

12K BASIC Manual

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1. Text Editor

The Central Data text editor allows a user to create and change source code (ASCII) files for use with an assembler, interpreter, or any other application of this type. The user's file (otherwise called the text or the source code) is read into a RAM buffer where the user can inspect it and make changes to it.

The editor takes full advantage of the system's features. The video display is always used to display the lines of text in the immediate area of last editing which frees the user from the task of trying to remember where he is in the file. The cassette interface is used to store files and also allows editing of files which are larger than the amount of RAM that you have available for the editing buffers. The supervisor program is used by the editor for its serial input and output routines.

Basic Information

The editor takes up roughly 2K of RAM starting at address H2000. This space includes all of the working RAM locations that the editor needs. The editor requires two buffers to operate: the edit buffer and the insert buffer. The edit buffer is where the source code is held while editing. The insert buffer is where all changes to the edit buffer are made. After an editing operation is finished (i.e. an insert), the insert buffer is merged into the edit buffer to form the new source code.

There are two restrictions concerning the buffers:

1. The edit buffer must be before the insert buffer in RAM, and there can be no space between the two buffers.
2. The buffers must be multiples of 256 bytes long, and their starting and ending addresses must also be multiples of 256 bytes.

Examples of incorrect formatting of the buffers are:

<u>Text Buffer Start</u>	<u>Insert Buffer Start</u>	<u>Reason Why Wrong</u>
H6000	H5A00	The edit buffer must start at a lower address than the insert buffer.
H5800	- H5A10	Buffers must start in multiples of 256 bytes.

If the text buffer were to start at H5A00 and the insert buffer at H5E00 this would work fine. Note that this means that the edit buffer has 1024 bytes of space (H5A00 to H5E00). You can't tell how big the insert buffer is since its ending address is not known. You must, therefore, also specify an address (256 byte multiple) for the first byte after the insert buffer. This byte's address will be called the end of RAM location from here on. If this address was H6000 in this case, the length of the insert buffer would be 512 bytes. Thus far, in our example of correct buffer addressing, we have the following:

<u>Text Buffer Start</u>	<u>Insert Buffer Start</u>	<u>End Of RAM</u>
H5A00	H5E00	H6000

The user defines where the buffers start and end by altering three RAM locations (using the supervisor) before executing the editor. Because of the 256-byte-multiple address restriction, it can be seen that the low byte of each address is H00. For this reason, you need only specify the high byte of the address for the edit buffer, insert buffer, and the end of RAM location. You alter locations H2003 through H2006 to give this information to the editor and then jump to the editor (address H2000). In our example, location H2003 would be changed to H5A, while H2004 would be changed to H5E, and H2006 would be changed to H60. Address H2005 is changed to allocate a buffer in BASIC, and this is explained later.

The buffers have no size restrictions so they can span from any one address to any other as long as the end address is greater than the start address.

After the three bytes have been set up for the editor (using the alter command) and the editor has been jumped to (by the execute command) using the supervisor, you are able to edit your source code using one of the 21 editor commands which are described later.

Display Format

While you are inspecting the source code of your file, the editor displays a header line and up to 15 lines of text. The header line tells you how many completely empty blocks (256 bytes per block) you have left in the edit buffer and displays the command you have entered. The bottom 15 lines of the display are used for the text. These lines are numbered from 1 to 15 as they progress down the page. Note that a line can be up to 256 characters long and that the line numbers are not actually part of the text. The line numbers are simply displayed on the screen to allow you to reference each individual line easily.

In the edit buffer, the end of a line is indicated by a ASCII carriage return code (HOD). The end of file is sensed to be the first character in the buffer with bit 7 set to one. Note that the ASCII characters are all encoded using bits 0 through 6, so bit 7 is free for this use.

Commands

There are 21 commands which the editor accepts. All commands are typed in through the keyboard, and all except four are executed after the press of the carriage return key. The four commands that do not require a carriage return are position moving commands which are used so frequently that they are allowed to take only one keypress. They are explained in detail in the section called 'Moving Around in the File' as well as in the Command Reference Section. The other 17 commands require a carriage return for their execution. These other commands also allow you to type in up to sixteen additional characters which tell the routines exactly what should be done. The backspace key is active during command entering so that mistakes can be easily corrected. Pressing control-P causes the last command entered to be executed again.

Depending on the command, the additional characters may be alphabetic, numeric, or not used. If a number is required (such as in the Forward command) it can be of any size, although the maximum number sent to the routine will be 255. For example, if the command typed was F3000 (move forward 3000 lines), the user would only be moved ahead 255 lines. More details about the Forward command are presented later. Also, if a command requiring a number is entered with no extra characters (just the command and then a carriage return), a number of one will automatically be used. This feature was added due to frequent changes the user will make to the 1st line of text.

The specific command explanations tell you what you should enter after the command (a number, a word, or nothing).

User Defined Commands

You can cause the editor to jump to your own routines by utilizing any of the unused command letters. All that you need to do is change the correct locations in the command address table. Refer to the program listing to find out which two memory locations to change for your command.

Moving Around in the File

Since the display can show only 15 lines at a time and the file can be much larger than this, there are commands which allow you to move around in the file (display different areas of the file).

Four of these commands are executed immediately when the command key is pressed. These four commands are: go to end of file (+), go to beginning of file (-), go forward 15 lines (space), and go backward 15 lines (/). The only exception to this immediate action is when another command is entered, erased (by back-spaces) and then one of the four immediate action commands is entered. The four commands then will require a carriage return to execute them.

The other moving commands are: forward x lines (Fx), backward x lines (Bx), and search for an ASCII string 'xxxx' (Xxxxx). The detailed explanations for all seven of the moving commands are given in the command reference section.

Inserting New Lines

To enter new lines of text, use the Insert (I) command. This command should be followed by a number which signifies which line on the screen the text should be inserted after.

After the command, number, and carriage return have been entered, the screen is cleared and you are in INSERT MODE. In this mode you simply type in your new text pressing carriage return at the end of each line. Backspace is active to the beginning of your current line. Note that while in insert mode the characters you type in are being put in the insert buffer, and they are held there until ETX is pressed. Pressing ETX (control-C) when you are done inserting will put the lines just typed into the edit buffer after the line number originally typed with the command.

If you insert too much text (either the insert buffer is

full or it can be seen that the text to be inserted will fill the edit buffer), insert mode is automatically ended and the lines are inserted.

Modifying a String

To modify one ASCII string to another there are two commands available. Using the preset modify strings (P) command you can tell the editor what the original string is and what the new string should be. With the modify (M) command, you tell the editor to look for the original ASCII string on a specified line and, if the string is found, to change it to the new string.

The sequence of steps for a modify is:

- 1) Type "P" for the preset modify command.
- 2) Type old string you would like to modify.
- 3) Hit carriage return. The top line of the display will change to:
-- MODIFY STRING "old string just typed " TO
- 4) Type in the new string.
- 5) Hit carriage return.
At this point, the two strings have been entered and are stored in a special set of RAM locations.

To continue modifying lines containing the same old string to the new one:

- 6) Type "M" for the modify command.
- 7) Type the line number where the old string can be found.
- 8) Hit carriage return.
If the old string is found in that line, it is changed to the new string.
If the old string is not found, an error message of NOT FOUND is displayed.

You can continue to modify the old string throughout your program using the "M" command.

Saving and Appending Lines

If you have a number of lines of code that repeat themselves

throughout a program, rather than having to retype the lines at each point in the program you can hold the lines in the insert buffer and place them as you wish in the program.

To hold lines in the insert buffer, bring the first line to be held to the top of the screen (using the forward and backward commands) and type "Hx" to hold the top x lines. After the carriage return is pressed, the command is executed. If you try to hold more lines than will fit in the insert buffer, the editor will give you an error message saying TOO MUCH.

To insert these lines, use the append (A) command. This command is in the form of "Ax" with x being the line number after which the held lines should be inserted. If there is no room in the text buffer for all of the lines, the command is aborted and you are given an error message of TOO MUCH.

Deleting Lines

To delete selected lines, bring the first line to be deleted to the top of the screen. Then use the delete (D) command followed by a line number to delete that number of lines from the text buffer (starting from the top line on the screen).

Changing Lines

If you have a line in the text buffer which is wrong, you can change it (without having to retype the whole thing). To change a line, type "Cx", with x being the line number. The screen is then cleared and the line selected is displayed. At this time several keys are active:

- 1) Copy character (control-U): causes one character from the old line to be copied to the new line. The new line is written just below the old one as the characters are copied.
- 2) Copy word (control-Y): does continued character copies until the first occurrence of a space or comma.
- 3) Delete old character (control-O): causes one character of the old line to be deleted. In other words one or more characters from the old line can be skipped from being copied.
- 4) Erase (control-H): just erases one character from the new line.
- 5) Erase word (control-N): erases characters until it comes to a space or a comma.

6) Copy to end of line (control-P): causes all of the remaining characters of the old line to be copied to the new line.

7) Any printable (non-control) character will be added to the new line.

8) Carriage return ends the change of this line. After this key is pressed, the next line in the text buffer is displayed and you are allowed to change it.

If you press ETX (control-C) right after a new line appears, the editor returns to the normal page showing all of the corrected lines.

Storing your Text

The editor allows you to store and retrieve your programs using cassette tape. You can name your text with labels of up to eight characters long and therefore have the system keep track of the various programs on a tape.

To store the edit buffer on cassette tape, turn the tape recorder to record and type "Sxxxx" with xxxx being the name (up to 8 characters). After carriage return is pressed, the editor starts sending the name and the text to the tape recorder. It finishes when the end of file is reached (any byte in the edit buffer with bit 7 set) and will simply prompt for a new command.

To load that file back just as it was before storing it, first move to the beginning of the file (using the "-" command). Then type "Lxxxx" followed by a carriage return and play the tape recorder. The editor will read everything on the tape and will load the data contained in blocks with the name xxxx. After the end of file byte is read in, the routine terminates.

You should note that the load routine starts loading at the current line position (it starts loading over the top line on the screen). Thus you can merge two files by loading one in as was explained earlier, moving to the end of that file, and loading the second file. Once it is loaded it will appear after the first file in the text buffer.

Also, the full name need not be typed in for the load routine. The routine only checks the tape against the letters typed in with the command, and no others. For instance, if you have a file named STARTREK on tape, you can load it back by typing any of the following as the command:

LSTARTREK	will load only startrek
L	will load any file
LSTAR	will load any file whose name's first four letters are STAR

Note that the last two methods have the possibility of loading the wrong program--the second one loading anything and the third one loading anything which starts with STAR (i.e. STARWAR OR STAR).

Jumping out of the Editor

Use the command 'E' to return to the supervisor program. Type the command 'R' to run your program, and 'G' to go to the OPTION in BASIC.

2. Editor Command Reference

The following abbreviations are used in this section:

- l--a line number
- n--a number of lines
- a--an ASCII string (up to 16 characters)

Also, note that all commands (except the ones with immediate action) must be terminated with a carriage return.

Command: APPEND

Format: A1

Description: This command places what is in the insert buffer immediately after the line listed in the command. The data in the insert buffer may be the result of a HOLD, INSERT, CHANGE, or MODIFY command.

Errors: If the text in the insert buffer is too large to fit in the edit buffer, you are given an error saying TOO MUCH.

Example:

If the insert buffer had the following lines in it:

```
NOW IS THE TIME
FOR ALL GOOD MEN
TO COME TO THE AID
```

And the screen looked like:

```
                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  THIS IS LINE THREE
```

And the command "A2" was executed, the insert buffer would remain the same and the screen would change to:

```
                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  NOW IS THE TIME
4  FOR ALL GOOD MEN
5  TO COME TO THE AID
6  THIS IS LINE THREE
```

Command: BACKWARD

Format: Bn

Description: This command causes the editor to start displaying n lines before the top line on the screen.

Example:

If the screen had displayed the 10th-13th lines of a program as shown below:

```
                                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE 10
2  THIS IS LINE 11
3  THIS IS LINE 12
4  THIS IS LINE 13
```

And the command "B3" was executed, the first line displayed is number 7 and the display would change to:

```
                                BLOCKS LEFT:  04    COMMAND:
1  THIS IS LINE 7
2  THIS IS LINE 8
3  THIS IS LINE 9
4  THIS IS LINE 10
5  THIS IS LINE 11
6  THIS IS LINE 12
7  THIS IS LINE 13
```

Command: CHANGE

Format: C1

Description: This command allows you to change a line of text. After entering this command, the screen is cleared and the line selected is displayed on the top of the screen. You can then type control-U to copy a character of the old line to the new one, control-Y to copy a word from the old line to the new one, control-O to skip a character of the old line from being copied, control-H (erase) to delete a character from the new line, control-N to erase a word from the new line, control-P to copy all of the remaining characters from the old line to the new line, or any printable (non-control) character to just be added to the new line. After the new line is as you want it, press carriage return. The next line of the text buffer is then displayed and you can change it. Pressing ETX (control-C) at this point returns you to the command entry page with the corrections entered into the text buffer.

Example:

If you have the line NOW IA THE TIME ready to change (you have just entered the "C" command), the following keypresses will correct the mistake:

<u>KEY</u>	<u>New line so far</u>
control-Y	NOW
control-U	NOW (there is a space after NOW)
control-U	NOW I
control-O	NOW I (the A was deleted)
S	NOW IS
control-P	NOW IS THE TIME

Pressing carriage-return and ETX now will return you to the normal editor display page with the changes in effect.

Command: DELETE

Format: Dn

Description: This command deletes n lines from the text buffer starting with the top line on the screen.

Example:

If the screen had lines 6-10 of the text buffer displayed as is shown below:

	BLOCKS LEFT: 04	COMMAND:
1	LINE 6	
2	LINE 7	
3	LINE 8	
4	LINE 9	
5	LINE 10	

And the command "D2" was executed, text lines 6&7 would be deleted and the screen would look like:

	BLOCKS LEFT: 04	COMMAND:
1	LINE 5	
2	LINE 8	
3	LINE 9	
4	LINE 10	

Command: EXIT

Format: E

Description: This command exits the user back to location 0 (normally back into the supervisor program).

Command: FORWARD

Format: Fn

Description: This command causes the editor to start displaying n lines after the present line.

Example:

If the screen had the 10th-16th lines of the text buffer displayed as below:

```
                                BLOCKS LEFT:  04          COMMAND:
1  LINE 10
2  LINE 11
3  LINE 12
4  LINE 13
5  LINE 14
6  LINE 15
7  LINE 16
```

And the command "F5" was executed, the first text line now displayed is line 15 and the screen will look as below:

```
                                BLOCKS LEFT:  04          COMMAND:
1  LINE 15
2  LINE 16
```

Command: GO TO THE BASIC

Format: G

Description: This command jumps the user into BASIC's
OPTION mode.

Command: HOLD

Format: Hn

Description: Copies n lines of the text buffer into the insert buffer starting with the first line displayed on the screen.

Errors: If you try to hold too many lines, you will get an error message of TOO MUCH.

Example:

If the display looked as it does below:

	BLOCKS LEFT:	02	COMMAND:
1	LINE 1		
2	LINE 2		
3	LINE 3		
4	LINE 4		
5	LINE 5		
6	LINE 6		

And the command "H3" was executed, the screen will remain the same and the insert buffer will be changed to

LINE 1
LINE 2
LINE 3

Command: INSERT

Format: I1

Description: This command allows the insertion of new text. The new text is typed in after the command and is ended by a ETX (control-C) key. Then the text is inserted after the line number specified in the command.

Errors: If you try to type in too much text (either too much for the insert buffer to hold or too much to be able to put back into the edit buffer), the insert is automatically ended just as if you had pressed ETX.

Example:

If the screen looked as it does below:

```
                                BLOCKS LEFT:  04          COMMAND:
1  LINE 1
2  LINE 2
3  LINE 3
4  LINE 4
5  LINE 5
```

And the command "I2" was executed, the screen would be erased and you would be allowed to type in new text. If you typed in the following lines (each line followed by a carriage return):

```
NOW IS THE TIME
FOR ALL GOOD MEN
TO COME TO THE AID
```

And pressed ETX, the 3 new lines would be inserted after line 2 of the text buffer, and the screen would change to:

```
-BLOCKS LEFT:  04          COMMAND:
1  LINE 2
2  NOW IS THE TIME
3  FOR ALL GOOD MEN
4  TO COME TO THE AID
5  LINE 3
6  LINE 4
7  LINE 5
```

Command: LOAD

Format: Lx

Description: Loads a file from cassette tape into the text buffer. The name, x, can be up to 8 characters, and any file which has at least the letters specified in the command will be loaded. A simple "L" command (one with no file name) will load any file. Loading ceases when a byte is read in with the end of file bit set.

The file is loaded starting at the first character position on the screen. Any lines before the ones displayed will not be changed during the load.

Errors: If you run out of text buffer space before a load is complete, you will get an error saying TOO MUCH. If upon loading, a cassette error occurs, you are given a SUMCHECK ERROR message and you must reload.

Command: MODIFY

Format: M1

Description: This command uses the old and new ASCII strings entered with the "P" command. First, the line number specified in the command is searched for the old string. If it is found, that old ASCII string is replaced with the new string.

Errors: If the old string is not found in the line, you are given an error of NOT FOUND.

Example:

If the text buffer had the following lines displayed:

```
                BLOCKS LEFT:  04          COMMAND:
1  NOW IS THE TIME
2  FOR ALL GOOD MEN
3  TO COME TO THE AID
```

And you wanted to change the word "come" in line 3 to "go", you would first enter the two strings using the P command and then do a "M3" command. The text would be changed, and the screen would change to:

```
                BLOCKS LEFT:  04          COMMAND:
1  FOR ALL GOOD MEN
2  TO GO TO THE AID
```


Command: NORMAL MODE

Format: N

Description: this command turns the upper case mode OFF.

Command: PRESET MODIFY STRINGS

Format: Pa

Description: To allow entry of two ASCII strings for later use with the Modify command. The string to be looked for and replaced (the old string) with the modify is typed in with this command followed by a carriage return. After that, the top line of the screen will change to:

MODIFY STRING "old string just typed" TO

at which time you should type in the string which is to replace the old one (the new string) followed by a carriage return.

Command: STORE

Format: Sx

Description: This command stores the text buffer onto cassette tape. A name (x) is also stored on the tape, and that specific name can be referenced during a LOAD command.

Command: UPPERCASE MODE

Format: U

Description: this command bumps all characters displayed on the screen to upper case. It does not affect what is stored in the text buffer, only what you see. Upper case mode is off when you enter the editor.

Command: X-SEARCH

Format: Xa

Description: This command searches for the ASCII string starting at the 2nd line displayed on the screen. If the string is found, the line with the string is brought to the top of the screen.

Errors: If the string is not found, you are given the error message of NOT FOUND.

Example:

If the screen looked as it is pictured below:

```
                BLOCKS LEFT:  04          COMMAND:
1  THIS IS LINE ONE
2  THIS IS LINE TWO
3  THIS IS LINE THREE
4  THIS IS LINE FOUR
5  THIS IS LINE FIVE
```

And the command "XTHREE" is entered, the screen would start displaying at line 3 and would look as follows:

```
                BLOCKS LEFT:  04          COMMAND:
1  THIS IS LINE THREE
2  THIS IS LINE FOUR
3  THIS IS LINE FIVE
```

Command: GO TO BEGINNING--IMMEDIATE ACTION

Format: -

Description: Starts displaying lines at the first line of the file.

Command: GO TO END--IMMEDIATE ACTION

Format: +

Description: Starts displaying lines beginning at the last line in the file. You should note that after this command is executed, the screen will contain only one line of text (the last line of the text buffer).

Command: FORWARD 15 LINES--IMMEDIATE ACTION

Format: space

Description: This command functions exactly the same way as the command "F15".

Command: BACKWARD 15.LINES--IMMEDIATE ACTION

Format: /

Description: This command functions in exactly the same way as the command "R15".

3. 12K BASIC

The Central Data 12K BASIC interpreter is a powerful program which allows a person to use virtually any BASIC program written for a microcomputer today. The program resides starting at address H2000 and can be entered through the editor by the GO TO BASIC command. When you enter BASIC you will get the following message:

OPTION:

where you should type one of the following characters: 'R', 'B', 'S', or 'D'. These four letters correspond to the options of RUN, SET POINTER TO BEGINNING, SINGLE STEP, and DIRECT MODE. Each option is explained in detail below. If at any time during the execution of your program you wish to return to the OPTION message, you can simply hit escape. If you hit escape at the OPTION message, you will return to the editor.

RUN: This option will start execution of your program at the current line. The current line is the first line of the program if you just entered BASIC; but, if you hit escape in the middle of program execution, then the current line is the one that would have executed had you not halted the program. Also, if you single step through a section of the program and then leave single step mode, the current line is the one that would have been executed at the time that you left step mode.

SET POINTER TO BEGINNING: This option sets the current line to be the first line of the program. The next time that you give 'R' or 'S' as the option the program will start its execution from the beginning of the program.

SINGLE STEP: This option allows you to single step through your program. After entering the option, the next line to be executed (the current line as described above) is printed. You then have the choice of hitting the space bar to execute the line or escape to return to choose a new option. If you decide to choose a new option, the current line will not change. If you type 'S' again, the same line will be displayed. If you choose to execute the line, the next line of the program will be displayed after the execution is complete.

DIRECT MODE: This option allows you to enter BASIC statements and have them executed immediately. The cursor moves to the next line after choosing this command, and you are allowed to enter a statement. You should hit return after the statement is entered, and it will then be executed. You can then type another line for DIRECT MODE execution or hit escape to return to choose another option. Note that direct mode will execute only one statement--if you type in multiple statements on the line (seperated by colons), only the first will be executed.

General Information

Several features that this BASIC allows are listed below:

1) A colon (:) between statements will allow multiple statements per line. This is especially useful in IF statements where you want several things to happen on the occurance of one event. Also note that our BASIC requires a colon before the ELSE phrase of an IF statement (see the statement reference section for more information about the IF statement).—

2) Putting an explanation point (!) after the end of a statement in a line will cause the interpreter to ignore all characters past that point. This allows you to place comments in the same line as a statement.

3) An asterisk (*) as the first character of a line will indicate to the program that this is a comment line and it should be ignored. This functions exactly like a REM statement (which is also supported). Note that a comment line will only terminate with a carriage return (and not a colon).

4) Variable names can be up to four characters in length. For string variables, the '\$' at the end of the name is not included in this count of four.

5) You can use the plus sign (+) in an arithmetic expression to concatonate (put together) strings. In other words, the statement:

```
LET B$="IT IS A "+"NICE"+" DAY"
```

would store "IT IS A NICE DAY" into the variable named B\$.

6) The LET statement is default, so you do not need to type the word LET at the beginning of these lines.

7) Strings are stored in a dynamic buffer area which allows

their length to change as needed. This means that the length of a string can vary throughout the program from zero to the maximum (255 characters).

Buffer Setup

There are three buffers in BASIC: the text buffer, the string buffer, and the variable table. The length of each buffer can be changed by altering addresses H2003 to H2006. Note that these addresses are the same as those used in the editor, and their values will not be changed when switching between programs.

The text buffer remains the same as it is in the editor, but the insert buffer is divided to form the string buffer and the variable table. Upon executing the program for the first time, you will get the message:

DO YOU WISH TO DELETE THE EXTENDED FUNCTIONS? (Y/N)

where you are allowed to shorten BASIC by 1.25K by removing some of BASICs functions. After typing either a 'Y' or 'N', the text buffer start address is automatically set to the lowest possible address. This address is H5800 with the extended functions and H5300 without those functions implemented. The functions that are deleted are listed in the next chapter as EXTENDED FUNCTIONS. Also, the exponential operator (x^y) is no longer available. You are allowed to change this address if you need the space directly after BASIC for one of your routines.

The string buffer is used to hold all of the strings that are stored in variables at any time. It must, therefore, be at least as long as the maximum number of characters that you will have stored in string variables at one time will be. If you don't plan to use strings extensively, you can probably set this buffer to 256 bytes without any problems. A STR SPACE OVF error will occur if you try to store into a string variable when the string buffer is filled up.

The variable table is used to hold all of the variables which are needed to run your program. This table starts at the address given by H2005 and progresses toward the end of RAM. The stack area is located at the end of RAM moving downward. This area is constantly changing, and it is very hard to predict what space it will consume at any one time. It is best to allow at least 512 bytes for it alone, not counting the variable area. This variable area can be calculated as follows:

15 bytes for each floating point variable
10 bytes for each string variable

8+n*8*x bytes for each dimensioned floating var
8+n*3*x bytes for each dimensioned string variable
9 bytes for each user defined function

where n is the number of dimensions and x is the total number of variables (remember that each dimension starts at zero).

Note that for most programs space should not be so tight that you will have to calculate the amount of storage required for each buffer. Normally, you can set the string buffer to 512 bytes and the variable table to 1024 bytes and leave the rest of the space for the text buffer. Naturally, if you have a very large program, you may have to experiment to find the best buffer settings.

The buffers are set (as in the editor) by altering the following locations:

<u>Address</u>	<u>Function</u>
H2003	Text buffer start
H2004	String buffer start
H2005	Variable table start
H2006	End of RAM

Expression Evaluation

Expressions are evaluated in the normal way for algebra. There are, however, changes due to the addition of relational operators in expressions. These operators are as follows: =, <, >, <=, >=, and <> corresponding to the relations of equal, less than, greater than, less than or equal and greater than or equal, and not equal. These operations are evaluated after all of the arithmetic operations. (They are the level below addition and subtraction). If a relational operation results in a true condition, the resultant number will be -1. If the operation has a false condition the value of the expression will be 0.

Note that the IF statement uses these facts to determine what to do. Also note that this arrangement allows you to emulate the AND and OR operations by using the multiplication and addition functions. Whenever you do that, be sure that the relational operations are put in parenthesis so that they are done first. For example, if you wanted to have an IF statement with the logic 'A>B AND C<D', then you would enter as the expression for the statement: (A>B)*(C<D).

Error Messages

Below are listed the possible error messages that you can encounter in BASIC. When an error occurs, the error message is displayed on the screen with the line containing the error displayed on the line below it. Whenever possible, BASIC places a pointer (^) in the statement to indicate the approximate location of the error. Note that this pointer can sometimes be several characters away from the error and, in some cases, will not be there at all.

USR FN ERROR: this means that something is wrong with the user defined function that you called. The DEF statement may have more or less arguments than what you used; you may have put a string expression where a floating point expression was needed; etc.

OUT OF DATA ERROR: this error means that you don't have enough data (in your DATA statements) to cover all of the READ statements in the program.

SYNTAX ERROR: this is the most common error, and it can mean just about anything. Usually it means that a statement is not in its correct form: it is missing some punctuation, etc.

OVF ERROR: this error means that there was an arithmetic overflow (or underflow) when evaluating one of the expressions in the statement. The maximum number for a floating point variable is 10**99 and the smallest number is 10**-99. You can also get an overflow error if an expression is too large in a statement or function which deals with the machine language (CALL, OUT, etc.).

LINE NOT FOUND ERROR: means that a line referenced in a statement cannot be found in the program.

NEST ERROR: this error is given when FOR-NEXT loops are not done in the proper sequence. The error can also occur in GOSUB statements if you violate the rules of BASIC.

TYPE MISMATCH ERROR: means that the expression that you gave for a statement or function is of the wrong type (it is a string and should be floating point or the other way around).

ARG ERROR: means that an expression that you have in a function or statement is either missing or is in another way wrong.

DIM ERROR: means that the argument of a DIM statement is out of range for dimensioned variables. (Each dimension can be only 255 long.)

STK OVF ERROR: means that the amount of space that you allocated to the variable table will have to be increased, or you will have to change your program.

STR SPACE OVF ERROR: means that the amount of space allocated to strings must be increased. Note that the string space is not packed; the total number of string characters can be less than the total string space allocated and you can still get this error.

VAR ALREADY DEFINED ERROR: this error means that the variable listed in a DIM or DEF statement has already been defined. Remember that if a dimensioned variable is referenced in the program without it being previously defined, it will be dimensioned with all sizes equal to 10. This will cause an error if you reference a variable before its respective DIM statement.

FXPR TOO COMPLEX ERROR: means that an expression in the statement has too many nesting levels (of parentheses or function calls) to be evaluated. You will have to split the expression into several parts.

4. BASIC Command and Function Reference

The following pages-list the commands and functions available in 12K BASIC. The following terms are used throughout the section:

<line number>	must be a constant value in the range of 1 to 9999
<expr>	is an arithmetic expression which can be a constant, variable, function call, or any combination of these in a valid arithmetic expression
<string expr>	is any string expression which can be a constant, variable, or any combination of these concatenated
<var>	is a floating point variable
<string var>	is a string variable
<constant>	is a constant
EXTENDED FN	Indicates that this function will not be available if the extended functions are deleted

Function: Absolute value

Format: ABS(<expr>)

Description: this function returns the absolute value of the expression listed. It will return (<expr>) if <expr> is positive or zero and will return (-<expr>) if <expr> is negative.

Function: ASCII numeric value

Format: ASC(<string expr>)

Description: this function returns the number corresponding to the ASCII code of the first character in the string. For example, the function ASC(" ") will return the number 32.

Function: Arctangent

EXTENDED FN

Format: ATN(<expr>)

Description: this function returns the arctangent of the expression listed. The value returned will be in radians and will be in the equivalent range of +90 to -90 degrees.

Function: Call an assembler language routine

Format: CALL([<expr>],<expr>)

Description: this function causes a branch to subroutine to an assembly language program. The value of the second expression is the address of the routine. If the first expression is given, it will be passed to the routine in R0 (high) and R1 (low).

Note that all expressions in BASIC are in decimal; you have to convert any hex addresses and/or values to decimal before entering them. Also, the two expressions possible in this function have a maximum value of 65,535.

When the assembly language routine executes a RETURN instruction, the processor will return to BASIC and will convert the values found in R0 and R1 to decimal using these as the returned value of the function. With this method you can send data to and receive data from the subroutine.

Statement: Clear all variables

Format: CLEAR

Description: this command erases all variables from the variable table and allows the user to start from scratch. It is suggested that you place this command at the beginning of your program so that any dimensioned variables or defined functions will be erased before their DIM or DEF statement is executed again (thus avoiding the VAR ALREADY DEFINED error).

Function: Character from ASCII numeric value

Format: CHR\$(<expr>)

Description: this function is the opposite of the ASC function in that its argument is a numeric value between 32 and 127. A string with a length of one is returned with the corresponding character in it.

Function: Cosine

EXTENDED FN

Format: COS(<expr>)

Description: this function returns the cosine of the listed expression. The expression is expected to be in radians.

Statement: Data

Format: DATA <any expr> [, <any expr>...]

Description: the DATA statement is used to hold values which are to be read by the READ statement. If a DATA statement is encountered in a program, it is skipped over.

Statement: Define a user function

Format: DEF <name>(<param>[,<param>...])=<expr>

Description: this statement sets up a user defined function. This function can be used like any other function in BASIC (in any expression) and can have a variable number of parameters. When a user defined function is encountered in a program, all of the values contained within its parentheses are transferred to the variables listed in the DEF statement in their corresponding order. Next, the expression to the right of the equal sign in the DEF statement is evaluated, and that value is returned for the function. For instance, if you wanted a function for the secant of a number, you could define it in the following way:

```
DEF SEC(X)=1/COS(X)
```

Then, whenever the expression SEC(<expr>) is found, the expression is transferred into X and then the function returns 1/COS(X). In this way you can form any of the trigonometric functions which are not intrinsic to BASIC.

The expression to the right of the equal sign in a DEF statement must be less than 40 characters. Anything more will give you a DEF error when you try to use the function.

The name of the function is stored in the variable table for simplicity. For this reason, you cannot name a variable the same as a function. Also, this allows function names up to four characters. Note that the first two characters need not be FN like in other BASICs; but, they can be if the user so desires.

Statement: Dimmension a variable

Format: DIM <var>(<dim1>[,<dim2>...]) [,<var>...]
or
DIM <string var>(<dim1>[,<dim2>...]) [,<string
var>...]

Description: this statement creates space for a dimensioned variable in the variable table. The variable can have up to seven dimmensions, and each can have a value of up to 255. When referencing a dimensioned variable, remember that the first index is always zero and the maximum index is that which is set forth in the statement.

If a variable which was not dimmensioned is used in an expression, space is automatically allocated to it in the variable table (just as if the user had done the DIM statement). The number of dimmensions allocated will be the same as the number used in the variable, but the size of the dimmensions will vary according to the following rules:

1) If any of the dimmensions given in the variable is less than 10, that dimmension is forced to be 10.

2) If any dimmension is 10 or greater, then that will be made the size of the dimmension.

For example, if the statement

LET B(2,15)=3

were executed without a previous dimmension statement for the variable 'B', then the variable would be dimmensioned with the sizes (10,15). Rememeber that if the DIM statement later appears in the program you will get a VAR ALREADY DEFINED error since the variable was defined during execution of another statement.

Statement: End of program

Format: END

Description: this statement should be placed at the end of every program. If it is not, and the program is allowed to execute past its actual text, you may get a SYNTAX error with an unrecognizable line displayed.

Statement: Erase the screen

Format: ERASE

Description: this statement will cause the screen to be erased and the cursor will be positioned in the upper-left hand corner of the screen.

Statement: Set error recovery line number

Format: ERROR [<line number>]

Description: this statement sets the line number where BASIC is to go whenever it encounters an OUT OF DATA or TYPE MISMATCH error while executing a READ statement. At this line the appropriate action can be taken to correct for this error. If the line number is not specified, then the feature is disabled and BASIC will handle any errors in the normal fashion.

The function ERR(0) can be referenced to see which of the two errors caused the branch to the line.

The RESUME statement MUST end the error handling routine. If this is not done, a NEST error may result.

Function: Error type

Format: ERR(0)

Description: this function returns a value of 2 if the last error was OUT OF DATA and a value of 10 if the last error was TYPE MISMATCH. It is normally used in conjunction with an error processing routine setup with the ERROR statement.

Statement: Exit FOR-NEXT loops

Format: EXIT <line number>

Description: the operation of this statement is exactly the same as the GOTO statement except that all current FOR-NEXT loops are terminated.

Function: 'e' to an expression

EXTENDED FM

Format: EXP(<expr>)

Description: this function returns the value of e (approx. 2.71828) raised to the given power.

Function: Truncate a variable

Format: FIX(<expr>)

Description: this function returns the truncated portion of the given expression. This function differs from the INT function in that the decimal part of this expression is simply "chopped off", but the INT function returns the first integer GREATER THAN or EQUAL to the expression.

-

Statement: Start FOR loop

Format: FOR <var>=<expr> TO <expr> [STEP <expr>]

Description: this statement begins a FOR-NEXT loop. The end of the loop is signaled with the corresponding NEXT statement. When this statement is first executed, the first expression is transferred into the variable listed. This FOR-NEXT loop is executed at least one time and at the end of each loop <var> is incremented by either 1 or the STEP value (if given). It is then compared to the expression given after the 'TO' in the statement. If it is greater than this value (for positive steps, less than for negative steps), then the FOR-NEXT loop is terminated and execution will continue after the NEXT statement. If, however, the variable is still less than or equal to the TO expression (or greater than or equal in the case of negative steps), then the loop is executed once again starting at the statement after the FOR statement.

Note that the loop itself can modify the value of the variable, and it will affect the operation at the following NEXT statement; but, the values of the three possible expressions are only evaluated at the time the FOR statement is first executed (and thus cannot be modified with any effect inside the loop).

Function: Fractional part

Format: FRC(<expr>)

Description: this function returns the fractional part of the expression. The sign of the returned value is the same as that of the expression.

Statement: Goto subroutine

Format: GOSUB <line number>

Description: this statement allows the user to branch to a BASIC subroutine at the listed line number. The statements at this line number are executed until a RETURN statement is reached. At this point control passes back to the point just after the GOSUB statement.

Note that a NEXT statement cannot be done in the middle of a BASIC subroutine. Also a RETURN cannot be done in the middle of a FOR-NEXT loop which was called by a GOSUB.

Statement: Goto line

Format: GOTO <line number>

Description: this statement transfers control to the specified line in the program.

Statement: IF

Format: IF <expr> [THEN] <aaa> [:ELSE <bbb>]
or
IF <expr> [THEN] <aaa>
ELSE <bbb>

Description: the expression in this statement is evaluated and if the result is zero the condition is considered to be false. If the result is non-zero the condition is considered true. If the condition is found to be true, then <aaa> will be in effect. If the condition is found to be false, then <bbb> will be in effect (if present).

<aaa> and <bbb> are either line numbers or statement lists (statements separated by colons). If either is a line number and it is put into effect, then that line number is jumped to (just like in a GOTO). If it is a statement list, then all of the statements in the list are executed. These statements may be anything including other IF statements.

Note that the ELSE section of the IF statement (if present) can be either on the same line as the IF (if preceded by a colon) or on the line directly following the line with the IF. If the BASIC interpreter should ever come upon an ELSE statement by itself, it is just ignored (all the way to the next return).

Statement: Input data

Format: INPUT ["<prompt string>";] <any var>
[,<any var>...]]

Description: this statement allows the user to enter data into variables. If a prompt string is given, it is printed to prompt the user's input. If no prompt string is listed, then a question mark is printed as a prompt. In any event, a space is printed after the prompt and the user is allowed to input the data.

All of the data must be typed in at one time; and, if there are several variables, their input data must be separated by commas. After entry of all of the data, the user should hit return. If the types and amount of data match the variables as specified, then the data is stored into the associated variables. If there is a type mismatch or the number of items typed is fewer than the number of items listed, then the user must retype the entire list. When this happens, the user will get the message

REDO FROM START:

where he should check what he just typed and re-enter the correct data.

If nothing is listed after the 'INPUT' in the statement, then the statement will simply wait for the user to hit return before going on.

Function: Input from port

Format: INP(<expr>)

Description: this function returns the value which is read from the port number given by the expression. Note that the expression given must be in the range of 0 to 255 and that this number corresponds to the number of the extended port that the user is accessing. If the user wishes to have access to the DATA or CONTROL ports of the computer, he will have to write an assembly language subroutine to do so and interface to it using the CALL function.

Function: Search for string

Format: INSTR(<string expr>,<string expr>[,<expr>])

Description: this function returns the starting position that the second string was found in the first string. If it was found starting at the first character, it returns 1. If the second string cannot be found in the first string, then the function returns 0.

The optional expression sets the starting position for the search. It defaults to 1.

Function: Integer

Format: INT(<expr>)

Description: this function returns the first integer greater than or equal to the value of the expression. You may need the FIX function if what you want is the truncated portion of the expression.

Function: Left part of string

Format: LEFT\$(<string expr>,<expr>)

Description: this function returns the leftmost characters of the string expression. The number of characters returned is either the second expression listed or the length of the string expression (whichever is smallest).

Function: Length of string

Format: LEN(<string expression>)

Description: this function returns the length of the string expression given as its argument. This length can vary from 0 to 255.

Statement: Assign an expression to a variable

Format: [LET] <var>=<expr> [,<var>=<expr>...]
or
[LET] <string var>=<string expr> [,<string
var>=<string expr>...]

Description: this statement assigns the listed expression to the variable. Several assignments can be done with one LET statement by separating them with commas. Also, the word 'LET' in the statement is optional which makes it the default statement.

If an expression is stored into a string variable its length is changed to the length of the expression.

Function: Natural log

EXTENDED FN

Format: LN(<expr>)

Description: this function returns the natural log (to the base e) of the expression.

Function: Common log

EXTENDED FN

Format: LOG(<expr>)

Description: this function returns the common log (to the base 10) of the expression.

Function: Line-print position

Format: LPOS(0)

Description: this function returns a value corresponding to the current position of the print head on the line printer. (The line printer is accessed by the LPRINT statement.) The LPOS function will return a 1 if nothing has been sent to the line printer.

Statement: Line print

Format: LPRINT <argument> [<delimiter> <argument>] [<end delimiter>]

Description: this statement performs much the same way as the PRINT statement; but, instead of routing the output to the video display, this statement sends it to the user's printer.

The only option available in the regular PRINT statement which is not available in the LPRINT statement is to set the cursor position (naturally). All other operations are exactly the same, including PRINT USING. Every time a new line is to be printed on the printer, BASIC sends a carriage return code (HOD) to the printer. No line feed code is ever sent to the printer by BASIC.

The printer driver routine (which is used to interface to the printer) must be written by the user and most likely will reside in display memory (the area from H1510 to H17E9). The BASIC program must be modified to inform the LPRINT routine where to find your routine. This can be done by modifying addresses H2006 to H2008 as follows:

<u>Address</u>	<u>Value</u>
H2006	H1F
H2007	High byte of address of your routine
H2008	Low byte of address of your routine

After this change is made, BASIC will branch to this routine every time it needs to send a character to the printer. These characters will be sent in register 0. All characters sent will be ASCII, and they can be upper or lower case (as can anything in BASIC). Special control codes can be sent to the printer by using the control code option as in the PRINT statement. This allows special functions to be performed which may be peculiar to your printer.

This printer driver routine must not alter any registers in bank 1 or the program status word (lower). It can use a maximum of 4 levels of subroutine nesting. Register bank 1 is available for its use and can be changed by the routine. Remember, however, that the routine must return with the bank select cleared.

Function: Middle of string

Format: MID\$(<string expr>,<expr> [,<expr>])

Description: this function returns characters from the middle of the string expression given. The first character returned is the one corresponding to the first numeric expression given. The number of characters returned is either

1) the maximum number returnable because the string expression ends. (This is always the case if the optional expression is not given.)

or

2) the value of the optional expression (if smaller than the remainder of the string expression).

If the string expression given has a length of zero, then a string is returned with a length of zero (a null string).

Statement: Store into the middle of a string

Format: MID\$(<string var>,<expr> [,<expr>]=<string expr>

Description: this statement stores the string expression into the middle of the listed string variable. The start position for the store is given by the first numeric expression, and the maximum number of characters to be stored is given by the second (optional) numeric expression. If the second expression is excluded, the characters are stored until the variable ends or the string expression runs out of characters.

This statement should not be confused with the MID\$ function which loads from the middle of a string expression. This statement stores into the middle of a string variable.

Statement: End FOR-NEXT loop

Format: NEXT [<var>] [,<var>]

Description: this statement marks the end of a FOR-NEXT loop. The variables listed in the statement correspond to the variable used in the FOR statement associated with this statement. If the variable is omitted, BASIC assumes that it is the one associated with the inner-most FOR-NEXT loop. Note that you can terminate several FOR statements with a single NEXT statement by separating the variables by commas. An example of this is given below:

```
FOR SIZE=1 TO 20
FOR LEN=1 TO 10
FOR INDX=5 TO -1 STEP -1
.
.
(statments for the loop)
.
.
NEXT INDX,LEN,SIZE
```

Statement: Conditional line numbers

Format: ON <expr> GOTO <line number list>
or
ON <expr> GOSUB <line number list>
or
ON <expr> RESTORE <line number list>
or
ON <expr> EXIT <line number list>
or
ON <expr> ERROR <line number list>
or
ON <expr> RESUME <line number list>

Description: these statements allow a user to give a conditional line number to any of the above six statements. The line number list is simply a list of line numbers separated by commas. The line number chosen for the command is the one indexed by the expression listed. This expression must be in the range of 0 to 65,535 or an overflow error will result.

If the expression is zero, the statement will fall through (as if it wasn't even executed). The same is the case if the expression is greater than the number of lines in the list. If, however, the expression can be matched with a corresponding line in the list, then the correct action will be taken with that line.

If you wanted to GOTO lines 100, 110, or 120 depending on whether the variable X was equal to -4, -3, or -2 you could use the following line:

ON X+5 GOTO 100,110,120

Statement: Output to a 2650 port

Format: OUT <expr>,<expr>

Description: this command sends the data given by the second expression to the extended output port numbered by the first expression. Both expressions must be in the range of 0 to 255 or you will get an overflow error. Remember that (as in all BASIC statements) all expressions given are in decimal. You will have to convert hex values to decimal before expecting BASIC to use them.

This statement only allows access to the extended I/O ports of the system. If you need to write to the data or control ports you will need to set up an assembly language subroutine which does it and interface to it using the CALL function.

Statement: Pause

Format: PAUSE <expr>

Description: this statement causes the program to pause for approx. <expr> tenths of a second. The expression is truncated, and the maximum delay is 6,553.5 seconds. Naturally, longer delays can be introduced by doing several PAUSE statements in a loop.

Function: Read from memory

Format: PEEK(<expr>)

Description: this function returns the value found when reading the memory location addressed by the listed expression. This number is guaranteed to be in the range of 0 to 255, and the expression given for the function must be between 0 and 32,767.

Statement: Write to memory

Format: POKE <expr>,<expr>

Description: this statement writes the data given by the second expression to the address given by the first expression. The first expression has bounds of 0 to 32,767 and the second expression has the limits of 0 to 255.

Function: Cursor position

Format: POS(0)

Description: this function returns a numeric value for the horizontal position of the cursor on the screen at the moment. The left-most position is number 1.

Statement: Print on the screen

Format: PRINT [*@*<expr>,<expr>] <argument> [<delimiter>
<argument>] [<end delimiter>]

Description: this statement prints data on the video screen. The first argument possible will set the cursor location to the line and character positions specified in the two expressions following the at sign (*@*). If that option is not exercised, then a linefeed will occur (unless it was inhibited by the last PRINT or LPRINT statement).

After the starting cursor location is determined, the arguments are printed. The arguments can be either string or floating point variables, and the floating point variables are printed in their most condensed form. The delimiter can be either a comma (,) or a semicolon (;). If it is a comma, a tab is made to the next tab stop. Each tab stop is 16 positions away from the previous one (and the first is at position 17). If the delimiter is a semicolon, then no space is put between the arguments. If either delimiter ends a line (with no further arguments beyond it) then the linefeed of the next PRINT or LPRINT statement is inhibited.

The following special arguments are also allowed in this PRINT statement:

&<expr> prints the control-code value of the expression. This is mainly useful in the LPRINT statement for causing special actions to happen with a printer

TAB(<expr>) moves the cursor to the specified location on the line. The cursor cannot be moved to the left.

Statement: Formatted print

Format: PRINT USING <string expr>;<arg> [,<arg>...]

Description: this statement allows a user to format printing so that a specified number of print columns is used for each argument printed. This allows neat tables of numbers and words to be output to the screen or a printer.

The string expression given before the semicolon gives a map of how the line is to be layed out. Each character in this string will directly correspond to one character that is output. If the character of the string is any except the ones listed below, it will be transferred directly to the screen.

String formatting

An exclamation point (!) sets up a one character field for the string expression given by the next argument. If the argument is longer than one character, then only the first character will be printed. If the argument is a null string then a space is printed.

The up-arrow is used to set up a n-character string field. Two up-arrows are needed for each field of this type, and any number of characters (which are meaningless) can be between them. If, for instance, the following characters are in the control string: ^xxx^, then a five character string field will be set up. If the actual string (obtained from one of the arguments) is greater than this length, then only its first characters are printed. If the actual string has fewer characters, then the remaining character positions are filled with spaces.

Numeric Formatting

To format a number for output, you have several choices. You can set the number of spaces for the integer portion of the number as well as whether the number should print with a decimal point; and, if so, how many decimal digits should be printed. Each formatting string for a number must begin with a number sign (#). Everything after that is up to you. This first character will be available for a significant digit if the number is positive, but will be used for the minus sign if the number is negative. If more number signs are placed after the first, then the number of possible integer digits is increased accordingly. If a decimal point is placed in the string, it will force the decimal point to be in that relative position on the line. If any number signs appear after the decimal point, they will indicate how many decimal places will print.

If a comma is inserted between any of the number signs for the integer part of the number, then that number will be printed with commas inserted as needed. Most often you will insert commas every three characters for clarity, but only one is needed to cause the option to go into effect.

If the actual number turns out to be too large for the space that you allotted it, a field of asterisks (*) will appear. This field will exactly fill up the space that you gave to the number.

Some examples of numeric print formatting are given below:

<u>Formatting String</u>	<u>Number</u>	<u>Characters Output</u>
###	12.5	13
###,###.##	1234.674	1,234.67
###.	-5.25	- 5.
###.##	999.995	***.**

Note that the last example prints overflow because, after rounding, the number is larger than can fit in the space allotted.

Statement: Setup the random number generator.

Format: RANDOMIZE

Description: this statement initializes the random number generator to a random value. This statement only works if the user has done an INPUT since the last RANDOMIZE statement.

Statement: Read data

Format: READ <any var> [,<any var>...]

Description: this statement loads the next values from the DATA statements into the variables listed. If all of the data in the DATA statements has been exhausted, then an OUT OF DATA error may occur. Also, if the type (string or floating point) of the next data does not match up with the type of the variable- you may get a TYPE MISMATCH ERROR.

If the ERROR statement was used to setup a line number to branch to in case of one of these errors, then that error handling routine will take control rather than BASICs normal error handler.

Statement: Restore the data pointer

Format: RESTORE [<line number>]

Description: this statement resets the data pointer to the start of the program or to the line number (if specified). The next READ statement will read the first data after this point in the program.

Statement: Resume execution after error handling routine

Format: RESUME [<line number>]

Description: this statement must be used at the end of any error handling routine that you may have. Refer to the ERROR statement's reference sheet for more information regarding error handling.

If the optional line-number is not supplied, then BASIC restarts execution at the line following the one that caused the error. If the line number is present, then execution resumes at that line number.

Statement: Remark

Format: REM <comment>
or
* <comment>

Description: this statement causes no operation in BASIC.
The line is totally ignored up to the next carriage return.
(A colon will not terminate a REM statement.)

Statement: Return from subroutine

Format: RETURN

Description: this statement marks the end of a BASIC subroutine. It will cause a branch to the statement after the GOSUB which corresponds to this RETURN.

Function: Right part of string

Format: RIGHT\$(<string expr>,<expr>)

Description: this function returns the right-most character of the string expression listed. The number of characters returned is given by the second expression unless the string expression has a length less than this. If that is the case then the length of the string returned is equal to the length of the string expression.

Function: Random number

Format: RND(<expr>)

Description: this function returns a pseudo-random number in the range of 0 to the expression listed. The sequence of random numbers can be changed using the RANDOMIZE statement.

Function: Sign of expression

Format: SGN(<expr>)

Description: this function returns 1 if the expression is positive, 0 if the expression is zero, and -1 if the expression is negative.

Function: Sine

EXTENDED FN

Format: SIN(<expr>)

Description: this function returns the sine of the expression. The expression given must be expressed in radians.

Statement: Stop

Format: STOP

- . Description: this statement will cause program execution to halt, and the user will be returned to choose an option. Several stop statements can be in a program while only one END statement can be.

Function: Square root

EXTENDED FM

Format: SQR(<expr>)

Description: this function returns the square root of the expression. If the expression is negative, an overflow error will result.

Function: String representation of an expression

Format: STR\$(<expr>)

Description: this function returns a string which is the exact representation of the given floating point expression. This function is just the opposite of VAL. The string is filled with the same characters that would be used if the expression were to be printed.

**** IMPORTANT NOTICE ****

THE STR\$ FUNCTION CANNOT BE USED IN ANY PRINT STATEMENTS.

Function: Create multi-character string

Format: STRING\$(*<expr>*,*<expr>*)

Description: this function returns a string with the length given by the first expression. All of the characters of the string are equal to CHR\$(*<second expr>*). Note that the first expression has the limits of 0 to 255 and the second expression has the bounds of 32 to 127.

Statement: Swap two variables

Format: SWAP <var>,<var>

or

SWAP <string var>,<string var>

Description: this statement transfers the contents of the first variable to the second, and at the same time transfers the contents of the second variable to the first.

Function: Tangent

EXTENDED FN

Format: TAN(<expr>)

Description: this function returns the tangent of the expression. The expression is assumed to be in radians.

Function: Value of string

Format: VAL(<string expr>)

Description: this function returns a number which represents the string expression given. For example, the function VAL("4.5") would return the NUMBER 4.5. Naturally, you can have operations in the string which will be evaluated before the conversion.

One note of caution: the VAL function will not operate properly if any of the following functions are used in the expression: ASC, INSTR, or LEN.

Function: Variable pointer

Format: VARPTR(<any var>)

Description: this function returns the address where the specified variable is stored. This function is usually used inside the CALL function to pass the address to an assembly language subroutine.

The address returned is that of the first byte of a floating point variable or that of the last byte of a three byte parcel containing information about a string variable. This three byte area (of which VARPTR will return the address of the last byte) contains the address that the string is stored at (in the string storage area) and the length of the string. The address is first, using two bytes, and the length is the third byte.

This function is only meant for use by advanced users of BASIC, and no further information will be supplied about it by the factory.

— — —
—

Statement: Wait for input port

Format: WAIT <expr>,<expr> [,<expr>]

Description: this statement will pause until the specified input port's data meets certain criteria. The first expression gives the number of the extended input port to be accessed. The second expression gives a value to be ANDed with this input. The third expression (if present) will be exclusive-ORed with the data prior to the ANDing operation.

BASIC will not proceed until the results of the above operations are non-zero. In effect, the third expression can set bits which must be low to pass (as long as those bits are also tested with the second expression). The second expression masks off any bits that are not to be tested, and at least one bit that is tested by this argument must be high in order to procede.

5. Program Listing

This section contains the program listing for 12K BASIC.

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0000	0000						ORG	2222	
0001	0000						EXEC	STRT	
0002	0000					R0	ECU	0	
0003	0000					R1	ECU	1	
0004	0000					R2	ECU	2	
0005	0000					R3	ECU	3	
0006	0000					PC	ECU	0	
0007	0000					OT	ECU	1	
0008	0000					IT	ECU	2	
0009	0000					UN	ECU	3	
0010	0000					NE	ECU	02	
0011	0000					IE	ECU	01	
0012	0000					GE	ECU	02	
0013	0000					Z	ECU	0	
0014	0000					N	ECU	2	
0015	0000					CH	ECU	1	
0016	0000					CH	ECU	2	
0017	0000					CVF	ECU	4	
0018	0000					WC	ECU	0	
0019	0000					RS	ECU	12	
0020	0000					CP	ECU	02	
0021	0000					LF	ECU	2A	
0022	0000					ESC	ECU	13	
0023	0000					BS	ECU	0	
0024	0000					CCOPY	ECU	12	
0025	0000					*			
0026	0000					*			
0027	0000					STRT	BCTA,UN	ZSET	
0028	0000					RESTART	LATA	5A	
0029	0000					IPST	DATA	5D	
0030	0000					VARST	DATA	5E	
0031	0000					ENDRAM	DATA	60	
0032	0000					PRINT	RECO,UN		
0033	0000					RES		2	
0034	0000					TABEND	RES	2	
0035	0000					*			
0036	0000					BASIC	LODI,R0	2	
0037	0000					LFSL			
0038	0000					LODR,R0	ENDRAM		
0039	0000					STPA,R0	SE		
0040	0000					LODR,R0	RESTART		
0041	0000					STPA,R0	DATENT		
0042	0000					LODR,R0	TEST		
0043	0000					STPA,R0	CTEMP		
0044	0000					STPA,R0	STROES		
0045	0000					STPA,R0	PIATA		
0046	0000					STPA,R0	FWAIT		
0047	0000					STPA,R0	INON		
0048	0000					STPA,R0	SE-1		
0049	0000					STPA,R0	DATENT-1		
0050	0000					STPA,R0	DOLFOR		
0051	0000					STPA,R0	CTEMP-1		
0052	0000					BASIC2	STPA,R1		
0053	0000					BASIC1	STPA,R1	*CTEMP-	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0056	0000					BRNR,R1	BASIC1		
0057	0000					LODA,R1	CTEMP		
0058	0000					ADDI,R1	1		
0059	0000					STPA,R1	CTEMP		
0060	0000					COMA,R1	VARST		
0061	0000					BCTR,LT	BASIC2		
0062	0000					BSTA,UN	FRASE		
0063	0000					LODI,R3	0		
0064	0000					BSTA,UN	DEOSP		
0065	0000					BSTA,UN	BEGIN		
0066	0000					BCTA,UN	OPTION		
0067	0000					*			
0068	0000					SHLIN	BSTA,UN	LFOR	
0069	0000					SHLIN2	BRNR,R2	SHLIN3	
0070	0000					LODI,R0			
0071	0000					BSTA,UN	WRT		
0072	0000					SHLIN3	SUBI,P2	1	
0073	0000					LODR,R0	*SHPNT		
0074	0000					BSTA,UN	CHOCR		
0075	0000					COMI,R0	LF		
0076	0000					BCTR,EC	SHLIN4		
0077	0000					BSTA,UN	WRT		
0078	0000					LODR,R0	SHPNT-1		
0079	0000					ADDI,R0	1		
0080	0000					STRR,R0	SHPNT-1		
0081	0000					BCTR,EC	SHLIN2		
0082	0000					LODR,R0	SHPNT		
0083	0000					ADDI,R0	1		
0084	0000					STRR,R0	SHPNT		
0085	0000					BCTR,UN	SHLIN2		
0086	0000					BSTA,UN	LVCP		
0087	0000					BCTR,UN	SHLIN5		
0088	0000					*			
0089	0000					*			
0090	0000					SHPNT	RES	2	
0091	0000					*			
0092	0000					*			
0093	0000					SAVING	LODA,R0	INPT	
0094	0000					STRR,R0	SHPNT		
0095	0000					LODA,R0	INPT-1		
0096	0000					STRR,R0	SHPNT-1		
0097	0000					FITC,UN			
0098	0000					*			
0099	0000					*			
0100	0000					RTNADR	RES	2	
0101	0000					*			
0102	0000					*			
0103	0000					EXEC	STRR,R0	RTNADR	
0104	0000					STRR,R1	RTNADR-1		
0105	0000					LODA,R0	*INPT		
0106	0000					COMI,R0			
0107	0000					BCTR,EC	REM		
0108	0000					BSTA,UN	SAVING		
0109	0000					BSTA,UN	GETLIN		

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
2111	2045	24	46				LODI,R0	*COMTBL	
2112	2047	25	47				LODI,R1	COMTBL	
2113	2049	3F	4F	F7			BCTA,UN	LOOKUP	
2114	204C	3F	4F	13			BCTA,EO	LET	
2115	204E	3F	4F	14			STRA,R0	DODST	
2116	2050	3F	4F	14			STRA,R1	DODST-1	
2117	2054	1F	E4	D4			BCTA,UN	*DODST	
2118	2056								
2119	2058								
2120	205B	3F	4F	01			ERASEB	BSTA,UN	EPAGE
2121	205E	1F	31	A3			BCTA,UN	NITLIN	
2122	205F								
2123	2061								
2124	2065	3F	32	0F			POKE	BSTA,UN	EVAL
2125	2068	3F	32	0E			BSTA,UN	ENS	
2126	206A	3F	32	0E			BSTA,UN	STRUCT	
2127	206C	3F	46	46			BSTA,UN	*KPCOM	
2128	206E	3F	32	0F			BSTA,UN	EVAL	
2129	2070	3F	22	07			BSTA,UN	ENS1B	
2130	2072	0F	03	4F			STRA,R1	*CTEMP	
2131	2074	1F	31	A7			BCTA,UN	NITLIN	
2132	2076								
2133	2078								
2134	207F	3F	32	0F			GOSUB	BSTA,UN	FNDLIN
2135	2080	00	43	07			BCTA,EO	INFER	
2136	2082	0F	11	00			LODA,R3	CINPT-1	
2137	2084	3F	32	09			BSTA,UN	DECSP	
2138	2086	0F	11	0F			LODA,R3	CINPT	
2139	2088	3F	30	09			BSTA,UN	DECSP	
2140	208A	27	02				LODI,R3	2	
2141	208C	3F	32	09			BSTA,UN	DECSP	
2142	208E	1F	A2	02			BCTA,UN	*RTNADR	
2143	2090								
2144	2092								
2145	2095	3F	30	01			RETURN	BSTA,UN	INCSP
2146	2098	07	02				COMI,R3	2	
2147	209A	00	46	70			BCTA,EO	WESTER	
2148	209C	3F	30	01			BSTA,UN	INCSP	
2149	209E	0F	11	04			STRA,R2	INPT	
2150	20A0	3F	30	01			BSTA,UN	INCSP	
2151	2121	0F	11	05			STRA,R3	INPT-1	
2152	2124	1F	46	3A			BCTA,UN	SKFLIN	
2153	2127								
2154	2129								
2155	212F	3F	32	53			PESTOR	BSTA,UN	FNDLIN
2156	213A	1F	43	07			BCTA,LT	INFER	
2157	213E	10	13				BCTF,GT	REST2	
2158	2140	20	11	04			LODA,R0	INPT	
2159	2142	0F	11	05			LODA,R1	INPT-1	
2160	2144	00	1F				REST1	STPR,R0	DATPNT
2161	2147	09	14				STPR,R1	DATPNT-1	
2162	2149	3F	31	01			BSTA,UN	CRINPT	
2163	214B								
2164	214D	00	2F				STPR,R2	PDATA	
2165	214F	1F	31	06			BCTA,UN	CINXTL	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
2166	2127	3F	31	06			REST2	BSTA,UN	CSINPT
2167	2129	20	20	03			LODA,R0	BSTART	
2168	212B	05	00				LODI,R1	0	
2169	212D	1B	69				BCTP,UN	REST1	
2170	212E								
2171	212E								
2172	2127	07	00				DATPNT	RES	2
2173	212E	22					PDATA	RES	1
2174	212F								
2175	212F								
2176	212F	3F	29	6E			FOR	BSTA,UN	GCVAR
2177	2132	00	46	34			BCTA,EO	N STR	
2178	2135	3F	30	6E			BSTA,UN	STRUCT	
2179	2138	02					STRZ,R2		
2180	2139	01					LODZ,R1		
2181	213A	03					STRZ,R3		
2182	213B	3F	30	D9			BSTA,UN	DECSP	PUSH VAR. LOCATION
2183	213E	02					LODZ,R2		
2184	213F	03					STRZ,R3		
2185	2140	3F	30	D9			BSTA,UN	DECSP	
2186	2143	0F	11	05			LODA,R3	INPT-1	
2187	2146	3F	30	D9			BSTA,UN	DECSP	PUSH INPT
2188	2149	0F	11	04			LODA,R3	INPT	
2189	214C	3F	30	D9			BSTA,UN	DECSP	
2190	214F	3F	46	*8			BSTA,UN	SLEFO	
2191	2152	3F	23	0F			BSTA,UN	EVAL	
2192	2155	00	46	34			BCTA,EO	NOSTR	
2193	2158	3F	21	10			BSTA,UN	FORCT	
2194	215B	04	48				LODI,R0	FORTEL	
2195	2160	25	30				LODI,R1	FORTEL	
2196	2163	3F	45	F7			BSTA,UN	LOOKUP	
2197	2166	00	31	B1			BCTA,EO	STNER	
2198	2169	05	01				COMI,R1	1	
2199	216C	00	31	B1			BCTA,EO	STNER	
2200	216A	3F	33	0F			BSTA,UN	EVAL	
2201	216D	00	46	34			BCTA,EO	NOSTR	
2202	2170	04	48				LODI,R0	FORTEL	
2203	2172	05	30				LODI,R1	FORTEL	
2204	2174	3F	45	F7			BSTA,UN	LOOKUP	
2205	2177	00	20				BCTA,EO	FOR2	
2206	2179	05	02				COMI,R1	2	
2207	217E	00	31	B1			BCTA,EO	STNER	
2208	217F	3F	33	0F			BSTA,UN	EVAL	
2209	2181	00	46	34			BCTA,EO	NOSTR	
2210	2184	10	03				BCTA,UN	FOR3	
2211	2186	3F	45	AC			BSTA,UN	PUSH1	
2212	2189	07	03				LODI,R3	3	
2213	218B	3F	30	D9			BSTA,UN	DECSP	
2214	218F	1F	31	A3			BCTA,UN	NITLIN	
2215	2191								
2216	2191								
2217	2191	00	00	00	02	NTEMP	RES	4	
2218	2195	00	00	00	02	NTEMP	RES	8	
2219	2199	00	00	00	02				
2220	2199	00	00	00	02				
2221	2199	00	00	00	02				
2222	2199	00	00	00	02	DTEMP	RES	8	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2211	22A1	27	22	70	27				
2212	22A2					*			
2213	22A3					*			
2214	22A4	2F	30	E1		NEXT	BSTA.UN	INCSP	
2215	22A5	17	23				COMI.R3	3	
2216	22A6	27	45	78			PCFA.FC	NEXTER	
2217	22A7	24	21				LODI.R0	DTIMP	POP STEP VALUE
2218	22A8	25	90				LODI.R1	ETEMP	
2219	22A9	37	31	55			BSTA.UN	POPFP	
2220	22B4	24	21				LODI.R0	NTEMP	POP TO VALUE
2221	22B5	25	95				LODI.R1	NTEMP	
2222	22B6	27	31	55			BSTA.UN	POPFP	
2223	22B7	25	F3				LODI.R1	FF	
2224	22B8	26	24				LODI.R2	4	
2225	22B9	27	32	F1		NEXT1	BSTA.UN	INCSP	PCP INPT. VAR LOC.
2226	22C0						LODI.R3		
2227	22C1	2D	21	91			STRA.R1	NTEMPS,4	
2228	22C2	2A	77				PCRA.P2	NEXT1	
2229	22C3	37	35	77			BSTA.UN	LOXVAP	
2230	22C4	16	03				PCRA.P2	NEXT1	
2231	22C5	18	45	70			PCRA.LT	TYFER	
2232	22C6	15	31	53			COMA.R0	NTEMPS+2	
2233	22C7	20	45	76			PCFA.FC	NEXTER	
2234	22C8	21	54				COMA.R1	NTEMPS+3	
2235	22C9	25	45	75			PCFA.FC	NEXTER	
2236	22D0	27	21	93		NEXTX	LODA.R0	NTEMPS+2	
2237	22D1	2D	21	94			LODA.R1	NTEMPS+3	
2238	22D2	27	31	38			BSTA.UN	PUSHFP	
2239	22D3	24	21				LODI.R0	ETEMP	
2240	22D4	25	90				LODI.R1	ETEMP	
2241	22D5	37	31	38			BSTA.UN	PUSHFP	
2242	22D6	27	3A	70			BSTA.UN	FEADD	
2243	22D7	27	45	E7			BSTA.UN	POPC2	
2244	22D8	25	25				LODI.R1	8	
2245	22D9	27	53	55		NEXT2	LODA.R1	CBUF2,-	
2246	22DA	27	E1	53			STRA.R1	*NTEMPS+2,1	
2247	22DB	2D	61	95			LODA.R1	NTEMP,1	
2248	22DC	27	73	50			STRA.R1	CBUF1,1	
2249	22DD	25	72				BRNR.P1	NEXT2	
2250	22DE	27	38	22			BSTA.UN	COMMON	
2251	22DF	2D	21	9F			LODA.R0	DTIMP+2	
2252	22E0	1A	31				PCRA.LT	NEXT3	
2253	22E1	E7	02				COMI.R3	LT	
2254	22E2	16	31				PCRA.FC	NEXT4	
2255	22E3	25	04			NEXT5	LODI.R1	4	
2256	22E4	27	41	51		NEXT5	LODA.R1	NTEMPS,-	
2257	22E5	23					STRZ.R3		
2258	22E6	37	3F	09			BSTA.UN	DFCSP	
2259	22E7	25	77				BRNR.P1	NEXT5	
2260	22E8	24	21				LODI.R0	NTEMP	
2261	22E9	25	95				LODI.R1	NTEMP	
2262	22EA	27	31	38			BSTA.UN	PUSHFP	
2263	22EB	24	21				LODI.R0	DTIMP	
2264	22EC	25	90				LODI.R1	ETEMP	
2265	22ED	37	31	38			BSTA.UN	PUSHFP	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2276	22F7	27	03				LODI.R3	3	
2277	22F8	37	32	19			BSTA.UN	DECSP	
2278	22F9	2C	01	91			LODA.R0	NTEMPS	
2279	22FA	CC	11	84			STRA.R0	INPT	
2280	22FB	CC	21	92			LODA.R0	NTEMPS+1	
2281	22FC	CC	11	85			STRA.R0	INPT+1	
2282	22FD	17	46	3A			BSTA.UN	SKPLIN	
2283	22FE	27	47			NEXT3	COMI.R3	GT	
2284	22FF	27	46	40		NEXT4	PCFA.FC	NITE	
2285	2300	37	46	40			BSTA.UN	SKPSP	
2286	2301	14	20				COMI.R0		
2287	2302	10	21	A*			PCFA.FC	NEXT	
2288	2303	37	32	13			BSTA.UN	DECTP	
2289	2304	1F	31	A3			BSTA.UN	NITLIN	
2290	2305					*			
2291	2306					*			
2292	2307	3F	03			PURGE	BSTR.UN	PURGES	
2293	2308	1F	31	A3			PCFA.UN	NITLIN	
2294	2309					*			
2295	230A	2C	00	05		PURGES	LODA.R0	VAPST	
2296	230B	CC	00	0A			STRA.R0	TABEND	
2297	230C	20					PCRA.R0		
2298	230D	CC	00	0B			STRA.R0	TABEND+1	
2299	230E	CC	00	0A			STRA.R0	*TABEND	
2300	230F	17					RETC.UN		
2301	2310					*			
2302	2311					*			
2303	2312	00	00	20		SWAPS	RES	2	
2304	2313					*			
2305	2314					*			
2306	2315	37	29	6E		SWAP	BSTA.UN	GCVAR	
2307	2316	1A	28				PCRA.LT	SWAPST	
2308	2317	1D	45	80			PCRA.CT	ARGER	
2309	2318	37	30	6E			BSTA.UN	STRCT	
2310	2319	37	45	48			BSTA.UN	SKPCOM	
2311	231A	37	29	6F			BSTA.UN	GCVAR	
2312	231B	2C	46	34			PCFA.IQ	NOSTR	
2313	231C	27	08				LODI.R3	8	
2314	231D	2C	06			SWAP2	STRR.R0	SWAPS	
2315	231E	09	6E				STRR.R1	SWAPS-1	
2316	231F	0F	02	60		SWAP3	LODA.R3	*SWAPS,-	
2317	2320	01					STRZ.R1		
2318	2321	0F	13	4E			LODA.R3	*CTEMP,1	
2319	2322	0F	12	60			STRA.R3	*SWAPS,1	
2320	2323	01					LODI.R1		
2321	2324	0F	12	4F			STRA.R3	*CTEMP,1	
2322	2325	5B	70				BRNR.R3	SWAF3	
2323	2326	1F	31	A3			BSTA.UN	NITLIN	
2324	2327	37	32	6E		SWAPST	BSTA.UN	STRCT	
2325	2328	37	46	48			BSTA.UN	SKPCOM	
2326	2329	37	29	6E			BSTA.UN	GCVAR	
2327	232A	27	45	74			PCFA.LT	NOSTR	
2328	232B	27	27				LODI.R3	3	
2329	232C	1E	59				PCRA.UN	SWAP2	
2330	232D					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0331	020F					*			
0332	020F	00				DCLFCR	RES	1	
0333	0209	00				PTYPE	RES	1	
0334	02A1	00				LPOS	RES	1	
0335	02A2	00				PUSP	RES	1	
0336	02A2	00	49	4E		USINGCL	ALIT		'USING.'
0337	02A7	00	2E						
0338	02A9	00	00	FF		DATA		0,0,FF	
0339	02A0					*			
0340	02A0					*			
0341	02A0	00	74			STRPUS	STRB,R1	PUSP	
0342	02A1	17				RETC,UN			
0343	02A0					*			
0344	02A0					*			
0345	02A0	04	FF			LPPINT	LODI,R0	FF	
0346	02B1	00	01			STRB,R0	PTYPE		
0347	02B3	10	13			BCTR,UN	PRNTAL		
0348	02B5					*			
0349	02B5					*			
0350	02B5	22				PRINT	LOPZ,R0		
0351	02B6	00	00			STRB,R0	PTYPE		
0352	02B8	24	FF			LODI,R0	FF		
0353	02BA	00	02	A7		STRA,R0	PUSP		
0354	02B0	3F	40	40		BSTA,UN	SKFSF		
0355	02B2	00	42			COMI,R0	'0'		
0356	02C7	10	24	20		BCTA,EQ	PRNTAT		
0357	02C0	3F	32	13		BSTA,UN	DECTP		
0358	02C8	04	2E			PRNTAL	LODI,R0	CR	
0359	02CA	20	22	9F		LODA,R3	DCLFCR		
0360	02C0	30	24	05		BSTA,EG	SENDIT		
0361	02C2	20				LOPZ,R0			
0362	02C1	00	02	0F		TRA,R0	DCLFCR		
0363	02C4	24	00			LODI,R0	USINGCL		
0364	02C6	20	A2			LODI,R1	USINGCL		
0365	02C0	3F	40	F7		BSTA,UN	LOCKUP		
0366	02C8	10	43	34		BCTA,EG	PUSING		PRINT USING
0367	02D0	00	01	04		PRINT2	LODA,R0	*INPT	
0368	02D1	04	20			COMI,R0	'0'		
0369	02D0	10	2F	00		BCTA,EG	PRNTCT		
0370	02D0	3F	31	00		BSTA,UN	CHKCR		
0371	02D0	10	31	A3		BCTA,EG	NXTLIN		
0372	02D0	3F	32	9F		BCTA,UN	EVAL		
0373	02D0	10	14			BCTR,LT	PRINT3		
0374	02D0	3F	00			BCTR,LT	PRINT4		
0375	02D0	3F	00	29		BSTA,UN	PRNTF		
0376	02D0	10	24	00		BCTA,UN	PRNTD		
0377	02D0	00	FF			PRINT4	LODI,R1	FF	
0378	02D0	3F	15			BCTR,UN	PRNTS		
0379	02D0	10	24	00		BCTA,UN	PRNTD		
0380	02D0	10	03	29		BCTA,EG	PRNTF		
0381	02D0	1A	00			BCTR,LT	PRNTS		
0382	02D0	04	40			PRINT3	LODI,R0	TABLIT	
0383	02D0	00	3E			LODI,R1	TABLIT		
0384	02D0	3F	40	F7		BSTA,UN	LOOKUP		
0385	02D0	00	31	B1		BCTA,EG	SYNER		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0386	02D0	1F	24	49		BCTA,UN	PRNTAB		
0387	02D2					*			
0388	02D2					*			
0389	02D2	3F	30	B1		PRNTS	BSTA,UN	INCSF	
0390	02D5	3F	30	B1		BSTA,UN	INCSF		
0391	02D8	00				LODI,R3			
0392	02D9	02				STRZ,R2			
0393	02D8	00				PRNTS2	LODZ,R2		
0394	02D8	10	00			BCTR,EG	PRNTS3		
0395	02D0	00	10	17		LODA,R2	*SF,-		
0396	02D0	3F	24	00		BSTA,UN	SENDIT		
0397	02D3	00	75			BDRR,R1	PRNTS2		
0398	02D5	03				PRNTS3	LODZ,R3		
0399	02D6	1F	30	00		BCTA,UN	INCSF2		
0400	02D9					*			
0401	02D9					*			
0402	02D9	3F	45	D9		PRNTF	BSTA,UN	POPC1	
0403	02D0	00	13	52		LODA,R0	CBUF1+2		
0404	02D0	3F	23	FB		BSTA,UN	PRTSOM		
0405	02D2	3F	2B	D9		PRNTF1	BSTA,UN	CILEN	
0406	02D5	00				LODZ,R0			
0407	02D6	00	04			BCTR,EG	PRNTF2		
0408	02D6	3F	24	03		BSTA,UN	SEND0		
0409	02D8	17				RETC,UN			
0410	02D0	00	13	00		PRNTF2	LODA,R2	CBUF1	
0411	02D0	1A	10			BCTR,LT	PRNTF3		
0412	02D1	00	13	51		LODA,R1	CBUF1+1		
0413	02D4	10	10			COMI,R1	10		
0414	02D6	10	20	00		BCTA,GT	PRTEXP		
0415	02D9	3F	20	11		PRNTF4	BSTA,UN	CIGET	
0416	02D0	10				RETC,GT			
0417	02D1	14				RETC,EG			
0418	02D1	03				STRZ,R3			
0419	02D0	00	00			BRNR,R1	PT4A		
0420	02D1	04	20			LODI,R0			
0421	02D0	3F	24	00		BSTA,UN	SENDIT		
0422	02D6	A0	01			PT4A	SUBI,R1	1	
0423	02D8	03				LODZ,R3			
0424	02D9	3F	24	03		BSTA,UN	SEND0		
0425	02D0	10	00			BCTR,UN	PRNTF4		
0426	02D0	00	13	51		PRNTF3	LODA,R2	CBUF1+1	
0427	02D1	14	00			COMI,R0	1		
0428	02D3	00	02			BCTR,EG	PT3A		
0429	02D3	04	10			LODI,R0	10		
0430	02D7	04	66			PT3A	ADDI,R0	00	
0431	02D9	00				ADDZ,R2			
0432	02D0	04				DAP,R0			
0433	02D0	04	12			COMI,R0	12		
0434	02D0	10	10			BCTR,GT	PRTEXP		
0435	02D0	04	20			LODI,R0			
0436	02D1	3F	24	05		BSTA,UN	SENDIT		
0437	02D4	00	13	51		LODA,R1	CBUF1+1		
0438	02D7	00	00			PT3D	BRNR,R1	PT3B	
0439	02D9	3F	20	11		PT3C	BSTA,UN	CIGET	
0440	02D0	15				RETC,GT			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2441	2301	14					RETC,R0		
2442	2301	37	24	C3			BSTA,UN	SEND0	
2443	2301	18	76				BSTA,UN	RETC	
2444	2301	04	30			PT3B	LODI,R0		
2445	2301	31	24	C5			BSTA,UN	SENDIT	
2446	2301	18	01				SUBI,R1		
2447	2301	18	01				BSTA,UN	RETC	
2448	2301	18	22	11		PRTEP	BSTA,UN	CIGET	
2449	2301	18	24	C1			BSTA,UN	SEND0	
2450	2301	18	20	27			LODI,R0	C*AX	
2451	2301	18	21				COMI,R0	1	
2452	2301	10	23	AP			LODI,R0	PRTE5	
2453	2301	24	21				LODI,R0		
2454	2301	31	24	C5			BSTA,UN	SENDIT	
2455	2301	18	20	11		PRTE2	BSTA,UN	CIGET	
2456	2301	04	27				LODI,R0	PRTE5	
2457	2301	04	37				LODI,R0	2	
2458	2301	31	24	C5			BSTA,UN	SENDIT	
2459	2301	18	74				BSTA,UN	PRTE2	
2460	2301	24	45			PRTE5	LODI,R0	F	
2461	2301	31	24	C5			BSTA,UN	SENDIT	
2462	2301	20	13	E0			LODI,R0	CRUF1	
2463	2301	18	27				BSTA,UN	PRTE6	
2464	2301	20	13	E1			LODI,R0	CRUF1-1	
2465	2301	18	01				SUBI,R0	1	
2466	2301	04					LODI,R0		
2467	2301	18	24	E0			COMI,R0	50	
2468	2301	08	27				LODI,R0	PRTE7	
2469	2301	04	70				LODI,R0	10	
2470	2301	20	13	E0			BSTA,UN	CRUF1	
2471	2301	20	13	E1		PRTE6	LODI,R0	CRUF1-1	
2472	2301	18	08				COMI,R0	50	
2473	2301	18	20				BSTA,UN	PRTE6	
2474	2301	04	57				ADDI,R0	57	
2475	2301	04					LODI,R0		
2476	2301	08	13	E1		PRTE7	BSTA,UN	CRUF1-1	
2477	2301	18	27				LODI,R0	PRTE9	
2478	2301	31	21	E0		PRTE6	BSTA,UN	PRTE1	
2479	2301	04	2A				LODI,R0		
2480	2301	31	24	C5			BSTA,UN	SENDIT	
2481	2301	24	2A				LODI,R0		
2482	2301	31	24	C5			BSTA,UN	SENDIT	
2483	2301	17					RETC,UN		
2484	2301	20	13	E0		PRTE9	LODI,R0	CRUF1	
2485	2301	31	23	FB			BSTA,UN	PRTEGN	
2486	2301	20	13	E1			LODI,R0	CRUF1-1	
2487	2301	01					STPZ,R2		
2488	2301	02					PRP,R0		
2489	2301	02					PRP,R0		
2490	2301	02					PRP,R0		
2491	2301	02					PRP,R0		
2492	2301	44	0F				ANDI,R0	F	
2493	2301	31	24	C3			BSTA,UN	SEND0	
2494	2301	02					LODI,R0		
2495	2301	44	0F				ANDI,R0	F	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2496	2301	31	24	C3			BSTA,UN	SEND0	
2497	2301	17					RETC,UN		
2498	2301					*			
2499	2301					*			
2500	2301	18	05			PRTEGN	BSTA,UN	PRTE2	
2501	2301	04	20			PRTE1	LODI,R0		
2502	2301	18	24	C5			BSTA,UN	SENDIT	
2503	2402	04	20			PRTE2	LODI,R0		
2504	2402	18	24	C5			BSTA,UN	SENDIT	
2505	2402					*			
2506	2402					*			
2507	2402	02				ATSTG	RIS	1	
2508	2402					*			
2509	2402					*			
2510	2402	31	33	9F		PRNTAT	BSTA,UN	EVAL	
2511	2402	31	28	9F			BSTA,UN	ENSIB	
2512	2402	18	10				COMI,R1	10	
2513	2402	18	45	74			BSTA,UN	OVFER	
2514	2402	01					LODI,R1		
2515	2402	10	45	74			BSTA,UN	OVFER	
2516	2402	18	01				SUBI,R1	1	
2517	2402	01	07				BSTA,UN	ATSTG	
2518	2402	31	40	40			BSTA,UN	SKPCOM	
2519	2402	31	30	9F			BSTA,UN	EVAL	
2520	2402	31	28	9F			BSTA,UN	ENSIB	
2521	2402	18	50				COMI,R1	50	
2522	2402	18	45	74			BSTA,UN	OVFER	
2523	2402	18	23				COMI,R1	0	
2524	2402	10	45	74			BSTA,UN	OVFER	
2525	2402	18	21				SUBI,R1	1	
2526	2402	18					LODI,R0		
2527	2402	27	08				PRP,R0	VC	
2528	2402	18					PRP,R0		
2529	2402	18					PRP,R0		
2530	2402	18					PRP,R0		
2531	2402	18					PRP,R0		
2532	2402	18					PRP,R0		
2533	2402	18					PRP,R0		
2534	2402	18					PRP,R0		
2535	2402	18					PRP,R0		
2536	2402	18					PRP,R0		
2537	2402	18					PRP,R0		
2538	2402	18					PRP,R0		
2539	2402	18					PRP,R0		
2540	2402	18					PRP,R0		
2541	2402					*			
2542	2402					*			
2543	2402	31	33	9F		PRNTAT	BSTA,UN	EVAL	
2544	2402	31	28	9F			BSTA,UN	ENSIB	
2545	2402	18					LODI,R1		
2546	2402	18					LODI,R1		
2547	2402	31	24	AD		TAE1	BSTA,UN	GETPOS	
2548	2402	18					LODI,R0		
2549	2402	18					LODI,R1		
2550	2402	18					LODI,R1		

SUBI,R1 1 - - - 242A - A5 01
BCTA,N OVFER - 242C - IE 45 74
CPSL 01 - 242F - 75 01

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LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2551	2458	04	20				LODI,R0		
2552	245A	3F	24	C5			BSTA,UN	SENDIT	
2553	2451	03					LGIZ,R3		
2554	2451	00	74				BIPR,R0	TAB1	
2555	2450					*			
2556	2450					*			
2557	2459	3F	46	40		PRNTD	BSTA,UN	SEKSP	
2558	2453	1F	31	16			BSTA,UN	CBICN	
2559	2456	1C	A0	02			BSTA,EQ	*RTNADR	
2560	2459	E4	21				COMI,R0		
2561	2452	1C	45	3A			BSTA,EC	SEKPLIN	
2562	2452	E4	3B				COMI,R0		
2563	2450	1E	20				BCTR,EQ	PRNTD4	
2564	2472	E4	2C				COMI,R0		
2565	2454	9C	31	21			BSTA,EC	STNER	
2566	2477	3F	24	A3			BSTA,UN	GETPOS	
2567	247A	14	40				COMI,R0	40	
2568	247C	19	11				BCTR,GT	PRNTD5	
2569	247E	01					STRZ,R1		
2570	247F	A5	01				SUBI,R1	1	
2571	2481	01				PRNTD2	LODI,R1		
2572	2482	44	2F				ANDI,R0	F	
2573	2484	10	3C				BCTR,EC	PRNTD4	
2574	2485	04	20				LODI,R0		
2575	2488	3F	24	C5			BSTA,UN	SENDIT	
2576	248B	05	01				ADII,R1	1	
2577	248F	1B	72				BCTR,UN	PRNTD0	
2578	2491	3F	2E	55		PRNTD5	BSTA,UN	LPCR	
2579	2492	3F	32	12		PRNTD4	BSTA,UN	SEKPEC	
2580	2495	3F	31	BE			BSTA,UN	CHRCR	
2581	2498	9C	22	1E			BSTA,EC	PRINT2	
2582	2495	04	2F			PRNTD6	LODI,R0	FF	
2583	249C	0C	00	0F			STPA,R0	DOLFCR	
2584	24A2	1F	31	A3			BSTA,UN	NATLIN	
2585	24A3					*			
2586	24A3					*			
2587	24A3	2C	22	A0		GETPOS	LOIA,R0	PTYPE	
2588	24A0	18	24				BCTR,EC	GETDIS	
2589	24A5	0C	02	A1			LOIA,R0	LPOS	
2590	24A5	17					BCTR,UN		
2591	24A5	0D	01	C7		GETDIS	LOIA,R1	CURSOR	
2592	24A5	0C	01	C0			LOIA,R0	CURSCR+1	
2593	24B2	77	00				PPSL	WC	
2594	24B4	51					RRR,R1		
2595	24B5	50					RRR,R0		
2596	24B6	51					RRR,R1		
2597	24B7	50					RRR,R0		
2598	24B8	51					RRR,R1		
2599	24B9	50					RRR,R0		
2600	24BA	51					RRR,R1		
2601	24BB	50					RRR,R0		
2602	24BC	44	7F				ANDI,R0	7F	
2603	24BE	75	08				CPSL	WC	
2604	24C0	04	01				ADII,R0	1	
2605	24C0	17					RETC,UN		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2606	24C3					*			
2607	24C3					*			
2608	24C3	64	30			SENDE	IORI,R0	'0'	
2609	24C3	77	10			SENDIT	PPSL	RS	
2610	24C7	0C	02	A0			LOIA,R1	PTYPE	
2611	24CA	75	10				CPSL	RS	
2612	24CC	18	10				BCTR,EQ	SEND1	
2613	24CE	15	22				BCTR,GT	SEND3	
2614	24D0	E4	01				COMI,R0	CR	
2615	24D2	00	12				BCTR,EQ	SEND2	
2616	24D4	04	01				LODI,R0	1	
2617	24D6	0C	02	A1			STRA,R0	LPOS	
2618	24D9	04	3D				LODI,R0	CR	
2619	24DB	1F	20	07			BSTA,UN	PRNT	
2620	24DE	E4	0D			SEND1	COMI,R0	CR	
2621	24E0	1C	2E	55			BSTA,EC	LPCR	
2622	24E3	1F	2E	23			BSTA,UN	WRT	
2623	24E6	3F	20	07		SEND2	BSTA,UN	PRNT	
2624	24E9	0C	02	A1			LOIA,R0	LPOS	
2625	24EC	04	01				ADII,R0	1	
2626	24EE	0C	02	A1			STRA,R0	LPOS	
2627	24F1	17					RETC,UN		
2628	24F2	77	10			SEND3	PPSL	RS	
2629	24F4	01	1E	9E			LOIA,R1	TYP3SP	
2630	24F7	0D	1E	9E			STRA,R1	STR45+	
2631	24FA	0D	1E	9E			STRA,R1	TYP3SP	
2632	24FD	75	10				CPSL	RS	
2633	24FF	17					RETC,UN		
2634	2500					*			
2635	2500					*			
2636	2500	3F	31	FD		PRNTCT	BSTA,UN	INCPT	
2637	2503	3F	32	28			BSTA,UN	GETCHN	
2638	2506	E4	40				COMI,R0	40	
2639	2508	1F	45	74			BSTA,LT	OVFER	
2640	250B	E4	5F				COMI,R0	5F	
2641	250D	1F	45	74			BSTA,GT	OVFER	
2642	2510	44	1F				ANDI,R0	1F	
2643	2512	3F	24	C5			BSTA,UN	SENDIT	
2644	2515	1F	24	C0			BSTA,UN	PRNTD	
2645	2516					*			
2646	2518					*			
2647	2518	02				ERRTYP	RES	1	
2648	2519					*			
2649	2519					*			
2650	2519	0C	06	34		DATERR	LOIA,R0	ERRAIT	
2651	251C	1C	33	2E			BSTA,EC	ERROR	
2652	251F	0F	77				STRP,R3	ERRTYP	
2653	2521	0F	11	05			LOIA,R3	INPT+1	
2654	2524	3F	30	D9			BSTA,UN	DECSF	
2655	2527	0F	11	04			LOIA,R3	INPT	
2656	252A	3F	30	D9			BSTA,UN	DECSF	
2657	252C	07	02				LODI,R3	2	
2658	252F	3F	30	D9			BSTA,UN	DECSF	
2659	2532	0C	0F	32			LOIA,R0	ERRTN	
2660	2535	0C	11	04			STRA,R0	INPT	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2661	2578	2C	06	33			LODA,R0	IRPTN+1	
2662	257F	2C	11	5F			STPA,R0	INPT+1	
2663	257F	1F	A0	92			PCTA,UN	*RTNADR	
2664	2541					*			
2665	2541					*			
2666	2541	27	27			PDNLY	LODI,R3	NDIPIR	
2667	2543	15	54				BCTR,UN	DATERR	
2668	2545	07	2A			RITYPE	LODI,R3	TIFERR	
2669	2547	1E	50				BCTR,UN	LATERR	
2672	2549					*			
2671	2549					*			
2672	2549	2C	0F			ONSTG	RES	2	
2673	254E	24				INON	RES	1	
2674	254C					*			
2675	254C					*			
2676	254C	3F	33	9F		ON	BSTA,UN	EVAL	
2677	254F	3F	2B	9E			BSTA,UN	ENS	
2678	2552	09	75				STRR,R1	ONSTG	
2679	2554	02					LODI,R0		
2680	2555	9C	45	3A			BCTA,EG	SKFLIN	
2681	2556	01					LOIZ,R1		
2682	2559	1C	46	3A			BCTA,EG	SKPLIN	
2683	255C	24	47				LODI,R0	ONTBL	
2684	2553	05	FE				LODI,R1	ONTBL	
2685	2552	3F	45	F7			BSTA,UN	LOOKUP	
2686	2553	3C	31	B1			BCTA,EG	SYNER	
2687	2555	05	F2				STRR,R1	ONSTG+1	
2688	2558	08	F3				LODI,R1	ONSTG	
2689	255A	15	01			ON1	COMI,R1	1	
2690	255C	18	2F				BCTR,EG	ON2	
2691	2561	3F	32	28		ON1B	BSTA,UN	GETCHR	
2692	2561	3F	31	36			BSTA,UN	CHOCR	
2693	2574	1C	A2	92			BCTA,EG	*RTNADR	
2694	2577	14	2C				COMI,R0		
2695	2579	08	73				BCTR,EG	ON1B	
2696	2573	15	6D				BCTR,R1	ON1	
2697	2577	24	FF			ON2	LODI,R0	FF	
2698	2577	05	4A				STRR,R0	INON	
2699	2581	05	47				LODI,R1	ONSTG+1	
2700	258C	05	65	92			LODI,R1	ONPTR,I	
2701	2586	0C	14	D4			STPA,FP	DODST	
2702	2586	0C	14	D2			ICDA,R1	ONPTR,+	
2703	2587	0C	14	D5			STPA,R0	DODST+1	
2704	2583	1F	B4	D4			BCTA,UN	*DODST	
2705	2582					*			
2706	2582					*			
2707	2582	43	B1	28	D6	ONPTR	ACON	GOTO,GOSUB,RESTOR,EXIT,ERRORC,RESUME	
2708	2586	21	27	25	F7				
2709	258A	26	35	44	1A				
2710	258E					*			
2711	258E					*			
2712	258E	3F	33	9F		IF	BSTA,UN	EVAL	
2713	25A1	9C	45	3A			BCTA,EG	MOSTR	
2714	25A4	3F	45	28			BSTA,UN	POPC1	
2715	25A7	0C	13	53			LODA,R0	CBUF1-3	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2716	25AA	18	13				BCTR,EG	IFELSY	0-FALSE
2717	25AC	04	47				LODI,R0	IFTEL	
2718	25AF	05	FE				LODI,R1	IFTEL	
2719	25B2	3F	45	F7			BSTA,UN	LOOKUP	
2720	25B3	98	04				BCTR,EG	IFTHEN	
2721	25B5	01					LOIZ,R1		
2722	25B5	9C	31	B1			BCTA,EG	SYNER	
2723	25B9	3F	32	B3		IFTHEN	BSTA,UN	FNDLIN	
2724	25BC	1F	A0	92			BCTA,UN	*RTNADR	
2725	25BF	3F	32	28		IFELSE	BSTA,UN	GETCHR	
2726	25C7	14	3A				COMI,R0		
2727	25C4	18	13				BCTR,EG	ELSE2	
2728	25C6	14	0D				COMI,R0	CB	
2729	25C8	98	7F				BCTR,EG	IFELSE	
2730	25CA	3F	32	10			BSTA,UN	SKPDEC	
2731	25CD	04	47				LODI,R0	ELSTBL	
2732	25CF	05	F6				LODI,R1	ELSTBL	
2733	25D1	3F	45	F7			BSTA,UN	LOOKUP	
2734	25D4	1E	A0	92			BCTA,LT	*RTNADR	
2735	25D7	1B	60				BCTR,UN	IFTHEN	
2736	25D9	3F	32	10		ELSE2	BSTA,UN	SKPDEC	
2737	25DC	04	47				LODI,R0	ELSTBL	
2738	25DE	05	F6				LODI,R1	ELSTBL	
2739	25E7	3F	45	F7			BSTA,UN	LOOKUP	
2740	25E3	9A	5A				BCTR,EG	IFELSE	
2741	25E5	1B	52				BCTR,UN	IFTHEN	
2742	25E7					*			
2743	25E7					*			
2744	25E7	2F	98	D7		EXIT	LODA,R3	*SP	
2745	25FA	E7	03				COMI,R3	3	
2746	25FC	9C	43	B1			BCTA,EO	GOTO	
2747	25FF	06	17				LODI,R2	17	
2748	25F1	3F	30	B1		EXIT1	BSTA,UN	INCSP	
2749	25F4	FA	7E				BCTR,R2	EXIT1	
2750	25F6	1B	6F				BCTR,UN	EXIT	
2751	25F8					*			
2752	25F8					*			
2753	25F8	3F	33	9F		WAIT	BSTA,UN	EVAL	
2754	25F8	3F	2B	97			BSTA,UN	ENS1B	
2755	25FE	09	26				STRR,R1	WAIT4+1	
2756	2600	3F	46	48			BSTA,UN	SEPCOM	
2757	2603	3F	33	9F			BSTA,UN	EVAL	
2758	2606	3F	2B	97			BSTA,UN	ENS1B	
2759	2609	CD	13	4E			STRR,R1	CTEMP	
2760	260C	3F	32	10			BSTA,UN	SKPDEC	
2761	260F	14	2C				COMI,R0		
2762	2611	98	2D				BCTR,EG	WAIT2	
2763	2613	3F	31	FD			BSTA,UN	INOPT	
2764	2616	3F	33	9F			BSTA,UN	EVAL	
2765	2619	1C	25				BCTR,GT	WAIT2	
2766	261B	3F	2B	97			BSTA,UN	ENS1B	
2767	261D	1B	82				BCTR,UN	WAIT3	
2768	2622	2F	00			WAIT2	LODI,R1	0	
2769	2622	CD	13	4F		WAIT3	STRR,R1	CTEMP+1	
2770	2625	14	00			WAIT4	REDE,R0	0	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0771	2627	20	12	4F			BCFA,R0	CTEMP+1	
0772	2628	40	13	4E			ANEA,R0	CTEMP	
0773	2629	90	31	A3			BCFA,EO	NITLIN	
0774	2630	19	73				BCTR,UN	WAIT4	
0775	2631					*			
0776	2632					*			
0777	2633	07	00			FRPTN	RES	2	
0778	2634	20				ERWAIT	RES	1	
0779	2635					*			
0780	2636					*			
0781	2637	3F	32	B3		ERROR	BSTA,UN	FNCLIN	
0782	2638	1E	43	B7			BCTA,LT	LNFER	
0783	2639	19	14				PCTR,GT	ENF	
0784	2640	00	11	B4			LODA,R0	INPT	
0785	2641	08	72				STRR,R0	ERRTN	
0786	2642	00	11	B5			LODA,R0	INPT+1	
0787	2643	08	60				STRR,R0	ERRTN+1	
0788	2644	24	FF				LODI,R0	FF	
0789	2645	08	69				STRR,R0	E WAIT	
0790	2646	3F	31	G1			BSTA,UN	CRINPT	
0791	2647	1F	31	C6			BCTA,UN	CKNITL	
0792	2648	20				ENF	ICRZ,R0		
0793	2649	08	60				STRR,R0	ERWAIT	
0794	2650	1F	31	C6			BCTA,UN	CKNITL	
0795	2651					*			
0796	2652					*			
0797	2653	3F	35	77		DEF	BSTA,UN	LOKVAR	
0798	2654	00	45	80			BCTA,GT	ACER	
0799	2655	3F	29	F0			BSTA,UN	GETHA	
0800	2656	1E	FF				COMI,R1	FF	
0801	2657	10	31	B1			BCTA,EO	SYNER	
0802	2658	14	70				COMI,R0		
0803	2659	00	31	B1			BCFA,EO	SYNER	
0804	2660	26	22				LODI,R2	2	
0805	2661	07	04				LODI,R3	4	
0806	2662	1F	2A	1D			BSTA,UN	GCSUB	
0807	2663	00	11	B4			LODA,R0	INPT	
0808	2664	3F	37	A7			BSTA,UN	PSHOP1	
0809	2665	00	11	B5			LODA,R0	INPT+1	
0810	2666	3F	30	A7			BSTA,UN	PSHOP1	
0811	2667	3F	29	CD			BSTA,UN	PSHEND	
0812	2668	1F	46	3A			BCTA,UN	SKFLIN	
0813	2669					*			
0814	2670					*			
0815	2671	3F	75	77		DIM	BSTA,UN	LOKVAR	
0816	2672	00	45	80			BCFA,GT	ACER	
0817	2673	24	FF				LODI,R0	FF	
0818	2674	00	2A	30			STRR,R0	GCDIMS	
0819	2675	3F	29	70			BSTA,UN	CCV	
0820	2676	1E	45	80			BCTA,GT	ARGER	
0821	2677	3F	32	10			BSTA,UN	SKPDEC	
0822	2678	14	20				COMI,R0		
0823	2679	00	31	A3			BCFA,EO	NITLIN	
0824	2680	3F	31	FD			BCTA,UN	INCPY	
0825	2681	13	62				BCTR,UN	DIM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0826	26A1					*			
0827	26A1					*			
0828	26A1					CMSTRS	RES	100	
0829	27A1					*			
0830	27A1	00	00			INSTG	RES	2	
0831	27A3					*			
0832	27A3					*			
0833	27A3	0F	02	9F		INPUT	LODA,R3	DOLFCR	
0834	27A6	3C	2E	5E			BSTA,EO	LFCE	
0835	27A9	20					ICRZ,R0		
0836	27AA	00	02	9F			STRR,R0	DOLFCR	
0837	27AD	2F	46	40			BSTA,UN	SKFSP	
0838	27B0	3F	31	BC			BSTA,UN	CHKOP	
0839	27B3	98	03				BCTR,EO	INPUTA	
0840	27B5	3F	2E	E2			BSTA,UN	PAUSE	
0841	27B8	14	1B				COMI,R0	ESC	
0842	27BA	1C	42	A0			BCTA,EO	OPTION	
0843	27BD	1F	40	92			BCTA,UN	*RTNADR	
0844	27C0	14	22			INPUTA	COMI,R0		
0845	27C2	08	26				BCFR,EO	INPUT1	
0846	27C4	00	G1	84		INPUT2	LODA,R0	*INPT	
0847	27C7	11	31	B1			BCTA,LT	SYNER	
0848	27CA	3F	21	FD			BSTA,UN	INCPY	
0849	27CD	14	0D				COMI,R0	CR	
0850	27CF	1C	31	B1			BCTA,EO	SYNER	
0851	27D2	14	0A				COMI,R0	LF	
0852	27D4	1C	31	B1			BCTA,EO	SYNER	
0853	27D7	14	22				COMI,R0		
0854	27D9	58	0A				BCFR,EO	INPUT2	
0855	27DB	3F	46	40			BSTA,UN	SKFSP	
0856	27DE	14	3B				COMI,R0		
0857	27E0	90	31	B1			BCFA,EO	SYNER	
0858	27E3	1E	0E				BCTR,UN	INPUT3	
0859	27E5	3F	2E	23		INPUT2	BSTA,UN	WRT	
0860	27E8	18	5A				BCTR,UN	INPUT0	
0861	27EA	3F	37	13		INPUT1	BSTA,UN	DICPT	
0862	27ED	04	3F				LODI,R0		
0863	27EF	3F	2E	23			BSTA,UN	WRT	
0864	27F2	3F	2E	21		INPUT3	BSTA,UN	WRBL	
0865	27F5	3F	31	86			BSTA,UN	CSINPT	
0866	27F8	3F	32	7F		INPUT3A	BSTA,UN	AROWCB	
0867	27FB	3F	28	81			BSTA,UN	SWTCH	
0868	27FE	3F	29	6F		INPNIT	BSTA,UN	CCVAR	
0869	2801	1A	1C				BCTA,LT	INPSTR	
0870	2803	1F	03				BCTR,EO	INFPPT	
0871	2805	1F	51	A3			BCTA,UN	NITLIN	
0872	2809	3F	30	6E		INFPPT	BSTA,UN	STRCT	
0873	280B	3F	26	81			BSTA,UN	SWTCH	
0874	280E	3F	37	9F			BSTA,UN	FVAL	
0875	2811	90	26	76			BCFA,EO	INPERR	
0876	2814	3F	2F	18			BSTA,UN	POPCT	
0877	2817	13	37				BCTP,UN	INPDEL	
0878	2819	3F	12	5E		INPSTR	BSTA,UN	STRCT	
0879	281C	3F	27	E7			BSTA,UN	ZSTR	
0880	281F	3F	28	81			BSTA,UN	SWTCH	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
0001	0002	2F	30	10			BSTA,UN	SKPDEC	
0002	0005	14	22				COMI,R0		
0003	0007	10	07				BCTB,EQ	INPST2	
0004	0008	25	FF				LODI,R2	FF	
0005	0009	07	01	B4		INIST0	LODA,R0	*INFT	
0006	0009	14	01				COMI,R0	CP	
0007	0009	14	12				BCTB,EQ	INPST1	
0008	0009	14	14				COMI,R0	IF	
0009	0009	10	07				BCTB,EQ	INPST1	
0010	0009	14	00				COMI,R0		
0011	0009	10	0A				BCTB,EQ	INPST1	
0012	0009	10	06	A1			STRA,R0	CMSTPS,+	
0013	0009	10	01	FD			BCTA,UN	INOPT	
0014	0009	10	09				BCTB,UN	INPST0	
0015	0009	10	01			INPST1	LODI,R2	1	
0016	0009	14	28				LODI,R0	CMSTRS	
0017	0009	25	A1				LODI,R1	CMSTRS	
0018	0009	10	12	F2			BCTA,UN	PUSHT	
0019	0009	10	0B	32			BCTA,UN	STPIMG	
0020	0009	10	08				BCTB,UN	INPDEL	
0021	0009	10	00	5F		INPST2	BCTA,UN	EVAL	
0022	0009	10	01				BCTB,LT	INPERR	
0023	0009	10	0B	32			BCTA,UN	STPIMG	
0024	0009	10	00	01		INPDEL	BCTA,UN	SWTCH	
0025	0009	10	00	12			BCTA,UN	SKPDEC	
0026	0009	14	00				COMI,R0		
0027	0009	10	11	A3			BCTA,EQ	WTLIN	
0028	0009	10	11	0D			BCTA,UN	INOPT	
0029	0009	10	00	01			BCTA,UN	SWTCH	
0030	0009	10	00	42			BCTA,UN	SKPSP	
0031	0009	14	00				COMI,R0		
0032	0009	10	00	00			BCTB,EQ	INPERR	
0033	0009	10	00	01			BCTA,UN	SWTCH	
0034	0009	10	00	FF			BCTA,UN	INPNXT	
0035	0009	10	00	01		INPERR	BCTA,UN	GRINFT	
0036	0009	07	24				LODI,R3	WRTMSG	
0037	0009	10	00	00			BCTA,UN	WRTMCR	
0038	0009	10	00	00			BCTA,UN	INFT3A	
0039	0009					*			
0040	0009					*			
0041	0009	10	12	A5		SWTCH	LODA,R0	BTEMP	
0042	0009	10	11	04			LODA,R1	INFT	
0043	0009	10	11	04			STRA,R0	INFT	
0044	0009	10	11	04			STRA,R1	BTEMP	
0045	0009	10	11	04			STRA,R1	BTEMP-1	
0046	0009	10	11	04			LODA,R1	INFT-1	
0047	0009	10	11	04			STRA,R0	INFT-1	
0048	0009	10	11	04			STRA,R1	BTEMP-1	
0049	0009	10	11	04			BCTB,UN		
0050	0009					*			
0051	0009					*			
0052	0009	10	11	04		RBUFF	ACON	RBUFF	
0053	0009					*			
0054	0009					*			
0055	0009	10	11	04		RANDOM	LODA,R0	NEWSED	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
0056	0009	10	11	04			STRA,R0	*RBUFF	
0057	0009	10	11	04			BCTA,UN	WTLIN	
0058	0009					*			
0059	0009					*			
0060	0009	10	11	04		MIDSTG	RES	7	
0061	0009	10	11	04					
0062	0009					*			
0063	0009					*			
0064	0009	10	11	04		MID5	BCTA,UN	GOVAR	
0065	0009	10	11	04			BCTA,LT	NOSTR	
0066	0009	10	11	04			BCTA,UN	STRICT	
0067	0009	10	11	04			LODI,R2	3	
0068	0009	10	11	04			LODI,R3	5	
0069	0009	10	11	04		MID1	LODA,R2	*CTEMP,-	
0070	0009	10	11	04			STRA,R3	MIDSTG,-	
0071	0009	10	11	04			BRNR,R2	MID1	
0072	0009	10	11	04			BCTA,UN	SKPCOM	
0073	0009	10	11	04			BCTA,UN	EVAL	
0074	0009	10	11	04			BCTA,UN	ENS1B	
0075	0009	10	11	04			LODI,R1		
0076	0009	10	11	04			BCTA,EQ	OFFER	
0077	0009	10	11	04			STPR,R1	MIDSTG	
0078	0009	10	11	04			LODI,R1	FF	
0079	0009	10	11	04			BCTA,UN	SKPSP	
0080	0009	10	11	04			COMI,R0		
0081	0009	10	11	04			BCTB,EQ	MID2	
0082	0009	10	11	04			COMI,R0		
0083	0009	10	11	04			BCTA,EQ	SYNER	
0084	0009	10	11	04			BCTA,UN	EVAL	
0085	0009	10	11	04			BCTA,UN	ENS1B	
0086	0009	10	11	04			BCTA,UN	SKPSP	
0087	0009	10	11	04			COMI,R0		
0088	0009	10	11	04			BCTA,EQ	SYNER	
0089	0009	10	11	04		MID2	BCTA,UN	SKPEQ	
0090	0009	10	11	04			STRA,R1	MIDSTG-1	
0091	0009	10	11	04			BCTA,UN	EVAL	
0092	0009	10	11	04			BCTA,LT	NOSTR	
0093	0009	10	11	04			BCTA,UN	INCSF	
0094	0009	10	11	04			BCTA,UN	INCSF	
0095	0009	10	11	04			LODA,R1	MIDSTG-4	
0096	0009	10	11	04			BCTA,EQ	MID77	
0097	0009	10	11	04			LODI,R2	FF	
0098	0009	10	11	04		MID3	LODA,R2	*MIDSTG-2,+	
0099	0009	10	11	04			STRA,R2	CMSTRS,1	
0100	0009	10	11	04			BCTB,P1	MID3	
0101	0009	10	11	04			LODA,R0	MIDSTG-4	
0102	0009	10	11	04			COMI,R0	MIDSTG	
0103	0009	10	11	04			BCTA,LT	MID77	
0104	0009	10	11	04			STRA,R0	MIDSTG	
0105	0009	10	11	04			ADDI,R0	1	
0106	0009	10	11	04			STRA,R0	MIDSTG-5	
0107	0009	10	11	04			LODA,R2	MIDSTG	
0108	0009	10	11	04			STB1,R2	1	
0109	0009	10	11	04			LODA,R1	MIDSTG-1	
0110	0009	10	11	04			BCTA,EQ	MID77	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0951	262A	07	28	A2			STRA,R3	MIDSTG-6	
0952	262D	17	28			MID4	COMI,R3	8	
0953	262F	18	27				BCTR,EQ	MID5	
0954	2631	0F	18	27			LOIA,R2	*SP,-	
0955	2634	0E	55	A1			STRA,R2	CMSTRS.1	
0956	2635	05	21				ADDI,R2	1	
0957	2638	14	29	A9			COMI,R2	MIDSTG-4	
0958	2639	16	29				BCTR,EQ	MID5	
0959	263E	05	27				BRRR,R1	MID4	
0960	2642	02	29	A9		MID5	LOIA,R1	MIDSTG-4	
0961	2643	05	FF				LODI,R2	FF	
0962	2645	23	28	A1		MID6	LOIA,R2	CMSTRS.-	
0963	2648	0E	19	A7			STRA,R2	*MIDSTG-2.1	
0964	264F	09	76				BRRR,R1	MID6	
0965	264D	0F	28	A2			LOIA,R3	MIDSTG-6	
0966	2650	23				MID77	LODZ,R3		
0967	2651	33	30	E5			ESTA,UN	INCSP2	
0968	2654	1F	31	A3			BCTA,UN	NXTLIN	
0969	2657					*			
0970	2657					*			
0971	2657	20	14	72		CCSFND	LOIA,R2	ITEMP	
0972	265A	20	15	73			LOIA,R1	LTEMP+1	
0973	2661	A5	72				SUBI,R1	2	
0974	2663	77	26				PPSL	WC	
0975	2661	A4	72				SUBI,R2	6	
0976	2663	75	28				CPSL	WC	
0977	2665	07	FF				LODI,R3	FF	
0978	2667	17					RETC,UN		
0979	266A					*			
0980	266A					*			
0981	266B	0F	02	02	20	NAME	RES	4	
0982	266C	02	00			GCSAV	RES	2	
0983	266E					*			
0984	266E					*			
0985	266E	27				GCVAR	FORZ,R2		
0986	2673	0C	2A	3C			STRA,R2	CCTIMS	
0987	2672	33	31	77			BCTA,UN	LOKVAR	
0988	2675	14					RETC,EQ		
0989	2676	14	57				BCTR,LT	CCSFND	
0990	2678	0C	11	24		GCV	LOIA,R2	INPT	
0991	2679	08	61				STRR,R2	GCSAV	
0992	267C	0C	11	25			LOIA,R2	INPT+1	
0993	2680	08	61				STRR,R2	GCSAV+1	
0994	2682	3F	2C	E8			ESTA,UN	GETNA	
0995	2685	25	FF			GCV2	COMI,P1	FF	
0996	2687	1C	46	59			BCTA,EQ	RETNGT	
0997	268A	14	24				COMI,R0	'S'	
0998	268C	1C	2A	2A			BCTA,EQ	GCSTR	
0999	268F	14	26				COMI,R2	'I'	
1000	2691	1C	2A	3D			BCTA,EQ	GCDIM	
1001	2694	3F	32	13			ESTA,UN	DFCPT	
1002	2697	66	28				LODI,R2	8	
1003	2699	07	02				LODI,R3	6	
1004	269B	3F	2A	1C		GCV3	ESTA,UN	GCSUB	
1005	269E	20				GCV6	FORZ,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1246	295F	16	27				COMI,R2	7	
1247	29A1	1A	08				BCTR,LT	GCNT	
1248	29A3	18	04				BCTR,EQ	CC7	
1249	29A5	04	70				LODI,R2	70	
1250	29A7	1B	02				BCTR,UN	GCNT	
1251	29A9	04	59			GCV7	LODI,R2	99	
1252	29AB	3F	38	A7		GCNT	ESTA,UN	PSHOP1	
1253	29AF	1A	61				BRRR,E2	GCV6	
1254	29B2	3F	29	CD			ESTA,UN	PSHEND	
1255	29B3	20					FORZ,R2		
1256	29B4	3F	38	A7			ESTA,UN	PSHCP1	
1257	29B7	2C	12	96			LOIA,R0	OP2	
1258	29BA	0D	1C	97			LOIA,R1	OP2+1	
1259	29BD	05	05				ADDI,R1	5	
1260	29BF	77	06				PPSL	WC	
1261	29C1	84	20				ADDI,R2	8	
1262	29C3	75	08				CPSL	WC	
1263	29C5	05	08				LODI,R2	8	
1264	29C7	17	06				COMI,R3	8	
1265	29C9	14					RETC,EQ		
1266	29CA	07	FF				LODI,R3	FF	
1267	29CC	17					RETC,UN		
1268	29CD					*			
1269	29CD					*			
1270	29CD	0C	10	7A		PSHEND	LOIA,R2	OP1	
1271	29D0	0C	08	0A			STRA,R0	TABEND	
1272	29D3	3F	38	AC			ESTA,UN	PSHOP2	
1273	29D6	0C	10	7B			LOIA,R2	OP1+1	
1274	29D9	0C	08	2B			STRA,R0	TABEND+1	
1275	29DC	3F	38	AC			ESTA,UN	PSHOP2	
1276	29DF	17					RETC,UN		
1277	29E0					*			
1278	29E0					*			
1279	29E0	0C	08	0A		GETNA	LOIA,R0	TABEND	
1280	29F3	0D	08	2B			LOIA,R1	TABEND+1	
1281	29F6	3F	38	75			ESTA,UN	STROP1	
1282	29F9	3F	38	61			ESTA,UN	STROP2	
1283	29FC	05	04				LODI,R1	4	
1284	29FE	20					FORZ,R2		
1285	29FF	0C	46	6B		GCV1	STRA,R1	NAME,-	
1286	29FF	59	72				BRRR,R1	GCV1	
1287	29FA	25	FF				LODI,R1	FF	
1288	29FB	3F	32	28		GCV3	ESTA,UN	GETCHR	
1289	29FD	2F	45	2C			ESTA,UN	CHKAN	
1290	29FC	16					RETC,LT		
1291	29FD	15					RETC,GT		
1292	29FE	05	01				AEDI,R1	1	
1293	2A20	FF	03				COMI,R1	3	
1294	2A22	1C	45	82			BCTA,GT	ARGER	
1295	2A25	0D	69	6B			STRA,R1	NAME.1	
1296	2A27	1F	6C				BCTR,UN	GCV3	
1297	2A2A					*			
1298	2A2A					*			
1299	2A2A	3F	32	28		CCSTR	ESTA,UN	GETCHR	
1300	2A2C	07	07				LODI,R3	2	

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1101	2A0F	14	28				COMI,R0	1	
1102	2A11	19	2C				BCTR,EC		GCDSTR
1103	2A12	3F	32	13			BSTA,UN	DECP	
1104	2A16	06	23				LODI,R2	3	
1105	2A18	07	21				LODI,R3	1	
1106	2A1A	1F	26	5B			BCTA,UN	GCVB	
1107	2A1D					*			
1108	2A1D					*			
1109	2A1F	22				GCSUB	FORZ,R0		
1110	2A1F	3F	32	A7			BSTA,UN	PSHOP1	
1111	2A21	3F	32	A7			BSTA,UN	PSHOP1	
1112	2A24	23					LODZ,R3		
1113	2A25	3F	32	A7			BSTA,UN	PSHOP1	
1114	2A26	24	FF				LODI,P1	FF	
1115	2A2A	2D	29	68		GCV5	LODA,R1	NAME*	
1116	2A2D	3F	32	A7			BSTA,UN	PSHOP1	
1117	2A30	15	02				COMI,R1	3	
1118	2A32	2B	7E				BCFR,EQ	GCV5	
1119	2A34	17					RETC,UN		
1120	2A35					*			
1121	2A35					*			
1122	2A38	22	27	22	22	GCLN	RES	6	
1123	2A39	72	22						
1124	2A3E	22				GCTYPE	RES	1	
1125	2A3C	22				GCDIMS	RES	1	
1126	2A3D					*			
1127	2A3D					*			
1128	2A3E	27	03			GCDIM	LODI,R3	3	
1129	2A3F	CF	2A	35		GCDSTR	STRA,R3	GCTYPE	
1130	2A42	3F	2A	1D			BSTA,UN	GCSUB	
1131	2A45	22					FORZ,P0		
1132	2A46	CC	2A	35			STRA,R0	GCLN	
1133	2A46	CC	2A	37			STRA,P2	GCLN+2	
1134	2A4C	24	21				LODI,R0	1	
1135	2A4E	CC	2A	36			STRA,R0	GCLN+1	
1136	2A51	20	12	7A			LODA,R0	OP1	
1137	2A54	CC	2A	36			STRA,R0	GCLN+3	
1138	2A57	2C	12	79			LODA,R0	OP1+1	
1139	2A5A	CC	2A	39			STRA,R0	GCLN+4	
1140	2A5D	3F	32	7C			BSTA,UN	INCOPI	SKIP 1 BYTE /# OF DIMS
1141	2A5D	3F	33	9F		GCD4	BSTA,UN	EVAL	
1142	2A5D	1F	2A	AC			BCTA,GT	GCD2	
1143	2A5E	3F	32	97			BSTA,UN	ENSIB	
1144	2A59	21					LODZ,R1		
1145	2A5A	1C	45	64			BCTA,EO	DIMER	
1146	2A5D	15	0A				COMI,R1	A	
1147	2A5F	15	07				BCTR,GT	GCD3	
1148	2A71	0F	7A	3C			LODA,R3	GCDIMS	
1149	2A74	1A	22				BCTR,LT	GCD3	
1150	2A76	24	2A				LODI,P0	A	DEFAULT TO 12
1151	2A78	03				GCD3	STRZ,R3		
1152	2A79	3F	32	A7			BSTA,UN	PSHOP1	
1153	2A7C	2C	0A	27			LODA,R0	GCLN+2	
1154	2A7F	24	21				ADDI,R0	1	
1155	2A81	CC	2A	37			STRA,R0	GCLN+2	

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1156	2A84	2C	2A	35			LODA,R0	GCLN	
1157	2A87	2D	2A	36			LODA,R1	GCLN+1	
1158	2A8A	2E	2A	36		GCD3B	ADDA,R1	GCLN+1	
1159	2A8D	77	26				PPSL	WC	
1160	2A8F	8C	2A	35			ACTA,R0	GCLN	
1161	2A92	75	26				CPSL	WC	
1162	2A94	24	21				TPSL	CRY	
1163	2A95	1C	45	64			BCTA,EO	DIMER	
1164	2A99	FF	6F				BDRR,R3	GCD3B	
1165	2A9B	CC	2A	35			STRA,R0	GCLN	
1166	2A9E	CF	2A	36			STRA,R1	GCLN+1	
1167	2AA1	3F	4E	42			BSTA,UN	SKPSP	
1168	2AA4	14	2C				COMI,R0		
1169	2AA6	1C	2A	60			BCTA,EO	GCD4	
1170	2AA9	3F	32	13			BSTA,UN	DECP	
1171	2AAC	0C	2A	37		GCD2	LODA,R0	GCLN+2	
1172	2AAF	1C	45	64			BCTA,EO	DIMER	
1173	2AB2	CC	2A	38			STRA,R0	*GCLN+3	STORE # OF DIMS
1174	2AB5	3F	32	22			BSTA,UN	GETCHR	
1175	2AB8	14	29				COMI,R0		
1176	2ABA	9C	31	31			BCFA,EO	SYNER	
1177	2ABD	0C	2A	38			LODA,R0	GCTYPE	
1178	2AC0	14	22				COMI,R0	2	
1179	2AC2	18	24				BCTR,EO	GCD5	
1180	2AC4	07	2B				LODI,R3	8	
1181	2AC6	1B	22				BCTR,UN	GCD6	
1182	2AC8	07	22			GCD5	LODI,R3	3	
1183	2ACA	CF	2A	38		GCD6	STRA,R3	GCTYPE	
1184	2ACD	2F	2A	38		GCD7	LODA,R3	GCTYPE	
1185	2AD0	22				GCD8	FORZ,R0		
1186	2AD1	17	07				COMI,R3	7	
1187	2AD3	1A	08				BCTR,LT	GCDNT	
1188	2AD5	18	24				BCTR,EO	GCEG7	
1189	2AD7	04	12				LODI,R0	78	
1190	2AD9	1B	22				BCTR,UN	GCDNT	
1191	2ADB	24	99			GCEG7	LODI,R0	99	
1192	2ADC	3F	32	A7		GCDNT	BSTA,UN	PSHOP1	
1193	2AD7	FF	6F				BDRR,R3	GCD8	
1194	2AE2	2C	2A	35			LODA,R0	GCLN	
1195	2AE5	2D	2A	36			LODA,R1	GCLN+1	
1196	2AE8	AF	21				SUBI,R1	1	
1197	2AEA	77	26				PPSL	WC	
1198	2AEC	A4	22				SUBI,R0	0	
1199	2AE3	75	26				CPSL	WC	
1200	2AE6	CC	2A	35			STRA,R0	GCLN	
1201	2AE9	CD	2A	36			STRA,R1	GCLN+1	
1202	2AF6	22					LODZ,R0		
1203	2AF7	96	54				BCTR,EO	GCD7	
1204	2AF9	21					LODZ,P1		
1205	2AFA	98	51				BCTR,EO	GCD7	
1206	2AFD	2C	12	7A			LODA,R0	OP1	
1207	2AFF	CC	22	2A			STRA,R0	TABEND	
1208	2B02	3F	32	AC			BSTA,UN	PSHOP2	
1209	2B05	0C	12	78			LODA,P2	OP1+1	
1210	2B08	CC	22	2B			STRA,R0	TABEND-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1211	2B0F	3F	3F	AC		BSTA,UN	PSHOP2		
1212	2B11	20				EORZ,R0			
1213	2B13	3F	3F	A7		BSTA,UN	PSHCP1		
1214	2B1C	0C	20	6C		LODA,R0	GCSAV		
1215	2B15	0C	11	64		STRA,R0	INPT		
1216	2B16	2C	0C	ED		LODA,R0	GCSAV+1		
1217	2B1F	0C	11	65		STRA,R0	INPT+1		
1218	2B1E	1F	35	77		BSTA,UN	LOKVAR		
1219	2B21					*			
1220	2B21					*			
1221	2B21	0C	17	4F		CTOS	LODA,R0	CTEMP	
1222	2B24	1A	2A			STPR,R0	STMP+4		
1223	2B26	0C	13	4F		LODA,R0	CTEMP+1		
1224	2B20	06	26			STRR,R0	STMP+5		
1225	2B2F	17				RETC,UN			
1226	2B1C					*			
1227	2B2C					*			
1228	2B2C	20	20	20	20	STMP	RIS	6	
1229	2B30	00	20						
1230	2B32					*			
1231	2B32					*			
1232	2B32	3B	6D			STRING	BSTR,UN	CTOS	
1233	2B34	3F	32	B1		STRG	BSTA,UN	INCSP	
1234	2B37	3F	30	E1		BSTA,UN	INCSP		
1235	2B3A	23				LOI7,P3			
1236	2B3E	02				STRZ,P2			
1237	2B3C	01				STRZ,R1			
1238	2B3E	0C	27	04		LODA,R0	12ST		
1239	2B42	0B	6C			STRR,R0	STMP+2		
1240	2B42	20				EORZ,R0			
1241	2B43	09	6A			STRR,R0	STMP+3		
1242	2B4F	03				STRZ,R3			
1243	2B46	12				COMZ,R2			
1244	2B47	1C	2B	BF		BSTA,EQ	STRB		
1245	2B4A	09	62			IGER,R0	STMP+2		
1246	2B4C	0B	FE			STRR,R0	STMP		
1247	2B4E	0B	5D			STRR,R3	STMP+1		
1248	2B50	0F	1B	2E		STR2	LODA,R3	*STMP+2.1	
1249	2B53	07	21			ADDI,R3	1		
1250	2B55	0B	1F			PCPR,EQ	STR6		
1251	2B57	0B	55			LOER,R0	STMP+2		
1252	2B59	04	21			ADDI,R0	1		
1253	2B5E	0B	51			STRR,R0	STMP+2		
1254	2B51	1C	00	25		COMA,R0	VARST		
1255	2B50	1A	2F			PCTR,LT	STR6		
1256	2B52	27	0E			LODI,R3	STRERR		
1257	2B54	1F	33	2E		BSTA,UN	ERROR		
1258	2B57	27				STR6	LODZ,R0		
1259	2B58	06	20			PCFR,EQ	STR3		
1260	2B5A	FA	64			BDRR,R2	STR2		
1261	2B5C	07	00			STR4	LODI,R3	0	
1262	2B5F	0C	0E	2C		LODA,R0	STMP		
1263	2B71	0C	0B	30		STRA,R0	*STMP+4		
1264	2B74	0C	0B	2D		LODA,R0	STMP+1		
1265	2B77	0F	AF	30		STRA,R3	*STMP+4.+		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1266	2B7A	01				LODZ,R1			
1267	2B7E	CF	AF	30		STRA,R3	*STMP+4.+		
1268	2B7E	01				LODZ,R1			
1269	2B7F	14				RETC,EQ			
1270	2B80	3F	30	B1		STRC5	BSTA,UN	INCSP	
1271	2B53	03				LODZ,R3			
1272	2B84	01	CB	2C		STRA,R1	*STMP.-		
1273	2B87	59	77			BRNR,P1	STRC5		
1274	2B83	17				RETC,UN			
1275	2B8A	01				STR3	LODZ,R1		
1276	2B62	02				STRZ,P2			
1277	2B8C	1F	2B	4A		BSTA,UN	STR1		
1278	2B8F	06	03			STR8	LODI,R2	3	
1279	2B91	01	0B	30		STR8A	STRA,R2	*STMP+4.-	
1280	2B94	5A	7B			BRNR,R2	STR8A		
1281	2B96	17				RETC,UN			
1282	2B97					*			
1283	2B97					*			
1284	2B97	3B	05			ENS1B	BSTR,UN	ENS	
1285	2B95	00				LODZ,R0			
1286	2B9A	9C	45	74		BCFA,EQ	OFFEB		
1287	2B9D	17				RETC,UN			
1288	2B91					*			
1289	2B91					*			
1290	2B91	9C	46	34		ENS	BCFA,EQ	NOSTR	
1291	2B81	3F	45	D9		ENS2	BSTA,UN	POPC1	
1292	2B84	20				DT0B	EORZ,R0		
1293	2B81	01				STRZ,R1			
1294	2B86	0F	13	50		LODA,R3	CBUF1		
1295	2B89	16				RETC,LT			
1296	2B8A	0F	13	52		LODA,R3	CBUF1+2		
1297	2B81	1C				RETC,LT			
1298	2B81	0F	13	53		LODA,R3	CBUF1+3		
1299	2B81	14				RETC,EQ			
1300	2B82	0C	13	51		LODA,R0	CBUF1+1		
1301	2B85	0C	0C	0F		STRA,R0	CMAX		
1302	2B88	20				EORZ,R0			
1303	2B99	0C	0C	10		TRA,R0	CPTB		
1304	2B8C	01				STRZ,R1			
1305	2B8D	03				STRZ,R3			
1306	2B81	3F	2C	11		BSTA,UN	CIGET		
1307	2B01	1F				RETC,CT			
1308	2B02	14				RETC,EQ			
1309	2B03	02				STRZ,P2			
1310	2B04	03				LODZ,R3			
1311	2B05	3F	44	F3		BSTA,UN	X10		
1312	2B06	03				STRZ,P3			
1313	2B09	01				LODZ,R1			
1314	2B0A	22				ADDZ,R2			
1315	2B0E	01				STRZ,R1			
1316	2B0C	77	20			PPLS	VC		
1317	2B0E	20				EOPZ,R0			
1318	2B0F	03				ADDZ,R3			
1319	2B1F	7F	00			CPSL	VC		
1320	2B22	25	01			TPLS	CRT		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1321	2B14	10	45	74			BCTA, EQ	OVER	
1322	2B17	1F	64				BCTR, UN	DTOB1	
1323	2B18					*			
1324	2B19					*			
1325	2B1A	2F	08			CILEN	LODI, R2	8	
1326	2B1B	2F	22				LODI, R3	8	
1327	2B1C	0F	31				STRR, R3	CFTR	
1328	2B1F	0F	52	50		CILFN1	LODA, R2	CBUF1, -	
1329	2B20	1F	28				BCTP, EQ	CILEN2	
1330	2B14	44	7F				ANDI, R2	7	
1331	2B16	5F	2A				BCFR, EQ	CILEN3	
1332	2B18	5F	21				ARCI, R3	1	
1333	2B1A	1F	26				BCTR, UN	CILEN3	
1334	2B1C	8F	22			CILEN2	ADDI, R3	2	
1335	2B1E	1F	2A				COMI, R3	A	
1336	2B20	90	61				BCFR, EQ	CILEN1	
1337	2B22	74	7A			CILEN3	LODI, R2	A	
1338	2B24	A3					SURZ, R3		
1339	2B26	0F	12				STRR, R2	C*AX	
1340	2B27	2F	13	50			LODA, R2	CBUF1	
1341	2B2A	1F					PETC, LT		
1342	2B2E	14	2A				COMI, R2	A	
1343	2B30	14					PETC, EQ		
1344	2B31	10	13	51			COMA, R2	CBUF1+1	
1345	2021	1F					PETC, GT		
1346	2023	14					PETC, EQ		
1347	2025	20	13	51			LODA, R2	CBUF1+1	
1348	2026	14	25				COMI, R2	8	
1349	2028	1A	27				BCTP, LT	CILEN4	
1350	202A	04	2A				LODI, R2	A	
1351	202C	08	21			CILEN4	STRR, R2	C*AX	
1352	202E	1F					PETC, UN		
1353	202F					*			
1354	203F					*			
1355	200F	02				C*AX	RFS	1	
1356	2010	02				CFTR	RES	1	
1357	2011					*			
1358	2011					*			
1359	2011	2A	7D			CIGET	LODR, R2	CFTR	
1360	2013	1A	7A				COMR, R2	C*AX	
1361	2015	1F					PETC, GT		
1362	2016	14					PETC, EQ		
1363	2017	02					LODZ, R2		
1364	2018	5F					RRR, R2		
1365	2019	44	7F				ANDI, R0	7F	
1366	201F	84	23				ADDI, R2	3	
1367	201D	20	73	50			LODA, R0	CBUF1, 1	
1368	2020	76	21				TM1, R2	1	
1369	2022	18	24				BCTR, EQ	CIGET2	
1370	2024	5F					RRR, R2		
1371	2025	5F					RRR, R0		
1372	2026	50					RRR, R2		
1373	2027	5F					RRR, R2		
1374	2028	44	0F			CIGET2	ANDI, R0	7	
1375	202A	86	21				ADDI, R2	1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1376	202C	CA	62				STRR, R2	CFTR	
1377	202E	06	FF				LODI, R2	FF	
1378	2030	1F					PETC, UN		
1379	2031					*			
1380	2031					*			
1381	2031	3F	31	86		GETDAT	BSTA, UN	CSINPT	
1382	2034	00	21	20			LODA, R0	DATPMT	
1383	2037	00	11	84			STRA, R0	INPT	
1384	203A	00	21	20			LODA, R2	DATPMT+1	
1385	203C	00	11	85			STRA, R0	INPT+1	
1386	2042	20	01	2E			LODA, R0	PDATA	
1387	2043	12	28				BCTR, EQ	GETD2	
1388	2045	3F	46	40			BSTA, UN	SEPS	
1389	2048	14	20				COMI, R0		
1390	204A	18	25				BCTR, EQ	GETD3	
1391	204C	3F	32	13			BSTA, UN	DEOPT	
1392	204F	12	35				BCTR, UN	GETD4	
1393	2051	3F	33	9F		GETD3	BSTA, UN	EVAL	
1394	2054	13					SPSL		
1395	2055	03					STRZ, R3		
1396	2056	04	FF				LODI, R0	FF	
1397	2058	00	01	2E			STRA, R0	PDATA	
1398	205B	00	11	84			LODA, R2	INPT	
1399	205E	00	01	20			STRA, R0	DATPMT	
1400	2061	00	11	85			LODA, R0	INPT+1	
1401	2064	00	01	20			STRA, R0	DATPMT+1	
1402	2067	3F	31	91			BSTA, UN	CRINPT	
1403	206A	03					LODZ, R3		
1404	206B	93					LPSL		
1405	206C	17					PETC, UN		
1406	206E	3F	31	19		GETD2	BSTA, UN	GETLIN	
1407	2070	04	48				LODI, R0	DATTEL	
1408	2072	05	44				LODI, R1	DATTEL	
1409	2074	3F	45	7F			BSTA, UN	LOOKUP	
1410	2077	90	2D				BCFR, EQ	GETD4	
1411	2079	1F					COMZ, R1		
1412	207A	18	55				BCTR, EQ	GETD3	
1413	207C	15	83				COMI, R1	3	
1414	207E	96	06				BCTR, EQ	GETD4	
1415	2080	3F	31	91		GETD5	BSTA, UN	CRINPT	
1416	2083	04	01				LODI, R0	1	
1417	2085	17					PETC, UN		
1418	2086	3F	33	20		GETD4	BSTA, UN	SEPCR	
1419	2089	00	91	64			LODA, R0	*INPT	
1420	208C	9A	5F				BCFR, LT	GETD2	
1421	208E	1E	70				BCTR, UN	GETD5	
1422	2090					*			
1423	2090					*			
1424	2090	01	02	A2		PUGET	LODA, R1	PUSF	
1425	2093	02	26	A1			LODA, R1	C*STRS, -	
1426	2096	0D	22	A2			STPA, R1	PUSP	
1427	2099	17					PETC, UN		
1428	209A					*			
1429	209A					*			
1430	209A	20				ZEBOMS	ICRZ, R2		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1421	2007	02					STRZ,R2		
1422	200C	0F	46	A1		ZERCM2	STRA,R2	CMSTPS.-	
1423	200F	5A	7B				BRNR,R2	ZERCM2	
1424	20A1	17					RETC,UN		
1431	20A2					*			
1432	20A2					*			
1437	20A2	6F	02	02	78	FSTG	RES	5	
1438	20A6	02							
1439	20A7					*			
1442	20A7					*			
1441	20A7	06	79			PRNTFU	STRR,R0	FSTG	
1442	20A8	09	78				STRR,R1	FSTG-1	
1443	20A8	0A	77				STRR,R2	FSTG-2	
1444	20A7	0E	76				STRR,R3	FSTG-3	
1445	20A8	14	2A				COMI,R0	A	
1446	20B1	1D	31	F1			ECTA,GT	SYNER	
1447	20B4	1E	0A				COMI,R1	A	
1448	20B5	1F	31	61			ECTA,GT	SYNER	
1449	20B9	3F	45	D9			BSTA,UN	POPC1	
1450	20B0	7C	13	53			LODA,R0	CBUF1-3	
1451	20B5	56	12				BCFR,EC	PFU1	
1452	20C1	71	0C	A7		PFU5B	LODA,R2	FSTG	
1453	20C4	1-	27				BCFR,EC	PFU0	
1454	20C6	74	20			PFU02	LODI,R0		
1455	20C6	3F	24	C5			BSTA,UN	SENDIT	
1456	20C5	5A	76				BCFR,EC	PFU00	
1457	20C5	3F	21	D3		PFU0	BSTA,UN	SENDIT	
1458	20C6	1F	2D	7E			ECTA,UN	PFU0	
1459	20C2	75	45	E4		PFU1	BSTA,UN	PUSC01	
1461	20C7	0E	24				LODI,R2		
1462	20C9	03	53	54		PFU2	STRR,R2	CBUF1-4.-	
1463	20C0	5A	79				BRNR,R2	PFU2	
1464	20C1	04	70				LODI,R0	F0	
1465	20C0	07	13	50			STRA,R0	CBUF1	
1466	20C3	7C	0C	A3			LODA,R0	FSTG-1	
1467	20C6	0C	13	51			STRA,R0	CBUF1-1	
1468	20C9	04	50				LODI,R0	50	
1469	20C9	0C	13	53			STRA,R0	CBUF1-3	
1470	20C9	3F	45	E0			BSTA,UN	PUSC01	
1471	20C1	3F	3A	72			BSTA,UN	PFAD	ROUND OFF NUMBER
1472	20C4	3F	45	D9			POPC1		
1473	20C7	0C	2C	A3			LODA,R0	FSTG-1	
1474	20C1	60	0F				BCFR,EC	PFU99	
1475	20C0	3F	45	E0			BSTA,UN	PUSC01	
1476	20C7	3F	3D	6F			BSTA,UN	PFIX	
1477	20C2	3F	45	D9			BSTA,UN	POPC1	
1478	20C2	0C	13	53			LODA,R0	CBUF1-3	
1479	20C8	1C	2C	C1			ECTA,EC	PFU98	
1480	20C2	0C	13	52		PFU98	LODA,R0	CBUF1-2	
1481	20C1	16	05				BCFR,EC	PFU3A	
1482	20C0	3F	73	7D			BSTA,UN	PWTM1	
1483	20C3	15	08				BCFR,UN	PFU3B	
1484	20C5	0C	0C	A2		PFU3A	LODA,R0	FSTG	
1485	20C5	04	01				ADDI,R0	1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1486	2D1A	0C	0C	A2			STRA,R0	FSTG	
1487	2D1C	05	00			PFU3B	LODI,R1	0	
1488	2D1F	0C	13	50			LODA,R0	CBUF1	
1489	2D22	1A	03				BCFR,LT	PFU4	
1490	2D24	0D	13	51			LODA,R1	CBUF1-1	
1491	2D27	0C	0C	A5		PFU4	STRA,R1	FSTG-4	
1492	2D2A	0C	0C	A4			LODA,R0	FSTG-2	
1493	2D2D	19	0C				BCFR,GT	PFU5	
1494	2D2F	01					LODI,R1		
1495	2D30	03					STRZ,R3		
1496	2D31	E7	03			PFU4A	COMI,R3	3	
1497	2D33	99	06				BCFR,GT	PFU5	
1498	2D35	0F	01				ADDI,R1	1	
1499	2D37	A7	03				SUBI,R3	3	
1500	2D39	18	76				BCFR,UN	PFU4A	
1501	2D3B	0C	0C	A2		PFU5	LODA,R0	FSTG	
1502	2D3E	A1					SUBI,R1	FOVF	
1503	2D3F	1E	2D	B2			ECTA,LT		
1504	2D40	01					STRZ,R1		
1505	2D43	18	07				BCFR,EC	PFU7	
1506	2D45	04	20			PFU6	LODI,R0		
1507	2D47	3F	24	C5			BSTA,UN	SENDIT	
1508	2D4A	F9	79				BCFR,R1	PFU6	
1509	2D4C	3F	2B	F9		PFU7	BSTA,UN	CILEW	
1510	2D4F	0D	0C	A6		PFU7B	LODA,R1	FSTG-4	
1511	2D52	18	24				BCFR,EC	PFU8	
1512	2D54	A5	01				SUBI,R1	1	
1513	2D56	0C	0C	A6			STRA,R1	FSTG-4	
1514	2D59	3F	2C	11			BSTA,UN	CIGET	
1515	2D5C	3F	24	C3			BSTA,UN	SIND0	
1516	2D5F	0C	0C	A4			LODA,R0	FSTG-2	
1517	2D62	19	6B				BCFR,GT	PFU7B	
1518	2D64	0D	0C	A6			LODA,R1	FSTG-4	
1519	2D67	1F	03			PFU7C	COMI,R1	3	
1520	2D69	18	06				BCFR,EC	PFU7A	
1521	2D6B	1A	62				BCFR,LT	PFU7B	
1522	2D6E	A5	03				SUBI,R1	3	
1523	2D6F	18	76				BCFR,UN	PFU7C	
1524	2D71	04	2C			PFU7A	LODI,R0		
1525	2D73	3F	24	C5			BSTA,UN	SENDIT	
1526	2D75	12	57				BCFR,UN	PFU7B	
1527	2D78	0C	0C	A5		PFU8	LODA,R0	FSTG-3	
1528	2D7B	15					RETC,GT		
1529	2D7C	04	2E				LODI,R0		
1530	2D7E	3F	24	C5			BSTA,UN	SENDIT	
1531	2D81	0C	0C	A3			LODA,R0	FSTG-1	
1532	2D84	04					RETC,EC		
1533	2D85	0C	13	50			LODA,R1	CBUF1	
1534	2D88	0A	14				BCFR,LT	PFU9A	
1535	2D8A	0D	13	51			LODA,R1	CBUF1-1	
1536	2D8D	E1					COMI,R1		
1537	2D8E	19	01				BCFR,GT	PFU9B	
1538	2D90	C1					STRZ,R1		
1539	2D91	A1				PFU9B	STRZ,R1		
1540	2D92	0C	0C	A3			STRA,R0	FSTG-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1541	2D05	3F	2D	D3		PFU9C	BSTA,UN	SEND00	
1542	2D08	3F	7F				BCTR,R1	PFU9C	
1543	2D0A	2F	0C	A3		PFUG	LODA,R0	FSTG-1	
1544	2D0D	14					BTRC,EQ		
1545	2D0E	44	01			PFUGA	SUBI,R0	1	
1546	2D12	07	0C	A3			STRA,R0	FSTG-1	
1547	2D13	3F	2C	11			BSTA,UN	CIGET	
1548	2D16	1A	45				BCTR,LT	PFU10	
1549	2D18	3F	2C	13			BSTA,UN	SEND00	
1550	2D1B	1F	6D				BCTR,UN	PFU9	
1551	2D1D	3F	74	03		PFU10	BSTA,UN	SEN10	
1552	2D20	1F	6E				BCTR,UN	PFU9	
1553	2D22	01	0C	A2		FOVF	LOIA,R1	FST	
1554	2D25	1F	77				BCTR,EQ	FOVF2	
1555	2D27	24	2A			FOVF1	LODI,R2	*	
1556	2D28	3F	24	C5			BSTA,UN	SENDIT	
1557	2D2C	3F	75				BCTR,R1	FOVF1	
1558	2D2E	0C	0C	A5		FOVF2	LOIA,R1	FSTG-3	
1559	2D31	1F					BCTR,CT		
1560	2D32	04	2E				LODI,R0		
1561	2D34	3F	74	C5			BSTA,UN	SENDIT	
1562	2D37	2D	2C	A3			LOIA,R1	FSTG-1	
1563	2D3A	14					BCTR,EQ		
1564	2D3C	04	2A			FOVF3	LODI,R0	*	
1565	2D3E	3F	74	C5			BSTA,UN	SENDIT	
1566	2D40	3F	75				BCTR,R1	FOVF3	
1567	2D42	17					BCTR,UN		
1568	2D43					*			
1569	2D43					*			
1570	2D43	22				SEND00	BCTR,R0	SENDE	
1571	2D44	1F	74	C3			BCTR,UN		
1572	2D47					*			
1573	2D47					GETK	BCTR,UN	PAUSE	
1574	2D47	3F	75				BSTA,UN	WRT	
1575	2D48	3F	2F	23			LODR,R2	KBRUF	
1576	2D4C	04	21				BCTR,UN		
1577	2D4E	17							
1578	2D4F					*			
1579	2D4F					*			
1580	2D4F	20				KBRUF	RES	1	
1581	2D4F	07				NEWSID	RES	1	
1582	2D4F	02				PAUSE	RES	1	
1583	2D4F					*			
1584	2D4F					*			
1585	2D4F	0A	7D			PAUSE	STRR,R2	PAUSES	
1586	2D4F	70				PAUSE1	BCTR,LT	PAUSE2	
1587	2D4F	0A	04				BCTR,LT	1	
1588	2D4F	06	01				ADDI,R2	1	
1589	2D4F	1B	75				BCTR,UN	PAUSE1	
1590	2D4F	0A	77			PAUSE2	STRR,R2	NEWSID	
1591	2D4F	0A	72				LODR,R2	PAUSES	
1592	2D4F	09	0E				STRR,R2	KBRUF	
1593	2D4F	70				PL	RECD,R0		
1594	2D4F	0A	7D				BCTR,LT	PI	
1595	2D4F	20	09				LODR,R0	KBRUF	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1596	2D4F	17					BCTR,UN		
1597	2D4F					*			
1598	2D4F					*			
1599	2D4F	3F	16			SETCUR	BCTR,UN	EROLD	
1600	2D4F	0E	01	C7			STRA,R2	CURSOR	
1601	2D4F	0D	21	C8			STRA,R1	CURSOR-1	
1602	2D4F	04	1C				LODI,R0	1C	
1603	2D4F	0C	0E	C7			STRA,R0	*CURSOR	
1604	2D4F	17					BCTR,UN		
1605	2D4F					*			
1606	2D4F					*			
1607	2D4F	2C	21	C7		ERAS1	LOTA,R0	CURSOR	
1608	2D4F	14	10				COMI,R0	10	
1609	2D4F	00	06				BCTR,EQ	EROLD	
1610	2D4F	0C	01	C8			LOTA,R0	CURSOR-1	
1611	2D4F	14	10				COMI,R0	10	
1612	2D4F	16					BCTR,LT		
1613	2D4F	04	20			EROLD	LODI,R0		
1614	2D4F	0C	0E	C7			STRA,R0	*CURSOR	
1615	2D4F	17					BCTR,UN		
1616	2D4F					*			
1617	2D4F					*			
1618	2D4F	0C	13	4F		POPCT	LOTA,R0	CTEMP	
1619	2D4F	0D	13	4F			LODA,R1	CTEMP-1	
1620	2D4F	1F	31	55			BCTR,UN	POPP	
1621	2D4F					*			
1622	2D4F					*			
1623	2D4F	04	20			WRBL	LODI,R0		
1624	2D4F	77	10			WRT	FISL	RS	
1625	2D4F	01					STRZ,R1		
1626	2D4F	25	FF				FORI,R1	FF	
1627	2D4F	75	00				MI,R1	00	
1628	2D4F	10	20				BCTR,EQ	WRTPTN	
1629	2D4F	74	00				MI,R0	00	
1630	2D4F	16	02				BCTR,EQ	WRTLC	
1631	2D4F	44	3F				ANDI,R0	3F	
1632	2D4F	0C	0E	C7		WRTLC	STRA,R0	*CURSOR	
1633	2D4F	05	10				LODI,R1	10	
1634	2D4F	0E	0E	C8			ADDA,R1	CURSOR-1	
1635	2D4F	0E	0E	C8			STRA,R1	CURSOR-1	
1636	2D4F	77	00				PPSL	WC	
1637	2D4F	05	20				LODI,R1	0	
1638	2D4F	0C	0E	C7			ADDA,R1	CURSOR	
1639	2D4F	0E	0E	C7			STRA,R1	CURSOR	
1640	2D4F	75	20				CPSL	WC	
1641	2D4F	75	20				MI,R1	5	
1642	2D4F	10	2D				BCTR,EQ	LFCR2	
1643	2D4F	0E	1C				LODI,R1	1C	
1644	2D4F	0E	0E	C7			STRA,R1	*CURSOR	
1645	2D4F	75	10			WRTM	CPSL	RS	
1646	2D4F	17					BCTR,UN		
1647	2D4F					*			
1648	2D4F					*			
1649	2D4F	77	10			LYCR	PPSL	RS	
1650	2D4F	3F	2F	12			BSTA,UN	EROLD	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1651	2F5A	2F	2E	09		LFCR2	LODA,R1	CURSOR-1	
1652	2F5D	F5	2F				TM1,R1	F	
1653	2F5F	16	2E				BCTR,EC	SCROLL	
1654	2F61	6F	2E				ADDI,R1	1	
1655	2F63	45	2F				ANDI,R1	F	
1656	2F64	07	2E	09			STRA,R1	CURSOR-1	
1657	2F66	07	10			CIRLIN	LODI,R3	10	
1658	2F6A	03	0E	C7			STRA,R3	CURSOR	
1659	2F6C	24	20				LODI,R0	0	
1662	2F6F	06	20				LODI,R2	0	
1661	2F71	2E	FF	C7		E111	STRA,R2	*CURSOR,1	
1662	2F74	8F	12				ACDI,R2	10	
1663	2F76	06	20				BCTR,EC	E111	
1664	2F78	07	2E				ADDI,R3	1	
1665	2F7A	07	0E	C7			STRA,R3	CURSOR	
1666	2F7C	17	15				COMI,R3	15	
1667	2F7F	06	20				PCFR,F0	E111	
1668	2F81	27	12				LODI,R3	10	
1669	2F83	07	0E	C7			STRA,R3	CURSOR	
1670	2F86	05	10				LODI,R1	10	
1671	2F88	07	0E	C7			STRA,R1	*CURSOR	
1672	2F8B	25	10				CPSL	R5	
1673	2F8D	17					PETC,UN		
1674	2F8F	24	14			SCROLL	LODI,R0	14	
1675	2F92	0C	2E	C7			STRA,R0	CURSOR	
1676	2F93	20					FORZ,R0		
1677	2F94	07	0E	C7			STRA,R0	CURSOR-1	
1678	2F97	06	20			SCROL2	LODI,R2	0	
1679	2F99	27	FF				LODI,R3	FF	
1680	2F9E	03	0E	C7		SCROL1	LODA,R2	*CURSOR,1	
1681	2F9F	26	FF				LODI,R2	FF	
1682	2FA2	16	2F				TM1,R2	F	
1683	2FA3	10	1F				BCTR,EC	SCROL4	
1684	2FA4	03	0E	C7			STRA,R3	*CURSOR,1	
1685	2FA7	26	FF			SCROL5	LODI,R2	FF	
1686	2FA9	16	FF				COMI,R2	FF	
1687	2FAE	06	0E				BCTR,EC	SCROL1	
1688	2FAC	0C	0E	C7			LODA,R0	CURSOR	
1689	2FB0	A4	21				SUPI,R0	1	
1690	2FB7	14	2F				COMI,R2	F	
1691	2FB4	15	05				BCTR,EC	SCROL3	
1692	2FB6	07	2E	C7			STRA,R2	CURSOR	
1693	2FB9	13	5C				PCTN,UN	SCROL2	
1694	2FBF	24	0F			SCPOL3	LODI,R0	F	
1695	2FC1	0C	0E	C7			STRA,R0	CURSOR-1	
1696	2FC8	1F	2F	68			PCTN,UN	CLPLIN	
1697	2FC3	67	21			SCROL4	ADDI,R3	1	
1698	2FC5	1E	00				PCTN,UN	SCPOL5	
1699	2FC7					*			
1700	2FC7					*			
1701	2FC7	00	00			CURSOR	RIS	2	
1702	2FC6	00	00			TMFA	RIS	2	
1703	2FC8					*			
1704	2FC8					*			
1705	2FC8	08	7C			ARROW	STPR,R2	TMFA	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1706	2FCD	09	7B				STPR,R1	TMFA-1	
1707	2FCD	05	FF				LODI,R1	FF	
1708	2FCE	3F	2E	27		INLOCP	BSTA,UN	GETB	
1709	2FCE	14	1F				COMI,R0	ESC	
1710	2FCE	1C	2F	2B			BCTR,EC	ARROW2	
1711	2FCE	14	00				COMI,R0	BS	
1712	2FCE	06	2F				BCTR,EC	NOBS	
1713	2FDD	15	FF				COMI,R1	FF	
1714	2FDE	10	70				BCTR,EC	INLOOP	
1715	2FDE	3F	2F	2E			BSTA,UN	BACKSF	
1716	2FDE	1A	6B				BCTR,LT	INLOOP	
1717	2FDE	A5	21				SUPI,R1	1	
1718	2FDE	06	0E				ADDI,R2	1	
1719	2FDE	1B	6A				BCTR,UN	INLOOP	
1720	2FDE	F4	15			NOBS	COMI,R0	15	
1721	2FDE	06	16				BCTR,EC	STRIN	
1722	2FDE	E5	FF				COMI,R1	FF	
1723	2FDE	00	51				BCTR,EC	INLOOP	
1724	2FDE	2D	AE	C9		NOBS2	LODA,R1	*TMFA,1	
1725	2FDE	10	00				BCTR,EC	STRIN2	
1726	2FDE	F4	0E				COMI,R0	CR	
1727	2FDE	10	27				BCTR,EC	STRIN2	
1728	2FDE	3F	2F	23			BSTA,UN	WRT	
1729	2FDE	FA	72				BCTR,R2	NOBS2	
1730	2FDE	1B	0E				BCTR,UN	CPWAIT	
1731	2FDE	AE	0E			STRIN2	SUPI,R1	1	
1732	2FDE	1B	46				BCTR,UN	INLOOP	
1733	2FDE	0C	AE	C9		STRIN	STRA,R1	*TMFA,1	
1734	2FDE	E4	0D				COMI,R0	CR	
1735	2FDE	10	12				BCTR,EC	CLRLAS	
1736	2FDE	F1	2E	D1			BCTR,R2	INLOOP	
1737	2FDE	70				CPWAIT	RELI,R0		
1738	2FDE	E4	00				COMI,R0	BS	
1739	2FDE	1C	2E	D1			BCTR,EC	INLOOP	
1740	2FDE	F4	0E				COMI,R0	CR	
1741	2FDE	00	76				BCTR,EC	CPWAIT	
1742	2FDE	3F	2D	F1			BSTA,UN	FL	
1743	2FDE	20					FORZ,R0		
1744	2FDE	17					RETC,UN		
1745	2FDE	20				CLRLAS	FORZ,R0		
1746	2FDE	0E	EE	C9		CL	STRA,R1	*TMFA,1	
1747	2FDE	05	0E				ADDI,R1	1	
1748	2FDE	FA	79				BCTR,R2	CL	
1749	2FDE	20					FORZ,R0		
1750	2FDE	17					RETC,UN		
1751	2FDE	04	FF			ARROW2	LODI,R0	FF	
1752	2FDE	17					RETC,UN		
1753	2FDE					*			
1754	2FDE					*			
1755	2FDE	3F	2F	25		BACKSP	BSTA,UN	ERAS1	
1756	2FDE	15					RETC,LT		
1757	2FDE	0E	EE	C9			LODA,R3	CURSOR-1	
1758	2FDE	0C	0E	C7			LODA,R0	CURSOR	
1759	2FDE	A7	10			BACKS1	SUPI,R3	10	
1760	2FDE	77	06				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1761	2F3C	A4	22				SUBI,R0	0	
1762	2F3E	74	0A				CPSL	WC	
1763	2F40	0F	0E	09			STRA,R3	CURSCP-1	
1764	2F42	0C	0E	07			STRA,R0	CURSOR	
1765	2F44	04	1C				LODI,R0	1C	
1766	2F46	0C	0F	07			STPA,R0	*CURSOR	
1767	2F48	17					RETC,UN		
1768	2F4C								
1769	2F4C	0F	13			*FPROP2	LODI,R2	13	
1770	2F4E	0E	19				LODI,R1	08	
1771	2F50	31	21	F2			STTA,UN	SETCUR	
1772	2F52	31	2F	1C			STTA,UN	PRING	
1773	2F54	04	22				LODI,R0		
1774	2F56	0C	0E	07			STRA,R0	*CURSOR	
1775	2F58	31	2F	12			STTA,UN	PAUSE	
1776	2F5A	1F	49	09			STTA,UN	FEIN	
1777	2F61								
1778	2F61	31	2F	05		*BACK1	STTA,UN	ERAS1	
1779	2F64	16					ETC,LT		
1780	2F66	0C	0E	06			LODA,R2	CURSCR-1	
1781	2F68	A4	10				SUBI,R0	10	
1782	2F6A	0C	0E	09			STRA,R0	CURSOR-1	
1783	2F6C	77	25				PPSL	WC	
1784	2F6E	3D	2E	07			LODA,R0	CURSOR	
1785	2F70	A4	0A				SUBI,R0	0	
1786	2F72	0C	0E	07			STRA,R0	CURSCR	
1787	2F74	75	28				CPSL	WC	
1788	2F76	04	1C				LODI,R0	1C	
1789	2F78	0C	0F	07			STPA,R0	*CURSOR	
1790	2F7A	A4	01				SUBI,R1	1	
1791	2F7C	15	2F				CMPI,R1	FF	
1792	2F7E	08	25				BCFR,IC	NOSUB1	
1793	2F80	0F	06				LODF,R0	*TMP	
1794	2F82	A4	01				SUBI,R0	1	
1795	2F84	06	0F				STRR,R0	*TMP	
1796	2F86	0C	0E			*WCSUB1	BCPZ,R0		
1797	2F88	17					RETC,UN		
1798	2F8C								
1799	2F8C	2F	09			*TMP	ACON	TMPA	
1800	2F91								
1801	2F93	27	08			*OLYCR	LODI,R3		
1802	2F95	0F	0F	07			STRA,R3	*CURSOR	
1803	2F97	05	0E	08		*GLFCB2	LODA,R3	CURSOR-1	
1804	2F99	47	0F				ANDI,R3	F	
1805	2F9B	E7	01				ATTI,P3	1	
1806	2F9D	47	0F				ANDI,R3	F	
1807	2F9F	0F	0E	08			STRA,R3	CURSCP-1	
1808	2FA1	07	1C				LODI,R3	10	
1809	2FA3	0F	0E	07			STPA,R3	CURSOR	
1810	2FA5	04	22				LODI,R0		
1811	2FA7	0C	0E	07		*L2	STRA,R0	*CURSOR	
1812	2FA9	27	10				LODI,R3	10	
1813	2FAB	0F	0E	08			ADDA,R3	CURSOR-1	
1814	2FAD	0F	0E	08			STRA,R3	CURSOR-1	
1815	2FAF	77	28				PPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1816	2FB3	07	08				LODI,R3	0	
1817	2FB5	0F	0E	07			ADDA,R3	CURSOR	
1818	2FB7	0F	0E	07			STRA,R3	CURSOR	
1819	2FB9	75	28				CPSL	WC	
1820	2FBD	F7	25				TM1,R3	5	
1821	2FBF	08	05				BCFR,EQ	L2	
1822	2FC1	0F	0E	08			LODA,R3	CURSOR-1	
1823	2FC3	0F	0E	08			STRA,R3	CURSCP-1	
1824	2FC5	07	10				LODI,R3	10	
1825	2FC7	0F	0E	07			STRA,R3	CURSOR	
1826	2FC9	04	1C				LODI,R0	1C	
1827	2FCB	0C	0E	07			STPA,R0	*CURSOR	
1828	2FD1	17					RETC,UN		
1829	2FD2								
1830	2FD2								
1831	2FD2	04	20			*WRTBL	LODI,R0		
1832	2FD4	1F	2E	23			STTA,UN	WRT	
1833	2FD7								
1834	2FD7								
1835	2FD7								
1836	2FD7	52	05			*TMESS	ACON	MSG02	
1837	2FD9								
1838	2FD9	3F	2E	F6		*FSTRNG	STTA,UN	LFCH	
1839	2FDB	0F	0E	17		*PRING	LODA,R3	*TMESS.1	
1840	2FDD	16					RETC,LT		
1841	2FDF	3F	2E	23			STTA,UN	WRT	
1842	2FE3	0F	77				BIRR,R3	PRING	
1843	2FE5								
1844	2FE5								
1845	2FE5								
1846	2FE5								
1847	2FE5								
1848	2FE5	00	00			*ZSTR5	RES	2	
1849	2FE7								
1850	2FE7								
1851	2FE7	3F	2E	21		*ZSTR	STTA,UN	CTOS	
1852	2FEA	06	FF			ZER	LODI,R2	FF	
1853	2FEC	0E	AB	30			LODA,R2	*STMP-4.+	
1854	2FEE	08	74				STRR,R0	ZSTR5	
1855	2FEF	0E	AB	30			LODA,R2	*STMP-4.+	
1856	2FF0	08	70				STRR,R0	ZSTR5-1	
1857	2FF2	0E	AB	70			LODA,R2	*STMP-4.+	
1858	2FF9	14					RETC,IC		
1859	2FFA	02					STRZ,R2		
1860	2FFB	20					STRZ,R0		
1861	2FFC	0E	0F	F5		*ZSTR2	STTA,R2	*ZSTR5.-	
1862	2FFD	5A	78				BRR,R2	ZSTR2	
1863	3001	17					RETC,UN		
1864	3002								
1865	3002								
1866	3002	20	13	F4		*COMMON	LODA,R0	CRUP2-2	
1867	3005	1C	13	52			COMA,R0	CRUP1-2	
1868	3006	9C	70	66			BCIA,IC	COMN3	
1869	3008	25	FF				LODI,F1	FF	
1870	300C	0C	33	53		*COMN2	LODA,R1	CRUP1-3.-	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OFFERAND	COMMENTS
1871	3217	10	23	58			COMA,R1	CRUF2+3,1	
1872	3213	08	32				BCFR,EG	COMN1	
1873	3215	15	24				COM1,R1	4	
1874	3217	04	24				BCFR,EG	COMN0	
1875	3210	00	13	58			LODA,R2	CRUF2	
1876	3210	00	13	58			COMA,R2	CRUF1	
1877	3218	15	11				BCFR,EG	COMN2	
1878	3221	35	32	58		COMIN2	BCFR,UN	COMN3	
1879	3224	00	13	52		COMIN3	LODA,R2	CRUF1-2	
1880	3227	14					BCFR,EG		
1881	3228	07	02			INVRT	COM1,R2	LT	
1882	3228	15	23				BCFR,EG	INV2	
1883	3220	07	02				LODI,R3	LT	
1884	3221	17					BCFR,UN		
1885	3227	25	21			INV2	LODI,R3	GT	
1886	3231	17					BCFR,UN		
1887	3232	07	00			COMN2	LODI,R3	EG	
1888	3234	00	13	51			LODA,R2	CRUF1-1	
1889	3237	15	13	59			COMA,R0	CRUF2-1	
1890	3234	14					BCFR,EG		
1891	3238	38	20				BCFR,UN	COMN3	
1892	3230	00	13	50			LODA,R2	CRUF1	
1893	3240	15	02				BCFR,EG	COMIN3	
1894	3242	35	20	29			BCFR,UN	INVT	
1895	3245	15	01				BCFR,UN	COMIN3	
1896	3247	35	17			COMN1	BCFR,UN	COMN3	
1897	3240	00	13	50			LODA,R2	CRUF2	
1898	3240	00	13	50			COMA,R0	CRUF1	
1899	3245	05	52				BCFR,EG	COMIN2	
1900	3251	02					LODI,R0		
1901	3252	1A	0A				BCFR,LT	COMN4	
1902	3254	20	13	51			LODA,R2	CRUF1-1	
1903	3257	15	13	59			COMA,R2	CRUF2-1	
1904	325A	18	40			COMN5	BCFR,EG	COMIN2	
1905	3250	17	42				BCFR,UN	COMIN2	
1906	3255	20	13	55		COMN4	LODA,R2	CRUF2-1	
1907	3251	00	13	51			COMA,R0	CRUF1-1	
1908	3254	18	74				BCFR,UN	COMN5	
1909	3256	10	03			COMN3	BCFR,GT	COMN3A	
1910	3258	07	02				LODI,R3	LT	
1911	325A	17					BCFR,UN		
1912	325B	07	21			COMN3A	LODI,R3	GT	
1913	325D	17					BCFR,UN		
1914	325E					*			
1915	325F					*			
1916	326E	00	13	43		STPCT	STRA,R0	CTEMP	
1917	3271	00	13	4F			STRA,R1	CTEMP+1	
1918	3274	17					BCFR,UN		
1919	3275					*			
1920	3275					*			
1921	3275	08	03			STROP1	STRR,R0	OP1	
1922	3277	08	02				STRR,R1	OP1-1	
1923	3279	17					BCFR,UN		
1924	327A					*			
1925	327A					*			

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OFFERAND	COMMENTS
1926	327A	02	02			OP1	RES	2	
1927	327C					*			
1928	327C					*			
1929	327C	08	7D			INCOPI	LODR,R0	OP1+1	
1930	327E	04	21				ADDI,R0	1	
1931	3280	08	79				STRR,R0	OP1+1	
1932	3282	16					BCFR,LT		
1933	3283	15					BCFR,GT		
1934	3284	08	74				LODR,R0	OP1	
1935	3286	04	01				ADDI,R0	1	
1936	3288	08	70				STRR,R0	OP1	
1937	328A	00	10	D7			COMA,R0	SP	
1938	328D	0E	30	C7			BCFR,LT	SOER	
1939	3290	17					BCFR,UN		
1940	3291					*			
1941	3291					*			
1942	3291	08	03			STROP2	STRR,R0	OP2	
1943	3293	09	02				STRR,R1	OP2+1	
1944	3295	17					BCFR,UN		
1945	3296					*			
1946	3296					*			
1947	3296	02	02			OP2	RES	2	
1948	3296					*			
1949	3298					*			
1950	3298	08	7D			INCOPI	LODR,R0	OP2+1	
1951	329A	04	01				ADDI,R0	1	
1952	329C	08	79				STRR,R0	OP2-1	
1953	329E	16					BCFR,LT		
1954	329F	15					BCFR,GT		
1955	32A0	08	74				LODR,R0	OP2	
1956	32A2	04	01				ADDI,R0	1	
1957	32A4	08	70				STRR,R0	OP2	
1958	32A6	17					BCFR,UN		
1959	32A7					*			
1960	32A7					*			
1961	32A7	08	D1			PSHOP1	STRR,R0	*OP1	
1962	32A9	1F	30	7C			BCFR,UN	INCOPI	
1963	32AC					*			
1964	32AC					*			
1965	32AC	08	70			PSHOP2	STRR,R0	*OP2	
1966	32AE	1F	30	5F			BCFR,UN	INCOPI	
1967	32B1					*			
1968	32B1					*			
1969	32B1	08	A4			INCSPI	LODR,R3	*SP	
1970	32B3	04	01				LODI,R0	1	
1971	32B5	08	71			INCSPI	ALTR,R0	SP-1	
1972	32B7	00	17				STPP,R0	SP-1	
1973	32B9	77	08				PPSL	WC	
1974	32BB	04	1A				LODR,R0	SP	
1975	32BD	04	20				ADDI,R0	0	
1976	32BF	02	1E				STRR,R0	SP	
1977	32C1	7F	05				CPSL	WC	
1978	32C3	00	02	06			COMA,R0	ENDRAM	
1979	32C5	16					BCFR,LT		
1980	32C7	00	02	06		SOER	LODA,R0	ENDRAM	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1961	300A	A4	21				SUBI,R0	1	
1962	300C	08	09				STRR,R0	SP	
1963	300E	04	FF				LODI,R0	FF	
1964	3010	04	26				STRR,R0	SP-1	
1965	3012	07	2D				LODI,R3	SOFR	
1966	3014	1F	33	2E			BCTA,UN	ERROR	
1967	3017								
1968	3017								
1969	3017	02	FF				RES	2	
1970	3019								
1971	3019								
1972	3019	26	7D				DECSF	LODR,R0	SP-1
1973	301B	A4	01				SUBI,R0	1	
1974	301D	04	79				DECSF2	STRR,R0	SP-1
1975	301F	77	26				PSSL	WC	
1976	3021	08	74				LODR,R0	SP	
1977	3023	A4	22				SUBI,R0	0	
1978	3025	04	70				STRR,R0	SP	
1979	3027	77	26				CPSL	WC	
1980	3029	1C	02	0A			COMA,R0	TABEND	
1981	302C	5C	12	07			BCTA,CT	SOFR	
1982	302F	08	1E				STRR,R3	*SP	
1983	3031	17					ETC,UN		
1984	3032								
1985	3032								
1986	3032	0C	11	3E			FUSHST	STRA,R0	UTEMP
1987	3035	0D	11	37			STRA,R1	UTEMP-1	
1988	3038	02					LODZ,R2		
1989	3039	03					STRZ,R3		
1990	303A	10	2F				BCTP,FC	PUSH3	
1991	303C	09	5A				LODR,R2	SP-1	
1992	303F	A2					SUBZ,R2		
1993	3041	7E	FC				BSTR,UN	DECSF2	
1994	3101	0F	FF				LODI,R1	FF	
1995	3103	0D	31	36			LODA,R1	*UTEMP,-	
1996	3105	01	10	17			STRA,R2	*SP,-	
1997	3107	5A	70				BRNR,R2	PUSH2	
1998	3109	3E	4C				BSTR,UN	DECSF	
1999	310B	07	21				LODI,R3	1	
2000	310F	1F	4E				BCTB,UN	DECSF	
2001	3111								
2002	3111								
2003	3111	08	23				POFST	STRR,R0	UTEMP
2004	3113	05	22				STRR,R1	UTEMP-1	
2005	3115	27	21				LODI,R3	1	
2006	3117	7C	50	D7			LODA,R0	*SP	
2007	311A	13					COMZ,R3		
2008	311B	9C	45	7C			BCTA,FC	TYPFR	
2009	311E	2F	F0	D7			LODA,R3	*SP,I	
2010	3121	02					STRZ,P2		
2011	3122	01					STRZ,R1		
2012	3123	10	2C				BCTR,EQ	POPST3	
2013	3125	0F	B0	D7			LODA,R3	*SP,-	
2014	3129	0D	11	36			STRA,R1	*UTEMP,-	
2015	312B	5F	70				BRNR,R1	POPST2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2036	312D	02					LODZ,R2		
2037	312F	3F	30	B5			BCTA,UN	INCSP2	
2038	3131	04	02				LODI,R0	2	
2039	3133	1F	30	B5			BCTA,UN	INCSP2	
2040	3136								
2041	3136								
2042	3136	00	00				UTEMP	RES	2
2043	3138								
2044	3138								
2045	3138	08	7C				PUSHFP	STRR,R0	UTEMP
2046	313A	09	7B				STRR,R1	UTEMP-1	
2047	313C	0C	10	D6			LOIA,R0	SP-1	
2048	313F	A4	09				SUBI,R0	9	
2049	3141	07	02				LODI,R3	0	
2050	3143	3F	30	D5			BCTA,UN	DECSF2	
2051	3146	06	09				LODI,R2	8	
2052	3146	05	FF				LODI,R1	FF	
2053	314A	07	09				LODI,R3	9	
2054	314C	01	11	36			LOIA,R1	*UTEMP,-	
2055	314F	0F	D0	D7			STRA,R3	*SP,-	
2056	3152	FA	70				BRNR,R2	PUSHF2	
2057	3154	17					BCTC,UN		
2058	3155								
2059	3155								
2060	3155	08	57				POFEP	STRR,R0	UTEMP
2061	3157	06	51				STRR,R1	UTEMP-1	
2062	3159	06	00				LODI,R2	0	
2063	315B	07	00				LODI,R3	0	
2064	315D	0C	00	D7			LODA,R0	*SP	
2065	3150	9C	45	7C			BCTA,FC	TYPFR	
2066	3163	0F	52	D7			LODA,R3	*SP,-	
2067	3166	0F	D1	36			STRA,R2	*UTEMP,-	
2068	3169	5A	70				BRNR,R2	POFEP2	
2069	316B	04	09				LODI,R0	9	
2070	316D	1F	30	B5			BCTA,UN	INCSP2	
2071	3170								
2072	3170								
2073	3170	06	12				LOIR,R0	INPT	
2074	3172	06	05				STRR,R0	STEMP	
2075	3174	08	07				LODR,R0	INFT-1	
2076	3176	06	02				STRR,R0	STEMP-1	
2077	3178	17					BCTC,UN		
2078	3179								
2079	3179								
2080	3179	02	00				STEMP	RES	2
2081	317B								
2082	317F								
2083	317B	08	7C				LOIR,R0	STEMP	
2084	3177	06	05				STRR,R0	INFT	
2085	3173	06	75				LOIR,R0	STEMP-1	
2086	3161	06	02				STRR,R0	INFT-1	
2087	3163	17					BCTC,UN		
2088	3164								
2089	3164								
2090	3164	02	00				INPT	RES	2

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2091	3168					*			
2092	3168					*			
2093	3168 02 70					CSINPT	LODR,R0	INPT	
2094	3168 02 00						STPR,R0	CINPT	
2095	3168 02 70						LODR,R0	INPT+1	
2096	3168 02 00						STPR,R0	CINPT+1	
2097	3168 17						RETC,UN		
2098	3167					*			
2099	3167					*			
2100	3167 00 00					CINPT	RES	2	
2101	3167					*			
2102	3167					*			
2103	3167 02 70					CRINPT	LODR,R2	CINPT	
2104	3167 02 00						STPR,R0	INPT	
2105	3167 02 70						LODR,R0	CINPT+1	
2106	3167 02 00						STPR,R0	INPT+1	
2107	3167 17						RETC,UN		
2108	3167					*			
2109	3167					*			
2110	3167 00 02 03					BEGIN	LODR,R0	BSTART	
2111	3167 02 00						STPR,R0	INPT	
2112	3167 02						LODR,R0	INPT+1	
2113	3167 02 00						STPR,R0	INPT+1	
2114	3167 17						RETC,UN		
2115	3167					*			
2116	3167					*			
2117	3167 3F 46 40					NXTLIN	BSTA,UN	SKPSP	
2118	3167 3F 31 86						BSTA,UN	CHKCR	
2119	3167 10 A2 92						BCTA,EQ	*BCTA	
2120	3167 04 21						COMI,R0		
2121	3167 10 40 3A						BCTA,EQ	SKPLIN	
2122	3167 02 00					SYNER	LODR,R2	SEWER	
2123	3167 1F 33 2E						BCTA,UN	ERROR	
2124	3167					*			
2125	3167					*			
2126	3167 04 21					CHKCR	COMI,R0	CR	
2127	3167 14						RETC,EQ		
2128	3167 04 3A						COMI,R0		
2129	3167 17						RETC,UN		
2130	3167					*			
2131	3167					*			
2132	3167 75 00					RETC,LT	CPSL	00	
2133	3167 77 00						FFSL	00	
2134	3167 17						RETC,UN		
2135	3167					*			
2136	3167					*			
2137	3167 75 00					RETC,GT	CPSL	00	
2138	3167 77 00						FFSL	40	
2139	3167 17						RETC,UN		
2140	3167					*			
2141	3167					*			
2142	3167 00 05 4B					CKNXTL	LODR,R0	INON	
2143	3167 05 00						LODR,R2	0	
2144	3167 05 4B						STPR,R2	INON	
2145	3167 00						LODR,R0		

COMMENT FROM HERE ON

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2146	3167 10 31 A3						BCTA,EQ	NXTLIN	
2147	3167 1F 46 3A						BCTA,UN	SKPLIN	
2148	3167					*			
2149	3167					*			
2150	3167 00 00 00 00					LINNUM	RES	4	
2151	3167					*			
2152	3167					*			
2153	3167 02					GETLIN	FORZ,R0		
2154	3167 05 04						LODR,R1	4	
2155	3167 01 51 D5					GETLIN2	STPR,R1	LINNUM,-	
2156	3167 09 7B						BRNR,R1	GETLIN2	
2157	3167 05 FF						LODR,R1	FF	
2158	3167 3F 46 40					GETLIN3	BSTA,UN	SKPSP	
2159	3167 04 30						COMI,R0	00	
2160	3167 16 79						BCTA,EQ	GETLIN3	
2161	3167 3F 45 40					GETN4	BSTA,UN	CHKNUM	
2162	3167 90 32 13						BCTA,EQ	DECT	
2163	3167 05 04						COMI,R1	4	
2164	3167 10 45 74						BCTA,EQ	OVER	
2165	3167 00 31 D5						STPR,R1	LINNUM,+	
2166	3167 3F 32 20						BSTA,UN	GETCPR	
2167	3167 1B 6D						BCTA,UN	GETN4	
2168	3167					*			
2169	3167					*			
2170	3167 07 11 05					INCPY	LODR,R3	INPT+1	
2171	3200 07 01						ADDI,R3	1	
2172	3200 07 11 05						STPR,R3	INPT+1	
2173	3200 16						RETC,LT		
2174	3200 15						RETC,GT		
2175	3200 07 11 04						LODR,R3	INPT	
2176	3200 07 01						ADDI,R3	1	
2177	3200 07 11 04						STPR,R3	INPT	
2178	3200 17						RETC,UN		
2179	3200					*			
2180	3200					*			
2181	3200 3F 46 40					SKPDEC	BSTA,UN	SKPSP	
2182	3200 07 11 05					DECT	LODR,R3	INPT+1	
2183	3200 A7 01						SUBI,R3	1	
2184	3200 07 11 05						STPR,R3	INPT+1	
2185	3200 77 00						FFSL	WC	
2186	3200 07 11 04						LODR,R3	INPT	
2187	3200 A7 00						SUBI,R3	0	
2188	3200 07 11 04						STPR,R3	INPT	
2189	3200 75 00						CPSL	WC	
2190	3200 17						RETC,UN		
2191	3200					*			
2192	3200					*			
2193	3200 00 01 04					GETCPR	LODR,R0	*INPT	
2194	3200 3F 45 40						BSTA,UN	LTOUT	
2195	3200 02						LODR,R0		
2196	3200 0A 40						FORZ,LT	INCPY	
2197	3200 1F 31 B1						BCTA,UN	SEWER	
2198	3200					*			
2199	3200					*			
2200	3200 00 00 00 00					INBUF	RES	41	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2221	3234	00	00	00	20				
2222	3230	00	00	00	20				
2223	3240	00	00	00	20				
2224	3244	00	00	00	20				
2225	3246	00	00	00	20				
2226	3240	00	00	00	20				
2227	3250	00	00	00	00				
2228	3254	00	00	00	00				
2229	3254	00	00	00	00				
2230	3254	00	00	00	00				
2231	3260	00	00	00	00				
2232	3264	00	00	00	00				
2233	3266	00	00	00	00				
2234	3260	00	00	00	00				
2235	3270	00	00	00	00				
2236	3274	00							
2237	3275					*			
2238	3276					*			
2239	3275	04	32			AROWCR	LODI,R0	INBUF	
2240	3277	05	34				LODI,R1	INBUF	
2241	3270	06	40				LODI,R2	40	
2242	3278	3F	0E	00			RSTA,UN	ARROW	
2243	3275	00	47	00			BCFA,EG	BEGN	
2244	3261	05	40				LODI,R1	40	
2245	3263	07	54			APOWC2	LOCI,R1	INBUF.-	
2246	3266	5F	04				BRNR,R0	AROWC3	
2247	3269	59	79				BRNR,R1	AROWC2	
2248	326A	A0	01				SUBI,R1	1	
2249	326C	04	20			AROWC3	LODI,R0	00	
2250	326F	0D	32	34			STPA,R1	INBUF,+	
2251	3261	00	11	04			LOCI,R0	INFT-	
2252	3264	06	10				STRR,R0	BTEMP	
2253	3266	20	11	05			LOCI,R0	INFT-1	
2254	3269	00	00				STRR,R0	BTEMP-1	
2255	326B	04	32				LODI,R0	INBUF	
2256	326D	00	11	04			STPA,R0	INFT	
2257	326F	04	34				LODI,R0	INBUF	
2258	326E	07	11	05			STRA,R0	INFT+1	
2259	32A5	17					PETC,UN		
2260	32A6					*			
2261	32A6					*			
2262	32A6	00	00			BTEMP	RES	2	
2263	32A9					*			
2264	32A8					*			
2265	32A8	00	70			RECBY	LODR,R0	BTEMP	
2266	32A4	00	11	04			STRA,R0	INFT	
2267	32A1	00	70				LODR,R0	BTEMP-1	
2268	32A1	00	11	05			STRA,R0	INFT-1	
2269	32B2	17					PETC,UN		
2270	32B3					*			
2271	32B3					*			
2272	32B3	3F	3B	05		ENDLIN	RSTA,UN	ECONST	
2273	32B6	00	46	09			BCFA,EG	RENGT	
2274	32B9	3F	31	0E			RSTA,UN	CSINPT	
2275	32B0	3F	31	0A			RSTA,UN	BEGIN	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2256	32BF	3F	31	70		FINDI2	BSTA,UN	SINPT	SAVE BEGINNING OF THIS LINE
2257	32C2	3F	31	19			BSTA,UN	GETLIN	
2258	32C5	85	01				ADDI,R1	1	
2259	32C7	1E	13	51			COMA,P1	CBUF1-1	
2260	32CA	98	2E				BCFR,FP	FINDL5	
2261	32CC	85	FF				LODI,R1	FF	
2262	32CE	07	00				LODI,P3	0	
2263	32D0	2E	31	15		FINDI1	LOIA,P1	LINNUM,+	
2264	32D3	44	FF				ANDI,FP	F	
2265	32D5	95	01				THI, P1	1	
2266	32D7	18	04				PCTR,EQ	FINDI3	
2267	32D9	10					RRL,R0		
2268	32DA	D0					RRL,R0		
2269	32DB	D0					RRL,R0		
2270	32DC	D0					RRL,R0		
2271	32DD	63				FINDI3	IORZ,R3		
2272	32DE	C3					STRZ,P3		
2273	32DF	F5	23				COMI,R1	3	
2274	32E1	10	07				BCTR,EQ	FINDL4	
2275	32E3	F5	01				COMI,R1	1	
2276	32E5	98	69				BCFR,EQ	FINDL1	
2277	32E7	C7					STRZ,R2		
2278	32E9	1E	64				BCTR,UN	FINDL1-2	
2279	32EA	FE	13	53		FINDL4	COMA,R2	CBUF1-3	
2280	32ED	98	0A				BCFR,EQ	FINDL5	
2281	32EF	EF	13	54			COMA,R3	CBUF1-4	
2282	32F2	98	05				BCFR,EQ	FINDL5	
2283	32F4	3F	31	7B			BSTA,UN	RINPT	
2284	32F7	20					EORZ,R0		
2285	32F8	17					RETC,UN		
2286	32F9	3F	33	0C		FINDL5	BSTA,UN	SKPCR	
2287	32FC	E4	0D				COMI,R0	CR	
2288	32FE	98	79				BCFR,EQ	FINDI*	
2289	3300	0C	91	84			LODA,R0	*INPT	
2290	3303	9F	32	5F			BCFA,LT	FINDI2	
2291	3306	3F	31	91			BSTA,UN	CRINPT	
2292	3309	04	FF				LODI,R0	FF	
2293	330B	17					RETC,UN		
2294	330C					*			
2295	330C					*			
2296	330C	0F	11	05		SKPCR	LOIA,P3	INPT-1	
2297	330F	20					EORZ,R0		
2298	3310	CC	11	05			STRA,FP	INPT-1	
2299	3313	0F	F1	64		SKPCR2	LOIA,R3	*INPT-1	
2300	3316	07	01				ACTI,P3	1	
2301	3318	98	6A				BCFR,EQ	SKPCR3	
2302	331A	0F	11	64			LOIA,P3	INPT	
2303	331C	07	01				ACTI,R2	1	
2304	331F	0F	11	64			STRA,P3	INPT	
2305	3322	07	00				LODI,R3	0	
2306	3324	3F	31	06		SKPCR3	PSTA,UN	CHKCR	
2307	3327	98	6A				BCFR,EQ	SKPCR2	
2308	3329	0F	11	05			STRA,P3	INPT-1	
2309	332C	17					RETC,UN		
2310	332C					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2311	3320					*			
2312	3320	20				FTMP	RES	1	
2313	3321					*			
2314	3321					*			
2315	3321	04	07			ERRDP	LODI,R0	2	
2316	3322	03					LISL		
2317	3321	08	7A				STRB,R3	ETEMP	
2318	3323	07	17				LODI,R3	ASTMSG	***
2319	3325	31	45	53			BSTA,UN	WRTHCR	
2320	3326	05	73				LODR,R3	ETEMP	
2321	332A	3F	45	56			BSTA,UN	WPTM	
2322	3330	07	11				LODI,R3	SPRMSG	ERROR ***
2323	3337	3F	45	56			BSTA,UN	WPTM	
2324	3347	2E	11	FF			LOFA,R2	INPT-1	
2325	334E	AF	27	0E			SUBA,R2	SHRNT-1	
2326	334F	3F	22	77			BSTA,UN	SHLN	
2327	334F	1F	42	0F			PCTA,UN	EIGN	
2328	334F					*			
2329	334F					*			
2330	334F					*			
2331	334F	27	0F			CTEMP	RES	2	
2332	334F	00	22	72	02	CPUP1	RES	8	
2333	334F	3F	22	72	02				
2334	3350	00	20	72	02	CPUP2	RES	8	
2335	3350					*			
2336	3350					*			
2337	3350	49	0F			PUSHOP	LODR,R1	OPSP	
2338	3352	00	73	72			STRA,R1	OPSTK.I	
2339	3356	0F	21				ADDI,R1	1	
2340	3357	00	20				STPP,R1	OPSP	
2341	3359	15	20				COMI,R1	22	
2342	335B	10					RETC,LT		
2343	3360	27	12			CSOER	LODI,R3	CSOER	
2344	336E	1F	33	2E			PCTA,UN	ERRDP	
2345	3371					*			
2346	3371					*			
2347	3371	20				OPSP	RES	1	
2348	3372	00	22	00	22	OPSTK	RES	20	
2349	3376	02	00	00	02				
2350	337A	20	20	20	20				
2351	337E	00	22	00	22				
2352	3382	00	00	00	00				
2353	3386	07	00	00	07				
2354	338A	00	20	00	20				
2355	338F	22	22	20	22				
2356	3390	00				EVALCC	RES	1	
2357	3392					*			
2358	3393					*			
2359	3393	20	50			POPOP	LODP,R1	OPSP	
2360	3395	AF	71				SUBI,R1	1	
2361	3397	1A	53				OSOER		
2362	3399	00	60				STPP,R1	OPSP	
2363	339B	20	73	72			LOFA,R1	OPSTK.I	
2364	339F	17					RETC,UN		
2365	339F					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2366	339F					*			
2367	339F	20				EVAL	IORZ,R0		
2368	33A0	00	4F				TPR,R2	OPSP	
2369	33A2	06	61				STRB,R2	EVALCC	
2370	33A4	00	14	97			STRA,R0	PAFNSI	
2371	33A7	04	07				LODI,R0	7	
2372	33A9	3F	33	60			BSTA,UN	PUSHOP	
2373	33AC	3F	45	25			BSTA,UN	CRNEG	
2374	33AF	3F	35	77		EVALC	BSTA,UN	LOKVAR	
2375	33F2	99	10				BCFR,GT	EVAL1	
2376	33F4	3F	38	BB			BSTA,UN	ECONST	
2377	33F7	99	17				PCFR,GT	EVAL1	
2378	33B9	3F	32	28			BSTA,UN	CATCHR	
2379	33BC	F4	20				COMI,R2		
2380	33BE	10	34	81			PCTA,R0	KLPA9	
2381	33C1	1F	32	13			BSTA,UN	DEOPT	
2382	33C4	04	46				LODI,R0	PCNTAB	
2383	33C6	05	66				LODI,R1	PCNTAB	
2384	33C8	3F	45	F7			BSTA,UN	LOOKUP	
2385	33CB	10	34	FA			PCTA,EO	IFCN	
2386	33C1	1F	21			EVAL1	PCTR,UN	ENDEVL	
2387	33D0	18	05			EVAL1	PCTR,EO	EVAL2	
2388	33D2	3F	30	F2			BSTA,UN	PUSRST	
2389	33D5	12	03				PCTR,UN	EVAL3	
2390	33D7	3F	31	38		EVAL2	BSTA,UN	PUSHFP	
2391	33DA	04	FF			EVAL3	LODI,R0	FF	
2392	33DC	00	13	92			STRA,R0	EVALCC	
2393	33DF	3F	46	40			BSTA,UN	SKPSP	
2394	33E2	F4	20				COMI,R2		
2395	33E4	10	3D	2B			PCTA,EO	YPCOM	
2396	33E7	F4	25				COMI,R0		
2397	33E9	10	34	53			PCTA,EO	KRPAR	
2398	33EC	F4	27				COMI,R0	2	
2399	33EE	10	3F	23			PCTA,EO	RTNVAL	
2400	33F1	05	28				LODI,R1	8	
2401	33F3	10	55	49		EVAL4	COMA,R1	OPTPL,-	
2402	33F6	10	34	23			PCTA,EO	ICP	
2403	33F9	59	78				BRNR,R1	EVAL4	
2404	33FB	3F	32	13			BSTA,UN	DEOPT	
2405	33FE	3F	33	93		ENDEVL	BSTA,UN	POPOP	
2406	3401	03					STRZ,R3	7	
2407	3402	F4	07				COMI,R0		
2408	3404	16	00				BCPR,EC	ENDE2	
2409	3406	44	27				ANDI,R0	7	
2410	3408	F4	03				COMI,R0	3	
2411	340A	1F	31	F1			PCTA,GT	STWER	
2412	340C	3F	34	39			BSTA,UN	DOOF	
2413	3410	1B	60				PCTR,UN	ENDEVL	
2414	3412	00	13	97		ENTER	LOFA,R2	EVALCC	
2415	3415	10	31	01			PCTA,EO	RETCGT	
2416	341B	3F	39	F1			BSTA,UN	INCSF	
2417	341B	3F	32	D9			BSTA,UN	DECSF	
2418	341E	03					LOIZ,R3		
2419	341F	14					RETC,EO		
2420	3420	04	FF				LODI,R2	FF	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPEPAND	COMMENTS
2421	2422	17					RETC,UN		
2422	2423					*			
2423	2423					*			
2424	2423	F*	24			EOF	CCM1,R1	4	
2425	2425	15	2A				BCTR,R1	4	EOF4
2426	2427	20	75	51			LOCA,R1		OPCOD.1
2427	2428	11					RPL,R1		
2428	2428	01					RPL,R1		
2429	2428	01					RPL,R1		
2430	2428	01					ICR2,R1		
2431	2428	15	32				STBR,R1		TEMPOP
2432	2432	35	33	53		EOF2	STRA,UN		POFOP
2433	2433	01					STR2,R1		
2434	2434	44	27				ANCI,R0	7	
2435	2436	23	16				LOCP,R3		TEMPOP
2436	2436	47	27				ANCI,R3	7	
2437	243A	13					COM2,R3		
2438	243E	09	7C				BCTR,LE		ECF3
2439	243D	01					LODZ,R1		
2440	243E	35	33	60			BSTA,UN		PUSHOP
2441	2441	05	01				LOCP,R2		TEMPOP
2442	2443	75	33	52			BSTA,UN		PUSHOP
2443	2446	1F	33	AF			BSTA,UN		EVAL2
2444	2445	01				ECF3	LODZ,R1		
2445	244A	03					STPZ,R3		
2446	2445	35	34	19			BSTA,UN		DOOP
2447	244E	15	62				BCTR,UN		ECF2
2448	2450					*			
2449	2452					*	TEMPOP RES	1	
2450	2451					*			
2451	2451					*			
2452	2451					EOF4	BCTR,UN		CONVGT
2453	2451	03	2C				LODZ,R1		
2454	2451	01					STR2,R2		
2455	2454	00					LODA,R2		*INPT
2456	2455	00	01	84			LOD1,R1	8	
2457	2455	05	02				CCMA,R1		OPTFL.-
2458	245A	1D	55	49		EOF4A	BCTR,EQ		ECF5
2459	2457	12	02				CCM1,R1	5	
2460	2457	15	25				BCTR,EQ		EOF4A
2461	2457	15	77				BCTR,EQ		EOF5A
2462	2457	12	02				BCTR,UN		INCPY
2463	2455	35	31	FD		EOF5	BSTA,UN		CONVGT
2464	2459	35	0F				BCTR,UN		
2465	246A	21					LODZ,R1		
2466	246B	02					ICR2,R2		
2467	246C	02					STR2,R2		
2468	2467	08				EOF5A	RPL,R2		
2469	2467	12					RPL,R2		
2470	2477	12					RPL,R2		
2471	2472	66	23				ICR1,R2	3	
2472	2472	02					LODZ,R2		
2473	2473	0C	14	50			STRA,R2		TEMPOP
2474	2475	1F	34	30			BCTA,UN		EOF2
2475	2475					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPEPAND	COMMENTS
2476	2475					*			
2477	2475	A*	24			CONVGT	SUB1,R1	4	
2478	2475	15	23				COM1,R1	3	
2479	247D	16					RETC,LT		
2480	247E	05	04				LOD1,R1	4	
2481	2480	17					RETC,UN		
2482	2481					*			
2483	2481					*			
2484	2481	08	2F			ELPAR	LOCP,R0		PARNST
2485	2483	04	01				AUDI,R0	1	
2486	2485	08	09				STBR,R0		PARNST
2487	2487	04	05				LOD1,R0	5	
2488	2489	35	33	60			BSTA,UN		PUSHOP
2489	248C	3F	45	29			BSTA,UN		CKNEG
2490	248F	1F	33	AF			BCTA,UN		EVAL2
2491	2492					*			
2492	2492					*			
2493	2492	02				PARNST	RES	1	
2494	2493					*			
2495	2493					*			
2496	2493	08	7D			ERPAR	LOCP,R0		PARNST
2497	2495	08	06				BCTR,EQ		ERPAR2
2498	2497	3F	32	13		ERPAR1	BSTA,UN		DECPY
2499	249A	1F	33	FE			BCTA,UN		ENDEVL
2500	249D	A4	21			ERPAR2	SUB1,R0	1	
2501	249F	C8	71				STBR,R0		PARNST
2502	24A1	31	33	53		ERPAR3	BSTA,UN		POFOP
2503	24A4	01					STR2,R3		
2504	24A5	44	07				ANCI,R0	7	
2505	24A7	E4	07				COM1,R0	7	
2506	24A9	1C	31	F1			BCTA,EQ		SYNER
2507	24AC	E4	05				COM1,R0		
2508	24AE	1C	33	DA			BCTA,EQ		EVAL2
2509	24B1	E4	06				COM1,R0	6	
2510	24B3	18	21				BCTR,EQ		KPCWEX
2511	24B5	3B	22				BCTR,UN		DOOP
2512	24B7	1B	68				BCTR,UN		ERPAR3
2513	24B9					*			
2514	24B9					*			
2515	24B9	03				DOOP	LODZ,R3		
2516	24BA	44	07				ANCI,R0	7	
2517	24BC	E4	03				COM1,R0	3	
2518	24BE	1C	3D	0C			BCTA,EQ		PCOMP
2519	24C1	53					RPL,R3		
2520	24C2	53					RPL,R3		
2521	24C3	47	2E				ANCI,R3	E	
2522	24C5	0F	75	56			LOCA,R3		OPJUMP.1
2523	24C8	0C	14	24			STPA,R0		DOEST
2524	24C8	05	34	1E			LOCA,R3		OPJUMP.1
2525	24C1	0C	14	25			STPA,R0		DOEST.1
2526	24C1	1F	E4	04			BCTA,UN		*DOEST
2527	24C4					*			
2528	24C4					*			
2529	24C4	02	22			DOEST	RES	2	
2530	24C6					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2531	2476								
2532	2476	53				IFCNEY	PRR,R3		
2533	2477	53					PRR,R3		
2534	2478	47	32				ANTI,R3	3F	
2535	247A	27	25	20			LOCA,R3	FCNIMP,I	
2536	247D	08	25				STRP,R0	DOIST	
2537	247F	25	34	25			LOCA,R3	FCNIMP,+	
2538	2480	09	71				STRP,R2	DOIST-1	
2539	2484	3F	F4	14			BSTA,UN	*DOIST	
2540	2487	13	32	0A			BSTA,UN	FVAL3	
2541	248A								
2542	248A								
2543	248A	3F	40	40		FFCN	BSTA,UN	SKPSP	
2544	248D	14	28				COMI,P0	1	
2545	248F	0C	31	R1			PCFA,IC	SYNER	
2546	2490	20	14	02			LOCA,P0	PARNST	
2547	2494	34	01				ALDI,R0	1	
2548	2497	0C	14	02			STRP,R0	PARNST	
2549	249A	11					RRL,R1		
2550	249B	11					RRL,R1		
2551	249C	11					RRL,R1		
2552	249E	2F	25				LODI,R1	6	
2553	249F	21					LODI,R1		
2554	2499	33	40				BSTA,UN	POSHOP	
2555	249B	3F	45	29			BSTA,UN	CKN25	
2556	249E	13	32	0A			BSTA,UN	FVAL3	
2557	249E	3F	5A	3D	40	FCNIMP	ACON	FPAPS,FPSON,FPFI,FPFEK,FPCHR,FPIN,FPLEY,FILPOS	
2558	2499	3F	61	3F	34				
2559	249B	3F	45	29					
2560	249E	3F	60	37	A1				
2561	2499	3F	67	3D	AP	ACON		FFASC,FPINT,FPFPR,FPFOS,FPFALL,FPFRIGT,FPLETT,FPFID	
2562	249B	3F	60	37	64				
2563	249B	3F	64	41	ED				
2564	249E	47	30	42	51				
2565	2499	47	25	3F	A3	ACON		FPSTRG,FPFND,FPVAPP,FPINST,FPFRC,FPSTR,FPVAI	
2566	2499	3F	12	42	07				
2567	249B	3F	26	3E	B0				
2568	249E	3F	1A						
2569	2499	3F	16	54	27	ACON		FPFIN,FPFOS,FPFAN,FPFATN,FPFNL,FPFLOG,FPFEP2,FPFSR	
2570	2499	3F	04	54	AB				
2571	2499	3F	62	54	AB				
2572	249B	3F	35	52	60				
2573	2497	3F	06						
2574	2499	3F	2A	2F	2B	CPTBI	ALIT		
2575	2499	3F	3C	3E	3D				
2576	249B	3F	01	02	OPCOD	DATA		2.1.1,2,2	
2577	249E	02							
2578	249E	45	14	3B	F1	OPJUMP	ACON	FPFEX,FPFULT,FPFIV,FPFAD,FPFSUP	
2579	249A	3F	12	3A	72				
2580	249E	3A	64						
2581	2499								
2582	2499								
2583	2499	04	11			POPLT	ICDR,R0	LTEMP-1	
2584	2499	04	71				ADDI,R0	1	
2585	2499	08	02				STRP,R0	LTEMP-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2586	2499	06	26			PCFP,EQ	POPLT2		
2587	2499	08	08			LODR,R0	LTEMP		
2588	249A	04	71			ADDI,R0	1		
2589	249C	08	24			STRP,R0	LTEMP		
2590	249E	0C	05	72		LODA,R0	*LTEMP		
2591	2491	17				RETC,UN			
2592	2492								
2593	2492								
2594	2492	02	02	00	00	LTEMP	RES	5	
2595	2496	00							
2596	2497								
2597	2497								
2598	2497	3F	32	12		LOKVAR	BSTA,UN	SKPDEC	
2599	249A	3F	31	72			BSTA,UN	SINFT	
2600	249C	0C	00	05			LODA,R0	VARS1	
2601	249C	A4	21				SUBI,R0	1	
2602	249C	08	61				STRP,R0	LTEMP	
2603	249A	04	1F				LODI,P0	FF	
2604	249C	08	69				STRP,R0	LTEMP-1	
2605	249B	3F	56			LOKV1	BSTA,UN	POPLT	
2606	249A	1C	3A	16			PCFA,IC	ICRETN	
2607	249B	08	65				STRP,R0	LTEMP-2	
2608	249F	3F	4F				BSTA,UN	POPLT	
2609	249B	08	62				STRP,R0	LTEMP-3	
2610	249B	3F	4B				BSTA,UN	POPLT	
2611	249B	08	5F				STRP,R0	LTEMP-4	
2612	2497	06	04				LODI,R2	4	
2613	2499	3F	4*			LOKV2	BSTA,UN	PCPLT	
2614	249B	10	29				PCFP,IC	LOKV2A	
2615	249C	3F	32	28			BSTA,UN	GETCHR	
2616	249C	1F	08				COMP,R0	*LTEMP	
2617	249A	06	2C				PCFP,IC	LOKV3	
2618	249A	FA	73				PCFP,IC	LOKV2	
2619	249B	0C	01	04		LOKV2A	LODA,R0	*INFT	
2620	249B	3F	4*	A6			BSTA,UN	LCU	
2621	249C	3F	45	3C			BSTA,UN	CKEAN	
2622	249F	16	1F				BCTR,IC	LOKV3	
2623	249B	A6	01				SUBI,P2	1	
2624	249B	09	05				PCFP,IC	LOKV5	
2625	249B	3F	35	60		LOKV4	BSTA,UN	POPLT	
2626	249B	FA	2E				BCTR,IC	LOKV4	
2627	249A	0C	1*	7E		LOKV5	LODA,P0	LTEMP-4	
2628	249B	FA	01				COMI,R0	1	
2629	249F	1C	36	14			PCFA,IC	LOKDI*	
2630	2497	1C	26				PCFP,IC	LOKSTR	
2631	249A	3F	3*	60		LOKV6	BSTA,UN	PCPLT	
2632	2497	AC	1*	7E			LODA,P0	LTEMP	
2633	249A	0C	15	73			LODA,P1	LTEMP-1	
2634	249C	07	00				LODI,R3	0	
2635	249F	17					PCFP,UN		
2636	2499	3F	31	72		LOKV7	BSTA,UN	PINPT	
2637	249B	0C	1*	74			LODA,P0	LTEMP-2	
2638	249E	2*	1*	75			LODA,P1	LTEMP-3	
2639	249C	A6	01				SUBI,P1	1	
2640	249E	77	20				PCPL	WC	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2641	3600	A4	28				SUBI.R2	2	
2642	3601	28	28				CECL	WC	
2643	3601	00	14	72			STRA.R2	LTEMP	
2644	3614	00	15	72			STRA.R1	LTEMP-1	
2645	3607	1F	35	08			BCRA.UN	LOKVI	
2646	3614					*			
2647	3614					*			
2648	3614	7F	35	0F		LOKSTR	STRA.UN	GETCHF	
2649	3607	14	04				COMI.R2	5	
2650	3600	00	2A	16			PCFA.EC	ECFETN	
2651	3600	25	46	07		LOKSTR	STRA.UN	POPLT	
2652	3614	00					STRZ.R3		
2653	3614	35	35	00			STRA.UN	FOPLT	
2654	3614	01					STRZ.R1		
2655	3614	31	34	00			STRA.UN	POPLT	
2656	3610	02					STRZ.R2		
2657	3614	07					LODZ.R3		
2658	3614	27	35				LODI.R3	FF	
2659	3614	17					RETC.UN		
2660	3600					*			
2661	3600					*			
2662	3607	27	22	27	02	LDIMS	RIS	A	
2663	3606	24	22	42	72				
2664	360A	07	20						
2665	3600	27	20	20	27	DIMSTK	RIS	B	
2666	3612	27	20	22	04				
2667	3614					*			
2668	3614					*			
2669	3614	04	00			LOKDIM	STRA.R2	LDIMS	
2670	3614	04	04				COMI.R2	4	
2671	3614	10	37	01			PCFA.EC	FWFVAL	
2672	3614	04	07				COMI.R2	2	
2673	3610	00	02				PCFR.EC	LOKONS	
2674	3607	35	32	20			STRA.UN	GETCHF	
2675	3607	04	04				COMI.R2	4	
2676	3604	07	46	56			PCFA.EC	RETNGT	
2677	3607	35	35	00		LOKONS	STRA.UN	POPLT	
2678	3604	04	07				STRA.R2	LDIMS-1	# OF DIMS
2679	3600	06	00				LODI.R2	0	
2680	3607	07	01				LODI.R3	1	
2681	3607	01	16	2A			STRA.R2	LDIMS-8	
2682	3607	0F	16	0F			STRA.R3	LDIMS-6	
2683	3606	05	16	0A		LOKD2	LOIA.R2	LDIMS-6	
2684	3606	45	16	2B			LOIA.R3	LDIMS-6	
2685	3600	00	49			LOKD2A	STRA.R2	LDIMS-5	
2686	3606	35	35	00			STRA.UN	POPLT	
2687	3641	01					STRZ.R1		
2688	3647	00	16	74			STRA.R2	LDIMS-7	
2689	3645	0F	16	0F		LOKD3	ADDA.R3	LDIMS-9	MULT BY THIS DIM
2690	3645	77	04				PCFL	WC	
2691	364A	05	16	0A			ADDA.R2	LDIMS-8	
2692	3640	05	08				CECL	WC	
2693	3645	16	74				PCFR.R1	LOKNS	
2694	3601	01	16	2A			STRA.R2	LDIMS-8	
2695	3604	0F	16	0F			STRA.R3	LDIMS-9	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2696	3607	35	32	D9			STRA.UN	DEOSP	
2697	360A	02					LODZ.R2		
2698	3609	03					STRZ.R3		
2699	3600	35	32	D9			STRA.UN	DEOSP	STORE IT
2700	3606	0F	16	24			LODA.R3	LDIMS-2	STORE THIS DIM
2701	3607	35	32	D9			STRA.UN	DEOSP	
2702	3600	00	16	07			LOIA.R0	LDIMS-5	
2703	3608	00	36	36			BCRA.R0	LOKNS	
2704	3608	00	15	72			LOIA.R0	LTEMP	SAVE LTEMP
2705	3600	00	16	05			STRA.R2	LDIMS-3	
2706	3601	00	15	03			LODA.R2	LTEMP-1	
2707	3604	00	16	05			STRA.R0	LDIMS-4	
2708	3607	35	46	40			STRA.UN	SEPSF	
2709	360A	04	28				COMI.R2	1	
2710	3600	00	71	01			PCFA.EC	SYNER	
2711	3607	05	08				LODI.R1	8	
2712	3601	01	16	04		LOKDB	STRA.R1	LDIMS-2	
2713	3604	35	32	18			STRA.UN	SKIDEC	
2714	3607	35	46	46			STRA.UN	CHNUM	
2715	360A	00	36	AB			PCFA.EC	LOKNS	
2716	3600	35	31	FD			STRA.UN	INCPY	
2717	3600	44	0F				ANDI.R0	F	
2718	3607	02					STRZ.R2		
2719	3603	00	51	04		LOKDS	LODA.R2	*INVT	
2720	3606	35	46	40			STRA.UN	CHNUM	
2721	3609	06	22				PCFR.EC	LOKNS	
2722	360B	01					STRZ.R1		
2723	3600	45	0F				ANDI.R1	F	
2724	3600	35	31	FD			STRA.UN	INCPY	
2725	36A1	27	09				LODI.R3	9	
2726	36A3	02					LODZ.R2		
2727	36A4	02				LOKDB	ADDA.R2	LOKNS	
2728	36A5	0B	71				PCFR.R3		
2729	36A7	01					ADDA.R1		
2730	36A8	02					STRZ.R2		
2731	36A9	15	08				PCFR.UN	LOKNS	
2732	36A0	35	35	77		LOKNS	STRA.UN	LOKNS	
2733	36A0	00	46	56			PCFA.EC	RETNGT	
2734	36B1	35	31	06			STRA.UN	FUSHEP	
2735	36B4	35	2F	A1			STRA.UN	FWNS	
2736	36B7	00					LODZ.R2		
2737	36B8	00	46	59			PCFA.EC	RETNGT	
2738	36B8	21					LODI.R1		
2739	36B0	00					STRZ.R2		
2740	36B0	00	16	04		LOKNS	LODA.R1	LDIMS-2	STACK POINTER
2741	36B0	02					LODZ.R2		
2742	36C1	01	16	20			STRA.R1	DIMSTK-	
2743	36C4	01					LODZ.R1		
2744	36C6	10	46	56			STRA.EC	RETNGT	
2745	36C6	35	46	40			STRA.UN	SEPSF	
2746	36C3	04	20				COMI.R2	1	
2747	36C7	10	36	01			PCFA.EC	LOKNS	
2748	36C7	04	20				COMI.R2	1	
2749	36C7	00	46	59			PCFA.EC	RETNGT	
2750	36C5	00	16	23			ADDA.R1	LDIMS-1	# OF DIMS

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2751	3706	18	22				COMI,R1	8	
2752	370A	10	46	59			BCFA,FC	RETNST	# OF DIMS - # OF SUBSTP
2753	3710	00					FORZ,R0		
2754	3710	00	16	29			STRA,R0	LDIMS-6	
2755	3711	00	16	29			STRA,R2	LDIMS-7	
2756	3714	20	16	24			LODA,R1	LDIMS-7	STACK POINTER
2757	3717	A5	02				SUPI,R1	2	
2758	3718	15	26			LOKDC	COMI,R1	6	
2759	371B	10	32	3F			BCTA,EC	LOKDF	LAST SUBSCRIPT
2762	371F	20	76	0C			LODA,R1	DIMSTK-1	
2763	3721	01	16	34			STRA,R1	LDIMS-2	
2767	3724	02					STRZ,R2		
2768	3725	75	20	F1			BSTA,UN	INCSP	
2774	372B	22					LODI,R2		
2775	372C	10					COMI,R1		
2776	372C	10					RETC,C0		
2777	3731	75	77	F1			BSTA,UN	INCSP	
2778	3731	75	77	F1			BSTA,UN	INCSP	
2779	3731	07	21				LODI,R3	1	
2780	3732	2F	17	17			LODA,R3	*SP,1	
2781	3732	00	16	2A			STRA,R0	LDIMS-6	
2782	3732	25	10	D7			LODA,R3	*SP,-	
2783	373C	00	16	0B			STRA,R0	LDIMS-9	
2784	373E	20					FORZ,R0		
2785	373E	01					STRZ,R1		
2786	3741	03					STRZ,R3		
2787	3742	18	27				COMI,R2	8	
2788	3744	18	10				BCTP,EC	LOKDF	
2789	3746	60	16	2B		LOKDC4	ADDA,R1	LDIMS-9	
2790	3748	77	19				FESL	WC	
2791	374F	0F	16	0A			ADDA,R3	LDIMS-8	
2792	3751	05	04				CPSL	WC	
2793	3752	FA	74			LOKDC5	FORZ,R2	LOKDC4	
2794	3752	80	16	09			ADDA,R1	LDIMS-7	
2795	3756	01	16	29			STRA,R1	LDIMS-7	
2796	3758	77	79				PPSL	WC	
2797	375A	6F	16	7P			ADDA,R3	LDIMS-6	
2798	375C	03	16	0E			STRA,R3	LDIMS-6	
2799	375D	75	16				CPSL	WC	
2800	375D	20	16	24			LODA,R1	LDIMS-2	
2801	375F	13	26	16			BCTA,UN	LOKDC	
2802	375B	3F	32	B1		LOKDF	BSTA,UN	INCSP	
2803	375B	1F	16	13			COMA,F3	DIMSTK-7	
2804	375F	13	46	59			BCTA,LT	RETNST	
2805	3741	3F	32	61			BSTA,UN	INCSP	
2806	3744	3F	32	51			BSTA,UN	INCSP	
2807	3747	20	36	2C			LODA,R1	DIMSTK-1	
2808	374A	60	16	29			ADDA,R3	LDIMS-7	
2809	374D	00	16	09			STRA,R0	LDIMS-7	
2810	3752	77	09				FESL	WC	
2811	3752	20					FORZ,R0		
2812	3753	40	16	2B			ADDA,R0	LDIMS-6	
2813	3756	00	16	0E			STRA,R0	LDIMS-6	
2814	3759	75	05				CPSL	WC	
2815	375B	23	16	72			LODA,R2	LDIMS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2826	3751	36	22				COMI,R2	2	
2827	3762	18	22				BCTP,EC	LOKDC	
2828	3762	08	07				LODI,R2	7	
2829	3764	0F	16	2B		LOKDC	LODA,R3	LDIMS-6	
2830	3767	20	16	29			LODA,R1	LDIMS-7	
2831	376A	80	16	09		LOKDF	ADDA,R1	LDIMS-7	
2832	376C	77	79				FESL	WC	
2833	376F	4F	16	26			ADDA,R3	LDIMS-6	
2834	3772	00	0A				CPSL	WC	
2835	3774	FA	74				BRRR,R2	LOKDF	
2836	3776	01	16	0E			ADDA,R1	LDIMS-4	
2837	3778	77	08				FESL	WC	
2838	377B	5F	16	05			ADDA,R3	LDIMS-3	
2839	377E	76	05				CPSL	WC	
2840	3782	0F	16	72			STRA,R3	LTMP	
2841	3783	0D	15	73			STRA,R1	LTMP-1	
2842	3786	00	16	02			LODA,R0	LDIMS	
2843	3789	F4	02				COMI,R0	2	
2844	378F	10	35	F2			BCTA,FC	LOKST2	
2845	3791	1F	35	C4			BCTA,UN	LOKVE	
2846	3791								
2847	3791								
2848	3791								
2849	3791	22	22	22	22	FNS	PIS	5	
2850	3795	08							
2851	3796								
2852	3796								
2853	3796	00	11	84		FNVAL	LODA,R0	INPT	
2854	3799	00	11	08			STRA,R0	VALS	
2855	379C	00	11	85			LODA,R0	INPT-1	
2856	379E	00	11	19			STRA,R0	VALS-1	
2857	379E	28	05				LODR,R0	FNS	
2858	3794	00	11	84			STRA,R0	INPT	
2859	3799	28	05				LODR,R0	FNS-1	
2860	3799	00	11	85			STRA,R0	INPT-1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1241	3200	35	30	02		FN2	BSTA.UN	GETCHR	
1242	3201	35	31	06			BSTA.UN	CHICP	
1243	3202	10	39	0A			BSTA.EC	UFER	
1244	3203	34	20				COMI.R0		
1245	3204	34	03				BCPR.EC	FN2	
1246	3205	35	45	42			BSTA.UN	SKICP	
1247	3206	34	31				COMI.R0		
1248	3207	35	34	0A			BSTA.EC	UFER	
1249	3208	35	11	04			LOCA.R0	INPT	
1250	3209	35	45				STRA.R0	FNS-2	
1251	3210	35	11	04			LOCA.R0	INPT+1	
1252	3211	35	45				STRA.R0	FNS-3	
1253	3212	35	7A	70			BSTA.UN	SINFT	
1254	3213	35	45				LOCA.R0	FF	
1255	3214	35	32	0A		FN5	BSTA.UN	GETCHR	
1256	3215	35	70	05			STRA.R0	FNSTG-1	
1257	3216	35	12				COMI.R0	42	
1258	3217	10	39	0A			BSTA.EC	UFER	
1259	3218	34	31				COMI.R0	0P	
1260	3219	34	7A				BCPR.EC	FNE	
1261	3220	34	20				LOCA.R0	2	
1262	3221	35	7A	05			STRA.R0	FNSTG.I	
1263	3222	35	31	05			BSTA.UN	PINFT	
1264	3223	24	27				LOCA.R0	3	
1265	3224	35	39	13		FN3	BSTA.UN	DFCET	
1266	3225	34	7A				BCPR.EC	FN3	
1267	3226	35	39	13		FN3A	BSTA.UN	DFCET	
1268	3227	30	01	04			LOCA.R0	*INFT	
1269	3228	34	00				COMI.R0		
1270	3229	35	05				BCPR.EC	FN4	
1271	3230	34	15				COMI.R0	1	
1272	3231	35	05				BCPR.EC	FNEND	
1273	3232	35	7A				BCPR.EC	FN3A	
1274	3233	35	05			FN4	BCPR.EC		
1275	3234	35	22				BCPR.EC	FN5	
1276	3235	34	31			FNEND	LOCA.R0	FF	
1277	3236	35	17	05		FN5	BCPR.EC	FNS-4	
1278	3237	35	11	05			BSTA.UN	INCP7	
1279	3238	35	70	0A			BSTA.UN	CCVAP	
1280	3239	35	7A	0A			BSTA.UN	UFER	
1281	3240	3A	32				BCPR.LT	FNSTR	
1282	3241	35	31	05			BSTA.UN	BCPRP	
1283	3242	35	02	17		FN1	LOCA.R0	*SP	
1284	3243	34	05				COMI.R0	5	
1285	3244	35	16				BCPR.EC	FNDONE	
1286	3245	35	17	05			LOCA.R0	FNS-4	
1287	3246	35	3A	0A			BSTA.EC	UFER	
1288	3247	35	39	05			BSTA.UN	INCP8	
1289	3248	35	39	13		FN27	BSTA.UN	DFCET	
1290	3249	35	01	04			LOCA.R0	*INFT	
1291	3250	34	00				COMI.R0		
1292	3251	35	05				BCPR.EC	FN22	
1293	3252	35	38	1E			BSTA.UN	FN3A	
1294	3253	35	17	05		FNDONE	LOCA.R0	FNS-4	
1295	3254	35	24				BCPR.EC	UFER	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1296	3255	34	30				LOCA.R0	FNSTG	
1297	3256	35	11	04			STRA.R0	INFT	
1298	3257	34	05				LOCA.R0	FNSTG	
1299	3258	35	11	05			STRA.R0	INFT+1	
1300	3259	1F	3E	F6			BSTA.UN	VAL2	
1301	3260	35	2B	30		FNSTR	STRA.R0	STMP-4	
1302	3261	35	05	31			STRA.R1	STMP-5	
1303	3262	35	2F	2A			BSTA.UN	2ER	
1304	3263	35	02	D7			LOCA.R0	*SP	
1305	3264	34	31				COMI.R0	1	
1306	3265	35	45	70			BCPR.EC	TYPER	
1307	3266	35	2B	24			BSTA.UN	STRG	
1308	3267	1F	3B	44			BSTA.UN	FND	
1309	3268					*			
1310	3269					*			
1311	3270	07	03			UFER	LOCA.R0	UFERR	
1312	3271	1F	23	2E			BSTA.UN	ERRPR	
1313	3272					*			
1314	3273					*			
1315	3274	22	20	00	22	FNSTG	RES	29	40 BYTE MAXIMUM
1316	3275	02	00	00	00				
1317	3276	02	00	00	00				
1318	3277	02	00	00	00				
1319	3278	02	00	00	00				
1320	3279	02	00	00	00				
1321	3280	02	00	00	00				
1322	3281	02	00	00	00				
1323	3282	02	00	00	00				
1324	3283	02	00	00	00				
1325	3284	02	00	00	00				
1326	3285	02	00	00	00				
1327	3286	02	00	00	00				
1328	3287	02	00	00	00				
1329	3288	02	00	00	00				
1330	3289	02	00	00	00				
1331	3290	02	00	00	00				
1332	3291	02	00	00	00				
1333	3292	02	00	00	00				
1334	3293	02	00	00	00				
1335	3294	02	00	00	00				
1336	3295	02	00	00	00				
1337	3296	02	00	00	00				
1338	3297	02	00	00	00				
1339	3298	02	00	00	00				
1340	3299	02	00	00	00				
1341	3300	02	00	00	00				
1342	3301	02	00	00	00				
1343	3302	02	00	00	00				
1344	3303	02	00	00	00				
1345	3304	02	00	00	00				
1346	3305	02	00	00	00				
1347	3306	02	00	00	00				
1348	3307	02	00	00	00				
1349	3308	02	00	00	00				
1350	3309	02	00	00	00				
1351	3310	02	00	00	00				
1352	3311	02	00	00	00				
1353	3312	02	00	00	00				
1354	3313	02	00	00	00				
1355	3314	02	00	00	00				
1356	3315	02	00	00	00				
1357	3316	02	00	00	00				
1358	3317	02	00	00	00				
1359	3318	02	00	00	00				
1360	3319	02	00	00	00				
1361	3320	02	00	00	00				
1362	3321	02	00	00	00				
1363	3322	02	00	00	00				
1364	3323	02	00	00	00				
1365	3324	02	00	00	00				
1366	3325	02	00	00	00				
1367	3326	02	00	00	00				
1368	3327	02	00	00	00				
1369	3328	02	00	00	00				
1370	3329	02	00	00	00				
1371	3330	02	00	00	00				
1372	3331	02	00	00	00				
1373	3332	02	00	00	00				
1374	3333	02	00	00	00				
1375	3334	02	00	00	00				
1376	3335	02	00	00	00				
1377	3336	02	00	00	00				
1378	3337	02	00	00	00				
1379	3338	02	00	00	00				
1380	3339	02	00	00	00				
1381	3340	02	00	00	00				
1382	3341	02	00	00	00				
1383	3342	02	00	00	00				
1384	3343	02	00	00	00				
1385	3344	02	00	00	00				
1386	3345	02	00	00	00				
1387	3346	02	00	00	00				
1388	3347	02	00	00	00				
1389	3348	02	00	00	00				
1390	3349	02	00	00	00				
1391	3350	02	00	00	00				
1392	3351	02	00	00	00				
1393	3352	02	00	00	00				
1394	3353	02	00	00	00				
1395	3354	02	00	00	00				
1396	3355	02	00	00	00				
1397	3356	02	00	00	00				
1398	3357	02	00	00	00				
1399	3358	02	00	00	00				
1400	3359	02	00	00	00				
1401	3360	02	00	00	00				
1402	3361	02	00	00	00				
1403	3362	02	00	00	00				
1404	3363	02	00	00	00				
1405	3364	02	00	00	00				
1406	3365	02	00	00	00				
1407	3366	02	00	00	00				
1408	3367	02	00	00	00				
1409	3368	02	00	00	00				
1410	3369	02	00	00	00				
1411	3370	02	00	00	00				
1412	3371	02	00	00	00				
1413	3372	02	00	00	00				
1414	3373	02	00	00	00				
1415	3374	02	00	00	00				
1416									

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3071	3070	11	13	51			STRA,R2	CBUF1-1	
3072	3070	04	FF				LODI,R0	FF	
3073	3070	00	49				STRA,R0	DPFND	
3074	3070	5A	5E				STRA,R2	ECONB	
3075	3070	3F	32	2F		ECONB	BSTA,UN	DECTNR	
3076	3074	14	12				COMI,R0	0	
3077	3074	00	74				PCFR,IC	ECONA	
3078	3070	FE	67				ADII,R2	67	
3079	3074	00					DAR,R2		
3080	3070	1E	74				PCFR,UN	ECONB	
3081	3070	22				ECONA	LOI2,R2		
3082	3070	1F	2A				PCFR,IC	ECONB	
3083	3070	04	FF				LODI,R0	F2	
3084	3072	00	13	57			STRA,R0	CBUF1	
3085	3070	1E	13	51			STRA,R2	CBUF1-1	
3086	3070	26	90				LODI,R2	0	
3087	3074	2F	22	13		ECONC	BSTA,UN	DECT	
3088	3070	1F	4F				PCFR,UN	ECONB	
3089	3070	3F	45	46		ECON4	BSTA,UN	CHKNUM	
3090	3070	1F	77				PCFR,IC	ECON5	
3091	3074	14	72				COMI,R2	0	
3092	3070	5E	2F				PCFR,IC	ECON4A	
3093	3070	2F	1E	3E			LOCA,R3	DPFND	
3094	3070	1A	0A				PCFR,LT	ECON4A	
3095	3070	1A	7E				BRNP,R2	ECON4A	
3096	3070	04	FF				LODI,R0	FF	
3097	3070	00	1B	EA			STRA,R0	ECSTG-1	
3098	3070	1F	3E	10			BSTA,UN	ECONB	
3099	3070	4E	2F			ECON4A	ANDI,R2	F	
3100	3070	FE	61				TM1,R2	1	
3101	3070	1E	29				PCFR,IC	ECON6	
3102	3070	1E	2E				COMI,R1	5	
3103	3070	1E	04				PCFR,IC	ECON6	
3104	3070	00					RRL,R2		
3105	3070	00					RRL,R0		
3106	3070	00					RPL,R0		
3107	3070	00					RRL,R2		
3108	3070	00	77	53		ECON6	LOFA,R1	CBUF1-3,I	
3109	3070	00	57				ADII,R2	67	
3110	3070	00					DAR,R2		
3111	3070	00	05				COMI,R1	5	
3112	3070	00	3E	DC			BSTA,IC	ECONB	
3113	3070	00	73	53			STRA,R1	CBUF1-3,I	
3114	3070	00	01				TM1,R2	1	
3115	3070	00	3E	DC			BSTA,IC	ECONB	
3116	3070	00	3E	DC			BSTA,IC	ECONB	
3117	3070	00	22			ECON5	COMI,R2	0	
3118	3070	00	12				PCFR,IC	ECON5B	
3119	3070	00	1E	BA			LOTA,R0	ECSTG-1	
3120	3070	00	1E	16			PCFR,IC	ECSTG-1	
3121	3070	00	1E	16			LODI,R0	F0	
3122	3070	00	13	52			STRA,R0	CBUF1	
3123	3070	00	13	52			LODI,R0	59	
3124	3070	00	13	51			STRA,R0	CBUF1-1	
3125	3070	00	13	51			PCFR,UN	ECOK	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3226	3261	00	1B	58		ECON5B	LOCA,R0	DPFND	
3227	3264	1A	03				PCFR,LT	ECON5A	
3228	3260	2E	13	51			STRA,R2	CBUF1-1	
3229	3260	3F	32	13		ECON5A	BSTA,UN	DECT	
3230	3260	3F	4E	4E			BSTA,UN	SKPSP	
3231	3260	14	45				COMI,R0	0	
3232	3271	1E	0A				PCFR,IC	ECON9	
3233	3270	3F	32	13		ECOK	BSTA,UN	DECT	
3234	3270	04	13				LODI,R0	CBUF1	
3235	3270	0E	50				LODI,R1	CBUF1	
3236	327A	07	02				LODI,R3	0	
3237	3270	17					RITC,UN		
3238	3270	27				ECON9	ICRZ,R0		
3239	3270	00	1B	59			STRA,R0	ECSTG	
3240	3281	3F	4E	4E			BSTA,UN	SKPSP	
3241	3284	14	2E				COMI,R0	0	
3242	3280	1E	2E				PCFR,IC	ECONB	
3243	3280	14	2E				COMI,R0	0	
3244	328A	9E	07				PCFR,IC	ECONA	
3245	3280	04	F0				LODI,R0	F0	
3246	3280	00	1B	59			STRA,R0	ECSTG	
3247	3281	1E	03				PCFR,UN	ECONB	
3248	3283	3F	32	13		ECONA	BSTA,UN	DECT	
3249	3280	00	91	04		ECONB	LOTA,R0	*INPT	
3250	3280	3F	4E	4E			BSTA,UN	CHKNUM	
3251	3280	3E	55				PCFR,IC	ECOK	
3252	3281	3F	51	FD			BSTA,UN	INCP	
3253	3281	44	0F				ANDI,R0	F	
3254	3280	00					STRZ,R2		
3255	3284	00	91	E4			LODI,R0	*INPT	
3256	3287	3F	4F	4E			BSTA,UN	CHKNUM	
3257	328A	9E	0B				PCFR,IC	ECONC	
3258	3280	3F	31	FD			BSTA,UN	INCP	
3259	3287	1E					RPL,R2		
3260	3280	1E					RPL,R2		
3261	3281	D2					RRL,R2		
3262	3280	1E					RRL,R2		
3263	3283	44	2F				ANDI,R0	F	
3264	3280	00					ICRZ,R2		
3265	3280	00					STRZ,R2		
3266	3287	00	1B	59		ECONC	LOCA,R0	ECSTG	
3267	328A	1E	13	50			COMA,R0	CBUF1	
3268	3280	9E	10				PCFR,IC	ECONC1	
3269	3280	00	66				ADII,R2	66	
3270	3280	00	13	51			ADII,R2	CBUF1-1	
3271	3284	9E					DAR,R2		
3272	3280	B5	01				TPSL	CRY	
3273	3287	10	4E	74			BSTA,IC	OVFER	
3274	328A	0E	13	51			STRA,R2	CBUF1-1	
3275	3280	1E	00				PCFR,UN	ECONC	
3276	3280	1E	13	51		ECONC1	COMA,R2	CBUF1-1	
3277	3280	1E	13	51			PCFR,IC	ECONC	
3278	3284	1A	09				PCFR,LT	ECONC2	
3279	3280	00					ICRZ,R0		
3280	3287	00	13	52			STRA,R0	CBUF1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3001	3A04	10	13	51			STPA,R0	CBUF1-1	
3002	3A05	15	17				PCTR,UN	ECONE	
3003	3A06	20	13	51		ECONE2	LODA,R0	CBUF1-1	
3004	3A07	25					SUPD,R2		
3005	3A08	30					TAR,R2		
3006	3A09	35	13	51			STPA,R0	CBUF1-1	
3007	3A0A	40	18	20			PCTR,UN	ECONE	
3008	3A0B	45	13	51		ECONE2	SUBA,R2	CBUF1-1	
3009	3A0C	50					TAR,R2		
3010	3A0D	55	13	51			TAR,R2	CBUF1-1	
3011	3A0E	60	18	20			LODA,R0	ECS G	
3012	3A0F	65	13	51			STPA,R0	CBUF1	
3013	3A10	70	32	20		ECONE	BSTA,UN	GETCHR	
3014	3A11	75	45	40			BSTA,UN	CHKNUM	
3015	3A12	80	15	15			ECTR,EC	ECPTM	
3016	3A13	85	15	15			BSTA,UN	ECCK	
3017	3A14					*			
3018	3A15					*			
3019	3A16	90	20			ESTR	LODI,R2	0	
3020	3A17	95	51	24		ESTR1	LODA,R0	*INPT	
3021	3A18	100	31	31			PCTA,LT	SYNFP	
3022	3A19	105	31	31			BSTA,UN	INCPPT	
3023	3A1A	110	31	31			COM1,R0	CP	
3024	3A1B	115	31	31			PCTR,EC	ECPTM	
3025	3A1C	120	31	31			COM1,R2		
3026	3A1D	125	31	31			PCTR,EC	ESTR2	
3027	3A1E	130	31	31			PIER,R2	ESTR1	
3028	3A1F	135	31	31		ECPTM	BSTA,UN	PINPT	
3029	3A20	140	31	31			PCTA,UN	PITNOT	
3030	3A21	145	31	31		ESTR2	LODA,R0	STEMP	
3031	3A22	150	31	31			LODA,R1	STEMP-1	
3032	3A23	155	31	31			ALOD,R1		
3033	3A24	160	31	31			PESI	WC	
3034	3A25	165	31	31			ALDI,R0	0	
3035	3A26	170	31	31			CPSL	WC	
3036	3A27	175	31	31			LODI,R2	FF	
3037	3A28	180	31	31			PCTR,UN		
3038	3A29	185	31	31		LEN	ECU	5	
3039	3A2A	190	31	31		LENG	ECU	8	
3040	3A2B	195	31	31		CPSC	ECU	65	
3041	3A2C	200	31	31		PCUN	LATA	FS	
3042	3A2D	205	31	31		CTP	RES	2	
3043	3A2E	210	31	31		CNTR	RES	1	
3044	3A2F	215	31	31		CFA	RES	1	
3045	3A30	220	31	31		EXPA	RES	1	
3046	3A31	225	31	31		SMAA	RES	1	
3047	3A32	230	31	31			RES	LEN+1	
3048	3A33	235	31	31		OPB	RES	1	
3049	3A34	240	31	31		EXPA	RES	1	
3050	3A35	245	31	31		SMAA	RES	1	
3051	3A36	250	31	31			RES	LEN+1	
3052	3A37	255	31	31			RES	LEN+1	
3053	3A38	260	31	31			RES	LEN+1	
3054	3A39	265	31	31			RES	LEN+1	
3055	3A3A	270	31	31			RES	LEN+1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3136	3A49	22				EEXP	RES	1	
3137	3A4A					*			
3138	3A4B					*			
3139	3A4C	24	3A			TRAN	LODI,R0	OPA	
3140	3A4D	25	31				LODI,R1	OPA	
3141	3A4E	26	31	55			BSTA,UN	POPP	
3142	3A4F	27	3A				LODI,R0	CPB	
3143	3A50	28	3A				LODI,R1	OPB	
3144	3A51	29	31	55			BSTA,UN	POPP	
3145	3A52	30					FORZ,R0		
3146	3A53	31	1A	39			STRA,R0	MANA-LEN	
3147	3A54	32	25				LODI,R1	LENG	
3148	3A55	33	5A	42		TRAN2	STRA,R1	MANB-LEN-	
3149	3A56	34	7B				PPNR,R1	TRAN2	
3150	3A57	35					RITC,UN		
3151	3A58					*			
3152	3A59					*			
3153	3A5A	37	64			FPSUB	BSTR,UN	TRAN	
3154	3A5B	38	1A	33			LODI,R3	OPA+2	
3155	3A5C	39	70				FORI,R3	Y0	CHG SIGN
3156	3A5D	40	1A	33			STRA,R3	OPA+2	
3157	3A5E	41	2E				BCTR,UN	DA2	
3158	3A5F	42	00	07		FPADD	LODA,R0	*SP	
3159	3A60	43	01				COM1,R0	1	
3160	3A61	44	30	06			BCTA,EC	ADDSTR	
3161	3A62	45	3A	4A			BSTA,UN	TRAN	
3162	3A63	46	1A	33			LODA,R3	OPA+2	
3163	3A64	47	00			DA2	PESI	WC	
3164	3A65	48	01				CPSL	CRY	
3165	3A66	49	1A	3A			LODA,R1	OPB	
3166	3A67	50	1A	31			COMA,R1	OPA	
3167	3A68	51	16				BCTR,EC	DA6	
3168	3A69	52	0F			DA3	ERNR,R1	DA5	
3169	3A6A	53	3A			DA7	LODI,R0	OPA	
3170	3A6B	54	31				LODI,R1	OPA	
3171	3A6C	55	0B			DA4	LODI,R2	LENG	
3172	3A6D	56	30	92			BSTA,UN	SHFR	
3173	3A6E	57	30	92			BSTA,UN	INCR	
3174	3A6F	58	64				BCTR,UN	DA2	
3175	3A70	59	3A			DA5	LODI,R0	OPB	
3176	3A71	60	3A				LODI,R1	OPB	
3177	3A72	61	70				BCTR,UN	DA4	
3178	3A73	62	1A	3B		DA6	LODA,R0	EXPA	
3179	3A74	63	1A	32			COMA,R0	EXPA	
3180	3A75	64	62				BCTR,CT	DA3	
3181	3A76	65	24				PCTR,EC	DA6	
3182	3A77	66	62				ERNR,R1	DA7	
3183	3A78	67	00				BCTR,UN	DA5	
3184	3A79	68	1A	33		DA6	LODA,R0	SMAA	
3185	3A7A	69	1A	30			COMA,R3	SMAA	
3186	3A7B	70	11				BCTR,EC	DA01	
3187	3A7C	71	21				BCTR,UN	ADD	
3188	3A7D	72	20				LODI,R2	LENG+1	
3189	3A7E	73	3A				LODI,R0	OPB	
3190	3A7F	74	3A				LODI,R1	OPB	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3161	3A5F	2F	3C	02			PS*TA,UN	SHFP	
3162	3A61	2F	3C	02			EST*TA,UN	INCR	
3163	3A64	1F	3F	45			ECT*TA,UN	RTY	
3164	3A67	7F	21			EAT1	FFSL	CRY	CLTAR POPROW
3165	3A69	3F	32				EST*TA,UN	COMP	
3166	3A6E	1F	25				ECT*TA,UN	DAI2	
3167	3A71	3F	32				EST*TA,UN	SUB	
3168	3A73	1F	3F	45			ECT*TA,UN	RDY	
3169	3A75	CF	1A	3C		DAD2	STRA,R3	SMAB	
3170	3A78	2F	26				LODI,R2	LEN+1	
3171	3A79	1F	5A	34		DAD3	LOTA,R2	MANA,-	
3172	3A7A	1F	7A	3D			SUPA,R2	MANB,I	
3173	3A7D	04					DAR,P0		
3174	3A7E	CF	7A	3E			STRA,R2	MANB,I	
3175	3A81	5A	74				BRNR,R2	DAD3	
3176	3A83	1F	3B	45			ECT*TA,UN	RTY	
3177	3A86					*			
3178	3A86					*			
3179	3A86					*			
3180	3A86	75	01			ADD	CPSL	CRY	
3181	3A86	CF	20				LODI,R1	0	
3182	3A8A	0F	26				LODI,R2	LEN+1	
3183	3A8C	51				ADD1	PRP,R1		
3184	3A8E	2F	5A	3D			LODA,R2	MANB,-	
3185	3A90	54	66				ADII,R2	66	
3186	3A92	01					PRP,R1		
3187	3A93	6A	7A	34			ADDA,P2	MANA,I	
3188	3A95	04					DAR,P0		
3189	3A97	CF	7A	3D			TRA,R2	MANB,I	
3190	3A9A	5A	72				BRNR,R2	ADD1	
3191	3A9C	47					RETC,UN		
3192	3A9E					*			
3193	3A9E					*			
3194	3A9E					*			
3195	3A9E	0F	FA			COMP	LODI,R2	0-LEN-1	
3196	3A9F	2F	76	43		COM1	LODA,R2	MANB-100-LEN+1,I	
3197	3A9F	1F	76	3A			COMA,P2	MANA-100-LEN+1,I	
3198	3A9F	5F	62				CFYR,EC	COM2	
3199	3A9F	5A	76				PIPP,R2	COM1	
3200	3A9F	17				COM2	RETC,UN		
3201	3A9A					*			
3202	3A9A					*			
3203	3A9A					*			
3204	3A9A	77	01			SUB	FFSL	CRY	
3205	3A9C	46	06				LODI,R2	LEN+1	
3206	3A9E	CF	5A	3D		SUB1	LODA,R2	MANB,-	
3207	3A9E	AE	7A	34			SUPA,R2	MANA,I	
3208	3A9E	04					TAI,R2		
3209	3A9E	CF	7A	3D			STRA,R2	MANB,I	
3210	3A9E	5A	74				BRNR,R2	SUB1	
3211	3A9E	17					RETC,UN		
3212	3A9E					*			
3213	3A9E					*			
3214	3A9E	07	7E			DIV	LODI,R3	LEN-LEN+1	
3215	3A9E	2F	20			DIV1	LODI,R1	0	
3216	3A9E	3F	5C			DIV2	ESTR,UN	COMP	
3217	3A9E	1A	07				ECT*TA,UN	DIV3	
3218	3A9E	2F	26				ESTR,UN	SUB	

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3246	3B25	05	66				ADDI,R1	66	
3247	3B27	05					DAR,R1		
3248	3B28	1F	7F				ECT*TA,UN	DIV2	
3249	3B2A	0D	1A	40		DIV3	ADDA,R1	MANB-LEN+LEN+1	
3250	3B2C	CD	1A	46			STRA,R1	MANB-LEN+LEN+1	
3251	3B2E	04	3A				LODI,R0	OPB	
3252	3B32	05	3A				LODI,R1	OPB	
3253	3B34	06	07				LODI,R2	LENG+LEN+2	
3254	3B36	3F	3F	9C			PS*TA,UN	SHFL	
3255	3B39	FB	62				BRNR,R3	DIV1	
3256	3B3F	3F	3C	90			EST*TA,UN	INCR	
3257	3B3F	07	28				LODI,R3	LEN+LEN+1	
3258	3B40	3F	3F	A5		DIV4	EST*TA,UN	SFL	
3259	3B43	3F	78				BRNR,R3	DIV4	
3260	3B45	04	3A			RDY	LODI,R0	OPB	
3261	3B47	05	3A				LODI,R1	OPB	
3262	3B49	05	0A				LODI,R2	LENG+2	
3263	3B4B	3F	13				ESTR,UN	NORM	
3264	3B4D	3F	3C	7A			EST*TA,UN	RND	
3265	3B50	0C	1A	49			LODA,R0	ELIF	
3266	3B53	9C	45	74			BCYA,EC	OVER	
3267	3B56	04	02				LODI,R2	2	
3268	3B58	93					FFSL		
3269	3B59	04	3A				LODI,R0	OPB	
3270	3B5B	05	3A				LODI,R1	OPB	
3271	3B5D	1F	31	30			ECT*TA,UN	PUSHFP	
3272	3B5D					*			
3273	3B5D					*			
3274	3B5D	CF	1A	32		NORM	STRA,R2	CNTR	
3275	3B5D	CC	1A	2E		NRM2	STRA,R0	PTR	
3276	3B5D	CF	1A	2F			STRA,R1	PTR+1	
3277	3B5D	07	03			NRM	LODI,R3	0	
3278	3B5D	05	02				LODI,R1	2	
3279	3B5D	75	01				CPSL	CRY	
3280	3B5F	2F	FA	2E		NRM1	LODA,R1	*PTR,+	
3281	3B72	06	19				ECT*TA,UN	NRM2	
3282	3B74	07	02				ADDI,R3	2	
3283	3B76	1F	06				COMI,R1	LENG	
3284	3B78	96	75				BCYA,EC	NRM1	
3285	3B7A	01					STRA,R1		
3286	3B7B	04	70				LODI,R0	70	
3287	3B7C	CC	9A	2E			STRA,R0	*PTR	
3288	3B7D	24	99				LODI,R0	99	
3289	3B7E	CF	BA	2E			STRA,R1	*PTR,+	
3290	3B7F	20					ECT*TA,UN		
3291	3B7F	CF	BA	2E			STRA,R1	*PTR,+	
3292	3B7F	CC	1A	49			STRA,R0	ELIF	
3293	3B7F	17					RETC,UN		
3294	3B7F					*			
3295	3B7F					*			
3296	3B7F	44	70			NRM2	ANDI,R0	70	
3297	3B7F	90	02				ECT*TA,UN	NRM3	
3298	3B7F	07	01				ADII,R3	1	
3299	3B7F	03				NRM3	LODI,R3		
3300	3B7F	14					RETC,EC		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3341	3305	3F	0E			NRM4	BSTR.UN	SFL	
3342	3307	3B	71				BSTR.UN	DECR	
3343	3309	FE	7A				BSTR.R3	NRM4	
3344	330B	17					PETC.UN		
3345	330C					*			
3346	330C					*			
3347	330C	0F	1A	3D		SHFL	STRA.R2	CNTR	
3348	330F	0C	1A	2E		SVL0	STRA.R0	PTR	
3349	33A7	0D	1A	2F			STRA.R1	PTR-1	
334A	33A5	2F	24			SFL	LODI.P1	4	
334B	33A7	2F	1A	3D		SFI1	LODA.R2	CNTR	
334C	33AA	2F	21				CPSL	CRY	
334D	33AC	2A	1A	2E		SFI2	LODA.R2	*PTR.-	
334E	33AF	2A					PCL.R2		
334F	33B2	0F	FA	2E			STRA.R2	*PTR.I	
3350	33B3	1E	03				COM1.R2	3	
3351	33B4	06	7F				BCTR.EC	SFL2	
3352	33B7	70	0E				BCTR.R1	SFL1	
3353	33B9	17					PETC.UN		
3354	33BA					*			
3355	33BA					*			
3356	33BA	0D	3A	2E		DFCR	LODA.R1	*PTR.+	
3357	33B1	2F	9A	2E			LODA.R2	*PTR	
3358	33C2	1B	3A				BCTR.EC	DEC3	
3359	33C5	04	67			DEC1	ADDI.R2	67	
335A	33C4	04					DAP.R0		
335B	33C5	1C	4F	74			PCTA.EC	CVFER	
335C	33C8	1C	7	2E		DEC2	STRA.R1	*PTR.I	
335D	33C9	17					PETC.UN		
335E	33C0	59	0F			DEC3	BRNP.R2	DEC5	
335F	33C1	1C	1A	49			COMA.P2	EXIF	
3360	33D1	2B	27				BCTR.EC	DEC4	
3361	33D3	2A	10				LODI.R2	P0	
3362	33D5	01	9A	2E			STRA.R2	*PTR	
3363	33D8	1B	6A				BCTR.UN	DEC1	
3364	33DA	0C	1A	49		DEC4	STRA.R2	ELXP	
3365	33D1	A4	0C			DEC5	SUPI.R0	0	
3366	33D7	04					DAP.R2		
3367	33D2	1B	6C				BCTR.UN	DEC2	
3368	33D2					*			
3369	33D2					*			
3370	33D2	3F	3A	4A		FPLIV	BSTA.UN	TRAN	
3371	33E5	21	1A	31			LODA.R2	OPA	
3372	33E9	2A	10				FORI.R2	FP	
3373	33EA	01	1A	31			STBA.R2	OPA	
3374	33E1	27	0B				LODI.R3	0B	
3375	33E1	1B	0B				BCTR.UN	DM1	
3376	33E1	37	3A	4A		FPMULT	BSTA.UN	TRAN	
3377	33E4	21	1A	31			LODA.R2	OPA	
3378	33E7	07	02				LODI.R3	0	
3379	33E9	77	09			DM1	FEEL	WC-CRY	
3380	33E2	23					LODI.R3		
3381	33E0	1A	26				BCTR.EC	DM2	
3382	33E1	2C	1A	34			LODA.RC	MANA	
3383	3C71	1C	4F	74			BCTA.EC	CVFER	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3386	3C84	0C	1A	3C		DM2	LODA.R2	SMAB	
3387	3C87	1C	1A	33			COMA.R2	SMAB	
3388	3C8A	1B	04				BCTR.EC	DM3	
3389	3C8C	04	10				LODI.R0	P0	
3390	3C8E	1B	21				BCTR.UN	DM4	
3391	3C10	20				DM3	FORZ.R0		
3392	3C11	0C	1A	3C		DM4	TBA.R0	SMAB	
3393	3C14	1F	1A	3A			COMA.R2	OPB	
3394	3C17	9B	0C				BCTR.EC	DMU	
3395	3C19	2C	1A	3D			LODA.R0	EXPA	
3396	3C1C	04	65				ADDI.R2	65	
3397	3C1E	0C	1A	3B			ADDA.R2	EXPB	
3398	3C21	04					DAR.R0		
3399	3C22	11					RL.R1		
3400	3C23	1B	1E				BCTR.UN	DMU4	
3401	3C25	2C	1A	3B		DMU	LODA.R0	EXPE	
3402	3C28	1C	1A	32			COMA.R2	EXPA	
3403	3C2B	19	0C				BCTR.GT	DMU2	
3404	3C2D	9B	02				BCTR.EC	DMU1	
3405	3C2F	26	00				LODI.R2	0	
3406	3C31	0C	1A	32		DMU1	LODA.R0	EXPA	
3407	3C34	AC	1A	3B			SUBA.R0	EXPB	
3408	3C37	1B	09				BCTR.UN	DMU3	
3409	3C39	2F	1A	3A		DMU2	LODA.R2	OPB	
3410	3C3C	AC	1A	32			SUBA.R0	EXPA	
3411	3C3F	04				DMU3	DAR.R2		
3412	3C40	0F	1A	3A			STRA.R2	OPB	
3413	3C43	0C	1A	3B		DMU4	STRA.R0	EXPB	
3414	3C46	0D	1A	49			STRA.R1	EXXP	
3415	3C49	75	01				CPSL	CRY	
3416	3C4B	04	3A				LODI.R0	OPA	
3417	3C4D	05	31				LODI.R1	OPA	
3418	3C4F	06	0B				LODI.R2	LENG	
3419	3C51	3B	37				BSTR.UN	SETR	
3420	3C53	57	3B	1B			BRNA.P3	DIV	
3421	3C56	27	0C			MUL	LODI.R3	LEN-LEN+2	
3422	3C59	04	3A			MUL1	LODI.R0	OPB	
3423	3C5A	27	3A				LODI.R1	CPB	
3424	3C5C	06	0E				LODI.R2	LENG-LEN+1	
3425	3C5E	3B	32				BSTR.UN	SETR	
3426	3C60	F5	76				PIPR.P3	MUL1	
3427	3C62	07	0A				LODI.R2	LEN-LEN	
3428	3C64	3F	35			MUL2	BSTR.UN	SETR	
3429	3C66	0C	1A	4B		MUL3	LODA.R2	MANB-LEN-LEN+1	
3430	3C69	16	0A				BCTR.EC	MUL4	
3431	3C6B	A4	0F				SUPI.R0	P	
3432	3C6D	0C	1A	4B			STRA.R2	MANB-LEN-LEN+1	
3433	3C70	3F	3A	05			BSTA.UN	ADD	
3434	3C73	1F	71				BCTR.UN	MUL3	
3435	3C75	FB	6D			MUL4	BCTR.R3	MUL2	
3436	3C77	1F	3B	45			BCTA.UN	RDY	
3437	3C7A					*			
3438	3C7A					*			
3439	3C7A	0C	1A	2D		END	LODA.R2	RODM	
3440	3C7D	0C	0E				LODI.P1	LEN+1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3411	3CFF	B1	5A	3D		RND1	ADDA,R1	MANB,-	
3412	3CFF	94					DAF,R2		
3413	3C83	0E	7A	3D			STPA,R1	MANP,I	
3414	3C86	04	66				LODI,R0	OFST	
3415	3C88	56	75				BRNR,R1	RND1	
3416	3C8A	55	01				TPSL	CRY	
3417	3C8C	16					PETC,LT		
3418	3C8D	23	9C				PSTR,UN	SHF	
3419	3C9F	28	1F				PSTR,UN	INCR	
3420	3C91	17					PETC,UN		
3421	3C92					*			
3422	3C92					*			
3423	3C92	01	1A	20		SHFR	STRA,R2	CNTR	
3424	3C9F	0C	1A	2E		SHF0	STRA,R0	PTR	
3425	3C9B	07	1A	2F			STRA,R1	PTR+1	
3426	3C92	05	04			SHF	LODI,R1	4	
3427	3C91	06	02			SHF1	LODI,R2	2	
3428	3C9F	2E	2A	2E		SHF2	LODA,R2	*PTR,+	
3429	3C92	52					RRR,R0		
3430	3C95	0F	FA	2E			STRA,R2	*PTR,I	
3431	3C95	18	1A	20			COMA,R2	CNTR	
3432	3C9B	05	74	20			BCFR,FC	SHF2	
3433	3C9B	75	01				CPSL	CRY	
3434	3C9D	56	6E				BRNR,R1	SBF1	
3435	3C97	17					PETC,UN		
3436	3C90					*			
3437	3C90					*			
3438	3C92	0E	EA	2E		INCR	LODA,R1	*PTR,+	
3439	3C93	02	9A	2E			LODA,R2	*PTR	
3440	3C96	08	2E				PCFR,EQ	INC2	
3441	3C9B	04	67				ADDI,R0	67	
3442	3C9A	04					DAF,R0		
3443	3C9B	05	05				BCFR,EQ	INC1	
3444	3C9D	05	01				LODI,R1	1	
3445	3C9F	0F	1A	49			STPA,R1	EEXP	
3446	3C92	01	FA	2E		INCL	STRA,R1	*PTR,I	
3447	3C90	17					PETC,UN		
3448	3C95	58	03			INC2	BRNR,R0	INC3	
3449	3C9B	0F	1A	49			STRA,R0	EEXP	
3450	3C9B	A4	22			INC3	SUBI,R0	0	
3451	3C9D	04					DAF,R0		
3452	3C91	56	72				BRNR,R0	INC1	
3453	3C90	0C	9A	2E			STRA,R0	*PTR	
3454	3C93	15	6D				BCFR,UN	INC1	
3455	3C95					*			
3456	3C95					*			
3457	3C9F	27				ADDSTS	RES	1	
3458	3C96					*			
3459	3C96					*			
3460	3C9F	2F	40	E4		ADDSTR	BSTA,UN	PFSTRS	
3461	3C9F	30	B1				BSTA,UN	INCSP	
3462	3C9D	27	01				COMI,R3	1	
3463	3C9E	9C	45	7C			PCFA,EQ	TYPEP	
3464	3C91	2F	30	B1			BSTA,UN	INCSP	
3465	3C94	07					LODZ,P2		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3466	3C9F	03					ADLZ,R3		
3467	3C96	05	01				TPSL	CRY	
3468	3C9B	06	06				BCFR,EQ	ADDST2	
3469	3C9A	04	FF				LODI,R0	FF	
3470	3C9C	A3					SUBZ,R3		
3471	3C9D	02					STBZ,R2		
3472	3C9F	04	FF				LODI,R0	FF	
3473	3C90	0C	1C	E5		ADDST2	STRA,R0	ADDSTS	
3474	3C93	3F	40	2D			BSTA,UN	PFSTRS	
3475	3C96	3F	30	B1			BSTA,UN	INCSP	
3476	3C96	3F	30	B1			BSTA,UN	INCSP	
3477	3C9C	0F	1C	D6			LODA,R3	ADDSTS	
3478	3C9F	3F	30	D9			BSTA,UN	DECSP	
3479	3D02	07	01				LODI,R3	1	
3480	3D04	1F	30	D9			BSTA,UN	DECSP	
3481	3D07					*			
3482	3D07					*			
3483	3D07	3F	40	E4		STCOMP	BSTA,UN	COMSTR	
3484	3D0A	1B	10				BCTR,UN	FPCM2	
3485	3D0C					*			
3486	3D0C					*			
3487	3D0C	0B	15			FPCOMP	STRR,R3	COMPS	
3488	3D01	0C	90	D7			LODA,R0	*SP	
3489	3D11	90	74				BCFR,EQ	STCOMP	
3490	3D13	3F	45	E7			BSTA,UN	POPC2	
3491	3D16	3F	45	D9			BSTA,UN	POPC1	
3492	3D19	3F	30	02			BSTA,UN	COMMON	
3493	3D1C	07	7D	28		FPCM2	LODA,R3	COMPTB,I	
3494	3D1F	40	06				AMIR,R0	COMPS	
3495	3D21	0C	45	B3			BCFA,EQ	POSHM1	
3496	3D24	1F	45	BA			BSTA,UN	PUSH0	
3497	3D27					*			
3498	3D27					*			
3499	3D27	00				COMPS	RES	1	
3500	3D29	20	10	00		COMPTB	DATA	20,10,0	
3501	3D2B					*			
3502	3D2B					*			
3503	3D2E	0C	14	92		FPCOM	LODA,R0	PARNST	
3504	3D2E	1C	34	97			BSTA,EQ	IRFAB1	
3505	3D31	3F	35	93		FPCOM1	BSTA,UN	POF P	
3506	3D34	14	02				COMI,R1	2	
3507	3D36	19	04				BCTR,UN	FPCOM2	
3508	3D38	3F	34	B9			BSTA,UN	DOOP	
3509	3D3B	1B	74				BCTR,UN	FPCOM1	
3510	3D3D	3F	33	60		FPCOM2	BSTA,UN	PUSHOP	
3511	3D40	07	05				LODI,R3	5	
3512	3D47	3F	30	D6			BSTA,UN	DECSP	
3513	3D45	1F	33	AF			BSTA,UN	IVALE	
3514	3D46					*			
3515	3D46					*			
3516	3D48	3F	45	D6		FPCOM	BSTA,UN	POPC1	
3517	3D47	0C	13	53			LODA,R0	CBUF1-3	
3518	3D4E	1C	45	EA			BSTA,EQ	PUSH0	
3519	3D51	2C	13	52			LODA,R0	CBUF1-2	
3520	3D54	1F	45	B3			BSTA,LT	PUSHM1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3571	3157	1F	45	AC		BCTA,UN	PUSH1		
3572	3158					*			
3573	3159					*			
3574	315A	3F	45	D9	FFAPS	BSTA,UN	POPC1		
3575	315B	00	13	52		FORZ,R0			
3576	315C	00	13	52		TPA,R2	CBUF1-2		
3577	315D	1F	45	52		BCTA,UN	PUSHC1		
3578	315E					*			
3579	315F					*			
3580	3160	3F	45	D9	FPPOS	BSTA,UN	POPC1		
3581	3161	3F	24	AC		BSTA,UN	GETDIS		
3582	3162	01				STRZ,R1			
3583	3163	22				FORZ,R0			
3584	3164	1F	3D	FA		BCTA,UN	BTOD		
3585	3165					*			
3586	3166					*			
3587	3167	3F	45	D9	FPFIX	BSTA,UN	POPC1		
3588	3168	00	13	52	FIX0	LODA,R0	CBUF1		
3589	3169	1E	45	FA		BCTA,LT	PUSH0		
3590	316A	21	13	51		LODA,R1	CBUF1-1		
3591	316B	FE	79			COMI,R1	9		
3592	316C	17	45	F0		BCTA,GT	PUSHC1		
3593	316D	26	2F			LODI,R2	8		
3594	316E	24	10			LODI,R0	10		
3595	316F	A1				SUBZ,R1			
3596	3170	94				LAR,R0			
3597	3171	01				STRZ,R1			
3598	3172	FE	71		FIX1	COMI,R1	1		
3599	3173	19	01			BCTP,GT	FIX2		
3600	3174	1E	45	F2		BCTA,LT	PUSHC1		
3601	3175	24	10			LODI,R0	10		
3602	3176	4E	50	50		ANEA,R2	CBUF1,-		
3603	3177	01	72	50		STRA,R2	CBUF1,I		
3604	3178	1E	45	F2		BCTA,UN	PUSHC1		
3605	3179	A5	02		FIX2	SUBI,R1	2		
3606	317A	22				FORZ,R0			
3607	317B	01	53	50		STRA,R2	CBUF1,-		
3608	317C	1E	66			BCTP,UN	FIX1		
3609	317D					*			
3610	317E					*			
3611	317F	3F	45	D9	FPLPCS	BSTA,UN	POPC1		
3612	3180	2D	22	A1		LODA,P1	LPOS		
3613	3181	22				FORZ,R0			
3614	3182	1F	31	FA		BCTA,UN	BTCD		
3615	3183					*			
3616	3184					*			
3617	3185	3F	45	D9	FPINT	BSTA,UN	POPC1		
3618	3186	00	13	52		LODA,R0	CBUF1-2		
3619	3187	10	3D	72		BCTA,IQ	FIX0		
3620	3188	00	0A			LODI,R2	A		
3621	3189	00	13	52		LODA,R0	CBUF1		
3622	318A	1A	0E			BCTP,LT	FPINT2		
3623	318B	0F	13	51		LODA,R3	CBUF1-1		
3624	318C	10	09			BCTP,IQ	FPINT2		
3625	318D	17	09			COMI,R3	9		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3576	31C2	1F	45	F0		BCTA,GT	PUSHC1		
3577	31C3	04	0A			LODI,R0	A		
3578	31C4	A3				SUBZ,R3			
3579	31C5	02				STRZ,R2			
3580	31C6	07	28		FPINT2	LODI,R3	8		
3581	31C7	0F	53	52	FPINT4	LODA,R3	CBUF1,-		
3582	31C8	36	01			COMI,P2	1		
3583	31C9	1E	45	F0		BCTA,LT	PUSHC1		
3584	31CA	19	27			BCTP,GT	-FPINT3		
3585	31CB	44	0F			ANDI,R0	F		
3586	31CC	98	08			BCTP,IC	FPINT5		
3587	31CD	1F	45	F2		BCTA,UN	PUSHC1		
3588	31CE	A6	02		FPINT2	SUBI,R2	2		
3589	31CF	02				LODI,R0			
3590	31D0	16	0A			BCTP,EC	FPINT4		
3591	31D1	3F	45	F0	FPINT5	BSTA,UN	PUSHC1		
3592	31D2	3F	45	AC		BSTA,UN	PUSH1		
3593	31D3	3F	3A	04		BSTA,UN	FFSUB		
3594	31D4	1F	3D	CF		BCTA,UN	FPFIX		
3595	31D5					*			
3596	31D6					*			
3597	31D7	3F	45	D9	FPERR	BSTA,UN	POPC1		
3598	31D8	01	05	18		LODA,R1	ERRTYP		
3599	31D9	20				FORZ,R0			
3600	31DA	1F	3D	FA		BCTA,UN	BTOD		
3601	31DB					*			
3602	31DC					*			
3603	31DD	00	02	00		BTODS	RES	3	
3604	31DE					*			
3605	31DF					*			
3606	31E0	02			BTOD	STRZ,R2			
3607	31E1	01				LODI,R1			
3608	31E2	03				STRZ,R3			
3609	31E3	20				FORZ,R0			
3610	31E4	08	77			STRR,R0	BTODS		
3611	31E5	08	76			STRR,R0	BTODS-1		
3612	31E6	08	75			STRR,R0	BTODS-2		
3613	31E7	05	10			LODI,R1	10		
3614	31E8	28	71		BTOD2	LODR,R0	BTODS-2		
3615	31E9	84	66			ADDI,R0	66		
3616	31EA	86	6D			ADDI,R0	BTODS-2		
3617	31EB	94				LAR,R0			
3618	31EC	08	6A			STRR,R0	BTODS-2		
3619	31ED	77	08			FPST	WC		
3620	31EE	00	65			LODR,R0	BTODS-1		
3621	31EF	00	65			ADDI,R0	66		
3622	31F0	00	61			ADDI,R0	BTODS-1		
3623	31F1	24				LAR,R0			
3624	31F2	0F	5E			STPP,R0	BTODS-1		
3625	31F3	28	55			LODR,R0	BTODS		
3626	31F4	04	66			ADDI,R0	66		
3627	31F5	00	57			ADDI,R0	BTODS		
3628	31F6	04				LAR,R0			
3629	31F7	00	54			STRR,R0	BTODS		
3630	31F8	75	00			CPST	WC		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3621	3E75	FF	02				TWI,R2	02	
3622	3E76	5E	1A				BCFR,E0	BTOD3	
3623	3E26	24	57				LODI,R0	67	
3624	3E28	08	4C				ADDR,R0	BTODS+2	
3625	3E2C	04					JAR,R0		
3626	3E2E	08	49				STRR,R0	BTODS+2	
3627	3E30	77	28				FFSL	WC	
3628	3E32	04	56				LODI,R0	66	
3629	3E34	08	47				ADFF,R0	BTODS-1	
3630	3E36	04					JAR,R0		
3631	3E37	0C	1E	F8			STRA,R0	BTODS+1	
3632	3E3A	24	56				LODI,R0	66	
3633	3E3C	0C	1D	F7			ALDA,R0	BTODS	
3634	3E3E	04					JAR,R0		
3635	3E42	0C	1D	F7			STRA,R0	BTODS	
3636	3E43	77	2E			BTOD3	FFSL	WC	
3637	3E45	03					RRL,R3		
3638	3E4F	72					RRL,R2		
3639	3E47	75	00				CPSL	WC	
3640	3E49	11	31	26			STPA,R1	BTOD2	
3641	3E4C	20					FORZ,R0		
3642	3E4C	05	00				LODI,R1	8	
3643	3E4E	01	53	52		BTOD4	STRA,R1	CRUF1,-	
3644	3E4F	50	75				BRNR,R1	BTOD4	
3645	3E54	0C	1D	F7			LODA,R0	BTODS	
3646	3E57	0C	13	51			STRA,R0	CRUF1+3	
3647	3E5A	0C	1D	F8			LODA,R0	BTODS+1	
3648	3E5C	0C	13	54			STRA,R0	CRUF1+4	
3649	3E5E	0C	1D	F8			LODA,R0	BTODS+2	
3650	3E62	0C	13	55			STRA,R0	CRUF1+5	
3651	3E65	24	06				LODI,R0	6	
3652	3E68	0C	13	51			STRA,R0	CRUF1+1	
3653	3E6B	04	33				LODI,R0	CRUF1	
3654	3E6C	05	50				LODI,R1	CRUF1	
3655	3E6F	26	00				LODI,R2	8	
3656	3E71	77	00				FFSL	WC	
3657	3E73	3F	3E	50			ESTA,UN	NORM	
3658	3E76	75	28				CPSL	WC	
3659	3E78	04	33				LODI,R0	CRUF1	
3660	3E7A	25	50				LODI,R1	CRUF1	
3661	3E7C	1F	31	26			BCTA,UN	PUSHFP	
3662	3E7F					*			
3663	3E7F					*			
3664	3E7F	1F	2P	A1		ENX	BCTA,UN	ENS2	
3665	3E82					*			
3666	3E82					*			
3667	3E82	07	02			CALLS	RES	2	
3668	3E84					*			
3669	3E84					*			
3670	3E84	3F	3E	7F		FPCALL	ESTA,UN	ENX	
3671	3E87	08	79				STRR,R0	CALLS	
3672	3E89	09	78				STRR,R1	CALLS+1	
3673	3E8B	2C	00	17			LODA,R0	*SP	
3674	3E8E	14	25				COMI,R0	5	
3675	3E92	58	26				BCFR,E0	CALL2	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3686	3E92	3F	30	B1			BSTA,UN	INCSP	
3687	3E95	3F	3E	7F			BSTA,UN	ENX1	
3688	3E98	3F	B1	02		CALL2	BSTA,UN	*CALLS	
3689	3E99	1F	3D	FA			BCTA,UN	BTOD	
3690	3E9F					*			
3691	3E9F					*			
3692	3E9F	07				TYP3SP	RES	1	
3693	3E9F	02	00	00	20	STR55	RES	11	
3694	3EA3	02	00	00	20				
3695	3EA7	02	00	00	00				
3696	3EAB	02	00	00	00				
3697	3EAF	02							
3698	3EB2					*			
3699	3EB2					*			
3700	3EB0	04	01			FPSTP	LODI,R0	1	
3701	3EB2	0C	22	A0			STRA,R0	PTYPE	
3702	3EB5	04	FF				LODI,R0	FF	
3703	3EB7	08	65				STRR,R0	TYP3SP	
3704	3EB9	06	11				LODI,R0	11	
3705	3EBB	20					FORZ,R0		
3706	3EBD	0F	5E	9F		STZ2	STRA,R2	STR55,-	
3707	3EBF	5A	7B				BRNR,R2	STZ2	
3708	3EC1	3F	23	29			BSTA,UN	PRMTF	
3709	3EC4	06	11				LODI,R2	11	
3710	3EC6	0F	5E	9F		STZ3	LODA,R2	STR55,-	
3711	3EC9	08	04				BCFR,E0	STZ4	
3712	3ECB	5A	79				BRNR,R2	STZ3	
3713	3ECD	A6	01				SUBI,R2	1	
3714	3ECF	06	01			STZ4	ADDI,R2	1	
3715	3ED1	04	3E				LODI,R0	STR55	
3716	3ED3	05	9F				LODI,R1	STR55	
3717	3ED5	1F	20	F2			BCTA,UN	PUSHST	
3718	3ED8					*			
3719	3ED8					*			
3720	3ED8	02	00			VALS	RES	2	
3721	3EDA					*			
3722	3EDA					*			
3723	3EDA	3F	40	E4		FPVAL	BSTA,UN	FPSTRS	
3724	3EDD	04	02				LODI,R0	2	
3725	3EDF	3F	40	00			BSTA,UN	VALSUB	
3726	3EE2	0C	11	04			LODA,R0	INPT	
3727	3EE5	0A	71				STRR,R0	VALS	
3728	3EE7	0C	11	05			LODA,R0	INPT+1	
3729	3EEA	0A	6D				STRR,R0	VALS+1	
3730	3EEC	04	40				LODI,R0	FPSTRS	
3731	3EEF	0C	11	04			STRA,R0	INPT	
3732	3EF1	04	EB				LODI,R0	FPSTRS	
3733	3EF3	0C	11	05			STRA,R0	INPT+1	
3734	3EF6	12				VAL2	SPSU		
3735	3EF7	01					STZ,R1		
3736	3EF8	A4	01				SUBI,R0	1	
3737	3EFA	44	27				ANDI,R0	7	
3738	3EFC	45	F8				ANDI,R1	78	
3739	3EFD	61					ICB,R1		
3740	3EFF	92					LPSU		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3741	3F22	1F	33	AF			ECTA,UN	EVAL0	
3742	3F23					*			
3743	3F23					*			
3744	3F23	0E	53			RTNVAL	LODR,R0	VALS	
3745	3F25	CC	11	F4			STRA,R0	INPT	
3746	3F25	2E	4F				LODR,R0	VALS+1	
3747	3F2A	CC	11	E5			STRA,R0	INPT+1	
3748	3F2C	1F	33	1A			ECTA,UN	EVAL3	
3749	3F12					*			
3750	3F12					*			
3751	3F12	0C	50	D7		FFVARF	LODA,R0	*SP	
3752	3F13	15	0F				PCTR,CT	VAPP2	
3753	3F15	3F	45	D9			BSTA,UN	POPC1	
3754	3F18	1B	03				BCTR,UN	VAPP3	
3755	3F1A	3F	42	F4		VARF2	BSTA,UN	PFSTES	
3756	3F1C	2C	15	72		VARF3	LODA,P0	LTEMP	
3757	3F22	0E	15	73			LODA,R1	LTEMP+1	
3758	3F23	1F	31	FA			ECTA,UN	BTOD	
3759	3F26					*			
3760	3F26					*			
3761	3F26	3F	45	D9		FFERC	BSTA,UN	POPC1	
3762	3F29	3F	1F	E2			BSTA,UN	PUSPC1	
3763	3F2C	3F	3D	72			PSTA,UN	FIX0	
3764	3F2F	1F	3A	64			ECTA,UN	FFSUB	
3765	3F32					*			
3766	3F32					*			
3767	3F32	0E	0E			PEEKS	RES	2	
3768	3F34					*			
3769	3F34					*			
3770	3F34	22				FFPEEK	FORZ,R0		
3771	3F35	3F	3E	7F			BSTA,UN	ENSX	
3772	3F36	CC	78				STBR,R0	PEEKS	
3773	3F3A	CC	77				STBR,R1	PEEKS+1	
3774	3F3C	2E	F4				LODR,R1	*PEEKS	
3775	3F3E	2E					FORZ,R0		
3776	3F3E	1F	3E	FA			ECTA,UN	BTOD	
3777	3F42					*			
3778	3F42					*			
3779	3F42	3F	3F	5A		FFCHR	BSTA,UN	ENSX1B	
3780	3F45	01					LOPR,R1		
3781	3F46	1E	45	74			ECTA,LT	OVFER	
3782	3F49	15	20				COMI,R1	20	
3783	3F4B	1E	45	74			ECTA,LT	OVFER	
3784	3F4F	03					STRZ,R3		
3785	3F4F	3F	3F	D9			BSTA,UN	DFCSP	
3786	3F52	07	01				LODI,R3	1	
3787	3F54	1E	32	10			PSTA,UN	DECSP	
3788	3F57	1F	32	D9			ECTA,UN	DECSP	
3789	3F5A					*			
3790	3F5A	3F	2E	A1		ENSX1B	BSTA,UN	ENS2	
3791	3F5D	2C					LOIZ,R0		
3792	3F5F	9C	45	74			BCFA,EQ	OVFER	
3793	3F61	17					RITC,UN		
3794	3F62					*			
3795	3F62					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3796	3F62	3E	76			FPIN	ESTR,UN	ENSX1B	
3797	3F64	C9	81				STPR,R1	4+3	
3798	3F66	55	02				RIDE,R1	0	
3799	3F69	20					FORZ,R0		
3800	3F69	1F	3E	FA			ECTA,UN	BTOD	
3801	3F6C					*			
3802	3F6C	3F	30	B1		FPLEN	BSTA,UN	INCSP	
3803	3F6F	E7	01				COMI,R3	1	
3804	3F71	9C	45	7C			BCFA,EQ	TYPFR	
3805	3F74	3F	30	B1			BSTA,UN	INCSP	
3806	3F77	03					LOIZ,R3		
3807	3F78	C1					STRZ,R1		
3808	3F79	C2					STRZ,R2		
3809	3F7A	5A	04			LEN1	BRNR,R2	LEN2	
3810	3F7C	20					FORZ,R0		
3811	3F7D	1F	3D	FA			ECTA,UN	BTOD	
3812	3F80	3F	30	B1		LEN2	BSTA,UN	INCSP	
3813	3F83	AC	81				SUBI,R2	1	
3814	3F85	1B	73				BCTR,UN	LEN1	
3815	3F87					*			
3816	3F87					*			
3817	3F87	3F	30	B1		FPASC	BSTA,UN	INCSP	
3818	3F8A	E7	01				COMI,R3	1	
3819	3F8C	9C	45	7C			BCFA,EQ	TYPFR	
3820	3F8F	3F	30	B1			BSTA,UN	INCSP	
3821	3F92	03					LOIZ,R3		
3822	3F93	C1					STRZ,R1		
3823	3F94	1C	45	00			ECTA,EQ	ARGEN	
3824	3F97	3F	30	B1		ASC1	BSTA,UN	INCSP	
3825	3F9A	F9	7E				BRNR,R1	ASC1	
3826	3F9C	03					LODZ,R3		
3827	3F9D	C1					STRZ,R1		
3828	3F9E	20					FORZ,R0		
3829	3F9F	1F	3D	FA			ECTA,UN	BTOD	
3830	3FA2					*			
3831	3FA2					*			
3832	3FA2	00				RBUF	RES	1	
3833	3FA3					*			
3834	3FA3					*			
3835	3FA3	00	7C			FFRNC	LODR,R0	RBUF	
3836	3FA5	64	01				ICRT,P0	1	
3837	3FA7	C2					STRZ,R2		
3838	3FA8	C3					STRZ,R3		
3839	3FA9	20					FORZ,R0		
3840	3FAA	75	01				CPSL	CRY	
3841	3FAC	77	00				CPSL	WC	
3842	3FAD	AC					SUBZ,R3		
3843	3FAD	AC	00				SUBI,R2	0	
3844	3FAD	13					SUBZ,P3		
3845	3FAD	AC	00				SUBI,R2	0	
3846	3FAD	50					RRR,R2		
3847	3FAD	50					RRR,R0		
3848	3FAD	52					RRR,R2		
3849	3FAD	50					RRR,R0		
3850	3FAD	75	00				CPSL	WC	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3651	3F5A	08	66				STRR,R0	REUF	
3652	3F5C	01					STZ,R1		
3653	3F5D	27					ICRZ,PP		
3654	3F5F	3F	3E	FA			BSTA,UN	BTOD	
3655	3F61	04	3F				LOCI,R0	F1/255	
3656	3F63	25	01				LOCI,R1	F1/255	
3657	3F65	3F	71	36			BSTA,UN	PUSHFP	
3658	3F68	7F	3E	F1			BSTA,UN	PFMULT	
3659	3F6B	1F	3E	F1			BSTA,UN	PFMULT	
3660	3F6F						*		
3661	3F6E						*		
3662	3F71	F2	22	22	39		F1,255 ACON	F002.0039.2156.0627	
3663	3F72	21	56	0E	27				
3664	3F76						*		
3665	3F7E						*		
3666	3F76	2C	90	D7			LOADSP	LODA,R0	*SP THIS IS FOR ROUTINES IN THE NEXT PAGE
3667	3F79	17					RETC,UN		
3668	3F7A	21	90	17			INSSUP	CCMA,R1	*SP, I FOR NEXT PAGE
3669	3F7D	17					RETC,UN		
3670	3F7E	21	D0	D7			COMSB	LODA,R3	*SP, -
3671	3F81	17					RETC,UN		
3672	4100						ORG	4000	
3673	4102						*		
3674	4200						*		
3675	4202	01	60	EB			VALSUP	STRA,R2	FPSTRS, I
3676	4203	17					RETC,UN		
3677	4204						*		
3678	4204						*		
3679	4204	3F	42	14			COMSTP	BSTA,UN	FPSTRS
3680	4207	3F	30	51			BSTA,UN	INCSP	
3681	420A	17	21				COMI,R3	1	
3682	420C	90	45	70			BCFA,EC	TYPEP	
3683	420F	3F	30	E1			BSTA,UN	INCSP	
3684	4210	23					LODZ,R3		
3685	4213	72					COMZ,R2		
3686	4214	00	77	50			BCFA,EC	COMN3	
3687	4217	35	71				LODI,R1	FF	
3688	4219	3F	3F	DE			COMST2	BSTA,UN	COMSB
3689	421C	17	22	1B			CCMA,R1	FPSTRS, -	
3690	421F	60	30	66			BCFA,EC	COMN3	
3691	4220	55	70				BRNR,R3	COMST2	
3692	4224	17					RETC,UN		
3693	4225						*		
3694	4225						*		
3695	4225	3F	3F	5A			FPSTPG	BSTA,UN	ENSK1B
3696	4228	01					LODZ,R1		
3697	4229	1F	45	74			BCFA,LT	OFFER	
3698	422C	15	72				COMI,R1	20	
3699	422E	15	45	74			BCFA,LT	OFFER	
3700	4231	01	1B				STRA,R1	STRS	
3701	4234	3F	30	E1			BSTA,UN	INCSP	
3702	4237	17	05				COMI,R3	5	
3703	4239	90	45	00			BCFA,EC	ARGER	
3704	423C	3F	3F	5A			BSTA,UN	ENSK1B	
3705	423F	01					LODZ,R1		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3706	4240	C2					STZ,R2		
3707	4241	C3					STZ,R3		
3708	4242	1B	06				BCFA,EQ	STRG3	
3709	4244	0C	01	1B			LODA,R0	STRS	
3710	4247	CF	40	1B			STRG2	STRA,R3	FPSTRS, -
3711	424A	5B	7B				BRNR,R3	STRG2	
3712	424C	1F	40	DE			STRG3	BSTA,UN	PHSTRS
3713	424F						*		
3714	424F						*		
3715	424F						*		
3716	424F	00	00				MIDS	RES	2
3717	4251						*		
3718	4251						*		
3719	4251	3F	3F	5A			FPFID	BSTA,UN	ENSK1B
3720	4254	09	79				STRA,R1	MIDS	LENGTH
3721	4256	3F	30	51			BSTA,UN	INCSP	
3722	4259	17	65				COMI,R3	5	
3723	425B	90	45	02			BCFA,EC	ARGER	
3724	425F	3F	3F	D6			BSTA,UN	LOADSP	
3725	4261	00	16				BCFA,EQ	MED3	
3726	4263	3F	3E	7F			BSTA,UN	ENSI	
3727	4266	F5	00				COMI,R1	0	
3728	4268	10	45	74			BCFA,EQ	OFFER	
3729	426B	A5	01				SUBI,R1	1	
3730	426D	05	61				STRR,R1	MIDS-1	
3731	426F	3F	30	B1			BSTA,UN	INCSP	
3732	4272	17	05				COMI,R3	5	
3733	4274	90	45	00			BCFA,EC	ARGER	
3734	4277	1F	01				BCFA,UN	MED4	
3735	4279	00	54				LODR,R0	MIDS	
3736	427B	10	45	74			BCFA,EQ	OFFER	
3737	427E	A4	01				SUBI,R0	1	
3738	4280	00	41				STRR,R0	MIDS-1	
3739	4282	04	FF				LODI,R0	FF	
3740	4284	00	49				STRR,R0	MIDS	
3741	4286	3F	40	14			BSTA,UN	FPSTRS	
3742	4289	E1	02	50			CCMA,R2	MIDS-1	
3743	428C	99	2A				BCFA,GT	MED6	
3744	428E	A1	00	50			SUBI,R2	MIDS-1	
3745	4291	1E	00	4F			CCMA,R2	MIDS	
3746	4294	1A	23				BCFA,LT	MED5	
3747	4296	03	00	4F			LODA,R2	MIDS	
3748	4299	01	30	4F			STRA,R2	MIDS	
3749	429C	02					LODZ,R2		
3750	429E	15	19				BCFA,EC	MED6	
3751	429F	21	00	50			LODA,R1	MIDS-1	
3752	42A2	01	00	1B			LODA,R1	FPSTRS, I	
3753	42A5	C2					STZ,R3		
3754	42A5	3F	30	19			BSTA,UN	DECSP	
3755	42A9	65	21				ADDI,R1	1	
3756	42AB	FA	75				EDRP,R2	MID7	
3757	42AD	2F	00	4F			LOCA,R3	MIDS	
3758	42B0	3F	30	D6			BSTA,UN	DECSP	
3759	42B3	07	01				LODI,R3	1	
3760	42B5	1F	30	19			BCFA,UN	DECSP	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3901	4058	27	02			MED6	LODI,R3	0	
3902	405A	1F	74				PCTR,UN	MID8	
3903	405C					*			
3904	405D					*			
3905	405E	3F	3F	5A		FPLEFT	BSTA,UN	ENX1B	
3906	405F	01	01	EC			STRA,R1	FPSTRS	
3907	4060	3F	30	B1			BSTA,UN	INCSP	
3908	4061	27	25				COM1,R3	5	
3909	4062	9C	45	0F			BCFA,EC	ARGER	
3910	4063	3F	42	E4			BSTA,UN	FPSTRS	
3911	4064	01	21	EE			STPA,R2	STRS	
3912	4065	72	01	EC			LODA,R1	FPSTRS	
3913	4066	12	01	EB			COMA,R1	STRS	
3914	4067	9C	03				BCFR,CT	LEFT2	
3915	4068	2D	21	EE			LODA,R1	ST S	
3916	4069	01				LEFT2	LODZ,R1		
3917	406A	02					STRZ,R2		
3918	406B	04	42			PHSTRS	LODI,R2	FPSTRS	
3919	406C	25	EE				LODI,R1	FPSTRS	
3920	406D	1F	30	F2			BCTA,UN	PUSHST	
3921	406E					*			
3922	406F	04	42			PPSTRS	LODI,R0	FPSTRS	
3923	4070	25	EE				LODI,R1	FPSTRS	
3924	4071	1F	31	11			BCTA,UN	PCPST	
3925	4072					*			
3926	4073					FPSTRS	RES	100	
3927	4074	00				STRS	RES	1	
3928	4075	02				FPSTRS	RES	1	
3929	4076					*			
3930	4077					*			
3931	4078	3F	3F	5A		FPRIGHT	BSTA,UN	ENX1B	
3932	4079	25	7A				STPP,R1	FPSTRS	
3933	407A	3F	30	B1			BSTA,UN	INCSP	
3934	407B	E7	25				COM1,R3	5	
3935	407C	9C	45	0F			BCFA,EC	ARGER	
3936	407D	3F	40	E4			BSTA,UN	FPSTRS	
3937	407E	CA	6C				STPR,R2	STRS	
3938	407F	01	01	EC			LODA,R1	FPSTRS	
3939	4080	12	01	EB			COMA,R1	STRS	
3940	4081	9C	03				BCFR,CT	RIGHT2	
3941	4082	01	01	EB			LODA,R1	STRS	
3942	4083	21				RIGHT2	LODZ,R1		
3943	4084	02					STRZ,R2		
3944	4085	2C	01	EB			LODA,R2	STRS	
3945	4086	A1					SUPZ,R1		
3946	4087	04	EB				ADDI,R0	FPSTRS	
3947	4088	01					STRZ,R1		
3948	4089	77	00				FPSTRS	WC	
3949	408A	04	42				LODI,R0	FPSTRS	
3950	408B	04	20				ADDI,R0	0	
3951	408C	25	00				CPSL	WC	
3952	408D	1F	30	F2			BCTA,UN	PUSHST	
3953	408E					*			
3954	408F					*			
3955	4090	2C	00	00	00	INSTRS	RES	4	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4216	4222					*			
4217	4223					*			
4218	4224	05	01			FPINST	LODI,R1	1	
4219	4225	3F	3F	D6			BSTA,UN	LOADSP	
4220	4226	9C	0F				BCFR,EC	INST2	
4221	4227	3F	3F	5A			BSTA,UN	ENX1B	
4222	4228	01					LODZ,R1		
4223	4229	1C	45	74			BCFA,EC	OVER	
4224	422A	3F	30	B1			BSTA,UN	INCSP	
4225	422B	E7	05				COM1,R3	5	
4226	422C	9C	45	0F			BCFA,EC	ARGER	
4227	422D	A5	01			INST2	SUBI,R1	1	
4228	422E	CD	02	1E			STRA,R1	INSTS	INDEX
4229	422F	3F	40	E4			BSTA,UN	FPSTRS	
4230	4230	CE	02	1F			STPA,R2	INSTS+1	
4231	4231	3F	30	B1			BSTA,UN	INCSP	
4232	4232	E7	05				COM1,R3	05	
4233	4233	9C	45	0F			BCFA,EC	ARGER	
4234	4234	3F	30	B1			BSTA,UN	INCSP	
4235	4235	E7	01				COM1,R3	1	
4236	4236	9C	45	7C			BCFA,EC	TYPEF	
4237	4237	3F	30	B1			BSTA,UN	INCSP	
4238	4238	E7	02	1E			COMA,R3	INSTS	
4239	4239	9D	42	97			BCFA,CT	INST3A	
4240	423A	CE	02	21			STRA,R3	INSTS+3	
4241	423B	AF	02	1E			SUBA,R3	INSTS	
4242	423C	CF	02	20			STRA,R3	INSTS+2	
4243	423D	0D	02	20		INST2A	LODA,R1	INSTS+2	
4244	423E	0C	02	1F			LODA,R0	INSTS+1	
4245	423F	A4	01				SUBI,R0	1	
4246	4240	F1					COMZ,R1		
4247	4241	1C	42	97			BCFA,EC	INST3A	
4248	4242	A5	01				SUBI,R1	1	
4249	4243	CD	02	20			STRA,R1	INSTS+2	
4250	4244	06	FF				LODI,R2	FF	
4251	4245	0F	02	1F			LODA,R3	INSTS+1	
4252	4246	0E	20	EB		INST3	LODA,R2	FPSTRS+	
4253	4247	3F	3F	DA			BSTA,UN	INSSUB	
4254	4248	9B	62				BCFP,EC	INST2A	
4255	4249	A5	01				SUBI,R1	1	
4256	424A	FB	74				BOPR,R3	INST3	
4257	424B	2C	02	21			LODA,R0	INSTS+3	
4258	424C	3F	30	B5			BSTA,UN	INCSP2	
4259	424D	2D	02	21			LODA,R1	INSTS+3	
4260	424E	AD	02	20			SUBA,R1	INSTS+2	
4261	424F	20					KORZ,R2		
4262	4250	1F	3D	FA			BCTA,UN	BOD	
4263	4251	2C	02	21		INST3A	LODA,R0	INSTS+3	
4264	4252	3F	30	B5			BSTA,UN	INCSP2	
4265	4253	1F	45	EA			BCTA,UN	PUSH2	
4266	4254					*			
4267	4255					*			
4268	4256	07	00			OPTION	LODI,R3	OFFMSG	
4269	4257	3F	45	03			BSTA,UN	WFTMCB	
4270	4258	3F	2D	27			BSTA,UN	GETEB	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4271	42AB	3F	45	AE			BSTA,UN	LTCU	
4272	42AB	E4	1E				COMI,R0	ISC	
4273	42AC	1C	49	7A			BSTA,EQ	EDITOR	
4274	42AC	E4	42				COMI,R0	"E	
4275	42BC	1E	17				BCTR,EC	BEGN	
4276	42BC	E4	52				COMI,R0	"F	
4277	42BC	1B	19				BCTR,EC	RUN	
4278	42BC	E4	53				COMI,R0	"G	
4279	42BA	1A	0F				BCTR,EC	STEP	
4280	42BC	E4	44				COMI,R0	"D	
4281	42BE	1C	43	06			BCTR,EC	DIRECT	
4282	42BC	3F	2F	21			BSTA,UN	WREL	
4283	42BA	E4	3F				LODI,R0	"?	
4284	420E	3F	2E	23			BSTA,UN	WRT	
4285	420E	1E	55				BCTR,UN	OPTION	
4286	420E								
4287	420E								
4288	420D	3F	31	9A			BSTA,UN	BEGIN	
4289	420E	1F	42	A2			BSTA,UN	OPTICN	
4290	420E								
4291	420E								
4292	420E	07	01				LODI,P3	OKMSG	
4293	420E	3F	45	5E			BSTA,UN	WRTM	
4294	420E	72					PEDD,P0		
4295	4207	44	7F				ANDI,R0	7F	
4296	420E	E4	1E				COMI,R0	ISC	
4297	420E	0E	0E				BCTR,EC	PUNE	
4298	420D	3F	2D	F1			BSTA,UN	PL	
4299	420E	1F	42	A2			BSTA,UN	OPTION	
4300	420E	3F	42				LODI,P0	NORM1	
4301	420E	05	16				LODI,R1	NORM1	
4302	4207	1F	20	94			BSTA,UN	EXEC	
4303	420A								
4304	420A								
4305	420A	27	21				LODI,R3	OKMSG	
4306	420E	3F	45	5E			BSTA,UN	WRTM	
4307	420E	7F	20	E7			BSTA,UN	SAVING	
4308	420E	26	FF				LODI,R0	FF	
4309	420A	3F	20	57			BSTA,UN	SELIN	
4310	4207	3F	2D	E2			BSTA,UN	PAUSE	
4311	420A	E4	1E				COMI,R0	ISC	
4312	420E	1C	42	AE			BCTR,EC	OPTION	
4313	420E	E4	42				LODI,R0	STEP1	
4314	420E	0E	FF				LODI,R1	STEP1	
4315	420E	1F	20	94			BSTA,UN	EXEC	
4316	420E								
4317	420E								
4318	420E	3F	2E	55			BSTA,UN	LYCR	
4319	420E	3F	32	75			BSTA,UN	AROWCR	
4320	420E	E4	43				LODI,R0	DIRECT	
4321	420E	0E	0E				LODI,R1	DIRECT	
4322	420E	1F	22	94			BSTA,UN	EXEC	
4323	4313								
4324	4313								
4325	4312	3F	29	6E			LET	BSTA,UN	GCVAR

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4326	431E	1A	1F				BCTR,LT	LETSTR	
4327	431E	1E	45	00			BSTA,GT	ARGER	
4328	431E	3F	30	0E			BSTA,UN	SPECT	
4329	431E	3F	46	50			BSTA,UN	SPECT	
4330	4321	3F	33	9F			BSTA,UN	EVAL	
4331	4324	3C	46	34			BSTA,EQ	EVAL	
4332	4327	3F	2E	18			BSTA,UN	POPCT	
4333	432A	3F	46	40			BSTA,UN	SKPSP	
4334	432C	E4	2C				COMI,R0	"?	
4335	432F	1E	62				BCTR,EO	LET	
4336	4331	3F	32	13			BSTA,UN	DECTP	
4337	4334	1F	31	A3			BSTA,UN	NITLIN	
4338	4337	3F	32	6E			BSTA,UN	STROCT	
4339	433A	3F	2F	E7			BSTA,UN	ZSTR	
4340	433D	3F	46	50			BSTA,UN	SKPEQ	
4341	4340	3F	33	9F			BSTA,UN	EVAL	
4342	4342	3F	46	34			BSTA,LT	NOSTR	
4343	4346	3F	2B	32			BSTA,UN	STRING	
4344	4349	1B	5F				BCTR,UN	LETD	
4345	4342								
4346	4342								
4347	434B	3F	33	0C			BSTA,UN	SKPCR	
4348	434E	1A	0D				COMI,R0	CB	
4349	4350	0E	79				BCTR,EO	REM	
4350	4352	1F	A2	92			BSTA,UN	*RTNADR	
4351	4355								
4352	4355								
4353	435F	3F	33	9F			BSTA,UN	EVAL	
4354	435B	3F	2B	97			BSTA,UN	ENSIB	
4355	435B	09	0A				STRR,P1	WRITEP-1	
4356	435E	3F	46	40			BSTA,UN	SKPCOM	
4357	4360	3F	33	9F			BSTA,UN	EVAL	
4358	4363	3F	2B	97			BSTA,UN	ENSIB	
4359	4365	D5	00				WRITEP	WTFP,R1	
4360	4368	1F	31	A3			BSTA,UN	NITLIN	
4361	436B								
4362	436B								
4363	436B	3F	31	9A			BSTA,UN	BEGIN	
4364	436E	1E	09				BCTR,UN	STOP1	
4365	4370	3F	46	40			BSTA,UN	SKPSP	
4366	4373	3F	31	BE			BSTA,UN	CRICR	
4367	4376	0C	31	B1			BCTR,EO	STWER	
4368	4379	07	07				LODI,P3	STOMSG	
4369	437B	3F	45	53			BSTA,UN	WRTMCR	
4370	437E	1F	42	A0			BSTA,UN	OPTION	
4371	4381								
4372	4381								
4373	4381	3F	32	B3			BSTA,UN	FNDLIN	
4374	4384	1C	A0	02			BSTA,EO	*RTNADR	
4375	4387	07	09				LODI,P3	LNVERB	
4376	4389	1F	33	2F			BSTA,UN	EPGRN	
4377	439C								
4378	439C								
4379	439C	3F	33	9F			BSTA,UN	EVAL	
4380	439F	3F	2E	6E			BSTA,UN	ENS	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
4181	4292	C2					STRZ,R2		
4182	4293	E1				PAUS2	LODI,R1		
4183	4294	98	04				BCFR,IQ	PAUS3	
4184	4295	02					LODI,R2		
4185	4297	10	31	A3			PCTA,IQ	NXTIIM	
4186	4298	07	30			PAUS3	LODI,R3	30	60 DECIMAL
4187	4299	17	14			PAUS4	RSTR,UN	D1	
4188	4291	70					FEED,R0		
4189	4297	44	7F				ANDI,R0	7F	
4190	4291	14	15				COMI,R0	ESC	
4191	42A3	10	42	A2			PCTA,IQ	OPTION	
4192	42A5	1F	74				BERR,R3	PAUS4	
4193	42A6	A5	01				SUBI,R1	1	
4194	42A4	77	08				PSL	WC	
4195	42AC	A5	00				SUBI,R2	0	
4196	42B0	75	00				CPSI	WC	
4197	42B0	19	61				BCTR,UN	PAUS2	
4198	42B2					*			
4199	42B2					*			
4200	42B2	24	1B			I1	LODI,R0	DB	
4201	42B4	1F	7F				PDRR,R0	\$	
4202	42B5	17					RETC,UN		
4203	42F7					*			
4204	42F7					*			
4205	42B7	3F	29	6E		READ	ESTA,UN	GCVAR	
4206	42BA	1A	17				BCTR,LT	R0STR	
4207	42BC	11	4F	02			PCTA,GT	AREGR	
4208	42BF	3F	34	6E			ESTA,UN	STPCT	
4209	42C0	3F	20	31			PSTA,UN	GETDAT	
4210	42C0	1C	25	41			PCTA,GT	RENDE	
4211	42C8	1F	25	45			BCTA,LT	RDTYPE	
4212	42C8	3F	22	18			PSTA,UN	POPCT	
4213	42C0	3F	45	47		REDEL	ESTA,UN	SKISF	
4214	42C1	14	20				COMI,R0		
4215	42C3	16	62				BCTR,IQ	READ	
4216	42D5	3F	32	13			ESTA,UN	DEOPT	
4217	42D8	1F	31	A3			BCTA,UN	NXTIIM	
4218	42DF	3F	30	6E		RISTR	ESTA,UN	STRICT	
4219	42DF	3F	2F	17			ESTA,UN	ZSTR	
4220	42E1	3F	20	31			ESTA,UN	GETDAT	
4221	42E4	1E	2F	41			BCTA,GT	RENDE	
4222	42E7	1C	25	45			BCTA,GT	RDTYPE	
4223	42E1	3F	28	32			ESTA,UN	STRING	
4224	42E1	1F	5F				BCTR,UN	REDEL	
4225	42EF					*			
4226	42EF					*			
4227	42E5	00				COMMA	RES	1	
4228	42E8	02				DP	RES	1	
4229	42F1	00	20	00		PUSGC	RES	3	
4230	42FA					*			
4231	42FA					*			
4232	42FA	3F	33	9F		PUSING	ESTA,UN	IVAL	
4233	42F7	9F	46	34			BCFA,LT	N0STR	
4234	42FA	3F	20	9A			ESTA,UN	ZEROMS	
4235	42E1	24	2E				LODI,R0	CMSTRS	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
4236	42FF	05	A1				LODI,R1	CMSTRS	
4237	4401	3F	31	11			ESTA,UN	POPST	
4238	4404	3F	46	40			ESTA,UN	SKISF	
4239	4427	14	30				COMI,R0		
4240	4429	9C	31	11			BCFA,IQ	STWER	
4241	442C	3F	20	50		PUIOCP	ESTA,UN	PUGET	
4242	442F	1C	44	D0			PCTA,IQ	PUREPT	
4243	4412	14	21				COMI,R0		
4244	4414	96	11				BCFR,IQ	PU2	
4245	4416	3F	33	9F			ESTA,UN	IVAL	
4246	4419	11	24	9B			BCTA,GT	PRNTDS	
4247	441C	9E	46	34			BCTA,LT	N0STR	
4248	441F	25	01				LODI,R1	1	
4249	4421	3F	23	12			ESTA,UN	PRNTS	
4250	4424	1F	44	BD			BCTA,UN	PUDIL	
4251	4427	14	5E			PU2	COMI,R0		
4252	4429	96	22				BCFR,IQ	PUS	
4253	442B	06	01				LODI,R2	1	
4254	442D	3F	20	90		FU2B	ESTA,UN	PUGET	
4255	4430	06	01				ADDI,R2	1	
4256	4432	14	5E				COMI,R0		
4257	4434	98	77				BCFR,IQ	PU2B	
4258	4436	01	03	F1			STRA,R2	PUSGC-2	
4259	4439	21	33	9F			ESTA,UN	IVAL	
4260	443C	1D	24	9B			BCTA,GT	PRNTDS	
4261	443F	9E	46	34			BCFA,LT	N0STR	
4262	4442	01	03	F1			LODI,R1	PUSGC	
4263	4445	3F	23	12			ESTA,UN	PRNTS	
4264	4448	1F	44	BD			BCTA,UN	PUDIL	
4265	444B	14	23			FU3	COMI,R0		
4266	444C	10	06				BCTR,IQ	PU4	
4267	444F	3F	24	C5			ESTA,UN	SENDIT	
4268	4452	1F	44	2C			BCTA,UN	PUILOOP	
4269	4455	06	01			PU4	LODI,R2	1	
4270	4457	01	03	F1			STRA,R2	COMMA	
4271	445A	01	03	F2			STRA,R2	DP	
4272	445D	20					FORZ,R0		
4273	445E	0C	03	F3			STRA,R0	PUSGC-2	
4274	4461	3F	20	90		PU5	ESTA,UN	PUGET	
4275	4464	06	01				ADDI,R2	1	
4276	4466	14	23				COMI,R0		
4277	4468	10	77				BCTR,IQ	PU5	
4278	446A	14	2C				COMI,R0		
4279	446C	10	10				BCTR,IQ	PU6	
4280	446E	14	21				COMI,R0		
4281	4470	98	10				BCFR,IQ	PURND	
4282	4472	A5	01				SUBI,R2	1	
4283	4474	01	03	F2			STRA,R2	PUSGC-1	
4284	4477	06	00				LODI,R2	0	
4285	4479	01	03	F2			STRA,R2	DP	
4286	447C	10	53				BCTR,UN	PUS	
4287	447E	2C	23	F0		PU6	LODI,R0	DP	
4288	4481	1C	31	B1			BCTA,IQ	STWER	
4289	4484	20					ICRZ,R0		
4290	4485	0C	03	F1			TBA,R0	COMMA	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4251	4499	1F	57				BCTR,UN	FUS	
4252	449A	A5	71			PUNWD	SUPI,R1	1	
4253	449C	3F	22	AC			BSTA,UN	STRFUS	
4254	449F	AF	P1				SUBI,P2	1	
4255	4491	00	03	F0			LOIA,R0	IF	
4256	4494	16	0*				BCTR,EC	PU7	
4257	4496	0E	03	F2			STRA,P2	FUSTG-1	
4258	4499	1B	03				BCTR,UN	FUS	
4259	449F	3F	03	F3		PU7	STRA,R2	FUSTG+2	
4260	449E	3F	03	0F		PUG	BSTA,UN	EVAL	
4261	44A1	1D	24	08			BCTA,GT	FRNTD	
4262	44A4	9C	45	34			BCTA,EC	NCSTR	
4263	44A7	2C	23	F7			LODA,R0	FUSTG-1	
4264	44A8	A4	01			FUG	SUBI,R0	1	
4265	44AC	E4	FF				COMI,R0	FF	
4266	44A1	1C	31	R1			BCTA,EC	STNIR	
4267	44B1	2D	23	F3			LODA,R1	FUSTG+7	
4268	44B4	0E	03	1F			LODA,R2	COMPA	
4269	44B7	0F	03	F0			LODA,R3	DP	
4270	44BA	3F	2C	A7			BSTA,UN	PRNTU	
4271	44B1	3F	45	40		PUEI	BSTA,UN	SKPSP	
4272	44B2	F4	2C				COMI,R0		
4273	44C2	1C	44	2C			BCTA,EC	PULOP	
4274	44C5	F4	3F				COMI,R0		
4275	44C7	1C	44	2C			BCTA,EC	PULOP	
4276	44CA	3F	32	13			BSTA,UN	DECPT	
4277	44CD	1F	31	A3			BCTA,UN	NITLIN	
4278	44D2	24	FF			FUPPT	LODI,R0	FF	
4279	44D2	0C	04	D8			STRA,R2	*IFUSP	
4280	44D5	1F	44	2C			BCTA,UN	PULOP	
4281	44D8	22	A2			IFUSP	ACOM	FUSE	
4282	44DA								
4283	44DA								
4284	44DA	3F	32	B3		RESUME	BSTA,UN	FNDLIN	
4285	44DD	9C	20	F0			BCTA,EC	RETURN	
4286	44E0	3F	30	B1			BSTA,UN	INCSP	
4287	44E3	F7	02				COMI,R3	Z	
4288	44E5	9C	45	70			BCTA,EC	NESTER	
4289	44E8	3F	30	11			BSTA,UN	INCSP	
4290	44EB	3F	30	B1			BSTA,UN	INCSP	
4291	44EE	1F	A0	92			BCTA,UN	*RTNADR	
4292	44F1								
4293	44F1								
4294	44F1	02	00			X2STG	RIS	Z	
4295	44F2								
4296	44F2								
4297	44F3	07	02			X1C	LODI,R3	0	
4298	44F5	77	29				PFSL	WC	
4299	44F7	75	01				CPSL	CRY	
4300	44F9	D1					RL,R1		
4301	44FA	D0					RRL,R0		
4302	44FB	E3					RRL,R3		
4303	44FC	0A	73				STRR,R0	X2STG	
4304	44FE	09	72				STRR,R1	X2STG-1	
4305	4500	E1					RRL,R1		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4306	4501	D0					RRL,R0		
4307	4502	D3					RRL,R3		
4308	4503	11					RRL,R1		
4309	4504	D2					RRL,R0		
4310	4505	D3					RRL,R3		
4311	4506	09	6A				ADDR,R1	X2STG-1	
4312	4508	06	07				ADDR,R0	X2STG	
4313	450A	07	08				ADDI,R3	0	
4314	450C	75	08				CPSL	WC	
4315	450E	67	00				ICRI,R3	0	
4316	4510	9C	45	74			BCTA,EC	OFFER	
4317	4513	17					RETC,UN		
4318	4514								
4319	4514								
4320	4514	3F	45	D0		FPEIP	BSTA,UN	POPC1	
4321	4517	3F	45	E7			BSTA,UN	POPC2	
4322	451A	3F	45	E0			BSTA,UN	PUSHC1	
4323	451D	3F	45	E2			BSTA,UN	PUSHC2	
4324	4520	3F	55	E0			BSTA,UN	PFLN	
4325	4523	3F	39	F1			BSTA,UN	FPMULT	
4326	4526	1F	54	35			BCTA,UN	FPIIP2	
4327	4529								
4328	4529								
4329	4529	3F	46	42		CKNEG	BSTA,UN	SKPSP	
4330	452C	F4	2B				COMI,R0		
4331	452E	14					RETC,EC		
4332	452F	F4	2D				COMI,R0		
4333	4531	9C	32	13			BCTA,EC	DECPT	
4334	4534	3F	45	BA			BSTA,UN	PUSHC0	
4335	4537	04	22				LODI,R0	22	
4336	4539	1F	33	60			BCTA,UN	PUSHC0P	
4337	453C								
4338	453C								
4339	453C	3B	0A			CKKAN	BSTR,UN	CKKNUM	
4340	453E	14					RETC,EC		
4341	453F	F4	41			CKALPH	COMI,R0	'A'	
4342	4541	1C					RETC,LT		
4343	4542	F4	5A				COMI,R0	'Z'	
4344	4544	15					RETC,GT		
4345	4545	75	0F				CPSL	00	
4346	4547	17					RETC,UN		
4347	4548								
4348	4548								
4349	4548	F4	30			CKKNUM	COMI,R0	'0'	
4350	454A	16					RETC,LT		
4351	454B	F4	30				COMI,R0	'9'	
4352	454D	15					RETC,GT		
4353	454E	75	0F				CPSL	00	
4354	4550	17					RETC,UN		
4355	4551								
4356	4551								
4357	4551	09	02			WRIMS	RIS	Z	
4358	4553								
4359	4553								
4360	4553	3F	3E	55		WPTMCR	BSTA,UN	LFOR	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4471	4575	05	00			WRTM	LODI,R2	0	
4472	4576	05	FF				LODI,R1	FF	
4473	4577	02				WRTM2	LODI,R2		
4474	4578	02					COMI,R3		
4475	4579	02	00				BCR,R3	WRTM4	
4476	4580	02	27	34		WRTM3	LODI,R1	MSGP,+	
4477	4581	14	21				COMI,R0		
4478	4582	06	79				BCR,R3	WRTM3	
4479	4583	06	01				ADDI,R2	1	
4480	4584	19	71				BCR,RN	WRTM2	
4481	4585	02	27	34		WRTM4	LODI,R1	MSGP,+	
4482	4586	14	21				COMI,R2		
4483	4587	14					BCR,R3		
4484	4588	33	21	23			BSTA,UN	WRT	
4485	4589	12	75				BCR,RN	WRTM4	
4486	4590					*			
4487	4591					*			
4488	4592	07	05			OVERR	LODI,R3	OVERR	
4489	4593	11	16				BCR,RN	ERJMP	
4490	4594					*			
4491	4595					*			
4492	4596	27	09			NSTERR	LODI,R3	NSTERR	
4493	4597	11	12				BCR,RN	ERJMP	
4494	4598					*			
4495	4599					*			
4496	4600	07	0A			TYERR	LODI,R3	TYERR	
4497	4601	13	21				BCR,RN	ERJMP	
4498	4602					*			
4499	4603					*			
4500	4604	07	0B			ARGERR	LODI,R3	ARGERR	
4501	4605	11	0A				BCR,RN	ERJMP	
4502	4606					*			
4503	4607					*			
4504	4608	07	0C			DIMERR	LODI,R3	DIMERR	
4505	4609	11	0C				BCR,RN	ERJMP	
4506	4610					*			
4507	4611					*			
4508	4612	07	02			NDERR	LODI,R3	NDERR	
4509	4613	13	02				BCR,RN	ERJMP	
4510	4614					*			
4511	4615					*			
4512	4616	27	03			ADERR	LODI,R3	ADERR	
4513	4617	13	33	21		I JMP	BCTA,UN	EBRCH	
4514	4618					*			
4515	4619					*			
4516	4620	06	10			ERASE	LODI,R2	10	
4517	4621	06	00				LODI,R1	00	
4518	4622	33	2D	F7			BSTA,UN	SETCUR	
4519	4623	05	10				LODI,R1	10	
4520	4624	33	21	55		ERASE1	BSTA,UN	LFOR	
4521	4625	19	71				BCR,R1	ERASE1	
4522	4626	06	10				LODI,R2	10	
4523	4627	25	00				LODI,R1	00	
4524	4628	13	2D	F7			BCTA,UN	SETCUR	
4525	4629					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4456	45A6					*			
4457	45A7	14	60			LTOR	TMI,R0	60	
4458	45A8	16					BCR,R1		
4459	45A9	44	DF				ANDI,R0	DF	
4460	45AB	17					BCR,RN		
4461	45AC					*			
4462	45AD					*			
4463	45AE	04	45			PUSH1	LODI,R0	FF1	
4464	45AF	05	09				LODI,R1	FF1	
4465	45B0	1F	31	38			BCTA,UN	PUSHTF	
4466	45B3					*			
4467	45B5					*			
4468	45B7	04	45			PUSHM1	LODI,R0	FPM1	
4469	45B8	25	D1				LODI,R1	FPM1	
4470	45B9	1F	31	38			BCTA,UN	PUSHTF	
4471	45BA					*			
4472	45BB					*			
4473	45BD	04	45			PUSH2	LODI,R2	FPE	
4474	45BE	05	01				LODI,R1	FPE	
4475	45BF	1F	31	38			BCTA,UN	PUSHTF	
4476	45C1					*			
4477	45C1					*			
4478	45C1	F0	00	00	00	FPO	ACON	F000,0000,2000,0000	
4479	45C5	00	00	00	00				
4480	45C9	00	01	00	10	FPI	ACON	0001,0010,0000,0000	
4481	45CD	00	00	00	00				
4482	45D1	00	01	F0	10	FPM1	ACON	0001,F010,0000,0000	
4483	45D5	00	00	00	00				
4484	45D5					*			
4485	45D9					*			
4486	45D9	04	33			POPC1	LODI,R0	CBUF1	
4487	45DB	05	50				LODI,R1	CBUF1	
4488	45DD	1F	31	55			BCTA,UN	POPPF	
4489	45E0					*			
4490	45E2					*			
4491	45E2	04	33			PUSHC1	LODI,R0	CBUF1	
4492	45E2	05	50				LODI,R1	CBUF1	
4493	45E4	1F	31	38			BCTA,UN	PUSHTF	
4494	45E7					*			
4495	45E7					*			
4496	45E7	04	33			POPC2	LODI,R0	CBUF2	
4497	45E9	05	50				LODI,R1	CBUF2	
4498	45EB	1F	31	55			BCTA,UN	POPPF	
4499	45EE					*			
4500	45EE					*			
4501	45EE	04	33			PUSHC2	LODI,R0	CBUF2	
4502	45EE	05	50				LODI,R1	CBUF2	
4503	45F2	1F	31	38			BCTA,UN	PUSHTF	
4504	45F5					*			
4505	45F5					*			
4506	45F5	00	00			TABSTC	RIS	2	
4507	45F7					*			
4508	45F7					*			
4509	45F7	08	70			LOOKUP	STRB,R2	TABSTC	
4510	45F9	09	70				STRB,R1	TABSTC-1	

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4511	451B	3F	32	1F			BSTA.UN	SKPDEC	
4512	451F	3F	31	7F			BSTA.UN	SINPT	
4513	4521	7F	3F				LODI.R1	FF	
4514	4523	3F	32	7F		LOOK2	BSTA.UN	GETCHP	
4515	4525	02					STRZ.R3		
4516	4527	22	A5	F*			LODA.R1	*TABSTG.-	
4517	452A	F4	2E				COM1.R0		
4518	452C	1F	17				BCTR.E0	LOOK4	
4519	452E	F2					COM2.R3		
4520	452F	1F	72				BCTR.E0	LOOK2	
4521	4511	2D	A5	F5		LOOK3	LODA.R1	*TABSTG.-	
4522	4514	F4	2E				COM1.R0		
4523	4516	08	70				PCFR.E2	LOOK3	
4524	4519	3F	31	7B			BSTA.UN	SINPT	
4525	451E	05	63				ADDI.R1	3	
4526	451D	21	15	F5			LODA.R1	*TABSTG.1	
4527	4522	16					RETC.L7		
4528	4521	A5	71				SUPI.R1	1	
4529	4523	1F	3F				BCTR.UN	LOOK2	
4529	4525	21	A5	F5		LOOK4	LODA.R1	*TABSTG.-	
4531	4528	02					STRZ.R3		
4532	4529	0C	A5	F5			LODA.R1	*TABSTG.-	
4533	452C	01					STRZ.R1		
4534	452D	03					LOIZ.R3		
4535	452E	3F	32	13			BSTA.UN	DECP	
4536	4531	75	02				CFSL	02	
4537	4533	17					RETC.UN		
4538	4534					*			
4539	4534					*			
4540	4534	1F	A5	0F		NOSTR	BCTA.GT	ARGER	
4541	4537	1F	A5	7C			BCTA.UN	TYPFR	
4542	453A					*			
4543	453A					*			
4544	453A	3F	33	0C		SKPLIN	BSTA.UN	SKPCR	
4545	4537	1F	A5	02			BCTA.UN	*PTNADR	
4546	4540					*			
4547	4542					*			
4548	4542	3F	32	28		SKPSP	BSTA.UN	GETCHR	
4549	4543	F4	22				COM1.R0		
4550	4545	18	79				BCTR.E0	SKPSP	
4551	4547	17					RETC.UN		
4552	4548					*			
4553	4549					*			
4554	4549	3F	76			SKPCOM	BSTA.UN	SKPSP	
4555	454A	F4	2C				COM1.R0		
4556	454C	0C	31	E1			ECFA.EC	SYNER	
4557	454F	17					RETC.UN		
4558	4550					*			
4559	4550					*			
4560	4552	33	A5	40		SKPEC	BSTA.UN	SKPSP	
4561	4553	F4	3C				COM1.R0		
4562	4555	0C	71	E1			ECFA.EC	SYNER	
4563	4556	17					RETC.UN		
4564	4559					*			
4565	4559					*			

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4566	4559	75	02			RETNGT	CFSL	02	
4567	4559	77	42				PFSL	40	
4568	455D	17					RETC.UN		
4569	455E					*			
4570	455E					*			
4571	455E	75	02			RETNLT	CFSL	02	
4572	4560	77	80				PFSL	80	
4573	4562	17					RETC.UN		
4574	4563					*			
4575	4563					*			
4576	4563	75	02			RETDEC	CFSL	02	
4577	4565	17					RETC.UN		
4578	4566					*			
4579	4566					*			
4580	4566	41	42	53	2E	FONTAB	ALIT	'ABS.'	
4581	456A	00	00				ACON	0	
4582	456C	53	47	4E	2E		ALIT	'SGN.'	
4583	4572	02	01				ACON	1	
4584	4572	46	49	58	2E		ALIT	'FIX.'	
4585	4576	02	02				ACON	2	
4586	4578	17	45	45	4B		ALIT	'PEEK.'	
4587	457C	2E							
4588	457D	02	23				ACON	3	
4589	457F	41	49	52	24		ALIT	'CHRS.'	
4590	4583	2E							
4591	4584	00	04				ACON	4	
4592	4586	49	4E	50	2E		ALIT	'INP.'	
4593	458A	00	05				ACON	5	
4594	458C	4C	49	4E	2E		ALIT	'LEN.'	
4595	4590	00	06				ACON	6	
4596	4592	4C	50	4F	53		ALIT	'LFOS.'	
4597	4595	2E							
4598	4597	32	07				ACON	7	
4599	4599	41	53	43	2E		ALIT	'ASC.'	
4600	459D	00	08				ACON	8	
4601	459F	49	4E	54	2E		ALIT	'INT.'	
4602	45A3	00	09				ACON	9	
4603	45A5	45	52	52	2E		ALIT	'ERR.'	
4604	45A5	00	0A				ACON	A	
4605	45AB	52	47	53	2E		ALIT	'POS.'	
4606	45AF	00	0B				ACON	B	
4607	45B1	43	41	4C	4C		ALIT	'CALL.'	
4608	45B5	2E							
4609	45B6	00	0C				ACON	C	
4610	45B8	52	49	47	46		ALIT	'RIGHTS.'	
4611	45BC	54	24	2E					
4612	45BF	00	0D				ACON	D	
4613	4601	4C	45	46	54		ALIT	'LEFTS.'	
4614	4605	24	2E						
4615	4607	00	0E				ACON	E	
4616	4609	41	45	44	24		ALIT	'WIDS.'	
4617	460D	2E							
4618	460E	00	0F				ACON	F	
4619	4610	53	54	52	49		ALIT	'STRING\$.'	
4620	4614	41	47	24	2E				

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4621	4618	00	10				ACON	12	
4622	461A	52	4F	44	2F		ALIT	'END.'	
4623	461E	07	11				ACON	11	
4624	4612	56	41	52	52		ALIT	'VARPTR.'	
4625	4614	54	52	2F					
4626	4617	02	12				ACON	12	
4627	4616	45	41	53	54		ALIT	'INSTR.'	
4628	461D	52	2F						
4629	461F	02	13				ACON	13	
4630	4611	46	52	43	2E		ALIT	'PRC.'	
4631	4611	20	14				ACON	14	
4632	4617	52	54	52	24		ALIT	'STR\$.'	
4633	4618	2F							
4634	461C	22	15				ACON	15	
4635	461E	56	41	4C	2E		ALIT	'VAL.'	
4636	4712	20	16				ACON	16	
4637	470A	53	49	4E	2E	ZTAB	ALIT	'SIN.'	
4638	4728	02	17				ACON	17	
4639	472A	43	4F	53	2E		ALIT	'COS.'	
4640	470E	02	18				ACON	18	
4641	4710	54	41	4E	2F		ALIT	'TAN.'	
4642	4714	27	19				ACON	19	
4643	4716	41	54	4E	2E		ALIT	'ATN.'	
4644	471A	0E	1A				ACON	1A	
4645	471C	4C	43	2E			ALIT	'LN.'	
4646	471F	02	12				ACON	1P	
4647	4721	4C	4F	47	2E		ALIT	'LOG.'	
4648	4725	04	1C				ACON	1C	
4649	4727	45	5B	50	2E		ALIT	'EXI.'	
4650	472B	07	17				ACON	1D	
4651	472D	52	51	52	2E		ALIT	'SCR.'	
4652	4731	02	1E				ACON	1E	
4653	4733	1F					DATA	1F	
4654	4734	4F	50	54	49	MSG0	ALIT	'OPTION: '	
4655	4738	4F	41	3A	2E				
4656	473C	22	2E						
4657	473E	24	4F	43	2E		ALIT	'CK.'	
4658	4742	4F	55	54	2P		ALIT	'OUT OF DATA.'	
4659	4746	4F	45	20	44				
4660	474A	41	54	41	2E				
4661	474E	55	53	52	20		ALIT	'USR FN.'	
4662	4752	4F	41	2F					
4663	4755	52	45	44	4F		ALIT	'RECD FROM START: '	
4664	4759	02	45	52	4F				
4665	475D	4F	22	53	54				
4666	4761	41	52	54	3A				
4667	4765	20	20	2F					
4668	4769	53	50	4E	54		ALIT	'SYNTAX.'	
4669	476C	41	55	2F					
4670	476F	4F	56	46	2E		ALIT	'OFF.'	
4671	4773	53	54	4F	52		ALIT	'STOPPED.'	
4672	4777	50	45	44	2E				
4673	477B	4C	49	4F	45		ALIT	'LINE NOT FOUND.'	
4674	477F	20	4E	4F	54				
4675	4783	22	4C	4F	55				

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4676	4787	4E	44	2E					
4677	478A	43	45	53	54		ALIT	'NEST.'	
4678	4783	2E							
4679	478F	54	50	50	45		ALIT	'TYPE MISMATCH.'	
4680	4793	20	4D	49	53				
4681	4797	4C	41	54	43				
4682	4792	40	21						
4683	479D	41	57	47	2E		ALIT	'ARG.'	
4684	47A1	44	49	4D	2E		ALIT	'DIM.'	
4685	47A5	52	54	4B	22		ALIT	'STR OVF.'	
4686	47A9	4F	56	46	2E				
4687	47AD	53	54	52	22		ALIT	'STR SPACE OVF.'	
4688	47B1	53	50	41	43				
4689	47B5	41	22	4F	56				
4690	47B9	46	2E						
4691	47BE	56	41	52	20		ALIT	'VAR ALREADY DEFINED.'	
4692	47BF	41	4C	52	45				
4693	47C3	41	44	59	20				
4694	47C7	44	45	46	49				
4695	47CB	4E	45	44	2E				
4696	47CF	1A	2A	2A	20		ALIT	'*** '	
4697	47D3	21							
4698	47D4	20	45	52	52		ALIT	'ERROR ***.'	
4699	47D8	4F	57	20	2A				
4700	47DC	2A	2A	2E					
4701	47E7	45	50	50	52		ALIT	'EXPR TO COMPLETE.'	
4702	47E3	22	54	4F	22				
4703	47E7	43	4F	4D	50				
4704	47EB	4C	45	50	2E				
4705	47EF								
4706	47EF								
4707	47EF	54	48	45	4E	IFTEL	ALIT	'THEN.'	
4708	47F3	2E							
4709	47F4	20	02				ACON	0	
4710	47F6	45	4C	53	45	ELSTEL	ALIT	'ELSE.'	
4711	47FA	2F							
4712	47FB	20	21				ACON	1	
4713	47FD	FF					DATA	FF	
4714	47FE								
4715	47FE								
4716	47FE	47	4F	54	4F	ONTEL	ALIT	'GOTO.'	
4717	4822	21							
4718	4823	02	22				ACON	2	
4719	4825	47	45	53	55		ALIT	'GOSUB.'	
4720	4825	42	21						
4721	4825	02	22				ACON	2	
4722	4821	57	45	53	54		ALIT	'RESTORE.'	
4723	4811	4F	57	45	21				
4724	4811	20	24				ACON	4	
4725	4817	4C	50	49	54		ALIT	'EXIT.'	
4726	481A	2E							
4727	481C	00	00				ACON	5	
4728	4811	41	56	52	4F		ALIT	'FFRCP.'	
4729	482C	15	35				ACON	5	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4731	462E	52	45	53	45		ALIT		'RESUME.'
4732	462A	4D	45	2E					
4733	462C	20	2A				ACON	A	
4734	462F	FF					DATA	FF	
4735	4632								
4736	4632								
4737	4630	54	4F	2E		FORTEL	ALIT		'TO.'
4738	4633	00	21				ACON	1	
4739	4635	53	54	45	50		ALIT		'STEP.'
4740	4635	2E							
4741	463A	20	72				ACON	2	
4742	463C	FF					DATA	FF	
4743	4631								
4744	463D								
4745	463D	54	41	42	2E	TABLIT	ALIT		'TAB.'
4746	4641	20	00				ACON	0	
4747	4642	FF					DATA	FF	
4748	4644								
4749	4644								
4750	4644	44	41	54	41	DATTEL	ALIT		'DATA.'
4751	4645	2E							
4752	4646	27	22				ACON	0	
4753	4647	45	41	44	2E		ALIT		'END.'
4754	464F	20	23				ACON	3	
4755	4651	FF					DATA	FF	
4756	4652								
4757	4652								
4758	4652	4C	45	54	2E	COMTEL	ALIT		'LET.'
4759	4655	43	13				ACON	LIT	
4760	4655	50	57	40	4E		ALIT		'PRINT.'
4761	465C	54	25						
4762	4651	20	05				ACON	PRINT	
4763	4652	50	41	55	53		ALIT		'PAUSE.'
4764	4654	45	23						
4765	4655	43	00				ACON	PAUSER	
4766	4656	40	46	2E			ALIT		'IF.'
4767	4655	25	0E				ACON	IF	
4768	465D	47	4F	54	4F		ALIT		'GOTO.'
4769	4671	2E							
4770	4672	43	01				ACON	GOTO	
4771	4674	47	4F	53	55		ALIT		'GOSUB.'
4772	4678	42	2E						
4773	467A	22	10				ACON	GOSUB	
4774	467C	52	45	54	55		ALIT		'RETURN.'
4775	4682	52	45	2F					
4776	4682	20	00				ACON	RETURN	
4777	4685	45	4F	52	2E		ALIT		'FOR.'
4778	4685	71	2F				ACON	FOR	
4779	4685	45	40	50	54		ALIT		'NEXT.'
4780	4687	2E							
4781	4692	31	A5				ACON	NEXT	
4782	4692	49	4F	50	55		ALIT		'INPUT.'
4783	4695	54	2E						
4784	4695	27	A5				ACON	INPUT	
4785	469A	44	41	54	41		ALIT		'DATA.'

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4786	469E	2E							
4787	469F	46	3A				ACON	SKPLIN	
4788	46A1	45	52	41	53		ALIT		'ERASE.'
4789	46A5	45	2E						
4790	46A7	20	06				ACON	ERASEB	
4791	46A9	52	45	41	44		ALIT		'READ.'
4792	46AD	2E							
4793	46AE	42	E7				ACON	READ	
4794	46B0	50	47	4B	45		ALIT		'POKE.'
4795	46B4	2E							
4796	46B5	20	0E				ACON	POKE	
4797	46B7	4F	55	54	2E		ALIT		'OUT.'
4798	46B2	43	55				ACON	EXTOUT	
4799	46BD	44	49	4D	2E		ALIT		'DIM.'
4800	46C1	26	03				ACON	DIM	
4801	46C3	52	45	53	54		ALIT		'RESTORE.'
4802	46C7	4F	52	45	2E				
4803	46C9	21	07				ACON	RESTOR	
4804	46CD	45	40	53	45		ALIT		'ELSE.'
4805	46D1	2E							
4806	46D2	45	3A				ACON	SKPLIN	
4807	46D4	45	4E	44	2E		ALIT		'END.'
4808	46DB	43	0B				ACON	END	
4809	46DA	53	54	4F	50		ALIT		'STOP.'
4810	46DE	2E							
4811	46DF	43	70				ACON	STOP	
4812	46E1	52	45	4D	2E		ALIT		'REM.'
4813	46E5	43	4E				ACON	REM	
4814	46F7	53	57	41	50		ALIT		'SWAP.'
4815	46EB	2E							
4816	46EC	27	02				ACON	SWAP	
4817	46EE	4F	4E	2E			ALIT		'ON.'
4818	46F1	25	40				ACON	ON	
4819	46F3	45	58	49	54		ALIT		'EXIT.'
4820	46F7	2E							
4821	46F8	25	E7				ACON	EXIT	
4822	46FA	57	41	49	54		ALIT		'WAIT.'
4823	46FE	2E							
4824	46FF	25	06				ACON	WAIT	
4825	4901	40	50	52	49		ALIT		'LPRINT.'
4826	4905	4E	54	2E					
4827	4909	22	AF				ACON	LPRINT	
4828	490A	45	52	52	4F		ALIT		'ERROR.'
4829	490E	52	2E						
4830	4910	26	35				ACON	ERRORC	
4831	4912	52	45	53	55		ALIT		'RESUME.'
4832	4915	47	45	2E					
4833	4919	44	DA				ACON	RESUME	
4834	491B	44	45	46	2E		ALIT		'DIV.'
4835	491F	26	57				ACON	DIV	
4836	4921	52	41	4E	44		ALIT		'RANDOMIZE.'
4837	4925	4F	4D	49	5A				
4838	4929	45	2E						
4839	492E	75	07				ACON	RANDOM	
4840	492E	41	49	44	24		ALIT		'MIS.'

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4641	4931	28	2E						
4642	4931	28	AC				ACCM	MID	
4643	4935	43	4C	45	41		ALIT	'CLEAR.'	
4644	4939	57	2E						
4645	4939	28	41				ACOM	PURGE	
4646	4931	FF					DATA	FF	
4647	4931					*			
4648	4931					*			
4649	4931					OPTMSG	ECU	0	
4650	4931					OKMSG	ECU	1	
4651	4931					NDERR	ECU	2	
4652	4931					UFERR	ECU	3	
4653	4931					WBTMSG	ECU	4	
4654	4931					SYNERR	ECU	5	
4655	4931					OYFERR	ECU	6	
4656	4931					STOMSG	ECU	7	
4657	4931					INFERR	ECU	8	
4658	4931					NSTERR	ECU	9	
4659	4931					TYPERR	ECU	A	
4660	4931					ARGERR	ECU	B	
4661	4931					DIMERR	ECU	C	
4662	4931					SOEPR	ECU	D	
4663	4931					STREPR	ECU	E	
4664	4931					ADTERR	ECU	F	
4665	4931					ASCMG	ECU	10	
4666	4931					ERRMSG	ECU	11	
4667	4931					OSCEPR	ECU	12	
4668	4931					*			
4669	4931					*			
4670	4931					HT	ECU	09	
4671	4931					ETX	ECU	03	
4672	4931					CTRLF	ECU	10	
4673	4931					CTRLU	ECU	15	
4674	4931					CTPLY	ECU	19	
4675	4931					CTRLW	ECU	0F	
4676	4931					CTRL0	ECU	0F	
4677	4931					*			
4678	4931					SERO	ECU	024F	
4679	4931					SERP	ECU	02E9	
4680	4931					ELAY	ECU	0278	
4681	4931					*			
4682	4931					*			
4683	4931					CURA	RES	2	
4684	4942	07				DUMA	RES	1	
4685	4941	20				DUM2	RES	1	
4686	4942	02				TMFAI	RES	1	
4687	4942	02				TMFP2	RES	1	
4688	4944	02	00			BSA1	RES	2	
4689	4940	07	02			CHGA	RES	2	
4690	4942	02	02			CHGST	RES	2	
4691	494A					*			
4692	494A	22	03			BSTRT2	ACOM	BSTART	
4693	494C	20	04			IBST2	ACOM	IBST	
4694	494E	20	05			CBST	ACOM	VABST	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4896	4950	20	06			ENDRM2	ACOM	ENDRAM	
4897	4952	07				TABS	DATA	7	
4898	4953	12					DATA	12	
4899	4954	1E					DATA	1B	
4900	4955					*			
4901	4955					*			
4902	4955	02	02	02	02	MBUF	RES	10	
4903	4959	07	02	02	02				
4904	4951	22	02	02	02				
4905	4961	00	02	02	02				
4906	4965	00				COMS	RES	1	
4907	4966	02	02	02	02	NAME2	RES	12	
4908	496A	02	02	02	02				
4909	4961	02	02	02	02				
4910	4972	02	02	02	02				
4911	4976	02				TMPS	RES	1	
4912	4977	02				TEMP	RES	1	
4913	4978					*			
4914	4978					ENC	ECU	03	
4915	4978					*			
4916	4978					*			
4917	4978					*			
4918	4979	20	03			BSRT	ACOM	BSTART	
4919	497A	04	02			EDITON	LODI.R2	02	
4920	497C	03					LPPL		
4921	497D	76	40				PFSU	40	
4922	4977	20					EORZ.R2		
4923	4980	0C	0A	59			STRA.R0	ULC	
4924	4983	3F	45	91			BSTA.UN	VBASI	
4925	4986	3F	4B	9A			BSTA.UN	BEGIN2	
4926	4989					*			
4927	4989	3F	4A	7F		YEDN	BSTA.UN	DISP	
4928	498C	0E	10			COMD	LODI.R2	10	
4929	498E	05	2F				LODI.R1	2F	
4930	4990	3F	21	77			BSTA.UN	SETCUR	
4931	4993	3F	21	81			BSTA.UN	OLYCR	
4932	4996	0C	10				LODI.R2	10	
4933	4998	05	00				LODI.R1	00	
4934	499A	3F	21	77			BSTA.UN	SETCUR	
4935	499D	07	00				LODI.R3	MSGC-MSG02	
4936	4997	3F	21	DC			BSTA.UN	FRING	
4937	49A1	3F	4B	2F			BSTA.UN	FININD	
4938	49A5	0F	09	4C			LODI.R3	*IBST2	
4939	49AB	AF	09	4E			SUBI.R3	DUMA	
4940	49AE	A7	01				SUBI.R3	01	
4941	49AC	3F	4B	B2			BSTA.UN	DVCCUT	
4942	49B0	05	13				LODI.R2	13	
4943	49B2	05	20				LODI.R1	20	
4944	49B4	3F	21	77			BSTA.UN	SETCUR	
4945	49B7	27	58				LODI.R3	MSGID-MSG02	
4946	49B9	3F	21	DC			BSTA.UN	FRING	
4947	49BD	70				RI1	REED.P0		
4948	49BD	1A	7D				RCTP.LT	RL1	
4949	49BF	3F	4A	77			BSTA.UN	OLC	
4950	49C2	24	40				LODI.R0	CCMS	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4951	49C4	05	65				LODI,R1	COMS	
4952	49C5	06	11				LODI,R2	11	
4953	49C6	3F	2F	CE			BCTA,UN	ARPCW	
4954	49C8	5C	20	83			BCFA,EC	83	
4955	49C9	2C	70	65			LODA,R2	COMS	
4956	49D1	3F	4F	A6			BSTA,UN	LTOU	
4957	49D4	3F	4A	E7			BSTA,UN	OLC	
4958	49D7	20					FORZ,R0		
4959	49D8	01					STRZ,R1		
4960	49D9	27	FF				LODI,R0	FF	
4961	49DE	2F	20	66		NI	LOTA,R0	NAME2,1	
4962	49E1	10	26				BCTR,EC	CK0	
4963	49E2	17	12				COMI,R0	12	
4964	49E2	9A	2C				BCFR,LT	EADD	
4965	49E4	14	3F				COMI,R0	0	
4966	49E6	1A	26				BCTR,LT	DS	
4967	49E8	14	35				COMI,R0	19	
4968	49E9	19	27				BCTR,GT	DS	
4969	49F1	01					LODI,R1		
4970	49F2	26	20			ONE2	LODI,R2	09	
4971	49F3	01					ADDZ,R1		
4972	49F5	01					TPSL	CRY	
4973	49F2	10	01				BCTR,EC	D255	
4974	49F4	1A	79				BTRR,P2	ONE2	
4975	49F6	01					STRZ,R1		
4976	49F7	0F	05	66			LODA,P3	NAME2,1	
4977	49FA	A4	32				SUPI,R0	0	
4978	49FC	01					ADDZ,R1		
4979	49FD	01					STRZ,P1		
4980	49FE	0F	21				TPSL	CRY	
4981	4A00	90	56				BCFR,EC	NI	
4982	4A02	05	FF			D255	LODI,R1	FF	
4983	4A04	10	0A				BCTR,UN	EADD	
4984	4A05	E7	00			CK0	COMI,R0	00	
4985	4A05	96	2F				BCFR,EC	EADD	
4986	4A0A	05	01				LODI,P1	01	
4987	4A0C	10	22				BCTR,UN	EADD	
4988	4A0E	00	02			DS	LODI,P1	00	
4989	4A10	70	0C	65		EADD	LODA,P0	COMS	
4990	4A13	3F	45	A6			BSTA,UN	LTOU	
4991	4A16	03					STRZ,R0	'A'	
4992	4A17	A7	41				SUPI,R0	19	
4993	4A19	E7	19				COMI,R0	19	
4994	4A19	1D	49	0C			BCTA,GT	COMD	
4995	4A1E	D3					BRL,R0		
4996	4A1F	67	00				IOPI,R0	00	
4997	4A21	CE	01				STRZ,R0	0-3	
4998	4A23	10	02				BCTR,UN	COMT08	
4999	4A25	4E	67			COMT08	ACON	ISAVE	A=APPEND BUFFER AFTER LINE X
5000	4A27	4E	42				ACON	BACK	B=BACK X LINES
5001	4A29	4E	6E				ACON	CHANGE	C=CHANGE LINES
5002	4A2B	4D	16				ACON	DEL	D=DELETE X LINES FROM TOP
5003	4A2D	20	03				DATA	00,03	E=EXIT TO SUP.
5004	4A2F	4B	4B				ACON	FORWD	F=FORWARD X LINES
5005	4A31	20	0C				ACON	BASIC	G=GO TO BASIC

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5006	4A33	4E	26				ACON	SAVE	H=HOLD X LINES IN INSERT BUFFER
5007	4A35	4E	1E				ACON	INST	I=INSERT LINES AFTER LINE X
5008	4A37	49	8C				ACON	COMD	
5009	4A39	49	8C				ACON	COMD	
5010	4A3F	51	70				ACON	ICAD1	L=LOAD X LINES FROM DISK
5011	4A3D	4E	CC				ACON	MODIFY	M=MODIFY STRING IN LINE X
5012	4A3F	4A	5A				ACON	ULCASE	N=NORMAL LOWERCASE MODE
5013	4A41	45	8C				ACON	COMT	
5014	4A43	4E	AA				ACON	PMOD	P=PRESET MODIFY PATTERNS
5015	4A45	49	8C				ACON	COMD	
5016	4A47	49	8C				ACON	COMD	
5017	4A49	51	41				ACON	TAPEO	S=STORE X LINES TO DISK
5018	4A4B	49	8C				ACON	COMD	
5019	4A4D	4A	60				ACON	UPONLY	U=GO INTO UPPER CASE ONLY MODE
5020	4A4F	49	8C				ACON	COMD	
5021	4A51	49	8C				ACON	COMD	
5022	4A53	4E	0E				ACON	SEARCH	X=SEARCH FOR ASCII STRING X
5023	4A55	49	8C				ACON	COMD	
5024	4A57	49	8C				ACON	COMD	
5025	4A59								
5026	4A59	00				ULC	RES	1	
5027	4A5A								
5028	4A5A	20				ULCASE	FORZ,R0		
5029	4A5B	00	7C				STRR,R0	ULC	
5030	4A5D	1F	49	8C			BCTA,UN	COMD	
5031	4A60								
5032	4A60	04	FF			UPONLY	LODI,R0	FF	
5033	4A62	06	75				STRR,R0	ULC	
5034	4A64	1F	49	8C			BCTA,UN	COMD	
5035	4A67								
5036	4A67								
5037	4A67	E4	2B			OLC	COMI,R0	2B	
5038	4A69	1C	4B	20			BCTA,EC	ENDF	
5039	4A6C	F4	21				COMI,R0	2D	
5040	4A6E	1C	4B	94			BCTA,EC	BFGN8	
5041	4A71	E4	20				COMI,R0		
5042	4A73	1C	4B	4C			BCTA,EC	FW15	
5043	4A75	E4	0F				COMI,R0	17	
5044	4A78	1C	4B	4F			BCTA,EC	BK15	
5045	4A7B	17					BCTA,UN		
5046	4A7C								
5047	4A7C	2F	00			CURIT	ACON	CURSOR-1	
5048	4A7E	02				LINEX	RES	1	
5049	4A7F								
5050	4A7F	3F	4B	A5		DISP	BSTA,UN	MDA	
5051	4A82	01					STRZ,P1		
5052	4A83	20					FORZ,R0		
5053	4A84	00	8A	7C			STRA,R0	*CURIT	
5054	4A87	00	09	41			STRA,R0	DUMA+1	
5055	4A8A	08	72				STRP,R0	LINEX	
5056	4A8C	3F	2F	EE		LINENC	BSTA,UN	CLF09	
5057	4A8F	20	6A	7C			LOTA,R0	*CURIT	
5058	4A92	44	07				ANDI,R0	7	
5059	4A94	14					BITC,EC		
5060	4A96	00	15	40			LOTA,R1	*DUMA,1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5051	4A98	1E	4A	DE		BCTA,LT	CLREND		
5052	4A99	0F	E1			LODR,R0	LINEX		
5053	4A9D	04	21			ADDI,R0	1		
5054	4A9F	08	5D			STRR,R0	LINEX		
5055	4A91	03				STRZ,R3			
5056	4A92	14	09			COMI,R0	9		
5057	4A94	19	05			BCTR,GT	TWOCH		
5058	4A96	1F	2F	D2		BSTA,UN	WRTEL		
5059	4A99	1E	27			BCTR,UN	WR2ND		
5072	4A9B	24	31			LODI,R0	'1'		
5071	4A9C	3F	2E	23		BSTA,UN	WRT		
5072	4A9D	A7	2A			SUFI,R3	A		
5073	4A9E	67	30			IORI,R3	'0'		
5074	4A9F	23				LODZ,R3			
5075	4A95	3F	2E	23		BSTA,UN	WRT		
5076	4A98	1F	2F	D2		BSTA,UN	WRTEL		
5077	4A99	21	29	40	WATC	LOIA,R1	*DUMA,1		
5078	4A9E	1A	1E			BCTR,LT	CLREND		
5079	4A90	03				STRZ,R3			
5080	4A91	09	75			BRR,R1	NA1		
5081	4A93	3F	4E	1A		BSTA,UN	AIDA		
5082	4A96	1A	16			BCFR,LT	CLREND		
5083	4A98	17	2E		NA1	COMI,R3	CR		
5084	4A9A	10	4A	2C		BCTA,EC	LINEW0		
5085	4A9C	23				LODZ,R3			
5086	4A9E	3F	2E	23		BSTA,UN	WRT		
5087	4A9F	1E	68			BCTR,UN	WATC		
5088	4A93	20			ERASE2	ICRZ,R0			
5089	4A94	00	8A	7C		STRA,R0	*CURIT		
5090	4A97	3F	4A	1E		BSTA,UN	CLREND		
5091	4A9A	3F	2F	6E		BSTA,UN	OLTCR		
5092	4A9D	17				RETC,UN			
5093	4A9E	00	8A	7C	CLREND	LODA,R0	*CURIT		
5094	4A91	F4	2F			IMI,R0	F		
5095	4A93	14				PTC,EC			
5096	4A94	3F	2F	2E		BSTA,UN	OLTCR		
5097	4A97	1E	75			BCTR,UN	CLREND		
5098	4A99	00			FTIMP	RES	1		
5099	4A9A	3F	4B	A5		BSTA,UN	MTDA		
5100	4A9D	02			FWDX2	STRZ,R2			
5101	4A9E	01				LODZ,R1			
5102	4A9F	14				RETC,IC			
5103	4A99	27				ICRZ,R0			
5104	4A91	00	09	41		STRA,R0	DUMA+1		
5105	4A94	01	29	40	WATCHR	LOIA,R2	*DUMA,1		
5106	4A97	1A	1D			BCTR,LT	ENDFW		
5107	4A99	08	6E			STRR,R0	FTIMP		
5108	4A9B	1A	11			BRR,R2	CRCK		
5109	4A9D	3F	4B	1A		BSTA,UN	AIDA		
5110	4A9E	1A	2C			BCTR,LT	CRCK		
5111	4A9F	1F	4C	24		BSTA,UN	SIDA		
5112	4B00	06	FF			LODI,R2	FF		
5113	4B02	04	03			LODI,R0	IBC		
5114	4B06	0E	09	40		STRA,R2	*DUMA,1		
5115	4B0C	1B	26			BCTR,UN	ENDFW		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5116	4B01	06	09			CRCK	LODR,R0	FTIMP	
5117	4B04	F4	2D				COMI,R0	CR	
5118	4B02	08	6E				BCFR,EQ	WATCHR	
5119	4B04	F9	5E				BRR,R1	WATCHR	
5120	4B06	0E	09	41	ENDFW	STRA,R2	DUMA+1		
5121	4B09	17					RETC,UN		
5122	4B0A	04	01		AIDA	LODI,R0	1		
5123	4B0C	00	09	40			AIDA,R2	DUMA	
5124	4B0F	00	09	40			STRA,R2	DUMA	
5125	4B0E	10	09	40			COMA,R0	*IBST2	
5126	4B0F	17					RETC,UN		
5127	4B0E				*				
5128	4B0E				*				
5129	4B0E	3E	27		INDF	BSTR,UN	FINDND		
5130	4B08	3F	4B	00		BSTA,UN	MTCA		
5131	4B0B	05	21			LODI,R1	1		
5132	4B0D	1B	13			BCTR,UN	BACK		
5133	4B0F	3F	4B	A5	FINDND	BSTA,UN	MTDA		
5134	4B0E	05	FF		FINDND2	LODI,R1	FF		
5135	4B04	3F	4A	1D		BSTA,UN	FWDX2		
5136	4B07	00	09	40		LODA,R0	*DUMA		
5137	4B0A	16				RETC,LT			
5138	4B0F	00	09	41		LODA,R0	DUMA+1		
5139	4B0E	1E	72			BCTR,UN	FINDND2		
5140	4B00	05	0F		BE15	LODI,R1	F		
5141	4B02	3B	0C		BACK	BSTR,UN	BACKX		
5142	4B04	1B	05			BCTR,UN	FWBXD		
5143	4B06	05	0F		FW15	LODI,R1	F		
5144	4B08	3F	4A	1A	FORWD	BSTA,UN	FWDX		
5145	4B0B	3B	33		FWBXD	BSTR,UN	MTCA		
5146	4B0D	1F	4B	09		BCTR,UN	FBDW		
5147	4B08	3F	4B	A5	BACKX	BSTA,UN	MTDA		
5148	4B0F	02				STRZ,R2			
5149	4B04	20				ICRZ,R0			
5150	4B05	00	09	41		STRA,R0	DUMA+1		
5151	4B08	05	01			ADDI,R1	1		
5152	4B0A	1B	03			BCTR,UN	CHK		
5153	4B0C	0E	09	40	SUBL	LODA,R2	*DUMA,-		
5154	4B0F	03			CHK	STRZ,R3			
5155	4B00	16	00			COMI,R2	0		
5156	4B02	08	30			BCFR,EC	NOSU		
5157	4B04	3F	4C	24		BSTA,UN	SIDA		
5158	4B07	10	09	4A		COMA,R0	*BSTR2		
5159	4B0A	1A	28			BCTR,LT	REGN0		
5160	4B0C	17	0D		NOSU	COMI,R3	CR		
5161	4B0E	08	5C			BCFR,EQ	SUBL		
5162	4B0F	09	6A			BRR,R1	SUBL		
5163	4B0E	16	20			COMI,R2	0		
5164	4B04	3C	4B	1A		BSTA,EC	AIDA		
5165	4B07	06	01			ADDI,R2	1		
5166	4B09	3C	4E	1A		BSTA,EC	AIDA		
5167	4B0C	0E	09	41		STRA,R2	DUMA+1		
5168	4B0F	17				RETC,UN			
5169	4B00	00	09	40	MTCA	LODA,R0	DUMA		
5170	4B0C	00	09	51		STRA,R0	CURA		

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LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5226	4F14	E4	03				COMI, R0	ITX	
5227	4F16	15	05				RCTR, EQ	EVFAS	
5228	4F18	3F	4F	49			BSTA, UN	ECTRL	
5229	4F1E	1A	6A				RCTR, LT	NEXI	
5230	4F1F	01	E9	42		EVPAS	STRA, R1	*TMPAE, I	
5231	4C00	E4	03				COMI, R0	ITX	
5232	4C04	15	05				RCTR, EQ	ENDI	
5233	4C0A	E4	03				COMI, R0	CR	
5234	4C0C	30	2F	55			BSTA, EQ	LFGR	
5235	4C09	3B	02				BSTR, UN	INSTS2	
5236	4C0B	1P	5A				RCTR, UN	NEXI	
5237	4C20					*			
5238	4C20	E4	01			INSTS2	LODI, R0	1	
5239	4C0F	0E	02				LODI, R2	2	
5240	4C11	3F	4D	47			BSTA, UN	ADDANY	
5241	4C14	FC	69	4C			COMA, R0	*1BST2	
5242	4C17	1A	2A				RCTR, LT	INCR2	
5243	4C19	3F	4C	B4			BSTA, UN	S1TA	
5244	4C1C	04	FE				LODI, RC	FE	
5245	4C1E	0C	25	41			STRA, R0	DUMA+1	
5246	4C21	1B	19				RCTR, UN	ENDINS	
5247	4C23	09	0D			INCR2	RIRR, R1	RETCON	
5248	4C25	04	01				LODI, R0	1	
5249	4C27	0C	29	42			ADDA, R0	*TMPAE	
5250	4C2A	EC	69	50			COMA, R0	*ENDRM2	
5251	4C2D	GA	04				RCTR, LT	STRTMP	
5252	4C2F	0C	05	42			STRA, R0	*TMPAE	
5253	4C32	17					RETCON	RETCON	
5254	4C33	04	01			STRTMP	LODI, R0	1	
5255	4C35	0E	02				LCII, R2	2	
5256	4C37	3F	4C	76			BSTA, UN	SOBANY	
5257	4C3A	05	FF				LODI, R1	FF	
5258	4C3C	04	03				LODI, R0	ITX	
5259	4C3E	01	E9	42			STRA, R1	*TMPAE, I	
5260	4C41					*			
5261	4C41					*			
5262	4C41					*			
5263	4C41	0C	09	40		ENDI	LODA, R0	DUMA	
5264	4C44	0C	05	42			STRA, R0	*TMPAE	
5265	4C47	0F	29	41			LODA, R3	DUMA+1	
5266	4C4A	3F	4E	2F			BSTA, UN	FINDWD	
5267	4C4D	3F	4C	BD			BSTA, UN	SDCA	
5268	4C4E	01	05	41			LODA, R1	DUMA+1	
5269	4C53	20					ECRZ, R0		
5270	4C54	0C	05	41			STRA, R0	DUMA+1	
5271	4C57	0C	05	43			STRA, R0	*TMPAE, I	
5272	4C5A	0C	EC	40		DOWN	LODA, R1	*DUMA, I	
5273	4C5D	0F	E9	42			STRA, R3	*TMPAE, I	
5274	4C60	04	01				LODI, R0	1	
5275	4C62	04	2E				LODI, R2	6	
5276	4C64	3F	4C	7F			BSTA, UN	SOBANY	
5277	4C67	50	05				RCFR, EQ	NCCI	
5278	4C69	0C	25	45			LODA, R0	BSA1+1	
5279	4C6C	10	1F				ECTP, EQ	INSTDN	
5280	4C7E					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5261	4C61	A5	01			NOCK	SUBI.R1	1	
5262	4C72	F5	FF				COMI.R1	FF	
5263	4C72	98	0F				BCFR.R0	NSIDA	
5264	4C74	3F	4C	B4			BSTA.UN	SIDA	
5265	4C77	8C	09	4A			COMA.R0	*BSTR2	
5266	4C7A	1A	12				BCTR.LT	INSTDN	
5267	4C7C	A7	01			NSIDA	SUBI.R3	01	
5268	4C7E	F7	FF				COMI.R3	FF	
5269	4C80	9E	5B				BCFR.R0	DOWN	
5270	4C82	2C	29	42			LODA.R0	TMPAE	
5271	4C85	A4	01				SUBI.R2	01	
5272	4C87	0C	09	42			STRA.R2	TMPAE	
5273	4C8A	1B	4E				BCTR.UN	DOWN	
5274	4C8C					*			
5275	4C90	3F	4C	EA		INSTDN	BSTA.UN	IBADD	
5276	4C9F	3F	4B	A5			BSTA.UN	MTDA	
5277	4C92	01					STRZ.R1		
5278	4C93	22					KORZ.R0		
5279	4C94	0C	09	41			STRA.R0	DUMA+1	
5280	4C97	07	FF				LODI.R2	FF	
5281	4C99	2F	A9	42		INSERT	LODA.R2	*TMPAE, +	
5282	4C9C	F4	23				COMI.R0	ETI	
5283	4C9E	18	07				BCTR.R0	INSTE	
5284	4CA2	01	E9	40			STRA.R1	*DUMA, I	
5285	4CA3	F7	FF				COMI.R5	FF	
5286	4CA5	3C	4C	ED			BSTA.R0	ALTA	
5287	4CA8	09	03				PIRR.R1	INSERT	
5288	4CAA	3F	4E	1A			BSTA.UN	ALTA	
5289	4CAD	1A	6A				BCTR.LT	INSERT	
5290	4CAF	05	01			INSTE	LODI.R1	1	
5291	4CB1	1F	4E	42			BCTR.UN	PACK	
5292	4CB4					*			
5293	4CB4	2C	29	40		SIDA	LODA.R0	DUMA	
5294	4CB7	A4	01				SUBI.R0	1	
5295	4CB9	0C	09	40			STRA.R0	DUMA	
5296	4CB0	17					RETC.UN		
5297	4CB0					*			
5298	4CB0	2C	29	41		SDCA	LODA.R0	DUMA+1	
5299	4CB2	AC	09	3F			SUBA.R0	CURA+1	
5300	4CB3	0C	09	45			STRA.R0	BSA1+1	
5301	4CB6	77	0B				PPSL	WC	
5302	4CB8	2C	29	40			LODA.R0	IUMA	
5303	4CB8	AC	29	3E			SUBA.R0	CURA	
5304	4CB8	0C	09	44			STRA.R0	BSA1	
5305	4CB1	75	FE				CPSL	WC	
5306	4CB3	24	01				LODI.R0	1	
5307	4CB5	06	06				LODI.R2	6	
5308	4CB7	1F	4E	47			BCTR.UN	ADDANY	
5309	4CBA					*			
5310	4CBA	2C	29	4C		IBADD	LODA.R0	*IBST2	
5311	4CDD	0C	09	42			STRA.R0	TMPAE	
5312	4CE0	20					KORZ.R2		
5313	4CE1	0C	09	43			STRA.R0	TMPAE+1	
5314	4CE4	17				*			
5315	4CE5								

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5316	4CE5	3F	2F	61		PACKN	BSTA.UN	BACK1	
5317	4CE8	1F	4B	E7			BCTR.LT	NEXI	
5318	4CE8	24	01				LODI.R0	1	
5319	4CE1	06	02				LODI.R2	2	
5320	4CE7	3F	4C	76			BSTA.UN	SUBANY	
5321	4CF2	1F	4B	E7			BCTR.UN	NEXI	
5322	4CF5					*			
5323	4CF5					*			
5324	4CF5	20				STORE	RES	1	
5325	4CF5	09	7D			SUBANY	STRR.R0	STORE	
5326	4CF6	0E	09	3F			LODA.R2	CURA+1, I	
5327	4CFB	A8	7B				SUBR.R0	STORE	
5328	4CF1	0E	09	3F			STRA.R2	CURA+1, I	
5329	4D20	77	0B				PPSL	WC	
5330	4D02	0E	09	3E			LODA.R2	CURA, I	
5331	4D05	A4	00				SUBI.R0	0	
5332	4D07	0E	09	3E			STRA.R2	CURA, I	
5333	4D0A	75	0B				CPSL	WC	
5334	4D0C	17					RETC.UN		
5335	4D0E					*			
5336	4D0D	04	01			ALTA	LODI.R0	1	
5337	4D0F	8C	09	42			ALDA.R0	TMPAE	
5338	4D12	0C	09	42			STRA.R0	TMPAE	
5339	4D15	17					RETC.UN		
5340	4D16					*			
5341	4D16	3F	4A	EA		DELT	BSTA.UN	PWDI	
5342	4D16	3E	05				BSTR.UN	SHIF	
5343	4D18	05	01				LODI.R1	1	
5344	4D1C	1F	4B	42			BCTR.UN	BACK	
5345	4D20					*			
5346	4D20	0F	09	3E		SHIF	LODA.R3	CURA	
5347	4D23	0F	09	42			STRA.R3	TMPAE	
5348	4D26	0F	09	3F			LODA.R3	CURA+1	
5349	4D29	0D	09	41			LODA.R1	DUMA+1	
5350	4D2C	20					KORZ.R0		
5351	4D2E	0C	09	43			STRA.R0	TMPAE+1	
5352	4D30	0C	09	41			STRA.R0	DUMA+1	
5353	4D33	2D	E9	40		UF	LODA.R1	*DUMA, I	
5354	4D35	0F	E9	42			STRA.R0	*TMPAE, I	
5355	4D36	16					RETC.LT		
5356	4D3A	87	01				ADDI.R3	1	
5357	4D3C	3C	41	0D			BSTA.R0	ALTA	
5358	4D3F	E9	72				PIRR.R1	UP	
5359	4D41	3F	4B	1A			BSTA.UN	ALDA	
5360	4D44	1A	6D				BCTR.LT	UP	
5361	4D45	17					RETC.UN		
5362	4D47					*			
5363	4D47	0E	09	3F		ADDANY	ALDA.R2	CURA+1, I	
5364	4D4A	0E	09	3F			STRA.R2	CURA+1, I	
5365	4D4C	77	0B				PPSL	WC	
5366	4D4F	20					KORZ.R0		
5367	4D50	0F	09	3E			ALDA.R2	CURA, I	
5368	4D53	0E	09	3E			STRA.R2	CURA, I	
5369	4D56	75	0B				CPSL	WC	
5370	4D58	17					RETC.UN		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5321	4D59					*			
5322	4D59								
5323	4D59 27 19					NOTFON	LODI,R3	MSG1-MSG02	
5324	4D59 1F 2F 4C						ECTA,UN	ERROR2	
5325	4D59 07 10					TME	LODI,R3	MSG0-MSG02	
5326	4D59 1F 2F 4C						ECTA,UN	ERR0R2	
5327	4D63					*			
5328	4D63 3F 4D 79					TABO	BSTA,UN	TABSUB	
5329	4D66 1C 4D E7						ECTA,EC	NEXI	
5420	4D69 24 2E					T13	LODI,R0		
5421	4D69 01 29 42						STRA,R1	*TMPAE,I	
5422	4D69 3F 2E 22						BSTA,UN	WRT	
5423	4D71 3F 4C 0D						BSTA,UN	INSTS2	
5424	4D74 3F 73						ERRR,R3	T13	
5425	4D76 1F 4E E7						ECTA,UN	NEXI	
5426	4D79					*			
5427	4D79 07 FF					TABSUB	LODI,R3	FF	
5428	4D79 2C 29 42						LODA,R0	TMPAE	
5429	4D7E 0C 09 44						STRA,R0	BSA1	
5430	4D7E 0C 09 45						STRA,R1	BSA1-1	
5431	4D84 07 01					TL1	ADDI,R2	1	
5432	4D86 04 01						LODI,R0	1	
5433	4D86 05 0E						LODI,R2	0	
5434	4D8A 3F 4C F6						BSTA,UN	SUBANT	
5435	4D8D 0C 09 4C						COMA,R0	*TEST2	
5436	4D90 1A 27						BCTR,LT	CPFND	
5437	4D92 0C 05 44						LODA,R0	*PSA1	
5438	4D95 34 07						COMI,R0	CR	
5439	4D97 08 03						BCFR,EC	TL1	
5440	4D99 06 FF					CPFND	LODI,R2	FF	
5441	4D9E 0E 29 52					TL2	LODA,R2	TABS,+	
5442	4D9E 0E 23						COMI,R2	03	
5443	4DA2 14						RETC,EC		
5444	4DA1 E7						COMZ,R3		
5445	4DA2 09 77						BCFR,GT	TL2	
5446	4DA4 A3						SUBZ,R3		
5447	4DA5 03						STRZ,R3		
5448	4DA6 17						RETC,UN		
5449	4DA7					*			
5450	4DA7 3F 42 A5					S2	BSTA,UN	MTDA	
5451	4DA8 21						STRZ,R1		
5452	4DA8 20						ERRZ,R0		
5453	4DA8 0C 29 41						STRA,R0	DUMA-1	
5454	4DA8 0C 0E 05						STRA,R0	SSTAT	
5455	4DA8 0C 02 40						LODA,R0	DUMA	
5456	4DA8 0C 09 42						STRA,R0	TMPAE	
5457	4DA8 0C 05 43						STRA,R1	TMPAE-1	
5458	4DA8 06 FF					REDO	LODI,R2	FF	
5459	4DA8 0E 29 56					SL2	LODA,R2	NAMF2,+	
5460	4DC2 10 33						BCTR,EC	FOUND	
5461	4DC2 3F 45 A6						BSTA,UN	LT0U	
5462	4DC5 16 10						COMI,R2	10	
5463	4DC7 16 2C						BCTR,EC	FOUND	
5464	4DC9 03						STRZ,R3		
5465	4DCA 01 09 40						LODA,R1	*DUMA,I	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5466	4DCD 1E 41 06						ECTA,LT	N7	
5467	4DD2 3F 45 A6						BSTA,UN	LT0U	
5468	4DD3 0C 05 76						STRA,R0	TMPS	
5469	4DD6 09 05						BIRR,R1	NCAD	
5470	4DD8 3F 4B 1A						BSTA,UN	AIDA	
5471	4DD8 9A 29						BCFR,LT	N7	
5472	4DD8 0C 09 76					NCAD	LODA,R0	TMPS	
5473	4DE0 E3						COMZ,R3		
5474	4DE1 10 5A						BCTR,EC	SL2	
5475	4DE3 04 01						LODI,R0	1	
5476	4DE5 06 04						LODI,R2	4	
5477	4DE7 3F 4D 47						BSTA,UN	ADDANT	
5478	4DEA 0C 09 42						LODA,R0	TMPAE	
5479	4DE8 0C 05 40						STRA,R0	DUMA	
5480	4DE8 0C 09 43						LODA,R1	TMPAE-1	
5481	4DE3 1E 46						BCTR,UN	RETC	
5482	4DE5 0C 09 41					FOUND	STRA,R1	DUMA-1	
5483	4DE8 0C 09 77						STRA,R2	TEMP	
5484	4DE8 02						LODI,R2		
5485	4DE8 06 02						LODI,R2	02	
5486	4DE8 3F 4C F6						BSTA,UN	SUBANT	
5487	4DE8 0E 05 77						LODA,R2	TEMP	
5488	4DEA 17						RETC,UN		
5489	4DE5					*			
5490	4DE5 0C					SSTAT	RIS	1	
5491	4DE5 24 FF					NT	LODI,R0	FF	
5492	4DE8 0B 73						STRR,R0	SSTAT	
5493	4DEA 3F 4B A5						BSTA,UN	MTDA	
5494	4DE1 17						RETC,UN		
5495	4DE2					*			
5496	4DE2 05 01					SEARCH	LODI,R1	01	
5497	4DE2 3F 4A FA						BSTA,UN	FWCX	
5498	4DE3 3F 4B 00						BSTA,UN	MTCA	
5499	4DE3 3F 4B A7						BSTA,UN	S2	
5500	4DE3 0B 6A						LODP,R0	SSTAT	
5501	4DE3 1E 4C 06						ECTA,LT	NOTFON	
5502	4DE3 3F 4B 00						BSTA,UN	MTCA	
5503	4DE3 05 00						LODI,R1	00	
5504	4DE3 17 4B 42						ECTA,UN	BACK	
5505	4DE5					*			
5506	4DE5 3F 4C DA					SAVE	BSTA,UN	IBADD	
5507	4DE5 3F 4A FA						BSTA,UN	FWCX	
5508	4DE5 3F 4C 0D						BSTA,UN	SDCA	
5509	4DE5 3F 4B A5						BSTA,UN	MTDA	
5510	4E32 01						STPZ,R1		
5511	4E33 20						ECBZ,R0		
5512	4E34 0C 09 41						STRA,R0	DUMA-1	
5513	4E37 03						STPZ,R3		
5514	4E38 0C 09 40					SL	LODA,R1	*DUMA,I	
5515	4E38 0C 09 42						STRA,R3	*TMPAE,I	
5516	4E38 0C 05						BIRP,R1	CR03	
5517	4E40 3F 4B 1A						BSTA,UN	AIDA	
5518	4E43 0A 1A						BCYP,LT	SL3	
5519	4E45 0B 0B					CR03	BIRP,R0	SL0K	
5520	4E47 3F 4C 0D						BSTA,UN	ALTA	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5521	4F4A	1C	89	52			COMA,R0	*ENDRM2	
5522	4F4D	1A	88				BCTR,LT	SICK	
5523	4F4F	04	81			SICK	LODI,R0	1	
5524	4F51	3F	7E				LODI,R2	6	
5525	4F53	3F	4C	FE			BSTA,UN	SUBANT	
5526	4F5F	89	80				BCFR,IC	SL	
5527	4F59	0C	29	45			LODA,R0	BSA1+1	
5528	4F5B	14	21				COMI,R0	1	
5529	4F5D	06	59				BCFR,IC	SI	
5530	4F5F	04	43			SL3	LODI,R0	ITI	
5531	4F61	0F	19	42			STRA,R3	*TMPAE,I	
5532	4F64	1F	49	8C			BCTA,UN	COMP	
5533	4F67					*			
5534	4F67	3F	4A	FA		ISAVE	BSTA,UN	FWDI	
5535	4F6A	3F	4B	80			BSTA,UN	MTCA	
5536	4F6D	3F	4F	2F			BSTA,UN	FINDND	
5537	4F70	3F	4C	2A			BSTA,UN	IBADD	
5538	4F73	25	02				LODI,R1	6	
5539	4F75	74	23			ISL2	LODI,R0	ITI	
5540	4F77	1F	19	42		ISI	COMA,R1	*TMPAE,I	
5541	4F7A	1P	2D				BCTR,EQ	IFOUND	
5542	4F7C	09	79				BIRR,R1	ISL	
5543	4F7E	3F	4C	22			BSTA,UN	ALTA	
5544	4F81	1C	69	50			COMA,R0	*ENDRM2	
5545	4F84	0F	49	89			BCFA,LT	FBDN	
5546	4F87	1P	6C				BCTR,UN	ISL2	
5547	4F89	0C	2E	42		IFOUND	LODA,R0	*TMPAE	
5548	4F8C	AC	69	4C			SUBA,R0	*IBST2	
5549	4F8F	8C	09	4E			ADDA,R0	DUMA	
5550	4F92	0C	2E	40			STRA,R0	DUMA	
5551	4F95	21					LODI,R1	22	
5552	4F96	16	22				LODI,R2	22	
5553	4F98	1F	4C	47			BSTA,UN	ADDANT	
5554	4F9B	1C	69	4C			COMA,R0	*IBST2	
5555	4F9E	0F	4C	5E			BCFA,LT	TME	
5556	4FA1	1F	4C	41			BCTA,UN	INDI	
5557	4FA4					*			
5558	4FA4	25	15			PMOD	LODI,R2	15	
5559	4FA6	05	27				LODI,R1	27	
5560	4FA8	3F	2D	F7			BSTA,UN	SETCUR	
5561	4FAB	3F	2F	8E			BSTA,UN	OLFCR	
5562	4FAD	05	FF				LODI,R1	FF	
5563	4FBD	0D	26	66		NITNM	LODA,R1	NAME2,+	
5564	4FBF	07	72	27			STRA,R1	MNAME,I	
5565	4FB6	15	0F				COMI,R1	7	
5566	4FB9	90	7A				BCFR,EQ	NITNM	
5567	4FBA	27	23			WRIMB	LODI,R3	MSGF-MSG02	
5568	4FBC	3F	2F	DC			BSTA,UN	PRING	
5569	4FBF	25	55				LODI,R1	MBUF	
5570	4FC1	24	45				LODI,R0	MBUF	
5571	4FC3	05	12				LODI,R2	10	
5572	4FC5	3F	2E	CB			BSTA,UN	ARROW	
5573	4FC9	1F	46	8C			BCTA,UN	COMD	
5574	4FCB					*			
5575	4FCB					MTEMP	RES	1	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5556	4FCC	01				MODIFY	LODI,R1		
5557	4FCD	1C	49	8C			BCTA,EQ	COMD	
5558	4FE0	A5	01				SUEI,R1	1	
5559	4FE2	3F	4A	FA			BSTA,UN	FWDI	
5560	4FE5	3F	4B	80			BSTA,UN	MTCA	
5561	4FE8	05	FF				LODI,R1	FF	
5562	4FEA	06	10				LODI,R2	10	
5563	4FEC	2D	32	37		XFER	LODA,R1	MNAME,+	
5564	4FED	CD	69	66			STRA,R1	NAME2,I	
5565	4FEE	FA	70				BIRR,R2	XFER	
5566	4FE4	25	01				LODI,R1	1	
5567	4FE6	3F	4A	FA			BSTA,UN	FWDI	
5568	4FE8	0C	89	48			LODA,R0	*DUMA	
5569	4FE0	08	5D				STRA,R0	MTEMP	
5570	4FE1	04	83				LODI,R0	IBC	
5571	4FEF	0C	89	40			STRA,R0	*DUMA	
5572	4FE3	3F	4C	A7			BSTA,UN	S2	
5573	4FE6	0C	89	76			STRA,R2	TMPS	
5574	4FE9	3F	4B	80			BSTA,UN	MTCA	
5575	4FEC	05	81				LODI,R1	1	
5576	4FEF	3F	4A	FA			BSTA,UN	FWDI	
5577	4FE1	08	48				LODA,R0	MTEMP	
5578	4FE3	0C	89	48			STRA,R0	*DUMA	
5579	4FE6	0C	8E	0F			LODA,R0	SSTAT	
5580	4FE9	1F	4D	59			BCTA,LT	NOTFON	
5581	4FEC	3F	4B	AE			BSTA,UN	MTDA	
5582	4FE1	0C	89	76			LODA,R0	TMPS	
5583	4FE2	06	02				LODI,R2	2	
5584	4FE4	3F	4D	47			BSTA,UN	ADDANT	
5585	4FE7	3F	4C	20			BSTA,UN	SHIF	
5586	4FEA	3F	4C	DA			BSTA,UN	IBADD	
5587	4FE0	05	FF				LODI,R1	FF	
5588	4FE1	0D	29	55		ML1	LODA,R1	MBUF,+	
5589	4FE2	18	09				BCTR,EQ	ENDM	
5590	4FE4	CD	19	42			STRA,R1	*TMPAE,I	
5591	4FE7	15	0F				COMI,R1	0F	
5592	4FE9	98	74				BCFR,EQ	ML1	
5593	4FEB	05	10				LODI,R1	10	
5594	4FE0	04	23			ENDM	LODI,R0	ITI	
5595	4FE1	0C	19	42			STRA,R1	*TMPAE,I	
5596	4FE2	CD	09	76			STRA,R1	TMPS	
5597	4FE5	3F	4E	2F			BSTA,UN	FINDND	
5598	4FE8	0C	89	76			LODA,R0	TMPS	
5599	4FEB	25	02				LODI,R2	2	
5600	4FE0	3F	4D	47			BSTA,UN	ADDANT	
5601	4FE4	1C	69	4C			COMA,R0	*IBST2	
5602	4FE5	9F	4C	5E			BCFA,LT	TME	
5603	4FE6	1F	4C	41			BCTA,UN	INDI	
5604	4FE9					*			
5605	4FA5	14	2C			CKCTRL	COMI,R0	CR	
5606	4FA8	98	05				BCFR,EQ	CKLP12	
5607	4FAD	75	02				CPSL	02	
5608	4FAF	77	40				PPSL	40	
5609	4F51	17					BCTR,UN		
5610	4FE2	24	FF			CKLP12	BCPI,R0	FF	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5611	4F74	77	10				PPSL	RS	
5612	4F76	C1					STRZ,R1		
5613	4F77	24	FF				FORI,RP	FF	
5614	4F78	FF	FF				TMI,R1	FF	
5615	4F79	00	05				PCFP,IC	NOCTCK	
5616	4F7D	77	00				PPSL	00	
5617	4F7F	75	00				CPSL	00	
5618	4F81	17					PCTC,UN		
5619	4F82	75	00			NOCTCK	CPSL	00	
5620	4F84	17					RITC,UN		
5621	4F85								
5622	4F85	21				CHANGE	LODZ,R1		
5623	4F86	10	40	00			RCTA,EO	COMO	
5624	4F89	3F	4C	DA			BSTA,UN	IBADD	TMPI-IBST
5625	4F8C	A5	01				SUPI,R1	1	
5626	4F8E	3F	4A	EA			BSTA,UN	PWDX	
5627	4F71	3F	4B	00			BSTA,UN	MTCA	CURA-ADDRESS OF BYTE TO CHANGE
5628	4F74	3F	4A	00			BSTA,UN	FRASE2	
5629	4F77	3F	4B	00			BSTA,UN	FRAND	DUMA-END OF BUFFER
5630	4F7A	00	00	00			LODA,R0	CURA	CHGA-ADDRESS OF BYTE TO CHANGE
5631	4F7C	00	00	00			STRA,R0	CHGA	
5632	4F7E	00	00	00			LODA,R0	CHGA-1	
5633	4F7F	00	00	00			STRA,R0	CHGA-1	
5634	4F80	00	00	00			LODI,R1	00	
5635	4F80	3F	2E	00		DISPL	BSTA,UN	LTCP	
5636	4F80	20	0A	70			LODA,R2	*CUPIT	
5637	4F8E	F4	01				TMI,RP	1	
5638	4F80	30	4A	00			BSTA,EO	FRASE2	
5639	4F83	00	00	00			LODA,R2	CHGA	
5640	4F86	00	00	00			STRA,R2	BSA1	
5641	4F89	00	00	00			LODA,R3	CHGA-1	
5642	4F8C	00	00	00		DISPL	LODA,R0	*CHGA	
5643	4F8F	1E	51	19			BSTA,LT	ENDCHG	EOF
5644	4F92	F4	01				COMI,RP	CR	
5645	4F94	10	12				BCTR,IC	ILFND	
5646	4F96	3F	2E	23			BSTA,UN	WPT	
5647	4F99	F4	01				LODI,R0	1	BUMP CHGA
5648	4F9E	00	00	00			LODI,R2	0	
5649	4FA1	3F	41	47			BSTA,UN	ADDANY	
5650	4F90	00	00	00			COMA,R0	*IBST2	
5651	4F83	1A	67				BCTR,LT	DISPLP	
5652	4F8E	1E	51	19			BSTA,UN	PAUCBG	
5653	4F80	00	00	00		ILFND	STRA,R3	CHGA-1	
5654	4F83	00	00	00			LODA,R0	BSA1	
5655	4F86	00	00	00			STRA,R0	CHGA	
5656	4F81	3F	2E	00			BSTA,UN	LTCP	
5657	4F84	3F	2E	00		CHGL	BSTA,UN	CHGL	
5658	4F87	00	00	00			COMI,R0	BS	
5659	4F89	00	00	00			BCTR,IC	NOCHBS	
5660	4F8E	3F	51	21			BSTA,UN	CHBACK	
5661	4F91	1E	74				BCTR,UN	CHGL	
5662	4F83	F4	00			NOCHBS	COMI,R0	HT	TAR
5663	4F8D	00	15				BCTR,IC	WPT	
5664	4F84	3F	41	79			BSTA,UN	TARSUB	
5665	4F87	10	00				BCTR,EO	CHGL	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5666	4F89	00	00	00		TABLS	STRA,R3	BSA1	
5667	4F8C	00	00	00			LODI,R3		
5668	4F8E	3F	50	E1			BSTA,UN	STRIMS	
5669	4F91	00	00	00			LODA,R3	BSA1	
5670	4F94	00	00	00			BCTR,R3	TABLS	
5671	4F96	1E	41	C4			BCTR,UN	CHGL	
5672	4F99	1E	41	C4		NOBT	COMI,R0	CTRLU	
5673	4F9C	00	00	00			BCTR,IC	NOCOPY	
5674	4F9F	3F	50	CA			BSTA,UN	LOADD	
5675	4FA2	10	52				BCTR,IC	CHGL	
5676	4FA5	3F	50	E1			BSTA,UN	STRIMS	
5677	4FA8	10	40				BCTR,UN	CHGL	
5678	4FAF	F4	10			NOCOPY	COMI,R0	CTRLU	
5679	4FB2	00	00	00			BCTR,IC	NCCWD	
5680	4FB5	3F	50	CA		CWD1	BSTA,UN	LOADD	
5681	4FB8	10	44				BCTR,IC	CHGL	
5682	5000	F7	20				COMI,R3		
5683	5002	00	10				BCTR,IC	CWIS	
5684	5004	3F	50	E1			BSTA,UN	STRIMS	
5685	5007	10	72				BCTR,UN	CWD1	
5686	5009	00	00	00		CWD2	LODA,R3	*CHGA	
5687	500C	F7	20				COMI,R3		
5688	500E	10	4F	C4			BCTR,IC	CHGL	
5689	5011	F7	20				COMI,R3		
5690	5013	10	4F	C4			BCTR,IC	CHGL	
5691	5016	3F	50	CA			BSTA,UN	LOADD	
5692	5019	10	4F	C4			BCTR,IC	CHGL	
5693	501C	3F	50	E1		CWIS	BSTA,UN	STRIMS	
5694	501F	10	60				BCTR,UN	CWD2	
5695	5021	F4	01			NOCWD	COMI,R0	CTRLU	
5696	5023	00	35				BCTR,IC	NOERWD	
5697	5025	00	00	49			STRA,R1	CHGST-1	
5698	5028	00	00	42			LODA,R0	TMPI-1	
5699	502A	00	00	48			STRA,R0	CHGST	
5700	502E	00	00	00		ERWD1	LODI,R2	A	
5701	5030	00	00	00			LODI,R0	1	
5702	5032	3F	40	FE			BSTA,UN	SUBANY	
5703	5035	00	00	48			LODA,R0	*CHGST	
5704	5038	F4	01				COMI,R0		
5705	503A	00	19				BCTR,IC	ERWD3	
5706	503C	3F	51	21			BSTA,UN	CHBACK	
5707	503F	10	6D				BCTR,UN	ERWD1	
5708	5041	00	00	00		ERWD2	LODI,R2	A	
5709	5043	F4	01				LODI,R0	1	
5710	5045	3F	40	76			BSTA,UN	SUBANY	
5711	5048	00	00	40			LODA,R0	*CHGST	
5712	504B	F4	01				COMI,R0		
5713	504D	10	4F	C4			BCTR,IC	CHGL	
5714	5050	F4	01				COMI,R0		
5715	5052	10	4F	C4			BCTR,IC	CHGL	
5716	5055	3F	51	21		ERWD3	BSTA,UN	CHBACK	
5717	5058	10	67				BCTR,UN	ERWD2	
5718	505A	F4	12				COMI,R0	CTRLU	
5719	505C	00	00	00			BCTR,IC	NOCHGL	
5720	505F	3F	50	CA		COPTLF	BSTA,UN	LOADD	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5721	5001	10	4F	C4		BCTA, R0	CHGL		
5722	5004	3F	50	E1		BCTA, UN	STRTMS		
5723	5007	1F	71			BCTA, UN	CCPTLP		
5724	5009	14	0F			MOCEGL COM1, R0	CTP10		
5725	5009	56	06			BCTA, R0	MOD1SC		
5726	500D	3F	50	CA		BCTA, UN	LOADD		
5727	500E	1F	4F	C4		PCTA, UN	CHGL		
5728	500F	03				MOD1SC STRZ, R3			
5729	500A	14	23			COM1, R0	RTX		
5730	500E	10	26			BCTA, R0	BYPASS		
5731	500E	3F	4F	C4		BCTA, UN	CHCTRL		
5732	5007	1F	4F	C4		BCTA, LT	CHGL		
5733	500E	3F	50	E1		BYPASS BCTA, UN	STRT2		
5734	5001	03				LODZ, R3			
5735	5002	14	2D			COM1, R2	CR		
5736	5004	1F	0F			BCTA, R0	ENDCHL		
5737	5006	14	03			COM1, R0	RTX		
5738	500F	30	4F	C4		BCTA, R0	CHGL		
5739	500F	04	01			LODI, R0	1		
5740	5007	0F	22			LODI, R2	2		
5741	500F	3F	40	F6		BCTA, UN	SUBANT	GET RID OF RTX BEING IN PICTURE	
5742	5002	1F	50	A0		BCTA, UN	ENDCH		
5743	5005	3F	50	CA		ENDCHL BCTA, UN	LOADD		
5744	5006	50	70			BCTA, R0	ENDCHL		
5745	500A	3F	50	D7		BCTA, UN	AISC		
5746	500D	1F	4F	B0		BCTA, UN	DISPL		
5747	5002								
5748	5002	20	09	40		ENDCH LODA, R0	DUMA		
5749	5002	10	05	44		STFA, R0	BSA1		
5750	5002	20	09	41		LODA, R0	DUMA+1		
5751	5005	00	09	45		STFA, R0	BSA1-1		
5752	5002	20	09	45		LODA, R0	CHGA		
5753	5005	00	09	42		STFA, R0	DUMA		
5754	5002	20	09	47		LODA, R0	CHGA+1		
5755	5005	00	09	41		STFA, R0	DUMA+1		
5756	5005	3F	41	20		BCTA, UN	SHIF		
5757	5005	20	70	44		LODA, R0	BSA1		
5758	5005	20	09	40		STFA, R0	DUMA		
5759	5005	20	09	45		LODA, R0	BSA1-1		
5760	5004	00	09	41		STFA, R0	DUMA+1		
5761	5007	1F	40	41		BCTA, UN	ENDI		
5762	500A								
5763	500A	2F	09	46		LOADD LODA, R0	CHGA		
5764	500D	1F	0D			COM1, R3	CR		
5765	500F	14				BCTA, R0			
5766	5002	04	01			AISC LODI, R0	1	LECR DUMA	
5767	5002	05	02			LODI, R2	2		
5768	5004	3F	40	F6		BCTA, UN	SUBANT	BUMP CHGA	
5769	5007	04	01			LODI, R0	1		
5770	5009	26	20			LODI, R2	B		
5771	5009	3F	4D	47		BCTA, UN	ADDANT		
5772	500E	04	50			LODI, R0	00		
5773	5000	17				BCTA, UN			
5774	5001								
5775	5001	03				STRTMS LODZ, R3			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5776	5002	3F	2E	23		BCTA, UN	WRT		
5777	5005	03				STRT2 LODZ, R3			
5778	5006	0D	10	42		STFA, R1	*TMPAE, I		
5779	5009	04	01			LODI, R0	1	BUMP DUMA	
5780	500B	06	02			LODI, R2	2		
5781	500F	3F	40	47		BCTA, UN	ADDANT		
5782	5002	10	05	44		COMA, R0	*IBST2		
5783	5003	1A	00			BCTA, LT	AIR1		
5784	5005	3F	40	B4		BCTA, UN	SIDA		
5785	5006	04	01			LODI, R0	FI		
5786	500A	00	09	41		STFA, R0	DUMA+1		
5787	5001	1F	51	10		BCTA, UN	ENDCHG		
5788	5000	06	0D			AIR1 BIRR, R1	RETCN		
5789	5002	04	01			LODI, R0	1		
5790	5004	00	09	42		ALDA, R0	*TMPAE, I		
5791	5007	10	09	50		COMA, R0	*ENDRM2		
5792	500A	0A	04			BCTA, LT	ABRUPT		
5793	5000	00	09	42		STFA, R0	*TMPAE		
5794	500F	17				RETCN RETC, UN			
5795	5002	04	01			ABRUPT LODI, R0	1		
5796	5002	05	02			LODI, R2	2		
5797	5004	3F	40	F6		BCTA, UN	SUBANT		
5798	5007	05	FF			LODI, R1	FF		
5799	5009	04	03			ENDCHG LODI, R0	RTX		
5800	500E	01	10	42		STFA, R1	*TMPAE, I		
5801	500E	1F	50	A0		BCTA, UN	ENDCH		
5802	5001								
5803	5021	3F	2F	61		CHBACK BCTA, UN	BACK1		
5804	5024	10				BCTA, LT			
5805	5025	04	01			LODI, R0	1		
5806	5027	06	02			LODI, R2	2		
5807	5026	3F	40	F6		BCTA, UN	SUBANT		
5808	5020	17				RETC, UN			
5809	502D								
5810	502D	00	00	00		LOADLS RES	3		
5811	5030								
5812	5032	3F	51	FC		LOADL BCTA, UN	AOK		
5813	5033	3F	51	91		BCTA, UN	LOADA		
5814	5036	0C	51	30		BCTA, R0	SCERR		
5815	5035	1F	49	B9		BCTA, UN	FFEM		
5816	5030								
5817	5030	27	49			LODI, R3	MSG10-MSG07		
5818	503E	1F	2F	40		BCTA, UN	ERROR2		
5819	5041								
5820	5041	3F	51	FC		TAPEO BCTA, UN	AOK		
5821	5044	00	09	4A		LODA, R0	*BSTR2		
5822	5047	00	05	40		STFA, R0	DUMA		
5823	504A	20				TAPEOT EOPZ, R0			
5824	504B	08	B7			STFA, R0	*SOMK		
5825	5047	00	09	41		STFA, R0	DUM2		
5826	5048	07	3B			LODI, R3	1		
5827	5042	3F	02	4F		BCTA, UN	SIFD		
5828	5045	05	FF			LODI, R1	FF		
5829	5047	2F	29	66		LODI, R1	NAME2, +		
5830	505A	03				STRT, R3			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5231	5128	7F	02	4F		BSTA,UN	SERC		
5232	512E	E5	07			COMI,P1	07		
5233	5128	0P	75			BCVR,EQ	NAMO		
5234	5127	0P	A8			LODR,R3	*SUMK		
5235	5124	3F	22	4F		BSTA,UN	SERO		
5236	5127	0P	72			LODI,R1	00		
5237	5125	0P	55			STRP,R1	*SUMK		
5238	512B	2D	E9	4D	BYTEO	LOTA,R1	*DUMA,I		
5239	512F	03				STRZ,R3			
5240	512F	1A	15			BCTR,LT	ENDO		
5241	5121	3F	02	4F		BSTA,UN	SERO		
5242	5124	D9	75			BIRP,R1	BYTEO		
5243	5126	0P	8C			LODR,R3	*SUMK		
5244	5126	3F	02	4F		BSTA,UN	SERC		
5245	5128	3F	42	1A		BSTA,UN	AIDA		
5246	512E	0E	49	89		BCTA,LT	FBDN		
5247	5121	1F	51	4A		BCTA,UN	TAPICT		
5248	5124								
5249	5124	17	F9			SUMK	ACON	17F9	
5250	5128								
5251	5126	3F	02	4F		ENDO	BSTA,UN	SERC	
5252	5125	0P	70			INCT	LOIR,R3	*SUMK	
5253	5125	3F	02	4F		BSTA,UN	SERC		
5254	512E	1F	49	89		BCTA,UN	FBDN		
5255	5121								
5256	5121	3F	42	A5		LOADA	BSTA,UN	MTDA	
5257	5124	20				WAITF	FORZ,R0		
5258	5125	0C	91	84		STRA,R0	*SUMK		
5259	5126	3F	02	E9		BSTA,UN	SERP		
5260	512B	E7	3E			COMI,P3			
5261	512D	0P	70			BCTR,EQ	WAITF		
5262	512F	0P	F7			LODI,R1	FF		
5263	5121	3F	22	E9	NAML	BSTA,UN	SERP		
5264	5124	0C	29	6E		LODA,R1	NAMIP,		
5265	5127	1F	03			BCTR,EQ	OVE S1		
5266	512C	13				COMZ,P3			
5267	512A	0P	65			BCTR,EQ	WAITF		
5268	512C	E5	07		OVERSI	COMI,E1	07		
5269	512E	0P	71			BCTR,EQ	NAML		
5270	5120	3F	02	E9		BSTA,UN	SERP		
5271	5123	0C	91	84		LODA,R0	*SUMK		
5272	5125	1F				RETC,LT			
5273	5127	1F				RETC,GT			
5274	512B	0C	09	41		LODA,R1	DUM2		
5275	512B	0C	29	41		STRA,RP	DUM2		
5276	512E	0C	29	7E		STRA,R0	TMPS		
5277	5121	3F	02	E9	ASCII	BSTA,UN	SERP		
5278	5124	03				LODR,R3			
5279	512C	0E	E9	40		STRA,R1	*DUMA,I		
5280	512B	1A	2B			BCTR,LT	ENDING		
5281	512A	D9	17			BIRP,R1	LL1		
5282	512C	3F	42	1A		BSTA,UN	AIDA		
5283	512F	1A	0E			BCTR,LT	LL1		
5284	5121	3F	4C	E4		BSTA,UN	SIDA		
5285	5124	05	FF			LODI,R1	FF		

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5286	5126	04	BC			LODI,R0	FBC		
5287	5120	0C	E9	40		STRA,R1	*DUMA,I		
5288	512E	1F	4D	5F		BCTA,UN	TME		
5289	512D	0P	09	7E	LL1	LODA,R2	TMPS		
5290	5121	86	01			ADDI,R2	01		
5291	5123	03	09	7E		STRA,R2	TMPS		
5292	5126	06	59			BCTR,EQ	ASCII		
5293	512B								
5294	5128	3F	02	E9		ENDTP	BSTA,UN	SERP	
5295	512B	0C	09	41		STRA,R1	DUM2		
5296	512E	0P	91	84		LODA,R3	*SUMK		
5297	5121	1C	51	94		BCTA,EQ	WAITF		
5298	5124	17				RETC,UN			
5299	512E								
5300	5125	3F	02	E9		ENDING	BSTA,UN	SERP	
5301	512B	0C	91	84		LODA,R0	*SUMK		
5302	512F	17				RETC,UN			
5303	512C								
5304	512C	07	63			AOE	LODI,R3	MSG1F-MSG02	
5305	512E	3F	2F	DC		BSTA,UN	PRINC		
5306	5203	3F	2E	05		BSTA,UN	IRAS1		
5307	5204	17				RETC,UN			
5308	5205								
5309	5205								
5310	5205					MSG02	EOU		
5311	5207	42	4C	4F	43	MSGC	ALIT		*BLOCKS LEFT:
5312	5209	4B	53	20	20				
5313	520D	4C	45	46	54				
5314	5211	3A	20	20					
5315	5214	FF				DATA	FF		
5316	5215	54	4F	4F	20	MSGD	ALIT		'TOO MUCH'
5317	5219	4D	55	43	40				
5318	5211	FF				DATA	FF		
5319	521E	4E	4F	54	20	MSGE	ALIT		'NOT FOUND'
5320	5222	46	4F	55	4E				
5321	5226	44							
5322	5227	FF				DATA	FF		
5323	5228	4D	4F	44	40	MSGF	ALIT		'MODIFY STRING '
5324	522C	46	59	20	53				
5325	5230	54	52	49	4E				
5326	5234	47	20	27					
5327	5237	00	00	00	00	NNAME	BYS	10	
5328	523B	00	00	00	00				
5329	523F	00	00	00	00				
5330	5243	00	00	00	00				
5331	5247	27	20	54	4F				' TO '
5332	524B	20	27						
5333	524F	FF				DATA	FF		
5334	524F	53	55	4D	43	MSG10	ALIT		'SUMCHECK ERROR'
5335	5252	48	45	43	4E				
5336	5256	20	45	52	52				
5337	525A	4F	52						
5338	525C	FF				DATA	FF		
5339	525D	43	4F	4D	4D	MSG1D	ALIT		'COMMAND:
5340	5261	41	4F	44	3A				

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5941	5265	20	20						
5942	5267	FF				DATA	FF		
5943	5269	20	45	48		MSG1V	ALIT	OK	
5944	526B	FF				DATA	FF		
5945	526C					*			
5946	526C					7FF	EQ		
5947	526C					*			
5948	526C	3F	52	FB		FPSCR	BSTA,UN	POPC3	
5949	526F	3F	52	14			BSTA,UN	PUSHC3	
5950	5270	20	16	29			LOIA,R0	CSSIGN	
5951	5275	1E	45	74			BCTA,LT	OVTEP	
5952	5276	3F	52	F9			BSTA,UN	POPC4	
5953	527E	20	16	3E			LOIA,R0	C4EX	
5954	527F	50					RPR,R0		
5955	527F	44	77				ANDI,R0	77	
5956	5281	00	12	D5			STRA,R0	VFSOUT	
5957	5284	20					IORZ,R0		
5958	5285	00	16	3F			STRA,R0	ZTEMP1	
5959	5288	3F	52	F2			BSTA,UN	PUSHC4	
5960	528B	24	57				LODI,R0	CTR	
5961	528D	25	5D				LODI,R1	CTR	
5962	528F	3F	31	38			BSTA,UN	PUSHFP	
5963	5292	3F	3E	F1			BSTA,UN	FFMULT	
5964	5295	3F	52	F9			BSTA,UN	POPC4	
5965	5296	00	3F				LODR,R0	VFSOUT	
5966	529A	00	16	30			STRA,R0	C4EX	
5967	529D	2F	52	F2			BSTA,UN	PUSHC4	
5968	52A2	3F	45	F7			BSTA,UN	POPC2	
5969	52A3	3F	45	EE		SCU1	BSTA,UN	PUSHC2	
5970	52A6	3F	45	D9			BSTA,UN	POPC1	
5971	52A9	3F	52	F4			BSTA,UN	PUSHC3	
5972	52AC	3F	45	EE			BSTA,UN	PUSHC1	
5973	52AF	3F	7E	F2			BSTA,UN	FEIIV	
5974	52B2	3F	45	EE			BSTA,UN	PUSHC1	
5975	52B5	3F	2A	70			BSTA,UN	FFADD	
5976	52B8	3F	52	D6			BSTA,UN	PUSHE	
5977	52B9	3F	3B	F1			BSTA,UN	FFMULT	
5978	52BE	04	01				LODI,R0	01	
5979	52C0	00	16	3F			ADDA,R0	ZTEMP1	
5980	52C3	14	FF				COMI,R0	FF	
5981	52C5	16					RETC,GT		
5982	52C6	00	16	3F			STRA,R0	ZTEMP1	
5983	52C9	3F	45	F7			BSTA,UN	POPC2	
5984	52CC	3F	30	02			BSTA,UN	COMMON	
5985	52CF	03					LOIZ,R3		
5986	52D2	06	*1				PCFR,R0	SCU1	
5987	52D2	1F	45	EE		SQUEND	BCTA,UN	PUSHC2	
5988	52D5					*			
5989	52D5					FFSOUT	RES	1	
5990	52D6					*			
5991	52D6					*			
5992	52D6	04	57			PUSHE	LODI,R0	HALF	
5993	52D6	05	4F				LODI,R1	HALF	
5994	52DA	1F	31	38			BCTA,UN	PUSHFP	
5995	52DD					*			

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
6006	52DD					*			
6007	52DD	04	57			PS2	LODI,R0	TWO	
6008	52DF	05	F5				LODI,R1	TWO	
6009	52E1	1F	31	38			BCTA,UN	PUSHFP	
6020	52E4					*			
6021	52E4								
6022	52E4	04	56			PUSHC3	LODI,R0	CSTEMP	
6023	52E6	05	27				LODI,R1	CSTEMP	
6024	52E8	1F	31	38			BCTA,UN	PUSHFP	
6025	52EB					*			
6026	52EB	04	56			POPC3	LODI,R0	CSTEMP	
6027	52ED	05	27				LODI,R1	CSTEMP	
6028	52EF	1F	31	55			BCTA,UN	POPPF	
6029	52F2					*			
6030	52F2	04	56			PUSHC4	LODI,R0	CATEMP	
6031	52F4	05	27				LODI,R1	CATEMP	
6032	52F6	1F	31	38			BCTA,UN	PUSHFP	
6033	52F9					*			
6034	52F9	04	56			POPC4	LODI,R0	CATEMP	
6035	52FB	05	27				LODI,R1	CATEMP	
6036	52FD	1F	31	55			BCTA,UN	POPPF	
6037	5300					*			
6038	5300	04	56			PUSHC5	LODI,R0	CSTEMP	
6039	5302	05	37				LODI,R1	CSTEMP	
6040	5304	1F	31	38			BCTA,UN	PUSHFP	
6041	5307					*			
6042	5307	04	56			POPC5	LODI,R0	CSTEMP	
6043	5309	05	37				LODI,R1	CSTEMP	
6044	530B	1F	31	55			BCTA,UN	POPPF	
6045	530E					*			
6046	530E					*			
6047	530E	04	57			PUSHEP	LODI,R0	PIE	
6048	5310	05	DD				LODI,R1	PIE	
6049	5312	1F	31	38			BCTA,UN	PUSHFP	
6050	5315					*			
6051	5315	04	57			PUSHE	LODI,R0	PIE	
6052	5317	05	DD				LODI,R1	PIE	
6053	5319	1F	31	38			BCTA,UN	PUSHFP	
6054	531C					*			
6055	531C	04	57			PUSHIN	LODI,R0	IN(10)	
6056	531E	05	05				LODI,R1	IN(10)	
6057	5320	1F	31	38			BCTA,UN	PUSHFP	
6058	5323					*			
6059	5323					*			
6060	5323					*			
6061	5323	04	57			PUSHIG	LODI,R0	LOGC	
6062	5325	05	DD				LODI,R1	LOGC	
6063	5327	1F	31	38			BCTA,UN	PUSHFP	
6064	532A					*			
6065	532A					*			
6066	532A					*			
6067	532A	3F	45	D9		COTERM	BSTA,UN	POPC1	
6068	532E	3F	45	10			BSTA,UN	PUSHC1	
6069	5330	3F	30	02			BSTA,UN	COMMON	
6070	5333	03					LODZ,R3		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6251	5324	5A	03				BCFR,EO	GTERM	
6252	5326	24	01				LCDF,PO	1	
6253	5330	17					RETC,UN		
6254	5336	3F	45	17		GTERM	BSTA,UN	POPC2	
6255	533C	3F	45	EE			BSTA,UN	PUSHC2	
6256	533F	3F	52	E4			BSTA,UN	PUSHC3	ACCUMULATED X
6257	5342	3F	52	F2			BSTA,UN	PUSHC4	INITIAL X
6258	5345	3F	5E	F1			BSTA,UN	FPMULT	
6259	534F	3F	52	EB			BSTA,UN	POPC3	
6260	5349	3F	52	F4			BSTA,UN	PUSHC3	
6261	534E	0C	16	44			LODA,R1	TERMNM	
6262	5351	0D	16	41			ADDA,P1	DUP	
6263	5354	0C	16	44			STRA,R1	TERMNM	
6264	5357	15	78				COMI,R1	78	END OF TERMS
6265	5359	15	14				BCFR,GT	GTERM2	
6266	535E	21	15	42			ALTA,R1	OFFSET	
6267	536E	85	03				ADDI,R1	KTAB	
6268	5360	77	08				FFSL	WC	
6269	5365	22					ROBZ,PO		
6270	5368	64	56				ADDI,PO	KTAB	
6271	5365	75	09				CPSL	WC	
6272	5367	3F	31	38			BSTA,UN	PUSHYP	
6273	536A	3F	7B	F1			BSTA,UN	FPMULT	
6274	5363	02					ROBZ,PO		
6275	5361	17					RETC,UN		
6276	5365	3F	45	D9		GTERM2	BSTA,UN	POPC1	
6277	5372	24	01				LODI,EO	1	
6278	5374	17					RETC,UN		
6279	5375					*			
6280	5375					*			
6281	5375					*			
6282	5375	3F	52	F9		GTERM	BSTA,UN	POPC4	
6283	5378	3F	52	F2			BSTA,UN	PUSHC4	
6284	5375	24	78				LODI,PO	08	
6285	537D	0C	16	41			STRA,PO	DUP	
6286	5380	24	78				LODI,PO	78	
6287	5382	0C	16	44			STRA,PO	TERMNM	
6288	5385	22					ROBZ,PO		
6289	5386	0C	16	42			STRA,PO	OFFSET	
6290	5389	0C	16	43			STRA,PO	SSIGN	
6291	538C	3F	45	AC			BSTA,UN	PUSH1	
6292	538F	1F	52	EE			BSTA,UN	POPC3	
6293	5392					*			
6294	5392					*			
6295	5392					*			
6296	5392	3F	52	F2		DOUBLE	BSTA,UN	PUSHC4	
6297	5395	3F	52	F2			BSTA,UN	PUSHC4	
6298	5396	3F	52	F1			BSTA,UN	FPMULT	
6299	539B	3F	52	F9			BSTA,UN	POPC4	
6300	539E	24	12				LODI,PO	12	
6301	53A2	0C	16	41			STRA,PO	DUP	
6302	53A3	17					RETC,UN		
6303	53A4					*			
6304	53A4					*			
6305	53A4					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6126	53A4	3F	45	D9		CSIGN	BSTA,UN	POPC1	
6127	53A7	3F	45	E0			BSTA,UN	PUSHC1	
6128	53AA	3F	45	E0			BSTA,UN	PUSHC1	
6129	53AD	3F	53	EE			BSTA,UN	PUSHC1	
6130	53B0	3F	53	EE			BSTA,UN	PUSHC1	
6131	53B3	3F	53	EE			BSTA,UN	PUSHC1	
6132	53B6	3F	53	EE			BSTA,UN	PUSHC1	
6133	53B9	3F	53	EE			BSTA,UN	PUSHC1	
6134	53BC	3F	53	EE			BSTA,UN	PUSHC1	
6135	53BF	3F	53	EE			BSTA,UN	PUSHC1	
6136	53C2	3F	53	EE			BSTA,UN	PUSHC1	
6137	53C5	3F	53	EE			BSTA,UN	PUSHC1	
6138	53C8	3F	53	EE			BSTA,UN	PUSHC1	
6139	53CB	3F	53	EE			BSTA,UN	PUSHC1	
6140	53CE	3F	53	EE			BSTA,UN	PUSHC1	
6141	53D1	3F	53	EE			BSTA,UN	PUSHC1	
6142	53D4	3F	53	EE			BSTA,UN	PUSHC1	
6143	53D7	3F	53	EE			BSTA,UN	PUSHC1	
6144	53DA	3F	53	EE			BSTA,UN	PUSHC1	
6145	53DD	3F	53	EE			BSTA,UN	PUSHC1	
6146	53E0	3F	53	EE			BSTA,UN	PUSHC1	
6147	53E3	3F	53	EE			BSTA,UN	PUSHC1	
6148	53E6	3F	53	EE			BSTA,UN	PUSHC1	
6149	53E9	3F	53	EE			BSTA,UN	PUSHC1	
6150	53EC	3F	53	EE			BSTA,UN	PUSHC1	
6151	53EF	3F	53	EE			BSTA,UN	PUSHC1	
6152	53F2	3F	53	EE			BSTA,UN	PUSHC1	
6153	53F5	3F	53	EE			BSTA,UN	PUSHC1	
6154	53F8	3F	53	EE			BSTA,UN	PUSHC1	
6155	53FB	3F	53	EE			BSTA,UN	PUSHC1	
6156	53FE	3F	53	EE			BSTA,UN	PUSHC1	
6157	5401	3F	53	EE			BSTA,UN	PUSHC1	
6158	5404	3F	53	EE			BSTA,UN	PUSHC1	
6159	5407	3F	53	EE			BSTA,UN	PUSHC1	
6160	540A	3F	53	EE			BSTA,UN	PUSHC1	
6161	540D	3F	53	EE			BSTA,UN	PUSHC1	
6162	5410	3F	53	EE			BSTA,UN	PUSHC1	
6163	5413	3F	53	EE			BSTA,UN	PUSHC1	
6164	5416	3F	53	EE			BSTA,UN	PUSHC1	
6165	5419	3F	53	EE			BSTA,UN	PUSHC1	
6166	541C	3F	53	EE			BSTA,UN	PUSHC1	
6167	541F	3F	53	EE			BSTA,UN	PUSHC1	
6168	5422	3F	53	EE			BSTA,UN	PUSHC1	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6161	5425	1F	70				BCTP.UN	WFSI41	
6162	5427					*			
6163	5427					*			
6164	5427					*			
6165	5427	3F	53	75		FPCOS	BSTA.UN	CTERM	
6166	542A	3F	53	84			BSTA.UN	GSIGN	
6167	542D	3F	52	F9			BSTA.UN	POPC4	
6168	5436	3F	4A	AC			BSTA.UN	PUSH1	
6169	5433	1F	F9				BCTP.UN	SERI	
6170	5435					*			
6171	5435					*			
6172	5435					*			
6173	5435					*			
6174	5435					*			
6175	5436	3F	53	75		FPEXP2	BSTA.UN	CTERM	
6176	5436	3F	53	27			BSTA.UN	POPC5	
6177	5438	3F	53	00			BSTA.UN	PUSHC5	
6178	543F	3F	52	72			BSTA.UN	PUSHC4	
6179	5441	3F	3D	5A			BSTA.UN	FPAS5	
6180	5444	3F	2B	A1			BSTA.UN	ENS2	
6181	5447	2F					LODZ.R0		
6182	544F	2F	45	74			BCTP.EQ	CVFER	
6183	5449	2F	16	40			STRA.R1	ZTIMEP2	
6184	5445	3F	3F	26			BSTA.UN	FFPRC	
6185	5451	3F	52	F9			BSTA.UN	POPC4	
6186	5454	3F	45	AC			BSTA.UN	PUSH1	
6187	5457	2F	16	4F		FPEX1	LODA.F1	ZTIMEP2	
6188	545A	1F	17				BCTP.EQ	FPEX2	
6189	545C	45	01				SUPR.R1	01	
6190	545E	2F	16	4F			STRA.R1	ZTIMEP2	
6191	5461	3F	53	1F			BSTA.UN	PUSHF	
6192	5464	2F	16	39			LODA.R0	CASIGN	
6193	5467	1F	25				BCTP.EQ	FPEX5	
6194	5468	3F	39	F2			BSTA.UN	FPDIV	
6195	546C	1F	69				BCTP.UN	FPEX1	
6196	5471	3F	3F	F1		FPEX5	BSTA.UN	FPMULT	
6197	5471	1F	44				BCTP.UN	FPEX1	
6198	5473	3F	45	AC		FPEX2	BSTA.UN	PUSH1	
6199	5476	3F	53	39			BSTA.UN	CTERM	
6200	5479	3F	3A	70			BSTA.UN	FPADD	
6201	547D	3F	53	2A		FPEX3	BSTA.UN	CGTERM	
6202	547F	2F	05				BCTP.EQ	FPEX4	
6203	5481	3F	3A	70			BSTA.UN	FPADD	
6204	5484	1F	76				BCTP.UN	FPEX3	
6205	5486	1F	2B	F1		FPEX4	BCTA.UN	FPMULT	
6206	5489					*			
6207	5489					*			
6208	5489					*			
6209	5489	3F	45	D9		VFLOG	BSTA.UN	POPC1	
6210	5490	3F	53	23			BSTA.UN	PUSHG	
6211	5491	3F	4F	10			BSTA.UN	PUSHC1	
6212	5492	3F	53	6C			BSTA.UN	FPLW	
6213	5495	1F	3E	F1			BCTA.UN	FPMULT	
6214	5496					*			
6215	5496					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6216	5498					*			
6217	5498	3F	53	07		FPTAN	BSTA.UN	POPC4	
6218	549P	3F	53	2A			BSTA.UN	PUSHC5	
6219	549E	3F	53	F8			BSTA.UN	FPIN	
6220	54A1	3F	53	00			BSTA.UN	PUSHC5	
6221	54A4	3F	54	27			BSTA.UN	FPCOS	
6222	54A7	1F	3B	E2			BCTA.UN	FPDIV	
6223	54AA					*			
6224	54AA					*			
6225	54AA	20				FPTSN	RES	1	
6226	54AB					*			
6227	54AB	3F	52	F9		FPTAN	BSTA.UN	POPC4	
6228	54AB	3F	52	F2			BSTA.UN	PUSHC4	
6229	54B1	2F	16	31			LODA.R0	CASIGN	
6230	54B4	3F	74				SIRR.R2	FPTSN	
6231	54B6	3F	31	5A			BSTA.UN	FPAS5	
6232	54B9	3F	45	19			BSTA.UN	POPC1	
6233	54BC	3F	45	AC			BSTA.UN	PUSH1	
6234	54BF	3F	45	17			BSTA.UN	POPC2	
6235	54C2	3F	30	02			BSTA.UN	COMMON	
6236	54C5	1F	21				COMI.R3	GT	
6237	54C7	2F	0C	54	1B		BCTP.EQ	ATN2	
6238	54CA	2F	47				LODI.R2	HALTPI	
6239	54CC	2F	45	E5			LODI.R1	HALTPI	
6240	54CE	3F	31	38			BSTA.UN	PUSHFP	
6241	54D1	3F	45	AC			BSTA.UN	PUSH1	
6242	54D4	3F	4F	10			BSTA.UN	PUSHC1	
6243	54D7	3F	3B	E2			BSTA.UN	FPDIV	
6244	54DA	2F					ICRZ.R0		
6245	54DE	3F	16				BSTR.UN	APPROX	
6246	54DD	3F	3A	64			BSTA.UN	FPSUB	
6247	54E0	3F	52	F9		FPTEND	BSTA.UN	POPC4	
6248	54E3	2F	45				LODR.R0	FPTSN	
6249	54E5	2F	16	31			STRA.R0	CASIGN	
6250	54E8	1F	52	F2			BCTA.UN	PUSHC4	
6251	54EB					*			
6252	54EE	3F	45	10		ATN2	BSTA.UN	PUSHC1	
6253	54EE	2F					ICRZ.R0		
6254	54F1	3F	64				BSTR.UN	APPROX	
6255	54F1	1F	61				BCTP.UN	FPTEND	
6256	54F3					*			
6257	54F3	2F				ACVFS	RES	1	
6258	54F4	2F				AFTIM	RES	1	
6259	54F4					*			
6260	54F5	2F	7C			APPROX	SIRR.R0	ACVFS	
6261	54F7	2F	0F				LODI.R1	0	
6262	54F9	2F	79				SIRR.R1	APPRM	
6263	54FB	3F	52	EB			BSTA.UN	POPC3	
6264	54FE	3F	52	F4			BSTA.UN	PUSHC3	
6265	5501	3F	52	F9			BSTA.UN	POPC4	
6266	5504	3F	52	F2			BSTA.UN	PUSHC4	
6267	5507	2F	6A				LODR.R1	ACVFS	
6268	5509	2F	45				ADDI.R1	ATN2	
6269	550B	7F	09				PPSL	WC	
6270	550D	2F					ICRZ.R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6271	552E	84	56				ADDI,R0	ATAB	
6272	5512	75	28				CPSL	WC	
6273	5512	3F	31	3B			BSTA,UN	PUSHFP	
6274	5515	3F	32	F1			BSTA,UN	FPMULT	
6275	5518	3F	45	F9			BSTA,UN	POPC1	
6276	551B	85	28			APPE	LODI,R1	28	
6277	551D	86	25				ADDR,R1	APTEM	
6278	5521	85	42				COMI,B1	4C	
6279	5521	15	45	10			BCTB,IC	PUSHC1	
6280	5524	09	41				STBR,R1	APTEM	
6281	5526	56	4F				ADDP,R1	ACFYS	
6282	5528	85	45				ADDI,R1	ATAB	
6283	552A	77	28				FFSL	WC	
6284	552C	27					FORZ,R2		
6285	552D	84	56				ADDI,R0	ATAB	
6286	552F	56	08				CPSL	WC	
6287	5531	3F	31	3B			BSTA,UN	PUSHFP	
6288	5534	3F	42	F2			BSTA,UN	PUSHC4	
6289	5537	3F	52	F4			BSTA,UN	PUSHC3	
6290	553A	3F	55	F1			BSTA,UN	FPMULT	
6291	553C	2C	14	F3			LODI,P2	ACFYS	
6292	5540	54	42				COMI,P0	BTAB-ATAB	
6293	5542	15	25				BCTB,IC	APP1	
6294	5544	3F	52	F4			BSTA,UN	PUSHC3	
6295	5547	3F	3F	F1			BSTA,UN	FPMULT	
6296	554A	3F	52	F9		APP1	BSTA,UN	POPC4	
6297	554D	3F	62	F2			BSTA,UN	PUSHC4	
6298	5550	3F	3B	F1			BSTA,UN	FPM LT	
6299	5553	3F	45	12			BSTA,UN	PUSHC1	
6300	5556	3F	3A	72			BSTA,UN	FFAID	
6301	5559	3F	45	F7			BSTA,UN	POPC2	
6302	5560	3F	3F	62			BSTA,UN	COMMON	
6303	5561	23					LODI,R3		
6304	5568	1C	45	1E			BCTA,RC	PUSHC2	
6305	5563	3F	45	1E			BSTA,UN	PUSHC2	
6306	5566	3F	45	29			BSTA,UN	POPC1	
6307	5569	15	55	1B			BCTA,UN	APP0	
6308	556C					*			
6309	556C					*			
6310	556C					*			
6311	556F	3F	53	75		FPLN	BSTA,UN	CTIRM	
6312	556F	3F	52	F9			BSTA,UN	POPC4	
6313	5572	2C	16	31			LODI,P0	CASIGN	
6314	5575	15	45	74			BCTA,LT	OFFER	
6315	5578	2C	16	32			LODI,P2	CASIGN	
6316	557B	1C	45	74			BCTA,IC	OFFER	
6317	5580	24	45				LODI,R0	BC	
6318	5582	25	16	42			STRA,R0	OFFSET	
6319	5583	3F	45	3A			BSTA,UN	PUSHC	
6320	5586	3F	45	77			BSTA,UN	POPC5	
6321	5589	2C	16	32			LODI,R0	C4EX	
6322	559C	2C	16	3A			STRA,R0	C5MAIN	
6323	559F	2C	16	2F			LODI,R0	C4TEMP	
6324	55A2	2C	16	39			STRA,P2	C5SIGN	
6325	55A5	20					FORZ,R0		

IN#	AT#	P1	B2	B3	P4	LABEL	OPCODE	OPERAND	COMMENTS
6326	6596	00	16	2F			STRA,R0	C4TEMP	
6327	6596	00	16	37			STRA,R0	C5TEMP	
6328	6590	24	21				LOLI,R0	1	
6329	6590	00	16	30			STRA,R0	C4EX	
6330	65A1	04	22				LODI,R0	02	
6331	65A2	00	16	38			STRA,R0	C5EX	
6332	65A6	24	26				LODI,R0	C5TEMP	
6333	65A8	26	27				LODI,R1	C5TEMP	
6334	65AA	06	28				LOLI,R2	LENG	
6335	65AC	27	06				PPSL	WC	
6336	65A1	3F	3B	E0			BSTA,UN	NORM	
6337	65E1	04	02				LOLI,R0	02	
6338	65B3	93					LPSL		
6339	65FA	3F	52	10			BSTA,UN	PUSHIN	
6340	65B7	3F	53	00			BSTA,UN	PUSHC5	
6341	65FA	3F	45	AC			BSTA,UN	PUSH1	
6342	65BD	3F	3A	64			BSTA,UN	PPSUB	
6343	65C0	3F	3B	F1			BSTA,UN	PPMULT	
6344	65C3	3F	45	EA			BSTA,UN	PUSH0	
6345	65C6	3F	42	F2			BSTA,UN	PUSPC4	
6346	65C9	3F	45	D9		LN2	BSTA,UN	POPCL	
6347	65C0	3F	45	AC			BSTA,UN	PUSH1	
6348	65C3	3F	45	E7			BSTA,UN	PCPC2	
6349	65D2	3F	30	02			BSTA,UN	COMMON	
6350	65D5	E7	02				COMI,R3	L7	
6351	65E7	16	18				BCFR,E0	LN3	
6352	65E9	3F	42	DE			BSTA,UN	PS2	
6353	65D0	3F	45	E7			BSTA,UN	POPCL	
6354	65D3	3F	30	02			BSTA,UN	COMMON	
6355	65E2	17	01				COMI,R3	G7	
6356	65E4	98	23				BCFR,E0	LN4	
6357	65E6	3F	45	AC			BSTA,UN	PUSH1	
6358	65E9	3F	2A	72			BSTA,UN	PPACD	
6359	65FC	3F	45	E0			BSTA,UN	PUSHC1	
6360	65E3	3F	52	06			BSTA,UN	PUSHH	
6361	65E7	3F	2B	F1			BSTA,UN	PPMULT	
6362	65F1	16	12				BCFR,UN	LN2	
6363	65F7	3F	45	AC		LN3	BSTA,UN	PUSH1	
6364	65FA	3F	3A	64			BSTA,UN	PPSUB	
6365	65F1	3F	45	E0			BSTA,UN	PUSHC1	
6366	6500	3F	42	ED			BSTA,UN	PS2	
6367	65D3	3F	30	F1			BSTA,UN	PPMULT	
6368	65D6	16	05	09			BSTA,UN	LN2	
6369	65E5	75	04			LN4	LODI,R0	LN(2)	
6370	65A3	25	2D				LODI,R1	LN(2)	
6371	65B0	3F	31	38			BSTA,UN	PUSHEFF	
6372	6510	3F	2E	71			BSTA,UN	PPMULT	
6373	6513	3F	2A	70			BSTA,UN	PPACD	
6374	6516	3F	45	E0			BSTA,UN	PUSHC1	
6375	6519	3F	45	AC			BSTA,UN	PUSH1	
6376	6510	3F	3A	64			BSTA,UN	PPSUB	
6377	651F	04	42				LODI,R0	BTAAP-A*AB	
6378	6521	3F	54	75			BSTA,UN	PPROI	
6379	6524	16	3	70			BSTA,UN	PPACD	
6380	6527					*			

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6301	5627					*			
6302	5627					*			
6303	5627	00				CSTEMP	RES	1	
6304	5628	00				CSEI	RES	1	
6305	5629	00				CSSIGN	RES	1	
6306	562A	00	00	00	00	CSMAIN	RES	5	
6307	562B	00				*			
6308	562C					*			
6309	562D	00				C4TEMP	RES	1	
6310	5630	00				C4YI	RES	1	
6311	5631	00				C4SIGN	RES	1	
6312	5632	00	00	00	00	C4MAIN	RES	5	
6313	5633	00				*			
6314	5634	00				C4TEMP	RES	1	
6315	5635	00				C5E1	RES	1	
6316	5636	00				C5SIGN	RES	1	
6317	5637	00	00	00	00	C5MAIN	RES	5	
6318	5638	00				*			
6319	5639	00				*			
6320	563A	00				ZTEMP1	RES	1	
6321	563B	00				ZTEMP2	RES	1	
6322	563C	00				LUB	RES	1	
6323	563D	00				OFFSET	RES	1	
6324	563E	00				SSIGN	RES	1	
6325	563F	00				TERMNM	RES	1	
6326	5640					*			
6327	5641	00	00	00	00	ATAB	DATA	00,00,00,99,99,33,29	
6328	5642	00	00	00	00		DATA	00,00,00,33,32,98,56,00	
6329	5643	00	00	00	00		DATA	00,00,00,19,94,65,35,99	
6330	5644	00	00	00	00		DATA	00,00,00,13,98,85,33,51	
6331	5645	00	00	00	00		DATA	00,01,00,98,42,00,44,10	
6332	5646	00	00	00	00		DATA	00,01,00,55,98,98,86,10	
6333	5647	00	00	00	00		DATA	00,01,00,21,86,12,28,80	
6334	5648	00	00	00	00		DATA	00,02,00,48,54,85,88,88	
6335	5649	00	00	00	00		DATA	00,00,00,99,99,99,42,39	
6336	564A	00	00	00	00		DATA	00,00,00,49,98,74,12,38	
6337	564B	00	00	00	00		DATA	00,00,00,33,17,99,82,58	
6338	564C	00	00	00	00		DATA	00,00,00,24,87,33,88,84	

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6436	5641	00	33	00	84		DATA	00,00,00,16,75,54,87,11	
6437	5642	00	00	00	16		DATA	00,01,00,95,32,93,89,78	
6438	5643	00	00	00	11		DATA	00,01,00,36,88,84,93,78	
6439	5644	00	00	00	00		DATA	00,02,00,54,53,54,42,88	
6440	5645	00	00	00	00		DATA	00,01,00,18,88,88,88,88	
6441	5646	00	00	00	00		DATA	00,00,00,58,88,88,88,88	
6442	5647	00	00	00	00		DATA	00,00,00,16,66,66,66,67	
6443	5648	00	00	00	00		DATA	00,01,00,41,66,66,66,67	
6444	5649	00	00	00	00		DATA	00,02,00,83,33,33,33,33	
6445	564A	00	00	00	00		DATA	00,02,00,13,88,88,88,89	
6446	564B	00	00	00	00		DATA	00,03,00,19,84,12,69,84	
6447	564C	00	00	00	00		DATA	00,04,00,24,88,15,87,38	
6448	564D	00	00	00	00		DATA	00,05,00,27,55,73,19,22	
6449	564E	00	00	00	00		DATA	00,06,00,27,55,73,19,22	
6450	564F	00	00	00	00		DATA	00,07,00,25,85,31,88,39	
6451	5650	00	00	00	00		DATA	00,08,00,28,87,67,56,99	
6452	5651	00	00	00	00		DATA	00,09,00,16,85,98,43,84	
6453	5652	00	00	00	00		DATA	00,10,00,11,47,87,45,68	
6454	5653	00	00	00	00		DATA	00,12,00,76,47,16,37,32	
6455	5654	00	00	00	00		DATA	00,13,00,47,49,47,73,32	
6456	5655	00	00	00	00		DATA	00,01,00,18,88,88,88,88	
6457	5656	00	00	00	00		DATA	00,00,00,58,88,88,88,88	
6458	5657	00	00	00	00		DATA	00,00,00,33,33,33,33,33	
6459	5658	00	00	00	00		DATA	00,00,00,25,88,88,88,88	
6460	5659	00	00	00	00		DATA	00,00,00,28,88,88,88,88	
6461	565A	00	00	00	00		DATA	00,00,00,16,86,86,86,87	

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
0401	0771	06	06	06	07				
0402	0775	00	00	00	14	DATA		00,00,00,14,28,57,14,29	
0403	0779	28	57	14	29				
0404	0771	00	00	00	12	DATA		00,00,00,12,05,00,00,00	
0405	0781	00	00	00	12				
0406	0785	00	00	00	11	DATA		00,00,00,11,11,11,11,11	
0407	0789	11	11	11	11				
0408	078D	00	00	00	10	DATA		00,00,00,10,00,00,00,00	
0409	07C1	00	00	00	08				
040A	0795	00	01	02	98	DATA		00,01,00,00,98,98,98,98	
040B	0799	00	01	02	98				
040C	0795	00	00	00	51				
040D	079D	00	01	00	83	DATA		00,01,00,00,83,33,33,33	
040E	07A1	33	33	33	33				
040F	07A5	00	01	00	76	DATA		00,01,00,76,92,30,76,92	
0410	07A9	92	30	76	92				
0411	07AD	00	01	00	71	DATA		00,01,00,71,42,05,71,43	
0412	07B1	42	05	71	43				
0413	07B5	00	01	00	66	DATA		00,01,00,66,66,66,66,67	
0414	07B9	66	66	66	67				
0415	07BD	00	01	00	62	DATA		00,01,00,62,65,00,00,00	
0416	07C1	05	00	00	00				
0417	07C5					*			
0418	07C5					*			
0419	07C5					*			
041A	07C5					*			
041B	07C5	00	01	00	23	IN(10) DATA		00,01,00,23,02,58,58,93	
041C	07C9	02	59	50	93				
041D	07CD	00	00	00	43	LOGC DATA		00,00,00,43,42,04,48,22	
041E	07C1	42	04	48	22				
041F	07C5	00	01	00	27	EEK DATA		00,01,00,27,18,28,18,28	
0420	07C9	18	28	18	28				
0421	07DD	00	01	00	31	PIK DATA		00,01,00,31,41,56,26,54	
0422	07D1	41	49	26	54				
0423	07D5	00	01	00	15	HALFPI DATA		00,01,00,15,70,70,63,27	
0424	07D9	70	63	27					
0425	07E1	00	00	00	09	LN(2) ACON		0000,0009,3147,1805	
0426	07E1	31	47	18	05				
0427	07E5	00	01	00	20	TWO ACON		0001,0020,0000,0000	
0428	07E9	27	02	00	00				
0429	07FD					*			
042A	07FD					*			
042B	07E1					ZFND			
042C	07E9								
042D	07E1					*			
042E	07E1					*			
042F	07E9					ORG		5A00	
0430	07E9					*			
0431	07E9					*			
0432	07E9					*			
0433	07E9					*			
0434	07E9					*			
0435	07E9					*			
0436	07E9					*			
0437	0A00	04	22			ZSET		LODI,R0	02
0438	0A02	93						LPUL	
0439	0A03								

LINE	ADDR	PI	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6546	5A14	FF	5B				LODI,R1	~ZEND-100	
6547	5A16	CF	9A	67			STRA,R1	*ZBSTR	
6548	5A19	CF	1A	61			STRA,R1	ZTEMP	
6549	5A1C	CF	9A	61			STRA,R0	*ZTEMP	
6550	5A1F	3F	2E	55			BSTA,UM	LYCR	
6551	5A22	8F	20	00			LODI,R3	00	
6552	5A24	8F	7A	6R		ZPRINT	LODI,R3	ZPTAB,I	
6553	5A27	1A	85				BCTA,LT	ZCOM	
6554	5A29	3F	2F	23			BSTA,UM	WRT	
6555	5A2C	DD	76				BIRR,R3	ZPRINT	
6556	5A2F	3F	2F	12		ZCOM	BSTA,UM	PAUSE	
6557	5A31	3F	45	A6			BSTA,UM	LTOU	
6558	5A34	F4	4E				COMI,RC	N	
6559	5A36	1C	20	00			BCTA,EQ	STRT	
6560	5A39	E4	59				COMI,R0	T	
6561	5A3B	90	71				BCFB,EQ	ZCOM	
6562	5A3D	04	FF				LODI,R0	FF	
6563	5A3F	CC	9A	65			STRA,R0	*ZAB	
6564	5A42	05	53				LODI,R1	~ZFP-100	
6565	5A44	CF	1A	61			STRA,R1	ZTEMP	
6566	5A47	CC	9A	61			STRA,R0	*ZTEMP	
6567	5A4A	CD	9A	67			STRA,R1	*ZBSTR	
6568	5A4D	07	FF				LODI,R3	FF	
6569	5A4F	04	1F				LODI,R0	1F	
6570	5A51	CF	BA	63			STRA,R3	*FPX100,+	
6571	5A54	E4	31				LODI,R0	~SYNER	
6572	5A56	CF	BA	63			STRA,R3	*FPX100,+	
6573	5A59	E4	B1				LODI,R0	~SYNER	
6574	5A5B	CF	BA	63			STRA,R3	*FPX100,+	
6575	5A5F	1F	20	00			BCTA,UM	STRT	
6576	5A61								
6577	5A61	00	00				ZTEMP	RES	2
6578	5A63								
6579	5A63	4F	14				FPX100	ACOM	FPXP
6580	5A65	47	04				ZAP	ACOM	ZTAB
6581	5A67	20	03				ZBSTR	ACOM	BSTART
6582	5A68	20	00				ZSTART	ACOM	STRT
6583	5A6C	44	4F	20	55		ZPTAB	ALIT	DO YOU WISH TO DELETE THE EXTENDED FUNCTIONS? (Y/N)
6584	5A6F	4F	55	20	57				
6585	5A73	45	53	40	2F				
6586	5A77	54	4F	20	44				
6587	5A79	45	4C	45	54				
6588	5A7F	45	20	54	48				
6589	5A83	45	20	45	58				
6590	5A87	54	45	4E	44				
6591	5A8B	45	44	20	4C				
6592	5A8F	55	4E	43	54				
6593	5A93	45	4F	4E	53				
6594	5A97	3F	20	28	46				
6595									

5. Program Listing

This section contains the program listing for 12K BASIC.

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2201	2202						OPG	2202	
2202	2202						EXEC	STRT	
2203	2202					R0	ECU	0	
2204	2202					R1	ECU	1	
2205	2202					R2	ECU	2	
2206	2202					R3	ECU	3	
2207	2202					R0	ECU	0	
2208	2202					CT	ECU	1	
2209	2202					LT	ECU	2	
2210	2202					UN	ECU	3	
2211	2202					NE	ECU	00	
2212	2202					IE	ECU	01	
2213	2202					OE	ECU	02	
2214	2202					Z	ECU	0	
2215	2202					N	ECU	0	
2216	2202					CRY	ECU	1	
2217	2202					COM	ECU	2	
2218	2202					OVF	ECU	4	
2219	2202					*C	ECU	0	
2220	2202					RS	ECU	10	
2221	2202					CP	ECU	0D	
2222	2202					LF	ECU	0A	
2223	2202					ESC	ECU	1B	
2224	2202					BS	ECU	0	
2225	2202					CCOPY	ECU	10	
2226	2202					*			
2227	2202	1F	5A	02		STRT	BCTA,UN	ZSET	
2228	2202					BSTAPT	DATA	5A	IF 49 7A
2229	2202					IBST	DATA	5A	
2230	2202					VARST	DATA	5E	
2231	2202					ENDRAM	DATA	62	IF
2232	2202					PRNT	PETC,UN		
2233	2202						RES	2	
2234	2202					TABEND	RES	2	
2235	2202					*			
2236	2202					*			
2237	2202					BASIC	LODI,R0	2	
2238	2202						LFSL		
2239	2202					LODR,R0		ENDRAM	
2240	2202					STRA,R0		SP	
2241	2202					LOTR,R0		BSTART	
2242	2202					STRA,R0		LATPNT	
2243	2202					LODR,R0		IBST	
2244	2202					STRA,R0		CTEMP	
2245	2202					BSTA,UN		PURGES	
2246	2202					STRA,R0		PDATA	
2247	2202					STRA,R0		ERWAIT	
2248	2202					STRA,R0		INCON	
2249	2202					STRA,R0		SP-1	
2250	2202					STRA,R0		DATPNT-1	
2251	2202					STRA,R0		TOLECR	
2252	2202					STRA,R0		CTEMP+1	
2253	2202					BASIC0	STRT,R1		
2254	2202					BASIC1	STRA,R1	*CTEMP,-	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2256	2202					PRNR,R1		BASIC1	
2257	2202					LODR,R1		CTEMP	
2258	2202					ADDI,R1		1	
2259	2202					STRA,R1		CTEMP	
2260	2202					COMA,R1		VARST	
2261	2202					BCTR,LT		BASIC0	
2262	2202					BSTA,UN		ERASE	
2263	2202					LODI,R0		0	
2264	2202					BSTA,UN		TFCSF	
2265	2202					BSTA,UN		BEGIN	
2266	2202					BCTA,UN		OPTION	
2267	2202					*			
2268	2202					SHLIN	BSTA,UN	LFGR	
2269	2202					SHLIN2	BRNR,R2	SHLINS	
2270	2202					LODI,R0			
2271	2202					BSTA,UN		WRT	
2272	2202					SHLIN3	SUBI,R2	1	
2273	2202					LODR,R0		*SHPNT	
2274	2202					BSTA,UN		CHKCR	
2275	2202					RETC,EQ			
2276	2202					COMI,R0		LF	
2277	2202					BCTR,EQ		SHLIN4	
2278	2202					SHLIN5	BSTA,UN	WRT	
2279	2202					LODR,R0		SHPNT+1	
2280	2202					ADDI,R0		1	
2281	2202					STRR,R0		SHPNT+1	
2282	2202					BCTR,EQ		SHLIN2	
2283	2202					LODR,R0		SHPNT	
2284	2202					ADDI,R0		1	
2285	2202					STRR,R0		SHPNT	
2286	2202					BCTR,UN		SHLIN2	
2287	2202					SHLIN4	BSTA,UN	LFGR	
2288	2202					BCTR,UN		SHLIN5	
2289	2202					*			
2290	2202					*			
2291	2202					SHPNT	RES	2	
2292	2202					*			
2293	2202					*			
2294	2202					SAVING	LODR,R0	INPT	
2295	2202					STRR,R0		SHPNT	
2296	2202					LODR,R0		INPT+1	
2297	2202					STRR,R0		SHPNT+1	
2298	2202					PETC,UN			
2299	2202					*			
2300	2202					*			
2301	2202					RTNADR	RES	2	
2302	2202					*			
2303	2202					*			
2304	2202					EXEC	STRR,R0	RTNADR	
2305	2202					STRR,R1		RTNADR+1	
2306	2202					LODR,R0		*INPT	
2307	2202					COMI,R0		*	
2308	2202					BCTA,EQ		REM	
2309	2202					BSTA,UN		SAVING	
2310	2202					BSTA,UN		GETLIN	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2111	20A5	24	48				LODI,R0	COMTBL	
2112	20A7	05	52				LODI,R1	COMTBL	
2113	20A9	3F	44	F7			BSTA,UN	LOOKUP	
2114	20AC	97	43	13			BCFA,EQ	LT	
2115	20AF	0C	14	24		EXEC2	STRA,R0	DODST	
2116	20B2	0C	14	24			STRA,R1	DODST+1	
2117	20B5	1F	B4	D4			BCFA,UN	*DODST	
2118	20B9					*			
2119	20BE					*			
2120	20C5	3F	45	01		FRASEB	BSTA,UN	EPASE	
2121	20C2	1F	31	A3			BCFA,UN	NITLIN	
2122	20C5					*			
2123	20EE					*			
2124	20E5	3F	33	9F		POKF	BSTA,UN	EVAL	
2125	20C1	3F	29	5E			BSTA,UN	ENS	
2126	20C4	3F	32	6E			BSTA,UN	STRCT	
2127	20C7	3F	46	46			BSTA,UN	SKPCCM	
2128	20CA	3F	33	9F			BSTA,UN	EVAL	
2129	20C7	3F	29	5E			BSTA,UN	ENS13	
2130	20D0	0D	93	47			STRA,R1	*CTEMP	
2131	20D3	1F	31	A3			BCFA,UN	NITLIN	
2132	20D6					*			
2133	20E6					*			
2134	20E5	3F	32	83		GOSUP	BSTA,UN	FNDLIN	
2135	20E9	9C	43	87			BCFA,EQ	LNFER	
2136	20E0	0F	11	80			LODA,R3	CINPT+1	
2137	20E5	3F	30	D9			BSTA,UN	DECSP	
2138	20E2	0F	11	80			LODA,R3	CINPT	
2139	20E5	3F	30	D9			BSTA,UN	DECSP	
2140	20E8	07	02				LODI,R2	2	
2141	20EA	3F	30	D9			BSTA,UN	DECSP	
2142	20ED	1F	A3	92			BCFA,UN	*RTNADR	
2143	20F0					*			
2144	20F0					*			
2145	20F2	3F	30	E1		RETURN	BSTA,UN	INCSP	
2146	20F3	17	02				COMI,R3	2	
2147	20F5	9C	45	78			BCFA,EQ	NESTER	
2148	20F8	3F	32	B1			BSTA,UN	INCSP	
2149	20F5	0F	11	84			STRA,R3	INPT	
2150	20FE	3F	30	E1			BSTA,UN	INCSP	
2151	2101	0F	11	85			STRA,R3	INPT+1	
2152	2104	1F	46	3A			BCFA,UN	SKFLIN	
2153	2107					*			
2154	2107					*			
2155	2107	3F	32	53		RESTOR	BSTA,UN	FNDLIN	
2156	210A	1E	43	87			BCFA,LT	LNFER	
2157	2105	19	13				BCFA,GT	REST2	
2158	212F	0C	11	84			LODA,R0	INPT	
2159	2112	01	11	85			LODA,R1	INPT+1	
2160	2115	08	1F			REST1	STRR,R0	DATPMT	
2161	2117	09	14				STRR,R1	DATPMT+1	
2162	2119	3F	31	91			BSTA,UN	CRINPT	
2163	211C	20					EORZ,R0		
2164	211D	08	2F				STARR,R2	PDATA	
2165	211F	1F	31	0E			BCFA,UN	CKNXTL	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2166	2122	3F	31	86		REST2	BSTA,UN	CSINPT	
2167	2125	0C	20	03			LODA,R0	BSTART	
2168	2129	05	02				LODI,R1	0	
2169	21CA	1B	69				BCTR,UN	REST1	
2170	212C					*			
2171	212C					*			
2172	212C	07	00				DATPMT RES	2	
2173	212E	20					PDATA RES	1	
2174	212F					*			
2175	212F					*			
2176	212F	3F	29	6E		FOR	BSTA,UN	GCVAR	
2177	2132	9C	46	34			BCFA,EQ	N STR	
2178	2135	3F	32	6E			BSTA,UN	STRCT	
2179	2138	0C					STRR,R2		
2180	2139	01					LODZ,R1		
2181	213A	03					STRR,R3		
2182	213B	3F	30	D9			BSTA,UN	DECSP	PUSH VAR. LOCATION
2183	213E	02					LODZ,R2		
2184	213F	03					STRR,R3		
2185	2140	3F	30	D9			BSTA,UN	DECSP	
2186	2143	0F	11	85			LODA,R3	INPT+1	
2187	2146	3F	30	D9			BSTA,UN	DECSP	PUSH INPT
2188	2149	0F	11	84			LODA,R3	INPT	
2189	214C	3F	30	D9			BSTA,UN	DECSP	
2190	214F	3F	46	50			BSTA,UN	SKPFO	
2191	2152	3F	33	9F			BSTA,UN	EVAL	
2192	2155	9C	46	34			BCFA,EQ	NOSTR	
2193	2158	3F	21	18			BCFA,UN	POPCT	
2194	215B	04	48				LODI,R0	FORTBL	
2195	215D	25	30				LODI,R1	FORTBL	
2196	215F	3F	45	F7			BSTA,UN	LOOKUP	
2197	2162	9C	31	B1			BCFA,EQ	SYNER	
2198	2165	05	01				COMI,R1	1	
2199	2167	9C	31	B1			BCFA,EQ	SYNER	
2200	216A	1F	33	9F			BSTA,UN	EVAL	
2201	216D	9C	46	34			BCFA,EQ	NOSTR	
2202	2170	04	46				LODI,R0	FORTBL	
2203	2172	05	30				LODI,R1	FORTBL	
2204	2174	3F	45	F7			BSTA,UN	LOOKUP	
2205	2177	98	0D				BCFA,EQ	FOR2	
2206	2179	15	02				COMI,R1	2	
2207	217B	9C	31	B1			BCFA,EQ	SYNER	
2208	217E	3F	33	9F			BSTA,UN	EVAL	
2209	2181	9C	46	34			BCFA,EQ	NOSTR	
2210	2184	1E	03			FOR2	BCTR,UN	FOR3	
2211	2186	3F	45	AC		FOR3	BSTA,UN	PUSH1	
2212	2189	07	03				LODI,R3	3	
2213	218B	3F	30	D9			BSTA,UN	DECSP	
2214	218E	1F	31	A3			BCFA,UN	NITLIN	
2215	2191					*			
2216	2191					*			
2217	2191	00	00	00	00	NTEMP	RES	4	
2218	2195	00	00	00	00	NTEMP	RES	8	
2219	2195	00	00	00	00				
2220	219D	00	00	00	00	DTEMP	RES	8	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2201	21A1	27	02	00	27				
2202	21A5					*			
2203	21A5					*			
2204	21A5	3F	30	E1		NEXT	BSTA,UN	INCSF	
2205	21A5	17	23				COMI,R3	3	
2206	21AA	9C	45	78			PCFA,EC	WESTER	
2207	21A7	04	21				LODI,R0	DTMP	POP STEP VALUE
2208	21A7	05	5D				LODI,R1	DTMP	
2209	21P1	3F	31	55			BSTA,UN	POPPF	
2210	21B4	04	21				LODI,R0	NTMPF	POP TO VALUE
2211	21B5	05	55				LODI,R1	NTMPF	
2212	21B5	3F	31	55			BSTA,UN	POPPF	
2213	21B5	05	FF				LODI,R1	FF	
2214	21B5	05	24				LODI,R2	4	
2215	21F7	3F	32	F1		NEXT1	BSTA,UN	INCSF	PCP INPT, VAR LOC.
2216	21C7	22					LODI,R3		
2217	21C3	07	21	91			STRA,R1	NTEMPS,-	
2218	21C5	FA	77				BRDR,R2	NEXT1	
2219	21D9	3F	35	77			BSTA,UN	LOKVAP	
2220	21C3	07	0F				PCTR,GT	NEXT1	
2241	21D1	1F	45	7C			BCTA,LT	TYFER	
2242	21D2	ED	01	93			COMA,R0	NTEMPS-2	
2243	21D3	9C	45	78			PCFA,EC	NWESTER	
2244	21D5	ED	01	94			COMA,R1	NTEMPS-3	
2245	21D9	9C	45	78			PCFA,EC	NWESTER	
2246	21D0	7C	31	93		NEXT2	LODA,R0	NTEMPS-2	
2247	21D7	2D	61	94			LODA,R1	NTEMPS-3	
2248	21E0	3F	31	38			BSTA,UN	PUSHFP	
2249	21E5	04	21				LODI,R0	DTMP	
2250	21E7	25	5D				LODI,R1	DTMP	
2251	21F9	3F	31	38			BSTA,UN	PUSHFP	
2252	21F0	3F	3A	70			BSTA,UN	FPALD	
2253	21F3	3F	4F	F7			BSTA,UN	PCPC2	
2254	21F2	25	28				LODI,R1	8	
2255	21F4	7C	53	58		NEXT2	LODA,R1	CBUF2,-	
2256	21F7	07	21	93			STRA,R1	*NTEMPS-2,I	
2257	21FA	2D	61	95			LODA,R1	NTEMP,I	
2258	21FD	07	73	50			STRA,R1	CBUF1,I	
2259	2202	3F	32	22			BRNR,R1	NEXT2	
2260	2202	3F	32	22			BSTA,UN	COMMON	
2261	2202	27	21	9F			LODA,R0	DTMP-2	
2262	2208	1A	31				BCTA,LT	NEXT3	
2263	220A	17	02				COMI,R3	LT	
2264	220C	18	31				BCTA,EC	NEXT4	
2265	220E	25	04			NEXT6	LODI,R1	4	
2266	2210	07	41	91		NEXT5	LODA,R1	NTEMPS,-	
2267	2213	07					STRZ,R3		
2268	2214	3F	30	D0			BSTA,UN	DECSF	
2269	2217	59	77				BRNR,R1	NEXT5	
2270	2219	04	21				LODI,R0	NTMP	
2271	2215	05	95				LODI,R1	NTMP	
2272	221D	3F	31	38			BSTA,UN	PUSHFP	
2273	2220	04	21				LODI,R0	DTMP	
2274	2222	05	91				LODI,R1	DTMP	
2275	2224	3F	31	38			BSTA,UN	PUSHFP	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2276	2227	27	03				LODI,R3	3	
2277	2229	3F	30	E9			BSTA,UN	IECSP	
2278	222C	0C	01	31			LODA,R0	NTEMPS	
2279	222F	0C	11	04			STRA,R0	INPT	
2280	2232	0C	21	92			LODA,R0	NTEMPS-1	
2281	2235	0C	11	05			STRA,R0	INPT-1	
2282	2238	1F	46	7A			BCTA,UN	SEFLIN	
2283	223F	17	01			NEXT3	COMI,R3	GT	
2284	223D	9B	4F				BCTA,EC	NEXT6	
2285	223F	1F	46	40		NEXT4	BSTA,UN	SEPSF	
2286	2242	14	2C				COMI,R0		
2287	2244	1C	21	A*			BCTA,EC	NEXT	
2288	2247	3F	32	13			BSTA,UN	DECP	
2289	224A	1F	31	A3			BCTA,UN	NITLIN	
2290	2241					*			
2291	2241					*			
2292	224D	3E	03			PURGE	BSTR,UN	PURGES	
2293	224F	1F	31	A3			BCTA,UN	NITLIN	
2294	2252					*			
2295	2252	0C	00	05		PURGES	LODA,R0	VAPST	
2296	2255	0C	00	0A			STRA,R0	TABEND	
2297	2258	20					EDRZ,R0		
2298	2259	0C	00	0B			STRA,R0	TABEND-1	
2299	225C	0C	00	0A			STRA,R0	*TABEND	
2300	225F	17					RETC,UN		
2301	2260					*			
2302	2260					*			
2303	2260	00	00			SWAPS	RES	2	
2304	2262					*			
2305	2262					*			
2306	2262	3F	29	6E		SWAP	BSTA,UN	GCVAR	
2307	2265	1A	28				BCTA,LT	SWAPST	
2308	2267	1D	45	80			BCTA,GT	ARGIN	
2309	226A	3F	31	61			BSTA,UN	STRCT	
2310	2261	3F	46	48			BSTA,UN	SKPCOM	
2311	2270	3F	29	6E			BSTA,UN	GCVAR	
2312	2273	9C	46	34			PCFA,EC	NOSTR	
2313	2276	07	08				LODI,R3	8	
2314	2279	08	66			SWAP2	STRR,R0	SWAPS	
2315	227A	08	65				STRR,R1	SWAPS-1	
2316	227C	0F	02	60		SWAP3	LODA,R3	*SWAPS,-	
2317	227F	01					STRZ,R1		
2318	2280	0F	F3	4E			LODA,R3	*CTEMP,I	
2319	2283	0F	F2	60			STRA,R3	*SWAFS,I	
2320	2286	01					LODI,R1		
2321	2287	0F	F3	4E			STRA,R3	*CTEMP,I	
2322	228A	5B	70				BRNR,R3	SWAF3	
2323	229C	1F	31	A3			BCTA,UN	NITLIN	
2324	228F	3F	30	61		SWAPST	BSTA,UN	STRCT	
2325	2292	3F	46	48			BSTA,UN	SKPCOM	
2326	2295	3F	29	61			BSTA,UN	GCVAR	
2327	2298	9E	46	74			BCTA,LT	NOSTR	
2328	229B	07	03				LODI,R3	3	
2329	229D	1E	59				BCTA,UN	SWAP2	
2330	229F					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2331	229F					*			
2332	229F	02				DOLFCR	RES	1	
2333	22A2	22				PTYPE	RES	1	
2334	22A1	00				LPOS	RES	1	
2335	22A2	02				PUSP	RES	1	
2336	22A3	15	42	49	4E	USINGL	ALIT		USING.
2337	22A7	47	21						
2338	22A9	22	22	FF		DATA		2,2,FF	
2339	22AC					*			
2340	22AC					*			
2341	22AC	08	74			STRPUS	STRP,R1	PUSP	
2342	22AE	17				RETC,UN			
2343	22AF					*			
2344	22AF					*			
2345	22AF	24	FF			LPRINT	LODI,R0	FF	
2346	22B1	08	61			STRP,R0		PTYPE	
2347	22B3	1F	13			BCTR,UN		PRNTA1	
2348	22B5					*			
2349	22B5					*			
2350	22B5	22				PRINT	FORZ,R0		
2351	22B6	08	68			STRP,R0		PTYPE	
2352	22B8	24	FF			LODI,R0		FF	
2353	22BA	00	72	A2		STRA,R0		PUSP	
2354	22BD	3F	46	40		BSTA,UN		SKFSP	
2355	22C2	F4	42			COMI,R0		Q	
2356	22C2	10	24	08		BCTA,EG		PRNTA1	
2357	22C5	3F	32	13		BSTA,UN		DECT	
2358	22C5	04	21			PRNTA1	LODI,R0	CR	
2359	22CA	2F	22	2F		LODA,R0		DOLFCR	
2360	22CD	30	24	C5		BSTA,EG		SENDIT	
2361	22D2	20				FORZ,R0			
2362	22E1	00	02	6F		TRA,R0		DOLFCR	
2363	22E4	24	22			LODI,R0		USINGL	
2364	22D6	08	A3			LODI,R1		USINGL	
2365	22E6	3F	46	57		BSTA,UN		LOCICP	
2366	22E8	10	43	14		BSTA,EG		PUSING	PRINT USING
2367	22D9	00	51	84		PRINT2	LODA,R0	*INCP	
2368	22E1	F4	2E			COMI,R0		S	
2369	22E7	10	2F	00		BCTA,EG		PRNTC3	
2370	22E6	3F	31	B6		BSTA,UN		CHICP	
2371	22E9	10	31	A3		BCTA,EG		NITLIN	
2372	22F0	3F	33	EF		BSTA,UN		EVAL	
2373	22F7	19	14			BCTR,GT		PRINT3	
2374	22F1	1A	0E			BCTR,LT		PRINT4	
2375	22F3	3F	23	29		BSTA,UN		PRNTF	
2376	22F6	1F	24	C0		BCTA,UN		PRNTD	
2377	22F9	05	FF			PRINT4	LODI,R1	FF	
2378	22FB	3B	15			BSTR,UN		PRNTS	
2379	22FD	1F	24	C0		BCTA,UN		PRNTD	
2380	2282	10	23	29		BCTA,EG		PRNTF	
2381	2283	1A	2D			BCTR,LT		PRNTS	
2382	2285	04	48			PRINT3	LODI,R0	TABLI1	
2383	2227	05	31			LODI,R1		TABLI1	
2384	2229	3F	45	F7		BSTA,UN		LOOKUP	
2385	222C	90	31	B1		BCTA,EG		SYNER	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2386	232F	1F	24	49		BCTA,UN		PRNTA1	
2387	2312					*			
2388	2312					*			
2389	2312	3F	30	R1		PRNTS	BSTA,UN	INCSP	
2390	2315	3F	30	B1			BSTA,UN	INCSP	
2391	2318	03					LOI2,R3		
2392	2319	02					STRZ,R2		
2393	231A	02				PRNTS2	LOI2,R2		
2394	231B	18	08			BCTR,EG		PRNTS3	
2395	231F	0E	10	D7		LODA,R2		*SP,-	
2396	2320	3F	24	C5		BSTA,UN		SENDIT	
2397	2323	F9	75			BDRR,R1		PRNTS2	
2398	2325	03				PRNTS3	LOI2,R3		
2399	2326	1F	30	2F		BCTA,UN		INCSP2	
2400	2329					*			
2401	2329					*			
2402	2329	3F	45	D9		PRNTF	BSTA,UN	POPC1	
2403	232C	00	13	52		LODA,R0		CBUF1-2	
2404	232F	3F	23	FB		BSTA,UN		PRMSGN	
2405	2332	3F	2B	D9		PRNTF1	BSTA,UN	CILEN	
2406	2335	00					LOI2,R0		
2407	2336	98	04			BCTP,EG		PRNTF2	
2408	2338	3F	24	C3		BSTA,UN		SEND0	
2409	233B	17				RETC,UN			
2410	233C	0E	13	50		PRNTF2	LODA,R2	CBUF1	
2411	233F	1A	1D			BCTR,LT		PRNTF3	
2412	2341	0D	13	51		LODA,R1		CBUF1-1	
2413	2344	F5	12			COMI,R1		10	
2414	2346	1D	27	9C		BCTA,GT		PRTEXP	
2415	2349	3F	20	11		PRNTF4	BSTA,UN	C1GET	
2416	234C	15				RETC,GT			
2417	234D	14				RETC,EG			
2418	234E	C3				STRZ,R3			
2419	234F	59	05			BRNR,R1		PT4A	
2420	2351	04	21			LODI,R0			
2421	2353	3F	24	C5		BSTA,UN		SENDIT	
2422	2356	A5	01			PT4A	SUBI,R1	1	
2423	2358	03					LOI2,R3		
2424	2359	3F	24	C3		BSTA,UN		SEND0	
2425	235C	1B	6F			BCTR,UN		PRNTF4	
2426	235E	0E	13	51		PRNTF3	LODA,R2	CBUF1-1	
2427	2361	F4	04			COMI,R0		A	
2428	2363	98	02			BCTR,EG		PT3A	
2429	2365	04	10			LODI,R0		10	
2430	2367	84	66			PT3A	ADDI,R0	66	
2431	2369	82					ADDZ,R2		
2432	236A	94				DAP,R0			
2433	236B	F4	12			COMI,R0		12	
2434	236D	15	1C			BCTR,GT		PRTEIF	
2435	236F	04	21			LODI,R0			
2436	2371	3F	24	C5		BSTA,UN		SENDIT	
2437	2374	0D	13	51		LODA,R1		CBUF1-1	
2438	2377	59	0A			PT3D	BRNR,R1	PT3B	
2439	2379	3F	20	11		PT3C	BSTA,UN	C1GET	
2440	237C	15				RETC,GT			

FILE BASIC107 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2441	2301	14					RETC,EQ		
2442	2302	2F	24	03			BSTA,UN	SEND0	
2443	2303	12	76				BCTR,UN	PT3C	
2444	2304	34	30			PT3E	LODI,R0	0	
2445	2305	2F	24	03			BSTA,UN	SENDIT	
2446	2306	45	01				SUBI,R1	1	
2447	2307	15	6E				BCTR,UN	PT3D	
2448	2308	15	20	11		PT3FYP	BSTA,UN	CIGET	
2449	2309	1F	24	03			BSTA,UN	SEND0	
2450	2310	2F	24	0F			LODA,R0	CMAX	
2451	2311	15	20	11			COMI,R0	1	
2452	2312	10	23	AF			BCTA,EQ	PRTE5	
2453	2313	24	0F				LODI,R0		
2454	2314	1F	24	03			BSTA,UN	SENDIT	
2455	2315	1F	20	11		PT3E2	BSTA,UN	CIGET	
2456	2316	2A	27				BCTR,LT	PRTE5	
2457	2317	24	30				IOBI,R0	0	
2458	2318	1F	24	03			BSTA,UN	SENDIT	
2459	2319	15	24				BCTR,UN	PRTE2	
2460	2320	24	4F			PRTE5	LODI,R0	1	
2461	2321	1F	24	03			BSTA,UN	SENDIT	
2462	2322	2F	13	50			LODA,R0	CBUF1	
2463	2323	1A	3F				BCTR,LT	PRTE6	
2464	2324	20	13	51			LODA,R0	CBUF1+1	
2465	2325	14	01				SUBI,R0	1	
2466	2326	24					DAR,R0		
2467	2327	14	09				COMI,R0	99	
2468	2328	2F	2F				BCTR,EQ	PRTE7	
2469	2329	24	30				LODI,R0	F0	
2470	2330	10	13	50			STRA,R0	CBUF1	
2471	2331	20	13	51		PRTE6	LODA,R0	CBUF1+1	
2472	2332	1A	39				COMI,R0	99	
2473	2333	15	25				BCTR,EQ	PRTE8	
2474	2334	24	07				ADDI,R0	07	
2475	2335	24					DAR,R0		
2476	2336	13	51			PRTE7	STRA,R0	CBUF1+1	
2477	2337	10	0F				BCTR,UN	PRTE9	
2478	2338	3F	23	FD		PRTE8	BSTA,UN	PRTM1	
2479	2339	24	2A				LODI,R0	*	
2480	2340	1F	24	03			BSTA,UN	SENDIT	
2481	2341	24	2A				LODI,R0	*	
2482	2342	2F	24	03			BSTA,UN	SENDIT	
2483	2343	17					RETC,UN		
2484	2344	20	13	52		PRTE9	LODA,R0	CBUF1	
2485	2345	3F	23	FE			BSTA,UN	PRTSGN	
2486	2346	20	13	51			LODA,R0	CBUF1+1	
2487	2347	01					STRZ,R2		
2488	2348	02					RRP,R0		
2489	2349	02					RRR,R0		
2490	2350	06					RRP,R0		
2491	2351	00					RRR,R0		
2492	2352	44	0F				ANDI,R0	F	
2493	2353	1F	24	03			BSTA,UN	SEND0	
2494	2354	02					LODZ,R2		
2495	2355	44	0F				ANDI,R0	F	

FILE BASIC107 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2496	2356	1F	24	03			BSTA,UN	SEND0	
2497	2357	17					RETC,UN		
2498	2358					*			
2499	2359					*			
2500	2360	18	25			PRTSGN	BCTR,EQ	PRTS2	
2501	2361	04	2D			PRTM1	LODI,R0	1	
2502	2362	1F	24	03			BCTA,UN	SENDIT	
2503	2402	24	00			PRTE2	LODI,R0		
2504	2404	1F	24	03			BCTA,UN	SENDIT	
2505	2407					*			
2506	2407					*			
2507	2407	22				ATSTG	RES	1	
2508	2428					*			
2509	2428					*			
2510	2428	3F	33	9F		PRNTAT	BSTA,UN	EVAL	
2511	2428	3F	2B	97			BSTA,UN	ENS1B	
2512	2421	15	10				COMI,R1	10	
2513	2410	13	45	74			BCTA,GT	OVFER	
2514	2413	21					LODZ,R1		
2515	2414	10	45	74			BCTA,EQ	OVFER	
2516	2417	A5	01				SUBI,R1	1	
2517	2419	0D	04	27			STRA,R1	ATSTG	
2518	2410	3F	46	49			BSTA,UN	SKPCOM	
2519	2417	3F	33	9F			BSTA,UN	EVAL	
2520	2422	3F	2B	97			BSTA,UN	ENS1B	
2521	2425	15	50				COMI,R1	50	
2522	2427	11	45	74			BCTA,GT	OVFER	
2523	242A	15	00				COMI,R1	0	
2524	242C	10	45	74			BCTA,EQ	OVFER	
2525	242F	A5	01				SUBI,R1	1	
2526	2431	11					RRL,R1		
2527	2432	77	08				PSSL	WC	
2528	2434	10					RRL,R0		
2529	2435	11					RRL,R1		
2530	2436	10					RRL,R0		
2531	2437	11					RRL,R1		
2532	2438	10					RRL,R0		
2533	2439	11					RRL,R1		
2534	243A	10					RRL,R0		
2535	243B	75	28				CPSL	WC	
2536	243D	04	10				IOBI,R0	10	
2537	243F	02					STRZ,R2		
2538	2440	6D	04	07			IOBA,R1	ATSTG	
2539	2443	3F	2D	F7			BSTA,UN	SETCUR	
2540	2446	1F	22	DE			BCTA,UN	PRINT2	
2541	2446					*			
2542	2449					*			
2543	2449	3F	33	9F		PRNTAB	BSTA,UN	EVAL	
2544	2440	3F	2B	97			BSTA,UN	ENS1B	
2545	2447	01					LODZ,R1		
2546	2450	02					STRZ,R2		
2547	2451	3F	24	A3			BSTA,UN	GITPOS	
2548	2454	12				TAB1	COMZ,R2		
2549	2455	9A	09				BCTR,GE	PRNTD	
2550	2457	03					STRZ,R3		

SUBI,R1 1 - 242A - A5 01
 BCTA,N OVFER - 242C - 1E 45 74
 CPSL 01 242F - 75 01

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FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2551	2458	04	70				LODI,R0		
2552	245A	3F	24	C5			BSTA,UN	SENDIT	
2553	2451	03					LOIZ,R3		
2554	2451	D8	74				BIRR,R0	TAB1	
2555	2460					*			
2556	2460					*			
2557	2460	3F	46	40		PRNTI	BSTA,UN	SKFSP	
2558	2463	73	31	16			BSTA,UN	CHICR	
2559	2466	10	A0	02			BCTA,EQ	*RTNADR	
2560	2469	E4	21				COMI,R0	!	
2561	246B	10	4F	3A			BCTA,EQ	SKPLIN	
2562	246E	E4	33				COMI,R0	!	
2563	2470	18	20				BCTR,EQ	PRNTD4	
2564	2472	E4	2C				COMI,R0	!	
2565	2474	90	31	31			BCFA,EC	SYNER	
2566	2477	3F	24	A3			BSTA,UN	GETPOS	
2567	247A	E4	40				COMI,R0	40	
2568	247C	19	11				BCTR,GT	PRNTD5	
2569	247E	01					STRZ,R1		
2570	247F	A5	01				SUBI,R1	1	
2571	2481	01				PRNTD6	LODZ,R1		
2572	2482	44	2F				ANDI,R0	F	
2573	2484	18	0C				BCTR,EQ	PRNTD4	
2574	2486	04	20				LODI,R0		
2575	2488	3F	24	C5			BSTA,UN	SENDIT	
2576	248B	05	01				ADII,R1	1	
2577	2481	13	72				BCTR,UN	PRNTD6	
2578	2481	31	2E	55		PRNTD5	BSTA,UN	LFCR	
2579	2482	3F	72	12		PRNTD4	BSTA,UN	SKPDEC	
2580	2485	3F	71	06			BSTA,UN	CHICR	
2581	2489	90	22	1E			BCFA,EC	PRINT2	
2582	248B	04	37			PRNTD6	LODI,R0	FF	
2583	249D	00	2C	3F			STPA,R0	DOLFCR	
2584	24A0	1F	31	A3			BCTA,UN	NXTLIN	
2585	24A3					*			
2586	24A3					*			
2587	24A3	2C	22	A0		GETPOS	LOIA,R0	PTYPE	
2588	24A6	18	24				BCTR,EQ	GETDIS	
2589	24A8	0C	02	41			LOIA,R0	LPOS	
2590	24AB	17					RETC,UN		
2591	24AC	0D	0E	C0		GETDIS	LODA,R1	CURSOR	
2592	24AF	0C	0E	08			LOIA,R0	CURSCR-1	
2593	24B2	77	08				PFSI	WC	
2594	24B4	51					RRR,R1		
2595	24B5	50					RRR,R0		
2596	24B6	51					RRR,R1		
2597	24B7	50					RRR,R0		
2598	24B8	51					RRR,R1		
2599	24B9	50					RRR,R0		
2600	24BA	51					RRR,R1		
2601	24BE	50					RRR,R0		
2602	24EC	44	7F				ANDI,R0	7F	
2603	24EE	75	08				CPSI	WC	
2604	24F0	04	01				ADII,R0	1	
2605	24C2	17					RETC,UN		

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2606	24C3					*			
2607	24C3					*			
2608	24C3	64	30			SEND0	IORI,R0	'0'	
2609	24C5	77	10			SENDIT	PFSI	RS	
2610	24C7	0C	02	A0			LOIA,R1	PTYPE	
2611	24CA	75	10				CPSI	RS	
2612	24CC	18	10				BCTR,EQ	SEND1	
2613	24CE	15	22				BCTR,GT	SEND3	
2614	24D0	E4	01				COMI,R0	CR	
2615	24D2	90	12				BCTR,EQ	SEND2	
2616	24D4	04	01				LODI,R0	1	
2617	24D6	0C	02	A1			STRA,R0	LPOS	
2618	24D9	04	01				LODI,R0	CP	
2619	24DB	1F	20	07			BCTA,UN	PRNT	
2620	24DE	E4	0D			SEND1	COMI,R0	CR	
2621	24E0	10	2E	55			BCTA,EC	LFCR	
2622	24E3	1F	2F	23			BCTA,UN	WRT	
2623	24E6	3F	20	07		SEND2	BSTA,UN	PRNT	
2624	24E9	0C	02	A1			LODA,R0	LPOS	
2625	24EC	E4	01				ADDI,R0	1	
2626	24EE	0C	02	A1			STRA,R0	LPOS	
2627	24F1	17					RETC,UN		
2628	24F2	77	10			SEND3	PFSI	RS	
2629	24F4	01	1E	9E			LODA,R1	TYP3SP	
2630	24F7	0D	3E	9F			STRA,R1	STR4S,+	
2631	24FA	0D	1E	9E			STRA,R1	TYP3SP	
2632	24FD	75	10				CPSI	RS	
2633	24FF	17					RETC,UN		
2634	2500					*			
2635	2500					*			
2636	2500	3F	31	FD		PRNTCT	BSTA,UN	INCPT	
2637	2503	3F	32	20			BSTA,UN	GETCHR	
2638	2506	E4	40				COMI,R0	40	
2639	2509	1E	45	74			BCTA,LT	OFFER	
2640	250B	E4	3F				COMI,R0	5F	
2641	250D	1E	45	74			BCTA,GT	OFFER	
2642	2510	44	1F				ANDI,R0	1F	
2643	2512	3F	24	C5			BSTA,UN	SENDIT	
2644	251F	1F	24	00			BCTA,UN	PRNTD	
2645	2518					*			
2646	2518					*			
2647	2518	00				ERRTYP	RES	1	
2648	2519					*			
2649	2519					*			
2650	2519	0C	06	34		DATERR	LODA,R0	ERWAIT	
2651	251C	10	33	2F			BCTA,EC	ERROR	
2652	251F	0F	77				STRR,R3	ERRTYP	
2653	2521	0F	11	85			LODA,R3	INPT+1	
2654	2524	3F	30	D9			BSTA,UN	DECSP	
2655	2527	0F	11	84			LODA,R3	INPT	
2656	252A	3F	30	D9			BSTA,UN	DECSP	
2657	252D	07	02				LODI,R3	2	
2658	252F	3F	30	D9			BSTA,UN	DECSP	
2659	2532	0C	06	32			LODA,R0	ERRTN	
2660	2535	0C	11	84			STRA,R0	INPT	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0661	253E	2C	06	33			LODA,R0	ERRTN+1	
0662	253F	7C	11	8F			STRA,R0	INPT+1	
0663	253E	1F	A0	92			ECTA,UN	*RTNADR	
0664	2541					*			
0665	2541					*			
0666	2541	27	02			*DNIE	LODI,R3	NDERR	
0667	2543	15	54				BCTR,UN	DATERR	
0668	2545	07	0A			RDTYPE	LODI,R3	TYPERR	
0669	2547	1F	5F				BCTR,UN	DATERR	
0670	2549					*			
0671	2549					*			
0672	2549	27	07			ONSTG	SFS	2	
0673	254B	24				INON	RES	1	
0674	254C					*			
0675	254C					*			
0676	254C	3F	33	9F		CN	BSTA,UN	EVAL	
0677	254F	3F	2B	8E			BSTA,UN	ENS	
0678	2552	C9	75				STRR,R1	ONSTG	
0679	2554	02					LODZ,R0		
0680	255F	9C	46	3A			BCTA,EC	SKFLIN	
0681	255B	01					LODZ,R1		
0682	255B	1C	46	3A			ECTA,EC	SKFLIN	
0683	255C	24	47				LODI,R0	ONTBL	
0684	255E	0F	FE				LODI,R1	ONTBL	
0685	2560	3F	45	F7			BSTA,UN	LOOKUP	
0686	256C	2C	31	B1			BCTA,EC	SYNER	
0687	256E	75	22				STRR,R1	ONSTG-1	
0688	256E	08	5F				LODZ,R1	ONSTG	
0689	256A	15	01			ON1	COMI,R1	1	
0690	256C	18	0F				BCTR,EC	ON2	
0691	256E	1F	32	25		ON1B	BSTA,UN	GETCHR	
0692	2571	3F	31	36			BSTA,UN	CHKCR	
0693	257A	1C	A0	92			ECTA,EC	*RTNADR	
0694	2577	F4	2C				COMI,R0		
0695	2578	08	73				BCTE,EC	ON1B	
0696	2579	F9	6D				PDERR,P1	ON1	
0697	257D	24	FF			ON2	LODI,R0	FF	
0698	257F	28	4A				STRR,R0	INON	
0699	2581	25	47				LODR,P1	ONSTG+1	
0700	2583	2D	65	92			LODA,R1	ONPTR,I	
0701	2585	2C	14	D4			STPA,R0	DODST	
0702	2588	2C	2F	92			LODA,R1	ONPTR,+	
0703	258C	2C	14	D5			STRA,R0	DODST+1	
0704	258F	1F	B4	D4			BCTA,UN	*DODST	
0705	2592					*			
0706	2592					*			
0707	2592	43	81	20	D6	ONPTR	ACON	GOTO,GOSUB,RESTOR.EXIT.ERRORC.RESUME	
0708	2595	21	07	25	F7				
0709	259A	26	3F	44	DA				
0710	259E					*			
0711	259E					*			
0712	259E	3F	33	9F		IF	BSTA,UN	EVAL	
0713	25A1	9C	46	3A			BCTA,EC	NOSTR	
0714	25A4	3F	45	DC			BSTA,UN	POPC1	
0715	25A7	0C	13	53			LODA,R0	CBUF1+3	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
0716	25AA	18	13				BCTR,EC	IFELSP	0=FALSE
0717	25AC	04	47				LODI,R0	IFTEL	
0718	25AF	0F	FF				LODI,R1	IFTEL	
0719	25B0	3F	45	F7			BSTA,UN	LOOKUP	
0720	25B3	98	04				BCTE,EC	IFTHEN	
0721	25B5	01					LODZ,R1		
0722	25B6	9C	31	B1			BCTA,EC	SYNER	
0723	25B9	3F	32	B3		IFTHEN	BSTA,UN	FNDLIN	
0724	25BC	1F	A0	92			BCTA,UN	*RTNADR	
0725	25BF	3F	32	28		IFELSE	BSTA,UN	GETCHR	
0726	25C2	F4	3A				COMI,R0		
0727	25C4	18	13				BCTR,EC	ELSE2	
0728	25C8	F4	0E				COMI,R0	OR	
0729	25C8	98	7F				BCTE,EC	IFELSE	
0730	25CA	3F	32	10			BSTA,UN	SKPDEC	
0731	25CD	04	47				LODI,R0	ELSTBL	
0732	25CF	0F	F6				LODI,R1	ELSTBL	
0733	25D1	3F	45	F7			BSTA,UN	LOOKUP	
0734	25D4	1E	A0	92			BCTA,LT	*RTNADR	
0735	25D7	1E	60				BCTR,UN	IFTHEN	
0736	25D9	3F	32	10		ELSE2	BSTA,UN	SKPDEC	
0737	25DC	04	47				LODI,R0	ELSTBL	
0738	25DE	0F	F6				LODI,R1	ELSTBL	
0739	25E0	3F	45	F7			BSTA,UN	LOOKUP	
0740	25E3	98	5A				BCTE,EC	IFELSE	
0741	25E5	1B	52				BCTR,UN	IFTHEN	
0742	25E7					*			
0743	25E7					*			
0744	25E7	2F	90	D7		EXIT	LODA,R3	*SP	
0745	25EA	F7	03				COMI,R3	3	
0746	25EC	9C	43	81			BCTA,EC	GOTO	
0747	25EF	06	17				LODI,R2	17	
0748	25F1	3F	30	B1		EXIT1	BSTA,UN	INCSP	
0749	25F4	FA	7B				BCTE,R2	EXIT1	
0750	25F6	1B	6F				BCTR,UN	EXIT	
0751	25F8					*			
0752	25F8					*			
0753	25F8	3F	33	9F		WAIT	BSTA,UN	EVAL	
0754	25FB	3F	2B	97			BSTA,UN	ENS1B	
0755	25FE	C9	26				STRR,R1	WAIT+1	
0756	2600	3F	46	48			BSTA,UN	SKPCOM	
0757	2603	3F	33	9F			BSTA,UN	EVAL	
0758	2606	3F	2B	97			BSTA,UN	ENS1B	
0759	2609	CD	13	4E			STRA,R1	CTEMP	
0760	260C	3F	32	10			BSTA,UN	SKPDEC	
0761	260F	F4	2C				COMI,R0		
0762	2611	98	0D				BCTE,EC	WAIT2	
0763	2613	3F	31	FD			BSTA,UN	INCPY	
0764	2615	3F	37	9F			BSTA,UN	EVAL	
0765	2618	1C	55				BCTR,GT	WAIT2	
0766	261B	3F	2B	97			BSTA,UN	ENS1B	
0767	261E	1B	02				BCTR,UN	WAIT3	
0768	2620	0F	00			WAIT2	LODI,R1	0	
0769	2622	CD	13	4F		WAIT3	STRA,R1	CTEMP+1	
0770	2625	54	00			WAIT4	REDE,R0	0	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2771	2627	00	13	4F			FORA,R0	CTEMP+1	
2772	262A	40	13	4E			ANDA,R0	CTEMP	
2773	262D	90	31	A3			BCFA,E0	NXTLIN	
2774	2630	1B	73				BCTR,UN	WAIT4	
2775	2632					*			
2776	2632					*			
2777	2637	27	00				ERRTN RES	2	
2778	2634	27					ERWAIT RES	1	
2779	2635					*			
2780	2635					*			
2781	2676	3F	32	B3		ERRORC	BSTA,UN	FNELIN	
2782	267A	1F	43	B7			BCTA,LT	LNFER	
2783	263B	13	14				PCTP,GT	ENF	
2784	2631	00	11	B4			LODA,R0	INPT	
2785	2642	00	70				STRR,R0	ERRTN	
2786	2642	00	11	B5			LODA,R0	INPT+1	
2787	2645	00	60				STRR,R0	ERRTN+1	
2788	2647	24	FF				LODI,R0	FF	
2789	2649	00	60				STRR,R0	E WAIT	
2790	264B	3F	31	B1			BSTA,UN	CRINFT	
2791	264F	1F	31	06			BCTA,UN	CKNXTL	
2792	2651	20				ENF	FORZ,R0		
2793	2652	00	60				STRR,R0	ERWAIT	
2794	2654	1F	31	06			BCTA,UN	CKNXTL	
2795	2657					*			
2796	2657					*			
2797	2657	3F	35	77		IEF	BSTA,UN	LOKVAR	
2798	265A	90	4E	80			BCFA,GT	ADER	
2799	265F	3F	30	10			BCTA,UN	GETNA	
2800	2662	FF	FF				COMI,R1	FF	
2801	2669	10	31	B1			BCTA,EQ	SINER	
2802	2666	14	00				COMI,R0	(
2803	2667	00	31	B1			BCFA,EQ	SINER	
2804	266A	26	70				LODI,R2	2	
2805	266C	07	24				LODI,R3	4	
2806	266E	1F	2A	1D			BSTA,UN	GCSUB	
2807	2671	00	11	B4			LODA,R0	INPT	
2808	2677	1F	37	A7			BSTA,UN	PSHOP1	
2809	2677	00	11	B5			LODA,R0	INPT+1	
2810	267A	3F	30	A7			BSTA,UN	PSHOP1	
2811	267D	3F	00	CD			BSTA,UN	PSHEND	
2812	2680	1F	40	3A			BCTA,UN	SKFLIN	
2813	2683					*			
2814	2683					*			
2815	2683	3F	35	77		DIM	BSTA,UN	LOKVAR	
2816	2686	90	4E	80			BCFA,GT	ADER	
2817	2686	24	FF				LODI,R0	FF	
2818	268B	00	2A	3C			STRA,R0	GCDIMS	
2819	268E	3F	70	70			BSTA,UN	GCV	
2820	2691	10	40	80			BCTA,GT	ARGER	
2821	2694	3F	32	10			BSTA,UN	SKPDEC	
2822	2697	14	20				COMI,R0	'	
2823	2699	90	31	A3			BCFA,EQ	NXTLIN	
2824	269C	3F	31	FD			BSTA,UN	INCPY	
2825	269F	10	62				BCTR,UN	DIM	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2826	26A1					*			
2827	26A1					*			
2828	26A1					CMSTRS	RES	100	
2829	27A1					*			
2830	27A1	00	00			INSTG	RES	2	
2831	27A3					*			
2832	27A3					*			
2833	27A3	2F	22	9F		INPUT	LODA,R3	DOLFCR	
2834	27A6	30	2E	FF			BSTA,EQ	LFCR	
2835	27A9	20					FORZ,R0		
2836	27AA	00	02	9F			STRA,R0	DOLFCR	
2837	27AD	3F	40	40			BSTA,UN	SKPSP	
2838	27B0	3F	31	B0			BSTA,UN	CHECR	
2839	27B3	90	00				BCFR,EQ	INPUTA	
2840	27B5	3F	21	E2			BSTA,UN	PAUSE	
2841	27B8	14	10				COMI,R0	ESC	
2842	27BA	10	40	A0			BCTA,EQ	OPTION	
2843	27BD	1F	A0	92			BCTA,UN	*INADR	
2844	27C0	14	22			INPUTA	COMI,R0		
2845	27C2	90	00				BCFR,EQ	INPUT1	
2846	27C4	00	51	B4		INPUT2	LODA,R0	*INPT	
2847	27C7	1F	31	E1			BCTA,LT	SINER	
2848	27CA	3F	31	FD			BSTA,UN	INCPY	
2849	27CD	14	00				COMI,R0	CR	
2850	27CF	10	31	B1			BCTA,EQ	SINER	
2851	27D2	14	0A				COMI,R0	LF	
2852	27D4	10	31	B1			BCTA,EQ	SINER	
2853	27D7	14	22				COMI,R0	'	
2854	27D9	90	0A				BCFR,EQ	INPUT2	
2855	27DB	3F	40	40			BSTA,UN	SKPSP	
2856	27DE	14	30				COMI,R0	'	
2857	27E0	90	31	B1			BCFA,EQ	SINER	
2858	27E3	1F	00				BCTR,UN	INPUT3	
2859	27E5	3F	2E	23		INPUT2	BSTA,UN	WRT	
2860	27E8	10	5A				BCTR,UN	INPUT0	
2861	27EA	3F	32	13		INPUT1	BSTA,UN	DECPY	
2862	27EI	04	3F				LODI,R0	'	
2863	27EF	3F	2E	23			BSTA,UN	WRT	
2864	27F2	3F	2E	21		INPUT3	BSTA,UN	WRBL	
2865	27F5	3F	31	B0			BSTA,UN	CSINFT	
2866	27F8	3F	32	7F		INPT3A	BSTA,UN	AROWCR	
2867	27FB	3F	70	81			BSTA,UN	SWTCH	
2868	27FE	3F	29	6F		INPNIT	BSTA,UN	GCVAR	
2869	2801	1A	10				BCTR,LT	INPSTR	
2870	2803	10	20				BCTR,EQ	INFPPT	
2871	2805	1F	31	A3			BCTA,UN	NXTLIN	
2872	2809	3F	30	FF		INFPFT	BSTA,UN	STRCT	
2873	280B	3F	70	81			BSTA,UN	SWTCH	
2874	280E	3F	37	0F			BSTA,UN	EVAL	
2875	2811	90	20	70			BCFA,EQ	INPERR	
2876	2814	3F	2E	10			BSTA,UN	POPCT	
2877	2817	10	37				BCTR,UN	INPDEL	
2878	2819	3F	30	6E		INPSTR	BSTA,UN	STRCT	
2879	281C	3F	2F	E7			BSTA,UN	ZSTR	
2880	281F	3F	70	81			BSTA,UN	SWTCH	

FILE BASIC10 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2881	2822	3F	3E	10			BSTA.UN	SKPDEC	
2882	2825	E4	22				COMI.R0		
2883	2827	18	27				BCTR.EQ	INPST2	
2884	2828	26	FF				LODI.R2	IF	
2885	2829	20	21	E4		INFST0	LODA.R0	*INFT	
2886	2831	34	21				COMI.R0	CR	
2887	2832	16	12				BCTR.EQ	INPST1	
2888	2832	16	14				COMI.R0	IF	
2889	2834	18	10				BCTR.EQ	INPST1	
2890	2835	1A	11				COMI.R0		
2891	2836	18	28				BCTR.EQ	INPST1	
2892	283A	2F	28	A1			STRA.R2	CMSTRS.-	
2893	283D	3F	31	FD			BSTA.UN	INCF	
2894	2842	18	20				BCTR.UN	INPST0	
2895	2842	A6	21			INFST1	ADDI.R2	1	
2896	2844	04	26				LODI.R0	CMSTRS	
2897	2846	2F	A1				LODI.R1	CMSTRS	
2898	2848	31	32	F2			BSTA.UN	PUSHST	
2899	2848	3F	2B	32			BSTA.UN	STRING	
2900	284F	1B	28				BCTR.UN	INPDEL	
2901	2852	33	33	2F		INFST2	BSTA.UN	EVAL	
2902	2853	0A	21				BCTR.LT	INPERR	
2903	2856	3F	2B	32			BSTA.UN	STRING	
2904	2858	2F	2B	21		INPDEL	BSTA.UN	SWITCH	
2905	285B	3F	30	12			BSTA.UN	SKPDEC	
2906	285E	E4	21				COMI.R2		
2907	2867	8C	31	A3			BCTA.EQ	NXTLIN	
2908	286C	3F	31	12			BSTA.UN	INCF	
2909	286E	31	28	21			BSTA.UN	SWITCH	
2910	286E	3F	30	42			BSTA.UN	SKPSP	
2911	2870	E4	21				COMI.R2		
2912	2871	06	20				BCTR.EQ	INPERR	
2913	2872	3F	2B	21			BSTA.UN	SWITCH	
2914	2873	1F	27	FF			BCTA.UN	INPNIT	
2915	2876	3A	31	21		INPERR	BSTA.UN	CRINFT	
2916	287C	07	24				LODI.R3	WRTMSG	
2917	287B	3F	2B	27			BSTA.UN	WRTMCR	
2918	287F	1F	27	FB			BCTA.UN	INFT3A	
2919	2881					*			
2920	2881					*			
2921	2881	0C	12	A6		SWITCH	LODA.R0	BTEMP	
2922	2884	2F	11	E4			LODA.R1	INFT	
2923	2887	20	11	E4			STRA.R0	INFT	
2924	288A	2D	12	A6			STRA.R1	BTEMP	
2925	288C	2C	11	A7			LODA.R0	BTEMP+1	
2926	288E	21	11	26			LODA.R1	INFT-1	
2927	288B	2C	11	26			STRA.R0	INFT-1	
2928	288E	21	12	A7			STRA.R1	BTEMP+1	
2929	2889	17					RETC.UN		
2930	288A					*			
2931	288A					*			
2932	288A	3F	A2			RBUFP	ACON	RBUF	
2933	288C					*			
2934	288C					*			
2935	289C	2C	21	FD		RANDOM	LODA.R0	NEWSID	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2936	289F	CC	08	5A			STRA.R0	*RBUFP	
2937	28A2	1F	31	A3			BCTA.UN	NXTLIN	
2938	28A5					*			
2939	28A5					*			
2940	28A5	00	02	00	00	MIDSTG	RES	7	
2941	28A5	00	02	00	00				
2942	28A5					*			
2943	28A5					*			
2944	28AC	3F	29	2E		MID5	BSTA.UN	CCVAR	
2945	28AF	9F	45	34			BCTA.LT	NOSTR	
2946	28B2	3F	32	2E			BSTA.UN	STRICT	
2947	28B5	26	23				LODI.R2	3	
2948	28B7	27	25				LODI.R3	5	
2949	28B9	0F	17	4E		MID1	LODA.R2	*CTEMP.-	
2950	28BC	0F	48	A5			STRA.R3	MIDSTG.-	
2951	28BF	5A	79				BRNR.R2	MID1	
2952	28C1	3F	46	48			BSTA.UN	SKPCOM	
2953	28C4	3F	33	9F			BSTA.UN	EVAL	
2954	28C7	3F	2B	27			BSTA.UN	ENS1B	
2955	28CA	01					LODZ.R1		
2956	28CB	1C	45	74			BCTA.EQ	OVFER	
2957	28CE	08	56				STRA.R1	MIDSTG	
2958	28D0	26	FF				LODI.R1	FF	
2959	28D2	3F	46	40			BSTA.UN	SKPSP	
2960	28D5	E4	29				COMI.R0		
2961	28D7	18	13				BCTR.EQ	MID2	
2962	28D9	E4	2C				COMI.R2		
2963	28DB	8C	31	51			BCTA.EQ	SYNER	
2964	28DE	3F	33	9F			BSTA.UN	EVAL	
2965	28E1	3F	2B	27			BSTA.UN	ENS1B	
2966	28E4	3F	46	40			BSTA.UN	SKPSP	
2967	28E7	E4	29				COMI.R0		
2968	28E9	9C	31	51			BCTA.EQ	SYNER	
2969	28EC	3F	46	50		MID2	BSTA.UN	SKPEQ	
2970	28EF	2D	28	A6			STRA.R1	MIDSTG-1	
2971	28F0	3F	33	9F			BSTA.UN	EVAL	
2972	28F6	0F	46	74			BCTA.LT	NOSTR	
2973	28F6	3F	30	51			BSTA.UN	INCSF	
2974	28FB	3F	30	51			BSTA.UN	INCSF	
2975	28FE	01	08	A6			LODA.R1	MIDSTG+4	
2976	2901	1C	29	50			BCTA.EQ	MID77	
2977	2904	06	FF				LODI.R2	77	
2978	2906	2F	A8	A7		MID3	LODA.R2	*MIDSTG-2.-	
2979	2909	0F	66	A1			STRA.R2	CMSTRS.I	
2980	290C	F9	76				BRNR.R1	MID3	
2981	290E	0C	08	A5			LODA.R0	MIDSTG+4	
2982	2911	1C	08	A5			COMA.R0	MIDSTG	
2983	2914	1E	29	50			BCTA.LT	MID77	
2984	2917	AC	08	A5			SUBA.R0	MIDSTG	
2985	291A	84	31				ADDI.R0	1	
2986	291C	0C	28	AA			STRA.R0	MIDSTG-5	
2987	291F	0E	08	A5			LODA.R2	MIDSTG	
2988	2922	A6	01				SUBI.R2	1	
2989	2924	01	08	A6			LODA.R1	MIDSTG+1	
2990	2927	1C	29	50			BCTA.EQ	MID77	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2091	202A	07	7E	AE			STRA,R3	MIDSTG-6	
2092	202D	07	20		MID4		COMI,R3	0	
2093	202F	18	0F				BCTR,EQ	MID5	
2094	2031	0F	10	D7			LODA,R3	*SP,-	
2095	2034	01	5F	A1			STRA,R2	CMSTRS,I	
2096	2037	06	01				ADDI,R2	1	
2097	2039	31	20	A9			COMA,R2	MIDSTG-4	
2098	203C	18	07				BCTR,EQ	MID5	
2099	203E	0F	0D				BDRR,R1	MID4	
2100	2040	01	02	A9	MID5		LODA,R1	MIDSTG-4	
2101	2043	25	FF				LODI,R2	FF	
2102	2045	2F	26	A1	*MID6		LODA,R2	CMSTRS,+	
2103	2048	01	08	A7			STRA,R2	*MIDSTG-2.I	
2104	204B	06	78				BDRR,R1	MID6	
2105	204D	0F	08	AB			LODA,R3	MIDSTG-6	
2106	2050	03			*MID77		LODZ,R3		
2107	2051	21	30	B5			BSTA,UN	INCSF2	
2108	2054	1F	31	A3			BCTA,UN	NXTLIN	
2109	2057				*				
2110	2057				*				
2111	2057	30	1F	72	GCSFND	LODA,R0	LTEMP		
2112	205A	2D	15	73		LODA,R1	LTEMP-1		
2113	205D	A5	72			SUBI,R1	2		
2114	205F	77	05			FFSL	WC		
2115	2061	A4	20			SUBI,R0	0		
2116	2063	73	03			CPSL	WC		
2117	2065	07	FF			LODI,R3	FF		
2118	2067	17				RETC,UN			
2119	206A				*				
2120	206B				*				
2121	206B	07	02	30	20	NAME	RES	4	
2122	206C	02	02		GCSAV	RES		2	
2123	206E				*				
2124	206E				*				
2125	206E	07			GCVAR	FORZ,R0			
2126	206F	0C	0A	3C		STRA,R0	GCFIMS		
2127	2072	3F	3F	77		BSTA,UN	LOKVAR		
2128	2075	14				RETC,EQ			
2129	2076	1A	5F			BCTR,LT	GCSFND		
2130	2078	0C	11	84	GCV	LODA,R0	INPT		
2131	207B	0E	6F			STRP,R0	GCSAV		
2132	207D	0C	11	85		LODA,R0	INPT+1		
2133	207F	38	0F			STRR,R0	GCSAV+1		
2134	2082	3F	29	F0		BSTA,UN	GETNA		
2135	2085	05	FF		GCV2	COMI,R1	FF		
2136	2087	1C	46	59		BCTA,EC	RETNGT		
2137	208A	14	24			COMI,R0	'4'		
2138	208C	10	2A	2A		BCTA,EC	GCTSTR		
2139	208F	14	28			COMI,R0	'('		
2140	2091	10	2A	3D		BCTA,EC	GCDIM		
2141	2094	3F	32	13		BSTA,UN	DEOPT		
2142	2097	06	08			LODI,R2	0		
2143	2099	07	02			LODI,R3	0		
2144	209B	3F	2A	1D	GCV3	BSTA,UN	GCSUB		
2145	209F	23			GCV6	FORZ,R0			

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1246	299F	16	07				COMI,R2	7	
1247	29A1	1A	08				BCTR,LT	GCNT	
1248	29A3	18	04				BCTR,EQ	GC7	
1249	29A5	04	30				LODI,R0	F0	
1250	29A7	12	02				BCTR,UN	GCNT	
1251	29A9	04	09				LODI,R0	99	
1252	29AB	3F	30	A7	GC7		BSTA,UN	PSHOP1	
1253	29AE	7A	61				BDRR,R2	GCV6	
1254	29B0	3F	29	0D			BSTA,UN	PSHEND	
1255	29B3	20					FORZ,R0		
1256	29B4	3F	30	A7			BSTA,UN	PSHOP1	
1257	29B7	2C	10	96			LODA,R0	OP2	
1258	29BA	0D	10	97			LODA,R1	OP2+1	
1259	29BD	05	05				ADDI,R1	5	
1260	29BF	77	06				FFSL	WC	
1261	29C1	84	00				ADDI,R0	0	
1262	29C3	75	08				CPSL	WC	
1263	29C5	06	00				LODI,R2	0	
1264	29C7	17	00				COMI,R3	0	
1265	29C9	14					RETC,EQ		
1266	29CA	07	FF				LODI,R3	FF	
1267	29CC	17					RETC,UN		
1268	29CD				*				
1269	29CD				*				
1270	29CD	0C	10	7A	PSHEND	LODA,R0	OP1		
1271	29D0	0C	02	0A		STRA,R0	TABEND		
1272	29D3	3F	30	AC		BSTA,UN	PSHOP2		
1273	29D6	0C	10	7B		LODA,R0	OP1+1		
1274	29D9	0C	00	0B		STRA,R0	TABEND+1		
1275	29DB	3F	30	AC		BSTA,UN	PSHOP2		
1276	29DF	17				RETC,UN			
1277	29E0				*				
1278	29E0				*				
1279	29E2	0C	00	0A	GETNA	LODA,R0	TABEND		
1280	29E3	0D	00	0B		LODA,R1	TABEND-1		
1281	29E6	1F	30	75		BSTA,UN	STROP1		
1282	29E9	3F	30	91		BSTA,UN	STROP2		
1283	29FC	05	04			LODI,R1	4		
1284	29FE	20				FORZ,R0			
1285	29FF	01	49	60	GCV1	STRA,R1	NAME,-		
1286	29F2	59	7B			FRNR,R1	GCV1		
1287	29F4	05	FF			LODI,R1	FF		
1288	29F6	3F	32	28	GCV3	BSTA,UN	GETCHR		
1289	29F9	2F	45	3C		BSTA,UN	CHKAN		
1290	29FC	16				RETC,LT			
1291	29FD	15				RETC,GT			
1292	29FE	85	01			ADDI,R1	1		
1293	2A00	1F	03			COMI,R1	3		
1294	2A02	11	45	80		BCTA,GT	ARGEN		
1295	2A05	0D	69	58		STRA,R1	NAME.I		
1296	2A08	1F	6C			BCTR,UN	GCV3		
1297	2A0A				*				
1298	2A0A				*				
1299	2A0A	3F	32	28	GCTSTR	BSTA,UN	GETCHR		
1300	2A0E	07	02			LODI,R3	2		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1101	2A2F	E4	28				COMI,R0	'('	
1102	2A11	18	2C				BCTR,EQ	GCDSTR	
1103	2A13	3F	32	13			BSTA,UN	DECP1	
1104	2A16	06	03				LODI,R2	3	
1105	2A18	07	21				LODI,R3	1	
1106	2A1A	17	29	9B			BCTA,UN	GCV5	
1107	2A11					*			
1108	2A1D					*			
1109	2A11	28				GCSUB	FOR2,R0		
1110	2A13	3F	32	A7			BSTA,UN	PSHCP1	
1111	2A11	3F	32	A7			BSTA,UN	PSHOP1	
1112	2A24	23					LODZ,R3		
1113	2A25	3F	32	A7			BSTA,UN	PSHOP1	
1114	2A26	0F	FF				LODI,R1	FF	
1115	2A2A	0D	29	6F		GCV5	LCDA,R1	NAME,-	
1116	2A2D	3F	32	A7			BSTA,UN	PSHOP1	
1117	2A2D	1F	03				COMI,R1	3	
1118	2A22	9B	76				BCTR,EQ	GCV5	
1119	2A24	17					RETC,UN		
1120	2A25					*			
1121	2A25					*			
1122	2A28	00	27	20	00	GCLN	RES	6	
1123	2A29	02	00						
1124	2A2B	00				GCTYPE	RES	1	
1125	2A2C	20				GCDIMS	RES	1	
1126	2A2D					*			
1127	2A2E					*			
1128	2A31	27	03			GCDIM	LODI,R3	3	
1129	2A31	0F	2A	1D		GCISTR	STRA,R3	GCTYPE	
1130	2A32	3F	32	1D			BSTA,UN	GCSUB	
1131	2A35	00					FOR2,R0		
1132	2A45	00	0A	3F			STRA,R0	GCLN	
1133	2A46	00	0A	70			STRA,R2	GCLN+2	
1134	2A4C	24	21				LODI,R0	1	
1135	2A4E	00	2A	36			STRA,R0	GCLN-1	
1136	2A51	00	10	7A			LCDA,R0	OP1	
1137	2A54	00	0A	36			STRA,R0	GCLN+3	
1138	2A57	00	10	7A			LCDA,R0	OP1-1	
1139	2A5A	00	0A	36			STRA,R0	GCLN+4	
1140	2A5D	3F	32	7C			BSTA,UN	INCOPI	SKIP 1 BYTE # OF DIMS
1141	2A60	3F	32	9F		GCD4	BSTA,UN	EVAL	
1142	2A63	11	2A	AC			BCTA,GT	GCD2	
1143	2A66	3F	32	97			BSTA,UN	ENS1B	
1144	2A69	01					LODZ,R1		
1145	2A6A	10	45	64			BCTA,EQ	DIMER	
1146	2A6D	1F	0A				COMI,R1	A	
1147	2A6F	18	07				BCTR,GT	GCD3	
1148	2A71	0F	2A	3C			LCDA,R3	GCDIMS	
1149	2A74	1A	02				BCTR,LT	GCD3	
1150	2A76	24	0A				LODI,R0	A	DEFAULT TO 10
1151	2A78	03				GCD3	STRZ,R3		
1152	2A79	3F	32	A7			BSTA,UN	PSHOP1	
1153	2A7C	00	0A	37			LCDA,R0	GCLN+2	
1154	2A7F	04	01				ADDI,R2	1	
1155	2A81	00	0A	37			STRA,R0	GCLN+2	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1156	2A84	2C	0A	35			LCDA,R0	GCLFN	
1157	2A87	00	0A	36			LCDA,R1	GCLN+1	
1158	2A8A	51	0A	76		GCD3B	ADDA,R1	GCLN+1	
1159	2A8D	77	0B				PSSL	WC	
1160	2A8F	0C	0A	35			ADDA,R0	GCLN	
1161	2A92	75	0E				CPSL	WC	
1162	2A94	05	01				TSSL	CRY	
1163	2A96	10	45	64			BCTA,EQ	DIMER	
1164	2A99	FF	6F				BDRR,R3	GCD3B	
1165	2A9B	00	0A	35			STRA,R0	GCLN	
1166	2A95	01	0A	36			STRA,R1	GCLN+1	
1167	2AA1	3F	46	40			BSTA,UN	SKPSP	
1168	2AA4	14	2C				COMI,R0	'.'	
1169	2AA6	10	2A	60			BCTA,EQ	GCD4	
1170	2AA9	3F	32	13			BSTA,UN	DECP1	
1171	2AAC	00	0A	37		GCD2	LCDA,R0	GCLN+2	
1172	2AAF	10	45	64			BCTA,EQ	DIMER	
1173	2AB2	00	0A	38			STRA,R0	*GCLN+3	STORE # OF DIMS
1174	2AB5	3F	32	28			BSTA,UN	GETCHR	
1175	2AB8	E4	29				COMI,R0	'('	
1176	2ABA	9C	31	31			BCTA,EQ	SYNER	
1177	2ABD	0C	0A	3E			LCDA,R0	GCTYPE	
1178	2AC0	14	02				COMI,R2	2	
1179	2AC2	18	04				BCTR,EQ	GCD5	
1180	2AC4	07	0B				LODI,R3	8	
1181	2AC6	13	02				BCTR,UN	GCD6	
1182	2AC8	07	03			GCD5	LODI,R3	3	
1183	2ACA	0F	0A	3F		GCD6	STRA,R3	GCTYPE	
1184	2ACT	2F	0A	3E		GCD7	LCDA,R3	GCTYPE	
1185	2AD0	20				GCD8	FORZ,R0		
1186	2AD1	E7	07				COMI,R3	7	
1187	2AD3	1A	0B				BCTR,LT	GCDNT	
1188	2AD5	18	04				BCTR,EQ	GCDQ7	
1189	2AD7	04	F0				LODI,R0	F0	
1190	2AD9	13	02				BCTR,UN	GCDNT	
1191	2ADB	04	99			GCDQ7	LODI,R0	99	
1192	2ADD	3F	30	A7		GCDNT	BSTA,UN	PSHOP1	
1193	2AE2	FF	6F				BDRR,R3	GCD8	
1194	2AE2	0C	0A	35			LCDA,R0	GCLN	
1195	2AE5	0D	0A	36			LCDA,R1	GCLN+1	
1196	2AE8	A5	01				SUBI,R1	1	
1197	2AEA	77	0B				PSSL	WC	
1198	2AEC	A4	00				SUBI,R0	0	
1199	2AE1	75	0B				CPSL	WC	
1200	2AF0	0C	0A	35			STRA,R0	GCLN	
1201	2AF3	0D	0A	36			STRA,R1	GCLN+1	
1202	2AF6	00					LODZ,R0		
1203	2AF7	9B	*4				BCTR,EQ	GCD7	
1204	2AF9	01					LODZ,R1		
1205	2AFA	9B	51				BCTR,EQ	GCD7	
1206	2AFC	0C	10	7A			LCDA,R0	OP1	
1207	2AF1	00	0A				STRA,R0	TABEND	
1208	2B02	3F	30	AC			BSTA,UN	PSHOP2	
1209	2B05	0C	00	7B			LCDA,R0	OP1-1	
1210	2B08	0C	00	0B			STRA,R0	TABEND+1	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1211	2B0F	3F	30	AC			BSTA,UN	PSHCP2	
1212	2B01	20					EORZ,R0		
1213	2B0F	3F	30	A7			BSTA,UN	PSHOP1	
1214	2B12	20	20	6C			LODA,R0	GCSAV	
1215	2B15	00	11	84			STRA,R0	INPT	
1216	2B15	20	00	6D			LODA,R0	GCSAV+1	
1217	2B1F	00	11	85			STRA,R0	INPT+1	
1218	2B1F	1F	35	77			BCTA,UN	LOKVAR	
1219	2F21					*			
1220	2F21					*			
1221	2F21	00	13	4F		CTOS	LODA,R0	CTEMP	
1222	2F24	08	2A				STRR,R0	STMP+4	
1223	2F26	00	13	4F			LODA,R0	CTEMP+1	
1224	2F26	08	26				STRR,R0	STMP+5	
1225	2F2B	17					RETC,UN		
1226	2F20					*			
1227	2F23					*			
1228	2F20	00	00	20	20	STMP	RES	6	
1229	2B30	00	20						
1230	2F32					*			
1231	2F32					*			
1232	2B32	3B	6D			STRING	BSTR,UN	CTOS	
1233	2B34	3F	30	B1		STRG	BSTA,UN	INCSP	
1234	2B37	3F	30	B1			BSTA,UN	INCSP	
1235	2F3A	23					LODZ,R3		
1236	2F3B	C2					STRZ,R2		
1237	2B3C	C1					STRZ,R1		
1238	2F3D	00	07	04			LODA,R0	IBST	
1239	2F42	08	60				STRR,R0	STMP+2	
1240	2F42	20					EORZ,R0		
1241	2F43	08	6A				STRR,R0	STMP+3	
1242	2F4F	C3					STRZ,R3		
1243	2F46	12					COMZ,R2		
1244	2B47	10	2B	8F			BCTA,EQ	STR8	
1245	2B4A	02	62			STR1	LOLR,R0	STMP+2	
1246	2F4C	0E	5F				STRR,R0	STMP	
1247	2F4E	08	5D				STRR,R3	STMP+1	
1248	2B50	0F	1B	2E		STR2	LODA,R3	*STMP+2.1	
1249	2F53	07	01				ADDI,R3	1	
1250	2B55	08	10				BCFR,EQ	STR6	
1251	2F57	05	65				LOLR,R0	STMP+2	
1252	2B59	84	01				ADDI,R0	1	
1253	2F5B	08	51				STRR,R0	STMP+2	
1254	2B5E	10	00	25			COMA,R0	VARST	
1255	2B50	1A	0F				BCTR,LT	STR6	
1256	2B62	07	0F				LODI,R3	STRERR	
1257	2B64	1F	33	2E			BCTA,UN	ERROR	
1258	2B67	02				STR6	LODZ,R0		
1259	2B68	96	20				BCFR,EQ	STR3	
1260	2B6A	FA	64				BDRR,R2	STR2	
1261	2B6C	07	00			STR4	LODI,R3	0	
1262	2B6E	00	0F	2C			LODA,R0	STMP	
1263	2B71	00	8B	30			STRA,R0	*STMP+4	
1264	2B74	00	0B	2D			LODA,R0	STMP+1	
1265	2B77	CF	AF	30			STRA,R3	*STMP+4,+	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1266	2B7A	01					LODZ,R1		
1267	2B7D	CF	AF	30			STRA,R3	*STMP+4,+	
1268	2B7E	01					LODZ,R1		
1269	2B7F	14					RETC,EQ		
1270	2B80	3F	30	B1		STRC5	BSTA,UN	INCSP	
1271	2B83	03					LODZ,R3		
1272	2B84	01	0B	2C			STRA,R1	*STMP,-	
1273	2B87	59	77				BRNR,R1	STRC5	
1274	2B89	17					RETC,UN		
1275	2B8A	01				STR3	LODZ,R1		
1276	2B8E	C2					STRZ,R2		
1277	2B8C	1F	2B	4A			BCTA,UN	STR1	
1278	2B8F	06	03			STR2	LODI,R2	3	
1279	2B91	0E	0E	30		STR8A	STRA,R2	*STMP+4,-	
1280	2B94	5A	7B				BRNR,R2	STR8A	
1281	2B96	17					RETC,UN		
1282	2B97					*			
1283	2B97					*			
1284	2B97	3B	05			ENS1B	BSTR,UN	ENS	
1285	2B99	00					LODZ,R0		
1286	2B9A	9C	4F	74			BCFA,EQ	CVFER	
1287	2B9D	17					RETC,UN		
1288	2B9E					*			
1289	2B9E					*			
1290	2B9E	9C	4F	34		ENS	BCFA,EQ	NOSTR	
1291	2BA1	3F	45	D9		ENS2	BSTA,UN	POPC1	
1292	2BA4	20				DT0B	EORZ,R0		
1293	2BAE	C1					STRZ,R1		
1294	2BA6	0F	13	50			LODA,R3	CBUF1	
1295	2BA9	16					RETC,LT		
1296	2BAA	0F	13	52			LODA,R3	CBUF1+2	
1297	2BAD	16					RETC,LT		
1298	2BAF	0F	13	53			LODA,R3	CBUF1+3	
1299	2BB1	14					RETC,EQ		
1300	2BB2	00	13	51			LODA,R0	CBUF1+1	
1301	2BB5	00	00	0F			STRA,R0	CMAI	
1302	2BB8	20					EORZ,R0		
1303	2BB9	00	00	10			TRA,R0	CPTR	
1304	2BBC	C1					STRZ,R1		
1305	2BBD	C3				DT0B1	STRZ,R3		
1306	2BBE	3F	20	11			BSTA,UN	C1GET	
1307	2BC1	1F					RETC,GT		
1308	2BC2	14					RETC,EQ		
1309	2BC3	C2					STRZ,R2		
1310	2BC4	03					LODZ,R3		
1311	2BCF	3F	44	F3			BSTA,UN	X10	
1312	2BC8	C3					STRZ,R3		
1313	2BC9	01					LODZ,R1		
1314	2BCA	82					ADDZ,R2		
1315	2BCB	C1					STRZ,R1		
1316	2BC0	77	08				PPSL	WC	
1317	2BCE	20					EORZ,R0		
1318	2BCF	03					ADDZ,R3		
1319	2BD0	7F	08				CPSL	WC	
1320	2BD2	B5	01				TPSL	CRY	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1321	2ED4	13	45	74			BCTA,EO	CVFER	
1322	2ED7	1F	64				BCTR,UN	DTOP1	
1323	2ED9								
1324	2ED9								
1325	2ED9	06	06			CILEN	LODI,R2	8	
1326	2ED9	27	00				LODI,R3	0	
1327	2EDD	0F	31				STRR,R3	CFTR	
1328	2EDF	01	53	50		C1IFN1	LODI,R2	CBUF1,-	
1329	2ED9	14	28				BCTR,EO	CILEN2	
1332	2ED4	44	0F				ANDI,R0	F	
1331	2ED6	05	0A				BCFR,EO	CILEN3	
1332	2ED8	P2	01				ADDI,R3	1	
1333	2ED8	12	06				BCTR,UN	CILEN3	
1334	2EDC	07	02			CILEN2	ADDI,R3	2	
1335	2ED8	17	0A				COMI,R3	A	
1336	2ED0	08	0D				BCFR,EO	CILEN1	
1337	2ED2	04	0A			CILEN3	LODI,R2	A	
1338	2ED4	A3					SUBZ,R3		
1339	2ED5	06	18				STRR,R2	CMAI	
1342	2ED7	2F	13	50			LODA,R2	CBUF1	
1341	2BFA	15					RETC,LT		
1342	2BFE	14	0A				COMI,R0	A	
1343	2BFD	14					PETC,EO		
1344	2BFE	1C	13	51			COMA,R2	CBUF1+1	
1345	2C01	15					RETC,GT		
1346	2C02	14					RETC,EO		
1347	2C02	2C	13	51			LODA,0	CBUF1+1	
1348	2C06	14	2E				COMI,R2	B	
1349	2C08	1A	02				BCTR,LT	CILEN4	
1352	2C0A	04	0A				LODI,R0	A	
1351	2C0C	05	01			CILEN4	STRR,R2	CMAI	
1352	2C0E	17					RETC,UN		
1353	2C0F								
1354	2C0F								
1355	2C0F	00				CMAI	RES	1	
1356	2C10	00				CFTR	RES	1	
1357	2C11								
1358	2C11								
1359	2C11	0A	7D			C1GET	LODR,R2	CPTR	
1360	2C13	1A	7A				COMR,R2	CMAI	
1361	2C15	15					RETC,GT		
1362	2C16	14					RETC,EO		
1363	2C17	02					LODZ,R2		
1364	2C18	59					RRR,R0		
1365	2C19	44	7F				ANDI,R0	7F	
1366	2C1F	04	03				ADDI,R0	3	
1367	2C11	0C	73	50			LODA,R0	CBUF1,1	
1368	2C20	F5	01				TMI,R2	1	
1369	2C22	18	04				BCTR,EO	C1GET2	
1370	2C24	50					RRR,R0		
1371	2C21	50					RRR,R0		
1372	2C26	50					RRR,R0		
1373	2C27	50					RRR,R0		
1374	2C28	44	0F			C1GET2	ANDI,R0	F	
1375	2C2A	06	01				ADDI,R2	1	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1376	2C2C	CA	62				STRR,R2	CPTR	
1377	2C2E	06	FF				LODI,R2	FF	
1378	2C32	17					PETC,UN		
1379	2C31								
1380	2C31								
1381	2C31	3F	31	06		GETDAT	BSTA,UN	CSINPT	
1382	2C34	2C	01	2C			LODA,R0	DATPNT	
1383	2C37	CC	11	04			STRA,R0	INPT	
1384	2C3A	0C	01	2D			LODA,R0	DATPNT+1	
1385	2C3D	CC	11	05			STRA,R0	INPT+1	
1386	2C40	2C	01	2E			LODA,R0	PDATA	
1387	2C43	18	28				BCTR,EO	GETD2	
1388	2C45	3F	46	40			BSTA,UN	SIFCP	
1389	2C48	14	2C				COMI,R0		
1390	2C4A	18	05				BCTR,EO	GETD3	
1391	2C4C	3F	32	13			BSTA,UN	DECPT	
1392	2C4F	12	3F				BCTR,UN	GETD4	
1393	2C51	3F	33	9F		GETD3	BSTA,UN	EVAL	
1394	2C54	13					SPSL		
1395	2C55	03					STRZ,R3		
1396	2C56	04	FF				LODI,R0	FF	
1397	2C58	CC	01	2E			STRA,R0	PDATA	
1398	2C5B	0C	11	04			LODA,R0	INPT	
1399	2C5E	CC	01	2C			STRA,R0	DATPNT	
1400	2C61	CC	11	05			LODA,R0	INPT+1	
1401	2C64	CC	01	2D			STRA,R0	DATPNT+1	
1402	2C67	3F	31	91			BSTA,UN	CRINPT	
1403	2C6A	03					LODZ,R3		
1404	2C6B	93					LPSL		
1405	2C6C	17					RETC,UN		
1406	2C6D	3F	31	19		GETD2	BSTA,UN	GETLIN	
1407	2C70	04	48				LODI,R0	DATTEL	
1408	2C72	05	44				LODI,R1	DATTEL	
1409	2C74	3F	45	F7			BSTA,UN	LOOKUP	
1410	2C77	08	01				BCFR,EO	GETD4	
1411	2C79	F1					COMZ,R1		
1412	2C7A	18	55				BCTR,EO	GETD3	
1413	2C7C	F5	03				COMI,R1	3	
1414	2C7E	08	06				BCFR,EO	GETD4	
1415	2C80	3F	31	91		GETD5	BSTA,UN	CRINPT	
1416	2C83	04	01				LODI,R0	1	
1417	2C85	17					RETC,UN		
1418	2C86	3F	33	0C		GETD4	BSTA,UN	SKPCR	
1419	2C89	0C	91	04			LODA,R0	*INPT	
1420	2C8C	9A	5F				BCFR,LT	GETD2	
1421	2C8E	1F	70				BCTR,UN	GETD5	
1422	2C90								
1423	2C90								
1424	2C90	0D	02	A2		PUGET	LODA,R1	PUSF	
1425	2C93	0D	26	A1			LODA,R1	CMSTRS,-	
1426	2C96	0D	02	A2			STRA,R1	PUSF	
1427	2C99	17					RETC,UN		
1428	2C9A								
1429	2C9A								
1430	2C9A	20				ZERCMS	ECRZ,R0		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	F1	F2	B3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1431	2C0B	02					STRZ,R2		
1432	2C0C	0E	46	A1		ZERC*2	STRA,R2	CMSTRS.-	
1433	2C0F	5A	7B				BRNR,R2	ZERC*2	
1434	2CA1	17					RTCC,UN		
1435	2CA2					*			
1436	2CA2					*			
1437	2CA2	6C	20	20	20	FSTG	RES	5	
1438	2CA6	20							
1439	2CA7					*			
1440	2CA7					*			
1441	2CA7	00	79			PRNTIU	STRR,R0	FSTG	
1442	2CA9	09	78				STRR,R1	FSTG+1	
1443	2CAB	0A	77				STRR,R2	FSTG+2	
1444	2CAD	0B	76				STRR,R3	FSTG+3	
1445	2CAF	14	2A				COMI,R0	A	
1446	2CB1	1D	31	E1			BCTA,GT	SYNER	
1447	2CB4	1E	3A				COMI,R1	A	
1448	2CB6	1F	31	E1			BCTA,GT	SYNER	
1449	2CB9	3F	4E	D9			BSTA,UN	POPC1	
1450	2CB0	2C	13	53			LODA,R7	CBUF1-3	
1451	2CBF	98	12				BCFR,EC	PFU1	
1452	2CC1	2E	20	A2		PFU9B	LODA,R2	FSTG	
1453	2CC4	1F	27				BCTR,EG	PFU2	
1454	2CC6	24	20			PFU02	LODI,R0		
1455	2CC8	2F	24	C5			BSTA,UN	SENDIT	
1456	2CCB	3A	29				BCTR,R0	PFU00	
1457	2CCD	3F	2E	D3		PFU7	BSTA,UN	SEND00	
1458	2CE0	1F	2D	76			BCTA,UN	PFU8	
1459	2CE3	3F	4E	E0		PFU1	BSTA,UN	PUSHC1	
1460	2CD6	20					FORZ,R0		
1461	2CD7	25	24				LODI,R2	4	
1462	2CD9	0F	53	54		PFU2	STRA,R2	CBUF1-4,-	
1463	2CD0	5A	7B				BRNR,R2	PFU2	
1464	2CDE	04	F0				LODI,R0	F0	
1465	2CE0	00	13	50			STRA,R0	CBUF1	
1466	2CE3	20	00	A3			LODA,R0	FSTG+1	
1467	2CE6	00	13	51			STRA,R0	CBUF1-1	
1468	2CE9	04	F0				LODI,R0	50	
1469	2CEB	00	13	53			STRA,R0	CBUF1-3	
1470	2CEE	3F	4E	E0			BSTA,UN	PUSHC1	
1471	2CF1	3F	3A	72			BSTA,UN	FPAID	ROUND OFF NUMBER
1472	2CF4	3F	4E	D9			BSTA,UN	POPC1	
1473	2CF7	00	20	A3			LODA,R0	FSTG+1	
1474	2CFA	98	12				BCFR,EC	PFU99	
1475	2CF0	3F	4E	E0			BSTA,UN	PUSHC1	
1476	2CFF	3F	3D	6F			BSTA,UN	PFPIX	
1477	2D02	3F	4E	D9			BSTA,UN	POPC1	
1478	2D05	00	13	53			LODA,R0	CBUF1-3	
1479	2D08	10	20	C1			BCTA,EG	PFU98	
1480	2D0B	20	13	52		PFU95	LODA,R0	CBUF1-2	
1481	2D0E	18	0E				BCTR,10	PFU3A	
1482	2D10	3F	23	FD			BSTA,UN	PRTH1	
1483	2D13	18	0E				BCTR,UN	PFU3B	
1484	2D15	00	20	A2		PFU3A	LODA,R0	FSTG	
1485	2D18	84	01				ADDI,R0	1	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	F1	F2	B3	P4	LABEL	OPCODE	OPERAND	COMMENTS
1486	2D1A	00	20	A2			STRA,R0	FSTG	
1487	2D1E	05	00			PFU3B	LODI,R1	0	
1488	2D1F	00	13	50			LODA,R0	CBUF1	
1489	2D22	1A	23				BCTR,LT	PFU4	
1490	2D24	0D	13	51			LODA,R1	CBUF1+1	
1491	2D27	01	00	A6		PFU4	STRA,R1	FSTG+4	
1492	2D2A	00	00	A4			LODA,R0	FSTG+2	
1493	2D2D	19	00				BCTR,GT	PFU5	
1494	2D2F	01					LOI2,R1		
1495	2D30	03					STRZ,R3		
1496	2D31	E7	03			PFU4A	COMI,R3	3	
1497	2D33	59	06				BCFR,GT	PFU5	
1498	2D35	8F	01				ADDI,R1	1	
1499	2D37	A7	23				SUBI,R3	3	
1500	2D39	1B	76				BCTR,UN	PFU4A	
1501	2D3B	00	00	A2		PFU5	LODA,R0	FSTG	
1502	2D3E	A1					SUBZ,R1		
1503	2D3F	1E	2D	B2			BCTA,LT	FOVF	
1504	2D42	C1					STRZ,R1		
1505	2D43	18	07				BCTR,EG	PFU7	
1506	2D45	04	20			PFU6	LODI,R0		
1507	2D47	3F	24	C5			BSTA,UN	SENDIT	
1508	2D4A	F9	79				EDRR,R1	PFU6	
1509	2D4C	3F	2B	D9		PFU7	BSTA,UN	C1LEN	
1510	2D4F	0D	00	A6		PFU7B	LODA,R1	FSTG+4	
1511	2D52	18	24				BCTR,EG	PFU8	
1512	2D54	AF	01				SUBI,R1	1	
1513	2D56	01	00	A6			STRA,R1	FSTG+4	
1514	2D59	3F	20	11			BSTA,UN	C1GET	
1515	2D5C	3F	24	C3			BSTA,UN	SEND0	
1516	2D5F	00	00	A4			LODA,R0	FSTG+2	
1517	2D62	19	6B				BCTR,GT	PFU7B	
1518	2D64	0D	00	A6		PFU7C	LODA,R1	FSTG+4	
1519	2D67	E5	03				COMI,R1	3	
1520	2D69	18	06				BCTR,EG	PFU7A	
1521	2D6B	1A	62				BCTR,LT	PFU7B	
1522	2D6E	A5	03				SUBI,R1	3	
1523	2D6F	1B	76				BCTR,UN	PFU7C	
1524	2D71	04	20			PFU7A	LODI,R0		
1525	2D73	3F	24	C5			BSTA,UN	SENDIT	
1526	2D75	1B	57				BCTR,UN	PFU7B	
1527	2D78	00	00	A5		PFU8	LODA,R0	FSTG+3	
1528	2D7B	15					RTCC,GT		
1529	2D7C	04	21				LODI,R0		
1530	2D7F	3F	24	C5			BSTA,UN	SENDIT	
1531	2D81	00	00	A3			LODA,R0	FSTG+1	
1532	2D84	14					RTCC,EG		
1533	2D85	0E	13	50			LODA,R1	CBUF1	
1534	2D88	9A	14				BCFR,LT	PFU9A	
1535	2D8A	0D	13	51			LODA,R1	CBUF1+1	
1536	2D8D	E1					COM2,R1		
1537	2D8F	19	01				BCTR,GT	PFU9B	
1538	2D90	C1					STRZ,R1		
1539	2D91	A1				PFU9B	SUBZ,R1		
1540	2D92	00	00	A3			STRA,R0	FSTG+1	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1541	2D95	3F	2D	D3		PFU9C	BSTA,UN	SEND00	
1542	2D96	79	7B			BDRR,R1	PFU9C		
1543	2D9A	2C	2C	A3		PFUS	LODA,R0	FSTG-1	
1544	2D9D	14					RETC,EQ		
1545	2D9E	A4	21			PFUSA	SUBI,R0	1	
1546	2D9F	00	2C	A3			STRA,R0	FSTG-1	
1547	2DA3	3F	7C	11			BSTA,UN	CIGET	
1548	2DA5	1A	25				BCTR,LT	PFU10	
1549	2DA6	3F	2C	D3			BSTA,UN	SEND00	
1550	2DAF	12	6C				BCTR,UN	PFU9	
1551	2DAD	3F	24	C3		PFU1F	BSTA,UN	SEND2	
1552	2DDE	76					BCTR,UN	PFU9	
1553	2DE2	01	2C	A2		FOVF	LODA,R1	FST	
1554	2DE5	12	77				BCTR,FC	FOVF2	
1555	2DE7	04	2A			FOVF1	LODI,R0	*	
1556	2DE8	3F	24	C3			BSTA,UN	SENDIT	
1557	2DE9	79	7B			BDRR,R1	FOVF1		
1558	2DEB	2D	2C	A5		FOVF2	LODA,R1	FSTG+3	
1559	2DD1	15					RETC,GT		
1560	2DD2	04	2E				LODI,R0		
1561	2DD4	12	24	C5			BSTA,UN	SENDIT	
1562	2DD7	2D	2C	A3			LODA,R1	FSTG+1	
1563	2DDA	14					RETC,EQ		
1564	2DDC	74	2A			FOVF3	LODI,R0	*	
1565	2DDD	3F	24	C5			BSTA,UN	SENDIT	
1566	2DDE	79	7B			BDRR,R1	FOVF3		
1567	2DD2	17					RETC,UN		
1568	2D13					*			
1569	2D13					*			
1570	2DDE	20				SEND20	20R2,R0		
1571	2DD4	1F	24	C3			BCTR,UN	SEND0	
1572	2D17					*			
1573	2D17					*			
1574	2D17	3F	29			GETKP	BSTR,UN	PAUSE	
1575	2D18	3F	2F	23			BSTA,UN	WRT	
1576	2D1C	04	21				LODR,R2	KBBUF	
1577	2D13	17					RETC,UN		
1578	2D13					*			
1579	2D13					*			
1580	2DDF	20				KBBUF	RES	1	
1581	2D12	0F				NEWSFD	RES	1	
1582	2D13	20				PAUSES	RES	1	
1583	2D12					*			
1584	2D12					*			
1585	2D12	2A	7D			PAUSE	STRR,R2	PAUSES	
1586	2DE4	70				PAUSE1	REDD,R0		
1587	2DE5	9A	04				BCTR,LT	PAUSE2	
1588	2DE7	06	41				ADDI,R2	1	
1589	2DE9	1B	79				BCTR,UN	PAUSE1	
1590	2DEB	CA	73			PAUSE2	STRR,R2	NEWSFD	
1591	2DE1	2A	72				LODR,R2	PAUSES	
1592	2DE7	28	6E				STRR,R0	KBBUF	
1593	2DF1	70				PL	REDD,R0	PL	
1594	2DF2	9A	71				BCTR,LT		
1595	2DF4	28	69				LODR,R0	KBBUF	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1596	2DF6	17					RETC,UN		
1597	2DF7					*			
1598	2DF7					*			
1599	2DF7	3E	19			SETCUR	BSTR,UN	EROLD	
1600	2DF9	2F	0E	C7			STRA,R2	CURSCR	
1601	2DFC	2D	0E	C8			STRA,R1	CURSOR+1	
1602	2DFF	04	1C				LODI,R0	1C	
1603	2E01	0C	8E	C7			STRA,R0	*CURSOR	
1604	2E04	17					RETC,UN		
1605	2E05					*			
1606	2E05					*			
1607	2E05	0C	0E	C7		FRAS1	LODA,R0	CURSCR	
1608	2E06	24	10				COMI,R0	10	
1609	2E0A	98	06				BCTR,EQ	EROLD	
1610	2E0C	0C	0E	C8			LODA,R0	CURSOR+1	
1611	2E0F	24	10				COMI,R0	10	
1612	2E11	16					RETC,LT		
1613	2E12	04	22			EROLD	LODI,R0		
1614	2E14	0C	8E	C7			STRA,R0	*CURSOR	
1615	2E17	17					RETC,UN		
1616	2E18					*			
1617	2E18					*			
1618	2E18	0C	13	4E		POFCT	LODA,R0	CTEMP	
1619	2E1B	0D	13	4F			LODA,R1	CTEMP+1	
1620	2E1F	1F	31	55			BCTR,UN	POFP	
1621	2E21					*			
1622	2E21					*			
1623	2E21	04	20			WRBL	LODI,R0		
1624	2E23	77	10			WRT	PPSL	RS	
1625	2E2E	C1					STRZ,R1		
1626	2E26	25	FF				BORI,R1	FF	
1627	2E28	F5	62				MI,R1	62	
1628	2E2A	18	2C				BCTR,EQ	WRTPTN	
1629	2E2C	F4	60				TMI,R0	60	
1630	2E2E	18	02				BCTR,EQ	WRTLC	
1631	2E30	44	3F				ANDI,R0	3F	
1632	2E32	0C	8E	C7		WRTLC	STRA,R0	*CURSCR	
1633	2E35	05	10				LODI,R0	10	
1634	2E37	0E	0E	C8			ADDA,R1	CURSOR+1	
1635	2E3A	0D	0E	C8			STRA,R1	CURSOR+1	
1636	2E3D	77	08				PPSL	WC	
1637	2E3F	05	00				LODI,R1	0	
1638	2E41	8D	0E	C7			ADDA,R1	CURSOR	
1639	2E44	0D	0E	C7			STRA,R1	CURSOR	
1640	2E47	75	08				PPSL	WC	
1641	2E49	F5	05				TMI,R1	5	
1642	2E4B	18	0D				BCTR,EQ	LFCR2	
1643	2E4D	0F	1C				LODI,R1	1C	
1644	2E4F	0D	8E	C7			STRA,R1	*CURSOR	
1645	2E52	75	10			WRTM*N	PPSL	RS	
1646	2E54	17					RETC,UN		
1647	2E55					*			
1648	2E55					*			
1649	2E55	77	10			LFCR	PPSL	RS	
1650	2E57	3F	2F	12			BSTA,UN	EROLD	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1651	2E5A	3D	2E	08		LFGR2	LODA,R1	CURSOR-1	
1652	2E5D	F8	2F				TMI,R1	F	
1653	2E5F	19	21				BCTR,EC	SCROLL	
1654	2E61	88	21				ADDI,R1	1	
1655	2E63	45	2F				ANDI,R1	F	
1656	2E65	01	2E	02			STRA,R1	CURSOR-1	
1657	2E68	07	12			CIRLIN	LODI,R2	10	
1658	2E6A	03	2F	07			STRA,R3	CURSOR	
1659	2E6C	04	22				LODI,R2	2	
1660	2E6F	06	22				LODI,R2	2	
1661	2E71	03	2F	07		ELL1	STRA,R2	*CURSOR-1	
1662	2E74	87	13				ADDI,R2	10	
1663	2E76	98	29				BCTR,EQ	ELL1	
1664	2E78	87	21				ADDI,R3	1	
1665	2E7A	0F	2E	07			STRA,R3	CURSOR	
1666	2E7C	F2	15				COMI,R3	15	
1667	2E7F	98	29				BCTR,EQ	ELL1	
1668	2E81	07	12				LODI,R3	10	
1669	2E83	0F	2E	07			STRA,R3	CURSOR	
1670	2E86	05	10				LODI,R1	10	
1671	2E88	07	2E	07			STRA,R1	*CURSOR	
1672	2E8B	25	10				CPSL	RS	
1673	2E8D	17					RETC,UN		
1674	2E8F	24	14			SCROLL	LODI,R0	14	
1675	2E90	00	2E	07			STRA,R0	CURSOR	
1676	2E93	20					FORZ,R0		
1677	2E94	00	2E	08			TRA,R0	CURSOR+1	
1678	2E97	26	20			SCROLL2	LODI,R2	0	
1679	2E99	27	FF				LODI,R3	FF	
1680	2E9B	01	AE	07		SCROLL1	LODA,R2	*CURSOR,-	
1681	2E9D	26	FF				ECPI,R2	FF	
1682	2E9F	26	2F				TMI,R2	F	
1683	2EA2	18	1F				BCTR,EQ	SCROLL4	
1684	2EA4	03	AE	07			STRA,R3	*CURSOR,-	
1685	2EA7	26	FF			SCROLL5	ECPI,R2	FF	
1686	2EA9	16	FF				COMI,R2	FF	
1687	2EAB	98	2E				BCTR,EQ	SCROLL1	
1688	2EAD	00	0F	07			LODA,R2	CURSOR	
1689	2EAF	A4	21				SUBI,R0	1	
1690	2EB2	14	2F				COMI,R2	F	
1691	2EB4	18	05				BCTR,EQ	SCROLL3	
1692	2EB6	00	2E	07			STRA,R2	CURSOR	
1693	2EB9	18	5C				BCTR,UN	SCROLL2	
1694	2EBB	24	0F			SCROLL3	LODI,R2	F	
1695	2EBF	00	0E	08			STRA,R0	CURSOR+1	
1696	2EC0	17	2E	68			BCTR,UN	CLPLIN	
1697	2EC3	87	21			SCROLL4	ADDI,R3	1	
1698	2EC5	1E	60				BCTR,UN	SCROLL5	
1699	2EC7					*			
1700	2EC7					*			
1701	2EC7	22	00			CURSOR	RES	2	
1702	2EC9	22	00			TMFA	RES	2	
1703	2ECF					*			
1704	2ECB					*			
1705	2ECB	08	7C			ARROW	STPR,R2	TMFA	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1706	2ECD	09	78				STRR,R1	TMFA+1	
1707	2ECF	25	FF				LODI,R1	FF	
1708	2EF1	3F	2D	E7		INICOP	BSTA,UN	GETKB	
1709	2EF4	F4	1B				COMI,R0	ESC	
1710	2ED6	10	2F	2B			BCTR,EQ	ARROW2	
1711	2ED9	F4	08				COMI,R0	BS	
1712	2ELE	98	2F				BCTR,EQ	NCBS	
1713	2EDD	E5	FF				COMI,R1	FF	
1714	2EDF	18	20				BCTR,EQ	INLOOP	
1715	2EE1	3F	2F	2E			BSTA,UN	BACKSF	
1716	2EE4	1A	69				BCTR,LT	INLOOP	
1717	2EE6	A5	21				SUBI,R1	1	
1718	2EE8	96	21				ADDI,R2	1	
1719	2EEA	15	65				BCTR,UN	INICOP	
1720	2EEC	F4	15			NCBS	COMI,R0	15	
1721	2EEF	98	18				BCTR,EC	STRIN	
1722	2EF0	E5	FF				COMI,R1	FF	
1723	2EF2	98	5E				BCTR,EQ	INLOOP	
1724	2EF4	2D	AE	C9		NOBS2	LODA,R1	*TMFA,-	
1725	2EF7	18	05				BCTR,EQ	STRIN2	
1726	2EF9	F4	0E				COMI,R0	CR	
1727	2EFB	18	27				BCTR,EQ	STRIN2	
1728	2EFD	3F	2E	23			BSTA,UN	WRT	
1729	2F00	FA	72				BDRR,R2	NOBS2	
1730	2F02	1B	0E				BCTR,UN	CPWAIT	
1731	2F04	A5	P1			STRIN2	SUBI,R1	1	
1732	2F06	1B	45				BCTR,UN	INLOOP	
1733	2F08	CD	AE	C9		STRIN	STRA,R1	*TMFA,-	
1734	2F0B	E4	0D				COMI,R0	CR	
1735	2F0D	18	12				BCTR,EQ	CLRLAS	
1736	2F0F	FE	23	D1			BDRR,R2	INLCOP	
1737	2F12	20				CRWAIT	REDD,R2		
1738	2F13	E4	08				COMI,R0	BS	
1739	2F15	10	2E	D1			BCTR,EQ	INLOOP	
1740	2F18	E4	0E				COMI,R0	CR	
1741	2F1A	98	76				BCTR,EQ	CRWAIT	
1742	2F1C	3F	2D	F1			BSTA,UN	PL	
1743	2F1F	20					FORZ,R0		
1744	2F20	17					RETC,UN		
1745	2F21	20					EONZ,R0		
1746	2F22	01	EE	C9		CL	STRA,R1	*TMFA,1	
1747	2F24	85	01				ADDI,R1	1	
1748	2F27	F4	79				BDRR,R2	CL	
1749	2F29	20					BDRR,R0		
1750	2F2A	17					RETC,UN		
1751	2F2B	04	FF			ARROW2	LODI,R0	FF	
1752	2F2D	17					RETC,UN		
1753	2F2E					*			
1754	2F2E					*			
1755	2F2E	3F	2E	25		BACKSP	BSTA,UN	ERAS1	
1756	2F31	16					RETC,LT		
1757	2F32	0F	2E	28			LODA,R3	CURSOR-1	
1758	2F35	0C	0E	C7			LODA,R0	CURSOR	
1759	2F38	A7	10			BACKS1	SUBI,R3	10	
1760	2F3A	77	08				PPSL	WC	

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1761	2F3C	A4	20				SUBL,R0	0	
1762	2F3E	75	08				CPSL	WC	
1763	2F40	0F	0F	09			STRA,R3	CURSOR-1	
1764	2F43	0C	0E	07			STRA,R0	CURSOR	
1765	2F46	24	1C				LODI,R0	1C	
1766	2F49	0C	0F	07			STRA,R0	*CURSOR	
1767	2F4B	17					RETC,UN		
1768	2F4C					*			
1769	2F4C	2F	13			ERROR2	LODI,R2	13	
1770	2F4E	25	00				LODI,R1	C0	
1771	2F52	31	2D	F7			BSTA,UN	SFTCUR	
1772	2F53	75	2F	1C			BSTA,UN	PRING	
1773	2F56	24	20				LODI,R0		
1774	2F59	0C	0E	07			STRA,R0	*CURSOR	
1775	2F5B	31	2D	F7			BSTA,UN	PAUSE	
1776	2F5F	1F	49	09			BSTA,UN	FEIN	
1777	2F61					*			
1778	2F61	31	2F	05		BACK1	BSTA,UN	ERAS1	
1779	2F64	16					ETC,LT		
1780	2F6F	2C	0E	08			LODA,R0	CURSOR-1	
1781	2F6F	A4	10				SUBL,R0	10	
1782	2F7A	0C	0E	09			STRA,R0	CURSOR-1	
1783	2F81	77	08				PPSL	WC	
1784	2F81	0C	0E	07			LODA,R0	CURSOR	
1785	2F8F	A4	00				SUBL,R0	0	
1786	2F74	0C	0F	07			STRA,R0	CURSOR	
1787	2F77	75	28				CPSL	WC	
1788	2F79	24	1C				LODI,R0	1C	
1789	2F7B	0C	0F	07			STRA,R0	*CURSOR	
1790	2F7E	A4	01				SUBL,R1	1	
1791	2F82	15	FF				COMI,R1	FF	
1792	2F82	0C	0E	05			BCFR,EQ	NOSUB1	
1793	2F84	25	06				LODA,R0	*TMM	
1794	2F86	A4	01				SUBL,R0	1	
1795	2F88	0C	0E	02			STRA,R0	*TMM	
1796	2F8A	20				NCSUB1	BCFZ,R0		
1797	2F8B	17					RETC,UN		
1798	2F8C					*			
1799	2F8C	2F	09			TMM	ACON	TMPA	
1800	2F8E					*			
1801	2F8E	27	20			OLFCR	LODI,R2		
1802	2F90	0F	0F	07			STRA,R3	*CURSOR	
1803	2F93	0F	0E	08		OLFCR2	LODA,R3	CURSOR-1	
1804	2F96	47	0F				ANDI,R3	F	
1805	2F99	07	01				ANDI,R3	1	
1806	2F9A	47	0F				ANDI,R3	F	
1807	2F9C	0F	0E	08			STRA,R3	CURSOR-1	
1808	2F9E	27	10				LODI,R3	10	
1809	2FA1	0F	0F	07			STRA,R3	CURSOR	
1810	2FA4	24	20				LODI,R0		
1811	2FA6	0C	0E	07		L2	STRA,R0	*CURSOR	
1812	2FA9	27	10				LODI,R3	10	
1813	2FAB	0F	0E	08			ADDA,R3	CURSOR-1	
1814	2FAD	0F	0E	08			STRA,R3	CURSOR-1	
1815	2FBI	77	08				PPSL	WC	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 12-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1816	2FB4	27	00				LODI,R3	0	
1817	2FB6	0F	0E	07			ADDA,R3	CURSOR	
1818	2FB6	0F	0E	07			STRA,R3	CURSOR	
1819	2FB7	75	08				CPSL	WC	
1820	2FB9	F7	25				TM1,R3	5	
1821	2FBF	30	65				BCFR,EQ	L2	
1822	2FC1	0F	0F	09			LODA,R3	CURSOR-1	
1823	2FC4	0F	0F	08			STRA,R3	CURSOR-1	
1824	2FC7	27	10				LODI,R3	10	
1825	2FC9	0F	0F	07			STRA,R3	CURSOR	
1826	2FC0	34	1C				LODI,R0	1C	
1827	2FC3	0C	0F	07			STRA,R0	*CURSOR	
1828	2FD1	17					RETC,UN		
1829	2FD2					*			
1830	2FD2					*			
1831	2FD2	04	20			WRIBL	LODI,R0		
1832	2FD4	1F	2E	23			BSTA,UN	WRT	
1833	2FD7					*			
1834	2FD7					*			
1835	2FD7					*			
1836	2FD7	52	05			TMESS	ACON	*MSG02	
1837	2FD9					*			
1838	2FE9	3F	2E	55		PSTRNG	BSTA,UN	LICR	
1839	2FD6	0F	0F	17		PRING	LODA,R3	*TMESS.1	
1840	2FDF	16					RETC,LT		
1841	2FE0	3F	2E	23			BSTA,UN	WRT	
1842	2FE3	2F	77				BIRR,R3	PRING	
1843	2FE5					*			
1844	2FE5					*			
1845	2FE5					*			
1846	2FE5					*			
1847	2FE5					*			
1848	2FE5	00	00			ZSTRS	RES	2	
1849	2FE7					*			
1850	2FE7					*			
1851	2FE7	3F	2B	21		ZSTR	BSTA,UN	CTOS	
1852	2FEA	26	FF			ZER	LODI,R2	FF	
1853	2FEC	0E	AB	30			LODA,R2	*STMF+4.+	
1854	2FEF	08	74				STRA,R0	ZSTRS	
1855	2FF1	0E	AB	30			LODA,R2	*STMF+4.+	
1856	2FF4	08	70				STRA,R0	ZSTRS-1	
1857	2FF6	0E	AB	30			LODA,R2	*STMF+4.+	
1858	2FF9	14					BCFR,EQ		
1859	2FFA	C2					STRZ,R2		
1860	2FFE	20					BCFR,EQ		
1861	2FFC	0E	0F	15		ZSTR2	STRA,R2	*ZSTRS.-	
1862	2FFF	5A	7B				BRNR,R2	ZSTR2	
1863	3001	17					ETC,UN		
1864	3002					*			
1865	3002					*			
1866	3002	0C	13	5A		COMMON	LODA,R0	CBUF2-2	
1867	3005	FC	13	52			COMA,R0	CBUF1-2	
1868	3006	9C	70	66			BCFR,EQ	COMN3	
1869	300B	05	FF				LODI,R1	FF	
1870	300D	0D	33	53		COMMON	LODA,R1	CBUF1+3.+	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OFFERAND	COMMENTS
1871	3212	E1	73	5B			COMA,R1	CRUF2-3,1	
1872	3213	08	32				BCTR,EO	COMN1	
1873	3215	E5	24				COMI,R1	4	
1874	3217	0A	74				PCTP,EO	COMN0	
1875	3219	0C	13	5B			LODA,R2	CBUF2	
1876	321C	EC	13	5B			COMA,R2	CBUF1	
1877	321F	15	11				PCTR,EO	COMN2	
1878	3221	7F	32	5B		COMIN2	BSTA,UN	COMN3	
1879	3224	2C	13	52		COMIN3	LODA,R2	CBUF1-2	
1880	3227	14					RETC,EO		
1881	3228	E7	02			INVRT	COMI,R3	LT	
1882	322A	15	23				BCTR,EO	INV2	
1883	322C	07	02				LODI,R3	LT	
1884	322E	17					RETC,UN		
1885	322F	27	31			INV2	LODI,R3	GT	
1886	3231	17					RETC,UN		
1887	3232	07	02			COMN2	LODI,R3	EQ	
1888	3234	0C	13	51			LODA,R2	CBUF1-1	
1889	3237	EC	13	5B			COMA,R2	CBUF2-1	
1890	323A	14					PETC,EO		
1891	323B	3B	2B				BSTR,UN	COMN3	
1892	323D	4C	13	5B			LODA,R2	CBUF1	
1893	3240	19	62				BCTR,EO	COMIN3	
1894	3242	3F	32	2B			BSTA,UN	INVRT	
1895	3245	1F	5C				BCTR,UN	COMIN3	
1896	3247	35	12			COMN1	BSTR,UN	COMN3	
1897	3249	0C	13	5B			LODA,R2	CBUF2	
1898	324C	EC	13	5B			COMA,R2	CBUF1	
1899	324E	55	52				PCTP,EO	COMIN2	
1900	3251	02					LODZ,EO		
1901	3252	1A	2A				BCTR,LT	COMN4	
1902	3254	27	13	51			LODA,R2	CBUF1-1	
1903	3257	5C	13	5B			COMA,R2	CBUF2-1	
1904	325A	18	4B			COMN5	BCTR,EO	COMIN3	
1905	325C	1F	43				BCTR,UN	COMIN2	
1906	325E	2C	13	5B		COMN4	LODA,R2	CBUF2-1	
1907	3261	7C	13	51			COMA,R2	CBUF1-1	
1908	3264	12	74				BCTR,UN	COMN5	
1909	3266	19	03			COMN3	BCTR,GT	COMN3A	
1910	3268	07	02				LODI,R3	LT	
1911	326A	17					PETC,UN		
1912	326B	07	21			COMN3A	LODI,R3	GT	
1913	326D	17					PETC,UN		
1914	326E					*			
1915	326F					*			
1916	326E	CC	13	43		STRCT	STRA,R2	CTEMP	
1917	3271	CC	13	4F			STRA,R1	CTEMP-1	
1918	3274	17					RETC,UN		
1919	3275					*			
1920	3275					*			
1921	3275	08	03			STROP1	STRR,R2	OP1	
1922	3277	CF	02				STRR,R1	OP1-1	
1923	3278	17					PETC,UN		
1924	327A					*			
1925	327A					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OFFERAND	COMMENTS
1926	327A	02	02			OP1	RES	2	
1927	327C					*			
1928	327C					*			
1929	327C	08	7D			INCOP1	LODR,R2	OP1+1	
1930	327E	24	01				ADDI,R2	1	
1931	3280	08	79				STRR,R2	OP1+1	
1932	3282	16					RETC,LT		
1933	3283	1F					RETC,GT		
1934	3284	08	74				LODR,R2	OP1	
1935	3286	84	01				ADDI,R2	1	
1936	3288	08	70				STRR,R2	OP1	
1937	328A	EC	12	E7			COMA,R2	SP	
1938	328D	9E	32	07			BCTA,LT	SOER	
1939	3290	17					RETC,UN		
1940	3291					*			
1941	3291					*			
1942	3291	08	03			STROP2	STRR,R2	OP2	
1943	3293	09	02				STRR,R1	OP2+1	
1944	3295	17					RETC,UN		
1945	3296					*			
1946	3296					*			
1947	3296	02	02			OP2	RES	2	
1948	3296					*			
1949	3298					*			
1950	3298	08	7D			INCOP2	LODR,R2	OP2+1	
1951	329A	84	01				ADDI,R2	1	
1952	329C	08	79				STRR,R2	OP2+1	
1953	329E	16					RETC,LT		
1954	329F	15					RETC,GT		
1955	32A0	08	74				LODR,R2	OP2	
1956	32A2	84	01				ADDI,R2	1	
1957	32A4	08	70				STRR,R2	OP2	
1958	32A6	17					RETC,UN		
1959	32A7					*			
1960	32A7					*			
1961	32A7	08	D1			PSHOP1	STRR,R2	*OP1	
1962	32A8	1F	32	7C			BCTA,UN	INCOP1	
1963	32AC					*			
1964	32AC					*			
1965	32AC	08	E8			PSHOP2	STRR,R2	*OP2	
1966	32AE	1F	32	5F			BCTA,UN	INCOP2	
1967	32B1					*			
1968	32B1					*			
1969	32B1	0B	A4			INCSP	LODR,R3	*SP	
1970	32B3	04	01				LODI,R2	1	
1971	32B5	08	21			INCSP2	ALDR,R2	SP+1	
1972	32B7	08	1F				STRR,R2	SP+1	
1973	32B9	77	0B				FPSL	WC	
1974	32BB	08	1A				LODR,R2	SP	
1975	32BD	84	02				ADDI,R2	2	
1976	32BF	08	16				STRR,R2	SF	
1977	32C1	7F	0A				CPSL	WC	
1978	32C3	EC	02	06			COMA,R2	ENDRAM	
1979	32C6	16					RETC,LT		
1980	32C7	0C	02	06		SOER	LODA,R2	ENDRAM	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1981	30CA	A4	21				SUBI,R0	1	
1982	30CC	08	09				STRR,R0	SP	
1983	30CE	04	FF				LODI,R0	FF	
1984	30D0	08	06				STRR,R0	SP+1	
1985	30D2	07	ED				LODI,R3	SOFR	
1986	30D4	1F	33	2F			BCTA,UN	ERROR	
1987	30D7					*			
1988	30D7					*			
1989	30D7	02	00			SP	RES	2	
1990	30D9					*			
1991	30DB					DECSF	LODR,R0	SP+1	
1992	30DB	28	7D				SUBI,R0	1	
1993	30DB	A4	01			DECSF2	STRR,R0	SP-1	
1994	30E1	04	79				PSSL	WC	
1995	30E3	77	26				LODR,R0	SP	
1996	30F1	08	74				SUBI,R0	2	
1997	30F3	A4	22				STRR,R0	SP	
1998	30F5	08	70				CPSL	WC	
1999	30F7	78	25				COMA,R0	TAREND	
2000	30F9	FC	02	0A			BCTA,GT	SOFR	
2001	30FC	35	32	07			STRR,R3	*SP	
2002	30FF	0B	15				BCTA,UN		
2003	30F1	17				*			
2004	30F2					*			
2005	30F2								
2006	30F2	0C	11	35		PUSHST	STRA,R0	UTEMP	
2007	30F5	0D	11	37			STRA,R1	UTEMP-1	
2008	30F8	02					LODZ,R2		
2009	30F8	03					STRZ,R3		
2010	30FA	19	2F				BCTR,EO	PUSH3	
2011	30FC	08	5A				LODR,R0	SP+1	
2012	30FE	A2					STRZ,R2		
2013	30FF	7F	5C				BCTR,UN	DECSF2	
2014	3101	25	FF				LODI,R1	FF	
2015	3103	0D	B1	36		PUSH2	LODA,R1	*UTEMP,-	
2016	3105	0E	D0	17			STRA,R2	*SP,-	
2017	3105	5A	78				PPNR,R2	PUSH2	
2018	3108	35	4C			PUSH3	BCTR,UN	DECSF	
2019	310F	07	01				LODI,R3	1	
2020	310F	1F	4E				BCTR,UN	DECSF	
2021	3111					*			
2022	3111					*			
2023	3113	08	23			POPST	STRR,R0	UTEMP	
2024	3113	05	22				STRR,R1	UTEMP+1	
2025	3115	07	21				LODI,R3	1	
2026	3117	0C	50	D7			LODA,R0	*SP	
2027	311A	F3					COMZ,R3		
2028	311B	9C	45	7C			BCTA,EO	TYPFR	
2029	311E	2F	F0	D7			LODA,R3	*SP,I	
2030	3121	02					STRZ,P2		
2031	3122	01					STRZ,R1		
2032	3123	18	0C				BCTR,EO	POPST3	
2033	3125	0F	B0	D7		POPST2	LODA,R3	*SP,+	
2034	3128	0D	D1	36			STRA,R1	*UTEMP,-	
2035	3128	59	78				PPNR,R1	POPST2	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2036	312E	02					LODZ,R2		
2037	312F	3F	30	B5			BCTA,UN	INCSF2	
2038	3131	04	02			POPST3	LODI,R0	2	
2039	3133	1F	30	B5			BCTA,UN	INCSF2	
2040	3136					*			
2041	3136					*			
2042	3136	00	00			UTEMP	RES	2	
2043	3138					*			
2044	3138					*			
2045	3138	0B	7C			PUSHFP	STRR,R0	UTEMP	
2046	313A	09	7B				STRR,R1	UTEMP+1	
2047	313C	0C	10	18			LOIA,R0	SP+1	
2048	313F	A4	09				SUBI,R0	5	
2049	3141	07	0E				LODI,R3	2	
2050	3143	3F	30	1D			BCTA,UN	DECSF2	
2051	3146	06	05				LODI,R2	8	
2052	3148	05	FF				LODI,R1	FF	
2053	314A	07	09				LODI,R3	9	
2054	314C	01	B1	36		PUSHF2	LOIA,R1	*UTEMP,-	
2055	314F	CF	D0	D7			STRA,R3	*SP,-	
2056	3152	FA	78				BDRR,R2	PUSHF2	
2057	3154	17					BCTA,UN		
2058	3155					*			
2059	3155					*			
2060	3155	08	5F			POFPF	STRR,R0	UTEMP	
2061	3157	09	5E				STRR,R1	UTEMP+1	
2062	3159	06	08				LODI,R2	8	
2063	315B	07	00				LODI,R3	0	
2064	315D	0C	90	D7			LODA,R0	*SP	
2065	315D	9C	45	7C			BCTA,EO	TYPFR	
2066	3163	0F	E0	D7		POFPF2	LODA,R3	*SP,+	
2067	3166	CF	D1	36			STRA,R2	*UTEMP,-	
2068	3169	5A	78				PPNR,R2	POFPF2	
2069	316B	04	09				LODI,R0	9	
2070	316D	1F	30	B5			BCTA,UN	INCSF2	
2071	3170					*			
2072	3170					*			
2073	3170	08	12			SINPT	LODR,R0	INPT	
2074	3172	08	05				STRR,R0	STEMP	
2075	3174	08	0F				LODR,R0	INPT+1	
2076	3175	08	02				STRR,R0	STEMP+1	
2077	3178	17					BCTA,UN		
2078	3179					*			
2079	3179					*			
2080	3179	02	00			STEMP	RES	2	
2081	317B					*			
2082	317B					*			
2083	317B	08	7C			RINPT	LODR,R0	STEMP	
2084	317D	09	05				STRR,R0	INPT	
2085	317F	08	75				LODR,R0	STEMP+1	
2086	3181	08	02				STRR,R0	INPT+1	
2087	3183	17					BCTA,UN		
2088	3184					*			
2089	3184					*			
2090	3184	00	00			INPT	RES	2	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2091	3166					*			
2092	3166					*			
2093	3166	02	70			CSINPT	LODR,R2	INPT	
2094	3166	02	05				STPR,R2	CINPT	
2095	316A	02	75				LODR,R2	INPT+1	
2096	316C	08	02				STPR,R2	CINPT-1	
2097	316E	02					RETC,UN		
2098	316F					*			
2099	316F					*			
2100	316F	00	00			CINPT	RES	2	
2101	3171					*			
2102	3161					*			
2103	3161	02	70			CRINPT	LODR,R2	CINPT	
2104	3163	08	0F				STPR,R2	INPT	
2105	316F	02	79				LODR,R2	CINPT-1	
2106	3167	08	60				STPR,R2	INPT-1	
2107	3169	17					RETC,UN		
2108	316A					*			
2109	316A					*			
2110	316A	00	02	03		BEGIN	LODR,R2	BSTART	
2111	3161	02	65				STPR,R2	INPT	
2112	316F	02					LODR,R2		
2113	3162	02	63				TPR,R2	INPT-1	
2114	3162	17					RETC,UN		
2115	3163					*			
2116	3163					*			
2117	3167	3F	46	40		NXTLIN	BSTA,UN	SKPSP	
2118	316F	3F	31	56			BSTA,UN	CHKCR	
2119	3165	10	A2	92			BSTA,EC	*RTNADR	
2120	316C	54	21				COMI,R2	'1'	
2121	316E	10	47	3A			BSTA,EC	SKPLIN	
2122	3161	02	05			SYNER	LODR,R2	SYNER	
2123	3163	1F	33	2E			BSTA,UN	ERRCR	
2124	3166					*			
2125	316F					*			
2126	316F	14	2E			CHKCR	COMI,R2	CR	
2127	3168	14					RETC,EC		
2128	3169	54	3A				COMI,R2	'1'	
2129	316B	17					RETC,UN		
2130	316C					*			
2131	316C					*			
2132	316C	75	02			RETC,LT	CPSL	C2	
2133	316F	77	80				FPPL	80	
2134	3162	17					RETC,UN		
2135	3161					*			
2136	3161					*			
2137	3161	75	02			RETC,LT	CPSL	C2	
2138	3163	77	47				FPPL	40	
2139	3165	17					RETC,UN		
2140	3166					*			
2141	3166					*			
2142	3166	00	25	4B		CKNXTL	LODR,R2	INON	
2143	3169	0F	00				LODR,R2	0	
2144	316B	CF	05	4B			STPR,R2	INON	
2145	316F	02					LODR,R2		

COMMENT FROM HERE ON

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADIP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2146	316F	10	31	A3			BSTA,EC	NXTLIN	
2147	3162	1F	46	3A			BSTA,UN	SKPLIN	
2148	316F					*			
2149	316E					*			
2150	3165	00	00	00	00	LINNUM	RES	4	
2151	3169					*			
2152	3169					*			
2153	3169	22				GETLIN	CPFL,R2		
2154	316A	05	04				LODR,R1	4	
2155	316C	CF	51	D5		GETLIN2	BSTA,R1	LINNUM,-	
2156	316F	09	7B				PRNR,R1	GETLIN2	
2157	3161	05	7F				LODR,R1	FF	
2158	3163	3F	46	40		GETLIN3	BSTA,UN	SKPSP	
2159	3166	14	30				COMI,R2	'0'	
2160	316B	18	79				BSTA,EC	GETLIN3	
2161	316A	3F	45	40		GETN4	BSTA,UN	CHINUM	
2162	316D	9C	32	13			BSTA,EC	DECP	
2163	3168	1F	04				COMI,R1	4	
2164	3162	10	45	74			BSTA,EC	OVFER	
2165	3165	CD	31	D5			STPR,R1	LINNUM,+	
2166	3168	3F	32	20			BSTA,UN	GETCRP	
2167	316F	1B	6D				BCTR,UN	GETN4	
2168	316D					*			
2169	316D					*			
2170	316D	0F	11	85		INCP	LODR,R2	INPT+1	
2171	3200	07	01				ADDI,R2	1	
2172	3202	CF	11	85			STPR,R2	INPT+1	
2173	3205	16					RETC,LT		
2174	3206	15					RETC,GT		
2175	3207	0F	11	84			LODR,R2	INPT	
2176	320A	07	01				ADDI,R2	1	
2177	320C	CF	11	84			STPR,R2	INPT	
2178	320F	17					RETC,UN		
2179	3210					*			
2180	3210					*			
2181	3210	3F	46	40		SKPDEC	BSTA,UN	SKPSP	
2182	3213	0F	11	85		DECP	LODR,R2	INPT+1	
2183	3216	A7	01				SUBI,R2	1	
2184	3218	CF	11	85			STPR,R2	INPT+1	
2185	321B	77	06				PPSL	WC	
2186	321D	0F	11	84			LODR,R2	INPT	
2187	3220	A7	00				SUBI,R2	0	
2188	3222	CF	11	84			STPR,R2	INPT	
2189	3225	75	08				CPSL	WC	
2190	3227	17					ETC,UN		
2191	3228					*			
2192	3228					*			
2193	3228	0C	91	84		GETCHR	LODR,R2	*INPT	
2194	322F	3F	45	A6			BSTA,UN	LTOU	
2195	322E	00					LODR,R2		
2196	322F	9A	4C				PCPR,LT	INCP	
2197	3231	1F	31	B1			BSTA,UN	SINER	
2198	3234					*			
2199	3234					*			
2200	3234	00	00	00	00	INBUF	RES	41	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2221	3234	20	00	00	20				
2222	3235	20	00	00	22				
2223	3240	00	00	00	20				
2224	3244	00	00	00	20				
2225	3245	22	00	00	27				
2226	3246	22	00	00	22				
2227	3250	20	00	00	27				
2228	3254	20	00	00	00				
2229	3254	27	00	00	00				
2230	3255	07	00	00	00				
2231	3259	00	00	00	20				
2232	3264	00	00	00	00				
2233	3265	07	00	00	00				
2234	3260	02	00	00	00				
2235	3270	07	00	00	02				
2236	3274	00							
2237	3275					*			
2238	3275					*			
2239	3275	04	32			AROWCR	LODI,R0	INBUF	
2240	3277	05	34				LODI,R1	INBUF	
2241	3270	05	40				LODI,R2	40	
2242	3273	3F	0E	09			PSTA,UN	ARROW	
2243	3271	0C	42	0B			PCTA,EO	BEGN	
2244	3281	05	40				LODI,R1	40	
2245	3287	22	57	34		ARCWC2	LODI,R1	INBUF,-	
2246	3286	56	04				BRNR,R0	ARCWC3	
2247	3288	56	79				BRNR,R1	AROWC2	
2248	328A	A7	01				SUBI,R1	1	
2249	328C	04	2D			AROWC3	LODI,R0	09	
2250	328F	0D	32	34			STRA,R1	INBUF,-	
2251	3291	0C	11	04			LODI,R0	INPT	
2252	3294	0E	10				STRR,R0	BTEMP	
2253	3296	0C	11	05			LODI,R0	INPT+1	
2254	3299	08	00				STRR,R0	BTEMP+1	
2255	3295	24	32				LODI,R0	INBUF	
2256	329D	0C	11	04			STRA,R0	INPT	
2257	32A7	24	34				LODI,R0	INBUF	
2258	32A2	07	11	05			STRA,R0	INPT+1	
2259	32A5	17					RETC,UN		
2260	32A6					*			
2261	32A6					*			
2262	32AF	07	00			BTEMP	RES	2	
2263	32A9					*			
2264	32A9					*			
2265	32A8	08	70			RFCBT	LODR,R0	BTEMP	
2266	32AA	0C	11	04			STRA,R0	INPT	
2267	32AD	08	79				LODR,R0	BTEMP+1	
2268	32AF	0C	11	05			STRA,R0	INPT+1	
2269	32B2	17					RETC,UN		
2270	32B3					*			
2271	32B3					*			
2272	32B3	3F	38	BB		FINDLIN	PSTA,UN	ECONST	
2273	32B6	0C	46	59			PCTA,EO	RETNPT	
2274	32B9	3F	31	86			PSTA,UN	CSINPT	
2275	32BC	3F	31	9A			PSTA,UN	BEGIN	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2276	32B7	3F	31	70		FIND12	PSTA,UN	SINPT	SAVE BEGINNING OF THIS LINE
2277	32C2	3F	31	19			PSTA,UN	GETLIN	
2278	32C5	05	01				ADDI,R1	1	
2279	32C7	11	13	51			COMA,R1	CBUF1-1	
2280	32CA	98	2D				BCFR,EO	FINDL5	
2281	32CC	05	FF				LODI,R1	FF	
2282	32CE	27	00				LODI,R3	0	
2283	32D0	21	31	D5		FIND11	LODI,R1	LINNUM,-	
2284	32D3	44	0F				ANDI,P0	F	
2285	32D5	F5	01				TMI,R1	1	
2286	32D7	1B	04				PCTR,EO	FIND13	
2287	32D9	D0					RRL,R0		
2288	32DA	D0					RRL,R0		
2289	32DB	D0					RRL,R0		
2290	32DC	D0					RRL,R0		
2291	32DE	63				FIND13	IORZ,R3		
2292	32DF	03					STRZ,R3		
2293	32E1	15	03				COMI,R1	3	
2294	32E1	1B	07				BCFR,EO	FINDL4	
2295	32E3	F5	01				COMI,R1	1	
2296	32E5	98	69				BCFR,EO	FINDL1	
2297	32E7	02					STRZ,R2		
2298	32E8	1B	64				PCTR,UN	FINDL1-2	
2299	32FA	FE	13	53		FIND14	COMA,R2	CBUF1+3	
2300	32ED	98	0A				BCFR,EO	FINDL5	
2301	32EF	17	13	54			COMA,R3	CBUF1+4	
2302	32F2	98	05				BCFR,EO	FINDL5	
2303	32F4	3F	31	7B			PSTA,UN	RINPT	
2304	32F7	20					FORZ,R0		
2305	32F8	17					RETC,UN		
2306	32F9	3F	33	0C		FINDL5	PSTA,UN	SKPCR	
2307	32FC	14	0D				COMI,R0	09	
2308	32FE	98	79				BCFR,EO	FINDL5	
2309	3300	0C	91	84			LODI,R0	*INPT	
2310	3303	9F	32	BF			PCTA,LT	FINDL2	
2311	3306	3F	31	51			PSTA,UN	CSINPT	
2312	3309	04	FF				LODI,R0	FF	
2313	330B	17					RETC,UN		
2314	330C					*			
2315	330C					*			
2316	330C					*			
2317	330C	07	11	05		SKPCR	LODI,R3	INPT+1	
2318	330F	20					FORZ,R0		
2319	3310	0C	11	05			STRA,P0	INPT-1	
2320	3313	0F	F1	04		SKPCR2	LODI,R3	*INPT,1	
2321	3316	07	01				ADDI,R3	1	
2322	3318	98	0A				BCFR,EO	SKPCR3	
2323	331A	0F	11	04			LODI,R3	INPT	
2324	331D	07	01				ADDI,R3	1	
2325	331F	0F	11	04			STRA,R3	INPT	
2326	3322	07	00				LODI,R3	0	
2327	3324	3F	31	B6		SKPCR3	PSTA,UN	CHKCR	
2328	3327	98	6A				BCFR,EO	SKPCR2	
2329	3329	0F	11	05			STRA,R3	INPT+1	
2330	332C	17					RETC,UN		
2331	332E					*			

FILE 'BASIO12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPFRAND	COMMENTS
2311	332E					*			
2312	332E	20				ITEMP	RFS	1	
2313	332E					*			
2314	332E					*			
2315	332E	04	22			ERR0R	LODI,R0	2	
2316	332E	03					LFSL		
2317	332E	01	2A				STAR,R3	ITEMP	
2318	332E	07	12				LODI,R3	ASTMSG	****
2319	332E	3F	4E	53			BSTA,UN	WRTMCR	
2320	332E	05	73				ICIR,R3	ITEMP	
2321	332E	3F	4E	56			BSTA,UN	WRTM	
2322	332E	07	11				LODI,R3	ERRMSG	ERROR ***
2323	332E	3F	4E	56			BSTA,UN	WRTM	
2324	332E	01	11	6F			LOPA,R2	INPT-1	
2325	332E	AF	22	0E			SUBA,R2	SHPNT-1	
2326	332E	3F	02	-7			BSTA,UN	SHLIN	
2327	332E	1F	42	01			ECTA,UN	EEGN	
2328	332E					*			
2329	332E					*			
2330	332E	22	02			ITEMP	RFS	2	
2331	332E	22	02	22	22	OPUP1	RFS	8	
2332	332E	07	22	02	22				
2333	332E	72	26	02	02	OPUP2	RFS	8	
2334	332E	00	20	02	22				
2335	332E					*			
2336	332E					*			
2337	332E	00	2F			PUSHOP	LODR,R1	OPSP	
2338	332E	0D	73	72			STRA,R1	OPSTK.I	
2339	332E	0F	01				ALDI,R1	1	
2340	332E	0C	26				STPR,R1	OPSP	
2341	332E	03	26				COMI,R1	20	
2342	332E	1E					RETC,LT		
2343	332E	27	12			CSOPR	LODI,R3	CSOIRP	
2344	332E	1F	33	2E			ECTA,UN	ERR0R	
2345	332E					*			
2346	332E					*			
2347	332E	22	02	02	22	OPSP	RFS	1	
2348	332E	02	02	02	02	OPSTK	RFS	22	
2349	332E	02	02	02	02				
2350	332E	02	02	02	02				
2351	332E	02	02	02	02				
2352	332E	02	02	02	02				
2353	332E	02	02	02	02				
2354	332E	02	02	02	02				
2355	332E	02	02	02	02				
2356	332E	00				EVALCC	RFS	1	
2357	332E					*			
2358	332E					*			
2359	332E	0F	50			POPCF	LODR,R1	OPSP	
2360	332E	AF	71				SUBI,R1	1	
2361	332E	1A	52				BCTR,LT	OSOER	
2362	332E	0F	56				STPR,R1	OPSP	
2363	332E	0C	73	72			LODA,R1	OPSTK.I	
2364	332E	17					RETC,UN		
2365	332E					*			

FILE 'BASIO12' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPFRAND	COMMENTS
2366	332F					*			
2367	332F	20				EVAL	FORZ,R0		
2368	332F	0A	4F				TPR,R2	OPSP	
2369	332F	06	5F				STRR,R2	EVALCC	
2370	332F	00	14	02			STRA,R0	PARNST	
2371	332F	04	07				LODI,R0	7	
2372	332F	0F	33	60			BSTA,UN	PUSHOP	
2373	332F	3F	4E	56			BSTA,UN	CKNEG	
2374	332F	3F	35	77		EVAL2	BSTA,UN	LOKVAR	
2375	332F	99	10				BCTR,GT	EVAL1	
2376	332F	3F	36	2B			BSTA,UN	ECONST	
2377	332F	09	17				BCTR,GT	EVAL1	
2378	332F	3F	32	2B			BSTA,UN	GETCHR	
2379	332F	04	28				COMI,R2		
2380	332F	10	34	01			ECTA,EO	ELFAP	
2381	332F	3F	32	13			BSTA,UN	DECP7	
2382	332F	04	46				LODI,R0	FCNTAB	
2383	332F	05	56				LODI,R1	FCNTAB	
2384	332F	3F	45	F7			BSTA,UN	LOOKUP	
2385	332F	10	34	EA			ECTA,EO	EFEN	
2386	332F	1F	2F				BCTR,UN	ENIEVL	
2387	332F	18	05			EVAL1	BCTR,EO	EVAL2	
2388	332F	3F	32	F2			BSTA,UN	PUSHST	
2389	332F	1F	03				BCTR,UN	EVAL3	
2390	332F	3F	31	38		EVAL2	BSTA,UN	PUSHFP	
2391	332F	04	FF			EVAL3	LODI,R0	FF	
2392	332F	00	13	92			STRA,R0	EVALCC	
2393	332F	3F	46	40			BSTA,UN	SKPSP	
2394	332F	04	20				COMI,R2		
2395	332F	10	3D	2B			ECTA,EO	FPCOM	
2396	332F	04	29				COMI,R0		
2397	332F	10	34	93			ECTA,EO	ERRPAR	
2398	332F	04	27				COMI,R0	2	
2399	332F	10	3F	23			ECTA,EO	RTNVAL	
2400	332F	0F	09				LODI,R1	8	
2401	332F	11	59	49		EVAL4	COMA,R1	OPTPL-	
2402	332F	10	34	23			ECTA,EO	EOPT	
2403	332F	00	78				BRNR,R1	EVAL4	
2404	332F	3F	32	13			BSTA,UN	DECP7	
2405	332F	3F	33	93		ENDEVL	BSTA,UN	POPOP	
2406	3401	03					STRZ,R3		
2407	3402	04	07				COMI,R0	7	
2408	3404	16	00				BCTR,EO	ENDE2	
2409	3406	44	27				ANDI,R0	7	
2410	3408	04	03				COMI,R0	3	
2411	340A	1D	31	E1			ECTA,GT	SYNER	
2412	340D	3F	34	89			BSTA,UN	DOOF	
2413	3410	1B	60				BCTR,UN	ENDEVL	
2414	3412	00	13	92		ENIE2	LODA,R0	EVALCC	
2415	341F	10	31	01			ECTA,EO	RETC27	
2416	3418	3F	30	E1			BSTA,UN	INCSP	
2417	341B	3F	30	D9			BSTA,UN	DECSP	
2418	341F	03					ICDZ,R3		
2419	341F	14					RETC,EO		
2420	3420	04	FF				LODI,R0	FF	

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1421	3420	17					RETC,UN		
1422	3423					*			
1423	3423					*			
1424	3423	18	24			EOP	CCM1,R1	4	
1425	3425	18	2A				PCTR,RT	EOP4	
1426	3427	18	75	51			LODA,R1	OPCOD.I	
1427	342A	21					RRL,R1		
1428	342B	21					RRL,R1		
1429	342C	21					RRL,R1		
1430	342D	21					IOR2,R1		
1431	342E	22					STRZ,R2	TEMPCP	
1432	3430	31	33	53		EOP2	STRA,UN	POPCP	
1433	3433	31					STRZ,R1		
1434	3434	44	27				ANDI,R2	7	
1435	3436	28	1A				LODR,R3	TEMPCP	
1436	3438	47	27				ANDI,R3	7	
1437	343A	53					COM2,R3		
1438	343B	59	7C				PCTR,LE	EOP3	
1439	343D	21					LODZ,R1		
1440	343E	31	33	60			STRA,UN	PUSHOP	
1441	3441	28	0E				LODR,R2	TEMPCP	
1442	3443	31	33	62			STRA,UN	FUSHOP	
1443	3446	1F	33	AF			BCTA,UN	EVAL2	
1444	3449	21				EOP3	LODZ,R1		
1445	344A	03					STRZ,R3		
1446	344B	31	34	59			STRA,UN	DOOP	
1447	344C	18	62				BCTA,UN	EOP2	
1448	3450					*			
1449	3450					*			
1450	3450	22				TEMPOP RES		1	
1451	3451					*			
1452	3451					*			
1453	3451	35	2C			EOP4	BSTR,UN	CONVGT	
1454	3452	21					LODZ,R1		
1455	3454	2C					STRZ,R2		
1456	3455	2C	51	84			LODA,R2	*INFT	
1457	3456	2A	22				LODI,R1	8	
1458	345A	17	56	40		EOP4A	CCM1,R1	OPTBL.-	
1459	345D	18	26				PCTR,EQ	EOP5	
1460	3457	18	25				CCM1,R1	5	
1461	3451	32	77				PCTR,EQ	EOP4A	
1462	3467	18	08				BCTA,UN	EOP5A	
1463	3465	31	31	FD		EOP5	STRA,UN	INOPT	
1464	3468	31	3F				BSTR,UN	CONVGT	
1465	346A	21					LODZ,R1		
1466	346B	52					IOR2,R2		
1467	346C	02					STRZ,R2		
1468	346D	12				EOP5A	RRL,R2		
1469	346E	12					RPL,R2		
1470	3471	12					RRL,R2		
1471	3472	66	23				IOR1,R2	3	
1472	3472	07					LODZ,R2		
1473	3473	0C	14	50			STRA,R2	TEMPCP	
1474	3475	18	74	30		*	BCTA,UN	EOP2	
1475	3476					*			

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1476	3476					*			
1477	3476	AF	74			CONVGT	SUBI,R1	4	
1478	347B	15	03				COMI,R1	3	
1479	347C	16					RETC,LT		
1480	347E	08	24				LODI,R1	4	
1481	3480	17					RETC,UN		
1482	3481					*			
1483	3481					*			
1484	3481	28	2F			ELPAR	LODR,R2	PARNST	
1485	3481	2A	01				ADDI,R2	1	
1486	3483	0C	23				STRZ,R2	PARNST	
1487	3487	24	05				LODI,R2	5	
1488	3489	31	33	60			STRA,UN	FUSHOP	
1489	3490	31	45	79			STRA,UN	CKNEG	
1490	348F	1F	33	AF			BCTA,UN	EVAL2	
1491	3492					*			
1492	3492					*			
1493	3492	02				PARNST RES		1	
1494	3493					*			
1495	3493					*			
1496	3493	08	7D			ERPAR	LODR,R2	PARNST	
1497	3495	06	06				PCTR,EQ	ERPAR2	
1498	3497	31	32	13		ERPAR1	STRA,UN	DEOPT	
1499	349A	1F	33	FE			BCTA,UN	ENDEVL	
1500	349D	A4	01			ERPAR2	SUPI,R2	1	
1501	349F	08	71				STRZ,R2	PARNST	
1502	34A1	31	33	53		ERPAR3	STRA,UN	POPCP	
1503	34A4	03					STRZ,R3		
1504	34A5	44	07				ANDI,R2	7	
1505	34A7	14	07				COMI,R2	7	
1506	34A5	1C	31	B1			BCTA,EQ	SYNER	
1507	34A7	14	05				COMI,R2	5	
1508	34A8	1C	33	DA			BCTA,EQ	EVAL2	
1509	34B1	14	06				COMI,R2	6	
1510	34B3	18	21				BCTA,EQ	EFCWEX	
1511	34B5	31	32				BSTR,UN	DOOP	
1512	34B7	18	68				BCTA,UN	ERPAR3	
1513	34B9					*			
1514	34B9					*			
1515	34B9	23				DOOP	LODZ,R3		
1516	34BA	44	07				ANDI,R2	7	
1517	34BC	14	03				COMI,R2	3	
1518	34BE	1C	3D	0C			BCTA,EQ	FPCCOMP	
1519	34C1	53					RPL,R3		
1520	34C2	53					RPL,R3		
1521	34C3	47	0E				ANDI,R3	5	
1522	34C5	0F	75	56			LODA,R3	OPJUMP.I	
1523	34C8	0C	14	D4			STRA,R2	DODST	
1524	34C8	2F	35	56			LODA,R3	OPJUMP.-	
1525	34CE	0C	14	D5			STRA,R2	DODST+1	
1526	34D1	1F	B4	D4		*	BCTA,UN	*DODST	
1527	34D4					*			
1528	34D4					*			
1529	34D4	00	00			DODST RES		2	
1530	34D6					*			

FILE BASIC127 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2521	3408								
2522	3408	51					BCONEX	RRR,R3	
2523	3417	51						RRR,R3	
2524	3426	47	2E					ANTI,R3	3E
2525	342A	75	75	20				LODA,R3	FCNJMP.1
2526	3437	08	75					STRR,R3	DODST
2527	341F	24	74	20				LODA,R3	FCNJMP.1
2528	3432	08	71					STRR,R3	DODST-1
2529	3434	3F	64	24				BSTA,UN	*DODST
2530	3437	18	32	2A				BSTA,UN	FVAL3
2531	341A								
2532	343A								
2533	341A	1F	40	47			FFCN	BSTA,UN	SKPSP
2534	3421	54	20					COMI,R3	(/
2535	343F	00	71	R1				BCFA,EC	SYNER
2536	3432	20	14	02				LODA,R3	PARNST
2537	3425	34	21					ADDI,R3	1
2538	3427	10	14	02				STRR,R3	PARNST
2539	343A	11						RRL,R1	
2540	343B	11						RRL,R1	
2541	343C	11						RRL,R1	
2542	343D	11						RRL,R1	
2543	343E	11						RRL,R1	
2544	343F	11						RRL,R1	
2545	3440	11						RRL,R1	
2546	3441	11						RRL,R1	
2547	3442	11						RRL,R1	
2548	3443	11						RRL,R1	
2549	3444	11						RRL,R1	
2550	3445	11						RRL,R1	
2551	3446	11						RRL,R1	
2552	3447	11						RRL,R1	
2553	3448	11						RRL,R1	
2554	3449	11						RRL,R1	
2555	344A	11						RRL,R1	
2556	344B	11						RRL,R1	
2557	344C	11						RRL,R1	
2558	344D	11						RRL,R1	
2559	344E	11						RRL,R1	
2560	344F	11						RRL,R1	
2561	3450	11						RRL,R1	
2562	3451	11						RRL,R1	
2563	3452	11						RRL,R1	
2564	3453	11						RRL,R1	
2565	3454	11						RRL,R1	
2566	3455	11						RRL,R1	
2567	3456	11						RRL,R1	
2568	3457	11						RRL,R1	
2569	3458	11						RRL,R1	
2570	3459	11						RRL,R1	
2571	345A	11						RRL,R1	
2572	345B	11						RRL,R1	
2573	345C	11						RRL,R1	
2574	345D	11						RRL,R1	
2575	345E	11						RRL,R1	
2576	345F	11						RRL,R1	
2577	3460	11						RRL,R1	
2578	3461	11						RRL,R1	
2579	3462	11						RRL,R1	
2580	3463	11						RRL,R1	
2581	3464	11						RRL,R1	
2582	3465	11						RRL,R1	
2583	3466	11						RRL,R1	
2584	3467	11						RRL,R1	
2585	3468	11						RRL,R1	
2586	3469	11						RRL,R1	
2587	346A	11						RRL,R1	
2588	346B	11						RRL,R1	
2589	346C	11						RRL,R1	
2590	346D	11						RRL,R1	
2591	346E	11						RRL,R1	
2592	346F	11						RRL,R1	
2593	3470	11						RRL,R1	
2594	3471	11						RRL,R1	
2595	3472	11						RRL,R1	
2596	3473	11						RRL,R1	
2597	3474	11						RRL,R1	
2598	3475	11						RRL,R1	
2599	3476	11						RRL,R1	
2600	3477	11						RRL,R1	
2601	3478	11						RRL,R1	
2602	3479	11						RRL,R1	
2603	347A	11						RRL,R1	
2604	347B	11						RRL,R1	
2605	347C	11						RRL,R1	
2606	347D	11						RRL,R1	
2607	347E	11						RRL,R1	
2608	347F	11						RRL,R1	
2609	3480	11						RRL,R1	
2610	3481	11						RRL,R1	
2611	3482	11						RRL,R1	
2612	3483	11						RRL,R1	
2613	3484	11						RRL,R1	
2614	3485	11						RRL,R1	
2615	3486	11						RRL,R1	
2616	3487	11						RRL,R1	
2617	3488	11						RRL,R1	
2618	3489	11						RRL,R1	
2619	348A	11						RRL,R1	
2620	348B	11						RRL,R1	
2621	348C	11						RRL,R1	
2622	348D	11						RRL,R1	
2623	348E	11						RRL,R1	
2624	348F	11						RRL,R1	
2625	3490	11						RRL,R1	
2626	3491	11						RRL,R1	
2627	3492	11						RRL,R1	
2628	3493	11						RRL,R1	
2629	3494	11						RRL,R1	
2630	3495	11						RRL,R1	
2631	3496	11						RRL,R1	
2632	3497	11						RRL,R1	
2633	3498	11						RRL,R1	
2634	3499	11						RRL,R1	
2635	349A	11						RRL,R1	
2636	349B	11						RRL,R1	
2637	349C	11						RRL,R1	
2638	349D	11						RRL,R1	
2639	349E	11						RRL,R1	
2640	349F	11						RRL,R1	

FILE BASIC127 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
2586	3566	16	26				PCFR,EC	POPLT2	
2587	3568	08	08				LODR,R3	LTEMP	
2588	356A	54	71				ADDI,R3	1	
2589	356C	08	24				STRR,R3	LTEMP	
2590	356E	0C	95	72			POPLT2	LODA,R3	*LTEMP
2591	3571	17					RETC,UN		
2592	3572								
2593	3572								
2594	3572	20	02	20	20		LTEMP	RES	5
2595	3576	07							
2596	3577								
2597	3577								
2598	3577	3F	32	10			LOKVAR	BSTA,UN	SKPDEC
2599	357A	3F	31	70				BSTA,UN	SINFT
2600	357C	7C	00	0F				LODA,R3	VARST
2601	3580	A4	21					SURI,R3	1
2602	3582	08	0E					STRR,R3	LTEMP
2603	3584	04	7F					LODI,R3	FF
2604	3586	06	09					STRR,R3	LTEMP-1
2605	3588	3F	56				LOKV1	BSTA,UN	POPLT
2606	358A	1C	3A	16				PCFA,EC	ECRETN
2607	358C	08	05					STRR,R3	LTEMP-2
2608	358F	3E	4F					BSTR,UN	POPLT
2609	3591	08	52					STRR,R3	LTEMP-3
2610	3593	3F	4E					BSTR,UN	POPLT
2611	3595	3A	5F					STRR,R3	LTEMP-4
2612	3597	06	04					LODI,R3	4
2613	3598	3F	4F				LOKV2	BSTR,UN	POPLT
2614	359B	18	29					PCFR,EC	LOKV2A
2615	359D	3F	32	20				BSTA,UN	GETCHR
2616	35A0	3A	10					COMB,R3	*LTEMP
2617	35A2	08	2C					PCFR,EC	LOKV3
2618	35A4	FA	73					PCFR,EC	LOKV2
2619	35A6	0C	31	64			LOKV2A	LODA,R3	*INFT
2620	35A8	3F	4F	A6				BSTA,UN	LTCU
2621	35AC	3F	45	3C				BSTA,UN	CHKAN
2622	35AF	18	1F					PCFR,EC	LOKV3
2623	35B1	A6	31				</		

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
2641	35D4	A4	00				SUBI,R0	2	
2642	35D5	75	28				CFSL	WC	
2643	35D6	00	15	72			STRA,R0	LTEMP	
2644	35D7	0D	15	73			STRA,R1	LTEMP-1	
2645	35D8	1F	35	88			BCFA,UN	LOKV1	
2646	35D9					*			
2647	35DA					*			
2648	35DB	3F	32	78		LOKSTR	BSTA,UN	GETCHR	
2649	35DC	E4	24				COMI,R0	' '	
2650	35DD	9C	3A	1F			BCFA,EC	ECFETN	
2651	35DE	35	88	27		LOKSTR	BSTA,UN	POPLT	
2652	35DF	03	35	80			STRZ,R3		
2653	35E0	3F	35	80			BSTA,UN	FCPLT	
2654	35E1	01					STRZ,R1		
2655	35E2	3F	35	82			BSTA,UN	POPLT	
2656	35E3	02					STRZ,R2		
2657	35E4	07					LODZ,R3		
2658	35E5	27	7F				LODI,R3	FF	
2659	35E6	17					RETC,UN		
2660	35E7					*			
2661	35E8					*			
2662	35E9	22	00	22	02	LDIMS	RYS	A	
2663	35EA	22	00	22	02				
2664	35EB	22	00	22	02				
2665	35EC	22	00	22	02	DIMSTR	RYS	B	
2666	35ED	22	00	22	02				
2667	35EE					*			
2668	35EF					*			
2669	35F0	3A	8C			LOKDIM	STPP,R0	LDIMS	
2670	35F1	E4	24				COMI,R2	4	
2671	35F2	10	37	41			BCFA,EC	FNEMVAL	
2672	35F3	E4	24				COMI,R0	2	
2673	35F4	88	08				BCFP,EC	LOKDWS	
2674	35F5	3F	32	26			BSTA,UN	GETCHR	
2675	35F6	E4	24				COMI,R0	' '	
2676	35F7	40	46	59			BCFA,EC	RETNGT	
2677	35F8	3F	35	82		LOKDWS	BSTA,UN	POPLT	
2678	35F9	08	57				STPP,R0	LDIMS+1	# OF DIMS
2679	35FA	06	22				LODI,R2	0	
2680	35FB	07	01				LODI,R3	1	
2681	35FC	0E	15	2A			STFA,R2	LDIMS-5	
2682	35FD	3F	15	05			STRA,R3	LDIMS-3	
2683	35FE	21	15	2A		LOKDE	LODA,R2	LDIMS+6	
2684	35FF	3F	15	25			LODA,R3	LDIMS+6	
2685	3600	08	46			LOKDEA	STPP,R0	LDIMS-5	
2686	3601	7F	35	80			BSTA,UN	POPLT	
2687	3602	01					STRZ,R1		
2688	3603	00	16	24			STRA,R0	LDIMS-2	
2689	3604	4F	15	25		LOKDE	ADDA,R3	LDIMS+9	MULT BY THIS DIM
2690	3605	77	08				PFSL	WC	
2691	3606	8F	15	2A			ADDA,R2	LDIMS-8	
2692	3607	75	08				CFSL	WC	
2693	3608	F9	24				BDRR,R1	LOKDE	
2694	3609	0E	15	2A			STRA,R2	LDIMS+8	
2695	360A	0F	15	25			STRA,R3	LDIMS+9	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
2696	360B	3F	32	28			BSTA,UN	DEOSP	
2697	360C	22					LODZ,R2		
2698	360D	03					STRZ,R3		
2699	360E	3F	32	09			BSTA,UN	DEOSP	STORE IT
2700	360F	0F	16	24			LODA,R3	LDIMS-2	STORE THIS DIM
2701	3610	3F	32	09			BSTA,UN	DEOSP	
2702	3611	00	10	27			LODA,R0	LDIMS-5	
2703	3612	FC	36	36			BDRA,R0	LOKD2	
2704	3613	00	15	72			LODA,R0	LTEMP	SAVE LTEMP
2705	3614	00	16	05			STRA,R0	LDIMS-3	
2706	3615	20	15	73			LODA,R0	LTEMP+1	
2707	3616	00	16	26			STRA,R0	LDIMS-4	
2708	3617	3F	46	40			BSTA,UN	SKPSP	
2709	3618	E4	28				COMI,R0	' '	
2710	3619	9C	31	21			BCFA,EC	SYNER	
2711	361A	05	08				LODI,R1	2	
2712	361B	0E	16	04		LOKDB	STRA,R1	LDIMS-2	
2713	361C	3F	32	10			BSTA,UN	SKPDEC	
2714	361D	3F	45	48			STFA,UN	CHENUM	
2715	361E	9C	36	42			BCFA,EC	LOKDE	
2716	361F	3F	31	1E			BSTA,UN	INCPT	
2717	3620	44	0F				ANDI,R0	F	
2718	3621	02					STRZ,R2		
2719	3622	00	91	84		LOKD9	LODA,R0	*INPT	
2720	3623	3F	45	49			BSTA,UN	CHENUM	
2721	3624	98	22				BCFP,EC	LOKD7	
2722	3625	01					STRZ,R1		
2723	3626	45	0F				ANDI,R1	F	
2724	3627	3F	31	7D			BSTA,UN	INCPT	
2725	3628	07	09				LODI,R3	9	
2726	3629	02					LODZ,R2		
2727	362A	82				LOKDB	ADDZ,R2	LOKDB	
2728	362B	FB	7D				BDRR,R3		
2729	362C	81					ADDZ,R1		
2730	362D	02					STRZ,R2		
2731	362E	12	68				BCFP,UN	LOKD9	
2732	362F	3F	35	77		LOKDE	BSTA,UN	LOKVAP	
2733	3630	9C	46	59			BCFA,EC	RETNGT	
2734	3631	3F	31	35			BSTA,UN	PUSHFP	
2735	3632	3F	2F	A1			BSTA,UN	ENS2	
2736	3633	02					LODZ,R0		
2737	3634	9C	46	59			BCFA,EC	RETNGT	
2738	3635	01					LODZ,R1		
2739	3636	02					STRZ,R2		
2740	3637	00	16	04		LOKD7	LODA,R1	LDIMS-2	STACK POINTER
2741	3638	02					LODZ,R2		
2742	3639	01	56	0C			STRA,R1	DIMSTR-	
2743	363A	01					LODZ,R1		
2744	363B	10	46	59			BCFA,EC	RETNGT	
2745	363C	3F	46	48			BSTA,UN	SKPSP	
2746	363D	E4	2C				COMI,R0	' '	
2747	363E	10	36	81			BCFA,EC	LOKDB	
2748	363F	E4	29				COMI,R0	' '	
2749	3640	9C	46	59			BCFA,EC	RETNGT	
2750	3641	8D	16	23			ADDA,R1	LDIMS+1	# OF DIMS

FILE BASIC10 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1751	3618	15	28			COMI,R1	6		
1752	361A	20	46	59		BCFR,R2		FNRGT	# OF DIMS - # OF SUBSCR
1753	361D	20				FORZ,R2			
1754	361E	20	18	28		STRA,R2		LDIMS-6	
1755	361F	20	18	28		STRA,R2		LDIMS-7	
1756	361A	20	18	24		LODA,R1		LDIMS-7	STACK POINTER
1757	3617	20	28			SUFI,R1	1		
1758	3618	20	28			COMI,R1	6		
1759	361B	20	30	36		BCTA,R0		LOKIF	LAST SUBSCRIPT
1760	361C	20	36	00		LODA,R1		DIMSTK,-	
1761	3611	20	18	24		STRA,R1		LDIMS-2	
1762	3614	20				STRZ,R2			
1763	3615	20	32	51		BSTA,UN		INCSF	
1764	3616	20				LODI,R2			
1765	3617	20				COMZ,R3			
1766	361A	20				RETC,R1			
1767	361B	20	37	51		BSTA,UN		INCSF	
1768	361C	20	32	51		BSTA,UN		INCSF	
1769	361D	20	21			LODI,R2	1		
1770	361E	20	32	17		LODA,R3		*SP,1	
1771	361F	20	32	3A		STRA,R2		LDIMS-6	
1772	3620	20	32	07		LODA,R3		*SP,-	
1773	3620	20	18	2B		STRA,R2		LDIMS-9	
1774	3621	20				FORZ,R2			
1775	361E	20				STRZ,R1			
1776	3611	20				STRZ,R3			
1777	3612	20	22			COMI,R2	2		
1778	3614	20				BCFR,R2		LOKIF	
1779	3615	20	18	29		ADDA,R1		LDIMS-6	
1780	3616	20	18	0A		WC			
1781	361B	20	18	0A		ADDA,R2		LDIMS-6	
1782	361B	20	18			CPSL	WC		
1783	3620	20	24			BDRR,R2		LOKIF	
1784	3620	20	18	28		ADDA,R1		LDIMS-7	
1785	3620	20	18	29		STRA,R1		LDIMS-7	
1786	3620	20	28			PPSL	WC		
1787	362A	20	18	39		ADDA,R3		LDIMS-6	
1788	3620	20	18	28		STRA,R2		LDIMS-6	
1789	3620	20	18			CPSL	WC		
1790	3620	20	18	24		LODA,R1		LDIMS-2	
1791	3620	20	38	59		BCTA,UN		LOKIC	
1792	3620	20	38	51		BSTA,UN		INCSF	
1793	3620	20	18	13		COMA,R3		DIMSTK-7	
1794	3620	20	18	59		BCTA,1T		REFNGT	
1795	3641	20	38	51		BSTA,UN		INCSF	
1796	3644	20	38	51		BSTA,UN		INCSF	
1797	3647	20	38	20		LODA,R1		DIMSTK,-	
1798	364A	20	18	28		ADDA,R2		LDIMS-7	
1799	3640	20	18	09		STRA,R2		LDIMS-7	
1800	3650	20	28			PPSL	WC		
1801	3652	20				FORZ,R2		LDIMS-6	
1802	3653	20	18	28		ADDA,R2		LDIMS-6	
1803	3656	20	18	28		CPSL	WC		
1804	3656	20	18	28		LODA,R2		LDIMS	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
1806	3751	20	22			COMI,R2	2		
1807	3762	20	22			BCTR,R2		LOKED	
1808	3762	20	22			LODI,R2	2		
1809	376A	20	18	28		LODA,R3		LDIMS-6	
1810	3767	20	18	28		LODA,R1		LDIMS-7	
1811	376A	20	18	28		ALDA,R1		LDIMS-7	
1812	376D	20	28			PPSL	WC		
1813	376E	20	18	28		ADDA,R2		LDIMS-6	
1814	3777	20	28			CPSL	WC		
1815	377A	20	24			BDRR,R2		LOKIF	
1816	3776	20	18	06		ADDA,R1		LDIMS-4	
1817	3776	20	28			PPSL	WC		
1818	377E	20	18	06		ADDA,R2		LDIMS-3	
1819	377E	20	28			CPSL	WC		
1820	3760	20	18	72		STRA,R3		LTEMP	
1821	3783	20	18	72		STRA,R1		LTEMP-1	
1822	3786	20	18	22		LODA,R2		LDIMS	
1823	3789	20	22			COMI,R2	2		
1824	378B	20	38	72		BCTA,R0		LOKST2	
1825	378E	20	38	04		BCTA,UN		LOKVB	
1826	3791					*			
1827	3791					*			
1828	3791	20	46	42		FNEVAL		SKPSP	
1829	379A	20	28			COMI,R2	1		
1830	3796	20	1A			BCFR,R0		FNRGT	
1831	3798	20	14	92		LODA,R2		PARNST	
1832	379E	20	21			ADDI,R0	1		
1833	379D	20	14	92		STRA,R2		PARNST	
1834	37A0	20	38	67		BSTA,UN		POFLT	
1835	37A3	20	18			STRR,R2		FNS	
1836	37A5	20	38	60		BSTA,UN		POPLT	
1837	37A8	20	18			STRR,R2		FNS+1	
1838	37AA	20	24	FF		LODI,R2		FE	
1839	37AC	20	38	60		BSTA,UN		PUSHP	
1840	37AF	20	38	76		BCTA,UN		VAL2	
1841	37B2	20	18	16		LODA,R2		VALS	
1842	37B5	20	11	84		STRA,R2		INFT	
1843	37B8	20	18	09		LODA,R2		VALS+1	
1844	37B8	20	11	86		STRA,R2		INFT-1	
1845	37B8	20	24	21		LODI,R2	1		
1846	37C0	20				RETC,UN			
1847	37C1					*			
1848	37C1					*			
1849	37C1	20	20	20	02	FNS	FNS	*	
1850	37C5	20				*			
1851	37C6					*			
1852	37C6					*			
1853	37C6	20	11	84		FPUSE	LODA,R2	INFT	
1854	37C9	20	18	18		STRA,R2		VALS	
1855	37C0	20	11	85		LODA,R2		INFT+1	
1856	37C0	20	18	09		STRA,R2		VALS+1	
1857	37D2	20	28	6D		LODR,R2		FNS	
1858	37D4	20	11	84		STRA,R2		INFT	
1859	37D7	20	28	59		LOIR,R2		FNS+1	
1860	37D9	20	11	85		STRA,R2		INFT-1	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
1961	3700	2F	32	28		FNC	BSTA.UN	GETCHR	
1962	3701	2F	31	2E			BSTA.UN	CHKCP	
1963	3702	1C	39	2A			BCTA.EC	UFER	
1964	3703	24	28				COMI.R0		
1965	3704	26	28				BCFP.EC	FNC	
1966	3705	2F	40	42			BSTA.UN	SKESP	
1967	3706	34	31				COMI.R0		
1968	3707	20	2A	2A			BCFA.EC	UFER	
1969	3708	27	31	24			LCDA.R0	INPT	
1970	3709	28	41				STRA.R0	FNS+3	
1971	3710	20	31	2F			LCDA.R0	INPT+1	
1972	3711	28	41				STRA.R0	FNS+3	
1973	3712	28	31	22			BSTA.UN	SINPT	
1974	3713	24	2F				LCDA.R0	FF	
1975	3714	2F	32	28		FNC	BSTA.UN	GETCHR	
1976	3715	20	28	2E			STRA.R0	FNSTG+1	
1977	3716	28	42				COMI.R0	42	
1978	3717	1C	39	2A			BCTA.EC	UFER	
1979	3718	24	27				COMI.R0	CR	
1980	3719	24	27				BCFR.EC	FNC	
1981	3720	34	2C				LCDA.R0	2	
1982	3721	1C	39	2A			STRA.R0	FNSTG+1	
1983	3722	33	31	2B			BSTA.UN	PIINPT	
1984	3723	24	27				LCDA.R0	3	
1985	3724	34	2C	13		FNC	BSTA.UN	DECPY	
1986	3725	28	28				BCFR.R0	FNC	
1987	3726	33	31	13		FNC	BSTA.UN	DECPY	
1988	3727	20	31	24			LCDA.R0	*INPT	
1989	3728	24	2C				COMI.R0		
1990	3729	1C	39				BCFR.EC	FNC	
1991	3730	24	2C				COMI.R0		
1992	3731	24	2C				BCFR.EC	FNC	
1993	3732	1C	39				BCFR.EC	FNC	
1994	3733	24	2C				BCFR.EC	FNC	
1995	3734	20	31	24			LCDA.R0	FNC	
1996	3735	24	2C				BCFR.EC	FNC	
1997	3736	24	2C				BCFR.EC	FNC	
1998	3737	24	2C				BCFR.EC	FNC	
1999	3738	24	2C				BCFR.EC	FNC	
2000	3739	24	2C				BCFR.EC	FNC	
2001	3740	24	2C				BCFR.EC	FNC	
2002	3741	24	2C				BCFR.EC	FNC	
2003	3742	24	2C				BCFR.EC	FNC	
2004	3743	24	2C				BCFR.EC	FNC	
2005	3744	24	2C				BCFR.EC	FNC	
2006	3745	24	2C				BCFR.EC	FNC	
2007	3746	24	2C				BCFR.EC	FNC	
2008	3747	24	2C				BCFR.EC	FNC	
2009	3748	24	2C				BCFR.EC	FNC	
2010	3749	24	2C				BCFR.EC	FNC	
2011	3750	24	2C				BCFR.EC	FNC	
2012	3751	24	2C				BCFR.EC	FNC	
2013	3752	24	2C				BCFR.EC	FNC	
2014	3753	24	2C				BCFR.EC	FNC	
2015	3754	24	2C				BCFR.EC	FNC	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2016	3806	04	38				LCDA.R0	FNSTG	
2017	3807	01	11	24			STRA.R0	INPT	
2018	3808	24	2F				LCDA.R0	FNSTG	
2019	3809	00	11	25			STRA.R0	INPT+1	
2020	3810	1F	3E	2F			BCTA.UN	VAL2	
2021	3811	00	28	22		FNSTG	STRA.R0	STMP+4	
2022	3812	00	28	31			STRA.R1	STMP+5	
2023	3813	3F	2F	2A			BSTA.UN	ZER	
2024	3814	2C	22	27			LCDA.R0	*SP	
2025	3815	24	21				COMI.R0	1	
2026	3816	2C	4F	2C			BCFA.EC	TYPER	
2027	3817	2C	2F	24			BSTA.UN	STEG	
2028	3818	1F	28	44			BCTA.UN	FND	
2029	3819					*			
2030	3820					*			
2031	3821	27	22			UFER	LCDA.R3	UFERR	
2032	3822	1F	33	2E			BCTA.UN	ERROR	
2033	3823					*			
2034	3824					*			
2035	3825	22	20	00	22	FNSTG	RES	29	40 BYTE MAXIMUM
2036	3826	22	20	00	22				
2037	3827	22	20	00	22				
2038	3828	22	20	00	22				
2039	3829	22	20	00	22				
2040	3830	22	20	00	22				
2041	3831	22	20	00	22				
2042	3832	22	20	00	22				
2043	3833	22	20	00	22				
2044	3834	22	20	00	22				
2045	3835	22	20	00	22				
2046	3836					*			
2047	3837					*			
2048	3838	22				DPFND	RES	1	
2049	3839	00	00			ECSTG	RES	2	
2050	3840					*			
2051	3841					*			
2052	3842	22				ECONST	FORZ.R0		
2053	3843	22	2A			TRR.R0	DPFND		
2054	3844	22	2A			TRR.R0	ECSTG+1		
2055	3845	24	2B			LCDA.R0	8		
2056	3846	01	53	52		ECON1	STRA.R0	CBUFL-	
2057	3847	2A	2E			RRNR.R0	ECON1		
2058	3848	2F	32	10		BSTA.UN	SKPDEC		
2059	3849	3F	31	20		BSTA.UN	SINPT		
2060	3850	3F	32	28		BSTA.UN	GETCHR		
2061	3851	34	22				COMI.R0		
2062	3852	1C	3A	21			BCTA.EC	ESTR	
2063	3853	1F	32	13			BSTA.UN	DECPY	
2064	3854	2C	00				LCDA.R2	2	
2065	3855	2C	00				LCDA.R1	0	
2066	3856	2F	32	28		ECON2	BSTA.UN	GETCHR	
2067	3857	24	2E				COMI.R0		
2068	3858	2F	2C				BCFR.EC	ECON4	
2069	3859	2F	2C				LCDA.R0	DPFND	
2070	3860	1C	3A	16			BCTA.LT	ECPETN	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3271	3278	03	13	51			STRA,R0	CBUF1-1	
3272	327B	04	FF				LODI,R0	FF	
3273	327C	08	49				STRA,R0	DPFND	
3274	327D	0A	EB				BRNR,R0	ECON8	
3275	327E	2F	20	20		ECON8B	BSTA,UN	DECTHR	
3276	327F	14	72				COMI,R0	10	
3277	3278	08	75				BCFR,EC	ECON8A	
3278	3279	48	87				ADII,R2	57	
3279	327A	10					DAR,R2		
3280	327B	1F	04				BCTR,UN	ECON8B	
3281	327C	22				ECON8A	LODZ,R2		
3282	327D	16	2A				BCTR,EC	ECON8C	
3283	327E	04	77				LODI,R0	F2	
3284	327F	20	43	57			STRA,R0	CBUF1	
3285	3280	18	12	51			STRA,R0	CBUF1-1	
3286	3281	2A	72				LODI,R2	0	
3287	3282	03	13			ECON8C	BSTA,UN	DEOPT	
3288	3283	1F	4F				BCTR,UN	ECON8	
3289	3284	4F	4F	4F		ECON4	BSTA,UN	CHKNUM	
3290	3285	08	77				BCFR,EC	ECON5	
3291	3286	14	77				COMI,R2	0	
3292	3287	08	25				BCTR,EC	ECON4A	
3293	3288	03	16	2F			LODZ,R2	DPFND	
3294	3289	1A	2A				BCTR,LT	ECON4A	
3295	328A	1A	2A				BRNP,R2	ECON4A	
3296	328B	1A	2A				LODI,R0	FF	
3297	328C	20	18	5A			STRA,R0	ECSTG-1	
3298	328D	1F	28	7C			BCTR,UN	ECON8	
3299	328E	44	27			ECON4A	ANLI,R2	F	
3300	328F	F0	21				TMI,R2	1	
3301	3290	10	28				BCTR,EC	ECON6	
3302	3291	08	25				COMI,R1	5	
3303	3292	1A	24				BCTR,EC	ECON6	
3304	3293	10					RRL,R0		
3305	3294	12					RRL,R0		
3306	3295	12					RRL,R0		
3307	3296	00					RRL,R0		
3308	3297	01	73	53		ECON6	IOFA,R1	CBUF1-3.1	
3309	3298	08	27				ADII,R2	67	
3310	3299	08					DAR,R2		
3311	329A	08	25				COMI,R1	5	
3312	329B	10	38	10			BCTR,EC	ECON8	
3313	329C	01	72	53			STRA,R1	CBUF1-3.1	
3314	329D	F6	21				TMI,R2	1	
3315	329E	10	38	10			BCTR,EC	ECON8	
3316	329F	11	38	10			BIRA,R1	ECON8	
3317	32A0	F6	22			ECON5	COMI,R2	0	
3318	32A1	08	12				BCFR,EC	ECON5B	
3319	32A2	40	16	5A			LODZ,R2	ECSTG-1	
3320	32A3	10	3A	16			BCTR,EC	ECSTG	
3321	32A4	04	F0				LODI,R0	F2	
3322	32A5	10	17	52			STRA,R0	CBUF1	
3323	32A6	10	39				LODI,R0	59	
3324	32A7	10	17	51			STRA,R0	CBUF1-1	
3325	32A8	10	12				BCTR,UN	ECON	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3226	3261	F0	18	58		ECON5B	LODZ,R0	DPFND	
3227	3262	1A	23				BCTR,LT	ECON5A	
3228	3263	08	13	51			STRA,R2	CBUF1-1	
3229	3264	3F	32	13		ECON5A	BSTA,UN	DEOPT	
3230	3265	3F	46	40			BSTA,UN	SKFSP	
3231	3266	14	45				COMI,R0	1	
3232	3267	18	2A				BCTR,EC	ECON9	
3233	3268	3F	32	13		ECON	BSTA,UN	DEOPT	
3234	3269	04	73				LODI,R0	CBUF1	
3235	326A	25	50				LODI,R1	CBUF1	
3236	326B	07	02				LODI,R2	0	
3237	326C	17					BCTR,UN		
3238	326D	17				ECON5	IORZ,R0		
3239	326E	70	18	58			STRA,R0	ECSTG	
3240	326F	3F	46	40			BSTA,UN	SKFSP	
3241	3270	14	2B				COMI,R0	1	
3242	3271	18	21				BCTR,EC	ECONB	
3243	3272	14	2F				COMI,R0	1	
3244	3273	08	27				BCFR,EC	ECONA	
3245	3274	04	F0				LODI,R0	F0	
3246	3275	00	18	58			STRA,R0	ECSTG	
3247	3276	1F	03				BCTR,UN	ECONB	
3248	3277	3F	32	13		ECONA	BSTA,UN	DEOPT	
3249	3278	00	91	64		ECONB	LODZ,R0	*INPT	
3250	3279	3F	46	40			BSTA,UN	CHKNUM	
3251	327A	08	55				BCFR,EC	ECON	
3252	327B	3F	31	FD			BSTA,UN	INOPT	
3253	327C	44	2F				ANLI,R0	F	
3254	327D	02					STRZ,R2		
3255	327E	00	91	64			LODZ,R0	*INPT	
3256	327F	3F	4F	48			BSTA,UN	CHKNUM	
3257	3280	08	0B				BCFR,EC	ECONC	
3258	3281	3F	31	FD			BSTA,UN	INOPT	
3259	3282	12					RPL,R2		
3260	3283	12					RRL,R2		
3261	3284	D2					RRL,R2		
3262	3285	12					RRL,R2		
3263	3286	44	2F				ANLI,R0	F	
3264	3287	02					IORZ,R2		
3265	3288	02					STRZ,R2		
3266	3289	00	18	58		ECONC	LODZ,R0	ECSTG	
3267	328A	00	13	53			COMA,R0	CBUF1	
3268	328B	08	10				BCFR,EC	ECONC1	
3269	328C	06	66				ADDI,R2	66	
3270	328D	0F	13	51			ADDA,R2	CBUF1-1	
3271	328E	06					DAR,R2		
3272	328F	05	21				TPSL	CRY	
3273	3290	10	46	74			BCTR,EC	OVFER	
3274	3291	01	13	51			STRA,R2	CBUF1-1	
3275	3292	1B	27				BCTR,UN	ECONC	
3276	3293	0F	13	51		ECONC1	COMA,R2	CBUF1-1	
3277	3294	19	1F				BCTR,GT	ECONC2	
3278	3295	1A	29				BCTR,LT		
3279	3296	22					IORZ,R0		
3280	3297	00	13	52			STRA,R0	CBUF1	

FILE BASIC121 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
2041	2041	00	13	51		STRA,R2		CBUF1-1	
2042	2042	00	13	51		BCTR,UN		ECONE	
2043	2043	00	13	51		ECONC2		LOCA,R2	CBUF1-1
2044	2044	00	13	51		SUB2,R2			
2045	2045	00	13	51		DAE,R2			
2046	2046	00	13	51		STRA,R2		CBUF1-1	
2047	2047	00	13	51		BCTR,UN		ECONE	
2048	2048	00	13	51		ECONC2		SUBA,R2	CBUF1-1
2049	2049	00	13	51		SAR,R2			
2050	2050	00	13	51		TEA,R2		CBUF1-1	
2051	2051	00	13	51		LOCA,R2		ECS G	
2052	2052	00	13	51		STRA,R2		CEUF1	
2053	2053	00	13	51		ECONC2		GETCHR	
2054	2054	00	13	51		STRA,UN		CHKNUM	
2055	2055	00	13	51		BCTR,EC		ECRETN	
2056	2056	00	13	51		BCTR,UN		ECCK	
2057	2057	00	13	51					
2058	2058	00	13	51					
2059	2059	00	13	51					
2060	2060	00	13	51					
2061	2061	00	13	51					
2062	2062	00	13	51					
2063	2063	00	13	51					
2064	2064	00	13	51					
2065	2065	00	13	51					
2066	2066	00	13	51					
2067	2067	00	13	51					
2068	2068	00	13	51					
2069	2069	00	13	51					
2070	2070	00	13	51					
2071	2071	00	13	51					
2072	2072	00	13	51					
2073	2073	00	13	51					
2074	2074	00	13	51					
2075	2075	00	13	51					
2076	2076	00	13	51					
2077	2077	00	13	51					
2078	2078	00	13	51					
2079	2079	00	13	51					
2080	2080	00	13	51					
2081	2081	00	13	51					
2082	2082	00	13	51					
2083	2083	00	13	51					
2084	2084	00	13	51					
2085	2085	00	13	51					
2086	2086	00	13	51					
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2090	2090	00	13	51					
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2092	2092	00	13	51					
2093	2093	00	13	51					
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2096	2096	00	13	51					
2097	2097	00	13	51					
2098	2098	00	13	51					
2099	2099	00	13	51					
2100	2100	00	13	51					
2101	2101	00	13	51					
2102	2102	00	13	51					
2103	2103	00	13	51					
2104	2104	00	13	51					
2105	2105	00	13	51					
2106	2106	00	13	51					
2107	2107	00	13	51					
2108	2108	00	13	51					
2109	2109	00	13	51					
2110	2110	00	13	51					
2111	2111	00	13	51					
2112	2112	00	13	51					
2113	2113	00	13	51					
2114	2114	00	13	51					
2115	2115	00	13	51					
2116	2116	00	13	51					
2117	2117	00	13	51					
2118	2118	00	13	51					
2119	2119	00	13	51					
2120	2120	00	13	51					
2121	2121	00	13	51					
2122	2122	00	13	51					
2123	2123	00	13	51					
2124	2124	00	13	51					
2125	2125	00	13	51					
2126	2126	00	13	51					
2127	2127	00	13	51					
2128	2128	00	13	51					
2129	2129	00	13	51					
2130	2130	00	13	51					
2131	2131	00	13	51					
2132	2132	00	13	51					
2133	2133	00	13	51					
2134	2134	00	13	51					
2135	2135	00	13	51					

FILE BASIC122 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3136	3A49	22				EXEP	RES	1	
3137	3A4A					*			
3138	3A4A					*			
3139	3A4A	24	3A			TRAN	LODI,R2	CPA	
3140	3A4C	25	31				LODI,R1	OPA	
3141	3A4E	3F	31	55			BSTA,UN	POFFP	
3142	3A51	24	3A				LODI,R2	CPB	
3143	3A53	25	3A				LODI,R1	OPB	
3144	3A55	3F	31	55			BSTA,UN	POFFP	
3145	3A59	22					FORZ,R2		
3146	3A5F	00	1A	39			STRA,R2	MANA-LEN	
3147	3A60	25	26				LENG		
3148	3A6F	0D	5A	42		TRAN2	STRA,R1	MANA-LEN,-	
3149	3A6F	59	78				BPNR,R1	TRAN2	
3150	3A6F	17					RETC,UN		
3151	3A6A					*			
3152	3A6A					*			
3153	3A6A	3F	64			FPFSUB	BSTR,UN	TRAN	
3154	3A6F	0F	1A	33			LOCA,R3	CPA-2	
3155	3A69	27	F0				FORI,R3	F0	CHG SIGN
3156	3A69	0F	1A	33			STRA,R3	CPA-2	
3157	3A6E	1B	2E				BCTR,UN	DA2	
3158	3A72	00	90	D7		FPADD	LOCA,R2	*SP	
3159	3A73	14	81				COMI,R2	1	
3160	3A75	10	30	26			BCTA,EC	ALDSTR	
3161	3A78	3F	3A	4A			BSTA,UN	TRAN	
3162	3A78	0F	1A	33			LOCA,R3	CPA-2	
3163	3A7F	77	28			DA2	PPSL	WC	
3164	3A82	25	01				CPSL	CR1	
3165	3A82	0D	1A	3A			LOCA,R1	CPB	
3166	3A85	1E	1A	31			COMA,R1	CPA	
3167	3A85	1E	1A				BCTR,EC	TA6	
3168	3A8A	59	0F			DA3	BRNR,R1	TA5	
3169	3A8C	24	3A			DA7	LODI,R2	CPA	
3170	3A8F	25	31				LODI,R1	CPA	
3171	3A92	26	28			DA4	LODI,R2	LENG	
3172	3A92	3F	3C	22			BSTA,UN	SHFR	
3173	3A95	3F	3C	B0			BSTA,UN	INCR	
3174	3A98	1B	64				BCTR,UN	DA2	
3175	3A9A	24	3A			DA5	LODI,R2	CPB	
3176	3A9C	25	3A				LODI,R1	OPB	
3177	3A9E	1F	70				BCTR,UN	DA4	
3178	3AA2	2C	1A	3F		DA6	LOCA,R2	EXPB	
3179	3AA3	1C	1A	32			COMA,R2	EXPA	
3180	3AA5	19	62				BCTR,GT	DA3	
3181	3AA5	19	64				BCTR,EC	DA10	
3182	3AA5	59	62				BRNR,R1	DA7	
3183	3AA5	1B	6C				BCTR,UN	DA5	
3184	3AA5	2C	1A	33		DA8	LOCA,R2	SMAA	
3185	3AB1	3F	1A	3C			COMA,R3	SMAB	
3186	3AB4	98	11				BCTR,EC	DAD1	
3187	3AB6	3F	21				BSTR,UN	ADD	
3188	3AB9	26	26				LODI,P2	LENG+1	
3189	3ABA	24	3A				LODI,R2	OPB	
3190	3ABC	25	3A				LODI,R1	OPB	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3151	3AEE	3F	70	20			RSTA,UN	SHFR	
3152	3AC1	3F	30	20			RSTA,UN	INCR	
3153	3AC4	1F	3E	4F			RCTA,UN	RDY	
3154	3AC7	7F	21			DAT1	PFSL	CRY	CLEAR EDPROW
3155	3AC9	3F	32				RSTR,UN	COMP	
3156	3ACB	1A	3E				RCTR,LT	LAT2	
3157	3AC1	3F	3E				RSTR,UN	SUB	
3158	3ACF	1F	3E	4E			RCTA,UN	RDY	
3159	3AC2	3F	1A	30		DAT2	STRA,R3	SMAB	
3160	3AD6	2F	2F				LCI1,R2	LEN-1	
3161	3AD7	4F	5A	34		DAD3	LOIA,R2	MANA,-	
3162	3ADA	4F	7A	3D			SUBA,R2	MANB,I	
3163	3AD1	34					DAR,R0		
3164	3AD3	3E	7A	71			STRA,R2	MANF,I	
3165	3AE1	5A					BRNR,R2	DAD3	
3166	3AE7	1F	3E	4F			RCTA,UN	RDY	
3167	3AE8					*			
3168	3AE8					*			
3169	3AE6	7F	21			ADD	PFSL	CRY	
3170	3AE9	4E	20				LCI1,R1	0	
3171	3AEA	2F	2E				LCI1,R2	LEN-1	
3172	3AE5	51				ADD1	RST,R1		
3173	3AE3	2E	5A	7D			LOIA,R2	MANB,-	
3174	3AF7	14	5E				ADTI,R0	66	
3175	3AF2	11					RFL,R1		
3176	3AF3	2A	7A	34			ADDA,R2	MANA,I	
3177	3AF6	14					DAR,R0		
3178	3AF7	3E	7A	31			TRA,R2	MANB,I	
3179	3AFA	1A	72				BRNR,R2	ADD1	
3180	3AFC	12					RETC,UN		
3181	3AF1					*			
3182	3AF1					*			
3183	3AF1	2F	FA			COMP	LCI1,R2	0-LEN-1	
3184	3AF7	3F	29	43		COM1	LOIA,R2	MANB-100-LEN-1,I	
3185	3B22	3E	7E	3A			COMA,R2	MANA-100-LEN-1,I	
3186	3B45	3F	22				RCTR,EQ	COM2	
3187	3B77	DA	76				RIFP,R2	COM1	
3188	3B25	12				COM2	RETC,UN		
3189	3B2A					*			
3190	3B4A					*			
3191	3B7A	77	21			SUB	PFSL	CRY	
3192	3B2C	2E	2E				LCI1,R2	LEN-1	
3193	3B61	4E	5A	7E		SUB1	LOIA,R2	MANB,-	
3194	3E11	4E	7A	74			SUBA,R2	MANA,I	
3195	3E14	14					TRA,R2		
3196	3E15	3E	7A	7D			STRA,R2	MANB,I	
3197	3E16	5A	74				BRNR,R2	SUB1	
3198	3E1A	12					RETC,UN		
3199	3E1E					*			
3200	3E1E					*			
3201	3E1E					*			
3202	3E1F	27	2E			DIV	LCI1,R3	LEN-LEN-1	
3203	3E1D	2E	20			DIV1	LCI1,R1	0	
3204	3E1F	3E	50			DIV2	RSTR,UN	COMP	
3205	3E21	1A	27				RCTR,LT	DIV3	
3206	3E23	3E	6F				RSTR,UN	SUB	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
3246	3B25	8E	66				ADD1,R1	66	
3247	3B27	9E					DAR,R1		
3248	3B28	1F	7E				RCTR,UN	DIV2	
3249	3B2A	8D	1A	4E		DIV3	ADDA,R1	MANB-LEN+LEN-1	
3250	3B2C	2E	1A	4E			STRA,R1	MANB-LEN+LEN-1	
3251	3B30	24	3A				LCI1,R0	OPB	
3252	3B32	2E	3A				LCI1,R1	OPB	
3253	3B34	2E	2F				LCI1,R2	LENG-LEN-2	
3254	3B36	3F	3E	50			RSTA,UN	SHFL	
3255	3B39	1B	62				RDRR,R3	DIV1	
3256	3B3E	3F	30	50			RSTA,UN	INCR	
3257	3B3E	27	2B				LCI1,R3	LEN-LEN-1	
3258	3B40	3F	3E	4E		DIV4	RSTA,UN	SFL	
3259	3B43	3F	7B				RDRR,R3	DIV4	
3260	3B45	24	3A			RET	LCI1,R0	OPB	
3261	3B47	2E	3A				LCI1,R1	OPB	
3262	3B49	2E	2A				LCI1,R2	LENG-2	
3263	3B4B	3E	13				RSTR,UN	NORM	
3264	3B4D	3F	30	7A			RSTA,UN	RND	
3265	3B50	20	1A	49			LOIA,R0	ELXP	
3266	3B53	30	4E	74			RCTA,EC	OFFER	
3267	3B56	24	22				LCI1,R2	2	
3268	3B58	33					PFSL		
3269	3B59	24	3A				LCI1,R0	OPB	
3270	3B5B	2E	3A				LCI1,R1	OPB	
3271	3B5D	1F	31	38			RCTA,UN	PUSEFP	
3272	3B60					*			
3273	3B62					*			
3274	3B62	1E	1A	30		NRM	STRA,R2	CNTR	
3275	3B63	00	1A	2E		NRM2	STRA,R2	PTR	
3276	3B66	01	1A	2F			STRA,R1	PTR-1	
3277	3B69	27	00			NRM	LCI1,R3	0	
3278	3B6B	2E	2E				LCI1,R1	2	
3279	3B6D	7E	21				PFSL	CRY	
3280	3B6F	21	5A	21		NRM1	LOIA,R1	*PTR,-	
3281	3B72	3E	19				RCTR,EQ	NRM2	
3282	3B74	37	22				ADDI,R3	2	
3283	3B76	1F	08				COMI,R1	LENG	
3284	3B78	3E	7E				RCTR,EQ	NRM1	
3285	3B7A	01					STRZ,R1		
3286	3B7E	24	70				LCI1,R0	F0	
3287	3B71	00	9A	2E			STRA,R0	*PTR	
3288	3B80	24	09				LCI1,R0	99	
3289	3B82	01	5A	2E			STRA,R1	*PTR,-	
3290	3B85	22					RCEZ,R0		
3291	3B86	0E	5A	7E			STRA,R1	*PTR,-	
3292	3B89	00	1A	49			STRA,R0	ELXP	
3293	3B8C	17					RETC,UN		
3294	3B81					*			
3295	3B8D					*			
3296	3B8D	44	70			NRM2	ANDI,R2	F0	
3297	3B8F	3E	22				RCTR,EQ	NRM3	
3298	3B91	37	01				ADDI,3	1	
3299	3B93	03				NRM3	LOEZ,R3		
3300	3B94	14					RETC,EQ		

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3301	3E05	3E	0F			NRM4	BSTR.UN	SFL	
3302	3E07	3B	21				BSTR.UN	DECR	
3303	3E09	FE	7A				BIRR.R3	NRM4	
3304	3E0E	10					PETC.UN		
3305	3E0C					*			
3306	3E0C					*			
3307	3E0C	0E	1A	20		SFL	STRA.R2	CNTR	
3308	3E0F	0C	1A	2E		SFL2	STRA.R0	PTR	
3309	3E12	0C	1A	2F			STRA.R1	PTR-1	
3310	3E15	25	24			SFL	LODI.R1	4	
3311	3E17	21	1A	20		SFL1	LODI.R2	CNTR	
3312	3E1A	75	01				CPSL	CRY	
3313	3E1C	24	1A	2E		SFL2	LODI.R2	*PTR,-	
3314	3E1F	24					PTR.R2		
3315	3E22	0F	FA	0E			STRA.R2	*PTR.I	
3316	3E25	16	03				COMI.R2	3	
3317	3E28	06	7F				BCTR.FC	SFL2	
3318	3E27	70	6E				BIRR.R1	SFL1	
3319	3E29	17					PETC.UN		
3320	3E2A					*			
3321	3E2A					*			
3322	3E2A	2D	5A	2E		DTCR	LODI.R1	*PTR,+	
3323	3E27	25	9A	2E			LODI.R2	*PTR	
3324	3E2C	18	2A				BCTR.FC	DEC3	
3325	3E2C	84	67			DTC1	ADDI.R2	67	
3326	3E24	94					DAR.R2		
3327	3E2C	10	4F	74			PCTA.FC	OVFER	
3328	3E2B	01	7	2E		DEC2	STRA.R1	*PTR.I	
3329	3E2B	17					PETC.UN		
3330	3E27	54	0F			DEC3	BRNR.R2	DEC3	
3331	3E2C	10	1A	46			COMA.R2	EEXP	
3332	3E21	88	07				BCTR.FC	DEC4	
3333	3E23	26	F0				LODI.R2	F0	
3334	3E25	01	9A	2E			STRA.R2	*PTR	
3335	3E23	1B	66				BCTR.UN	DEC1	
3336	3E2A	0C	1A	46		DEC4	STRA.R2	EEXP	
3337	3E21	A4	00			DEC5	SUBI.R2	0	
3338	3E27	94					DAR.R2		
3339	3E22	1B	66				BCTR.UN	DEC2	
3340	3E22					*			
3341	3E22					*			
3342	3E27	3F	3A	4A		FPIV	BSTA.UN	TRAN	
3343	3E25	25	1A	31			LODI.R2	OPA	
3344	3E28	2F	F0				FORI.R2	F0	
3345	3E2A	01	1A	31			STRA.R2	CPA	
3346	3E27	27	66				LODI.R3	BB	
3347	3E2F	1B	08				BCTR.UN	DM1	
3348	3E21	37	3A	4A		FPMULT	BSTA.UN	TRAN	
3349	3E24	2E	1A	31			LODI.R2	OPA	
3350	3E27	07	00				LODI.R3	0	
3351	3E28	77	29			DM1	FFSL	WC+CRY	
3352	3E2E	23					LODI.R3		
3353	3E2C	1B	06				BCTR.FC	DM2	
3354	3E2E	20	1A	34			LODI.R2	MANA	
3355	3C21	10	46	74			BCTA.FC	OVFER	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	E1	E2	E3	E4	LABEL	OPCODE	OPERAND	COMMENTS
3356	3C24	0C	1A	3C		DM2	LODI.R2	SMAB	
3357	3C27	EC	1A	33			COMA.R2	SMAA	
3358	3C2A	18	04				BCTR.FC	DM3	
3359	3C2C	04	F0				LODI.R0	F0	
3360	3C2F	1B	01				BCTR.UN	DM4	
3361	3C10	20				DM3	FORZ.R0		
3362	3C11	0C	1A	3C		DM4	TRA.R0	SMAB	
3363	3C14	EE	1A	3A			COMA.R2	OPB	
3364	3C17	98	0C				BCTR.FC	DMU	
3365	3C19	2C	1A	32			LODI.R0	EXPA	
3366	3C1C	84	65				ADDI.R2	65	
3367	3C1E	8C	1A	3B			ADDA.R2	EXPB	
3368	3C21	94					DAR.R2		
3369	3C22	D1					EL.R1		
3370	3C23	1B	1E				BCTR.UN	DMU4	
3371	3C25	0C	1A	3B		DMU	LODI.R2	EXFP	
3372	3C28	EC	1A	32			COMA.R2	EXPA	
3373	3C2B	19	0C				BCTR.CT	DMU2	
3374	3C2D	98	02				BCTR.FC	DMU1	
3375	3C2F	06	00				LODI.R2	0	
3376	3C31	0C	1A	32		DMU1	LODI.R0	EXPA	
3377	3C34	AC	1A	3B			SUBA.R0	EXPB	
3378	3C37	1B	06				BCTR.UN	DMU3	
3379	3C39	0E	1A	3A		DMU2	LODI.R2	OPB	
3380	3C3C	AC	1A	32			SUBA.R0	EXPA	
3381	3C3F	94				DMU3	DAR.R0		
3382	3C40	0E	1A	3A			STRA.R2	OPB	
3383	3C43	0C	1A	3B		DMU4	STRA.R0	EXPB	
3384	3C46	CD	1A	46			STRA.R1	EEXP	
3385	3C49	75	01				CPSL	CRY	
3386	3C4B	04	3A				LODI.R0	CPA	
3387	3C4D	05	31				LODI.R1	OPA	
3388	3C4F	06	08				LODI.R2	LENG	
3389	3C51	3B	3F				BSTR.UN	SHFR	
3390	3C53	5F	3B	1B			BRNA.R3	DIV	
3391	3C56	07	0C			MUL	LODI.R3	LEN-LEN+2	
3392	3C58	04	3A			MUL1	LODI.R0	OPB	
3393	3C5A	05	3A				LODI.R1	OPB	
3394	3C5C	06	0E				LODI.R2	LENG-LEN+1	
3395	3C5F	3B	32				BSTR.UN	SHFR	
3396	3C60	F5	76				BIRR.R3	MUL1	
3397	3C62	07	0A				LODI.R3	LEN-LEN	
3398	3C64	3E	3E			MUL2	BSTR.UN	SHF	
3399	3C66	0C	1A	48		MUL3	LODI.R2	MANB-LEN-LEN+1	
3400	3C68	18	0A				BCTR.FC	MUL4	
3401	3C6B	A4	0F				SUBI.R0	F	
3402	3C6D	0C	1A	48			STRA.R2	MANB-LEN-LEN+1	
3403	3C70	3F	3A	FE			BSTA.UN	AEC	
3404	3C73	1F	71				BCTR.UN	MUL3	
3405	3C75	FB	6D				BIRR.R3	MUL2	
3406	3C77	1F	3E	45			BCTA.UN	RDY	
3407	3C7A					*			
3408	3C7A					*			
3409	3C7A	0C	1A	2D		RND	LODI.R2	ROUN	
3410	3C7E	05	06				LODI.R1	LEN+1	

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3411	3C0F	01	FA	3D		RND1	ADDA,R1		MANB,-
3412	3C0A	04					DAF,R2		
3413	3C0B	0A	7A	3D			STRA,R1		MANB,I
3414	3C0C	04	66				LODI,R0		OFST
3415	3C0B	00	75				BRNR,R1		RND1
3416	3C0A	05	21				TFSL		CRY
3417	3C0C	10					PETC,LT		
3418	3C0D	03	7C				BSTR,UN		SHF
3419	3C0F	03	1F				BCTP,UN		INCR
3420	3C01	12					PETC,UN		
3421	3C00					*			
3422	3C02					*			
3423	3C02	01	1A	22		CHFR	STRA,R2		CNTR
3424	3C02	00	1A	2F		SHF2	STRA,R2		PTR
3425	3C0B	00	1A	2F			STRA,R1		PTR-1
3426	3C0B	00	04			SHF	LODI,R1		4
3427	3C0D	00	02			SHF1	LODI,R2		2
3428	3C0F	2E	0A	2F		SHF2	LODA,R2		*PTR,-
3429	3C02	00				RRR,R0			
3430	3C03	0F	FA	2F			STRA,R2		*PTR,I
3431	3C03	0E	1A	30			CCMA,R2		CNTR
3432	3C03	00	04				BCFR,FC		SHF2
3433	3C03	00	01				CPSL		CRY
3434	3C03	10	01				BDNR,R1		SHF1
3435	3C0F	12					PETC,UN		
3436	3C00					*			
3437	3C00					*			
3438	3C02	01	0A	2E		INCR	LODA,R1		*PTR,-
3439	3C03	00	0A	2E			LODA,R2		*PTR
3440	3C06	00	21				BCFR,EQ		INC2
3441	3C0B	04	07				ADDI,R0		67
3442	3C0A	00					DAR,R0		
3443	3C0A	00	05				BCFR,EQ		INC1
3444	3C0D	00	21				LODI,R1		1
3445	3C0F	01	1A	40			STRA,R1		EEFX
3446	3C02	00	FA	2F		INC1	STRA,R1		*PTR,I
3447	3C0A	10					PETC,UN		
3448	3C02	00	03			INC2	BRNR,R2		INC3
3449	3C0A	00	1A	49			STRA,R0		EEFX
3450	3C0C	A4	22			INC1	SUBI,R0		0
3451	3C00	04					DAR,R0		
3452	3C01	00	02				BRNR,R0		INC1
3453	3C02	00	0A	2E			STRA,R0		*PTR
3454	3C03	10	00				BCTP,UN		INC1
3455	3C00					*			
3456	3C00					*			
3457	3C0A	22				ADDSTS	RES		1
3458	3C06					*			
3459	3C00					*			
3460	3C06	00	40	E4		ADDSTR	BSTA,UN		FPSTRS
3461	3C0B	00	00	01			BSTA,UN		INCSP
3462	3C0C	00	21				COMI,R3		1
3463	3C0D	00	45	7C			BCFA,EQ		TYPER
3464	3C0F	00	02	01			BSTA,UN		INCSP
3465	3C04	00					LODZ,R2		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3466	3C0F	03					ADD2,R3		
3467	3C06	00	21				TFSL		CRY
3468	3C0B	00	0C				BCFR,EQ		ADDST2
3469	3C0A	04	FF				LODI,R0		FF
3470	3C0C	A3					SUBZ,R3		
3471	3C0D	00					STRZ,R2		
3472	3C0F	04	FF				LODI,R0		FF
3473	3C00	00	10	25		ADDST2	STRA,R0		ADDSTS
3474	3C03	0F	40	2D			BSTA,UN		PHSTRS
3475	3C06	00	00	01			BSTA,UN		INCSP
3476	3C06	00	00	01			BSTA,UN		INCSP
3477	3C0C	00	10	25			LODA,R2		ADDSTS
3478	3C0F	00	00	09			BSTA,UN		DECSP
3479	3D02	07	01				LODI,R3		1
3480	3D04	1F	00	09			BCTA,UN		DECSP
3481	3D07					*			
3482	3D07					*			
3483	3D07	0F	40	24		STCOMP	BSTA,UN		COMSTR
3484	3D0A	10	12				BCTR,UN		FFCM2
3485	3D0C					*			
3486	3D0C					*			
3487	3D0C	0B	10			FFCOMP	STRR,R3		COMPS
3488	3D0F	00	00	E7			LODA,R0		*SP
3489	3D11	00	04				BCFR,EQ		STCOMP
3490	3D13	0F	45	E7			BSTA,UN		POPC2
3491	3D16	0F	45	E9			BSTA,UN		POPC1
3492	3D19	0F	00	02			BSTA,UN		COMMON
3493	3D1C	0F	7D	2B		FFCM2	LODA,R3		COMPTB,I
3494	3D1F	40	06				ANCR,R0		COMFS
3495	3D21	00	45	E3			BCFA,EQ		PUSHM1
3496	3D24	1F	45	BA			BCTA,UN		PUSH0
3497	3D27					*			
3498	3D27					*			
3499	3D27	00				COMPS	RES		1
3500	3D28	00	10	08		COMPTP	DATA		20,10,0
3501	3D2B					*			
3502	3D2B					*			
3503	3D2E	00	14	02		FFCOM	LODA,R0		PARNST
3504	3D2E	10	14	07			BCTA,EQ		IRPAR1
3505	3D31	0F	33	03		FFCOM1	BSTA,UN		POF P
3506	3D34	04	02				COMI,R0		2
3507	3D36	10	14	05			BCTR,05		FFCOM2
3508	3D38	0F	14	B9			BSTA,UN		DOOP
3509	3D3B	10	14	07			BCTR,UN		FFCOM1
3510	3D3D	0F	33	00		FFCOM2	BSTA,UN		PUSHOP
3511	3D40	07	05				LODI,R3		5
3512	3D42	0F	30	19			BSTA,UN		DECSP
3513	3D45	1F	33	AF			BCTA,UN		EVAL0
3514	3D46					*			
3515	3D46					*			
3516	3D48	0F	45	E9		FFSGN	BSTA,UN		POPC1
3517	3D4B	00	13	03			LODA,R0		CBUF1+3
3518	3D4F	10	45	BA			BCTA,EQ		PUSH0
3519	3D51	00	13	02			LODA,R0		CBUF1+2
3520	3D54	1F	45	BA			BCTA,LT		PUSHM1

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3521	3157	1F	4F	AC			BCTA,UN	PUSH1	
3522	315A					*			
3523	315A					*			
3524	315A	3F	45	D9		FPAPS	BSTA,UN	POPC1	
3525	315F						FORZ,R0		
3526	315E	00	13	52			TPA,R2	CBUF1-2	
3527	31C1	1F	45	E0			BCTA,UN	PUSHC1	
3528	3154					*			
3529	3154					*			
3530	3154	3F	45	D9		FPPOS	BSTA,UN	POPC1	
3531	3157	3F	24	AC			BSTA,UN	GETDIS	
3532	315A	01					STRZ,R1		
3533	315B	02					FORZ,R0		
3534	315C	1F	3D	FA			BCTA,UN	BTOD	
3535	3153					*			
3536	3153					*			
3537	3157	3F	45	D9		FPFIX	BSTA,UN	POPC1	
3538	3175	0C	13	52		FIX0	LODA,R0	CBUF1	
3539	3175	1F	45	FA			BCTA,LT	PUSH0	
3540	3176	21	13	51			LOTA,R1	CBUF1-1	
3541	3179	25	20				COMI,R1	9	
3542	3177	1D	45	E0			BCTA,GT	PUSHC1	
3543	3182	06	0P				LODI,R2	8	
3544	3182	04	10				LODI,R0	10	
3545	3184	A1					SUBZ,R1		
3546	3185	04					DAR,R0		
3547	3186	11					STRZ,R1		
3548	3187	25	21			FIX1	COMI,R1	1	
3549	3189	19	01				BCTP,GT	FIX2	
3550	3189	1F	4F	E2			BCTA,LT	PUSHC1	
3551	318B	04	F0				LODI,R2	F0	
3552	318C	4E	53	50			ANTA,R2	CBUF1-	
3553	318C	1F	73	50			STPA,R2	CBUF1-1	
3554	318C	1F	4C	E0			BCTA,UN	PUSHC1	
3555	318C	45	02			FIX2	SUBI,R1	2	
3556	318D	02					FORZ,R0		
3557	318C	01	53	50			STPA,R2	CBUF1-	
3558	318F	15	66				BCTP,UN	FIX1	
3559	31A1					*			
3560	31A1					*			
3561	31A1	3F	4F	10		FPLPCS	BSTA,UN	PCPC1	
3562	31A4	0D	02	A1			LODA,R1	LPOS	
3563	31A7	20					FORZ,R0		
3564	31A8	1F	3D	FA			BCTA,UN	BTOD	
3565	31A2					*			
3566	31A2					*			
3567	31A8	3F	45	D9		FPINT	BSTA,UN	POPC1	
3568	31A8	0C	13	52			LODA,R0	CBUF1-2	
3569	31B1	1C	3D	72			BCTA,EQ	FIX2	
3570	31B4	06	0A				LODI,R2	A	
3571	31B5	0C	13	52			LODA,R0	CBUF1	
3572	31B5	1A	0E				BCTR,LT	FPINT2	
3573	31B5	0F	13	51			LODA,R3	CBUF1-1	
3574	31B5	10	09				BCTR,EQ	FPINT2	
3575	31C2	17	09				COMI,R3	9	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3576	31C2	1F	45	E0			BCTA,GT	PUSHC1	
3577	31C5	04	0A				LODI,R0	A	
3578	31C7	A3					SUBZ,R3		
3579	31C8	02					STRZ,R2		
3580	31C9	07	20			FPINT2	LODI,R3	8	
3581	31CB	0F	53	52		FPINT4	LOTA,R3	CBUF1-	
3582	31CE	56	01				COMI,P2	1	
3583	31D2	1F	45	E0			BCTA,LT	PUSHC1	
3584	31D3	19	07				BCTR,GT	FPINT3	
3585	31D5	44	0F				ANDI,R0	F	
3586	31D7	98	08				BCTR,EQ	FPINT5	
3587	31D8	1F	45	E0			BCTA,UN	PUSHC1	
3588	31D9	A6	02			FPINT3	SUBI,R2	2	
3589	31DE	02					LODZ,R2		
3590	31DF	16	6A				BCTR,EQ	FPINT4	
3591	31E1	3F	4F	F0		FPINT6	BSTA,UN	PUSHC1	
3592	31E4	3F	45	AC			BSTA,UN	PUSH1	
3593	31E7	3F	3A	64			BSTA,UN	FPSUB	
3594	31EA	1F	3D	EF			BCTA,UN	FPFIX	
3595	31ED					*			
3596	31ED					*			
3597	31E1	3F	45	D9		FPERR	BSTA,UN	POPC1	
3598	31F0	01	05	18			LOTA,R1	ERRTYP	
3599	31F3	20					FORZ,R0		
3600	31F4	1F	3D	FA			BCTA,UN	BTOD	
3601	31F7					*			
3602	31F7					*			
3603	31F7	00	00	00		BTODS	RES	3	
3604	31FA					*			
3605	31FA					*			
3606	31FA	02				BTOD	STRZ,R2		
3607	31FB	01					LODZ,R1		
3608	31FC	03					STRZ,R3		
3609	31FD	20					FORZ,R0		
3610	31FE	58	77				STRR,R0	BTODS	
3611	31E0	08	76				STRR,R0	BTODS+1	
3612	31E2	09	75				STRR,R0	BTODS+2	
3613	31E4	05	10				LODI,R1	10	
3614	31E5	06	71			BTOD2	LODR,R0	BTODS+2	
3615	31E8	84	66				ADDI,R0	66	
3616	31EA	86	6D				ADDP,R0	BTODS+2	
3617	31EC	94					DAR,R0		
3618	31ED	08	6A				STRR,R0	BTODS+2	
3619	31EF	77	08				PPSL	VC	
3620	31F1	00	65				LODR,R0	BTODS+1	
3621	31F3	84	66				ADDI,P0	66	
3622	31F5	88	61				ADDR,R0	BTODS+1	
3623	31F7	94					DAR,R0		
3624	31F8	00	5E				STRR,R0	BTODS+1	
3625	31FA	26	59				LODR,R0	BTODS	
3626	31FC	84	66				ADDI,R0	66	
3627	31FE	88	57				ADDP,R0	BTODS	
3628	31F0	94					DAR,R0		
3629	31F1	00	54				STRR,R0	BTODS	
3630	31F3	75	0E				CPSL	VC	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3631	3E28	F6	F2				TMI,R2	80	
3632	3E29	86	1A				BCFR,E0	BTOD3	
3633	3E2B	24	67				LODI,R0	67	
3634	3E2F	80	4C				ADDF,R0	BTODS-2	
3635	3E31	04					DAR,R0		
3636	3E32	08	46				STRR,R0	BTODS-2	
3637	3E30	77	28				FFSL	WC	
3638	3E32	24	66				LODI,R0	66	
3639	3E34	88	42				ADDF,R0	BTODS-1	
3640	3E36	04					DAR,R0		
3641	3E37	00	10	F8			STRA,R0	BTODS-1	
3642	3E3A	24	66				LODI,R0	66	
3643	3E3C	80	1D	F7			ADDA,R0	BTODS	
3644	3E3F	04					DAR,R0		
3645	3E42	00	10	F7			STRA,R0	BTODS	
3646	3E43	07	2F			BTOD3	FFSL	WC	
3647	3E45	00					RRL,R3		
3648	3E46	00					RLL,R2		
3649	3E47	7F	0F				CPSL	WC	
3650	3E49	FD	3E	26			BPRA,R1	BTOD2	
3651	3E4C	00					FORZ,R0		
3652	3E4E	05	03				LODI,R1	8	
3653	3E4F	00	63	F2		BTOD4	STRA,R1	CBUF1,-	
3654	3E50	80	05				BRNR,R1	BTOD4	
3655	3E54	00	1E	F7			LODA,R0	BTODS	
3656	3E50	00	13	63			STRA,R0	CBUF1-3	
3657	3E5A	00	1D	F8			LODA,R0	BTODS-1	
3658	3E51	00	13	64			STRA,R0	CBUF1-4	
3659	3E52	00	1D	F8			LODA,R0	BTODS-2	
3660	3E53	00	13	65			STRA,R0	CBUF1-5	
3661	3E56	04	26				LODI,R0	6	
3662	3E58	00	13	61			STRA,R0	CBUF1+1	
3663	3E5F	04	33				LODI,R0	CBUF1	
3664	3E61	0F	50				LODI,R1	CBUF1	
3665	3E6F	26	26				LODI,R2	8	
3666	3E71	77	28				FFSL	WC	
3667	3E73	3E	32	60			BSTA,UN	NORM	
3668	3E76	7F	28				CPSL	WC	
3669	3E76	24	33				LODI,R0	CBUF1	
3670	3E7A	2E	56				LODI,R1	CBUF1	
3671	3E7D	1F	31	7E			BCTA,UN	PUSHFP	
3672	3E7F					*			
3673	3E7F					*			
3674	3E7F	1F	2E	A1		ENX	BCTA,UN	ENS2	
3675	3E7C					*			
3676	3E62					*			
3677	3E62	00	02			CALLS	RES	2	
3678	3E54					*			
3679	3E54					*			
3680	3E84	3F	31	7F		FPCALL	BSTA,UN	ENX	
3681	3E87	08	75				STRR,R0	CALLS	
3682	3E89	09	78				STRR,R1	CALLS+1	
3683	3E83	20	90	C7			LODA,R0	*SP	
3684	3E8E	14	75				COMI,R0	5	
3685	3E90	08	26				BCFR,E0	CALL2	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3686	3E92	3F	30	B1			BSTA,UN	INCSP	
3687	3E95	3F	31	7F			BSTA,UN	ENX	
3688	3E90	3F	3E	82		CALL2	BSTA,UN	*CALLS	
3689	3E93	1F	3D	FA			BCTA,UN	BTOD	
3690	3E91					*			
3691	3E91					*			
3692	3E91	00				TYP3SP	RES	1	
3693	3E9F	02	00	00	20	STR45	RES	11	
3694	3EA3	00	00	00	00				
3695	3EA7	00	00	00	00				
3696	3EAF	00	00	00	00				
3697	3EAF	00							
3698	3EB2					*			
3699	3EB0					*			
3700	3EB0	24	01			FPSTR	LODI,R0	1	
3701	3EB0	00	02	A0			STRA,R0	PTYPE	
3702	3EB5	04	FF				LODI,R0	FF	
3703	3EB7	08	65				STRR,R0	TYP3SP	
3704	3EB9	06	11				LODI,R2	11	
3705	3EBB	20					FORZ,R0		
3706	3EB0	0F	5F	9F		STZ2	STRA,R2	STR45,-	
3707	3EBF	5A	78				BRNR,R2	STZ2	
3708	3EC1	3F	23	29			BSTA,UN	PRNTF	
3709	3EC4	06	11				LODI,R2	11	
3710	3EC6	0F	5F	9F		STZ3	LODA,R2	STR45,-	
3711	3EC9	96	04				BCFR,E0	STZ4	
3712	3ECB	0A	79				BRNR,R2	STZ3	
3713	3ECD	06	71				SUBI,R2	1	
3714	3ECF	06	01			STZ4	ADDI,R2	1	
3715	3ED1	04	3E				LODI,R0	STR45	
3716	3ED3	05	9F				LODI,R1	STR45	
3717	3ED5	1F	30	F2			BCTA,UN	PUSHST	
3718	3ED8					*			
3719	3ED8					*			
3720	3ED8	00	02			VALS	RES	2	
3721	3EDA					*			
3722	3EDA					*			
3723	3EDA	3F	40	E4		FPVAL	BSTA,UN	PPSTRS	
3724	3EDD	04	02				LODI,R0	2	
3725	3EEF	3F	40	00			BSTA,UN	VALSUB	
3726	3EE2	00	11	84			LODA,R0	INPT	
3727	3EE5	08	71				STRR,R0	VALS	
3728	3EE7	00	11	85			LODA,R0	INPT-1	
3729	3EEA	08	5D				STRR,R0	VALS-1	
3730	3EE0	04	40				LODI,R0	FPSTRS	
3731	3EE1	00	11	84			STRA,R0	INPT	
3732	3EF1	04	EB				LODI,R0	FPSTRS	
3733	3EF3	00	11	85			STRA,R0	INPT-1	
3734	3EF6	12				VAL2	SPSU		
3735	3EF7	01					STRZ,R1		
3736	3EF8	44	01				SUBI,R0	1	
3737	3EFA	44	07				ANDI,R0	7	
3738	3EFC	45	FB				ANDI,R1	FB	
3739	3EFF	61					IORZ,R1		
3740	3EFF	92					LFSU		

FILE 'BASIC11' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3741	3F22	1F	33	AF			RCTA,UN	EVAL0	
3742	3F23					*			
3743	3F24					*			
3744	3F25	00	00	00		RINVAL	LODR,R0	VALS	
3745	3F26	00	11	04			STRA,R0	INPT	
3746	3F27	00	4F				LODR,R0	VALS-1	
3747	3F28	00	11	05			STRA,R0	INPT-1	
3748	3F29	1F	33	1A			RCTA,UN	EVAL3	
3749	3F2A					*			
3750	3F2B					*			
3751	3F2C	20	00	17		FFVARF	LODA,R0	*SF	
3752	3F2D	10	0F				BCTR,GT	VARF2	
3753	3F2E	3F	46	09			BSTA,UN	POPC1	
3754	3F2F	1B	03				BCTR,UN	VARF3	
3755	3F30	3F	40	14		VARF2	BSTA,UN	PFSTAS	
3756	3F31	20	10	70		VARF3	LODA,R0	LTEMP	
3757	3F32	01	16	73			LODA,R1	LTEMP-1	
3758	3F33	1F	31	FA			RCTA,UN	BTOD	
3759	3F34					*			
3760	3F35					*			
3761	3F36	3F	45	19		FFFR0	BSTA,UN	POPC1	
3762	3F37	3F	1F	12			BSTA,UN	PUSHC1	
3763	3F38	3F	3D	72			PSTA,UN	FIX2	
3764	3F39	1F	3A	04			RCTA,UN	FFSUB	
3765	3F3A					*			
3766	3F3B					*			
3767	3F3C	00	00			PEEKS	RES	2	
3768	3F3D					*			
3769	3F3E					*			
3770	3F3F	27				FFPEEK	FORZ,R0		
3771	3F40	3F	3E	7F			BSTA,UN	ENSX	
3772	3F41	00	78				STRP,R1	PEEKS	
3773	3F42	00	77				STRP,R1	PEEKS-1	
3774	3F43	20	05	14			LODP,R1	*PEEKS	
3775	3F44	00					FORZ,R0		
3776	3F45	1F	3D	FA			RCTA,UN	BTOD	
3777	3F46					*			
3778	3F47					*			
3779	3F48	3F	3F	5A		FFCHN	BSTA,UN	ENSX1B	
3780	3F49	01					LOI2,R1		
3781	3F4A	1E	46	74			RCTA,LT	OVFER	
3782	3F4B	55	20				COM1,R1	20	
3783	3F4C	1E	46	74			RCTA,LT	OVFER	
3784	3F4D	03					STRZ,R3		
3785	3F4E	3F	30	09			BSTA,UN	DECSF	
3786	3F4F	07	01				LOI2,R3	1	
3787	3F50	7F	32	10			PSTA,UN	DECSF	
3788	3F51	1F	30	06			RCTA,UN	DECSF	
3789	3F52					*			
3790	3F53	3F	2B	A1		ENSX1B	BSTA,UN	ENS2	
3791	3F54	22					LOI2,R0		
3792	3F55	90	45	74			RCTA,LT	OVFER	
3793	3F56	17					RCTA,UN		
3794	3F57					*			
3795	3F58					*			

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3796	3F59	3F	70			FPIN	BSTR,UN	ENSX1B	
3797	3F5A	00	01				STRP,R1	4+3	
3798	3F5B	55	00				RIDE,R1	0	
3799	3F5C	20					FORZ,R0		
3800	3F5D	1F	31	FA			RCTA,UN	BTOD	
3801	3F5E					*			
3802	3F5F	3F	30	B1		FPLEN	BSTA,UN	INCSP	
3803	3F60	17	01				COM1,R3	1	
3804	3F61	90	45	70			RCTA,LT	TYPFR	
3805	3F62	3F	30	B1			BSTA,UN	INCSP	
3806	3F63	03					LOI2,R3		
3807	3F64	01					STRZ,R1		
3808	3F65	02					STRZ,R2		
3809	3F66	5A	04			LEN1	BRNR,R2	LEN2	
3810	3F67	20					FORZ,R0		
3811	3F68	1F	3D	FA			RCTA,UN	BTOD	
3812	3F69	3F	30	B1		LEN2	BSTA,UN	INCSP	
3813	3F6A	AC	01				SUPI,R2	1	
3814	3F6B	1B	73				BCTR,UN	LEN1	
3815	3F6C					*			
3816	3F6D					*			
3817	3F6E	3F	30	B1		FPASC	BSTA,UN	INCSP	
3818	3F6F	17	01				COM1,R3	1	
3819	3F70	90	45	70			RCTA,LT	TYPFR	
3820	3F71	3F	30	B1			BSTA,UN	INCSP	
3821	3F72	03					LOI2,R3		
3822	3F73	01					STRZ,R1		
3823	3F74	10	45	00			RCTA,LT	ARGER	
3824	3F75	3F	30	B1		ASC1	BSTA,UN	INCSP	
3825	3F76	10	7E				BRNR,R1	ASC1	
3826	3F77	03					LOI2,R3		
3827	3F78	01					STRZ,R1		
3828	3F79	20					FORZ,R0		
3829	3F7A	1F	3D	FA			RCTA,UN	BTOD	
3830	3F7B					*			
3831	3F7C					*			
3832	3F7D	00				RBUF	RES	1	
3833	3F7E					*			
3834	3F7F					*			
3835	3F80	00	7D			FFRND	LODR,R0	RBUF	
3836	3F81	54	01				FORI,R0	1	
3837	3F82	02					STRZ,R2		
3838	3F83	03					STRZ,R3		
3839	3F84	20					FORZ,R0		
3840	3F85	75	01				CPSL	CRY	
3841	3F86	77	0B				PPSL	WC	
3842	3F87	A3					SUB2,R3		
3843	3F88	AC	00				SUB1,R2	0	
3844	3F89	A3					SUB2,R3		
3845	3F8A	AC	00				SUB1,R2	0	
3846	3F8B	02					RRR,R2		
3847	3F8C	02					RRR,R0		
3848	3F8D	02					RRR,R2		
3849	3F8E	00					RRR,R0		
3850	3F8F	75	0B				CPSL	WC	

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-01-79

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3881	31BA	08	08				STRR,R2	RBUF	
3882	31BC	01					STRZ,R1		
3883	31BD	27					ICRZ,R2		
3884	31FE	3F	31	FA			BSTA.UN	BTCL	
3885	31C1	04	3F				LODI,R2	F1/255	
3886	31C2	05	CE				LODI,R1	F1/255	
3887	31C3	31	11	38			BSTA.UN	PUSHFF	
3888	31C4	3F	35	F1			BSTA.UN	FPMULT	
3889	31C5	3F	32	F1			BSTA.UN	FPMULT	
3890	31C6								
3891	31C7								
3892	31C8								
3893	31C9	F2	02	28	75	F1 255 ACON		F202,2039,2156,8627	
3894	31CA	21	42	56	27				
3895	31CB								
3896	31CC								
3897	31CD	40	00	D7		LOADSP	LODA,R2	*SP	THIS IS FOR ROUTINES IN THE NEXT PAGE
3898	31CE	17					RETC.UN		
3899	31CF	21	F2	17		PASSUP	COMA,R1	*SP,1	FOR NEXT PAGE
3900	31D0	17					RETC.UN		
3901	31D1	05	D0	77		COMSB	LODA,R2	*SP,-	
3902	31D2	17					RETC.UN		
3903	4000						ORG	4000	
3904	4001								
3905	4002								
3906	4003	03	E2	EB		VALSUP	STPA,R2	FPSTRS,1	
3907	4004	17					RETC.UN		
3908	4005								
3909	4006								
3910	4007	3F	42	E4		COMSTR	BSTA.UN	FPSTRS	
3911	4008	3F	30	B1			BSTA.UN	INCSP	
3912	4009	F7	21				COMI,R3	1	
3913	400A	09	45	7C			BCFA,EQ	TYPER	
3914	400B	31	30	B1			BSTA.UN	INCSP	
3915	400C								
3916	400D								
3917	400E	00	72	66			BCFA,EQ	COMNS	
3918	400F	05	FF				LODI,R1	FF	
3919	4010	3F	3F	DE		COMST2	BSTA.UN	COMSB	
3920	4011	11	32	EE			COMA,R1	FPSTRS,1	
3921	4012	09	45	7C			BCFA,EQ	COMNS	
3922	4013	17					RETR,R2	COMST2	
3923	4014								
3924	4015								
3925	4016	3F	3F	5A		FPSTRG	BSTA.UN	ENSX1B	
3926	4017	01					LODI,R1		
3927	4018	11	45	74			BCTA,LT	OVFER	
3928	4019	3F	32				COMI,R1	20	
3929	401A	11	45	74			BCTA,LT	OVFER	
3930	401B	01	1E				STRA,R1	STRS	
3931	401C	3F	30	B1			BSTA.UN	INCSP	
3932	401D	07	05				COMI,R3	5	
3933	401E	09	45	80			BCFA,EQ	ARGER	
3934	401F	3F	3F	5A			BSTA.UN	ENSX1B	
3935	4020								
3936	4021								
3937	4022								
3938	4023								
3939	4024								
3940	4025								
3941	4026								
3942	4027								
3943	4028								
3944	4029								
3945	402A								
3946	402B								
3947	402C								
3948	402D								
3949	402E								
3950	402F								
3951	4030								
3952	4031								
3953	4032								
3954	4033								
3955	4034								
3956	4035								
3957	4036								
3958	4037								
3959	4038								
3960	4039								

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-01-79

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3961	4040	02					STRZ,R2		
3962	4041	03					STRZ,R3		
3963	4042	18	06				BCTR,R2	STRG3	
3964	4043	0C	01	1E			LODI,R0	STRS	
3965	4044	07	40	EB		STRG2	STRA,R3	FPSTRS,-	
3966	4045	EB	78				BRNR,R3	STRG2	
3967	4046	1F	40	DE		STRG3	BCTA,UN	PRSTRS	
3968	4047								
3969	4048								
3970	4049								
3971	404A								
3972	404B								
3973	404C								
3974	404D								
3975	404E								
3976	404F								
3977	4050								
3978	4051	3F	3F	5A		FPMID	BSTA.UN	ENSX1B	
3979	4052	09	79				STRR,R1	MIDS	LENGTH
3980	4053	3F	30	B1			BSTA.UN	INCSP	
3981	4054	17	05				COMI,R3	5	
3982	4055	0C	45	92			BCFA,EQ	ARGER	
3983	4056	3F	3F	D6			BCTA,UN	LOADSP	
3984	4057	09	45	80			BCFA,EQ	MED3	
3985	4058	3F	31	7F			BSTA.UN	ENSX	
3986	4059	15	00				COMI,R1	0	
3987	405A	10	45	74			BCTA,EQ	OVFER	
3988	405B	A5	21				SUBL,R1	1	
3989	405C	09	61				STRR,R1	MIDS+1	
3990	405D	3F	30	B1			BSTA.UN	INCSP	
3991	405E	07	05				COMI,R3	5	
3992	405F	0C	45	80			BCFA,EQ	ARGER	
3993	4060	1E	01				BCTP,UN	MED4	
3994	4061	06	54				LODI,R2	MIDS	
3995	4062	10	45	74			BCTA,EQ	OVFER	
3996	4063	A4	01				SUBL,R2	1	
3997	4064	0C	41				STRR,R2	MIDS+1	
3998	4065	04	FF				LODI,R0	FF	
3999	4066	C8	49				STRR,R2	MIDS	
4000	4067	3F	40	E4		MED4	BSTA.UN	FPSTRS	
4001	4068	EE	00	50			COMA,R2	MIDS+1	
4002	4069	99	2A				BCTR,GT	MED6	
4003	406A	A5	00	50			SUBA,R2	MIDS+1	
4004	406B	EE	00	4F			COMA,R2	MIDS	
4005	406C	1A	23				BCTR,LT	MED5	
4006	406D	0F	00	4F			LODI,R2	MIDS	
4007	406E	0E	00	4F			STRA,R2	MIDS	
4008	406F								
4009	4070								
4010	4071	15	15				BCTR,EQ	MED6	
4011	4072	01	00	50			LODI,R1	MIDS+1	
4012	4073	0C	62	EF		MID7	LODI,R1	FPSTRS,1	
4013	4074	03					STRZ,R3		
4014	4075	3F	30	19			BSTA.UN	DECSP	
4015	4076	05	01				ADDI,R1	1	
4016	4077	FA	75				EDRR,R2	MID7	
4017	4078	2F	00	4F			LODI,R3	MIDS	
4018	4079	3F	30	D6		MID8	BSTA.UN	DECSP	
4019	407A	07	01				LODI,R3	1	
4020	407B	1F	30	19			BCTA,UN	DECSP	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
3961	40BA	27	02			MEDE	LODI,R3	0	
3962	40EA	1F	74				PCTR,UN	MID8	
3963	40FC					*			
3964	40FC					*			
3965	40FC	3F	3F	5A		FPLEFT	BSTA,UN	ENXS1B	
3966	40FC	0F	21	EC			STRA,R1	FPLRS	
3967	40FC	3F	30	E1			BSTA,UN	INCSP	
3968	40FC	E7	05				COMI,R3	5	
3969	40FC	0C	45	E7			ECFA,EC	ARGER	
3970	40CA	3F	42	E4			BSTA,UN	FPSTRS	
3971	40FC	0F	21	EE			STRA,R2	STRS	
3972	40FC	2D	21	EC			LODA,R1	FPLRS	
3973	40FC	1E	01	ED			COMA,R1	STRS	
3974	40FC	0C	23				ECFR,GT	LEFT2	
3975	40FC	0D	21	EE			LODA,R1	ST S	
3976	40FC	21				LEFT2	LODZ,R1		
3977	40FC	02					STRZ,R2		
3978	40FC	04	42			PHSTRS	LODI,R2	FPSTRS	
3979	40FC	05	1E				LODI,R1	FPSTRS	
3980	40FC	1F	30	E2			BSTA,UN	PUSHST	
3981	40FC					*			
3982	40FC	24	42			FPSTRS	LODI,R2	FPSTRS	
3983	40FC	05	1E				LODI,R1	FPSTRS	
3984	40FC	1F	31	11			BSTA,UN	POPST	
3985	40FC					*			
3986	40FC					FPSTRS	RFS	120	
3987	40FC	02				STRS	RIS	1	
3988	40FC	02				FPLPS	RIS	1	
3989	40FC					*			
3990	40FC					*			
3991	40FC	3F	3F	5A		FPRIGT	BSTA,UN	ENXS1B	
3992	40FC	0C	7A				STRA,R1	FPLRS	
3993	40FC	3F	32	E1			BSTA,UN	INCSP	
3994	40FC	E7	05				COMI,R3	5	
3995	40FC	0C	45	E7			ECFA,EC	ARGER	
3996	40FC	3F	42	E4			BSTA,UN	FPSTRS	
3997	40FC	CA	0C				STRZ,R2	STRS	
3998	40FC	0D	21	EC			LODA,R1	FPLRS	
3999	40FC	1E	01	ED			COMA,R1	STRS	
4000	40FC	0C	23				ECFR,GT	RIGHT2	
4001	40FC	0D	21	EE			LODA,R1	STRS	
4002	40FC	21				RIGHT2	LODZ,R1		
4003	40FC	02					STRZ,R2		
4004	40FC	0C	21	EE			LODA,R2	STRS	
4005	40FC	A1					SUBZ,R1		
4006	40FC	04	EP				ADDI,R0	FPSTRS	
4007	40FC	01					STRZ,R1		
4008	40FC	77	06				FPSL	WC	
4009	40FC	04	42				LODI,R0	FPSTRS	
4010	40FC	04	09				ADDI,R0	0	
4011	40FC	75	06				CPSL	WC	
4012	40FC	1F	30	E2			BSTA,UN	PUSHST	
4013	40FC					*			
4014	40FC					*			
4015	40FC	0C	22	02	00	INSTS	RFS	4	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4016	4222					*			
4017	4222					*			
4018	4222	05	01			FPINST	LODI,R1	1	
4019	4224	3F	3F	16			BSTA,UN	LOADSP	
4020	4227	0F	0F				ECFR,EQ	INST2	
4021	4229	3F	3F	5A			BSTA,UN	ENXS1B	
4022	422C	01					LODZ,R1		
4023	422E	1C	45	74			BSTA,EC	OFFER	
4024	4230	3F	30	E1			BSTA,UN	INCSP	
4025	4233	E7	05				COMI,R3	5	
4026	4235	0C	45	E7			ECFA,EC	ARGER	
4027	4238	A5	01			INST2	SUBI,R1	1	
4028	423A	0D	02	1E			STRA,R1	INSTS	INDEX
4029	423D	3F	42	E4			BSTA,UN	FPSTRS	
4030	4240	0F	02	1F			STRA,R2	INSTS+1	
4031	4243	3F	30	E1			BSTA,UN	INCSP	
4032	4246	E7	05				COMI,R3	05	
4033	4248	0C	45	E7			ECFA,EC	ARGER	
4034	424B	3F	30	E1			BSTA,UN	INCSP	
4035	424E	E7	01				COMI,R3	1	
4036	4250	0C	45	7C			ECFA,EC	TYFER	
4037	4253	3F	30	E1			BSTA,UN	INCSP	
4038	4256	EF	02	1E			COMA,R3	INSTS	
4039	4259	0D	42	97			ECFA,GT	INST3A	
4040	42FC	0F	02	21			STRA,R3	INSTS+3	
4041	42FF	AF	02	1E			SUBA,R3	INSTS	
4042	4282	0F	02	20			STRA,R3	INSTS+2	
4043	4285	0D	02	20		INST2A	LODA,R1	INSTS+2	
4044	4288	0C	02	1F			LODA,R0	INSTS+1	
4045	428B	A4	01				SUBI,R0	1	
4046	428D	E1					COMZ,R1		
4047	428F	1C	42	97			BSTA,EC	INST3A	
4048	4291	A5	01				SUBI,R1	1	
4049	4293	0D	02	20			STRA,R1	INSTS+2	
4050	4296	0F	0F				LODI,R2	FF	
4051	4298	0F	02	1F			LODA,R3	INSTS+1	
4052	429B	0E	20	1B		INST3	LODA,R2	FPSTRS,+	
4053	429F	3F	3F	1A			BSTA,UN	INSSUB	
4054	42A1	08	62				ECFR,EQ	INST2A	
4055	42A3	A5	01				SUBI,R1	1	
4056	42A5	FB	74				EDRR,R3	INST3	
4057	42A7	0C	02	21			LODA,R0	INSTS+3	
4058	42AA	3F	30	E5			BSTA,UN	INCSP2	
4059	42AD	0D	02	21			LODA,R1	INSTS+3	
4060	42AF	1E	02	20			SUBA,R1	INSTS+2	
4061	42B3	20					FORZ,R0		
4062	42B4	1F	3D	FA			BSTA,UN	BTOD	
4063	42B7	0C	02	21		INST3A	LODA,R0	INSTS+3	
4064	42BA	3F	30	E5			BSTA,UN	INCSP2	
4065	42BD	1F	45	BA			BSTA,UN	PUSHE	
4066	42B0					*			
4067	42B7					*			
4068	42A0	07	00			OPTION	LODI,R3	OPTMSG	
4069	42A2	3F	45	E3			BSTA,UN	WRITCR	
4070	42A5	3F	2D	D7			BSTA,UN	GETKB	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4271	42A8	3F	4F	AF			BSTA.UN	LTCU	
4272	42AB	E4	1B				COMI.R0	ESC	
4273	42AD	10	49	7A			BCTA.EQ	EDITOR	
4274	42B0	E4	42				COMI.R0	'B'	
4275	42B3	1B	17				BCTR.EC	BEGN	
4276	42B4	E4	52				COMI.R0	'R'	
4277	42B6	1B	19				BCTR.EQ	RUN	
4278	42B9	E4	1C				COMI.R0	'S'	
4279	42BA	1B	2F				BCTR.EQ	STEP	
4280	42BC	E4	44				COMI.R0	'D'	
4281	42BF	1C	43	26			BCTA.EQ	DIRECT	
4282	42C1	3F	21	21			BSTA.UN	WREL	
4283	42C4	E4	3F				LODI.R0	'?'	
4284	42C6	3F	2F	23			BSTA.UN	WRT	
4285	42C8	1B	5F				BCTR.UN	OPTION	
4286	42CB					*			
4287	42CE					*			
4288	42D2	3F	31	9A		BEGN	BSTA.UN	BEGIN	
4289	42D5	1F	42	A0			BCTA.UN	OPTION	
4290	42D1					*			
4291	42D1					*			
4292	42D1	07	21			RUN	LODI.R3	OKMSG	
4293	42D3	3F	4F	56			BSTA.UN	WRTM	
4294	42D6	72				NORM1	PEDD.P0		
4295	42D7	44	7F				ANDI.R0	7F	
4296	42D8	E4	1B				COMI.R0	ESC	
4297	42DB	68	26				BCTR.EC	PUNF	
4298	42DD	3F	2D	F1			BSTA.UN	PL	
4299	42E0	1F	42	A7			BCTA.UN	OPTION	
4300	42E3	74	42			RUN5	LODI.R0	NORM1	
4301	42E5	25	D6				LODI.R1	NOPM1	
4302	42E7	1F	20	94			BCTA.UN	EXEC	
4303	42EA					*			
4304	42EA					*			
4305	42EA	07	21			STEP	LODI.R3	OKMSG	
4306	42EC	3F	45	56			BSTA.UN	WRTM	
4307	42EF	3F	20	87		STEP1	BSTA.UN	SAVINP	
4308	42F2	26	FF				LODI.R0	FF	
4309	42F4	3F	00	57			BSTA.UN	SHLIN	
4310	42F7	3F	2E	E2			BSTA.UN	PAUSE	
4311	42FA	E4	1B				COMI.R0	ESC	
4312	42FC	1F	42	A2			BCTA.EQ	OPTION	
4313	42FF	24	42				LODI.R0	STEP1	
4314	4301	0F	1F				LODI.R1	STEP1	
4315	4303	1F	20	94			BCTA.UN	EXEC	
4316	430E					*			
4317	430E					*			
4318	430E	3F	2F	5F		DIRECT	BSTA.UN	LPGR	
4319	4309	3F	32	76			BSTA.UN	AROWCR	
4320	430C	04	43				LODI.R0	DIRECT	
4321	430E	2F	26				LODI.R1	DIRECT	
4322	4310	1F	20	94			BCTA.UN	EXEC	
4323	4313					*			
4324	4313					*			
4325	4312	3F	20	94		LET	BSTA.UN	GCVAR	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4126	4316	1A	1F				BCTR.LT	LETSTR	
4127	4318	1F	45	80			BCTA.EQ	ARGEP	
4128	431B	1F	30	81			BSTA.UN	STRICT	
4129	431E	3F	46	50			BSTA.UN	SKPEQ	
4130	4321	3F	33	9F			BSTA.UN	EVAL	
4131	4324	9C	46	34			BCTA.EQ	NOSTR	
4132	4327	3F	2E	16			BSTA.UN	POPCT	
4133	432A	3F	46	40		LETD	BSTA.UN	SKPSP	
4134	432D	E4	2C				COMI.R0		
4135	432F	1B	62				BCTR.EC	LET	
4136	4331	3F	32	13			BSTA.UN	DEOPT	
4137	4334	1F	31	A3			BCTA.UN	NXTLIN	
4138	4337	3F	32	6E		LETSTR	BSTA.UN	STRICT	
4139	433A	3F	2F	E7			BSTA.UN	ZSTP	
4140	433D	3F	46	50			BSTA.UN	SKPEQ	
4141	4340	3F	33	9F			BSTA.UN	EVAL	
4142	4343	9F	46	34			BCTA.LT	NOSTR	
4143	4346	3F	2B	32			BSTA.UN	STRING	
4144	4349	1B	5F				BCTR.UN	LETD	
4145	434E					*			
4146	434E					*			
4147	434B	3F	33	2C		REM	BSTA.UN	SKPCR	
4148	434E	E4	8D				COMI.R0	CR	
4149	4350	9B	75				BCTR.EQ	REM	
4150	4352	1F	A0	92			BCTA.UN	*RTNADR	
4151	4355					*			
4152	4355					*			
4153	435F	3F	33	9F		EXTOUT	BSTA.UN	EVAL	
4154	4360	3F	2B	97			BSTA.UN	ENSIB	
4155	4363	09	0A				STRR.R1	WRITEP+1	
4156	4365	3F	46	40			BSTA.UN	SKPCOM	
4157	4360	3F	33	9F			BSTA.UN	EVAL	
4158	4363	3F	2B	97			BSTA.UN	ENSIB	
4159	4366	D5	00			WRITEP	WRTT.R1	0	
4160	4368	1F	31	A3			BCTA.UN	NXTLIN	
4161	436B					*			
4162	436B					*			
4163	436E	3F	31	5A		END	BSTA.UN	BEGIN	
4164	436E	1B	09				BCTR.UN	STOP1	
4165	4370	3F	46	40		STOP	BSTA.UN	SKPSP	
4166	4373	3F	31	8C			BSTA.UN	CHKCR	
4167	4376	5C	31	F1			BCTA.EQ	SYNER	
4168	4379	07	07			STOP1	LODI.R3	STOMSG	
4169	437B	3F	45	53			BSTA.UN	WRTMCR	
4170	437E	1F	42	A0			BCTA.UN	OPTION	
4171	4381					*			
4172	4381					*			
4173	4381	3F	32	83		GOTO	BSTA.UN	PNDLIN	
4174	4384	1C	A0	92			BCTA.EQ	*RTNADR	
4175	4387	07	06			LNFER	LODI.R3	LNFER	
4176	4389	1F	33	2F			BCTA.UN	ERROR	
4177	439C					*			
4178	439C					*			
4179	439C	3F	33	9F		PAUSER	BSTA.UN	EVAL	
4180	439F	3F	2B	9E			BSTA.UN	ENS	

FILE 'PASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4181	4392	02					STRZ,R2		
4182	4393	01				PAUS2	LODZ,R1		
4183	4394	98	04				BCFR,EQ	PAUS3	
4184	4395	02					LODZ,R2		
4185	4397	10	31	A3			BCTA,EQ	NITLIN	
4186	439A	07	30			PAUS3	LODI,R3	3C	60 DECIMAL
4187	439C	7F	14			PAUS4	RSTR,UN	D1	
4188	439E	70					FEED,R0		
4189	439F	44	7F				ANDI,R0	7F	
4190	43A1	14	1E				COMI,R0	ESC	
4191	43A3	10	42	A2			BCTA,EQ	OPTION	
4192	43A5	7E	74				BDRR,R3	PAUS4	
4193	43A8	A5	01				SUBI,R1	1	
4194	43AA	77	06				PPSL	WC	
4195	43AC	A6	00				SUBI,R2	0	
4196	43AF	7F	08				CPSL	WC	
4197	43B0	1B	61				BCTR,UN	PAUS2	
4198	43B2					*			
4199	43B2					*			
4200	43B2	24	1B			I1	LODI,R0	DB	
4201	43B4	7F	7F				BDRR,R0	\$	
4202	43B5	17					PETC,UN		
4203	43B7					*			
4204	43B7					*			
4205	43B7	3F	29	6F		READ	ESTA,UN	GCVAR	
4206	43BA	1A	1F				BCTP,LT	RDSTR	
4207	43BC	11	4F	80			BCTA,GT	ARGER	
4208	43BF	7F	30	61			ESTA,UN	STRUCT	
4209	43C2	33	20	31			PSTA,UN	GETDAT	
4210	43C5	1D	2F	41			BCTA,GT	RDNDP	
4211	43C8	1F	25	45			BCTA,LT	RDTYPE	
4212	43CB	33	2E	1B			ESTA,UN	POPCT	
4213	43CE	33	46	40		RDEFL	PSTA,UN	SKFSP	
4214	43D1	E4	20				COMI,R0		
4215	43D3	1A	62				BCTR,EQ	READ	
4216	43D5	3F	32	13			ESTA,UN	DECPT	
4217	43D8	1F	31	A3			BCTA,UN	NITLIN	
4218	43DB	3F	30	6E		RDSTR	ESTA,UN	STRUCT	
4219	43DE	3F	2F	E7			ESTA,UN	ZSTR	
4220	43E1	3F	20	31			ESTA,UN	GETDAT	
4221	43E4	1D	2F	41			BCTA,GT	FDNDP	
4222	43E7	10	25	45			BCTA,EC	RDTYPE	
4223	43EA	3F	2B	32			ESTA,UN	STPING	
4224	43E1	1F	5F				BCTR,UN	RDEFL	
4225	43EF					*			
4226	43EF					*			
4227	43F0	00				COMMA	RES	1	
4228	43F0	02				DP	RES	1	
4229	43F1	00	20	00		PUSG	RES	3	
4230	43F4					*			
4231	43F4					*			
4232	43F4	3F	33	9F		PUSING	ESTA,UN	EVAL	
4233	43F7	0F	46	34			BCFA,LT	NOSTR	
4234	43FA	3F	20	9A			ESTA,UN	ZTRCMS	
4235	43FD	04	26				LODI,R0	CMSTRS	

FILE 'PASIC12' AS ASSEMBLED BY SYSTEM ON 12-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4236	43FF	25	A1				LODI,R1	CMSTRS	
4237	4401	3F	31	11			ESTA,UN	POPST	
4238	4404	3F	46	40			ESTA,UN	SKFSP	
4239	4407	E4	78				COMI,R0		
4240	4409	90	31	F1			BCTA,EQ	SYNER	
4241	440C	3F	20	90		FUIOCP	ESTA,UN	PUGET	
4242	440F	10	44	D0			BCTA,EC	PUREPT	
4243	4412	E4	21				COMI,R0		
4244	4414	98	11				BCFR,EQ	PU2	
4245	4415	3F	33	9F			ESTA,UN	IVAL	
4246	4418	11	24	9B			BCTA,GT	PRNTDE	
4247	441C	9E	46	34			BCFA,LT	NOSTR	
4248	441F	05	01				LODI,R1	1	
4249	4421	3F	23	12			ESTA,UN	PRNTS	
4250	4424	1F	44	BD			BCTA,UN	PUGEL	
4251	4427	E4	5E			PU2	COMI,R0		
4252	4429	98	22				BCFR,EQ	PU3	
4253	442B	06	01				LODI,R2	1	
4254	442D	3F	20	90		PU2B	ESTA,UN	PUGET	
4255	4430	06	01				ADDI,R2	1	
4256	4432	E4	5E				COMI,R0		
4257	4434	98	77				BCFR,EQ	PU2B	
4258	4436	CE	03	F1			STRA,R2	PUSG	
4259	4439	3F	33	9F			ESTA,UN	EVAL	
4260	443C	1D	24	9B			BCTA,GT	PRNTDE	
4261	443F	9E	46	34			BCFA,LT	NOSTR	
4262	4442	01	03	F1			LOIA,R1	PUSG	
4263	4445	3F	23	12			ESTA,UN	PRNTS	
4264	4448	1F	44	BD			BCTA,UN	PUGEL	
4265	444B	E4	23			PU3	COMI,R0		
4266	444D	18	06				BCTR,EQ	PU4	
4267	444F	3F	24	C5			ESTA,UN	SENDIT	
4268	4452	1F	44	0C			BCTA,UN	PULOOP	
4269	4455	06	01			PU4	LODI,R2	1	
4270	4457	CE	03	FF			STRA,R2	COMMA	
4271	445A	CE	03	FF			STRA,R2	DP	
4272	445D	20					EORZ,R0		
4273	445E	CC	03	F3			STRA,R0	PUSG-2	
4274	4461	3F	20	90		PU5	ESTA,UN	PUGET	
4275	4464	86	01				ADDI,R2	1	
4276	4466	E4	23				COMI,R0		
4277	4468	18	77				BCTR,EQ	PU5	
4278	446A	E4	20				COMI,R0		
4279	446C	18	10				BCTR,EQ	PU6	
4280	446E	E4	2E				COMI,R0		
4281	4470	98	18				BCFR,EQ	PUNTD	
4282	4472	A6	01				SUBI,R2	1	
4283	4474	CE	03	F2			STRA,R2	PUSG+1	
4284	4477	06	00				LODI,R2	0	
4285	4479	CE	03	F2			STRA,R2	DP	
4286	447C	13	03				BCTR,UN	PU5	
4287	447E	00	03	F0		PU6	LODI,R0	DP	
4288	4481	10	31	B1			BCTA,EQ	SYNER	
4289	4484	20					BCFR,R0		
4290	4485	CC	03	FF			TRA,R0	COMMA	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4281	4408	1F	57				BCTR,UN	PUS	
4282	440A	AF	21			PUEUD	SUBI,R1	1	
4283	440C	3F	22	AC			BSTA,UN	STRFUS	
4284	440E	AF	01				SUBI,P2	1	
4285	440F	2C	03	F0			LODA,R0	IF	
4286	4410	18	0F				PCTR,EC	PU7	
4287	4411	03	03	F0			STRA,R2	PUSTG-1	
4288	4412	1B	03				BCTR,UN	PUS	
4289	4413	31	03	F3		PU7	STRA,R2	PUSTG-2	
4290	4414	3F	33	0F		PU6	BSTA,UN	EVAL	
4291	4415	1D	24	0B			BCTA,GT	PRNTLC	
4292	4416	9C	45	34			PCFA,EO	WCSTF	
4293	4417	2C	23	F7			LODA,R0	PUSTG-1	
4294	441A	A4	01			PUS	SUBI,R0	1	
4295	441C	34	FF				COMI,R0	FF	
4296	441E	1C	31	F1			BCTA,EC	SYNER	
4297	4421	0D	23	F3			LODA,R1	PUSTG-7	
4298	4424	0F	03	1F			LODA,R2	COMMA	
4299	4427	0F	23	F2			LODA,R3	DP	
4300	442A	3F	2C	A7			BSTA,UN	PRNTFY	
4301	442F	31	46	40		PUEUL	BSTA,UN	SKFSP	
4302	4432	F4	2C				COMI,R0		
4303	4432	1C	44	4C			BCTA,EO	PULCOP	
4304	4435	34	3E				COMI,R0		
4305	4437	1C	44	2C			BCTA,EO	PULCOP	
4306	443A	3F	32	13			BSTA,UN	DFCPT	
4307	443F	1F	31	A3			BCTA,UN	NXTLIN	
4308	4442	74	FF			PUEIPT	LODI,R0	FF	
4309	4442	2C	04	18			STRA,R2	*IFUSP	
4310	4443	1F	44	2C			BCTA,UN	PULCOP	
4311	4445	2C	A2			IFUSP	ACON	PUSP	
4312	444A					*			
4313	444A					*			
4314	444A	3F	32	B3		RESUME	BSTA,UN	FNDLIN	
4315	444D	2C	20	F0			PCFA,EO	RETURN	
4316	444E	3F	30	B1			BSTA,UN	INCSP	
4317	4453	1F	02				COMI,R3	2	
4318	4455	5C	45	70			PCFA,EO	WESTER	
4319	4458	3F	30	31			BSTA,UN	INCSP	
4320	445B	3F	30	B1			BSTA,UN	INCSP	
4321	445F	1F	A0	02		*	BCTA,UN	*RTNADR	
4322	4461					*			
4323	4461					*			
4324	4461	02	02			X2STG	RES	2	
4325	4463					*			
4326	4463					*			
4327	4467	07	02			X10	LODI,R3	2	
4328	4469	77	09				PFSL	WC	
4329	4467	75	01				CPSL	CRY	
4330	4469	D1					RL,R1		
4331	446A	00					RRL,R0		
4332	4469	D3					RRI,R3		
4333	446C	08	73				STR,R0	X2STG	
4334	446E	09	72				STR,R1	X2STG-1	
4335	4500	11					RRL,P1		

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FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4346	4521	22					RRL,R0		
4347	4522	11					RRL,R3		
4348	4523	11					RRL,R1		
4349	4524	00					RRL,R0		
4350	4525	03					RRL,R3		
4351	4526	65	6A				ADDR,R1	X2STG-1	
4352	4528	08	67				ADDR,R0	X2STG	
4353	452A	07	02				ADDI,R3	0	
4354	452C	75	08				CPSL	WC	
4355	452E	67	00				ICRI,R3	0	
4356	4512	9C	45	74			PCFA,EO	CVFEP	
4357	4513	17					RETC,UN		
4358	4514					*			
4359	4514					*			
4360	4514	3F	45	D9		FPEXP	BSTA,UN	POPC1	
4361	4517	3F	45	F7			BSTA,UN	POPC2	
4362	451A	3F	45	E0			BSTA,UN	PUSHC1	
4363	451D	3F	45	EE			BSTA,UN	PUSHC2	
4364	4520	3F	55	6C			BSTA,UN	PFLN	
4365	4523	3F	3B	F1			BSTA,UN	PFMULT	
4366	4525	1F	54	35		*	BCTA,UN	PFEXP2	
4367	4529					*			
4368	4529					*			
4369	4529	3F	46	40		CKNEG	BSTA,UN	SKPSP	
4370	452C	14	2B				COMI,R0		
4371	452B	14					RETC,EO		
4372	452F	14	2D				COMI,R0		
4373	4531	9C	32	13			PCFA,EO	DECPT	
4374	4534	3F	45	BA			BSTA,UN	PUSH0	
4375	4537	04	22				LODI,R0	22	
4376	4539	1F	33	60			BCTA,UN	PUSHCOP	
4377	453C					*			
4378	453C					*			
4379	453C	3B	0A			CHKAN	BSTR,UN	CHKNUM	
4380	453E	14					RETC,EO		
4381	453F	14	41			CKALPH	COMI,R0	'A'	
4382	4541	16					RETC,LT		
4383	4542	14	5A				COMI,R0	'Z'	
4384	4544	15					RETC,GT		
4385	4545	75	00				CPSL	C0	
4386	4547	17					RETC,UN		
4387	4548					*			
4388	4548					*			
4389	4548	14	30			CHKNUM	COMI,R0	'0'	
4390	454A	16					RETC,LT		
4391	454B	14	39				COMI,R0	'9'	
4392	454D	15					RETC,GT		
4393	454E	75	00				CPSL	C0	
4394	4550	17					RETC,UN		
4395	4551					*			
4396	4551					*			
4397	4551	00	02			WRTHS	RES	2	
4398	4553					*			
4399	4553					*			
4400	4553	3F	0E	55		WRTHCR	BSTA,UN	LPCR	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4421	4556	05	02			WRTM	LODI,R2	0	
4422	4558	05	FF				LODI,R1	FF	
4423	455A	02				WRTM2	LODZ,R2		
4424	455B	F3					COMZ,R3		
4425	455C	16	0B				ECTP,EO	WRTM4	
4426	455D	20	27	34		WRTM3	LODA,R1	MSG2,-	
4427	455E	14	21				COMI,R0		
4428	455F	06	76				ECTP,EO	WRTM3	
4429	4560	06	01				ADDI,R0	1	
4430	4561	1B	71				ECTP,UN	WRTM2	
4431	4562	20	27	34		WRTM4	LODA,R1	MSG2,+	
4432	4563	14	21				COMI,R0		
4433	4564						RETC,EO		
4434	4565	33	21	23			BCTA,UN	WRT	
4435	4566	13	75				ECTP,UN	WRTM4	
4436	4567					*			
4437	4568								
4438	4569	27	25			OVER	LODI,R3	OVERFP	
4439	456A	1F	16				ECTP,UN	EPJMP	
4440	456B					*			
4441	456C								
4442	456D	27	25			NESTER	LODI,R3	NSTERR	
4443	456E	1F	16				ECTP,UN	EPJMP	
4444	456F					*			
4445	4570								
4446	4571	27	2A			TYPEP	LODI,R3	TYPEERR	
4447	4572	1F	2E				ECTP,UN	EPJMP	
4448	4573					*			
4449	4574								
4450	4575	27	2B			ARGER	LODI,R3	ARGERR	
4451	4576	1F	0A				ECTP,UN	IRJMP	
4452	4577					*			
4453	4578								
4454	4579	27	2C			DIMEP	LODI,R3	DIMERR	
4455	457A	1F	76				ECTP,UN	IRJMP	
4456	457B					*			
4457	457C								
4458	457D	27	22			NDEP	LODI,R3	NDERR	
4459	457E	1F	02				ECTP,UN	IRJMP	
4460	457F					*			
4461	4580								
4462	4581	27	27			ADER	LODI,R3	ADEERR	
4463	4582	1F	33	2E		E JMP	BCTA,UN	EPJMP	
4464	4583					*			
4465	4584								
4466	4585	05	10			EPASE	LODI,R2	10	
4467	4586	05	70				LODI,R1	70	
4468	4587	3F	20	F7			BCTA,UN	SETCUR	
4469	4588	05	10				LODI,R1	10	
4470	4589	3F	21	55		EPASE1	BCTA,UN	1FCR	
4471	458A	F0	7E				BCTP,R1	EPASE1	
4472	458B	06	10				LODI,R2	10	
4473	458C	25	02				LODI,R1	02	
4474	458D	1F	21	F7			BCTA,UN	SETCUR	
4475	458E					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4456	45A6					*			
4457	45A7	14	60			LTOU	TMI,R0	60	
4458	45A8	16					RETC,LT		
4459	45A9	4+	1F				ANDI,R0	1F	
4460	45AB	17					RETC,UN		
4461	45AC					*			
4462	45AD								
4463	45AE	04	45			PUSH1	LODI,R0	FP1	
4464	45AF	26	09				LODI,R1	FP1	
4465	45B0	1F	31	3E			BCTA,UN	PUSHFP	
4466	45B1					*			
4467	45B2								
4468	45B3	04	45			PUSHM1	LODI,R0	FPM1	
4469	45B4	25	D1				LODI,R1	FPM1	
4470	45B5	1F	31	3E			BCTA,UN	PUSHFP	
4471	45B6					*			
4472	45B7								
4473	45B8	04	45			PUSH2	LODI,R2	FP2	
4474	45B9	05	C1				LODI,R1	FP2	
4475	45BA	1F	31	3E			BCTA,UN	PUSHFP	
4476	45BB					*			
4477	45BC								
4478	45BD	F0	05	00	00	FP0	ACON	F000,0000,0000,0000	
4479	45BE	00	00	00	00				
4480	45BF	00	01	00	10	FP1	ACON	0001,0010,0000,0000	
4481	45C0	00	00	00	00				
4482	45C1	00	01	00	10	FPM1	ACON	0001,F010,0000,0000	
4483	45C2	00	00	00	00				
4484	45C3					*			
4485	45C4								
4486	45C5	04	33			POPC1	LODI,R0	CBUF1	
4487	45C6	05	50				LODI,R1	CBUF1	
4488	45C7	1F	31	55			BCTA,UN	POPPF	
4489	45C8					*			
4490	45C9								
4491	45CA	04	33			PUSHC1	LODI,R0	CBUF1	
4492	45CB	05	50				LODI,R1	CBUF1	
4493	45CC	1F	31	38			BCTA,UN	PUSHFP	
4494	45CD					*			
4495	45CE								
4496	45CF	04	33			POPC2	LODI,R0	CBUF2	
4497	45D0	05	50				LODI,R1	CBUF2	
4498	45D1	1F	31	55			BCTA,UN	POPPF	
4499	45D2					*			
4500	45D3								
4501	45D4	04	33			PUSHC2	LODI,R0	CBUF2	
4502	45D5	05	50				LODI,R1	CBUF2	
4503	45D6	1F	31	38			BCTA,UN	PUSHFP	
4504	45D7					*			
4505	45D8								
4506	45D9	00	00			TABSTG	RES	2	
4507	45DA					*			
4508	45DB								
4509	45DC	08	7C			LOOKUP	STRR,R0	TABSTG	
4510	45DD	09	7B				STRR,R1	TABSTG+1	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

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LINE	ADDP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4511	451B	3F	32	10			BSTA.UN	SKPDEC	
4512	451F	3F	31	20			BSTA.UN	SINPT	
4513	4521	2F	FF				LODI.R1	FF	
4514	4523	3F	32	28		LOOK2	BSTA.UN	GETCHP	
4515	4526	03					STRZ.R3		
4516	4527	2F	AF	FE			LODA.R1	*TABSTG.-	
4517	452A	34	2E				COMI.R0		
4518	452C	1F	17				BCTR.EQ	LOOK4	
4519	452E	1F					COMZ.R3		
4520	452F	1F	72				BCTR.EQ	LOOK2	
4521	4531	2F	AF	FE		LOOK3	LODA.R1	*TABSTG.-	
4522	4534	34	2E				COMI.R0		
4523	4536	0F	79				BCTR.EQ	LOOK3	
4524	4538	3F	31	28			BSTA.UN	SINPT	
4525	453B	2F	03				ADDI.R1	3	
4526	453D	2F	1E	FE			LODA.R1	*TABSTG.I	
4527	453F	1F					RETC.LT		
4528	4541	AF	21				SUBI.R1	1	
4529	4543	1F	3F				BCTR.UN	LOOK2	
4530	4545	2F	AF	FE		LOOK4	LODA.R1	*TABSTG.-	
4531	4548	03					STRZ.R3		
4532	4549	2F	AF	FE			LODA.R1	*TABSTG.-	
4533	454B	0F					STRZ.R1		
4534	454D	03					LODZ.R3		
4535	454F	3F	32	13			BSTA.UN	DECFP	
4536	4551	7F	02				CPSI	C2	
4537	4553	17					RETC.UN		
4538	4554					*			
4539	4555					*			
4540	4556	17	45	80		WOSTR	BCTA.GT	ARGOP	
4541	4557	1F	45	7C			BCTA.UN	TYPER	
4542	4558					*			
4543	4559					*			
4544	455A	3F	33	2C		SKPLIN	BSTA.UN	SKPDP	
4545	455B	1F	4F	82			BCTA.UN	*RTWALR	
4546	455C					*			
4547	455D					*			
4548	455E	3F	32	28		SKPSP	BSTA.UN	GETCHP	
4549	455F	1F	02				COMI.R0		
4550	4560	1F	79				BCTR.EQ	SKPSP	
4551	4561	17					RETC.UN		
4552	4562					*			
4553	4563					*			
4554	4564	3F	32	28		SKPDCM	BSTA.UN	SKPSP	
4555	4565	1F	02				COMI.R0		
4556	4566	0C	31	E1			BCTA.EC	SYNER	
4557	4567	17					RETC.UN		
4558	4568					*			
4559	4569					*			
4560	456A	3F	4F	40		SKPDC	BSTA.UN	SKPSP	
4561	456B	1F	31				COMI.R0		
4562	456C	0C	31	B1			BCTA.EC	SYNER	
4563	456D	17					RETC.UN		
4564	456E					*			
4565	456F					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDP	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4566	4569	7F	02			RETNGT	CPSI	C2	
4567	456B	77	40				PFSL	40	
4568	456D	17					RETC.UN		
4569	456E					*			
4570	456F					*			
4571	4570	7F	02			RETNLT	CPSI	C2	
4572	4571	77	80				PFSL	80	
4573	4572	17					RETC.UN		
4574	4573					*			
4575	4574					*			
4576	4575	7F	02			RETCEC	CPSI	C2	
4577	4576	17					RETC.UN		
4578	4577					*			
4579	4578					*			
4580	4579	41	42	53	2E	FONTAB	ALIT	'ABS.'	
4581	457A	00	00				ACON	0	
4582	457B	53	47	4E	2E		ALIT	'SGN.'	
4583	457C	00	01				ACON	1	
4584	457D	46	49	58	2E		ALIT	'FIX.'	
4585	457E	00	02				ACON	2	
4586	457F	52	4F	4F	4B		ALIT	'PEEK.'	
4587	4580	2F							
4588	4581	00	23				ACON	3	
4589	4582	43	40	52	24		ALIT	'CHRS.'	
4590	4583	2F							
4591	4584	00	04				ACON	4	
4592	4585	49	4E	50	2E		ALIT	'INP.'	
4593	4586	00	05				ACON	5	
4594	4587	4C	45	4E	2E		ALIT	'LEN.'	
4595	4588	00	06				ACON	6	
4596	4589	4C	50	4F	53		ALIT	'LFOS.'	
4597	458A	2F							
4598	458B	00	07				ACON	7	
4599	458C	41	53	43	2F		ALIT	'ASC.'	
4600	458D	00	08				ACON	8	
4601	458E	49	4E	54	2F		ALIT	'INT.'	
4602	458F	00	09				ACON	9	
4603	4590	45	52	52	2E		ALIT	'ERR.'	
4604	4591	00	0A				ACON	A	
4605	4592	50	4F	53	2E		ALIT	'POS.'	
4606	4593	00	0B				ACON	B	
4607	4594	43	41	4C	4C		ALIT	'CALL.'	
4608	4595	2F							
4609	4596	00	0C				ACON	C	
4610	4597	52	49	47	4B		ALIT	'RIGHTS.'	
4611	4598	54	24	2E					
4612	4599	00	0D				ACON	D	
4613	459A	4C	45	46	54		ALIT	'LEFTS.'	
4614	459B	24	2E						
4615	459C	00	0E				ACON	E	
4616	459D	41	49	44	24		ALIT	'MIDS.'	
4617	459E	2F							
4618	459F	00	0F				ACON	F	
4619	45A0	53	54	52	49		ALIT	'STRING\$.'	
4620	45A1	4F	47	24	2F				

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4621	461E	00	10				ACON	10	
4622	461A	52	4F	44	2F		ALIT	'RND.'	
4623	461F	00	11				ACON	11	
4624	4612	56	41	52	52		ALIT	'VARPTR.'	
4625	4614	54	52	2F					
4626	4617	02	12				ACON	12	
4627	4619	46	4F	53	54		ALIT	'INSTR.'	
4628	461D	52	2E						
4629	461F	00	13				ACON	13	
4632	4611	46	52	43	23		ALIT	'REC.'	
4631	4615	20	14				ACON	14	
4632	4617	52	54	53	54		ALIT	'STR\$.'	
4633	461E	2F							
4634	461C	20	15				ACON	15	
4635	4611	56	41	4C	CE		ALIT	'VAL.'	
4636	4722	20	16				ACON	16	
4637	4724	53	49	41	21	ZTAB	ALIT	'SIN.'	
4638	4725	20	17				ACON	17	
4639	472A	43	4F	53	2F		ALIT	'COS.'	
4640	472E	00	18				ACON	18	
4641	4710	54	41	45	2F		ALIT	'TAN.'	
4642	4714	22	19				ACON	19	
4643	4716	41	54	4E	CE		ALIT	'ATN.'	
4644	471A	02	1A				ACON	2A	
4645	471C	40	41	2E			ALIT	'LN.'	
4646	471F	02	1B				ACON	1B	
4647	4721	4C	4F	47	2F		ALIT	'LOG.'	
4648	4725	0A	1C				ACON	1C	
4649	4727	45	58	50	2E		ALIT	'EXP.'	
4650	472E	00	1D				ACON	1D	
4651	472D	53	51	52	2E		ALIT	'SQRT.'	
4652	4721	02	1E				ACON	1E	
4653	4723	FF					DATA	FF	
4654	4734	4F	50	54	49	MSG0	ALIT	'OPTION: '	
4655	4735	4F	4E	3A	20				
4656	473C	00	2E						
4657	473E	20	4F	4B	2E		ALIT	'OK.'	
4658	4742	4F	55	54	20		ALIT	'OUT OF DATA.'	
4659	4745	41	46	20	44				
4660	4741	41	54	41	2E				
4661	4741	55	52	52	20		ALIT	'USR FN.'	
4662	4752	46	41	2F					
4663	4755	42	44	44	4F		ALIT	'RELO FROM START: '	
4664	4759	22	46	52	4F				
4665	475D	4D	20	52	54				
4666	4761	41	52	54	3A				
4667	4765	20	20	2E					
4668	4768	53	59	41	54		ALIT	'SYNTAX.'	
4669	476C	41	58	2F					
4670	476F	4F	56	46	2E		ALIT	'OVF.'	
4671	4773	53	54	4F	50		ALIT	'STOPPED.'	
4672	4777	50	45	44	2E				
4673	477B	4C	49	4F	45		ALIT	'LINE NOT FOUND.'	
4674	477F	20	4E	4F	54				
4675	4783	20	46	4F	5F				

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FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
4676	4787	4E	44	2E					
4677	478A	41	45	53	54		ALIT	'NEST.'	
4678	4781	2E							
4679	478F	54	59	50	45		ALIT	'TYPE MISMATCH.'	
4680	4793	20	4D	49	53				
4681	4797	4D	41	54	43				
4682	479E	40	2E						
4683	479D	41	52	47	2E		ALIT	'ARG.'	
4684	47A1	44	49	4D	2E		ALIT	'DIM.'	
4685	47A5	52	54	4B	20		ALIT	'STR OVF.'	
4686	47A9	4F	56	46	2E				
4687	47AD	53	54	52	22		ALIT	'STR SPACE OVF.'	
4688	47B1	53	50	41	43				
4689	47B5	45	20	4F	56				
4690	47B9	46	2E						
4691	47BF	56	41	52	20		ALIT	'VAR ALREADY DEFINED.'	
4692	47BF	41	4C	52	45				
4693	47C3	41	44	59	20				
4694	47C7	44	45	46	49				
4695	47CB	4E	45	44	21				
4696	47CF	2A	2A	2A	20		ALIT	'*** '	
4697	47D1	2E							
4698	47D4	20	45	52	52		ALIT	'ERROR ***.'	
4699	47D8	4F	52	2F	2A				
4700	47DC	2A	2A	2E					
4701	47E5	45	50	50	52		ALIT	'EXPR TO COMPLEX.'	
4702	47E3	20	54	4F	20				
4703	47E7	43	4F	4D	50				
4704	47EB	4C	45	58	2E				
4705	47EF								
4706	47EF								
4707	47EF	54	48	45	4E	IFTBL	ALIT	'THEN.'	
4708	47E3	2E							
4709	47F4	20	00				ACON	0	
4710	47F6	45	4C	53	45	ELSTBL	ALIT	'ELSE.'	
4711	47FA	2E							
4712	47FE	00	01				ACON	1	
4713	47FD	FF					DATA	FF	
4714	47FE								
4715	47FE								
4716	47FE	47	4F	54	4F	ONTBL	ALIT	'GOTO.'	
4717	4802	2E							
4718	4803	20	00				ACON	0	
4719	4805	47	4F	53	55		ALIT	'GOSUB.'	
4720	4809	42	2E						
4721	480B	00	02				ACON	2	
4722	480D	52	45	53	54		ALIT	'RESTORE.'	
4723	4811	4F	52	45	21				
4724	4815	00	04				ACON	4	
4725	4817	45	58	49	54		ALIT	'EXIT.'	
4726	481B	2E							
4727	481C	00	06				ACON	6	
4728	481F	45	52	52	4F		ALIT	'ERRCR.'	
4729	4822	52	2E						
4730	4824	00	08				ACON	8	

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FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4731	482F	52	4F	53	55		ALIT	'RESUME.'	
4732	482A	4D	48	2E					
4733	487D	20	2A				ACON	A	
4734	487F	FF					DATA	FF	
4735	4830					*			
4736	4832					*			
4737	4830	54	4F	2E		FORTEL	ALIT	'TO.'	
4738	4833	00	21				ACON	1	
4739	483F	53	54	4F	52		ALIT	'STEP.'	
4740	4839	2E							
4741	483A	20	72				ACON	2	
4742	483C	FF					DATA	FF	
4743	483E					*			
4744	483D					*			
4745	483D	54	41	42	2E	TABLIT	ALIT	'TAB.'	
4746	4841	22	28				ACON	0	
4747	4843	FF					DATA	FF	
4748	4844					*			
4749	4844					*			
4750	4844	44	41	54	41	DATTBL	ALIT	'DATA.'	
4751	4845	2E							
4752	4849	22	22				ACON	2	
4753	484F	45	4E	44	2E		ALIT	'END.'	
4754	4843	22	22				ACON	3	
4755	4851	FF					DATA	FF	
4756	4852					*			
4757	4852					*			
4758	4852	40	4F	54	2E	COMTEL	ALIT	'LET.'	
4759	4856	43	13				ACON	LET	
4760	4859	50	52	40	4E		ALIT	'PRINT.'	
4761	485C	54	2E						
4762	485E	00	55				ACON	PRINT	
4763	4862	50	41	55	57		ALIT	'PAUSE.'	
4764	4864	45	2E						
4765	4866	43	50				ACON	PAUSER	
4766	4869	40	46	2E			ALIT	'IF.'	
4767	486B	25	2E				ACON	IF	
4768	486D	47	4F	54	4F		ALIT	'GOTO.'	
4769	4871	2E							
4770	4872	43	51				ACON	GOTO	
4771	4874	47	4F	53	55		ALIT	'GOSUB.'	
4772	4878	42	2E						
4773	487A	22	2E				ACON	GOSUB	
4774	487C	52	45	54	55		ALIT	'RETURN.'	
4775	4882	55	41	2F					
4776	4883	22	2E				ACON	RETURN	
4777	488F	45	4F	52	2E		ALIT	'FOR.'	
4778	4890	27	2F				ACON	FOR	
4779	489F	41	45	58	54		ALIT	'NEXT.'	
4780	489F	2E							
4781	489D	31	A5				ACON	NEXT	
4782	489D	40	4E	50	55		ALIT	'INPUT.'	
4783	4896	54	2E						
4784	4899	27	A7				ACON	INPUT	
4785	489A	44	41	54	41		ALIT	'DATA.'	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4786	489E	2E							
4787	489F	45	3A				ACON	SKPLIN	
4788	48A1	45	52	41	53		ALIT	'ERASE.'	
4789	48A5	45	2E						
4790	48A7	20	B8				ACON	ERASEB	
4791	48AC	52	45	41	44		ALIT	'READ.'	
4792	48AD	2E							
4793	48AE	47	37				ACON	READ	
4794	48B0	52	4F	4B	45		ALIT	'PCKE.'	
4795	48B4	2E							
4796	48B5	20	BE				ACON	PCKE	
4797	48F7	4F	55	54	2E		ALIT	'OUT.'	
4798	48BB	43	55				ACON	EXITCUT	
4799	48BD	44	49	4D	2E		ALIT	'DIM.'	
4800	48C1	26	83				ACON	DIM	
4801	48C3	52	4F	53	54		ALIT	'RESTORE.'	
4802	48C7	4F	52	45	2E				
4803	48C8	21	27				ACON	RESTOR	
4804	48CD	45	40	53	45		ALIT	'ELSE.'	
4805	48D1	2E							
4806	48D2	45	3A				ACON	SKPLIN	
4807	48D4	45	4E	44	2E		ALIT	'END.'	
4808	48D8	43	5B				ACON	END	
4809	48DA	53	54	4F	50		ALIT	'STOP.'	
4810	48DE	2E							
4811	48DF	43	7F				ACON	STOP	
4812	48E1	52	45	4D	2E		ALIT	'REM.'	
4813	48E5	43	42				ACON	REM	
4814	48E7	53	57	41	50		ALIT	'SWAP.'	
4815	48EB	2E							
4816	48EC	22	52				ACON	SWAP	
4817	48EE	4F	4E	2E			ALIT	'ON.'	
4818	48F1	25	40				ACON	ON	
4819	48F3	45	58	49	54		ALIT	'EXIT.'	
4820	48F7	2E							
4821	48F8	25	17				ACON	EXIT	
4822	48FA	57	41	49	54		ALIT	'WAIT.'	
4823	48FE	2E							
4824	48FF	2E	18				ACON	WAIT	
4825	4901	40	50	52	49		ALIT	'LPRINT.'	
4826	4905	4E	54	2E					
4827	4908	22	AF				ACON	LPRINT	
4828	490A	45	52	52	4F		ALIT	'ERROR.'	
4829	490E	52	2E						
4830	4910	26	35				ACON	ERRORC	
4831	4912	52	45	53	55		ALIT	'RESUME.'	
4832	4916	4D	45	2E					
4833	4919	44	DA				ACON	RESUME	
4834	491B	44	45	46	2E		ALIT	'DEF.'	
4835	491F	26	57				ACON	DEF	
4836	4921	22	41	4E	44		ALIT	'RANDOMIZE.'	
4837	4925	4F	4D	49	5A				
4838	4929	45	2E						
4839	492E	28	5C				ACON	RANDOM	
4840	492D	4D	49	44	24		ALIT	'MID.'	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4841	4931	28	2E						
4842	4931	28	AC				ACON	MID\$	
4843	4935	43	4C	45	41		ALIT	CLEAR.	
4844	4939	52	2E						
4845	493F	22	4C				ACON	PURGE	
4846	493F	FF					DATA	FF	
4847	493F					*			
4848	493F					*			
4849	493F					OPTMSG	ECU	0	
4850	493F					OKMSG	ECU	1	
4851	493F					NDERR	ECU	2	
4852	493F					WFERR	ECU	3	
4853	493F					WBTMSG	ECU	4	
4854	493F					SYNERR	ECU	5	
4855	493F					OVFEPR	ECU	6	
4856	493F					STOMSG	ECU	7	
4857	493F					LNFEPR	ECU	8	
4858	493F					WSTFEPR	ECU	9	
4859	493F					TYPEPR	ECU	A	
4860	493F					ARGERR	ECU	B	
4861	493F					DIMERR	ECU	C	
4862	493F					SOEPR	ECU	D	
4863	493F					STREPR	ECU	E	
4864	493F					ACTPR	ECU	F	
4865	493F					ASTMSG	ECU	10	
4866	493F					ERPMSG	ECU	11	
4867	493F					OSCEPR	ECU	12	
4868	493F					*			
4869	493F					*			
4870	493F					*			
4871	493F					HT	ECU	09	
4872	493F					ETY	ECU	03	
4873	493F					CTRLP	ECU	10	
4874	493F					CTRLU	ECU	15	
4875	493F					CTPLV	ECU	19	
4876	493F					CTRLN	ECU	0F	
4877	493F					CTRLC	ECU	0F	
4878	493F					*			
4879	493F					SERO	ECU	024F	
4880	493F					SERP	ECU	02E9	
4881	493F					DELAY	ECU	0278	
4882	493F					*			
4883	493F					*			
4884	493F	00	00			CHRA	RES	2	
4885	4940	07				DUMA	RES	1	
4886	4941	00				DUM2	RES	1	
4887	4942	00				TMFAE	RES	1	
4888	4943	00				TEMP2	RES	1	
4889	4944	00	00			BSA1	RES	2	
4890	4946	00	00			CHGA	RES	2	
4891	4948	00	00			CHGST	RES	2	
4892	494A					*			
4893	494A	20	03			BSRT	ACON	BSTART	
4894	494C	20	04			IBST	ACON	IBST	
4895	494E	20	05			CBST	ACON	VBST	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 12-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4896	4950	20	06			ENDRM2	ACON	ENDRAM	
4897	4952	07				TABS	DATA	7	
4898	4953	12					DATA	12	
4899	4954	1E					DATA	1B	
4900	4955					*			
4901	4955					*			
4902	4955	00	00	00	00	MBUF	RES	10	
4903	4959	00	00	00	00				
4904	495F	00	00	00	00				
4905	4961	00	00	00	00				
4906	4965	00				COMS	RES	1	
4907	4966	00	00	00	00	NAMER	RES	10	
4908	496A	00	00	00	00				
4909	496E	00	00	00	00				
4910	4972	00	00	00	00				
4911	4976	00				TMFS	RES	1	
4912	4977	00				TEMP	RES	1	
4913	4978					*			
4914	4978					EBC	ECU	03	
4915	4978					*			
4916	4978					*			
4917	4978					*			
4918	4978	20	03			BSRT	ACON	BSTART	
4919	497A	04	02			EDITOR	LODI.R0	02	
4920	497C	07					LFSL		
4921	497D	76	40				PFSL	40	
4922	497F	20					FOR2.R0		
4923	4980	CC	0A	59			STR1.R0	ULC	
4924	4983	3F	45	01			BSTA.UN	FRASE	
4925	4986	3F	4B	0A			BSTA.UN	BEGIN2	
4926	4988					*			
4927	4989	3F	4A	7F		FRDM	BSTA.UN	DISP	
4928	498C	06	10			COMD	LODI.R2	10	
4929	498F	05	2F				LODI.R1	2F	
4930	4990	3F	21	F7			BSTA.UN	SETCUR	
4931	4993	3F	2F	EF			BSTA.UN	OLFCR	
4932	4996	06	10				LODI.R2	10	
4933	4998	05	80				LODI.R1	80	
4934	499A	3F	21	F7			BSTA.UN	SETCUR	
4935	499D	07	00				LODI.R3	MSGC-MSG02	
4936	499F	3F	2F	DC			BSTA.UN	FRING	
4937	49A2	3F	4B	2F			BSTA.UN	FINLND	
4938	49A5	0F	89	4C			LODI.R3	TEST2	
4939	49A8	AF	09	40			SUBA.R3	DUMA	
4940	49AB	A7	01				SUBI.R3	01	
4941	49AD	3F	4B	E2			BSTA.UN	DFFCUT	
4942	49B0	06	13				LODI.R2	13	
4943	49B2	05	20				LODI.R1	20	
4944	49B4	3F	21	F7			BSTA.UN	SETCUR	
4945	49B7	07	50				LODI.R3	MSG1D-MSG02	
4946	49B6	3F	2F	DC			BSTA.UN	FRING	
4947	49B0	70				RL1	REDD.R0		
4948	49BD	1A	7D				BCTR.LT	RL1	
4949	49BF	3F	4A	F7			BSTA.UN	OLC	
4950	49C2	04	49				LODI.R0	CCMS	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4901	4904	25	65				LODI,R1	COMS	
4902	4905	26	11				LODI,R2	11	
4903	4906	27	21	CF			BSTA,UN	ARPCW	
4904	4907	28	22	83			BCFA,EC	83	
4905	4908	29	23	65			LODA,R2	COMS	
4906	4909	24	45	A8			BSTA,UN	LTOU	
4907	490A	25	4A	67			BSTA,UN	OLC	
4908	490B	26					FORZ,R2		
4909	490C	27					STRZ,R1		
490A	490D	27	FF				LODI,R3	FF	
490B	490E	2F	29	66		NI	LODA,R3	NAME2,.	
490C	490F	1F	2F				BCTR,EC	CK0	
490D	4910	17	10				COMI,R3	10	
490E	4911	0A	2C				BCFR,LT	EADD	
490F	4912	14	32				COMI,R2	'0'	
4910	4913	1A	26				BCTR,LT	DS	
4911	4914	14	36				COMI,R2	'0'	
4912	4915	19	27				BCTR,GT	DS	
4913	4916	01					LODI,R1		
4914	4917	25	79				LODI,R2	29	
4915	4918	81				ONE2	ADDZ,R1		
4916	4919	25	01				TPSL	CRY	
4917	491A	19	21				BCTR,EC	1255	
4918	491B	1A	29				BCTR,EC	ONE2	
4919	491C	01					STRZ,R1		
491A	491D	2F	65	65			LODA,R3	NAME2,!	
491B	491E	A4	32				SUBI,R2	'0'	
491C	491F	81					ADDZ,R1		
491D	4920	01					STRZ,R1		
491E	4921	2F	21				TPSL	CRY	
491F	4922	28	69				BCFR,EC	NI	
4920	4923	25	FF			D255	LODI,R1	FF	
4921	4924	11	2A				BCTR,UN	EADD	
4922	4925	17	22			CK0	COMI,R3	22	
4923	4926	06	26				BCFR,EC	EADD	
4924	4927	05	21				LODI,R1	01	
4925	4928	1F	22				BCTR,UN	EADD	
4926	4929	05	22			DS	LODI,R1	22	
4927	492A	20	2C	85		EADD	LODA,R2	COMS	
4928	492B	3F	45	A6			BSTA,UN	LTOU	
4929	492C	03					STRZ,R3		
492A	492D	A7	41				SUBI,R3	'A'	
492B	492E	17	19				COMI,R3	19	
492C	492F	1D	49	8C			BCTR,GT	COMD	
492D	4930	D3					RRL,R3		
492E	4931	57	80				IORI,R3	80	
492F	4932	0B	01				STRZ,R3	4+3	
4930	4933	1B	22				BCTR,UN	COMTEB	
4931	4934	4E	67			COMTEB	ACON	ISAVE	A=APPEND BUFFER AFTER LINE Y
4932	4935	4F	42				ACON	BACK	B=BACK X LINES
4933	4936	4F	45				ACON	CHANGE	C=CHANGE LINES
4934	4937	4D	16				ACON	DEL	D=DELETE X LINES FROM "TOP"
4935	4938	22	83				DATA	22,83	E=EXIT TO SUP.
4936	4939	4B	4B				ACON	FORWD	F=FORWARD X LINES
4937	493A	28	2C				ACON	BASIC	G=GO TO BASIC

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5026	4A33	4F	26				ACON	SAVE	H=HOLD X LINES IN INSERT BUFFER
5027	4A34	4F	2E				ACON	INST	I=INSERT LINES AFTER LINE X
5028	4A35	45	8C				ACON	COMD	
5029	4A36	49	8C				ACON	COMD	
5030	4A37	51	70				ACON	LCADI	L=LOAD X LINES FROM DISK
5031	4A38	4E	2C				ACON	MODIFY	M=MODIFY STRING IN LINE X
5032	4A39	4A	5A				ACON	ULCASE	N=NORMAL LOWERCASE MODE
5033	4A40	45	8C				ACON	COMD	
5034	4A41	4E	A4				ACON	PMOD	P=PRESET "MODIFY" PATTERNS
5035	4A42	45	8C				ACON	COMD	
5036	4A43	45	8C				ACON	COMD	
5037	4A44	51	41				ACON	TAPEO	S=STORE X LINES TO DISK
5038	4A45	45	8C				ACON	COMD	
5039	4A46	4A	50				ACON	UPONLY	U=GO INTO UPPER CASE ONLY MODE
5040	4A47	49	8C				ACON	COMD	
5041	4A48	49	8C				ACON	COMD	
5042	4A49	4E	2F				ACON	SEARCH	X=SEARCH FOR ASCII STRING Y
5043	4A4A	49	8C				ACON	COMD	
5044	4A4B	49	8C				ACON	COMD	
5045	4A4C	49	8C				ACON	COMD	
5046	4A4D					*			
5047	4A4E	2E	08			JLC	RES	1	
5048	4A4F					*			
5049	4A50					ULCAST	FORZ,R2	ULC	
5050	4A51	0B	7C				STRZ,R2		
5051	4A52	1F	49	8C			BCTR,UN	COMD	
5052	4A53					*			
5053	4A54	04	FF			UPONLY	LODI,R2	FF	
5054	4A55	0B	75				STRZ,R2	ULC	
5055	4A56	1F	49	8C			BCTR,UN	COMD	
5056	4A57					*			
5057	4A58					*			
5058	4A59	14	2B			OLC	COMI,R2	2B	
5059	4A5A	1C	4B	26			BCTR,EC	ENDF	
5060	4A5B	14	2D				COMI,R2	2D	
5061	4A5C	11	4B	94			BCTR,EC	BEGNB	
5062	4A5D	14	20				COMI,R2		
5063	4A5E	1C	4F	46			BCTR,EC	FW15	
5064	4A5F	14	37				COMI,R2		
5065	4A60	1C	4B	42			BCTR,EC	BK15	
5066	4A61	17					BCTR,UN		
5067	4A62					*			
5068	4A63	2E	08			CURIT	ACON	CURSOR-1	
5069	4A64					LINEI	RES	1	
5070	4A65					*			
5071	4A66	3F	4B	A5		DISP	BSTA,UN	MTDA	
5072	4A67	01					STRZ,R1		
5073	4A68	20					FORZ,R2		
5074	4A69	0C	8A	7C			STRZ,R2	*CURIT	
5075	4A6A	0C	89	41			STRZ,R2	DUMA+1	
5076	4A6B	0B	72				STRZ,R2	LINEX	
5077	4A6C	3F	2F	EE		LINEIN	BSTA,UN	CLFCR	
5078	4A6D	2C	8A	7C			LODA,R2	*CURIT	
5079	4A6E	44	0F				ANDI,R2	F	
5080	4A6F	14					RETC,EC		
5081	4A70	2D	15	40			LODA,R1	*DUMA,1	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5071	4A98	1E	4A	DE			BCTA,LT	CLREND	
5072	4A99	2F	61				LODR,R0	LINE1	
5073	4A9C	84	21				ADDI,R0	1	
5074	4A9F	0C	5D				STRB,R0	LINEX	
5075	4AA1	03					COMI,R0	0	
5076	4AA2	14	79				COMI,R0	0	
5077	4AA4	10	05				BCTR,LT	TWOCH	
5078	4AA6	3F	2F	D2			BSTA,UN	WRTBL	
5079	4AA8	1E	07				BCTR,UN	WR2ND	
5070	4AA9	24	31			TWOCH	LODI,R0	1	
5071	4AA1	3F	2F	D2			BSTA,UN	WRT	
5072	4AB0	A7	2A				SUBI,R3	A	
5073	4AB2	27	30			WR2ND	IORI,R3	'0'	
5074	4AB4	23					LODZ,R3		
5075	4AB5	3F	2E	D3			BSTA,UN	WRT	
5076	4AB6	3F	2F	D2			BSTA,UN	WRTBL	
5077	4AB8	2E	FS	40		NXTC	LODA,R1	*DUMA,1	
5078	4ABE	1A	1E				BCTR,LT	CLREND	
5079	4AC0	03					STRZ,R3		
5080	4AC1	09	7F				BIRR,R1	NA1	
5081	4AC3	3F	4E	1A			BSTA,UN	AIDA	
5082	4AC6	2A	16				BCTR,LT	CLREND	
5083	4AC8	17	01			NA1	COMI,R3	CR	
5084	4ACA	10	4A	8C			BCTA,EC	LINEFO	
5085	4ACD	03					LODZ,R3		
5086	4ACE	3F	2E	D3			BSTA,UN	WRT	
5087	4AC1	1E	68				BCTR,UN	NXTC	
5088	4AD1	20				ERASE2	FORZ,R0		
5089	4ADA	00	8A	7C			STRA,R0	*CURIT	
5090	4AD7	3F	4A	DE			BSTA,UN	CLREND	
5091	4ADA	3F	2F	DE			BSTA,UN	CLPCR	
5092	4ADD	17					RETC,UN		
5093	4ADE	00	8A	7C		CLREND	LODA,R0	*CURIT	
5094	4AE1	14	2F				TMI,R0	F	
5095	4AE3	14					RETC,EC		
5096	4AE4	3F	2F	DE			BSTA,UN	CLPCR	
5097	4AE7	1B	75				BCTR,UN	CLREND	
5098	4AE9	02				PTEMP	PES	1	
5099	4AEA	3F	4B	AS		PWDIX	BSTA,UN	MTDA	
5100	4AE7	02				PWDIX2	STRZ,R2		
5101	4AEF	01					LODZ,R1		
5102	4AEF	14					RETC,EC		
5103	4AF0	27					FORZ,R0		
5104	4AF1	00	09	41			STRA,R0	DUMA+1	
5105	4AF4	0E	29	40		NXTCR	LODA,R2	*DUMA,1	
5106	4AF7	1A	1D				BCTR,LT	ENDFW	
5107	4AF9	0F	61				STRB,R0	PTEMP	
5108	4AFB	1A	11				BIRR,R2	CRCK	
5109	4AFD	3F	4B	1A			BSTA,UN	AIDA	
5110	4B00	1A	0C				BCTR,LT	CRCA	
5111	4B02	3F	4C	P4			BSTA,UN	SIDA	
5112	4B05	0F	FF				LODI,R2	FF	
5113	4B07	04	83				LODI,R0	EBC	
5114	4B0C	0E	E9	40			STRA,R2	*DUMA,1	
5115	4B0C	1B	05				BCTR,UN	ENDFW	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 10-21-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5116	4B0E	0E	59			CRCK	LODR,R2	PTEMP	
5117	4B10	04	0E				COMI,R0	CR	
5118	4B12	08	62				BCTR,EC	NXTCR	
5119	4B14	09	5E				BIRR,R1	NXTCR	
5120	4B16	0E	09	41		ENDFW	STRA,R2	DUMA+1	
5121	4B18	17					RETC,UN		
5122	4B1A	04	01			AIDA	LODI,R0	1	
5123	4B1C	0C	09	40			ADDA,R0	DUMA	
5124	4B1F	0C	09	40			STRA,R0	DUMA	
5125	4B22	3C	09	4C			COMA,R0	*IBST2	
5126	4B25	17					RETC,UN		
5127	4B26					*			
5128	4B26					*			
5129	4B26	3F	07			ZNDF	BSTR,UN	FINDND	
5130	4B28	3F	4E	8C			BSTA,UN	MTCA	
5131	4B2B	05	01				LODI,R1	1	
5132	4B2D	1B	13				BCTR,UN	BACK	
5133	4B2F	3F	4E	AS		FINDND	BSTA,UN	MTCA	
5134	4B32	05	FF			FINDND2	LODI,R1	FF	
5135	4B34	3F	4A	ED			BSTA,UN	PWDIX2	
5136	4B37	0C	09	40			LODA,R0	*DUMA	
5137	4B3A	16					RETC,LT		
5138	4B3F	0C	09	41			LODA,R0	DUMA+1	
5139	4B41	1B	72				BCTR,UN	FINDND2	
5140	4B40	0E	0F			BK15	LODI,R1	F	
5141	4B42	3B	0C			BACK	BCTR,UN	BACKY	
5142	4B44	1B	05				BCTR,UN	PWBKD	
5143	4B46	05	0F			PW15	LODI,R1	F	
5144	4B48	3F	4A	EA		FORWD	BSTA,UN	PWDY	
5145	4B4B	2B	33			PWBKD	BSTR,UN	MTCA	
5146	4B4D	1F	49	89			BCTA,UN	FBDN	
5147	4B50	3F	4B	AS		BACKY	BSTA,UN	MTDA	
5148	4B53	02					STRZ,R2		
5149	4B54	20					FORZ,R0		
5150	4B55	0C	09	41			STRA,R0	DUMA+1	
5151	4B58	05	01				ADDI,R1	1	
5152	4B5A	1B	03				BCTR,UN	CHEK	
5153	4B5C	0E	09	40		SUBL	LODA,R2	*DUMA,-	
5154	4B5F	03				CHEK	STRZ,R3		
5155	4B60	16	00				COMI,R2	0	
5156	4B62	08	08				BCTR,EC	NOSU	
5157	4B64	3F	4C	E4			BSTA,UN	SIDA	
5158	4B67	3C	09	4A			COMA,R0	*BSTR2	
5159	4B6A	1A	28				BCTR,LT	BEGRN	
5160	4B6C	17	0D				COMI,R3	CR	
5161	4B6F	08	0C				BCTR,EC	SUBL	
5162	4B70	19	6A				BIRR,R1	SUBL	
5163	4B72	16	00				COMI,R0	0	
5164	4B74	3C	4B	1A			BCTA,EC	AIDA	
5165	4B77	06	01				ADDI,R2	1	
5166	4B79	3C	4B	1A			BCTA,EC	AIDA	
5167	4B7C	0E	09	41			STRA,R2	DUMA+1	
5168	4B7F	17					RETC,UN		
5169	4B80	0C	09	40		MTCA	LODA,R0	DUMA	
5170	4B83	0C	09	3E			STRA,R0	CURA	

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5171	4F8C	20	26	41			LODA,R2	DUMA+1	
5172	4F8D	00	09	3F			STRA,R0	CURA+1	
5173	4F8E	17					RETC,UN		
5174	4F8F					*			
5175	4F90					*			
5176	4F91	33	2B			CREATE	BSTR,UN	BEGIN2	
5177	4F92	24	23				LODI,R2	ERC	
5178	4F93	17	09	3F			STRA,R0	*CURA	
5179	4F94					*			
5180	4F95	3F	4B	5A		SEGNB	BSTA,UN	BEGIN2	
5181	4F96	1F	49	89			BCTA,UN	FEEN	
5182	4F97	20	09	4A		BEGIN2	LCIA,R0	*BSTR2	
5183	4F98	00	09	3F			STRA,R0	CURA	
5184	4F99	22					FORZ,R0		
5185	4F9A	00	09	3F			STPA,R0	CURA+1	
5186	4F9B	17					RETC,UN		
5187	4F9C					*			
5188	4F9D	20	09	3F		*TEA	LODA,R0	CURA	
5189	4F9E	00	09	40			STRA,R0	DUMA	
5190	4F9F	00	09	3F			LODA,R0	CURA+1	
5191	4FA0	17	09	41			STRA,R0	DUMA+1	
5192	4FA1	17					RETC,UN		
5193	4FA2					*			
5194	4FA3	27	63			DECOU	COMI,R3	63	
5195	4FA4	00	07				BCTP,ST	NO10P	
5196	4FA5	24	31				LODI,R0	'1'	
5197	4FA6	3F	0F	23			BSTA,UN	VRT	
5198	4FA7	47	64				SUBI,R3	64	
5199	4FA8	26	00			NO100	LODI,R2	0	
5200	4FA9	37	09			SUB10	COMI,R3	0	
5201	4FAA	00	06				BCTP,ST	TENIN	
5202	4FAB	17	2A				SUBI,R3	A	
5203	4FAC	00	21				ALDI,R2	1	
5204	4FAD	13	06				BCTP,UN	SUB10	
5205	4FAE	22				TENIN	LODZ,R2		
5206	4FAD	54	32				ICRI,R0	'0'	
5207	4FAE	3F	2E	23			BSTA,UN	VRT	
5208	4FAF	03					LODZ,R3		
5209	4FB0	54	32				ICRI,R0	'0'	
5210	4FB1	3F	2E	23			BSTA,UN	VRT	
5211	4FB2	17					RETC,UN		
5212	4FB3					*			
5213	4FB4					*			
5214	4FB5	3F	4A	E3		INST	BSTA,UN	EPASE2	
5215	4FB6	3F	4C	DA			BSTA,UN	IBADD	
5216	4FB7	3F	4A	EA			BSTA,UN	FWEX	
5217	4FB8	3F	4B	EB			BSTA,UN	MTCA	
5218	4FB9	3F	4B	2F			BSTA,UN	FINDND	
5219	4FBA	00	20				LODI,R1	00	
5220	4FBB	3F	21	E7		NEXI	BSTA,UN	GITKB	
5221	4FBC	24	28				COMI,R0	RS	
5222	4FBD	10	4C	F5			BCTA,EC	BACKN	
5223	4FBE	14	09				COMI,R0	BT	
5224	4FBF	10	4D	63			BCTA,EC	TABO	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5225	4FF4	14	03				COMI,R0	ETX	
5226	4FF5	10	0F				BCTP,EC	ETPAS	
5227	4FF6	3F	4F	49			BSTA,UN	CICTRL	
5228	4FF7	1A	0A				BCTP,LT	NEXI	
5229	4FF8	22	E9	42		ETPAS	STRA,R1	*TMPAE,I	
5230	4FF9	24	03				COMI,R0	ETX	
5231	4FFA	1F	3T				BCTP,EC	ENDI	
5232	4FFB	14	01				COMI,R0	CR	
5233	4FFC	30	2F	55			BSTA,EC	LFOR	
5234	4FFD	2B	02				BSTR,UN	INSTS2	
5235	4FFE	1F	5A				BCTP,UN	NEXI	
5236	4FFD					*			
5237	4FFD					INSTS2	LODI,R0	1	
5238	4FFD	06	02				LODI,R2	2	
5239	4FFD	3F	4D	47			BSTA,UN	ADDANY	
5240	4FFD	30	09	4C			COMA,R0	*IBST2	
5241	4FFD	1A	0A				BCTP,LT	INCR2	
5242	4FFD	3F	4C	B4			BSTA,UN	SIDA	
5243	4FFD	24	FE				LODI,R0	FE	
5244	4FFD	00	09	41			STRA,R0	DUMA+1	
5245	4FFD	1B	19				BCTP,UN	ENDINS	
5246	4FFD	29	0D			INCR2	BIRR,R1	RETCUN	
5247	4FFD	24	01				LODI,R0	1	
5248	4FFD	20	09	42			ALTA,P0	*TMPAE	
5249	4FFD	10	09	50			COMA,R0	*ENDRM2	
5250	4FFD	2A	04				BCTP,LT	STRTMP	
5251	4FFD	20	09	42			STRA,R0	*TMPAE	
5252	4FFD	17				RETCUN	RETC,UN		
5253	4FFD					*			
5254	4FFD	04	01			STRTMP	LODI,R0	1	
5255	4FFD	26	02				LODI,R2	2	
5256	4FFD	3F	4C	F6			BSTA,UN	SUBANY	
5257	4FFD	05	FF				LODI,R1	FF	
5258	4FFD	24	03			ENDINS	LODI,R0	ETX	
5259	4FFD	2E	FS	42			STRA,R1	*TMPAE,I	
5260	4C41					*			
5261	4C41					*			
5262	4C41					*			
5263	4C41	20	09	40		ENDI	LODA,R0	DUMA	
5264	4C41	20	09	42			STRA,R0	*TMPAE	
5265	4C41	0F	09	41			LODA,R3	DUMA+1	
5266	4C41	3F	4B	2F			BSTA,UN	FINDND	
5267	4C41	3F	4C	BD			BSTA,UN	SDCA	
5268	4C41	0E	05	41			LODA,R1	DUMA+1	
5269	4C41	20					FORZ,R0		
5270	4C41	20	09	41			STRA,R0	DUMA+1	
5271	4C41	20	09	43			STRA,R0	*TMPAE-1	
5272	4C41	20	09	40		DOWN	LODA,R1	*DUMA,I	
5273	4C41	27	E9	42			STRA,R3	*TMPAE,I	
5274	4C41	04	01				LODI,R0	1	
5275	4C41	26	02				LODI,R2	2	
5276	4C41	3F	4C	FE			BSTA,UN	SUBANY	
5277	4C41	20	05				BCTP,EC	NCCI	
5278	4C41	20	09	45			LODA,R0	BSA1+1	
5279	4C41	18	1E			*	BCTP,EC	INSTDN	
5280	4C41					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
5281	4061	A6	01			NOCK	SUBI,R1	1	
5282	4070	FF	FF				COMI,R1	FF	
5283	4072	08	08				BCFR,EQ	NSIDA	
5284	4074	3F	4C	B4			ESTA,UN	SIDA	
5285	4077	FC	89	4A			COMA,R0	*ESTRT2	
5286	407A	1A	17				BCTR,LT	INSTDN	
5287	407C	A7	01			NSIDA	SUBI,R3	01	
5288	407E	F7	FF				COMI,R3	FF	
5289	4080	98	58				BCFR,FC	DOWN	
5290	4082	20	29	42			LODA,R0	TMPAE	
5291	4084	A4	01				SUBI,R0	01	
5292	4087	00	29	42			STRA,R0	TMPAE	
5293	408A	1B	4E				BCTR,UN	DOWN	
5294	408C					*			
5295	408C	3F	4C	CA		INSTDN	ESTA,UN	IBADD	
5296	408F	3F	4E	A5			ESTA,UN	MTDA	
5297	4092	C1					STRZ,R1		
5298	4093	22					FORZ,R0		
5299	4094	00	29	41			STRA,R0	DUMA+1	
5300	4097	27	FF				LODI,R3	FF	
5301	4099	2F	A9	42		INSERT	LODA,R3	*TMPAE,+	
5302	409C	F4	23				COMI,R0	ITX	
5303	409E	16	2F				BCTR,EQ	INSTE	
5304	40A2	01	E9	40			STRA,R1	*DUMA,I	
5305	40A3	F7	FF				COMI,R3	FF	
5306	40A5	3C	4C	2D			ESTA,EQ	AITA	
5307	40A9	F9	05				PIRR,R1	INSERT	
5308	40AA	F7	4E	1A			ESTA,UN	AIEA	
5309	40AD	1A	6A				BCTR,LT	INSERT	
5310	40AF	25	01			INSTI	LODI,R1	1	
5311	40B1	1F	4E	42			BCTR,UN	BACK	
5312	40B4					*			
5313	40B4	00	29	42		SIDA	LODA,R0	DUMA	
5314	40B7	A4	01				SUBI,R0	1	
5315	40B9	00	29	42			STRA,R0	DUMA	
5316	40BC	17					RETC,UN		
5317	40BD					*			
5318	40BD	00	29	41		SDCA	LODA,R0	DUMA+1	
5319	40C0	A0	09	3F			SUBA,R0	CURA+1	
5320	40C3	00	09	45			STRA,R0	BSA1+1	
5321	40C6	77	08				PSSL	WC	
5322	40C8	20	29	40			LODA,R0	DUMA	
5323	40CB	A0	29	3E			SUBA,R0	CURA	
5324	40CE	00	29	44			STRA,R0	BSA1	
5325	40D1	75	0E				CPSL	WC	
5326	40D3	24	01				LODI,R0	1	
5327	40D5	26	06				LODI,R0	6	
5328	40D7	1F	4E	47			BCTR,UN	ADDANT	
5329	40DA					*			
5330	40DA	20	09	40		IBADD	LODA,R0	*IBST2	
5331	40DD	00	09	42			STRA,R0	TMPAE	
5332	40E0	26					FORZ,R0		
5333	40E1	1C	09	43			STRA,R0	TMPAE+1	
5334	40E4	17					RETC,UN		
5335	40E5					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-16-78

LINE	ADDR	P1	P2	P3	P4	LABEL	OPCODE	OPERAND	COMMENTS
5336	40E5	3F	2F	61		BACKN	ESTA,UN	BACK1	
5337	40E8	1F	4E	F7			BCTR,LT	NEXI	
5338	40EE	24	01				LODI,R0	1	
5339	40ED	26	02				LODI,R2	2	
5340	40EF	3F	4C	F6			ESTA,UN	SUBANY	
5341	40F2	1F	4E	F7			BCTR,UN	NEXI	
5342	40F5					*			
5343	40F5					*			
5344	40F5	00				STORE	RES	1	
5345	40F6	09	7D			SUBANY	STRR,R0	STORE	
5346	40F8	21	69	3F			LODA,R2	CURA+1,I	
5347	40FB	A8	78				SUBR,R0	STORE	
5348	40FD	01	69	3F			STRA,R2	CURA+1,I	
5349	40E0	77	08				PSSL	WC	
5350	40E2	01	69	3F			LODA,R2	CURA,I	
5351	40E4	A4	00				SUBI,R0	0	
5352	40E7	01	69	3E			STRA,R2	CURA,I	
5353	40EA	75	08				CPSL	WC	
5354	40EC	17					RETC,UN		
5355	40ED					*			
5356	40ED	24	01			AITA	LODI,R0	1	
5357	40EF	0C	09	42			ADDA,R0	TMPAE	
5358	40F0	00	09	42			STRA,R0	TMPAE	
5359	40F1	17					RETC,UN		
5360	40F6					*			
5361	40F6	3F	4A	FA		DELT	ESTA,UN	FWDI	
5362	40F9	3F	0C				BCTR,UN	SHIF	
5363	40FB	25	01				LODI,R1	1	
5364	40FD	1F	4E	42			BCTR,UN	BACK	
5365	40F0					*			
5366	40F0	0F	09	3E		SHIF	LODA,R3	CURA	
5367	40F3	0F	09	42			STRA,R3	TMPAE	
5368	40F6	0F	09	3F			LODA,R3	CURA+1	
5369	40F9	0D	09	41			LODA,R1	DUMA+1	
5370	40FC	20					FORZ,R0		
5371	40FE	00	09	43			STRA,R0	TMPAE+1	
5372	40F0	00	09	41			STRA,R0	DUMA+1	
5373	40F3	0D	E9	40		UF	LODA,R1	*DUMA,I	
5374	40F6	0F	E9	42			STRA,R3	*TMPAE,I	
5375	40F9	16					RETC,LT		
5376	40FA	S7	01				ADDI,R3	1	
5377	40FC	3C	4D	0D			ESTA,FO	AITA	
5378	40FE	D9	72				PIRR,R1	UP	
5379	40F1	3F	4B	1A			ESTA,UN	ALDA	
5380	40F4	1A	6D				BCTR,LT	UP	
5381	40F6	17					RETC,UN		
5382	40F7					*			
5383	40F7	0E	69	3F		ADDANT	ADDA,R2	CURA+1,I	
5384	40FA	01	69	3F			STRA,R2	CURA+1,I	
5385	40FD	77	08				PSSL	WC	
5386	40FE	22					FORZ,R0		
5387	40F0	01	69	3E			ADDA,R2	CURA,I	
5388	40F3	0E	69	3E			STRA,R2	CURA,I	
5389	40F6	75	08				CPSL	WC	
5390	40F8	17					RETC,UN		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5391	4DE9					*			
5392	4DE9					NOTFON	LODI,R3	MSGF-MSG22	
5393	4DE9	27	19				ECTA,UN	ERROR2	
5394	4DEB	1F	2F	4C		TME	LODI,R3	MSGD-MSG02	
5395	4DEB	07	18				ECTA,UN	ERROR2	
5396	4DE9	1F	2F	4C		*			
5397	4DE3					TABO	BSTA,UN	TABSUB	
5398	4DE3	33	4D	79			ECTA,EC	NEXI	
5399	4DE6	1C	4B	E7		TIC	LODI,R0		
5400	4DE9	24	20				STRA,R1	*TMPAE,I	
5401	4DEB	21	19	42			BSTA,UN	WRT	
5402	4DEB	3F	21	23			BSTA,UN	INSTS2	
5403	4D71	3F	4C	2D			BSTR,R3	TIC	
5404	4D74	3F	71				ECTA,UN	NEXI	
5405	4D76	1F	4F	E7		*			
5406	4D79					TABSUB	LODI,R3	FF	
5407	4D7E	2C	28	42			LODA,R0	TMPAE	
5408	4D7E	0C	29	44			STRA,R0	BSA1	
5409	4D7E	07	28	45			STRA,R1	BSA1+1	
5410	4D84	27	21			TL1	ADDI,R3	1	
5411	4D86	24	21				LODI,R0	1	
5412	4D88	26	26				LODI,R2	6	
5413	4D8A	3F	4C	F6			BSTA,UN	SUBANY	
5414	4D8D	3C	39	4C			COMA,R0	*IBST2	
5415	4D90	1A	27				ECTR,LT	CRFND	
5416	4D92	2C	28	44			LODA,R0	*PSA1	
5417	4D95	14	2D				COMI,R0	CR	
5418	4D97	26	23				ECTR,EQ	TL1	
5419	4D99	26	FF			CRFND	LODI,R2	FF	
5420	4D9F	2E	29	52		TL2	LODA,R2	TABS.+	
5421	4D9F	1F	23				COMI,R2	03	
5422	4DA0	14					RETC,EC		
5423	4DA1	23					COMZ,R3		
5424	4DA2	29	77				ECTR,GT	TL2	
5425	4DA4	A3					SUBZ,R3		
5426	4DA5	23					STRZ,R3		
5427	4DA5	17					RETC,UN		
5428	4DA7					*			
5429	4DA7	3F	4B	A5		S2	BSTA,UN	MTDA	
5430	4DA8	21					STRZ,R1		
5431	4DA8	20					FORZ,R0		
5432	4DAC	0C	29	41			STRA,R0	DUMA+1	
5433	4DA7	0C	21	25			STRA,R0	SSTAT	
5434	4DB2	0C	29	40			LODA,R0	DUMA	
5435	4DB5	0C	29	42			STRA,R0	TMPAE	
5436	4DB8	0D	29	43			STRA,R1	TMPAE-1	
5437	4DB9	26	FF			REDO	LODI,R2	FF	
5438	4DBD	21	29	56		SL2	LODA,R2	NAMF2,-	
5439	4DC2	3F	45	A6			ECTR,EC	FOUND	
5440	4DC2	3F	45	A6			BSTA,UN	LTOU	
5441	4DC5	16	18				COMI,R2	16	
5442	4DC7	18	2C				ECTR,EC	FOUND	
5443	4DC9	23					STRZ,R3		
5444	4DCA	21	19	42			LODA,R1	*DUMA,I	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5446	4DD0	1F	41	26			ECTA,LT	NF	
5447	4DD2	3F	45	A6			BSTA,UN	LTOU	
5448	4DD3	0C	29	76			STRA,R0	TMPS	
5449	4DD6	19	25				BIRR,R1	NOAD	
5450	4DD8	3F	4B	1A			BSTA,UN	ALDA	
5451	4DD8	3A	29				ECTR,LT	NF	
5452	4DD1	0C	29	76		NCAD	LODA,R0	TMPS	
5453	4DE0	E3					COMZ,R3	SL2	
5454	4DE1	18	5A				ECTR,EC	1	
5455	4E13	24	21				LODI,R0	4	
5456	4E15	26	24				LODI,R2		
5457	4E17	3F	4D	47			BSTA,UN	ADDANY	
5458	4E1A	0C	29	42			LODA,R0	TMPAE	
5459	4E1D	0C	29	40			STRA,R0	DUMA	
5460	4E1F	2D	29	43			LODA,R1	TMPAE-1	
5461	4E13	1F	46				ECTR,UN	REIC	
5462	4E15	0D	29	41		FOUND	STRA,R1	DUMA+1	
5463	4E18	0F	29	77			STRA,R2	TEMP	
5464	4E1B	22					LOI2,R2		
5465	4E1C	06	22				LODI,R2	02	
5466	4E1F	3F	4C	F6			BSTA,UN	SUBANY	
5467	4E01	2E	29	77			LODA,R2	TEMP	
5468	4E04	17					RETC,UN		
5469	4E05					*			
5470	4E05	2C				SSTAT	RES	1	
5471	4E06	24	FF			N7	LODI,R0	FF	
5472	4E08	08	7B				STRR,R0	SSTAT	
5473	4E0A	3F	4B	A5			BSTA,UN	MTDA	
5474	4E01	17				*			
5475	4E02								
5476	4E01	05	21			SEARCH	LODI,R1	01	
5477	4E10	3F	4A	1A			BSTA,UN	FWDI	
5478	4E13	3F	4F	80			BSTA,UN	MTCA	
5479	4E16	3F	4F	A7			BSTA,UN	S2	
5480	4E19	08	6A				LODR,R0	SSTAT	
5481	4E1B	1F	4F	59			ECTA,LT	NOTFON	
5482	4E1F	3F	4B	80			BSTA,UN	MTCA	
5483	4E21	05	20				LODI,R1	00	
5484	4E23	17	4B	42			ECTA,UN	BACK	
5485	4E26					*			
5486	4E26	3F	4C	DA		SAVE	BSTA,UN	IBADD	
5487	4E29	3F	4A	1A			BSTA,UN	FWDI	
5488	4E2C	3F	4C	BD			BSTA,UN	SDCA	
5489	4E2F	3F	4B	A5			BSTA,UN	MTDA	
5490	4E32	C1					STRZ,R1		
5491	4E33	20					FORZ,R0		
5492	4E34	0C	29	41			STRA,R0	DUMA+1	
5493	4E37	C3					STRZ,R3		
5494	4E38	2D	19	40		SL	LODA,R1	*DUMA,I	
5495	4E39	0F	19	42			STRA,R3	*TMPAE,I	
5496	4E3E	06	25				BIRR,R1	CKR3	
5497	4E40	3F	4B	1A			BSTA,UN	ALDA	
5498	4E43	2A	1A			CKR3	ECTR,LT	SL3	
5499	4E45	DE	28				BIRR,R3	SLCK	
5500	4E47	3F	4D	2D			BSTA,UN	ALTA	

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FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5521	4E4A	EC	89	52			COMA,R2	*ENDRM2	
5522	4E4D	1A	00				BCTR,LT	SICK	
5523	4E4F	24	21			SICK	LODI,R0	1	
5524	4E51	0E	26				LODI,R2	6	
5525	4E52	3F	4C	FE			BSTA,UN	SUBANT	
5526	4E56	29	60				BCTR,EC	SL	
5527	4E59	2C	29	45			LODA,R0	BSA1+1	
5528	4E5B	F4	01				COMI,R0	1	
5529	4E5D	58	59				BCTR,FO	SI	
5530	4E5F	24	03			SL3	LODI,R0	ETX	
5531	4E61	0F	E9	42			STRA,R3	*TMPAE,I	
5532	4E64	1F	49	2C			BCTA,UN	COMD	
5533	4E67					*			
5534	4E67	3F	4A	EA		ISAVE	BSTA,UN	FWDI	
5535	4E6A	3F	4B	80			BSTA,UN	MTCA	
5536	4E6D	3F	4E	2F			BSTA,UN	FINDND	
5537	4E70	3F	4C	1A			BSTA,UN	IBATD	
5538	4E73	25	00				LODI,R1	0	
5539	4E75	24	03			ISL2	LODI,R0	ETX	
5540	4E77	1D	E9	42		ISI	COMA,R1	*TMPAF,I	
5541	4E7A	1D	2D				BCTR,EQ	IFOUND	
5542	4E7C	D9	79				BIRR,R1	ISL	
5543	4E7E	3F	4E	2D			BSTA,UN	ALTA	
5544	4E81	1C	89	52			COMA,R0	*ENDPM2	
5545	4E84	3F	4B	80			BCTA,LT	FBDN	
5546	4E87	1F	0C				BCTR,UN	ISL2	
5547	4E89	2C	08	42		IFOUND	LODA,R0	TMPAE	
5548	4E8C	A0	59	4C			SUBA,R0	*IBST2	
5549	4E8F	60	09	42			ADCA,R0	DUMA	
5550	4E92	2C	09	42			STRA,R0	DUMA	
5551	4E95	2C					LODZ,R1		
5552	4E9E	26	22				LODI,R2	02	
5553	4E9B	3F	4E	47			BSTA,UN	ADDANY	
5554	4E9D	1C	89	4C			COMA,R0	*IBST2	
5555	4E9F	3F	4D	51			BCTA,LT	TME	
5556	4EA1	1F	4C	41			BCTA,UN	ENDI	
5557	4EA4					*			
5558	4EA4	2F	15			PMOD	LODI,R2	15	
5559	4EA6	2F	0F				LODI,R1	0F	
5560	4EA6	3F	2D	F7			BSTA,UN	SETCUR	
5561	4EA8	3F	2F	0E			BSTA,UN	OLFCR	
5562	4EA7	2F	FF				LODI,R1	FF	
5563	4E9D	2D	32	37		NXTNM	LODA,R1	NAME2,+	
5564	4E9F	CD	69	66			STRA,R1	MNAME,I	
5565	4E92	FA	72				COMI,R1	F	
5566	4E96	9E	76				BCTR,EC	NXTNM	
5567	4E9A	27	23			WRIMB	LODI,R3	MSGF-MSG02	
5568	4E9C	3F	2F	DC			BSTA,UN	PRING	
5569	4E9F	25	55				LODI,R1	MBUF	
5570	4F01	24	49				LODI,R0	MBUF	
5571	4F03	08	10				LODI,R2	10	
5572	4F05	3F	2E	CB			BSTA,UN	ARROW	
5573	4F08	1F	49	2C			BCTA,UN	COMD	
5574	4F0B					*			
5575	4F0B	26				MTEMP	RES	1	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5586	4F0C	01				MODIFY	LODZ,R1		
5587	4E0D	1C	49	BC			BCTA,EO	COMD	
5588	4E10	A5	01				SUBI,R1	1	
5589	4E12	3F	4A	EA			BSTA,UN	FWDI	
5590	4E15	3F	4B	80			BSTA,UN	MTCA	
5591	4E18	05	FF				LODI,R1	FF	
5592	4E1A	0E	10				LODI,R2	10	
5593	4E1C	2D	32	37		XFER	LODA,R1	MNAME,+	
5594	4E1F	CD	69	66			STRA,R1	NAME2,I	
5595	4E22	FA	72				EDRR,R2	XFER	
5596	4E24	25	01				LODI,R1	1	
5597	4E26	3F	4A	EA			BSTA,UN	FWDI	
5598	4E29	0C	25	48			LODA,R0	*DUMA	
5599	4E2C	08	5D				STRR,R0	*TMP	
5600	4E2E	24	03				LODI,R0	IBC	
5601	4E30	0C	89	42			STRA,R0	*DUMA	
5602	4E33	3F	4E	A7			BSTA,UN	S2	
5603	4E36	2E	09	76			STRA,R2	TMPS	
5604	4E39	3F	4B	80			BSTA,UN	MTCA	
5605	4E3C	05	01				LODI,R1	1	
5606	4E3E	3F	4A	EA			BSTA,UN	FWDI	
5607	4E41	28	48				LODR,R0	*TEMP	
5608	4E43	0C	89	42			STRA,R0	*DUMA	
5609	4E46	2C	0E	05			LODA,R0	SSTAT	
5610	4E49	1E	4D	59			BCTA,LT	NOTFON	
5611	4E4C	3F	4B	A5			BSTA,UN	MTDA	
5612	4E4F	0C	09	76			LODA,R0	TMPS	
5613	4E52	06	02				LODI,R2	2	
5614	4E54	3F	4D	47			BSTA,UN	ADDANY	
5615	4E57	3F	4E	20			BSTA,UN	SBIF	
5616	4E5A	3F	4C	DA			BSTA,UN	IBADD	
5617	4E5D	05	FF			ML1	LODI,R1	FF	
5618	4E5F	0D	29	55			LODA,R1	MBUF,+	
5619	4E62	18	09				BCTR,EC	ENDM	
5620	4E64	CD	E9	42			STRA,R1	*TMPAE,I	
5621	4E67	15	0F				COMI,R1	0F	
5622	4E69	5E	74				BCTR,EQ	ML1	
5623	4E6B	05	10				LODI,R1	10	
5624	4E6D	24	23			ENDM	LODI,R0	ETX	
5625	4E6F	CD	E9	42			STRA,R1	*TMPAE,I	
5626	4E72	CD	09	76			STRA,R1	TMPS	
5627	4E75	3F	4B	2F			BSTA,UN	FINDND	
5628	4E78	0C	09	76			LODA,R0	TMPS	
5629	4E7B	26	02				LODI,R2	2	
5630	4E7D	3F	4D	47			BSTA,UN	ADDANY	
5631	4E7F	EC	89	4C			COMA,R0	*IBST2	
5632	4E82	3F	4E	5E			BCTA,LT	TME	
5633	4E85	1F	4C	41			BCTA,UN	ENDI	
5634	4E88					*			
5635	4E88	F4	01			CKCTRL	COMI,R0	CR	
5636	4E8B	58	05				BCTR,EQ	CKLP12	
5637	4E8E	75	82				CPSL	82	
5638	4E91	77	42				PPSL	42	
5639	4E94	17					RETC,UN		
5640	4E97	24	FF			CKLP12	ECRI,R0	FF	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5611	4F54	27	12				FPSL	RS	
5612	4F56	C1					STRZ,R1		
5613	4F57	24	FF				EORI,R0	FF	
5614	4F58	F5	E2				TMI,R1	E2	
5615	4F5B	98	05				BCFP,EC	NOCTCK	
5616	4F5D	77	48				FPSL	82	
5617	4F5F	25	58				FPSL	58	
5618	4F61	17					CTC,UN		
5619	4F62	75	D2				CTC,UN	D2	
5620	4F64	17					CTC,UN		
5621	4F65								
5622	4F66	21							
5623	4F66	10	49	80			LODZ,R1	COMD	
5624	4F69	3F	40	DA			BSTA,UN	IBADD	TMPAE=IBST
5625	4F6C	A5	21				SUBI,R1	1	
5626	4F6E	3F	4A	EA			BSTA,UN	FWDY	
5627	4F71	3F	4B	92			BSTA,UN	MTCA	CURA=ADDRESS OF BYTE TO CHANGE
5628	4F74	3F	4A	13			BSTA,UN	ERASE2	
5629	4F77	3F	45	2F			BSTA,UN	FINDND	DUMA=END OF BUFFER
5630	4F7A	20	29	3E			LODA,R0	CURA	CHGA=ADDRESS OF BYTE TO CHANGE
5631	4F7E	CC	29	4E			STRA,R0	CHGA	
5632	4F80	20	29	3F			LODA,R0	CURA-1	
5633	4F83	CC	29	47			STRA,R0	CHGA+1	
5634	4F86	25	20				LODI,R1	20	
5635	4F88	3F	2E	EE			BSTA,UN	LFCR	
5636	4F8B	20	SA	70			LODA,R0	*CURIT	
5637	4F8E	F4	2F				TMI,R0	F	
5638	4F90	30	4A	13			BSTA,UN	ERASE2	
5639	4F93	2E	29	4E			LODA,R0	CHGA	
5640	4F96	3F	29	44			STRA,R0	BSA1	
5641	4F99	FF	29	47			LODA,R0	CHGA-1	
5642	4F9C	20	29	4E			LODA,R0	*CHGA	
5643	4F9F	1E	51	19			BSTA,LT	ENDCHG	IOF
5644	4FA2	F4	27				COMI,R0	CR	
5645	4FA4	12	12				BCTR,EC	ELFND	
5646	4FA6	3F	2E	23			BSTA,UN	WPT	
5647	4FA9	24	21				LODI,R0	1	BUMP CHGA
5648	4FAE	06	02				LODI,R2	9	
5649	4FAD	3F	41	47			BSTA,UN	ADDANT	
5650	4F90	FD	89	40			COMA,R0	*IBST2	
5651	4FB3	1A	67				BCTR,LT	DISPLP	
5652	4FEE	1F	51	19			BSTA,UN	ENDCHG	
5653	4FB8	CF	29	47			STRA,R0	CHGA-1	
5654	4FBF	70	29	44			LODA,R0	BSA1	
5655	4FBE	CC	29	4E			STRA,R0	CHGA	
5656	4FC1	3F	2E	55			BSTA,UN	LFCR	
5657	4FC4	3F	2E	D7			BSTA,UN	GETKB	
5658	4FC7	F4	2E				COMI,R0	BS	
5659	4FC9	98	25				BCFR,EC	NOCHBS	
5660	4FCE	3F	51	21			BSTA,UN	CHBACK	
5661	4FC1	1E	74				BCTR,UN	CHGL	
5662	4F10	F4	20				COMI,R0	HT	TAB
5663	4FD2	98	15				BCFR,EC	NOBT	
5664	4FD4	3F	41	79			BSTA,UN	TABSUE	
5665	4FD7	16	6B				BCTR,EC	CHGL	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5666	4F18	CF	25	44		TABL3	STRA,R0	BSA1	
5667	4F1C	27	20				LODI,R0		
5668	4FDE	3F	52	E1			BSTA,UN	STRTMS	
5669	4FE1	0F	29	44			LODA,R0	BSA1	
5670	4F1A	FE	73				BCTR,R0	TABL3	
5671	4FE6	1F	41	C4			BCTR,UN	CHGL	
5672	4FE9	F4	15			NOBT	COMI,R0	CTRLU	
5673	4FE8	98	2A				BCFR,EC	NOCCOPY	
5674	4FE7	3F	50	CA			BSTA,UN	LOADD	
5675	4FF0	18	52				BCTR,EC	CHGL	
5676	4FF2	3F	50	E1			BSTA,UN	STRTMS	
5677	4FF5	1B	4D				BCTR,UN	CHGL	
5678	4FF7	F4	19			NOCCOPY	COMI,R0	CTRLU	
5679	4FF9	98	26				BCFR,EC	NOCCWD	
5680	4FFB	3F	50	CA		CWD1	BSTA,UN	LOADD	
5681	4FFE	18	44				BCTR,EC	CHGL	
5682	5000	F7	20				COMI,R0		
5683	5002	98	16				BCFR,EC	CWD3	
5684	5004	3F	50	E1			BSTA,UN	STRTMS	
5685	5007	1B	72				BCTR,UN	CWD1	
5686	5009	0F	59	4C		CWD2	LODA,R0	*CHGA	
5687	500C	E7	20				COMI,R0		
5688	500E	1C	4F	C4			BCTR,EC	CHGL	
5689	5011	F7	20				COMI,R0		
5690	5013	1C	4F	C4			BCTR,EC	CHGL	
5691	5016	3F	50	CA			BSTA,UN	LOADD	
5692	5019	1C	4F	C4			BCTR,EC	CHGL	
5693	501C	3F	50	E1		CWD3	BSTA,UN	STRTMS	
5694	501F	1B	68				BCTR,UN	CWD2	
5695	5021	F4	2E			NOCCWD	COMI,R0	CTRLU	
5696	5023	98	35				BCFR,EC	NOERWD	
5697	5025	CF	29	49			STRA,R1	CHGST+1	
5698	5028	20	05	42			LODA,R0	TMPAE	
5699	502B	CC	09	48			STRA,R0	CHGST	
5700	502E	25	0A			FRWD1	LODI,R2	A	
5701	5030	04	01				LODI,R0	1	
5702	5032	3F	4C	F6			BSTA,UN	SUBANY	
5703	5035	20	89	48			LODA,R0	*CHGST	
5704	5038	F4	20				COMI,R0		
5705	503A	98	19				BCFR,EC	ERWIS	
5706	503C	3F	51	21			BSTA,UN	CHBACK	
5707	503F	1B	ED				BCTR,UN	ERWD1	
5708	5041	05	0A			ERWD2	LODI,R2	A	
5709	5043	F4	01				LODI,R0	1	
5710	5045	3F	4C	F6			BSTA,UN	SUBANY	
5711	5046	CC	09	48			LODA,R0	*CHGST	
5712	504B	F4	20				COMI,R0		
5713	504D	1C	4F	C4			BCTR,EC	CHGL	
5714	5050	F4	20				COMI,R0		
5715	5052	1C	4F	C4			BCTR,EC	CHGL	
5716	5055	3F	51	21		FRWD3	BSTA,UN	CHBACK	
5717	5058	1B	67				BCTR,UN	ERWD2	
5718	505A	F4	12			NOERWD	COMI,R0	CTRLU	COPY TO END OF LINE
5719	505C	98	0B				BCFR,EC	NOCCOL	
5720	505E	3F	50	CA		COPYLP	BSTA,UN	LOADD	

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5721	5061	10	4F	C4			RCTA, EQ	CHGL	
5722	5064	3F	50	E1			BSTA, UN	STRTMS	
5723	5067	1F	7E				RCTR, UN	COPTLP	
5724	5069	54	0F			NOCEOL	COMI, R0	CTRLO	
5725	506B	56	06				RCTR, EQ	NODISC	
5726	506D	3F	50	CA			BSTA, UN	LOADD	
5727	5070	1F	4F	C4			RCTA, UN	CHGL	
5728	5073	03				NODISC	STRZ, R3		
5729	5074	14	23				COMI, R0	ETX	
5730	5076	1E	0E				RCTA, EQ	BYPASS	
5731	5078	3F	4F	4F			BSTA, UN	CKCTRL	
5732	5079	1F	4F	C4			RCTA, LT	CHGL	
5733	507E	3F	50	EE		BYPASS	BSTA, UN	STRZ	
5734	5081	2E					LODI, R2		
5735	5082	04	0D				COMI, R2	CR	
5736	5084	1F	0F				RCTR, EQ	ENDCHL	
5737	5086	34	03				COMI, R0	ETX	
5738	5088	3C	4F	C4			RCTA, EQ	CHGL	
5739	508B	04	01				LODI, R0	1	
5740	508E	06	22				LODI, R2	2	
5741	5090	3F	4C	FE			BSTA, UN	SUBANY	GET RID OF FTX BEING IN PICTURE
5742	5092	1F	50	A0			RCTA, UN	ENDCH	
5743	5095	3F	50	CA		ENDCHL	BSTA, UN	ICADL	
5744	5096	56	0B				RCTR, EQ	ENDCHL	
5745	509A	3F	50	D2			BSTA, UN	AISC	
5746	509D	1F	4F	BP			RCTA, UN	DISPI	
5747	50A0					*			
5748	50A2	2C	09	40		ENDCH	LODA, R0	DUMA	
5749	50A3	0C	26	44			STRA, R0	BSA1	
5750	50A5	2C	20	41			LODA, R0	DUMA+1	
5751	50A8	0C	09	45			STRA, R0	BSA1+1	
5752	50AC	2C	09	46			LODA, R0	CHGA	
5753	50AF	0C	09	40			STRA, R0	DUMA	
5754	50B2	0C	09	47			LODA, R0	CHGA+1	
5755	50B5	0C	09	41			STRA, R0	DUMA+1	
5756	50B8	3F	41	20			BSTA, UN	CHIF	
5757	50B9	2C	26	44			LODA, R0	BSA1	
5758	50BB	0C	09	40			STRA, R0	DUMA	
5759	50BD	0C	09	45			LODA, R0	BSA1+1	
5760	50C0	2C	26	41			STRA, R0	DUMA+1	
5761	50C7	1F	4C	41			RCTA, UN	ENDI	
5762	50CA					*			
5763	50CA	2F	50	46		LOADD	LODA, R3	*CHGA	
5764	50CD	0F	2D				COMI, R3	CR	
5765	50CF	14					RETC, EQ		
5766	50D0	24	21			AISC	LODI, R0	1	DECR DUMA
5767	50D2	06	22				LODI, R2	2	
5768	50D4	3F	4C	FE			BSTA, UN	SUBANY	
5769	50D7	04	01				LODI, R0	1	BUMP CHGA
5770	50D9	2E	2E				LODI, R2	8	
5771	50DB	3F	4D	47			BSTA, UN	ADDANY	
5772	50DE	04	50				LODI, R0	80	
5773	50E0	17					RETC, UN		
5774	50E1					*			
5775	50E1	23				STRTMS	LODZ, R3		

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
5776	50E2	3F	2E	23			BSTA, UN	WRT	
5777	50E5	23				STRZ	LODZ, R3		
5778	50E6	0C	19	42			STRA, R1	*TMPAE, I	
5779	50E9	04	01				LODI, R0	1	BUMP DUMA
5780	50EB	06	02				LODI, R2	2	
5781	50ED	3F	4C	47			BSTA, UN	ADDANY	
5782	50F0	1C	59	40			COMA, R0	*IBST2	
5783	50F3	1A	0B				RCTR, LT	AIR1	
5784	50F5	3F	4C	B4			BSTA, UN	SIDA	
5785	50F8	04	FE				LODI, R0	FE	
5786	50FA	0C	09	41			STRA, R0	DUMA+1	
5787	50FD	1F	51	19			RCTA, UN	ENDCHG	
5788	5100	0C	0D			AIR1	RIPR, R1	RETCN	
5789	5102	04	01				LODI, R0	1	
5790	5104	0C	09	42			ADDA, R0	TMPAE	
5791	5107	1C	59	50			COMA, R0	*ENDRM2	
5792	510A	0A	04				RCTR, LT	ABRUPT	
5793	510C	0C	09	42			STRA, R0	TMPAE	
5794	510F	17				RETCN	RETC, UN		
5795	5110	04	01			ABRUPT	LODI, R0	1	
5796	5112	06	02				LODI, R2	2	
5797	5114	3F	4C	FE			BSTA, UN	SUBANY	
5798	5117	05	FF				LODI, R1	FF	
5799	5119	04	03			ENDCHG	LODI, R0	ETI	
5800	511B	0C	19	42			STRA, R1	*TMPAE, I	
5801	511E	1F	50	A0			RCTA, UN	ENDCH	
5802	5121					*			
5803	5121	3F	2F	61		CHBACK	BSTA, UN	BACK1	
5804	5124	16					RETC, LT		
5805	5125	04	01				LODI, R0	1	
5806	5127	06	02				LODI, R2	2	
5807	5128	3F	4C	FE			BSTA, UN	SUBANY	
5808	512C	17					RETC, UN		
5809	512D					*			
5810	512D	02	00	00		LOADLS	RES	3	
5811	5130					*			
5812	5130	3F	51	1C		LOALL	BSTA, UN	AOK	
5813	5133	3F	51	01			BSTA, UN	LOADA	
5814	5136	0C	51	3C			RCTR, EQ	SCERR	
5815	5138	1F	49	29			RCTA, UN	FRFN	
5816	513C					*			
5817	513C	27	49			SCERR	LODI, R3	MSG12-MSG02	
5818	513E	1F	2F	4C			RCTA, UN	ERROR2	
5819	5141					*			
5820	5141	3F	51	FC		TAPEO	BSTA, UN	AOK	
5821	5144	0C	59	4A			LODA, R0	*BSTRZ2	
5822	5147	0C	26	40			STRA, R0	DUMA	
5823	514A	20				TAPEOT	TOPZ, R0		
5824	514B	0B	07				STRR, R0	*SUMX	
5825	514E	0C	26	41			STRA, R0	DUM2	
5826	5150	27	3B				LODI, R3	'	
5827	5152	3F	02	4F			BSTA, UN	STRG	
5828	5155	05	FF				LODI, R1	FF	
5829	5157	0E	29	56		NAMEO	LODA, R1	NAME2, *	
5830	515A	03					STRZ, R3		

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FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5231	51F9	7F	02	4F			BSTA,UN	SERC	
5232	51FE	EE	27				COMI,P1	07	
5233	5100	98	75				BCFR,EQ	NAMO	
5234	5102	0B	A0				LODR,R3	*SUMK	
5235	5104	3F	22	4F			BSTA,UN	SERO	
5236	5107	05	00				LODI,R1	00	
5237	5109	06	56				STRR,R1	*SUMK	
5238	510B	2D	E9	42		BYTE0	LOLA,R1	*DUMA,I	
5239	510E	03					STRZ,R3		
5240	5110	1A	15				ECTR,LT	ENDO	
5241	5171	3F	02	4F			BSTA,UN	SERO	
5242	5174	08	75				BIRR,R1	BYTE0	
5243	5176	2E	8C				LODR,R3	*SUMK	
5244	5178	3F	02	4F			BSTA,UN	SERC	
5245	517B	3F	4F	1A			BSTA,UN	AIDA	
5246	517E	0E	45	89			BCFA,LT	FBDN	
5247	5181	1F	51	4A			PCTA,UN	TAPECT	
5248	5184								
5249	5184	17	F9				*SUMK	ACON	17F9
5250	5186								
5251	5188	3F	02	4F			ENDO	BSTA,UN	SERC
5252	518B	0E	7C				ENDT	LODR,R3	*SUMK
5253	518B	3F	02	4F			BSTA,UN	SERO	
5254	518E	1F	40	89			BCTA,UV	FBDN	
5255	51C1								
5256	51C1	3F	43	A5		LOADA	BSTA,UN	MTDA	
5257	51C4	20				WAITE	EORZ,R0		
5258	51C6	0C	91	84			STRA,R0	*SUMK	
5259	51C8	3F	02	E9			BSTA,UN	SERP	
5260	51CB	E7	3B				COMI,P3	'	
5261	51CD	98	75				BCFR,EQ	WAITE	
5262	51CF	05	FF				LODI,R1	FF	
5263	51A1	3F	22	E9		NAML	BSTA,UN	SERP	
5264	51A4	2D	26	6C			LODA,R1	NAME2,+	
5265	51A7	10	03				ECTR,EC	OVE S1	
5266	51A9	23					COMZ,R3		
5267	51AA	88	66				BCFR,EQ	WAITE	
5268	51AC	EE	07			OVERSI	COMI,R1	07	
5269	51AE	98	71				BCFR,EQ	NAML	
5270	51B0	3F	02	E9			BSTA,UN	SERP	
5271	51B3	2C	91	84			LODA,R0	*SUMK	
5272	51B5	16					RETC,LT		
5273	51B7	15					RETC,GT		
5274	51B8	07	09	41			LODA,R1	DUM2	
5275	51BB	0C	29	41			STRA,R0	DUM2	
5276	51BE	0C	29	76			STRA,R0	TMPS	
5277	51C1	3F	02	E9		ASCII	BSTA,UN	SERP	
5278	51C4	03					LODR,R3		
5279	51CE	07	E9	40			STRA,R1	*DUMA,I	
5280	51D2	1A	2B				ECTR,LT	ENDING	
5281	51CA	D9	17				BIRR,R1	LL1	
5282	51CC	3F	4B	1A			BSTA,UN	AIDA	
5283	51CF	1A	0D				ECTP,LT	LL1	
5284	51D1	3F	4C	E4			BSTA,UN	SIDA	
5285	51D4	05	FF				LODI,R1	FF	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5286	51D6	04	BC				LODI,R0	PRC	
5287	51D9	CD	F9	40			STRA,R1	*DUMA,I	
5288	51DE	1F	4D	5F			BCTA,UN	TME	
5289	51DE	0F	09	76		LL1	LODA,R2	TMPS	
5290	51E1	86	01				ADDI,R2	01	
5291	51E3	03	09	76			STRA,R2	TMPS	
5292	51E6	96	50				BCFR,EQ	ASCII	
5293	51E8								
5294	51E8	3F	02	E9		ENDTP	BSTA,UN	SERP	
5295	51E8	0C	09	41			STRA,R1	DUM2	
5296	51EE	0F	91	84			LODA,R3	*SUMK	
5297	51F1	1C	51	94			BCTA,EQ	WAITE	
5298	51F4	17					RETC,UN		
5299	51F5								
5300	51F5	3F	02	E9		ENDING	BSTA,UN	SERP	
5301	51F8	2C	91	84			LODA,R0	*SUMK	
5302	51FB	17					RETC,UN		
5303	51FC								
5304	51FC	07	63			ACK	LODI,R3	MSG1F-MSG02	
5305	51FE	3F	2F	DC			BSTA,UN	PRING	
5306	5201	3F	2E	05			BSTA,UN	TRAS1	
5307	5204	17					RETC,UN		
5308	5205								
5309	5205								
5310	5205					MSG02	ECU	\$	
5311	5205	42	4C	4F	43	MSGC	ALIT	'CLOCK	LEFT: '
5312	5209	4B	53	20	20				
5313	520D	4C	45	46	54				
5314	5211	3A	20	20					
5315	5214	FF					DATA	FF	
5316	5215	54	4F	4F	20	MSGD	ALIT	'TOO MUCH'	
5317	5219	4D	55	43	40				
5318	521D	7F					DATA	FF	
5319	521E	4E	4F	54	20	MSGE	ALIT	'NOT FOUND'	
5320	5222	46	4F	55	4E				
5321	5226	44							
5322	5227	FF					DATA	FF	
5323	5228	4D	4F	44	49	MSGF	ALIT	'MODIFY STRING '	=
5324	522C	46	50	20	53				
5325	5230	54	52	49	4E				
5326	5234	47	20	27					
5327	5237	00	00	00	20	*NAME	RIS	10	
5328	523B	00	00	00	00				
5329	523F	00	00	00	00				
5330	5243	00	00	00	00				
5331	5247	27	20	54	4F		ALIT	' TO '	
5332	524B	20	27						
5333	524F	FF					DATA	FF	
5334	524F	53	55	4D	43	MSG10	ALIT	'SUMCHECK ERROR'	
5335	5252	48	45	43	4B				
5336	5256	20	45	52	52				
5337	525A	4F	57						
5338	525C	FF					DATA	FF	
5339	525D	43	4F	4D	4D	MSG1D	ALIT	'COMMAND: '	
5340	5261	41	4E	44	3A				

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5941	5265	20	20						
5942	5267	FF					DATA	FF	
5943	5268	22	4F	4B		MSG1F	ALIT	'OK'	
5944	526F	FF					DATA	FF	
5945	526C					*			
5946	526C					ZFF	EQ	\$	
5947	526C					*			
5948	526C	3F	52	FB		FPSQR	BSTA,UN	POPC3	
5949	5265	3F	52	14			BSTA,UN	PUSHC3	
5950	5272	20	16	29			LOIA,R0	CSSIGN	
5951	5275	1E	45	74			BCTA,L1	OVFEF	
5952	5276	3F	52	15			BSTA,UN	POPC4	
5953	5275	20	16	32			LOIA,R0	C4EX	
5954	5275	52					RFB,R0		
5955	527F	44	77				ANDI,R0	77	
5956	5281	77	12	D5			STRA,R0	FPSQUT	
5957	5284	22					IOBZ,R0		
5958	5285	00	16	3F			STRA,R0	ZTEMP1	
5959	5288	3F	52	F2			BSTA,UN	FUSHC4	
5960	5288	24	57				LODI,R0	QTR	
5961	528D	25	5D				LODI,R1	QTR	
5962	528F	3F	31	38			BSTA,UN	PUSHFP	
5963	5282	3F	3E	F1			BSTA,UN	FFMULT	
5964	5285	3F	32	F9			BSTA,UN	POPC4	
5965	5286	02	3F				LODR,R0	FPSQUT	
5966	528A	00	16	30			STRA,R0	C4EX	
5967	5287	3F	52	F2			BSTA,UN	PUSHC4	
5968	52A0	3F	45	E7			BSTA,UN	POPC2	
5969	52A2	3F	45	1F		SQU1	BSTA,UN	FUSHC2	
5970	52A6	3F	45	D9			BSTA,UN	POPC1	
5971	52A3	3F	52	14			BSTA,UN	PUSHC3	
5972	52AC	3F	45	10			BSTA,UN	PUSHC1	
5973	52A5	3F	38	E2			BSTA,UN	FFDIV	
5974	52B2	3F	45	E0			BSTA,UN	PUSHC1	
5975	52B5	3F	3A	70			BSTA,UN	FFADD	
5976	52B8	3F	52	D6			BSTA,UN	PUSHH	
5977	52B3	3F	38	F1			BSTA,UN	FPMULT	
5978	52B5	24	01				LODI,R0	01	
5979	52C5	00	16	3F			STRA,R0	ZTEMP1	
5980	52C3	74	FF				COMI,R0	FF	
5981	52C5	15					RITC,GT		
5982	52C6	00	16	3F			STRA,R0	ZTEMP1	
5983	52C9	3F	45	E7			BSTA,UN	POPC2	
5984	52C0	3F	30	02			BSTA,UN	COMMUM	
5985	52C3	23					LOI2,R3		
5986	5212	65	*1				PCFR,EO	SQU1	
5987	52D2	1F	45	E1		SQUEND	BCTA,UN	PUSHC2	
5988	52D5					*			
5989	5215	00				FPSQUT	RES	1	
5990	52D6					*			
5991	52D6					*			
5992	52D6	24	57			PUSHH	LODI,R0	HALF	
5993	52D8	25	4D				LODI,R1	HALF	
5994	52DA	1F	31	38			BCTA,UN	PUSHFP	
5995	52DD					*			

FILE BASIC12 AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
5996	52DD					*			
5997	52DD	04	57			PS2	LODI,R0	TWO	
5998	52DF	05	F5				LODI,R1	TWO	
5999	52F1	1F	31	38			BCTA,UN	PUSHFP	
6000	52E4					*			
6001	52E4					*			
6002	52E4	04	56			PUSHC3	LODI,R0	C3TEMP	
6003	52E6	05	27				LODI,R1	C3TEMP	
6004	52E8	1F	31	38			BCTA,UN	PUSHFP	
6005	52EB					*			
6006	52EB	04	55			POPC3	LODI,R0	C3TEMP	
6007	52ED	05	27				LODI,R1	C3TEMP	
6008	52EF	1F	31	55			BCTA,UN	POPPF	
6009	52F2					*			
6010	52F2	04	56			PUSHC4	LODI,R0	C4TEMP	
6011	52F4	05	2F				LODI,R1	C4TEMP	
6012	52F6	1F	31	38			BCTA,UN	PUSHFP	
6013	52F9					*			
6014	52F9	04	56			POPC4	LODI,R0	C4TEMP	
6015	52FB	05	2F				LODI,R1	C4TEMP	
6016	52FD	1F	31	55			BCTA,UN	POPPF	
6017	5300					*			
6018	5300	04	56			PUSHC5	LODI,R0	C5TEMP	
6019	5302	05	37				LODI,R1	C5TEMP	
6020	5304	1F	31	38			BCTA,UN	PUSHFP	
6021	5307					*			
6022	5307	04	56			POPC5	LODI,R0	C5TEMP	
6023	5309	05	37				LODI,R1	C5TEMP	
6024	530B	1F	31	55			BCTA,UN	POPPF	
6025	530E					*			
6026	530E					*			
6027	530E	04	57			PUSHPI	LODI,R0	PIE	
6028	5310	05	DD				LODI,R1	PIE	
6029	5312	1F	31	38			BCTA,UN	PUSHFP	
6030	5315					*			
6031	5315	04	57			PUSHE	LODI,R0	TEE	
6032	5317	05	D5				LODI,R1	TEE	
6033	5319	1F	31	38			BCTA,UN	PUSHFP	
6034	531C					*			
6035	531C	04	57			PUSHIN	LODI,R0	IN(10)	
6036	531E	05	C5				LODI,R1	IN(10)	
6037	5320	1F	31	38			BCTA,UN	PUSHFP	
6038	5323					*			
6039	5323					*			
6040	5323					*			
6041	5323	24	57			PUSHLC	LODI,R0	LOGC	
6042	5325	05	CD				LODI,R1	LOGC	
6043	5327	1F	31	38			BCTA,UN	PUSHFP	
6044	532A					*			
6045	532A					*			
6046	532A					*			
6047	532A	3F	45	D9		CGTERM	BSTA,UN	POPC1	
6048	532D	3F	45	10			BSTA,UN	PUSHC1	
6049	5330	3F	32	02			BSTA,UN	COMMUM	
6050	5333	03					LODZ,R3		

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6251	5334	98	03				BCFR, EQ	GTERM	
6252	5336	04	01				LODI, R0	1	
6253	5338	17					RETC, UN		
6254	5336	3F	45	E7		GTERM	BSTA, UN	POPC2	
6255	5338	3F	45	EE			BSTA, UN	PUSHC2	
6256	533F	3F	52	F4			BSTA, UN	PUSHC3	ACCUMULATED X
6257	5342	3F	52	F2			BSTA, UN	PUSHC4	INITIAL X
6258	5345	3F	7E	F1			BSTA, UN	FPMULT	
6259	5346	3F	52	E8			BSTA, UN	POPC3	
6260	5349	3F	52	F4			BSTA, UN	PUSHC3	
6261	534E	02	16	44			LODA, R1	TERMNM	
6262	5351	0D	16	41			ADDA, R1	DUB	
6263	5354	01	16	44			STRA, R1	TERMNM	
6264	5357	3F	78				COMI, R1	78	END OF TERMS
6265	5359	19	14				BCTR, CT	GTERM2	
6266	535B	0E	14	42			ADIA, R1	OFFSET	
6267	535D	05	05				ADDI, R1	KTAB	
6268	535E	77	08				FPSL	WC	
6269	5360	20					EORZ, R0		
6270	5363	64	56				ADDI, R0	KTAB	
6271	5365	75	06				CPSL	WC	
6272	5367	3F	31	38			BSTA, UN	PUSHPF	
6273	536A	3F	3E	F1			BSTA, UN	FPMULT	
6274	536D	20					EORZ, R0		
6275	536E	17					RETC, UN		
6276	536F	3F	45	D9		GTERM2	BSTA, UN	POPC1	
6277	5372	24	01				LODI, R0	1	
6278	5374	17					RETC, UN		
6279	5375					*			
6280	5376					*			
6281	5378					*			
6282	5375	27	52	F0		GTERM	BSTA, UN	POPC4	
6283	5378	3F	52	F2			BSTA, UN	PUSHC4	
6284	537B	44	00				LODI, R0	00	
6285	537D	0C	16	41			STRA, R0	DUB	
6286	5380	24	F0				LODI, R0	F0	
6287	5382	0C	16	44			STRA, R0	TERMNM	
6288	5385	22					EOPZ, R0		
6289	5386	0C	16	42			STRA, R0	OFFSET	
6290	5389	0C	16	43			STRA, R0	SSIGN	
6291	538C	3F	45	AC			BSTA, UN	PUSH1	
6292	538F	1F	52	EE			BSTA, UN	POPC3	
6293	5392					*			
6294	5392					*			
6295	5393					*			
6296	5392	3F	52	F2		DCUBLE	BSTA, UN	PUSHC4	
6297	5395	3F	52	F2			BSTA, UN	PUSHC4	
6298	5396	3F	39	F1			BSTA, UN	FPMULT	
6299	5398	3F	02	F9			BSTA, UN	POPC4	
6300	539B	04	10				LODI, R0	10	
6301	53A0	0C	16	41			STRA, R0	DUB	
6302	53A3	17					RETC, UN		
6303	53A4					*			
6304	53A4					*			
6305	53A4					*			

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6106	53A4	3F	45	D9		CSIGN	BSTA, UN	POPC1	
6107	53A7	3F	45	E0			BSTA, UN	PUSHC1	
6108	53AA	3F	45	E0			BSTA, UN	PUSHC1	
6109	53AD	3F	53	DE			BSTA, UN	PUSHP1	
6110	53B0	3F	3E	12			BSTA, UN	FPSUB	
6111	53B3	3F	31	6F			BSTA, UN	FPSUB	
6112	53B6	3F	52	F0			BSTA, UN	POPC4	
6113	53B9	0C	16	30			LODA, R0	C4E1	
6114	53BC	16	21				BCTR, EC	CSIGN2	
6115	53BE	14	2A				COMI, R0	A	
6116	53C0	19	2A				BCTR, CT	CSIGN2	
6117	53C2	02					STRZ, R2		
6118	53C3	A4	01				SUBI, R0	1	
6119	53C5	50					RRR, R0		
6120	53C6	44	07				ANDI, R0	7	
6121	53C8	0C	06	32			LODA, R0	C4MAIN, I	
6122	53CF	F6	01				TMI, R2	1	
6123	53D0	98	04				BCFR, EC	CSIGN3	
6124	53D0	50					RRR, R0		
6125	53D2	50					RRR, R0		
6126	53D1	50					RRR, R0		
6127	53D2	50					RRR, R0		
6128	53D3	14	01			CSIGN3	TMI, R0	1	
6129	53D5	98	15				BCFR, EC	CSIGN2	
6130	53D7	3F	52	F2			BSTA, UN	PUSHC4	
6131	53DA	3F	44	AC			BSTA, UN	PUSH1	
6132	53DD	0C	16	31			LODA, R0	C4SIGN	
6133	53E0	18	05				BCTR, EC	CSIGN5	
6134	53E2	3F	3A	54			BSTA, UN	FPSUB	
6135	53E5	1B	08				BCTR, UN	CSIGN4	
6136	53E7	3F	3A	70		CSIGN5	BSTA, UN	FPSUB	
6137	53EA	1B	03				BCTR, UN	CSIGN4	
6138	53EC	3F	52	F2		CSIGN2	BSTA, UN	PUSHC4	
6139	53EF	3F	53	0E		CSIGN4	BSTA, UN	PUSHP1	
6140	53F2	3F	3E	F1			BSTA, UN	FPMULT	
6141	53F5	1F	3A	64			BSTA, UN	FPSUB	
6142	53F8					*			
6143	53F8					*			
6144	53F8	3F	53	A4		FPSIN	BSTA, UN	GSIGN	
6145	53FB	3F	53	75			BSTA, UN	GTERM	
6146	53FE	3F	52	F9			BSTA, UN	POPC4	
6147	5401	3F	52	F2			BSTA, UN	PUSHC4	
6148	5404	3F	52	EE			BSTA, UN	POPC3	
6149	5407	3F	52	F2			BSTA, UN	PUSHC4	
6150	540A	20					EORZ, R0		
6151	540E	0C	16	44			STRA, R0	TERMNM	
6152	540E	3F	53	92		SERI	BSTA, UN	DOUBLE	
6153	5411	3F	67	39			BSTA, UN	GTERM	
6154	5414	3F	3A	64			BSTA, UN	FPSUB	
6155	5417	3F	53	2A		FPSIN1	BSTA, UN	GTERM	
6156	541A	1F					RETC, CT		
6157	541B	3F	3A	70			BSTA, UN	FPSUB	
6158	541E	3F	53	2A			BSTA, UN	GTERM	
6159	5421	15					RETC, CT		
6160	5422	3F	3A	64			BSTA, UN	FPSUB	

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FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
6161	5405	1F	70				BCTR,UN	FPSIN1	
6162	5406					*			
6163	5407					*			
6164	5408					*			
6165	5409	3F	53	75		FPCOS	BSTA,UN	CTERM	
6166	540A	3F	53	A4			BSTA,UN	CSIGN	
6167	540B	3F	52	F0			BSTA,UN	POPC4	
6168	540C	3F	45	AC			BSTA,UN	PUSH1	
6169	540D	1F	60				BCTR,UN	SIRI	
6170	540E					*			
6171	540F					*			
6172	5410					*			
6173	5411					*			
6174	5412					*			
6175	5413	3F	53	75		FPEXP2	BSTA,UN	CTERM	
6176	5414	3F	53	27			BSTA,UN	POPC5	
6177	5415	3F	53	00			BSTA,UN	PUSHC5	
6178	5416	3F	52	F2			BSTA,UN	PUSHC4	
6179	5417	3F	3D	5A			BSTA,UN	FPABS	
6180	5418	3F	2B	A1			BSTA,UN	ENS2	
6181	5419	22					LODZ,R0		
6182	541A	3C	45	74			BCTA,EC	CYFER	
6183	541B	3C	16	40			STRA,R1	ZTEMP2	
6184	541C	3F	3F	26			BCTA,UN	FPRC	
6185	541D	3F	52	F0			BSTA,UN	POPC4	
6186	541E	3F	45	AC			BSTA,UN	PUSH1	
6187	541F	3C	16	40		FPEX1	LODA,R1	ZTEMP2	
6188	5420	3C	17				BCTA,EC	FPEX2	
6189	5421	3C	21				SUBI,R1	01	
6190	5422	3C	16	40			STRA,R1	ZTEMP2	
6191	5423	3F	53	15			BSTA,UN	PUSHE	
6192	5424	3C	16	39			LODA,R0	CSIGN	
6193	5425	3C	35				BCTA,EC	FPEX5	
6194	5426	3F	33	F0			BSTA,UN	FPEX4	
6195	5427	1F	59				BCTR,UN	FPEX1	
6196	5428	3F	3F	F1		FPEX5	BSTA,UN	FPMULT	
6197	5429	1F	64				BCTA,UN	FPEX1	
6198	542A	3F	45	AC		FPEX2	BSTA,UN	PUSH1	
6199	542B	3F	33	39			BSTA,UN	CTERM	
6200	542C	3F	3A	70			BSTA,UN	FPAED	
6201	542D	3F	53	2A		FPEX3	BSTA,UN	CGTEPM	
6202	542E	3F	3A	05			BCTA,EC	FPEX4	
6203	542F	3F	3A	70			BSTA,UN	FPAED	
6204	5430	1F	76				BCTA,UN	FPEX3	
6205	5431	1F	3B	F1		FPEX4	BCTA,UN	FPMULT	
6206	5432					*			
6207	5433					*			
6208	5434					*			
6209	5435	3F	45	D9		FPEX5	BSTA,UN	POPC1	
6210	5436	3F	45	23			BSTA,UN	PUSHC1	
6211	5437	3F	45	10			BSTA,UN	PUSHC1	
6212	5438	3F	55	60			BSTA,UN	FPLW	
6213	5439	1F	3B	F1			BCTA,UN	FPMULT	
6214	543A					*			
6215	543B					*			

FILE 'BASIC10' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	R1	R2	R3	R4	LABEL	OPCODE	OPERAND	COMMENTS
6216	543C					*			
6217	543D	3F	53	07		FPTAN	BSTA,UN	POPC5	
6218	543E	3F	53	04			BSTA,UN	PUSHC5	
6219	543F	3F	53	F8			BSTA,UN	FPSIN	
6220	5440	3F	53	00			BSTA,UN	PUSHC5	
6221	5441	3F	54	27			BSTA,UN	FPCOS	
6222	5442	1F	3B	E2			BCTA,UN	FPEX4	
6223	5443					*			
6224	5444					*			
6225	5445	20				FPTSN	RES	1	
6226	5446					*			
6227	5447	3F	52	19		FPTAN	BSTA,UN	POPC4	
6228	5448	3F	52	F2			BSTA,UN	PUSHC4	
6229	5449	3C	16	31			LODA,R0	CSIGN	
6230	544A	3C	74				STRA,R2	FPTSN	
6231	544B	3F	3D	5A			BSTA,UN	FPABS	
6232	544C	3F	45	D9			BSTA,UN	POPC1	
6233	544D	3F	45	AC			BSTA,UN	FUSE1	
6234	544E	3F	45	E7			BSTA,UN	POPC2	
6235	544F	3F	30	2F			BSTA,UN	COMMON	
6236	5450	E7	01				COMI,R3	GT	
6237	5451	3C	54	EB			BCTA,EC	ATN2	
6238	5452	24	57				LODI,R0	HALFPI	
6239	5453	3C	55	E5			LODI,R1	HALFPI	
6240	5454	3F	31	38			BSTA,UN	PUSHFP	
6241	5455	3F	45	AC			BSTA,UN	PUSH1	
6242	5456	3F	45	E0			BSTA,UN	PUSHC1	
6243	5457	3F	3B	E2			BSTA,UN	FPEX4	
6244	5458	22					EORZ,R0		
6245	5459	3F	15				BSTR,UN	APPROX	
6246	545A	3F	3A	64			BSTA,UN	FPSUB	
6247	545B	3F	52	F9		FPTEND	BSTA,UN	POPC4	
6248	545C	3C	45				LODA,R0	FPTSN	
6249	545D	3C	16	31			STRA,R0	CSIGN	
6250	545E	1F	52	F2			BCTA,UN	PUSHC4	
6251	545F					*			
6252	5460	3F	45	E0		ATN2	BSTA,UN	PUSHC1	
6253	5461	20					EORZ,R0		
6254	5462	3B	04				BSTR,UN	APPROX	
6255	5463	1B	61				BCTR,UN	FPTEND	
6256	5464					*			
6257	5465	20				AOFFS	RES	1	
6258	5466	20				AFTM	RES	1	
6259	5467					*			
6260	5468	3C	7C			APPROX	STPR,R0	AOFFS	
6261	5469	3C	00				LODI,R1	0	
6262	546A	3C	79				STRA,R1	APTEM	
6263	546B	3F	52	EB			BSTA,UN	POPC3	
6264	546C	3F	52	E4			BSTA,UN	PUSHC3	
6265	546D	3F	52	F9			BSTA,UN	POPC4	
6266	546E	3F	52	F2			BSTA,UN	PUSHC4	
6267	546F	3C	6A				LODI,R1	AOFFS	
6268	5470	3C	45				ADDI,R1	ATAB	
6269	5471	3C	77	05			FPSL	WC	
6270	5472	20					EORZ,R0		

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6271	5F2E	84	56				ADDI,R0	ATAP	
6272	5E18	75	28				CPSL	WC	
6273	5E12	3F	31	38			BSTA,UN	PUSHFF	
6274	5F19	3F	32	F1			BSTA,UN	PFMULT	
6275	5E19	3F	45	19		APPE	BSTA,UN	POPC1	
6276	5E20	85	42				LODI,R1	Q8	
*277	5F10	85	55				ADTR,R1	APTEM	
6278	5F15	11	42				COMI,R1	46	
6279	5E21	11	42	E0			BCTA,EC	PUSHC1	
6280	5E24	C6	45				STRR,R1	APTEM	
6281	5E25	86	48				ADTR,R1	ACFF5	
6282	5E26	85	45				ADDI,R1	ATAB	
6283	5E2A	77	28				FFSL	WC	
6284	5E20	27					IORZ,R0		
6285	5E2D	84	56				ADDI,E0	ATAP	
6286	5E2F	75	28				CPSL	WC	
6287	5E31	3F	31	30			BSTA,UN	PUSHFF	
6288	5E34	3F	31	72			BSTA,UN	PUSPC4	
6289	5E37	3F	32	F4			BSTA,UN	PUSHC3	
6290	5E3A	3F	33	F1			BSTA,UN	PFMULT	
6291	5E3D	40	14	F3			LOIA,R0	ACFF5	
6292	5E40	F4	42				COMI,R2	BTAB-ATAP	
6293	5E42	16	25				BCTA,EC	APP1	
6294	5E44	3F	32	F4			BSTA,UN	PUSHC3	
6295	5E47	3F	39	F1			BSTA,UN	PFMULT	
6296	5E4A	3F	32	F9		APP1	BSTA,UN	POPC4	
6297	5E4D	3F	32	F2			BSTA,UN	PUSHC4	
6298	5E50	3F	38	F1			BSTA,UN	PFM LT	
6299	5E53	3F	45	10			BSTA,UN	PUSHC1	
6300	5E56	3F	3A	72			BSTA,UN	FPAED	
6301	5E59	3F	45	17			BSTA,UN	POPC2	
6302	5E60	3F	32	C2			BSTA,UN	COMMON	
6303	5E6F	22					LOI7,R3		
6304	5E68	10	45	E3			BCTA,EC	PUSHC2	
6305	5E63	2F	45	E5			BSTA,UN	PUSHC2	
6306	5E66	2F	45	D9			BSTA,UN	POPC1	
6307	5E69	11	55	13			BCTA,UN	APPE	
*308	5E6C					*			
*309	5E6D					*			
*310	5E6E					*			
6311	5E70	3F	57	75		FF1N	BSTA,UN	CTERM	
6312	5E6F	3F	52	F9			BSTA,UN	POPC4	
6313	5E72	20	45	31			LOIA,R0	C4SIGN	
6314	5E75	11	45	74			BCTA,LT	OVFER	
6315	5E78	20	16	72			LOIA,R2	C4MAIN	
6316	5E7B	10	45	74			BCTA,EC	OVFER	
6317	5E7E	74	30				LODI,R2	80	
6318	5E80	20	16	42			STRA,R0	OFFSET	
6319	5E83	3F	45	5A			BSTA,UN	PUSH2	
6320	5E86	3F	53	27			BSTA,UN	POPC5	
6321	5E89	20	16	30			LOIA,R2	C4EX	
6322	5E8C	20	16	3A			STRA,R0	C5MAIN	
6323	5E8F	20	16	2F			LOIA,R0	C4TEMP	
6324	5E92	20	16	30			STRA,R2	C5SIGN	
6325	5E95	20					FORZ,R0		

IN#	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
4326	5596	00	16	2F			STRA,R0	C4TEMP	
4327	5598	00	16	37			STRA,R0	C5TEMP	
4328	559C	24	21				LODI,R0	1	
4329	559E	00	16	30			STRA,R0	C4EX	
4330	55A1	24	22				LODI,R0	02	
4331	55A3	00	16	38			STRA,R0	CFEX	
4332	55A6	24	16				LODI,R0	C5TEMP	
4333	55A8	05	37				LODI,R1	C5TEMP	
4334	55AA	06	28				LODI,R2	LING	
4335	55AC	77	28				PPSL	WC	
4336	55AE	3F	33	60			BSTA,UN	NORM	
4337	55B1	84	02				LODI,R0	02	
4338	55B3	83					LPSL		
4339	55B4	3F	53	1C			BSTA,UN	PUSHIN	
4340	55B7	3F	53	00			BSTA,UN	PUSHC5	
4341	55B9	4F	4C				BSTA,UN	PUSH1	
4342	55BD	3F	34	64			BSTA,UN	FPSUB	
4343	55C0	3F	3B	F1			BSTA,UN	FPMULT	
4344	55C3	3F	45	FA			BSTA,UN	PUSH0	
4345	55C6	3F	52	F2			BSTA,UN	PUSHC4	
4346	55C9	3F	45	D9		LN2	BSTA,UN	POPC1	
4347	55CC	3F	45	AC			BSTA,UN	PUSH1	
4348	55CF	3F	45	I7			BSTA,UN	POPC2	
4349	55D2	3F	33	02			BSTA,UN	COMMON	
4350	55D5	E7	22				COM1,R3	LT	
4351	55E7	10	11				BCTR,EQ	LN3	
4352	55E9	3F	52	DD			BSTA,UN	PS2	
4353	55ED	3F	45	E7			PSTA,UN	POPC2	
4354	55F0	3F	50	02			BSTA,UN	COMMON	
4355	55F2	E7	81				COM1,R5	GT	
4356	55E4	96	73				BCR,EQ	LN4	
4357	55E6	3F	45	AC			BSTA,UN	PUSH1	
4358	55E9	3F	3A	70			BSTA,UN	FPAID	
4359	55FC	3F	45	I0			BSTA,UN	PUSHC1	
4360	55FE	3F	52	DE			BSTA,UN	PUSHH	
4361	55FF	3F	3B	F1			BSTA,UN	FPMULT	
4362	55FF	1E	52				BCTR,UN	LN2	
4363	55FF	3F	45	AC		LN3	BSTA,UN	PUSH1	
4364	55FA	3F	3A	64			BSTA,UN	FPSUB	
4365	55FD	3F	45	I0			BSTA,UN	PUSHC1	
4366	5600	3F	52	DD			BSTA,UN	PS2	
4367	5603	3F	3F	F1			BSTA,UN	FPMULT	
4368	5606	1F	55	C0			BCTA,UN	LN2	
4369	5629	04	57			LN4	LODI,R0	LN(2)	
4370	560B	25	ED				LODI,R1	LN(2)	
4371	560D	3F	31	38			BSTA,UN	PUSHFF	
4372	5610	3F	2B	F1			BSTA,UN	FPMULT	
4373	5613	3F	3A	70			BSTA,UN	FPAID	
4374	5616	3F	50	I0			BSTA,UN	PUSHC1	
4375	5619	3F	45	AC			BSTA,UN	PUSH1	
4376	561C	3F	3A	64			BSTA,UN	FPSUB	
4377	561F	04	40				LODI,R0	ATAP-ATAP	
4378	5621	3F	54	Y5			BSTA,UN	APFROX	
4379	5624	1F	3F	70			BCTA,UN	FPAID	
4380	5627					*			

FILE BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6381	5627					*			
6382	5627					*			
6383	5627	00				C3TEMP	RES	1	
6384	5628	20				C3EX	RES	1	
6385	5629	20				C3SIGN	RES	1	
6386	562A	20	00	00	00	C3MAIN	RES	5	
6387	562E	20				*			
6388	562F					*			
6389	562F					*			
6390	562F	20				C4TEMP	RES	1	
6391	5630	20				C4EX	RES	1	
6392	5631	20				C4SIGN	RES	1	
6393	5632	20	20	00	20	C4MAIN	RES	5	
6394	5633	20				*			
6395	5637	20				C5TEMP	RES	1	
6396	5638	20				C5EX	RES	1	
6397	5639	20				C5SIGN	RES	1	
6398	563A	20	00	00	00	C5MAIN	RES	5	
6400	563F	20				*			
6401	563F					*			
6402	563F					*			
6403	563F					*			
6404	563F	20				ZTEMP1	RES	1	
6405	5640	20				ZTEMP2	RES	1	
6406	5641	20				DUB	RES	1	
6407	5642	20				OFFSET	RES	1	
6408	5643	20				SSIGN	RES	1	
6409	5644	20				TERMNM	RES	1	
6410	5645					*			
6411	5645					*			
6412	5645	20	00	00	00	ATAB	DATA	00,00,00,99,99,99,33,20	
6413	5645	00	00	33	20				
6414	5647	20	00	00	33		DATA	00,00,70,33,32,98,56,05	
6415	5648	32	00	00	20				
6416	5649	00	00	00	10		DATA	00,00,00,19,94,65,35,99	
6417	5649	00	00	00	10				
6418	5649	00	00	00	10				
6419	5649	00	00	00	10		DATA	00,00,70,13,90,85,33,51	
6420	5649	00	00	00	10				
6421	5649	00	00	00	10		DATA	70,01,00,96,42,00,44,10	
6422	5649	00	00	00	10				
6423	5649	00	00	00	10		DATA	70,01,70,55,90,98,86,10	
6424	5649	00	00	00	10				
6425	5649	00	00	00	10		DATA	70,01,00,21,86,12,28,80	
6426	5649	00	00	00	10				
6427	5649	00	00	00	10		DATA	70,02,70,40,54,05,80,00	
6428	5649	00	00	00	10				
6429	5649	00	00	00	10		DATA	00,00,00,99,99,96,42,36	
6430	5649	00	00	00	10				
6431	5649	00	00	00	10		DATA	00,00,70,49,98,74,12,38	
6432	5649	00	00	00	10				
6433	5649	00	00	00	10		DATA	00,00,00,33,17,99,02,50	
6434	5649	00	00	00	10				
6435	5649	00	00	00	10		DATA	00,00,70,24,07,33,80,84	

FILE BASIC12' AS ASSEMBLED BY SYSTEM ON 11-15-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6436	56A1	07	33	60	84				
6437	56A5	20	00	00	16		DATA	00,00,00,16,76,54,07,11	
6438	56A5	76	54	07	11				
6439	56AD	12	01	70	05		DATA	70,01,70,95,32,93,89,70	
6440	56B1	32	00	00	70				
6441	56B5	10	01	07	36		DATA	70,01,00,36,08,84,93,70	
6442	56B9	08	04	93	70				
6443	56BD	10	02	70	64		DATA	70,02,70,64,53,54,42,00	
6444	56C1	53	54	42	00				
6445	56C5					*			
6446	56C5					*			
6447	56C5	00	01	00	10	KTAB	DATA	00,01,00,10,00,00,00,00	
6448	56C9	00	00	00	00				
6449	56D1	00	00	00	00		DATA	00,00,00,50,00,00,00,00	
6450	56D1	00	00	00	00				
6451	56D5	00	00	00	16		DATA	00,00,00,16,66,66,66,67	
6452	56D9	00	00	00	16				
6453	56DD	10	01	00	41		DATA	70,01,00,41,66,66,66,67	
6454	56E1	00	00	00	00				
6455	56E5	10	02	00	83		DATA	70,02,00,83,33,33,33,33	
6456	56E9	33	33	33	33				
6457	56ED	10	02	00	13		DATA	70,02,00,13,00,00,00,00	
6458	56F1	00	00	00	00				
6459	56F5	10	03	00	19		DATA	70,03,00,19,04,12,69,84	
6460	56F9	04	12	69	84				
6461	56FD	10	04	00	24		DATA	70,04,00,24,00,15,87,30	
6462	5701	00	15	87	30				
6463	5705	10	05	00	27		DATA	70,05,00,27,55,73,16,22	
6464	5709	55	72	19	22				
6465	570D	10	06	00	27		DATA	70,06,00,27,55,73,19,22	
6466	5711	55	73	19	22				
6467	5715	10	07	00	25		DATA	70,07,00,25,05,31,08,39	
6468	5719	05	31	08	39				
6469	571D	10	08	00	20		DATA	70,08,00,20,07,07,56,99	
6470	5721	07	07	56	99				
6471	5725	10	09	00	16		DATA	70,09,00,16,05,90,43,84	
6472	5729	05	00	43	84				
6473	572D	10	10	00	11		DATA	70,10,00,11,47,07,45,80	
6474	5731	47	07	45	80				
6475	5735	10	12	00	76		DATA	70,12,00,76,47,16,37,32	
6476	5739	47	16	37	32				
6477	573D	10	13	00	47		DATA	70,13,00,47,49,47,73,32	
6478	5741	49	47	73	32				
6479	5745					KTAB2	EQU	\$	
6480	5745	00	01	00	10	ONE	DATA	00,01,00,10,00,00,00,00	
6481	5749	00	00	00	00				
6482	574D	00	00	00	50	HALF	DATA	00,00,00,50,00,00,00,00	
6483	5751	00	00	00	00				
6484	5755	00	00	00	33		DATA	00,00,00,33,33,33,33,33	
6485	5759	33	33	33	33				
6486	575D	00	00	00	25	QTR	DATA	00,00,00,25,00,00,00,00	
6487	5761	00	00	00	00				
6488	5765	00	00	00	00		DATA	00,00,00,20,00,00,00,00	
6489	5769	00	00	00	00				
6490	576D	00	00	00	16		DATA	00,00,00,16,66,66,66,67	

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6461	5771	66	66	66	67				
6462	5775	00	02	00	14		DATA	00,00,00,14,28,57,14,29	
6463	5779	28	57	14	29				
6464	5771	00	00	00	12		DATA	00,00,00,12,05,00,00,00	
6465	5761	05	00	00	00				
6466	5785	20	00	00	11		DATA	00,00,00,11,11,11,11,11	
6467	5769	11	11	11	11				
6468	578D	00	00	00	10		DATA	00,00,00,10,00,00,00,00	
6469	57C1	00	00	00	00				
6470	5795	F0	01	00	30		DATA	F0,01,00,00,00,00,00,01	
6471	5799	50	50	50	51				
6472	579D	F0	01	00	83		DATA	F0,01,00,00,33,33,33,33	
6473	57A1	33	33	33	33				
6474	57A5	F0	01	00	76		DATA	F0,01,00,00,76,92,30,76,92	
6475	57A9	52	32	76	92				
6476	57AT	F0	01	00	71		DATA	F0,01,00,00,71,42,85,71,43	
6477	57B1	42	85	71	43				
6478	57B5	F0	01	00	66		DATA	F0,01,00,00,66,66,66,66	
6479	57B9	66	66	66	67				
6480	57BD	F0	01	00	62		DATA	F0,01,00,00,62,05,00,00,00	
6481	57C1	25	00	00	00				
6482	57C5					*			
6483	57C5					*			
6484	57C5					*			
6485	57C5	00	01	00	23	IN(10)	DATA	00,01,00,23,02,50,50,93	
6486	57C9	00	50	50	93				
6487	57CD	00	00	00	43	LOGC	DATA	00,00,00,43,42,94,48,20	
6488	57D1	42	94	48	20				
6489	57C9	00	01	00	27	EEF	DATA	00,01,00,27,18,20,18,20	
6490	57D5	18	20	18	20				
6491	57DD	00	01	00	31	PIE	DATA	00,01,00,31,41,50,20,54	
6492	57E1	41	50	20	54				
6493	57E5	00	01	00	15	HALFEI	DATA	00,01,00,15,70,79,63,27	
6494	57E9	72	79	63	27				
6495	57F1	00	00	00	60	LN(2)	ACON	0000,0069,3147,1005	
6496	57F1	31	47	10	05				
6497	57F5	00	01	00	20	TWO	ACON	0001,0020,0000,0000	
6498	57F9	27	02	00	00				
6499	57FD					*			
6500	57FD					*			
6501	57FD					*			
6502	57FD					*			
6503	57FD					*			
6504	57FD					*			
6505	57FD					*			
6506	57FD					*			
6507	57FD					*			
6508	57FD					*			
6509	57FD					*			
6510	57FD					*			
6511	57FD					*			
6512	57FD					*			
6513	57FD					*			
6514	57FD					*			
6515	57FD					*			
6516	57FD					*			
6517	57FD					*			
6518	57FD					*			
6519	57FD					*			
6520	57FD					*			
6521	57FD					*			
6522	57FD					*			
6523	57FD					*			
6524	57FD					*			
6525	57FD					*			
6526	57FD					*			
6527	57FD					*			
6528	57FD					*			
6529	57FD					*			
6530	57FD					*			
6531	57FD					*			
6532	57FD					*			
6533	57FD					*			
6534	57FD					*			
6535	57FD					*			
6536	57FD					*			
6537	57FD					*			
6538	57FD					*			
6539	57FD					*			
6540	57FD					*			
6541	57FD					*			
6542	57FD					*			
6543	57FD					*			
6544	57FD					*			
6545	57FD					*			

FILE 'BASIC12' AS ASSEMBLED BY SYSTEM ON 10-01-78

LINE	ADDR	B1	B2	B3	B4	LABEL	OPCODE	OPERAND	COMMENTS
6546	5A14	05	58				LODI,R1	~ZEND-100	
6547	5A16	00	5A	67			STRA,R1	*ZBSTR	
6548	5A19	00	1A	61			STRA,R1	ZTEMP	
6549	5A1C	00	9A	61			STRA,R0	*ZTEMP	
6550	5A1F	00	2E	55			BSTA,UN	LFOP	
6551	5A22	00	00				LODI,R3	00	
6552	5A24	00	7A	6B		ZPRINT	LODI,R3	ZPTAB,1	
6553	5A27	1A	2E				BCTR,LT	ZCON	
6554	5A29	00	2E	23			BSTA,UN	WRT	
6555	5A2C	00	7E				BCTR,R3	ZPRINT	
6556	5A2E	00	2E	12		ZCON	BSTA,UN	PAUSE	
6557	5A31	00	40	A6			BSTA,UN	LTOUT	
6558	5A34	00	4E				COMI,R0	W	
6559	5A36	10	20	00			BCTR,IO	STRT	
6560	5A39	00	59				COMI,R0	W	
6561	5A3B	00	71				BCTR,IO	ZCON	
6562	5A3D	00	FF				LODI,R0	FF	
6563	5A3F	00	9A	65			STRA,R0	*ZAB	
6564	5A42	00	53				LODI,R1	~ZFP+100	
6565	5A44	00	1A	61			STRA,R1	ZTEMP	
6566	5A47	00	9A	61			STRA,R0	*ZTEMP	
6567	5A4A	00	9A	67			STRA,R1	*ZBSTR	
6568	5A4D	00	FF				LODI,R3	FF	
6569	5A4F	00	1F				LODI,R0	1F	
6570	5A51	00	BA	63			STRA,R3	*FFEX00,+	
6571	5A54	00	31				LODI,R0	~STWER	
6572	5A56	00	BA	63			STRA,R3	*FFEX00,+	
6573	5A59	00	B1				LODI,R0	~STWER	
6574	5A5B	00	BA	63			STRA,R3	*FFEX00,+	
6575	5A5E	1F	20	00			BCTR,UN	STRT	
6576	5A61					*			
6577	5A61	00	00			ZTEMP	RES	2	
6578	5A63					*			
6579	5A63	45	14			FFEX00	ACON	FFEXP	
6580	5A65	47	04			ZAB	ACON	ZTAB	
6581	5A67	00	03			ZBSTR	ACON	BSTART	
6582	5A69	00	00			ZSTART	ACON	STRT	
6583	5A6B	44	4F	20	59	ZPTAB	ALIT	DO YOU WISH TO DELETE THE EXTENDED FUNCTIONS? (Y/N)	
6584	5A6F	47	55	20	57				
6585	5A73	49	53	40	20				
6586	5A77	54	4F	20	44				
6587	5A7B	45	40	45	54				
6588	5A7F	45	20	54	48				
6589	5A83	45	20	45	58				
6590	5A87	54	45	4E	44				
6591	5A8B	45	44	20	46				
6592	5A8F	55	4E	43	54				
6593	5A93	49	4F	4E	53				
6594	5A97	3F	20	28	59				
6595	5A9B	2F	4E	29	20				
6596	5A9F	20							
6597	5AA2	FF				DATA		FF	
6598	5AA1	FF							
6599	5AA2					*			
6600	5AA2					*			