

LA36

TERM TEST
CZLAFAO

AH-E100A-MC

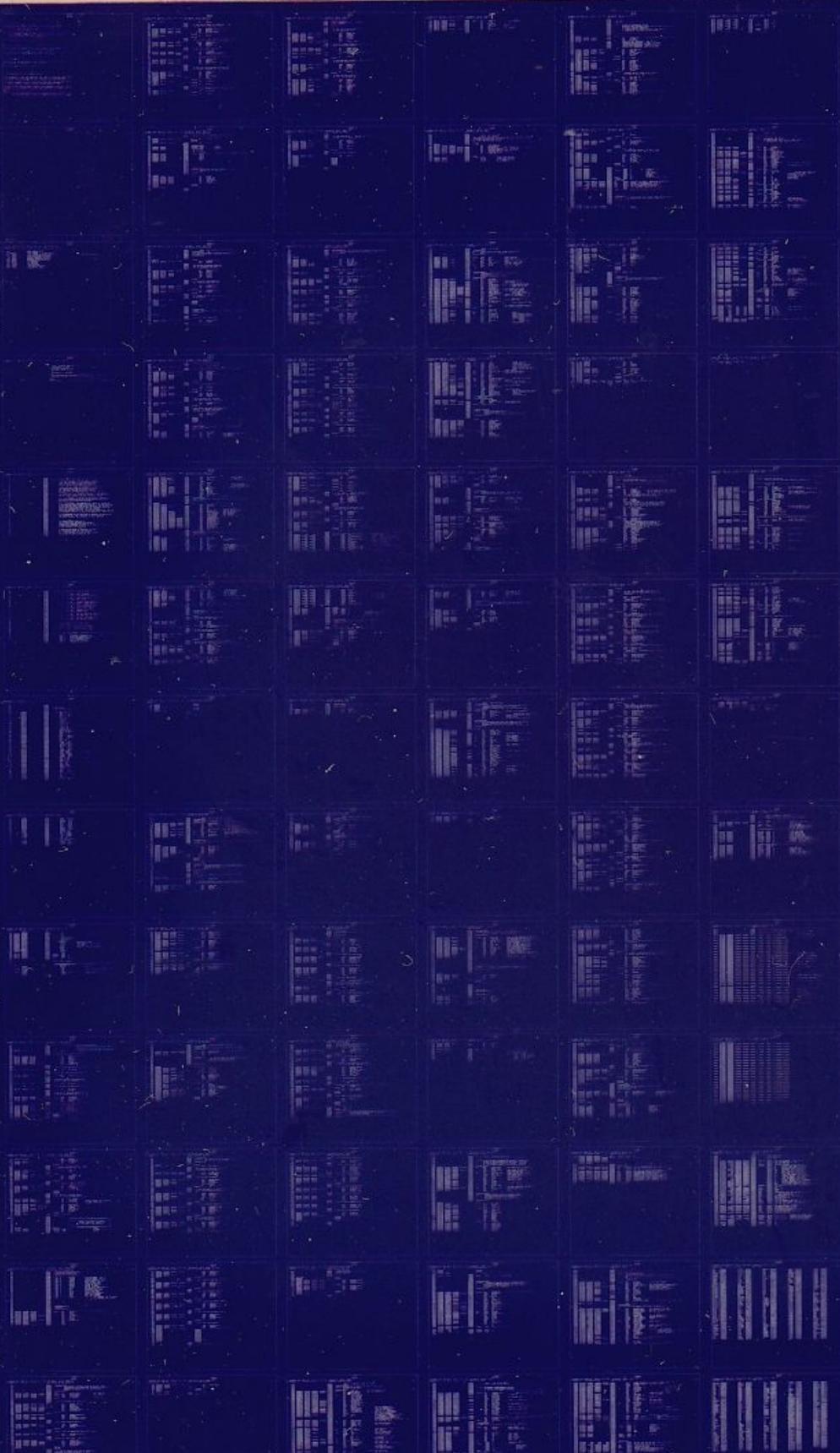
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IDENTIFICATION

SEQ 0001

Product code: AC-E099A-MC

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Author: RALPH A. SCHAUER

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TABLE OF CONTENTS

- 1.0 ABSTRACT
 - 1.1 Functional Description
- 2.0 REQUIREMENTS
 - 2.1 Equipment
 - 2.2 Options
 - 2.3 Related Programs
- 3.0 LOADING & INITIALIZATION
- 4.0 CONTROL & TEST SELECTION
 - 4.1 Switch Register Control
 - 4.2 Console Control
 - 4.3 Commands
 - 4.4 Examples & Hints
- 5.0 SCOPE OF TESTS
 - 5.1 TEST 0
 - 5.2 TEST 1
 - 5.3 TEST 2
 - 5.4 TEST 3
 - 5.5 TEST 4
 - 5.6 TEST 5
- 6.0 ERRORS
- 7.0 PROCEDURES FOR NON STD. DVCS

1.0 ABSTRACT

This diagnostic will functionally test the hardware options on the LA36 terminal.

Up to 48 terminals, including the console device, can be tested at a time. All terminals under test must be interfaced thru a DLII type interface.

Control of this diagnostic may be thru a switch register, or via interactive console terminal commands.

1.1 Functional Description

The program will first determine if the system has a hardware switch register. If none available a software switch register at loc 176 will be assigned.

The program will then determine what device interfaces are on the system, at the standard DLII-A,B,C,D,E address and the interrupt vector of each interface present. This information will then be stored in a table.

The program will then ask the operator if he/she wants to use console control. If the response is "no" the program will halt and wait for the operator to enter control information thru the switch register.

Note : If no hardware switch register is present control is forced to console control.

If console control is selected a menu of available commands will be printed on the console terminal, and the program will wait for commands via the console.

2.0 REQUIREMENTS

2.1 EQUIPMENT

This diagnostic was written to run on all models of the PDP-11 computer, including the LSI-11. One to forty eight LA36 terminals, connected thru a single line asynchronous interface (DLII-A thru E, DLII-W, DLVII), may be tested. 8K of memory is required.

A hardware switch register is supported, but not required.

2.2 OPTIONS

The following options are tested by this diagnostic:

ASCII/APL character set.
Selective Addressing Option.
Auto-Answerback Option.
Top-of-form Option.
Horizontal & Vertical Tab Option.

2.3 RELATED PROGRAMS

Although some error checking is done, this diagnostic does not functionally test the basic LA36 terminal, nor the terminals interface.

Therefore the basic LA36 terminal diagnostic, MDEC-11-DZLAC-*, and the DL11-* / DLV-11 interface test should be successfully run prior to this diagnostic. Also any other applicable processor/memory tests.

3.0 LOADING & INITIALIZATION

This diagnostic may be loaded using the standard procedures for paper tape, or via XXDP media. This diagnostic will not run in chained mode because manual intervention is required. The absolute loader area is preserved.

This diagnostic self sizes the system as far as the interfaces, and their interrupt vectors. The only operator modifications to be made are:

1. the location 'TIMER' which is a CPU dependent TIME constant.
See listing of DELAYM Routine.

```
TIMER: .WORD 554      ;SET FOR 11/35 - 11/40
          ;SET TO 202 IF 11/03
          ;    251   11/05 - 11/10
          ;    314   11/15 - 11/20
          ;    2127  11/45 BIPOLAR - 11.55
          ;    1237  11/45 - MOS - 11/70
          ;    755   11/45
```

DELAYT: .WORD 0 ;DELAY TIME BUFFER

2. any of the preset device address to accomodate a non-standard interface address. (See Sect 7.0 for details)
3. location 'WIDTH' if other than 132 COL PAPER is being used.
(See section 4.3). (Common for all terminals)

The initial starting address is 200(8), and all restarts at 1372.

4.0 CONTROL & TEST SELECTION

The diagnostic will ask (via the console) if console control is desired. Answer 'Y' if you want to use interactive commands, otherwise type 'N' for switch register control.

If 'Y' is typed a menu of available commands is printed on the console, and the program will wait for command input. If 'N' is typed the program will print a listing of the line (interface) table, then halt for the operator to set the switches to the desired parameters.

4.1 SWITCH REGISTER CONTROL

When SWITCH REGISTER CONTROL is selected the program will halt. Set the switches to the desired mode, then press continue. The program will check the entry and if a specific test is to be run, or a specific line is to be tested the program will halt again. Enter the desired line/test data in the switches, then press continue. To change parameters the test must be restarted at loc 1372.

ALL of the switch functions are also available under console control mode. (See sect. 4.2.4.3).

SWITCH REGISTER BIT DEFINITIONS FIRST WORD MODE SELECTION

BIT15	=1 (UP) =0 (DOWN)	HALT ON ERROR CONTINUE AFTER REPORT
BIT14	=1 (UP) =0 (DOWN)	LOOP AFTER ERROR IS DETECTED DON'T LOOP
BIT13	=1 (UP) =0 (DOWN)	INHIBIT ERROR REPORTS PRINT ERROR REPORTS
BIT12	=1 (UP) =0 (DOWN)	PRINT INTERFACE TABLE DON'T PRINT TABLE
BIT11	=1 (UP) =0 (DOWN)	INHIBIT ITERATIONS NORMAL RUN.
BIT6	=1 (UP) =0 (DOWN)	RUN ALL TESTS IN SEQUENCE RUN SELECTED TEST ONLY
BIT5	=1 (UP) =0 (DOWN)	RUN ALL AVAILABLE LINES RUN SINGLE LINE ONLY

SECOND WORD LINE AND TEST NO.

BIT15 - BIT8 SELECTED LINE NUMBER (00-57)

BIT7 - BIT0 SELECTED TEST NUMBER (0-5)

4.2 CONSOLE CONTROL

When console control is selected a menu of available commands is typed on the console terminal. The program will wait for commands to be entered thru the keyboard.

Enter one command per line, followed by a carriage return. To terminate command input and start execution type an ALTmode or ESCape.

To regain control once execution has begun type a CTL-C. The program will respond with 'READY'. You can now enter the desired

commands just as in startup.

4.3 COMMANDS

There are two types of commands available, interactive commands; and static commands.

ALL static commands can only be entered while in "Command Mode", that is during startup after 'READY' is printed on the console, or after the operator has invoked command mode by typing a CTL-C and the program has printed 'READY'.

Interactive commands can be entered at any time, and are essentially the same as the switch register bits 15,14,13.

The available Commands are:

- S (STATIC) Single Line Mode. Test a single device. Line 00 is default. Use add command to select the desired line.
- M (STATIC) Multi Line Mode. Test all lines present and not deselected.
- Q (STATIC) Sequence thru all tests, starting with test 0.
- Pr (STATIC) Run test N.
- Dr (STATIC) Deselect or Drop from testing interface line N. (see T command)
- An (STATIC) Add line N. Clear out the error count for line N, and reselect the line for testing. In single line mode sets N as current line to test.
- T (STATIC) Type out a listing of the interface lines present on the system, the vector address at which the device interrupts, and whether or not the line is selected.
- W (STATIC) Changes location 'Width' to N. Used to control output of terminal tests. Enter N as an Octal number 32 to 204. (132 decimal)
- CTL-L (interactive) Loop on error. If an error is detected the program will start looping on the test section which caused the error, and continue to loop until a Klear command is issued.
In command mode type an L.

- CTL-H (interactive) Halt on error. Will cause the program to halt after the error message is printed. (assuming error printouts are enabled). In command mode type or H.
- CTL-K (interactive) Klear - resets both the H and L commands (Don't halt, Don't loop). In command mode type a C.
- CTL-N (interactive) NO Error reports. Inhibits the printing of normal error messages. In command mode type an N.
- CTL-P (interactive) Print error reports. ALL report messages will be printed on the console. In command mode type a P.
- CTL-G (interactive) Will cause the program PCFLAGS to be displayed on the console for trouble shooting purposes. See listing for bit definitions.
- ESC Exit command mode & start execution of the diagnostic test(s).
- CTL-C Returns test to command mode. All operations in progress stop.

4.4 EXAMPLES & HINTS

Test numbers 0 thru 5 may be selected to run individually on all, or any terminal.

All tests can be run sequentially on all or any terminal.

Tests can be run sequentially on a terminal, but there is little chance that any terminal will have more than one or two of these options installed. Sequencing all tests will probably result in numerous errors from trying to test non-existent options.

If a line gets more than 16 errors it will be deselected by the program and a message will be printed on the console. If the line is the only one being tested it will automatically be re-selected.

Example 1. the commands to select test #4 to be run on all lines.

READY
R04(CR) - Run test 4
M(CR) - Multi line mode
w120(CR) - Set paper width to 120
\\$ - ESC - echoed as \\$

Example 2. the commands to run all tests on line no. 06, with Halt on error set.

READY
Q(CR) - Sequence tests
S(CR) - Single line mode.
A06(CR) - Add line #06
H(CR) - Halt on error
S - ESC - echoed as S.

EXAMPLE 3. How do I run tests on 10 out of 12 terminals.

First you must be in command mode. If a test is running type CTL-C. The program will respond with "Ready". Now type D nn (cr) to deselect line number nn. Repeat for each additional line to be dropped from the tests. Now select your test other parameters as in Example 1.

EXAMPLE 4. How do I restart a device which has been deselected?

In command mode type Ann (cr) where nn is the line number of the line to be added.

EXAMPLE 5. How do I loop on error.

If the test is running type a CTL-L. When an error is detected the program will start to loop on the test or subtest and continue to loop until a CTL-K or CTL-C command is issued.

If in command mode type L (CR).

EXAMPLE 6. Can I set the 'width' constant different for each terminal?

The constant 'width' is the same for all terminals, although it may be changed any time you are in command mode.

5.0 SCOPE OF TESTS.

This diagnostic will functionally test the following hardware options of the LA36.

1. Secondary character set option APL/ASCII character set selection
2. Selective addressing option
3. Auto-answer back option
4. Top of forms option

5. Horizontal and Vertical tabulation option.

The diagnostic will do cursory testing of the basic interface, and basic LA36 logic. It is assumed that the basic interface, CPU/memory, and LA36 tests have been run successfully.

Due to the nature of the hardware under test most error checking will be by visual inspection of the terminal output by the operator.

Description Of Tests

5.1 Test 0 Secondary Character Set.

This test is an output only test. No terminal feed back is received.

The test prints on each terminal alternating lines of ASCII character set, and APL character set.

Output of characters per line will consist of char codes 40 thru 176 unless the paper width limit is reached first.

Output format:

PRIMARY---(ASCII CHARACTER SET)
SECONDARY--(APL CHARACTER SET)

This output is controlled by the "width" of the paper. See W command description.

5.2 Test 1 Selective Addressing Option

This test will alternately send out a select code, followed by it's ASCII Equivalent, for all possible select codes (20 thru 177).

This test will also deselect all terminals and try to output a "this should not print" message. "All terminals should be off"

This test will also try to print "this should not print" messages after transmitting 'NUL' select character sequences, and no select codes sequences.

Valid terminal output should be: Select Recognized = /NN(Group Select Code) /NN(Individual Select Code)/

Where NN represents the select codes recognized by this terminal. If the group select code and individual select codes are set to the same thing them only one /NN/ should appear.

More than two /nn/ codes printed indicates a logic failure in the decoder section of the option, or possibly interface to terminal line problems.

Any of the "this should not print" message that appear on the terminal indicate a failure of the selection logic.

5.3 Test 2 Auto Answer Back Option

This test is divided into six subtests:

Subtest -1

The first subtest is actually a sizing routine. The terminal should respond to its unique selection code with an answerback when polled. This test has no way of knowing what the answer back is, nor any way of 'pre-selecting' its unique selection code. Therefore subtest -1 will try all legal selection codes to see if it can cause an answer back to be transmitted. If one is received the program will store the select code associated with the response in the line table for future testing.

Subtest -2

Will see if any answer back has been received, and check its length, the message should not exceed 20 (10) characters. Subtest 2 will print the ASCII message on the terminal, and an octal representation of the characters (to verify non printables are being transmitted correctly, and as a trouble shooting aid if bad data is being sent out from the switches).

Subtest -3

Will read the answer back ten times to verify reliability of the data, and lines.

Subtest -4

Will try to cause transmission of the answer back in response to a broadcast code.

Single Line Mode - Subtests 5, and 6.

Subtest -5

The test will request the operator to press the 'Here-is' key, then check for answerback.

Subtest -6

The test will request the operator to type 'CTL-E', then check for answer back.

The operator must verify that the message echoed back to the terminal is correct, by comparing it to the data switch configuration.

5.4 Test 3 Top Of Forms Option

This test is divided into two subtests, one for multi line mode, the other for single line mode. Operator intervention will be required for the single line test.

1. Multi line mode.

This subtest will assume a standard form of 11 inches being used.

The test will issue a form feed, then print a line of dashes. This FF/dashes is repeated 3 times.

The operator should verify correct operation by checking for a line of dashes at the same place on each page.

2. In single line mode, This test will require the operator to set the forms length switch to the value requested. The test will then do three form feeds at each length setting.

5.5 Test 4 Horizontal Tab Option

This test will adjust it's output to conform to the paper width. Change location "width" to the appropriate value before starting test. (Preset to 132 col.) Note: see W command description.

The test will print a reference line for visual verification. The line will look like this:V.....V.....V.....V.....

Tabs will then be set corresponding to the location of each V. The test will then issue a tab and print an X tab then X etc until the line is complete. Three lines of X's will be printed. All X's printed should be aligned with the reference line V's.

This will be repeated for various (7) values of tab spacing.

Example of output

```
.....V.....V.....V.....V.....V.....  
X   X   X   X   X  
X   X   X   X   X  
X   X   X   X   X
```

```
.....V.....V.....V.....  
X   X   X  
X   X   X  
X   X   X
```

5.6 Test 5 Vertical Tab Option

This test is divided into two subtests, one for multi line mode, the other for single line mode. The single line mode test requires operator intervention.

Multi line mode subtest

Will set tabs at intervals of 1 line, 2 lines, 3 lines etc. up to 11 lines. The test will then issue a vert. tab then print a line of dashes, then repeat until 1 full page has been done. Three pages of output are run for 1 pass of test.

Single line mode testing involves the operator to set up the forms control to 11 inch forms, and then proceeds with the same subtest as for multi line mode.

5.0 ERROR REPORTING

There will be four basic sources of error messages. First the system sizer, second the command decoder, and third the diagnostic tests, and the I/O drivers.

5.1 Diagnostic Tests

All test error messages will be 2 lines of output. A standard format line, shown below, and a descriptive message telling what went wrong.

Std. Fmt.: #ERROR XXX TEST YY LINE ZZ

where XXX = the error number local to the current test.

YY = the current test number.

ZZ = the line under test.

An example of a descriptive message :

.NO ANSWERBACK MEASSAGE RECEIVED

As each error is handled a routine will update an error count for the failing line. If 16 errors are accumulated on a line, that line will be "deselected" and the following message will be displayed.

EXCESSIVE ERRORS .. LINE XX DROPPED.

If the line under test is the only line being tested the program will automatically re-select the line, zero the count, and continue testing after typing the following:

LINE RE-SELECTED FOR TEST.

6.2 I O Driver

If the IO Driver finds no available line to test a message will be displayed and then control will return to the "ready" state.

NO LINES AVAILABLE FOR TEST.

#377 Multi line driver error.

Error messages tagged as #377 indicate a failure during an I/O driver operation, such as a failure to interrupt on transmit to a terminal with the interrupt enable set.

#376

Same as #377 except a single line Driver.

6.3 Command Decoder

Console terminal command errors will be handled by a CMDERR module & will output a line of ???? if the input was invalid.

If a line selection command tries to add (re-select) an invalid or non existant line a --LINE INVALID message will be typed.

6.4 System Sizer

If during the sizing operation the sizing routine detects a failure of the interface to interrupt it will be reported.

ex: 'NO INTERRUPT ON TXMIT LINE 27'

7.C PROCEDURES FOR NON-STANDARD DEVICES.

This diagnostic can be modified for use on devices that have non-standard interface addresses by replacing an unused address in the line table with the address of the interface line to be tested.

The table is preset to the standard DL11-A,B,C,D,E addresses. (775610 - 7756170 & 776500 - 776670), and the console address 777560.

No modification need be made because of non-standard interrupt vector addresses. The diagnostic sizes each address for presence on the system, and inserts the interrupt vector data into the table at run time.

NOTE: The table addresses are not in ascending order, rather it has been optimized for relative system size by having the most commonly used addresses at the head of the table. DL11-A,B

CO2

Page 15

SEQ 0015

and DL11-C,D,E address are merged together.

002

DLAFC LAB36 TERM 1ST MAC 11 30A 1052 03-JAN-77 00:01
DLAFA.F11 03-JAN-78 11:20 TABLE OF CONTENTS

TE, DDE

101	BASIC DEFINITIONS
102	ACTIVI HOOKS
216	04200 TEST CONTROL & INITIALIZATION
507	08500 LINE CONTROL & INITIALIZATION
713	12540 SWITCH REGISTER ROUTINES
791	14840 CONSOLE TERMINAL ROUTINES
1189	22020 ERROR & REPORT ROUTINES
1378	00700 INTERFACE SIZER ROUTINES
1452	05450 EMT HANDLER
1472	06650 I/O DRIVERS
1659	11595 TRAP ROUTINES
1993	16900 CONVERSION ROUTINES
1898	00250 LAB36 OPTION TESTS
1100	43150 STORAGE & CONSTANTS

E02

CZLAFAC LA36 TERM TST MAC:11 30A 1052 03-JAN-77 00:01 PAGE 1
CZLAFAC.L11 03-JAN-78 11:20

SEG 0017

IC

00200

TITLE CZLAFAC LA36 TERM TST
*COPYRIGHT (C) 1977
*DIGITAL EQUIPMENT CORP.
*MAYNARD, MASS. 01754
*
*PROGRAM BY R.SCHAUBER
*
*THIS PROGRAM WAS ASSEMBLED USING THE PDP-11 MAINDEC SYSTEM
*PACKAGE 'MAINDEC-11-CZLAFAC-03'. JAN 19, 1977.

\$TNE=1
\$SWR=160000 ;;HALT ON ERROR, LOOP ON TEST, INHIBIT ERROR TRAP

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G02

CZLAFAO LA36 TERM 7ST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-2
CZLAF.A.FIT 03-JAN-78 11:20

SES 0019

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0W
0X
0Y
0Z
01160 : * *** SWITCH REGISTER BIT DEFINITIONS *****
01180 :
01200 : BIT15 =1 (UP) HALT ON ERROR
01220 : =0 (DOWN) CONTINUE AFTER REPORT
01240 :
01260 : BIT14 =1 (UP) LOOP AFTER ERROR IS DETECTED
01280 : =0 (DOWN) DON'T LOOP
01300 :
01320 : BIT13 =1 (UP) INHIBIT ERROR REPORTS
01340 : =0 (DOWN) PRINT ERROR REPORTS
01360 :
01380 : BIT12 =1 (UP) PRINT INTERFACE TABLE
01400 : =0 (DOWN) DON'T PRINT TABLE
01420 :
01440 : BIT11 =1 (UP) INHIBIT ITERATIONS
01460 : =0 (DOWN) NORMAL RUN
01480 :
01500 : BIT6 =1 (UP) RUN ALL TESTS IN SEQUENCE
01520 : =0 (DOWN) RUN SELECTED TEST ONLY
01540 :
01560 : BITS =1 (UP) RUN ALL AVAILABLE LINES
01580 : =0 (DOWN) RUN SINGLE LINE ONLY
01600 :
01620 :
01640 : SECOND WORD ENTRY VIA SWITCHES
01660 :
01680 : BIT15 - BIT8 SELECTED LINE NUMBER
01700 :
01720 : BIT7 - BIT0 SELECTED TEST NUMBER
01740 :
01760 :
01780 : ***** TEST ASSIGNMENTS *****
01800 :
01820 : TEST 0 SECONDARY CHARACTER SET
01840 : TEST 1 SELECTIVE ADDRESSING OPTION
01860 : TEST 2 AUTO ANSWERBACK OPTION
01880 : TEST 3 TOP OF FORMS OPTION
01900 : TEST 4 HORIZONTAL TAB OPTION
01920 : TEST 5 VERTICAL TAB OPTION

H02

CZLAFAD LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-3
 CZLAFAD.F11 03-JAN-78 11:20

SEG 0020

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01960
 02080
 02100 ;*****
 02120 ; LOCAL PROGRAM EQUATES
 02140
 02160 ABO = BIT4 :LINE ABORT FLAG
 02180 ACK = 6
 02200 ADDC = BIT2
 02220 ATTN = BIT7
 02240 CR = 15
 02260 CTL0 = 3
 02280 CTL0CNT = 0
 02300 CTLG = 7
 02301 CTLH = 10
 02302 CTLK = 13
 02303 CTLL = 14
 02304 CTLN = 16
 02305 CTLF = 20
 02320 DATAIN = BIT11
 02340 DLP = BIT15 :LINE PRESENT FLAG
 02360 DROPC = BIT3
 02380 ENQ = 5
 02400 EOL = BIT11
 02420 EOP = BIT13
 02440 EOT = BIT14
 02460 ESC = 33
 02480 FTX = 3
 02500 FLAG1 = BIT0
 02520 FLAG2 = BIT1
 02540 HALTOE = BIT15
 02560 HALTC = BIT7
 02580 ICNT = -2
 02600 INHR = BITS
 02620 INHRPT = BIT13
 02640 ISP = 5726 :INC SP 2
 02660 ISP2 = 22626 :INC SP 4
 02680 LOONE = BIT8
 02700 LOOPC = BIT6
 02720 LOOPOE = BIT14
 02740 PRI4 = 200 :PRIOPIT 4
 02760 PRI7 = 240
 02780 PRI0 = 0
 02800 SEL = BIT7 :LINE SELECT FLAG
 02820 NOP = 240
 02840 NOOP = 240
 02860 MAJOR = 3000
 02880 POINT = 6
 02900 PASCNT = 2
 02920 RPC = 10
 02940 NREQ = 340
 02960 SI = 17
 02980 SC = 16
 03000 SOH = 1
 03020 STX = 2
 03040 PRIN[↔] = BIT12
 03060 DCME = BIT13

DC-LAFAD L836 TERM TST MAY 11 30A 1052 03-JAN-77 00:01 PAGE 1--
DC-LAFAD.FLT 03-JAN-78 11:20 BASI- DEFINITIONS

SEG 0021

159	100000	03080	MERR = BIT15
160	002000	03120	NEWTS* = BIT10
161	001000	03140	NEWMOD = BIT9
162	000200	03160	READY = BIT7
163	000100	03180	SEQ = BIT6
164	000040	03200	MULTI = BITS
165	000020	03220	SWC.L = BIT4
166	000020	03240	PRINT = BIT4
167	100377	03260	MERRN = 100377
168	000004	03280	MFLAGS = 4
169	177564	03281	TPS = 177564
170	177566	03282	TPB = 177566
171	177560	03283	TKS = 177560
172	177562	03284	TKB = 177562
173	000060	03285	TKV = 60
		03300	***** EMT CALL EQUATES
		03320	TYPE = EMT
		03340	PRTTBL = EMT+2
		03360	ITRAP = EMT+4
		03380	DELAYR = EMT+6
		03460	

J02

CLAFAG L36 TERM TST MAC/11 30A(1052) 03-JAN-77 00:01 PAGE 1-5
CLAFAG.P11 03-JAN-78 11:20 BASIC DEFINITIONS

SEC 0022

181	000000	033000	03500	.=0	:TRAP CATCHER
182	000000	000002	03520	.+2	
183	000002	000000	03540	HALT	
184	000004	000006	03560	MACHER: .+2	
185	000006	000000	03580	HALT	
186	000010	000012	03600	.+2	
187	000012	000000	03620	HAL	
188	000014	007162	03640	INTRAP	:BREAKPOINT TRAP
189	000016	000200	03660	PRI4	:USED DURING SYSTEM SIZER
190	000020	0C7416	03680	TXTRAP	:IOT TRAP
191	000022	000200	03700	PRI4	:USED BY TXMIT I/O DRIVER
192	000024	001372	03720	RESTR	:POWER FAIL TRAPS TO RESTART
193	000026	000000	03740	PRI0	
194	000030	006162	03760	EMTBOS	
195	000032	000000	03780	PRI0	
206	000172	000000	04000	.=172	
207	000172	000000	04020	SWTEST: .WORD 0	
208	000174	000000	04040	SWLINE: .WORD 0	
209	000176	000000	04060	SSWR: .WORD 0	
210	000200	000137	001102	04080	JMP START
211				04100	
212					.SBTTL ACT11 HOOKS
213					*****
214					;HOOKS REQUIRED BY ACT11
				\$SVPC=.	:SAVE PC
				.=46	
	000046	001102		START	::1)SET LOC.46 TO ADDRESS OF START
				.=52	
	000052	020000		.WORD 20000	::2)SET LOC.52 TO 20000
				.=\$SVPC	
				.=1100	:: RESTORE PC
			04140	NOP	
			04160		

K02

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-6
 CZLAFAO.F11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SES 0023

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216          04200      .SBTTL TEST CONTROL & INITIALIZATION
221          04300      *****
222          04320
223 001102 000005 04340      START:   RESET      ***** TEST MONITOR *****
225          04380
226          04400
227          04420      : PROGRAM II,INITIALIZATION SECTION
228          04440
229 001104 012706 001100      :
230 001110 005037 016152      MOV     #STACK,SP
231 001114 005037 016154      CLR     NEXT
232 001120 005037 016162      CLR     INTEST
233 001124 005037 016160      CLR     NXTLIN
234 001130 012737 016114      CLR     ONLIN
235 001136 012705 010352      MOV     #INBUF,PTR
236          016164      MOV     #TOOBLK,RS
237          04580
238          04600      : SEE IF SYSTEM HAS A SWITCH REGISTER
239 001142 004737 003006 04620      JSR     PC,SWRTST
240          04660
241          04680      : PRINT TEST IDENTIFICATION MESSAGE
242          04700
243 001146 012700 016772      MOV     #PROGID,RO
244 001152 104000 04740      TYPE
245          04760
246          04780      : DETERMIN SYSTEM CONFIGURATION ++
247          04800      : BUILD A TABLE OF INTERFACE LINES.
248          04820
249 001154 004737 005640      JSR     PC,BUILD
250          04860
251          04880      : RESTORE TRAP CATCHER FROM 100 TO 1000
252          04900
253 001160 004737 006126      JSR     PC,CATCH
254 001164 104002 04930      PRITBL
255          04940
256          04960      : FIND OUT IF OPERATOR WANTS TO USE
257          04980      : CONSOLE OR SWITCHS FOR CONTROL
258          05000
259 001166 004737 003350      JSR     PC,GETSRC
260 001172 004737 003332      JSR     PC,CONSON
261 001176 032737 000020 001364 05030      BIT     #SWCTL,PCFLAG
262          (9) 001204 001011      BNE     $0001$  

263          05060
264          05080      : PRINT A MENUE OF AVAILABLE COMMANDS
265          05100
266 001206 012700 017051      05115      MOV     #L3,RO
267 001212 104000 017056      05140      TYPE
268 001220 104000 017103      05180      MOV     #HEADER1,RO
269 001222 012700 017103      50001$:  TYPE
270 001226 104000 017103      05220      MOV     #COMSUM,RO
271 001230 012700 017103      50002$:  TYPE
272 001230 004737 003332      05260      BIT     #SWCTL,PCFLAG
273 001234 032737 000020 001364

```

L02

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-7
 CZLAFA.P11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SEQ 0024

```

(9) 001242 001403          BEQ    50004$  

276          ; IF IN SWITCH CONTROL GET CONTENTS OF SW REG.  

277 001244 004737 003130      JSR    PC,GETSW$  

278 001250 000421          BR     50005$  

(3) 001252          50004$:  

279          05420          ; IN CONSOLE CONTROL SIGNIFY READY  

280          05440          ; AND READ COMMANDS FROM THE CONSOLE.  

281          05460          :  

282          05480          :  

283 001252 012700 020123      MOV    #RDY,R0  

284 001256 104000          TYPE  

285 001260          05520          50006$:  

286 001260 000001          BIT    #ATTN,PCFLAG  

287 001262 032737 000200 001364      BNE    50007$  

(5) 001270 001001          BR     50006$  

288 001272 000772          50007$:  

(3) 001274          05620          ; PRINT THE LINE TABLE IF REQUESTED.  

289          05640          :  

290          05660          :  

291          05700          BIT    #PRINTT,PCFLAG  

292 001274 032737 010000 001364      BEQ    50010$  

(9) 001302 001404          PRTTBL  

293 001304 104002          05720          50010$:  

294 001306 042737 010000 001364      BIC    #PRINTT,PCFLAG  

295 001314          05780          50005$:  

296 001314          05800          ; SET UP THE I/O DRIVER AREAS  

297          05820          ; SET UP & EXECUTE REQUESTED TESTS.  

298          05840          :  

300          05870          JSR    PC,LINMON  

301 001314 004737 002110      MOV    #ALLON,RO      ; ISSUE A SELECT ALL COMMAND  

302 001320 012700 020411      JSR    PC,MTYPE      ; IN CASE THERE ARE SELECTIVE  

303 001324 004737 007010      05872          ; TERMINALS ON LINE.  

304          05874          :  

305 001330 004737 001446      JSR    PC,TSTCTL  

306 001334 032737 004000 002032      BIT    #EOL,CFLAGS  

(5) 001342 001406          BEQ    50003$  

307 001344 042737 004000 002032      BIC    #EOL,CFLAGS  

308 001352 004737 001372          JSR    PC,RESTART  

309 001356 000726          BR     50002$  

(3) 001360          50003$:  

310 001360 000137 001172          JMP    START2  

311 001364          50000$:  

312          06020          :  

313          06040          *****  

314          06060          *  

315          06080          * NOTE... TYPING CTL-G WHILE IN CONSOLE  

316          06100          * CONTROL MODE WILL CAUSE THE  

317          06120          * PCFLAG WORD TO BE PRINTED.  

318          06140          *  

319          06160          *****  

320 001364          06180          CTLBLK:          ; PROGRAM CONTROL BLOCK  

321 001364 000001          06200          PCFLAG: .WORD 1          ; PROGRAM CONTROL FLAGS  

322 001366 000000          06220          TESTNO: .WORD 0          ; TESTNO  

323 001370 000000          06240          LINENO: .WORD 0          ; LINENO  

324          06260          :

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M02

CZLAFAD LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-8
 CZLAFAD.P11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SEQ 0025

325		06280	*****	
326		06281	PCFLAG BIT DEFINITIONS *	
327		06282	*****	
328		06283		
329		06284	BIT 15 HALTOE	HALT ON ERROR (SW-15)
330		06285	BIT 14 LOOPOE	LOOP ON ERROR (SW-14)
331		06286	BIT 13 INHRPT	INHIBIT REPORTS (SW-13)
332		06287	BIT 12 PRINTT	PRINT TABLE (SW-12)
333		06288	BIT 11 DATAIN	DATA IN FROM KBD.
334		06289	BIT 10 NEWTST	CHANGE IN TEST NO.
335		06290	BIT 9 NEWMOD	CHANGE IN MODE.
336		06291	BIT 8 LDONE	END OF LINE TABLE REACHED
337		06292	BIT 7 ATTN	ATTENTION !!!!!!!
338		06293	BIT 6 SEQ	SEQUENCE TESTS MODE
339		06294	BIT 5 MULTI	MULTI LINE MODE.
340		06295	BIT 4 SWCTL	CONTROL VIA SWITCHES.
341		06296	BIT 3 DROPC	DROP LINE COMMAND
342		06297	BIT 2 ADDC	ADD LINE COMMAND
343		06298	BIT 1 FLAG2	MODE 0 = NO CURRENT I/O TO CONSOLE
344		06299	BIT 0 FLAG1	1 = IN COMMAND INPUT MODE
345		06300		2 = I/O TESTING OF CONSOLE
346		06301		3 = ?
347		06305		
348		06306		
349		06307		
350		06319	*****	
351		06320	RESTART	
352		06340	*****	
353		06360		
354	001372	012706	001100	06380 RESTRT: MOV #STACK,SP :REINITIALIZE EVERYTHING
355	001376	005037	016152	06400 CLR NEXT
356	001402	005037	016154	06420 CLR INTEST
357	001406	012737	000001	001364 06440 MOV #1, PCFLAG
358	001414	005037	016162	06460 CLR NXTLIN
359	001420	005037	016160	06480 CLR ONLIN
360	001424	012737	016114	016164 06500 MOV #INBUF_PTR
361	001432	004737	006126	06520 JSR PC,CATCH
362	001436	000240		06540 NOP
363	001440	000005		06560 RESET
364	001442	000137	001230	06580 JMP START3

NO2

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-9
 CZLAFAO.P11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SEG 0026

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369          06680 *****
370          06700 TSTCTL THIS SECTION CONTROLS TEST SELECTION, TEST
371          06720 SEQUENCING, AND INTERFACES TO ERROR AND REPORT
372          06740 MODULES AS REQUIRED BY THE TEST MODULES.
373          06760 *****
374          06780
375 001446 013737 001366 016152 06800 TSTCTL MOV TESTNO,NEXT      ;GET TEST NO.
376 001454 013737 016152 016154 06820 LOOP1: MOV NEXT,INTEST    ;GET CURRENT TEST NO.
377 001462 004737 002056 06840 JSR PC,SUTEST
378 001466 004777 014464 06920 LOOP2: JSR PC,ATESTAD   ;START TEST
379          06940
380          06942
381          06944
382          06946 : CHECK FOR ERROR FLAG FROM TEST

383 001472 032737 000020 001364          BIT #SWCTL,PCFLAG
384 (9) 001500 001414          BEQ 50011$               SWR TEMP
385 001502 017737 014416 016100          MOV #SWR TEMP
386 001510 042737 003777 016100          BIC #3777 TEMP
387 001516 042737 174000 001364          BIC #174000 PCFLAG
388 001524 053737 016100 001364          BIS TEMP,PCFLAG
389 001532          06953: 50011$:          BIT #MERR,MFLAGS(R5)
390 (9) 001532 032765 100000 000004          BEQ 50012$               MFLAGS(R5),CFLAGS
391 001540 001414          MOV POINT(R5),TSCPTR
392 001542 016537 000004 002032          MOV
393 001550 016537 000006 002034          07002:          : CALL ERROR HANDLER ROUTINE
394          07004:          JSR PC,ERROR
395          07006:          BIC #MERRN,MFLAGS(R5)
396 001556 004737 005124 07062:          BR 50013$               MERRN,MFLAGS(R5)
397 001562 042765 100377 000004          07064:          : SEE IF TEST IS REPORTING DONE CONDITION
398 001570 000421          07066:          BIT #TDONE,MFLAGS(R5)
399 (3) 001572          07082:          BEQ 50014$               TDONE,MFLAGS(R5)
400          07084:          : UPDATE THE PASS COUNT THEN REPORT END OF PASS
401          07086:          INC PASCNT(R5)
402 001572 032765 020000 000004          BIC #TDONE,MFLAGS(R5)
403 (9) 001600 001415          07222:          BIS #EOP,CFLAGS
404          07224:          MOV PASCNT(R5),TSCCNT
405          07226:          JSR PC,REPORT
406 001602 005265 000002 07230:          50014$:          : IF LOOP ON ERROR IS SET AND AN ERROR IS
407 001606 042765 020000 000004          07232:          DETECTED THE ERROR HANDLER WILL MAKE THE
408 001614 052737 020000 002032          07234:          RETURN ADDRESS OF THE TEST ODD
409 001622 016537 000002 002036          : CHECK FOR ODD ADDRESS....IN LOOP MODE...
410 001630 004737 005436          07234:          BIT #BIT0,RPC(R5)
411 001634          07234:          50013$:          :
412 001634          07234:          :
413          07234:          :
414          07234:          :
415          07234:          :
416          07234:          :
417          07234:          :
418          07234:          :
419          07234:          :
420 001634 032765 000001 000010          07234:          :

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CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-10
 CZLAFAO.P11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SEQ 0027

```

(9) 001642 001413           BEQ    50015$  

421 07242  

422 07244 ; IF THE LOOP OR ERROR IS TURNED OFF THEN  

423 07246 CONTINUE TEST AT THE NEXT SUBTEST.  

424 07248 ;  

425 001644 032737 040000 001364     BIT    #LOOPOE,PCFLAG  

(9) 001652 001006             BNE    50016$  

426 001654 042765 000001 000010     BIC    #BIT0,RPC(R5)  

427 001662 016537 000010 016156     MOV    RPC(R5),TESTAD  

428 001670 000456             50016$: BR     50017$  

429 001672 000456             50015$:  

(3) 001672 026565 000002 000000     07342 : CHECK TO SEE IF THE ITERATION COUNT IS COMPLETED  

431 001700 003447             07344  

432 001702 052737 040000 002032     07346 :  

433 001710 005037 002036             CMP    PASCNT(R5),CTLCNT(R5)  

(9) 001720 016565 000002 000000     BLE    50020$  

434 001726 066565 177776 000000     BIS    #EOT,CFLAGS  

435 001726 066565 177776 000000     CLR    TSCCNT  

436 07402 : REPORT END OF TEST CONDITION  

437 07404  

438 07406 :  

439 001714 004737 005436             JSR    PC,REPORT  

440 001720 016565 000002 000000     MUV    PASCNT(R5),CTLCNT(R5)  

(6) 001726 066565 177776 000000     ADD    ICNT(R5),CTLCNT(R5)  

441 07442 : IF IN SEQUENCE TESTS MODE SET UP NEXT TEST  

442 07444  

443 07446 :  

444 001734 032737 000100 001364     BIT    #SEQ,PCFLAG  

(9) 001742 001423             BEQ    50021$  

445 001744 013737 016152 016154     MOV    NEXT,INTEST  

446 001752 005237 016152             INC    NEXT  

447 07520 :  

448 07522  

449 07524 : IF NEXT IS A NON EXISTANT TEST SET EOL  

450 07526 AND RETURN TO MONITOR FOR NEW COMMANDS  

451 07528 :  

452 001756 023727 016154 000005     CIP    INTEST,#5  

(9) 001764 003407             BLE    50022$  

453 001766 005037 016152             CLR    NEXT  

454 001772 052737 004000 002032     LIS    #EOL,CFLAGS  

455 002000 000207             RTS    PC  

456 002002 000402             BR     50023$  

(3) 002004 000402             50022$: JSR    PC,SUTEST  

457 002004 004737 002056             50023$: BR     50024$  

458 002010 000402             50021$:  

(3) 002012 000402             07682 : SET UP TEST ADDRESS FOR THE SAME TEST AGAIN.  

460 002012 004737 002056             07684  

461 002016 000403             07686 :  

462 002016 004737 002056             JSR    PC,SUTEST  

463 002016 000403             50024$: BR     50025$  

464 002020 004737 002056             50020$: ;  

465 002020 000403

```

C03

CZLAFAC LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-11
 CZLAFAC.P11 03-JAN-78 11:20 TEST CONTROL & INITIALIZATION

SES 0028

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467          07744 : RETURN TO TEST VIA ADDRESS SUPPLIED BY TEST
468          07746 :
469 002020 016537 000010 016:56      50025$:
470 002026          000000      50017$:
471 002026          000000      07820   JMP     LOOP2
472 002026 000137 001466      08160
473          08180
474          08200
475 002032 000000      08220   CFLAGS: .WORD    0 :FLAGS
476 002034 000000      08240   TSCTR: .WORD    0 :POINTER
477 002036 000000      08260   TSCCNT: .WORD    0 :PASCNT
478          08300
479          08320   TSTBL: TEST0      : TABLE OF TEST ADDRESSES *****
480 002040 010164      08340   TEST1
481 002042 010444      08360   TEST2
482 002044 011526      08380   TEST3
483 002046 013700      08400   TEST4
484 002050 014652      08420   TEST5
485 002052 015354      08440   -1
486 002054 177777      08441
487          08442
488          08443
489          08444
490          08445
491          08446 :SUTEST INITIALIZES THE TEST ADDRESS POINTER
492          08447 FOR TEST • IN 'INTEST'
493          08448
494          08449 :*****
495          08450
496 002056          08451 SUTEST:
497 002056 006337 016154      ASL     INTEST
498 002062 012700 002040      MOV     @TSTBL, R0
499 002066 063700 016154      ADD     INTEST, R0
500 002072 011037 016156      MOV     (R0), TESTAD
501 002102 005065 000004      ASR     INTEST
502 002106          08452 CLR     MFLAGS RS
503          08453
504          08454
505          08455
506          08456
507          08457
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CZLAFAD L36 TERM TST MAC 11 30H 1052 03-JAN-77 00:01 PAGE 1-12
 CZLAFAD.FII 03-JAN-76 11:20 LINE CONTROL & INITIALIZATION

SEG 0029

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507
508
509
510
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512
513
514 002110 032737 DC1000 001364
515 002110 032737 DC1000 001364
516 002116 001426
      08500 :SBTTL LINE CONTROL & INITIALIZATION
      08520 :*****+
      08540 :THIS SECTION CONTROLS THE SELECTION AND SEQUENCING
      08560 :OF SINGLE OR MULTIPLE LINES FOR TESTING.
      08580 :*****+
      08600
      08620

      08680 LINMON:
      08700   BIT     $NEWMOD,PCFLAG
      08720   BEQ    50002$*
      08740
      08760   : INITIALIZE THE DEVICE HANDLER :
      08780   : SET UP A POINTER AREA WITH THE
      08800   : DEVICE ADDRESSES & VECTORS ETC.

521 002120 032737 000040 001364
522 002126 001407
523 002130 004737 002332
524 002134 004737 002432
525 002140 004737 002556
526 002144 000410
527 002146
      08880
      08900
      08920
      08940   :MULTI,PCFLAG
      08960   BEQ    50003$*
      08980   JSR    PC,GVL
      09000   JSR    PC,MTW
      09020   JSR    PC,GNL
      09040   BR     50004$*
      09060   :50003$:
      09080   : GET SELECTED LINE NUMBER AND
      09100   : PULL THE DATA FROM THE TABLE.
      09120
      09140   :MOV    LINENO,ONLIN
      09160   JSR    PC,MTW
      09180   MOV    ONLIN,NXTLIN
      09200   :50004$:
      09220   BIC    $NEWMOD,PCFLAG
      09240   BR     50005$*
      09260   :50005$:
      09280   :50006$:
      09300   :50001$:
      09320   RTS    PC
      09340
      09360
      09380
      09400   :*****+
      09420   :LINESEL ROUTINE TO FURNISH THE IODRIVER WITH DVC POINTERS
      09440   :*****+
      09460   :LINESEL:
      09480   : MULTIPLE LINES UNDER TEST ?
      09500
      09520   :BIT    $MULTI,PCFLAG
      09540   BEQ    50002$*
      09560
      09580   :SET UP POINTER AREA WITH DATA FOR
      09600
      09620
      09640
      09660
      09680
      09700
      09720
      09740
      09760
      09780
      09800
      09820
      09840
      09860
      09880
      09900
      09920
      09940
      09960
      09980
      09990
      09999
  
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E03

LAFAFO LA36 TEFM TST MAC 11 30A. 1052 03-JAN-77 00:01 PAGE 1-13
LAFA.F:1 03-JAN-78 11:20 LINE CONTROL & INITIALIZATION

SES CC30

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556      : THE NEXT DEVICE TO BE TESTED
557
558 002214 013737 016162 016:60 09480 : MOV      NXTLIN,ONLIN
559
560 002222 023727 016160 177777 09500 :
561 002230 001012 000400 001364 09540 : RESET EVERYTHING IF AT THE END OF OUR DEVICE LIST.
562 002232 052737 000400 001364 09560
563 002240 004737 002332 09580 09580 :
564 002244 004737 002432 09720   CMP      ONLIN,-1
565 002250 004737 002556 09750   BNE      $0003$,
566 002254 000404 000400 09780   BIS      $LDONE,PCFLAG
567 002256 004737 002432 09920   JSR      PC,GVL
568 002262 004737 002556 09940   JSR      PC,MTW
569 002266 000420 000400 09960   JSR      PC,GNL
570 002270 004737 002432 09980   BR       $0004$:
571 002270 032737 00020C 016:26 09980   ; SET UP POINTER AREA FOR LINE = 'ONLIN'.
572 002274 001404 001404 09980   ;:
573 002302 004737 002432 09980   JSR      PC,MTW
574 002302 004737 002556 09980   JSR      PC,GNL
575 002304 052737 000400 001364 09980   BR       $0005$:
576 002312 000406 000400 09980   JSR      PC,MTW
577 002312 000406 000400 09980   BIT      $SEL,DLFLAG
578 002312 000406 000400 09980   BEQ      $0006$:
579 002312 000406 000400 09980   ; CHECK TO SEE IF ALL DEVICES
580 002312 000406 000400 09980   HAVE BEEN TESTED YET. SET LDONE FLAG.
581 002304 052737 000400 001364 09980   BIS      $LDONE,PCFLAG
582 002312 000406 000400 09980   BR       $0007$:
583 002312 000406 000400 09980   ;:
584 002312 000406 000400 09980   ; MAKE SURE THAT WHEN TESTING A SINGLE
585 002312 000406 000400 09980   ; DEVICE, IT DOESN'T GET DROPPED
586 002312 000406 000400 09980   ; BECAUSE OF EXCESSIVE ERRORS
587 002314 052737 00020C 016126 10040 :
588 002322 012700 020345 016126 10050 :
589 002326 10400C 016126 10080 :
590 002326 10400C 016126 10100 :
591 002330 002330 016126 10120 :
592 002330 002330 016126 10180   BIS      $SEL,DLFLAG
593 002330 002330 016126 10180   MOV      $E20,R0
594 002330 002330 000207 10260   TYPE
595 002330 002330 000207 10280   50007$:
596 002330 002330 000207 10300   50005$:
597 002330 002330 000207 10320   50000$:
598 002330 002330 000207 10340   50001$:
599 002332 010346 016170 10360   RTS      PC
600 002334 012703 016170 10260   ***** THIS ROUTINE FINDS A VALID LINE FOR TESTING *****
601 002340 005713 016170 10280   GVL:
602 002342 100412 016170 10300   MOV      P3,-(SP)
603 002344 062703 000315 10400   MOV      $LIN00,R3
604 002344 062703 000315 10420   G1A:   TST      (R3)
605 002344 062703 000315 10440   BMI      G1D
606 002344 062703 000315 10440   G1B:   ADD      $10,R3
607 002344 062703 000315 10440   ; GET ADDR OF LINE TABLE
608 002344 062703 000315 10440   ; LIN PRESENT?
609 002344 062703 000315 10440   ; YES BRANCH
610 002344 062703 000315 10440   ; POINT TO OTHER WORD

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F03

ELAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-14
ELAFAO.F11 03-JAN-78 11:20 LINE CONTROL & INITIALIZATION

FEB 2003

604	002350	020027	016770	10460	CMP	RO TABEND	:END OF TABLE?
605	002354	001371		10480	BNE	G1A	:NO BRANCH
606	002356	012700	020306	10500	G1C:	MOV	:NO IFY OPERATOR - NO LINES
607	002362	104000		10520	TYPE		
608	002364	000137	001372	10540	JMP	RESTR	
609	002370	105713		10560	G1D:	TSTB	:LINE SELECTED?
610	002372	100364		10580		BPL	:NO TRY ANOTHER LINE
611	002374	062703	000006	10600		ADD	:POINT TO OTHER WORD
612	002400	011337	016160	10620		MOV	:SET DATA FROM TABLE
613	002404	000337	016160	10640		SWAB	ONLIN
614	002410	105037	016161	10660		CLRB	ONLIN+1
615	002414	005037	000174	10680		CLR	SWLINE
616	002420	113737	016160	000174		MOVB	ONLIN, SWLINE
617	002426	012603		10700		MOV	(SP)+, R3
618	002430	000207		10740		RTS	PC
619				10760	*****		:EXIT
620				10780	*****	MTW	THIS ROUTINE TRANSFERS TABLE DATA TO THE WORK AREA
621				10800	*****		
622				10820			
623	002432			10840	MTW:		
624	002432	010346		10860	MOV	R3, -(SP)	
625	002434	013703	016160	10880	MOV	ONLIN, R3	:GET LINE NO.
626	002440	006303		10900	ASL	R3	
627	002442	006303		10920	ASL	R3	
628	002444	006303		10940	ASL	R3	
629	002446	062703	016170	10960	MTW1:	ADD	:X8 FOR OFFSET
630	002452	012337	016126	10980		(R3)+, DLFLAG	:ADD IN BASE ADDR
631	002456	012337	016130	11000		(R3)+, DLADR	:GET FLAG WORD
632	002462	012337	016132	11020		(R3)+, DLVEC	:GET ADDRESS
633	002466	011337	016134	11040		(R3), DLOTH	:GET VECTOR
634	002472	013737	016130	016136		DLAGR, DVCRXB	:GET "OTHER" WORD
635	002500	062737	000002	016136		#2, DVCRXB	
636	002506	013737	016136	016140		DVCRXB, DVCTYS	
637	002514	062737	000002	016140		#2, DVCTXS	
638	002522	013737	016140	016142		DVCTXS, DVCTXB	
639	002530	013737	016132	016144		DLVEC, TXVEC	
640	002536	062737	000004	016144		#4, TXVEC	
641	002544	062737	000002	016142		#2, DVCTXB	
642	002552	012603		11180		MOV	(SP)+, R3
643	002554	000207		11220		RTS	PC
644				11240	*****		
645				11260	*****	GNL	THIS ROUTINE FINDS THE NEXT VALID LINE TO TEST
646				11280	*****		
647	002556			11300			
648	002556	010346		11320	GNL:		
649	002560	013703	016160	11340	MOV	R3, -(SP)	
650	002564	005203		11360	MOV	ONLIN, R3	:GET CURRENT LINE
651	002566	006303		11380	INC	R3	:CURRENT +1
652	002570	006303		11400	ASL	R3	
653	002572	006303		11420	ASL	R3	
654	002574	062703	016170	11440	ADD	#LIND0, R3	:X8 FOR OFFSET
655	002600	005713		11460	TST	(R3)	:ADD IN BASE ADDR OF TABLE
656	002602	100403		11480	BMI	GN3	:LINE PRESENT?
657	002604	062703	000010	11500	GN2:	ADD	:YES - BRANCH
658	002610	000773		11520	BR	#10, R3	:POINT TO NEXT LINE ENTR.
659						GN1	:CHECK NEXT

GO3

ZLAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-15
 ZLAFAO.F11 03-JAN-78 11:20 LINE CONTROL & INITIALIZATION

SEG 0032

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658 002612 105713      11540  GN3:   TSTB    (R3)      :LINE SELECTED?
659 002614 100373      11560  BPL     GN2       :NO TRY ANOTHER
660 002616 021327 177777 11580  CMP     (R3),#-1   :END OF TABLE?
661 002622 001412      11600  BEQ     GNS      :YES - BRANCH
662 002624 062703 000006 11620  ADD     #6,R3    :GET "OTHER WORD"
663 002630 011337 016162 11640  MOV     (R3),NXTLIN
664 002634 000337 016162 11660  SWAB    NXTLIN
665 002640 105037 016163 11680  CLRQ    NXTLIN+
666 002644             11700  GN4:   MOV     (SP)+,R3
667 (4) 002644 012603      11720  RTS     PC       :EXIT
668 002646 000207      11740  GNS:   MOV     #1,NXTLIN :SET NXTLIN TO -1 - NO SELECT
669 002656 000772      11760  BR     GN4
670
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674
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676 002660
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680 002660 006337 004776      11902  UPDATE: SHIFT THE CONVERTED LINE NO. FOR AN
681 002664 006337 004776      11904  OFFSET TO THE LINE TABLE.
682 002670 006337 004776      11906
683
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687 002674 062737 016170 004776      11930  : ADD IN THE BASE ADDRESS OF THE TABLE.
688
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    ADD  #LIN00,DATA
    11960
    11980
    12000
    12020
    BIT  $DLP,DATA
    BNE  50002$  

    JSR  PC,SELERR
    BR   50003$  

    50002$:  

    ADDC TEMPF
    BEQ  50004$  

    BIS  $SEL,DATA
    BIC  $ABO!,#17,DATA
    ADD  #7,DATA
    MOVB DATA,LINENO
    BR   50005$  

    50004$:  

    DROPPING A LINE JUST RESETS IT'S "SELECTED" FLAG
    BIT  $DROPC,TEMPF
    BEQ  50006$  

    BIC  $SEL,DATA
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02LAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-16
02LAFA.P11 03-JAN-78 11:20 LINE CONTROL & INITIALIZATION

SEG 0033

706 003000
707 003000
708 003000 005037 004776
709 003004
710 003004
711 003004 000207

50005\$:
50003\$:
50000\$:
50001\$:
CLR DATA
RTS PC

12480
12500

CLRAFD.LA36 TERM TST MAC:11 30A 1052 03-JAN-77 00:01 PAGE 1-17
 CLRAFD.FII 03-JAN-78 11:20 SWITCH REGISTER ROUTINES

SES 0034

```

713          12540      .SBTTL  SWITCH REGISTER ROUTINES
714          12560      :*****
715          12580      :SWRTST TESTS FOR HARDWARE SWITCH REGISTER
716          12600      :*****
717 003006 012737 003040 0C0004 12620 SWRTST: MOV    #4$, MACHER   ;SU NXM TRAP TO 4$
718 003014 012737 000340 000006 12640     MOV    SPR17, MACHER+2 ;ACCESS SWITCH REG.
719 003022 005777 013076 000000 12660     TST    JSWR
720 003026 000240 000000 000000 12680     NOP
721 003030 012737 177570 016124 12700     MOV    #177570, SWR ;RETAIN HARDWARE POINTER
722 003036 000404 000176 016124 12720     BR    65
723 003040 012737 000006 016124 12740     4S:   MOV    #SSWR, SWR ;SU FOR SOFTWARE SWITCH REG.
724 003046 022626 000006 000004 12760     ISP2
725 003050 012737 000006 000004 12780     6S:   MOV    #6$ MACHER   ;CLEAN THE STACK
726 003056 005037 000005 000005 12800     CLR    MACHER+2 ;RESET TRAP CATCHER
727 003062 000207 000005 000004 12820     RTS    PC
728          12840
729          12860      :*****
730          12880      : CTLGX THIS ROUTINE PRINTS THE PROGRAM CONTROL FLAGS ON THE CONSOLE.
731          12900      :*****
732          12920      :*****
```

CTLGX:

```

733 0C3064 013746 001364
734 003064 013746 001364
735 003070 012746 000006
736 003074 012746 020230
737 003100 004737 007566
738 003104 142737 000006
739 003112 012700 020215 020226
740 003116 104000 13080      TYPE
741 003120 012700 017730 13120      TYPE
742 003124 104000
743 003126
744 003126 000207
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751 0C3130
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755 003130 000000
756 003132 017737 012766 016100
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761 003140 032737 000100 016100
762 003146 001404
763 003150 032737 000040 016100
764 003156 001016
765 003160 000000
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J03

DCLAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-18
 DCLAFAD.P11 03-JAN-78 11:20 SWITCH REGISTER ROUTINES

SEQ 0035

763	003162	017737	012736	016102		MOV	\$SWR, TEMP+2
764	003170	005037	001366			CLR	TESTNO
765	003174	113737	016102	001366		MOV#	TEMP+2, TESTNO
766	003202	005037	001370			CLR	LINENO
767	003206	113737	016103	001370		MOV#	TEMP+3, LINENO
768	003214				50003\$:		
769	003214	032737	000100	016100		BIT	#SEQ, TEMP
770	003222	001406				BEQ	50004\$
771	003224	052737	000100	001364		BIS	#SEQ, PCFLAG
772	003232	005037	001366			CLR	TESTNO
773	003236	000403				BR	50005\$
774	003240				50004\$:		
775	003240	042737	000100	001364		BIC	#SEQ, PCFLAG
776	003246	032737	000040	016100	13780		
777	003254	001406				BIT	#MULTI, TEMP
778	003256	052737	000040	001364		BEQ	50006\$
779	003264	005037	001370			BIS	#MULTI, PCFLAG
780	003270	000403				CLR	LINENO
781	003272					BR	50007\$
782	003272	042737	000040	001364	13940		
783	003300	052737	003200	001364	13980		
784	003306	042737	174037	001364		BIS	#ATTN! #NEWMOD! #NEWTST. PCFLAG
785	003314	042737	003777	016100		BIC	#174037 PCFLAG
786	003322	053737	016100	001364		BIC	#3777 TEMP
787	003330					BIS	TEMP, PCFLAG
788	003330				50000\$:		
789	003330	000207			50001\$:		
						RTS	PC
					14100		

K03

CZLAFAO LA36 TERM TST MAC,11 30A(1052) 03-JAN-77 00:01 PAGE 1-19
 CZLAFAO.F11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG 0036

```

791          14840      .SBTTL CONSOLE TERMINAL ROUTINES
792          14860      *****
793          14880      :CONSON-- ROUTINE TO INITIALIZE CONSOLE VECTOR AREA
794          14900      *****
795          14920      *****
796 003332 012737 003466 000060 14940 CONSON: MOV     #READKB, @PTK  ;INTERRUPT TO "READKB"
797 003340 012737 000101 177560 14960    MOV     #101, @TKS
798 003346 000207          14980    RTS     PC
799          15000
800          15020      *****
801          15040      :GETSRC
802          15060      THIS ROUTINE ASKS THE OPERATOR IF HE/SHE
803          15080      WANTS TO USE CONSOLE CONTROL. THEN SETS
804          15100      A CONTROL FLAG ACCORDINGLY.
805          15120      *****
806          15140      *****
807 003350          GETSRC:
808 003350 005077 012610          CLR     @PTR
809 003354 012700 020370          MOV     @CTL.M, R0
810 003360 104000          TYPE
811 003362 012737 000001 177560 15220    MOV     $1, @TKS
812 003370          50002$:
813 003370 032737 000200 177560          BIT     #READY, @TKS
814 (9) 003375 001410          BEQ     50004$
815 003400 113777 177562 012556          MOVB   @TKB, @PTR
816 003406 004737 005044          JSR     PC, ECHO
817 003412 012700 017730          MOV     $L1, R0
818 003416 104000          TYPE
819 003420 005777 012540          50004$:
820 (5) 003424 001001          TST     @PTR
821 003426 000760          BNE     50003$
822          50003$:
823          50002$:
824 003430 142777 000200 012526          BR     50002$
825 003436 027727 012522 000116          BICB   $200, @PTR
826 (9) 003444 001007          CMP     @PTR, #'N
827 (6) 003446 023727 016124 000176          BNE     50005$
828 (9) 003454 001403          CMP     SWR, #SSWR
829 003456 052737 000020 001364          BEQ     50005$
830          50005$:
831          50000$:
832 003464 000207          BIS     #SWCTL, PCFLAG
833          50001$:
834          RTS     PC
  
```

CZLAFAD LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-20
 CZLAF.A.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEQ 0037

```

827          15540 *****
828          15560 READKB THIS MODULE IS AN INTERRUPT HANDLER
829          15580 FOR THE CONSOLE TERMINAL.
830          15600 ;*****
831          15620
832 003466   READKB:
833 003466 010046 15650 MOV    R0,-(SP)
834          15655 GET CHAR FROM KEYBOARD BUFFER REG.
835          15660 CLEAR PARITY BIT IF SET.
836          15665
837          15680
838 003470 013737 177562 003776 15685 CHECK FOR DEVICE ERROR
839 003476 142737 000200 003776 15690
840          15715
841          15720
842          15725
843 003504 032737 100000 003776 15730
844 (9) 003512 001405 50002$ BIT    #MERR RDSAV
845 003514 004737 005062 JSR    PC,CMDERR
846 003520 005037 177560 CLR    #TKS
847 (3) 003524 000516 BR     50003$ 50002$:
848          15750
849          15755
850          15760
851 003526 123727 003776 000007 15770
852 (9) C03534 001006 50004$ CMPB   RDSAV, #CTLG
853 003536 004737 003064 JSR    PC, CTLGX
854 003542 012700 017730 MOV    #L1, R0
855 003546 104000 TYPE   BR     50005$ 50004$:
856 (3) 003550 000504
857 003552 032737 000002 001364 15756
858          15757
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868 003602 032737 000001 001364 50006$:
869 (9) 003610 001406 50006$ BIT    #FLAG2,PCFLAG
870 003612 113777 003776 012344 MOV    RDSAV,(R1)
871 003620 004737 004000 BIS    #DATAIN,PCFLAG
872 (3) 003624 000456 CLR    DELAYT
873          003626 BR     50007$ 50006$:
874          15796
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1425         15799
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M03

CZLAFAD LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-21
 CZLAFAD.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEQ 0036

```

875 003626 123727 003776 000003      CMPB    RDSAV #CTLC
(9) 003634 001003                      BNE     50012$S
876 003636 004737 001372      JSR     PC RESTRT
877 003642 000447                      BR      50013$S
(3) 003644

878                               15811
879                               15812 : CHECK FOR PRINT REPORTS COMMAND
880                               15813 :
881 003644 123727 003776 000020      CMPB    RDSAV #CTLP
(9) 003652 001004                      BNE     50014$S
882 003654 042737 020000 001364      BIC     #INHRPT,PCFLAG
883 003662 000437                      BR      50015$S
(3) 003664

884                               15826
885                               15827 : CHECK FOR NO REPORTS COMMAND
886                               15828 :
887 003664 123727 003776 000016      CMPB    RDSAV #CTLN
(9) 003672 001004                      BNE     50016$S
888 003674 052737 020000 001364      BIS     #INHRPT,PCFLAG
889 003702 000427                      BR      50017$S
(3) 003704

890                               15841
891                               15842 : CHECK FOR HALT ON ERROR COMMAND
892                               15843 :
893 003704 123727 003776 000010      CMPB    RDSAV #CTLH
(9) 003712 001004                      BNE     50020$S
894 003714 052737 100000 001364      BIS     #HALTOE,PCFLAG
895 003722 000417                      BR      50021$S
(3) 003724

896                               15856
897                               15857 : CHECK FOR LOOP ON ERROR COMMAND
898                               15858 :
899 003724 123727 003776 000014      CMPB    RDSAV #CTLL
(9) 003732 001004                      BNE     50022$S
900 003734 052737 040000 001364      BIS     #LOOPPOE,PCFLAG
901 003742 000407                      BR      50023$S
(3) 003744

902                               15871
903                               15872 : CHECK FOR CLEAR COMMAND
904                               15873 :
905 003744 123727 003776 000013      CMPB    RDSAV #CTLK
(9) 003752 001003                      BNE     50024$S
906 003754 042737 140000 001364      BIC     #HALTOE!#LOOPPOE,PCFLAG
907 003762
908 003762
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910 003762
911 003762
912 003762
913 003762
914 003762
915 003762
916 003762
917
918
919                               15935
                               15940 : TURN CONSOLE BACK ON & EXIT.
                               15945 :
```

N03

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-22
CZLAF.A.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG 0039

920	003762	012737	000101	177560	MOV	\$101,2@TKS
921	003770	012600			MOV	(SP)+,R0
922	003772	000002		15960	RTI	
923	003774				50000\$:	
(3)	003774				50001\$:	
(2)	003774	000207			RTS	PC
924				16580		
925	003776	000000		16600	RDSAV: .WORD	0

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-23
 CZLAF.A.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEQ 0040

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927
928
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930
931 004000
932
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936 004000 123727 003776 000033
(9) 004006 001030
937 004010 112777 000044 012146
938 004016 004737 005044
939 004022 012700 017051
940 004026 104000
941 004030 042737 000001 005002
942
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946 004036 013737 005002 001364
947 004044 013737 005004 001366
948 004052 012737 016114 016164
949
950 004060 042737 017603 005002
951
952 004066 000457
(3) 004070
953
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957 004070 123737 003776 016166
(9) 004076 001007
958 004100 012737 016114 016164
959 004106 012700 017730
960 004112 104000
961 004114 000444
(3) 004116
962
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964
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966 004116 123727 003776 000015
(9) 004124 001021
967 004126 012700 017730
968 004132 104000
969 004134 004727 004230
970 004140 123727 016114 000121
(9) 004146 001007
971 004150 005037 001056
972 004154 005037 005034
973 004160 012737 000001 016152
974 004166 000417
(3) 004170

16640 : *****
16660 ; CSI COMMAND STRING INTERPRETER
16680 : *****
16700
16740 CSI:
16760 ; IF CMD CHMR IS AN ESCAPE ECHO A '$'
16780 ; AND SET MODE BACK TO 0.
16800
16900
17100
17120
17140
17160 ; MOVE NEW CONTROL FLAGS TO THE PCFLAG WORD.
; RESET THE BUFFER POINTER.
17235
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C04

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-24
CZLAFRA.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG 0041

976
978
979
980 004170 123727 003776 000077 17800 :
(9) 004176 001007 17820 : IF CMD CHAR WAS A '?' RETYPE THE COMMAND
981 004200 012700 017103 17840 : SUMMARY & GO TO READY CONDITION.
982 004204 104000 17920 :
983 004206 012700 020123 17960 :
984 004212 104000 :
985 004214 000404 :
(3) 004216 :
986 18000 :
987 18020 : ECHO THE INPUT CHARACTER.
988 18040 :
989 004216 004737 005044 50011\$:
990 004222 00523~ 016164 JSR PC ECHO
991 004226 INC PTA
992 004226 50012\$:
993 004226 50010\$:
994 004226 50005\$:
995 004226 50003\$:
(3) 004226 50000\$:
(2) 004226 000207 50001\$:
996 18220 RTS PC
997 18240

CZLAFAO L836 TERM TST MAC:11 30A 1052 03-JAN-77 00:01 PAGE 1-25
 CZLAFAL.FII 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

EE 0042

```

999
:000
:001
:002
:003
:004 004230
:005
:006 004230 010046
:007 004232 010146
:008 004234 010246
:009 004236 012702 001364
:010 004242 012700 004656
:011 004246 012701 016114
:012 004252
:013
:014
:015
:016 004252 121110
:017 004254 001145
:018
:019
:020 004256 116037 000001 004774
:021 004264 056037 000002 005002
:022 004272 046037 000004 005002
:023 004300 005037 004776
:024 004304 005037 005000
:025
:026
:027
:028 004310 032737 000340 004774
:029 004316 001520
:030 004320 126127 000001 000015
:031 004326 001006
:032
:033 004330 004737 005062
:034
:035
:036
:037 004334 012737 016114 016164
:038 004342 000505
:039 004344
:040
:041
:042 004344 012746 004776
:043 004350 116137 000001 004776
:044 004356 126127 000002 000015
:045 004364 001003
:046 004366 012746 000001
:047 004372 000417
:048 004374 116137 000002 004777
:049 004402 126127 000003 000015

18280 **** DECODE THIS SECTION DECODES THE COMMAND STRING FROM THE
18300 CONSOLE, AND SETS THE APPROPRIATE CONTROL FLAGS.
18320 ****
18340 ****
18360 ****

18400 DECODE:
18420      MOV    R0,-(SP)
18440      MOV    R1,-(SP)
18460      MOV    R2,-(SP)
18480      MOV    #CILBLK,R2
18500      MOV    #CPECTBL,R0
18520      MOV    #INBUF,R1

50002$:
18560      : COMPARE CHAR IN TO FIRST BYTE OF TABLE
18580
18600
18620      CMPB   (R1), (R0),
18640      BNE    50004$
18660      : IF SAME GET FLAGS FROM THE TABLE TO TEMPF
18680
18700      MOVB   1(R0), DECSAV
18720      BIS    2(R0), TEMPF
18740      BIC    4(R0), TEMPF
18760      CLR DATA
18780      CLR DATA2

18800      : SEE IF THIS COMMAND REQUIRES ADDITIONAL DATA
18820
18840      BIT    #NREQ, DECSAV
18860      BEQ    50005$
18880      CMPB   1(R1), SCR
18900      BNE    50006$

18920      : DATA REQUIRED BUT NOT PRESENT...ERROR
18940      JSR    PC, CMDERR

18960      : IF A OR D COMMAND USE DATA FOR LINE NO.
18980
19000
19020      MOV    #INBUF, PTR
19040      BR    50007$

50006$:
19060      : CONVERT THE CHARS TO OCTAL...DATA
19080
19100
19120      MOV    #DATA,-(SP)
19140      MOVB   1(R1), DATA
19160      CMPB   2(R1), SCR
19180      BNE    50010$
19200      MOV    #1,-(SP)
19220      BR    50011$

50010$:
19240      MOVB   2(R1), DATA+1
19260      CMPB   3(R1), SCR

```

E04

ZLAFAD LA36 TERM TST MAC:11 30A 1052 03-JAN-77 00:01 PAGE 1-26
 ZLAFAL.F11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG C043

```

 9) 004410 001003      BNE   50012$  

1049 004412 012746      MOV    #2-(SP  

1050 004416 000405      BR    50013$  

 3) 004420      50012$:  

1051 004420 116137 000003 005000      MOVB  3(R1),DATA2  

1052 004426 012746 000003      MOV    #3,-(SP)  

1053 004432      50013$:  

1054 004432      50011$:  

1055 004432 012746 004776      MOV    #DATA,-(SP)  

1056 004436 004737 007676      JSR    PC,A2BIN  

1057      1944C      : IF R COMMAND USE DATA AS A TEST NO.  

1058      19460      :  

1059      19480      :  

1060 004442 121027 000122      CMPB  (R0),#R  

 9) 004446 001020      BNE   50014$  

1061      19520      : CHECK THE LIMITS FOR VALID TEST NO.  

1062      19540      :  

1063      19560      :  

1064      19580      :***** #5 BELOW IS HIGHEST TEST NO THIS DIAGNOSTIC *****  

1065 004450 005737 004776      TST    DATA  

 8) 004454 002404      BLT    50015$  

 6) 004456 023727 004776 000005      CMP    DATA,#5  

 9) 004464 003403      BLE    50016$  

 6) 004466 004466 004737 005100      50015$:  

1066      JSR    PC,SELERR  

1067      1964C      : OUT OF RANGE ERROR.  

1068      19660      :  

1069      19680      :  

1070 004472 000403      SR    50017$  

 3) 004474      50016$:  

1071 004474 013737 004776 005004      MOV    DATA,TEMPT  

1072 004502 052737 100000 005000      50017$:  

1073 004502 052737      BIS    #MERR,DATA2  

1074 004510 004514 121027 000127      50014$.  

1075      19800      : IF W COMMAND USE DATA AS WIDTH  

1076      19820      :  

1077      19840      :  

1078 004510 004514 001005      CMPB  (R0),#W  

 9) 004514      BNE   50020$  

1079      19880      : GO CHECK FOR VALID LIMITS ON WIDTH ENTRY.  

1080      19900      :  

1081      19920      :  

1082 004516 004737 005006      JSR    PC,CHKW  

1083 004522 052737 100000 005000      BIS    #MERR,DATA2  

1084 004530      50020$:  

1085      20000      : IF ADDING OR DROPPING A LINE CALL UPDATE ROUTINE  

1086      20020      :  

1087      20040      :  

1088 004530 121027 000101      CMPB  (R0),#A  

 8) 004534 001403      BEQ   50021$  

 6) 004536 121027 000104      CMPB  (R0),#D  

 9) 004542 001005      BNE   50022$  

 6) 004544      50021$:  

1089      20080      : TAKE LINE NO. AND UPDATE INTERFACE TABLE  

1090      20100      :  

1091      20120      :

```

F04

CLAFAC LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-2
 CLAFAC.FII 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SES 0044

1092	004544	004737	002660		JSP	PC UPDATE
1093	004550	052737	100000	005000	BIS	#MERR, DATA2
1094	004556				50022\$:	
1095	004556				50007\$:	
1096	004556	000403			BR	50023\$
(3)	004560				50005\$:	
1097	004560	052737	100000	005000	BIS	#MERR, DATA2
1098	004566				50023\$:	
1099	004566	000415			BR	50024\$
(3)	004570				50004\$:	
1100	004570	062700	000006		ADD	#6, R0
1101				20320	:	
1102				20340	: IF THE CHAR IN DOESN'T COMPARE TO ANY	
1103				20360	TABLE ENTRY THE COMMAND IS INVALID	
1104				20380	:	
1105	004574	020027	004724		CMP	R0, #DTEND
(9)	004600	001010			BNE	50025\$
1106	004602	004737	005062	016114	JSR	PC, CMDERR
1107	004606	012737	016114	016164	MOV	#INBUF PTR
1108	004614	052737	100000	005000	BIS	#MERR, DATA2
1109	004622				50025\$:	
1110	004622				50024\$:	
1111				20520	:	
1112				20540	KEEP LOOKING AT CHAR UNTIL IT'S	
1113				20560	DECODED, OR END OF TABLE (ERROR)	
1114				20580	:	
1115	004622	032737	100000	005000	BIT	#MERR, DATA2
(5)	004630	001001			BNE	50003\$
1116	004632	00060-			BR	50002\$
(3)	004634				50003\$:	
1117	004634	005037	005000		CLR	DATA2
1118				20660	:	
1119				20680	RESET THE INPUT BUFFER POINTER	
1120				20700	:	
1121	004640	012737	016114	016164	MOV	#INBUF PTR
1122	004646	012602			MOV	(SP)+, R2
1123	004650	012601			MOV	(SP)+, R1
1124	004652	012600			MOV	(SP)+, R0
1125	004654				50000\$:	
(3)	004654				50001\$:	
(2)	004654	000207			RTS	PC
1126				20820	*	*
1127				20840	*	*
1128	004656	123	000	20860	DECtbl:	'S, 0 : DECODE TABLE
1129	004660	001200	000040	20880	.WORD	ATTN!NEWMOD, MULTI
1130	004664	115	000	20900	.BYTE	'M, 0 : FIRST - CHAR TO BE DECODED
1131	004666	001240	000000	20920	.WORD	ATTN!MULTI!NEWMOD, 0
1132	004672	121	000	20940	.BYTE	'Q, 0 : SECOND - CONTROL BITS
1133	004674	000300	000000	20960	.WORD	ATTN!SEQ, 0
1134	004700	122	200	20980	.BYTE	'R, 200 : THIRD - SET MASK
1135	004702	000200	000100	21000	.WORD	ATTN, SEQ
1136	004706	104	100	21020	.BYTE	'D, 100 : FOURTH - CLEAR MASK
1137	004710	002010	000004	21040	.WORD	DROPC!NEWTST, ADDC
1138	004714	101	100	21060	.BYTE	'A, 100
1139	004716	002004	000010	21080	.WORD	ADDC!NEWTST, DROPC
1140	004722	124	000	21100	.BYTE	'T, 0 : CONTROL BITS

GO4

ZLAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-28
 ZLAFAO.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG 0045

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1141 004724 010000 000000    21120 .WORD PRINTT.C
1142 004730 114 000    21140 .BYTE 'L'0
1143 004732 040000 000000    21160 .WORD LOOPOE.C
1144 004736 110 000    21180 .BYTE 'H'0
1145 004740 100000 000000    21200 .WORD HALTOE.C
1146 004744 116 000    21220 .BYTE 'N'0
1147 004746 020000 000000    21240 .WORD INHRPT.C
1148 004752 120 000    21260 .BYTE 'P'0
1149 004754 000000 020000    21280 .WORD 0,INHRPT
1150 004760 103 000    21300 .BYTE 'C'0
1151 004762 000000 140000    21320 .WORD 0,HALTOE!LOOPOE
1152 004766 127 040    300 21340 .BYTE 'W',40,0,0,0,0
1153 004771 000 000    300 21360 DTEND:
1154 004774 000000    21380 DECSAV: .WORD 0
1155 004776 000000    21400 DATA: .WORD 0
1156 005000 30000C    21420 DATA2: .WORD 0
1157 005002 000000    21440 TEMPF: .WORD 0
1158 005004 000000    21460 TEMP: .WORD 0 : TEMPORAR/ PCFLAG WORD
1159
1160
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1162
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1164
1165
1166 305006
1167
1168
1169
1170 005006 023727 004776 000032    21600 CHKW:
1171 005014 002404
1172 005016 023727 004776 000204    21621 : RANGE OF 26 THRU 132 CHARACTERS IS VALID
1173 005024 003403
1174 005026 004776 005100
1175 005032 000403
1176 005034 013737 004776 016146
1177 005034 004776 005100
1178 005042 000403
1179 005042 005042
1180 005042 005042
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1524 005042 0050
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H04

CZLAFAO LA36 TERM TST MACY11 30A 1052) 03-JAN-77 00:01 PAGE 1-29
CZLAFAO.P11 03-JAN-78 11:20 CONSOLE TERMINAL ROUTINES

SEG 0046

1180 21820 ;*****
1180 21840 ;ECHO CONSOLE KEYBOARD ECHO ROUTINE; PTR HAS ADDR OF CHAR
1181 21860 ;*****
1182 21880
1183 005044 105737 177564 21900 ECHO: TSTB JTPS
1184 005050 100375 21920 BPL ECHO
1185 005052 117737 011106 177566 21940 MOVB JPTR, JTF3
1186 005060 00020 21960 PTS PC
1187 21980

CZLAFA0_A36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 1-30
CZLAFA.FII 03-JAN-78 11:20 ERROR & REPORT ROUTINES

SEG 0047

1189
1190
1191
1192
1193
1194 005062 012700 0200.
1195 005062 012700 0200.
1196 005066 104000
1197 005070 012700 020123
1198 005074 104000
1199 005076
(3) 005076
(2) 005076 00020.
1200
1201
1202
1203
1204 005100 012700 020032
1205 005100 012700 020032
1206 005104 104000
1207 005106 012700 020123
1208 005112 104000
1209 005114 012737 016114 016164
1210 005122
(3) 005122
(2) 005122 00020.
1211

22020 .SBTTL ERROR & REPORT ROUTINES
22040 :*****
22060 :CMDERR ROUTINE TO HANDLE INVALID COMMANDS
22080 :*****
22100
22160 MOV #ER1,RO
TYPE
22200 MOV #RDY,RO
TYPE
50000\$:
50001\$:
RTS PC
22240 :*****
22260 :SELERR ROUTINE TO HANDLE SELECTION ERRORS
22280 :*****
22300
22360 MOV #ER2,RO
TYPE
22400 MOV #RDY,RO
TYPE
50000\$:
50001\$:
RTS PC
22460

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CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-31
 CZLAFRA.P11 03-JAN-78 11:20 ERROR & REPORT ROUTINES

SEG 0048

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1213          22500 :*****
1214          22520 :ERRORS ERROR LOGGER AND TYPEOUT ROUTINE
1215          22540 :
1216          22560 :*****
1217          22580 :
1218 005124    22600 :ERROR:
1219 005124 005037 005434    CLR   ERRSAV
1220 005130 032737 020000 001364    BIT   #INHRPT,PCFLAG
1221 (9) 005136 001044    BNE   50002$:
1222          22642 :CONVERT TEST NO. FOR OUTPUT
1223          22644 :
1224          22646 :
1225 005140 013746 016154    MOV   INTEST-(SP)
1226 005144 012746 000002    MOV   #2-(SP)
1227 005150 012746 020001    MOV   #ERO+16.-(SP)
1228 005154 004737 007566    JSR   PC,02ASC
1229          22722 :CONVERT ERROR NO. FOR OUTPUT
1230          22724 :
1231          22726 :
1232 005160 113737 002032 005434    MOVB CFLAGS,ERRSAV
1233 005166 013746 005434    MOV   ERRSAV-(SP)
1234 005172 012746 000003    MOV   #3-(SP)
1235 005176 012746 017770    MOV   #ERO+7-(SP)
1236 005202 004737 007566    JSR   PC,02ASC
1237          22822 :CONVERT LINE NO. FOR OUTPUT
1238          22824 :
1239          22826 :
1240 005206 013746 016160    MOV   ONLIN-(SP)
1241 005212 012746 000002    MOV   #2-(SP)
1242 005216 012746 020011    MOV   #ERO+24.-(SP)
1243 005222 004737 007566    JSR   PC,02ASC
1244 005226 012700 017761    MOV   #ERO,RO
1245          22940 TYPE
1246          22960 :
1247          22980 :
1248 005234 042737 100377 002032 23000 :CLEAR THE ERROR FLAG
1249          23040 :
1250          23060 :
1251          23080 :
1252          23100 :
1253 005242 013700 002034    MOV   TSCPTR,RO
1254 005246 104000            TYPE
1255 005250            50002$:
1256 005250 005037 005434    CLR   ERRSAV
1257          23200 :
1258          23220 :
1259          23240 :
1260 005254 013737 016160 005434 23340 :UPDATE THE ERROR COUNT FOR THE FAILING LINE
1261 005262 006337 005434    MOV   ONLIN,ERRSAV
1262 (7) 005266 006337 005434    ASL   ERRSAV
1263 (7) 005272 006337 005434    ASL   ERRSAV
1264 005276 062737 016170 005434    ASL   ERRSAV
1265 005304 005277 000124            ADD   #LIN00,ERRSAV
1266          23360 INC   #ERRSAV
1267          23380 :
1268          23400 :
1269          23420 :
1270          23440 :
1271          23460 :
1272          23480 :
1273          23500 :
1274          23520 :
1275          23540 :
1276          23560 :
1277          23580 :
1278          23600 :
1279          23620 :
1280          23640 :
1281          23660 :
1282          23680 :
1283          23700 :
1284          23720 :
1285          23740 :
1286          23760 :
1287          23780 :
1288          23800 :
1289          23820 :
1290          23840 :
1291          23860 :
1292          23880 :
1293          23900 :
1294          23920 :
1295          23940 :
1296          23960 :
1297          23980 :
1298          24000 :
1299          24020 :
1300          24040 :
1301          24060 :
1302          24080 :
1303          24100 :
1304          24120 :
1305          24140 :
1306          24160 :
1307          24180 :
1308          24200 :
1309          24220 :
1310          24240 :
1311          24260 :
1312          24280 :
1313          24300 :
1314          24320 :
1315          24340 :
1316          24360 :
1317          24380 :
1318          24400 :
1319          24420 :
1320          24440 :
1321          24460 :
1322          24480 :
1323          24500 :
1324          24520 :
1325          24540 :
1326          24560 :
1327          24580 :
1328          24600 :
1329          24620 :
1330          24640 :
1331          24660 :
1332          24680 :
1333          24700 :
1334          24720 :
1335          24740 :
1336          24760 :
1337          24780 :
1338          24800 :
1339          24820 :
1340          24840 :
1341          24860 :
1342          24880 :
1343          24900 :
1344          24920 :
1345          24940 :
1346          24960 :
1347          24980 :
1348          25000 :
1349          25020 :
1350          25040 :
1351          25060 :
1352          25080 :
1353          25100 :
1354          25120 :
1355          25140 :
1356          25160 :
1357          25180 :
1358          25200 :
1359          25220 :
1360          25240 :
1361          25260 :
1362          25280 :
1363          25300 :
1364          25320 :
1365          25340 :
1366          25360 :
1367          25380 :
1368          25400 :
1369          25420 :
1370          25440 :
1371          25460 :
1372          25480 :
1373          25500 :
1374          25520 :
1375          25540 :
1376          25560 :
1377          25580 :
1378          25600 :
1379          25620 :
1380          25640 :
1381          25660 :
1382          25680 :
1383          25700 :
1384          25720 :
1385          25740 :
1386          25760 :
1387          25780 :
1388          25800 :
1389          25820 :
1390          25840 :
1391          25860 :
1392          25880 :
1393          25900 :
1394          25920 :
1395          25940 :
1396          25960 :
1397          25980 :
1398          26000 :
1399          26020 :
1400          26040 :
1401          26060 :
1402          26080 :
1403          26100 :
1404          26120 :
1405          26140 :
1406          26160 :
1407          26180 :
1408          26200 :
1409          26220 :
1410          26240 :
1411          26260 :
1412          26280 :
1413          26300 :
1414          26320 :
1415          26340 :
1416          26360 :
1417          26380 :
1418          26400 :
1419          26420 :
1420          26440 :
1421          26460 :
1422          26480 :
1423          26500 :
1424          26520 :
1425          26540 :
1426          26560 :
1427          26580 :
1428          26600 :
1429          26620 :
1430          26640 :
1431          26660 :
1432          26680 :
1433          26700 :
1434          26720 :
1435          26740 :
1436          26760 :
1437          26780 :
1438          26800 :
1439          26820 :
1440          26840 :
1441          26860 :
1442          26880 :
1443          26900 :
1444          26920 :
1445          26940 :
1446          26960 :
1447          26980 :
1448          27000 :
1449          27020 :
1450          27040 :
1451          27060 :
1452          27080 :
1453          27100 :
1454          27120 :
1455          27140 :
1456          27160 :
1457          27180 :
1458          27200 :
1459          27220 :
1460          27240 :
1461          27260 :
1462          27280 :
1463          27300 :
1464          27320 :
1465          27340 :
1466          27360 :
1467          27380 :
1468          27400 :
1469          27420 :
1470          27440 :
1471          27460 :
1472          27480 :
1473          27500 :
1474          27520 :
1475          27540 :
1476          27560 :
1477          27580 :
1478          27600 :
1479          27620 :
1480          27640 :
1481          27660 :
1482          27680 :
1483          27700 :
1484          27720 :
1485          27740 :
1486          27760 :
1487          27780 :
1488          27800 :
1489          27820 :
1490          27840 :
1491          27860 :
1492          27880 :
1493          27900 :
1494          27920 :
1495          27940 :
1496          27960 :
1497          27980 :
1498          28000 :
1499          28020 :
1500          28040 :
1501          28060 :
1502          28080 :
1503          28100 :
1504          28120 :
1505          28140 :
1506          28160 :
1507          28180 :
1508          28200 :
1509          28220 :
1510          28240 :
1511          28260 :
1512          28280 :
1513          28300 :
1514          28320 :
1515          28340 :
1516          28360 :
1517          28380 :
1518          28400 :
1519          28420 :
1520          28440 :
1521          28460 :
1522          28480 :
1523          28500 :
1524          28520 :
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1526          28560 :
1527          28580 :
1528          28600 :
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1532          28680 :
1533          28700 :
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1541          28860 :
1542          28880 :
1543          28900 :
1544          28920 :
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1546          28960 :
1547          28980 :
1548          29000 :
1549          29020 :
1550          29040 :
1551          29060 :
1552          29080 :
1553          29100 :
1554          29120 :
1555          29140 :
1556          29160 :
1557          29180 :
1558          29200 :
1559          29220 :
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1566          29360 :
1567          29380 :
1568          29400 :
1569          29420 :
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1572          29480 :
1573          29500 :
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1580          29640 :
1581          29660 :
1582          29680 :
1583          29700 :
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1586          29760 :
1587          29780 :
1588          29800 :
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1590          29840 :
1591          29860 :
1592          29880 :
1593          29900 :
1594          29920 :
1595          29940 :
1596          29960 :
1597          29980 :
1598          30000 :
1599          30020 :
1600          30040 :
1601          30060 :
1602          30080 :
1603          30100 :
1604          30120 :
1605          30140 :
1606          30160 :
1607          30180 :
1608          30200 :
1609          30220 :
1610          30240 :
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1617          30380 :
1618          30400 :
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1621          30460 :
1622          30480 :
1623          30500 :
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1625          30540 :
1626          30560 :
1627          30580 :
1628          30600 :
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1631          30660 :
1632          30680 :
1633          30700 :
1634          30720 :
1635          30740 :
1636          30760 :
1637          30780 :
1638          30800 :
1639          30820 :
1640          30840 :
1641          30860 :
1642          30880 :
1643          30900 :
1644          30920 :
1645          30940 :
1646          30960 :
1647          30980 :
1648          31000 :
1649          31020 :
1650          31040 :
1651          31060 :
1652          31080 :
1653          31100 :
1654          31120 :
1655          31140 :
1656          31160 :
1657          31180 :
1658          31200 :
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1667          31380 :
1668          31400 :
1669          31420 :
1670          31440 :
1671          31460 :
1672          31480 :
1673          31500 :
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1676          31560 :
1677          31580 :
1678          31600 :
1679          31620 :
1680          31640 :
1681          31660 :
1682          31680 :
1683          31700 :
1684          31720 :
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1686          31760 :
1687          31780 :
1688          31800 :
1689          31820 :
1690          31840 :
1691          31860 :
1692          31880 :
1693          31900 :
1694          31920 :
1695          31940 :
1696          31960 :
1697          31980 :
1698          32000 :
1699          32020 :
1700          32040 :
1701          32060 :
1702          32080 :
1703          32100 :
1704          32120 :
1705          32140 :
1706          32160 :
1707          32180 :
1708          32200 :
1709          32220 :
1710          32240 :
1711          32260 :
1712          32280 :
1713          32300 :
1714          32320 :
1715          32340 :
1716          32360 :
1717          32380 :
1718          32400 :
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1732          32680 :
1733          32700 :
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1737          32780 :
1738          32800 :
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1741          32860 :
1742          32880 :
1743          32900 :
1744          32920 :
1745          32940 :
1746          32960 :
1747          32980 :
1748          33000 :
1749          33020 :
1750          33040 :
1751          33060 :
1752          33080 :
1753          33100 :
1754          33120 :
1755          33140 :
1756          33160 :
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1758          33200 :
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1763          33300 :
1764          33320 :
1765          33340 :
1766          33360 :
1767          33380 :
1768          33400 :
1769          33420 :
1770          33440 :
1771          33460 :
1772          33480 :
1773          33500 :
1774          33520 :
1775          33540 :
1776          33560 :
1777          33580 :
1778          33600 :
1779          33620 :
1780          33640 :
1781          33660 :
1782          33680 :
1783          33
```

K04

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-32
 CZLAF.A.F11 03-JAN-78 11:20 . ERROR & REPORT ROUTINES

SEG 0043

```

1266          23380 : RETURN ADDRESS OF THE TEST ODD.
1267          23400 : THE TEST CONTROLLER WILL USE THE OLD
1268          23420 : RPC TO RE-DO THE SUBTEST.
1269          23440 :
1270 005310 032737 040000 001364      BIT    #LOOPOE,PCFLAG
1271 (9) 005316 001403      BEQ    50003$  

1272 005320 052765 000001 000010      BIS    #BIT0,RPC(RS)
1273          50003$:
1274          23520 :
1275          23540 : SEE IF LINE ABORT FLAG IS SET
1276          23560 :
1277 005326 032777 000020 000100      BIT    #ABO,JERRSAV
1278 (9) 005334 001431      BEQ    50004$  

1279          23600 :
1280          23620 : IF ABORT IS SET DESELECT THE LINE
1281          23640 : UNLESS IT'S THE ONLY ONE BEING TESTED
1282          23660 :
1283 005336 032737 000040 001364      BIT    #MULTI,PCFLAG
1284 (9) 005344 001417      BEQ    50005$  

1285 005346 042777 000377 000060      BIC    #SEL:#177,JERRSAV
1286 005354 013746 016160      MOV    ONLIN,-(SP)
1287 005360 012746 000002      MOV    #2,-(SP)
1288 005364 012746 020270      MOV    #DR1,-(SP)
1289 005370 004737 007566      JSR    PC,02ASC  

1290          23800 :
1291 005374 012700 020242      23820 : NOTIFY OPERATOR THAT LINE WAS DROPPED
1292 005400 104000      23840 :
1293          23880 :
1294 005402 000406      23900 :
1295 (3) 005404 052777 000200 0J0022  23920 : IF TESTING ONLY ONE LINE DONOT ALLOW IT TO BE DESELECTED
1296 005412 042777 000020 000014      BR    50006$  

1297 005420          50005$:
1298 005420          50006$:
1299          50004$:
1300          24040 :
1301 005420 032737 100000 001364  24060 : HALT HERE IF HALT ON ERROR IS SET
1302 (9) 005426 001401      24080 :
1303 005430 000000          24120 : BIT    #HALTOE,PCFLAG
1304 005432          24180 : BEQ    50007$  

1305 005432          24200 : HALT
1306 (3) 005432 000207          24220 :
1307 005434 000000          24240 : 50007$:
1308          24260 : 50000$:
1309          24280 : 50001$:
1310          24300 : RTS    PC
1311          24320 : ERRSAV: .WORD 0
1312          24240 : ****
1313          24260 : REPORT THIS ROUTINE HANDLES END OF TEST AND
1314 005436          24280 : END OF PASS REPORTS.  

1313          24300 : ****
1314          24320 : REPORT.

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L04

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 1-33
 CZLAFA.P11 03-JAN-78 11:20 ERROR & REPORT ROUTINES

SEQ 0050

```

1315      24345 ; CHECK FOR END OF TEST CONDITION
1316      24350 ;
1317 005436 032737 040000 002032    BIT     #EOT,CFLAGS
1318 (9) 005444 001423               BEQ     50002$  

1318      24365 ;
1319      24370 ; CONVERT TEST NO. FOR OUTPUT
1320      24375 ;
1321 005446 013746 016154           MOV     INTEST,-(SP)
1322 005452 012746 000002           MOV     #2,-(SP)
1323 005456 012746 020210           MOV     #EOTM+18.,-(SP)
1324 005462 004737 007566           JSR     PC,02ASC
1325      24445 ;
1326      24450 ; SEND END OF TEST MESSAGE
1327 005466 042737 040000 002032   BIC     #EOT,CFLAGS
1328      24455 ;
1329 005474 012700 020166           MOV     #EOTM,RO
1330 005500 004737 007010           JSR     PC,MTYPE
1331 005504 012700 017051           MOV     #L3,RO
1332 005510 004737 007010           JSR     PC,MTYPE
1333 005514               50002$:
1334      24505 ;
1335      24510 ; CHECK FOR END OF PASS CONDITION
1336      24515 ;
1337 005514 032737 020000 002032   BIT     #EOP,CFLAGS
1338 (9) 005522 001425               BEQ     50003$  

1338 005524 013746 016154           MOV     INTEST,-(SP)
1339      24545 ;
1340      24550 ; CONVERT TEST NO. FOR OUTPUT
1341      24555 ;
1342 005530 012746 000002           MOV     #2,-(SP)
1343 005534 012746 020161           MOV     #EOPM+19.,-(SP)
1344 005540 004737 007566           JSR     PC,02ASC
1345      24605 ;
1346      24610 ; CONVERT PASS NUMBER FOR OUTPUT
1347      24615 ;
1348 005544 013746 002036           MOV     TSCCNT,-(SP)
1349 005550 012746 020145           MOV     #EOPM+7,-(SP)
1350 005554 004737 010006           JSR     PC,BIN2DA
1351      24685 ;
1352      24690 ; SEND END OF PASS MESSAGE.
1353      24695 ;
1354 005560 012700 020136           MOV     #EOPM,RO
1355 005564 004737 007010           JSR     PC,MTYPE
1356 005570 042737 020000 002032   BIC     #EOP,CFLAGS
1357 005576               50003$:
1358 005576               50000$:
1358 (3) 005576               50001$:
1358 (2) 005576 000207             RTS     PC
1359      24800 ;
1360      24820 ;
1361      24840 ;
1362

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M04

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 2
CZLAFAO.P11 03-JAN-78 11:20 ERROR & REPORT ROUTINES

SEQ 0051

1363 00050 ;*****
1364 00070 ; SETIO ROUTINE TO SET I/O MODE
1365 00090 ;*****
1366 00110
1367 00130
1368 005600 SETIO:
1369 005600 50002\$:
1370 005600 032737 000001 001364 BIT #FLAG1,PCFLAG
 (9) 005606 001003 BNE 50003\$
1371 005610 052737 000003 001364 BIS #FLAG1!#FLAG2,PCFLAG
1372 005616 032737 000001 001364 50003\$:
1373 005616 032737 000001 001364 BIT #FLAG1,PCFLAG
 (7) 005624 001765 BEQ 50002\$
 (4) 005626 032737 000002 001364 BIT #FLAG2,PCFLAG
 (7) 005634 001761 BEQ 50002\$
1374 005636 50000\$:
 (3) 005636 50001\$:
 (2) 005636 000207 RTS PC
1375 00320
1376 00340

```

1378          00700      .SBTTL INTERFACE SIZER ROUTINES
1379          00900      ;*****
1380          00950      ;BUILD SUBROUTINE TO BUILD THE DEVICE TABLE USED
1381          01000      ;IN MULTI LINE MODE.
1382          01050      ;*****
1383 005640 012737 000003 000066 01100 00900      ;SET UP CONSOLE TRAP
1384 005646 012737 006120 000004 01150 00950      ;SET UP NXM TRAP
1385 005654 012701 016170 01200 01200      ;BUILD: MOV #BPT,66
1386 005660 012137 016126 01220 01220      MOV #4$,MACHER
1387 005664 012137 016130 01240 01240      MOV #LINDO,R1
1388 005670 012137 016132 01260 01260      MOV (R1)+,DLFLAG
1389 005674 012137 016134 01280 01280      MOV (R1)+,DLADR
1390 005700 013737 016130 016140 01400 01280      MOV (R1)+,DLVEC
1391 005706 062737 000004 016140 01430 01280      MOV (R1)+,DLOTH
1392 005714 013737 016140 016142 01440 01280      ADD #4,DVCTXS
1393 005722 062737 000002 016142 01450 01280      MOV DVCTXS,DVCTXB
1394 005730 113737 016135 016160 01500 01280      ADD #2,DVCTXB
1395 005736 005777 010166 01750 01280      MOVB DLOTH+1,ONLIN
1396 005742 052737 100000 016126 01850 01280      TST #DLADR
1397 005750 012737 000300 007564 01900 01280      BIS #DLP,DLFLAG
1398 005756 112777 000076 010156 01925 01280      MOV #300,DELAYT
1399 005764 052777 000100 010146 01950 01280      MOVB #'>,DVCTXB
1400 005772 104006 02050 01200 01950      BIS #100,DVCTXS
1401 005774 005737 016132 02100 01950      DELAYR TST DLVEC
1402 006000 001433 02125 0125      BEQ 2$               ;IF ZERO NO INTERRUPT OCCURED
1403 02150 02200 0125      ;NO INTERRUPT - BRANCH
1404 02150 02200 0125      ;OTHERWISE DLVEC=ADDR THAT
1405 006002 052737 000200 016126 02300 02150      ;DVC INTERRUPTED TO VIA INTRAP.
1406 006010 013741 016134 02350 02150      ;SET SELECTED FLAG
1407 006014 013741 016132 02400 02150      3$: BIS #SEL,DLFLAG
1408 006020 013741 016130 02450 02150      MOV DLOTH,-(R1)
1409 006024 013741 016126 02500 02150      MOV DLVEC,-(R1)
1410 02550 02200 02150      MOV DLADR,-(R1)
1411 006030 062701 000010 02600 02550      MOV DFLAG,-(R1)
1412 006034 020127 016770 02650 02600      5$: ADD #10,R1
1413 006040 001307 02700 02650      CMP R1,LTABEND
1414 006042 162701 000010 02700 02700      BNE 1S
1415 006046 005711 02750 02700      6$: SUB #10,R1
1416 006050 100403 02800 02750      TST (R1)
1417 006052 012711 177777 02850 02800      BMI 7S
1418 006056 000771 02900 02850      MOV #-1,(R1)
1419 006060 012737 02950 02900      BR 6S
1420 006066 000207 03100 02950      7$: MOV #6,MACHER
1421 006070 052737 000020 016126 03150 03100      RTS PC
1422 006076 042737 000200 016126 03200 03150      BIS #AB0,DLFLAG
1423 006104 004737 005124 03250 03200      BIC #SEL,DLFLAG
1424 006110 012700 020055 03350 03250      JSR PC,ERROR
1425 006114 104000 03400 03350      MOV #ER7,RO
1426 006116 000734 03450 03400      TYPE
1427 03500 03450      BR 3S
1428 006120 062706 000004 03550 03500      3$: ;ERASE INTR FROM STACK
1429 006124 000743 03600 03550      BR 5S
1430 03650 03600      ;GET NEXT LINE ENTRY
1431 03700 03650      ;*****
1432 03750 03700      ;CATCH REPLACES TRAP CATCHER FROM 100 TO 1000 .
1433 03800 03750      ;*****

```

B05

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 2-2
CZLAFRA.P11 03-JAN-78 11:20 INTERFACE SIZER ROUTINES

SEG 0053

1434 006126 012700 001000	03850	CATCH: MOV #1000, R0	;START AT 1000
1435 006132 005040	03900	1\$: CLR -(R0)	;PUT HALT IN PC+2
1436 006134 010037 016100	03950	MOV RO, TEMP	
1437 006140 013740 016100	04000	MOV TEMP -(R0)	;PUT PC+2 IN PC
1438 006144 020027 000100	04050	CMP RO, #100	;FIN?
1439 006150 002370	04100	BGE 1\$;NO - DO MORE
1440 006152 012737 003466 000060	04200	MOV #READKB, @TKV	;SU CONSOLE
1441 006160 000207	04250	RTS PC	
1442	04300		
1445	04500		

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 2-3
 CZLAFRA.P11 03-JAN-78 11:20 INTERFACE SIZER ROUTINES

SEC 0054

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1458 006162      05400 .SBTTL EMT HANDLER
1459 006166 011637 016112 05450
1460 006174 017737 000002 016112 05500 :THIS SECTION CONTAINS THE HANDLER AND MOST ROUTINES ACCESSED
1461 006202 042737 104400 016110 05550 :BY TRAPS THROUGH LOCATION 30.
1462 006210 062737 006230 016110 05600
1463 006216 017737 007666 016112 05650
1464 006224 000177 007662 016112 05700
1465
1466
1467 006230 006240 05750 EMTBOS:
1468 006232 007212 06100 MOV    (SP),TEMP+12
1469 006234 007162 06150 SUB    @TEMP+12 :GET REAL PC
1470 006236 007530 06200 MOV    @TEMP+12 TEMP+10 :GET EMT INSTRUCTION
          06250 BIC    @104400,TEMP+10 :MASK INSTR BITS
          06300 ADD    @EMTABL,TEMP+10 :ADD TABLE ADDR
          06350 MOV    @TEMP+10,TEMP+12
          06400 JMP    @TEMP+12

.EVEN
1467 006230 006240 06250 EMTABL: ETYP
1468 006232 007212 06300 PRTLTB :NSOLE TYPE ROUTINE
1469 006234 007162 06350 INTRAP :LINE TABLE PRINTER
1470 006236 007530 06400 DELAYM :DL INTERRUPT CATCHER
          :DELAY ROUTINE

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DOS

CZLAFAD LA36 TERM TST MAC+11 30H 1052 03-JAN ?? 00:01 PAGE 2-4
 CZLAFD.P11 03-JAN-78 11:20 : C DRIVERS

FEG 0055

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1478 006240 105710 06650 .SBTTL I O DRIVERS
1479 006242 001406 06700 ;*****
1480 006244 105737 177564 06750 :E TYPE CONSOLE OUTPUT ROUTINE. ENTER WITH ADDRESS OF
1481 006250 100375 06800 DATA IN R0. NULL TERMINATES OUTPUT.
1482 006252 112037 177568 06850 ;*****
1483 006256 000770 06900
1484 006260 105737 177568 06950 E TYPE: TSTB RO, :CHECK FOR NULL
1485 006264 100375 07000 BEQ 3S EXIT ROUTINE
1486 006266 000002 07050 IS: TSTB 3BTPS :CHECK FOR TRANSMIT READ
1487
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1494 006270 010237 006646 07100 :*****
1495 006274 010446 07150 :MECHO TERMINAL OUTPT ROUTINE - SINGLE CHAR
1496 006276 012702 020434 07200 CHAR IN R2
1497 006302 005037 020670 07250 :INTERRUPT DRIVEN ALL LINES
1498 006306 012704 020574 07300 :*****
1499 006312 013722 016132 07350 :MECHO:
1500 006316 013737 016144 016150 07400 MOV R2,MSAVE :INITIALIZE STACK2
1501 006324 062737 000002 016150 07450 MOV R4-(SP) :ZERO COUNT
1502 006332 013777 016150 007604 08000 CLR ENDS :INITIALIZE STACK3
1503 006340 012777 000004 007602 08100 MOV #STACK2,R2 :GET THE BASE VECTOR ADDR
1504 006346 012737 000317 007564 08150 MOV DLVEC,(R2)+ :SAVE THE VECTOR
1505 006354 113777 006646 007560 08200 MOV TXVEC,SAVE :PUT ADDR+2 INTO ADDR
1506 006362 012777 000100 007550 08250 MOV #IOT,MSAVE :PUT TRAP INTO ADDR+2
1507 006370 005237 020670 08300 INC #200,DELAYT :WAIT FOR 200 MS.
1508 006374 004737 002110 007550 MOV #IOVCTX5 :PUT CHAR IN BUF REG
1509 006400 032737 000400 001364 08400 JSR PC LINMON :ENABLE TX INTERRUPT
1510 006406 001741 001364 BIT #LDONE,PCFLAG :ADD 1 TO INTR PENDING COUNT
1511 006410 042737 000400 001364 BEQ 1S :END OF DVC LIST ?
1512 006416 010237 006650 08500 BIC #LDONE,PCFLAG :NO DO THIS LINE
1513 006422 104006 08600 DELAYR :SAVE STACK2 POINTER
1514 006424 005737 020670 08650 TST :ALL PENDING INTERRUPTS SHOULD
1515 006430 001004 08700 BNE 3S :BE COUNTED DOWN BY TXTRAP.
1516 006432 012604 08750 12S: :*****
1517 006434 013702 006646 08800 MOV (SP)+,R4 :EXIT
1518 006440 000207 08850 MOV MSAVE,R2 :SAVE STACK 3 LIMIT
1519 006442 010437 006652 08900 2S: RTS PC :RESET STACK3 POINTER
1520 006446 012704 020574 08950 3S: MOV R4,MSAVE+4 :RESET STACK2 POINTER
1521 006452 012702 020434 09000 MOV #STACK3,R4 :VECTOR MATCH ?
1522 006456 021224 09050 4S: MOV #STACK2,R2 :YES - BRANCH
1523 006460 001404 09100 BEQ SS :STACK END
1524 006462 020437 006652 09150 CMP R4,MSAVE+4 :YES - BRANCH
1525 006466 001403 09200 BEQ 6S :COMPARE NEXT .ECT.
1526 006470 000772 09250 BF 4S

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1527 006472 005012      09300  5$: CLR   (R2)          :ERASE VECT OUT
1528 006474 005044      09350  CLR   -(R4)          :ERASE VECT IN
1529 006476 062702 000002 09400  6$: ADD   #2,R2        :MOVE STACK POINTER
1530 006502 020237 006650 09450  CMP   R2,MSAVE+2    :END OF OUT STACK ?
1531 006506 001403      09500  BEQ   ?S             :YES - GO GET ODD VECTOR
1532 006510 012704 020574 09550  MOV   #STACK3,R4    :RESET STACK3 POINTER
1533 006514 000760      09600  BR    4$             :KEEP SORTING
1534 006516 012702 020434 09650  7$: MOV   #STACK2,R2    :RESET STACK2 POINTER
1535 006522 005712      09700  8$: TST   (R2)          :CHECK FOR NON ZERO
1536 006524 001003      09750  BNE   9$             :
1537 006526 062702 000002 09800  ADD   #2,R2        :
1538 006532 000773      09850  BR    8$             :
1539 006534 012737 016174 006652 09900  9$: MOV   @LIN00+4,MSAVE+4  :GET VECT FROM TABLE
1540 006542 027712 000104 09950  10$: CMP   @MSAVE+4,(R2)  :MATCH ?
1541 006546 001404      10000  BEQ   11$            :YES THIS LINE IS N.G.
1542 006550 062737 000010 006652 10050  ADD   #10,MSAVE+4   :MOVE PO. ITER TO NEXT
1543 006556 000771      10100  BR    10$            :
1544 006560 062737 000002 006652 10150  11$: ADD   #2,MSAVE+4   :GET LINE NUMBER
1545 006566 017737 000060 016160 10200  MOV   @MSAVE+4,ONLIN  :
1546 006574 105037 016160 10250  CLRB  ONLIN         :
1547 006600 000337 016160 10300  SWAB  ONLIN         :ERASE JUNK BITS
1548 006604 004737 002432 10350  JSR   PC,MTW       :MOVE TABLE TO WORK AREAS
1549 006610 012737 020055 002034 10400  MOV   #ER7,TSCPTR  :POINT TO ERROR MESSAGE
1550 006616 112737 000377 002032 10450  MOVB  #377,CFLAGS  :ERROR NO.
1551 006624 052737 100000 002032 10500  BIS   #MERR,CFLAGS  :SET ERROR FLAG
1552 10551  *****          :
1553 10600  *****          :ERROR 377
1554 10650  *****          :
1555 006632 004737 005124 10750  JSR   PC,ERROR     :
1556 006636 042737 100377 002032 10800  BIC   #MERRN,CFLAGS  :ERASE ERROR DATA
1557 006644 000672      10850  BR    12$            :CLEAN HOUSE & EXIT
1558 006646 C00000 000000 000000  MSAVE: .WORD 0,0,0
1559 10855
1560 10856
1561 10857
1562 10860
1563 10861  *****          :SECHO SINGLE LINE ECHO ROUTINE
1564 10862  *****          :ENTER WITH CHAR IN R2
1565 10863  *****          :TRANSMITS TO DVC VIA I C DRIVER WORK AREA
1566 10864
1567 10865
1568 10866
1569 006654 013737 016144 016150  SECHO:           :
1570 006654 013737 016144 016150  MOV   TXVEC,SAVE   :
1571 006662 062737 000002 016150  ADD   #2,SAVE      :
1572 006670 012777 007510 007246  MOV   #STRAP,TXVEC  :
1573 006676 012777 000200 007244  MOV   #PRI4,SAVE    :
1574 006704 012737 000144 007564  MOV   #100,DELAYT   :
1575 006712 110277 007224 007214  MOVB  R2,JDVCTXB  :
1576 006716 012777 00C100 007214  MOV   #100,JDVCTXS  :
1577 006724 005237 020670 007214  INC   ENDS         :
1578 006730 104006 020670 10877  DELAYR          :
1579 006732 005737 020670 10877  TST   ENDS         :
1580 006736 001413 002034 002032  BEQ   50002$       :
1581 006740 012737 020055 002032  MOV   #ER7,TSCPTR  :
1582 006746 052737 100376 002032  BIS   #376,#MERR,CFLAGS
  
```

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CZLAFAC LA36 TERM TST MACY 1 30A 1052 03-JAN-77 00:01 PAGE 2-6
 CZLAFAC.P11 03-JAN-78 11:20 I C DRIVERS

SES CC57

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1582 006754 004737 005124          JSR      PC ERROR
1583 006760 042737 100377 002032    BIC      #MERRN,CFLAGS
1584 006766          013777 016150          50002$:
1585 006766 013777 016150 007150    MOV      SAVE,ATXVEC
1586 006774 005077 007150          CLR      JSAVE
1587 007000 013737 016160 016150    MOV      ONLIN,SAVE
1588 007006          000207          50000$:
1589          (3) 007006          000207          50001$:
1590          (2) 007006          000207          10900
1591          10950
1592          11000:******
1593          11050:MTYPE TERMINAL OUTPUT ROUTINE - LINE TABLE VERSION
1594          11100:ENTER WITH ADDR OF MSG IN R0
1595          11150:
1596 007010 112002          11200:******
1597 007012 001403          11250:MTYPE: MOVB (R0)+,R2      ;GET CHAR TO PRINT
1598 007014 004737 006270          11300:BEQ   1$                   ;EXIT IF NULL CHAR
1599 007020 000773          11400:JSR   PC,MECHO
1600 007022 000207          11450:BR    MTYPE
1601          11460
1602          11462
1603          11464
1604          11466
1605          11468:******
1606          11470:READIO THIS ROUTINE MONITORS AN I/O READ OPERATION
1607          11472:******, ***
1608          11474
1609 007024          004000 001364:READIO:
1610 007024 042737 004000 001364    BIC      #DATAIN,PCFLAG
1611 007032 010237 007564          MOV      R2,DELAYT
1612 007036 012777 000101 007064    MOV      #101,ADLADR
1613 007044 104006          11480:DELAYR
1614          11481: IF NO CHAR RECVD WITHIN (R2) MS SET ERROR FLAG
1615 007046 032737 004000 001364    BIT      #DATAIN,PCFLAG
1616          (9) 007054 001003          BNE   50002$:
1617 007056 052765 100000 000004    BIS      #MERR,MFLAGS(R5)
1618          11487:50002$:
1619 007064 105737 016160          11487: IF ON LINE-0 CLEAR I/O MODE FLAGS
1620          (9) 007070 001004          TSTB   ONLIN
1621 007072 042737 000003 001364    BNE   50003$:
1622          007100 000402          BIC      #FLAG1:#FLAG2,PCFLAG
1623          (3) 007102 005077 007022          BR    50004$:
1624          007106          50003$:
1625          (3) 007106          50004$:
1626          (2) 007106          50000$:
1627          000207          50001$:
1628          11500
1629          11502
1630          11504
1631          11506:******
1632          11508:TYPE5 TERMINAL OUTPUT ROUTINE SINGLE LINE
1633          11510:******

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GOS

CZLAFAC L836 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 2-7
 CZLAFAC.PII C3-JAN-78 11:20 I O DRIVERS

SEG 0058

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1631          11512
1632          11514
1633 007110 112002 11516 TYPES: MOVB (R0)+,R2 : GET CHAR TO PRINT
1634 007112 001403 11518 BEQ 1$ : EXIT IF NULL
1635 007114 004737 006654 11520 JSR PC_SECHO : SEND THE MESSAGE
1636 007120 000773 11522 BR TYPES
1637 007122 000207 11524 1$: RTS PC : EXIT
1638
1639
1640
1641 11526
1642 11528
1643 11530 : *****
1644 11532 : READS THIS ROUTINE SETS UP DVC RECVR VECTOR AREAS
1645 11533 IF THE CURRENT LINE IS NOT LINE-00
1646 11534 : *****
1647 007124 105737 016160 READS:
1648 007130 001003 005600      TSTB ONLIN
1649 007132 004737 005600      BNE $0002$  

1650 007136 000410           JSR PC_SETIO
1651 (3) 007140           BR $0003$  

1652 007140 010277 006766      MOV R2_DLVEC
1653 007144 C13702 016132      MOV DLVEC,R2
1654 007150 062702 000003      ADD #2,R2
1655 007154 012712 00020C      MOV #PRI4,(R2)
1656 007160 000207      50002$:  

1657 (3) 007160           50003$:  

1658 (2) 007160           50000$:  

1659 007160           50001$:  

1660          11554 RTS PC
1661          11556

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H05

CZLAFAC LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 2-8
CZLAFAC.FI: C3-JAN-78 11:20 TRAP ROUTINES

SEE COSE

1661 .
 1662 .
 1663 .
 1664 .
 1665 007162 005077 006752 11595 .
 1666 007166 012637 016132 11600 :***** SBTTL TRAP ROUTINES
 1667 007172 062706 000002 11650 :INTRAP: USED BY TABLE BUILD TO GET ADDRESS THAT A LINE
 1668 007176 162737 000010 016132 11700 INTERRUPTS TO AN STORE IT IN - DLVEC.
 1669 007204 005037 007564 11750 TRANSMIT INTERRUPT USED, DLV HAS NO MAINT MODE.
 1670 007210 000002 11800 *****
 1671 .
 1672 .
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 1677 .
 1678 007212 (2) 013746 016100 11875 INTRAP: CLR DDVCTXS ;DISABLE THE INTERRUPTS.
 1679 007216 013746 016102 11900 MOV (SP)+,DLVEC
 1680 007222 012702 016170 11950 ADD #2 SP
 1681 007226 012700 017676 12000 SUB #10 DLVEC :ADJUST TO RCVR INTR ADDR
 1682 007232 104000 12050 CLR DELAYT :RESET TIMER
 1683 007234 005712 12100 RTI :GO BACK TO BUILD ROUTINE
 1684 007236 100406 12150 *****
 1685 007240 062702 000010 12200 PRTL TB THIS ROUTINE TYPES THE LINE TABLE ON THE CONSOLE
 1686 007244 021227 177777 12250 DEVICE. DROPPED FLAGS ARE DECODED AND THE
 1687 007250 001452 12300 APPROPRIATE INFORMATION IS PRINTED FOR EACH LINE.
 1688 007252 000770 12350 *****
 1689 007254 012237 016100 12400 .
 1690 007260 012246 12450 PRTL TB:
 1691 007262 012746 000004 — MOV TEMP,-(SP)
 1692 007266 012746 017743 12650 MOV TEMP+2,-(SP,
 1693 007272 004737 007566 12700 \$LIN00,R2 ;POINTER TO ;START OF TABLE
 1694 007276 012246 12750 \$HEADER2,R0 ;PRINT HEADER
 1695 007300 012746 000003 12800 1S: TST (R2) ;LINE PRESENT?
 1696 007304 012746 017752 12850 BMI 2S :YES - BRANCH
 1697 007310 004737 007566 12900 ADD #10,R2 :MOVE POINTER TO NEXT ENTR.
 1698 007314 012237 016102 12950 6S: CMP (R2),#-1 :END OF TABLE?
 1699 007320 000337 016102 13000 BEQ 10S :YES - BRANCH
 1700 007324 013746 016102 13050 1S: MOV (R2)+,TEMP :SAVE FLAG WORD
 1701 007330 012746 000002 13100 MOV (R2)+,-(SP)
 1702 007334 012746 017733 13150 MOV #4,-(SP)
 1703 007340 004737 007566 13200 MOV \$DLAD,-(SP)
 1704 007344 012700 017733 13250 JSR PC,02ASC :CONVERT ADDRESS TO ASCII
 1705 007350 104000 13300 MOV (R2)+,-(SP)
 1706 007352 105737 016100 13350 MOV #3,-(SP)
 1707 007356 001403 13400 MOV \$DLV,-(SP)
 1708 007360 012700 020117 13450 JSR PC,02ASC :CONVERT LINE NC.
 1709 007364 000402 13500 MOV (R2)+,TEMP+2
 1710 007366 012700 020105 13550 SWAB TEMP+2 :TYPE FORMATTED LINE
 1711 007372 104000 13600 MOV TEMP+2,-(SP)
 1712 007374 000723 13650 BEQ 4S :SELECTED?
 1713 007376 012700 020105 13700 MOV #51,PO :NO - BRANCH
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I05

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 2-9
CZLAF.A.FII 03-JAN-78 11:20 TRAP ROUTINES

SEG 0060

(2)	007376	012637	016102	MOV	(SP)+,TEMP+2
1714	007402	012637	016100	MOV	(SP1)+,TEMP
1715	007406	012700	017051	MOV	SL3,R0
1716	007412	104000		14400	TYPE
1717	007414	000002		14450	
1718				14500	RTI
1719				14550	

```

1720
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1728 007416 162716 000010
1729 007422 011614 000000
1730 007424 012746 016174
1731 007430 027614 000000
1732 007434 001403 000000
1733 007436 062716 000010
1734 007442 000772 000000
1735 007444 162716 000002
1736 007450 017637 000000 016100
1737 007456 062737 000004 016100
1738 007464 005077 006410
1739 007470 062706 000006
1740 007474 005337 020670
1741 007500 003002 000000
1742 007502 005037 007564
1743 007506 000002 000000
1744
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1755 007510 005077 006424
1756 007510 005337 020670
1757 007514 005337 020670
1758 007520 005037 007564
1759 007524 000002 000000
1760 007526 (3) 007526 (2) 007526 000207
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1773 007530 005737 007564
1774 007534 001411 000000
1775 007536 010346 000000
1776 007540 013703 007562
1777 007544 005303 000000
1778 007546 001376 000000

14600 :*****
14650 :TXTRAP THIS ROUTINE CATCHES THE INTERRUPTS FROM
14700 :DL11'S IN USE BY THE MECHO ROUTINE .
14750 :*****
14950 TXTRAP: SUB #10,(SP)
15000 MOV (SP),(R4)
15020 MOV #LIN00+4-(SP)
15040 1$: CMP #0,(SP),(R4)
15060 BEQ 2$:
15080 ADD #10,(SP)
15100 BR 1$:
15120 ADD #2,(SP)
15130 2$: SUB #2,(SP)
15140 MOV #0,(SP),TEMP
15160 ADD #4,TEMP
15180 CLR TEMP
15200 ADD #6,SP
15220 DEC ENDS
15240 BGT DELAYT
15260 CLR
15280 3$: RTI

15300
15500
15501
15502
15503
15504 :*****
15505 :STRAP
15506 SINGLE LINE TRANSMIT INTERRUPT CATCHER
15507 USED IN CONJUNCTION WITH SECHO ROUTINE.
15508
15509 :*****

STRAP:
15515 CLR #DVCTXS
DEC ENDS
CLR DELAYT
RTI
50000$: RTS PC
50001$: PC

15517
15518
15519
15520
15550
15750 :*****
15800 :DELAYM_DELAY FOR X MILLI SECONDS, X STORED IN - DELAYT
15850
15900 :*****
15950
15955 DELAYM: TST DELAYT
15960 BEQ 3$:
MOV R3-(SP)
MEXIT
16050 1$: MOV TIMER,R3 :1MS LOOP TIME
16100 2$: DEC R3
16150 BNE 2$:

```

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CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 2-11
CZLAF.A.P11 03-JAN-78 11:20 TRAP ROUTINES

SEQ 0062

1779 007550 005337 007564 16200 DEC DELAYT
1780 007554 003371 16250 BGT 1\$
1781 007556 012603 MOV (SP)+, R3
(2) .MEXIT†
1782 007560 000002 16350 3\$: RTI
1783 16400
1784 007562 000554 16450 TIMER: .WORD 554 :SET FOR 11/35 - 11/40
1785 16500 :SET TO 202 IF 11/03
1786 16550 : 251 11/05 - 11/10
1787 16600 : 314 11/15 - 11/20
1788 16650 : 2127 11/45 BIPOLAR
1789 16700 : 1237 11/45 - 11/70
1790 16750 : 755 11/45 MOS
1791 007564 000000 16800 DELAYT: .WORD 0 :DELAY TIME BUF-R

1793
 1794
 1795
 1796 16900 .SBTLL CONVERSION ROUTINES
 1797 16950
 1798 17000
 1799 17050 :02ASCII OCTAL TO ASCII CONVERSION ROUTINE - ENTER WITH
 1800 17100 NUMBER TO BE CONVERTED ON THE STACK, FOLLOWED
 1801 17150 BY THE NUMBER OF DIGITS TO CONVERT FOLLOWED
 1802 17200 BY THE STORAGE ADDRESS FOR THE ASCII STRING.
 1803 17250 *****
 1804 007566 016637 000006 016150 17300 02ASC: MOV 6(SP),SAVE ;GET WORK COPY OF NUMBER
 1805 007574 013746 016150 17350 MOV SAVE -(SP)
 1806 007600 066666 000006 000004 17400 ADD 6(SP),4(SP) ;ADD COUNT TO POINTER
 1807 007606 005366 000004 17450 DEC 4(SP) ;DEC FOR END ADDR
 1808 007612 042716 177770 17500 2\$: BIC #177770,(SP) ;MASK OUT ALL BUT 3 BITS
 1809 007616 052716 000004 17550 BIS #60,(SP) ;MAKE CHAR ASCII
 1810 007622 111676 000004 17600 MOVB (SP),@4(SP) PUT ASCII CHAR IN BUFFER
 1811 007626 005366 000004 17650 DEC 4(SP) ;INC POINTER
 1812 007632 005366 000006 17700 DEC 6(SP) ;DEC DIGIT COUNT
 1813 007636 001411 17750 BEQ 1\$;BRANCH IF DONE
 1814 007640 006266 000010 17800 ASR 10(SP)
 1815 007644 006266 000010 17850 ASR 10(SP) ;GET NEXT DIGIT
 1816 007650 006266 000010 17900 ASR 10(SP)
 1817 007654 016616 000010 17950 MOV 10(SP),(SP)
 1818 007660 000754 18000 BR 2\$;DO NEXT CHAR FOR CONVERSION
 1819 007662 016666 000002 000010 18050 1\$: MOV 2(SP),10(SP) ;PUT RETL IN PC AT TOP OF JUNK
 1820 007670 062706 000010 18100 ADD #10,SP ;POINT TO RETURN PC
 1821 007674 000207 18150 RTS PC ;EXIT...
 1822
 1823
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 1830 007676 010046 18200
 1831 007676 005037 18250 *****
 1832 007700 005037 010004 18300 :A2BIN CONVERTS INPUT ASCII TO BINARY NUMBER
 1833 007704 016600 000010 18350 ENTER WITH ADDR OF ASCII STRING ON STACK
 1834 007710 142710 000370 18400 FOLLOWED BY # DIGITS TO CONVERT
 1835 007710 005366 000006 18450 FOLLOWED BY ADDR OF WORD FOR ANSWER.
 1836 007714 152037 010004 18500 *****
 1837 007720 005766 000006 18700
 1838 007724 001407 000370
 (5) 007730 006337 010004
 1839 007732 006337 010004
 (7) 007736 006337 010004
 (7) 007742 006337 010004
 1840 007746 000760 000370
 (3) 007750 016600 000004
 1841 007750 013710 010004
 1842 007754 011637 010004
 1843 007760 016600 00C.02
 1844 007764 0062706 000010
 1845 007770 010016 000004
 1846 007774 013700 010004
 1847 007776 010004
 1830 007676 010046 18200
 1831 007676 005037 18250 A2BIN:
 1832 007700 005037 010004 18300 MOV R0 -(SP)
 1833 007704 016600 000010 18350 CLR A2SAV
 1834 007710 142710 000370 18400 MOV 10(SP),R0
 1835 007710 005366 000006 18450 50002\$: BICB #370,(R0)
 1836 007714 005366 000006 18500 DEC 6(SP)
 1837 007720 152037 010004 18550 BISB (R0)+,A2SAV
 1838 007724 005766 000006 18600 TST 6(SP)
 (5) 007730 001407 000370 18650 BEQ 50003\$
 1839 007732 006337 010004 18700 ASL A2SAV
 (7) 007736 006337 010004 18750 ASL A2SAV
 (7) 007742 006337 010004 18800 ASL A2SAV
 1840 007746 000760 000370 18850 BR 50002\$
 (3) 007750 016600 000004 18900 50003\$: MOV 4(SP),R0
 1841 007750 013710 010004 18950 MOV A2SAV,(R0)
 1842 007754 011637 010004 19000 MOV (SP),A2SAV
 1843 007760 016600 00C.02 19050 MOV 2(SP),R0
 1844 007764 0062706 000010 19100 ADD #10,SP
 1845 007770 010016 000004 19150 MOV R0,(SP)
 1846 007774 013700 010004 19200 MOV A2SAV,R0

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1848 010002      50000$:  

(3) 010002      50001$:  

(2) 010002 000207          RTS      PC  

1849          19600  

1850 010004 0000000          19650 A25AV: .WORD 0 ;STORAGE AREA  

1851          19750  

1852          19850  

1853          19950  

1854          20050 :*****  

1855          20150 :BIN2DA  BINARY TO DECIMAL ASCII CONVERSION ROUTINE  

1856          20250 ENTER WITH NUMBER TO CONVERT ON THE STACK  

1857          20450 FOLLOWED BY THE ADDRESS OF THE ASCII BUFFER.  

1858          20500 5 DIGITS WILL BE CONVERTED  

1859          20550 :*****  

1860          20650  

1861          20750  

1862 010006 012700 010146 010162 20850 BIN2DA: MOV TABDA, R0 ;INITIALIZE TABLE POINTER  

1863 010012 112737 000005          20900 MOVB #5,DIGITS  

1864 010020 005037 010160          20950 CLR CNTDA  

1865 010024 021066 000004          21050 1$: CMP (R0), 4(SP)  

1866 010030 003005          21150 BGT 2$  

1867 010032 161066 000004          21250 SUB (R0), 4(SP)  

1868 010036 105237 010160          21350 INC B CNTDA  

1869 010042 000770          21450 BR 1$  

1870 010044 152737 000060 010160 21550 2$: BISB #60,CNTDA  

1871 010052 105737 010161          21650 TSTB FLAGDA  

1872 010056 001012          21750 BNE 4$  

1873 010060 123727 010160 000060 21850 CMPB CNTDA, #'0  

1874 010066 001004          21950 BNE 3$  

1875 010070 112737 000177 010160 22050 MOVB #177,CNTDA  

1876 010076 000402          22150 BR 4$  

1877 010100 105137 010161          22250 3$: COMB FLAGDA  

1878 010104 113776 010160 000002 22350 MOVB CNTDA, #2(SP)  

1879 010112 005266 000002          22400 INC 2(SP)  

1880 010116 062700 000002          22450 ADD #2,R0  

1881 010122 105037 010160          22550 CLR B CNTDA  

1882 010126 105337 010162          22650 DECB DIGITS  

1883 010132 001334          22750 BNE 1$  

1884 010134 011666 000004          22800 MOV (SP), 4(SP)  

1885 010140 062706 000004          22825 ADD #4,SP  

1886 010144 000207          22850 RTS PC  

1887          22950  

1888 010146 023420 001750 000144 23050 TABDA: .WORD 10000.,1000.,100.,10.,1  

1889 010154 000012 000001          23150 CNTDA: .BYTE 0  

1890 010160 000          23250 FLAGDA: .BYTE 0  

1891 010161 000          23300 DIGITS: .BYTE 0,0  

1892 010162 000          23350
  
```

NOS

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3
 CZLAFA.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0065

```

1898          00250      .SBTTL  LA36 OPTION TESTS
1899          00300      ;* * * * * * * * * * * * * * * * * * * * * * *
1900          00350      :TESTO  SECONDARY CHARACTER SET OPTION
1901          00400      NO MANUAL INTERVENTION REQUIRED
1902          00450      :* * * * * * * * * * * * * * * * * * * * * * *
1903          00500      :* * * * * * * * * * * * * * * * * * * * * * *
1904          00550      :* * * * * * * * * * * * * * * * * * * * * * *
1905 010164 012705 010352 00600 TESTO: MOV    #TOOBLK,R5      ;SET UP POINTER TO MODULE BLOCK
1906 010170 012700 010366 00650 MOV    #TO, R0      ;SU TEST ID
1907 010174 004737 007010 00750 T01: JSR    PC,MTYPE
1908 010200 012700 010424 00850 MOV    #PRI, R0      ;SU PRIMARY MSG
1909 010204 004737 007010 JSR    PC,MTYPE
1910 010210 004737 010310 00900 MCV    #L1, R0      ;SEND ALL CHARACTERS
1911 010214 012700 017730 01000 MOV    #SEC, R0      ;SU SECONDARY MSC.
1912 010220 004737 007010 JSR    PC,MTYPE
1913 010224 012700 010434 01100 MOV    #E0, R2      ;SEND SO - SELECT APL SET
1914 010230 004737 007010 JSR    PC,MECHO
1915 010234 012702 000016 01200 JSR    PC,CHARS
1916 010240 004737 006270 01250 MOV    #L, R0      ;SEND ALL CHARS AGAIN
1917 010244 004737 010310 JSR    PC,MTYPE
1918 010250 012700 017730 01350 MOV    #S1, R2      ;SEND SI-SELECT ASCII
1919 010254 004737 007010 JSR    PC,MECHO
1920 010260 012702 000017 01450 BIS    #TONE,MFLAGS(R5)
1921 010264 004737 006270 01500 MOV    #1F, R2      ;SET DONE AND ATTENTION FLAGS
1922          01550 JSR    PC,MECHO
1923 010270 052765 020000 000004 01650 RTS    PC
1924 010276 012702 000012 01700 :*****:*
1925 010302 004737 006270          : SUBROUTINE TO FILL OUTPUT LINE WITH ALL CHARACTERS
1926 010306 000207          01750
1927          01800
1928          01850 CHAR: MOV    WIDTH, R1      ;SAVE WIDTH
1929          01900 MOV    #40, R2      ;SAVE START CHAR
1930 010310 013701 016146 01950 SUB    #7, R1      ;ADJUST WIDTH FOR PRI/SEC MSG
1931 010314 012702 000040 02000 2$: JSR    PC,MECHO
1932 010320 162701 000007 02050 INC    R2
1933 010324 (3) 004737 006270 02100 CMP    R2, RUB
1934 010330 005202 020237 02150 BEQ    3$      ;NEXT CHAR
1935 010332 020237 010364 02200 DEC    R1      ;LAST CHAR?
1936 010336 001403 02250 BEQ    3$      ;YES - EXIT
1937 010340 005301 02300 BR    2$      ;END OF PAPER?
1938 010342 001401 02350 BEQ    3$      ;YES - EXIT
1939 010344 000767 02400 BR    2$      ;SEND NEXT
1940 010346 000207 02450 3$: RTS    PC      ;ITERATION COUNT
1941 010350 000006 02400 TOOBLOCK: .WORD 6      ;CTLCNT
1942 010352 000000 02450 .WORD 0      ;PASS COUNT
1943 010354 000000 02500 .WORD 0      ;STATUS FLAGS
1944 010356 000000 02550 .WORD 0      ;POINTER
1945 010360 000000 02600 .WORD 0      ;RETURN PC
1946 010362 010200 02650 .WORD T01
1947 010364 000177 02700 .WORD 177
1948          02750 RUB: .NLIST BEX
1949 010366 042524 052123 030040 02800 TO:   ASCIZ *TEST 0 APL/ASCII CHAR SET*(15)<12><12>
1950 010424 051501 044503 026511 02850 PRI:  .ASCIZ /ASCII--/
1951 010434 050101 026514 026455 02900 SEC:  .ASCIZ /APL----/
1952          02950 .EVEN

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CZLAFAD LA36 TERM TST MAC/11 30A(1052) 03-JAN-77 00:01 PAGE 3-1
 CZLAFAD.F11 03-JAN-78 11:20 LA36 OPTION TESTS

SEC 0066

```

1954          03050
1955          03100 LIST BEX
1956          03150 **** * * * * * * * * * * * * * * * * * * * * * * * * * * * *
1957          03200
1958          03250 TEST1 SELECTIVE ADDRESSING OPTION
1959          03300 OPERATOR MUST COMPARE TYPEOUT AND SWITCHES ON THE M7737
1960          03350 TO VERIFY CORRECT OPERATION.
1961          03400 IF A GROUP OR UNIT SELECT CODE OF LESS THAN 20(8)
1962          03450 IS USED MODIFY LOCATION GSEL ACCORDINGLY.
1963          03500
1964          03550
1965          03600

1966 010444    03700      MOV     #T01BLK,R5      ;SET UP POINTER TO MODULE BLOCK
1967 010444 012705 010722 03750      MOV     #T1, R0
1968 010450 012700 010742 03850      JSR     PC,MTYPE
1969 010454 004737 007010      T11:   :DESELECT ALL TERMINALS, THEN TRY TO
1970 010460      03900      :PRINT ERROR MESSAGES... SHOULD NOT PRINT
1971      :03950      :TRANSMIT A BAD SELECT SEQUENCE, THEN TRY TO
1972      :04000      :PRINT ERROR MESSAGES... SHOULD NOT PRINT
1973      :04050      :SELECT ALL TERMINALS, PRINT GP MESSAGE.
1974      :04100
1975

1976 010460 012765 010566 000010      MOV     #T13,RPC(R5)
1977 010466 013701 010734      MOV     GSEL,R1
1978 010472 012737 011176 010740      MOV     #TABL1,T1TEMP+2
1979 010500 012737 000001 010736      MOV     #1,T1TEMP
1980 (5) 010506 000402      BR     50002$  

1981 (4) 010510      50003$: INC    T1TEMP
1982 (7) 010510 005237 010736      50002$: INC    T1TEMP
1983 (5) 010514 023727 010736 000010      CMP    T1TEMP, #8.
1984 (7) 010522 003014      BGT    50004$  

1985 1980 010524 012700 017730      MOV     #L1, R0
1986 1981 010530 004737 007010      JSR     PC,MTYPE
1987 1982 010534 017700 000200      MOV     #T1TEMP+2,R0
1988 1983 010540 004737 007010      JSR     PC,MTYPE
1989 1984 010544 062737 000002 010740      ADD    #2,T1TEMP+2
1990 1985 010552 000756      BR     50003$  

1991 (3) 010554      50004$: : TRANSMIT SELECT CODES TO ALL TERMINALS
1992      : FOLLOWED BY ASCII EQUIV OF CODE.
1993 1988 010554 012765 010460 000010      04650      MOV     #T11,RPC(R5)
1994 1989 010562 013701 010734      04700      MOV     GSEL,R1
1995 1990 010566      T12:   :OUTPUT ALL CODES AND ASCII EQUIVELANTS
1996 1991 010566      04850      T13:   50005$:  

1997 1992 010566 020127 000200      CMP    R1, #200
1998 1993 010572 001420      BEQ    50006$  

1999 1994 010574 012730 020421      MOV    #SCODE,R0
2000 1995 010600 110160 000003      MOVB   R1,3(R0)
2001 1996 010604 004737 007010      JSR     PC,MTYPE
2002 1997 010610 112702 000002      MOVB   #STX,R2
2003 1998 010614 004737 006270      JSR     PC,MTYPE
2004 1999 010620 004737 010662      05250      : NOW CONVERT SELECT CODE TO ASCII FOR OUTPUT
2005 2000 010624 004737 007010      JSR     PC,CON
2006      : JSR     PC,MTYPE

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CZLAFAU LA36 TERM TST MAC,11 30A,1052' 03-JAN-77 00:01 PAGE 3-2
 CZLAFU.P11 03-JAN-78 :1:20 LA36 OPTION TESTS

SEG 0067

2001	010630	005201			INC	R1	
2002	010632	000755			BR	5000SS	
(3)	010634				50006\$:		
2003			05500			; TURN ALL TERMINALS ON AND EXIT TEST	
2004	010634	012765	010460	000010	05550	T16:	
(4)	010634	012765	020000	000004		MOV	\$T11,RPC(R5)
2005	010642	012765	020411			BIS	\$TDONE,MFLAGS(R5)
2006	010650	012700				MCV	\$ALLON,RO
2007	010654	004737	007010			JSR	PC,MTYPE
2008	010660				50000\$:		
(3)	010660				50001\$:		
(2)	010660	000207				RTS	PC
2009			05750			; THIS ROUTINE CONVERTS THE SELECT CODE	
2010			05800			; TO ASCII FOR OUTPUT IN OCTALC MESSAGE.	
2011	010662				CON:		
2012	010662	005037	010736			CLR	T1TEMP
2013	010666	110137	010736			MOVB	R1,T1TEMP
2014	010672	013746	010736			MOV	T1TEMP-(SP)
2015	010676	012746	000003			MOV	\$3-(SP)
2016	010702	012746	011520			MOV	\$OCTALC-(SP)
2017	010706	004737	007566			JSR	PC,G2ASC
2018	010712	012700	011520			MOV	\$OCTALC,RO
2019	010716				50000\$:		
(3)	010716				50001\$:		
(2)	010716	000207				RTS	PC
2020			06300				
2021	010720	000002	06350			.WORD	2
2022	010722	000000	06400		TC1BLK:	.WORD	0
2023	010724	000000	06450			.WORD	0
2024	010726	000000	06500			.WORD	0
2025	010730	000000	06550			.WORD	0
2026	010732	010460	06600			.WORD	T11
2027	010734	000020	06650		GSEL:	.WORD	20
2028	010736	000000	000000		T1TEMP:	.WORD	0,0
2029			06700			.NLIST	BEX
2030	010742	005015	052012	051505	06800	T1:	.ASCIZ <15><12><12>/TEST 1 SELECTIVE ADDRESSING 15 12 12
2031	011005	105	051122	051117	06850	E9:	.ASCIZ /ERROR - THIS SHOULD NOT PRINT *
2032	011045	116	020117	042523	06900	E12:	.ASCIZ /NO SELECT CHARACTER SENT/<15><12
2033	011100	042523	042514	052103	06950	GP:	.ASCIZ /SELECT CHARACTERS RECOGNIZED =/
2034	011137	101	046114	052040	07000	E10:	.ASCIZ /ALL TERMINALS SHOULD BE OFF//<15><12>
2035		011176			07050	EVEN	
2036	011176	020416	C11005	011137	07100	TPBL1:	.WORD ALLOFF,E9,E10,NSEL,C,E9,E12,ALLON,GP
2037					07150		
2038					07200		
2039					07250		
2040					07300		
2041					07350	*****	
2042					07400	;GETANS	
2043					07450		THIS ROUTINE SETS UP AND READS THE ANSWERBACK
2044					07500		MESSAGE FROM THE TERMINAL UNDER TEST.
2045					07550	*****	
2046					07600		
2047					07650		
2048	011216				GETANS:		
2049	011216	010337	011304			MOV	R3,25
2050	011222	012702	013144			MOV	\$T2E0,R2

ZLAFAC LA36 TERM TST MAC, 11 30A 1052 03-JAN-77 00:01 PAGE 3-3
 ZLAFAC.FII 03-JAN-78 11:20 LA36 OPTION TESTS

ZES 0062

2051	011226	004737	007124		JSR	PC READS
2052	011232	012702	000005		MOV	#ENQ, R2
2053	011236	004737	006654		JSR	PC, SECHO
2054	011242			08000 1\$:	MOV	2\$, R2
(4)	011242	013702	011304		JSR	PC, RADIO
2055	011246	004737	007024		BIT	#MERR, MFLAGS RS
2056	011252	032765	100000	000004	BEQ	50002\$
(9)	011260	001405			BIC	#MERR, MFLAGS RS
2057	011262	042765	100000	000004	CLRB	(R1)
2058	011270	105011			BR	50003\$
2059	011272	000403			INCB	T2CNT1
(3)	011274				BR	1\$
2060	011274	105237	013212	08350	50002\$:	50003\$:
2061	011300	000760			50003\$:	50000\$:
2062	011302				50000\$:	50001\$:
2063	011302				RTS	PC
(3)	011302			08500 2\$:	.WORD	0
(2)	011302	000207			09550	
2064	011304	000000			09600	
2065					08650	*****
2066					08700	THIS ROUTINE PRINTS THE ANSWERBACK MESSAGE
2067					08750	IN OCTAL FORMATT, AND ASCII FORMATT.
2068					08800	*****
2069					08850	
2070					08900	
2071					09000	TYPANS:
2072						
2073	011306					
2074						
2075	011306	012700	020421		MOV	*SCODE, R0
2076	011312	004737	007110		JSR	PC, TYPES
2077	011316	012702	000002		MOV	#\$1X, R2
2078	011322	004737	006654		JSR	PC, SECHO
2079	011326	012700	011472		MOV	#ANSHDR, F1
2080	011332	004737	007110		JSR	PC, TYPES
2081	011336	013746	013212		MOV	T2CNT1,-(SP)
2082	011342	005046		09337 1\$:	CLR	-(SP)
2083	011344	112116			MOV	(R1)+ (SP)
2084	011346	012746	000003		MOV	#3-(SP)
2085	011352	012746	011520		MOV	#OCTALC -(SP)
2086	011356	004737	007566		JSR	PC, O2ASC
2087	011362	012700	011520		MOV	#OCTALC, R0
2088	011366	004737	007110		JSR	PC, TYPES
2089	011372	105337	013212		DEC8	T2CNT1
2090	011376	105737	013212		TSTB	T2CNT1
(9)	011402	003402			BLE	50002\$
2091	011404	000756		09700	BR	1\$
2092	011406	000426			BR	50003\$
(3)	011410				50002\$:	
2093	011410	012700	017730		MOV	SL1, R0
2094	011414	004737	007110		JSR	PC, TYPES
2095	011420	012700	000023		MOV	#19., R0
2096	C11424				MOV	#40, R2
2097	011424	012702	000040		JSR	PC, SECHO
2098	C11430	004737	006654			

E06

CZLAFAC LA36 TERM TST MACYII 30A 1052 03-JAN-77 00:01 PAGE 3-4
CZLAFAC.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEG CC69

2099	011434	005300			DEC	RO	
2100	011436	005700			TST	RO	
(5)	011440	001401			BEG	50005\$	
2101	011442	000770			BR	500C4\$	
(3)	011444			50005\$:			
2102	011444	012700	013220		MOV	BT2BUF, RO	
2103	011450	004737	007110		JSR	PC, TYPES	
2104	011454	012700	017730		MOV	BL1, RO	
2105	011460	004737	007110		JSR	PC, TYPES	
2106	011464			50003\$:	MOV	(SP)+, T2CNT1	
2107	011464	012637	013212		50000\$:		
2108	011470				50001\$:		
(3)	011470				RTS	PC	
(2)	011470	000207			ANSHDR:	.ASCIZ '(15)(12) ANSWERBACK PECVD =	
2109	011472	005015	047101	053523	10100	OCTALC:	.ASCIZ '000/*
2110	011520	030C60	027460	00C	10150		.EVEN
					10200		
					10250		

CZLAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 3-5
 CZLAFAO.FII 03-JAN-78 11:20 LA36 OPTION TESTS

SEG 0070

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2114          10350      .LIST BEX
2115          10400      * * * * *
2116          10450      *
2117          10500      TEST2 AUTO ANSWER BACK OPTION
2118          10550      SINGLE LINE TESTS REQUIRE MANUAL INTERVENTION
2119          10600      *
2120          10650      *
2121          10700      *
2122          10750      ENABL LSB
2123 011526    TEST2:
2124 011526 012700 013326 10850      MOV     #T2 R0
2125 011532 012701 013220 10900      MOV     #T2BUF R1      ;SET UP STACK-2 AS INPUT BUFFER
2126 011536 012705 013176 10950      MOV     #T02BLK RS      ;SET UP POINTER TO MODULE BLOCK
2127 011542 004737 007010 11050      JSR     PC MTYPE
2128 011546          T21:   :IF THE LINE UNDER TEST HASN'T BEEN SIZED
2129          11100      :FOR THE ANSWERBACK OPTION DO SO NOW.
2130          11150      TSTB    DLOTH
2131 011546 105737 016134          BNE    $0002$*
2132 (9) 011552 001065 013220          MOV     #T2BUF R1
2133 011554 012701          11300      :CHECK DLOTH ENTRY OF LINE TABLE FOR CURRENT
2134          11350      :LINE. IF LOBYTE IS 0 NO SIZE HAS BEEN DONE.
2135          11400      :IF = 200 LINE SIZED BUT NO ANSWER RECVD.
2136          11450      *
2137 011560 013737 010734 013214          MOV     GSEL, T2TEMP
2138 011566 013737 016160 013216          MOV     ONLIN, T2TEMP+2
2139 (7) 011574 006337 013216          ASL     T2TEMP+2
2140 (7) 011600 006337 013216          ASL     T2TEMP+2
2141 (7) 011604 006337 013216          ASL     T2TEMP+2
2142 011610 062737 016176 013216          ADD     $LIN00+6, T2TEMP+2
2143 011616 112777 000200 001372          MOVB   $200, AT2TEMP+2
2144 (5) 011624 023727 013214 000200          50003$: CMP     T2TEMP, $200
2145 (5) 011632 001435          11800      BEQ    $0004$*
2146          11850      :SEND EACH POSSIBLE SELECT CODE TO THE
2147          11900      :TERMINAL, THEN REQUEST AN ANSWERBACK.
2148          11950      :IF AN ANSWER IS RECEIVED STORE THE SELECT
2149          12000      :CODE IN DLOTH ENTRY OF THE LINE TABLE.
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2162 011726
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 2164 011726
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 2168 011726 123727 016134 000200
 (9) 011734 001015
 2169
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 2171
 2172 011736 012765 012530 000010
 2173 011744 052765 100000 000004
 2174 011752 105065 000004
 2175 011756 012765 013356 000006
 2176 011764 000207
 2177 011766 000463
 (3) 011770
 2178 011770 012701 013220
 2179
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 2181
 2182 011774 113737 016134 020424
 2183 012002 012700 020421
 2184 012006 004737 007110
 2185 012012 012703 000310
 2186 012016 105037 013212
 2187 012022 004737 011216
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 2190 012026 105737 013212
 (9) 012032 001015
 2191
 2192
 2193
 2194 012034 012765 012530 000010
 2195 012042 052765 100000 000004
 2196 012050 112765 000001 000004
 2197 012056 012765 013356 000006
 2198 012064 000424
 (3) 012066
 2199 012066 012765 012140 000010
 2200
 2201
 2202 012074 123727 013212 000024
 (9) 012102 003411
 2203
 2204
 2205
 2206 012104 052765 100000 000004
 2207 012112 112765 000002 000004
 2208 012120 012765 013404 000006
 2209 012126
 2210 012126 012701 013220
 2211 012132 004737 011306
 22.2 012136

50002\$:

12600
 12650 T22: ; IF THE LINE HAS BEEN SIZED BUT NO
 12700 ; SELECT CODE HAS BEEN MAPPED NOTIFY THE
 12750 ; OPERATOR .
 12800

CMPB DLOTH #200
 BNE 50007\$
 : ERROR #0 NO ANSWERBACK FROM TERMINAL
 : *****
 MOV ST24, RPC(R5)
 BIS \$MERR, MFLAGS(R5)
 CLR B MFLAGS(R5)
 MOV #E14, POINT(R5)
 RTS PC
 BR 50010\$
 13250

50007\$:

13400
 13450
 13500

MOV #T2BUF, R1
 : GET THE SELECT CODE FROM THE LINE TABLE &
 REQUEST AN ANSWERBACK.
 13850

MOVB DLOTH, SCODE+3
 MOV #SCODE, R0
 JSR PC, TYPES
 MOV #200, R3
 CLR B T2CNT1
 JSR PC, GETANS
 : CHECK FOR ANY RESPONSE FROM TERMINAL
 13900

TSTB T2CNT1
 BNE 50011\$
 : ERROR #1 NO ANSWERBACK RECEIVED.
 : *****
 14000
 14050
 14100

MOV #T24, RPC(R5)
 BIS \$MERR, MFLAGS(R5)
 MOVB #1, MFLAGS(R5)
 MOV #E14, POINT(R5)
 BR 50012\$
 14450

50011\$:

14500

CMPB T2CNT1, #20.
 BLE 50013\$
 : ERROR #2 ANSWERBACK OVER 20 CHARS LONG.
 : *****
 14600
 14650
 14700

BIS \$MERR, MFLAGS(R5)
 MOVB #2, MFLAGS(R5)
 MOV #E15, POINT(R5)
 50013\$:
 MOV #T2BUF, R1
 JSR PC, TYPANS
 50012\$:

2213 012136 012136 000207 15150 50010\$:
 2214 012136 000207 15200 RTS PC
 2215 012140 012140 012206 000010 15250 ;SAVE COPIES OF THE ANSWERBACK AND IT'S LENGTH
 2216 012140 012140 013212 013213 15300 ;THEN READ ANSWERBACKS 10 TIMES MORE.
 2217 012140 012140 013220 013220 15350 ;VERIFY THEY ARE ALL THE SAME.
 2218 012140 012765 012206 000010
 2219 012146 113737 013212 013213
 2220 012154 012701 013220
 2221 012160 012700 020574
 2222 012164 105737 013212 15650 50014\$:
 2223 012164 105737 013212 :COPY ANSWERBACK TO STACK3 FOR COMPARISONS
 2224 012170 001404 T23: TSTB T2CNT1
 (5) 012170 001404 BEQ 50015\$
 2225 012172 112120 MOV (R1)+(R0)+
 2226 012174 105337 013212 DECB T2CNT1
 2227 012200 000771 BR 50014\$
 (3) 012202 012202 105037 013210 15950 50015\$:
 2228 012202 105037 013210 CLR8 T2SAV1
 2229 012206 012206 16000 T23A: ;RESET INPUT BUFFER POINTER AND ZERO COUNTER
 2230 012206 012206 16050
 2231 012206 012206 16200 :SEND SELECT SEQUENCE TO TERMINAL
 2232 012212 105037 013220 16250 ;THEN READ ANSWER
 2233 012212 105037 013212
 2234 012216 012700 020421
 2235 012222 012703 000310
 2236 012226 004737 011216
 2237 012232 105237 013210 16500 :
 2238 012236 105737 013212 16550 :IF NO ANSWER NOTIFY OPERATOR
 (9) 012242 001012 013212 16600 :IF OLD ANSWER DIFFERENT FROM NEW ANSWER
 2241 012242 001012 013212 16650 :NOTIFY OPERATOR.
 2242 012246 16750 :
 2243 012246 16800 TSTB T2CNT1
 2244 012246 16850 BNE 50016\$
 2245 012246 16850 ;ERROR #30 NO ANSWERBACK DURING TEN READ LOOP
 2246 012247 16850 :*****
 2247 012247 16850 :*****
 2248 012249 052765 100000 000004 17150 50016\$:
 2249 012252 012765 013356 000006 BIS #MERR,MFLAGS(R5)
 2250 012260 112765 000030 000004 MOV #E14,POINT(R5)
 2251 012266 000500
 2252 012270 012270 105011 012270 17350
 (3) 012270 105011 CLR8 (R1)
 2253 012270 105011 ;COMPARE LENGTHS OF ANSWERS
 2254 012272 123737 013212 013213 17400 CMPB T2CNT1,T2CNT2
 2255 012300 001416 BEQ 50020\$
 (9) 012302 012701 013220 MOV #T2BUF,R1
 2256 012306 004737 007110 JSR PC,TYPES
 2257 012312 052765 100000 000004 :ERROR #31 INCONSISTANT ANSWERBLOCKS
 2258 012320 112765 000031 000004 17450 :*****
 2259 012326 012765 013356 000006 BIS #MERR,MFLAGS(R5)
 2260 012326 012765 MOV #31,MFLAGS(R5)
 2261 012326 012765 MOV #E14,POINT R5

I06

CZLAFAO LA36 TERM TST MACY11 30A.1052 03-JAN-77 00:01 PAGE 3-6
CZLAFAO.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEC 0073

J06

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-9
 CZLAFAO.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0074

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2308 012544 004737 006654          JSR    PC SECHO
2309 012550 012700 020421          MOV    #SCODE R0
2310 012554 112737 000007          MOVB   #7, SCODE+3
2311 012562 004737 007110          JSR    PC TYPES
2312 012566 012703 000310          MOV    #200, R3
2313 012572 004737 011216          JSR    PC GETANS
2314 012576 105737 013212          TSTB   T2CNT1
2315 (9) 012602 001415          BEQ    50031$  

2316          20050          : ERROR #4 RECVD ANSWERBACK FROM BROADCAST
2317          20100          : ****
2318          20150          : ****
2319 012604 052765 100000 000004          BIS    #MERR, MFLAGS(R5)
2320 012612 112765 000004 000004          MOVB   #4, MFLAGS(R5)
2321 012620 012765 013632 000006          MOV    #E22, POINT(R5)
2322 012626 012765 012636 000010          MOV    #T25, RPC(R5)
2323 012634 000207          RTS    PC
2324 012636          20400          50031$:  

2325 012636          20500          T25: ; IF IN MULTI LINE MODE SETUP NEXT LINE POINTERS
2326          20550          ; IF SINGLE LINE MODE TEST KEYBOARD STUFF.
2327          20600          : ****
2328 012636 032737 000040 001364          BIT    #MULTI, PCFLAG
2329 (9) 012644 001424          BEQ    50032$  

2330 012646 004737 002110          JSR    PC LINMON
2331 012652 012765 012734 000010          MOV    #T25A, RPC(R5)
2332 012660 032737 000400 001364          BIT    #LDONE, PCFLAG
2333 (9) 012666 001406          BEQ    50033$  

2334 012670 042737 000400 001364          BIC    #LDONE, PCFLAG
2335 012676 052765 020000 000004          BIS    #TDONE, MFLAGS(R5)
2336 012704 012765 011546 000010          MOV    #T21, RPC(R5)
2337 012712 000207          21000          RTS    PC
2338 012714 000512          BR    50034$  

2339 (3) 012716 113737 016134 020424          50032$:  

2340 012724 012700 020421          MOVB   DLOTH, SCODE+3
2341 012730 004737 007110          MOV    #SCODE, R0
2342 012734 012765 013034 000010          JSR    PC, TYPES
2343 (4) 012734 012765 013220          21100          T25A:  

2344 012742 012701 000002          MOV    #T26, RPC(R5)
2345 012746 012702 006654          MOV    #T2BUF, R1
2346 012752 004737          21300          MOV    #STX, R2
2347 012756 012700 013252          JSR    PC SECHO
2348 012762 004737 007110          ; SET UP TO TEST HERE-IS KEY SINGLE LINE ONLY
2349 012766 105037 013212          21350          : ****
2350 012772 012703 007640          CLR8   T2CNT1
2351 012776 004737 011216          MOV    #4000, R3
2352 013002 105737 013212          : READ ANSWERBACK
2353 (9) 013006 001012          JSR    PC GETANS
2354          21600          TSTE   T2CNT1
2355          21750          BNE    50035$  

2356 013010 052765 100000 000004          : ERROR #5 NO ANSWERBACK FROM HERE-IS KEY
2357 013016 112765 000005 000004          : ****
2358          21800          : ****
2359          21850          BIS    #MERR, MFLAGS(R5)
2360          21850          MOVB   #5, MFLAGS(R5)
  
```

K06

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-10
 CZLAFAO.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0075

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2358 013024 012765 013475 000006    22050      MOV     #E17,POINT(R5)
2359 013032 000207                   22150      RTS     PC
2360 013034                   50035$:   22200      T26:    ;TEST CTL-E FUNCTION
2361                   22250
2362 013034                   22300      ;SET UP TO TEST CTL-E FUNCTION
2363                   22350
2364
2365
2366 013034 012765 011726 000010    22800      MOV     #T22,RPC(R5)
2367 013042 012701 013220             22850      MOV     #T2BUF,R1
2368 013046 012700 013305             22900      MOV     #CE, R0
2369 013052 012703 007640             23100      MOV     #4000,,R3
2370 013056 105037 013212             23400      CLR8   T2CNT1
2371 013062 004737 007110             23450      JSR    PC,TYPES
2372 013066 004737 011216             23500      JSR    PC,GETANS
2373 013072 105737 013212             23550      TSTB   T2CNT1
(9) 013076 001013                   23600      BNE    50036$:
2374                   23650      ; ERROR #6 NO ANSWERBACK FROM CTL-E KEY
2375                   23700      ;*****
2376
2377 013100 052765 100000 000004    23750      BIS    #MERR,MFLAGS(R5)
2378 013106 112765 000006 000004    23800      MOVB   #6,MFLAGS(R5)
2379 013114 012765 013540 000006    23850      MOV    #E18,POINT(R5)
2380 013122 000207                   23900      RTS    PC
2381 013124 000406                   23950      BR    50037$:
(3) 013126
2382 013126 052765 020000 000004    24000      BIS    #TDONE,MFLAGS(R5)
2383 013134 012765 011726 000010    24050      MOVB   #T22,RPC(R5)
2384 013142
2385 013142
2386 013142 000207                   24100      50037$:
2387                   24150      50034$:
2388                   24200      RTS    PC
2389                   24250      ;*****
2390                   24300      ;THIS ROUTINE IS THE KEYBOARD INTERRUPT HANDLER
2391                   24350      ;FOR TESTS #1 AND #2
2392                   24400      ;*****
2393 013144 117721 002766             24450      T220:  MOV     #DVCRXB,(R1)+      ;STORE CHAR IN POINTER
2394 013150 052737 004000             24500      BIS    #DATAIN,PCFLAG    ;SET DATA-IN FLAG
2395 013156 012777 000101             24550      MOV    #101,DLADR        ;REENABLE THE RECVR
2396 013164 005037 007564             24600      CLR    DELAYT           ;ABORT THE TIMEOUT
2397 013170 000002                   24650
2398 013172
(3) 013172
(2) 013172 000207                   24700      50000$:
2399                   24750      50001$:
2400                   24800      RTS    PC
2401 013174 000                 003   24850      ;*****
2402 013176 000000                   24900      ;DSABL LSB
2403 013200 000000                   24950      T02BLK: .BYTE   0,3      ;ITERATION COUNTS
2404 013202 000000                   25000      .WORD   0          ;CTL CNT
2405 013204 000000                   25050      .WORD   0          ;PASS COUNT
2406 013206 011546                   25100      .WORD   0          ;STATUS FLAGS
2407 013210 000000                   25150      .WORD   0          ;POINTER
2408 013212 000                 003   25200      T2SAV1: .WORD   T21      ;RETURN PC
2409 013213 000                 003   25250      T2CNT1: .BYTE   0
2410                   25300      T2CNT2: .BYTE   0

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L06

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-11
CZLAFAO.P1 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0076

2410	013214	000000	000000		29600	T2TEMP:	.WORD	0.0		
2411	013220	000000	000000	000000	21605	T2BUF:	.WORD	0.0,0.0,0.0,0.0,0.0,0.0,0.0,	: BJFFER FOR ANSWERBACK	
	013226	000000	000000	000000						
	013234	000000	000000	000000						
	013242	000000	000000	000000						
	013250	000000	000000	000000						
2412					24650					
2413					24700	.NLIST BEX				
2414	013252	005015	042504	051120	24750	HI:	.ASCIZ	<15><12>/DEPRESS HERE IS -- KEY/<15><12>		
2415	013305	015	052012	050131	24800	CE:	.ASCIZ	<15><12>/TYPE CONTL-E/<15><12>		
2416					24850					
2417	013326	005015	052012	051505	24900	T2:	.ASCIZ	<15><12><12>/TEST 2 AUTO ANSWER/<15><12>		
2418	013356	047516	040440	051516	24950	E14:	.ASCIZ	/NO ANSWERBACK RECD/<15><12>		
2419	013404	047101	041123	041501	25000	E15:	.ASCIZ	/ANSBACK MSG OVER 20 CHARS/<15><12>		
2420	013440	047101	041123	041501	25050	E16:	.ASCIZ	/ANSBACK MSG CONTAINED NULL/<15><12>		
2421	013475	110	051105	020105	25100	E17:	.ASCIZ	/HERE IS KEY DIDN'T TXMIT ANSBACK/<15><12>		
2422	013540	052103	026514	020105	25150	E18:	.ASCIZ	/CTL-E DIDN'T TXMIT ANSBACK/<15><12>		
2423	013575	101	051516	042527	25200	E21:	.ASCIZ	/ANSWERBACKS DIDN'T COMPARE/<15><12>		
2424	013632	047101	041123	041501	25250	E22:	.ASCIZ	/ANSBACK RECD FROM BROADCAST SELECT/<15><12>		
2425					25300	.EVEN				
2426					25350	.LIST BEX				

M06

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-12
CZLAFAO.PII 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0077

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2428
2429
2430
2431 TEST3 TOP OF FORM OPTION
2432 OPERATOR INTERVENTION REQUIRED IN SINGLE LINE MODE
2433
2434
2435 .ENABL LS8
2436
2437 013700 012700 014376 25450
2438 013704 004737 007010 25500
2439 013710 012705 014342 25550
2440 013714 032737 000040 001364 25600 TEST3: MOV #T3, R0 ;SU FOR TEST HEADER
2441 013722 001424 26000 JSR PC, MTYPE
2442 013724 012701 000102 26050 MOV #T03BLK, R5 ;SET UP POINTER TO MODULE BLOCK
2443 013730 113702 016167 26100 BIT #MULTI, PCFLAG ;CHECK FOR SINGLE LINE MODE
2444 013734 004737 006270 26150 BEQ 3$ ;SINGLE MODE - BRANCH
2445 013740 012702 00000E 26200 1$: MCV #66, R1 ;FILL COUNT FOR 11" FORMS
2446 013744 004737 006270 26250 MOVK FF, R2 ;MOVE TO TOP OF FJRM
2447 013750 005301 26300 2$: JSR PC, MECHO
2448 013752 001372 26400 MOV #ACK, R2
2449 013754 012700 014427 26450 JSR PC, MECHO
2450 013760 004737 007010 26500 DEC R1
2451 013764 052765 020000 000004 26550 BNE 2$ ;SET ATTENTION & DONE FLAGS
2452
2453 013772 000207 26600 RTS PC
2454
2455 013774 012765 013774 000010 26650 26700 :***** THIS SECTION FOR SINGLE LINE MANUAL INTERVENTION
2456 014002 012737 014610 014356 26750 26800 ;THIS SECTION FOR SINGLE LINE MANUAL INTERVENTION
2457 014010 012737 014362 014354 26850 26800 ;THIS SECTION FOR SINGLE LINE MANUAL INTERVENTION
2458 014016 012700 014443 26900 3$: MOV #3$, #PC(R5) ;SET RETURN PC TO HERE
2459 014022 004737 007110 26950 MOV #HDR5, T3SAV1 ;GET LIST OF FORM LENGTHS
2460 014026 012700 014646 27000 MOV #FILL3, T3SAV ;GET FIL COUNT
2461 014032 112037 014564 27050 MOV #HDR3, R0
2462 014036 112037 014565 27100 JSR PC, TYPES
2463 014042 111037 014566 27150 MOV #HORSA, R0 ;SET UP MESSAGE WITH
2464 014046 012700 014557 27200 MOVB (R0)+, HOR4+5 ;INSTRUCTIONS FOR 3"
2465 014052 004737 007110 27250 MOVB (R0)+, HOR4+6 ;FORMS.
2466 014056 013700 014356 27300 MOVB (R0), HOR4+7
2467 014062 112037 014564 27350 A3$: MOV #HOR4, R0 ;SEND SU MSG
2468 014066 112037 014565 27400 JSR PC, TYPES
2469 014072 112037 014566 27450 MOV T3SAV1, R0
2470 014076 01C037 014356 27500 MOVB (R0)+, HOR4+5 ;MODIFY INSTRUCTIONS FOR
2471 014102 012702 014124 27550 MOVB (R0)+, HOR4+6 ;NEXT LOOP
2472 014106 004737 007124 27600 MOVB (R0)+, HOR4+7
2473 014112 012702 035230 27650 MOV RO, T3SAV1 ;SAVE THE LIST POINTER
2474 014116 004737 007024 27700 5$: MOV #6$, R2 ;PASS 6$ AS VECTOR TO READ ROUTINE
2475 014122 000406 27750 JSR PC, READS ;GO SET VECTORS
2476 014124 005037 007564 27800 MOV #15000, R2 ;SET UP 15 SEC DELAY
2477 014130 052737 004000 001364 27850 JSR PC, READIO
2478 014136 000002 27900 BR 9$ ;ABORT THE TIMEOUT
2479 014140 012700 017730 27950 6$: CLR DELAYT
2480 014144 004737 007110 28000 BIS #DATAIN, PCFLAG ;SEND CR/LF
2481 014150 042737 004000 001364 28050 RTI ;IN CASE LINE 0
2482

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2484 014156 042765 1000_0 000004 28250      BIC      #MERR, MFLAGS(R5); IN CASE OF READ ERROR
2485 014164 117737 000164 014360 28300      MOVB    #T3SAV, T3SAV2 ;GET FILL COUNT
2486 014172 113702 016167 28350      MOVB    FF, R2
2487 014176 004737 006654 28400      JSR     PC, SECHO
2488 014202 012702 000006 28450      MOV     #ACK, R2
2489 014206 004737 006654 28500      JSR     PC, SECHO
2490 014212 005337 014360 28550      DEC     T3SAV2
2491 014216 001371 28600      BNE    7$:          ;DO FORM FEED
2492 014220 012700 014427 28650      MOV     #DAS, RD
2493 014224 004737 007110 28700      JSR     PC, TYPES
2494 014230 012702 000012 28750      MOV     #LF, R2
2495 014234 004737 006654 28800      JSR     PC, SECHO
2496 014240 117737 000110 014360 28850      MOVB    #T3SAV, T3SAV2 ;SEND FILL CHARS
2497 014246 113702 016167 28900      MOVB    FF, R2
2498 014252 004737 006654 28950      JSR     PC, SECHO
2499 014256 012702 000006 29000      MOV     #ACK, R2
2500 014262 004737 006654 29050      JSR     PC, SECHO
2501 014266 005337 014360 29100      DEC     T3SAV2
2502 014272 001371 29150      BNE    8$:          ;COUNT NOT DONE - BRANCH
2503 014274 012700 014427 29200      MOV     #DAS, RD
2504 014300 004737 007110 29250      JSR     PC, TYPES
2505 014304 012702 000012 29300      MOV     #LF, R2
2506 014310 004737 006654 29350      JSR     PC, SECHO
2507 29400
2508 014314 005237 014354 29450      INC     T3SAV
2509 014320 023727 014356 014651 29500      CMP     T3SAV1, #HDRSE ;GET NEW FILL COUNT
2510 014326 001247 29550      BNE    A3$          ;END OF INSTRUCTION LIST?
2511 014330 052765 020000 000004 29600      BIS     #TDONE, MFLAGS(R5) ;NO - DO NEXT
2512 29650      ;SET ATTENTION & DONE FLAGS
2513 014336 000207 29700      RTS     PC
2514 29750
2515 014340      000      003 29800      T03BLK: .BYTE 0,3       ;ITERATION COUNT
2516 014342 000000 29850      .WORD 0
2517 014344 000000 29900      .WORD 0       ;CTL CNT
2518 014346 000000 29950      .WORD 0       ;PASS COUNT
2519 014350 000000 30000      .WORD 0       ;STATUS FLAGS
2520 014352 013724 30050      .WORD 0       ;POINTER
2521 30100      .WORD 1$       ;RETURN PC
2522 014354 000000 30150      T3SAV: .WORD 0       ;STORAGE
2523 014356 000000 30200      T3SAV1: .WORD 0
2524 014360 000000 30250      T3SAV2: .WORD 0
2525 30300
2526 30350
2527 30400      .NLIST BEX
2528 014362      022      025 030 30450      FILL3: .BYTE 18., 21., 24., 33., 36., 42. ;FILL COUNTS FOR TEST 3
2529 014370      060      063 102 30500      .BYTE 48., 51., 66., 72., 84., 18.
2530 014376 005015 052012 051505 30550      T3: .ASCII <15><12><12>/TEST 3' TOP OF FORMS/<15><12>
2531 014427      075      036475 036475 30600      DAS: .ASCII /=====/<15>
2532 014443      120      042522 051523 30650      HDR3: .ASCII /PRESS TOF RESET SWITCH/<15><12>
2533 014473      101      052106 051105 30700      .ASCII /AFTER EACH SWITCH SETTING/<15><12>
2534 014526 054524 042520 042040 30750      HDR4: .ASCII /TYPE DELETE WHEN READY/<15><12>
2535 014557      055      042523 020124 30800      .ASCII /-SET 3 INCH FORM FEED/
2536 014610      014610   065 30850      .EVEN
2537 014610 027063      065 30900      HDR5: .ASCII /3.5/
2538 014613      040      032040 30950      .ASCII /4/
2539 014616 027065      065 31000      .ASCII /5.5/

```

B07

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-14
CZLAFAO.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SEG 0073

2540	014621	040	033040	31050	.ASCII	/ 6/
2541	014624	020040	067	31100	.ASCII	/ 7/
2542	014627	040	034040	31150	.ASCII	/ 8/
2543	014632	027070	065	31200	HDR5B:	.ASCII / 8.5/
2544	014635	040	030461	31250	.ASCII	/ 11/
2545	014640	030440	062	31300	.ASCII	/ 12/
2546	014643	040	032061	31350	.ASCII	/ 14/
2547	014646	020040	063	31400	HDR5A:	.ASCII / 3/
2548	014651	014652		31450	HDR5E:	
2549				31500	EVEN	
2550				31550	.LIST BEX	

CZLAFAD LA36 TERM TS MAC 11 30A(1052) 03-JAN-77 00:01 PAGE 3-15
 CZLAFAD.F11 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ 0080

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2552          31650      .DSABL LSB
2553          31700
2554          31750      * * * * *
2555          31800
2556          31850      TEST4 HORIZONTAL TAB OPTION
2557          31900      IF USING OTHER THAN 132 COL PAPER CHANGE LOC "WIDTH"
2558          31950      TO APPROPRIATE VALUE. SEE WN COMMAND .
2559          32000
2560          32050      * * * * *
2561          32100
2562 014652 012705 015246 32150      TEST4: MOV #T04BLK,R5 ;SET UP POINTER TO MODULE BLOCK
2563 014656 012700 015320 32200      MOV #T4,RO
2564          32250      : PRINT TEST HEADER
2565 014662 004737 007010 32350      JSR PC MTYPE
2566 014666 012737 015270 015264 32400      T41: MOV #TABL4,T4SAV2
2567 014674 012765 014702 000010 32450      MOV #T42,RPC(R5)
2568 014702 012702 000033 32500      T42: MOV #ESC,R2
2569 014706 013737 016146 015262 32550      MOV #WIDTH,T4SAV1
2570          : SEND ESC-2 TO RESET PLL TABS.
2571 014714 004737 006270 32650      JSR PC MECHO
2572 014720 012702 000062 32700      MOV #'2,R2
2573 014724 004737 006270 32750      JSR PC MECHO
2574 014730 117737 000330 015316 32800      MOVB #T4SAV2,TAB ;GET TAB COUNT FROM TABL4
2575 014736 005237 015264 32850      INC T4SAV2
2576 014742 105077 000316 32900      CLR B #T4SAV2 ;INITIALIZE COUNT TO ZIP
2577 014746 013701 015316 32950      MOV TAB,R1
2578 014752 012700 017730 33000      MOV #L1,RO
2579          : SEND CR/LF
2580 014756 004737 007010 33100      JSR PC MTYPE
2581 014762 163737 015316 015262 33150      3S: SUB TAB,T4SAV1
2582 014770 002434          33150      BLY 6S :FINISHED TAB COUNT PER LINE - BRANCH
2583          33200
2584 014772 005301 33250      4S: DEC R1
2585 014774 001405 33300      BEQ SS
2586 014776 012702 000056 33350      MOV #'1,R2
2587 015002 004737 006270 33400      JSR PC MECHO ;PRINT PERIOD
2588 015006 000771          33450      BR 4S
2589 015010 012702 000033          33500      SS: MOV #ESC,R2 ;SET TAB
2590          33550      : SEND ESC-1 TO SET A TAB
2591 015014 004737 006270 33650      JSR PC MECHO
2592 015020 012702 000061 33700      MOV #'1,R2
2593 015024 004737 006270          33750      JSR PC MECHO
2594          : SEND A BACKSPACE
2595 015030 012702 000010 33800      MOV #'10,R2
2596 015034 004737 006270          33850      JSR PC MECHO
2597          33900      : PRINT A V FOR REFERENCE
2598 015040 012702 000126 33950      MOV #'V,R2
2599 015044 004737 006270          34000      JSR PC MECHO
2600 015050 105277 000210 34050      INC B #T4SAV2 ;INC TAB COUNT
2601 015054 013701 015316 34100      MOV TAB,R1 ;GET TAB POS AGAIN
2602 015060 000740          34150      BR 3S ;FORMAT NEXT SECTION
2603          34200      :LINE SHOULD LOOK LIKE THIS: ....V....V....V..ETC
2604          34250
2605 015062 012737 000000 015266 34300      6S: MOV #3,COUNT ;DO 3 LINES OF TABS
2606 015070 117737 000170 015316 34350      7S: MOVB #T4SAV2,TAB ;GET TAB COUNT
2607 015076 001440          34400      BEQ 11S ;=0? - BRANCH OUT

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D07

CZLAFAO LA36 TERM TST MAC 11 30A 1052 03-JAN-77 00:01 PAGE 3-16
 CZLAFAO.F11 03-JAN-78 11:20 LA36 OPTION TESTS

SES 0081

```

2608 015100 005237 015264      34450    INC    T4SAV2
2609 015104 012700 017730      34500    MOV    $L1,R0
2610                               34550    : SEND A CR/LF
2611 015110 004737 007010      34650    JSR    PC MTYPE
2612 015114 012702 000011      34700    BS:   MOV    $11,R2
2613                               34800    : SEND A HORIZ-TAB
2614 015120 004737 006270      34850    JSR    PC MECHO
2615 015124 117737 000134      34900    MOVB   AT4SAV2,T4SAV  ; GET FILL COUNT TABS 2
2616 015132 012702 000006      34950    9S:   MOV    BACK R2
2617                               35000    : SEND FILL CHARACTERS
2618 015136 004737 006270      35050    JSR    PC MECHO
2619 015142 005337 01526C      35100    DEC    T4SAV
2620 015146 001371            35150    BNE   9S
2621 015150 012702 000130      35200    MOV    $'X R2
2622                               35250    : PRINT A Y X UNDER EACH V
2623 015154 004737 006270      35300    JSR    PC MECHO
2624 015160 005337 015316      35350    DEC    TAB
2625 015164 001353            35400    BNE   BS
2626 015166 005337 015264      35450    DEC    T4SAV2
2627 015172 005337 015266      35500    10S:   DEC    COUNT
2628 015176 001334            35550    BNE   7S
2629 015200 012700 017051      35600    11S:   MOV    $L3,R0
2630 015204 004737 007010      35650    JSR    PC MTYPE
2631 015210 062737 000002      35700    ADD    $2,T4SAV2
2632 015216 023727 015264      35750    CMP    T4SAV2,$TAB-1
2633 015224 001226            35800    BNE   T42
2634                               35900    BIS    #TDONE,MFLAGS(R5)  ; SET ATTENTION AND DONE FLAGS
2635 015226 052765 020000 000004 35950    MOV    #T41,RPC(R5)
2636 015234 012765 014666 000010 36000    RTS    PC
2637 015242 000207            36050
2638                               36100
2639 015244 000 004            36150    T04BLK: .BYTE 0,4
2640 015246 000000            36200    .WORD 0
2641 015250 000000            36250    .WORD 0
2642 015252 000000            36300    .WORD 0
2643 015254 000000            36350    .WORD 0
2644 015256 014702            36400    .WORD 1,2
2645                               36450
2646 015260 000000            36500    T4SAV: .WORD 0
2647 015262 000000            36550    T4SAV1: .WORD 0
2648 015264 000000            36600    T4SAV2: .WORD 0
2649                               36650
2650                               36700
2651 015266 000002            36750    COUNT: .WORD 2
2652 015270 004 000 002        36800    TABL4: .BYTE 4,0,2
2653 015273 010 000 004        36850    .BYTE 8,0,4
2654 015276 011 000 005        36900    .BYTE 9,0,5
2655 015301 020 000 010        36950    .BYTE 16,0,8
2656 015304 022 000 012        37000    .BYTE 18,0,10
2657 015307 040 000 021        37050    .BYTE 32,0,17
2658 015312 100 000 041        37100    .BYTE 64,0,33,0
2659 015316 000000            37150    TAB: .WORD 0
2660 015320 005015 052012 051505 37200    T4: .ASCII '15,12,12, TEST 4 HORIZONTAL TAB 15,12
01532E 020124 020064 047510
C15334 044522 047532 052116

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EO7

CELAFAO LA36 TERM TST MACY11 30A\1052 03-JAN-77 00:01 PAGE 3-17
CELAFA.PII 03-JAN-78 11:20 LA36 OPTION TESTS

EE 0082

015342 046101 052040 041101
C15350 005015 000

266: 015354

3-250

.EVE'

F07

02LAFA00 LA36 TERM TS MAC 11 30A. 1052 03-JAN-77 00:01 PAGE 3-18
02LAFA.FI 03-JAN-78 11:20 LA36 OPTION TESTS

SEQ CO83

2663
 2664
 2665
 2666
 2667
 2668
 2669
 2670
 2671
 2672 015354 012700 016040 37350
 2673 015360 012705 016014 37400
 2674 015364 004737 007010 37450
 2675 015370 032737 000040 001364 37500 TESTS VERTICAL TAB OPTION
 2676 015376 001046 37550 SINGLE LINE TEST REQUIRES OPERATOR INTERVENTION
 2677 015400 012700 014635 37600
 2678 015404 112037 014564 37650
 2679 015410 112037 014565 37700
 2680 015414 112037 014566 37750
 2681
 2682 015420 012700 014443 37800 TESTS:
 2683 015424 004737 007110 37850 MOV #T5, R0 ;SU TEST HEADER
 2684 015430 012700 014557 37900 MOV #TOSBLK, RS ;SET UP POINTER TO MODULE BLOCK
 2685 015434 004737 007110 37950 JSR PC, MTYPE
 2686 015440 012702 015500 38000 BIT #MULTI, PCFLAG :MULTI LINE MODE?
 2687 015444 004737 007124 38050 BNE 4S :YES - BRANCH OVFR INTERVENTION
 2688 015450 012702 035230 38100 MOV #HDR5B, R0 :SET UP INSTRUCTIONS
 2689 015454 004737 007024 38150 MOVB (R0)+, HDR4+5
 2690 015460 032737 004000 001364 38200 MOVB (R0)+, HDR4+6
 2691 015466 001770 38250 MOVB (R0)+, HDR4+7
 2692 015470 042737 004000 001364 : TYPE INSTRUCTIONS
 2693 015476 000406 38300 T51: MOV #HDR3, R0
 2694 015500 005037 007564 38350 JSR PC, TYPES
 2695 015504 052737 004000 001364 38400 MOV #HDR4, R0
 2696 015512 000002 38450 JSR PC, TYPES
 2697 38500 MOV \$3\$, R2 :SU FOR INTERRUPT TO 3\$
 2698 38550 JSR PC, READS ;INITIALIZE VECTOR AREA
 2699 38600 2S: MOV \$15000, R2 ;ALLOW 15 SEC.
 2700 38650 JSR PC, READIO
 2701 015514 012737 000002 015266 38700 BIT #DATAIN, PCFLAG
 2702 015522 012765 015514 000010 38750 BEQ 2S
 2703 015530 012737 000001 016032 38800 BIC #DATAIN, PCFLAG
 2704 015536 005037 016036 38850 BR 4S
 2705 015542 012737 000014 016034 38900 ;***** THIS SECTION HANDLES RECVR INTERRUPTS*****
 2706 015550 012702 000033 38950 38950 3S: CLR DELAYT
 2707 39000 BIS #DATAIN, PCFLAG ;ABORT THE TIMEOUT
 2708 39050 10\$: RTI ;FLAG RECIEVED CHAR.
 2709 39100 39150
 2710 39200 ;*****
 2711 39250
 2712 015554 004737 006270 39300 4S: MOV #2, COUNT
 2713 015560 012702 000064 39350 MOV #4\$, RPC(R5) ;SET RETURN TO 4\$
 2714 015564 004737 006270 39400 MOV #1, LINES
 2715 015570 013701 016032 39450 CLR TABS
 2716 015574 012702 000012 39500 MOV #12, MAX
 2717 39550 MOV #ESC, R2 ;RESET ALL TABS
 2718 39600 ; FSC-4 RESETS THE TABS.
 2719 39700 JSR PC, MECHO
 2720 39800 MOV #'4, R2
 2721 39850 JSR PC, MECHO
 2722 39900 5S: MOV LINES, R1 :GET LINE COUNT
 2723 6S: MOV #12, R2 :
 2724 ; SEND LINE FEED.
 2725 39950 JSR PC, MECHO
 2726 40000 DEC P1
 2727 40050 BNE 6S
 2728 40100 MOV #ESC, R2 ;SET TAB

GO7

OZLAFAJ LA36 TERM TST MACY11 30A 1052 03-JAN-77 00:01 PAGE 3-19
 OZLAFAJ.F11 03-JAN-78 11:20 LA36 OPTION TESTS

SEG C084

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2719 015614 004737 006270          JSR      PC MECHO
2720 015620 012702 000063          MOV     #'3,R2
2721          : ESC-3 SETS A TAB LOCATION.
2722 015624 004737 006270          JSR      PC MECHO
2723 015630 012700 014427          MOV     #DAS,RO
2724          40400
2725 015634 004737 007010          JSR      PC MTYPE
2726 015640 005237 016032          INC     LINES
2727 015644 023737 016032 016034 40500    CMP     LINES,MAX      ; 11 TABS + ET
2728 015652 001346               40550    BNE     $S:           ; NO - BRANCH
2729 015654 012737 000001 016032 40600    MOV     #1,LINES      ; RESET LINE COUNT
2730 015662 012737 000001 016030 40650    MOV     #1,TSSAV1    ; FILL COUNT
2731 015670 012702 000013          40700    8S:           MOV     #13,R2
2732          40750    MOV     #1,TSSAV1
2733 015674 004737 006270          40800    : SEND A VERT-TAB COMMAND.
2734 015700 012702 000006          40900    9S:           MOV     #ACK,R2
2735          40950    : SEND A FILL CHARACTER.
2736 015704 004737 006270          JSR      PC MECHO
2737 015710 005337 016030          DEC     TSSAV1
2738 015714 001371               41050    BNE     9S
2739          41100
2740          41150    : CONVERT NO. OF LINES FOR OUTPUT MSG.
2741          41200
2742 015716 013746 016032          41250    :
2743 015722 012746 016071          41300    MOV     LINES,-(SP)
2744 015726 004737 010006          41400    MOV     #T52,-(SP)
2745 015732 012700 016071          41450    JSR     PC BIN2DA
2746 015736 004737 007010          41500    MOV     #T52,RO
2747 015742 012700 014427          41550    JSR     PC MTYPE
2748 015746 004737 007010          41600    MOV     #DAS,RO      ; SU LINE OF DASHES
2749 015752 005237 016032          41700    JSR     PC MTYPE
2750 015756 013737 016032 016030 41750    INC     LINES
2751 015764 023737 016032 016034 41800    MOV     LINES,TSSAV1      ; NEW LINE COUNT
2752 015772 001336               41850    CMP     LINES,MAX      ; FILL COUNT = LINES
2753 015774 005337 015266          41900    BNE     8S:           ; 11 TABS DONE?
2754 016000 001325               41950    DEC     COUNT      ; NO - CONTINUE
2755 016002 052765 020000 000004 42000    BNE     7S:           ; DO 2 PAGES TOTAL
2756          42050    BIS     #TDONE,MFLAGS(R5)      ; RE-DO PAGE
2757 016010 000207               42100    RTS     PC      ; SET ATTENTION & DONE FLAGS
2758          42150
2759          42200    :
2760 016012 000 002              42250    .BYTE   0,2      ; ITERATION COUNTS
2761 016014 000000               42300    TOSBLK: .WORD   C      ; CTLCNT
2762 016016 000000               42350    .WORD   C      ; PASS COUNT
2763 016020 000000               42400    .WORD   0      ; STATUS FLAGS
2764 016022 000000               42450    .WORD   0      ; POINTER
2765 016024 015420               42500    .WORD   TS1      ; RETURN PC
2766          42550
2767 016026 000000               42600    TSSAV:  .WORD   0
2768 016030 000000               42650    TSSAV1: .WORD   0
2769          42700
2770 016032 000000               42750    LINES:  .WORD   0
2771 016034 000000               42800    MAX:   .WORD   0
2772 016036 000000               42850    TABS:  .WORD   0
2773 016040 005015 052012 051505 42900    TS:    .ASCIZ  '15..12..12.. TEST 5 VERTICAL TAB <15..12
          016046 020124 020065 042526

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H07

OZLAFAD LA36 TERM TST MACYII 30A(1052) 03-JAN-77 00:01 PAGE 3-20
OZLAFAD.P11 03-JAN-78 11:20 LA36 OPTION TESTS

SES 0085

016054	052122	041511	046101	
016062	052040	041101	005015	
016070	000			
2774 016071	060	030060	030060	42950 T52: .ASCIZ /00000/
2775 016076	000			
2776 016100			43000	:EVEN
			43050	:DSHBL LSB

CZLAFAD L936 TERM TST MAC 11 30A(1052) 03-JAN-77 00:01 PAGE 3-21
 CZLAFAD.P11 03-JAN-78 11:20 STORAGE & CONSTANTS

SES CC86

2778		43150	.SBTTL	STORAGE & CONSTANTS
2779		43200	-----	PROGRAM STORAGE, CONSTANTS, AND VARIABLES
2780		43250	-----	-----
2781		43300	-----	-----
2782		43350	EVEN	-----
2783	016100 000000 000000 000000 000000	43400	TEMP:	.WORD 0,0,0,0,0 ;TEMPORARY WORK AREA
2784	016106 000000 000000 000000 000000	43450	INBUF:	BLKW 4 INPUT BUFFER
2785	016114 000004 016124 177570	43500	SWR:	177570 SWITCH REGISTER POINTER
2786		43550		MAY BE CHANGED TO 176
2787		43600	***** I/O DRIVER WORK AREA *****	*****
2788		43650		
2789	016126 000000	43700	DLFLAG:	.WORD 0 :LINE FLAG WORD
2790	016130 000000	43750	DLADR:	.WORD 0 :LINE ADDR WORD
2791	016132 000000	43800	DLVEC:	.WORD 0 :LINE VECTOR WORD
2792	016134 000000	43850	DLOTH:	.WORD 0 :LINE "OTHER WORD
2793	016136 000000	43900	DVCRXB:	.WORD 0 :RECIIEVER DATA BUFFER
2794	016140 000000	43950	DVCTXS:	.WORD 0 :TRANSMI STATUS REGISTER
2795	016142 000000	44000	DVCTXB:	.WORD 0 :TRANSMIT DATA BUFFER
2796	016144 000000	44050	TXVEC:	.WORD 0 :TRANSMIT INTERRUPT VECTOR
2797		44100		
2798		44150	***** GENERAL USE *****	*****
2799	016146 000204	44200	WIDTH:	.WORD 132.
2800	016150 000000	44250	SAVE:	.WORD 0
2801	016152 000000	44300	NEXT:	.WORD 0 :NEXT TEST NO.
2802	016154 000000	44350	INTEST:	.WORD 0 :CURRENT TEST
2803	016156 000000	44400	TESTAD:	.WORD 0 :CERRENT TEST PC.
2804	016160 000000	44450	ONLIN:	.WORD 0 :CURRENT LINE UNDER TEST
2805	016162 000000	44500	NXTLIN:	.WORD 0 :NEXT LINE TO TEST
2806	016164 016114	44550	PTR:	INBUF INPUT BUFFER POINTER
2807	016166 177	44600	DEL:	.BYTE 177
2808	016167 014	44650	FF:	.BYTE 14
2809		44750	EVEN	
2810		44800		

J07

CZLAFAO LA36 TERM TST MACYII 30A(1052) 03-JAN-77 00:01 PAGE 3-22
 CZLAFAP11 03-JAN-78 11:20 STORAGE & CONSTANTS

SEG C087

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2812
2813
2814
2815
2816 016170 000000 177560 000000 45100 LIN00: .WORD 0,177560,0,0 ;CONSOLE INTERFACE
016176 000000
2817 016200 000000 175610 000000 45150 LIN01: .WORD 0,175610,0,400 ;DL11-C,D,E LINES
016206 000400
2818 016210 000000 175620 000000 45200 LIN02: .WORD 0,175620,0,1000
016216 001000
2819 016220 000000 175630 000000 45250 LIN03: .WORD 0,175630,0,1400
016226 001400
2820 016230 000000 175640 000000 45300 LIN04: .WORD 0,175640,0,2000
016236 002000
2821 016240 000000 176500 000000 45350 LIN05: .WORD 0,176500,0,2400
016246 002400
2822 016250 000000 176510 000000 45400 LIN06: .WORD 0,176510,0,3000
016256 003000
2823 016260 000000 176520 000000 45450 LIN07: .WORD 0,176520,0,3400 ;FIRST WORD : FLAGS
016266 003400
2824 016270 000000 176530 000000 45500 LIN10: .WORD 0,176530,0,4000 ;BIT 15 = DVC PRESENT
016276 004000
2825 016300 000000 175650 000000 45550 LIN11: .WORD 0,175650,0,4400 ;BIT 7 = DVC SELECTED
016306 004400
2826 016310 000000 175660 000000 45600 LIN12: .WORD 0,175660,0,5000 ;BIT 4 = ABORT FLAG
016316 005000
2827 016320 000000 175670 000000 45650 LIN13: .WORD 0,175670,0,5400 ;BIT 3 THRU
016326 005400
2828 016330 000000 175700 000000 45700 LIN14: .WORD 0,175700,0,6000 ;BIT 0 = ERROR COUNT
016336 006000
2829 016340 000000 175710 000000 45750 LIN15: .WORD 0,175710,0,6400
016346 006400
2830 016350 000000 175720 000000 45800 LIN16: .WORD 0,175720,0,7000
016356 007000
2831 016360 000000 175730 000000 45850 LIN17: .WORD 0,175730,0,7400 ;THIRD WORD WILL CONTAIN
016366 007400
2832 016370 000000 175740 000000 45900 LIN20: .WORD 0,175740,0,10000 ;THE DEVICES INTERRUPT
016376 010000
2833 016400 000000 176540 000000 45950 LIN21: .WORD 0,176540,0,10400 ;VECTOR 'SUPPLIED BY PROGRAM'
016406 010400
2834 016410 000000 176550 000000 46000 LIN22: .WORD 0,176550,0,11000
016416 011000
2835
2836 016420 000000 176560 000000 46050 LIN23: .WORD 0,176560,0,11400
016426 011400
2837 016430 000000 176570 000000 46100 LIN24: .WORD 0,176570,0,12000 ;WORD FOUR :
016436 012000
2838 016440 000000 176600 000000 46200 LIN25: .WORD 0,176600,0,12400 ;BITS 7 THRU 0
016446 012400
2839 016450 000000 176610 000000 46250 LIN26: .WORD 0,176610,0,13000 ;WILL BE SET TO
016456 013000
2840 016460 000000 175750 00000C 46300 LIN27: .WORD 0,175750,0,13400 ;UNIQUE SELECT CODE
016466 013400
2841 016470 000000 175760 000000 46350 LIN28: .WORD 0,175760,0,14000
016476 014000
2842 016500 000000 175770 000000 46400 LIN29: .WORD 0,175770,0,14400 ;BITS 13 THRU 9

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K07

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 3-23
CZLAFAO.P11 03-JAN-78 11:20 STORAGE & CONSTANTS

SEG 0088

	016506	014400								
2843	016510	000000	176000	000000	46450	LIN32:	.WORD	0,176000,0,15000		;BINARY LINE NO.
2844	016516	015000	176010	000000	46500	LIN33:	.WORD	0,176010,0,15400		.
2845	016520	000000	176020	000000	46550	LIN34:	.WORD	0,176020,0,16000		.
2846	016526	015400	176030	000000	46600	LIN35:	.WORD	0,176030,0,16400		.
2847	016540	000000	176040	000000	46650	LIN36:	.WORD	0,176040,0,17000		.
2848	016556	017000	176620	000000	46700	LIN37:	.WORD	0,176620,0,17400		.
2849	016570	000000	176630	000000	46750	LIN40:	.WORD	0,176630,0,20000		.
2850	016576	020000	176640	000000	46800	LIN41:	.WORD	0,176640,0,20400		.
2851	016600	000000	176650	000000	46850	LIN42:	.WORD	0,176650,0,21000		.
2852	016606	020400	176660	000000	46900	LIN43:	.WORD	0,176660,0,21400		.
2853	016616	021000	176670	000000	46950	LIN44:	.WORD	0,176670,0,22000		.
2854	016620	000000	176050	000000	47000	LIN45:	.WORD	0,176050,0,22400		.
2855	016626	021400	176060	000000	47050	LIN46:	.WORD	0,176060,0,23000		.
2856	016630	000000	176070	000000	47100	LIN47:	.WORD	0,176070,0,23400		.
2857	016636	022000	176100	000000	47150	LIN50:	.WORD	0,176100,0,24000		.
2858	016640	000000	176110	000000	47200	LIN51:	.WORD	0,176110,0,24400		.
2859	016646	022400	176120	000000	47250	LIN52:	.WORD	0,176120,0,25000		.
2860	016660	000000	176130	000000	47300	LIN53:	.WORD	0,176130,0,25400		.
2861	016666	023400	176140	000000	47350	LIN54:	.WORD	0,176140,0,26000		.
2862	016670	000000	176150	000000	47400	LIN55:	.WORD	0,176150,0,26400		.
2863	016676	024000	176160	000000	47450	LIN56:	.WORD	0,176160,0,27000		.
2864	016706	024400	176170	000000	47500	LIN57:	.WORD	0,176170,0,27400		.
2865	016730	000000			47550	TABEND:	.WORD	-1		.
2866	016736	026000			47600					.

L07

2868
 2869
 2870
 2871
 2872 016772 005015 055103 040514 47700 ; * * * * * SYSTEM MESSAGES
 2873 017030 005015 042522 052123 47750 ; .NLIST BEX
 2874 017051 015 005012 000012 47800
 2875 017056 047503 046515 047101 47850
 2876 017103 123 020040 020040 47900 PROGID: .ASCII <15><12>/CZLAFAO LA36 OPTIONS TESTS/
 2877 017135 115 020040 020040 47950 .ASCII <15><12>/RESTART AT 1372/
 2878 017166 020121 020040 020040 48000 L3: .ASCIIZ <15><12><12><12>
 2879 017216 047122 020040 020040 48050 HEADR1: .ASCIIZ /COMMAND SUMMARY :/<15><12><12>
 2880 017245 104 020116 020040 48100 COMSUM: .ASCIIZ /S SINGLE LINE MODE/<15><12><1>
 2881 017275 101 020116 020040 48150 .ASCIIZ /M MULTI-LINE MODE/<15><12><1>
 2882 017324 020124 020040 020040 48200 .ASCIIZ /Q SEQUENCE TESTS/<15><12><1>
 2883 017356 047127 020040 020040 48250 .ASCIIZ /RN RUN TEST "N" /<15><12><1>
 2884 017413 114 020040 020040 48300 .ASCIIZ /DN DROP LINE "N" /<15><12><1>
 2885 017443 110 020040 020040 48350 .ASCIIZ /AN ADD LINE "N" /<15><12><1>
 2886 017473 103 020040 020040 48400 .ASCIIZ /T TYPE LINE TABLE /<15><12><1>
 2887 017542 020116 020040 020040 48450 .ASCIIZ /WN CHANGE "WIDTH" TO N/<15><12><1>
 2888 017574 020120 020040 020040 48500 .ASCIIZ /L LOOP ON ERROR /<15><12><1>
 2889 017632 051505 020103 020040 48550 .ASCIIZ /H HALT ON ERROR /<15><12><1>
 2890 017676 005015 046012 047111 48600 .ASCIIZ /C CLEAR : RESETS H & L COMMANDS/<15><12><1>
 2891 017730 005015 000 048800 HEADR2: .ASCIIZ /N INHIBIT REPORTS /<15><12><1>
 2892 017733 060 020060 020040 48850 .ASCIIZ /P PRINT ERROR REPORTS /<15><12><1>
 2893 017743 060 030060 020060 48900 .ASCIIZ /ESC TO EXECUTE COMMAND STRING/<15><12><12>
 2894 017752 030060 020060 020040 49000
 2895 017761 052 051105 047522. 49050
 2896 020017 040 020040 037477 49100
 2897 020032 026455 046055 047111 49150
 2898 020055 116 020117 047111 49200
 2899 020105 104 047522 050120 49250
 2900 020117 052 005015 000 49300
 2901 020123 015 051012 040505 49350
 2902 020136 005015 040520 051523 49400
 2903 020166 005015 025052 020052 49450
 2904 49500
 2905 020215 015 050012 043103 49550 SW: .ASCIIZ <15><12>/PCFLAG : 000000 /<15><12>
 2906 020242 054105 042503 051523 49600 DRO: .ASCIIZ /EXCESSIVE ERRORS..LINE/
 2907 020270 030060 042040 047522 49650 DR1: .ASCIIZ /00 DROPPED/<15><12><7>
 2908 020306 047516 046040 047111 49700 E19: .ASCIIZ /NO LINES AVAILABLE FOR TEST/<15><12><7>
 2909 020345 114 047111 020105 49750 E20: .ASCIIZ /LINE RE-SELECTED/<15><12>
 2910 020370 047503 051516 046117 49800 CTLM: .ASCIIZ /CONSOLE CONTROL?/
 2911 49850
 2912 020411 004 003401 000002 49900 ALLON: .ASCIIZ <4><1><7><2> ; SELECT ALL ESCAPE SEQUENCE
 2913 020416 000404 000 000002 49950 ALLOFF: .ASCIIZ <4><1> ; DESELECT ALL SEQUENCE
 2914 020421 004 001401 000000 50000 SCODE: .ASCIIZ <4><1><3><000> ; SELECT UNIQUE SEQUENCE
 2915 020426 000404 001003 000 50050 NSELIC: .ASCIIZ <4><1><3><2> ; BAD SELECT SEQUENCE
 2916 50100
 2917 020434 000060 50150 STACK2: .BLKW 48.
 2918 020574 000036 50200 STACK3: .BLKW 30.
 2919 020670 000000 50250 ENDS: .WORD 0
 2920 001102 50300 .END START

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 4
 CZLAFRA.P11 03-JAN-78 11:20 SYMBOL TABLE

SEQ OC90

ABO = 000020	CTLBLK 001364	ERRVEC= 000004	ICNT = 177776	LIN44 016630
ACK = 000006	CTLC = 000003	ERO 017761	INBUF 016114	LIN45 016640
ADDC = 000004	CTLCNT= 000000	ER1 020C17	INHR = 000040	LIN46 016650
ALLOFF 020416	CTLG = 000007	ER2 020032	INHRPT= 020000	LIN47 016660
ALLON 020411	CTLGX 003064	ER7 020055	INTEST 016154	LIN50 016670
ANSHDR 011472	CTLH = 000010	ESC = 000033	INTRAP 007162	LIN51 016700
ATTN = 000200	CTLK = 000013	ETX = 000003	IOTVEC= 000020	LIN52 016710
A2BIN 007676	CTLL = 000014	ETYPE 006240	ISP = 005726	LIN53 016720
A2SAV 010004	CTLM 020370	E10 011137	ISP2 = 022626	LIN54 016730
A3S 014046	CTLN = 000016	E12 011045	ITRAP = 104004	LIN55 016740
BIN2DA 010006	CTLP = 000020	E14 013356	LDONE = 000400	LIN56 016750
BIT0 = 000001	DAS 014427	E15 013404	LF = 000012	LIN57 016760
BIT00 = 000001	DATA 004776	E16 013440	LIN 017733	LOOPC = 000100
BIT01 = 000002	DATAIN= 004000	E17 013475	LINENO 001370	LOOPOE= 040000
BIT02 = 000004	DATA2 005000	E18 013540	LINES 016032	LOOP1 001454
BIT03 = 000010	DDISP = 177570	E19 020306	LINESE 002204	LOOP2 001466
BIT04 = 000020	DECODE 004230	E20 020345	LINMON 002110	L1 017730
BIT05 = 000040	DEC5AV 004774	E21 013575	LIN00 016170	L3 017051
BIT06 = 000100	DECTBL 004656	E22 013632	LIN01 016200	MACHER 000004
BIT07 = 000200	DEL 016166	E9 011005	LIN02 016210	MAJOR = 003000
BIT08 = 000400	DELAYM 007530	FF 016167	LIN03 016220	MAX 016034
BIT09 = 001000	DELAYR= 104006	FILL3 014362	LIN04 016230	ECHO 006270
BIT1 = 000002	DELAYT 007564	FLAGDA 010161	LIN05 016240	MERR = 100000
BIT10 = 002000	DIGITS 010162	FLAG1 = 000001	LIN06 016250	MERRN = 100377
BIT11 = 004000	DLAO 017743	FLAG2 = 000002	LIN07 016260	MFLAGS= 000004
BIT12 = 010000	DLADR 016130	GETANS 011216	LIN10 016270	MSAVE 006646
BIT13 = 020000	DLFLAG 016126	GETSRC 003350	LIN11 016300	MTW 002432
BIT14 = 040000	DLOTH 016134	GETSWS 003130	LIN12 016310	MTW1 002452
BIT15 = 100000	DLP = 100000	GNL 002556	LIN13 016320	MTYPE 007010
BIT2 = 000004	DLV 017752	GN1 002600	LIN14 016330	MULTI = 000040
BIT3 = 000010	DLVEC 016132	GN2 002604	LIN15 016340	NEWMOD= 001000
BIT4 = 000020	DR 020105	GN3 002612	LIN16 016350	NEWTST= 002000
BIT5 = 000040	DROPC = 000010	GN4 002644	LIN17 016360	NEXT 016152
BIT6 = 000100	DRO 020242	GNS 002650	LIN20 016370	NOOP = 000240
BIT7 = 000200	DR1 020270	GP 011100	LIN21 016400	NOP = 000240
BIT8 = 000400	DSWR = 177570	GSEL 010734	LIN22 016410	NREQ = 000340
BIT9 = 001000	DTEND 004774	GVL 002332	LIN23 016420	NSEL_C 020426
BPTVEC= 000014	DVCRXB 016136	G1A 002340	LIN24 016430	NXTLIN 016162
BUILD 005640	DVCTXB 016142	G1B 002344	LIN25 016440	OCTALC 011520
CATCH 006126	DVCTXS 016140	G1C 002356	LIN26 016450	ONLIN 016160
CE 013305	ECHO 005044	G1D 002370	LIN27 016460	O2ASC 007566
CFLAGS 002032	EMTABL 006230	HALTC = 000200	LIN30 016470	PASCNT= 000002
CHARS 010310	EMTBOS 006162	HALTOE= 100000	LIN31 016500	PCFLAG 001364
CHKW 005006	EMTVEC= 000030	HDR3 014443	LIN32 016510	PIRQ = 177772
CMDERR 005062	ENDS 020670	HDR4 014557	LIN33 016520	PIRQVE= 000240
CNTDA 010160	ENQ = 000005	HDR5 014610	LIN34 016530	POINT = 000006
COMSUM 017103	EOL = 004000	HDR5A 014646	LIN35 016540	PRI 010424
CON 010662	EOP = 020000	HDR5B 014635	LIN36 016550	PRINT = 000020
CONSON 003332	EOPM 020136	HDR5E 014651	LIN37 016560	PRINTT= 010000
COUNT 015266	EOT = 040000	HEADR1 017056	LIN38 016570	PRI0 = 000000
CR = 000015	EOTM 020166	HEADR2 017676	LIN39 016580	PRI4 = 000200
CRLF = 000200	ERROR 005124	HI = 013252	LIN40 016600	PRI7 = 000340
CSI 004000	ERRSAV 005434	HT = 000011	LIN41 016610	PROGID 016772

PRTL TB	007212	SWR	016124	TKV	= 000060	T4SAV1	015262	SNSKO = 000300
PRTTBBL	= 104002	SWRTST	003006	TKVEC	= 000060	T4SAV2	015264	SNSK1 = 000110
PRO	= 000000	SWTEST	000172	TFB	= 177566	T41	014666	SNSK10 = 000110
PR1	= 000040	SW00	= 000001	TPS	= 177564	T42	014702	SNSK11 = 000110
PR2	= 000100	SW01	= 000002	TPVEC	= 000064	T5	016040	SNSK12 = 000110
PR3	= 000140	SW02	= 000004	TRAPVE	= 000034	T5SAV	016026	SNSK2 = 000110
PR4	= 000200	SW03	= 000010	TRTVEC	= 000014	T5SAV1	016030	SNSK3 = 000110
PRS	= 000240	SW04	= 000020	TSCCNT	002036	T51	015420	SNSK4 = 000110
PR6	= 000300	SW05	= 000040	TSCPTR	002034	T52	016071	SNSK5 = 000110
PR7	= 000340	SW06	= 000100	TSTBL	002040	UPDATE	002660	SNSK6 = 000110
PS	= 177776	SW07	= 000200	TSTCTL	001446	WIDTH	016146	SNSK7 = 000110
PSW	= 177776	SW08	= 000400	TSTMON	= 050000	SBGNLE	= 177777	SSAVLE = 177777
PTR	016164	SW09	= 001000	TXTRAP	007416	SERFLG	= 000400	SSSKO = 050023
PWRVEC	= 000024	SW1	= 000002	TXVEC	016144	SFSAND	= 000310	SSVPC = 000204
RDSAV	003776	SW10	= 002000-	TYPANS	011306	SFSBAD	= 000401	SSWR = 160000
RDY	020123	SW11	= 004000	TYPE	= 104000	SFSBLA	= 000170	STAGLE = 177777
READIO	007024	SW12	= 010000	TYPES	007110	SFSCASS	= 000150	STAGNU = 050040
READKB	003466	SW13	= 020000	TO	010366	SFSDEC	= 000220	STEMP = 000300
READS	007124	SW14	= 040000	TO08BLK	010352	SFSDO	= 000340	STN = 000001
READY	= 000200	SW15	= 100000	TO1	010200	SFSFAL	= 000405	STSK0 = 050034
REPORT	005436	SW2	= 000004	TO1BLK	010722	SFSG00	= 000400	STSK1 = 050037
RESTRT	001372	SW3	= 000010	TO2BLK	013176	SFSIF	= 000110	STSK10 = 050023
RESVEC	= 000010	SW4	= 000020	TO3BLK	014342	SFSINC	= 000210	STSK11 = 050024
RPC	= 000010	SW5	= 000040	TO4BLK	015246	SFSLO0	= 000200	STSK2 = 050024
RUB	010364	SW6	= 000100	TO5BLK	016014	SFSNAM	= 000160	STSK3 = 050023
R6	=%0.000006	SW7	= 000200	T1	010742	SFSNO	= 000403	STSK4 = 050025
R7	=%0.000007	SW8	= 000400	T1TEMP	010736	SFSOR	= 000320	STSK5 = 050022
SAVE	016150	SW9	= 001000	T11	010460	SFSRTN	= 000300	STSK6 = 050017
SCODE	020421	S1	020117	T12	010554	SFSSEL	= 000140	STSK7 = 050021
SEC	010434	TAB	015316	T13	010566	SFSTHE	= 000330	SSARGC = 000000
SECHO	006654	TABDA	010146	T16	010634	SFSTRU	= 000404	SSBYTE = 000402
SEL	= 000200	TABEND	016770	T2	013326	SFSUNT	= 000130	SSCASE = 000000
SELERR	005100	TABLE1	011176	T28UF	013220	SFSWHI	= 000120	SSDST = 000000
SEQ	= 000100	TABLE4	015270	T2CNT1	013212	SFSYES	= 000402	SSELOC = 000402
SETIO	005600	TABS	016036	T2CNT2	013213	SHD	= 000003	SSERLF = 000000
SI	= 000017	TBITVE	= 000014	T2SAV1	013210	SIFLEV	= 177777	SSFLAG = 000001
SO	= 000016	TDONE	= 020000	T2TEMP	013214	SISK0	= 000001	SSFROM = 000000
SOH	= 000001	TEMP	016100	T21	011546	SISK1	= 000001	SSLOC = 013076
SSWR	000176	TEMPF	005002	T22	011726	SISK10	= 000001	SSLOCN = 000000
STACK	= 001100	TEMPT	005004	T220	013144	SISK11	= 000001	SSREG = 177777
STACK2	020434	TESTAD	016156	T23	012140	SISK2	= 000001	SSRETU = 000000
STACK3	020574	TESTNO	001366	T23A	012206	SISK3	= 000001	SSRTN1 = 050009
START	001102	TESTO	010164	T24	012530	SISK4	= 000001	SSRTN2 = 050001
START2	001172	TEST1	010444	T25	012636	SISK5	= 000001	SSSRC = 000000
START3	001230	TEST2	011526	T25A	012734	SISK6	= 000001	SSTGSV = 000000
STKLMT	= 177774	TEST3	013700	T26	013034	SISK7	= 000001	SSTGS1 = 000000
STRAP	007510	TEST4	014652	T3	014376	SLOCTA	= 177777	SSTGS2 = 000000
STX	= 000002	TEST5	015354	T3SAV	014354	SLSTCN	= 177777	SSTO = 000000
SUTEST	002056	TIMER	007562	T3SAV1	014356	SLSTIN	= 000000	SSSTAG = 050000
SW	020215	TKB	= 177562	T3SAV2	014360	SLSTST	= 177777	. = 020672
SWCTL	= 000020	TKS	= 177560	T4	015320	SLSTTA	= 000000	
SWLINE	000174			T4SAV	015260	SNESTL	= 177777	

B08

CZLAFAO LA36 TERM TST MACY11 30A(1052) 03-JAN-77 00:01 PAGE 4-2
CZLAF.A.P11 03-JAN-78 11:20 SYMBOL TABLE

SES 0092

ERRORS DETECTED: 0

CZLAF.A,CZLAF.A.LST=SYSMAC.SML/ML,SPMAC.SML ML,CZLAF.A.F11

RUN-TIME: 120 101 .6 SECONDS

RUN-TIME RATIO: 60633/222=272.2

CORE USED: 19K (37 PAGES)

C08