

PROCESSOR TEST PROGRAM

Consists of:

Program Listing	06-106R08A13
Program Description	06-106R09A15
Program Tape	06-106M17R08

PERKIN-ELMER

Computer Systems Division
2 Crescent Place
Oceanport, N.J. 07757

SERIES 16 PROCESSOR TEST

1 GENERAL

Documents Required:
Processor Test

06-106R11

Related documents:
Test Program Listing
Test Program Tape

06-106R08M97A13
06-106R08M17

Applicable Test Programs:
Common Teletype Basic Confidence Test
Memory Test

06-004
06-003

2 PURPOSE OF TEST

This program tests the Models 5, 6/16, 70, 74, 80, 85, and 7/16 Processors. All logic and arithmetic instructions and optional features are tested. Writable control store instructions are not tested.

3 MINIMUM HARDWARE REQUIRED

Processor:
Model 5, 6/16, 70, 74, 80, 85, or 7/16 Processor
8kb of Memory

Console Device:
Teletype (See Appendix D for GE Terminette on KP10)
CRT
Carousel 15, 30, 35, or 300

Paper-Tape Reader:
Teletype or high-speed, paper-tape reader

4 REQUIREMENTS OF MACHINE UNDER TEST

Location CONADR contains X'02' for the console address. If the console address is different, this location must be changed. See Appendix G for the appropriate setup.

5 LOADING PROCEDURES

5.1 Test Tape Format

The test tape contains three parts, each in absolute, nonzoned object format (M17) with a front-end bootloader. Part 1 and Part 2 occupy approximately 8kb of memory. Part 3 occupies approximately 5kb of memory.

Manually enter the X'50' sequence into memory as shown below:

	LOCATION	CONTENTS
	X'30'	X'0000'
	X'32'	X'0000'
	X'34'	X'0000'
	X'36'	X'0050'
	X'50'	X'D500'
	X'52'	X'00CF'
	X'54'	X'4300'
	X'56'	X'0080'
for TTY	X'78'	X'0294'
HSPTR	X'78'	X'0399'
HSPTR/P	X'78'	X'1399'

Place the program tape in the paper-tape reader. Execute at address X'30'.

When the processor halts, observe the display panel. It should be zero. If it is zero, loading is completed; if it is not zero, repeat the loading procedure.

When Part 1 testing is completed, address X'30' and hit EXECUTE following the same method previously stated. When Part 2 testing is completed, address X'30' and hit EXECUTE following the same method stated previously.

5.2 Multimedia Diagnostic Loading Procedure

To load this program from the Interdata Multimedia Diagnostic System, refer to Publication Number 06-176A15.

5.3 Program Execution

After the requirements of the machine under test are met and the loading of Part 1 has been completed, execute at X'100' and observe:

```
S16PT1R09
CPU
*
```

After loading Part 2, execute at X'2D0' and observe:

```
S16PT2R09
CPU
*
```

After loading Part 3, execute at X'2D0' and observe:

```
S16PT3R09
CPU
*
```

6 OPERATING PROCEDURES

6.1 Normal Testing

For the Processor Test, Part 1, after loading has been completed and the proper processor number has been entered (see Appendix A), the test executes the appropriate subtests totaling 10 times or until an error has been encountered. See Appendix C for error numbers and their meaning.

For the Processor Test, Part 2, each test in Part 2 assumes that Part 1 was run without detecting an error. Therefore, to get a meaningful result from the Error Number Dictionary, Part 1 must be run prior to Part 2. Load Part 2 of the Processor Test as explained in loading procedures.

This message is printed:

```
S16PT2R09
CPU
*
```

Depress 2 numeric keys corresponding to the Processor under test. The valid key depressions are 05, 70, 74, 7D, 80, 85, 16, or 1D. See Appendix A for appropriate key depressions.

This message is printed:

```
DEPRESS KEYS
1234567890
```

If these characters are not printed, WB instruction failed. When these characters are printed, depress keys 1 through 9 and 0. If the test is aborted while depressing any of these keys and an error message is printed, refer to the error procedures for Part 2.

After all the keys are depressed, observe the printout. It should be:

DEPRESS KEYS
1234567890

If these characters are not printed, WBR instruction failed.
If these characters are printed, depress keys 1 through 9 and 0 and observe the printout. If the message:

SUBTEST
*

is printed, the I/O test has not detected any errors. If it has detected any errors, refer to error procedures. Select desired subtest according to Appendix A.

Subtest 3 of the Interdata Processor Test Part 2 tests the Binary Display Panel. The break key on the console device must be depressed to execute the next part of the test. The test performs the following six functions. In all six functions, the display panel displays the data in the following manner: Data Displayed, ZEROS, Data Displayed. See Appendix H for an explanation of display panel representations (D4, D3, D2, D1).

- | | |
|-------------------------------|--|
| 1) Character Printed Console: | A |
| Display Panel Mode: | Normal |
| Data Displayed: | Status (right 2 hexadecimal digits) |
| 2) Character Printed Console: | AB |
| Display Panel Mode: | Normal |
| Data Displayed: | All Switches in D4 and D3
All Switches in D2 and D1 |
| 3) Character Printed Console: | ABC |
| Display Panel Mode: | Increment |
| Data Displayed: | All Switches in D4 and D3
All Switches in D2 and D1 |
| 4) Character Printed Console: | ABCD |
| Display Panel Mode: | Increment |
| Data Displayed: | Right 8 Switches in D1 |
| 5) Character Printed Console: | ABCDE |
| Display Panel Mode: | Increment |
| Data Displayed: | All Switches in D4 and D3
All Switches in D2 and D1 |
| 6) Character Printed Console: | ABCDEF |
| Display Panel Mode: | Normal Mode |
| Data Displayed: | All Switches in D2 and D1 |

Subtest 6 of the Interdata Processor Test Part 2 tests the Extended Console Panel. The break key on the Teletype typewriter must be depressed to execute the next part of the test. Hexadecimal digits are displayed from right to left. The test should perform these six functions:

- 1) Character Printed Console: A
Display Panel Mode: Normal
Data Displayed: Status (right 2 hexadecimal digits)
- 2) Character Printed Console: AB
Display Panel Mode: Normal
Data Displayed: 0000 → FFFF → 0000
(right 4 hexadecimal digits)
- 3) Character Printed Console: ABC
Display Panel Mode: Normal
Data Displayed: All hexadecimal digits displayed as a counter (0 → F)
- 4) Character Printed Console: ABCD
Display Panel Mode: Normal
Data Displayed: A5A5 → 5A5A → A5A5 → 5A5A
- 5) Character Printed Console: ABCDE
Display Panel Mode: Incremental
Data Displayed: The above pattern is seen shifted through display
- 6) Character Printed Console: ABCDEF
Display Panel Mode: Normal
Data Displayed: Contents of switch register

For the Processor Test Part 3, the test in Part 3 assumes that Part 1 and Part 2 were run without detecting an error. Therefore, to get a meaningful result from the Error Number Dictionary, Part 1 and Part 2 must be run prior to Part 3.

This message is printed:

S16PT3R09
CPU
*

Depress two numeric keys corresponding to the processor under test. The valid key depressions are: 05, 70, 74, 7D, 80, or 85. See Appendix A for the appropriate key depressions.

6.2 Optional Testing

For the Processor Test Part 1, turning the console OFF or OFF-Line (DU=1) can inhibit all the printouts. When this is done, a count is made of the total times the entire test is repeated. This total is stored in memory location TOTAL and is also continuously copied into the Console Panel Display 2. If an error is detected, a count is made of the total errors at memory location TOTERR.

When the console is turned On-Line, the test is repeated until TOTAL equals NTIMES. The test is terminated and these characters are printed:

NNNN RRRR
where NNNN = Contents of TOTAL.
 RRRR = Contents of TOTERR which are 0 in this case.

If any errors are detected while the console is turned OFF and no errors are detected after it was turned ON, these characters are printed:

NNNN RRRR
where N and R have the same meaning as above.

If any errors are detected after turning the console ON, these characters are printed and the test is terminated:

ERROR XXXX
NNNN RRRR
where XXXX = The last error detected.
 NNNN = Contents of TOTAL.
 RRRR = Contents of TOTERR.

When the console is turned OFF, the test is aborted if:

1. A spurious interrupt is detected (e.g., an illegal instruction is detected). In this case, the error number, which is one of INF1 through INF9, is copied into the Console Panel Display 2 and the processor is halted by loading a PSW of X'8000'. When the EXECUTE switch on the console is pressed and the console is turned ON, the error message is printed.
2. The test is also aborted if TOTERR equals X'FFFF'. In this case, X'FFFF' is copied into the Console Panel Display 2 and the processor is halted by loading a PSW of X'8000'. When the EXECUTE switch is depressed and the console is turned ON, characters FFFF ERRORS are printed and the test is terminated.

Processor Test Part 2 is divided into eight subtests that can be selected individually. A subtest should be selected only if the processor under test has the features tested by the subtest; e.g., Subtest 5 must be performed only if the machine has Machine Malfunction Interrupt.

7 ERROR PROCEDURES

If an error occurs, see Appendix C for a description of each error number.

7.1 Processor Test Part 1

- Case 1 The program detects an error; the error number in Display 2 is the same as the error number printed on the Teletype typewriter. The error number dictionary in Appendix C can pinpoint the error.
- Case 2 For a Model 74 without a Display Panel, if the error number printed on the Teletype typewriter is not legible, no further diagnosis can be made.
- Case 3 If a spurious interrupt is detected, the error number is copied into the Console Panel Indicators Display 2 and the processor is halted by loading a PSW of X'8000'. The error number has the form X'lTFN' where T = test number that was executing at the time of the error; N defines the spurious interrupt. See the error numbers in Appendix C. When the EXECUTE switch is depressed, the error number is printed.
- Case 4 If an error is detected in a test that checks arithmetic operations, refer to Appendix C. In Tests 8 and 12 of Part 1, which check the fixed point arithmetic instructions, certain registers are printed after printing the error number.

7.2 Processor Test Part 2

Each error message in Part 2 is printed using a WB command. Refer to Appendix C for an error number table.

7.3 Processor Test Part 3

Each error message in Part 3 is printed using a WB command. Refer to Appendix C for an error number table.

Examples:

1) ERROR 1604

If this message is printed, it indicates that Test 6 in Part 1 of the Processor Test detected an error. The error number is 04. Refer to the error number table in Appendix C. It indicates that the instruction SLHA or SRHA failed.

To further isolate the problem, the program can either run in single steps starting at the beginning of the test or it can start at a location where the test for the failed instruction begins. Thus, Test 6 can be started after it has tested for errors 1601 through 1603 and begins to test for error 1604. In this case, the location is T1F.

2) ERROR 18F2

This indicates that Test 9 of Part 1 detected an error. Error number F2 indicates that an illegal instruction interrupt was detected. To determine at what location this occurred, the program must be executed in single step mode starting at Test 9.

3) ERROR 1C0C

If this message is printed:

0000 0000 FFFF 0000 0000 0000 0000 1000 1000 7777 0000

Test 12 of the Processor Test Part 1 detected an error. The error number is 0C. Refer to the error printout description in Appendix C, which states that error 1C0D refers to incorrect fixed point division. The printed values of the contents of some registers can be interpreted using the information given in the error printout description shown below:

0000	0000	FFFF	0000	0000	0000	0000	1000	1000
Dividend	Divisor		actual values	expected values	PSW	PSW		
= 0	= -1		of remainder	of remainder	after	before		
			and quotient	and quotient	division	division		

7777	0000
actual divide	expected divide
fault interrupt	fault interrupt
flag	flag

The above interpretation of the printed information indicates that when 0 was divided by -1, the obtained values of the remainder and quotient were zero (which are identical to expected values). The PSW remained unchanged (PSW should not change); and, a divide fault interrupt was taken (indicated by nonzero actual divide fault flag) when it was not expected (indicated by zero expected divide fault interrupt flag). An error in divide fault interrupt logic has thus been detected.

For further diagnosis, the program can be run in single step starting from the instruction that sets the error number to X'C' (in this case DLOOP2+4).

8. RESTART PROCEDURES

The starting address for Part 1 is X'100', for Part 2 is X'2D0', and for Part 3 is X'2D0'. In certain cases, the program can be restarted as described below.

For Processor Test Part 1, to start the program without selecting the processor number through the console, start the program at ENTRY2. See the program listing.

For the Processor Test Part 2, the program can be restarted at RENTRY to avoid Subtest 0. An illegal instruction can also be performed from the console panel switches. The characters:

```
ERROR      2TF2      (where T is the subtest number)
SUBTEST
*
```

are printed and any one of the subtests 0 through 7 may be selected.

For the Processor Test Part 3, start the program at ENTRY to start the program without selecting the Processor number through the Console. See the program listing.

APPENDIX A
CPU AND SUBTEST SELECTION

MODEL UNDER TEST	REQUIRED INPUT (CPU) 1			SUBTEST SELECTION
	PART 1	PART 2	PART 3	PART 2
5	05	05	05	1,2,3,4,5,6
70	70	70	70	1,2,3,4,5,6
74-with display panel	74	74	-	1,3,5,6
74-without display panel	74	74	-	1,5,6
80	80	80	80	1,2,3,4,5,6
85	85	85	85	1,2,3,4,5,6,7
6/16 or 7/16 Basic without multiply/divide and without extended display panel	1D	1D	-	1,5,6,
6/16 or 7/16 Basic without multiply/divide and extended display panel	16	16	-	1,5,6,7
6/16 or 7/16 Basic multiply/divide (M71-105) and without extended display panel	7D	7D	-	1,5,6
6/16 or 7/16 Basic multiply/divide and extended display panel	74	74	-	1,5,6,7
7/17 HSALU (M71-106) and without extended display panel	70	70	70	1,2,4,5,6
7/16 HSALU and extended display panel	70	70	70	1,2,3,4,5,6,7

Example: For a Model 6/16 with multiply/divide and extended display panel after loading the tape, this message is printed:

```
S16PTR09
CPU
*           Printed by the processor
74         Input by the user
```

NO ERRORS

APPENDIX B
EXPECTED RESULTS

06-106R09P1

S16PT1R09
CPU
*
74
NO ERRORS

06-106R09P2

S16PT2R09
CPU
*
70 Input by User
DEPRESS KEYS
1234567890
1234567890 USER
DEPRESS KEYS
1234567890
1234567890 USER

SUBTEST
*
1 USER
PRESS BRK
NO ERROR

SUBTEST
*
2 USER (does not print with a 1A
1234567890 processor selection)
1234567890
1234567890
DEPRESS KEYS
1234567890
1234567890 USER

SUBTEST
*
3 USER
ABCDEF HIT BRK KEY FOR EACH LETTER

APPENDIX B (Continued)
EXPECTED RESULTS

SUBTEST

*

4

USER

PRESS INIT

PRESS BRK

NO ERROR

SUBTEST

*

5

NOTE: Subtest 5 can be run only if
Processor is equipped with
Auto-Restart.

PRESS INIT

PRESS BRK

NO ERROR

SUBTEST

*

6

USER

ABCDEF

HIT BRK KEY FOR EACH LETTER

SUBTEST

*

7

PRESS FUNC 0

PRESS BREAK KEY

PRESS FUNC 0

PRESS BREAK KEY

NO ERROR

06-106R09P3

S16PT3R09

CPU

*70

No Error

APPENDIX C
PROCESSOR TEST PART 1
ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
1	1101	LPSW
	1102	BTC, BFC, (COND. CODE = 0000)
	1103	BTC, BFC, (COND. CODE = 1111)
	1104	BFBS, BFBS (UNCONDITIONAL)
	1105	BTFS, BFBS, BTBS, BFBS
2	1201	LH, CLHR, CLHI, LHI, CLH, LIS, LHR, LCS
3	1301	STH
	1302	LM
	1303	STM
4	1401	XHR, XHI, XH
	1402	OHR, OHI, OH
	1403	NHR, NHI, NH
5	1501	BAL
	1502	BXLE, BXH
	1503	BTCR, BFCR, BR
6	1601	ESPR
	1602	SLLS, SRLS
	1603	SLHL, SRHL
	1604	SLHA, SRHA
	1605	THI
7	1701	LB, STB, CLB, LBR, STBR, EXBR

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

For error number 1801, M and N are two arbitrary numbers whose values are between $-2^{15}-1$ and $2^{15}-1$. C is 1 if there is an input carry to the least significant bit. If there is no carry, the value of C is 0.

After printing the error number for Test 8, some pertinent register values are also printed:

AAAA	BBBB	CCCC	DDDDMaximum 10 half-
(i)	(ii)	(iii)		words printed.

The following table describes the different operand values:

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED	VALUES PRINTED TO AID IN DIAGNOSIS
8	1801	M+(-M) does not equal zero. AIS, AHM	(i) M (ii) -M (iii) M+(-M) (calculated value)
	1802	M+(R4)-(R4) does not equal M. AHR, SHR	(i) M (ii) M+(R4) (iii) M+(R4)-(R4) (calculated value)
	1803	M+X'789A'-X'789A' does not equal M. AHI, SHI	(i) M (ii) M+X'789A' (iii) M+X'789A'-X'789A' (calculated value)
	1804	(M+N+C)+(M-N-C) is not equal to 2*M. AH, SIS, ACH, SH	(i) M (ii) N (iii) C (iv) M+N+C (v) M-N-C (vi) calculated value of (M+N+C)+(M-N-C) (vii) expected value of (M+N+C)+(M-N-C)

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED	VALUES PRINTED TO AID IN DIAGNOSIS
8	1805	$(M+N+C) - (M-N-C) - C$ is not equal to $2N+C$	(i) M (ii) N (iii) C (iv) $(M+N+C)$ (v) $(M-N-C)$ (vi) calculated value of $(M+N+C) - (M-N-C) - C$ (vii) expected value of $(M+N+C) - (M-N-C) - C$

Error numbers from 1806 through 181D refer to the improper setting of the condition code resulting from an adding or subtracting operation. The actual and expected values of condition codes are printed in each case.

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED	VALUES PRINTED TO AID IN DIAGNOSIS
8	1806	$0 + 0$ did not set condition code correctly	(i) Actual condition code (ii) Expected condition code
	1807	$0 - 0$ SHR	"
	1808	X'7FFE' - X'7FFE' SHI	"
	1809	X'FFFF' - X'FFFF' SH	"
	180A	X'8001' + X'7FFE' AH	"
	180B	X'8002' - X'0001' SIS	"
	180C	X'7FFE' + 1 AIS	"

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED	VALUES PRINTED TO AID IN DIAGNOSIS
8	180D	X'7FFF'-X'7FFE' SHI	(i) Actual condition code
	180E	X'FFFF'-X'FFFE' SH	(ii) Expected condition code
	180F	X'7FFE'+X'7FFF' AH	"
	1810	X'8001'-X'7FFF' SHI	"
	1811	X'0001;+X'FFFF' AHR	"
	1812	X'7FFF'+X'8001' AHI	"
	1813	X'FFFF'+X'FFFE' AHR	"
	1814	0 - 1 SIS	"
	1815	X'FFFE'-X'FFFF' SHI	"
	1816	X'7FFE'-X'7FFF' SH	"
	1817	X'FFFF'+2 AIS	"
	1818	0-X'FFFF' SHI	"
	1819	X'7FFE'-X'FFFF' SH	"

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED	VALUES PRINTED TO AID IN DIAGNOSIS
8	181A	X'8002'+X'7FFF'	(i) Actual condition code (ii) Expected condition code
	181B	X'7FFF'-X'FFFE' SH	"
	181C	2-X'8001' SHI	
	181D	X'8001'+X'FFFE' AHI	

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

Error numbers 181E and 181F refer to incorrect operation of instructions ACH, ACHR, SCH, SCHR, when they are used for multi-precision addition and subtraction. The following table shows the expected value. The program prints the actual incorrect value (triple precision) in three halfwords:

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE AND EXPECTED VALUE
8	181E	2221 + 2*1111 + 3*1111 ++FFFF*1111 does not equal 0888 7777 8000 ACH, ACHR
	181F	0888 7777 8000 -1111 -2*1111 -3*1111.... -FFFF*1111 does not equal zero SCH, SCHR

Errors 1820 through 1833 refer to incorrect condition codes set up after the fixed point compare operation. The actual condition code and the expected condition codes are printed as two halfwords:

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE AND EXPECTED VALUE
8	1820	0:0, CLHR
	1821	2:2, CLH
	1822	X'7FFF':X'7FFF', CLHI
	1823	X'8002':X'8001', CHR
	1824	X'FFFE':X'FFFE', CH
	1825	X'FFFF':X'FFFF', CHI
	1826	X'8002':2, CLHR
	1827	X'7FFF':X'7FFF', CLH
	1828	X'8002':X'8001', CLHI
	1829	2:0, CHR
	182A	X'FFFF':X'FFFE', CH
	182B	0:X'8001, CHI
	182C	X'8001':2, CLH
	182D	X'FFFE'-X'FFFF', CLHR
	182E	0:1, CLHI
	182F	0:1, CHI
	1830	X'8001':X'8002', CH
	1831	X'FFFF':0, CHR
	1832	X'7FFE':X'FFFF', CLH
	1833	X'7FFF':X'FFFE', CLHI

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
9	1901	SVC
10	1A01	External interrupt detected. Incorrect service pointer used by SINT to generate interrupt.
	1A02	SINT used immediate interrupt service when not specified by PSW.
	1A03	SINT generated no interrupt.
	1A04	PSW swap not OK after SINT.
	1A05	The illegal instruction at location ILLEGL was executed and it did not generate an interrupt.
	1A06	When the illegal instruction interrupt is generated, the locations X'30' through X'34' were not correctly set.
11	1B01	Zero shift set incorrect condition on SLL instruction failed.
	1B02	SRL instruction failed
	1B03	SRL or SRA instruction failed
	1B04	RLL or RLL instruction failed

Test 12 of the Processor Test Part 1 prints 12 different error numbers (1C01 to 1C0D). The error numbers 1C01 to 1C0A refer to improper fixed-point multiplication. If any of these errors are detected, this message is printed:

ERROR NNNN

AAAA BBBB A'A'A'A' B'B'B'B' RRRR RRRR R'R'R'R' R'R'R'R' PPPP P'P'P'P'

where:	NNNN	Error number
	AAAA	First operand
	BBBB	Second operand
	A'A'A'A'	Negative of the first operand
	B'B'B'B'	Negative of the second operand
	RRRR RRRR	Double length actual result
	R'R'R'R' R'R'R'R'	Double length expected result
	PPPP	PSW after multiplication
	P'P'P'P'	PSW before multiplication

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

The error numbers 1C0C and 1C0D refer to incorrect division. If any error in the fixed point divide operation is detected, this message is printed:

```
ERROR NNNN
AAAA AAAA BBBB RRRR 0000 R'R'R'R' 0'0'0'0' PPPP P'P'P'P' FFFF F'F'F'F'
```

where:

NNNN	Error number
AAAA AAAA	First operand (double length dividend)
BBBB	Second operand (divisor)
RRRR	Actual remainder
0000	Actual quotient
R'R'R'R'	Expected remainder
0'0'0'0'	Expected quotient
PPPP	PSW after division
P'P'P'P'	PSW before division
FFFF	Actual divide fault flag (nonzero if the divide fault interrupt was taken, zero if it was not taken)
F'F'F'F'	Expected divide fault flag (nonzero if the divide fault interrupt is expected, zero if it was not expected)

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTION FAILED
12	1C01	A*B does not equal the expected value, MH.
	1C02	B*A is not equal to the expected value of the product, MH.
	1C03	(-A)*(-B) is not equal to the expected product, MHR.
	1C04	(-B)*(-A) is not equal to the expected value, MHR.
	1C05	A*(-B) does not equal the expected result, MHR.
	1C06	(-B)*A does not equal the expected result, MH.

APPENDIX C (Continued)
 PROCESSOR TEST PART 1
 ERROR MESSAGES

TEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTION FAILED
12	1C07	$B*(-A)$ is not equal to the expected value of the product, MHR.
	1C08	$(-A)*B$ is not equal to the expected value of the product.
	1C09	Unsigned product of A and B does not equal the expected value, MHU.
	1C0A	Unsigned product of B and A is not equal to the expected value of the unsigned product, MHUR.
	1C0C	A/B did not produce the expected values of the remainder and the quotient, DHR.
	1C0D	A/B did not produce the expected remainder and quotient values.
13	1D01	Privileged instruction performed while in protect mode.
	1D02	PSW swap not OK when a privileged instruction is attempted while in protect mode.
	1D03	SVC is not correctly performed while in protect mode.

Other Error Messages in Part 1:

ERROR NUMBER	TYPE OF FAILURE
1TF1	Floating Point Arithmetic Fault Interrupt is detected.
1TF2	Illegal Instruction Interrupt is detected.
1TF3	Machine Malfunction Interrupt is detected.
1TF4	External Interrupt is detected.

APPENDIX C (Continued)
PROCESSOR TEST PART 1
ERROR MESSAGES

ERROR NUMBER	TYPE OF FAILURE
1TF5	Fixed point divide fault interrupt is detected.
1TF6	Channel I/O termination interrupt is detected.
1TF7	Termination queue overflow interrupt is detected.
1TF8	SVC is performed from an incorrect location (one of X'9C' through X'13A').
1TF9	Incorrect service pointer used (one of X'D0' through X'2CE').

NOTE: T = test number from 1 through X'C'

APPENDIX D
PROCESSOR TEST PART 2
ERROR MESSAGES

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
I/O Test	2001	RDR
	2002	SS (even address)
	2003	RD (even address)
	2004	SS (odd address)
	2005	RD (odd address)
	2006	RH (even address)
	2007	RH (odd address)
	2008	RBR
	2009	RB
	200A	RHR
1	2101	ACKR, ACK, false SYNC from device; zero incorrect.
	2102	No interrupt generated when TTY mode changed from read to write.
	2103	AIR TTY address and status not correctly received.
	2104	External interrupt not properly generated when the break key on the console is depressed.
2	2201	Condition code fails for list instructions.
	2202	Entry into table placed in wrong memory location.
	2203	RBL does not set the next top pointer to the maximum slot number during a list wrap condition.

APPENDIX D (Continued)
PROCESSOR TEST PART 2
ERROR MESSAGES

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
2	2204	ATL does not set the next bottom pointer to maximum slot number during a list wrap condition.
	2205	RTL does not set the next top pointer to zero during a list wrap condition.
	2206	ABL does not set the next bottom pointer to zero during a list wrap condition.
	2207	DMT using CCW.
	2208	Channel I/O operation.
	2209	Channel I/O operation.
	220A	Channel I/O termination interrupt not taken. PSW swaps not OK.
	220B	Queue overflow interrupt not properly generated.
	220C	Read operation from TTY using channel I/O does not work.
	4	2401
2402		Registers not correctly stored in memory by the microprogram when initialized.
2403		Current PSW not properly stored at X'24'.
2404		Machine malfunction interrupt taken when it was disabled.

APPENDIX D (Continued)
 PROCESSOR TEST PART 2
 ERROR MESSAGES

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
5	2501	Contents of one or more registers destroyed when initialized.
	2502	Registers not correctly stored in memory by the microprogram when initialized.
	2503	PSW not properly stored at X'24' or registers destroyed when initialized.
	2504	Machine malfunction interrupt not generated when enabled.
6	---	---
7	2701	Interrupt not generated when function 0 pressed (PSW enabled).
	2702	Interrupt generated when function 0 pressed (PSW disabled).

OTHER ERRORS IN PROCESSOR TEST PART 2

ERROR NUMBER	TYPE OF FAILURE
2TF1	Floating point arithmetic fault interrupt is detected.
2TF2	Illegal instruction interrupt is detected.
2TF3	Machine malfunction interrupt is detected.
2TF4	External interrupt is detected.
2TF5	Fixed-point divide fault interrupt is detected.
2TF6	Channel I/O termination interrupt is detected.
2TF7	Termination queue overflow interrupt is detected.
2TF8	SVC is performed from an incorrect location (one of X'9C' through X'BA').
2TF9	Incorrect service pointer used (one of X'D0'-X'2CE').

NOTE: T = subtest numbers from 0 through 7

APPENDIX E
PROCESSOR TEST PART 3
ERROR MESSAGE

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
0	3001 to 3011	<p>Error in floating-point load or store operation</p> <p>LE, LER, STE</p> <p>a. If the actual stored value does not match the expected value (due to improper normalization or incorrect information transfer) after a load and a store operation, this information is printed (4 halfwords):</p> <p>ERROR NNNN RRRR RRRR SSSS SSSS</p> <p>where: NNNN is the error number.</p> <p>RRRR RRRR is the actual stored value.</p> <p>SSSS SSSS is the expected value.</p> <p>The operand used for the load operation can be found in the Program Listing.</p> <p>b. If the condition code is not properly set after a load operation, this information is printed (1 halfword):</p> <p>ERROR NNNN NNNN is the error number.</p> <p>000C C is the actual condition code.</p> <p>The condition code's expected value can be found in the Program Listing.</p>

APPENDIX E (Continued)
 PROCESSOR TEST PART 3
 ERROR MESSAGE

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
0	3001 to 3011	c. If the floating-point fault interrupt is not correctly handled, only the error number is printed.
0	3012 to 3021	<p>Error in floating-point addition or subtraction</p> <p>AE, AER, SER, SE, SER</p> <p>a. If the expected result does not match the actual result or the condition code setting is incorrect, this information is printed. (The performed operation instruction used can be found in the Program Listing):</p> <p>ERROR NNNN AAAA AAAA BBBB BBBB RRRR RRRR SSSS SSSS 000X 000Y</p> <p>where: NNNN is the error number. AAAA AAAA is the first operand. BBBB BBBB is the second operand. RRRR RRRR is the actual result. SSSS SSSS is the expected result. X is the actual condition code. Y is the expected condition code.</p>

APPENDIX E (Continued)
PROCESSOR TEST PART 3
ERROR MESSAGES

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
0	3012 to 3021	b. If a floating-point fault interrupt is incorrectly taken or if a fault interrupt is not taken when it was expected, only the error number is printed. (The performed operation can be found from the program listing and the first and second operands. The result can be known by floating-point registers 6, 8, and 4, respectively.
0	3022 to 3025	Error in floating-point multiplication ME, MER The error printout is same as that format for error numbers 2412 to 2421.
0	3026 to 3029	Error in floating-point division DE, DER Error printout has the same format as error numbers 2412 to 2421.
0	302A to 3031	Error in floating-point multiplication or division ME, MER, DE If any error other than incorrect floating-point fault interrupt is detected, this information is printed (in addition to error number): RRRR SSSS 000X 000Y where: RRRR is the actual result SSSS is the expected result X is the actual condition code Y is the expected condition code

APPENDIX E (Continued)
PROCESSOR TEST PART 3
ERROR MESSAGES

SUBTEST NUMBER	ERROR NUMBER	TYPE OF FAILURE, INSTRUCTIONS FAILED
0	3032 to 3041	<p>Error in floating-point, compare operation</p> <p>CE, CER</p> <p>This information (in addition to error number) is printed, if any error other than incorrect floating point fault interrupt is detected:</p> <p>000X 000Y</p> <p>where: X is the actual condition code Y is the expected condition code</p> <p>The operands compared and the instruction used can be found in the Program Listings.</p>

OTHER ERRORS IN PROCESSOR TEST PART 3

ERROR NUMBER	TYPE OF FAILURE
3TF1	Floating-point arithmetic fault interrupt is detected.
3TF2	Illegal instruction interrupt is detected.
3TF3	Machine malfunction interrupt is detected.
3TF4	External interrupt is detected.
3TF5	Fixed-point divide fault interrupt is detected.
3TF6	Channel I/O termination interrupt.
3TF7	Termination queue overflow interrupt is detected.
3TF8	SVC is performed from an incorrect location (one of X'9C' through X'BA').
3TF9	Incorrect service pointer used (one of X'D0'-X'2CE').

NOTE: T = subtest number 0

APPENDIX F
 TEST MODIFICATION FOR CONSOLE
 ON KPIO INTERFACE

If processor has a KPIO board (no disarm), modify the indicated location:

LOCATION	CONTENTS	CHANGE TO
KPI01	7C00	3C00
KPI02	0811	4300
KPI03	2334	A(NOERR)

If the console device is a GE Terminette on a KPIO I/O Printer Interface (35-120) at address X'02', modify the indicated locations:

LOCATION	CONTENTS	CHANGE TO
KPI01	7C00	3C00
TERM1	C800	C800
	3200	3210
TERM2	2306	0200
TERM3	4300	4200
	A(S2D)	
TERM4	2303	200
TERM5	C500	C500
	0208	0218

If a KPIO I/O Printer Interface (35-120) is strapped for disarm feature, do not modify location KPI01.

APPENDIX G
 PATCHES TO PROCESSOR TEST PROGRAM

The Processor Test Program may be executed on a Model 50 or 60 Processor if certain patches are added.

The patches needed for Processor Test Program Part 1 are:

LOCATION	NEW CONTENTS	OLD CONTENTS		PSEUDO-CODE
M5001+2	0022	002C		STH R0, X'22'
M5002+2	0086	0090		STH R0, X'86'
M5003+3	3530	3730		CLHI R0, C'50'
T2	7000	7C00	T2	DC X'7000', T2A
T6A1+2	700F	7C0F	T6A1	LHI R1, X'700F'
M5004+2	7000	7C00		CLHI R4, X'7000'
SVC150	2005	2805	SVC150	DC X'2005', SCV175
M5005+2	2005	2805		CLHI R4, X'2005'
T10M70	2C2D	E5E8	T10M70	DC X'2C2D'
T10M70+2	E0E6	E92E		DC X'E0E6'
T10M70+4	E7EE	2F62		DC X'E7EE'
T10M70+6	EF00	636E		DC X'EF00'
T10END	4300	2301		
T10END+2	1CAE	C200	T10END	B TSTEND
T10M	7005	7C05	T10M	DC X'7005', ILLEGAL
M5006+2	7005	7C05		CLHI R0, X'7005'
T13BYT	E4E5*	9596	T13BYT	DC X'E4E5'
T13BYT+2	EAEB*	9798		DC X'EAEB'
T13BYT+\$	ECED*	999A		DC X'ECED'
T13C+2	3530	3734		DC C'50'

The patches needed for Processor Test Program Part 2 are:

LOCATION	NEW CONTENTS	OLD CONTENTS		PSEUDO-CODE
M5007+2	3530	3730		CLI R0, C'50'
M5008+2	0034	0020		STH R3, X'34'
M5009+2	0086	0090		STH R3, X'86'
KP101	7000	7C00		DC X'7000', *+2
54A	5000	5C00	S5A	DC X'5000', S56B
55A	7000	7C00	S6A	DC X'7000', S56B
M50112	5000	5C00		CLHI R0, X'5000'
M50122	7000	7C00		CLHI R0, X'7000'
SGINTD2	7000	7C00	S6INTD	DC X'7000', S5AA

APPENDIX G (Continued)
PATCHES TO PROCESSOR TEST PROGRAM

NOTE

To test all M50 privileged instructions, run Subtest 7 twice; once without the three patches marked with an asterisk and once with the three patches inserted at the indicated locations.

Subtest 2 should not be run on the Model 50.

All Model 50 special instructions must be tested with the Model 50 Test Program (06-128R01). However, with these patches, the new Processor Test Program can be used in conjunction with 06-128R01 to provide a more comprehensive test of processor operation.

The Processor Test Program should be run as described in Section 2, except '50' is now a valid keyboard entry for the processor number.

APPENDIX II
MNEMONIC ADDRESS DEFINITIONS

PROCESSOR TEST PART 1

LOCATION	CONTENTS
CPUNO	Two keys from TTY stored. Defines processor number.
ENTRY1	Program starting address at '100'.
ENTRY2	Starting address for the program without selection of processor.
ERRIND	Error number to be copied into display 2.
ILGINT	Address for illegal instruction interrupt.
NTIMES	Value = 10 (X'A') on the tape. Tests 1 through 12 are repeated 10 times before printing characters NO ERROR.
NXTST	Stores starting address of the next test. If the error messages are suppressed, a branch is made to this address to attempt next test.
ONE	Contains X'FFFF', used as data.
TESTNO	Contains test number in ASCII to print error.
TOTAL	Number of times tests 1 through 12 have been repeated.
TOTERR	Number of errors detected.
ZERO	Value = 0, used as data.

APPENDIX H (Continued)
MNEMONIC ADDRESS DEFINITIONS

PROCESSOR TEST PART 2

LOCATION	CONTENTS
BUFRO	Contains 16 halfwords of zero.
BUFR1	Contains ASCII characters 1 through 9 and 0.
BUFR2	Sixteen halfwords of storage area.
CCW1	Channel command word used in Subtest 2.
CPUMO	Contains two ASCII keys for processor number.
DMT	Channel command word to test DMT in Subtest 2.
IOERHW	Nonzero number if I/O test failed; zero number if I/O test did not fail.
RENTY	Address of subtest selection routine.
T14BYT	Address of first privileged instruction tested in Subtest 7.

APPENDIX I
USER DEVICE DEFINITION

The halfword labeled IO (see Program Listing) has the default value for Teletype type device as an input/output console device. If the console is different, it must be changed as:

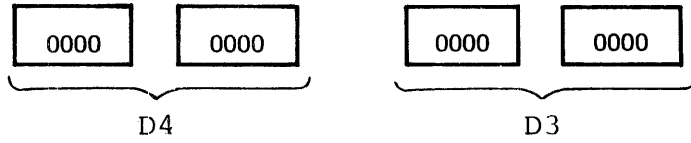


CONSOLE DEVICE IDENTIFIER	EXPLANATION
X'0101'	CRT on PASLA/PALM interface strapped for FDX at highest baud.
X'0202'	TTY, Carousel 15, 30, 35 on TTY interface or GDT/CRT on current loop interface.
X'0404'	Carousel 300 on PASLA/PALM interface strapped for FDX at highest baud rate.

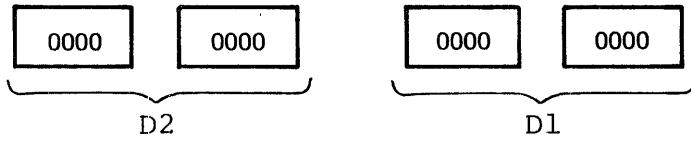
The location CONADR should equal the console device's address except if connected through a PASLA/PALM interface. In that case, the location PASADR should equal the receive/send addresses.

APPENDIX J
BINARY DISPLAY PANEL CONFIGURATION

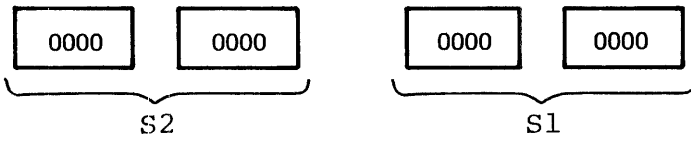
Register Display 1



Register Display 2



Data/Address Switches



PROG= S16P1 ASSEMBLED BY CAL 03-066R05-00 (32-BIT)

	1	CROSS		PT100010
	2	WIDTH 120		PT100020
	3	TARGT 16		PT100030
	4	S16P1	PROG INTERDATA PROCESSOR TEST 06-106R08A13 PART1	PT100040
	5	*		PT100050
	6	*	COPYRIGHT INTERDATA,INC (JULY 77)	PT100060
	7	*		PT100070
	8	*	PROGRAM USES BASIC MODEL 7/16 INSTRUCTION SET	PT100080
	9	*		PT100090
	10	*	THIS PROGRAM IS DESIGNED TO TEST THE PROCESSORS FOR	PT100100
	11	*		PT100110
	12	*	MODEL 5,70,74,80,85,6/16,7/16	PT100120
	13	*		PT100130
	14	*	PART1 TEST THE INSTRUCTIONS, EXCEPT FOR FLOATING POINT,	PT100140
	15	*	THAT NEED NO MANUAL INTERVENTION	PT100150
	16	*		PT100160
	17	*	PART2 TESTS THE INSTRUCTIONS	PT100170
	18	*	WHICH NEED VARIOUS INPUTS FROM THE USER	PT100180
	19	*		PT100190
	20	*	PART3 TESTS THE FLOATING POINT INSTRUCTIONS	PT100200
	21	*		PT100210
	22	R0	EQU 0	PT100220
	23	R1	EQU 1	PT100230
	24	R2	EQU 2	PT100240
	25	R3	EQU 3	PT100250
	26	R4	EQU 4	PT100260
	27	R5	EQU 5	PT100270
	28	R6	EQU 6	PT100280
	29	R7	EQU 7	PT100290
	30	R8	EQU 8	PT100300
	31	R9	EQU 9	PT100310
	32	R10	EQU 10	PT100320
	33	R11	EQU 11	PT100330
	34	R12	EQU 12	PT100340
	35	R13	EQU 13	PT100350
	36	R14	EQU 14	PT100360
	37	R15	EQU 15	PT100370
	38	*		PT100380
	39	ORG	X'80'	PT100390
	40	*		PT100400
	41	LIS	R2,1	PT100410
	42	BS	BOOT	PT100420
	43	DC	Z(PSWAVE)	PT100430
	44	DC	Z(REGSAV)	PT100440
	45	BOOT	STH R2,X'22'	PT100450
	46	LHI	R1,X'100'	PT100460
	47	LHI	R3,LNZB	PT100470
	48	MN	LHI R6,0	PT100480
	49	LS	R4,X'78'	PT100490
	50	OC	R4,X'79'	PT100500
	51	LEADER	SSR R4,R5	PT100510
	52	BTBS	9.1	PT100520
	53	RDR	R4,R5	PT100530

0000 0000	22	R0	EQU 0	PT100220
0000 0001	23	R1	EQU 1	PT100230
0000 0002	24	R2	EQU 2	PT100240
0000 0003	25	R3	EQU 3	PT100250
0000 0004	26	R4	EQU 4	PT100260
0000 0005	27	R5	EQU 5	PT100270
0000 0006	28	R6	EQU 6	PT100280
0000 0007	29	R7	EQU 7	PT100290
0000 0008	30	R8	EQU 8	PT100300
0000 0009	31	R9	EQU 9	PT100310
0000 000A	32	R10	EQU 10	PT100320
0000 000B	33	R11	EQU 11	PT100330
0000 000C	34	R12	EQU 12	PT100340
0000 000D	35	R13	EQU 13	PT100350
0000 000E	36	R14	EQU 14	PT100360
0000 000F	37	R15	EQU 15	PT100370

0000R	39	ORG	X'80'	PT100390
0080 2421	41	LIS	R2,1	PT100410
0082 2303	42	BS	BOOT	PT100420
0084 0110	43	DC	Z(PSWAVE)	PT100430
0086 1FBE	44	DC	Z(REGSAV)	PT100440
0088 4020 0022	45	BOOT	STH R2,X'22'	PT100450
008C C810 0100	46	LHI	R1,X'100'	PT100460
0090 C830 1FBD	47	LHI	R3,LNZB	PT100470
0094 C860 0000	48	MN	LHI R6,0	PT100480
0098 D340 0078	49	LS	R4,X'78'	PT100490
009C DE40 0079	50	OC	R4,X'79'	PT100500
00A0 9D45	51	LEADER	SSR R4,R5	PT100510
00A2 2091	52	BTBS	9.1	PT100520
00A4 9B45	53	RDR	R4,R5	PT100530

00A6	0855	54	LDAR	R5,R5		PT100540
00A8	2234	55	BZS	LEADER		PT100550
00AA	D251 0000	56	LOAD	STB	R5,0(R1)	PT100560
00AE	D351 0000	57		LB	R5,0(R1)	PT100570
00B2	0765	58		XAR	R6,R5	PT100580
00B4	9481	59		EXBR	R8,R1	PT100590
00B6	9828	60		WHR	R2,R8	PT100600
00B8	9D45	61		SSR	R4,R5	PT100610
00BA	2091	62		ETSS	9,1	PT100620
00BC	9B45	63		RDR	R4,R5	PT100630
00BE	C110 00AA	64		BXLE	R1,LOAD	PT100640
00C2	9486	65		EXBR	R8,R6	PT100650
00C4	9828	66		WHR	R2,R8	PT100660
00C6	2478	67	LDWT	LIS	R7,8	PT100670
00C8	917C	68		SLLS	R7,12	PT100680
00CA	9557	69		EPSR	R5,R7	PT100690
00CC	2203	70		BS	LDWT	PT100700
00CE		71		ORG	X'100'	PT100710
0100	4300 0112	72	ORIGIN1	B	ENTRY1	PT100720
		73	*****			PT100730
0104	0202	74	IO	DCX	0202	PT100740
0106	0101	75	CRT	DCX	0101	PT100750
0108	0404	76	CAR	DCX	0404	PT100760
010A	0202	77	CONADR	DCX	0202	PT100770
010C	1011	78	PASADR	DCX	1011	PT100780
010E	000A	79	NTIMES	DC	10	PT100790
0110	0000	80	PSWAVE	DCX	0	PT100800
		81	*			PT100810
		82	*			PT100820
		83	*	SET UP FOR SPURIOUS INTERRUPTS		PT100830
		84	*			PT100840
0112	2400	85	ENTRY1	LIS	R0,0	PT100850
0114	4000 002C	86	M5001	STH	R0,X'2C'	PT100860
0118	4000 0022	87		STH	R0,X'22'	PT100870
011C	4000 0034	88		STH	R0,X'34'	PT100880
0120	4000 003C	89		STH	R0,X'3C'	PT100890
0124	4000 0044	90		STH	R0,X'44'	PT100900
0128	4000 004C	91		STH	R0,X'4C'	PT100910
012C	4000 0086	92		STH	R0,X'86'	PT100920
0130	4000 0090	93	M5002	STH	R0,X'90'	PT100930
		94	*			PT100940
0134	C800 1DFC	95		LHI	R0,FLPTNT	PT100950
0138	4000 002E	96		STH	R0,X'2E'	PT100960
013C	C800 1E00	97		LHI	R0,ILGINT	PT100970
0140	4000 0036	98		STH	R0,X'36'	PT100980
0144	C800 1E04	99		LHI	R0,MALFTN	PT100990
0148	4000 003E	100		STH	R0,X'3E'	PT101000
014C	C800 1E08	101		LHI	R0,EXTINT	PT101010
0150	4000 0046	102		STH	R0,X'46'	PT101020
0154	C800 1E0E	103		LHI	R0,DVDFLT	PT101030
0158	4000 004E	104		STH	R0,X'4E'	PT101040
015C	C800 1F6C	105		LHI	R0,TABLE	PT101050
0160	4000 0080	106		STH	R0,X'80'	PT101060
0164	C800 1E12	107		LHI	R0,CHANIO	PT101070
0168	4000 0088	108		STH	R0,X'88'	PT101080

016C	C800 1E16	109	LHI	R0,QVRFLO		PT101090
0170	4000 0092	110	STH	R0,X'92'		PT101100
		111	*			PT101110
		112	*	SET UP INPUT OUTPUT DEVICES		PT101120
		113	*			PT101130
0174	C800 F800	114	LHI	R0,X'F800'		PT101140
0178	4000 1F8E	115	STH	R0,FIRSTCMD		PT101150
017C	D300 0104	116	IOTEST	LB	R0,IO	PT101160
0180	C500 0004	117		CLHI	R0,4	PT101170
0184	2135	118		BNES	CRTIO	PT101180
0196	C800 F000	119		LHI	R0,X'F000'	PT101190
018A	4000 1F8E	120		STH	R0,FIRSTCMD	PT101200
018E	D300 0104	121	CRTIO	LB	R0,IO	PT101210
0192	C500 0002	122		CLHI	R0,2	PT101220
0196	233F	123		BES	TTYIO	PT101230
0198	D310 1F89	124		LB	R1,CRTOUT+1	PT101240
019C	D210 1F85	125		STB	R1,INCMND	PT101250
01A0	D310 010D	126		LB	R1,PASADR+1	PT101260
01A4	D320 1F88	127		LB	R2,CRTOUT	PT101270
01A8	DE10 1F8E	128		OC	R1,FIRSTCMD	PT101280
01AC	2531	129		LCS	R3,1	PT101290
01AE	4030 1F8C	130		STH	R3,CRTFLG	PT101300
01B2	230C	131		BS	IO2	PT101310
	0000 01B4	132	TTYIO	EQU	*	PT101320
01B4	C810 00A4	133		LHI	R1,X'A4'	PT101330
01B8	D210 1F85	134		STB	R1,INCMND	PT101340
01BC	2410	135		LIS	R1,0	PT101350
01BE	4010 1F8C	136		STH	R1,CRTFLG	PT101360
01C2	D310 010A	137		LB	R1,CONADR	PT101370
01C6	D320 1F8A	138		LB	R2,CONOUT	PT101380
	0000 01CA	139	IO2	EQU	*	PT101390
01CA	D210 1F84	140		STB	R1,OUTDEV	PT101400
01CE	D220 1F86	141		STB	R2,OUTCMD	PT101410
01D2	D320 1F84	142		LB	R2,OUTDEV	PT101420
01D6	DE20 1F86	143		OC	R2,OUTCMD	PT101430
01DA	9D23	144		SSR	R2,R3	PT101440
01DC	4210 0288	145		BTC	1,ENTRY2	PT101450
01E0	C430 00FC	146		NHI	R3,X'FC'	PT101460
01E4	C530 000C	147		CLHI	R3,X'0C'	PT101470
01E8	4330 0288	148		BE	ENTRY2	PT101480
01EC	9D23	149	PRTTLE	SSR	R2,R3	PT101490
01EE	4240 0288	150		BTC	4,ENTRY2	PT101500
01F2	2083	151		BTBS	8,3	PT101510
01F4	C840 1FA4	152		LHI	R4,TITLE1	PT101520
01F8	D304 0000	153	PRTCPU	LB	R0,0(R4)	PT101530
01FC	41E0 1DEA	154		BAL	R14,WRITE1	PT101540
0200	2641	155		AIS	R4,1	PT101550
0202	C540 1FBD	156		CLHI	R4,TITEND	PT101560
0206	2037	157		BNES	PRTCPU	PT101570
	0000 0208	158	PRTCP	EQU	*	PT101580
0208	4800 1F8C	159		LH	R0,CRTFLG	PT101590
020C	2338	160		BZS	RD	PT101600
020E	D320 010C	161		LB	R2,PASADR	PT101610
0212	DE20 1F85	162		OC	R2,INCMND	PT101620
0216	9D23	163		SSR	R2,R3	PT101630

R2 = OUTDEV = TTYADR.

PRINT
CPU
*

0218	2281	164		BFBS	8,1		PT101640
021A	2303	165		BS	RDCPU1		PT101650
	0000 021C	166	RD	EQU	*		PT101660
021C	DE20 1F85	167		OC	R2,INCMND	TTY IN READ MODE	PT101670
0220	9D23	168	RDCPU1	SSR	R2,R3		PT101680
0222	2081	169		BTBS	8,1		PT101690
0224	9B20	170		RDR	R2,R0	RO = FIRST KEY READ	PT101700
0226	C400 007F	171		NHI	R0,X'7F'		PT101710
022A	9D23	172	RDCPU2	SSR	R2,R3		PT101720
022C	2081	173		BTBS	8,1		PT101730
022E	9B21	174		RDR	R2,R1	R1 = SECOND KEY READ	PT101740
0230	C410 007F	175		NHI	R1,X'7F'		PT101750
0234	9108	176		SLLS	R0,8		PT101760
0236	0601	177		CHR	R0,R1	RO = 2 KEYS	PT101770
0238	C500 3136	178		CLHI	R0,C'16'		PT101780
023C	2339	179		BES	MOD57		PT101790
023E	C500 3035	180		CLHI	R0,C'05'		PT101800
0242	233C	181		BES	MOD570		PT101810
0244	C500 3734	182		CLHI	R0,C'74'		PT101820
0248	2339	183		BES	MOD570		PT101830
024A	C500 3730	184	M5003	CLHI	R0,C'70'		PT101840
024E	2336	185	MOD57	BES	MOD570		PT101850
0250	C500 3830	186		CLHI	R0,C'80'		PT101860
0254	2333	187		BES	MOD570		PT101870
0256	C500 3835	188		CLHI	R0,C'85'		PT101880
025A	233F	189	MOD570	BES	MOD5		PT101890
025C	C500 3744	190		CLHI	R0,C'7D'		PT101900
0260	233A	191		BES	MOD7D		PT101910
0262	C500 3144	192		CLHI	R0,C'1D'		PT101920
0266	2337	193		BES	MOD7D		PT101930
0268	C800 003F	194	CPUERR	LHI	R0,C'?'		PT101940
026C	41E0 1DEA	195		BAL	R14,WRITE1		PT101950
0270	4300 01EC	196		B	PRTTLE		PT101960
0274	4000 1F80	197	MOD7D	STH	R0,CPUNO		PT101970
0278	4000 1F80	198	MOD5	STH	R0,CPUNO		PT101980
027C	240D	199	MOD	LIS	R0,13	CR	PT101990
027E	41E0 1DEA	200		BAL	R14,WRITE1		PT102000
0282	240A	201		LIS	R0,10	LF	PT102010
0284	41E0 1DEA	202		BAL	R14,WRITE1		PT102020
		203	*				PT102030
0288	2400	204	ENTRY2	LIS	R0,0		PT102040
028A	4000 1F7E	205		STH	R0,TTYOFF		PT102050
028E	4000 1F7A	206		STH	R0,TOTAL		PT102060
0292	4000 1F7C	207		STH	R0,TOTERR		PT102070
	0000 0296	208	ENTRY3	EQU	*		PT102080
0296	2401	209		LIS	R0,1		PT102090
0298	DE00 1F83	210		OC	R0,NORM		PT102100
	0000 029C	211	ENT3A	EQU	*		PT102110
029C	0320 1F84	212		LB	R2,OUTDEV		PT102120
02A0	9D25	213		SSR	R2,R5		PT102130
02A2	4210 02B2	214		BTC	1,ENT3B		PT102140
02A6	C450 00FC	215		NHI	R5,X'FC'		PT102150
02AA	C550 000C	216		CLHI	R5,X'0C'		PT102160
02AE	2332	217		BES	ENT3B		PT102170
02B0	2304	218		BS	TEST1		PT102180

	0000 02B2	219	ENT3B	EQU	*		PT102190	
02B2	2451	220		LIS	R5,1		PT102200	
02B4	4050 1F7E	221		STH	R5,TTYOFF		PT102210	
		222		*****				PT102220
		223	*				PT102230	
		224	*	TEST1 CHECKS THE INSTRUCTIONS				PT102240
		225	*				PT102250	
		226	*	LPSW, BTC,BFC,BTFS,BTBS,BFFS				PT102260
		227	*				PT102270	
02B8	C600 048A	228	TEST1	LHI	R0,TEST2		PT102280	
02B9	4000 1F92	229		STH	R0,NXTST		PT102290	
02C0	C800 3131	230		LHI	R0,C'11'		PT102300	
02C4	4000 1F58	231		STH	R0,TESTNO		PT102310	
02C8	C600 0111	232		LHI	R0,X'0111'		PT102320	
02CC	4000 1F90	233		STH	R0,ERRIND		PT102330	
	0000 02D0	234	LPSW	EQU	*		PT102340	
02D0	C200 02D4	235		LPSW	T1		PT102350	
02D4	0000	236	T1	DC	0,T1A		PT102360	
02D6	02DC							
02D8	4300 1E3C	237	T1AA	B	ERROR		PT102370	
02DC	4300 02E8	238	T1A	B	T1B		PT102380	
02E0	4300 02F0	239	T1A2	B	T1C		PT102390	
02E4	4300 1E3C	240	T1ERR1	B	ERROR		PT102400	
02E8	4300 02E0	241	T1B	B	T1A2		PT102410	
02EC	4300 1E3C	242		B	ERROR		PT102420	
	0000 02F0	243	BTC	EQU	*		PT102430	
02F0	4210 0304	244	T1C	BTC	1,T1ERR2	COND. CODE = 0000 , SO	PT102440	
02F4	4220 0304	245		BTC	2,T1ERR2	ERR. IF BRANCH ON TRUE	PT102450	
02F8	4240 0304	246		BTC	4,T1ERR2		PT102460	
02FC	4280 0304	247		BTC	8,T1ERR2		PT102470	
	0000 0300	248	BFC	EQU	*		PT102480	
0300	4310 0310	249		BFC	1,T1D1	COND. CODE = 0000	PT102490	
0304	C600 0211	250	T1ERR2	LHI	R0,X'0211'	ERROR 1102	PT102500	
0308	4000 1F90	251		STH	R0,ERRIND		PT102510	
030C	4300 1E3C	252		B	ERROR		PT102520	
0310	4320 0318	253	T1D1	BFC	2,T1D2		PT102530	
0314	4300 0304	254		B	T1ERR2		PT102540	
0318	4340 0320	255	T1D2	BFC	4,T1D3		PT102550	
031C	4300 0304	256		B	T1ERR2		PT102560	
0320	4380 0328	257	T1D3	BFC	8,T1D4		PT102570	
0324	4300 0304	258		B	T1ERR2		PT102580	
0328	C200 032C	259	T1D4	LPSW	T1D8		PT102590	
032C	000F	260	T1D8	DC	15,T1D9		PT102600	
032E	0330							
0330	4310 035C	261	T1D9	BFC	1,T1ERR3	COND CODE = 1111 , SO	PT102610	
0334	4320 035C	262		BFC	2,T1ERR3	ERR. IF BRANCH ON ZERO	PT102620	
0338	4340 035C	263		BFC	4,T1ERR3		PT102630	
033C	4380 035C	264		BFC	8,T1ERR3		PT102640	
0340	4210 0348	265		BTC	1,T1E1	COND. CODE = 1111 , SO	PT102650	
0344	4300 035C	266		B	T1ERR3	ERR. IF BRANCH NOT TAKEN	PT102660	
0348	4220 0350	267	T1E1	BTC	2,T1E2		PT102670	
034C	4300 035C	268		B	T1ERR3		PT102680	
0350	4240 0358	269	T1E2	BTC	4,T1E3		PT102690	
0354	4300 035C	270		B	T1ERR3		PT102700	
0358	4280 0368	271	T1E3	BTC	8,T1E4		PT102710	

035C	C800	0311	272	T1ERR3	LHI	RO,X*0311'	ERROR	1103	PT102720
0360	4000	1F90	273		STH	RO,ERRIND			PT102730
0364	4300	1E3C	274		B	ERROR			PT102740
	0000	0368	275	BFFS	EQU	*			PT102750
0368	2301		276	T1E4	BFFS	0,1	BS +1		PT102760
036A	2302		277		BFFS	0,2	BS+2		PT102770
036C	2302		278		BFFS	0,2			PT102780
036E	2303		279		BFFS	0,3	BS+3		PT102790
0370	4300	040A	280		B	T1ERR4			PT102800
0374	2303		281		BFFS	0,3	BS+3		PT102810
0376	4300	040A	282		B	T1ERR4			PT102820
037A	2307		283		BFFS	0,7	BS+7	1	PT102830
037C	4300	040A	284		B	T1ERR4			PT102840
0380	2306		285		BFFS	0,6	BS+6	3	PT102850
0382	4300	040A	286		B	T1ERR4			PT102860
0386	2306		287		BFFS	0,6	BS+6		PT102870
0388	2204		288		BFBS	0,4	BS-4	2	PT102880
038A	2302		289		BFFS	0,2	BS+2		PT102890
038C	2203		290		BFBS	0,3	BS-3	4	PT102900
038E	4300	040A	291		B	T1ERR4			PT102910
			292	*					PT102920
0392	230F		293	T1F	BFFS	0,15	BS+15	1	PT102930
0394	2302		294		BFFS	0,2			PT102940
0396	2303		295		BFFS	0,3	BS+3		PT102950
0398	2302		296		BFFS	0,2			PT102960
039A	230E		297		BFFS	0,14	BS+14	3	PT102970
039C	2302		298		BFFS	0,2			PT102980
039E	230D		299		BFFS	0,13	BS+13	5	PT102990
03A0	2302		300		BFFS	0,2			PT103000
03A2	230C		301		BFFS	0,12	BS+12	7	PT103010
03A4	2302		302		BFFS	0,2			PT103020
03A6	230B		303		BFFS	0,11	BS+11	9	PT103030
03A8	2302		304		BFFS	0,2			PT103040
03AA	230A		305		BFFS	0,10	BS+10	11	PT103050
03AC	2303		306		BFFS	0,3			PT103060
03AE	2309		307		BFFS	0,9	BS+9	13 TO T1F2	PT103070
03B0	220B		308		BFBS	0,11	BS-11	2	PT103080
03B2	4300	040A	309		B	T1ERR4			PT103090
03B6	220C		310		BFBS	0,12	BS-12	4	PT103100
03B8	220B		311		BFBS	0,11	BS-11	6	PT103110
03BA	220A		312		BFBS	0,10	BS-10	8	PT103120
03BC	2209		313		BFBS	0,9	BS-9	10	PT103130
03BE	2208		314		BFBS	0,8	BS-8	12	PT103140
			315	*					PT103150
03C0	2308		316	T1F2	BFFS	0,8	BS+8	1	PT103160
03C2	2302		317		BFFS	0,2			PT103170
03C4	2307		318		BFFS	0,7	BS+7	3	PT103180
03C6	2302		319		BFFS	0,2			PT103190
03C8	2306		320		BFFS	0,6	BS+6	5	PT103200
03CA	2302		321		BFFS	0,2			PT103210
03CC	2305		322		BFFS	0,5	BS+5	7	PT103220
03CE	2306		323		BFFS	0,6			PT103230
03D0	2206		324		BFBS	0,6	BS-6	2	PT103240
03D2	2205		325		BFBS	0,5	BS-5	4	PT103250
03D4	2204		326		BFBS	0,4	BS-4	6	PT103260

03D6	2304	327	BFFS	0,4	BS+4	8	PT103270
03D8	2301	328	BFFS	0,1	BS+1		PT103280
03DA	4300 040A	329	B	T1ERR4			PT103290
		330	*				PT103300
03DE	230F	331	BS	T1F3			PT103310
03E0	2302	332	BFFS	0,2			PT103320
03E2	2307	333	BFFS	0,7	9	BS+7	PT103330
03E4	2302	334	BFFS	0,2			PT103340
03E6	230F	335	BFFS	0,15	6	BS+15	PT103350
03E8	2302	336	BFFS	0,2			PT103360
03EA	2204	337	BFFS	0,4	8	BS-4	PT103370
03EC	2304	338	BFFS	0,4			PT103380
03EE	230D	339	BFFS	0,13			PT103390
03F0	230C	340	BS	T1F4			PT103400
03F2	2308	341	BFFS	0,8	4	BS+8	PT103410
03F4	2302	342	BFFS	0,2			PT103420
03F6	2202	343	BFFS	0,2	3	BS-3	PT103430
03F8	2303	344	BFFS	0,3			PT103440
03FA	2202	345	BFFS	0,2	2	BS-2	PT103450
03FC	2201	346	T1F3	BFFS 0,1	1	BS-1	PT103460
03FE	2306	347	BS	T1ERR4			PT103470
0400	2305	348	BS	T1ERR4			PT103480
0402	220E	349	BFFS	0,14	5	BS-14	PT103490
0404	220D	350	BFFS	0,13	7	BS-13	PT103500
0406	2302	351	BS	T1ERR4			PT103510
0408	2309	352	T1F4	BS T1G2			PT103520
040A	C800 0411	353	T1ERR4	LHI R0,X'0411'	ERROR	1104	PT103530
040E	4000 1F90	354		STH R0,ERRIND			PT103540
0412	4300 1E3C	355		B ERROR			PT103550
		356	*				PT103560
		357	*	COND CODE = 1111			PT103570
		358	*				PT103580
	0000 0416	359	BTFS	EQU *			PT103590
0416	2134	360	T1G	BTFS 3,4	3		PT103600
0418	2302	361		BFFS 0,2			PT103610
041A	2154	362	T1G2	BTFS 5,4	1		PT103620
041C	2302	363		BFFS 0,2			PT103630
041E	218A	364		BTFS 8,10	4		PT103640
0420	2302	365		BFFS 0,2			PT103650
	0000 0422	366	BTBS	EQU *			PT103660
0422	2056	367		BTBS 5,6	2		PT103670
0424	2302	368		BFFS 0,2			PT103680
0426	2174	369		BTFS 7,4	6		PT103690
0428	2302	370		BFFS 0,2			PT103700
042A	2117	371		BTFS 1,7	8		PT103710
042C	2302	372		BFFS 0,2			PT103720
042E	2092	373		BTBS 9,2	7		PT103730
0430	2302	374		BFFS 0,2			PT103740
0432	2046	375		BTBS 4,6	5		PT103750
0434	4300 047C	376		B T1ERR5			PT103760
0438	2315	377		BFFS 1,5		COND CODE = 111 . SO	PT103770
043A	2344	378		BFFS 4,4			PT103780
043C	2393	379		BFFS 9,3		ERR. IF BRANCH	PT103790
043E	2372	380		BFFS 7,2			PT103800
0440	2303	381		BFFS 0,3			PT103810

0442	4300 047C	382	B	T1ERR5		PT103820	
		383	*			PT103830	
0446	C200 044A	384	LPSW	T1H		PT103840	
044A	0000	385	T1H	DC	0,T1H1	PT103850	
044C	0454						
044E	2304	386	BS	T1H1+2		PT103860	
0450	2334	387	BFFS	3.4	3	PT103870	
0452	2302	388	BFFS	0.2		PT103880	
0454	2354	389	T1H1	BFFS	5.4	1	PT103890
0456	2302	390	BFFS	0.2		PT103900	
0458	238A	391	BFFS	8.10	4	PT103910	
045A	2302	392	BFFS	0.2		PT103920	
045C	2256	393	BFBS	5.6	2	PT103930	
045E	2302	394	BFFS	0.2		PT103940	
0460	2374	395	BFFS	7.4	6	PT103950	
0462	2302	396	BFFS	0.2		PT103960	
0464	2317	397	BFFS	1.7	8	PT103970	
0466	2302	398	BFFS	0.2		PT103980	
0468	2292	399	BFBS	9.2	7	PT103990	
046A	2302	400	BFFS	0.2		PT104000	
046C	2246	401	BFBS	4.6	5	PT104010	
046E	4300 047C	402	B	T1ERR5		PT104020	
		403	*			PT104030	
0472	2115	404	BTFS	1.5		COND CODE = 0000 , SO	PT104040
0474	2144	405	BTFS	4.4			PT104050
0476	2193	406	BTFS	9.3		ERR. IF BRANCH	PT104060
0478	2172	407	BTFS	7.2			PT104070
047A	2307	408	BFFS	0.7			PT104080
047C	C800 0511	409	T1ERR5	LHI	R0,X'0511'	ERROR 1105	PT104090
0480	4000 1F90	410	STH	R0,ERRIND			PT104100
0484	4300 1E3C	411	B	ERROR			PT104110
0488	2301	412	T1END	BS	TEST2		PT104120
		413	*****				PT104130
		414	*			PT104140	
		415	*	TEST 2 CHECKS THE INSTRUCTIONS		PT104150	
		416	*			PT104160	
		417	*	LH, CLHR, CLHI, LHI, CLH, LIS, LHR, LCS		PT104170	
		418	*			PT104180	
		419	*	MEMORY LOCATIONS USED ARE		PT104190	
		420	*			PT104200	
		421	*	ZERO	0	PT104210	
		422	*	ONE	X'FFFF'	PT104220	
		423	*	FIVE	X'5555'	PT104230	
		424	*	TEN	X'AAAA'	PT104240	
		425	*			PT104250	
048A	C800 05A2	426	TEST2	LHI	R0,TEST3	PT104260	
048E	4000 1F92	427	STH	R0,NXTST		PT104270	
0492	C800 0112	428	LHI	R0,X'0112'		PT104280	
0496	4000 1F90	429	STH	R0,ERRIND	ERRIND = 0112	PT104290	
049A	C800 3132	430	LHI	R0,X'3132'	PART1 , TEST2	PT104300	
049E	4000 1F58	431	STH	R0,TESTNO		PT104310	
04A2	C200 04A6	432	LPSW	T2		PT104320	
04A6	7C00	433	T2	DC	X'7C00',T2A	PT104330	
04A8	04AA	434	*			PT104340	

04AA	2400		435	T2A	LIS	R0,0		R0 = 0	PT104350
04AC	213C		436		BNZS	T2R1			PT104360
	0000	04AE	437	LHR	EQU	*			PT104370
04AE	0810		438		LHR	R1,R0		R1 = R0 = 0	PT104380
04B0	213A		439		BNZS	T2R1			PT104390
04B2	0821		440		LHR	R2,R1		R2 = R1 = 0	PT104400
04B4	0832		441		LHR	R3,R2		R3 = R2 = 0	PT104410
04B6	0843		442		LHR	R4,R3		R4 = R3 = 0	PT104420
04B8	0504		443		CLHR	R0,R4		IS R0 = R4 (=0)	PT104430
04BA	2135		444		BNES	T2R1			PT104440
04BC	0853		445		LHR	R5,R3		R5 = R3 = 0	PT104450
04BE	0865		446		LHR	R6,R5		R6 = R5 = 0	PT104460
04C0	0536		447		CLHR	R3,R6		IS R3 = R6 (=0)	PT104470
04C2	2332		448		BES	T2B			PT104480
04C4	230E		449	T2R1	BS	T2R2			PT104490
	0000	04C6	450	LH	EQU	*			PT104500
04C6	4370	1F94	451	T2B	LH	R7,ZERO		R7 = 0	PT104510
04CA	C570	0000	452		CLHI	R7,0			PT104520
04CE	2139		453		BNES	T2R2			PT104530
04D0	4530	1F94	454		CLH	R3,ZERO		IS R3 = ZERO (=0)	PT104540
04D4	2136		455		BNES	T2R2			PT104550
04D6	48A0	1FA0	456		LH	R10,TEN		R10 = AAAA	PT104560
04DA	C5A0	AAAA	457		CLHI	R10,X'AAAA'			PT104570
04DE	2332		458		BES	T2C			PT104580
04E0	230D		459	T2R2	BS	T2R3			PT104590
04E2	C5A0	AAA9	460	T2C	CLHI	R10,X'AAA9'		R10 > AAA9	PT104600
04E6	218A		461		BLS	T2R3			PT104610
04E8	2339		462		BES	T2R3			PT104620
04EA	45A0	1F98	463		CLH	R10,ONE		R10 = AAAA , ONE = FFFF	PT104630
04EE	2386		464		BNLS	T2R3			PT104640
04F0	2385		465		BNCS	T2R3			PT104650
04F2	4850	1F9C	466		LH	R5,FIVE		R5 = FIVE = 5555	PT104660
	0000	04F6	467	CLHR	EQU	*			PT104670
04F6	055A		468		CLHR	R5,R10		R5 = 55558 R10 = AAAA	PT104680
04F8	2182		469		BLS	T2D			PT104690
04FA	230D		470	T2R3	BS	T2R4			PT104700
04FC	0553		471	T2D	CLHR	R5,R3		R5 = 5555, R3 = 0	PT104710
04FE	2188		472		BLS	T2R4			PT104720
0500	233A		473		BES	T2R4			PT104730
0502	C8F0	5555	474		LHI	R15,X'5555'			PT104740
0506	055F		475		CLHR	R5,R15		R5 = R15 = 5555	PT104750
0508	2136		476		BNES	T2R4			PT104760
050A	0505		477		CLHR	R0,R5		R0 = 0, R5 = 5555	PT104770
050C	2384		478		BNLS	T2R4			PT104780
	0000	050E	479	CLH	EQU	*			PT104790
050E	4550	1F9C	480		CLH	R5,FIVE		R5 = 5555 , FIVE = 5555	PT104800
0512	2332		481		BES	T2E			PT104810
0514	230E		482	T2R4	BS	T2R5			PT104820
0516	4540	1F94	483	T2E	CLH	R4,ZERO		R4 = 0000 = ZERO = 0	PT104830
051A	213B		484		BNES	T2R5			PT104840
051C	45A0	1F9C	485		CLH	R10,FIVE		R10 = AAAA, FIVE = 5555	PT104850
0520	2188		486		BLS	T2R5			PT104860
0522	2337		487		BES	T2R5			PT104870
0524	C5A0	AAAB	488		CLHI	R10,X'AAAB'		R10 = AAAB	PT104880
0528	2384		489		BNLS	T2R5			PT104890

	0000	052A	490	CLHI	EQU	*		PT104900	
052A	C540	0003	491	CLHI	R4,3		R4 = 0 <3	PT104910	
052E	2183		492	BLS	T2F			PT104920	
0530	4300	1E3C	493	T2R5	B	ERROR		PT104930	
0534	48F0	1F98	494	T2F	LH	R15,ONE	R15 = ONE = FFFF	PT104940	
0538	C5F0	FFFF	495		CLHI	R15,X'FFFF'		PT104950	
053C	213B		496		BNES	T2R6		PT104960	
053E	48A0	1F9C	497		LH	R10,FIVE	R10 = 5555	PT104970	
0542	05A5		498		CLHR	R10,R5		PT104980	
0544	2137		499		BNES	T2R6		PT104990	
0546	4850	1FA0	500		LH	R5,TEN	R5 = AAAA	PT105000	
	0000	054A	501	LHI	EQU	*		PT105010	
054A	C8A0	AAAA	502		LHI	R10,X'AAAA'	R10 = AAAA	PT105020	
054E	055A		503		CLHR	R5,R10	IS R5 = R10 (=AAAA)	PT105030	
0550	2332		504		BES	T2G		PT105040	
0552	230D		505	T2R6	BS	T2R7		PT105050	
	0000	0554	506	LIS	EQU	*		PT105060	
0554	2477		507	T2G	LIS	R7,7	R7 = 7	PT105070	
0556	C570	0007	508		CLHI	R7,7		PT105080	
055A	2139		509		BNES	T2R7		PT105090	
055C	2488		510		LIS	R8,8	R8 = 8	PT105100	
055E	240D		511		LIS	R13,13	R13=13	PT105110	
0560	C580	0006	512		CLHI	R8,8		PT105120	
0564	2134		513		BNES	T2R7		PT105130	
0566	C500	000D	514		CLHI	R13,13		PT105140	
056A	2333		515		BES	T2H		PT105150	
056C	4300	058E	516	T2R7	B	T2R8		PT105160	
	0000	0570	517	LCS	EQU	*		PT105170	
0570	25E1		518	T2H	LCS	R14,1	R14=FFFF	PT105180	
0572	2233		519		BZS	T2R7		PT105190	
0574	2024		520		BPS	T2R7		PT105200	
0576	05EF		521		CLHR	R14,R15	R14 = R15 FFFF ?	PT105210	
0578	213B		522		BNES	T2R8		PT105220	
057A	258B		523		LCS	R11,11	R11 = FFF5	PT105230	
057C	2129		524		BPS	T2R8		PT105240	
057E	25CC		525		LCS	R12,12	R12 = FFF4	PT105250	
0580	2127		526		BPS	T2R8		PT105260	
0582	C580	FFF5	527		CLHI	R11,X'FFF5'		PT105270	
0586	2134		528		BNES	T2R8		PT105280	
0588	C5C0	FFF4	529		CLHI	R12,X'FFF4'		PT105290	
058C	2333		530		BES	T2END		PT105300	
058E	4300	1E3C	531	T2R8	B	ERROR	ERROR 1201	PT105310	
0592	2308		532	T2END	BS	TEST3		PT105320	
0594	0000		533		DC	0		PT105330	
0596	0000		534	T2WRD0	DC	0		PT105340	
0598	0000		535		DC	0		PT105350	
059A	0000		536	T2WRD1	DC	0		PT105360	
059C	0000		537		DC	0		PT105370	
059E	0000		538	T2WRD2	DC	0		PT105380	
05A0	0000		539		DC	0		PT105390	
			540	*****					PT105400
			541	*					PT105410
			542	* TEST 3 CHECKS THE INSTRUCTIONS					PT105420
			543	*					PT105430
			544	* STH , LM AND STM					PT105440

		545	*			PT105450
		546	*	T3BUF0 = 16 HW'S OF ZEROS		PT105460
		547	*			PT105470
		548	*	T3BUF2 = 16 HW'S OF DATA 0,1,2,.....,14,15		PT105480
		549	*			PT105490
		550	*	T3BUF1 = T3BUF2 + 14, (STARTS AT HW = 7)		PT105500
		551	*			PT105510
		552	*	T3BUF3 = 16 HW'S OF STORAGE AREA		PT105520
		553	*			PT105530
05A2	C800 073A	554	TEST3	LHI R0,TEST4		PT105540
05A6	4000 1F92	555		STH R0,NXTST		PT105550
05AA	C800 0113	556		LHI R0,X'0113'		PT105560
05AE	4000 1F90	557		STH R0,ERRIND	ERRIND = 0113	PT105570
05B2	C800 3133	558		LHI R0,X'3133'		PT105580
05B6	4000 1F58	559		STH R0,TESTNO		PT105590
		560	*			PT105600
05BA	2501	561		LCS R0,1	R0=FFFF	PT105610
05BC	2512	562		LCS R1,2		PT105620
05BE	2523	563		LCS R2,3		PT105630
	0000 05C0	564	STH	EQU *		PT105640
05C0	4000 0596	565		STH R0,T2WRD0	T2WRD0 = R0 = FFFF	PT105650
05C4	4010 059A	566		STH R1,T2WRD1	T2WRD1 = R1 = FFFE	PT105660
05C8	4020 059E	567		STH R2,T2WRD2	T2WRD2 = R2 = FFFD	PT105670
05CC	4310 1E3C	568		BNM ERROR		PT105680
05D0	4860 0596	569		LH R6,T2WRD0		PT105690
05D4	4870 059A	570		LH R7,T2WRD1		PT105700
05D8	4880 059E	571		LH R8,T2WRD2		PT105710
05DC	0506	572		CLHR R0,R6		PT105720
05DE	4230 1E3C	573		BNE ERROR		PT105730
05E2	0528	574		CLHR R2,R8		PT105740
05E4	4230 1E3C	575		BNE ERROR		PT105750
05E8	C800 0213	576		LHI R0,X'213'		PT105760
05EC	4000 1F90	577		STH R0,ERRIND		PT105770
	0000 05F0	578	LM	EQU *		PT105780
05F0	0100 06D2	579	T3B	LM R0,T3BUF0	ZERO INTO ALL REG. R0 THRU R15	PT105790
05F4	0800	580		LHR R0,R0		PT105800
05F6	2135	581		BNZS T3R1		PT105810
05F8	050F	582		CLHR R0,R15	IS R0 = R15 (=0)	PT105820
05FA	2133	583		BNES T3R1		PT105830
05FC	0507	584		CLHR R0,R7		PT105840
05FE	2332	585		BES T3C		PT105850
0600	2300	586	T3R1	BS T3R2		PT105860
0602	D170 0702	587	T3C	LM R7,T3BUF1	REG7=7,.....,REG15=15	PT105870
0606	0800	588		LHR R0,R0	R0 THRU R6 MUST BE UNCHANGED	PT105880
0608	2139	589		BNZS T3R2		PT105890
060A	0866	590		LHR R6,R6		PT105900
060C	2137	591		BNZS T3R2		PT105910
060E	C570 0007	592		CLHI R7,7		PT105920
0612	2134	593		BNES T3R2		PT105930
0614	C580 0008	594		CLHI R8,8		PT105940
0618	2332	595		BES T3D		PT105950
061A	230F	596	T3R2	BS T3R3		PT105960
061C	C5F0 000F	597	T3D	CLHI R15,15		PT105970
0620	213C	598		BNES T3R3		PT105980
0622	C5E8 000E	599		CLHI R14,14		PT105990

0626	2139	600		BNES	T3R3		PT106000
0628	2544	601		LCS	R4,4	R4=FFFC	PT106010
062A	2555	602		LCS	R5,5	R5=FFFB	PT106020
062C	2565	603		LCS	R6,5	R6=FFFB	PT106030
062E	D150 06D2	604		LM	R5,T3BUF0	ALL REG. R5 THRU R15 = 0	PT106040
0632	C540 FFFC	605		CLHI	R4,X'FFFC'		PT106050
0636	2332	606		BES	T3E		PT106060
0638	2300	607	T3R3	BS	T3R4		PT106070
063A	0600	608	T3E	LHR	R0,R0		PT106080
063C	2138	609		BNZS	T3R4		PT106090
063E	0505	610		CLHR	R0,R5		PT106100
0640	2139	611		BNES	T3R4		PT106110
0642	0506	612		CLHR	R0,R6		PT106120
0644	2137	613		BNES	T3R4		PT106130
0646	050F	614		CLHR	R0,R15		PT106140
0648	2135	615		BNES	T3R4		PT106150
064A	050E	616		CLHR	R0,R14		PT106160
064C	2133	617		BNES	T3R4		PT106170
064E	0509	618		CLHR	R0,R9		PT106180
0650	2333	619		BES	T3F		PT106190
0652	4300 1E3C	620	T3R4	B	ERROR	ERROR 1302	PT106200
0656	C800 0313	621	T3F	LHI	R0,X'313'		PT106210
065A	4000 1F90	622		STH	R0,ERRIND		PT106220
065E	2466	623		LIS	R6,6	270	PT106230
0660	D106 06EE	624		LM	R0,T3BUF2-6(R6)	REG 0=0 REG 1=1 ETC	PT106240
	0000 0664	625	STM	EQU	*		PT106250
0664	D008 070E	626		STM	R0,T3BUF3-8(R8)		PT106260
0668	4800 0716	627		LH	R0,T3BUF3	0	PT106270
066C	2130	628		BNZS	T3R5		PT106280
066E	4000 0718	629		LH	R0,T3BUF3+2	1	PT106290
0672	0501	630		CLHR	R0,R1		PT106300
0674	2139	631		BNES	T3R5		PT106310
0676	4800 071A	632		LH	R0,T3BUF3+4	2	PT106320
067A	0502	633		CLHR	R0,R2		PT106330
067C	2135	634		BNES	T3R5		PT106340
067E	4800 0734	635		LH	R0,T3BUF3+30	15	PT106350
0682	050F	636		CLHR	R0,R15		PT106360
0684	2332	637		BES	T3G		PT106370
0686	230D	638	T3R5	BS	T3R6		PT106380
0688	4800 0732	639	T3G	LH	R0,T3BUF3+28	14	PT106390
068C	050E	640		CLHR	R0,R14		PT106400
068E	2139	641		BNES	T3R6		PT106410
0690	4800 0728	642		LH	R0,T3BUF3+18		PT106420
0694	0590	643		CLHR	R9,R0		PT106430
0696	2135	644		BNES	T3R6		PT106440
0698	4800 0720	645		LH	R0,T3BUF3+10	5	PT106450
069C	0505	646		CLHR	R0,R5		PT106460
069E	2333	647		BES	T3H		PT106470
06A0	4300 1E3C	648	T3R6	B	ERROR	ERROR 1303	PT106480
06A4	D100 06D2	649	T3H	LM	R0,T3BUF0	EACH REG. =0	PT106490
06A8	D000 0716	650		STM	R0,T3BUF3	T3BUF3 = 0	PT106500
06AC	4800 0716	651		LH	R0,T3BUF3	0	PT106510
06B0	213E	652		BNZS	T3R7		PT106520
06B2	4800 0718	653		LH	R0,T3BUF3+2	1	PT106530
06B6	213B	654		BNZS	T3R7		PT106540

0730	0000		710	DC	0		13	PT107100	
0732	0000		711	DC	0		14	PT107110	
0734	0000		712	DC	0		15	PT107120	
0736	0000		713	DC	0			PT107130	
0738	2301		714	T3END	BS	TEST4		PT107140	
			715	*****					PT107150
			716	*				PT107160	
			717	*		TEST 4 CHECKS THE LOGIC INSTRUCTIONS		PT107170	
			718	*				PT107180	
			719	*		XHR , XHI , XH ; OHR , OHI , OH ; NHR , NHI , NH		PT107190	
			720	*				PT107200	
073A	C800	0934	721	TEST4	LHI	RO,TEST5		PT107210	
073E	4000	1F92	722		STH	RO,NXTST		PT107220	
0742	C800	0114	723		LHI	RO,X'0114'		PT107230	
0746	4000	1F90	724		STH	RO,ERRIND	ERRIND = 0114	PT107240	
074A	C800	3134	725		LHI	RO,X'3134'		PT107250	
074E	4000	1F58	726		STH	RO,TESTNO		PT107260	
			727	*				PT107270	
0752	D100	06D2	728		LM	RO,T3BUF0	EACH REG. RO THRU R15=0	PT107280	
0756	4850	1F9C	729		LH	R5,FIVE	R5=5555	PT107290	
075A	48A0	1FA0	730		LH	R10,TEN	R10=AAAA	PT107300	
075E	25F1		731		LCS	R15,1		PT107310	
	0000	0760	732	XHR	EQU	*		PT107320	
0760	0705		733		XHR	RO,R5	RO=R5=5555	PT107330	
0762	233D		734		BZS	T4R1		PT107340	
0764	21CC		735		BTFS	12,12		PT107350	
0766	050F		736		CLHR	RO,R15		PT107360	
0768	238A		737		BNLS	T4R1		PT107370	
076A	070A		738		XHR	RO,R10	RO=FFFF	PT107380	
076C	2338		739		BZS	T4R1		PT107390	
076E	21C7		740		BTFS	12,7		PT107400	
0770	050F		741		CLHR	RO,R15		PT107410	
0772	2135		742		BNES	T4R1		PT107420	
0774	0703		743		XHR	RO,R3	RO=FFFF,R3=0	PT107430	
0776	2333		744		BZS	T4R1		PT107440	
0778	050F		745		CLHR	RO,R15	RO = FFFF	PT107450	
077A	2333		746		BES	T4B		PT107460	
077C	4300	1E3C	747	T4R1	B	ERROR	ERROR 1401	PT107470	
0780	070A		748	T4B	XHR	RO,R10	RO = 5555	PT107480	
0782	2233		749		BZS	T4R1		PT107490	
0784	20C4		750		BTBS	12,4		PT107500	
0786	0505		751		CLHR	RO,R5		PT107510	
0788	2036		752		BNES	T4R1		PT107520	
078A	0705		753		XHR	RO,R5		PT107530	
078C	2038		754		BNZS	T4R1		PT107540	
078E	0800		755		LHR	RO,RO	RO = 0	PT107550	
0790	203A		756		BNZS	T4R1		PT107560	
0792	C700	5555	757		XHI	RO,X'5555'	RO = 5555	PT107570	
0796	223D		758		BZS	T4R1		PT107580	
0798	20CE		759		BTBS	12,14		PT107590	
079A	0505		760		CLHR	RO,R5		PT107600	
079C	213D		761		BNES	T4R2		PT107610	
	0000	079E	762	XHI	EQU	*		PT107620	
079E	C700	AAAA	763		XHI	RO,X'AAAA'	RO = FFFF	PT107630	
07A2	233A		764		BZS	T4R2		PT107640	

07A4	21C9	765		BTFS	12,9		PT107650
07A6	050F	766		CLHR	R0,R15		PT107660
07A8	2137	767		BNES	T4R2		PT107670
07AA	C700 0000	768		XHI	R0,0	RO = FFFF	PT107680
07AE	2334	769		BZS	T4R2		PT107690
07B0	21C3	770		BTFS	12,3		PT107700
07B2	050F	771		CLHR	R0,R15		PT107710
07B4	2333	772		BES	T4D		PT107720
07B6	4300 1E3C	773	T4R2	B	ERROR	ERROR 1401	PT107730
07BA	C700 5555	774	T4D	XHI	R0,X'5555'	RO = AAAA	PT107740
07BE	2234	775		BZS	T4R2		PT107750
07C0	050A	776		CLHR	R0,R10		PT107760
07C2	2036	777		BNES	T4R2		PT107770
07C4	C700 AAAA	778		XHI	R0,X'AAAA'	RO = 0	PT107780
07C6	2039	779		BNZS	T4R2		PT107790
07CA	0800	780		LHR	R0,R0		PT107800
07CC	203B	781		BNZS	T4R2		PT107810
	0000 07CE	782	XH	EQU	*		PT107820
07CE	4700 1F9C	783		XH	R0,FIVE	RO = 5555	PT107830
07D2	223E	784		BZS	T4R2		PT107840
07D4	0505	785		CLHR	R0,R5		PT107850
07D6	213B	786		BNES	T4R3		PT107860
07D8	4700 1FA0	787		XH	R0,TEN	RO = FFFF	PT107870
07DC	2338	788		BZS	T4R3		PT107880
07DE	050F	789		CLHR	R0,R15		PT107890
07E0	2136	790		BNES	T4R3		PT107900
07E2	4700 1F94	791		XH	R0,ZERO	RO = FFFF	PT107910
07E6	2333	792		BZS	T4R3		PT107920
07E8	050F	793		CLHR	R0,R15		PT107930
07EA	2333	794		BES	T4E		PT107940
07EC	4300 1E3C	795	T4R3	B	ERROR	ERROR 1401	PT107950
		796	*				PT107960
07F0	C870 0214	797	T4E	LHI	R7,X'214'		PT107970
07F4	4070 1F90	798		STH	R7,ERRIND	ERRIND = 0214	PT107980
		799	*				PT107990
07F8	4700 1FA0	800		XH	R0,TEN	RO = 5555	PT108000
07FC	2238	801		BZS	T4R3		PT108010
07FE	0505	802		CLHR	R0,R5		PT108020
0800	203A	803		BNES	T4R3		PT108030
0802	4700 1F9C	804		XH	R0,FIVE	RO = 0	PT108040
0806	203D	805		BNZS	T4R3		PT108050
0808	0800	806		LHR	R0,R0		PT108060
080A	203F	807		BNZS	T4R3		PT108070
		808	*				PT108080
		809	*		THE REG. HAVE THE VALUES:		PT108090
		810	*				PT108100
		811	*		R0=0,R5=5555,R10=AAAA,R15=FFFF		PT108110
		812	*				PT108120
		813	*		ALL OTHERS=0		PT108130
		814	*				PT108140
080C	087F	815		LHR	R7,R15	R7=R15=FFFF	PT108150
	0000 080E	816	OHR	EQU	*		PT108160
080E	0640	817		OHR	R4,R0	R4=R0=0	PT108170
0810	213F	818		BNZS	T4R4		PT108180
0812	054D	819		CLHR	R4,R0	R4=R0=0 ?	PT108190

		875	*				PT108750
		876	*	THE REG. HAVE THE VALUES:			PT108760
		877	*				PT108770
		878	*	R0=R4=R8=FFFF			PT108780
		879	*				PT108790
		880	*	R5=5555,R10=AAAA,R15=FFFF			PT108800
		881	*				PT108810
		882	*	ALL OTHERS=0			PT108820
		883	*				PT108830
0898	C800 0314	884	T4J	LHI R0,X'314'			PT108840
089C	4000 1F90	885		STH R0,ERRIND	ERRIND = 0314		PT108850
		886	*				PT108860
08A0	2400	887		LIS R0,0	R0=0		PT108870
08A2	2490	888		LIS R9,0	R9=0		PT108880
	0000 08A4	889	NHR	EQU *			PT108890
08A4	0490	890		NHR R9,R0			PT108900
08A6	213F	891		BNZS T4R7			PT108910
08A8	0899	892		LHR R9,R9			PT108920
08AA	213D	893		BNZS T4R7			PT108930
08AC	0590	894		CLHR R9,R0	R9=R0=0?		PT108940
08AE	213B	895		BNZS T4R7			PT108950
	0000 08B0	896	NH	EQU *			PT108960
08B0	4490 1F94	897		NH R9,ZERO	R9=0,ZERO=0		PT108970
08B4	2138	898		BNZS T4R7			PT108980
08B6	0590	899		CLHR R9,R0	R9=R0=0?		PT108990
08B8	2136	900		BNES T4R7			PT109000
	0000 08BA	901	NHI	EQU *			PT109010
08BA	C490 0000	902		NHI R9,0			PT109020
08BE	2133	903		BNZS T4R7			PT109030
08C0	0590	904		CLHR R9,R0	R9=0000		PT109040
08C2	2333	905		BES T4K			PT109050
08C4	4300 1E3C	906	T4R7	B ERROR	ERR0- 1403		PT109060
08C8	0498	907	T4K	NHR R9,R8	R9=0,R8=FFFF		PT109070
08CA	2033	908		BNZS T4R7			PT109080
08CC	058F	909		CLHR R8,R15	R8=R15=FFFF?		PT109090
08CE	2035	910		BNES T4R7			PT109100
08D0	0590	911		CLHR R9,R0	R9=R0=0?		PT109110
08D2	2037	912		BNES T4R7			PT109120
08D4	C490 FFFF	913		NHI R9,X'FFFF'	R9=0		PT109130
08D6	203A	914		BNZS T4R7			PT109140
08DA	0590	915		CLHR R9,R0	R9=R0=0?		PT109150
08DC	203C	916		BNES T4R7			PT109160
08DE	4490 1F98	917		NH R9,ONE	R9=0,ONE=FFFF		PT109170
08E2	203F	918		BNZS T4R7			PT109180
08E4	0590	919		CLHR R9,R0			PT109190
08E6	0448	920		NHR R4,R8	R4=FFFF,R8=FFFF		PT109200
08E8	233A	921		BZS T4R8			PT109210
08EA	21C9	922		BTFS 12,9			PT109220
08EC	054F	923		CLHR R4,R15	R4=R15=FFFF?		PT109230
08EE	2137	924		BNES T4R8			PT109240
08F0	058F	925		CLHR R8,R15	R8=R15=FFFF?		PT109250
08F2	C440 FFFF	926		NHI R4,X'FFFF'			PT109260
08F6	2333	927		BZS T4R8			PT109270
08F8	054F	928		CLHR R4,R15	R4=R15=FFFF?		PT109280
08FA	2333	929		BES T4L			PT109290

08FC	4300	1E3C	930	T4R8	B	ERROR	ERROR	1403	PT109300	
0900	4440	1F98	931	T4L	NH	R4,ONE			PT109310	
0904	2234		932		BZS	T4R8			PT109320	
0906	20C5		933		BTBS	12.5			PT109330	
0908	054F		934		CLHR	R4,R15	R4=R15=FFFF?		PT109340	
090A	2037		935		BNES	T4R8			PT109350	
090C	0440		936		NHR	R4,R0	R4=FFFF,R0=0 R4=R0=0		PT109360	
090E	2039		937		BNZS	T4R8			PT109370	
0910	0844		938		LHR	R4,R4			PT109380	
0912	2038		939		BNZS	T4R8			PT109390	
0914	0540		940		CLHR	R4,R0			PT109400	
0916	213C		941		BNES	T4R9			PT109410	
0918	C480	0000	942		NHI	R8,0	R8=FFFF R8=0		PT109420	
091C	2139		943		BNZS	T4R9			PT109430	
091E	0580		944		CLHR	R8,R0	R8=R0=0?		PT109440	
0920	2137		945		BNES	T4R9			PT109450	
0922	087F		946		LHR	R7,R15	R7=R15=FFFF		PT109460	
0924	4470	1F94	947		NH	R7,ZERO	R7=FFFF,ZERO=0 R7=0		PT109470	
0928	2133		948		BNZS	T4R9			PT109480	
092A	0570		949		CLHR	R7,R0			PT109490	
092C	2333		950		BES	T4END			PT109500	
092E	4300	1E3C	951	T4R9	B	ERROR	ERROR	1403	PT109510	
0932	2301		952	T4END	BS	TEST5			PT109520	
			953	*****						PT109530
			954	*					PT109540	
			955	*	TEST 5	TESTS THE INSTRUCTIONS			PT109550	
			956	*					PT109560	
			957	*					PT109570	
			958	*	BAL ,	BXLE , BXH , BR , BPCR,BFCR , BALR			PT109580	
			959	*					PT109590	
			960	*	(ERR1, ERR2,3,4	ERR5,6,7)			PT109600	
			961	*					PT109610	
0934	C800	0A8C	962	TEST5	LHI	R0,TEST6			PT109620	
0938	4000	1F92	963		STH	R0,NXTST			PT109630	
093C	C800	0115	964		LHI	R0,X'0115'			PT109640	
0940	4000	1F90	965		STH	R0,ERRIND	ERRIND = 0115		PT109650	
0944	C800	3135	966		LHI	R0,X'3135'			PT109660	
0948	4000	1F58	967		STH	R0,TESTNO			PT109670	
			968	*					PT109680	
	0000	094C	969	BAL	EQU	*			PT109690	
094C	4100	0952	970		BAL	R0,T5A2			PT109700	
0950	230C		971	T5A1	BS	T5ERR1	ERROR	1501	PT109710	
0952	C810	0950	972	T5A2	LHI	R1,T5A1			PT109720	
0956	0501		973		CLHR	R0,R1			PT109730	
0958	2138		974		BNES	T5ERR1			PT109740	
095A	4130	0960	975		BAL	R3,T5B2			PT109750	
095E	2305		976	T5B1	BS	T5ERR1	ERROR	1501	PT109760	
0960	C820	095E	977	T5B2	LHI	R2,T5B1			PT109770	
0964	0523		978		CLHR	R2,R3			PT109780	
0966	2333		979		BES	T5C			PT109790	
0968	4300	1E3C	980	T5ERR1	B	ERROR	ERROR	1501	PT109800	
096C	C800	0992	981	T5C	LHI	R0,T5D2	R0 = ADD. OF T5D2 STORED		PT109810	
0970	2440		982		LIS	R4,0	R4 = 0,0		PT109820	
0972	2451		983		LIS	R5,1	R5 = INCR. = 1		PT109830	
0974	2468		984		LIS	R6,8	R6 = 8 = FINAL VALUE		PT109840	

0976	C540	0009	985	T5D	CLHI	R4,9		PT109850
097A	233A		986		BES	T5ERR2		PT109860
	0000	097C	987	BXLE	EQU	*		PT109870
097C	C140	0976	988		BXLE	R4,T5D		PT109880
0980	C540	0009	989		CLHI	R4,9		PT109890
0984	2135		990		BNES	T5ERR2		PT109900
0986	C560	0008	991		CLHI	R6,8		PT109910
098A	2132		992		BNES	T5ERR2		PT109920
098C	230D		993		BS	T5D3		PT109930
098E	4300	09E8	994	T5ERR2	B	T5ERR4	ERROR	PT109940
0992	4300	09F8	995	T5D2	B	T5E1	(2) TO T5E1	PT109950
0996	4300	0A00	996	T5E2	B	T5F	(4) TO T5F	PT109960
099A	2411		997		LIS	R1,1	DUMMY	PT109970
099C	2408		998	T5F2	LIS	R0,8		PT109980
099E	4300	0A0C	999		B	T5G	(6) TO T5G	PT109990
09A2	4300	0A78	1000	T5Q	B	T5Q2		PT110000
09A6	C870	9684	1001	T5D3	LHI	R7,X'9684'	R7 = INIT. VALUE	PT110010
09AA	2482		1002		LIS	R8,2		PT110020
09AC	C890	F436	1003		LHI	R9,X'F436'		PT110030
09B0	C570	F437	1004	T5D4	CLHI	R7,X'F437'		PT110040
09B4	2389		1005		BNLS	T5ERR3		PT110050
09B6	C170	09B0	1006		BXLE	R7,T5D4		PT110060
09BA	C570	F438	1007		CLHI	R7,X'F438'		PT110070
09BE	2134		1008		BNES	T5ERR3		PT110080
09C0	C590	F436	1009		CLHI	R9,X'F436'		PT110090
09C4	2333		1010		BES	T5D5		PT110100
09C6	4300	09E8	1011	T5ERR3	B	T5ERR4		PT110110
09CA	C840	7328	1012	T5D5	LHI	R4,X'7328'		PT110120
09CE	2452		1013		LIS	R5,2		PT110130
09D0	C860	9648	1014		LHI	R6,X'9648'		PT110140
09D4	C540	9649	1015	T5B3	CLHI	R4,X'9649'		PT110150
09D8	2388		1016		BNLS	T5ERR4		PT110160
	0000	09DA	1017	BXH	EQU	*		PT110170
09DA	C040	09E0	1018		BXH	R4,T5B4		PT110180
09DE	2205		1019		BS	T5B3		PT110190
09E0	C540	964A	1020	T5B4	CLHI	R4,X'964A'		PT110200
09E4	2182		1021		BLS	T5ERR4		PT110210
09E6	2307		1022		BS	T5E		PT110220
09E8	C800	0215	1023	T5ERR4	LHI	R0,X'0215'	ERRIND = 0215	PT110230
09EC	4000	1F90	1024		SIH	R0,EKKIND		PT110240
09F0	4300	1E3C	1025		B	ERROR	ERROR 1502	PT110250
	0000	09F4	1026	BR	EQU	*		PT110260
09F4	0300		1027	T5E	BR	R0	R0 = ADD. OF T5D2 (1) TO T5D2	PT110270
09F6	230A		1028		BS	T5R5		PT110280
09F8	C860	0996	1029	T5E1	LHI	R6,T5E2		PT110290
09FC	0306		1030		BR	R6	(3) TO T5E2	PT110300
09FE	2306		1031		BS	T5R5		PT110310
0A00	2400		1032	T5F	LIS	R0,0		PT110320
0A02	2410		1033		LIS	R1,0		PT110330
0A04	C850	099C	1034		LHI	R5,T5F2		PT110340
0A08	0305		1035		BR	R5	(5) TO T5F2	PT110350
0A0A	2308		1036	T5R5	BS	T5ERR5	ERROR 1503	PT110360
0A0C	C500	0008	1037	T5G	CLHI	R0,8	NO ERR. IF R4 = 8	PT110370
0A10	2138		1038		BNES	T5ERR5		PT110380
0A12	0811		1039		LHR	R1,R1	R1 MUST BE ZERO	PT110390

0A14	2136		1040		BNZS	T5ERR5		PT110400	
0A16	4300	0A3A	1041		B	T5K1	(7) TO T5K1	PT110410	
0A1A	4300	0A4C	1042	T5H1	B	T5K2	(9) TO T5K2	PT110420	
0A1E	2301		1043	T5H2	BS	T5ERR5		PT110430	
0A20	4300	0A7E	1044	T5ERR5	B	T5ERR7	ERROR 1503	PT110440	
0A24	4300	0A5C	1045	T5H3	B	T5K3	(11) TO T5K3	PT110450	
0A28	2204		1046	T5H4	BS	T5ERR5		PT110460	
0A2A	C820	0A64	1047	T5J1	LHI	R2,T5L		PT110470	
0A2E	0512		1048		CLHR	R1,R2		PT110480	
0A30	2038		1049		BNES	T5ERR5		PT110490	
0A32	C830	0A66	1050		LHI	R3,T5M	R3 = (T5M)	PT110500	
0A36	0143		1051		BALR	R4,R3	(13) TO T5M , R4 = (T5J3)	PT110510	
0A38	220C		1052	T5J3	BS	T5ERR5		PT110520	
			1053	*				PT110530	
0A3A	C800	0A1A	1054	T5K1	LHI	R0,T5H1	R0 = ADD. OF T5H1	PT110540	
0A3E	C850	0A1E	1055		LHI	R5,T5H2	R5 = ADD. OF T5H2	PT110550	
0A42	2418		1056		LIS	R1,8		PT110560	
0A44	0511		1057		CLHR	R1,R1	COND. CODE = 0000	PT110570	
	0000	0A46	1058	BFCR	EQU	*		PT110580	
0A46	0330		1059		BFCR	3,R0	(8) TO T5H1	PT110590	
0A48	4300	09E8	1060		B	T5ERR4	ERR. IF NO BRANCH TAKEN	PT110600	
	0000	0A4C	1061	BTCR	EQU	*		PT110610	
0A4C	0235		1062	T5K2	BTCR	3,R5	ERR. IF BRANCH TO R5 (T5H2)	PT110620	
0A4E	C840	0A24	1063		LHI	R4,T5H3	R4 = ADD. OF T5H3	PT110630	
0A52	C860	0A28	1064		LHI	R6,T5H4	R6 = ADD. OF T5H4	PT110640	
0A56	0516		1065		CLHR	R1,R6	R1 < R6 , COND. CODE = 1000	PT110650	
0A58	0284		1066		BTCR	8,R4	(10) TO T5H3	PT110660	
0A5A	230A		1067		BS	T5ERR6		PT110670	
0A5C	0386		1068	T5K3	BFCR	8,R6	ERR. IF BRANCH	PT110680	
			1069	*				PT110690	
0A5E	C890	0A2A	1070		LHI	R9,T5J1		PT110700	
0A62	0119		1071		BALR	R1,R9	(12) TO T5J1 , R1 = (T5L)	PT110710	
0A64	2305		1072	T5L	BS	T5ERR6		PT110720	
0A66	C880	0A38	1073	T5M	LHI	R8,T5J3		PT110730	
0A6A	0548		1074		CLHR	R4,R8		PT110740	
0A6C	2332		1075		BES	T5P		PT110750	
0A6E	2308		1076	T5ERR6	BS	T5ERR7	ERROR 1503	PT110760	
0A70	C870	09A2	1077	T5P	LHI	R7,T5Q	R7 = ADD. OF T5Q	PT110770	
	0000	0A74	1078	BALR	EQU	*		PT110780	
0A74	0177		1079		BALR	R7,R7		PT110790	
0A76	2304		1080	T5R7	BS	T5ERR7		PT110800	
0A78	C570	0A76	1081	T5Q2	CLHI	R7,T5R7	IS R7 = ADD. OF T5R7	PT110810	
0A7C	2337		1082		BES	T5END		PT110820	
0A7E	C800	0315	1083	T5ERR7	LHI	R0,X'0315'	ERROR 1503	PT110830	
0A82	4000	1F90	1084		STH	R0,ERRIND		PT110840	
0A86	4300	1E3C	1085		B	ERROR		PT110850	
0A8A	2301		1086	T5END	BS	TEST6		PT110860	
			1087	*****					PT110870
			1088	*				PT110880	
			1089	*	TEST 6 CHECKS THE INSTRUCTIONS			PT110890	
			1090	*				PT110900	
			1091	*	EPSR , SLLS , SRLS , SLHL , SRHL			PT110910	
			1092	*				PT110920	
			1093	*	(T6R1 , T6R2,T6R3,T6R4 , T6R5,T6R6)			PT110930	
			1094	*				PT110940	

			1095	*					PT110950
			1096	*	SLHA	, SRHA	, THI		PT110960
			1097	*					PT110970
			1098	*	(T6R7,T6R8,T6R9	, T6RA)			PT110980
			1099	*					PT110990
0A8C	C800	0CD2	1100	TEST6	LHI	R0,TEST7			PT111000
0A90	4000	1F92	1101		STH	R0,NXTST			PT111010
0A94	C800	3136	1102		LHI	R0,C'16'			PT111020
0A98	4000	1F58	1103		STH	R0,TESTNO			PT111030
0A9C	C800	0116	1104		LHI	R0,X'0116'			PT111040
0AA0	4000	1F90	1105		STH	R0,ERRIND	ERRIND = 0116		PT111050
			1106	*					PT111060
0AA4	2400		1107		LIS	R0,0			PT111070
	0000	0AA6	1108	EPSR	EQU	*			PT111080
0AA6	9510		1109		EPSR	R1,R0			PT111090
0AA8	2511		1110		LCS	R1,1			PT111100
0AAA	2400		1111		LIS	R0,0			PT111110
0AAC	9510		1112		EPSR	R1,R0	PSW INTO R1 , R0 INTO PSW		PT111120
0AAE	2138		1113		BNZS	T6R1			PT111130
0AB0	0800		1114		LHR	R0,R0			PT111140
0AB2	2139		1115		BNZS	T6R1			PT111150
0AB4	0510		1116		CLHR	R1,R0			PT111160
0AB6	2137		1117		BNES	T6R1			PT111170
0AB8	2511		1118		LCS	R1,1			PT111180
0ABA	2400		1119		LIS	R0,0	COND. CODE = 0 , R0 = 0		PT111190
0ABC	9511		1120		EPSR	R1,R1	R1 = PSW = 0 ?		PT111200
0ABE	2133		1121		BNZS	T6R1			PT111210
0AC0	0510		1122		CLHR	R1,R0			PT111220
0AC2	2333		1123		BES	T6A1			PT111230
0AC4	4300	1E3C	1124	T6R1	B	ERROR	ERROR 1601		PT111240
0AC8	C810	7C0F	1125	T6A1	LHI	R1,X'7C0F'			PT111250
0ACC	9501		1126		EPSR	R0,R1	NEW PSW = R1 = 7C0F		PT111260
0ACE	2440		1127		LIS	R4,0			PT111270
0AD0	9540		1128		EPSR	R4,R0	R4 = NEW PSW = 7C0F		PT111280
0AD2	C540	7C00	1129	M5004	CLHI	R4,X'7C00'			PT111290
0AD6	2039		1130		BNES	T6R1			PT111300
0AD8	9511		1131		EPSR	R1,R1			PT111310
0ADA	203B		1132		BNZS	T6R1			PT111320
0ADC	0811		1133		LHR	R1,R1			PT111330
0AD E	203D		1134		BNZS	T6R1			PT111340
0AE0	2402		1135	T6B	LIS	R0,2			PT111350
0AE2	D200	1F90	1136		STB	R0,ERRIND	ERRIND = 0216		PT111360
			1137	*					PT111370
0AE6	C860	D2BB	1138		LHI	R6,X'D2BB'	R6 = 1101,0010,1011,1011		PT111380
0AEA	C870	DD4B	1139		LHI	R7,X'DD4B'	R7 = 1101,1101,0100,1011		PT111390
	0000	0AEE	1140	SLLS	EQU	*			PT111400
0AEE	9170		1141		SLLS	R7,0	SHIFT LEFT SHORT 0		PT111410
0AF0	218C		1142		BCS	T6R2			PT111420
	0000	0AF2	1143	SRLS	EQU	*			PT111430
0AF2	9070		1144		SRLS	R7,0	SHIFT RIGHT SHORT 0		PT111440
0AF4	212A		1145		BPS	T6R2			PT111450
	0000	0AF6	1146	SLHL	EQU	*			PT111460
0AF6	CD70	0000	1147		SLHL	R7,0	SHIFT LEFT HW 0		PT111470
0AFA	2187		1148		BCS	T6R2			PT111480
	0000	0AFC	1149	SRHL	EQU	*			PT111490

0AFC	CC70	0000	1150		SRHL	R7,0		SHIFT RIGHT HW	0	PT111500
0B00	2124		1151		BPS	T6R2				PT111510
0B02	CF60	0000	1152		SLHA	R6,0				PT111520
0B06	2383		1153		BNCS	T6B2				PT111530
0B08	4300	1E3C	1154	T6R2	B	ERROR		ERROR	1602	PT111540
	0000	0B0C	1155	SRHA	EQU	*				PT111550
0B0C	CE60	0000	1156	T6B2	SRHA	R6,0				PT111560
0B10	2024		1157		BPS	T6R2				PT111570
0B12	C560	D28B	1158		CLHI	R6,X'D28B'				PT111580
0B16	2037		1159		BNES	T6R2				PT111590
0B18	C570	DD4B	1160		CLHI	R7,X'DD4B'				PT111600
0B1C	203A		1161		BNES	T6R2				PT111610
0B1E	9161		1162		SLLS	R6,1		SHIFT LEFT SHORT	1	PT111620
0B20	228C		1163		BNCS	T6R2				PT111630
0B22	C560	A576	1164	T6B4	CLHI	R6,X'A576'				PT111640
0B26	213D		1165		BNES	T6R3				PT111650
0B28	9162		1166		SLLS	R6,2		SHIFT LEFT SHORT	2	PT111660
0B2A	218B		1167		BCS	T6R3				PT111670
0B2C	C560	95D8	1168		CLHI	R6,X'95D8'				PT111680
0B30	2138		1169		BNES	T6R3				PT111690
0B32	9164		1170		SLLS	R6,4		SHIFT LEFT SHORT	4	PT111700
0B34	2386		1171		BNCS	T6R3				PT111710
0B36	C560	5D80	1172		CLHI	R6,X'5D80'				PT111720
0B3A	2133		1173		BNES	T6R3				PT111730
0B3C	9168		1174		SLLS	R6,8		SHIFT LEFT SHORT	8	PT111740
0B3E	2183		1175		BCS	T6B6				PT111750
0B40	4300	1E3C	1176	T6R3	B	ERROR		ERROR	1602	PT111760
0B44	C560	8000	1177	T6B6	CLHI	R6,X'8000'				PT111770
0B48	2034		1178		BNES	T6R3				PT111780
0B4A	C570	DD4B	1179		CLHI	R7,X'DD4B'		R7 MUST BE UNCHANGED		PT111790
0B4E	2037		1180		BNES	T6R3				PT111800
0B50	C840	2369	1181	T6C	LHI	R4,X'2369'				PT111810
0B54	9041		1182		SRLS	R4,1		SHIFT RIGHT SHORT	1	PT111820
0B56	228B		1183		BNCS	T6R3				PT111830
0B58	C540	11B4	1184		CLHI	R4,X'11B4'				PT111840
0B5C	213D		1185		BNES	T6R4				PT111850
0B5E	9042		1186		SRLS	R4,2		SHIFT RIGHT SHORT	2	PT111860
0B60	218B		1187		BCS	T6R4				PT111870
0B62	C540	046D	1188		CLHI	R4,X'46D'				PT111880
0B66	2138		1189		BNES	T6R4				PT111890
0B68	9044		1190		SRLS	R4,4		SHIFT RIGHT SHORT	4	PT111900
0B6A	2386		1191		BNCS	T6R4				PT111910
0B6C	C540	0046	1192		CLHI	R4,X'46'				PT111920
0B70	2133		1193		BNES	T6R4				PT111930
0B72	9048		1194		SRLS	R4,8		SHIFT RIGHT SHORT	8	PT111940
0B74	2333		1195		BZS	T6C3				PT111950
0B76	4300	1E3C	1196	T6R4	B	ERROR		ERROR	1602	PT111960
0B7A	0844		1197	T6C3	LHR	R4,R4				PT111970
0B7C	2033		1198		BNZS	T6R4				PT111980
0B7E	2403		1199	T6D	LIS	R0,3				PT111990
0B80	D200	1F90	1200		STB	R0,ERRIND		ERRIND = 0316		PT112000
0B84	C840	D28B	1201		LHI	R4,X'D28B'				PT112010
0B88	CD40	0001	1202		SLHL	R4,1		SHIFT LEFT HW	1	PT112020
0B8C	238E		1203		BNCS	T6R5				PT112030
0B8E	C540	A576	1204		CLHI	R4,X'A576'				PT112040

0B92	2138	1205	BNES	T6R5		PT112050
0B94	CD40 0002	1206	SLHL	R4,2	SHIFT LEFT HW 2	PT112060
0B98	2188	1207	BCS	T6R5		PT112070
0B9A	C540 95D8	1208	CLHI	R4,X'95D8'		PT112080
0B9E	2135	1209	BNES	T6R5		PT112090
0BA0	2474	1210	LIS	R7,4		PT112100
0BA2	CD47 0000	1211	SLHL	R4,0(R7)		PT112110
0BA6	2193	1212	BCS	T6D2		PT112120
0BA8	4300 1E3C	1213	T6R5	B	ERROR 1603	PT112130
0BAC	C540 5D80	1214	T6D2	CLHI	R4,X'5D80'	PT112140
0BB0	2034	1215	BNES	T6R5		PT112150
0BB2	CD40 0008	1216	SLHL	R4,8	SHIFT LEFT HW 8	PT112160
0BB6	2287	1217	BNCS	T6R5		PT112170
0BB8	C540 8000	1218	CLHI	R4,X'8000'		PT112180
0BBC	203A	1219	BNES	T6R5		PT112190
0BBE	C860 2369	1220	T6E	LHI	R6,X'2369'	PT112200
0BC2	CC60 0001	1221	SRHL	R6,1	SHIFT RIGHT HW 1	PT112210
0BC6	238D	1222	BNCS	T6R6		PT112220
0BC8	C560 11B4	1223	CLHI	R6,X'11B4'		PT112230
0BCC	213A	1224	BNES	T6R6		PT112240
0BCE	CC60 0002	1225	SRHL	R6,2	SHIFT RIGHT HW 2	PT112250
0BD2	2187	1226	BCS	T6R6		PT112260
0BD4	C560 046D	1227	CLHI	R6,X'46D'		PT112270
0BD8	2134	1228	BNES	T6R6		PT112280
0BDA	CC60 0004	1229	SRHL	R6,4	SHIFT RIGHT HW 4	PT112290
0BDE	2183	1230	BCS	T6E2		PT112300
0BE0	4300 1E3C	1231	T6R6	B	ERROR 1603	PT112310
0BE4	C560 0046	1232	T6E2	CLHI	R6,X'46'	PT112320
0BE8	2034	1233	BNES	T6R6		PT112330
0BEA	2478	1234	LIS	R7,8		PT112340
0BEC	CC67 0000	1235	SRHL	R6,0(R7)		PT112350
0BF0	2038	1236	BNZS	T6R6		PT112360
0BF2	0866	1237	LHR	R6,R6		PT112370
0BF4	203A	1238	BNZS	T6R6		PT112380
0BF6	2404	1239	T6F	LIS	R0,4	PT112390
0BF8	D200 1F90	1240	STB	R0,ERRIND	ERRIND = 0416	PT112400
0BFC	C860 496C	1241	LHI	R6,X'496C'		PT112410
0C00	CF60 0001	1242	SLHA	R6,1	SHIFT LEFT HW ARITH. 1	PT112420
0C04	238E	1243	BNCS	T6R7		PT112430
0C06	C560 12D8	1244	CLHI	R6,X'12D8'		PT112440
0C0A	213B	1245	BNES	T6R7		PT112450
0C0C	CF60 0002	1246	SLHA	R6,2	SHIFT LEFT HW ARITH. 2	PT112460
0C10	2188	1247	BCS	T6R7		PT112470
0C12	C560 4B60	1248	CLHI	R6,X'4B60'		PT112480
0C16	2135	1249	BNES	T6R7		PT112490
0C18	9161	1250	SLLS	R6,1	R6 = 96C0 = -VE NO.	PT112500
0C1A	CF60 0004	1251	SLHA	R6,4	SHIFT LEFT HW ARITH. 4	PT112510
0C1E	2383	1252	BNCS	T6F3		PT112520
0C20	4300 1E3C	1253	T6R7	B	ERROR 1604	PT112530
0C24	C560 EC00	1254	T6F3	CLHI	R6,X'EC00'	PT112540
0C28	2034	1255	BNES	T6R7		PT112550
0C2A	C860 ECAA	1256	LHI	R6,X'ECAA'		PT112560
0C2E	CF60 0008	1257	SLHA	R6,8	SHIFT LEFT HW ARITH. 8	PT112570
0C32	2289	1258	BNCS	T6R7		PT112580
0C34	C560 AA00	1259	CLHI	R6,X'AA00'		PT112590

0C38	203C		1260		BNES	T6R7		PT112600
0C3A	C870	6729	1261	T6G	LHI	R7,X'6729'		PT112610
0C3E	CE70	0001	1262		SRHA	R7,1	SHIFT RIGHT HW ARITH. 1	PT112620
0C42	238C		1263		BNCS	T6R8		PT112630
0C44	232B		1264		BNPS	T6R8		PT112640
0C46	C570	3394	1265		CLHI	R7,X'3394'		PT112650
0C4A	2138		1266		BNES	T6R8		PT112660
0C4C	CE70	0002	1267		SRHA	R7,2	SHIFT RIGHT HW ARITH. 2	PT112670
0C50	2185		1268		BCS	T6R8		PT112680
0C52	2324		1269		BNPS	T6R8		PT112690
0C54	C570	0CE5	1270		CLHI	R7,X'CE5'		PT112700
0C58	2333		1271		BES	T6G4		PT112710
0C5A	4300	1E3C	1272	T6R8	B	ERROR	ERROR 1604	PT112720
0C5E	C860	948A	1273	T6G4	LHI	R6,X'948A'	R6 = -VE NO.	PT112730
0C62	CE60	0004	1274		SRHA	R6,4	SHIFT RIGHT HW ARITH. 4	PT112740
0C66	2286		1275		BNCS	T6R8		PT112750
0C68	2027		1276		BPS	T6R8		PT112760
0C6A	C560	F948	1277		CLHI	R6,X'F948'		PT112770
0C6E	203A		1278		BNES	T6R8		PT112780
0C70	CE60	0008	1279		SRHA	R6,8	SHIFT RIGHT HW ARITH. 8	PT112790
0C74	2185		1280		BCS	T6R9		PT112800
0C76	2124		1281	T6G8	BPS	T6R9		PT112810
0C78	C560	FFF9	1282		CLHI	R6,X'FFF9'		PT112820
0C7C	2333		1283		BES	T6H		PT112830
0C7E	4300	1E3C	1284	T6R9	B	ERROR	ERROR 1604	PT112840
0C82	2405		1285	T6H	LIS	R0,5		PT112850
0C84	D200	1F90	1286		STB	R0,ERRIND	ERRIND = 0516	PT112860
0C88	2400		1287		LIS	R0,0		PT112870
0C8A	C300	0000	1288		THI	R0,0		PT112880
0C8E	2139		1289		BNZS	T6RA		PT112890
0C90	0800		1290		LHR	R0,R0		PT112900
0C92	2137		1291		BNZS	T6RA		PT112910
0C94	2437		1292		LIS	R3,7		PT112920
0C96	C330	5555	1293		THI	R3,X'5555'		PT112930
0C9A	2323		1294		BNPS	T6RA		PT112940
0C9C	4310	0CA4	1295		BFC	1,T6H3		PT112950
0CA0	4300	1E3C	1296	T6RA	B	ERROR	ERROR 1605	PT112960
0CA4	C530	0007	1297	T6H3	CLHI	R3,7		PT112970
0CA8	2034		1298		BNES	T6RA		PT112980
0CAA	2035		1299		BNES	T6RA		PT112990
0CAC	C880	8000	1300		LHI	R8,X'8000'		PT113000
	0000	0CB0	1301	THI	EQU	*		PT113010
0CB0	C380	AAAA	1302		THI	R8,X'AAAA'		PT113020
0CB4	4330	0CCC	1303		BFC	3,T6GA		PT113030
0CB8	9181		1304		SLLS	R8,1		PT113040
0CBA	2139		1305		BNZS	T6GA		PT113050
0CBC	C8A0	AAAA	1306		LHI	R10,X'AAAA'		PT113060
0CC0	C3A0	0000	1307		THI	R10,0		PT113070
0CC4	2134		1308		BNZS	T6GA		PT113080
0CC6	45A0	1FA0	1309		CLH	R10,TEN		PT113090
0CCA	2331		1310		BES	T6GA		PT113100
	0000	0CCC	1311	T6GA	EQU	*		PT113110
0CCC	4300	0CDD	1312		B	T6END		PT113120
0CDD	2301		1313	T6END	BS	TEST7		PT113130
			1314					PT113140

		1315	*				PT113150
		1316	*	TEST 7 CHECKS THE BYTE HANDLING INSTRUCTIONS			PT113160
		1317	*				PT113170
		1318	*	LB, STB, CLB, LBR, STBR, EXBR			PT113180
		1319	*				PT113190
		1320	TEST7	LHI R0,TEST8			PT113200
0CD2	C800	0DFE		STH R0,NXTST			PT113210
0CD6	4000	1F92		LHI R0,X'0117'			PT113220
0CDA	C800	0117		STH R0,ERRIND	ERRIND = 0117		PT113230
0CDE	4000	1F90		LHI R0,X'3137'			PT113240
0CE2	C800	3137		STN R0,TESTNO			PT113250
0CE6	4000	1F58					PT113260
		1326	*				PT113270
0CEA	2501			LCS R0,1			PT113280
0CEC	4000	0596		STH R0,T2WRD0	T2WRD0 = FFFF		PT113290
0CF0	4000	059A		STH R0,T2WRD1	T2WRD1 = FFFF		PT113300
0CF4	4000	059E		STH R0,T2WRD2	T2WRD2 = FFFF		PT113310
0CF8	0810			LHR R1,R0	R1 = R0 = FFFF		PT113320
0CFA	0850			LHR R5,R0	R5 = R0 = FFFF		PT113330
0CFC	08A0			LHR R10,R0	R10 = R0 = FFFF		PT113340
	0000	0CFE		EQU *			PT113350
0CFE	D310	1F98		LB R1,ONE	R1=00FF		PT113360
0D02	D350	1F9C		LB R5,FIVE	R5 = 0055		PT113370
0D06	D3A0	1FA0		LB R10,TEN	R10 = 00AA		PT113380
0D0A	C510	00FF		CLHI R1,X'FF'	CHECK BYTES LOADED INTO		PT113390
0D0E	213D			BNES T7R1	R1		PT113400
0D10	C550	0055		CLHI R5,X'55'			PT113410
0D14	213A			BNES T7R1	R5		PT113420
0D16	C5A0	00AA		CLHI R10,X'AA'			PT113430
0D1A	2137			BNES T7R1	R10		PT113440
0D1C	D410	1F99		CLB R1,ONE+1	TEST CLB INSTRUCTION USING		PT113450
0D20	2134			BNES T7R1	R1		PT113460
	0000	0D22		EQU *			PT113470
0D22	D450	1F9D		CLB R5,FIVE+1			PT113480
0D26	2333			BES T7B	R5		PT113490
0D28	4300	1E3C		B ERROR	ERROR 1701		PT113500
0D2C	D4A0	1FA0		CLB R10,TEN	R10		PT113510
0D30	2034			BNES T7R1			PT113520
0D32	C870	0123		LHI R7,X'0123'	R7 = 0123		PT113530
0D36	C880	4567		LHI R8,X'4567'	R8 = 4567		PT113540
0D3A	C890	89AB		LHI R9,X'89AB'	R9 = 89AB		PT113550
	0000	0D3E		EQU *			PT113560
0D3E	D270	0597		STB R7,T2WRD0+1	T2WRD0 = FF23		PT113570
0D42	D280	059B		STB R8,T2WRD1+1	T2WRD1 = FF67		PT113580
0D46	D290	059E		STB R9,T2WRD2	T2WRD2 = 89FF		PT113590
0D4A	4310	0D78		BNM T7R2			PT113600
0D4E	4800	0596		LH R0,T2WRD0	R0 = FF23		PT113610
0D52	4810	059A		LH R1,T2WRD1	R1 = FF67		PT113620
0D56	4820	059E		LH R2,T2WRD2	R8 = A3FF		PT113630
0D5A	C500	FF23		CLHI R0,X'FF23'			PT113640
0D5E	213D			BNES T7R2			PT113650
0D60	C510	FF67		CLHI R1,X'FF67'			PT113660
0D64	213A			BNES T7R2			PT113670
0D66	C520	ABFF		CLHI R2,X'ABFF'			PT113680
0D6A	2137			BNES T7R2			PT113690
0D6C	D470	0597		CLB R7,T2WRD0+1	R7 = 0123, T2WRD0 = FF23		PT113690

0D70	2134	1370		BNES	T7R2		PT113700
0D72	D480 059B	1371		CLB	R8,T2WRD1+1	R8=4567, T2WRD1=FF67	PT113710
0D76	2333	1372		BES	T7C		PT113720
0D78	4300 1E3C	1373	T7R2	B	ERROR	ERROR 1701	PT113730
0D7C	D490 059E	1374	T7C	CLB	R9,T2WRD2	R9=89AB, T2WRD2=ABFF	PT113740
0D80	2034	1375		BNES	T7R2		PT113750
0D82	D400 059A	1376		CLB	R0,T2WRD1	R0=FF238T2WRD1=FF67	PT113760
0D86	2237	1377		BES	T7R2		PT113770
0D88	D470 1F96	1378		CLB	R7,ZERO+2	R7=0123, ZERO=0000	PT113780
0D8C	223A	1379		BES	T7R2		PT113790
0D8E	2480	1380		LIS	R11,0		PT113800
0D90	D480 1F98	1381		CLB	R11,ONE		PT113810
0D94	223E	1382		BES	T7R2		PT113820
		1383	*				PT113830
0D96	2531	1384		LCS	R11,1	R11 = FFFF	PT113840
0J98	25C2	1385		LCS	R12,2	R12 = FFFE	PT113850
0D9A	25D3	1386		LCS	R13,3	R13=FFFF	PT113860
	0000 0D9C	1387	STBR	EQU	*		PT113870
0D9C	927B	1388		STBR	R7,R11		PT113880
0D9E	928C	1389		STBR	R8,R12		PT113890
0DA0	929D	1390		STBR	R9,R13		PT113900
0DA2	C580 FF23	1391		CLHI	R11,X'FF23'		PT113910
0JA6	213E	1392		BNES	T7R3		PT113920
0DA8	C5C0 FF67	1393		CLHI	R12,X'FF67'		PT113930
0DAC	213B	1394		BNES	T7R3		PT113940
0DAE	C500 FFAB	1395		CLHI	R13,X'FFAB'		PT113950
0DB2	2138	1396		BNES	T7R3		PT113960
	0000 0DB4	1397	LBR	EQU	*		PT113970
0DB4	93B1	1398		LBR	R11,R1	R1=FF678 R11=FF23	PT113980
0DB6	93C0	1399		LBR	R12,R0	R0=FF23, R12=FF67	PT113990
0DB8	9302	1400		LBR	R13,R2	R2=ABFF, R13=FFAB	PT114000
0DBA	2134	1401		BNZS	T7R3		PT114010
0DBC	C580 0067	1402		CLHI	R11,X'0067'		PT114020
0DC0	2333	1403		BES	T7E		PT114030
0DC2	4300 1E3C	1404	T7R3	B	ERROR	ERROR 1701	PT114040
0DC6	C5C0 0023	1405	T7E	CLHI	R12,X'0023'		PT114050
0DCA	2034	1406		BNES	T7R3		PT114060
0DCC	C500 00FF	1407		CLHI	R13,X'00FF'		PT114070
0DD0	2037	1408		BNES	T7R3		PT114080
		1409	*				PT114090
	0000 0DD2	1410	EXBR	EQU	*		PT114100
0DD2	9478	1411		EXBR	R7,R8	R7=0123, R8=4567	PT114110
		1412	*			R7 = 6745, R8 = 4567	PT114120
0DD4	C570 6745	1413		CLHI	R7,X'6745'		PT114130
0DD8	203B	1414		BNES	T7R3		PT114140
0DDA	C580 4567	1415		CLHI	R8,X'4567'		PT114150
0DDE	203E	1416		BNES	T7R3		PT114160
0DE0	9489	1417		EXBR	R8,R9	R8 = AB89, R9 = 89AB	PT114170
0DE2	213B	1418		BNES	T7R4		PT114180
0DE4	C580 AB89	1419		CLHI	R8,X'AB89'		PT114190
0DE8	9499	1420		EXBR	R9,R9	R9 = AB89	PT114200
0DEA	9488	1421		EXBR	R8,R8	R8 = 89AB	PT114210
0DEC	C580 89AB	1422		CLHI	R8,X'89AB'		PT114220
0DF0	2134	1423		BNES	T7R4		PT114230
0DF2	C590 AB89	1424		CLHI	R9,X'AB89'		PT114240

ODF6	2333	1425	BES	T7END		PT114250	
ODF8	4300 1E3C	1426	T7R4	B	ERROR	PT114260	
ODFC	2301	1427	T7END	BS	TEST8	PT114270	
		1428	*****				PT114280
		1429	*				PT114290
		1430	*				PT114300
		1431	TEST8 CHECKS THE INSTRUCTIONS				PT114310
		1432	*				PT114320
		1433	AH , AHR , AHI , AHM , AIS , ACH , ACHI				PT114330
		1434	*				PT114340
		1435	SH , SHR , SHI , SIS , SCH , SCHI				PT114350
		1436	*				PT114360
		1437	*				PT114370
		1438	TEST8 CHECKS THE FIXED POINT				PT114380
		1439	ADD,SUBTRACT,AND COMPARE INSTRUCTIONS				PT114390
		1440	*				PT114400
	0000 000F	1441	TOT	EQU	15	PT114410	
		1442	*				PT114420
ODFE	C800 1238	1442	TEST8	LHI	R0,TEST9	PT114430	
OE02	4000 1F92	1443		STH	R0,NXTST	PT114440	
OE06	C800 0116	1444		LHI	R0,X'0118'	PT114450	
OE0A	4000 1F90	1445		STH	R0,ERRIND	PT114460	
OE0E	C800 3138	1446		LHI	R0,C'18'	PT114470	
OE12	4000 1F58	1447		STH	R0,TESTNO	PT114480	
OE16	24F1	1448		LIS	TOT,1	PT114490	
OE18	2445	1449		LIS	R4,5	PT114500	
OE1A	0700	1450		XHR	R0,R0	PT114510	
OE1C	0711	1451		XHR	R1,R1	PT114520	
OE1E	0722	1452		XHR	R2,R2	PT114530	
OE20	C8A0 0101	1453		LHI	R10,X'0101'	PT114540	
OE24	4180 0E56	1454		BAL	R8,TEST85	PT114550	
OE28	2408	1455		LIS	R0,8	PT114560	
OE2A	C810 0040	1456		LHI	R1,X'0040'	PT114570	
OE2E	C820 00C0	1457		LHI	R2,X'00C0'	PT114580	
OE32	4180 0E56	1458		BAL	R8,TEST85	PT114590	
OE36	0700	1459		XHR	R0,R0	PT114600	
OE38	0711	1460		XHR	R1,R1	PT114610	
OE3A	0722	1461		XHR	R2,R2	PT114620	
OE3C	C8A0 1010	1462		LHI	R10,X'1010'	PT114630	
OE40	4180 0E56	1463		BAL	R8,TEST85	PT114640	
OE44	2408	1464		LIS	R0,8	PT114650	
OE46	C810 0404	1465		LHI	R1,X'0404'	PT114660	
OE4A	C820 0C0C	1466		LHI	R2,X'0C0C'	PT114670	
OE4E	4180 0E56	1467		BAL	R8,TEST85	PT114680	
OE52	4300 0E78	1468		B	OVTEST	PT114690	
OE56	4010 1236	1469	TEST85	STH	R1,INITM	PT114700	
OE5A	24CF	1470		LIS	R12,15	PT114710	
OE5C	24EF	1471		LIS	R14,15	PT114720	
OE5E	4190 112C	1472	LOOP85	BAL	R9,TEST83	PT114730	
OE62	0A1A	1473		AHR	R1,R10	PT114740	
OE64	27C1	1474		SIS	R12,1	PT114750	
OE66	2214	1475		BNMS	LOOP85	PT114760	
OE68	4810 1236	1476		LH	R1,INITM	PT114770	
OE6C	24CF	1477		LIS	R12,15	PT114780	
OE6E	0A2A	1478		AHR	R2,R10	PT114790	
OE70	27E1	1479		SIS	R14,1	PT114790	

0E72	4310	0E5E	1480		BNM	LOOP85	LOOP IF COUNT IS NON-NEGATIVE	PT114800
0E76	0308		1481		BR	R8		PT114810
0E78	07CC		1482	OVTEST	XHR	R12,R12	EXPECTED CC=0	PT114820
0E7A	0700		1483		XHR	R0,R0	(R0)=0	PT114830
0E7C	4630	121A	1484		LH	R3,CD3	(R3)=X'7FFE'	PT114840
0E80	4880	1224	1485		LH	R8,CD8	(R8)=X'FFFF'	PT114850
0E84	24F6		1486		LIS	TOT,6	SET ERROR NUMBER=6	PT114860
0E86	2600		1487		AIS	R0,0		PT114870
0E88	4190	111A	1488		BAL	R9,TESTCC		PT114880
			1489	*		ERROR NUMBER=7		PT114890
0E8C	0B00		1490		SHR	R0,R0		PT114900
0E8E	4190	111A	1491		BAL	R9,TESTCC		PT114910
			1492	*		ERROR NUMBER=8		PT114920
0E92	CB30	7FFE	1493		SHI	R3,X'7FFE'		PT114930
0E96	4190	111A	1494		BAL	R9,TESTCC		PT114940
			1495	*		ERROR NUMBER=9		PT114950
0E9A	4880	1224	1496		SH	R8,CD8		PT114960
0E9E	4190	111A	1497		BAL	R9,TESTCC		PT114970
			1498	*		ERROR NUMBER=X'A'		PT114980
0EA2	24C1		1499		LIS	R12,1	EXPECTED CC=1	PT114990
0EA4	4850	121E	1500		LH	R5,CD5	(R5)='8001'	PT115000
0EA6	4860	1220	1501		LH	R6,CD6	(R6)='8002'	PT115010
	0000	0EAC	1502	AH	EQU	*		PT115020
0EAC	4A50	121A	1503		AH	R5,CD3	'8001'+ '7FFE'	PT115030
0EB0	4190	111A	1504		BAL	R9,TESTCC		PT115040
0EB4	2761		1505		SIS	R6,1	'8002'- '0001'	PT115050
0EB6	4190	111A	1506		BAL	R9,TESTCC		PT115060
			1507	*		ERROR NUMBER=X'C'		PT115070
0EBA	24C2		1508		LIS	R12,2	EXPECTED CC=2	PT115080
0EBC	4830	121A	1509		LH	R3,CD3	(R3)='7FFE'	PT115090
0EC0	4840	121C	1510		LH	R4,CD4	(R4)='7FFF'	PT115100
0EC4	4880	1224	1511		LH	R8,CD8	(R8)='FFFF'	PT115110
0EC8	2631		1512		AIS	R3,1	'7FFE'+1='7FFF'	PT115120
0ECA	4190	111A	1513		BAL	R9,TESTCC		PT115130
	0000	0ECE	1514	SHI	EQU	*		PT115140
0ECE	CB40	7FFE	1515		SHI	R4,X'7FFE'	'7FFF'- '7FFE'	PT115150
0ED2	4190	111A	1516		BAL	R9,TESTCC		PT115160
			1517	*		ERROR NUMBER=X'E'		PT115170
	0000	0ED6	1518	SH	EQU	*		PT115180
0ED6	4880	1222	1519		SH	R8,CD7	'FFFF'- 'FFFE'	PT115190
0EDA	4190	111A	1520		BAL	R9,TESTCC		PT115200
0EDE	C8C0	0005	1521		LHI	R12,5	EXPECTED CC=5	PT115210
0EE2	4840	121C	1522		LH	R4,CD4	(R4)='7FFF'	PT115220
0EE6	4A40	121A	1523		AH	R4,CD3	'7FFE'+ '7FFF'	PT115230
0EEA	4190	111A	1524		BAL	R9,TESTCC		PT115240
			1525	*		ERROR NUMBER=X'10'		PT115250
0EEE	24C6		1526		LIS	R12,6	EXPECTED CC=6	PT115260
0EF0	4850	121E	1527		LH	R5,CD5	(R5)='8001'	PT115270
0EF4	CB50	7FFF	1528		SHI	R5,X'7FFF'	'8001'- '7FFF'	PT115280
0EF8	4190	111A	1529		BAL	R9,TESTCC		PT115290
0EFC	24C8		1530		LIS	R12,8	EXPECTED CC=8	PT115300
0EFE	4810	1216	1531		LH	R1,CD1	(R1)=1	PT115310
0F02	4840	121C	1532		LH	R4,CD4	(R4)=X'7FFF'	PT115320
0F06	4880	1224	1533		LH	R8,CD8	(R8)='FFFF'	PT115330
	0000	0F0A	1534	AHI	EQU	*		PT115340

0F0A	CA40 8001	1535	AHI	R4,X'8001'		PT115350
0F0E	4190 111A	1536	BAL	R9,TESTCC		PT115360
	0000 0F12	1537	AHR	EQU *		PT115370
0F12	0A18	1538	AHR	R1,R8	X'0001' + X'FFFF'	PT115380
0F14	4190 111A	1539	BAL	R9,TESTCC		PT115390
0F18	24C9	1540	LIS	R12,9	EXPECTED CC=9	PT115400
0F1A	4830 121A	1541	LH	R3,CD3	(R3)=X'7FFE'	PT115410
0F1E	4870 122C	1542	LH	R7,CD7	(R7)=X'FFFE'	PT115420
0F22	4880 1224	1543	LH	R8,CD8	(R8)=X'FFFF'	PT115430
0F26	0A87	1544	AHR	R8,R7	'FFFF'+ 'FFFE'	PT115440
0F28	4190 111A	1545	BAL	R9,TESTCC		PT115450
		1546	*	ERROR NUMBER=X'14'		PT115460
	0000 0F2C	1547	SIS	EQU *		PT115470
0F2C	2701	1548	SIS	R0,1	0-1	PT115480
0F2E	4190 111A	1549	BAL	R9,TESTCC		PT115490
0F32	CB70 FFFF	1550	SHI	R7,X'FFFF'	'FFFE'-'FFFF'	PT115500
0F36	4190 111A	1551	BAL	R9,TESTCC		PT115510
0F3A	4B30 121C	1552	SH	R3,CD4	'7FFE'-'7FFF'	PT115520
0F3E	4190 111A	1553	BAL	R9,TESTCC		PT115530
0F42	24CA	1554	LIS	R12,X'A'	EXPECTED CC= 'A'	PT115540
0F44	0700	1555	XHR	R0,R0	(R0)=0	PT115550
0F46	4830 121A	1556	LH	R3,CD3	(R3)=X'7FFE'	PT115560
0F4A	4860 1220	1557	LH	R6,CD6	(R6)='8002'	PT115570
0F4E	4880 1224	1558	LH	R8,CD8	(R8)='FFFF'	PT115580
	0000 0F52	1559	AIS	EQU *		PT115590
0F52	2682	1560	AIS	R8,2	'FFFF'+2	PT115600
0F54	4190 111A	1561	BAL	R9,TESTCC		PT115610
		1562	*	ERROR NUMBER=X'18'		PT115620
0F58	CB00 FFFF	1563	SHI	R0,X'FFFF'	0-'FFFF'	PT115630
0F5C	4190 111A	1564	BAL	R9,TESTCC		PT115640
0F60	4830 1224	1565	SH	R3,CD8	'7FFE'-'FFFF'	PT115650
0F64	4190 111A	1566	BAL	R9,TESTCC		PT115660
0F68	CA60 7FFF	1567	AHI	R6,X'7FFF'	'8002' + '7FFF'= '0001'	PT115670
0F6C	4190 111A	1568	BAL	R9,TESTCC		PT115680
0F70	24C0	1569	LIS	R12,X'D'	EXPECTED CC='D'	PT115690
0F72	4840 121C	1570	LH	R4,CD4	(R4)='7FFF'	PT115700
0F76	4820 1218	1571	LH	R2,CD2	(R2)=2	PT115710
0F7A	4840 1222	1572	SH	R4,CD7	'7FFF'-'FFFE'	PT115720
0F7E	4190 111A	1573	BAL	R9,TESTCC		PT115730
		1574	*	ERROR NUMBER=X'1C'		PT115740
0F82	CB20 8001	1575	SHI	R2,X'8001'	2-'8001'	PT115750
0F86	4190 111A	1576	BAL	R9,TESTCC		PT115760
		1577	*	ERROR NUMBER=X'1D'		PT115770
0F8A	C8C0 000E	1578	LHI	R12,X'E'	EXPECTED CC = 'E'	PT115780
0F8E	4850 121E	1579	LH	R5,CD5	(R5)='8001'	PT115790
0F92	CA50 FFFE	1580	AHI	R5,X'FFFE'	'8001'+ 'FFFE'	PT115800
0F96	4190 111A	1581	BAL	R9,TESTCC		PT115810
		1582	*	ERROR NUMBER=X'1E'		PT115820
		1583	*	MULTIPLE PRECISION ADD	SUBTRACT CHECK	PT115830
0F9A	0700	1584	XHR	R0,R0	(R0) = 0 FIRST WORD OF RESULT	PT115840
0F9C	0711	1585	XHR	R1,R1	(R1) = 0 SECOND WORD OF RESULT	PT115850
0F9E	0722	1586	XHR	R2,R2	(R2) = 0 THIRD WORD OF RESULT	PT115860
0FA0	0733	1587	XHR	R3,R3	(R3) = 0 FIRST WORD OF INCREMENT	PT115870
0FA2	0744	1588	XHR	R4,R4	(R4) = 0 SECOND WORD OF INCREMENT	PT115880
0FA4	C650 1110	1589	LHI	R5,X'1110'	(R5) = '1110' MSB OF FINAL VALUE OF IN	PT115890

0FA8	C860	EEEE	1590	LHI	R6,X'EEEE'	(R6) = 'EEEE' LSB OF FINAL VALUE OF INC	PT115900
0FAC	C870	0888	1591	LHI	R7,X'0888'	FIRST WORD OF EXPECTED RESULT	PT115910
0FB0	C880	7777	1592	LHI	R8,X'7777'	SECOND WORD OF EXPECTED RESULT	PT115920
0FB4	C890	8000	1593	LHI	R9,X'8000'	THIRD WORD OF EXPECTED RESULT	PT115930
0FB8	4A40	1228	1594	LOOP1	AH R4,ININC2	INCREMENT THE INCREMENT BY '00001111	PT115940
	0000	0FBC	1595	ACH	EQU *		PT115950
0FBC	4E30	1226	1596	ACH	R3,ININC1		PT115960
0FC0	0A24		1597	AHR	R2,R4	ADD THE INCREMENT TO TRIPLE	PT115970
0FC2	0E13		1598	ACHR	R1,R3	PRECISION RESULT	PT115980
0FC4	4E00	1F94	1599	ACH	R0,ZERO		PT115990
0FC8	08D5		1600	LHR	R13,R5		PT116000
0FCA	08E6		1601	LHR	R14,R6		PT116010
0FCC	0BE4		1602	SHR	R14,R4		PT116020
0FCE	4230	0FB8	1603	BNZ	LOOP1		PT116030
	0000	0FD2	1604	SHR	EQU *		PT116040
0FD2	08D3		1605	SHR	R13,R3		PT116050
0FD4	4230	0FB8	1606	BNZ	LOOP1		PT116060
0FD8	0592		1607	CLHR	R9,R2	COMPARE TRIPLE	PT116070
0FDA	4230	11F0	1608	BNE	ERR13	PRECISION CALCULATED	PT116080
0FDE	0581		1609	CLHR	R8,R1	AND EXPECTED	PT116090
0FE0	4230	11F0	1610	BNE	ERR13		PT116100
0FE4	0570		1611	CLHR	R7,R0	RESULTS	PT116110
0FE6	4230	11F0	1612	BNE	ERR13		PT116120
0FEA	26F1		1613	AIS	TOT,1	INCR. ERROR NUMBER BY 1	PT116130
			1614	*	ERROR NUMBER=X'1F'		PT116140
0FEC	0B24		1615	LOOP2	SHR R2,R4	SUBTRACT THE DECREMENT FROM	PT116150
0FEE	0F13		1616		SCHR R1,R3	TRIPLE PRECISION RESULT	PT116160
	0000	0FF0	1617	SCH	EQU *		PT116170
0FF0	4F00	1F94	1618	SCH	R0,ZERO		PT116180
0FF4	4B40	1228	1619	SH	R4,ININC2	DECR. THE DECREMENT BY '00001111'	PT116190
0FF8	4F30	1226	1620	SCH	R3,ININC1		PT116200
0FFC	0844		1621	LHR	R4,R4		PT116210
0FFE	4230	0FEC	1622	BNZ	LOOP2		PT116220
1002	0833		1623	LHR	R3,R3		PT116230
1004	4230	0FEC	1624	BNZ	LOOP2		PT116240
1008	0822		1625	LHR	R2,R2		PT116250
100A	4230	11F0	1626	BNZ	ERR13		PT116260
100E	0811		1627	LHR	R1,R1		PT116270
1010	4230	11F0	1628	BNZ	ERR13		PT116280
1014	0800		1629	LHR	R0,R0		PT116290
1016	4230	11F0	1630	BNZ	ERR13		PT116300
			1631	*	FIXED POINT COMPARE CHECK		PT116310
101A	26F1		1632	AIS	TOT,1	ERROR NUMBER=X'20'	PT116320
101C	2475		1633	LIS	R7,5	SET INDEX OFFSET=5	PT116330
101E	4800	1F94	1634	LH	R0,ZERO	(R0) = 0	PT116340
1022	4810	1216	1635	LH	R1,CD1	(R1) = 1	PT116350
1026	4820	121C	1636	LH	R2,CD4	(R2) = '7FFF'	PT116360
102A	4830	121E	1637	LH	R3,CD5	(R3) = '8001'	PT116370
102E	4840	1222	1638	LH	R4,CD7	(R4) = 'FFFE'	PT116380
1032	4850	1224	1639	LH	R5,CD8	(R5) = 'FFFF'	PT116390
1036	08C0		1640	LHR	R12,R0	EXPECTED CC = 0	PT116400
1038	0500		1641	CLHR	R0,R0		PT116410
103A	4190	111A	1642	BAL	R9,TESTCC		PT116420
103E	4517	1211	1643	CLH	R1,CD1-5(R7)		PT116430
1042	4190	111A	1644	BAL	R9,TESTCC		PT116440

			1645 *	ERROR NUMBER=X'22'		PT116450
1046	C520	7FFF	1646	CLHI R2,X'7FFF'		PT116460
104A	4190	111A	1647	BAL R9,TESTCC		PT116470
104E	0933		1648	CHR R3,R3		PT116480
1050	4190	111A	1649	BAL R9,TESTCC		PT116490
			1650 *	ERROR NUMBER=X'24'		PT116500
1054	4940	1222	1651	CH R4,CD7		PT116510
1058	4190	111A	1652	BAL R9,TESTCC		PT116520
105C	C950	FFFF	1653	CHI R5,X'FFFF'		PT116530
1060	4190	111A	1654	BAL R9,TESTCC		PT116540
			1655 *	ERROR NUMBER=X'26'		PT116550
1064	24C1		1656	LIS R12,1	EXPECTED CC=1	PT116560
1066	4810	1220	1657	LH R1,CD6	(R1)='8002'	PT116570
106A	4820	1216	1658	LH R2,CD1	(R2)='0001'	PT116580
106E	0512		1659	CLHR R1,R2		PT116590
1070	4190	111A	1660	BAL R9,TESTCC		PT116600
1074	C8C0	0002	1661	LHI R12,2	EXPECTED CC=2	PT116610
1078	4810	121C	1662	LH R1,CD4	(R1)='7FFF'	PT116620
107C	4510	121A	1663	CLH R1,CD3	COMPARE WITH '7FFE'	PT116630
1080	4190	111A	1664	BAL R9,TESTCC	CHECK CC	PT116640
			1665 *	ERROR NUMBER X'28'		PT116650
1084	4810	1220	1666	LH R1,CD6	(R1)='8002'	PT116660
1088	C510	8001	1667	CLHI R1,X'8001'		PT116670
108C	4190	111A	1668	BAL R9,TESTCC		PT116680
1090	4820	1224	1669	LH R2,CD8	(R2)=X'FFFF'	PT116690
1094	4800	1F94	1670	LH R0,ZERO	(R0)=0	PT116700
1098	4810	1216	1671	LH R1,CD1	(R1)=1	PT116710
109C	0910		1672	CHR R1,R0		PT116720
109E	4190	111A	1673	BAL R9,TESTCC		PT116730
			1674 *	ERROR NUMBER=X'2A'		PT116740
10A2	4927	121D	1675	CH R2,CD7-5(R7)	COMPARE 'FFFF' AND 'FFFE'	PT116750
10A6	4190	111A	1676	BAL R9,TESTCC		PT116760
10AA	C900	8001	1677	CHI R0,X'8001'	COMPARE 0 AND '8001'	PT116770
10AE	4190	111A	1678	BAL R9,TESTCC		PT116780
			1679 *	ERROR NUMBER=X'2C'		PT116790
10B2	24C6		1680	LIS R12,6	EXPECTED CC=6	PT116800
10B4	4810	121E	1681	LH R1,CD5	(R1)='8001'	PT116810
10B8	4510	1218	1682	CLH R1,CD2	COMPARE '8001' AND '0002'	PT116820
10BC	4190	111A	1683	BAL R9,TESTCC		PT116830
10C0	24C9		1684	LIS R12,9	EXPECTED CC=9	PT116840
10C2	4800	1F94	1685	LH R0,ZERO	(R0)=0	PT116850
10C6	4810	1222	1686	LH R1,CD7	(R1)='FFFE'	PT116860
10CA	4820	1224	1687	LH R2,CD8	(R2)='FFFF'	PT116870
10CE	4830	121E	1688	LH R3,CD5	(R3)='8001'	PT116880
10D2	0512		1689	CLHR R1,R2		PT116890
10D4	4190	111A	1690	BAL R9,TESTCC		PT116900
			1691 *	ERROR NUMBER=X'2E'		PT116910
10D8	C500	0001	1692	CLHI R0,1	COMPARE 0 AND 1	PT116920
10DC	4190	111A	1693	BAL R9,TESTCC		PT116930
10E0	C900	0001	1694	CHI R0,1		PT116940
10E4	4190	111A	1695	BAL R9,TESTCC		PT116950
			1696 *	ERROR NUMBER=X'30'		PT116960
10E8	4930	1220	1697	CH R3,CD6	COMPARE '8001' AND '8002'	PT116970
10EC	4190	111A	1698	BAL R9,TESTCC		PT116980
10F0	0920		1699	CHR R2,R0	COMPARE 'FFFF' AND 0	PT116990

118A	4330	1190	1755	BZ	NCRY1	IF NO CARRY IN GOTO NCRY1	PT117550
118E	2751		1756	SIS	R5,1		PT117560
1190	4854	1229	1757	NCRY1	SH R5,PLUSN-5(R4)	M-N-C	PT117570
1194	4050	1232	1758	STH	R5,MMNMC	STORE M-N-C	PT117580
1198	4A54	122B	1759	AH	R5,MPNPC-5(R4)	GET (M+N+C)+(M-N-C)=2M	PT117590
119C	0871		1760	LHR	R7,R1	M	PT117600
119E	CD70	0001	1761	SLHL	R7,1	GET 2*M	PT117610
11A2	0557		1762	CLHR	R5,R7	IF(M+N+C)+(M-N-C) IS NOT=2*M	PT117620
11A4	4230	11D8	1763	BNE	ERR12	BRANCH TO ERR1	PT117630
11A8	24F5		1764	LIS	TOT,5	SET ERROR NUMBER=5	PT117640
11AA	4850	1230	1765	LH	R5,MPNPC	M+N+C	PT117650
11AE	9500		1766	EPSR	R13,R0		PT117660
11B0	4F54	122D	1767	SCH	R5,MMNMC-5(R4)	(M+N+C)-(M-N-C)-C =2N+C	PT117670
11B4	4870	122E	1768	LH	R7,PLUSN	N	PT117680
11B8	CD70	0001	1769	SLHL	R7,1	2*N	PT117690
11BC	0800		1770	LHR	R0,R0	EXAMINE IF CARRY IN HAS	PT117700
11BE	4330	11C4	1771	BZ	NOCRY	BEEN SPECIFIED	PT117710
11C2	2671		1772	AIS	R7,1	2*N+C	PT117720
11C4	0557		1773	NOCRY	CLHR R5,R7	IF (M+N+C)-(M-N-C)-C	PT117730
11C6	4230	11D8	1774	BNE	ERR12	IS NOT=2*N+C,BRANCH TO ERR1	PT117740
11CA	0309		1775	BR	R9	RETURN	PT117750
11CC	2443		1776	ERR11	LIS R4,3	THREE VALUES FOR PRINT OUT	PT117760
11CE	0875		1777	LHR	R7,R5	ACTUAL RESULT	PT117770
11D0	0863		1778	LHR	R6,R3	-M OR M+(R4)OR M+X*789A'	PT117780
11D2	0851		1779	LHR	R5,R1	VALUE OF M	PT117790
11D4	4300	1206	1780	B	ERR1		PT117800
11D8	2447		1781	ERR12	LIS R4,7	SEVEN VALUES ARE TO BE PRINTED	PT117810
11DA	08A5		1782	LHR	R10,R5	ACTUAL RESULT	PT117820
11DC	0887		1783	LHR	R11,R7	EXPECTED RESULT	PT117830
11DE	0851		1784	LHR	R5,R1	M	PT117840
11E0	0862		1785	LHR	R6,R2	N	PT117850
11E2	0870		1786	LHR	R7,R0	CARRY IN	PT117860
11E4	4880	1230	1787	LH	R8,MPNPC	M+N+C	PT117870
11E8	4890	1232	1788	LH	R9,MMNMC	M-N-C	PT117880
11EC	4300	1206	1789	B	ERR1		PT117890
11F0	2443		1790	ERR13	LIS R4,3	THREE VALUES TO BE PRINTED	PT117900
11F2	0850		1791	LHR	R5,R0	ACTUAL	PT117910
11F4	0861		1792	LHR	R6,R1	TRIPAL PRECISION	PT117920
11F6	0872		1793	LHR	R7,R2	RESULT	PT117930
11F8	4300	1206	1794	B	ERR1		PT117940
11FC	2442		1795	ERR14	LIS R4,2	TWO VALUES TO BE PRINTED	PT117950
11FE	085E		1796	LHR	R5,R14	ACTUAL CONDITION CODE	PT117960
1200	086C		1797	LHR	R6,R12	EXPECTED CONDITION CODE	PT117970
1202	4300	1206	1798	B	ERR1		PT117980
1206	C800	0018	1799	ERR1	LHI R0,X'0018'		PT117990
120A	91F8		1800	SLLS	TOT,8		PT118000
120C	060F		1801	OHR	R0,TOT		PT118010
120E	4000	1F90	1802	STH	R0,ERRIND		PT118020
1212	4300	1E3C	1803	B	ERROR		PT118030
			1804	*	DATA OF TEST 8		PT118040
1216	0001		1805	CD1	DC 1		PT118050
1218	0002		1806	CD2	DC 2		PT118060
121A	7FFE		1807	CD3	DC X'7FFE'		PT118070
121C	7FFF		1808	CD4	DC X'7FFF'		PT118080
121E	8001		1809	CD5	DC X'8001'		PT118090

1220	8002	1810	CD6	DC	X'8002'		PT118100	
1222	FFFE	1811	CD7	DC	X'FFFE'		PT118110	
1224	FFFF	1812	CD8	DC	X'FFFF'		PT118120	
1226	0000	1813	ININC1	DC	0		PT118130	
1228	1111	1814	ININC2	DC	X'1111'		PT118140	
122A		1815	MINUSM	DS	2		PT118150	
122C		1816	PLUSM	DS	2		PT118160	
122E		1817	PLUSN	DS	2		PT118170	
1230		1818	MPNPC	DS	2		PT118180	
1232		1819	MMNMC	DS	2		PT118190	
1234		1820	MMNMC	DS	2		PT118200	
1236		1821	INITM	DS	2		PT118210	
		1822	*				PT118220	
		1823	*****					PT118230
		1824	*	TEST 9 CHECKS THE			PT118240	
		1825	*				PT118250	
		1826	*	SVC INSTRUCTIONS			PT118260	
		1827	*				PT118270	
		1828	*	SVCINT = ADDRESS FOR SVC INTERRUPT			PT118280	
		1829	*				PT118290	
		1830	*	R13 = ADDRESS OF ERROR ROUTINE			PT118300	
		1831	*				PT118310	
1238	C800 1330	1832	TEST9	LHI	R0,TEST10		PT118320	
123C	4000 1F92	1833		STH	R0,NXTST		PT118330	
1240	C800 0119	1834		LHI	R0,X'0119'		PT118340	
1244	4000 1F90	1835		STH	R0,ERRIND	ERRIND = 0119	PT118350	
1248	C800 3139	1836		LHI	R0,X'3139'		PT118360	
124C	4000 1F58	1837		STH	R0,TESTNO		PT118370	
		1838	*				PT118380	
1250	C800 1E3C	1839		LHI	R13,ERROR	R13 = ADD. OF ERR. RTN.	PT118390	
1254	C830 009C	1840		LHI	R3,X'9C'		PT118400	
1258	4003 0000	1841	SVC004	STH	R13,0(R3)		PT118410	
125C	2632	1842		AIS	R3,2		PT118420	
125E	C530 008C	1843		CLHI	R3,X'BC'		PT118430	
1262	2035	1844		BNES	SVC004		PT118440	
1264	246E	1845		LIS	R6,14		PT118450	
1266	2410	1846		LIS	R1,0		PT118460	
1268	2400	1847	SVC100	LIS	R0,0	R0 = 0	PT118470	
126A	4000 0094	1848		STH	R0,X'94'	SVC ARGUMENT POINTER	PT118480	
126E	4000 0096	1849		STH	R0,X'96'	OLD PSW	PT118490	
1272	4000 0098	1850		STH	R0,X'98'	OLD PSW LOCATION	PT118500	
1276	4000 009A	1851		STH	R0,X'9A'	NEW PSW	PT118510	
127A	0831	1852		LHR	R3,R1	R1 = SVC CALL 0 THRU 15	PT118520	
127C	9131	1853		SLLS	R3,1	R3 = R1 X 2	PT118530	
127E	CA30 009C	1854		AHI	R3,X'9C'	R3 = R1 X 2 + 9C	PT118540	
1282	C800 1304	1855		LHI	R0,SVCINT		PT118550	
1286	4003 0000	1856		STH	R0,0(R3)		PT118560	
128A	0801	1857		LHR	R0,R1		PT118570	
128C	9102	1858		SLLS	R0,2	R0 = 4 X R1	PT118580	
128E	0841	1859		LHR	R4,R1		PT118590	
1290	9141	1860		SLLS	R4,1	R4 = 2 X R1	PT118600	
1292	0A04	1861		AHR	R0,R4	R0 = 6 X R1	PT118610	
1294	C850 12A4	1862		LHI	R5,SVC200		PT118620	
1298	0A05	1863		AHR	R0,R5		PT118630	
129A	C200 129E	1864		LPSW	SVC150		PT118640	

129E	2805	1865	SVC150	DC	X'2805',SVC175		PT118650	
12A0	12A2							
12A2	0300	1866	SVC175	BR	R0		PT118660	
12A4	E100 0000	1867	SVC200	SVC	0,R0		PT118670	
12A8	0300	1868		BR	R13		PT118680	
	0000 12AA	1869	SVC	EQU	*		PT118690	
12AA	E110 0001	1870	SVC201	SVC	1,R1		PT118700	
12AE	0300	1871		BR	R13		PT118710	
12B0	E120 0002	1872	SVC202	SVC	2,R2		PT118720	
12B4	0300	1873		BR	R13		PT118730	
12B6	E130 0003	1874		SVC	3,R3		PT118740	
12BA	0300	1875		BR	R13		PT118750	
12BC	E140 0004	1876		SVC	4,R4		PT118760	
12C0	0300	1877		BR	R13		PT118770	
12C2	E150 0005	1878		SVC	5,R5		PT118780	
12C6	0300	1879		BR	R13		PT118790	
12C8	E160 0006	1880		SVC	6,R6		PT118800	
12CC	0300	1881		BR	R13		PT118810	
12CE	E170 0007	1882		SVC	7,R7		PT118820	
12D2	0300	1883		BR	R13		PT118830	
12D4	E180 0006	1884	SVC208	SVC	8,R8		PT118840	
12D8	0300	1885		BR	R13		PT118850	
12DA	E190 0009	1886		SVC	9,R9		PT118860	
12DE	0300	1887		BR	R13		PT118870	
12E0	E1A0 000A	1888		SVC	10,R10		PT118880	
12E4	0300	1889		BR	R13		PT118890	
12E6	E1B0 000B	1890		SVC	11,R11		PT118900	
12EA	0300	1891		BR	R13		PT118910	
12EC	E1C0 000C	1892	SVC212	SVC	12,R12		PT118920	
12F0	0300	1893		BR	R13		PT118930	
12F2	E1D0 000D	1894		SVC	13,R13		PT118940	
12F6	0300	1895		BR	R13		PT118950	
12F8	E1E6 0000	1896		SVC	14,0(R6)		PT118960	
12FC	0300	1897		BR	R13		PT118970	
12FE	E1F0 000F	1898	SVC215	SVC	15,R15		PT118980	
1302	0300	1899		BR	R13		PT118990	
		1900	*				PT119000	
1304	4840 0094	1901	SVCINT	LH	R4,X'94'	SUPVC CALL ARGU. POINTER	PT119010	
1308	0541	1902		CLHR	R4,R1	MUST EQUAL R1	PT119020	
130A	0230	1903		BNER	R13		PT119030	
130C	4840 0096	1904		LH	R4,X'96'	OLD PSW	PT119040	
1310	C540 2805	1905	M5005	CLHI	R4,X'2805'		PT119050	
1314	0230	1906		BNER	R13		PT119060	
1316	4840 0098	1907		LH	R4,X'98'	OLD PSW LOCA.	PT119070	
131A	2604	1908		AIS	R0,4	MUST EQUAL R3 + 4	PT119080	
131C	0504	1909		CLHR	R0,R4		PT119090	
131E	0230	1910		BNER	R13		PT119100	
1320	40D3 0000	1911		STH	R13,0(R3)	RESTORE ERR. ADD. AT SVC TESTED	PT119110	
1324	2611	1912		AIS	R1,1		PT119120	
1326	C510 0010	1913		CLHI	R1,16		PT119130	
132A	4230 1268	1914		BNE	SVC100		PT119140	
132E	2301	1915	T9END	BS	TEST10		PT119150	
		1916	*****					PT119160
		1917	*				PT119170	
		1918	*	TEST 10 CHECKS THE INSTRUCTIONS			PT119180	

		1919	*				PT119190
		1920	*	SINT AND ILLG. INSTR. INTRPR.			PT119200
		1921	*				PT119210
		1922	*	T10INT=ADD. FOR INTERRUPT			PT119220
		1923	*				PT119230
		1924	*	T10SNT=ADD. SIMULATE INTERRUPT			PT119240
		1925	*				PT119250
		1926	*	OLDPSW=ADD. OF INSTR. AFTER T10SNT			PT119260
		1927	*				PT119270
		1928	*	T10DEV=DEV. NO. 0 THRU 255 OF THE INTRPT. DEV.			PT119280
		1929	*				PT119290
		1930	TEST10	LHI R0,TEST11			PT119300
		1931		STH R0,NXTST			PT119310
		1932		LHI R0,X'011A'			PT119320
		1933		STH R0,ERRIND	ERRIND = 011A		PT119330
		1934		LHI R0,C'1A'			PT119340
		1935		STH R0,TESTNO			PT119350
		1936	*				PT119360
		1937		LIS R1,0	R1=ADD. OF INTRPT. DEV.		PT119370
		1938		LHI R4,X'FE'			PT119380
		1939		LHI R3,T10R2	ERROR ADD. FOR INCORRECT		PT119390
		1940	T10A1	STH R3,0(R4)	SERVICE POINTER		PT119400
		1941		SIS R4,2			PT119410
		1942		CLHI R4,X'D0'	STORED AT ALL LOCATIONS		PT119420
		1943		BNES T10A1	X'D0' THRU X'2CE'		PT119430
		1944	T10A2	LHI R3,ERROR	ERR. ADD. EXT. I/O INTRPT.		PT119440
		1945		STH R3,X'46'	NEW PSW EXT. I/O INTRPT.		PT119450
		1946		STH R1,X'44'			PT119460
		1947		STH R1,X'40'	OLD PSW EXT. I/O INT. (PSW)		PT119470
		1948		STH R1,X'42'	OLD PSW EXT. I/O INT. (LOC.)		PT119480
		1949		STH R1,T10DEV	T10DEV=SINT DEV. ADDRESS		PT119490
		1950		STH R1,T10R2	OLD PSW INCORRECT DEV. ADD.		PT119500
		1951		STH R1,T10R2+2			PT119510
		1952		STH R1,T10R2+4			PT119520
		1953		LHI R3,T10INT			PT119530
		1954		STH R3,X'D0'			PT119540
		1955		B T10SNT			PT119550
		1956	T10R2	DC 0			PT119560
		1957		DC 0			PT119570
		1958		DC 0			PT119580
		1959	T10R2B	LHI R0,X'021A'	ERRIND = 021A		PT119590
		1960		STH R0,ERRIND			PT119600
		1961		B ERROR	ERROR 1A02		PT119610
		1962	*				PT119620
		1963		DC 0			PT119630
		1964	T10INT	DC 0	OLD PSW		PT119640
		1965		DC 0	OLD PSW LOCATION		PT119650
		1966		DC 0	NEW PSW		PT119660
		1967		LIS R0,0			PT119670
		1968		LH R3,T10INT	OLD PSW=4000?		PT119680
		1969		CLHI R3,X'4000'			PT119690
		1970		BNES T10R4			PT119700
		1971		LHI R3,OLDPSW			PT119710
		1972		CLH R3,T10INT+2	OLD PSW LOC.		PT119720
		1973		BNES T10R4			PT119730
1330	C800	1518					
1334	4000	1F92					
1338	C800	011A					
133C	4000	1F90					
1340	C800	3141					
1344	4000	1F58					
1348	2410						
134A	C840	00FE					
134E	C830	138E					
1352	4034	0000					
1356	2742						
1358	C540	00D0					
135C	2035						
135E	C830	1E3C					
1362	4030	0046					
1366	4010	0044					
136A	4010	0040					
136E	4010	0042					
1372	4010	1400					
1376	4010	138E					
137A	4010	1390					
137E	4010	1392					
1382	C830	13A2					
1386	4030	00D0					
138A	4300	13F6					
138E	0000						
1390	0000						
1392	0000						
1394	C800	021A					
1398	4000	1F90					
139C	4300	1E3C					
13A0	0000						
13A2	0000						
13A4	0000						
13A6	0000						
13A8	2400						
13AA	4830	13A2					
13AE	C530	4000					
13B2	213A						
13B4	C830	1402					
13B8	4530	13A4					
13BC	2135						

13BE	9530	1974	EPSR	R3,R0	CURRENT PSW MUST BE ZERO	PT119740	
13C0	C430 FFF0	1975	NHI	R3,X'FFF0'		PT119750	
13C4	2335	1976	BZS	T10D		PT119760	
13C6	C800 041A	1977	T10R4	LHI	R0,X'041A'	ERRIND = 041A	PT119770
13CA	4300 1406	1978		B	T10R34	ERROR 1A04	PT119780
		1979	*				PT119790
		1980	*	NO ERROR DETECTED			PT119800
		1981	*				PT119810
13CE	4000 13A2	1982	T10D	STH	R0,T10INT	RESET OLD PSW STORAGE LOC.	PT119820
13D2	4000 13A4	1983		STH	R0,T10INT+2		PT119830
13D6	C830 138E	1984		LHI	R3,T10R2	LOAD ERROR ADD. AT	PT119840
13DA	4034 0000	1985		STH	R3,0(R4)	DEV. NO. JUST TESTED	PT119850
13DE	2611	1986		AIS	R1,1		PT119860
13E0	C510 0018	1987		CLHI	R1,X'18'		PT119870
13E4	4330 140E	1988		BE	T10E		PT119880
13E8	2642	1989		AIS	R4,2	SERVICE POINTER FOR NEXT DEV.	PT119890
13EA	C830 13A2	1990		LHI	R3,T10INT	STORE INTERRUPT ADDRESS	PT119900
13EE	4034 0000	1991		STH	R3,0(R4)		PT119910
13F2	4010 1400	1992		STH	R1,T10DEV		PT119920
13F6	C200 13FA	1993	T10SNT	LPSW	++4		PT119930
13FA	4000	1994		DC	X'4000',++2		PT119940
13FC	13FE						
	0000 13FE	1995	SINT	EQU	*		PT119950
13FE	E200	1996		DC	X'E200'	SINT INSTR. CODE	PT119960
1400	0000	1997	T10DEV	DC	0	DEV. NO.	PT119970
	0000 1402	1998	OLDPSW	EQU	*		PT119980
1402	C800 031A	1999	T10R3	LHI	R0,X'031A'	ERROR 1A03	PT119990
1406	4000 1F90	2000	T10R34	STH	R0,ERRIND		PT120000
140A	4300 1E3C	2001		B	ERROR	ERROR 1A03 OR 1A04	PT120010
		2002	*				PT120020
		2003	*	TEST ILLEGAL INSTRUCTION INTERRUPT FOR INSTRUCTIONS			PT120030
		2004	*				PT120040
		2005	*	10 THRU 1F , 30 THRU 3F , 50 THRU 5F , 70 THRU 7F			PT120050
		2006	*				PT120060
		2007	*	80 THRU 8F , A0 THRU AF , B0 THRU BF , F0 THRU FF			PT120070
		2008	*				PT120080
		2009	*	ILLEGAL = ADD. OF THE ILLEGAL INSTRUCTION			PT120090
		2010	*				PT120100
		2011	*	ILGINT = ILLG. INSTR. INTRPT. ADDRESS			PT120110
		2012	*				PT120120
140E	4800 1F80	2013	T10E	LH	R0,CPUNO		PT120130
1412	C840 1406	2014		LHI	R4,T10M16	START OF ILLEGAL INST.EXCEPTION TABLE	PT120140
1416	C860 0031	2015		LHI	R6,C'1'	IS 1ST CHARACTER IN CPUNO A 1 FOR MODEL	PT120150
141A	D460 1F80	2016		CLB	R6,CPUNO	7/16	PT120160
141E	4330 1440	2017		BE	T10G	YES	PT120170
1422	C840 14EF	2018		LHI	R4,T10M70		PT120180
1426	C500 3835	2019		CLHI	R0,C'85'		PT120190
142A	2134	2020		BNES	T10E2		PT120200
142C	C840 14F2	2021		LHI	R4,T10M85		PT120210
1430	2308	2022		BS	T10G		PT120220
1432	C400 0704	2023	T10E2	NHI	R0,X'704'		PT120230
1436	C500 0704	2024		CLHI	R0,X'704'		PT120240
143A	2133	2025		BNES	T10G		PT120250
143C	C840 14DE	2026		LHI	R4,T10M74		PT120260
1440	24A0	2027	T10G	LIS	R10,0	R10 = 0 FOR FIRST TIME	PT120270

1442	2460		2028	LIS	R6,0		PT120280
1444	2480		2029	LIS	R11,0		PT120290
1446	2400		2030	T10H	LIS	R0,0	PT120300
1442	4000 0034		2031	STH	R0,X'34'	NEW PSW , ILLG. INSTR.	PT120310
144C	C800 14B2		2032	LHI	R0,T10ILG		PT120320
1450	4000 0036		2033	STH	R0,X'36'		PT120330
1454	2501		2034	LCS	R0,1		PT120340
1456	4000 0030		2035	STH	R0,X'30'		PT120350
145A	4000 0032		2036	STH	R0,X'32'		PT120360
145E	08AA		2037	LHR	R10,R10		PT120370
1460	4230 147A		2038	BNZ	T10K	IF R10 = 1 , TEST ODD ILLG. INSTR.	PT120380
1464	D314 0000		2039	LB	R1,0(R4)	OTHERWISE GET NEXT ILLG. INSTR.	PT120390
1468	0811		2040	LHR	R1,R1		PT120400
146A	2135		2041	BNZS	T10J		PT120410
146C	24A1		2042	LIS	R10,1	R1 = 0	PT120420
146E	C840 14FE		2043	LHI	R4,T100DD		PT120430
1472	2302		2044	BS	T10JJ		PT120440
1474	2641		2045	T10J	AIS	R4,1	PT120450
1476	4300 149C		2046	T10JJ	B	T10L	PT120460
147A	088B		2047	T10K	LHR	R11,R11	PT120470
147C	2338		2048		3ZS	T10KK	PT120480
147E	248J		2049		LIS	R11,0	PT120490
1480	2641		2050		AIS	R4,1	PT120500
1482	C540 1506		2051	CLHI	R4,T10LST+1		PT120510
1486	4330 1506		2052	BE	T10Z		PT120520
148A	246J		2053	LIS	R6,0		PT120530
148C	D314 0000		2054	T10KK	LB	R1,0(R4)	R11 = 0
1490	0A16		2055	AHR	R1,R6		PT120550
1492	2661		2056	AIS	R6,1		PT120560
1494	C560 0010		2057	CLHI	R6,16		PT120570
1498	2132		2058	BNES	T10L		PT120580
149A	24B1		2059	LIS	R11,1		PT120590
			2060	*			PT120600
			2061	*	R1 = ILLEGAL INSTRUCTION		PT120610
			2062	*			PT120620
149C	D210 14A8		2063	T10L	STB	R1,ILLEGL	PT120630
14A0	C200 14A4		2064		LPSW	T10M	PT120640
14A4	7C05		2065	T10M	DC	X'7C05',ILLEGL	PT120650
14A6	14A8						
14A8	0000		2066	ILLEGL	DC	0	ILLEGAL INSTRUCTION
14AA	C800 051A		2067	T10R7	LHI	R0,X'051A'	ERRIND = 051A
14AE	4300 14D0		2068		B	T10R78	ERROR 1A05
			2069	*			PT120690
14B2	4800 0030		2070	T10ILG	LH	R0,X'30'	PT120700
14B6	C500 7C05		2071	M5006	CLHI	R0,X'7C05'	IS LOC-30 = OLD PSW
14BA	2139		2072		BNES	T10R8	PT120720
14BC	C830 14A8		2073		LHI	R3,ILLEGL	PT120730
14C0	4530 0032		2074		CLH	R3,X'32'	IS LOC-32 = ADD. OF ILLEGL
14C4	2134		2075		BNES	T10R8	PT120740
14C6	9533		2076		EPSR	R3,R3	PT120750
14C8	4330 1446		2077		BZ	T10H	PT120760
14CC	C800 061A		2078	T10R8	LHI	R0,X'061A'	ERRIND = 061A
14D0	4000 1F90		2079	T10R78	STH	R0,ERRIND	PT120780
14D4	4300 1E3C		2080		B	ERROR	ERROR 1A05 OR 1A06
			2081	*			PT120810

14D8	0C	2082	T10M16	DB	X'0C'	MHR	PT120820
14D9	0D	2083		DB	X'0D'	DHR	PT120830
14DA	4C	2084		DB	X'4C'	MH	PT120840
14DB	4D	2085		DB	X'4D'	DH	PT120850
14DC	9C	2086		DB	X'9C'	MHUR	PT120860
14DD	DC	2087		DB	X'DC'	MHU	PT120870
		2088	*				PT120880
14DE	28	2089	T10M74	DB	X'28'	LER	PT120890
14DF	29	2090		DB	X'29'	CER	PT120900
14E0	2A	2091		DB	X'2A'	AER	PT120910
14E1	2B	2092		DB	X'2B'	SER	PT120920
14E2	2C	2093		DB	X'2C'	MER	PT120930
14E3	2D	2094		DB	X'2D'	DER	PT120940
14E4	6D	2095		DB	X'6D'	STE	PT120950
14E5	64	2096		DB	X'64'	ATL	PT120960
14E6	65	2097		DB	X'65'	ABL	PT120970
14E7	66	2098		DB	X'66'	RTL	PT120980
14E8	67	2099		DB	X'67'	RBL	PT120990
14E9	68	2100		DB	X'68'	LE	PT121000
14EA	69	2101		DB	X'69'	CE	PT121010
14EB	6A	2102		DB	X'6A'	AE	PT121020
14EC	6B	2103		DB	X'6B'	SE	PT121030
14ED	6C	2104		DB	X'6C'	ME	PT121040
14EE	6D	2105		DB	X'6D'	DE	PT121050
14EF	E5	2106	T10M70	DB	X'E5'		PT121060
14F0	E8	2107		DB	X'E8'		PT121070
14F1	E9	2108		DB	X'E9'		PT121080
14F2	2E	2109	T10M85	DB	X'2E'		PT121090
14F3	2F	2110		DB	X'2F'		PT121100
14F4	62	2111		DB	X'62'		PT121110
14F5	63	2112		DB	X'63'		PT121120
14F6	6E	2113		DB	X'6E'		PT121130
14F7	6F	2114		DB	X'6F'		PT121140
14F8	E0	2115		DB	X'E0'		PT121150
14F9	E3	2116		DB	X'E3'		PT121160
14FA	E4	2117		DB	X'E4'		PT121170
14FB	E6	2118		DB	X'E6'		PT121180
14FC	E7	2119		DB	X'E7'		PT121190
14FD	00	2120		DB	X'00'		PT121200
14FE	10	2121	T100DD	DB	X'10'		PT121210
14FF	30	2122		DB	X'30'		PT121220
1500	50	2123		DB	X'50'		PT121230
1501	70	2124		DB	X'70'		PT121240
1502	80	2125		DB	X'80'		PT121250
1503	A0	2126		DB	X'A0'		PT121260
1504	B0	2127		DB	X'B0'		PT121270
1505	F0	2128	T10LST	DB	X'F0'		PT121280
1506		2129		DB	*		PT121290
		2130	*				PT121300
1506	C800 1E08	2131	T10Z	LHI	RO,EXTINT		PT121310
150A	4000 0046	2132		STH	RO,X'46'	RESTORE EXTINT ERROR ADRS.	PT121320
150E	C800 1E00	2133		LHI	RO,ILGINT		PT121330
1512	4000 0036	2134		STH	RO,X'36'	RESTORE ILGINT ERROR ADRS.	PT121340
1516	2301	2135	T10END	BS	TEST11		PT121350
		2136	*****				PT121360

			2137	*					PT121370
			2138	*	TEST 11 CHECKS THE INSTRUCTIONS				PT121380
			2139	*					PT121390
			2140	*	SLL , SRL , SLA , SRA , RLL , RRL				PT121400
			2141	*					PT121410
1518	C200	151C	2142	TEST11	LPSW T11				PT121420
151C	7C00		2143	T11	DC X'7C00',T11A				PT121430
151E	1520								
1520	C800	1836	2144	T11A	LHI R0,TEST12				PT121440
1524	4000	1F92	2145		STH R0,NXTST				PT121450
1528	C800	011B	2146		LHI R0,X'011B'				PT121460
152C	4000	1F90	2147		STH R0,ERRIND	ERRIND = 011B			PT121470
1530	C800	3142	2148		LHI R0,X'3142'				PT121480
1534	4000	1F58	2149		STH R0,TESTNO				PT121490
			2150	*					PT121500
1538	2440		2151		LIS R4,0	R4 = 0,0,0,0			PT121510
153A	2450		2152		LIS R5,0	R5 = 0,0,0,0			PT121520
	0000	153C	2153	SLL	EGU *				PT121530
153C	ED40	0000	2154		SLL R4,0	ZERO SHIFT			PT121540
1540	213A		2155		BNZS T11R1	COND. CODE = 0 ?			PT121550
	0000	1542	2156	SRL	EGU *				PT121560
1542	EC40	0000	2157		SRL R4,0				PT121570
1546	2137		2158		BNZS T11R1				PT121580
	0000	1548	2159	SLA	EGU *				PT121590
1548	EF40	0000	2160		SLA R4,0				PT121600
154C	2134		2161		BNZS T11R1				PT121610
	0000	154E	2162	SRA	EGU *				PT121620
154E	EE40	0000	2163		SRA R4,0				PT121630
1552	2333		2164		BZS T11B1				PT121640
1554	4300	1E3C	2165	T11R1	B ERROR	ERROR 1801			PT121650
1558	C840	0101	2166	T11B1	LHI R4,X'0101'				PT121660
155C	2450		2167		LIS R5,0				PT121670
155E	ED40	0000	2168		SLL R4,0	CHECK G FLAG FOR SLL			PT121680
1562	2227		2169		BFBS 2,T11R1				PT121690
1564	EC40	0000	2170		SRL R4,0	CHECK G FLAG FOR SRL			PT121700
1568	222A		2171		BFBS 2,T11R1				PT121710
156A	EF40	0000	2172		SLA R4,0	CHECK G FLAG FOR SLA			PT121720
156E	232+		2173		BFFS 2,T11R2A				PT121730
1570	EE40	0000	2174		SRA R4,0	CHECK G FLAG FOR SRA			PT121740
1574	2123		2175		BTFS 2,T11B				PT121750
1576	4300	1E3C	2176	T11R2A	B ERROR				PT121760
157A	C840	D28B	2177	T11B	LHI R4,X'D28B'	R4=1101,0010,1011,1011			PT121770
157E	C850	2D55	2178		LHI R5,X'2D55'	R5=0010,1101,0101,0101			PT121780
1582	ED40	0000	2179		SLL R4,0	ZERO SHIFT			PT121790
1586	2088		2180		BCS T11R2A	CARR = 0 ?			PT121800
1588	2219		2181		BNMS T11R2A				PT121810
158A	EC40	0000	2182		SRL R4,0				PT121820
158E	2180		2183		BCS T11R2				PT121830
1590	231C		2184		BNMS T11R2				PT121840
1592	EF40	0000	2185		SLA R4,0				PT121850
1596	2189		2186		BCS T11R2				PT121860
1598	231A		2187		BNMS T11R2				PT121870
159A	EE40	0000	2188		SRA R4,0				PT121880
159E	2185		2189		BCS T11R2				PT121890
15A0	2314		2190		BNMS T11R2				PT121900

15A2	C540	D2BB	2191		CLHI	R4,X'D2BB'	CHECK FOR SHIFTS OF ZERO ONLY	PT121910
15A6	2333		2192		BES	T11D		PT121920
15A8	4300	1E3C	2193	T11R2	B	ERROR	ERROR 1B01	PT121930
	0000	15AC	2194	T11D	EQU	*		PT121940
15AC	C550	2D55	2195		CLHI	R5,X'2D55'		PT121950
15B0	2034		2196		BNES	T11R2		PT121960
15B2	ED40	0001	2197		SLL	R4,1	SHIFT LEFT 1	PT121970
15B6	2267		2198		BNCS	T11R2		PT121980
15B8	C540	A576	2199		CLHI	R4,X'A576'		PT121990
15BC	203A		2200		BNES	T11R2		PT122000
15BE	C550	5AAA	2201		CLHI	R5,X'5AAA'		PT122010
15C2	213D		2202		BNES	T11R3		PT122020
15C4	ED40	0002	2203		SLL	R4,2	SHIFT LEFT 2	PT122030
15C8	218A		2204		BCS	T11R3		PT122040
15CA	C540	95D9	2205		CLHI	R4,X'95D9'		PT122050
15CE	2137		2206		BNES	T11R3		PT122060
15D0	C550	6AA8	2207		CLHI	R5,X'6AA8'		PT122070
15D4	2134		2208		BNES	T11R3		PT122080
15D6	ED40	0004	2209		SLL	R4,4	SHIFT LEFT 4	PT122090
15DA	2183		2210		BCS	T11E		PT122100
15DC	4300	1E3C	2211	T11R3	B	ERROR	ERROR 1B01	PT122110
15E0	C540	5D96	2212	T11E	CLHI	R4,X'5D96'		PT122120
15E4	2034		2213		BNES	T11R3		PT122130
15E6	C550	AA80	2214		CLHI	R5,X'AA80'		PT122140
15EA	2037		2215		BNES	T11R3		PT122150
15EC	ED40	0008	2216		SLL	R4,8	SHIFT LEFT 8	PT122160
15FC	228A		2217		BNCS	T11R3		PT122170
15F2	C540	96AA	2218		CLHI	R4,X'96AA'		PT122180
15F6	203D		2219		BNES	T11R3		PT122190
15F8	C550	8000	2220		CLHI	R5,X'8000'		PT122200
15FC	213B		2221		BNES	T11R4		PT122210
15FE	C850	67A5	2222		LHI	R5,X'67A5'		PT122220
1602	ED40	0010	2223		SLL	R4,16	SHIFT LEFT 16	PT122230
1606	2186		2224		BCS	T11R4		PT122240
1608	C540	67A5	2225		CLHI	R4,X'67A5'		PT122250
160C	2133		2226		BNES	T11R4		PT122260
160E	0855		2227		LHR	R5,R5		PT122270
1610	2333		2228		BZS	T11F		PT122280
1612	4300	1E3C	2229	T11R4	B	ERROR	ERROR 1B01	PT122290
1616	C800	021B	2230	T11F	LHI	R0,X'21B'		PT122300
161A	4000	1F90	2231		STH	R0,ERRIND	ERRIND = 021B	PT122310
161E	C840	AAB4	2232		LHI	R4,X'AAB4'		PT122320
1622	C850	2D55	2233		LHI	R5,X'2D55'		PT122330
1626	EC40	0001	2234		SRL	R4,1	SHIFT RIGHT 1	PT122340
162A	238A		2235		BNCS	T11R5		PT122350
162C	C540	555A	2236		CLHI	R4,X'555A'		PT122360
1630	2137		2237		BNES	T11R5		PT122370
1632	C550	16AA	2238		CLHI	R5,X'16AA'		PT122380
1636	2134		2239		BNES	T11R5		PT122390
1638	EC40	0002	2240		SRL	R4,2	SHIFT RIGHT 2	PT122400
163C	2183		2241		BCS	T11G		PT122410
163E	4300	1E3C	2242	T11R5	B	ERROR		PT122420
1642	C540	1556	2243	T11G	CLHI	R4,X'1556'		PT122430
1646	2034		2244		BNES	T11R5		PT122440
1648	C550	85AA	2245		CLHI	R5,X'85AA'		PT122450

164C	2037	2246		BNES	T11R5			PT122460
164E	EC40 0004	2247		SRL	R4,4	SHIFT RIGHT	4	PT122470
1652	228A	2248		BNCS	T11R5			PT122480
1654	C540 0155	2249	T11H	CLHI	R4,X'0155'			PT122490
1658	213D	2250		BNES	T11R6			PT122500
165A	C550 685A	2251		CLHI	R5,X'685A'			PT122510
165E	213A	2252		BNES	T11R6			PT122520
1660	EC40 0008	2253		SRL	R4,8	SHIFT RIGHT	8	PT122530
1664	2187	2254		BCS	T11R6			PT122540
1666	C540 0001	2255		CLHI	R4,1			PT122550
166A	2134	2256		BNES	T11R6			PT122560
166C	C550 5568	2257		CLHI	R5,X'5568'			PT122570
1670	2333	2258		BES	T11H2			PT122580
1672	4300 1E3C	2259	T11R6	B	ERROR	ERROR	1B02	PT122590
1676	C840 AA95	2260	T11H2	LHI	R4,X'AA95'			PT122600
167A	EC40 0010	2261		SRL	R4,16	SHIFT RIGHT	16	PT122610
167E	2086	2262		BCS	T11R6			PT122620
1680	C550 AA95	2263		CLHI	R5,X'AA95'			PT122630
1684	2039	2264		BNES	T11R6			PT122640
1686	0844	2265		LHR	R4,R4			PT122650
1688	2038	2266		BNZS	T11R6			PT122660
168A	C800 0318	2267	T11J	LHI	R0,X'318'			PT122670
168E	4000 1F90	2268		STH	R0,ERRIND	ERRIND = 0318		PT122680
1692	C86J 496C	2269		LHI	R6,X'496C'	R6 = 0100,1001,0110,1100		PT122690
1696	C870 85E3	2270		LHI	R7,X'85E3'	R7 = 1011,0101,1110,0011		PT122700
169A	EF60 0001	2271		SLA	R6,1	SHIFT LEFT ARITH.	1	PT122710
169E	238D	2272		BNCS	T11R7			PT122720
16A0	C560 12D9	2273		CLHI	R6,X'12D9'			PT122730
16A4	213A	2274		BNES	T11R7			PT122740
16A6	C570 6BC6	2275		CLHI	R7,X'6BC6'			PT122750
16AA	2137	2276		BNES	T11R7			PT122760
16AC	EF60 0002	2277		SLA	R6,2	SHIFT LEFT ARITH.	2	PT122770
16B0	2184	2278		BCS	T11R7			PT122780
16B2	C560 4B65	2279		CLHI	R6,X'4B65'			PT122790
16B6	2333	2280		BES	T11K			PT122800
16B8	4300 1E3C	2281	T11R7	B	ERROR	ERROR	1B03	PT122810
16BC	C570 AF18	2282	T11K	CLHI	R7,X'AF18'			PT122820
16C0	2034	2283		BNES	T11K7			PT122830
16C2	9161	2284		SLLS	R6,1	R6 = 96CA		PT122840
16C4	EF60 0004	2285		SLA	R6,4	SHIFT LEFT ARITH.	4	PT122850
16C8	2088	2286		BCS	T11R7			PT122860
16CA	C560 ECAA	2287		CLHI	R6,X'ECAA'			PT122870
16CE	2038	2288		BNES	T11R7			PT122880
16D0	C570 F180	2289		CLHI	R7,X'F180'			PT122890
16D4	203E	2290		BNES	T11R7			PT122900
16D6	2488	2291		LIS	R8,8			PT122910
16D8	EF68 0000	2292		SLA	R6,0(R8)			PT122920
16DC	238C	2293		BNCS	T11R8			PT122930
16DE	C560 AAF1	2294		CLHI	R6,X'AAF1'			PT122940
16E2	2139	2295		BNES	T11R8			PT122950
16E4	C570 8000	2296		CLHI	R7,X'8000'			PT122960
16E8	2136	2297		BNES	T11R8			PT122970
16EA	C870 550E	2298		LHI	R7,X'550E'			PT122980
16EE	EF60 0010	2299		SLA	R6,16	SHIFT LEFT ARITH.	16	PT122990
16F2	2383	2300		BNCS	T11K2			PT123000

16F4	4300	1E3C	2301	T11R8	B	ERROR	ERROR 1B03	PT123010
16F8	C560	D50E	2302	T11K2	CLHI	R6,X'D50E'		PT123020
16FC	2034		2303		BNES	T11R8		PT123030
16FE	0877		2304		LHR	R7,R7		PT123040
1700	2036		2305		BNZS	T11R8		PT123050
			2306	*				PT123060
			2307	*	SRA			PT123070
			2308	*				PT123080
1702	C860	4576	2309	T11L	LHI	R6,X'4576'		PT123090
1706	C870	6729	2310		LHI	R7,X'6729'		PT123100
170A	EE60	0001	2311		SRA	R6,1	SHIFT RIGHT ARITH 1	PT123110
170E	2280		2312		BNCS	T11R8		PT123120
1710	222E		2313		BNPS	T11R8		PT123130
1712	C560	22BB	2314		CLHI	R6,X'22BB'		PT123140
1716	213F		2315		BNES	T11R9		PT123150
1718	C570	3394	2316		CLHI	R7,X'3394'		PT123160
171C	213C		2317		BNES	T11R9		PT123170
171E	2482		2318		LIS	R8,2		PT123180
1720	EE68	0000	2319		SRA	R6,0(R8)		PT123190
1724	2188		2320		BCS	T11R9		PT123200
1726	2327		2321		BNPS	T11R9		PT123210
1728	C560	08AE	2322		CLHI	R6,X'08AE'		PT123220
172C	2134		2323		BNES	T11R9		PT123230
172E	C570	CCE5	2324		CLHI	R7,X'CCE5'		PT123240
1732	2333		2325		BES	T11L3		PT123250
1734	4300	1E3C	2326	T11R9	B	ERROR	ERROR 1B03	PT123260
1738	C860	AB0F	2327	T11L3	LHI	R6,X'AB0F'		PT123270
173C	C870	148A	2328		LHI	R7,X'148A'		PT123280
1740	EE60	0004	2329		SRA	R6,4	SHIFT RIGHT ARITH. 4	PT123290
1744	2288		2330		BNCS	T11R9		PT123300
1746	2029		2331		BPS	T11R9		PT123310
1748	C560	FAB0	2332		CLHI	R6,X'FAB0'		PT123320
174C	203C		2333		BNES	T11R9		PT123330
174E	C570	F148	2334		CLHI	R7,X'F148'		PT123340
1752	213B		2335		BNES	T11R95		PT123350
1754	EE60	0008	2336		SRA	R6,8	SHIFT RIGHT ARITH. 8	PT123360
1758	2188		2337		BCS	T11R95		PT123370
175A	2127		2338		BPS	T11R95		PT123380
175C	C560	FFFA	2339		CLHI	R6,X'FFFA'		PT123390
1760	2134		2340		BNES	T11R95		PT123400
1762	C570	B0F1	2341		CLHI	R7,X'B0F1'		PT123410
1766	2333		2342		BES	T11L5		PT123420
1768	4300	1E3C	2343	T11R95	B	ERROR	ERROR 1B03	PT123430
176C	C860	730E	2344	T11L5	LHI	R6,X'730E'		PT123440
1770	EE60	0010	2345		SRA	R6,16	SHIFT RIGHT ARITH. 16	PT123450
1774	2286		2346		BNCS	T11R95		PT123460
1776	2227		2347		BNPS	T11R95		PT123470
1778	C570	730E	2348		CLHI	R7,X'730E'		PT123480
177C	203A		2349		BNES	T11R95		PT123490
177E	0866		2350		LHR	R6,R6		PT123500
1780	203C		2351		BNZS	T11R95		PT123510
1782	C800	041B	2352	T11P	LHI	R0,X'41B'		PT123520
1786	4000	1F90	2353		STH	R0,ERRIND	ERRIND = 041B	PT123530
178A	C840	8F70	2354		LHI	R4,X'8F70'		PT123540
178E	0864		2355		LHR	R6,R4	R4 = R6 = 8F70	PT123550

1790	C850 E6A0	2356		LHI	R5,X'E6A0'		PT123560
1794	0875	2357		LHR	R7,R5	R5 = R7 = E680	PT123570
	0000 1796	2358	RLL	EQU	*		PT123580
1796	EB60 0000	2359		RLL	R6,0		PT123590
179A	212E	2360		BPS	T11RA	RESULT IS -VE	PT123600
	0000 179C	2361	RRL	EQU	*		PT123610
179C	EA60 0000	2362		RRL	R6,0		PT123620
17A0	212B	2363		BPS	T11RA		PT123630
17A2	0546	2364		CLHR	R4,R6		PT123640
17A4	2139	2365		BNES	T11RA		PT123650
17A6	0557	2366		CLHR	R5,R7		PT123660
17A8	2137	2367		BNES	T11RA		PT123670
17AA	EB60 0001	2368		RLL	R6,1	ROTATE LEFT 1	PT123680
17AE	2324	2369		BNPS	T11RA		PT123690
17B0	C560 1EE1	2370		CLHI	R6,X'1EE1'		PT123700
17B4	2333	2371		BES	T11P2		PT123710
17B6	4300 1E3C	2372	T11RA	B	ERROR	ERROR 1804	PT123720
17BA	C570 CD41	2373	T11P2	CLHI	R7,X'CD41'		PT123730
17BE	2034	2374		BNES	T11RA		PT123740
17C0	EA60 0001	2375		RRL	R6,1	ROTATE RIGHT 1	PT123750
17C4	2027	2376		BPS	T11RA		PT123760
17C6	0546	2377		CLHR	R4,R6		PT123770
17C8	2039	2378		BNES	T11RA		PT123780
17CA	0557	2379		CLHR	R5,R7		PT123790
17CC	203B	2380		BNES	T11RA		PT123800
17CE	EB60 0002	2381		RLL	R6,2	ROTATE LEFT 2	PT123810
17D2	232E	2382		BNPS	T11RB		PT123820
17D4	C560 3DC3	2383		CLHI	R6,X'3DC3'		PT123830
17D8	213B	2384		BNES	T11RB		PT123840
17DA	C570 9A82	2385		CLHI	R7,X'9A82'		PT123850
17DE	2138	2386		BNES	T11RB		PT123860
17E0	EA60 0002	2387		RRL	R6,2	ROTATE RIGHT 2	PT123870
17E4	2125	2388		BPS	T11RB		PT123880
17E6	0546	2389		CLHR	R4,R6		PT123890
17E8	2133	2390		BNES	T11RB		PT123900
17EA	0557	2391		CLHR	R5,R7		PT123910
17EC	2333	2392		BES	T11P4		PT123920
17EE	4300 1E3C	2393	T11RB	B	ERROR	ERROR 1804	PT123930
17F2	EB60 0004	2394	T11P4	RLL	R6,4	ROTATE LEFT 4	PT123940
17F6	2024	2395		BPS	T11RB		PT123950
17F8	EB60 0008	2396		RLL	R6,8	ROTATE LEFT 8	PT123960
17FC	2227	2397		BNPS	T11RB		PT123970
17FE	EA60 0004	2398		RRL	R6,4	ROTATE RIGHT 4	PT123980
1802	222A	2399		BNPS	T11RB		PT123990
1804	EA60 0008	2400		RRL	R6,8	ROTATE RIGHT 8	PT124000
1808	202D	2401		BPS	T11RB		PT124010
180A	0546	2402		CLHR	R4,R6		PT124020
180C	213E	2403		BNES	T11RC		PT124030
180E	0557	2404		CLHR	R5,R7		PT124040
1810	213C	2405		BNES	T11RC		PT124050
1812	EB60 0010	2406		RLL	R6,16	ROTATE LEFT 16	PT124060
1816	2129	2407		BPS	T11RC		PT124070
1818	2188	2408		BCS	T11RC		PT124080
181A	0547	2409		CLHR	R4,R7		PT124090
181C	2136	2410		BNES	T11RC		PT124100

181E	0556	2411	CLHR	R5,R6		PT124110
1820	2134	2412	BNES	T11RC		PT124120
1822	EA60 0010	2413	RRL	R6,16	ROTATE RIGHT 16	PT124130
1826	2323	2414	BNPS	T11P8		PT124140
1828	4300 1E3C	2415	T11RC	B	ERROR 1804	PT124150
182C	0546	2416	T11P8	CLHR	R4,R6	PT124160
182E	2033	2417	BNES	T11RC		PT124170
1830	0557	2418	CLHR	R5,R7		PT124180
1832	2035	2419	BNES	T11RC		PT124190
		2420	*			PT124200
1834	2301	2421	T11END	BS	TEST12	PT124210
		2422	*****			PT124220
		2423	*			PT124230
		2424	*	TEST12 CHECKS THE INSTRUCTIONS		PT124240
		2425	*			PT124250
		2426	*	MH , MHR , MHU , MHUR		PT124260
		2427	*			PT124270
		2428	*	DH , DHR		PT124280
		2429	*			PT124290
		2430	*	TEST12 TESTS THE MULTIPLY AND DIVIDE INSTRUCTIONS		PT124300
		2431	*			PT124310
	0000 000D	2432	POINT	EQU	13	PT124320
		2433	*			PT124330
1836	C800 02B8	2434	TEST12	LHI	R0,TEST1	PT124340
183A	4000 1F92	2435		STH	R0,NXTST	PT124350
183E	C800 011C	2436		LHI	R0,X'011C'	PT124360
1842	4000 1F90	2437		STH	R0,ERRIND	PT124370
1846	C800 3143	2438		LHI	R0,C'1C'	PT124380
184A	4000 1F58	2439		STH	R0,TESTNO	PT124390
184E	D300 1F80	2440		LB	R0,CPUNO	PT124400
1852	C500 0031	2441		CLHI	R0,C'1'	PT124410
1856	4330 1BAA	2442		BE	TEST13	PT124420
		2443	*			PT124430
185A	24F1	2444	LIS	TOT,1	SET ERROR NUMBER=1	PT124440
185C	C800 1A80	2445	MCHK2	LHI	POINT,MUD1	PT124450
1860	2478	2446		LIS	R7,8	PT124460
1862	4830 0000	2447	MLOOP1	LH	R3,0(POINT)	PT124470
1866	4840 0002	2448		LH	R4,2(POINT)	PT124480
186A	4850 1F94	2449		LH	R5,ZERO	PT124490
186E	4860 1F94	2450		LH	R6,ZERO	PT124500
1872	0B53	2451		SHR	R5,R3	PT124510
1874	0B64	2452		SHR	R6,R4	PT124520
1876	4880 0004	2453		LH	R8,4(POINT)	PT124530
187A	4890 0006	2454		LH	R9,6(POINT)	PT124540
187E	0813	2455		LHR	R1,R3	PT124550
1880	95CC	2456		EPSR	R12,R12	PT124560
	0000 1882	2457	MH	EQU	*	PT124570
1882	4C00 0002	2458		MH	R0,2(POINT)	PT124580
1886	41A0 19C6	2459		BAL	R10,TESTC4	PT124590
188A	24F2	2460		LIS	TOT,2	PT124600
188C	0814	2461		LHR	R1,R4	PT124610
188L	95CC	2462		EPSR	R12,R12	PT124620
1890	4C00 0000	2463		MH	R0,0(POINT)	PT124630
1894	41A0 19C6	2464		BAL	R10,TESTC4	PT124640
189C	24F3	2465		LIS	TOT,3	PT124650

189A	0722		2466	XHR	R2,R2		PT124660
189C	4020	1BA2	2467	STH	R2,SFLAG	RESET SFLAG	PT124670
18A0	C550	8000	2468	CLHI	R5,X'8000'		PT124680
18A4	4230	18B8	2469	BNE	SCONT1		PT124690
18A8	C560	8000	2470	CLHI	R6,X'8000'		PT124700
18AC	4330	18B8	2471	BE	SCONT1		PT124710
18B0	C820	7777	2472	LHI	R2,X'7777'		PT124720
18B4	4020	1BA2	2473	STH	R2,SFLAG	SET SFLAG	PT124730
18B8	0815		2474	LHR	R1,R5	-A	PT124740
18BA	95CC		2475	EPSR	R12,R12	SAVE CC	PT124750
18BC	0C06		2476	MHR	R0,R6	-A*(-B)	PT124760
18BE	41A0	1A56	2477	BAL	R10,SCHECK		PT124770
18C2	41A0	19C6	2478	BAL	R10,TESTC4		PT124780
18C6	24F4		2479	LIS	TOT,4	SET ERROR NUMBER=4	PT124790
18C8	0816		2480	LHR	R1,R6		PT124800
18CA	95CC		2481	EPSR	R12,R12		PT124810
18CC	0C05		2482	MHR	R0,R5	-B*(-A)	PT124820
18CE	41A0	1A56	2483	BAL	R10,SCHECK		PT124830
18D2	41A0	19C6	2484	BAL	R10,TESTC4		PT124840
18D6	24F5		2485	LIS	TOT,5	SET ERROR NUMBER=5	PT124850
18D8	0788		2486	XHR	R8,R8		PT124860
18DA	0799		2487	XHR	R9,R9		PT124870
18DC	4B9D	0006	2488	SH	R9,6(POINT)	DOUBLE LENGTH	PT124880
18E0	4F8D	0004	2489	SCH	R8,4(POINT)	EXPECTED -(A*B)	PT124890
18E4	0722		2490	XHR	R2,R2		PT124900
18E6	4020	1BA2	2491	STH	R2,SFLAG	RESET SFLAG	PT124910
18EA	C560	8000	2492	CLHI	R6,X'8000'		PT124920
18EE	4230	18FA	2493	BNE	SCONT2		PT124930
18F2	C820	7777	2494	LHI	R2,X'7777'		PT124940
18F6	4020	1BA2	2495	STH	R2,SFLAG	SET SFLAG	PT124950
18FA	0813		2496	LHR	R1,R3		PT124960
18FC	95CC		2497	EPSR	R12,R12		PT124970
18FE	0C06		2498	MHR	R0,R6	A*(-B)	PT124980
1900	41A0	1A56	2499	BAL	R10,SCHECK		PT124990
1904	41A0	19C6	2500	BAL	R10,TESTC4		PT125000
1908	24F6		2501	LIS	TOT,6	SET ERROR NUMBER=6	PT125010
190A	0816		2502	LHR	R1,R6	-B	PT125020
190C	95CC		2503	EPSR	R12,R12		PT125030
190E	4C0D	0000	2504	MH	R0,0(POINT)	(-B)*A	PT125040
1912	41A0	1A56	2505	BAL	R10,SCHECK		PT125050
1916	41A0	19C6	2506	BAL	R10,TESTC4		PT125060
191A	24F7		2507	LIS	TOT,7	SET ERROR NUMBER=7	PT125070
191C	0722		2508	XHR	R2,R2		PT125080
191E	4020	1BA2	2509	STH	R2,SFLAG	RESET SFLAG	PT125090
1922	C550	8000	2510	CLHI	R5,X'8000'		PT125100
1926	4230	1932	2511	BNE	SCONT3		PT125110
192A	C820	7777	2512	LHI	R2,X'7777'		PT125120
192E	4020	1BA2	2513	STH	R2,SFLAG	SET SFLAG	PT125130
1932	0814		2514	LHR	R1,R4	B	PT125140
1934	95CC		2515	EPSR	R12,R12		PT125150
	0000	1936	2516	MHR	*		PT125160
1936	0C05		2517	MHR	R0,R5	B*(-A)	PT125170
1938	41A0	1A56	2518	BAL	R10,SCHECK		PT125180
193C	41A0	19C6	2519	BAL	R10,TESTC4		PT125190
1940	24F8		2520	LIS	TOT,8	SET ERROR NUMBER=8	PT125200

1942	0815	2521	LHR	R1,R5	-A	PT125210
1944	95CC	2522	EPSR	R12,R12		PT125220
1946	4C0D 0002	2523	MH	R0,2(POINT)	(-A)*B	PT125230
194A	41A0 1A56	2524	BAL	R10,SCHECK		PT125240
194E	41A0 19C6	2525	BAL	R10,TESTC4		PT125250
1952	24F9	2526	LIS	TOT,9	SET ERROR NUMBER=9	PT125260
1954	488D 0008	2527	LH	R8,8(POINT)	EXPECTED DOUBLE LENGTH VALUE	PT125270
1958	489D 000A	2528	LH	R9,10(POINT)	OF UNSIGNED PRODUCT OF A AND B	PT125280
195C	0813	2529	LHR	R1,R3	A	PT125290
195E	95CC	2530	EPSR	R12,R12		PT125300
	0000 1960	2531	MHU	EQU *		PT125310
1960	DC0D 0002	2532	MHU	R0,2(POINT)	A*B UNSIGNED	PT125320
1964	41A0 19C6	2533	BAL	R10,TESTC4		PT125330
1968	24FA	2534	LIS	TOT,10	SET ERROR NUMBER=X*A'	PT125340
196A	0814	2535	LHR	R1,R4	B	PT125350
196C	95CC	2536	EPSR	R12,R12		PT125360
	0000 196E	2537	MHUR	EQU *		PT125370
196E	9C03	2538	MHUR	R0,R3	B*A UNSIGNED	PT125380
1970	41A0 19C6	2539	BAL	R10,TESTC4		PT125390
1974	24FB	2540	LIS	TOT,11	SET ERROR NUMBER=X*B'	PT125400
1976	26DC	2541	AIS	POINT,12		PT125410
1978	2771	2542	SIS	R7,1		PT125420
197A	423D 1862	2543	BNZ	MLOOP1		PT125430
		2544	*			PT125440
	0000 0007	2545	POINTR	EQU 7		PT125450
		2546	*			PT125460
197E	0722	2547	DVDCHK	XHR R2,R2		PT125470
1980	402D 004C	2548	STH	R2,X*4C'		PT125480
1984	C83D 1A42	2549	LHI	R3,DFAULT		PT125490
1988	403D 004E	2550	STH	R3,X*4E'		PT125500
198C	C82D 1000	2551	LHI	R2,X*1000'	ENABLE DIVIDE FAULT INTERRUPT	PT125510
1990	9532	2552	EPSR	R3,R2		PT125520
1992	C87D 1AE0	2553	LHI	POINTR,DIVD2		PT125530
1996	242F	2554	LIS	R2,15		PT125540
1998	D1A7 0000	2555	DLOOP2	LM R10,0(POINTR)		PT125550
199C	243C	2556	LIS	R3,12	SET ERROR NUMBER=X*C'	PT125560
199E	080A	2557	LHR	R0,R10	DOUBLE LENGTH	PT125570
19A0	081B	2558	LHR	R1,R11	DIVIDEND	PT125580
19A2	9588	2559	EPSR	R8,R8	SAVE PSW	PT125590
	0000 19A4	2560	DHR	EQU *		PT125600
19A4	0D0C	2561	DHR	R0,R12	DIVIDEND/DIVISOR	PT125610
19A6	419D 19DC	2562	BAL	R9,TESTC5		PT125620
19AA	243D	2563	LIS	R3,13	SET ERROR NUMBER=X*D'	PT125630
19AC	080A	2564	LHR	R0,R10	DOUBLE LENGTH	PT125640
19AE	081B	2565	LHR	R1,R11	DIVIDEND	PT125650
19B0	9588	2566	EPSR	R8,R8	SAVE PSW	PT125660
	0000 19B2	2567	DH	EQU *		PT125670
19B2	4D07 0004	2568	DH	R0,4(POINTR)	DIVIDEND/DIVISOR	PT125680
19B6	419D 19DC	2569	BAL	R9,TESTC5		PT125690
19BA	267C	2570	AIS	POINTR,12	INCREMENT POINTER BY 12	PT125700
19BC	2721	2571	SIS	R2,1	DECREMENT COUNT	PT125710
19BE	431D 1998	2572	BWR	DLOOP2		PT125720
19C2	430D 18AA	2573	T12END	S TEST13		PT125730
		2574	*	SUBROUTINES OF T12		PT125740
19C6	95EE	2575	TESTC4	EPSR R14,R14	GET PSW	PT125750

19C8	05CE		2576	CLHR	R12,R14		PT125760	
19CA	4230	1A00	2577	BNE	ERR21		PT125770	
19CE	0580		2578	CLHR	R8,R0		PT125780	
19D0	4230	1A00	2579	BNE	ERR21		PT125790	
19D4	0591		2580	CLHR	R9,R1		PT125800	
19D6	4230	1A00	2581	BNE	ERR21		PT125810	
19DA	030A		2582	BR	R10		PT125820	
19DC	9566		2583	TESTC5	EPSR	R6,R6	GET PSW	PT125830
19DE	0568		2584	CLHR	R6,R8		PT125840	
19E0	4230	1A1A	2585	BNE	ERROR1		PT125850	
19E4	050D		2586	CLHR	R0,R13		PT125860	
19E6	4230	1A1A	2587	BNE	ERROR1		PT125870	
19EA	051E		2588	CLHR	R1,R14		PT125880	
19EC	4230	1A1A	2589	BNE	ERROR1		PT125890	
19F0	45F0	1BA0	2590	CLH	R15,IDFLAG		PT125900	
19F4	4230	1A1A	2591	BNE	ERROR1		PT125910	
19F8	0766		2592	XHR	R6,R6		PT125920	
19FA	4060	1BA0	2593	STH	R6,IDFLAG		PT125930	
19FE	0309		2594	BR	R9		PT125940	
1A00	08DE		2595	ERR21	LHR	R13,R14	PSW AFTER MULTIPLICATION	PT125950
1A02	08EC		2596		LHR	R14,R12	PSW BEFORE MULTIPLICATION	PT125960
1A04	08B8		2597		LHR	R11,R8	CALCULATED	PT125970
1A06	08C9		2598		LHR	R12,R9	RESULT	PT125980
1A08	0890		2599		LHR	R9,R0	EXPECTED	PT125990
1A0A	08A1		2600		LHR	R10,R1	RESULT	PT126000
1A0C	0875		2601		LHR	R7,R5	NEGATIVE OF THE FIRST OPERAND	PT126010
1A0E	0886		2602		LHR	R8,R6	NEGATIVE OF THE SECOND OPERAND	PT126020
1A10	0853		2603		LHR	R5,R3	THE FIRST OPERAND	PT126030
1A12	0864		2604		LHR	R6,R4	THE SECOND OPERAND	PT126040
1A14	244A		2605		LIS	R4,10	TEN VALUES ARE TO BE PRINTED	PT126050
1A16	083F		2606		LHR	R3,TOT		PT126060
1A18	230D		2607		BS	ERR2		PT126070
1A1A	244B		2608	ERROR1	LIS	R4,11	ELEVEN HALF WORDS ARE TO BE PRINTED	PT126080
1A1C	085A		2609		LHR	R5,R10	MSB OF THE DIVIDEND	PT126090
1A1E	087C		2610		LHR	R7,R12	DIVISOR	PT126100
1A20	0891		2611		LHR	R9,R1	ACTUAL VALUE OF QUOTIENT	PT126110
1A22	08AD		2612		LHR	R10,R13	EXPECTED VALUE OF REMAINDER	PT126120
1A24	08C6		2613		LHR	R12,R6	PSW AFTER DIVISION	PT126130
1A26	08D8		2614		LHR	R13,R8	PSW BEFORE DIVISION	PT126140
1A28	0880		2615		LHR	R8,R0	ACTUAL VALUE OF THE REMAINDER	PT126150
1A2A	086B		2616		LHR	R6,R11	LSB OF THE DIVIDEND	PT126160
1A2C	08BE		2617		LHR	R11,R14	EXPECTED QUOTIENT VALUE	PT126170
1A2E	48E0	1BA0	2618		LH	R14,IDFLAG	ACTUAL DIVIDE FAULT FLAG	PT126180
1A32	C800	001C	2619	ERR2	LHI	R0,X'001C'		PT126190
1A36	9138		2620		SLLS	R3,8		PT126200
1A38	0603		2621		OHR	R0,R3		PT126210
1A3A	4000	1F90	2622		STH	R0,ERRIND		PT126220
1A3E	4300	1E3C	2623		B	ERROR		PT126230
1A42	4060	1BA4	2624	DFAULT	STH	R6,TEMPF		PT126240
1A46	C860	7777	2625		LHI	R6,X'7777'		PT126250
1A4A	4060	1BA0	2626		STH	R6,IDFLAG	SET DIVIDE FAULT INT. FLAG	PT126260
1A4E	4860	1BA4	2627		LH	R6,TEMPF	RESTORE R6	PT126270
1A52	C200	0048	2628		LPSW	X'48'	LOAD NEW PSW & LOC FROM '48'	PT126280
1A56	9522		2629	SCHECK	EPSR	R2,R2	SAVE PSW	PT126290
1A58	48E0	1BA2	2630		LH	R14,SFLAG	EXAMINE SFLAG	PT126300

1A5C	2338	2631	BZS	NCHANG	IF RESET, DO NOT MODIFY	PT126310
1A5E	C700 FFFF	2632	XHI	R0,X'FFFF'	COMPLEMENT	PT126320
1A62	C710 FFFF	2633	XHI	R1,X'FFFF'	THE RESULT	PT126330
1A66	2611	2634	AIS	R1,1		PT126340
1A68	4E00 1F94	2635	ACH	R0,ZERO		PT126350
1A6C	95E2	2636	NCHANG	EPSR R14,R2	RESTORE PSW	PT126360
1A6E	030A	2637		BR R10		PT126370
		2638	*	DATA OF TEST12		PT126380
1A70	0000	2639	MUD2	DC 0,1,X'FFFF'		PT126390
1A72	0001					
1A74	FFFF					
1A76	7FFF	2640	DC	X'7FFF',X'8001'		PT126400
1A78	8001					
1A7A	8000	2641	DC	X'8000',X'7777'		PT126410
1A7C	7777					
1A7E	79DE	2642	DC	X'79DE'		PT126420
1A80	0000	2643	MUD1	DC 0	A	PT126430
1A82	0000	2644		DC 0	B	PT126440
1A84	0000	2645		DC 0,0	A*B	PT126450
1A86	0000					
1A88	0000	2646	DC	0,0	A*B UNSIGNED	PT126460
1A8A	0000					
1A8C	0000	2647	DC	0	A	PT126470
1A8E	FFFF	2648	DC	X'FFFF'	B	PT126480
1A90	0000	2649	DC	0,0	A*B	PT126490
1A92	0000					
1A94	0000	2650	DC	0,0	A*B UNSIGNED	PT126500
1A96	0000					
1A98	7FFF	2651	DC	X'7FFF',0		PT126510
1A9A	0000					
1A9C	0000	2652	DC	0,0		PT126520
1A9E	0000					
1AA0	0000	2653	DC	0,0		PT126530
1AA2	0000					
1AA4	1111	2654	DC	X'1111'	A	PT126540
1AA6	1111	2655	DC	X'1111'	B	PT126550
1AA8	0123	2656	DC	X'0123',X'4321'	A*B	PT126560
1AAA	4321					
1AAC	0123	2657	DC	X'0123',X'4321'	A*B UNSIGNED	PT126570
1AAE	4321					
1AB0	1111	2658	DC	X'1111'	A	PT126580
1AB2	FFFF	2659	DC	X'FFFF'	B	PT126590
1AB4	FFFF	2660	DC	X'FFFF',X'EEEE'	A*B	PT126600
1AB6	EEEE					
1AB8	1110	2661	DC	X'1110',X'EEEE'	A*B UNSIGNED	PT126610
1ABA	EEEE					
1ABC	FFFF	2662	DC	X'FFFF'	A	PT126620
1ABE	FFFF	2663	DC	X'FFFF'	B	PT126630
1AC0	0000	2664	DC	0,1	A*B	PT126640
1AC2	0001					
1AC4	FFFE	2665	DC	X'FFFE',X'0001'	A*B UNSIGNED	PT126650
1AC6	0001					
1AC8	8000	2666	DC	X'8000',X'FFFF'		PT126660
1ACA	FFFF					
1ACC	0000	2667	DC	0,X'8000'		PT126670

1ACE	8000					
1AD0	7FFF	2668	DC	X'7FFF',X'8000'	PT126680	
1AD2	8000					
1AD4	8000	2669	DC	X'8000',X'8000'	PT126690	
1AD6	8000					
1AD8	4000	2670	DC	X'4000',0	PT126700	
1ADA	0000					
1ADC	4000	2671	DC	X'4000',0	PT126710	
1AD E	000J					
1AE0	0000	2672	DIVD2	DC	0,0,0	PT126720
1AE2	0000					
1AE4	0000					
1AE6	0000	2673	DC	0,0,X'7777'	PT126730	
1AEB	0000					
1AEA	7777					
1AEC	0000	2674	DC	0,1,0	PT126740	
1AEE	0001					
1AF0	0000					
1AF2	0000	2675	DC	0,1,X'7777'	PT126750	
1AF4	0001					
1AF6	7777					
1AF8	FFFF	2676	DC	X'FFFF',X'FFFF'	PT126760	
1AFA	FFFF					
1AFC	0000	2677	DC	0,X'FFFF',X'FFFF'	PT126770	
1AFE	FFFF					
1B00	FFFF					
1B02	7777	2678	DC	X'7777'	PT126780	
1B04	0000	2679	DC	0,0,X'7FFF'	PT126790	
1B06	0000					
1B08	7FFF					
1B0A	0000	2680	DC	0,0,0	PT126800	
1B0C	0000					
1B0E	0000					
1B10	0000	2681	DC	0,0,X'FFFF'	PT126810	
1B12	0000					
1B14	FFFF					
1B16	0000	2682	DC	0,0,0	PT126820	
1B18	0000					
1B1A	0000					
1B1C	0000	2683	DC	0,0,X'8000'	PT126830	
1B1E	0000					
1B20	8000					
1B22	0000	2684	DC	0,0,0	PT126840	
1B24	0000					
1B26	0000					
1B28	3FFF	2685	DC	X'3FFF',X'8000'	PT126850	
1B2A	8000					
1B2C	7FFF	2686	DC	X'7FFF',X'3FFF'	PT126860	
1B2E	3FFF					
1B30	8000	2687	DC	X'8000',X'7777'	PT126870	
1B32	7777					
1B34	C000	2688	DC	X'C000',X'8000'	PT126880	
1B36	8000					
1B38	8001	2689	DC	X'8001',X'C000'	PT126890	
1B3A	C000					

1B3C	8000	2690	DC	X'8000',X'7777'	PT126900	
1B3E	7777					
1B40	3FFF	2691	DC	X'3FFF',X'7FFF'	PT126910	
1B42	7FFF					
1B44	7FFF	2692	DC	X'7FFF',X'7FFE'	PT126920	
1B46	7FFE					
1B48	7FFF	2693	DC	X'7FFF',0	PT126930	
1B4A	0000					
1B4C	C000	2694	DC	X'C000',X'8001'	PT126940	
1B4E	8001					
1B50	8001	2695	DC	X'8001',X'8002'	PT126950	
1B52	8002					
1B54	7FFF	2696	DC	X'7FFF',0	PT126960	
1B56	0000					
1B58	3FFF	2697	DC	X'3FFF',X'FFFE'	PT126970	
1B5A	FFFE					
1B5C	8001	2698	DC	X'8001',X'7FFE'	PT126980	
1B5E	7FFE					
1B60	8000	2699	DC	X'8000',0	PT126990	
1B62	0000					
1B64	C000	2700	DC	X'C000',X'0002'	PT127000	
1B66	0002					
1B68	7FFF	2701	DC	X'7FFF',X'8002'	PT127010	
1B6A	8002					
1B6C	8000	2702	DC	X'8000',0	PT127020	
1B6E	0000					
1B70	3FFF	2703	DC	X'3FFF',X'FFFF'	PT127030	
1B72	FFFF					
1B74	8001	2704	DC	X'8001',X'3FFF'	PT127040	
1B76	3FFF					
1B78	FFFF	2705	DC	X'FFFF',X'7777'	PT127050	
1B7A	7777					
1B7C	C000	2706	DC	X'C000',X'0001'	PT127060	
1B7E	0001					
1B80	7FFF	2707	DC	X'7FFF',X'C000'	PT127070	
1B82	C000					
1B84	0001	2708	DC	X'0001',X'7777'	PT127080	
1B86	7777					
1B88	0000	2709	DC	0,1,X'FFFF'	PT127090	
1B8A	0001					
1B8C	FFFF					
1B8E	0000	2710	DC	0,X'FFFF',0	PT127100	
1B90	FFFF					
1B92	0000					
1B94	FFFF	2711	DC	X'FFFF',X'FFFC'	PT127110	
1B96	FFFC					
1B98	0002	2712	DC	X'0002',0	PT127120	
1B9A	0000					
1B9C	FFFE	2713	DC	X'FFFE',0	PT127130	
1B9E	0000					
1BA0	0000	2714	IDFLAG	DC	0	PT127140
1BA2	0000	2715	SFLAG	DC	0	PT127150
1BA4		2716	TEMPF	DS	2	PT127160
1BA6	0000	2717	NUMBER	DC	0,X'7FFF'	PT127170
1BA8	7FFF					

		2718	*			PT127180
		2719	*	*****		PT127190
		2720	*			PT127200
		2721	*	TEST13		PT127210
		2722	*			PT127220
		2723	*	THIS TEST CHECKS THE PRIVELEGED INSTRUCTIONS		PT127230
		2724	*			PT127240
		2725	*			PT127250
1BAA	C600 02B6	2726	TEST13	LHI	R0,TEST1	PT127260
1BAE	4000 1F92	2727		STH	R0,WTST	PT127270
1BB2	C600 3144	2728		LHI	R0,C'1D'	PT127280
1BB6	4000 1F58	2729		STH	R0,TESTNO	PT127290
1BBA	C800 0110	2730		LHI	R0,X'011D'	PT127300
1BBE	4000 1F90	2731		STH	R0,ERRIND	PT127310
1BC2	4800 1F80	2732		LH	R0,CPUNO	PT127320
1BC6	C500 3734	2733		CLHI	R0,C'74'	PT127330
1BCA	2333	2734		BES	ENTET	PT127340
1BCC	C500 3144	2735		CLHI	R0,C'1D'	PT127350
1BD0	2338	2736		BES	ENTET	PT127360
1BD2	C500 3136	2737		CLHI	R0,C'16'	PT127370
1BD6	2335	2738		BES	ENTET	PT127380
1BD8	C500 3744	2739		CLHI	R0,C'7D'	PT127390
1BDC	2332	2740		BES	ENTET	PT127400
1BDE	2303	2741		BS	NOEXT	PT127410
1BE0	4300 1CA6	2742	ENTET	B	TSTEND	PT127420
1BE4	2410	2743	NOEXT	LIS	R1,0	PT127430
1BE6	C840 1C90	2744		LHI	R4,T13BYT	PT127440
	0000 1BEA	2745	T13	EQU	*	PT127450
1BEA	D364 0000	2746	T13D	LB	R6,0(R4)	PT127460
1BEE	D260 1C10	2747		STR	R6,T13PRV	PT127470
1BF2	2400	2748		LIS	R0,0	PT127480
1BF4	4000 0030	2749		STH	R0,X'30'	PT127490
1BF8	4000 0032	2750		STH	R0,X'32'	PT127500
1BFC	4000 0034	2751		STH	R0,X'34'	PT127510
1C00	C830 1C16	2752		LHI	R3,T13INT	PT127520
1C04	4030 0036	2753		STH	R3,X'36'	PT127530
1C08	C200 1C0C	2754		LPSW	T13A	PT127540
1C0C	0100	2755	T13A	DC	X'100',T13B	PT127550
1C0E	1C10					
	0000 1C10	2756	T13B	EQU	*	PT127560
1C10	0000	2757	T13PRV	DC	0	PT127570
1C12	4300 1E3C	2758	T13R1	B	ERROR	PT127580
1C16	0811	2759	T13INT	LHR	R1,R1	PT127590
1C18	4230 1C72	2760		BNZ	T13R3	PT127600
1C1C	C830 0100	2761		LHI	R3,X'100'	PT127610
1C20	4530 0030	2762		CLH	R3,X'30'	PT127620
1C24	2138	2763		BNES	T13R2	PT127630
1C26	C830 1C10	2764		LHI	R3,T13PRV	PT127640
1C2A	4530 0032	2765		CLH	R3,X'32'	PT127650
1C2E	2133	2766		BNES	T13R2	PT127660
1C30	9533	2767		EPSR	R3,R3	PT127670
1C32	2337	2768		BZS	T13F	PT127680
1C34	C800 021D	2769	T13R2	LHI	R0,X'021D'	PT127690
1C38	4000 1F90	2770		STH	R0,ERRIND	PT127700
1C3C	4300 1E3C	2771		B	ERROR	PT127710

R1 = 0

R6 = PRIV. INSTR.

ILLEGAL INSTRUCTION
OLD PSW

ILLEGAL INSTRUCTION

IF R1=0,PRIV.INSTR.INTRPT.
IF R1=1,SVC
OLD PSW
IS OLD PSW = 100 ?
IF NOT , ERROR
OLD PSW LOCATION

		2772	*				PT127720
		2773	*	PRIV. INST. DETECTED AND PSW SWAP OK			PT127730
		2774	*				PT127740
1C40	2641	2775	T13F	AIS R4,1	R4=ADD. OF NEXT PRIV. INSTR.		PT127750
1C42	C540 1CA6	2776		CLHI R4,T13LST+1			PT127760
1C46	4230 1BEA	2777		BNE T13			PT127770
		2778	*				PT127780
		2779	*	ALL PRIVILEGED INSTRUCTIONS TESTED			PT127790
		2780	*				PT127800
1C4A	C800 1E00	2781		LHI R0,ILGINT			PT127810
1C4E	4000 0036	2782		STH R0,X'36'	RESTORE ILGINT ADR. AT ?		PT127820
1C52	2411	2783		LIS R1,1	R1 = 1		PT127830
1C54	C830 1C7E	2784	T13HB	LHI R3,T13SVC			PT127840
1C58	4030 009C	2785		STH R3,X'9C'			PT127850
1C5C	2400	2786		LIS R0,0			PT127860
1C5E	4000 0096	2787		STH R0,X'96'	OLD PSW SVC		PT127870
1C62	4000 009A	2788		STH R0,X'9A'	NEW PSW SVC 0		PT127880
1C66	C200 1C6A	2789		LPSW T13HC			PT127890
1C6A	0100	2790	T13HC	DC X'100',T13K			PT127900
1C6C	1C6E						
1C6E	E100 0004	2791	T13K	SVC 0,R4			PT127910
1C72	C600 031D	2792	T13R3	LHI R0,X'031D'			PT127920
1C76	4000 1F90	2793		STH R0,ERRIND			PT127930
1C7A	4300 1E3C	2794		B ERROR			PT127940
1C7E	C830 0100	2795	T13SVC	LHI R3,X'100'			PT127950
1C82	4530 0096	2796		CLH R3,X'96'			PT127960
1C86	203A	2797		BNES T13R3			PT127970
1C88	9533	2798		EPSR R3,R3			PT127980
1C8A	203C	2799		BNZS T13R3			PT127990
1C8C	4300 1CA6	2800	T13END	B TSTEND			PT128000
1C90	95	2801	T13BYT	DB X'95'	EPSR		PT128010
1C91	96	2802		DB X'96'	WBR		PT128020
1C92	97	2803		DB X'97'	RBR		PT128030
1C93	98	2804		DB X'98'	WHR		PT128040
1C94	99	2805		DB X'99'	RHR		PT128050
1C95	9A	2806		DB X'9A'	WDR		PT128060
1C96	9B	2807		DB X'9B'	RDR		PT128070
1C97	9D	2808		DB X'9D'	SSR		PT128080
1C98	9E	2809		DB X'9E'	OCR		PT128090
1C99	9F	2810		DB X'9F'	ACKR		PT128100
1C9A	C2	2811		DB X'C2'	LPSW		PT128110
1C9B	D5	2812		DB X'D5'	AL		PT128120
1C9C	D6	2813		DB X'D6'	WB		PT128130
1C9D	D7	2814		DB X'D7'	RB		PT128140
1C9E	D8	2815		DB X'D8'	WH		PT128150
1C9F	D9	2816		DB X'D9'	RH		PT128160
1CA0	DA	2817		DB X'DA'	WD		PT128170
1CA1	DB	2818		DB X'DB'	RD		PT128180
1CA2	DD	2819		DB X'DD'	SS		PT128190
1CA3	DE	2820		DB X'DE'	OC		PT128200
1CA4	DF	2821		DB X'DF'	ACK		PT128210
1CA5	E2	2822	T13LST	DB X'E2'	SINT		PT128220
1CA6		2823		DB *			PT128230
		2824	*				PT128240
		2825	*				PT128250

		2826	*****			PT128260
		2827	*			PT128270
		2828	*	ALL THE TESTS IN PART 1 ARE DONE		PT128280
		2829	*			PT128290
1CA6	4800 1F7A	2830	TSTEND	LH R0,TOTAL		PT128300
1CAA	2601	2831		AIS R0,1		PT128310
1CAC	4000 1F7A	2832		STH R0,TOTAL		PT128320
1CB0	2431	2833		LIS R3,1		PT128330
1CB2	DE30 1F83	2834		OC R3,NORM		PT128340
1CB6	9400	2835		EXBR R0,R0		PT128350
1CB8	9830	2836		WHR R3,R0	TOTAL INTO CONSOLE IND.	PT128360
1CBA	9400	2837		EXBR R0,R0		PT128370
1CBC	C500 FFFF	2838		CLHI R0,X'FFFF'		PT128380
1CC0	4230 1CE4	2839		BNE NOTFF		PT128390
1CC4	D320 1F84	2840	AGTRY	LB R2,OUTDEV		PT128400
1CC8	9D25	2841		SSR R2,R5		PT128410
1CCA	2011	2842		BTBS 1,1		PT128420
1CCC	2042	2843		BTBS 4,2		PT128430
1CCE	C450 00FC	2844		NHI R5,X'FC'		PT128440
1CD2	C550 000C	2845		CLHI R5,X'0C'		PT128450
1CD6	2239	2846		BES AGTRY		PT128460
1CD8	41F0 1D4C	2847		BAL R15,TIM		PT128470
1CDC	4100 1D66	2848		BAL R13,PRTTOT		PT128480
1CE0	4300 0112	2849		B ENTRY1		PT128490
	0000 1CE4	2850	NOTFF	EQU *		PT128500
1CE4	D320 1F84	2851		LB R2,OUTDEV		PT128510
1CE8	9D25	2852		SSR R2,R5	R5 = TTY STATUS	PT128520
1CEA	2117	2853		BTFS 1,7		PT128530
1CEC	2146	2854		BTFS 4,6		PT128540
1CEE	C450 00FC	2855		NHI R5,X'FC'		PT128550
1CF2	C550 000C	2856		CLHI R5,X'0C'		PT128560
1CF6	2136	2857		BNES DONE		PT128570
1CF8	2451	2858	DONE0	LIS R5,1		PT128580
1CFA	4050 1F7E	2859		STH R5,TTYOFF	TTYOFF = 1 AND	PT128590
1CFE	4300 0288	2860		B TEST1		PT128600
	0000 1D02	2861	DONE	EQU *		PT128610
1D02	4500 010E	2862		CLH R0,NTIMES		PT128620
1D06	4280 0296	2863		BL ENTRY3		PT128630
1D0A	4800 1F7E	2864		LH R0,TTYOFF		PT128640
1D0E	2333	2865		BZS DONE11		PT128650
1D10	41F0 1D4C	2866		BAL R15,TIM		PT128660
	0000 1D14	2867	DONE11	EQU *		PT128670
1D14	4800 1F7C	2868		LH R0,TOTERR		PT128680
1D18	4230 1D38	2869		BNZ DONE3		PT128690
1D1C	2440	2870		LIS R4,0		PT128700
1D1E	C850 1F69	2871		LHI R5,NOERRB		PT128710
1D22	DE20 1F86	2872		OC R2,OUTCMD		PT128720
1D26	9D23	2873	DONE12	SSR R2,R3		PT128730
1D28	2081	2874		BTBS 8,1		PT128740
1D2A	DA24 1F5C	2875	DONE2	WD R2,NOERRA(R4)		PT128750
1D2E	C554 1F5C	2876		CLHI R5,NOERRA(R4)		PT128760
1D32	2333	2877		BES DONE3		PT128770
1D34	2641	2878		AIS R4,1		PT128780
1D36	2208	2879		BS DONE12		PT128790
	0000 1D38	2880	DONE3	EQU *		PT128800

1D38	4800	1F7E	2881	LH	RO,TTYOFF		PT128810
1D3C	4330	0112	2882	BZ	ENTRY1		PT128820
1D40	41F0	1D4C	2883	BAL	R15,TIM		PT128830
1D44	41D0	1D66	2884	BAL	R13,PRTTOT		PT128840
1D48	4300	1D82	2885	TOWT	B	WT000F	PT128850
	0000	1D4C	2886	TIM	EQU	*	PT128860
1D4C	C800	FFFF	2887	LHI	RO,X'FFFF'		PT128870
1D50	2701		2888	TIME	SIS	RO,1	PT128880
1D52	4200	0000	2889		NOP		PT128890
1D56	2033		2890		BNZS	TIME	PT128900
1D58	C800	FFFF	2891		LHI	RO,X'FFFF'	PT128910
1D5C	2701		2892	TIME2	SIS	RO,1	PT128920
1D5E	4200	0000	2893		NOP		PT128930
1D62	2033		2894		BNZS	TIME2	PT128940
1D64	030F		2895		BR	R15	PT128950
1D66	C800	00FF	2896	PRTTOT	LHI	RO,X'FF'	PT128960
1D6A	41E0	1DEA	2897		BAL	R14,WRITE1	PT128970
1D6E	41E0	1DEA	2898		BAL	R14,WRITE1	PT128980
1D72	41E0	1DEA	2899		BAL	R14,WRITE1	PT128990
1D76	240A		2900		LIS	RO,10	PT129000
1D78	41E0	1DEA	2901		BAL	R14,WRITE1	PT129010
1D7C	48F0	1F7A	2902		LH	R15,TOTAL	PT129020
1D80	41C0	1DBA	2903		BAL	R12,PRNTRF	PRINT TOTAL PT129030
1D84	C800	0020	2904		LHI	RO,X'20'	PT129040
1D88	41E0	1DEA	2905		BAL	R14,WRITE1	PT129050
1D8C	41E0	1DEA	2906		BAL	R14,WRITE1	PT129060
1D90	41E0	1DEA	2907		BAL	R14,WRITE1	PT129070
1D94	41E0	1DEA	2908		BAL	R14,WRITE1	PT129080
1D98	48F0	1F7C	2909		LH	R15,TOTERR	PRINT TOTERR PT129090
1D9C	41C0	1DBA	2910		BAL	R12,PRNTRF	PT129100
1DA0	240D		2911		LIS	RO,13	PT129110
1DA2	41E0	1DEA	2912		BAL	R14,WRITE1	PT129120
1DA6	41E0	1DEA	2913		BAL	R14,WRITE1	PT129130
1DAA	240A		2914		LIS	RO,10	PT129140
1DAC	41E0	1DEA	2915		BAL	R14,WRITE1	PT129150
1DB0	030D		2916		BR	R13	PT129160
	0000	1DB2	2917	WT000F	EQU	*	PT129170
1DB2	4300	0112	2918		B	ENTRY1	NO OP THIS BRANCH TO BYPASS PT129180
1DB6	4300	0296	2919		B	ENTRY3	INITIAL SET UP PT129190
			2920	*			PT129200
			2921	*		PRINT THE CONTENTS OF REG. 15 IN HEX.	PT129210
			2922	*			PT129220
			2923	*		EXIT ON R12	PT129230
			2924	*			PT129240
1DBA	080F		2925	PRNTRF	LHR	RO,R15	PT129250
1DBC	900C		2926		SRLS	RO,12	PT129260
1DBE	41E0	1DDA	2927		BAL	R14,PRNTR0	PT129270
1DC2	080F		2928		LHR	RO,R15	PT129280
1DC4	9008		2929		SRLS	RO,8	PT129290
1DC6	41E0	1DDA	2930		BAL	R14,PRNTR0	PT129300
1DCA	080F		2931		LHR	RO,R15	PT129310
1DCC	9004		2932		SRLS	RO,4	PT129320
1DCE	41E0	1DDA	2933		BAL	R14,PRNTR0	PT129330
1DD2	080F		2934		LHR	RO,R15	PT129340
1DD4	41E0	1DDA	2935		BAL	R14,PRNTR0	PT129350

1DD8	030C	2936	BR	R12		PT129360
1DDA	C400 000F	2937	PRNTR0	NHI	R0,15	PT129370
1DDE	CA00 0030	2938		AHI	R0,X'30'	PT129380
1DE2	C500 003A	2939		CLHI	R0,X'3A'	PT129390
1DE6	2182	2940		BLS	WRITE1	PT129400
1DE8	2607	2941		AIS	R0,7	PT129410
1DEA	D320 1F84	2942	WRITE1	LB	R2,OUTDEV	PT129420
1DEE	DE20 1F86	2943		OC	R2,OUTCMD	PT129430
1DF2	9D23	2944	WRIT	SSR	R2,R3	PT129440
1DF4	021E	2945		BTCR	1,R14	PT129450
1DF6	2082	2946		BTBS	8,2	PT129460
1DF8	9A20	2947		WDR	R2,R0	PT129470
1DFA	030E	2948		BR	R14	PT129480
		2949	*			PT129490
		2950	*****			PT129500
		2951	*			PT129510
		2952	*	AN INTERRUPT IS DETECTED		PT129520
		2953	*			PT129530
1DFC	24F1	2954	FLPTNT	LIS	R15,1	PT129540
1DFE	2309	2955		BS	ERRF	PT129550
1E00	24F2	2956	ILGINT	LIS	R15,2	PT129560
1E02	2307	2957		BS	ERRF	PT129570
1E04	24F3	2958	MALFTN	LIS	R15,3	PT129580
1E06	2305	2959		BS	ERRF	PT129590
1E08	24F4	2960	EXTINT	LIS	R15,4	PT129600
1E0A	9FAB	2961		AIR	R10,R11	PT129610
1E0C	2302	2962		BS	ERRF	PT129620
1E0E	24F5	2963	DVDFLT	LIS	R15,5	PT129630
1E10	2309	2964		BS	ERRORF	PT129640
1E12	24F6	2965	CHANIO	LIS	R15,6	PT129650
1E14	2307	2966		BS	ERRORF	PT129660
1E16	24F7	2967	QVRFLO	LIS	R15,7	PT129670
1E18	2305	2968		BS	ERRORF	PT129680
1E1A	24F8	2969	SVCERR	LIS	R15,8	PT129690
1E1C	23J3	2970		BS	ERRORF	PT129700
1E1E	0000	2971	DEVERR	DC	0	PT129710
1E20	24F9	2972		LIS	R15,9	PT129720
1E22	C6F0 00F0	2973	ERRORF	OHI	R15,X'F0'	PT129730
1E26	D2F0 1F90	2974		STB	R15,ERRIND	PT129740
1E2A	2431	2975		LIS	R3,1	PT129750
1E2C	D830 1F90	2976		WH	R3,ERRIND	PT129760
1E30	C200 1E34	2977		LPSW	WAITFF2	PT129770
1E34	8000	2978	WAITFF2	DC	X'8000',ERFSS	PT129780
1E36	1E38	2979	*			PT129790
1E38	4300 1E3C	2980	ERFSS	B	ERROR	PT129800
		2981	*			PT129810
		2982	*	NXTST = RETURN ADD. IF TTY IS TURNED OFF		PT129820
		2983	*			PT129830
		2984	*	R14 = PSW WHEN THE ERROR OCCURED		PT129840
		2985	*			PT129850
		2986	*	ERRIND = ERROR NO. INTO IND.		PT129860
		2987	*			PT129870
		2988	*	TESTNO = 31NN , NN = TEST NO. 1 THRU E		PT129880
		2989	*			PT129890

	0000 1E3C	2990	ERROR	EQU	*		PT129900
1E3C	D000 1FB8	2991	ERRA	STM	R0,REGSAV	SAVE REGISTERS	PT129910
1E40	95EE	2992		EPSR	R14,R14	STORE CURRENT PSW	PT129920
1E42	2431	2993		LIS	R3,1	R3 = 1 = CONSOLE ADDRESS	PT129930
1E44	D830 1F90	2994		WH	R3,ERRIND	ERRNO. INTO CONSOLE IND.	PT129940
1E48	D300 1F90	2995	ERRA6	LB	R0,ERRIND	CONVERT ERRIND INTO	PT129950
1E4C	C850 0030	2996		LHI	R5,X'30'		PT129960
1E50	C500 0010	2997		CLHI	R0,16	TWO BYTES TO PRINT	PT129970
1E54	2383	2998		BMLS	ERRB		PT129980
1E56	0805	2999		LHR	R0,R5		PT129990
1E58	2307	3000		BS	ERRB2		PT130000
1E5A	9004	3001	ERRB	SRLS	R0,4		PT130010
1E5C	0A05	3002		AHR	R0,R5		PT130020
1E5E	C500 003A	3003		CLHI	R0,X'3A'		PT130030
1E62	2182	3004		BLS	ERRB2		PT130040
1E64	2607	3005		AIS	R0,7		PT130050
		3006	*				PT130060
		3007	*		ERRNO = 2 BYTES TO PRINT		PT130070
		3008	*				PT130080
1E66	D200 1F5A	3009	ERRB2	STB	R0,ERRNO		PT130090
1E6A	D300 1F90	3010		LB	R0,ERRIND		PT130100
1E6E	C400 000F	3011	ERRB4	NHI	R0,15		PT130110
1E72	0A05	3012		AHR	R0,R5		PT130120
1E74	C500 003A	3013		CLHI	R0,X'3A'		PT130130
1E78	2182	3014		BLS	ERRB6		PT130140
1E7A	2607	3015		AIS	R0,7		PT130150
1E7C	D200 1F5B	3016	ERRB6	STB	R0,ERRNO+1		PT130160
	0000 1E80	3017	ERROF	EQU	*		PT130170
1E80	4800 1F7C	3018		LH	R0,TOTERR	COUNT TOTAL ERRORS	PT130180
1E84	2601	3019		AIS	R0,1		PT130190
1E86	4000 1F7C	3020		STH	R0,TOTERR		PT130200
1E8A	C500 FFFF	3021		CLHI	R0,X'FFFF'	IF TOTERR = FFFF	PT130210
1E8E	4330 1EB0	3022		BE	WTFFFF		PT130220
1E92	D320 1F84	3023		LB	R2,OUTDEV		PT130230
1E96	9023	3024		SSR	R2,R3		PT130240
1E98	4250 1EAA	3025		BTC	5,NEXT		PT130250
1E9C	C430 00FC	3026		NHI	R3,X'FC'		PT130260
1EA0	C530 000C	3027		CLHI	R3,X'0C'		PT130270
1EA4	2333	3028		BES	NEXT		PT130280
1EA6	4300 1EE4	3029		R	PRTRR		PT130290
1EAA	4800 1F92	3030	NEXT	LH	R0,NXTST	IF TTY IS OFF GO TO NEXT TEST	PT130300
1EAE	0300	3031		BR	R0	CONTINUE THE NEXT TEST	PT130310
1EB0	2431	3032	WTFFFF	LIS	R3,1	FFFF INTO CO-S-LE &ND.	PT130320
1EB2	9830	3033		WHR	R3,R0		PT130330
1EB4	C200 1EB8	3034		LPSW	WAITFF		PT130340
1EB8	8000	3035	WAITFF	DC	X'8000',CONT	WAIT UNTIL EXE IS DEPRESSED	PT130350
1EBA	1EBC						
1EBC	D320 1F84	3036	CONT	LB	R2,OUTDEV		PT130360
1EC0	DE20 1F86	3037		OC	R2,OUTCMD		PT130370
1EC4	9025	3038		SSR	R2,R5		PT130380
1EC6	4210 1EB0	3039		BTC	1,WTFFFF		PT130390
1ECA	C450 00FC	3040		NHI	R5,X'FC'		PT130400
1ECE	C550 000C	3041		CLHI	R5,X'0C'		PT130410
1ED2	4330 1EB0	3042		BE	WTFFFF		PT130420
1ED6	C840 1F3C	3043		LHI	R4,FFFF		PT130430

1EDA	C850	1F4D	3044	LHI	R5,FFFFR		PT130440
1EDE	9624		3045	WBR	R2,R4		PT130450
1EE0	4300	1DB2	3046	B	WT000F		PT130460
1EE4	C840	1F4E	3047	PRTRR	LHI R4,PRTERR		PT130470
			3048	*			PT130480
	0000	1EE8	3049	PRTR	EQU *		PT130490
			3050	*			PT130500
1EE8	D320	1F84	3051	LB	R2,OUTDEV		PT130510
1EEC	DE20	1F86	3052	OC	R2,OUTCMD		PT130520
1EF0	9D23		3053	PRTBSY	SSR R2,R3		PT130530
1EF2	2081		3054	BTBS	8,1		PT130540
1EF4	DA24	0000	3055	WD	R2,0(R4)		PT130550
1EF8	2641		3056	AIS	R4,1		PT130560
1EFA	C540	1F5E	3057	CLHI	R4,ERRNO+4		PT130570
1EFE	2037		3058	BNES	PRTBSY		PT130580
1F00	D300	1F59	3059	LB	R0,TESTNO+1	GET TEST NUMBER	PT130590
1F04	C500	0038	3060	CLHI	R0,C'A'	IF IT IS TEST 12	PT130600
1F08	2335		3061	BES	TST812	BRANCH TO TST812	PT130610
1F0A	C500	0043	3062	CLHI	R0,C'C'	IF IT IS NOT TEST12	PT130620
1F0E	4230	1F36	3063	BNE	PRTEND	BRANCH TO PRTEND	PT130630
1F12	C870	1FC6	3064	TST812	LHI R7,REGSAV+8	GET THE POINTER TO REG SAVE AREA	PT130640
1F16	4887	0000	3065	LH	R8,0(R7)	NUMBER OF REGISTERS TO BE PRINTED	PT130650
1F1A	C580	0000	3066	CLHI	R8,0	CHECK IF ZERO REGISTERS TO PRINT	PT130660
1F1E	233C		3067	BES	PRTEND		PT130670
1F20	2672		3068	LOOPXX	AIS R7,2	INCREMENT THE POINTER	PT130680
1F22	46F7	0000	3069	LH	R15,0(R7)	GET THE REGISTER CONTENTS	PT130690
1F26	41C0	1DBA	3070	BAL	R12,PRNTRF	PRINT THE CONTENTS	PT130700
1F2A	C800	0020	3071	LHI	R0,X'20'		PT130710
1F2E	41E0	1DEA	3072	BAL	R14,WRITE1	PRINT A BLANK	PT130720
1F32	2781		3073	SIS	R8,1		PT130730
1F34	203A		3074	BNZS	LOOPXX	IF NOT DONE GO TO LOOPXX	PT130740
1F36	2404		3075	PRTEND	LIS R0,4		PT130750
1F38	4300	1D38	3076	B	DONE3		PT130760
			3077	*			PT130770
1F3C	0D0A		3078	FFFF	DC X'D0A'		PT130780
1F3E	4646	4646 2045 5252	3079	DC	C'FFFF ERRORS'		PT130790
1F46	4F52	5320					
1F4A	0D0A		3080	DC	X'D0A'		PT130800
1F4C	FFFF		3081	DCX	FFFF		PT130810
	0000	1F4D	3082	FFFFR	EQU *-1		PT130820
1F4E	0D0A		3083	PRTERR	DC X'D0A'		PT130830
1F50	4552	524F 5220	3084	DC	C'ERROR '		PT130840
1F56	2000		3085	DC	X'2000'		PT130850
1F58	3130		3086	TESTNO	DC X'3130'		PT130860
1F5A	3030		3087	ERRNO	DC X'3030'		PT130870
1F5C	0D0A		3088	NOERRA	DC X'D0A'		PT130880
1F5E	4E4F	2045 5252 4F52	3089	DC	C'NO ERROR'		PT130890
1F66	0D0A		3090	DC	X'D0A'		PT130900
1F68	FFFF		3091	DCX	FFFF		PT130910
	0000	1F69	3092	NOERRB	EQU *-1		PT130920
			3093	*			PT130930
			3094	*			PT130940
			3095	*****			PT130950
			3096	*			PT130960
			3097	*	DATA CONSTANTS		PT130970

		3098	*			PT130980
		3099	*****			PT130990
		3100	*			PT131000
1F6A	0000	3101	DC	0		PT131010
1F6C	0000	3102	TABLE	DC	0	PT131020
					12 BYTES	
1F6E	0000	3103	DC	0		PT131030
1F70	0000	3104	DC	0		PT131040
1F72	0000	3105	DC	0		PT131050
1F74	0000	3106	DC	0		PT131060
1F76	0000	3107	DC	0		PT131070
1F78	0000	3108	TEMP	DC	0	PT131080
1F7A	0000	3109	TOTAL	DC	0	PT131090
1F7C	0000	3110	TOTERR	DC	0	PT131100
1F7E	0000	3111	TTYOFF	DC	0	PT131110
1F80	0000	3112	CPUNO	DC	0	PT131120
1F82	00	3113	M7DSWT	DB	0	PT131130
1F83	80	3114	NORM	DB	X'80'	PT131140
		3115	*			PT131150
		3116	*****			PT131160
		3117	*			PT131170
1F84	02	3118	OUTDEV	DB	2	PT131180
					OUTDEV = 2 = TTY ADDRESS	
1F85	A4	3119	INCMND	DB	X'A4'	PT131190
					READ COMMAND FOR TTY	
1F86	A8	3120	OUTCMD	DB	X'A8'	PT131200
1F87	00	3121		DB	*	PT131210
1F88	ABB9	3122	CRTGUT	DCX	ABB9	PT131220
1F8A	C8E4	3123	CONOUT	DCX	C8E4	PT131230
1F8C	0000	3124	CRTFLG	DCX	0	PT131240
1F8E	0000	3125	FIRSTCHD	DCX	0	PT131250
1F90	0000	3126	ERRIND	DC	0	PT131260
					COPY ERRNO INTO CONSOLE IND.	
1F92	0000	3127	NXTST	DC	0	PT131270
		3128	*			PT131280
1F94	0000	3129	ZERO	DC	0	PT131290
1F96	0000	3130		DC	0	PT131300
1F98	FFFF	3131	ONE	DC	X'FFFF'	PT131310
1F9A	0000	3132		DC	0	PT131320
1F9C	5555	3133	FIVE	DC	X'5555'	PT131330
1F9E	0000	3134		JC	0	PT131340
1FA0	AAAA	3135	TEN	DC	X'AAAA'	PT131350
1FA2	0000	3136		DC	0	PT131360
		3137	*			PT131370
1FA4	00	3138	TITLE1	DB	13	PT131380
					CR	
1FA5	0A	3139		DB	10	PT131390
					LF	
1FA6	5331 3650 5431 5230	3140		DC	C'S16PT1R08'	PT131400
1FAE	3820					
1FB0	0D0A	3141		DCX	0D0A	PT131410
1FB2	FFFF	3142		DCX	FFFF	PT131420
1FB4	4350 5520	3143		DC	C'CPU'	PT131430
1FB8	0D0A	3144		DCX	0D0A	PT131440
1FBA	2AFF	3145		DC	X'2AFF'	PT131450
1FBC	FFFF	3146		DCX	FFFF	PT131460
	0000 1FBD	3147	TITEND	EQU	*-1	PT131470
	0000 1FBE	3148	LNZ8	EQU	*-1	PT131480
1FBE		3149	REGSAV	DS	32	PT131490
		3150	*		CHKSUM	PT131500
		3151	*		(THE FOLLOWING CODE IS NOT PART OF THE TEST.)	PT131510

		3152	*				PT131520
		3153	*				PT131530
1FDE	2400	3154	\$CHKSUM	LIS	R0,0	PUNCH M17 TAPE WITH CHECKSUM	PT131540
1FE0	9510	3155		EPSR	R1,R0	SELECT REG. SET 0	PT131550
		3156	*				PT131560
1FE2	C810 0100	3157		LDAI	R1,ORIGIN1	START	PT131570
1FE6	2421	3158		LIS	R2,1	INCREMENT	PT131580
1FE8	C830 1FBD	3159		LDAI	R3,LNZB	FINAL	PT131590
1FEC	2440	3160		LIS	R4,0	CHECKSUM BYTE	PT131600
1FEE	D351 0000	3161	\$GEN	LB	R5,0(R1)		PT131610
1FF2	0745	3162		XAR	R4,R5		PT131620
1FF4	C110 1FEE	3163		BXLE	R1,\$GEN		PT131630
1FF8	D240 0097	3164		STB	R4,MN+3	CHECKSUM BYTE TO ROOT LOADER	PT131640
		3165	*				PT131650
1FFC	C810 0080	3166	\$TAPE	LHI	R1,X'0080'		PT131660
2000	9E21	3167		OCR	R2,R1	DISPLAY : NORMAL MODE	PT131670
2002	9444	3168		EXBR	R4,R4		PT131680
2004	9824	3169		WHR	R2,R4	CHECKSUM BYTE TO D1	PT131690
2006	9411	3170		EXBR	R1,R1		PT131700
2008	9501	3171		EPSR	R0,R1	HALT PROCESSOR.	PT131710
200A	D360 007A	3173	\$PUNCH	LB	R6,X'7A'	GET BOU7DV (PUNCH) ADDRESS.	PT131730
200E	DE60 007B	3174		OC	R6,X'7B'	START TAPE PUNCH	PT131740
2012	9D60	3175		SSR	R6,R0		PT131750
2014	2081	3176		BTBS	8,1		PT131760
2016	41F0 2058	3177		BAL	R15,\$STAPL	PUNCH LEADER	PT131770
201A	9411	3178		EXBR	R1,R1	(R1) = X'0080'	PT131780
201C	C830 00CF	3179		LHI	R3,X'CF'		PT131790
2020	DA61 0000	3180	\$PNCH1	WD	R6,0(R1)	PUNCH BOOT LOADER	PT131800
2024	9D60	3181		SSR	R6,R0		PT131810
2026	2081	3182		BTBS	8,1		PT131820
2028	C110 2020	3183		BXLE	R1,\$PNCH1		PT131830
202C	41F0 205E	3184		BAL	R15,\$STAPL1	PUNCH ONE-FOLD GAP.	PT131840
		3185	*				PT131850
2030	D340 0097	3186		LB	R4,MN+3	GET CHECKSUM BYTE	PT131860
2034	C810 0100	3187		LDAI	R1,ORIGIN1	(NORMALLY X'A00')	PT131870
2038	C830 1FBD	3188		LDAI	R3,LNZB		PT131880
203C	D351 0000	3189	\$PNCH2	LB	R5,0(R1)	PUNCH PROGRAM	PT131890
2040	0745	3190		XAR	R4,R5		PT131900
2042	9A65	3191		WDR	R6,R5		PT131910
2044	9401	3192		EXBR	R0,R1		PT131920
2046	9820	3193		WHR	R2,R0	DATA ADDRESS TO DISPLAY.	PT131930
2048	9D60	3194		SSR	R6,R0		PT131940
204A	2081	3195		BTBS	8,1		PT131950
204C	C110 203C	3196		BXLE	R1,\$PNCH2		PT131960
2050	41F0 2058	3197		BAL	R15,\$STAPL	PUNCH TRAILER.	PT131970
2054	4300 1FFC	3198		B	\$TAPE	DISPLAY CHECKSUM. HALT PROCESSOR.	PT131980
2058	C800 0100	3200	\$TAPL	LHI	R0,256	TO PUNCH BLANK LEADER	PT132000
205C	2303	3201		BS	\$TAPLP		PT132010
205E	C800 0055	3202	\$TAPL1	LHI	R0,85	TO PUNCH 1-FOLD GAP	PT132020
2062	2701	3203	\$TAPLP	SIS	R0,1		PT132030
2064	032F	3204		BNPR	R15	RETURN	PT132040

2066	2430	3205	LIS	R3.0
2068	9A63	3206	WDR	R6,R3
206A	9D68	3207	SSR	R6,R8
206C	2081	3208	BTBS	8.1
206E	2206	3209	BS	\$TAPLP
		3210 *		
2070		3211	END	

PUNCH BLANK FRAME

CONTINUE.

PT132050
PT132060
PT132070
PT132080
PT132090
PT132100
PT132110

ERROR1	0000	1A1A	2585	2587	2589	2591	2608*
ERRCRF	0000	1E22	2964	2966	2968	2970	2973*
EXBR	0000	0DD2	1410*				
EXTINT	0000	1E08	101	2131	2960*		
FFFF	0000	1F3C	3043	3078*			
FFFFRR	0000	1F4D	3044	3082*			
FIRSTCMD	0000	1F8E	115	120	128	3125*	
FIVE	0000	1F9C	466	480	485	497	729 783 804 1336 1347 3133*
FLPTNT	0000	1DFC	95	2954*			
IDFLAG	0000	1BA0	2590	2593	2618	2626	2714*
ILGINT	0000	1E00	97	2133	2781	2956*	
ILLEGL	0000	14A8	2063	2065	2066*	2073	
IMPTOP	0000	0000R					
INCMND	0000	1F85	125	134	162	167	3119*
ININC1	0000	1226	1596	1620	1813*		
ININC2	0000	1228	1594	1619	1814*		
INITM	0000	1236	1469	1476	1821*		
IO	0000	0104	74*	116	121		
IO2	0000	01CA	131	139*			
IGTEST	0000	017C	116*				
LADC	0000	0001					
LB	0000	0CFE	1334*				
LBR	0000	0DB4	1397*				
LCS	0000	0570	517*				
LDWT	0000	00C6	67*	70			
LEADER	0000	00A0	51*	55			
LH	0000	04C6	450*				
LHI	0000	054A	501*				
LHR	0000	04AE	437*				
LIS	0000	0554	506*				
LM	0000	05F0	578*				
LNZB	0000	1FB0	47	3148*	3159	3188	
LOAD	0000	00AA	56*	64			
LOOP1	0000	0FB8	1594*	1603	1606		
LOOP2	0000	0FEC	1615*	1622	1624		
LOOP85	0000	0E5E	1472*	1475	1480		
LOOPXX	0000	1F20	3068*	3074			
LPSW	0000	02D0	234*				
M5001	0000	0114	86*				
M5002	0000	0130	93*				
M5003	0000	024A	184*				
M5004	0000	04D2	1129*				
M5005	0000	1310	1905*				
M5006	0000	14B6	2071*				
M7DSWT	0000	1F82	3113*				
MALFTN	0000	1E04	99	2958*			
MCHK2	0000	185C	2445*				
MH	0000	1882	2457*				
MHR	0000	1936	2516*				
MHU	0000	1960	2531*				
MHUR	0000	196E	2537*				
MINUSM	0000	122A	1729	1730	1732	1815*	
MLOOP1	0000	1862	2447*	2543			
MMNMC	0000	1234	1820*				
MMNMC	0000	1232	1758	1767	1788	1819*	

MN	0000	0094	48*	3164	3186																	
MOD	0000	027C	199*																			
MOD5	0000	0278	189	198*																		
MOD57	0000	024E	179	185*																		
MOD570	0000	025A	181	183	185	187	189*															
MOD7D	0000	0274	191	193	197*																	
MPNPC	0000	1230	1752	1759	1765	1787	1818*															
MUD1	0000	1A80	2445	2643*																		
MUD2	0000	1A70	2639*																			
NCHANG	0000	1A6C	2631	2636*																		
NCRY1	0000	1190	1755	1757*																		
NEXT	0000	1EAA	3025	3028	3030*																	
NH	0000	08B0	896*																			
NHI	0000	08BA	901*																			
NHR	0000	08A4	889*																			
NOCRY	0000	11C4	1771	1773*																		
NOERRA	0000	1F5C	2875	2876	3088*																	
NOERRB	0000	1F69	2871	3092*																		
NOEXT	0000	18E4	2741	2743*																		
NORM	0000	1F83	210	2834	3114*																	
NOTFF	0000	1CE4	2839	2850*																		
NTIMES	0000	010E	79*	2862																		
NUMBER	0000	18A6	2717*																			
NXTST	0000	1F92	229	427	555	722	963	1101	1321	1443	1833	1931	2145	2435	2727							
			3030	3127*																		
OH	0000	0820	826*																			
OHI	0000	0816	821*																			
OHR	0000	080E	816*																			
OLDPSW	0000	1402	1971	1998*																		
ONE	0000	1F98	463	494	859	870	917	931	1335	1344	1381	3131*										
ORIGIN1	0000	0100	72*	3157	3187																	
OUTCMD	0000	1F86	141	143	2872	2943	3037	3052	3120*													
OUTDEV	0000	1F84	140	142	212	2840	2851	2942	3023	3036	3051	3118*										
OVTEST	0000	0E78	1468	1482*																		
PASADR	0000	010C	78*	126	161																	
PLUM	0000	122C	1724	1753	1816*																	
PLUSN	0000	122E	1725	1751	1757	1768	1817*															
POINT	0000	000D	2432*	2445	2447	2448	2453	2454	2458	2463	2488	2489	2504	2523	2527							
			2528	2532	2541																	
POINTR	0000	0007	2545*	2553	2555	2568	2570															
PRNTR0	0000	10DA	2927	2930	2933	2935	2937*															
PRNTRF	0000	10BA	2903	2910	2925*	3070																
PRTBSY	0000	1EF0	3053*	3058																		
PRTCP	0000	0208	158*																			
PRTCPU	0000	01F8	153*	157																		
PRTEND	0000	1F36	3063	3067	3075*																	
PRTERR	0000	1F4E	3047	3083*																		
PRTR	0000	1EE8	3049*																			
PRTRR	0000	1EE4	3029	3047*																		
PRTTLE	0000	01EC	149*	196																		
PRTTOT	0000	1066	2848	2884	2896*																	
PSWAVE	0000	0110	43	80*																		
PURETOP	0000	0000P																				
QVRFLO	0000	1E16	109	2967*																		
R0	0000	0000	22*	85	86	87	88	89	90	91	92	93	95	96	97							

	98	99	100	101	102	103	104	105	106	107	108	109	110		
	114	115	116	117	119	120	121	122	153	159	170	171	176		
	177	178	180	182	184	186	188	190	192	194	197	198	199		
	201	204	205	206	207	209	210	228	229	230	231	232	233		
	250	251	272	273	353	354	409	410	426	427	428	429	430		
	431	435	438	443	477	554	555	556	557	558	559	561	565		
	572	576	577	579	580	580	582	584	588	588	608	608	610		
	612	614	616	618	621	622	624	626	627	629	630	632	633		
	635	636	639	640	642	643	645	646	649	650	651	653	655		
	657	659	721	722	723	724	725	726	728	733	736	738	741		
	743	745	748	751	753	755	755	757	760	763	766	768	771		
	774	776	778	780	780	783	785	787	789	791	793	800	802		
	804	806	806	817	819	824	829	837	854	857	866	868	884		
	885	887	890	894	899	904	911	915	919	936	940	944	949		
	962	963	964	965	966	967	970	973	981	998	1023	1024	1027		
	1032	1037	1054	1059	1083	1084	1100	1101	1102	1103	1104	1105	1107		
	1109	1111	1112	1114	1114	1116	1119	1122	1126	1128	1135	1136	1199		
	1200	1239	1240	1285	1286	1287	1288	1290	1290	1320	1321	1322	1323		
	1324	1325	1327	1328	1329	1330	1331	1332	1333	1360	1363	1376	1399		
	1442	1443	1444	1445	1446	1447	1450	1450	1455	1459	1459	1464	1483		
	1483	1487	1490	1490	1548	1555	1555	1563	1584	1584	1599	1611	1618		
	1629	1629	1634	1640	1641	1641	1670	1672	1677	1685	1692	1694	1699		
	1750	1754	1754	1766	1770	1770	1786	1791	1799	1801	1802	1832	1833		
	1834	1835	1836	1837	1847	1848	1849	1850	1851	1855	1856	1857	1858		
	1861	1863	1866	1867	1908	1909	1930	1931	1932	1933	1934	1935	1959		
	1960	1967	1974	1977	1982	1983	1999	2000	2013	2019	2023	2024	2030		
	2031	2032	2033	2034	2035	2036	2067	2070	2071	2078	2079	2131	2132		
	2133	2134	2144	2145	2146	2147	2148	2149	2230	2231	2267	2268	2352		
	2353	2434	2435	2436	2437	2438	2439	2440	2441	2458	2463	2476	2482		
	2498	2504	2517	2523	2532	2538	2557	2561	2564	2568	2578	2586	2599		
	2615	2619	2621	2622	2632	2635	2726	2727	2728	2729	2730	2731	2732		
	2733	2735	2737	2739	2748	2749	2750	2751	2769	2770	2781	2782	2786		
	2787	2788	2792	2793	2830	2831	2832	2835	2835	2836	2837	2837	2838		
	2862	2864	2868	2881	2887	2888	2891	2892	2896	2900	2904	2911	2914		
	2925	2926	2928	2929	2931	2932	2934	2937	2938	2939	2941	2947	2991		
	2995	2997	2999	3001	3002	3003	3005	3009	3010	3011	3012	3013	3015		
	3016	3018	3019	3020	3021	3030	3031	3033	3059	3060	3062	3071	3075		
	3154	3155	3171	3175	3181	3192	3193	3194	3200	3202	3203				
R1		0000 0001	23*	46	56	57	59	64	124	125	126	128	133	134	135
	136	137	140	174	175	177	438	440	562	566	630	972	973		
	997	1033	1039	1039	1048	1056	1057	1057	1065	1071	1109	1110	1112		
	1116	1118	1120	1120	1122	1125	1126	1131	1131	1133	1133	1331	1335		
	1333	1344	1361	1365	1398	1451	1451	1456	1460	1460	1465	1469	1473		
	1476	1531	1538	1585	1585	1598	1609	1616	1627	1627	1635	1643	1657		
	1659	1662	1663	1666	1667	1671	1672	1681	1682	1686	1689	1703	1705		
	1724	1726	1730	1735	1739	1742	1746	1749	1760	1779	1784	1792	1846		
	1852	1857	1859	1870	1902	1912	1913	1937	1946	1947	1948	1949	1950		
	1951	1952	1986	1987	1992	2039	2040	2040	2054	2055	2063	2455	2461		
	2474	2480	2496	2502	2514	2521	2529	2535	2558	2565	2580	2588	2600		
	2611	2633	2634	2743	2759	2759	2783	3155	3157	3161	3163	3166	3167		
	3170	3170	3171	3178	3178	3180	3183	3187	3189	3192	3196				
R10		0000 000A	32*	456	457	460	463	468	485	488	497	498	502	503	730
	738	748	776	1306	1307	1309	1333	1337	1342	1350	1453	1462	1473		
	1478	1782	1888	2027	2037	2037	2042	2459	2464	2477	2478	2483	2484		
	2499	2500	2505	2506	2518	2519	2524	2525	2533	2539	2555	2557	2564		

		2582	2600	2609	2612	2637	2961														
R11	0000 000B	33*	523	527	1380	1381	1384	1388	1391	1398	1402	1783	1890	2029							
		2047	2047	2049	2059	2558	2565	2597	2616	2617	2961										
R12	0000 000C	34*	525	529	1385	1389	1393	1399	1405	1470	1474	1477	1482	1482							
		1499	1508	1521	1526	1530	1540	1554	1569	1578	1640	1656	1661	1680							
		1684	1702	1707	1715	1797	1892	2456	2456	2462	2462	2475	2475	2481							
		2481	2497	2497	2503	2503	2515	2515	2522	2522	2530	2530	2536	2536							
		2561	2576	2596	2598	2610	2613	2903	2910	2936	3070										
R13	0000 000D	35*	511	514	1386	1390	1395	1400	1407	1600	1605	1750	1766	1839							
		1841	1868	1871	1873	1875	1877	1879	1881	1883	1885	1887	1889	1891							
		1893	1894	1895	1897	1899	1903	1906	1910	1911	2586	2595	2612	2614							
		2848	2884	2916																	
R14	0000 000E	36*	154	195	200	202	518	521	599	616	640	1471	1479	1601							
		1602	1713	1713	1714	1715	1796	2575	2575	2576	2588	2595	2596	2617							
		2618	2630	2636	2897	2898	2899	2901	2905	2906	2907	2908	2912	2913							
		2915	2927	2930	2933	2935	2945	2948	2992	2992	3072										
R15	0000 000F	37*	474	475	494	495	521	582	597	614	636	731	736	741							
		745	766	771	789	793	815	835	841	846	851	853	857	862							
		863	868	872	909	923	925	928	934	946	1898	2590	2847	2866							
		2883	2895	2902	2909	2925	2928	2931	2934	2954	2956	2958	2960	2963							
		2965	2967	2969	2972	2973	2974	3069	3177	3184	3197	3204									
R2	0000 0002	24*	41	45	60	66	127	138	141	142	143	144	149	161							
		162	163	167	168	170	172	174	212	213	440	441	563	567							
		574	633	977	978	1047	1048	1362	1367	1400	1452	1452	1457	1461							
		1461	1466	1478	1571	1575	1586	1586	1597	1607	1615	1625	1625	1636							
		1646	1658	1659	1669	1675	1687	1689	1699	1704	1708	1725	1785	1793							
		1872	2466	2466	2467	2472	2473	2490	2490	2491	2494	2495	2508	2508							
		2509	2512	2513	2547	2547	2548	2551	2552	2554	2571	2629	2629	2636							
		2840	2841	2851	2852	2872	2873	2875	2942	2943	2944	2947	3023	3024							
		3036	3037	3038	3045	3051	3052	3053	3055	3158	3167	3169	3193								
R3	0000 0003	25*	47	129	130	144	146	147	149	163	168	172	441	442							
		445	447	454	471	743	975	978	1050	1051	1292	1293	1297	1484							
		1493	1509	1512	1541	1552	1556	1565	1587	1587	1596	1598	1605	1616							
		1620	1623	1623	1637	1648	1648	1688	1697	1726	1727	1728	1729	1735							
		1736	1737	1742	1743	1744	1778	1840	1841	1842	1843	1852	1853	1854							
		1856	1874	1911	1939	1940	1944	1945	1953	1954	1968	1969	1971	1972							
		1974	1975	1984	1985	1990	1991	2073	2074	2076	2076	2447	2451	2455							
		2496	2529	2538	2549	2550	2552	2556	2563	2603	2606	2620	2621	2752							
		2753	2761	2762	2764	2765	2767	2767	2784	2785	2795	2796	2798	2798							
		2833	2834	2836	2873	2944	2975	2976	2994	2994	3024	3026	3027	3032							
		3033	3053	3159	3179	3188	3205	3206													
R4	0000 0004	26*	49	50	51	53	61	63	152	153	155	156	442	443							
		483	491	601	605	817	819	822	824	827	829	832	837	848							
		851	863	920	923	926	928	931	934	936	938	938	940	982							
		985	988	989	1012	1015	1018	1020	1051	1063	1066	1074	1127	1128							
		1129	1181	1182	1184	1186	1188	1190	1192	1194	1197	1197	1201	1202							
		1204	1206	1208	1211	1214	1216	1218	1449	1510	1515	1522	1523	1532							
		1535	1570	1572	1588	1588	1594	1597	1602	1615	1619	1621	1621	1638							
		1651	1730	1736	1738	1751	1757	1759	1767	1776	1781	1790	1795	1859							
		1860	1861	1876	1901	1902	1904	1905	1907	1909	1938	1940	1941	1942							
		1985	1989	1991	2014	2018	2021	2026	2039	2043	2045	2050	2051	2054							
		2151	2154	2157	2160	2163	2166	2168	2170	2172	2174	2177	2179	2182							
		2185	2188	2191	2197	2199	2203	2205	2209	2212	2216	2218	2223	2225							
		2232	2234	2236	2240	2243	2247	2249	2253	2255	2260	2261	2265	2265							
		2354	2355	2364	2377	2389	2402	2409	2416	2448	2452	2461	2514	2535							

RLL	0000	1796	2358*						
RRL	0000	179C	2361*						
SCH	0000	0FF0	1617*						
SCHECK	0000	1A56	2477	2483	2499	2505	2518	2524	2629*
SCONT1	0000	18B8	2469	2471	2474*				
SCONT2	0000	18FA	2493	2496*					
SCONT3	0000	1932	2511	2514*					
SFLAG	0000	18A2	2467	2473	2491	2495	2509	2513	2630 2715*
SH	0000	0E06	1518*						
SHI	0000	0ECE	1514*						
SHR	0000	0F02	1604*						
SINT	0000	13FE	1995*						
SIS	0000	0F2C	1547*						
SLA	0000	1348	2159*						
SLHL	0000	0AF6	1146*						
SLL	0000	153C	2153*						
SLLS	0000	0AEE	1140*						
SRA	0000	154E	2162*						
SRHA	0000	0B0C	1155*						
SRHL	0000	0AFC	1149*						
SRL	0000	1542	2156*						
SRLS	0000	0AF2	1143*						
STB	0000	003E	1355*						
STBR	0000	009C	1387*						
STH	0000	05C0	564*						
STM	0000	0664	625*						
SVC	0000	12AA	1869*						
SVC004	0000	1259	1841*	1844					
SVC100	0000	1268	1847*	1914					
SVC150	0000	129E	1864	1865*					
SVC175	0000	12A2	1865	1866*					
SVC200	0000	12A4	1862	1867*					
SVC201	0000	12AA	1870*						
SVC202	0000	12B0	1872*						
SVC208	0000	12D4	1884*						
SVC212	0000	12EC	1892*						
SVC215	0000	12FE	1898*						
SVCERR	0000	1E1A	2969*						
SVCINT	0000	1304	1855	1901*					
T1	0000	02D4	235	236*					
T10A1	0000	1352	1940*	1943					
T10A2	0000	135E	1944*						
T10D	0000	13CE	1976	1982*					
T10DEV	0000	1400	1949	1992	1997*				
T10E	0000	140E	1988	2013*					
T10E2	0000	1432	2020	2023*					
T10END	0000	1516	2135*						
T10G	0000	1440	2017	2022	2025	2027*			
T10H	0000	1446	2030*	2077					
T10ILG	0000	1482	2032	2070*					
T10INT	0000	13A2	1953	1964*	1968	1972	1982	1983	1990
T10J	0000	1474	2041	2045*					
T10JJ	0000	1476	2044	2046*					
T10K	0000	147A	2036	2047*					
T10KK	0000	148C	2048	2054*					

T5C	0000	096C	979	981*						
T5D	0000	0976	985*	988						
T5D2	0000	0992	981	995*						
T5D3	0000	09A6	993	1001*						
T5D4	0000	09B0	1004*	1006						
T5D5	0000	09CA	1010	1012*						
T5E	0000	09F4	1022	1027*						
T5E1	0000	09F8	995	1029*						
T5E2	0000	0996	996*	1029						
T5END	0000	0A8A	1082	1086*						
T5ERR1	0000	0968	971	974	976	980*				
T5ERR2	0000	098E	986	990	992	994*				
T5ERR3	0000	09C6	1005	1008	1011*					
T5ERR4	0000	09E8	994	1011	1016	1021	1023*	1060		
T5ERR5	0000	0A20	1036	1038	1040	1043	1044*	1046	1049	1052
T5ERR6	0000	0A6E	1067	1072	1076*					
T5ERR7	0000	0A7E	1044	1076	1080	1083*				
T5F	0000	0A00	996	1032*						
T5F2	0000	099C	998*	1034						
T5G	0000	0A0C	999	1037*						
T5H1	0000	0A1A	1042*	1054						
T5H2	0000	0A1E	1043*	1055						
T5H3	0000	0A24	1045*	1063						
T5H4	0000	0A28	1046*	1064						
T5J1	0000	0A2A	1047*	1070						
T5J3	0000	0A38	1052*	1073						
T5K1	0000	0A3A	1041	1054*						
T5K2	0000	0A4C	1042	1062*						
T5K3	0000	0A5C	1045	1068*						
T5L	0000	0A64	1047	1072*						
T5M	0000	0A66	1050	1073*						
T5P	0000	0A70	1075	1077*						
T5Q	0000	09A2	1000*	1077						
T5Q2	0000	0A78	1000	1081*						
T5R5	0000	0A0A	1028	1031	1036*					
T5R7	0000	0A76	1080*	1081						
T6A1	0000	0AC8	1123	1125*						
T6B	0000	0AE0	1135*							
T6B2	0000	0B0C	1153	1156*						
T6B4	0000	0B22	1164*							
T6B6	0000	0B44	1175	1177*						
T6C	0000	0B50	1181*							
T6C3	0000	0B7A	1195	1197*						
T6D	0000	0B7E	1199*							
T6D2	0000	0BAC	1212	1214*						
T6E	0000	0BBE	1220*							
T6E2	0000	0BE4	1230	1232*						
T6END	0000	0CD0	1312	1313*						
T6F	0000	0BF6	1239*							
T6F3	0000	0C24	1252	1254*						
T6G	0000	0C3A	1261*							
T6G4	0000	0C5E	1271	1273*						
T6G8	0000	0C76	1281*							
T6GA	0000	0CCC	1303	1305	1308	1310	1311*			
T6H	0000	0C82	1283	1285*						

PROG= S16P2 ASSEMBLED BY CAL 03-066R05-00 (32-BIT)

		1	CROSS		PT200010
		2	WIDTH 120		PT200020
		3	TARGT 16		PT200030
		4	S16P2 PROG INTERDATA PROCESSOR TEST 06-106R08A13 PART 2		PT200040
		5	*		PT200050
		6	* COPYRIGHT INTERDATA,INC. (JULY 1977)		PT200060
		7	*		PT200070
		8	*		PT200080
	0000 0000	9	R0 EQU 0		PT200090
	0000 0001	10	R1 EQU 1		PT200100
	0000 0002	11	R2 EQU 2		PT200110
	0000 0003	12	R3 EQU 3		PT200120
	0000 0004	13	R4 EQU 4		PT200130
	0000 0005	14	R5 EQU 5		PT200140
	0000 0006	15	R6 EQU 6		PT200150
	0000 0007	16	R7 EQU 7		PT200160
	0000 0008	17	R8 EQU 8		PT200170
	0000 0009	18	R9 EQU 9		PT200180
	0000 000A	19	R10 EQU 10		PT200190
	0000 000B	20	R11 EQU 11		PT200200
	0000 000C	21	R12 EQU 12		PT200210
	0000 000D	22	R13 EQU 13		PT200220
	0000 000E	23	R14 EQU 14		PT200230
	0000 000F	24	R15 EQU 15		PT200240
		25	*		PT200250
0000R		26	ORG X'80'		PT200260
		27	*		PT200270
0080	2421	28	LIS R2,1		PT200280
0082	2303	29	BS B00T		PT200290
0084	020E	30	DC Z(PSWAVE)		PT200300
0086	1380	31	DC Z(DSAVE)		PT200310
0088	4020 0022	32	BOOT STH R2,X'22'		PT200320
008C	C810 02D0	33	LHI R1,X'2D0'		PT200330
0090	C830 1590	34	LHI R3,LNZB		PT200340
0094	C860 0000	35	MN LHI R6,0		PT200350
0098	D340 0078	36	LB R4,X'78'		PT200360
009C	DE40 0079	37	OC R4,X'79'		PT200370
00A0	9D45	38	LEADER SSR R4,R5		PT200380
00A2	2091	39	BTBS 9,1		PT200390
00A4	9B45	40	RDR R4,R5		PT200400
00A6	0855	41	LDAR R5,R5		PT200410
00A8	2234	42	BZS LEADER		PT200420
00AA	D251 0000	43	LOAD STB R5,0(R1)		PT200430
00AE	D351 0000	44	LB R5,0(R1)		PT200440
00B2	0765	45	XAR R6,R5		PT200450
00B4	9481	46	EXBR R8,R1		PT200460
00B6	9828	47	WHR R2,R8		PT200470
00B8	9D45	48	SSR R4,R5		PT200480
00BA	2091	49	BTBS 9,1		PT200490
00BC	9B45	50	RDR R4,R5		PT200500
00BE	C110 00AA	51	BXLE R1,LOAD		PT200510
00C2	9486	52	EXBR R8,R6		PT200520
00C4	9828	53	WHR R2,R8		PT200530

00C6	2478	54	LDWT	LIS	R7,8		PT200540	
00C8	917C	55		SLLS	R7,12		PT200550	
00CA	9557	56		EPSR	R5,R7		PT200560	
00CC	2203	57		BS	LDWT		PT200570	
00CE		58		ORG	X'2D0'		PT200580	
02D0	4300 02E0	59	ORIGIN1	B	ENTRY1		PT200590	
		60	*****					PT200600
02D4	0202	61	IO	DCX	0202	IO INDICATOR	PT200610	
02D6	0101	62	CRT	DCX	0101	CRT VALUE	PT200620	
02D8	0202	63	CONADR	DCX	0202	CONSL	PT200630	
02DA	0404	64	CAR	DCX	0404	CAROUSEL VALUE	PT200640	
02DC	1011	65	PASADR	DCX	1011	PASLA ADDRESS REC/SND DEFAULT 1	PT200650	
02DE	0000	66	PSWAVE	DCX	0		PT200660	
		67	*				PT200670	
		68	*				PT200680	
	0000 02E0	69	ENTRY1	EQU	*		PT200690	
02E0	C200 02E4	70	PART2	LPSW	PART2A		PT200700	
02E4	0000	71	PART2A	DC	0,PART2AA		PT200710	
02E6	02E8							
		72	*****					PT200720
	0000 02E8	73	PART2AA	EQU	*		PT200730	
02E8	C800 F800	74		LHI	R0,X'F800'		PT200740	
02EC	4000 1580	75		STH	R0,FIRSTCMD		PT200750	
02F0	D300 02D4	76	IOTEST1	LB	R0,IO		PT200760	
02F4	C500 0004	77		CLHI	R0,4		PT200770	
02F6	2135	78		BNES	CRTIO		PT200780	
02FA	C800 F000	79		LHI	R0,X'F000'		PT200790	
02FE	4000 1580	80		STH	R0,FIRSTCMD		PT200800	
0302	D300 02D4	81	CRTIO	LB	R0,IO		PT200810	
0306	C500 0002	82		CLHI	R0,2		PT200820	
030A	4330 0354	83		BE	TTYIO		PT200830	
030E	C800 B979	84		LHI	R0,X'B979'		PT200840	
0312	4000 1588	85		STH	R0,\$C4		PT200850	
0316	C800 686B	86		LHI	R0,X'6B6B'		PT200860	
031A	4000 158A	87		STH	R0,\$58		PT200870	
031E	C800 7979	88		LHI	R0,X'7979'		PT200880	
0322	4000 158C	89		STH	R0,\$44		PT200890	
0326	C800 7979	90		LHI	R0,X'7979'		PT200900	
032A	4000 158E	91		STH	R0,\$66		PT200910	
032E	D320 157A	92		LB	R2,CRTOUT		PT200920	
0332	D310 157B	93		LB	R1,CRTOUT+1		PT200930	
0336	D210 1579	94		STB	R1,INCMND		PT200940	
033A	D310 02DC	95		LB	R1,PASADR		PT200950	
033E	D210 1586	96		STB	R1,INDEV		PT200960	
0342	D310 02DD	97		LB	R1,PASADR+1		PT200970	
0346	DE10 1580	98		OC	R1,FIRSTCMD		PT200980	
034A	2531	99		LCS	R3,1		PT200990	
034C	4030 157E	100		STH	R3,CRTFLG		PT201000	
0350	4300 0392	101		B	IO2		PT201010	
	0000 0354	102	TTYIO	EQU	*		PT201020	
0354	C810 00A4	103		LHI	R1,X'A4'		PT201030	
0358	D210 1579	104		STB	R1,INCMND		PT201040	
035C	C800 C454	105		LHI	R0,X'C454'		PT201050	
0360	4000 1588	106		STH	R0,\$C4		PT201060	
0364	C800 5848	107		LHI	R0,X'5848'		PT201070	

0368	4000	158A	108	STH	RO,\$58		PT201080
036C	C800	4456	109	LHI	RO,X'4456'		PT201090
0370	4000	158C	110	STH	RO,\$44		PT201100
0374	C800	6664	111	LHI	RO,X'6664'		PT201110
0378	4000	158E	112	STH	RO,\$66		PT201120
037C	D310	02D8	113	LB	R1,CONADR		PT201130
0380	D210	1586	114	STB	R1,INDEV		PT201140
0384	2410		115	LIS	R1,0		PT201150
0386	4010	157E	116	STH	R1,CRTFLG		PT201160
038A	D310	02D8	117	LB	R1,CONADR		PT201170
038E	D320	157C	118	LB	R2,CONOUT		PT201180
	0000	0392	119	I02 EQU	*		PT201190
0392	D210	1585	120	STB	R1,OUTDEV		PT201200
0396	D220	1578	121	STB	R2,OUTCMD		PT201210
039A	D320	1585	122	PART2B LB	R2,OUTDEV	R2 = ADD. OF TTY	PT201220
039E	C8A0	152E	123	LHI	R10,TITLE2	PRINT	PT201230
03A2	C860	1547	124	LHI	R11,TITEND		PT201240
03A6	DE20	1578	125	PART2C OC	R2,OUTCMD	PROCESSOR TEST PART 2	PT201250
03AA	9D23		126	PART2D SSR	R2,R3		PT201260
03AC	2013		127	BTBS	1,3	TTY DEV. UNAVA. ?	PT201270
03AE	2062		128	BTBS	8,2	TTY BUSY ?	PT201280
03B0	C430	00FC	129	NHI	R3,X'FC'		PT201290
03B4	C530	000C	130	CLHI	R3,X'0C'		PT201300
03B8	2237		131	BES	PART2D		PT201310
03BA	D30A	0000	132	LB	RO,0(R10)		PT201320
03BE	41E0	140A	133	BAL	R14,WRITE1		PT201330
03C2	26A1		134	AIS	R10,1		PT201340
03C4	05AB		135	CLHR	R10,R11		PT201350
			136	*			PT201360
03C6	203E		137	BNES	PART2D		PT201370
			138	*			PT201380
03C8	D320	1586	139	LB	R2,INDEV		PT201390
03CC	41E0	13F0	140	BAL	R14,READ1		PT201400
03D0	D200	1576	141	STB	RO,CPUNO		PT201410
03D4	41E0	13F0	142	BAL	R14,READ1		PT201420
03D8	D200	1577	143	STB	RO,CPUNO+1		PT201430
03DC	4800	1576	144	LH	RO,CPUNO		PT201440
03E0	C500	3035	145	CLHI	RO,C'05'		PT201450
03E4	2336		146	BES	MOD57		PT201460
03E6	C500	3730	147	M5007 CLHI	RO,C'70'		PT201470
03EA	233C		148	BES	MOD578		PT201480
03EC	C500	3830	149	CLHI	RO,C'80'		PT201490
03F0	2339		150	MOD57 BES	MOD578		PT201500
03F2	C500	3835	151	CLHI	RO,C'85'		PT201510
03F6	2336		152	BES	MOD578		PT201520
03F8	C500	3734	153	CLHI	RO,C'74'		PT201530
03FC	2333		154	BES	MOD578		PT201540
03FE	C500	3744	155	CLHI	RO,C'7D'		PT201550
0402	4330	0424	156	MOD578 BE	IOTEST		PT201560
0406	C500	3136	157	CLHI	RO,C'16'	TEST FOR MODEL 7/16 WITH DISPLAY	PT201570
040A	2234		158	BES	MOD578		PT201580
040C	C500	3144	159	CLHI	RO,C'1D'	TEST FOR MODEL 7/16 WITHOUT DISPLAY	PT201590
0410	2237		160	BES	MOD578		PT201600
0412	C500	3141	161	CLHI	RO,C'1A'		PT201610
0416	223A		162	BES	MOD578		PT201620

0418	C800	003F	163	CPUERR	LHI	R0,C'?'		PT201630
041C	41E0	140A	164		BAL	R14,WRITE1		PT201640
0420	4300	02E0	165		B	PART2		PT201650
			166	*				PT201660
0424	24F0		167	IOTEST	LIS	R15,0		PT201670
0426	40F0	152A	168		STH	R15,TEMP		PT201680
042A	41C0	141C	169		BAL	R12,CRLF		PT201690
042E	C800	0030	170		LHI	R0,C'0'		PT201700
0432	D200	1515	171		STB	R0,TESTNO+1		PT201710
			172	*				PT201720
	0000	0436	173	IOSTA	EQU	*		PT201730
0436	D320	1585	174		LB	R2,OUTDEV		PT201740
043A	DE20	1578	175		OC	R2,OUTCMD		PT201750
043E	D620	00B8	176		WB	R2,WBSTR	1234567890	PT201760
0442	D320	1586	177		LB	R2,INDEV		PT201770
0446	DE20	1579	178		OC	R2,INCMND		PT201780
044A	9D23		179		SSR	R2,R3		PT201790
044C	2281		180		BFBS	8,1		PT201800
044E	9D23		181	IOA2	SSR	R2,R3		PT201810
0450	2081		182		BTBS	8,1		PT201820
0452	9B21		183		RDR	R2,R1	READ KEY 1 IN R1	PT201830
0454	C410	007F	184		NHI	R1,X'7F'		PT201840
0458	C510	0031	185		CLHI	R1,X'31'		PT201850
045C	4230	05CE	186		BNE	IOERR1		PT201860
0460	DD20	152B	187	IOA4	SS	R2,TEMP+1		PT201870
0464	2082		188		BTBS	8,2		PT201880
0466	9D23		189		SSR	R2,R3		PT201890
0468	4530	152A	190		CLH	R3,TEMP	READ KEY 2 IN TEMP	PT201900
046C	4230	05CC	191		BNE	IOERR2		PT201910
0470	DB20	152A	192		RD	R2,TEMP		PT201920
0474	4110	05DA	193		BAL	R1,PARITY		PT201930
0478	C800	3200	194	TERM1	LHI	R0,X'3200'		PT201940
047C	4500	152A	195		CLH	R0,TEMP		PT201950
0480	4230	05CA	196		BNE	IOERR3		PT201960
0484	DD20	152B	197	IOA6	SS	R2,TEMP+1	TTY STATUS IN TEMP	PT201970
0488	2082		198		BTBS	8,2		PT201980
048A	4500	152A	199		CLH	R0,TEMP		PT201990
048E	4230	05C8	200		BNE	IOERR4		PT202000
0492	DB20	152B	201		RD	R2,TEMP+1	READ KEY 3 IN TEMP	PT202010
0496	4110	05DA	202		BAL	R1,PARITY		PT202020
049A	C800	3233	203		LHI	R0,X'3233'		PT202030
049E	4500	152A	204		CLH	R0,TEMP		PT202040
04A2	4230	05C6	205		BNE	IOERR5		PT202050
04A6	9D23		206	IOA8	SSR	R2,R3	TTY STATUS IN R3	PT202060
04A8	2081		207		BTBS	8,1		PT202070
04AA	D920	152A	208		RH	R2,TEMP	READ KEY 4 TEMP	PT202080
04AE	4110	05DA	209		BAL	R1,PARITY		PT202090
04B2	C800	0034	210		LHI	R0,X'34'		PT202100
04B6	D400	152A	211		CLB	R0,TEMP		PT202110
04BA	4230	05C4	212		BNE	IOERR6		PT202120
04BE	9D23		213	IOA10	SSR	R2,R3	TTY STATUS IN R3	PT202130
04C0	2081		214		BTBS	8,1		PT202140
04C2	D920		215		DC	X'D920'	READ KEY 5 IN TEMP (RH)	PT202150
04C4	152B		216		DC	Z(TEMP+1)	STORE AT TEMP	PT202160
04C6	4110	05DA	217		BAL	R1,PARITY		PT202170

04CA	C800	0035	218	LHI	R0,X'35'		PT202180
04CE	D400	152B	219	CLB	R0,TEMP+1		PT202190
04D2	4230	05C2	220	BNE	IOERR7		PT202200
04D6	D1B0	10AA	221	LM	R11,BUFR0	R11 THRU R15 = 0	PT202210
04DA	D0B0	10F2	222	STM	R11,BJFR2		PT202220
04DE	C8B0	10F2	223	LHI	R11,BUFR2		PT202230
04E2	C8C0	10F6	224	LHI	R12,BUFR2+4		PT202240
04E6	972B		225	RBR	R2,R11		PT202250
04E8	4800	10F2	226	LH	R0,BUFR2		PT202260
04EC	C400	7F7F	227	NHI	R0,X'7F7F'		PT202270
04F0	4000	10F2	228	STH	R0,BUFR2		PT202280
04F4	4800	10F4	229	LH	R0,BUFR2+2		PT202290
04F8	C400	7F7F	230	NHI	R0,X'7F7F'		PT202300
04FC	4000	10F4	231	STH	R0,BUFR2+2		PT202310
0500	D300	10F6	232	LB	R0,BUFR2+4		PT202320
0504	C400	7F7F	233	NHI	R0,X'7F7F'		PT202330
0508	D200	10F6	234	STB	R0,BUFR2+4		PT202340
050C	C800	3637	235	LHI	R0,X'3637'		PT202350
0510	4500	10F2	236	CLH	R0,BUFR2		PT202360
0514	4230	05C0	237	BNE	IOERR8		PT202370
0518	C800	3839	238	LHI	R0,X'3839'		PT202380
051C	4500	10F4	239	CLH	R0,BUFR2+2	CHECK KEYS 8 , 9	PT202390
0520	4230	05C0	240	BNE	IOERR8		PT202400
0524	C800	0030	241	LHI	R0,X'30'		PT202410
0528	D400	10F6	242	CLB	R0,BUFR2+4	CHECK KEY 0	PT202420
052C	4230	05C0	243	BNE	IOERR8		PT202430
0530	41C0	141C	244	BAL	R12,CRLF	CR LF	PT202440
			245	*			PT202450
0534	D320	1585	246	LB	R2,OUTDEV		PT202460
0538	C840	0DBC	247	LHI	R4,S26MSG	PRINT CHARACTERS	PT202470
053C	C850	0DD7	248	LHI	R5,S26MSD	DEPRESS KEYS CR LF	PT202480
0540	DE20	1578	249	OC	R2,OUTCMD	1234567890	PT202490
0544	9624		250	WBR	R2,R4		PT202500
0546	D320	1586	251	LB	R2,INDEV		PT202510
054A	DE20	1579	252	OC	R2,INCMND		PT202520
054E	9023		253	SSR	R2,R3		PT202530
0550	2281		254	BFBS	8,1		PT202540
0552	D720	10EE	255	RB	R2,BF2ST	READ 10 KEYS IN BUFR2	PT202550
0556	2458		256	LIS	R5,8		PT202560
	0000	0558	257	PARTY1	EQU *		PT202570
0558	4865	10F2	258	LH	R6,BUFR2(R5)		PT202580
055C	C460	7F7F	259	NHI	R6,X'7F7F'		PT202590
0560	4065	10F2	260	STH	R6,BUFR2(R5)		PT202600
0564	2752		261	SIS	R5,2		PT202610
0566	2217		262	BNMS	PARTY1		PT202620
0568	C800	3132	263	LHI	R0,X'3132'		PT202630
056C	4500	10F2	264	CLH	R0,BUFR2		PT202640
0570	4230	058E	265	BNE	IOERR9		PT202650
0574	C800	3334	266	LHI	R0,X'3334'		PT202660
0578	4500	10F4	267	CLH	R0,BUFR2+2		PT202670
057C	4230	058E	268	BNE	IOERR9		PT202680
0580	C800	3536	269	LHI	R0,X'3536'		PT202690
0584	4500	10F6	270	CLH	R0,BUFR2+4		PT202700
0588	4230	058E	271	BNE	IOERR9		PT202710
058C	C800	3738	272	LHI	R0,X'3738'		PT202720

0590	4500	10F8	273	CLH	R0,BUFR2+6	PT202730
0594	4230	05BE	274	BNE	IOERR9	PT202740
0598	9D23		275	SSR	R2,R3	PT202750
059A	2081		276	BTBS	8,1	PT202760
059C	9924		277	RHR	R2,R4	PT202770
059E	C440	7F7F	278	NHI	R4,X*7F7F*	PT202780
05A2	C540	3939	279	CLHI	R4,X*3939*	PT202790
05A6	213B		280	BNES	IOERRA	PT202800
05A8	9D23		281	SSR	R2,R3	PT202810
05AA	2081		282	BTBS	8,1	PT202820
05AC	9924		283	RHR	R2,R4	PT202830
05AE	C440	7F7F	284	NHI	R4,X*7F7F*	PT202840
05B2	C540	3030	285	CLHI	R4,X*3030*	PT202850
05B6	2133		266	BNES	IOERRA	PT202860
05B8	4330	05E8	287	BE	RENTRY	PT202870
05BC	26F1		288	IOERRA	AIS R15,1	PT202880
05BE	26F1		289	IOERR9	AIS R15,1	PT202890
05C0	26F1		290	IOERR8	AIS R15,1	PT202900
05C2	26F1		291	IOERR7	AIS R15,1	PT202910
05C4	26F1		292	IOERR6	AIS R15,1	PT202920
05C6	26F1		293	IOERR5	AIS R15,1	PT202930
05C8	26F1		294	IOERR4	AIS R15,1	PT202940
05CA	26F1		295	IOERR3	AIS R15,1	PT202950
05CC	26F1		296	IOERR2	AIS R15,1	PT202960
05CE	26F1		297	IOERR1	AIS R15,1	PT202970
05D0	2501		298	IOERR	LCS R0,1	PT202980
05D2	4000	1582	299	STH	R0,IOERHW	PT202990
05D6	4300	145C	300	B	ERROR	PT203000
	0000	05DA	301	PARITY	EQU *	PT203010
05DA	4800	152A	302	LH	R0,TEMP	PT203020
05DE	C400	7F7F	303	NHI	R0,X*7F7F*	PT203030
05E2	4000	152A	304	STH	R0,TEMP	PT203040
05E6	0301		305	BR	R1	PT203050
			306	*		PT203060
			307	*	FLPTNT = FLPT ARITHMETIC FAULT INTERRUPT	PT203070
			308	*		PT203080
			309	*	ILGINT = ILLEGAL INSTRUCTION INTERRUPT	PT203090
			310	*		PT203100
			311	*	MALFTN = MACHINE MALFUNCTION INTERRUPT	PT203110
			312	*		PT203120
			313	*	EXTINT = EXTERNAL INTERRUPT	PT203130
			314	*		PT203140
			315	*	DVDFLT = FIXED POINT DIVIDE FAULT INTERRUPT	PT203150
			316	*		PT203160
			317	*	CHANIO = CHANNEL I/O TERMINATION INTERRUPT	PT203170
			318	*		PT203180
			319	*	QVRFLO = TERMINATION QUEUE OVERFLOW INTERRUPT	PT203190
			320	*		PT203200
			321	*		PT203210
			322	*	SVCERR = INCORRECT SVC INTRPT	PT203220
			323	*		PT203230
			324	*	DEVERR = INCORRECT SERVICE POINTER USED OR	PT203240
			325	*	* = INCORRECT DEV. GENERATED INTRPT.	PT203250
			326	*		PT203260
05E8	41C0	141C	327	RENTRY	BAL R12,CRLF	PT203270

05EC	2430	328	LIS	R3,0		PT203260
05EE	4030 1582	329	STH	R3,IOERHW		PT203290
05F2	4030 002C	330	STH	R3,X'2C'	NEW PSW FLPT ARITH. FAULT INTRPT.	PT203300
05F6	4030 0034	331	STH	R3,X'34'	NEW PSW ILLG. INSTR. INTRPT.	PT203310
05FA	4030 003C	332	STH	R3,X'3C'	NEW PSW MCHN. MALFNTN. INTRPT.	PT203320
05FE	4030 0044	333	STH	R3,X'44'	NEW PSW EXTERNAL INTRPT.	PT203330
0602	4030 004C	334	STH	R3,X'4C'	NEW PSW FXDPT. DIV. FAULT INTRPT.	PT203340
0606	4030 0086	335	STH	R3,X'86'	NEW PSW CHAN. I/O TERM. INTRPT.	PT203350
060A	4030 0090	336	STH	R3,X'90'	NEW PSW TERM. & OVERFLO. INTRPT	PT203360
		337	*			PT203370
		338	*			PT203380
060E	C810 1432	339	LHI	R1,ILGINT	NEW PSW ADDRESS FOR	PT203390
0612	4010 0036	340	STH	R1,X'36'	ILLEGAL INSTR. INTRPT.	PT203400
0616	C810 1436	341	LHI	R1,MALFTN	NEW PSW ADDRESS FOR	PT203410
061A	4010 003E	342	STH	R1,X'3E'	MACHINE MALFUNCTION INTERRUPT	PT203420
061E	C810 143A	343	LHI	R1,EXTINT	NEW PSW ADDRESS FOR	PT203430
0622	4010 0046	344	STH	R1,X'46'	EXTERNAL INTERRUPT	PT203440
0626	C810 142E	345	LHI	R1,FLPTNT	NEW PSW ADDRESS FOR	PT203450
062A	4010 002E	346	STH	R1,X'2E'	FLPT ARITH. FAULT INTRPT.	PT203460
062E	C810 143E	347	LHI	R1,OVDFLT	NEW PSW ADDRESS FOR	PT203470
0632	4010 004E	348	STH	R1,X'4E'	FIXED PT. DIV. FAULT INTRPT.	PT203480
0636	C810 1592	349	LHI	R1,TABLE		PT203490
063A	4010 0080	350	STH	R1,X'80'		PT203500
063E	C810 1442	351	LHI	R1,CHANIO		PT203510
0642	4010 0086	352	STH	R1,X'88'		PT203520
0646	C810 1446	353	LHI	R1,QVRFLO	NEW PSW ADDRESS FOR	PT203530
064A	4010 0092	354	STH	R1,X'92'	TERM. QUEUE OVERFLO INTRPT.	PT203540
		355	*			PT203550
		356	*			PT203560
064E	C800 10F2	357	LHI	R0,BUFR2		PT203570
0652	4000 0022	358	STH	R0,X'22'		PT203580
		359	*			PT203590
0656	C800 144A	360	LHI	R0,SVCERR		PT203600
065A	C840 009C	361	LHI	R4,X'9C'		PT203610
065E	4004 0000	362	STH	R0,0(R4)		PT203620
0662	2642	363	AIS	R4,2		PT203630
0664	C540 00D0	364	CLHI	R4,X'D0'		PT203640
0668	2035	365	BNES	RENTRO		PT203650
		366	*			PT203660
066A	C800 144E	367	LHI	R0,DEVERR	DEVERR = ADDR. FOR	PT203670
066E	4004 0000	368	STH	R0,0(R4)	STORE THIS ADR.	PT203680
0672	2642	369	AIS	R4,2	IN ALL SERVICE POINTERS	PT203690
0674	C540 02D0	370	CLHI	R4,X'2D0'		PT203700
0678	2035	371	BNES	RENTR2		PT203710
		372	*			PT203720
		373	*			PT203730
		374	*	RESET THE TABLE		PT203740
067A	C800 0400	375	LHI	R0,X'400'		PT203750
067E	4000 1592	376	STH	R0,TABLE		PT203760
		377	*			PT203770
		378	*			PT203780
0682	D320 1585	379	LB	R2,OUTDEV		PT203790
0686	DE20 1576	380	OC	R2,OUTCMD		PT203800
068A	C840 1546	381	LHI	R4,SUBTST-2		PT203810
068E	C850 1557	382	LHI	R5,SUBTSTND		PT203820

0692	9D23	383	RENTR1	SSR	R2,R3		PT203830
0694	2091	384		BTBS	9,1		PT203840
0696	9624	385		WBR	R2,R4		PT203850
0698	41E0 13F0	386		BAL	R14,READ1		PT203860
069C	C500 0030	387		CLHI	R0,X'30'	RO = KEY READ FROM TTY	PT203870
06A0	2184	388		BLS	RENTR3	LOOK FOR A NUMERIC KEY	PT203880
06A2	C500 0038	389		CLHI	R0,X'38'	FROM 0 THROU 7	PT203890
06A6	2187	390		BLS	RENTR6		PT203900
06A8	C800 003F	391	KENR3	LHI	R0,C'?'	PRINT ?	PT203910
06AC	41E0 140A	392		BAL	R14,WRITE1		PT203920
06B0	4300 05E8	393		B	RENTRY		PT203930
06B4	D200 1515	394	RENTR6	STB	R0,TESTNO+1		PT203940
06B8	C400 000F	395		NHI	R0,15		PT203950
06BC	D200 1584	396		STB	R0,SUBTNO	SUBTNO = SUBTEST NO. STORED	PT203960
06C0	41E0 13F0	397		BAL	R14,READ1	RO = KEY READ	PT203970
06C4	C500 000D	398		CLHI	R0,X'0D'		PT203980
06C8	4230 06A8	399		BNE	RENTR3		PT203990
06CC	240A	400		LIS	R0,10		PT204000
06CE	41E0 140A	401		BAL	R14,WRITE1		PT204010
06D2	D300 1584	402		LB	R0,SUBTNO		PT204020
06D6	9102	403		SLLS	R0,2		PT204030
06D8	C810 06E8	404		LHI	R1,RENTR8		PT204040
06DC	0A10	405		AHR	R1,R0		PT204050
06DE	C200 06E2	406		LPSW	**4		PT204060
06E2	7C00	407	KPIO1	DC	X'7C00',**2		PT204070
06E4	06E6						
06E6	0301	408		BR	R1		PT204080
06E8	4300 02E0	409	RENTR8	B	PART2		PT204090
06EC	4300 0708	410		B	SUBT1		PT204100
06F0	4300 085E	411		B	SUBT2		PT204110
06F4	4300 0DD8	412		B	SUBT3		PT204120
06F8	4300 0F14	413		B	SUBT4		PT204130
06FC	4300 0F22	414		B	SUBT5		PT204140
0700	4300 1114	415		B	SUBT6		PT204150
0704	4300 12A6	416		B	SUBT7		PT204160
		417	*				PT204170
		418	*				PT204180
		419	*				PT204190
		420	*****				PT204200
		421	*				PT204210
		422	*		TEST INSTRUCTIONS ACK AND ACKR		PT204220
		423	*				PT204230
	0000 0708	424	SUBT1	EQU	*		PT204240
0708	C200 070C	425		LPSW	SUB12		PT204250
070C	2C00	426	SUB12	DC	X'2C00',SUB13		PT204260
070E	0710						
	0000 0710	427	SUB13	EQU	*		PT204270
0710	C800 3231	428		LHI	R0,C'21'	PART2,SUBTEST1	PT204280
0714	4000 1514	429		STH	R0,TESTNO		PT204290
		430	*				PT204300
0718	2400	431		LIS	R0,0		PT204310
071A	2410	432		LIS	R1,0		PT204320
071C	9F01	433		ACKR	R0,R1		PT204330
071E	4340 0734	434		BFC	4,S1RA	ERROR IF OVERFLO = 0	PT204340
0722	0800	435		LHR	R0,R0		PT204350

0724	2138	436		BNZS	S1RA		PT204360
0726	C510 0004	437		CLHI	R1,4		PT204370
072A	2135	438		BNES	S1RA		PT204380
072C	2400	439		LIS	R0,0		PT204390
072E	9F00	440		ACKR	R0,R0		PT204400
0730	4240 073A	441		BTC	4,S1P	ERROR IF OVERFLO = 0	PT204410
0734	24F1	442	S1RA	LIS	R15,1		PT204420
0736	4300 145C	443		B	ERROR		PT204430
073A	C830 3035	444	S1P	LHI	R3,C'05'	LOOK FOR MODEL 5	PT204440
073E	4530 1576	445		CLH	R3,CPUNO		PT204450
0742	2335	446		BES	S1P1		PT204460
0744	C500 0004	447		CLHI	R0,4	IS R0 = 4 = EX. (FALSE SINK)	PT204470
0748	203A	448		BNES	S1RA		PT204480
074A	2303	449		BS	S1P2		PT204490
074C	0800	450	S1P1	LHR	R0,R0	MODEL 5 : IS R0 = 0 ?	PT204500
074E	203D	451		BNZS	S1RA		PT204510
0750	2500	452	S1P2	LCS	R0,0		PT204520
0752	4000 152A	453		STH	R0,TEMP		PT204530
0756	0F00 152A	454		ACK	R0,TEMP		PT204540
075A	4340 0734	455		BFC	4,S1RA		PT204550
075E	0800	456		LHR	R0,R0		PT204560
0760	4230 0734	457		BNZ	S1RA		PT204570
0764	2404	458		LIS	R0,4		PT204580
0766	0400 152A	459		CLB	R0,TEMP	IS TEMP = 4 = EX. (FALSE SINK)	PT204590
076A	4230 0734	460		BNE	S1RA		PT204600
076E	9F22	461		ACKR	R2,R2		PT204610
0770	9F22	462		ACKR	R2,R2		PT204620
0772	0320 1586	463		LB	R2,INDEV		PT204630
0776	0310 1588	464		LB	R1,\$C4	LOAD COMMAND BYTE	PT204640
077A	9E21	465		OCR	R2,R1	TTY IN READ MODE	PT204650
077C	2500	466		LCS	R0,0		PT204660
077E	4000 0040	467		STH	R0,X'40'	OLD PSW EXT. INTRPT.	PT204670
0782	2400	468		LIS	R0,0		PT204680
0784	4000 0044	469		STH	R0,X'44'	NEW PSW EXT. INTRPT.	PT204690
0788	C830 07C6	470		LHI	R3,S1INT		PT204700
078C	4030 0046	471		STH	R3,X'46'		PT204710
0790	0310 1589	472		LB	R1,\$54	LOAD COMMAND BYTE	PT204720
0794	9E21	473		OCR	R2,R1	TTY IN READ MODE	PT204730
0796	4800 157E	474		LH	R0,CRTFLG		PT204740
079A	2332	475		BZS	S1M		PT204750
079C	9F00	476		ACKR	R0,R0		PT204760
079E	9023	477	S1M	SSR	R2,R3	R3 = TTY STATUS	PT204770
07A0	2281	478		BFBS	8,1	WAIT UNTIL TTY BUSY	PT204780
07A2	C200 07A6	479		LPSW	S100		PT204790
07A6	4000	480	S100	OC	X'4000',**2	ENABLE EXT. INT.	PT204800
07A8	07AA						
07AA	0310 158A	481		LB	R1,\$58	LOAD COMMAND BYTE	PT204810
07AE	0320 1585	482		LB	R2,OUTDEV		PT204820
07B2	9E21	483		OCR	R2,R1		PT204830
07B4	9023	484		SSR	R2,R3		PT204840
07B6	2081	485		ETBS	8,1		PT204850
07B8	DA20 1528	486		WD	R2,NULL		PT204860
07BC	41F0 14C0	487		BAL	R15,TSTBRK		PT204870
07C0	24F2	488	S1RB	LIS	R15,2		PT204880
07C2	4300 145C	489		B	ERROR		PT204890

07C6	2500	490	S1INT	LCS	R0,0		PT204900
07C8	2510	491		LCS	R1,0		PT204910
07CA	9F01	492		ACKR	R0,R1		PT204920
07CC	4240 07C0	493		B0	S1RB		PT204930
07D0	0520	494		CLHR	R2,R0	IS R0 = R2 = TTY ADD.	PT204940
07D2	213C	495		BNES	S1RB1		PT204950
07D4	2306	496	TERM2	BS	KPIO2		PT204960
07D6	C510 0010	497		CLHI	R1,X'10'		PT204970
07DA	4230 07EA	498		BNE	S1RB1		PT204980
07DE	2309	499		BS	S1K		PT204990
07E0	0811	500	KPIO2	LHR	R1,R1		PT205000
07E2	2337	501	KPIO3	BZS	S1K		PT205010
07E4	C510 0008	502		CLHI	R1,8		PT205020
07E8	2334	503		BES	S1K		PT205030
07EA	24F3	504	S1RB1	LIS	R15,3		PT205040
07EC	4300 145C	505		B	ERROR		PT205050
07F0	4800 0040	506	S1K	LH	R0,X'40'	OLD PSW EXT. INTRPT.	PT205060
07F4	C400 FFF0	507		NHI	R0,X'FFF0'		PT205070
07F8	C500 4000	508		CLHI	R0,X'4000'	IS IT = 4000 ?	PT205080
07FC	2039	509		BNES	S1RB1		PT205090
07FE	C840 1566	510	S1K.1	LHI	R4,PRBRK	PRINT	PT205100
0802	C850 1573	511		LHI	R5,BRK	PRESS BRK	PT205110
0806	D320 1585	512		LB	R2,OUTDEV		PT205120
080A	DE20 1578	513		OC	R2,OUTCMD		PT205130
080E	9624	514		WBR	R2,R4		PT205140
0810	C800 0838	515		LHI	R0,S1XINT	EXT. INT. ADR.	PT205150
0814	4000 0046	516		STH	R0,X'46'		PT205160
0818	D310 1589	517		LB	R1,\$54	LOAD COMMAND BYTE	PT205170
081C	D320 1586	518		LB	R2,INDEV		PT205180
0820	9E21	519		OCR	R2,R1		PT205190
0822	9D23	520	S1MM	SSR	R2,R3		PT205200
0824	2281	521		BFBS	8,1		PT205210
0826	C200 082A	522		LPSW	S1PP		PT205220
082A	4000	523	S1PP	DC	X'4000',**2		PT205230
082C	082E						
082E	41F0 14B8	524		BAL	R15,TSTBRKC		PT205240
0832	24F4	525	S1R4	LIS	R15,4		PT205250
0834	4300 145C	526		B	ERROR		PT205260
		527	*				PT205270
0838	9F03	528	S1XINT	ACKR	R0,R3		PT205280
083A	9D25	529	S1T	SSR	R2,R5		PT205290
083C	C350 0020	530		THI	R5,X'20'	CHECK FOR BREAK KEY STATUS,,IF NOT	PT205300
0840	4330 0832	531		BZ	S1R4	THEN PRINT ERROR 04	PT205310
0844	0502	532		CLHR	R0,R2		PT205320
0846	203A	533		BNES	S1R4		PT205330
0848	C330 0020	534		THI	R3,X'20'		PT205340
084C	223D	535		BZS	S1R4		PT205350
084E	C8F0 085A	536		LHI	R15,S1END		PT205360
0852	40F0 1110	537		STH	R15,BUFR2+X'1E'		PT205370
0856	4300 14D8	538		B	TSTBRK12		PT205380
085A	4300 1494	539	S1END	B	NOERR		PT205390
		540	*****				PT205400
		541	*			PT205410	
		542	*	THIS SUBJECT CHECKS THE		PT205420	
		543	*			PT205430	

		544	*	LIST INSTRUCTIONS	AND		PT205440
		545	*				PT205450
		546	*	AUTOMATIC INPUT/OUTPUT CHANNEL			PT205460
		547	*				PT205470
		548	*	THIS SUBTEST WILL NOT WORK ON MODEL 74			PT205480
		549	*				PT205490
		550	SUBT2	EQU	*		PT205500
	085E	0880	0894	551	LHI	R11,T13A	PT205510
	0862	C800	0400	552	S2	LHI R0,X'400'	PT205520
	0866	4000	1592	553	STH	R0,TABLE	PT205530
	086A	2400		554	LIS	R0,0	PT205540
	086C	2303		555	BS	SKIP	PT205550
	086E	4030	1592	556	RESTORE	STH R3,TABLE	PT205560
	0872	4000	1594	557	SKIP	STH R0,TABLE+2	PT205570
	0876	4000	1594	558	STH	R0,TABLE+2	PT205580
	087A	4000	1596	559	STH	R0,TABLE+4	PT205590
	087E	4000	1598	560	STH	R0,TABLE+6	PT205600
	0882	4000	159A	561	STH	R0,TABLE+8	PT205610
	0886	4000	159C	562	STH	R0,TABLE+10	PT205620
				563	*		PT205630
	088A	C200	088E	564	LPSW	T13	PT205640
	088E	7C00		565	T13	DC X'7C00',T13B	PT205650
	0890	0892					
	0892	030B		566	T13B	BR R11	PT205660
				567	*		PT205670
	0894	C800	145C	568	T13A	LHI R13,ERROR	PT205680
	0898	24F1		569		LIS R15,1	PT205690
	089A	C800	0400	570	LHI	R0,X'400'	PT205700
	089E	4000	1592	571	STH	R0,TABLE	PT205710
	08A2	2400		572	LIS	R0,0	PT205720
	08A4	4000	1594	573	STH	R0,TABLE+2	PT205730
	08A8	6730	1592	574	RBL	3,TABLE	PT205740
	08AC	034D		575	BFCR	4,R13	PT205750
	08AE	6630	1592	576	RTL	R3,TABLE	PT205760
	08B2	034D		577	BFCR	4,R13	PT205770
	08B4	2401		578	LIS	R0,1	PT205780
	08B6	6400	1592	579	ATL	R0,TABLE	PT205790
	08BA	02FD		580	BTCR	X'F',R13	PT205800
	08BC	2601		581	AIS	R0,1	PT205810
	08BE	6500	1592	582	ABL	R0,TABLE	PT205820
	08C2	02FD		583	BTCR	X'F',R13	PT205830
	08C4	2601		584	AIS	R0,1	PT205840
	08C6	6500	1592	585	ABL	R0,TABLE	PT205850
	08CA	02FD		586	BTCR	X'F',R13	PT205860
	08CC	2601		587	AIS	R0,1	PT205870
	08CE	6500	1592	588	ABL	R0,TABLE	PT205880
	08D2	02FD		589	BTCR	X'F',R13	PT205890
				590	*		PT205900
	08D4	D1C0	1596	591	CHEKTAB	LM R12,TABLE+4	PT205910
	08D8	C5C0	0002	592	CLHI	R12,2	PT205920
	08DC	213A		593	BNES	TAERR	PT205930
	08DE	C500	0003	594	CLHI	R13,3	PT205940
	08E2	2137		595	BNES	TAERR	PT205950
	08E4	C5E0	0004	596	CLHI	R14,4	PT205960
	08E8	2134		597	BNES	TAERR	PT205970

08EA	C5F0	0001	598	CLHI	R15,1		PT205980
08EE	2334		599	BES	CONTIN		PT205990
08F0	24F2		600	TAERR	LIS R15,X'2'		PT206000
08F2	4300	145C	601	B	ERROR		PT206010
			602	*			PT206020
			603	*	THE LIST IS NOW FULL , WITH FOUR ENTRIES		PT206030
			604	*			PT206040
			605	*	1,2,3,4 FROM TOP TO BOTTOM		PT206050
			606	*			PT206060
08F6	C800	145C	607	CONTIN	LHI R13,ERROR		PT206070
08FA	2601		608	AIS	R0,1	RO = 5 NOW	PT206080
08FC	6500	1592	609	ABL	R0,TABLE	ADD TO FULL LIST,TEST OVRFLO	PT206090
0900	034D		610	BFCR	X'4',R13	IS COND CODE V = 1	PT206100
0902	6400	1592	611	ATL	R0,TABLE	OVERFLOW THE LIST AGAIN	PT206110
0906	034D		612	BFCR	X'4',R13	IS COND CODE V = 1	PT206120
0908	6600	1592	613	RTL	R0,TABLE	FETCH TOP ENTRY WHICH IS 1	PT206130
090C	032D		614	BFCR	X'2',R13	IS COND CODE G = 1	PT206140
090E	C500	0001	615	CLHI	R0,1	IS TOP ENTRY REMOVED = 1	PT206150
0912	02FD		616	BTCR	X'F',R13		PT206160
0914	6700	1592	617	RBL	R0,TABLE	FETCH BOTTOM ENTRY WHICH IS 4	PT206170
0918	032D		618	BFCR	X'2',R13	IS COND CODE G = 1	PT206180
091A	C500	0004	619	CLHI	R0,4	IS THE ENTRY REMOVED = 4	PT206190
091E	02FD		620	BTCR	X'F',R13		PT206200
0920	6600	1592	621	RTL	R0,TABLE	FETCH NEW TOP ENTRY (= 2)	PT206210
0924	032D		622	BFCR	2,R13	IS COND CODE G = 1	PT206220
0926	C500	0002	623	CLHI	R0,2	IS THE ENTRY REMOVED = 2	PT206230
092A	02FD		624	BTCR	X'F',R13	IS COND CODE C,V,G,L = 0	PT206240
092C	6700	1592	625	RBL	R0,TABLE	REMOVE THE LAST ENTRY	PT206250
0930	02FD		626	BTCR	X'F',R13	IS COND CODE C,V,G,L = 0	PT206260
0932	C500	0003	627	CLHI	R0,3	IS THE ENTRY REMOVED = 3	PT206270
0936	02FD		628	BTCR	X'F',R13		PT206280
			629	*			PT206290
			630	*	THE LIST IS NOW EMPTY		PT206300
			631	*			PT206310
0938	6700	1592	632	RBL	R0,TABLE	REMOVE FROM EMPTY LIST	PT206320
093C	034D		633	BFCR	4,R13	IS COND CODE V = 1	PT206330
093E	6600	1592	634	RTL	R0,TABLE	REMOVE FROM EMPTY LIST	PT206340
0942	034D		635	BFCR	4,R13		PT206350
0944	C880	0952	636	LHI	R11,CHRBL		PT206360
0948	2400		637	LIS	R0,0		PT206370
094A	C830	0400	638	LHI	R3,X'400'		PT206380
094E	4300	086E	639	B	RESTORE		PT206390
			640	*			PT206400
0952	2421		641	CHRBL	LIS R2,1	CHECK LIST WRAP CONDITION FOR RBL	PT206410
0954	6420	1592	642	ATL	R2,TABLE		PT206420
0958	6720	1592	643	RBL	R2,TABLE		PT206430
095C	D310	1595	644	LB	R1,TABLE+3		PT206440
0960	C510	0003	645	CLHI	R1,3		PT206450
0964	2135		646	BNES	LIS400		PT206460
0966	C880	0978	647	LHI	R11,CHATL		PT206470
096A	4300	086E	648	B	RESTORE		PT206480
			649	*			PT206490
096E	24F3		650	LIS400	LIS R15,3	LIST WRAP ERROR ON RBL INSTRUCTION	PT206500
0970	4300	145C	651	LIERR1	B ERROR		PT206510
0974	24F4		652	LIS401	LIS R15,4	LIST WRAP ERROR ON ATL INSTRUCTION	PT206520

0976	2203	653	BS	LIERR1		PT206530
		654	*			PT206540
0978	6420 1592	655	CHATL	ATL R2, TABLE	CHECK LIST WRAP CONDITION FOR ATL	PT206550
097C	D310 1594	656		LB R1, TABLE+2		PT206560
0980	C510 0003	657		CLHI R1, 3		PT206570
0984	2038	658		BNES LIS041		PT206580
0986	C880 0996	659		LHI R11, CHRTL		PT206590
098A	C830 0402	660		LHI R3, X'0402'		PT206600
098E	C800 0303	661		LHI R0, X'0303'		PT206610
0992	4300 086E	662		B RESTORE		PT206620
		663	*			PT206630
0996	6620 1592	664	CHRTL	RTL R2, TABLE	CHECK LIST WRAP CONDITION FOR RTL	PT206640
099A	D310 1594	665		LB R1, TABLE+2		PT206650
099E	C510 0000	666		CLHI R1, 0		PT206660
09A2	2135	667		BNES LIS040		PT206670
09A4	C880 0986	668		LHI R11, CHABL		PT206680
09A8	4300 086E	669		B RESTORE		PT206690
		670	*			PT206700
09AC	24F5	671	LIS040	LIS R15, 5	LIST WRAP ERROR ON RTL INSTRUCTION	PT206710
09AE	4300 145C	672	LIERR2	B ERROR		PT206720
09B2	24F6	673	LIS041	LIS R15, 6	LIST WRAP ERROR ON ABL INSTRUCTION	PT206730
09B4	2203	674		BS LIERR2		PT206740
		675	*			PT206750
09B6	6520 1592	676	CHABL	ABL R2, TABLE	CHECK LIST WRAP CONDITION FOR ABL	PT206760
09BA	D310 1595	677		LB R1, TABLE+3		PT206770
09BE	C510 0000	678		CLHI R1, 0		PT206780
09C2	2038	679		BNES LIS041	CONCLUSION OF LIST INSTRUCTION TEST	PT206790
		680	*			PT206800
09C4	C8A0 0400	681		LHI R10, X'400'		PT206810
09C8	C880 0101	682		LHI R11, X'0101'		PT206820
09CC	24C2	683		LIS R12, 2		PT206830
09CE	24D3	684		LIS R13, 3		PT206840
09D0	24E4	685		LIS R14, 4		PT206850
09D2	24F1	686		LIS R15, 1		PT206860
09D4	D0A0 1592	687		STM R10, TABLE		PT206870
		688	*			PT206880
09D8	C800 3141	689		LHI R0, C'1A'		PT206890
09DC	4500 1576	690		CLH R0, CPUNO		PT206900
09E0	4330 1494	691		BE NOERR		PT206910
		692	*			PT206920
		693	*	DMT NOT Q , CHAIN , CONTINUE		PT206930
		694	*			PT206940
09E4	C8C0 0A36	695		LHI R12, S21G	CHAIN VALUE	PT206950
09E8	94D2	696		EXBR R13, R2		PT206960
09EA	C8E0 A031	697		LHI R14, X'A031'	1010,0000,0011,0001	PT206970
09EE	24FD	698		LIS R15, 13		PT206980
09F0	D0C0 0D62	699		STM R12, DMT-4		PT206990
09F4	D320 1585	700		LB R2, OUTDEV	R2 = TTY ADDRESS	PT207000
09F8	0872	701		LHR R7, R2	R1 = TTY ADDRESS	PT207010
09FA	9171	702		SLLS R7, 1		PT207020
09FC	CA70 00D0	703		AHI R7, X'D0'	R1 = SERVICE POINTER FOR TTY	PT207030
0A00	C800 0D67	704		LHI R0, DMT+1	STORE ADD. OF DMT+1	PT207040
0A04	4007 0000	705		STH R0, 0(R7)	INTO THE SERVICE POINTER R1	PT207050
0A08	C200 0A0C	706		LPSW S21C		PT207060
0A0C	7E00	707	S21C	DC X'7E00', S21D		PT207070

0A0E	0A10							
0A10	C840	0D9A	708	S21D	LHI	R4,S2BUF1		PT207080
0A14	2400		709		LIS	R0,0		PT207090
0A16	0350	158B	710		LB	R5,\$48	LOAD COMMAND BYTE	PT207100
0A1A	9E25		711		OCR	R2,R5	INTRPTS. ENABLED	PT207110
0A1C	9D23		712	S21E	SSR	R2,R3		PT207120
0A1E	2081		713		BTBS	8,1		PT207130
0A20	0A24	0000	714		WD	R2,0(R4)	WRITE TO TTY WITH INTERRUPTS	PT207140
0A24	2641		715		AIS	R4,1	ENABLED	PT207150
0A26	C540	0DA6	716		CLHI	R4,S2BUF1+12		PT207160
0A2A	2037		717		BNES	S21E		PT207170
			718	*				PT207180
0A2C	9D23		719	S21F	SSR	R2,R3		PT207190
0A2E	2081		720		BTBS	8,1		PT207200
0A30	24F7		721	S2R1	LIS	R15,7		PT207210
0A32	4300	145C	722		B	ERROR		PT207220
0A36	0000		723	S21G	DC	0	OLD PSW	PT207230
0A38	0000		724		DC	0	OLD PSW	PT207240
0A3A	0000		725		DC	0	NEW PSW	PT207250
0A3C	4800	0D68	726		LH	R0,DMT+2	COUNT MUST BE ZERO	PT207260
0A40	4230	0A30	727		BNZ	S2R1		PT207270
0A44	4800	0D66	728		LH	R0,DMT		PT207280
0A48	C500	2031	729		CLHI	R0,X'2031'		PT207290
0A4C	203E		730		BNES	S2R1		PT207300
0A4E	C8C0	0A36	731		LHI	R12,S21G		PT207310
0A52	45C7	0000	732		CLH	R12,0(R7)	CHAIN VALUE AT 0(R7)	PT207320
0A56	4230	0A30	733		BNE	S2R1		PT207330
0A5A	6700	1592	734		RBL	R0,TABLE		PT207340
0A5E	4340	0A30	735		BFC	4,S2R1	NOT Q SO LIST MUST BE MT	PT207350
0A62	9D23		736	S21H	SSR	R2,R3	WAIT UNTIL THE LAST CHAR.	PT207360
0A64	2081		737		BTBS	8,1	IS PRINTED ON THE TTY	PT207370
			738	*				PT207380
0A66	C800	0D73	739		LHI	R0,CCW1+1	RESTORE SERVICE POINTER	PT207390
0A6A	4007	0000	740		STH	R0,0(R7)		PT207400
			741	*				PT207410
			742	*		SET UP CCW1 TO PRINT 1234567890 AND CR,LF		PT207420
			743	*				PT207430
			744	*		NOT G , CHAIN , CONTINUE		PT207440
			745	*				PT207450
0A6E	C8A0	0AA4	746	S22	LHI	R10,S22D	CHAIN VALUE	PT207460
0A72	94B2		747		EXBR	R11,R2	R11 = TTY ADR. , 0	PT207470
0A74	C8C0	9431	748		LHI	R12,X'9431'	1001,0100,0011,0001	PT207480
0A78	C8D0	0D9A	749		LHI	R13,S2BUF1	Q	PT207490
0A7C	C8E0	0DA5	750		LHI	R14,S2BUF1+11		PT207500
0A80	D3F0	158B	751		LB	R15,\$48	LOAD COMMAND BYTE	PT207510
0A84	91F8		752		SLLS	R15,8		PT207520
0A86	C6F0	000A	753		OHI	R15,X'0A'		PT207530
0A8A	D0A0	0D6E	754		STM	R10,CCW1-4		PT207540
0A8E	C200	0A92	755		LPSW	S22B		PT207550
0A92	7E0C		756	S22B	DC	X'7E00',S22A		PT207560
0A94	0A96							
0A96	E202	0000	757	S22A	SINT	0(R2)		PT207570
0A9A	41E0	1394	758		BAL	R14,CIDEL		PT207580
			759	*				PT207590
0A9E	24F8		760	S2R2	LIS	R15,8		PT207600

0AA0	4300	145C	761	B	ERROR		PT207610
0AA4	0000		762	S22D	DC	0	PT207620
0AA6	0000		763		DC	0	PT207630
0AA8	0000		764		DC	0	PT207640
0AAA	4300	0A82	765	TERM3	B	S2D	PT207650
0AAE	C8E0	0210	766		LHI	R11,X'210'	PT207660
	0000	0A82	767	S2D	EQU	*	PT207670
0AB2	45B0	0D70	768		CLH	R11,CCW1-2	PT207680
0AB6	203C		769		BNES	S2R2	PT207690
0AB8	C800	5431	770		LHI	R0,X'5431'	PT207700
0ABC	4500	0D72	771		CLH	R0,CCW1	PT207710
0AC0	4230	0A9E	772		BNE	S2R2	PT207720
0AC4	C8E0	0DA6	773		LHI	R14,S2BUF1+12	PT207730
0AC6	45E0	0D74	774		CLH	R14,CCW1+2	PT207740
0ACC	4230	0A9E	775		BNE	S2R2	PT207750
0AD0	D320	1585	776		LB	R2,OUTDEV	PT207760
0AD4	9D23		777	S22E	SSR	R2,R3	PT207770
0AD6	2081		778		BTBS	8,1	PT207780
0AD8	6600	1592	779		RTL	R0,TABLE	PT207790
0ADC	4340	0A9E	780		BFC	4,S2R2	PT207800
			781	*			PT207810
			782	*			PT207820
			783	*	SET UP CCW1 TO PRINT 123456789 AND CR LF		PT207830
			784	*			PT207840
			785	*	QUEUE , NOT CHAIN , NOT CONTINUE		PT207850
0AE0	C800	0D73	786		LHI	R0,CCW1+1	PT207860
0AE4	4007	0000	787		STH	R0,0(R7)	PT207870
0AE8	C8A0	0B28	788	S23	LHI	R10,S23D	PT207880
			789	*	*		PT207890
0AEC	C8C0	9681	790		LHI	R12,X'9681'	PT207900
0AF0	C8D0	0D9A	791		LHI	R13,S2BUF1	PT207910
0AF4	C8E0	0DA7	792		LHI	R14,S2BUF1+13	PT207920
0AF8	D3F0	1586	793		LB	R15,\$48	PT207930
0AFC	91F8		794		LLS	R15,8	PT207940
0AFE	C6F0	00FF	795		OHI	R15,X'FF'	PT207950
0B02	D0A0	0D6E	796		STM	R10,CCW1-4	PT207960
0B06	C800	0B30	797		LHI	R0,S23E	PT207970
0B0A	4000	0086	798		STH	R0,X'88'	PT207980
0B0E	4200	0000	799		NOP		PT207990
0B12	C200	0B16	800		LPSW	S23A	PT208000
0B16	7E00		801	S23A	DC	X'7E00',S23A2	PT208010
0B18	0B1A						
0B1A	E202	0000	802	S23A2	SINT	0(R2)	PT208020
0B1E	41E0	1394	803		BAL	R14,CIDEL	PT208030
0B22	24F9		804	S2R3	LIS	R15,9	PT208040
0B24	4300	145C	805		B	ERROR	PT208050
0B28	0000		806	S23D	DC	0	PT208060
0B2A	0000		807		DC	0	PT208070
0B2C	0000		808		DC	0	PT208080
0B2E	2206		809		BS	S2R3	PT208090
	0000	0B30	810	S23E	EQU	*	PT208100
	0000	0B30	811	TERM4	EQU	*	PT208110
0B30	2303		812		BS	S23E1	PT208120
0B32	C8B0	0210	813		LHI	R11,X'210'	PT208130
0B36	45B0	0D70	814	S23E1	CLH	R11,CCW1-2	PT208140

CHECK DEV.NO. AND STATUS

NO QUEUED SO LIST MUST BE MT

SET UP CCW1 TO PRINT 123456789 AND CR LF

QUEUE , NOT CHAIN , NOT CONTINUE

R7 = X'D0' + 2(OUTDEV)
CHAIN VALUE
R11 = OUTDEV. , 0
1001,0110,1000,0001

LOAD COMMAND BYTE

Q TERM. INTRPT. TO S23E

0B3A	203C	815	BNES	S2R3		PT208150
0B3C	C800 5681	816	LHI	R0,X'5681'		PT208160
0B40	4500 0D72	817	CLH	R0,CCW1		PT208170
0B44	4230 0822	818	BNE	S2R3		PT208180
0B48	C8E0 0DA7	819	LHI	R14,S2BUF1+13		PT208190
0B4C	45E0 0D74	820	CLH	R14,CCW1+2	START. ADR. = ENDING ADR.	PT208200
0B50	4230 0822	821	BNE	S2R3		PT208210
0B54	6700 1592	822	KBL	R0,TABLE	REMOVE FIRST ENTRY	PT208220
0B58	42F0 0822	823	BTC	X'F',S2R3		PT208230
0B5C	C500 0D72	824	CLHI	R0,CCW1	IS R0 = ADR. OF CCW1	PT208240
0B60	4230 0822	825	BNE	S2R3		PT208250
0B64	4500 1596	826	CLH	R0,TABLE+4		PT208260
0B68	4230 0822	827	BNE	S2R3		PT208270
0B6C	0323 1585	828	LB	R2,OUTDEV		PT208280
0B70	9023	829	SSR	R2,R3		PT208290
0B72	2081	830	BTBS	8,1		PT208300
		831	*			PT208310
		832	*	SET UP CCW1 TO PRINT		PT208320
		833	*			PT208330
		834	*	TOTAL CHAR. = 3		PT208340
		835	*			PT208350
		836	*	TERM. CHAR. = LF		PT208360
		837	*			PT208370
		838	*	QUEUE ,HI/LO = 1,CHAIN,CONTINUE		PT208380
		839	*			PT208390
0B74	C800 0D73	840	S24	LHI	R0,CCW1+1	PT208400
0B78	4007 0000	841		STH	R0,0(R7)	PT208410
		842	*			PT208420
0B7C	C8A0 0BCE	843		LHI	R10,S24IN	PT208430
0B80	94B2	844		EXBR	R11,R2	PT208440
0B82	C8C0 9731	845		LHI	R12,X'9731'	1001,0111,0011,0001
0B86	C8D0 0D9A	846		LHI	R13,S2BUF1	STARTING ADDRESS
0B8A	C8E0 0D9C	847		LHI	R14,S2BUF1+2	ENDING ADDRESS(OF NUM. 3)
0B8E	D3F0 158B	848		LB	R15,\$48	LOAD COMMAND BYTE
0B92	91F8	849		SLLS	R15,8	PT208490
0B94	C6F0 000A	850		OHI	R15,X'0A'	PT208500
0B98	D0A0 0D6E	851		STM	R10,CCW1-4	PT208510
		852	*			PT208520
0B9C	D360 158E	853		LB	R6,\$66	PT208530
0BA0	D320 1586	854		LB	R2,INDEV	PT208540
0BA4	9E26	855		OCR	R2,R6	PT208550
0BA6	9D23	856	S24B	SSR	R2,R3	PT208560
0BA8	2281	857		BFBS	8,1	PT208570
		858	*			PT208580
0BAA	C800 0BD6	859		LHI	R0,S24D	PT208590
0BAE	4000 0088	860		STH	R0,X'88'	PT208600
0BB2	D320 1585	861		LB	R2,OUTDEV	PT208610
0BB6	9F00	862		ACKR	R0,R0	PT208620
0BB8	C200 0B8C	863		LPSW	S24P	PT208630
0BBC	7E00	864	S24P	DC	X'7E00',S24P4	PT208640
0BBE	0BC0					
0BC0	E202 0000	865	S24P4	SINT	0(R2)	PT208650
0BC4	41E0 1394	866		BAL	R14,CIDEL	PT208660
0BC8	24FA	867	S2R4	LIS	R15,X'A'	PT208670
0BCA	4300 145C	868		B	ERROR	PT208680

OBCE	0000	869	S24IN	DC	0		PT208690
OBDO	0000	870		DC	0		PT208700
OB02	0000	871		DC	0		PT208710
OB04	2206	872		ES	S2R4		PT208720
OB06	4800 0D70	873	S24D	LH	R0,CCW1-2		PT208730
OB0A	4810 157E	874		LH	R1,CRTFLG		PT208740
OB0E	233A	875		BZS	TERMS		PT208750
OBEO	D310 1585	876		LB	R1,OUTDEV		PT208760
OB04	9118	877		SLLS	R1,8		PT208770
OB06	C610 0008	878		OHI	R1,X'8'		PT208780
OB0A	0501	879		CLHR	R0,R1		PT208790
OB0C	4230 0BC8	880		BNE	S2R4		PT208800
OB0F	2305	881		BS	S25		PT208810
OBF2	C500 0208	882	TERMS	CLHI	R0,X'208'		PT208820
OBF6	4230 0BC8	883		BNE	S2R4		PT208830
		884	*				PT208840
		885	*	SET UP	CCW1 TO PRINT ON TTY		PT208850
		886	*				PT208860
		887	*	KEEP TTY	BUSY SO COMMAND IS ABORTED		PT208870
		888	*				PT208880
		889	*	KEEP THE	LIST FULL SO ONE MORE ENTRY CAUSES OVERFLOW		PT208890
		890	*				PT208900
		891	*	TAKE	TERMINATION QUEUE-OVERFLO INTERRUPT		PT208910
		892	*				PT208920
OBFA	C800 0404	893	S25	LHI	R0,X'404'	FILL UP THE LIST	PT208930
OBFE	400J 1592	894		STH	R0,TABLE		PT208940
OC02	C8A0 0C52	895		LHI	R10,S25INT		PT208950
OC06	D38J 1585	896		LB	R11,OUTDEV	(DUMMY INDEX REGISTER)	PT208960
OC0A	C8C0 9731	897		LHI	R12,X'9731'	Q,CHN.,NO OUTCMND.	PT208970
OC0E	C8D0 0D9A	898		LHI	R13,S2BUF1		PT208980
OC12	C8E0 0DA6	899		LHI	R14,S2BUF1+12		PT208990
OC16	D3F0 158B	900		LB	R15,\$48	LOAD COMMAND BYTE	PT209000
OC1A	91F8	901		SLLS	R15,8		PT209010
OC1C	C6F0 000A	902		OHI	R15,X'0A'		PT209020
OC20	D0A0 0D72	903		STM	R10,CCW1		PT209030
OC24	D310 158C	904		LB	R1,\$44		PT209040
OC28	9E21	905		OCR	R2,R1		PT209050
OC2A	9D23	906	S25C	SSR	R2,R3	WAITN UNTIL TTY IS BUSY	PT209060
OC2C	2281	907		BFBS	8,1		PT209070
OC2E	C800 0C5E	908		LHI	R0,S25INK	Q OVERFLO ADD.	PT209080
OC32	4000 0092	909		STH	R0,X'92'		PT209090
OC36	C800 0D73	910		LHI	R0,CCW1+1		PT209100
OC3A	4007 0000	911		STH	R0,0(R7)		PT209110
OC3E	C200 0C42	912		LPSW	S25D		PT209120
OC42	7C0J	913	S25D	DC	X'7C00',S25E		PT209130
OC44	0C46						
OC46	E202 0000	914	S25E	SINT	0(R2)		PT209140
OC4A	D310 158C	915		LB	R1,\$44	LOAD COMMAND BYTE	PT209150
OC4E	9E21	916		OCR	R2,R1		PT209160
OC50	2304	917		BS	S2R5		PT209170
OC52	0000	918	S25INT	DC	0		PT209180
OC54	0000	919		DC	0		PT209190
OC56	0000	920		DC	0		PT209200
OC58	24FB	921	S2R5	LIS	R15,X'B'		PT209210
OC5A	4300 145C	922		B	ERROR		PT209220

		923	*			PT209230
		924	*	QUEUE OVERFLO INTERRUPT DETECTED		PT209240
		925	*			PT209250
0C5E	C800 7C00	926	S25INK	LHI R0,X'7C00'		PT209260
0C62	4500 008C	927		CLH R0,X'8C'		PT209270
0C66	2037	928		BNES S2R5		PT209280
0C68	4800 0070	929		LH R0,CCW1-2		PT209290
0C6C	C400 0008	930		NHI R0,8		PT209300
0C70	223C	931		BZS S2R5		PT209310
0C72	2410	932		LIS R1,0	RESET COND. CODE	PT209320
0C74	9500	933		EPSR R0,R0		PT209330
0C76	203F	934		BNZS S2R5		PT209340
		935	*			PT209350
		936	*	RESTORE OVRFLO ADD. FOR ERROR MESSAGE		PT209360
		937	*			PT209370
0C78	C800 0400	938		LHI R0,X'400'		PT209380
0C7C	4000 1592	939		STH R0,TABLE	RESET TABLE	PT209390
0C80	C800 1446	940		LHI R0,QVRFLO		PT209400
0C84	4000 0092	941		STH R0,X'92'		PT209410
		942	*			PT209420
		943	*	SET UP CCW1 TO READ 10 KEYS FROM TTY KEYBOARD		PT209430
		944	*			PT209440
		945	*	NOT Q , CHAIN , CONTINUE		PT209450
		946	*			PT209460
	0000 0C88	947	S26	EQU *		PT209470
0C88	D320 1586	948		LB R2,INDEV		PT209480
0C8C	D18C 10AA	949		LM R11,BUFRO		PT209490
0C90	D080 0DAC	950		STM R11,S2INBF	S2INBF = 0	PT209500
0C94	C800 0073	951		LHI R0,CCW1+1		PT209510
0C98	4007 0000	952		STH R0,0(R7)		PT209520
0C9C	C8A0 001A	953		LHI R10,S26IN	CHAIN VALUE	PT209530
0CA0	9482	954		EXBR R11,R2		PT209540
0CA2	C8C0 84B1	955		LHI R12,X'84B1'	1000,0100,1011,0001	PT209550
0CA6	C8D0 0DAC	956		LHI R13,S2INBF		PT209560
0CAA	C6E0 0DB5	957		LHI R14,S2NBFD		PT209570
0CAE	D3FC 158F	958		LB R15,\$64	LOAD COMMAND BYTE	PT209580
0CB2	91F8	959		SLLS R15,8		PT209590
0CB4	C6F0 0030	960		OHI R15,X'30'		PT209600
0CB8	D0A0 0D6E	961		STM R10,CCW1-4		PT209610
0CBC	D320 1585	962		LB R2,OUTDEV		PT209620
0CC0	DE20 1578	963		OC R2,OUTCMD		PT209630
0CC4	C840 0DBC	964		LHI R4,S26MSG	PRINT CHARACTERS	PT209640
0CC8	C850 0DD7	965		LHI R5,S26MSD	DEPRESS KEYS	PT209650
JCCC	9023	966	S26C	SSR R2,R3	1234567890	PT209660
0CCE	2081	967		BTBS 8,1		PT209670
0CD0	9624	968		WBR R2,R4		PT209680
0CD2	D320 1585	969		LB R2,OUTDEV		PT209690
0CD6	0872	970		LHR R7,R2		PT209700
0CD8	9171	971		SLLS R7,1		PT209710
0CDA	CA70 00D0	972		AHI R7,X'D0'		PT209720
0CDE	C800 144E	973		LHI R0,DEVERR		PT209730
0CE2	4007 0000	974		STH R0,0(R7)		PT209740
0CE6	D320 1586	975		LB R2,INDEV		PT209750
0CEA	0872	976		LHR R7,R2		PT209760
0CEC	9171	977		SLLS R7,1		PT209770

0CEE	CA70 00D0	978	AHI	R7,X'D0'	PT209780
0CF2	C800 0D73	979	LHI	R0,CCW1+1	PT209790
0CF6	4007 0000	980	STH	R0,0(R7)	PT209800
0CFA	D310 158F	981	LB	R1,S64	PT209810
0CFE	9E21	982	OCR	R2,R1	PT209820
0D00	9D23	983	SSR	R2,R3	PT209830
0D02	2281	984	BFBS	8,1	PT209840
0D04	C200 0D08	985	LPSW	S26E	PT209850
0D08	7C00	986	DC	X'7C00',S26F	PT209860
0D0A	0D0C				
0D0C	E202 0000	987	S26F	SINT 0(R2)	PT209870
0D10	41FD 1488	988	BAL	R15,TSTBRKC	PT209880
0D14	24FC	989	S2R6	LIS R15,X'C'	PT209890
0D16	4300 145C	990	B	ERROR	PT209900
		991	*		PT209910
0D1A	0000	992	S26IN	DC 0	PT209920
0D1C	0000	993		DC 0	PT209930
0D1E	0000	994		DC 0	PT209940
0D20	0100 0DAC	995	LM	R0,S2INBF	PT209950
0D24	C400 7F7F	996	NHI	R0,X'7F7F'	PT209960
0D28	C500 3132	997	CLHI	R0,C'12'	PT209970
0D2C	203C	998	BNES	S2R6	PT209980
0D2E	C410 7F7F	999	NHI	R1,X'7F7F'	PT209990
0D32	C510 3334	1000	CLHI	R1,C'34'	PT210000
0D36	4230 0D14	1001	BNE	S2R6	PT210010
0D3A	C420 7F7F	1002	NHI	R2,X'7F7F'	PT210020
0D3E	C520 3536	1003	CLHI	R2,C'56'	PT210030
0D42	4230 0D14	1004	BNE	S2R6	PT210040
0D46	C430 7F7F	1005	NHI	R3,X'7F7F'	PT210050
0D4A	C530 3738	1006	CLHI	R3,C'78'	PT210060
0D4E	4230 0D14	1007	BNE	S2R6	PT210070
0D52	C440 7F7F	1008	NHI	R4,X'7F7F'	PT210080
0D56	C540 3930	1009	CLHI	R4,C'90'	PT210090
0D5A	4230 0D14	1010	BNE	S2R6	PT210100
0D5E	4300 1494	1011	B	NOERR	PT210110
		1012	*		PT210120
		1013	*		PT210130
		1014	*	SUBTEST 2 DATA CONSTANTS	PT210140
		1015	*		PT210150
		1016	*		PT210160
0D62	0000	1017	DC	0	PT210170
0D64	0000	1018	DC	0	CHAIN VALUE
0D66	A0B1	1019	DMT	DC X'A0B1'	DEV. = TTY , STATUS
0D68	0000	1020	DC	0	PT210180
0D6A	0000	1021	DC	0	TOTAL COUNT =
0D6C	0000	1022	DC	0	DUMMY HW
0D6E	0000	1023	DC	0	DUMMY
0D70	0000	1024	DC	0	CHAIN VALUE
0D72	0000	1025	CCW1	DC 0	DEV.NO. , FINAL STATUS
0D74	0000	1026	DC	0	C.C.WORD 1
0D76	0000	1027	DC	0	START ADR.
0D78	0000	1028	DC	0	END ADR.
0D7A	0000	1029	DC	0	CMND. BYTE , TERM.CHAR.
		1030	*		DUMMY
0D7C	0000	1031	DC	0	PT210290
					PT210300
					PT210310

0D7E	0000	1032	CCW2	DC	0	DEV. NO. , FINAL STATUS	PT210320	
0D80	0000	1033		DC	0	C.C.WORD 2	PT210330	
0D82	0000	1034		DC	0	START ADR.	PT210340	
0D84	0000	1035		DC	0	END ADR.	PT210350	
0D86	0000	1036		DC	0	CMND. BYTE , TERM. CHAR.	PT210360	
0D88	0000	1037		DC	0	DUMMY	PT210370	
		1038	*				PT210380	
0D8A	0000	1039		DC	0	CHAIN VALUE	PT210390	
0D8C	0000	1040		DC	0	DEV. NO. , STATUS	PT210400	
0D8E	0000	1041	CCW3	DC	0	COMMAND WORD	PT210410	
0D90	0000	1042		DC	0	STARTING ADDRESS	PT210420	
0D92	0000	1043		DC	0	END ADDRESS	PT210430	
0D94	0000	1044		DC	0	COMND. BYTE , TERM. CHAR.	PT210440	
0D96	0000	1045		DC	0	DUMMY	PT210450	
		1046	*				PT210460	
0D98	4142	1047		DC	C'AB'		PT210470	
0D9A	3132	1048	S2BUF1	DC	C'12'		PT210480	
0D9C	3334	1049		DC	C'34'		PT210490	
0D9E	3536	1050		DC	C'56'		PT210500	
0DA0	3738	1051		DC	C'78'		PT210510	
0DA2	3930	1052		DC	C'90'		PT210520	
0DA4	0D0A	1053		DC	X'D0A'		PT210530	
0DA6	FFFF	1054		DCX	FFFF		PT210540	
UDA8	4344	1055		DC	C'CD'		PT210550	
		1056	*				PT210560	
		1057	*				PT210570	
0DAA	0000	1058		DC	0		PT210580	
0DAC	0000	1059	S2INRF	DC	0		PT210590	
0DAE	0000	1060		DC	0		PT210600	
0DB0	0000	1061		DC	0		PT210610	
0DB2	0000	1062		DC	0		PT210620	
0DB4	0000	1063		DC	0		PT210630	
	0000 0DB5	1064	S2NBFD	EQU	*-1		PT210640	
0DB6	0000	1065		DC	0		PT210650	
		1066	*				PT210660	
0DB8	0DBC	1067	WBSTRT	DC	S26MSG		PT210670	
0DBA	0DD7	1068		DC	S26MSD		PT210680	
	0000 0DBC	1069	S26MSG	EQU	*		PT210690	
0DBC	4445 5052 4553 5320	1070		DC	C'DEPRESS KEYS'		PT210700	
0DC4	4B45 5953							
0DC8	0D0A	1071		DC	X'D0A'		PT210710	
0DCA	3132 3334 3536 3738	1072		DC	C'1234567890'		PT210720	
0DD2	3930							
0DD4	0D0A	1073		DC	X'D0A'		PT210730	
0DD6	FFFF	1074		DCX	FFFF		PT210740	
	0000 0DD7	1075	S26MSD	EQU	*-1		PT210750	
		1076	*				PT210760	
		1077	*****					PT210770
		1078	*				PT210780	
		1079	*	TEST 3			PT210790	
		1080	*				PT210800	
		1081	*	THIS TEST EXERCISES THE BINARY DISPLAY PANEL			PT210810	
		1082	*				PT210820	
		1083	*				PT210830	
0DD8	C800 0041	1084	SUBT3	LHI	RO,C'A'	PRINTA	PT210840	

ODDC	D320 1585	1085		LB	R2,OUTDEV		PT210850
ODE0	41E0 140A	1086		BAL	R14,WRITE1		PT210860
		1087	*				PT210870
ODE4	2411	1088	S31	LIS	R1,1	R1 = 1 = CONSOLE ADDRESS	PT210880
ODE6	C880 0080	1089		LHI	R8,X'80'	CONSOLE IN NORMAL MODE	PT210890
ODEA	9E18	1090		OCR	R1,R8	R8 = 80	PT210900
ODEC	9D14	1091	S31A	SSR	R1,R4	R4 = CONSOLE STATUS	PT210910
ODEE	9A14	1092		WDR	R1,R4		PT210920
ODF0	C890 0E02	1093		LHI	R9,S32		PT210930
ODF4	41E0 136E	1094		BAL	R14,BIDEL		PT210940
ODF8	DA10 0F12	1095		WD	R1,ZERO		PT210950
ODFC	41E0 136E	1096		BAL	R14,BIDEL		PT210960
OE00	220A	1097		BS	S31A		PT210970
		1098	*				PT210980
OE02	C800 0042	1099	S32	LHI	R0,C'B'	PRINT B	PT210990
OE06	41E0 140A	1100		BAL	R14,WRITE1		PT211000
OE0A	9914	1101	S32B	RHR	R1,R4	R4 = CONSOLE SWITCHES	PT211010
OE0C	9814	1102		WHR	R1,R4		PT211020
OE0E	C890 0E20	1103		LHI	R9,S33		PT211030
OE12	41E0 136E	1104		BAL	R14,BIDEL		PT211040
OE16	D810 0F12	1105		WH	R1,ZERO		PT211050
OE1A	41E0 136E	1106		BAL	R14,BIDEL		PT211060
OE1E	220A	1107		BS	S32B		PT211070
		1108	*				PT211080
OE20	C800 0043	1109	S33	LHI	R0,C'C'	PRINT C	PT211090
OE24	41E0 140A	1110		BAL	R14,WRITE1		PT211100
OE28	C890 0040	1111	S33A	LHI	R9,X'40'	CONSOLE IN INCRE. MODE	PT211110
OE2C	9E19	1112		OCR	R1,R9	R9 = 40	PT211120
OE2E	9B14	1113		RDR	R1,R4	R4 = SWITCHES 8 THRU 15	PT211130
OE30	9B15	1114		RDR	R1,R5	R5 = SWITCHES 0 THRU 7	PT211140
OE32	9E19	1115		OCR	R1,R9		PT211150
OE34	9A14	1116		WDR	R1,R4		PT211160
OE36	9A15	1117		WDR	R1,R5		PT211170
OE38	9A14	1118		WDR	R1,R4		PT211180
OE3A	9A15	1119		WDR	R1,R5		PT211190
OE3C	C890 0E5E	1120		LHI	R9,S34		PT211200
OE40	41E0 136E	1121		BAL	R14,BIDEL		PT211210
OE44	C890 0040	1122		LHI	R9,X'40'		PT211220
OE48	9E19	1123		OCR	R1,R9		PT211230
OE4A	D810 0F12	1124		WH	R1,ZERO		PT211240
OE4E	D810 0F12	1125		WH	R1,ZERO		PT211250
OE52	C890 0E5E	1126		LHI	R9,S34		PT211260
OE56	41E0 136E	1127		BAL	R14,BIDEL		PT211270
OE5A	4300 0E28	1128		B	S33A		PT211280
		1129	*				PT211290
OE5E	C800 0044	1130	S34	LHI	R0,C'D'	PRINT D	PT211300
OE62	41E0 140A	1131		BAL	R14,WRITE1		PT211310
OE66	C890 0040	1132	S34A	LHI	R9,X'40'		PT211320
OE6A	9E19	1133		OCR	R1,R9	CONSOLE IN INCRE. MODE	PT211330
OE6C	9B14	1134		RDR	R1,R4		PT211340
OE6E	9A14	1135		WDR	R1,R4		PT211350
OE70	C890 0E92	1136		LHI	R9,S35		PT211360
OE74	41E0 136E	1137		BAL	R14,BIDEL		PT211370
OE78	C890 0040	1138		LHI	R9,X'40'		PT211380
OE7C	9E19	1139		OCR	R1,R9		PT211390

0E7E	DA10 0F12	1140	WD	R1,ZERO		PT211400	
0E82	DA10 0F12	1141	WD	R1,ZERO		PT211410	
0E86	C890 0E92	1142	LHI	R9,S35		PT211420	
0E8A	41E0 136E	1143	BAL	R14,BIDEL		PT211430	
0E8E	4300 0E66	1144	B	S34A		PT211440	
		1145	*			PT211450	
0E92	C800 0045	1146	S35	LHI R0,C'E'	PRINT E	PT211460	
0E96	41E0 140A	1147	BAL	R14,WRITE1		PT211470	
0E9A	C890 J040	1148	S35A	LHI R9,X'40'		PT211480	
0E9E	9E19	1149	OCR	R1,R9	CONSOLE IN INCRE. MODE	PT211490	
0EA0	9914	1150	RHR	R1,R4		PT211500	
0EA2	9915	1151	RHR	R1,R5		PT211510	
0EA4	DE10 0009	1152	OC	R1,R9		PT211520	
0EA8	9814	1153	WHR	R1,R4		PT211530	
0EAA	9815	1154	WHR	R1,R5		PT211540	
0EAC	C890 0ECE	1155	LHI	R9,S36		PT211550	
0EB0	41E0 136E	1156	BAL	R14,BIDEL		PT211560	
0EB4	C890 0040	1157	LHI	R9,X'40'		PT211570	
0EB8	9E19	1158	OCR	R1,R9		PT211580	
0EBA	D810 0F12	1159	WH	R1,ZERO		PT211590	
0EBE	D810 0F12	1160	WH	R1,ZERO		PT211600	
0EC2	C890 0ECE	1161	LHI	R9,S36		PT211610	
0EC6	41E0 136E	1162	BAL	R14,BIDEL		PT211620	
0ECA	4300 0E9A	1163	B	S35A		PT211630	
0ECE	C800 0046	1164	S36	LHI R0,C'F'	PRINT F	PT211640	
0ED2	41E0 140A	1165	BAL	R14,WRITE1		PT211650	
0ED6	C860 0F0E	1166	S36C	LHI R6,S3BUF		PT211660	
0EDA	C870 0F11	1167	LHI	R7,S3BUF+3		PT211670	
0EDE	C880 0080	1168	LHI	R8,X'80'		PT211680	
0EE2	9E18	1169	S36B	OCR R1,R8	CONSOLE IN NORMAL MODE	PT211690	
0EE4	9716	1170	RBR	R1,R6	CONSOLE SWITCHES INTO S3BUF	PT211700	
0EE6	9616	1171	WBR	R1,R6		PT211710	
0EE8	C690 0F0A	1172	LHI	R9,S3END		PT211720	
0EEC	41E0 136E	1173	BAL	R14,BIDEL		PT211730	
0EF0	C890 0040	1174	LHI	R9,X'40'		PT211740	
0EF4	9E19	1175	OCR	R1,R9		PT211750	
0EF6	D810 0F12	1176	WH	R1,ZERO		PT211760	
0EFA	D810 0F12	1177	WH	R1,ZERO		PT211770	
0EFE	C890 0F0A	1178	LHI	R9,S3END		PT211780	
0F02	41E0 136E	1179	BAL	R14,BIDEL		PT211790	
0F06	4300 0ED6	1180	B	S36C		PT211800	
		1181	*			PT211810	
0F0A	4300 05E8	1182	S3END	B RENTRY		PT211820	
0F0E	0000	1183	S3BUF	DC 0		PT211830	
0F10	0000	1184		DC 0		PT211840	
0F12	0000	1185	ZERO	DC 0		PT211850	
		1186	*****				PT211860
	0000 0F14	1187	SUBT4	EQU *		PT211870	
		1188	*	THIS SUBTEST CHECKS INITIALIZE/POWER FAIL/AUTO RESTART		PT211880	
		1189	*	MACHINE MALFUNCTION INTERRUPT IS DISABLED.		PT211890	
		1190	*			PT211900	
0F14	2400	1191	LIS	R0,0		PT211910	
0F16	4000 1112	1192	STH	R0,S4MM	S4MM = 0 : MMINT DISABLED	PT211920	
0F1A	C200 0F1E	1193	LPSW	S4A		PT211930	
0F1E	5C00	1194	S4A	DC X'5C00',S45B		PT211940	

0F20	0F30	1195	*			PT211950
		1196	*			PT211960
		1197	*****			PT211970
	0000 0F22	1198	SUBT5	EQU *		PT211980
		1199	*	THIS SUBTEST CHECKS INITIALIZE/POWER FAIL/AUTO RESTART		PT211990
		1200	*	MACHINE MALFUNCTION INTERRUPT IS ENABLED.		PT212000
		1201	*			PT212010
		1202	*	NOTE: THIS TEST CAN BE RUN ONLY IF PROCESSOR IS EQUIPPED		PT212020
		1203	*	WITH AUTO-RESTART.		PT212030
		1204	*			PT212040
0F22	2501	1205		LCS R0,1		PT212050
0F24	4000 1112	1206		STH R0,S4MM	S4MM = FFFF : MMINT ENABLED.	PT212060
0F28	C200 0F2C	1207		LPSW S5A		PT212070
0F2C	7C00	1208	S5A	DC X'7C00',S45B		PT212080
0F2E	0F30					
		1209	*			PT212090
		1210	*	THE FOLLOWING IS COMMON CODE FOR SUBTESTS 4 AND 5.		PT212100
		1211	*			PT212110
0F30	C800 0FFC	1212	S45B	LHI R0,S4INT		PT212120
0F34	4000 003E	1213		STH R0,X'3E'	MMINT NEW PSW LOC	PT212130
0F38	C800 10F2	1214		LHI R0,BUFR2		PT212140
0F3C	4000 0022	1215		STH R0,X'22'	PPF REGISTER SAVE POINTER	PT212150
0F40	D100 10AA	1216		LM R0,BUFR0	ALL REGS = 0	PT212160
0F44	D000 10F2	1217		STM R0,BUFR2	INITIALIZE SAVE AREA	PT212170
0F48	4000 0024	1218		STH R0,X'24'	CURRENT PSW PPF SAVE AREA	PT212180
0F4C	4000 0026	1219		STH R0,X'26'	CURRENT PSW PPF SAVE AREA	PT212190
0F50	4000 0038	1220		STH R0,X'38'	MMINT OLD PSW STATUS	PT212200
0F54	4000 003A	1221		STH R0,X'3A'	MMINT OLD PSW LOC	PT212210
0F58	4000 003C	1222		STH R0,X'3C'	MMINT NEW PSW STATUS	PT212220
		1223	*			PT212230
0F5C	D320 1585	1224	S45C	LB R2,OUTDEV		PT212240
0F60	C840 1558	1225		LHI R4,PRESS		PT212250
0F64	C850 1573	1226		LHI R5,BRK		PT212260
0F68	9624	1227		WBR R2,R4	'PRESS INIT PRESS BRK'	PT212270
		1228	*			PT212280
0F6A	D100 10CA	1229		LM R0,BUFR1	SET SINGLE BIT IN EACH REGISTER	PT212290
0F6E	41F0 1052	1230	S4B	BAL R15,CMPARE	CHECK REGISTERS	PT212300
0F72	2334	1231		BES S4B4		PT212310
		1232	*			PT212320
0F74	24F1	1233	S4R1	LIS R15,1	REGISTERS CHANGED *****	PT212330
0F76	4300 145C	1234		B ERROR		PT212340
		1235	*			PT212350
	0000 0F7A	1236	S4B4	EQU *		PT212360
0F7A	D320 1586	1237		LB R2,INDEV		PT212370
0F7E	9D20	1238		SSR R2,R0		PT212380
0F80	C300 0020	1239		THI R0,X'20'		PT212390
0F84	2134	1240		BNZS S4B6		PT212400
0F86	2422	1241		LIS R2,2		PT212410
0F88	2400	1242		LIS R0,0		PT212420
0F8A	220E	1243		BS S4B	P	PT212430
	0000 0F8C	1244	S4B6	EQU *		PT212440
0F8C	D320 1586	1245		LB R2,INDEV		PT212450
0F90	9D23	1246		SSR R2,R3		PT212460
0F92	C8F0 0F9E	1247		LHI R15,S4B61		PT212470

102A	1004	1303	*	EXECUTE A 1-MS DELAY BEFORE POWER RESTORE INTERRUPT TAKEN.	PT213030
		1304	*	IF NO INTERRUPT, ERROR 2604 RESULTS.	PT213040
		1305	*		PT213050
102C	9500	1306	S5INT2	EPSR R0,R0	PT213060
102E	4000 1050	1307		STH R0,S5PSW2	PT213070
1032	C800 1436	1308		LHI R0,HALFTN	PT213080
1036	4000 003E	1309		STH R0,X'3E'	PT213090
103A	2400	1310		LIS R0,0	PT213100
103C	2422	1311		LIS R2,2	PT213110
103E	4300 0F6E	1312		B S48	PT213120
		1313	*		PT213130
1042	24F5	1314	S5R5	LIS R15,5	PT213140
1044	4300 145C	1315		B ERROR	PT213150
		1316	*		PT213160
1048	24F6	1317	S5R6	LIS R15,6	PT213170
104A	4300 145C	1318		B ERROR	PT213180
		1319	*		PT213190
104E	0000	1320	S5PSW1	DCX 0	PT213200
1050	0000	1321	S5PSW2	DCX 0	PT213210
		1322	*		PT213220
		1323	*		PT213230
1052	0800	1324	CMPARE	LHR R0,R0	PT213240
1054	023F	1325		BNZR R15	PT213250
1056	C510 0001	1326		CLHI R1,1	PT213260
105A	023F	1327		BNER R15	PT213270
105C	C520 0002	1328		CLHI R2,2	PT213280
1060	023F	1329		BNER R15	PT213290
1062	C530 0004	1330		CLHI R3,4	PT213300
1066	023F	1331		BNER R15	PT213310
1068	C540 0008	1332		CLHI R4,8	PT213320
106C	023F	1333		BNER R15	PT213330
106E	C550 0010	1334		CLHI R5,16	PT213340
1072	023F	1335		BNER R15	PT213350
1074	C560 0020	1336		CLHI R6,X'20'	PT213360
1078	023F	1337		BNER R15	PT213370
107A	C570 0040	1338		CLHI R7,X'40'	PT213380
107E	023F	1339		BNER R15	PT213390
1080	C580 0080	1340		CLHI R8,X'80'	PT213400
1084	023F	1341		BNER R15	PT213410
1086	C590 0100	1342		CLHI R9,X'100'	PT213420
108A	023F	1343		BNER R15	PT213430
108C	C5A0 0200	1344		CLHI R10,X'200'	PT213440
1090	023F	1345		BNER R15	PT213450
1092	C5B0 0400	1346		CLHI R11,X'400'	PT213460
1096	023F	1347		BNER R15	PT213470
1098	C5C0 0800	1348		CLHI R12,X'800'	PT213480
109C	023F	1349		BNER R15	PT213490
109E	C5D0 1000	1350		CLHI R13,X'1000'	PT213500
10A2	023F	1351		BNER R15	PT213510
10A4	C5E0 2000	1352		CLHI R14,X'2000'	PT213520
10A8	030F	1353		BR R15	PT213530
		1354	*		PT213540
10AA	0000	1355	BUFR0	DC 0	PT213550
10AC	0000	1356		DC 0	PT213560

10AE	0000	1357	DC	0	PT213570
10B0	0000	1358	DC	0	PT213580
10B2	0000	1359	DC	0	PT213590
10B4	0000	1360	DC	0	PT213600
10B6	0000	1361	DC	0	PT213610
10B8	0000	1362	DC	0	PT213620
10BA	0000	1363	DC	0	PT213630
10BC	0000	1364	DC	0	PT213640
10BE	0000	1365	DC	0	PT213650
10C0	0000	1366	DC	0	PT213660
10C2	0000	1367	DC	0	PT213670
10C4	0000	1368	DC	0	PT213680
10C6	0000	1369	DC	0	PT213690
10C8	0000	1370	DC	0	PT213700
10CA	0000	1371	DC	0	PT213710
10CC	0001	1372	DC	1	PT213720
10CE	0002	1373	DC	2	PT213730
10D0	0004	1374	DC	4	PT213740
10D2	0008	1375	DC	8	PT213750
10D4	0010	1376	DC	16	PT213760
10D6	0020	1377	DC	32	PT213770
10D8	0040	1378	DC	64	PT213780
10DA	0080	1379	DC	128	PT213790
10DC	0100	1380	DC	X'100'	PT213800
10DE	0200	1381	DC	X'200'	PT213810
10E0	0400	1382	DC	X'400'	PT213820
10E2	0800	1383	DC	X'800'	PT213830
10E4	1000	1384	DC	X'1000'	PT213840
10E6	2000	1385	DC	X'2000'	PT213850
10E8	4000	1386	DC	X'4000'	PT213860
10EA	8000	1387	DC	X'8000'	PT213870
10EC	0000	1388	DC	0	PT213880
		1389	*		PT213890
		1390	*		PT213900
10EE	10F2	1391	DC	BUFR2	PT213910
10F0	10F9	1392	DC	BUFR2+7	PT213920
10F2	0000	1393	DC	0	PT213930
10F4	0000	1394	DC	0	PT213940
10F6	0000	1395	DC	0	PT213950
10F8	0000	1396	DC	0	PT213960
10FA	0000	1397	DC	0	PT213970
10FC	0000	1398	DC	0	PT213980
10FE	0000	1399	DC	0	PT213990
1100	0000	1400	DC	0	PT214000
1102	0000	1401	DC	0	PT214010
1104	0000	1402	DC	0	PT214020
1106	0000	1403	DC	0	PT214030
1108	0000	1404	DC	0	PT214040
110A	0000	1405	DC	0	PT214050
110C	0000	1406	DC	0	PT214060
110E	0000	1407	DC	0	PT214070
1110	0000	1408	DC	0	PT214080
		1409	*		PT214090
1112	0000	1410	DC	0	PT214100
		1411	*		PT214110

BUFFER FOR READING DATA
AND STORING REGISTERS

0000	1113	1412	S5MM	EQU	*-1		PT214120	
		1413	*				PT214130	
		1414	*****					PT214140
		1415	*				PT214150	
		1416	*	TEST	6		PT214160	
		1417	*				PT214170	
		1418	*	THIS TEST EXERCISES THE HEXIDECIMAL DISPLAY PANEL			PT214180	
		1419	*				PT214190	
1114	D320 1585	1420	SUBT6	LB	R2,OUTDEV	TEST FOR EXTENDED DISPLAY	PT214200	
1118	C800 0041	1421		LHI	R0,C'A'	PRINT CHARACTER A	PT214210	
111C	41E0 140A	1422		BAL	R14,WRITE1		PT214220	
		1423	*			OUTPUT TO DISPLAY CONSOLE STATUS	PT214230	
1120	2411	1424	S61	LIS	R1,1	R1 = 1 = CONSOLE ADR	PT214240	
1122	C880 008C	1425		LHI	R8,X'80'	R8 = X'80' = NORMAL MODE	PT214250	
1126	9E18	1426		OCR	R1,R8	NORMAL MODE	PT214260	
1128	9D14	1427	S61A	SSR	R1,R4	R4 = CONSOLE STATUS	PT214270	
112A	9A14	1428		WDR	R1,R4	DISPLAY CONSOLE STATUS, RT 2 HEX DIGIT	PT214280	
112C	C890 1140	1429		LHI	R9,S62		PT214290	
1130	41E0 1346	1430		BAL	R14,DELAY		PT214300	
1134	2440	1431		LIS	R4,0		PT214310	
1136	9A14	1432		WDR	R1,R4		PT214320	
1138	41E0 1346	1433		BAL	R14,DELAY		PT214330	
113C	4300 1120	1434		B	S61		PT214340	
		1435	*				PT214350	
		1436	*			OUTPUT TO DISPLAY	PT214360	
		1437	*			ALL ZERO ALTERNATED WITH X'FFFF'	PT214370	
		1438	*			TEST LAMPS	PT214380	
1140	C800 0042	1439	S62	LHI	R0,C'B'	PRINT CHARACTER B	PT214390	
1144	41E0 140A	1440		BAL	R14,WRITE1		PT214400	
1148	C880 0040	1441		LHI	R8,X'40'	INCREMENTAL MODE	PT214410	
114C	0700	1442	S62A	XHR	R0,R0	CLEAR R0	PT214420	
114E	9E18	1443	S62B	OCR	R1,R8		PT214430	
1150	9A10	1444		WDR	R1,R0	OUTPUT TO DISPLAR 1	PT214440	
1152	9A10	1445		WDR	R1,R0	OUTPUT TO DISPLAR 2	PT214450	
1154	9A10	1446		WDR	R1,R0	OUTPUT TO DISPLAR 3	PT214460	
1156	9A10	1447		WDR	R1,R0	OUTPUT TO DISPLAR 4	PT214470	
1158	9A10	1448		WDR	R1,R0	OUTPUT TO DISPLAR 5	PT214480	
115A	C890 1172	1449		LHI	R9,S63	NEXT TEST	PT214490	
115E	41E0 1346	1450		BAL	R14,DELAY		PT214500	
1162	C900 FFFF	1451	S62E	CHI	R0,X'FFFF'		PT214510	
1166	4330 114C	1452		BE	S62A		PT214520	
116A	C800 FFFF	1453		LHI	R0,X'FFFF'		PT214530	
116E	4300 114E	1454		B	S62B		PT214540	
		1455	*				PT214550	
		1456	*			OUTPUT COUNTER TO DISPLAY	PT214560	
		1457	*			TEST CONSOLE SHIFT REGISTERS	PT214570	
1172	C800 0043	1458	S63	LHI	R0,C'C'	PRINT CHARACTER C	PT214580	
1176	41E0 140A	1459		BAL	R14,WRITE1		PT214590	
117A	C840 11E4	1460		LHI	R4,DISBUF	LOAD R4 & R5 WITH DISPLAY BUFFER	PT214600	
117E	C650 11E8	1461		LHI	R5,DISBUF+4	WITH LOWER AND UPER LIMITS	PT214610	
1182	C800 1032	1462		LHI	R0,X'1032'	LOAD DATA INTO DISPLAY BUFFER	PT214620	
1186	4000 11E4	1463		STH	R0,DISBUF		PT214630	
118A	C800 5476	1464		LHI	R0,X'5476'		PT214640	
118E	4000 11E6	1465		STH	R0,DISBUF+2		PT214650	
1192	C800 9800	1466		LHI	R0,X'9800'		PT214660	

1196	4000 11E8	1467		STH	R0,DISBUF+4		PT214670
119A	9E18	1468	S63A	OCR	R1,R8	OUTPUT CMD TO RESET DISPLAY	PT214680
119C	DA14 0000	1469		WD	R1,0(R4)	OUTPUT DISPLAY 1	PT214690
11A0	DA14 0001	1470		WD	R1,1(R4)	OUTPUT DISPLAY 2	PT214700
11A4	DA14 0002	1471		WD	R1,2(R4)	OUTPUT DISPLAY 3	PT214710
11A8	DA14 0003	1472		WD	R1,3(R4)	OUTPUT DISPLAY 4	PT214720
11AC	DA14 0004	1473		WD	R1,4(R4)	OUTPUT DISPLAY 5	PT214730
11B0	C890 11EA	1474		LHI	R9,S64	NEXT TEST	PT214740
11B4	41E0 1346	1475		BAL	R14,DELAY	WAIT FOR DELAY TIME OUT	PT214750
11B8	C880 11E4	1476	S63D	LHI	R6,DISBUF	R6 = ADDRESS OF DISPLAY BUFFER	PT214760
11BC	D376 0000	1477	S63E	LB	R7,0(R6)	GET BYTE FROM BUFFER	PT214770
11C0	2671	1478		AIS	R7,1	ADD 1 TO RIGHT HEX DIDGIT	PT214780
11C2	C470 000F	1479		NHI	R7,X'000F'	R7 = STRIPPED RIGHT HEX DIDGIT	PT214790
11C6	D396 0000	1480		LB	R9,0(R6)	AGAIN GET BYTE FROM BUFF	PT214800
11CA	CA90 0010	1481		AHI	R9,X'0010'	ADD 1 TO LEFT HEX DIDGIT	PT214810
11CE	C490 00F0	1482		NHI	R9,X'00F0'	R9 = STRIPPED LEFT HEX DIDGIT	PT214820
11D2	0679	1483		OHR	R7,R9	COMBINE RIGHT & LEFT HEX DIDGIT	PT214830
11D4	D276 0000	1484		STB	R7,0(R6)	STORE UPDATEX HEX DIDGITS	PT214840
11D8	2661	1485		AIS	R6,1	INDEX BUFFER TO NEXT BYTE	PT214850
11DA	0956	1486		CHR	R5,R6	CHECK FOR BUFFER END	PT214860
11DC	4380 11BC	1487		BNL	S63E	NO	PT214870
11E0	4300 119A	1488		B	S63A	YES, GO OUTPUT BUFFER	PT214880
11E4		1489	DISBUF	DS	6	DISPLAY BUFFER	PT214890
		1490	*				PT214900
		1491	*			OUTPUT TO DISPLAY IN NORMAL MODE	PT214910
		1492	*				PT214920
11EA	C800 0044	1493	S64	LHI	R0,C'D'	PRINT CHARACTER D	PT214930
11EE	41E0 140A	1494		BAL	R14,WRITE1		PT214940
11F2	C880 0080	1495		LHI	R8,X'80'	NORMAL MODE	PT214950
11F6	9E1A	1496		OCR	R1,R8		PT214960
11F8	C870 5A5A	1497		LHI	R7,X'5A5A'	R7 & R6 = ALTERNATE LIGHT PATTERN	PT214970
11FC	C860 A5A5	1498		LHI	R6,X'A5A5'		PT214980
1200	9A17	1499	S64A	WDR	R1,R7	OUTPUT TO DISPLAY X'5A'	PT214990
1202	C890 122C	1500		LHI	R9,S65	NEXT TEST	PT215000
1206	41E0 1346	1501		BAL	R14,DELAY	WAIT	PT215010
120A	9A16	1502		WDR	R1,R6	OUTPUT TO DISPLAY X'5A'	PT215020
120C	C890 122C	1503		LHI	R9,S65	NEXT TEST	PT215030
1210	41E0 1346	1504		BAL	R14,DELAY	WAIT	PT215040
1214	9817	1505		WHR	R1,R7	OUTPUT TO DISPLAY X'5A5A'	PT215050
1216	C890 122C	1506		LHI	R9,S65	NEXT TEST	PT215060
121A	41E0 1346	1507		BAL	R14,DELAY	WAIT	PT215070
121E	9816	1508		WHR	R1,R6	OUTPUT TO DISPLAY X'A5A5'	PT215080
1220	C890 122C	1509		LHI	R9,S65	NEXT TEST	PT215090
1224	41E0 1346	1510		BAL	R14,DELAY	WAIT	PT215100
1228	4300 1200	1511		B	S64A	NO BREAK KEY GO AGAIN	PT215110
		1512	*				PT215120
		1513	*			OUTPUT TO DISPLAY IN INCREMENTAL MODE	PT215130
		1514	*				PT215140
122C	C800 0045	1515	S65	LHI	R0,C'E'	PRINT CHARACTER E	PT215150
1230	41E0 140A	1516		BAL	R14,WRITE1		PT215160
1234	C890 1288	1517		LHI	R9,S66	NEXT TEST	PT215170
1238	C880 0040	1518		LHI	R8,X'40'	COMMAND FOR INCREMENTAL MODE	PT215180
123C	9E18	1519	S65A	OCR	R1,R8		PT215190
123E	2450	1520		LIS	R5,0	LOOP COUNTER	PT215200
1240	9A17	1521	S65B	WDR	R1,R7	OUT TO DISPLAY X'5A',TWO HEX DIDGITS	PT215210

1242	41E0 1346	1522	BAL	R14,DELAY	AT A TIME	PT215220	
1244	2651	1523	AIS	R5,1	INCREMENT LOOP COUNTER	PT215230	
1248	C950 0005	1524	CHI	R5,X'05'	FIVE TIMES THROUGH LOOP	PT215240	
124C	2036	1525	BNES	S65B	NO	PT215250	
124E	2450	1526	LIS	R5,0	LOOP COUNTER	PT215260	
1250	9E18	1527	OCR	R1,R8	OUTPUT CMT TO RESET DISPLAY	PT215270	
1252	9A16	1528	S65C	WDR	R1,R6	OUTPUT TO DISPLAY X'A5'	PT215280
1254	41E0 1346	1529	BAL	R14,DELAY	WAIT	PT215290	
1258	2651	1530	AIS	R5,1	INCREMENT LOOP COUNTER	PT215300	
125A	C950 0005	1531	CHI	R5,X'05'	5 TIMES THROUGH LOOP	PT215310	
125E	2036	1532	BNES	S65C	NO	PT215320	
1260	2450	1533	LIS	R5,0	LOOP COUNTER	PT215330	
1262	9E18	1534	OCR	R1,R8	OUTPUT CMT TO RESET DISPLAY	PT215340	
1264	9817	1535	S65D	WHR	R1,R7	OUTPUT TO DISPLAY X'SA5A'	PT215350
1266	41E0 1346	1536	BAL	R14,DELAY	WAIT	PT215360	
126A	2651	1537	AIS	R5,1	INCREMENT LOOP COUNTER	PT215370	
126C	C950 0003	1538	CHI	R5,X'03'	3 TIMES THROUGH LOOP	PT215380	
1270	2036	1539	BNES	S65D	NO	PT215390	
1272	2450	1540	LIS	R5,0	LOOP COUNTER	PT215400	
1274	9E18	1541	OCR	R1,R8	OUTPUT CMT TO RESET DISPLAY	PT215410	
1276	9816	1542	S65E	WHR	R1,R6	OUTPUT TO DISPLAY X'ASA5'	PT215420
1278	41E0 1346	1543	BAL	R14,DELAY	WAIT	PT215430	
127C	2651	1544	AIS	R5,1	INCREMENT LOOP COUNTER	PT215440	
127E	C950 0003	1545	CHI	R5,X'03'	3 TIMES THROUGH LOOP	PT215450	
1282	2036	1546	BNES	S65E	NO	PT215460	
1284	4300 123C	1547	B	S65A	NO BREAK KEY GO AGAIN	PT215470	
		1548	*			PT215480	
		1549	*		OUTPUT CONTENTS OF SWITCH REGISTER IS	PT215490	
		1550	*		PRESENTED TO THE DISPLAY. THE SWITCH	PT215500	
		1551	*		REGISTER IS UPDATED BY FIRST DEPRE-	PT215510	
		1552	*		SSING 'DTA' & THEN HEX KEYS. BREAK	PT215520	
		1553	*		POINT ENDS TEST	PT215530	
1288	C800 0046	1554	S66	LHI	R0,C'F'	PRINT CHARACTER F	PT215540
128C	41E0 140A	1555	BAL	R14,WRITE1		PT215550	
1290	C880 0080	1556	LHI	R8,X'80'	COMMAND FOR NORMAL MODE	PT215560	
1294	9E18	1557	S66A	OCR	R1,R8	PT215570	
1296	9914	1558	RHR	R1,R4	READ SWITCH REGISTER	PT215580	
1298	9814	1559	WHR	R1,R4	OUTPUT TO DISPLAY CONTENTS OF SWITCH REPT	PT215590	
129A	C8E0 1294	1560	LHI	R14,S66A		PT215600	
129E	41F0 14C0	1561	BAL	R15,TSTBRK		PT215610	
12A2	4300 05E8	1562	S66END	B	RENTRY	PT215620	
		1563	*			PT215630	
		1564	*		*****	PT215640	
		1565	*			PT215650	
		1566	*	TEST 7		PT215660	
		1567	*			PT215670	
		1568	*	THIS TEST CHECKS FUNCTION ZERO (CONSOLE INTERRUPT) WITH		PT215680	
		1569	*	INTERRUPTS ENABLED AND DISABLED.		PT215690	
		1570	*			PT215700	
12A6	C8E0 00D2	1571	SUBT7	LHI	R14,X'D2'	PT215710	
12AA	C8F0 12DE	1572	LHI	R15,FZI1		PT215720	
12AE	40FE 0000	1573	STH	R15,0(R14)		PT215730	
12B2	C200 12B6	1574	LPSW	FUNCO	ENABLE CONSOLE INTERRUPT	PT215740	
12B6	7800	1575	FUNCO	DC	X'7800',INRET1	PT215750	
123e	12BA						

12BA	0755		1576	INRET1	XHR	R5,R5		PT215760
12BC	D310	1585	1577		LB	R1,OUTDEV		PT215770
12C0	C820	1326	1578		LHI	R2,FZERM	BEGINNING ADDRESS OF MESSAGE	PT215780
12C4	C830	1345	1579		LHI	R3,FZEND	ENDING ADDRESS OF MESSAGE	PT215790
12C8	DE10	1578	1580		OC	R1,OUTCMD		PT215800
12CC	9612		1581		WBR	R1,R2	PRINT: PRESS FUNC 0, PRESS BREAK KEY	PT215810
12CE	41F0	1488	1582		BAL	R15,TSTBRKC		PT215820
			1583	*				PT215830
12D2	C550	0001	1584	FZ1	CLHI	R5,1	IF FLAG = 1, THEN INTERRUPT TAKEN	PT215840
12D6	2338		1585		BES	FUNCO1	INTERRUPT TAKEN, CONTINUE TEST	PT215850
12D8	24F1		1586		LIS	R15,1	ERROR 2701	PT215860
12DA	4300	145C	1587		B	ERROR		PT215870
12DE	0000		1588	FZI1	DC	0		PT215880
12E0	0000		1589		DC	0		PT215890
12E2	7800		1590		DC	X'7800'		PT215900
12E4	2451		1591		LIS	R5,1		PT215910
12E6	41F0	1488	1592		BAL	R15,TSTBRKC		PT215920
12EA	220C		1593		BS	FZ1		PT215930
			1594	*				PT215940
12EC	C8E0	00D2	1595	FUNCO1	LHI	R14,X'D2'	STORE RETURN ADDRFS IN MEMORY	PT215950
12F0	C8F0	131A	1596		LHI	R15,FZI2		PT215960
12F4	40FE	0000	1597		STH	R15,0(R14)		PT215970
12F8	C200	12FC	1598		LPSW	FUNCON	DISABLE CONSOLE INTERRUPT	PT215980
12FC	7000		1599	FUNCON	DC	X'7000',INRET2		PT215990
12FE	1300							
1300	D310	1585	1600	INRET2	LB	R1,OUTDEV		PT216000
1304	C820	1326	1601		LHI	R2,FZERM	BEGINNING ADDRESS OF MESSAGE	PT216010
1308	C830	1345	1602		LHI	R3,FZEND	ENDING ADDRESS OF MESSAGE	PT216020
130C	DE10	1578	1603		OC	R1,OUTCMD		PT216030
1310	9612		1604		WBR	R1,R2	PRINT: PRESS FUNC 0, PRESS BREAK KFY	PT216040
1312	41F0	1488	1605		BAL	R15,TSTBRKC		PT216050
			1606	*				PT216060
1316	4300	1494	1607	FZ2	B	NOERR		PT216070
			1608	*				PT216080
131A	0000		1609	FZI2	DC	0	INTERRUPT RETURN ROUTINE	PT216090
131C	0000		1610		DC	0		PT216100
131E	7000		1611		DC	X'7000'		PT216110
1320	24F2		1612		LIS	R15,2	ERROR 2702	PT216120
1322	4300	145C	1613		B	ERROR		PT216130
			1614	*				PT216140
			1615	*				PT216150
1326	5052	4553 5320 4655	1616	FZERM	DC	C'PRESS FUNC 0'	COMMON MESSAGE FOR TEST 6 AND 7	PT216160
132E	4E43	2030						
1332	0A0D		1617		DC	X'A0D'		PT216170
1334	FFFF		1618		DC	X'FFFF'		PT216180
1336	5052	4553 5320 4252	1619		DC	C'PRESS BREAK'		PT216190
133E	4541	4820						
1342	0A0D		1620		DC	X'0A0D'		PT216200
1344	FFFF		1621		DC	X'FFFF'		PT216210
	0000	1345	1622	FZENO	EQU	*-1	END OF COMMON MESSAGE	PT216220
			1623	*				PT216230
			1624	*				PT216240
			1625	*				PT216250
			1626	*			DELAY ROUTINE	PT216260
			1627	*				PT216270

1346	D000	13B0	1628	DELAY	STM	R0,DSAVE	SAVE ALL REGISTERS	PT216280
134A	C6A0	0000	1629		LHI	R10,X'0'	CLEAR REG 10	PT216290
134E	EAC0	000F	1630	DELAY1	RRL	R12,15	34.5 US PER INSTRUCTION	PT216300
1352	C8E0	1360	1631		LHI	R14,DELAY3		PT216310
1356	41F0	14C0	1632		BAL	R15,TSTBRK		PT216320
135A	D100	13B0	1633		LM	R0,DSAVE	RESTORE REGISTERS	PT216330
135E	0309		1634		BR	R9	BREAK POINT RECEIVED RETURN	PT216340
1360	26A1		1635	DELAY3	AIS	R10,1	1.5	PT216350
1362	C5A0	5FFF	1636	DELAY4	CLHI	R10,X'5FFF'	3.0	PT216360
1366	203C		1637		BNES	DELAY1	1.5	PT216370
			1638	*			47.5 US TOTAL TIME PER LOOP	PT216380
1368	D100	13B0	1639		LM	R0,DSAVE		PT216390
136C	030E		1640		BR	R14		PT216400
			1641	*				PT216410
136E	D000	13B0	1642	BIDEL	STM	R0,DSAVE		PT216420
1372	24A1		1643		LIS	R10,1		PT216430
137A	CAA0	0001	1644	BIDEL2	AHI	R10,X'1'		PT216440
1378	C8E0	1386	1645		LHI	R14,BIDEL3		PT216450
137C	41F0	14C0	1646		BAL	R15,TSTBRK		PT216460
1380	D100	13B0	1647		LM	R0,DSAVE		PT216470
1384	0309		1648		BR	R9		PT216480
1386	C5A0	1FFF	1649	BIDEL3	CLHI	R10,X'1FFF'		PT216490
138A	4230	1374	1650		BNE	BIDEL2		PT216500
138E	D100	13B0	1651		LM	R0,DSAVE		PT216510
1392	030E		1652		BR	R14		PT216520
			1653	*				PT216530
1394	D000	13B0	1654	CIDEL	STM	R0,DSAVE		PT216540
1396	24A0		1655		LIS	R10,0		PT216550
139A	C8C0	0014	1656	CIDEL1	LHI	R12,X'14'		PT214560
139E	27C1		1657	CIDEL2	SIS	R12,1		PT216570
13A0	2031		1658		BNZS	CIDEL2		PT216580
13A2	26A1		1659	CIDEL3	AIS	R10,1		PT216590
13A4	C5A0	7FFF	1660	CIDEL4	CLHI	R10,X'7FFF'		PT216600
13A8	2037		1661		BNES	CIDEL1		PT216610
13AA	D100	13B0	1662		LM	R0,DSAVE		PT216620
13AE	030E		1663		BR	R14		PT216630
			1664	*				PT216640
13B0			1665	DSAVE	DS	64	REGISTER SAVE AREA	PT216650
			1666	*				PT216660
			1667	*				PT216670
			1668	*				PT216680
			1669	*				PT216690
			1670	*				PT216700
	0000	13F0	1671	READ1	EQU	*		PT216710
13F0	D320	1586	1672		LB	R2,INDEV		PT216720
13F4	DE20	1579	1673		OC	R2,INCMND		PT216730
13F8	9B23		1674		RDR	R2,R3		PT216740
13FA	9D23		1675		SSR	R2,R3		PT216750
13FC	2281		1676		BFBS	8,1		PT216760
13FE	9D23		1677	READ3	SSR	R2,R3	R2 = 2 , R3 = TTY STATUS	PT216770
1400	2091		1678		BTBS	9,1		PT216780
1402	9B20		1679		RDR	R2,R0	READ THE KEY PRESSED IN R0	PT216790
1404	C400	007F	1680		MHI	R0,X'7F'	ZERO OUT THE PARITY BIT	PT216800
1408	030E		1681		BR	R14		PT216810
140A	D320	1585	1682	WRITE1	LB	R2,OUTDEV		PT216820

1492	2306		1738	BS	PRTMSG		PT217380
			1739	*			PT217390
1494	2470		1740	NOERR	LIS	R7,0	PT217400
1496	C840	151C	1741		LHI	R4,NOER	PT217410
149A	C850	1527	1742		LHI	R5,NOER+11	PT217420
149E	D320	1585	1743	PRTMSG	L3	R2,OUTDEV	PT217430
14A2	DE20	1578	1744		OC	R2,OUTCMD	PT217440
14A6	9D23		1745		SSR	R2,R3	PT217450
14A8	2091		1746		BTBS	9,1	PT217460
14AA	9624		1747		WBR	R2,R4	PT217470
14AC	4800	1582	1748		LH	R0,IOERHW	PT217480
14B0	4230	02E0	1749		BNZ	PART2	PT217490
14B4	4300	05E8	1750		B	RENTRY	PT217500
			1751	*			PT217510
	0000	1488	1752	TSTBRKC	EQU	*	PT217520
14B8	2400		1753		LIS	R0,0	PT217530
14BA	4000	1574	1754		STH	R0,OUTFLAG	PT217540
14BE	2304		1755		BS	TTBRK	PT217550
	0000	14C0	1756	TSTBRK	EQU	*	PT217560
14C0	2401		1757		LIS	R0,1	PT217570
14C2	4000	1574	1758		STH	R0,OUTFLAG	PT217580
14C6	D000	10F2	1759	TTBRK	STM	R0,BUFR2	PT217590
14CA	D320	1586	1760		LB	R2,INDEV	PT217600
	0000	14CE	1761	TSTBRK1	EQU	*	PT217610
14CE	9D23		1762		SSR	R2,R3	PT217620
14D0	C330	0020	1763		THI	R3,X'20'	PT217630
14D4	4330	14FC	1764		BZ	TSTBRKB	PT217640
	0000	14D8	1765	TSTBRK12	EQU	*	PT217650
14D8	4800	157E	1766		LH	R0,CRTFLG	PT217660
14D0C	2339		1767		BZS	TSTBRK11	PT217670
14DE	C530	0024	1768		CLHI	R3,X'24'	PT217680
14E2	203A		1769		BNES	TSTBRK1	PT217690
14E4	9824		1770		RDR	R2,R4	PT217700
14E6	9D23		1771		SSR	R2,R3	PT217710
14E8	2281		1772		BFBS	8,1	PT217720
14EA	0844		1773		LHR	R4,R4	PT217730
14EC	2335		1774		BZS	TSTBRK2	PT217740
	0000	14EE	1775	TSTBRK11	EQU	*	PT217750
14EE	9D23		1776		SSR	R2,R3	PT217760
14F0	C330	0020	1777		THI	R3,X'20'	PT217770
14F4	203E		1778		BNZS	TSTBRK12	PT217780
	0000	14F6	1779	TSTBRK2	EQU	*	PT217790
14F6	D100	10F2	1780		LH	R0,BUFR2	PT217800
14FA	030F		1781		BR	R15	PT217810
	0000	14FC	1782	TSTBRKB	EQU	*	PT217820
14FC	4800	1574	1783		LH	R0,OUTFLAG	PT217830
1500	4330	14CE	1784		BZ	TSTBRK1	PT217840
1504	D100	10F2	1785		LH	R0,BUFR2	PT217850
1508	030E		1786		BR	R14	PT217860
			1787	*****			PT217870
			1788	*		PT217880	
			1789	*	DATA CONSTANTS	PT217890	
			1790	*		PT217900	
			1791	*****			PT217910
			1792	*		PT217920	

IF IOERHW = 0 , I/O ERR.

SENSE STATUS
BREAK KEY PRESSED

IS IT PASALA

READ DUMMY CHARACTER

WAIT FOR BRK RELEASED

150A	000A		1793	ERRMSG	DC	X'D0A'		CR , LF	PT217930
150C	4552 524F 5220		1794		DC	C'ERROR'			PT217940
1512	2000		1795		DC	X'2000'			PT217950
1514	3230		1796	TESTNO	DC	C'20'			PT217960
1516	0000		1797	ERRNO	DC	0			PT217970
1518	000A		1798		DC	X'D0A'		CR , LF	PT217980
151A	FFFF		1799		DCX	FFFF			PT217990
			1800	*					PT218000
151C	000A		1801	NOER	DC	X'D0A'		CR , LF	PT218010
151E	4E4F 2045 5252 4F52		1802		DC	C'NO ERROR'			PT218020
1526	000A		1803		DC	X'D0A'			PT218030
	0000 1528		1804	NULL	EQU	*			PT218040
1528	FFFF		1805		DCX	FFFF			PT218050
			1806	*					PT218060
152A	0000		1807	TEMP	DC	0			PT218070
152C	0000		1808		DC	0			PT218080
152E	000A		1809	TITLE2	DC	X'D0A'			PT218090
1530	5331 3650 5432 5230		1810		DC	C'S16PT2R08'			PT218100
1538	3820								
153A	000A		1811		DCX	000A			PT218110
153C	FFFF		1812		DCX	FFFF			PT218120
153E	4350 5520		1813		DC	C'CPU'			PT218130
1542	000A		1814		DCX	000A			PT218140
1544	2A		1815		DB	C'*'		*	PT218150
1546	FFFF		1816		DCX	FFFF			PT218160
	0000 1547		1817	TITEND	EQU	*-1			PT218170
1548	5355 4254 4553 5420		1818	SUBTST	DC	C'SUBTEST'			PT218180
1550	000A		1819		DC	X'D0A'			PT218190
1552	FFFF		1820		DCX	FFFF			PT218200
1554	2A20		1821		DC	C'*'			PT218210
1556	FFFF		1822		DCX	FFFF			PT218220
	0000 1557		1823	SUBTSTND	EQU	*-1			PT218230
			1824	*					PT218240
			1825	*					PT218250
			1826	*					PT218260
1558	5052 4553 5320 494E		1827	PRESS	DC	C'PRESS INIT'			PT218270
1560	4954								
1562	000A		1828		DC	X'D0A'			PT218280
1564	FFFF		1829		DCX	FFFF			PT218290
1566	5052 4553 5320 4252		1830	PRBRK	DC	C'PRESS BRK'			PT218300
156E	4820								
1570	000A		1831		DC	X'D0A'			PT218310
1572	FFFF		1832		DCX	FFFF			PT218320
	0000 1573		1833	BRK	EQU	*-1			PT218330
			1834	*					PT218340
			1835	*					PT218350
1574			1836		ALIGN 2				PT218360
			1837	*					PT218370
1574	0000		1838	OUTFLAG	DC	0			PT218380
1576	0000		1839	CPUND	DC	0			PT218390
1578	C8E4		1840	OUTCMD	DC	X'C8E4'			PT218400
	0000 1579		1841	INCMND	EQU	OUTCMD+1			PT218410
157A	ABB9		1842	CRTOUT	DCX	ABB9			PT218420
157C	C8E4		1843	CONOUT	DCX	C8E4			PT218430
157E	0000		1844	CRTFLG	DCX	0			PT218440

1580	0000	1845	FIRSTCMD	DCX	0		PT218450
1582	0000	1846	IOERHW	DC	0		PT218460
1584	00	1847	SUBTNO	DB	0	SUBT. NO. 1 THRU 7	PT218470
1585	02	1848	OUTDEV	DB	2	OUTDEV = 2 = TTY ADDRESS	PT218480
1586	02	1849	INDEV	DB	2		PT218490
1587	00	1850	STATUS	DB	0		PT218500
1588	00	1851	\$C4	DB	0		PT218510
1589	00	1852	\$54	DB	0		PT218520
158A	00	1853	\$58	DB	0		PT218530
158B	00	1854	\$48	DB	0		PT218540
158C	00	1855	\$44	DB	0		PT218550
158D	00	1856	\$56	DB	0		PT218560
158E	00	1857	\$66	DB	0		PT218570
158F	00	1858	\$64	DB	0		PT218580
1590	00	1859		DB	0		PT218590
		1860	*				PT218600
	0000 1590	1861	LNZB	EQU	*-1		PT218610
1592		1862		ALIGN	2		PT218620
		1863	*				PT218630
1592		1864	TABLE	DS	12		PT218640
		1865	*				PT218650
		1866	*			(THE FOLLOWING CODE IS NOT PART OF THE TEST.)	PT218660
		1867	*				PT218670
		1868	*				PT218680
159E	2400	1869	\$CHKSUM	LIS	R0,0	PUNCH M17 TAPE WITH CHECKSUM	PT218690
15A0	9510	1870		EPSR	R1,R0	SELECT REG. SET 0	PT218700
		1871	*				PT218710
15A2	C810 0200	1872		LDAI	R1,ORIGIN1	START	PT218720
15A6	2421	1873		LIS	R2,1	INCREMENT	PT218730
15A8	C830 1590	1874		LDAI	R3,LNZB	FINAL	PT218740
15AC	2440	1875		LIS	R4,0	CHECKSUM BYTE	PT218750
15AE	D351 0000	1876	\$GEN	LB	R5,0(R1)		PT218760
15B2	0745	1877		XAR	R4,R5		PT218770
15B4	C110 15AE	1878		BXLE	R1,\$GEN		PT218780
15B8	D240 0097	1879		STB	R4,MN+3	CHECKSUM BYTE TO BOOT LOADER	PT218790
		1880	*				PT218800
15BC	C810 0080	1881	\$TAPE	LHI	R1,X'0080'		PT218810
15C0	9E21	1882		OGR	R2,R1	DISPLAY : NORMAL MODE	PT218820
15C2	9444	1883		EXBR	R4,R4		PT218830
15C4	9824	1884		WHR	R2,R4	CHECKSUM BYTE TO D1	PT218840
15C6	9411	1885		EXBR	R1,R1		PT218850
15C8	9501	1886		EPSR	R0,R1	HALT PROCESSOR.	PT218860
		1887					
15CA	D360 007A	1888	\$PUNCH	LB	R6,X'7A'	GET BOUTDV (PUNCH) ADDRESS.	PT218880
15CE	DE60 007B	1889		OC	R6,X'7B'	START TAPE PUNCH	PT218890
15D2	9D60	1890		SSR	R6,R0		PT218900
15D4	2081	1891		BTBS	8,1		PT218910
15D6	41F0 1618	1892		BAL	R15,\$TAPL	PUNCH LEADER	PT218920
15DA	9411	1893		EXBR	R1,R1	(R1) = X'0080'	PT218930
15DC	C830 00CF	1894		LHI	R3,X'CF'		PT218940
15E0	DA61 0000	1895	\$PNCH1	WD	R6,0(R1)	PUNCH BOOT LOADER	PT218950
15E4	9D60	1896		SSR	R6,R0		PT218960
15E6	2081	1897		BTBS	8,1		PT218970
15E8	C110 15E0	1898		BXLE	R1,\$PNCH1		PT218980

15EC	41F0 161E	1899		BAL	R15,\$STAPL1	PUNCH ONE-FOLD GAP.	PT218990
		1900	*				PT219000
15F0	D340 0097	1901		LB	R4,MN+3	GET CHECKSUM BYTE	PT219010
15F4	C810 02D0	1902		LDAI	R1,ORIGIN1	(NORMALLY X'A00')	PT219020
15F8	C830 1590	1903		LDAI	R3,LNZB		PT219030
15FC	D351 0000	1904	\$PNCH2	LB	R5,0(R1)	PUNCH PROGRAM	PT219040
1600	0745	1905		XAR	R4,R5		PT219050
1602	9A65	1906		WDR	R6,R5		PT219060
1604	9401	1907		EXBR	R0,R1		PT219070
1606	9820	1908		WHR	R2,R0	DATA ADDRESS TO DISPLAY.	PT219080
1608	9D60	1909		SSR	R6,R0		PT219090
160A	2081	1910		BTBS	8,1		PT219100
160C	C11J 15FC	1911		BXLE	R1,\$PNCH2		PT219110
1610	41F0 1618	1912		BAL	R15,\$STAPL	PUNCH TRAILER.	PT219120
1614	4300 15BC	1913		B	\$TAPE	DISPLAY CHECKSUM, HALT PROCESSOR.	PT219130
1618	C800 0100	1915	\$STAPL	LHI	R0,256	TO PUNCH BLANK LEADER	PT219150
161C	2303	1916		BS	\$STAPLP		PT219160
161E	C800 0055	1917	\$STAPL1	LHI	R0,85	TO PUNCH 1-FOLD GAP	PT219170
1622	2701	1918	\$STAPLP	SIS	R0,1		PT219180
1624	032F	1919		BNPR	R15	RETURN	PT219190
1626	2430	1920		LIS	R3,0		PT219200
1628	9A63	1921		WDR	R6,R3	PUNCH BLANK FRAME	PT219210
162A	9D68	1922		SSR	R6,R8		PT219220
162C	2081	1923		BTBS	8,1		PT219230
162E	2266	1924		BS	\$STAPLP	CONTINUE.	PT219240
1630		1925	*				PT219250
		1926		END			PT219260

R14	0000 000E	23*	133	140	142	164	386	392	397	401	596	685	697	750
		758	773	774	792	803	819	820	847	866	899	957	1086	1094
		1096	1100	1104	1106	1110	1121	1127	1131	1137	1143	1147	1156	1162
		1165	1173	1179	1352	1422	1430	1433	1440	1450	1459	1475	1494	1501
		1504	1507	1510	1516	1522	1529	1536	1543	1555	1560	1571	1573	1595
		1597	1631	1640	1645	1652	1663	1681	1688	1690	1692	1786		
R15	0000 000F	24*	167	168	288	289	290	291	292	293	294	295	296	297
		442	487	488	504	524	525	536	537	569	598	600	650	652
		671	673	686	698	721	751	752	753	760	793	794	795	804
		848	849	850	867	900	901	902	921	958	959	960	988	989
		1230	1233	1247	1248	1255	1258	1269	1290	1314	1317	1325	1327	1329
		1331	1333	1335	1337	1339	1341	1343	1345	1347	1349	1351	1353	1561
		1572	1573	1582	1586	1592	1596	1597	1605	1612	1632	1646	1696	1698
		1700	1702	1704	1706	1708	1710	1715	1721	1729	1730	1731	1733	1734
		1781	1892	1899	1912	1919								
R2	0000 0002	11*	28	32	47	53	92	118	121	122	125	126	139	174
		175	176	177	178	179	181	183	187	189	192	197	201	206
		208	213	225	246	249	250	251	252	253	255	275	277	281
		283	379	380	383	385	461	461	462	462	463	465	473	477
		482	483	484	486	494	512	513	514	518	519	520	529	532
		641	642	643	655	664	676	696	700	701	711	712	714	719
		736	747	757	776	777	802	828	829	844	854	855	856	861
		865	905	906	914	916	948	954	962	963	966	968	969	970
		975	976	982	983	987	1002	1003	1085	1224	1227	1237	1238	1241
		1245	1246	1254	1287	1291	1292	1293	1311	1328	1420	1578	1581	1601
		1604	1672	1673	1674	1675	1677	1679	1682	1683	1684	1687	1743	1744
		1745	1747	1760	1762	1770	1771	1776	1873	1882	1884	1906		
R3	0000 0003	12*	34	99	100	126	129	130	179	181	189	190	206	213
		253	275	281	328	329	330	331	332	333	334	335	336	383
		444	445	470	471	477	484	520	528	534	556	576	638	660
		712	719	736	777	829	856	906	966	983	1005	1006	1246	1330
		1579	1602	1674	1675	1677	1684	1745	1762	1763	1768	1771	1776	1777
		1874	1894	1903	1920	1921								
R4	0000 0004	13*	36	37	38	40	48	50	247	250	277	278	279	283
		284	285	361	362	363	364	368	369	370	381	385	510	514
		708	714	715	716	964	968	1008	1009	1091	1092	1101	1102	1113
		1116	1118	1134	1135	1150	1153	1225	1227	1332	1427	1428	1431	1432
		1460	1469	1470	1471	1472	1473	1558	1559	1736	1741	1747	1770	1773
		1773	1875	1877	1879	1883	1883	1884	1901	1905				
R5	0000 0005	14*	38	40	41	41	43	44	45	48	50	56	248	256
		258	260	261	382	511	529	530	710	711	965	1114	1117	1119
		1151	1154	1226	1334	1461	1486	1520	1523	1524	1526	1530	1531	1533
		1537	1538	1540	1544	1545	1576	1576	1584	1591	1737	1742	1876	1877
		1904	1905	1906										
R6	0000 0006	15*	35	45	52	258	259	260	853	855	1166	1170	1171	1336
		1476	1477	1480	1484	1485	1486	1498	1502	1508	1528	1542	1888	1889
		1890	1895	1896	1906	1909	1921	1922						
R7	0000 0007	16*	54	55	56	701	702	703	705	732	740	787	841	911
		952	970	971	972	974	976	977	978	980	1167	1338	1477	1478
		1479	1483	1484	1497	1499	1505	1521	1535	1720	1740			
R8	0000 0008	17*	46	47	52	53	1089	1090	1168	1169	1340	1425	1426	1441
		1443	1468	1495	1496	1518	1519	1527	1534	1541	1556	1557	1922	
R9	0000 0009	18*	1093	1103	1111	1112	1115	1120	1122	1123	1126	1132	1133	1136
		1138	1139	1142	1148	1149	1152	1155	1157	1158	1161	1172	1174	1175
		1178	1342	1429	1449	1474	1480	1481	1482	1483	1500	1503	1506	1509

TERM1	0000	0478	194*																	
TERM2	0000	07D4	496*																	
TERM3	0000	0AAA	765*																	
TERM4	0000	0B30	811*																	
TERM5	0000	0BF2	875	882*																
TESTNO	0000	1514	171	394	429	1796*														
TITEND	0000	1547	124	1817*																
TITLE2	0000	152E	123	1809*																
TSTBRK	0000	14C0	487	1561	1632	1646	1756*													
TSTBRK1	0000	14CE	1761*	1769	1784															
TSTBRK11	0000	14EE	1767	1775*																
TSTBRK12	0000	14D8	538	1249	1765*	1778														
TSTBRK2	0000	14F6	1774	1779*																
TSTBRK8	0000	14FC	1764	1782*																
TSTBRKC	0000	1488	524	988	1582	1592	1605	1752*												
TTBRK	0000	14C6	1755	1759*																
TTYIO	0000	0354	83	102*																
WBSTR1	0000	0DB8	176	1067*																
WRITE1	0000	140A	133	164	392	401	1086	1100	1110	1131	1147	1165	1422	1440	1459					
			1494	1516	1555	1682*	1690	1692												
wRITE3	0000	1412	1684*																	
ZERO	0000	0F12	1095	1105	1124	1125	1140	1141	1159	1160	1176	1177	1185*							

PROG= S16P3

ASSEMBLED BY CAL 03-066R05-00 (32-BIT)

		1	CROSS		PT300010	
		2	WIDTH 120		PT300020	
		3	TARGT 16		PT300030	
		4	S16P3	PROG INTERDATA PROCESSOR TEST 06-106R08M96	PART 3	PT300040
		5	*		PT300050	
		6	*	COPYRIGHT INTERDATA,INC. (AUGUST 1977)	PT300060	
		7	*		PT300070	
		8	*		PT300080	
	0000 0000	9	R0	EQU 0	PT300090	
	0000 0001	10	R1	EQU 1	PT300100	
	0000 0002	11	R2	EQU 2	PT300110	
	0000 0003	12	R3	EQU 3	PT300120	
	0000 0004	13	R4	EQU 4	PT300130	
	0000 0005	14	R5	EQU 5	PT300140	
	0000 0006	15	R6	EQU 6	PT300150	
	0000 0007	16	R7	EQU 7	PT300160	
	0000 0008	17	R8	EQU 8	PT300170	
	0000 0009	18	R9	EQU 9	PT300180	
	0000 000A	19	R10	EQU 10	PT300190	
	0000 000B	20	R11	EQU 11	PT300200	
	0000 000C	21	R12	EQU 12	PT300210	
	0000 000D	22	R13	EQU 13	PT300220	
	0000 000E	23	R14	EQU 14	PT300230	
	0000 000F	24	R15	EQU 15	PT300240	
		25	*		PT300250	
0000R		26	ORG	X'80'	PT300260	
		27	*		PT300270	
0080	2421	28	LIS	R2,1	PT300280	
0082	2303	29	BS	BOOT	PT300290	
0084	02DE	30	DC	Z(PSWAVE)	PT300300	
0086	0F06	31	DC	Z(BUFR2)	PT300310	
0088	4020 0022	32	BOOT	STH R2,X'22'	PT300320	
008C	C810 02D0	33	LHI	R1,X'2D0'	PT300330	
0090	C830 10D1	34	LHI	R3,LNZB	PT300340	
0094	C860 0000	35	MN	LHI R6,0	PT300350	
0098	D340 0078	36	LB	R4,X'78'	PT300360	
009C	DE40 0079	37	OC	R4,X'79'	PT300370	
00A0	9D45	38	LEADER	SSR R4,R5	PT300380	
00A2	2081	39	BTBS	8,1	PT300390	
00A4	9B45	40	RDR	R4,R5	PT300400	
00A6	0855	41	LDAR	R5,R5	PT300410	
00A8	2234	42	BZS	LEADER	PT300420	
00AA	D251 0000	43	LOAD	STB R5,0(R1)	PT300430	
00AE	D351 0000	44	LB	R5,0(R1)	PT300440	
00B2	0765	45	XAR	R6,R5	PT300450	
00B4	9481	46	EXBR	R8,R1	PT300460	
00B6	9823	47	WHR	R2,R8	PT300470	
00B8	9D45	48	SSR	R4,R5	PT300480	
00BA	2091	49	BTBS	9,1	PT300490	
00BC	9B45	50	RDR	R4,R5	PT300500	
00BE	C110 00AA	51	EXLE	R1,LOAD	PT300510	
00C2	9486	52	EXBR	R8,R6	PT300520	
00C4	9823	53	WHR	R2,R8	PT300530	

00C6	2478	54	LDWT	LIS	R7,8		PT300540	
00C8	917C	55		SLLS	R7,12		PT300550	
00CA	9557	56		EPSR	R5,R7		PT300560	
00CC	2203	57		BS	LDWT		PT300570	
00CE		58		ORG	X'2D0'		PT300580	
02D0	4300 02E0	59	ORIGIN1	B	ENTRY1		PT300590	
		60	*****					PT300600
02D4	0202	61	IO	DCX	0202	IO INDICATOR	PT300610	
02D6	0101	62	CRT	DCX	0101	CRT VALUE	PT300620	
02D8	0202	63	CONADR	DCX	0202	CONSL	PT300630	
02DA	0404	64	CAR	DCX	0404	CAROUSEL VALUE	PT300640	
02DC	1011	65	PASADR	DCX	1011	PASLA ADDRESS REC/SND DEFAULT 1	PT300650	
02DE	0000	66	PSWAVE	DC	0	PSW STORAGE AREA	PT300660	
		67	*				PT300670	
		68	*				PT300680	
	0000 02E0	69	ENTRY1	EQU	*		PT300690	
02E0	C200 02E4	70	PART2	LPSW	PART2A		PT300700	
02E4	0000	71	PART2A	DC	0,PART2AA		PT300710	
02E6	02E8							
	0000 02E8	72	*****					PT300720
		73	PART2AA	EQU	*		PT300730	
02E8	C800 F800	74		LHI	R0,X'F800'		PT300740	
02EC	4000 104A	75		STH	R0,FIRSTCMD		PT300750	
02F0	D300 02D4	76	IOTEST1	LB	R0,IO		PT300760	
02F4	C500 0004	77		CLHI	R0,4		PT300770	
02F8	2135	78		BNES	CRTIO		PT300780	
02FA	C800 F000	79		LHI	R0,X'F000'		PT300790	
02FE	4000 104A	80		STH	R0,FIRSTCMD		PT300800	
0302	D300 02D4	81	CRTIO	LB	R0,IO		PT300810	
0306	C500 0002	82		CLHI	R0,2		PT300820	
030A	4330 0354	83		BE	TTYIO		PT300830	
030E	C600 B979	84		LHI	R0,X'B979'		PT300840	
0312	4000 1052	85		STH	R0,\$C4		PT300850	
0316	C800 6B6B	86		LHI	R0,X'6B6B'		PT300860	
031A	4000 1054	87		STH	R0,\$58		PT300870	
031E	C800 7979	88		LHI	R0,X'7979'		PT300880	
0322	4000 1056	89		STH	R0,\$44		PT300890	
0326	C800 7979	90		LHI	R0,X'7979'		PT300900	
032A	4000 1058	91		STH	R0,\$66		PT300910	
032E	D320 1044	92		LB	R2,CRTOUT		PT300920	
0332	D310 1045	93		LB	R1,CRTOUT+1		PT300930	
0336	D210 1043	94		STB	R1,INCMND		PT300940	
033A	D310 02DC	95		LB	R1,PASADR		PT300950	
033E	D210 104F	96		STB	R1,INDEV		PT300960	
0342	D310 02DD	97		LB	R1,PASADR+1		PT300970	
0346	DE10 104A	98		OC	R1,FIRSTCMD		PT300980	
034A	2531	99		LCS	R3,1		PT300990	
034C	4030 1048	100		STH	R3,CRTFLG		PT301000	
0350	4300 0392	101		B	IO2		PT301010	
	0000 0354	102	TTYIO	EQU	*		PT301020	
0354	C810 00A4	103		LHI	R1,X'A4'		PT301030	
0358	D210 1043	104		STB	R1,INCMND		PT301040	
035C	C800 C454	105		LHI	R0,X'C454'		PT301050	
0360	4000 1052	106		STH	R0,\$C4		PT301060	
0364	C800 5848	107		LHI	R0,X'5848'		PT301070	

0368	4000	1054	108	STH	R0,\$58	PT301080
036C	C800	4456	109	LHI	R0,X'4456'	PT301090
0370	4000	1056	110	STH	R0,\$44	PT301100
0374	C800	6664	111	LHI	R0,X'6664'	PT301110
0378	4000	1058	112	STH	R0,\$66	PT301120
037C	D310	0208	113	LB	R1,CONADR	PT301130
0380	D210	104F	114	STB	R1,INDEV	PT301140
0384	2410		115	LIS	R1,0	PT301150
0386	4010	1048	116	STH	R1,CRTFLG	PT301160
038A	D310	0208	117	LB	R1,CONADR	PT301170
038E	D320	1046	118	LB	R2,CONOUT	PT301180
	0000	0392	119	I02 EQU	*	PT301190
0392	D210	104E	120	STB	R1,OUTDEV	PT301200
0396	D220	1042	121	STB	R2,OUTCMD	PT301210
039A	D320	104E	122	PART2B LB	R2,OUTDEV	PT301220
039E	C8A0	1026	123	LHI	R10,TITLE2	PT301230
03A2	C8B0	103F	124	LHI	R11,TITEND	PT301240
03A6	DE20	1042	125	PART2C OC	R2,OUTCMD	PT301250
03AA	9023		126	PART2D SSR	R2,R3	PT301260
03AC	4210	03A6	127	BTC	1,PART2C	PT301270
03B0	4280	03AA	128	BTC	8,PART2D	PT301280
03B4	C430	00FC	129	NHI	R3,X'FC'	PT301290
03B8	C530	000C	130	CLHI	R3,X'0C'	PT301300
03BC	4330	03AA	131	BE	PART2D	PT301310
03C0	D30A	0000	132	LB	R0,0(R10)	PT301320
03C4	41E0	0F42	133	BAL	R14,WRITE1	PT301330
03C8	26A1		134	AIS	R10,1	PT301340
03CA	05A8		135	CLHA	R10,R11	PT301350
			136	*		PT301360
03CC	4230	03AA	137	BNE	PART2D	PT301370
			138	*		PT301380
			139	LB	R2,INDEV	PT301390
03D0	D320	104F	140	BAL	R14,READ1	PT301400
03D4	41E0	0F26	141	STB	R0,CPUNO	PT301410
03D8	D200	1040	142	BAL	R14,READ1	PT301420
03DC	41E0	0F26	143	STB	R0,CPUNO+1	PT301430
03E0	D200	1041	144	LH	R0,CPUNO	PT301440
03E4	4800	1040	145	CLHI	R0,C'05'	PT301450
03E8	C500	3035	146	BES	MOD57	PT301460
03EC	2336		147	M5007 CLHI	R0,C'70'	PT301470
03EE	C500	3730	148	BES	MOD578	PT301480
03F2	2336		149	M5007 CLHI	R0,C'80'	PT301490
03F4	C500	3830	150	MOD57 BES	MOD578	PT301500
03F8	2333		151	MOD57 CLHI	R0,C'85'	PT301510
03FA	C500	3835	152	MOD578 BE	RENTRY	PT301520
03FE	4330	040E	153	CPUERR LHI	R0,C'?'	PT301530
0402	C800	003F	154	BAL	R14,WRITE1	PT301540
0406	41E0	0F42	155	S	PART2	PT301550
040A	4300	02E0	156	*		PT301560
			157	*		PT301570
			158	*	FLPTNT = FLPT ARITHMETIC FAULT INTERRUPT	PT301580
			159	*		PT301590
			160	*	ILGINT = ILLEGAL INSTRUCTION INTERRUPT	PT301600
			161	*		PT301610
			162	*	MALFTN = MACHINE MALFUNCTION INTERRUPT	PT301620

R2 = ADD. OF TTY
PRINT

PROCESSOR TEST PART 2

TTY DEV. UNAVA. ?
TTY BUSY ?

		163	*				PT301630
		164	*	EXTINT	=	EXTERNAL INTERRUPT	PT301640
		165	*				PT301650
		166	*	DVDFLT	=	FIXED POINT DIVIDE FAULT INTERRUPT	PT301660
		167	*				PT301670
		168	*	CHANIO	=	CHANNEL I/O TERMINATION INTERRUPT	PT301680
		169	*				PT301690
		170	*	QVRFLO	=	TERMINATION QUEUE OVERFLOW INTERRUPT	PT301700
		171	*				PT301710
		172	*				PT301720
		173	*	SVCERR	=	INCORRECT SVC INTRPT	PT301730
		174	*				PT301740
		175	*	DEVERR	=	INCORRECT SERVICE POINTER USED OR	PT301750
		176	*	*	=	INCORRECT DEV. GENERATED INTRPT.	PT301760
		177	*				PT301770
040E	41C0	0F58		178	RENTRY	BAL R12,CRLF	PT301780
0412	24F0			179		LIS R15,0	PT301790
0414	40F0	1022		180		STH R15,TEMP	PT301800
0418	2430			181		LIS R3,0	PT301810
041A	4030	104C		182		STH R3,IOERHW	PT301820
041E	4030	002C		183	M5008	STH R3,X'2C'	NEW PSW FLPT ARITH. FAULT INTRPT.
0422	4030	0034		184		STH R3,X'34'	NEW PSW ILLG. INSTR. INTRPT.
0426	4030	003C		185		STH R3,X'3C'	NEW PSW MCHN. MALFNTN. INTRPT.
042A	4030	0044		186		STH R3,X'44'	NEW PSW EXTERNAL INTRPT.
042E	4030	004C		187		STH R3,X'4C'	NEW PSW FXDPT. DIV. FAULT INTRPT.
0432	4030	0086		188		STH R3,X'86'	NEW PSW CHAN. I/O TERM. INTRPT.
0436	4030	0090		189	M5009	STH R3,X'90'	NEW PSW TERM. Q OVERFLO. INTRPT
				190	*		PT301890
				191	*		PT301900
043A	C810	0F6E		192	LHI	R1,ILGINT	NEW PSW ADDRESS FOR
043E	4010	0036		193	STH	R1,X'36'	ILLEGAL INSTR. INTRPT.
0442	C810	0F72		194	LHI	R1,MALFTN	NEW PSW ADDRESS FOR
0446	4010	003E		195	STH	R1,X'3E'	MACHINE MALFUNCTION INTERRUPT
044A	C810	0F76		196	LHI	R1,EXTINT	NEW PSW ADDRESS FOR
044E	4010	0046		197	STH	R1,X'46'	EXTERNAL INTERRUPT
0452	C810	0F6A		198	LHI	R1,FLPTNT	NEW PSW ADDRESS FOR
0456	4010	002E		199	STH	R1,X'2E'	FLPT ARITH. FAULT INTRPT.
045A	C810	0F7A		200	LHI	R1,DVDFLT	NEW PSW ADDRESS FOR
045E	4010	004E		201	STH	R1,X'4E'	FIXED PT. DIV. FAULT INTRPT.
0462	C810	105A		202	LHI	R1,TABLE	
0466	4010	0080		203	STH	R1,X'80'	
046A	C810	0F7E		204	LHI	R1,CHANIO	
046E	4010	0088		205	STH	R1,X'88'	
0472	C810	0F82		206	LHI	R1,QVRFLO	NEW PSW ADDRESS FOR
0476	4010	0092		207	STH	R1,X'92'	TERM. QUEUE OVERFLO INTRPT.
				208	*		PT302080
				209	*		PT302090
047A	C800	0F06		210	LHI	R0,BUFR2	PT302100
047E	4000	0022		211	STH	R0,X'22'	PT302110
				212	*		PT302120
0482	C800	0F86		213	LHI	R0,SVCERR	PT302130
0486	C840	009C		214	LHI	R4,X'9C'	PT302140
048A	4004	0000		215	RENTRO	STH R0,0(R4)	PT302150
048E	2642			216	AIS	R4,2	PT302160
0490	C540	00D0		217	CLHI	R4,X'D0'	PT302170

0494	2035	218	BNES	RENTRO		PT302180
		219	*			PT302190
0496	C800 0F8A	220	LHI	RO,DEVERR	DEVERR = ADDR. FOR	PT302200
049A	4004 0000	221	RENTR2	STH	RO,0(R4)	PT302210
049E	2642	222		AIS	R4,2	PT302220
04A0	C540 02D0	223	CLHI	R4,X'2D0'	IN ALL SERVICE POINTERS	PT302230
04A4	2035	224	BNES	RENTR2		PT302240
		225	*			PT302250
		226	*	RESET THE TABLE		PT302260
		227	*			PT302270
04A6	C800 0400	228	LHI	RO,X'400'		PT302280
04AA	4000 105A	229	STH	RO, TABLE		PT302290
		230	*			PT302300
		231	*			PT302310
04AE	C200 04B2	232	LPSW	**4		PT302320
04B2	7C00	233	KPI01	DC	X'7C00',**2	PT302330
04B4	04B6					
04B6	4300 04BA	234	RENTR8	B	SUBT0	PT302340
		235	*****			PT302350
		236	*			PT302360
		237	*	TEST PROGRAM FOR FLOATING POINT INSTRUCTIONS		PT302370
		238	*	LE/LER		PT302380
		239	*	STE		PT302390
		240	*	AE/AER		PT302400
		241	*	SE/SER		PT302410
		242	*	ME/MER		PT302420
		243	*	DE/DER		PT302430
		244	*	CE/CER		PT302440
		245	*			PT302450
		246	*	GENERAL REGISTER ASSIGNMENT		PT302460
	0000 000F	247	TOT	EQU	15	PT302470
	0000 0005	248	GR5	EQU	5	PT302480
	0000 0006	249	GR6	EQU	6	PT302490
	0000 0007	250	GR7	EQU	7	PT302500
	0000 0008	251	GR8	EQU	8	PT302510
	0000 0009	252	GR9	EQU	9	PT302520
	0000 000A	253	GR10	EQU	10	PT302530
	0000 000B	254	GR11	EQU	11	PT302540
	0000 000C	255	GR12	EQU	12	PT302550
	0000 000D	256	PNT	EQU	13	PT302560
	0000 000E	257	GR14	EQU	14	PT302570
	0000 000F	258	GR15	EQU	15	PT302580
	0000 0000	259	DISABL	EQU	0	PT302590
	0000 0001	260	SWAP	EQU	1	PT302600
		261	*			PT302610
		262	*	LOAD STORE CHECK		PT302620
04BA	24F1	263	SUBT0	LIS	TOT,1	PT302630
04BC	C850 0B88	264	LDST	LHI	GR5,ERROR1	PT302640
04C0	C860 0400	265		LHI	GR6,X'400'	PT302650
04C4	4060 002C	266		STH	GR6,X'2C'	SET FAULT PSW
04C8	4050 002E	267		STH	GR5,X'2E'	SET FAULT LOC
04CC	9556	268		EPSR	GR5,GR6	SET CURRENT PSW
04CE	C800 7777	269		LHI	RO,X'7777'	SET CC PRINT FLAG
04D2	4000 0F06	270		STH	RO,BUFR2	PT302690
04D6	6600 0C86	271		LE	0,LS00	PT302700
					DATA0 TO REG. 0	PT302710

04DA	42F0	0FA2	272	BTC	X'F',ERROR	EXPECTED CC=0	PT302720
04DE	4190	0AFA	273	BAL	GR9,COMP0	CHECK RESULT	PT302730
04E2	0C8A		274	DC	LSR0	ZERO RESULT	PT302740
04E4	26F1		275	AIS	TOT,1	SET ERROR NUMBER=2	PT302750
04E6	6800	0C8E	276	LE	0,LSD1	NORMALIZED	PT302760
04EA	4320	0FA2	277	BFC	2,ERROR	EXPECTED CC=2	PT302770
04EE	4200	0FA2	278	BTC	X'D',ERROR		PT302780
04F2	4190	0AFA	279	BAL	GR9,COMP0	CHECK RESULT	PT302790
04F6	0C92		280	UC	LSR1		PT302800
04F8	26F1		281	AIS	TOT,1	SET ERROR NUMBER=3	PT302810
04FA	6820	0C96	282	LE	2,LSD2	NEG. NORMALIZED	PT302820
04FE	4310	0FA2	283	BFC	1,ERROR	CC=1	PT302830
0502	42E0	0FA2	284	BTC	X'E',ERROR		PT302840
0506	4190	0B02	285	BAL	GR9,COMP2	CHECK	PT302850
050A	0C9A		286	DC	LSR2		PT302860
050C	26F1		287	AIS	TOT,1	SET ERROR NUMBER=4	PT302870
050E	6820	0C9E	288	LE	2,LSD3	POSITIVE NORMALIZED	PT302880
0512	4320	0FA2	289	BFC	2,ERROR	CC=2	PT302890
0516	42D0	0FA2	290	BTC	X'D',ERROR		PT302900
051A	4190	0B02	291	BAL	GR9,COMP2	CHECK	PT302910
051E	0CA2		292	DC	LSR3		PT302920
0520	2802		293	LER	0,2	R2 R3 TO R0 & R1	PT302930
0522	4320	0FA2	294	BFC	2,ERROR	CC=2	PT302940
0526	42D0	0FA2	295	BTC	X'D',ERROR		PT302950
052A	4190	0AFA	296	BAL	GR9,COMP0		PT302960
052E	0CA2		297	DC	LSR3	POSITIVE NORMALIZED	PT302970
0530	26F1		298	AIS	TOT,1	SET ERROR NUMBER=5	PT302980
0532	6840	0CA6	299	LE	4,LSD4	POSITIVE UNNORMALIZED	PT302990
0536	4320	0FA2	300	BFC	2,ERROR	CC=2	PT303000
053A	42D0	0FA2	301	BTC	X'D',ERROR		PT303010
053E	4190	0B0A	302	BAL	GR9,COMP4		PT303020
0542	0CAA		303	DC	LSR4		PT303030
0544	26F1		304	AIS	TOT,1	SET ERROR NUMBER=6	PT303040
0546	6840	0CAE	305	LE	4,LSD5	POSITIVE UNNORMALIZED	PT303050
054A	4320	0FA2	306	BFC	2,ERROR	CC=2	PT303060
054E	42D0	0FA2	307	BTC	X'D',ERROR		PT303070
0552	4190	0B0A	308	BAL	GR9,COMP4		PT303080
0556	0CB2		309	DC	LSR5		PT303090
0558	26F1		310	AIS	TOT,1	SET ERROR NUMBER=7	PT303100
055A	6860	0CB6	311	LE	6,LSD6	NEG. UNNORM.	PT303110
055E	4310	0FA2	312	BFC	1,ERROR	CC=1	PT303120
0562	42E0	0FA2	313	BTC	X'E',ERROR		PT303130
0566	4190	0B12	314	BAL	GR9,COMP6		PT303140
056A	0CBA		315	DC	LSR6		PT303150
056C	2846		316	LER	4,6	R6 & R7 TO R4 & R5	PT303160
056E	4310	0FA2	317	BFC	1,ERROR		PT303170
0572	42E0	0FA2	318	BTC	X'E',ERROR		PT303180
0576	4190	0B0A	319	BAL	GR9,COMP4		PT303190
057A	0CBA		320	DC	LSR6		PT303200
057C	26F1		321	AIS	TOT,1	SET ERROR NUMBER=8	PT303210
057E	6860	0CBE	322	LE	6,LSD7	POS. UNNORM.	PT303220
0582	4320	0FA2	323	BFC	2,ERROR	CC=2	PT303230
0586	42D0	0FA2	324	BTC	X'D',ERROR		PT303240
058A	4190	0B12	325	BAL	GR9,COMP6		PT303250
058E	0CC2		326	DC	LSR7		PT303260

0590	26F1	327	AIS	TOT,1	SET ERROR NUMBER=9	PT303270
0592	6880 OCC6	328	LE	8,LSDB	NEG. UNNORM.	PT303280
0596	4310 OFA2	329	BFC	1,ERROR	CC=1	PT303290
059A	42E0 OFA2	330	BTC	X'E',ERROR		PT303300
059E	4190 OB1A	331	BAL	GR9,COMP8		PT303310
05A2	0CCA	332	DC	LSR8		PT303320
05A4	26F1	333	AIS	TOT,1	SET ERROR NUMBER=X'A'	PT303330
05A6	6880 OCC6	334	LE	8,LSDB	POS. ILLEG.ZERO	PT303340
05AA	42F0 OFA2	335	BTC	X'F',ERROR	CC=0	PT303350
05AE	4190 OB1A	336	BAL	GR9,COMP8		PT303360
05B2	0CD2	337	DC	LSR9		PT303370
05B4	26F1	338	AIS	TOT,1	SET ERROR NUMBER=X'B'	PT303380
05B6	68A0 0CD6	339	LE	10,LSDB	NEG. ILLEG.ZERO	PT303390
05BA	42F0 OFA2	340	BTC	X'F',ERROR	CC=0	PT303400
05BE	4190 OB22	341	BAL	GR9,COMP10		PT303410
05C2	0CDA	342	DC	LSR10		PT303420
05C4	C6A0 OB5A	343	LHI	GR10,FAULT1	SET FAULT PSW FOR	PT303430
05C8	40A0 002E	344	STH	GR10,X'2E'	OVERFLOW CHECK	PT303440
05CC	26F1	345	AIS	TOT,1	SET ERROR NUMBER=X'C'	PT303450
05CE	68A0 0CDE	346	LE	10,LSDB	UNDERFLOW EXPECTED	PT303460
05D2	4300 0BB8	347	B	ERROR1		PT303470
05D6	4340 OFA2	348	BFC	4,ERROR	CC=4	PT303480
05DA	4280 OFA2	349	BTC	X'B',ERROR		PT303490
05DE	C570 05D2	350	CLHI	GR7,T3B	CHECK ADDRESS	PT303500
05E2	4230 0BB8	351	BNE	ERROR1		PT303510
05E6	4190 OB22	352	BAL	GR9,COMP10		PT303520
05EA	0CE2	353	DC	LSR11		PT303530
05EC	26F1	354	AIS	TOT,1	SET ERROR NUMBER=X'D'	PT303540
05EE	68C0 0CE6	355	LE	12,LSDB	UNDERFLOW EXPECTED	PT303550
05F2	4300 0BB8	356	B	ERROR1		PT303560
05F6	4340 OFA2	357	BFC	4,ERROR	CC= 4	PT303570
05FA	4280 OFA2	358	BTC	X'B',ERROR		PT303580
05FE	C570 05F2	359	CLHI	GR7,T3C	CHECK ADDRESS	PT303590
0602	4230 0BB8	360	BNE	ERROR1		PT303600
0606	4190 OB2A	361	BAL	GR9,COMP12		PT303610
060A	0CEA	362	DC	LSR12		PT303620
060C	26F1	363	AIS	TOT,1	SET ERROR NUMBER=X'E'	PT303630
060E	68C0 0CEE	364	LE	12,LSDB	UNDERFLOW EXPECTED	PT303640
0612	4300 0BB8	365	B	ERROR1		PT303650
0616	4340 OFA2	366	BFC	4,ERROR		PT303660
061A	4280 OFA2	367	BTC	X'B',ERROR		PT303670
061E	C570 0612	368	CLHI	GR7,T3D		PT303680
0622	4230 0BB8	369	BNE	ERROR1		PT303690
0626	4190 OB2A	370	BAL	GR9,COMP12		PT303700
062A	0CF2	371	DC	LSR13		PT303710
062C	28CC	372	LER	12,12	ZERO	PT303720
062E	42F0 OFA2	373	BTC	X'F',ERROR	CC=0	PT303730
0632	4190 OB2A	374	BAL	GR9,COMP12		PT303740
0636	0CF2	375	DC	LSR13		PT303750
0638	26F1	376	AIS	TOT,1	SET ERROR NUMBER=X'F'	PT303760
063A	0799	377	XHR	GR9,GR9		PT303770
063C	9579	378	EPSR	GR7,GR9	DISABLE FLOAT. PT FAULT. INTERRUPT	PT303780
063E	C870 0BB8	379	LHI	GR7,ERROR1	SET FLOAT. PT. FAULT	PT303790
0642	4070 002E	380	STH	GR7,X'2E'	NEW LOC	PT303800
0646	66E0 0CF6	381	LE	14,LSDB	UNDERFLOW OF NEG. OPERAND	PT303810

064A	4340	0FA2	382	BFC	4.ERROR		PT303820
064E	42B0	0FA2	383	BTC	X'B',ERROR	CC=4	PT303830
0652	4190	0B32	384	BAL	GR9,COMP14		PT303840
0656	0CFA		385	DC	LSR14		PT303850
0658	68E0	0CFE	386	LE	14,LSR15	NEG. UNDERFLOW	PT303860
065C	4340	0FA2	387	BFC	4.ERROR	CC=4	PT303870
0660	42B0	0FA2	388	BTC	X'B',ERROR		PT303880
0664	4190	0B32	389	BAL	GR9,COMP14		PT303890
0668	0D02		390	DC	LSR15		PT303900
066A	26F1		391	AIS	TOT,1	SET ERROR NUMBER=X'11'	PT303910
066C	68E0	0D06	392	LE	14,LSR16	NEG. UNDERFLOW	PT303920
0670	4340	0FA2	393	BFC	4.ERROR		PT303930
0674	42B0	0FA2	394	BTC	X'B',ERROR		PT303940
0678	4190	0B32	395	BAL	GR9,COMP14		PT303950
067C	0D0A		396	DC	LSR16		PT303960
067E	4300	0682	397	B	ARITH	BRANCH TO 'ARITH'	PT303970
			398	*	ADD/SUBTRACT CHECK		PT303980
0682	0722		399	ARITH	XHR R2,R2		PT303990
0684	4020	002C	400	STH	R2,X'2C'	SET PSW FOR	PT304000
0688	C830	0C40	401	LHI	R3,FAULT	FLOATING POINT FAULT	PT304010
068C	4030	002E	402	STH	R3,X'2E'	INTERRUPT	PT304020
0690	C830	0400	403	LHI	R3,X'400'	ENABLE FLATING POINT	PT304030
0694	9523		404	EPSR	R2,R3	FAULT INTERRUPT	PT304040
0696	0711		405	XHR	SWAP,SWAP	REMOVE SWAP FLAG	PT304050
0698	0700		406	XHR	DISABL,DISABL	REMOVE DISABLE FLAG	PT304060
			407	*			PT304070
			408	*	*****		PT304080
			409	*			PT304090
069A	C850	0001	410	ADSUB	LHI GR5,1	INITIAL	PT304100
069E	C860	0001	411		LHI GR6,1	INCREMENT	PT304110
06A2	C870	0006	412		LHI GR7,6	FINAL (NUMBER OF OPERAND PAIRS)	PT304120
06A6	C8D0	0D0E	413		LHI PNT,AS		PT304130
06AA	C8F0	0012	414	ASLOOP	LHI TOT,X'12'	SET ERROR NUMBER=X'12'	PT304140
06AE	686D	0000	415		LE 6,0(PNT)	FETCH A	PT304150
06B2	688D	0004	416		LE 8,4(PNT)	FETCH B	PT304160
06B6	48AD	0008	417		LH GR10,8(PNT)	FETCH EXPECTED	PT304170
06BA	48BD	000A	418		LH GR11,10(PNT)	(A+B)	PT304180
06BE	48CD	0010	419		LH GR12,16(PNT)	FETCH EXPECTED CC	PT304190
06C2	68A0	0C80	420		LE 10,ZEROF		PT304200
06C6	28A6		421		SER 10,6	GET (-A)	PT304210
06C8	68C0	0C80	422		LE 12,ZEROF		PT304220
06CC	28C8		423		SER 12,8	GET (-B)	PT304230
06CE	2846		424		LER 4,6		PT304240
06D0	6A4D	0004	425		AE 4,4(PNT)	(A)+(B)	PT304250
06D4	4190	0B68	426		BAL GR9,TEST	CHECK	PT304260
06D8	C8F0	0013	427		LHI TOT,X'13'	SET ERROR NUMBER=X'13'	PT304270
06DC	2846		428		LER 4,6		PT304280
06DE	2B4C		429		SER 4,12	(A)-(-B)	PT304290
06E0	4190	0B68	430		BAL GR9,TEST	CHECK	PT304300
06E4	C8F0	0014	431		LHI TOT,X'14'	SET ERROR NUMBER=X'14'	PT304310
06E8	2848		432		LER 4,8		PT304320
06EA	6A4D	0000	433		AE 4,0(PNT)	(B)+(A)	PT304330
06EE	4190	0B68	434		BAL GR9,TEST	CHECK	PT304340
06F2	C8F0	0015	435		LHI TOT,X'15'	SET ERROR NUMBER=X'15'	PT304350
06F6	2848		436		LER 4,8		PT304360

06F8	2B4A		437	SER	4,10	(B)-(-A)	PT304370
06FA	4190	0B68	438	BAL	GR9,TEST		PT304380
06FE	C8F0	0016	439	LHI	TOT,X'16'	SET ERROR NUMBER=X'16'	PT304390
0702	48CD	0016	440	LH	GR12,22(PNT)	FETCH EXPECTED CC FOR (-A-B)	PT304400
0706	47A0	0C7E	441	XH	GR10,NEG	GET (-A-B) IN GR10 AND GR11	PT304410
070A	284A		442	LER	4,10		PT304420
070C	2A4C		443	AER	4,12	(-A)+(-B)	PT304430
070E	4190	0B68	444	BAL	GR9,TEST	CHECK	PT304440
0712	C8F0	0017	445	LHI	TOT,X'17'	SET ERROR NUMBER=X'17'	PT304450
0716	284A		446	LER	4,10		PT304460
0718	6B4D	0004	447	SE	4,4(PNT)	(-A)-(B)	PT304470
071C	4190	0B68	448	BAL	GR9,TEST	CHECK	PT304480
0720	C8F0	0018	449	LHI	TOT,X'18'	SET ERROR NUMBER=X'18'	PT304490
0724	284C		450	LER	4,12		PT304500
0726	2A4A		451	AER	4,10	(-B)+(-A)	PT304510
0728	4190	0B68	452	BAL	GR9,TEST		PT304520
072C	C8F0	0019	453	LHI	TOT,X'19'	SET ERROR NUMBER=X'19'	PT304530
0730	284C		454	LER	4,12		PT304540
0732	6B4D	0000	455	SE	4,0(PNT)	(-B)-(A)	PT304550
0736	4190	0B68	456	BAL	GR9,TEST		PT304560
073A	C8F0	001A	457	LHI	TOT,X'1A'	SET ERROR NUMBER=X'1A'	PT304570
073E	48AD	000C	458	LH	GR10,12(PNT)	FETCH EXPECTED	PT304580
0742	488D	000E	459	LH	GR11,14(PNT)	(A)-(B)	PT304590
0746	48CD	0012	460	LH	GR12,18(PNT)	FETCH EXPECTED CC	PT304600
074A	2846		461	LER	4,6		PT304610
074C	6B4D	0004	462	SE	4,4(PNT)	(A)-(B)	PT304620
0750	4190	0B68	463	BAL	GR9,TEST	CHECK	PT304630
0754	C8F0	001B	464	LHI	TOT,X'1B'	SET ERROR NUMBER=X'1B'	PT304640
0758	2846		465	LER	4,6		PT304650
075A	2A4C		466	AER	4,12	(A)+(-B)	PT304660
075C	4190	0B68	467	BAL	GR9,TEST	CHECK	PT304670
0760	C8F0	001C	468	LHI	TOT,X'1C'	SET ERROR NUMBER=X'1C'	PT304680
0764	284C		469	LER	4,12		PT304690
0766	6A4D	0000	470	AE	4,0(PNT)	(-B)+(A)	PT304700
076A	4190	0B68	471	BAL	GR9,TEST	CHECK	PT304710
076E	C8F0	001D	472	LHI	TOT,X'1D'	SET ERROR NUMBER=X'1D'	PT304720
0772	284C		473	LER	4,12		PT304730
0774	2B4A		474	SER	4,10	(-B)-(-A)	PT304740
0776	4190	0B68	475	BAL	GR9,TEST	CHECK	PT304750
077A	C8F0	001E	476	LHI	TOT,X'1E'	SET ERROR NUMBER=X'1E'	PT304760
077E	48CD	0014	477	LH	GR12,20(PNT)	FETCH EXPECTED CC FOR (B-A)	PT304770
0782	C5A0	0000	478	CLHI	GR10,0		PT304780
0786	2333		479	BES	ZRORST	DIFFERENCE IS ZERO	PT304790
0788	47A0	0C7E	480	XH	GR10,NEG	COMPLEMENT THE SIGN BIT	PT304800
078C	284A		481	ZRORST	LER	4,10	PT304810
078E	6A4D	0004	482	AE	4,4(PNT)	(-A)+(B)	PT304820
0792	4190	0B68	483	BAL	GR9,TEST	CHECK	PT304830
0796	C8F0	001F	484	LHI	TOT,X'1F'	SET ERROR NUMBER=X'1F'	PT304840
079A	284A		485	LER	4,10		PT304850
079C	2B4C		486	SER	4,12	(-A)-(-B)	PT304860
079E	4190	0B68	487	BAL	GR9,TEST	CHECK	PT304870
07A2	C8F0	0020	488	LHI	TOT,X'20'	SET ERROR NUMBER=X'20'	PT304880
07A6	2848		489	LER	4,8		PT304890
07A8	6B4D	0000	490	SE	4,0(PNT)	(B)-(A)	PT304900
07AC	4190	0B68	491	BAL	GR9,TEST		PT304910

07B0	C8F0	0021	492	LHI	TOT,X'21'	SET ERROR NUMBER=X'21	PT304920	
07B4	2848		493	LER	4,8		PT304930	
07B6	2A4A		494	AER	4,10	(B)+(-A)	PT304940	
07B8	4190	0B68	495	BAL	GR9,TEST	CHECK	PT304950	
07BC	CAD0	0018	496	AHI	PNT,24	INCREMENT POINTER	PT304960	
07C0	C150	06AA	497	BXLE	GR5,ASLOOP		PT304970	
07C4	0800		498	LHR	DISABL,DISABL	EXAMINE DISABLE FLAG	PT304980	
07C6	4230	07D6	499	BNZ	ASOVER		PT304990	
07CA	C800	0C84	500	LHI	DISABL,FLAG	DISABLE FLOATING	PT305000	
07CE	0733		501	XHR	R3,R3	POINT FAULT	PT305010	
07D0	9523		502	EPSR	R2,R3	INTERRUPT	PT305020	
07D2	4300	069A	503	B	ADSUB		PT305030	
07D6	0700		504	ASOVER	XHR	DISABL,DISABL	ENABLE FLOATING	PT305040
07D8	C830	0400	505	LHI	R3,X'400'	POINT FAULT	PT305050	
07DC	9523		506	EPSR	R2,R3	INTERRUPT	PT305060	
07DE	4300	07E2	507	B	MULTI	BRANCH TO MULT. DIV. ROUTINE	PT305070	
			508	*	MULTIPLY/DIVIDE CHECK		PT305080	
07E2	2451		509	MULTI	LIS	GR5,1	INITIAL	PT305090
07E4	2461		510		LIS	GR6,1	INCREMENT	PT305100
07E6	2478		511		LIS	GR7,8	FINAL	PT305110
07E8	C8D0	0D9E	512	LHI	PNT,MUL	OBTAIN POINTER TO DATA	PT305120	
07EC	C8F0	0022	513	MLOOP	LHI	TOT,X'22'	SET ERROR NUMBER=X'22'	PT305130
07F0	686D	0000	514		LE	6,0(PNT)	FETCH A	PT305140
07F4	688D	0004	515		LE	8,4(PNT)	FETCH B	PT305150
07F8	68A0	0C80	516		LE	10,ZEROF		PT305160
07FC	28A6		517	SER	10,6	GET (-A)	PT305170	
07FE	68C0	0C80	518	LE	12,ZEROF		PT305180	
0802	28C8		519	SER	12,8	GET (-B)	PT305190	
0804	48AD	0006	520	LH	GR10,8(PNT)	FETCH EXPECTED VALUE OF	PT305200	
0808	48BD	000A	521	LH	GR11,10(PNT)	(A*B)	PT305210	
080C	48CD	000C	522	LH	GR12,12(PNT)	FETCH EXPECTED CC	PT305220	
0810	2846		523	LER	4,6		PT305230	
0812	6C4D	0004	524	ME	4,4(PNT)	GET (A)*(B)	PT305240	
0816	4190	0B68	525	BAL	GR9,TEST		PT305250	
081A	C8F0	0023	526	LHI	TOT,X'23'	SET ERROR NUMBER=X'23'	PT305260	
081E	284C		527	LER	4,12	GET (-B)*(-A)	PT305270	
0820	2C4A		528	MER	4,10		PT305280	
0822	4190	0B68	529	BAL	GR9,TEST		PT305290	
0826	C8F0	0024	530	LHI	TOT,X'24'	SET ERROR NUMBER=X'24'	PT305300	
082A	48CD	000E	531	LH	GR12,14(PNT)	GET CC FOR -(A*B)	PT305310	
082E	C5A0	0000	532	CLHI	GR10,0		PT305320	
0832	2333		533	BES	ZR01	ZERO RESULT	PT305330	
0834	47A0	0C7C	534	XH	GR10,NEG	COMPLEMENT THE SIGN BIT	PT305340	
0838	284A		535	ZR01	LER	4,10	PT305350	
083A	2C48		536	MER	4,8	GET (-A)*(B)	PT305360	
083C	4190	0B68	537	BAL	GR9,TEST	CHECK	PT305370	
0840	C8F0	0025	538	LHI	TOT,X'25'	SET ERROR NUMBER=X'25'	PT305380	
0844	284C		539	LER	4,12		PT305390	
0846	6C4D	0000	540	ME	4,0(PNT)	GET (-B)*(A)	PT305400	
084A	4190	0B68	541	BAL	GR9,TEST	CHECK	PT305410	
084E	CAD0	0010	542	AHI	PNT,16	INCREMENT POINTER	PT305420	
0852	C150	07EC	543	BXLE	GR5,MLOOP		PT305430	
0856	2451		544	DIVIDE	LIS	GR5,1	PT305440	
0858	2461		545		LIS	GR6,1	PT305450	
085A	2478		546		LIS	GR7,8	PT305460	

085C	C8D0 0E1E	547	LHI	PNT, DIV	FETCH POINTER TO DATA	PT305470
0860	C8F0 0026	548	LHI	TOT, X'26'	SET ERROR NUMBER=X'26'	PT305480
0864	686D 0000	549	LE	6,0(PNT)	FETCH A	PT305490
0868	688D 0004	550	LE	8,4(PNT)	FETCH B	PT305500
086C	68A0 0C80	551	LE	10,ZEROF		PT305510
0870	28A6	552	SER	10,6	GET (-A)	PT305520
0872	68C0 0C80	553	LE	12,ZEROF		PT305530
0876	28C8	554	SER	12,8	GET (-B)	PT305540
0878	48A0 0008	555	LH	GR10,8(PNT)	FETCH EXPECTED	PT305550
087C	488D 000A	556	LH	GR11,10(PNT)	VALUE OF (A/B)	PT305560
0880	48C0 000C	557	LH	GR12,12(PNT)	FETCH EXPECTED CC	PT305570
0884	2846	558	LER	4,6		PT305580
0886	6D4D 0004	559	DE	4,4(PNT)	GET (A)/(B)	PT305590
088A	4190 0B68	560	BAL	GR9,TEST	CHECK	PT305600
088E	C8F0 0027	561	LHI	TOT, X'27'	SET ERROR NUMBER=X'27'	PT305610
0892	284A	562	LER	4,10		PT305620
0894	2D4C	563	DER	4,12	GET (-A)/(-B)	PT305630
0896	4190 0B68	564	BAL	GR9,TEST		PT305640
089A	C8F0 0028	565	LHI	TOT, X'28'	SET ERROR NUMBER=X'28'	PT305650
089E	48C0 J00E	566	LH	GR12,14(PNT)	GET CC FOR -(A/B)	PT305660
08A2	C5A0 J00C	567	CLHI	GR10,0	IF(A/B) NOT ZERO	PT305670
08A6	2333	568	BES	ZRO2	COMPLEMENT THE	PT305680
08A8	47A0 0C7E	569	XH	GR10,NEG	SIGN BIT	PT305690
08AC	284A	570	LER	4,10		PT305700
08AE	6D4D 0004	571	DE	4,4(PNT)	GET (-A)/(B)	PT305710
08B2	4190 0B68	572	BAL	GR9,TEST	CHECK	PT305720
08B6	C8F0 0029	573	LHI	TOT, X'29'	SET ERROR NUMBER=X'29'	PT305730
08BA	2846	574	LER	4,6		PT305740
08BC	2D4C	575	DER	4,12	GET (A)/(-B)	PT305750
08BE	4190 0B68	576	BAL	GR9,TEST		PT305760
08C2	CA00 0010	577	AHI	PNT,16	INCREMENT THE POINTER	PT305770
08C6	C150 0860	578	BXLE	GR5,DLOOP		PT305780
		579	* CHECK	FOR THE ACCURACY OF	THE ALGORITHMS USED	PT305790
08CA	24C2	580	LIS	GR12,2	EXPECTED CC=2	PT305800
08CC	6840 0E9E	581	LE	4,MD1		PT305810
08D0	6C40 0EA2	582	ME	4,MD2	(MD1)*(MD2)	PT305820
08D4	C8F0 002A	583	LHI	TOT, X'2A'	SET ERROR NUMBER=X'2A'	PT305830
08D8	48A0 0E9E	584	LH	GR10,MD1		PT305840
08DC	4880 0EA0	585	LH	GR11,MD1+2		PT305850
08E0	6D40 0EA2	586	DE	4,MD2	(MD1)*(MD2)/(MD2)	PT305860
08E4	4190 0B68	587	BAL	GR9,TEST		PT305870
08E8	C8F0 002B	588	LHI	TOT, X'2B'	SET ERROR NUMBER=X'2B'	PT305880
08EC	48A0 0EB2	589	LH	GR10,MD6		PT305890
08F0	4880 0EB4	590	LH	GR11,MD6+2		PT305900
08F4	6840 0EAA	591	LE	4,MD4		PT305910
08F8	6C40 0EAE	592	ME	4,MD5	GET (MD4)*(MD5)	PT305920
08FC	4190 0B68	593	BAL	GR9,TEST		PT305930
0900	C8F0 002C	594	LHI	TOT, X'2C'	SET ERROR NUMBER=X'2C'	PT305940
0904	48A0 0EAE	595	LH	GR10,MD5		PT305950
0908	4880 0EB0	596	LH	GR11,MD5+2		PT305960
090C	6D40 0EAA	597	DE	4,MD4	OBTAIN (MD4)*(MD5)/(MD4)	PT305970
0910	4190 0B68	598	BAL	GR9,TEST	CHECK	PT305980
0914	C8F0 002D	599	LHI	TOT, X'2D'	SET ERROR NUMBER=X'2D'	PT305990
0918	48A0 0EBE	600	LH	GR10,MD9		PT306000
091C	4880 0EC0	601	LH	GR11,MD9+2		PT306010

0920	6840	0EB6	602	LE	4,MD7		PT306020	
0924	6C40	0EBA	603	ME	4,MD8		PT306030	
0928	6C40	0EBE	604	ME	4,MD9		PT306040	
092C	6860	0EC2	605	LE	6,MD10		PT306050	
0930	6C60	0EC6	606	ME	6,MD11		PT306060	
0934	6C60	0ECA	607	ME	6,MD12		PT306070	
0938	2C46		608	MER	4,6		PT306080	
093A	6D40	0EB6	609	DE	4,MD7		PT306090	
093E	6D40	0EBA	610	DE	4,MD8		PT306100	
0942	6D40	0ECA	611	DE	4,MD12		PT306110	
0946	6D40	0EC6	612	DE	4,MD11		PT306120	
094A	6D40	0EC2	613	DE	4,MD10		PT306130	
094E	4190	0B68	614	BAL	GR9,TEST		PT306140	
0952	C8F0	002E	615	LHI	TOT,X'2E'	SET ERROR NUMBER=X'2E'	PT306150	
0956	48A0	0ECE	616	LH	GR10,MD13		PT306160	
095A	48B0	0ED0	617	LH	GR11,MD13+2		PT306170	
095E	6840	0ECE	618	LE	4,MD13		PT306180	
0962	6D40	0ED2	619	DE	4,MD14		PT306190	
0966	6D40	0ED6	620	DE	4,MD15		PT306200	
096A	6D40	0EDA	621	DE	4,MD16		PT306210	
096E	6D40	0EDE	622	DE	4,MD17		PT306220	
0972	6D40	0EE2	623	DE	4,MD18		PT306230	
0976	6C40	0EE2	624	ME	4,MD18		PT306240	
097A	6C40	0EDE	625	ME	4,MD17		PT306250	
097E	6C40	0EDA	626	ME	4,MD16		PT306260	
0982	6C40	0ED6	627	ME	4,MD15		PT306270	
0986	6C40	0ED2	628	ME	4,MD14		PT306280	
098A	4190	0B68	629	BAL	GR9,TEST		PT306290	
098E	C8F0	002F	630	LHI	TOT,X'2F'	SET ERROR NUMBER=X'2F'	PT306300	
			631	*	CHECK FOR DIVISION BY ZERO		PT306310	
0992	4820	1040	632	LH	R2,CPUNO	EXAMINE CPU MODEL NUMBER	PT306320	
0996	C420	0800	633	NHI	R2,X'800'		PT306330	
099A	4230	09A4	634	BNZ	DVZ1		PT306340	
099E	24CD		635	LIS	GR12,X'D'	SET CONDITION CODE FOR MOD 5 OR 70	PT306350	
09A0	4300	09A6	636	B	DVZ2		PT306360	
09A4	24CC		637	DVZ1	LIS	GR12,X'C'	SET CONDITION CODE FOR MODEL 80	PT306370
09A6	6860	0EB2	638	DVZ2	LE	6,MD6	PT306380	
09AA	48A0	0EB2	639	LH	GR10,MD6		PT306390	
09AE	48B0	0EB4	640	LH	GR11,MD6+2		PT306400	
09B2	2846		641	LER	4,6		PT306410	
09B4	6D40	0C80	642	DE	4,ZEROF	DIVIDE BY ZERO	PT306420	
09B8	4190	0B68	643	BAL	GR9,TEST	CHECK	PT306430	
09BC	C8F0	0030	644	LHI	TOT,X'30'	SET ERROR NUMBER=X'30'	PT306440	
09C0	6840	0C80	645	LE	4,ZEROF		PT306450	
09C4	2B46		646	SER	4,6	GET (-MD6)	PT306460	
09C6	47A0	0C7E	647	XH	GR10,NEG	COMPLEMENT THE SIGN BIT	PT306470	
09CA	6D40	0C80	648	DE	4,ZEROF		PT306480	
09CE	4190	0B68	649	BAL	GR9,TEST		PT306490	
09D2	C8F0	0031	650	LHI	TOT,X'31'	SET ERROR NUMBER=X'31'	PT306500	
09D6	6840	0C80	651	LE	4,ZEROF		PT306510	
09DA	24A0		652	LIS	GR10,0		PT306520	
09DC	24B0		653	LIS	GR11,0		PT306530	
09DE	6D40	0C80	654	DE	4,ZEROF		PT306540	
09E2	4190	0B68	655	BAL	GR9,TEST		PT306550	
09E6	0800		656	LHR	DISABL,DISABL	EXAMINE DISABLE FLAG	PT306560	

09E8	4230	09F8	657	BNZ	MDOVER		PT306570	
09EC	4800	0C84	658	LH	DISABL,FLAG	DISABLE FLOATING	PT306580	
09F0	0733		659	XHR	R3,R3	POINT FAULT	PT306590	
09F2	9523		660	EPSR	R2,R3	INTERRUPT	PT306600	
09F4	4300	07E2	661	B	MULTI		PT306610	
09F8	0700		662	MDOVER	XHR	DISABL,DISABL	ENABLE FLOATING	PT306620
09FA	C830	0400	663	LHI	R3,X'400'	POINT FAULT	PT306630	
09FE	9523		664	EPSR	R2,R3	INTERRUPT	PT306640	
0A00	4300	0A04	665	B	COMPR	BRANCH TO FLOAT. COMPARE ROUTINE	PT306650	
			666	*	COMPARE CHECK		PT306660	
0A04	2451		667	COMPR	LIS	GR5,1	PT306670	
0A06	2461		668		LIS	GR6,1	PT306680	
0A08	2474		669		LIS	GR7,4	PT306690	
0A0A	C8D0	0EE6	670	LHI	PNT,COM		PT306700	
0A0E	C8F0	0032	671	COLOOP	LHI	TOT,X'32'	SET ERROR NUMBER=X'32'	PT306710
0A12	686D	0000	672		LE	6,0(PNT)	FETCH A	PT306720
0A16	688D	0004	673		LE	8,4(PNT)	FETCH B	PT306730
0A1A	68A0	0C80	674		LE	10,ZEROF		PT306740
0A1E	28A6		675	SER	10,6	GET (-A)	PT306750	
0A20	68C0	0C80	676	LE	12,ZEROF		PT306760	
0A24	28C8		677	SER	12,8	GET (-B)	PT306770	
0A26	24C0		678	LIS	GR12,0	EXPECTED CC=0	PT306780	
0A28	696D	0000	679	CE	6,0(PNT)		PT306790	
0A2C	4190	0BA2	680	BAL	GR9,TCC	CHECK CC	PT306800	
0A30	C8F0	0033	681	LHI	TOT,X'33'	SET ERROR NUMBER=X'33'	PT306810	
0A34	29AA		682	CER	10,10		PT306820	
0A36	4190	0BA2	683	BAL	GR9,TCC	CHECK CC	PT306830	
0A3A	C8F0	0034	684	LHI	TOT,X'34'	SET ERROR NUMBER=X'34'	PT306840	
0A3E	698D	0004	685	CE	8,4(PNT)		PT306850	
0A42	4190	0BA2	686	BAL	GR9,TCC	CHECK CC	PT306860	
0A46	C8F0	0035	687	LHI	TOT,X'35'	SET ERROR NUMBER=X'35'	PT306870	
0A4A	29CC		688	CER	12,12		PT306880	
0A4C	4190	0BA2	689	BAL	GR9,TCC	CHECK CC	PT306890	
0A50	C8F0	0036	690	LHI	TOT,X'36'	SET ERROR NUMBER=X'36'	PT306900	
0A54	24C2		691	LIS	GR12,2	EXPECTED CC=2	PT306910	
0A56	696D	0004	692	CE	6,4(PNT)	A>B	PT306920	
0A5A	4190	0BA2	693	BAL	GR9,TCC	CHECK CC	PT306930	
0A5E	C8F0	0037	694	LHI	TOT,X'37'	SET ERROR NUMBER=X'37'	PT306940	
0A62	296A		695	CER	6,10	A> -A	PT306950	
0A64	4190	0BA2	696	BAL	GR9,TCC	CHECK	PT306960	
0A68	C8F0	0038	697	LHI	TOT,X'38'	SET ERROR NUMBER=X'38'	PT306970	
0A6C	296C		698	CER	6,12	A >-B	PT306980	
0A6E	4190	0BA2	699	BAL	GR9,TCC	CHECK	PT306990	
0A72	C8F0	0039	700	LHI	TOT,X'39'	SET ERROR NUMBER=X'39'	PT307000	
0A76	299A		701	CER	8,10	B>-A	PT307010	
0A78	4190	0BA2	702	BAL	GR9,TCC	CHECK	PT307020	
0A7C	C8F0	003A	703	LHI	TOT,X'3A'	SET ERROR NUMBER=X'3A'	PT307030	
0A80	6980	0C80	704	CE	8,ZEROF	CHECK IF B=0	PT307040	
0A84	2133		705	BNES	COMPR1	IF NOT BRANCH TO COMPR1	PT307050	
0A86	26F1		706	AIS	TOT,1	ERROR NUMBER=X'3B'	PT307060	
0A88	2306		707	BS	COMPR2		PT307070	
0A8A	298C		708	COMPR1	CER	8,12	PT307080	
0A8C	4190	0BA2	709	BAL	GR9,TCC	CHECK	PT307090	
0A90	C8F0	003B	710	LHI	TOT,X'3B'	SET ERROR NUMBER=X'3B'	PT307100	
0A94	29CA		711	COMPR2	CER	12,10	PT307110	
						-B>-A		

0A96	4190	0BA2	712	BAL	GR9,TCC	CHECK	PT307120	
0A9A	C8F0	003C	713	LHI	TOT,X'3C'	SET ERROR NUMBER=X'3C'	PT307130	
0A9E	24C9		714	LIS	GR12,9	EXPECTED CC=9	PT307140	
0AA0	29AC		715	CER	10,12	-AC-B	PT307150	
0AA2	4190	0BA2	716	BAL	GR9,TCC	CHECK	PT307160	
0AA6	C8F0	003D	717	LHI	TOT,X'3D'	SET ERROR NUMBER=X'3D'	PT307170	
0AAA	69AD	0000	718	CE	10,0(PNT)	-A<A	PT307180	
0AAE	4190	0BA2	719	BAL	GR9,TCC	CHECK	PT307190	
0AB2	C8F0	003E	720	LHI	TOT,X'3E'	SET ERROR NUMBER=X'3E'	PT307200	
0AB6	69AD	0004	721	CE	10,4(PNT)	-ACB	PT307210	
0ABA	4190	0BA2	722	BAL	GR9,TCC	CHECK	PT307220	
0ABE	C8F0	003F	723	LHI	TOT,X'3F'	SET ERROR NUMBER=X'3F'	PT307230	
0AC2	698D	0000	724	CE	8,0(PNT)	B<A	PT307240	
0AC6	4190	0BA2	725	BAL	GR9,TCC		PT307250	
0ACA	C6F0	0040	726	LHI	TOT,X'40'	SET ERROR NUMBER=X'40'	PT307260	
0ACE	29C6		727	CER	12,6	-B<A	PT307270	
0AD0	4190	0BA2	728	BAL	GR9,TCC		PT307280	
0AD4	C8F0	0041	729	LHI	TOT,X'41'	SET ERROR NUMBER=X'41'	PT307290	
0AD8	698D	0C80	730	CE	8,ZEROF	CHECK IF B=0	PT307300	
0ADC	2133		731	BNES	COMPR3	IF NOT BRANCH TO COMPR3	PT307310	
0ADE	26F1		732	AIS	TOT,1	INCREMENT ERROR NUMBER	PT307320	
0AE0	2307		733	BS	COMPR4		PT307330	
0AE2	69CD	0004	734	COMPR3	CE	12,4(PNT)	-B<B	PT307340
0AE6	4190	0BA2	735	BAL	GR9,TCC	CHECK CC	PT307350	
0AEA	C8F0	0042	736	LHI	TOT,X'42'	SET ERROR NUMBER=X'42'	PT307360	
0AEE	CAD0	0008	737	COMPR4	AHI	PNT,8	PT307370	
0AF2	C150	0A0E	738	BXLE	GR5,COLOOP		PT307380	
0AF6	4300	0FD8	739	B	NOERR		PT307390	
			740	*	SUBROUTINES		PT307400	
			741	*			PT307410	
			742	*	THESE SUBROUTINES STORE THE RESULT IN TEMP& AND TEMP+2		PT307420	
0AFA	6000	1022	743	COMP0	STE	0,TEMP	THIS ROUTINE	PT307430
0AFE	4300	0B3A	744	B	COMPAR		STORES THE 32 BIT	PT307440
0B02	6020	1022	745	COMP2	STE	2,TEMP	RESULT IN 4 SUCCESSIVE	PT307450
0B06	4300	0B3A	746	B	COMPAR		BYTES IN MAIN MEMORY	PT307460
0B0A	6040	1022	747	COMP4	STE	4,TEMP		PT307470
0B0E	4300	0B3A	748	B	COMPAR			PT307480
0B12	6060	1022	749	COMP6	STE	6,TEMP		PT307490
0B16	4300	0B3A	750	B	COMPAR			PT307500
0B1A	6080	1022	751	COMP8	STE	8,TEMP		PT307510
0B1E	4300	0B3A	752	B	COMPAR			PT307520
0B22	60A0	1022	753	COMP10	STE	10,TEMP		PT307530
0B26	4300	0B3A	754	B	COMPAR			PT307540
0B2A	60C0	1022	755	COMP12	STE	12,TEMP		PT307550
0B2E	4300	0B3A	756	B	COMPAR			PT307560
0B32	60E0	1022	757	COMP14	STE	14,TEMP		PT307570
0B36	4300	0B3A	758	B	COMPAR			PT307580
			759	*	THIS ROUTINE COMPARES CALCULATED AND EXPECTED RESULTS		PT307590	
0B3A	48C9	0000	760	COMPAR	LH	GR12,0(GR9)		PT307600
0B3E	48AC	0000	761		LH	GR10,0(GR12)		PT307610
0B42	48BC	0002	762		LH	GR11,2(GR12)		PT307620
0B46	45A0	1022	763		CLH	GR10,TEMP	COMPARE	PT307630
0B4A	4230	0BC6	764		BNE	ERROR2		PT307640
0B4E	45B0	1024	765		CLH	GR11,TEMP+2		PT307650
0B52	4230	0BC6	766		BNE	ERROR2		PT307660

0B56	4309 0002	767	B	2(GR9)		PT307670
		768	*	THIS ROUTINE IS ENTERED WHEN FLOAT. PT. FAULT		PT307680
		769	*	INTERRUPT IS TAKEN		PT307690
0B5A	4860 0028	770	FAULT1	LH GR6,X'28'	GET OLD PSW	PT307700
0B5E	4870 002A	771		LH GR7,X'2A'	GET OLD LOC	PT307710
0B62	9556	772		EPSR GR5,GR6	SET CURRENT PSW= OLD PSW	PT307720
0B64	4307 0004	773		B 4(GR7)	BRANCH TO OLD LOC	PT307730
		774	*	THIS ROUTINE COMPARES THE CALCULATED RESULT AND		PT307740
		775	*	CONDITION CODE AGAINST THE EXPECTED RESULT AND CC		PT307750
0B68	95EE	776	TEST	EPSR GR14,GR14	OBTAIN CC FROM CURRENT PSW	PT307760
0B6A	C4E0 000F	777		NHI GR14,X'F'		PT307770
0B6E	05EC	778		CLHR GR14,GR12	COMPARE	PT307780
0B70	4230 0BEE	779		BNZ ERROR3		PT307790
0B74	0800	780		LHR DISABL,DISABL	EXAMINE DISABLE FLAG	PT307800
0B76	4230 0B8A	781		BNZ TEST1	IF SET BRANCH TO TEST1	PT307810
0B7A	C3C0 0004	782		THI GR12,X'4'	EXAMINE OVERFLOW BIT OF CC	PT307820
0B7E	4330 0B8A	783		BZ TEST1	IF RESET GO TO TEST1	PT307830
0B82	0811	784		LHR SWAP,SWAP	TEST WHETHER INT. WAS TAKEN	PT307840
0B84	4330 0BB8	785		BZ ERROR1	IF INT. NOT TAKEN THEN ERROR	PT307850
0B88	0711	786		XHR SWAP,SWAP	REMOVE SWAP FLAG	PT307860
0B8A	6040 1022	787	TEST1	STE 4,TEMP	STORE THE CALCULATED RESULT	PT307870
0B8E	45A0 1022	788		CLH GR10,TEMP	COMPARE	PT307880
0B92	4230 0BEE	789		BNE ERROR3		PT307890
0B96	4580 1024	790		CLH GR11,TEMP+2		PT307900
0B9A	4230 0BEE	791		BNE ERROR3		PT307910
0B9E	4309 0000	792		B 0(GR9)	RETURN	PT307920
		793	*	THIS ROUTINE COMPARES CC OF CURRENT PSW AGAINST EXPECTED CC		PT307930
0BA2	95EE	794	TCC	EPSR GR14,GR14	OBTAIN CC FROM CURRENT PSW	PT307940
0BA4	C4E0 000F	795		NHI GR14,X'F'		PT307950
0BA8	05EC	796		CLHR GR14,GR12		PT307960
0BAA	4230 0C28	797		BNE ERROR4		PT307970
0BAE	0811	798		LHR SWAP,SWAP	EXAMINE SWAP FLAG	PT307980
0BB0	4230 0BB8	799		BNZ ERROR1	IF SET ,BRANCH TO ERROR	PT307990
0BB4	4309 0000	800		B 0(GR9)		PT308000
		801	*	THIS SUBROUTINE IS ENTERED WHEN THE FLOATING POINT		PT308010
		802	*	FAULT INTERRUPT IS NOT HANDLED CORRECTLY		PT308020
0BB8	0700	803	ERROR1	XHR R0,R0	RESET CC PRINT FLAG	PT308030
0BBA	4000 0F06	804		STH R0,BUFR2		PT308040
0BBE	4000 0F08	805		STH R0,BUFR2+2	NO VALUES ARE TO BE PRINTED	PT308050
0BC2	4300 0FA2	806		B ERROR		PT308060
		807	*-	THIS SUBROUTINE IS ENTERED WHEN THE ACTUAL VALUE AFTER LOAD		PT308070
		808	*	AND STORE OPERATION DOES NOT MATCH THE EXPECTED VALUE		PT308080
0BC6	0700	809	ERROR2	XHR R0,R0		PT308090
0BC8	2414	810		LIS R1,4		PT308100
0BCA	4000 0F06	811		STH R0,BUFR2	RESET CC PRINT FLAG	PT308110
0BCE	4010 0F08	812		STH R1,BUFR2+2	FOUR HALF WORDS ARE TO BE PRINTED	PT308120
0BD2	4800 1022	813		LH R0,TEMP		PT308130
0BD6	4810 1024	814		LH R1,TEMP+2		PT308140
0BDA	4000 0F0A	815		STH R0,BUFR2+4	ACTUAL #	PT308150
0BDE	4010 0F0C	816		STH R1,BUFR2+6	VALUE	PT308160
0BE2	40A0 0F0E	817		STH R10,BUFR2+8	EXPECTED	PT308170
0BE6	40B0 0F10	818		STH R11,BUFR2+10	VALUE	PT308180
0BEA	4300 0FA2	819		B ERROR		PT308190
		820	*	THIS SUBROUTINE IS ENTERED WHEN THE EXPECTED		PT308200
		821	*	AND CALCULATED RESULTS OR THE EXPECTED AND ACTUAL		PT308210

		822	*	CONDITION CODES DO NOT MATCH IN FLOATING POINT	PT308220
		823	*	ADD,SUBTRACT, MULTIPLY OR DIVIDE OPERATION.	PT308230
OBEE	0700	824	ERROR3	XHR R0,R0 RESET CC PRINT FLAG	PT308240
OBFO	4000 0F06	825		STH R0,BUFR2	PT308250
OBF4	C5F0 002A	826		CLHI R15,X'2A'	PT308260
OBF8	2185	827		BLS ERR4CO IF ERROR NUMBER	PT308270
OBFA	C5F0 0032	828		CLHI R15,X'32'	PT308280
OBFE	4280 0C60	829		BL ERROR5 BRANCH TO	PT308290
OC02	240A	830	ERR4CO	LIS R0,10 ERRORS	PT308300
OC04	4000 0F08	831		STH R0,BUFR2+2 TEN HALF WORD VALUES TO BE PRINTED	PT308310
OC08	6060 0F0A	832		STE 6,BUFR2+4 FIRST OPERAND	PT308320
OC0C	6080 0F0E	833		STE 8,BUFR2+8 SECOND OPERAND	PT308330
OC10	6040 0F12	834		STE 4,BUFR2+12 ACTUAL RESULT	PT308340
OC14	40A0 0F16	835		STH R10,BUFR2+16 EXPECTED	PT308350
OC18	4080 0F18	836		STH R11,BUFR2+18 RESULT	PT308360
OC1C	40E0 0F1A	837		STH R14,BUFR2+20 ACTUAL CONDITION CODE	PT308370
OC20	40C0 0F1C	838		STH R12,BUFR2+22 EXPECTED CONDITION CODE	PT308380
OC24	4300 0FA2	839		B ERROR	PT308390
		840	*	THIS SUBROUTINE IS ENTERED WHEN THE ACTUAL AND	PT308400
		841	*	EXPECTED CONDITION CODES DONOT MATCH AFTER	PT308410
		842	*	A FL ATING POINT COMPARE OPERATION.	PT308420
OC28	0700	843	ERROR4	XHR R0,R0 RESET CC PRINT FLAG	PT308430
OC2A	4000 0F06	844		STH R0,BUFR2	PT308440
OC2E	2402	845		LIS R0,2 TWO HALF WORD VALUES	PT308450
OC30	4000 0F08	846		STH R0,BUFR2+2 ARE TO BE PRINTED	PT308460
OC34	40E0 0F0A	847		STH R14,BUFR2+4 ACTUAL CONDITION CODE	PT308470
OC38	40C0 0F0C	848		STH R12,BUFR2+6 EXPECTED CONDITION CODE	PT308480
OC3C	4300 0FA2	849		B ERROR	PT308490
		850	*	THIS ROUTINE CHECKS WHETHER OR NOT THE FLOAT. POINT	PT308500
		851	*	FAULT INTERRUPT TAKEN IS ERRONEOUS	PT308510
OC40	0800	852	FAULT	LHR DISABL,DISABL EXAMINE DISABLE FLAG	PT308520
OC42	4230 0BB8	853		BNZ ERROR1 IF SET, BRANCH TO ERROR	PT308530
OC46	C3C0 0004	854		THI GR12,X'4'	PT308540
OC4A	4330 0BB8	855		BZ ERROR1 IF RESET,BRANCH TO ERROR	PT308550
OC4E	4810 0C84	856		LH SWAP,FLAG PUT FLAG IN SWAP	PT308560
OC52	4830 0028	857		LH R3,X'28'	PT308570
OC56	4840 002A	858		LH R4,X'2A'	PT308580
OC5A	9513	859		EPSR R1,R3 SET NEW PSW TO OLD PSW VALUE	PT308590
OC5C	4304 0000	860		B 0(R4) BRANCH TO OLD LOC VALUE	PT308600
OC60	2406	861	ERROR5	LIS R0,6	PT308610
OC62	4000 0F08	862		STH R0,BUFR2+2 SIX HALF WORDS ARE TO BE PRINTED	PT308620
OC66	6040 0F0A	863		STE 4,BUFR2+4 ACTUAL RESULT	PT308630
OC6A	40A0 0F0E	864		STH R10,BUFR2+8 EXPECTED	PT308640
OC6E	40B0 0F10	865		STH R11,BUFR2+10 RESULT	PT308650
OC72	40E0 0F12	866		STH R14,BUFR2+12 ACTUAL CONDITION CODE	PT308660
OC76	40C0 0F14	867		STH R12,BUFR2+14 EXPECTED CONDITION CODE	PT308670
OC7A	4300 0FA2	868		B ERROR	PT308680
		869	*	CONSTANTS USED IN MAIN PROGRAM AND SUBROUTINES	PT308690
OC7E	8000	870	NEG	DC X'8000'	PT308700
OC80	0000	871	ZEROF	DC 0,0	PT308710
OC82	0000				
OC84	7777	872	FLAG	DC X'7777'	PT308720
		873	*	DATA AND RESULT TABLE FOR LOAD/STORE CHECK	PT308730
OC86	0000	874	LSD0	DC 0,0 CC=0 AND	PT308740
OC88	0000				

0C9A	0000	875	LSR0	DC	0,0	ZERO VALUE	PT308750
0C8C	0000						
0C8E	0010	876	LSD1	DC	X'0010',0	CC=2 AND	PT308760
0C90	0000						
0C92	0010	877	LSR1	DC	X'0010',0	POSITIVE NORMALIZED	PT308770
0C94	0000						
0C96	FF10	878	LSD2	DC	X'FF10',0	CC=1 AND	PT308780
0C98	0000						
0C9A	FF10	879	LSR2	DC	X'FF10',0	NEGATIVE NORMALIZED	PT308790
0C9C	0000						
0C9E	7F10	880	LSD3	DC	X'7F10',0	CC=2	PT308800
0CA0	0000						
0CA2	7F10	881	LSR3	DC	X'7F10',0	POS. NORM.	PT308810
0CA4	0000						
0CA6	0101	882	LSD4	DC	X'0101',0	CC=2	PT308820
0CA8	0000						
0CAA	0010	883	LSR4	DC	X'0010',0	POS. UN.	PT308830
0CAC	0000						
0CAE	4200	884	LSD5	DC	X'4200',X'1000'	CC=2	PT308840
0CB0	1000						
0CB2	4010	885	LSR5	DC	X'4010',0	POS. UN.	PT308850
0CB4	0000						
0CB6	F300	886	LSD6	DC	X'F300',X'01FF'	CC=1	PT308860
0CB8	01FF						
0CBA	F01F	887	LSR6	DC	X'F01F',X'F000'	NEG. UN	PT308870
0CBC	F000						
0CBE	4400	888	LSD7	DC	X'4400',X'00F8'	CC=2	PT308880
0CC0	00F8						
0CC2	40F8	889	LSR7	DC	X'40F8',0	POS. UN	PT308890
0CC4	0000						
0CC6	C500	890	LSD8	DC	X'C500',1	CC=1	PT308900
0CC8	0001						
0CCA	C010	891	LSR8	DC	X'C010',0	NEG UN	PT308910
0CCC	0000						
0CCE	4600	892	LSD9	DC	X'4600',0	CC=0	PT308920
0CD0	0000						
0CD2	0000	893	LSR9	DC	0,0	POS. ZERO	PT308930
0CD4	0000						
0CD6	C600	894	LSD10	DC	X'C600',0	CC=0	PT308940
0CD8	0000						
0CDA	0000	895	LSR10	DC	0,0	NEG. ZERO	PT308950
0CDC	0000						
0CDE	0001	896	LSD11	DC	1,0	CC=4	PT308960
0CE0	0000						
0CE2	0000	897	LSR11	DC	0,0	POS. UNDERFLOW	PT308970
0CE4	0000						
0CE6	0100	898	LSD12	DC	X'0100',X'1000'	CC=4	PT308980
0CE8	1000						
0CEA	0000	899	LSR12	DC	0,0	UNDERFLOW	PT308990
0CEC	0000						
0CEE	0300	900	LSD13	DC	X'0300',X'0010'	CC=4 POS.	PT309000
0CF0	0010						
0CF2	0000	901	LSR13	DC	0,0	UNDERFLOW	PT309010
0CF4	0000						
0CF6	8008	902	LSD14	DC	X'8008',0	CC =4	PT309020

0CF8	0000						
0CFA	0000	903	LSR14	DC	0,0	NEG. UNDERFLOW	PT309030
0CFC	0000						
0CFE	8200	904	LSD15	DC	X'8200',X'0800'	CC=4	PT309040
0D00	0800						
0D02	0000	905	LSR15	DC	0,0	NEG. UND. FLOW	PT309050
0D04	0000						
0D06	8400	906	LSD16	DC	X'8400',8	CC=4	PT309060
0D08	0000						
0D0A	0000	907	LSR16	DC	0,0	NEG. UNDERFLOW	PT309070
0D0C	0000						
		908	*				
0D0E	7EFF						
0D10	FFFF	909	AS	DC	X'7EFF',X'FFFF'	DATA AND RESULT TABLE FOR ADD / SUBTRACT CHECK A	PT309080 PT309090
0D12	7EFF	910		DC	X'7EFF',X'FFFF'	B	PT309100
0D14	FFFF						
0D16	7F1F	911		DC	X'7F1F',X'FFFF'	SUM	PT309110
0D18	FFFF						
0D1A	0000	912		DC	0,0	DIFFERENCE	PT309120
0D1C	0000						
0D1E	0002	913		DC	2	CC OF A+B	PT309130
0D20	0000	914		DC	0	CC OF A-B	PT309140
0D22	0000	915		DC	0	CC OF B-A	PT309150
0D24	0001	916		DC	1	CC OF -A-B	PT309160
0D26	7FFF	917		DC	X'7FFF',X'FFFF'		PT309170
0D28	FFFF						
0D2A	79FF	918		DC	X'79FF',X'FFFF'		PT309180
0D2C	FFFF						
0D2E	7FFF	919		DC	X'7FFF',X'FFFF'	SUM	PT309190
0D30	FFFF						
0D32	7FFF	920		DC	X'7FFF',X'FFFF'	DIFFERENCE	PT309200
0D34	FFFF						
0D36	0002	921		DC	2		PT309210
0D38	0002	922		DC	2		PT309220
0D3A	0001	923		DC	1		PT309230
0D3C	0001	924		DC	1		PT309240
0D3E	7FEF	925		DC	X'7FEF',X'FFFF'		PT309250
0D40	FFFF						
0D42	7A10	926		DC	X'7A10',X'0000'		PT309260
0D44	0000						
0D46	7FF0	927		DC	X'7FF0',X'0000'	SUM	PT309270
0D48	0000						
0D4A	7FEF	928		DC	X'7FEF',X'FFFE'	DIFFERENCE	PT309280
0D4C	FFFE						
0D4E	0002	929		DC	2		PT309290
0D50	0002	930		DC	2		PT309300
0D52	0001	931		DC	1		PT309310
0D54	0001	932		DC	1		PT309320
0D56	7FFF	933		DC	X'7FFF',X'FFFF'		PT309330
0D58	FFFF						
0D5A	7A10	934		DC	X'7A10',X'0000'		PT309340
0D5C	0000						
0D5E	7FFF	935		DC	X'7FFF',X'FFFF'	SUM	PT309350
0D60	FFFF						
0D62	7FFF	936		DC	X'7FFF',X'FFFE'	DIFFERENCE	PT309360

0D64	FFFE					
0D66	0006	937	DC	6		PT309370
0D68	0002	938	DC	2		PT309380
0D6A	0001	939	DC	1		PT309390
0D6C	0005	940	DC	5		PT309400
0D6E	0510	941	DC	X'0510',X'0000'		PT309410
0D70	0000					
0D72	04FF	942	DC	X'04FF',X'FFFF'		PT309420
0D74	FFFF					
0D76	051F	943	DC	X'051F',X'FFFF'	SUM	PT309430
0D78	FFFF					
0D7A	0010	944	DC	X'0010',X'0000'	DIFFERENCE	PT309440
0D7C	0000					
0D7E	0002	945	DC	2		PT309450
0D80	0002	946	DC	2		PT309460
0D82	0001	947	DC	1		PT309470
0D84	0001	948	DC	1		PT309480
0D86	0410	949	DC	X'0410',X'0000'		PT309490
0D88	0000					
0D8A	03FF	950	DC	X'03FF',X'FFFF'		PT309500
0D8C	FFFF					
0D8E	041F	951	DC	X'041F',X'FFFF'		PT309510
0D90	FFFF					
0D92	0000	952	DC	X'0000',X'0000'		PT309520
0D94	0000					
0D96	0002	953	DC	2		PT309530
0D98	0004	954	DC	4		PT309540
0D9A	0004	955	DC	4		PT309550
0D9C	0001	956	DC	1		PT309560
		957	*	DATA AND RESULT TABLE FOR MULTIPLY CHECK		PT309570
0D9E	4615	958	MUL	DC	X'4615',X'FFFF'	A
0DA0	FFFF					
0DA2	0000	959	DC	0,0	B	PT309590
0DA4	0000					
0DA6	0000	960	DC	0,0	A*B	PT309600
0DA8	0000					
0DAA	0000	961	DC	0	CC FOR A*B	PT309610
0DAC	0000	962	DC	0	CC FOR -(A*B)	PT309620
0DAE	60FF	963	DC	X'60FF',X'FFFF'	NO NORMALIZATION.	PT309630
0DB0	FFFF					
0DB2	5FFF	964	DC	X'5FFF',X'FFFF'	NO UNDER FLOW	PT309640
0DB4	FFFF					
0DB6	7FFF	965	DC	X'7FFF',X'FFFE'	OR OVERFLOW,AND	PT309650
0DB8	FFFE					
0DBA	0002	966	DC	2	NO EFFECT OF ROUNDING	PT309660
0DBC	0001	967	DC	1		PT309670
0DBE	4078	968	DC	X'4078',X'8888'	NORMALIZATION IS REQUIRED	PT309680
0DC0	8888					
0DC2	0520	969	DC	X'0520',X'0000'	BUT NO OVERFLOW OR UNDERFLOW	PT309690
0DC4	0000					
0DC6	04F1	970	DC	X'04F1',X'1110'	AND NO EFFECT OF ROUNDING	PT309700
0DC8	1110					
0DCA	0002	971	DC	2		PT309710
0DCC	0001	972	DC	1		PT309720
0DCE	6010	973	DC	X'6010',X'0000'	EXPONENT OVERFLOW	PT309730

00D0	0000					
00D2	6010	974	DC	X'6010',X'0000'	OCCURS (ACTUALLY	PT309740
00D4	0000					
00D6	7FFF	975	DC	X'7FFF',X'FFFF'	THE PRODUCT IS LESS	PT309750
00D8	FFFF					
00DA	0006	976	DC	6	THAN THE GREATEST	PT309760
00DC	0005	977	DC	5	REPRESENTABLE NUMBER)	PT309770
00DE	01FF	978	DC	X'01FF',X'FFFF'	ROUNDING CHANGES THE	PT309780
00E0	FFFF					
00E2	4030	979	DC	X'4030',X'0000'	MOST SIGNIFICANT HEX	PT309790
00E4	0000					
00E6	0130	980	DC	X'0130',X'0000'	DIGIT OF FRACTION NO	PT309800
00E8	0000					
00EA	0002	981	DC	2	NORMALIZATION AND NO	PT309810
00EC	0001	982	DC	1	OVERFLOW OR UNDERFLOW	PT309820
00EE	0673	983	CC	X'0673',X'2146'	EXPONENT UNDERFLOW	PT309830
00F0	2146					
00F2	3984	984	DC	X'3984',X'673A'	OCCURS	PT309840
00F4	673A					
00F6	0000	985	DC	0,0		PT309850
00F8	0600					
00FA	0004	986	DC	4		PT309860
00FC	0004	987	DC	4		PT309870
00FE	07FF	988	DC	X'07FF',X'FFFF'	EXPONENT UNDERFLOW	PT309880
0E00	FFFF					
0E02	3910	989	DC	X'3910',X'0000'	OCCURS BECAUSE OF	PT309890
0E04	0000					
0E06	0000	990	DC	X'0000',X'0000'	NORMALIZATION	PT309900
0E08	0000					
0E0A	0004	991	DC	4		PT309910
0E0C	0004	992	DC	4		PT309920
0E0E	07FF	993	DC	X'07FF',X'FFF0'	UNDERFLOW OCCURS BECAUSE	PT309930
0E10	FFF0					
0E12	3910	994	DC	X'3910',X'0001'	NORMALIZATION IS DONE	PT309940
0E14	0001					
0E16	0000	995	DC	0,0	BEFORE ROUNDING	PT309950
0E18	0000					
0E1A	0004	996	DC	4		PT309960
0E1C	0004	997	DC	4		PT309970
		998	*	DATA AND RESULT TABLE FOR	DIVIDE CHECK	PT309980
		999	DIV	0,0	ZERO RESULT	PT309990
0E1E	0000					
0E20	0000					
0E22	0E25	1000	DC	X'0E25',X'FF24'		PT310000
0E24	FF24					
0E26	0000	1001	DC	0,0	A/B	PT310010
0E28	0000					
0E2A	0000	1002	DC	0	CC FOR A/B	PT310020
0E2C	0000	1003	DC	0	CC FOR (-A/B)	PT310030
0E2E	7FFF	1004	DC	X'7FFF',X'FFFE'	NO NORMALIZATION	PT310040
0E30	FFFE					
0E32	60FF	1005	DC	X'60FF',X'FFFF'	BUT ROUNDING	PT310050
0E34	FFFF					
0E36	5FFF	1006	DC	X'5FFF',X'FFFF'	EFFECT	PT310060
0E38	FFFF					
0E3A	0002	1007	DC	2		PT310070

0E3C	0001	1008	DC	1		PT310080
0E3E	44FF	1009	DC	X'44FF',X'FFFF'	NORM. REQUIRED BUT	PT310090
0E40	FFFF					
0E42	0611	1010	DC	X'0611',X'1111'	NO ROUNDING	PT310100
0E44	1111					
0E46	7FF0	1011	DC	X'7FF0',X'0000'	EFFECT	PT310110
0E48	C000					
0E4A	0002	1012	DC	X'2'		PT310120
0E4C	0001	1013	DC	1		PT310130
0E4E	0912	1014	DC	X'0912',X'3456'	NORMALIZATION	PT310140
0E50	3456					
0E52	0311	1015	DC	X'0311',X'1111'	AND ROUNDING	PT310150
0E54	1111					
0E56	4711	1016	DC	X'4711',X'1111'	EFFECT	PT310160
0E58	1111					
0E5A	0002	1017	DC	2		PT310170
0E5C	0001	1018	DC	1		PT310180
0E5E	0642	1019	DC	X'0642',X'3216'	RESULT IS FLOATING	PT310190
0E60	3216					
0E62	0642	1020	DC	X'0642',X'3216'	POINT ONE	PT310200
0E64	3216					
0E66	4110	1021	DC	X'4110',X'0000'		PT310210
0E68	0000					
0E6A	0002	1022	DC	2		PT310220
0E6C	0001	1023	DC	1		PT310230
0E6E	4F12	1024	DC	X'4F12',X'3456'	NORMALIZATION	PT310240
0E70	3456					
0E72	1012	1025	DC	X'1012',X'3456'	CAUSES OVERFLOW	PT310250
0E74	3456					
0E76	7FFF	1026	DC	X'7FFF',X'FFFF'		PT310260
0E78	FFFF					
0E7A	0006	1027	DC	6		PT310270
0E7C	0005	1028	DC	5		PT310280
0E7E	2012	1029	DC	X'2012',X'3456'	EXPONENT	PT310290
0E80	3456					
0E82	6112	1030	DC	X'6112',X'3456'	UNDERFLOW OCCURS	PT310300
0E84	3456					
0E86	0000	1031	DC	X'0',X'0'	(ACTUAL QUOTIENT IS	PT310310
0E88	0000					
0E8A	0004	1032	DC	4	THE LOWEST REPRESENTABLE	PT310320
0E8C	0004	1033	DC	4	NUMBER)	PT310330
0E8E	0080	1034	DC	X'0080',0	EXPONENT	PT310340
0E90	0000					
0E92	7F80	1035	DC	X'7F80',0	UNDERFLOW	PT310350
0E94	0000					
0E96	0000	1036	DC	0,0	OCCURS	PT310360
0E98	0000					
0E9A	0004	1037	DC	4		PT310370
0E9C	0004	1038	DC	4		PT310380
		1039	*	DATA AND RESULT TABLE FOR MULT./DIVIDE ACCURACY CHECK		PT310390
0E9E	4288	1040	MD1	DC	X'4288',X'8880'	PT310400
0EA0	8880					
0EA2	4110	1041	MD2	DC	X'4110',X'0001'	PT310410
0EA4	0001					
0EA6	4288	1042	MD3	DC	X'4288',X'8889'	PT310420

0EAB	8889					
0EAA	4677	1043	MD4	DC	X'4677',X'7770'	PT310430
0EAC	7770					
0EAE	4010	1044	MD5	DC	X'4010',X'0001'	PT310440
0EB0	0001					
0EB2	4577	1045	MD6	DC	X'4577',X'7777'	PT310450
0EB4	7777					
0EB6	41A0	1046	MD7	DC	X'41A0',0	PT310460
0EB8	0000					
0EBA	41B0	1047	MD8	DC	X'41B0',0	PT310470
0EBC	0000					
0EBE	41C0	1048	MD9	DC	X'41C0',0	PT310480
0EC0	0000					
0EC2	41D0	1049	MD10	DC	X'41D0',0	PT310490
0EC4	0000					
0EC6	41E0	1050	MD11	DC	X'41E0',0	PT310500
0EC8	0000					
0ECA	41F0	1051	MD12	DC	X'41F0',0	PT310510
0ECC	0000					
0ECE	4178	1052	MD13	DC	X'4178',X'9ABC'	PT310520
0ED0	9ABC					
0ED2	4223	1053	MD14	DC	X'4223',X'4567'	PT310530
0ED4	4567					
0ED6	4398	1054	MD15	DC	X'4398',X'7654'	PT310540
0E08	7654					
0EDA	4432	1055	MD16	DC	X'4432',X'5476'	PT310550
0EDC	5476					
0EDE	4522	1056	MD17	DC	X'4522',X'3344'	PT310560
0EE0	3344					
0EE2	4699	1057	MD18	DC	X'4699',X'FFFF'	PT310570
0EE4	FFFF					
		1058	*	DATA	AND RESULT TABLE FOR COMPARE CHECK	PT310580
0EE6	0010	1059	COM	DC	X'0010',1	PT310590
0EE8	0001					
0EEA	0010	1060		DC	X'0010',0	PT310600
0EEC	0000					
0EEE	3FFF	1061		DC	X'3FFF',X'FFFF'	PT310610
0EF0	FFFF					
0EF2	3EFF	1062		DC	X'3EFF',X'FFFF'	PT310620
0EF4	FFFF					
0EF6	0210	1063		DC	X'0210',0	PT310630
0EF8	0000					
0EFA	01FF	1064		DC	X'01FF',X'FFFF'	PT310640
0EFC	FFFF					
0EFE	0010	1065		DC	X'0010',X'0000'	PT310650
0F00	0000					
0F02	0000	1066		DC	0,0	PT310660
0F04	0000					
		1067	*****			PT310670
		1068	*			PT310680
		1069	*	STORAGE AREA		PT310690
		1070	*			PT310700
0F06	0000	1071	BUFR2	DCX	0	PT310710
0F08	0000	1072		DCX	0	PT310720
0F0A	0000	1073		DCX	0	PT310730

0F0C	0000	1074	DCX	0		PT310740
0F0E	0000	1075	DCX	0		PT310750
0F10	0000	1076	DCX	0		PT310760
0F12	0000	1077	DCX	0		PT310770
0F14	0000	1078	DCX	0		PT310780
0F16	0000	1079	DCX	0		PT310790
0F18	0000	1080	DCX	0		PT310800
0F1A	0000	1081	DCX	0		PT310810
0F1C	0000	1082	DCX	0		PT310820
0F1E	0000	1083	DCX	0		PT310830
0F20	0000	1084	DCX	0		PT310840
0F22	0000	1085	DCX	0		PT310850
0F24	0000	1086	DCX	0		PT310860
		1087	*			PT310870
		1088	*****			PT310880
		1089	*	SUBROUTINES		PT310890
		1090	*			PT310900
		1091	*****			PT310910
		1092	*			PT310920
	0000 0F26	1093	READ1	EGU	*	PT310930
0F26	D320 104F	1094		LB	R2,INDEV	PT310940
0F2A	DE20 1043	1095		OC	R2,INCMND	PT310950
0F2E	9B23	1096		RDR	R2,R3	PT310960
0F30	9D23	1097		SSR	R2,R3	PT310970
0F32	2281	1098		BFBS	8,1	PT310980
0F34	9D23	1099	READ3	SSR	R2,R3	PT310990
0F36	4290 0F34	1100		BTC	9,READ3	PT311000
0F3A	9B23	1101		RDR	R2,R0	PT311010
0F3C	C400 007F	1102		NHI	R0,X'7F'	PT311020
0F40	030E	1103		BR	R14	PT311030
0F42	D320 104E	1104	WRITE1	LB	R2,OUTDEV	PT311040
0F46	DE20 1042	1105		OC	R2,OUTCMD	PT311050
0F4A	9D23	1106	WRITE3	SSR	R2,R3	PT311060
0F4C	4210 0F42	1107		BTC	1,WRITE1	PT311070
0F50	4280 0F4A	1108		BTC	8,WRITE3	PT311080
0F54	9A20	1109		WDR	R2,R0	PT311090
0F56	030E	1110		BR	R14	PT311100
0F58	C800 0000	1111	CRLF	LHI	R0,13	PT311110
0F5C	41E3 0F42	1112		BAL	R14,WRITE1	PT311120
0F60	C800 000A	1113		LHI	R0,10	PT311130
0F64	41E0 0F42	1114		BAL	R14,WRITE1	PT311140
0F68	030C	1115		BR	R12	PT311150
		1116	*			PT311160
		1117	*			PT311170
0F6A	24F1	1118	FLPTNT	LIS	R15,1	PT311180
0F6C	230C	1119		BS	ERR2F	PT311190
0F6E	24F2	1120	ILGINT	LIS	R15,2	PT311200
0F70	230A	1121		BS	ERR2F	PT311210
0F72	24F3	1122	MALFTN	LIS	R15,3	PT311220
0F74	2308	1123		BS	ERR2F	PT311230
0F76	24F4	1124	EXTINT	LIS	R15,4	PT311240
0F78	2303	1125		BS	ERR2F	PT311250
0F7A	24F5	1126	UVDFLT	LIS	R15,5	PT311260
0F7C	2304	1127		BS	ERR2F	PT311270
0F7E	24F6	1128	CHANIO	LIS	R15,6	PT311280

R2 = 2 , R3 = TTY STATUS

READ THE KEY PRESSED IN R0
ZERO OUT THE PARITY BIT

FLPT ARITH. FAULT INTRPT.

ILL. INSTR. INTRPT.

MACH. MALFTN. INTRPT.

EXTERNAL INTRPT.

FIXD. PT. DIV. FAULT INTRPT.

THIS INTRPT. IS AN ERROR

0F80	2302	1129	BS	ERR2F		PT311290
0F82	24F7	1130	QVRFL0	LIS	R15,7	PT311300
0F84	2307	1131	ERR2F	BS	ERR2FF	PT311310
0F86	24F8	1132	SVCERR	LIS	R15,8	PT311320
0F88	2305	1133		BS	ERR2FF	PT311330
0F8A	0000	1134	DEVERR	DC	0	PT311340
0F8C	0000	1135		DC	0	PT311350
0F8E	0000	1136		DC	0	PT311360
0F90	24F9	1137		LIS	R15,9	PT311370
0F92	C800 4630	1138	ERR2FF	LHI	R0,C'F0'	PT311380
0F96	4000 100E	1139		STH	R0,ERRNO	PT311390
0F9A	95DD	1140		EPSR	R13,R13	PT311400
0F9C	2471	1141		LIS	R7,1	PT311410
0F9E	4300 0FBA	1142		B	ERR5	PT311420
		1143	*			PT311430
0FA2	95DD	1144	ERROR	EPSR	R13,R13	PT311440
0FA4	2471	1145		LIS	R7,1	PT311450
0FA6	080F	1146		LHR	R0,R15	PT311460
0FA8	9108	1147		SLLS	R0,8	PT311470
0FAA	900C	1148		SRLS	R0,12	PT311480
0FAC	CA00 0030	1149		AHI	R0,X'30'	PT311490
0FB0	C500 003A	1150		CLHI	R0,X'3A'	PT311500
0FB4	2181	1151		BLS	ERR2	PT311510
0FB6	D200 100E	1152	ERR2	STB	R0,ERRNO	PT311520
0FBA	C4F0 000F	1153	ERR5	NHI	R15,15	PT311530
0FBE	CAF0 0030	1154		AHI	R15,X'30'	PT311540
0FC2	C5F0 003A	1155		CLHI	R15,X'3A'	PT311550
0FC6	2182	1156		BLS	ERR4	PT311560
0FC8	26F7	1157		AIS	R15,7	PT311570
0FCA	D2F0 100F	1158	ERR4	STB	R15,ERRNO+1	PT311580
		1159	*			PT311590
0FCE	C840 1004	1160		LHI	R4,ERRMSG	PT311600
0FD2	C850 1013	1161		LHI	R5,ERRMSG+15	PT311610
0FD6	2306	1162		BS	PRTMSG	PT311620
		1163	*			PT311630
0FD8	2470	1164	NOERR	LIS	R7,0	PT311640
0FDA	C840 1014	1165		LHI	R4,NOER	PT311650
0FDE	C850 101F	1166		LHI	R5,NOER+11	PT311660
0FE2	D320 104E	1167	PRTMSG	LB	R2,OUTDEV	PT311670
0FE6	DE20 1042	1168		OC	R2,OUTCMD	PT311680
0FEA	9D23	1169		SSR	R2,R3	PT311690
0FEC	4290 0FE2	1170		BTC	9,PRTMSG	PT311700
0FF0	9624	1171		WBR	R2,R4	PT311710
0FF2	4800 104C	1172		LH	R0,IOERHW	PT311720
0FF6	4230 02E0	1173		BNZ	PART2	PT311730
0FFA	0877	1174		LHR	R7,R7	PT311740
0FFC	4330 02E0	1175		BZ	PART2	PT311750
1000	4300 1066	1176		B	PRTS04	PT311760
		1177	*			PT311770
		1178	*			PT311780
		1179	*****			PT311790
		1180	*		PT311800	
		1181	*	DATA CONSTANTS	PT311810	
		1182	*		PT311820	
		1183	*		PT311830	

THIS INTERRUPT IS AN ERROR

SAVE CONDITION CODE

IF IOERHW = 0 , I/O ERR.

		1184	*#####				PT311840
		1185	*				PT311850
1004	0D0A	1186	ERRMSG	DC	X'D0A'	CR , LF	PT311860
1006	4552 524F 5220	1187		DC	C'ERROR'		PT311870
100C	3330	1188	TESTNO	DC	C'30'		PT311880
100E	0000	1189	ERRNO	DC	0		PT311890
1010	0D0A	1190		DC	X'D0A'	CR , LF	PT311900
1012	FFFF	1191		DCX	FFFF		PT311910
		1192	*				PT311920
1014	0D0A	1193	NOER	DC	X'D0A'	CR , LF	PT311930
1016	4E4F 2045 5252 4F52	1194		DC	C'NO ERROR'		PT311940
101E	0D0A	1195		DC	X'D0A'		PT311950
	0000 1020	1196	NULL	DC	*		PT311960
1020	FFFF	1197		DCX	FFFF		PT311970
		1198	*				PT311980
1022	0000	1199	TEMP	DC	0		PT311990
1024	0000	1200		DC	0		PT312000
1026	0D0A	1201	TITLE2	DC	X'D0A'		PT312010
1028	5331 3650 5433 5230	1202		DC	C'S16PT3R08'		PT312020
1030	3820						
1032	0D0A	1203		DCX	0D0A		PT312030
1034	FFFF	1204		DCX	FFFF		PT312040
1036	4350 5520	1205		DC	C'CPU'		PT312050
103A	0D0A	1206		DCX	0D0A		PT312060
103C	2AFF	1207		DC	X'2AFF'		PT312070
103E	FFFF	1208		DCX	FFFF		PT312080
	0000 103F	1209	TITEND	DC	*-1		PT312090
		1210	*				PT312100
		1211	*				PT312110
		1212	*				PT312120
		1213	*				PT312130
1040	0000	1214	CPUND	DC	0		PT312140
1042	C8E4	1215	OUTCMD	DC	X'C8E4'		PT312150
	0000 1043	1216	INCMND	DC	OUTCMD+1		PT312160
1044	ABB9	1217	CRTOUT	DCX	ABB9		PT312170
1046	C8E4	1218	CONOUT	DCX	C8E4		PT312180
1048	0000	1219	CRTFLG	DCX	0		PT312190
104A	0000	1220	FIRSTCMD	DCX	0		PT312200
104C	0000	1221	IOERHW	DC	0		PT312210
104E	02	1222	OUTDEV	DB	2	OUTDEV = 2 = TTY ADDRESS	PT312220
104F	02	1223	INDEV	DB	2		PT312230
1050	00	1224	STATUS	DB	0		PT312240
1051	00	1225		DB	*		PT312250
1052	00	1226	\$C4	DB	0		PT312260
1053	00	1227	\$54	DB	0		PT312270
1054	00	1228	\$58	DB	0		PT312280
1055	00	1229	\$48	DB	0		PT312290
1056	00	1230	\$44	DB	0		PT312300
1057	00	1231	\$56	DB	0		PT312310
1058	00	1232	\$66	DB	0		PT312320
1059	00	1233	\$64	DB	0		PT312330
		1234	*				PT312340
105A		1235	TABLE	DS	12		PT312350
		1236	*				PT312360
1066	4100 0F58	1237	PRTS04	BAL	R12+CRLF	CR AND LF	PT312370

106A	4800	0F06	1238	LH	R0,BUFR2		PT312380
106E	2333		1239	BZS	PRTREG		PT312390
1070	4300	02E0	1240	B	PART2	P	PT312400
1074	4870	0F08	1241	LH	R7,BUFR2+2		PT312410
1078	4330	02E0	1242	BZ	PART2	P	PT312420
107C	C880	0F0A	1243	LHI	R8,BUFR2+4		PT312430
1080	48F8	0000	1244	LH	R15,0(R8)		PT312440
1084	41C0	109C	1245	BAL	R12,PRNTRF	PRINT A REG.	PT312450
1088	2771		1246	SIS	R7,1		PT312460
108A	4330	02E0	1247	BZ	PART2	P	PT312470
108E	C800	0020	1248	LHI	R0,X'20'	SPACE	PT312480
1092	41E0	0F42	1249	BAL	R14,WRITE1		PT312490
1096	2682		1250	AIS	R8,2		PT312500
1098	4300	1080	1251	B	AGAIN		PT312510
			1252	*	PRINT CONTENTS OF REGISTER 15 , EXIT ON R12		PT312520
109C	080F		1253	PRNTRF	LHR R0,R15	R15 = A B C D	PT312530
109E	900C		1254	SRLS	R0,12		PT312540
10A0	41E0	10BC	1255	BAL	R14,PRNTR0	PRINT A	PT312550
10A4	080F		1256	LHR	R0,R15		PT312560
10A6	9008		1257	SRLS	R0,8		PT312570
10A8	41E0	10BC	1258	BAL	R14,PRNTR0	PRINT B	PT312580
10AC	080F		1259	LHR	R0,R15		PT312590
10AE	9004		1260	SRLS	R0,4		PT312600
10B0	41E0	10BC	1261	BAL	R14,PRNTR0	PRINT C	PT312610
10B4	080F		1262	LHR	R0,R15		PT312620
10B6	41E0	10BC	1263	BAL	R14,PRNTR0		PT312630
10BA	030C		1264	BR	R12		PT312640
10BC	C400	000F	1265	PRNTR0	NHI R0,15		PT312650
10C0	CA00	0030	1266	AHI	R0,X'30'		PT312660
10C4	C500	003A	1267	CLHI	R0,X'3A'		PT312670
10C8	4280	0F42	1268	BL	WRITE1		PT312680
10CC	2607		1269	AIS	R0,7		PT312690
10CE	4300	0F42	1270	B	WRITE1		PT312700
	0000	10D1	1271	LNZB	EQU *-1		PT312710
			1272	*	CHKSUM		PT312720
			1273	*	(THE FOLLOWING CODE IS NOT PART OF THE TEST.)		PT312730
			1274	*			PT312740
			1275	*			PT312750
10D2	2400		1276	\$CHKSUM	LIS R0,0	PUNCH M17 TAPE WITH CHECKSUM	PT312760
10D4	9510		1277		EPSR R1,R0	SELECT REG. SET 0	PT312770
			1278	*			PT312780
10D6	C810	02D0	1279		LDAI R1,ORIGIN1	START	PT312790
10DA	2421		1280		LIS R2,1	INCREMENT	PT312800
10DC	C830	10D1	1281		LDAI R3,LNZB	FINAL	PT312810
10E0	2440		1282		LIS R4,0	CHECKSUM BYTE	PT312820
10E2	D351	0000	1283	\$GEN	LB R5,0(R1)		PT312830
10E6	0745		1284		XAR R4,R5		PT312840
10E8	C110	10E2	1285		BXLE R1,\$GEN		PT312850
10EC	D240	0097	1286		STB R4,MN+3	CHECKSUM BYTE TO ROOT LOADER	PT312860
			1287	*			PT312870
10F0	C810	0080	1288	STAPE	LHI R1,X'0080'		PT312880
10F4	9E21		1289		OCR R2,R1	DISPLAY : NORMAL MODE	PT312890
10F6	9444		1290		EXBR R4,R4		PT312900
10F8	9824		1291		WHR R2,R4	CHECKSUM BYTE TO D1	PT312910
10FA	9411		1292		EXBR R1,R1		PT312920

10FC	9501	1293	EPSR	R0,R1	HALT PROCESSOR.	PT312930
10FE	D360 007A	1295	\$PUNCH	LB R6,X'7A'	GET BOUTDV (PUNCH) ADDRESS.	PT312950
1102	DE60 007B	1296	OC	R6,X'7B'	START TAPE PUNCH	PT312960
1106	9D6J	1297	SSR	R6,R0		PT312970
1108	2081	1298	BTBS	8,1		PT312980
110A	41F0 114C	1299	BAL	R15,\$TAPL	PUNCH LEADER	PT312990
110E	9411	1300	EXBR	R1,R1	(R1) = X'0080'	PT313000
1110	C830 00CF	1301	LHI	R3,X'CF'		PT313010
1114	DA61 0000	1302	\$PNCH1	WD R6,0(R1)	PUNCH BOOT LOADER	PT313020
1118	9D60	1303	SSR	R6,R0		PT313030
111A	2081	1304	BTBS	8,1		PT313040
111C	C110 1114	1305	BXLE	R1,\$PNCH1		PT313050
1120	41F0 1152	1306	BAL	R15,\$TAPL1	PUNCH ONE-FOLD GAP.	PT313060
		1307	*			PT313070
1124	D340 0097	1308	LB	R4,MN+3	GET CHECKSUM BYTE	PT313080
1128	C810 02D0	1309	LDAI	R1,ORIGIN1	(NORMALLY X'A00')	PT313090
112C	C830 10D1	1310	LDAI	R3,LNZB		PT313100
1130	D351 0000	1311	\$PNCH2	LB R5,0(R1)	PUNCH PROGRAM	PT313110
1134	0745	1312	XAR	R4,R5		PT313120
1136	9A65	1313	WDR	R6,R5		PT313130
1138	9401	1314	EXBR	R0,R1		PT313140
113A	9820	1315	WHR	R2,R0	DATA ADDRESS TO DISPLAY.	PT313150
113C	9D60	1316	SSR	R6,R0		PT313160
113E	2081	1317	BTBS	8,1		PT313170
1140	C110 1130	1318	BXLE	R1,\$PNCH2		PT313180
1144	41F0 114C	1319	BAL	R15,\$TAPL	PUNCH TRAILER.	PT313190
1148	4300 10F0	1320	B	\$TAPE	DISPLAY CHECKSUM, HALT PROCESSOR.	PT313200
114C	C800 0100	1322	\$TAPL	LHI R0,256	TO PUNCH BLANK LEADER	PT313220
1150	2303	1323	BS	\$TAPLP		PT313230
1152	C800 0055	1324	\$TAPL1	LHI R0,85	TO PUNCH 1-FOLD GAP	PT313240
1156	2701	1325	\$TAPLP	SIS R0,1		PT313250
1158	032F	1326	BNPR	R15	RETURN	PT313260
115A	243J	1327	LIS	R3,0		PT313270
115C	9A63	1328	WDR	R6,R3	PUNCH BLANK FRAME	PT313280
115E	9D68	1329	SSR	R6,R8		PT313290
1160	2081	1330	BTBS	8,1		PT313300
1162	2206	1331	BS	\$TAPLP	CONTINUE.	PT313310
1164		1332	END			PT313320

			88	89	90	91	105	106	107	108	109	110	111	112	132
			141	143	144	145	147	149	151	153	210	211	213	215	220
			221	228	229	269	270	803	803	804	805	809	809	811	813
			815	824	824	825	830	831	843	843	844	845	846	861	862
			1101	1102	1109	1111	1113	1138	1139	1146	1147	1148	1149	1150	1152
			1172	1238	1248	1253	1254	1256	1257	1259	1260	1262	1265	1266	1267
			1269	1276	1277	1293	1297	1303	1314	1315	1316	1322	1324	1325	
R1	0000 0001		10*	33	43	44	46	51	93	94	95	96	97	98	103
			104	113	114	115	116	117	120	192	193	194	195	196	197
			198	199	200	201	202	203	204	205	206	207	810	812	814
			816	859	1277	1279	1283	1285	1288	1289	1292	1292	1293	1300	1300
			1302	1305	1309	1311	1314	1318							
R10	0000 000A		19*	123	132	134	135	817	835	864					
R11	0000 000B		20*	124	135	818	836	865							
R12	0000 000C		21*	178	838	848	867	1115	1237	1245	1264				
R13	0000 000D		22*	1140	1140	1144	1144								
R14	0000 000E		23*	133	140	142	154	837	847	866	1103	1110	1112	1114	1249
			1255	1258	1261	1263									
R15	0000 000F		24*	179	180	826	828	1118	1120	1122	1124	1126	1128	1130	1132
			1137	1146	1153	1154	1155	1157	1158	1244	1253	1256	1259	1262	1299
			1306	1319	1326										
R2	0000 0002		11*	28	32	47	53	92	118	121	122	125	126	139	399
			399	400	404	502	506	632	633	660	664	1094	1095	1096	1097
			1099	1101	1104	1105	1106	1109	1167	1168	1169	1171	1280	1289	1291
			1315												
R3	0000 0003		12*	34	99	100	126	129	130	181	182	183	184	185	186
			187	188	189	401	402	403	404	501	501	502	505	506	659
			659	660	663	664	857	859	1096	1097	1099	1106	1169	1281	1301
			1310	1327	1328										
R4	0000 0004		13*	36	37	38	40	48	50	214	215	216	217	221	222
			223	858	860	1160	1165	1171	1282	1284	1286	1290	1290	1291	1308
			1312												
R5	0000 0005		14*	38	40	41	41	43	44	45	48	50	56	1161	1166
			1283	1284	1311	1312	1313								
R6	0000 0006		15*	35	45	52	1295	1296	1297	1302	1303	1313	1316	1328	1329
R7	0000 0007		16*	54	55	56	1141	1145	1164	1174	1174	1241	1246		
R8	0000 0008		17*	46	47	52	53	1243	1244	1250	1329				
R9	0000 0009		18*												
READ1	0000 0F26		140	142	1093*										
READ3	0000 0F34		1099*	1100											
RENTRO	0000 048A		215*	218											
RENTR2	0000 049A		221*	224											
RENTR8	0000 04B6		234*												
RENTRY	0000 040E		152	178*											
STATUS	0000 1050		1224*												
SUBT0	0000 048A		234	263*											
SVCERR	0000 0F86		213	1132*											
SWAP	0000 0001		260*	405	405	784	784	786	786	798	798	856			
T3B	0000 05D2		347*	350											
T3C	0000 05F2		356*	359											
T3D	0000 0612		365*	368											
TABLE	0000 105A		202	229	1235*										
TCC	0000 0BA2		680	683	686	689	693	696	699	702	709	712	716	719	722
			725	728	735	794*									
TEMP	0000 1022		180	743	745	747	749	751	753	755	757	763	765	787	788

