

FP11

STS ILLEGAL INSTRUCTIONS
MD-11-DCFPB-B

FP DCFPB B DL A

OCT 1976

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FICHE 1 OF 1

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IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DCFPB
 PRODUCT NAME: FP11 BASIC INSTRUCTION TESTS
 DATE CREATED: MARCH 12, 1973
 MAINTAINER: DIAGNOSTIC GROUP
 AUTHORS: BOB BRAIN & KEN CHAPMAN

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<u>MAINDEC NO.</u>	<u>INSTRUCTIONS TESTED</u>
DCFPA	LDFPS, STFPS, SETI, SETL SETF, SETD, CFCC
DCFPB	STST
DCFPC	LDF, LDD, STF, STD
DCFPD	ADD, ACD, SUBF, SUBC
DCFDE	CMD, CMPD
DCFPF	MULF, MULD
DCFPG	DIVF, DIVD
DCFPH	CLRF, CLRD, TSTF, TSTD ABSF, ABSD, NEGF, NEGD
DCFPI	LDCF, LCCF, STCF, STCD
DCFPJ	LDCF, LDCLF, LDCID, LDCLC STCF, STCFL, STCDI, STCOL
DCFPK	LDEXP, STEXP
DCFPL	MOCF, MOCD

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FP11 BASIC INSTRUCTION TEST DCFPA - DCFPL
DESCRIPTION

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1. ABSTRACT

THESE PROGRAMS TEST THE FP11 IN ALL MODES WITH FIXED NUMBER PATTERNS. THE PROGRAMS SHOULD BE RUN IN ORDER FOR AT LEAST 2 PASSES WITH ALL SWITCHES DOWN.

2. REQUIREMENTS

2.1 EQUIPMENT

PDP11/45 STANDARD COMPUTER WITH FP11 OPTION

2.2 STORAGE

PROGRAM STORAGE - THE ROUTINES USE MEMORY C - 17775

2.3 PRELIMINARY PROGRAMS

NONE

3. LOADING PROCEDURE

USE STANDARD PROCEDURE FOR ABS TAPES.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS

SEE 5.1.1 (ALL DOWN FOR WORST CASE TESTING)

4.2 STARTING ADDRESS

THE PROGRAM SHOULD ALWAYS BE STARTED AT 200.

4.3 PROGRAM AND/OR OPERATOR ACTION

- 1) LOAD PROGRAM INTO MEMORY USING ABS LOADER.
- 2) LOAD ADDRESS 200.
- 3) SET SWITCHES (SEE SEC 5.1.1) ALL DOWN FOR WORST CASE
- 4) PRESS START.
- 5) THE PROGRAM WILL LOOP AND BELL WILL RING ONCE EVERY PASS
- 6) A MINIMUM OF TWO PASSES SHOULD ALWAYS BE RUN.

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7) THE DISPLAY ON THE 11/45 WILL SHOW THE ITERATION COUNT IN
THE LEFT BYTE AND TEST NUMBER IN THE RIGHT. TO USE, SET THE

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DATA DISPLAY SWITCH TO THE DISPLAY POSITION.

5. OPERATING PROCEDURE

5.1 OPERATIONAL SWITCH SETTINGS

AT SA 200 .. ALL SWITCHES DOWN IS WORST CASE TESTING. IF AN ERROR OCCURS, THAT TEST WILL BE LOOPED UPON UNTIL COMPLETION OF 256 CONSECUTIVE PASSES WITH NO ERRORS OF THE SUBTEST IF SW<9> SET TO A 1. THE BELL WILL RING UPON COMPLETION OF A PASS.

5.1.1 SWITCH SETTINGS ARE:

SW<15> = 1 HALT ON ERROR
SW<14> = 1 SCOPE LOOP
SW<13> = 1 INHIBIT PRINTOUT
SW<12> = 1 INHIBIT TRACE TRAPPING
SW<11> = 1 INHIBIT ITERATIONS OF SUBTEST
SW<10> = 1 BELL ON ERROR
 0 BELL ON PASS COMPLETE
SW<09> = 1 LOOP ON ERROR
SW<08> = 1 LOOP ON TEST IN SW<7:0>
 0 LOAD SW<7:0> INTO JB REGISTER

5.2 SUBROUTINE ABSTRACTS

5.2.1 SCOPE

THIS SUBROUTINE CALL IS PLACED BETWEEN EACH SUBTEST IN THE INSTRUCTION SECTION. IT RECORDS THE STARTING ADDRESS OF EACH SUBTEST AS IT IS BEING ENTERED IN LOCATION "LAD". IF A SCOPE LOOP IS REQUESTED, THE CURRENT SUBTEST WILL BE LOOPED UPON. SW<11> ON A 1 INHIBITS ITERATION OF SUBTESTS. THE CONTENTS OF LAD MAY BE USED TO DETERMINE THE LAST SUBTEST SUCCESSFULLY COMPLETED.

5.2.2 HLT

THIS ROUTINE PRINTS OUT AN ERROR MESSAGE (SEE 5.1.) IF A HLT IS EXECUTED. THE SUBTEST WILL BE LOOPED UPON UNTIL 256 CONSECUTIVE GOOD PASSES ARE COMPLETED IF SW 9 IS ON A 1. TO INHIBIT TYPEOUTS, PUT SW<13> ON A 1.

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5.2.3 TRTRAP

IF SW<12> IS ON A 0, THE T BIT WILL BE SET ON ALTERNATE PASSES. WHEN SET, IT CAUSES A TRAP AFTER EACH INSTRUCTION. THE FIRST INSTRUCTION EXECUTED UPON TRAPPING IS AN "RTI" WHICH RETURNS TO THE INTERRUPTED SEQUENCE OF INSTRUCTIONS. THIS SEQUENCE IS CONTINUED UNTIL THE END OF THE PROGRAM IS REACHED.

5.2.4 TRAPCATCHER

A ".+2" - "HALT" SEQUENCE IS REPEATED FROM 0 - 776 TO CATCH ANY UNEXPECTED TRAPS. THUS ANY UNEXPECTED TRAPS OR INTERRUPTS WILL HALT AT THE VECTOR + 2.

5.2.5 FLOATING POINT TRAP (TO 244)

THE FP11 INTERRUPT DISABLE BIT IS ALWAYS SET IN ALL OF THESE TESTS (EXCEPT DCFPA) SO NO TRAPS TO 244 SHOULD OCCUR. IF AN INTERRUPT OCCURS, THE PROGRAM WILL HALT AT 766 IN THE ROUTINE CALLED FLTERR AND DISPLAY THE FPS REGISTER IN RC.

6. ERRORS

6.1 ERROR PRINTOUT

THE FORMAT IS AS FOLLOWS:

ADR FPS ANS1 ANS2 ANS3 ANS4 ANS5 ANS6 ANS7 ANS8
FEC FEA

WHERE:

- ADR = ADDRESS OF ERROR HLT
- FPS = FLOATING POINT STATUS
- FEC = FLOATING EXCEPTION CODES (ERROR CODES)
- FEA = FLOATING EXCEPTION ADDRESS (ERROR ADDRESS)
- ANS1-8 = ERROR DATA READ FROM THE FP11. FROM 0-8 OF THESE MAY BE TYPED DEPENDING ON THE NUMBER FOLLOWING THE HLT; I.E., HLT+3 WOULD TYPE ANS1-ANS3.

TO FIND THE FAILING TEST, LOOK AT THE LISTING ABOVE THE ADDRESS TYPED.

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6.2 ERROR RECOVERY
RESTART AT 200

7. RESTRICTIONS
NONE

8. MISCELLANEOUS

8.1 EXECUTION TIME
A BELL WILL RING WITHIN 15 SECONDS WITH ALL SWITCHES DOWN.

8.2 STACK POINTER
STACK IS INITIALLY SET TO 600

8.3 POWER FAIL
EACH TEST CAN BE POWER FAILED WITH NO ERRORS EXCEPT ON THE SEC AND FEAL. TO USE, START THE TEST AS USUAL AND POWER DOWN THEN UP AT ANY TIME. THE PROGRAM SHOULD TYPE "POWER" AND CONTINUE TO RUN WITH NO OTHER TYPEOUTS.

9. PROGRAM DESCRIPTION

THESE PROGRAMS TEST ALL THE INSTRUCTIONS ON THE FP11 IN ALL MODES. EACH PROGRAM HAS MANY SUBTESTS (THE CODE BETWEEN 2 SCOPE STATEMENTS) WHICH ARE RUN 256 TIMES BEFORE CONTINUING TO THE NEXT. SW<11> ON A 1 CAUSES EACH SUBTEST TO BE RUN ONLY ONCE. SW<9> ON A 1 ENABLES LOOP ON ERROR. THE ADDRESS ICNT (LOC 1000) AND DISPLAY REGISTER ON THE 11/45 EACH CONTAIN THE ITERATION COUNT IN THE LEFT BYTE AND THE TEST NUMBER IN THE RIGHT BYTE. ALL THE SUBTESTS SHOULD BE RUN SEQUENTIALLY BY STARTING AT 200 NOT BY STARTING AT THE BEGINNING OF THE SUBTEST. TO LOOP ON A PARTICULAR SUBTEST PUT THE TEST NUMBER (SEE LISTING) IN THE RIGHT BYTE OF THE SWITCH REGISTER AND SW<8> ON A 1. THIS TEST WILL BE LOOPEO UPON UNTIL SW<8> IS PUT ON A 0 OR THE RIGHT BYTE IS CHANGED. IF THE TEST IS NON-EXISTANT, THE PROGRAM WILL BE RUN AS USUAL.
.ENDP

.TITLE MAINDEC-11-DCFPB-B TEST OF STST AND ILLEGAL INSTRUCTIONS
:COPYRIGHT 1972, DIGITAL EQUIPMENT CORP., MAYNARD, MASS
:PROGRAM BY KEN CHAPMAN
.REM*

SWITCH	USE
8	0 - LOAD UB REGISTER WITH SW<7:0> 1 - LOOP ON TEST IN SW<7:0>
9	LOOP ON ERROR
10	0 - BELL ON PASS COMPLETE 1 - BELL ON ERROR
11	INHIBIT ITERATIONS
12	INHIBIT TRACE TRAP
13	INHIBIT ERROR TYPEOUTS
14	LOOP ON TEST
15	HALT ON ERROR

OUTPUT FORM:

ADR FPS ANS1 ANS2 ANS3 ANS4 ANS5 ANS6 ANS7 ANS8
FEC FEA

BIT	FPS	REASON	CODE	FEC	ERROR
0		CARRY	0		ADDRESS ERROR
1		OVERFLOW	2		OPCODE ERROR
2		ZERO	4		DIVIDE BY ZERO
3		NEGATIVE	6		CONVERSION ERROR
4		MAINTAINANCE MODE	10		OVERFLOW
5		TRUNCATE MODE	12		UNDERFLOW
6		LONG INTEGER MODE	14		UNDEFINED VARIABLE (-C)
7		DOUBLE PRECISION MODE	16		UBREAK TRAP
8		INTERUPT ON CONVERSION ERROR			
9		INTERUPT ON OVERFLOW			
10		INTERUPT ON UNDERFLOW			
11		INTERUPT ON UNDEFINED VARIABLE			
12					
13					
14		INTERUPT DISABLE			
15		ERROR FLAG*			

```

000001      .ENABL  ABS
177776      N=      1
177570      PS=     177776
177570      SWR=     177570
177570      DISPLAY=SWR
104400      SCOPE=  TRAP
104000      HLT=     EMT
000004      TYPE=    IOT
000207      BELL=    207
000000      FPS=     %0
000000      R0=      %0
000001      R1=      %1
000002      R2=      %2
000003      R3=      %3
000004      R4=      %4
000005      R5=      %5
000005      TTY=     %5
000006      SP=      %6
000007      PC=      %7
000000      AC0=     %0
000001      AC1=     %1
000002      AC2=     %2
000003      AC3=     %3
000004      AC4=     %4
000005      AC5=     %5
100000      SW15=    100000
040000      SW14=    40000
020000      SW13=    20000
010000      SW12=    10000
004000      SW11=    4000
002000      SW10=    2000
001000      SW09=    1000
000400      SW08=    400
170003      LDUB=    170003
170005      STA0=    170005
170007      STQ0=    170007
170006      MRS=    170006
170004      LDSC=    170004

000000      .=      0
000200      .=      200

000200 000167 000622      JMP      BEG

000760 000760      .=      760
000760 170200      F.LTERR: STFPS  FPS
000762 170367 000034      STST   FEC
000766 000000      HALT
000770 000002      RTI

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:TRAP CATCHER FROM 0 - 776

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SETUP AND ANSWER AREA

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001000	001000			.=	1000		
001000	000000			ICNT:	0		: ITERATION COUNT - LH TEST NO. - PH
001002	000000			ANS1:	0		: FIRST ANSWER (SEE CODE)
001004	000000			ANS2:	0		
001006	000000			ANS3:	0		
001010	000000			ANS4:	0		
001012	000000			ANS5:	0		
001014	000000			ANS6:	0		
001016	000000			ANS7:	0		
001020	000000			ANS8:	0		
001022	000000			FEC:	0		: FLOATING EXCEPTION CODES
001024	000000			FEA:	0		: FLOATING EXECPTION ADDRESS
001026	012706	000600		BEG:	MOV	#600, SP	: ** STACK AT 600 **
001032	012737	001054	000004		MOV	#M1120, @#4	: FIND OUT WHICH MACHINE THIS IS
001040	005737	177772			TST	@#177772	: IS PIRQ THERE?
001044	012767	000006	013770		MOV	#6, YESRT	: FUDGE IN RTT IF 11/45
001052	000403				BR	BEGIN	
001054	016737	015124	000010	M1120:	MOV	FPTADR, @#10	: LOAD THE ILLEGAL INSTRUCTION VECTOR
							: WITH THE ADDRESS OF THE FPJ.
							: THE FPU WILL HANDLE THE BAD OPCODES
							: RESET 4
001062	012737	000006	000004	BEGIN:	MOV	#6, @#4	
001070	012706	000600			MOV	#600, SP	
001074	012737	015042	000014		MOV	#YESRT, @#14	: SET TRACE TRAP VECTOR
001102	012777	015702	015102		MOV	#POWDWN, @DOWNVEC	
001110	012777	000340	015076		MOV	#340, @DOWNVEC+2	
001116	012737	016102	000020		MOV	#. IOT, @#20	: SET UP VECTOR 20
001124	012700	000030			MOV	#30, RO	: SET RO TO VECTOR 30
001130	012720	015204			MOV	#. TRAP, (0)+	: SET EMT VECTOR
001134	012720	000340			MOV	#340, (0)+	
001140	012720	015044			MOV	#. EMT, (0)+	: SET TRAP VECTOR
001144	012710	000340			MOV	#340, (0)	
001150	012777	000760	015030		MOV	#FLTERR, @FPVECT	: LOAD INTERRUPT VECTOR
001156	012777	000340	015024		MOV	#340, @FPVECT+2	: LOCK UP PROCESSOR
001164	005067	177810			CLR	ICNT	
001170	005067	015032			CLR	LAC	

```
*****  
:TEST 1:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION  
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).  
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.  
:              ILLEGAL INSTRUCTION = 170013  
:              FPS = 147740,   FEC = 02,   FEA = FPI1  
*****
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001174 104400      SCOPE  
001176 000401      BR      TST1      :SKIP DATA  
  
001200 001002      ADR1:   ANS1  
  
001202 170127 047740      TST1:   LDFPS   #047740      ;LOAD FLOATING POINT STATUS  
001206 012703 001200      MOV     #ADR1, %3      ;SET UP R3  
001212 170013      FPI1:   170013      ;ILLEGAL INSTRUCTION  
001214 022703 001200      CMP     #ADR1, %3      ;CHECK R3  
001220 001407      BEQ     TSA1      ;BRANCH IF OK  
001222 010367 177554      MOV     %3,      ANS1      ;STORE R3 FOR TYPING  
001226 170200      STFPS   FPS      ;STORE FPS FOR TYPING  
001230 170367 177566      STST   FEC      ;STORE FEC, FEA FOR TYPING  
001234 104001      HLT+1  
001236 000401      BR      .+4      ;SKIP STFPS  
  
001240 000      TSA1:  
001240 170200      STFPS   FPS      ;STORE FLOATING POINT STATUS  
001242 170367 177554      STST   FEC      ;STORE EXCEPTION CODES  
001246 022700 147740      CMP     #147740,FPS      ;CHECK FLOATING POINT STATUS  
001252 001401      BEQ     .+4      ;BRANCH IF OK  
001254 104000      HLT      ;FPS NOT EQUAL TO 147740  
  
001256 022767 000002 177536      CMP     #02,      FEC      ;CHECK FLOATING EXCEPTION CODE  
001264 001401      BEQ     .+4      ;BRANCH IF OK  
001266 104000      HLT      ;FEC NOT EQUAL TO 02  
  
001270 022767 001212 177526      CMP     #FPI1, FEA      ;CHECK FLOATING EXCEPTION ADDRESS  
001276 001401      BEQ     .+4      ;BRANCH IF OK  
001300 104000      HLT      ;FEA NOT EQUAL TO FPI1  
  
001302 126727 177472 000001      CMPB   ICNT,   #1      ;CHECK FOR RIGHT TEST  
001310 001401      BEQ     .+4      ;BRANCH IF OK  
001312 104000      HLT      ;PC JUMPED TESTS
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*****  
:TEST 2:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION  
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).  
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.  
:              ILLEGAL INSTRUCTION = 170014  
:              FPS = 147740,   FEC = 02,   FEA = FPI2  
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001314 104400      SCOPE  
001316 000401      BR      TST2      :SKIP DATA
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001320 001002          ADR2:  ANS1
001322 170127 047740  TST2:  LDFPS  #047740      ;LOAD FLOATING POINT STATUS
001326 012704 001320      MOV    #ADR2,  %4      ;SET UP R4
001332 170014      FPI2:  170014      ;ILLEGAL INSTRUCTION
001334 022704 001320      CMP    #ADR2,  %4      ;CHECK R4
001340 001407      BEQ    TSA2          ;BRANCH IF OK
001342 010467 177434      MOV    %4,    ANS1    ;STORE R4 FOR TYPING
001346 170200      STFPS  FPS          ;STORE FPS FOR TYPING
001350 170367 177446      STST  FEC          ;STORE FEC, FEA FOR TYPING
001354 104001      HLT+1
001356 000401      BR     .+4          ;SKIP STFPS

001360 000
001360 170200          TSA2:
001362 170367 177434      STFPS  FPS          ;STORE FLOATING POINT STATUS
001366 022700 147740      STST  FEC          ;STORE EXCEPTION CODES
001372 001401      CMP    #147740,FPS  ;CHECK FLOATING POINT STATUS
001374 104000      BEQ    .+4          ;BRANCH IF OK
001374 104000      HLT          ;FPS NOT EQUAL TO 147740

001376 022767 000002 177416      CMP    #02,    FEC    ;CHECK FLOATING EXCEPTION CODE
001404 001401      BEQ    .+4          ;BRANCH IF OK
001406 104000      HLT          ;FEC NOT EQUAL TO 02

001410 022767 001332 177406      CMP    #FPI2,  FEA    ;CHECK FLOATING EXCEPTION ADDRESS
001416 001401      BEQ    .+4          ;BRANCH IF OK
001420 104000      HLT          ;FEA NOT EQUAL TO FPI2

001422 126727 177352 000002      CMPB  ICNT,    #2     ;CHECK FOR RIGHT TEST
001430 001401      BEQ    .+4          ;BRANCH IF OK
001432 104000      HLT          ;PC JUMPED TESTS

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;TEST 3:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
;              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
;              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
;              ILLEGAL INSTRUCTION = 170015
;              FPS = 147740,    FEC = 02,    FEA = FPI3
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001434 104400          SCOPE
001436 000401          BR     TST3          ;SKIP DATA

001440 001002          ADR3:  ANS1
001442 170127 047740  TST3:  LDFPS  #047740      ;LOAD FLOATING POINT STATUS
001446 012705 001440      MOV    #ADR3,  %5      ;SET UP R5
001452 170015      FPI3:  170015      ;ILLEGAL INSTRUCTION
001454 022705 001440      CMP    #ADR3,  %5      ;CHECK R5
001460 001407      BEQ    TSA3          ;BRANCH IF OK
001462 010567 177314      MOV    %5,    ANS1    ;STORE R5 FOR TYPING
001466 170200      STFPS  FPS          ;STORE FPS FOR TYPING
001470 170367 177326      STST  FEC          ;STORE FEC, FEA FOR TYPING
001474 104001      HLT+1
001476 000401      BR     .+4          ;SKIP STFPS

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001500      000      TSA3:
001500      170200      STFPS      FPS      ;STORE FLOATING POINT STATUS
001502      170367      177314      STST      FEC      ;STORE EXCEPTION CODES
001506      022700      147740      CMP      #147740,FPS ;CHECK FLOATING POINT STATUS
001512      001401      BEQ      .+4      ;BRANCH IF OK
001514      104000      HLT      ;FPS NOT EQUAL TO 147740

001516      022767      000002      177276      CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
001524      001401      BEQ      .+4      ;BRANCH IF OK
001526      104000      HLT      ;FEC NOT EQUAL TO 02

001530      022767      001452      177266      CMP      #FPI3, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
001536      001401      BEQ      .+4      ;BRANCH IF OK
001540      104000      HLT      ;FEA NOT EQUAL TO FPI3

001542      126727      177232      000003      CMPB     ICNT,      #3      ;CHECK FOR RIGHT TEST
001550      001401      BEQ      .+4      ;BRANCH IF OK
001552      104000      HLT      ;PC JUMPED TESTS

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:*****
:TEST 4:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170016
:              FPS = 147740,      FEC = 02,      FEA = FPI4
:*****

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001554      104400      SCOPE
001556      000401      BR      TST4      ;SKIP DATA

001560      001002      ADR4:      ANS1

001562      170127      047740      TST4:      LDFPS     #047740      ;LOAD FLOATING POINT STATUS
001566      010667      177212      MOV      %6,      ANS2      ;SAVE R6
001572      170016      FPI4:      170016      ;ILLEGAL INSTRUCTION
001574      020667      177204      CMP      %6,      ANS2      ;CHECK R6
001600      001411      BEQ      TSA4      ;BRANCH IF OK
001602      010667      177174      MOV      %6,      ANS1      ;STORE R6 FOR TYPING
001606      016706      177172      MOV      ANS2,     %6      ;RESTORE R6
001612      170200      STFPS     FPS      ;STORE FPS FOR TYPING
001614      170367      177202      STST     FEC      ;STORE FEC, FEA FOR TYPING
001620      104002      HLT+2
001622      000401      BR      .+4      ;R6 (ANS1) NOT EQUAL TO ANS2
;SKIP STFPS

001624      000      TSA4:
001624      170200      STFPS     FPS      ;STORE FLOATING POINT STATUS
001626      170367      177170      STST     FEC      ;STORE EXCEPTION CODES
001632      022700      147740      CMP      #147740,FPS ;CHECK FLOATING POINT STATUS
001636      001401      BEQ      .+4      ;BRANCH IF OK
001640      104000      HLT      ;FPS NOT EQUAL TO 147740

001642      022767      000002      177152      CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
001650      001401      BEQ      .+4      ;BRANCH IF OK
001652      104000      HLT      ;FEC NOT EQUAL TO 02

```

```

001654 022767 001572 177142      CMP      #FPI4, FEA      :CHECK FLOATING EXCEPTION ADDRESS
001662 001401      BEQ      .+4           :BRANCH IF OK
001664 104000      HLT                               :FEA NOT EQUAL TO FPI4

001666 126727 177106 000004      CMPB     ICNT, #4       :CHECK FOR RIGHT TEST
001674 001401      BEQ      .+4           :BRANCH IF OK
001676 104000      HLT                               :PC JUMPED TESTS

```

```

*****
:TEST 5:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170017
:              FPS = 147740,   FEC = 02,   FEA = FPI5
*****

```

```

001700 104400      SCOPE
001702 000401      BR      TST5           :SKIP DATA

001704 001002      ADR5:   ANS1

001706 170127 047740      TST5:   LDFPS          #047740      :LOAD FLOATING POINT STATUS
001712 170017      FPIS:   170017        :ILLEGAL INSTRUCTION
001714 170200      STFPS   FPS           :STORE FLOATING POINT STATUS
001716 170367 177100      STST    FEC           :STORE EXCEPTION CODES
001722 022700 147740      CMP     #147740,FPS    :CHECK FLOATING POINT STATUS
001726 001401      BEQ     .+4           :BRANCH IF OK
001730 104000      HLT                               :FPS NOT EQUAL TO 147740

001732 022767 000002 177062      CMP     #02,   FEC     :CHECK FLOATING EXCEPTION CODE
001740 001401      BEQ     .+4           :BRANCH IF OK
001742 104000      HLT                               :FEC NOT EQUAL TO 02

001744 022767 001712 177052      CMP     #FPI5, FEA     :CHECK FLOATING EXCEPTION ADDRESS
001752 001401      BEQ     .+4           :BRANCH IF OK
001754 104000      HLT                               :FEA NOT EQUAL TO FPI5

001756 126727 177016 000005      CMPB     ICNT, #5       :CHECK FOR RIGHT TEST
001764 001401      BEQ     .+4           :BRANCH IF OK
001766 104000      HLT                               :PC JUMPED TESTS

```

```

*****
:TEST 6:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170020
:              FPS = 147740,   FEC = 02,   FEA = FPI6
*****

```

```

001770 104400      SCOPE
001772 000401      BR      TST6           :SKIP DATA

001774 001002      ADR6:   ANS1

```

001776	170127	047740	TST6:	LDFPS	#047740		:LOAD FLOATING POINT STATUS
002002	012700	001774		MOV	#ADR6,	%0	:SET UP R0
002006	170020		FPI6:	170020			:ILLEGAL INSTRUCTION
002010	022700	001774		CMP	#ADR6,	%0	:CHECK R0
002014	001407			BEG	TSA6		:BRANCH IF OK
002016	010067	176760		MOV	%0	ANSI	:STORE R0 FOR TYPING
002022	170200			STFPS	FPS		:STORE FPS FOR TYPING
002024	170367	176772		STST	FEC		:STORE FEC, FEA FOR TYPING
002030	104001			HLT+1			:R0 NOT EQUAL TO #ADR6
002032	000401			BR	.+4		:SKIP STFPS
002034	000		TSA6:				
002034	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
002036	170367	176760		STST	FEC		:STORE EXCEPTION CODES
002042	022700	147740		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
002046	001401			BEG	.+4		:BRANCH IF OK
002050	104000			HLT			:FPS NOT EQUAL TO 147740
002052	022767	000002	176742	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
002060	001401			BEG	.+4		:BRANCH IF OK
002062	104000			HLT			:FEC NOT EQUAL TO 02
002064	022767	002006	176732	CMP	#FPI6,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
002072	001401			BEG	.+4		:BRANCH IF OK
002074	104000			HLT			:FEA NOT EQUAL TO FPI6
002076	126727	176676	000006	CMPB	ICNT,	#6	:CHECK FOR RIGHT TEST
002104	001401			BEG	.+4		:BRANCH IF OK
002106	104000			HLT			:PC JUMPED TESTS

```

*****
:TEST 7:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170021
:              FPS = 147740,   FEC = 02,   FEA = FPI7
*****

```

002110	104400			SCOPE			
002112	000401			BR	TST7		:SKIP DATA
002114	001002		ADR7:	ANSI			
002116	170127	047740	TST7:	LDFPS	#047740		:LOAD FLOATING POINT STATUS
002122	012701	002114		MOV	#ADR7,	%1	:SET UP R1
002126	170021		FPI7:	170021			:ILLEGAL INSTRUCTION
002130	022701	002120		CMP	#ADR7+4,%1		:CHECK R1
002134	001407			BEG	TSA7		:BRANCH IF OK
002136	010167	176640		MOV	%1	ANSI	:STORE R1 FOR TYPING
002142	170200			STFPS	FPS		:STORE FPS FOR TYPING
002144	170367	176652		STST	FEC		:STORE FEC, FEA FOR TYPING
002150	104001			HLT+1			:R1 NOT EQUAL TO #ADR7
002152	000401			BR	.+4		:SKIP STFPS


```

002154      000
002154      170200
002156      170367      176640
002162      022700      147740
002166      001401
002170      104000
                                *SA7:
                                STFPS      FPS      :STORE FLOATING POINT STATUS
                                STST      FEC      :STORE EXCEPTION CODES
                                CMP      #147740,FPS :CHECK FLOATING POINT STATUS
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :FPS NOT EQUAL TO 147740

002172      022767      000002      176622
002200      001401
002202      104000
                                CMP      #02,      FEC      :CHECK FLOATING EXCEPTION CODE
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :FEC NOT EQUAL TO 02

002204      022767      002126      176612
002212      001401
002214      104000
                                CMP      #FPI7, FEA      :CHECK FLOATING EXCEPTION ADDRESS
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :FEA NOT EQUAL TO FPI7

002216      126727      176556      000007
002224      001401
002226      104000
                                CMPB     ICNT,      #7      :CHECK FOR RIGHT TEST
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :PC JUMPED TESTS

```

```

*****
:TEST 10:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170022
:              FPS = 147740,      FEC = 02,      FEA = FPI10
*****

```

```

002230      104400
002232      000401
                                SCOPE
                                BR      *ST10      :SKIP DATA

002234      001002
                                ADR10:  ANS:

002236      170127      047740
002242      012702      002234
                                *ST10:  LDFPS      #047740      :LOAD FLOATING POINT STATUS
                                MOV      #ADR10, %2      :SET UP R2
                                FPI10:  170022      :ILLEGAL INSTRUCTION
                                CMP      #ADR10+4,%2      :CHECK R2
                                BEQ      TSA10      :BRANCH IF OK
                                MOV      %2,      ANS1      :STORE R2 FOR TYPING
                                STFPS      FPS      :STORE FPS FOR TYPING
                                STST      FEC      :STORE FEC, FEA FOR TYPING
                                HLT+1
                                BR      .+4      :R2 NOT EQUAL TO #ADR10
                                :SKIP STFPS

002274      000
002274      170200
002276      170367      176520
002302      022700      147740
                                *SA10:
                                STFPS      FPS      :STORE FLOATING POINT STATUS
                                STST      FEC      :STORE EXCEPTION CODES
                                CMP      #147740,FPS :CHECK FLOATING POINT STATUS
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :FPS NOT EQUAL TO 147740

002312      022767      000002      176502
002320      001401
002322      104000
                                CMP      #02,      FEC      :CHECK FLOATING EXCEPTION CODE
                                BEQ      .+4      :BRANCH IF OK
                                HLT
                                :FEC NOT EQUAL TO 02

002324      022767      002246      176472
                                CMP      #FPI10, FEA      :CHECK FLOATING EXCEPTION ADDRESS

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```

002332 001401      BEQ      .+4      :BRANCH IF OK
002334 104000      HLT                      :FEA NOT EQUAL TO FPI10

002336 126727 176436 000010  CMPB     ICNT.    #10    :CHECK FOR RIGHT TEST
002344 001401      BEQ      .+4      :BRANCH IF OK
002346 104000      HLT                      :PC JUMPED TESTS

```

```

*****
TEST 11:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 170023
              FPS = 147740,   FEC = 02,   FEA = FPI11
*****

```

```

002350 104400      SCOPE
002352 000401      BR      TST11      :SKIP DATA

002354 001002      ADR11:  ANS1

002356 170127 047740  TST11:  LDFPS     #047740    :LOAD FLOATING POINT STATUS
002362 012703 002354      MOV      #ADR11, %3    :SET UP R3
002366 170023 002354      FPI11:  170023      :ILLEGAL INSTRUCTION
002370 022703 002354      CMP      #ADR11, %3    :CHECK R3
002374 001401      BEQ      TSA11      :BRANCH IF OK
002376 010367 176400      MOV      %3,   ANS1   :STORE R3 FOR TYPING
002402 170200      STFPS    FPS        :STORE FPS FOR TYPING
002404 170367 176412      STST    FEC        :STORE FEC, FEA FOR TYPING
002410 104001      HLT+1
002412 000401      BR      .+4      :R3 NOT EQUAL TO #ADR11
              :SKIP STFPS

002414      000      TSA11:
002414 170200      STFPS    FPS        :STORE FLOATING POINT STATUS
002416 170367 176400      STST    FEC        :STORE EXCEPTION CODES
002422 022700 147740      CMP      #147740, FPS  :CHECK FLOATING POINT STATUS
002426 001401      BEQ      .+4      :BRANCH IF OK
002430 104000      HLT                      :FPS NOT EQUAL TO 147740

002432 022767 000002 176362  CMP      #02,   FEC    :CHECK FLOATING EXCEPTION CODE
002440 001401      BEQ      .+4      :BRANCH IF OK
002442 104000      HLT                      :FEC NOT EQUAL TO 02

002444 022767 002366 176352  CMP      #FPI11, FEA   :CHECK FLOATING EXCEPTION ADDRESS
002452 001401      BEQ      .+4      :BRANCH IF OK
002454 104000      HLT                      :FEA NOT EQUAL TO FPI11

002456 126727 176316 000011  CMPB     ICNT.    #11    :CHECK FOR RIGHT TEST
002454 001401      BEQ      .+4      :BRANCH IF OK
002456 104000      HLT                      :PC JUMPED TESTS

```

```

*****
TEST 12:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
*****

```

F02

MAINDEC-11-DCFPB-B
DCFPBB.F11

TEST OF STST AND ILLEGAL INSTRUCTIONS
TEST SECTION

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ILLEGAL INSTRUCTION = 170024
FPS = 147740, FEC = 02, FEA = FPI12

002470	104400			SCOPE			
002472	000401			BR	TST12		:SKIP DATA
002474	001002			ADR12:	ANS1		
002476	170127	047740		TST12:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
002502	012704	002474			MOV	#ADR12, %4	:SET UP R4
002506	170024			FPI12:	170024		:ILLEGAL INSTRUCTION
002510	022704	002474			CMP	#ADR12, %4	:CHECK R4
002514	001407				BEQ	TSA12	:BRANCH IF OK
002516	010467	176260			MOV	%4, ANS1	:STORE R4 FOR TYPING
002522	170200				STFPS	FPS	:STORE FPS FOR TYPING
002524	170367	176272			STST	FEC	:STORE FEC, FEA FOR TYPING
002530	104001				HLT+1		:R4 NOT EQUAL TO #ADR12
002532	000401				BR	+.4	:SKIP STFPS
002534	000			TSA12:			
002534	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
002536	170367	176260			STST	FEC	:STORE EXCEPTION CODES
002542	022700	147740			CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
002546	001401				BEQ	+.4	:BRANCH IF OK
002550	104000				HLT		:FPS NOT EQUAL TO 147740
002552	022767	000002	176242		CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
002560	001401				BEQ	+.4	:BRANCH IF OK
002562	104000				HLT		:FEC NOT EQUAL TO 02
002564	022767	002506	176232		CMP	#FPI12, FEA	:CHECK FLOATING EXCEPTION ADDRESS
002572	001401				BEQ	+.4	:BRANCH IF OK
002574	104000				HLT		:FEA NOT EQUAL TO FPI12
002576	126727	176176	000012		CMPB	ICNT, #12	:CHECK FOR RIGHT TEST
002604	001401				BEQ	+.4	:BRANCH IF OK
002606	104000				HLT		:PC JUMPED TESTS

TEST 13: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170025
FPS = 147740, FEC = 02, FEA = FPI13

002610	104400			SCOPE			
002612	000401			BR	TST13		:SKIP DATA
002614	001002			ADR13:	ANS1		
002616	170127	047740		TST13:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
002622	012705	002614			MOV	#ADR13, %5	:SET UP R5
002626	170025			FPI13:	170025		:ILLEGAL INSTRUCTION

002630	022705	002614		CMP	#ADR13, %5		:CHECK R5
002634	001407			BEG	TSA13		:BRANCH IF OK
002636	010567	176140		MOV	%5, ANS1		:STORE R5 FOR TYPING
002642	170200			STFPS	FPS		:STORE FPS FOR TYPING
002644	170367	176152		STST	FEC		:STORE FEC, FEA FOR TYPING
002650	104001			HLT+1			:R5 NOT EQUAL TO #ADR13
002652	000401			BR	.+4		:SKIP STFPS
002654	000		TSA13:				
002654	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
002656	170367	176140		STST	FEC		:STORE EXCEPTION CODES
002662	022700	147740		CMP	#147740, FPS		:CHECK FLOATING POINT STATUS
002666	001401			BEG	.+4		:BRANCH IF OK
002670	104000			HLT			:FPS NOT EQUAL TO 147740
002672	022767	000002	176122	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
002700	001401			BEG	.+4		:BRANCH IF OK
002702	104000			HLT			:FEC NOT EQUAL TO 02
002704	022767	002626	176112	CMP	#FPI13, FEA		:CHECK FLOATING EXCEPTION ADDRESS
002712	001401			BEG	.+4		:BRANCH IF OK
002714	104000			HLT			:FEA NOT EQUAL TO FPI13
002716	126727	176056	000013	CMPB	ICNT, #13		:CHECK FOR RIGHT TEST
002724	001401			BEG	.+4		:BRANCH IF OK
002726	104000			HLT			:PC JUMPED TESTS

```

*****
:TEST 14: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:          CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
:          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:          ILLEGAL INSTRUCTION = 170026
:          FPS = 147740, FEC = 02, FEA = FPI14
*****

```

002730	104400			SCOPE			
002732	000401			BR	TST14		:SKIP DATA
002734	001002		TSA14:				
002736	170127	047740	TST14:	LDFPS	#047740		:LOAD FLOATING POINT STATUS
002742	010667	176036		MOV	%6, ANS2		:SAVE R6
002746	170026		FPI14:	170026			:ILLEGAL INSTRUCTION
002750	020667	176030		CMP	%6, ANS2		:CHECK R6
002754	001411			BEG	TSA14		:BRANCH IF OK
002756	010667	176020		MOV	%6, ANS1		:STORE R6 FOR TYPING
002762	016706	176016		MOV	ANS2, %6		:RESTORE R6
002766	170200			STFPS	FPS		:STORE FPS FOR TYPING
002770	170367	176026		STST	FEC		:STORE FEC, FEA FOR TYPING
002774	104002			HLT+2			:R6 (ANS1) NOT EQUAL TO ANS2
002776	000401			BR	.+4		:SKIP STFPS
003000	000		TSA14:				
003000	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
003002	170367	176014		STST	FEC		:STORE EXCEPTION CODES

003006	022700	147740		CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
003012	001401			BEQ	+.4	:BRANCH IF OK
003014	104000			HLT		:FPS NOT EQUAL TO 147740
003016	022767	000002	175776	CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
003024	001401			BEQ	+.4	:BRANCH IF OK
003026	104000			HLT		:FEC NOT EQUAL TO 02
003030	022767	002746	175766	CMP	#FPI14, FEA	:CHECK FLOATING EXCEPTION ADDRESS
003036	001401			BEQ	+.4	:BRANCH IF OK
003040	104000			HLT		:FEA NOT EQUAL TO FPI14
003042	126727	175732	000014	CMPB	ICNT, #14	:CHECK FOR RIGHT TEST
003050	001401			BEQ	+.4	:BRANCH IF OK
003052	104000			HLT		:PC JUMPED TESTS

```

:*****
:TEST 15:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170027
:              FPS = 147740,   FEC = 02,   FEA = FPI15
:*****

```

003054	104400			SCOPE		
003056	000401			BR	TST15	:SKIP DATA
003060	001002			ADR15:	ANS1	
003062	170127	047740		TST15:	LDFPS #047740	:LOAD FLOATING POINT STATUS
003066	170027			FPI15:	170027	:ILLEGAL INSTRUCTION
003070	000000				HALT	:PC NOT PROPERLY UPDATED
003072	170200				STFPS FPS	:STORE FLOATING POINT STATUS
003074	170367	175722			STST FEC	:STORE EXCEPTION CODES
003100	022700	147740			CMP #147740, FPS	:CHECK FLOATING POINT STATUS
003104	001401				BEQ +.4	:BRANCH IF OK
003106	104000				HLT	:FPS NOT EQUAL TO 147740
003110	022767	000002	175704	CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
003116	001401			BEQ	+.4	:BRANCH IF OK
003120	104000			HLT		:FEC NOT EQUAL TO 02
003122	022767	003066	175674	CMP	#FPI15, FEA	:CHECK FLOATING EXCEPTION ADDRESS
003130	001401			BEQ	+.4	:BRANCH IF OK
003132	104000			HLT		:FEA NOT EQUAL TO FPI15
003134	126727	175640	000015	CMPB	ICNT, #15	:CHECK FOR RIGHT TEST
003142	001401			BEQ	+.4	:BRANCH IF OK
003144	104000			HLT		:PC JUMPED TESTS

```

:*****
:TEST 16:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:*****

```

```

: ILLEGAL INSTRUCTION = 170030
: FPS = 147740, FEC = 02, FEA = FPI16
:*****

```

```

003146 104400          SCOPE
003150 000401          BR      TST16      ;SKIP DATA

003152 001002          ADR16: ANS1

003154 170127 047740    TST16: LDFPS  #047740    ;LOAD FLOATING POINT STATUS
003160 012700 003152    MOV      #ADR16, %0    ;SET UP R0
003164 170030          FPI16: 170030        ;ILLEGAL INSTRUCTION
003166 022700 003154    CMP      #ADR16+2,%0   ;CHECK R0
003172 001407          BEQ     *SA16         ;BRANCH IF OK
003174 010067 175602    MOV      %0, ANS1     ;STORE R0 FOR TYPING
003200 170200          STFPS  FPS           ;STORE FPS FOR TYPING
003202 170367 175614    STST    FEC          ;STORE FEC, FEA FOR TYPING
003206 104001          HLT+1  ;R0 NOT EQUAL TO #ADR16
003210 000401          BR      .+4          ;SKIP STFPS

003212 000          *SA16:
003212 170200          STFPS  FPS           ;STORE FLOATING POINT STATUS
003214 170367 175602    STST    FEC          ;STORE EXCEPTION CODES
003220 022700 147740    CMP      #147740,FPS  ;CHECK FLOATING POINT STATUS
003224 001401          BEQ     .+4          ;BRANCH IF OK
003226 104000          HLT      ;FPS NOT EQUAL TO 147740

003230 022767 000002 175564    CMP      #02, FEC     ;CHECK FLOATING EXCEPTION CODE
003236 001401          BEQ     .+4          ;BRANCH IF OK
003240 104000          HLT      ;FEC NOT EQUAL TO 02

003242 022767 003164 175554    CMP      #FPI16, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
003250 001401          BEQ     .+4          ;BRANCH IF OK
003252 104000          HLT      ;FEA NOT EQUAL TO FPI16

003254 126727 175520 000016    CMPB    ICNT, #16     ;CHECK FOR RIGHT TEST
003262 001401          BEQ     .+4          ;BRANCH IF OK
003264 104000          HLT      ;PC JUMPED TESTS

```

```

:*****
:TEST 17: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:          CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
: ILLEGAL INSTRUCTION = 170031
: FPS = 147740, FEC = 02, FEA = FPI17
:*****

```

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003266 104400          SCOPE
003270 000401          BR      TST17      ;SKIP DATA

003272 001002          ADR17: ANS1

003274 170127 047740    TST17: LDFPS  #047740    ;LOAD FLOATING POINT STATUS
003300 012700 003272    MOV      #ADR17, %1    ;SET UP R1
003304 170031          FPI17: 170031        ;ILLEGAL INSTRUCTION

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003306 022701 003274      CMP      #ADR17+2,%1      ;CHECK R1
003312 001407              BEQ      TSA17          ;BRANCH IF OK
003314 010167 175462      MOV      %1,      ANS1  ;STORE R1 FOR TYPING
003320 170200              STFPS   FPS          ;STORE FPS FOR TYPING
003322 170367 175474      STST    FEC          ;STORE FEC, FEA FOR TYPING
003326 104001              HLT+1   ;R1 NOT EQUAL TO #ADR17
003330 000401              BR      .+4          ;SKIP STFPS

003332      000              TSA17:
003332 170200              STFPS   FPS          ;STORE FLOATING POINT STATUS
003334 170367 175462      STST    FEC          ;STORE EXCEPTION CODES
003340 022700 147740      CMP      #147740,FPS   ;CHECK FLOATING POINT STATUS
003344 001401              BEQ      .+4          ;BRANCH IF OK
003346 104000              HLT                    ;FPS NOT EQUAL TO 147740

003350 022767 000002 175444      CMP      #02,      FEC  ;CHECK FLOATING EXCEPTION CODE
003356 001401              BEQ      .+4          ;BRANCH IF OK
003360 104000              HLT                    ;FEC NOT EQUAL TO 02

003362 022767 003304 175434      CMP      #FPI17, FEA   ;CHECK FLOATING EXCEPTION ADDRESS
003370 001401              BEQ      .+4          ;BRANCH IF OK
003372 104000              HLT                    ;FEA NOT EQUAL TO FPI17

003374 126727 175400 000017      CMPB    ICNT,      #17 ;CHECK FOR RIGHT TEST
003402 001401              BEQ      .+4          ;BRANCH IF OK
003404 104000              HLT                    ;PC JUMPED TESTS

```

```

:*****
:TEST 20:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170032
:              FPS = 147740,      FEC = 02,      FEA = FPI20
:*****

```

```

003406 104400              SCOPE
003410 000401              BR      TST20          ;SKIP DATA

003412 001002              ADR20:  ANS1

003414 170127 047740      TST20:  LDFPS   #047740  ;LOAD FLOATING POINT STATUS
003420 012702 003412      MOV      #ADR20, %2   ;SET UP R2
003424 170032              FPI20:  170032        ;ILLEGAL INSTRUCTION
003426 022702 003414      CMP      #ADR20+2,%2  ;CHECK R2
003432 001407              BEQ      TSA20        ;BRANCH IF OK
003434 0102E7 175342      MOV      %2,      ANS1 ;STORE R2 FOR TYPING
003440 170200              STFPS   FPS          ;STORE FPS FOR TYPING
003442 170367 175354      STST    FEC          ;STORE FEC, FEA FOR TYPING
003446 104001              HLT+1   ;R2 NOT EQUAL TO #ADR20
003450 000401              BR      .+4          ;SKIP STFPS

003452      000              TSA20:
003452 170200              STFPS   FPS          ;STORE FLOATING POINT STATUS
003454 170367 175342      STST    FEC          ;STORE EXCEPTION CODES
003460 022702 147740      CMP      #147740,FPS   ;CHECK FLOATING POINT STATUS

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003464 001401      BEQ      .+4      ;BRANCH IF OK
003466 104000      HLT                      ;FPS NOT EQUAL TO 147740

003470 022767 000002 175324  CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
003476 001401      BEQ      .+4      ;BRANCH IF OK
003500 104000      HLT                      ;FEC NOT EQUAL TO 02

003502 022767 003424 175314  CMP      #FPI20,   FEA      ;CHECK FLOATING EXCEPTION ADDRESS
003510 001401      BEQ      .+4      ;BRANCH IF OK
003512 104000      HLT                      ;FEA NOT EQUAL TO FPI20

003514 126727 175260 000020  CMPB     ICNT,     #20      ;CHECK FOR RIGHT TEST
003522 001401      BEQ      .+4      ;BRANCH IF OK
003524 104000      HLT                      ;PC JUMPED TESTS

```

```

:*****
:TEST 21:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)..
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170033
:              FPS = 147740,   FEC = 02,   FEA = FPI21
:*****

```

```

003526 104400      SCOPE
003530 000401      BR      TST21      ;SKIP DATA

003532 001002      ADR21:  ANS1

003534 170127 047740  TST21:  LDFPS   #047740      ;LOAD FLOATING POINT STATUS
003540 012703 003532      MOV      #ADR21, %3      ;SET UP R3
003544 170033  FPI21:  170033      ;ILLEGAL INSTRUCTION
003546 022703 003534      CMP      #ADR21+2,%3     ;CHECK R3
003552 001407      BEQ      TSA21         ;BRANCH IF OK
003554 010367 175222      MOV      %3,      ANS1   ;STORE R3 FOR TYPING
003560 170200      STFPS   FPS          ;STORE FPS FOR TYPING
003562 170367 175234      STST    FEC          ;STORE FEC, FEA FOR TYPING
003566 104001      HL↑+1
003570 000401      BR      .+4          ;R3 NOT EQUAL TO #ADR21
                        ;SKIP STFPS

003572      000      TSA21:
003572 170200      STFPS   FPS          ;STORE FLOATING POINT STATUS
003574 170367 175222      STST    FEC          ;STORE EXCEPTION CODES
003600 022700 147740      CMP      #147740,FPS    ;CHECK FLOATING POINT STATUS
003604 001401      BEQ      .+4          ;BRANCH IF OK
003606 104000      HLT                      ;FPS NOT EQUAL TO 147740

003610 022767 000002 175204  CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
003616 001401      BEQ      .+4      ;BRANCH IF OK
003620 104000      HLT                      ;FEC NOT EQUAL TO 02

003622 022767 003544 175174  CMP      #FPI21,   FEA      ;CHECK FLOATING EXCEPTION ADDRESS
003630 001401      BEQ      .+4      ;BRANCH IF OK
003632 104000      HLT                      ;FEA NOT EQUAL TO FPI21

003634 126727 175140 000021  CMPB     ICNT,     #21      ;CHECK FOR RIGHT TEST

```


003642 001401
003644 104000

BEQ .+4
HLT

;BRANCH IF OK
;PC JUMPED TESTS

:TEST 22: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
: CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
: ALSO TEST ALL ILLEGAL INSTRUCTIONS.
: ILLEGAL INSTRUCTION = 170034
: FPS = 147740, FEC = 02, FEA = FPI22

003646 104400
003650 000401

SCOPE
BR TST22

;SKIP DATA

003652 001002

ADR22: ANS1

003654 170127 047740
003660 012704 003652
003664 170034
003666 022704 003654
003672 001401
003674 010467 175102
003700 170200
003702 170367 175114
003706 104001
003710 000401

TST22: LDFPS #047740
MOV #ADR22, %4
FPI22: 170034
CMP #ADR22+2,%4
BEQ TSA22
MOV %4, ANS1
STFPS FPS
STST FEC
HLT+1
BR .+4

;LOAD FLOATING POINT STATUS
;SET UP R4
;ILLEGAL INSTRUCTION
;CHECK R4
;BRANCH IF OK
;STORE R4 FOR TYPING
;STORE FPS FOR TYPING
;STORE FEC, FEA FOR TYPING
;R4 NOT EQUAL TO #ADR22
;SKIP STFPS

003712 000
003712 170200
003714 170367 175102
003720 022700 147740
003724 001401
003726 104000

TSA22:
STFPS FPS
STST FEC
CMP #147740,FPS
BEQ .+4
HLT

;STORE FLOATING POINT STATUS
;STORE EXCEPTION CODES
;CHECK FLOATING POINT STATUS
;BRANCH IF OK
;FPS NOT EQUAL TO 147740

003730 022767 000002 175064
003736 001401
003740 104000

CMP #02, FEC
BEQ .+4
HLT

;CHECK FLOATING EXCEPTION CODE
;BRANCH IF OK
;FEC NOT EQUAL TO 02

003742 022767 003664 175054
003750 001401
003752 104000

CMP #FPI22, FEA
BEQ .+4
HLT

;CHECK FLOATING EXCEPTION ADDRESS
;BRANCH IF OK
;FEA NOT EQUAL TO FPI22

003754 126727 175020 000022
003762 001401
003764 104000

CMPB ICNT, #22
BEQ .+4
HLT

;CHECK FOR RIGHT TEST
;BRANCH IF OK
;PC JUMPED TESTS

:TEST 23: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
: CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
: ALSO TEST ALL ILLEGAL INSTRUCTIONS.
: ILLEGAL INSTRUCTION = 170035
: FPS = 147740, FEC = 02, FEA = FPI23

```

003766 104400          SCOPE
003770 000401          BR          TST23          ;SKIP DATA

003772 001002          ADR23:  ANS1

003774 170127 047740    TST23:  LDFPS  #047740          ;LOAD FLOATING POINT STATUS
004000 012705 003772    MOV      #ADR23, %5          ;SET UP R5
004004 170035          FPI23:  170035          ;ILLEGAL INSTRUCTION
004006 022705 003774    CMP      #ADR23+2,%5        ;CHECK R5
004012 001407          BEQ      TSA23            ;BRANCH IF OK
004014 010567 174762    MOV      %5,      ANS1      ;STORE R5 FOR TYPING
004020 170200          STFPS   FPS             ;STORE FPS FOR TYPING
004022 170367 174774    STST    FEC             ;STORE FEC, FEA FOR TYPING
004026 104001          HLT+1
004030 000401          BR      .+4             ;SKIP STFPS

004032 000          TSA23:
004032 170200          STFPS   FPS             ;STORE FLOATING POINT STATUS
004034 170367 174762    STST    FEC             ;STORE EXCEPTION CODES
004040 022700 147740    CMP      #147740,FPS        ;CHECK FLOATING POINT STATUS
004044 001401          BEQ      .+4             ;BRANCH IF OK
004046 104000          HLT                    ;FPS NOT EQUAL TO 147740

004050 022767 000002 174744    CMP      #02,      FEC        ;CHECK FLOATING EXCEPTION CODE
004056 001401          BEQ      .+4             ;BRANCH IF OK
004060 104000          HLT                    ;FEC NOT EQUAL TO 02

004062 022767 004004 174734    CMP      #FPI23, FEA        ;CHECK FLOATING EXCEPTION ADDRESS
004070 001401          BEQ      .+4             ;BRANCH IF OK
004072 104000          HLT                    ;FEA NOT EQUAL TO FPI23

004074 126727 174700 000023    CMPB    ICNT,      #23        ;CHECK FOR RIGHT TEST
004102 001401          BEQ      .+4             ;BRANCH IF OK
004104 104000          HLT                    ;PC JUMPED TESTS

```

```

*****
;TEST 24:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
;                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
;                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
;                  ILLEGAL INSTRUCTION = 170036
;                  FPS = 147740,      FEC = 02,      FEA = FPI24
*****

```

```

004106 104400          SCOPE
004110 000401          BR          TST24          ;SKIP DATA

004112 001002          ADR24:  ANS1

004114 170127 047740    TST24:  LDFPS  #047740          ;LOAD FLOATING POINT STATUS
004120 010667 174660    MOV      %6,      ANS2      ;SAVE R6
004124 005746          TST      -(%6)            ;SET UP THE STACK
004126 170036          FPI24:  170036          ;ILLEGAL INSTRUCTION
004130 020667 174650    CMP      %6,      ANS2      ;CHECK R6
004134 001411          BEQ      TSA24            ;BRANCH IF OK
004136 010667 174640    MOV      %6,      ANS1      ;STORE R6 FOR TYPING

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004142 016706 174636      MOV      ANS2,  %6      ;RESTORE R6
004146 170200              STFPS   FPS          ;STORE FPS FOR TYPING
004150 170367 174646      STST    FEC          ;STORE FEC, FEA FOR TYPING
004154 104002              HLT+2  ;R6 (ANS1) NOT EQUAL TO ANS2
004156 000401              BR      .+4          ;SKIP STFPS

004160      000              TSA24:
004160 170200              STFPS   FPS          ;STORE FLOATING POINT STATUS
004162 170367 174634      STST    FEC          ;STORE EXCEPTION CODES
004166 022700 147740      CMP     #147740,FPS  ;CHECK FLOATING POINT STATUS
004172 001401              BEQ     .+4          ;BRANCH IF OK
004174 104000              HLT                    ;FPS NOT EQUAL TO 147740

004176 022767 000002 174616      CMP     #02,  FEC     ;CHECK FLOATING EXCEPTION CODE
004204 001401              BEQ     .+4          ;BRANCH IF OK
004206 104000              HLT                    ;FEC NOT EQUAL TO 02

004210 022767 004126 174606      CMP     #FPI24, FEA   ;CHECK FLOATING EXCEPTION ADDRESS
004216 001401              BEQ     .+4          ;BRANCH IF OK
004220 104000              HLT                    ;FEA NOT EQUAL TO FPI24

004222 126727 174552 000024      CMPB   ICNT,  #24    ;CHECK FOR RIGHT TEST
004230 001401              BEQ     .+4          ;BRANCH IF OK
004232 104000              HLT                    ;PC JUMPED TESTS

```

```

:*****
:TEST 25:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170037
:              FPS = 147740,  FEC = 02,  FEA = FPI25
:*****

```

```

004234 104400              SCOPE
004236 000401              BR      TST25        ;SKIP DATA

004240 001002              ADR25:  ANS1

004242 170127 047740      TST25:  LDFPS   #047740 ;LOAD FLOATING POINT STATUS
004246 170037              FPI25:  170037        ;ILLEGAL INSTRUCTION
004250 000000              HALT                    ;PC NOT PROPERLY UPDATED
004252 170200              STFPS   FPS          ;STORE FLOATING POINT STATUS
004254 170367 174542      STST    FEC          ;STORE EXCEPTION CODES
004260 022700 147740      CMP     #147740,FPS  ;CHECK FLOATING POINT STATUS
004264 001401              BEQ     .+4          ;BRANCH IF OK
004266 104000              HLT                    ;FPS NOT EQUAL TO 147740

004270 022767 000002 174524      CMP     #02,  FEC     ;CHECK FLOATING EXCEPTION CODE
004276 001401              BEQ     .+4          ;BRANCH IF OK
004300 104000              HLT                    ;FEC NOT EQUAL TO 02

004302 022767 004246 174514      CMP     #FPI25, FEA   ;CHECK FLOATING EXCEPTION ADDRESS
004310 001401              BEQ     .+4          ;BRANCH IF OK
004312 104000              HLT                    ;FEA NOT EQUAL TO FPI25

```

004314	126727	174460	000025	CMPB	ICNT,	#25	:CHECK FOR RIGHT TEST
004317	001401			BEQ	.+4		:BRANCH IF OK
004319	104000			HLT			:PC JUMPED TESTS

```

*****
:TEST 26:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170040
:              FPS = 147740,   FEC = 02,   FEA = FPI26
*****

```

004326	104400			SCOPE			
004330	000401			BR	TST26		:SKIP DATA
004332	001002			ADR26:	ANS1		
004334	170127	047740		*ST26:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
004340	012700	004332			MOV	#ADR26, %C	:SET UP RO
004344	170040			FPI26:	170040		:ILLEGAL INSTRUCTION
004346	022700	004332			CMP	#ADR26, %C	:CHECK RO
004352	001407				BEQ	TSA26	:BRANCH IF OK
004354	010067	174422			MOV	%C, ANS1	:STORE RO FOR TYPING
004360	170200				STFPS	FPS	:STORE FPS FOR TYPING
004362	170367	174434			STST	FEC	:STORE FEC, FEA FOR TYPING
004366	104001				HLT	+1	:RO NOT EQUAL TO #ADR26
004370	000401				BR	.+4	:SKIP STFPS

004372	000			*SA26:			
004372	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
004374	170367	174422			STST	FEC	:STORE EXCEPTION CODES
004400	022700	147740			CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
004404	001401				BEQ	.+4	:BRANCH IF OK
004406	104000				HLT		:FPS NOT EQUAL TO 147740

004410	022767	000002	174404	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
004416	001401			BEQ	.+4		:BRANCH IF OK
004420	104000			HLT			:FEC NOT EQUAL TO 02

004422	022767	004344	174374	CMP	#FPI26, FEA		:CHECK FLOATING EXCEPTION ADDRESS
004430	001401			BEQ	.+4		:BRANCH IF OK
004432	104000			HLT			:FEA NOT EQUAL TO FPI26

004434	126727	174340	000026	CMPB	ICNT,	#26	:CHECK FOR RIGHT TEST
004442	001401			BEQ	.+4		:BRANCH IF OK
004444	104000			HLT			:PC JUMPED TESTS

```

*****
:TEST 27:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170041
:              FPS = 147740,   FEC = 02,   FEA = FPI27
*****

```

```

004446 104400          SCOPE
004450 000401          BR          TST27          :SKIP DATA

004452 001002          ADR27:  ANS1

004454 170127 047740    TST27:  LDFPS  #047740          :LOAD FLOATING POINT STATUS
004460 012701 004456          MOV  #ADR27+4,%1          :SET UP R1
004464 170041          FPI27: 170041          :ILLEGAL INSTRUCTION
004466 022701 004452          CMP  #ADR27,%1          :CHECK R1
004472 001407          BEQ  TSA27          :BRANCH IF OK
004474 010167 174302          MOV  %1, ANS1          :STORE R1 FOR TYPING
004500 170200          STFPS FPS          :STORE FPS FOR TYPING
004502 170367 174314          STST FEC          :STORE FEC, FEA FOR TYPING
004506 104001          HLT+!          :R1 NOT EQUAL TO #ADR27
004510 000401          BR          .+4          :SKIP STFPS

004512 000          TSA27:
004512 170200          STFPS FPS          :STORE FLOATING POINT STATUS
004514 170367 174302          STST FEC          :STORE EXCEPTION CODES
004520 022700 147740          CMP  #147740,FPS          :CHECK FLOATING POINT STATUS
004524 001401          BEQ  .+4          :BRANCH IF OK
004526 104000          HLT          :FPS NOT EQUAL TO 147740

004530 022767 000002 174264          CMP  #02, FEC          :CHECK FLOATING EXCEPTION CODE
004536 001401          BEQ  .+4          :BRANCH IF OK
004540 104000          HLT          :FEC NOT EQUAL TO 02

004542 022767 004464 174254          CMP  #FPI27, FEA          :CHECK FLOATING EXCEPTION ADDRESS
004550 001401          BEQ  .+4          :BRANCH IF OK
004552 104000          HLT          :FEA NOT EQUAL TO FPI27

004554 126727 174220 000027          CMPB CNT, #27          :CHECK FOR RIGHT TEST
004562 001401          BEQ  .+4          :BRANCH IF OK
004564 104000          HLT          :PC JUMPED TESTS

```

```

*****
:TEST 30:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
:                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                  ILLEGAL INSTRUCTION = 170042
:                  FPS = 147740,   FEC = 02,   FEA = FPI30
*****

```

```

004566 104400          SCOPE
004570 000401          BR          TST30          :SKIP DATA

004572 001002          ADR30:  ANS1

004574 170127 047740    TST30:  LDFPS  #047740          :LOAD FLOATING POINT STATUS
004600 012702 004576          MOV  #ADR30+4,%2          :SET UP R2
004604 170042          FPI30: 170042          :ILLEGAL INSTRUCTION
004606 022702 004572          CMP  #ADR30,%2          :CHECK R2
004612 001407          BEQ  TSA30          :BRANCH IF OK
004614 010267 174162          MOV  %2, ANS1          :STORE R2 FOR TYPING

```

004620	170200			STFPS	FPS		:STORE FPS FOR TYPING
004622	170367	174174		STST	FEC		:STORE FEC, FEA FOR TYPING
004626	104001			HLT+1			:R2 NOT EQUAL TO #ADR30
004630	000401			BR	.+4		:SKIP STFPS
004632	000		TSA30:	STFPS	FPS		:STORE FLOATING POINT STATUS
004632	170200			STST	FEC		:STORE EXCEPTION CODES
004634	170367	174162		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
004640	022700	147740		BEQ	.+4		:BRANCH IF OK
004644	001401			HLT			:FPS NOT EQUAL TO 147740
004646	104000						
004650	022767	000002	174144	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
004656	001401			BEQ	.+4		:BRANCH IF OK
004660	104000			HLT			:FEC NOT EQUAL TO 02
004662	022767	004604	174134	CMP	#FPI30, FEA		:CHECK FLOATING EXCEPTION ADDRESS
004670	001401			BEQ	.+4		:BRANCH IF OK
004672	104000			HLT			:FEA NOT EQUAL TO FPI30
004674	126727	174100	000030	CMPB	%04, #30		:CHECK FOR RIGHT TEST
004702	001401			BEQ	.+4		:BRANCH IF OK
004704	104000			HLT			:PC JUMPED TESTS

```

*****
TEST 31: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
          CODES) AND FEA (FLOATING EXCEPTION ADDRESS) .
          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
          ILLEGAL INSTRUCTION = 170043
          FPS = 147740, FEC = 02, FEA = FPI31
*****

```

004706	104400			SCOPE			
004710	000401			BR	TEST31		:SKIP DATA
004712	001002		ADR31:	ANS1			
004714	170127	047740	TEST31:	LDFPS	#047740		:LOAD FLOATING POINT STATUS
004720	012703	004712		MOV	#ADR31, %3		:SET UP R3
004724	170043		FP31:	170043			:ILLEGAL INSTRUCTION
004726	022703	004712		CMP	#ADR31, %3		:CHECK R3
004732	001407			BEQ	TSA31		:BRANCH IF OK
004734	010367	174042		MOV	%3, ANS1		:STORE R3 FOR TYPING
004740	170200			STFPS	FPS		:STORE FPS FOR TYPING
004742	170367	174054		STST	FEC		:STORE FEC, FEA FOR TYPING
004746	104001			HLT+1			:R3 NOT EQUAL TO #ADR31
004750	000401			BR	.+4		:SKIP STFPS
004752	000		TSA31:	STFPS	FPS		:STORE FLOATING POINT STATUS
004752	170200			STST	FEC		:STORE EXCEPTION CODES
004754	170367	174042		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
004760	022700	147740		BEQ	.+4		:BRANCH IF OK
004764	001401			HLT			:FPS NOT EQUAL TO 147740
004766	104000						

E03

MINDEC-11-00FPB-B
00FPB8.F11

TEST OF STST AND ILLEGAL INSTRUCTIONS
TEST SECTION

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004770	022767	000002	174024	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
004776	001401			BEG	.+4		:BRANCH IF OK
005000	104000			HLT			:FEC NOT EQUAL TO 02
005002	022767	004724	174014	CMP	#FPI31,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
005010	001401			BEG	.+4		:BRANCH IF OK
005012	104000			HLT			:FEA NOT EQUAL TO FPI31
005014	126727	173760	000031	CMPB	ICNT,	#31	:CHECK FOR RIGHT TEST
005020	001401			BEG	.+4		:BRANCH IF OK
005024	104000			HLT			:PC JUMPED TESTS

```

*****
TEST 32:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 170044
              FPS = 147740,   FEC = 02,   FEA = FPI32
*****

```

005026	104400			SCOPE			
005030	000401			BR	TST32		:SKIP DATA
005032	001002			ADR32:	ANS1		
005034	170127	047740		TST32:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
005040	012704	005032		MOV	#ADR32,	%4	:SET UP R4
005044	170044			FP132:	170044		:ILLEGAL INSTRUCTION
005046	022704	005032		CMP	#ADR32,	%4	:CHECK R4
005052	001401			BEG	TSA32		:BRANCH IF OK
005054	010467	173722		MOV	%4	ANS1	:STORE R4 FOR TYPING
005060	170200			STFPS	FPS		:STORE FPS FOR TYPING
005062	170367	173734		STFEC	FEC		:STORE FEC, FEA FOR TYPING
005066	104001			HL	+1		:R4 NOT EQUAL TO #ADR32
005070	000401			BR	.+4		:SKIP STFPS
005072	000			TSA32:			
005072	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
005074	170367	173722		STFEC	FEC		:STORE EXCEPTION CODES
005100	022700	147740		CMP	#147740,	FPS	:CHECK FLOATING POINT STATUS
005104	001401			BEG	.+4		:BRANCH IF OK
005106	104000			HLT			:FPS NOT EQUAL TO 147740
005110	022767	000002	173704	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
005116	001401			BEG	.+4		:BRANCH IF OK
005120	104000			HLT			:FEC NOT EQUAL TO 02
005122	022767	005044	173674	CMP	#FPI32,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
005130	001401			BEG	.+4		:BRANCH IF OK
005132	104000			HLT			:FEA NOT EQUAL TO FPI32
005134	126727	173640	000032	CMPB	ICNT,	#32	:CHECK FOR RIGHT TEST
005140	001401			BEG	.+4		:BRANCH IF OK
005144	104000			HLT			:PC JUMPED TESTS

F03

TEST STST AND ILLEGAL INSTRUCTIONS
SECTION

TEST STST AND ILLEGAL INSTRUCTIONS
SECTION

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*****
TEST 33: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
          CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
          ILLEGAL INSTRUCTION = 170045
          FPS = 147740, FEC = 02, FEA = FPI33
*****
  
```

```

005148 104400 SCOPE
005150 000401 BR TST33 :SKIP DATA

005152 001002 ADR33: ANS1

005154 170127 047740 TST33: LD FPS #047740 :LOAD FLOATING POINT STATUS
005160 012705 005152 MOV #ADR33, :5 :SET UP R5
005164 170045 FPI33: 170045 :ILLEGAL INSTRUCTION
005166 022705 005152 CMP #ADR33, :5 :CHECK R5
005172 001401 *SA33 BEQ :5A33 :BRANCH IF OK
005174 010567 173602 MOV :5 ANS1 :STORE R5 FOR TYPING
005200 170200 ST FPS FPS :STORE FPS FOR TYPING
005202 170367 173614 ST ST FEC :STORE FEC, FEA FOR TYPING
005206 104001 HLT+ :R5 NOT EQUAL TO #ADR33
005210 000401 BR .+4 :SKIP ST FPS

005212 000 *SA33: ST FPS FPS :STORE FLOATING POINT STATUS
005212 170200 ST ST FEC :STORE EXCEPTION CODES
005214 170367 173602 CMP #147740, FPS :CHECK FLOATING POINT STATUS
005220 022700 147740 BEQ .+4 :BRANCH IF OK
005224 001401 HLT :FPS NOT EQUAL TO 147740

005230 022767 000002 17356+ CMP #02, FEC :CHECK FLOATING EXCEPTION CODE
005236 001401 BEQ .+4 :BRANCH IF OK
005240 104000 HLT :FEC NOT EQUAL TO 02

005242 022767 005164 173554 CMP #FPI33, FEA :CHECK FLOATING EXCEPTION ADDRESS
005250 001401 BEQ .+4 :BRANCH IF OK
005252 104000 HLT :FEA NOT EQUAL TO FPI33

005254 126727 173520 000033 CMPS ICNT, #33 :CHECK FOR RIGHT TEST
005262 001401 BEQ .+4 :BRANCH IF OK
005264 104000 HLT :PC JUMPED TESTS
  
```

```

*****
TEST 34: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
          CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
          ILLEGAL INSTRUCTION = 170046
          FPS = 147740, FEC = 02, FEA = FPI34
*****
  
```

```

005266 104400 SCOPE
005268 000401 BR TST34 :SKIP DATA
  
```


005272	001002		ADR34:	ANS1			
005274	170127	047740	TST34:	LDFPS	#047740	:LOAD FLOATING POINT STATUS	
005300	010667	173500		MOV	%6,	:SAVE R6	
005304	170046		FPI34:	170046		:ILLEGAL INSTRUCTION	
005306	020667	173472		CMP	%6	:CHECK R6	
005312	001411			BEG	TSA34	:BRANCH IF OK	
005314	010667	173462		MOV	%6,	:STORE R6 FOR TYPING	
005320	016706	173460		MOV	ANS2,	:RESTORE R6	
005324	170200			STFPS	FPS	:STORE FPS FOR TYPING	
005326	170367	173470		STST	FEC	:STORE FEC, FEA FOR TYPING	
005332	104002			HLT+2		:R6 (ANS1) NOT EQUAL TO ANS2	
005334	000401			BR	.+4	:SKIP STFPS	
005336	000		TSA34:				
005336	170200			STFPS	FPS	:STORE FLOATING POINT STATUS	
005340	170367	173456		STST	FEC	:STORE EXCEPTION CODES	
005344	022700	147740		CMP	#147740,FPS	:CHECK FLOATING POINT STATUS	
005350	001401			BEG	.+4	:BRANCH IF OK	
005352	104000			HLT		:FPS NOT EQUAL TO 147740	
005354	022767	000002	173440	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
005362	001401			BEG	.+4		:BRANCH IF OK
005364	104000			HLT			:FEC NOT EQUAL TO 02
005366	022767	005304	173430	CMP	#FPI34,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
005374	001401			BEG	.+4		:BRANCH IF OK
005376	104000			HLT			:FEA NOT EQUAL TO FPI34
005400	126727	173374	000034	CMFB	%CNT,	#34	:CHECK FOR RIGHT TEST
005406	001401			BEG	.+4		:BRANCH IF OK
005410	104000			HLT			:PC JUMPED TESTS

 TEST 35: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
 CODES) AND FEA (FLOATING EXCEPTION ADDRESS) .
 ALSO TEST ALL ILLEGAL INSTRUCTIONS.
 ILLEGAL INSTRUCTION = 170050
 FPS = 147740, FEC = 02, FEA = FPI35

005412	104400		SCOPE				
005414	000401		BR	TST35		:SKIP DATA	
005416	001002		ADR35:	ANS1			
005420	170127	047740	TST35:	LDFPS	#047740	:LOAD FLOATING POINT STATUS	
005424	012700	005420		MOV	#ADR35+2,%C	:SET UP RC	
005430	170050		FPI35:	170050		:ILLEGAL INSTRUCTION	
005432	022700	005416		CMP	#ADR35,%C	:CHECK RC	
005436	001407			BEG	TSA35	:BRANCH IF OK	
005440	010667	173336		MOV	%0,	ANS1	:STORE RC FOR TYPING
005444	170200			STFPS	FPS	:STORE FPS FOR TYPING	
005446	170367	173350		STST	FEC	:STORE FEC, FEA FOR TYPING	
005452	104000			HLT+1		:RC NOT EQUAL TO #ADR35	

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TEST OF STST AND ILLEGAL INSTRUCTIONS
TEST SECTION

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005454 000401          BR      .+4          ;SKIP STFPS
005456      000          TSA35:
005456 170200          STFPS   FPS          ;STORE FLOATING POINT STATUS
005460 170367 173336  STST    FEC          ;STORE EXCEPTION CODES
005464 022700 147740  CMP     #147740.FPS  ;CHECK FLOATING POINT STATUS
005470 001401          BEQ     .+4          ;BRANCH IF OK
005472 104000          HLT                    ;FPS NOT EQUAL TO 147740

005474 022767 000002 173320  CMP     #02,   FEC          ;CHECK FLOATING EXCEPTION CODE
005502 001401          BEQ     .+4          ;BRANCH IF OK
005504 104000          HLT                    ;FEC NOT EQUAL TO 02

005506 022767 005430 173310  CMP     #FPI35, FEA        ;CHECK FLOATING EXCEPTION ADDRESS
005514 001401          BEQ     .+4          ;BRANCH IF OK
005516 104000          HLT                    ;FEA NOT EQUAL TO FPI35

005520 126727 173254 000035  CMPB   ICNT,   #35        ;CHECK FOR RIGHT TEST
005526 001401          BEQ     .+4          ;BRANCH IF OK
005530 104000          HLT                    ;PC JUMPED TESTS

```

```

:*****
:TEST 36:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170051
:              FPS = 147740,   FEC = 02,   FEA = FPI36
:*****

```

```

005532 104400          SCOPE
005534 000401          BR      TST36          ;SKIP DATA

005536 001002          ADR36: ANS1

005540 170127 047740  TST36: LDFPS   #047740          ;LOAD FLOATING POINT STATUS
005544 012701 005540  MOV     #ADR36+2,%1        ;SET UP R1
005550 170051          FPI36: 170051          ;ILLEGAL INSTRUCTION
005552 022701 005536  CMP     #ADR36, %1        ;CHECK R1
005556 001407          BEQ     TSA36          ;BRANCH IF OK
005560 010167 173216  MOV     %1,   ANS1        ;STORE R1 FOR TYPING
005564 170200          STFPS   FPS          ;STORE FPS FOR TYPING
005566 170367 173230  STST    FEC          ;STORE FEC, FEA FOR TYPING
005572 104001          HLT     +!          ;R1 NOT EQUAL TO #ADR36
005574 000401          BR      .+4          ;SKIP STFPS

005576      000          TSA36:
005576 170200          STFPS   FPS          ;STORE FLOATING POINT STATUS
005600 170367 173216  STST    FEC          ;STORE EXCEPTION CODES
005604 022700 147740  CMP     #147740.FPS  ;CHECK FLOATING POINT STATUS
005610 001401          BEQ     .+4          ;BRANCH IF OK
005612 104000          HLT                    ;FPS NOT EQUAL TO 147740

005614 022767 000002 173200  CMP     #02,   FEC          ;CHECK FLOATING EXCEPTION CODE
005622 001401          BEQ     .+4          ;BRANCH IF OK
005624 104000          HLT                    ;FEC NOT EQUAL TO 02

```

005626	022767	005550	173170	CMP	#FPI36, FEA	:CHECK FLOATING EXCEPTION ADDRESS
005634	001401			BEQ	+.4	:BRANCH IF OK
005636	104000			HLT		:FEA NOT EQUAL TO FPI36
005640	126727	173134	000036	CMPB	ICNT, #36	:CHECK FOR RIGHT TEST
005646	001401			BEQ	+.4	:BRANCH IF OK
005650	104000			HLT		:PC JUMPED TESTS

```

*****
:TEST 37:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 170052
                FPS = 147740,   FEC = 02,   FEA = FPI37
*****

```

005652	104400			SCOPE		
005654	000401			BR	TST37	:SKIP DATA
005656	001002			ADR37:	ANS1	
005660	170127	047740		TST37:	LDFPS #047740	:LOAD FLOATING POINT STATUS
005664	012702	005660			MOV #ADR37+2,%2	:SET UP R2
005670	170052			FP:37:	170052	:ILLEGAL INSTRUCTION
005672	022702	005656			CMP #ADR37,%2	:CHECK R2
005676	001407				BEQ T5A37	:BRANCH IF OK
005700	010267	173076			MOV %2, ANS1	:STORE R2 FOR TYPING
005704	170200				STFPS FPS	:STORE FPS FOR TYPING
005706	170367	173110			STST FEC	:STORE FEC, FEA FOR TYPING
005712	104001				HLT+1	:R2 NOT EQUAL TO #ADR37
005714	000401				BR .+4	:SKIP STFPS

005716	000			T5A37:		
005716	170200				STFPS FPS	:STORE FLOATING POINT STATUS
005720	170367	173076			STST FEC	:STORE EXCEPTION CODES
005724	022700	147740			CMP #147740,FPS	:CHECK FLOATING POINT STATUS
005730	001401				BEQ .+4	:BRANCH IF OK
005732	104000				HLT	:FPS NOT EQUAL TO 147740

005734	022767	000002	173060	CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
005742	001401			BEQ	+.4	:BRANCH IF OK
005744	104000			HLT		:FEC NOT EQUAL TO 02

005746	022767	005670	173050	CMP	#FPI37, FEA	:CHECK FLOATING EXCEPTION ADDRESS
005754	001401			BEQ	+.4	:BRANCH IF OK
005756	104000			HLT		:FEA NOT EQUAL TO FPI37

005760	126727	173014	000037	CMPB	ICNT, #37	:CHECK FOR RIGHT TEST
005766	001401			BEQ	+.4	:BRANCH IF OK
005770	104000			HLT		:PC JUMPED TESTS

```

*****
:TEST 40:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION

```

CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170053
FPS = 147740, FEC = 02, FEA = FPI40

005772	104400			SCOPE			
005774	000401			BR	TST40		:SKIP DATA
005776	001002			ADR40:	ANSI		
006000	170127	047740		TST40:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
006004	012703	006000			MOV	#ADR40+2,%3	:SET UP R3
006010	170053			FPI40:	170053		:ILLEGAL INSTRUCTION
006012	022703	005776			CMP	#ADR40,%3	:CHECK R3
006016	001407				BEQ	TSA40	:BRANCH IF OK
006020	010367	172756			MOV	%3,ANSI	:STORE R3 FOR TYPING
006024	170200				STFPS	FPS	:STORE FPS FOR TYPING
006026	170367	172770			STST	FEC	:STORE FEC, FEA FOR TYPING
006032	104001				HLT+1		:R3 NOT EQUAL TO #ADR40
006034	000401				BR	.+4	:SKIP STFPS
006036	000			TSA40:			
006036	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
006040	170367	172756			STST	FEC	:STORE EXCEPTION CODES
006044	022700	147740			CMP	#147740,FPS	:CHECK FLOATING POINT STATUS
006050	001401				BEQ	.+4	:BRANCH IF OK
006052	104000				HLT		:FPS NOT EQUAL TO 147740
006054	022767	000002	172740		CMP	#02,FEC	:CHECK FLOATING EXCEPTION CODE
006062	001401				BEQ	.+4	:BRANCH IF OK
006064	104000				HLT		:FEC NOT EQUAL TO 02
006066	022767	006010	172730		CMP	#FPI40,FEA	:CHECK FLOATING EXCEPTION ADDRESS
006074	001401				BEQ	.+4	:BRANCH IF OK
006076	104000				HLT		:FEA NOT EQUAL TO FPI40
006100	126727	172674	000040		CMPB	ICNT,#40	:CHECK FOR RIGHT TEST
006106	001401				BEQ	.+4	:BRANCH IF OK
006110	104000				HLT		:PC JUMPED TESTS

:TEST 41: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170054
FPS = 147740, FEC = 02, FEA = FPI41

006112	104400			SCOPE			
006114	000401			BR	TST41		:SKIP DATA
006116	001002			ADR41:	ANSI		
006120	170127	047740		TST41:	LDFPS	#047740	:LOAD FLOATING POINT STATUS

```

006124 012704 006120      MOV      #ADR41+2,%4      ;SET JP R4
006130 170054      FFI41: 170054      ;ILLEGAL INSTRUCTION
006132 022704 006116      CMP      #ADR41,%4      ;CHECK R4
006136 001407      BEQ      TSA41          ;BRANCH IF OK
006140 010467 172536      MOV      %4,ANS1        ;STORE R4 FOR TYPING
006144 170200      STFPS   FPS            ;STORE FPS FOR TYPING
006146 170367 172650      STST    FEC            ;STORE FEC, FEA FOR TYPING
006152 104001      HLT+1
006154 000401      BR      .+4            ;SKIP STFPS

006156 000
006156 170200      TSA41: STFPS   FPS            ;STORE FLOATING POINT STATUS
006160 170367 172636      STST    FEC            ;STORE EXCEPTION CODES
006164 022700 147740      CMP      #147740,FPS    ;CHECK FLOATING POINT STATUS
006170 001401      BEQ      .+4            ;BRANCH IF OK
006172 104000      HLT                    ;FPS NOT EQUAL TO 147740

006174 022767 000002 172620      CMP      #02,FEC        ;CHECK FLOATING EXCEPTION CODE
006202 001401      BEQ      .+4            ;BRANCH IF OK
006204 104000      HLT                    ;FEC NOT EQUAL TO 02

006206 022767 006130 172610      CMP      #FFI41,FEA     ;CHECK FLOATING EXCEPTION ADDRESS
006214 001401      BEQ      .+4            ;BRANCH IF OK
006216 104000      HLT                    ;FEA NOT EQUAL TO FFI41

006220 126727 172554 000041      CMPB    ICNT,#41        ;CHECK FOR RIGHT TEST
006226 001401      BEQ      .+4            ;BRANCH IF OK
006230 104000      HLT                    ;PC JUMPED TESTS

```

```

*****
:TEST 42:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170055
:              FPS = 147740,   FEC = 02,   FEA = FFI42
*****

```

```

006232 104400      SCOPE
006234 000401      BR      TST42          ;SKIP DATA

006236 001002      ADR42: ANS1

006240 170127 047740      TST42: LDFPS   #047740    ;LOAD FLOATING POINT STATUS
006244 012705 006240      MOV      #ADR42+2,%5    ;SET UP R5
006250 170055      FFI42: 170055      ;ILLEGAL INSTRUCTION
006252 022705 006236      CMP      #ADR42,%5      ;CHECK R5
006256 001407      BEQ      TSA42          ;BRANCH IF OK
006260 010567 172516      MOV      %5,ANS1        ;STORE R5 FOR TYPING
006264 170200      STFPS   FPS            ;STORE FPS FOR TYPING
006266 170367 172530      STST    FEC            ;STORE FEC, FEA FOR TYPING
006272 104001      HLT+1
006274 000401      BR      .+4            ;SKIP STFPS

006276 000
006276 170200      TSA42: STFPS   FPS            ;STORE FLOATING POINT STATUS

```

006300	170367	172516		STST	FEC		:STORE EXCEPTION CODES
006304	022700	147740		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
006310	001401			BEQ	.+4		:BRANCH IF OK
006312	104000			HLT			:FPS NOT EQUAL TO 147740
006314	022767	000002	172500	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
006322	001401			BEQ	.+4		:BRANCH IF OK
006324	104000			HLT			:FEC NOT EQUAL TO 02
006326	022767	006250	172470	CMP	#FPI42, FEA		:CHECK FLOATING EXCEPTION ADDRESS
006334	001401			BEQ	.+4		:BRANCH IF OK
006336	104000			HLT			:FEA NOT EQUAL TO FPI42
006340	126727	172434	000042	CMPB	ICNT, #42		:CHECK FOR RIGHT TEST
006346	001401			BEQ	.+4		:BRANCH IF OK
006350	104000			HLT			:PC JUMPED TESTS

```

*****
*TEST 43:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
*              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
*              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
*              ILLEGAL INSTRUCTION = 170056
*              FPS = 147740,   FEC = 02,   FEA = FPI43
*****

```

006352	104400			SCOPE			
006354	000401			BR	TST43		:SKIP DATA
006356	001002			ADR43:	ANS1		
006360	170127	047740		TST43:	LDFPS #047740		:LOAD FLOATING POINT STATUS
006364	010667	172414			MOV %6, ANS2		:SAVE R6
006370	170056			FPI43:	170056		:ILLEGAL INSTRUCTION
006372	005726				TST (%6)+		:RESTORE THE STACK
006374	020667	172404			CMP %6, ANS2		:CHECK R6
006400	001411				BEQ TSA43		:BRANCH IF OK
006402	010667	172374			MOV %6, ANS1		:STORE R6 FOR TYPING
006406	016706	172372			MOV ANS2, %6		:RESTORE R6
006412	170200				STFPS FPS		:STORE FPS FOR TYPING
006414	170367	172402			STS FEC		:STORE FEC, FEA FOR TYPING
006420	104002				HLT+2		:R6 (ANS1) NOT EQUAL TO ANS2
006422	000401				BR .+4		:SKIP STFPS
006424	000			TSA43:			
006424	170200				STFPS FPS		:STORE FLOATING POINT STATUS
006426	170367	172370			STST FEC		:STORE EXCEPTION CODES
006432	022700	147740			CMP #147740,FPS		:CHECK FLOATING POINT STATUS
006436	001401				BEQ .+4		:BRANCH IF OK
006440	104000				HLT		:FPS NOT EQUAL TO 147740
006442	022767	000002	172352	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
006450	001401			BEQ	.+4		:BRANCH IF OK
006452	104000			HLT			:FEC NOT EQUAL TO 02
00645-	022767	006370	172342	CMP	#FPI43, FEA		:CHECK FLOATING EXCEPTION ADDRESS

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TEST OF STST AND ILLEGAL INSTRUCTIONS
TEST SECTION

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006462	001401			BEQ	+.4			;BRANCH IF OK
006464	104000			HLT				;FEA NOT EQUAL TO FPI43
006466	126727	172306	000043	CMPB	ICNT,	#43		;CHECK FOR RIGHT TEST
006474	001401			BEQ	+.4			;BRANCH IF OK
006476	104000			HLT				;PC JUMPED TESTS

```

*****
:TEST 44:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170060
:              FPS = 147740,   FEC = 02,   FEA = FPI44
*****

```

006500	104400			SCOPE				
006502	000401			BR	TST44			;SKIP DATA
006504	001002			ADR44:	ANSI			
006506	170127	047740		TST44:	LDFPS	#047740		;LOAD FLOATING POINT STATUS
006512	012700	006504			MOV	#ADR44, %0		;SET UP RO
006516	170060			FPI44:	170060			;ILLEGAL INSTRUCTION
006520	000000				HALT			;INDEX VALUE OF 0 GOT EXICUTED
006522	022700	006504			CMP	#ADR44, %0		;CHECK RO
006526	001407				BEQ	TSA44		;BRANCH IF OK
006530	010067	172246			MOV	%0, ANSI		;STORE RO FOR TYPING
006534	170200				STFPS	FPS		;STORE FPS FOR TYPING
006536	170367	172260			STST	FEC		;STORE FEC, FEA FOR TYPING
006542	104001				HLT+1			;RO NOT EQUAL TO #ADR44
006544	000401				BR	+.4		;SKIP STFPS
006546	000			TSA44:				
006546	170200				STFPS	FPS		;STORE FLOATING POINT STATUS
006550	170367	172246			STST	FEC		;STORE EXCEPTION CODES
006554	022700	147740			CMP	#147740, FPS		;CHECK FLOATING POINT STATUS
006560	001401				BEQ	+.4		;BRANCH IF OK
006562	104000				HLT			;FPS NOT EQUAL TO 147740
006564	022767	000002	172230		CMP	#02, FEC		;CHECK FLOATING EXCEPTION CODE
006572	001401				BEQ	+.4		;BRANCH IF OK
006574	104000				HLT			;FEC NOT EQUAL TO 02
006576	022767	006516	172220		CMP	#FPI44, FEA		;CHECK FLOATING EXCEPTION ADDRESS
006604	001401				BEQ	+.4		;BRANCH IF OK
006606	104000				HLT			;FEA NOT EQUAL TO FPI44
006610	126727	172154	000044		CMPB	ICNT, #44		;CHECK FOR RIGHT TEST
006616	001401				BEQ	+.4		;BRANCH IF OK
006620	104000				HLT			;PC JUMPED TESTS

```

*****
:TEST 45:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:

```

ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170061
FPS = 147740, FEC = 02, FEA = FPI45

006622	104400			SCOPE			
006624	000401			BR	TST45		;SKIP DATA
006626	001002			ADR45:	ANS1		
006630	170127	047740		TST45:	LDFPS	#047740	;LOAD FLOATING POINT STATUS
006634	012701	006626			MOV	#ADR45, %1	;SET UP R1
006640	170061			FPI45:	170061		;ILLEGAL INSTRUCTION
006642	000000				HALT		;INDEX VALUE OF 0 GOT EXECUTED
006644	022701	006626			CMP	#ADR45, %1	;CHECK R1
006650	001407				BEQ	TSA45	;BRANCH IF OK
006652	010167	172124			MOV	%1 ANS1	;STORE R1 FOR TYPING
006656	170200				STFPS	FPS	;STORE FPS FOR TYPING
006660	170367	172136			STST	FEC	;STORE FEC, FEA FOR TYPING
006664	104001				HLT+1		;R1 NOT EQUAL TO #ADR45
006666	000401				BR	.+4	;SKIP STFPS
006670	000			TSA45:			
006670	170200				STFPS	FPS	;STORE FLOATING POINT STATUS
006672	170367	172124			STST	FEC	;STORE EXCEPTION CODES
006676	022700	147740			CMP	#147740,FPS	;CHECK FLOATING POINT STATUS
006702	001401				BEQ	.+4	;BRANCH IF OK
006704	104000				HLT		;FPS NOT EQUAL TO 147740
006706	022767	000002	172106		CMP	#02, FEC	;CHECK FLOATING EXCEPTION CODE
006714	001401				BEQ	.+4	;BRANCH IF OK
006716	104000				HLT		;FEC NOT EQUAL TO 02
006720	022767	006640	172076		CMP	#FPI45, FEA	;CHECK FLOATING EXCEPTION ADDRESS
006726	001401				BEQ	.+4	;BRANCH IF OK
006730	104000				HLT		;FEA NOT EQUAL TO FPI45
006732	126727	172042	000045		CMPB	ICNT, #45	;CHECK FOR RIGHT TEST
006740	001401				BEQ	.+4	;BRANCH IF OK
006742	104000				HLT		;PC JUMPED TESTS

TEST 46: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
CODES AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170062
FPS = 147740, FEC = 02, FEA = FPI46

006744	104400			SCOPE			
006746	000401			BR	TST46		;SKIP DATA
006750	001002			ADR46	ANS1		
006752	170127	047740		TST46:	LDFPS	#047740	;LOAD FLOATING POINT STATUS


```

006756 012702 006750      MOV      #ADR46, %2      :SET JF R2
006762 170062      FPI46: 170062          :ILLEGAL INSTRUCTION
006764 000000      HALT                    :INDEX VALUE OF 0 GOT EXECUTED
006766 022702 006750      CMP      #ADR46, %2      :CHECK R2
006772 001407      BEQ     TSA46           :BRANCH IF OK
006774 010267 172002      MOV     %2, ANS1        :STORE R2 FOR TYPING
007000 170200      STFPS  FPS              :STORE FPS FOR TYPING
007002 170367 172014      STST   FEC              :STORE FEC, FEA FOR TYPING
007006 104001      HLT+1                    :R2 NOT EQUAL TO #ADR46
007010 000401      BR     .+4              :SKIP STFPS

007012 000          *TSA46:
007012 170200      STFPS  FPS              :STORE FLOATING POINT STATUS
007014 170367 172002      STST   FEC              :STORE EXCEPTION CODES
007020 022700 147740      CMP     #147740, FPS     :CHECK FLOATING POINT STATUS
007024 001401      BEQ     .+4              :BRANCH IF OK
007026 104000      HLT                    :FPS NOT EQUAL TO 147740

007030 022767 000002 171764      CMP     #02, FEC         :CHECK FLOATING EXCEPTION CODE
007036 001401      BEQ     .+4              :BRANCH IF OK
007040 104000      HLT                    :FEC NOT EQUAL TO 02

007042 022767 006762 171754      CMP     #FPI46, FEA      :CHECK FLOATING EXCEPTION ADDRESS
007050 001401      BEQ     .+4              :BRANCH IF OK
007052 104000      HLT                    :FEA NOT EQUAL TO FPI46

007054 126727 171720 000046      CMPB   ICNT, #46        :CHECK FOR RIGHT TEST
007062 001401      BEQ     .+4              :BRANCH IF OK
007064 104000      HLT                    :PC JUMPED TESTS

```

```

*****
:TEST 47:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170063
:              FPS = 147740, FEC = 02, FEA = FPI47
*****

```

```

007066 104400      SCOPE
007070 000401      BR     TST47           :SKIP DATA

007072 001002      ADR47: ANS1

007074 170127 047740      TST47: LDFPS #047740     :LOAD FLOATING POINT STATUS
007100 012703 007072      MOV     #ADR47, %3      :SET UP R3
007104 170063      FFI47: 170063          :ILLEGAL INSTRUCTION
007106 000000      HALT                    :INDEX VALUE OF 0 GOT EXECUTED
007110 022703 007072      CMP     #ADR47, %3      :CHECK R3
007114 001407      BEQ     TSA47           :BRANCH IF OK
007116 010367 171660      MOV     %3, ANS1        :STORE R3 FOR TYPING
007122 170200      STFPS  FPS              :STORE FPS FOR TYPING
007124 170367 171672      STST   FEC              :STORE FEC, FEA FOR TYPING
007130 104001      HLT+1                    :R3 NOT EQUAL TO #ADR47
007132 000401      BR     .+4              :SKIP STFPS

```

Address	Instruction	PC	STST	STEPS	FPS	FEC	FEA	Description
007134	000							
007134	170200							:STORE FLOATING POINT STATUS
007136	170367	171660						:STORE EXCEPTION CODES
007142	022700	147740			147740	FPS		:CHECK FLOATING POINT STATUS
007146	001401							:BRANCH IF OK
007150	104000							:FPS NOT EQUAL TO 147740
007152	022767	000002	171642			02	FEC	:CHECK FLOATING EXCEPTION CODE
007156	001401							:BRANCH IF OK
007152	104000							:FEC NOT EQUAL TO 02
007164	022767	007104	171632			FPI47	FEA	:CHECK FLOATING EXCEPTION ADDRESS
007172	001401							:BRANCH IF OK
007174	104000							:FEA NOT EQUAL TO FPI47
007176	126727	171576	000047			IC47	47	:CHECK FOR RIGHT TEST
007204	001401							:BRANCH IF OK
007206	104000							:PC JUMPED TESTS

 :TEST 50: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
 : CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
 : ALSO TEST ALL ILLEGAL INSTRUCTIONS.
 : ILLEGAL INSTRUCTION = 170064
 : FPS = 147740, FEC = 02, FEA = FPI5C

Address	Instruction	PC	STST	STEPS	FPS	FEC	FEA	Description
007210	104400							
007212	000401							:SKIP DATA
007214	001002							
007216	170127	047740						:LOAD FLOATING POINT STATUS
007222	012704	007214						:SET UP R4
007226	170064							:ILLEGAL INSTRUCTION
007230	000000							:INDEX VALUE OF 0 GOT EXECUTED
007232	022704	007214						:CHECK R4
007236	001407							:BRANCH IF OK
007240	010467	171536						:STORE R4 FOR TYPING
007244	170200							:STORE FPS FOR TYPING
007246	170367	171550						:STORE FEC, FEA FOR TYPING
007252	104001							:R4 NOT EQUAL TO 0ADR5C
007254	000401							:SKIP STEPS
007256	000							
007256	170200							:STORE FLOATING POINT STATUS
007260	170367	171536						:STORE EXCEPTION CODES
007264	022700	147740				147740	FPS	:CHECK FLOATING POINT STATUS
007270	001401							:BRANCH IF OK
007272	104000							:FPS NOT EQUAL TO 147740
007274	022767	000002	171520			02	FEC	:CHECK FLOATING EXCEPTION CODE
007302	001401							:BRANCH IF OK
007304	104000							:FEC NOT EQUAL TO 02

007306	022767	007226	171510	CMP	#FPIS0, FEA	:CHECK FLOATING EXCEPTION ADDRESS
007314	001401			BEG	.+4	:BRANCH IF OK
007316	104000			HLT		:FEA NOT EQUAL TO FPIS0
007320	126727	171454	000050	CMPB	ICNT, #50	:CHECK FOR RIGHT TEST
007326	001401			BEG	.+4	:BRANCH IF OK
007330	104000			HLT		:PC JUMPED TESTS

```

*****
:TEST S1:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS) .
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 170065
                FPS = 147740,   FEC = 02,   FEA = FPIS1
*****

```

007332	104400			SCOPE		
007334	000401			BR	TESTS:	:SKIP DATA
007336	001002			ADRS1:	ANS1	
007340	170127	047740		TESTS:	LDFPS #047740	:LOAD FLOATING POINT STATUS
007344	012705	007336		MOV	#ADRS1, %5	:SET UP RS
007350	170065			FPIS1:	170065	:ILLEGAL INSTRUCTION
007352	000000			HALT		:INDEX VALUE OF 0 GOT EXECUTED
007354	022705	007336		CMP	#ADRS1, %5	:CHECK RS
007360	001407			BEG	TSAS!	:BRANCH IF OK
007362	010567	171414		MOV	%5, ANS1	:STORE RS FOR TYPING
007366	170200			STFPS	FPS	:STORE FPS FOR TYPING
007370	170367	171426		STFEC	FEC	:STORE FEC, FEA FOR TYPING
007374	104001			HLT	.+4	:RS NOT EQUAL TO #ADRS1
007376	000401			BR		:SKIP STEPS
007400	000			TSAS1:		
007400	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
007402	170367	171414		STFEC	FEC	:STORE EXCEPTION CODES
007406	022700	147740		CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
007412	001401			BEG	.+4	:BRANCH IF OK
007414	104000			HLT		:FPS NOT EQUAL TO 147740
007416	022767	000002	171376	CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
007424	001401			BEG	.+4	:BRANCH IF OK
007426	104000			HLT		:FEC NOT EQUAL TO 02
007430	022767	007350	171366	CMP	#FPIS1, FEA	:CHECK FLOATING EXCEPTION ADDRESS
007436	001401			BEG	.+4	:BRANCH IF OK
007440	104000			HLT		:FEA NOT EQUAL TO FPIS1
007442	126727	171332	000051	CMPB	ICNT, #51	:CHECK FOR RIGHT TEST
007450	001401			BEG	.+4	:BRANCH IF OK
007452	104000			HLT		:PC JUMPED TESTS

```

*****
:TEST S2:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS) .
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 170065
                FPS = 147740,   FEC = 02,   FEA = FPIS1
*****

```

E04

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00FBE.F11

TEST OF STST AND ILLEGAL INSTRUCTIONS
TEST SECTION

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CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170066
FPS = 147740, FEC = 02, FEA = FPIS2

007454	104400			SCOPE			
007456	000401			BR	TST52		:SKIP DATA
007460	001002			ADR52:	ANS1		
007462	170127	047740		TST52:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
007466	010667	171312			MOV	%6, ANS2	:SAVE R6
007472	170066			FPIS2:	170066		:ILLEGAL INSTRUCTION
007474	000000				HALT		:INDEX VALUE OF 0 GOT EXECUTED
007476	020667	171302			CMP	%6, ANS2	:CHECK R6
007502	001411				BEG	TSAS2	:BRANCH IF OK
007504	010667	171272			MOV	%6, ANS1	:STORE R6 FOR TYPING
007510	016706	171270			MOV	ANS2, %6	:RESTORE R6
007514	170200				STFPS	FPS	:STORE FPS FOR TYPING
007516	170367	171300			STST	FEC	:STORE FEC, FEA FOR TYPING
007522	104002				HLT+2		:R6 (ANS1) NOT EQUAL TO ANS2
007524	000401				BR	.+4	:SKIP STFPS
007526	000			TSAS2:			
007526	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
007530	170367	171266			STST	FEC	:STORE EXCEPTION CODES
007534	022700	147740			CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
007540	001401				BEG	.+4	:BRANCH IF OK
007542	104000				HLT		:FPS NOT EQUAL TO 147740
007544	022767	000002	171250		CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
007552	001401				BEG	.+4	:BRANCH IF OK
007554	104000				HLT		:FEC NOT EQUAL TO 02
007556	022767	007472	171240		CMP	#FPIS2, FEA	:CHECK FLOATING EXCEPTION ADDRESS
007564	001401				BEG	.+4	:BRANCH IF OK
007566	104000				HLT		:FEA NOT EQUAL TO FPIS2
007570	126727	171204	000052		CMPB	ICNT, #52	:CHECK FOR RIGHT TEST
007576	001401				BEG	.+4	:BRANCH IF OK
007600	104000				HLT		:PC JUMPED TESTS

TEST 53: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 170067
FPS = 147740, FEC = 02, FEA = FPIS2

007602	104400			SCOPE			
007604	000401			BR	TST53		:SKIP DATA
007606	001002			ADR52:	ANS1		

```

007610 170127 047740 TST53: LDFPS #047740 ;LOAD FLOATING POINT STATUS
007614 170067 FPIS3: 170067 ;ILLEGAL INSTRUCTION
007616 000000 HALT ;INDEX VALUE OF 0 GOT EXECUTED
007620 170200 STFPS FPS ;STORE FLOATING POINT STATUS
007622 170367 171174 STST FEC ;STORE EXCEPTION CODES
007626 022700 147740 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
007632 001401 BEQ .+4 ;BRANCH IF OK
007634 104000 HLT ;FPS NOT EQUAL TO 147740

007636 022767 000002 171156 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE
007644 001401 BEQ .+4 ;BRANCH IF OK
007646 104000 HLT ;FEC NOT EQUAL TO 02

007650 022767 007614 171146 CMP #FPIS3, FEA ;CHECK FLOATING EXCEPTION ADDRESS
007656 001401 BEQ .+4 ;BRANCH IF OK
007660 104000 HLT ;FEA NOT EQUAL TO FPIS3

007662 126727 171112 000053 CMPB ICNT, #53 ;CHECK FOR RIGHT TEST
007670 001401 BEQ .+4 ;BRANCH IF OK
007672 104000 HLT ;PC JUMPED TESTS

```

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*****
TEST 54: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
          CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
          ILLEGAL INSTRUCTION = 170070
          FPS = 147740, FEC = 02, FEA = FPIS4
*****

```

```

007674 104400 SCOPE
007676 000401 BR TST54 ;SKIP DATA

007700 001002 ACP54: ANS1

007702 170127 047740 TST54: LDFPS #047740 ;LOAD FLOATING POINT STATUS
007706 012700 007700 MOV #ACR54, %0 ;SET UP RO
007712 170070 FPIS4: 170070 ;ILLEGAL INSTRUCTION
007714 000000 HALT ;INDEX VALUE OF 0 GOT EXECUTED
007716 022700 007700 CMP #ACR54, %0 ;CHECK RO
007722 001401 BEQ #ANS4 ;BRANCH IF OK
007724 010067 171052 MOV %0, ANS1 ;STORE RO FOR TYPING
007730 170200 STFPS FPS ;STORE FPS FOR TYPING
007732 170367 171064 STST FEC ;STORE FEC, FEA FOR TYPING
007736 104001 HLT .+1 ;RO NOT EQUAL TO #ACR54
007740 000401 BR .+4 ;SKIP STFPS

007742 000 STFPS FPS ;STORE FLOATING POINT STATUS
007742 170200 STST FEC ;STORE EXCEPTION CODES
007744 170367 171052 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
007750 022700 147740 BEQ .+4 ;BRANCH IF OK
007754 001401 HLT .+1 ;FPS NOT EQUAL TO 147740
007756 104000

007760 022767 000002 171034 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE

```

007766	001401			BEQ	+.4		:BRANCH IF OK
007770	104000			HLT			:FEC NOT EQUAL TO 02
007772	022767	007712	171024	CMP	#FPI54, FEA		:CHECK FLOATING EXCEPTION ADDRESS
010000	001401			BEQ	+.4		:BRANCH IF OK
010002	104000			HLT			:FEA NOT EQUAL TO FPI54
010004	126727	170770	000054	CMPB	ICNT, #54		:CHECK FOR RIGHT TEST
010012	001401			BEQ	+.4		:BRANCH IF OK
010014	104000			HLT			:PC JUMPED TESTS

```

*****
TEST 55:      TEST SYST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 170071
              FPS = 147740,   FEC = 02,   FEA = FPI55
*****

```

010016	104400			SCOPE			
010020	000401			BR	TS55		:SKIP DATA
010022	001002			ADR55:	ANS1		
010024	170127	047740		TS55:	LCFPS #047740		:LOAD FLOATING POINT STATUS
010030	012701	010022			MOV #ADR55, %1		:SET UP R1
010034	170071			FPI55:	170071		:ILLEGAL INSTRUCTION
010036	000000				HALT		:INDEX VALUE OF 0 GOT EXECUTED
010040	022701	010022			CMP #ADR55, %1		:CHECK R1
010044	001401				BEQ TS55		:BRANCH IF OK
010046	010167	170730			MOV %1, ANS1		:STORE R1 FOR TYPING
010052	170200				STFPS FPS		:STORE FPS FOR TYPING
010054	170367	170742			SYST FEC		:STORE FEC, FEA FOR TYPING
010060	104001				HLT +1		:R1 NOT EQUAL TO #ADR55
010062	000401				BR .+4		:SKIP STEPS
010064	000			TS55:			
010064	170200				STFPS FPS		:STORE FLOATING POINT STATUS
010066	170367	170730			SYST FEC		:STORE EXCEPTION CODES
010072	022700	147740			CMP #147740, FPS		:CHECK FLOATING POINT STATUS
010076	001401				BEQ .+4		:BRANCH IF OK
010100	104000				HLT		:FPS NOT EQUAL TO 147740
010102	022767	000002	170712		CMP #02, FEC		:CHECK FLOATING EXCEPTION CODE
010106	001401				BEQ .+4		:BRANCH IF OK
010112	104000				HLT		:FEC NOT EQUAL TO 02
010114	022767	010034	170702		CMP #FPI55, FEA		:CHECK FLOATING EXCEPTION ADDRESS
010122	001401				BEQ .+4		:BRANCH IF OK
010124	104000				HLT		:FEA NOT EQUAL TO FPI55
010126	126727	170646	000055		CMPB ICNT, #55		:CHECK FOR RIGHT TEST
010134	001401				BEQ .+4		:BRANCH IF OK
010136	104000				HLT		:PC JUMPED TESTS

```

*****
TEST 56:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 170072
              FPS = 147740,   FEC = 02,   FEA = FPI56
*****

```

010140	104400			SCOPE			
010142	000401			BR	TST56		:SKIP DATA
010144	001002			ADR56:	ANS1		
010146	170127	047740		TST56:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
010152	012702	010144			MOV	#ADR56, R2	:SET UP R2
010156	170072			FPI56:	170072		:ILLEGAL INSTRUCTION
010160	000000				HALT		:INDEX VALUE OF 0 GOT EXECUTED
010162	022702	010144			CMP	#ADR56, R2	:CHECK R2
010166	001407				BEG	TSA56	:BRANCH IF OK
010170	010267	170606			MOV	R2, ANS1	:STORE R2 FOR TYPING
010174	170200				STFPS	FPS	:STORE FPS FOR TYPING
010176	170367	170620			STST	FEC	:STORE FEC, FEA FOR TYPING
010202	104001				HLT+1		:R2 NOT EQUAL TO #ADR56
010204	000401				BR	.+4	:SKIP STFPS
010206	000			TSA56:			
010206	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
010210	170367	170606			STST	FEC	:STORE EXCEPTION CODES
010214	022700	147740			CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
010220	001401				BEG	.+4	:BRANCH IF OK
010222	104000				HLT		:FPS NOT EQUAL TO 147740
010224	022767	000002	170570		CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
010232	001401				BEG	.+4	:BRANCH IF OK
010234	104000				HLT		:FEC NOT EQUAL TO 02
010236	022767	010156	170560		CMP	#FPI56, FEA	:CHECK FLOATING EXCEPTION ADDRESS
010244	001401				BEG	.+4	:BRANCH IF OK
010246	104000				HLT		:FEA NOT EQUAL TO FPI56
010250	126727	170524	000056		CMFB	ICNT, #56	:CHECK FOR RIGHT TEST
010256	001401				BEG	.+4	:BRANCH IF OK
010260	104000				HLT		:PC JUMPED TESTS

```

*****
TEST 57:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 170073
              FPS = 147740,   FEC = 02,   FEA = FPI57
*****

```

010262	104400			SCOPE			
010264	000401			BR	TST57		:SKIP DATA

010266	001002		ADR57:	ANS1		
010270	170127	047740	TST57:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
010274	012703	010266		MOV	#ADR57, %3	:SET UP R3
010300	170073		FPI57:	170073		:ILLEGAL INSTRUCTION
010302	000000			HALT		:INDEX VALUE OF 0 GOT EXECUTED
010304	022703	010266		CMP	#ADR57, %3	:CHECK R3
010310	001407			BEQ	TSA57	:BRANCH IF OK
010312	010367	170464		MOV	%3, ANS1	:STORE R3 FOR TYPING
010316	170200			STFPS	FPS	:STORE FPS FOR TYPING
010320	170367	170476		STST	FEC	:STORE FEC, FEA FOR TYPING
010324	104001			HLT+1		:R3 NOT EQUAL TO #ADR57
010326	000401			BR	++	:SKIP STFPS
010330	000		TSA57:			
010330	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
010332	170367	170464		STST	FEC	:STORE EXCEPTION CODES
010336	022700	147740		CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
010342	001401			BEQ	++	:BRANCH IF OK
010344	104000			HLT		:FPS NOT EQUAL TO 147740
010346	022767	000002	170446	CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
010354	001401			BEQ	++	:BRANCH IF OK
010356	104000			HLT		:FEC NOT EQUAL TO 02
010360	022767	010300	170436	CMP	#FPI57, FEA	:CHECK FLOATING EXCEPTION ADDRESS
010366	001401			BEQ	++	:BRANCH IF OK
010370	104000			HLT		:FEA NOT EQUAL TO FPI57
010372	126727	170402	000057	CMPB	ICNT, #57	:CHECK FOR RIGHT TEST
010400	001401			BEQ	++	:BRANCH IF OK
010402	104000			HLT		:PC JUMPED TEST

```

*****
:TEST 60:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170074
:              FPS = 147740,   FEC = 02,   FEA = FPI60
*****

```

010404	104400		SCOPE			
010406	000401		BR	TST60		:SKIP DATA
010410	001002		ADR60:	ANS1		
010412	170127	047740	TST60:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
010416	012704	010410		MOV	#ADR60, %4	:SET UP R4
010422	170074		FPI60:	170074		:ILLEGAL INSTRUCTION
010424	000000			HALT		:INDEX VALUE OF 0 GOT EXECUTED
010426	022704	010410		CMP	#ADR60, %4	:CHECK R4
010432	001407			BEQ	TSA60	:BRANCH IF OK
010434	010467	170342		MOV	%4, ANS1	:STORE R4 FOR TYPING
010440	170200			STFPS	FPS	:STORE FPS FOR TYPING


```

010442 170367 170354      STST  FEC      ;STORE FEC, FEA FOR TYPING
010446 104001      HLT+1          ;R4 NOT EQUAL TO #ADR60
010450 000401      BR          .+4 ;SKIP STFPS

010452 000          TSA60:
010452 170200      STFPS  FPS      ;STORE FLOATING POINT STATUS
010454 170367 170342  STST  FEC      ;STORE EXCEPTION CODES
010460 022700 147740  CMP   #147740,FPS ;CHECK FLOATING POINT STATUS
010464 001401      BEQ   .+4      ;BRANCH IF OK
010466 104000      HLT                    ;FPS NOT EQUAL TO 147740

010470 022767 000002 170324  CMP   #02,  FEC   ;CHECK FLOATING EXCEPTION CODE
010476 001401      BEQ   .+4      ;BRANCH IF OK
010500 104000      HLT                    ;FEC NOT EQUAL TO 02

010502 022767 010422 170314  CMP   #FPI60, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
010510 001401      BEQ   .+4      ;BRANCH IF OK
010512 104000      HLT                    ;FEA NOT EQUAL TO FPI60

010514 126727 170260 000060  CMPB  ICNT,  #60   ;CHECK FOR RIGHT TEST
010522 001401      BEQ   .+4      ;BRANCH IF OK
010524 104000      HLT                    ;PC JUMPED TESTS

```

```

*****
:TEST 61:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170075
:              FPS = 147740,  FEC = 02,      FEA = FPI60
*****

```

```

010526 104400      SCOPE
010530 000401      BR          TST61      RIP DATA

010532 001002      ADR61:  ANS!

010534 170127 047740  TST61:  LDFPS  #047740  ;LOAD FLOATING POINT STATUS
010540 012705 010532  MOV   #ADR61, %5  ;SET UP R5
010544 170075  FPI61:  170075  ;ILLEGAL INSTRUCTION
010546 000000      HALT                    ;INDEX VALUE OF 0 GOT EXECUTED
010550 022705 010532  CMP   #ADR61, %5  ;CHECK R5
010554 001407      BEQ   TSA61!  ;BRANCH IF OK
010556 010567 170220  MOV   %5,  ANS1  ;STORE R5 FOR TYPING
010562 170200      STFPS  FPS      ;STORE FPS FOR TYPING
010564 170367 170232  STST  FEC      ;STORE FEC, FEA FOR TYPING
010570 104001      HLT+1          ;R5 NOT EQUAL TO #ADR61
010572 000401      BR          .+4      ;SKIP STFPS

010574 000          TSA61:
010574 170200      STFPS  FPS      ;STORE FLOATING POINT STATUS
010576 170367 170220  STST  FEC      ;STORE EXCEPTION CODES
010602 022700 147740  CMP   #147740,FPS ;CHECK FLOATING POINT STATUS
010606 001401      BEQ   .+4      ;BRANCH IF OK
010610 104000      HLT                    ;FPS NOT EQUAL TO 147740

```

K04

MAINDEC-11-DCFPB-B
DCFPBB.P11

TEST OF STS AND ILLEGAL INSTRUCTIONS
TEST SECTION

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010612	022767	000002	170202	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
010620	001401			BEQ	+.4		:BRANCH IF OK
010622	104000			HLT			:FEC NOT EQUAL TO 02
010624	022767	010544	170172	CMP	#FPI61,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
010632	001401			BEQ	+.4		:BRANCH IF OK
010634	104000			HLT			:FEA NOT EQUAL TO FPI61
010636	126727	170136	000061	CMPB	ICNT,	#61	:CHECK FOR RIGHT TEST
010644	001401			BEQ	+.4		:BRANCH IF OK
010646	104000			HLT			:PC JUMPED TESTS

```

*****
TEST 62:      TEST STS (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 170076
                FPS = 147740,   FEC = 02,   FEA = FPI62
*****

```

010650	104400			SCOPE			
010652	000401			BR	TST62		:SKIP DATA
010654	001002			ADR62:	ANS1		
010656	170127	047740		TST62:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
010662	010667	170116			MOV	%6,	ANS2
010666	170076			FPI62:	170076		:ILLEGAL INSTRUCTION
010670	000090				HAL		:INDEX VALUE OF 0 GOT EXECUTED
010672	020667	170106			CMP	%6	ANS2
010676	001411				BEQ	TSA62	
010700	010667	170076			MOV	%6,	ANS1
010704	016706	170074			MOV	ANS2,	%6
010710	170200				STFPS	FPS	:STORE FPS FOR TYPING
010712	170367	170104			STST	FEC	:STORE FEC, FEA FOR TYPING
010716	104002				HLT+2		:R6 (ANS1) NOT EQUAL TO ANS2
010720	000401				BR	+.4	:SKIP STFPS
010722	000			TSA62:	STFPS	FPS	:STORE FLOATING POINT STATUS
010722	170200				STS	FEC	:STORE EXCEPTION CODES
010724	170367	170072			CMP	#147740,FPS	:CHECK FLOATING POINT STATUS
010730	022700	147740			BEQ	+.4	:BRANCH IF OK
010734	001401				HLT		:FPS NOT EQUAL TO 147740
010736	104000						
010740	022767	000002	170054	CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
010746	001401			BEQ	+.4		:BRANCH IF OK
010750	104000			HLT			:FEC NOT EQUAL TO 02
010752	022767	010666	170044	CMP	#FPI62,	FEA	:CHECK FLOATING EXCEPTION ADDRESS
010760	001401			BEQ	+.4		:BRANCH IF OK
010762	104000			HLT			:FEA NOT EQUAL TO FPI62
010764	126727	170010	000062	CMPB	ICNT,	#62	:CHECK FOR RIGHT TEST
010772	001401			BEQ	+.4		:BRANCH IF OK

010774 104000

HLT

;PC JUMPED TESTS

```

*****
:TEST 63:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170077
:              FPS = 147740,   FEC = 02,   FEA = FPI63
*****

```

010776 104400
011000 000401

SCOPE
BR

TST63

;SKIP DATA

011002 001002

ADR63: ANS1

011004 170127 047740
011010 170077
011012 000000
011014 170200
011016 170367 170000
011022 022700 147740
011026 001401
011030 104000

TST63: LDFPS #047740
FPI63: 170077
HALT
STFPS FPS
STST FEC
CMP #147740,FPS
BEQ .+4
HLT

;LOAD FLOATING POINT STATUS
;ILLEGAL INSTRUCTION
;INDEX VALUE OF 0 GOT EXECUTED
;STORE FLOATING POINT STATUS
;STORE EXCEPTION CODES
;CHECK FLOATING POINT STATUS
;BRANCH IF OK
;FPS NOT EQUAL TO 147740

011032 022767 000002 167762
011040 001401
011042 104000

CMP #02, FEC
BEQ .+4
HLT

CHECK FLOATING EXCEPTION CODE
;BRANCH IF OK
;FEC NOT EQUAL TO 02

011044 022767 011010 167752
011052 001401
011054 104000

CMP #FPI63, FEA
BEQ .+4
HLT

;CHECK FLOATING EXCEPTION ADDRESS
;BRANCH IF OK
;FEA NOT EQUAL TO FPI63

011056 126727 167716 000063
011064 001401
011066 104000

CMFBI ICNT, #63
BEQ .+4
HLT

;CHECK FOR RIGHT TEST
;BRANCH IF OK
;PC JUMPED TESTS

```

*****
:TEST 64:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170406
:              FPS = 147740,   FEC = 02,   FEA = FPI64
*****

```

011070 104400
011072 000401

SCOPE
BR

TST64

;SKIP DATA

011074 001002

ADR64: ANS1

011076 170127 047740
011102 010667 167676
011106 170406
011110 020667 167670
011114 001411

TST64: LDFPS #047740
MOV %6, ANS2
FPI64: 170406
CMP %6, ANS2
BEQ TSA64

;LOAD FLOATING POINT STATUS
;SAVE R6
;ILLEGAL INSTRUCTION
;CHECK R6
;BRANCH IF OK

```

011116 010667 167660      MOV    %6,   ANS1    ;STORE R6 FOR TYPING
011122 016706 167656      MOV    ANS2,  %6     ;RESTORE R6
011126 170200                STFPS  FPS         ;STORE FPS FOR TYPING
011130 170367 167666      STST   FEC         ;STORE FEC, FEA FOR TYPING
011134 104002                HLT+2                ;R6 (ANS1) NOT EQUAL TO ANS2
011136 000401                BR     .+4          ;SKIP STFPS

011140      000                TSA64:
011140 170200                STFPS  FPS         ;STORE FLOATING POINT STATUS
011142 170367 167654      STST   FEC         ;STORE EXCEPTION CODES
011146 022700 147740      CMP    #147740,FPS ;CHECK FLOATING POINT STATUS
011152 001401                BEQ    .+4          ;BRANCH IF OK
011154 104000                HLT                    ;FPS NOT EQUAL TO 147740

011156 022767 000002 167636  CMP    #02,   FEC   ;CHECK FLOATING EXCEPTION CODE
011164 001401                BEQ    .+4          ;BRANCH IF OK
011166 104000                HLT                    ;FEC NOT EQUAL TO 02

011170 022767 011106 167626  CMP    #FPI64, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
011176 001401                BEQ    .+4          ;BRANCH IF OK
011200 104000                HLT                    ;FEA NOT EQUAL TO FPI64

011202 126727 167572 000064  CMPB   ICNT,   #64  ;CHECK FOR RIGHT TEST
011210 001401                BEQ    .+4          ;BRANCH IF OK
011212 104000                HLT                    ;PC JUMPED TESTS

```

```

:*****
:TEST 65:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170407
:              FPS = 147740,   FEC = 02,   FEA = FPI65
:*****

```

```

011214 104400                SCOPE
011216 000401                BR     TST65        ;SKIP DATA

011220 001002                ADR65: ANS1

011222 170127 047740      TST65: LDFPS  #047740 ;LOAD FLOATING POINT STATUS
011226 170407                FPI65: 170407 ;ILLEGAL INSTRUCTION
011230 170200                STFPS  FPS         ;STORE FLOATING POINT STATUS
011232 170367 167564      STST   FEC         ;STORE EXCEPTION CODES
011236 022700 147740      CMP    #147740,FPS ;CHECK FLOATING POINT STATUS
011242 001401                BEQ    .+4          ;BRANCH IF OK
011244 104000                HLT                    ;FPS NOT EQUAL TO 147740

011246 022767 000002 167546  CMP    #02,   FEC   ;CHECK FLOATING EXCEPTION CODE
011254 001401                BEQ    .+4          ;BRANCH IF OK
011256 104000                HLT                    ;FEC NOT EQUAL TO 02

011260 022767 011226 167536  CMP    #FPI65, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
011266 001401                BEQ    .+4          ;BRANCH IF OK
011270 104000                HLT                    ;FEA NOT EQUAL TO FPI65

```

011272	126727	167502	000065	CMPB	ICNT,	#65	;CHECK FOR RIGHT TEST
011300	001401			BEQ	.+4		;BRANCH IF OK
011302	104000			HLT			;PC JUMPED TESTS

```

*****
:TEST 66:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170506
:              FPS = 147740,   FEC = 02,   FEA = FPI66
*****

```

011304	104400			SCOPE			
011306	000401			BR	TST66		;SKIP DATA
011310	001002			ADR66:	ANS1		
011312	170127	047740		TST66:	LDFPS	#047740	;LOAD FLOATING POINT STATUS
011316	010667	167462			MOV	%6, ANS2	;SAVE R6
011322	170506			FPI66:	170506		;ILLEGAL INSTRUCTION
011324	020667	167454			CMP	%6, ANS2	;CHECK R6
011330	001411				BEQ	TSA66	;BRANCH IF OK
011332	010667	167444			MOV	%6, ANS1	;STORE R6 FOR TYPING
011336	016706	167442			MOV	ANS2, %6	;RESTORE R6
011342	170200				STFPS	FPS	;STORE FPS FOR TYPING
011344	170367	167452			STST	FEC	;STORE FEC, FEA FOR TYPING
011350	104002				HLT+2		;R6 (ANS1) NOT EQUAL TO ANS2
011352	000401				BR	.+4	;SKIP STFPS

011354	000			TSA66:	STFPS	FPS	;STORE FLOATING POINT STATUS
011354	170200				STST	FEC	;STORE EXCEPTION CODES
011356	170367	167440			CMP	#147740, FPS	;CHECK FLOATING POINT STATUS
011362	022700	147740			BEQ	.+4	;BRANCH IF OK
011366	001401				HLT		;FPS NOT EQUAL TO 147740
011370	104000						

011372	022767	000002	167422	CMP	#02, FEC		;CHECK FLOATING EXCEPTION CODE
011400	001401			BEQ	.+4		;BRANCH IF OK
011402	104000			HLT			;FEC NOT EQUAL TO 02

011404	022767	011322	167412	CMP	#FPI66, FEA		;CHECK FLOATING EXCEPTION ADDRESS
011412	001401			BEQ	.+4		;BRANCH IF OK
011414	104000			HLT			;FEA NOT EQUAL TO FPI66

011416	126727	167356	000066	CMPB	ICNT,	#66	;CHECK FOR RIGHT TEST
011424	001401			BEQ	.+4		;BRANCH IF OK
011426	104000			HLT			;PC JUMPED TESTS

```

*****
:TEST 67:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170507
:              FPS = 147740,   FEC = 02,   FEA = FPI67
*****

```

```

:*****
011430 104400          SCOPE
011432 000401          BR      TST67          :SKIP DATA

011434 001002          ADR67: ANSI

011436 170127 047740    TST67: LDFPS  #047740      :LOAD FLOATING POINT STATUS
011442 170507          FPI67: 170507          :ILLEGAL INSTRUCTION
011444 170200          STFPS  FPS           :STORE FLOATING POINT STATUS
011446 170367 167350    STST   FEC           :STORE EXCEPTION CODES
011452 022700 147740    CMP    #147740,FPS    :CHECK FLOATING POINT STATUS
011456 001401          BEQ    .+4           :BRANCH IF OK
011460 104000          HLT                    :FPS NOT EQUAL TO 147740

011462 022767 000002 167332  CMP    #02,   FEC     :CHECK FLOATING EXCEPTION CODE
011470 001401          BEQ    .+4           :BRANCH IF OK
011472 104000          HLT                    :FEC NOT EQUAL TO 02

011474 022767 011442 167322  CMP    #FPI67, FEA    :CHECK FLOATING EXCEPTION ADDRESS
011502 001401          BEQ    .+4           :BRANCH IF OK
011504 104000          HLT                    :FEA NOT EQUAL TO FPI67

011506 126727 167266 000067  CMPB   ICNT,   #67    :CHECK FOR RIGHT TEST
011514 001401          BEQ    .+4           :BRANCH IF OK
011516 104000          HLT                    :PC JUMPED TESTS

```

```

:*****
:TEST 70:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                  ILLEGAL INSTRUCTION = 170606
:                  FPS = 147740,   FEC = 02,   FEA = FPI70
:*****

```

```

011520 104400          SCOPE
011522 000401          BR      TST70          :SKIP DATA

011524 001002          ADR70: ANSI

011526 170127 047740    TST70: LDFPS  #047740      :LOAD FLOATING POINT STATUS
011532 010667 167246    MOV    %R6,   ANS2    :SAVE R6
011536 170606          FPI70: 170606          :ILLEGAL INSTRUCTION
011540 020667 167240    CMP    %R6,   ANS2    :CHECK R6
011544 001411          BEQ    TSA70         :BRANCH IF OK
011546 010667 167230    MOV    %R6,   ANS1    :STORE R6 FOR TYPING
011552 016706 167226    MOV    ANS2,   %R6    :RESTORE R6
011556 170200          STFPS  FPS           :STORE FPS FOR TYPING
011560 170367 167236    STST   FEC           :STORE FEC, FEA FOR TYPING
011564 104002          HL    +2           :R6 (ANS1) NOT EQUAL TO ANS2
011566 000401          BR      .+4           :SKIP STFPS

011570          000          TSA70:
011570 170200          STFPS  FPS           :STORE FLOATING POINT STATUS
011572 170367 167224    STST   FEC           :STORE EXCEPTION CODES

```

```

011576 022700 147740      CMP      #147740,FPS      ;CHECK FLOATING POINT STATUS
011602 001401      BEQ      .+4            ;BRANCH IF OK
011604 104000      HLT                               ;FPS NOT EQUAL TO 147740

011606 022767 000002 167205  CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
011614 001401      BEQ      .+4            ;BRANCH IF OK
011616 104000      HLT                               ;FEC NOT EQUAL TO 02

011620 022767 011536 167176  CMP      #FPI70, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
011626 001401      BEQ      .+4            ;BRANCH IF OK
011630 104000      HLT                               ;FEA NOT EQUAL TO FPI70

011632 126727 167142 000070  CMPB     ICNT,      #70     ;CHECK FOR RIGHT TEST
011640 001401      BEQ      .+4            ;BRANCH IF OK
011642 104000      HLT                               ;PC JUMPED TESTS

```

```

:*****
:TEST 71:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170607
:              FPS = 147740,  FEC = 02,      FEA = FPI71
:*****

```

```

011644 104400      SCOPE
011646 000401      BR      TST71          ;SKIP DATA

011650 001002      ADR71:  ANS1

011652 170127 047740  TST71:  LDFPS      #047740      ;LOAD FLOATING POINT STATUS
011656 170607      FPI71:  170607      ;ILLEGAL INSTRUCTION
011660 170200      STFPS     FPS          ;STORE FLOATING POINT STATUS
011662 170367 167134  STST     FEC          ;STORE EXCEPTION CODES
011666 022700 147740  CMP      #147740,FPS      ;CHECK FLOATING POINT STATUS
011672 001401      BEQ      .+4            ;BRANCH IF OK
011674 104000      HLT                               ;FPS NOT EQUAL TO 147740

011676 022767 000002 167116  CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
011704 001401      BEQ      .+4            ;BRANCH IF OK
011706 104000      HLT                               ;FEC NOT EQUAL TO 02

011710 022767 011656 167106  CMP      #FPI71, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
011716 001401      BEQ      .+4            ;BRANCH IF OK
011720 104000      HLT                               ;FEA NOT EQUAL TO FPI71

011722 126727 167052 000071  CMPB     ICNT,      #71     ;CHECK FOR RIGHT TEST
011730 001401      BEQ      .+4            ;BRANCH IF OK
011732 104000      HLT                               ;PC JUMPED TESTS

```

```

:*****
:TEST 72:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 170706
:*****

```

FPS = 147740, FEC = 02, FEA = FPI72

011734	104400			SCOPE			
011736	000401			BR	TST72		:SKIP DATA
011740	001002			ADR72:	ANS1		
011742	170127	047740		TST72:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
011746	010667	167032			MOV	%6, ANS2	:SAVE R6
011752	170706			FFI72:	170706		:ILLEGAL INSTRUCTION
011754	020667	167024			CMP	%6, ANS2	:CHECK R6
011760	001411				BEQ	TSA72	:BRANCH IF OK
011762	010667	167014			MOV	%6, ANS1	:STORE R6 FOR TYPING
011766	016706	167012			MOV	ANS2, %6	:RESTORE R6
011772	170200				STFPS	FPS	:STORE FPS FOR TYPING
011774	170367	167022			STST	FEC	:STORE FEC, FEA FOR TYPING
012000	104002				HL	+2	:R6 (ANS1), NOT EQUAL TO ANS2
012002	000401				BR	.+4	:SKIP STFPS
012004	000			TSA72:			
012004	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
012006	170367	167010			STST	FEC	:STORE EXCEPTION CODES
012012	022700	147740			CMP	#147740, FPS	:CHECK FLOATING POINT STATUS
012016	001401				BEQ	.+4	:BRANCH IF OK
012020	104000				HL		:FPS NOT EQUAL TO 147740
012022	022767	000002	166772		CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
012030	001401				BEQ	.+4	:BRANCH IF OK
012032	104000				HL		:FEC NOT EQUAL TO 02
012034	022767	011752	166762		CMP	#FPI72, FEA	:CHECK FLOATING EXCEPTION ADDRESS
012042	001401				BEQ	.+4	:BRANCH IF OK
012044	104000				HL		:FEA NOT EQUAL TO FPI72
012046	126727	166726	000072		CMPB	ICNT, #72	:CHECK FOR RIGHT TEST
012054	001401				BEQ	.+4	:BRANCH IF OK
012056	104000				HL		:PC JUMPED TESTS

 :TEST 73: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
 : CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
 : ALSO TEST ALL ILLEGAL INSTRUCTIONS.
 : ILLEGAL INSTRUCTION = 170707
 : FPS = 147740, FEC = 02, FEA = FPI73

012060	104400			SCOPE			
012062	000401			BR	TST73		:SKIP DATA
012064	001002			ADR73:	ANS1		
012066	170127	047740		TST73:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
012072	170707			FPI73:	170707		:ILLEGAL INSTRUCTION
012074	170200				STFPS	FPS	:STORE FLOATING POINT STATUS

012076	170367	166720		STST	FEC		:STORE EXCEPTION CODES
012102	022700	147740		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
012106	001401			BEQ	.+4		:BRANCH IF OK
012110	104000			HLT			:FPS NOT EQUAL TO 147740
012112	022767	000002	166702	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
012120	001401			BEQ	.+4		:BRANCH IF OK
012122	104000			HLT			:FEC NOT EQUAL TO 02
012124	022767	012072	166672	CMP	#FPI73, FEA		:CHECK FLOATING EXCEPTION ADDRESS
012132	001401			BEQ	.+4		:BRANCH IF OK
012134	104000			HLT			:FEA NOT EQUAL TO FPI73
012136	126727	166636	000073	CHFB	#07, #73		:CHECK FOR RIGHT TEST
012144	001401			BEQ	.+4		:BRANCH IF OK
012146	104000			HLT			:PC JUMPED TESTS

```

:*****
:TEST 74:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:              ILLEGAL INSTRUCTION = 171006
:              FPS = 147740,   FEC = 02,   FEA = FPI74
:*****

```

012150	104400			SCOPE			
012152	000401			BR	TST74		:SKIP DATA
012154	001002			ADR74:	ANS1		
012156	170127	047740		*ST74:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
012162	010667	166616		MOV	%5, ANS2		:SAVE R6
012166	171006			FPI74:	171006		:ILLEGAL INSTRUCTION
012170	020667	166610		CMP	%6, ANS2		:CHECK R6
012174	001411			BEQ	TSA74		:BRANCH IF OK
012176	010667	166600		MOV	%6, ANS1		:STORE R6 FOR TYPING
012202	016706	166576		MOV	ANS2, %6		:RESTORE R6
012206	170200			STFPS	FPS		:STORE FPS FOR TYPING
012210	170367	166606		STST	FEC		:STORE FEC, FEA FOR TYPING
012214	104002			HL*+2			:R6 (ANS1) NOT EQUAL TO ANS2
012216	000401			BR	.+4		:SKIP STFPS
012220	000			*SA74:			
012220	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
012222	170367	166574		STST	FEC		:STORE EXCEPTION CODES
012226	022700	147740		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
012232	001401			BEQ	.+4		:BRANCH IF OK
012234	104000			HLT			:FPS NOT EQUAL TO 147740
012236	022767	000002	166556	CMP	#02, FEC		:CHECK FLOATING EXCEPTION CODE
012244	001401			BEQ	.+4		:BRANCH IF OK
012246	104000			HLT			:FEC NOT EQUAL TO 02
012250	022767	012166	166546	CMP	#FPI74, FEA		:CHECK FLOATING EXCEPTION ADDRESS
012256	001401			BEQ	.+4		:BRANCH IF OK

```

012260 104000          HLT          ;FEA NOT EQUAL TO FPI74
012262 126727 166512 000074  CMPB   ICNT,  #74    ;CHECK FOR RIGHT TEST
012270 001401          BEQ     .+4      ;BRANCH IF OK
012272 104000          HLT          ;PC JUMPED TESTS

```

```

*****
:TEST 75:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
:                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                  ILLEGAL INSTRUCTION = 171007
:                  FPS = 147740,   FEC = 02,   FEA = FPI75
*****

```

```

012274 104400          SCOPE
012276 000401          BR          TST75          ;SKIP DATA

012300 001002          ADR75:  ANS1

012302 170127 047740  TST75:  LDFPS   #047740    ;LOAD FLOATING POINT STATUS
012306 171007          FPI75:  171007    ;ILLEGAL INSTRUCTION
012310 170200          STFPS   FPS          ;STORE FLOATING POINT STATUS
012312 170367 166504  STST   FEC          ;STORE EXCEPTION CODES
012316 022700 147740  CMP     #147740,FPS  ;CHECK FLOATING POINT STATUS
012322 001401          BEQ     .+4      ;BRANCH IF OK
012324 104000          HLT          ;FPS NOT EQUAL TO 147740

012326 022767 000002 166466  CMP     #02,   FEC    ;CHECK FLOATING EXCEPTION CODE
012334 001401          BEQ     .+4      ;BRANCH IF OK
012336 104000          HLT          ;FEC NOT EQUAL TO 02

012340 022767 012306 166456  CMP     #FPI75, FEA   ;CHECK FLOATING EXCEPTION ADDRESS
012346 001401          BEQ     .+4      ;BRANCH IF OK
012350 104000          HLT          ;FEA NOT EQUAL TO FPI75

012352 126727 166422 000075  CMPB   ICNT,  #75    ;CHECK FOR RIGHT TEST
012360 001401          BEQ     .+4      ;BRANCH IF OK
012362 104000          HLT          ;PC JUMPED TESTS

```

```

*****
:TEST 76:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS)...
:                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                  ILLEGAL INSTRUCTION = 171406
:                  FPS = 147740,   FEC = 02,   FEA = FPI76
*****

```

```

012364 104400          SCOPE
012366 000401          BR          TST76          ;SKIP DATA

012370 001002          ADR76:  ANS1

012372 170127 047740  TST76:  LDFPS   #047740    ;LOAD FLOATING POINT STATUS
012376 010667 166402  MOV     #6,   ANS2   ;SAVE R6

```

012402	171406			FPI76: 171406			: ILLEGAL INSTRUCTION
012404	020667	166374		CMP	%6	ANS2	: CHECK R6
012410	001411			BEG	TSA76		: BRANCH IF OK
012412	010667	166364		MOV	%6	ANS1	: STORE R6 FOR TYPING
012416	016706	166362		MOV	ANS2,	%6	: RESTORE R6
012422	170200			STFPS	FPS		: STORE FPS FOR TYPING
012424	170367	166372		STST	FEC		: STORE FEC, FEA FOR TYPING
012430	104002			HLT+2			: R6 (ANS1) NOT EQUAL TO ANS2
012432	000401			BR	.+4		: SKIP STFPS
012434	000			TSA76:			
012434	170200			STFPS	FPS		: STORE FLOATING POINT STATUS
012436	170367	166360		STST	FEC		: STORE EXCEPTION CODES
012442	022700	147740		CMP	#147740,FPS		: CHECK FLOATING POINT STATUS
012446	001401			BEG	.+4		: BRANCH IF OK
012450	104000			HLT			: FPS NOT EQUAL TO 147740
012452	022767	000002	166342	CMP	#02,	FEC	: CHECK FLOATING EXCEPTION CODE
012460	001401			BEG	.+4		: BRANCH IF OK
012462	104000			HLT			: FEC NOT EQUAL TO 02
012464	022767	012402	166332	CMP	#FPI76,	FEA	: CHECK FLOATING EXCEPTION ADDRESS
012472	001401			BEG	.+4		: BRANCH IF OK
012474	104000			HLT			: FEA NOT EQUAL TO FPI76
012476	126727	166276	000076	CMPB	ICNT,	#76	: CHECK FOR RIGHT TEST
012504	001401			BEG	.+4		: BRANCH IF OK
012506	104000			HLT			: PC JUMPED TESTS

```

*****
:TEST 77:          TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                  CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
:                  ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:
:                  ILLEGAL INSTRUCTION = 171407
:                  FPS = 147740,   FEC = 02,   FEA = FPI77
*****

```

012510	104400			SCOPE			
012512	000401			BR	TST77		: SKIP DATA
012514	001002			ADR77:	ANS1		
012516	170127	047740		TST77:	LDFPS	#047740	: LOAD FLOATING POINT STATUS
012522	171407			FPI77:	171407		: ILLEGAL INSTRUCTION
012524	170200			STFPS	FPS		: STORE FLOATING POINT STATUS
012526	170367	166270		STST	FEC		: STORE EXCEPTION CODES
012532	022700	147740		CMP	#147740,FPS		: CHECK FLOATING POINT STATUS
012536	001401			BEG	.+4		: BRANCH IF OK
012540	104000			HLT			: FPS NOT EQUAL TO 147740
012542	022767	000002	166252	CMP	#02,	FEC	: CHECK FLOATING EXCEPTION CODE
012550	001401			BEG	.+4		: BRANCH IF OK
012552	104000			HLT			: FEC NOT EQUAL TO 02
012554	022767	012522	166242	CMP	#FPI77,	FEA	: CHECK FLOATING EXCEPTION ADDRESS

```

012562 001401      BEQ      .+4      :BRANCH IF OK
012564 104000      HLT
                                :FEA NOT EQUAL TO FPI77

012566 126727 166206 000077  CMPB    ICNT.    #77    :CHECK FOR RIGHT TEST
012574 001401      BEQ      .+4      :BRANCH IF OK
012576 104000      HLT
                                :PC JUMPED TESTS

```

```

:*****
:TEST 100:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                ILLEGAL INSTRUCTION = 172006
:                FPS = 147740,   FEC = 02,   FEA = FPI100
:*****

```

```

012600 104400      SCOPE
012602 000401      BR      TST100    :SKIP DATA

012604 001002      ADR100: ANS1

012606 170127 047740 *TST100: LDFPS    #047740    :LOAD FLOATING POINT STATUS
012612 010667 166166      MOV      %5,      ANS2    :SAVE R6
012616 172006      FPI100: MOV      172006      :ILLEGAL INSTRUCTION
012620 020667 166160      CMP      %6,      ANS2    :CHECK R6
012624 001411      BEQ      TSA100    :BRANCH IF OK
012626 010667 166150      MOV      %6,      ANS1    :STORE R6 FOR TYPING
012632 016706 166146      MOV      ANS2,    %6      :RESTORE R6
012636 170200      STFPS    FPS      :STORE FPS FOR TYPING
012640 170367 166156      STST    FEC      :STORE FEC, FEA FOR TYPING
012644 104002      HLT+2
012646 000401      BR      .+4      :SKIP STFPS

```

```

012650 000      *TSA100: STFPS    FPS      :STORE FLOATING POINT STATUS
012650 170200      STST    FEC      :STORE EXCEPTION CODES
012652 170367 166144      CMP      #147740,FPS    :CHECK FLOATING POINT STATUS
012656 022700 147740      BEQ      .+4      :BRANCH IF OK
012662 001401      HLT
012664 104000      HLT
                                :FPS NOT EQUAL TO 147740

```

```

012666 022767 000002 166126  CMP      #02,    FEC      :CHECK FLOATING EXCEPTION CODE
012674 001401      BEQ      .+4      :BRANCH IF OK
012676 104000      HLT
                                :FEC NOT EQUAL TO 02

```

```

012700 022767 012616 166116  CMP      #FPI100, FEA    :CHECK FLOATING EXCEPTION ADDRESS
012706 001401      BEQ      .+4      :BRANCH IF OK
012710 104000      HLT
                                :FEA NOT EQUAL TO FPI100

```

```

012712 126727 166062 000100  CMPB    ICNT.    #100    :CHECK FOR RIGHT TEST
012720 001401      BEQ      .+4      :BRANCH IF OK
012722 104000      HLT
                                :PC JUMPED TESTS

```

```

:*****
:TEST 101:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:*****

```

ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 172007
FPS = 147740, FEC = 02, FEA = FPI101

012724	104400			SCOPE			
012726	000401			BR	TST101		:SKIP DATA
012730	001002			ADR101:	ANS1		
012732	170127	047740		TST101:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
012736	172007			FPI101:	172007		:ILLEGAL INSTRUCTION
012740	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
012742	170367	166054			STST	FEC	:STORE EXCEPTION CODES
012746	022700	147740			CMP	#147740,FPS	:CHECK FLOATING POINT STATUS
012752	001401				BEQ	+.4	:BRANCH IF OK
012754	104000				HLT		:FPS NOT EQUAL TO 147740
012756	022767	000002	166036		CMP	#02, FEC	:CHECK FLOATING EXCEPTION CODE
012764	001401				BEQ	+.4	:BRANCH IF OK
012766	104000				HLT		:FEC NOT EQUAL TO 02
012770	022767	012736	166026		CMP	#FPI101, FEA	:CHECK FLOATING EXCEPTION ADDRESS
012776	001401				BEQ	+.4	:BRANCH IF OK
013000	104000				HLT		:FEA NOT EQUAL TO FPI101
013002	126727	165772	000101		CMPB	ICNT, #101	:CHECK FOR RIGHT TEST
013010	001401				BEQ	+.4	:BRANCH IF OK
013012	104000				HLT		:PC JUMPED TESTS

TEST 102: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.
ILLEGAL INSTRUCTION = 172406
FPS = 147740, FEC = 02, FEA = FPI102

013014	104400			SCOPE			
013016	000401			BR	TST102		:SKIP DATA
013020	001002			ADR102:	ANS1		
013022	170127	047740		TST102:	LDFPS	#047740	:LOAD FLOATING POINT STATUS
013026	010667	165752			MOV	%6, ANS2	:SAVE R6
013032	172406			FPI102:	172406		:ILLEGAL INSTRUCTION
013034	020667	165744			CMP	%6, ANS2	:CHECK R6
013040	001411				BEQ	TSA102	:BRANCH IF OK
013042	010667	165734			MOV	%6, ANS1	:STORE R6 FOR TYPING
013046	016706	165732			MOV	ANS2, %6	:RESTORE R6
013052	170200				STFPS	FPS	:STORE FPS FOR TYPING
013054	170367	165742			STST	FEC	:STORE FEC, FEA FOR TYPING
013060	104002				HLT+2		:R6 (ANS1) NOT EQUAL TO ANS2
013062	000401				BR	+.4	:SKIP STFPS

```

013064      000
013064      170200
013066      170367      165730
013072      022700      147740
013076      001401
013100      104000
                                TSA102:
                                STFPS      FPS      ;STORE FLOATING POINT STATUS
                                STST      FEC      ;STORE EXCEPTION CODES
                                CMP      #147740,FPS ;CHECK FLOATING POINT STATUS
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FPS NOT EQUAL TO 147740

013102      022767      000002      165712
013110      001401
013112      104000
                                CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FEC NOT EQUAL TO 02

013114      022767      013032      165702
013122      001401
013124      104000
                                CMP      #FPI102, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FEA NOT EQUAL TO FPI102

013126      126727      165646      000102
013134      001401
013136      104000
                                CMPB     ICNT,      #102      ;CHECK FOR RIGHT TEST
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;PC JUMPED TESTS

```

```

:*****
:TEST 103:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                ILLEGAL INSTRUCTION = 172407
:                FPS = 147740,      FEC = 02,      FEA = FPI103
:*****

```

```

013140      104400
013142      000401
                                SCOPE
                                BP      TST103      ;SKIP DATA

013144      001002
                                ADR103: ANS1

013146      170127      047740
013152      172407
013154      170200
013156      170367      165640
013162      022700      147740
013166      001401
013170      104000
                                TST103: LDFPS      #047740      ;LOAD FLOATING POINT STATUS
                                FPI103: 172407      ;ILLEGAL INSTRUCTION
                                STFPS     FPS      ;STORE FLOATING POINT STATUS
                                STST     FEC      ;STORE EXCEPTION CODES
                                CMP      #147740,FPS ;CHECK FLOATING POINT STATUS
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FPS NOT EQUAL TO 147740

013172      022767      000002      165622
013200      001401
013202      104000
                                CMP      #02,      FEC      ;CHECK FLOATING EXCEPTION CODE
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FEC NOT EQUAL TO 02

013204      022767      013152      165612
013212      001401
013214      104000
                                CMP      #FPI103, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;FEA NOT EQUAL TO FPI103

013216      126727      165556      000103
013224      001401
013226      104000
                                CMPB     ICNT,      #103      ;CHECK FOR RIGHT TEST
                                BEQ      .+4      ;BRANCH IF OK
                                HLT      ;PC JUMPED TESTS

```

```

:*****
:TEST 104:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION

```

CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
ALSO TEST ALL ILLEGAL INSTRUCTIONS.

ILLEGAL INSTRUCTION = 173006
FPS = 147740, FEC = 02, FEA = FPI104

013230	104400			SCOPE				
013232	000401			BR	TST104			;SKIP DATA
013234	001002			ADR104:	ANS1			
013236	170127	047740		TST104:	LDFPS	#047740		:LOAD FLOATING POINT STATUS
013242	010667	165536			MOV	%6,	ANS2	:SAVE R6
013246	173006			FPI104:	173006			:ILLEGAL INSTRUCTION
013250	020667	165530			CMP	%6,	ANS2	:CHECK R6
013254	001411				BEQ	TSA104		:BRANCH IF OK
013256	010667	165520			MOV	%6,	ANS1	:STORE R6 FOR TYPING
013262	016706	165516			MOV	ANS2,	%6	:RESTORE R6
013266	170200				STFPS	FPS		:STORE FPS FOR TYPING
013270	170367	165526			STST	FEC		:STORE FEC, FEA FOR TYPING
013274	104002				HLT+2			:R6 (ANS1) NOT EQUAL TO ANS2
013276	000401				BR	.+4		:SKIP STFPS
013300	000			TSA104:				
013300	170200				STFPS	FPS		:STORE FLOATING POINT STATUS
013302	170367	165514			STST	FEC		:STORE EXCEPTION CODES
013306	022700	147740			CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
013312	001401				BEQ	.+4		:BRANCH IF OK
013314	104000				HLT			:FPS NOT EQUAL TO 147740
013316	022767	000002	165476		CMP	#02,	FEC	:CHECK FLOATING EXCEPTION CODE
013324	001401				BEQ	.+4		:BRANCH IF OK
013326	104000				HLT			:FEC NOT EQUAL TO 02
013330	022767	013246	165466		CMP	#FPI104, FEA		:CHECK FLOATING EXCEPTION ADDRESS
013336	001401				BEQ	.+4		:BRANCH IF OK
013340	104000				HLT			:FEA NOT EQUAL TO FPI104
013342	126727	165432	000104		CMPB	ICNT,	#104	:CHECK FOR RIGHT TEST
013350	001401				BEQ	.+4		:BRANCH IF OK
013352	104000				HLT			:PC JUMPED TESTS

:TEST 105: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
: CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
: ALSO TEST ALL ILLEGAL INSTRUCTIONS.
: ILLEGAL INSTRUCTION = 173007
: FPS = 147740, FEC = 02, FEA = FPI105
:*****

013354	104400			SCOPE				
013356	000401			BR	TST105			;SKIP DATA
013360	001002			ADR105:	ANS1			

```

013362 170127 047740 TST105: LDFPS #047740 ;LOAD FLOATING POINT STATUS
013366 173007 FPI105: 173007 ;ILLEGAL INSTRUCTION
013370 170200 STFPS FPS ;STORE FLOATING POINT STATUS
013372 170367 165424 STST FEC ;STORE EXCEPTION CODES
013376 022700 147740 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
013402 001401 BEQ .+4 ;BRANCH IF OK
013404 104000 HLT ;FPS NOT EQUAL TO 147740

013406 022767 000002 165406 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE
013414 001401 BEQ .+4 ;BRANCH IF OK
013416 104000 HLT ;FEC NOT EQUAL TO 02

013420 022767 013366 165376 CMP #FPI105, FEA ;CHECK FLOATING EXCEPTION ADDRESS
013426 001401 BEQ .+4 ;BRANCH IF OK
013430 104000 HLT ;FEA NOT EQUAL TO FPI105

013432 126727 165342 000105 CMPB ICNT, #105 ;CHECK FOR RIGHT TEST
013440 001401 BEQ .+4 ;BRANCH IF OK
013442 104000 HLT ;PC JUMPED TESTS

```

```

;*****
;TEST 106: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
; CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
; ALSO TEST ALL ILLEGAL INSTRUCTIONS.
; ILLEGAL INSTRUCTION = 173406
; FPS = 147740, FEC = 02, FEA = FPI106
;*****

```

```

013444 104400 SCOPE
013446 000401 BR TST106 ;SKIP DATA

013450 001002 ADR106: ANS1

013452 170127 047740 TST106: LDFPS #047740 ;LOAD FLOATING POINT STATUS
013456 010667 165322 MOV %6, ANS2 ;SAVE R6
013462 173406 FPI106: 173406 ;ILLEGAL INSTRUCTION
013464 020667 165314 CMP %6, ANS2 ;CHECK R6
013470 001411 BEQ TSA106 ;BRANCH IF OK
013472 010667 165304 MOV %6, ANS1 ;STORE R6 FOR TYPING
013476 016706 165302 MOV ANS2, %6 ;RESTORE R6
013502 170200 STFPS FPS ;STORE FPS FOR TYPING
013504 170367 165312 STST FEC ;STORE FEC, FEA FOR TYPING
013510 104002 HLT+2 ;R6 (ANS1) NOT EQUAL TO ANS2
013512 000401 BR .+4 ;SKIP STFPS

013514 000 TSA106:
013514 170200 STFPS FPS ;STORE FLOATING POINT STATUS
013516 170367 165300 STST FEC ;STORE EXCEPTION CODES
013522 022700 147740 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
013526 001401 BEQ .+4 ;BRANCH IF OK
013530 104000 HLT ;FPS NOT EQUAL TO 147740

013532 022767 000002 165262 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE
013540 001401 BEQ .+4 ;BRANCH IF OK
013542 104000 HLT ;FEC NOT EQUAL TO 02

```



```

013544 022767 013462 165252      CMP      #FPI106, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
013552 001401                      BEQ      .+4              ;BRANCH IF OK
013554 104000                      HLT                          ;FEA NOT EQUAL TO FPI106

013556 126727 165216 000106      CMPB     ICNT,    #106    ;CHECK FOR RIGHT TEST
013564 001401                      BEQ      .+4              ;BRANCH IF OK
013566 104000                      HLT                          ;PC JUMPED TESTS

```

```

:*****
:TEST 107:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                ILLEGAL INSTRUCTION = 173407
:                FPS = 147740,   FEC = 02,   FEA = FPI107
:*****

```

```

013570 104400      SCOPE
013572 000401      BR      TST107      ;SKIP DATA

013574 001002      ADR107: ANS1

013576 170127 047740      TST107: LDFPS      #047740      ;LOAD FLOATING POINT STATUS
013602 173407      FPI107: 173407      ;ILLEGAL INSTRUCTION
013604 170200      STFS      FPS          ;STORE FLOATING POINT STATUS
013606 170367 165210      STST     FEC          ;STORE EXCEPTION CODES
013612 022700 147740      CMP      #147740,FPS    ;CHECK FLOATING POINT STATUS
013616 001401                      BEQ      .+4              ;BRANCH IF OK
013620 104000                      HLT                          ;FPS NOT EQUAL TO 147740

013622 022767 000002 165172      CMP      #02,   FEC      ;CHECK FLOATING EXCEPTION CODE
013630 001401                      BEQ      .+4              ;BRANCH IF OK
013632 104000                      HLT                          ;FEC NOT EQUAL TO 02

013634 022767 013602 165162      CMP      #FPI107, FEA    ;CHECK FLOATING EXCEPTION ADDRESS
013642 001401                      BEQ      .+4              ;BRANCH IF OK
013644 104000                      HLT                          ;FEA NOT EQUAL TO FPI107

013646 126727 165126 000107      CMPB     ICNT,    #107    ;CHECK FOR RIGHT TEST
013654 001401                      BEQ      .+4              ;BRANCH IF OK
013656 104000                      HLT                          ;PC JUMPED TESTS

```

```

:*****
:TEST 110:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:                ILLEGAL INSTRUCTION = 174006
:                FPS = 147740,   FEC = 02,   FEA = FPI110
:*****

```

```

013660 104400      SCOPE
013662 000401      BR      TST110      ;SKIP DATA

013664 001002      ADR110: ANS1

```

```

013666 170127 047740 TST110: LDFPS #047740 ;LOAD FLOATING POINT STATUS
013672 010667 165106 MOV %6, ANS2 ;SAVE R6
013676 174006 FPI110: 174006 ;ILLEGAL INSTRUCTION
013700 020667 165100 CMP %6, ANS2 ;CHECK R6
013704 001411 BEQ TSA110 ;BRANCH IF OK
013706 010667 165070 MOV %0, ANS1 ;STORE R6 FOR TYPING
013712 016706 165066 MOV ANS2, %6 ;RESTORE R6
013716 170200 STFPS FPS ;STORE FPS FOR TYPING
013720 170367 165076 STST FEC ;STORE FEC, FEA FOR TYPING
013724 104002 HLT+2 ;R6 (ANS1) NOT EQUAL TO ANS2
013726 000401 BR .+4 ;SKIP STFPS

013730 000 TSA110: STFPS FPS ;STORE FLOATING POINT STATUS
013730 170200 STST FEC ;STORE EXCEPTION CODES
013732 170367 165064 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
013736 022700 147740 BEQ .+4 ;BRANCH IF OK
013742 001401 HLT ;FPS NOT EQUAL TO 147740
013744 104000

013746 022767 000002 165046 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE
013754 001401 BEQ .+4 ;BRANCH IF OK
013756 104000 HLT ;FEC NOT EQUAL TO 02

013760 022767 013676 165036 CMP #FPI110, FEA ;CHECK FLOATING EXCEPTION ADDRESS
013766 001401 BEQ .+4 ;BRANCH IF OK
013770 104000 HLT ;FEA NOT EQUAL TO FPI110

013772 126727 165002 000110 CMPB ICNT, #110 ;CHECK FOR RIGHT TEST
014000 001401 BEQ .+4 ;BRANCH IF OK
014002 104000 HLT ;PC JUMPED TESTS

```

```

:*****
:TEST 111: TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
:          CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
:          ALSO TEST ALL ILLEGAL INSTRUCTIONS.
:          ILLEGAL INSTRUCTION = 174007
:          FPS = 147740, FEC = 02, FEA = FPI111
:*****

```

```

014004 104400 SCOPE
014006 000401 BR TST111 ;SKIP DATA

014010 001002 ADR111: ANS1

014012 170127 047740 TST111: LDFPS #047740 ;LOAD FLOATING POINT STATUS
014016 174007 FPI111: 174007 ;ILLEGAL INSTRUCTION
014020 170200 STFPS FPS ;STORE FLOATING POINT STATUS
014022 170367 164774 STST FEC ;STORE EXCEPTION CODES
014026 022700 147740 CMP #147740,FPS ;CHECK FLOATING POINT STATUS
014032 001401 BEQ .+4 ;BRANCH IF OK
014034 104000 HLT ;FPS NOT EQUAL TO 147740

014036 022767 000002 164756 CMP #02, FEC ;CHECK FLOATING EXCEPTION CODE
014044 001401 BEQ .+4 ;BRANCH IF OK

```

```

014046 104000          HLT          :FEC NOT EQUAL TO 02
014050 022767 014016 164746  CMP      #FPI111, FEA :CHECK FLOATING EXCEPTION ADDRESS
014056 001401          BEQ      .+4       :BRANCH IF OK
014060 104000          HLT          :FEA NOT EQUAL TO FPI111
014062 126727 164712 000111  CMPB    ICNT,   #111 :CHECK FOR RIGHT TEST
014070 001401          BEQ      .+4       :BRANCH IF OK
014076 104000          HLT          :PC JUMPED TESTS

```

```

*****
TEST 112:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 174406
                FPS = 147740,   FEC = 02,   FEA = FPI112
*****

```

```

014074 104400          SCOPE
014076 000401          BR      TS112      :SKIP DATA

014100 001002          ADR112: ANS1

014102 170127 047740  TS112: LDFPS  #047740 :LOAD FLOATING POINT STATUS
014106 010667 164672  MOV      %6,   ANS2   :SAVE R6
014112 174406          FPI112: 174406 :ILLEGAL INSTRUCTION
014114 020667 164664  CMP      %6,   ANS2   :CHECK R6
014120 001411          BEQ      TSA112    :BRANCH IF OK
014122 010667 164654  MOV      %6,   ANS1   :STORE R6 FOR TYPING
014126 016706 164652  MOV      ANS2,  %6     :RESTORE R6
014132 170200          STFPS  FPS        :STORE FPS FOR TYPING
014134 170367 164662  STST   FEC        :STORE FEC, FEA FOR TYPING
014140 104002          HLT+2
014142 000401          BR      .+4       :SKIP STFPS

014144          000          TSA112:
014144 170200          STFPS  FPS        :STORE FLOATING POINT STATUS
014146 170367 164650  STST   FEC        :STORE EXCEPTION CODES
014152 022700 147740  CMP      #147740, FPS :CHECK FLOATING POINT STATUS
014156 001401          BEQ      .+4       :BRANCH IF OK
014160 104000          HLT          :FPS NOT EQUAL TO 147740

014162 022767 000002 164632  CMP      #02,   FEC    :CHECK FLOATING EXCEPTION CODE
014170 001401          BEQ      .+4       :BRANCH IF OK
014172 104000          HLT          :FEC NOT EQUAL TO 02

014174 022767 014112 164622  CMP      #FPI112, FEA :CHECK FLOATING EXCEPTION ADDRESS
014202 001401          BEQ      .+4       :BRANCH IF OK
014204 104000          HLT          :FEA NOT EQUAL TO FPI112

014206 126727 164566 000112  CMPB    ICNT,   #112 :CHECK FOR RIGHT TEST
014214 001401          BEQ      .+4       :BRANCH IF OK
014216 104000          HLT          :PC JUMPED TESTS

```

```

*****
TEST 113:    TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 174407
              FPS = 147740,   FEC = 02,   FEA = FPI113
*****

```

```

014220 104400          SCOPE
014221 000401          BR      TST113          :SKIP DATA

014224 001002      ADR113: ANS1

014226 170127 047740  TST113: LDFPS      #047740      :LOAD FLOATING POINT STATUS
014232 174407          FPI113: 174407      :ILLEGAL INSTRUCTION
014234 170200          STFPS      FPS          :STORE FLOATING POINT STATUS
014236 170367 164560  STST      FEC          :STORE EXCEPTION CODES
014242 022700 147740  CMP      #147740.FPS    :CHECK FLOATING POINT STATUS
014246 001401          BEQ      .+4          :BRANCH IF OK
014250 104000          HLT

014252 022767 000002 164542  CMP      #02,   FEC      :CHECK FLOATING EXCEPTION CODE
014260 001401          BEQ      .+4          :BRANCH IF OK
014262 104000          HLT      :FEC NOT EQUAL TO 02

014264 022767 014232 164532  CMP      #FPI113, FEA    :CHECK FLOATING EXCEPTION ADDRESS
014272 001401          BEQ      .+4          :BRANCH IF OK
014274 104000          HLT      :FEA NOT EQUAL TO FPI113

014276 126727 164476 000113  CMPB     ICNT,   #113    :CHECK FOR RIGHT TEST
014304 001401          BEQ      .+4          :BRANCH IF OK
014306 104000          HLT      :PC JUMPED TESTS

```

```

*****
TEST 114:    TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 176006
              FPS = 147740,   FEC = 02,   FEA = FPI114
*****

```

```

014310 104400          SCOPE
014312 000401          BR      TST114          :SKIP DATA

014314 001002      ADR114: ANS1

014316 170127 047740  TST114: LDFPS      #047740      :LOAD FLOATING POINT STATUS
014322 010667 16445E  MOV      %6,   ANS2     :SAVE R6
014326 176006          FPI114: 176006      :ILLEGAL INSTRUCTION
014330 020667 164450  CMP      %6,   ANS2     :CHECK R6
014334 001411          BEQ      TSA114      :BRANCH IF OK
014336 010667 1E444C  MOV      %6,   ANS1     :STORE R6 FOR TYPING
014342 01E706 1E443E  MOV      ANS2,   %6     :RESTORE R6
014346 170200          STFPS      FPS          :STORE FPS FOR TYPING
014350 170367 1E444E  STST      FEC          :STORE FEC, FEA FOR TYPING

```

```

014354 104002          HLT+2          :R6 (ANS1) NOT EQUAL TO ANS2
014356 000401          BR           .+4          :SKIP STFPS

014360 000          TSA114:
014360 170200          STFPS        FPS          :STORE FLOATING POINT STATUS
014362 170367 164434  STST         FEC          :STORE EXCEPTION CODES
014366 022700 147740  CMP          #147740,FPS    :CHECK FLOATING POINT STATUS
014372 001401          BEQ          .+4          :BRANCH IF OK
014374 104000          HLT

014376 022767 000002 164416  CMP          #02,      FEC    :CHECK FLOATING EXCEPTION CODE
014384 001401          BEQ          .+4          :BRANCH IF OK
014386 104000          HLT          :FEC NOT EQUAL TO 02

014410 022767 014326 164406  CMP          #FPI114, FEA    :CHECK FLOATING EXCEPTION ADDRESS
014416 001401          BEQ          .+4          :BRANCH IF OK
014420 104000          HLT          :FEA NOT EQUAL TO FPI114

014422 126727 164352 000114  CMPB        ICNT,      #114  :CHECK FOR RIGHT TEST
014430 001401          BEQ          .+4          :BRANCH IF OK
014432 104000          HLT          :PC JUMPED TESTS

```

```

*****
TEST :15:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
              CODES) AND FEA (FLOATING EXCEPTION ADDRESS).
              ALSO TEST ALL ILLEGAL INSTRUCTIONS.
              ILLEGAL INSTRUCTION = 176007
              FPS = 147740,   FEC = 02,   FEA = FPI115
*****

```

```

014434 104400          SCOPE
014436 000401          BR           TST:15      :SKIP DATA

014440 001002          ADR115: ANS1

014442 170127 047740  TST115: LD FPS      #047740    :LOAD FLOATING POINT STATUS
014446 176007  FPI115: ILLEGAL INSTRUCTION
014450 170200          STFPS        FPS          :STORE FLOATING POINT STATUS
014452 170367 164344  STST         FEC          :STORE EXCEPTION CODES
014456 022700 147740  CMP          #147740,FPS    :CHECK FLOATING POINT STATUS
014462 001401          BEQ          .+4          :BRANCH IF OK
014464 104000          HLT          :FPS NOT EQUAL TO 147740

014466 022767 000002 164326  CMP          #02,      FEC    :CHECK FLOATING EXCEPTION CODE
014474 001401          BEQ          .+4          :BRANCH IF OK
014476 104000          HLT          :FEC NOT EQUAL TO 02

014500 022767 014446 164316  CMP          #FPI115, FEA    :CHECK FLOATING EXCEPTION ADDRESS
014506 001401          BEQ          .+4          :BRANCH IF OK
014510 104000          HLT          :FEA NOT EQUAL TO FPI115

014512 126727 164262 000115  CMPB        ICNT,      #115  :CHECK FOR RIGHT TEST
014520 001401          BEQ          .+4          :BRANCH IF OK
014522 104000          HLT          :PC JUMPED TESTS

```

```

*****
TEST 116:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 177406
                FPS = 147740,   FEC = 02,   FEA = FPI116
*****

```

```

014524 104400          SCOPE
014526 000401          BR      TST116          :SKIP DATA

014530 001002          ADP116: ANS1

014532 170127 047740   TST116: LDFPS   #047740          :LOAD FLOATING POINT STATUS
014536 010667 164242   MOV      %6,   ANS2          :SAVE R6
014542 177406          FPI116: 177406          :ILLEGAL INSTRUCTION
014544 020667 164234   CMP      %6,   ANS2          :CHECK R6
014550 001411          BEQ      TSA116          :BRANCH IF OK
014552 010667 164224   MOV      %6,   ANS1          :STORE R6 FOR TYPING
014556 016706 164222   MOV      ANS2, %6          :RESTORE R6
014562 170200          STFPS   FPS          :STORE FPS FOR TYPING
014564 170367 164232   STST    FEC          :STORE FEC, FEA FOR TYPING
014570 104002          HLT+2
014572 000401          BR      .+4          :SKIP STFPS

014574 000          TSA116:
014574 170200          STFPS   FPS          :STORE FLOATING POINT STATUS
014576 170367 164220   STST    FEC          :STORE EXCEPTION CODES
014602 022700 147740   CMP      #147740,FPS      :CHECK FLOATING POINT STATUS
014606 001401          BEQ      .+4          :BRANCH IF OK
014610 104000          HLT
                :FPS NOT EQUAL TO 147740

014612 022767 000002 164202   CMP      #02,   FEC          :CHECK FLOATING EXCEPTION CODE
014620 001401          BEQ      .+4          :BRANCH IF OK
014622 104000          HLT
                :FEC NOT EQUAL TO 02

014624 022767 014542 164172   CMP      #FPI116, FEA      :CHECK FLOATING EXCEPTION ADDRESS
014632 001401          BEQ      .+4          :BRANCH IF OK
014634 104000          HLT
                :FEA NOT EQUAL TO FPI116

014636 126727 164136 000116   CMPB    CNT,   #116        :CHECK FOR RIGHT TEST
014644 001401          BEQ      .+4          :BRANCH IF OK
014646 104000          HLT
                :PC JUMPED TESTS

```

```

*****
TEST 117:      TEST STST (STORE STATUS, I.E. FEC (FLOATING EXCEPTION
                CODES) AND FEA (FLOATING EXCEPTION ADDRESS)).
                ALSO TEST ALL ILLEGAL INSTRUCTIONS.
                ILLEGAL INSTRUCTION = 177407
                FPS = 147740,   FEC = 02,   FEA = FPI117
*****

```

```

014550 104400          SCOPE
014552 000401          BR      TST117          :SKIP DATA

```

014654	001002			ADR117: ANS1			
014656	170127	047740		TST117: LDFPS	#047740		:LOAD FLOATING POINT STATUS
014662	177407			FPI117: 177407			:ILLEGAL INSTRUCTION
014664	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
014666	170367	164130		STST	FEC		:STORE EXCEPTION CODES
014672	022700	147740		CMP	#147740,FPS		:CHECK FLOATING POINT STATUS
014676	001401			BEG	.+4		:BRANCH IF OK
014700	104000			HLT			:FPS NOT EQUAL TO 147740
014702	022767	000002	164112	CMP	#02. FEC		:CHECK FLOATING EXCEPTION CODE
014710	001401			BEG	.+4		:BRANCH IF OK
014712	104000			HLT			:FEC NOT EQUAL TO 02
014714	022767	014662	164102	CMP	#FPI117. FEA		:CHECK FLOATING EXCEPTION ADDRESS
014722	001401			BEG	.+4		:BRANCH IF OK
014724	104000			HLT			:FEA NOT EQUAL TO FPI117
014726	126727	164046	000117	CMPB	:CNT. #117		:CHECK FOR RIGHT TEST
014734	001401			BEG	.+4		:BRANCH IF OK
014736	104000			HLT			:PC JUMPED TESTS

Address	Instruction	Label	Comment
014740	104400	DONE:	SCOPE
014742	032737	002000	177570 BIT #SW10,2#SWR :PING THE BELL?
014750	001005		1\$:NO!
014752	012767	000207	001242 MCV #BELL,.TYPE :TYPE A BELL
014760	000004	C16222	TYPE -.TYPE
014764	005046		1\$: CLR -(6) :CLEAR TRACE TRAP
014766	032737	010000	177570 BIT #SW12,2#SWR :RUN WITH TRT?
014774	001010		BNE 2\$
014776	005167	001222	COM TRPB
015002	100005		BPL 2\$
015004	052716	000020	BIS #20,(6) :SET TRACE TRAP
015010	012746	001062	MOV #BEGIN,-(6) :JUMP TO START OF TEST
015014	000412		BR YESRT
015016	012746	001062	2\$: MOV #BEGIN,-(6) :JUMP TO START OF TEST
015022	013700	000042	MOV #42,R0 :GET MONITOR ADDRESS
015026	001404		BEG 3\$:IF NONE
015030	004710		JSR 7,(0) :GO TO MONITOR
015032	000240		NOP
015034	000240		NOP
015036	000240		NOP
015040	000002		3\$: RTI
015042	000002	YESRT:	RTI :RETURN TO PROGRAM FROM TRAP
015044	032737	000400	177570 .EMT: BIT #SW08,2#SWR :KILL LDUB OR LOOP ON SPEC. TEST
015052	001404		BEG 1\$
015054	123767	177570	163716 CMPB 2#SWR,ICNT :ON RIGHT TEST? *SW7-C*
015062	001437		BEG OVER
015064	113703	177570	1\$: MOVB 2#SWR,R3 :GET LB BITS
015070	170003		LDUB
015072	032737	040000	177570 BIT #SW14,2#SWR :LOOP ON TEST
015100	001026		BNE KIT
015102	032737	004000	177570 BIT #SW11,2#SWR :KILL ITERATIONS
015110	001012		BNE SAVLAD
015112	105767	163663	TSTB ICNT+1
015116	001404		BEG 2\$:BRANCH IF FIRST
015120	126767	001106	163653 CMPB TIMES,ICNT+1 :DONE?
015126	001013		BNE KIT :BRANCH IF NOT
015130	112767	000001	163643 2\$: MOVB #1,ICNT+1 :FIRST ITERATION
015136	105267	163636	SAVLAD: INCB ICNT :COUNT TEST NUMBERS
015142	011667	001060	MCV (6),LAD :SAVE LOOP ADDRESS
015146	016737	163626	177570 MOV ICNT,2#DISPLAY :DISPLAY TEST NO. AND ITERATION COUNT
015154	000002		RTI :RETURN
015156	105267	163617	KIT: INCB ICNT+1
015162	016737	163612	177570 OVER: MOV ICNT,2#DISPLAY :SET UP DISPLAY
015170	005767	001032	TST LAD :FIRST ONE?
015174	001760		BEG SAVLAD
015176	016716	001024	MCV LAD,(6) :FUDGE RETURN ADDRESS
015202	000002		RTI :FIXES AS

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TEST OF STST AND ILLEGAL INSTRUCTIONS MACY11 27(732) 03-SEP-76 17:13 PAGE 72
HLT ROUTINE (ERROR TIMEOUT)

015204	032737	002000	177570	.TRP:	BIT	#SW10,2#SWR	:BELL ON ERROR?
015212	001405				BEO	1\$:NO - SKIP
015214	012767	000207	001000		MOV	#BELL,TYPE	:TYPE A BELL
015222	000004	016222			TYPE	TYPE	
015226	004767	000406		1\$:	JSR	PC,ERROR	:COUNT THE NUMBER OF ERRORS
015232	010446				MOV	R4,-(6)	
015234	032737	020000	177570		BIT	#SW13,2#SWR	:SKIP TIMEOUT IF SET
015242	001072				BNE	4\$	
015244	000004	016170			TYPE	RETURN	
015250	016646	000002			MOV	2(6),-(6)	:PUT ADDRESS OF INSTRUCTION ON STACK
015254	162716	000002			SUB	#2,(6)	
015260	011605				MOV	(6),TTY	:TYPE (6) IN OCTAL
015262	004767	000212			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
015266	000004	016176			TYPE	SPACE+3	
015272	010005				MOV	R0,TTY	:TYPE R0 IN OCTAL
015274	004767	000200			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
015300	000004	016177			TYPE	SPACE+4	
015304	012703	001002			MOV	#ANS1,R3	:ADDRESS OF DATA
015310	113604				MOV	2(6)+,R4	:AMOUNT OF DATA IN TABLE
015312	001426				BEO	3\$	
015314	100016				BPL	2\$:TYPE STACK?
015316	016667	000006	163456		MOV	6(6),ANS1	
015324	016667	000010	163452		MOV	10(6),ANS2	
015332	016667	000012	163446		MOV	12(6),ANS3	
015340	016667	000014	163442		MOV	14(6),ANS4	
015346	042704	177600			BIC	#177600,R4	:CLEAR SIGN
015352	000004	016177		2\$:	TYPE	SPACE+4	
015356	012305				MOV	(3)+,TTY	:TYPE (3)+ IN OCTAL
015360	004767	000114			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
015364	005304				DEC	R4	
015366	001371				BNE	2\$	
015370	005700			3\$:	TST	FPS	
015372	100016				BPL	4\$	
015374	000004	016173			TYPE	SPACE	
015400	170367	163416			STST	FEC	
015404	016705	163412			MOV	FEC,TTY	:TYPE FEC IN OCTAL
015410	004767	000064			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
015414	000004	016176			TYPE	SPACE+3	
015420	016705	163400			MOV	FEA,TTY	:TYPE FEA IN OCTAL
015424	004767	000050			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
015430	012604			4\$:	MOV	(6)+,R4	
015432	005737	177570			TST	2#SWR	:HALT ON ERROR
015436	100001				BPL	+.4	:SKIP IF CONTINUE
015440	000000				HALT		:HALT ON ERROR!
015442	032737	001000	177570		BIT	#SW09,2#SWR	:CHECK FOR INHIBIT LOOP ON ERROR
015450	001001				BNE	+.4	:SKIP IF LOOP ON ERROR
015452	000002				RTI		
015454	105067	163321			CLRB	ICNT+1	
015460	032737	000400	177570		BIT	#SW08,2#SWR	:CHECK FOR LOAD MICROBREAK
015466	001233				BNE	KIT	:BRANCH IF NOT
015470	113703	177570			MOV	2#SWR,R3	:PUT MICROBREAK ADDRESS IN R3
015474	170003				LOLB		:LOAD MICROBREAK
015476	000627				BR	KIT	:LOOP ON TEST UNTIL NO ERRORS

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015500 112767 000001 000130 PRINTR: MOVB #1,R4S :SET ZERO FILL SWITCH
015506 000402 BR .+6
015510 005067 000122 PRINTS: CLR A4S :SUPRESS LEADING ZEP0'S
015514 112767 177772 000115 MOVB #-6,R4S+1 :SET COUNT
015522 010446 MOV R4 -(6) :SAVE R4
015524 012704 015626 MOV #3$,R4 :SET POINTER TO FIRST ASCII CHAR.
015530 105014 CLRB (4) :CLEAR FIRST BYTE
015532 000405 BR 2$ :ROTATE FIRST BIT
015534 105014 1$: CLRB (4) :CLEAR BYTE OF CHARACTER
015536 006105 ROL TTY :ROTATE BIT INTO C
015540 106114 ROLB (4) :PACK IT
015542 006105 ROL TTY :ROTATE BIT INTO C
015544 106114 ROLB (4) :PACK IT
015546 006105 2$: ROL TTY :ROTATE BIT INTO C
015550 106114 ROLB (4) :PACK IT
015552 105714 TSTB (4)
015554 001402 BEQ .+6
015556 105267 000054 INCB A4S
015562 105767 000050 TSTB A4S :CHECK FILL SWITCH
015566 001402 BEQ .+6
015570 152724 000060 BISB #0,(4)+ :MAKE INTO ASCII CHAR
015574 105267 000037 INCB A4S+1
015600 001355 BNE 1$ :REPEAT
015602 022704 015626 CMP #3$,R4
015606 001002 BNE .+6
015610 112724 000060 MOVB #0,(4)+
015614 105014 CLRB (4)
015616 000004 C15626 TYPE 3$ :TYPE IT
015622 012604 MOV (6)+,R4 :RESTORE R4
015624 000207 RTS PC

015626 000004 3$: .BLKW 4
015636 000000 A4S: 0

015640 005267 000354 ERROR: INC ERRORS :COUNT ERRORS
015644 132737 000001 000041 BITB #1,2#41 :AUTO MODE?
015652 001412 BEQ 1$ :NO!
015654 022767 000010 000346 CMP #10,ERRORS :TOO MANY?
015662 001006 BNE 1$ :NOT YET
015664 013700 000042 MOV 2#42,RC :GET ADDRESS
015670 001403 BEQ 1$ :FORGET IT IF ZERO
015672 005037 000042 CLR 2#42 :ZAP 42
015676 004710 JSR PC,(0) :CALL THE MONITOR
015700 000207 1$: RTS PC :RETURN
    
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015702 012777 016076 000306 POWDOWN: MOV #ILLUP, @UPVEC ;SET FOR FAST JP
015710 012777 000340 000302 MOV #340, @UPVEC+2 ;PRIO:7
015716 170246 STFPS -(6) ;GET THE FPS
015720 170011 SETD ;
015722 174046 STD ACC, -(6) ;SAVE AC'S
015724 174146 STD AC1, -(6)
015726 174246 STD AC2, -(6)
015730 174346 STD AC3, -(6)
015732 172404 LDD AC4, ACC
015734 174046 STD ACC, -(6)
015736 172405 LDD AC5, ACC
015740 174046 STD ACC, -(6)
015742 010046 MOV R0, -(6) ;SAVE REGISTERS
015744 010146 MOV R1, -(6)
015746 010246 MOV R2, -(6)
015750 010346 MOV R3, -(6)
015752 010446 MOV R4, -(6)
015754 010546 MOV R5, -(6)
015756 010667 000220 MOV SP, SAVE6 ;SAVE SP
015762 012777 015772 000226 MOV #POWUP, @UPVEC ;SET UP VECTOR
015770 000000 HALT

015772 016706 000204 POWUP: MOV SAVE6, SP ;GET SP
015776 005001 CLR R1 ;WAIT LOOP FOR THE TTY
016000 005201 1$: INC R1
016002 001376 BNE 1$
016004 012605 MOV (6)+, R5 ;GET THE REGISTERS
016006 012604 MOV (6)+, R4
016010 012603 MOV (6)+, R3
016012 012602 MOV (6)+, R2
016014 012601 MOV (6)+, R1
016016 012600 MOV (6)+, R0
016020 170011 SETD ;
016022 172426 LDD (6)+, ACC ;RESTORE THE AC'S
016024 174005 STD ACC, AC5
016026 172426 LDD (6)+, ACC
016030 174004 STD ACC, AC4
016032 172726 LDD (6)+, AC3
016034 172626 LDD (6)+, AC2
016036 172526 LDD (6)+, AC1
016040 172426 LDD (6)+, ACC
016042 170126 LDFPS (6)+ ;RESTORE FPS
016044 012777 015702 000140 MOV #POWDOWN, @DOWNVEC ;SET UP THE POWER DOWN VECTOR
016052 012777 000340 000134 MOV #340, @DOWNVEC+2
016060 000004 016064 TYPE ..+2 ;.ASCIZ <15><12>"POWER"
016076 000000 ILLUP: HALT ;THE POWER UP SEQUENCE WAS STARTED
016100 000776 BR -2 ;BEFORE THE POWER DOWN WAS COMPLETE

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016102 010546          .IOT:  MOV    TTY, -(6)      ;SAVE TTY
016104 017605 000002   MOV    @2(6), TTY    ;GET ADDRESS TO BE TYPED
016110 105715          1$:   TSTB   (TTY)      ;TERMINATOR?
016112 001406          BEQ    2$           ;
016114 112537 177566   MOVB   (TTY)+, @#177566 ;LOAD AND TYPE THE CHARACTER
016120 105737 177564   TSTB   @#177564    ;IS THE PRINTER READY
016124 100375          BPL    -4          ;
016126 000770          BR     1$          ;GET THE NEXT CHARACTER
016130 017646 000002   2$:   MOV    @2(6), -(6) ;GET ADDRESS TO BE TYPED
016134 062766 000002 000004   ADD    #2, 4(6)     ;ADD 2 TO THE ADDRESS
016142 022666 000002   CMP    (6)+, 2(6)  ;IS IT .+2?
016146 001006          BNE    3$          ;NO
016150 062705 000002   ADD    #2, TTY     ;ADD 2 TO THE ADDRESS
016154 042705 000001   BIC    #1, TTY     ;BACK UP TO AN EVEN BYTE
016160 010566 000002   MOV    TTY, 2(6)  ;RESTORE ADDRESS
016164 012605          3$:   MOV    (6)+, TTY   ;RESTORE TTY
016166 000002          RTI                    ;RETURN

016170 005015          000          RETURN: .ASCIZ <15><12> ;RETURN AND LINEFEED
016173          015 020012 020040 SPACE: .ASCIZ <15><12>" " ;RETURN AND 3 SPACES
016200          000

016202 016202          .EVEN
016204 000000          SAVE6: 0
016206 172160          FPTADR: 172160 ;FLOATING POINT ADDRESS ON THE 11/20
016212 000244 000246          FPVECT: 244, 246 ;FLOATING POINT VECTOR ADDRESS
016216 000024 000026          DWNVEC: 24, 26 ;POWER DOWN VECTOR ADDRESS
016222 000024 000026          UPVEC: 24, 26 ;POWER UP VECTOR ADDRESS
016224 000000          .TYPE: 0
016226 000000          TRPB: 0
016230 000000          LAD: 0 ;LOOP ADDRESS
016232 000377          ERRORS: 0 ;ERROR COUNT
          000001          TIMES: 377 ;ITERATION COUNT
          .END

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TS0110	013730	3489	3497
TS0111	014144	3568	3576
TS0112	014380	3647	3655
TS0113	014596	3726	3734
TS0114	002524	965	872
TS0115	002654	909	916
TS0116	003000	953	961
TS0117	003212	1021	1040
TS0118	003332	1077	1084
TS0119	001380	522	529
TS0120	003450	1121	1128
TS0121	003570	1165	1172
TS0122	003712	1209	1216
TS0123	004022	1253	1260
TS0124	004160	1298	1306
TS0125	004372	1378	1385
TS0126	004512	1422	1429
TS0127	001500	566	573
TS0128	004532	1466	1473
TS0129	004752	1510	1517
TS0130	005072	1554	1561
TS0131	005212	1598	1605
TS0132	005336	1642	1650
TS0133	005456	1687	1694
TS0134	005576	1731	1738
TS0135	005716	1775	1782
TS0136	001624	610	618
TS0137	006036	1819	1826
TS0138	006156	1863	1870
TS0139	006276	1907	1914
TS0140	006424	1952	1960
TS0141	006546	1998	2005
TS0142	006670	2043	2050
TS0143	007012	2088	2095
TS0144	007134	2133	2140
TS0145	007256	2178	2185
TS0146	007400	2223	2230
TS0147	007526	2268	2276
TS0148	007742	2349	2356
TS0149	010064	2394	2401
TS0150	010206	2439	2446
TS0151	010330	2484	2491
TS0152	002034	689	696
TS0153	010452	2529	2536
TS0154	010574	2574	2581
TS0155	010722	2619	2627
TS0156	011140	2699	2707
TS0157	011364	2778	2786
TS0158	002154	733	740
TS0159	011570	2857	2865
TS0160	012004	2936	2944
TS0161	012220	3015	3023
TS0162	0012434	3094	3102
TS0163	001202	470	474
TS0164	001202	759	773
TS0165	001202	3165	3169

INDEX-11-DCFPB-B TEST OF STST AND ILLEGAL INSTRUCTIONS
DCFPB.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

151101	012732	3210	3214
151102	013022	3244	3248
151103	013146	3289	3293
151104	013236	3323	3327
151105	013362	3368	3372
151106	013452	3402	3406
151107	013576	3447	3451
151111	002356	813	817
151110	013666	3481	3485
151111	014012	3526	3530
151112	014102	3560	3564
151113	014226	3605	3609
151114	014316	3639	3643
151115	014442	3684	3688
151116	014532	3718	3722
151117	014656	3763	3767
151118	002476	857	861
151119	002616	901	905
151120	002736	945	949
151121	003062	990	994
151122	003154	1025	1029
151123	003274	1069	1073
151124	003322	514	518
151125	003414	1113	1117
151126	003534	1157	1161
151127	003654	1201	1205
151128	003774	1245	1249
151129	004114	1289	1293
151130	004242	1335	1339
151131	004334	1370	1374
151132	004454	1414	1418
151133	001442	558	562
151134	004574	1458	1462
151135	004714	1502	1506
151136	005034	1546	1550
151137	005154	1590	1594
151138	005274	1634	1638
151139	005420	1679	1683
151140	005540	1723	1727
151141	005660	1767	1771
151142	001562	602	606
151143	006000	1811	1815
151144	006120	1855	1859
151145	006240	1899	1903
151146	006360	1943	1947
151147	006506	1989	1993
151148	006630	2034	2038
151149	006752	2079	2083
151150	007074	2124	2128
151151	001706	647	651
151152	007218	2169	2173
151153	007340	2214	2218
151154	007460	2259	2263
151155	007580	2304	2308
151156	007700	2349	2353
151157	007820	2394	2398
151158	007940	2439	2443
151159	008060	2484	2488
151160	008180	2529	2533
151161	008300	2574	2578
151162	008420	2619	2623
151163	008540	2664	2668
151164	008660	2709	2713
151165	008780	2754	2758
151166	008900	2799	2803
151167	009020	2844	2848
151168	009140	2889	2893
151169	009260	2934	2938
151170	009380	2979	2983
151171	009500	3024	3028
151172	009620	3069	3073
151173	009740	3114	3118
151174	009860	3159	3163
151175	009980	3204	3208
151176	010100	3249	3253
151177	010220	3294	3298
151178	010340	3339	3343
151179	010460	3384	3388
151180	010580	3429	3433
151181	010700	3474	3478
151182	010820	3519	3523
151183	010940	3564	3568
151184	011060	3609	3613
151185	011180	3654	3658
151186	011300	3699	3703
151187	011420	3744	3748
151188	011540	3789	3793
151189	011660	3834	3838
151190	011780	3879	3883
151191	011900	3924	3928
151192	012020	3969	3973
151193	012140	4014	4018
151194	012260	4059	4063
151195	012380	4104	4108
151196	012500	4149	4153
151197	012620	4194	4198
151198	012740	4239	4243
151199	012860	4284	4288
151200	012980	4329	4333

SYMBOLS AND ILLEGAL INSTRUCTIONS
 CROSS REFERENCE TABLE -- USER SYMBOLS

SYMBOL	ADDRESS	INSTRUCTION	SYMBOL	ADDRESS	INSTRUCTION
Y	000004	LD R0, 000004	3851*	3851*	LD R0, 3851*
	000005	LD R1, 000005	3852*	3852*	LD R0, 3852*
	000006	LD R2, 000006	3853	3853	LD R0, 3853
	000007	LD R3, 000007	3854*	3854*	LD R0, 3854*
	000008	LD R4, 000008	3855*	3855*	LD R0, 3855*
	000009	LD R5, 000009	3856*	3856*	LD R0, 3856*
	000010	LD R6, 000010	3857*	3857*	LD R0, 3857*
	000011	LD R7, 000011	3858*	3858*	LD R0, 3858*
	000012	LD R8, 000012	3859*	3859*	LD R0, 3859*
	000013	LD R9, 000013	3860*	3860*	LD R0, 3860*
	000014	LD R10, 000014	3861*	3861*	LD R0, 3861*
	000015	LD R11, 000015	3862*	3862*	LD R0, 3862*
	000016	LD R12, 000016	3863	3863	LD R0, 3863
	000017	LD R13, 000017	3864*	3864*	LD R0, 3864*
	000018	LD R14, 000018	3865*	3865*	LD R0, 3865*
	000019	LD R15, 000019	3866*	3866*	LD R0, 3866*
	000020	LD R16, 000020	3867*	3867*	LD R0, 3867*
	000021	LD R17, 000021	3868*	3868*	LD R0, 3868*
	000022	LD R18, 000022	3869*	3869*	LD R0, 3869*
	000023	LD R19, 000023	3870*	3870*	LD R0, 3870*
	000024	LD R20, 000024	3871*	3871*	LD R0, 3871*
	000025	LD R21, 000025	3872*	3872*	LD R0, 3872*
	000026	LD R22, 000026	3873*	3873*	LD R0, 3873*
	000027	LD R23, 000027	3874*	3874*	LD R0, 3874*
	000028	LD R24, 000028	3875*	3875*	LD R0, 3875*
	000029	LD R25, 000029	3876*	3876*	LD R0, 3876*
	000030	LD R26, 000030	3877*	3877*	LD R0, 3877*
	000031	LD R27, 000031	3878*	3878*	LD R0, 3878*
	000032	LD R28, 000032	3879*	3879*	LD R0, 3879*
	000033	LD R29, 000033	3880*	3880*	LD R0, 3880*
	000034	LD R30, 000034	3881*	3881*	LD R0, 3881*
	000035	LD R31, 000035	3882*	3882*	LD R0, 3882*
	000036	LD R32, 000036	3883*	3883*	LD R0, 3883*
	000037	LD R33, 000037	3884*	3884*	LD R0, 3884*
	000038	LD R34, 000038	3885*	3885*	LD R0, 3885*
	000039	LD R35, 000039	3886*	3886*	LD R0, 3886*
	000040	LD R36, 000040	3887*	3887*	LD R0, 3887*
	000041	LD R37, 000041	3888*	3888*	LD R0, 3888*
	000042	LD R38, 000042	3889*	3889*	LD R0, 3889*
	000043	LD R39, 000043	3890*	3890*	LD R0, 3890*
	000044	LD R40, 000044	3891*	3891*	LD R0, 3891*
	000045	LD R41, 000045	3892*	3892*	LD R0, 3892*
	000046	LD R42, 000046	3893*	3893*	LD R0, 3893*
	000047	LD R43, 000047	3894*	3894*	LD R0, 3894*
	000048	LD R44, 000048	3895*	3895*	LD R0, 3895*
	000049	LD R45, 000049	3896*	3896*	LD R0, 3896*
	000050	LD R46, 000050	3897*	3897*	LD R0, 3897*
	000051	LD R47, 000051	3898*	3898*	LD R0, 3898*
	000052	LD R48, 000052	3899*	3899*	LD R0, 3899*
	000053	LD R49, 000053	3900*	3900*	LD R0, 3900*
	000054	LD R50, 000054	3901*	3901*	LD R0, 3901*
	000055	LD R51, 000055	3902*	3902*	LD R0, 3902*
	000056	LD R52, 000056	3903*	3903*	LD R0, 3903*
	000057	LD R53, 000057	3904*	3904*	LD R0, 3904*
	000058	LD R54, 000058	3905*	3905*	LD R0, 3905*
	000059	LD R55, 000059	3906*	3906*	LD R0, 3906*
	000060	LD R56, 000060	3907*	3907*	LD R0, 3907*
	000061	LD R57, 000061	3908*	3908*	LD R0, 3908*
	000062	LD R58, 000062	3909*	3909*	LD R0, 3909*
	000063	LD R59, 000063	3910*	3910*	LD R0, 3910*
	000064	LD R60, 000064	3911*	3911*	LD R0, 3911*
	000065	LD R61, 000065	3912*	3912*	LD R0, 3912*
	000066	LD R62, 000066	3913*	3913*	LD R0, 3913*
	000067	LD R63, 000067	3914*	3914*	LD R0, 3914*
	000068	LD R64, 000068	3915*	3915*	LD R0, 3915*
	000069	LD R65, 000069	3916*	3916*	LD R0, 3916*
	000070	LD R66, 000070	3917*	3917*	LD R0, 3917*
	000071	LD R67, 000071	3918*	3918*	LD R0, 3918*
	000072	LD R68, 000072	3919*	3919*	LD R0, 3919*
	000073	LD R69, 000073	3920*	3920*	LD R0, 3920*
	000074	LD R70, 000074	3921*	3921*	LD R0, 3921*
	000075	LD R71, 000075	3922*	3922*	LD R0, 3922*
	000076	LD R72, 000076	3923*	3923*	LD R0, 3923*
	000077	LD R73, 000077	3924*	3924*	LD R0, 3924*
	000078	LD R74, 000078	3925*	3925*	LD R0, 3925*
	000079	LD R75, 000079	3926*	3926*	LD R0, 3926*
	000080	LD R76, 000080	3927*	3927*	LD R0, 3927*
	000081	LD R77, 000081	3928*	3928*	LD R0, 3928*
	000082	LD R78, 000082	3929*	3929*	LD R0, 3929*
	000083	LD R79, 000083	3930*	3930*	LD R0, 3930*
	000084	LD R80, 000084	3931*	3931*	LD R0, 3931*
	000085	LD R81, 000085	3932*	3932*	LD R0, 3932*
	000086	LD R82, 000086	3933*	3933*	LD R0, 3933*
	000087	LD R83, 000087	3934*	3934*	LD R0, 3934*
	000088	LD R84, 000088	3935*	3935*	LD R0, 3935*
	000089	LD R85, 000089	3936*	3936*	LD R0, 3936*
	000090	LD R86, 000090	3937*	3937*	LD R0, 3937*
	000091	LD R87, 000091	3938*	3938*	LD R0, 3938*
	000092	LD R88, 000092	3939*	3939*	LD R0, 3939*
	000093	LD R89, 000093	3940*	3940*	LD R0, 3940*
	000094	LD R90, 000094	3941*	3941*	LD R0, 3941*
	000095	LD R91, 000095	3942*	3942*	LD R0, 3942*
	000096	LD R92, 000096	3943*	3943*	LD R0, 3943*
	000097	LD R93, 000097	3944*	3944*	LD R0, 3944*
	000098	LD R94, 000098	3945*	3945*	LD R0, 3945*
	000099	LD R95, 000099	3946*	3946*	LD R0, 3946*
	000100	LD R96, 000100	3947*	3947*	LD R0, 3947*
	000101	LD R97, 000101	3948*	3948*	LD R0, 3948*
	000102	LD R98, 000102	3949*	3949*	LD R0, 3949*
	000103	LD R99, 000103	3950*	3950*	LD R0, 3950*
	000104	LD R100, 000104	3951*	3951*	LD R0, 3951*
	000105	LD R101, 000105	3952*	3952*	LD R0, 3952*
	000106	LD R102, 000106	3953*	3953*	LD R0, 3953*
	000107	LD R103, 000107	3954*	3954*	LD R0, 3954*
	000108	LD R104, 000108	3955*	3955*	LD R0, 3955*
	000109	LD R105, 000109	3956*	3956*	LD R0, 3956*
	000110	LD R106, 000110	3957*	3957*	LD R0, 3957*
	000111	LD R107, 000111	3958*	3958*	LD R0, 3958*
	000112	LD R108, 000112	3959*	3959*	LD R0, 3959*
	000113	LD R109, 000113	3960*	3960*	LD R0, 3960*
	000114	LD R110, 000114	3961*	3961*	LD R0, 3961*
	000115	LD R111, 000115	3962*	3962*	LD R0, 3962*
	000116	LD R112, 000116	3963*	3963*	LD R0, 3963*
	000117	LD R113, 000117	3964*	3964*	LD R0, 3964*
	000118	LD R114, 000118	3965*	3965*	LD R0, 3965*
	000119	LD R115, 000119	3966*	3966*	LD R0, 3966*
	000120	LD R116, 000120	3967*	3967*	LD R0, 3967*
	000121	LD R117, 000121	3968*	3968*	LD R0, 3968*
	000122	LD R118, 000122	3969*	3969*	LD R0, 3969*
	000123	LD R119, 000123	3970*	3970*	LD R0, 3970*
	000124	LD R120, 000124	3971*	3971*	LD R0, 3971*
	000125	LD R121, 000125	3972*	3972*	LD R0, 3972*
	000126	LD R122, 000126	3973*	3973*	LD R0, 3973*
	000127	LD R123, 000127	3974*	3974*	LD R0, 3974*
	000128	LD R124, 000128	3975*	3975*	LD R0, 3975*
	000129	LD R125, 000129	3976*	3976*	LD R0, 3976*
	000130	LD R126, 000130	3977*	3977*	LD R0, 3977*
	000131	LD R127, 000131	3978*	3978*	LD R0, 3978*
	000132	LD R128, 000132	3979*	3979*	LD R0, 3979*
	000133	LD R129, 000133	3980*	3980*	LD R0, 3980*
	000134	LD R130, 000134	3981*	3981*	LD R0, 3981*
	000135	LD R131, 000135	3982*	3982*	LD R0, 3982*
	000136	LD R132, 000136	3983*	3983*	LD R0, 3983*
	000137	LD R133, 000137	3984*	3984*	LD R0, 3984*
	000138	LD R134, 000138	3985*	3985*	LD R0, 3985*
	000139	LD R135, 000139	3986*	3986*	LD R0, 3986*
	000140	LD R136, 000140	3987*	3987*	LD R0, 3987*
	000141	LD R137, 000141	3988*	3988*	LD R0, 3988*
	000142	LD R138, 000142	3989*	3989*	LD R0, 3989*
	000143	LD R139, 000143	3990*	3990*	LD R0, 3990*
	000144	LD R140, 000144	3991*	3991*	LD R0, 3991*
	000145	LD R141, 000145	3992*	3992*	LD R0, 3992*
	000146	LD R142, 000146	3993*	3993*	LD R0, 3993*
	000147	LD R143, 000147	3994*	3994*	LD R0, 3994*
	000148	LD R144, 000148	3995*	3995*	LD R0, 3995*
	000149	LD R145, 000149	3996*	3996*	LD R0, 3996*
	000150	LD R146, 000150	3997*	3997*	LD R0, 3997*
	000151	LD R147, 000151	3998*	3998*	LD R0, 3998*
	000152	LD R148, 000152	3999*	3999*	LD R0, 3999*
	000153	LD R149, 000153	4000*	4000*	LD R0, 4000*

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TEST OF STST AND ILLEGAL INSTRUCTIONS
CROSS REFERENCE TABLE -- USER SYMBOLS

454	3811			
455	3983			
456	3833			
457	3833			
458	3833			
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MAINDEC-11-DCFPB-B TEST OF STST AND ILLEGAL INSTRUCTIONS
DCFPBB.P11 CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

	2143	2147	2151	2177	2188	2192	2196	2222	2233	2237	2241	2267	2279	2283	2287
	2314	2318	2322	2348	2359	2363	2367	2393	2404	2408	2412	2438	2449	2453	2457
	2483	2494	2498	2502	2528	2539	2543	2547	2573	2584	2588	2592	2618	2630	2634
	2638	2665	2669	2673	2698	2710	2714	2718	2744	2748	2752	2777	2789	2793	2797
	2823	2827	2831	2856	2868	2872	2876	2902	2906	2910	2935	2947	2951	2955	2981
	2985	2989	3014	3026	3030	3034	3060	3064	3068	3093	3105	3109	3113	3139	3143
	3147	3172	3184	3188	3192	3218	3222	3226	3251	3263	3267	3271	3297	3301	3305
	3330	3342	3346	3350	3376	3380	3384	3409	3421	3425	3429	3455	3459	3463	3488
	3500	3504	3508	3534	3538	3542	3567	3579	3583	3587	3613	3617	3621	3646	3658
	3662	3666	3692	3696	3700	3725	3737	3741	3745	3771	3775	3779	3913	3927	3993
CMFB	500	544	588	633	667	711	755	799	843	887	931	976	1011	1055	1099
	1143	1187	1231	1275	1321	1356	1400	1444	1488	1532	1576	1620	1665	1709	1753
	1797	1841	1885	1929	1975	2020	2065	2110	2155	2200	2245	2291	2326	2371	2416
	2461	2506	2551	2596	2642	2677	2722	2756	2801	2835	2890	2914	2959	2993	3038
	3072	3117	3151	3196	3230	3275	3309	3354	3388	3433	3467	3512	3546	3591	3625
	3670	3704	3749	3783	3813	3823									
	3796														
COM	3866														
DEC	378														
EMT	412	420	996	1341	1996	2041	2086	2131	2176	2221	2266	2311	2347	2392	2437
HALT	2482	2527	2572	2617	2662	3880	3954	3981							
INC	3924	3958													
INCB	3826	3831	3907	3911											
IOI	379														
JMP	415														
JSR	3804	3841	3849	3852	3865	3873	3876	3932							
LDD	3942	3944	3967	3969	3971	3972	3973	3974							
LCFPS	474	518	562	606	651	685	729	773	817	861	905	949	994	1029	1073
	1117	1161	1205	1249	1293	1339	1374	1418	1462	1506	1550	1594	1638	1683	1727
	1771	1815	1859	1903	1947	1993	2038	2083	2128	2173	2218	2263	2309	2344	2389
	2434	2479	2524	2569	2614	2660	2695	2740	2774	2819	2853	2898	2932	2977	3011
	3056	3090	3135	3169	3214	3248	3293	3327	3372	3406	3451	3485	3530	3564	3609
	3643	3688	3722	3767	3975										
LCUB	3816	3888													
MOV	436	437	439	442	445	446	447	448	449	450	451	452	453	454	455
	456	457	475	479	519	523	563	567	607	611	612	686	690	730	734
	774	778	818	822	862	866	906	910	950	954	955	1030	1034	1074	1078
	1118	1122	1162	1166	1206	1210	1250	1254	1294	1299	1300	1375	1379	1419	1423
	1463	1467	1507	1511	1551	1555	1595	1599	1639	1643	1644	1684	1688	1728	1732
	1772	1776	1816	1820	1860	1864	1904	1908	1948	1953	1954	1994	1999	2039	2044
	2084	2089	2129	2134	2174	2179	2219	2224	2264	2269	2270	2345	2350	2390	2395
	2435	2440	2480	2485	2525	2530	2570	2575	2615	2620	2621	2696	2700	2701	2775
	2779	2780	2854	2858	2859	2933	2937	2938	3012	3016	3017	3091	3095	3096	3170
	3174	3175	3249	3253	3254	3328	3332	3333	3407	3411	3412	3486	3490	3491	3565
	3569	3570	3644	3648	3649	3723	3727	3728	3791	3799	3801	3802	3827	3829	3832
	3835	3839	3842	3846	3848	3851	3854	3858	3859	3860	3861	3864	3872	3875	3877
	3894	3895	3918	3929	3934	3935	3946	3947	3948	3949	3950	3951	3952	3953	3956
	3960	3961	3962	3963	3964	3965	3976	3977	3983	3984	3991	3997	3998		
MOV8	3815	3825	3855	3887	3890	3893	3915	3987							
NOP	3805	3806	3807												
ROL	3899	3901	3903												
ROLB	3900	3902	3904												
RTI	421	3808	3809	3829	3936	3883	3979	3999							
RTS	3919	3933													
SETC	3937	3966													
ST	3938	3939	3940	3941	3943	3945	3968	3970							

STFPS	418	480	486	524	530	568	574	613	619	653	691	697	735	741	779
	785	823	829	867	873	911	917	956	962	997	1035	1041	1079	1085	1123
	1129	1167	1173	1211	1217	1255	1261	1301	1307	1342	1380	1386	1424	1430	1468
	1474	1512	1518	1556	1562	1600	1606	1645	1651	1689	1695	1733	1739	1777	1783
	1821	1827	1865	1871	1909	1915	1955	1961	2000	2006	2045	2051	2090	2096	2135
	2141	2180	2186	2225	2231	2271	2277	2312	2351	2357	2396	2402	2441	2447	2486
	2492	2531	2537	2576	2582	2622	2628	2663	2702	2708	2742	2781	2787	2821	2860
	2866	2900	2939	2945	2979	3018	3024	3058	3097	3103	3137	3176	3182	3216	3255
	3261	3295	3334	3340	3374	3413	3419	3453	3492	3498	3532	3571	3577	3611	3650
	3656	3690	3729	3735	3769	3936									
STST	419	481	487	525	531	569	575	614	620	654	692	698	736	742	780
	786	824	830	868	874	912	918	957	963	998	1036	1042	1080	1086	1124
	1130	1168	1174	1212	1218	1256	1262	1302	1308	1343	1381	1387	1425	1431	1469
	1475	1513	1519	1557	1563	1601	1607	1646	1652	1690	1696	1734	1740	1778	1784
	1822	1828	1866	1872	1910	1916	1956	1962	2001	2007	2046	2052	2091	2097	2136
	2142	2181	2187	2226	2232	2272	2278	2313	2352	2358	2397	2403	2442	2448	2487
	2493	2532	2538	2577	2583	2623	2629	2664	2703	2709	2743	2782	2788	2822	2861
	2867	2901	2940	2946	2980	3019	3025	3059	3098	3104	3138	3177	3183	3217	3256
	3262	3296	3335	3341	3375	3414	3420	3454	3493	3499	3533	3572	3578	3612	3651
	3657	3691	3730	3736	3770	3871									
SUB	3847														
TRAP	377														
TST	438	1295	1950	3833	3868	3878									
TSTB	3821	3905	3908	3985	3988										
.ASCIZ	3979	4001	4002												
.BLKW	3921														
.ENABL	372														
.END	4015														
.ENDC	476	477	478	485	486	488	500	520	521	522	529	530	532	544	564
	565	566	573	574	576	588	607	608	609	618	621	633	652	653	655
	667	687	688	689	696	697	699	711	730	731	732	733	740	741	743
	755	774	775	776	777	784	785	787	799	819	820	821	828	829	831
	843	863	864	865	872	873	875	887	907	908	909	916	917	919	931
	950	951	952	961	964	976	995	997	999	1011	1030	1031	1032	1033	1040
	1041	1043	1055	1074	1075	1076	1077	1084	1085	1087	1099	1118	1119	1120	1121
	1128	1129	1131	1143	1162	1163	1164	1165	1172	1173	1175	1187	1206	1207	1208
	1209	1216	1217	1219	1231	1250	1251	1252	1253	1260	1261	1263	1275	1294	1296
	1297	1306	1309	1321	1340	1342	1344	1356	1376	1377	1378	1385	1386	1398	1400
	1419	1420	1421	1422	1429	1430	1432	1444	1463	1464	1465	1466	1473	1474	1476
	1488	1503	1509	1510	1517	1518	1520	1532	1552	1553	1554	1561	1562	1564	1576
	1596	1597	1598	1605	1606	1608	1620	1639	1640	1641	1650	1653	1665	1684	1685
	1686	1687	1694	1695	1697	1709	1728	1729	1730	1731	1738	1739	1741	1753	1772
	1773	1774	1775	1782	1783	1785	1797	1816	1817	1818	1819	1826	1827	1829	1841
	1860	1861	1862	1863	1870	1871	1873	1885	1904	1905	1906	1907	1914	1915	1917
	1929	1948	1949	1950	1951	1960	1963	1975	1995	1996	1997	1998	2005	2006	2008
	2020	2040	2041	2042	2043	2050	2051	2053	2065	2085	2086	2087	2093	2095	2096
	2098	2110	2130	2131	2132	2133	2140	2141	2143	2155	2175	2176	2177	2178	2185
	2186	2188	2200	2220	2221	2222	2223	2230	2231	2233	2245	2264	2265	2266	2267
	2276	2279	2291	2310	2311	2312	2314	2326	2346	2347	2348	2349	2356	2357	2359
	2371	2391	2392	2393	2394	2401	2402	2404	2416	2436	2437	2438	2439	2446	2447
	2449	2461	2481	2482	2483	2484	2491	2492	2494	2506	2526	2527	2528	2529	2536
	2537	2539	2551	2571	2572	2573	2574	2581	2582	2584	2596	2615	2616	2617	2618
	2627	2630	2642	2661	2662	2663	2665	2677	2696	2697	2698	2707	2710	2722	2741
	2742	2744	2756	2775	2776	2777	2786	2789	2801	2820	2821	2823	2835	2854	2855
	2856	2865	2868	2880	2899	2900	2902	2914	2933	2934	2935	2944	2947	2959	2978
	2979	2981	2993	3012	3013	3014	3023	3026	3038	3057	3058	3060	3072	3091	3092

	3093	3102	3105	3117	3136	3137	3139	3151	3170	3171	3172	3181	3184	3196	3215
	3216	3218	3230	3249	3250	3251	3260	3263	3275	3294	3295	3297	3309	3328	3329
	3330	3339	3342	3354	3373	3374	3376	3388	3407	3408	3409	3418	3421	3433	3452
	3453	3455	3467	3486	3487	3488	3497	3500	3512	3531	3532	3534	3546	3565	3566
	3567	3576	3579	3591	3610	3611	3613	3625	3644	3645	3646	3655	3658	3670	3689
	3690	3692	3704	3723	3724	3725	3734	3737	3749	3768	3769	3771	3783		
.EVEN	3979	4004													
.IFEQ	475	476	477	478	486	519	520	521	522	530	563	564	565	566	574
	607	608	609	652	653	686	687	688	689	697	730	731	732	741	774
	775	776	785	818	819	820	821	829	862	863	864	865	873	906	907
	908	909	917	950	951	952	995	996	997	1030	1031	1032	1041	1074	1075
	1076	1085	1118	1119	1120	1129	1162	1153	1164	1173	1206	1207	1208	1217	1250
	1251	1252	1261	1294	1295	1297	1340	1341	1342	1375	1376	1377	1378	1386	1419
	1420	1421	1422	1430	1463	1464	1465	1466	1474	1507	1508	1509	1510	1518	1551
	1552	1553	1554	1562	1595	1596	1597	1598	1606	1639	1640	1641	1684	1685	1686
	1687	1695	1728	1729	1730	1731	1739	1772	1773	1774	1775	1783	1816	1817	1818
	1819	1827	1860	1861	1862	1863	1871	1904	1905	1906	1907	1915	1948	1949	1950
	1994	1995	1996	1997	1998	2006	2039	2040	2041	2042	2043	2051	2084	2085	2086
	2087	2088	2096	2129	2130	2131	2132	2133	2141	2174	2175	2176	2177	2179	2186
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