

PDP-15/PDP 11
UNICHANNEL

IDENTIFICATION

PRODUCT CODE: MAINDEC-15-DAUCC-A-D
PRODUCT NAME: UNICHANNEL15 EXERCISER MODULE (UC15) FOR PDP-15
SYSTEM EXERCISER
DATE: JULY 25, 1973
MAINTAINER: DIAGNOSTIC GROUP
AUTHOR(S): R, CHRISTOPHER

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1. DESCRIPTION

THIS MODULE IN COMBINATION WITH THE DEC/X11 EXERCISER MODULE XUCAA, EXERCISES THE CHANNEL 15 HARDWARE WHICH CONSISTS OF:

- A, MX15-B
- B, DR15
- C, 2 DR11-C'S

2. PROGRAM ACTION

TEST SEQUENCE:

- ROUTINE 0 = WRITES A 125252 PATTERN TO BE CHECKED BY THE DEC/X11 EXERCISER MODULE,
- ROUTINE 1 = WRITES A 52525 PATTERN TO BE CHECKED BY THE DEC/X11 EXERCISER MODULE,
- ROUTINE 2 = CHECKS A 125252 PATTERN WHICH HAS BEEN WRITTEN BY THE DEC/X11 EXERCISER MODULE,
- ROUTINE 3 = CHECKS A 52525 PATTERN WHICH HAS BEEN WRITTEN BY THE DEC/X11 EXERCISER MODULE,
- ROUTINE 4 = SENDS TCBP'S TO BE CHECKED BY THE DEC/X11 EXERCISER MODULE, -API LEVELS

3. IMPORTANT NOTES

THE PAPER TAPE BINARY (UC15) MODULE MUST BE ADDED TO THE PDP-15 SYSTEM EXERCISER SYSTEM DEVICE USING THE ADD (*A) COMMAND.

THIS MODULE MUST BE LOADED INTO PDP-15/PDP-11 COMMON MEMORY.

PRIOR TO STARTING THE DEC/X11 EXERCISER, THIS MODULE MUST BE RUNNING AND HAVE OUTPUT THE MESSAGE "UC15 000001", WHICH INDICATES THAT DEC/X11 MAY THEN (AND ONLY THEN) BE STARTED.

EACH TIME THIS MODULE IS LOADED FROM THE PDP-15 EXERCISER SYSTEM DEVICE, THE OPERATOR MUST START OR RESTART THE DEC/X11 EXERCISER (WHEN APPROPRIATE), THIS ACTION IS NECESSARY TO SYNC THE TWO EXERCISERS.

IF THE OPERATOR WISHES TO ISSUE A CTRL C (*C) TO BOTH EXERCISERS HE MUST DO SO IN THE FOLLOWING ORDER IF HE WISHES TO CONTINUE BOTH EXERCISERS AFTER INTERRUPTING THE RUN, FIRST ISSUE A CTRL C TO DEC/X11, AND WAIT FOR THE PDP-11 TO OUTPUT IT'S RUN SUMMARY AND HALT, THEN AND ONLY THEN ISSUE A CTRL C TO THE PDP-15 EX, WHEN CONTINUING THE EXERCISERS AFTER DOING A CTRL C, THE PDP-15 EX, MUST BE ISSUED THE EXECUTE (X) COMMAND AND THIS MODULE MUST BE RUNNING BEFORE PRESSING CONTINUE ON THE PDP-11, BOTH EXERCISERS WILL AGAIN BE IN SYNC.

PDP-15 DECTAPE TIMING ERRORS MAY RESULT AFTER A DEC/X11 MESSAGE IS OUTPUT, THEY SHOULD BE IGNORED WHEN IMMEDIATELY FOLLOWING THE DEC/X11 MESSAGE.

PDP-15 SYSTEM EXERCISER OPTION SWITCHES 1-3 MUST BE EQUAL TO ZERO UNTIL AFTER THE UC15 000001 MESSAGE IS TYPED.

4. ERRORS

ERROR CODE	DESCRIPTION
UC15 000001	DOES NOT INDICATE AN ERROR! INDICATES THAT THE UC15 MODULE IS NOW RUNNING AND THAT THE DEC/X11 EXERCISER MAY NOW BE STARTED.
UC15 000002	INDICATES THAT THE PDP-15 IS WAITING FOR THE PDP-11 TO SET THE TCRP ACCEPTED FLAG.
UC15 000003	INDICATES THAT THIS MODULE WAS ENTERED, BUT THAT NO UC15 FLAG CAUSED AN INTERRUPT.
UC15 000004	INDICATES THAT THE WRONG DR15 API LEVEL WAS SET, AND ALSO OUTPUTS THE EXPECTED LEVEL, AND THE ACTUAL LEVEL THAT WAS SET.
UC15 000005	INDICATES THAT THE DR15 API LEVEL INDICATED DID NOT SET.
UC15 000006	INDICATES THAT THE PDP-15 DETECTED A DATA ERROR AFTER THE PDP-11 WROTE DATA INTO A BUFFER IN THE COMMON MEMORY, ALSO OUTPUT ARE THE ADDRESS, THE DATA THAT WAS EXPECTED, AND THE DATA THAT WAS FOUND.
UC15 000007	INDICATES THAT AN API DONE INTERRUPT FAILED TO OCCUR ON THE PDP-11.

,TITLE * UC15 EX, MOD, * MAINDEC-15-DAUCC-A * MAY 25, 1973 *

,EHREL

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 /*****
 /IMPORTANT NOTES: THIS MODULE MUST BE LOADED AND RUNNING IN
 / PDP-15/PDP-11 COMMON MEMORY.
 / EACH TIME THIS MODULE IS LOADED FROM DECTAPE,
 / THE DEC/X11 EXERCISER MUST BE RESTARTED AT
 / LOC 1000; HOWEVER BEFORE STARTING AT 1000, THIS MODULE
 / MUST BE STARTED AND RUNNING. CONVERSELY, EACH TIME
 / DEC/X11 IS RESTARTED AT 1000, THIS MODULE MUST BE
 / RELOADED AND RUNNING.
 /*****

```

00000 R 000007 A
00001 R 000000 A
00002 R 000000 A
00003 R 000000 A
00004 R 000441 R
00005 R 000046 R
00006 R 250361 A
00007 R 654040 A
00010 R 000020 A
00011 R 000000 A
00020 R 000000 A
00021 R 000000 A
00022 R 000000 A
00023 R 000000 A
00024 R 000000 A
00025 R 000000 A
00026 R 000000 A
00027 R 000000 A
00032 R 000000 A
  
```

```

UODSW 000007
      0
      0
      0
      0
SERV /SERVICE ENTRANCE
UCIN /INITIALIZATION ENTRANCE
,SIXBT UC15 '
      20 /MASK FOR CHAIN MODE
,BLOCK 7
SYSERR 0
ERMC 0
ERCODE 0
      0
      0
      0
      0
      0
  
```

,EJECT

/THE DEFINITIONS OF ERROR MESSAGES FOR THIS MODULE FOLLOW:

```

/UC15 WORD=1 WORD=2 WORD=3 WORD=4
/-----
/" 000001
/-----
/ CODE #1 INDICATES THAT THE PDP-15 MODULE IS NOW RUNNING,
/ AND THAT THE DEC/X11 EXERCISER MAY NOW BE STARTED.
/" 000002
/-----
/ CODE #2 INDICATES THAT THE PDP-15 IS WAITING FOR THE PDP-11
/ TO SET THE DR15 YCRP ACCEPTED FLAG.
/" 000003
/-----
/ ERROR #3 INDICATES THAT THIS MODULE WAS ENTERED BUT THAT NO
/ UC15 FLAG CAUSED THE INTERRUPT.
/" 000004 EXPCTED LVL ACTUAL LVL
/-----
/ ERROR #4 INDICATES THAT THE WRONG DR15 API LEVEL WAS SET.
/" 000005 EXPCTED LVL
/-----
/ ERROR #5 INDICATES THAT THE DR15 API LEVEL INDICATED DID NOT SET.
/" 000006 ADDRESS GOOD DATA BAD DATA
/-----
/ ERROR #6 INDICATES THAT THE PDP-15 DETECTED A DATA ERROR AFTER
/ THE PDP-11 WROTE DATA INTO A BUFFER.
/" 000007
/-----
/ ERROR #7 INDICATES THAT AN SPI DONE INTERRUPT FAILED
/ TO OCCUR ON THE PDP-11.
,EJECT
  
```

```

/
700401 A TSF=700401
700402 A TCF=700402
700406 A TLS=700406
/
70031 R 706001 A SIOA 706001 /SKIP ON I/O DATA ACCEPTED; SKIPS ON I/O DATA
/ACCEPTED FLAG WHICH IS SET WHEN 11 READS TCBP;
70032 R 706002 A CIOD 706002 /CLEAR I/O DATA ACCEPTED FLAG
70033 R 706004 A LIOR 706004 /LOAD I/O REG; LOADS AC INTO I/O REG (NEW TCBP)
/FLAG; LOADS AC INTO I/O REG (BECOMES NEW TCBP)
70034 R 706112 A RDRS 706112 /READ DR STATUS REG (BIT 17=INT ENABLE)
70035 R 706122 A LDRS 706122 /LOAD DR STATUS REG (BIT 17=INT ENABLE)
70036 F 706101 A SAPI0 706101 /SKIP ON DR API LEVEL 0 FLAG
70037 R 706121 A SAPI1 706121 /SKIP ON DR API LEVEL 1 FLAG
70040 R 706141 A SAPI2 706141 /SKIP ON DR API LEVEL 2 FLAG
00041 F 706161 A SAPI3 706161 /SKIP ON DR API LEVEL 3 FLAG
00042 R 706104 A CAPI0 706104 /CLEAR DR API LEVEL 0 FLAG
00043 R 706124 A CAPI1 706124 /CLEAR DR API LEVEL 1 FLAG
00044 R 706144 A CAPI2 706144 /CLEAR DR API LEVEL 2 FLAG
00045 R 706164 A CAPI3 706164 /CLEAR DR API LEVEL 3 FLAG
,EJECT
    
```

```

/
00046 R 700000 A UCIN 0
00047 R 777777 A LAW -1
00050 R 040403 R DAC PASS
00051 R 200046 R LAC UCIN
00052 R 140441 R DAC SERV
00053 F 140406 R D2M END
20054 R 140371 R D2M API
70055 R 140372 R D2M BRK
00056 R 140020 R D2M SYSERR
00057 R 140021 R D2M ERWC
00060 R 400032 R XCT CIOD
00061 R 200405 R LAC IFLG
00062 F 750200 A SEAICLA /FIRST TIME THROUGH SINCE LOAD?
00063 R 600072 R JMP UC;2 /NO
00064 R 777777 A LAW -1
00065 R 040020 R DAC SYERR
00066 R 777777 A LAW -1
00067 R 040021 R DAC ERWC
00070 R 201203 R LAC (1
00071 R 040022 R DAC ERGODE
00072 R 201203 R UC,2 LAC (1
00073 R 400035 R XCT LDRS
00074 R 100566 R JMS EXIT
00075 R 100644 R JMS LVLST
00076 R 400042 R XCT CAPI0
00077 R 201204 R LAC (200000
00100 R 400033 R XCT LIOR /SEND ADDRESS OF WBUF
00101 R 100713 R JMS TCBPAC
00102 R 140405 R D2M IFLG
00103 R 440405 R ISE IFLG
00104 R 100601 R UC,3 JMS HOLD
00105 R 201205 R LAC (CHEMBP
00106 R 400033 R XCT LIOR /ING TO 11, INITIALIZE,
00107 R 100713 R JMS TCBPAC
00110 R 100124 R JMS ROU0
00111 R 100601 R JMS HOLD
00112 R 100131 R JMS ROU1
00113 R 100601 R JMS HOLD
00114 R 100217 R JMS ROU2
00115 R 100601 R JMS HOLD
00116 R 100270 R JMS ROU3
00117 R 100601 R JMS HOLD
00120 R 100341 R JMS ROU4
00121 R 440403 R ISE PASS /DONE PASS?
00122 R 600104 R JMP UC;3 /NO
00123 R 600556 R JMP TERM
,EJECT
    
```

```

/PDP-15 WRITES A 125252 PATTERN & PEP=11 CHECKS IT,
ROU0 0
      DZM LUNTST
      LAW -200
      DAC CNT
      LAC (CHEMBF
      DAC BFPNT1
      LAC (125252
ROU0.1 DAC* BFPNT1 /LD BUFF
      ISZ BFPNT1 /INCR BUFF PNT
      ISZ CNT /DONE?
      JMP ROU0.1 /NO
      CLA
      XCT LIOR /LD TCBP TO IND DONE.
      JMS TCBPAC
      LAC (1
      XCT LDPS
ROU0.2 JMS EXIT
      JMS LVLST
ROU0.3 XCT CAPI0 /CNR API L0
      JMS APIDNE
      JMP* ROU0
      .EJECT
    
```

```

/PDP-15 WRITES A 52525 PATTERN & PEP=11 CHECKS IT,
ROU1 0
      LAC (1
      DAC LUNTST
      LAW -200
      DAC CNT
      LAC (CHEMBF
      DAC BFPNT1
      LAC (52525
ROU1.1 DAC* BFPNT1 /LD BUFF
      ISZ BFPNT1 /INCR BUFF PNT
      ISZ CNT /DONE?
      JMP ROU1.1 /NO
      CLA
      XCT LIOR /IND DONE TO 11.
      JMS TCBPAC
      LAC (1
      XCT LDPS
ROU1.2 JMS EXIT
      XCT SAPI1 /L1?
      SKP /NO
      JMP ROU1.3 /YES, CORRECT.
      DZM LVLSET
      XCT SAPI0 /L2?
      SKP /NO
      JMP LVLERR /YES, ERR.
      LAC (2
      DAC LVLSET
      XCT SAPI2 /L3?
      SKP /NO
      JMP LVLERR /YES, ERR.
      LAC (3
      DAC LVLSET
      XCT SAPI3 /L3?
      HLT /NO
      JMP LVLERR /YES, ERR.
ROU1.3 XCT CAPI1 /CNR API L1
      JMS APIDNE
      JMP* ROU1
      .EJECT
    
```

```

/PDP-11 WRITES A 125252 PATTERN & PDP-15 CHECKS IT.
ROU2
00217 R 000000 A
00220 R 201210 R
00221 R 040377 R
00222 R 777600 A
00223 R 040373 R
00224 R 201205 R
00225 R 040376 R
00226 R 750000 A
00227 R 400033 R
00230 R 100713 R
00231 R 201203 R
00232 R 400035 R
00233 R 100566 R
00234 R 400040 R
00235 R 741000 A
00236 R 600255 R
00237 R 140400 R
00240 R 400036 R
00241 R 741000 A
00242 R 600615 R
00243 R 201203 R
00244 R 140400 R
00245 R 400037 R
00246 R 741000 A
00247 R 600615 R
00250 R 201211 R
00251 R 040400 R
00252 R 400041 R
00253 R 740040 A
00254 R 600615 R
00255 R 400044 R
00256 R 100746 R
00257 R 201206 R
00260 R 040402 R
00261 R 560376 R
00262 R 741000 A
00263 R 100666 R
00264 R 440376 R
00265 R 440373 R
00266 R 600257 R
00267 R 620217 R

ROU2,1
XCT L1OR /INB READY TO 11.
JMS TCBPAC
LAC (1
XCT LDRS
JMS EXIT
XCT SAPI2 /L2?
SKP /NO
JMP ROU2,2 /YES, CORRECT.
DZM LVLSET
XCT SAPI0 /L0?
SKP /NO
JMP LVLERR /YES, ERR.
LAC (1
DAC LVLSET
XCT SAPI1 /L1?
SKP /NO
JMP LVLERR /YES, ERR.
LAC (3
DAC LVLSET
XCT SAPI3 /L3?
HLT /NO
JMP LVLERR /YES, ERR.
XCT CAP12 /CHR API L2.
JMS APIDNE
ROU2,2
LAC (125252
ROU2,3
DAC TGOOD
SAD* BFPNT1 /DATA CORRECT?
SKP /YES
JMS DATERR /NO
ISE BFPNT1 /INCR BUFF PNT
ISE CNT /DONE?
JMP ROU2,3 /NO
JMP* ROU2
.EJECT

```

```

/PDP-11 WRITES A 52525 PATTERN & PDP-15 CHECKS IT.
ROU3
00270 R 000000 A
00271 R 201211 R
00272 R 040377 R
00273 R 777600 A
00274 R 040373 R
00275 R 201205 R
00276 R 040376 R
00277 R 750000 A
00300 R 400033 R
00301 R 100713 R
00302 R 201203 R
00303 R 400035 R
00304 R 100566 R
00305 R 400041 R
00306 R 741000 A
00307 R 600326 R
00310 R 140400 R
00311 R 400036 R
00312 R 741000 A
00313 R 600615 R
00314 R 201203 R
00315 R 040400 R
00316 R 400037 R
00317 R 741000 A
00320 R 600615 R
00321 R 201210 R
00322 R 040400 R
00323 R 400040 R
00324 R 740040 A
00325 R 600615 R
00326 R 400045 R
00327 R 100746 R
00330 R 201207 R
00331 R 040402 R
00332 R 560376 R
00333 R 741000 A
00334 R 100666 R
00335 R 440376 R
00336 R 440373 R
00337 R 600330 R
00340 R 620270 R

ROU3,1
XCT L1OR /INB READY TO 11.
JMS TCBPAC
LAC (1
XCT LDRS
JMS EXIT
XCT SAPI3 /L3?
SKP /NO
JMP ROU3,2 /YES, CORRECT.
DZM LVLSET
XCT SAPI0 /L0?
SKP /NO
JMP LVLERR /YES, ERR.
LAC (1
DAC LVLSET
XCT SAPI1 /L1?
SKP /NO
JMP LVLERR /YES, ERR.
LAC (2
DAC LVLSET
XCT SAPI2 /L2?
HLT /NO
JMP LVLERR /YES, ERR.
XCT CAP13 /CHR API L3
JMS APIDNE
ROU3,2
LAC (52525
ROU3,3
DAC TGOOD
SAD* BFPNT1 /DATA CORRECT?
SKP /YES
JMS DATERR /NO
ISE BFPNT1 /INCR BUFF PNT
ISE CNT /DONE?
JMP ROU3,3 /NO
JMP* ROU3
.EJECT

```



```

00341 R 000000 A /TESTS FOR CORRECT TRANSMISSION OF TCBP & DR15 INTERRUPTS.
00342 R 140404 R ROU4 0
00343 R 000404 R ROU4,1 DZM TCBP /INIT TCBP
00344 R 400033 R XCT TCBP /LU TCBP
00345 R 100713 R JMS TCBPAC
00346 R 201203 R LAC (1
00347 R 400035 R XCT LDERS /ENABLE DR15 INT
00350 R 140377 R DZM LUNTST
00351 R 140400 R DZM LVLSET
00352 R 100566 R ROU4,2 JMS EXIT
00353 R 750000 A CLA
00354 R 400035 R XCT LDERS /DISABLE DR INT
00355 R 100644 R JMS LVLST
00356 R 400042 R XCT CAP10 /CLR L0
00357 R 100746 R JMS APIDNE
00360 R 200404 R LAC TCBP
00361 R 541212 R SAD (77777 /DONE?
00362 R 620341 R JMP* ROU4 /YES
00363 R 440404 R ISZ TCBP /NO
00364 R 600343 R JMP ROU4,1
                .EJECT
    
```

```

00365 R 000000 A /TEMPORARY STORAGE
00366 R 000000 A CNT1 0
00367 R 000000 A CNT2 0
00370 R 000000 A CNT5 0
00371 R 000000 A API 0
00372 R 000000 A BRK 0
00373 R 000000 A CNT 0
00374 R 000000 A POINT 0
00375 R 000000 A PNT 0
00376 R 000000 A BFPNT1 0
00377 R 000000 A LUNTST 0
00400 R 000000 A LVLSET 0
00401 R 000000 A SAVAC 0
00402 R 000000 A TGOOD 0
00403 R 000000 A PASS 0
00404 R 000000 A TCBP 0
00405 R 000000 A IFLG 0
00406 R 000000 A END 0
00407 R A /TEMPORARY STORAGE FOR ERROR STATUS
                SAVBUF ,BLOCK 11
                /RETRIEVE ERROR STATUS FOR MONITOR
00420 R 000000 A RESTAT 0
00421 R 777767 A LAW -11
00422 R 040365 R DAC CNT1 /INT COUNT
00423 R 201213 R LAC (SYSERR
00424 R 040374 R DAC POINT /INT POINTER
00425 R 201214 R LAC (SAVBUF
00426 R 040375 R DAC PNT /INT POINTER
00427 R 220375 R LAC* PNT
00430 R 100435 R JMS STATUS /SIDRE A WORD
00431 R 440375 R ISZ PNT
00432 R 440365 R ISZ CNT1 /DONE?
00433 R 600427 R JMP ,+4 /NO
00434 R 620420 R JMP* RESTAT
                /STORE STATUS
00435 R 000000 A STATUS 0
00436 R 060374 R DAC* POINT
00437 R 440374 R ISZ POINT
00440 R 620435 R JMP* STATUS
                .EJECT
    
```

```

/SERVICE ROUTINE
SERV 0
00441 R 000000 A
00442 R 040401 R DAC SAVAC
00443 R 200372 R LAC BRK
00444 R 741200 A SNA
00445 R 600447 R JMP SERV,A /RETURN FROM BRK?
00446 R 620566 R JMP* EXIT /NO
00447 R 201215 R SERV,A LAC (400000)
00450 R 705001 A SPI /API ON?
00451 R 600515 R JMP APIOFF /NO
00452 R 777777 A LAW -1
00453 R 140371 R DAC API
00454 R 400034 R XCT RDRS
00455 R 501203 R AND (1)
00456 R 741200 A SNA /DR15 INT ENABLE SET?
00457 R 600476 R JMP SERV,B /NO
00460 R 750000 A CLA
00461 R 400035 R XCT LDRS /DISABLE DR15 INT
00462 R 400036 R XCT SAPI0 /API L0 FLG SET?
00463 R 741000 A SKP /NO
00464 R 620566 R JMP* EXIT /YES
00465 R 400037 R XCT SAPI1 /L1 SET?
00466 R 741000 A SKP /NO
00467 R 620566 R JMP* EXIT /YES
00470 R 400042 R XCT SAPI2 /L2 SET?
00471 R 741000 A SKP /NO
00472 R 620566 R JMP* EXIT /YES
00473 R 400041 R XCT SAPI3 /L3 SET?
00474 R 741000 A SKP /NO
00475 R 620566 R JMP* EXIT /YES
00476 R 201214 R SERV,B LAC (SAVBUF)
00477 R 040374 R DAC POINT
00500 R 777775 A LAW -3
00501 R 100435 R JMS STATUS
00502 R 777777 A LAW +1
00503 R 100435 R JMS STATUS
00504 R 201211 R LAC (3)
00505 R 100435 R JMS STATUS
00506 R 200020 R LAC SYSERR
00507 R 740200 A SZA /PREVIOUS ERROR?
00510 R 100566 R JMS BRKEX /YES
00511 R 100420 R JMS RESTAT /GET STATUS FOR MON
00512 R 100566 R JMS EXIT
00513 R 740040 A HLT /MONITOR ERROR!!!!
00514 R 600513 R JMP -1
,EJECT
    
```

```

00515 R 140371 R APIOFF DZM API
00516 R 400034 R XCT RDRS
00517 R 741200 A SNA
00520 R 620537 R JMP SERV,C /DR15 INT ENABLE SET?
00521 R 750000 A CLA /NO
00522 R 400035 R XCT LDRS /DISABLE DR15 INT
00523 R 400036 R XCT SAPI0 /L0 SET?
00524 R 741000 A SKP /NO
00525 R 620566 R JMP* EXIT /YES
00526 R 400037 R XCT SAPI1 /L1 SET?
00527 R 741000 A SKP /NO
00530 R 620566 R JMP* EXIT /YES
00531 R 400040 R XCT SAPI2 /L2 SET?
00532 R 741000 A SKP /NO
00533 R 620566 R JMP* EXIT /YES
00534 R 400041 R XCT SAPI3 /L3 SET?
00535 R 741000 A SKP /NO
00536 R 620566 R JMP* EXIT /YES
00537 R 200406 R SERV,C LAC END
00540 R 740200 A SZA
00541 R 600544 R JMP +5
00542 R 201203 R LAC (1)
00543 R 400035 R XCT LDRS /ENABLE DR15 INT
00544 R 750001 A CLC /NO
00545 R 620441 R JMP* SERV /INB INT WITH NO FLG SET.???
/BREAK EXIT TO THE MONITOR
BRKEX 0
00546 R 000000 A
00547 R 777773 A LAW -5 /INDICATE NORMAL BREAK
00550 R 040020 R DAC SYSERR
00551 R 777777 A LAW -1
00552 R 040372 R DAC BRK /SET BREAK FLAG
00553 R 100566 R JMS EXIT
00554 R 140372 R DZM BRK /CLEAR BREAK FLAG
00555 R 620546 R JMP* BRKEX
,EJECT
    
```

```

/TERMINATION ROUTINE
02554 R 140021 R TERM DZM ERWC
02557 R 140406 R DZM END
02561 R 440406 R ISZ END
02561 R 777774 A LAW -4
02562 R 240020 R DAC SYSERR
02563 R 140372 R DZM BRK
02564 R 100566 R JMS EXIT
02565 R 740040 A HLT /MONITOR ERROR

/EXIT TO THE MONITOR
02566 R 000000 A EXIT 0
02567 R 200371 R LAC API /ENTERED BY API?
02570 R 741200 A SNA /NO
02571 R 600576 R JMP ,+5 /CLEAR API FLAG
02572 R 140371 R DZM API /RESTORE AC
02573 R 200401 R LAC SAVAC
02574 R 703344 A DBR
02575 R 620441 R JMP* SERV
02576 R 750000 A CLA
02577 R 703344 A DBR
02600 R 620441 R JMP* SERV

/HOLD EXECUTION ON AC SWITCH 13=1
02601 R 000000 A HOLD 0
02602 R 750004 A LAS
02603 R 501216 R AND (20
02604 R 740200 A SEA
02605 R 600610 R JMP ,+3
02606 R 140614 R DZM HOLDSW
02607 R 620601 R JMP* HOLD

/
02610 R 777777 A LAW -1
02611 R 040614 R DAC HOLDSW
02612 R 100546 R JMS BRKEX
02613 R 600602 R JMP HOLD*1

02614 R 000000 A HOLDSW 0
,EJECT
    
```

```

/ROUTINE TO IND WRONG DR15 API LEVEL WAS BROUGHT UP.
02615 R 201214 R LVLERR LAC (SAVBUF
02616 R 040374 R DAC POINT
02617 R 400042 R XCT CAPI0
02620 R 400043 R XCT CAPI1
02621 R 400044 R XCT CAPI2
02622 R 400045 R XCT CAPI3
02623 R 777775 A LAW -3
02624 R 100435 R JMS STATUS
02625 R 777775 A LAW -3
02626 R 100435 R JMS STATUS
02627 R 201217 R LAC (4
02632 R 100435 R JMS STATUS
02631 R 200377 R LAC LUNTST /GET EXPECTED LEVEL.
02632 R 100435 R JMS STATUS /GET ACTUAL LEVEL.
02633 R 200400 R LAC LVLSET
02634 R 100435 R JMS STATUS
02635 R 200020 R LAC SYSERR
02636 R 740200 A SEA /PREVIOUS ERR?
02637 R 100546 R JMS BRKEX /YES
02642 R 100420 R JMS RESTAT /GET STATUS FOR MON.
02641 R 100566 R JMS EXIT
02642 R 740040 A HLT /MONITOR ERROR!!!!
02643 R 600642 R JMP , -1

/
02644 R 000000 A LVLSTST ?
02645 R 140377 R DZM LUNTST
02646 R 140400 R DZM LVLSET
02647 R 400036 R XCT SAPI0 /L0?
02650 R 741000 A SKP /NO
02651 R 620644 R JMP* LVLSTST /YES, CORRECT.
02652 R 440400 R ISZ LVLSET /L1?
02653 R 400037 R XCT SAPI1
02654 R 741000 A SKP
02655 R 600615 R JMP LVLERR
02656 R 440400 R ISZ LVLSET
02657 R 400040 R XCT SAPI2
02660 R 741000 A SKP
02661 R 600615 R JMP LVLERR
02662 R 440400 R ISZ LVLSET
02663 R 400041 R XCT SAPI3
02664 R 740040 A HLT /INDICATES A FLG INTERRUPTED, BUT NO FLG??
02665 R 600615 R JMP LVLERR
,EJECT
    
```

```

/ROUTINE TO IND THAT A DATA ERROR WAS DETECTED.
DATEPR 0
20666 R 100000 A
20667 R 201214 R LAC (SAVBUF
20670 R 240374 R DAC POINT
20674 R 777776 A LAW -2
20672 R 100435 R JMS STATUS
20673 R 777774 A LAW -4
20674 R 100435 R JMS STATUS
20675 R 201220 R LAC (6
20676 R 100435 R JMS STATUS
20677 R 200376 R LAC BFPNT1
20702 R 100435 R JMS STATUS
20701 R 200402 R LAC TGOON
20702 R 100435 R JMS STATUS
20703 R 220376 R LAC* BFPNT1
20704 R 100435 R JMS STATUS
20705 R 200020 R LAC SYSERR
20706 R 740200 A SZL
20707 R 100546 R JMS BRKEX
20711 R 100420 R JMS RESTAT
20711 R 100546 R JMS BRKEX
20712 R 620660 R JMP DATERR
,EJECT
/PMVIOUS ERR?
/YES
/GET STATUS FOR MON.

```

```

/
20713 R 200000 A TCBPAC 0
20714 R 777775 A LAW -3
20715 R 100370 R DAC CNT5
20716 R 100366 R DZM CNT2
20717 R 400011 R TCB.1 XCT SIOA /TCBP ACCEPTED?
20720 R 600723 R JMP TCB.2 /NO
20721 R 400032 R XCT CIO0 /YES
20722 R 620713 R JMP* TCBPAC
20723 R 100546 R TCB.2 JMS BRKEX
20724 R 440366 R ISZ CNT2 /TRY AGAIN?
20725 R 600717 R JMP TCB.1 /YES
20726 R 440370 R ISZ CNT5
20727 R 600717 R JMP TCB.1
20732 R 201214 R LAC (SAVBUF
20731 R 240374 R DAC POINT
20732 R 777776 A LAW -2
20733 R 100435 R JMS STATUS
20734 R 777777 A LAW -1
20735 R 100435 R JMS STATUS
20736 R 201210 R LAC (2
20737 R 100435 R JMS STATUS
20740 R 200020 R LAC SYSERR
20741 R 740200 A SZL
20742 R 100546 R JMS BRKEX
20743 R 100420 R JMS RESTAT
20744 R 100546 R JMS BRKEX
20745 R 600714 R JMP TCBPAC+1
,EJECT

```

```

00744 D 000000 A /
00747 R 777775 A API.1 LAX -3
00750 R 400370 R DAC CNT5
00751 R 140347 R DCM CNT3
00752 R 201002 R API.1 LAC COMM
00753 R 741200 A SNA /API DONE?
00754 R 600757 R JMP API.2 /NO
00755 R 141002 R DCM COMM /YES
00756 R 620746 R JMP* APIDNE
00757 R 100546 R API.2 JMS BRKEX
00760 R 440367 R ISP CNT3 /TIME OUT?
00761 R 600752 R JMP API.1 /NO, TRY AGAIN,
00762 R 440370 R ISP CNT5
00763 R 600752 R JMP API.1
00764 R 201214 R LAC (SAVBUF
00765 R 040374 R DAC POINT
00766 R 777776 A LAU -2
00767 R 100435 R JMS STATUS
00770 R 777777 A LAW -1
00771 R 100435 R JMS STATUS
00772 R 201221 R LAC (7
00773 R 100435 R JMS STATUS
00774 R 200000 R LAC SYSERR
00775 R 740200 A SZA
00776 R 100546 R JMS BRKEX
00777 R 100420 R JMS RESTAT
01000 R 100546 R JMS BRKEX
01001 R 600747 R JMP APIDNE*1
,EJECT
    
```

```

01002 R 000000 A / COMM 0
01003 R 000000 A /
01203 R .LOC CMEMBF+200 /THIS BUFFER IS 120 DECIMAL LOC
/LOC AND IS USED FOR THE COMMON
/MEMORY TESTS.
01000 R /
.END UONSW
01203 R 000001 A *L
01204 R 200000 A *L
01205 R 001003 R *L
01206 R 125252 A *L
01207 R 052525 A *L
01210 R 000002 A *L
01211 R 000003 A *L
01212 R 077777 A *L
01213 R 000000 R *L
01214 R 000407 R *L
01215 R 400000 A *L
01216 R 000000 A *L
01217 R 000004 A *L
01220 R 000006 A *L
01221 R 000007 A *L
SIZE=01226 NO ERROR LINES
    
```