

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
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1. DESCRIPTION

THIS MODULE IN COMBINATION WITH THE DEC/X11 EXERCISER MODULE XUCAA, EXERCISES THE CHANNEL15 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 TCPD 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.


```

/
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 R 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
00055 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 SYSERR
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 LAC (1
00073 R 400035 R UC,2 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 F 100124 R JMS ROU0
00111 R 100601 R JMS HOLD
00112 R 100191 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 F 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 CAP10 /CLR 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 /L2?
      SKP /NO
      JMP LVLERR /YES, ERR.
      LAC (3
      DAC LVLSET
      XCT SAPI3 /L3?
      HLT /NO
      JMP LVLERR /YES, ERR.
ROU1.3 XCT CAP11 /CLR 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 LIOR /INB READY TO 11.
JMS TCBPAC
LAC (1
XCT LDPS
EXIT
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
LAC (125252
DAC TGOOD
SAD* BFPNT1 /DATA CORRECT?
SKP /YES
JMS DATERR /NO
ISZ BFPNT1 /INCR BUFF PNT
ISZ 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 LIOR /INB READY TO 11.
JMS TCBPAC
LAC (1
XCT LDPS
EXIT
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
LAC (52525
DAC TGOOD
SAD* BFPNT1 /DATA CORRECT?
SKP /YES
JMS DATERR /NO
ISZ BFPNT1 /INCR BUFF PNT
ISZ CNT /DONE?
JMP ROU3,3 /NO
JMP* ROU3
,EJECT

```



```

00341 R 000000 A
00342 R 140404 R
00343 R 000404 R
00344 R 400033 R
00345 R 100713 R
00346 R 201203 R
00347 R 400035 R
00350 R 140377 R
00351 R 140400 R
00352 R 100566 R
00353 R 750000 A
00354 R 400035 R
00355 R 100644 R
00356 R 400042 R
00357 R 100746 R
00360 R 200404 R
00361 R 541212 R
00362 R 620341 R
00363 R 440404 R
00364 R 600343 R
/TESTS FOR CORRECT TRANSMISSION OF TCBP & DR15 INTERRUPTS.
ROU4 0
      DZM TCBP /INIT TCBP
ROU4,1 LAC TCBP
      XCT LIOR /LD TCBP
      JMS TCBPAC
      LAC (1
      XCT LDRS /ENABLE DR15 INT
      DZM LUNTST
      DZM LVLSET
ROU4,2 JMS EXIT
      CLA
      XCT LDRS /DISABLE DR INT
      JMS LVLST
      XCT CAPI0 /CLR LB
      JMS APIONE
      LAC TCBP
      SAD (77777 /DONE?
      JMP* ROU4 /YES
      ISZ TCBP /NO
      JMP ROU4,1
      ,EJECT

```

```

00365 R 000000 A
00366 R 000000 A
00367 R 000000 A
00370 R 000000 A
00371 R 000000 A
00372 R 000000 A
00373 R 000000 A
00374 R 000000 A
00375 R 000000 A
00376 R 000000 A
00377 R 000000 A
00400 R 000000 A
00401 R 000000 A
00402 R 000000 A
00403 R 000000 A
00404 R 000000 A
00405 R 000000 A
00406 R 000000 A
/TEMPORARY STORAGE
CNT1 0
CNT2 0
CNT3 0
CNT5 0
API 0
BRK 0
CNT 0
POINT 0
PNT 0
BFPNT1 0
LUNTST 0
LVLSET 0
SAVAC 0
TGDD 0
PASS 0
TCBP 0
IFLG 0
END 0
/TEMPORARY STORAGE FOR ERROR STATUS
SAVBUF ,BLOCK 11
/RETRIEVE ERROR STATUS FOR MONITOR
RESTAT 0
00420 R 000000 A
00421 R 777767 A
00422 R 040365 R
00423 R 201213 R
00424 R 040374 R
00425 R 201214 R
00426 R 040375 R
00427 R 220375 R
00430 R 100435 R
00431 R 440375 R
00432 R 440365 R
00433 R 600427 R
00434 R 620420 R
LAW -11
DAC CNT1 /INIT COUNT
LAC (SYSERR
DAC POINT /INIT POINTER
LAC (SAVBUF
DAC PNT /INIT POINTER
LAC* PNT
JMS STATUS /SIDRE A WORD
ISZ PNT
ISZ CNT1 /DONE?
JMP ,+4 /NO
JMP* RESTAT
/STORE STATUS
STATUS 0
DAC* POINT
ISZ POINT
JMP* STATUS
      ,EJECT

```

```

/SERVICE ROUTINE
SERV 0
00441 R 000000 A
00442 R 040401 R DAC SAVAC
00443 R 000372 R LAC BRK
00444 R 741200 A SNA /RETURN FROM BRK?
00445 R 600447 R JMP SERV,A /NO
00446 R 620566 R JMP* EXIT
00447 R 201215 R SERV,A LAC (400000)
00450 R 705501 A SPI /API ON?
00451 R 600515 R JMP APIOFF /NO
00452 R 777777 A LAW +1
00453 R 040371 R DAC API
00454 R 400034 R XCT RDRS
00455 R 501203 R AND (1
00456 R 741200 A SNA /DM15 INT ENABLE SET?
00457 R 600476 R JMP SERV,B /NO
00462 R 750000 A CLA
00461 R 400035 R XCT LDMS /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
00472 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 400435 R JMS STATUS
00502 R 777777 A LAW +1
00503 R 400435 R JMS STATUS
00504 R 201211 R LAC (3
00505 R 400435 R JMS STATUS
00506 R 200020 R LAC SYSERR
00507 R 740200 A SEA
00511 R 400546 R JMS BRKEX /PREVIOUS ERROR?
00511 R 400420 R JMS RESTAT /YES
00512 R 400566 R JMS EXIT /GET STATUS FOR MON
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 /DM15 INT ENABLE SET?
00522 R 600537 R JMP SERV,C /NO
00521 R 750000 A CLA
00522 R 400035 R XCT LDMS /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
00532 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 SEA
00541 R 600544 R JMP +5
00542 R 201203 R LAC (1
00543 R 400035 R XCT LDMS /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 400566 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 D2M ERWC
02557 R 140406 R D2M END
02561 R 140406 R ISZ END
02561 R 777774 A LAW -4
02562 R 240020 R DAC SYSERR
02563 R 140372 R D2M 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 D2M 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 SZA
02605 R 600610 R JMP ,+3
02606 R 140614 R D2M 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
02621 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
02633 R 200400 R LAC LVLSET /GET ACTUAL LEVEL.
02634 R 100435 R JMS STATUS
02635 R 200020 R LAC SYSERR
02636 R 740200 A SZA /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 LVLST ?
02645 R 140377 R D2M LUNTST
02646 R 140400 R D2M LVLSET
02647 R 400036 R XCT SAPI0 /L0?
02650 R 741000 A SKP /NO
02651 R 620644 R JMP* LVLST /YES, CORRECT.
02652 R 440400 R ISZ LVLSET
02653 R 400037 R XCT SAPI1 /L1?
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,
DATERR 0
20666 R 200000 A
20667 R 201214 R LAC (SAVBUF
20670 R 100374 R DAC POINT
20671 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
20700 R 100435 R JMS STATUS
20701 R 200402 R LAC TGR00
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 700200 A SZA
20707 R 100546 R JMS BRKEX
20710 R 100420 R JMS RESTAT
20711 R 100546 R JMS BRKEX
20712 R 600666 R JMP* DATERR
,EJECT
/PREVIOUS ERR?
/YES
/GET STATUS FOR MON.
    
```

```

/TCBPAC 0
20713 R 200000 A
20714 R 777775 A LAW -3
20715 R 100370 R DAC CNT5
20716 R 100366 R DZM CNT2
20717 R 400031 R TCB.1 XCT SIOA /TCBP ACCEPTED?
20720 R 600723 R JMP TCB.2 /NO
20721 R 400032 R XCT CIO0 /YES
20722 R 600713 R JMP* TCBPAC
20723 R 100546 R TCB.2 JMS BRKEX
20724 R 400366 R ISZ CNT2 /TRY AGAIN?
20725 R 600717 R JMP TCB.1 /YES
20726 R 400370 R ISZ CNT5
20727 R 600717 R JMP TCB.1
20730 R 201214 R LAC (SAVBUF
20731 R 100374 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 700200 A SZA
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 R 000000 A /
00747 R 777775 A / APIDNE 0
00751 R 140367 R LAC -3
00751 R 140367 R DAC CNT5
00752 R 201002 R API.1 LAC CNT3
00753 R 741202 A SNA COMM
00754 R 600757 R JMP API.2 /API DONE?
00755 R 141002 R DZM COMM /NO
00756 R 620746 R JMP* APIDNE /YES
00757 R 100546 R API.2 JMS BRKEX
00760 R 440367 R ISZ CNT3 /TIME OUT?
00761 R 600752 R JMP API.1 /NO, TRY AGAIN,
00762 R 440370 R ISZ CNT5
00763 R 600752 R JMP API.1
00764 R 201214 R LAC (SAVBUF
00765 R 040374 R DAC POINT
00766 R 777776 A LAW -2
00767 R 100435 R JMS STATUS
00772 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 / CHEMBF 0 /THIS BUFFER IS 128 DECIMAL LOC
11203 R .LOC CHEMBF*200 /LONG AND IS USED FOR THE COMMON
/ MEMORY TESTS.
/
. END UONSW
21203 R 000001 A *L
21204 R 000000 A *L
21205 R 001003 R *L
21206 R 125252 A *L
21207 R 052525 A *L
21210 R 000002 A *L
21211 R 000003 A *L
21212 R 077777 A *L
21213 R 000000 R *L
21214 R 000407 R *L
21215 R 400000 A *L
21216 R 000000 A *L
21217 R 000004 A *L
21220 R 000006 A *L
21221 R 000007 A *L
    
```

SIZE=01226 NO ERROR LINES