

TITLE ADF15 SYSTEM EXERCISER TEST
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 /DIGITAL EQUIPMENT CORPORATION MAYNARD, MASS, 01754
 /PROGRAMMER: EARL L. BOUSE

/THIS PROGRAM IS DESIGNED TO EXERCISE THE 'LOGIC' OF THE "ADF15"
 /ANALOG TO DIGITAL CONVERTER, CONVERSIONS ARE TAKEN UNDER PROGRAM
 /CONTROL, SEQUENTIAL AND RANDOM OPERATION, EIGHT (8) POSSIBLE
 /ERRORS MAY BE DETECTED BY THE 'ADF15' SYSTEM EXERCISER,

- /1); ILLEGAL 'WORD COUNT' FLAG OCCURRED,
- /2); ILLEGAL 'MEMORY OVERFLOW' FLAG OCCURRED,
- /3); WRONG 'CHANNEL' IN 'ADF15' STATUS REGISTER,
- /4); CONTENTS OF 'W.C.#26' NOT EQUAL TO '0' AFTER W,C, FLAG,
- /5); CONTENTS OF 'DATA BUFFER' UNCHANGED AFTER SEQ, OR RAN, CONVERSIONS,
- /6); ILLEGAL DATA TRANSFER TO DATA BUFFER,
- /7); DATA ERROR, CONVERSION VALUES OUT OF SPEC IN NOISE TEST,
- /10); ILLEGAL 'API' ERROR,
- /11); ADD TO MEMORY FAILED

EBREL

705512 A RPL=705512
 707764 A EBA=707764
 707702 A EEM=707702

00000 R 600017 A	USERSW 600017	/I/O DEVICE WITH API CHANNEL '57'.
00001 R 000000 A	0	
00002 R 000000 A	0	
00003 R 000000 A	0	
00004 R 000076 R	,DSA SERVICE	
00005 R 000046 R	,DSA INIT	
00006 R 010406 A	,SIXBT 'ADF15'	
00007 R 616540 A		
00010 R 010000 A	DATASW 10000	/DATA SW5 INHIBITS THE ADF15 TEST
00011 R 000000 A	,BLOCK 7	
00020 R 000000 A	SYSERR 0	/ERROR INDICATOR FOR MONITOR
00021 R 000000 A	0	/W,C, FOR DATA WORD ERROR CODES
00022 R 000000 A	ERCODE 0	/ERROR CODE
00023 R 000000 A	,BLOCK 10	
00033 R 701304 A	/ADF15 IOT'S	
00034 R 701312 A	ADCV 701304	/LOAD STATUS, CLR A/D DONE, INITIATE TIMING
00035 R 701352 A	ADRB 701312	/READ DATA INTO AC, CLR A/D DONE
00036 R 701362 A	ADRS 701352	/READ STATUS REGISTER INTO AC
00037 R 701301 A	ADCF 701362	/CLEAR ALL A/D FLAGS
00040 R 701341 A	ADSF 701301	/SKIP ON A/D DONE FLAG
00041 R 701321 A	WCSF 701341	/SKIP ON WORD COUNT OVERFLOW
00042 R 000024 A	MSSF 701321	/SKIP ON MEMORY OVERFLOW
00043 R 000025 A	WC24 24	/=TO W,C, 24
00044 R 000026 A	CA25 25	/=TO CURRENT ADDRESS 25
00045 R 000027 A	WC26 26	/=TO W,C, 26
	CA27 27	/=TO CURRENT ADDRESS 27
	,EJECT	

/INITILIZE THE 'ADF15' TEST

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INIT 0
      EBA
      EEM
      LAC      INIT
      DAC      SERVICE
      DZM      SYSERR      /CLEAR ERROR LOCATIONS
      DZM      SYSERR+1
      DZM      ERCODE
      DZM      FLGDRV      /CLEAR 'FLAG DRIVE' INDICATOR,
      LAW
      DAC      RUNCTR      /SET UP FOR 8192 PASSES,
      LAW      -10
      DAC      STALCT      /INIT STALL COUNTER
      LAC      (PGCVRT
      DAC      DSTSW1      /SET DISTRIBUTION SWITCH
      LAC      (1
      DAC      CHANEL      /=TO CHANNEL #1
      JMS      HOLDSW      /CHECK FOR HOLD SWITCH
      LAC      (200001      /GAIN=2, PROG, CONTROL, CHA, #1
      DAC      STAWRD
      XCT      ADCV      /START 1ST CONVERSION
      DZM      CNTRA
      DZM      DELAYS
      JMP*     INIT

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/SERVICE ROUTINE FOR THE 'ADF15' TEST

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SERVICE 0
        EBA
        EEM
        DAC      SAVEAC      /SAVE CONTENTS OF THE AC
        DZM      FLGDRV      /CLEAR 'FLAG DRIVEN' INDICATOR,
        JMP*     DSTSW1
DSTSW1 0      /DISTRIBUTION LOCATION FOR TESTS

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/ENTER HERE AFTER COMPLETING A 'PROGRAM CONTROL' CONVERSATION

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PGCVRT XCT      ADSF      /IS 'A/D DONE' FLAG SET?
        JMP      EXIT      /NO, EXIT
        ISZ      CNTRA      /INCREMENT THE LOOP CNTR,
        NOP
        LAW      -1
        DAC      FLGDRV      /SET 'FLAG DRIVEN' INDICATOR
        JMS      CKWCSF      /CHECK FOR AN ILLEGAL W,C, FLAG,
        JMS      CKMSSF      /CHECK FOR AN ILLEGAL MEM, OFLO FLAG,
        XCT      ADRS      /READ 'ADF15' STATUS REGISTER
        AND      (177      /MASK OUT CHANNEL

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,EJECT

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00117 R 541233 R SAD CHANEL /CORRECT CHANNEL?
00120 R 600123 R JMP ,+3 /YES, CONTINUE
00121 R 100513 R JMS ERRMES /NO, WRONG CHANNEL IN STATUS REG
00122 R 000003 A 3 /ERROR CODE #3
00123 R 400036 R XCT ADCF /CLEAR ALL 'A/D' FLAGS
00124 R 201257 R LAC (SEQTST
00125 R 040104 R DAC DSTSW1 /SET UP TO TEST 'SEQUENTIAL' MODE
00126 R 160042 R DZM* WC24
00127 R 777601 A LAW =177
00130 R 060044 R DAC* WC26 /'127' CONVERSIONS
00131 R 777600 A LAW =200
00132 R 041240 R DAC CNTR1
00133 R 201260 R LAC (DATABUF-1
00134 R 060045 R DAC* CA27 /DATA BUFFER ADDRESS-1
00135 R 201261 R LAC (DATABUF
00136 R 041241 R DAC TEMP1
00137 R 201262 R LAC (377777
00140 R 061241 R DAC* TEMP1 /PRE-LOAD DATA BUFFER
00141 R 441241 R ISZ TEMP1
00142 R 441240 R ISZ CNTR1
00143 R 600140 R JMP ,=3
00144 R 100634 R JMS HOLDSW /CHECK FOR HOLD SWITCH
00145 R 201263 R LAC (402200 /GAIN=4, MULTI CYCLE, SEQ,, CHA, #0
00146 R 400033 R XCT ADCV /START CONVERSION
00147 R 201256 R LAC (177
00150 R 041233 R DAC CHANEL /TO CHA, 128
00151 R 201236 R EXIT LAC FLGDRV /ANY A/D FLAGS SET?
00152 R 741200 A SNA
00153 R 600544 R JMP NOFLAG /EXIT
00154 R 705512 A RPL /YES
00155 R 751100 A SPA:CLA /IS 'API' ON?
00156 R 201234 R LAC SAVEAC /YES, RESTORE THE AC,
00157 R 703344 A DBR /NO, EXIT
00160 R 620076 R JMP* SERVICE

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/ENTER HERE AFTER TAKING ALL 'SEQUENTIAL' CONVERSIONS.

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00161 R 100613 R SEQTST JMS CKMSSE /CHECK FOR AN ILLEGAL MEM, FLAG,
00162 R 400040 R XCT WCSF /W,C, OVRFLOW FLAG SET,
00163 R 600151 R JMP EXIT /NO, EXIT
00164 R 777777 A LAW =1
00165 R 041236 R DAC FLGDRV /SET 'FLAG DRIVEN' INDICATOR
00166 R 400036 R XCT ADCF /CLEAR ALL A/D FLAGS
00167 R 220044 R LAC* WC26
00170 R 741200 A SNA /IS W,C, #26 = '0'
00171 R 600174 R JMP ,+3 /YES
00172 R 100513 R JMS ERRMES /W,C, 26 ISN'T '0'
00173 R 000004 A 4 /ERROR CODE #4
00174 R 400035 R XCT ADRS
00175 R 501256 R AND (177 /MASK CHANNEL
00176 R 541256 R SAD (177 /CHANNEL CORRECT?
00177 R 600202 R JMP ,+3 /YES, CONTINUE
00200 R 100513 R JMS ERRMES /NO, WRONG CHANNEL IN STATUS REG,

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00201 R 000003 A

3
EJECT

/ERROR CODE #3

00202	R	201026	R	LAC	DATABUF	
00203	R	541262	R	SAD	(377777	
00204	R	741000	A	SKP		
00205	R	600210	R	JMP	,+3	
00206	R	100513	R	JMS	ERRMES	/DATA BUFFER UNCHANGED
00207	R	000005	A	5		/ERROR CODE #5
00210	R	201224	R	LAC	DATABUF+176	
00211	R	541262	R	SAD	(377777	/WAS THE LAST BUFFER CHANGED?
00212	R	741000	A	SKP		/NO, ERROR
00213	R	600216	R	JMP	,+3	/YES, CONTINUE
00214	R	100513	R	JMS	ERRMES	/DATA BUFFER UNCHANGED
00215	R	000005	A	5		/ERROR CODE #5
00216	R	201225	R	LAC	DATABUF+177	
00217	R	541262	R	SAD	(377777	/CHECK FOR AN EXTRA CONVERSION
00220	R	600223	R	JMP	,+3	
00221	R	100513	R	JMS	ERRMES	/ERROR LAST DATA BUFFER+1 MODIFIED
00222	R	000006	A	6		/ERROR CODE #6
00223	R	740000	A	NOP		/TEST LOCATION FOR 'DBK'
00224	R	201264	R	LAC	(RANTST	
00225	R	040104	R	DAC	DSTSW1	/SET UP FOR 'RANDOM' MODE
00226	R	201265	R	LAC	(STAWRD	
00227	R	041241	R	DAC	TEMP1	/=TO STATUS WORD BUFFER,
00230	R	201266	R	LAC	(002000	/GAIN=1, MULTI-CYCLE, RAN,, CHA #0
00231	R	100622	R	JMS	SETSTA	/SET UP '10' STAWRD'S
00232	R	201267	R	LAC	(202001	/CHA #1
00233	R	100622	R	JMS	SETSTA	
00234	R	201270	R	LAC	(402002	/CHA #2
00235	R	100622	R	JMS	SETSTA	
00236	R	201271	R	LAC	(602003	/CHA #3
00237	R	100622	R	JMS	SETSTA	
00240	R	201272	R	LAC	(602420	/CHA #20
00241	R	100622	R	JMS	SETSTA	
00242	R	201273	R	LAC	(402007	/=TO CHA, #7
00243	R	100622	R	JMS	SETSTA	
00244	R	201274	R	LAC	(102077	/=TO CHA, #77
00245	R	100622	R	JMS	SETSTA	
00246	R	201275	R	LAC	(602005	/=TO CHA, #5
00247	R	100622	R	JMS	SETSTA	
00250	R	201276	R	LAC	(002033	
00251	R	061241	R	DAC*	TEMP1	/=TO THE LAST STATUS WORD, #81
00252	R	441241	R	ISZ	TEMP1	
00253	R	201276	R	LAC	(002033	/WORD #82 =TO CH, 33
00254	R	061241	R	DAC*	TEMP1	
00255	R	777655	A	LAW	=123	
00256	R	060042	R	DAC*	WC24	/SET UP FOR 81 CONVERSIONS
00257	R	201277	R	LAC	(STAWRD=1	
00260	R	060043	R	DAC*	CA25	/STATUS WORD ADDRESS=1
00261	R	777657	A	LAW	=121	
00262	R	060044	R	DAC*	WC26	
00263	R	201260	R	LAC	(DATABUF-1	/DATA BUFFER ADDRESS =1
00264	R	060045	R	DAC*	CA27	
00265	R	201300	R	LAC	(33	
00266	R	041233	R	DAC	CHANNEL	/=TO CHANNEL #33

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00267 R 777777 A      LAW      =1
00270 R 041146 R      DAC      DATABUF+120      /PRE-LOAD DATA BUFFER
00271 R 041147 R      DAC      DATABUF+121
00272 R 041150 R      DAC      DATABUF+122
00273 R 100634 R      JMS      HOLDSW      /CHECK FOR HOLD SWITCH
00274 R 200666 R      LAC      STAWRD
00275 R 400033 R      XCT      ADCV      /START 'RANDOM' CONVERSIONS
00276 R 600151 R      JMP      EXIT
/ENTER HERE AFTER TAKING ALL 'RANDOM' CONVERSIONS
/
00277 R 100613 R      RANTST JMS      CKMSSE      /CHECK FOR AN ILLEGAL MEM. FLAG,
00300 R 400040 R      XCT      WCSF      /W,C, OVRFLOW FLAG SET?
00301 R 600151 R      JMP      EXIT      /NO, EXIT
00302 R 777777 A      LAW      =1
00303 R 041236 R      DAC      FLGDRY      /SET 'FLAG DRIVEN' INDICATOR
00304 R 400036 R      XCT      ADCF      /CLEAR ALL A/D FLAGS
00305 R 400035 R      XCT      ADRS      /READ 'ADF15' STATUS REGISTER
00306 R 501256 R      AND      (177      /MASK OUT CHANNEL
00307 R 541233 R      SAD      CHANNEL      /CHANNEL RIGHT
00310 R 600313 R      JMP      ,+3      /YES
00311 R 100513 R      JMS      ERRMES      /WRONG CHANNEL IN STATUS
00312 R 000003 A      3      /ERROR CODE #3
00313 R 201146 R      LAC      DATABUF+120
00314 R 541301 R      SAD      (=1      /WAS DATA BUFFER CHANGED?
00315 R 741000 A      SKP      /NO, REPORT ERROR
00316 R 600321 R      JMP      ,+3      /YES, CONTINUE
00317 R 100513 R      JMS      ERRMES      /DATA BUFFER UNCHANGED VIA RAN, CNVRT,
00320 R 000005 A      5      /ERROR CODE #5
00321 R 201147 R      LAC      DATABUF+121
00322 R 541301 R      SAD      (=1
00323 R 600326 R      JMP      ,+3
00324 R 100513 R      JMS      ERRMES      /ERROR, DATA BUFFER+82 WAS MODIFIED
00325 R 000006 A      6      /ERROR CODE #6
00326 R 740000 A      NOP
00327 R 201302 R      LAC      (ADDMEM
00330 R 040104 R      DAC      DSTSW1      /SET UP FOR THE ADD TO MEM. TEST,
00331 R 141026 R      DZM      DATABUF      /PRE-LOAD DATA BUFFER
00332 R 141027 R      DZM      DATABUF+1
00333 R 141030 R      DZM      DATABUF+2
00334 R 141031 R      DZM      DATABUF+3
00335 R 141032 R      DZM      DATABUF+4
00336 R 201262 R      LAC      (377777
00337 R 041033 R      DAC      DATABUF+5
00340 R 041034 R      DAC      DATABUF+6
00341 R 041035 R      DAC      DATABUF+7
00342 R 201303 R      LAC      (006401      /GAIN=1, MEM, OVRFLOW, ADD TO MEM,
00343 R 040666 R      DAC      STAWRD
00344 R 040667 R      DAC      STAWRD+1
00345 R 040670 R      DAC      STAWRD+2
00346 R 040671 R      DAC      STAWRD+3
00347 R 040672 R      DAC      STAWRD+4
00350 R 040673 R      DAC      STAWRD+5
00351 R 040674 R      DAC      STAWRD+6

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00352 R 040675 R DAC STAWRD+7
00353 R 777767 A LAW -11
00354 R 060042 R DAC* WC24
00355 R 201277 R LAC (STAWRD=1
00356 R 060043 R DAC* CA25
00357 R 777770 A LAW -10 /SET UP FOR '8' CONVERSIONS,
00360 R 060044 R DAC* WC26
00361 R 201260 R LAC (DATABUF=1
00362 R 060045 R DAC* CA27
00363 R 201254 R LAC (1
00364 R 041233 R DAC CHANNEL /=TO CHANNEL #1
00365 R 100634 R JMS HOLDSW /CHECK FOR HOLD SWITCH
00366 R 200666 R LAC STAWRD
00367 R 400033 R XCT ADCV /START ADD TO MEM, TEST,
00370 R 600151 R JMP EXIT

/ENTER HERE FOR THE 'ADD TO MEMORY' TEST
00371 R 100604 R ADDMEM JMS CKWCSE /CHECK FOR AN ILLEGAL W,C, FLAG,
00372 R 400041 R XCT MSSF /MEM, OVRFLOW FLAG SET?
00373 R 600151 R JMP EXIT
00374 R 777777 A LAW -1
00375 R 041236 R DAC FLGDRV /SET 'FLAG DRIVEN' INDICATOR
00376 R 400036 R XCT ADCF /CLEAR ALL 'A/D' FLAGS,
00377 R 400041 R XCT MSSF /DID THE MEM, OVRFLOW FLAG CLEAR?
00400 R 600403 R JMP ,+3 /YES, CONTINUE
00401 R 100513 R JMS ERRMES /NO, ADCF DIDN'T CLEAR MEM, FLAG,
00402 R 000012 A 12 /ERROR CODE #12
00403 R 400034 R XCT ADRB /READ DATA BUFFER
00404 R 341262 R TAD (377777 /ADD CONSTANT
00405 R 541033 R SAD DATABUF+5 /IS RESULT = TO DATA BUFFER?
00406 R 600411 R JMP ,+3 /YES
00407 R 100513 R JMS ERRMES /NO, ADD TO MEM, FAILED
00410 R 000011 A 11 /ERROR CODE #11
00411 R 201304 R LAC (NOISE
00412 R 040104 R DAC DSTSW1 /SET UP FOR NOISE TEST
00413 R 777634 A LAW -144
00414 R 041240 R DAC CNTR1 /SET UP '100' CONVERSIONS
00415 R 201261 R LAC (DATABUF
00416 R 041241 R DAC TEMP1
00417 R 100634 R JMS HOLDSW /CHECK FOR HOLD SWITCH
00420 R 201254 R RAN1 LAC (000001 /GAIN=1, PROG CONTROL, CHA, #1
00421 R 400033 R XCT ADCV /START CONVERSION
00422 R 600151 R JMP EXIT

/ENTER HERE FOR 'NOISE' TEST
00423 R 100604 R NOISE JMS CKWCSE /CHECK FOR W,C, FLAG,
00424 R 100613 R JMS CKMSSF /CHECK FOR MEM, FLAG
00425 R 400037 R XCT ADSF /DONE FLAG SET?
00426 R 600151 R JMP EXIT /NO, EXIT
00427 R 777777 A LAW -1
00430 R 041236 R DAC FLGDRV /SET 'FLAG DRIVEN' INDICATOR
00431 R 400036 R XCT ADCF /CLEAR ALL A/D FLAGS
00432 R 400034 R XCT ADRB /READ DATA BUFFER
00433 R 061241 R DAC* TEMP1 /SAVE IT
00434 R 441241 R ISZ TEMP1

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00435 R 441240 R      ISZ      CNTR1      /FINISHED '100' CONVERSIONS?
00436 R 600420 R      JMP      RAN1      /NO, START NEXT CONVERSION
00437 R 740000 A      NOP
00440 R 201261 R      LAC      (DATABUF
00441 R 041241 R      DAC      TEMP1
00442 R 777634 A      LAW      =144
00443 R 041240 R      DAC      CNTR1
00444 R 201026 R      LAC      DATABUF
00445 R 341305 R      TAD      (5      /ADD '5' TO 1ST CONVERSION VALUE
00446 R 740001 A      CMA
00447 R 341254 R      TAD      (1
00450 R 041242 R      DAC      TEMP2      /SAVE ITS COMPLIMENT
00451 R 201026 R      LAC      DATABUF
00452 R 341306 R      TAD      (-5     /ADD '-5' TO 1ST CONVERSION VALUE
00453 R 740001 A      CMA
00454 R 341254 R      TAD      (1
00455 R 041243 R      DAC      TEMP3      /SAVE ITS COMPLIMENT
00456 R 201242 R      NOISE1 LAC      TEMP2
00457 R 361241 R      TAD*     TEMP1
00460 R 740100 A      SMA
00461 R 100566 R      JMS      ERROR7    /IS VALUE LESS THAN HIGH LIMIT
00462 R 201243 R      LAC      TEMP3      /NO, CONVERSION OUT OF SPEC
00463 R 361241 R      TAD*     TEMP1
00464 R 741300 A      SZA!SPA
00465 R 100566 R      JMS      ERROR7    /IS VALUE GREATER THAN LOW LIMIT
00466 R 441241 R      ISZ      TEMP1      /NO, VALUE OUT OF SPEC
00467 R 441240 R      ISZ      CNTR1
00470 R 600456 R      NOISE2 JMP      NOISE1    /CHECKED ALL VALUES?
00471 R 201307 R      LAC      (+2     /NO, COMPARE NEXT CONVERSION
00472 R 040104 R      DAC      DSTSW1    /SET UP STALL
00473 R 100651 R      JMS      STALL
00474 R 201253 R      LAC      (PGCVRT
00475 R 040104 R      DAC      DSTSW1    /START STALL SEQ.
00476 R 441246 R      ISZ      RUNCTR
00477 R 741000 A      SKP
00500 R 600507 R      JMP      EXITM4    /SET DISTRIBUTION SWITCH FOR P.C, TEST
00501 R 100634 R      JMS      HOLDSW
00502 R 201310 R      LAC      (400610 /FINISHED TEST?
00503 R 400033 R      XCT      ADCV      /NO, LOOP AGAIN
00504 R 201311 R      LAC      (10     /YES, TYPE DONE,
00505 R 041233 R      DAC      CHANEL    /CHECK FOR HOLD SWITCH
00506 R 600151 R      JMP      EXIT      /GAIN=4, PROG CONTROL, ADD TO MEM., CHA 10
00507 R 777774 A      EXITM4  LAW      =4      /START NEXT CONVERSION
00510 R 040020 R      DAC      SYSERR
00511 R 140021 R      DZM      SYSERR+1 /SET UP TO TYPE 'DONE'
00512 R 600151 R      JMP      EXIT
/
/ERROR EXIT FOR ERRORS #1, #2, #3, #4, #5, AND #6
/
ERRMES 0
00513 R 000000 A      DAC      SAVACC    /SAVE CONTENTS OF AC
00514 R 041235 R      LAC*     ERRMES
00515 R 220513 R      DAC      ERCODE
00516 R 040022 R

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00517 R 201312 R LAC (NOISE2
00520 R 040104 R DAC DSTSW1 /RESET DISTRIBUTION SWITCH,
00521 R 777776 A LAW -2
00522 R 040020 R DAC SYSERR /SET ERROR INDICATOR
00523 R 777772 A LAW -6
00524 R 040021 R DAC ERCODE-1 /6 DATA WORDS
00525 R 201235 R LAC SAVACC
00526 R 040023 R DAC ERCODE+1 /#2, CONTENTS OF AC
00527 R 400035 R XCT ADRS /#3, 'ADF15' STATUS REG
00530 R 040024 R DAC ERCODE+2
00531 R 201233 R LAC CHANEL /#4, CURRENT CHANNEL
00532 R 040025 R DAC ERCODE+3
00533 R 220042 R LAC* WC24 /#5, CONTENTS OF W.C. #24
00534 R 040026 R DAC ERCODE+4
00535 R 220044 R LAC* WC26 /#6, CONTENTS OF W.C. #26
00536 R 040027 R DAC ERCODE+5
00537 R 400036 R XCT ADCF /CLEAR ALL A/D FLAGS,
00540 R 600154 R JMP EXIT+3
/SET UP FOR A "-5" EXIT
/
00541 R 777773 A EXITM5 LAW -5
00542 R 040020 R DAC SYSERR
00543 R 600154 R JMP EXIT+3
/
/EXIT FOR A 'NO-FLAG' CONDITION
/
00544 R 705512 A NOFLAG RPL /TEST FOR 'API'
00545 R 741100 A SPA /IS 'API' ON?
00546 R 100552 R JMS ERR10 /YES, 'API' ERROR
00547 R 777777 A LAW -1 /NO
00550 R 703344 A DBR
00551 R 620076 R JMP* SERVICE /NORMAL EXIT
/
/ERROR #10, API INTERRUPTED WITH NO FLAGS SET
/
00552 R 000000 A ERR10 0
00553 R 777776 A LAW -2 /SET UP ERROR 10
00554 R 040020 R DAC SYSERR
00555 R 201311 R LAC (10 /ERROR CODE, 'API' ERROR
00556 R 040022 R DAC ERCODE
00557 R 400035 R XCT ADRS
00560 R 040023 R DAC ERCODE+1
00561 R 201247 R LAC CNTRA
00562 R 040024 R DAC ERCODE+2
00563 R 777775 A LAW -3
00564 R 040021 R DAC ERCODE-1
00565 R 600154 R JMP EXIT+3
/
/ERROR #7, DATA NOISE ERROR, CONVERSION'S OUT OF SPEC,
/
00566 R 000000 A ERROR7 0
00567 R 201312 R LAC (NOISE2
00570 R 040104 R DAC DSTSW1 /SET DISTRIBUTION SW FOR NEXT TEST,

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00571 R 777776 A
00572 R 040020 R
00573 R 201313 R
00574 R 040022 R
00575 R 777775 A
00576 R 040021 R
00577 R 201026 R
00600 R 040023 R
00601 R 221241 R
00602 R 040024 R
00603 R 600154 R

LAW -2
DAC SYSERR
LAC (7
DAC ERCODE /ERROR CODE #7
LAW -3
DAC ERCODE-1
LAC DATABUF
DAC ERCODE+1 /1ST CONVERSION VALUE
LAC* TEMP1
DAC ERCODE+2 /2ND CONVERSION VALUE
JMP EXIT+3
/
EJECT

/CHECK FOR AN ILLEGAL 'WORD COUNT' OVRFLOW FLAG.

```

00604 R 000000 A CKWCSF 0
00605 R 400040 R XCT WCSF /IS THE W,C, FLAG SET?
00606 R 620604 R JMP* CKWCSE /NO, EXIT
00607 R 777777 A LAW -1
00610 R 041236 R DAC FLGDRV /YES, SET FLAG INDICATOR.
00611 R 100513 R JMS ERRMES /ERROR, ILLEGAL W,C, FLAG.
00612 R 000001 A 1 /ERROR CODE #1

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/CHECK FOR AN ILLEGAL 'MEM, OVRFLOW' FLAG.

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00613 R 000000 A CKMSSF 0
00614 R 400041 R XCT MSSF /IS THE MEM, FLAG SET?
00615 R 620613 R JMP* CKMSSF /NO, EXIT
00616 R 777777 A LAW -1
00617 R 041236 R DAC FLGDRV /YES, SET FLAG INDICATOR.
00620 R 100513 R JMS ERRMES /ERROR, ILLEGAL MEM, OVRFLOW FLAG.
00621 R 000002 A 2 /ERROR CODE #2

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/SET UP '10' RANDOM STATUS WORDS ON ENTRY.

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00622 R 000000 A SETSTA 0
00623 R 041250 R DAC SAVSTA /SAVE THE STATUS WORD.
00624 R 777766 A LAW -12
00625 R 041240 R DAC CNTR1 /SET UP FOR 10 WORDS.
00626 R 201250 R LAC SAVSTA
00627 R 061241 R DAC* TEMP1 /SAVE IN STATUS BUFFER.
00630 R 441241 R ISZ TEMP1
00631 R 441240 R ISZ CNTR1
00632 R 600626 R JMP , -4
00633 R 620622 R JMP* SETSTA

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/TEST FOR DATA SW5 WHICH INHIBITS THE 'ADF15' TEST

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00634 R 000000 A HOLDSW 0
00635 R 750004 A LAS
00636 R 500010 R AND DATASW /DATA SW5
00637 R 741200 A SNA /IS SWITCH SET?
00640 R 620634 R JMP* HOLDSW /NO, CONTINUE
00641 R 200104 R LAC DSTSW1 /YES
00642 R 041245 R DAC SAVDST /SAVE RETURN ADDRSS
00643 R 201314 R LAC (HOLD,1
00644 R 040104 R DAC DSTSW1
00645 R 600541 R JMP EXITM5 /EXIT '-5'
00646 R 201245 R HOLD,1 LAC SAVDST
00647 R 040104 R DAC DSTSW1 /RESTORE RETURN ADDRESS
00650 R 600635 R JMP HOLDSW+1 /RE-TEST SWITCH

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,EJECT

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00651 R 000000 A STALL 0
00652 R 441251 R ISZ STALCT
00653 R 600541 R JMP EXITM5
00654 R 201252 R LAC DELAYS
00655 R 740001 A CMA
00656 R 041252 R DAC DELAYS
00657 R 740200 A SZA /STALL EVERY OTHER PASS
00660 R 600603 R JMP ,+3 /SET UP STALL
00661 R 777777 A LAW -1 /SET UP SKIP
00662 R 741000 A SKP
00663 R 777775 A LAW -3
00664 R 041251 R DAC STALCT
00665 R 620651 R JMP# STALL

00666 R A STAWRD ,BLOCK 140 /STATUS WORD LOCATIONS

01026 R A DATABUF ,BLOCK 205 /DATA STORAGE TABLE

01233 R 000000 A CHANEL 0
01234 R 000000 A SAVEAC 0
01235 R 000000 A SAVACC 0
01236 R 000000 A FLGDRV 0
01237 R 000000 A WAITCT 0
01240 R 000000 A CNTR1 0
01241 R 000000 A TEMP1 0
01242 R 000000 A TEMP2 0
01243 R 000000 A TEMP3 0
01244 R 000000 A SAVDSW 0
01245 R 000000 A SAVDST 0
01246 R 000000 A RUNCTR 0
01247 R 000000 A CNTRA 0
01250 R 000000 A SAVSTA 0
01251 R 000000 A STALCT 0
01252 R 000000 A DELAYS 0

000000 R ,END USERSW

01253 R 000105 R *L
01254 R 000001 A *L
01255 R 200001 A *L
01256 R 000177 A *L
01257 R 000161 R *L
01260 R 001025 R *L
01261 R 001026 R *L
01262 R 377777 A *L
01263 R 402200 A *L
01264 R 000277 R *L
01265 R 000666 R *L
01266 R 002000 A *L
01267 R 202001 A *L
01270 R 402002 A *L
01271 R 602003 A *L
01272 R 602420 A *L
01273 R 402007 A *L

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01274 R 102077 A *L
01275 R 602005 A *L
01276 R 002033 A *L
01277 R 000665 R *L
01300 R 000033 A *L
01301 R 777777 A *L
01302 R 000371 R *L
01303 R 006401 A *L
01304 R 000423 R *L
01305 R 000005 A *L
01306 R 777773 A *L
01307 R 000473 R *L
01310 R 400610 A *L
01311 R 000010 A *L
01312 R 000471 R *L
01313 R 000007 A *L
01314 R 000646 R *L

SIZE=01323

NO ERROR LINES

ADCF	00036	R	ADCV	00033	R	ADMEM	00371	R	ADRB	00034	R
ADRS	00035	R	ADSF	00037	R	CA25	00043	R	CA27	00045	R
CHANEL	01233	R	CKMSSF	00613	R	CKWCSF	00604	R	CNTRA	01247	R
CNTR1	01240	R	DATABU	01026	R	DATASW	00010	R	DELAYS	01252	R
DSTSW1	00104	R	EBA	707764	A	EEM	707702	A	ERCODE	00022	R
ERRMES	00513	R	ERROR7	00566	R	ERR10	00552	R	EXIT	00151	R
EXITM4	00507	R	EXITM5	00541	R	FLGDRV	01236	R	HOLDSW	00634	R
HOLD,1	00646	R	INIT	00046	R	MSSF	00041	R	NOFLAG	00544	R
NOISE	00423	R	NOISE1	00456	R	NOISE2	00471	R	PGCVRT	00105	R
RANIST	00277	R	RAN1	00420	R	RPL	705512	A	RUNCTR	01246	R
SAVACC	01235	R	SAVDST	01245	R	SAVDSW	01244	R	SAVEAC	01234	R
SAVSTA	01250	R	SEQTST	00161	R	SERVCE	00076	R	SETSTA	00622	R
STALCT	01251	R	STALL	00651	R	STAWRD	00666	R	SYSERR	00020	R
TEMP1	01241	R	TEMP2	01242	R	TEMP3	01243	R	USERSW	00000	R
WAITCT	01237	R	WCSF	00040	R	WC24	00042	R	WC26	00044	R

USERSW	00000	R	DATASW	00010	R	SYSERR	00020	R	ERCODE	00022	R
ADCV	00033	R	ADRB	00034	R	ADRS	00035	R	ADCF	00036	R
ADSF	00037	R	WCSE	00040	R	MSSF	00041	R	WC24	00042	R
CA25	00043	R	WC26	00044	R	CA27	00045	R	INIT	00046	R
SERVICE	00076	R	DSTSW1	00104	R	PGCVRT	00105	R	EXIT	00151	R
SEOTST	00161	R	RANTST	00277	R	ADDMEM	00371	R	RAN1	00420	R
NOISE	00423	R	NOISE1	00456	R	NOISE2	00471	R	EXITM4	00507	R
ERRMES	00513	R	EXITM5	00541	R	NOFLAG	00544	R	ERR10	00552	R
ERROR7	00566	R	CKWCSF	00604	R	CKMSSF	00613	R	SETSTA	00622	R
HOLDSW	00634	R	HOLD.1	00646	R	STALL	00651	R	STAWRD	00666	R
DATABU	01026	R	CHANEL	01233	R	SAVEAC	01234	R	SAVACC	01235	R
FLGDRV	01236	R	WAITCT	01237	R	CNTR1	01240	R	TEMP1	01241	R
TEMP2	01242	R	TEMP3	01243	R	SAVQSW	01244	R	SAVDST	01245	R
RUNCTR	01246	R	CNTRA	01247	R	SAVSTA	01250	R	STALCT	01251	R
DELAYS	01252	R	RPL	705512	A	EEM	707702	A	EBA	707764	A