

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 1

```

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEMENT BOARD -> DM8E50
/      E. LOPES CARDOZO
/      WESTVRIES COMPUTER CONSULTING BV
/      RIJKSSTRAATWEG 19A
/      1969 LB HEEMSKERK
/      02510 - 43244

```

/SYMBOL DEFINITIONS: NEW DEFINITIONS IOTS FOR V50

```

6254 SINT=6254
6274 SUF=6274
6204 CINT=6204
6264 CUF=6264
/RTM=6205
/SKME=6215
/SKMM=6225
/LTM=6235
/LRM=6245
/SMME=6265
/CMME=6275
6304 RTM=6304
6314 SKME=6314
6324 SKMM=6324
6334 LTM=6334
6344 LRM=6344
6364 SMME=6364
6374 CMME=6374
6300 CTI=6300

```

/FOR PRODUCTION TEST DEFINE PRODUCTION:

0001 PRODUCTION=1

/INTERRUPT SERVICE ROUTINE:

```

0000 *0
000000 0000 0
000001 5020 JMP SERV

0020 *20
000020 3123 SERV, DCA AC /SAVE AC
000021 6254 SINT /TRAP ?
000022 5777' JMP INTERR /NO, ILLEGAL INTERRUPT
000023 6204 CINT /CLEAR TRAP FLAG
000024 6304 RTM /READ TRAP REGISTER
000025 3124 DCA TRAPD /THAT IS THE INSTR. THE HARDWARE SAW
000026 7240 CLA CMA
000027 1000 TAD 0
000030 3000 DCA 0 /BACKUP PC
000031 1400 TAD I 0 /GET TRAPPED INSTRUCTION FROM MEMORY
000032 7041 CIA /AND COMPARE TO
000033 1124 TAD TRAPD /TRAP REGISTER CONTENTS
000034 7640 SZA CLA /SHOULD BE EQUAL
000035 4776' JMS TRPERR /ERROR IN TRAP REGISTER
000036 1000 TAD 0 /DID WE TRAP THE SAFETY HLT ?
000037 1175 TAD (-HALT /
000040 7640 SZA CLA /?
000041 7040 CMA /NO, SET AC=-1

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000042 5443          JMP I ENDTRP   /BACK TO MAIN LOOP
000043 0042          ENDTRP, .-1      /CONTINUATION ADDRESS

/VIRTUAL CODE SEQUENCES:
000044 1574          RELTST, TAD I (7000   /RELOCATION TEST; GET DATAFIELD
000045 5051              JMP HALT          /EXIT FROM USER MODE

000046 5046          TRPTST, JMP .          /GETS IOT TO BE TESTED
000047 5051              JMP .+2          /FOR CIF: ENABLE INTERRUPTS
000050 6001              ION              /FOR SKON: REENABLE INTERRUPTS
000051 7402          HALT, HLT          /EXIT FROM USER MODE
000052 5052              JMP .          /*** IF HERE, HLT DID NOT TRAP ***

000053 1125          TTYTST, TAD BELL      /TEST TTY IN UNTRAPED MODE
000054 6046              TLS              /SEND A BELL TO THE CONSOLE
000055 6041              TSF              /WAIT TILL READY
000056 5055              JMP .-1          /

IFNDEF PRODUCTION <
    CLA              / >
IFDEF PRODUCTION <
000057 6032          KCC              /USED TO CLEAR THE AC
000060 7440          SZA              /DIDITDO ?
000061 5061              JMP .          /NO !!! *** UNTRAPPED KCC DID NOT CLA ***
000062 6042          TCF              /EXIT WITH TTY FLAG CLEAR
000063 6041          TSF              /DID THAT WORK ?
000064 7410          SKP              /YES
000065 5065          JMP .          /***TCF DID NOT CLEAR FLAG *** >
000066 5051          JMP HALT        /NOW EXIT FROM USER MODE

/MD-LINE TEST:
000067 3573          MDTST, DCA I (Q
000070 1573              TAD I (Q
000071 7001              IAC
000072 7440          SZA              /TEST ALL 4096 VALUES
000073 5067              JMP MDTST
000074 5051          JMP HALT
000075 0000          Q, 0

/CDTOIF TEST ROUTINE
000076 0000          CDTF, 0
000077 6300          CTI              /CDTOIF
000100 6202          CIF 0
000101 5476          JMP I CDTF

/RDF TEST ROUTINE:
000102 6214          TSTRDF, RDF
000103 1105          KK, TAD K0      /GET ACTUAL FIELD NUMBER
000104 5051          JMP HALT        /GOT THROUGH

000105 0000          K0, 0
000106 0001          K1, 1
000107 0002          K2, 2
000110 0003          K3, 3
000111 0004          K4, 4
000112 0005          K5, 5

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000113 0006 K6, 6  
000114 0007 K7, 7

/VARIABLES, COUNTERS AND POINTERS:

000115 0000 COUNT, 0  
000116 0000 COUNT1, 0  
000117 0000 COUNT2, 0  
000120 0000 COUNT3, 0  
000121 0000 PTR, 0  
000122 0000 FIELDS, 0 /NUMBER OF FIELDS AVAILABLE  
000123 0000 AC, 0  
000124 0000 TRAPD, 0  
000125 0207 BELL, 207

0200 PAGE

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```

000200 4777'          JMS INIT          /SETUP FIELDS
000201 6007          START, CAF
000202 6035          KIE                /DISABLE KEYBOARD INTERRUPTS
000203 4776'        LOOP0, JMS COPY      /MOVE PAGE 0 TO ALL FIELDS
000204 4775'          JMS IOTTST        /STATIC TEST OF DM8E40 IOTS
000205 1122          TAD FIELDS
000206 7041          CIA
000207 3115          DCA COUNT          /FOR ALL FIELDS
000210 1374          TAD (CDF
000211 3214          DCA FCDF           /SET A CDF TO EACH FIELD
000212 1115        LOOP1, TAD COUNT      /
000213 1122          TAD FIELDS
000214 6201        FCDF, CDF 0          //CDF0, CDF10, CDF 20, ...
000215 3773          DCA I (7000        //PUT THE FIELD NUMBER AT 7000
000216 6201          CDF 0             //RESTORE THE DATAFIELD
000217 1214          TAD FCDF           /MAKE A NEW CDF
000220 1372          TAD (10
000221 3214          DCA FCDF           /
000222 2115          ISZ COUNT          /ALL FIELDS DONE
000223 5212          JMP LOOP1          /

/NOW A SIMPLE RELOCATION TEST. WE SET UP A SEQUENCE OF
/RELOCATION AND THAN GO VIRTUAL, PICK UP THE FIELD
/CONSTANT FROM 7000 AND HLT, TO GET OUT OF USER MODE
/WE TRY TO TEST IF ALL WORDS OF THE RELOCATION RAM
/CAN TAKE ALL VALUES, AT LEAST ALL VALUES FOR WHICH
/THERE ARE FIELDS IN THE SYSTEM.

000224 1371          TAD (RET1          /SETUP TRAP RETURN ADDRESS
000225 3043          DCA ENDTRP         /
000226 1122          TAD FIELDS         /SET UP COUNTER FOR FIELDS
000227 7041          CIA
000230 3115          DCA COUNT          /
000231 1370        LOOP2, TAD (-10      /TEST ALL 8 WORDS OF THE RELOCATION RAM
000232 3116          DCA COUNT1        /
000233 1370        LOOP3, TAD (-10      /LOAD ALL WORDS OF THE RAM
000234 3117          DCA COUNT2        /
000235 1117        LOOP4, TAD COUNT2    /
000236 1372          TAD (10            /MAKE 0, 1, 2, ...
000237 6344          LRM                /SET ALL WORDS TO 0
000240 2117          ISZ COUNT2         /
000241 5235          JMP LOOP4          /
000242 1115          TAD COUNT          /
000243 1122          TAD FIELDS         /POSITIVE REAL FIELD #
000244 7106          CLL RTL            /
000245 7004          RAL                /SHIFT TO BITS 6-8
000246 1116          TAD COUNT1        /ADD VIRTUAL FIELD #
000247 1372          TAD (10            / (POSITIVE)
000250 6344          LRM                /THIS SETS ONE WORD
000251 1116          TAD COUNT1        /
000252 1372          TAD (10            /

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000253 1367          TAD (100          /USER MODE+VIRTUAL DATA FIELD
000254 6005          RTF              /RESTORE FLAGS
000255 7200          CLA              /?!
000256 5044          JMP RELTST        /JMP TO RELOCATION TEST
                /RELTST MUST BE AVAILABLE IN EACH FIELD
000257 7200          RET1,   CLA
000260 1123          TAD AC          /GET AC FROM TRAP
000261 7041          CIA              /AND COMPARE TO INTENDED FIELD #
000262 1115          TAD COUNT      /
000263 1122          TAD FIELDS     /
000264 7640          SZA CLA         /
000265 4766'        JMS RELERR      /RELOCATION ERROR
000266 2116          ISZ COUNT1     /
000267 5233          JMP LOOP3      /
000270 2115          ISZ COUNT      /
000271 5231          JMP LOOP2      /
                /END OF RELOCATION TEST. NOW COMES THE TRAP/UNTRAP TEST
                /IN EACH AVAILABLE FIELD WE TEST EACH IOT FROM THE TABLE
000272 1122          TAD FIELDS     /
000273 7041          CIA
000274 3115          DCA COUNT      /
000275 1370          LOOP5,  TAD (-10
000276 3116          DCA COUNT1     /ZERO THE RELOCATION RAM
000277 1115          LOOP6,  TAD COUNT /
000300 1122          TAD FIELDS     /
000301 7106          CLL RTL
000302 7004          RAL            /
000303 1116          TAD COUNT1     /
000304 1372          TAD (10          /MAKE ONE-TO-ONE MAPPING
000305 6344          LRM            /LOAD RELOCATION MEMORY
000306 2116          ISZ COUNT1     /
000307 5277          JMP LOOP6      /
000310 1115          TAD COUNT      /
000311 1122          TAD FIELDS     /
000312 7106          CLL RTL
000313 7004          RAL            /
000314 1374          TAD (CDF        /MAKE CDF
000315 3325          DCA XCDF        /CDF TO TARGET FIELD
000316 1365          TAD (TABLE      /SETP POINTER FOR IOT TABLE
000317 3121          DCA PTR         /
000320 1521          LOOP7,  TAD I PTR /
000321 3046          DCA TRPTST     /DROP IT IN THE TRAPTEST
000322 1364          TAD (RET2
000323 3043          DCA ENDTRP
000324 1046          TAD TRPTST     /
000325 6201          XCDF,   CDF      /CDF TARGET FIELD
000326 3763          DCA I (TRPTST  /IN THE TARGET FIELD TOO
000327 6201          CDF 0          /
000330 4762'        JMS UTRALL      /UNTRAP ALL DEVICE CODES
000331 1046          TAD TRPTST     /GET TEST IOT AGAIN
000332 0361          AND (7776      /CLEAR UNTRAP BIT
000333 6334          LTM            /AND SET DM8E40 TO TRAP FOR THIS IOT
000334 6274          SUF            /ENTER USER MODE
000335 6001          ION            /WITH INTERRUPT ON
000336 5046          JMP TRPTST     /THIS BRINGS US INTHE TARGET FIELD !

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 2-2

```

/-----
000337 2121  RET2,  ISZ PTR          /RETURN FROM TRAP HANDLER
000340 1521          TAD I PTR      /GET TRAP/UNTRAP INDICATOR
000341 7010          RAR              /BIT 11 IS XOR!
000342 7630          SZL CLA          /OK ?
000343 4760'        JMS TERROR      /TRAP ERROR
000344 1357          TAD (RET3
000345 3043          DCA ENDTRP     /SET NEW RETURN POINT
000346 4756'        JMS TRPALL     /TRAP ALL DEVICE CODES
000347 1046          TAD TRPTST
000350 0361          AND (7776
000351 7001          IAC            /SET UNTRBP BIT
000352 6334          LTM            /
000353 6274          SUF
000354 6001          ION
000355 5046          JMP TRPTST     /GO !

000356 1600
000357 0400
000360 1120
000361 7776
000362 1615
000363 0046
000364 0337
000365 2200
000366 1057
000367 0100
000370 7770
000371 0257
000372 0010
000373 7000
000374 6201
000375 0502
000376 0437
000377 2000
0400 PAGE
```

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```

/- - - - -
000400 2121  RET3,  ISZ PTR
000401 1521          TAD I PTR
000402 7010          RAR          /BIT 11 DOES XOR
000403 7630          SZL CLA          /OK ?
000404 4777'        JMS UERROR  /NO, UNTRAP ERROR
000405 2121          ISZ PTR          /SELECT NEXT IOT
000406 1521          TAD I PTR          /AND FETCH IT
000407 7640          SZA CLA          /END OF LIST ?
000410 5776'        JMP LOOP7   /NO, TEST NEXT IOT

IFNDEF FYSIOL <
/FINALY, WE TEST THE CONSOLE TERMINAL WITH IT'S IOTS UNTRAPPED:
000411 1375          TAD (RET4
000412 3043          DCA ENDTRP
000413 4774'        JMS TRPALL  /TRAP ALL DEVICE CODES,
000414 1373          TAD (6031    /EXCEPT FOR THE TERMINAL
000415 6334          LTM
000416 1372          TAD (6041    /
000417 6334          LTM          /
000420 6274          SUF
000421 6001          ION
000422 5053          JMP TTYTST  /

/- - - - -
000423 7300  RET4,  CLA CLL          / >
000424 1371          TAD (RET5
000425 3043          DCA ENDTRP
000426 6274          SUF
000427 6001          ION
000430 5067          JMP MDTST   /TEST ALL VALUES FOR MD DATA

/- - - - -
000431 7640  RET5,  SZA CLA          /SHOULD NOT TRAP
000432 4770'        JMS MDERR
000433 4767'        JMS RDFSTST /NOW EXERCIZE RDF IN USER MODE
000434 2115          ISZ COUNT    /SELECT NEXT TARGET FIELD
000435 5766'        JMP LOOP5    /NOT DONE YET
000436 5765'        JMP LOOP0    /START OVER AGAIN

000437 0000  COPY,  0
000440 1122          TAD FIELDS
000441 7041          CIA
000442 7001          IAC
000443 7450          SNA
000444 5637          JMP I COPY   /ONLY 4K
000445 3115          DCA COUNT
000446 7040  COPY1, CMA
000447 3010          DCA 10
000450 7040          CMA
000451 3011          DCA 11
000452 1115          TAD COUNT

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 3-1

```

000453 1122      TAD FIELDS
000454 7104      CLL RAL
000455 7006      RTL
000456 1364      TAD (CDF
000457 3264      DCA YCDF
000460 1363      TAD (-200
000461 3116      DCA COUNT1
000462 6201      COPY2, CDF 0
000463 1410      TAD I 10
000464 7402      YCDF,  HLT
000465 3411      DCA I 11
000466 2116      ISZ COUNT1
000467 5262      JMP COPY2
000470 1264      TAD YCDF
000471 0362      AND (70
000472 7112      CLL RTR
000473 7010      RAR
000474 1761      TAD I (KK
000475 3761      DCA I (KK
000476 6201      CDF 0
000477 2115      ISZ COUNT
000500 5246      JMP COPY1
000501 5637      JMP I COPY

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/STATIC IOT TST FOR DM8E40 INSTRUCTIONS:

```

000502 0000      IOTTST, 0
000503 1360      TAD (IOTLST-1 /SETUP LIST POINTER
000504 3010      DCA 10
000505 1410      TAD I 10      /FETCH FIRST IOT
000506 3310      IOT1,  DCA IOTX      /
000507 1357      TAD (5252      /GET A TEST PATERN IN THE AC
000510 7402      IOTX,  HLT      /REPLACED BY THE IOT UNDER TEST
000511 5317      JMP IOT2      /IOT DID NOT SKIP
000512 3123      DCA AC      /REMEBER AC AFTER IOT
000513 1410      TAD I 10      /GET SKIP FLAG
000514 7650      SNA CLA      /SHOULD HE HAVE SKIPPED ?
000515 4756'     JMS ERR1      /NO, BUT HE DID !
000516 5323      JMP IOT3      /GO CHECK AC EFFECTS
000517 3123      IOT2,  DCA AC      /REMEMBER AC
000520 1410      TAD I 10      /GET SKIP FLAG
000521 7640      SZA CLA      /SHOULD HE HAVE SKIPPED ?
000522 4755'     JMS ERR2      /YES, BUT HE DIDN'T !
000523 1410      IOT3,  TAD I 10      /GET AC-CHANGED FLAG
000524 7650      SNA CLA      /SHOULD AC HAVE CHANGED ?
000525 5335      JMP IOT4      /NO, GO CHECK THAT
000526 1410      TAD I 10      /YES, MUST AC BE CLEAR NOW ?
000527 7650      SNA CLA      /
000530 5341      JMP IOT5      /NO, UNDEFINED AC NOW
000531 1123      TAD AC      /YES, TEST AC
000532 7640      SZA CLA      /ZERO ?
000533 4754'     JMS ERR3      /NO, IOT DID NOT CLA !
000534 5341      JMP IOT5      /DONE ALL TESTS
000535 1123      IOT4,  TAD AC      /IF HERE AC SHOULD NOT HAVE CHANGED
000536 1353      TAD (-5252      /TEST IF STILL OK
000537 7640      SZA CLA      /

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```
000540 4752'      JMS ERR4      /IOT SPOILED AC
000541 1410      IOT5, TAD I 10      /GET NEXT IOT
000542 7440      SZA          /END OF LIST ?
000543 5306      JMP IOT1      /NO, TEST NEXT IOT
000544 4572      JMS I [CDTOIF /TEST 6200
000545 5702      JMP I IOTTST
```

```
000552 1344
000553 2526
000554 1324
000555 1306
000556 1267
000557 5252
000560 3226
000561 0103
000562 0070
000563 7600
000564 6201
000565 0203
000566 0275
000567 0600
000570 1245
000571 0431
000572 6041
000573 6031
000574 1600
000575 0423
000576 0320
000577 1200
0600
```

PAGE

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```

000600 0000   RDFTST,      0           /TEST RDF IN USER MODE
000601 4777'   JMS TRPALL
000602 1376   TAD (RET6
000603 3043   DCA ENDTRP
000604 1775   TAD I (XCDF   /SET DATAFIELD TO
000605 7040   CMA           /COMPLEMENT OF
000606 0374   AND (70       /REAL FIELD
000607 1373   TAD (CDF
000610 3222   DCA KCDF
000611 1372   TAD (-7
000612 3116   DCA COUNT1   /CHANGE MAPPING
000613 1222   LOOP8, TAD KCDF /
000614 0374   AND (70       /
000615 1116   TAD COUNT1   /
000616 1371   TAD (10      /
000617 6344   LRM          /
000620 2116   ISZ COUNT1   /
000621 5213   JMP LOOP8    /
000622 6271   KCDF, CDF 70
000623 6274   SUF
000624 6001   ION
000625 5102   JMP TSTRDF

/- - - - -
000626 7640   RET6, SZA CLA           /DID RDF TRAP ?
000627 4770'   JMS RDFER1   /YES, ERROR
000630 1222   TAD KCDF     /COMPUTE CORRECT AC
000631 0374   AND (70
000632 7421   MQL
000633 7501   MQA
000634 7040   CMA
000635 0374   AND (70
000636 7112   CLL RTR
000637 7010   RAR
000640 7501   MQA
000641 7041   CIA
000642 1123   TAD AC       /GET VIRTUAL AC
000643 7640   SZA CLA     / ?
000644 4767'   JMS RDFER2   /NO, AC WAS SPOILED !
000645 5600   JMP I RDFTST /RETURN

000767 1414
000770 1400
000771 0010
000772 7771
000773 6201
000774 0070
000775 0325
000776 0626
000777 1600

```

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```

                                /ERROR MESSAGE PROCESSORS:
001000 6007      INTERR, CAF
001001 6035          KIE
001002 4571          JMS I [STRING
001003 2516          TEXT /UNEXPECTED INTERRUPT/
001004 0530
001005 2005
001006 0324
001007 0504
001010 4011
001011 1624
001012 0522
001013 2225
001014 2024
001015 0000
001016 4570          JMS I [CRLF
001017 1123          TAD AC
001020 6244          RMF
001021 6001          ION
001022 5400          JMP I 0

001023 0000      TRPERR, 0
001024 4571          JMS I [STRING
001025 2422          TEXT /TRAP REGISTER WRONG: (PC-1)=/
001026 0120
001027 4022
001030 0507
001031 1123
001032 2405
001033 2240
001034 2722
001035 1716
001036 0772
001037 4050
001040 2003
001041 5561
001042 5175
001043 0000
001044 1400          TAD I 0
001045 4777'        JMS OCTOUT
001046 4571          JMS I [STRING
001047 5440          TEXT /, RTM=/
001050 2224
001051 1575
001052 0000
001053 1124          TAD TRAPD
001054 4777'        JMS OCTOUT
001055 4570          JMS I [CRLF
001056 5623          JMP I TRPERR
```

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 5-1

```
001057 0000      RELERR, 0
001060 4571          JMS I [STRING
001061 2205          TEXT /RELOCATION ERROR, GOOD FIELD=/
001062 1417
001063 0301
001064 2411
001065 1716
001066 4005
001067 2222
001070 1722
001071 5440
001072 0717
001073 1704
001074 4006
001075 1105
001076 1404
001077 7500
001100 1115          TAD COUNT
001101 1122          TAD FIELDS
001102 4777'        JMS OCTOUT
001103 4571          JMS I [STRING
001104 5440          TEXT /, ACTUAL FIELD=/
001105 0103
001106 2425
001107 0114
001110 4006
001111 1105
001112 1404
001113 7500
001114 1123          TAD AC
001115 4777'        JMS OCTOUT
001116 4570          JMS I [CRLF
001117 5657          JMP I RELERR

001120 0000      TERROR, 0
001121 1046          TAD TRPTST
001122 4777'        JMS OCTOUT
001123 1521          TAD I PTR
001124 7650          SNA CLA
001125 5340          JMP TER1
001126 4571          JMS I [STRING
001127 4006          TEXT / FAILED TO TRAP/
001130 0111
001131 1405
001132 0440
001133 2417
001134 4024
001135 2201
001136 2000
001137 5350          JMP TER2
001140 4571      TER1, JMS I [STRING
001141 4040          TEXT / DID TRAP /
001142 0411
001143 0440
```

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```
001144 4024
001145 2201
001146 2040
001147 0000
001150 4571 TER2, JMS I [STRING
001151 4011 TEXT / IN FIELD /
001152 1640
001153 0611
001154 0514
001155 0440
001156 0000
001157 1115 TAD COUNT
001160 1122 TAD FIELDS
001161 0376 AND (7
001162 1375 TAD ("0
001163 4774' JMS TYPE
001164 4570 JMS I [CRLF
001165 5720 JMP I ERROR

001174 2054
001175 0260
001176 0007
001177 1715
1200 PAGE
```

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```
001200 0000      UERROR,      0
001201 1046          TAD TRPTST
001202 4777'        JMS OCTOUT
001203 1521          TAD I PTR
001204 7640          SZA CLA
001205 5220          JMP UER1
001206 4571          JMS I [STRING
001207 4004          TEXT / DID NOT UNTRAP/
001210 1104
001211 4016
001212 1724
001213 4025
001214 1624
001215 2201
001216 2000
001217 5227          JMP UER2
001220 4571      UER1,      JMS I [STRING
001221 4004          TEXT / DID UNTRAP/
001222 1104
001223 4025
001224 1624
001225 2201
001226 2000
001227 4571      UER2,      JMS I [STRING
001230 4011          TEXT / IN FIELD /
001231 1640
001232 0611
001233 0514
001234 0440
001235 0000
001236 1115          TAD COUNT
001237 1122          TAD FIELDS
001240 0376          AND (7
001241 1375          TAD ("0
001242 4774'        JMS TYPE
001243 4570          JMS I [CRLF
001244 5600          JMP I UERROR

001245 0000      MDERR,      0
001246 4571          JMS I [STRING
001247 2422          TEXT /TRAPPED ON MEMORY DATA /
001250 0120
001251 2005
001252 0440
001253 1716
001254 4015
001255 0515
001256 1722
001257 3140
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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 6-1

```
001260 0401
001261 2401
001262 4000
001263 1075          TAD Q
001264 4777'        JMS OCTOUT
001265 4570          JMS I [CRLF
001266 5645          JMP I MDERR

001267 0000      ERR1, 0
001270 1773          TAD I (IOTX
001271 4567          JMS I [OCTOUT
001272 4571          JMS I [STRING
001273 4027          TEXT / WRONGLY SKIPPED/
001274 2217
001275 1607
001276 1431
001277 4023
001300 1311
001301 2020
001302 0504
001303 0000
001304 4570          JMS I [CRLF
001305 5667          JMP I ERR1

001306 0000      ERR2, 0
001307 1566          TAD I [IOTX
001310 4567          JMS I [OCTOUT
001311 4571          JMS I [STRING
001312 4006          TEXT / FAILED TO SKIP/
001313 0111
001314 1405
001315 0440
001316 2417
001317 4023
001320 1311
001321 2000
001322 4570          JMS I [CRLF
001323 5706          JMP I ERR2

001324 0000      ERR3, 0
001325 1566          TAD I [IOTX
001326 4567          JMS I [OCTOUT
001327 4571          JMS I [STRING
001330 4006          TEXT / FAILED TO CLEAR AC/
001331 0111
001332 1405
001333 0440
001334 2417
001335 4003
001336 1405
001337 0122
001340 4001
001341 0300
001342 4570          JMS I [CRLF
001343 5724          JMP I ERR3
```



/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 6-2

```
001344 0000 ERR4, 0
001345 1566 TAD I [IOTX
001346 4567 JMS I [OCTOUT
001347 4571 JMS I [STRING
001350 4023 TEXT / SPOILED THE AC/
001351 2017
001352 1114
001353 0504
001354 4024
001355 1005
001356 4001
001357 0300
001360 4570 JMS I [CRLF
001361 5744 JMP I ERR4
001373 0510
001374 2054
001375 0260
001376 0007
001377 1715
1400 PAGE
```

---

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 7

```
001400 0000      RDFER1, 0
001401 4571          JMS I [STRING
001402 2204          TEXT /RDF DID TRAP !/
001403 0640
001404 0411
001405 0440
001406 2422
001407 0120
001410 4041
001411 0000
001412 4570          JMS I [CRLF
001413 5600          JMP I RDFER1

001414 0000      RDFER2, 0
001415 4571          JMS I [STRING
001416 2204          TEXT /RDF RETURNED WRONG ANSWER: /
001417 0640
001420 2205
001421 2425
001422 2216
001423 0504
001424 4027
001425 2217
001426 1607
001427 4001
001430 1623
001431 2705
001432 2272
001433 4000
001434 1123          TAD AC
001435 4567          JMS I [OCTOUT
001436 4570          JMS I [CRLF
001437 5614          JMP I RDFER2

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```

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```

001600 0000 TRPALL, 0 /SUBROUTINE TO SET ALL BITS
001601 1377 TAD (-100 /IN THE TRAP MEMORY (EXCEPT 600X)
001602 3231 DCA TRPCNT
001603 1231 TRP1, TAD TRPCNT
001604 1376 TAD (100 /MAKE IT POSITIVE
001605 7104 CLL RAL
001606 7006 RTL
001607 6334 LTM /SET TO TRAP
001610 2231 ISZ TRPCNT /DONE ?
001611 5203 JMP TRP1 /NO
001612 1375 TAD (6001 /UNTRAP ION FOR 6215, 6225
001613 6334 LTM /
001614 5600 JMP I TRPALL /YES, RETURN

001615 0000 UTRALL, 0 /SUBROUTINE TO UNTRAP ALL DEVICE CODES
001616 1377 TAD (-100
001617 3231 DCA TRPCNT /
001620 1231 UTR1, TAD TRPCNT
001621 1376 TAD (100 /MAKE IT POTIVE
001622 7104 CLL RAL
001623 7006 RTL
001624 7001 IAC /SET UNTRAP BIT
001625 6334 LTM
001626 2231 ISZ TRPCNT /DONE ?
001627 5220 JMP UTR1 /NO
001630 5615 JMP I UTRALL /YES, RETURN

001631 0000 TRPCNT, 0

001632 0000 CDTOIF, 0 /TEST CDTOIF INSTRUCTION
001633 1122 TAD FIELDS /FOR ALL AVAILABLE FIELDS
001634 7041 CIA
001635 3116 DCA COUNT1 /
001636 1116 CDT1, TAD COUNT1
001637 1122 TAD FIELDS /MAKE POSITIVE FIELD NUMBER
001640 7104 CLL RAL
001641 7006 RTL
001642 1165 TAD [CIF
001643 3252 DCA CDT3 /
001644 1252 TAD CDT3
001645 7040 CMA /MAKE COMPLEMENTARY CDF
001646 0164 AND [70
001647 1163 TAD [CDF
001650 3251 DCA CDT2
001651 7402 CDT2, HLT /CDF
001652 7402 CDT3, HLT /CIF
001653 4076 JMS CDTF /DO CDTOIF IN SOME FIELD
001654 6214 RDF /READ DATA FIELD
001655 6201 CDF 0 /RESET DF

```

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 8-1

```
001656 7041      CIA
001657 1252      TAD CDT3      /AND COMPARE WITH PREVIOUS
001660 0164      AND [70          /INSTRUCTION FIELD
001661 7640      SZA CLA          /OK ?
001662 4774 '      JMS CDERR      /NO, CDTOIF DID NOT WORK
001663 2116      ISZ COUNT1    /TRY NEXT FIELD
001664 5236      JMP CDT1
001665 5632      JMP I CDTOIF    /END OF TEST
```

```
001666 0000      CRLF, 0
001667 1373      TAD (215
001670 4772 '      JMS TYPE
001671 1371      TAD (212
001672 4772 '      JMS TYPE
001673 5666      JMP I CRLF
```

```
001674 0000      STRING, 0
001675 1674      TAD I STRING
001676 7002      BSW
001677 4304      JMS BYTE
001700 1674      TAD I STRING
001701 2274      ISZ STRING
001702 4304      JMS BYTE
001703 5275      JMP STRING+1
```

```
001704 0000      BYTE, 0
001705 0370      AND (77
001706 7450      SNA
001707 5674      JMP I STRING
001710 1367      TAD (240
001711 0370      AND (77
001712 1367      TAD (240
001713 4772 '      JMS TYPE
001714 5704      JMP I BYTE
```

```
001715 0000      OCTOUT, 0
001716 7004      RAL
001717 4325      JMS DIGIT
001720 4325      JMS DIGIT
001721 4325      JMS DIGIT
001722 4325      JMS DIGIT
001723 7200      CLA
001724 5715      JMP I OCTOUT
```

```
001725 0000      DIGIT, 0
001726 7004      RAL
001727 7006      RTL
001730 3337      DCA OCTEMP
001731 1337      TAD OCTEMP
001732 0366      AND (7
001733 1365      TAD ("0
001734 4772 '      JMS TYPE
001735 1337      TAD OCTEMP
001736 5725      JMP I DIGIT
```

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 8-2

001737 0000 OCTEMP, 0

001765 0260

001766 0007

001767 0240

001770 0077

001771 0212

001772 2054

001773 0215

001774 2027

001775 6001

001776 0100

001777 7700

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```
002000 0000 INIT, 0
002001 4571 JMS I [STRING
002002 1011 TEXT /HIGHEST FIELD # ? /
002003 0710
002004 0523
002005 2440
002006 0611
002007 0514
002010 0440
002011 4340
002012 7740
002013 0000
002014 6031 KSF
002015 5214 JMP .-1
002016 6036 KRB
002017 6046 TLS
002020 6041 TSF
002021 5220 JMP .-1
002022 0377 AND (7
002023 7001 IAC
002024 3122 DCA FIELDS
002025 4570 JMS I [CRLF
002026 5600 JMP I INIT

002027 0000 CDTERR, 0
002030 4571 JMS I [STRING
002031 0304 TEXT /CDTOIF FAILED IN FIELD /
002032 2417
002033 1106
002034 4006
002035 0111
002036 1405
002037 0440
002040 1116
002041 4006
002042 1105
002043 1404
002044 4000
002045 1116 TAD COUNT1
002046 1122 TAD FIELDS
002047 0162 AND [7
002050 1161 TAD ["0
002051 4254 JMS TYPE
002052 4570 JMS I [CRLF
002053 5627 JMP I CDTERR

002054 0000 TYPE, 0
002055 6046 TLS
002056 6041 TSF
```

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 9-1

```
002057 5256          JMP  .-1
002060 7200          CLA
002061 6031          KSF
002062 5654          JMP I TYPE
002063 1376 CTRLQ,   TAD (7600
002064 6034          KRS
002065 1375          TAD (-7603
002066 7450          SNA
002067 5776          JMP I (7600
002070 1374          TAD (3-23
002071 7650          SNA CLA
002072 5275          JMP CTRLS
002073 6032          KCC
002074 5654          JMP I TYPE
002075 6032 CTRLS,   KCC
002076 6031          KSF
002077 5276          JMP  .-1
002100 5263          JMP CTRLQ
002174 7760
002175 0175
002176 7600
002177 0007
          2200 PAGE
```

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10

/THE IOT TABLE. THE FORMAT IS: IOT;SHOULD-TRAP-IF-TRAPPED;SHOULD-TRAP-  
/IF-UNTRAPPED. THE TABLE ENDS WITH IOT=0

```

          7777          Y=7777
          0000          N=0000
002200  6000  TABLE, 6000;Y;N
002201  7777
002202  0000
002203  6006          6006;N;N      /SGT
002204  0000
002205  0000

          IFDEF PRODUCTION <
002206  6010          6010;Y;N
002207  7777
002210  0000
002211  6020          6020;Y;N
002212  7777
002213  0000
002214  6030          6030;Y;N
002215  7777
002216  0000
002217  6040          6040;Y;N
002220  7777
002221  0000
002222  6050          6050;Y;N
002223  7777
002224  0000
002225  6060          6060;Y;N
002226  7777
002227  0000
002230  6070          6070;Y;N
002231  7777
002232  0000
002233  6100          6100;Y;N
002234  7777
002235  0000
002236  6110          6110;Y;N
002237  7777
002240  0000
002241  6120          6120;Y;N
002242  7777
002243  0000
002244  6130          6130;Y;N
002245  7777
002246  0000
002247  6140          6140;Y;N
002250  7777
002251  0000
002252  6150          6150;Y;N
```



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|        |      |          |              |
|--------|------|----------|--------------|
| 002253 | 7777 |          |              |
| 002254 | 0000 |          |              |
| 002255 | 6160 | 6160;Y;N |              |
| 002256 | 7777 |          |              |
| 002257 | 0000 |          |              |
| 002260 | 6170 | 6170;Y;N | / >          |
| 002261 | 7777 |          |              |
| 002262 | 0000 |          |              |
| 002263 | 6200 | 6200;Y;Y | /LXM         |
| 002264 | 7777 |          |              |
| 002265 | 7777 |          |              |
| 002266 | 6201 | 6201;Y;N | /CDF 000     |
| 002267 | 7777 |          |              |
| 002270 | 0000 |          |              |
| 002271 | 6202 | 6202;Y;N | /CIF 000     |
| 002272 | 7777 |          |              |
| 002273 | 0000 |          |              |
| 002274 | 6203 | 6203;Y;N | /CDF CIF 000 |
| 002275 | 7777 |          |              |
| 002276 | 0000 |          |              |
| 002277 | 6204 | 6204;Y;Y | /CINT        |
| 002300 | 7777 |          |              |
| 002301 | 7777 |          |              |
| 002302 | 6205 | 6205;Y;Y | /CDF 100     |
| 002303 | 7777 |          |              |
| 002304 | 7777 |          |              |
| 002305 | 6206 | 6206;Y;Y | /CIF 100     |
| 002306 | 7777 |          |              |
| 002307 | 7777 |          |              |
| 002310 | 6207 | 6207;Y;Y | /CDF CIF 100 |
| 002311 | 7777 |          |              |
| 002312 | 7777 |          |              |
| 002313 | 6210 | 6210;Y;Y | /GTS         |
| 002314 | 7777 |          |              |
| 002315 | 7777 |          |              |
| 002316 | 6211 | 6211;Y;N | /CDF 010     |
| 002317 | 7777 |          |              |
| 002320 | 0000 |          |              |
| 002321 | 6212 | 6212;Y;N | /CIF 010     |
| 002322 | 7777 |          |              |
| 002323 | 0000 |          |              |
| 002324 | 6213 | 6213;Y;N | /CDF CIF 010 |
| 002325 | 7777 |          |              |
| 002326 | 0000 |          |              |
| 002327 | 6214 | 6214;N;N | /RDF         |
| 002330 | 0000 |          |              |
| 002331 | 0000 |          |              |
| 002332 | 6215 | 6215;Y;Y | /CDF 110     |
| 002333 | 7777 |          |              |
| 002334 | 7777 |          |              |
| 002335 | 6216 | 6216;Y;Y | /CIF 110     |
| 002336 | 7777 |          |              |
| 002337 | 7777 |          |              |
| 002340 | 6217 | 6217;Y;Y | /CDF CIF 110 |
| 002341 | 7777 |          |              |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-2

|        |      |          |              |
|--------|------|----------|--------------|
| 002342 | 7777 |          |              |
| 002343 | 6220 | 6220;Y;Y | /RTS         |
| 002344 | 7777 |          |              |
| 002345 | 7777 |          |              |
| 002346 | 6221 | 6221;Y;N | /CDF 020     |
| 002347 | 7777 |          |              |
| 002350 | 0000 |          |              |
| 002351 | 6222 | 6222;Y;N | /CIF 020     |
| 002352 | 7777 |          |              |
| 002353 | 0000 |          |              |
| 002354 | 6223 | 6223;Y;N | /CDF CIF 030 |
| 002355 | 7777 |          |              |
| 002356 | 0000 |          |              |
| 002357 | 6224 | 6224;N;N | /RIF         |
| 002360 | 0000 |          |              |
| 002361 | 0000 |          |              |
| 002362 | 6225 | 6225;Y;Y | /CDF 120     |
| 002363 | 7777 |          |              |
| 002364 | 7777 |          |              |
| 002365 | 6226 | 6226;Y;Y | /CIF 120     |
| 002366 | 7777 |          |              |
| 002367 | 7777 |          |              |
| 002370 | 6227 | 6227;Y;Y | /CDF CIF 130 |
| 002371 | 7777 |          |              |
| 002372 | 7777 |          |              |
| 002373 | 6230 | 6230;Y;Y | /RXM         |
| 002374 | 7777 |          |              |
| 002375 | 7777 |          |              |
| 002376 | 6231 | 6231;Y;N | /CDF 030     |
| 002377 | 7777 |          |              |
| 002400 | 0000 |          |              |
| 002401 | 6232 | 6232;Y;N | /CIF 030     |
| 002402 | 7777 |          |              |
| 002403 | 0000 |          |              |
| 002404 | 6233 | 6233;Y;N | /CDF CIF 030 |
| 002405 | 7777 |          |              |
| 002406 | 0000 |          |              |
| 002407 | 6234 | 6234;Y;Y | /RIB         |
| 002410 | 7777 |          |              |
| 002411 | 7777 |          |              |
| 002412 | 6235 | 6235;Y;Y | /CDF 130     |
| 002413 | 7777 |          |              |
| 002414 | 7777 |          |              |
| 002415 | 6236 | 6236;Y;Y | /CIF 130     |
| 002416 | 7777 |          |              |
| 002417 | 7777 |          |              |
| 002420 | 6237 | 6237;Y;Y | /CDF CIF 130 |
| 002421 | 7777 |          |              |
| 002422 | 7777 |          |              |
| 002423 | 6240 | 6240;Y;Y | /LRR         |
| 002424 | 7777 |          |              |
| 002425 | 7777 |          |              |
| 002426 | 6241 | 6241;Y;N | /CDF 040     |
| 002427 | 7777 |          |              |
| 002430 | 0000 |          |              |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-3

|        |      |          |              |
|--------|------|----------|--------------|
| 002431 | 6242 | 6242;Y;N | /CIF 040     |
| 002432 | 7777 |          |              |
| 002433 | 0000 |          |              |
| 002434 | 6243 | 6243;Y;N | /CDF CIF 040 |
| 002435 | 7777 |          |              |
| 002436 | 0000 |          |              |
| 002437 | 6244 | 6244;Y;Y | /RMF         |
| 002440 | 7777 |          |              |
| 002441 | 7777 |          |              |
| 002442 | 6245 | 6245;Y;Y | /CDF 140     |
| 002443 | 7777 |          |              |
| 002444 | 7777 |          |              |
| 002445 | 6246 | 6246;Y;Y | /CIF 140     |
| 002446 | 7777 |          |              |
| 002447 | 7777 |          |              |
| 002450 | 6247 | 6247;Y;Y | /CDF CIF 140 |
| 002451 | 7777 |          |              |
| 002452 | 7777 |          |              |
| 002453 | 6250 | 6250;Y;Y | /RRR         |
| 002454 | 7777 |          |              |
| 002455 | 7777 |          |              |
| 002456 | 6251 | 6251;Y;N | /CDF 050     |
| 002457 | 7777 |          |              |
| 002460 | 0000 |          |              |
| 002461 | 6252 | 6252;Y;N | /CIF 050     |
| 002462 | 7777 |          |              |
| 002463 | 0000 |          |              |
| 002464 | 6253 | 6253;Y;N | /CDF CIF 050 |
| 002465 | 7777 |          |              |
| 002466 | 0000 |          |              |
| 002467 | 6254 | 6254;Y;Y | /SINT        |
| 002470 | 7777 |          |              |
| 002471 | 7777 |          |              |
| 002472 | 6255 | 6255;Y;Y | /CDF 150     |
| 002473 | 7777 |          |              |
| 002474 | 7777 |          |              |
| 002475 | 6256 | 6256;Y;Y | /CIF 150     |
| 002476 | 7777 |          |              |
| 002477 | 7777 |          |              |
| 002500 | 6257 | 6257;Y;Y | /CDF CIF 150 |
| 002501 | 7777 |          |              |
| 002502 | 7777 |          |              |
| 002503 | 6260 | 6260;Y;Y | /LUSR        |
| 002504 | 7777 |          |              |
| 002505 | 7777 |          |              |
| 002506 | 6261 | 6261;Y;N | /CDF 060     |
| 002507 | 7777 |          |              |
| 002510 | 0000 |          |              |
| 002511 | 6262 | 6262;Y;N | /CIF 060     |
| 002512 | 7777 |          |              |
| 002513 | 0000 |          |              |
| 002514 | 6263 | 6263;Y;N | /CDF CIF 060 |
| 002515 | 7777 |          |              |
| 002516 | 0000 |          |              |
| 002517 | 6264 | 6264;Y;Y | /CUF         |

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-4

```
002520 7777
002521 7777
002522 6265          6265;Y;Y      /CDF 160
002523 7777
002524 7777
002525 6266          6266;Y;Y      /CIF 160
002526 7777
002527 7777
002530 6267          6267;Y;Y      /CDF CIF 160
002531 7777
002532 7777
002533 6270          6270;Y;Y      /RUSR
002534 7777
002535 7777
002536 6271          6271;Y;N      /CDF 070
002537 7777
002540 0000
002541 6272          6272;Y;N      /CIF 070
002542 7777
002543 0000
002544 6273          6273;Y;N      /CDF CIF 070
002545 7777
002546 0000
002547 6274          6274;Y;Y      /SUF
002550 7777
002551 7777
002552 6275          6275;Y;Y      /CDF 170
002553 7777
002554 7777
002555 6276          6276;Y;Y      /CIF 170
002556 7777
002557 7777
002560 6277          6277;Y;Y      /CDF CIF 170
002561 7777
002562 7777

      IFDEF PRODUCTION <
002563 6300          6300;Y;Y      /CTI CDTOIF
002564 7777
002565 7777
002566 6301          6301;Y;Y      /CDF 200
002567 7777
002570 7777
002571 6302          6302;Y;Y      /CIF 200
002572 7777
002573 7777
002574 6303          6303;Y;Y      /CDF CIF 200
002575 7777
002576 7777
002577 6304          6304;Y;Y      /RTM
002600 7777
002601 7777
002602 6305          6305;Y;Y      /CDF 300
002603 7777
002604 7777
002605 6306          6306;Y;Y      /CIF 300
```

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-5

|        |      |          |              |
|--------|------|----------|--------------|
| 002606 | 7777 |          |              |
| 002607 | 7777 |          |              |
| 002610 | 6307 | 6307;Y;Y | /CDF CIF 300 |
| 002611 | 7777 |          |              |
| 002612 | 7777 |          |              |
| 002613 | 6310 | 6310;Y;N | /NOP         |
| 002614 | 7777 |          |              |
| 002615 | 0000 |          |              |
| 002616 | 6311 | 6311;Y;Y | /CDF 210     |
| 002617 | 7777 |          |              |
| 002620 | 7777 |          |              |
| 002621 | 6312 | 6312;Y;Y | /CIF 210     |
| 002622 | 7777 |          |              |
| 002623 | 7777 |          |              |
| 002624 | 6313 | 6313;Y;Y | /CDF CIF 210 |
| 002625 | 7777 |          |              |
| 002626 | 7777 |          |              |
| 002627 | 6314 | 6314;Y;Y | /SKME        |
| 002630 | 7777 |          |              |
| 002631 | 7777 |          |              |
| 002632 | 6315 | 6315;Y;Y | /CDF 310     |
| 002633 | 7777 |          |              |
| 002634 | 7777 |          |              |
| 002635 | 6316 | 6316;Y;Y | /CIF 310     |
| 002636 | 7777 |          |              |
| 002637 | 7777 |          |              |
| 002640 | 6317 | 6317;Y;Y | /CDF CIF 310 |
| 002641 | 7777 |          |              |
| 002642 | 7777 |          |              |
| 002643 | 6320 | 6320;Y;N | /NOP         |
| 002644 | 7777 |          |              |
| 002645 | 0000 |          |              |
| 002646 | 6321 | 6321;Y;Y | /CDF 220     |
| 002647 | 7777 |          |              |
| 002650 | 7777 |          |              |
| 002651 | 6322 | 6322;Y;Y | /CIF 220     |
| 002652 | 7777 |          |              |
| 002653 | 7777 |          |              |
| 002654 | 6323 | 6323;Y;Y | /CDF CIF 220 |
| 002655 | 7777 |          |              |
| 002656 | 7777 |          |              |
| 002657 | 6324 | 6324;Y;Y | /SKMM        |
| 002660 | 7777 |          |              |
| 002661 | 7777 |          |              |
| 002662 | 6325 | 6325;Y;Y | /CDF 320     |
| 002663 | 7777 |          |              |
| 002664 | 7777 |          |              |
| 002665 | 6326 | 6326;Y;Y | /CIF 320     |
| 002666 | 7777 |          |              |
| 002667 | 7777 |          |              |
| 002670 | 6327 | 6327;Y;Y | /CDF CIF 320 |
| 002671 | 7777 |          |              |
| 002672 | 7777 |          |              |
| 002673 | 6330 | 6330;Y;N | /NOP         |
| 002674 | 7777 |          |              |

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-6

|        |      |          |              |
|--------|------|----------|--------------|
| 002675 | 0000 |          |              |
| 002676 | 6331 | 6331;Y;Y | /CDF 230     |
| 002677 | 7777 |          |              |
| 002700 | 7777 |          |              |
| 002701 | 6332 | 6332;Y;Y | /CIF 230     |
| 002702 | 7777 |          |              |
| 002703 | 7777 |          |              |
| 002704 | 6333 | 6333;Y;Y | /CDF CIF 230 |
| 002705 | 7777 |          |              |
| 002706 | 7777 |          |              |
| 002707 | 6334 | 6334;Y;Y | /LTM         |
| 002710 | 7777 |          |              |
| 002711 | 7777 |          |              |
| 002712 | 6335 | 6335;Y;Y | /CDF 330     |
| 002713 | 7777 |          |              |
| 002714 | 7777 |          |              |
| 002715 | 6336 | 6336;Y;Y | /CIF 330     |
| 002716 | 7777 |          |              |
| 002717 | 7777 |          |              |
| 002720 | 6337 | 6337;Y;Y | /CDF CIF 330 |
| 002721 | 7777 |          |              |
| 002722 | 7777 |          |              |
| 002723 | 6340 | 6340;Y;N | /NOP         |
| 002724 | 7777 |          |              |
| 002725 | 0000 |          |              |
| 002726 | 6341 | 6341;Y;Y | /CDF 240     |
| 002727 | 7777 |          |              |
| 002730 | 7777 |          |              |
| 002731 | 6342 | 6342;Y;Y | /CIF 240     |
| 002732 | 7777 |          |              |
| 002733 | 7777 |          |              |
| 002734 | 6343 | 6343;Y;Y | /CDF CIF 240 |
| 002735 | 7777 |          |              |
| 002736 | 7777 |          |              |
| 002737 | 6344 | 6344;Y;Y | /LRM         |
| 002740 | 7777 |          |              |
| 002741 | 7777 |          |              |
| 002742 | 6345 | 6345;Y;Y | /CDF 340     |
| 002743 | 7777 |          |              |
| 002744 | 7777 |          |              |
| 002745 | 6346 | 6346;Y;Y | /CIF 340     |
| 002746 | 7777 |          |              |
| 002747 | 7777 |          |              |
| 002750 | 6347 | 6347;Y;Y | /CDF CIF 340 |
| 002751 | 7777 |          |              |
| 002752 | 7777 |          |              |
| 002753 | 6350 | 6350;Y;N | /NOP         |
| 002754 | 7777 |          |              |
| 002755 | 0000 |          |              |
| 002756 | 6351 | 6351;Y;Y | /CDF 250     |
| 002757 | 7777 |          |              |
| 002760 | 7777 |          |              |
| 002761 | 6352 | 6352;Y;Y | /CIF 250     |
| 002762 | 7777 |          |              |
| 002763 | 7777 |          |              |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-7

|        |      |          |              |
|--------|------|----------|--------------|
| 002764 | 6353 | 6353;Y;Y | /CDF CIF 250 |
| 002765 | 7777 |          |              |
| 002766 | 7777 |          |              |
| 002767 | 6354 | 6354;Y;N | /NOP         |
| 002770 | 7777 |          |              |
| 002771 | 0000 |          |              |
| 002772 | 6355 | 6355;Y;Y | /CDF 350     |
| 002773 | 7777 |          |              |
| 002774 | 7777 |          |              |
| 002775 | 6356 | 6356;Y;Y | /CIF 350     |
| 002776 | 7777 |          |              |
| 002777 | 7777 |          |              |
| 003000 | 6357 | 6357;Y;Y | /CDF CIF 350 |
| 003001 | 7777 |          |              |
| 003002 | 7777 |          |              |
| 003003 | 6360 | 6360;Y;N | /NOP         |
| 003004 | 7777 |          |              |
| 003005 | 0000 |          |              |
| 003006 | 6361 | 6361;Y;Y | /CDF 260     |
| 003007 | 7777 |          |              |
| 003010 | 7777 |          |              |
| 003011 | 6363 | 6363;Y;Y | /CIF 260     |
| 003012 | 7777 |          |              |
| 003013 | 7777 |          |              |
| 003014 | 6363 | 6363;Y;Y | /CDF CIF 260 |
| 003015 | 7777 |          |              |
| 003016 | 7777 |          |              |
| 003017 | 6364 | 6364;Y;Y | /SMME        |
| 003020 | 7777 |          |              |
| 003021 | 7777 |          |              |
| 003022 | 6365 | 6365;Y;Y | /CDF 360     |
| 003023 | 7777 |          |              |
| 003024 | 7777 |          |              |
| 003025 | 6366 | 6366;Y;Y | /CIF 360     |
| 003026 | 7777 |          |              |
| 003027 | 7777 |          |              |
| 003030 | 6367 | 6367;Y;Y | /CDF CIF 360 |
| 003031 | 7777 |          |              |
| 003032 | 7777 |          |              |
| 003033 | 6370 | 6370;Y;N | /NOP         |
| 003034 | 7777 |          |              |
| 003035 | 0000 |          |              |
| 003036 | 6371 | 6371;Y;Y | /CDF 270     |
| 003037 | 7777 |          |              |
| 003040 | 7777 |          |              |
| 003041 | 6372 | 6372;Y;Y | /CIF 270     |
| 003042 | 7777 |          |              |
| 003043 | 7777 |          |              |
| 003044 | 6373 | 6373;Y;Y | /CDF CIF 270 |
| 003045 | 7777 |          |              |
| 003046 | 7777 |          |              |
| 003047 | 6374 | 6374;Y;Y | /CMME        |
| 003050 | 7777 |          |              |
| 003051 | 7777 |          |              |
| 003052 | 6375 | 6375;Y;Y | /CDF 370     |

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/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-8

|        |      |          |              |
|--------|------|----------|--------------|
| 003053 | 7777 |          |              |
| 003054 | 7777 |          |              |
| 003055 | 6376 | 6376;Y;Y | /CIF 370     |
| 003056 | 7777 |          |              |
| 003057 | 7777 |          |              |
| 003060 | 6377 | 6377;Y;Y | /CDF CIF 370 |
| 003061 | 7777 |          |              |
| 003062 | 7777 |          |              |
| 003063 | 6400 | 6400;Y;N |              |
| 003064 | 7777 |          |              |
| 003065 | 0000 |          |              |
| 003066 | 6410 | 6410;Y;N |              |
| 003067 | 7777 |          |              |
| 003070 | 0000 |          |              |
| 003071 | 6420 | 6420;Y;N |              |
| 003072 | 7777 |          |              |
| 003073 | 0000 |          |              |
| 003074 | 6430 | 6430;Y;N |              |
| 003075 | 7777 |          |              |
| 003076 | 0000 |          |              |
| 003077 | 6440 | 6440;Y;N |              |
| 003100 | 7777 |          |              |
| 003101 | 0000 |          |              |
| 003102 | 6450 | 6450;Y;N |              |
| 003103 | 7777 |          |              |
| 003104 | 0000 |          |              |
| 003105 | 6460 | 6460;Y;N |              |
| 003106 | 7777 |          |              |
| 003107 | 0000 |          |              |
| 003110 | 6470 | 6470;Y;N |              |
| 003111 | 7777 |          |              |
| 003112 | 0000 |          |              |
| 003113 | 6500 | 6500;Y;N |              |
| 003114 | 7777 |          |              |
| 003115 | 0000 |          |              |
| 003116 | 6510 | 6510;Y;N |              |
| 003117 | 7777 |          |              |
| 003120 | 0000 |          |              |
| 003121 | 6520 | 6520;Y;N |              |
| 003122 | 7777 |          |              |
| 003123 | 0000 |          |              |
| 003124 | 6530 | 6530;Y;N |              |
| 003125 | 7777 |          |              |
| 003126 | 0000 |          |              |
| 003127 | 6540 | 6540;Y;N |              |
| 003130 | 7777 |          |              |
| 003131 | 0000 |          |              |
| 003132 | 6550 | 6550;Y;N |              |
| 003133 | 7777 |          |              |
| 003134 | 0000 |          |              |
| 003135 | 6560 | 6560;Y;N |              |
| 003136 | 7777 |          |              |
| 003137 | 0000 |          |              |
| 003140 | 6570 | 6570;Y;N |              |



/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-9

|        |      |           |               |
|--------|------|-----------|---------------|
| 003141 | 7777 |           |               |
| 003142 | 0000 |           |               |
| 003143 | 6600 | 6600;Y;N  |               |
| 003144 | 7777 |           |               |
| 003145 | 0000 |           |               |
| 003146 | 6610 | 6610;Y;N  |               |
| 003147 | 7777 |           |               |
| 003150 | 0000 |           |               |
| 003151 | 6620 | 6620;Y;N  |               |
| 003152 | 7777 |           |               |
| 003153 | 0000 |           |               |
| 003154 | 6630 | 6630;Y;N  |               |
| 003155 | 7777 |           |               |
| 003156 | 0000 |           |               |
| 003157 | 6640 | 6640;Y;N  |               |
| 003160 | 7777 |           |               |
| 003161 | 0000 |           |               |
| 003162 | 6650 | 6650;Y;N  |               |
| 003163 | 7777 |           |               |
| 003164 | 0000 |           |               |
|        |      | /6660;Y;N |               |
| 003165 | 6670 | 6670;Y;N  |               |
| 003166 | 7777 |           |               |
| 003167 | 0000 |           |               |
| 003170 | 6700 | 6700;Y;N  |               |
| 003171 | 7777 |           |               |
| 003172 | 0000 |           |               |
| 003173 | 6710 | 6710;Y;N  |               |
| 003174 | 7777 |           |               |
| 003175 | 0000 |           |               |
| 003176 | 6720 | 6720;Y;N  |               |
| 003177 | 7777 |           |               |
| 003200 | 0000 |           |               |
| 003201 | 6730 | 6730;Y;N  |               |
| 003202 | 7777 |           |               |
| 003203 | 0000 |           |               |
| 003204 | 6740 | 6740;Y;N  |               |
| 003205 | 7777 |           |               |
| 003206 | 0000 |           |               |
| 003207 | 6750 | 6750;Y;N  |               |
| 003210 | 7777 |           |               |
| 003211 | 0000 |           |               |
| 003212 | 6760 | 6760;Y;N  |               |
| 003213 | 7777 |           |               |
| 003214 | 0000 |           |               |
| 003215 | 6770 | 6770;Y;N  | / >           |
| 003216 | 7777 |           |               |
| 003217 | 0000 |           |               |
| 003220 | 7402 | 7402;Y;Y  | /HLT          |
| 003221 | 7777 |           |               |
| 003222 | 7777 |           |               |
| 003223 | 7404 | 7404;Y;Y  | /OSR          |
| 003224 | 7777 |           |               |
| 003225 | 7777 |           |               |
| 003226 | 0000 | 0         | /END OF TABLE |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-10

/LIST FOR STATIC IOT TEST. EACH ENTRY CONSISTS OF  
/IOT-CODE, SHOULD-SKIP, MAY-CHANGE-AC, (SHOULD-CLEAR-AC).  
/THE LAST ELEMENT IS ONLY NEEDED IF MAY-CHANGE-AC IS YES.  
IOTLST, CTI;N;N

|        |      |           |
|--------|------|-----------|
| 003227 | 6300 |           |
| 003230 | 0000 |           |
| 003231 | 0000 |           |
| 003232 | 6374 | CMME;N;N  |
| 003233 | 0000 |           |
| 003234 | 0000 |           |
| 003235 | 6304 | RTM;N;Y;N |
| 003236 | 0000 |           |
| 003237 | 7777 |           |
| 003240 | 0000 |           |
| 003241 | 6314 | SKME;N;N  |
| 003242 | 0000 |           |
| 003243 | 0000 |           |
| 003244 | 6324 | SKMM;Y;N  |
| 003245 | 7777 |           |
| 003246 | 0000 |           |
| 003247 | 6334 | LTM;N;Y;Y |
| 003250 | 0000 |           |
| 003251 | 7777 |           |
| 003252 | 7777 |           |
| 003253 | 6344 | LRM;N;Y;Y |
| 003254 | 0000 |           |
| 003255 | 7777 |           |
| 003256 | 7777 |           |
| 003257 | 6364 | SMME;N;N  |
| 003260 | 0000 |           |
| 003261 | 0000 |           |
| 003262 | 6314 | SKME;Y;N  |
| 003263 | 7777 |           |
| 003264 | 0000 |           |
| 003265 | 6324 | SKMM;Y;N  |
| 003266 | 7777 |           |
| 003267 | 0000 |           |
| 003270 | 6304 | RTM;N;Y;N |
| 003271 | 0000 |           |
| 003272 | 7777 |           |
| 003273 | 0000 |           |
| 003274 | 6334 | LTM;N;Y;Y |
| 003275 | 0000 |           |
| 003276 | 7777 |           |
| 003277 | 7777 |           |
| 003300 | 6344 | LRM;N;Y;Y |
| 003301 | 0000 |           |
| 003302 | 7777 |           |
| 003303 | 7777 |           |
| 003304 | 0000 | 0         |
|        |      | \$        |
| 000161 | 0260 |           |
| 000162 | 0007 |           |
| 000163 | 6201 |           |
| 000164 | 0070 |           |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 10-11

|        |      |
|--------|------|
| 000165 | 6202 |
| 000166 | 0510 |
| 000167 | 1715 |
| 000170 | 1666 |
| 000171 | 1674 |
| 000172 | 1632 |
| 000173 | 0075 |
| 000174 | 7000 |
| 000175 | 7727 |
| 000176 | 1023 |
| 000177 | 1000 |

/TEST PROGRAM FOR DM8E40 MEMORY MANAGEM PAL8-V50X 01-DEC-87 PAGE 11

|        |      |        |      |      |      |
|--------|------|--------|------|------|------|
| AC     | 0123 | LOOP3  | 0233 | Y    | 7777 |
| BELL   | 0125 | LOOP4  | 0235 | YCDF | 0464 |
| BYTE   | 1704 | LOOP5  | 0275 |      |      |
| CDTERR | 2027 | LOOP6  | 0277 |      |      |
| CDTF   | 0076 | LOOP7  | 0320 |      |      |
| CDTOIF | 1632 | LOOP8  | 0613 |      |      |
| CDT1   | 1636 | LRM    | 6344 |      |      |
| CDT2   | 1651 | LTM    | 6334 |      |      |
| CDT3   | 1652 | MDERR  | 1245 |      |      |
| CINT   | 6204 | MDTST  | 0067 |      |      |
| CMME   | 6374 | N      | 0000 |      |      |
| COPY   | 0437 | OCTEMP | 1737 |      |      |
| COPY1  | 0446 | OCTOUT | 1715 |      |      |
| COPY2  | 0462 | PRODUC | 0001 |      |      |
| COUNT  | 0115 | PTR    | 0121 |      |      |
| COUNT1 | 0116 | Q      | 0075 |      |      |
| COUNT2 | 0117 | RDFER1 | 1400 |      |      |
| COUNT3 | 0120 | RDFER2 | 1414 |      |      |
| CRLF   | 1666 | RDFTST | 0600 |      |      |
| CTI    | 6300 | RELERR | 1057 |      |      |
| CTRLQ  | 2063 | RELTST | 0044 |      |      |
| CTRLS  | 2075 | RET1   | 0257 |      |      |
| CUF    | 6264 | RET2   | 0337 |      |      |
| DIGIT  | 1725 | RET3   | 0400 |      |      |
| ENDTRP | 0043 | RET4   | 0423 |      |      |
| ERR1   | 1267 | RET5   | 0431 |      |      |
| ERR2   | 1306 | RET6   | 0626 |      |      |
| ERR3   | 1324 | RTM    | 6304 |      |      |
| ERR4   | 1344 | SERV   | 0020 |      |      |
| FCDF   | 0214 | SINT   | 6254 |      |      |
| FIELDS | 0122 | SKME   | 6314 |      |      |
| HALT   | 0051 | SKMM   | 6324 |      |      |
| INIT   | 2000 | SMME   | 6364 |      |      |
| INTERR | 1000 | START  | 0201 |      |      |
| IOTLST | 3227 | STRING | 1674 |      |      |
| IOTTST | 0502 | SUF    | 6274 |      |      |
| IOTX   | 0510 | TABLE  | 2200 |      |      |
| IOT1   | 0506 | TERROR | 1120 |      |      |
| IOT2   | 0517 | TER1   | 1140 |      |      |
| IOT3   | 0523 | TER2   | 1150 |      |      |
| IOT4   | 0535 | TRAPD  | 0124 |      |      |
| IOT5   | 0541 | TRPALL | 1600 |      |      |
| KCDF   | 0622 | TRPCNT | 1631 |      |      |
| KK     | 0103 | TRPERR | 1023 |      |      |
| K0     | 0105 | TRPTST | 0046 |      |      |
| K1     | 0106 | TRP1   | 1603 |      |      |
| K2     | 0107 | TSTRDF | 0102 |      |      |
| K3     | 0110 | TTYTST | 0053 |      |      |
| K4     | 0111 | TYPE   | 2054 |      |      |
| K5     | 0112 | UERROR | 1200 |      |      |
| K6     | 0113 | UER1   | 1220 |      |      |
| K7     | 0114 | UER2   | 1227 |      |      |
| LOOP0  | 0203 | UTRALL | 1615 |      |      |
| LOOP1  | 0212 | UTR1   | 1620 |      |      |
| LOOP2  | 0231 | XCDF   | 0325 |      |      |

ERRORS DETECTED: 0  
LINKS GENERATED: 37

