TC11

BASIC LOGIC

MD-11-DZTCA-A

EP-DZTCA-A-DL-A

OCT 1976

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IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DZTCA-A-D

PRODUCT NAME: TC1 - TC11 TEST 1

DATE: MAY 1, 1972

MAINTAINER: DIAGNOSTIC GROUP

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THIS MAINDEC OBSOLETES MAINDEC-11-D3AB

TC1 - TC11 TEST 1 IS PART 1 OF A FIVE PROGRAM PACKAGE
USED TO TEST THE TC11 DECTAPE CONTROL.

1. ABSTRACT

TC1 - TC11 TEST 1 IS PART 1 OF A FIVE PROGRAM PACKAGE USED TO TEST THE TC11 DECTAPE CONTROL. TC1 IS A BIT CHECKER PROGRAM THAT CHECKS THAT EACH OF THE CONTROL'S REGISTERS CAN BE REFERENCED WITHOUT CAUSING BUS ERROR TRAPS, THAT READ-WRITE BITS CAN BE SET AND CLEAR, THAT READ-WRITE BITS ARE CLEARED BY RESET INSTRUCTION, AND THAT READ ONLY BITS ARE SET TO THEIR POWER CLEAR STATE BY RESET INSTRUCTION.

A SPECIAL ROUTINE (TEST 0) IS AVAILABLE IN THE PROGRAM AS A MAINTENANCE AID IN ADJUSTING THE TC11 CONTROL DELAYS.

ALL EXECUTION TIMES QUOTED ARE TYPICAL OF A 11/20 SYSTEM. EXECUTION TIMES IN OTHER PDP-11 SYSTEMS WILL VARY.

2. REQUIREMENTS

2.1 EQUIPMENT

A. PDP-11 SYSTEM (4K CORE).
B. ASR33/35 TELETYPE.
C. TC11 DECTAPE CONTROL AND AT LEAST ONE TU56 DUAL TRANSPORT.

THE TELETYPE AND TC11 CONTROL MUST HAVE THEIR STANDARD PERIPHERAL ADDRESSES, INTERRUPT LEVELS, AND INTERRUPT VECTOR ADDRESSES. REFER TO SECTION 7.2 IF YOUR SYSTEM DOES NOT HAVE STANDARD PERIPHERAL ADDRESSES.

2.2 STORAGE

THIS PROGRAM USES LOCATIONS 000000 THROUGH 016000.

3. LOADING PROCEDURE

THIS PROGRAM'S OBJECT TAPE IS PUNCHED IN ABSOLUTE FORMAT. THE ABS LOADER IS USED TO LOAD THE PROGRAM.

4. USE PROCEDURE

SECTION 4.1 DESCRIBES USE PROCEDURE FOR RUNNING TC1 TEST.

SECTION 4.2 DESCRIBES USE OF TC11 DELAY ADJUSTMENT MAINTENANCE ROUTINE.

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4.1     TC1 TEST USE PROCEDURE
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        A.  ALL TRANSPORTS MUST BE OFF
        B.  SET WRTM SWITCH AND WALL SWITCH TO OFF POSITION.
        C.  LOAD ADDRESS 000200.
        D.  PRESS START.
        E.  THE PROGRAM IDENTIFIES ITSELF, TYPES SETUP INSTRUCTIONS,
            SR OPTIONS MESSAGE, AND HALTS.
        F.  PERFORM SETUP (STEPS A AND B), AND SELECT DESIRED SR OPTIONS,
            IF ANY. NORMAL SR SETTING IS 000000.

            THIS PROGRAM'S SR OPTIONS ARE:

                SR15 = 1        HALT ON ERROR
                SR14 = 1        ENTER SCOPE MODE
                SR13 = 1        INHIBIT ERROR PRINTOUT
                SR11 = 1        INHIBIT ITERATION
                SR10 = 1        HALT AT END OF TEST CURRENTLY EXECUTING
                SR9  = 1        SELECT THE TEST SPECIFIED BY SR7 THROUGH SR0
                SR7 THROUGH SR0 - NUMBER OF TEST TO BE SELECTED

                SECTION 7.1 GIVES A COMPLETE EXPLANATION OF SR OPTIONS.

        G.  PRESS CONT. THE PROGRAM BEGINS EXECUTION.
        H.  AT THE END OF EACH PASS THE TELETYPE BELL RINGS ONCE, AND
            THE CHARACTER "*" IS TYPED.
        I.  REFER TO SECTION 6.2  IF ERROR PRINTOUTS OCCUR.

        EXECUTION TIME:

        A. ONE NORMAL ERROR FREE PASS TAKES APPROXIMATELY 1 MINUTE.
        B.  ONE SINGLE ITERATION PASS (SR11=1) TAKES ABOUT 13  SECONDS.

                        ******NOTE******

        THE SINGLE ITERATION PASS IS A CONVENIENT WAY TO QUICKLY
        DETERMINE IF ANY SOLID PROBLEMS EXIST. FOR A THOROUGH TEST,
        THE NORMAL ITERATION PASS SHOULD BE RUN.


4.11    RESTART PROCEDURE
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        TO RESTART THE PROGRAM WITHOUT GENERATING THE INITIAL PRINTOUTS
        PROCEED AS FOLLOWS:

        A.  LOAD ADDRESS 001000
        B.  PERFORM STEP F OF PREVIOUS PROCEDURE.
        C.  PRESS START.
        D.  GO TO STEP G OF PREVIOUS PROCEDURE.
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4.2 TC11 DELAY ADJUSTMENT MAINTENANCE ROUTINE - USE PROCEDURE

THIS PROGRAM'S TEST 0 IS A SPECIAL MAINTENANCE ROUTINE USED AS AN AID IN ADJUSTING THE VARIOUS DELAYS IN THE TC11 CONTROL. A SCOPE IS REQUIRED. TO USE PROCEED AS FOLLOWS:

A. ALL TRANSPORTS MUST BE OFF. WRTMSW -OFF. WALLSW - OFF.
B. LOAD ADDRESS 001000.
C. SET SR9 = 1, AND SR7 THROUGH SR0 TO 0. PRESS START.
D. TEST 0 IDENTIFIES ITSELF, REFERS USER TO THIS DOCUMENT, AND HALTS.
E. THERE ARE TEN DELAYS TO BE ADJUSTED BY MEANS OF THIS ROUTINE. AN 11TH DELAY ADJUSTMENT IS DESCRIBRD UNDER STEP G.
F. TO ADJUST THE FIRST TEN DELAYS PRESS CONT AND USING THE TABLE BELOW DISPLAY AND ADJUST THE POSITIVE PULSE FOR THE TIME SPECIFIED. THE SR SETTINGS DESCRIBED APPLY TO A PDP11/20 ONLY. FOR OTHER SYSTEMS SET SR TO OBTAIN APPROPRIATE WAVESHAPE.

PIN#	SR SETTING	ADJUST FOR	USING
D11H2	070000	120 MSECS	LOWER POT
D05H2	010000	10 MSECS	LOWER POT
D11K1	40	70 USECS	UPPER POT
D05K1	10	10 USECS	UPPER POT
B10K1	10	10 USECS	UPPER POT
A10F2	0	500 NSECS	UPPER POT
A10T2	0	500 NSECS	LOWER POT
D10T2	0	500 NSECS	LOWER POT
C04H2	10	#1-5 USEC	LOWER POT
C04K1	10	7 USECS	UPPER POT

ADJUST POT FOR MINIMUM TIME.

G. TO ADJUST THE 11TH DELAY PROCEED AS FOLLOWS:

1. SELECT UNIT0/REMOTE/NO TAPE/WRITE ENABLE.
2. SET WRTM SWITCH TO ON POSITION.
3. SET CONSOLE HALT SWITCH DOWN.
4. LOAD ADDRESS OF TCCM.
5. DEPOSIT NUMBER 000013.
6. DISREGARD ANY TRANSPORT MOTION.
7. DISPLAY PIN B10H2, AND ADJUST LOWER POT FOR 8.33 USECS.

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5.      PROGRAM AND/OR OPERATOR ACTION
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5.1     NORMAL HALTS
        ------------

        LOC 001714      COMMON HALT. THIS HALT IS CONTAINED IN A SUBROUTINE
                        THAT IS CALLED BY THOSE PARTS OF THE PROGRAM THAT
                        REQUIRE THAT THE PROCESSOR STOP. THIS HALT NORMALLY
                        OCCURS UPON COMPLETION OF NON-ERROR PRINTOUTS.
                        THE CONSOLE DATA LIGHTS DISPLAY THE ADDRESS OF
                        INSTRUCTION THAT GENERATED THE HALT REQUEST.

        LOC 001372      ROUTINE END HALT. THIS HALT OCCURS UPON COMPLETION
                        OF THE CURRENT TEST ROUTINE IF SR10 IS SET. THE
                        CONSOLE DATA LIGHTS DISPLAY THE NUMBER OF THE TEST
                        JUST COMPLETED.

5.2     NORMAL PRINTOUTS
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        ALL NON-ERROR PRINTOUTS ARE NORMAL PRINTOUTS. INSTRUCTION,
        TITLE, AND USER ERROR PRINTOUTS ARE NORMAL PRINTOUTS.

6.      ERRORS
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        ERRORS ARE REPORTED IN THIS PROGRAM BY THE FOLLOWING METHODS:

        A.  UNCONDITIONAL ERROR HALTS, OR
        B.  ERROR PRINTOUT FOLLOWED BY OPTIONAL ERROR HALT.

6.1     UNCONDITIONAL ERROR HALTS
        -------------------------

        AN UNCONDITIONAL ERROR HALT WILL OCCUR AT THE ADDRESSES LISTED
        BELOW IF THROUGH HARDWARE OR SOFTWARE FAILURE, PROGRAM CONTROL
        IS TRANSFERRED TO AN UNEXPECTED AREA BETWEEN 000000 AND 000176.

        000002  RESERVED AREA
        000006  ERROR TRAP
        000012  RESERVED INSTRUCTION TRAP
        000016  DEBUG TRAP
        000022  IOT TRAP
        000026  POWER FAIL TRAP
        000040 THROUGH 000176 - SYSTEM SOFTWARE AND INTERRUPT VECTOR AREA.
                EXCEPT FOR TC11 AND TTY VECTORS.

        TO FIND OUT WHERE THE PROGRAM WAS AT THE TIME THE FAILURE OCCURRED,

        A.  EXAMINE CONTENTS OF REGISTER 6. (ADDRESS 177706).
        B.  TRANSFER THE CONTENTS OF REG 6 TO THE SR, LOAD ADDRESS AND EXAMINE.
        C.  THE DATA SHOWN IN THE DATA LIGHTS IS THE VALUE OF THE PC WHEN
            THE FAILURE OCCURRED.
        D.  LOCATE IN PROGRAM LISTING THE DISPLAYED PC VALUE.
```

(6.1 CONT'D)

E. THE INSTRUCTION THAT IMMEDIATELY PRECEDES THE ONE REFFRENCED BY THE DISPLAYED PC VALUE IS THE INSTRUCTION THAT WAS/WAS BEING EXECUTED WHEN THE FAILURE OCCURRED.

AN UNCONDITIONAL ERROR HALT FAILURE IS AN ABNORMAL CONDITION INDICATING A HARDWARE FAILURE, OR MOST UNLIKELY, A PROGRAM FAILURE. THIS PROGRAM ASSUMES THAT THE PROCESSOR IS IN OPERATING CONDITION IN ORDER TO PERFORM ITS TESTS. ANY FURTHER STEPS REQUIRED TO DIAGNOSE AN AN UNCONDITIONAL ERROR HALT ARE NOT WITHIN THE SCOPE OF THIS PROGRAM.

6.2 ERROR PRINTOUTS

ERROR PRINTOUTS ARE GENERATED BY THE "ERR" SUBROUTINE. THE "ERR" SUBROUTINE IS CALLED BY AN "ERROR" STATEMENT IN THE PROGRAM LISTING. AN ERROR PRINTOUT LOOKS AS FOLLOWS:

T XXX PC 0YYYYY ICNT ZZZZ.

WHERE:

T XXX IS THE NUMBER OF FAILING ROUTINE (OCTAL).

PC 0YYYYY IS THE ADDRESS OF ERROR CALL.

ICNT ZZZZ. IS THE ITERATION COUNT AT TIME OF FAILURE.

AFTER THE PRINTOUT IS COMPLETED, THE PROGRAM WILL HALT AT COMMON ERROR HALT AT LOC 001726 IF SR15 IS SET.

WHEN AN ERROR PRINTOUT OCCURS:

A. LOOK UP THE ADDRESS REFERENCED BY PC 0YYYYY IN THE LISTING.
B. OPPOSITE THE PC VALUE AN "ERROR" STATEMENT WILL BE FOUND, AND IN THE COMMENTS SECTION, A DESCRIPTION OF THE ERROR.
C. AT THE BEGINNING OF THE TEST ROUTINE A DESCRIPTION OF THE TEST WILL BE FOUND.

7. MISCELLANEOUS

7.1 SR OPTIONS

THE STANDARD SR OPTIONS ARE DESCRIBED HERE.

SR15 HALT ON ERROR. WITH SR15 SET TO A 1, THE PROGRAM WILL HALT AFTER AN ERROR OCCURS. PRESSING CONT WILL CAUSE PROGRAM TO RESUME OPERATION.

SR14 SCOPE. THIS OPTION CAUSES THE PROGRAM TO REMAIN IN THE CURRENT TEST ROUTINE. WHEN THE OPTION IS REMOVED, THE PROGRAM WILL COMPLETE THE CURRENT ROUTINE, AND WILL THEN GO ON TO THE NEXT ROUTINE.

SR13 INHIBIT ERROR PRINTOUT. THIS OPTION IF SET, WILL REMOVE ALL ERROR PRINTOUTS.

*****NOTE*****

SCOPE MODE OPERATION IS ACHIEVED BY LOCKING THE PROGRAM IN THE CURRENT ROUTINE, INHIBITING ERROR PRINTOUTS, AND BYPASSING ERROR HALTS.

SR11 INHIBIT ITERATION. SETTING THIS OPTION WILL CAUSE THE PROGRAM TO EXECUTE EACH TEST ONLY ONCE, INSTEAD OF THE NORMAL NUMBER OF ITERATIONS SELECTED FOR EACH TEST. TWO POSSIBLE USES OF THIS OPTION ARE:

A. QUICK PASS. EACH TEST IS RUN ONLY ONCE.
B. TO SKIP OVER A FAILING ROUTINE.

SR10 HALT AT END OF CURRENT ROUTINE. WITH THE OPTION SET, THE PROGRAM WILL HALT AT THE END OF EACH TEST, AND DISPLAY IN DATA LIGHTS THE NUMBER OF THE TEST JUST COMPLETED. THREE POSSIBLE USES OF THIS OPTION ARE:

A. TO STEP THROUGH THE PROGRAM ONE ROUTINE AT A TIME.
B. WHEN THE PROGRAM HAS BEEN RUNNING FOR A WHILE, TO FIND OUT HOW FAR IT HAS PROGRESSED.
C. IN CASE OF A BLOW UP, ETC., TO STEP THROUGH ONE TEST AT A TIME UNTIL THE FAILURE REOCCURS. THE ROUTINE FOLLOWING THE PREVIOUSLY COMPLETED ROUTINE WOULD BE THE FAILING ROUTINE.

SR9 SELECT ROUTINE. WITH SR9 SET, THE PROGRAM WILL GO AND EXECUTE THE ROUTINE INDICATED BY SR7 THROUGH SR0, AFTER THE CURRENT ROUTINE HAS BEEN COMPLETED. IF THE OPTION IS REMOVED, THE PROGRAM WILL PROCEED TO EXECUTE THE ROUTINES FOLLOWING THE SELECTED ROUTINE.

7.2 TESTING TC11 AT NON-STANDARD ADDRESSES AND/OR VECTORS

THIS PROGRAM CAN TEST THE TC11 AT NON-STANDARD ADDRESSES AND VECTORS PROVIDED THOSE ADDRESSES AND VECTORS ARE PROVIDED TO THE PROGRAM AS FOLLOWS:

A. AFTER LOADING PROGRAM REFER TO PROGRAM LISTING AND CHANGE LOCATIONS 001004 THROUGH 001020 TO REFLECT THE NEW TC11 ADDRESSES AND VECTORS.

B. IF THE TELETYPE IS ALSO AT NON STANDARD ADDRESSES, CHANGE LOCATIONS 001022 AND 001024 ALSO.

C. PROCEED TO USE THE PROGRAM, OR

D. USING STANDARD DUMP ROUTINES, DUMP OUT THE ENTIRE PROGRAM IN ABSOLUTE FORMAT TO HAVE AN OBJECT TAPE THAT REFLECTS YOUR SYSTEM, OR

E. DUMP OUT ONLY LOCATIONS 001004 THROUGH 001024 IN ABSOLUTE FORMAT, AND LOAD IT ALSO AFTER LOADING THE MAIN PROGRAM.

8. DESCRIPTION

THIS PROGRAM IS ORGANIZED INTO THREE MAIN SECTIONS:

A. CONTROL ROUTINE,
B. TEST ROUTINES,
C. COMMON SUBROUTINES

8.1 CONTROL ROUTINE

THE CONTROL ROUTINE ASSUMES CONTROL WHEN THE PROGRAM IS STARTED. IT HAS THE FOLLOWING FUNCTIONS:

A. CONTROLS SEQUENCE OF TEST ROUTINES.
B. HONORS AND ACTS ON SR OPTIONS.

THE CONTROL ROUTINE IS CALLED FROM A TEST ROUTINE BY THE "SCOPE" STATEMENT.

8.2 TEST ROUTINES

THE ACTUAL TESTING IS PERFORMED BY A SET OF TEST ROUTINES THAT ARE NUMBERED SEQUENTIALLY FROM 0 TO 225 (OCTAL). EACH TEST ROUTINE IS PRECEDED BY A TEST HEADER THAT IS USED BY THE CONTROL ROUTINE IN ORDER TO PROPERLY SEQUENCE THROUGH THE TESTS. THE HEADER LOOKS AS FOLLOWS: (EXAMPLE)

```
*****************************************************************
T20:    20              ;ROUTINE NUMBER 20.                    *
        T21             ;ADDRESS OF NEXT ROUTINE               *
        100.            ;TEST ITERATION COUNT                  *
        BAGA            ;SCOPE ENTRY POINT                     *
*****************************************************************
```

THE FIRST 2 ITEMS ARE SELF EXPLANATORY. THE TEST ITERATION COUNT INDICATES TO THE CONTROL ROUTINE THE NUMBER OF TIMES THE TEST SHOULD BE PERFORMED BEFORE GOING ON TO THE NEXT ROUTINE.

THE SCOPE ENTRY POINT INDICATES TO THE CONTROL ROUTINE THE ADDRESS IT SHOULD RETURN TO AFTER THE FIRST ITERATION. THE ADDRESS MAY NOT NECCESARILY POINT TO THE FIRST INSTRUCTION OF THE TEST.

8.3 COMMON SUBROUTINES

ALL SUBROUTINES NEEDED BY EITHER THE CONTROL ROUTINE OR TEST ROUTINES ARE GROUPED TOGETHER. THE MOST SIGNIFICANT SUBROUTINE IS THE "ERR" SUBROUTINE, WHICH IS CALLED BY AN "ERROR" STATEMENT AND TYPES THE TEST NUMBER AND PC VALUE WHEN A FAILURE OCCURS.

```
                                          .LIST   BIN,SEQ,LD,ME
                                          .NLIST  MC,MD
                                          .ABS
                              ;

           000000                         .=0
000000     000002                         .+2                     ;UNASSIGNED TRAP
000002     000000                         HALT
000004     000006             MACHER:     .+2                     ;SP OVERFLOW, BUS ERROR TRAP
000006     000000                         HALT
000010     000012                         .+2                     ;RESERVED INSTRUCTION TRAP
000012     000000                         HALT
000014     000016                         .+2                     ;TRACE TRAP
000016     000000                         HALT
000020     000022                         .+2                     ;TRAP TO CALL IOX
000022     000000                         HALT
000024     000026                         .+2                     ;POWER FAIL TRAP
000026     000000                         HALT
000030     001510             EMTV:       EMTINT                  ;EMT TRAP
000032     000340                         PRTY7
000034     000036             TRPV:       .+2                     ;TRAP TRAP. SIMILAR TO EMT.
000036     000000                         HALT
                              ,LOC 40 THROUGH 376 FILLED WITH .+2 AND HALT.
                                          .LIST
                              ;EQUATE STATEMENTS
           177570                         SR=177570
           177776                         CC=177776
           177776                         PSW=177776
           001000                         SPBOT=1000
           000240                         NOP=240
           000000                         OPEN=0
           100000                         MANUAL=BIT15
           100000                         BIT!5=100000
           040000                         BIT14=40000
           020000                         BIT13=20000
           010000                         BIT12=10000
           004000                         BIT11=4000
           002000                         BIT10=2000
           001000                         BIT9=1000
           000400                         BIT8=400
           000200                         BIT7=200
           000100                         BIT6=100
           000040                         BIT5=40
           000020                         BIT4=20
           000010                         BIT3=10
           000004                         BIT2=4
           000002                         BIT1=2
           000001                         BIT0=1
           000000                         R0=%0
           000001                         R1=%1
           000002                         R2=%2
           000003                         R3=%3
           000004                         R4=%4
```

```
                 000005                          R5=%5
                 000006                          R6=%6
                 000007                          R7=%7
                 000007                          PC=%7
                 005726                          POPSP=5726                   ;POP THE STACK. SAME AS TST (6)+
                 022626                          POPSP2=022626                ;POP STACK TWICE. SAME AS CMP (6)+,(6)+
                 000340                          PRTY7=340                    ;PRIORITY LEVEL DEFINITIONS
                 000300                          PRTY6=300
                 000240                          PRTY5=240
                 000200                          PRTY4=200
                 000140                          PRTY3=140
                 000100                          PRTY2=100
                 000040                          PRTY1=40
                 000000                          PRTY0=0
                 000007                          BELL=007
                 177777                          TLAST=-1
                 177777                          X=-1
                 020000                          MAINT=BIT13
                 000002                          RNUM=BIT1
                 000001                          DO=BIT0
                 000000                          EMTX=0
                 000200                          .=200
        000200   000167   000724                 JMP      START               ;GO TO START OF PROGRAM.
                 001000                          .=1000
        001000   000167   000154                 JMP      GETRDY
        001004   177340                 TCST:    177340                       ;TC11 STATUS REGISTER.
        001006   177342                 TCCM:    177342                       ;TC11 COMMAND REGISTER.
        001010   177344                 TCWC:    177344                       ;TC11 WORD COUNT REGISTER.
        001012   177346                 TCBA:    177346                       ;TC11 BUS ADDRESS REGISTER.
        001014   177350                 TCDT:    177350                       ;TC11 DATA REGISTER.
        001016   000214                 TCVTR:   214                          ;TC11 INTERRUPT VECTOR
        001020   000300                 TCLVL:   PRTY6                        ;TC11 INTERRUPT PRIORITY LEVEL.
        001022   177564                 TPS:     177564                       ;LSP CSR
        001024   177566                 TPB:     177566                       ;LSP BUFFER
        001026   000000                 ICTR:    OPEN                         ;CONTAINS CURRENT ITERATION COUNT
        001030   000000                 ICNT:    OPEN                         ;CONTAINS ACCUMULATED ITERATION COUNT.
        001032   003514                 KSTART:  TO                           ;CONTAINS STARTING ROUTINE ADDR.
        001034   000000                 SCOPTR:  OPEN                         ;CONTAINS CURRENT SCOPE POINTER.
        001036   000000                 RTNNO:   OPEN
        001040   000000                 NXTST:   OPEN
        001042   000000                 CURTST:  OPEN
        001044   000000                 RCNT:    OPEN
        001046   000000                 CRBUF:   OPEN
        001050   000000                 CRBUFA:  OPEN
        001052   000000                 CARMSK:  OPEN
        001054   000000                 ERCTR:   OPEN
        001056   000000                 CTRA:    OPEN
        001060   000000                 CTRB:    OPEN
        001062   000000                 CTRC:    OPEN
        001064   000000                 CTRD:    OPEN
        001066   000000                 PRVCNT:  OPEN
        001070   000000                 RNDNMB:  OPEN
        001072   000000                 TEMP:    OPEN
        001074                          EMTTAB:
        001074   002222                          .WORD    TYP                 ;POINTER FOR EMT CALL TYPE
                                                 .LIST
```

```
001076  002340                            .WORD   TYPS            ;POINTER FOR EMT CALL TYPES
                                          .LIST
001100  002436                            .WORD   STAL            ;POINTER FOR EMT CALL STALL
                                          .LIST
001102  001774                            .WOPD   ERR             ;POINTER FOR EMT CALL ERROR
                                          .LIST
001104  001732                            .WORD   DTCHK           ;POINTER FOR EMT CALL DATCHK
                                          .LIST
001106  001706                            .WORD   CHLT            ;POINTER FOR EMT CALL CHALT
                                          .LIST
001110  001630                            .WORD   STTCV           ;POINTER FOR EMT CALL STC11V
                                          .LIST
001112  001720                            .WORD   EHLT            ;POINTER FOR EMT CALL EHALT
                                          .LIST
001114  001660                            .WORD   SRSETT          ;POINTER FOR EMT CALL SRESET
                                          .LIST
001116  001272                            .WORD   CHAINN          ;POINTER FOR EMT CALL SCOPE
                                          .LIST
001120  001530                            .WORD   SAVRG           ;POINTER FOR EMT CALL SAVREG
                                          .LIST
001122  001570                            .WORD   RSTRG           ;POINTER FOR EMT CALL RSTREG
                                          .LIST
001124  002016                            .WORD   ERR1            ;POINTER FOR EMT CALL ERROR1
                                          .LIST
001126  002372                            .WORD   DLY             ;POINTER FOR EMT CALL DELAY
                                          .LIST
001130  012706  001000          START:    MOV     #SPBOT,%6       ;SET BOTTOM OF SP STACK.
001134  012767  000340  176634            MOV     #PRTY7,PSW      ;SET PRIORITY 7.
001142  012767  000006  176634            MOV     #6,MACHER
001150  104000                            TYPE                    ;TYPE TITLE AND INSTRUCTIONS.
001152  003314                            POTIT
001154  004767  000516          SRSET:    JSR     %7,SETSR        ;SET SR OPTIONS DESIRED
001160  016767  177646  177652  GETRDY:   MOV     KSTART,NXTST    ;ADDR OF 1ST ROUTINE TO NXTST
001166  012767  000006  176610  GTRDYX:   MOV     #6,MACHER       ;RESET MACHER TRAP.
001174  012767  000340  176574            MOV     #PRTY7,PSW      ;SET PRIORITY 7.
001202  012706  001000                    MOV     #SPBOT,R6       ;SET BOTTOM OF STACK.
001206  104010                            SRESET                  ;ISSUE RESET.
001210  004767  000226          GTRDYA:   JSR     R7,FORWD        ;ROLL FORWARD TO "NEXT" ROUTINE.
001214  032767  001000  176346  GTRDYB:   BIT     #BIT9,SR        ;CHECK SELECT ROUTINE SWITCH
001222  001002                            BNE     GTRDYC          ;BRANCH IF SELECT ROUTINE SWITCH IS SET.
001224  000177  177612                    JMP     @CURTST         ;GO RUN CURRENT ROUTINE.
001230  016700  176334          GTRDYC:   MOV     SR,R0           ;(SR) TO R0
001234  042700  177400                    BIC     #177400,R0      ;MASK UNDESIRED BITS
001240  126700  177572                    CMPB    RTNNO,R0        ;COMPARE RTNNO TO (R0)
001244  001002                            BNE     GTRDYD          ;BRANCH IF ROUTINE NOT FOUND YET.
001246  000177  177570                    JMP     @CURTST         ;GO RUN ROUTINE.
001252  022767  177777  177560  GTRDYD:   CMP     #-1,NXTST       ;NO. CHECK FOR LAST ROUTINE.
001260  001353                            BNE     GTRDYA          ;BRANCH IF NOT LAST ROUTINE.
001262  104000                            TYPE                    ;TYPE INCORRECT RTN SELECTED.
001264  003271                            AINCRT
001266  104005                            CHALT                   ;COMMON HALT.
001270  000733                            BR      GETRDY          ;START OVER.
001272  016667  000002  177476  CHAINN:   MOV     2(6),776        ;
001300  016767  177530  177466            MOV     SCOPTR,774      ;
001306  012706  000774                    MOV     #774,R6         ;
001312  005267  177512                    INC     ICNT            ;INCREMENT ICNT.
```

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001316 001002                            BNE     CHNAC                ;BR IF RESULT NOT 0.
001320 005167  177504                    COM     ICNT                 ;RESET ICNT TO -1.
001324 032767  040000  176236  CHNAC:    BIT     #BIT14,SR            ;CHECK FOR SCOPE OPTION.
001332 001401                            BEQ     CHNA                 ;BRANCH IF SCOPE SW NOT SET.
001334 000002                  CHNAB:    RTI                          ;RETURN TO ROUTINE.
001336 032767  004000  176224  CHNA:     BIT     #BIT11,SR            ;TEST INHIBIT ITERATION SWITCH
001344 001003                            BNE     CHNAA                ;BRANCH IF INHIBIT ITERATION SW SET.
001346 005367  177454                    DEC     ICTR                 ;DECREMENT ITERATION COUNT.
001352 001370                            BNE     CHNAB                ;BRANCH IF COUNT NOT 0.
001354 022626                  CHNAA:    POPSP2                       ;POP STACK TWICE
001356 032767  002000  176204            BIT     #BIT10,SR            ;ROUTINE END HALT SW SET? (SR10)
001364 001403                            BEQ     CHNB                 ;BRANCH IF NOT SET.
001366 016700  177444                    MOV     RTNNO,R0             ;TEST # TO R0.
001372 000000                            HALT                         ;ROUTINE END HALT. TEST # IN LIGHTS.
001374 032767  001000  176166  CHNB:     BIT     #BIT9,SR             ;CHECK SELECT ROUTINE SWITCH
001402 001266                            BNE     GETRDY               ;BRANCH IF SELECT RTN SW SET
001404 022767  177777  177426            CMP     #-1,NXTST            ;LAST TEST?
001412 001265                            BNE     GTRDYX               ;BRANCH IF NOT LAST TEST.
001414 104000                            TYPE                         ;TYPE PROGRAM END BELL.
001416 003310                            .PGEND
001420 013700  000042                    MOV     @#42,R0              ;GET CONTENTS OF 42.
001424 001405                            BEQ     HERE                 ;BR IF 0.
001426 000005                            RESET                        ;NON-ZERO. ISSUE RESET.
001430 004710                  LOGIC:    JSR     PC,(0)               ;RETURN TO MONITOR.
001432 000240  000240  000240            .WORD   NOP,NOP,NOP
001440 000647                  HERE:     BR      GETRDY               ;GO REPEAT PROGRAM.
001442 016705  177372          FORWD:    MOV     NXTST,R5             ;ADDR OF NEXT ROUTINE TO R5.
001446 012567  177364                    MOV     (5)+,RTNNO           ;GET NEXT ROUTINE NUMBER.
001452 012567  177362                    MOV     (5)+,NXTST           ;GET ADDR OF NEXT "NEXT" ROUTINE.
001456 012567  177344                    MOV     (5)+,ICTR            ;GET ITERATION COUNT.
001462 012567  177346                    MOV     (5)+,SCOPTR          ;GET SCOPE LOOP ENTRY POINTER.
001466 010567  177350          FORWDA:   MOV     R5,CURTST            ;ADDR OF NOW CURRENT TEST TO CURTST.
001472 012767  000001  177330            MOV     #1,ICNT              ;PRESET ICNT TO 1.
001500 016767  177332  176062            MOV     RTNNO,SR             ;DISPLAY ROUTINE #.
001506 000207                            RTS     R7                   ;EXIT FORWD SUBROUTINE.
001510 010046                  EMTINT:   MOV     R0,-(6)              ;PUSH R0.
001512 016600  000002                    MOV     2(6),R0              ;GET EMT PC.
001516 014000                            MOV     -(0),R0              ;GET EMT CALL.
001520 006300                            ASL     R0                   ;TIMES 2.
001522 016000  171074                    MOV     EMTTAB-10000(0),R0      ;FORM EMT ADDR.
001526 000200                            RTS     R0                   ;GO TO EMT RTN. RESTORE R0.
                               ;SAVE REGS 0 TO 4 SUBROUTINE.
001530 012667  000030          SAVRG:    MOV     (6)+,SVRPC           ;SAVE PC AND PSW.
001534 012667  000026                    MOV     (6)+,SVRPSW
001540 010446                            MOV     %4,-(6)              ;SAVE REGS 0 - 4
001542 010346                            MOV     %3,-(6)              ;IN STACK.
001544 010246                            MOV     %2,-(6)
001546 010146                            MOV     %1,-(6)
001550 010046                            MOV     %0,-(6)
001552 016746  000010                    MOV     SVRPSW,-(6)          ;RESTORE PC AND PSW.
001556 016746  000002                    MOV     SVRPC,-(6)
001562 000002                            RTI                          ;EXIT.
001564 000000                  SVRPC:    OPEN
001566 000000                  SVRPSW:   OPEN
                               ;RESTORE REGS 0 TO 4 SUBROUTINE.
001570 012667  000030          RSTRG:    MOV     (6)+,RSTPC           ;SAVE PC AND PSW.
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001574  012567  000026                   MOV     (6)+,RSTPSW
001600  012600                           MOV     (6)+,%0         ;RESTORE REGS 0 - 4
001602  012601                           MOV     (6)+,%1         ;FROM STACK.
001604  012602                           MOV     (6)+,%2
001606  012603                           MOV     (6)+,%3
001610  012604                           MOV     (6)+,%4
001612  016746  000010                   MOV     RSTPSW,-(6)     ;RESTORE PC AND PSW.
001616  016746  000002                   MOV     RSTPC,-(6)
001622  000002                           RTI                     ;EXIT
001624  000000                   RSTPC:  OPEN
001626  000000                   RSTPSW: OPEN
                                 ;ROUTINE TO SET TC11 INTERRUPT VECTOR AND PRIORITY
001630  017667  000000  000012   STTCV:  MOV     @(6),STPRA+2    ;MOVE VECTOR ADDR TO STPRA+2
001636  062716  000002                   ADD     #2,@%6          ;SET UP EXIT
001642  016701  177150                   MOV     TCVTR,%1
001646  012721  000000           STPRA:  MOV     #OPEN,(1)+      ;SET VECTOR ADDRESS
001652  016721  177142                   MOV     TCLVL,(1)+      ;SET PRIORITY
001656  000002                           RTI                     ;EXIT
                                 ;ROUTINE TO ISSUE RESET.
001660  012700  052525           SRSETT: MOV     #52525,%0       ;DATA TO R0.
001664  005100                           COM     %0              ;COMPLEMENT (R0).
001666  010067  177770                   MOV     %0,SRSETT+2     ;(R0) TO SRSETT+2.
001672  000005                           RESET                   ;ISSUE RESET. (R0) IS
001674  000002                           RTI                     ;DISPLAYED. EXIT.
001676  104000                   SETSR:  TYPE                    ;TYPE SELECT OPTION MESSAGE.
001700  003233                           ASETSR
001702  104005                           CHALT                   ;COMMON HALT.
001704  000207                           RTS     %7              ;EXIT.
                                 ;COMMON HALT ROUTINE
001706  011600                   CHLT:   MOV     @%6,%0          ;DEVELOP ADDRESS OF CALLER.
001710  162700  000002                   SUB     #2,%0
001714  000000                           HALT                    ;HALT. ADDRESS OF CALL INSTRUCTION
001716  000002                           RTI                     ;IN DATA LIGHTS.
                                 ;CONDITIONAL ERROR HALT ROUTINE.
001720  005767  175644           EHLT:   TST     SR              ;CHECK FOR HALT ON ERROR.
001724  100001                           BPL     EHLTA           ;BRANCH IF NO HALT DESIRED.
001726  000000                           HALT                    ;HALT.
001730  000002                   EHLTA:  RTI                     ;IN DATA LIGHTS.
                                 ;DATA CHECK ROUTINE.
001732  026767  17711   177110   DTCHK:  CMP     CRBUF,CRBUFA    ;COMPARE EXPECTED AND RECEIVED
001740  001414                           BEQ     DTCHKA          ;CHARS. BRANCH IF SAME.
001742  004567  000714                   JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
001746  001046                           CRBUF                   ;SOURCE ADDR.
001750  003176                           AWAS                    ;DESTINATION ADDR.
001752  000003                           3                       ;#OF DIGITS TO CONVERT.
001754  004567  000702                   JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
001760  001050                           CRBUFA                  ;SOURCE ADDR.
001762  003160                           AASB                    ;DESTINATION ADDR.
001764  000003                           3                       ;#OF DIGITS TO CONVERT.
001766  104014                           ERROR1
001770  003137                           ERDAT
001772  000002                   DTCHKA: RTI                     ; EXIT.
001774  012767  177777  000126   ERR:    MOV     #-1,ERRB        ;SET UP ONE MESSAGE CALL.
002002  012767  000240  000122           MOV     #240,ERRB+2
002010  005067  000132                   CLR     ERRE
002014  000413                           BR      ERRA
```

```
002016  011667  000106          ERR1:   MOV     @%6,ERRB        ;DEVELOP ADDT'L MESSAGE ADDR.
002022  017767  000102  000100          MOV     @ERRB,ERRB      ;STORE AT ERRB.
002030  012767  177777  000074          MOV     #-1,ERRB+2
002036  012767  000002  000102          MOV     #2,ERRE
002044  032767  020000  175516  ERRA:   BIT     #BIT13,SR       ;INHIBIT ERROR PRINT?
002052  001030                          BNE     ERRC            ;BRANCH TO INHIBIT PRINT.
002054  011667  000064                  MOV     @%6,ERRD        ;DEVELOP CALLING ADDR.
002060  162767  000002  000056          SUB     #2,ERRD
002066  004567  000570                  JSR     R5,OACNV        ;CONVERT TEST # TO ASCII.
002072  001036                          RTNNO
002074  003102                          ATNUMB
002076  000003                          3
002100  004567  000556                  JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
002104  002144                          ERRD                    ;SOURCE ADDR.
002106  003112                          APC                     ;DESTINATION ADDR.
002110  000006                          6                       ;#OF DIGITS TO CONVERT.
002112  004567  000650                  JSR     R5,BDCNV        ;CONVERT ICNT TO DECIMAL ASCII.
002116  001030                          ICNT
002120  003127                          AICNT
002122  000005                          5
002124  104001                          TYPES                   ;TYPE:
002126  003076                          EMO                     ;ERROR HEADER.
002130  000000                  ERRB:   OPEN                    ;ADDT'L ERROR MESSAGE IF ANY.
002132  177777                          -1
002134  104007                  ERRC:   EHALT                   ;GO ERR HALT IF DESIRED.
002136  066716  000004                  ADD     ERRE,@%6
002142  000002                          RTI                     ;EXIT.
002144  000000                  ERRD:   OPEN
002146  000000                  ERRE:   OPEN
                                ;RANDOM NUMBER GENERATOR. ROUTINE EXITS WITH NUMBER IN REGISTER 0.
002150  016700  000042          RNGEN:  MOV     RP1,%0
002154  006100                          ROL     %0
002156  006100                          ROL     %0
002160  066700  000034                  ADD     RP2,%0
002164  010067  000026                  MOV     %0,RP1
002170  006100                          ROL     %0
002172  006100                          ROL     %0
002174  066700  000020                  ADD     RP2,%0
002200  006100                          ROL     %0
002202  006100                          ROL     %0
002204  010067  000010                  MOV     %0,RP2
002210  016700  000002                  MOV     RP1,%0
002214  000207                          RTS     %7              ;EXIT. NUMBER IN R0
002216  001233                  RP1:    1233
002220  007622                  RP2:    7622
                                ;SUBROUTINE TO OUTPUT ASCII MESSAGE ON TELETYPE PRINTER.
002222  011600                  TYP:    MOV     @%6,%0          ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS.
002224  062716  000002                  ADD     #2,@%6          ;SET UP EXIT.
002230  011000                          MOV     @%0,%0          ;ADDRESS OF MESSAGE TO R0.
002232  112067  000100          TYPA:   MOVB    (0)+,TYPDAT     ;GET CHARACTER
002236  001006                          BNE     TYPC            ;BRANCH IF NOT TERMINATOR..
002240  112767  000177  000070          MOVB    #177,TYPDAT     ;OUTPUT RUBOUT.
002246  004767  000020                  JSR     %7,TYPD
002252  000002                          RTI                     ;TERMINATOR CHAR. DONE. EXIT.
002254  122767  000045  000054  TYPC:   CMPB    #45,TYPDAT      ;CHECK FOR"%".
002262  001412                          BEQ     TYPF            ;BRANCH IF"%"
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002264  004767  000002                    JSR     %7,TYPD             ;TYPE CHAR IN TYPDAT
002270  000760                            BR      TYPA
002272  116777  000040  176524  TYPD:     MOVB    TYPDAT,@TPB         ;OUTPUT CHARACTER TO PRINTER
002300  105777  176516                    TSTB    @TPS                ;WAIT FOR DONE FLAG.
002304  100375                            BPL     .-4
002306  000207                            RTS     %7                  ;EXIT
002310  112767  000015  000020  TYPF:     MOVB    #15,TYPDAT          ;MOVE CARRIAGE RETURN CODE TO TYPDAT
002316  004767  177750                    JSR     %7,TYPD             ;GO TYPE CHAR.
002322  112767  000012  000006  TYPG:     MOVB    #12,TYPDAT          ;MOVE LF CODE TO TYPDAT.
002330  004767  177736                    JSR     %7,TYPD             ;GO TYPE CHAR.
002334  000736                            BR      TYPA
002336  000000                  TYPDAT:   OPEN
                                ;SUBROUTINE TO OUTPUT A SERIES OF ASCII MESSAGES ON TELETYPE PRINTER
002340  011600                  TYPS:     MOV     @%6,%0              ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS
002342  062716  000002                    ADD     #2,@%6              ;UPDATE TO NEXT MESSAGE ADDRESS
002346  011067  000014                    MOV     @%0,TYPSB           ;ADDRESS OF MESSAGE TO TYPSB
002352  022767  177777  000006            CMP     #-1,TYPSB           ;CHECK FOR TERMINATOR
002360  001001                            BNE     TYPSA               ;BRANCH IF NOT TERMINATOR.
002362  000002                            RTI                         ;TERMINATOR, EXIT
002364  104000                  TYPSA:    TYPE                        ;CALL ON TYP SUB TO TYPE MESSAGE
002366  000000                  TYPSB:    OPEN                        ;ADDRESS OF MESSAGE GOES HERE
002370  000763                            BR      TYPS                ;GO PROCESS NEXT MESSAGE
                                ;SUBROUTINE TO DELAY A SPECIFIED NUMBER OF MILLISECONDS
002372  011667  000036          DLY:      MOV     @%6,DLCNT           ;GET DELAY COUNT ADDRESS.
002376  062716  000002                    ADD     #2,@%6              ;SET UP EXIT ADDRESS
002402  017746  000026                    MOV     @DLCNT,-(6)         ;DELAY COUNT TO STACK
002406  005067  175364                    CLR     PSW                 ;SET PRIORITY 0
002412  012746  000226          DLYA:     MOV     #226,-(6)           ;1 MSEC COUNT TO STACK
002416  005316                  DLYB:     DEC     @%6                 ;DECREMENT 1 MSEC COUNT
002420  001376                            BNE     DLYB                ;BRANCH IF NOT 0.
002422  005726                            POPSP                       ;ZERO. UNCOVER MSECS. COUNT.
002424  005316                            DEC     @%6                 ;DECREMENT IT
002426  001371                            BNE     DLYA                ;BR IF NOT DONE DELAYING
002430  005726                            POPSP                       ;DONE
002432  000002                            RTI                         ;EXIT.
002434  000000                  DLCNT:    OPEN                        ;CONTAINS MILLISECONDS COUNT ADDRESS.
                                ;SUBROUTINE TO STALL A RANDOM NUMBER OF MILLISECONDS. MAXIMUM STALL
                                ;DETERMINED BY CONTENTS OF LOC STLMSK.
002436  004767  177506          STAL:     JSR     %7,RNGEN            ;GO GET RANDOM NUMBER.
002442  046700  000014                    BIC     STLMSK,%0           ;# IN R0. APPLY STALL MASK.
002446  001404                            BEQ     STALB               ;BRANCH IF RESULT IS 0.
002450  010067  000002                    MOV     %0,STALA
002454  104015                            DELAY                       ;DELAY
002456  000000                  STALA:    OPEN                        ;DELAY COUNT
002460  000002                  STALB:    RTI                         ;DONE. EXIT.
002462  000000                  STLMSK:   OPEN                        ;STALL MASK.
                                ;SUBROUTINE TO GENERATE RANDOM CHARACTER COUNT
002464  004767  177460          GRCNT:    JSR     %7,RNGEN            ;GET RANDOM NUMBER
002470  046700  000010                    BIC     RCMSK,%0            ;APPLY MASK
002474  001773                            BEQ     GRCNT               ;TRY AGAIN IF RESULT 0
002476  010067  000004                    MOV     %0,RNCNT            ;COUNT TO RNCNT
002502  000207                            RTS     %7                  ;EXIT.
002504  000000                  RCMSK:    OPEN                        ;RANDOM CHARACTER MASK.
002506  000000                  RNCNT:    OPEN                        ;RANDOM CHARACTER COUNT.
                                ;SUBROUTINE TO INITIALIZE BINARY COUNT PATTERNS
002510  012767  177777  000014  INBIN:    MOV     #-1,?IND            ;SET ALL VARIABLES
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002516  004567  000222                       JSR     %5,BMOVE        ;TO MINUS 1.
002522  002532                               RIND
002524  002533                               RIND+1
002526  000013                               11.
002530  000207                               RTS     %7              ;EXIT
002532  000000                     RIND:     OPEN
002534  000000                     PTO:      OPEN
002536  000000                     PT1:      OPEN
002540  000000                     PIND:     OPEN
002542  000000                     PTOP:     OPEN
002544  000000                     PT1P:     OPEN
                                   ;SPECIAL BINARY COUNT PATTERN SUBROUTINE. EXITS WITH BIN CHAR IN R0
002546  016767  177762  177762     GTBIN:    MOV     PTO,PT1         ;PREVIOUS BIN CHAR TO PT1
002554  005167  177756                       COM     PT1
002560  005167  177746                       COM     RIND
002564  001002                               BNE     .+6
002566  005267  177744                       INC     PT1
002572  042767  177400  177736               BIC     #177400,PT1     ;MASK TO 8 BITS
002600  016767  177732  177726               MOV     PT1,PTO         ;SAVE BIN CHAR IN PTO
002606  016700  177724                       MOV     PT1,%0          ;BIN CHAR TO R0.
002612  000207                               RTS     %7              ;EXIT.
002614  016767  177722  177722     GTBINP:   MOV     PTOP,PT1P       ;PREVIOUS BIN CHAR TO PT1P
002622  005167  177716                       COM     PT1P
002626  005167  177706                       COM     PIND
002632  001002                               BNE     .+6
002634  005267  177704                       INC     PT1P
002640  042767  177400  177676               BIC     #177400,PT1P    ;MASK TO 8 BITS.
002646  016767  177672  177666               MOV     PT1P,PTOP       ;SAVE BIN CHAR IN PTOP.
002654  016701  177664                       MOV     PT1P,%1         ;BIN CHAR TO R1.
002660  000207                               RTS     %7              ;EXIT.
                                   ;OCTAL TO ASCII CONVERT ROUTINE
002662  013567  000054             OACNV:    MOV     @(5)+,OACNVX    ;GET OCTAL VALUE.
002666  012501                               MOV     (5)+,%1         ;GET DESTINATION ADDR.
002670  012502                               MOV     (5)+,%2         ;GET CONVERT COUNT.
002672  060201                               ADD     %2,%1           ;DEVELOP ADDR TO STORE 1ST CHAR.
002674  016703  000042             OACNVA:   MOV     OACNVX,%3
002700  042703  177770                       BIC     #177770,%3      ;ISOLATE LEAST SIGNIFICANT DIGIT.
002704  062703  000060                       ADD     #60,%3          ;CONVERT DIGIT TO ASCII.
002710  110341                               MOVB    %3,-(1)         ;STORE ASCII CHARACTER.
002712  042767  000007  000022               BIC     #7,OACNVX
002720  006067  000016                       ROR     OACNVX
002724  006067  000012                       ROR     OACNVX
002730  006067  000006                       ROR     OACNVX
002734  005302                               DEC     %2              ;DONE ALL DIGITS?
002736  001356                               BNE     OACNVA          ;BRANCH IF NOT DONE.
002740  000205                               RTS     %5              ;DONE. EXIT.
002742  000000                     OACNVX:   OPEN
                                   ;SUBROUTINE TO MOVE A VARIABLE NUMBER OF BYTES.
002744  104012                     BMOVE:    SAVREG                  ;SAVE REGS.
002746  012501                               MOV     (5)+,%1         ;GET"FROM"ADDRESS
002750  012502                               MOV     (5)+,%2         ;GET"TO"ADDRESS
002752  012503                               MOV     (5)+,%3         ;GET COUNT.
002754  112122                     BMOVA:    MOVB    (1)+,(2)+       ;MOVE BYTES
002756  005303                               DEC     %3              ;DECREMENT COUNT
002760  001375                               BNE     BMOVA           ;BRANCH IF NOT DONE.
002762  104013                               RSTREG                  ;RESTORE REGS.
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002764  000205                                     RTS     %5              ;DONE EXIT
                                           ;BINARY TO DECIMAL ASCII CONVERT SUBROUTINE.
002766  104012                             BDCNV:  SAVREG                  ;SAVE REGS.
002770  013501                                     MOV     @(5)+,R1        ;GET BINARY VALUE.
002772  012700  003070                             MOV     #DECVAL,R0      ;ADDR OF DECVAL TO R0.
002776  012702  003056                             MOV     #TENPWR,R2      ;ADDR OF 10 POWER TO R2.
003002  012703  000005                             MOV     #5,R3           ;SET UP FOR 5 CONVERSIONS.
003006  005004                             BDCNVA: CLR     R4              ;CLEAR RESULT.
003010  161201                             BDCNVB: SUB     (2),R1          ;10 POWER FROM VALUE.
003012  103402                                     BCS     BDCNVC          ;BR IF UNSUCCESSFUL.
003014  005204                                     INC     R4              ;+1 TO RESULT.
003016  000774                                     BR      BDCNVB          ;DO IT AGAIN.
003020  061201                             BDCNVC: ADD     (2),R1          ;RESTORE SUBTRACTED VALUE.
003022  062704  000060                             ADD     #60,R4  ;CONVERT RESULT TO ASCII.
003026  110420                                     MOVB    R4,(0)+         ;STORE RESULT.
003030  005722                                     TST     (2)+            ;UPDATE 10 POWER ADDR.
003032  005303                                     DEC     R3              ;DONE 5 TIMES?
003034  001364                                     BNE     BDCNVA          ;BR IF NOT.
003036  012501                                     MOV     (5)+,R1         ;GET ADDR TO STORE ASCII.
003040  012502                                     MOV     (5)+,R2         ;GET # OF DIGITS REQUIRED.
003042  060201                                     ADD     R2,R1           ;START WITH LSD.
003044  114041                             BDCNVD: MOVB    -(0),-(1)       ;TRANSFER CHARACTER.
003046  005302                                     DEC     R2              ;DONE?
003050  001375                                     BNE     BDCNVD          ;BR IF NOT.
003052  104013                                     RSTREG                  ;RESTORE REGS.
003054  000205                                     RTS     R5              ;EXIT.
003056  023420                             TENPWR: 10000.
003060  001750                                     1000.
003062  000144                                     100.
003064  000012                                     10.
003066  000001                                     1
003070     040     040     040             DECVAL: .BYTE   040,040,040,040,040,040
003073     040     040     040
                                           ;ASCII MESSAGES
003076  022445  020124                     EMO:    .ASCII  '%%T '
003102  020040  020040  050040             ATNUMB: .ASCII  '     PC '
003110  020103
003112  020040  020040  020040             APC:    .ASCII  '        ICNT '
003120  020040  041511  052116
003126     040
003127     040  020040  020040             AICNT:  .ASCIZ  '     .%'
003134  022456     000
003137     040  042040  052101             ERDAT:  .ASCII  ' DATA ERR  S/B: '
003144  020101  051105  020122
003152  051440  041057  020072
003160  020040  020040  020040             AASB:   .ASCII  '        WAS: '
003166  020040  053440  051501
003174  020072
003176  020040  020040  020040             AWAS:   .ASCII  '        PREVIOUS WAS '
003204  020040  050040  042522
003212  044526  052517  020123
003220  040527  020123
003224  020040  020040  020040             APWAS:  .ASCIZ  '      '
003232     000
003233     045  042523  020124             ASETSR: .ASCIZ  '%SET SR OPTIONS. NORMAL SR =0'
003240  051123  047440  052120
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003246  047511  051516  020056
003254  047516  046522  046101
003262  051440  020122  030075
003270     000
003271     045  047111  040526  AINCRT: .ASCIZ  '%INVALID TEST.'
003276  044514  020104  042524
003304  052123  000056
003310     007                  APGEND: .BYTE   007
003311     045  000052                  .ASCIZ  '%*'
003314  022445  041524  020061  POTIT:  .ASCII  '%%TC1 TC11 TEST 1%'
003322  041524  030461  052040
003330  051505  020124  022461
003336  046101  020114  047125          .ASCIZ  'ALL UNITS MUST BE DESELECTED'
003344  052111  020123  052515
003352  052123  041040  020105
003360  042504  042523  042514
003366  052103  042105     000
003373     045  051045  052517  TOMSG:  .ASCII  '%%ROUTINE 0. TC11 CONTROL DELAY ADJUSTMENT ROUTINE.'
003400  044524  042516  030040
003406  020056  041524  030461
003414  041440  047117  051124
003422  046117  042040  046105
003430  054501  040440  045104
003436  051525  046524  047105
003444  020124  047522  052125
003452  047111  027105
003456  051045  043105  051105          .ASCIZ  '%REFER TO PROGRAM DOCUMENT.%%'
003464  052040  020117  051120
003472  043517  040522  020115
003500  047504  052503  042515
003506  052116  022456  000045
                                        .EVEN
```

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                                         ;*************************************************************
        003514  000000                   T0:     0                             ;ROUTINE NUMBER 0            *
        003516  003614                           T1                            ;ADDRESS OF NEXT ROUTINE     *
        003520  000001                           1                             ;TEST ITERATION COUNT        *
        003522  003524                           XAA                           ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TC11 CONTROL DELAY ADJUSTMENTS ROUTINE.
                                         ;ROUTINE CAN BE EXECUTED ONLY BY SELECTING ROUTINE 0.
                                         ;SR9=1 , SR6 THROUGH SR0 SET TO 0.
        003524  032767  001000  174036   XAA:    BIT     #BIT9,SR              ;ROUTINE SELECT SWITCH SET?
        003532  001001                           BNE     XAB                   ;BR IF YES.
        003534  104011                           SCOPE                         ;NO. GET OUT.
                                         ;
        003536  104000                   XAB:    TYPE                          ;TYPE ID AND INSTRUCTIONS.
        003540  003373                           TOMSG
        003542  104005                           CHALT                         ;WAIT FOR USER.
        003544  012777  020003  175234   XAC:    MOV     #MAINT!RNUM!DO,@TCCM
        003552  012777  000100  175224           MOV     #100,@TCST            ;SET CLOCK FOR TF1.
        003560  005067  175244                   CLR     ICNT                  ;CLEAR TIMER.
        003564  005267  175240           XAD:    INC     ICNT                  ;INCREMENT TIMER.
        003570  026767  175234  173772           CMP     ICNT,SR
        003576  101772                           BLOS    XAD
        003600  005077  175200                   CLR     @TCST
        003604  012777  021000  175174           MOV     #21000,@TCCM          ;SET 120 MSEC DELAY.
        003612  000754                           BR      XAC
                                         ;*************************************************************
        003614  000001                   T1:     1                             ;ROUTINE NUMBER 1            *
        003616  003646                           T2                            ;ADDRESS OF NEXT ROUTINE     *
        003620  001750                           1000.                         ;TEST ITERATION COUNT        *
        003622  003624                           AAA                           ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TEST ABILITY TO REFERENCE TCCM WITHOUT TRAPPING.
        003624  012767  003640  174152   AAA:    MOV     #AAB,MACHER           ;SET UP BUS ERROR TRAP.
        003632  005777  175150                   TST     @TCCM                 ;REFERENCE RREG.
        003636  104011                           SCOPE                         ;OK IF NO TRAP OCCURS. SCOPE.
        003640  104003                   AAB:    ERROR                         ;TRAPPED WHEN REFERENCING RREG.
        003642  022626                           POPSP2
        003644  104011                           SCOPE                         ;SCOPE
                                         ;*************************************************************
        003646  000002                   T2:     2                             ;ROUTINE NUMBER 2            *
        003650  003700                           T3                            ;ADDRESS OF NEXT ROUTINE     *
        003652  001750                           1000.                         ;TEST ITERATION COUNT        *
        003654  003656                           ABA                           ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TEST ABILITY TO REFERENCE TCST WITHOUT TRAPPING.
        003656  012767  003672  174120   ABA:    MOV     #ABB,MACHER           ;SET UP BUS ERROR TRAP.
        003664  005777  175114                   TST     @TCST                 ;REFERENCE RREG.
        003670  104011                           SCOPE                         ;OK IF NO TRAP OCCURS. SCOPE.
        003672  104003                   ABB:    ERROR                         ;TRAPPED WHEN REFERENCING RREG.
        003674  022626                           POPSP2
        003676  104011                           SCOPE                         ;SCOPE
                                         ;*************************************************************
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003700  000003                  T3:     3                       ;ROUTINE NUMBER 3                 *
003702  003732                          T4                      ;ADDRESS OF NEXT ROUTINE          *
003704  001750                          1000.                   ;TEST ITERATION COUNT             *
003706  003710                          ACA                     ;SCOPE ENTRY POINT                *
                                        .LIST
                                ;*******************************************************************
                                ;TEST ABILITY TO REFERENCE TCDT WITHOUT TRAPPING.
003710  012767  003724  174066  ACA:    MOV     #ACB,MACHER     ;SET UP BUS ERROR TRAP.
003716  005777  175072                  TST     @TCDT           ;REFERENCE RREG.
003722  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
003724  104003                  ACB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
003726  022626                          POPSP2
003730  104011                          SCOPE                   ;SCOPE
                                ;*******************************************************************
003732  000004                  T4:     4                       ;ROUTINE NUMBER 4                 *
003734  003764                          T5                      ;ADDRESS OF NEXT ROUTINE          *
003736  001750                          1000.                   ;TEST ITERATION COUNT             *
003740  003742                          ADA                     ;SCOPE ENTRY POINT                *
                                        .LIST
                                ;*******************************************************************
                                ;TEST ABILITY TO REFERENCE TCBA WITHOUT TRAPPING.
003742  012767  003756  174034  ADA:    MOV     #ADB,MACHER     ;SET UP BUS ERROR TRAP.
003750  005777  175036                  TST     @TCBA           ;REFERENCE RREG.
003754  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
003756  104003                  ADB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
003760  022626                          POPSP2
003762  104011                          SCOPE                   ;SCOPE
                                ;*******************************************************************
003764  000005                  T5:     5                       ;ROUTINE NUMBER 5                 *
003766  004016                          T6                      ;ADDRESS OF NEXT ROUTINE          *
003770  001750                          1000.                   ;TEST ITERATION COUNT             *
003772  003774                          AEA                     ;SCOPE ENTRY POINT                *
                                        .LIST
                                ;*******************************************************************
                                ;TEST ABILITY TO REFERENCE TCWC WITHOUT TRAPPING.
003774  012767  004010  174002  AEA:    MOV     #AEB,MACHER     ;SET UP BUS ERROR TRAP.
004002  005777  175002                  TST     @TCWC           ;REFERENCE RREG.
004006  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
004010  104003                  AEB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
004012  022626                          POPSP2
004014  104011                          SCOPE                   ;SCOPE
                                ;*******************************************************************
004016  000006                  T6:     6                       ;ROUTINE NUMBER 6                 *
004020  004072                          T7                      ;ADDRESS OF NEXT ROUTINE          *
004022  000144                          100.                    ;TEST ITERATION COUNT             *
004024  004026                          AFA                     ;SCOPE ENTRY POINT                *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCDT BIT0 CAN BE SET, AND CLEARED.
004026  052777  000001  174760  AFA:    BIS     #BIT0,@TCDT     ;SET TCDT BIT0.
004034  032777  000001  174752          BIT     #BIT0,@TCDT     ;SEE IF BIT IS SET.
004042  001002                          BNE     .+6             ;BRANCH IF SET.
004044  104003                          ERROR                   ;TCDT BIT0 FAILED TO SET.
004046  104011                          SCOPE
004050  042777  000001  174736          BIC     #BIT0,@TCDT     ;CLEAR TCDT BIT0.
004056  032777  000001  174730          BIT     #BIT0,@TCDT     ;SEE IF BIT IS CLEAR.
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004064  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
004066  104003                            ERROR                   ;TCDT BIT0 FAILED TO CLEAR.
004070  104011                            SCOPE                   ;SCOPE.
                                  ;*************************************************************
004072  000007                    T7:     7                       ;ROUTINE NUMBER 7              *
004074  004126                            T10                     ;ADDRESS OF NEXT ROUTINE       *
004076  000012                            10.                     ;TEST ITERATION COUNT          *
004100  004102                            BAFA                    ;SCOPE ENTRY POINT             *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT0
004102  052777  000001  174704    BAFA:   BIS     #BIT0,@TCDT     ;SET TCDT BIT0
004110  104010                            SRESET                  ;ISSUE RESET TO CLEAR BIT.
004112  032777  000001  174674            BIT     #BIT0,@TCDT     ;SEE IF BIT IS CLEAR.
004120  001401                            BEQ     BAFB            ;BR IF BIT IS CLEAR.
004122  104003                            ERROR                   ;RESET FAILED TO CLEAR TCDT BIT0
004124  104011                    BAFB:   SCOPE                   ;SCOPE.
                                  ;*************************************************************
004126  000010                    T10:    10                      ;ROUTINE NUMBER 10             *
004130  004202                            T11                     ;ADDRESS OF NEXT ROUTINE       *
004132  000144                            100.                    ;TEST ITERATION COUNT          *
004134  004136                            AGA                     ;SCOPE ENTRY POINT             *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT TCDT BIT1 CAN BE SET, AND CLEARED.
004136  052777  000002  174650    AGA:    BIS     #BIT1,@TCDT     ;SET TCDT BIT1.
004144  032777  000002  174642            BIT     #BIT1,@TCDT     ;SEE IF BIT IS SET.
004152  001002                            BNE     .+6             ;BRANCH IF SET.
004154  104003                            ERROR                   ;TCDT BIT1 FAILED TO SET.
004156  104011                            SCOPE
004160  042777  000002  174626            BIC     #BIT1,@TCDT     ;CLEAR TCDT BIT1.
004166  032777  000002  174620            BIT     #BIT1,@TCDT     ;SEE IF BIT IS CLEAR.
004174  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
004176  104003                            ERROR                   ;TCDT BIT1 FAILED TO CLEAR.
004200  104011                            SCOPE                   ;SCOPE.
                                  ;*************************************************************
004202  000011                    T11:    11                      ;ROUTINE NUMBER 11             *
004204  004236                            T12                     ;ADDRESS OF NEXT ROUTINE       *
004206  000012                            10.                     ;TEST ITERATION COUNT          *
004210  004212                            BAGA                    ;SCOPE ENTRY POINT             *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT1
004212  052777  000002  174574    BAGA:   BIS     #BIT1,@TCDT     ;SET TCDT BIT1
004220  104010                            SRESET                  ;ISSUE RESET TO CLEAR BIT.
004222  032777  000002  174564            BIT     #BIT1,@TCDT     ;SEE IF BIT IS CLEAR.
004230  001401                            BEQ     BAGB            ;BR IF BIT IS CLEAR.
004232  104003                            ERROR                   ;RESET FAILED TO CLEAR TCDT BIT1
004234  104011                    BAGB:   SCOPE                   ;SCOPE.
                                  ;*************************************************************
004236  000012                    T12:    12                      ;ROUTINE NUMBER 12             *
004240  004312                            T13                     ;ADDRESS OF NEXT ROUTINE       *
004242  000144                            100.                    ;TEST ITERATION COUNT          *
004244  004246                            AHA                     ;SCOPE ENTRY POINT             *
                                          .LIST
                                  ;*************************************************************
```

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                                               ;TEST THAT TCDT BIT2 CAN BE SET, AND CLEARED.
004246  052777  000004  174540  AHA:    BIS     #BIT2,@TCDT         ;SET TCDT BIT2.
004254  032777  000004  174532          BIT     #BIT2,@TCDT         ;SEE IF BIT IS SET.
004262  001002                          BNE     .+6                 ;BRANCH IF SET.
004264  104003                          ERROR                       ;TCDT BIT2 FAILED TO SET.
004266  104011                          SCOPE
004270  042777  000004  174516          BIC     #BIT2,@TCDT         ;CLEAR TCDT BIT2.
004276  032777  000004  174510          BIT     #BIT2,@TCDT         ;SEE IF BIT IS CLEAR.
004304  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
004306  104003                          ERROR                       ;TCDT BIT2 FAILED TO CLEAR.
004310  104011                          SCOPE                       ;SCOPE.

                                ;*******************************************************************
004312  000013                  T13:    13                          ;ROUTINE NUMBER 13             *
004314  004346                          T14                         ;ADDRESS OF NEXT ROUTINE       *
004316  000012                          10.                         ;TEST ITERATION COUNT          *
004320  004322                          BAHA                        ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT2
004322  052777  000004  174464  BAHA:   BIS     #BIT2,@TCDT         ;SET TCDT BIT2
004330  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
004332  032777  000004  174454          BIT     #BIT2,@TCDT         ;SEE IF BIT IS CLEAR.
004340  001401                          BEQ     BAHB                ;BR IF BIT IS CLEAR.
004342  104003                          ERROR                       ;RESET FAILED TO CLEAR TCDT BIT2
004344  104011                  BAHB:   SCOPE                       ;SCOPE.

                                ;*******************************************************************
004346  000014                  T14:    14                          ;ROUTINE NUMBER 14             *
004350  004422                          T15                         ;ADDRESS OF NEXT ROUTINE       *
004352  000144                          100.                        ;TEST ITERATION COUNT          *
004354  004356                          AIA                         ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCDT BIT3 CAN BE SET, AND CLEARED.
004356  052777  000010  174430  AIA:    BIS     #BIT3,@TCDT         ;SET TCDT BIT3.
004364  032777  000010  174422          BIT     #BIT3,@TCDT         ;SEE IF BIT IS SET.
004372  001002                          BNE     .+6                 ;BRANCH IF SET.
004374  104003                          ERROR                       ;TCDT BIT3 FAILED TO SET.
004376  104011                          SCOPE
004400  042777  000010  174406          BIC     #BIT3,@TCDT         ;CLEAR TCDT BIT3.
004406  032777  000010  174400          BIT     #BIT3,@TCDT         ;SEE IF BIT IS CLEAR.
004414  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
004416  104003                          ERROR                       ;TCDT BIT3 FAILED TO CLEAR.
004420  104011                          SCOPE                       ;SCOPE.

                                ;*******************************************************************
004422  000015                  T15:    15                          ;ROUTINE NUMBER 15             *
004424  004456                          T16                         ;ADDRESS OF NEXT ROUTINE       *
004426  000012                          10.                         ;TEST ITERATION COUNT          *
004430  004432                          BAIA                        ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT3
004432  052777  000010  174354  BAIA:   BIS     #BIT3,@TCDT         ;SET TCDT BIT3
004440  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
004442  032777  000010  174344          BIT     #BIT3,@TCDT         ;SEE IF BIT IS CLEAR.
004450  001401                          BEQ     BAIB                ;BR IF BIT IS CLEAR.
004452  104003                          ERROR                       ;RESET FAILED TO CLEAR TCDT BIT3
```

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004454  104011                    BAIB:   SCOPE                       ;SCOPE.
                                  ;*****************************************************************************
004456  000016                    T16:    16                          ;ROUTINE NUMBER 16                        *
004460  004532                            T17                         ;ADDRESS OF NEXT ROUTINE                  *
004462  000144                            100.                        ;TEST ITERATION COUNT                     *
004464  004466                            AJA                         ;SCOPE ENTRY POINT                        *
                                          .LIST
                                  ;*****************************************************************************
                                  ;TEST THAT TCDT BIT4 CAN BE SET, AND CLEARED.
004466  052777  000020  174320    AJA:    BIS     #BIT4,@TCDT         ;SET TCDT BIT4.
004474  032777  000020  174312            BIT     #BIT4,@TCDT         ;SEE IF BIT IS SET.
004502  001002                            BNE     .+6                 ;BRANCH IF SET.
004504  104003                            ERROR                       ;TCDT BIT4 FAILED TO SET
004506  104011                            SCOPE
004510  042777  000020  174276            BIC     #BIT4,@TCDT         ;CLEAR TCDT BIT4.
004516  032777  000020  174270            BIT     #BIT4,@TCDT         ;SEE IF BIT IS CLEAR.
004524  001401                            BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
004526  104003                            ERROR                       ;TCDT BIT4 FAILED TO CLEAR.
004530  104011                            SCOPE                       ;SCOPE.
                                  ;*****************************************************************************
004532  000017                    T17:    17                          ;ROUTINE NUMBER 17                        *
004534  004566                            T20                         ;ADDRESS OF NEXT ROUTINE                  *
004536  000012                            10.                         ;TEST ITERATION COUNT                     *
004540  004542                            BAJA                        ;SCOPE ENTRY POINT                        *
                                          .LIST
                                  ;*****************************************************************************
                                  ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT4
004542  052777  000020  174244    BAJA:   BIS     #BIT4,@TCDT         ;SET TCDT BIT4
004550  104010                            SRESET                      ;ISSUE RESET TO CLEAR BIT.
004552  032777  000020  174234            BIT     #BIT4,@TCDT         ;SEE IF BIT IS CLEAR.
004560  001401                            BEQ     BAJB                ;BR IF BIT IS CLEAR.
004562  104003                            ERROR                       ;RESET FAILED TO CLEAR TCDT BIT4
004564  104011                    BAJB:   SCOPE                       ;SCOPE.
                                  ;*****************************************************************************
004566  000020                    T20:    20                          ;ROUTINE NUMBER 20                        *
004570  004642                            T21                         ;ADDRESS OF NEXT ROUTINE                  *
004572  000144                            100.                        ;TEST ITERATION COUNT                     *
004574  004576                            AKA                         ;SCOPE ENTRY POINT                        *
                                          .LIST
                                  ;*****************************************************************************
                                  ;TEST THAT TCDT BIT5 CAN BE SET, AND CLEARED.
004576  052777  000040  174210    AKA:    BIS     #BIT5,@TCDT         ;SET TCDT BIT5.
004604  032777  000040  174202            BIT     #BIT5,@TCDT         ;SEE IF BIT IS SET.
004612  001002                            BNE     .+6                 ;BRANCH IF SET.
004614  104003                            ERROR                       ;TCDT BIT5 FAILED TO SET.
004616  104011                            SCOPE
004620  042777  000040  174166            BIC     #BIT5,@TCDT         ;CLEAR TCDT BIT5.
004626  032777  000040  174160            BIT     #BIT5,@TCDT         ;SEE IF BIT IS CLEAR.
004634  001401                            BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
004636  104003                            ERROR                       ;TCDT BIT5 FAILED TO CLEAR.
004640  104011                            SCOPE                       ;SCOPE.
                                  ;*****************************************************************************
004642  000021                    T21:    21                          ;ROUTINE NUMBER 21                        *
004644  0046?6                            T22                         ;ADDRESS OF NEXT ROUTINE                  *
004646  00001?                            10.                         ;TEST ITERATION COUNT                     *
004650  00465?                            BAKA                        ;SCOPE ENTRY POINT                        *
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                                            .LIST
                                    ;*******************************************************************
                                    ;TEST THAT RESET INSTRUCTION CLEARS TCDT BITS
004652  052777  000040  174134      BAKA:   BIS     #BIT5,@TCDT     ;SET TCDT BITS
004660  104010                              SRESET                  ;ISSUE RESET TO CLEAR BIT.
004662  032777  000040  174124              BIT     #BIT5,@TCDT     ;SEE IF BIT IS CLEAR.
004670  001401                              BEQ     BAKB            ;BR IF BIT IS CLEAR.
004672  104003                              ERROR                   ;RESET FAILED TO CLEAR TCDT BITS
004674  104011                      BAKB:   SCOPE                   ;SCOPE.
                                    ;*******************************************************************
004676  000022                      T22:    22                      ;ROUTINE NUMBER 22                  *
004700  004752                              T23                     ;ADDRESS OF NEXT ROUTINE            *
004702  000144                              100.                    ;TEST ITERATION COUNT               *
004704  004706                              ALA                     ;SCOPE ENTRY POINT                  *
                                            .LIST
                                    ;*******************************************************************
                                    ;TEST THAT TCDT BIT6 CAN BE SET, AND CLEARED.
004706  052777  000100  174100      ALA:    BIS     #BIT6,@TCDT     ;SET TCDT BIT6.
004714  032777  000100  174072              BIT     #BIT6,@TCDT     ;SEE IF BIT IS SET.
004722  001002                              BNE     .+6             ;BRANCH IF SET.
004724  104003                              ERROR                   ;TCDT BIT6 FAILED TO SET.
004726  104011                              SCOPE
004730  042777  000100  174056              BIC     #BIT6,@TCDT     ;CLEAR TCDT BIT6.
004736  032777  000100  174050              BIT     #BIT6,@TCDT     ;SEE IF BIT IS CLEAR.
004744  001401                              BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
004746  104003                              ERROR                   ;TCDT BIT6 FAILED TO CLEAR.
004750  104011                              SCOPE                   ;SCOPE.
                                    ;*******************************************************************
004752  000023                      T23:    23                      ;ROUTINE NUMBER 23                  *
004754  005006                              T24                     ;ADDRESS OF NEXT ROUTINE            *
004756  000012                              10.                     ;TEST ITERATION COUNT               *
004760  004762                              BALA                    ;SCOPE ENTRY POINT                  *
                                            .LIST
                                    ;*******************************************************************
                                    ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT6
004762  052777  000100  174024      BALA:   BIS     #BIT6,@TCDT     ;SET TCDT BIT6
004770  104010                              SRESET                  ;ISSUE RESET TO CLEAR BIT.
004772  032777  000100  174014              BIT     #BIT6,@TCDT     ;SEE IF BIT IS CLEAR.
005000  001401                              BEQ     BALB            ;BR IF BIT IS CLEAR.
005002  104003                              ERROR                   ;RESET FAILED TO CLEAR TCDT BIT6
005004  104011                      BALB:   SCOPE                   ;SCOPE.
                                    ;*******************************************************************
005006  000024                      T24:    24                      ;ROUTINE NUMBER 24                  *
005010  005062                              T25                     ;ADDRESS OF NEXT ROUTINE            *
005012  000144                              100.                    ;TEST ITERATION COUNT               *
005014  005016                              AMA                     ;SCOPE ENTRY POINT                  *
                                            .LIST
                                    ;*******************************************************************
                                    ;TEST THAT TCDT BIT7 CAN BE SET, AND CLEARED.
005016  052777  000200  173770      AMA:    BIS     #BIT7,@TCDT     ;SET TCDT BIT7.
005024  032777  000200  173762              BIT     #BIT7,@TCDT     ;SEE IF BIT IS SET.
005032  001002                              BNE     .+6             ;BRANCH IF SET.
005034  104003                              ERROR                   ;TCDT BIT7 FAILED TO SET.
005036  104011                              SCOPE
005040  042777  000200  173746              BIC     #BIT7,@TCDT     ;CLEAR TCDT BIT7.
005046  032777  000200  173740              BIT     #BIT7,@TCDT     ;SEE IF BIT IS CLEAR.
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        005054  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
        005056  104003                          ERROR                       ;TCDT BIT7 FAILED TO CLEAR.
        005060  104011                          SCOPE                       ;SCOPE.
                                        ;*******************************************************************
        005062  000025                  T25:    25                          ;ROUTINE NUMBER 25              *
        005064  005116                          T26                         ;ADDRESS OF NEXT ROUTINE        *
        005066  000012                          10.                         ;TEST ITERATION COUNT           *
        005070  005072                          BAMA                        ;SCOPE ENTRY POINT              *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT7
        005072  052777  000200  173714  BAMA:   BIS     #BIT7,@TCDT         ;SET TCDT BIT7
        005100  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
        005102  032777  000200  173704          BIT     #BIT7,@TCDT         ;SEE IF BIT IS CLEAR.
        005110  001401                          BEQ     BAMB                ;BR IF BIT IS CLEAR.
        005112  104003                          ERROR                       ;RESET FAILED TO CLEAR TCDT BIT7
        005114  104011                  BAMB:   SCOPE                       ;SCOPE.
                                        ;*******************************************************************
        005116  000026                  T26:    26                          ;ROUTINE NUMBER 26              *
        005120  005172                          T27                         ;ADDRESS OF NEXT ROUTINE        *
        005122  000144                          100.                        ;TEST ITERATION COUNT           *
        005124  005126                          ANA                         ;SCOPE ENTRY POINT              *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT BIT8 CAN BE SET, AND CLEARED.
        005126  052777  000400  173660  ANA:    BIS     #BIT8,@TCDT         ;SET TCDT BIT8.
        005134  032777  000400  173652          BIT     #BIT8,@TCDT         ;SEE IF BIT IS SET.
        005142  001002                          BNE     .+6                 ;BRANCH IF SET.
        005144  104003                          ERROR                       ;TCDT BIT8 FAILED TO SET.
        005146  104011                          SCOPE
        005150  042777  000400  173636          BIC     #BIT8,@TCDT         ;CLEAR TCDT BIT8.
        005156  032777  000400  173630          BIT     #BIT8,@TCDT         ;SEE IF BIT IS CLEAR.
        005164  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
        005166  104003                          ERROR                       ;TCDT BIT8 FAILED TO CLEAR.
        005170  104011                          SCOPE                       ;SCOPE.
                                        ;*******************************************************************
        005172  000027                  T27:    27                          ;ROUTINE NUMBER 27              *
        005174  005226                          T30                         ;ADDRESS OF NEXT ROUTINE        *
        005176  000012                          10.                         ;TEST ITERATION COUNT           *
        005200  005202                          BANA                        ;SCOPE ENTRY POINT              *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT8
        005202  052777  000400  173604  BANA:   BIS     #BIT8,@TCDT         ;SET TCDT BIT8
        005210  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
        005212  032777  000400  173574          BIT     #BIT8,@TCDT         ;SEE IF BIT IS CLEAR.
        005220  001401                          BEQ     BANB                ;BR IF BIT IS CLEAR.
        005222  104003                          ERROR                       ;RESET FAILED TO CLEAR TCDT BIT8
        005224  104011                  BANB:   SCOPE                       ;SCOPE.
                                        ;*******************************************************************
        005226  000030                  T30:    30                          ;ROUTINE NUMBER 30              *
        005230  005302                          T31                         ;ADDRESS OF NEXT ROUTINE        *
        005232  000144                          100.                        ;TEST ITERATION COUNT           *
        005234  005236                          AOA                         ;SCOPE ENTRY POINT              *
                                                .LIST
                                        ;*******************************************************************
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                                        ;TEST THAT TCDT BIT9 CAN BE SET, AND CLEARED.
005236  052777  001000  173550  AOA:    BIS     #BIT9,@TCDT     ;SET TCDT BIT9.
005244  032777  001000  173542          BIT     #BIT9,@TCDT     ;SEE IF BIT IS SET.
005252  001002                          BNE     .+6             ;BRANCH IF SET.
005254  104003                          ERROR                   ;TCDT BIT9 FAILED TO SET.
005256  104011                          SCOPE
005260  042777  001000  173526          BIC     #BIT9,@TCDT     ;CLEAR TCDT BIT9.
005266  032777  001000  173520          BIT     #BIT9,@TCDT     ;SEE IF BIT IS CLEAR.
005274  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
005276  104003                          ERROR                   ;TCDT BIT9 FAILED TO CLEAR.
005300  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
005302  000031                  T31:    31                      ;ROUTINE NUMBER 31            *
005304  005336                          T32                     ;ADDRESS OF NEXT ROUTINE      *
005306  000012                          10.                     ;TEST ITERATION COUNT         *
005310  005312                          BAOA                    ;SCOPE ENTRY POINT            *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT9
005312  052777  001000  173474  BAOA:   BIS     #BIT9,@TCDT     ;SET TCDT BIT9
005320  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
005322  032777  001000  173464          BIT     #BIT9,@TCDT     ;SEE IF BIT IS CLEAR.
005330  001401                          BEQ     BAOB            ;BR IF BIT IS CLEAR.
005332  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT9
005334  104011                  BAOB:   SCOPE                   ;SCOPE.
                                ;*************************************************************
005336  000032                  T32:    32                      ;ROUTINE NUMBER 32            *
005340  005412                          T33                     ;ADDRESS OF NEXT ROUTINE      *
005342  000144                          100.                    ;TEST ITERATION COUNT         *
005344  005346                          APA                     ;SCOPE ENTRY POINT            *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT TCDT BIT10 CAN BE SET, AND CLEARED.
005346  052777  002000  173440  APA:    BIS     #BIT10,@TCDT    ;SET TCDT BIT10.
005354  032777  002000  173432          BIT     #BIT10,@TCDT    ;SEE IF BIT IS SET.
005362  001002                          BNE     .+6             ;BRANCH IF SET.
005364  104003                          ERROR                   ;TCDT BIT10 FAILED TO SET.
005366  104011                          SCOPE
005370  042777  002000  173416          BIC     #BIT10,@TCDT    ;CLEAR TCDT BIT10.
005376  032777  002000  173410          BIT     #BIT10,@TCDT    ;SEE IF BIT IS CLEAR.
005404  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
005406  104003                          ERROR                   ;TCDT BIT10 FAILED TO CLEAR.
005410  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
005412  000033                  T33:    33                      ;ROUTINE NUMBER 33            *
005414  005446                          T34                     ;ADDRESS OF NEXT ROUTINE      *
005416  000012                          10.                     ;TEST ITERATION COUNT         *
005420  005422                          BAPA                    ;SCOPE ENTRY POINT            *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT10
005422  052777  002000  173364  BAPA:   BIS     #BIT10,@TCDT    ;SET TCDT BIT10
005430  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
005432  032777  002000  173354          BIT     #BIT10,@TCDT    ;SEE IF BIT IS CLEAR.
005440  001401                          BEQ     BAPB            ;BR IF BIT IS CLEAR.
005442  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT10
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005444  104011                          BAPB:   SCOPE                           ;SCOPE.
                                        ;*******************************************************************
005446  000034                          T34:    34                              ;ROUTINE NUMBER 34                  *
005450  005522                                  T35                             ;ADDRESS OF NEXT ROUTINE            *
005452  000144                                  100.                            ;TEST ITERATION COUNT               *
005454  005456                                  AQA                             ;SCOPE ENTRY POINT                  *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT BIT11 CAN BE SET, AND CLEARED.
005456  052777  004000  173330          AQA:    BIS     #BIT11,@TCDT            ;SET TCDT BIT11.
005464  032777  004000  173322                  BIT     #BIT11,@TCDT            ;SEE IF BIT IS SET.
005472  001002                                  BNE     .+6                     ;BRANCH IF SET.
005474  104003                                  ERROR                           ;TCDT BIT11 FAILED TO SET.
005476  104011                                  SCOPE
005500  042777  004000  173306                  BIC     #BIT11,@TCDT            ;CLEAR TCDT BIT11.
005506  032777  004000  173300                  BIT     #BIT11,@TCDT            ;SEE IF BIT IS CLEAR.
005514  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
005516  104003                                  ERROR                           ;TCDT BIT11 FAILED TO CLEAR.
005520  104011                                  SCOPE                           ;SCOPE.
                                        ;*******************************************************************
005522  000035                          T35:    35                              ;ROUTINE NUMBER 35                  *
005524  005556                                  T36                             ;ADDRESS OF NEXT ROUTINE            *
005526  000012                                  10.                             ;TEST ITERATION COUNT               *
005530  005532                                  BAQA                            ;SCOPE ENTRY POINT                  *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT11
005532  052777  004000  173254          BAQA:   BIS     #BIT11,@TCDT            ;SET TCDT BIT11
005540  104010                                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
005542  032777  004000  173244                  BIT     #BIT11,@TCDT            ;SEE IF BIT IS CLEAR.
005550  001401                                  BEQ     BAQB                    ;BR IF BIT IS CLEAR.
005552  104003                                  ERROR                           ;RESET FAILED TO CLEAR TCDT BIT11
005554  104011                          BAQB:   SCOPE                           ;SCOPE.
                                        ;*******************************************************************
005556  000036                          T36:    36                              ;ROUTINE NUMBER 36                  *
005560  005632                                  T37                             ;ADDRESS OF NEXT ROUTINE            *
005562  000144                                  100.                            ;TEST ITERATION COUNT               *
005564  005566                                  ARA                             ;SCOPE ENTRY POINT                  *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT BIT12 CAN BE SET, AND CLEARED.
005566  052777  010000  173220          ARA:    BIS     #BIT12,@TCDT            ;SET TCDT BIT12.
005574  032777  010000  17321                   BIT     #BIT12,@TCDT            ;SEE IF BIT IS SET.
005602  001002                                  BNE     .+6                     ;BRANCH IF SET.
005604  104003                                  ERROR                           ;TCDT BIT12 FAILED TO SET.
005606  104011                                  SCOPE
005610  042777  01000        6                  BIC     #BIT12,@TCDT            ;CLEAR TCDT BIT12.
005616  032777  01000        0                  BIT     #BIT12,@TCDT            ;SEE IF BIT IS CLEAR.
005624  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
005626  104003                                  ERROR                           ;TCDT BIT12 FAILED TO CLEAR.
005630  104011                                  SCOPE                           ;SCOPE.
                                        ;*******************************************************************
005632  000037                          T37:    37                              ;ROUTINE NUMBER 37                  *
005634  005666                                  T40                             ;ADDRESS OF NEXT ROUTINE            *
005636  000012                                  10.                             ;TEST ITERATION COUNT               *
005640  005642                                  BARA                            ;SCOPE ENTRY POINT                  *
```

```
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT12
005642  052777  010000  173144  BARA:   BIS     #BIT12,@TCDT    ;SET TCDT BIT12
005650  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
005652  032777  010000  173134          BIT     #BIT12,@TCDT    ;SEE IF BIT IS CLEAR.
005660  001401                          BEQ     BARB            ;BR IF BIT IS CLEAR.
005662  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT12
005664  104011                  BARB:   SCOPE                   ;SCOPE.
                                        ;*******************************************************************
005666  000040                  T40:    40                      ;ROUTINE NUMBER 40              *
005670  005742                          T41                     ;ADDRESS OF NEXT ROUTINE        *
005672  000144                          100.                    ;TEST ITERATION COUNT           *
005674  005676                          ASA                     ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT BIT13 CAN BE SET, AND CLEARED.
005676  052777  020000  173110  ASA:    BIS     #BIT13,@TCDT    ;SET TCDT BIT13.
005704  032777  020000  173102          BIT     #BIT13,@TCDT    ;SEE IF BIT IS SET.
005712  001002                          BNE     .+6             ;BRANCH IF SET.
005714  104003                          ERROR                   ;TCDT BIT13 FAILED TO SET.
005716  104011                          SCOPE
005720  042777  020000  173066          BIC     #BIT13,@TCDT    ;CLEAR TCDT BIT13.
005726  032777  020000  173060          BIT     #BIT13,@TCDT    ;SEE IF BIT IS CLEAR.
005734  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
005736  104003                          ERROR                   ;TCDT BIT13 FAILED TO CLEAR.
005740  104011                          SCOPE                   ;SCOPE.
                                        ;*******************************************************************
005742  000041                  T41:    41                      ;ROUTINE NUMBER 41              *
005744  005776                          T42                     ;ADDRESS OF NEXT ROUTINE        *
005746  000012                          10.                     ;TEST ITERATION COUNT           *
005750  005752                          BASA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT13
005752  052777  020000  173034  BASA:   BIS     #BIT13,@TCDT    ;SET TCDT BIT13
005760  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
005762  032777  020000  173024          BIT     #BIT13,@TCDT    ;SEE IF BIT IS CLEAR.
005770  001401                          BEQ     BASB            ;BR IF BIT IS CLEAR.
005772  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT13
005774  104011                  BASB:   SCOPE                   ;SCOPE.
                                        ;*******************************************************************
005776  000042                  T42:    42                      ;ROUTINE NUMBER 42              *
006000  006052                          T43                     ;ADDRESS OF NEXT ROUTINE        *
006002  000144                          100.                    ;TEST ITERATION COUNT           *
006004  006006                          ATA                     ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT BIT14 CAN BE SET, AND CLEARED.
006006  052777  040000  173000  ATA:    BIS     #BIT14,@TCDT    ;SET TCDT BIT14.
006014  032777  040000  172772          BIT     #BIT14,@TCDT    ;SEE IF BIT IS SET.
006022  001002                          BNE     .+6             ;BRANCH IF SET.
006024  104003                          ERROR                   ;TCDT BIT14 FAILED TO SET.
006026  104011                          SCOPE
006030  042777  040000  172756          BIC     #BIT14,@TCDT    ;CLEAR TCDT BIT14.
006036  032777  040000  172750          BIT     #BIT14,@TCDT    ;SEE IF BIT IS CLEAR.
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006044  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
006046  104003                          ERROR                   ;TCDT BIT14 FAILED TO CLEAR.
006050  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
006052  000043                  T43:    43                      ;ROUTINE NUMBER 43              *
006054  006106                          T44                     ;ADDRESS OF NEXT ROUTINE        *
006056  000012                          10.                     ;TEST ITERATION COUNT           *
006060  006062                          BATA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT14
006062  052777  040000  172724  BATA:   BIS     #BIT14,@TCDT    ;SET TCDT BIT14
006070  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
006072  032777  040000  172714          BIT     #BIT14,@TCDT    ;SEE IF BIT IS CLEAR.
006100  001401                          BEQ     BATB            ;BR IF BIT IS CLEAR.
006102  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT14
006104  104011                  BATB:   SCOPE                   ;SCOPE.
                                ;*************************************************************
006106  000044                  T44:    44                      ;ROUTINE NUMBER 44              *
006110  006162                          T45                     ;ADDRESS OF NEXT ROUTINE        *
006112  000144                          100.                    ;TEST ITERATION COUNT           *
006114  006116                          AUA                     ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT TCDT BIT15 CAN BE SET, AND CLEARED.
006116  052777  100000  172670  AUA:    BIS     #BIT15,@TCDT    ;SET TCDT BIT15.
006124  032777  100000  172662          BIT     #BIT15,@TCDT    ;SEE IF BIT IS SET.
006132  001002                          BNE     .+6             ;BRANCH IF SET.
006134  104003                          ERROR                   ;TCDT BIT15 FAILED TO SET.
006136  104011                          SCOPE
006140  042777  100000  172646          BIC     #BIT15,@TCDT    ;CLEAR TCDT BIT15.
006146  032777  100000  172640          BIT     #BIT15,@TCDT    ;SEE IF BIT IS CLEAR.
006154  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
006156  104003                          ERROR                   ;TCDT BIT15 FAILED TO CLEAR.
006160  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
006162  000045                  T45:    45                      ;ROUTINE NUMBER 45              *
006164  006216                          T46                     ;ADDRESS OF NEXT ROUTINE        *
006166  000012                          10.                     ;TEST ITERATION COUNT           *
006170  006172                          BAUA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT15
006172  052777  100000  172614  BAUA:   BIS     #BIT15,@TCDT    ;SET TCDT BIT15
006200  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
006202  032777  100000  172604          BIT     #BIT15,@TCDT    ;SEE IF BIT IS CLEAR.
006210  001401                          BEQ     BAUB            ;BR IF BIT IS CLEAR.
006212  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT15
006214  104011                  BAUB:   SCOPE                   ;SCOPE.
                                ;*************************************************************
006216  000046                  T46:    46                      ;ROUTINE NUMBER 46              *
006220  006272                          T47                     ;ADDRESS OF NEXT ROUTINE        *
006222  000144                          100.                    ;TEST ITERATION COUNT           *
006224  006226                          AVA                     ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
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                                          ;TEST THAT TCBA BIT1 CAN BE SET, AND CLEARED.
006226  052777  000002  172556  AVA:    BIS     #BIT1,@TCBA     ;SET TCBA BIT1.
006234  032777  000002  172550          BIT     #BIT1,@TCBA     ;SEE IF BIT IS SET.
006242  001002                          BNE     .+6             ;BRANCH IF SET.
006244  104003                          ERROR                   ;TCBA BIT1 FAILED TO SET.
006246  104011                          SCOPE
006250  042777  000002  172534          BIC     #BIT1,@TCBA     ;CLEAR TCBA BIT1.
006256  032777  000002  172526          BIT     #BIT1,@TCBA     ;SEE IF BIT IS CLEAR.
006264  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
006266  104003                          ERROR                   ;TCBA BIT1 FAILED TO CLEAR.
006270  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
006272  000047                  T47:    47                      ;ROUTINE NUMBER 47                 *
006274  006326                          T50                     ;ADDRESS OF NEXT ROUTINE           *
006276  000012                          10.                     ;TEST ITERATION COUNT              *
006300  006302                          BAVA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT1
006302  052777  000002  172502  BAVA:   BIS     #BIT1,@TCBA     ;SET TCBA BIT1
006310  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
006312  032777  000002  172472          BIT     #BIT1,@TCBA     ;SEE IF BIT IS CLEAR.
006320  001401                          BEQ     BAVB            ;BR IF BIT IS CLEAR.
006322  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT1
006324  104011                  BAVB:   SCOPE                   ;SCOPE.
                                ;*******************************************************************
006326  000050                  T50:    50                      ;ROUTINE NUMBER 50                 *
006330  006402                          T51                     ;ADDRESS OF NEXT ROUTINE           *
006332  000144                          100.                    ;TEST ITERATION COUNT              *
006334  006336                          AWA                     ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCBA BIT2 CAN BE SET, AND CLEARED.
006336  052777  000004  172446  AWA:    BIS     #BIT2,@TCBA     ;SET TCBA BIT2.
006344  032777  000004  172440          BIT     #BIT2,@TCBA     ;SEE IF BIT IS SET.
006352  001002                          BNE     .+6             ;BRANCH IF SET.
006354  104003                          ERROR                   ;TCBA BIT2 FAILED TO SET.
006356  104011                          SCOPE
006360  042777  000004  172424          BIC     #BIT2,@TCBA     ;CLEAR TCBA BIT2.
006366  032777  000004  172416          BIT     #BIT2,@TCBA     ;SEE IF BIT IS CLEAR.
006374  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
006376  104003                          ERROR                   ;TCBA BIT2 FAILED TO CLEAR.
006400  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
006402  000051                  T51:    51                      ;ROUTINE NUMBER 51                 *
006404  006436                          T52                     ;ADDRESS OF NEXT ROUTINE           *
006406  000012                          10.                     ;TEST ITERATION COUNT              *
006410  006412                          BAWA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT2
006412  052777  000004  172372  BAWA:   BIS     #BIT2,@TCBA     ;SET TCBA BIT2
006420  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
006422  032777  000004  172362          BIT     #BIT2,@TCBA     ;SEE IF BIT IS CLEAR.
006430  001401                          BEQ     BAWB            ;BR IF BIT IS CLEAR.
006432  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT2
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006434  104011                          BAWB:   SCOPE                           ;SCOPE.
                                                ;*************************************************************
006436  000052                          T52:    52                              ;ROUTINE NUMBER 52             *
006440  006512                                  T53                             ;ADDRESS OF NEXT ROUTINE       *
006442  000144                                  100.                            ;TEST ITERATION COUNT          *
006444  006446                                  AXA                             ;SCOPE ENTRY POINT             *
                                                .LIST
                                                ;*************************************************************
                                                ;TEST THAT TCBA BIT3 CAN BE SET, AND CLEARED.
006446  052777  000010  172336          AXA:    BIS     #BIT3,@TCBA             ;SET TCBA BIT3.
006454  032777  000010  172330                  BIT     #BIT3,@TCBA             ;SEE IF BIT IS SET.
006462  001002                                  BNE     .+6                     ;BRANCH IF SET.
006464  104003                                  ERROR                           ;TCBA BIT3 FAILED TO SET.
006466  104011                                  SCOPE
006470  042777  000010  172314                  BIC     #BIT3,@TCBA             ;CLEAR TCBA BIT3.
006476  032777  000010  172306                  BIT     #BIT3,@TCBA             ;SEE IF BIT IS CLEAR.
006504  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
006506  104003                                  ERROR                           ;TCBA BIT3 FAILED TO CLEAR.
006510  104011                                  SCOPE                           ;SCOPE.
                                                ;*************************************************************
006512  000053                          T53:    53                              ;ROUTINE NUMBER 53             *
006514  006546                                  T54                             ;ADDRESS OF NEXT ROUTINE       *
006516  000012                                  10.                             ;TEST ITERATION COUNT          *
006520  006522                                  BAXA                            ;SCOPE ENTRY POINT             *
                                                .LIST
                                                ;*************************************************************
                                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT3
006522  052777  000010  172262          BAXA:   BIS     #BIT3,@TCBA             ;SET TCBA BIT3
006530  104010                                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
006532  032777  000010  172252                  BIT     #BIT3,@TCBA             ;SEE IF BIT IS CLEAR.
006540  001401                                  BEQ     BAXB                    ;BR IF BIT IS CLEAR.
006542  104003                                  ERROR                           ;RESET FAILED TO CLEAR TCBA BIT3
006544  104011                          BAXB:   SCOPE                           ;SCOPE.
                                                ;***************  *********************************************
006546  000054                          T54:    54                              ;ROUTINE NUMBER 54             *
006550  006622                                  T55                             ;ADDRESS OF NEXT ROUTINE       *
006552  000144                                  100.                            ;TEST ITERATION COUNT          *
006554  006556                                  AYA                             ;SCOPE ENTRY POINT             *
                                                .LIST
                                                ;*************************************************************
                                                ;TEST THAT TCBA BIT4 CAN BE SET, AND CLEARED.
006556  052777  000020  172226          AYA:    BIS     #BIT4,@TCBA             ;SET TCBA BIT4.
006564  032777  000020  172220                  BIT     #BIT4,@TCBA             ;SEE IF BIT IS SET.
006572  001002                                  BNE     .+6                     ;BRANCH IF SET.
006574  104003                                  ERROR                           ;TCBA BIT4 FAILED TO SET.
006576  104011                                  SCOPE
006600  042777  000020  172204                  BIC     #BIT4,@TCBA             ;CLEAR TCBA BIT4.
006606  032777  000020  172176                  BIT     #BIT4,@TCBA             ;SEE IF BIT IS CLEAR.
006614  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
006616  104003                                  ERROR                           ;TCBA BIT4 FAILED TO CLEAR.
006620  104011                                  SCOPE                           ;SCOPE.
                                                ;*************************************************************
006622  000055                          T55:    55                              ;ROUTINE NUMBER 55             *
006624  006656                                  T56                             ;ADDRESS OF NEXT ROUTINE       *
006626  000012                                  10.                             ;TEST ITERATION COUNT          *
006630  006632                                  BAYA                            ;SCOPE ENTRY POINT             *
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                                                .LIST
                                        ;*************************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT4
006632  052777  000020  172152  BAYA:   BIS     #BIT4,@TCBA     ;SET TCBA BIT4
006640  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
006642  032777  000020  172142          BIT     #BIT4,@TCBA     ;SEE IF BIT IS CLEAR.
006650  001401                          BEQ     BAYB            ;BR IF BIT IS CLEAR.
006652  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT4
006654  104011                  BAYB:   SCOPE                   ;SCOPE.
                                        ;*************************************************************************
006656  000056                  T56:    56                      ;ROUTINE NUMBER 56                       *
006660  006732                          T57                     ;ADDRESS OF NEXT ROUTINE                 *
006662  000144                          100.                    ;TEST ITERATION COUNT                    *
006664  006666                          AZA                     ;SCOPE ENTRY POINT                       *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT TCBA BIT5 CAN BE SET, AND CLEARED.
006666  052777  000040  172116  AZA:    BIS     #BIT5,@TCBA     ;SET TCBA BIT5.
006674  032777  000040  172110          BIT     #BIT5,@TCBA     ;SEE IF BIT IS SET.
006702  001002                          BNE     .+6             ;BRANCH IF SET.
006704  104003                          ERROR                   ;TCBA BIT5 FAILED TO SET.
006706  104011                          SCOPE
006710  042777  000040  172074          BIC     #BIT5,@TCBA     ;CLEAR TCBA BIT5.
006716  032777  000040  172066          BIT     #BIT5,@TCBA     ;SEE IF BIT IS CLEAR.
006724  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
006726  104003                          ERROR                   ;TCBA BIT5 FAILED TO CLEAR.
006730  104011                          SCOPE                   ;SCOPE.
                                        ;*************************************************************************
006732  000057                  T57:    57                      ;ROUTINE NUMBER 57                       *
006734  006766                          T60                     ;ADDRESS OF NEXT ROUTINE                 *
006736  000012                          10.                     ;TEST ITERATION COUNT                    *
006740  006742                          BAZA                    ;SCOPE ENTRY POINT                       *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT5
006742  052777  000040  172042  BAZA:   BIS     #BIT5,@TCBA     ;SET TCBA BIT5
006750  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
006752  032777  000040  172032          BIT     #BIT5,@TCBA     ;SEE IF BIT IS CLEAR.
006760  001401                          BEQ     BAZB            ;BR IF BIT IS CLEAR.
006762  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT5
006764  104011                  BAZB:   SCOPE                   ;SCOPE.
                                        ;*************************************************************************
006766  000060                  T60:    60                      ;ROUTINE NUMBER 60                       *
006770  007042                          T61                     ;ADDRESS OF NEXT ROUTINE                 *
006772  000144                          100.                    ;TEST ITERATION COUNT                    *
006774  006776                          AABA                    ;SCOPE ENTRY POINT                       *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT TCBA BIT6 CAN BE SET, AND CLEARED.
006776  052777  000100  172006  AABA:   BIS     #BIT6,@TCBA     ;SET TCBA BIT6.
007004  032777  000100  172000          BIT     #BIT6,@TCBA     ;SEE IF BIT IS SET.
007012  001002                          BNE     .+6             ;BRANCH IF SET.
007014  104003                          ERROR                   ;TCBA BIT6 FAILED TO SET.
007016  104011                          SCOPE
007020  042777  000100  171764          BIC     #BIT6,@TCBA     ;CLEAR TCBA BIT6.
007026  032777  000100  171756          BIT     #BIT6,@TCBA     ;SEE IF BIT IS CLEAR.
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007034  001401                     BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
007036  104003                     ERROR                   ;TCBA BIT6 FAILED TO CLEAR.
007040  104011                     SCOPE                   ;SCOPE.
                           ;*******************************************************************
007042  000061             T61:    61                      ;ROUTINE NUMBER 61                *
007044  007076                     T62                     ;ADDRESS OF NEXT ROUTINE          *
007046  000012                     10.                     ;TEST ITERATION COUNT             *
007050  007052                     BAABA                   ;SCOPE ENTRY POINT                *
                                   .LIST
                           ;*******************************************************************
                           ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT6
007052  052777  000100  171732  BAABA:  BIS     #BIT6,@TCBA     ;SET TCBA BIT6
007060  104010                     SRESET                  ;ISSUE RESET TO CLEAR BIT.
007062  032777  000100  171722          BIT     #BIT6,@TCBA     ;SEE IF BIT IS CLEAR.
007070  001401                     BEQ     BAABB           ;BR IF BIT IS CLEAR.
007072  104003                     ERROR                   ;RESET FAILED TO CLEAR TCBA BIT6
007074  104011             BAABB:  SCOPE                   ;SCOPE.
                           ;*******************************************************************
007076  000062             T62:    62                      ;ROUTINE NUMBER 62                *
007100  007152                     T63                     ;ADDRESS OF NEXT ROUTINE          *
007102  000144                     100.                    ;TEST ITERATION COUNT             *
007104  007106                     ABBA                    ;SCOPE ENTRY POINT                *
                                   .LIST
                           ;*******************************************************************
                           ;TEST THAT TCBA BIT7 CAN BE SET, AND CLEARED.
007106  052777  000200  171676  ABBA:   BIS     #BIT7,@TCBA     ;SET TCBA BIT7.
007114  032777  000200  171670          BIT     #BIT7,@TCBA     ;SEE IF BIT IS SET.
007122  001002                     BNE     .+6             ;BRANCH IF SET.
007124  104003                     ERROR                   ;TCBA BIT7 FAILED TO SET.
007126  104011                     SCOPE
007130  042777  000200  171654          BIC     #BIT7,@TCBA     ;CLEAR TCBA BIT7.
007136  032777  000200  171646          BIT     #BIT7,@TCBA     ;SEE IF BIT IS CLEAR.
007144  001401                     BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
007146  104003                     ERROR                   ;TCBA BIT7 FAILED TO CLEAR.
007150  104011                     SCOPE                   ;SCOPE.
                           ;*******************************************************************
007152  000063             T63:    63                      ;ROUTINE NUMBER 63                *
007154  007206                     T64                     ;ADDRESS OF NEXT ROUTINE          *
007156  000012                     10.                     ;TEST ITERATION COUNT             *
007160  007162                     BABBA                   ;SCOPE ENTRY POINT                *
                                   .LIST
                           ;*******************************************************************
                           ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT7
007162  052777  000200  171622  BABBA:  BIS     #BIT7,@TCBA     ;SET TCBA BIT7
007170  104010                     SRESET                  ;ISSUE RESET TO CLEAR BIT.
007172  032777  000200  171612          BIT     #BIT7,@TCBA     ;SEE IF BIT IS CLEAR.
007200  001401                     BEQ     BABBB           ;BR IF BIT IS CLEAR.
007202  104003                     ERROR                   ;RESET FAILED TO CLEAR TCBA BIT7
007204  104011             BABBB:  SCOPE                   ;SCOPE.
                           ;*******************************************************************
007206  000064             T64:    64                      ;ROUTINE NUMBER 64                *
007210  007262                     T65                     ;ADDRESS OF NEXT ROUTINE          *
007212  000144                     100.                    ;TEST ITERATION COUNT             *
007214  007216                     ACBA                    ;SCOPE ENTRY POINT                *
                                   .LIST
                           ;*******************************************************************
```

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                                        ;TEST THAT TCBA BIT8 CAN BE SET, AND CLEARED.
007216  052777  000400  171566  ACBA:   BIS     #BIT8,@TCBA     ;SET TCBA BIT8.
007224  032777  000400  171560          BIT     #BIT8,@TCBA     ;SEE IF BIT IS SET.
007232  001002                          BNE     .+6             ;BRANCH IF SET.
007234  104003                          ERROR                   ;TCBA BIT8 FAILED TO SET.
007236  104011                          SCOPE
007240  042777  000400  171544          BIC     #BIT8,@TCBA     ;CLEAR TCBA BIT8.
007246  032777  000400  171536          BIT     #BIT8,@TCBA     ;SEE IF BIT IS CLEAR.
007254  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
007256  104003                          ERROR                   ;TCBA BIT8 FAILED TO CLEAR.
007260  104011                          SCOPE                   ;SCOPE.
                                ;************************************************************************
007262  000065                  T65:    65                      ;ROUTINE NUMBER 65                     *
007264  007316                          T66                     ;ADDRESS OF NEXT ROUTINE               *
007266  000012                          10.                     ;TEST ITERATION COUNT                  *
007270  007272                          BACBA                   ;SCOPE ENTRY POINT                     *
                                        .LIST
                                ;************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT8
007272  052777  000400  171512  BACBA:  BIS     #BIT8,@TCBA     ;SET TCBA BIT8
007300  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
007302  032777  000400  171502          BIT     #BIT8,@TCBA     ;SEE IF BIT IS CLEAR.
007310  001401                          BEQ     BACBB           ;BR IF BIT IS CLEAR.
007312  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT8
007314  104011                  BACBB:  SCOPE                   ;SCOPE.
                                ;************************************************************************
007316  000066                  T66:    66                      ;ROUTINE NUMBER 66                     *
007320  007372                          T67                     ;ADDRESS OF NEXT ROUTINE               *
007322  000144                          100.                    ;TEST ITERATION COUNT                  *
007324  007326                          ADBA                    ;SCOPE ENTRY POINT                     *
                                        .LIST
                                ;************************************************************************
                                ;TEST THAT TCBA BIT9 CAN BE SET, AND CLEARED.
007326  052777  001000  171456  ADBA:   BIS     #BIT9,@TCBA     ;SET TCBA BIT9.
007334  032777  001000  171450          BIT     #BIT9,@TCBA     ;SEE IF BIT IS SET.
007342  001002                          BNE     .+6             ;BRANCH IF SET.
007344  104003                          ERROR                   ;TCBA BIT9 FAILED TO SET.
007346  104011                          SCOPE
007350  042777  001000  171434          BIC     #BIT9,@TCBA     ;CLEAR TCBA BIT9.
007356  032777  001000  171426          BIT     #BIT9,@TCBA     ;SEE IF BIT IS CLEAR.
007364  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
007366  104003                          ERROR                   ;TCBA BIT9 FAILED TO CLEAR.
007370  104011                          SCOPE                   ;SCOPE.
                                ;************************************************************************
007372  000067                  T67:    67                      ;ROUTINE NUMBER 67                     *
007374  007426                          T70                     ;ADDRESS OF NEXT ROUTINE               *
007376  000012                          10.                     ;TEST ITERATION COUNT                  *
007400  007402                          BADBA                   ;SCOPE ENTRY POINT                     *
                                        .LIST
                                ;************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT9
007402  052777  001000  171402  BADBA:  BIS     #BIT9,@TCBA     ;SET TCBA BIT9
007410  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
007412  032777  001000  171372          BIT     #BIT9,@TCBA     ;SEE IF BIT IS CLEAR.
007420  001401                          BEQ     BADBB           ;BR IF BIT IS CLEAR.
007422  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT9
```

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007424  104011                      BADBB:  SCOPE                             ;SCOPE.
                                    ;*************************************************************************
007426  000070                      T70:    70                                ;ROUTINE NUMBER 70                *
007430  007502                              T71                               ;ADDRESS OF NEXT ROUTINE          *
007432  000144                              100.                              ;TEST ITERATION COUNT             *
007434  007436                              AEBA                              ;SCOPE ENTRY POINT                *
                                            .LIST
                                    ;*************************************************************************
                                    ;TEST THAT TCBA BIT10 CAN BE SET, AND CLEARED.
007436  052777  002000  171346      AEBA:   BIS     #BIT10,@TCBA          ;SET TCBA BIT10.
007444  032777  002000  171340              BIT     #BIT10,@TCBA          ;SEE IF BIT IS SET.
007452  001002                              BNE     .+6                   ;BRANCH IF SET.
007454  104003                              ERROR                         ;TCBA BIT10 FAILED TO SET.
007456  104011                              SCOPE
007460  042777  002000  171324              BIC     #BIT10,@TCBA          ;CLEAR TCBA BIT10.
007466  032777  002000  171316              BIT     #BIT10,@TCBA          ;SEE IF BIT IS CLEAR.
007474  001401                              BEQ     .+4                   ;BRANCH IF BIT IS CLEAR.
007476  104003                              ERROR                         ;TCBA BIT10 FAILED TO CLEAR.
007500  104011                              SCOPE                         ;SCOPE.
                                    ;*************************************************************************
007502  000071                      T71:    71                                ;ROUTINE NUMBER 71                *
007504  007536                              T72                               ;ADDRESS OF NEXT ROUTINE          *
007506  000012                              10.                               ;TEST ITERATION COUNT             *
007510  007512                              BAEBA                             ;SCOPE ENTRY POINT                *
                                            .LIST
                                    ;*************************************************************************
                                    ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT10
007512  052777  002000  171272      BAEBA:  BIS     #BIT10,@TCBA          ;SET TCBA BIT10
007520  104010                              SRESET                        ;ISSUE RESET TO CLEAR BIT.
007522  032777  002000  171262              BIT     #BIT10,@TCBA          ;SEE IF BIT IS CLEAR.
007530  001401                              BEQ     BAEBB                 ;BR IF BIT IS CLEAR.
007532  104003                              ERROR                         ;RESET FAILED TO CLEAR TCBA BIT10
007534  104011                      BAEBB:  SCOPE                         ;SCOPE.
                                    ;*************************************************************************
007536  000072                      T72:    72                                ;ROUTINE NUMBER 72                *
007540  007612                              T73                               ;ADDRESS OF NEXT ROUTINE          *
007542  000144                              100.                              ;TEST ITERATION COUNT             *
007544  007546                              AFBA                              ;SCOPE ENTRY POINT                *
                                            .LIST
                                    ;*************************************************************************
                                    ;TEST THAT TCBA BIT11 CAN BE SET, AND CLEARED.
007546  052777  004000  171236      AFBA:   BIS     #BIT11,@TCBA          ;SET TCBA BIT11.
007554  032777  004000  171230              BIT     #BIT11,@TCBA          ;SEE IF BIT IS SET.
007562  001002                              BNE     .+6                   ;BRANCH IF SET.
007564  104003                              ERROR                         ;TCBA BIT11 FAILED TO SET.
007566  104011                              SCOPE
007570  042777  004000  171214              BIC     #BIT11,@TCBA          ;CLEAR TCBA BIT11.
007576  032777  004000  171206              BIT     #BIT11,@TCBA          ;SEE IF BIT IS CLEAR.
007604  001401                              BEQ     .+4                   ;BRANCH IF BIT IS CLEAR.
007606  104003                              ERROR                         ;TCBA BIT11 FAILED TO CLEAR.
007610  104011                              SCOPE                         ;SCOPE.
                                    ;*************************************************************************
007612  000073                      T73:    73                                ;ROUTINE NUMBER 73                *
007614  007646                              T74                               ;ADDRESS OF NEXT ROUTINE          *
007616  000012                              10.                               ;TEST ITERATION COUNT             *
007620  007622                              BAFBA                             ;SCOPE ENTRY POINT                *
```

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                                                .LIST
                                        ;*********************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT11
007622  052777  004000  171162  BAFBA:  BIS     #BIT11,@TCBA    ;SET TCBA BIT11
007630  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
007632  032777  004000  171152          BIT     #BIT11,@TCBA    ;SEE IF BIT IS CLEAR.
007640  001401                          BEQ     BAFBB           ;BR IF BIT IS CLEAR.
007642  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT11
007644  104011                  BAFBB:  SCOPE                   ;SCOPE.
                                        ;*********************************************************************
007646  000074                  T74:    74                      ;ROUTINE NUMBER 74                  *
007650  007722                          T75                     ;ADDRESS OF NEXT ROUTINE            *
007652  000144                          100.                    ;TEST ITERATION COUNT               *
007654  007656                          AGBA                    ;SCOPE ENTRY POINT                  *
                                        .LIST
                                        ;*********************************************************************
                                        ;TEST THAT TCBA BIT12 CAN BE SET, AND CLEARED.
007656  052777  010000  171126  AGBA:   BIS     #BIT12,@TCBA    ;SET TCBA BIT12.
007664  032777  010000  171120          BIT     #BIT12,@TCBA    ;SEE IF BIT IS SET.
007672  001002                          BNE     .+6             ;BRANCH IF SET.
007674  104003                          ERROR                   ;TCBA BIT12 FAILED TO SET.
007676  104011                          SCOPE
007700  042777  010000  171104          BIC     #BIT12,@TCBA    ;CLEAR TCBA BIT12.
007706  032777  010000  171076          BIT     #BIT12,@TCBA    ;SEE IF BIT IS CLEAR.
007714  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
007716  104003                          ERROR                   ;TCBA BIT12 FAILED TO CLEAR.
007720  104011                          SCOPE                   ;SCOPE.
                                        ;*********************************************************************
007722  000075                  T75:    75                      ;ROUTINE NUMBER 75                  *
007724  007756                          T76                     ;ADDRESS OF NEXT ROUTINE            *
007726  000012                          10.                     ;TEST ITERATION COUNT               *
007730  007732                          BAGBA                   ;SCOPE ENTRY POINT                  *
                                        .LIST
                                        ;*********************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT12
007732  052777  010000  171052  BAGBA:  BIS     #BIT12,@TCBA    ;SET TCBA BIT12
007740  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
007742  032777  010000  171042          BIT     #BIT12,@TCBA    ;SEE IF BIT IS CLEAR.
007750  001401                          BEQ     BAGBB           ;BR IF BIT IS CLEAR.
007752  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT12
007754  104011                  BAGBB:  SCOPE                   ;SCOPE.
                                        ;*********************************************************************
007756  000076                  T76:    76                      ;ROUTINE NUMBER 76                  *
007760  010032                          T77                     ;ADDRESS OF NEXT ROUTINE            *
007762  000144                          100.                    ;TEST ITERATION COUNT               *
007764  007766                          AHBA                    ;SCOPE ENTRY POINT                  *
                                        .LIST
                                        ;*********************************************************************
                                        ;TEST THAT TCBA BIT13 CAN BE SET, AND CLEARED.
007766  052777  020000  171016  AHBA:   BIS     #BIT13,@TCBA    ;SET TCBA BIT13.
007774  032777  020000  171010          BIT     #BIT13,@TCBA    ;SEE IF BIT IS SET.
010002  001002                          BNE     .+6             ;BRANCH IF SET.
010004  104003                          ERROR                   ;TCBA BIT13 FAILED TO SET.
010006  104011                          SCOPE
010010  042777  020000  170774          BIC     #BIT13,@TCBA    ;CLEAR TCBA BIT13.
010016  032777  020000  170766          BIT     #BIT13,@TCBA    ;SEE IF BIT IS CLEAR.
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010024  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
010026  104003                          ERROR                   ;TCBA BIT13 FAILED TO CLEAR.
010030  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
010032  000077                  T77:    77                      ;ROUTINE NUMBER 77                  *
010034  010066                          T100                    ;ADDRESS OF NEXT ROUTINE            *
010036  000012                          10.                     ;TEST ITERATION COUNT               *
010040  010042                          BAHBA                   ;SCOPE ENTRY POINT                  *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT13
010042  052777  020000  170742  BAHBA:  BIS     #BIT13,@TCBA    ;SET TCBA BIT13
010050  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010052  032777  020000  170732          BIT     #BIT13,@TCBA    ;SEE IF BIT IS CLEAR.
010060  001401                          BEQ     BAHBB           ;BR IF BIT IS CLEAR.
010062  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT13
010064  104011                  BAHBB:  SCOPE                   ;SCOPE.
                                ;*******************************************************************
010066  000100                  T100:   100                     ;ROUTINE NUMBER 100                 *
010070  010142                          T101                    ;ADDRESS OF NEXT ROUTINE            *
010072  000144                          100.                    ;TEST ITERATION COUNT               *
010074  010076                          AIBA                    ;SCOPE ENTRY POINT                  *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCBA BIT14 CAN BE SET, AND CLEARED.
010076  052777  040000  170706  AIBA:   BIS     #BIT14,@TCBA    ;SET TCBA BIT14.
010104  032777  040000  170700          BIT     #BIT14,@TCBA    ;SEE IF BIT IS SET.
010112  001002                          BNE     .+6             ;BRANCH IF SET.
010114  104003                          ERROR                   ;TCBA BIT14 FAILED TO SET.
010116  104011                          SCOPE
010120  042777  040000  170664          BIC     #BIT14,@TCBA    ;CLEAR TCBA BIT14.
010126  032777  040000  170656          BIT     #BIT14,@TCBA    ;SEE IF BIT IS CLEAR.
010134  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
010136  104003                          ERROR                   ;TCBA BIT14 FAILED TO CLEAR.
010140  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
010142  000101                  T101:   101                     ;ROUTINE NUMBER 101                 *
010144  010176                          T102                    ;ADDRESS OF NEXT ROUTINE            *
010146  000012                          10.                     ;TEST ITERATION COUNT               *
010150  010152                          BAIBA                   ;SCOPE ENTRY POINT                  *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT14
010152  052777  040000  170632  BAIBA:  BIS     #BIT14,@TCBA    ;SET TCBA BIT14
010160  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010162  032777  040000  170622          BIT     #BIT14,@TCBA    ;SEE IF BIT IS CLEAR.
010170  001401                          BEQ     BAIBB           ;BR IF BIT IS CLEAR.
010172  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT14
010174  104011                  BAIBB:  SCOPE                   ;SCOPE.
                                ;*******************************************************************
010176  000102                  T102:   102                     ;ROUTINE NUMBER 102                 *
010200  010252                          T103                    ;ADDRESS OF NEXT ROUTINE            *
010202  000144                          100.                    ;TEST ITERATION COUNT               *
010204  010206                          AJBA                    ;SCOPE ENTRY POINT                  *
                                        .LIST
                                ;*******************************************************************
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                                              ;TEST THAT TCBA BIT15 CAN BE SET, AND CLEARED.
010206  052777  100000  170576  AJBA:   BIS     #BIT15,@TCBA    ;SET TCBA BIT15.
010214  032777  100000  170570          BIT     #BIT15,@TCBA    ;SEE IF BIT IS SET.
010222  001002                          BNE     .+6             ;BRANCH IF SET.
010224  104003                          ERROR                   ;TCBA BIT15 FAILED TO SET.
010226  104011                          SCOPE
010230  042777  100000  170554          BIC     #BIT15,@TCBA    ;CLEAR TCBA BIT15.
010236  032777  100000  170546          BIT     #BIT15,@TCBA    ;SEE IF BIT IS CLEAR.
010244  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
010246  104003                          ERROR                   ;TCBA BIT15 FAILED TO CLEAR.
010250  104011                          SCOPE                   ;SCOPE.
                                ;***********************************************************************
010252  000103                  T103:   103                     ;ROUTINE NUMBER 103            *
010254  010306                          T104                    ;ADDRESS OF NEXT ROUTINE       *
010256  000012                          10.                     ;TEST ITERATION COUNT          *
010260  010262                          BAJBA                   ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***********************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT15
010262  052777  100000  170522  BAJBA:  BIS     #BIT15,@TCBA    ;SET TCBA BIT15
010270  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010272  032777  100000  170512          BIT     #BIT15,@TCBA    ;SEE IF BIT IS CLEAR.
010300  001401                          BEQ     BAJBB           ;BR IF BIT IS CLEAR.
010302  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT15
010304  104011                  BAJBB:  SCOPE                   ;SCOPE.
                                ;***********************************************************************
010306  000104                  T104:   104                     ;ROUTINE NUMBER 104            *
010310  010362                          T105                    ;ADDRESS OF NEXT ROUTINE       *
010312  000144                          100.                    ;TEST ITERATION COUNT          *
010314  010316                          AKBA                    ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***********************************************************************
                                ;TEST THAT TCWC BIT0 CAN BE SET, AND CLEARED.
010316  052777  000001  170464  AKBA:   BIS     #BIT0,@TCWC     ;SET TCWC BIT0.
010324  032777  000001  170456          BIT     #BIT0,@TCWC     ;SEE IF BIT IS SET.
010332  001002                          BNE     .+6             ;BRANCH IF SET.
010334  104003                          ERROR                   ;TCWC BIT0 FAILED TO SET.
010336  104011                          SCOPE
010340  042777  000001  170442          BIC     #BIT0,@TCWC     ;CLEAR TCWC BIT0.
010346  032777  000001  170434          BIT     #BIT0,@TCWC     ;SEE IF BIT IS CLEAR.
010354  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
010356  104003                          ERROR                   ;TCWC BIT0 FAILED TO CLEAR.
010360  104011                          SCOPE                   ;SCOPE.
                                ;***********************************************************************
010362  000105                  T105:   105                     ;ROUTINE NUMBER 105            *
010364  010416                          T106                    ;ADDRESS OF NEXT ROUTINE       *
010366  000012                          10.                     ;TEST ITERATION COUNT          *
010370  010372                          BAKBA                   ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***********************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT0
010372  052777  000001  170410  BAKBA:  BIS     #BIT0,@TCWC     ;SET TCWC BIT0
010400  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010402  032777  000001  170400          BIT     #BIT0,@TCWC     ;SEE IF BIT IS CLEAR.
010410  001401                          BEQ     BAKBB           ;BR IF BIT IS CLEAR.
010412  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT0
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010414  104011                          BAKBB:  SCOPE                           ;SCOPE.
                                        ;*****************************************************************
010416  000106                          T106:   106                             ;ROUTINE NUMBER 106              *
010420  010472                                  T107                            ;ADDRESS OF NEXT ROUTINE         *
010422  000144                                  100.                            ;TEST ITERATION COUNT            *
010424  010426                                  ALBA                            ;SCOPE ENTRY POINT               *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCWC BIT1 CAN BE SET, AND CLEARED.
010426  052777  000002  170354          ALBA:   BIS     #BIT1,@TCWC             ;SET TCWC BIT1.
010434  032777  000002  170346                  BIT     #BIT1,@TCWC             ;SEE IF BIT IS SET.
010442  001002                                  BNE     .+6                     ;BRANCH IF SET.
010444  104003                                  ERROR                           ;TCWC BIT1 FAILED TO SET.
010446  104011                                  SCOPE
010450  042777  000002  170332                  BIC     #BIT1,@TCWC             ;CLEAR TCWC BIT1.
010456  032777  000002  170324                  BIT     #BIT1,@TCWC             ;SEE IF BIT IS CLEAR.
010464  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
010466  104003                                  ERROR                           ;TCWC BIT1 FAILED TO CLEAR.
010470  104011                                  SCOPE                           ;SCOPE.
                                        ;*****************************************************************
010472  000107                          T107:   107                             ;ROUTINE NUMBER 107              *
010474  010526                                  T110                            ;ADDRESS OF NEXT ROUTINE         *
010476  000012                                  10.                             ;TEST ITERATION COUNT            *
010500  010502                                  BALBA                           ;SCOPE ENTRY POINT               *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT1
010502  052777  000002  170300          BALBA:  BIS     #BIT1,@TCWC             ;SET TCWC BIT1
010510  104010                                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
010512  032777  000002  170270                  BIT     #BIT1,@TCWC             ;SEE IF BIT IS CLEAR.
010520  001401                                  BEQ     BALBB                   ;BR IF BIT IS CLEAR.
010522  104003                                  ERROR                           ;RESET FAILED TO CLEAR TCWC BIT1
010524  104011                          BALBB:  SCOPE                           ;SCOPE.
                                        ;*****************************************************************
010526  000110                          T110:   110                             ;ROUTINE NUMBER 110              *
010530  010602                                  T111                            ;ADDRESS OF NEXT ROUTINE         *
010532  000144                                  100.                            ;TEST ITERATION COUNT            *
010534  010536                                  AMBA                            ;SCOPE ENTRY POINT               *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCWC BIT2 CAN BE SET, AND CLEARED.
010536  052777  000004  170244          AMBA:   BIS     #BIT2,@TCWC             ;SET TCWC BIT2.
010544  032777  000004  170236                  BIT     #BIT2,@TCWC             ;SEE IF BIT IS SET.
010552  001002                                  BNE     .+6                     ;BRANCH IF SET.
010554  104003                                  ERROR                           ;TCWC BIT2 FAILED TO SET.
010556  104011                                  SCOPE
010560  042777  000004  170222                  BIC     #BIT2,@TCWC             ;CLEAR TCWC BIT2.
010566  032777  000004  170214                  BIT     #BIT2,@TCWC             ;SEE IF BIT IS CLEAR.
010574  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
010576  104003                                  ERROR                           ;TCWC BIT2 FAILED TO CLEAR.
010600  104011                                  SCOPE                           ;SCOPE.
                                        ;*****************************************************************
010602  000111                          T111:   111                             ;ROUTINE NUMBER 111              *
010604  010636                                  T112                            ;ADDRESS OF NEXT ROUTINE         *
010606  000012                                  10.                             ;TEST ITERATION COUNT            *
010610  010612                                  BAMBA                           ;SCOPE ENTRY POINT               *
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                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT2
010612  052777  000004  170170  BAMBA:  BIS     #BIT2,@TCWC     ;SET TCWC BIT2
010620  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010622  032777  000004  170160          BIT     #BIT2,@TCWC     ;SEE IF BIT IS CLEAR.
010630  001401                          BEQ     BAMBB           ;BR IF BIT IS CLEAR.
010632  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT2
010634  104011                  BAMBB:  SCOPE                   ;SCOPE.
                                        ;*******************************************************************
010636  000112                  T112:   112                     ;ROUTINE NUMBER 112                      *
010640  010712                          T113                    ;ADDRESS OF NEXT ROUTINE                 *
010642  000144                          100.                    ;TEST ITERATION COUNT                    *
010644  010646                          ANBA                    ;SCOPE ENTRY POINT                       *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCWC BIT3 CAN BE SET, AND CLEARED.
010646  052777  000010  170134  ANBA:   BIS     #BIT3,@TCWC     ;SET TCWC BIT3.
010654  032777  000010  170126          BIT     #BIT3,@TCWC     ;SEE IF BIT IS SET.
010662  001002                          BNE     .+6             ;BRANCH IF SET.
010664  104003                          ERROR                   ;TCWC BIT3 FAILED TO SET.
010666  104011                          SCOPE
010670  042777  000010  170112          BIC     #BIT3,@TCWC     ;CLEAR TCWC BIT3.
010676  032777  000010  170104          BIT     #BIT3,@TCWC     ;SEE IF BIT IS CLEAR.
010704  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
010706  104003                          ERROR                   ;TCWC BIT3 FAILED TO CLEAR.
010710  104011                          SCOPE                   ;SCOPE.
                                        ;*******************************************************************
010712  000113                  T113:   113                     ;ROUTINE NUMBER 113                      *
010714  010746                          T114                    ;ADDRESS OF NEXT ROUTINE                 *
010716  000012                          10.                     ;TEST ITERATION COUNT                    *
010720  010722                          BANBA                   ;SCOPE ENTRY POINT                       *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT3
010722  052777  000010  170060  BANBA:  BIS     #BIT3,@TCWC     ;SET TCWC BIT3
010730  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
010732  032777  000010  170050          BIT     #BIT3,@TCWC     ;SEE IF BIT IS CLEAR.
010740  001401                          BEQ     BANBB           ;BR IF BIT IS CLEAR.
010742  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT3
010744  104011                  BANBB:  SCOPE                   ;SCOPE.
                                        ;*******************************************************************
010746  000114                  T114:   114                     ;ROUTINE NUMBER 114                      *
010750  011022                          T115                    ;ADDRESS OF NEXT ROUTINE                 *
010752  000144                          100.                    ;TEST ITERATION COUNT                    *
010754  010756                          AOBA                    ;SCOPE ENTRY POINT                       *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCWC BIT4 CAN BE SET, AND CLEARED.
010756  052777  000020  170024  AOBA:   BIS     #BIT4,@TCWC     ;SET TCWC BIT4.
010764  032777  000020  170016          BIT     #BIT4,@TCWC     ;SEE IF BIT IS SET.
010772  001002                          BNE     .+6             ;BRANCH IF SET.
010774  104003                          ERROR                   ;TCWC BIT4 FAILED TO SET.
010776  104011                          SCOPE
011000  042777  000020  170002          BIC     #BIT4,@TCWC     ;CLEAR TCWC BIT4.
011006  032777  000020  167774          BIT     #BIT4,@TCWC     ;SEE IF BIT IS CLEAR.
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 011014  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 011016  104003                          ERROR                   ;TCWC BIT4 FAILED TO CLEAR.
 011020  104011                          SCOPE                   ;SCOPE.
                                 ;*****************************************************************
 011022  000115                  T115:   115                     ;ROUTINE NUMBER 115             *
 011024  011056                          T116                    ;ADDRESS OF NEXT ROUTINE        *
 011026  000012                          10.                     ;TEST ITERATION COUNT           *
 011030  011032                          BAOBA                   ;SCOPE ENTRY POINT              *
                                         .LIST
                                 ;*****************************************************************
                                 ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT4
 011032  052777  000020  167750  BAOBA:  BIS     #BIT4,@TCWC     ;SET TCWC BIT4
 011040  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 011042  032777  000020  167740          BIT     #BIT4,@TCWC     ;SEE IF BIT IS CLEAR.
 011050  001401                          BEQ     BAOBB           ;BR IF BIT IS CLEAR.
 011052  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT4
 011054  104011                  BAOBB:  SCOPE                   ;SCOPE.
                                 ;*****************************************************************
 011056  000116                  T116:   116                     ;ROUTINE NUMBER 116             *
 011060  011132                          T117                    ;ADDRESS OF NEXT ROUTINE        *
 011062  000144                          100.                    ;TEST ITERATION COUNT           *
 011064  011066                          APBA                    ;SCOPE ENTRY POINT              *
                                         .LIST
                                 ;*****************************************************************
                                 ;TEST THAT TCWC BITS CAN BE SET, AND CLEARED.
 011066  052777  000040  167714  APBA:   BIS     #BITS,@TCWC     ;SET TCWC BITS.
 011074  032777  000040  167706          BIT     #BITS,@TCWC     ;SEE IF BIT IS SET.
 011102  001002                          BNE     .+6             ;BRANCH IF SET.
 011104  104003                          ERROR                   ;TCWC BITS FAILED TO SET.
 011106  104011                          SCOPE
 011110  042777  000040  167672          BIC     #BITS,@TCWC     ;CLEAR TCWC BITS.
 011116  032777  000040  167664          BIT     #BITS,@TCWC     ;SEE IF BIT IS CLEAR.
 011124  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 011126  104003                          ERROR                   ;TCWC BITS FAILED TO CLEAR.
 011130  104011                          SCOPE                   ;SCOPE.
                                 ;*****************************************************************
 011132  000117                  T117:   117                     ;ROUTINE NUMBER 117             *
 011134  011166                          T120                    ;ADDRESS OF NEXT ROUTINE        *
 011136  000012                          10.                     ;TEST ITERATION COUNT           *
 011140  011142                          BAPBA                   ;SCOPE ENTRY POINT              *
                                         .LIST
                                 ;*****************************************************************
                                 ;TEST THAT RESET INSTRUCTION CLEARS TCWC BITS
 011142  052777  000040  167640  BAPBA:  BIS     #BITS,@TCWC     ;SET TCWC BITS
 011150  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 011152  032777  000040  167630          BIT     #BITS,@TCWC     ;SEE IF BIT IS CLEAR.
 011160  001401                          BEQ     BAPBB           ;BR IF BIT IS CLEAR.
 011162  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BITS
 011164  104011                  BAPBB:  SCOPE                   ;SCOPE.
                                 ;*****************************************************************
 011166  000120                  T120:   120                     ;ROUTINE NUMBER 120             *
 011170  011242                          T121                    ;ADDRESS OF NEXT ROUTINE        *
 011172  000144                          100.                    ;TEST ITERATION COUNT           *
 011174  011176                          AQBA                    ;SCOPE ENTRY POINT              *
                                         .LIST
                                 ;*****************************************************************
```

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                                         ;TEST THAT TCWC BIT6 CAN BE SET, AND CLEARED.
011176  052777  000100  167604  AQBA:   BIS     #BIT6,@TCWC     ;SET TCWC BIT6.
011204  032777  000100  167576          BIT     #BIT6,@TCWC     ;SEE IF BIT IS SET.
011212  001002                          BNE     .+6             ;BRANCH IF SET.
011214  104003                          ERROR                   ;TCWC BIT6 FAILED TO SET.
011216  104011                          SCOPE
011220  042777  000100  167562          BIC     #BIT6,@TCWC     ;CLEAR TCWC BIT6.
011226  032777  000100  167554          BIT     #BIT6,@TCWC     ;SEE IF BIT IS CLEAR.
011234  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
011236  104003                          ERROR                   ;TCWC BIT6 FAILED TO CLEAR.
011240  104011                          SCOPE                   ;SCOPE.
                                        ;*************************************************************
011242  000121                  T121:   121                     ;ROUTINE NUMBER 121              *
011244  011276                          T122                    ;ADDRESS OF NEXT ROUTINE         *
011246  000012                          10.                     ;TEST ITERATION COUNT            *
011250  011252                          BAQBA                   ;SCOPE ENTRY POINT               *
                                        .LIST
                                        ;*************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT6
011252  052777  000100  167530  BAQBA:  BIS     #BIT6,@TCWC     ;SET TCWC BIT6
011260  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
011262  032777  000100  167520          BIT     #BIT6,@TCWC     ;SEE IF BIT IS CLEAR.
011270  001401                          BEQ     BAQBB           ;BR IF BIT IS CLEAR.
011272  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT6
011274  104011                  BAQBB:  SCOPE                   ;SCOPE.
                                        ;*************************************************************
011276  000122                  T122:   122                     ;ROUTINE NUMBER 122              *
011300  011352                          T123                    ;ADDRESS OF NEXT ROUTINE         *
011302  000144                          100.                    ;TEST ITERATION COUNT            *
011304  011306                          ARBA                    ;SCOPE ENTRY POINT               *
                                        .LIST
                                        ;*************************************************************
                                        ;TEST THAT TCWC BIT7 CAN BE SET, AND CLEARED.
011306  052777  000200  167474  ARBA:   BIS     #BIT7,@TCWC     ;SET TCWC BIT7.
011314  032777  000200  167466          BIT     #BIT7,@TCWC     ;SEE IF BIT IS SET.
011322  001002                          BNE     .+6             ;BRANCH IF SET.
011324  104003                          ERROR                   ;TCWC BIT7 FAILED TO SET.
011326  104011                          SCOPE
011330  042777  000200  167452          BIC     #BIT7,@TCWC     ;CLEAR TCWC BIT7.
011336  032777  000200  167444          BIT     #BIT7,@TCWC     ;SEE IF BIT IS CLEAR.
011344  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
011346  104003                          ERROR                   ;TCWC BIT7 FAILED TO CLEAR.
011350  104011                          SCOPE                   ;SCOPE.
                                        ;*************************************************************
011352  000123                  T123:   123                     ;ROUTINE NUMBER 123              *
011354  011406                          T124                    ;ADDRESS OF NEXT ROUTINE         *
011356  000012                          10.                     ;TEST ITERATION COUNT            *
011360  011362                          BARBA                   ;SCOPE ENTRY POINT               *
                                        .LIST
                                        ;*************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT7
011362  052777  000200  167420  BARBA:  BIS     #BIT7,@TCWC     ;SET TCWC BIT7
011370  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
011372  032777  000200  167410          BIT     #BIT7,@TCWC     ;SEE IF BIT IS CLEAR.
011400  001401                          BEQ     BARBB           ;BR IF BIT IS CLEAR.
011402  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT7
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 011404  104011                          BARBB:  SCOPE                           ;SCOPE.
                                         ;*************************************************************
 011406  000124                          T124:   124                             ;ROUTINE NUMBER 124          *
 011410  011462                                  T125                            ;ADDRESS OF NEXT ROUTINE     *
 011412  000144                                  100.                            ;TEST ITERATION COUNT        *
 011414  011416                                  ASBA                            ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TEST THAT TCWC BIT8 CAN BE SET, AND CLEARED.
 011416  052777  000400  167364          ASBA:   BIS     #BIT8,@TCWC             ;SET TCWC BIT8.
 011424  032777  000400  167356                  BIT     #BIT8,@TCWC             ;SEE IF BIT IS SET.
 011432  001002                                  BNE     .+6                     ;BRANCH IF SET.
 011434  104003                                  ERROR                           ;TCWC BIT8 FAILED TO SET.
 011436  104011                                  SCOPE
 011440  042777  000400  167342                  BIC     #BIT8,@TCWC             ;CLEAR TCWC BIT8.
 011446  032777  000400  167334                  BIT     #BIT8,@TCWC             ;SEE IF BIT IS CLEAR.
 011454  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
 011456  104003                                  ERROR                           ;TCWC BIT8 FAILED TO CLEAR.
 011460  104011                                  SCOPE                           ;SCOPE.
                                         ;*************************************************************
 011462  000125                          T125:   125                             ;ROUTINE NUMBER 125          *
 011464  011516                                  T126                            ;ADDRESS OF NEXT ROUTINE     *
 011466  000012                                  10.                             ;TEST ITERATION COUNT        *
 011470  011472                                  BASBA                           ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT8
 011472  052777  000400  167310          BASBA:  BIS     #BIT8,@TCWC             ;SET TCWC BIT8
 011500  104010                                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
 011502  032777  000400  167300                  BIT     #BIT8,@TCWC             ;SEE IF BIT IS CLEAR.
 011510  001401                                  BEQ     BASBB                   ;BR IF BIT IS CLEAR.
 011512  104003                                  ERROR                           ;RESET FAILED TO CLEAR TCWC BIT8
 011514  104011                          BASBB:  SCOPE                           ;SCOPE.
                                         ;*************************************************************
 011516  000126                          T126:   126                             ;ROUTINE NUMBER 126          *
 011520  011572                                  T127                            ;ADDRESS OF NEXT ROUTINE     *
 011522  000144                                  100.                            ;TEST ITERATION COUNT        *
 011524  011526                                  ATBA                            ;SCOPE ENTRY POINT           *
                                                 .LIST
                                         ;*************************************************************
                                         ;TEST THAT TCWC BIT9 CAN BE SET, AND CLEARED.
 011526  052777  001000  167254          ATBA:   BIS     #BIT9,@TCWC             ;SET TCWC BIT9.
 011534  032777  001000  167246                  BIT     #BIT9,@TCWC             ;SEE IF BIT IS SET.
 011542  001002                                  BNE     .+6                     ;BRANCH IF SET.
 011544  104003                                  ERROR                           ;TCWC BIT9 FAILED TO SET.
 011546  104011                                  SCOPE
 011550  042777  001000  167232                  BIC     #BIT9,@TCWC             ;CLEAR TCWC BIT9.
 011556  032777  001000  167224                  BIT     #BIT9,@TCWC             ;SEE IF BIT IS CLEAR.
 011564  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
 011566  104003                                  ERROR                           ;TCWC BIT9 FAILED TO CLEAR.
 011570  104011                                  SCOPE                           ;SCOPE.
                                         ;*************************************************************
 011572  000127                          T127:   127                             ;ROUTINE NUMBER 127          *
 011574  011626                                  T130                            ;ADDRESS OF NEXT ROUTINE     *
 011576  000012                                  10.                             ;TEST ITERATION COUNT        *
 011600  011602                                  BATBA                           ;SCOPE ENTRY POINT           *
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                                                .LIST
                                        ;*************************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT9
011602  052777  001000  167200  BATBA:  BIS     #BIT9,@TCWC     ;SET TCWC BIT9
011610  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
011612  032777  001000  167170          BIT     #BIT9,@TCWC     ;SEE IF BIT IS CLEAR.
011620  001401                          BEQ     BATBB           ;BR IF BIT IS CLEAR.
011622  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT9
011624  104011                  BATBB:  SCOPE                   ;SCOPE.
                                        ;*************************************************************************
011626  000130                  T130:   130                     ;ROUTINE NUMBER 130                  *
011630  011702                          T131                    ;ADDRESS OF NEXT ROUTINE             *
011632  000144                          100.                    ;TEST ITERATION COUNT                *
011634  011636                          AUBA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT TCWC BIT10 CAN BE SET, AND CLEARED.
011636  052777  002000  167144  AUBA:   BIS     #BIT10,@TCWC    ;SET TCWC BIT10.
011644  032777  002000  167136          BIT     #BIT10,@TCWC    ;SEE IF BIT IS SET.
011652  001002                          BNE     .+6             ;BRANCH IF SET.
011654  104003                          ERROR                   ;TCWC BIT10 FAILED TO SET.
011656  104011                          SCOPE
011660  042777  002000  167122          BIC     #BIT10,@TCWC    ;CLEAR TCWC BIT10.
011666  032777  002000  167114          BIT     #BIT10,@TCWC    ;SEE IF BIT IS CLEAR.
011674  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
011676  104003                          ERROR                   ;TCWC BIT10 FAILED TO CLEAR.
011700  104011                          SCOPE                   ;SCOPE.
                                        ;*************************************************************************
011702  000131                  T131:   131                     ;ROUTINE NUMBER 131                  *
011704  011736                          T132                    ;ADDRESS OF NEXT ROUTINE             *
011706  000012                          10.                     ;TEST ITERATION COUNT                *
011710  011712                          BAUBA                   ;SCOPE ENTRY POINT                   *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT10
011712  052777  002000  167070  BAUBA:  BIS     #BIT10,@TCWC    ;SET TCWC BIT10
011720  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
011722  032777  002000  167060          BIT     #BIT10,@TCWC    ;SEE IF BIT IS CLEAR.
011730  001401                          BEQ     BAUBB           ;BR IF BIT IS CLEAR.
011732  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT10
011734  104011                  BAUBB:  SCOPE                   ;SCOPE.
                                        ;*************************************************************************
011736  000132                  T132:   132                     ;ROUTINE NUMBER 132                  *
011740  012012                          T133                    ;ADDRESS OF NEXT ROUTINE             *
011742  000144                          100.                    ;TEST ITERATION COUNT                *
011744  011746                          AVBA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                        ;*************************************************************************
                                        ;TEST THAT TCWC BIT11 CAN BE SET, AND CLEARED.
011746  052777  004000  167034  AVBA:   BIS     #BIT11,@TCWC    ;SET TCWC BIT11.
011754  032777  004000  167026          BIT     #BIT11,@TCWC    ;SEE IF BIT IS SET.
011762  001002                          BNE     .+6             ;BRANCH IF SET.
011764  104003                          ERROR                   ;TCWC BIT11 FAILED TO SET.
011766  104011                          SCOPE
011770  042777  004000  167012          BIC     #BIT11,@TCWC    ;CLEAR TCWC BIT11.
011776  032777  004000  167004          BIT     #BIT11,@TCWC    ;SEE IF BIT IS CLEAR.
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012004  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
012006  104003                          ERROR                   ;TCWC BIT11 FAILED TO CLEAR.
012010  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
                                T133:   133                     ;ROUTINE NUMBER 133                *
012012  000133
012014  012046                          T134                    ;ADDRESS OF NEXT ROUTINE           *
012016  000012                          10.                     ;TEST ITERATION COUNT              *
012020  012022                          BAVBA                   ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT11
012022  052777  004000  166760  BAVBA:  BIS     #BIT11,@TCWC    ;SET TCWC BIT11
012030  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
012032  032777  004000  166750          BIT     #BIT11,@TCWC    ;SEE IF BIT IS CLEAR.
012040  001401                          BEQ     BAVBB           ;BR IF BIT IS CLEAR.
012042  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT11
012044  104011                  BAVBB:  SCOPE                   ;SCOPE.
                                ;*******************************************************************
012046  000134                  T134:   134                     ;ROUTINE NUMBER 134                *
012050  012122                          T135                    ;ADDRESS OF NEXT ROUTINE           *
012052  000144                          100.                    ;TEST ITERATION COUNT              *
012054  012056                          AWBA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCWC BIT12 CAN BE SET, AND CLEARED.
012056  052777  010000  166724  AWBA:   BIS     #BIT12,@TCWC    ;SET TCWC BIT12.
012064  032777  010000  166716          BIT     #BIT12,@TCWC    ;SEE IF BIT IS SET.
012072  001002                          BNE     .+6             ;BRANCH IF SET.
012074  104003                          ERROR                   ;TCWC BIT12 FAILED TO SET.
012076  104011                          SCOPE
012100  042777  010000  166702          BIC     #BIT12,@TCWC    ;CLEAR TCWC BIT12.
012106  032777  010000  166674          BIT     #BIT12,@TCWC    ;SEE IF BIT IS CLEAR.
012114  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
012116  104003                          ERROR                   ;TCWC BIT12 FAILED TO CLEAR.
012120  104011                          SCOPE                   ;SCOPE.
                                ;*******************************************************************
012122  000135                  T135:   135                     ;ROUTINE NUMBER 135                *
012124  012156                          T136                    ;ADDRESS OF NEXT ROUTINE           *
012126  000012                          10.                     ;TEST ITERATION COUNT              *
012130  012132                          BAWBA                   ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT12
012132  052777  010000  166650  BAWBA:  BIS     #BIT12,@TCWC    ;SET TCWC BIT12
012140  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
012142  032777  010000  166640          BIT     #BIT12,@TCWC    ;SEE IF BIT IS CLEAR.
012150  001401                          BEQ     BAWBB           ;BR IF BIT IS CLEAR.
012152  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT12
012154  104011                  BAWBB:  SCOPE                   ;SCOPE.
                                ;*******************************************************************
012156  000136                  T136:   136                     ;ROUTINE NUMBER 136                *
012160  012232                          T137                    ;ADDRESS OF NEXT ROUTINE           *
012162  000144                          100.                    ;TEST ITERATION COUNT              *
012164  012166                          AXBA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
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                                           ;TEST THAT TCWC BIT13 CAN BE SET, AND CLEARED.
012166  052777  020000  166614  AXBA:   BIS     #BIT13,@TCWC        ;SET TCWC BIT13.
012174  032777  020000  166606          BIT     #BIT13,@TCWC        ;SEE IF BIT IS SET.
012202  001002                          BNE     .+6                 ;BRANCH IF SET.
012204  104003                          ERROR                       ;TCWC BIT13 FAILED TO SET.
012206  104011                          SCOPE
012210  042777  020000  166572          BIC     #BIT13,@TCWC        ;CLEAR TCWC BIT13.
012216  032777  020000  166564          BIT     #BIT13,@TCWC        ;SEE IF BIT IS CLEAR.
012224  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
012226  104003                          ERROR                       ;TCWC BIT13 FAILED TO CLEAR.
012230  104011                          SCOPE                       ;SCOPE.
                                ;*******************************************************************
012232  000137                  T137:   137                         ;ROUTINE NUMBER 137             *
012234  012266                          T140                        ;ADDRESS OF NEXT ROUTINE        *
012236  000012                          10.                         ;TEST ITERATION COUNT           *
012240  012242                          BAXBA                       ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT13
012242  052777  020000  166540  BAXBA:  BIS     #BIT13,@TCWC        ;SET TCWC BIT13
012250  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
012252  032777  020000  166530          BIT     #BIT13,@TCWC        ;SEE IF BIT IS CLEAR.
012260  001401                          BEQ     BAXBB               ;BR IF BIT IS CLEAR.
012262  104003                          ERROR                       ;RESET FAILED TO CLEAR TCWC BIT13
012264  104011                  BAXBB:  SCOPE                       ;SCOPE.
                                ;*******************************************************************
012266  000140                  T140:   140                         ;ROUTINE NUMBER 140             *
012270  012342                          T141                        ;ADDRESS OF NEXT ROUTINE        *
012272  000144                          100.                        ;TEST ITERATION COUNT           *
012274  012276                          AYBA                        ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCWC BIT14 CAN BE SET, AND CLEARED.
012276  052777  040000  166504  AYBA:   BIS     #BIT14,@TCWC        ;SET TCWC BIT14.
012304  032777  040000  166476          BIT     #BIT14,@TCWC        ;SEE IF BIT IS SET.
012312  001002                          BNE     .+6                 ;BRANCH IF SET.
012314  104003                          ERROR                       ;TCWC BIT14 FAILED TO SET.
012316  104011                          SCOPE
012320  042777  040000  166462          BIC     #BIT14,@TCWC        ;CLEAR TCWC BIT14.
012326  032777  040000  166454          BIT     #BIT14,@TCWC        ;SEE IF BIT IS CLEAR.
012334  001401                          BEQ     .+4                 ;BRANCH IF BIT IS CLEAR.
012336  104003                          ERROR                       ;TCWC BIT14 FAILED TO CLEAR.
012340  104011                          SCOPE                       ;SCOPE.
                                ;*******************************************************************
012342  000141                  T141:   141                         ;ROUTINE NUMBER 141             *
012344  012376                          T142                        ;ADDRESS OF NEXT ROUTINE        *
012346  000012                          10.                         ;TEST ITERATION COUNT           *
012350  012352                          BAYBA                       ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT14
012352  052777  040000  166430  BAYBA:  BIS     #BIT14,@TCWC        ;SET TCWC BIT14
012360  104010                          SRESET                      ;ISSUE RESET TO CLEAR BIT.
012362  032777  040000  166420          BIT     #BIT14,@TCWC        ;SEE IF BIT IS CLEAR.
012370  001401                          BEQ     BAYBB               ;BR IF BIT IS CLEAR.
012372  104003                          ERROR                       ;RESET FAILED TO CLEAR TCWC BIT14
```

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012374  104011                          BAYBB:  SCOPE                           ;SCOPE.
                                        ;*******************************************************************
012376  000142                          T142:   142                             ;ROUTINE NUMBER 142            *
012400  012452                                  T143                            ;ADDRESS OF NEXT ROUTINE       *
012402  000144                                  100.                            ;TEST ITERATION COUNT          *
012404  012406                                  AZBA                            ;SCOPE ENTRY POINT             *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCWC BIT15 CAN BE SET, AND CLEARED.
012406  052777  100000  166374          AZBA:   BIS     #BIT15,@TCWC            ;SET TCWC BIT15.
012414  032777  100000  166366                  BIT     #BIT15,@TCWC            ;SEE IF BIT IS SET.
012422  001002                                  BNE     .+6                     ;BRANCH IF SET.
012424  104003                                  ERROR                           ;TCWC BIT15 FAILED TO SET.
012426  104011                                  SCOPE
012430  042777  100000  166352                  BIC     #BIT15,@TCWC            ;CLEAR TCWC BIT15.
012436  032777  100000  166344                  BIT     #BIT15,@TCWC            ;SEE IF BIT IS CLEAR.
012444  001401                                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
012446  104003                                  ERROR                           ;TCWC BIT15 FAILED TO CLEAR.
012450  104011                                  SCOPE                           ;SCOPE.
                                        ;*******************************************************************
012452  000143                          T143:   143                             ;ROUTINE NUMBER 143            *
012454  012506                                  T144                            ;ADDRESS OF NEXT ROUTINE       *
012456  000012                                  10.                             ;TEST ITERATION COUNT          *
012460  012462                                  BAZBA                           ;SCOPE ENTRY POINT             *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT15
012462  052777  100000  166320          BAZBA:  BIS     #BIT15,@TCWC            ;SET TCWC BIT15
012470  104010                                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
012472  032777  100000  166310                  BIT     #BIT15,@TCWC            ;SEE IF BIT IS CLEAR.
012500  001401                                  BEQ     BAZBB                   ;BR IF BIT IS CLEAR.
012502  104003                                  ERROR                           ;RESET FAILED TO CLEAR TCWC BIT15
012504  104011                          BAZBB:  SCOPE                           ;SCOPE.
                                        ;*******************************************************************
012506  000144                          T144:   144                             ;ROUTINE NUMBER 144            *
012510  012544                                  T145                            ;ADDRESS OF NEXT ROUTINE       *
012512  001750                                  1000.                           ;TEST ITERATION COUNT          *
012514  012516                                  AACA                            ;SCOPE ENTRY POINT             *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT CAN BE SET TO 125252
012516  012777  125252  166270          AACA:   MOV     #125252,@TCDT           ;SET TCDT TO VALUE.
012524  022777  125252  166262                  CMP     #125252,@TCDT           ;SEE IF TCDT IS SET TO VALUE.
012532  001401                                  BEQ     AACB                    ;BRANCH IF TCDT IS SET CORRECTLY.
012534  104003                                  ERROR                           ;TCDT DID NOT SET TO VALUE.
012536  005077  166252                  AACB:   CLR     @TCDT                   ;CLEAR TCDT
012542  104011                                  SCOPE
                                        ;*******************************************************************
012544  000145                          T145:   145                             ;ROUTINE NUMBER 145            *
012546  012602                                  T146                            ;ADDRESS OF NEXT ROUTINE       *
012550  001750                                  1000.                           ;TEST ITERATION COUNT          *
012552  012554                                  ABCA                            ;SCOPE ENTRY POINT             *
                                                .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCDT CAN BE SET TO 052525
012554  012777  052525  166232          ABCA:   MOV     #052525,@TCDT           ;SET TCDT TO VALUE.
```

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012562  022777  052525  166224          CMP     #052525,@TCDT   ;SEE IF TCDT IS SET TO VALUE.
012570  001401                          BEQ     ABCB            ;BRANCH IF TCDT IS SET CORRECTLY.
012572  104003                          ERROR                   ;TCDT DID NOT SET TO VALUE.
012574  005077  166214          ABCB:   CLR     @TCDT           ;CLEAR TCDT
012600  104011                          SCOPE
                                ;*****************************************************************
012602  000146                  T146:   146                     ;ROUTINE NUMBER 146                  *
012604  012640                          T147                    ;ADDRESS OF NEXT ROUTINE             *
012606  001750                          1000.                   ;TEST ITERATION COUNT                *
012610  012612                          ACCA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                ;*****************************************************************
                                ;TEST THAT TCDT CAN BE SET TO 177777
012612  012777  177777  166174  ACCA:   MOV     #177777,@TCDT   ;SET TCDT TO VALUE.
012620  022777  177777  166166          CMP     #177777,@TCDT   ;SEE IF TCDT IS SET TO VALUE.
012626  001401                          BEQ     ACCB            ;BRANCH IF TCDT IS SET CORRECTLY.
012630  104003                          ERROR                   ;TCDT DID NOT SET TO VALUE.
012632  005077  166156          ACCB:   CLR     @TCDT           ;CLEAR TCDT
012636  104011                          SCOPE
                                ;*****************************************************************
012640  000147                  T147:   147                     ;ROUTINE NUMBER 147                  *
012642  012676                          T150                    ;ADDRESS OF NEXT ROUTINE             *
012644  001750                          1000.                   ;TEST ITERATION COUNT                *
012646  012650                          ADCA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                ;*****************************************************************
                                ;TEST THAT TCBA CAN BE SET TO 125252
012650  012777  125252  166134  ADCA:   MOV     #125252,@TCBA   ;SET TCBA TO VALUE.
012656  022777  125252  166126          CMP     #125252,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
012664  001401                          BEQ     ADCB            ;BRANCH IF TCBA IS SET CORRECTLY.
012666  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
012670  005077  166116          ADCB:   CLR     @TCBA           ;CLEAR TCBA
012674  104011                          SCOPE
                                ;*****************************************************************
012676  000150                  T150:   150                     ;ROUTINE NUMBER 150                  *
012700  012734                          T151                    ;ADDRESS OF NEXT ROUTINE             *
012702  001750                          1000.                   ;TEST ITERATION COUNT                *
012704  012706                          AECA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                ;*****************************************************************
                                ;TEST THAT TCBA CAN BE SET TO 052524
012706  012777  052524  166076  AECA:   MOV     #052524,@TCBA   ;SET TCBA TO VALUE.
012714  022777  052524  166070          CMP     #052524,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
012722  001401                          BEQ     AECB            ;BRANCH IF TCBA IS SET CORRECTLY.
012724  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
012726  005077  166060          AECB:   CLR     @TCBA           ;CLEAR TCBA
012732  104011                          SCOPE
                                ;*****************************************************************
012734  000151                  T151:   151                     ;ROUTINE NUMBER 151                  *
012736  012772                          T152                    ;ADDRESS OF NEXT ROUTINE             *
012740  001750                          1000.                   ;TEST ITERATION COUNT                *
012742  012744                          AFCA                    ;SCOPE ENTRY POINT                   *
                                        .LIST
                                ;*****************************************************************
                                ;TEST THAT TCBA CAN BE SET TO 177776
012744  012777  177776  166040  AFCA:   MOV     #177776,@TCBA   ;SET TCBA TO VALUE.
```

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012752  022777  177776  166032          CMP     #177776,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
012760  001401                          BEQ     AFCB            ;BRANCH IF TCBA IS SET CORRECTLY.
012762  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
012764  005077  166022          AFCB:   CLR     @TCBA           ;CLEAR TCBA
012770  104011                          SCOPE
                                ;*******************************************************************
012772  000152                  T152:   152                     ;ROUTINE NUMBER 152                *
012774  013030                          T153                    ;ADDRESS OF NEXT ROUTINE           *
012776  001750                          1000.                   ;TEST ITERATION COUNT              *
013000  013002                          AGCA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCWC CAN BE SET TO 125252
013002  012777  125252  166000  AGCA:   MOV     #125252,@TCWC   ;SET TCWC TO VALUE.
013010  022777  125252  165772          CMP     #125252,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
013016  001401                          BEQ     AGCB            ;BRANCH IF TCWC IS SET CORRECTLY.
013020  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
013022  005077  165762          AGCB:   CLR     @TCWC           ;CLEAR TCWC
013026  104011                          SCOPE
                                ;*******************************************************************
013030  000153                  T153:   153                     ;ROUTINE NUMBER 153                *
013032  013066                          T154                    ;ADDRESS OF NEXT ROUTINE           *
013034  001750                          1000.                   ;TEST ITERATION COUNT              *
013036  013040                          AHCA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCWC CAN BE SET TO 052525
013040  012777  052525  165742  AHCA:   MOV     #052525,@TCWC   ;SET TCWC TO VALUE.
013046  022777  052525  165734          CMP     #052525,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
013054  001401                          BEQ     AHCB            ;BRANCH IF TCWC IS SET CORRECTLY.
013056  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
013060  005077  165724          AHCB:   CLR     @TCWC           ;CLEAR TCWC
013064  104011                          SCOPE
                                ;*******************************************************************
013066  000154                  T154:   154                     ;ROUTINE NUMBER 154                *
013070  013124                          T155                    ;ADDRESS OF NEXT ROUTINE           *
013072  001750                          1000.                   ;TEST ITERATION COUNT              *
013074  013076                          AICA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCWC CAN BE SET TO 177777
013076  012777  177777  165704  AICA:   MOV     #177777,@TCWC   ;SET TCWC TO VALUE.
013104  022777  177777  165676          CMP     #177777,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
013112  001401                          BEQ     AICB            ;BRANCH IF TCWC IS SET CORRECTLY.
013114  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
013116  005077  165666          AICB:   CLR     @TCWC           ;CLEAR TCWC
013122  104011                          SCOPE
                                ;*******************************************************************
013124  000155                  T155:   155                     ;ROUTINE NUMBER 155                *
013126  013200                          T156                    ;ADDRESS OF NEXT ROUTINE           *
013130  000144                          100.                    ;TEST ITERATION COUNT              *
013132  013134                          AJCA                    ;SCOPE ENTRY POINT                 *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCCM BIT1 CAN BE SET, AND CLEARED.
013134  052777  000002  165644  AJCA:   BIS     #BIT1,@TCCM     ;SET TCCM BIT1.
```

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013142  032777  000002  165636          BIT     #BIT1,@TCCM     ;SEE IF BIT IS SET.
013150  001002                          BNE     .+6             ;BRANCH IF SET.
013152  104003                          ERROR                   ;TCCM BIT1 FAILED TO SET.
013154  104011                          SCOPE
013156  042777  000002  165622          BIC     #BIT1,@TCCM     ;CLEAR TCCM BIT1.
013164  032777  000002  165614          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
013172  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
013174  104003                          ERROR                   ;TCCM BIT1 FAILED TO CLEAR.
013176  104011                          SCOPE                   ;SCOPE.
                                ;***************************************************************
013200  000156                  T156:   156                     ;ROUTINE NUMBER 156            *
013202  013234                          T157                    ;ADDRESS OF NEXT ROUTINE       *
013204  000012                          10.                     ;TEST ITERATION COUNT          *
013206  013210                          BAJCA                   ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT1
013210  052777  000002  165570  BAJCA:  BIS     #BIT1,@TCCM     ;SET TCCM BIT1
013216  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
013220  032777  000002  165560          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
013226  001401                          BEQ     BAJCB           ;BR IF BIT IS CLEAR.
013230  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT1
013232  104011                  BAJCB:  SCOPE                   ;SCOPE.
                                ;***************************************************************
013234  000157                  T157:   157                     ;ROUTINE NUMBER 157            *
013236  013310                          T160                    ;ADDRESS OF NEXT ROUTINE       *
013240  000144                          100.                    ;TEST ITERATION COUNT          *
013242  013244                          AKCA                    ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***************************************************************
                                ;TEST THAT TCCM BIT2 CAN BE SET, AND CLEARED.
013244  052777  000004  165534  AKCA:   BIS     #BIT2,@TCCM     ;SET TCCM BIT2.
013252  032777  000004  165526          BIT     #BIT2,@TCCM     ;SEE IF BIT IS SET.
013260  001002                          BNE     .+6             ;BRANCH IF SET.
013262  104003                          ERROR                   ;TCCM BIT2 FAILED TO SET.
013264  104011                          SCOPE
013266  042777  000004  165512          BIC     #BIT2,@TCCM     ;CLEAR TCCM BIT2.
013274  032777  000004  165504          BIT     #BIT2,@TCCM     ;SEE IF BIT IS CLEAR.
013302  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
013304  104003                          ERROR                   ;TCCM BIT2 FAILED TO CLEAR.
013306  104011                          SCOPE                   ;SCOPE.
                                ;***************************************************************
013310  000160                  T160:   160                     ;ROUTINE NUMBER 160            *
013312  013344                          T161                    ;ADDRESS OF NEXT ROUTINE       *
013314  000012                          10.                     ;TEST ITERATION COUNT          *
013316  013320                          BAKCA                   ;SCOPE ENTRY POINT             *
                                        .LIST
                                ;***************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT1
013320  052777  000002  165460  BAKCA:  BIS     #BIT1,@TCCM     ;SET TCCM BIT1
013326  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
013330  032777  000002  165450          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
013336  001401                          BEQ     BAKCB           ;BR IF BIT IS CLEAR.
013340  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT1
013342  104011                  BAKCB:  SCOPE                   ;SCOPE.
                                ;***************************************************************
```

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013344  000161                      T161:   161                             ;ROUTINE NUMBER 161                         *
013346  013420                              T162                            ;ADDRESS OF NEXT ROUTINE                    *
013350  000144                              100.                            ;TEST ITERATION COUNT                       *
013352  013354                              ALCA                            ;SCOPE ENTRY POINT                          *
                                            .LIST
                                    ;***********************************************************************
                                    ;TEST THAT TCCM BIT3 CAN BE SET, AND CLEARED.
013354  052777  000010  165424      ALCA:   BIS     #BIT3,@TCCM             ;SET TCCM BIT3.
013362  032777  000010  165416              BIT     #BIT3,@TCCM             ;SEE IF BIT IS SET.
013370  001002                              BNE     .+6                     ;BRANCH IF SET.
013372  104003                              ERROR                           ;TCCM BIT3 FAILED TO SET.
013374  104011                              SCOPE
013376  042777  000010  165402              BIC     #BIT3,@TCCM             ;CLEAR TCCM BIT3.
013404  032777  000010  165374              BIT     #BIT3,@TCCM             ;SEE IF BIT IS CLEAR.
013412  001401                              BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
013414  104003                              ERROR                           ;TCCM BIT3 FAILED TO CLEAR.
013416  104011                              SCOPE                           ;SCOPE.
                                    ;***********************************************************************
013420  000162                      T162:   162                             ;ROUTINE NUMBER 162                         *
013422  013454                              T163                            ;ADDRESS OF NEXT ROUTINE                    *
013424  000012                              10.                             ;TEST ITERATION COUNT                       *
013426  013430                              BALCA                           ;SCOPE ENTRY POINT                          *
                                            .LIST
                                    ;***********************************************************************
                                    ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT3
013430  052777  000010  165350      BALCA:  BIS     #BIT3,@TCCM             ;SET TCCM BIT3
013436  104010                              SRESET                          ;ISSUE RESET TO CLEAR BIT.
013440  032777  000010  165340              BIT     #BIT3,@TCCM             ;SEE IF BIT IS CLEAR.
013446  001401                              BEQ     BALCB                   ;BR IF BIT IS CLEAR.
013450  104003                              ERROR                           ;RESET FAILED TO CLEAR TCCM BIT3
013452  104011                      BALCB:  SCOPE                           ;SCOPE.
                                    ;***********************************************************************
013454  000163                      T163:   163                             ;ROUTINE NUMBER 163                         *
013456  013530                              T164                            ;ADDRESS OF NEXT ROUTINE                    *
013460  000144                              100.                            ;TEST ITERATION COUNT                       *
013462  013464                              AMCA                            ;SCOPE ENTRY POINT                          *
                                            .LIST
                                    ;***********************************************************************
                                    ;TEST THAT TCCM BIT4 CAN BE SET, AND CLEARED.
013464  052777  000020  165314      AMCA:   BIS     #BIT4,@TCCM             ;SET TCCM BIT4.
013472  032777  000020  165306              BIT     #BIT4,@TCCM             ;SEE IF BIT IS SET.
013500  001002                              BNE     .+6                     ;BRANCH IF SET.
013502  104003                              ERROR                           ;TCCM BIT4 FAILED TO SET.
013504  104011                              SCOPE
013506  042777  000020  165272              BIC     #BIT4,@TCCM             ;CLEAR TCCM BIT4.
013514  032777  000020  165264              BIT     #BIT4,@TCCM             ;SEE IF BIT IS CLEAR.
013522  001401                              BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
013524  104003                              ERROR                           ;TCCM BIT4 FAILED TO CLEAR.
013526  104011                              SCOPE                           ;SCOPE.
                                    ;***********************************************************************
013530  000164                      T164:   164                             ;ROUTINE NUMBER 164                         *
013532  013564                              T165                            ;ADDRESS OF NEXT ROUTINE                    *
013534  000012                              10.                             ;TEST ITERATION COUNT                       *
013536  013540                              BAMCA                           ;SCOPE ENTRY POINT                          *
                                            .LIST
                                    ;***********************************************************************
```

```
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT4
013540  052777  000020  165240  BAMCA:  BIS     #BIT4,@TCCM     ;SET TCCM BIT4
013546  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
013550  032777  000020  165230          BIT     #BIT4,@TCCM     ;SEE IF BIT IS CLEAR.
013556  001401                          BEQ     BAMCB           ;BR IF BIT IS CLEAR.
013560  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT4
013562  104011                  BAMCB:  SCOPE                   ;SCOPE.
                                        ;*******************************************************************
013564  000165                  T165:   165                     ;ROUTINE NUMBER 165             *
013566  013640                          T166                    ;ADDRESS OF NEXT ROUTINE        *
013570  000144                          100.                    ;TEST ITERATION COUNT           *
013572  013574                          ANCA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCCM BITS CAN BE SET, AND CLEARED.
013574  052777  000040  165204  ANCA:   BIS     #BIT5,@TCCM     ;SET TCCM BITS.
013602  032777  000040  165176          BIT     #BIT5,@TCCM     ;SEE IF BIT IS SET.
013610  001002                          BNE     .+6             ;BRANCH IF SET.
013612  104003                          ERROR                   ;TCCM BITS FAILED TO SET.
013614  104011                          SCOPE
013616  042777  000040  165162          BIC     #BIT5,@TCCM     ;CLEAR TCCM BITS.
013624  032777  000040  165154          BIT     #BIT5,@TCCM     ;SEE IF BIT IS CLEAR.
013632  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
013634  104003                          ERROR                   ;TCCM BITS FAILED TO CLEAR.
013636  104011                          SCOPE                   ;SCOPE.
                                        ;*******************************************************************
013640  000166                  T166:   166                     ;ROUTINE NUMBER 166             *
013642  013674                          T167                    ;ADDRESS OF NEXT ROUTINE        *
013644  000012                          10.                     ;TEST ITERATION COUNT           *
013646  013650                          BANCA                   ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCCM BITS
013650  052777  000040  165130  BANCA:  BIS     #BIT5,@TCCM     ;SET TCCM BITS
013656  104010                          $RESET                  ;ISSUE RESET TO CLEAR BIT.
013660  032777  000040  165120          BIT     #BIT5,@TCCM     ;SEE IF BIT IS CLEAR.
013666  001401                          BEQ     BANCB           ;BR IF BIT IS CLEAR.
013670  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BITS
013672  104011                  BANCB:  SCOPE                   ;SCOPE.
                                        ;*******************************************************************
013674  000167                  T167:   167                     ;ROUTINE NUMBER 167             *
013676  013750                          T170                    ;ADDRESS OF NEXT ROUTINE        *
013700  000144                          100.                    ;TEST ITERATION COUNT           *
013702  013704                          AOCA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                        ;*******************************************************************
                                        ;TEST THAT TCCM BIT6 CAN BE SET, AND CLEARED.
013704  052777  000100  165074  AOCA:   BIS     #BIT6,@TCCM     ;SET TCCM BIT6.
013712  032777  000100  165066          BIT     #BIT6,@TCCM     ;SEE IF BIT IS SET.
013720  001002                          BNE     .+6             ;BRANCH IF SET.
013722  104003                          ERROR                   ;TCCM BIT6 FAILED TO SET.
013724  104011                          SCOPE
013726  042777  000100  165052          BIC     #BIT6,@TCCM     ;CLEAR TCCM BIT6.
013734  032777  000100  165044          BIT     #BIT6,@TCCM     ;SEE IF BIT IS CLEAR.
013742  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
013744  104003                          ERROR                   ;TCCM BIT6 FAILED TO CLEAR.
```

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013746	104011			SCOPE				;SCOPE.
				;*******************************************************************
013750	000170			T170:	170				;ROUTINE NUMBER 170		*
013752	014004				T171				;ADDRESS OF NEXT ROUTINE	*
013754	000012				10.				;TEST ITERATION COUNT		*
013756	013760				BAOCA				;SCOPE ENTRY POINT		*
					.LIST
				;*******************************************************************
				;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT6
013760	052777	000100	165020	BAOCA:	BIS	#BIT6,@TCCM	;SET TCCM BIT6
013766	104010				SRESET				;ISSUE RESET TO CLEAR BIT.
013770	032777	000100	165010		BIT	#BIT6,@TCCM	;SEE IF BIT IS CLEAR.
013776	001401				BEQ	BAOCB		;BR IF BIT IS CLEAR.
014000	104003				ERROR				;RESET FAILED TO CLEAR TCCM BIT6
014002	104011			BAOCB:	SCOPE				;SCOPE.
				;*******************************************************************
014004	000171			T171:	171				;ROUTINE NUMBER 171		*
014006	014060				T172				;ADDRESS OF NEXT ROUTINE	*
014010	000144				100.				;TEST ITERATION COUNT		*
014012	014014				APCA				;SCOPE ENTRY POINT		*
					.LIST
				;*******************************************************************
				;TEST THAT TCCM BIT8 CAN BE SET, AND CLEARED.
014014	052777	000400	164764	APCA:	BIS	#BIT8,@TCCM	;SET TCCM BIT8.
014022	032777	000400	164756		BIT	#BIT8,@TCCM	;SEE IF BIT IS SET.
014030	001002				BNE	.+6		;BRANCH IF SET.
014032	104003				ERROR				;TCCM BIT8 FAILED TO SET.
014034	104011				SCOPE
014036	042777	000400	164742		BIC	#BIT8,@TCCM	;CLEAR TCCM BIT8.
014044	032777	000400	164734		BIT	#BIT8,@TCCM	;SEE IF BIT IS CLEAR.
014052	001401				BEQ	.+4		;BRANCH IF BIT IS CLEAR.
014054	104003				ERROR				;TCCM BIT8 FAILED TO CLEAR.
014056	104011				SCOPE				;SCOPE.
				;*******************************************************************
014060	000172			T172:	172				;ROUTINE NUMBER 172		*
014062	014114				T173				;ADDRESS OF NEXT ROUTINE	*
014064	000012				10.				;TEST ITERATION COUNT		*
014066	014070				BAPCA				;SCOPE ENTRY POINT		*
					.LIST
				;*******************************************************************
				;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT8
014070	052777	000400	164710	BAPCA:	BIS	#BIT8,@TCCM	;SET TCCM BIT8
014076	104010				SRESET				;ISSUE RESET TO CLEAR BIT.
014100	032777	000400	164700		BIT	#BIT8,@TCCM	;SEE IF BIT IS CLEAR.
014106	001401				BEQ	BAPCB		;BR IF BIT IS CLEAR.
014110	104003				ERROR				;RESET FAILED TO CLEAR TCCM BIT8
014112	104011			BAPCB:	SCOPE				;SCOPE.
				;*******************************************************************
014114	000173			T173:	173				;ROUTINE NUMBER 173		*
014116	014170				T174				;ADDRESS OF NEXT ROUTINE	*
014120	000144				100.				;TEST ITERATION COUNT		*
014122	014124				AQCA				;SCOPE ENTRY POINT		*
					.LIST
				;*******************************************************************
				;TEST THAT TCCM BIT9 CAN BE SET, AND CLEARED.
014124	052777	001000	164654	AQCA:	BIS	#BIT9,@TCCM	;SET TCCM BIT9.
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014132  032777  001000  164646          BIT     #BIT9,@TCCM     ;SEE IF BIT IS SET.
014140  001002                          BNE     .+6             ;BRANCH IF SET.
014142  104003                          ERROR                   ;TCCM BIT9 FAILED TO SET.
014144  104011                          SCOPE
014146  042777  001000  164632          BIC     #BIT9,@TCCM     ;CLEAR TCCM BIT9.
014154  032777  001000  164624          BIT     #BIT9,@TCCM     ;SEE IF BIT IS CLEAR.
014162  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
014164  104003                          ERROR                   ;TCCM BIT9 FAILED TO CLEAR.
014166  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
014170  000174                  T174:   174                     ;ROUTINE NUMBER 174             *
014172  014224                          T175                    ;ADDRESS OF NEXT ROUTINE        *
014174  000012                          10.                     ;TEST ITERATION COUNT           *
014176  014200                          BAQCA                   ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT9
014200  052777  001000  164600  BAQCA:  BIS     #BIT9,@TCCM     ;SET TCCM BIT9
014206  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
014210  032777  001000  164570          BIT     #BIT9,@TCCM     ;SEE IF BIT IS CLEAR.
014216  001401                          BEQ     BAQCB           ;BR IF BIT IS CLEAR.
014220  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT9
014222  104011                  BAQCB:  SCOPE                   ;SCOPE.
                                ;*************************************************************
014224  000175                  T175:   175                     ;ROUTINE NUMBER 175             *
014226  014300                          T176                    ;ADDRESS OF NEXT ROUTINE        *
014230  000144                          100.                    ;TEST ITERATION COUNT           *
014232  014234                          ARCA                    ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT TCCM BIT10 CAN BE SET, AND CLEARED.
014234  052777  002000  164544  ARCA:   BIS     #BIT10,@TCCM    ;SET TCCM BIT10.
014242  032777  002000  164536          BIT     #BIT10,@TCCM    ;SEE IF BIT IS SET.
014250  001002                          BNE     .+6             ;BRANCH IF SET.
014252  104003                          ERROR                   ;TCCM BIT10 FAILED TO SET.
014254  104011                          SCOPE
014256  042777  002000  164522          BIC     #BIT10,@TCCM    ;CLEAR TCCM BIT10.
014264  032777  002000  164514          BIT     #BIT10,@TCCM    ;SEE IF BIT IS CLEAR.
014272  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
014274  104003                          ERROR                   ;TCCM BIT10 FAILED TO CLEAR.
014276  104011                          SCOPE                   ;SCOPE.
                                ;*************************************************************
014300  000176                  T176:   176                     ;ROUTINE NUMBER 176             *
014302  014334                          T177                    ;ADDRESS OF NEXT ROUTINE        *
014304  000012                          10.                     ;TEST ITERATION COUNT           *
014306  014310                          BARCA                   ;SCOPE ENTRY POINT              *
                                        .LIST
                                ;*************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT10
014310  052777  002000  164470  BARCA:  BIS     #BIT10,@TCCM    ;SET TCCM BIT10
014316  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
014320  032777  002000  164460          BIT     #BIT10,@TCCM    ;SEE IF BIT IS CLEAR.
014326  001401                          BEQ     BARCB           ;BR IF BIT IS CLEAR.
014330  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT10
014332  104011                  BARCB:  SCOPE                   ;SCOPE.
                                ;*************************************************************
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014334 000177                 T177:   177                    ;ROUTINE NUMBER 177              *
014336 014410                         T200                   ;ADDRESS OF NEXT ROUTINE         *
014340 000144                         100.                   ;TEST ITERATION COUNT            *
014342 014344                         ASCA                   ;SCOPE ENTRY POINT               *
                                      .LIST
                              ;*******************************************************  ************
                              ;TEST THAT TCCM BIT11 CAN BE SET, AND CLEARED.
014344 052777 004000 164434   ASCA:   BIS     #BIT11,@TCCM   ;SET TCCM BIT11.
014352 032777 004000 164426           BIT     #BIT11,@TCCM   ;SEE IF BIT IS SET.
014360 001002                         BNE     .+6            ;BRANCH IF SET.
014362 104003                         ERROR                  ;TCCM BIT11 FAILED TO SET.
014364 104011                         SCOPE
014366 042777 004000 164412           BIC     #BIT11,@TCCM   ;CLEAR TCCM BIT11.
014374 032777 004000 164404           BIT     #BIT11,@TCCM   ;SEE IF BIT IS CLEAR.
014402 001401                         BEQ     .+4            ;BRANCH IF BIT IS CLEAR.
014404 104003                         ERROR                  ;TCCM BIT11 FAILED TO CLEAR.
014406 104011                         SCOPE                  ;SCOPE.
                              ;********************************************************************
014410 000200                 T200:   200                    ;ROUTINE NUMBER 200              *
014412 014444                         T201                   ;ADDRESS OF NEXT ROUTINE         *
014414 000012                         10.                    ;TEST ITERATION COUNT            *
014416 014420                         BASCA                  ;SCOPE ENTRY POINT               *
                                      .LIST
                              ;********************************************************************
                              ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT11
014420 052777 004000 164360   BASCA:  BIS     #BIT11,@TCCM   ;SET TCCM BIT11
014426 104010                         SRESET                 ;ISSUE RESET TO CLEAR BIT.
014430 032777 004000 164350           BIT     #BIT11,@TCCM   ;SEE IF BIT IS CLEAR.
014436 001401                         BEQ     BASCB          ;BR IF BIT IS CLEAR.
014440 104003                         ERROR                  ;RESET FAILED TO CLEAR TCCM BIT11
014442 104011                 BASCB:  SCOPE                  ;SCOPE.
                              ;********************************************************************
014444 000201                 T201:   201                    ;ROUTINE NUMBER 201              *
014446 014520                         T202                   ;ADDRESS OF NEXT ROUTINE         *
014450 000144                         100.                   ;TEST ITERATION COUNT            *
014452 014454                         ATCA                   ;SCOPE ENTRY POINT               *
                                      .LIST
                              ;********************************************************************
                              ;TEST THAT TCCM BIT12 CAN BE SET, AND CLEARED.
014454 052777 010000 164324   ATCA:   BIS     #BIT12,@TCCM   ;SET TCCM BIT12.
014462 032777 010000 164316           BIT     #BIT12,@TCCM   ;SEE IF BIT IS SET.
014470 001002                         BNE     .+6            ;BRANCH IF SET.
014472 104003                         ERROR                  ;TCCM BIT12 FAILED TO SET.
014474 104011                         SCOPE
014476 042777 010000 164302           BIC     #BIT12,@TCCM   ;CLEAR TCCM BIT12.
014504 032777 010000 164274           BIT     #BIT12,@TCCM   ;SEE IF BIT IS CLEAR.
014512 001401                         BEQ     .+4            ;BRANCH IF BIT IS CLEAR.
014514 104003                         ERROR                  ;TCCM BIT12 FAILED TO CLEAR.
014516 104011                         SCOPE                  ;SCOPE.
                              ;********************************************************************
014520 000202                 T202:   202                    ;ROUTINE NUMBER 202              *
014522 014554                         T203                   ;ADDRESS OF NEXT ROUTINE         *
014524 000012                         10.                    ;TEST ITERATION COUNT            *
014526 014530                         BATCA                  ;SCOPE ENTRY POINT               *
                                      .LIST
                              ;********************************************************************
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                                          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT12
014530  052777  010000  164250    BATCA:  BIS     #BIT12,@TCCM     ;SET TCCM BIT12
014536  104010                            SRESET                   ;ISSUE RESET TO CLEAR BIT.
014540  032777  010000  164240            BIT     #BIT12,@TCCM     ;SEE IF BIT IS CLEAR.
014546  001401                            BEQ     BATCB            ;BR IF BIT IS CLEAR.
014550  104003                            ERROR                    ;RESET FAILED TO CLEAR TCCM BIT12
014552  104011                    BATCB:  SCOPE                    ;SCOPE.
                                  ;*************************************************************
014554  000203                    T203:   203                      ;ROUTINE NUMBER 203          *
014556  014630                            T204                     ;ADDRESS OF NEXT ROUTINE     *
014560  000144                            100.                     ;TEST ITERATION COUNT        *
014562  014564                            AUCA                     ;SCOPE ENTRY POINT           *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT TCCM BIT13 CAN BE SET, AND CLEARED.
014564  052777  020000  164214    AUCA:   BIS     #BIT13,@TCCM     ;SET TCCM BIT13.
014572  032777  020000  164206            BIT     #BIT13,@TCCM     ;SEE IF BIT IS SET.
014600  001002                            BNE     .+6              ;BRANCH IF SET.
014602  104003                            ERROR                    ;TCCM BIT13 FAILED TO SET.
014604  104011                            SCOPE
014606  042777  020000  164172            BIC     #BIT13,@TCCM     ;CLEAR TCCM BIT13.
014614  032777  020000  164164            BIT     #BIT13,@TCCM     ;SEE IF BIT IS CLEAR.
014622  001401                            BEQ     .+4              ;BRANCH IF BIT IS CLEAR.
014624  104003                            ERROR                    ;TCCM BIT13 FAILED TO CLEAR.
014626  104011                            SCOPE                    ;SCOPE.
                                  ;*************************************************************
014630  000204                    T204:   204                      ;ROUTINE NUMBER 204          *
014632  014664                            T205                     ;ADDRESS OF NEXT ROUTINE     *
014634  000012                            10.                      ;TEST ITERATION COUNT        *
014636  014640                            BAUCA                    ;SCOPE ENTRY POINT           *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT13
014640  052777  020000  164140    BAUCA:  BIS     #BIT13,@TCCM     ;SET TCCM BIT13
014646  104010                            SRESET                   ;ISSUE RESET TO CLEAR BIT.
014650  032777  020000  164130            BIT     #BIT13,@TCCM     ;SEE IF BIT IS CLEAR.
014656  001401                            BEQ     BAUCB            ;BR IF BIT IS CLEAR.
014660  104003                            ERROR                    ;RESET FAILED TO CLEAR TCCM BIT13
014662  104011                    BAUCB:  SCOPE                    ;SCOPE.
                                  ;*************************************************************
014664  000205                    T205:   205                      ;ROUTINE NUMBER 205          *
014666  014740                            T206                     ;ADDRESS OF NEXT ROUTINE     *
014670  000144                            100.                     ;TEST ITERATION COUNT        *
014672  014674                            AVCA                     ;SCOPE ENTRY POINT           *
                                          .LIST
                                  ;*************************************************************
                                  ;TEST THAT TCST BIT0 CAN BE SET, AND CLEARED.
014674  052777  000001  164102    AVCA:   BIS     #BIT0,@TCST      ;SET TCST BIT0.
014702  032777  000001  164074            BIT     #BIT0,@TCST      ;SEE IF BIT IS SET.
014710  001002                            BNE     .+6              ;BRANCH IF SET.
014712  104003                            ERROR                    ;TCST BIT0 FAILED TO SET.
014714  104011                            SCOPE
014716  042777  000001  164060            BIC     #BIT0,@TCST      ;CLEAR TCST BIT0.
014724  032777  000001  164052            BIT     #BIT0,@TCST      ;SEE IF BIT IS CLEAR.
014732  001401                            BEQ     .+4              ;BRANCH IF BIT IS CLEAR.
014734  104003                            ERROR                    ;TCST BIT0 FAILED TO CLEAR.
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014736  104011                          SCOPE                        ;SCOPE.
                                ;*******************************************************************
014740  000206                  T206:   206                          ;ROUTINE NUMBER 206              *
014742  014774                          T207                         ;ADDRESS OF NEXT ROUTINE         *
014744  000012                          10.                          ;TEST ITERATION COUNT            *
014746  014750                          BAVCA                        ;SCOPE ENTRY POINT               *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCST BIT0
014750  052777  000001  164026  BAVCA:  BIS     #BIT0,@TCST          ;SET TCST BIT0
014756  104010                          SRESET                       ;ISSUE RESET TO CLEAR BIT.
014760  032777  000001  164016          BIT     #BIT0,@TCST          ;SEE IF BIT IS CLEAR.
014766  001401                          BEQ     BAVCB                ;BR IF BIT IS CLEAR.
014770  104003                          ERROR                        ;RESET FAILED TO CLEAR TCST BIT0
014772  104011                  BAVCB:  SCOPE                        ;SCOPE.
                                ;*******************************************************************
014774  000207                  T207:   207                          ;ROUTINE NUMBER 207              *
014776  015050                          T210                         ;ADDRESS OF NEXT ROUTINE         *
015000  000144                          100.                         ;TEST ITERATION COUNT            *
015002  015004                          AWCA                         ;SCOPE ENTRY POINT               *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCST BIT1 CAN BE SET, AND CLEARED.
015004  052777  000002  163772  AWCA:   BIS     #BIT1,@TCST          ;SET TCST BIT1.
015012  032777  000002  163764          BIT     #BIT1,@TCST          ;SEE IF BIT IS SET.
015020  001002                          BNE     .+6                  ;BRANCH IF SET.
015022  104003                          ERROR                        ;TCST BIT1 FAILED TO SET.
015024  104011                          SCOPE
015026  042777  000002  163750          BIC     #BIT1,@TCST          ;CLEAR TCST BIT1.
015034  032777  000002  163742          BIT     #BIT1,@TCST          ;SEE IF BIT IS CLEAR.
015042  001401                          BEQ     .+4                  ;BRANCH IF BIT IS CLEAR.
015044  104003                          ERROR                        ;TCST BIT1 FAILED TO CLEAR.
015046  104011                          SCOPE                        ;SCOPE.
                                ;*******************************************************************
015050  000210                  T210:   210                          ;ROUTINE NUMBER 210              *
015052  015104                          T211                         ;ADDRESS OF NEXT ROUTINE         *
015054  000012                          10.                          ;TEST ITERATION COUNT            *
015056  015060                          BAWCA                        ;SCOPE ENTRY POINT               *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCST BIT1
015060  052777  000002  163716  BAWCA:  BIS     #BIT1,@TCST          ;SET TCST BIT1
015066  104010                          SRESET                       ;ISSUE RESET TO CLEAR BIT.
015070  032777  000002  163706          BIT     #BIT1,@TCST          ;SEE IF BIT IS CLEAR.
015076  001401                          BEQ     BAWCB                ;BR IF BIT IS CLEAR.
015100  104003                          ERROR                        ;RESET FAILED TO CLEAR TCST BIT1
015102  104011                  BAWCB:  SCOPE                        ;SCOPE.
                                ;*******************************************************************
015104  000211                  T211:   211                          ;ROUTINE NUMBER 211              *
015106  015132                          T212                         ;ADDRESS OF NEXT ROUTINE         *
015110  000144                          100.                         ;TEST ITERATION COUNT            *
015112  015114                          AXCA                         ;SCOPE ENTRY POINT               *
                                        .LIST
                                ;*******************************************************************
                                ;TEST THAT TCCM BIT7 IS SET FOLLOWING RESET INSTRUCTION.
015114  032777  000200  163664  AXCA:   BIT     #BIT7,@TCCM          ;SEE IF TCCM BIT7 IS SET.
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015122  001001                                  BNE     .+4             ;BRANCH IF BIT IS SET.
015124  104003                                  ERROR                   ;TCCM BIT7 NOT SET AFTER RESET.
015126  104010                                  SRESET                  ;ISSUE RESET.
015130  104011                                  SCOPE                   ;SCOPE
                                        ;*****************************************************************
015132  000212                          T212:   212                     ;ROUTINE NUMBER 212                     *
015134  015150                                  T213                    ;ADDRESS OF NEXT ROUTINE                *
015136  000012                                  10.                     ;TEST ITERATION COUNT                   *
015140  015142                                  AYCA                    ;SCOPE ENTRY POINT                      *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCCM BIT15 IS CLEAR FOLLOWING A RESET INSTRUCTION.
015142  032777  100000  163636          AYCA:   BIT     #BIT15,@TCCM    ;SEE IF TCCM BIT15 IS CLEAR
015150  001401                                  BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
015152  104003                                  ERROR                   ;TCCM BIT15 NOT CLEAR AFTER RESET.
015154  104010                                  SRESET                  ;ISSUE RESET.
015156  104011                                  SCOPE                   ;SCOPE
                                        ;*****************************************************************
015160  000213                          T213:   213                     ;ROUTINE NUMBER 213                     *
015162  015206                                  T214                    ;ADDRESS OF NEXT ROUTINE                *
015164  000012                                  10.                     ;TEST ITERATION COUNT                   *
015166  015170                                  AZCA                    ;SCOPE ENTRY POINT                      *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCST BIT7 IS CLEAR FOLLOWING A RESET INSTRUCTION.
015170  032777  000200  163606          AZCA:   BIT     #BIT7,@TCST     ;SEE IF TCST BIT7 IS CLEAR
015176  001401                                  BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
015200  104003                                  ERROR                   ;TCST BIT7 NOT CLEAR AFTER RESET.
015202  104010                                  SRESET                  ;ISSUE RESET.
015204  104011                                  SCOPE                   ;SCOPE
                                        ;*****************************************************************
015206  000214                          T214:   214                     ;ROUTINE NUMBER 214                     *
015210  015234                                  T215                    ;ADDRESS OF NEXT ROUTINE                *
015212  000012                                  10.                     ;TEST ITERATION COUNT                   *
015214  015216                                  AADA                    ;SCOPE ENTRY POINT                      *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCST BIT8 IS CLEAR FOLLOWING A RESET INSTRUCTION.
015216  032777  000400  163560          AADA:   BIT     #BIT8,@TCST     ;SEE IF TCST BIT8 IS CLEAR
015224  001401                                  BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
015226  104003                                  ERROR                   ;TCST BIT8 NOT CLEAR AFTER RESET.
015230  104010                                  SRESET                  ;ISSUE RESET.
015232  104011                                  SCOPE                   ;SCOPE
                                        ;*****************************************************************
015234  000215                          T215:   215                     ;ROUTINE NUMBER 215                     *
015236  015262                                  T216                    ;ADDRESS OF NEXT ROUTINE                *
015240  000012                                  10.                     ;TEST ITERATION COUNT                   *
015242  015244                                  ABDA                    ;SCOPE ENTRY POINT                      *
                                                .LIST
                                        ;*****************************************************************
                                        ;TEST THAT TCST BIT9 IS CLEAR FOLLOWING A RESET INSTRUCTION.
015244  032777  001000  163532          ABDA:   BIT     #BIT9,@TCST     ;SEE IF TCST BIT9 IS CLEAR
015252  001401                                  BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
015254  104003                                  ERROR                   ;TCST BIT9 NOT CLEAR AFTER RESET.
015256  104010                                  SRESET                  ;ISSUE RESET.
015260  104011                                  SCOPE                   ;SCOPE
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                                               ;*****************************************************************
        015262  000216                          T216:   216                             ;ROUTINE NUMBER 216              *
        015264  015310                                  T217                            ;ADDRESS OF NEXT ROUTINE         *
        015266  000012                                  10.                             ;TEST ITERATION COUNT            *
        015270  015272                                  ACDA                            ;SCOPE ENTRY POINT               *
                                                        .LIST
                                               ;*****************************************************************
                                               ;TEST THAT TCST BIT10 IS CLEAR FOLLOWING A RESET INSTRUCTION.
        015272  032777  002000  163504  ACDA:   BIT     #BIT10,@TCST    ;SEE IF TCST BIT10 IS CLEAR
        015300  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
        015302  104003                          ERROR                   ;TCST BIT10 NOT CLEAR AFTER RESET.
        015304  104010                          SRESET                  ;ISSUE RESET.
        015306  104011                          SCOPE                   ;SCOPE
                                               ;*****************************************************************
        015310  000217                          T217:   217                             ;ROUTINE NUMBER 217              *
        015312  015336                                  T220                            ;ADDRESS OF NEXT ROUTINE         *
        015314  000012                                  10.                             ;TEST ITERATION COUNT            *
        015316  015320                                  ADDA                            ;SCOPE ENTRY POINT               *
                                                        .LIST
                                               ;*****************************************************************
                                               ;TEST THAT TCST BIT13 IS CLEAR FOLLOWING A RESET INSTRUCTION.
        015320  032777  020000  163456  ADDA:   BIT     #BIT13,@TCST    ;SEE IF TCST BIT13 IS CLEAR
        015326  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
        015330  104003                          ERROR                   ;TCST BIT13 NOT CLEAR AFTER RESET.
        015332  104010                          SRESET                  ;ISSUE RESET.
        015334  104011                          SCOPE                   ;SCOPE
                                               ;*****************************************************************
        015336  000220                          T220:   220                             ;ROUTINE NUMBER 220              *
        015340  015364                                  T221                            ;ADDRESS OF NEXT ROUTINE         *
        015342  000012                                  10.                             ;TEST ITERATION COUNT            *
        015344  015346                                  AEDA                            ;SCOPE ENTRY POINT               *
                                                        .LIST
                                               ;*****************************************************************
                                               ;TEST THAT TCST BIT14 IS CLEAR FOLLOWING A RESET INSTRUCTION.
        015346  032777  040000  163430  AEDA:   BIT     #BIT14,@TCST    ;SEE IF TCST BIT14 IS CLEAR
        015354  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
        015356  104003                          ERROR                   ;TCST BIT14 NOT CLEAR AFTER RESET.
        015360  104010                          SRESET                  ;ISSUE RESET.
        015362  104011                          SCOPE                   ;SCOPE
                                               ;*****************************************************************
        015364  000221                          T221:   221                             ;ROUTINE NUMBER 221              *
        015366  015412                                  T222                            ;ADDRESS OF NEXT ROUTINE         *
        015370  000012                                  10.                             ;TEST ITERATION COUNT            *
        015372  015374                                  AFDA                            ;SCOPE ENTRY POINT               *
                                                        .LIST
                                               ;*****************************************************************
                                               ;TEST THAT TCST BIT15 IS CLEAR FOLLOWING A RESET INSTRUCTION.
        015374  032777  100000  163402  AFDA:   BIT     #BIT15,@TCST    ;SEE IF TCST BIT15 IS CLEAR
        015402  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
        015404  104003                          ERROR                   ;TCST BIT15 NOT CLEAR AFTER RESET.
        015406  104010                          SRESET                  ;ISSUE RESET.
        015410  104011                          SCOPE                   ;SCOPE
                                               ;*****************************************************************
        015412  000222                          T222:   222                             ;ROUTINE NUMBER 222              *
        015414  015434                                  T223                            ;ADDRESS OF NEXT ROUTINE         *
        015416  023420                                  10000.                          ;TEST ITERATION COUNT            *
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015420 015422                       CHAA                          ;SCOPE ENTRY POINT                      *
                                    .LIST
                             ;*************************************************************************
                             ;TEST ABILITY TO SET RANDOM NUMBERS IN DATA REGISTER.
015422 016767 163366 000114  CAAA:  MOV     TCDT,REGADR           ;ADDR OF TCDT REG TO REGADR.
015430 000167 000040                JMP     CXXA
                             ;*************************************************************************
015434 000223                T223:  223                           ;ROUTINE NUMBER 223                     *
015436 015456                       T224                          ;ADDRESS OF NEXT ROUTINE                *
015440 023420                       10000.                        ;TEST ITERATION COUNT                   *
015442 015444                       CBBA                          ;SCOPE ENTRY POINT                      *
                                    .LIST
                             ;*************************************************************************
                             ;TEST ABILITY TO SET RANDOM NUMBERS IN WORD COUNT REGISTER.
015444 016767 163340 000072  CBBA:  MOV     TCWC,REGADR           ;ADDR OF TCWC REG TO REGADR.
015452 000167 000016                JMP     CXXA
                             ;*************************************************************************
015456 000224                T224:  224                           ;ROUTINE NUMBER 224                     *
015460 015572                       T225                          ;ADDRESS OF NEXT ROUTINE                *
015462 023420                       10000.                        ;TEST ITERATION COUNT                   *
015464 015466                       CCCA                          ;SCOPE ENTRY POINT                      *
                                    .LIST
                             ;*************************************************************************
                             ;TEST ABILITY TO SET RANDOM NUMBERS IN BUS ADDRESS REGISTER.
015466 016767 163320 000050  CCCA:  MOV     TCBA,REGADR           ;ADDR OF TCBA REG TO REGADR.
                             ;
015474 017767 000044 163364  CXXA:  MOV     @REGADR,PRVCNT        ;SAVE CURRENT REG CONTENTS.
015502 004767 164442                JSR     PC,RNGEN              ;GENERATE RANDOM NUMBER.
015506 010067 163356                MOV     R0,RNDNMB             ;SAVE RANDOM NUMBER.
015512 010077 000026                MOV     R0,@REGADR            ;MOVE RANDOM NUMBER TO TEST REGISTER.
015516 027767 000022 163344         CMP     @REGADR,RNDNMB        ;CHECK RANDOM # AND REG CONTENTS.
015524 001421                       BEQ     CXXX                  ;BR IF BOTH SAME. (OK).
015526 004567 165130                JSR     R5,OACNV              ;CONVERT EXPECTED CONTENTS TO ASCII.
015532 001070                       RNDNMB
015534 003160                       AASB
015536 000006                       6
015540 004567 165116                JSR     R5,OACNV              ;CONVERT CONTENTS OF TEST REG TO ASCII.
015544 000000                REGADR: OPEN                          ;ADDR OF TEST REG IS STORED HERE.
015546 003176                       AWAS
015550 000006                       6
015552 004567 165104                JSR     R5,OACNV              ;CONVERT PREVIOUS REGISTER CONTENTS TO ASCII.
015556 001066                       PRVCNT
015560 003224                       APWAS
015562 000006                       6
015564 104014                       ERROR1                        ;CONTENTS OF REG NOT SAME AS DATA THAT
015566 003137                       ERDAT                         ;PROGRAM TRIED TO LOAD.
015570 104011                CXXX:  SCOPE                         ;SCOPE.
                             ;*************************************************************************
015572 000225                T225:  225                           ;ROUTINE NUMBER 225                     *
015574 177777                       TLAST                         ;ADDRESS OF NEXT ROUTINE                *
015576 000001                       1                             ;TEST ITERATION COUNT                   *
015600 015602                       ZZZA                          ;SCOPE ENTRY POINT                      *
                                    .LIST
                             ;*************************************************************************
                             ;DUMMY END TEST.
015602 104011                ZZZA:  SCOPE
```

```
 3315          000001                          .END
```

L05

AAA	003624	994	998#	
AAB	003640	998	1001#	
AABA	006776	1736	1740#	
AACA	012516	2568	2572#	
AACB	012536	2574	2576#	
AADA	015216	3181	3185#	
AASB	003160	698	920#	3293
ABA	003656	1008	1012#	
ABB	003672	1012	1015#	
ABBA	007106	1768	1772#	
ABCA	012554	2582	2586#	
ABCB	012574	2588	2590#	
ABDA	015244	3194	3198#	
ACA	003710	1022	1026#	
ACB	003724	1026	1029#	
ACBA	007216	1800	1804#	
ACCA	012612	2596	2600#	
ACCB	012632	2602	2604#	
ACDA	015272	3207	3211#	
ADA	003742	1036	1040#	
ADB	003756	1040	1043#	
ADBA	007326	1832	1836#	
ADCA	012650	2610	2614#	
ADCB	012670	2616	2618#	
ADDA	015320	3220	3224#	
AEA	003774	1050	1054#	
AEB	004010	1054	1057#	
AEBA	007436	1864	1869#	
AECA	012706	2624	2628#	
AECB	012726	2630	2632#	
AEDA	015346	3233	3237#	
AFA	004026	1064	1068#	
AFBA	007546	1896	1900#	
AFCA	012744	2638	2642#	
AFCB	012764	2644	2646#	
AFDA	015374	3246	3250#	
AGA	004136	1096	1100#	
AGBA	007656	1928	1932#	
AGCA	013002	2652	2656#	
AGCB	013022	2658	2660#	
AHA	004246	1128	1132#	
AHBA	007766	1960	1964#	
AHCA	013040	2666	2670#	
AHCB	013060	2672	2674#	
AIA	004356	1160	1164#	
AIBA	010076	1992	1996#	
AICA	013076	2680	2684#	
AICB	013116	2686	2688#	
AICNT	003127	725	915#	
AINCRT	003271	588	935#	
AJA	004466	1192	1196#	
AJBA	010206	2024	2028#	
AJCA	013134	2694	2698#	
AKA	004576	1224	1228#	
AKBA	010316	2056	2060#	
AKCA	013244	2726	2730#	

ALA	004706	1256	1260#	
ALBA	010426	2088	2092#	
ALCA	013354	2758	2762#	
AMA	005016	1238	1292#	
AMBA	010536	2120	2124#	
AMCA	013464	2790	2794#	
ANA	005126	1320	1324#	
ANBA	010646	2152	2156#	
ANCA	013574	2822	2826#	
AOA	005236	1352	1356#	
AOBA	010756	2184	2188#	
AOCA	013704	2854	2858#	
APA	005346	1384	1388#	
APBA	011066	2216	2220#	
APC	003112	721	912#	
APCA	014014	2886	2890#	
APGEND	003310	614	938#	
APWAS	003224	927#	3301	
AQA	005456	1416	1420#	
AQBA	011176	2248	2252#	
AQCA	014124	2918	2922#	
ARA	005566	1448	1452#	
ARBA	011306	2280	2284#	
ARCA	014234	2950	2954#	
ASA	005676	1480	1484#	
ASBA	011416	2312	2316#	
ASCA	014344	2982	2986#	
ASETSR	003233	676	929#	
ATA	006006	1512	1516#	
ATBA	011526	2344	2348#	
ATCA	014454	3014	3018#	
ATNUMB	003102	717	910#	
AUA	006116	1544	1548#	
AUBA	011636	2376	2380#	
AUCA	014564	3046	3050#	
AVA	006226	1576	1580#	
AVBA	011746	2408	2412#	
AVCA	014674	3078	3082#	
AWA	006336	1609	1612#	
AWAS	003176	694	923#	3297
AWBA	012056	2440	2444#	
AWCA	015004	3110	3114#	
AXA	006446	1640	1644#	
AXBA	012166	2472	2476#	
AXCA	015114	3142	3146#	
AYA	006556	1672	1676#	
AYBA	012276	2504	2508#	
AYCA	015142	3155	3159#	
AZA	006666	1704	1708#	
AZBA	012406	2536	2540#	
AZCA	015170	3168	3172#	
BAABA	007052	1754	1758#	
BAABB	007074	1761	1763#	
BABBA	007162	1786	1790#	
BABBB	007204	1793	1795#	
BACBA	007272	1818	1822#	

BACBB	007314	1825	1827#
BADBA	007402	1850	1854#
BADBB	007424	1857	1859#
BAEBA	007512	1882	1886#
BAEBB	007534	1889	1891#
BAFA	004102	1082	1086#
BAFB	004124	1089	1091#
BAFBA	007622	1914	1918#
BAFBB	007644	1921	1923#
BAGA	004212	1114	1118#
BAGB	004234	1121	1123#
BAGBA	007732	1946	1950#
BAGBB	007754	1953	1955#
BAHA	004322	1146	1150#
BAHB	004344	1153	1155#
BAHBA	010042	1978	1982#
BAHBB	010064	1985	1987#
BAIA	004432	1178	1182#
BAIB	004454	1185	1187#
BAIBA	010152	2010	2014#
BAIBB	010174	2017	2019#
BAJA	004542	1210	1214#
BAJB	004564	1217	1219#
BAJBA	010262	2042	2046#
BAJBB	010304	2049	2051#
BAJCA	013210	2712	2716#
BAJCB	013232	2719	2721#
BAKA	004652	1242	1246#
BAKB	004674	1249	1251#
BAKBA	010372	2074	2078#
BAKBB	010414	2081	2083#
BAKCA	013320	2744	2748#
BAKCB	013342	2751	2753#
BALA	004762	1274	1278#
BALB	005004	1281	1283#
BALBA	010502	2106	2110#
BALBB	010524	2113	2115#
BALCA	013430	2776	2780#
BALCB	013452	2783	2785#
BAMA	005072	1306	1310#
BAMB	005114	1313	1315#
BAMBA	010612	2138	2142#
BAMBB	010634	2145	2147#
BAMCA	013540	2808	2812#
BAMCB	013562	2815	2817#
BANA	005202	1338	1342#
BANB	005224	1345	1347#
BANBA	010722	2170	2174#
BANBB	010744	2177	2179#
BANCA	013650	2840	2844#
BANCB	013672	2847	2849#
BAOA	005312	1370	1374#
BAOB	005334	1377	1379#
BAOBA	011032	2202	2206#
BAOBB	011054	2209	2211#
BAOCA	013760	2872	2876#

BAOCB	014002	2879	2891#
BAPA	005422	1402	1406#
BAPB	005444	1409	1411#
BAPBA	011142	2234	2238#
BAPBB	011164	2241	2243#
BAPCA	014070	2904	2908#
BAPCB	014112	2911	2913#
BAQA	005532	1434	1438#
BAQB	005554	1441	1443#
BAQBA	011252	2266	2270#
BAQBB	011274	2273	2275#
BAQCA	014200	2936	2940#
BAQCB	014222	2943	2945#
BARA	005642	1466	1470#
BARB	005664	1473	1475#
BARBA	011362	2298	2302#
BARBB	011404	2305	2307#
BARCA	014310	2968	2972#
BARCB	014332	2975	2977#
BASA	005752	1498	1502#
BASB	005774	1505	1507#
BASBA	011472	2330	2334#
BASBB	011514	2337	2339#
BASCA	014420	3000	3004#
BASCB	014442	3007	3009#
BATA	006062	1530	1534#
BATB	006104	1537	1539#
BATBA	011602	2362	2366#
BATBB	011624	2369	2371#
BATCA	014530	3032	3036#
BATCB	014552	3039	3041#
BAUA	006172	1562	1566#
BAUB	006214	1569	1571#
BAUBA	011712	2394	2398#
BAUBB	011734	2401	2403#
BAUCA	014640	3064	3068#
BAUCB	014662	3071	3073#
BAVA	006302	1594	1598#
BAVB	006324	1601	1603#
BAVBA	012022	2426	2430#
BAVBB	012044	2433	2435#
BAVCA	014750	3096	3100#
BAVCB	014772	3103	3105#
BAWA	006412	1626	1630#
BAWB	006434	1633	1635#
BAWBA	012132	2458	2462#
BAWBB	012154	2465	2467#
BAWCA	015060	3128	3132#
BAWCB	015102	3135	3137#
BAXA	006522	1658	1662#
BAXB	006544	1665	1667#
BAXBA	012242	2490	2494#
BAXBB	012264	2497	2499#
BAYA	006632	1690	1694#
BAYB	006654	1697	1699#
BAYBA	012352	2522	2526#

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BAYBB    012374          2529    2531#
BAZA     006742          1722    1726#
BAZB     006764          1729    1731#
BAZBA    012462          2554    2559#
BAZBB    012504          2561    2563#
BDCNV    002766           723     877#
BDCNVA   003006           882#    892
BDCNVB   003010           883#    896
BDCNVC   003020           894     887#
BDCNVD   003044           896#    898
BELL   = 000007           497#
BIT0   = 000001           477#    502     1068    1069    1073    1074    1086    1088    2060    2061    2065    2066    2078
                         2090    3082    3083    3087    3088    3100    3102
BIT1   = 000002           476#    501     1100    1101    1105    1106    1118    1120    1580    1581    1585    1596    1598
                         1600    2092    2093    2097    2098    2110    2112    2698    2699    2703    2704    2716    2718
                         2748    2750    3114    3115    3119    3120    3132    3134
BIT10  = 002000           467#    605     1388    1389    1393    1394    1406    1408    1868    1869    1973    1874    1886
                         1988    2380    2381    2385    2386    2398    2400    2954    2955    2959    2960    2972    2974
                         3211
BIT11  = 004000           466#    600     1420    1421    1425    1426    1438    1440    1900    1901    1905    1906    1918
                         1920    2412    2413    2417    2418    2430    2432    2986    2987    2991    2992    3004    3006
BIT12  = 010000           465#    1452    1453    1457    1458    1470    1472    1932    1933    1937    1938    1950    1952
                         2444    2445    2449    2450    2462    2464    3018    3019    3023    3024    3036    3038
BIT13  = 020000           464#    500      711    1484    1485    1489    1490    1502    1504    1964    1965    1969    1970
                         1982    1984    2476    2477    2481    2482    2494    2496    3050    3051    3055    3056    3068
                         3070    3224
BIT14  = 040000           463#    597     1516    1517    1521    1522    1534    1536    1996    1997    2001    2002    2014
                         2016    2508    2509    2513    2514    2526    2528    3237
BIT15  = 100000           461     462#    1548    1549    1553    1554    1566    1568    2028    2029    2033    2034    2046
                         2048    2540    2541    2545    2546    2558    2560    3159    3250
BIT2   = 000004           475#    1132    1133    1137    1138    1150    1152    1612    1613    1617    1618    1630    1632
                         2124    2125    2129    2130    2142    2144    2730    2731    2735    2736
BIT3   = 000010           474#    1164    1165    1169    1170    1182    1194    1644    1645    1649    1650    1662    1664
                         2156    2157    2161    2162    2174    2176    2762    2763    2767    2768    2780    2792
BIT4   = 000020           473#    1196    1197    1201    1202    1214    1216    1676    1677    1681    1682    1694    1696
                         2188    2189    2193    2194    2206    2208    2794    2795    2799    2800    2812    2914
BIT5   = 000040           472#    1228    1229    1233    1234    1246    1248    1708    1709    1713    1714    1726    1729
                         2220    2221    2225    2226    2238    2240    2826    2827    2831    2832    2844    2846
BIT6   = 000100           471#    1260    1261    1265    1266    1278    1280    1740    1741    1745    1746    1758    1760
                         2252    2253    2257    2258    2270    2272    2858    2959    2863    2864    2876    2878
BIT7   = 000200           470#    1292    1293    1297    1298    1310    1312    1772    1773    1777    1778    1790    1792
                         2284    2285    2289    2290    2302    2304    3146    3172
BIT8   = 000400           469#    1324    1325    1329    1330    1342    1344    1804    1805    1809    1810    1822    1924
                         2316    2317    2321    2322    2334    2336    2890    2891    2895    2996    2908    2910    3185
BIT9   = 001000           468#    577      609     974    1356    1357    1361    1362    1374    1376    1836    1837    1841
                         1842    1854    1856    2348    2349    2353    2354    2366    2368    2922    2923    2927    2929
                         2940    2942    3198
BMOVA    002754           871#    873
BMOVE    002744           819     867#
CAAA     015422          3259    3263#
CARMSK   001052           527#
CBBA     015444          3269    3273#
CC     = 177776           456#
CCCA     015466          3279    3283#
CHAINN   001272           555     591#
CHALT  = 104005           548#    589      677     990
```

```
CHLT      001706        547     680#
CHNA      001336        598     600#
CHNAA     001354        601     604#
CHNAB     001334        599#    603
CHNAC     001324        595     597#
CHNB      001374        606     609#
CRBUF     001046        525#    690     693
CRBUFA    001050        526#    690     697
CTRA      001056        529#
CTRB      001060        530#
CTRC      001062        531#
CTRD      001064        532#
CURTST    001042        523#    579     584     626*
CXXA      015474       3264    3274    3285#
CXXX      015570       3290    3305#
DATCHK= 104004          546#
DECVAL    003070        879     906#
DELAY = 104015          564#    805
DLCNT     002434        786*    788     798#
DLY       002372        563     786#
DLYA      002412        790#    795
DLYB      002416        791#    792
DO    = 000001          502#    981
DTCHK     001732        545     690#
DTCHKA    001772        691     702#
EHALT = 104007          552#    731
EHLT      001720        551     685#
EHLTA     001730        686     688#
EMTINT    001510        448     630#
EMTTAB    001074        536#    634
EMTV      000030        448#
EMTX  = 000016          503#    538#    540#    542#    544#    546#    548#    550#    552#    554#    556#    558#    560#
                        562#    564#
EMO       003076        728     909#
ERCTR     001054        528#
ERDAT     003137        701     917#   3304
ERR       001774        543     703#
ERRA      002044        706     711#
ERRB      002130        703*    704*    707*    708*    709*    729#
ERRC      002134        712     731#
ERRD      002144        713*    714*    720     734#
ERRE      002146        705*    710*    732     735#
ERROR = 104003          544#   1001    1015    1029    1043    1057    1071    1076    1090    1103    1108    1122    1135
                       1140    1154    1167    1172    1186    1199    1204    1219    1231    1236    1250    1263    1269
                       1282    1295    1300    1314    1327    1332    1346    1359    1364    1378    1391    1396    1410
                       1423    1428    1442    1455    1460    1474    1487    1492    1506    1519    1524    1538    1551
                       1556    1570    1583    1588    1602    1615    1620    1634    1647    1652    1666    1679    1684
                       1698    1711    1716    1730    1743    1748    1762    1775    1780    1794    1807    1812    1826
                       1839    1844    1858    1871    1876    1890    1903    1908    1922    1935    1940    1954    1967
                       1972    1986    1999    2004    2018    2031    2036    2050    2063    2068    2082    2095    2100
                       2114    2127    2132    2146    2159    2164    2178    2191    2196    2210    2223    2228    2242
                       2255    2260    2274    2287    2292    2306    2319    2324    2338    2351    2356    2370    2383
                       2388    2402    2415    2420    2434    2447    2452    2466    2479    2484    2498    2511    2516
                       2530    2543    2548    2562    2575    2589    2603    2617    2631    2645    2659    2673    2687
                       2701    2706    2720    2733    2738    2752    2765    2770    2784    2797    2802    2816    2829
                       2834    2848    2861    2866    2880    2893    2898    2912    2925    2930    2944    2957    2962
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E06

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TC1 - TC11 TEST 1        MACY11 27(732)  08-SEP-76  09:06  PAGE 70
DZTCAA.P11       CROSS REFERENCE TABLE -- USER SYMBOLS

                            2976    2989    2994    3008    3021    3026    3040    3053    3058    3072    3085    3090    3104
                            3117    3122    3136    3148    3161    3174    3187    3200    3213    3226    3239    3252
ERRORI= 104014               562#    700    3303
ERRI    002016               561     707#
FORWD   001442               576     621#
FORWDA  001466               626#
GETRDY  001160               507     571#    590     610     620
GRCNT   002464               810#    812
GTBIN   002546               831#
GTBINP  002614               840#
GTRDYA  001210               576#    586
GTRDYB  001214               577#
GTRDYC  001230               578     580#
GTRDYD  001252               583     585#
GTRDYX  001166               572#    612
HERE    001440               616     620#
ICNT    001030               518#    594*    596*    627*    724     983*    984*    985
ICTR    001026               517#    602*    624*
INBIN   002510               818#
KSTART  001032               519#    571
LOGIC   001430               618#
MACHER  000004               438#    567*    572*    998*   1012*   1026*   1040*   1054*
MAINT = 020000               500#    981
MANUAL= 100000               461#
NOP   = 000240               459#    619
NXTST   001040               522#    571*    585     611     621     623*
OACNV   002662               692     696     715     719     850#   3291    3295    3299
OACNVA  002674               854#    863
OACNVX  002742               850*    854     858*    859*    860*    861*    865#
OPEN  = 000000               460#    517     518     520     521     522     523     524     525     526     527     528     529
                             530     531     532     533     534     535     647     648     660     661     666     729     734
                             735     774     783     798     806     808     815     816     824     825     826     827     828
                             829     865    3296
PC    =%000007               486#    618*   3286*
PIND    002540               827#    842*
POPSP = 005726               487#    793     796
POPSP2= 022626               488#    604    1002    1016    1030    1044    1058
PRTY0 = 000000               496#
PRTY1 = 000040               495#
PRTY2 = 000100               494#
PRTY3 = 000140               493#
PRTY4 = 000200               492#
PRTY5 = 000240               491#
PRTY6 = 000300               490#    514
PRTY7 = 000340               449     489#    566     573
PRVCNT  001066               533#   3285*   3300
PSW   = 177776               457#    566*    573*    789*
PTO     002534               825#    831     837*
PTOP    002542               828#    840     846*
PTI     002536               826#    831*    832*    835*    836*    837     838
PTIP    002544               829#    840*    841*    844*    845*    846     847
POTIT   003314               569     940#
RCMSK   002504               811     815#
RCNT    001044               524#
REGADR  015544              3263*   3273*   3283*   3285    3288*   3289    3296#
RIND    002532               818*    820     821     824#    833*
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RNCNT    002506     813*   816#
RNDNMB   001070     534#   3287*  3299   3292
RNGEN    002150     737#   801    810    3286
RNUM   = 000002     501#   981
RF1      002216     737    741*   748    750#
RP2      002220     740    744    747*   751#
RSTPC    001624     650*   658    660#
RSTPSW   001626     651*   657    661#
RSTREG=  104013     560#   874    899
RSTRG    001570     559    650#
RTNNO    001036     521#   582    607    622*   628    716
R0      =%000000    478#   580*   581*   582    607*   615*   630    631*   632*   533*   634*   635*   879*
                    3287   3288
R1      =%000001    479#   878*   883*   887*   893*   895*
R2      =%000002    480#   880*   894*   895    897*
R3      =%000003    481#   881*   891*
R4      =%000004    482#   892*   885*   888*   889
R5      =%000005    483#   621*   626    715*   723*   900*   3291*  3295*  3299*
R6      =%000006    484#   574*   593*
R7      =%000007    485#   576*   629*
SAVREG=  104012     558#   867    877
SAVRG    001530     557    637#
SCOPE =  104011     556#   976    1000   1003   1014   1017   1028   1031   1042   1045   1056   1059   1072
                    1077   1091   1104   1109   1123   1136   1141   1155   1168   1173   1187   1200   1205
                    1219   1232   1237   1251   1264   1269   1283   1296   1301   1315   1328   1333   1347
                    1360   1365   1379   1392   1397   1411   1424   1429   1443   1456   1461   1475   1488
                    1493   1507   1520   1525   1539   1552   1557   1571   1584   1589   1603   1616   1621
                    1635   1648   1653   1667   1680   1685   1699   1712   1717   1731   1744   1749   1763
                    1776   1781   1795   1808   1813   1827   1840   1845   1859   1872   1877   1891   1904
                    1909   1923   1936   1941   1955   1968   1973   1987   2000   2005   2019   2032   2037
                    2051   2064   2069   2083   2096   2101   2115   2128   2133   2147   2160   2165   2179
                    2192   2197   2211   2224   2229   2243   2256   2261   2275   2289   2293   2307   2320
                    2325   2339   2352   2357   2371   2384   2389   2403   2416   2421   2435   2448   2453
                    2467   2480   2485   2499   2512   2517   2531   2544   2549   2563   2577   2591   2605
                    2619   2633   2647   2661   2675   2689   2702   2707   2721   2734   2739   2753   2766
                    2771   2785   2798   2803   2817   2830   2835   2849   2862   2867   2881   2894   2899
                    2913   2926   2931   2945   2958   2963   2977   2990   2995   3009   3022   3027   3041
                    3054   3059   3073   3086   3091   3105   3118   3123   3137   3150   3163   3176   3189
                    3202   3215   3228   3241   3254   3305   3314
SCOPTR   001034     520#   592    625*
SETSR    001676     570    675#
SPBOT =  001000     458#   565    574
SR    =  177570     455#   577    580    597    600    605    609    628*   685    711    974    985
SRESET=  104010     554#   575    1087   1119   1151   1183   1215   1247   1279   1311   1343   1375   1407
                    1439   1471   1503   1535   1567   1599   1631   1663   1695   1727   1759   1791   1823
                    1855   1887   1919   1951   1983   2015   2047   2079   2111   2143   2175   2207   2239
                    2271   2303   2335   2367   2399   2431   2463   2495   2527   2559   2717   2749   2781
                    2813   2845   2877   2909   2941   2973   3005   3037   3069   3101   3133   3149   3162
                    3175   3188   3201   3214   3227   3240   3253
SRSET    001154     570#
SPSETT   001660     553    670#   672*
STAL     002436     541    801#
STALA    002456     804*   806#
STALB    002460     803    807#
STALL =  104002     542#
START    001130     505    565#
```

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```
STC11V= 104006     550#
STLMSK  002462     802    808#
STPRA   001646     663*   666#
STTCV   001630     549    663#
SVRPC   001564     637*   645    647#
SVRPSW  001566     638*   644    648#
TCBA    001012     511#   1041   1580*  1581   1585*  1586   1598*  1600   1612*  1613   1617*  1618   1630*
                   1632   1644*  1645   1649*  1650   1662*  1664   1676*  1677   1681*  1682   1694*  1696
                   1708*  1709   1713*  1714   1726*  1728   1740*  1741   1745*  1746   1758*  1760   1772*
                   1773   1777*  1778   1790*  1792   1804*  1805   1809*  1810   1822*  1824   1836*  1837
                   1841*  1842   1854*  1856   1868*  1869   1873*  1874   1886*  1888   1900*  1901   1905*
                   1906   1918*  1920   1932*  1933   1937*  1938   1950*  1952   1964*  1965   1969*  1970
                   1982*  1984   1996*  1997   2001*  2002   2014*  2016   2028*  2029   2033*  2034   2045*
                   2048   2614*  2615   2618*  2628*  2629   2632*  2642*  2643   2646*  3283
TCCM    001006     509#   981*   988*   999    2698*  2699   2703*  2704   2716*  2718   2730*  2731   2735*
                   2736   2748*  2750   2762*  2763   2767*  2768   2780*  2782   2794*  2795   2799*  2800
                   2812*  2814   2826*  2827   2831*  2832   2844*  2846   2858*  2859   2863*  2864   2876*
                   2878   2890*  2891   2895*  2896   2908*  2910   2922*  2923   2927*  2928   2940*  2942
                   2954*  2955   2959*  2960   2972*  2974   2986*  2987   2991*  2992   3004*  3006   3018*
                   3019   3023*  3024   3036*  3038   3050*  3051   3055*  3056   3068*  3070   3146   3159
TCDT    001014     512#   1027   1068*  1069   1073*  1074   1086*  1088   1100*  1101   1105*  1106   1118*
                   1120   1132*  1133   1137*  1138   1150*  1152   1164*  1165   1169*  1170   1182*  1184
                   1196*  1197   1201*  1202   1214*  1216   1228*  1229   1233*  1234   1246*  1248   1260*
                   1261   1265*  1266   1278*  1280   1292*  1293   1297*  1298   1310*  1312   1324*  1325
                   1329*  1330   1342*  1344   1356*  1357   1361*  1362   1374*  1376   1388*  1389   1393*
                   1394   1406*  1408   1420*  1421   1425*  1426   1438*  1440   1452*  1453   1457*  1458
                   1470*  1472   1484*  1485   1489*  1490   1502*  1504   1516*  1517   1521*  1522   1534*
                   1536   1548*  1549   1553*  1554   1566*  1568   2572*  2573   2576*  2586*  2587   2590*
                   2600*  2601   2604*  3263
TCLVL   001020     514#   667
TCST    001004     508#   982*   987*   1013   3082*  3083   3087*  3088   3100*  3102   3114*  3115   3119*
                   3120   3132*  3134   3172   3185   3198   3211   3224   3237   3250
TCVTR   001016     513#   665
TCWC    001010     510#   1055   2060*  2061   2065*  2066   2078*  2080   2092*  2093   2097*  2098   2110*
                   2112   2124*  2125   2129*  2130   2142*  2144   2156*  2157   2161*  2162   2174*  2176
                   2188*  2189   2193*  2194   2206*  2208   2220*  2221   2225*  2226   2238*  2240   2252*
                   2253   2257*  2258   2270*  2272   2284*  2285   2289*  2290   2302*  2304   2316*  2317
                   2321*  2322   2334*  2336   2348*  2349   2353*  2354   2366*  2368   2380*  2381   2385*
                   2386   2398*  2400   2412*  2413   2417*  2418   2430*  2432   2444*  2445   2449*  2450
                   2462*  2464   2476*  2477   2481*  2482   2494*  2496   2508*  2509   2513*  2514   2526*
                   2528   2540*  2541   2545*  2546   2558*  2560   2656*  2657   2660*  2670*  2671   2674*
                   2684*  2685   2688*  3273
TEMP    001072     535#
TENPWR  003056     880    901#
TLAST = 177777     498#   3308
TPB     001024     516#   765*
TPS     001022     515#   766
TRPV    000034     450#
TYP     002222     537    753*
TYPA    002232     756#   764    773
TYPC    002254     757    761#
TYPD    002272     759    763    765#   770    772
TYPDAT  002336     756*   758*   761    765    769*   771*   774#
TYPE  = 104000     538#   568    587    613    675    782    978
TYPES = 104001     540#   727
TYPF    002310     762    769#
```

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```
TYPG      002322           771#
TYPS      002340           539      776#      784
TYPSA     002364           780      782#
TYPSB     002366           778*     779       783#
T0        003514           519      965#
T0MSG     003373           948#     979
T1        003614           966      991#
T10       004126          1080     1093#
T100      010066          1976     1989#
T101      010142          1990     2007#
T102      010176          2008     2021#
T103      010252          2022     2039#
T104      010306          2040     2053#
T105      010362          2054     2071#
T106      010416          2072     2085#
T107      010472          2086     2103#
T11       004202          1094     1111#
T110      010526          2104     2117#
T111      010602          2118     2135#
T112      010636          2136     2149#
T113      010712          2150     2167#
T114      010746          2168     2181#
T115      011022          2182     2.99#
T116      011056          2200     2213#
T117      011132          2214     2231#
T12       004236          1112     1125#
T120      011166          2232     2245#
T121      011242          2246     2263#
T122      011276          2264     2277#
T123      011352          2278     2295#
T124      011406          2296     2309#
T125      011462          2310     2327#
T126      011516          2328     2341#
T127      011572          2342     2359#
T13       004312          1126     1143#
T130      011626          2360     2373#
T131      011702          2374     2391#
T132      011736          2392     2405#
T133      012012          2406     2423#
T134      012046          2424     2437#
T135      012122          2438     2455#
T136      012156          2456     2469#
T137      012232          2470     2487#
T14       004346          1144     1157#
T140      012266          2488     2501#
T141      012342          2502     2519#
T142      012376          2520     2533#
T143      012452          2534     2551#
T144      012506          2552     2565#
T145      012544          2566     2579#
T146      012602          2580     2593#
T147      012640          2594     2607#
T15       004422          1158     1175#
T150      012676          2608     2621#
T151      012734          2622     2635#
T152      012772          2636     2649#
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T153	013030	2650	2663#
T154	013066	2664	2677#
T155	013124	2678	2691#
T156	013200	2692	2709#
T157	013234	2710	2723#
T16	004456	1176	1189#
T160	013310	2724	2741#
T161	013344	2742	2755#
T162	013420	2756	2773#
T163	013454	2774	2787#
T164	013530	2788	2805#
T165	013564	2806	2819#
T166	013640	2820	2837#
T167	013674	2838	2851#
T17	004532	1190	1207#
T170	013750	2852	2869#
T171	014004	2870	2883#
T172	014060	2884	2901#
T173	014114	2902	2915#
T174	014170	2916	2933#
T175	014224	2934	2947#
T176	014300	2948	2965#
T177	014334	2966	2979#
T2	003646	992	1005#
T20	004566	1208	1221#
T200	014410	2980	2997#
T201	014444	2998	3011#
T202	014520	3012	3029#
T203	014554	3030	3043#
T204	014630	3044	3061#
T205	014664	3062	3075#
T206	014740	3076	3093#
T207	014774	3094	3107#
T21	004642	1222	1239#
T210	015050	3108	3125#
T211	015104	3126	3139#
T212	015132	3140	3152#
T213	015160	3153	3165#
T214	015206	3166	3178#
T215	015234	3179	3191#
T216	015262	3192	3204#
T217	015310	3205	3217#
T22	004676	1240	1253#
T220	015336	3218	3230#
T221	015364	3231	3243#
T222	015412	3244	3256#
T223	015434	3257	3266#
T224	015456	3267	3276#
T225	015572	3277	3307#
T23	004752	1254	1271#
T24	005006	1272	1285#
T25	005062	1286	1303#
T26	005116	1304	1317#
T27	005172	1318	1335#
T3	003700	1006	1019#
T30	005226	1336	1349#

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T31        005302          1350    1367#
T32        005336          1368    1381#
T33        005412          1382    1399#
T34        005446          1400    1413#
T35        005522          1414    1431#
T36        005556          1432    1445#
T37        005632          1446    1463#
T4         003732          1020    1033#
T40        005666          1464    1477#
T41        005742          1478    1495#
T42        005776          1496    1509#
T43        006052          1510    1527#
T44        006106          1528    1541#
T45        006162          1542    1559#
T46        006216          1560    1573#
T47        006272          1574    1591#
T5         003764          1034    1047#
T50        006326          1592    1605#
T51        006402          1606    1623#
T52        006436          1624    1637#
T53        006512          1638    1655#
T54        006546          1656    1669#
T55        006622          1670    1687#
T56        006656          1688    1701#
T57        006732          1702    1719#
T6         004016          1048    1061#
T60        006766          1720    1733#
T61        007042          1734    1751#
T62        007076          1752    1765#
T63        007152          1766    1783#
T64        007206          1784    1797#
T65        007262          1798    1815#
T66        007316          1816    1829#
T67        007372          1830    1847#
T7         004072          1062    1079#
T70        007426          1848    1861#
T71        007502          1862    1879#
T72        007536          1880    1893#
T73        007612          1894    1911#
T74        007646          1912    1925#
T75        007722          1926    1943#
T76        007756          1944    1957#
T77        010032          1958    1975#
X        = 000225           499#    964     969#    990     995#   1004    1009#   1019    1023#   1032    1037#   1046    1051#
                           1060    1065#   1078    1083#   1092    1097#   1110    1115#   1124    1129#   1142    1147#   1156
                           1161#   1174    1179#   1188    1193#   1206    1211#   1220    1225#   1238    1243#   1252    1257#
                           1270    1275#   1284    1289#   1302    1307#   1316    1321#   1334    1339#   1348    1353#   1366
                           1371#   1380    1385#   1398    1403#   1412    1417#   1430    1435#   1444    1449#   1462    1467#
                           1476    1481#   1494    1499#   1508    1513#   1526    1531#   1540    1545#   1558    1563#   1572
                           1577#   1590    1595#   1604    1609#   1622    1627#   1636    1641#   1654    1659#   1668    1673#
                           1686    1691#   1700    1705#   1718    1723#   1732    1737#   1750    1755#   1764    1769#   1782
                           1787#   1796    1801#   1814    1819#   1828    1833#   1846    1851#   1860    1865#   1878    1883#
                           1892    1897#   1910    1915#   1924    1929#   1942    1947#   1956    1961#   1974    1979#   1998
                           1993#   2006    2011#   2020    2025#   2038    2043#   2052    2057#   2070    2075#   2084    2089#
                           2102    2107#   2116    2121#   2134    2139#   2148    2153#   2166    2171#   2180    2195#   2198
                           2203#   2212    2217#   2230    2235#   2244    2249#   2262    2267#   2276    2281#   2294    2299#
```

```
                          2308     2313*    2326     2331*    2340     2345*    2358     2363*    2372     2377*    2390     2395*    2404
                          2409*    2422     2427*    2436     2441*    2454     2459*    2468     2473*    2486     2491*    2500     2505*
                          2518     2523*    2532     2537*    2550     2555*    2564     2569*    2578     2583*    2592     2597*    2606
                          2611*    2620     2625*    2634     2639*    2648     2653*    2662     2667*    2676     2681*    2690     2695*
                          2708     2713*    2722     2727*    2740     2745*    2754     2759*    2772     2777*    2786     2791*    2804
                          2809*    2818     2823*    2836     2841*    2850     2855*    2868     2873*    2692     2887*    2900     2905*
                          2914     2919*    2932     2937*    2946     2951*    2964     2969*    2978     2983*    2996     3001*    3010
                          3015*    3028     3033*    3042     3047*    3060     3065*    3074     3079*    3092     3097*    3106     3111*
                          3124     3129*    3138     3143*    3151     3156*    3164     3169*    3177     3182*    3190     3195*    3203
                          3208*    3216     3221*    3229     3234*    3242     3247*    3255     3260*    3265     3270*    3275     3280*
                          3306     3311*
XAA       003524           968      974*
XAB       003536           975      978*
XAC       003544           981*     989
XAD       003564           984*     986
ZZZA      015602          3310     3314*
.       = 015604           435*     436      438      440      442      444      446      450      453      504*     506*     767      834
                           843     1070     1075     1102     1107     1134     1139     1166     1171     1198     1203     1230     1235
                          1262     1267     1294     1299     1326     1331     1358     1363     1390     1395     1422     1427     1454
                          1459     1486     1491     1518     1523     1550     1555     1582     1587     1614     1619     1646     1651
                          1678     1683     1710     1715     1742     1747     1774     1779     1806     1911     1838     1843     1870
                          1875     1902     1907     1934     1939     1966     1971     1998     2003     2030     2035     2062     2067
                          2094     2099     2126     2131     2158     2163     2190     2195     2222     2227     2254     2259     2286
                          2291     2318     2323     2350     2355     2382     2387     2414     2419     2446     2451     2478     2483
                          2510     2515     2542     2547     2700     2705     2732     2737     2764     2769     2796     2801     2828
                          2833     2860     2865     2892     2897     2924     2929     2956     2961     2988     2993     3020     3025
                          3052     3057     3084     3089     3116     3121     3147     3160     3173     3186     3199     3212     3225
                          3238     3251
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TC1 - TC11 TEST 1       MACY11 27(732)  08-SEP-76  09:06  PAGE 78
DZTCAA.P11      CROSS REFERENCE TABLE -- MACRO NAMES

EMTDEF    435#    537     539     541     543     545     547     549     551     553     555     557     559     561     563
TSTA      433#    964     990    1004    1018    1032    1046    1060    1078    1092    1110    1124    1142    1156    1174
         1188    1206    1220    1238    1252    1270    1284    1302    1316    1334    1348    1366    1380    1398    1412
         1430    1444    1462    1476    1494    1508    1526    1540    1558    1572    1590    1604    1622    1636    1654
         1668    1686    1700    1718    1732    1750    1764    1782    1796    1814    1828    1846    1860    1878    1892
         1910    1924    1942    1956    1974    1988    2006    2020    2038    2052    2070    2094    2102    2116    2134
         2148    2166    2180    2198    2212    2230    2244    2262    2276    2294    2308    2326    2340    2358    2372
         2390    2404    2422    2436    2454    2468    2486    2500    2518    2532    2550    2564    2578    2592    2606
         2620    2634    2648    2662    2676    2690    2708    2722    2740    2754    2772    2786    2804    2818    2836
         2850    2868    2882    2900    2914    2932    2946    2964    2978    2996    3010    3028    3042    3060    3074
         3092    3106    3124    3138    3151    3164    3177    3190    3203    3216    3229    3242    3255    3265    3275
         3306
TSTBR     435#   3151    3164    3177    3190    3203    3216    3229    3242
TSTBRS    435#   3138
TSTBRW    433#   1060    1092    1124    1156    1188    1220    1252    1284    1316    1348    1380    1412    1444    1476
         1508    1540    1572    1604    1636    1668    1700    1732    1764    1796    1828    1860    1892    1924    1956
         1988    2020    2052    2084    2116    2148    2180    2212    2244    2276    2308    2340    2372    2404    2436
         2468    2500    2532    2690    2722    2754    2786    2818    2850    2882    2914    2946    2978    3010    3042
         3074    3106
TSTREF    433#    990    1004    1018    1032    1046
TSTRES    435#   1078    1110    1142    1174    1206    1238    1270    1302    1334    1366    1398    1430    1462    1494
         1526    1558    1590    1622    1654    1686    1718    1750    1782    1814    1846    1878    1910    1942    1974
         2006    2038    2070    2102    2134    2166    2198    2230    2262    2294    2326    2358    2390    2422    2454
         2486    2518    2550    2708    2740    2772    2804    2836    2868    2900    2932    2964    2996    3028    3060
         3092    3124
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M06


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COM       596   671   832   833   841   842
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MOV	565	566	567	571	572	573	574	580	591	592	593	607	615	621	622
	623	624	625	626	627	628	630	631	632	634	637	638	639	640	641
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	748	753	755	776	778	786	788	790	804	813	818	831	837	838	840
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MOVB	756	758	765	769	771	857	871	889	896						
RESET	617	673													
ROL	738	739	742	743	745	746									
ROR	859	860	861												
RTI	599	646	659	668	674	683	688	702	[illegible]	760	781	797	807		
RTS	629	635	678	749	768	814	823	839	848	864	875	900			
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.REPT	453														
.TITLE	1														

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.WORD     537    539    541    543    545    547    549    551    553    555    557    559    561    563    619


 ERRORS DETECTED:  0
 DEFAULT GLOBALS GENERATED:  0

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 RUN-TIME: 14 26 5 SECONDS
 RUN-TIME RATIO: 84/47=1.7
 CORE USED:  12K  (24 PAGES)
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C07

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Spooler runtime 14 Seconds, 62 KCS, 37/ disk reads, 3 disk writes, 79 pages
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