TC11

BASIC LOGIC

MD-11-DZTCA-A

EP DZTCA-A-DL-A

OCT 1976

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digital

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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

AUTHOR: L. R. KOLLER

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.

4.1 TC1 TEST USE PROCEDURE

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

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.

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.

5. PROGRAM AND/OR OPERATOR ACTION

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

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

6. ERRORS

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 REFERENCED 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 OYYYYY ICNT ZZZZ.

WHERE:

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

PC OYYYYY 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 OYYYYY 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                             BIT15=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                          .WORD   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),-(6)       ;
001300  016767  177530  177466          MOV     SCOPTR,-(6)     ;
001306  012706  000774                  MOV     #774,R6         ;
001312  005267  177512                  INC     ICNT            ;INCREMENT ICNT.
```

```
                                        BNE     CHNAC           ;BR IF RESULT NOT 0.
                                        COM     ICNT            ;RESET ICNT TO -1.
                        CHNAC:  BIT     #BIT14,SR       ;CHECK FOR SCOPE OPTION.
                                        BEQ     CHNA            ;BRANCH IF SCOPE SW NOT SET.
                        CHNAB:  RTI                             ;RETURN TO ROUTINE.
                        CHNA:   BIT     #BIT11,SR       ;TEST INHIBIT ITERATION SWITCH
                                        BNE     CHNAA           ;BRANCH IF INHIBIT ITERATION SW SET.
                                        DEC     ICTR            ;DECREMENT ITERATION COUNT.
                                        BNE     CHNAB           ;BRANCH IF COUNT NOT 0.
                        CHNAA:  POPSP2                          ;POP STACK TWICE
                                        BIT     #BIT10,SR       ;ROUTINE END HALT SW SET? (SR10)
                                        BEQ     CHNB            ;BRANCH IF NOT SET.
                                        MOV     RTNNO,R0        ;TEST # TO R0.
                                        HALT                    ;ROUTINE END HALT. TEST # IN LIGHTS.
                        CHNB:   BIT     #BIT9,SR        ;CHECK SELECT ROUTINE SWITCH
                                        BNE     GETRDY          ;BRANCH IF SELECT RTN SW SET
                                        CMP     #-1,NXTST       ;LAST TEST?
                                        BNE     GTRDYX          ;BRANCH IF NOT LAST TEST.
                                        TYPE                    ;TYPE PROGRAM END BELL.
                                        .PGEND
                                        MOV     @#42,R0         ;GET CONTENTS OF 42.
                                        BEQ     HERE            ;BR IF 0.
                                        RESET                   ;NON-ZERO. ISSUE RESET.
                        LOGIC:  JSR     PC,(0)          ;RETURN TO MONITOR.
                                        .WORD   NOP,NOP,NOP
                        HERE:   BR      GETRDY          ;GO REPEAT PROGRAM.
                        FORWD:  MOV     NXTST,R5        ;ADDR OF NEXT ROUTINE TO R5.
                                        MOV     (5)+,RTNNO      ;GET NEXT ROUTINE NUMBER.
                                        MOV     (5)+,NXTST      ;GET ADDR OF NEXT "NEXT" ROUTINE.
                                        MOV     (5)+,ICTR       ;GET ITERATION COUNT.
                                        MOV     (5)+,SCOPTR     ;GET SCOPE LOOP ENTRY POINTER.
                        FORWDA: MOV     R5,CURTST       ;ADDR OF NOW CURRENT TEST TO CURTST.
                                        MOV     #1,ICNT         ;PRESET ICNT TO 1.
                                        MOV     RTNNO,SR        ;DISPLAY ROUTINE #.
                                        RTS     R7              ;EXIT FORWD SUBROUTINE.
                        EMTINT: MOV     R0,-(6)         ;PUSH R0.
                                        MOV     2(6),R0         ;GET EMT PC.
                                        MOV     -(0),R0         ;GET EMT CALL.
                                        ASL     R0              ;TIMES 2.
                                        MOV     EMTTAB-10000(0),R0      ;FORM EMT ADDR.
                                        RTS     R0              ;GO TO EMT RTN. RESTORE R0.

                        ;SAVE REGS 0 TO 4 SUBROUTINE.
                        SAVRG:  MOV     (6)+,SVRPC      ;SAVE PC AND PSW.
                                        MOV     (6)+,SVRPSW
                                        MOV     %4,-(6)         ;SAVE REGS 0 - 4
                                        MOV     %3,-(6)         ;IN STACK.
                                        MOV     %2,-(6)
                                        MOV     %1,-(6)
                                        MOV     %0,-(6)
                                        MOV     SVRPSW,-(6)     ;RESTORE PC AND PSW.
                                        MOV     SVRPC,-(6)
                                        RTI                             ;EXIT.
                        SVRPC:  OPEN
                        SVRPSW: OPEN

                        ;RESTORE REGS 0 TO 4 SUBROUTINE.
                        RSTRG:  MOV     (6)+,RSTPC      ;SAVE PC AND PSW.
```

```
                                        MOV     (6)+,RSTPSW
                                        MOV     (6)+,%0         ;RESTORE REGS 0 - 4
                                        MOV     (6)+,%1         ;FROM STACK.
                                        MOV     (6)+,%2
                                        MOV     (6)+,%3
                                        MOV     (6)+,%4
                                        MOV     RSTPSW,-(6)     ;RESTORE PC AND PSW.
                                        MOV     RSTPC,-(6)
                                        RTI                     ;EXIT
                                RSTPC:  OPEN
                                RSTPSW: OPEN
                                ;ROUTINE TO SET TC11 INTERRUPT VECTOR AND PRIORITY
                                STTCV:  MOV     @(6),STPRA+2    ;MOVE VECTOR ADDR TO STPRA+2
                                        ADD     #2,@%6          ;SET UP EXIT
                                        MOV     TCVTR,%1
                                STPRA:  MOV     #OPEN,(1)+      ;SET VECTOR ADDRESS
                                        MOV     TCLVL,(1)+      ;SET PRIORITY
                                        RTI                     ;EXIT
                                ;ROUTINE TO ISSUE RESET.
                                SRSETT: MOV     #52525,%0       ;DATA TO R0.
                                        COM     %0              ;COMPLEMENT (R0).
                                        MOV     %0,SRSETT+2     ;(R0) TO SRSETT+2.
                                        RESET                   ;ISSUE RESET. (R0) IS
                                        RTI                     ;DISPLAYED. EXIT.
                                SETSR:  TYPE                    ;TYPE SELECT OPTION MESSAGE.
                                        ASETSR
                                        CHALT                   ;COMMON HALT.
                                        RTS     %7              ;EXIT.
                                ;COMMON HALT ROUTINE
                                CHLT:   MOV     @%6,%0          ;DEVELOP ADDRESS OF CALLER.
                                        SUB     #2,%0
                                        HALT                    ;HALT. ADDRESS OF CALL INSTRUCTION
                                        RTI                     ;IN DATA LIGHTS.
                                ;CONDITIONAL ERROR HALT ROUTINE.
                                EHLT:   TST     SR              ;CHECK FOR HALT ON ERROR.
                                        BPL     EHLTA           ;BRANCH IF NO HALT DESIRED.
                                        HALT                    ;HALT.
                                EHLTA:  RTI                     ;IN DATA LIGHTS.
                                ;DATA CHECK ROUTINE.
                                DTCHK:  CMP     CRBUF,CRBUFA    ;COMPARE EXPECTED AND RECEIVED
                                        BEQ     DTCHKA          ;CHARS. BRANCH IF SAME.
                                        JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
                                        CRBUF                   ;SOURCE ADDR.
                                        AWAS                    ;DESTINATION ADDR.
                                        3                       ;#OF DIGITS TO CONVERT.
                                        JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
                                        CRBUFA                  ;SOURCE ADDR.
                                        AASB                    ;DESTINATION ADDR.
                                        3                       ;#OF DIGITS TO CONVERT.
                                        ERROR1
                                        ERDAT
                                DTCHKA: RTI                     ; EXIT.
                                ERR:    MOV     #-1,ERRB        ;SET UP ONE MESSAGE CALL.
                                        MOV     #240,ERRB+2
                                        CLR     ERRE
                                        BR      ERRA
```

```
                                ERR1:   MOV     @%6,ERRB        ;DEVELOP ADDT'L MESSAGE ADDR.
                                        MOV     @ERRB,ERRB      ;STORE AT ERRB.
                                        MOV     #-1,ERRB+2
                                        MOV     #2,ERRE
                                ERRA:   BIT     #BIT13,SR       ;INHIBIT ERROR PRINT?
                                        BNE     ERRC            ;BRANCH TO INHIBIT PRINT.
                                        MOV     @%6,ERRD        ;DEVELOP CALLING ADDR.
                                        SUB     #2,ERRD
                                        JSR     R5,OACNV        ;CONVERT TEST # TO ASCII.
                                        RTNNO
                                        ATNUMB
                                        3
                                        JSR     %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
                                        ERRD                    ;SOURCE ADDR.
                                        APC                     ;DESTINATION ADDR.
                                        6                       ;#OF DIGITS TO CONVERT.
                                        JSR     R5,BDCNV        ;CONVERT ICNT TO DECIMAL ASCII.
                                        ICNT
                                        AICNT
                                        5
                                        TYPES                   ;TYPE:
                                        EMO                     ;ERROR HEADER,
                                ERRB:   OPEN                    ;ADDT'L ERROR MESSAGE IF ANY.
                                        -1
                                ERRC:   EHALT                   ;GO ERR HALT IF DESIRED.
                                        ADD     ERRE,@%6
                                        RTI                     ;EXIT.
                                ERRD:   OPEN
                                ERRE:   OPEN
                                ;RANDOM NUMBER GENERATOR. ROUTINE EXITS WITH NUMBER IN REGISTER 0.
                                RNGEN:  MOV     RP1,%0
                                        ROL     %0
                                        ROL     %0
                                        ADD     RP2,%0
                                        MOV     %0,RP1
                                        ROL     %0
                                        ROL     %0
                                        ADD     RP2,%0
                                        ROL     %0
                                        ROL     %0
                                        MOV     %0,RP2
                                        MOV     RP1,%0
                                        RTS     %7              ;EXIT. NUMBER IN R0
                                RP1:    1233
                                RP2:    7622
                                ;SUBROUTINE TO OUTPUT ASCII MESSAGE ON TELETYPE PRINTER.
                                TYP:    MOV     @%6,%0          ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS.
                                        ADD     #2,@%6          ;SET UP EXIT.
                                        MOV     @%0,%0          ;ADDRESS OF MESSAGE TO R0.
                                TYPA:   MOVB    (0)+,TYPDAT     ;GET CHARACTER
                                        BNE     TYPC            ;BRANCH IF NOT TERMINATOR..
                                        MOVB    #177,TYPDAT     ;OUTPUT RUBOUT.
                                        JSR     %7,TYPD
                                        RTI                     ;TERMINATOR CHAR. DONE. EXIT.
                                TYPC:   CMPB    #45,TYPDAT      ;CHECK FOR"%".
                                        BEQ     TYPF            ;BRANCH IF"%"
```

```
                                                    JSR     %7,TYPD         ;TYPE CHAR IN TYPDAT
                                                    BR      TYPA
                                    176524  TYPD:   MOVB    TYPDAT,@TPB     ;OUTPUT CHARACTER TO PRINTER
                                                    TSTB    @TPS            ;WAIT FOR DONE FLAG.
                                                    BPL     .-4
                                                    RTS     %7              ;EXIT
                                    000020  TYPF:   MOVB    #15,TYPDAT      ;MOVE CARRIAGE RETURN CODE TO TYPDAT
                                                    JSR     %7,TYPD         ;GO TYPE CHAR.
                                    000006  TYPG:   MOVB    #12,TYPDAT      ;MOVE LF CODE TO TYPDAT.
                                                    JSR     %7,TYPD         ;GO TYPE CHAR.
                                                    BR      TYPA
                                            TYPDAT: OPEN
                                            ;SUBROUTINE TO OUTPUT A SERIES OF ASCII MESSAGES ON TELETYPE PRINTER
                                            TYPS:   MOV     @%6,%0          ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS
                                                    ADD     #2,@%6          ;UPDATE TO NEXT MESSAGE ADDRESS
                                                    MOV     @%0,TYPSB       ;ADDRESS OF MESSAGE TO TYPSB
                                    000006          CMP     #-1,TYPSB       ;CHECK FOR TERMINATOR
                                                    BNE     TYPSA           ;BRANCH IF NOT TERMINATOR.
                                                    RTI                     ;TERMINATOR, EXIT.
                                            TYPSA:  TYPE                    ;CALL ON TYP SUB TO TYPE MESSAGE
                                            TYPSB:  OPEN                    ;ADDRESS OF MESSAGE GOES HERE
                                                    JR      TYPS            ;GO PROCESS NEXT MESSAGE
                                            ;SUBROUTINE TO DELAY A SPECIFIED NUMBER OF MILLISECONDS
                                    000036  DLY:    MOV     @%6,DLCNT       ;GET DELAY COUNT ADDRESS.
                                                    ADD     #2,@%6          ;SET UP EXIT ADDRESS
                                                    MOV     @DLCNT,-(6)     ;DELAY COUNT TO STACK
                                                    CLR     PSW             ;SET PRIORITY 0
                                    000226  DLYA:   MOV     #226,-(6)       ;1 MSEC COUNT TO STACK
                                            DLYB:   DEC     @%6             ;DECREMENT 1 MSEC COUNT
                                                    BNE     DLYB            ;BRANCH IF NOT 0.
                                                    POPSP                   ;ZERO. UNCOVER MSECS. COUNT.
                                                    DEC     @%6             ;DECREMENT IT
                                                    BNE     DLYA            ;BR IF NOT DONE DELAYING
                                                    POPSP                   ;DONE
                                                    RTI                     ;EXIT.
                                            DLCNT:  OPEN                    ;CONTAINS MILLISECONDS COUNT ADDRESS.
                                            ;SUBROUTINE TO STALL A RANDOM NUMBER OF MILLISECONDS. MAXIMUM STALL
                                            ;DETERMINED BY CONTENTS OF LOC STLMSK.
                                    177506  STAL:   JSR     %7,RNGEN        ;GO GET RANDOM NUMBER.
                                    000014          BIC     STLMSK,%0       ;# IN R0. APPLY STALL MASK.
                                                    BEQ     STALB           ;BRANCH IF RESULT IS 0.
                                    000002          MOV     %0,STALA
                                                    DELAY                   ;DELAY
                                            STALA:  OPEN                    ;DELAY COUNT
                                            STALB:  RTI                     ;DONE. EXIT.
                                            STLMSK: OPEN                    ;STALL MASK.
                                            ;SUBROUTINE TO GENERATE RANDOM CHARACTER COUNT
                                    177460  GRCNT:  JSR     %7,RNGEN        ;GET RANDOM NUMBER
                                    000010          BIC     RCMSK,%0        ;APPLY MASK
                                                    BEQ     GRCNT           ;TRY AGAIN IF RESULT 0
                                    000004          MOV     %0,RNCNT        ;COUNT TO RNCNT
                                                    RTS     %7              ;EXIT.
                                            RCMSK:  OPEN                    ;RANDOM CHARACTER MASK.
                                            RNCNT:  OPEN                    ;RANDOM CHARACTER COUNT.
                                            ;SUBROUTINE TO INITIALIZE BINARY COUNT PATTERNS
                                    177777  000014  INBIN:  MOV     #-1,RIND        ;SET ALL VARIABLES
```

```
819  002516  004567  000222                  JSR     %5,BMOVE        ;TO MINUS 1.
820  002522  002532                          RIND
821  002524  002533                          RIND+1
822  002526  000013                          11.
823  002530  000207                          RTS     %7              ;EXIT
824  002532  000000                  RIND:   OPEN
825  002534  000000                  PTO:    OPEN
826  002536  000000                  PT1:    OPEN
827  002540  000000                  PIND:   OPEN
828  002542  000000                  PTOP:   OPEN
829  002544  000000                  PT1P:   OPEN
830                                  ;SPECIAL BINARY COUNT PATTERN SUBROUTINE. EXITS WITH BIN CHAR IN RO
831  002546  016767  177762  177762  GTBIN:  MOV     PTO,PT1         ;PREVIOUS BIN CHAR TO PT1
832  002554  005167  177756          COM     PT1
833  002560  005167  177746          COM     RIND
834  002564  001002                  BNE     .+6
835  002566  005267  177744          INC     PT1
836  002572  042767  177400  177736  BIC     #177400,PT1     ;MASK TO 8 BITS
837  002600  016767  177732  177726  MOV     PT1,PTO         ;SAVE BIN CHAR IN PTO
838  002606  016700  177724          MOV     PT1,%0          ;BIN CHAR TO RO.
839  002612  000207                  RTS     %7              ;EXIT.
840  002614  016767  177722  177722  GTBINP: MOV     PTOP,PT1P       ;PREVIOUS BIN CHAR TO PT1P
841  002622  005167  177716          COM     PT1P
842  002626  005167  177706          COM     PIND
843  002632  001002                  BNE     .+6
844  002634  005267  177704          INC     PT1P
845  002640  042767  177400  177676  BIC     #177400,PT1P    ;MASK TO 8 BITS.
846  002646  016767  177672  177666  MOV     PT1P,PTOP       ;SAVE BIN CHAR IN PTOP.
847  002654  016701  177664          MOV     PT1P,%1         ;BIN CHAR TO R1.
848  002660  000207                  RTS     %7              ;EXIT.
849                                  ;OCTAL TO ASCII CONVERT ROUTINE
850  002662  013567  000054          OACNV:  MOV     @(5)+,OACNVX    ;GET OCTAL VALUE.
851  002666  012501                  MOV     (5)+,%1         ;GET DESTINATION ADDR.
852  002670  012502                  MOV     (5)+,%2         ;GET CONVERT COUNT.
853  002672  060201                  ADD     %2,%1           ;DEVELOP ADDR TO STORE 1ST CHAR.
854  002674  016703  000042          OACNVA: MOV     OACNVX,%3
855  002700  042703  177770          BIC     #177770,%3      ;ISOLATE LEAST SIGNIFICANT DIGIT.
856  002704  062703  000060          ADD     #60,%3          ;CONVERT DIGIT TO ASCII.
857  002710  110341                  MOVB    %3,-(1)         ;STORE ASCII CHARACTER.
858  002712  042767  000007  000022  BIC     #7,OACNVX
859  002720  006067  000016          ROR     OACNVX
860  002724  006067  000012          ROR     OACNVX
861  002730  006067  000006          ROR     OACNVX
862  002734  005302                  DEC     %2              ;DONE ALL DIGITS?
863  002736  001356                  BNE     OACNVA          ;BRANCH IF NOT DONE.
864  002740  000205                  RTS     %5              ;DONE. EXIT.
865  002742  000000                  OACNVX: OPEN
866                                  ;SUBROUTINE TO MOVE A VARIABLE NUMBER OF BYTES.
867  002744  104012                  BMOVE:  SAVREG                  ;SAVE REGS.
868  002746  012501                  MOV     (5)+,%1         ;GET"FROM"ADDRESS
869  002750  012502                  MOV     (5)+,%2         ;GET"TO"ADDRESS
870  002752  012503                  MOV     (5)+,%3         ;GET COUNT
871  002754  112122                  BMOVA:  MOVB    (1)+,(2)+       ;MOVE BYTE
872  002756  005303                  DEC     %3              ;DECREMENT COUNT
873  002760  001375                  BNE     BMOVA           ;BRANCH IF NOT DONE.
874  002762  104013                  RSTREG                  ;RESTORE REGS.
```

```
                                                RTS     %5              ;DONE EXIT
                                        ;BINARY TO DECIMAL ASCII CONVERT SUBROUTINE.
                                        BDCNV:  SAVREG                  ;SAVE REGS.
                                                MOV     @(5)+,R1        ;GET BINARY VALUE.
                                                MOV     #DECVAL,R0      ;ADDR OF DECVAL TO R0.
                                                MOV     #TENPWR,R2      ;ADDR OF 10 POWER TO R2.
                                                MOV     #5,R3           ;SET UP FOR 5 CONVERSIONS.
                                        BDCNVA: CLR     R4              ;CLEAR RESULT.
                                        BDCNVB: SUB     (2),R1          ;10 POWER FROM VALUE.
                                                BCS     BDCNVC          ;BR IF UNSUCCESSFUL.
                                                INC     R4              ;;1 TO RESULT.
                                                BR      BDCNVB          ;DO IT AGAIN.
                                        BDCNVC: ADD     (2),R1          ;RESTORE SUBTRACTED VALUE.
                                                ADD     #60,R4  ;CONVERT RESULT TO ASCII.
                                                MOVB    R4,(0)+         ;STORE RESULT.
                                                TST     (2)+            ;UPDATE 10 POWER ADDR.
                                                DEC     R3              ;DONE 5 TIMES?
                                                BNE     BDCNVA          ;BR IF NOT.
                                                MOV     (5)+,R1         ;GET ADDR TO STORE ASCII.
                                                MOV     (5)+,R2         ;GET # OF DIGITS REQUIRED.
                                                ADD     R2,R1           ;START WITH LSD.
                                        BDCNVD: MOVB    -(0),-(1)       ;TRANSFER CHARACTER.
                                                DEC     R2              ;DONE?
                                                BNE     BDCNVD          ;BR IF NOT.
                                                RSTREG                  ;RESTORE REGS.
                                                RTS     R5              ;EXIT.
                                        TENPWR: 10000.
                                                1000.
                                                100.
                                                10.
                                                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
```

```
      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
```

```
                                ;*******************************************************************************
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
                                ;*******************************************************************************
```

```
1019  003700  000003                  T3:     3                       ;ROUTINE NUMBER 3                       *
1020  003702  003732                          T4                      ;ADDRESS OF NEXT ROUTINE                *
1021  003704  001750                          1000.                   ;TEST ITERATION COUNT                   *
1022  003706  003710                          ACA                     ;SCOPE ENTRY POINT                      *
1023                                          .LIST
1024                                  ;*****************************************************************************
1025                                  ;TEST ABILITY TO REFERENCE TCDT WITHOUT TRAPPING.
1026  003710  012767  003724  174066  ACA:    MOV     #ACB,MACHER     ;SET UP BUS ERROR TRAP.
1027  003716  005777  175072                  TST     @TCDT           ;REFERENCE RREG.
1028  003722  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
1029  003724  104003                  ACB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
1030  003726  022626                          POPSP2
1031  003730  104011                          SCOPE                   ;SCOPE
1032                                  ;*****************************************************************************
1033  003732  000004                  T4:     4                       ;ROUTINE NUMBER 4                       *
1034  003734  003764                          T5                      ;ADDRESS OF NEXT ROUTINE                *
1035  003736  001750                          1000.                   ;TEST ITERATION COUNT                   *
1036  003740  003742                          ADA                     ;SCOPE ENTRY POINT                      *
1037                                          .LIST
1038                                  ;*****************************************************************************
1039                                  ;TEST ABILITY TO REFERENCE TCBA WITHOUT TRAPPING.
1040  003742  012767  003756  174034  ADA:    MOV     #ADB,MACHER     ;SET UP BUS ERROR TRAP.
1041  003750  005777  175036                  TST     @TCBA           ;REFERENCE RREG.
1042  003754  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
1043  003756  104003                  ADB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
1044  003760  022626                          POPSP2
1045  003762  104011                          SCOPE                   ;SCOPE
1046                                  ;*****************************************************************************
1047  003764  000005                  T5:     5                       ;ROUTINE NUMBER 5                       *
1048  003766  004016                          T6                      ;ADDRESS OF NEXT ROUTINE                *
1049  003770  001750                          1000.                   ;TEST ITERATION COUNT                   *
1050  003772  003774                          AEA                     ;SCOPE ENTRY POINT                      *
1051                                          .LIST
1052                                  ;*****************************************************************************
1053                                  ;TEST ABILITY TO REFERENCE TCWC WITHOUT TRAPPING.
1054  003774  012767  004010  174002  AEA:    MOV     #AEB,MACHER     ;SET UP BUS ERROR TRAP.
1055  004002  005777  175002                  TST     @TCWC           ;REFERENCE RREG.
1056  004006  104011                          SCOPE                   ;OK IF NO TRAP OCCURS. SCOPE.
1057  004010  104003                  AEB:    ERROR                   ;TRAPPED WHEN REFERENCING RREG.
1058  004012  022626                          POPSP2
1059  004014  104011                          SCOPE                   ;SCOPE
1060                                  ;*****************************************************************************
1061  004016  000006                  T6:     6                       ;ROUTINE NUMBER 6                       *
1062  004020  004072                          T7                      ;ADDRESS OF NEXT ROUTINE                *
1063  004022  000144                          100.                    ;TEST ITERATION COUNT                   *
1064  004024  004026                          AFA                     ;SCOPE ENTRY POINT                      *
1065                                          .LIST
1066                                  ;*****************************************************************************
1067                                  ;TEST THAT TCDT BIT0 CAN BE SET, AND CLEARED.
1068  004026  052777  000001  174760  AFA:    BIS     #BIT0,@TCDT     ;SET TCDT BIT0.
1069  004034  032777  000001  174752          BIT     #BIT0,@TCDT     ;SEE IF BIT IS SET.
1070  004042  001002                          BNE     .+6             ;BRANCH IF SET.
1071  004044  104003                          ERROR                   ;TCDT BIT0 FAILED TO SET.
1072  004046  104011                          SCOPE
1073  004050  042777  000001  174736          BIC     #BIT0,@TCDT     ;CLEAR TCDT BIT0.
1074  004056  032777  000001  174730          BIT     #BIT0,@TCDT     ;SEE IF BIT IS CLEAR.
```

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                                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
                                        ERROR                   ;TCDT BIT0 FAILED TO CLEAR.
                                        SCOPE                   ;SCOPE.
                                ;*******************************************************************************
                                T7:     7                       ;ROUTINE NUMBER 7                              *
                                        T10                     ;ADDRESS OF NEXT ROUTINE                       *
                                        10.                     ;TEST ITERATION COUNT                          *
                                        BAFA                    ;SCOPE ENTRY POINT                             *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT0
                                BAFA:   BIS     #BIT0,@TCDT     ;SET TCDT BIT0
                                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
                                        BIT     #BIT0,@TCDT     ;SEE IF BIT IS CLEAR.
                                        BEQ     BAFB            ;BR IF BIT IS CLEAR.
                                        ERROR                   ;RESET FAILED TO CLEAR TCDT BIT0
                                BAFB:   SCOPE                   ;SCOPE.
                                ;*******************************************************************************
                                T10:    10                      ;ROUTINE NUMBER 10                             *
                                        T11                     ;ADDRESS OF NEXT ROUTINE                       *
                                        100.                    ;TEST ITERATION COUNT                          *
                                        AGA                     ;SCOPE ENTRY POINT                             *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT TCDT BIT1 CAN BE SET, AND CLEARED.
                                AGA:    BIS     #BIT1,@TCDT     ;SET TCDT BIT1.
                                        BIT     #BIT1,@TCDT     ;SEE IF BIT IS SET.
                                        BNE     .+6             ;BRANCH IF SET.
                                        ERROR                   ;TCDT BIT1 FAILED TO SET.
                                        SCOPE
                                        BIC     #BIT1,@TCDT     ;CLEAR TCDT BIT1.
                                        BIT     #BIT1,@TCDT     ;SEE IF BIT IS CLEAR.
                                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
                                        ERROR                   ;TCDT BIT1 FAILED TO CLEAR.
                                        SCOPE                   ;SCOPE.
                                ;*******************************************************************************
                                T11:    11                      ;ROUTINE NUMBER 11                             *
                                        T12                     ;ADDRESS OF NEXT ROUTINE                       *
                                        10.                     ;TEST ITERATION COUNT                          *
                                        BAGA                    ;SCOPE ENTRY POINT                             *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT1
                                BAGA:   BIS     #BIT1,@TCDT     ;SET TCDT BIT1
                                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
                                        BIT     #BIT1,@TCDT     ;SEE IF BIT IS CLEAR.
                                        BEQ     BAGB            ;BR IF BIT IS CLEAR.
                                        ERROR                   ;RESET FAILED TO CLEAR TCDT BIT1
                                BAGB:   SCOPE                   ;SCOPE.
                                ;*******************************************************************************
                                T12:    12                      ;ROUTINE NUMBER 12                             *
                                        T13                     ;ADDRESS OF NEXT ROUTINE                       *
                                        100.                    ;TEST ITERATION COUNT                          *
                                        AHA                     ;SCOPE ENTRY POINT                             *
                                        .LIST
                                ;*******************************************************************************
```

```
                                        ;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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1187  004454  104011                  BAIB:   SCOPE                   ;SCOPE.
1188                                  ;*******************************************************************************
1189  004456  000016                  T16:    16                      ;ROUTINE NUMBER 16                             *
1190  004460  004532                          T17                     ;ADDRESS OF NEXT ROUTINE                       *
1191  004462  000144                          100.                    ;TEST ITERATION COUNT                          *
1192  004464  004466                          AJA                     ;SCOPE ENTRY POINT                             *
1193                                          .LIST
1194                                  ;*******************************************************************************
1195                                  ;TEST THAT TCDT BIT4 CAN BE SET, AND CLEARED.
1196  004466  052777  000020  174320  AJA:    BIS     #BIT4,@TCDT     ;SET TCDT BIT4.
1197  004474  032777  000020  174312          BIT     #BIT4,@TCDT     ;SEE IF BIT IS SET.
1198  004502  001002                          BNE     .+6             ;BRANCH IF SET.
1199  004504  104003                          ERROR                   ;TCDT BIT4 FAILED TO SET.
1200  004506  104011                          SCOPE
1201  004510  042777  000020  174276          BIC     #BIT4,@TCDT     ;CLEAR TCDT BIT4.
1202  004516  032777  000020  174270          BIT     #BIT4,@TCDT     ;SEE IF BIT IS CLEAR.
1203  004524  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1204  004526  104003                          ERROR                   ;TCDT BIT4 FAILED TO CLEAR.
1205  004530  104011                          SCOPE                   ;SCOPE.
1206                                  ;*******************************************************************************
1207  004532  000017                  T17:    17                      ;ROUTINE NUMBER 17                             *
1208  004534  004566                          T20                     ;ADDRESS OF NEXT ROUTINE                       *
1209  004536  000012                          10.                     ;TEST ITERATION COUNT                          *
1210  004540  004542                          BAJA                    ;SCOPE ENTRY POINT                             *
1211                                          .LIST
1212                                  ;*******************************************************************************
1213                                  ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT4
1214  004542  052777  000020  174244  BAJA:   BIS     #BIT4,@TCDT     ;SET TCDT BIT4
1215  004550  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
1216  004552  032777  000020  174234          BIT     #BIT4,@TCDT     ;SEE IF BIT IS CLEAR.
1217  004560  001401                          BEQ     BAJB            ;BR IF BIT IS CLEAR.
1218  004562  104003                          ERROR                   ;RESET FAILED TO CLEAR TCDT BIT4
1219  004564  104011                  BAJB:   SCOPE                   ;SCOPE.
1220                                  ;*******************************************************************************
1221  004566  000020                  T20:    20                      ;ROUTINE NUMBER 20                             *
1222  004570  004642                          T21                     ;ADDRESS OF NEXT ROUTINE                       *
1223  004572  000144                          100.                    ;TEST ITERATION COUNT                          *
1224  004574  004576                          AKA                     ;SCOPE ENTRY POINT                             *
1225                                          .LIST
1226                                  ;*******************************************************************************
1227                                  ;TEST THAT TCDT BIT5 CAN BE SET, AND CLEARED.
1228  004576  052777  000040  174210  AKA:    BIS     #BIT5,@TCDT     ;SET TCDT BIT5.
1229  004604  032777  000040  174202          BIT     #BIT5,@TCDT     ;SEE IF BIT IS SET.
1230  004612  001002                          BNE     .+6             ;BRANCH IF SET.
1231  004614  104003                          ERROR                   ;TCDT BIT5 FAILED TO SET.
1232  004616  104011                          SCOPE
1233  004620  042777  000040  174166          BIC     #BIT5,@TCDT     ;CLEAR TCDT BIT5.
1234  004626  032777  000040  174160          BIT     #BIT5,@TCDT     ;SEE IF BIT IS CLEAR.
1235  004634  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1236  004636  104003                          ERROR                   ;TCDT BIT5 FAILED TO CLEAR.
1237  004640  104011                          SCOPE                   ;SCOPE.
1238                                  ;*******************************************************************************
1239  004642  000021                  T21:    21                      ;ROUTINE NUMBER 21                             *
1240  004644  004676                          T22                     ;ADDRESS OF NEXT ROUTINE                       *
1241  004646  000012                          10.                     ;TEST ITERATION COUNT                          *
1242  004650  004652                          BAKA                    ;SCOPE ENTRY POINT                             *
```

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                                        .LIST
                                ;*****************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT5
004652  052777  000040  174134 BAKA:   BIS     #BIT5,@TCDT     ;SET TCDT BIT5
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 BIT5
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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1299  005054  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1300  005056  104003                        ERROR                   ;TCDT BIT7 FAILED TO CLEAR.
1301  005060  104011                        SCOPE                   ;SCOPE.
1302                                ;*****************************************************************************
1303  005062  000025                T25:    25                      ;ROUTINE NUMBER 25                          *
1304  005064  005116                        T26                     ;ADDRESS OF NEXT ROUTINE                    *
1305  005066  000012                        10.                     ;TEST ITERATION COUNT                       *
1306  005070  005072                        BAMA                    ;SCOPE ENTRY POINT                          *
1307                                        .LIST
1308                                ;*****************************************************************************
1309                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT7
1310  005072  052777  000200  173714 BAMA:   BIS     #BIT7,@TCDT     ;SET TCDT BIT7
1311  005100  104010                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
1312  005102  032777  000200  173704        BIT     #BIT7,@TCDT     ;SEE IF BIT IS CLEAR.
1313  005110  001401                        BEQ     BAMB            ;BR IF BIT IS CLEAR.
1314  005112  104003                        ERROR                   ;RESET FAILED TO CLEAR TCDT BIT7
1315  005114  104011                BAMB:   SCOPE                   ;SCOPE.
1316                                ;*****************************************************************************
1317  005116  000026                T26:    26                      ;ROUTINE NUMBER 26                          *
1318  005120  005172                        T27                     ;ADDRESS OF NEXT ROUTINE                    *
1319  005122  000144                        100.                    ;TEST ITERATION COUNT                       *
1320  005124  005126                        ANA                     ;SCOPE ENTRY POINT                          *
1321                                        .LIST
1322                                ;*****************************************************************************
1323                                ;TEST THAT TCDT BIT8 CAN BE SET, AND CLEARED.
1324  005126  052777  000400  173660 ANA:    BIS     #BIT8,@TCDT     ;SET TCDT BIT8.
1325  005134  032777  000400  173652        BIT     #BIT8,@TCDT     ;SEE IF BIT IS SET.
1326  005142  001002                        BNE     .+6             ;BRANCH IF SET.
1327  005144  104003                        ERROR                   ;TCDT BIT8 FAILED TO SET.
1328  005146  104011                        SCOPE
1329  005150  042777  000400  173636        BIC     #BIT8,@TCDT     ;CLEAR TCDT BIT8.
1330  005156  032777  000400  173630        BIT     #BIT8,@TCDT     ;SEE IF BIT IS CLEAR.
1331  005164  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1332  005166  104003                        ERROR                   ;TCDT BIT8 FAILED TO CLEAR.
1333  005170  104011                        SCOPE                   ;SCOPE.
1334                                ;*****************************************************************************
1335  005172  000027                T27:    27                      ;ROUTINE NUMBER 27                          *
1336  005174  005226                        T30                     ;ADDRESS OF NEXT ROUTINE                    *
1337  005176  000012                        10.                     ;TEST ITERATION COUNT                       *
1338  005200  005202                        BANA                    ;SCOPE ENTRY POINT                          *
1339                                        .LIST
1340                                ;*****************************************************************************
1341                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT8
1342  005202  052777  000400  173604 BANA:   BIS     #BIT8,@TCDT     ;SET TCDT BIT8
1343  005210  104010                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
1344  005212  032777  000400  173574        BIT     #BIT8,@TCDT     ;SEE IF BIT IS CLEAR.
1345  005220  001401                        BEQ     BANB            ;BR IF BIT IS CLEAR.
1346  005222  104003                        ERROR                   ;RESET FAILED TO CLEAR TCDT BIT8
1347  005224  104011                BANB:   SCOPE                   ;SCOPE.
1348                                ;*****************************************************************************
1349  005226  000030                T30:    30                      ;ROUTINE NUMBER 30                          *
1350  005230  005302                        T31                     ;ADDRESS OF NEXT ROUTINE                    *
1351  005232  000144                        100.                    ;TEST ITERATION COUNT                       *
1352  005234  005236                        AOA                     ;SCOPE ENTRY POINT                          *
1353                                        .LIST
1354                                ;*****************************************************************************
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                                        ;TEST THAT TCDT BIT9 CAN BE SET, AND CLEARED.
005236  052777  001000  173550  A0A:    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                        A0A                     ;SCOPE ENTRY POINT                                  *
                                    .LIST
                                    ;*****************************************************************************
                                    ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT9
005312  052777  001000  173474  A0A:    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     A0B             ;BR IF BIT IS CLEAR.
005332  104003                        ERROR                   ;RESET FAILED TO CLEAR TCDT BIT9
005334  104011                A0B:    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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1411  005444  104011                    BAPB:   SCOPE                   ;SCOPE.
1412
1413  005446  000034                    T34:    34                      ;ROUTINE NUMBER 34                      *
1414  005450  005522                            T35                     ;ADDRESS OF NEXT ROUTINE                *
1415  005452  000144                            100.                    ;TEST ITERATION COUNT                   *
1416  005454  005456                            AQA                     ;SCOPE ENTRY POINT                      *
1417                                            .LIST
1418
1419                                    ;TEST THAT TCDT BIT11 CAN BE SET, AND CLEARED.
1420  005456  052777  004000  173330    AQA:    BIS     #BIT11,@TCDT    ;SET TCDT BIT11.
1421  005464  032777  004000  173322            BIT     #BIT11,@TCDT    ;SEE IF BIT IS SET.
1422  005472  001002                            BNE     .+6             ;BRANCH IF SET.
1423  005474  104003                            ERROR                   ;TCDT BIT11 FAILED TO SET.
1424  005476  104011                            SCOPE
1425  005500  042777  004000  173306            BIC     #BIT11,@TCDT    ;CLEAR TCDT BIT11.
1426  005506  032777  004000  173300            BIT     #BIT11,@TCDT    ;SEE IF BIT IS CLEAR.
1427  005514  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1428  005516  104003                            ERROR                   ;TCDT BIT11 FAILED TO CLEAR.
1429  005520  104011                            SCOPE                   ;SCOPE.
1430
1431  005522  000035                    T35:    35                      ;ROUTINE NUMBER 35                      *
1432  005524  005556                            T36                     ;ADDRESS OF NEXT ROUTINE                *
1433  005526  000012                            10.                     ;TEST ITERATION COUNT                   *
1434  005530  005532                            BAQA                    ;SCOPE ENTRY POINT                      *
1435                                            .LIST
1436
1437                                    ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT11
1438  005532  052777  004000  173254    BAQA:   BIS     #BIT11,@TCDT    ;SET TCDT BIT11
1439  005540  104010                            SRESET                  ;ISSUE RESET TO CLEAR BIT.
1440  005542  032777  004000  173244            BIT     #BIT11,@TCDT    ;SEE IF BIT IS CLEAR.
1441  005550  001401                            BEQ     BAQB            ;BR IF BIT IS CLEAR.
1442  005552  104003                            ERROR                   ;RESET FAILED TO CLEAR TCDT BIT11
1443  005554  104011                    BAQB:   SCOPE                   ;SCOPE.
1444
1445  005556  000036                    T36:    36                      ;ROUTINE NUMBER 36                      *
1446  005560  005632                            T37                     ;ADDRESS OF NEXT ROUTINE                *
1447  005562  000144                            100.                    ;TEST ITERATION COUNT                   *
1448  005564  005566                            ARA                     ;SCOPE ENTRY POINT                      *
1449                                            .LIST
1450
1451                                    ;TEST THAT TCDT BIT12 CAN BE SET, AND CLEARED.
1452  005566  052777  010000  173220    ARA:    BIS     #BIT12,@TCDT    ;SET TCDT BIT12.
1453  005574  032777  010000  173212            BIT     #BIT12,@TCDT    ;SEE IF BIT IS SET.
1454  005602  001002                            BNE     .+6             ;BRANCH IF SET.
1455  005604  104003                            ERROR                   ;TCDT BIT12 FAILED TO SET.
1456  005606  104011                            SCOPE
1457  005610  042777  010000  173176            BIC     #BIT12,@TCDT    ;CLEAR TCDT BIT12.
1458  005616  032777  010000  173170            BIT     #BIT12,@TCDT    ;SEE IF BIT IS CLEAR.
1459  005624  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1460  005626  104003                            ERROR                   ;TCDT BIT12 FAILED TO CLEAR.
1461  005630  104011                            SCOPE                   ;SCOPE.
1462
1463  005632  000037                    T37:    37                      ;ROUTINE NUMBER 37                      *
1464  005634  005666                            T40                     ;ADDRESS OF NEXT ROUTINE                *
1465  005636  000012                            10.                     ;TEST ITERATION COUNT                   *
1466  005640  005642                            BARA                    ;SCOPE ENTRY POINT                      *
```

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                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT12
005642  052777  010000  173144  BARA:   BIS     #BIT12,@TCDT    ;SET TCDT BIT12
005650  104010                        SRESET                  ;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                        SRESET                  ;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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1523  006044  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1524  006046  104003                        ERROR                   ;TCDT BIT14 FAILED TO CLEAR.
1525  006050  104011                        SCOPE                   ;SCOPE.
1526                          ;*****************************************************************************
1527  006052  000043          T43:    43                              ;ROUTINE NUMBER 43                      *
1528  006054  006106                  T44                             ;ADDRESS OF NEXT ROUTINE                *
1529  006056  000012                  10.                             ;TEST ITERATION COUNT                   *
1530  006060  006062                  BATA                            ;SCOPE ENTRY POINT                      *
1531                                   .LIST
1532                          ;*****************************************************************************
1533                          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT14
1534  006062  052777  040000  172724  BATA:   BIS     #BIT14,@TCDT    ;SET TCDT BIT14
1535  006070  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
1536  006072  032777  040000  172714          BIT     #BIT14,@TCDT    ;SEE IF BIT IS CLEAR.
1537  006100  001401                  BEQ     BATB                    ;BR IF BIT IS CLEAR.
1538  006102  104003                  ERROR                           ;RESET FAILED TO CLEAR TCDT BIT14
1539  006104  104011          BATB:   SCOPE                           ;SCOPE.
1540                          ;*****************************************************************************
1541  006106  000044          T44:    44                              ;ROUTINE NUMBER 44                      *
1542  006110  006162                  T45                             ;ADDRESS OF NEXT ROUTINE                *
1543  006112  000144                  100.                            ;TEST ITERATION COUNT                   *
1544  006114  006116                  AUA                             ;SCOPE ENTRY POINT                      *
1545                                   .LIST
1546                          ;*****************************************************************************
1547                          ;TEST THAT TCDT BIT15 CAN BE SET, AND CLEARED.
1548  006116  052777  100000  172670  AUA:    BIS     #BIT15,@TCDT    ;SET TCDT BIT15.
1549  006124  032777  100000  172662          BIT     #BIT15,@TCDT    ;SEE IF BIT IS SET.
1550  006132  001002                  BNE     .+6                     ;BRANCH IF SET.
1551  006134  104003                  ERROR                           ;TCDT BIT15 FAILED TO SET.
1552  006136  104011                  SCOPE
1553  006140  042777  100000  172646          BIC     #BIT15,@TCDT    ;CLEAR TCDT BIT15.
1554  006146  032777  100000  172640          BIT     #BIT15,@TCDT    ;SEE IF BIT IS CLEAR.
1555  006154  001401                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
1556  006156  104003                  ERROR                           ;TCDT BIT15 FAILED TO CLEAR.
1557  006160  104011                  SCOPE                           ;SCOPE.
1558                          ;*****************************************************************************
1559  006162  000045          T45:    45                              ;ROUTINE NUMBER 45                      *
1560  006164  006216                  T46                             ;ADDRESS OF NEXT ROUTINE                *
1561  006166  000012                  10.                             ;TEST ITERATION COUNT                   *
1562  006170  006172                  BAUA                            ;SCOPE ENTRY POINT                      *
1563                                   .LIST
1564                          ;*****************************************************************************
1565                          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT15
1566  006172  052777  100000  172614  BAUA:   BIS     #BIT15,@TCDT    ;SET TCDT BIT15
1567  006200  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
1568  006202  032777  100000  172604          BIT     #BIT15,@TCDT    ;SEE IF BIT IS CLEAR.
1569  006210  001401                  BEQ     BAUB                    ;BR IF BIT IS CLEAR.
1570  006212  104003                  ERROR                           ;RESET FAILED TO CLEAR TCDT BIT15
1571  006214  104011          BAUB:   SCOPE                           ;SCOPE.
1572                          ;*****************************************************************************
1573  006216  000046          T46:    46                              ;ROUTINE NUMBER 46                      *
1574  006220  006272                  T47                             ;ADDRESS OF NEXT ROUTINE                *
1575  006222  000144                  100.                            ;TEST ITERATION COUNT                   *
1576  006224  006226                  AVA                             ;SCOPE ENTRY POINT                      *
1577                                   .LIST
1578                          ;*****************************************************************************
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1579
1580  006226  052777  000002  172556  AVA:    BIS     #BIT1,@TCBA     ;SET TCBA BIT1.
1581  006234  032777  000002  172550          BIT     #BIT1,@TCBA     ;SEE IF BIT IS SET.
1582  006242  001002                          BNE     .+6             ;BRANCH IF SET.
1583  006244  104003                          ERROR                   ;TCBA BIT1 FAILED TO SET.
1584  006246  104011                          SCOPE
1585  006250  042777  000002  172534          BIC     #BIT1,@TCBA     ;CLEAR TCBA BIT1.
1586  006256  032777  000002  172526          BIT     #BIT1,@TCBA     ;SEE IF BIT IS CLEAR.
1587  006264  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1588  006266  104003                          ERROR                   ;TCBA BIT1 FAILED TO CLEAR.
1589  006270  104011                          SCOPE                   ;SCOPE.
1590                          ;*****************************************************************************
1591  006272  000047                  T47:    47                      ;ROUTINE NUMBER 47                      *
1592  006274  006326                          T50                     ;ADDRESS OF NEXT ROUTINE                *
1593  006276  000012                          10.                     ;TEST ITERATION COUNT                   *
1594  006300  006302                          BAVA                    ;SCOPE ENTRY POINT                      *
1595                                           .LIST
1596                          ;*****************************************************************************
1597                          ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT1
1598  006302  052777  000002  172502  BAVA:   BIS     #BIT1,@TCBA     ;SET TCBA BIT1
1599  006310  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
1600  006312  032777  000002  172472          BIT     #BIT1,@TCBA     ;SEE IF BIT IS CLEAR.
1601  006320  001401                          BEQ     BAVB            ;BR IF BIT IS CLEAR.
1602  006322  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT1
1603  006324  104011                  BAVB:   SCOPE                   ;SCOPE.
1604                          ;*****************************************************************************
1605  006326  000050                  T50:    50                      ;ROUTINE NUMBER 50                      *
1606  006330  006402                          T51                     ;ADDRESS OF NEXT ROUTINE                *
1607  006332  000144                          100.                    ;TEST ITERATION COUNT                   *
1608  006334  006336                          AWA                     ;SCOPE ENTRY POINT                      *
1609                                           .LIST
1610                          ;*****************************************************************************
1611                          ;TEST THAT TCBA BIT2 CAN BE SET, AND CLEARED.
1612  006336  052777  000004  172446  AWA:    BIS     #BIT2,@TCBA     ;SET TCBA BIT2.
1613  006344  032777  000004  172440          BIT     #BIT2,@TCBA     ;SEE IF BIT IS SET.
1614  006352  001002                          BNE     .+6             ;BRANCH IF SET.
1615  006354  104003                          ERROR                   ;TCBA BIT2 FAILED TO SET.
1616  006356  104011                          SCOPE
1617  006360  042777  000004  172424          BIC     #BIT2,@TCBA     ;CLEAR TCBA BIT2.
1618  006366  032777  000004  172416          BIT     #BIT2,@TCBA     ;SEE IF BIT IS CLEAR.
1619  006374  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1620  006376  104003                          ERROR                   ;TCBA BIT2 FAILED TO CLEAR.
1621  006400  104011                          SCOPE                   ;SCOPE.
1622                          ;*****************************************************************************
1623  006402  000051                  T51:    51                      ;ROUTINE NUMBER 51                      *
1624  006404  006436                          T52                     ;ADDRESS OF NEXT ROUTINE                *
1625  006406  000012                          10.                     ;TEST ITERATION COUNT                   *
1626  006410  006412                          BAWA                    ;SCOPE ENTRY POINT                      *
1627                                           .LIST
1628                          ;*****************************************************************************
1629                          ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT2
1630  006412  052777  000004  172372  BAWA:   BIS     #BIT2,@TCBA     ;SET TCBA BIT2
1631  006420  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
1632  006422  032777  000004  172362          BIT     #BIT2,@TCBA     ;SEE IF BIT IS CLEAR.
1633  006430  001401                          BEQ     BAWB            ;BR IF BIT IS CLEAR.
1634  006432  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT2
```

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1635  006434  104011                  BAWB:   SCOPE                           ;SCOPE.
1636                                  ;*************************************************************************
1637  006436  000052                  T52:    52                              ;ROUTINE NUMBER 52                    *
1638  006440  006512                          T53                             ;ADDRESS OF NEXT ROUTINE              *
1639  006442  000144                          100.                            ;TEST ITERATION COUNT                 *
1640  006444  006446                          AXA                             ;SCOPE ENTRY POINT                    *
1641                                          .LIST
1642                                  ;*************************************************************************
1643                                  ;TEST THAT TCBA BIT3 CAN BE SET, AND CLEARED.
1644  006446  052777  000010  172336  AXA:    BIS     #BIT3,@TCBA             ;SET TCBA BIT3.
1645  006454  032777  000010  172330          BIT     #BIT3,@TCBA             ;SEE IF BIT IS SET.
1646  006462  001002                          BNE     .+6                     ;BRANCH IF SET.
1647  006464  104003                          ERROR                           ;TCBA BIT3 FAILED TO SET.
1648  006466  104011                          SCOPE
1649  006470  042777  000010  172314          BIC     #BIT3,@TCBA             ;CLEAR TCBA BIT3.
1650  006476  032777  000010  172306          BIT     #BIT3,@TCBA             ;SEE IF BIT IS CLEAR.
1651  006504  001401                          BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
1652  006506  104003                          ERROR                           ;TCBA BIT3 FAILED TO CLEAR.
1653  006510  104011                          SCOPE                           ;SCOPE.
1654                                  ;*************************************************************************
1655  006512  000053                  T53:    53                              ;ROUTINE NUMBER 53                    *
1656  006514  006546                          T54                             ;ADDRESS OF NEXT ROUTINE              *
1657  006516  000012                          10.                             ;TEST ITERATION COUNT                 *
1658  006520  006522                          BAXA                            ;SCOPE ENTRY POINT                    *
1659                                          .LIST
1660                                  ;*************************************************************************
1661                                  ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT3
1662  006522  052777  000010  172262  BAXA:   BIS     #BIT3,@TCBA             ;SET TCBA BIT3
1663  006530  104010                          SRESET                          ;ISSUE RESET TO CLEAR BIT.
1664  006532  032777  000010  172252          BIT     #BIT3,@TCBA             ;SEE IF BIT IS CLEAR.
1665  006540  001401                          BEQ     BAXB                    ;BR IF BIT IS CLEAR.
1666  006542  104003                          ERROR                           ;RESET FAILED TO CLEAR TCBA BIT3
1667  006544  104011                  BAXB:   SCOPE                           ;SCOPE.
1668                                  ;*************************************************************************
1669  006546  000054                  T54:    54                              ;ROUTINE NUMBER 54                    *
1670  006550  006622                          T55                             ;ADDRESS OF NEXT ROUTINE              *
1671  006552  000144                          100.                            ;TEST ITERATION COUNT                 *
1672  006554  006556                          AYA                             ;SCOPE ENTRY POINT                    *
1673                                          .LIST
1674                                  ;*************************************************************************
1675                                  ;TEST THAT TCBA BIT4 CAN BE SET, AND CLEARED.
1676  006556  052777  000020  172226  AYA:    BIS     #BIT4,@TCBA             ;SET TCBA BIT4.
1677  006564  032777  000020  172220          BIT     #BIT4,@TCBA             ;SEE IF BIT IS SET.
1678  006572  001002                          BNE     .+6                     ;BRANCH IF SET.
1679  006574  104003                          ERROR                           ;TCBA BIT4 FAILED TO SET.
1680  006576  104011                          SCOPE
1681  006600  042777  000020  172204          BIC     #BIT4,@TCBA             ;CLEAR TCBA BIT4.
1682  006606  032777  000020  172176          BIT     #BIT4,@TCBA             ;SEE IF BIT IS CLEAR.
1683  006614  001401                          BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
1684  006616  104003                          ERROR                           ;TCBA BIT4 FAILED TO CLEAR.
1685  006620  104011                          SCOPE                           ;SCOPE.
1686                                  ;*************************************************************************
1687  006622  000055                  T55:    55                              ;ROUTINE NUMBER 55                    *
1688  006624  006656                          T56                             ;ADDRESS OF NEXT ROUTINE              *
1689  006626  000012                          10.                             ;TEST ITERATION COUNT                 *
1690  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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1747  007034  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1748  007036  104003                        ERROR                   ;TCBA BIT6 FAILED TO CLEAR.
1749  007040  104011                        SCOPE                   ;SCOPE.
1750                                  ;*****************************************************************************
1751  007042  000061                  T61:  61                      ;ROUTINE NUMBER 61                          *
1752  007044  007076                        T62                     ;ADDRESS OF NEXT ROUTINE                    *
1753  007046  000012                        10.                     ;TEST ITERATION COUNT                       *
1754  007050  007052                        BAABA                   ;SCOPE ENTRY POINT                          *
1755                                        .LIST
1756                                  ;*****************************************************************************
1757                                  ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT6
1758  007052  052777  000100  171732  BAABA: BIS     #BIT6,@TCBA     ;SET TCBA BIT6
1759  007060  104010                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
1760  007062  032777  000100  171722        BIT     #BIT6,@TCBA     ;SEE IF BIT IS CLEAR.
1761  007070  001401                        BEQ     BAABB           ;BR IF BIT IS CLEAR.
1762  007072  104003                        ERROR                   ;RESET FAILED TO CLEAR TCBA BIT6
1763  007074  104011                  BAABB: SCOPE                   ;SCOPE.
1764                                  ;*****************************************************************************
1765  007076  000062                  T62:  62                      ;ROUTINE NUMBER 62                          *
1766  007100  007152                        T63                     ;ADDRESS OF NEXT ROUTINE                    *
1767  007102  000144                        100.                    ;TEST ITERATION COUNT                       *
1768  007104  007106                        ABBA                    ;SCOPE ENTRY POINT                          *
1769                                        .LIST
1770                                  ;*****************************************************************************
1771                                  ;TEST THAT TCBA BIT7 CAN BE SET, AND CLEARED.
1772  007106  052777  000200  171676  ABBA:  BIS     #BIT7,@TCBA     ;SET TCBA BIT7.
1773  007114  032777  000200  171670        BIT     #BIT7,@TCBA     ;SEE IF BIT IS SET.
1774  007122  001002                        BNE     .+6             ;BRANCH IF SET.
1775  007124  104003                        ERROR                   ;TCBA BIT7 FAILED TO SET.
1776  007126  104011                        SCOPE
1777  007130  042777  000200  171654        BIC     #BIT7,@TCBA     ;CLEAR TCBA BIT7.
1778  007136  032777  000200  171646        BIT     #BIT7,@TCBA     ;SEE IF BIT IS CLEAR.
1779  007144  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
1780  007146  104003                        ERROR                   ;TCBA BIT7 FAILED TO CLEAR.
1781  007150  104011                        SCOPE                   ;SCOPE.
1782                                  ;*****************************************************************************
1783  007152  000063                  T63:  63                      ;ROUTINE NUMBER 63                          *
1784  007154  007206                        T64                     ;ADDRESS OF NEXT ROUTINE                    *
1785  007156  000012                        10.                     ;TEST ITERATION COUNT                       *
1786  007160  007162                        BABBA                   ;SCOPE ENTRY POINT                          *
1787                                        .LIST
1788                                  ;*****************************************************************************
1789                                  ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT7
1790  007162  052777  000200  171622  BABBA: BIS     #BIT7,@TCBA     ;SET TCBA BIT7
1791  007170  104010                        SRESET                  ;ISSUE RESET TO CLEAR BIT.
1792  007172  032777  000200  171612        BIT     #BIT7,@TCBA     ;SEE IF BIT IS CLEAR.
1793  007200  001401                        BEQ     BABBB           ;BR IF BIT IS CLEAR.
1794  007202  104003                        ERROR                   ;RESET FAILED TO CLEAR TCBA BIT7
1795  007204  104011                  BABBB: SCOPE                   ;SCOPE.
1796                                  ;*****************************************************************************
1797  007206  000064                  T64:  64                      ;ROUTINE NUMBER 64                          *
1798  007210  007262                        T65                     ;ADDRESS OF NEXT ROUTINE                    *
1799  007212  000144                        100.                    ;TEST ITERATION COUNT                       *
1800  007214  007216                        ACBA                    ;SCOPE ENTRY POINT                          *
1801                                        .LIST
1802                                  ;*****************************************************************************
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 1803                                          ;TEST THAT TCBA BIT8 CAN BE SET, AND CLEARED.
 1804  007216  052777  000400  171566  ACBA:   BIS     #BIT8,@TCBA     ;SET TCBA BIT8.
 1805  007224  032777  000400  171560          BIT     #BIT8,@TCBA     ;SEE IF BIT IS SET.
 1806  007232  001002                          BNE     .+6             ;BRANCH IF SET.
 1807  007234  104003                          ERROR                   ;TCBA BIT8 FAILED TO SET.
 1808  007236  104011                          SCOPE
 1809  007240  042777  000400  171544          BIC     #BIT8,@TCBA     ;CLEAR TCBA BIT8.
 1810  007246  032777  000400  171536          BIT     #BIT8,@TCBA     ;SEE IF BIT IS CLEAR.
 1811  007254  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 1812  007256  104003                          ERROR                   ;TCBA BIT8 FAILED TO CLEAR.
 1813  007260  104011                          SCOPE                   ;SCOPE.
 1814                                ;*****************************************************************************
 1815  007262  000065                T65:    65                      ;ROUTINE NUMBER 65                          *
 1816  007264  007316                        T66                     ;ADDRESS OF NEXT ROUTINE                    *
 1817  007266  000012                        10.                     ;TEST ITERATION COUNT                       *
 1818  007270  007272                        BACBA                   ;SCOPE ENTRY POINT                          *
 1819                                         .LIST
 1820                                ;*****************************************************************************
 1821                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT8
 1822  007272  052777  000400  171512  BACBA:  BIS     #BIT8,@TCBA     ;SET TCBA BIT8
 1823  007300  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 1824  007302  032777  000400  171502          BIT     #BIT8,@TCBA     ;SEE IF BIT IS CLEAR.
 1825  007310  001401                          BEQ     BACBB           ;BR IF BIT IS CLEAR.
 1826  007312  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT8
 1827  007314  104011                BACBB:    SCOPE                   ;SCOPE.
 1828                                ;*****************************************************************************
 1829  007316  000066                T66:    66                      ;ROUTINE NUMBER 66                          *
 1830  007320  007372                        T67                     ;ADDRESS OF NEXT ROUTINE                    *
 1831  007322  000144                        100.                    ;TEST ITERATION COUNT                       *
 1832  007324  007326                        ADBA                    ;SCOPE ENTRY POINT                          *
 1833                                         .LIST
 1834                                ;*****************************************************************************
 1835                                ;TEST THAT TCBA BIT9 CAN BE SET, AND CLEARED.
 1836  007326  052777  001000  171456  ADBA:   BIS     #BIT9,@TCBA     ;SET TCBA BIT9.
 1837  007334  032777  001000  171450          BIT     #BIT9,@TCBA     ;SEE IF BIT IS SET.
 1838  007342  001002                          BNE     .+6             ;BRANCH IF SET.
 1839  007344  104003                          ERROR                   ;TCBA BIT9 FAILED TO SET.
 1840  007346  104011                          SCOPE
 1841  007350  042777  001000  171434          BIC     #BIT9,@TCBA     ;CLEAR TCBA BIT9.
 1842  007356  032777  001000  171426          BIT     #BIT9,@TCBA     ;SEE IF BIT IS CLEAR.
 1843  007364  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 1844  007366  104003                          ERROR                   ;TCBA BIT9 FAILED TO CLEAR.
 1845  007370  104011                          SCOPE                   ;SCOPE.
 1846                                ;*****************************************************************************
 1847  007372  000067                T67:    67                      ;ROUTINE NUMBER 67                          *
 1848  007374  007426                        T70                     ;ADDRESS OF NEXT ROUTINE                    *
 1849  007376  000012                        10.                     ;TEST ITERATION COUNT                       *
 1850  007400  007402                        BADBA                   ;SCOPE ENTRY POINT                          *
 1851                                         .LIST
 1852                                ;*****************************************************************************
 1853                                ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT9
 1854  007402  052777  001000  171402  BADBA:  BIS     #BIT9,@TCBA     ;SET TCBA BIT9
 1855  007410  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 1856  007412  032777  001000  171372          BIT     #BIT9,@TCBA     ;SEE IF BIT IS CLEAR.
 1857  007420  001401                          BEQ     BADBB           ;BR IF BIT IS CLEAR.
 1858  007422  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT9
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 1859  007424  104011                    BADBB:  SCOPE                           ;SCOPE.
 1860
 1861  007426  000070                    T70:    70                              ;ROUTINE NUMBER 70                              *
 1862  007430  007502                            T71                             ;ADDRESS OF NEXT ROUTINE                        *
 1863  007432  000144                            100.                            ;TEST ITERATION COUNT                           *
 1864  007434  007436                            AEBA                            ;SCOPE ENTRY POINT                              *
 1865                                            .LIST
 1866
 1867                                    ;TEST THAT TCBA BIT10 CAN BE SET, AND CLEARED.
 1868  007436  052777  002000  171346    AEBA:   BIS     #BIT10,@TCBA            ;SET TCBA BIT10.
 1869  007444  032777  002000  171340            BIT     #BIT10,@TCBA            ;SEE IF BIT IS SET.
 1870  007452  001002                            BNE     .+6                     ;BRANCH IF SET.
 1871  007454  104003                            ERROR                           ;TCBA BIT10 FAILED TO SET.
 1872  007456  104011                            SCOPE
 1873  007460  042777  002000  171324            BIC     #BIT10,@TCBA            ;CLEAR TCBA BIT10.
 1874  007466  032777  002000  171316            BIT     #BIT10,@TCBA            ;SEE IF BIT IS CLEAR.
 1875  007474  001401                            BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
 1876  007476  104003                            ERROR                           ;TCBA BIT10 FAILED TO CLEAR.
 1877  007500  104011                            SCOPE                           ;SCOPE.
 1878
 1879  007502  000071                    T71:    71                              ;ROUTINE NUMBER 71                              *
 1880  007504  007536                            T72                             ;ADDRESS OF NEXT ROUTINE                        *
 1881  007506  000012                            10.                             ;TEST ITERATION COUNT                           *
 1882  007510  007512                            BAEBA                           ;SCOPE ENTRY POINT                              *
 1883                                            .LIST
 1884
 1885                                    ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT10
 1886  007512  052777  002000  171272    BAEBA:  BIS     #BIT10,@TCBA            ;SET TCBA BIT10
 1887  007520  104010                            SRESET                          ;ISSUE RESET TO CLEAR BIT.
 1888  007522  032777  002000  171262            BIT     #BIT10,@TCBA            ;SEE IF BIT IS CLEAR.
 1889  007530  001401                            BEQ     BAEBB                   ;BR IF BIT IS CLEAR.
 1890  007532  104003                            ERROR                           ;RESET FAILED TO CLEAR TCBA BIT10
 1891  007534  104011                    BAEBB:  SCOPE                           ;SCOPE.
 1892
 1893  007536  000072                    T72:    72                              ;ROUTINE NUMBER 72                              *
 1894  007540  007612                            T73                             ;ADDRESS OF NEXT ROUTINE                        *
 1895  007542  000144                            100.                            ;TEST ITERATION COUNT                           *
 1896  007544  007546                            AFBA                            ;SCOPE ENTRY POINT                              *
 1897                                            .LIST
 1898
 1899                                    ;TEST THAT TCBA BIT11 CAN BE SET, AND CLEARED.
 1900  007546  052777  004000  171236    AFBA:   BIS     #BIT11,@TCBA            ;SET TCBA BIT11.
 1901  007554  032777  004000  171230            BIT     #BIT11,@TCBA            ;SEE IF BIT IS SET.
 1902  007562  001002                            BNE     .+6                     ;BRANCH IF SET.
 1903  007564  104003                            ERROR                           ;TCBA BIT11 FAILED TO SET.
 1904  007566  104011                            SCOPE
 1905  007570  042777  004000  171214            BIC     #BIT11,@TCBA            ;CLEAR TCBA BIT11.
 1906  007576  032777  004000  171206            BIT     #BIT11,@TCBA            ;SEE IF BIT IS CLEAR.
 1907  007604  001401                            BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
 1908  007606  104003                            ERROR                           ;TCBA BIT11 FAILED TO CLEAR.
 1909  007610  104011                            SCOPE                           ;SCOPE.
 1910
 1911  007612  000073                    T73:    73                              ;ROUTINE NUMBER 73                              *
 1912  007614  007646                            T74                             ;ADDRESS OF NEXT ROUTINE                        *
 1913  007616  000012                            10.                             ;TEST ITERATION COUNT                           *
 1914  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                        SRESET                  ;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                        SRESET                  ;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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 1971  010024  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 1972  010026  104003                        ERROR                   ;TCBA BIT13 FAILED TO CLEAR.
 1973  010030  104011                        SCOPE                   ;SCOPE.
 1974                          ;*****************************************************************************
 1975  010032  000077          T77:    77                              ;ROUTINE NUMBER 77                      *
 1976  010034  010066                  T100                            ;ADDRESS OF NEXT ROUTINE                *
 1977  010036  000012                  10.                             ;TEST ITERATION COUNT                   *
 1978  010040  010042                  BAHBA                           ;SCOPE ENTRY POINT                      *
 1979                                  .LIST
 1980                          ;*****************************************************************************
 1981                          ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT13
 1982  010042  052777  020000  170742  BAHBA:  BIS     #BIT13,@TCBA    ;SET TCBA BIT13
 1983  010050  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
 1984  010052  032777  020000  170732          BIT     #BIT13,@TCBA    ;SEE IF BIT IS CLEAR.
 1985  010060  001401                  BEQ     BAHBB                   ;BR IF BIT IS CLEAR.
 1986  010062  104003                  ERROR                           ;RESET FAILED TO CLEAR TCBA BIT13
 1987  010064  104011          BAHBB:  SCOPE                           ;SCOPE.
 1988                          ;*****************************************************************************
 1989  010066  000100          T100:   100                             ;ROUTINE NUMBER 100                     *
 1990  010070  010142                  T101                            ;ADDRESS OF NEXT ROUTINE                *
 1991  010072  000144                  100.                            ;TEST ITERATION COUNT                   *
 1992  010074  010076                  AIBA                            ;SCOPE ENTRY POINT                      *
 1993                                  .LIST
 1994                          ;*****************************************************************************
 1995                          ;TEST THAT TCBA BIT14 CAN BE SET, AND CLEARED.
 1996  010076  052777  040000  170706  AIBA:  BIS     #BIT14,@TCBA    ;SET TCBA BIT14.
 1997  010104  032777  040000  170700          BIT     #BIT14,@TCBA    ;SEE IF BIT IS SET.
 1998  010112  001002                  BNE     .+6                     ;BRANCH IF SET.
 1999  010114  104003                  ERROR                           ;TCBA BIT14 FAILED TO SET.
 2000  010116  104011                  SCOPE
 2001  010120  042777  040000  170664          BIC     #BIT14,@TCBA    ;CLEAR TCBA BIT14.
 2002  010126  032777  040000  170656          BIT     #BIT14,@TCBA    ;SEE IF BIT IS CLEAR.
 2003  010134  001401                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
 2004  010136  104003                  ERROR                           ;TCBA BIT14 FAILED TO CLEAR.
 2005  010140  104011                  SCOPE                           ;SCOPE.
 2006                          ;*****************************************************************************
 2007  010142  000101          T101:   101                             ;ROUTINE NUMBER 101                     *
 2008  010144  010176                  T102                            ;ADDRESS OF NEXT ROUTINE                *
 2009  010146  000012                  10.                             ;TEST ITERATION COUNT                   *
 2010  010150  010152                  BAIBA                           ;SCOPE ENTRY POINT                      *
 2011                                  .LIST
 2012                          ;*****************************************************************************
 2013                          ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT14
 2014  010152  052777  040000  170632  BAIBA:  BIS     #BIT14,@TCBA    ;SET TCBA BIT14
 2015  010160  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
 2016  010162  032777  040000  170622          BIT     #BIT14,@TCBA    ;SEE IF BIT IS CLEAR.
 2017  010170  001401                  BEQ     BAIBB                   ;BR IF BIT IS CLEAR.
 2018  010172  104003                  ERROR                           ;RESET FAILED TO CLEAR TCBA BIT14
 2019  010174  104011          BAIBB:  SCOPE                           ;SCOPE.
 2020                          ;*****************************************************************************
 2021  010176  000102          T102:   102                             ;ROUTINE NUMBER 102                     *
 2022  010200  010252                  T103                            ;ADDRESS OF NEXT ROUTINE                *
 2023  010202  000144                  100.                            ;TEST ITERATION COUNT                   *
 2024  010204  010206                  AJBA                            ;SCOPE ENTRY POINT                      *
 2025                                  .LIST
 2026                          ;*****************************************************************************
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2027
2028  010206  052777  100000  170576  AJBA:   BIS     #BIT15,@TCBA    ;SET TCBA BIT15.
2029  010214  032777  100000  170570          BIT     #BIT15,@TCBA    ;SEE IF BIT IS SET.
2030  010222  001002                          BNE     .+6             ;BRANCH IF SET.
2031  010224  104003                          ERROR                   ;TCBA BIT15 FAILED TO SET.
2032  010226  104011                          SCOPE
2033  010230  042777  100000  170554          BIC     #BIT15,@TCBA    ;CLEAR TCBA BIT15.
2034  010236  032777  100000  170546          BIT     #BIT15,@TCBA    ;SEE IF BIT IS CLEAR.
2035  010244  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2036  010246  104003                          ERROR                   ;TCBA BIT15 FAILED TO CLEAR.
2037  010250  104011                          SCOPE                   ;SCOPE.
2038                                  ;*****************************************************************************
2039  010252  000103                  T103:   103                     ;ROUTINE NUMBER 103                         *
2040  010254  010306                          T104                    ;ADDRESS OF NEXT ROUTINE                    *
2041  010256  000012                          10.                     ;TEST ITERATION COUNT                       *
2042  010260  010262                          BAJBA                   ;SCOPE ENTRY POINT                          *
2043                                          .LIST
2044                                  ;*****************************************************************************
2045                                  ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT15
2046  010262  052777  100000  170522  BAJBA:  BIS     #BIT15,@TCBA    ;SET TCBA BIT15
2047  010270  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2048  010272  032777  100000  170512          BIT     #BIT15,@TCBA    ;SEE IF BIT IS CLEAR.
2049  010300  001401                          BEQ     BAJBB           ;BR IF BIT IS CLEAR.
2050  010302  104003                          ERROR                   ;RESET FAILED TO CLEAR TCBA BIT15
2051  010304  104011                  BAJBB:  SCOPE                   ;SCOPE.
2052                                  ;*****************************************************************************
2053  010306  000104                  T104:   104                     ;ROUTINE NUMBER 104                         *
2054  010310  010362                          T105                    ;ADDRESS OF NEXT ROUTINE                    *
2055  010312  000144                          100.                    ;TEST ITERATION COUNT                       *
2056  010314  010316                          AKBA                    ;SCOPE ENTRY POINT                          *
2057                                          .LIST
2058                                  ;*****************************************************************************
2059                                  ;TEST THAT TCWC BIT0 CAN BE SET, AND CLEARED.
2060  010316  052777  000001  170464  AKBA:   BIS     #BIT0,@TCWC     ;SET TCWC BIT0.
2061  010324  032777  000001  170456          BIT     #BIT0,@TCWC     ;SEE IF BIT IS SET.
2062  010332  001002                          BNE     .+6             ;BRANCH IF SET.
2063  010334  104003                          ERROR                   ;TCWC BIT0 FAILED TO SET.
2064  010336  104011                          SCOPE
2065  010340  042777  000001  170442          BIC     #BIT0,@TCWC     ;CLEAR TCWC BIT0.
2066  010346  032777  000001  170434          BIT     #BIT0,@TCWC     ;SEE IF BIT IS CLEAR.
2067  010354  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2068  010356  104003                          ERROR                   ;TCWC BIT0 FAILED TO CLEAR.
2069  010360  104011                          SCOPE                   ;SCOPE.
2070                                  ;*****************************************************************************
2071  010362  000105                  T105:   105                     ;ROUTINE NUMBER 105                         *
2072  010364  010416                          T106                    ;ADDRESS OF NEXT ROUTINE                    *
2073  010366  000012                          10.                     ;TEST ITERATION COUNT                       *
2074  010370  010372                          BAKBA                   ;SCOPE ENTRY POINT                          *
2075                                          .LIST
2076                                  ;*****************************************************************************
2077                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT0
2078  010372  052777  000001  170410  BAKBA:  BIS     #BIT0,@TCWC     ;SET TCWC BIT0
2079  010400  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2080  010402  032777  000001  170400          BIT     #BIT0,@TCWC     ;SEE IF BIT IS CLEAR.
2081  010410  001401                          BEQ     BAKBB           ;BR IF BIT IS CLEAR.
2082  010412  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT0
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2093  010414  104011                    BAKBB:  SCOPE                           ;SCOPE.
2084                                    ;*****************************************************************************
2085  010416  000106                    T106:   106                             ;ROUTINE NUMBER 106                    *
2086  010420  010472                            T107                            ;ADDRESS OF NEXT ROUTINE               *
2087  010422  000144                            100.                            ;TEST ITERATION COUNT                  *
2088  010424  010426                            ALBA                            ;SCOPE ENTRY POINT                     *
2089                                            .LIST
2090                                    ;*****************************************************************************
2091                                    ;TEST THAT TCWC BIT1 CAN BE SET, AND CLEARED.
2092  010426  052777  000002  170354    ALBA:   BIS     #BIT1,@TCWC             ;SET TCWC BIT1.
2093  010434  032777  000002  170346            BIT     #BIT1,@TCWC             ;SEE IF BIT IS SET.
2094  010442  001002                            BNE     .+6                     ;BRANCH IF SET.
2095  010444  104003                            ERROR                           ;TCWC BIT1 FAILED TO SET.
2096  010446  104011                            SCOPE
2097  010450  042777  000002  170332            BIC     #BIT1,@TCWC             ;CLEAR TCWC BIT1.
2098  010456  032777  000002  170324            BIT     #BIT1,@TCWC             ;SEE IF BIT IS CLEAR.
2099  010464  001401                            BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2100  010466  104003                            ERROR                           ;TCWC BIT1 FAILED TO CLEAR.
2101  010470  104011                            SCOPE                           ;SCOPE.
2102                                    ;*****************************************************************************
2103  010472  000107                    T107:   107                             ;ROUTINE NUMBER 107                    *
2104  010474  010526                            T110                            ;ADDRESS OF NEXT ROUTINE               *
2105  010476  000012                            10.                             ;TEST ITERATION COUNT                  *
2106  010500  010502                            BALBA                           ;SCOPE ENTRY POINT                     *
2107                                            .LIST
2108                                    ;*****************************************************************************
2109                                    ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT1
2110  010502  052777  000002  170300    BALBA:  BIS     #BIT1,@TCWC             ;SET TCWC BIT1
2111  010510  104010                            SRESET                          ;ISSUE RESET TO CLEAR BIT.
2112  010512  032777  000002  170270            BIT     #BIT1,@TCWC             ;SEE IF BIT IS CLEAR.
2113  010520  001401                            BEQ     BALBB                   ;BR IF BIT IS CLEAR.
2114  010522  104003                            ERROR                           ;RESET FAILED TO CLEAR TCWC BIT1
2115  010524  104011                    BALBB:  SCOPE                           ;SCOPE.
2116                                    ;*****************************************************************************
2117  010526  000110                    T110:   110                             ;ROUTINE NUMBER 110                    *
2118  010530  010602                            T111                            ;ADDRESS OF NEXT ROUTINE               *
2119  010532  000144                            100.                            ;TEST ITERATION COUNT                  *
2120  010534  010536                            AMBA                            ;SCOPE ENTRY POINT                     *
2121                                            .LIST
2122                                    ;*****************************************************************************
2123                                    ;TEST THAT TCWC BIT2 CAN BE SET, AND CLEARED.
2124  010536  052777  000004  170244    AMBA:   BIS     #BIT2,@TCWC             ;SET TCWC BIT2.
2125  010544  032777  000004  170236            BIT     #BIT2,@TCWC             ;SEE IF BIT IS SET.
2126  010552  001002                            BNE     .+6                     ;BRANCH IF SET.
2127  010554  104003                            ERROR                           ;TCWC BIT2 FAILED TO SET.
2128  010556  104011                            SCOPE
2129  010560  042777  000004  170222            BIC     #BIT2,@TCWC             ;CLEAR TCWC BIT2.
2130  010566  032777  000004  170214            BIT     #BIT2,@TCWC             ;SEE IF BIT IS CLEAR.
2131  010574  001401                            BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2132  010576  104003                            ERROR                           ;TCWC BIT2 FAILED TO CLEAR.
2133  010600  104011                            SCOPE                           ;SCOPE.
2134                                    ;*****************************************************************************
2135  010602  000111                    T111:   111                             ;ROUTINE NUMBER 111                    *
2136  010604  010636                            T112                            ;ADDRESS OF NEXT ROUTINE               *
2137  010606  000012                            10.                             ;TEST ITERATION COUNT                  *
2138  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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                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
                        ERROR                   ;TCWC BIT4 FAILED TO CLEAR.
                        SCOPE                   ;SCOPE.
                ;*****************************************************************************
T115:           115                             ;ROUTINE NUMBER 115                          *
                T116                            ;ADDRESS OF NEXT ROUTINE                     *
                10.                             ;TEST ITERATION COUNT                        *
                BAOBA                           ;SCOPE ENTRY POINT                           *
                .LIST
                ;*****************************************************************************
                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT4
BAOBA:  BIS     #BIT4,@TCWC             ;SET TCWC BIT4
                SRESET                  ;ISSUE RESET TO CLEAR BIT.
                BIT     #BIT4,@TCWC     ;SEE IF BIT IS CLEAR.
                BEQ     BAOBB           ;BR IF BIT IS CLEAR.
                ERROR                   ;RESET FAILED TO CLEAR TCWC BIT4
BAOBB:  SCOPE                           ;SCOPE.
                ;*****************************************************************************
T116:           116                             ;ROUTINE NUMBER 116                          *
                T117                            ;ADDRESS OF NEXT ROUTINE                     *
                100.                            ;TEST ITERATION COUNT                        *
                APBA                            ;SCOPE ENTRY POINT                           *
                .LIST
                ;*****************************************************************************
                ;TEST THAT TCWC BITS CAN BE SET, AND CLEARED.
APBA:   BIS     #BITS,@TCWC             ;SET TCWC BITS.
                BIT     #BITS,@TCWC     ;SEE IF BIT IS SET.
                BNE     .+6             ;BRANCH IF SET.
                ERROR                   ;TCWC BITS FAILED TO SET.
                SCOPE
                BIC     #BITS,@TCWC     ;CLEAR TCWC BITS.
                BIT     #BITS,@TCWC     ;SEE IF BIT IS CLEAR.
                BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
                ERROR                   ;TCWC BITS FAILED TO CLEAR.
                SCOPE                   ;SCOPE.
                ;*****************************************************************************
T117:           117                             ;ROUTINE NUMBER 117                          *
                T120                            ;ADDRESS OF NEXT ROUTINE                     *
                10.                             ;TEST ITERATION COUNT                        *
                BAPBA                           ;SCOPE ENTRY POINT                           *
                .LIST
                ;*****************************************************************************
                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BITS
BAPBA:  BIS     #BITS,@TCWC             ;SET TCWC BITS
                SRESET                  ;ISSUE RESET TO CLEAR BIT.
                BIT     #BITS,@TCWC     ;SEE IF BIT IS CLEAR.
                BEQ     BAPBB           ;BR IF BIT IS CLEAR.
                ERROR                   ;RESET FAILED TO CLEAR TCWC BITS
BAPBB:  SCOPE                           ;SCOPE.
                ;*****************************************************************************
T120:           120                             ;ROUTINE NUMBER 120                          *
                T121                            ;ADDRESS OF NEXT ROUTINE                     *
                100.                            ;TEST ITERATION COUNT                        *
                AQBA                            ;SCOPE ENTRY POINT                           *
                .LIST
                ;*****************************************************************************
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2251                                    ;TEST THAT TCWC BIT6 CAN BE SET, AND CLEARED.
2252  011176  052777  000100  167604  AQBA:   BIS     #BIT6,@TCWC     ;SET TCWC BIT6.
2253  011204  032777  000100  167576          BIT     #BIT6,@TCWC     ;SEE IF BIT IS SET.
2254  011212  001002                          BNE     .+6             ;BRANCH IF SET.
2255  011214  104003                          ERROR                   ;TCWC BIT6 FAILED TO SET.
2256  011216  104011                          SCOPE
2257  011220  042777  000100  167562          BIC     #BIT6,@TCWC     ;CLEAR TCWC BIT6.
2258  011226  032777  000100  167554          BIT     #BIT6,@TCWC     ;SEE IF BIT IS CLEAR.
2259  011234  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2260  011236  104003                          ERROR                   ;TCWC BIT6 FAILED TO CLEAR.
2261  011240  104011                          SCOPE                   ;SCOPE.
2262                                  ;*****************************************************************************
2263  011242  000121                  T121:   121                     ;ROUTINE NUMBER 121                         *
2264  011244  011276                          T122                    ;ADDRESS OF NEXT ROUTINE                    *
2265  011246  000012                          10.                     ;TEST ITERATION COUNT                       *
2266  011250  011252                          BAQBA                   ;SCOPE ENTRY POINT                          *
2267                                          .LIST
2268                                  ;*****************************************************************************
2269                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT6
2270  011252  052777  000100  167530  BAQBA:  BIS     #BIT6,@TCWC     ;SET TCWC BIT6
2271  011260  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2272  011262  032777  000100  167520          BIT     #BIT6,@TCWC     ;SEE IF BIT IS CLEAR.
2273  011270  001401                          BEQ     BAQBB           ;BR IF BIT IS CLEAR.
2274  011272  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT6
2275  011274  104011                  BAQBB:  SCOPE                   ;SCOPE.
2276                                  ;*****************************************************************************
2277  011276  000122                  T122:   122                     ;ROUTINE NUMBER 122                         *
2278  011300  011352                          T123                    ;ADDRESS OF NEXT ROUTINE                    *
2279  011302  000144                          100.                    ;TEST ITERATION COUNT                       *
2280  011304  011306                          ARBA                    ;SCOPE ENTRY POINT                          *
2281                                          .LIST
2282                                  ;*****************************************************************************
2283                                  ;TEST THAT TCWC BIT7 CAN BE SET, AND CLEARED.
2284  011306  052777  000200  167474  ARBA:   BIS     #BIT7,@TCWC     ;SET TCWC BIT7.
2285  011314  032777  000200  167466          BIT     #BIT7,@TCWC     ;SEE IF BIT IS SET.
2286  011322  001002                          BNE     .+6             ;BRANCH IF SET.
2287  011324  104003                          ERROR                   ;TCWC BIT7 FAILED TO SET.
2288  011326  104011                          SCOPE
2289  011330  042777  000200  167452          BIC     #BIT7,@TCWC     ;CLEAR TCWC BIT7.
2290  011336  032777  000200  167444          BIT     #BIT7,@TCWC     ;SEE IF BIT IS CLEAR.
2291  011344  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2292  011346  104003                          ERROR                   ;TCWC BIT7 FAILED TO CLEAR.
2293  011350  104011                          SCOPE                   ;SCOPE.
2294                                  ;*****************************************************************************
2295  011352  000123                  T123:   123                     ;ROUTINE NUMBER 123                         *
2296  011354  011406                          T124                    ;ADDRESS OF NEXT ROUTINE                    *
2297  011356  000012                          10.                     ;TEST ITERATION COUNT                       *
2298  011360  011362                          BARBA                   ;SCOPE ENTRY POINT                          *
2299                                          .LIST
2300                                  ;*****************************************************************************
2301                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT7
2302  011362  052777  000200  167420  BARBA:  BIS     #BIT7,@TCWC     ;SET TCWC BIT7
2303  011370  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2304  011372  032777  000200  167410          BIT     #BIT7,@TCWC     ;SEE IF BIT IS CLEAR.
2305  011400  001401                          BEQ     BARBB           ;BR IF BIT IS CLEAR.
2306  011402  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT7
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2307  011404  104011                  BARBB:  SCOPE                           ;SCOPE.
2308
2309  011406  000124                  T124:   124                             ;ROUTINE NUMBER 124                             *
2310  011410  011462                          T125                            ;ADDRESS OF NEXT ROUTINE                        *
2311  011412  000144                          100.                            ;TEST ITERATION COUNT                           *
2312  011414  011416                          ASBA                            ;SCOPE ENTRY POINT                              *
2313                                          .LIST
2314                                  ;*******************************************************************************
2315                                  ;TEST THAT TCWC BIT8 CAN BE SET, AND CLEARED.
2316  011416  052777  000400  167364  ASBA:   BIS     #BIT8,@TCWC             ;SET TCWC BIT8.
2317  011424  032777  000400  167356          BIT     #BIT8,@TCWC             ;SEE IF BIT IS SET.
2318  011432  001002                          BNE     .+6                     ;BRANCH IF SET.
2319  011434  104003                          ERROR                           ;TCWC BIT8 FAILED TO SET.
2320  011436  104011                          SCOPE
2321  011440  042777  000400  167342          BIC     #BIT8,@TCWC             ;CLEAR TCWC BIT8.
2322  011446  032777  000400  167334          BIT     #BIT8,@TCWC             ;SEE IF BIT IS CLEAR.
2323  011454  001401                          BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2324  011456  104003                          ERROR                           ;TCWC BIT8 FAILED TO CLEAR.
2325  011460  104011                          SCOPE                           ;SCOPE.
2326                                  ;*******************************************************************************
2327  011462  000125                  T125:   125                             ;ROUTINE NUMBER 125                             *
2328  011464  011516                          T126                            ;ADDRESS OF NEXT ROUTINE                        *
2329  011466  000012                          10.                             ;TEST ITERATION COUNT                           *
2330  011470  011472                          BASBA                           ;SCOPE ENTRY POINT                              *
2331                                          .LIST
2332                                  ;*******************************************************************************
2333                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT8
2334  011472  052777  000400  167310  BASBA:  BIS     #BIT8,@TCWC             ;SET TCWC BIT8
2335  011500  104010                          SRESET                          ;ISSUE RESET TO CLEAR BIT.
2336  011502  032777  000400  167300          BIT     #BIT8,@TCWC             ;SEE IF BIT IS CLEAR.
2337  011510  001401                          BEQ     BASBB                   ;BR IF BIT IS CLEAR.
2338  011512  104003                          ERROR                           ;RESET FAILED TO CLEAR TCWC BIT8
2339  011514  104011                  BASBB:  SCOPE                           ;SCOPE.
2340                                  ;*******************************************************************************
2341  011516  000126                  T126:   126                             ;ROUTINE NUMBER 126                             *
2342  011520  011572                          T127                            ;ADDRESS OF NEXT ROUTINE                        *
2343  011522  000144                          100.                            ;TEST ITERATION COUNT                           *
2344  011524  011526                          ATBA                            ;SCOPE ENTRY POINT                              *
2345                                          .LIST
2346                                  ;*******************************************************************************
2347                                  ;TEST THAT TCWC BIT9 CAN BE SET, AND CLEARED.
2348  011526  052777  001000  167254  ATBA:   BIS     #BIT9,@TCWC             ;SET TCWC BIT9.
2349  011534  032777  001000  167246          BIT     #BIT9,@TCWC             ;SEE IF BIT IS SET.
2350  011542  001002                          BNE     .+6                     ;BRANCH IF SET.
2351  011544  104003                          ERROR                           ;TCWC BIT9 FAILED TO SET.
2352  011546  104011                          SCOPE
2353  011550  042777  001000  167232          BIC     #BIT9,@TCWC             ;CLEAR TCWC BIT9.
2354  011556  032777  001000  167224          BIT     #BIT9,@TCWC             ;SEE IF BIT IS CLEAR.
2355  011564  001401                          BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2356  011566  104003                          ERROR                           ;TCWC BIT9 FAILED TO CLEAR.
2357  011570  104011                          SCOPE                           ;SCOPE.
2358                                  ;*******************************************************************************
2359  011572  000127                  T127:   127                             ;ROUTINE NUMBER 127                             *
2360  011574  011626                          T130                            ;ADDRESS OF NEXT ROUTINE                        *
2361  011576  000012                          10.                             ;TEST ITERATION COUNT                           *
2362  011600  011602                          BATBA                           ;SCOPE ENTRY POINT                              *
```

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2363                                            .LIST
2364                                    ;*******************************************************************************
2365                                    ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT9
2366  011602  052777  001000  167200  BATBA:  BIS     #BIT9,@TCWC     ;SET TCWC BIT9
2367  011610  104010                   SRESET                          ;ISSUE RESET TO CLEAR BIT.
2368  011612  032777  001000  167170          BIT     #BIT9,@TCWC     ;SEE IF BIT IS CLEAR.
2369  011620  001401                   BEQ     BATBB                   ;BR IF BIT IS CLEAR.
2370  011622  104003                   ERROR                           ;RESET FAILED TO CLEAR TCWC BIT9
2371  011624  104011                   BATBB:  SCOPE                   ;SCOPE.
2372                                    ;*******************************************************************************
2373  011626  000130                   T130:   130                     ;ROUTINE NUMBER 130                             *
2374  011630  011702                           T131                    ;ADDRESS OF NEXT ROUTINE                        *
2375  011632  000144                           100.                    ;TEST ITERATION COUNT                           *
2376  011634  011636                           AUBA                    ;SCOPE ENTRY POINT                              *
2377                                            .LIST
2378                                    ;*******************************************************************************
2379                                    ;TEST THAT TCWC BIT10 CAN BE SET, AND CLEARED.
2380  011636  052777  002000  167144  AUBA:   BIS     #BIT10,@TCWC    ;SET TCWC BIT10.
2381  011644  032777  002000  167136          BIT     #BIT10,@TCWC    ;SEE IF BIT IS SET.
2382  011652  001002                   BNE     .+6                     ;BRANCH IF SET.
2383  011654  104003                   ERROR                           ;TCWC BIT10 FAILED TO SET.
2384  011656  104011                   SCOPE
2385  011660  042777  002000  167122          BIC     #BIT10,@TCWC    ;CLEAR TCWC BIT10.
2386  011666  032777  002000  167114          BIT     #BIT10,@TCWC    ;SEE IF BIT IS CLEAR.
2387  011674  001401                   BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2388  011676  104003                   ERROR                           ;TCWC BIT10 FAILED TO CLEAR.
2389  011700  104011                   SCOPE                           ;SCOPE.
2390                                    ;*******************************************************************************
2391  011702  000131                   T131:   131                     ;ROUTINE NUMBER 131                             *
2392  011704  011736                           T132                    ;ADDRESS OF NEXT ROUTINE                        *
2393  011706  000012                           10.                     ;TEST ITERATION COUNT                           *
2394  011710  011712                           BAUBA                   ;SCOPE ENTRY POINT                              *
2395                                            .LIST
2396                                    ;*******************************************************************************
2397                                    ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT10
2398  011712  052777  002000  167070  BAUBA:  BIS     #BIT10,@TCWC    ;SET TCWC BIT10
2399  011720  104010                   SRESET                          ;ISSUE RESET TO CLEAR BIT.
2400  011722  032777  002000  167060          BIT     #BIT10,@TCWC    ;SEE IF BIT IS CLEAR.
2401  011730  001401                   BEQ     BAUBB                   ;BR IF BIT IS CLEAR.
2402  011732  104003                   ERROR                           ;RESET FAILED TO CLEAR TCWC BIT10
2403  011734  104011                   BAUBB:  SCOPE                   ;SCOPE.
2404                                    ;*******************************************************************************
2405  011736  000132                   T132:   132                     ;ROUTINE NUMBER 132                             *
2406  011740  012012                           T133                    ;ADDRESS OF NEXT ROUTINE                        *
2407  011742  000144                           100.                    ;TEST ITERATION COUNT                           *
2408  011744  011746                           AVBA                    ;SCOPE ENTRY POINT                              *
2409                                            .LIST
2410                                    ;*******************************************************************************
2411                                    ;TEST THAT TCWC BIT11 CAN BE SET, AND CLEARED.
2412  011746  052777  004000  167034  AVBA:   BIS     #BIT11,@TCWC    ;SET TCWC BIT11.
2413  011754  032777  004000  167026          BIT     #BIT11,@TCWC    ;SEE IF BIT IS SET.
2414  011762  001002                   BNE     .+6                     ;BRANCH IF SET.
2415  011764  104003                   ERROR                           ;TCWC BIT11 FAILED TO SET.
2416  011766  104011                   SCOPE
2417  011770  042777  004000  167012          BIC     #BIT11,@TCWC    ;CLEAR TCWC BIT11.
2418  011776  032777  004000  167004          BIT     #BIT11,@TCWC    ;SEE IF BIT IS CLEAR.
```

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                                        BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
                                        ERROR                           ;TCWC BIT11 FAILED TO CLEAR.
                                        SCOPE                           ;SCOPE.
                                ;*******************************************************************************
                                T133:   133                             ;ROUTINE NUMBER 133                     *
                                        T134                            ;ADDRESS OF NEXT ROUTINE                *
                                        10.                             ;TEST ITERATION COUNT                   *
                                        BAVBA                           ;SCOPE ENTRY POINT                      *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT11
                                BAVBA:  BIS     #BIT11,@TCWC            ;SET TCWC BIT11
                                        SRESET                          ;ISSUE RESET TO CLEAR BIT.
                                        BIT     #BIT11,@TCWC            ;SEE IF BIT IS CLEAR.
                                        BEQ     BAVBB                   ;BR IF BIT IS CLEAR.
                                        ERROR                           ;RESET FAILED TO CLEAR TCWC BIT11
                                BAVBB:  SCOPE                           ;SCOPE.
                                ;*******************************************************************************
                                T134:   134                             ;ROUTINE NUMBER 134                     *
                                        T135                            ;ADDRESS OF NEXT ROUTINE                *
                                        100.                            ;TEST ITERATION COUNT                   *
                                        AWBA                            ;SCOPE ENTRY POINT                      *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT TCWC BIT12 CAN BE SET, AND CLEARED.
                                AWBA:   BIS     #BIT12,@TCWC            ;SET TCWC BIT12.
                                        BIT     #BIT12,@TCWC            ;SEE IF BIT IS SET.
                                        BNE     .+6                     ;BRANCH IF SET.
                                        ERROR                           ;TCWC BIT12 FAILED TO SET.
                                        SCOPE
                                        BIC     #BIT12,@TCWC            ;CLEAR TCWC BIT12.
                                        BIT     #BIT12,@TCWC            ;SEE IF BIT IS CLEAR.
                                        BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
                                        ERROR                           ;TCWC BIT12 FAILED TO CLEAR.
                                        SCOPE                           ;SCOPE.
                                ;*******************************************************************************
                                T135:   135                             ;ROUTINE NUMBER 135                     *
                                        T136                            ;ADDRESS OF NEXT ROUTINE                *
                                        10.                             ;TEST ITERATION COUNT                   *
                                        BAWBA                           ;SCOPE ENTRY POINT                      *
                                        .LIST
                                ;*******************************************************************************
                                ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT12
                                BAWBA:  BIS     #BIT12,@TCWC            ;SET TCWC BIT12
                                        SRESET                          ;ISSUE RESET TO CLEAR BIT.
                                        BIT     #BIT12,@TCWC            ;SEE IF BIT IS CLEAR.
                                        BEQ     BAWBB                   ;BR IF BIT IS CLEAR.
                                        ERROR                           ;RESET FAILED TO CLEAR TCWC BIT12
                                BAWBB:  SCOPE                           ;SCOPE.
                                ;*******************************************************************************
                                T136:   136                             ;ROUTINE NUMBER 136                     *
                                        T137                            ;ADDRESS OF NEXT ROUTINE                *
                                        100.                            ;TEST ITERATION COUNT                   *
                                        AXBA                            ;SCOPE ENTRY POINT                      *
                                        .LIST
                                ;*******************************************************************************
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2475
2476  012166  052777  020000  166614  AXBA:   BIS     #BIT13,@TCWC    ;SET TCWC BIT13.
2477  012174  032777  020000  166606          BIT     #BIT13,@TCWC    ;SEE IF BIT IS SET.
2478  012202  001002                          BNE     .+6             ;BRANCH IF SET.
2479  012204  104003                          ERROR                   ;TCWC BIT13 FAILED TO SET.
2480  012206  104011                          SCOPE
2481  012210  042777  020000  166572          BIC     #BIT13,@TCWC    ;CLEAR TCWC BIT13.
2482  012216  032777  020000  166564          BIT     #BIT13,@TCWC    ;SEE IF BIT IS CLEAR.
2483  012224  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2484  012226  104003                          ERROR                   ;TCWC BIT13 FAILED TO CLEAR.
2485  012230  104011                          SCOPE                   ;SCOPE.
2486                                  ;*****************************************************************************
2487  012232  000137                  T137:   137                     ;ROUTINE NUMBER 137                         *
2488  012234  012266                          T140                    ;ADDRESS OF NEXT ROUTINE                    *
2489  012236  000012                          10.                     ;TEST ITERATION COUNT                       *
2490  012240  012242                          BAXBA                   ;SCOPE ENTRY POINT                          *
2491                                          .LIST
2492                                  ;*****************************************************************************
2493                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT13
2494  012242  052777  020000  166540  BAXBA:  BIS     #BIT13,@TCWC    ;SET TCWC BIT13
2495  012250  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2496  012252  032777  020000  166530          BIT     #BIT13,@TCWC    ;SEE IF BIT IS CLEAR.
2497  012260  001401                          BEQ     BAXBB           ;BR IF BIT IS CLEAR.
2498  012262  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT13
2499  012264  104011                  BAXBB:  SCOPE                   ;SCOPE.
2500                                  ;*****************************************************************************
2501  012266  000140                  T140:   140                     ;ROUTINE NUMBER 140                         *
2502  012270  012342                          T141                    ;ADDRESS OF NEXT ROUTINE                    *
2503  012272  000144                          100.                    ;TEST ITERATION COUNT                       *
2504  012274  012276                          AYBA                    ;SCOPE ENTRY POINT                          *
2505                                          .LIST
2506                                  ;*****************************************************************************
2507                                  ;TEST THAT TCWC BIT14 CAN BE SET, AND CLEARED.
2508  012276  052777  040000  166504  AYBA:   BIS     #BIT14,@TCWC    ;SET TCWC BIT14.
2509  012304  032777  040000  166476          BIT     #BIT14,@TCWC    ;SEE IF BIT IS SET.
2510  012312  001002                          BNE     .+6             ;BRANCH IF SET.
2511  012314  104003                          ERROR                   ;TCWC BIT14 FAILED TO SET.
2512  012316  104011                          SCOPE
2513  012320  042777  040000  166462          BIC     #BIT14,@TCWC    ;CLEAR TCWC BIT14.
2514  012326  032777  040000  166454          BIT     #BIT14,@TCWC    ;SEE IF BIT IS CLEAR.
2515  012334  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2516  012336  104003                          ERROR                   ;TCWC BIT14 FAILED TO CLEAR.
2517  012340  104011                          SCOPE                   ;SCOPE.
2518                                  ;*****************************************************************************
2519  012342  000141                  T141:   141                     ;ROUTINE NUMBER 141                         *
2520  012344  012376                          T142                    ;ADDRESS OF NEXT ROUTINE                    *
2521  012346  000012                          10.                     ;TEST ITERATION COUNT                       *
2522  012350  012352                          BAYBA                   ;SCOPE ENTRY POINT                          *
2523                                          .LIST
2524                                  ;*****************************************************************************
2525                                  ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT14
2526  012352  052777  040000  166430  BAYBA:  BIS     #BIT14,@TCWC    ;SET TCWC BIT14
2527  012360  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2528  012362  032777  040000  166420          BIT     #BIT14,@TCWC    ;SEE IF BIT IS CLEAR.
2529  012370  001401                          BEQ     BAYBB           ;BR IF BIT IS CLEAR.
2530  012372  104003                          ERROR                   ;RESET FAILED TO CLEAR TCWC BIT14
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2531  012374  104011                    BAYBB:  SCOPE                           ;SCOPE.
2532
2533  012376  000142                    T142:   142                             ;ROUTINE NUMBER 142                    *
2534  012400  012452                            T143                            ;ADDRESS OF NEXT ROUTINE               *
2535  012402  000144                            100.                            ;TEST ITERATION COUNT                  *
2536  012404  012406                            AZBA                            ;SCOPE ENTRY POINT                     *
2537                                            .LIST
2538
2539                                    ;TEST THAT TCWC BIT15 CAN BE SET, AND CLEARED.
2540  012406  052777  100000  166374    AZBA:   BIS     #BIT15,@TCWC            ;SET TCWC BIT15.
2541  012414  032777  100000  166366            BIT     #BIT15,@TCWC            ;SEE IF BIT IS SET.
2542  012422  001002                            BNE     .+6                     ;BRANCH IF SET.
2543  012424  104003                            ERROR                           ;TCWC BIT15 FAILED TO SET.
2544  012426  104011                            SCOPE
2545  012430  042777  100000  166352            BIC     #BIT15,@TCWC            ;CLEAR TCWC BIT15.
2546  012436  032777  100000  166344            BIT     #BIT15,@TCWC            ;SEE IF BIT IS CLEAR.
2547  012444  001401                            BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
2548  012446  104003                            ERROR                           ;TCWC BIT15 FAILED TO CLEAR.
2549  012450  104011                            SCOPE                           ;SCOPE.
2550
2551  012452  000143                    T143:   143                             ;ROUTINE NUMBER 143                    *
2552  012454  012506                            T144                            ;ADDRESS OF NEXT ROUTINE               *
2553  012456  000012                            10.                             ;TEST ITERATION COUNT                  *
2554  012460  012462                            BAZBA                           ;SCOPE ENTRY POINT                     *
2555                                            .LIST
                                        ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT15
2556  012462  052777  100000  166320    BAZBA:  BIS     #BIT15,@TCWC            ;SET TCWC BIT15
2557  012470  104010                            SRESET                          ;ISSUE RESET TO CLEAR BIT.
2560  012472  032777  100000  166310            BIT     #BIT15,@TCWC            ;SEE IF BIT IS CLEAR.
2561  012500  001401                            BEQ     BAZBB                   ;BR IF BIT IS CLEAR.
2562  012502  104003                            ERROR                           ;RESET FAILED TO CLEAR TCWC BIT15
2563  012504  104011                    BAZBB:  SCOPE                           ;SCOPE.
2564
2565  012506  000144                    T144:   144                             ;ROUTINE NUMBER 144                    *
2566  012510  012544                            T145                            ;ADDRESS OF NEXT ROUTINE               *
2567  012512  001750                            1000.                           ;TEST ITERATION COUNT                  *
2568  012514  012516                            AACA                            ;SCOPE ENTRY POINT                     *
2569                                            .LIST
2570
2571                                    ;TEST THAT TCDT CAN BE SET TO 125252
2572  012516  012777  125252  166270    AACA:   MOV     #125252,@TCDT           ;SET TCDT TO VALUE.
2573  012524  022777  125252  166262            CMP     #125252,@TCDT           ;SEE IF TCDT IS SET TO VALUE.
2574  012532  001401                            BEQ     AACB                    ;BRANCH IF TCDT IS SET CORRECTLY.
2575  012534  104003                            ERROR                           ;TCDT DID NOT SET TO VALUE.
2576  012536  005077  166252            AACB:   CLR     @TCDT                   ;CLEAR TCDT
2577  012542  104011                            SCOPE
2578
2579  012544  000145                    T145:   145                             ;ROUTINE NUMBER 145                    *
2580  012546  012602                            T146                            ;ADDRESS OF NEXT ROUTINE               *
2581  012550  001750                            1000.                           ;TEST ITERATION COUNT                  *
2582  012552  012554                            ABCA                            ;SCOPE ENTRY POINT                     *
2583                                            .LIST
2584
2585                                    ;TEST THAT TCDT CAN BE SET TO 052525
2586  012554  012777  052525  166232    ABCA:   MOV     #052525,@TCDT           ;SET TCDT TO VALUE.
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2587  012562  022777  052525  166224          CMP     #052525,@TCDT   ;SEE IF TCDT IS SET TO VALUE.
2588  012570  001401                          BEQ     ABCB            ;BRANCH IF TCDT IS SET CORRECTLY.
2589  012572  104003                          ERROR                   ;TCDT DID NOT SET TO VALUE.
2590  012574  005077  166214          ABCB:   CLR     @TCDT           ;CLEAR TCDT
2591  012600  104011                          SCOPE
2592                                  ;*****************************************************************************
2593  012602  000146                  T146:   146                     ;ROUTINE NUMBER 146                        *
2594  012604  012640                          T147                    ;ADDRESS OF NEXT ROUTINE                   *
2595  012606  001750                          1000.                   ;TEST ITERATION COUNT                      *
2596  012610  012612                          ACCA                    ;SCOPE ENTRY POINT                         *
2597                                          .LIST
2598                                  ;*****************************************************************************
2599                                  ;TEST THAT TCDT CAN BE SET TO 177777
2600  012612  012777  177777  166174  ACCA:   MOV     #177777,@TCDT   ;SET TCDT TO VALUE.
2601  012620  022777  177777  166166          CMP     #177777,@TCDT   ;SEE IF TCDT IS SET TO VALUE.
2602  012626  001401                          BEQ     ACCB            ;BRANCH IF TCDT IS SET CORRECTLY.
2603  012630  104003                          ERROR                   ;TCDT DID NOT SET TO VALUE.
2604  012632  005077  166156          ACCB:   CLR     @TCDT           ;CLEAR TCDT
2605  012636  104011                          SCOPE
2606                                  ;*****************************************************************************
2607  012640  000147                  T147:   147                     ;ROUTINE NUMBER 147                        *
2608  012642  012676                          T150                    ;ADDRESS OF NEXT ROUTINE                   *
2609  012644  001750                          1000.                   ;TEST ITERATION COUNT                      *
2610  012646  012650                          ADCA                    ;SCOPE ENTRY POINT                         *
2611                                          .LIST
2612                                  ;*****************************************************************************
2613                                  ;TEST THAT TCBA CAN BE SET TO 125252
2614  012650  012777  125252  166134  ADCA:   MOV     #125252,@TCBA   ;SET TCBA TO VALUE.
2615  012656  022777  125252  166126          CMP     #125252,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
2616  012664  001401                          BEQ     ADCB            ;BRANCH IF TCBA IS SET CORRECTLY.
2617  012666  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
2618  012670  005077  166116          ADCB:   CLR     @TCBA           ;CLEAR TCBA
2619  012674  104011                          SCOPE
2620                                  ;*****************************************************************************
2621  012676  000150                  T150:   150                     ;ROUTINE NUMBER 150                        *
2622  012700  012734                          T151                    ;ADDRESS OF NEXT ROUTINE                   *
2623  012702  001750                          1000.                   ;TEST ITERATION COUNT                      *
2624  012704  012706                          AECA                    ;SCOPE ENTRY POINT                         *
2625                                          .LIST
2626                                  ;*****************************************************************************
2627                                  ;TEST THAT TCBA CAN BE SET TO 052524
2628  012706  012777  052524  166076  AECA:   MOV     #052524,@TCBA   ;SET TCBA TO VALUE.
2629  012714  022777  052524  166070          CMP     #052524,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
2630  012722  001401                          BEQ     AECB            ;BRANCH IF TCBA IS SET CORRECTLY.
2631  012724  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
2632  012726  005077  166060          AECB:   CLR     @TCBA           ;CLEAR TCBA
2633  012732  104011                          SCOPE
2634                                  ;*****************************************************************************
2635  012734  000151                  T151:   151                     ;ROUTINE NUMBER 151                        *
2636  012736  012772                          T152                    ;ADDRESS OF NEXT ROUTINE                   *
2637  012740  001750                          1000.                   ;TEST ITERATION COUNT                      *
2638  012742  012744                          AFCA                    ;SCOPE ENTRY POINT                         *
2639                                          .LIST
2640                                  ;*****************************************************************************
2641                                  ;TEST THAT TCBA CAN BE SET TO 177776
2642  012744  012777  177776  166040  AFCA:   MOV     #177776,@TCBA   ;SET TCBA TO VALUE.
```

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2643  012752  022777  177776  166032          CMP     #177776,@TCBA   ;SEE IF TCBA IS SET TO VALUE.
2644  012760  001401                          BEQ     AFCB            ;BRANCH IF TCBA IS SET CORRECTLY.
2645  012762  104003                          ERROR                   ;TCBA DID NOT SET TO VALUE.
2646  012764  005077  166022          AFCB:   CLR     @TCBA           ;CLEAR TCBA
2647  012770  104011                          SCOPE
2648                                  ;*****************************************************************************
2649  012772  000152                  T152:   152                     ;ROUTINE NUMBER 152                         *
2650  012774  013030                          T153                    ;ADDRESS OF NEXT ROUTINE                    *
2651  012776  001750                          1000.                   ;TEST ITERATION COUNT                       *
2652  013000  013002                          AGCA                    ;SCOPE ENTRY POINT                          *
2653                                          .LIST
2654                                  ;*****************************************************************************
2655                                  ;TEST THAT TCWC CAN BE SET TO 125252
2656  013002  012777  125252  166000  AGCA:   MOV     #125252,@TCWC   ;SET TCWC TO VALUE.
2657  013010  022777  125252  165772          CMP     #125252,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
2658  013016  001401                          BEQ     AGCB            ;BRANCH IF TCWC IS SET CORRECTLY.
2659  013020  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
2660  013022  005077  165762          AGCB:   CLR     @TCWC           ;CLEAR TCWC
2661  013026  104011                          SCOPE
2662                                  ;*****************************************************************************
2663  013030  000153                  T153:   153                     ;ROUTINE NUMBER 153                         *
2664  013032  013066                          T154                    ;ADDRESS OF NEXT ROUTINE                    *
2665  013034  001750                          1000.                   ;TEST ITERATION COUNT                       *
2666  013036  013040                          AHCA                    ;SCOPE ENTRY POINT                          *
2667                                          .LIST
2668                                  ;*****************************************************************************
2669                                  ;TEST THAT TCWC CAN BE SET TO 052525
2670  013040  012777  052525  165742  AHCA:   MOV     #052525,@TCWC   ;SET TCWC TO VALUE.
2671  013046  022777  052525  165734          CMP     #052525,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
2672  013054  001401                          BEQ     AHCB            ;BRANCH IF TCWC IS SET CORRECTLY.
2673  013056  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
2674  013060  005077  165724          AHCB:   CLR     @TCWC           ;CLEAR TCWC
2675  013064  104011                          SCOPE
2676                                  ;*****************************************************************************
2677  013066  000154                  T154:   154                     ;ROUTINE NUMBER 154                         *
2678  013070  013124                          T155                    ;ADDRESS OF NEXT ROUTINE                    *
2679  013072  001750                          1000.                   ;TEST ITERATION COUNT                       *
2680  013074  013076                          AICA                    ;SCOPE ENTRY POINT                          *
2681                                          .LIST
2682                                  ;*****************************************************************************
2683                                  ;TEST THAT TCWC CAN BE SET TO 177777
2684  013076  012777  177777  165704  AICA:   MOV     #177777,@TCWC   ;SET TCWC TO VALUE.
2685  013104  022777  177777  165676          CMP     #177777,@TCWC   ;SEE IF TCWC IS SET TO VALUE.
2686  013112  001401                          BEQ     AICB            ;BRANCH IF TCWC IS SET CORRECTLY.
2687  013114  104003                          ERROR                   ;TCWC DID NOT SET TO VALUE.
2688  013116  005077  165666          AICB:   CLR     @TCWC           ;CLEAR TCWC
2689  013122  104011                          SCOPE
2690                                  ;*****************************************************************************
2691  013124  000155                  T155:   155                     ;ROUTINE NUMBER 155                         *
2692  013126  013200                          T156                    ;ADDRESS OF NEXT ROUTINE                    *
2693  013130  000144                          100.                    ;TEST ITERATION COUNT                       *
2694  013132  013134                          AJCA                    ;SCOPE ENTRY POINT                          *
2695                                          .LIST
2696                                  ;*****************************************************************************
2697                                  ;TEST THAT TCCM BIT1 CAN BE SET, AND CLEARED.
2698  013134  052777  000002  165644  AJCA:   BIS     #BIT1,@TCCM     ;SET TCCM BIT1.
```

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2699  013142  032777  000002  165636          BIT     #BIT1,@TCCM     ;SEE IF BIT IS SET.
2700  013150  001002                          BNE     .+6             ;BRANCH IF SET.
2701  013152  104003                          ERROR                   ;TCCM BIT1 FAILED TO SET.
2702  013154  104011                          SCOPE
2703  013156  042777  000002  165622          BIC     #BIT1,@TCCM     ;CLEAR TCCM BIT1.
2704  013164  032777  000002  165614          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
2705  013172  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2706  013174  104003                          ERROR                   ;TCCM BIT1 FAILED TO CLEAR.
2707  013176  104011                          SCOPE                   ;SCOPE.
2708                                  ;*****************************************************************************
2709  013200  000156                  T156:   156                     ;ROUTINE NUMBER 156                        *
2710  013202  013234                          T157                    ;ADDRESS OF NEXT ROUTINE                   *
2711  013204  000012                          10.                     ;TEST ITERATION COUNT                      *
2712  013206  013210                          BAJCA                   ;SCOPE ENTRY POINT                         *
2713                                          .LIST
2714                                  ;*****************************************************************************
2715                                  ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT1
2716  013210  052777  000002  165570  BAJCA:  BIS     #BIT1,@TCCM     ;SET TCCM BIT1
2717  013216  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2718  013220  032777  000002  165560          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
2719  013226  001401                          BEQ     BAJCB           ;BR IF BIT IS CLEAR.
2720  013230  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT1
2721  013232  104011                  BAJCB:  SCOPE                   ;SCOPE.
2722                                  ;*****************************************************************************
2723  013234  000157                  T157:   157                     ;ROUTINE NUMBER 157                        *
2724  013236  013310                          T160                    ;ADDRESS OF NEXT ROUTINE                   *
2725  013240  000144                          100.                    ;TEST ITERATION COUNT                      *
2726  013242  013244                          AKCA                    ;SCOPE ENTRY POINT                         *
2727                                          .LIST
2728                                  ;*****************************************************************************
2729                                  ;TEST THAT TCCM BIT2 CAN BE SET, AND CLEARED.
2730  013244  052777  000004  165534  AKCA:   BIS     #BIT2,@TCCM     ;SET TCCM BIT2.
2731  013252  032777  000004  165526          BIT     #BIT2,@TCCM     ;SEE IF BIT IS SET.
2732  013260  001002                          BNE     .+6             ;BRANCH IF SET.
2733  013262  104003                          ERROR                   ;TCCM BIT2 FAILED TO SET.
2734  013264  104011                          SCOPE
2735  013266  042777  000004  165512          BIC     #BIT2,@TCCM     ;CLEAR TCCM BIT2.
2736  013274  032777  000004  165504          BIT     #BIT2,@TCCM     ;SEE IF BIT IS CLEAR.
2737  013302  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2738  013304  104003                          ERROR                   ;TCCM BIT2 FAILED TO CLEAR.
2739  013306  104011                          SCOPE                   ;SCOPE.
2740                                  ;*****************************************************************************
2741  013310  000160                  T160:   160                     ;ROUTINE NUMBER 160                        *
2742  013312  013344                          T161                    ;ADDRESS OF NEXT ROUTINE                   *
2743  013314  000012                          10.                     ;TEST ITERATION COUNT                      *
2744  013316  013320                          BAKCA                   ;SCOPE ENTRY POINT                         *
2745                                          .LIST
2746                                  ;*****************************************************************************
2747                                  ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT1
2748  013320  052777  000002  165460  BAKCA:  BIS     #BIT1,@TCCM     ;SET TCCM BIT1
2749  013326  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2750  013330  032777  000002  165450          BIT     #BIT1,@TCCM     ;SEE IF BIT IS CLEAR.
2751  013336  001401                          BEQ     BAKCB           ;BR IF BIT IS CLEAR.
2752  013340  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT1
2753  013342  104011                  BAKCB:  SCOPE                   ;SCOPE.
2754                                  ;*****************************************************************************
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2755  013344  000161                  T161:   161                     ;ROUTINE NUMBER 161                     *
2756  013346  013420                          T162                    ;ADDRESS OF NEXT ROUTINE                *
2757  013350  000144                          100.                    ;TEST ITERATION COUNT                   *
2758  013352  013354                          ALCA                    ;SCOPE ENTRY POINT                      *
2759                                          .LIST
2760                                  ;*******************************************************************************
2761                                  ;TEST THAT TCCM BIT3 CAN BE SET, AND CLEARED.
2762  013354  052777  000010  165424  ALCA:   BIS     #BIT3,@TCCM     ;SET TCCM BIT3.
2763  013362  032777  000010  165416  .       BIT     #BIT3,@TCCM     ;SEE IF BIT IS SET.
2764  013370  001002                          BNE     .+6             ;BRANCH IF SET.
2765  013372  104003                          ERROR                   ;TCCM BIT3 FAILED TO SET.
2766  013374  104011                          SCOPE
2767  013376  042777  000010  165402          BIC     #BIT3,@TCCM     ;CLEAR TCCM BIT3.
2768  013404  032777  000010  165374          BIT     #BIT3,@TCCM     ;SEE IF BIT IS CLEAR.
2769  013412  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2770  013414  104003                          ERROR                   ;TCCM BIT3 FAILED TO CLEAR.
2771  013416  104011                          SCOPE                   ;SCOPE.
2772                                  ;*******************************************************************************
2773  013420  000162                  T162:   162                     ;ROUTINE NUMBER 162                     *
2774  013422  013454                          T163                    ;ADDRESS OF NEXT ROUTINE                *
2775  013424  000012                          10.                     ;TEST ITERATION COUNT                   *
2776  013426  013430                          BALCA                   ;SCOPE ENTRY POINT                      *
2777                                          .LIST
2778                                  ;*******************************************************************************
2779                                  ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT3
2780  013430  052777  000010  165350  BALCA:  BIS     #BIT3,@TCCM     ;SET TCCM BIT3
2781  013436  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2782  013440  032777  000010  165340          BIT     #BIT3,@TCCM     ;SEE IF BIT IS CLEAR.
2783  013446  001401                          BEQ     BALCB           ;BR IF BIT IS CLEAR.
2784  013450  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT3
2785  013452  104011                  BALCB:  SCOPE                   ;SCOPE.
2786                                  ;*******************************************************************************
2787  013454  000163                  T163:   163                     ;ROUTINE NUMBER 163                     *
2788  013456  013530                          T164                    ;ADDRESS OF NEXT ROUTINE                *
2789  013460  000144                          100.                    ;TEST ITERATION COUNT                   *
2790  013462  013464                          AMCA                    ;SCOPE ENTRY POINT                      *
2791                                          .LIST
2792                                  ;*******************************************************************************
2793                                  ;TEST THAT TCCM BIT4 CAN BE SET, AND CLEARED.
2794  013464  052777  000020  165314  AMCA:   BIS     #BIT4,@TCCM     ;SET TCCM BIT4.
2795  013472  032777  000020  165306          BIT     #BIT4,@TCCM     ;SEE IF BIT IS SET.
2796  013500  001002                          BNE     .+6             ;BRANCH IF SET.
2797  013502  104003                          ERROR                   ;TCCM BIT4 FAILED TO SET.
2798  013504  104011                          SCOPE
2799  013506  042777  000020  165272          BIC     #BIT4,@TCCM     ;CLEAR TCCM BIT4.
2800  013514  032777  000020  165264          BIT     #BIT4,@TCCM     ;SEE IF BIT IS CLEAR.
2801  013522  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2802  013524  104003                          ERROR                   ;TCCM BIT4 FAILED TO CLEAR.
2803  013526  104011                          SCOPE                   ;SCOPE.
2804                                  ;*******************************************************************************
2805  013530  000164                  T164:   164                     ;ROUTINE NUMBER 164                     *
2806  013532  013564                          T165                    ;ADDRESS OF NEXT ROUTINE                *
2807  013534  000012                          10.                     ;TEST ITERATION COUNT                   *
2808  013536  013540                          BAMCA                   ;SCOPE ENTRY POINT                      *
2809                                          .LIST
2810                                  ;*******************************************************************************
```

```
2811
2812  013540  052777  000020  165240  BAMCA:  BIS     #BIT4,@TCCM     ;SET TCCM BIT4
2813  013546  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2814  013550  032777  000020  165230          BIT     #BIT4,@TCCM     ;SEE IF BIT IS CLEAR.
2815  013556  001401                          BEQ     BAMCB           ;BR IF BIT IS CLEAR.
2816  013560  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT4
2817  013562  104011                  BAMCB:  SCOPE                   ;SCOPE.
2818                                  ;*************************************************************************
2819  013564  000165                  T165:   165                     ;ROUTINE NUMBER 165                     *
2820  013566  013640                          T166                    ;ADDRESS OF NEXT ROUTINE                *
2821  013570  000144                          100.                    ;TEST ITERATION COUNT                   *
2822  013572  013574                          ANCA                    ;SCOPE ENTRY POINT                      *
2823                                          .LIST
2824                                  ;*************************************************************************
2825                                  ;TEST THAT TCCM BIT5 CAN BE SET, AND CLEARED.
2826  013574  052777  000040  165204  ANCA:   BIS     #BIT5,@TCCM     ;SET TCCM BIT5.
2827  013602  032777  000040  165176          BIT     #BIT5,@TCCM     ;SEE IF BIT IS SET.
2828  013610  001002                          BNE     .+6             ;BRANCH IF SET.
2829  013612  104003                          ERROR                   ;TCCM BIT5 FAILED TO SET.
2830  013614  104011                          SCOPE
2831  013616  042777  000040  165162          BIC     #BIT5,@TCCM     ;CLEAR TCCM BIT5.
2832  013624  032777  000040  165154          BIT     #BIT5,@TCCM     ;SEE IF BIT IS CLEAR.
2833  013632  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2834  013634  104003                          ERROR                   ;TCCM BIT5 FAILED TO CLEAR.
2835  013636  104011                          SCOPE                   ;SCOPE.
2836                                  ;*************************************************************************
2837  013640  000166                  T166:   166                     ;ROUTINE NUMBER 166                     *
2838  013642  013674                          T167                    ;ADDRESS OF NEXT ROUTINE                *
2839  013644  000012                          10.                     ;TEST ITERATION COUNT                   *
2840  013646  013650                          BANCA                   ;SCOPE ENTRY POINT                      *
2841                                          .LIST
2842                                  ;*************************************************************************
2843                                  ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT5
2844  013650  052777  000040  165130  BANCA:  BIS     #BIT5,@TCCM     ;SET TCCM BIT5
2845  013656  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
2846  013660  032777  000040  165120          BIT     #BIT5,@TCCM     ;SEE IF BIT IS CLEAR.
2847  013666  001401                          BEQ     BANCB           ;BR IF BIT IS CLEAR.
2848  013670  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT5
2849  013672  104011                  BANCB:  SCOPE                   ;SCOPE.
2850                                  ;*************************************************************************
2851  013674  000167                  T167:   167                     ;ROUTINE NUMBER 167                     *
2852  013676  013750                          T170                    ;ADDRESS OF NEXT ROUTINE                *
2853  013700  000144                          100.                    ;TEST ITERATION COUNT                   *
2854  013702  013704                          AOCA                    ;SCOPE ENTRY POINT                      *
2855                                          .LIST
2856                                  ;*************************************************************************
2857                                  ;TEST THAT TCCM BIT6 CAN BE SET, AND CLEARED.
2858  013704  052777  000100  165074  AOCA:   BIS     #BIT6,@TCCM     ;SET TCCM BIT6.
2859  013712  032777  000100  165066          BIT     #BIT6,@TCCM     ;SEE IF BIT IS SET.
2860  013720  001002                          BNE     .+6             ;BRANCH IF SET.
2861  013722  104003                          ERROR                   ;TCCM BIT6 FAILED TO SET.
2862  013724  104011                          SCOPE
2863  013726  042777  000100  165052          BIC     #BIT6,@TCCM     ;CLEAR TCCM BIT6.
2864  013734  032777  000100  165044          BIT     #BIT6,@TCCM     ;SEE IF BIT IS CLEAR.
2865  013742  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
2866  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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 2923  014132  032777  001000  164646          BIT     #BIT9,@TCCM     ;SEE IF BIT IS SET.
 2924  014140  001002                          BNE     .+6             ;BRANCH IF SET.
 2925  014142  104003                          ERROR                   ;TCCM BIT9 FAILED TO SET.
 2926  014144  104011                          SCOPE
 2927  014146  042777  001000  164632          BIC     #BIT9,@TCCM     ;CLEAR TCCM BIT9.
 2928  014154  032777  001000  164624          BIT     #BIT9,@TCCM     ;SEE IF BIT IS CLEAR.
 2929  014162  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 2930  014164  104003                          ERROR                   ;TCCM BIT9 FAILED TO CLEAR.
 2931  014166  104011                          SCOPE                   ;SCOPE.
 2932                          ;*****************************************************************************
 2933  014170  000174                T174:     174                     ;ROUTINE NUMBER 174                    *
 2934  014172  014224                          T175                    ;ADDRESS OF NEXT ROUTINE               *
 2935  014174  000012                          10.                     ;TEST ITERATION COUNT                  *
 2936  014176  014200                          BAQCA                   ;SCOPE ENTRY POINT                     *
 2937                                          .LIST
 2938                          ;*****************************************************************************
 2939                          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT9
 2940  014200  052777  001000  164600  BAQCA:  BIS     #BIT9,@TCCM     ;SET TCCM BIT9
 2941  014206  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 2942  014210  032777  001000  164570          BIT     #BIT9,@TCCM     ;SEE IF BIT IS CLEAR.
 2943  014216  001401                          BEQ     BAQCB           ;BR IF BIT IS CLEAR.
 2944  014220  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT9
 2945  014222  104011                BAQCB:    SCOPE                   ;SCOPE.
 2946                          ;*****************************************************************************
 2947  014224  000175                T175:     175                     ;ROUTINE NUMBER 175                    *
 2948  014226  014300                          T176                    ;ADDRESS OF NEXT ROUTINE               *
 2949  014230  000144                          100.                    ;TEST ITERATION COUNT                  *
 2950  014232  014234                          ARCA                    ;SCOPE ENTRY POINT                     *
 2951                                          .LIST
 2952                          ;*****************************************************************************
 2953                          ;TEST THAT TCCM BIT10 CAN BE SET, AND CLEARED.
 2954  014234  052777  002000  164544  ARCA:   BIS     #BIT10,@TCCM    ;SET TCCM BIT10.
 2955  014242  032777  002000  164536          BIT     #BIT10,@TCCM    ;SEE IF BIT IS SET.
 2956  014250  001002                          BNE     .+6             ;BRANCH IF SET.
 2957  014252  104003                          ERROR                   ;TCCM BIT10 FAILED TO SET.
 2958  014254  104011                          SCOPE
 2959  014256  042777  002000  164522          BIC     #BIT10,@TCCM    ;CLEAR TCCM BIT10.
 2960  014264  032777  002000  164514          BIT     #BIT10,@TCCM    ;SEE IF BIT IS CLEAR.
 2961  014272  001401                          BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 2962  014274  104003                          ERROR                   ;TCCM BIT10 FAILED TO CLEAR.
 2963  014276  104011                          SCOPE                   ;SCOPE.
 2964                          ;*****************************************************************************
 2965  014300  000176                T176:     176                     ;ROUTINE NUMBER 176                    *
 2966  014302  014334                          T177                    ;ADDRESS OF NEXT ROUTINE               *
 2967  014304  000012                          10.                     ;TEST ITERATION COUNT                  *
 2968  014306  014310                          BARCA                   ;SCOPE ENTRY POINT                     *
 2969                                          .LIST
 2970                          ;*****************************************************************************
 2971                          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT10
 2972  014310  052777  002000  164470  BARCA:  BIS     #BIT10,@TCCM    ;SET TCCM BIT10
 2973  014316  104010                          SRESET                  ;ISSUE RESET TO CLEAR BIT.
 2974  014320  032777  002000  164460          BIT     #BIT10,@TCCM    ;SEE IF BIT IS CLEAR.
 2975  014326  001401                          BEQ     BARCB           ;BR IF BIT IS CLEAR.
 2976  014330  104003                          ERROR                   ;RESET FAILED TO CLEAR TCCM BIT10
 2977  014332  104011                BARCB:    SCOPE                   ;SCOPE.
 2978                          ;*****************************************************************************
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 2979  014334  000177                    T177:   177                     ;ROUTINE NUMBER 177                     *
 2980  014336  014410                            T200                    ;ADDRESS OF NEXT ROUTINE                *
 2981  014340  000144                            100.                    ;TEST ITERATION COUNT                   *
 2982  014342  014344                            ASCA                    ;SCOPE ENTRY POINT                      *
 2983                                            .LIST
 2984                                    ;*******************************************************************
 2985                                    ;TEST THAT TCCM BIT11 CAN BE SET, AND CLEARED.
 2986  014344  052777  004000  164434    ASCA:   BIS     #BIT11,@TCCM    ;SET TCCM BIT11.
 2987  014352  032777  004000  164426            BIT     #BIT11,@TCCM    ;SEE IF BIT IS SET.
 2988  014360  001002                            BNE     .+6             ;BRANCH IF SET.
 2989  014362  104003                            ERROR                   ;TCCM BIT11 FAILED TO SET.
 2990  014364  104011                            SCOPE
 2991  014366  042777  004000  164412            BIC     #BIT11,@TCCM    ;CLEAR TCCM BIT11.
 2992  014374  032777  004000  164404            BIT     #BIT11,@TCCM    ;SEE IF BIT IS CLEAR.
 2993  014402  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 2994  014404  104003                            ERROR                   ;TCCM BIT11 FAILED TO CLEAR.
 2995  014406  104011                            SCOPE                   ;SCOPE.
 2996                                    ;*******************************************************************
 2997  014410  000200                    T200:   200                     ;ROUTINE NUMBER 200                     *
 2998  014412  014444                            T201                    ;ADDRESS OF NEXT ROUTINE                *
 2999  014414  000012                            10.                     ;TEST ITERATION COUNT                   *
 3000  014416  014420                            BASCA                   ;SCOPE ENTRY POINT                      *
 3001                                            .LIST
 3002                                    ;*******************************************************************
 3003                                    ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT11
 3004  014420  052777  004000  164360    BASCA:  BIS     #BIT11,@TCCM    ;SET TCCM BIT11
 3005  014426  104010                            SRESET                  ;ISSUE RESET TO CLEAR BIT.
 3006  014430  032777  004000  164350            BIT     #BIT11,@TCCM    ;SEE IF BIT IS CLEAR.
 3007  014436  001401                            BEQ     BASCB           ;BR IF BIT IS CLEAR.
 3008  014440  104003                            ERROR                   ;RESET FAILED TO CLEAR TCCM BIT11
 3009  014442  104011                    BASCB:  SCOPE                   ;SCOPE.
 3010                                    ;*******************************************************************
 3011  014444  000201                    T201:   201                     ;ROUTINE NUMBER 201                     *
 3012  014446  014520                            T202                    ;ADDRESS OF NEXT ROUTINE                *
 3013  014450  000144                            100.                    ;TEST ITERATION COUNT                   *
 3014  014452  014454                            ATCA                    ;SCOPE ENTRY POINT                      *
 3015                                            .LIST
 3016                                    ;*******************************************************************
 3017                                    ;TEST THAT TCCM BIT12 CAN BE SET, AND CLEARED.
 3018  014454  052777  010000  164324    ATCA:   BIS     #BIT12,@TCCM    ;SET TCCM BIT12.
 3019  014462  032777  010000  164316            BIT     #BIT12,@TCCM    ;SEE IF BIT IS SET.
 3020  014470  001002                            BNE     .+6             ;BRANCH IF SET.
 3021  014472  104003                            ERROR                   ;TCCM BIT12 FAILED TO SET.
 3022  014474  104011                            SCOPE
 3023  014476  042777  010000  164302            BIC     #BIT12,@TCCM    ;CLEAR TCCM BIT12.
 3024  014504  032777  010000  164274            BIT     #BIT12,@TCCM    ;SEE IF BIT IS CLEAR.
 3025  014512  001401                            BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
 3026  014514  104003                            ERROR                   ;TCCM BIT12 FAILED TO CLEAR.
 3027  014516  104011                            SCOPE                   ;SCOPE.
 3028                                    ;*******************************************************************
 3029  014520  000202                    T202:   202                     ;ROUTINE NUMBER 202                     *
 3030  014522  014554                            T203                    ;ADDRESS OF NEXT ROUTINE                *
 3031  014524  000012                            10.                     ;TEST ITERATION COUNT                   *
 3032  014526  014530                            BATCA                   ;SCOPE ENTRY POINT                      *
 3033                                            .LIST
 3034                                    ;*******************************************************************
```

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3035
3036  014530  052777  010000  164250  BATCA:  BIS     #BIT12,@TCCM    ;SET TCCM BIT12
3037  014536  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
3038  014540  032777  010000  164240          BIT     #BIT12,@TCCM    ;SEE IF BIT IS CLEAR.
3039  014546  001401                  BEQ     BATCB                   ;BR IF BIT IS CLEAR.
3040  014550  104003                  ERROR                           ;RESET FAILED TO CLEAR TCCM BIT12
3041  014552  104011          BATCB:  SCOPE                           ;SCOPE.
3042                          ;*************************************************************************
3043  014554  000203          T203:   203                             ;ROUTINE NUMBER 203                    *
3044  014556  014630                  T204                            ;ADDRESS OF NEXT ROUTINE               *
3045  014560  000144                  100.                            ;TEST ITERATION COUNT                  *
3046  014562  014564                  AUCA                            ;SCOPE ENTRY POINT                     *
3047                                  .LIST
3048                          ;*************************************************************************
3049                          ;TEST THAT TCCM BIT13 CAN BE SET, AND CLEARED.
3050  014564  052777  020000  164214  AUCA:   BIS     #BIT13,@TCCM    ;SET TCCM BIT13.
3051  014572  032777  020000  164206          BIT     #BIT13,@TCCM    ;SEE IF BIT IS SET.
3052  014600  001002                  BNE     .+6                     ;BRANCH IF SET.
3053  014602  104003                  ERROR                           ;TCCM BIT13 FAILED TO SET.
3054  014604  104011                  SCOPE
3055  014606  042777  020000  164172          BIC     #BIT13,@TCCM    ;CLEAR TCCM BIT13.
3056  014614  032777  020000  164164          BIT     #BIT13,@TCCM    ;SEE IF BIT IS CLEAR.
3057  014622  001401                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
3058  014624  104003                  ERROR                           ;TCCM BIT13 FAILED TO CLEAR.
3059  014626  104011                  SCOPE                           ;SCOPE.
3060                          ;*************************************************************************
3061  014630  000204          T204:   204                             ;ROUTINE NUMBER 204                    *
3062  014632  014664                  T205                            ;ADDRESS OF NEXT ROUTINE               *
3063  014634  000012                  10.                             ;TEST ITERATION COUNT                  *
3064  014636  014640                  BAUCA                           ;SCOPE ENTRY POINT                     *
3065                                  .LIST
3066                          ;*************************************************************************
3067                          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT13
3068  014640  052777  020000  164140  BAUCA:  BIS     #BIT13,@TCCM    ;SET TCCM BIT13
3069  014646  104010                  SRESET                          ;ISSUE RESET TO CLEAR BIT.
3070  014650  032777  020000  164130          BIT     #BIT13,@TCCM    ;SEE IF BIT IS CLEAR.
3071  014656  001401                  BEQ     BAUCB                   ;BR IF BIT IS CLEAR.
3072  014660  104003                  ERROR                           ;RESET FAILED TO CLEAR TCCM BIT13
3073  014662  104011          BAUCB:  SCOPE                           ;SCOPE.
3074                          ;*************************************************************************
3075  014664  000205          T205:   205                             ;ROUTINE NUMBER 205                    *
3076  014666  014740                  T206                            ;ADDRESS OF NEXT ROUTINE               *
3077  014670  000144                  100.                            ;TEST ITERATION COUNT                  *
3078  014672  014674                  AVCA                            ;SCOPE ENTRY POINT                     *
3079                                  .LIST
3080                          ;*************************************************************************
3081                          ;TEST THAT TCST BIT0 CAN BE SET, AND CLEARED.
3082  014674  052777  000001  164102  AVCA:   BIS     #BIT0,@TCST     ;SET TCST BIT0.
3083  014702  032777  000001  164074          BIT     #BIT0,@TCST     ;SEE IF BIT IS SET.
3084  014710  001002                  BNE     .+6                     ;BRANCH IF SET.
3085  014712  104003                  ERROR                           ;TCST BIT0 FAILED TO SET.
3086  014714  104011                  SCOPE
3087  014716  042777  000001  164060          BIC     #BIT0,@TCST     ;CLEAR TCST BIT0.
3088  014724  032777  000001  164052          BIT     #BIT0,@TCST     ;SEE IF BIT IS CLEAR.
3089  014732  001401                  BEQ     .+4                     ;BRANCH IF BIT IS CLEAR.
3090  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 BITO
014750  052777  000001  164026  BAVCA:  BIS     #BITO,@TCST        ;SET TCST BITO
014756  104010                                  SRESET                     ;ISSUE RESET TO CLEAR BIT.
014760  032777  000001  164016          BIT     #BITO,@TCST        ;SEE IF BIT IS CLEAR.
014766  001401                                  BEQ     BAVCB              ;BR IF BIT IS CLEAR.
014770  104003                                  ERROR                      ;RESET FAILED TO CLEAR TCST BITO
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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3147  015122  001001                        BNE     .+4             ;BRANCH IF BIT IS SET.
3148  015124  104003                        ERROR                   ;TCCM BIT7 NOT SET AFTER RESET.
3149  015126  104010                        SRESET                  ;ISSUE RESET.
3150  015130  104011                        SCOPE                   ;SCOPE
3151                                ;*************************************************************************
3152  015132  000212                T212:   212                     ;ROUTINE NUMBER 212                     *
3153  015134  015160                        T213                    ;ADDRESS OF NEXT ROUTINE                *
3154  015136  000012                        10.                     ;TEST ITERATION COUNT                   *
3155  015140  015142                        AYCA                    ;SCOPE ENTRY POINT                      *
3156                                        .LIST
3157                                ;*************************************************************************
3158                                ;TEST THAT TCCM BIT15 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3159  015142  032777  100000  163636 AYCA:   BIT     #BIT15,@TCCM    ;SEE IF TCCM BIT15 IS CLEAR
3160  015150  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
3161  015152  104003                        ERROR                   ;TCCM BIT15 NOT CLEAR AFTER RESET.
3162  015154  104010                        SRESET                  ;ISSUE RESET.
3163  015156  104011                        SCOPE                   ;SCOPE
3164                                ;*************************************************************************
3165  015160  000213                T213:   213                     ;ROUTINE NUMBER 213                     *
3166  015162  015206                        T214                    ;ADDRESS OF NEXT ROUTINE                *
3167  015164  000012                        10.                     ;TEST ITERATION COUNT                   *
3168  015166  015170                        AZCA                    ;SCOPE ENTRY POINT                      *
3169                                        .LIST
3170                                ;*************************************************************************
3171                                ;TEST THAT TCST BIT7 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3172  015170  032777  000200  163606 AZCA:   BIT     #BIT7,@TCST     ;SEE IF TCST BIT7 IS CLEAR
3173  015176  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
3174  015200  104003                        ERROR                   ;TCST BIT7 NOT CLEAR AFTER RESET.
3175  015202  104010                        SRESET                  ;ISSUE RESET.
3176  015204  104011                        SCOPE                   ;SCOPE
3177                                ;*************************************************************************
3178  015206  000214                T214:   214                     ;ROUTINE NUMBER 214                     *
3179  015210  015234                        T215                    ;ADDRESS OF NEXT ROUTINE                *
3180  015212  000012                        10.                     ;TEST ITERATION COUNT                   *
3181  015214  015216                        AADA                    ;SCOPE ENTRY POINT                      *
3182                                        .LIST
3183                                ;*************************************************************************
3184                                ;TEST THAT TCST BIT8 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3185  015216  032777  000400  163560 AADA:   BIT     #BIT8,@TCST     ;SEE IF TCST BIT8 IS CLEAR
3186  015224  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
3187  015226  104003                        ERROR                   ;TCST BIT8 NOT CLEAR AFTER RESET.
3188  015230  104010                        SRESET                  ;ISSUE RESET.
3189  015232  104011                        SCOPE                   ;SCOPE
3190                                ;*************************************************************************
3191  015234  000215                T215:   215                     ;ROUTINE NUMBER 215                     *
3192  015236  015262                        T216                    ;ADDRESS OF NEXT ROUTINE                *
3193  015240  000012                        10.                     ;TEST ITERATION COUNT                   *
3194  015242  015244                        ABDA                    ;SCOPE ENTRY POINT                      *
3195                                        .LIST
3196                                ;*************************************************************************
3197                                ;TEST THAT TCST BIT9 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3198  015244  032777  001000  163532 ABDA:   BIT     #BIT9,@TCST     ;SEE IF TCST BIT9 IS CLEAR
3199  015252  001401                        BEQ     .+4             ;BRANCH IF BIT IS CLEAR.
3200  015254  104003                        ERROR                   ;TCST BIT9 NOT CLEAR AFTER RESET.
3201  015256  104010                        SRESET                  ;ISSUE RESET.
3202  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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TC1 - TC11 TEST 1       MACY11 27(732)  08-SEP-76  09:06  PAGE 61
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  3259  015420  015422                        CAAA                    ;SCOPE ENTRY POINT                      *
  3260                                        .LIST
  3261                                ;*****************************************************************************
  3262                                ;TEST ABILITY TO SET RANDOM NUMBERS IN DATA REGISTER.
  3263  015422  016767  163366  000114 CAAA:   MOV     TCDT,REGADR     ;ADDR OF TCDT REG TO REGADR.
  3264  015430  000167  000040                JMP     CXXA
  3265                                ;*****************************************************************************
  3266  015434  000223                T223:   223                     ;ROUTINE NUMBER 223                     *
  3267  015436  015456                        T224                    ;ADDRESS OF NEXT ROUTINE                *
  3268  015440  023420                        10000.                  ;TEST ITERATION COUNT                   *
  3269  015442  015444                        CBBA                    ;SCOPE ENTRY POINT                      *
  3270                                        .LIST
  3271                                ;*****************************************************************************
  3272                                ;TEST ABILITY TO SET RANDOM NUMBERS IN WORD COUNT REGISTER.
  3273  015444  016767  163340  000072 CBBA:   MOV     TCWC,REGADR     ;ADDR OF TCWC REG TO REGADR.
  3274  015452  000167  000016                JMP     CXXA
  3275                                ;*****************************************************************************
  3276  015456  000224                T224:   224                     ;ROUTINE NUMBER 224                     *
  3277  015460  015572                        T225                    ;ADDRESS OF NEXT ROUTINE                *
  3278  015462  023420                        10000.                  ;TEST ITERATION COUNT                   *
  3279  015464  015466                        CCCA                    ;SCOPE ENTRY POINT                      *
  3280                                        .LIST
  3281                                ;*****************************************************************************
  3282                                ;TEST ABILITY TO SET RANDOM NUMBERS IN BUS ADDRESS REGISTER.
  3283  015466  016767  163320  000050 CCCA:   MOV     TCBA,REGADR     ;ADDR OF TCBA REG TO REGADR.
  3284                                ;
  3285  015474  017767  000044  163364 CXXA:   MOV     @REGADR,PRVCNT  ;SAVE CURRENT REG CONTENTS.
  3286  015502  004767  164442                JSR     PC,RNGEN        ;GENERATE RANDOM NUMBER.
  3287  015506  010067  163356                MOV     R0,RNDNMB       ;SAVE RANDOM NUMBER.
  3288  015512  010077  000026                MOV     R0,@REGADR      ;MOVE RANDOM NUMBER TO TEST REGISTER.
  3289  015516  027767  000022  163344        CMP     @REGADR,RNDNMB  ;CHECK RANDOM # AND REG CONTENTS.
  3290  015524  001421                        BEQ     CXXX            ;BR IF BOTH SAME. (OK).
  3291  015526  004567  165130                JSR     R5,OACNV        ;CONVERT EXPECTED CONTENTS TO ASCII.
  3292  015532  001070                        RNDNMB
  3293  015534  003160                        AASB
  3294  015536  000006                        6
  3295  015540  004567  165116                JSR     R5,OACNV        ;CONVERT CONTENTS OF TEST REG TO ASCII.
  3296  015544  000000                REGADR: OPEN                    ;ADDR OF TEST REG IS STORED HERE.
  3297  015546  003176                        AWAS
  3298  015550  000006                        6
  3299  015552  004567  165104                JSR     R5,OACNV        ;CONVERT PREVIOUS REGISTER CONTENTS TO ASCII.
  3300  015556  001066                        PRVCNT
  3301  015560  003224                        APWAS
  3302  015562  000006                        6
  3303  015564  104014                        ERROR1                  ;CONTENTS OF REG NOT SAME AS DATA THAT
  3304  015566  003137                        ERDAT                   ;PROGRAM TRIED TO LOAD.
  3305  015570  104011                CXXX:   SCOPE                   ;SCOPE.
  3306                                ;*****************************************************************************
  3307  015572  000225                T225:   225                     ;ROUTINE NUMBER 225                     *
  3308  015574  177777                        TLAST                   ;ADDRESS OF NEXT ROUTINE                *
  3309  015576  000001                        1                       ;TEST ITERATION COUNT                   *
  3310  015600  015602                        ZZZA                    ;SCOPE ENTRY POINT                      *
  3311                                        .LIST
  3312                                ;*****************************************************************************
  3313                                ;DUMMY END TEST.
  3314  015602  104011                ZZZA:   SCOPE
```

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  3315          000001                          .END
```

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	1868#	
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#	

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ALA     004706          1256    1260#
ALBA    010426          2088    2092#
ALCA    013354          2758    2762#
AMA     005016          1288    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          1608    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#
```

DZTCAA.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

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#

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BAQCB   014002          2879    2881#
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    2558#
BAZBB   012504          2561    2563#
BDCNV   002766           723     877#
BDCNVA  003006           882#    892
BDCNVB  003010           883#    886
BDCNVC  003020           884     887#
BDCNVD  003044           896#    898
BELL  = 000007           497#
BIT0  = 000001           477#    502     1068    1069    1073    1074    1086    1088    2060    2061    2065    2066    2078
                        2080    3082    3083    3087    3088    3100    3102
BIT1  = 000002           476#    501     1100    1101    1105    1106    1118    1120    1580    1581    1585    1586    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    1873    1874    1886
                        1888    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    1184    1644    1645    1649    1650    1662    1664
                        2156    2157    2161    2162    2174    2176    2762    2763    2767    2768    2780    2782
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    2814
BIT5  = 000040           472#    1228    1229    1233    1234    1246    1248    1708    1709    1713    1714    1726    1728
                        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    2859    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    1824
                        2316    2317    2321    2322    2334    2336    2890    2891    2895    2896    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     980
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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    1218    1231    1236    1250    1263    1268
                       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
```

```
                    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
ERROR1= 104014       562#    700    3303
ERR1    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*
```

```
RNCNT   002506          813*   816#
RNDNMB  001070          534#  3287*  3289   3292
RNGEN   002150          737#   801    810   3286
RNUM  = 000002          501#   981
RP1     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*   633*   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#   882*   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   2288   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#
SRSETT  001660          553    670#   672*
STAL    002436          541    801#
STALA   002456          804*   806#
STALB   002460          803    807#
STALL = 104002          542#
START   001130          505    565#
```

DZTCAA.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

```
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  2046*
                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#
```

```
TYPG    002322          771#
TYPS    002340          539     776#    784
TYPSA   002364          780     782#
TYPSB   002366          778*    779     783#
TO      003514          519     965#
TOMSG   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    2199#
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#
```

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#   1018    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#   1988
         1993#  2006    2011#   2020    2025#   2038    2043#   2052    2057#   2070    2075#   2084    2089#
         2102   2107#   2116    2121#   2134    2139#   2148    2153#   2166    2171#   2180    2185#   2198
         2203#  2212    2217#   2230    2235#   2244    2249#   2262    2267#   2276    2281#   2294    2299#
```

DZTCAA.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

```
                    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#   2892    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
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                    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    1811    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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DZTCAA.P11 CROSS REFERENCE TABLE -- MACRO NAMES

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ASL     633
BCS     884
BEQ     598  606  616  691  762  803  812 1075 1089 1107 1121 1139 1153 1171 1185
       1203 1217 1235 1249 1267 1281 1299 1313 1331 1345 1363 1377 1395 1409 1427
       1441 1459 1473 1491 1505 1523 1537 1555 1569 1587 1601 1619 1633 1651 1665
       1683 1697 1715 1729 1747 1761 1779 1793 1811 1825 1843 1857 1875 1889 1907
       1921 1939 1953 1971 1985 2003 2017 2035 2049 2067 2081 2099 2113 2131 2145
       2163 2177 2195 2209 2227 2241 2259 2273 2291 2305 2323 2337 2355 2369 2387
       2401 2419 2433 2451 2465 2483 2497 2515 2529 2547 2561 2574 2588 2602 2616
       2630 2644 2658 2672 2686 2705 2719 2737 2751 2769 2783 2801 2815 2833 2847
       2865 2879 2897 2911 2929 2943 2961 2975 2993 3007 3025 3039 3057 3071 3089
       3103 3121 3135 3160 3173 3186 3199 3212 3225 3238 3251 3290
BIC     581  802  811  836  845  855  858 1073 1105 1137 1169 1201 1233 1265 1297
       1329 1361 1393 1425 1457 1489 1521 1553 1585 1617 1649 1681 1713 1745 1777
       1809 1841 1873 1905 1937 1969 2001 2033 2065 2097 2129 2161 2193 2225 2257
       2289 2321 2353 2385 2417 2449 2481 2513 2545 2703 2735 2767 2799 2831 2863
       2895 2927 2959 2991 3023 3055 3087 3119
BIS    1068 1086 1100 1118 1132 1150 1164 1182 1196 1214 1228 1246 1260 1278 1292
       1310 1324 1342 1356 1374 1388 1406 1420 1438 1452 1470 1484 1502 1516 1534
       1548 1566 1580 1598 1612 1630 1644 1662 1676 1694 1708 1726 1740 1758 1772
       1790 1804 1822 1836 1854 1868 1886 1900 1918 1932 1950 1964 1982 1996 2014
       2028 2046 2060 2078 2092 2110 2124 2142 2156 2174 2188 2206 2220 2238 2252
       2270 2284 2302 2316 2334 2348 2366 2380 2398 2412 2430 2444 2462 2476 2494
       2508 2526 2540 2558 2698 2716 2730 2748 2762 2780 2794 2812 2826 2844 2858
       2876 2890 2908 2922 2940 2954 2972 2986 3004 3018 3036 3050 3068 3082 3100
       3114 3132
BIT     577  597  600  605  609  711  974 1069 1074 1088 1101 1106 1120 1133 1139
       1152 1165 1170 1184 1197 1202 1216 1229 1234 1248 1261 1266 1280 1293 1298
       1312 1325 1330 1344 1357 1362 1376 1389 1394 1408 1421 1426 1440 1453 1458
       1472 1485 1490 1504 1517 1522 1536 1549 1554 1568 1581 1586 1600 1613 1618
       1632 1645 1650 1664 1677 1682 1696 1709 1714 1728 1741 1746 1760 1773 1778
       1792 1805 1810 1824 1837 1842 1856 1869 1874 1888 1901 1906 1920 1933 1938
       1952 1965 1970 1984 1997 2002 2016 2029 2034 2048 2061 2066 2080 2093 2098
       2112 2125 2130 2144 2157 2162 2176 2189 2194 2208 2221 2226 2240 2253 2258
       2272 2285 2290 2304 2317 2322 2336 2349 2354 2368 2381 2386 2400 2413 2418
       2432 2445 2450 2464 2477 2482 2496 2509 2514 2528 2541 2546 2560 2699 2704
       2718 2731 2736 2750 2763 2768 2782 2795 2800 2814 2827 2832 2846 2859 2864
       2878 2891 2896 2910 2923 2928 2942 2955 2960 2974 2987 2992 3006 3019 3024
       3038 3051 3056 3070 3083 3088 3102 3115 3120 3134 3146 3159 3172 3185 3198
       3211 3224 3237 3250
BLOS    986
BNE     578  583  586  595  601  603  610  612  712  757  780  792  795  834  843
       863  873  892  898  975 1070 1102 1134 1166 1198 1230 1262 1294 1326 1358
      1390 1422 1454 1486 1518 1550 1582 1614 1646 1678 1710 1742 1774 1806 1838
      1870 1902 1934 1966 1998 2030 2062 2094 2126 2158 2190 2222 2254 2286 2318
      2350 2382 2414 2446 2478 2510 2542 2700 2732 2764 2796 2828 2860 2892 2924
      2956 2988 3020 3052 3084 3116 3147
BPL     686  767
BR      590  620  706  764  773  784  886  989
CLR     705  789  882  983  987 2576 2590 2604 2618 2632 2646 2660 2674 2688
CMP     585  611  690  779  985 2573 2587 2601 2615 2629 2643 2657 2671 2685 3289
CMPB    582  761
COM     596  671  832  833  841  842
DEC     602  791  794  862  872  891  897
EMT     538  540  542  544  546  548  550  552  554  556  558  560  562  564
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HALT     437   439   441   443   445   447   451   453   608   682   687
INC      594   835   844   885   984
JMP      505   507   579   584  3264  3274
JSR      570   576   618   692   696   715   719   723   759   763   770   772   801   810   819
        3286  3291  3295  3299
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
         642   643   644   645   650   651   652   653   654   655   656   657   658   663   665
         666   667   670   672   680   703   704   707   708   709   710   713   737   741   747
         748   753   755   776   778   786   788   790   804   813   818   831   837   838   840
         846   847   850   851   852   854   868   869   870   878   879   880   881   893   894
         981   982   988   998  1012  1026  1040  1054  2572  2586  2600  2614  2628  2642  2656
        2670  2684  3263  3273  3283  3285  3287  3288
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   733   760   781   797   807
RTS      629   635   678   749   768   814   823   839   848   864   875   900
SUB      681   714   883
TST      685   890   999  1013  1027  1041  1055
TSTB     766
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.ASCII   909   910   912   917   920   923   940   948
.ASCIZ   915   927   929   935   939   943   957
.BYTE    906   938
.END    3315
.EVEN    962
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        1179  1193  1211  1225  1243  1257  1275  1289  1307  1321  1339  1353  1371  1385  1403
        1417  1435  1449  1467  1481  1499  1513  1531  1545  1563  1577  1595  1609  1627  1641
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        1897  1915  1929  1947  1961  1979  1993  2011  2025  2043  2057  2075  2089  2107  2121
        2139  2153  2171  2185  2203  2217  2235  2249  2267  2281  2299  2313  2331  2345  2363
        2377  2395  2409  2427  2441  2459  2473  2491  2505  2523  2537  2555  2569  2583  2597
        2611  2625  2639  2653  2667  2681  2695  2713  2727  2745  2759  2777  2791  2809  2823
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        3079  3097  3111  3129  3143  3156  3169  3182  3195  3208  3221  3234  3247  3260  3270
        3280  3311
.MACR     433   435
.NLIST      1   430   453   538   540   542   544   546   548   550   552   554   556   558   560
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        1417  1435  1449  1467  1481  1499  1513  1531  1545  1563  1577  1595  1609  1627  1641
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        1897  1915  1929  1947  1961  1979  1993  2011  2025  2043  2057  2075  2089  2107  2121
        2139  2153  2171  2185  2203  2217  2235  2249  2267  2281  2299  2313  2331  2345  2363
        2377  2395  2409  2427  2441  2459  2473  2491  2505  2523  2537  2555  2569  2583  2597
        2611  2625  2639  2653  2667  2681  2695  2713  2727  2745  2759  2777  2791  2809  2823
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        3079  3097  3111  3129  3143  3156  3169  3182  3195  3208  3221  3234  3247  3260  3270
        3280  3311
.REM        1
.REPT     453
.TITLE      1
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TC1 - TC11 TEST 1       MACY11 27(732)  08-SEP-76  09:06  PAGE 82
DZTCAA.P11      CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

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


 ERRORS DETECTED:  0
 DEFAULT GLOBALS GENERATED:  0

 *DZTCAA,DZTCAA.SEQ/SOL/CRF/DS:ERFZ/EN:ABS=DSKM:DZTCAA.P11
 RUN-TIME:  14 26 5 SECONDS
 RUN-TIME RATIO:  84/47=1.7
 CORE USED:  12K  (24 PAGES)
```

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