

TC1 - TC11 TEST 1
DZTCAR.P11

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IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DZTCR-A-C

PRODUCT NAME: TC1 - TC11 TEST 1

DATE: MAY 1, 1972

MAINTAINER: DIAGNOSTIC GROUP

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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 D) 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. REQUIREMENTS2.1 EQUIPMENT

- A. PDP-11 SYSTEM (4K CORE).
- B. ASR33/35 TELETYPE.
- C. TC11 DECTAPE CONTROL AND AT LEAST ONE TUS6 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 DESCRIBED 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 UNITO/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 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.

```

439
430
431
432
433
434
435
436 000000 000000
437 000002 000000
438 000004 000006
439 000006 000000
440 000010 000012
441 000012 000000
442 000014 000016
443 000016 000000
444 000020 000022
445 000022 000000
446 000024 000026
447 000026 000000
448 000030 001510
449 000032 000340
450 000034 000036
451 000036 000000
452
453
454
455 177570
456 177776
457 177776
458 001000
459 000240
460 000000
461 100000
462 100000
463 040000
464 020000
465 010000
466 004000
467 002000
468 001000
469 000400
470 000200
471 000100
472 000040
473 000020
474 000010
475 000004
476 000002
477 000001
478 000000
479 000001
480 000002
481 000003
482 000004
  
```

```

      .LIST BIN,SEQ,LD,ME
      .NLIST MC,MD
      .ABS
;
MACHR:  .=0
      .+2 ;UNASSIGNED TRAP
      HALT
      .+2 ;SP OVERFLOW, BUS ERROR TRAP
      HALT
      .+2 ;RESERVED INSTRUCTION TRAP
      HALT
      .+2 ;TRACE TRAP
      HALT
      .+2 ;TRAP TO CALL IOX
      HALT
      .+2 ;POWER FAIL TRAP
EMTV:  HALT
      EMTINT ;EMT TRAP
      PRTY7
TRPV:  .+2 ;TRAP TRAP. SIMILAR TO EMT.
      HALT
;LOC 40 THROUGH 376 FILLED WITH .+2 AND HALT.
;EQUATE .LIST
STATEMENTS
SR=177570
CC=177776
PSW=177776
SPBOT=1000
NOP=240
OPEN=0
MANUAL=BIT15
BIT15=100000
BIT14=40000
BIT13=20000
BIT12=10000
BIT11=4000
BIT10=2000
BIT9=1000
BIT8=400
BIT7=200
BIT6=100
BIT5=40
BIT4=20
BIT3=10
BIT2=4
BIT1=2
BIT0=1
R0=%0
R1=%1
R2=%2
R3=%3
R4=%4
  
```

```

483 000005
484 000006
485 000007
486 000007
487 005726
488 022626
489 000340
490 000300
491 000240
492 000200
493 000140
494 000100
495 000040
496 000000
497 000007
498 177777
499 177777
500 020000
501 000002
502 000001
503 000000
504 000200
505 000200 000167 000724
506 001000 001000 000154
507 001000 000167 000154
508 001004 177340
509 001006 177342
510 001010 177344
511 001012 177346
512 001014 177350
513 001016 000214
514 001020 000300
515 001022 177564
516 001024 177566
517 001026 000000
518 001030 000000
519 001032 003514
520 001034 000000
521 001036 000000
522 001040 000000
523 001042 000000
524 001044 000000
525 001046 000000
526 001050 000000
527 001052 000000
528 001054 000000
529 001056 000000
530 001060 000000
531 001062 000000
532 001064 000000
533 001066 000000
534 001070 000000
535 001072 000000
536 001074
537 001074 002222
538

```

000724

000154

```

R5=%5
R6=%6
R7=%7
PC=%7
POPSP=5726
POPSP2=022626
PRTY7=340
PRTY6=300
PRTY5=240
PRTY4=200
PRTY3=140
PRTY2=100
PRTY1=40
PRTY0=0
BELL=007
TLAST=-1
X=-1
MAINT=BIT13
RNUM=BIT1
DO=BIT0
EMTX=0
JMP START
.=200
JMP GETRDY
TCST: 177340
TCOM: 177342
TCWC: 177344
TCBA: 177346
TCDT: 177350
TCVTR: 214
TCLVL: PRTY6
TPS: 177564
TPB: 177566
ICTR: OPEN
ICNT: OPEN
KSTART: TO
SCOPTR: OPEN
RTNNO: OPEN
NXTST: OPEN
CURTST: OPEN
RCNT: OPEN
CRBUF: OPEN
CRBUFA: OPEN
CARMSK: OPEN
ERCTR: OPEN
CTRA: OPEN
CTRB: OPEN
CTRC: OPEN
CTRD: OPEN
PRVCNT: OPEN
RNDNMB: OPEN
TEMP: OPEN
EMTTAB:

```

.WORD TYP
.LIST

```

;POP THE STACK. SAME AS TST (6)+
;POP STACK TWICE. SAME AS CMP (6)+,(6)+
;PRIORITY LEVEL DEFINITIONS

```

;GO TO START OF PROGRAM.

```

;TC11 STATUS REGISTER.
;TC11 COMMAND REGISTER.
;TC11 WORD COUNT REGISTER.
;TC11 BUS ADDRESS REGISTER.
;TC11 DATA REGISTER.
;TC11 INTERRUPT VECTOR
;TC11 INTERRUPT PRIORITY LEVEL.
;LSP CSR
;LSP BUFFER
;CONTAINS CURRENT ITERATION COUNT
;CONTAINS ACCUMULATED ITERATION COUNT.
;CONTAINS STARTING ROUTINE ADDR.
;CONTAINS CURRENT SCOPE POINTER.

```

;POINTER FOR EMT CALL TYPE

539	001076	002340				.WORD	TYP5		; POINTER FOR EMT CALL TYPES
540						.LIST			
541	001100	002436				.WORD	STAL		; POINTER FOR EMT CALL STALL
542						.LIST			
543	001102	001774				.WORD	ERR		; POINTER FOR EMT CALL ERROR
544						.LIST			
545	001104	001732				.WORD	DTCHK		; POINTER FOR EMT CALL DATCHK
546						.LIST			
547	001106	001706				.WORD	CHLT		; POINTER FOR EMT CALL CHALT
548						.LIST			
549	001110	001630				.WORD	STTCV		; POINTER FOR EMT CALL STCIIV
550						.LIST			
551	001112	001720				.WORD	EHLT		; POINTER FOR EMT CALL EHALT
552						.LIST			
553	001114	001660				.WORD	SRSETT		; POINTER FOR EMT CALL SRESET
554						.LIST			
555	001116	001272				.WORD	CHAINN		; POINTER FOR EMT CALL SCOPE
556						.LIST			
557	001120	001530				.WORD	SAVRG		; POINTER FOR EMT CALL SAVREG
558						.LIST			
559	001122	001570				.WORD	RSTRG		; POINTER FOR EMT CALL RSTREG
560						.LIST			
561	001124	002016				.WORD	ERR1		; POINTER FOR EMT CALL ERROR1
562						.LIST			
563	001126	002372				.WORD	DLY		; POINTER FOR EMT CALL DELAY
564						.LIST			
565	001130	012706	001000		START:	MOV	#SPBOT, %6		; SET BOTTOM OF SP STACK.
566	001134	012767	000340	176634		MOV	#PRTY7, PSW		; SET PRIORITY 7.
567	001142	012767	000006	176634		MOV	#6, MACHER		
568	001150	104000				TYPE			; TYPE TITLE AND INSTRUCTIONS.
569	001152	003314				POTIT			
570	001154	004767	000516		SRSET:	JSR	%7, SETSR		; SET SR OPTIONS DESIRED
571	001160	016767	177646	177652	GETRDY:	MOV	KSTART, NXTST		; ADDR OF 1ST ROUTINE TO NXTST
572	001166	012767	000006	176610	GTRDYX:	MOV	#6, MACHER		; RESET MACHER TRAP.
573	001174	012767	000340	176574		MOV	#PRTY7, PSW		; SET PRIORITY 7.
574	001202	012706	001000			MOV	#SPBOT, R6		; SET BOTTOM OF STACK.
575	001206	104010				SRESET			; ISSUE RESET.
576	001210	004767	000226		GTRDYA:	JSR	R7, FORWD		; ROLL FORWARD TO "NEXT" ROUTINE.
577	001214	032767	001000	176346	GTRDYB:	BIT	#BIT4, SR		; CHECK SELECT ROUTINE SWITCH
578	001222	001002				BNE	GTRDYC		; BRANCH IF SELECT ROUTINE SWITCH IS SET.
579	001224	000177	177612			JMP	@CURTST		; GO RUN CURRENT ROUTINE.
580	001230	016700	176334		GTRDYC:	MOV	SR, R0		; (SR) TO R0
581	001234	042700	177400			BIC	#177400, R0		; MASK UNDESIRED BITS
582	001240	126700	177572			CMPB	RTNNO, R0		; COMPARE RTNNO TO (R0)
583	001244	001002				BNE	GTRDYD		; BRANCH IF ROUTINE NOT FOUND YET.
584	001246	000177	177570			JMP	@CURTST		; GO RUN ROUTINE.
585	001252	022767	177777	177560	GTRDYD:	CMP	#-1, NXTST		; NO. CHECK FOR LAST ROUTINE.
586	001260	001353				BNE	GTRDYA		; BRANCH IF NOT LAST ROUTINE.
587	001262	104000				TYPE			; TYPE INCORRECT RTN SELECTED.
588	001264	003271				AIRCRT			
589	001266	104005				CHALT			; COMMON HALT.
590	001270	000733				BR			; START OVER.
591	001272	016667	000002	177476	CHAINN:	MOV	2(6), 776		
592	001300	016767	177530	177466		MOV	SCOPT, 774		
593	001306	012706	000774			MOV	#774, R6		
594	001312	005267	177512			INC	ICNT		; INCREMENT ICNT.


```

551 001574 012557 000025      MOV      (6)+,RSTPSW
552 001500 012500      MOV      (6)+,%0      ;RESTORE REGS 0 - 4
553 001502 012601      MOV      (6)+,%1      ;FROM STACK.
554 001504 012502      MOV      (6)+,%2
555 001506 012603      MOV      (6)+,%3
556 001510 012604      MOV      (6)+,%4
557 001512 016745 000010      MOV      RSTPSW,-(6)   ;RESTORE PC AND PSW.
558 001516 016745 000002      MOV      RSTPC,-(6)
559 001522 000002      RTI                          ;EXIT
560 001524 000000      RSTPC:  OPEN
561 001526 000000      RSTPSW: OPEN
562                                     ;ROUTINE TO SET TC11 INTERRUPT VECTOR AND PRIORITY
563 001530 017667 000000 000012  STTGV:  MOV      2(6),STPRA+2 ;MOVE VECTOR ADDR TO STPRA+2
564 001536 062716 000002      ADD      #2,2%6        ;SET UP EXIT
565 001542 016701 177150      MOV      TCVTR,%1
566 001546 012721 000000      STPRA:  MOV      #OPEN,(1)+ ;SET VECTOR ADDRESS
567 001552 016721 177142      MOV      TCLVL,(1)+    ;SET PRIORITY
568 001556 000002      RTI                          ;EXIT
569                                     ;ROUTINE TO ISSUE RESET.
570 001660 012700 052525  SRSETT:  MOV      #52525,%0   ;DATA TO RD.
571 001664 005100      COM      %0             ;COMPLEMENT (RD).
572 001666 010067 177770      MOV      %0,SRSETT+2   ;(RD) TO SRSETT+2.
573 001672 000005      RESET                      ;ISSUE RESET. (RD) IS
574 001674 000002      RTI                          ;DISPLAYED. EXIT.
575 001676 104000      SETSR:  TYPE                      ;TYPE SELECT OPTION MESSAGE.
576 001700 003233      RSETSR
577 001702 104005      CHALT                      ;COMMON HALT.
578 001704 000207      RTS                          ;EXIT.
579                                     ;COMMON HALT ROUTINE
580 001706 011600      CHLT:  MOV      2%6,%0   ;DEVELOP ADDRESS OF CALLER.
581 001710 162700 000002      SUB      #2,%0
582 001714 000000      HALT                      ;HALT. ADDRESS OF CALL INSTRUCTION
583 001716 000002      RTI                          ;IN DATA LIGHTS.
584                                     ;CONDITIONAL ERROR HALT ROUTINE.
585 001720 005767 175644  EHLT:  TST      SR          ;CHECK FOR HALT ON ERROR.
586 001724 100001      SPL      EHLTA          ;BRANCH IF NO HALT DESIRED.
587 001726 000000      HALT                      ;HALT.
588 001730 000002      RTI                          ;IN DATA LIGHTS.
589                                     ;DATA CHECK ROUTINE.
590 001732 026767 177110 177110  DTCHK:  CMP      CRBUF,CRBUFA ;COMPARE EXPECTED AND RECEIVED
591 001740 001414      BEQ      DTCHKA          ;CHARS. BRANCH IF SAME.
592 001742 004567 000714      JSR      %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
593 001746 001046      CRBUF                      ;SOURCE ADDR.
594 001750 003176      RASB                      ;DESTINATION ADDR.
595 001752 000003      3                          ;#OF DIGITS TO CONVERT.
596 001754 004567 000702      JSR      %5,OACNV        ;GO TO OCTAL TO ASCII CONVERT.
597 001760 001050      CRBUFA                     ;SOURCE ADDR.
598 001762 003160      RASB                      ;DESTINATION ADDR.
599 001764 000003      3                          ;#OF DIGITS TO CONVERT.
700 001766 104014      ERROR1
701 001770 003137      ERDAT
702 001772 000002      RTI
703 001774 012767 177777 000126  ERR:  MOV      #-1,ERRB      ;EXIT.
704 002002 012767 000240 000122  MOV      #240,ERRB+2    ;SET UP ONE MESSAGE CALL.
705 002010 005067 000132      CLR      ERRE
706 002014 000413      BR      ERRA

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707 002016 011557 000106 ERR1: MOV 3%6,ERRB ;DEVELOP ADDT'L MESSAGE ADDR.
708 002022 017757 000102 000100 MOV 3ERRB,ERRB ;STORE AT ERRB.
709 002030 012757 177777 000074 MOV #-1,ERRB+2
710 002036 012757 000002 000102 MOV #2,ERRE
711 002044 032757 020000 175516 ERRA: BIT #BIT13,SR ;INHIBIT ERROR PRINT?
712 002052 001030 BNE ERRC ;BRANCH TO INHIBIT PRINT.
713 002054 011557 000064 MOV 3%6,ERRD ;DEVELOP CALLING ADDR.
714 002060 162757 000002 000056 SUB #2,ERRD
715 002066 004557 000570 JSR RS,OACNV ;CONVERT TEST # TO ASCII.
716 002072 001030 RTNNO
717 002074 003102 ATNUMB
718 002076 000003 3
719 002100 004557 000556 JSR %5,OACNV ;GO TO OCTAL TO ASCII CONVERT.
720 002104 002144 ERRD ;SOURCE ADDR.
721 002106 003112 APC ;DESTINATION ADDR.
722 002110 000006 5 ;#OF DIGITS TO CONVERT.
723 002112 004557 000650 JSR RS,BDCNV ;CONVERT ICNT TO DECIMAL ASCII.
724 002116 001030 ICNT
725 002120 003127 AICNT
726 002122 000005 5
727 002124 104001 TYPES ;TYPE:
728 002126 003076 EMO ;ERROR HEADER,
729 002130 000000 ERRB: OPEN ;ADDT'L ERROR MESSAGE IF ANY.
730 002132 177777 -1
731 002134 104007 ERRC: EHALT ;GO ERR HALT IF DESIRED.
732 002136 066716 000004 ADD ERRE,3%6
733 002142 000002 RTI ;EXIT.
734 002144 000000 ERRD: OPEN
735 002146 000000 ERRE: OPEN
736 ;RANDOM NUMBER GENERATOR. ROUTINE EXITS WITH NUMBER IN REGISTER 0.
737 002150 016700 000042 RNGEN: MOV RP1,%0
738 002154 006100 ROL %0
739 002156 006100 ROL %0
740 002160 066700 000034 ADD RP2,%0
741 002164 010067 000026 MOV %0,RP1
742 002170 006100 ROL %0
743 002172 006100 ROL %0
744 002174 066700 000020 ADD RP2,%0
745 002200 006100 ROL %0
746 002202 006100 ROL %0
747 002204 010067 000010 MOV %0,RP2
748 002210 016700 000002 MOV RP1,%0
749 002214 000207 RTS ;EXIT. NUMBER IN R0
750 002216 001233 RP1: 1233
751 002220 007622 RP2: 7622
752 ;SUBROUTINE TO OUTPUT ASCII MESSAGE ON TELETYPE PRINTER.
753 002222 011600 ↑YP: MOV 3%6,%0 ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS.
754 002224 062716 000002 ADD #2,3%6 ;SET UP EXIT.
755 002230 011000 MOV 3%0,%0 ;ADDRESS OF MESSAGE TO R0.
756 002232 112067 000100 TYPA: MOVB (0)+,TYPDAT ;GET CHARACTER
757 002236 001006 BNE TYPC ;BRANCH IF NOT TERMINATOR..
758 002240 112767 000177 000070 MOVB #177,TYPDAT ;OUTPUT RUBOUT.
759 002246 004767 000020 JSR %7,TYPD
760 002252 000002 RTI ;TERMINATOR CHAR. DONE. EXIT.
761 002254 122767 000045 000054 TYPC: CMPB #45,TYPDAT ;CHECK FOR"%".
762 002262 001412 BEQ TYPF ;BRANCH IF"%".

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763 002264 004767 000002      JSR      %7,TYPD      ;TYPE CHAR IN TYPDAT
764 002270 000760              BR        TYPB
765 002272 116777 000040 176524 TYPD:  MOVB    TYPDAT,%TPB ;OUTPUT CHARACTER TO PRINTER
766 002300 105777 176516      TSTB    %TPS         ;WAIT FOR DONE FLAG.
767 002204 100375              BPL      -4
768 002306 000207              RTS
769 002310 112767 000015 000020 TYPF:  MOVB    #15,TYPDAT ;MOVE CARRIAGE RETURN CODE TO TYPDAT
770 002316 004767 177750      JSR      %7,TYPD      ;GO TYPE CHAR.
771 002322 112767 000012 000006 TYPG:  MOVB    #12,TYPDAT ;MOVE LF CODE TO TYPDAT.
772 002330 004767 177736      JSR      %7,TYPD      ;GO TYPE CHAR.
773 002334 000736              BR        TYPB
774 002336 000000      TYPDAT: OPEN
775              SUBROUTINE TO OUTPUT A SERIES OF ASCII MESSAGES ON TELETYPE PRINTER
776 002340 011600      TYPB:  MOV     %7,%0      ;GET ADDRESS THAT CONTAINS MESSAGE ADDRESS
777 002342 062716 000002      ADD     #2,%0          ;UPDATE TO NEXT MESSAGE ADDRESS
778 002346 011067 000014      MOV     %0,TYPSB     ;ADDRESS OF MESSAGE TO TYPSB
779 002352 022767 177777 000006      CMP     #-1,TYPSB    ;CHECK FOR TERMINATOR
780 002350 001001              BNE     TYPB         ;BRANCH IF NOT TERMINATOR.
781 002362 000002              RTI
782 002364 104000      TYPB:  TYPE     ;CALL ON TYP SUB TO TYPE MESSAGE
783 002366 000000      TYPSB: OPEN        ;ADDRESS OF MESSAGE GOES HERE
784 002370 000763      JR      TYPB       ;GO PROCESS NEXT MESSAGE
785              SUBROUTINE TO DELAY A SPECIFIED NUMBER OF MILLISECONDS
786 002372 011667 000036      DLY:  MOV     %7,DLCNT ;GET DELAY COUNT ADDRESS.
787 002376 062716 000002      ADD     #2,%7        ;SET UP EXIT ADDRESS
788 002402 017746 000026      MOV     %DLCNT,-(6) ;DELAY COUNT TO STACK
789 002406 005067 175364      CLR     PSW          ;SET PRIORITY 0
790 002412 012746 000226      DLYA:  MOV     #226,-(6) ;1 MSEC COUNT TO STACK
791 002416 005316      DLYB:  DEC     %7     ;DECREMENT 1 MSEC COUNT
792 002420 001376              BNE     DLYB        ;BRANCH IF NOT 0.
793 002422 005726      POPSP ;ZERO. UNCOVER MSECS. COUNT.
794 002424 005316      DEC     %7         ;DECREMENT IT
795 002426 001371              BNE     DLYA        ;BR IF NOT DONE DELAYING
796 002430 005726      POPSP ;DONE
797 002432 000002      RTI              ;EXIT.
798 002434 000000      DLCNT: OPEN      ;CONTAINS MILLISECONDS COUNT ADDRESS.
799              SUBROUTINE TO STALL A RANDOM NUMBER OF MILLISECONDS. MAXIMUM STALL
800              DETERMINED BY CONTENTS OF LOC STLMSK.
801 002436 004767 177506      STAL:  JSR     %7,RNGEN ;GO GET RANDOM NUMBER.
802 002442 046700 000014      BIC     STLMSK,%0    ;# IN RD. APPLY STALL MASK.
803 002446 001404              BEQ     STALB       ;BRANCH IF RESULT IS 0.
804 002450 010067 000002      MOV     %0,STALA
805 002454 104015              DELAY
806 002456 000000      STALA: OPEN        ;DELAY COUNT
807 002460 000002      STALB: RTI         ;DONE. EXIT.
808 002462 000000      STLMSK: OPEN      ;STALL MASK.
809              SUBROUTINE TO GENERATE RANDOM CHARACTER COUNT
810 002464 004767 177460      GRCNT: JSR     %7,RNGEN ;GET RANDOM NUMBER
811 002470 046700 000010      BIC     RCMSK,%0    ;APPLY MASK
812 002474 001773              BEQ     GRCNT       ;TRY AGAIN IF RESULT 0
813 002476 010067 000004      MOV     %0,RCNNT   ;COUNT TO RCNNT
814 002502 000207              RTS
815 002504 000000      RCMSK: OPEN        ;RANDOM CHARACTER MASK.
816 002506 000000      RCNNT: OPEN        ;RANDOM CHARACTER COUNT.
817              SUBROUTINE TO INITIALIZE BINARY COUNT PATTERNS
818 002510 012767 177777 000014      INBIN: MOV     #-1,RIND ;SET ALL VARIABLES

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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 PTIP: OPEN
830 ;SPECIAL BINARY COUNT PATTERN SUBROUTINE. EXITS WITH BIN CHAR IN RO
831 002546 016757 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 042757 177400 177736 BIC #177400,PT1 ;MASK TO 8 BITS
837 002600 016757 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 016757 177722 177722 GTBINP: MOV PTOP,PTIP ;PREVIOUS BIN CHAR TO PTIP
841 002622 005167 177716 COM PTIP
842 002626 005167 177706 COM PIND
843 002632 001002 BNE .+6
844 002634 005267 177704 INC PTIP
845 002640 042757 177400 177676 BIC #177400,PTIP ;MASK TO 8 BITS.
846 002646 016757 177672 177666 MOV PTIP,PTOP ;SAVE BIN CHAR IN PTOP.
847 002654 016701 177664 MOV PTIP,%1 ;BIN CHAR TO R1.
848 002660 000207 RTS %7 ;EXIT.
849 ;OCTAL TO ASCII CONVERT ROUTINE
850 002662 013567 000054 OACNV: MOV J(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 MOVB (1)+,(2)+ ;MOVE BYTE
872 002756 005303 DEC %3 ;DECREMENT COUNT
873 002760 001375 BNE BMOVEA ;BRANCH IF NOT DONE.
874 002762 104013 RSTREG ;RESTORE REGS.

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875 002764 000205
876
877 002765 104012
878 002770 013501
879 002772 012700 003070
880 002775 012702 003056
881 003002 012703 000005
882 003006 005004
883 003010 161201
884 003012 103402
885 003014 005204
886 003016 000774
887 003020 061201
888 003022 062704 000060
889 003026 110420
890 003030 005722
891 003032 005303
892 003034 001364
893 003036 012502
894 003040 012502
895 003042 060201
896 003044 114041
897 003046 005302
898 003050 001375
899 003052 104013
900 003054 000205
901 003056 023420
902 003060 001750
903 003062 000144
904 003064 000012
905 003066 000001
906 003070 040 040
907 003073 040 040 040
908
909 003076 022445 020124
910 003102 020040 020040 050040
911 003110 020103
912 003112 020040 020040 020040
913 003120 020040 041511 052116
914 003126 040
915 003127 040 020040 020040
916 003134 022456 000
917 003137 040 042040 052101
918 003144 020101 051105 020122
919 003152 051440 041057 020072
920 003160 020040 020040 020040
921 003166 020040 053440 051501
922 003174 020072
923 003176 020040 020040 020040
924 003204 020040 050040 042522
925 003212 044526 052517 020123
926 003220 040527 020123
927 003224 020040 020040 020040
928 003232 000
929 003233 045 042523 020124
930 003240 051123 047440 052120

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RTS R5 ; 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.
BDCNVD: MOV R2,R1 ; START WITH LSD.
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
DECVAL: .BYTE 040,040,040,040,040,040
; ASCII MESSAGES
EMO: .ASCII '%XT '
ATNUMB: .ASCII ' PC '
APC: .ASCII ' ICNT '
AICNT: .ASCIZ ' .%'
ERDAT: .ASCII ' DATA ERR S/B: '
AASB: .ASCII ' WAS: '
AWAS: .ASCII ' PREVIOUS WAS '
APWAS: .ASCIZ '
ASETSR: .ASCIZ '%SET SR OPTIONS. NORMAL SR =0'

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TC1 - TC11 TEST 1
DZTC001.P11

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931	003246	047511	051516	020056	
932	003254	047516	046522	046101	
933	003262	051440	020122	030075	
934	003270	000			
935	003271	045	047111	040526	AINCRT: .ASCII 'INVALID TEST.'
936	003276	044514	020104	042524	
937	003304	052123	000056		
938	003310	007			APGEN0: .BYTE 007
939	003311	045	000052		.ASCII2 '**'
940	003314	022445	041524	020061	POTIT: .ASCII '%TC1 TC11 TEST 1%'
941	003322	041524	030461	052040	
942	003330	051505	020124	022461	
943	003336	046101	020114	047125	.ASCII? 'ALL UNITS MUST BE DESELECTED'
944	003344	052111	020123	052515	
945	003352	052123	041040	020105	
946	003360	042504	042523	042514	
947	003366	052103	042105	000	
948	003373	045	051045	052517	TOMSG: .ASCII '%ROUTINE 0. TC11 CONTROL DELAY ADJUSTMENT ROUTINE.'
949	003400	044524	042516	030040	
950	003406	020056	041524	030461	
951	003414	041440	047117	051124	
952	003422	046117	042040	046105	
953	003430	054501	040440	045104	
954	003436	051525	046524	047105	
955	003444	020124	047522	052125	
956	003452	047111	027105		
957	003456	051045	043105	051105	.ASCII2 '%REFER TO PROGRAM DOCUMENT.%%'
958	003464	052040	020117	051120	
959	003472	043517	040522	020115	
960	003500	047504	052503	042515	
961	003506	052116	022456	000045	
962					.EVEN

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963
964
965 003514 000000
966 003516 003614
967 003520 000001
968 003522 003524
969
970
971
972
973
974 003524 032767 001000 174036
975 003532 001001
976 003534 104011
977
978 003536 104000
979 003540 003373
980 003542 104005
981 003544 012777 020003 175234
982 003552 012777 000100 175224
983 003560 005067 175244
984 003554 005267 175240
985 003570 026767 175234 173772
986 003576 101772
987 003600 005077 175200
988 003604 012777 021000 175174
989 003612 000754
990
991 003614 000001
992 003616 003646
993 003620 001750
994 003622 003624
995
996
997
998 003624 012767 003643 174152
999 003632 005777 175150
1000 003636 104011
1001 003640 104003
1002 003642 022626
1003 003644 104011
1004
1005 003646 000002
1006 003650 003700
1007 003652 001750
1008 003654 003656
1009
1010
1011
1012 003656 012767 003672 174120
1013 003664 005777 175114
1014 003670 104011
1015 003672 104003
1016 003674 022626
1017 003676 104011
1018

;*****
t0: 0 ;ROUTINE NUMBER 0 *
    T1 ;ADDRESS OF NEXT ROUTINE *
    1 ;TEST ITERATION COUNT *
    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.
XAA: BIT #BIT9,SR ;ROUTINE SELECT SWITCH SET? *
      BNE XAB ;BR IF YES. *
      SCOPE ;NO. GET OUT. *
;
XAB: TYPE ;TYPE ID AND INSTRUCTIONS.
      TOMSG
      CHALT ;WAIT FOR USER.
XAC: MOV #MAINT!RNUM!DO, @TCCM
      MOV #100, @TCST ;SET CLOCK FOR TP1.
      CLR ICNT ;CLEAR TIMER.
XAD: INC ICNT ;INCREMENT TIMER.
      CMP ICNT, SR
      BLOS XAD
      CLR @TCST
      MOV #21000, @TCCM ;SET 120 MSEC DELAY.
      BR XAC
;*****
t1: 1 ;ROUTINE NUMBER 1 *
    T2 ;ADDRESS OF NEXT ROUTINE *
    1000. ;TEST ITERATION COUNT *
    AAA ;SCOPE ENTRY POINT *
    .LIST
;*****
;TEST ABILITY TO REFERENCE TCCM WITHOUT TRAPPING.
AAA: MOV #AAB, MACHER ;SET UP BUS ERROR TRAP.
      TST @TCCM ;REFERENCE RREG.
      SCOPE ;OK IF NO TRAP OCCURS. SCOPE.
AAB: ERROR ;TRAPPED WHEN REFERENCING RREG.
      POPSP2
      SCOPE ;SCOPE
;*****
t2: 2 ;ROUTINE NUMBER 2 *
    T3 ;ADDRESS OF NEXT ROUTINE *
    1000. ;TEST ITERATION COUNT *
    ABA ;SCOPE ENTRY POINT *
    .LIST
;*****
;TEST ABILITY TO REFERENCE TCST WITHOUT TRAPPING.
ABA: MOV #ABB, MACHER ;SET UP BUS ERROR TRAP.
      TST @TCST ;REFERENCE RREG.
      SCOPE ;OK IF NO TRAP OCCURS. SCOPE.
ABB: ERROR ;TRAPPED WHEN REFERENCING RREG.
      POPSP2
      SCOPE ;SCOPE
;*****

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1019 003700 000003          T3:      3          ;ROUTINE NUMBER 3          *
1020 003702 003732          T4          ;ADDRESS OF NEXT ROUTINE *
1021 003704 001750          1000.      ;TEST ITERATION COUNT    *
1022 003705 003710          ACA          ;SCOPE ENTRY POINT      *
1023          .LIST
1024          ;*****
1025          ;TEST ABILITY TO REFERENCE TCDT WITHOUT TRAPPING.
1026 003710 012767 003724 174056 ACA:  MOV      #ACB,MACHER ;SET UP BUS ERROR TRAP.
1027 003715 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
1032          ;SCOPE
1033          ;*****
1034          T4:      4          ;ROUTINE NUMBER 4          *
1035 003734 003764          T5          ;ADDRESS OF NEXT ROUTINE *
1036 003736 001750          1000.      ;TEST ITERATION COUNT    *
1037 003740 003742          ADA          ;SCOPE ENTRY POINT      *
1038          .LIST
1039          ;*****
1040          ;TEST ABILITY TO REFERENCE TCBA WITHOUT TRAPPING.
1041 003742 012767 003756 174034 ADA:  MOV      #ADB,MACHER ;SET UP BUS ERROR TRAP.
1042 003750 005777 175036          TST      @TCBA      ;REFERENCE RREG.
1043 003754 104011          SCOPE      ;OK IF NO TRAP OCCURS. SCOPE.
1044 003756 104003          ADB:  ERROR      ;TRAPPED WHEN REFERENCING RREG.
1045 003760 022626          POPSP2
1046 003762 104011          SCOPE
1047          ;SCOPE
1048          ;*****
1049          T5:      5          ;ROUTINE NUMBER 5          *
1050 003766 004016          T6          ;ADDRESS OF NEXT ROUTINE *
1051 003770 001750          1000.      ;TEST ITERATION COUNT    *
1052 003772 003774          AEA          ;SCOPE ENTRY POINT      *
1053          .LIST
1054          ;*****
1055          ;TEST ABILITY TO REFERENCE TCWC WITHOUT TRAPPING.
1056 003774 012767 004010 174002 AEA:  MOV      #AEB,MACHER ;SET UP BUS ERROR TRAP.
1057 004007 005777 175002          TST      @TCWC      ;REFERENCE RREG.
1058 004006 104011          SCOPE      ;OK IF NO TRAP OCCURS. SCOPE.
1059 004010 104003          AEB:  ERROR      ;TRAPPED WHEN REFERENCING RREG.
1060 004012 022626          POPSP2
1061 004014 104011          SCOPE
1062          ;SCOPE
1063          ;*****
1064          T6:      6          ;ROUTINE NUMBER 6          *
1065 004016 000006          T7          ;ADDRESS OF NEXT ROUTINE *
1066 004020 004072          100.        ;TEST ITERATION COUNT    *
1067 004022 000144          AFA          ;SCOPE ENTRY POINT      *
1068 004024 004026          .LIST
1069          ;*****
1070          ;TEST THAT TCDT BIT0 CAN BE SET, AND CLEARED.
1071 004026 052777 000001 174760 AFA:  BIS      #BIT0,@TCDT ;SET TCDT BIT0.
1072 004034 032777 000001 174752          BIT      #BIT0,@TCDT ;SEE IF BIT IS SET.
1073 004042 001002          BNE      .+6          ;BRANCH IF SET.
1074 004044 104003          ERROR      ;TCDT BIT0 FAILED TO SET.
1075 004046 104011          SCOPE
1076 004050 042777 000001 174736          BIC      #BIT0,@TCDT ;CLEAR TCDT BIT0.
1077 004056 032777 000001 174730          BIT      #BIT0,@TCDT ;SEE IF BIT IS CLEAR.

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1075 004064 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
1076 004066 104003          ERROR     ;TCDT BIT0 FAILED TO CLEAR.
1077 004070 104011          SCOPE    ;SCOPE.
1078                                     ;*****
1079 004072 000007          †7:      7           ;ROUTINE NUMBER 7          *
1080 004074 004126          T10     ;ADDRESS OF NEXT ROUTINE *
1081 004076 000012          10.    ;TEST ITERATION COUNT   *
1082 004100 004102          BAFA    ;SCOPE ENTRY POINT     *
1083                                     .LIST
1084                                     ;*****
1085                                     ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT0
1086 004102 052777 000C01 174704 BAFA:  BIS      #BIT0,@TCDT ;SET TCDT BIT0
1087 004110 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
1088 004112 032777 000001 174674 BIT      #BIT0,@TCDT ;SEE IF BIT IS CLEAR.
1089 004120 001401          BEQ     BAFB        ;BR IF BIT IS CLEAR.
1090 004122 104003          ERROR  ;RESET FAILED TO CLEAR TCDT BIT0
1091 004124 104011          BAFB:  SCOPE    ;SCOPE.
1092                                     ;*****
1093 004126 000010          †10:   10          ;ROUTINE NUMBER 10       *
1094 004130 004202          T11    ;ADDRESS OF NEXT ROUTINE *
1095 004132 000144          100.  ;TEST ITERATION COUNT   *
1096 004134 004136          AGA   ;SCOPE ENTRY POINT     *
1097                                     .LIST
1098                                     ;*****
1099                                     ;TEST THAT TCDT BIT1 CAN BE SET, AND CLEARED.
1100 004136 052777 000002 174650 AGA:  BIS      #BIT1,@TCDT ;SET TCDT BIT1.
1101 004144 032777 000002 174642 BIT      #BIT1,@TCDT ;SEE IF BIT IS SET.
1102 004152 001002          BNE     .+6          ;BRANCH IF SET.
1103 004154 104003          ERROR  ;TCDT BIT1 FAILED TO SET.
1104 004156 104011          SCOPE
1105 004160 042777 000002 174626 BIC      #BIT1,@TCDT ;CLEAR TCDT BIT1.
1106 004166 032777 000002 174620 BIT      #BIT1,@TCDT ;SEE IF BIT IS CLEAR.
1107 004174 001401          BEQ     .+4          ;BRANCH IF BIT IS CLEAR.
1108 004176 104003          ERROR  ;TCDT BIT1 FAILED TO CLEAR.
1109 004200 104011          SCOPE  ;SCOPE.
1110                                     ;*****
1111 004202 000011          †11:   11          ;ROUTINE NUMBER 11       *
1112 004204 004236          T12    ;ADDRESS OF NEXT ROUTINE *
1113 004206 000012          10.    ;TEST ITERATION COUNT   *
1114 004210 004212          BAGA   ;SCOPE ENTRY POINT     *
1115                                     .LIST
1116                                     ;*****
1117                                     ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT1
1118 004212 052777 000002 174574 BAGA:  BIS      #BIT1,@TCDT ;SET TCDT BIT1
1119 004220 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
1120 004222 032777 000002 174564 BIT      #BIT1,@TCDT ;SEE IF BIT IS CLEAR.
1121 004230 001401          BEQ     BAGB        ;BR IF BIT IS CLEAR.
1122 004232 104003          ERROR  ;RESET FAILED TO CLEAR TCDT BIT1
1123 004234 104011          BAGB:  SCOPE    ;SCOPE.
1124                                     ;*****
1125 004236 000012          †12:   12          ;ROUTINE NUMBER 12       *
1126 004240 004312          T13    ;ADDRESS OF NEXT ROUTINE *
1127 004242 000144          100.  ;TEST ITERATION COUNT   *
1128 004244 004246          AHA   ;SCOPE ENTRY POINT     *
1129                                     .LIST
1130                                     ;*****

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1131                                     ;TEST THAT TCDT BIT2 CAN BE SET, AND CLEARED.
1132 004246 052777 000004 174540 AHA:  BIS      #BIT2,@TCDT ;SET TCDT BIT2.
1133 004254 032777 000004 174532      BIT      #BIT2,@TCDT ;SEE IF BIT IS SET.
1134 004262 001002                        BNE      .+6           ;BRANCH IF SET.
1135 004264 104003                        ERROR    ;TCDT BIT2 FAILED TO SET.
1136 004266 104011                        SCOPE
1137 004270 042777 000004 174516      BIC      #BIT2,@TCDT ;CLEAR TCDT BIT2.
1138 004276 032777 000004 174510      BIT      #BIT2,@TCDT ;SEE IF BIT IS CLEAR.
1139 004304 001401                        BEQ      .+4           ;BRANCH IF BIT IS CLEAR.
1140 004306 104003                        ERROR    ;TCDT BIT2 FAILED TO CLEAR.
1141 004310 104011                        SCOPE
1142                                     ;*****
1143 004312 000013 t13:  13          ;ROUTINE NUMBER 13 *
1144 004314 004346      T14          ;ADDRESS OF NEXT ROUTINE *
1145 004316 000012      10.          ;TEST ITERATION COUNT *
1146 004320 004322      BABA          ;SCOPE ENTRY POINT *
1147                                     .LIST
1148                                     ;*****
1149                                     ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT2
1150 004322 052777 000004 174464 BABA:  BIS      #BIT2,@TCDT ;SET TCDT BIT2
1151 004330 104010                        SRESET   ;ISSUE RESET TO CLEAR BIT.
1152 004332 032777 000004 174454      BIT      #BIT2,@TCDT ;SEE IF BIT IS CLEAR.
1153 004340 001401                        BEQ      BAHB          ;BR IF BIT IS CLEAR.
1154 004342 104003                        ERROR    ;RESET FAILED TO CLEAR TCDT BIT2
1155 004344 104011                        BAHB:  SCOPE          ;SCOPE.
1156                                     ;*****
1157 004346 000014 t14:  14          ;ROUTINE NUMBER 14 *
1158 004350 004422      T15          ;ADDRESS OF NEXT ROUTINE *
1159 004352 000144      100.         ;TEST ITERATION COUNT *
1160 004354 004356      AIA          ;SCOPE ENTRY POINT *
1161                                     .LIST
1162                                     ;*****
1163                                     ;TEST THAT TCDT BIT3 CAN BE SET, AND CLEARED.
1164 004356 052777 000010 174430 AIA:  BIS      #BIT3,@TCDT ;SET TCDT BIT3.
1165 004364 032777 000010 174422      BIT      #BIT3,@TCDT ;SEE IF BIT IS SET.
1166 004372 001002                        BNE      .+6           ;BRANCH IF SET.
1167 004374 104003                        ERROR    ;TCDT BIT3 FAILED TO SET.
1168 004376 104011                        SCOPE
1169 004400 042777 000010 174406      BIC      #BIT3,@TCDT ;CLEAR TCDT BIT3.
1170 004406 032777 000010 174400      BIT      #BIT3,@TCDT ;SEE IF BIT IS CLEAR.
1171 004414 001401                        BEQ      .+4           ;BRANCH IF BIT IS CLEAR.
1172 004416 104003                        ERROR    ;TCDT BIT3 FAILED TO CLEAR.
1173 004420 104011                        SCOPE
1174                                     ;*****
1175 004422 000015 t15:  15          ;ROUTINE NUMBER 15 *
1176 004424 004456      T16          ;ADDRESS OF NEXT ROUTINE *
1177 004426 000012      10.          ;TEST ITERATION COUNT *
1178 004430 004432      BAlA          ;SCOPE ENTRY POINT *
1179                                     .LIST
1180                                     ;*****
1181                                     ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT3
1182 004432 052777 000010 174354 BAlA:  BIS      #BIT3,@TCDT ;SET TCDT BIT3
1183 004440 104010                        SRESET   ;ISSUE RESET TO CLEAR BIT.
1184 004442 032777 000010 174344      BIT      #BIT3,@TCDT ;SEE IF BIT IS CLEAR.
1185 004450 001401                        BEQ      BAIB          ;BR IF BIT IS CLEAR.
1186 004452 104003                        ERROR    ;RESET FAILED TO CLEAR TCDT BIT3

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1187 004454 104011      BAIB:  SCOPE                ;SCOPE.
1188                      ;*****
1189 004456 000016      †16:  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      †17:  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      †20:  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 BITS CAN BE SET, AND CLEARED.
1228 004576 052777 000040 174210  AKA:  BIS    #BITS,@TCDT   ;SET TCDT BITS.
1229 004604 032777 000040 174202      BIT    #BITS,@TCDT   ;SEE IF BIT IS SET.
1230 004612 001002      BNE    .+6             ;BRANCH IF SET.
1231 004614 104003      ERROR ;TCDT BITS FAILED TO SET.
1232 004616 104011      SCOPE
1233 004620 042777 000040 174166      BIC    #BITS,@TCDT   ;CLEAR TCDT BITS.
1234 004626 032777 000040 174160      BIT    #BITS,@TCDT   ;SEE IF BIT IS CLEAR.
1235 004634 001401      BEQ    .+4             ;BRANCH IF BIT IS CLEAR.
1236 004636 104003      ERROR ;TCDT BITS FAILED TO CLEAR.
1237 004640 104011      SCOPE ;SCOPE.
1238                      ;*****
1239 004642 000021      †21:  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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1243          .LIST
1244          ;*****
1245          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BITS
1246 004652 052777 000040 174134 BAKA:  BIS  #BIT5,@TCDT  ;SET TCDT BITS
1247 004660 104010          SRESET  ;ISSUE RESET TO CLEAR BIT.
1248 004662 032777 000040 174124      BIT  #BIT5,@TCDT  ;SEE IF BIT IS CLEAR.
1249 004670 001401          BEQ  BAKB      ;BR IF BIT IS CLEAR.
1250 004672 104003          ERROR          ;RESET FAILED TO CLEAR TCDT BITS
1251 004674 104011 BAKB:  SCOPE          ;SCOPE.
1252          ;*****
1253 004676 000022 t22:  22          ;ROUTINE NUMBER 22          *
1254 004700 004752      T23          ;ADDRESS OF NEXT ROUTINE      *
1255 004702 000144      100.          ;TEST ITERATION COUNT          *
1256 004704 004706      ALA          ;SCOPE ENTRY POINT          *
1257          .LIST
1258          ;*****
1259          ;TEST THAT TCDT BIT6 CAN BE SET, AND CLEARED.
1260 004706 052777 000100 174100 ALA:  BIS  #BIT6,@TCDT  ;SET TCDT BIT6.
1261 004714 032777 000100 174072      BIT  #BIT6,@TCDT  ;SEE IF BIT IS SET.
1262 004722 001002          BNE  .+6          ;BRANCH IF SET.
1263 004724 104003          ERROR          ;TCDT BIT6 FAILED TO SET.
1264 004726 104011          SCOPE
1265 004730 042777 000100 174056      BIC  #BIT6,@TCDT  ;CLEAR TCDT BIT6.
1266 004736 032777 000100 174050      BIT  #BIT6,@TCDT  ;SEE IF BIT IS CLEAR.
1267 004744 001401          BEQ  .+4          ;BRANCH IF BIT IS CLEAR.
1268 004746 104003          ERROR          ;TCDT BIT6 FAILED TO CLEAR.
1269 004750 104011          SCOPE          ;SCOPE.
1270          ;*****
1271 004752 000023 t23:  23          ;ROUTINE NUMBER 23          *
1272 004754 005006      T24          ;ADDRESS OF NEXT ROUTINE      *
1273 004756 000012      10.          ;TEST ITERATION COUNT          *
1274 004760 004762      BALA          ;SCOPE ENTRY POINT          *
1275          .LIST
1276          ;*****
1277          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT6
1278 004762 052777 000100 174024 BALA:  BIS  #BIT6,@TCDT  ;SET TCDT BIT6
1279 004770 104010          SRESET  ;ISSUE RESET TO CLEAR BIT.
1280 004772 032777 000100 174014      BIT  #BIT6,@TCDT  ;SEE IF BIT IS CLEAR.
1281 005000 001401          BEQ  BALB      ;BR IF BIT IS CLEAR.
1282 005002 104003          ERROR          ;RESET FAILED TO CLEAR TCDT BIT6
1283 005004 104011 BALB:  SCOPE          ;SCOPE.
1284          ;*****
1285 005006 000024 t24:  24          ;ROUTINE NUMBER 24          *
1286 005010 005062      T25          ;ADDRESS OF NEXT ROUTINE      *
1287 005012 000144      100.          ;TEST ITERATION COUNT          *
1288 005014 005016      AMA          ;SCOPE ENTRY POINT          *
1289          .LIST
1290          ;*****
1291          ;TEST THAT TCDT BIT7 CAN BE SET, AND CLEARED.
1292 005016 052777 000200 173770 AMA:  BIS  #BIT7,@TCDT  ;SET TCDT BIT7.
1293 005024 032777 000200 173762      BIT  #BIT7,@TCDT  ;SEE IF BIT IS SET.
1294 005032 001002          BNE  .+6          ;BRANCH IF SET.
1295 005034 104003          ERROR          ;TCDT BIT7 FAILED TO SET.
1296 005036 104011          SCOPE
1297 005040 042777 000200 173746      BIC  #BIT7,@TCDT  ;CLEAR TCDT BIT7.
1298 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          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 BITS CAN BE SET, AND CLEARED.
1324 005126 052777 000400 173660 ANA: BIS      #BIT8,@TCDT ;SET TCDT BITS.
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 BITS.
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          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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B03

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1355          :TEST THAT TCDT BIT9 CAN BE SET, AND CLEARED.
1356 005236 052777 001000 173550 AOA:  BIS      #BIT9,2TCDT  ;SET TCDT BIT9.
1357 005244 032777 001000 173542      BIT      #BIT9,2TCDT  ;SEE IF BIT IS SET.
1358 005252 001002          BNE      .+6          ;BRANCH IF SET.
1359 005254 104003          ERROR          ;TCDT BIT9 FAILED TO SET.
1360 005256 104011          SCOPE
1361 005260 042777 001000 173526      BIC      #BIT9,2TCDT  ;CLEAR TCDT BIT9.
1362 005266 032777 001000 173520      BIT      #BIT9,2TCDT  ;SEE IF BIT IS CLEAR.
1363 005274 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
1364 005276 104003          ERROR          ;TCDT BIT9 FAILED TO CLEAR.
1365 005300 104011          SCOPE
1366          :*****
1367 005302 000031      †31:  31          ;ROUTINE NUMBER 31          *
1368 005304 005336          T32          ;ADDRESS OF NEXT ROUTINE    *
1369 005306 000012          10.          ;TEST ITERATION COUNT      *
1370 005310 005312          BA0A          ;SCOPE ENTRY POINT        *
1371          .LIST
1372          :*****
1373          :TEST THAT RESET INSTRUCTION CLEARS TCDT BIT9
1374 005312 052777 001000 173474 BA0A:  BIS      #BIT9,2TCDT  ;SET TCDT BIT9
1375 005320 104010          SRESET          ;ISSUE RESET TO CLEAR BIT.
1376 005322 032777 001000 173464      BIT      #BIT9,2TCDT  ;SEE IF BIT IS CLEAR.
1377 005330 001401          BEQ      BA0B          ;BR IF BIT IS CLEAR.
1378 005332 104003          ERROR          ;RESET FAILED TO CLEAR TCDT BIT9
1379 005334 104011          BA0B:  SCOPE          ;SCOPE.
1380          :*****
1381 005336 000032      †32:  32          ;ROUTINE NUMBER 32          *
1382 005340 005412          T33          ;ADDRESS OF NEXT ROUTINE    *
1383 005342 000144          100.         ;TEST ITERATION COUNT      *
1384 005344 005346          APA          ;SCOPE ENTRY POINT        *
1385          .LIST
1386          :*****
1387          :TEST THAT TCDT BIT10 CAN BE SET, AND CLEARED.
1388 005346 052777 002000 173440 APA:  BIS      #BIT10,2TCDT ;SET TCDT BIT10.
1389 005354 032777 002000 173432      BIT      #BIT10,2TCDT ;SEE IF BIT IS SET.
1390 005362 001002          BNE      .+6          ;BRANCH IF SET.
1391 005364 104003          ERROR          ;TCDT BIT10 FAILED TO SET.
1392 005366 104011          SCOPE
1393 005370 042777 002000 173416      BIC      #BIT10,2TCDT ;CLEAR TCDT BIT10.
1394 005376 032777 002000 173410      BIT      #BIT10,2TCDT ;SEE IF BIT IS CLEAR.
1395 005404 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
1396 005406 104003          ERROR          ;TCDT BIT10 FAILED TO CLEAR.
1397 005410 104011          SCOPE
1398          :*****
1399 005412 000033      †33:  33          ;ROUTINE NUMBER 33          *
1400 005414 005446          T34          ;ADDRESS OF NEXT ROUTINE    *
1401 005416 000012          10.          ;TEST ITERATION COUNT      *
1402 005420 005422          BAPA          ;SCOPE ENTRY POINT        *
1403          .LIST
1404          :*****
1405          :TEST THAT RESET INSTRUCTION CLEARS TCDT BIT10
1406 005422 052777 002000 173364 BAPA:  BIS      #BIT10,2TCDT ;SET TCDT BIT10
1407 005430 104010          SRESET          ;ISSUE RESET TO CLEAR BIT.
1408 005432 032777 002000 173354      BIT      #BIT10,2TCDT ;SEE IF BIT IS CLEAR.
1409 005440 001401          BEQ      BAPB          ;BR IF BIT IS CLEAR.
1410 005442 104003          ERROR          ;RESET FAILED TO CLEAR TCDT BIT10

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1411 005444 104011 BAPB: SCOPE ;SCOPE.
1412 *****
1413 005446 000034 †34: 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 173305 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 †35: 35 ;ROUTINE NUMBER 35 *
1432 005524 005556 T36 ;ADDRESS OF NEXT ROUTINE *
1433 005526 000012 10. ;TEST ITERATION COUNT *
1434 005528 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 †36: 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 †37: 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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1467          .LIST
1468          ;*****
1469          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT12
1470 005642 052777 010000 173144 BARA: BIS #BIT12,@TCDT ;SET TCDT BIT12
1471 005650 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
1472 005652 032777 010000 173134 BIT #BIT12,@TCDT ;SEE IF BIT IS CLEAR.
1473 005650 001401          BEQ BARB ;BR IF BIT IS CLEAR.
1474 005662 104003          ERROR ;RESET FAILED TO CLEAR TCDT BIT12
1475 005664 104011          BARB: SCOPE ;SCOPE.
1476          ;*****
1477 005666 000040 †40: 40 ;ROUTINE NUMBER 40 *
1478 005670 005742          T41 ;ADDRESS OF NEXT ROUTINE *
1479 005672 000144          100. ;TEST ITERATION COUNT *
1480 005674 005676          ASA ;SCOPE ENTRY POINT *
1481          .LIST
1482          ;*****
1483          ;TEST THAT TCDT BIT13 CAN BE SET, AND CLEARED.
1484 005676 052777 020000 173110 ASA: BIS #BIT13,@TCDT ;SET TCDT BIT13.
1485 005704 032777 020000 173102 BIT #BIT13,@TCDT ;SEE IF BIT IS SET.
1486 005712 001002          BNE .+6 ;BRANCH IF SET.
1487 005714 104003          ERROR ;TCDT BIT13 FAILED TO SET.
1488 005716 104011          SCOPE
1489 005720 042777 020000 173066 BIC #BIT13,@TCDT ;CLEAR TCDT BIT13.
1490 005726 032777 020000 173060 BIT #BIT13,@TCDT ;SEE IF BIT IS CLEAR.
1491 005734 001401          BEQ .+4 ;BRANCH IF BIT IS CLEAR.
1492 005736 104003          ERROR ;TCDT BIT13 FAILED TO CLEAR.
1493 005740 104011          SCOPE ;SCOPE.
1494          ;*****
1495 005742 000041 †41: 41 ;ROUTINE NUMBER 41 *
1496 005744 005776          T42 ;ADDRESS OF NEXT ROUTINE *
1497 005746 000012          10. ;TEST ITERATION COUNT *
1498 005750 005752          BASA ;SCOPE ENTRY POINT *
1499          .LIST
1500          ;*****
1501          ;TEST THAT RESET INSTRUCTION CLEARS TCDT BIT13
1502 005752 052777 020000 173034 BASA: BIS #BIT13,@TCDT ;SET TCDT BIT13
1503 005760 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
1504 005762 032777 020000 173024 BIT #BIT13,@TCDT ;SEE IF BIT IS CLEAR.
1505 005770 001401          BEQ BASB ;BR IF BIT IS CLEAR.
1506 005772 104003          ERROR ;RESET FAILED TO CLEAR TCDT BIT13
1507 005774 104011          BASB: SCOPE ;SCOPE.
1508          ;*****
1509 005776 000042 †42: 42 ;ROUTINE NUMBER 42 *
1510 006000 006052          T43 ;ADDRESS OF NEXT ROUTINE *
1511 006002 000144          100. ;TEST ITERATION COUNT *
1512 006004 006006          ATA ;SCOPE ENTRY POINT *
1513          .LIST
1514          ;*****
1515          ;TEST THAT TCDT BIT14 CAN BE SET, AND CLEARED.
1516 006006 052777 040000 173000 ATA: BIS #BIT14,@TCDT ;SET TCDT BIT14.
1517 006014 032777 040000 172772 BIT #BIT14,@TCDT ;SEE IF BIT IS SET.
1518 006022 001002          BNE .+6 ;BRANCH IF SET.
1519 006024 104003          ERROR ;TCDT BIT14 FAILED TO SET.
1520 006026 104011          SCOPE
1521 006030 042777 040000 172756 BIC #BIT14,@TCDT ;CLEAR TCDT BIT14.
1522 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      †43: 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          SCOPE          ;SCOPE.
1540 ;*****
1541 006106 000044      †44: 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          ;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      †45: 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          SCOPE          ;SCOPE.
1572 ;*****
1573 006216 000046      †46: 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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1635 006434 104011 BAWB: SCOPE ;SCOPE.
1636 ;*****
1637 006436 000052 †52: 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 †53: 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 †54: 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 †55: 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
1691
1692
1693
1694 006632 052777 000020 172152 BAYA: BIS #BIT4,@TCBA ;SET TCBA BIT4
1695 006640 104010 ;SRESET ;ISSUE RESET TO CLEAR BIT.
1696 006642 032777 000020 172142 BIT #BIT4,@TCBA ;SEE IF BIT IS CLEAR.
1697 006650 001401 BEQ BAYB ;BR IF BIT IS CLEAR.
1698 006652 104003 ERROR ;RESET FAILED TO CLEAR TCBA BIT4
1699 006654 104011 BAYB: SCOPE ;SCOPE.
:*****
†56: 56 ;ROUTINE NUMBER 56 *
T57 ;ADDRESS OF NEXT ROUTINE *
100. ;TEST ITERATION COUNT *
AZA ;SCOPE ENTRY POINT *
.LIST
:*****
:TEST THAT TCBA BITS CAN BE SET, AND CLEARED.
1701 006656 000056
1702 006660 006732
1703 006662 000144
1704 006664 006666
1705
1706
1707
1708 006666 052777 000040 172116 AZA: BIS #BITS,@TCBA ;SET TCBA BITS.
1709 006674 032777 000040 172110 BIT #BITS,@TCBA ;SEE IF BIT IS SET.
1710 006702 001002 BNE .+6 ;BRANCH IF SET.
1711 006704 104003 ERROR ;TCBA BITS FAILED TO SET.
1712 006706 104011 SCOPE
1713 006710 042777 000040 172074 BIC #BITS,@TCBA ;CLEAR TCBA BITS.
1714 006716 032777 000040 172066 BIT #BITS,@TCBA ;SEE IF BIT IS CLEAR.
1715 006724 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
1716 006726 104003 ERROR ;TCBA BITS FAILED TO CLEAR.
1717 006730 104011 SCOPE ;SCOPE.
:*****
†57: 57 ;ROUTINE NUMBER 57 *
T60 ;ADDRESS OF NEXT ROUTINE *
10. ;TEST ITERATION COUNT *
BAZA ;SCOPE ENTRY POINT *
.LIST
:*****
:TEST THAT RESET INSTRUCTION CLEARS TCBA BITS
1718
1719 006732 000057
1720 006734 006766
1721 006736 000012
1722 006740 006742
1723
1724
1725
1726 006742 052777 000040 172042 BAZA: BIS #BITS,@TCBA ;SET TCBA BITS.
1727 006750 104010 ;SRESET ;ISSUE RESET TO CLEAR BIT.
1728 006752 032777 000040 172032 BIT #BITS,@TCBA ;SEE IF BIT IS CLEAR.
1729 006760 001401 BEQ BAZB ;BR IF BIT IS CLEAR.
1730 006762 104003 ERROR ;RESET FAILED TO CLEAR TCBA BITS
1731 006764 104011 BAZB: SCOPE ;SCOPE.
:*****
†60: 60 ;ROUTINE NUMBER 60 *
T61 ;ADDRESS OF NEXT ROUTINE *
100. ;TEST ITERATION COUNT *
AABA ;SCOPE ENTRY POINT *
.LIST
:*****
:TEST THAT TCBA BIT6 CAN BE SET, AND CLEARED.
1732
1733 006766 000060
1734 006770 007042
1735 006772 000144
1736 006774 006776
1737
1738
1739
1740 006776 052777 000100 172006 AABA: BIS #BIT6,@TCBA ;SET TCBA BIT6.
1741 007004 032777 000100 172000 BIT #BIT6,@TCBA ;SEE IF BIT IS SET.
1742 007012 001002 BNE .+6 ;BRANCH IF SET.
1743 007014 104003 ERROR ;TCBA BIT6 FAILED TO SET.
1744 007016 104011 SCOPE
1745 007020 042777 000100 171764 BIC #BIT6,@TCBA ;CLEAR TCBA BIT6.
1746 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          †61:   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 007050 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          †62:   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          †63:   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          †64:   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      †70: 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      †71: 71                    ;ROUTINE NUMBER 71      *
1880 007504 007536      T72                    ;ADDRESS OF NEXT ROUTINE *
1881 007506 000112      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      †72: 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      †73: 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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1915 .LIST
1916 ;*****
1917 ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT11
1918 BAFBA: BIS #BIT11,@TCBA ;SET TCBA BIT11
1919 SRESET ;ISSUE RESET TO CLEAR BIT.
1920 BIT #BIT11,@TCBA ;SEE IF BIT IS CLEAR.
1921 BEQ BAFBB ;BR IF BIT IS CLEAR.
1922 ERROR ;RESET FAILED TO CLEAR TCBA BIT11
1923 BAFBB: SCOPE ;SCOPE.
1924 ;*****
1925 †74: 74 ;ROUTINE NUMBER 74 *
1926 T75 ;ADDRESS OF NEXT ROUTINE *
1927 100. ;TEST ITERATION COUNT *
1928 AGBA ;SCOPE ENTRY POINT *
1929 .LIST
1930 ;*****
1931 ;TEST THAT TCBA BIT12 CAN BE SET, AND CLEARED.
1932 AGBA: BIS #BIT12,@TCBA ;SET TCBA BIT12.
1933 BIT #BIT12,@TCBA ;SEE IF BIT IS SET.
1934 BNE .+6 ;BRANCH IF SET.
1935 ERROR ;TCBA BIT12 FAILED TO SET.
1936 SCOPE
1937 BIC #BIT12,@TCBA ;CLEAR TCBA BIT12.
1938 BIT #BIT12,@TCBA ;SEE IF BIT IS CLEAR.
1939 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
1940 ERROR ;TCBA BIT12 FAILED TO CLEAR.
1941 SCOPE ;SCOPE.
1942 ;*****
1943 †75: 75 ;ROUTINE NUMBER 75 *
1944 T76 ;ADDRESS OF NEXT ROUTINE *
1945 10. ;TEST ITERATION COUNT *
1946 BAGBA ;SCOPE ENTRY POINT *
1947 .LIST
1948 ;*****
1949 ;TEST THAT RESET INSTRUCTION CLEARS TCBA BIT12
1950 BAGBA: BIS #BIT12,@TCBA ;SET TCBA BIT12
1951 SRESET ;ISSUE RESET TO CLEAR BIT.
1952 BIT #BIT12,@TCBA ;SEE IF BIT IS CLEAR.
1953 BEQ BAGBB ;BR IF BIT IS CLEAR.
1954 ERROR ;RESET FAILED TO CLEAR TCBA BIT12
1955 BAGBB: SCOPE ;SCOPE.
1956 ;*****
1957 †76: 76 ;ROUTINE NUMBER 76 *
1958 T77 ;ADDRESS OF NEXT ROUTINE *
1959 100. ;TEST ITERATION COUNT *
1960 AHBA ;SCOPE ENTRY POINT *
1961 .LIST
1962 ;*****
1963 ;TEST THAT TCBA BIT13 CAN BE SET, AND CLEARED.
1964 AHBA: BIS #BIT13,@TCBA ;SET TCBA BIT13.
1965 BIT #BIT13,@TCBA ;SEE IF BIT IS SET.
1966 BNE .+6 ;BRANCH IF SET.
1967 ERROR ;TCBA BIT13 FAILED TO SET.
1968 SCOPE
1969 BIC #BIT13,@TCBA ;CLEAR TCBA BIT13.
1970 BIT #BIT13,@TCBA ;SEE IF BIT IS CLEAR.

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M03

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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          †77:    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          †100:   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          †101:   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          †102:   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 ;TEST THAT TCBA BIT15 CAN BE SET, AND CLEARED.
2028 010205 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
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 BEL 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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2083 010414 104011 BAKBB: SCOPE ;SCOPE.
2084 *****
2085 010416 000106 †106: 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 †107: 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 †110: 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 †111: 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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2139          .LIST
2140          ;*****
2141          ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT2
2142 010612 052777 000004 170170 BAMB: BIS #BIT2,@TCWC ;SET TCWC BIT2
2143 010620 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
2144 010622 032777 000804 170160 BIT #BIT2,@TCWC ;SEE IF BIT IS CLEAR.
2145 010630 001401          BEQ BAMB ;BR IF BIT IS CLEAR.
2146 010632 104003          ERROR ;RESET FAILED TO CLEAR TCWC BIT2
2147 010634 104011          BAMB: SCOPE ;SCOPE.
2148          ;*****
2149 010636 000112          †112: 112 ;ROUTINE NUMBER 112 *
2150 010640 010712          T113 ;ADDRESS OF NEXT ROUTINE *
2151 010642 000144          100 ;TEST ITERATION COUNT *
2152 010644 010646          ANBA ;SCOPE ENTRY POINT *
2153          .LIST
2154          ;*****
2155          ;TEST THAT TCWC BIT3 CAN BE SET, AND CLEARED.
2156 010646 052777 000010 170134 ANBA: BIS #BIT3,@TCWC ;SET TCWC BIT3.
2157 010654 032777 000010 170126 BIT #BIT3,@TCWC ;SEE IF BIT IS SET.
2158 010662 001002          BNE .+6 ;BRANCH IF SET.
2159 010664 104003          ERROR ;TCWC BIT3 FAILED TO SET.
2160 010666 104011          SCOPE
2161 010670 042777 000010 170112 BIC #BIT3,@TCWC ;CLEAR TCWC BIT3.
2162 010676 032777 000010 170104 BIT #BIT3,@TCWC ;SEE IF BIT IS CLEAR.
2163 010704 001401          BEQ .+4 ;BRANCH IF BIT IS CLEAR.
2164 010706 104003          ERROR ;TCWC BIT3 FAILED TO CLEAR.
2165 010710 104011          SCOPE ;SCOPE.
2166          ;*****
2167 010712 000113          †113: 113 ;ROUTINE NUMBER 113 *
2168 010714 010746          T114 ;ADDRESS OF NEXT ROUTINE *
2169 010716 000012          10 ;TEST ITERATION COUNT *
2170 010720 010722          BANBA ;SCOPE ENTRY POINT *
2171          .LIST
2172          ;*****
2173          ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT3
2174 010722 052777 000010 170060 BANBA: BIS #BIT3,@TCWC ;SET TCWC BIT3
2175 010730 104010          SRESET ;ISSUE RESET TO CLEAR BIT.
2176 010732 032777 000010 170050 BIT #BIT3,@TCWC ;SEE IF BIT IS CLEAR.
2177 010740 001401          BEQ BANBB ;BR IF BIT IS CLEAR.
2178 010742 104003          ERROR ;RESET FAILED TO CLEAR TCWC BIT3
2179 010744 104011          BANBB: SCOPE ;SCOPE.
2180          ;*****
2181 010746 000114          †114: 114 ;ROUTINE NUMBER 114 *
2182 010750 011022          T115 ;ADDRESS OF NEXT ROUTINE *
2183 010752 000144          100 ;TEST ITERATION COUNT *
2184 010754 010756          A0BA ;SCOPE ENTRY POINT *
2185          .LIST
2186          ;*****
2187          ;TEST THAT TCWC BIT4 CAN BE SET, AND CLEARED.
2188 010756 052777 000020 170024 A0BA: BIS #BIT4,@TCWC ;SET TCWC BIT4.
2189 010764 032777 000020 170016 BIT #BIT4,@TCWC ;SEE IF BIT IS SET.
2190 010772 001002          BNE .+6 ;BRANCH IF SET.
2191 010774 104003          ERROR ;TCWC BIT4 FAILED TO SET.
2192 010776 104011          SCOPE
2193 011000 042777 000020 170002 BIC #BIT4,@TCWC ;CLEAR TCWC BIT4.
2194 011006 032777 000020 167774 BIT #BIT4,@TCWC ;SEE IF BIT IS CLEAR.

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2195 011014 001401      BEQ      .+4      ;BRANCH IF BIT IS CLEAR.
2196 011016 104003      ERROR     ;TCWC BIT4 FAILED TO CLEAR.
2197 011020 104011      SCOPE    ;SCOPE.
2198
2199 011022 000115      *115:    115      ;ROUTINE NUMBER 115      *
2200 011024 011056      T116    ;ADDRESS OF NEXT ROUTINE *
2201 011026 000012      10.     ;TEST ITERATION COUNT   *
2202 011030 011032      BA0BA   ;SCOPE ENTRY POINT     *
2203      .LIST
2204
2205      ;*****
2206 011032 052777 000020 167750 BA0BA:  BIS      #BIT4,@TCWC ;SET TCWC BIT4
2207 011040 104010      SRESET  ;ISSUE RESET TO CLEAR BIT.
2208 011042 032777 000020 167740 BIT      #BIT4,@TCWC ;SEE IF BIT IS CLEAR.
2209 011050 001401      BEQ     BA0BB    ;BR IF BIT IS CLEAR.
2210 011052 104003      ERROR   ;RESET FAILED TO CLEAR TCWC BIT4
2211 011054 104011      BA0BB:  SCOPE    ;SCOPE.
2212
2213 011056 000116      *116:    116      ;ROUTINE NUMBER 116      *
2214 011060 011132      T117    ;ADDRESS OF NEXT ROUTINE *
2215 011062 000144      100.    ;TEST ITERATION COUNT   *
2216 011064 011066      APBA   ;SCOPE ENTRY POINT     *
2217      .LIST
2218
2219      ;*****
2220 011066 052777 000040 167714 APBA:  BIS      #BITS,@TCWC ;SET TCWC BITS.
2221 011074 032777 000040 167706 BIT      #BITS,@TCWC ;SEE IF BIT IS SET.
2222 011102 001002      BNE     .+6      ;BRANCH IF SET.
2223 011104 104003      ERROR   ;TCWC BITS FAILED TO SET.
2224 011106 104011      SCOPE
2225 011110 042777 000040 167672 BIC     #BITS,@TCWC ;CLEAR TCWC BITS.
2226 011116 032777 000040 167664 BIT      #BITS,@TCWC ;SEE IF BIT IS CLEAR.
2227 011124 001401      BEQ     .+4      ;BRANCH IF BIT IS CLEAR.
2228 011126 104003      ERROR   ;TCWC BITS FAILED TO CLEAR.
2229 011130 104011      SCOPE    ;SCOPE.
2230
2231 011132 000117      *117:    117      ;ROUTINE NUMBER 117      *
2232 011134 011166      T120    ;ADDRESS OF NEXT ROUTINE *
2233 011136 000012      10.     ;TEST ITERATION COUNT   *
2234 011140 011142      BAPBA  ;SCOPE ENTRY POINT     *
2235      .LIST
2236
2237      ;*****
2238 011142 052777 000040 167640 BAPBA:  BIS      #BITS,@TCWC ;SET TCWC BITS
2239 011150 104010      SRESET  ;ISSUE RESET TO CLEAR BIT.
2240 011152 032777 000040 167630 BIT      #BITS,@TCWC ;SEE IF BIT IS CLEAR.
2241 011160 001401      BEQ     BAPBB   ;BR IF BIT IS CLEAR.
2242 011162 104003      ERROR   ;RESET FAILED TO CLEAR TCWC BITS
2243 011164 104011      BAPBB:  SCOPE    ;SCOPE.
2244
2245 011166 000120      *120:    120      ;ROUTINE NUMBER 120      *
2246 011170 011242      T121    ;ADDRESS OF NEXT ROUTINE *
2247 011172 000144      100.    ;TEST ITERATION COUNT   *
2248 011174 011176      AQBA   ;SCOPE ENTRY POINT     *
2249      .LIST
2250      ;*****

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E04

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2251          :TEST THAT TCWC BIT6 CAN BE SET, AND CLEARED.
2252 011176 052777 000100 167604 BAQBA: 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          †121: 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          †122: 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          †123: 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 †124: 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 †125: 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 †126: 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 †127: 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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2419 012004 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
2420 012006 104003          ERROR     ;TCWC BIT11 FAILED TO CLEAR.
2421 012010 104011          SCOPE     ;SCOPE.
2422                                     ;*****
2423 012012 000133          †133: 133          ;ROUTINE NUMBER 133          *
2424 012014 012046          T134     ;ADDRESS OF NEXT ROUTINE   *
2425 012016 000012          10.     ;TEST ITERATION COUNT     *
2426 012020 012022          BAVBA    ;SCOPE ENTRY POINT        *
2427          .LIST
2428                                     ;*****
2429                                     ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT11
2430 012022 052777 004000 166750 BAVBA: BIS      #BIT11,@TCWC ;SET TCWC BIT11
2431 012030 104010          SRESET   ;ISSUE RESET TO CLEAR BIT.
2432 012032 032777 004000 166750 BIT      #BIT11,@TCWC ;SEE IF BIT IS CLEAR.
2433 012040 001401          BEQ      BAVBB      ;BR IF BIT IS CLEAR.
2434 012042 104003          ERROR     ;RESET FAILED TO CLEAR TCWC BIT11
2435 012044 104011          BAVBB: SCOPE ;SCOPE.
2436                                     ;*****
2437 012046 000134          †134: 134          ;ROUTINE NUMBER 134          *
2438 012050 012122          T135     ;ADDRESS OF NEXT ROUTINE   *
2439 012052 000144          100.    ;TEST ITERATION COUNT     *
2440 012054 012056          AWBA    ;SCOPE ENTRY POINT        *
2441          .LIST
2442                                     ;*****
2443                                     ;TEST THAT TCWC BIT12 CAN BE SET, AND CLEARED.
2444 012056 052777 010000 166724 AWBA: BIS      #BIT12,@TCWC ;SET TCWC BIT12.
2445 012064 032777 010000 166716 BIT      #BIT12,@TCWC ;SEE IF BIT IS SET.
2446 012072 001002          BNE     .+6          ;BRANCH IF SET.
2447 012074 104003          ERROR     ;TCWC BIT12 FAILED TO SET.
2448 012076 104011          SCOPE
2449 012100 042777 010000 166702 BIC      #BIT12,@TCWC ;CLEAR TCWC BIT12.
2450 012106 032777 010000 166674 BIT      #BIT12,@TCWC ;SEE IF BIT IS CLEAR.
2451 012114 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
2452 012116 104003          ERROR     ;TCWC BIT12 FAILED TO CLEAR.
2453 012120 104011          SCOPE     ;SCOPE.
2454                                     ;*****
2455 012122 000135          †135: 135          ;ROUTINE NUMBER 135          *
2456 012124 012156          T136     ;ADDRESS OF NEXT ROUTINE   *
2457 012126 000012          10.     ;TEST ITERATION COUNT     *
2458 012130 012132          BAWBA    ;SCOPE ENTRY POINT        *
2459          .LIST
2460                                     ;*****
2461                                     ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT12
2462 012132 052777 010000 166650 BAWBA: BIS      #BIT12,@TCWC ;SET TCWC BIT12
2463 012140 104010          SRESET   ;ISSUE RESET TO CLEAR BIT.
2464 012142 032777 010000 166640 BIT      #BIT12,@TCWC ;SEE IF BIT IS CLEAR.
2465 012150 001401          BEQ      BAWBB      ;BR IF BIT IS CLEAR.
2466 012152 104003          ERROR     ;RESET FAILED TO CLEAR TCWC BIT12
2467 012154 104011          BAWBB: SCOPE ;SCOPE.
2468                                     ;*****
2469 012156 000136          †136: 136          ;ROUTINE NUMBER 136          *
2470 012160 012232          T137     ;ADDRESS OF NEXT ROUTINE   *
2471 012162 000144          100.    ;TEST ITERATION COUNT     *
2472 012164 012166          AXBA    ;SCOPE ENTRY POINT        *
2473          .LIST
2474                                     ;*****

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2475 ;TEST THAT TCWC BIT13 CAN BE SET, AND CLEARED.
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
2486 *****
2487 012232 000137 †137: 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 †140: 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
2518 *****
2519 012342 000141 †141: 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 †142: 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 †143: 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
2556 *****
2557 ;TEST THAT RESET INSTRUCTION CLEARS TCWC BIT15
2558 012462 052777 100000 166320 BAZBA: BIS #BIT15,@TCWC ;SET TCWC BIT15
2559 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 †144: 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 †145: 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      †146:   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      †147:   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      †150:   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      AECC          ;BRANCH IF TCBA IS SET CORRECTLY.
2631 012724 104003                      ERROR                     ;TCBA DID NOT SET TO VALUE.
2632 012726 005077 166060      AECC:   CLR      @TCBA ;CLEAR TCBA
2633 012732 104011                      SCOPE
2634                                     ;*****
2635 012734 000151      †151:   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      †152:    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      †153:    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      †154:    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      †155:    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 ;*****
;*****
†156: 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 †157: 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 †160: 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
2772          ;*****
2773 013420 000162          †162: 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          ;SCOPE
2786          ;*****
2787 013454 000163          †163: 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 013527 001401          ;BEQ .+4 ;BRANCH IF BIT IS CLEAR.
2802 013529 104003          ;ERROR ;TCCM BIT4 FAILED TO CLEAR.
2803 013526 104011          ;SCOPE
2804          ;*****
2805          ;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          ;*****

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2811                                     :TEST THAT RESET INSTRUCTION CLEARS TCCM BIT4
2812 013540 052777 000020 165240 BAMCA: BIS #BIT4,2TCCM ;SET TCCM BIT4
2813 013546 104010                SRESET ;ISSUE RESET TO CLEAR BIT.
2814 013550 032777 000020 165230 BIT #BIT4,2TCCM ;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 013552 104011                BAMCB: SCOPE ;SCOPE
2818                                     :*****
2819 013564 000165                †165: 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 BITS CAN BE SET, AND CLEARED.
2826 013574 052777 000040 165204 ANCA: BIS #BITS,2TCCM ;SET TCCM BITS.
2827 013602 032777 000040 165176 BIT #BITS,2TCCM ;SEE IF BIT IS SET.
2828 013610 001002                BNE .+6 ;BRANCH IF SET.
2829 013612 104003                ERROR ;TCCM BITS FAILED TO SET.
2830 013614 104011                SCOPE
2831 013616 042777 000040 165162 BIC #BITS,2TCCM ;CLEAR TCCM BITS.
2832 013624 032777 000040 165154 BIT #BITS,2TCCM ;SEE IF BIT IS CLEAR.
2833 013632 001401                BEQ .+4 ;BRANCH IF BIT IS CLEAR.
2834 013634 104003                ERROR ;TCCM BITS FAILED TO CLEAR.
2835 013636 104011                SCOPE ;SCOPE
2836                                     :*****
2837 013640 000166                †166: 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 BITS
2844 013650 052777 000040 165130 BANCA: BIS #BITS,2TCCM ;SET TCCM BITS
2845 013656 104010                SRESET ;ISSUE RESET TO CLEAR BIT.
2846 013660 032777 000040 165120 BIT #BITS,2TCCM ;SEE IF BIT IS CLEAR.
2847 013666 001401                BEQ BANCBB ;BR IF BIT IS CLEAR.
2848 013670 104003                ERROR ;RESET FAILED TO CLEAR TCCM BITS
2849 013672 104011                BANCBB: SCOPE ;SCOPE
2850                                     :*****
2851 013674 000167                †167: 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 #BIT6,2TCCM ;SET TCCM BIT6.
2859 013712 032777 000100 165066 BIT #BIT6,2TCCM ;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 #BIT6,2TCCM ;CLEAR TCCM BIT6.
2864 013734 032777 000100 165044 BIT #BIT6,2TCCM ;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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2867 013746 104011          SCOPE          ;SCOPE.
2868          ;*****
2869 013750 000170          †170: 170          ;ROUTINE NUMBER 170      *
2870 013752 014004          ;ADDRESS OF NEXT ROUTINE *
2871 013754 000012          ;TEST ITERATION COUNT   *
2872 013755 013760          BA0CA          ;SCOPE ENTRY POINT     *
2873          .LIST
2874          ;*****
2875          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT6
2876 013760 052777 000100 165020 BA0CA: BIS      #BIT6,@TCCM ;SET TCCM BIT6
2877 013766 104010          SRESET        ;ISSUE RESET TO CLEAR BIT.
2878 013770 032777 000100 165010 BIT          #BIT6,@TCCM ;SEE IF BIT IS CLEAR.
2879 013775 001401          BEQ          BA0CB      ;BR IF BIT IS CLEAR.
2880 014000 104003          ERROR        ;RESET FAILED TO CLEAR TCCM BIT6
2881 014002 104011          BA0CB: SCOPE ;SCOPE.
2882          ;*****
2883 014004 000171          †171: 171          ;ROUTINE NUMBER 171      *
2884 014006 014060          ;ADDRESS OF NEXT ROUTINE *
2885 014010 000144          ;TEST ITERATION COUNT   *
2886 014012 014014          APCA          ;SCOPE ENTRY POINT     *
2887          .LIST
2888          ;*****
2889          ;TEST THAT TCCM BIT8 CAN BE SET, AND CLEARED.
2890 014014 052777 000400 164764 APCA: BIS      #BIT8,@TCCM ;SET TCCM BIT8.
2891 014022 032777 000400 164756 BIT          #BIT8,@TCCM ;SEE IF BIT IS SET.
2892 014030 001002          BNE          .+6        ;BRANCH IF SET.
2893 014032 104003          ERROR        ;TCCM BIT8 FAILED TO SET.
2894 014034 104011          SCOPE
2895 014036 042777 000400 164742 BIC          #BIT8,@TCCM ;CLEAR TCCM BIT8.
2896 014044 032777 000400 164734 BIT          #BIT8,@TCCM ;SEE IF BIT IS CLEAR.
2897 014052 001401          BEQ          .+4        ;BRANCH IF BIT IS CLEAR.
2898 014054 104003          ERROR        ;TCCM BIT8 FAILED TO CLEAR.
2899 014056 104011          SCOPE          ;SCOPE.
2900          ;*****
2901 014060 000172          †172: 172          ;ROUTINE NUMBER 172      *
2902 014062 014114          ;ADDRESS OF NEXT ROUTINE *
2903 014064 000012          ;TEST ITERATION COUNT   *
2904 014066 014070          BAPCA        ;SCOPE ENTRY POINT     *
2905          .LIST
2906          ;*****
2907          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT8
2908 014070 052777 000400 164710 BAPCA: BIS      #BIT8,@TCCM ;SET TCCM BIT8
2909 014076 104010          SRESET        ;ISSUE RESET TO CLEAR BIT.
2910 014100 032777 000400 164700 BIT          #BIT8,@TCCM ;SEE IF BIT IS CLEAR.
2911 014106 001401          BEQ          BAPCB      ;BR IF BIT IS CLEAR.
2912 014110 104003          ERROR        ;RESET FAILED TO CLEAR TCCM BIT8
2913 014112 104011          BAPCB: SCOPE ;SCOPE.
2914          ;*****
2915 014114 000173          †173: 173          ;ROUTINE NUMBER 173      *
2916 014116 014170          ;ADDRESS OF NEXT ROUTINE *
2917 014120 000144          ;TEST ITERATION COUNT   *
2918 014122 014124          AQCA        ;SCOPE ENTRY POINT     *
2919          .LIST
2920          ;*****
2921          ;TEST THAT TCCM BIT9 CAN BE SET, AND CLEARED.
2922 014124 052777 001000 164654 AQCA: BIS      #BIT9,@TCCM ;SET TCCM BIT9.

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2923 014132 032777 001000 164646 BIT #BIT9,2TCCM ;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 #BIT9,2TCCM ;CLEAR TCCM BIT9.
2928 014154 032777 001000 164624 BIT #BIT9,2TCCM ;SEE IF BIT IS CLEAR.
2929 014152 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
2930 014164 104003 ERROR ;TCCM BIT9 FAILED TO CLEAR.
2931 014166 104011 SCOPE
2932 *****
2933 014170 000174 †174: 174 ;ROUTINE NUMBER 174 *
2934 014172 014224 T175 ;ADDRESS OF NEXT ROUTINE *
2935 014174 000012 IO. ;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 #BIT9,2TCCM ;SET TCCM BIT9
2941 014206 104010 SRESET ;ISSUE RESET TO CLEAR BIT.
2942 014210 032777 001000 164570 BIT #BIT9,2TCCM ;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 †175: 175 ;ROUTINE NUMBER 175 *
2948 014226 014300 T176 ;ADDRESS OF NEXT ROUTINE *
2949 014230 000144 IO. ;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 #BIT10,2TCCM ;SET TCCM BIT10.
2955 014242 032777 002000 164536 BIT #BIT10,2TCCM ;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 #BIT10,2TCCM ;CLEAR TCCM BIT10.
2960 014264 032777 002000 164514 BIT #BIT10,2TCCM ;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 †176: 176 ;ROUTINE NUMBER 176 *
2966 014302 014334 T177 ;ADDRESS OF NEXT ROUTINE *
2967 014304 000012 IO. ;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 #BIT10,2TCCM ;SET TCCM BIT10
2973 014316 104010 SRESET ;ISSUE RESET TO CLEAR BIT.
2974 014320 032777 002000 164460 BIT #BIT10,2TCCM ;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 014350 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 001000 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          ;TEST THAT RESET INSTRUCTION CLEARS TCCM BIT12
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          †203: 203      ;ROUTINE NUMBER 203 *
3044 014556 014630          T204     ;ADDRESS OF NEXT ROUTINE *
3045 014560 000144          100     ;TEST ITERATION COUNT *
3046 014552 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
3060          ;*****
3061 014630 000204          †204: 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          †205: 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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3091 014736 104011          SCOPE          ;SCOPE.
3092          ;*****
3093 014740 000206      †206: 206          ;ROUTINE NUMBER 206      *
3094 014742 014774          T207          ;ADDRESS OF NEXT ROUTINE *
3095 014744 000012          10.          ;TEST ITERATION COUNT   *
3096 014746 014750          BAVCA          ;SCOPE ENTRY POINT     *
3097          .LIST
3098          ;*****
3099          ;TEST THAT RESET INSTRUCTION CLEARS TCST BIT0
3100 014750 052777 000001 164026 BAVCA: BIS      #BIT0,@TCST ;SET TCST BIT0
3101 014756 104010          SRESET          ;ISSUE RESET TO CLEAR BIT.
3102 014750 032777 000001 164016 BIT      #BIT0,@TCST ;SEE IF BIT IS CLEAR.
3103 014756 001401          BEQ      BAVCB   ;BR IF BIT IS CLEAR.
3104 014770 104003          ERROR          ;RESET FAILED TO CLEAR TCST BIT0
3105 014772 104011          BAVCB: SCOPE    ;SCOPE.
3106          ;*****
3107 014774 000207      †207: 207          ;ROUTINE NUMBER 207      *
3108 014776 015050          T210          ;ADDRESS OF NEXT ROUTINE *
3109 015000 000144          100.         ;TEST ITERATION COUNT   *
3110 015002 015004          AXCA          ;SCOPE ENTRY POINT     *
3111          .LIST
3112          ;*****
3113          ;TEST THAT TCST BIT1 CAN BE SET, AND CLEARED.
3114 015004 052777 000002 163772 AXCA: BIS      #BIT1,@TCST ;SET TCS1 BIT1.
3115 015012 032777 000002 163764 BIT      #BIT1,@TCST ;SEE IF BIT IS SET.
3116 015020 001002          BNE      .+6     ;BRANCH IF SET.
3117 015022 104003          ERROR          ;TCST BIT1 FAILED TO SET.
3118 015024 104011          SCOPE
3119 015026 042777 000002 163750 BIC      #BIT1,@TCST ;CLEAR TCST BIT1.
3120 015034 032777 000002 163742 BIT      #BIT1,@TCST ;SEE IF BIT IS CLEAR.
3121 015042 001401          BEQ      .+4     ;BRANCH IF BIT IS CLEAR.
3122 015044 104003          ERROR          ;TCST BIT1 FAILED TO CLEAR.
3123 015046 104011          SCOPE          ;SCOPE.
3124          ;*****
3125 015050 000210      †210: 210          ;ROUTINE NUMBER 210      *
3126 015052 015104          T211          ;ADDRESS OF NEXT ROUTINE *
3127 015054 000012          10.          ;TEST ITERATION COUNT   *
3128 015056 015060          BAWCA          ;SCOPE ENTRY POINT     *
3129          .LIST
3130          ;*****
3131          ;TEST THAT RESET INSTRUCTION CLEARS TCST BIT1
3132 015060 052777 000002 163716 BAWCA: BIS      #BIT1,@TCST ;SET TCST BIT1
3133 015066 104010          SRESET          ;ISSUE RESET TO CLEAR BIT.
3134 015070 032777 000002 163706 BIT      #BIT1,@TCST ;SEE IF BIT IS CLEAR.
3135 015076 001401          BEQ      BAWCB   ;BR IF BIT IS CLEAR.
3136 015100 104003          ERROR          ;RESET FAILED TO CLEAR TCST BIT1
3137 015102 104011          BAWCB: SCOPE    ;SCOPE.
3138          ;*****
3139 015104 000211      †211: 211          ;ROUTINE NUMBER 211      *
3140 015106 015132          T212          ;ADDRESS OF NEXT ROUTINE *
3141 015110 000144          100.         ;TEST ITERATION COUNT   *
3142 015112 015114          AXCA          ;SCOPE ENTRY POINT     *
3143          .LIST
3144          ;*****
3145          ;TEST THAT TCCM BIT7 IS SET FOLLOWING RESET INSTRUCTION.
3146 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          ;TCM BIT7 NOT SET AFTER RESET.
3149 015126 104010          SRESET        ;ISSUE RESET.
3150 015130 104011          SCOPE         ;SCOPE
3151          ;*****
3152 015132 000212          †212: 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 TCM BIT15 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3159 015142 032777 100000 163636 AYCA: BIT      #BIT15,@TCM ;SEE IF TCM BIT15 IS CLEAR
3160 015150 001401          BEQ      .+4          ;BRANCH IF BIT IS CLEAR.
3161 015152 104003          ERROR          ;TCM BIT15 NOT CLEAR AFTER RESET.
3162 015154 104010          SRESET        ;ISSUE RESET.
3163 015156 104011          SCOPE         ;SCOPE
3164          ;*****
3165 015160 000213          †213: 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          †214: 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          †215: 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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3203                                     ;*****
3204 015262 000216 †216: 216 ;ROUTINE NUMBER 216 *
3205 015264 015310 T217 ;ADDRESS OF NEXT ROUTINE *
3206 015266 000012 10. ;TEST ITERATION COUNT *
3207 015270 015272 ACDA ;SCOPE ENTRY POINT *
3208 .LIST
3209                                     ;*****
3210                                     ;TEST THAT TCST BIT10 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3211 015272 032777 002000 163504 ACDA: BIT #BIT10,@TCST ;SEE IF TCST BIT10 IS CLEAR
3212 015300 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
3213 015302 104003 ERROR ;TCST BIT10 NOT CLEAR AFTER RESET.
3214 015304 104010 SRESET ;ISSUE RESET.
3215 015306 104011 SCOPE ;SCOPE
3216                                     ;*****
3217 015310 000217 †217: 217 ;ROUTINE NUMBER 217 *
3218 015312 015336 T220 ;ADDRESS OF NEXT ROUTINE *
3219 015314 000012 10. ;TEST ITERATION COUNT *
3220 015316 015320 ADDA ;SCOPE ENTRY POINT *
3221 .LIST
3222                                     ;*****
3223                                     ;TEST THAT TCST BIT13 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3224 015320 032777 020000 163456 ADDA: BIT #BIT13,@TCST ;SEE IF TCST BIT13 IS CLEAR
3225 015326 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
3226 015330 104003 ERROR ;TCST BIT13 NOT CLEAR AFTER RESET.
3227 015332 104010 SRESET ;ISSUE RESET.
3228 015334 104011 SCOPE ;SCOPE
3229                                     ;*****
3230 015336 000220 †220: 220 ;ROUTINE NUMBER 220 *
3231 015340 015364 T221 ;ADDRESS OF NEXT ROUTINE *
3232 015342 000012 10. ;TEST ITERATION COUNT *
3233 015344 015346 AEDA ;SCOPE ENTRY POINT *
3234 .LIST
3235                                     ;*****
3236                                     ;TEST THAT TCST BIT14 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3237 015346 032777 040000 163430 AEDA: BIT #BIT14,@TCST ;SEE IF TCST BIT14 IS CLEAR
3238 015354 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
3239 015356 104003 ERROR ;TCST BIT14 NOT CLEAR AFTER RESET.
3240 015360 104010 SRESET ;ISSUE RESET.
3241 015362 104011 SCOPE ;SCOPE
3242                                     ;*****
3243 015364 000221 †221: 221 ;ROUTINE NUMBER 221 *
3244 015366 015412 T222 ;ADDRESS OF NEXT ROUTINE *
3245 015370 000012 10. ;TEST ITERATION COUNT *
3246 015372 015374 AFDA ;SCOPE ENTRY POINT *
3247 .LIST
3248                                     ;*****
3249                                     ;TEST THAT TCST BIT15 IS CLEAR FOLLOWING A RESET INSTRUCTION.
3250 015374 032777 100000 163402 AFDA: BIT #BIT15,@TCST ;SEE IF TCST BIT15 IS CLEAR
3251 015402 001401 BEQ .+4 ;BRANCH IF BIT IS CLEAR.
3252 015404 104003 ERROR ;TCST BIT15 NOT CLEAR AFTER RESET.
3253 015406 104010 SRESET ;ISSUE RESET.
3254 015410 104011 SCOPE ;SCOPE
3255                                     ;*****
3256 015412 000222 †222: 222 ;ROUTINE NUMBER 222 *
3257 015414 015434 T223 ;ADDRESS OF NEXT ROUTINE *
3258 015416 023420 10000. ;TEST ITERATION COUNT *

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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          †223:  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          †224:  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    RD,RNDNMB       ;SAVE RANDOM NUMBER.
3288 015512 010077 000026          MOV    RD,@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          †225:  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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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#	
ACA	003742	1036	1040#	
ACB	003756	1040	1043#	
ACBA	007326	1832	1836#	
ACCA	012650	2610	2614#	
ACCB	012670	2616	2618#	
ACDA	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#	
AACA	012744	2638	2642#	
AFCB	012764	2644	2646#	
AFDA	015374	3246	3250#	
AGA	004136	1096	1100#	
AGBA	007656	1928	1932#	
AGCA	013002	2652	2656#	
AGCB	013022	2658	2660#	
AHA	004246	1128	1132#	
AHBA	007766	1960	1964#	
AHCA	013040	2666	2670#	
AHCB	013060	2672	2674#	
AIA	004356	1160	1164#	
AIBA	010076	1992	1996#	
AICA	013076	2680	2684#	
AICB	013116	2686	2688#	
AICNT	003127	725	915#	
AINCRT	003271	588	935#	
AJA	004466	1192	1196#	
AJBA	010206	2024	2028#	
AJCA	013134	2694	2698#	
AKA	004576	1224	1228#	
AKBA	010316	2056	2060#	
AKCA	013244	2726	2730#	

ALA	004706	1256	1260#
ALBA	010426	2088	2092#
ALCA	013354	2758	2762#
AMA	005016	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#
ASET SR	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#
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#

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BA088	007314	1825	1827#
BA08A	007402	1850	1854#
BA08B	007424	1857	1859#
BAE8A	007512	1882	1886#
BAE8B	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#

BA00B	014002	2979	2891#
BA00A	005422	1402	1406#
BA00B	005444	1409	1411#
BA00BA	011142	2234	2238#
BA00BB	011164	2241	2243#
BA00CA	014070	2904	2908#
BA00CB	014112	2911	2913#
BA00A	005532	1434	1438#
BA00B	005554	1441	1443#
BA00BA	011252	2266	2270#
BA00BB	011274	2273	2275#
BA00CA	014200	2936	2940#
BA00CB	014222	2943	2945#
BA00A	005642	1466	1470#
BA00B	005664	1473	1475#
BA00BA	011362	2298	2302#
BA00BB	011404	2305	2307#
BA00CA	014310	2968	2972#
BA00CB	014332	2975	2977#
BA00A	005752	1498	1502#
BA00B	005774	1505	1507#
BA00BA	011472	2330	2334#
BA00BB	011514	2337	2339#
BA00CA	014420	3000	3004#
BA00CB	014442	3007	3009#
BA00A	006062	1530	1534#
BA00B	006104	1537	1539#
BA00BA	011602	2362	2366#
BA00BB	011624	2369	2371#
BA00CA	014530	3032	3036#
BA00CB	014552	3039	3041#
BA00A	006172	1562	1566#
BA00B	006214	1569	1571#
BA00BA	011712	2394	2398#
BA00BB	011734	2401	2403#
BA00CA	014640	3064	3068#
BA00CB	014662	3071	3073#
BA00A	006302	1594	1598#
BA00B	006324	1601	1603#
BA00BA	012022	2426	2430#
BA00BB	012044	2433	2435#
BA00CA	014750	3096	3100#
BA00CB	014772	3103	3105#
BA00A	006412	1626	1630#
BA00B	006434	1633	1635#
BA00BA	012132	2458	2462#
BA00BB	012154	2465	2467#
BA00CA	015060	3128	3132#
BA00CB	015102	3135	3137#
BA00A	006522	1658	1662#
BA00B	006544	1665	1667#
BA00BA	012242	2490	2494#
BA00BB	012264	2497	2499#
BA00A	006632	1690	1694#
BA00B	006654	1697	1699#
BA00BA	012352	2522	2526#

H06

T01 - T011 TEST 1 MACY11 27(732) 08-SEP-76 09:06 PAGE 73
DZTCAR.P11 CROSS REFERENCE TABLE -- USER SYMBOLS

TYPG	002322	771#		
TYPS	002340	539	776#	784
TYPSA	002364	780	782#	
TYPSB	002366	779*	779	783#
T0	003514	519	965#	
TOMSG	003373	949#	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#

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#						

EMTDEF	435#	537	539	541	543	545	547	549	551	553	555	557	559	561	563
TSTA	433#	964	990	1004	1018	1032	1046	1060	1078	1092	1110	1124	1142	1156	1174
	1188	1206	1220	1238	1252	1270	1284	1302	1316	1334	1348	1366	1380	1398	1412
	1430	1444	1462	1476	1494	1508	1526	1540	1558	1572	1590	1604	1622	1636	1654
	1668	1686	1700	1718	1732	1750	1764	1782	1796	1814	1828	1846	1860	1878	1892
	1910	1924	1942	1956	1974	1988	2006	2020	2038	2052	2070	2084	2102	2116	2134
	2148	2166	2180	2198	2212	2230	2244	2262	2276	2294	2308	2326	2340	2358	2372
	2390	2404	2422	2436	2454	2468	2486	2500	2518	2532	2550	2564	2578	2592	2606
	2620	2634	2648	2662	2676	2690	2708	2722	2740	2754	2772	2786	2804	2818	2836
	2850	2868	2882	2900	2914	2932	2946	2964	2978	2996	3010	3028	3042	3060	3074
	3092	3106	3124	3138	3151	3164	3177	3190	3203	3216	3229	3242	3255	3265	3275
	3306														
TSTBR	435#	3151	3164	3177	3190	3203	3216	3229	3242						
TSTBR5	435#	3138													
TSTBRW	433#	1060	1092	1124	1156	1188	1220	1252	1284	1316	1348	1380	1412	1444	1476
	1508	1540	1572	1604	1636	1668	1700	1732	1764	1796	1828	1860	1892	1924	1956
	1988	2020	2052	2084	2116	2148	2180	2212	2244	2276	2308	2340	2372	2404	2436
	2468	2500	2532	2690	2722	2754	2786	2818	2850	2882	2914	2946	2978	3010	3042
	3074	3106													
TSTREF	433#	990	1004	1018	1032	1046									
TSTRES	435#	1078	1110	1142	1174	1206	1238	1270	1302	1334	1366	1398	1430	1462	1494
	1526	1558	1590	1622	1654	1686	1718	1750	1782	1814	1846	1878	1910	1942	1974
	2006	2038	2070	2102	2134	2166	2198	2230	2262	2294	2326	2358	2390	2422	2454
	2486	2518	2550	2708	2740	2772	2804	2836	2868	2900	2932	2964	2996	3028	3060
	3092	3124													
TSTST	433#	2564	2578	2592	2606	2620	2634	2648	2662	2676					

	664	732	740	744	754	777	787	853	856	887	888	895			
ADD	664	732	740	744	754	777	787	853	856	887	888	895			
ASL	633														
BCS	984														
BEO	598	506	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
	2530	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	537	600	605	609	711	974	1069	1074	1088	1101	1106	1120	1133	1138
	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
	1330	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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DZTCAR.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

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

