

KD11

XOR INST TEST  
CCKBCCO

AH-T306C-MC  
FICHE 1 OF 1

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.TITLE CCKBCCO PDP11/45 XOR INST TEST  
.REM 8

IDENTIFICATION

PRODUCT CODE:	AC-7790C-MC
PRODUCT NAME:	CCKBCCO XOR INST TEST
DATE CREATED:	15 NOV 1972
REVISED:	08 JULY 1982 THOMAS DAVIES
MAINTAINER:	DIAGNOSTIC GROUP
AUTHORS:	JOHN ADAMS

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THIS GROUP OF TESTS CONSIST OF:

MAINDEC NO.	TEST FUNCTION	PROCESSOR
DCKBA-A	SXT INSTRUCTION	11/45,11/40
DCKBB-A	SOB INSTRUCTION	11/45,11/40
DCKBC-A	XOR INSTRUCTION	11/45,11/40
DCKBD-B	MARK INSTRUCTION	11/45,11/40
DCKBE-B	RTT INSTRUCTION	11/45,11/40

61  
62  
63 1.0 ABSTRACT  
64  
65 THIS IS THE FIRST 5 OF 15 TESTS THAT INCREMENTALLY TEST AND  
66 ISOLATE SIMPLE MALFUNCTIONS IN THE PDP 11/45, 11/40. THE  
67 TESTS SHOULD BE RUN IN THE INDICATED ALPHABETIC SEQUENCE.  
68 THERE ARE ADDITIONAL TESTS FOR MORE COMPLEX MALFUNCTIONS.  
69 ALL TESTS ARE EXECUTED IN KERNEL MODE ONLY EXCEPT FOR TEST  
70 DCKBE (11/45 ONLY).  
71  
72  
73 2.0 REQUIREMENTS  
74  
75  
76 2.1 EQUIPMENT  
77  
78 PDP11/45 OR PDP 11/40  
79  
80  
81 2.2 STORAGE  
82  
83 PROGRAM STORAGE - THE PROGRAMS USE ALL OF A 4KW MEMORY WITH  
84 THE EXCEPTION OF 17500 TO 17776 (WHICH IS RESERVED FOR THE  
85 BOOT AND ABSOLUTE LOADER).  
86  
87  
88 2.3 PRELIMINARY PROGRAMS  
89  
90 TESTS TO-T13(DOAA-DOMA)  
91  
92  
93 3.0 LOADING PROCEDURE  
94  
95 LOAD PROGRAM INTO MEMORY USING ABS LOADER.  
96  
97  
98 4.0 STARTING PROCEDURE  
99  
100 LOAD ADDRESS 200. PRESS START. THE PROGRAM WILL LOOP, AND  
101 RING BELL ON COMPLETION. PASS COUNT MAY BE MONITORED IN THE  
102 DISPLAY REGISTER (11/45 ONLY), AND IS STORED IN ADDRESS  
103 1000.  
104  
105  
106 5.0 OPERATING PROCEDURE  
107  
108  
109 5.1 OPERATIONAL SWITCH SETTINGS  
110  
111 SW<08>=1 LOAD PDP11/45 MICRO BREAK REGISTER WITH VALUE  
112 IN SW<00-07>. (AT START OF TEST ONLY).  
113  
114  
115  
116 5.2 SUBROUTINE ABSTRACTS

117  
118  
119 5.2.1 SCOPE  
120  
121 SCOPE IS A MOVE PC, R1(010701) AND STORES THE PC+2 IN R1 (OR  
122 R11 IF THE REGISTER SET BIT IS SET IN THE PDP11/45 PROCESSOR  
123 STATUS WORD.) THUS, R1 (R11) MAY BE USED AS A TAG TO  
124 DETERMINE THE LAST TEST SUCCESSFULLY COMPLETED.  
125  
126  
127 5.2.2 HLT  
128  
129 HLT IS A HALT INSTRUCTION AND IS EXECUTED WHENEVER A  
130 HARDWARE MALFUNCTION IS DETECTED BY THE DIAGNOSTIC. THE  
131 ADDRESS LIGHTS DISPLAY THE PC-PC+2 OF THE HALT INSTRUCTION  
132 IF AN 11/40-11/45.  
133  
134  
135 5.3 PROGRAM AND/OR OPERATOR ACTION  
136  
137  
138 5.3.1 PASS COUNT (ICNT)  
139  
140 THE NUMBER OF PROGRAM PASSES COMPLETED IS CONTAINED IN  
141 ADDRESS ICNT (1000). THIS ADDRESS MAY BE EXAMINED TO  
142 DETERMINE IN WHICH PASS THE ERROR OCCURED. NOTE, THE PASS  
143 COUNT IS DISPLAYED IN THE DISPLAY REGISTER IN THE PDP11/45.  
144  
145  
146 6.0 ERRORS  
147  
148  
149 6.1 TEST ERRORS WILL CAUSE A HALT  
150  
151 FALSE TRAP/INTERRUPT ERRORS - THE PROGRAM WILL HALT AT THE  
152 TRAP VECTOR ADDRESS +2.  
153  
154  
155 6.2 ERROR RECOVERY  
156  
157 TEST ERRORS - PRESS CONTINUE OR LOOP TEST (SEE SEC 6.3)  
158  
159 TRAP ERRORS - DETERMINE WHERE ERROR OCCURRED (SEE SEC 8)  
160  
161  
162 6.3 ERROR LOOPING  
163  
164 TO LOOP ON AN ERROR REPLACE THE HLT INSTRUCTION WITH A  
165 BRANCH BACK TO THE PREVIOUS SCOPE INSTRUCTION. NOTE THAT IF  
166 THE ERROR IS INTERMITTENT THAT THE TEST WILL DROP THROUGH  
167 THE HLT AND PROCEED TO THE NEXT TEST, THEREFORE TO LOOP THE  
168 TEST CONTINUOUSLY REPLACE THE BEQ +4 INSTRUCTION IMMEDIATLY  
169 PRECEEDING THE HLT WITH THE BRANCH BACK TO THE PREVIOUS  
170 SCOPE.  
171  
172 TO LOOP TRAP FAILURES PATCH IN THE FOLLOWING ROUTINE AT THE

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ADDRESS OF THE TRAP VECTOR:

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TRAPVEC: TRAPVEC+4  
 TRAPVEC+2: 0  
 TRAPVEC+4: 012716 ;MOVE 'SCOPE'  
 ;ADDRESS TO STACK  
 TRAPVEC+6: ADDRESS ;ADDRESS OF PREVIOUS  
 ;SCOPE INST.  
 TRAPVEC+10: 000006 ;RETURN TO TEST AT 'SCOPE'

RESTORE ALL LOCATIONS BEFORE PROCEEDING TO NEXT TEST(S).

## 7.0 RESTRICTIONS

THESE PROGRAMS MUST BE LOADED IN THE LOWER 4K OF MEMORY.

## 7.1 STARTING RESTRICTION

ALL PROGRAMS MUST BE INITIALLY STARTED AT 200 AND MAY BE STARTED AT A SCOPE INSTRUCTION THEREAFTER.

## 7.2 OPERATIONAL RESTRICTION

NONE

## 8.0 MISCELLANEOUS

IF A HALT OCCURS IN THE TRAP OR INTERRUPT VECTOR AREA, EXAMINE REGISTER 6 (THE STACK POINTER). THE CONTENTS OF R6 CONTAINS THE ADDRESS WHERE THE PC OF THE INSTRUCTION THAT CAUSED THE TRAP IS STORED.

## 8.1 EXECUTION TIME

ALL TESTS TAKE APPROXIMATELY 1 MINUTE EACH ON AN 11/45 WITH CORE MEMORY.

## 8.2 STACK POINTER

ALL PROGRAMS INITIALLY SET THE STACK POINTER AT 500

## 9.0 PROGRAM DESCRIPTION

DCKBA THIS IS A TEST OF THE SXT INSTRUCTION AND INSURES CORRECT RESULTS AND CONDITION CODE OPERATION. THE SXT INSTRUCTION IS TESTED IN ALL ADDRESS MODES IN A GENERAL REGISTER AND THE PC.

DCKBB THIS IS A TEST OF THE SOB INSTRUCTION AND INSURES CORRECT BRANCHING AND CONDITION CODE OPERATION.

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DCKBC THIS IS A TEST OF THE XOR INSTRUCTION AND INSURES  
CORRECT RESULTS AND CONDITION CODE OPERATION. THE  
XOR INSTRUCTION IS EXECUTED USING VARIOUS OPERANDS  
AND IS EXECUTED USING ALL ADDRESS MODES USING A  
GENERAL REGISTER AND THE PC.

DCKBD THIS IS A TEST OF THE MARK INSTRUCTION. THE TEST  
EXECUTES THE MARK INSTRUCTION USING ALL VALUES OF  
'N' AND CHECKS RESULTS. CORRECT CONDITION CODE  
OPERATION IS ALSO TESTED.

DCKBE THIS IS A TEST OF THE RTT AND RTI INSTRUCTIONS AND  
USES 'T' BIT TRAPS IN THE TEST. PROPER STACK  
OPERATION IS TESTED AND ALSO PROPER STATUS CHANGES  
ARE TESTED.

&



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.TITLE CCKBCCO PDP11/45 XOR INST TEST  
.NLIST MD,MC,CND,SEQ  
.LIST ME  
.ABS

;TEST CCKBCC- TEST OF THE XOR INSTRUCTION AND INCLUDES DATA CHECKS AND  
;CONDITION CODES CHECKS  
; THE XOR INSTRUCTION IS ESSENTIALLY A 'HALF ADD' INSTRUCTION, IE. IF  
;THE CORRESPONDING BIT IN THE SOURCE AND DESTINATION ADDRESS ARE THE  
;SAME THE RESULT IN DESTINATION ADDRESS IS A '0' IN THAT BIT POSITION,  
;AND, IF THE CORRESPONDING BITS ARE DIFFERENT THEN THE RESULT IS A '1'  
;IN THAT BIT POSITION. THE CONDITION CODES ARE AFFECTED AS FOLLOWS:  
; 'Z' IS SET IF THE RESULT IS = TO 0, OTHERWISE IT IS CLEARED  
; 'N' IS SET IF THE RESULT IS NEGATIVE, CLEARED IF POSITIVE  
; 'C' IS UNCHANGED  
; 'V' IS CLEARED

;FUNCTIONS NOT TESTED BY THIS PROGRAM  
;1: THAT XOR WILL EXPLICITLY CHANGE THE USER/EXEC BIT IN THE STATUS WORD.  
;STARTING PROCEEDURE  
; LOAD ADDRESS=200  
; PRESS START  
; STACK POINTER IS SET AT 500  
; BELL WILL RING WHEN TEST IS COMPLETE

010701  
000000  
177776  
177770  
177564  
177566  
177570  
177570

SCOPE=010701 ;MOV PC,R1  
HLT=HALT  
PSW=177776 ;ADDRESS OF PROCESSOR STATUS WORD  
UBREAK=177770 ;ADDRESS OF MICRO BREAK REGISTER  
TPCSR=177564 ;ADDRESS OF TELEPRINTER CSR  
TPBUF=177566 ;ADDRESS OF TELEPRINTER BUFFER  
SWR=177570 ;ADDRESS OF CONSOLE SWITCH REGISTER  
DISPLAY=177570 ;ADDRESS OF CONSOLE LIGHT REGISTER

000500

\*\*\*\*\*INITIAL STACK POINTER=0500\*\*\*\*\*  
STKPTR=0500 ;INITIAL STACK SETTING

000000  
000000  
000002  
000004  
000006  
000010  
000012  
000014  
000016  
000020  
000022  
000024  
000026

. = 0  
. + 2  
HALT  
. + 2  
HALT  
. + 2  
HALT  
. + 2  
HALT  
. + 2  
HALT  
. + 2  
HALT  
. + 2  
HALT

000030	000032	.+2
000032	000000	HALT
000034	000036	.+2
000036	000000	HALT
000040	000042	.+2
000042	000000	HALT
000044	000046	.+2
000046	000000	HALT
000050	000052	.+2
000052	000000	HALT
000054	000056	.+2
000056	000000	HALT
000060	000062	.+2
000062	000000	HALT
000064	000066	.+2
000066	000000	HALT
000070	000072	.+2
000072	000000	HALT
000074	000076	.+2
000076	000000	HALT
000100	000102	.+2
000102	000000	HALT
000104	000106	.+2
000106	000000	HALT
000110	000112	.+2
000112	000000	HALT
000114	000116	.+2
000116	000000	HALT
000120	000122	.+2
000122	000000	HALT
000124	000126	.+2
000126	000000	HALT
000130	000132	.+2
000132	000000	HALT
000134	000136	.+2
000136	000000	HALT
000140	000142	.+2
000142	000000	HALT
000144	000146	.+2
000146	000000	HALT
000150	000152	.+2
000152	000000	HALT
000154	000156	.+2
000156	000000	HALT
000160	000162	.+2
000162	000000	HALT
000164	000166	.+2
000166	000000	HALT
000170	000172	.+2
000172	000000	HALT
000174	000176	.+2
000176	000000	HALT
000200	000202	.+2
000202	000000	HALT
000204	000206	.+2
000206	000000	HALT

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000210	000212	.+2
000212	000000	HALT
000214	000216	.+2
000216	000000	HALT
000220	000222	.+2
000222	000000	HALT
000224	000226	.+2
000226	000000	HALT
000230	000232	.+2
000232	000000	HALT
000234	000236	.+2
000236	000000	HALT
000240	000242	.+2
000242	000000	HALT
000244	000246	.+2
000246	000000	HALT
000250	000252	.+2
000252	000000	HALT
000254	000256	.+2
000256	000000	HALT
000260	000262	.+2
000262	000000	HALT
000264	000266	.+2
000266	000000	HALT
000270	000272	.+2
000272	000000	HALT
000274	000276	.+2
000276	000000	HALT
000300	000302	.+2
000302	000000	HALT
000304	000306	.+2
000306	000000	HALT
000310	000312	.+2
000312	000000	HALT
000314	000316	.+2
000316	000000	HALT
000320	000322	.+2
000322	000000	HALT
000324	000326	.+2
000326	000000	HALT
000330	000332	.+2
000332	000000	HALT
000334	000336	.+2
000336	000000	HALT
000340	000342	.+2
000342	000000	HALT
000344	000346	.+2
000346	000000	HALT
000350	000352	.+2
000352	000000	HALT
000354	000356	.+2
000356	000000	HALT
000360	000362	.+2
000362	000000	HALT
000364	000366	.+2
000366	000000	HALT

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000370 000372      .+2
000372 000000      HALT
000374 000376      .+2
000376 000000      HALT

000046 000046      .=46
000046 007440      LOGICAL
000052 000052      .=52
000052 040000      40000

000200 000200      .=200
000167 000576      JMP      START
001000 001000      .=1000
001000 000000      ICNT: 0 ;CONTAINS PASS COUNT
001002 005067 177772 START: CLR ICNT ;CLEAR PASS COUNT
001006 012737 000000 177776 BEGIN: MOV #0,@#PSW ;ALLOW INTERRUPTS ** 22-JUNE-82 **
001014 012706 000500 MOV #STKPTR,%6 ;INITIALIZE STACK POINTER
001020 016737 177754 177570 MOV ICNT,@#DISPLAY ;DISPLAY PASS COUNT
001026 032737 000400 177570 BIT #400,@#SWR ;LOAD MICRO BREAK REGISTER?
001034 001403 BEQ .+10
001036 113737 177570 177770 MOVB @#SWR,@#UBREAK ;LOAD MICRO BREAK REG WITH SRO-7
000002 SOURCE=%2
000000 DEST=%0
000000 Y=0

001044 010701 SCOPE
001046 012702 000000 MOV #0,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
001052 012700 000000 MOV #0,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
001056 000257 CCC
001060 074200 XOR SOURCE,DEST ;XOR SOURCE AND DESTINATION
001062 103001 BCC .+4
001064 000000 HLT ;ERROR! CARRY CHANGED
001066 102001 BVC .+4
001070 000000 HLT ;ERROR! V FAILED TO CLEAR
001072 020027 000000 CMP DEST,#0 ;DEST=0?
001076 001401 BEQ .+4
001100 000000 HLT ;0 XOR 0 FAILED

001102 000001 Y=Y+1
001104 010701 SCOPE
001110 012702 125252 MOV #125252,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
001114 012700 125252 MOV #125252,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
001116 000277 SCC
001120 074200 XOR SOURCE,DEST ;XOR SOURCE AND DESTINATION
001122 103401 BCS .+4
001124 000000 HLT ;ERROR! CARRY CHANGED
001126 102001 BVC .+4
001130 000000 HLT ;ERROR! V FAILED TO CLEAR
001134 020027 000000 CMP DEST,#0 ;DEST=0?
001136 001401 BEQ .+4
001136 000000 HLT ;125252 XOR 125252 FAILED

001140 000002 Y=Y+1
001142 010701 SCOPE
001146 012702 052525 MOV #052525,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
001152 012700 052525 MOV #052525,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
001152 000257 CCC

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001154	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001156	103001		BCC	.+4	
001160	000000		HLT		:ERROR! CARRY CHANGED
001162	102001		BVC	.+4	
001164	000000		HLT		:ERROR! V FAILED TO CLEAR
001166	020027	000000	CMP	DEST,#0 ;DEST=0?	
001172	001401		BEQ	.+4	
001174	000000		HLT		:052525 XOR 052525 FAILED
	000003		Y=Y+1		
001176	010701		SCOPE		
001200	012702	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001204	012700	177777	MOV	#-1,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001210	000277		SCC		
001212	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001214	103401		BCS	.+4	
001216	000000		HLT		:ERROR! CARRY CHANGED
001220	102001		BVC	.+4	
001222	000000		HLT		:ERROR! V FAILED TO CLEAR
001224	020027	000000	CMP	DEST,#0 ;DEST=0?	
001230	001401		BEQ	.+4	
001232	000000		HLT		:-1 XOR -1 FAILED
	000004		Y=Y+1		
001234	010701		SCOPE		
001236	012702	125252	MOV	#125252,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001242	012700	052525	MOV	#052525,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001246	000257		CCC		
001250	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001252	103001		BCC	.+4	
001254	000000		HLT		:ERROR! CARRY CHANGED
001256	102001		BVC	.+4	
001260	000000		HLT		:ERROR! V FAILED TO CLEAR
001262	020027	177777	CMP	DEST,#-1	:DEST=-1?
001266	001401		BEQ	.+4	
001270	000000		HLT		:125252 XOR 052525 FAILED
	000005		Y=Y+1		
001272	010701		SCOPE		
001274	012702	052525	MOV	#052525,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001300	012700	125252	MOV	#125252,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001304	000277		SCC		
001306	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001310	103401		BCS	.+4	
001312	000000		HLT		:ERROR! CARRY CHANGED
001314	102001		BVC	.+4	
001316	000000		HLT		:ERROR! V FAILED TO CLEAR
001320	020027	177777	CMP	DEST,#-1	:DEST=-1?
001324	001401		BEQ	.+4	
001326	000000		HLT		:052525 XOR 125252 FAILED
	000006		Y=Y+1		
001330	010701		SCOPE		
001332	012702	100000	MOV	#100000,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001336	012700	100001	MOV	#100001,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001342	000257		CCC		

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001344	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001346	103001		BCC	+.4	
001350	000000		HLT		;ERROR! CARRY CHANGED
001352	102001		BVC	+.4	
001354	000000		HLT		;ERROR! V FAILED TO CLEAR
001356	020027	000001	CMP	DEST,#1 ;DEST=1?	
001362	001401		BEQ	+.4	
001364	000000		HLT		;100000 XOR 100001 FAILED
	000007		Y=Y+1		
001366	010701		SCOPE		
001370	012702	077777	MOV	#77777,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
001374	012700	100000	MOV	#100000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
001400	000277		SCC		
001402	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001404	103401		BCS	+.4	
001406	000000		HLT		;ERROR! CARRY CHANGED
001410	102001		BVC	+.4	
001412	000000		HLT		;ERROR! V FAILED TO CLEAR
001414	020027	177777	CMP	DEST,#-1	;DEST=-1?
001420	001401		BEQ	+.4	
001422	000000		HLT		;77777 XOR 100000 FAILED
	000010		Y=Y+1		
	000001		N=1		
001424	010701		SCOPE		
001426	012702	000001	MOV	#1,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
001432	012700	000001	MOV	#1,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
001436	000257		CCC		
001440	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001442	103001		BCC	+.4	
001444	000000		HLT		;ERROR! CARRY CHANGED
001446	102001		BVC	+.4	
001450	000000		HLT		;ERROR! V FAILED TO CLEAR
001452	020027	000000	CMP	DEST,#0 ;DEST=0?	
001456	001401		BEQ	+.4	
001460	000000		HLT		;1 XOR 1 FAILED
	000011		Y=Y+1		
	000002		N=N+N		
001462	010701		SCOPE		
001464	012702	000002	MOV	#2,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
001470	012700	000002	MOV	#2,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
001474	000277		SCC		
001476	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001500	103401		BCS	+.4	
001502	000000		HLT		;ERROR! CARRY CHANGED
001504	102001		BVC	+.4	
001506	000000		HLT		;ERROR! V FAILED TO CLEAR
001510	020027	000000	CMP	DEST,#0 ;DEST=0?	
001514	001401		BEQ	+.4	
001516	000000		HLT		;2 XOR 2 FAILED
	000012		Y=Y+1		
	000004		N=N+N		

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001520	010701		SCOPE		
001522	012702	000004	MOV	#4,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001526	012700	000004	MOV	#4,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001532	000257		CCC		
001534	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001536	103001		BCC	+.4	
001540	000000		HLT		:ERROR! CARRY CHANGED
001542	102001		BVC	+.4	
001544	000000		HLT		:ERROR! V FAILED TO CLEAR
001546	020027	000000	CMP	DEST,#0 ;DEST=0?	
001552	001401		BEQ	+.4	
001554	000000		HLT		:4 XOR 4 FAILED
	000013		Y=Y+1		
	000010		N=N+N		
	010701		SCOPE		
001556	010701		MOV	#10,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001560	012702	000010	MOV	#10,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001564	012700	000010	MOV	#10,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001570	000277		SCC		
001572	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001574	103401		BCS	+.4	
001576	000000		HLT		:ERROR! CARRY CHANGED
001600	102001		BVC	+.4	
001602	000000		HLT		:ERROR! V FAILED TO CLEAR
001604	020027	000000	CMP	DEST,#0 ;DEST=0?	
001610	001401		BEQ	+.4	
001612	000000		HLT		:10 XOR 10 FAILED
	000014		Y=Y+1		
	000020		N=N+N		
	010701		SCOPE		
001614	010701		MOV	#20,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001616	012702	000020	MOV	#20,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001622	012700	000020	MOV	#20,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001626	000257		CCC		
001630	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001632	103001		BCC	+.4	
001634	000000		HLT		:ERROR! CARRY CHANGED
001636	102001		BVC	+.4	
001640	000000		HLT		:ERROR! V FAILED TO CLEAR
001642	020027	000000	CMP	DEST,#0 ;DEST=0?	
001646	001401		BEQ	+.4	
001650	000000		HLT		:20 XOR 20 FAILED
	000015		Y=Y+1		
	000040		N=N+N		
	010701		SCOPE		
001652	010701		MOV	#40,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
001654	012702	000040	MOV	#40,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001660	012700	000040	MOV	#40,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
001664	000277		SCC		
001666	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
001670	103401		BCS	+.4	
001672	000000		HLT		:ERROR! CARRY CHANGED
001674	102001		BVC	+.4	
001676	000000		HLT		:ERROR! V FAILED TO CLEAR
001700	020027	000000	CMP	DEST,#0 ;DEST=0?	
001704	001401		BEQ	+.4	

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001706	000000		HLT		;40 XOR 40 FAILED
	000016		Y=Y+1		
	000100		N=N+N		
001710	010701		SCOPE		
001712	012702	000100	MOV	#100,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
001716	012700	000100	MOV	#100,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
001722	000257		CCC		
001724	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001726	103001		BCC	.+4	
001730	000000		HLT		;ERROR! CARRY CHANGED
001732	102001		BVC	.+4	
001734	000000		HLT		;ERROR! V FAILED TO CLEAR
001736	020027	000000	CMP	DEST,#0 ;DEST=0?	
001742	001401		BEQ	.+4	
001744	000000		HLT		;100 XOR 100 FAILED
	000017		Y=Y+1		
	000200		N=N+N		
001746	010701		SCOPE		
001750	012702	000200	MOV	#200,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
001754	012700	000200	MOV	#200,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
001760	000277		SCC		
001762	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
001764	103401		BCS	.+4	
001766	000000		HLT		;ERROR! CARRY CHANGED
001770	102001		BVC	.+4	
001772	000000		HLT		;ERROR! V FAILED TO CLEAR
001774	020027	000000	CMP	DEST,#0 ;DEST=0?	
002000	001401		BEQ	.+4	
002002	000000		HLT		;200 XOR 200 FAILED
	000020		Y=Y+1		
	000400		N=N+N		
002004	010701		SCOPE		
002006	012702	000400	MOV	#400,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002012	012700	000400	MOV	#400,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002016	000257		CCC		
002020	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002022	103001		BCC	.+4	
002024	000000		HLT		;ERROR! CARRY CHANGED
002026	102001		BVC	.+4	
002030	000000		HLT		;ERROR! V FAILED TO CLEAR
002032	020027	000000	CMP	DEST,#0 ;DEST=0?	
002036	001401		BEQ	.+4	
002040	000000		HLT		;400 XOR 400 FAILED
	000021		Y=Y+1		
	001000		N=N+N		
002042	010701		SCOPE		
002044	012702	001000	MOV	#1000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002050	012700	001000	MOV	#1000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002054	000277		SCC		
002056	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002060	103401		BCS	.+4	
002062	000000		HLT		;ERROR! CARRY CHANGED



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002064	102001		BVC	.+4	
002066	000000		HLT		;ERROR! V FAILED TO CLEAR
002070	020027	000000	CMP	DEST,#0 ;DEST=0?	
002074	001401		BEQ	.+4	
002076	000000		HLT		;1000 XOR 1000 FAILED
	000022		Y=Y+1		
	002000		N=N+N		
	010701		SCOPE		
002100	012702	002000	MOV	#2000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002102	012700	002000	MOV	#2000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002106	000257		CCC		
002112	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002114	103001		BCC	.+4	
002116	103001		HLT		;ERROR! CARRY CHANGED
002120	000000		BVC	.+4	
002122	102001		HLT		;ERROR! V FAILED TO CLEAR
002124	000000		CMP	DEST,#0 ;DEST=0?	
002126	020027	000000	BEQ	.+4	
002132	001401		HLT		;2000 XOR 2000 FAILED
002134	000000				
	000023		Y=Y+1		
	004000		N=N+N		
	010701		SCOPE		
002136	012702	004000	MOV	#4000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002140	012700	004000	MOV	#4000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002144	000277		SCC		
002150	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002152	103401		BCS	.+4	
002154	103401		HLT		;ERROR! CARRY CHANGED
002156	000000		BVC	.+4	
002160	102001		HLT		;ERROR! V FAILED TO CLEAR
002162	000000		CMP	DEST,#0 ;DEST=0?	
002164	020027	000000	BEQ	.+4	
002170	001401		HLT		;4000 XOR 4000 FAILED
002172	000000				
	000024		Y=Y+1		
	010000		N=N+N		
	010701		SCOPE		
002174	012702	010000	MOV	#10000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002176	012700	010000	MOV	#10000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002202	000257		CCC		
002206	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002210	103001		BCC	.+4	
002212	103001		HLT		;ERROR! CARRY CHANGED
002214	000000		BVC	.+4	
002216	102001		HLT		;ERROR! V FAILED TO CLEAR
002220	000000		CMP	DEST,#0 ;DEST=0?	
002222	020027	000000	BEQ	.+4	
002226	001401		HLT		;10000 XOR 10000 FAILED
002230	000000				
	000025		Y=Y+1		
	020000		N=N+N		
	010701		SCOPE		
002232	012702	020000	MOV	#20000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002234	012700	020000	MOV	#20000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION

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002244	000277		SCC		
002246	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002250	103401		BCS	+.4	
002252	000000		HLT		;ERROR! CARRY CHANGED
002254	102001		BVC	+.4	
002256	000000		HLT		;ERROR! V FAILED TO CLEAR
002260	020027	000000	CMP	DEST,#0 ;DEST=0?	
002264	001401		BEQ	+.4	
002266	000000		HLT		;20000 XOR 20000 FAILED
	000026		Y=Y+1		
	040000		N=N+N		
002270	010701		SCOPE		
002272	012702	040000	MOV	#40000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002276	012700	040000	MOV	#40000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002302	000257		CCC		
002304	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002306	103001		BCC	+.4	
002310	000000		HLT		;ERROR! CARRY CHANGED
002312	102001		BVC	+.4	
002314	000000		HLT		;ERROR! V FAILED TO CLEAR
002316	020027	000000	CMP	DEST,#0 ;DEST=0?	
002322	001401		BEQ	+.4	
002324	000000		HLT		;40000 XOR 40000 FAILED
	000027		Y=Y+1		
	100000		N=N+N		
002326	010701		SCOPE		
002330	012702	100000	MOV	#100000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002334	012700	100000	MOV	#100000,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002340	000277		SCC		
002342	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002344	103401		BCS	+.4	
002346	000000		HLT		;ERROR! CARRY CHANGED
002350	102001		BVC	+.4	
002352	000000		HLT		;ERROR! V FAILED TO CLEAR
002354	020027	000000	CMP	DEST,#0 ;DEST=0?	
002360	001401		BEQ	+.4	
002362	000000		HLT		;100000 XOR 100000 FAILED
	000030		Y=Y+1		
	000000		N=N+N		
	000001		N=1		
002364	010701		SCOPE		
002366	012702	177777	MOV	#-1,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
002372	012700	000001	MOV	#1,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
002376	000257		CCC		
002400	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
002402	103001		BCC	+.4	
002404	000000		HLT		;ERROR! CARRY CHANGED
002406	102001		BVC	+.4	
002410	000000		HLT		;ERROR! V FAILED TO CLEAR
002412	020027	177776	CMP	DEST,#177776	;DEST=177776?
002416	001401		BEQ	+.4	
002420	000000		HLT		;-1 XOR 1 FAILED

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	000031		Y=Y+1	
	000002		N=N+N	
	010701		SCOPE	
002422	012702	177777	MOV	#-1,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
002424	012700	000002	MOV	#2,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
002430	000277		SCC	
002434	074200		XOR	SOURCE,DEST ;XOR SOURCE AND DESTINATION
002436	103401		BCS	.+4
002440	000000		HLT	;ERROR! CARRY CHANGED
002442	102001		BVC	.+4
002444	000000		HLT	;ERROR! V FAILED TO CLEAR
002446	000000		HLT	;DEST=177775?
002450	020027	177775	CMP	DEST,#177775
002454	001401		BEQ	.+4
002456	000000		HLT	;-1 XOR 2 FAILED
	000032		Y=Y+1	
	000004		N=N+N	
	010701		SCOPE	
002460	012702	177777	MOV	#-1,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
002462	012700	000004	MOV	#4,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
002466	000257		CCC	
002472	074200		XOR	SOURCE,DEST ;XOR SOURCE AND DESTINATION
002474	103001		BCC	.+4
002476	000000		HLT	;ERROR! CARRY CHANGED
002500	102001		BVC	.+4
002502	000000		HLT	;ERROR! V FAILED TO CLEAR
002504	000000		HLT	;DEST=177773?
002506	020027	177773	CMP	DEST,#177773
002512	001401		BEQ	.+4
002514	000000		HLT	;-1 XOR 4 FAILED
	000033		Y=Y+1	
	000010		N=N+N	
	010701		SCOPE	
002516	012702	177777	MOV	#-1,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
002520	012700	000010	MOV	#10,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
002524	000277		SCC	
002530	074200		XOR	SOURCE,DEST ;XOR SOURCE AND DESTINATION
002532	103401		BCS	.+4
002534	000000		HLT	;ERROR! CARRY CHANGED
002536	102001		BVC	.+4
002540	000000		HLT	;ERROR! V FAILED TO CLEAR
002542	000000		HLT	;DEST=177767?
002544	020027	177767	CMP	DEST,#177767
002548	001401		BEQ	.+4
002552	000000		HLT	;-1 XOR 10 FAILED
	000034		Y=Y+1	
	000020		N=N+N	
	010701		SCOPE	
002554	012702	177777	MOV	#-1,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
002556	012700	000020	MOV	#20,DEST ;MOVE DESTINATION OPERAND TO DESTINATION
002562	000257		CCC	
002566	074200		XOR	SOURCE,DEST ;XOR SOURCE AND DESTINATION
002570	103001		BCC	.+4
002572	000000		HLT	;ERROR! CARRY CHANGED
002574	102001		BVC	.+4
002576				

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002600	000000		HLT		:ERROR! V FAILED TO CLEAR
002602	020027	177757	CMP	DEST,#177757	:DEST=177757?
002606	001401		BEQ	+.4	
002610	000000		HLT		:-1 XOR 20 FAILED
	000035		Y=Y+1		
	000040		N=N+N		
	010701		SCOPE		
002612	010701	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
002614	012702	177777	MOV	#40,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
002620	012700	000040	SCC		
002624	000277		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
002626	074200		BCS	+.4	
002630	103401		HLT		:ERROR! CARRY CHANGED
002632	000000		BVC	+.4	
002634	102001		HLT		:ERROR! V FAILED TO CLEAR
002636	000000		CMP	DEST,#177737	:DEST=177737?
002640	020027	177737	BEQ	+.4	
002644	001401		HLT		:-1 XOR 40 FAILED
002646	000000				
	000036		Y=Y+1		
	000100		N=N+N		
	010701		SCOPE		
002650	010701	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
002652	012702	177777	MOV	#100,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
002656	012700	000100	CCC		
002662	000257		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
002664	074200		BCC	+.4	
002666	103001		HLT		:ERROR! CARRY CHANGED
002670	000000		BVC	+.4	
002672	102001		HLT		:ERROR! V FAILED TO CLEAR
002674	000000		CMP	DEST,#177677	:DEST=177677?
002676	020027	177677	BEQ	+.4	
002702	001401		HLT		:-1 XOR 100 FAILED
002704	000000				
	000037		Y=Y+1		
	000200		N=N+N		
	010701		SCOPE		
002706	010701	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
002710	012702	177777	MOV	#200,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
002714	012700	000200	SCC		
002720	000277		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
002722	074200		BCS	+.4	
002724	103401		HLT		:ERROR! CARRY CHANGED
002726	000000		BVC	+.4	
002730	102001		HLT		:ERROR! V FAILED TO CLEAR
002732	000000		CMP	DEST,#177577	:DEST=177577?
002734	020027	177577	BEQ	+.4	
002740	001401		HLT		:-1 XOR 200 FAILED
002742	000000				
	000040		Y=Y+1		
	000400		N=N+N		
	010701		SCOPE		
002744	010701	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
002746	012702	177777	MOV	#400,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
002752	012700	000400	CCC		
002756	000257				

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002760	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
002762	103001		BCC	.+4	:ERROR! CARRY CHANGED
002764	000000		HLT		
002766	102001		BVC	.+4	:ERROR! V FAILED TO CLEAR
002770	000000		HLT		
002772	020027	177377	CMP	DEST,#177377	:DEST=177377?
002774	001401		BEQ	.+4	
003000	000000		HLT		:-1 XOR 400 FAILED
	000041		Y=Y+1		
	001000		N=N+N		
003002	010701		SCOPE		
003004	012702	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003010	012700	001000	MOV	#1000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003014	000277		SCC		
003016	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003020	103401		BCC	.+4	:ERROR! CARRY CHANGED
003022	000000		HLT		
003024	102001		BVC	.+4	:ERROR! V FAILED TO CLEAR
003026	000000		HLT		
003030	020027	176777	CMP	DEST,#176777	:DEST=176777?
003034	001401		BEQ	.+4	
003036	000000		HLT		:-1 XOR 1000 FAILED
	000042		Y=Y+1		
	002000		N=N+N		
003040	010701		SCOPE		
003042	012702	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003046	012700	002000	MOV	#2000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003052	000257		CCC		
003054	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003056	103001		BCC	.+4	:ERROR! CARRY CHANGED
003060	000000		HLT		
003062	102001		BVC	.+4	:ERROR! V FAILED TO CLEAR
003064	000000		HLT		
003066	020027	175777	CMP	DEST,#175777	:DEST=175777?
003072	001401		BEQ	.+4	
003074	000000		HLT		:-1 XOR 2000 FAILED
	000043		Y=Y+1		
	004000		N=N+N		
003076	010701		SCOPE		
003100	012702	177777	MOV	#-1,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003104	012700	004000	MOV	#4000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003110	000277		SCC		
003112	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003114	103401		BCC	.+4	:ERROR! CARRY CHANGED
003116	000000		HLT		
003120	102001		BVC	.+4	:ERROR! V FAILED TO CLEAR
003122	000000		HLT		
003124	020027	173777	CMP	DEST,#173777	:DEST=173777?
003130	001401		BEQ	.+4	
003132	000000		HLT		:-1 XOR 4000 FAILED
	000044		Y=Y+1		
	010000		N=N+N		

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003134	010701		SCOPE		
003136	012702	177777	MOV	#-1, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003142	012700	010000	MOV	#10000, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003146	000257		CCC		
003150	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
003152	103001		BCC	+.4	
003154	000000		HLT		:ERROR! CARRY CHANGED
003156	102001		BVC	+.4	
003160	000000		HLT		:ERROR! V FAILED TO CLEAR
003162	020027	167777	CMP	DEST, #167777	:DEST=167777?
003166	001401		BEQ	+.4	
003170	000000		HLT		:-1 XOR 10000 FAILED
	000045		Y=Y+1		
	020000		N=N+N		
003172	010701		SCOPE		
003174	012702	177777	MOV	#-1, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003200	012700	020000	MOV	#20000, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003204	000277		SCC		
003206	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
003210	103401		BCS	+.4	
003212	000000		HLT		:ERROR! CARRY CHANGED
003214	102001		BVC	+.4	
003216	000000		HLT		:ERROR! V FAILED TO CLEAR
003220	020027	157777	CMP	DEST, #157777	:DEST=157777?
003224	001401		BEQ	+.4	
003226	000000		HLT		:-1 XOR 20000 FAILED
	000046		Y=Y+1		
	040000		N=N+N		
003230	010701		SCOPE		
003232	012702	177777	MOV	#-1, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003236	012700	040000	MOV	#40000, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003242	000257		CCC		
003244	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
003246	103001		BCC	+.4	
003250	000000		HLT		:ERROR! CARRY CHANGED
003252	102001		BVC	+.4	
003254	000000		HLT		:ERROR! V FAILED TO CLEAR
003256	020027	137777	CMP	DEST, #137777	:DEST=137777?
003262	001401		BEQ	+.4	
003264	000000		HLT		:-1 XOR 40000 FAILED
	000047		Y=Y+1		
	100000		N=N+N		
003266	010701		SCOPE		
003270	012702	177777	MOV	#-1, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003274	012700	100000	MOV	#100000, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003300	000277		SCC		
003302	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
003304	103401		BCS	+.4	
003306	000000		HLT		:ERROR! CARRY CHANGED
003310	102001		BVC	+.4	
003312	000000		HLT		:ERROR! V FAILED TO CLEAR
003314	020027	077777	CMP	DEST, #77777	:DEST=77777?
003320	001401		BEQ	+.4	

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003322 000000

HLT

;-1 XOR 100000 FAILED

000050  
000000

Y=Y+1  
N=N+N

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	000001		N=1		
003324	010701			SCOPE	
003326	012702	000000		MOV #0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003332	012700	000001		MOV #1,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003336	000257			CCC	
003340	074200			XOR SOURCE,DEST	:XOR SOURCE AND DESTINATION
003342	103001			BCC .+4	
003344	000000			HLT	:ERROR! CARRY CHANGED
003346	102001			BVC .+4	
003350	000000			HLT	:ERROR! V FAILED TO CLEAR
003352	020027	000001		CMP DEST,#1	:DEST=1?
003356	001401			BEQ .+4	
003360	000000			HLT	:0 XOR 1 FAILED
	000051			Y=Y+1	
	000002			N=N+N	
003362	010701			SCOPE	
003364	012702	000000		MOV #0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003370	012700	000002		MOV #2,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003374	000277			SCC	
003376	074200			XOR SOURCE,DEST	:XOR SOURCE AND DESTINATION
003400	103401			BCS .+4	
003402	000000			HLT	:ERROR! CARRY CHANGED
003404	102001			BVC .+4	
003406	000000			HLT	:ERROR! V FAILED TO CLEAR
003410	020027	000002		CMP DEST,#2	:DEST=2?
003414	001401			BEQ .+4	
003416	000000			HLT	:0 XOR 2 FAILED
	000052			Y=Y+1	
	000004			N=N+N	
003420	010701			SCOPE	
003422	012702	000000		MOV #0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003426	012700	000004		MOV #4,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003432	000257			CCC	
003434	074200			XOR SOURCE,DEST	:XOR SOURCE AND DESTINATION
003436	103001			BCC .+4	
003440	000000			HLT	:ERROR! CARRY CHANGED
003442	102001			BVC .+4	
003444	000000			HLT	:ERROR! V FAILED TO CLEAR
003446	020027	000004		CMP DEST,#4	:DEST=4?
003452	001401			BEQ .+4	
003454	000000			HLT	:0 XOR 4 FAILED
	000053			Y=Y+1	
	000010			N=N+N	
003456	010701			SCOPE	
003460	012702	000000		MOV #0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003464	012700	000010		MOV #10,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003470	000277			SCC	
003472	074200			XOR SOURCE,DEST	:XOR SOURCE AND DESTINATION
003474	103401			BCS .+4	
003476	000000			HLT	:ERROR! CARRY CHANGED
003500	102001			BVC .+4	
003502	000000			HLT	:ERROR! V FAILED TO CLEAR



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003504	020027	000010	CMP	DEST,#10	:DEST=10?
003510	001401		BEQ	+.4	
003512	000000		HLT		:0 XOR 10 FAILED
	000054		Y=Y+1		
	000020		N=N+N		
	010701		SCOPE		
003514	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003522	012700	000020	MOV	#20,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003526	000257		CCC		
003530	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003532	103001		BCC	+.4	
003534	000000		HLT		:ERROR! CARRY CHANGED
003536	102001		BVC	+.4	
003540	000000		HLT		:ERROR! V FAILED TO CLEAR
003542	020027	000020	CMP	DEST,#20	:DEST=20?
003546	001401		BEQ	+.4	
003550	000000		HLT		:0 XOR 20 FAILED
	000055		Y=Y+1		
	000040		N=N+N		
	010701		SCOPE		
003552	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003560	012700	000040	MOV	#40,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003564	000277		SCC		
003566	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003570	103401		BCS	+.4	
003572	000000		HLT		:ERROR! CARRY CHANGED
003574	102001		BVC	+.4	
003576	000000		HLT		:ERROR! V FAILED TO CLEAR
003600	020027	000040	CMP	DEST,#40	:DEST=40?
003604	001401		BEQ	+.4	
003606	000000		HLT		:0 XOR 40 FAILED
	000056		Y=Y+1		
	000100		N=N+N		
	010701		SCOPE		
003610	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003616	012700	000100	MOV	#100,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003622	000257		CCC		
003624	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003626	103001		BCC	+.4	
003630	000000		HLT		:ERROR! CARRY CHANGED
003632	102001		BVC	+.4	
003634	000000		HLT		:ERROR! V FAILED TO CLEAR
003636	020027	000100	CMP	DEST,#100	:DEST=100?
003642	001401		BEQ	+.4	
003644	000000		HLT		:0 XOR 100 FAILED
	000057		Y=Y+1		
	000200		N=N+N		
	010701		SCOPE		
003646	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003654	012700	000200	MOV	#200,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003660	000277		SCC		
003662	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION

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003664	103401		BCS	+.4	
003666	000000		HLT		:ERROR! CARRY CHANGED
003670	102001		BVC	+.4	
003672	000000		HLT		:ERROR! V FAILED TO CLEAR
003674	020027	000200	CMP	DEST,#200	:DEST=200?
003700	001401		BEQ	+.4	
003702	000000		HLT		:0 XOR 200 FAILED
	000060		Y=Y+1		
	000400		N=N+N		
003704	010701		SCOPE		
003706	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003712	012700	000400	MOV	#400,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003716	000257		CCC		
003720	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003722	103001		BCC	+.4	
003724	000000		HLT		:ERROR! CARRY CHANGED
003726	102001		BVC	+.4	
003730	000000		HLT		:ERROR! V FAILED TO CLEAR
003732	020027	000400	CMP	DEST,#400	:DEST=400?
003736	001401		BEQ	+.4	
003740	000000		HLT		:0 XOR 400 FAILED
	000061		Y=Y+1		
	001000		N=N+N		
003742	010701		SCOPE		
003744	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
003750	012700	001000	MOV	#1000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
003754	000277		SCC		
003756	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
003760	103401		BCS	+.4	
003762	000000		HLT		:ERROR! CARRY CHANGED
003764	102001		BVC	+.4	
003766	000000		HLT		:ERROR! V FAILED TO CLEAR
003770	020027	001000	CMP	DEST,#1000	:DEST=1000?
003774	001401		BEQ	+.4	
003776	000000		HLT		:0 XOR 1000 FAILED
	000062		Y=Y+1		
	002000		N=N+N		
004000	010701		SCOPE		
004002	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004006	012700	002000	MOV	#2000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004012	000257		CCC		
004014	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004016	103001		BCC	+.4	
004020	000000		HLT		:ERROR! CARRY CHANGED
004022	102001		BVC	+.4	
004024	000000		HLT		:ERROR! V FAILED TO CLEAR
004026	020027	002000	CMP	DEST,#2000	:DEST=2000?
004032	001401		BEQ	+.4	
004034	000000		HLT		:0 XOR 2000 FAILED
	000063		Y=Y+1		
	004000		N=N+N		
004036	010701		SCOPE		

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004040	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004044	012700	004000	MOV	#4000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004050	000277		SCC		
004052	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004054	103401		BCS	+.4	
004056	000000		HLT		:ERROR! CARRY CHANGED
004060	102001		BVC	+.4	
004062	000000		HLT		:ERROR! V FAILED TO CLEAR
004064	020027	004000	CMP	DEST,#4000	:DEST=4000?
004070	001401		BEQ	+.4	
004072	000000		HLT		:0 XOR 4000 FAILED
	000064		Y=Y+1		
	010000		N=N+N		
	010701		SCOPE		
004074	010701				
004076	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004102	012700	010000	MOV	#10000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004106	000257		CCC		
004110	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004112	103001		BCC	+.4	
004114	000000		HLT		:ERROR! CARRY CHANGED
004116	102001		BVC	+.4	
004120	000000		HLT		:ERROR! V FAILED TO CLEAR
004122	020027	010000	CMP	DEST,#10000	:DEST=10000?
004126	001401		BEQ	+.4	
004130	000000		HLT		:0 XOR 10000 FAILED
	000065		Y=Y+1		
	020000		N=N+N		
	010701		SCOPE		
004132	010701				
004134	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004140	012700	020000	MOV	#20000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004144	000277		SCC		
004146	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004150	103401		BCS	+.4	
004152	000000		HLT		:ERROR! CARRY CHANGED
004154	102001		BVC	+.4	
004156	000000		HLT		:ERROR! V FAILED TO CLEAR
004160	020027	020000	CMP	DEST,#20000	:DEST=20000?
004164	001401		BEQ	+.4	
004166	000000		HLT		:0 XOR 20000 FAILED
	000066		Y=Y+1		
	040000		N=N+N		
	010701		SCOPE		
004170	010701				
004172	012702	000000	MOV	#0,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004176	012700	040000	MOV	#40000,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004202	000257		CCC		
004204	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004206	103001		BCC	+.4	
004210	000000		HLT		:ERROR! CARRY CHANGED
004212	102001		BVC	+.4	
004214	000000		HLT		:ERROR! V FAILED TO CLEAR
004216	020027	040000	CMP	DEST,#40000	:DEST=40000?
004222	001401		BEQ	+.4	
004224	000000		HLT		:0 XOR 40000 FAILED

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	000067		Y=Y+1		
	100000		N=N+N		
004226	010701		SCOPE		
004230	012702	000000	MOV	#0, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004234	012700	100000	MOV	#100000, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004240	000277		SCC		
004242	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
004244	103401		BCS	+.4	
004246	000000		HLT		:ERROR! CARRY CHANGED
004250	102001		BVC	+.4	
004252	000000		HLT		:ERROR! V FAILED TO CLEAR
004254	020027	100000	CMP	DEST, #100000	:DEST=100000?
004260	001401		BEQ	+.4	
004262	000000		HLT		:0 XOR 100000 FAILED
	000070		Y=Y+1		
	000000		N=N+N		
	000001				
		N=1			
004264	010701		SCOPE		
004266	012702	000001	MOV	#1, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004272	012700	177776	MOV	#177776, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004276	000257		CCC		
004300	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
004302	103001		BCC	+.4	
004304	000000		HLT		:ERROR! CARRY CHANGED
004306	102001		BVC	+.4	
004310	000000		HLT		:ERROR! V FAILED TO CLEAR
004312	020027	177777	CMP	DEST, #177777	:DEST=177777?
004316	001401		BEQ	+.4	
004320	000000		HLT		:1 XOR 177776 FAILED
	000071		Y=Y+1		
	000002		N=N+N		
004322	010701		SCOPE		
004324	012702	000002	MOV	#2, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004330	012700	177775	MOV	#177775, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004334	000277		SCC		
004336	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
004340	103401		BCS	+.4	
004342	000000		HLT		:ERROR! CARRY CHANGED
004344	102001		BVC	+.4	
004346	000000		HLT		:ERROR! V FAILED TO CLEAR
004350	020027	177777	CMP	DEST, #177777	:DEST=177777?
004354	001401		BEQ	+.4	
004356	000000		HLT		:2 XOR 177775 FAILED
	000072		Y=Y+1		
	000004		N=N+N		
004360	010701		SCOPE		
004362	012702	000004	MOV	#4, SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004366	012700	177773	MOV	#177773, DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004372	000257		CCC		
004374	074200		XOR	SOURCE, DEST	:XOR SOURCE AND DESTINATION
004376	103001		BCC	+.4	

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004400	000000		HLT		:ERROR! CARRY CHANGED
004402	102001		BVC	+.4	
004404	000000		HLT		:ERROR! V FAILED TO CLEAR
004406	020027	177777	CMP	DEST,#177777	:DEST=177777?
004412	001401		BEQ	+.4	
004414	000000		HLT		:4 XOR 177773 FAILED
	000073		Y=Y+1		
	000010		N=N+N		
	010701		SCOPE		
004416	010701		MOV	#10,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004420	012702	000010	MOV	#177767,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004424	012700	177767	SCC		
004430	000277		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004432	074200		BCS	+.4	
004434	103401		HLT		:ERROR! CARRY CHANGED
004436	000000		BVC	+.4	
004440	102001		HLT		:ERROR! V FAILED TO CLEAR
004442	000000		CMP	DEST,#177777	:DEST=177777?
004444	020027	177777	BEQ	+.4	
004450	001401		HLT		:10 XOR 177767 FAILED
004452	000000				
	000074		Y=Y+1		
	000020		N=N+N		
	010701		SCOPE		
004454	010701		MOV	#20,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004456	012702	000020	MOV	#177757,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004462	012700	177757	CCC		
004466	000257		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004470	074200		BCC	+.4	
004472	103001		HLT		:ERROR! CARRY CHANGED
004474	000000		BVC	+.4	
004476	102001		HLT		:ERROR! V FAILED TO CLEAR
004500	000000		CMP	DEST,#177777	:DEST=177777?
004502	020027	177777	BEQ	+.4	
004506	001401		HLT		:20 XOR 177757 FAILED
004510	000000				
	000075		Y=Y+1		
	000040		N=N+N		
	010701		SCOPE		
004512	010701		MOV	#40,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004514	012702	000040	MOV	#177737,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004520	012700	177737	SCC		
004524	000277		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004526	074200		BCS	+.4	
004530	103401		HLT		:ERROR! CARRY CHANGED
004532	000000		BVC	+.4	
004534	102001		HLT		:ERROR! V FAILED TO CLEAR
004536	000000		CMP	DEST,#177777	:DEST=177777?
004540	020027	177777	BEQ	+.4	
004544	001401		HLT		:40 XOR 177737 FAILED
004546	000000				
	000076		Y=Y+1		
	000100		N=N+N		
	010701		SCOPE		
004550	010701		MOV	#100,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004552	012702	000100			

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004556	012700	177677	MOV	#177677,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004562	000257		CCC		
004564	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004566	103001		BCC	+.4	
004570	000000		HLT		:ERROR! CARRY CHANGED
004572	102001		BVC	+.4	
004574	000000		HLT		:ERROR! V FAILED TO CLEAR
004576	020027	177777	CMP	DEST,#177777	:DEST=177777?
004602	001401		BEQ	+.4	
004604	000000		HLT		:100 XOR 177677 FAILED
	000077		Y=Y+1		
	000200		N=N+N		
	010701		SCOPE		
004606	012702	000200	MOV	#200,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004610	012700	177577	MOV	#177577,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004614	000277		SCC		
004620	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004622	103401		BCS	+.4	
004624	000000		HLT		:ERROR! CARRY CHANGED
004626	102001		BVC	+.4	
004630	000000		HLT		:ERROR! V FAILED TO CLEAR
004632	000000		CMP	DEST,#177777	:DEST=177777?
004634	020027	177777	BEQ	+.4	
004640	001401		HLT		:200 XOR 177577 FAILED
004642	000000				
	000100		Y=Y+1		
	000400		N=N+N		
	010701		SCOPE		
004644	012702	000400	MOV	#400,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004646	012700	177377	MOV	#177377,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004652	000257		CCC		
004656	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004660	103001		BCC	+.4	
004662	000000		HLT		:ERROR! CARRY CHANGED
004664	102001		BVC	+.4	
004666	000000		HLT		:ERROR! V FAILED TO CLEAR
004670	000000		CMP	DEST,#177777	:DEST=177777?
004672	020027	177777	BEQ	+.4	
004676	001401		HLT		:400 XOR 177377 FAILED
004700	000000				
	000101		Y=Y+1		
	001000		N=N+N		
	010701		SCOPE		
004702	012702	001000	MOV	#1000,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
004704	012700	176777	MOV	#176777,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
004710	000277		SCC		
004714	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
004716	103401		BCS	+.4	
004720	000000		HLT		:ERROR! CARRY CHANGED
004722	102001		BVC	+.4	
004724	000000		HLT		:ERROR! V FAILED TO CLEAR
004726	000000		CMP	DEST,#177777	:DEST=177777?
004730	020027	177777	BEQ	+.4	
004734	001401		HLT		:1000 XOR 176777 FAILED
004736	000000				

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	000102		Y=Y+1		
	002000		N=N+N		
004740	010701		SCOPE		
004742	012702	002000	MOV	#2000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
004746	012700	175777	MOV	#175777,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
004752	000257		CCC		
004754	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
004756	103001		BCC	+.4	
004760	000000		HLT		;ERROR! CARRY CHANGED
004762	102001		BVC	+.4	
004764	000000		HLT		;ERROR! V FAILED TO CLEAR
004766	020027	177777	CMP	DEST,#177777	;DEST=177777?
004772	001401		BEQ	+.4	
004774	000000		HLT		;2000 XOR 175777 FAILED
	000103		Y=Y+1		
	004000		N=N+N		
004776	010701		SCOPE		
005000	012702	004000	MOV	#4000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
005004	012700	173777	MOV	#173777,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
005010	000277		SCC		
005012	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
005014	103401		BCS	+.4	
005016	000000		HLT		;ERROR! CARRY CHANGED
005020	102001		BVC	+.4	
005022	000000		HLT		;ERROR! V FAILED TO CLEAR
005024	020027	177777	CMP	DEST,#177777	;DEST=177777?
005030	001401		BEQ	+.4	
005032	000000		HLT		;4000 XOR 173777 FAILED
	000104		Y=Y+1		
	010000		N=N+N		
005034	010701		SCOPE		
005036	012702	010000	MOV	#10000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
005042	012700	167777	MOV	#167777,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
005046	000257		CCC		
005050	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
005052	103001		BCC	+.4	
005054	000000		HLT		;ERROR! CARRY CHANGED
005056	102001		BVC	+.4	
005060	000000		HLT		;ERROR! V FAILED TO CLEAR
005062	020027	177777	CMP	DEST,#177777	;DEST=177777?
005066	001401		BEQ	+.4	
005070	000000		HLT		;10000 XOR 167777 FAILED
	000105		Y=Y+1		
	020000		N=N+N		
005072	010701		SCOPE		
005074	012702	020000	MOV	#20000,SOURCE	;MOVE SOURCE OPERAND TO SOURCE
005100	012700	157777	MOV	#157777,DEST	;MOVE DESTINATION OPERAND TO DESTINATION
005104	000277		SCC		
005106	074200		XOR	SOURCE,DEST	;XOR SOURCE AND DESTINATION
005110	103401		BCS	+.4	
005112	000000		HLT		;ERROR! CARRY CHANGED
005114	102001		BVC	+.4	
005116	000000		HLT		;ERROR! V FAILED TO CLEAR

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005120	020027	177777	CMP	DEST,#177777	:DEST=177777?
005124	001401		BEQ	+.4	
005126	000000		HLT		:20000 XOR 157777 FAILED
	000106		Y=Y+1		
	040000		N=N+N		
005130	010701		SCOPE		
005132	012702	040000	MOV	#40000,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
005136	012700	137777	MOV	#137777,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
005142	000257		CCC		
005144	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
005146	103001		BCC	+.4	
005150	000000		HLT		:ERROR! CARRY CHANGED
005152	102001		BVC	+.4	
005154	000000		HLT		:ERROR! V FAILED TO CLEAR
005156	020027	177777	CMP	DEST,#177777	:DEST=177777?
005162	001401		BEQ	+.4	
005164	000000		HLT		:40000 XOR 137777 FAILED
	000107		Y=Y+1		
	100000		N=N+N		
005166	010701		SCOPE		
005170	012702	100000	MOV	#100000,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
005174	012700	077777	MOV	#77777,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
005200	000277		SCC		
005202	074200		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
005204	103401		BCS	+.4	
005206	000000		HLT		:ERROR! CARRY CHANGED
005210	102001		BVC	+.4	
005212	000000		HLT		:ERROR! V FAILED TO CLEAR
005214	020027	177777	CMP	DEST,#177777	:DEST=177777?
005220	001401		BEQ	+.4	
005222	000000		HLT		:100000 XOR 77777 FAILED
	000110		Y=Y+1		
	000000		N=N+N		
	000000		SOURCE=%0		
	000002		DEST=%2		
	000002		RSLT=%2		
005224	010701		SCOPE		
005226	012700	031463	MOV	#031463,SOURCE	:MOVE SOURCE OPERAND TO SOURCE
005232	012702	146314	MCV	#146314,DEST	:MOVE DESTINATION OPERAND TO DESTINATION
005236	000257		CCC		
005240	074002		XOR	SOURCE,DEST	:XOR SOURCE AND DESTINATION
005242	103001		BCC	+.4	
005244	000000		HLT		:ERROR! CARRY CHANGED
005246	102001		BVC	+.4	
005250	000000		HLT		:ERROR! V FAILED TO CLEAR
005252	020227	177777	CMP	DEST,#-1	:DEST=-1?
005256	001401		BEQ	+.4	
005260	000000		HLT		:031463 XOR 146314 FAILED
	000111		Y=Y+1		



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000002          SOURCE=%2
000000          DEST=%0
000002          RSLT=%2

005262 010701          SCOPE
005264 012702 146314  MOV      #146314,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
005270 012700 031463  MOV      #031463,DEST  ;MOVE DESTINATION OPERAND TO DESTINATION
005274 000277          SCC
005276 074200          XOR      SOURCE,DEST  ;XOR SOURCE AND DESTINATION
005300 103401          BCS      .+4
005302 000000          HLT
005304 102001          BVC      .+4
005306 000000          HLT ;ERROR! CARRY CHANGED
005310 020027 177777  CMP      DEST,#-1    ;ERROR! V FAILED TO CLEAR
005314 001401          BEQ      .+4 ;DEST=-1?
005316 000000          HLT ;146314 XOR 031463 FAILED

000112          Y=Y+1
000003          SOURCE=%3

005320 010701          SCOPE
005322 012703 016161  MOV      #016161,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
005326 012700 161616  MOV      #161616,DEST  ;MOVE DESTINATION OPERAND TO DESTINATION
005332 000257          CCC
005334 074300          XOR      SOURCE,DEST  ;XOR SOURCE AND DESTINATION
005336 103001          BCC      .+4
005340 000000          HLT ;ERROR! CARRY CHANGED
005342 102001          BVC      .+4
005344 000000          HLT ;ERROR! V FAILED TO CLEAR
005346 020027 177777  CMP      DEST,#-1    ;DEST=-1?
005352 001401          BEQ      .+4
005354 000000          HLT ;016161 XOR 161616 FAILED

000113          Y=Y+1
000005          DEST=%5

005356 010701          SCOPE
005360 012703 161616  MOV      #161616,SOURCE ;MOVE SOURCE OPERAND TO SOURCE
005364 012705 016161  MOV      #016161,DEST  ;MOVE DESTINATION OPERAND TO DESTINATION
005370 000277          SCC
005372 074305          XOR      SOURCE,DEST  ;XOR SOURCE AND DESTINATION
005374 103401          BCS      .+4
005376 000000          HLT ;ERROR! CARRY CHANGED
005400 102001          BVC      .+4
005402 000000          HLT ;ERROR! V FAILED TO CLEAR
005404 020527 177777  CMP      DEST,#-1    ;DEST=-1?
005410 001401          BEQ      .+4
005412 000000          HLT ;161616 XOR 016161 FAILED

000114          Y=Y+1
000000          DEST=%0

;TEST THAT CONDITION CODES ARE OPERATED ON CORRECTLY
;CARRY REMAINS UNCHANGED (CARRY SET)

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005414 010701          SCOPE
005416 012702 177777  MOV      #-1,%2
005422 012700 177777  MOV      #-1,%0
005426 000261          SEC          :SET CARRY
005430 074200          XOR      %2,%0  :XOR
005432 103401          BCS      .+4    :BRANCH IF CARRY IS SET
005434 000000          HLT

;TEST 'N'
005436 010701          SCOPE
005440 012700 100000  MOV      #100000,%0
005444 005002          CLR      %2
005446 074200          XOR      %2,%0
005450 100401          BMI      .+4
005452 000000          HLT          :ERROR! 'N' FAILED TO SET

SCOPE
005454 010701          SCOPE
005456 012702 100000  MOV      #100000,%2
005462 012700 177777  MOV      #-1,%0
005466 000250          CLN
005470 074200          XOR      %2,%0
005472 100001          BPL      .+4
005474 000000          HLT          :ERROR! 'N' FAILED TO CLEAR

;CARRY REMAINS UNCHANGED (CARRY CLEAR)
005476 010701          SCOPE
005500 012702 177777  MOV      #-1,%2
005504 012700 177777  MOV      #-1,%0
005510 000241          CLC          :CLEAR CARRY
005512 074200          XOR      %2,%0  :XOR
005514 103001          BCC      .+4    :BRANCH IF CARRY IS CLEAR
005516 000000          HLT

N=1
;TEST THAT Z BIT IS CLEAR IF RESULT IS NOT ZERO
005520 010701          SCOPE
005522 012700 000001  MOV      #1,DEST
005526 000264          SEZ          :SET Z BIT
005530 074300          XOR      SOURCE,DEST :XOR
005532 001001          BNE      .+4
005534 000000          HLT          :0 XOR 1 FAILED TO CLEAR Z

N=N+N
005536 010701          SCOPE
005540 012700 000002  MOV      #2,DEST
005544 000264          SEZ          :SET Z BIT
005546 074300          XOR      SOURCE,DEST :XOR
005550 001001          BNE      .+4
005552 000000          HLT          :0 XOR 2 FAILED TO CLEAR Z

N=N+N
005554 010701          SCOPE
005556 012700 000004  MOV      #4,DEST
005562 000264          SEZ          :SET Z BIT
005564 074300          XOR      SOURCE,DEST :XOR
005566 001001          BNE      .+4

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005570	000000		HLT		:0 XOR 4 FAILED TO CLEAR Z
005572	000010		N=N+N		
005574	010701		SCOPE		
005574	012700	000010	MOV	#10,DEST	
005600	000264		SEZ		:SET Z BIT
005602	074300		XOR	SOURCE,DEST	:XOR
005604	001001		BNE	.+4	
005606	000000		HLT		:0 XOR 10 FAILED TO CLEAR Z
005610	000020		N=N+N		
005612	010701		SCOPE		
005612	012700	000020	MOV	#20,DEST	
005616	000264		SEZ		:SET Z BIT
005620	074300		XOR	SOURCE,DEST	:XOR
005622	001001		BNE	.+4	
005624	000000		HLT		:0 XOR 20 FAILED TO CLEAR Z
005626	000040		N=N+N		
005630	010701		SCOPE		
005630	012700	000040	MOV	#40,DEST	
005634	000264		SEZ		:SET Z BIT
005636	074300		XOR	SOURCE,DEST	:XOR
005640	001001		BNE	.+4	
005642	000000		HLT		:0 XOR 40 FAILED TO CLEAR Z
005644	000100		N=N+N		
005646	010701		SCOPE		
005646	012700	000100	MOV	#100,DEST	
005652	000264		SEZ		:SET Z BIT
005654	074300		XOR	SOURCE,DEST	:XOR
005656	001001		BNE	.+4	
005660	000000		HLT		:0 XOR 100 FAILED TO CLEAR Z
005662	000200		N=N+N		
005664	010701		SCOPE		
005664	012700	000200	MOV	#200,DEST	
005670	000264		SEZ		:SET Z BIT
005672	074300		XOR	SOURCE,DEST	:XOR
005674	001001		BNE	.+4	
005676	000000		HLT		:0 XOR 200 FAILED TO CLEAR Z
005700	000400		N=N+N		
005702	010701		SCOPE		
005702	012700	000400	MOV	#400,DEST	
005706	000264		SEZ		:SET Z BIT
005710	074300		XOR	SOURCE,DEST	:XOR
005712	001001		BNE	.+4	
005714	000000		HLT		:0 XOR 400 FAILED TO CLEAR Z
005716	001000		N=N+N		
005720	010701		SCOPE		
005720	012700	001000	MOV	#1000,DEST	
005724	000264		SEZ		:SET Z BIT
005726	074300		XOR	SOURCE,DEST	:XOR
005730	001001		BNE	.+4	

005732	000000		HLT		:0 XOR 1000 FAILED TO CLEAR Z
005734	002000		N=N+N		
005736	010701	002000	SCOPE		
005742	012700		MOV	#2000,DEST	
005744	000264		SEZ		:SET Z BIT
005746	074300		XOR	SOURCE,DEST	:XOR
005750	001001		BNE	+.4	
005750	000000		HLT		:0 XOR 2000 FAILED TO CLEAR Z
005752	004000		N=N+N		
005754	010701	004000	SCOPE		
005760	012700		MOV	#4000,DEST	
005762	000264		SEZ		:SET Z BIT
005764	074300		XOR	SOURCE,DEST	:XOR
005766	001001		BNE	+.4	
005766	000000		HLT		:0 XOR 4000 FAILED TO CLEAR Z
005770	010000		N=N+N		
005772	010701	010000	SCOPE		
005776	012700		MOV	#10000,DEST	
006000	000264		SEZ		:SET Z BIT
006002	074300		XOR	SOURCE,DEST	:XOR
006004	001001		BNE	+.4	
006004	000000		HLT		:0 XOR 10000 FAILED TO CLEAR Z
006006	020000		N=N+N		
006010	010701	020000	SCOPE		
006014	012700		MOV	#20000,DEST	
006016	000264		SEZ		:SET Z BIT
006020	074300		XOR	SOURCE,DEST	:XOR
006022	001001		BNE	+.4	
006022	000000		HLT		:0 XOR 20000 FAILED TO CLEAR Z
006024	040000		N=N+N		
006026	010701	040000	SCOPE		
006032	012700		MOV	#40000,DEST	
006034	000264		SEZ		:SET Z BIT
006036	074300		XOR	SOURCE,DEST	:XOR
006040	001001		BNE	+.4	
006040	000000		HLT		:0 XOR 40000 FAILED TO CLEAR Z
006042	100000		N=N+N		
006044	010701	100000	SCOPE		
006050	012700		MOV	#100000,DEST	
006052	000264		SEZ		:SET Z BIT
006054	074300		XOR	SOURCE,DEST	:XOR
006056	001001		BNE	+.4	
006056	000000		HLT		:0 XOR 100000 FAILED TO CLEAR Z
	000000		N=N+N		
	000001				
		N=1			
		:Z BIT IS SET IF RESULT=0			
006060	010701		SCOPE		
006062	012702	125252	MOV	#125252,%2	
006066	012700	125252	MOV	#125252,%0	

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006072 000244          CLZ          :CLEAR Z
006074 074200          XOR          %2,%0          :XOR
006076 001401          BEQ          .+4            :BRANCH IF Z IS SET
006100 000000          HLT

;V IS CLEARED
006102 010701          SCOPE
006104 012702 125252  MOV          #125252,%2
006110 012700 025252  MOV          #025252,%0
006114 000262          SEV
006116 074200          XOR          %2,%0          ;XOR
006120 102001          BVC          .+4            :BRANCH IF V IS CLEARED
006122 000000          HLT

006124 010701          SCOPE
006126 012702 025252  MOV          #052525,%2
006132 012700 125252  MOV          #125252,%0
006136 000262          SEV          :SET V
006140 074200          XOR          %2,%0          ;XOR
006142 102001          BVC          .+4            :BRANCH IF V IS CLEARED
006144 000000          HLT

006146 010701          SCOPE
006150 005002          CLR          %2
006152 005000          CLR          %0
006154 000262          SEV
006156 074200          XOR          %2,%0
006160 102001          BVC          .+4
006162 000000          HLT          :ERROR! V FAILED TO CLEAR
006164 010701          SCOPE

006166 012702 177777  MOV          #-1,%2
006172 012700 177777  MOV          #-1,%0
006176 000262          SEV
006200 074200          XOR          %2,%0
006202 102003          BVC          .+10
006204 000000          HLT          :ERROR! V FAILED TO CLEAR

          000002          SOURCE=%2
          006206          DEST=.
          006210          .=-.+2
006210 000000          IDEST: 0
;TEST DESTINATION MODE=67
006212 010701          SCOPE
006214 012702 177777  MOV          #-1,SOURCE      :MOVE SOURCE OPERAND TO SOURCE
006220 012767 177777 177760  MOV          #-1,DEST        :MOVE DESTINATION OPERAND TO DESTINATION
006226 000257          CCC
006230 074267 177752  XOR          SOURCE,DEST      :XOR SOURCE AND DESTINATION
006234 103001          BCC          .+4
006236 000000          HLT          :ERROR! CARRY CHANGED
006240 102001          BVC          .+4
006242 000000          HLT          :ERROR! V FAILED TO CLEAR
006244 026727 177736 000000  CMP          DEST,#0 ;DEST=0?
006252 001401          BEQ          .+4
006254 000000          HLT          :-1 XOR -1 FAILED
    
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000115

Y=Y+1

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;TEST DESTINATION MODE=27
006256 010701          SCOPE
006260 012702 177777  MOV      #-1,%2
006264 012767 177777 000002  MOV      #-1,MODE27
006272 074227          XOR      %2,(7)+
006274 000000  MODE27: 0
006276 001401          BEQ      .+4
006300 000000          HLT

;TEST DESTINATION MODE 37
006302 010701          SCOPE
006304 012702 177777  MOV      #-1,%2
006310 012737 177777 006206  MOV      #-1,@#DEST
006316 074237 006206          XOR      %2,@#DEST
006322 001401          BEQ      .+4
006324 000000          HLT

;TEST DESTINATION MODE 77
006326 010701          SCOPE
006330 012767 006210 177650  MOV      #IDEST,DEST
006336 012702 177777          MOV      #-1,%2
006342 012777 177777 177636  MOV      #-1,@DEST
006350 074277 177632          XOR      %2,@DEST
006354 001401          BEQ      .+4
006356 000000          HLT

;TEST DESTINATION MODE 1
006360 010701          SCOPE
006362 012700 006756  MOV      #MODE1,%0
006366 012702 177777  MOV      #-1,%2
006372 012710 177776  MOV      #-2,(0)
006376 074210          XOR      %2,(0)
006400 022767 000001 000350  CMP      #1,MODE1
006406 001401          BEQ      .+4
006410 000000          HLT
006412 022700 006756  CMP      #MODE1,%0
006416 001401          BEQ      .+4
006420 000000          HLT
006422 022702 177777  CMP      #-1,%2
006426 001401          BEQ      .+4
006430 000000          HLT
;CHECK RESULT
;ERROR! INCORRECT RESULT
;CHECK REGISTER
;ERROR! R0 CHANGED
;CHECK REGISTER
;ERROR! R2 CHANGED

;TEST DESTINATION MODE 2
006432 010701          SCOPE
006434 012702 006756  MOV      #MODE1,%2
006440 012703 000002  MOV      #2,%3
006444 005012          CLR      (2)
006446 074322          XOR      %3,(2)+
006450 022767 000002 000300  CMP      #2,MODE1
006456 001401          BEQ      .+4
006460 000000          HLT
006462 022702 006760  CMP      #MODE1+2,%2
006466 001401          BEQ      .+4
;CHECK RESULT
;ERROR! INCORRECT RESULT
;TEST AUTO-INCREMENT

```

```

006470 000000          HLT          ;ERROR! AUTO-INCREMENT FAILED

;TEST DESTINATION MODE 3
006472 010701          SCOPE
006474 012767 006760 000254  MOV      #MODE3,MODE1
006502 012704 006756          MOV      #MODE1,%4
006506 012703 000003          MOV      #3,%3
006512 005067 000242          CLR      MODE3
006516 074334          XOR      %3,@(4)+
006520 022767 000003 000232  CMP      #3,MODE3
006526 001401          BEQ      .+4
006530 000000          HLT          ;ERROR! INCORRECT RESULT
006532 022704 006760          CMP      #MODE1+2,%4 ;TEST AUTO-INCREMENT
006536 001401          BEQ      .+4
006540 000000          HLT          ;ERROR! ATO-INCREMENT DEFERRED FAILED

;TEST DESTINATION MODE 4
006542 010701          SCOPE
006544 012726 000004          MOV      #4,(6)+
006550 005005          CLR      %5
006552 074546          XOR      %5,-(6)
006554 022716 000004          CMP      #4,(6)
006560 001401          BEQ      .+4
006562 000000          HLT          ;ERROR! INCORRECT RESULT
006564 012706 000500          MOV      #STKPTR,%6 ;RESTORE STACK PTR

;TEST DESTINATION MODE 5
006570 010701          SCOPE
006572 012767 006756 000160  MOV      #MODE1,MODE3
006600 012702 006762          MOV      #MODE3+2,%2
006604 012767 000005 000144  MOV      #5,MODE1
006612 005000          CLR      %0
006614 074052          XOR      %0,@-(2)
006616 022767 000005 000132  CMP      #5,MODE1
006624 001401          BEQ      .+4
006626 000000          HLT          ;ERROR! INCORRECT RESULT
006630 022702 006760          CMP      #MODE3,%2 ;CHECK REGISTER
006634 001401          BEQ      .+4
006636 000000          HLT          ;ERROR! REGISTER CONTENTS CHANGED

;TEST DESTINATION MODE 6
006640 010701          SCOPE
006642 005067 000110          CLR      MODE1
006646 012702 000006          MOV      #6,%2
006652 012703 006760          MOV      #MODE3,%3
006656 074263 177776          XOR      %2,-2(3)
006662 022767 000006 000066  CMP      #6,MODE1
006670 001401          BEQ      .+4
006672 000000          HLT          ;ERROR! INCORRECT RESULT
006674 022703 006760          CMP      #MODE3,%3 ;CHECK REGISTER
006700 001401          BEQ      .+4
006702 000000          HLT          ;ERROR! REGISTER CONTENTS CHANGED

;TEST DESTINATION MODE 7
006704 010701          SCOPE
    
```

```

006706 012767 006760 000042      MOV      #MODE3,MODE1
006714 012705 177770      MOV      #-10,%5
006720 012767 177777 000032      MOV      #-1,MODE3
006726 074575 006766      XOR      %5,@MODE1+10(5)
006732 022767 000007 000020      CMP      #7,MODE3
006740 001401      BEQ      .+4
006742 000000      HLT
                                ;ERROR! INCORRECT RESULT
006744 022705 177770      CMP      #-10,%5
006750 001401      BEQ      .+4
006752 000000      HLT
                                ;ERROR! REGISTER CONTENTS CHANGED
006754 000402      BR       .+6
                                ;GO TO NEXT TEST
006756 000000      MODE1:  0
006760 000000      MODE3:  0
    
```

;TEST CONDITION CODES WHEN DESTINATION MODE IS NOT = 0  
 ;N=0,Z=0,V=0,C=0

```

006762 010701      SCOPE
006764 012700 000001      MOV      #1,%0
006770 012767 000002 177760      MOV      #2,MODE1
006776 012702 006756      MOV      #MODE1,%2
007002 000277      SCC
007004 000241      CLC
007006 074022      XOR      %0,(2)+
007010 016700 170762      MOV      PSW,%0
007014 022700 000000      CMP      #0,%0
007020 001401      BEQ      .+4
007022 000000      HLT
    
```

;N=0,Z=0,V=0,C=1

```

007024 010701      SCOPE
007026 012700 000002      MOV      #2,%0
007032 012767 000004 177716      MOV      #4,MODE1
007040 012703 006760      MOV      #MODE3,%3
007044 000277      SCC
007046 074043      XOR      %0,-(3)
007050 016700 170722      MOV      PSW,%0
007054 022700 000001      CMP      #1,%0
007060 001401      BEQ      .+4
007062 000000      HLT
    
```

;N=0,Z=1,V=0,C=0

```

007064 010701      SCOPE
007066 012767 177777 177662      MOV      #-1,MODE1
007074 012702 177777      MOV      #-1,%2
007100 012767 000012 170670      MOV      #12,PSW
007106 074267 177644      XOR      %2,MODE1
007112 016700 170660      MOV      PSW,%0
007116 022700 000004      CMP      #4,%0
007122 001401      BEQ      .+4
007124 000000      HLT
                                ;ERROR! INCORRECT CONDITION CODES
    
```

;N=0,Z=1,V=0,C=1

```

007126 010701      SCOPE
007130 012767 177777 177620      MOV      #-1,MODE1
007136 012704 177777      MOV      #-1,%4
    
```



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```

007142 012702 006756          MOV    #MODE1,%2
007146 000277          SCC
007150 000244          CLZ
007152 074412          XOR    %4,(2)
007154 016700 170616        MOV    PSW,%0
007160 022700 000005        CMP    #5,%0
007164 001401          BEQ    .+4
007166 000000          HLT
                                ;ERROR! INCORRECT CONDITION CODES

                                ;N=1,Z=0,V=0,C=0
007170 010701          SCOPE
007172 012700 177777        MOV    #-1,%0
007176 012767 077777 177552  MOV    #77777,MODE1
007204 012767 000006 170564  MOV    #6,PSW
007212 074067 177540        XOR    %0,MODE1
007216 016700 170554        MOV    PSW,%0
007222 022700 000010        CMP    #10,%0
007226 001401          BEQ    .+4
007230 000000          HLT
                                ;ERROR! INCORRECT CONDITION CODES

                                ;N=1,Z=0,V=0,C=1
007232 010701          SCOPE
007234 012700 077777        MOV    #77777,%0
007240 012767 177777 177510  MOV    #-1,MODE1
007246 012767 000007 170522  MOV    #7,PSW
007254 074067 177476        XOR    %0,MODE1
007260 016700 170512        MOV    PSW,%0
007264 022700 000011        CMP    #11,%0
007270 001401          BEQ    .+4
007272 000000          HLT
                                ;ERROR! INCORRECT CONDITION CODES

                                N=0
                                SOURCE=%2
                                ;TEST THAT XOR OPERATES PROPERLY WHEN THE DESTINATION IS THE PSW.
007274 010701          SCOPE
007276 012767 007330 170510  MOV    #TBITSET,14 ;SET UP TRACE TRAP VECTOR
007304 005067 170506        CLR    16 ;TO TRAP TO 'TBITSET'
007310 012702 000377        MOV    #377,%2
007314 005067 170456        CLR    PSW ;CLEAR THE PSW
007320 074267 170452        XOR    %2,PSW ;XOR THE #377 INTO A CLEAR PSW
007324 000240          NOP
007326 000401          BR    .+4
007330 000000          TBITSET:HLT ;T BIT SET
007332 022767 000357 170436  CMP    #357,PSW ;DID ALL BUT THE T BIT SET?
007340 001401          BEQ    .+4
007342 000000          HLT ;PSW IS NOT CLEAR

                                SCOPE
007344 010701          MOV    #357,%2
007346 012702 000357 170416  MOV    #357,PSW ;PRE SET THE STATUS WORD
007352 012767 000357        XOR    %2,PSW ;GET RESULT
007360 074267 170412        MOV    PSW,%0
007364 016700 170406        BEQ    .+4
007370 001401          HLT ;ERROR XOR #357,#357 FAILED TO CLEAR PSW
007372 000000          END: INC    ICNT ;INCREMENT THE PASS COUNT
007374 005267 171400        CMP    ICNT,#100000
007400 026727 171374 100000

```

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007406	001402			BEQ	DONE		:GO TO DONE IF 1000 PASSES COMPLETED
007410	000167	171372		JMP	BEGIN		:RESTART PROGRAM
007414	012767	000007	170144	DONE:	MOV	#7,TPBUF	:RING BELL
007422	105767	170136			TSTB	TPCSR	
007426	100375				BPL	-4	
007430	013702	000042			MOV	@#42,%2	:GET DECTAPE MONITOR RETURN ADDRESS
007434	001405				BEQ	DONE1	:DO NOT RETURN IF (42)=0
007436	000005				RESET		
007440	004712			LOGICAL:	JSR	7,(2)	:START OF
007442	000240				NOP		:ACT11
007444	000240				NOP		:OVERLAY
007446	000240				NOP		:AREA
007450	000167	171326		DONE1:	JMP	START	
	000001				.END		

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 CCKBCC.P11 08-JUL-82 12:58 CROSS REFERENCE TABLE -- USER SYMBOLS

BEGIN = 001006	431#	2045												
DEST = 006206	438#	1809*	1811*	1816	1834*	1835*	1841*	1843*	1844*					
DISPLA= 177570	280#	433*												
DONE 007414	2044	2046#												
DONE1 007450	2050	2056#												
END 007374	2042#													
HLT = 000600	274#	446	448	451	460	462	465	474	476	479	488	490	493	
	502	504	507	516	518	521	530	532	535	544	546	549	560	
	562	565	575	577	580	590	592	595	605	607	610	620	622	
	625	635	637	640	650	652	655	665	667	670	680	682	685	
	695	697	700	710	712	715	725	727	730	740	742	745	755	
	757	760	770	772	775	785	787	790	802	804	807	817	819	
	822	832	834	837	847	849	852	862	864	867	877	879	882	
	892	894	897	907	909	912	922	924	927	937	939	942	952	
	954	957	967	969	972	982	984	987	997	999	1002	1012	1014	
	1017	1027	1029	1032	1044	1046	1049	1059	1061	1064	1074	1076	1079	
	1089	1091	1094	1104	1106	1109	1119	1121	1124	1134	1136	1139	1149	
	1151	1154	1164	1166	1169	1179	1181	1184	1194	1196	1199	1209	1211	
	1214	1224	1226	1229	1239	1241	1244	1254	1256	1259	1269	1271	1274	
	1286	1288	1291	1301	1303	1306	1316	1318	1321	1331	1333	1336	1346	
	1348	1351	1361	1363	1366	1376	1378	1381	1391	1393	1396	1406	1408	
	1411	1421	1423	1426	1436	1438	1441	1451	1453	1456	1466	1468	1471	
	1481	1483	1486	1496	1498	1501	1511	1513	1516	1531	1533	1536	1550	
	1552	1555	1566	1568	1571	1583	1585	1588	1602	1610	1618	1628	1636	
	1644	1652	1660	1668	1676	1684	1692	1700	1708	1716	1724	1732	1740	
	1748	1756	1767	1776	1784	1792	1800	1813	1815	1818	1829	1837	1846	
	1857	1860	1863	1873	1876	1887	1890	1899	1911	1914	1924	1927	1938	
	1941	1958	1970	1981	1995	2006	2017	2030	2033	2041				
	429#	430*	433	2042*	2043									
ICNT 001000	1805#	1841												
IDEST 006210	422	2052#												
LOGICA 007440	1851	1855	1858	1867	1871	1874	1880*	1881	1888	1904	1906*	1909	1918*	
MODE1 006756	1922	1932*	1935*	1943#	1950*	1951	1963*	1974*	1977*	1986*	1988	2000*	2002*	
	2011*	2013*												
MODE27 016274	1825*	1827#												
MODE3 016760	1880	1883*	1885	1904*	1905	1912	1920	1925	1932	1934*	1936	1944#	1964	
N = 000000	553#	554	568#	569	583#	584	598#	599	613#	614	628#	629	643#	
	644	658#	659	673#	674	688#	689	703#	704	718#	719	733#	734	
	748#	749	763#	764	778#	779	793#	795#	796	810#	811	825#	826	
	840#	841	855#	856	870#	871	885#	886	900#	901	915#	916	930#	
	931	945#	946	960#	961	975#	976	990#	991	1005#	1006	1020#	1021	
	1035#	1037#	1038	1052#	1053	1067#	1068	1082#	1083	1097#	1098	1112#	1113	
	1127#	1128	1142#	1143	1157#	1158	1172#	1173	1187#	1188	1202#	1203	1217#	
	1218	1232#	1233	1247#	1248	1262#	1263	1277#	1279#	1280	1294#	1295	1309#	
	1310	1324#	1325	1339#	1340	1354#	1355	1369#	1370	1384#	1385	1399#	1400	
	1414#	1415	1429#	1430	1444#	1445	1459#	1460	1474#	1475	1489#	1490	1504#	
	1505	1519#	1629#	1631	1638#	1639	1646#	1647	1654#	1655	1662#	1663	1670#	
	1671	1678#	1679	1686#	1687	1694#	1695	1702#	1703	1710#	1711	1718#	1719	
	1726#	1727	1734#	1735	1742#	1743	1750#	1751	1758#	1759#	2019#			
PSW = 177776	275#	431*	1955	1967	1976*	1978	1992	2001*	2003	2012*	2014	2026*	2027*	
	2031	2037*	2038*	2039										
SCOPE = 010701	273#	440	454	468	482	496	510	524	538	554	569	584	599	
	614	629	644	659	674	689	704	719	734	749	764	779	796	
	811	826	841	856	871	886	901	916	931	946	961	976	991	
	1006	1021	1038	1053	1068	1083	1098	1113	1128	1143	1158	1173	1188	
	1203	1218	1233	1248	1263	1280	1295	1310	1325	1340	1355	1370	1385	

CCKBCCO PDP11/45 XOR INST TEST MACY11 30A(1052) 08-JUL-82 13:01 PAGE 44  
CCKBCC.P11 08-JUL-82 12:58 CROSS REFERENCE TABLE -- USER SYMBOLS

START 001002  
STKPTR= 000500  
SWR = 177570  
TBITSE 007330  
TPBUF = 177566  
TPCSR = 177564  
UBREAK= 177770  
Y = 000115

1400	1415	1430	1445	1460	1475	1490	1505	1525	1544	1560	1577	1596
1605	1612	1622	1631	1639	1647	1655	1663	1671	1679	1687	1695	1703
1711	1719	1727	1735	1743	1751	1761	1770	1778	1786	1793	1807	1823
1832	1840	1850	1866	1879	1893	1903	1917	1931	1948	1961	1973	1985
1998	2009	2022	2035									
427	430#	2056										
283#	432	1900										
279#	434	436										
2023	2030#											
278#	2046*											
277#	2047											
276#	436*											
439#	440	453#	454	467#	468	481#	482	495#	496	509#	510	523#
524	537#	538	551#	554	567#	569	582#	584	597#	599	612#	614
627#	629	642#	644	657#	659	672#	674	687#	689	702#	704	717#
719	732#	734	747#	749	762#	764	777#	779	792#	796	809#	811
824#	826	839#	841	854#	856	869#	871	884#	886	899#	901	914#
916	929#	931	944#	946	959#	961	974#	976	989#	991	1004#	1006
1019#	1021	1034#	1038	1051#	1053	1066#	1068	1081#	1083	1096#	1098	1111#
1113	1126#	1128	1141#	1143	1156#	1158	1171#	1173	1186#	1188	1201#	1203
1216#	1218	1231#	1233	1246#	1248	1261#	1263	1276#	1280	1293#	1295	1308#
1310	1323#	1325	1338#	1340	1353#	1355	1368#	1370	1383#	1385	1398#	1400
1413#	1415	1428#	1430	1443#	1445	1458#	1460	1473#	1475	1488#	1490	1503#
1505	1518#	1525	1538#	1544	1557#	1560	1573#	1577	1590#	1807	1820#	
291#	292	294	296	298	300	302	304	306	308	310	312	314
316	318	320	322	324	326	328	330	332	334	336	338	340
342	344	346	348	350	352	354	356	358	360	362	364	366
368	370	372	374	376	378	380	382	384	386	388	390	392
394	396	398	400	402	404	406	408	410	412	414	416	418
421#	423#	426#	428#	435	445	447	450	459	461	464	473	475
478	487	489	492	501	503	506	515	517	520	529	531	534
543	545	548	559	561	564	574	576	579	589	591	594	604
606	609	619	621	624	634	636	639	649	651	654	664	666
669	679	681	684	694	696	699	709	711	714	724	726	729
739	741	744	754	756	759	769	771	774	784	786	789	801
803	806	816	818	821	831	833	836	846	848	851	861	863
866	876	878	881	891	893	896	906	908	911	921	923	926
936	938	941	951	953	956	966	968	971	981	983	986	996
998	1001	1011	1013	1016	1026	1028	1031	1043	1045	1048	1058	1060
1063	1073	1075	1078	1088	1090	1093	1103	1105	1108	1118	1120	1123
1133	1135	1138	1148	1150	1153	1163	1165	1168	1178	1180	1183	1193
1195	1198	1208	1210	1213	1223	1225	1228	1238	1240	1243	1253	1255
1258	1268	1270	1273	1285	1287	1290	1300	1302	1305	1315	1317	1320
1330	1332	1335	1345	1347	1350	1360	1362	1365	1375	1377	1380	1390
1392	1395	1405	1407	1410	1420	1422	1425	1435	1437	1440	1450	1452
1455	1465	1467	1470	1480	1482	1485	1495	1497	1500	1510	1512	1515
1530	1532	1535	1549	1551	1554	1565	1567	1570	1582	1584	1587	1601
1609	1617	1627	1635	1643	1651	1659	1667	1675	1683	1691	1699	1707
1715	1723	1731	1739	1747	1755	1766	1775	1783	1791	1799	1803	1804#
1812	1814	1817	1828	1836	1845	1856	1859	1862	1872	1875	1886	1889
1898	1910	1913	1923	1926	1937	1940	1942	1957	1969	1980	1994	2005
2016	2029	2032	2040	2048								

= 007454

CCKBCC PDP11/45 XOR INST TEST MACY11 30A(1052) 08-JUL-82 13:01 PAGE 46  
 CCKBCC.P11 08-JUL-82 12:58 CROSS REFERENCE TABLE -- MACRO NAMES

XORA	285#	440	454	468	482	496	510	524	538	554	569	584	599	614	629
	644	659	674	689	704	719	734	749	764	779	796	811	826	841	856
	871	886	901	916	931	946	961	976	991	1006	1021	1038	1053	1068	1083
	1098	1113	1128	1143	1158	1173	1188	1203	1218	1233	1248	1263	1280	1295	1310
	1325	1340	1355	1370	1385	1400	1415	1430	1445	1460	1475	1490	1505	1520	1535
XORB	1560	1577	1807												
	287#	1631	1639	1647	1655	1663	1671	1679	1687	1695	1703	1711	1719	1727	1735
	1743	1751													

. ABS. 007454 000

ERRORS DETECTED: 0

CCKBCC,CCKBCC/SOL/CRF/NL:TOC=CCKBCC.P11  
 RUN-TIME: 23.4 SECONDS  
 RUN-TIME RATIO: 82/6=12.6  
 CORE USED: 5K (9 PAGES)