

CMPFIN	000206R	CMP01	000022R	CMP02	000046R
CMP022	000112R	CMP024	000136R	CMP025	000144R
CMP026	000170R	CMP028	000174R	CMP03	000210R
CMP04	000216R	CMP05	000236R	CMP06	000262R
CMP07	000276R	CMP08	000332R	CMP10	000360R
CMP11	000374R	CMP12	000420R	CMP15	000436R
COMPAR	000000RG	EXPLOD	= ***** G	EXPREP	= ***** G
EXPX	= ***** G	EXPY	= ***** G	HIT1	= ***** G
HIT2	= ***** G	MASK	= ***** G	PC	= %000007
PTNUM	= ***** G	RESET	= ***** G	R0	= %000000
R1	= %000001	R2	= %000002	R3	= %000003
R4	= %000004	R5	= %000005	R6	= %000006
R7	= %000007	SCORE	= ***** G	SP	= %000006
WIN	= ***** G	XDISP1	= ***** G	XDISP2	= ***** G
YDISP1	= ***** G	YDISP2	= ***** G		= 000444R

END ?

\*\*\*\*\*

# SUBROUTINE COMPAR

VERSION 3E  
 BILL SEILER  
 AUG. 24, 1974

CHECKS FOR COLLISIONS OR HITS AND KEEPS SCORE  
 R0=GENERAL CTR  
 R1=Y OF EXPLODS AND A SCRATCH REG.  
 R2=PTR TO TORPEDO ARRAY  
 R3=Y OR X DISPLACEMENT OF RKT1  
 R4=Y OR X DISPLACEMENT OF RKT2

000000	R0=%0
000001	R1=%1
000002	R2=%2
000003	R3=%3
000004	R4=%4
000005	R5=%5
000006	R6=%6
000007	R7=%7
000006	SP=R6
000007	PC=R7

TITLE COMPAR  
 GLOBL EXPREP, EXPX, EXPY  
 GLOBL WIN, COMPAR, EXPLOD, PTNUM, HIT1, HIT2, SCORE  
 GLOBL XDISP1, XDISP2, YDISP1, YDISP2, RESET, MASK

000000 CSECT

000000	016703'	COMPAR:	MOV	YDISP1, R3	; GET YDISP OF RKT1
000000					
000004	016704'		MOV	YDISP2, R4	; GET YDISP OF RKT2
000000					
000010	010301		MOV	R3, R1	; PUT YDISP1 INTO SCRATCH
000012	160401		SUB	R4, R1	; GET THE DIFFERENCE
000014	102475		BVS	CMP03	; IF OVERFLOW GO CHK TORPS
000016	100001		BPL	CMP01	; IF POSITIVE SKIP
000020	005101		COM	R1	; IF NEGATIVE MAKE POSITIVE
000022	022701'	CMP01:	CMP	#MASK, R1	; ARE THE RKTS COLLIDING?
000000					
000026	002470		BLT	CMP03	; NO-GO CHK PTS
000030	016701'		MOV	XDISP1, R1	; MAYBE-CHK XDISP OF RKTS
000000					
000034	166701'		SUB	XDISP2, R1	; GET THE DIFFERENCE
000000					
000040	102463		BVS	CMP03	; IF OVERFLOW GO CHK TORPS

000042	100001	BPL	CMP02	; IF POS SKIP
000044	005101	COM	R1	; IF NEG MAKE POS
000046	022701' CMP02:	CMP	#MASK, R1	; ARE RKTS COLLIDING?
	000000			
000052	002456	BLT	CMP03	; NO-GO CHK PTS
000054	012767'	MOV	#20, EXPREP	; SET EXPLOD REPEATS
	000020			
	000000			
000062	016767'	MOV	XDISP2, EXPX	; SET EXPLOD X
	000000			
	000000			
		PAGE	001	
000070	010367'	MOV	R3, EXPY	; SET EXPLOD Y
	000000			
000074	004767'	JSR	PC, EXPLOD	; GO BOOM BETWEEN RKTS
	000000			
000100	005367'	DEC	HIT2	; TAKE SHIELD FROM RKT2
	000000			
000104	005367'	DEC	HIT1	; TAKE SHIELD FROM RKT1
	000000			
000110	003012	BGT	CMP024	; IF SOME LEFT SKIP
000112	012767' CMP022:	MOV	#40, EXPREP	; SET EXPLOD REPEATS
	000040			
	000000			
000120	016767'	MOV	XDISP1, EXPX	; SET EXPLOD X
	000000			
	000000			
000126	010367'	MOV	R3, EXPY	; SET EXPLOD Y
	000000			
000132	004767'	JSR	PC, EXPLOD	; GO BOOM ON RKT1
	000000			
000136	005767' CMP024:	TST	HIT2	; ARE SHIELDS GONE ON RKT2?
	000000			
000142	003014	BGT	CMP028	; NO-SKIP
000144	012767' CMP025:	MOV	#40, EXPREP	; SET EXPLOD REPEATS
	000040			
	000000			
000152	016767'	MOV	XDISP2, EXPX	; SET EXPLOD X
	000000			
	000000			
000160	010467'	MOV	R4, EXPY	; SET EXPLOD Y
	000000			
000164	004767'	JSR	PC, EXPLOD	; GO BOOM ON RKT2
	000000			
000170	000167' CMP026:	JMP	SCORE	; GO SHOW THE SCORE
	000000			
000174	005767' CMP028:	TST	HIT1	; DID RKT1 LOOSE ALL SHIELDS?
	000000			
000200	003773	BLE	CMP026	; YES-GO BLOW IT UP
000202	004767'	JSR	PC, RESET	; NO-RESET RKTS AND KEEP PLAYING
	000000			
000206	000207 CMPFIN:	RTS	PC	; ALL DONE!!!!!!!!!!!!!!!!!!!!!!
000210	012702' CMP03:	MOV	#PTNUM, R2	; SET UP PTR TO TORPS
	000000			
000214	012200	MOV	(R2)+, R0	; GET # OF TORPS
000216	005300 CMP04:	DEC	R0	; ARE THERE ANY MORE TORPS LEFT?
000220	100772	BMI	CMPFIN	; NO-THEN ALL DONE
000222	016201	MOV	2(R2), R1	; GET YDISP OF TORP
	000002			
000226	160301	SUB	R3, R1	; GET DIFFERENCE
000230	102453	BVS	CMP10	; IF OVERFLOW GO CHK RKT2
000232	100001	BPL	CMP05	; IF POS SKIP
000234	005101	COM	R1	; IF NEG MAKE POS
000236	022701' CMP05:	CMP	#MASK, R1	; DOES YDISP OF RKT1 = TORP2

000000				
000242 002446	BLT	CMP10		; NO-GO CHK RKT2
000244 016201	MOV	6(R2), R1		; YES-CHK XDISP5
000006				
PAGE 002				
000250 166701'	SUB	XDISP1, R1		; GET DIFFERENCE
000000				
000254 102441	BVS	CMP10		; IF OVERFLOW GO CHK RKT2
000256 100001	BPL	CMP06		; IF POS SKIP
000260 005101	COM	R1		; IF NEG MAKE POS
000262 022701' CMP06:	CMP	#MASK, R1		; DOES XDISP OF RKT1 = TORP?
000000				
000266 002434	BLT	CMP10		; NO-GO CHK RKT2
000270 005367'	DEC	HIT1		; YES-HIT!-ARE RKT1 SHIELDS DONE?
000000				
000274 003706	BIF	CMP022		; YES-GO BLOW IT UP
000276 005067' CMP07:	CLR	EXPREP		; MAKE EXPLOD DO ONE BOOM
000000				
000302 016267'	MOV	2(R2), EXPY		; SET EXPLOD Y
000002				
000000				
000310 016267'	MOV	6(R2), EXPX		; SET EXPLOD X
000006				
000000				
000316 004767'	JSR	PC, EXPLOD		; GO BOOM ON TORPEDO
000000				
000322 010001	MOV	R0, R1		; SET UP SHIFT CTR
000324 010205	MOV	R2, R5		; SET UP SHIFT POINTER
000326 005367'	DEC	PTNUM		; NO-REMOVE TORP FROM CTR
000000				
000332 005301 CMP08:	DEC	R1		; ARE ALL TORPS MOVED UP?
000334 002730	BLT	CMP04		; YES-GO EXPLOD RKT
000336 016525	MOV	8. (R5), (R5)+		; NO-WELL MOVE THEM!
000010				
000342 016525	MOV	8. (R5), (R5)+		
000010				
000346 016525	MOV	8. (R5), (R5)+		
000010				
000352 016525	MOV	8. (R5), (R5)+		; FOUR WORDS MOVED UP
000010				
000356 000765	BR	CMP08		; GO CHK AGAIN
000360 016201 CMP10:	MOV	2(R2), R1		; GET YDISP OF TORP
000002				
000364 160401	SUB	R4, R1		; GET DIFFERENCE
000366 102423	BVS	CMP15		; IF OVERFLOW GO CHK NEXT TORP
000370 100001	BPL	CMP11		; IF POS SKIP
000372 005101	COM	R1		; IF NEG MAKE POS
000374 022701' CMP11:	CMP	#MASK, R1		; DOES YDISP OF RKT2 = TORP?
000000				
000400 002416	BLT	CMP15		; NO-GO CHK NEXT TORP
000402 016201	MOV	6(R2), R1		; YES-GET XDISP OF RKT2
000006				
000406 166701'	SUB	XDISP2, R1		; GET DIFFERENCE
000000				
000412 102411	BVS	CMP15		; IF OVERFLOW GO CHK NEXT TORP
000414 100001	BPL	CMP12		; IF POS SKIP
000416 005101	COM	R1		; IF NEG MAKE POS
000420 022701' CMP12:	CMP	#MASK, R1		; DOES XDISP OF RKT2 = TORP?
000000				
000424 002404	BLT	CMP15		; NO-GO CHK NEXT TORP
000426 005367'	DEC	HIT2		; YES-ARE RKT2 SHIELDS GONE?
000000				
PAGE 003				

000432	003644	BLE	CMP025	: YES-GO BLOW UP RKT2
000434	000720	BR	CMP07	: NO-GO EXPLOD TORP
000436	062702	CMP15	ADD	: MOVE PTR UP 4 WORDS
	000010			
000442	000665	BR	CMP04	: GO GKH NEXT TORP
	000001	END		

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000000 ERRORS

PAL-115 V003A

\*S R

\*B H

\*L T

\*T T