

LOCN B1 B2 B3

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 * BATTLESHIP 6800 SL68-23
 *
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 *

* THIS PROGRAM IMPLEMENTS A GAME SIMILAR TO
 * THE POPULAR BOARD GAME "BATTLESHIP". YOU AND THE
 * COMPUTER EACH COMMAND A FLEET OF FIVE SHIPS CON-
 * SISTING OF AN AIRCRAFT CARRIER, BATTLESHIP, CRU-
 * SIER, SUBMARINE, AND A DESTROYER. THE OBJECT OF
 * THE GAME IS TO DESTROY THE COMPUTERS FLEET BEFORE
 * HE DESTROYS YOUR'S. THE "OCEAN" IS AN 8X8 GRID
 * WITH ROWS LABELED A-H AND COLUMNS LABELED 1-8.
 * YOU EACH PLACE YOUR SHIPS ON THIS GRID AT THE BE-
 * GINNING OF THE GAME, LOCATION UNKNOWN TO THE OP-
 * PONENT. YOU SPECIFY THE LOCATION OF EACH SHIP
 * BY INDICATING THE ORIENTATION OF THE SHIP, EITHER
 * VERTICAL OR HORIZONTAL, AND THE UPPERMOST OR LEFT-
 * MOST COORDINATE OF EACH SHIP (COORDINATES ARE A
 * LETTER AND NUMBER SEPERATED BY A COMMA). EACH
 * SHIP OCCUPIES A NUMBER OF POINTS ON THE GRID AS
 * SHOWN BELOW:

* AIRCRAFT CARRIER	5
* BATTLESHIP	4
* CRUSIER	3
* SUBMARINE	3
* DESTROYER	2

* THE NUMBER OF POINTS IS ALSO THE NUMBER OF
 * HITS THE SHIP CAN WITHSTAND BEFORE IT IS SUNK.
 * AFTER YOUR FLEET IS POSITIONED THE COMPUTER WILL
 * DISPLAY THE OCEAN GRID AND ASK FOR YOUR APPROVAL
 * OF THE POSITIONING OF THE FLEET. IF YOU DO NOT
 * APPROVE THE MAP YOU MUST THEN RE-SPECIFY THE
 * POSITIONS OF EACH OF THE SHIPS.

* WHEN YOU APPROVE THE MAP YOU WILL BE ASKED
 * IF YOU WANT TO TAKE THE FIRST SHOT. IF YOU DON'T
 * THE COMPUTER WILL FIRE FIRST.

* WHEN THE COMPUTER FIRES, IT WILL SPECIFY AN
 * OCEAN COORDINATE (LETTER,NUMBER) AS IT'S CHOICE.
 * YOU MUST TELL WHETHER IT WAS A HIT OR MISS AND
 * TELL THE SHIP TYPE. NO CHEATING NOW! IF YOU
 * DON'T REMEMBER THE LOCATION OF YOUR SHIPS SIMPLY
 * TYPE AN X(CR) AND YOUR MAP WILL BE DISPLAYED.
 * AS YOUR SHIPS ARE HIT THEY WILL DISAPPEAR FROM
 * THE MAP. A "+" WILL MARK WHERE THE COMPUTER HAS
 * FIRED UNSUCCESSFULLY.

* WHEN YOU FIRE YOUR MISSILE YOU MUST SPECIFY
 * AN OCEAN COORDINATE (LETTER,NUMBER). YOU WILL
 * BE TOLD OF THE EFFECTIVENESS OF YOUR SHOT AND

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* WHAT SHIP WAS HIT, IF ANY. IF YOU WANT TO
 * SEE WHAT YOU KNOW OF HIS FLEET, SIMPLY TYPE AN
 * X(CR) AND HIS MAP WILL BE DISPLAYED SHOWING
 * SHIPS WHERE YOU HAVE HIT THEM AND "*" WHERE
 * YOU'VE FIRED UNSUCCESSFULLY.
 * YOU WILL NOT BE TOLD WHEN YOU SINK A SHIP
 * BUT YOU WILL BE TOLD WHEN ONE OF YOUR SHIPS GOES
 * DOWN.
 * IF, AT ANY TIME, WHEN YOU'RE TYPING IN OCEAN
 * COORDINATES (FOR POSITIONING OR FIRING) YOU CAN
 * SCRATCH THE LAST COORDINATE TYPED BY TYPING CTRL-X
 * AND YOU'LL BE REPROMPTED WITH "?" AND YOU CAN
 * RETYPE THAT COORDINATES AGAIN.
 * THE RATING (BEGINNER, MASTER) ASKED FOR
 * AT THE BEGINNING OF THE GAME AFFECTS THE WAY
 * THE COMPUTER PLAYS. THE COMPUTER IS MORE
 * DIFFICULT TO BEAT WITH THE MASTER RATING.
 * SEE THE SAMPLE OUTPUT FOR MORE DETAILS OF THE
 * PLAYING PROCEDURE. BE SURE TO NOTICE THE VARY-
 * ING WAYS IN WHICH THE DATA CAN BE ENTERED. NO
 * PLAYING STRATEGY WILL BE OFFERED HERE; IT'S BEST
 * TO LEARN AS YOU PLAY!
 * WHEN TYPING DATA TO THE MACHING (SHIP TYPE,
 * HIT OR MISS, ETC.) YOU NEED ONLY TYPE THE FIRST
 * CHARACTER FOLLOWED BY A CARRIAGE RETURN.
 * THIS PROGRAM REQUIRES ONLY 4 PATCH ADDRESSES
 * IF YOUR SYSTEM MONITOR IS NOT MIKBUG. THESE ARE
 * INPUT, OUTPUT, STACK LOCATION AND MONITOR ENTRY
 * POINT. (SEE EXTERNAL ROUTINES DESCRIPTION FOR
 * DETAILS OF THE IO ROUTINES)
 * RNDM AND RNDM+1 MUST NOT BOTH BE ZERO. IF
 * THIS IS THE CASE, SET ONE OR THE OTHER TO
 * SOME NON-ZERO VALUE.
 * THE STARTING ADDRESS OF THIS PROGRAM IS 100.

*
 * STORAGE

	ORG	\$0040
0040	RNDM RMB	2
0042	SEAMAP RMB	64
0082	TEMP RMB	1
0083	TEMP2 RMB	1
0084	TEMP3 RMB	1
0085	XTEMP RMB	2
0087	XTEMP3 RMB	2
0089	MASK RMB	1
008A	MAPMSK RMB	1
008B	CONST RMB	1
008C	COUNT RMB	1
008D	COUNT2 RMB	1
008E	SHOTPR RMB	1
008F	SHOTPT RMB	1
0090	INCMT RMB	1
0091	NEWCOR RMB	1
0092	PTCNT RMB	1

LOCN	B1	B2	B3			
0093				RT	RMB	1
0094				LF	RMB	1
0095				UP	RMB	1
0096				DN	RMB	1
0097				RT2	RMB	1
0098				LF2	RMB	1
0099				UP2	RMB	1
009A				DN2	RMB	1
009B				RATING	RMB	1
009C				TYPE	RMB	1
009D				TMPCOR	RMB	1
009E				X1	RMB	2
00A0				X2	RMB	2
00A2				CURPOS	RMB	1
00A3				TIES	RMB	1
00A4				TERM	RMB	1
00A5				CHAR	RMB	1
00A6				TXTL	RMB	2
00A8				XTRG	RMB	2

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* THE INFORMATION FOR THE MAPS IS STORED USING
* THE TOP 4 BITS FOR THE COMPUTER AND THE BOTTOM
* 4 BITS FOR THE USER. THE CODES BELOW ARE USED
* IN EACH HALF-WORD TO INDICATE THE STATUS OF
* EACH MAP POSITION.

*

* 0 NOTHING
* 1-5 HIT-TYPE
* 6 DESTROYED SHIP
* 7 FIRED, NO HIT
* 9-13 NO HIT-TYPE

*

*

0100	8E	A0	7F	START	LDS	#\$A07F	SET UP STACK
0103	20	6E			BRA	BEGIN	
0105	86	20		OUTS	LDA A	#'	
0107	7E	E1	D1	OUTCH	JMP	#\$E1D1	PRINT A CHAR
010A	7E	E1	AC	INCH	JMP	#\$E1AC	INPUT A CHAR
010D	7E	E0	E3	MONITR	JMP	#\$E0E3	JMP TO MONITOR
0110	86	3F		REPRMT	LDA A	#'?	
0112	8D	F3			BSR	OUTCH	PRINT A ?
0114	7F	00	A5	INSTR	CLR	CHAR	SET CHAR=NULL
0117	8D	01	0A		JSR	INCH	GET NEW CHAR
011A	81	20			CMP A	#\$20	
011C	27	F6			BEQ	INSTR	
011E	97	A5			STA A	CHAR	SAVE
0120	20	03			BRA	CHKCHR	GO CHECK FOR SPECIAL
0122	8D	01	0A	GETCR	JSR	INCH	GET MORE CHARACTERS
0125	81	18		CHKCHR	CMP A	#\$18	CHECK FOR CTRL-X
0127	27	E7			BEQ	REPRMT	IF SO REPRMPT
0129	81	2C			CMP A	#',	CHECK FOR COMMA
012B	27	04			BEQ	GOTCHR	
012D	81	0D			CMP A	#\$D	CHECK FOR CR

LOCN	B1	B2	B3					
012F	26	F1			BNE	GETCR		IF NOT WAIT UNTIL
0131	97	A4		GOTCHR	STA A	TERM		SAVE TERMINATOR
0133	96	A5			LDA A	CHAR		GET FIRST CHAR
0135	39				RTS			DONE
0136	36			FIXX	PSH A			SAVE A
0137	CE	00	42		LIX	#SEAMAP		
013A	DF	AB			STX	XTRG		
013C	9B	A9			ADD A	XTRG+1		ADD ON X
013E	97	A9			STA A	XTRG+1		
0140	DE	AB			LIX	XTRG		LOAD UP X
0142	32				PUL A			
0143	39				RTS			
0144	37			RANDOM	PSH B			SAVE B
0145	C6	08			LDA B	#8		SET FOR 8 LOOPS
0147	96	40		REPEAT	LDA A	RNDM		GET BYTE
0149	49				ROL A			
014A	98	40			EOR A	RNDM		XOR BITS 14 AND 13
014C	49				ROL A			
014D	49				ROL A			TO CARRY
014E	79	00	41		ROL	RNDM+1		ROTATE LS BYTE
0151	79	00	40		ROL	RNDM		ROTATE MS BYTE
0154	5A				DEC B			DECREMENT LOOP COUNT
0155	26	F0			BNE	REPEAT		
0157	33				PUL B			RESTORE B
0158	96	40			LDA A	RNDM		GET RANDOM BYTE
015A	39				RTS			DONE
015B	CE	06	6E	PCRLF	LIX	#CRLF		POINT TO CRLF
015E	20	03			BRA	PDATA		GO PRINT IT
0160	8D	A5		NOTFIN	BSR	OUTCH		GO PRINT IT
0162	08				INX			POINT NEXT
0163	A6	00		PDATA	LDA A	0,X		GET A CHAR
0165	81	04			CMF A	#04		CHECK FOR END
0167	26	F7			BNE	NOTFIN		IF NOT, PRINT IT
0169	39				RTS			DONE
016A	08			FNXT	INX			
016B	DF	9E		PSTR	STX	X1		SAVE POINTER
016D	8D	EC			BSR	PCRLF		GO PRINT CRLF
016F	DE	9E			LIX	X1		RESTORE X
0171	20	F0			BRA	PDATA		GO PRINT STRING
				*				
				*				
0173	CE	00	42	BEGIN	LIX	#SEAMAP		
0176	6F	00		SETZER	CLR	0,X		CLEAR OUT
0178	08				INX			POINT NEXT
0179	8C	00	82		CPX	#SEAMAP+64		
017C	26	F8			BNE	SETZER		FINISH MAP
017E	8D	DB			BSR	PCRLF		CR LF
0180	8D	01	6A		JSR	FNXT		
0183	8D	D6			BSR	PCRLF		PRINT CRLF
0185	CE	07	D6	GETRAT	LIX	#RATE		
0188	8D	01	6B		JSR	PSTR		ASK FOR RATING
018B	8D	01	14		JSR	INSTR		GET RESPONSE
018E	7F	00	9B		CLR	RATING		SET TO BEGINNER
0191	81	42			CMF A	#'B		CHECK FOR BEGINNER
0193	27	07			BEQ	GOTRAT		

no under-stand

LOCN	B1	B2	B3				
0195	81	4D			CMF A	#'M	CHECK FOR MASTER
0197	26	EC			BNE	GETRAT	IF NOT, ASK AGAIN
0199	73	00	9B		COM	RATING	SET TO MASTER
019C	CE	06	85	GOTRAT	LDX	#SETSTR	
019F	8D	CA			BSR	FSTR	
01A1	8D	B8			BSR	PCRLF	
01A3	86	0F			LDA A	#\$F	
01A5	97	8A			STA A	MAPMSK	SET PRINTING MASK
01A7	86	01			LDA A	#1	
01A9	97	82		TRYO	STA A	TEMP	
01AB	BD	01	44	TRYAGN	JSR	RANDOM	GET A COORDINATE
01AE	84	80			AND A	#\$80	SELECT DIRECTION
01B0	16				TAB		SAVE
01B1	86	F0			LDA A	#\$F0	
01B3	97	89			STA A	MASK	
01B5	BD	01	44	GETPT	JSR	RANDOM	
01B8	84	3F			AND A	#\$3F	
01BA	BD	04	7B		JSR	SETMAP	GO CHECK MAP
01BD	26	EC			BNE	TRYAGN	CHECK SUCCESS INDICATOR
01BF	96	82			LDA A	TEMP	GET COUNTER
01C1	4C				INC A		
01C2	81	06			CMF A	#6	CHECK DONE
01C4	26	E3			BNE	TRYO	
01C6	CE	00	42	GETMAP	LDX	#SEAMAP	
01C9	A6	00		CLRMAP	LDA A	0,X	
01CB	84	F0			AND A	#\$F0	MASK OUT INFO
01CD	A7	00			STA A	0,X	
01CF	08				INX		
01D0	8C	00	82		CPX	#SEAMAP+64	
01D3	26	F4			BNE	CLRMAP	
01D5	86	01			LDA A	#1	
01D7	97	82		GETO	STA A	TEMP	SET COUNTER
01D9	BD	01	5B	GETNXT	JSR	PCRLF	PRINT CR LF
01DC	BD	05	0D		JSR	TEXT	SELECT TEXT
01DF	08				INX		MOVE FAST COUNT
01E0	BD	01	6B		JSR	FSTR	PRINT TYPE
01E3	CE	07	58		LIX	#ORIENT	
01E6	BD	01	6B		JSR	FSTR	PRINT STRING
01E9	BD	01	14		JSR	INSTR	GET A CHAR (STRING)
01EC	81	58			CMF A	#'X	SEE IF WANT MAP
01EE	26	05			BNE	CHKDIR	
01F0	BD	05	AE		JSR	PRTMAP	
01F3	20	E4			BRA	GETNXT	
01F5	5F			CHKDIR	CLR B		
01F6	81	56			CMF A	#'V	CHECK VERTICAL
01F8	27	06			BEQ	GOTDIR	
01FA	81	48			CMF A	#'H	CHECK HORIZONTAL
01FC	26	DB			BNE	GETNXT	
01FE	C6	80			LDA B	#\$80	
0200	37			GOTDIR	PSH B		
0201	BD	05	28		JSR	GETSHT	GO GET COORDINATES
0204	C6	0F			LDA B	#\$F	
0206	D7	89			STA B	MASK	SET MASK FOR MAP
0208	33				PUL B		
0209	BD	04	7B		JSR	SETMAP	GO CHECK MAP

LOCN	B1	B2	B3				
020C	27	0B			BEQ	POSOK	IF SHIP FITS, OK
020E	CE	07	9F		LIX	#NOGO	
0211	BD	01	6B		JSR	FSTR	TELL HIM NO GO
0214	BD	05	AE		JSR	PRTMAP	PRINT THE MAP
0217	20	C0			BRA	GETNXT	
0219	96	82		POSOK	LDA A	TEMP	
021B	4C				INC A		KICK COUNTER
021C	81	06			CMP A	#6	CHECK DONE
021E	26	B7			BNE	GETO	
0220	BD	05	AE		JSR	PRTMAP	PRINT OUT THE MAP
0223	CE	06	AA	APFRMT	LIX	#APFR	
0226	BD	01	6B		JSR	FSTR	
0229	BD	01	14		JSR	INSTR	GET ANSWER
022C	81	4E			CMP A	#'N	
022E	27	96			BEQ	GETMAP	IF DOESN'T LIKE, DO AGAIN
0230	81	59			CMP A	#'Y	
0232	26	EF			BNE	APFRMT	
0234	CE	06	C2	FIRFRM	LIX	#FIRST	
0237	BD	01	6B		JSR	FSTR	
023A	BD	01	14		JSR	INSTR	SEE IF GO FIRST
023D	81	4E			CMP A	#'N	
023F	27	4E			BEQ	TAKSHT	IF NO, TAKE SHOT
0241	81	59			CMP A	#'Y	
0243	26	EF			BNE	FIRFRM	
0245	BD	01	5B	GOFIRS	JSR	PCRLF	PRINT CR LF
0248	CE	06	97		LIX	#FIRE	POINT TO STRING
024B	BD	01	6B		JSR	FSTR	PRINT MESG.
024E	86	F0			LDA A	##F0	
0250	97	8A			STA A	MAPMSK	
0252	BD	05	28		JSR	GETSHT	
0255	16				TAB		SAVE SHOT
0256	BD	01	36		JSR	FIXX	GO FIX X
0259	A6	00		OFF2	LDA A	0,X	GET MAP BYTE
025B	2B	09			BMI	HITONE	CHECK FOR HIT
025D	84	F0			AND A	##F0	CHECK INFO
025F	27	22			BEQ	NOHIT	
0261	CE	07	C1		LIX	#ALLFIR	TELL ALREADY FIRED
0264	20	26			BRA	FRTTAK	
0266	36			HITONE	FSH A		
0267	84	7F			AND A	##7F	MARK AS HIT
0269	A7	00			STA A	0,X	
026B	CE	06	DB		LIX	#HIT	
026E	BD	01	6B		JSR	FSTR	
0271	32				PUL A		GET BACK TYPE
0272	84	70			AND A	##70	
0274	47				ASR A		
0275	47				ASR A		
0276	47				ASR A		
0277	BD	05	10		JSR	TEXT2	GO FIND INFO
027A	08				INX		MOVE PAST COUNT
027B	BD	01	63		JSR	PDATA	PRINT SHIP TYPE
027E	BD	05	65		JSR	CHKWIN	GO CHECK WINNER
0281	20	0C			BRA	TAKSHT	GO TAKE TURN
0283	86	70		NOHIT	LDA A	##70	MARK AS FIRED
0285	AA	00			ORA A	0,X	

LOCN	R1	B2	B3				
0287	A7	00			STA	A	0,X
0289	CE	06	E5	TELLNO	LDX		#NOHITO
028C	BD	01	6B	PRTTAK	JSR		PSTR
028F	4F			TAKSHT	CLR	A	
0290	97	A3			STA	A	TIES
0292	97	8E			STA	A	SHOTPR
0294	97	8F			STA	A	SHOTPT
0296	97	A2		INDLOP	STA	A	CURPOS
0298	BD	01	36	SRLOOP	JSR		FIXX
029B	E6	00			LDA	B	0,X
029D	C4	0F			AND	B	#\$F
029F	27	07			BEQ		POSBLE
02A1	C5	08			BIT	B	#8
02A3	26	03			BNE		POSBLE
02A5	7E	03	8E		JMP		NOTBET
02A8	C6	FF		POSBLE	LDA	B	#\$FF
02AA	BD	03	3E		JSR		GETLOC
02AD	D7	94			STA	B	LF
02AF	C6	01			LDA	B	#1
02B1	BD	03	3E		JSR		GETLOC
02B4	D7	93			STA	B	RT
02B6	C6	08			LDA	B	#8
02B8	BD	03	4F		JSR		GETLO2
02BB	D7	96			STA	B	DN
02BD	C6	F8			LDA	B	#\$F8
02BF	BD	03	4F		JSR		GETLO2
02C2	D7	95			STA	B	UP
02C4	CE	00	00		LDX		#0
02C7	DF	97			STX		RT2
02C9	DF	99			STX		UP2
02CB	D6	9B			LDA	B	RATING
02CD	27	1C			BEQ		CHECKM
02CF	C6	02			LDA	B	#2
02D1	BD	03	3E		JSR		GETLOC
02D4	D7	97			STA	B	RT2
02D6	C6	FE			LDA	B	#\$FE
02D8	BD	03	3E		JSR		GETLOC
02DB	D7	98			STA	B	LF2
02DD	C6	10			LDA	B	#16
02DF	BD	03	4F		JSR		GETLO2
02E2	D7	9A			STA	B	DN2
02E4	C6	F0			LDA	B	#\$F0
02E6	BD	03	4F		JSR		GETLO2
02E9	D7	99			STA	B	UP2
02EB	C6	03		CHECKM	LDA	B	#3
02ED	96	95			LDA	A	UP
02EF	27	08			BEQ		CHKOP2
02F1	81	05			CMP	A	#5
02F3	22	04			RHI		CHKOP2
02F5	91	99			CMP	A	UP2
02F7	27	41			BEQ		HIPRI
02F9	96	96		CHKOP2	LDA	A	DN
02FB	27	0C			BEQ		CHKOP
02FD	81	05			CMP	A	#5
02FF	22	08			RHI		CHKOP

PRINT MESSAGE

SET PARAMETERS

GET CONTENTS

IF EMPTY, POSSIBLE

IF NO HIT, POSSIBLE

SET FOR LAST LOCN

CHECK LOCN

SET LEFT BYTE

SET FOR NEXT RIGHT

SET RIGHT BYTE

SET FOR DOWN

SET UPPER BYTE

SET INFO BYTES

CHECK RATING

IF BEG. NO 2 LEVEL

GET RIGHT 2 INFO

GET LEFT 2 INFO

GET DOWN 2 INFO

GET UP 2 INFO

GET UP BYTE

CHECK MATCH 2

IF SO HIGHEST

GET DOWN BYTE

CHECK NO HIT

LOCN	B1	B2	B3					
0301	91	9A			CMP A	DN2		CHECK MATCH 2
0303	27	35			BEQ	HIPRI		IF SO, HIGHEST
0305	91	95			CMP A	UP		CHECK OPP. MATCH
0307	27	66			BEQ	GOTPRI		
0309	96	93		CHKOP	LDA A	RT		GET RIGHT BYTE
030B	27	08			BEQ	NXTYP2		
030D	81	05			CMP A	#5		
030F	22	04			BHI	NXTYP2		
0311	91	97			CMP A	RT2		CHECK MATCH 2
0313	27	25			BEQ	HIPRI		IF SO, HIGHEST
0315	96	94		NXTYP2	LDA A	LF		GET LEFT BYTE
0317	27	0C			BEQ	NXTYP		
0319	81	05			CMP A	#5		CHECK NO HIT
031B	22	08			BHI	NXTYP		
031D	91	98			CMP A	LF2		CHECK MATCH 2
031F	27	19			BEQ	HIPRI		IF SO, HIGHEST
0321	91	93			CMP A	RT		CHECK OPPOSITE
0323	27	4A			BEQ	GOTPRI		
0325	CE	00	93	NXTYP	LDX	#RT		POINT TO CODES
0328	5F				CLR B			
0329	A6	00		CHKPRI	LDA A	0,X		
032B	27	05			BEQ	NOSCR		
032D	81	05			CMP A	#5		
032F	22	01			BHI	NOSCR		
0331	5C				INC B			COUNT HITS
0332	08			NOSCR	INX			
0333	8C	00	97		CPX	#RT+4		
0336	26	F1			BNE	CHKPRI		
0338	20	1F			BRA	CHKRES		
033A	C6	04		HIPRI	LDA B	#4		SET PRIORITY 4
033C	20	31			BRA	GOTPRI		
					*			
					*			
033E	BD	04	F1	GETLOC	JSR	ROWCHK		CHECK IN MAP
0341	26	11			BNE	NOTINR		
0343	96	91		GETSTF	LDA A	NEWCOR		GET ADJACENT POS.
0345	BD	01	36		JSR	FIXX		FIX UP X
0348	E6	00			LDA B	0,X		GET INFORMATION
034A	C4	0F			AND B	#0F		
034C	96	A2			LDA A	CURPOS		GET CURRENT POS
034E	39				RTS			
034F	BD	04	FF	GETLO2	JSR	COLCHK		
0352	27	EF			BEQ	GETSTF		
0354	C6	08		NOTINR	LDA B	#8		
0356	96	A2			LDA A	CURPOS		
0358	39				RTS			
					*			
					*			
0359	17			CHKRES	TBA			
035A	C6	02			LDA B	#2		
035C	4D				TST A			
035D	26	10			BNE	GOTPRI		
035F	5A				DEC B			
0360	86	07			LDA A	#7		
0362	94	95			AND A	UP		

LOCN	B1	B2	B3			
0364	94	96			AND A	DN
0366	94	93			AND A	RT
0368	94	94			AND A	LF
036A	81	07			CMP A	#7
036C	26	01			BNE	GOTPRI
036E	5F			ZERPRI	CLR B	
036F	D1	8E		GOTPRI	CMP B	SHOTPR
0371	22	12			BHI	BIGGER
0373	26	19			BNE	NOTBET
0375	7C	00	A3		INC	TIES
0378	BD	01	44	GETRRR	JSR	RANDOM
037B	84	3F			AND A	#\$3F
037D	90	A3			SUB A	TIES
037F	22	F7			BHI	GETRRR
0381	26	0B			BNE	NOTBET
0383	20	03			BRA	BIGGE1
0385	7F	00	A3	BIGGER	CLR	TIES
0388	96	A2		BIGGE1	LDA A	CURPOS
038A	97	BF			STA A	SHOTPT
038C	D7	8E			STA B	SHOTPR
038E	96	A2		NOTBET	LDA A	CURPOS
0390	4C				INC A	
0391	81	3F			CMP A	#63
0393	22	03			BHI	GOTSPT
0395	7E	02	96		JMP	INDLOP
0398	BD	01	5B	GOTSPT	JSR	PCRLF
039B	CE	06	ED		LDX	#ITAK
039E	BD	01	6B		JSR	PSTR
03A1	96	8F			LDA A	SHOTPT
03A3	BD	01	36		JSR	FIXX
03A6	DF	87			STX	XTEMP3
03A8	84	38			AND A	#\$38
03AA	44				LSR A	
03AB	44				LSR A	
03AC	44				LSR A	
03AD	8B	41			ADD A	#'A
03AF	BD	01	07		JSR	OUTCH
03B2	86	2C			LDA A	#'
03B4	BD	01	07		JSR	OUTCH
03B7	96	8F			LDA A	SHOTPT
03B9	84	07			AND A	#7
03BB	8B	31			ADD A	#'1
03BD	BD	01	07		JSR	OUTCH
03C0	86	0F			LDA A	#\$F
03C2	97	8A			STA A	MAPMSK
03C4	CE	07	6D	PRTPRM	LIX	#STATUS
03C7	BD	01	6B		JSR	PSTR
03CA	BD	01	14		JSR	INSTR
03CD	81	5B			CMP A	#'X
03CF	27	32			BEQ	SHMAP
03D1	81	4B		CHKMIS	CMP A	#'H
03D3	27	1B			BEQ	GOTONE
03D5	81	4D			CMP A	#'M
03D7	26	EB			BNE	PRTPRM
03D9	DE	87			LIX	XTEMP3

ONE MORE TIE

LIMIT TO 63
CHECK OVERRANGE
IF SO, GET ANOTHER
IF 0, MAKE NEW TARGET
SELECT AS BIGGEST PRIORITY
IF NEW MAX, NO TIES

GET POSITION
ADVANCE

IF NOT DONE, REPEAT

CR LF
POINT TO STRING

GET POINTER

PRINT HORIZ.

ADD ON BIAS
PRINT VERT.

PRINT MESSAGE

GET HIT OR MISS
SEE IF WANT MAP

SEE IF HIT

SEE IF MISS

LOCN	B1	B2	B3			
03DB	A6	00		LDA	A	0,X CHECK FOR CHEATING
03DD	85	08		BIT	A	#8
03DF	26	07		BNE		CHEAT
03E1	8A	07		ORA	A	#7
03E3	A7	00		STA	A	0,X
03E5	7E	02	45	JMP		GOFIRS
03E8	CE	07	4B	CHEAT	LDX	#NOCHET
03EB	BD	01	6B		JSR	FSTR
03EE	20	D4			BRA	FRTFRM
03F0	96	A4		GOTONE	LDA	A TERM GET TERMINATOR
03F2	81	2C			CMP	A #' CHECK COMMA
03F4	27	06			BEQ	GETTYP IF SO, DON'T PROMPT
03F6	CE	07	7B		LDX	#TYPER POINT TO STRING
03F9	BD	01	6B		JSR	FSTR
03FC	BD	01	14	GETTYP	JSR	INSTR
03FF	81	58			CMP	A #'X
0401	26	05			BNE	SAVTYP
0403	BD	05	AE	SHMAP	JSR	FRTMAP
0406	20	90			BRA	GOTSPT
0408	97	9C		SAVTYP	STA	A TYPE
040A	DE	87			LDX	XTEMP3
040C	A6	00			LDA	A 0,X CHECK FOR CHEATING
040E	84	07			AND	A #7
0410	27	D6			BEQ	CHEAT
0412	81	05			CMP	A #5
0414	22	D2			BHI	CHEAT
0416	16				TAB	
0417	48				ASL	A
0418	BD	05	10		JSR	TEXT2 GO GET TYPE
041B	A6	00			LDA	A 0,X
041D	97	92			STA	A PTCNT
041F	A6	01			LDA	A 1,X
0421	08				INX	
0422	DF	A6			STX	TXTL
0424	91	9C			CMP	A TYPE
0426	26	C0			BNE	CHEAT
0428	DE	87			LDX	XTEMP3
042A	A6	00			LDA	A 0,X
042C	84	F7			AND	A #F7
042E	A7	00			STA	A 0,X
0430	D7	9C		CHKDES	STA	B TYPE
0432	D6	92			LDA	B PTCNT
0434	CE	00	42		LDX	#SEAMAP GO SEE IF SUNK
0437	A6	00		GETCEL	LDA	A 0,X
0439	08				INX	
043A	8C	00	82		CPX	#SEAMAP+64
043D	27	09			BEQ	GOTALL
043F	84	0F			AND	A #F
0441	91	9C			CMP	A TYPE
0443	26	F2			BNE	GETCEL
0445	5A				DEC	B
0446	20	EF			BRA	GETCEL
0448	5D			GOTALL	TST	B
0449	26	2A			BNE	HISTRY IF NOT, HIS TURN
044B	CE	07	87		LDX	#YUR

044E	BD	01	6B		JSR	PSTR	
0451	DE	A6			LDX	TXTL	
0453	BD	01	63		JSR	PDATA	
0456	CE	07	8F		LDX	#IDSTR	TELL HIM DESTROYED
0459	BD	01	6B		JSR	PSTR	
045C	CE	00	42		LDX	#SEAMAP	
045F	A6	00		DESTRY	LDA	A 0,X	
0461	84	0F			AND	A #F	
0463	91	9C			CMF	A TYPE	
0465	26	08			BNE	NXTCEL	
0467	A6	00			LDA	A 0,X	
0469	84	F0			AND	A #F0	
046B	8A	06			ORA	A #6	SET DESTROYED
046D	A7	00			STA	A 0,X	
046F	08			NXTCEL	INX		
0470	8C	00	82		CFX	#SEAMAP+64	
0473	26	EA			BNE	DESTRY	
0475	BD	05	65	HISTRY	JSR	CHKWIN	
0478	7E	02	45		JMP	GOFIRS	
				*			
				*			
047B	BD	01	36	SETMAP	JSR	FIXX	
047E	97	83			STA	A TEMP2	
0480	A6	00			LDA	A 0,X	
0482	94	89			AND	A MASK	
0484	26	4F			BNE	RETURN	IF NOT EMPTY, NO GO.
0486	D7	84			STA	B TEMP3	SAVE DIRECTION
0488	BD	05	0D		JSR	TEXT	GET TO APPROPRIATE TEXT
048B	E6	00			LDA	B 0,X	GET POINT COUNT
048D	D7	92			STA	B PTCNT	AGAIN
048F	5A				DEC	B	
0490	D7	8B			STA	B CONST	
0492	96	83			LDA	A TEMP2	
0494	D6	84			LDA	B TEMP3	
0496	2A	3E			BPL	VERT	
0498	C6	01		SET2	LDA	B #1	
049A	BD	04	F1		JSR	ROWCHK	GO CHECK ROW
049D	26	36			BNE	RETURN	CHECK NO GO
049F	96	91			LDA	A NEWCOR	GET NEW COORD.
04A1	BD	01	36		JSR	FIXX	
04A4	A6	00			LDA	A 0,X	
04A6	94	89			AND	A MASK	
04A8	26	2B			BNE	RETURN	
04AA	96	91			LDA	A NEWCOR	
04AC	7A	00	8B		DEC	CONST	KICK POINT COUNTER
04AF	26	E7			BNE	SET2	LOOP
04B1	D7	90		SET4	STA	B INCMT	
04B3	96	83			LDA	A TEMP2	GET POSITION
04B5	BD	01	36		JSR	FIXX	
04B8	D6	82		OFF5	LDA	B TEMP	
04BA	CA	08			ORA	B #8	
04BC	7D	00	89		TST	MASK	
04BF	2A	04			BPL	OFF4	
04C1	58				ASL	B	
04C2	58				ASL	B	

```

LOCN B1 B2 B3
04C3 58          ASL B
04C4 58          ASL B          MOVE TO TOP
04C5 37          OFF4      PSH B
04C6 EA 00      ORA B 0,X
04C8 E7 00      STA B 0,X
04CA 33          PUL B
04CB 9B 90      ADD A INCMT
04CD BD 01 36   JSR      FIXX
04D0 7A 00 92   DEC      PTCNT
04D3 26 F0      BNE      OFF4
04D5 39          RETURN   RTS
04D6 C6 08      VERT     LDA B #8
04D8 BD 04 FF   SET3    JSR      COLCHK    CHECK COLUMNS
04DB 26 F8      BNE      RETURN
04DD 96 91      LDA A   NEWCOR    GET NEW COORDINATE
04DF BD 01 36   JSR      FIXX
04E2 A6 00      LDA A   0,X
04E4 94 B9      AND A   MASK
04E6 26 ED      BNE      RETURN
04E8 96 91      LDA A   NEWCOR
04EA 7A 00 8B   DEC      CONST    KICK COUNTER
04ED 26 E9      BNE      SET3     CHECK DONE
04EF 20 C0      BRA      SET4

*
** ROWCHK
* THIS ROUTINE CHECK ROW BOUNDARY VIOLATIONS
04F1 36      ROWCHK  PSH A
04F2 84 F8      AND A   #F8
04F4 97 9D      STA A   TMPCOR
04F6 32          FUL A
04F7 1B          ABA
04F8 97 91      STA A   NEWCOR
04FA 84 F8      AND A   #F8
04FC 91 9D      CMP A   TMPCOR
04FE 39      NOTROW  RTS

*
*
** COLCHK
* THIS ROUTINE CHECKS COLUMN BOUNDARY VIOLATIONS
04FF 36      COLCHK  PSH A
0500 84 C7      AND A   #C7
0502 97 9D      STA A   TMPCOR
0504 32          FUL A
0505 1B          ABA
0506 97 91      STA A   NEWCOR
0508 84 C7      AND A   #C7
050A 91 9D      CMP A   TMPCOR
050C 39      NOTCOL  RTS

*
*
** TEXT
* THIS ROUTINE SELECTS THE SHIP TITLE
* TEXT FOR PRINT OUT AND THE SHIP POINT
* COUNT VALUE FOR EACH SHIP TYPE
050D 96 82      TEXT   LDA A   TEMP

```

```

LOCN B1 B2 B3
050F 48          ASL A
0510 84 0F      TEXT2 AND A  #F
0512 CE 06 25   LDX    #TABLE-2
0515 DF A0      STX    X2
0517 36         PSH A
0518 9B A1      ADD A  X2+1
051A 97 A1      STA A  X2+1
051C 96 A0      LDA A  X2
051E 89 00      ADC A  #0
0520 97 A0      STA A  X2
0522 32         PUL A
0523 DE A0      LDX    X2
0525 EE 00      OFF1  LDX    0,X
0527 39         RTS

*
*
** GETSHT
* THIS ROUTINE GETS SHOT COORDINATES FOR
* BOTH PLACEMENT AND FIRING
0528 CE 06 F8   GETSHT  LDX    #COORDX
052B BD 01 6B   JSR    PSTR
052E BD 01 14   JSR    INSTR
0531 81 58      CMP A  #'X    SEE IF WANT MAP
0533 27 23      BEQ    REQMAP
0535 80 41      SUB A  #41
0537 2B EF      BMI    GETSHT
0539 81 07      CMP A  #7
053B 22 EB      BHI    GETSHT
053D 48         ASL A
053E 48         ASL A
053F 48         ASL A
0540 16         TAB
0541 96 A4      LDA A  TERM    GET TERMINATOR
0543 81 2C      CMP A  #',    CHECK FOR COMMA
0545 26 16      BNE    RECOR  IF NOT, REPROMPT
0547 BD 01 14   GETY    JSR    INSTR
054A 81 58      CMP A  #'X
054C 27 0A      BEQ    REQMAP
054E 80 31      SUB A  #31
0550 2B 0B      BMI    RECOR
0552 81 07      CMP A  #7
0554 22 07      BHI    RECOR
0556 1B         ABA
0557 39         RTS
0558 BD 05 AE   REQMAP  JSR    PRMAP
055B 20 CB      BRA    GETSHT
055D CE 07 AC   RECOR   LDX    #COLCOR
0560 BD 01 6B   JSR    PSTR    PRINT MESSAGE
0563 20 E2      BRA    GETY    GO GET COLUMN

*
*
** CHKWIN
* THIS ROUTINE CHECKS FOR A WIN FOR EITHER
* THE COMPUTER OR THE PLAYER. IF NEITHER
* HAS WON THE ROUTINE RETURNS TO THE POINT

```

LOCN B1 B2 B3

```

* OF CALL. ELSE THE STACK IS FIXED AND THE
* WIN IS REPORTED.
0565 CE 00 42  CHKWIN  LDX      #SEAMAP
0568 7F 00 95          CLR      UP
056B 7F 00 96          CLR      DN
056E A6 00          CHKLOP  LDA  A  0,X
0570 2A 02          BPL      CHKOPN
0572 97 95          STA  A  UP
0574 85 08          CHKOPN  BIT  A  #8
0576 27 02          BEQ      CHKN2
0578 97 96          STA  A  DN
057A 08          CHKN2   INX
057B 8C 00 82          CPX      #SEAMAP+64
057E 26 EE          BNE      CHKLOP
0580 96 95          LDA  A  UP
0582 27 05          BEQ      HUWIN
0584 96 96          LDA  A  DN
0586 27 1A          BEQ      IWIN
0588 39          RTS
0589 CE 07 0C          HUWIN  LDX      #YOUWIN
058C BD 01 6B          JSR      PSTR
058F 08          INX
0590 31          PRTPLA  INS
0591 31          INS
0592 BD 01 6B          JSR      PSTR
0595 BD 01 14          JSR      INSTR
0598 81 4E          CMP  A  #'N
059A 27 03          BEQ      NO
059C 7E 01 73          YES   JMP      BEGIN
059F 7E 01 0D          NO    JMP      MONITR
05A2 CE 07 2B          IWIN  LDX      #I
05A5 BD 01 6B          JSR      PSTR
05A8 CE 07 16          LDX      #PLAY
05AB 20 E3          BRA      PRTPLA
05AD 39          NOTYET  RTS

```

*

*

** PRTMAP

```

* THIS ROUTINE ACTUALLY CONTAINS 2 ROUTINES
* ONE FOR PRINTING EACH MAP. THE STRING
* "XAXIS" CONTAINS 6 NULLS FOR PERSONS REQ-
* UIRING EXTRA CURSOR CONTROL FOR THEIR TER-
* MINAL.

```

```

05AE BD 01 5B          PRTMAP  JSR      FCRLF      CR LF
05B1 CE 07 32          LDX      #XAXIS      POINT TO LABEL
05B4 BD 01 6B          JSR      PSTR
05B7 BD 01 5B          JSR      FCRLF
05BA CE 00 42          LDX      #SEAMAP
05BD 86 41          LDA  A  ##41
05BF 97 8C          LOOP3  STA  A  COUNT
05C1 BD 01 07          JSR      OUTCH
05C4 BD 01 05          JSR      OUTS
05C7 86 08          LDA  A  ##8
05C9 97 8D          STA  A  COUNT2
05CB BD 01 05          LOOP   JSR      OUTS

```

LOCN	B1	B2	B3		
05CE	96	8A		LDA	A MAPMSK
05D0	2B	20		BMI	LOOP2
05D2	86	2B		LDA	A #' +
05D4	E6	00		LDA	B 0,X
05D6	C4	0F		AND	B ##F
05D8	C1	07		CMF	B #7
05DA	27	11		BEQ	PRTPT
05DC	86	2E		LDA	A #'.
05DE	C1	08		CMF	B #8
05E0	23	0B		BLS	PRTPT
05E2	DF	85		STX	XTEMP
05E4	5B			ASL	B
05E5	17			TBA	
05E6	BD	05	10	JSR	TEXT2
05E9	A6	01		LDA	A 1,X
05EB	DE	85		LDX	XTEMP
05ED	BD	01	07	JSR	OUTCH
05F0	20	20		BRA	CONT
05F2	86	2E		LDA	A #'.
05F4	E6	00		LDA	B 0,X
05F6	2B	17		BMI	PRTPT2
05F8	C4	F0		AND	B ##F0
05FA	27	13		BEQ	PRTPT2
05FC	86	2A		LDA	A #'*
05FE	C1	70		CMF	B ##70
0600	27	0D		BEQ	PRTPT2
0602	17			TBA	
0603	DF	85		STX	XTEMP
0605	44			LSR	A
0606	44			LSR	A
0607	44			LSR	A
0608	BD	05	10	JSR	TEXT2
060B	A6	01		LDA	A 1,X
060D	DE	85		LDX	XTEMP
060F	BD	01	07	JSR	OUTCH
0612	0B			INX	CONT
0613	7A	00	8D	DEC	COUNT2
0616	26	B3		BNE	LOOP
0618	DF	85		STX	XTEMP
061A	BD	01	5B	JSR	PCRLF
061D	DE	85		LDX	XTEMP
061F	96	8C		LDA	A COUNT
0621	4C			INC	A
0622	81	49		CMF	A ##49
0624	26	99		BNE	LOOP3
0626	39			RTS	
				* THIS IS THE TEXT POINTER TABLE USED BY	
				* TEXT	
0627	06	31		FDB	AIRINF
0629	06	43		FDB	BATINF
062B	06	4F		FDB	CRUINF
062D	06	5B		FDB	SUBINF
062F	06	63		FDB	DESINF
				* THE FOLLOWING IS THE TEXT TABLE FOR THE	
				* SHIP TITLES AND POINT OCCUPANCY COUNT.	

LOCN B1 B2 B3

* THE TITLES ARE TERMINATED BY 04 (EOT)
 * FOR COMPATIBILITY WITH ROUTINE PDATA.

0631	05	AIRINF	FCB	5
0632	41		FCC	;AIRCRAFT CARRIER;
0642	04		FCB	4
0643	04	BATINF	FCB	4
0644	42		FCC	;BATTLESHIP;
064E	04		FCB	4
064F	03	CRUINF	FCB	3
0650	43		FCC	;CRUSIER;
0657	04		FCB	4
0658	03	SUBINF	FCB	3
0659	53		FCC	;SUBMARINE;
0662	04		FCB	4
0663	02	DESINF	FCB	2
0664	44		FCC	;DESTROYER;
066D	04		FCB	4

* THE FOLLOWING IS THE TEXT STRING CODE FOR
 * THE TEXT PRINT OUT.

066E	0D	CRLF	FCB	\$D,\$A,0,0,0,0,4
0675	42	INTRO	FCC	;BATTLESHIP 6800;
0684	04		FCB	4
0685	53	SETSTR	FCC	;SET UP YOUR FLEET;
0696	04		FCB	4
0697	46	FIRE	FCC	;FIRE YOUR MISSILE!;
06A9	04		FCB	4
06AA	41	APPR	FCC	;APPROVE THE MAP (Y-N)? ;
06C1	04		FCB	4
06C2	57	FIRST	FCC	;WANT TO GO FIRST (Y-N)? ;
06DA	04		FCB	4
06DB	07	HIT	FCB	7,7
06DD	48		FCC	;HIT ON ;
06E4	04		FCB	4
06E5	4D	NOHITO	FCC	;MISSED!;
06EC	04		FCB	4
06ED	49	ITAK	FCC	;I FIRE AT ;
06F7	04		FCB	4
06F8	20	COORDX	FCC	; COORDINATES(R,C)? ;
070B	04		FCB	4
070C	59	YOUWIN	FCC	;YOU WIN!;
0714	07		FCB	7,4
0716	57	PLAY	FCC	;WANT TO PLAY AGAIN? ;
072A	04		FCB	4
072B	49	I	FCC	;I WIN!;
0731	04		FCB	4
0732	00	XAXIS	FCB	0,0,0,0,0,0 CARRIAGE CONTROL
0738	20		FCC	; 1 2 3 4 5 6 7 8;
074A	04		FCB	4
074B	4E	NOCHET	FCC	;NO CHEATING!;
0757	04		FCB	4
0758	20	ORIENT	FCC	; ORIENTATION (H-V)? ;
076C	04		FCB	4
076D	48	STATUS	FCC	;HIT OR MISS? ;
077A	04		FCB	4
077B	53	TYPER	FCC	;SHIP TYPE? ;

LOCN	B1	B2	B3		
0786	04			FCB	4
0787	07	YUR		FCB	7,7
0789	59			FCC	;YOUR ;
078E	04			FCB	4
078F	20	DDSTR		FCC	; HAS BEEN SUNK!;
079E	04			FCB	4
079F	49	NOGO		FCC	;IT WON'T FIT;
07AB	04			FCB	4
07AC	20	COLCOR		FCC	; COLUMN COORDINATE? ;
07C0	04			FCB	4
07C1	41	ALLFIR		FCC	;ALREADY FIRED THERE!;
07D5	04			FCB	4
07D6	52	RATE		FCC	;RATING (B-M)? ;
07E4	04			FCB	4
				END	

SYMBOL TABLE:

AIRINF	0631	ALLFIR	07C1	APFR	06AA	APFRMT	0223	BATINF	0643
BEGIN	0173	BIGGER	0385	RIGGE1	0388	CHAR	00A5	CHEAT	03E8
CHECKM	02EB	CHKCHR	0125	CHKDES	0430	CHKDIR	01F5	CHKLOP	056E
CHKMIS	03D1	CHKN2	057A	CHKOP	0309	CHKOPN	0574	CHKOP2	02F9
CHKPRI	0329	CHKRES	0359	CHKWIN	0565	CLRMAP	01C9	COLCHK	04FF
COLCOR	07AC	CONST	008B	CONT	0612	COORDX	06F8	COUNT	008C
COUNT2	008D	CRLF	066E	CRUINF	064F	CURPOS	00A2	DDSTR	078F
DESINF	0663	DESTRY	045F	DN	0096	DN2	009A	FIRE	0697
FIRPRM	0234	FIRST	06C2	FIXX	0136	GETCEL	0437	GETCR	0122
GETLOC	033E	GETLO2	034F	GETMAP	01C6	GETNXT	01D9	GETPT	01B5
GETRAT	0185	GETRRR	0378	GETSHT	0528	GETSTF	0343	GETTYP	03FC
GETY	0547	GETO	01D7	GOFIRS	0245	GOTALL	0448	GOTCHR	0131
GOTDIR	0200	GOTONE	03F0	GOTPRI	036F	GOTRAT	019C	GOTSPT	0398
HIPRI	033A	HISTRY	0475	HIT	06DB	HITONE	0266	HUWIN	0589
I	072B	INCH	010A	INCMT	0090	INDLOP	0296	INSTR	0114
INTRO	0675	ITAK	06ED	IWIN	05A2	LF	0094	LF2	0098
LOOP	05CB	LOOP2	05F2	LOOP3	05BF	MAPMSK	008A	MASK	0089
MONITR	010D	NEWCOR	0091	NO	059F	NOCHET	074B	NOGO	079F
NOHIT	0283	NOHITO	06E5	NOSCR	0332	NOTRET	038E	NOTCOL	050C
NOTFIN	0160	NOTINR	0354	NOTROW	04FE	NOTYET	05AD	NXTCEL	046F
NXTYP	0325	NXTYP2	0315	OFF1	0525	OFF2	0259	OFF4	04C5
OFF5	04B8	ORIENT	0758	OUTCH	0107	OUTS	0105	PCRLF	015B
PDATA	0163	PLAY	0716	PNXT	016A	POSBLE	02A8	POSOK	0219
PRTMAP	05AE	PRTPLA	0590	PRTPRM	03C4	PRTPT	05ED	PRTPT2	060F
PRTTAK	028C	PSTR	016B	PTCNT	0092	RANDOM	0144	RATE	07D6
RATING	009B	RECOR	055D	REPEAT	0147	REPRMT	0110	REQMAP	0558
RETURN	04D5	RNDM	0040	ROWCHK	04F1	RT	0093	RT2	0097
SAVTYP	0408	SEAMAP	0042	SETMAP	047B	SETSTR	0685	SETZER	0176
SET2	0498	SET3	04D8	SET4	04B1	SHMAP	0403	SHOTPR	008E
SHOTPT	008F	SRL0OP	0298	START	0100	STATUS	076D	SUBINF	0658
TABLE	0627	TAKSHT	028F	TELLNO	0289	TEMP	0082	TEMP2	0083
TEMP3	0084	TERM	00A4	TEXT	050D	TEXT2	0510	TIES	00A3
TMFCOR	009D	TRYAGN	01AB	TRYO	01A9	TXTL	00A6	TYPE	009C
TYPER	077B	UP	0095	UP2	0099	VERT	04D6	XAXIS	0732
XTEMP	0085	XTEMP3	0087	XTRG	00AB	X1	009E	X2	00A0
YES	059C	YOUWIN	070C	YUR	0787	ZERPRI	036E		

S1	13	0100	8E	A0	7F	20	6E	86	20	7E	E1	D1	7E	E1	AC	7E	E0	E3	8E
S1	13	0110	86	3F	BD	F3	7F	00	A5	BD	01	0A	81	20	27	F6	97	A5	B0
S1	13	0120	20	03	BD	01	0A	81	18	27	E7	81	2C	27	04	81	0D	26	AD
S1	13	0130	F1	97	A4	96	A5	39	36	CE	00	42	DF	A8	9B	A9	97	A9	CA
S1	13	0140	DE	A8	32	39	37	C6	08	96	40	49	98	40	49	49	79	00	B3
S1	13	0150	41	79	00	40	5A	26	F0	33	96	40	39	CE	06	6E	20	03	8A
S1	13	0160	8D	A5	08	A6	00	81	04	26	F7	39	08	DF	9E	8D	EC	DE	F4
S1	13	0170	9E	20	F0	CE	00	42	6F	00	08	8C	00	82	26	F8	8D	DB	B2
S1	13	0180	BD	01	6A	BD	D6	CE	07	D6	BD	01	6B	BD	01	14	7F	00	BB
S1	13	0190	9B	81	42	27	07	81	4D	26	EC	73	00	9B	CE	06	85	8D	FB
S1	13	01A0	CA	8D	B8	86	0F	97	8A	86	01	97	82	BD	01	44	84	80	E0
S1	13	01B0	16	86	F0	97	89	BD	01	44	84	3F	BD	04	7B	26	EC	96	E6
S1	13	01C0	82	4C	81	06	26	E3	CE	00	42	A6	00	84	F0	A7	00	08	F4
S1	13	01D0	8C	00	82	26	F4	86	01	97	82	BD	01	5B	BD	05	0D	08	63
S1	13	01E0	BD	01	6B	CE	07	58	BD	01	6B	BD	01	14	81	58	26	05	B6
S1	13	01F0	BD	05	AE	20	E4	5F	81	56	27	06	81	48	26	DB	C6	80	14
S1	13	0200	37	BD	05	28	C6	0F	D7	89	33	BD	04	7B	27	0B	CE	07	1E
S1	13	0210	9F	BD	01	6B	BD	05	AE	20	C0	96	82	4C	81	06	26	B7	FA
S1	13	0220	BD	05	AE	CE	06	AA	BD	01	6B	BD	01	14	81	4E	27	96	55
S1	13	0230	81	59	26	EF	CE	06	C2	BD	01	6B	BD	01	14	81	4E	27	44
S1	13	0240	4E	81	59	26	EF	BD	01	5B	CE	06	97	BD	01	6B	86	F0	4A
S1	13	0250	97	8A	BD	05	28	16	BD	01	36	A6	00	2B	09	84	F0	27	10
S1	13	0260	22	CE	07	C1	20	26	36	84	7F	A7	00	CE	06	DB	BD	01	3F
S1	13	0270	6B	32	84	70	47	47	47	BD	05	10	08	BD	01	63	BD	05	57
S1	13	0280	65	20	0C	86	70	AA	00	A7	00	CE	06	E5	BD	01	6B	4F	61
S1	13	0290	97	A3	97	8E	97	8F	97	A2	BD	01	36	E6	00	C4	0F	27	C8
S1	13	02A0	07	C5	08	26	03	7E	03	8E	C6	FF	BD	03	3E	D7	94	C6	4A
S1	13	02B0	01	BD	03	3E	D7	93	C6	08	BD	03	4F	D7	96	C6	F8	BD	0C
S1	13	02C0	03	4F	D7	95	CE	00	00	DF	97	DF	99	D6	9B	27	1C	C6	36
S1	13	02D0	02	BD	03	3E	D7	97	C6	FE	BD	03	3E	D7	98	C6	10	BD	E8
S1	13	02E0	03	4F	D7	9A	C6	F0	BD	03	4F	D7	99	C6	03	96	95	27	F7
S1	13	02F0	08	81	05	22	04	91	99	27	41	96	96	27	0C	81	05	22	AD
S1	13	0300	08	91	9A	27	35	91	95	27	66	96	93	27	08	81	05	22	A7
S1	13	0310	04	91	97	27	25	96	94	27	0C	81	05	22	08	91	98	27	04
S1	13	0320	19	91	93	27	4A	CE	00	93	5F	A6	00	27	05	81	05	22	E1
S1	13	0330	01	5C	08	8C	00	97	26	F1	2Q	1F	C6	04	20	31	BD	04	FF
S1	13	0340	F1	26	11	96	91	BD	01	36	E6	00	C4	0F	96	A2	39	BD	7F
S1	13	0350	04	FF	27	EF	C6	08	96	A2	39	17	C6	02	4D	26	10	5A	85
S1	13	0360	86	07	94	95	94	96	94	93	94	94	81	07	26	01	5F	D1	7B
S1	13	0370	8E	22	12	26	19	7C	00	A3	BD	01	44	84	3F	90	A3	22	3F
S1	13	0380	F7	26	0B	20	03	7F	00	A3	96	A2	97	8F	D7	8E	96	A2	01
S1	13	0390	4C	81	3F	22	03	7E	02	96	BD	01	5B	CE	06	ED	BD	01	7A
S1	13	03A0	6B	96	BF	BD	01	36	DF	87	84	38	44	44	44	8B	41	BD	4E
S1	13	03B0	01	07	86	2C	BD	01	07	96	8F	84	07	8B	31	BD	01	07	89
S1	13	03C0	86	0F	97	8A	CE	07	6D	BD	01	6B	BD	01	14	81	58	27	36
S1	13	03D0	32	81	48	27	1B	81	4D	26	EB	DE	87	A6	00	85	08	26	3F
S1	13	03E0	07	8A	07	A7	00	7E	02	45	CE	07	4B	BD	01	6B	20	D4	C8
S1	13	03F0	96	A4	81	2C	27	06	CE	07	7B	BD	01	6B	BD	01	14	81	19
S1	13	0400	58	26	05	BD	05	AE	20	90	97	9C	DE	87	A6	00	84	07	7C
S1	13	0410	27	D6	81	05	22	D2	16	48	BD	05	10	A6	00	97	92	A6	BC
S1	13	0420	01	08	DF	A6	91	9C	26	C0	DE	87	A6	00	84	F7	A7	00	FA
S1	13	0430	D7	9C	D6	92	CE	00	42	A6	00	08	8C	00	82	27	09	84	5D
S1	13	0440	0F	91	9C	26	F2	5A	20	EF	5D	26	2A	CE	07	87	BD	01	24
S1	13	0450	6B	DE	A6	BD	01	63	CE	07	8F	BD	01	6B	CE	00	42	A6	45
S1	13	0460	0Q	84	0F	91	9C	26	08	A6	00	94	F0	8A	06	A7	00	08	41
S1	13	0470	8C	00	82	26	EA	BD	05	65	7E	02	45	BD	01	36	97	83	60
S1	13	0480	A6	00	94	89	26	4F	D7	84	BD	05	0D	E6	00	D7	92	5A	5D

S1 13 0490 D7 8B 96 83 D6 B4 2A 3E C6 01 BD 04 F1 26 36 96 B0
 S1 13 04A0 91 BD 01 36 A6 00 94 89 26 2B 96 91 7A 00 8B 26 5D
 S1 13 04B0 E7 D7 90 96 83 BD 01 36 D6 82 CA 08 7D 00 89 2A 83
 S1 13 04C0 04 58 58 58 58 37 EA 00 E7 00 33 9B 90 BD 01 36 6A
 S1 13 04D0 7A 00 92 26 F0 39 C6 08 BD 04 FF 26 F8 96 91 BD 2D
 S1 13 04E0 01 36 A6 00 94 89 26 ED 96 91 7A 00 8B 26 E9 20 A0
 S1 13 04F0 C0 36 84 F8 97 9D 32 1B 97 91 84 F8 91 9D 39 36 C4
 S1 13 0500 84 C7 97 9D 32 1B 97 91 84 C7 91 9D 39 96 82 48 E1
 S1 13 0510 84 0F CE 06 25 DF A0 36 9B A1 97 A1 96 A0 89 00 63
 S1 13 0520 97 A0 32 DE A0 EE 00 39 CE 06 F8 BD 01 6B BD 01 06
 S1 13 0530 14 81 58 27 23 80 41 2B EF 81 07 22 EB 48 48 48 38
 S1 13 0540 16 96 A4 81 2C 26 16 BD 01 14 81 58 27 0A 80 31 E1
 S1 13 0550 2B 0B 81 07 22 07 1B 39 BD 05 AE 20 CB CE 07 AC 80
 S1 13 0560 BD 01 6B 20 E2 CE 00 42 7F 00 95 7F 00 96 A6 00 7D
 S1 13 0570 2A 02 97 95 85 08 27 02 97 96 08 8C 00 82 26 EE 12
 S1 13 0580 96 95 27 05 96 96 27 1A 39 CE 07 0C BD 01 6B 08 58
 S1 13 0590 31 31 BD 01 6B BD 01 14 81 4E 27 03 7E 01 73 7E 91
 S1 13 05A0 01 0D CE 07 2B BD 01 6B CE 07 16 20 E3 39 BD 01 2B
 S1 13 05B0 5B CE 07 32 BD 01 6B BD 01 5B CE 00 42 86 41 97 25
 S1 13 05C0 8C BD 01 07 BD 01 05 86 08 97 8D BD 01 05 96 8A 7E
 S1 13 05D0 2B 20 86 2B E6 00 C4 QF C1 07 27 11 86 2E C1 08 E5
 S1 13 05E0 23 0B DF 85 58 17 BD 05 10 A6 01 DE 85 BD 01 07 65
 S1 13 05F0 20 20 86 2E E6 00 2B 17 C4 F0 27 13 86 2A C1 70 0C
 S1 13 0600 27 0D 17 DF 85 44 44 44 BD 05 10 A6 01 DE 85 BD D2
 S1 13 0610 01 07 08 7A 00 8D 26 B3 DF 85 BD 01 5B DE 85 96 70
 S1 13 0620 8C 4C 81 49 26 99 39 06 31 06 43 06 4F 06 58 06 F3
 S1 13 0630 63 05 41 49 52 43 52 41 46 54 20 43 41 52 52 49 71
 S1 13 0640 45 52 04 04 42 41 54 54 4C 45 53 48 49 50 04 03 10
 S1 13 0650 43 52 55 53 49 45 52 04 03 53 55 42 4D 41 52 49 5F
 S1 13 0660 4E 45 04 02 44 45 53 54 52 4F 59 45 52 04 0D 0A 11
 S1 13 0670 00 00 00 00 04 42 41 54 54 4C 45 53 48 49 50 20 62
 S1 13 0680 36 38 30 30 04 53 45 54 20 55 50 20 59 4F 55 52 74
 S1 13 0690 20 46 4C 45 45 54 04 46 49 52 45 20 59 4F 55 52 2D
 S1 13 06A0 20 4D 49 53 53 49 4C 45 21 04 41 50 50 52 4F 56 13
 S1 13 06B0 45 20 54 48 45 20 4D 41 50 20 28 59 2D 4E 29 3F 6E
 S1 13 06C0 20 04 57 41 4E 54 20 54 4F 20 47 4F 20 46 49 52 4E
 S1 13 06D0 53 54 20 28 59 2D 4E 29 3F 20 04 07 07 48 49 54 D4
 S1 13 06E0 20 4F 4E 20 04 4D 49 53 53 45 44 21 04 49 20 46 8C
 S1 13 06F0 49 52 45 20 41 54 20 04 20 43 4F 4F 52 44 49 4E 0F
 S1 13 0700 41 54 45 53 28 52 2C 43 29 3F 20 04 59 4F 55 20 26
 S1 13 0710 57 49 4E 21 07 04 57 41 4E 54 20 54 4F 20 50 4C 02
 S1 13 0720 41 59 20 41 47 41 49 4E 3F 20 04 49 20 57 49 4E F1
 S1 13 0730 21 04 00 00 00 00 00 00 20 20 20 31 20 32 20 33 5A
 S1 13 0740 20 34 20 35 20 36 20 37 20 38 04 4E 4F 20 43 48 AB
 S1 13 0750 45 41 54 49 4E 47 21 04 20 4F 52 49 45 4E 54 41 86
 S1 13 0760 54 49 4F 4E 20 28 48 2D 56 29 3F 20 04 48 49 54 C7
 S1 13 0770 20 4F 52 20 4D 49 53 53 3F 20 04 53 48 49 50 20 A1
 S1 13 0780 54 59 50 45 3F 20 04 07 07 59 4F 55 52 20 04 20 1F
 S1 13 0790 48 41 53 20 42 45 45 4E 20 53 55 4E 4B 21 04 49 70
 S1 13 07A0 54 20 57 4F 4E 27 54 20 46 49 54 04 20 43 4F 4C 5D
 S1 13 07B0 55 4D 4E 20 43 4F 4F 52 44 49 4E 41 54 45 3F 20 DE
 S1 13 07C0 04 41 4C 52 45 41 44 59 20 46 49 52 45 44 20 54 21
 S1 13 07D0 48 45 52 45 21 04 52 41 54 49 4E 47 20 28 42 2D 50
 S1 08 07E0 4D 29 3F 20 04 37

SAMPLE OUTPUT

BATTLESHIP 6300

RATING (B-M)? M
SET UP YOUR FLEET

AIRCRAFT CARRIER
ORIENTATION (H-V)? H
COORDINATES(R,C)? A,2

BATTLESHIP
ORIENTATION (H-V)? H
COORDINATES(R,C)? C,2

CRUISER
ORIENTATION (H-V)? V
COORDINATES(R,C)? B,3

SUBMARINE
ORIENTATION (H-V)? H
COORDINATES(R,C)? E,1

DESTROYER
ORIENTATION (H-V)? V
COORDINATES(R,C)? F,6

	1	2	3	4	5	6	7	8
A	.	A	A	A	A	A	.	.
B	.	.	.	.	.	.	.	C
C	.	B	B	B	B	.	.	C
D	.	.	.	.	.	.	.	C
E	S	S	S	.	.	.	.	.
F	.	.	.	.	D	.	.	.
G	.	.	.	.	D	.	.	.
H	.	.	.	.	.	.	.	.

APPROVE THE MAP (Y-N)? Y
WANT TO GO FIRST (Y-N)? N
I FIRE AT C,2
HIT OR MISS? H
SHIP TYPE? B
FIRE YOUR MISSILE!
COORDINATES(R,C)? D,5
MISSED!
I FIRE AT C,1
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? A,1
MISSED!
I FIRE AT B,2
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? G,1

MISSED!
I FIRE AT C,3
HIT OR MISS? H,B
FIRE YOUR MISSILE!
COORDINATES(R,C)? X

	1	2	3	4	5	6	7	8
A	*	.	.	.	.	.	.	.
B	.	.	.	.	.	.	.	.
C	.	.	.	.	.	.	.	.
D	.	.	.	.	*	.	.	.
E	.	.	.	.	.	.	.	.
F	.	.	.	.	.	.	.	.
G	*	.	.	.	.	.	.	.
H	.	.	.	.	.	.	.	.

COORDINATES(R,C)? E,2
MISSED!
I FIRE AT C,4
HIT OR MISS? H,B
FIRE YOUR MISSILE!
COORDINATES(R,C)? C,6
MISSED!
I FIRE AT C,5
HIT OR MISS? H,B
YOUR BATTLESHIP
HAS BEEN SUNK!
FIRE YOUR MISSILE!
COORDINATES(R,C)? F,3
HIT ON SUBMARINE
I FIRE AT E,8
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? F,4
MISSED!
I FIRE AT E,7
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? E,3
MISSED!
I FIRE AT B,5
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? G,3
MISSED!
I FIRE AT G,1
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? F,1
HIT ON SUBMARINE
I FIRE AT E,4
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? F,2
HIT ON SUBMARINE
I FIRE AT F,7
HIT OR MISS? M
FIRE YOUR MISSILE!
COORDINATES(R,C)? G,8