

A calculator game of strategy. Will you survive long enough to torpedo the destroyer or will you be found by the depth charges first?

The game is set in the Pacific Ocean. An enemy destroyer has infringed the international boundaries, on a hostile mission. The enemy have, in addition, stolen an RAF Nimrod submarine hunter. Co-ordinated by the ship, this proves a formidable weapon; however, if you eliminate the destroyer, you also put this aircraft to rout.

Setting The Scene

You command the Royal Naval submarine, HMS Ocean-nought. Belonging to a new and revolutionary class of submarines, HMS Oceannought is capable of firing both, torpedos, and Polaris ballistic missiles, although on account of the modifications necessary to use both, only a single weapon may be fired at one shot. The submarine is armed with an effectively limitless supply of both torpedos and missiles! In command of HMS Oceannought, your orders are clear; annihilate the hostile destroyer before it annihilates you. The enemy is armed with ship-to-ship rockets, which he fires in salvos at intervals, although being under water, most of these cause little or no damage, being poorly aimed. Your underwater "Camouflage" also hides you from the aircraft for most of the time. However, during the course of the engagement, the hostile vessel moves inexorably on, towards you, in order to get a better fix on your position (the attacks become more frequent as the game progresses) and also to drop depth charges. Although a missile dropped immediately above the submarine at the surface of the ocean is distant enough from the submarine not to destroy it, it cannot destroy the enemy either, as he anticipates this strategy and keeps a safe distance, also keeping out of visual contact, but remaining still sufficiently close to strike with depth charges.

The game begins as you pick up a faint blip on your radar, indicating the enemy's presence in the semi-circle of sea in front of your vessel, but not revealing his location or bearing relative to yourself. Once in range the intruder follows you where ever you move narrowing the distance separating you. Up until now you have been floating near the surface, scanning with your periscope; you order the periscope down, and dive! You commence the assault immediately, starting with perhaps random shots aimed within the semi-circle of your radar sweep, but bearing in mind that the intruder is continually moving towards you, and is thus unlikely to be located at the outer fringe of radar field after several shots have been exchanged.

Escape is impossible, since surface vessels can move faster than submerged ones You must fight to the death!

User Instructions

1. To start the game, first ensure the Master Library Module is in position. Next, ensure the calculator is connected to a print cradle of the PC-100' series, and check that the partition is set to 559.49 (ie press - 5 2nd Op 1 7). Now, enter the program and data memories, either directly, or from each side of two magnetic cards.



Press A. (First user-defined key)
After a short while, the following is printed:-

```
*DESTROYER ON RADAR*
  DOWN PERISCOPE
  DIVING STATIONS
  DIVE!
  DIVE!
  DIVE!
```

(Note: before pressing A, a new random number seed between 0 and 199017 (inc) may be entered into register 9)

The calculator has now placed the destroyer randomly within the semi-circle shown above.

2. Commence attack: If it is desired to shoot a torpedo, enter the bearing at which it is to be directed (as above) in degrees (after checking calculator is in degree mode) and press C. If it is desired to fire a ballistic missile, enter the rectangular co-ordinates of the target point, in the following format:- XXX.YYY where both XXX and YYY are right adjusted integers, in the range 0 - 100 for YYY, and -100 - +100 for XXX and press B. Thus a torpedo shot at 45° travels in a North Easterly direction, but one shot at 135° goes North West.

A Missile directed at a position of 50.025 lands at the point where X = 50, and Y = 25 (Bearing East North



MARITIME STRIKE



Description of number

Program location of No.

Safety factor (Variable - Register 13)
set to 6 at beginning of game but decreases
as game progress. The bigger it is, the
less likely the enemy is to attack you.

set at

236

Missile minor hit radius (8)

095 & 096

Missile direct hit radius (2)

092

Torpedo direct hit radius (2)

229

Escape factors, the bigger they are, the less
likely you are to be destroyed when
attacked by the method concerned.

Rocket Salvo (8)

356

Nimrod aircraft (9)

533

Depth charges (7)

461

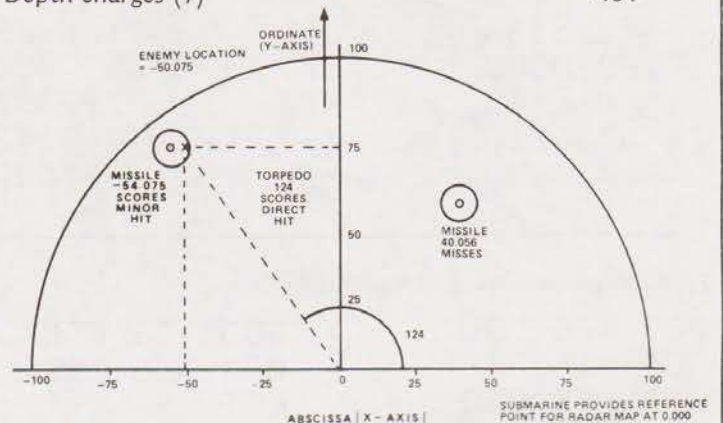


Fig.1. The radar field grid showing destroyer location and attempted strikes.

East;) whereas a missile directed at -50.025 , lands at the point where $X = -50$, and $Y = +25$ (Bearing West North West).

The torpedos are triggered magnetically by sensing a metallic ships hull. Therefore they will score a direct hit on anything within 2 units of their bearing line. Missiles, though, are triggered by the impact as they strike the water's surface. Therefore, they explode anyway (unlike torpedos which, if out of range simply pass by). The force of the explosion scores a direct to anything within 2 units of the impact point, but is sufficient to additionally score a minor hit on anything within 8 units of the impact point. The enemy can sustain four such minor hits and still continue the attack. The fifth minor hit however is fatal and destroys the enemy. The resulting explosion etc, as the intruder sinks, betrays its final position to your submarine's radar, and the enemy position is printed after the statement "Direct Hit!" or "Fatal Minor Hit!".

- Optional, but not recommended - Cheat button. Pressing E causes the enemy position to be printed.

Scaling The Game

The following Constants and Variables may be altered to suit individual ability.

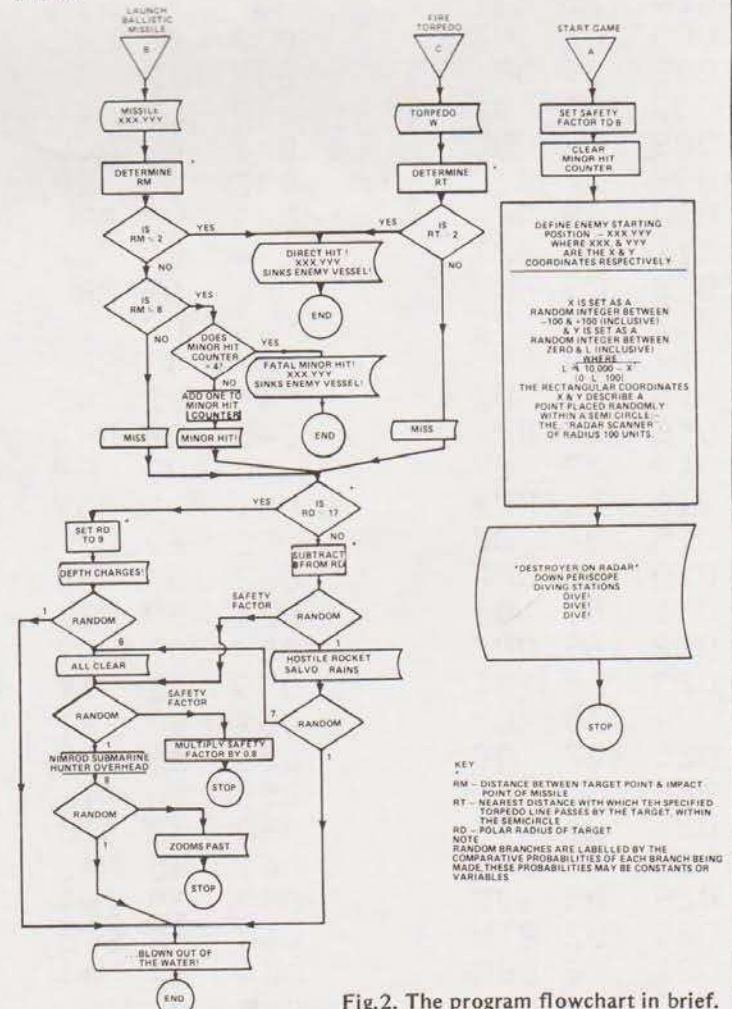


Fig.2. The program flowchart in brief.



Fig.3. The data memories required.

5116173637.	00	1335243117.	16	4137003221.	33
3532451735.	01	2341313717.	17	1617333723.	34
32310035.	02	3500324217.	18	15231335.	35
1316133551.	03	3523171316.	19	2217360073.	36
1624422431.	04	30243636.	20	3615323317.	37
2200363713.	05	3624312636.	21	1527171335.	38
3724323136.	06	17311730.	22	2435171537.	39
0.	07	4500421736.	23	0.	40
4632323036.	08	3617270073.	24	16324331.	41
0.	09	2332363724.	25	2427170000.	42
23243773.	10	2717003532.	26	1624421773.	43
37323533.	11	1526173700.	27	0.	44
1716320000.	12	3613274232.	28	0.	45
0.	13	3723170043.	29	0.	46
2430353216.	14	1337173573.	30	0.	47
36411430.	15	4040401427.	31	3024313235.	48
		3243310032.	32	1337132700.	49

Fig.4. The program listing for Maritime Strike

000	76	LBL	033	36	PGM	066	44	SUM	100	60	DEG
001	16	A'	034	15	15	067	45	45	101	69	DP
002	42	STD	035	71	SBR	068	03	3	102	00	00
003	07	07	036	88	DMS	069	22	INV	103	43	RCL
004	73	RC*	037	92	RTN	070	28	LDG	104	20	20
005	07	07	038	76	LBL	071	49	PRD	105	69	DP
006	69	DP	039	12	B	072	45	45	106	02	02
007	01	01	040	32	XIT	073	43	RCL	107	69	DP
008	76	LBL	041	43	RCL	074	46	46	108	05	05
009	17	B'	042	20	20	075	75	-	109	61	GTO
010	69	DP	043	69	DP	076	43	RCL	110	50	I×I
011	27	27	044	00	00	077	44	44	111	76	LBL
012	73	RC*	045	69	DP	078	95	=	112	38	SIN
013	07	07	046	02	02	079	32	XIT	113	69	DP
014	69	DP	047	43	RCL	080	43	RCL	114	00	00
015	02	02	048	42	42	081	47	47	115	01	1
016	69	DP	049	69	DP	082	75	-	116	06	6
017	27	27	050	03	03	083	43	RCL	117	69	DP
018	73	RC*	051	98	ADV	084	45	45	118	01	01
019	07	07	052	69	DP	085	50	I×I	119	43	RCL
020	69	DP	053	05	05	086	95	=	120	39	39
021	03	03	054	58	FIX	087	22	INV	121	69	DP
022	69	DP	055	03	03	088	37	P/R	122	02	02
023	27	27	056	32	XIT	089	32	XIT	123	43	RCL
024	73	RC*	057	99	PRT	090	50	I×I	124	10	10
025	07	07	058	22	INV	091	32	XIT	125	69	DP
026	69	DP	059	58	FIX	092	02	2	126	03	03
027	04	04	060	42	STD	093	77	GE	127	69	DP
028	69	DP	061	45	45	094	38	SIN	128	05	05
029	05	05	062	59	INT	095	08	8	129	15	E
030	92	RTN	063	42	STD	096	68	NDF	130	76	LBL
031	76	LBL	064	44	44	097	77	GE	131	30	TAN
032	10	E'	065	22	INV	098	39	CDS	132	02	2
						099	76	LBL	133	01	1

MARITIME STRIKE

134	69	DP	187	03	03	240	65	x	293	37	37
135	01	01	188	98	ADV	241	02	2	294	69	DP
136	43	RCL	189	69	DP	242	00	0	295	04	04
137	49	49	190	05	05	243	01	1	296	69	DP
138	69	DP	191	43	RCL	244	95	=	297	05	05
139	02	02	192	45	45	245	59	INT	298	98	ADV
140	69	DP	193	99	PRT	246	75	-	299	17	B'
141	05	05	194	43	RCL	247	01	1	300	98	ADV
142	76	LBL	195	46	46	248	00	0	301	69	DP
143	15	E	196	32	X:T	249	00	0	302	00	00
144	25	CLR	197	43	RCL	250	95	=	303	43	RCL
145	35	1/X	198	47	47	251	42	STD	304	43	43
146	35	1/X	199	22	INV	252	46	46	305	69	DP
147	24	CE	200	37	P/R	253	33	X ²	306	03	03
148	44	SUM	201	32	X:T	254	75	-	307	69	DP
149	46	46	202	48	EXC	255	04	4	308	05	05
150	43	RCL	203	45	45	256	22	INV	309	69	DP
151	47	47	204	75	-	257	28	LOG	310	05	05
152	55	÷	205	32	X:T	258	95	=	311	69	DP
153	03	3	206	95	=	259	94	+/-	312	05	05
154	22	INV	207	50	I×I	260	34	FX	313	98	ADV
155	28	LOG	208	32	X:T	261	32	X:T	314	25	CLR
156	65	x	209	43	RCL	262	10	E'	315	42	STD
157	43	RCL	210	45	45	263	65	x	316	40	40
158	46	46	211	32	X:T	264	32	X:T	317	91	R/S
159	69	DP	212	37	P/R	265	85	+	318	76	LBL
160	10	10	213	50	I×I	266	93	.	319	79	x
161	85	+	214	42	STD	267	05	5	320	01	1
162	43	RCL	215	44	44	268	95	=	321	32	X:T
163	46	46	216	32	X:T	269	59	INT	322	10	E'
164	95	=	217	29	CP	270	42	STD	323	65	x
165	58	FIX	218	77	GE	271	47	47	324	43	RCL
166	03	03	219	77	GE	272	98	ADV	325	13	13
167	99	PRT	220	43	RCL	273	25	CLR	326	95	=
168	22	INV	221	45	45	274	16	A'	327	77	GE
169	58	FIX	222	42	STD	275	98	ADV	328	45	YX
170	02	2	223	44	44	276	69	DP	329	02	2
171	01	1	224	76	LBL	277	00	00	330	05	5
172	16	A'	225	77	GE	278	43	RCL	331	98	ADV
173	19	D'	226	43	RCL	279	41	41	332	16	A'
174	76	LBL	227	44	44	280	69	DP	333	69	DP
175	13	C	228	32	X:T	281	02	02	334	00	00
176	42	STD	229	02	2	282	03	3	335	03	3
177	45	45	230	77	GE	283	03	3	336	05	5
178	43	RCL	231	38	SIN	284	01	1	337	01	1
179	11	11	232	61	GTD	285	07	7	338	03	3
180	69	DP	233	60	DEG	286	03	3	339	02	2
181	00	00	234	76	LBL	287	05	5	340	04	4
182	69	DP	235	11	A	288	02	2	341	03	3
183	02	02	236	06	6	289	04	4	342	01	1
184	43	RCL	237	42	STD	290	69	DP	343	03	3
185	12	12	238	13	13	291	03	03	344	06	6
186	69	DP	239	10	E'	292	43	RCL	345	69	DP

346	02	02	400	48	48	453	45	45	507	93	.
347	43	RCL	401	69	DP	454	32	X:T	508	08	8
348	41	41	402	03	03	455	09	9	509	49	PRD
349	69	DP	403	43	RCL	456	22	INV	510	13	13
350	03	03	404	10	10	457	77	GE	511	98	ADV
351	69	DP	405	69	DP	458	79	X	512	25	CLR
352	05	05	406	04	04	459	10	E'	513	92	RTN
353	98	ADV	407	04	4	460	65	X	514	76	LBL
354	10	E'	408	32	X:T	461	07	7	515	23	LNK
355	65	X	409	43	RCL	462	95	=	516	03	3
356	08	8	410	40	40	463	32	X:T	517	01	1
357	95	=	411	67	EQ	464	69	DP	518	69	DP
358	32	X:T	412	30	TAN	465	00	00	519	01	01
359	01	1	413	69	DP	466	03	3	520	01	1
360	22	INV	414	05	05	467	03	3	521	03	3
361	77	GE	415	01	1	468	42	STD	522	42	STD
362	35	1/X	416	44	SUM	469	07	07	523	07	07
363	76	LBL	417	40	40	470	98	ADV	524	98	ADV
364	58	FIX	418	76	LBL	471	17	B'	525	17	B'
365	98	ADV	419	50	I×I	472	98	ADV	526	69	DP
366	69	DP	420	43	RCL	473	01	1	527	00	00
367	00	00	421	46	46	474	77	GE	528	17	B'
368	03	3	422	32	X:T	475	58	FIX	529	01	1
369	00	0	423	43	RCL	476	76	LBL	530	32	X:T
370	42	STD	424	47	47	477	35	1/X	531	10	E'
371	07	07	425	22	INV	478	69	DP	532	65	X
372	17	B'	426	37	P/R	479	00	00	533	09	9
373	69	DP	427	42	STD	480	01	1	534	95	=
374	00	00	428	07	07	481	03	3	535	22	INV
375	43	RCL	429	01	1	482	02	2	536	77	GE
376	29	29	430	07	7	483	07	7	537	58	FIX
377	69	DP	431	77	GE	484	02	2	538	69	DP
378	03	03	432	48	EXC	485	07	7	539	00	00
379	43	RCL	433	32	X:T	486	00	0	540	43	RCL
380	30	30	434	76	LBL	487	00	0	541	08	08
381	69	DP	435	48	EXC	488	69	DP	542	69	DP
382	04	04	436	75	-	489	02	02	543	02	02
383	76	LBL	437	08	8	490	43	RCL	544	03	3
384	98	ADV	438	95	=	491	38	38	545	03	3
385	69	DP	439	42	STD	492	69	DP	546	01	1
386	05	05	440	45	45	493	03	03	547	03	3
387	76	LBL	441	32	X:T	494	69	DP	548	03	3
388	19	D'	442	43	RCL	495	05	05	549	06	6
389	98	ADV	443	07	07	496	76	LBL	550	03	3
390	98	ADV	444	37	P/R	497	45	YX	551	07	7
391	98	ADV	445	59	INT	498	10	E'	552	69	DP
392	98	ADV	446	42	STD	499	65	X	553	03	03
393	25	CLR	447	47	47	500	43	RCL	554	98	ADV
394	91	R/S	448	32	X:T	501	13	13	555	69	DP
395	76	LBL	449	59	INT	502	95	=	556	05	05
396	39	CDS	450	42	STD	503	32	X:T	557	98	ADV
397	69	DP	451	46	46	504	01	1	558	25	CLR
398	00	00	452	43	RCL	505	77	GE	559	91	R/S
399	43	RCL				506	23	LNK			

MARITIME STRIKE

Fig.5. Sample games of Maritime Strike showing key strokes. See text for explanation.

A
DESTROYER ON RADAR

DOWN PERISCOPE

DIVING STATIONS

DIVE?
DIVE?
DIVE?

C
TORPEDO
90.
MISS

HOSTILE ROCKET SALVO
RAINS DOWN

ALL CLEAR

C
TORPEDO
135.
MISS

C
TORPEDO
45.
MISS

DEPTH CHARGES ?

ALL CLEAR

NIMROD SUBMARINE
HUNTER OVERHEAD

ZOOMS PAST

B
MISSILE
0.012
MISS

DEPTH CHARGES ?

... BLOWN OUT OF
THE WATER ?

A
DESTROYER ON RADAR

DOWN PERISCOPE

DIVING STATIONS

DIVE?
DIVE?
DIVE?

C
TORPEDO
90.
MISS

C
TORPEDO
45.
MISS

C
TORPEDO
135.
MISS

HOSTILE ROCKET SALVO
RAINS DOWN

ALL CLEAR

C
TORPEDO
67.5
DIRECT HIT?
26.066
SINKS ENEMY VESSEL ?

A
DESTROYER ON RADAR

DOWN PERISCOPE

DIVING STATIONS

DIVE?
DIVE?
DIVE?

C
TORPEDO
90.
MISS

C
TORPEDO
135.
MISS

C
TORPEDO
45.
MISS

NIMROD SUBMARINE
HUNTER OVERHEAD

ZOOMS PAST

B
MISSILE
30.045
MINOR HIT?

NIMROD SUBMARINE
HUNTER OVERHEAD

ZOOMS PAST

B
MISSILE
25.040
MINOR HIT?

MISSILE
20.035
MINOR HIT?

B
MISSILE
15.030
MINOR HIT?

B
MISSILE
10.025
FATAL MINOR HIT?
13.019
SINKS ENEMY VESSEL ?