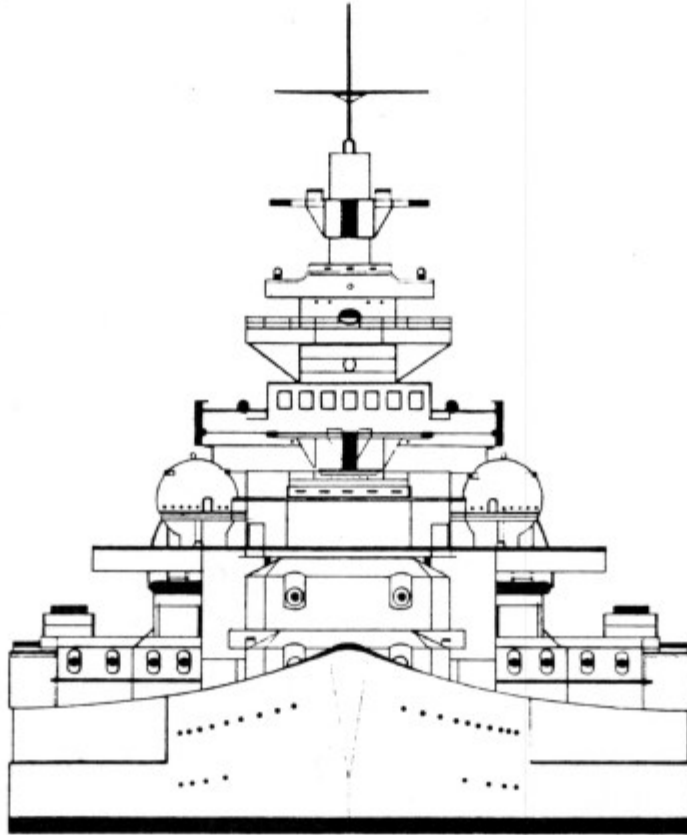


SEEKRIEG

FOURTH EDITION



CHARTS

1. MOVEMENT, GUNNERY, AND GAME SCALES

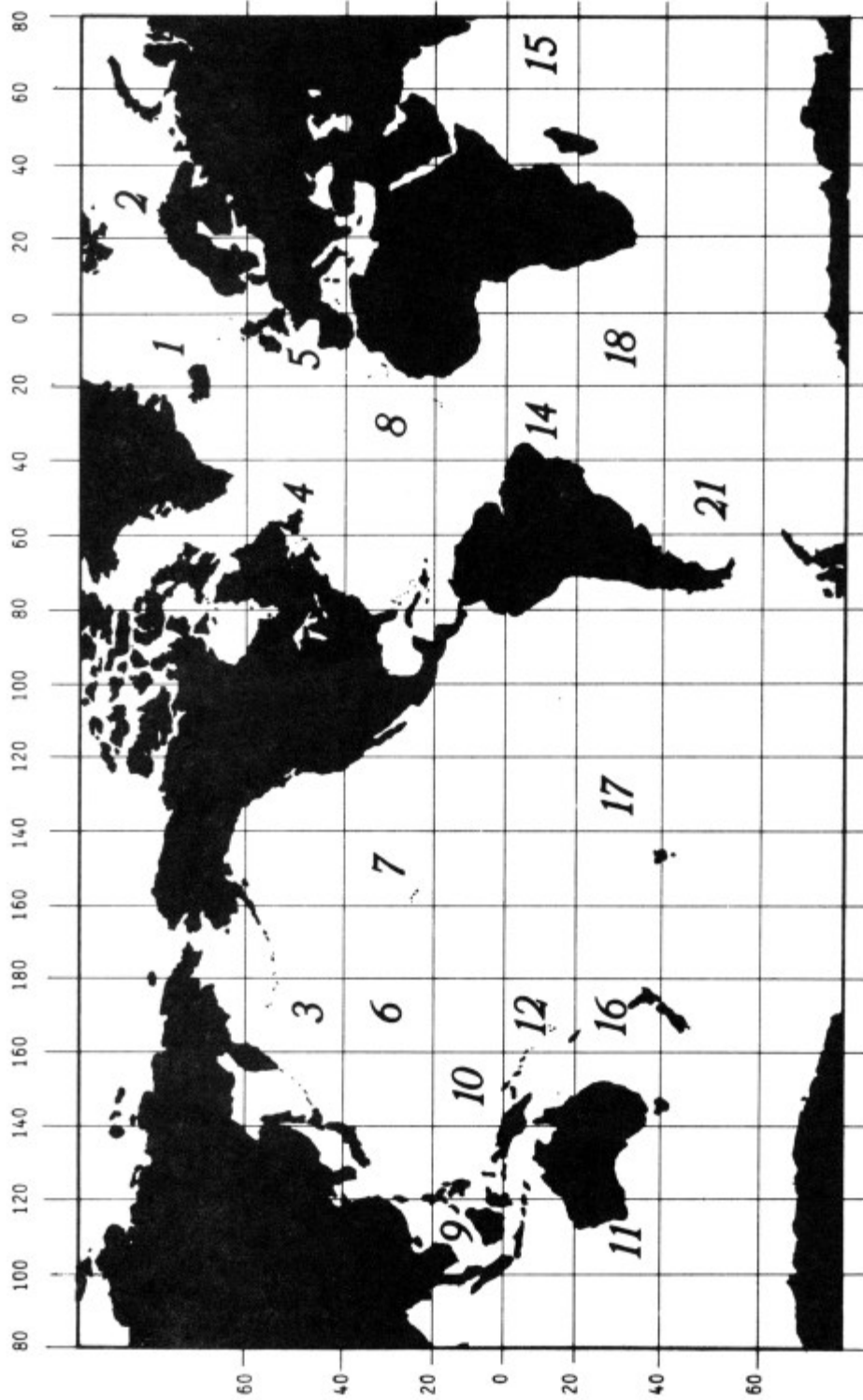


SPEED OF SHIP	GAME SCALE		1:1200 SCALE		1:2400 SCALE		1:3000 SCALE		1:4000 SCALE		1:4800 SCALE	
	2 kt = 1/4"	1,000 yds = 2"	2 kt = 4"	1,000 yds = 30"	2 kt = 2"	1,000 yds = 15"	2 kt = 1.6"	1,000 yds = 12"	2 kt = 1.2"	1,000 yds = 9"	2 kt = 1.0"	1,000 yds = 7 1/2"
2 knots	0.25"	4"	4"	20"	2"	10"	1.6"	8.0"	1.2"	6.0"	1.0"	5.0"
4 knots	0.50"	8"	8"	24"	4"	12"	9.6"	7.2"	2.4"	7.2"	2.0"	6.0"
6 knots	0.75"	12"	12"	28"	6"	14"	11.2"	8.4"	3.6"	8.4"	3.0"	7.0"
8 knots	1.00"	16"	16"	32"	8"	16"	12.8"	9.6"	4.8"	9.6"	4.0"	8.0"
10 knots	1.25"	20"	20"	40"	10"	20"	16.0"	12.0"	6.0"	12.0"	5.0"	10.0"
12 knots	1.50"	24"	24"	48"	12"	22"	17.6"	13.2"	7.2"	13.2"	6.0"	11.0"
14 knots	1.75"	28"	28"	56"	14"	24"	19.2"	14.4"	8.4"	14.4"	7.0"	12.0"
16 knots	2.00"	32"	32"	64"	16"	26"	20.8"	15.6"	9.6"	15.6"	8.0"	13.0"
18 knots	2.25"	36"	36"	72"	18"	28"	22.4"	16.8"	10.8"	16.8"	9.0"	14.0"
20 knots	2.50"	40"	40"	80"	20"	30"	24.0"	18.0"	12.0"	18.0"	10.0"	15.0"
22 knots	2.75"	44"	44"	88"	22"	32"	25.6"	19.2"	13.2"	19.2"	11.0"	16.0"
24 knots	3.00"	48"	48"	96"	24"	34"	27.2"	20.4"	14.4"	20.4"	12.0"	17.0"
26 knots	3.25"	52"	52"	104"	26"	36"	28.8"	21.6"	15.6"	21.6"	13.0"	18.0"
28 knots	3.50"	56"	56"	112"	28"	38"	30.4"	22.8"	16.8"	22.8"	14.0"	19.0"
30 knots	3.75"	60"	60"	120"	30"	40"	32.0"	24.0"	18.0"	24.0"	15.0"	20.0"
32 knots	4.00"	64"	64"	128"	32"	42"	33.6"	25.2"	19.2"	25.2"	16.0"	21.0"
34 knots	4.25"	68"	68"	136"	34"	44"	35.2"	26.4"	20.4"	26.4"	17.0"	22.0"
36 knots	4.50"	72"	72"	144"	36"	46"	36.8"	27.6"	21.6"	27.6"	18.0"	23.0"
38 knots	4.75"	76"	76"	152"	38"	48"	38.4"	28.8"	22.8"	28.8"	19.0"	24.0"
40 knots	5.00"	80"	80"	160"	40"	50"	40.0"	30.0"	24.0"	30.0"	20.0"	25.0"

NOTE: All movement amounts are based on a 2-minute turn length.

SEEKRIEG 4 CHART
B

1. GENERAL WEATHER AREAS



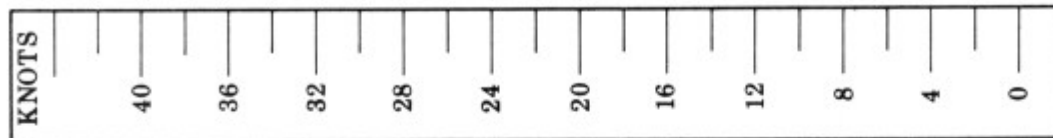
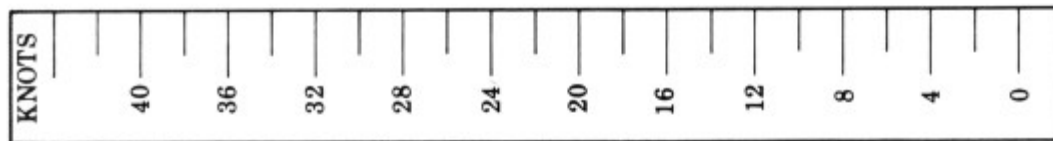


2. WEATHER PROBABILITY FOR AREAS BY QUARTERS

	2-4	5-6	7-8	9-10	11-12
AREA 1					
J-M	01-42	43-68	69-93	94-98	99-00
A-J	01-42	43-77	78-95	96-99	00
J-S	01-84	85-97	98-00	-----	-----
O-D	01-47	48-78	79-91	92-98	99-00
AREA 2					
J-M	01-49	50-76	77-90	91-99	00
A-J	01-52	53-82	83-96	97-00	-----
J-S	01-69	70-85	86-99	00	-----
O-D	01-57	58-88	89-95	96-98	99-00
AREA 3					
J-M	01-40	41-76	77-92	93-97	98-00
A-J	01-48	49-74	75-95	96-00	-----
J-S	01-69	70-95	96-99	00	-----
O-D	01-40	41-78	79-95	96-99	00
AREA 4					
J-M	01-31	32-66	67-90	91-98	99-00
A-J	01-40	41-77	78-97	98-00	-----
J-S	01-64	65-91	92-96	97-99	00
O-D	01-44	45-80	81-95	96-98	99-00
AREA 5					
J-M	01-45	46-76	77-94	95-98	99-00
A-J	01-50	51-84	85-96	97-00	-----
J-S	01-70	71-89	90-98	99-00	-----
O-D	01-54	55-85	86-96	97-99	00
AREA 6					
J-M	01-39	40-76	77-93	94-98	99-00
A-J	01-55	56-87	88-98	99-00	-----
J-S	01-73	74-92	93-96	97-98	99-00
O-D	01-53	54-89	90-96	97-99	00
AREA 7					
J-M	01-72	73-94	95-98	99-00	-----
A-J	01-72	73-96	97-98	99-00	-----
J-S	01-73	74-94	95-96	97-98	99-00
O-D	01-66	67-90	91-98	99-00	-----
AREA 8					
J-M	01-60	61-93	94-99	00	-----
A-J	01-69	70-98	99-00	-----	-----
J-S	01-64	65-92	93-98	99-00	-----
O-D	01-63	64-96	97-99	00	-----
AREA 9					
J-M	01-52	53-90	91-98	99-00	-----
A-J	01-92	93-97	98-99	00	-----
J-S	01-66	67-86	87-93	94-96	97-00
O-D	01-82	83-94	95-97	98-99	00
AREA 10					
J-M	01-57	58-90	91-96	97-00	-----
A-J	01-51	52-92	93-98	99-00	-----
J-S	01-72	73-88	89-92	93-95	96-00
O-D	01-61	62-90	91-95	96-97	98-00

	2-4	5-6	7-8	9-10	11-12
AREA 11					
J-M	01-63	64-86	87-90	91-94	95-00
A-J	01-70	71-94	95-98	99-00	-----
J-S	01-53	54-82	83-98	99-00	-----
O-D	01-67	68-90	91-96	97-98	99-00
AREA 12					
J-M	01-80	81-86	87-88	89-91	92-00
A-J	01-75	76-94	95-96	97-98	99-00
J-S	01-65	66-96	97-00	-----	-----
O-D	01-76	77-90	91-94	95-96	97-00
AREA 14					
J-M	01-70	71-98	99-00	-----	-----
A-J	01-66	67-98	99-00	-----	-----
J-S	01-42	43-90	91-99	00	-----
O-D	01-55	56-98	99-00	-----	-----
AREA 15					
J-M	01-84	85-91	92-93	94-95	96-00
A-J	01-90	91-96	97-98	99-00	-----
J-S	01-52	53-90	91-99	00	-----
O-D	01-63	64-88	89-95	96-97	98-00
AREA 16					
J-M	01-78	79-86	87-90	91-93	94-00
A-J	01-65	66-88	89-95	96-98	99-00
J-S	01-52	53-84	85-95	96-00	-----
O-D	01-69	70-88	89-93	94-95	96-00
AREA 17					
J-M	01-80	81-93	94-95	96-97	98-00
A-J	01-64	65-90	91-98	99-00	-----
J-S	01-58	59-86	87-96	97-98	99-00
O-D	01-68	69-92	93-98	99-00	-----
AREA 18					
J-M	01-63	64-95	96-99	00	-----
A-J	01-38	39-80	81-93	94-00	-----
J-S	01-36	37-78	79-96	97-00	-----
O-D	01-44	45-80	81-95	96-00	-----
AREA 21					
J-M	01-44	45-81	82-96	97-98	99-00
A-J	01-46	47-71	72-88	89-97	98-00
J-S	01-34	35-65	66-87	88-98	99-00
O-D	01-46	47-77	78-95	96-00	-----
NORTH SEA					
J-M	01-36	37-72	73-93	94-98	99-00
A-J	01-45	46-76	77-95	96-00	-----
J-S	01-62	63-88	89-97	98-00	-----
O-D	01-48	49-78	79-92	93-98	99-00
MEDITERRANEAN SEA					
J-M	01-58	59-84	85-95	96-00	-----
A-J	01-61	62-88	89-97	98-00	-----
J-S	01-79	80-96	97-00	-----	-----
O-D	01-71	72-90	91-98	99-00	-----

Listed under each area are four rows, each row representing a different calendar quarter (January to March, April to June, etc.). Each row lists the probability (01-00) of a particular set of Beaufort Numbers occurring during that quarter. The Beaufort Numbers are listed along the top row of the chart so that on a roll of 95 for AREA 1 during the month of November would result in either Beaufort Number 9 or 10 sea state.



These movement markers may be copied and pasted to a piece of cardboard or plastic.

3. BEAUFORT SEA STATE TABLE

BEAUFORT NUMBER	WIND SPEED	DESCRIPTION	REDUCE VISIBILITY	EFFECT ON SHIPBOARD OPERATIONS	
0	0- 1 knots	CALM - Sea like a mirror.	--	NONE	
1	2- 3 knots	LIGHT AIR - Ripples form.	--	NONE	
2	4- 6 knots	LIGHT BREEZE - Small wavelets form.	--	NONE	
3	7-10 knots	GENTLE BREEZE - Large wavelets with some breaking crests	--	NONE	
4	11-16 knots	MODERATE BREEZE - Small waves with breaking crests.	--	NONE	
5	17-21 knots	FRESH BREEZE - Moderate waves with many breaking crests and some spray.	--	NONE	
6	22-27 knots	STRONG BREEZE - Large waves with extensive whitecaps and spray.	--	0-30 DP SHIPS	10%
7	28-33 knots	MODERATE GALE - Sea heaps up and white foam from breaking waves begins to be blown along the direction of the wind.	5%	0- 40 DP SHIPS 41- 90 DP SHIPS	20% 10%
8	34-40 knots	FRESH GALE - Moderately high waves of greater length; edges of crests break into spindrift. Foam is blown in well-marked streaks.	10%	0- 40 DP SHIPS 41-120 DP SHIPS	30% 15%
9	41-47 knots	STRONG GALE - High waves. Dense streaks of foam. Sea begins to roll. Much spray.	20%	0- 30 DP SHIPS 31-100 DP SHIPS 101-200 DP SHIPS	40% 30% 15%
10	48-55 knots	WHOLE GALE - Very high waves with long overhanging crests. White appearance of sea. Rolling of sea becomes heavy.	40%	0- 40 DP SHIPS 41-150 DP SHIPS 151-500 DP SHIPS 501 + DP SHIPS	50% 40% 20% 10%
11	56-66 knots	STORM - Exceptionally high waves. Entire sea is white with foam and spray.	60%	0-100 DP SHIPS 101-500 DP SHIPS 501 + DP SHIPS	50% 40% 25%
12	66 + knots	CYCLONE - The air is filled with foam and spray. Extremely high seas. Ships under 100 DP in danger of being lost or severely damaged.	80%	0-200 DP SHIPS 201-500 DP SHIPS 501 + DP SHIPS	80% 50% 40%



1. VISIBILITY TABLE

VISIBILITY CODE	DESCRIPTION	EFFECT ON CURRENT VISIBILITY
0	Dense fog	nil
1	Thick fog	nil
2	Moderate fog	nil
3	Light fog	1% to 3%
4	Thin fog	3% to 5%
5	Haze	5% to 8%
6	Light haze	8% to 18%
7	Clear	18% to 37%
8	Very Clear	37% to 85%
9	Exceptionally clear	85% to 95%

NOTE: 0, 1, 2, and 3 exist only during Force 0-2
3 and 4 exist only during Force 0-3 and possibly Force 4.

2. SURFACE TO SURFACE VISIBILITY (VISUAL)

DP OF SEARCH VESSEL	DP OF TARGET SHIP						
	01- 25	26- 50	51- 75	76-150	151-300	301-600	601+
01- 25	15,600	18,400	20,600	25,200	28,600	30,400	31,400
26- 50	18,400	21,200	23,400	28,000	31,400	33,200	34,200
51- 75	20,600	23,400	25,600	30,200	33,600	35,400	36,400
76-150	25,200	28,000	30,200	34,800	38,200	40,000	41,000
151-300	28,600	31,400	33,600	38,200	41,600	43,400	44,400
301-600	30,400	33,200	35,400	40,000	43,400	45,200	46,200
601 +	31,400	34,200	36,400	41,000	44,400	46,200	47,200

NOTE: The above yard distances are the approximate distances at which the upper half of the target is visible assuming perfect visibility (such as in a vacuum!). Smoke and tall masts will, of course, be sighted at greater distances. Reduce the above ranges by the factors on CHART C1 (and those on B3 if applicable).

3. SURFACE TO SURFACE VISIBILITY (RADAR)

DP OF SEARCH VESSEL	DP OF TARGET SHIP						
	01- 25	26- 50	51- 75	76-150	151-300	301-600	601 +
01-100	25,700	28,900	31,400	36,700	40,700	42,800	44,000
101-200	29,000	32,200	34,700	40,000	44,000	46,100	47,300
201-500	31,900	35,100	37,600	42,900	46,900	49,000	50,200
501 +	35,000	38,200	40,700	46,000	50,000	52,100	53,300

NOTE: The above yard distances are the approximate distances at which shipboard surface search radar will detect a target. Radar is, for the most part unaffected by most weather conditions. However, reductions may be made for Force 10-12 or for periods of very low, heavy cloud cover.

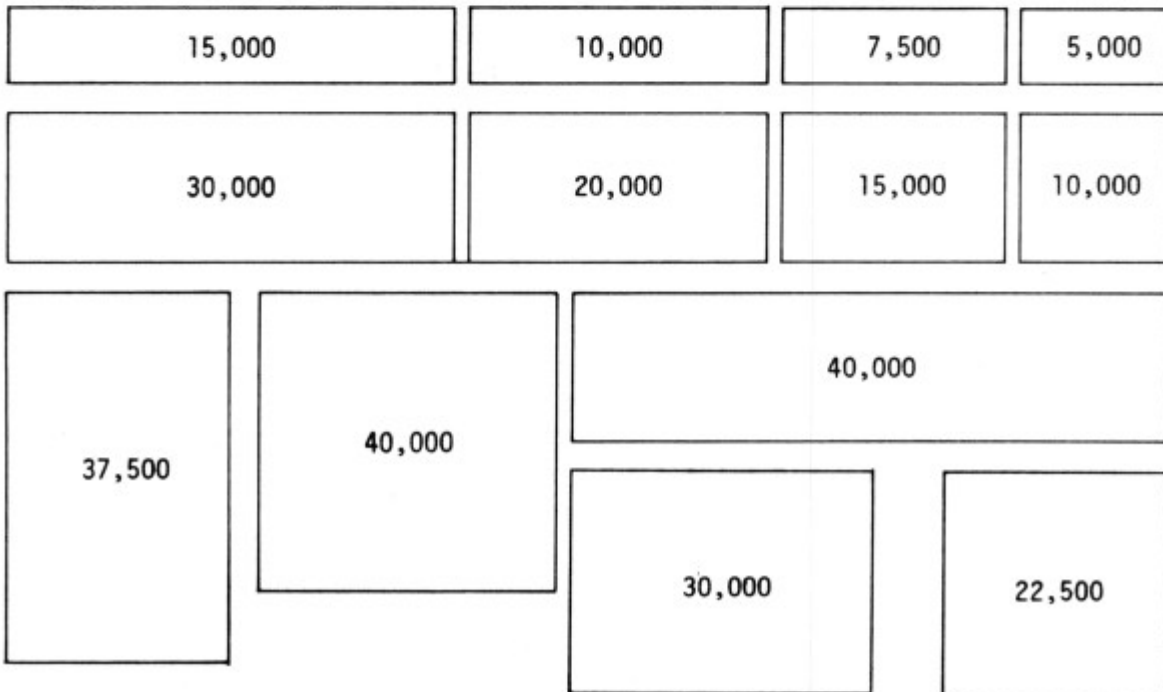


1. AIR TO SEA DETECTION PROBABILITY

VISIBILITY IN MILES	SEARCH AREA (IN SQUARE MILES)								
	5000	7500	10000	15000	20000	22500	30000	37500	40000
RADAR II	99	95	89	77	67	62	52	44	42
RADAR I	94	85	75	61	50	46	37	31	29
50	87	74	63	49	39	36	28	23	22
40	80	66	55	41	33	30	23	19	18
35	75	61	50	37	30	27	21	17	16
30	70	55	45	33	26	23	18	15	14
25	63	49	39	28	22	20	15	13	12
20	55	41	33	23	18	16	13	10	09
15	45	33	26	18	14	13	10	08	07
10	33	23	18	13	10	09	06	05	04

NOTE: Radar I is early (pre 1943) radar models.
 Radar II is late (USA from 1-43 and GB from 11-43) radar models.
 This chart gives the probability of detection (air to surface) by aircraft searching at 1,000 feet at 100 knots.

2. STANDARD AIR TO SURFACE SEARCH PATTERNS (1" = 120 n miles)



I. D.P. AND A.A. GUN FACTORS

GUN SIZE/CALIBER	MARK & MODEL	YEAR	SHELL WEIGHT	ROF	MAX ALTITUDE	RATING
------------------	--------------	------	--------------	-----	--------------	--------

FRANCE						
6.00"	/54		123.00 lbs.	8	S L M H V	3.1
5.10"	/45		64.90 lbs.	22	S L M H V	3.8
3.90"	/45		33.00 lbs.	12	S L M H	2.0
3.90"	/45		33.00 lbs.	16	S L M H V	2.3
3.90"	/45		29.36 lbs.	20	S L M H V	2.4
3.50"	/50		21.00 lbs.	14	S L M H	1.7
3.00"	/50		13.00 lbs.	16	S L M	1.4
40 mm	/56	Bofors	1.98 lbs.	240	S L M	2.2
37 mm	/60	Mark 33	1.80 lbs.	170	S L M	1.7
37 mm	/48		1.80 lbs.	300	S L M	2.2
20 mm	/70	Oerlikon	.27 lbs.	470	S L	1.1
13.2mm			.11 lbs	500	S	1.0

GREAT BRITAIN						
5.25"	/50	Mark I	80.00 lbs.	16	S L M H V	3.6
4.72"	/43	Mark VIII*	50.00 lbs.	16	S L M H	2.8
4.70"	/50		62.00 lbs.	18	S L M H	3.3
4.50"	/45	Mark III	55.00 lbs.	24	S L M H	3.6
4.00"	/45	Mark V	31.00 lbs.	22	S L M H	2.6
4.00"	/45	Mark XVI	36.00 lbs.	32	S L M H	3.4
3.00"	/45	Marks I-III (12 pdr.)	12.50 lbs.	40	S L M	2.2
2.24"	/40	Marks I-II (6 pdr.)	6.00 lbs.	40	S L	1.5
1.85"	/50	Mark II (3 pdr.)	3.40 lbs.	260	S L M	3.0
40 mm	/40	Marks I-II (2 pdr. pom-pom)	2.00 lbs.	180	S L	1.9
40 mm	/40	Marks V-VIII (2 pdr. pom-pom)	1.80 lbs.	220	S L M	2.0
40 mm	/60	Marks NI-X (Bofors)	2.00 lbs.	240	S L M	2.2
20 mm	/65	Marks I-V (Oerlikon)	0.27 lbs.	900	S L	1.6
0.50"	/52	Marks I-III (Vickers MG)	0.08 lbs.	1200	S	1.0

GERMANY						
4.10"	/65		33.30 lbs.	30	S L M H V	3.2
3.90"	/45		21.40 lbs.	20	S L M	2.1
3.5"	/76		19.80 lbs.	30	S L M H	2.4
40 mm	/56	Bofors	1.98 lbs.	320	S L M H	2.5
37 mm	/83		1.76 lbs.	60	S L M	1.0
37 mm	/69		1.32 lbs.	180	S L M	1.5
20 mm	/65		.24 lbs.	900	S L	1.5



2. D.P. AND A.A. GUN FACTORS

ITALY							
3.90"	/47		1928	33.00 lbs.	18	S L M H	2.4
3.50"	/50		1939	22.00 lbs.	24	S L M H	2.3
3.00"	/40		1917	13.20 lbs.	20	S L M	1.6
40 mm	/39		1917	1.98 lbs.	160	S L	1.8
37 mm	/54		1932	1.76 lbs.	240	S L M	2.1
20 mm	/65		1940	.31 lbs.	250	S L	0.9
13.2mm			1930	.11 lbs.	450	S	0.9

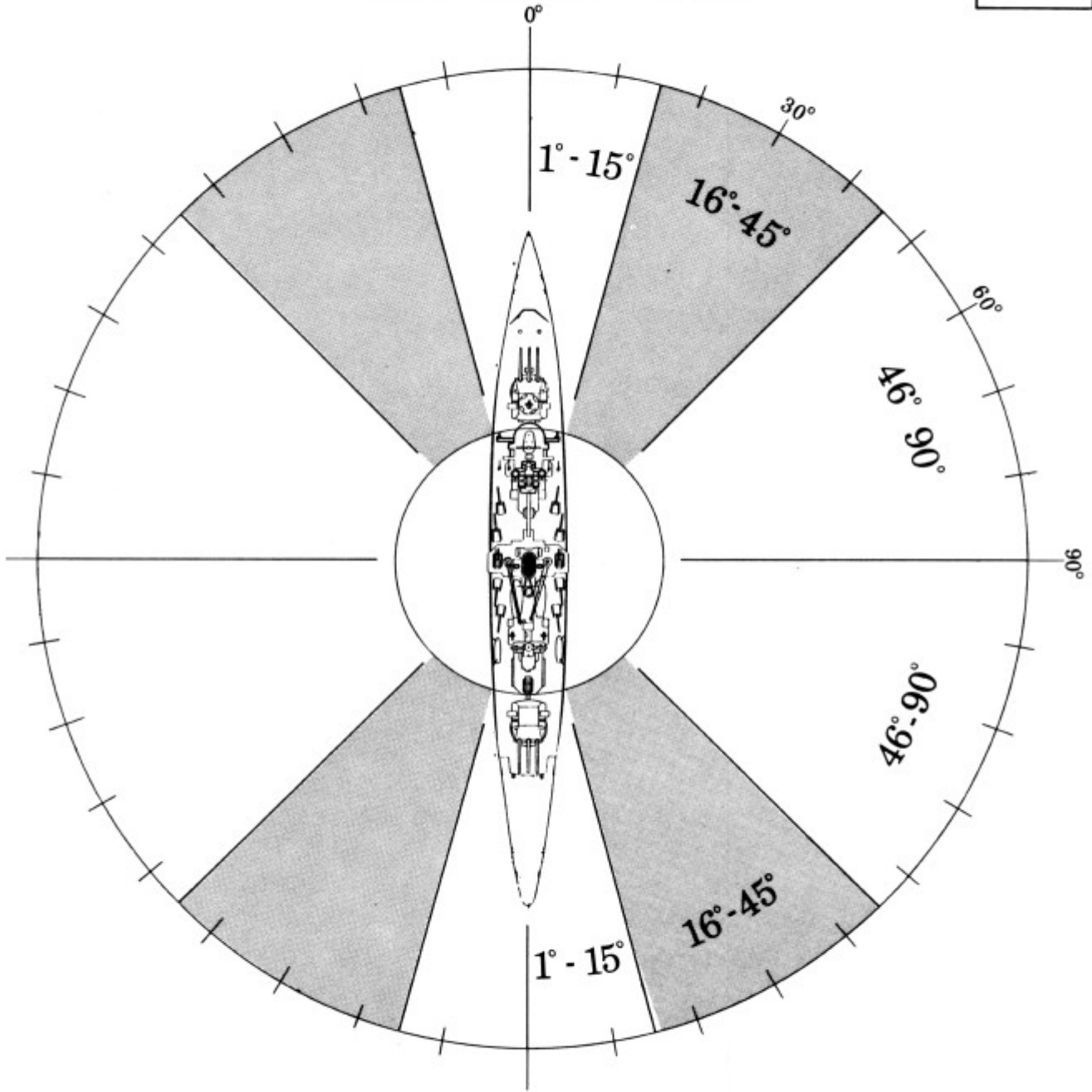
JAPAN							
6.10"	/60	Third year	1938	123.10 lbs.	10	S L M H V	3.5
5.00"	/40	Type 89	1930	50.80 lbs.	20	S L M H V	3.2
5.00"	/40	Type 89	1940	50.80 lbs.	28	S L M H V	3.8
4.72"	/45	10 Nendo Shiki	1927	45.10 lbs.	20	S L M H V	3.0
4.70"		AA Rockets	1944			S	1.0
3.90"	/65		1940	24.20 lbs.	22	S L M	2.3
3.10"	/40	3 Nendo Shiki	1916	13.20 lbs.	30	S L M	1.9
40 mm	/62	Type 92	1930	2.00 lbs.	260	S L M	2.3
25 mm	/60	Type 96	1935	0.55 lbs.	340	S L M	1.4
13.2mm		Type 93	1935	.12 lbs.	1000	S L	1.1
7.7mm		Type 92 F	1925	.03 lbs.	1800	S	0.7
8.00"	/50		1932	277.50 lbs.	5	S L M H	3.7

RUSSIA							
3.90"	/56		1934	34.83 lbs.	24	S L M H V	2.9
3.00"	/55		1934	14.60 lbs.	30	S L M H	2.1
2.95"	/31		1914	12.10 lbs.	22	S L M	1.6
37 mm	/67		1939	1.59 lbs.	200	S L M	1.8
45 mm			1926	2.20 lbs.	110	S L M H	1.5

UNITED STATES							
5.00"	/25	Mark 13	1923	59.50 lbs.	18	S L M H	3.3
5.00"	/38	Mark 12	1934	55.00 lbs.	24	S L M H V	3.6
5.00"	/38	Mark 12 (w/power ran)	1937	55.00 lbs.	36	S L M H V	4.4
5.00"	/54	Mark 16	1945	69.00 lbs.	30	S L M H V	4.5
3.00"	/50	Mark 10	1917	13.00 lbs.	20	S L M	1.6
3.00"	/50	Mark 21	1930	12.20 lbs.	40	S L M H	2.2
40 mm	/56	Marks 1-2	1941	2.00 lbs.	300	S L M	2.4
28 mm	/75	Mark 1	1936	0.90 lbs.	300	S L M	1.7
20 mm	/72	Marks 2-4	1937	0.27 lbs.	900	S L	1.6



1. BEARINGS FROM TARGET SHIP





1. HIT LOCATION

SHORT RANGE	LONG RANGE	HIT LOCATION	
		BB-CB-CA-CL-DD	CV
01-08	01-30	[D] DECK	[D] FLIGHT DECK
09-40	31-40	[B] SIDEBELT	[H] HANGAR
41-55	41-50	[C] CON	[C] CON
56-65	51-70	[T] TURRET	[S] ISLAND
66-85	71-82	[S] SUPERSTRUCTURE	[B] SIDEBELT
86-00	83-00	[I] DUD	[I] DUD

2. SHELL DAMAGE MODIFIERS

	SHELL TYPE			
	APC	SAP	COM	HE/HC
PENETRATION FACTOR	1.0	0.7	0.4	---
DAMAGE FACTOR MODIFIER (no penetration)	1.0	1.3	1.6	2.0
DAMAGE FACTOR MODIFIER (penetration)	3.0	3.5	4.0	---
PROBABILITY OF CRITICAL DAMAGE (no penetration)	*20%	*20%	*20%	*20%
PROBABILITY OF CRITICAL DAMAGE (penetration)	*65%	*65%	*65%	---
PROBABILITY OF PASS-THROUGH	45%	40%	30%	0

All HE and HC shells have no penetration capability and have the same Damage Factor Modifier and Probability of Critical Damage when they hit any target.

[*] CHECK FOR SHIPBOARD FIRE DURING THIS ROLL

3. RATE OF FIRE BY RANGE

RANGE TO TARGET	MAXIMUM RATE OF FIRE PER GUN (IN 2 MINUTES)
2,500 yards or less	10
2,600 to 5,000 yards	8
5,100 to 10,000 yards	6
10,100 to 17,500 yards	4
17,600 to 24,000 yards	3
24,100 to 30,000 yards	2
30,100 yards or more	1

4. SHIPBOARD FIRES

A shipboard fire will occur if two of the same number are rolled during the roll to see if the hit caused Critical Damage. The severity of the fire is determined by total of the two dice (00 being counted as 20). Each turn (2 minutes) a Damage Control Roll must be made to determine the status of the fire:

- 01-20 Subtract 4 from severity
- 21-35 Subtract 2 from severity
- 36-50 Subtract 1 from severity
- 51-75 No change
- 76-85 Add 1 to severity
- 86-99 Add 2 to severity
- 00 Fire 00C (abandon ship)

1. HIT PROBABILITY [BASIC METHOD]
1. TARGET SIZE

1- 100 DP	- 8
101- 500 DP	- 4
500-1000 DP	0
Over 1000 DP	+ 5

2. BEARING FROM TARGET

Bow-on [0° - 45°]	0
Broadside [46° - 90°]	+10

3. FIRE CONTROL SYSTEM

1942-1945	+26
1925-1941	+18
1914-1924	+10
1900-1914	+ 2
1890-1900	- 8

4. RADAR ASSISTED FIRE CONTROL

1939-42 FC Radars	+14
1942-44 FC Radars	+22
1944-45 FC Radars	+30

5. CHANGE OF TARGET

Firing on new target	-10
----------------------------	-----

6. RANGE TO TARGET

less than 5,000 yards ($0-9\frac{1}{2}''$)....	+20
5,000 to 10,000 yards ($10''-20''$)..	+16
10,100 to 15,000 yards ($20\frac{1}{2}''-30''$)	+10
15,100 to 20,000 yards ($30\frac{1}{2}''-40''$)	+ 4
20,100 to 30,000 yards ($40\frac{1}{2}''-60''$)	- 4
more than 30,000 yards ($60\frac{1}{2}''$ +)..	-12

7. SPEED OF TARGET

less than 5 knots	+ 6
5 to 10 knots	0
11 to 15 knots	- 4
16 to 20 knots	- 8
21 to 25 knots	-10
26 to 30 knots	-12
31 to 36 knots	-14
more than 36 knots	-16

AP SHELL DAMAGE [BASIC METHOD]

SHELL SIZE	DP INFLICTED (penetration)	DP INFLICTED (no penetration)	SHELL SIZE	DP INFLICTED (penetration)	DP INFLICTED (no penetration)
20.00"	102	34	9.40"	36	13
18.00"	90	30	8.00"	30	10
16.00"	78	26	7.50"	27	9
15.00"	72	24	6.00"	21	7
14.00"	66	22	5.50"	18	6
13.50"	63	21	5.25"	18	6
13.00"	60	20	5.00"	15	5
12.60"	57	19	4.00"	12	4
12.00"	54	18	3.00"	9	3
11.00"	48	16	SMALLER	3	1
10.00"	42	14			

2. HIT PROBABILITY [ADVANCED METHOD]



1. <u>TARGET SIZE</u>	
01- 40 DP	- 4
41- 80 DP	- 2
81- 200 DP	0
201- 500 DP	+ 2
501-1000 DP	+ 4
Over 1000 DP	+ 6
2. <u>BEARING FROM TARGET</u>	
Pos. A [0° - 15°]	0
Pos. B [16° - 45°]	+ 8
Pos. C [46° - 90°]	+15
3. <u>FIRING SHIP UNDER FIRE</u>	
Hit during last turn	- 8
4. <u>OVER CONCENTRATION</u>	
1 ship only firing at target ..	0
2-3 ships firing at target	- 5
4 or more ships firing	-10
5. <u>FIRE CONTROL SYSTEM</u>	
Post 1930 DCT System	+26
Post 1930 Local RF	+19
1914-30 DCT System	+15
1914-30 Top RF	+12
1914-30 Local RF	+ 8
1900-19 Top RF	+ 3
1900-19 Local RF	- 2
1880-99 Top spot	- 8
1880-99 Local spot	-12
6. <u>RADAR ASSISTED FIRE CONTROL</u>	
1939-42 FC Radars	+14
1942-44 FC Radars	+22
1944-45 FC Radars	+30
7. <u>RANGE TO TARGET</u>	
less than 4,000 yards	+21
4,000 to 8,000 yards	+18
8,100 to 12,000 yards	+15
12,100 to 16,000 yards	+10
16,100 to 20,000 yards	+ 4
20,100 to 24,000 yards	0
24,100 to 30,000 yards	- 5
more than 30,000 yards	-12
8. <u>CHANGE OF TARGET</u>	
Firing on new target	-14
9. <u>SPEED OF TARGET</u>	
less than 5 knots	+15
5 to 10 knots	+11
11 to 15 knots	+ 6
16 to 20 knots	0
21 to 25 knots	- 3
26 to 30 knots	- 5
31 to 36 knots	- 8
more than 36 knots	-12
10. <u>SPOTTER AIRCRAFT</u>	
Aircraft spotting shell splashes.	+10
11. <u>EVASIVE MANEUVER</u>	
Target only in E.M.	- 6
Firing ship only in E.M.	-12
Both Ships in E.M.	-18
12. <u>SEA STATE</u>	
Beaufort 0 to 6	0
Beaufort 7 (ships under 200 DP)..	- 4
Beaufort 8 (ships under 400 DP)..	- 8
Beaufort 9 (ships under 600 DP)..	-14
Beaufort 10 (all ships)	-30
13. <u>SMOKE SCREENS</u>	
Target behind chemical screen ...	-16
Target behind funnel smoke	- 6
14. <u>VISIBILITY</u>	
<u>DURING DAYLIGHT</u>	
Code 9 (Exceptionally Clear)	+ 4
Code 8 (Very Clear).....	0
Code 7 (Clear)	- 4
Code 5 or 6 (Haze)	- 8
Patchy fog	-16
<u>MORNING/EVENING TWILIGHT</u>	
Target afire or silhouetted	+ 2
Target in darkness	-10
Neither of the above	- 4
<u>NIGHT</u>	
No moonlight	-18
Moonlight	- 9
Target afire or silhouetted	+ 2
Target illuminated by searchlight	0
Target using a searchlight	- 4
Target in a starshell pattern ...	- 2