Stations Manned and Ready 2nd Edition

Naval Battles in the Age of Steel

The Battle of Kolombangara or

The 2nd Battle of Kula Gulf
12th/13th July 1943

A and A Game Engineering

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Product Code AA596WVrev1

Naval Battles in the Age of Steel

The Battle of Kolombangara or The Second Battle of Kula Gulf

12th/13th July 1943

A BATTLE SCENARIO FOR USE WITH

STATIONS MANNED AND READY

2ND EDITION

NAVAL WARGAMES RULES FOR THE PERIOD 1885 TO 1945
USING MODEL SHIPS AND AIRCRAFT

By Andrew Finch and Alan Butler Edition 1.1a

First published by A&AGE 2013

Updated December 2015; February 2016

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INTRODUCTION

This volume is part of a series of booklets providing scenarios for Naval Battles from the Pre-Dreadnought era through to the end of the Second World War, the "Age of Steel" referred to in the title.

This introduction is common to all the booklets, therefore it may refer to items that are not present in all.

Scenario Description

Following a brief introduction, a "potted history" if you like, we suggest the type of battle to be fought, if this is appropriate. Mostly a game will be fought as a typical fleet encounter.

A table set-up is provided describing the scene.

Victory conditions

Unless the game is a meeting engagement the victory conditions are defined. Many games are Breakthrough actions where one side has to get his forces off the table. The method is described in the rule book.

Forces and Special Rules

The deployment requirements for each side, and any special rules applying to the forces are shown separately. Some formations may have a delayed entry.

In some cases we may also specify some additional rules.

The map

A small map is provided, which defines which side starts where. As a convention, North is always at the top of the page, and the table is laid out so that it is based on an 8 foot by 4 foot playing area. Any terrain that should be present is also denoted on the map. The home edge for each side is defined by thicker black lines. In many cases the home edge is adjusted so that it does not follow the standard as laid down in the rules. If a force has to exit from an edge, then this is represented by a wavy line.

Fleets

The ships involved in each action are listed. As far as possible, where research has revealed the information, we have also shown the tactical orders of battle with names of the commanders of formations (shown in brackets). The ships in each formation are usually listed in descending order of size, so capital ships are listed before cruisers and destroyers. The actual composition of each squadron is left to the players. The listing shows the ship type, then the names of the ships in the class that were involved in the action.

In some cases you can choose whether to deploy the entire force at the start, or keep some off table in order to make flanking manoeuvre. Off table forces are treated as being in reserve.

Ships in the same class are grouped together and they will also appear grouped in the ship data sheets.

Aircraft

Some scenarios may include aircraft. In these cases players should organise them according to the tactical doctrine as shown in the rules. This allows some flexibility in squadrons in cases where fewer than the normal number are indicated.

Some large scenarios list a large number of separate formations of the same aircraft. These usually represent the appearance of repeat strikes by the same aircraft over a prolonged period. For this reason these separate formations should not be combined.

Comments:

Class names:

These have been taken from the names as defined in the Conway's series of books on Warships from 1860 onwards. They may be at variance to those that appear elsewhere, such as in 'Jane's Fighting Ships' for example.

Ship data:

The ship data sheets appear in the same order as mentioned earlier, which means that larger ships appear first. They are then sorted by class, then by ship name in the class. This means that when perusing the ship names these will often not be in alphabetical order.

In some cases you will find that the ship name is blank on a sheet. Check at the bottom left of the sheet in such cases and you will find the names of the ships in the class (unless the list of names is prohibitively long). Enter the name of the ship you need.

In larger battles you will have to print multiple copies of the data sheets for destroyers and smaller ships, entering the names required, so you have one sheet per ship.

In the cases where one sheet is used to provide data for multiple ships, the class name for the ships concerned is shown in bold type. If the "name ship" of the class is not in the fleet, then this name is shown in parenthesis after the list of ships at the battle.

Optional Ships:

Some scenarios allow for optional vessels and squadrons. These are shown in italics in the fleet lists, and may be used if the players wish. Bear in mind that in some cases this may make the battle rather one-sided.

THE BATTLE OF KOLOMBANGARA OR THE SECOND BATTLE OF KULA GULF

12th/13th July 1943

The Japanese were running a another transport mission of the "Tokyo Express" down 'The Slot' towards the Kula Gulf. This was a strong force, escorting four destroyer transports. They were intercepted by a stronger American force. The battle was a tactical victory for the Japanese force.

Scenario Description

This is a night-time Convoy battle.

Victory Conditions

The Japanese destroyer transports must leave the table via the south -western corner in order to determine their level of victory.

American Forces

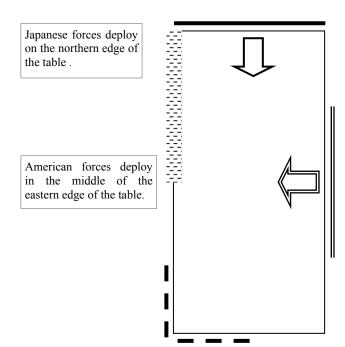
The American forces are deployed in the middle of the eastern edge of the table at the start of the game.

Japanese Forces

The Japanese forces deploy on the northern edge of the table at the start of the game.

Japanese Special Rules

The convoy rules for using warships to carry cargo are applied to the destroyer transports only in this game.



American Forces

Task Group 36.1 (Ainsworth)

- CL Honolulu
- CL St Louis
- CL Leander (RNZS)
- DD Nicholas, O'Bannon, Taylor, Jenkins, Radford (Fletcher)
- DD Ralph Talbot (**Bagley**)
- DD Buchanan, Woodworth (**Bristol**)
- DD Gwin (Benson/Gleaves)
- DD Maury (**Gridley**)

Japanese Forces

(Izaki)

- CL Jintsu
- DD Yukikaze, Hamakaze (Kagero)
- DD Kiyonami (Yugumo)
- DD Yugure (Hatusharu)

DD Transports

- DDT No.32 (ex-Mikazuki), No.27 (ex-Satsuki), No.28 (ex-Minazuki) (**Mutsuki**)
- DD Yunagi, Matsukaze (Kamikaze)

Alternative data sheets are provided for the Japanese ships giving them an optional Incendiary Shrapnel AA attack where appropriate.

HOW TO USE THE SHIP DATA SHEETS

You can print out the data sheet for the ships you want to use in your game. There is little or no manual intervention required on your part. You will have to enter the crew quality on all ships, generated at the start of the game. In the case of destroyers and smaller vessels you will usually have to print multiple copies of sheets and add the ship names as appropriate.

Some ships have minor changes to their close range defence weapons, noted on the sheets, which you can apply if you wish to do so. Note that these changes also have an effect on the points value of the ship, as shown.

Ship Data – Normal Ships

The ship data on the sheets follows a standard pattern, and is explained in more detail in the Ship Data Glossary, available free of charge. This takes each part of the data sheet and briefly explains its use in the game. The fields are laid out as follows, starting at the top of the sheet. Not all fields appear on all the sheets.

The top section, above the armour boxes, shows on the left the ship name and under this its class. The ship name may be blank in the case of destroyers and smaller ships. In such cases there is a usually list of ships for which the sheet is valid at the bottom of the page.

An abbreviated ship type, a date range for which the sheet is valid, the cost in points of a ship with the indicated crew code, the base cost of the ship is shown (in parenthesis), and then the dataset number for the current sheet. A remark may also appear drawing your attention to changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet, shown towards the bottom right of the sheet along with the adjusted points values.

On the right hand side is shown the nationality and a box showing the reconnaissance values, which are used during game set up.

At the top of some sheets there may be an additional italicised remark in the centre which identifies a variant of a ship, or otherwise shows some identifying remark.

The next row starts with the Armour on the ship in six main areas. An Armour Class of 0 means that the ship has negligible armour and is treated as unarmoured. This is explained in the rules themselves. Turrets and Casemates may be armoured or may show an entry of "n/a" which means that this ship does not have any weapons in the location.

You will see that in the case of Turrets and Casemates the armour value is shown in various sorts of brackets: [], () and {}. This is just intended as a handy reference to the weapons mounts shown lower down on the sheets.

To the right of the casemate entry there may be a special remark about armour on a specific part of the ship.

The last part, on the right, shows the ship's Size for when it is shot at, the Target Type, which may restrict what can shoot at it, and the Magazine Safety Factor (MSF), which has an effect if the ship suffers a main gun hit. Ships with no guns will not have an MSF.

In the next line there is an italicised section which tells you which Critical Hit table should be used, and which attack types can be used against the ship in question. On the right of this you will find reference to a Saving Throw Modifier. On larger ships this will show "n/a" to indicate that it does not apply. On many smaller and unarmoured vessels you will find a modifier, which is applied when testing the effectiveness of certain attacks on the ship in question.

Below the first black dividing line you will find the ship's Spotting Distance, which is how far the ship can see and engage a target. This may well be greater or less than the tactical visibility in your game.

Next is the Fire Control value, which is the resilience of the fire control systems on your ship. If reduced to zero, the ship must shoot using local control.

This is followed by the Gunnery Modifier, which reflects the level of technology for gunnery control when the ship was fitted out.

Finally, in this row, is a space for you to enter the Crew Quality of your ship. You roll for this before the game.

Below this row, above the next dividing line, you may find information about Radar on the ship. From the left you may find radar for MAIN guns, radar for OTHER guns and radar for Dual Purpose AA guns. In the latter case they get a +1 to hit bonus. On the far right on all sheets is a field for any spotting aircraft the ship may carry. If there are no aircraft this field will be blank.

The next section holds the weapons on a ship. This is divided into three groups: MAIN, OTHER and TORPEDOES. You will notice that above the data on the right is the to hit score at the 5 range bands for the weapons concerned. This may be helpful in play.

On the very left is the hit location number, which is used to determine where damage occurs when weapons are hit by Critical Damage Effects.

The number (of barrels/tubes) and calibre follow.

In some cases after the calibre there may be a special code showing AA and ASW weapons. Detailed explanations are given in the rules

Under the section on arcs these are each defined with the letter code for the arc (which matches the graphic depiction shown at the bottom on the section, gun arcs to the left and torpedo arcs to the right). There is a letter and number code showing the mount type and number of guns or tubes in the mount. If the mount is armoured it is shown in one of the brackets which also appear in the armour section higher up. The mount is followed by a circle, and/or a special symbol, for each mount.

On the right centre are the penetration values for guns and to hit modifiers for torpedoes in each Range Band. A "-" means that a gun or torpedo will not go that far, and a to hit modifier in parenthesis shows a torpedo that can be effective at a range longer than the ship can see.

This is followed by the weapon IP and CV, and a notation whether this weapon has radar support.

In the OTHER weapon section you will find the Close, Medium and Long range Factors which are mainly used for AA fire. If the ship has Anti Submarine Weapons, Long, Medium or Short Range Factors then there is a remark at the top of the OTHER weapon section about how these are lost to incidental damage.

The final information in this part of the form is the weapon arc row, where the arcs in use on this ship in question are outlined with a thick black line.

Immediately below the third dividing line, Aircraft Carriers have details of their Handling, RRR Limit, Flight Deck Catapults and Aircraft Capacity. On non carriers this area is left blank.

Structure and Flotation are on the next line, along with their value/3, which is linked to the Morale system.

The next row has space to record Fire on board ship, and on the right are details of the number of Damage Control Teams.

Finally there is the speed of the ship, its Manoeuvre Rating (MVR) and Steering # to record damage.

At the bottom of the page there are sections for Other Equipment and Special Effects. Any changes to the light anti-aircraft or other smaller calibre guns appear here, as do other remarks concerning the ship.

On ships with one sheet for a class of ships (in the case of destroyers and smaller) there is a list of the ships in the class, for which this sheet can be used.

The page footer on all sheets shows the CV costs for the loss of weapons.

On the bottom right of the sheet you will find a version number and date for the dataset in question.

Ship Data – Small Ships of Type "X"

The ship data for small ships is slightly different and the sheets are designed to be used as a record for one or more squadrons of such ships.

Again, the detail of how to use the sheets is explained in more detail in the Ship Data Glossary.

The top section, above the armour boxes, shows on the left the ship name and under this its class. The ship name will usually be blank in the case of smaller ships. In such cases there is a usually list of ships for which the sheet is valid at the bottom of the page.

An abbreviated ship type, a date range for which the sheet is valid, the cost in points of a ship with the indicated crew code, the base cost of the ship is shown (in parenthesis), and then the dataset number for the current sheet. When you are using the ship in this case, you must multiply the ship cost by the number of ships being used

A remark may also appear drawing your attention to changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet, shown lower down the sheet along with the adjusted points values.

On the right hand side is shown the nationality and a box showing the reconnaissance values, which are used during game set up.

At the top of some sheets there may be an additional italicised remark in the centre which identifies a variant of a ship, or otherwise shows some identifying remark.

In the next line there is an italicised section which tells you that Critical Hit tables are NOT used; then it shows which attack types can be used against the craft in question.

Next, on the right, shows the ship's Size for when it is shot at, the Target Type, which may restrict what can shoot at it, and the Saving Throw Modifier, which is used during combat to see what effect a hit will have on the craft.

Below this there are three boxes. The first shows the vessel's Spotting Distance, which is how far the it can see and engage a target. This may well be greater or less than the tactical visibility in your game. Next are the speed of the vessel and the Manoeuvre rating (MVR). To the right is a space for you to enter the Crew Quality of your ship. You roll for this before the game.

Next there is an area where there may be some remarks concerning Special Effects that may apply, and other information about the craft concerned.

Below the first thick line across the form you will find the section referring to the weapon outfit. The first information shows the Close Range and Medium Range factors on the vessel, followed by any information about changes to the ship's light anti aircraft or smaller calibre guns during the validity of the sheet, with the adjusted points values.

The only weapons shown in detail in the case of smaller ships will be Torpedoes. Again, these are each defined with the letter code for the arc (which matches the graphic depiction shown to the right of the section). There is a letter and number code showing the mount type and number of tubes in the mount. The mount is followed by a circle, and/or a special symbol, for each mount.

On the right centre are the to hit modifiers for torpedoes in each Range Band. A "-" means that the torpedo will not go that far, and a to hit modifier in parenthesis shows a torpedo that can be effective at a range longer than the ship can see.

The arcs in use on this ship in question are outlined with a thick black line.

Below the second thick black divider line you will find a section that you can use to record any squadrons of these ships you have in use in the game. The method should be fairly obvious. the first column is to record the ID if the squadron in use, then the stand #, each of which will be in the form of counters or single small models representing the squadron. Finally there is a space to record the number of craft in the squadron.

To the right the weapon fit is repeated for each stand you are using. here you will cross out the torpedoes that the stand has expended, and if you need to make any notes, there is space for that as well. Bear in mind that small craft are either in action, or they have been eliminated, as they do not have individual hit points.

On small vessels record sheets there is nearly always a list of the ships in the class.

The page footer shows in abbreviated form how you make use of the number of vessels remaining, linked to the number of Factors or tubes being fired to determine how many attack dice you roll.

Also, in abbreviated form, there is information about how the saving throw system works when small ships are attacked.

On the bottom right of the sheet you will find a version number and date for the dataset in question.

																						Japan
Ship name:	Jintsı	u														R	Recon va	lues D	ay:	2 Nig	ght:	1
Sendai Class ARMOUR: Crit. table: M	Belt: <i>lormal;</i>		Deck:	CL 1943 to 1943 1 CT: 0 by: Guns, Torpedoes	Turrets #1:	with Crew Code C n/a Turret off Weapons, Ro	s #2: n/a	Case	e Cost: emates:	228) n/a	Dataset:	242			S	ize:	-1 T			A MS		+ 0 n/a
Spotting Dista	ance:	4 RB		Fire Control	Value: 2	-	Gunnery Mod	ifier:	+ 0								Crew	Quality:				
								_									Spott	ing Aircr	raft: 1	1		
Hit Location	#						WE	APONS	3													
MAIN guns:	#:	Cal:		Arcs:				Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	7	5.50		A:S1 O I:S1 O K	::S1 OOO R:S1	O Z:S1 O		Pen:	5	4	2	1	_	3	2	No						
	If a v	veapon 'Cr	rit' land:	s in this section lose	1 CR factor for 6	each 2 CV or par	t thereof.										CRF:	5		MRF:	0	
OTHER guns:	: #:	Cal:		Arcs:				Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3				
6 -10	2	5.00	AA	K:S2 O				Pen:	4	2	1	-	_	2	2	No	moun	t marked	'AA' or 'A	— ach MAIN o AA+' that is e LRF is rec	lost. Wh	hen all
TORPEDOES:	:																					
n/a																						
ARCS:							GUNS													TORPED	OES	
7 8 1 Bow Stern	A: $\frac{7}{6}$ $\frac{1}{2}$ $\frac{1}{3}$	B: 78 1/2	C: 🖖	D: $\frac{7^8}{6}$ E: $\frac{81_2}{3}$ I	$F: \frac{7^8}{6}$ G: $\frac{1/2}{3}$	$H: \frac{7^8}{65}$ $I: \frac{7}{6}$	$K:\frac{7}{6}$: < <u>2</u>	S: \(\frac{1/2}{4^3} \)	T: 7/5/5	U: ﴿	$V: \frac{7}{6}$	W: ,	2 5 4 ³	X: ∕₅	Y: 6/	Z: 1/2	M 35 43	l: 🔚 I	N: C): }	P:
VII. dan		_																				
Structure (S)		9				Flotation (F)	. 7					F/3:	2									
Fires:					′	sts are penalised		fire)				1/3.				Г) amage	Control ⁻	Teams	2		
Speed:		35			MVR: 8	Steering #:	8 8	iii c)				When S	teerina	# rec	duced		_			rew Test t	to turn	
Other Equipm	nent	(delete w	hen los	t):	_ ```							Changes										
Searchli		`		(Optional) Smokescr	een; test at - 2							None										
Special Effect	•			, , , , , , , , , , , , , , , , , , , ,	,							Remarks	:									

Sunk in 1943

None

hip name: endai Class ARMOUR:	Jintsu Belt:		Deck: [CL 1943 to 1943 Ship Cost with 0	"S option Crew Code C : 305 "A Turrets #2: n/	`	e Cost:	305) :: n/a	Dataset:	3631			Si		econ valu	es Day: get Type:		Night:	Japan
	ormal;	Can be at	<u> </u>	by: Guns, Torpedoes, Bombs, Standoff VI Fire Control Value: 2		ikaze		,						20.	Crew Q	Savin	g Throw	Modifier:	
Hit Location	#				W	EAPONS	<u> </u>								эросин	g / in crarc.			
MAIN guns:	#:	Cal:		Arcs:	•••	Hit#:		II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 5	7	5.50		A:S1 OØ I:S1 OØ K:S1 OØOØOØ F	:S1 OØ Z:S1 OØ	Pen:	5	4	2	1	_	3	2	No					
	7	5.50	IS	1 AA factor is provided by each mount arc. These can be used once only. Crow when used. Special AA rules apply if ta	ss off 'Ø' boxes above														
	If a w	eapon 'Cı	rit' lands	s in this section lose 1 CR factor for each	2 CV or part thereof.										CRF:	5	M	IRF: 0	
OTHER guns	: #:	Cal:		Arcs:		Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3			
6 -10	2	5.00	AA	K:S2 OØ		Pen:	4	2	1	_	_	2	2	No		s 1 factor f			
	1	5.00	IS	3 AA factors are provided by each mou arc. These can be used once only. Crow when used. Special AA rules apply if ta	ss off 'Ø' boxes above											narked 'AA' ounts are lo			
TORPEDOES:	<u> </u>																		
ARCS:		 -			GUNS						.==:==:	======					TC	ORPEDOES	 S
7 8 1 2 Bow Stern	A: $\frac{78}{6}$ $\frac{1}{2}$ $\frac{7}{3}$	B: 78 1/2	C: 🖖	D: 6 E: 4 F: 6 G: 2 H: 6	$I: \frac{7}{6}$ $K: \frac{7}{6}$	R: <2/3	s: 1	7: 7/6/5	U: ﴿	$\frac{\sqrt{2}}{3}$ V: $\frac{7}{6\sqrt{5}}$	W:	5 3	X : ∕₅∱	Y: 6/5	$Z: \frac{7}{6}$	M: 4] N:	} o:[}	P:
Structure (S)	:	9		S/3: 3 F	flotation (F): 7					F/3:	2								
Fires:				(All Crew Tests a	re penalised if ship is o	n fire)				L				Da	amage Co	ontrol Tea	ms:	2	

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.)

• O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV • {C} (Armoured Turret)* 4CV (* If armour is penetrated in case of mount marked { } or ())

Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

When Steering # reduced to 0 then the ship requires a Crew Test to turn

Changes to CRF or MRF:

None Remarks:

• IS option

Speed:

Other Equipment

Special Effects:

Sunk in 1943

Searchlights

35

(delete when lost):

MVR:

(Optional) Smokescreen; test at - 2

Steering #:

																									Japa
Ship name:																			F	Recon va	alues	Day:	1	Night:	1
Hatsuharu (Type 93 ARMOUR: <i>Crit. table: No</i>	Belt:	0 [Deck:	0	· · · · ·) T	urrets	#1: (ets #2:	n/a Ca		s: n/a					S	Size:	- 2	Target	Type: Saving		MSF: Modifier:	+ 0
Spotting Dista	nce:	3 RB			ire Contro	l Value	: 1			Gunnery	/ Modifier:	+ 1								Crev	v Quali	ty:			
															_					Spot	ting Ai	rcraft:			
Hit Location #	#										WEAPON	IS													
MAIN guns:	#:	Cal:		Arcs:							Hit#	: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar	:					
1 - 4	4	5.00	AA	A:T2 () Z:T2 ()						Pen	: 5	3	2	_	_	2	2	No						
	If a w	— — — veapon 'Cr	rit' lands	in this	section lose	e 1 ASV	V or CI	R factor f	or each 2	CV or par	rt thereof. I	ose fac	tors in o	rder: AS	W then	CRF				CRF:	3		MR	F: 0	
OTHER guns:	#:	Cal:		Arcs:							Hit#	: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar	LRF:	3			-	
5 - 6			ASW	Z: DC	Ω (10cm)															mour	nt mark	factor for ed 'AA' or are lost	r 'AA+' th	at is lost	When all
TORPEDOES:	#:	Cal:		Arcs:	- · · · · · · · · · · · · · · · · · · ·						Hit#	: I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
7 -10	6	24.00		[∞] O	:TR3 O®0	O®C)				Mod	: +2	+2	+2	(+2)	(+2)	7	9							
ARCS:			=======================================				-==-			GUN	 NS							=-==					TOR	PEDOES	==-==-== ;
7 8 1/2 Bow Stern A	$\frac{7}{6} \frac{1}{2}$	B: 78 1/2	C: 📲	D: 78 1	E: 8/1/2	F: 78 6	G:	1/2 H: 7/6] 1: 7	K: 7	$\frac{\sqrt{2}}{3}$ R: $\frac{\sqrt{2}}{3}$	S:	2 T: 7 6 5	U:	$\sqrt{\frac{2}{6}}$ V: $\frac{7}{6}$	W:	5 4 3	X: /	∱. Y: <u>ĕ</u>	Z:	7 2 6 5 4 3	M: 🟣	N:	O: 🕌	P:
Structure (S):		3					5/3:		lotation (F	·					F/3:	1									
Fires:							_		•	-	is on fire)									J		ol Teams			
Speed:		33				M	VR:	5 S	teering #:						-	_	•		d to 0 th	en the	ship re	quires a	Crew T	est to tu	ırn
Other Equipme		(delete w		,												s to CRF	or MR	-:							
Searchlig	hts			Smokeso	reen; test	at + 0									None										

Ships in class: Hatsuharu, Hatsushimo, Wakaba, Yugure (+1943), Ariake (+1943)

still loaded.

• NOTE: Vessel is subject to special critical hit effects if a torpedo mount is lost which is

Special Effects:

Remarks:

• Carries Type 93 "Long Lance" torpedo

Japan
1

Ship name:								•	ption											R	econ va	ılues [Day:	1 N	light:	1
Hatsuharu (Type 93 tor ARMOUR: Belt Crit. table: Norma	t: 0	Deck:	0	· · · ·	0 Tu	urrets #	#1:	0	Code Code Code Code Code Code Code Code	ts #2:		Cas		: n/a					S	ize:	- 2 7	Target Ty Sa	ype: aving Th		/ISF:	+ 0 + 0
Spotting Distance	: 3 RB			Fire Contro	ol Value:	1				Gunne	ry Moc	difier:	+ 1								Crew	v Quality	:			
												_									Spott	ting Airc	raft:			
Hit Location #											WE	APONS	S													
MAIN guns: #:	Cal:		Arcs:									Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 4 4	5.00	AA	A:T2	OØ Z:T2	OØ							Pen:	5	3	2	_	_	2	2	No						
2	5.00	IS	arc. T	factors are hese can l used. Spe	be used o	once o	nly. C	ross of	ff 'Ø' bo																	
If a	weapon '(Crit' lands	s in this	section los	se 1 ASW	or CR	facto	r for e	ach 2 C	CV or p	art the	reof. Lo	ose fact	ors in o	rder: AS	W then (CRF				CRF:	3		MRF:	0	
OTHER guns: #:	Cal:		Arcs:									Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3		_		
5 - 6		ASW	Z: DC	Ω (10cm)	l																moun	oses 1 fac nt marked mounts a	I 'AA' or 'A	4A+' that	is lost. W	/hen all
TORPEDOES: #:	Cal:		Arcs:									Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
7 -10 6	24.00	0	[∞] C):TR3 O®	O O®O)						Mod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:					=======================================	=======================================	-====	=====	======	GL	JNS	======	======	======	:==:=::			.====	====	==========	=======	<u>-</u>	.=======	TORPE	DOES	
7 8 1 2 Bow A: 78 5 Stern	$B: \frac{\frac{1}{2}}{3}$	- C: 🖖	D: 78 1	E: 8/1/2	F: 78	G:	<mark>1∕2</mark> H	l: 78	l: 7/6	K: 7	<mark>√2</mark> F	R: < ² / ₃	S: \(\frac{1}{2} \)	T: 7/6/5	U: ·	$\sqrt{\frac{2}{3}}$ V: $\frac{7}{6\sqrt{5}}$	W:	5 43	X: 🖍	Y: 6/	Z:-	7 /2 6/5 4 ³	и:[=	N:	O: Y	P: 🜓
Structure (S):	3					/3:	1	T Flota	ition (F))· 3						F/3:	1]								
Fires:					<i>'</i>	· L		1	enalise		n is on	fire)				. 1/3.		ļ		Г	amage	Control	Teams	1		
Speed:	33					VR:	5	, ·	ring #:		p 15 011					When 9	Steerina	# re	duced		_	ship requ			t to turn	 I
Other Equipment		when los	t):			ш.]								Changes										
Searchlights	`		•	creen; test	t at + 0											None										
Special Effects:	• NOT			ject to sp		ritical	hit ef	fects	if a to	rpedo	moun	t is los	st whic	h is		Remarks	s:									
·	still loa	aded.								-						• Carries		3 "Lon	g Lanc	ce" torped	do					
Ships in class: Ha	tsuharu, Ha	atsushim	o, Waka	ba, Yugur	e (+194:	3), Aria	ake (+	1943)																		

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.)

• O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV • {C} (Armoured Casemate)* 3CV • (T) (Armoured Turret)* 4CV (* If armour is penetrated in case of mount marked {}) or ())

Torpedoes are lost starting with the mounts with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

nip name:				DD 1943 to 19	JN 3	Chir	Cost w	ith Crow	Code C	: 46	1 (Rac	se Cost:	461)	Dataset:	247				R	econ va	lues [Day:	1 [Night:	1
ARMOUR:	Belt:		Deck:		0 T	urret	s #1:	0	Turrets	#2: n	/a Cas	semates	: n/a					S	Size:	- 2 T		ype:	A‰ I row Mo	-	+ 0
Spotting Dista	ance:	3 RB		Fire Con	trol Value	: <u>1</u>			G	unnery M	lodifier:	+ 1									Quality ing Airc	_			
Hit Location	#									V	VEAPON	S													
MAIN guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 4	6	5.00	AA	A:T2 O Z:T2	00						Pen:	5	3	2	_	_	2	2	No						
	If a w	eapon 'Cr	it' lands	in this section l	ose 1 AS	N or	CR facto	or for ea	ech 2 CV	or part t	hereof. L	ose fac	tors in o	rder: AS\	W then (CRF				CRF:	3		MRF:	0	
OTHER guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3		_		
5			ASW	Z: DC Ω (10cn	n)															mount	t marked	ctor for ead in the contract of the contract o	A+' that	is lost.	When all
TORPEDOES:	#:	Cal:		Arcs:							Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							
6 -10	8	24.00		[∞] O:TR4 O	RO OR(O					Mod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:										GUNS								=====			 		TORPE	DOES	
7 8 1 2 Bow 6 5 4 3 Stern	$\lambda : \frac{7^8 \frac{1}{2}}{6} \frac{3}{3}$	B: 78 1/2	C: 📲 1	D: 8 1 E:	$F: \frac{78}{6}$	G	$\frac{1}{2}$	H: 78	l: 7/6	$K: \frac{7}{6} \underbrace{\frac{2}{3}}$	R: <2/3	s:	7: 7 6/5	U: ﴿	$\frac{\sqrt{2}}{\sqrt{3}}$ $V:\frac{7}{6\sqrt{5}}$	₩:	5 4 ³	X: /s	Y: 5/5	Z: ½	2 5 4 ³	и:[= 1	N: 📄	0:	P:
Structure (S):		4				5/3:	1	Flotat	tion (F):	4					F/3:	1	1								
Fires:						All Cre	ew Test	ts are pe	enalised	if ship is	on fire)				L		1		D	amage (Control	Teams:	1		
Speed:		35			N	1VR:	6	Steeri	ing #:	6					When S	Steering	# re	duce	d to 0 the	en the s	hip requ	uires a C	rew Tes	t to tur	'n
Other Equipm	<u>ent</u>	(delete w	hen lost):											Changes	to CRF	or MR	F:							
Searchlig	jhts		:	Smokescreen; te	est at + 0										None										
Special Effects	s:			l is subject to	special o	ritic	al hit e	effects i	if a torp	edo mo	unt is lo	st whic	ch is		Remarks	s:									
		still load	aed.												• Carries	Type 93	3 "Lon	g Lan	ce" torped	0					

Japan

Ships in class: Kagero (+1943), Kuroshio (+1943), Oyashio (+1943), Hatsukaze (+1943), Yukikaze, Maikaze, Isokaze, Shiranui, Amatsukaze, Tokitsukaze (+1943), Urakaze, Hamakaze, Nowaki, Arashi (+1943), Hagikaze (+1943), Tanikaze

																											Japan
Ship name:									IS o	ption											F	Recon va	lues D	Day:	1 N	ight:	1
Kagero Class	r				1943 to 194		•	_		Code C			`	e Cost:		Dataset:	3667							F	1	r	
ARMOUR: E Crit. table: Nor	Belt: [<i>rmal:</i>		eck: <i>tacked i</i>	0 bv: Gun			urrets F (s/t)		0		s #2: r ndoff Wea				: n/a 's Guns.	_	ze			Si	ize:	- 2 T	arget Ty Sa		A‰ Moo	-	+ 0
Spotting Distan					Fire Contr	-			,,	-	Gunnery I											Crew	Quality				
	-						-						_				-						ing Airci	_			
Hit Location #											1	WEAP	ONS	5													
MAIN guns:	#:	Cal:		Arcs:								Н	it#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 5	6	5.00	AA	A:T2	OØ Z:T2	OØOØ						F	en:	5	3	2	_	_	2	2	No						
	3	5.00	IS		factors are hese can	•	,			,																	
					used. Spe			,			xes above	=															
	If a w	eapon 'Cri	t' lands	in this	section lo	se 1 ASV	V or C	R facto	or for e	ach 2 C	V or part	thered	of. Lo	se fact	ors in o	rder: AS	W then	CRF				CRF:	3		MRF:	0	·
OTHER guns:	#:	Cal:		Arcs:								Н	it#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	3		_		
6 - 7			ASW	Z: DC	Ω (10cm))																moun	t marked	'AA' or '	each MAIN 'AA+' that i he LRF is re	s lost.	When all
TORPEDOES:	#:	Cal:		Arcs:								Н	it#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:							. — — —
8 -10	8	24.00		[∞] C):TR4 O®	O O®C)					M	lod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:		===:	=======	====		=====	:==:=	=====			GUNS	======		====		:==:=::	=====	====		=====	=======	=====		===	TORPE	DOES	
7 8 12 Bow A:	78 1/2 6 3	B: 78 1/2	C: 🖖	D: 78 1	E: 8 1/2/3	F: 78	G:	1/2 3 H	H: 78	l: 7 6	K: 7 2	R:	$\frac{\sqrt{2}}{3}$	S: 1/2	T: 7/6/5	U:	$\sqrt{\frac{2}{3}}$ V: $\frac{7}{6}$	W:	5 4 3	X: 🍂	Y: 6	Z: 7	7 <u>2</u> 3 3 4 3	Λ:]=	N:	O:	P:
	_	_					.,_ Г		T										 1								
Structure (S):	-	4					6/3:	1 T		tion (F):		C	- \				F/3:	1	J		-	.	Ct1	T			
Fires: Speed:	-	35				`	NII Cre	6	- '	enalised ing #:	if ship is 6	on tir	e)				When 9	Staaring	ı # ro	ducad		Damage			1 Crew Test	to tur	
Other Equipme	ent -	delete wh	nen lost):					Jicei	y π.							Change	_				icii uic s	inp requ	c3 a (CICVY ICS	. co tui	1.
Searchligh				,	creen; tes	t at + 0											None										

Ships in class: Kagero (+1943), Kuroshio (+1943), Oyashio (+1943), Hatsukaze (+1943), Yukikaze, Maikaze, Isokaze, Shiranui, Amatsukaze, Tokitsukaze (+1943), Urakaze, Hamakaze, Nowaki, Arashi (+1943), Hagikaze (+1943), Tanikaze

• NOTE: Vessel is subject to special critical hit effects if a torpedo mount is lost which is

Special Effects:

still loaded.

Remarks:

• IS option

• Carries Type 93 "Long Lance" torpedo

																						Japan
Ship name:																	R	Recon va	alues I	Day:	1 Night	: 1
			eck:	DD 1943 to 1943	Turrets #1	t with Crew Cod : n/a Tu olies), Bombs, .	ırrets #		a Cas		s: n/a					9	Size:	- 2	Гarget Т S		MSF:	+ 0
Spotting Distance	e: 3	RB		Fire Control V	/alue: 1		Gui	nnery Mo	difier:	+ 0								Crew	/ Quality	′ :		
					-				_									Spot	ting Airc	raft:		
Hit Location #								W	EAPON	S												
MAIN guns: #	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 5 3	3	4.70	AA	A:S1 O K:S1 O Z	:S1 O				Pen:	4	3	1	_	_	1	2	No					
If	a wea	pon 'Cri	it' lands	in this section lose 1	ASW or CR f	actor for each	2 CV c	r part th	ereof. Lo	ose fact	tors in o	rder: AS	W then (CRF				CRF:	2		MRF: 0	
OTHER guns: #	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	2			
6 - 7			ASW	Z: DC Ω (10cm)														mour	nt marked	d 'AA' or 'A	ch MAIN or O A+' that is los LRF is reduce	t. When all
TORPEDOES: #	#:	Cal:		Arcs:					Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
8 -10 4	ŀ	21.00		0:TT2 OO					Mod:	+1	+1	+0	_	_	4	6						
ARCS:	=======================================							GUNS		=====		1555155515	========			====		=======			TORPEDOE	 S
$ \begin{array}{c c} 7 & 1 \\ \hline 6 & 3 \end{array} $ Stern $ A: \frac{7}{6}$	8 1/2 3 B	: 78/1/2	C: ***	D: 78 E: 81/2 F	: 78 G: 4	2 H: 78 I: -	7)	$K: \frac{7}{6} \underbrace{\sqrt{\frac{2}{3}}}$	R: <2/3	S: 1/2	7: 7 6/5	U:	$\sqrt{\frac{2}{3}}$ V: $\frac{7}{6}$	W:	1 3 5 4 3 T	X: /s	Y: <u>5</u>	Z:	7 <u>/2</u> 6/5 4 ³	M: ├= N	l: 🔐 O: 🔓	P: P
	_																					
Structure (S):					_ 5,5.	Flotation			G\				F/3:	1			-		C !	T		
Fires:	_				- `	ests are penal		•	n fire)				\\/\ 6	74	. 4	٠		_		Teams:	1	
Speed:	+ (d		on lost	\.	MVR:	5 Steering	#:	5					Changes	_			u to u th	en the s	snip req	uires a Cr	ew Test to t	urn
Other Equipmen Searchlights	- `	elete wh): Smokescreen: test at	+ 0								None	o W CRF	OI PIKI							

Remarks: None

Special Effects:

Ships in class: Asakaze, Asanagi, Harukaze, Hatakaze, Kamikaze, Matsukaze, Oite, Yunagi

Ship name: Yugumo Class			ı	DD 19	943 to 1943	3	Ship C	ost wit	th Crew C	ode C	: 47	71 (Ba	se Cost:	471)	Dataset:	1818				R	econ va	alues	Day:	1	Night:	1
ARMOUR: Crit. table: No	Belt: ormal;		Deck: <i>tacked L</i>	0 by: Guns,	CT: CT		ırrets #	#1: <u> </u>	0	Turrets	#2: I	n/a Cas	semate	s: n/	a				Ş	Size:	- 2	Гarge	et Type: Saving	A‰ Throw M		+ 0
Spotting Dista	nce:	3 RB		Fi	ire Contro	l Value:	1			G	unnery I	Modifier:	+ 1			_					Crew	_	· ·			
																					Spot	ting <i>F</i>	Aircraft:			
Hit Location	#										1	WEAPON	S													
MAIN guns:	#:	Cal:		Arcs:								Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:						
1 - 4	6	5.00	AA	A:T2 C	Z:T2 O	0						Pen:	5	3	2	_	_	2	2	No						
	Ifaw	veapon 'Cr	it' lands	in this se	ection lose	e 1 ASW	or CR	facto	r for eac	ch 2 CV	or part	thereof. L	ose fa	ctors in	order: AS	SW then	CRF				CRF:	3		MR	F: 0	
OTHER guns:	#:	Cal:		Arcs:								Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	: Radar:	LRF:	4			-	
5			ASW	Z: DC 9	Ω (10cm)																moun	nt mar	I factor for ked 'AA' or ts are lost	r 'AA+' th	at is lost	When all
TORPEDOES:	#:	Cal:		Arcs:								— — Hit#:	I:14	II:17	' III:19	IV:20	V:21	IP:	CV:	:						
6 -10	8	24.00		[∞] O:	TR4 O®C	O®O)					Mod:	+2	+2	+2	(+2)	(+2)	7	9							
ARCS:	=======	=======================================			========		=======	.===:==		=======================================	GUNS												 -	TOR	PEDOES	
7 8 1 2 Bow Stern	$\frac{78}{6}$ $\frac{1}{2}$ $\frac{7}{3}$	B: 78 1/2	C: 🖏	D: 78 1	E: 8 1/2/3	F: 78	G:	¹ ⁄ ₃ H	l: 78 65	l: 7 6	$K: \frac{7}{6} \underbrace{\sqrt{\frac{2}{3}}}_{3}$	$\frac{2}{1}$ R: $\frac{\sqrt{2}}{3}$	S:	$\frac{\sqrt{2}}{\sqrt{3}}$ T: $\frac{7}{6\sqrt{5}}$	U:	$\sqrt{\frac{2}{3}}$ V: $\frac{7}{6}$	W:	/ _{5 4} 3	X: /	∱` Y: <u>•</u> ⁄	Z:-	7 2 6 3	M: [=	N:	O:	P: P
Structure (S):						— _s	/3:	1	Flotatio	on (F):	4					- F/3:	1	_								
Fires:								Tests	l			on fire)				- 1/5.	-			D	amage	Cont	rol Teams	s: 1		
Speed:		35				`	vr: [6	Steerin		6 6	, (11 111 6)				When !	Steering	ı#re	duce		_		equires a		est to ti	ırn
Other Equipm	ent .	(delete wh	hen lost):			L		0.00	.5						-	s to CRF					р .	5qu 55 u	0.0		
Searchlig		(•	een; test	at + 0										None										
Special Effects		• NOTE:			•		itical	hit ef	fects if	a torp	edo mo	ount is lo	st whi	ch is		Remark	s:									
,		still load			F									-		• Carrie	s Type 9	3 "Lor	ng Lan	nce" torped	lo					

Japan

Ships in class: Yugumo (+1943), Akigumo, Kazekumo, Makikumo (+1943), Makinami (+1943), Naganami, Tamanami, Suzunami (+1943), Onami (+1943), Fujinami, Kishinami, Hayanami, Kiyonami (+1943), Okinami, Hamanami, Asashimo

																			Japan
Ship name:				IS	S option									R	econ va	lues D	ay:	1 Night	t: 1
Yugumo Class	_		_[DD 1943 to 1943 Ship Cost with C	rew Code C : 538	(Base	e Cost:	538)	Dataset:	3661									
ARMOUR: Crit. table: No	Belt: ormal;		eck: [0 CT: 0 Turrets #1: 0 by: Guns, Torpedoes, MRF (s/t applies), B		_		: n/a 's Guns,	_	re			Siz	e:	- 2 T	arget Ty Sa		MSF: row Modifie	
Spotting Dista	ance:	3 RB		Fire Control Value: 1	Gunnery Mod	lifier:	+ 1								Crew	Quality:			
															Spott	ing Aircr	aft:		
Hit Location	#				WE	APONS	5												
MAIN guns:	#:	Cal:		Arcs:		Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV: F	Radar:					
1 - 4	6	5.00	AA	A:T2 OØ Z:T2 OØOØ		Pen:	5	3	2	_	_	2	2	No					
	3	5.00	IS	2 AA factors are provided by each mour arc. These can be used once only. Cros- when used. Special AA rules apply if tar	s off 'Ø' boxes above														
	If a w	eapon 'Cri	t' lands	in this section lose 1 ASW or CR factor for	or each 2 CV or part the	reof. Lo	se fact	ors in o	der: AS	V then C	CRF				CRF:	3		MRF: 0	
OTHER guns:	#:	Cal:		Arcs:		Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV: F	Radar:	LRF:	4			
5			ASW	Z: DC Ω (10cm)											moun	t marked	'AA' or 'AA	ch MAIN or C A+' that is loo LRF is reduc	st. When all
TORPEDOES:	#:	Cal:		Arcs:		Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
6 -10	8	24.00		[∞] O:TR4 O®O O®O		Mod:	+2	+2	+2	(+2)	(+2)	7	9						
ARCS:	==-==-=	=======================================	=======		GUNS	=-==	======		.==.==.=	=======				=====	=====		========	TORPEDOL	. <u></u> ES
7 8 1/2 Bow Stern	$A: \frac{7 \cdot 8 \cdot 1/2}{6 \cdot 3}$	B: 78 1/2	C: 🖖	D: $\frac{1}{2}$ E: $\frac{1}{2}$ F: $\frac{1}{2}$ G: $\frac{1}{2}$ H: $\frac{1}{2}$	$: \frac{7}{6} $ $ K : \frac{7}{6} $	R:	S: \(\frac{1/2}{4^3} \)	T: 7/6/5	U: ﴿	$\frac{\sqrt{2}}{3}$ $V:\frac{7}{6/5}$	W:	5 4 ³	X: ∕₅∱	Y: <u>√</u>	Z: (M M	:[= N	l: O: _	P:
	,									-									
Structure (S):	: _	4			otation (F): 4					F/3:	1	j							
Fires:					e penalised if ship is on	fire)									3	Control ⁻		1	
Speed:		35			teering #: 6									to 0 the	en the s	hip requ	ires a Cr	ew Test to	turn
Other Equipm		(delete wh		,						Changes	to CRF	or MRF:	:						
Searchlig Special Effects		- NOTE		Smokescreen; test at + 0 I is subject to special critical hit effec	te if a tarmada marr	tia laa	منطيب ا	h ia		None Remarks									

Ships in class: Yugumo (+1943), Akigumo, Kazekumo, Makikumo (+1943), Makinami (+1943), Naganami, Tamanami, Suzunami (+1943), Onami (+1943), Fujinami, Kishinami, Hayanami, Kiyonami (+1943), Okinami, Hamanami, Asashimo

• NOTE: Vessel is subject to special critical hit effects if a torpedo mount is lost which is

Special Effects:

still loaded.

• Carries Type 93 "Long Lance" torpedo

IS option

nip name:																Re	econ va	lues Day	: 0	Night:	0
	Belt: ormal;		DDT 1943 to 1943 0 CT: 0 <i>d by: Guns, Torpedoes,</i>	Turrets	#1:	th Crew Code C n/a Turrets <i>), Bombs, Stand</i>	s #2: n/ s	a Cas		n/a		3182 ze			Siz	ze:	- 2 T	arget Type Savir		MSF: Modifier:	+ 0
Spotting Dista	nce:	3 RB	Fire Control Va	alue: 1		G	Gunnery Mo	difier:	+ 0									Quality:			
																	Spott	ing Aircraft	:		
Hit Location	#						WI	EAPONS	5												
MAIN guns:	#:	Cal:	Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP: (CV:	Radar:					
1 - 3	2	4.70	A:S1 O Z:S1 O					Pen:	4	3	1	_	_	1	2	No					
	If a v	weapon 'Crit' land	ds in this section lose 1	ASW or C	R facto	or for each 2 CV	or part th	ereof. Lo	se fact	ors in o	rder: AS\	W then C	RF —				CRF:	3		1RF: 0	
OTHER guns:	#:	Cal:	Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP: (CV:	Radar:	LRF:	0		-	
4 - 5		ASV	V Z: DC Ω (10cm)														,				
TORPEDOES:	#:	 Cal:	Arcs:			_ — — — —		Hit#:	I:14	II:17	III:19	IV:20	V:21	IP: (CV:			- — — —			
6 -10	6	24.00	0:TT3 OO					Mod:	+1	+1	+1	(+0)	_	6	7						
ARCS:	=====				T		GUNS	=======	T. III. II.		.======	=======	:==:==:	=======		======	======	- -	TC	DRPEDOES	
7 8 1 2 Bow 6 5 4 3 Stern	$\lambda : \frac{7^{\frac{8}{1}} \frac{1}{2}}{6}$	B: 78 1/2 C: 8	D: 78 1 E: 81 2 F:	7 ⁸ G:	1/2 3 H	$1:\frac{7^8}{6}$ $1:\frac{7}{6}$	$K: \frac{7}{6} \underbrace{\frac{2}{3}}$	R: <2/3	S: \(\frac{1/2}{4^3} \)	T: 7/5/5	U: ﴿	$\sqrt{\frac{2}{3}}$ $V:\frac{7}{6/5}$	W: ,	√2/ _{5 4} 3 ×	 514	Y: _{€/5}	Z: 3	M: M	■ N:	O:	P: 🜓
Structure (S):		2		_ S/3:	1	Flotation (F):	2					F/3:	1								
Fires:				_ (All Cre	w Test	s are penalised	if ship is o	n fire)				L				Da	amage	Control Tea	ıms:	1	
Speed:		37		MVR:	5	Steering #:	5					When S	teering	# redu	iced	to 0 the	n the s	hip require	s a Crew	Test to tu	rn
Other Equipm	<u>ent</u>	(delete when lo	st):			-						Changes	to CRF	or MRF:							
Searchlig	hts		Smokescreen; test at	+ 0								None									
Special Effects	s:											Remarks	:								

None

Japan

Ships in class: No.25 ex-Uzuki, No.27 ex-Satsuki, No.28 ex-Minazuki, No.29 ex-Fumizuki, No.30 ex-Nagatsuki (+1943), No.32 ex-Mikazuki (+1943), No.33 ex-Mochizuki (+1943), No.34 ex-Yuzuki

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hip name:	Hono	lulu																	R	econ va	lues D	ay:	3 Nigh	t: 1
rooklyn (1st grou _l ARMOUR: <i>Crit. table: No</i>	Belt:	6	Deck:	3 C	to 1943 T: 6 corpedoes, E	Turrets	s #1:	[7]		: 965 #2: n/ a kets, Kami	a Cas	e Cost: emates	965) :: n/a	Dataset:	2734			S	ize:	+ 0 T	arget Ty Sa		A MSF	
Spotting Dista	ance:	4 RB		Fire	Control Va	lue: 3			G	unnery Mo	difier:	+ 1								Crew	Quality:			
RADAR:		Radar fo	r MAIN (Guns		Rad	lar for (OTHER	Guns			DPAA R	Radar: +	1 to hit						Spott	ing Aircr	aft: 2	2	
Hit Location	#									WI	EAPONS	S												
MAIN guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 5	15	6.00		A:[T3] O	O K:[T3] C	Z:[T3]	00				Pen:	6	4	3	2	_	4	3	Yes					
	If a v	veapon 'Cr	it' lands	in this sect	ion lose 1 C	CR factor	for ea	ach 2 C\	or part	thereof.						· — —				CRF:	8		MRF: 0	
OTHER guns:	#:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7		Aircraft sa	ve at -2
6 -10	8	5.00	AA+	I:01 OO	OO R:01 (0000					Pen:	4	2	1	_	_	3	2	Yes	moun	t marked	'AA' or 'A	ech MAIN or (A+' that is lo e LRF is reduce	st. When all
TORPEDOES:																								
ARCS: 7 8 1/2 Bow Stern 8 3 2 Stern	A: 78 1/2 6 3	B: 78 1/2	C: ***	D: 78 1 1	E: 8 1/2 F: 7/6	g:	3	H: 78	l: 7/6	GUNS $K: \frac{7}{6} \underbrace{\binom{2}{3}}_{3}$	R: <2/3	S: \frac{1/2}{4^3}	T: 7/6/5	U: d	2 V: 7/6/5	W: ,	5 4 3	X: ⁄5	Y: <u>6/</u>	Z: 	7 /2 8 5 4 3	l:]= 1	TORPEDO	P: P
Structure (S):	:	23				S/3:	8		tion (F):	11 if ship is or	n fire)				F/3:	4				lamage.	Control 7	Teamer	3	
Speed:		33				MVR:	9		ring #:	9 9	ii iiie)				When S	tooring	# ro	ducec		_			rew Test to	turn
Other Equipm	nent	(delete w	hen lost	١٠		1/14171		Sieei	my π.	-					Changes	_				cii uie s	inp requ	iii es a C	icw iest to	cuiii
Searchlic		(aciete W			mokescree	n: test a	t - 2								None		i ii (i	•						
Special Effect			(optional) c	oncoci cei	., ccsc a									Remarks	:								
Special Effect															None									
															110110									

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Ship name:	St Lo	ouis														R	econ va	lues Da	ay:	3 Nigh	nt: 1
Brooklyn (2nd g ARMOUR: Crit. table:	Belt:	6	CL Deck: : ttacked by		Turrets #1:	vith Crew Code C [7] Turretoff Weapons, Ro	s #2: (2)	Case		999) : n/a	Dataset:	3810			S	Size:	+ 0 T	arget Ty _l Sa		MSF	•
Spotting D	istance:	4 RB		Fire Control V	alue: 3	(Gunnery Mod	lifier:	+ 1								Crew	Quality:			
RADAR:		Radar fo	or MAIN G	uns	Radar for	OTHER Guns		I	OPAA R	adar: +	1 to hit						Spott	ing Aircra	aft: 2		
Hit Location	n#						WE	APONS	3												
MAIN guns	s: #:	Cal:	P	Arcs:				Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 5	15	6.00		A:[T3] OO K:[T3]	O Z:[T3] OO			Pen:	6	4	3	2	_	4	3	Yes					
	If a	weapon 'C	rit' lands ir	n this section lose 1	CR factor for ea	ach 2 CV or part	t thereof.										CRF:	8		MRF: 0	
OTHER gu	ns: #:	Cal:	P	Arcs:				Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	7		Aircraft s	ave at -2
6 -10	8	5.00	AA+	I:(T2) OO R:(T2)	00			Pen:	4	3	2	_	_	4	2	Yes	mount	t marked '	AA' or 'AA		OTHER gun ost. When all ced to 0.
TORPEDOE n/a	ES:																				
ARCS: 7 8 1/2 Bow Stern 7 6 3 3 Stern	A: 78 1	$B: \frac{78 \frac{1}{2}}{3}$	C: 🔱	D: 1 E: 1/2 F	G: 🔀	H: $\frac{\gamma^0}{9\zeta}$ I: $\frac{\gamma}{9}$	GUNS $K: \frac{7}{6} \underbrace{\binom{2}{3}}_{3} F$	2: <2/3	S: 1/2	T: 7 6/5	U: ﴿	√2 V: 7/6/5	W: ,	5 4 3	X: /s	Υ: <u>•/</u> ε	Z: 7	M:	<u></u> N:	TORPEDO	¬ ■
Structure (S):	24			S/3: 8	Flotation (F):		fire)				F/3:	4				amage (Control T	eams:	3	
Speed:		33			MVR: 9	Steering #:	9	(When 9	Steering	# red	duced		_			w Test to	turn
Other Equi	nment		hen lost):		_ ''''	otcoming #1						Changes	_			a to o an	J. 1 C. 1C J	inp requi	res a ere		carr
Searc		(3.2.2.2	,	ptional) Smokescre	en: test at - 2							None									
Special Eff	-		(0	, , , , , , , , , , , , , , , , , , , ,	, =							Remarks	:								
- F												None									

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nip name:																	R	lecon va	lues	Day:	1 Nig	ght: 1
agley Class ARMOUR: Belt Crit. table: Norma		Deck:	DD 1943 to 1943	Turre	ts #1: [ith Crew Code O Turi s), Bombs, Si	ets #2:	n/a	Case	mates:	n/a		2748 ze			S	Size:	- 2 T	arget 7	Ship has Type: Saving Th	A% o MS	SF: + 1
Spotting Distance:	3 RB		Fire Control Va	lue: 1			Gunne	ery Modifier	: н	+ 1								Crew	Qualit	y:		
RADAR:	Radar fo	r MAIN	Guns	-			_		D	PAA R	adar: +	1 to hit						Spott	ting Air	craft:		
Hit Location #								WEAPO	NS													
MAIN guns: #:	Cal:		Arcs:					Hit	#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 3 4	5.00	AA+	A:S1 OO Z:01 OO					Pe	en:	4	3	2	_	_	3	2	Yes					
If a	weapon 'C	rit' lands	in this section lose 1	ASW or	CR fact	or for each 2	CV or p	part thereof	. Los	se facto	ors in o	rder: AS	W then C	RF				CRF:	3		MRF:	0
OTHER guns: #:	Cal:		Arcs:					Hit	#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5		Aircraft	save at -2
4 - 5		ASW	Z: DC Ω Ω (10cm)															moun	t marke		A+' that is	r OTHER gun lost. When all luced to 0.
TORPEDOES: #:	Cal:		Arcs:					Hit	#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
6 -10 16	21.00		N:TT4 OO P:TT4 C	00				Mo	od:	+0	-1	-2	_	_	7	9						
ARCS:	 	.==.=		.==.==.	======	=======================================		UNS		- ==== ===		.===.=	=======================================		.===:=	====	.==.==	======			TORPED	OES
7 8 1 2 Bow A: 7 8 1 A: 7 8 1	$B: \frac{7^{8} \frac{1}{2}}{3}$	C: 📲	D: 6 E: 8 7 F:) 3 3	i: \(\frac{1/2}{3}\)	H: 78 I: 7 6/	⊳ Κ: ΄	7	<u>∕2</u> ₹3	S: \(\frac{1/2}{4^3} \)	T: 7/6/5	U: ¶	$\sqrt{\frac{2}{3}}$ $V:\frac{7}{6\sqrt{5}}$	₩ :.	5 3 3	X: /s	∱₄ Y: <u>-</u> 5⁄	Z:	7 <u>2</u> 6 5 4 3	м: 🚰	N: C	P: P
Structure (S):	4			S/3:	1	Flotation (— F): 4						F/3:	1]							
Fires:				. '	ew Test	s are penalis	_)						l		D	amage	Contro	l Teams:	1	
Speed:	39			MVR:	5	Steering #		•	,				When S	teering	# re	duce		_		juires a Cr	rew Test t	to turn
Other Equipment	(delete w	hen lost	:):				_						Changes	to CRF	or MR	F:						
Searchlights		:	· Smokescreen; test at +	- 0									None									
Special Effects:													Remarks	:								
													None									
Ships in class: Bac	ley, Helm,	Mugford	I, Ralph Talbot, Henley	(+194)	3), Patte	erson																

United States

ARMOUR: Belt Crit. table: Norma		Deck: ttacked i	0 CT by: Guns, Tol						s #2: n ndoff Wea _l					ze			S	iize:	- 2 T			MSF: row Modifier:	+ 1 + 0
Spotting Distance	3 RB		Fire C	Control Valu	e: 1			(Gunnery M	lodifier:	+ 1								Crew	Quality	:		
RADAR:	Radar fo	r MAIN	Guns								DPAA R	.adar: +	1 to hit						Spott	ing Airci	raft:		
Hit Location #									٧	VEAPON	S												
MAIN guns: #:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 4 4	5.00	AA+	A:T1 OO	Z:S1 OO						Pen:	4	3	2	_	_	4	2	Yes					
If a	weapon 'C	rit' lands	in this section	on lose 1 AS	W or C	CR facto	or for	each 2 C	or part t	hereof. L	ose fact	ors in o	rder: AS	W then (CRF				CRF:	3		MRF: 0	
OTHER guns: #:	Cal:		Arcs:							Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5		Aircraft save	at -2
5 - 6		ASW	Z: DC Ω Ω	Ω (10cm)															moun	t marked	'AA' or 'A	ch MAIN or OTH A+' that is lost. e LRF is reduced	When al
TORPEDOES: #:	Cal:		Arcs:							Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
7 -10 10	21.00		O:TT5 OO)						Mod:	+0	-1	-2	_	_	7	9						
ARCS:		.===.==	=======================================	=======================================	=-==-=	=-==-=	==-==-=	========	GUNS		=====	=-==-	:===:=	==-==-		.===.=	====	.==.==			.===.==	TORPEDOES	=-==-
78 1/2 Bow A: 78 6 5 4 3 Stern	B: 78 1/2	C: 🖖	D: 78 1 E:	$ \begin{array}{c c} 8 & 1 \\ \hline 2 & F : \frac{7}{6} \end{array} $	G:	1/2 3	H: 78	l: 7	$K: \frac{7}{6} \stackrel{2}{\checkmark 3}$	R: <2/3	S: 1/2	T: 7/6/5	U: j	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6\sqrt{5}}$	W: .	$\sqrt{\frac{2}{5 4^3}}$	X: ∕₅	Y: 6/5	Z: ²	$\frac{7}{6}$ $\frac{2}{5}$ $\frac{3}{4}$	1:	V: 0: W	P: [
Structure (S):	4				S/3:	1	T Flot	ation (F):	4					F/3:	1								
Fires:					′ .	w Test		` '	if ship is	on fire)				.,				D	amage	Control ⁻	Teams:	1	
Speed:	35				MVR:	5		ering #:	5	,				When S	teering	# re	duced		_			ew Test to tu	rn
Other Equipment	(delete w	hen lost	:):				_	-						Changes	_								
Searchlights		9	Smokescreen	; test at + ()									None									
Special Effects:														Remarks	:								

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.)

• O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV • {C} (Armoured Turret)* 4CV (* If armour is penetrated in case of mount marked { } or ())

Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

Wilkes, Nicholson, Swanson

opotting Distancer	3 RB	Fire Control \	/alue: 1		Gu	ınnery Modifier	+ 1								Crew	Quality:	
RADAR:	Radar for MA	IN Guns					DPAA	Radar: +	1 to hit						Spotti	ing Aircraft:	
Hit Location #						WEAPO	NS										
MAIN guns: #:	Cal:	Arcs:				Hit	#: I:6	II:9	III:12	IV:15	V:18	IP:	CV: I	Radar:			
1 - 4 4	5.00 A	A+ A:T1 OO Z:T1 O)			Pe	n: 4	3	2	_	_	4	2	Yes			
If a	weapon 'Crit' la	nds in this section lose :	L ASW or (CR factor	for each 2 CV	or part thereof.	Lose fa	actors in o	rder: AS\	W then C	 RF				CRF:	4	MRF: 0
THER guns: #:	Cal:	Arcs:				Hit	#: I:6	II:9	III:12	IV:15	V:18	IP:	CV: I	Radar:	LRF:	5	Aircraft save at -2
5 - 7	A:	SW Z: DC Ω Ω Ω (10cr	n)												mount	marked 'AA'	or each MAIN or OTHER gun or 'AA+' that is lost. When al t the LRF is reduced to 0.
ORPEDOES: #:	Cal:	Arcs:				Hit	#: I:14	4 II:17	III:19	IV:20	V:21	IP:	CV:				
8 -10 5	21.00	0:TT5 ()				Мо	d: +0	-1	-2	_	_	7	9				
ARCS:						GUNS											TORPEDOES
8 1/2 Bow A: 78 78 78 78 78 78 78 78 78 78 78 78 78	B: 78 1/2 C:	$D: \frac{7}{6} $ $E: \frac{8}{3} $ F	F: 78 G:	1/2 H:	l: 7/6	K: 7/3 R: ≪	½ S:	1/2 43 T: 7 6/5	U: ﴿	$V: \frac{7}{65}$	W: /	3 1 3 3	X: 🖍	Y: 6/5	$Z:\frac{7}{6}$	M: M:	N: O: P:
			 S/3:	1	Flotation (F):	4				F/3: 	1			_			
tructure (S):	4		ىرى							· L				Da	amage (Control Team	-
tructure (S):	4		_ ′		are penalised i	f ship is on fire										control i can	is: 1
` ,	35		_ ′	ew Tests a	are penalised i Steering #:	f ship is on fire				When St	eering	# red	duced t		•		a Crew Test to turn
ires:		lost):	(All Cre	ew Tests a						When St	-				•		

Ships in class: Bristol (+1943), Ellyson, Hambleton, Rodman, Emmons, Macomb, Woodworth, Forrest, Fitch, Corry, Hobson, Aaron Ward (+1943), Buchanan, Lansdowne, Lardner, McCalla, Mervine, Quick, Farenholt, Bailey, Carmick, Doyle, Endicott, McCook, Frankford, Bancroft, Boyle, Champlin, Meade, Murphy, Parker, Caldwell, Coghlan, Frazier, Gansevoort, Gillespie, Hobby, Kalk, Kendrick, Laub, Mackenzie, McLanahan, Nields, Ordronaux, Davison, Edwards, Glennon, Jeffers, Maddox (+1943), Nelson, Baldwin, Harding, Satterlee, Thompson, Welles, Cowie, Knight, Doran, Earle, Butler, Gherardi, Herndon, Shubrick, Beatty (+1943), Tillmann, Stevenson, Stockton, Thorn, Turner

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Ship name:													R	econ va	lues Day:	1	Night: 1
Fletcher Class ARMOUR: Belt: Crit. table: Normal;	1 Deck:	DD 1943 to 1943	Turrets #1:		#2: n/a C		620) s: n/a		2762	See belo	ow for	-	ges to CRI ize:		arget Type:	Α	MSF: +1 Modifier: n/a
Spotting Distance:	3 RB	Fire Control Va	lue: 1	G	unnery Modifier:	+ 1								Crew	Quality:		
RADAR:	Radar for MAIN	I Guns				DPAA	Radar: +	1 to hit						Spott	ing Aircraft:		
Hit Location #					WEAPO	NS											
MAIN guns: #:	Cal:	Arcs:			Hit#	t: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:				
1-4 5	5.00 AA+	A:T1 OO K:T1 O	Z:T1 OO		Per	n: 4	3	2	_	_	4	2	Yes				
If a v	veapon 'Crit' land	s in this section lose 1	ASW or CR factor	or for each 2 CV	or part thereof.	Lose fac	tors in o	rder: AS	N then C	RF				CRF:	4	М	RF: 0
OTHER guns: #:	Cal:	Arcs:			Hit#	t: I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	6	Α	ircraft save at -2
5 - 6	ASW	Z: DC Ω Ω Ω (10cm))											mount	t marked 'AA'	or 'AA+'	MAIN or OTHER gun that is lost. When all is reduced to 0.
TORPEDOES: #:	Cal:	Arcs:			Hit#	t: I:14	II:17	III:19	IV:20	V:21	IP:	CV:					
7 -10 10	21.00	0:TT5 OO			Mod	d: +0	-1	-2	_	_	7	9					
ARCS:	B: ½ C: ½	D: 38 E: 12 F:	7 ⁸ G: √2/3 I	1: $\frac{\gamma^{8}}{6}$ 1: $\frac{7}{6}$	GUNS K: 7/2 R:	2 3 S: 4	$\frac{\sqrt{2}}{3}$ T: $\frac{7}{6\sqrt{5}}$	U: f	$\frac{\sqrt{2}}{\sqrt{3}}$ $V:\frac{7}{6\sqrt{5}}$	W: ,	2 5 4 3	X: ⁄5	Y: 6/5	Z: 7/6	<u>√2</u> M:	<u></u>	RPEDOES O: P: P:
Structure (S): Fires:	6		S/3: 2 (All Crew Test	Flotation (F):	5 if ship is on fire)				F/3:	2				amage (Control Tea	ms: 2	2
Speed:	38		MVR: 6	Steering #:	6				When S	teering	# rec	duced	I to 0 the	en the s	hip requires	a Crew	Test to turn
Other Equipment	(delete when los	st):		_					Changes	to CRF	or MRF	:					
Searchlights Special Effects:		Smokescreen; test at -		hip cannot be	engaged by M	RF.			• CRF ind •• (Revise Remarks	ed ship				[Base co	ost = 623])		
China in alasa, V	lawa a munahan in	alaca							None								
Ships in class: VeryWartime losses:	iarge number in	UdSS															

Gun mounts are lost starting with the mounts with least protection in the order of priority shown below, followed by the largest calibre, then by highest number of guns in the mount. (OTHER guns are eliminated at the CV cost shown.)

• O (Open) 1CV • S (Shielded) 2CV • C (Unarmoured Casemate) 3CV • T (Unarmoured Turret) 4CV (* If armour is penetrated in case of mount marked { } or ())

Torpedoes are lost starting with the mount with the largest calibre (if there is a choice) followed by the mount with the greatest number of tubes. The cost in CV is equal to the number of tubes.

(+1943): Chevalier, Strong, De Haven, Brownson

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hip name:																R	econ va	lues D	ay:	1 Night:	1
ridley Class ARMOUR: Belt Crit. table: Norma		Deck:	DD 1943 to 1943	0 Turre	ets #1:		ets #2: r	1/a Cas	emates	: n/a		2763 ze			Si	ize:	- 2 T	arget Ty	/pe: A	Search Rad MSF: ow Modifier:	+ 1 + 0
Spotting Distance:	: 3 RB		Fire Contro	ol Value: 1	l.		Gunnery I	Modifier:	+ 1								Crew	Quality:			
RADAR:	Radar f	or MAIN	Guns	_					DPAA R	adar: +	1 to hit						Spott	ing Aircr	aft:		
Hit Location #							Ţ	WEAPONS	S												
MAIN guns: #:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 3 4	5.00	AA+	A:T1 OO Z:S1	00				Pen:	4	3	2	_	_	3	2	Yes					
If a	weapon 'C	rit' lands	in this section lose	e 1 ASW o	r CR fact	or for each 2	CV or part	thereof. Lo	ose fact	ors in o	rder: AS\	W then C	RF				CRF:	3		MRF: 0	
OTHER guns: #:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5		Aircraft save	at -2
4 - 5	ASW Z: DC Ω Ω (10cm)															mount	t marked	'AA' or 'AA	ch MAIN or OTH A+' that is lost. LRF is reduced	When all	
TORPEDOES: #:	Cal:		Arcs:					— — — — — Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
6 -10 16	21.00		N:TT4 OO P:TT	Γ4 ΟΟ				Mod:	+0	-1	-2	_	_	7	9						
ARCS:		.==.==	=======================================		:==:=:	=======================================	GUNS		======	======		=======	=======================================	====	=====	=======	======		========	TORPEDOES	
7 8 1 2 Bow A: 78 Stern	$B: \frac{\frac{1}{2}}{3}$	C: 📲 1	D: $\frac{78}{6}$ E: $\frac{81/2}{3}$	F: 78	G: \(\frac{1/2}{3}\)	H: 78 1: 7	K: 7 2 3	- R: <2/3	S: \(\frac{1}{2} \)	T: 7 5 5 5	U: «	$\frac{\sqrt{2}}{\sqrt{3}}$ $V:\frac{7}{6\sqrt{5}}$	₩ : ,	5 4 3	X: 🍂	Y: 6/5	Z: 7	2 3 4 3	:]= N	: O: G	P: 🔓
Structure (S):	4			 S/3:	1	Flotation (F): 4					F/3:	1								
Fires:				(All C	rew Tes	⊥ ts are penalise	ed if ship is	on fire)				L				D	amage (Control ⁻	Teams:	1	
Speed:	39			MVR	: 5	Steering #:	5					When S	teering	# red	duced	to 0 the	en the s	hip requ	ires a Cr	ew Test to tur	'n
Other Equipment	(delete when lost):										Changes to CRF or MRF:										
Searchlights		:	Smokescreen; test	at + 0								None									
Special Effects:												Remarks	:								
GI: : I G:			U 14									None									
Ships in class: Grid	aiey, Crave	n, McCal	ıı, maury																		

_	eat			•
r-r	225	ĸĸ	173	
G 11	=aL	DI.	ILO	

Ship name: L	eand	ler (RNZ	(S)														R	econ va	lues Day	r: 1	. Nigh	t: 1
	Belt: rmal;	4 D Can be att		1943 to 1943 CT: 0 Oy: Guns, Torpedoes, 1	Turrets	s #1:	th Crew Code [1] Turn F Weapons, R	ets #2: n/	a Cas	e Cost: emates	665) :: n/a	Dataset:	1971			S	Size:	- 1 T	arget Type	e:	Search Ra MSF: w Modifie	+ 0
Spotting Distar	nce:	4 RB		Fire Control Va	lue: 2			Gunnery M	odifier:	+ 1								Crew	Quality:			
RADAR:	-	Radar for	MAIN	Guns	Rac	lar for (OTHER Guns	-	_									Spott	ing Aircraft	t:		
Hit Location #	ŧ							w	EAPONS	S												
MAIN guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:					
1 - 4	8	6.00		A:[T2] OO Z:[T2] (OC				Pen:	6	4	3	1	_	3	2	Yes					
	If a w	eapon 'Cri	t' lands	in this section lose 1	CR factor	for ea	ch 2 CV or pa	art thereof.										CRF:	3		MRF: 0	
OTHER guns:	#:	Cal:		Arcs:					Hit#:	I:6	II:9	III:12	IV:15	V:18	IP:	CV:	Radar:	LRF:	5		Aircraft sa	ive at -2
5 - 7	8	4.00	AA+	I:S2 OO R:S2 OO					Pen:	4	2	1	0	_	2	1	Yes	mount	oses 1 factor t marked 'AA mounts are l	A' or 'AA-	⊦' that is lo	st. When all
TORPEDOES:	#:	Cal:		Arcs:					Hit#:	I:14	II:17	III:19	IV:20	V:21	IP:	CV:						
8 -10	8	21.00		N:TT4 O P:TT4 O					Mod:	+1	+1	+1	_	_	7	9						
ARCS: 7 8 1/2 Bow 6 3 Stern A:	78 1/2 6 3	B: ****/2	C: 811	D: \$\frac{1}{2} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	78 G:	1/2 3	1: $\frac{7^8}{6}$ 1: $\frac{7}{6}$	GUNS K: $\frac{7}{6}$ $\frac{2}{3}$	R: <2/3	S: 1/2	7: 7: 7: 8 T: 8 T: 8 T: 8 T: 8 T: 8 T: 8	U: ﴿	$\frac{\sqrt{2}}{\sqrt{3}}$ V: $\frac{7}{6\sqrt{5}}$	W: ,	5 4 3	X: /s	Y: 6/5	Z: 7	M: 2 5 43		ORPEDOI 0:	P: #
Structure (S): Fires:		15			- S/3: - (ΔII Cre	5	Flotation (F	·	on fire)				F/3:	3				amage (Control Tea	amsi	3	
Speed:	-	33			MVR:	8	Steering #	•	ni ilie)				When S	teering	# 100	duca		_	hip require	-		turn
Other Equipme	- ant	(delete wh	en loct	\•	-		Steering #	. —					Changes	,			u to o tin	ii uic s	inp require	.5 a Ci C	W Test to	cum
Searchligh		(delete Wil	,	,. Optional) Smokescree	n: test a	t - 2							None			-						
Special Effects			(optional) onlokestree	, icsi a	. 2							Remarks									
Special Effects	•												None	-								