The Naval SITREP

The Journal of the *Admiralty Trilogy* Game System

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New US Navy Gear
Movie Madness
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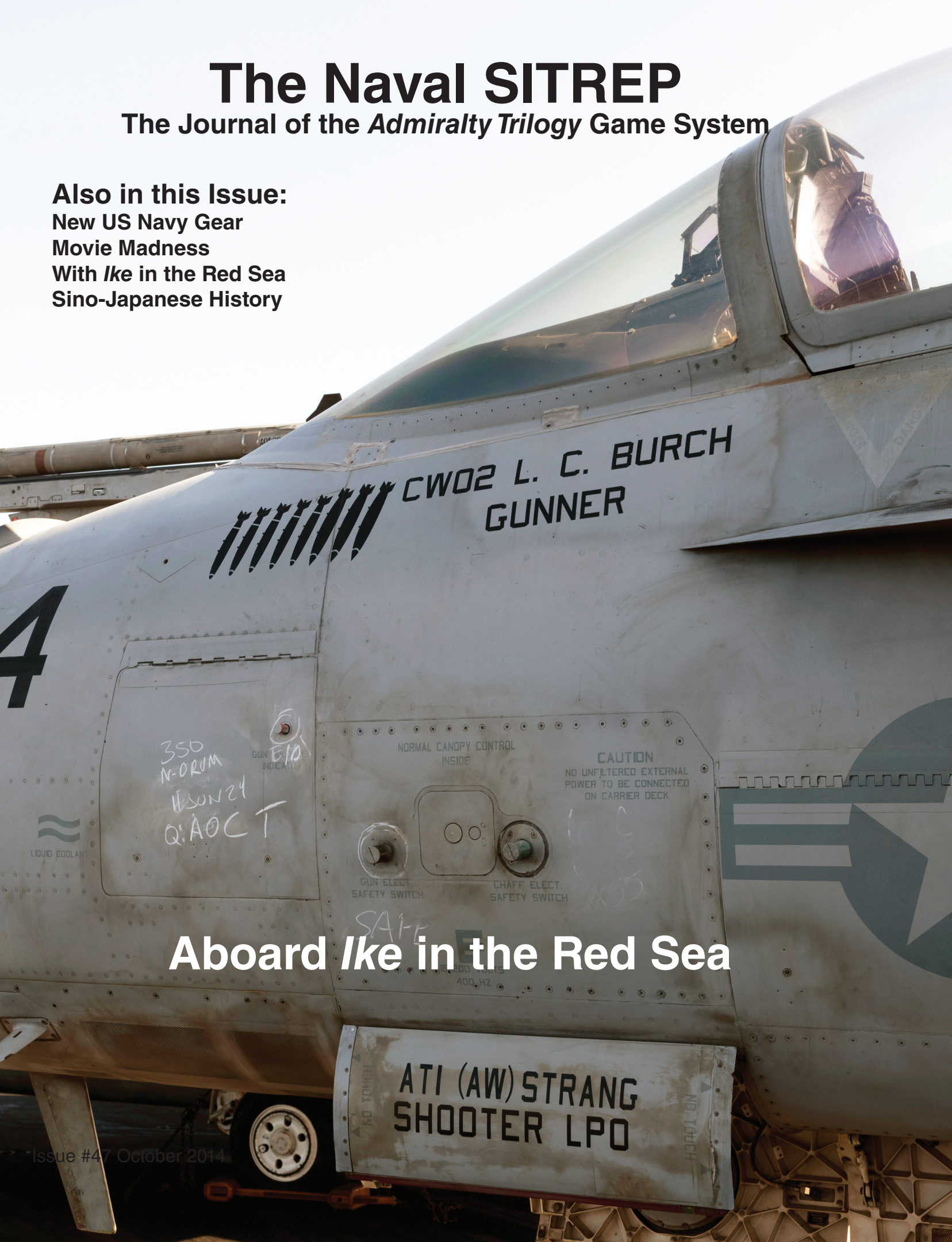
Sino-Japanese History



Aboard *Ike* in the Red Sea

Issue #47 October 2014

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Product Updates

With the *Navies* maintenance update done, we're moving forward to work on a new 5th edition of *Command at Sea*. This will introduce a few new rules (like simplified depth charge procedures), but is mainly intended to make *CaS* consistent with the other three games. *Dawn of the Battleship, Fear God & Dread Nought*, and *Harpoon* have all been updated, and now it's *CaS*' turn to be brought up to current standards.

This will be a new edition, and players who bought the 4th edition will not be automatically updated to the 5th.

When we release the fifth edition of *CaS*, we'll also release *Birth of the PLAN*, by our Chinese editor Chang Lei. It covers the surface and air battles between Communist Chinese and Nationalist Chinese forces in the 1940s and early 1950s. It's already in rough draft, but we've put it on hold so that any changes in the fifth edition can be incorporated.

We want to get those out the door ASAP, because that finally clears the decks so we can devote all our energies to Captain's edition 2.0. No timeline yet.

BT

Brooks Ashley Rowlett

Early on 8 July we were stunned to learn that a long-time colleague, Brooks Rowlett, had suddenly passed away. It's extremely hard to do a man like Brooks justice with such a brief note. He was wicked smart, had an encyclopedic knowledge on all matters naval, both historical and technical, and he was exceedingly gracious with his knowledge and time. Brooks had a rather dry sense of humor, with an affection – or should that be affliction – for puns, and he possessed an impish grin that had many functions. It would often be used as he waited for someone to catch up with one of his intricate trains of thought, or to express approval for a particular action, or it was a harbinger of doom on the gaming table. This last point is perhaps best explained by an old Dungeons & Dragons button I have, "When the DM smiles, it's already too late."

Brooks played many roles within the Admiralty Trilogy Group family. He authored numerous articles and book reviews, published in the *Naval SITREP*, and was a demanding reviewer. Brooks literally dissected the documents we sent to him, so much so that Larry Bond once referred to him as Brooks "the Knife" Rowlett. Brooks was also a key player in assisting me with revising the ATG damage point system, initially published as the 2006 Standard, and he provided numerous insightful suggestions during draft review of the 2012 Standard that is in force today.

Later Brooks became a moderator for several online chat groups and provided administrative support to both the ATG Yahoo and .io groups. If Brooks wasn't completely satisfied that a player's question was addressed properly in the chat group, he would flag the issue for Larry Bond or me to deal with. Having a knowledgeable gatekeeper like Brooks looking out for our online presence was priceless.

Fair winds and following seas, Brooks. Know that you will be sorely missed, my friend.

Chris Carlson

The *Naval SITREP* is edited by Larry Bond and is published biannually by the *Admiralty Trilogy Group* (admiraltytrilogy.com). Price per digital issue is $3.00 US. Article contributions should be sent to adtrgroup@aol.com.

Dawn of the Battleship Scenario: Battle of Souda Bay

by Michael W. Harris

Introduction: This is fictional battle that permits the French and Russians to take the advantage of greater odds and proximity to a British force, in the wake of the North Sea Incident.

Location: 0648 hours, 12 May 1899. Souda Bay, Crete.

Environment: Wind at 15 knots from 210°. Sea state 4. Visibility 60%.

Operational Situation: The North Sea Incident was the starting scenario in a campaign called the "Great Maritime War of 1899" that appeared in *In Mahan's Wake.*

In the fictional campaign, France, Russia. and Germany declared war on the United Kingdom on 20 April 1899, in a period of rising tensions, each thought the other had initiated hostilities.

After the perceived treachery of the North Sea Incident, French and Russian war planners looked at opportunities worldwide for potential targets. Their first target was Crete, and the International Squadron on patrol with warships of France and Russia in close proximity to British ships.

Tactical Situation: With the initial news of the North Sea Incident, the remaining warships of the International Squadron rendezvoused at the roadstead outside Souda Bay harbor. Having spent months together, the commanders of the warships hoped that cooler heads back home would prevail.

Communiqués from French and Russian naval headquarters have been hurried to their ships at anchor at Souda Bay for a coordinated attack on the British warships on station there.

With the arrival of the cruiser *Hawke*, a war warning has been received on board *Revenge,* but with no specifics or new orders.

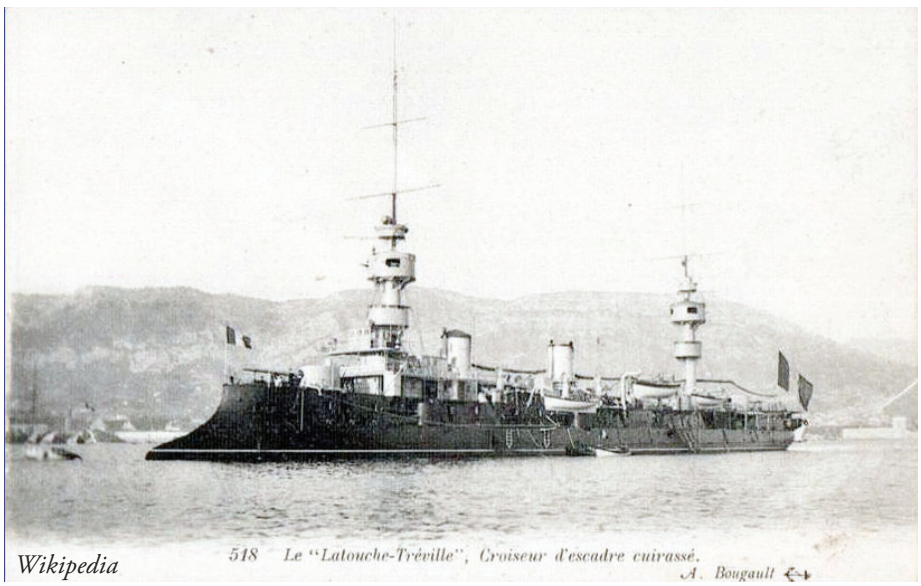
British Forces:
International Squadron - British Division
Revenge (*Royal Sovereign* class BB)
Hawke (*Edgar* class CR)
Hazard (*Dryad* class TB)

British Orders: Make all preparations for an attack by French and/or Russian ships of the International Squadron, especially the French. It is unknown whether or not the Italians will honor the recent secret alliance, or if these ships are even aware of the alliance.

British Victory Conditions:
Decisive: Revenge is not crippled (50% or greater damage) and sink one enemy battleship or cripple two enemy battleships.

Tactical: Revenge is not sunk and sink one enemy battleship or cripple two enemy battleships.

Italian Forces:
International Squadron - Italian Division
Francesco Morosini
(*Ruggiero Di Lauria* class BB)
Giovanni Bausan
(*Giovanni Bausan* class CR)



Wikipedia

Italian Orders: Make all preparations for an attack by French and/or Russian ships of the International Squadron on the British, especially the French. Be prepared to lend assistance to the British, but be cautious. It is unknown whether or not the British will honor the recent secret alliance, or if these ships are even aware of the alliance.

Italian Victory Conditions:
Decisive: Francesco Morosini is not crippled (50% or greater damage) and sink one enemy battleship or cripple two enemy battleships.

Tactical: Francesco Morosini is not sunk and sink at least one enemy battleship or cripple two enemy battleships.

French Forces:
International Squadron - French Division
Carnot (*Carnot* class BB)
Chanzy, *Latouche-Treville*
(both *Amiral Charner* class CR)

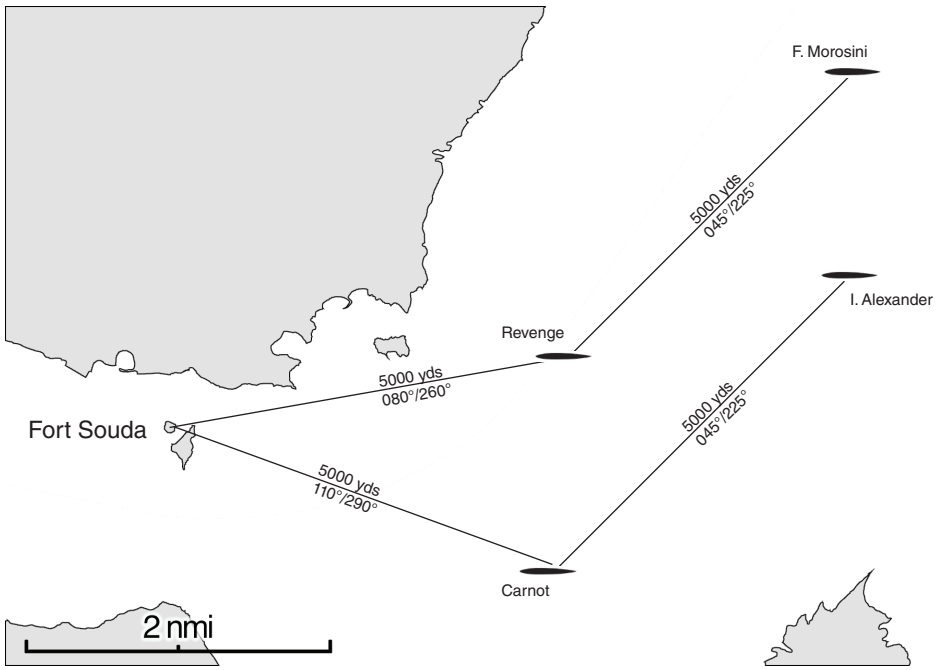
French Orders: Engage and sink the British ships at Souda Bay. The Russian ships may assist, but how or in what manner is still unconfirmed. The Italians should remain out of the battle. Commence the attack at 0700.

French Victory Conditions:
Decisive: Sink one enemy battleship and no French battleship is crippled (50% or greater damage).

Tactical: Cripple one enemy battleship and no French battleship is sunk.

Russian Forces:
International Squadron - Russian Division
Imperator Alexander II (*Imperator Nikolai I* class BB)
Gerzog Edinburgski (General Admiral class CR)

Russian Orders: Engage and sink the British ships at Souda Bay. The French ships may assist, but how or in what manner is still unconfirmed. The Italians should remain out of the battle. Commence the attack at 0700.



Russian Victory Conditions:

Decisive: Sink one enemy battleship and no Russian battleship is crippled (50% or greater damage).

Tactical: Cripple one enemy battleship and no Russian battleship is sunk.

Setup: All ships are at anchor with steam up.

Revenge bears 080° at 5000 yards from Fort Souda. *Hawke* and *Hazard* are at anchor within 500 yards of *Revenge*, at a location of the player's choice.

Francesco Morosini bears 045° at 5000 yards from *Revenge*. *Giovanni Bausan* is within 500 yards of *Francesco Morosini*, at a location of the player's choice.

Carnot bears 110° at 5000 yards from Fort Souda. *Chanzy* and *Latouche-Treville* are within 500 yards of *Revenge*, in a location of the player's choice.

Imperator Alexander II bears 045° at 5000 yards from *Carnot*. The *Gerzog Edinburgski* is within 500 yards of *Imperator Alexander II*, in a location of the player's choice.

BT

Mighty *Ike*'s Battle Axe Guarding the Red Sea

by Patrick Roegies, Angelo Romano & Ben Gorski

Introduction

USS *Dwight D. Eisenhower* (CV-69) deployed on 13 October 2023 on what was originally planned to be a European deployment in the 6th Fleet area of responsibility (AOR), cooperating and training with NATO allies. The flagship of Carrier Strike Group TWO (CSG-2), *Eisenhower* had Carrier Air Wing 3 (CVW-3) embarked, with eight operational squadrons.

After the events of 7 October 2023, the deployment was altered to the 5th Fleet AOR, with CSG-2 positioned in the Gulf of Aden and the Red Sea.

Leaving on the 13th of October, the CSG transited through the Strait of Gibraltar on 28 October 2023, and arrived on station on 4 November 2023.

They found themselves in a hostile and challenging environment.

Patrick Roegies and Ben Gorski embarked on *Eisenhower* on June 11 and 12th, while the CSG was actively engaged defending merchant vessels from attacks by the Houthi. They saw the strategic importance of the Carrier Strike Group deployment, including the capabilities of CVW-3, and the broader implications for regional stability.

Change of Plans

On 7 October 2023, the militant group Hamas raided Israel, killing over 1100 civilians and security forces and taking Israeli citizens hostage. Israel retaliated with an invasion of Gaza, with the goal of freeing the hostages.

In solidarity with Hamas, the Houthis, another Iranian-sponsored militant group, began attacking warships and commercial vessels in the Red Sea with ballistic missiles, unmanned aerial vehicles (UAVs) and unmanned surface vessels (USVs).

President of the United States Joe Biden communicated that the United States would do everything it could to de-escalate the conflict and secure maritime trade routes. The immediate outcome was that CSG-2 received orders to position themselves in the Red Sea and the Gulf of Aden.

Redefining

To cope with operating in a very dynamic environment and reduce the time to detect and eliminate the hostile contact, CVW-3 has three different scenarios they used, depending on the threat level.

The **first** scenario involves combat air patrols, which usually consist of a Northrop Grumman E-2C Hawkeye for air surveillance and early warning, Sikorsky MH-60S for search & rescue, and a combination of Boeing F/A-18E/F Super Hornet fighters, EA-18G Growler electronic warfare aircraft and an F/A-18F tanker for possible inflight refueling. This is used if the threat level is high.

When a hostile contact is detected, the Hawkeye directs the designated aircraft to their targets to eliminate the threat. This is the preferred scenario for protecting high value assets, and provides the fastest response.

Second, the Carrier Air Wing can have fully crewed, fueled and armed aircraft at an "alert five" catapult. This means when the alert is raised the aircraft can be airborne in 2-3 minutes time.

If there is no active threat, the Carrier Air Wing used a **third** scenario in which the required assets are kept on the flight deck at a lower state of alert. From start up to launch, this can take up to 30 minutes, and is used if there are no high value objects nearby to protect.

Elements of the three scenarios can be combined to reduce risks to the mission, the aircraft, and their crews.

Throughout their operational tasks, the *Eisenhower* CSG was supported by a coalition of international naval ships, including those from the Netherlands, Italy, France, the United Kingdom, Germany, and Greece.

Our Visit

When we arrived on the 11th of June we stayed on deck until flight operations were finished at 2300 hours. When we went to our bunks, there were no "regular" patrols airborne anymore, and nothing was launched. In the morning, when we woke up there were no aircraft aloft and we were allowed to walk the deck until 1000-ish when an alarm was raised. Apparently, a merchant ship was hit and a quick ready alert sortie went out.

This consisted of an E-2, a Growler, two F/A-18Fs and an F/A-18E and both a MH-60R and MH-60S Seahawk helicopters. It took roughly 20-30 minutes. As we were walking the deck no aircraft were siting on the ready alert catapult, so I imagined this is the last resort in case of an alert in the night as I could clearly hear aircraft engines started up throughout the nighttime probably ready to be launched within a short as possible time frame.

Operations

Since *Eisenhower* and its strike Group arrived in the Red Sea, they have encountered multiple and almost continuous engagements with hostile forces. These involve intercepting and neutralizing ballistic missiles, unmanned aerial vehicles (UAVs) and unmanned surface vehicles (USVs).

Rear Admiral Marc Miguez, the acting commander of CSG-2 explained, "To manage the myriad threats, the United States Navy relies on a combination of airborne surveillance and strategic positioning of destroyers. We project airborne power and then we take our guided missile destroyers ... forward. If something is being flown at us that might pose a threat, we check it out. If it is a threat, we try to take out that threat [far] away from us."

On 26 December 2023, a notable engagement occurred when aircraft assigned to CVW-3, alongside USS *Laboon* (DDG-58), successfully intercepted hostile missiles and drones aimed at coalition naval forces operating in the region. The destroyers assigned to CSG-2, including USS *Mason* (DDG-87) and USS *Gravely* (DDG-107), have also encountered multiple incidents, including an attempted missile strike against *Gravely*.

Captain Chris "Chowdah" Hill, the commanding Officer of *Eisenhower* commented, "Our aircraft [are] shooting down ballistic missiles, UAVs and USVs with AIM-9X Sidewinders, designed to shoot down other aircraft. Initially we were firing a lot of missiles while transitioning from the traditional air to air, but as we went along, we have found a sophisticated, effective, and efficient way to deal with any of the threats. It has been an evolution in

(continued on page 23)

The “Battle Axe” – a blue-collared tip of the spear

CVW-3 'Battle Axe' is renowned for its effectiveness despite operating traditional aircraft platforms, distinguishing itself as a 'blue collar' air wing within the US Navy. The following squadrons are assigned to CVW-3:

Squadron			*Aircraft Type*
Strike Fighter Squadron 32	VFA-32	“Fighting Swordsmen”	F/A-18F Super Hornet
Strike Fighter Squadron 83	VFA-83	“Rampagers”	F/A-18E Super Hornet
Strike Fighter Squadron 105	VFA-105	“Gunslingers”	F/A-18E Super Hornet
Strike Fighter Squadron 131	VFA-131	“Wildcats”	F/A-18E Super Hornet
Electronic Attack Squadron 130	VAQ-130	“Zappers”	EA-18G Growler
Airborne Command and Control Squadron 123	VAW-123	“Screwtops”	E-2C-2000 Hawkeye
Helicopter Sea Combat Squadron 7	HSC-7	“Dusty Dogs”	MH-60S Seahawk
Helicopter Maritime Strike Squadron	HSM-74	“Swamp Foxes”	MH-60R Seahawk
Fleet Logistic Support Squadron 40. Det. IV	VRC-40	“Rawhides”	C-2A Greyhound

See all of the nearly 50 photos of Pat’s visit to Ike *on our website at https://admiraltytrilogy.com/displaygallery.php?collection=ROEGIES.*


401
VFA-105
401


GUNSLINGERS
VFA - 105


VFA 131


300
VFA-131
WILDCATS


503
DOMINATE
ZAPPERS
500
ZAPPERS


VAQ-130


VAW-123


600


614
NAVY
HSC-7


HSC-7


SWAMP FOX
HSM-74


NAVY
700
HSM-74

Russian Special-Purpose Submarines

While we were recently researching and updating *Russia's Navy*, we found more information on Russia's fleet of special-purpose submarines assigned to the Main Directorate of Deep Sea Research (Russian acronym GUGI). These vessels have no place in a scenario, except perhaps as targets, but they are fascinating designs and an important part of submarine history (bottom line: these are too cool to not publish).

Project 09851 Khabarovsk — SSAN

Displacement: 12600 subm
Size Class: B/Medium
Propulsion: Nuclear
Electrn Cnt: --
Signature: Small/EQuiet
Max Depth: Int IV
In Class: 0 + 1
In Service: 2026?
Crew: ???
Acoust Cnt: 3rd Gen D
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
Cbt Sys: Gen 6 Automatic

Weapons:
(3)2 160cm TT w/6 2M39 Poseidon total --
PB&SB(2)2 533mm TT w/24 Futlyar torpedoes F
PB&SB(3)2 REPS-324 w/6 MG-104 Brosok, MG-114 Beril 4th Gen mobile decoys --

Sensors: **ES/AIR:** 3rd/3rd Gen
MGK-600 Irtysh Amfora (w/conformal), MG-519M Arfa-M K
R-43M (use MRKP-59 Radian-U) combined radar/ES mast J
Periscopes: Search (EO, 2nd Gen IR, 2nd Gen ES, laser rf.), Attack (LLTV, 2nd Gen ES) --

Remarks:
Fitted with pump jet propulsor. Sensors and defensive weapon loadout estimated. Three follow-on Project 09853 planned.

Damage & Speed Breakdown:

Dam Pts:	0	658	116	173	208	231
Surf Speed:	16	12	8	4	0	Sinks
Subm Speed:	31	23	16	8	0	Sinks

Project 09852 Belgorod — SSAN

Displacement: 19250 subm
Size Class: A/Large
Propulsion: Nuclear
Electrn Cnt: None
Signature: Medium/VQuiet
Max Depth: Deep II
In Class: 1
In Service: 2022
Crew: est. 110
Acoust Cnt: 3rd Gen
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
Cbt Sys: Gen 6 Automatic

Weapons:
(3)2 tubes w/6 2M39 Poseidon total --
PB&SB(2)2 533mm TT w/? torp total F
PB&SB(3)2 REPS-324 w/6 MG-104 Brosok, MG-114 Beril 4th Gen mobile decoys --
Project 10831 or Project 18511 SSAN (keel) A
Project 18270 rescue submersible (deck) A

Sensors: **ES/AIR:** 3rd/3rd Gen
MGK-540M Kizhuch K
R-43M (use MRKP-59 Radian-U) combined radar/ES mast J
Periscopes: Search (EO, 2nd Gen IR, 2nd Gen ES, laser rf.), Attack (LLTV, 2nd Gen ES) --

Remarks:
Project 949A SSGN converted during construction. Double hull. Has two engine rooms, not subject to single engine room penalty. Fitted with a Gneys precision station keeping sonar system.
• 8 Jul 22: Delivered. Commences service trials.

Damage & Speed Breakdown:

Dam Pts:	0	77	153	230	275	306
Surf Speed:	15	11	8	4	0	Sinks
Subm Speed:	31	23	16	8	0	Sinks

Project 09787 [Delta IV Stretch] — SSAN

Displacement: 16150 subm
Size Class: A/Large
Propulsion: Nuclear
Electrn Cnt: None
Signature: Medium/Quiet
Max Depth: Int VI
In Class: 1
In Service: 2016 (1986)
Crew: 140
Acoust Cnt: 3rd Gen
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
Cbt Sys: Gen 5 Automatic

Weapons:
PB&SB(2)2 533mm TT w/12 weapons, est. loadout 11 Fizik-2, 2 MG-74 3rd Gen mobile decoys (count as one weapon) F
F&A(1)1 Igla or Verba w/8 msls (while surfaced) D
Project 10831 or Project 18511 SSAN (keel) A

Sensors: **ES/AIR:** 3rd/2nd Gen
MGK-520.6 Skat-BDRM, Pelamida, MG-519 Arfa-G K
MRK-50 Kaskad, MRK-57 Korma J
Periscopes: Search, Attack --

Remarks:
BS-64 *Podmoskovye* in Northern Fleet. Project 667BRDM Delta IV K-64 *Delfin* 1999-2016 converted as a mothership for submersibles mated under the keel. Double hull. Fitted with a Gneys precision station keeping sonar system.
• 2018: Spotted with deck-mounted cradle for Project 18270 rescue submarine.

Damage & Speed Breakdown:

Dam Pts:	0	68	136	204	245	272
Surf Speed:	14	11	7	4	0	Sinks
Subm Speed:	24	18	12	6	0	Sinks

Project 09786 Grunt [Delta III Stretch] — SSAN

Displacement: 14500 subm
Size Class: B/Medium
Propulsion: Nuclear
Electrn Cnt: None
Signature: Small/Noisy
Max Depth: Deep I
In Class: [1]
In Service: 2006 (1976)
Crew: 130
Acoust Cnt: 3rd Gen
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
Cbt Sys: Gen 4 Semi-Automatic

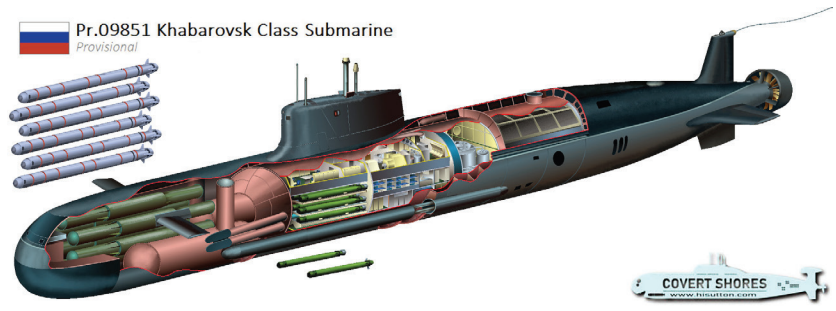
Weapons:
PB&SB(2)2 533mm TT w/16 weapons, est. loadout 14 USET-80K, 4 MG-74 3rd Gen mobile decoy (counts as two weapons) F
F&A(1)1 Igla-S or Verba (while surfaced) D
Project 10831 or Project 18511 SSANs (keel) A

Sensors: **ES/AIR:** 2nd/2nd
MGK-400 Rubikon, Pelamida, MG-519 Arfa-G K
MRK-50 Kaskad, MRK-57 Korma J
Periscopes: Search, Attack --

Remarks:
BS-136 *Orenburg* in Northern Fleet. Project 667BDR [Delta III] *K-129* converted 1994-2002 to a mothership for submersibles mated under the keel. Double hull. Fitted with a Gneys precision station keeping sonar system.
• 2022: In refit.

Damage & Speed Breakdown:

Dam Pts:	0	64	127	191	239	254
Surf Speed:	14	11	7	4	0	Sinks
Subm Speed:	24	18	12	6	0	Sinks



Project 09774 [Yankee Stretch] SSAN

Displacement: 10950 subm
Size Class: B/Medium
Propulsion: Nuclear
Electrn Cnt: None
Signature: Small/Noisy
Max Depth: Deep I
Weapons:
Project 1851 SSAN (keel) **A**
Sensors:
MGK-400 Rubikon, MG-519 Arfa-G **K**
RLK-101 Albatros **J**
Periscopes: Search, Attack **--**

In Class: [1]
In Service: 1991 (1967) - 2009
Crew: 106
Acoust Cnt: 2nd Gen
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
Cbt Sys: Gen 3 Semi-Automatic
ES/AIR: 2nd/2nd Gen

Remarks:
BS-411 *Orenburg* in Northern Fleet. Project 667A [Yankee] *K-411* converted Oct 83-Jun 90 to a mothership for submersibles mated under the keel. Double hull.

Damage & Speed Breakdown:

Dam Pts:	0	53	105	158	189	210
Surf Speed:	16	12	8	4	0	Sinks
Subm Speed:	27	20	14	7	0	Sinks

Project 10831 Losharik [Norsub-5] SSAN

Displacement: 2100 subm
Size Class: C/Small
Propulsion: Nuclear
Signature: VSmall/Quiet
Max Depth: Very Deep
Sensors:
Possible passive MF bow sonar **M**
Periscopes: Search, Attack **--**

In Class: 1
In Service: 2007
Crew: 25
Armor Rating: 0
Btry Rtng: 5 (Emerg.)
ES/AIR: 3rd/3rd

Remarks:
AS-31. Crew is all officers. Designed for research, rescue, and special military operations. Double hull. Pressure hull is a series of titanium spheres. Designed to mate with mother submarine. Fitted with spotlights, handling claw, skids for resting on the seabed.
• 1 Jul 19: Severely damaged in fire, killing 14. Transported to Zvezdochka ship repair center. One of the spheres that contains the central command post required repairs. Unlikely to be back in service before 2026-27.
• Mar 21: Repairs begin with removal of reactor.

Damage & Speed Breakdown:

Dam Pts:	0	18	35	53	61	70
Surf Speed:	7	5	4	2	0	Sinks
Subm Speed:	10	8	5	3	0	Sinks

Project 18511 Halibut [Paltus] SSAN

Displacement: 1000 subm
Size Class: D/Small
Propulsion: Nuclear
Signature: VSmall/Noisy
Max Depth: Deep IV+

In Class: 2
In Service: 1991
Crew: 6
Armor Rating: 0
Btry Rtng: 5 (Emerg.)

Remarks:
AS-21, AS-35. Northern fleet. Carried by Pr. 09774 SSAN. Double hull. Fitted with manipulators for seabed operations. Titanium hull.
• 2012 - 17: *AS-35* Project 18511M refit, Gneys precision station keeping sonar system added.

Damage & Speed Breakdown:

Dam Pts:	0	11	22	32	39	43
Surf Speed:	6	5	3	2	0	Sinks
Subm Speed:	6	5	3	2	0	Sinks

Project 1851 Nelma [X-Ray] SSAN

Displacement: 730 subm
Size Class: D/Small
Propulsion: Nuclear
Signature: VSmall/Noisy
Max Depth: Deep IV+

In Class: 1
In Service: 1986
Crew: 6
Armor Rating: 0
Btry Rtng: 5 (Emerg.)

Remarks:
AS-23. Northern fleet. Carried by Project 675N SSAN. Titanium double hull. Fitted with manipulators for seabed operations. All-officer crew.
• 2011: Possibly out of service.

Damage & Speed Breakdown:

Dam Pts:	0	9	18	26	32	35
Surf Speed:	6	5	3	2	0	Sinks
Subm Speed:	6	5	3	2	0	Sinks

Project 1910 Kashalot [Uniform] SSAN

Displacement: 2000 subm
Size Class: C/Small
Propulsion: Nuclear
Signature: VSmall/Noisy
Max Depth: Deep IV+
Sensors:
Unknown passive MF bow sonar **J**

In Class: 3 - 1?
In Service: 1986
Crew: 11
Armor Rating: 0
Btry Rtng: 5 (Emerg.)

Remarks:
AS-13, AS-15, AS-33. Northern fleet. Double titanium hull. Fitted with spotlights, skids for resting on the seabed.
• 2004: *AS-13* possibly struck.
• 2009 - 16: Project 19102 refit for *AS-15*. Fitted with a Gneys precision station keeping sonar system.

Damage & Speed Breakdown:

Dam Pts:	0	17	34	51	61	68
Surf Speed:	8	6	4	2	0	Sinks
Subm Speed:	10	8	5	3	0	Sinks

Project 20120 Sarov SSAP

Displacement: 3100 subm
Size Class: C/Small
Propulsion: Electric-AIP
Signature: VSmall/Quiet
Max Depth: Int III
Weapons:
(1)1 160cm TT w/1 2M39 Poseidon **--**
Sensors:
MGK-400 Rubikon, MG-519 Arfa-G **K**
MRK-50 Kaskad **J**
Periscopes: Search, Attack **--**

In Class: 1
In Service: 2008
Crew: 52
Armor Rating: 0
Btry Rtng: 125
Cbt Sys: Gen 5 Human
ES/AIR: --

Remarks:
Test platform for 2M39 Poseidon torpedo. Reported to have a small nuclear reactor or fuel cell AIP system to provide propulsion and hotel loads without having to draw on the battery. Maximum speed would be about 8 knots. At higher speeds, the battery would be needed to supply the necessary power. Endurance 45 days.

Damage & Speed Breakdown:

Dam Pts:	0	23	46	68	82	91
Surf Speed:	10	8	5	3	0	Sinks
Subm Speed:	17	13	9	4	0	Sinks

BT

Banner of the Main Directorate of Deep Sea Research of the Ministry of Defense of the Russian Federation
oosif.ru/19-y-centr-ministerstva-oborony

The US Navy's New EW Pod

The Advanced Off-board Electronic Warfare (AOEW) System is going to add another layer of missile defense to US Navy formations.

The ALQ-248 AOEW pod will be carried by MH-60R and -60S helicopters. It's still undergoing tests, but the press release describes it being able to "defeat threats."

The Navy has also described it as an "off-board decoy with onboard systems for EW." It works in coordination with Aegis and the new SEWIP Block III, sharing data, and coordinating the EW response. The pod is mounted on a helicopter, expanding a formation's horizon, both for detecting incoming threats, and beginning countermeasures.

There are few details regarding its exact capabilities, but the Navy makes a point of this being one element in a "distributed network" using Aegis, SEWIP Block III, and also UAVs to create false targets. Whether those false targets are seen only by the missile or by the shooter as well is not made clear - perhaps deliberately.

The pod is in LRIP (Low-Rate Initial Production), and Lockheed will deliver two pods for further tests. Since the tests in the anechoic chamber have been successful, the Navy may send them out to the fleet.

AESA technology allows many possibilities, as well as the capability to reprogram the pods to deal with new threats.

At a minimum, this pod has the ability to detect RF missile seekers and deceive them by projecting false targets. Given the small size of the pod, it is probably not powerful enough to attack the seekers directly, a capability being discussed for AESA radars.

In *Harpoon* terms, this allows a US defender to position one or more podded helicopters out beyond the formation horizon to detect missile seekers (some of which have very long ranges).

If the seeker is enabled (any ES can tell if it is), then the pod acts like a 4th Generation countermeasures and decoy, and has a chance of pulling a missile off target, even if it hasn't locked onto anything yet.

This is our best estimate of their capabilities, based on the extremely limited information that is available. It will probably change after we learn more.

There's no timeline yet, but it's possible that if the first fleet trials go well, and the Houthis are still active in the Red Sea...

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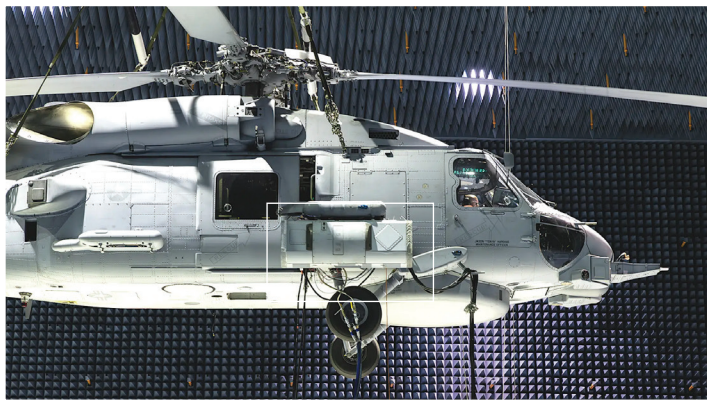

The new pod being tested in an anechoic chamber at Naval Air Station Patuxent River

US Navy

The US Navy's New Long-Range AAM

With very little warning, the US Navy has fielded a new, badly needed, long-range air-to-air missile, the AIM-174B. By simply adapting the SM6 missile, minus its booster, to an air-to-air role, the Navy has filled a dangerous gap in our capability.

The missile, with an "XAIM-" label, was carried by F/A-18s during the RIMPAC exercises this spring, but a service version has now been photographed with at least one line aircraft carrier squadron. There is no word on whether it has been used in the Red Sea conflict with the Houthis.

The AIM-54C Phoenix, with a range of 80 nmi, was retired from US Navy service in 2004, although it is still in service in the Iranian Air Force. Without the Phoenix, the Navy's longest-range weapon is the AIM-120 AMRAAM, with a range of 44 nmi.

That is almost the same as Russia's R-77-1 [AA-12 Adder], which IOC'd in 2016 with a range of 44.6 nmi. But Russia also has the R-37M [AA-13a Axehead], carried by the MiG-31BM, Su-35, and Su-57. It's a 4th Gen I/M/TARH with a range of 139 nmi. It IOC'd in 2018.

The Chinese equivalent to the AMRAAM is the PL-12, with an estimated range of 40 nmi. Their long-range AAM is probably the PL-15, with a range of 80 nmi and possibly as much as 108 nmi.

The US has been working on another long-range AAM, the AIM-260. Development started in 2017, and it's supposed to replace the AMRAAM, with a range of 100+ nmi. Getting that much energy in a smaller missile is a challenge. Testing was supposed to start in 2023, but no in-service date has been announced.

Our best estimate of the specs for the AIM-174B are: I&Sat/M/TSARH&TARH/5th Gen, with a range of 140 nmi with an ATA of 5.0. Since it has a TARH seeker, it can be launched in boresight mode at a range of 10 nmi and with an ATA of 5.5. It has a speed of 2006 kts, a ceiling of 34,000 m (RHigh), is all aspect, snap/up down, and dogfight capable. It can also be fired at surface targets, inflicting 33 DP + D6/2 criticals, with a penetration of 4. It weighs 860 kg.

Midcourse guidance can be provided by the launching aircraft or any other sensor with CEC/network capability. In fact, another aircraft can take control of the missile while the F/A-18 carrier remains completely passive.

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A comparison of the AIM-174B with the smaller AIM-120

offsetski on Reddit

Trilogy Scenario: Matinee Turkey Shoot - Gaming *The Final Countdown* at Historicon 24

by Steve Thorne

Introduction: The Historicon 2024 theme was "From Hollywood to Historicon." I submitted "*The Final Countdown*," after the 1980 Kirk Douglas movie of the same name. We ran the game twice, on Thursday and Saturday evenings at 1800 hours with three different players each time.

To reprise the plot, while operating off Hawaii, USS *Nimitz* is sucked through a mysterious vortex that transports her to some time on 6 December 1941. The main plot of the movie follows her incredulous captain and crew struggling to understand *when* they are and then what they should do about it. There is a subplot with a senator and his secretary, but the purpose of the film is to simply ask, "What would *Nimitz* do against the Imperial Japanese Navy? Could they prevent the attack?" Unfortunately, the vortex conveniently appears again just after the strike is launched. The aircraft are recalled just in time, and everyone (minus one helicopter and her CAG) is warped back to 1980.

Location: Off Hawaii. While *Nimitz*' exact position is unspecified, her aircraft are close enough to reach both Pearl Harbor and the Mobile Striking Force, arriving from the North.

While the scenario takes place on the morning of 7 December 1941, it's impossible to follow the movie's timeline. Historically, the Japanese launched their first strike at 0615, 11 minutes before sunrise, yet in the movie, Captain Yelland (Kirk Douglas) sends his CAG to plant a United States senator, his secretary, and her plot device, er, dog, on a nearby island by chopper in broad daylight, and tells him to get back in time to lead the strike.

Talk about time travel! I set the start time as 0720, when the Japanese First Wave was 18 minutes into its track at Opana Point and the Second Wave was just leaving the area of the carrier task force.

Environment: Historically, the weather over Pearl was visibility 70%. Clouds obscuring mountain tops on windward side. Wind 270° at 10 knots. In the movie, it looks like clear skies and 100% visibility, with scattered clouds at High altitude.

There's no storm sucking everybody back. Maybe later.

Operational Situation: *Nimitz*, minus her escorts and the trailing Soviet AGI, has mysteriously appeared off Hawaii and has detected the Japanese Mobile Force approaching Pearl Harbor.

US Forces

VF-41 (Black Aces), VF-84 (Jolly Rogers),
both with 12 F-14A Tomcats
VA-82 (Marauders), VA-86 (Sidewinders),
both with 12 A-7E Corsair IIs
VA-35 (Black Panthers)
equipped with 12 A-6E and 2 KA-6Ds
VS-24 (Scouts), equipped with 12 S-3As
VAQ-134 (Garudas) with 4 EA-6B
VAW-124 (Bear Aces) with 4 E-2C
VFP-63 (Eyes of the Fleet) 2 RF-8G

US Orders: Captain Yelland has decided to change history by intercepting the Japanese air strike and sinking the Kido Butai.

Japanese Forces: Kido Butai (Mobile Force), First Air Fleet, VADM Chuichi Nagumo in *Akagi*.

Air Attack Force:
Cardiv 1: *Akagi* (*Akagi* class CV), *Kaga* (*Kaga* class CV)
Cardiv 2: *Hiryu*, *Soryu* (both *Soryu* class CV)
Cardiv 5: *Shokaku*, *Zuikaku* (both *Shokaku* class CV)

Support Force:
Batdiv 3: *Hiei*, *Kirishima* (both *Kongo* class BB)
Crudiv 8: *Tone*, *Chikuma* (both *Tone* class CA)

Screening Unit:
Desron 1: *Abukuma* (*Nagara* class CL),
Desdiv 17: *Tanikaze*, *Urakaze*, *Isokaze*, *Hamakaze* (all *Kagero* class DD)
Desdiv 18: *Kasumi, Arare* (both *Asahio* class DD), *Shiranui* (*Kagero* class DD)

SupGru 1: *Kyokuto Maru* (*Toa M.* class AO), *Shinkoku Maru*, *Kenyo Maru*, *Kokuyo Maru* (all *Tatekawa M.* class AO),
SupGru 2: *Toho Maru*, *Nippon Maru* (both *Tatekawa M.* class AO), *Toei Maru* (*Toa M.* class AO)

Aircraft Attack Organization: CDR Mitsuo Fuchida.

First Attack Force, CDR Mitsuo Fuchida:

1st Flight Horizontal Bombing Force, CDR Mitsuo Fuchida, 49 B5N2 Kate with one Type 99 No. 80 Mk5 800 kg armor piercing bomb (*Akagi* = 15, *Kaga* = 14, *Soryu* = 10, *Hiryu* = 10). Target: Battleships.

1st Flight Special Group Torpedo Force, LCDR Shigemaru Murata, 40 B5N2 with one Type 91 Mod 2 torpedo (*Akagi* = 12, *Kaga* = 12, *Soryu* = 8, *Hiryu* = 8). Target: Battleships and carriers.

2nd Flight Dive Bomber Force, LCDR Kakuichi Takahashi, 51 D3A2 Val with one Type 98 No, 25 250 kg land bomb (*Shokaku* = 26, *Zuikaku* = 25), Target: Ford Island (17), Hickam (9), Wheeler (25).

3rd Flight Air Control Force, LCDR Shigeru Itaya, 45 A6M2 Zeke (*Akagi* = 10, *Kaga* = 10, *Soryu* = 8, *Hiryu* = 6, *Shokaku* = 5, *Zuikaku* = 6) 2 aborts. Targets: 1. Airborne aircraft 2. Strafe parked aircraft at Ford, Hickam, Wheeler, Barbers Point, Kaneohe fields. Ford and Hickam = 15, Wheeler and Ewa = 15, Kaneohe = 15.

Second Attack Force, LCDR Shigekazu Shimazaki:

1st Flight Horizontal Bombing Force, LCDR Shigekazu Shimazaki: 54 B5N2 (*Zuikaku* = 27, *Shokaku* = 27), 27 with two Type 98 No, 25 250 kg land bombs, 27 with one 250 kg and six Type 97 No, 6 60 kg land bombs. Targets: Hickam, Ford, Kaneohe, Ewa (planes split equally).

2nd Flight Dive Bomber Force, LCDR Takashige Egusa, 81 D3A2 with one Type 99 No. 25 Model 1 250 kg ordinary bomb, (*Akagi* = 18, *Kaga* = 27, *Soryu* = 18, *Hiryu* = 18) 1 abort. Target: Cruisers, battleships, destroyers.

3rd Flight Air Control Force, LT Saburo Shindo: 36 A6M2 Zeke (9 each from *Akagi*, *Kaga*, *Soryu*, *Hiryu*). Targets: 1. Airborne planes, 2. Strafing of Ford, Hickam, Wheeler, Kaneohe (9 planes to each field).

Japanese Orders: There are no orders for the Japanese side; they were committed to their historical course of action.

Setup: On the playing table were the First and Second Waves of the Imperial Japanese Navy (IJN) strike with each plane model representing three aircraft in 1:1250 scale (from the collection of my late brother-in-law, Robert Estremo), and the Mobile Fleet in 1:6000 scale. Some distance away was USS *Nimitz* in 1:6000 and the various USN aircraft in 1:1250, with each model representing four aircraft. The players were told the approximate elevations of each element of both waves (E-2Cs are handy aircraft to have around).

There is a US E-2C shadowing the Japanese surface formation.

There are 32 A6M2 Zeroes on Combat Air Patrol over the carriers at Medium altitude.

The First and Second waves are all at Medium altitude.

Special Rules: I used *CaS* rules for Area/Lt AA and shooting down USN aircraft with Zeros, should that actually happen, given the choices made by the USN players. I used *Harpoon* for the USN strike planning and resolution of bomb hits and damage.

I figured that each side had to play the game using rules meant for them. In both games (see the after-action reports), the IJN couldn't stop the weapons chosen by the USN players and USN aircraft executed their strikes from outside Area AA range. The CAP didn't have a chance to react, as the IJN had no means to detect attackers and direct CAP to them. And if the IJN had managed to intercept, even the slowest USN planes could just pull out and attack from another angle.

Designer's Notes: This game is all about strike planning. Do you want the Pearl Harbor attack to occur while you attack the Japanese carriers? Do you want to attack the First and Second Waves, return to *Nimitz*, re-arm and refuel, then come back for the enemy carriers? Do you think you can do all of this at the same time? Interestingly, both sets of players thought they could do it all.

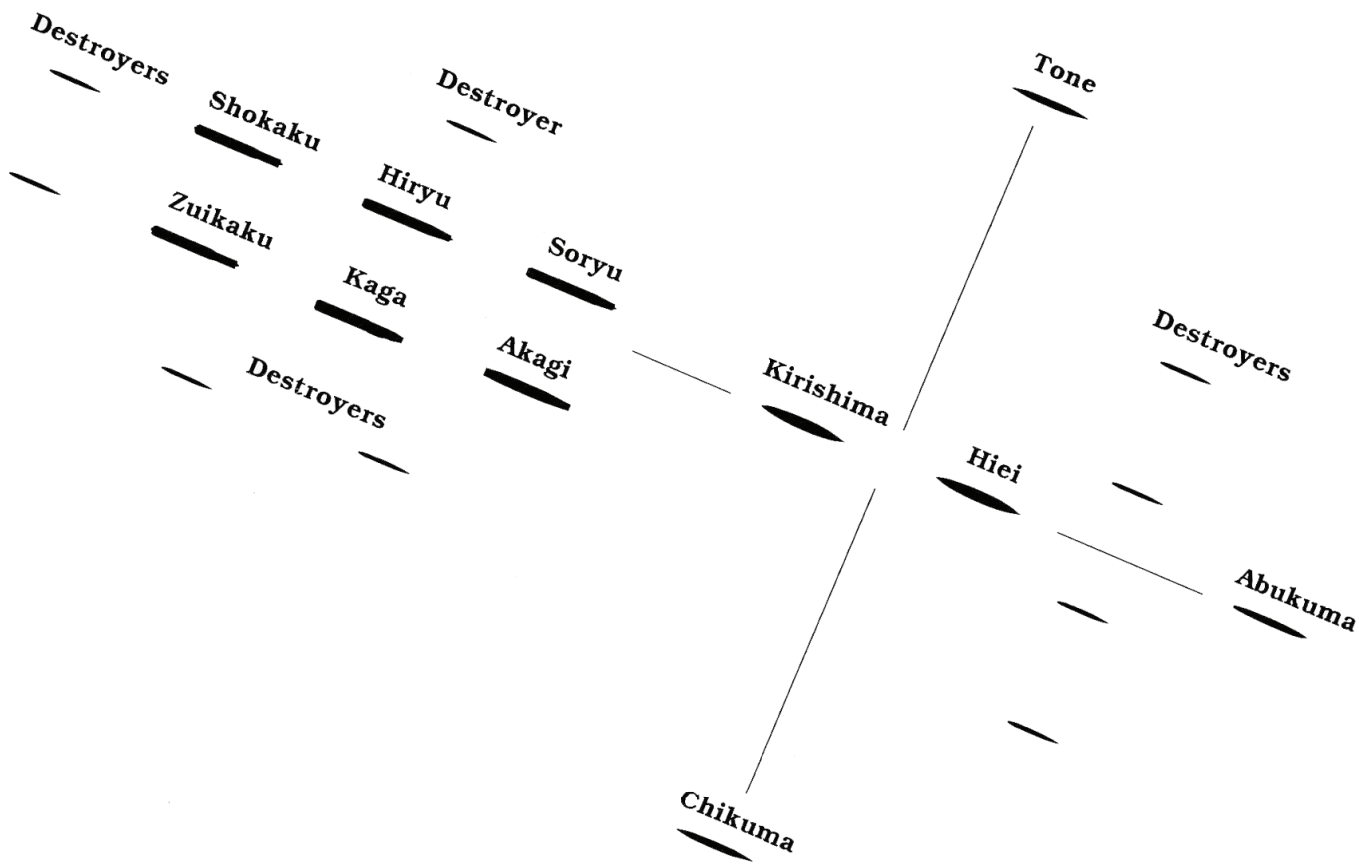
Each group had about an hour to learn the scenario, some basics about the rules (a blend of *Command At Sea* and *Harpoon*) and participate in a discussion about the strike packages available.

A handout was provided to the players detailing what armaments each aircraft could carry and what the effects of each would be.

I decided to include the S-3 Squadron in the attack planning, as it seemed to me that every pilot aboard *Nimitz* would want to drop *something* on the approaching Japanese. (Please see the Editor's Note).

Thursday Group

The Thursday Group had some interesting ideas about warning Pearl Harbor, despite the deep sleep the area was known to be in on December 7, 1941. Among them was sending an RF-8G on a photo recon of the First Air Fleet and then landing at Hickam Field to have it developed. Now who could argue with that?



They decided to send the Tomcats and Corsairs after the First Wave, with the exception of one flight of Corsairs which would escort the strike to the First Air Fleet. Any attacking Tomcats and Corsairs with armament remaining would go after the Second Wave. The S-3s were loaded with Mavericks and the A-6Es with Paveways.

The Tomcats were loaded up with AIM-54s (six per, so no landing without getting rid of two) and the Corsairs with AIM-9H Sidewinders. These attacked the Zeros first and then went after the Kates and Vals with what was left of the missiles and guns.

The strike had the S-3s launch their pairs of Mavericks first and then the six per Paveways came in. The Mavericks struck the six IJN carriers, doing enough damage to start the cascade of critical hits. The Paveways left all six carriers on fire with sufficient flooding, engineering, and fire critical hits to prevent their use for aviation purposes.

All USN aircraft returned safely to *Nimitz*.

Saturday Group

The Saturday Group was very interested in what worked on Thursday. Two of the players were from out of the country, which highlighted the need to avoid acronyms in scenario instructions at an event like Historicon. They independently decided to use the same loadouts as the Thursday Group, but decided to ignore the Zeros and go after the Kates and Vals. Chris Carlson and Mike Harris came by and Chris reminded me of the absurdity of rolling for dogfighting position (a question left over from Thursday when I forgot about it) and that the Tomcats' guns had six bursts (Thanks Chris!).

The die rolling commenced with missile shots and then switching to guns. One fighter player scored about as many hits as one might expect, while his comrade missed a LOT. Still, there were no surviving Vals or Kates in the First Wave and fewer in the Second Wave.

The same bombers and bomb loads went after the carriers with very deadly results. The Mavericks alone put two carriers out due to critical hits. The Paveways finished off those two and smashed the others.

All USN planes returned safely to *Nimitz*.

In both games, all the players had fun, which was the point of the exercise.

Play Balance: (*who am I kidding?*): Limit the USN strike to unguided weapons due to poor weather conditions over the target. In this way, the IJN has a (poor) chance to shoot down attacking aircraft and the US weapons are more likely to miss their targets.

Instead of having the air wing at full strength, roll for availability due to equipment failures. This will reduce the number of aircraft available to the US.

Editor's Note: There are no victory conditions for this scenario. It is simply a chance for the players (and the designer) to explore just how badly the *Nimitz* air group could thrash the Japanese Mobile Force.

There was one mistake made by the designer: The loadouts for the S-3 Vikings. The aircraft in VS-24 are S-3As, and can only carry dumb bombs and rocket pods. The S-3B, which entered service in 1988, added the capability to carry Harpoon, SLAM, and Maverick.

It is possible that since there were Japanese submarines with the Kido Butai, the S-3s could have been deployed to screen *Nimitz*, or even hunt the IJN subs, given that their historical positions were known.

Much of the play was abstracted, necessary because of the large number of units involved.

The assistance of Andy Doty and John Hall on the preparation of the scenario is acknowledged and greatly appreciated.

BT

F-14A Tomcat of VF-84 Jolly Rogers

(US Navy)

Data Links for ASW

Harpoon V introduced data links to the game, with an emphasis on their use in air defense and long-range targeting. They have also been used for antisubmarine warfare.

During the recent update of Russia's Navy, we discovered a Soviet-era system called Dozor-Tulip (Дозор-Тюльпан). It was fielded in the 1960s and is associated with ships fitted with RBU 6000 and RBU 1000 ASW projectors. There is no indication other RBU systems were supported.

It was used on Project 58, 61, 1134, 1134A, 1134B ships and several smaller ASW vessels - in other words on any Russian warship fitted with the RBU 6000 or RBU 1000.

The system transmits a firing range and bearing from a ship holding a sonar contact to another ship that does not have sonar contact. Given the vagaries of sonar, it's entirely possible only one ship may detect a nearby contact, even though more are in range. The firing information may only be passed to one other ship, not every ship in the formation.

The system is short ranged (10 nmi), designed for work within a formation, and to work, the ship sending the data must also have radar contact on the receiving vessel. This allows the system to calculate what the firing data would be for the receiving ship.

It is not clear if the firing data could be sent to a ship fitted with a different ASW weapon, e.g. the Metel or Rastrub standoff weapons.

There was a follow-on system, called Dozor-Triton, but very little is known about it, except that it was "improved."

BT

Command at Sea Campaign: Malta Strike Force - October to December 1941

by Paul French

Introduction

This is a scenario generator using the same structure as Dave Scheuler's campaign game in *Mighty Midgets*. It may be played with two to five players; a referee/game master is desirable, but not essential. The scenarios have defined victory conditions and there are overall victory conditions for the campaign.

The core of the campaign is the operations of the Malta Strike Force – Force K. Included within the game are elements of the wider conflict, including air and submarine actions. The emphasis is on the anti-shipping strikes; Force K also carried out support and escort duties to shipping bound to and from Malta. These can be included, adding to the flavor of the period and circumstances.

Operational Background

The campaign is set between October and December 1941, coinciding with re-deployment of Luftwaffe units to support operations in Russia, the Balkans and Libya. This reduction in Luftwaffe support corresponded with greater demands from Axis forces in the area.

The reduction in Axis air strength allowed the Allies to build up the force in the area, send supplies, and deploy a surface strike force to Malta. Initially, these were destroyer divisions, but from October 1941 Force K included light cruisers HMS *Arethusa* and HMS *Penelope*. It was fortuitous that during this period, Italian codes were broken by Ultra, allowing insight into naval movements.

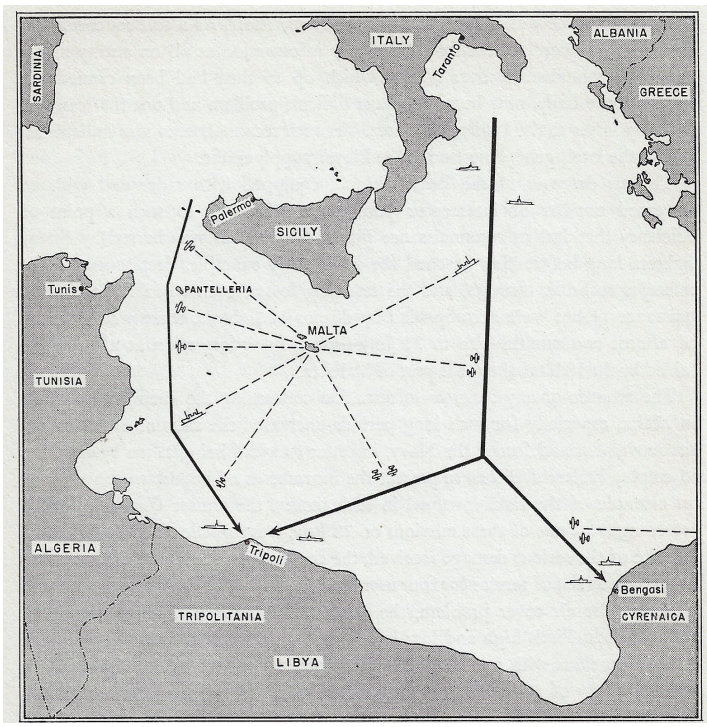


Figure 1: The First Battle of the Convoys.
The Italian Navy in WW2, Bragadin, p127

RN Forces: These forces are representative of those deployed to Malta between October and December 1941:

Option 1
Sikh (Cdr Stokes), *Maori* (both Tribal class DD),
Legion (L class DD with (2)4 4in/45 MkXVI),
HNLMS *Isaac Sweers* (Mod. *Gerard Callenburgh* class DD)
Option 2
Aurora (Capt. Agnew), *Penelope* (both *Arethusa* class CL),
Lance, Lively (L class DD with (2)4 4in/45 MkXVI)
Option 3
Ajax, Neptune (Capt. R C O' Connor (F)) (both *Leander* class CL), *Kimberley, Kingston* (both K class DD)

Modifications to Campaign Score:
Option 2, 0 modification to campaign score.
Option 1, +1 to campaign score unless added to Option 2, then -1.
Option 3 added -1 to campaign score unless added to Option 1 then -2, or Option 2 +3

Base Information and Repairs

Using Rules 8.4 and 8.5, ships may be repaired after combat. Normally, Malta would be an established base. Due to damage to dockyard facilities and ongoing air attacks, it is treated as a forward base with a +20% bonus to repair rolls.

Ships in dock may also have half of their structural damage repaired. e.g., a ship that has incurred 120 damage points may be repaired and have its damage reduced to 60 points. For other equipment serviceability, treat the RN as a first-rate navy.

Fuel and Ammunition: Supply shortages are covered by the Random Events Table. The greater number of active units at Malta make shortages more likely.

Other Friendly Forces: Include RAF and FAA, reconnaissance, fighter and strike units based in Malta, submarines and other intelligence including Ultra.

Campaign Length: From 14 to 40 days between 22 October and 30 November.

Environment: The players roll for wind direction and wind speed/ sea state, using Tables 1 and 2. Table 3 provides historical visibility and cloud cover, depending on the date.

Daily Turn Sequence

1) Check for random events.
2) Roll for equipment breakdown and repair.
3) Determine the target, roll a D10 and refer to Sortie Table.
4) RN commanders choose whether or not to sortie. Italians count as decisive victory if an operation is mounted.
5) Resolve random event.
6) Check for missed interceptions and determine the Axis forces.
7) Resolve operation.

Environment Table

Table 1: Wind Speed and Sea State

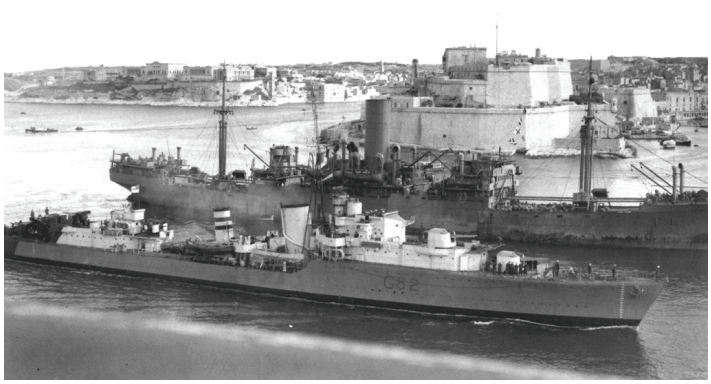
D10	*Wind Spd (kts)*	*Sea State*
1 – 2	2	0
3 - 5	5	1
6 - 8	10	2
9	13	3
10	18	4

Table 2: Wind Direction

D10 Roll	*Wind Direction*
1 - 4	135°
5 - 7	180°
8	337°
9	22°
10	000°

Table 3: Visibility and Cloud Cover

Date	Vis %/ *Cloud %*	*Date*	Vis%/ *Cloud %*
22 Oct	2/50	12 Nov	30/25
23 Oct	5/50	13 Nov	30/25
24 Oct	5/50	14 Nov	20/50
25 Oct	10/50	15 Nov	10/25
26 Oct	20/25	16 Nov	5/25
27 Oct	30/0	17 Nov	5/25
28 Oct	30/25	18 Nov	2/50
29 Oct	40/50	19 Nov	2/25
30 Oct	40/50	20 Nov	2/50
31 Oct	40/25	21 Nov	5/50
1 Nov	50/50	22 Nov	5/50
2 Nov	50/50	23 Nov	10/50
3 Nov	50/50	24 Nov	20/25
4 Nov	50/50	25 Nov	30/50
5 Nov	50/25	26 Nov	30/50
6 Nov	50/50	27 Nov	30/50
7 Nov	50/50	28 Nov	40/50
8 Nov	40/50	29 Nov	40/50
10 Nov	40/50	30 Nov.	40/25
11 Nov	40/50		



HMS *Sikh* in Malta

(hmscavalier.org.uk)

Sortie Table

1 - 4	Minor Convoy
5	Major Convoy
6	Troop convoy
7	Warship Interception
8 - 10	No Italian operation

Campaign Victory Conditions

After each sortie is completed, each side receives points based on the result. Two points are awarded for a Decisive Victory and one point for a Tactical Victory. At the end of the campaign, a Decisive Victory is achieved if either side scores twice the points of the other; a Tactical Victory is achieved if one side scores more than the other.

Random Events

Random events are rolled after the sortie is planned but before missed interception and resolution.

D100

01 - 05	Ultra information not available. Affects missed interception.
06 - 10	Force K spotted by submarine or aircraft. Affects missed interception.
11- 15	Force K attacked by aircraft after leaving harbor. Resolve air attack, and affects missed interception. The air attack is either two flights of three level bombers (Br.20M) or one flight of three torpedo bombers (SM.79).
16 - 18	Force K attacked by submarine. This can be gamed out, with the sub starting in an arc 060° - 300° bearing from the lead ship, range D6 +4 kyd. The sub starts at periscope depth at the speed determined by the commander. Any Italian submarine in service during that period maybe used. Submarine attacks can be resolved abstractly. 01 - 30 Attack on screen 31 - 100 Attack on main body Target ship is 01 - 07 Sunk 08 - 10 Damaged 11 - 00 Missed A damage result is a single torpedo hit, although this may lead to its subsequent loss.
19 - 30	Malta under heavy air attack. Any repairs delayed by 24 hours.
31	Force K runs into a minefield. The first two ships in formation test for mine damage using the 125 distance column for contact mines. There are three lines of mines.
32 - 90	No effect.
91 - 100	Fuel shortage at Malta, maximum sortie is two destroyers and one cruiser (or four destroyers). Torpedo replenishment is limited to D10 torpedoes. If more than two cruisers are located at Malta, the fuel shortages occur on 80 – 100.

Missed Interceptions

Force K had the advantage of Ultra, which gave access to high level Axis communications. Additionally, every effort was made to find Axis convoys by reconnaissance aircraft. Sometimes it took too long to break the code for it to be useful. In addition, Axis air activity and submarines meant that Force K might be detected, giving the target formation time to avoid contact.

D10	*Result*
1 - 7	Proceed as normal. Contact is made.
8	Contact is made with the covering group (if present).
9 - 10	Missed interceptions. Count as Axis Decisive Victory.

Modifiers

Ultra information not available	+3
Force K spotted by Italian reconnaissance	+2
Force K attacked by aircraft	+1

Setup (For all operations)

The convoy route is determined, either by setup or a D6 roll: 1- 3 Western, 4 - 6 Eastern.

Eastern route, course 180° (± up to 45°)

Western route, course 135° (± up to 45°)

Speed, formation and course variations are at the discretion of the respective commanders. The Royal Navy forces are set up just outside of detection range.

First test for directed approach (a directed approach is not possible if Ultra information is lost - see Random Events), a D6 roll of 1- 3 is successful. In which case the Royal Navy force is set up at the discretion of its commander. If this fails, then generate the contact direction by rolling D6 and subtracting one. Multiply the remainder times sixty, then add D6 times ten to this result. For example, if the two D6 rolls are 3, then 5, the direction is (3-1)*60)+(5*10) = 120+50 = 170°.

Italian Covering Force

The covering force is composed of *Trieste* (*Trento* class CA), *Bolzano* (*Bolzano* class CA) and *Granatiere, Fuciliere* and *Bersagliere* (all Soldati class DD).

The Italian covering forces were inhibited at night by their lack of radar and training in night fighting. To represent this, covering forces and merchant ships within a convoy must plot their moves two Tactical Turns ahead. The close escort plot and move normally.

The covering force may only activated every third day. If the Italian commander does not want to run an operation without a covering force, it may be cancelled and the RN gains points for a decisive victory.

Italian Replacements

If any of the Italian covering force ships are sunk or damaged more than 25%, they may be replaced in subsequent actions: *Trieste* or *Bolzano* by *Trento* (*Trento* class CA). If both cruisers need replacing, then activate *Abruzzi* and *Giuseppe Garibaldi* (both Abruzzi class CL). The destroyers maybe replaced by *Camicia Nera, Aviere*, and *Geniere* (all Soldati class DD).

Minor Convoy

The most frequent type of convoy during the period - D6/2 merchant ships, one of which might be a small tanker.

Close Escorts

Two *Spica* or *Pegaso* class torpedo boats. On a D6 roll of 5 or 6 add a Navigatori class destroyer to the escort. The escort may not exceed the number of merchant units by more than one.

Royal Navy Victory Conditions

Decisive: Sink two Axis merchant ships with no loss to own forces (if there is only one merchant ship, then sink the merchant ship plus one other).

Tactical: Cripple (50% or more damage) one merchant.

Italian Victory Conditions

Decisive: Sink one enemy unit, with no loss to friendly forces.

Tactical: Inflict more damage points than received.

Major Convoy

A minimum of four merchant ships with high value cargoes. Three plus D6/2 merchants ships, one of which must be a tanker and one is carrying ammunition.

Close Escort

D6/2 *Spica* or *Pegaso* class torpedo boats. One plus D6/2 destroyers. The total number of escorts may not exceed the number of merchant ships by more than two or be less than four.

Covering Force

Present on D6 roll of 1 - 3.

Royal Navy Victory Conditions

Decisive: Sink three Axis merchant ships with no loss to own forces).

Tactical: Cripple (>50% damage), four merchant ships.

Italian Victory Conditions

Decisive: Sink at least one enemy unit, with no loss to friendly forces.

Tactical: No more than two merchant ships with 50% damage.

Troop Convoy

This is a high-value convoy composed of a three larger and faster transports, being used as troop ships. There is always a strong escort and most likely a covering force. All troop convoys are western route scenarios.

MV *Victoria*, 13098 grt, 196 DP, 22 knots, Liner, 1931

MV *Vulcania*, 24,469 grt, 297 DP, 19 knots, Liner, 1928

MV *Calitea*, 4013 grt, 89 DP, 15 knots, Liner, 1933

(any suitable vessel may be used)

Close Escort

Three plus D6/2 destroyers. Any class of destroyer may be used.

Covering Force

Present on D6 roll of 1 – 5.

Royal Navy Victory Conditions

Decisive: Sink two troop ships with no loss to own forces.

Tactical: Sink one troop ship.

Italian Victory Conditions

Decisive: No troop ships are lost.

Tactical: One troop ship lost and two enemy units have 50% or more damage.

Warship Interception.

This is a special mission with warships being used as fast transports. Typically, they carried high value and highly combustible cargoes. This is a western route scenario.

Italian Forces

Bande Nere, Da Barbiano (both Condottieri (1st Group) CL)
Cigno, Climene (both Spica class TB).
Either of the light cruisers may be replaced with a Navigatori class DD.

Special Rule

Ships carrying out transport missions all have petrol and avgas stowed in barrels on deck. Each successful shellfire hit has a 50% chance of starting a fire critical.

Royal Navy Victory Conditions

Decisive: Sink both ships carrying fuel with no loss to own forces.

Tactical: Sink one ship carrying fuel.

Italian Victory Conditions

Decisive: Both ships carrying fuel incur less than 50% damage. Sink at least one enemy unit.

Tactical: One ship carrying fuel withdraws with less than 50% damage.

Game Notes

The campaign is set during the Autumn of 1941, when Force K was based at Malta. The orders of battle are based on historical examples.

To allow variation, the destroyers that intercepted the Italian cruiser off Cape Bon have been included as an option. Italian units are based on actual ships or classes represented. There was high utilisation of the Navigatori class destroyers and *Pegaso* class escorts, although there were only three of the latter. There is no restriction as to which ships are used, as most of those available were active at some time.

The weather is representative of that found in the area at that time of year. Weather patterns were consistent, and the most likely options have been coordinated with moon state.

Escort missions can be added for the RN, but this results in more complexity. Italian interceptions occurred in daylight, often in conjunction with major fleet operations. The "Battleship Convoys" have been avoided as they encouraged the Mediterranean Fleet to sortie in strength.

A random air or submarine attacks on Italian units can be included. Typically, six Blenheim IV, attacking in two flights of three, or U class submarines (use the submarine attack rule sequence).

The game assumes Royal Navy use of radar and superior night fighting training. This is reflected in the plotting rules. Ideally there should be more than one Italian commander; the close escort commands should be dashing and very brave (but uncoordinated), the covering force and convoy rather less so, possibly even programmed. The covering force must have clearly defined orders as to distance, position, and movement. There can be no deviation from orders until it spots something.

Italian convoy operations were more successful than they are given credit for. The smaller convoys made operational sense in the context of limited port capacity in North Africa. However, they suffered irreplaceable attrition, which made the outcome predictable.

References

The Italian Navy in WW II, Commander Marc Antonio Bragadin, Naval Institute Press, 1957

Sea Battles in Close Up, Eric Grove, Naval Institute Press, 1993

The Naval War in the Mediterranean, 1940 - 1943, Jack Greene and Alessandro Massignani, Naval Institute Press, 2024

BT

Command at Sea Scenario: Force H Engages

by Paul French

Introduction: This is a scenario on set on the evening of 26th May, following the Denmark Strait action after HMS *Hood* was sunk and both *Bismarck* and *Prince of Wales* sustained damage. It assumes that the air strike(s) from *Ark Royal* failed to slow *Bismarck*, and that a reinforced Force H has been ordered to engage.

The root of this scenario was one of the threads on the Naval Wargames (Historical) Facebook group opening the discussion as to whether *Renown* was able to effectively oppose *Bismarck*. We all have a view on this, but the critical factor is that unless things had gone very wrong, *Renown* would never be alone.

Location: Northeast Atlantic, approximately 600 nmi west of Brest, 26th May 1941 at 2130 hours.

Environment: Wind direction 135°, 25 knots, Sea State 5. Visibility 50% until 2248 then 20% visibility from 0020/27th 2% visibility. From 2228 there are frequent rain squalls. Cloud cover 75% broken, from 200 m to 600 m.

Operational Situation: *Bismarck* broke contact with RN units at around 0300/25th May, she was spotted by a Catalina at 1030/26th May, heading for French Biscay ports. Force H was in position to launch airstrikes and in extremis make a surface interception.

While the damage to *Bismarck* was minor, she has 4000 tons of water forward, which gave her a 9° downward trim. This meant that fuel in her forward bunkers was inaccessible. Damage control improved the situation, but an extended sortie was not practical. Admiral Lütgens acknowledged this, making the most direct route to French ports.

RN Tactical Situation: Contact has been re-established with *Bismarck*; air strikes have failed to slow her down. Weather conditions are deteriorating, and it is likely that further airstrike will not be

(continued on page 27)

Calculating Deadweight Tonnage

by Chris Carlson

The *Admiralty Trilogy* games use points to measure the structural damage a ship can take. These are based on the ship's displacement, modified by the type of construction, and sometimes special features. A vessel's displacement is measured in tons. Warship displacements may be "Standard" (std), "Full Load" (fl), or "Light Ship (lt), each calculated using a slightly different formula. Many merchant ships are listed using "Gross Registered Tonnage" (GRT), but often they are rated by "deadweight tonnage" (DWT).

We have well-proven formulas for standard, full load, light ship, and even gross registered tonnage, because these are based on the vessel itself. The formulas are listed in Annex Z, Conversions and Scales.

Deadweight tonnage is instead based on the amount of cargo a ship can carry. This is a useful figure for rating merchant ships, but does us no good in trying to find out how much damage a ship can take.

Harold Hutchison asked:

Anyone have a good method on converting deadweight tonnage to a standard displacement for a container ship?

Chris Carlson answered:

This is a slippery slope that has kept armies of lawyers occupied for decades, and up front I really haven't worked out the suggestion below fully. With that warning, here goes.

First, all tonnage values I've been working with are long tons 2,240 lbs, about 1.5% larger than a metric ton (2,204 lbs). Next, in 1969 a new international standard was adopted, the International Convention on Tonnage Measurements of Ships 1969 (ITC69), that replaced Gross Registered Tonnage with "Gross Tonnage" (GT). While both are based on the total internal volume of the ship, GRT is the total volume in cubic feet divided by 100. With GT, the total internal volume is multiplied by a coefficient that is itself dependent on the total volume. Of course, there isn't an accepted conversion between GRT and GT ... that would be too easy.

The Trilogy damage point system uses GRT, but I believe you can get away with using GT, even though, from what I can tell, GT will be a little larger than GRT.

If you have the deadweight tonnage (DWT) you can convert that to GT with the table below. I wish I remembered where I got it, but I can't find the parent document. However, the values are similar to ones I've seen on blog sites.

For container ships, if you don't have a DWT, there is a rough approximation based on the number of Twenty-foot Equivalent Units (TEU) the ship carries.

DWT = # of TEUs x 12

Thus, a 10,000 TEU container ship would have DWT of about 120,000 tons

GT = 0.8817 x 120,000 = 105,804 tons

DP tonnage = 105,804 x 0.75 = 79,353 tons (converts GT or GRT to something close to what we think is a standard displacement)

DP = 0.85 x (79,353)^0.667 x (1 - 0.75) = 394 damage points

I used the -0.75 modifier from Annex Z for super tankers here because I'm applying this modifier to merchant ships that can get really big, and have lots of volume dedicated to cargo, without a lot of sub-compartmentation.

Container ships are another kettle of fish as they have far less internal structure, especially the big guys. This is the part I'm not done futzing with yet.

I hope this is useful.

BT

Table 5-1 The relations between DWT and GT of each ship type

Type	Regression	Coefficients of determination(R^2)	Standard deviation (σ)
General Cargo Ship	GT = 0.5285DWT	0.988	2,202
Container Ship	GT = 0.8817DWT	0.971	3,735
Oil Tanker	GT = 0.5354DWT	0.992	4,276
Roll-on/Roll-off Ship	GT = 1.7803DWT	0.752	7,262
Pure Car Carrier	GT = 2.7214DWT	0.826	7,655
LPG Ship	GT = 0.8447DWT	0.988	1,513
LNG Ship	GT = 1.3702DWT	0.819	12,439
Passenger Ship	GT = 8.9393DWT	0.862	12,285

MV *Marie Maersk*, Triple E-class container ship (1st generation), 196,000 DWT, diesel propulsion, 23 knots max speed, capacity 18,270 TEU, built in 2013, Danish flagged
GT disp = 196,000 t* 0.8817 = 172,812 t => Std = 172,812 t * .75 = 129,609 t => 546 DP.
(containertech.com)

Battle of Humen: the Largest Naval Battle in the Second Sino-Japanese War

by Chang Lei

The Battle of Humen, which took place on 14 September 1937, was the only naval battle in the Second Sino-Japanese War that involved cruisers on both sides. Compared to the great clashes of fleets during World War II, the Battle of Humen was small in scale and therefore underwhelming; moreover, due to inaccurate wartime reporting and the long-standing language barrier between Chinese and Japanese, what actually happened at the battle remained shrouded in fog for years - until now.

Into Tiger Gate

In 1937, after the Marco Polo (Lugou) Bridge Incident and the outbreak of the Battle of Shanghai, the Empire of Japan began a full-scale invasion of China. On 25 August, the commander-in-chief of Japan's 3rd Fleet, Vice Admiral Kiyoshi Hasegawa, announced a blockade of the Chinese coast between the mouth of the Yangtze River and Swatow (Shantou) on the Kuangtung (Canton, Guangdong) coast. On 5 September, the blockade was extended from the Shanhai Pass to the Sino-French Indochina border, i.e., the entire Chinese coast except northeastern China, which had already been occupied by the Japanese in a false flag operation in 1931.

At the time, China had just been largely reunified after more than a decade of constant revolution, warlordism, and civil war, so the Chinese Navy had not been built up as it should have been, with only one light cruiser that barely met modern standards: the Japanese-built *Ning Hai*, (*Ninghai*) completed in 1932.

Most of the other warships were legacies of the last imperial dynasty, technologically at the level of the Russo-Japanese War, or even further back.

Thus, the Imperial Japanese Navy (IJN) blockaded the Chinese coast with only a small part of its huge fleet. For the Chinese coasts south of the 24th parallel, the Japanese had only one destroyer squadron and one gunship; the blockade could be supported by the heavy cruiser *Myōkō* and the light cruiser *Tama*, but the cruisers' task area was the entire southern Chinese coast.

Two Japanese *Kamikaze* class destroyers, *Oite* and *Hayate*, of the 29th Destroyer Division (29dg) of the 5th Destroyer Squadron (5Sd), were sent to the mouth of the Pearl River, the most important estuary in Kuangtung, located downstream of Kuangchou (Guangzhou), between Hong Kong and Macau. On 11 September, the flagship of the 5th Destroyer Squadron, the light cruiser *Yūbari*, also sailed from Makō (Magong), to join the two destroyers. A heavy cruiser, *Myōkō*, was in the South China Sea outside the Pearl River estuary.

The Chinese naval force that the Japanese faced was originally the Kuangtung Provincial Navy. A little over a year earlier, this navy had long been loyal to the Kuangtung warlords. Only after the last warlord leaders stepped down due to the Liangkwang (Guangdong & Guangxi) Incident in 1936, did the Kuangtung Navy formally become part of the national navy. At that time, two warships patrolled the Pearl River near Humen Fortress on a daily basis. One was the cruiser *Chao Ho* (*Zhaohe*), built by the British company Armstrong Whitworth in 1912. In 1933, the cruiser defected to Kuangtung, loyal to the local warlord.

Although the Navy Department wanted to take command of the cruiser after 1936, by mid-1937 *Chao Ho* was directly under the Kuangchou Headquarters of the Chairman of the Military Affairs Commission (MAC), but the captain was still Fang Nianzu, who came from the Kuangtung clique. Another captain wrote a report to the MAC that Fang Nianzu had neglected discipline on the warship because he did not want to serve as captain for a long time. This seemed to foreshadow Fang Nianzu's fate.

The other was *Hai Chou* (*Haizhou*, not the German-built cruiser *Hai Chou*/*Haichou*), originally the British *Arabis* class minesweeping sloop HMS *Pentstemon*, which became a merchant ship after being decommissioned in 1920, purchased by the Kuangtung warlords in the early 1930s and rearmed as an anti-smuggling vessel. Before the war broke out, *Hai Chou* was owned by the Liangkwang Salt Administration.

The Humen Fortress (Humen literally means "Gate of the Tiger," also known as Bocca Tigris) was located where the Pearl River suddenly narrows. The fort was rebuilt in the 1880s and 1890s on the ruins of older batteries destroyed in the Second Opium War (1856-60). Ten batteries on both sides of the river stood ready to block the waterway to Kuangchou. The three southernmost batteries were Shachiao (Shajiao, also known as Chuenpi/Chuanbi) Upstream and Downstream Batteries on the east bank of the Pearl River and Tachiao (Dajiao) Battery on the west bank of the river, all part of Shachiao General Batteries. The three batteries had a total of six Krupp 24cm (codenamed 5th caliber in China) coastal guns, twelve Krupp 21cm (4th caliber) guns, three Krupp 15cm (3rd caliber) guns and one Armstrong/EOC 8in (also 4th caliber) gun. However, the age of these guns exceeded that of many of the gunners operating them.

The propellant of these guns was also outdated, for example the Krupp 24cm/35 gun could only reach a range of 9,000 meters. Fortunately, smokeless powder was manufactured in Kuangtung. Led by Yang Tien-chun (Yang Dianjun) of the Kuangtung 1st Ordnance Manufacturing Factory, a team of Chinese engineers began modifying these guns in September 1936. By October 1937, the guns at Humen Fortress had all regained their original range. Although Yang Tien-chun also suggested adding ten pounds of propellant per round and adding armor piercing and ballistic caps to the shells to increase the range to 15,000 meters, it appears that this was never completed.

In addition to the fact that their range, rate of fire and penetration were behind the times, the greatest weakness of these guns, although they were well maintained, was that, as German military advisers pointed out in two reports in the early 1930s, they were scattered and fired independently rather than fire salvos under fire control. Almost every gun was quite far from other guns, and there were no telephones to transmit orders. These batteries also had no rangefinders, no searchlights, and no mortars to fire flares. Although the advisers and officers of Humen Fortress made many proposals to modernize the guns and fire control devices, and to add searchlights, shore-based torpedo batteries and mine barrages, almost nothing was realized until the outbreak of the war, except for planting

some trees for camouflage.

The Chinese Air Force stationed in Kuangtung, which a year earlier had been the Kuangtung Provincial Air Force, was temporarily able to conduct reconnaissance and attacks against the Japanese unhindered because the Imperial Japanese Navy Air Service had not yet begun to operate over Kuangtung. By this time the main force of the Chinese Air Force had all been sent to eastern China, with only the 29th Squadron, formerly the 7th Squadron of the Kuangtung Provincial Air Force, stationed at Tien Ho (Tianhe) Air Base. The three flights of the 29th Squadron had a total of nine Curtiss Hawk IIIs, eight of which were intact on 4 September.

The Battle

At 1830 hours on 5 September, IJN *Hayate* (a Kamikaze class destroyer) captured two Chinese Maritime Customs vessels near Tachan Island, and on 6 September *Hayate* bombarded coastal machine gun positions at Chihwan (Chiwan). Chinese aircraft then conducted reconnaissance of Japanese warships near Tachan Island for several days.

At 0914 hours on September 12, *Hayate* opened machine gun fire on a Chinese aircraft and the bullets cut off her own radio antenna. On 13 September, two Chinese aircraft bombed *Hayate*, but missed. At 1048 hours on the same day, two other Chinese aircraft dropped four bombs on *Myōkō* near the Ladrones (Wanshan) Islands, but missed by 300 to 800 meters.

By the afternoon of 13 September, *Yūbari*, *Oite* and *Hayate* had assembled near Tachan (Dachan) Island, about 18 nautical miles southeast of Humen Fortress. Commander Tadayoshi Narita, commander of the 29th Destroyer Division, reported that the Chinese cruisers near Humen Fortress often set sail to force the destroyer division to retreat. He requested that *Yūbari* bombard them. Rear Admiral Masakichi Ōkuma, commander of the 5th Destroyer Squadron, decided to carry out the attack the next morning. The gunnery officer of *Yūbari* was sent out in a boat to confirm the enemy's situation and to measure the water depth on a planned course.

At 0515 hours on 14 September, the Japanese warships set sail from Tachan Island, *Yūbari* in the lead with the two destroyers following. They sailed up the narrow waterway in the dark, relying on Sampanchau (Shanbanzhou) lighthouse about 3 nautical miles south of Humen Fort, reached the planned firing point, and drifted. Before dawn, the two Chinese warships, *Hai Chou* in the lead and *Chao Ho* following, set out on their usual patrol route from Tahu (Dahu) Island and sailed downstream to Tachiao Battery, then turned left to Downstream Battery, then left to Weiyüan Battery and returned to Tahu Island.

At 0647 hours, the Japanese warships spotted coal smoke and later confirmed that it came from two double-masted, double-funnel cruisers. One was identified as a *Hai Chou* class cruiser and the other as a *Chao Ho* class or *Hai Chi* (*Haiqi*) class cruiser (also known as *Hai Tien*/*Haitian* class). In fact, this identification result was inaccurate. The one identified as *Chao Ho* class was actually *Hai Chou*, and the one identified as *Hai Chou* class was actually the real *Chao Ho*. From the Japanese point of view, the Chinese warships appeared to be sailing around Chain Rock (Jinsuopai) lighthouse inside Humen.

At 0656 hours, *Yūbari* and *Hayate* opened fire on *Hai Chou*, and *Oite* opened fire on *Chao Ho*. At this time, *Hai Chou* was turning left near Tachiao Battery; the crews didn't know a Japanese attack was coming until they saw the shell splashes.

The two Chinese warships and Humen Fortress opened fire in response, and the shells fell close to the Japanese warships, missing them by about 100 meters. As *Yūbari* and the destroyers began to move forward, Chinese shells fell in their wake. Just three minutes after the Japanese opened fire, at 0659 hours, *Yūbari*'s third salvo hit *Hai Chou*. One shell hit the engine room and another hit the stern of *Hai Chou*, damaging the steering gear and causing the ship to drift downstream, run aground and list to port. At 0704 hours, the third shell tore a large hole in the back of *Hai Chou*'s bridge. *Hai Chou* ceased firing and some of her crew abandoned ship in boats; two of her crew were killed and several others wounded.

The Japanese thought that *Hai Chou*'s forward main gun had been destroyed, and then changed their target to the Downstream battery, all but two of whose guns were silent. At 0731 hours, the Japanese ceased firing and began to return to their anchorage near Tachan Island. Although the Japanese believed that *Chao Ho* had also suffered heavy damage and had run aground, neither the battery nor *Chao Ho* was damaged.

At 0758 hours, Chinese air support caught up with the returning Japanese flotilla near Tachan Island. With Tien Ho Air Base less than 50 nautical miles from the Japanese anchorage, two waves of air strikes were launched. At 0800 hours three Hawks dropped six bombs, at 0809 hours another three Hawks dropped an unknown number of bombs. And at 0921 hours three Hawks dropped six bombs, at 0932 hours another three Hawks dropped twelve bombs, at 0944 hours the last two Hawks dropped two bombs. None hit.

Only at 0921 hours did two bombs fall into the water 30 - 50 meters off the port bow of *Yūbari*, causing two of her crew to be seriously wounded. Three others were wounded, and two lightly wounded. Some of the aircraft were misidentified by the Japanese as Northrop A-17 (Gamma 2F), but the Chinese Air Force's Northrop Gammas were busy fighting over Shanghai at the time, not Kuangtung.

Although there has been some speculation that these aircraft were led by Claire Lee Chennault, or flown by foreign pilots, Chennault was busy fighting the Japanese in eastern China, and none of the famous Flying Tigers, the Soviet Volunteer Group, or the 14th and 41st squadrons of the Chinese Air Force, which included foreign pilots, were established at that time. The Hawks were flown by Chinese pilots from the 29th Squadron.

The anchorage at Tachan Island had become dangerous due to air raids, so the Japanese decided to withdraw the blockade line to the Ladrones Islands.

The Japanese 23rd Naval Air Group began operations on 18 September from Pratas (Dongsha) Island, a small island occupied by *Yūbari* on 3 September; the carrier-based aircraft of the two aircraft carriers *Ryūjō* and *Hōshō* of the 1st Carrier Division began operations over Kuangtung on 21 September, and the seaplanes of the Japanese cruisers began operations over Kuangtung on 23 September. Most of the Chinese Air Force aircraft stationed in Kuangtung were destroyed in the air or on the ground.

On 28 September, Japanese seaplanes of the 23rd Air Group, the auxiliary seaplane tender *Kaku Maru* and the heavy cruiser *Myōkō* bombed Kuangchou and Humen. Among them, a Type 94 (E7K Alf) seaplane of the 23rd Air Group dropped two 60 kg bombs on *Chao Ho*, which was anchored near Whampoa (Huangpu), both of which were near misses. At 1100 hours on the next day, a Type 94 seaplane from *Kaku Maru* bombed *Chao Ho* again, followed by four seaplanes from *Myōkō* and *Tama*. Several bombs hit *Chao Ho*, causing her to catch fire and sink to 13.7 - 17.1 meters below the surface at about 1700 hours; more than ten crew were wounded.

On 11 October, General Yü Han-mou (Yü Hanmou), military commander of Kuangtung, proposed that the more than 300 officers and sailors who lost their ship be discharged. On 11 November, the Chinese National Government dismissed and arrested Fang Nianzu, the captain of *Chao Ho*, for dereliction of duty and disobeying orders to move *Chao Ho* to avoid enemy bombing, resulting in the sinking of the ship. He was executed by firing squad the following January.

On 30 September, the day after the sinking of *Chao Ho*, sixteen seaplanes from *Kaku Maru*, *Myōkō*, and *Tama* found *Hai Chou* being towed west of Whampoa and identified her as a 2,500-ton cruiser. *Tama*'s seaplanes hit *Hai Chou* with three bombs, setting her on fire. After her 4.7 inch gun and a 6pdr gun were dismantled and moved ashore, *Hai Chou* sank on 1 October.

Both *Chao Ho* and *Hai Chou* were scrapped in place in the river in 1956-57. The speculation that *Hai Chou* was salvaged, repaired, and given by the Japanese to the puppet state of Japan, the Reorganized National Government of China, to become *Hsieh Li* (*Xieli*) is incorrect.

Victory on Paper

At the end of the surface battle on 14 September, while the air raid was still underway, Vice Admiral Chen Tse (Chen Ce), the commander of Humen Fortress, sent an initial report to the Chinese high command. The telegram gave an inaccurate description of the situation: one Japanese cruiser and four destroyers had attacked Humen Fortress, the coastal gun had damaged one Japanese warship, and the Chinese aircraft were bombing them. However, this was soon exaggerated in Chinese news reports that one Japanese warship had been sunk, with other reports claiming that the number of Japanese warships involved in the battle was five or six, and that there were Japanese warships sunk by Chinese aircraft.

The inaccurate report on the number of Japanese warships at the Battle of Humen was the result of inaccurate estimates of the number of Japanese warships at the mouth of the Pearl River. Although the witnesses on the Chinese warship knew that three Japanese warships were attacking, the commander of Humen Fortress added two more Japanese destroyers to his report to match the previous estimate, bringing the total number of Japanese warships to five, while the *Shanghai News* added one more Japanese destroyer, *Sanae*, selected from its previous report, doubling the total number of Japanese warships involved in the battle to six.

First, there was another Japanese flotilla, the 13th Destroyer Division, then operating 45 nautical miles to the east, and one of the flotilla, the destroyer *Sanae*, had evacuated Japanese from Kuangchou with *Hayate* on 17 August. On 12 September, the destroyers *Wakatake* and *Sanae* bombarded artillery positions north of Tapeng (Dapeng) Peninsula and then shelled the naval radio station in Pinghai Bay. These destroyers were probably included in the estimate of the number of Japanese warships at the mouth of the Pearl River.

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The four *Kamikaze* class destroyers of Japan's 29th Destroyer Division in 1926 all had hull numbers of 29.

Wikimedia Commons

Trilogy Scenario: Battle of Humen

by Chang Lei

Location: The mouth of the Pearl River on the south coast of China, 14 September 1937, 0647 hours local time.

Environment: Sea state 1, wind 2 knots from 290°. Clear day, 40% visibility. Sunrise 0611.

Operational Situation: After the outbreak of the Second Sino-Japanese War in July 1937, the Imperial Japanese Navy (IJN) blockaded the Chinese coast. On the coast of Kuangtung (Canton, Guangdong), two destroyers of the 29th Destroyer Division blockaded the mouth of the Pearl River, but the batteries of Humen Fortress and two Chinese warships still defended the waterway to Kuangchou, supported by an air squadron of the Chinese Air Force. On the afternoon of 13 September, a Japanese light cruiser joined the two destroyers near Tachan (Dachan) Island and prepared to attack the two Chinese warships the next morning. The water depth of a planned course was measured by a boat.

Tactical Situation: Before dawn, the Japanese warships sailed up the narrow waterway in the dark, drifting at the planned firing point, while the Chinese warships set out on their usual patrol route. At 0647 hours, the Japanese spotted coal smoke from enemy warships, while the Chinese didn't know an attack was coming.

Chinese Forces: Humen Fortress, Vice Admiral Chen Tse

Chao Ho (*Chao Ho* class CL)

Hai Chou (ex-British *Arabis* class PG)

The 29th Squadron, Squadron Leader Ho King-wei, with 8 Hawk III

Upstream Battery

Type: Fixed
Power Handling: N
Sensor: None
Fire Control: Local Control
Camouflage: Prepared
Gunnery Standard: 0*

Structures	Size	DP	AC
Sea (1)1 Krupp 24cm MRK L/35	F/E	68	5/0
Sea (1)2 Krupp 21cm RK L/22	F/E	68	5/0
Sea (1)3 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)1 Krupp 15cm RK L/26	F/E	64	5/0

Remarks: On a hill, the observation post is about 70 meters in height.

Downstream Battery

Type: Fixed
Power Handling: N
Sensor: None
Fire Control: Local Control
Camouflage: Prepared
Gunnery Standard: 0*

Structures	Size	DP	AC
Sea (1)4 Krupp 24cm MRK L/35	F/E	68	5/0
Sea (1)2 Krupp 21cm RK L/22	F/E	68	5/0
Sea (1)1 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)1 8in/26 EOC Pattern B	F/E	68	5/0
Sea (1)1 Krupp 15cm RK L/26	F/E	64	5/0

Remarks: On a hill, the observation post is about 60 meters in height.

Tachiao (Dajiao) Battery

Type: Fixed
Power Handling: N
Sensor: None
Fire Control: Local Control
Camouflage: Prepared
Gunnery Standard: 0*

Structures	Size	DP	AC
Sea (1)1 Krupp 24cm MRK L/35	F/E	68	5/0
Sea (1)2 Krupp 21cm RK L/22	F/E	68	5/0
Sea (1)2 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)1 Krupp 15cm RK L/35	F/E	64	5/0

Remarks: On a hill, the observation post is about 190 meters in height.

Chinese Orders: Prevent enemy ships from entering Humen.

Chinese Victory Conditions:

Decisive: At least one enemy warship is sunk.

Tactical: At least one enemy warship is crippled (50% or more damage).

Chinese Setup: *Hai Chou* and *Chao Ho* start in column formation with 1 nautical mile between ships, on a course of 150° at 8 knots, *Hai Chou* is between Tachiao (Dajiao) Battery and Hsiahengtang (Xiahengdang) Battery.

10+D6 Tactical Turns after the start of the battle, a strike of eight Hawk IIIs may appear at the northwestern edge of the map; their formation, course, speed, altitude and ordnance are at the discretion of the player.

Japanese Forces: The 5th Destroyer Squadron, Rear Admiral Masakichi Ōkuma

Yūbari (*Yūbari* class CL)

Oite, *Hayate* (both *Kamikaze* class DDs)

Japanese Orders: Find and destroy two Chinese warships near Humen Fortress.

Japanese Victory Conditions:

Decisive: Both enemy warships are crippled (50% or more damage) or sunk without any of your ships being damaged (25% or more damage).

Tactical: Both enemy warships are crippled or sunk without any of your ships being crippled.

Japanese Setup: All Japanese warships are drifting at 0 knots. They can start anywhere south of Humen, but at least 7700 yards from any Chinese batteries. Their formation and course are at the discretion of the player.

Variations:

1) Experience Level. According to the recollection of a Chinese pilot of the 29th Squadron, they had not received any training in attacking moving targets at that time. To reflect this, treat them as Recruits, which gives them 2 rows down on the bombing table and affects their chance of sighting.

2) In addition to the batteries involved in the Battle of Humen, there are three more batteries about three nautical miles north, all

part of the Weiyüan General Batteries. At the time, the Japanese did not intend to continue up the Pearl River, and the situation in the main channel is unclear. But the players may give these batteries a chance to fire, so here are the batteries for those who want to expand the scenario to include them.

Weiyüan Battery

Type: Fixed
Camouflage: Prepared
Power Handling: N
Gunnery Standard: 0*
Sensor: None
Fire Control: Local Control

Structures	Size	DP	AC
Sea (1)1 8in/26 EOC Pattern B	F/E	68	5/0
Sea (1)1 Krupp 15cm RK L/35	F/E	64	5/0
Sea (1)3 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)6 Krupp 15cm RK L/26	F/E	64	5/0

Remarks: On a hill, the observation post is about 180 meters in height.

Shanghengtang (Shanghengdang) Battery

Type: Fixed
Camouflage: Prepared
Power Handling: N
Gunnery Standard: 0*
Sensor: None
Fire Control: Local Control

Structures	Size	DP	AC
Sea (1)3 Krupp 21cm RK L/22	F/E	68	5/0
Sea (1)1 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)2 Krupp 15cm RK L/26	F/E	64	5/0

Remarks: The observation post is about 10 meters in height.

(Ike, continued from page 4)

how we are attacking the problem of each specific issue."

Detecting of the smaller UAVs and USVs has been a challenge. The earlier the possible threat is detected, the more time to execute counter measures. The smaller of UAVs and USVs require a different way of targeting.

Stepping up to the plate

Eisenhower has adopted a proactive approach, utilizing its formidable capabilities to detect, intercept and neutralize these threats before they can harm coalition forces or disrupt maritime traffic. According to recent reports, the DDGs accompanying the *Eisenhower* have fired over one hundred Standard surface-to-air missiles, targeting ballistic missile attacks.

BT

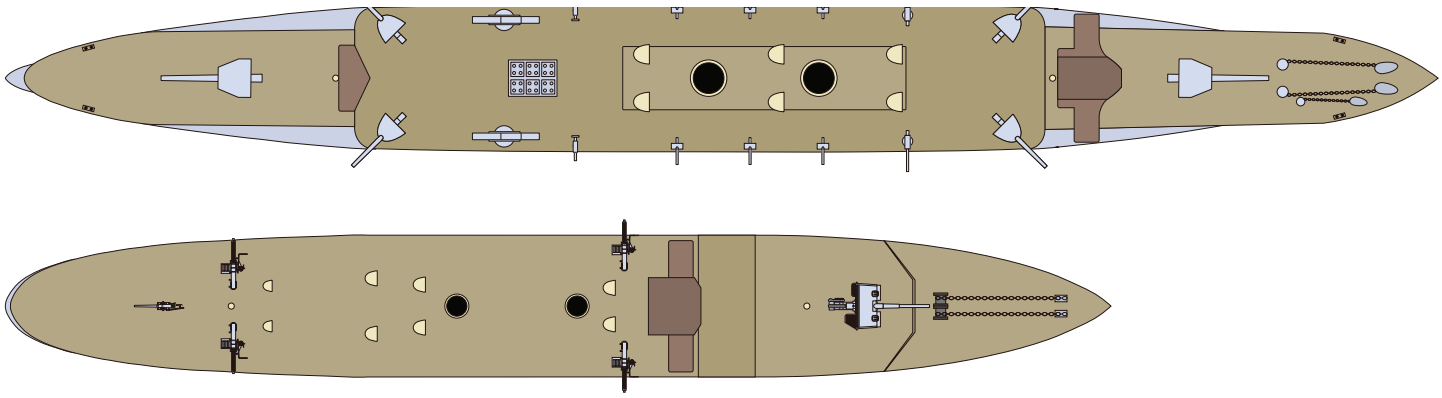
Hsiahengtang (Xiahengdang) Battery

Type: Fixed
Camouflage: Prepared
Power Handling: N
Gunnery Standard: 0*
Sensor: None
Fire Control: Local Control

Structures	Size	DP	AC
Sea (1)1 Krupp 21cm RK L/19	F/E	68	5/0
Sea (1)1 8in/26 EOC Pattern B	F/E	68	5/0
Sea (1)2 Krupp 15cm RK L/26	F/E	64	5/0

Remarks: The observation post is about 30 meters in height.

Chao Ho and *Hai Chou*
(Chang Lei)



Annex H1 - Unguided Air Ordnance for Battle of Humen

Country	Name	Ord Type	Warh Type	Hang wt (Kg)	Dam Pts	Dive B Pen Low/Med	Level Bomb Pen Low/Med/High	Remarks
USA	Mk4 100 lb bomb	Bomb	GP	54	23	2/2	1/2/2	
USA	Mk9 500 lb GP	Bomb	GP	147	38	2/2	2/2/2	

Annex H3 - Air Guns for Battle of Humen

Country	Name	Proj Wt (kg)	ROF (rds/min)	M/V (m/sec)	ATA	Damage Points	Pene-tration	Remarks
USA	Browning M2 .30 cal	.015	1200	720	0.27	0.6	1	
USA	Browning M2 .50 cal	.045	800	880	0.30	0.9	1	

Annex Data for the Battle of Humen

Annex A - Chinese Ships

Chao Ho — CS

Displacement: 2750 n
Size Class: C/Small
Propulsion: Mixed Turbine
Signature: Small/Noisy
Weapons:
F/A(1)2 6in/50 EOC Pattern NN — **C/GB Exp**
PW/SW/PA/SA(1)4 4in/50 EOC Pattern P — **C/GB Exp**
P/S(1)2 14pdr/18cwt EOC Pattern EE — **C/GB Exp**
P/S(1)2 18in deck TT w/4 Schwartzkopff 18in C/95 — **F/Ge Exp**
P/S(1)6 3pdr QF Hotchkiss MkI — **C/GB Exp**
Light AA: 2 1pdr Vickers-Maxim MkI — **(0.1)**
Searchlights: PW/SW 60cm (1896)
In Class: 1
In Service: 1912 - 37
Crew: 331
Armor Rating: 3/2
Gunnery Standard: I
Remarks:
Chao Ho (now romanized as *Zhaohe*). Training cruiser, built on a scout cruiser design. Laid down before 1925, special damage modifier of -15%.
• Oct 18: Defected to the military government in Kuangchou (Guangzhou).
• Dec 23: Defected to Chihli (Zhili) warlords.
• Nov 24: Controlled by Fengtien (Fengtian) warlords.
• Early 1930s: Downgraded to Gunnery Standard 0* due to equipment wastage and inadequate training.
• Jul 33: Defected to Kuangtung (Guangdong) warlords.
• Jan 34: Whitehead Mk5 torpedo available.
• 29 Sep 37: Sunk in Japanese air raids.

Damage & Speed Breakdown:

DP: (*Chao Ho*)	0	36	71	107	128	142
Surf Speed:	20	15	10	5	0	Sinks

Ex-British Arabis — PG

Displacement: 1250 n
Size Class: D/Small
Propulsion: Coal Recip
Signature: Small/Noisy
Weapons:
F(1)1 4.7in/45 QF Mk IX — **C/GB**
Light AA: 1 6pdr/8cwt QF MkI, II, 4 2pdr QF MkII, VIII — **(0.1)**
In class: 1
In Service: 1931 (1916)
Crew: 90
Armor Rating: 0
Gunnery Standard: 0*
Remarks:
Hai Chou (now romanized as *Haizhou*, ex-HMS *Pentstemon)*. Single shaft, double the speed reduction of Engineering critical hits. Laid down before 1925, special damage modifier of -15%.
• 1930-31: Transferred to Kuangtung (Guangdong) warlords, rearmed and renamed *Hai Chou.*
• 14 Sep 37: Damaged during the Battle of Humen.
• 30 Sep 37: Damaged in Japanese air raids and sunk the next day.
• 1956-57: Scrapped.

Damage & Speed Breakdown:

Dam Pts:	0	21	42	63	76	84
Surf Speed:	16	12	8	4	0	Sinks

Annex A - Japanese Ships

Yubari — CL

Displacement: 3387 std
Size Class: C/Small
Propulsion: Steam Turbine
Signature: Small/Noisy
Searchlights: F/P&S 90cm (1896)
Weapons:
F/A(2)2 3rd Yr Type 14cm/50 — **C**
F/A(1)2 3rd Yr Type 14cm/50 — **C**
P&S(2)2 610mm TT w/4 8th Yr Type No. 2 torps (2 reserve torp/mount for reload in 15 minutes) — **F**
Light AA: 2 Type 92 7.7mm, 2 Type 93 13.2mm — **(0.2)**
In Class: 1
In Service: 1923
Crew: 328
Armor Rating: 5/2
Gunnery Standard: IV
Remarks:
Configuration in 1937. Design displacement 2890 t, but exceeded in practice. Laid down before 1925, special damage modifier of -15%.

Damage & Speed Breakdown:

Dam Pts:	0	41	82	122	147	163
Surf Speed:	35	26	18	9	0	Sinks

Kamikaze — DD

Displacement: 1422 std
Size Class: D/Small
Propulsion: Steam Turbine
Signature: Small/Loud
Weapons:
F/2P&S/A(1)4 3rd Yr Type 12cm/45 LA — **C**
6 DC racks w/1 DC, 18 DC carried — **E**
P&S(2)3 533mm TT w/2 6th Yr Type — **F**
Light AA: 2 Vickers 7.7mm — **(0.1)**
In Class: 9
In Service: 1922
Crew: 148
Armor Rtng: 0
Gunnery Standard: III
Remarks:
Configuration in 1937. *Dai-1, 3, 5, 7, 9, 11, 13, 15, 17.* Improved *Minekaze* class. Originally commissioned with numbers, received names on 1 Aug 28. Laid down before 1925, special damage modifier of -15%.
• 1 Aug 28: Given names: *Kamikaze, Asakaze, Harukaze, Mitsukaze, Hatakaze, Oite, Hayate, Asanagi, Yunagi.*

Damage & Speed Breakdown:

Dam Pts:	0	23	46	69	83	92
Surf Speed:	35	26	18	9	0	Sinks

The weapons used by the Japanese can be found in *The Emperor's Fleet*.

Annex B - Chinese Aircraft

Curtiss 68 Hawk III — Fighter-Bomber

Man Rtng: 3.0/2.0
Size: Small
Damage Value: 9
Bombsight: Manual

Throttle Setting/Speed in knots

Altitude	*Cruise*	*Full Power*
Low:	155	180
Med:	100	210
High:	155	190

Ceiling: 7864 m
Cruise Range: 505 nmi
Engine Type: RP(S)
Int Fuel: 285 kg

Additional Fuel	*Fuel Wt.*	*Range Add.*
50 USG drop tank	135 kg	240 nmi

Ordnance Loadouts:
Payload: 227 kg
Off Guns: 1 M2 .50 cal. and 1 M2 .30 cal. in nose **(0.6)**
• 1 M9 500 lb bomb on C/L
• 4 M4 100 lb bombs under wings
• 50 USG drop tank on C/L and 2 M4 100 lb bombs under wings
Remarks:
In Service: Oct 34
Retractable undercarriage. Export version of BF2C. Wooden upper wing in place of metal structure.
• 1936: 30 were ordered by Nationalist government and another 41 (in two batches, 30 and 11) were ordered by Kuangtung (Guangdong) warlords. Each side received one aircraft in May, and all the others were assembled in China from US components beginning in June. All aircraft and orders from Kuangtung warlords were taken over by Nationalist government in August.
• Aug. 1937: 30 were ordered by the Nationalist government, all were assembled in China, with the last assembly completed by August 1940.

Replica Curtiss Hawk III c1937 in Datangshan museum in China *(David Lednicer)*

Annex C - Surface Guns for the Battle of Humen - Gunnery Standard 0 and 0*

Country	Name, Bore/Calibre	Gun Type	Shell Type	Short Range Pen	Short Range Dam	Medium Range Pen	Medium Range Dam	Long Range Pen	Long Range Dam	Extreme Range Pen	Extreme Range Dam	IOC	Remarks
Ge Export	Krupp 15cm RK L/26	--	AP	10	10	9	10	6	7	5	7		
			Com	4	12	3	12	2	10	2	9		
Ge Export	Krupp 15cm RK L/35 C/80	--	AP	13	13	11	12	7	9	6	9	1880	
			Com	4	13	4	13	2	11	2	10		
Ge Export	Krupp 21cm RK L/19 C/67	SF	AP	15	9	13	9	11	9	9	8	1867	
		SF	Com	5	10	4	10	3	10	3	10		
Ge Export	Krupp 21cm RK L/22 C/72	SF	AP	15	10	13	9	11	9	9	8		
		SF	Com	5	11	4	11	3	11	3	11		
Ge Export	Krupp 24cm MRK L/35 C/88	SF	AP	21	12	19	12	16	11	13	10	1870s	
			CP	9	13	8	12	7	12	6	1		
GB	6pdr/8cwt QF MkI, II (57mm/40)	RF	CP	2	7	1	7	1	5	0	5	1884	
		RF	HE	0	9	0	8	0	7	0	7		
GB	4.7in/45 QF MkIX	QF	HE	2	17	2	16	1	13	1	13		
		QF	SAP	11	16	10	16	6	12	5	11		
GB Export	3pdr QF Hotchkiss MkI	RF	HE	0	2	0	2	0	2	--	--		
GB Export	14pdr/18cwt EOC Pattern EE	QF	HE	1	10	1	10	0	8	0	8		
GB Export	4in/50 EOC Pattern P	QF	HE	2	13	2	13	1	11	1	10	1911	
GB Export	6in/50 EOC Pattern NN	QF	APC	25	22	21	21	13	16	11	16		
		QF	HE	3	24	3	24	2	20	1	20		
GB Export	8in/26 EOC Pattern B	SF	AP	13	10	12	9	10	9	8	8		
		SF	Com	7	11	6	11	5	11	4	11		
		SF	SAP	15	12	14	12	12	12	10	11		

Annex F - Torpedoes for the Battle of Humen

Country	Name	Range (kyds)	Speed (kts)	Diam (mm)	Warhead Wt (kg)	Dam vs. ship	Launch Platforms	IOC	Weight kg	Propulsion	Remarks
Ge Export	Schwartzkopff 18in C/95	0.9	28	450	90	56	Surf	1895		Comp. Air	No gyro
GB Export	Whitehead Mk5	1.0	40	450	91	57	Surf	1908		Dry Exhaust	
		2.0	36								
		4.0	27								

(Hunan, continued from page 21)

Second, this part comes from Japan's military deception measures. The destroyers of the 29th Destroyer Division all had hull numbers of 29, in part to increase the difficulty of identification for the enemy. On 9 September, a British vessel reported to Humen Fortress that there was a Japanese destroyer with hull number 29 and another warship near Tachan Island. According to the outdated information on the organization of the Imperial Japanese Navy, the commander of Humen Fortress probably thought that there should be a destroyer division with a total of four destroyers of hull number 29. In fact, from December 1925, four new *Kamikaze* class destroyers formed Japan's 29th Destroyer Division, but on 15 November 1935, a new 28th Destroyer Division was formed with two destroyers from the 29th Destroyer Division. Prior to 15 November 1940, when the four destroyers were reorganized into one unit, the 29th Destroyer Division had only two destroyers.

In the same news report, the journalists quoted an unnamed fisherman as saying that a Japanese warship damaged by the Chinese had sunk in the sea near Tachan Island. In fact, on 16 September, *Yūbari* bombarded a fort in Hainan (Qiongzhou) Strait; on 27 September, *Oite* and *Hayate* again bombarded Humen Fortress. Not a single Japanese destroyer or cruiser had been sunk or damaged in the previous battle. *Hayate* was sunk during the Battle of Wake Island on 11 December 1941; *Oite* and *Yūbari* were sunk by US aircraft and a submarine on 18 February and 28 April 1944, respectively. This is clear information.

After the war, not surprisingly, there were people who wanted to put in a good word for the struggles of the Kuangtung clique in the Chinese Navy and for Fang Nianzu, the executed captain of *Chao Ho*. After all, for a long time these struggles were not recognized by the naval headquarters, and officers from different cliques fought for dominance in the Chinese Navy. Thus, the exaggerated successes in the news reports were incorporated into the official history of the battle compiled by the Chinese Nationalist Party (KMT), and even more illusory details were added.

After spotting the fall of the shot and making three corrections, *Chao Ho* finally hit the Japanese flagship *Yūbari* at a distance of 11,000 meters. Twenty minutes later, Fang Nianzu made a bold turn so that the

(continued on page 29)

Harpoon V Sonar Rules Tweaks

by Chris Carlson

Over the course of the last few years, several questions and/or suggestions concerning the *Harpoon V* sonar rules have been put forward to the design team. Most of these surfaced during the development of *High Tide* 2nd edition and from questions during the Dawn Patrol sessions on the Discord server.

By the way, if you aren't tied into ATG/Harpoon 5 Discord Server moderated by Peter Robbins (https://discord.com/invite/t7pekGk), you are missing out on a lot of good discussion and an opportunity to ask Larry Bond and I questions directly. The following sonar rules tweaks were made to address these aforementioned questions and suggestions. Most of these changes are official rule modifications, although a couple are optional and will be identified accordingly.

Sonobuoy and Dipping Sonar Depths

We have begun listing the depth bands that sonobuoys and dipping sonars are capable of operating at. The information was included in the last update of the *Navies* series books. Dipping sonars can operate from periscope/snorkeling depth down to their maximum listed depth, while sonobuoys will have each operating depth band noted. The applicable depth bands are identified in a new column we've inserted into Annex K1. A few sonobuoys have a very shallow depth setting, basically at periscope depth, which could be affected by a shallow layer. For sonobuoys with a periscope/snorkel depth setting, a "P" will be used to note this capability.

Depth Band Graphic

In *High Tide,* we put together a water depth legend graphic to assist players in figuring out what depth bands were applicable to a specific scenario. This was largely driven by the need to accommodate scenarios in the Baltic Sea (one of our designers has described it as a "very wet meadow"). Along with the graphic notation, we've included the water depths that are linked to the graphic in meters, feet, and fathoms.

Word of caution, just make sure you look at the chart's water depth units before running off and designing a scenario. Hey, if NASA can make this mistake so can the rest of us mere mortals.

Shipping Traffic Noise

The effect of shipping noise was a little understated in the original rules. The following are the revised shipping traffic modifiers. Some basic guidance for referees is that shipping noise generally gets higher as one approaches a coast – largely due to the increase in fishing activity. However, some bodies of water, like the Mediterranean Sea, Baltic Sea, South China Sea, and the Persian Gulf have normally higher shipping densities than say, the open Atlantic or Pacific Oceans.

Shipping Traffic	*Light*	*Moderate*	*Heavy*
Modifier	-1	-2	-3

Biologics Noise *(optional)*

Sea critters can make a lot of background noise that has a bad habit of interfering with passive sonar searches. They are even capable of giving "submarine-like" active returns. The noise from biologics tends to have more impact on higher frequency sonar systems, but certain marine mammals can negatively influence even towed arrays. The modifier values below are added to the sea state modifier values.

Passive Modifier *Biologics*	*Light*	*Moderate*	*Heavy*
Modifier for (LMF-HF)	-1	-2	-3
Modifier for (LF-VLF)	0	-1	-2

For active sonars, a school of fish, a pod of dolphins, or even a single large whale can be a mighty convincing submarine lookalike; just ask the Royal Navy. Thus, they are less of an interference problem and more of a false contact issue. Doppler isn't much help in sorting out the problem either; larger fish and marine mammals can cruise around at 3-4 knots, swim at sustain speeds of 10-15 knots for a couple of hours and reach maximum speeds of 30+ knots. And while a lack of narrowband noise (VLF-LF) might be a clue, a very quiet or extremely quiet boat looks pretty much the same unless you get close. In other words, we are giving license to referees to hoodwink players to their hearts' content. Biologics active target strength equivalent recommendations are below.

- Medium contact – a large whale, a large pod of sea mammals, or a large school of fish.
- Small contact – a medium-size whale, or a smaller groups of sea mammals and fish.
- VSmall contact – a small whale, or a very small group of sea mammals or fish.

It's fiendishly hard to nail down specific locations for greater biologic noise. It depends not only on the location, but the time of year, even the time of day. Best guidance I can give is it's reasonable to expect higher biologic noise within 100 nmi of a coastline.

Biologic noise, like shipping traffic, affects all propagation paths including bottom bounce and CZ.

Water Depth Color	Depth Band	Water Depth (meters)	Water Depth (feet)	Water Depth (fathoms)
	Peris/Snorkel	0 – 25	0 – 84	0 – 14
	Shallow	26 – 50	85 – 165	14 – 27
	Intermediate I	51 – 100	166 – 328	27 – 55
	Intermediate II	101 – 200	329 – 657	55 – 109
	Intermediate III	201 – 300	658 – 985	110 – 164
	Intermediate IV	301 – 400	986 – 1313	165 – 219
	Intermediate V	401 – 500	1314 – 1641	219 – 273
	Deep I	501 – 600	1642 – 1969	274 – 328
	Deep II	601 – 750	1970 – 2461	328 – 410
	Deep III	751 – 900	2463 – 2953	411 – 492
	Deep IV	901 – 1050	2954 – 3444	492 – 574
	Deep V	1051 – 1200	3445 – 3937	574 – 656
	Very Deep	1201+	3938+	656+

If both shipping traffic and biologic noise are used in a scenario, use either the higher noise value of the two or if they are the same increase the noise value by one (-1) and add to the sea state noise.

Detection Range Modifiers Table

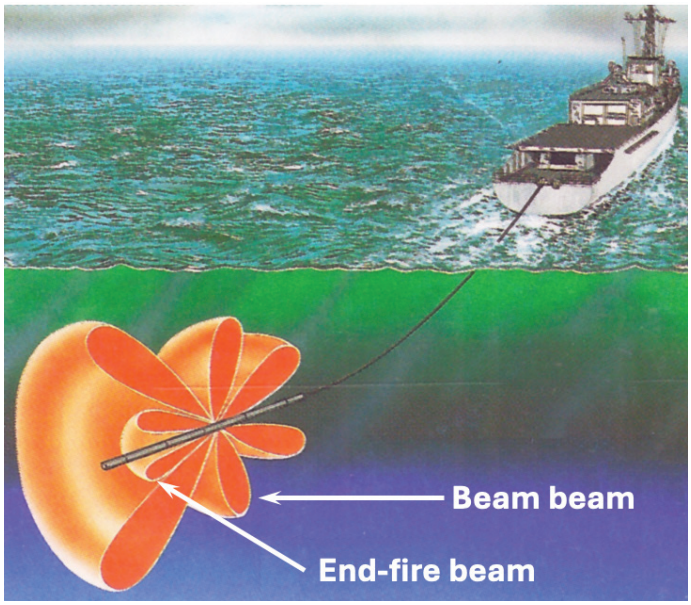
The Detection Range Modifier table on page 5-11 tops out with a modifier total of +10. However, it is conceivable that a really loud, high speed, cavitating contact could see the modifier total climb to a rock concert-like level of +14 and would have a range modifier of x13. Should the situation occur where the modifier total exceeds 10, take the total and just subtract one to get the sonar range modifier. Then settle down for a really, really long approach because this will take a while to close the range to where you can begin generating a fire control solution, let alone shoot.

Towed Array Beam Patterns *(optional)*

Towed sonar arrays have a very different beam pattern from a hull array. Being an unbaffled line array, the beams of a towed array form a set of cones, with the exception of the "beam" beam, basically a disk, and the end-fire beams that are big lobes. The cone structure is what causes the bearing ambiguity problem; all you know is which cone the contact is in, not which side. That's why ships with early towed arrays have to make a turn to resolve which side, port or starboard, the target is on. Another peculiarity of towed arrays is that the beam widths get wider (this means greater bearing inaccuracy) as you move toward one of the end-fire beams.

For all intents and purposes, the beam width size doesn't interfere with target tracking from a game mechanics perspective. Yes, the "beam" beam is the narrowest with about a 1-2° beam width, but the cones near an end-fire are about 5-6° wide, which is similar to the beam widths of most hull arrays. The end-fire beams are another matter, as they can be 15-20° wide depending on the towed array's design and they don't provide good target tracking. If a contact is detected in either the forward or aft end-fire beam, within ±20° of a ship or submarine's course, the detecting platform must change course to put the contact in a different beam before tracking can begin.

BT



Typical towed array beam pattern.
(*Atlas Electronik*)

(Force H, continued from page 17)

possible in the morning. The Home Fleet is running short on fuel and will not be able to intercept unless a significant reduction in speed is achieved. Force H is within range to intercept her.

RN Forces: VAdm Sir James Somerville
Division 1: *Renown* (Flag) (*Renown* class BC)
Sheffield (Town class, First Group CL)
Division 2: *Dorsetshire* (*Dorsetshire* class CA)
Edinburgh (Mod. Town class CL)
4th Destroyer Flotilla, 7th Division: *Cossack* (Capt. D4, Capt. Vian), *Maori, Zulu, Sikh* (all Tribal Class DD), ORP *Piorun* (GB N-Class DD)

Royal Navy Orders: Maintain contact and slow *Bismarck*.

Royal Navy Victory Conditions:
Decisive: Bismarck and *Prinz Eugen* are both slowed to half speed.
Tactical: Bismarck is slowed to half speed.

German Tactical Situation: Following the action against *Hood* and *Prince of Wales*, it has become apparent that the damage to *Bismarck* prevents extended operations. Several airstrikes have been driven off. There is no evidence of RN units in proximity.

Bismarck is taking the most direct route to the Biscay ports.

German Forces: Admiral Lütgens
Bismarck (Flag) (*Bismarck* class BB) Captain Lindemann
Prinz Eugen (*Prinz Eugen* class CA) Captain Brinkmann

German Orders: Continue moving southeast at your best speed. In the event of contact with RN units, break off at the earliest opportunity and continue heading towards Brest (East). Do not break off to the north or northeast, as the main body of the Home Fleet is in that direction. Avoid further damage to *Bismarck* at all costs.

German Victory Conditions:
Decisive: Both *Bismarck* and *Prinz Eugen* break contact with British units.
Tactical: *Bismarck* breaks contact with British units.

Setup: The players may place their ships in any formation they wish.
Bismarck and *Prinz Eugen* are steaming at 16 knots on course 135°.
Division One is on course 090° at 16 knots. They bear 180° at 12 nmi from *Bismarck*.
Division Two is on course 180° at 21 knots. They bear 030° at 12 nmi from *Bismarck.*
The 4th DF, 7th Division is on course 135° at 21 knots. They bear 330° at 12 nmi from *Bismarck*.

Special Rules:
1) *Bismarck* sustained damage in the action with *Hood*, resulting in minor flooding and loss of two boilers. These have not affected her speed. She has sustained 72 damage points. If her speed is increased over 20 knots, there is a 20% chance that D6/2% flooding will reoccur. This is tested each Tactical Turn *Bismarck* is moving at 20 knots or more. If flooding starts, it is managed as per rule 8.2
2) Contact is broken when the Kriegsmarine ships have not

(continued on page 30)

Book Review - The Royal Navy in the Cold War Years

The Royal Navy in the Cold War Years 1966-1990 Retreat and Revival, by Edward Hampshire, Seaforth Publishing, 2024, 798 pages, $54.77 on Amazon.

What remains to be said on the history, ship design and organization of the Royal Navy? Hampshire's strength is combining all three and more in this study of the Royal Navy, commencing from the cancellation of the CVA aircraft carrier in 1966 through the end of the Cold War in 1990.

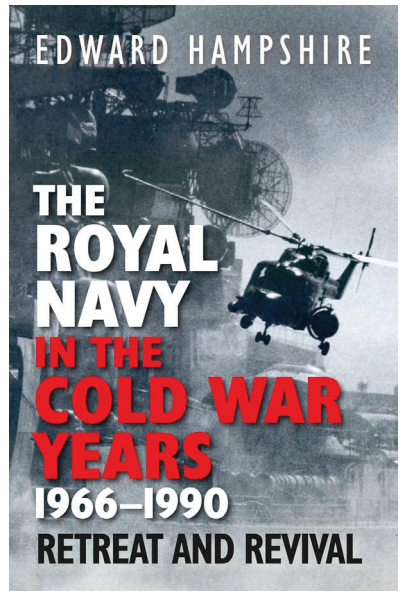
After the CVA program was cancelled, the Royal Navy withdrew from its remaining overseas colonies with a legacy fleet left over from World War II. The remaining aircraft carriers were retired in the 1970s and the Royal Navy changed its role to ASW in the Eastern Atlantic. Hampshire covers the equipment and tactics developed as a result. The low point was the 1981 Nott Review, but here Hampshire dispels several myths. The Falklands War was the high point of the Royal Navy, and the lessons learned are covered. The remaining years of the 1980s complete the main body of the book.

Training, naval culture, budget and the changes over the years are also covered. Lack of funds, problems with recruitment and shipbuilding are not new for any navy.

Appendices cover organization, budget, personnel, planned and actual fleet numbers and classes. Extensive notes from a variety of primary and secondary sources are provided.

The reviewer used the Kindle version of the book which was well formatted.

Peter Grining



Keeping Track

Because our products are living documents, they change. We correct errors, expand rules to cover new situations, and update older documents so that they remain consistent with newly released products. It's a pain to keep track of the changes, but it's absolutely necessary. Without proper documentation, there is only chaos.

And if it's hard for the ATG staff to keep track, it must be even harder for the folks who play our games. We are going to make it easier for everyone.

• From now on, all our products (other than the *Naval SITREPs*) will include two dates on the cover - one for the last printing and one for the last digital update. We should have been doing this since Day One.

• We've gotten a lot of positive response to using red text in the rules for changes. We're going to extend the same policy to the annexes. Like the rules, after an annex is printed (all black text), changes to the document will be made in red. The red color will be retained until the next printing, when it will revert to black. We believe this will help players find the changes as we implement them without blowing a mental gasket or two. This did not apply to the recent maintenance releases of *America's Navy, America's Aircraft, Russia's Navy*, and *Russia's Aircraft,* because their updates were well along before this decision was made.

We expect it will first be used with the *Fleet* series reissues, which will happen after *Command at Sea* 5th edition is released.

• We've added a new feature to our web page, called the "Change Log." Everyone who buys our products (hopefully) knows about the errata we collect. Because our products are living documents, we can correct any inconsistencies or errors and upload a new .pdf. The errata lists those corrections, primarily for folks who have purchased the print version. Errata for our products is available on the Game Support section of ATG's web page.

While changes to the rules are documented with *Naval SITREP* articles and are now marked with red in the published products, there are numerous smaller tweaks and adjustments to the weapons and sensor models that are not well-documented. This is not the same as errata. Corrections or inconsistencies in published products are of course corrected in the Master draft for that product, in the Master annexes, and are collected in an errata for each product, which is available online. A "change" usually results from analysis or new information that changes our understanding of how a weapon or sensor behaves. It's adjusting a formula or changing a value so that (in our opinion) the game is a little bit closer to reality. A refinement.

A typical example is our decision that the AK-630 30mm, with a self-contained fire control system, fitted to older Soviet ships, should not have a FC system modifier lower than 1.5. Another might be deciding that a radar does not have a particular feature. These changes are usually based on new information, and sometimes on a deeper examination of how things fit together. The reasoning behind these changes needs to be recorded somewhere that is easily found.

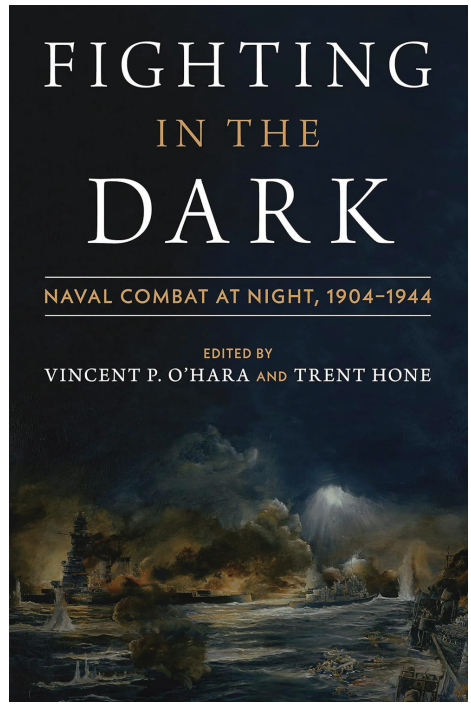
The Change Log will describe each change after it is made, the date it was implemented, and which products were affected. This will help preserve corporate memory for the designers, help reviewers check the correctness of the products, and will alert players as to why some values have been changed. It will also help our foreign-language editors stay consistent with the English-language version.

Most of the changes will be for *Harpoon*, but the Change Log includes all ATG games. Our sensor and weapons models cover the entire system, after all. Any model changes in any game will be documented. We will also record upload dates of new files for existing products. We may post other information on the page as it evolves, and as necessary.

We'll also put an alert on our Facebook page to let people know when the Change Log has been updated.

BT

Book Review - Fighting in the Dark



Fighting in the Dark, edited by Vincent P. O'Hara and Trent Hone, Naval Institute Press, 2023, 305 pp, $39.95 list

Mr. O'Hara and Mr. Hone are well-known and respected naval historians, which is reason enough to pick up this book. Contributing authors also include Stephen McLaughlin, Leonard P. Heinz, James Goldrick, Enrico Cernuschi, Jonathan Parshall, and Michael Whitby, which makes this collection of all-stars impossible to ignore.

The editors' and authors' goal is to systematically examine naval combat at night – the tools, the tactics, and especially the doctrine of major navies in different historical periods.

Starting with the Russo-Japanese war (focusing on Japan), then WW I and Germany, then Britain in late WW I through the 1920s, Italy in the first half of WW II, Japan again in 1922-1943, the US in 1942-44, and finally the British again from October 1943 – June 1944.

The book examines the written doctrine of the navy in question for each period, how it affected their warship designs and weapons, and how successful it was in actual practice. They break down the number of night combats into accidental and deliberate encounters, and discuss how the different navies learned (or did not learn) from the night combats.

The one constant of night combat in all these periods is confusion. Lack of visibility isn't just a problem for finding the enemy and shooting at them, it's also about controlling your own force. If you can't see the enemy, you can't see your own side, either – you don't know if they're following the plan (if there was one) and what's happening to them. It's also very difficult to see the results of attacks, both to the other side and to your own.

Technology played an important role, but not the dominant one. First comes doctrine; some navies did their best to avoid night combat (Italy in WW II) and were completely unready when it dod occur. Others developed elaborate battle plans that were not realistic. And to be successful, the doctrine had to be practiced, preferably by ships that stayed together and got used to working as a team. The last chapter, about the British "Tunnel" operations (See *NSITREP* issue 62 (April 22) for Paul French's article on the *Charybdis* action and Pat Hreachmack's *Clear the Coast*), demonstrates what happens to an ad-hoc force at night.

The book does cover the tech, describing in detail the utility of different night-fighting tools like searchlights and starshells, flashless powder, and of course radar. Torpedoes are given extensive coverage, and there are many comparisons of the utility of gunfire vs. torpedoes in night actions.

Techniques can be as important as technology. Command and control were nearly impossible once the shooting started. Simple formations and simple plans were vital. The Germans in WW I put a lot of thought into their system of recognition signals. This prevented many blue-on-blue incidents. The introduction of a plot, which sounds so basic, was a revolution in improving situational awareness. This eventually led to the American CIC and its British equivalent, the AIO.

The chapters are tightly written, with no wasted words. It's a fun and interesting read. Recommended.

Larry Bond

(Hunan, continued from page 21)

cruiser's forward, aft and side guns could all fire at the target. *Yūbari* was sunk after escaping for about ten nautical miles, and her unidentified commander was killed. (In fact, the commander of the 5th Destroyer Squadron, Rear Admiral Masakichi Ōkuma, and the captain of *Yūbari*, Captain Sueto Hirose, were both promoted to higher positions during the remainder of World War II). The story echoes another exaggerated story in the news at the time: a Chinese shell that luckily fell into the funnel of a Japanese warship. But as late as 2018, there were still new books and papers that saw the Battle of Humen as a Chinese victory in which one Japanese ship was sunk or heavily damaged. To reconcile the actual three Japanese warships with the inaccurate reports of five to six Japanese ships, they added two or more Japanese destroyers or even a merchant ship carrying the Japanese landing force.

In Japan, although there are rich archives and personal recollections of the Battle of Humen, the battle is not even mentioned in the official military history *Senshi Sōsho* (*War History Series*).

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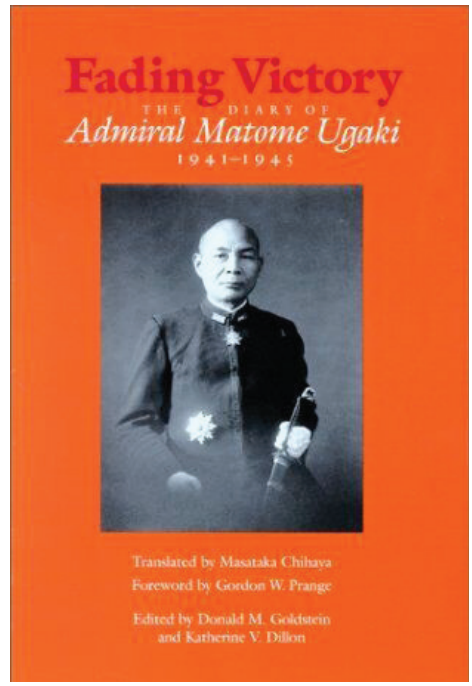
Book Review: *Fading Victory*
The Diary of Admiral Matome Ugaki 1941 - 1945



Fading Victory - The Diary of Admiral Matome Ugaki 1941 - 1945, translated by Masataka Chihaya, Edited by Donald M. Goldstein and Katherine V. Dillion, University of Pittsburgh Press, 1991, 729 pages.

This is not a new book. It was first published in 1991 by the University of Pittsburgh Press, and reprinted in 2008 by the Naval Institute Press. Both versions are now out of print, but it is available on ebay and other used book sites. Be careful. Prices on ebay can be hundreds of dollars, but there are also plenty of paperbacks available for about $35 US.

Admiral Matome Ugaki was Chief of Staff of the Combined Fleet, in other words, Yamamoto's number two, and starting just before Pearl Harbor, began keeping a detailed diary. In the end, it filled fifteen volumes, and luckily, most of it was preserved.

His diary starts one year after the Japanese signing of the Tripartite Pact in September of 1940. Ugaki was against it, but once the decision was made, he followed orders, although he was almost certain it would lead to war with the United States.

The diary follows the start of the war, the early successes, then the reverses at Midway, Guadalcanal, Leyte, and final stages of the Pacific War.

We learn a lot about Ugaki the person. He often mourned his wife Tomoko, who died about a year before he started the diary. His son Hiromitsu studied to become a naval surgeon. Ugaki was plagued with different ailments, and loved to go shooting, often bringing back game birds for the mess. He often added haiku poems to his entries.

He was the quintessential old-school samurai. Even before Japan resorted to suicide tactics, Ugaki often wrote about "finding a good place to die." In the last half of the book, when the course of the war was against Japan, he continued to hope that Japanese spirit and sacrifice could somehow bring victory. Toward the end, in February of 1945, he was appointed to command the 5th Air Fleet, and organized dozens of Kamikaze attacks on the advancing American forces. After hearing news of the surrender and the Emperor's speech, he refused to accept it, and led an eleven-plane flight on one last attack. As far as anyone knows, the flight did no damage.

This is not the first, or even second book someone new to the Pacific War should read. Because he was far removed from much of the action, and because this is a contemporary record, he does not always include a detailed account of battles, even for the Japanese side. Instead, the value comes from reading his personal, unfiltered reactions to the Japanese leadership, the decisions of the Combined Chiefs, and of course to each battle won or lost.

An important event in the Pacific War was the shoot-down of Yamamoto on April 14th, 1943, while on an inspection trip. Admiral Ugaki accompanied him on the trip, along with several of their staff. While both bombers were shot down, and almost all were killed, Ugaki and the pilot of the second bomber survived, although the Admiral was badly injured. His diary entry for 18 April 43 was dictated from a hospital bed, and is sparse, but the entry one year later, 18 April 1944, is a detailed and compelling account of the preparations for the flight, the attack, and the immediate aftermath.

This book needs to be placed in context to get the most out of it. Knowing the general course of the Pacific War is essential, since Ugaki's account is incomplete. For instance, his analysis of the Midway "disaster" concludes that simple coincidence must have played a part in putting the US in the right place to attack.

With that caveat, the book is recommended for anyone interested in a deeper understanding of the Japanese actions in WW II.

Larry Bond

(Force H, continued from 27)

been detected for three consecutive Tactical Turns.

Variations: The number of ships available to the RN was overwhelming, if they could be concentrated at the right place and time. The number of variations is almost limitless. For example, *Rodney* and *Ramillies*; the difficulty is keeping in contact with *Bismarck* in poor visibility conditions. Whatever variation is used, the balance of probability is that the RN will have cruisers and destroyers in the order of battle.

Prinz Eugen is an optional asset. Historically, on the 26th May she was not in company with *Bismarck*.

Replace the 4th DF with the original escort (less two ships to remain with *Ark Royal*), *Faulknor* (F class Leader), *Foresight*, *Forester, Foxhound, Fury* (all F-class DD) and *Hesperus* (H class DD), in which case they start in company with Division One.

Historical Outcome: The history of the *Bismarck* hunt is well known. Force H was ordered not to engage unless *Bismarck* was heavily engaged. This was undoubtably the correct decision, based on a one-to-one scenario. The second airstrike from *Ark Royal* and spirited harassment during the night by 4th Destroyer Flotilla sealed her fate.

With the forces potentially available, Force H could have been reinforced and a surface action in poor visibility was viable.

(continued on page 31)

Book Review: *Iran-Iraq Naval War,* Volume 1: Opening Blows September - November 1980

Iran-Iraq Naval War – Volume 1: Opening Blows September - November 1980, by Tom Cooper, Sirous Ebrahimi, and E.R. Hooton, Helion, 2023, 70 pages, $20.48 on Amazon.

Cooper, Ebrahimi, and Hooton are all published authors with expertise in Iran, Iraq, and the Middle East. They combine their talents well in this new history of the Persian Gulf War. This first volume begins with a general history of the region, tracing the involvement of Britain, the US, and Russia in the region up through two World Wars and into recent events. As they proceed, they describe in detail the beginnings of each nation's armed forces, concentrating on the navies and air forces of each side.

The buildup of Iran's forces under the Shah is extensively covered, not only in terms of the hardware that was ordered, but potential plans that were not fulfilled because of the Islamic Revolution, and the Shah's reasoning and goals.

The authors describe Saddam's rise to power and the effects of his policies on Iraq's military. Oriented towards threats from Israel and Kurdish rebels, the armed forces had to prioritize the army and air force, and with a much shorter coastline, the Iraqi Navy never got the same priority as the Iraqi army and air force. Iraq's naval buildup did not begin until Iran's was well underway.

The Islamic revolution itself is not covered in detail, but its effects on both the Iranian armed forces and on Saddam Hussein's thinking are discussed. The authors describe how the chaos within Iran emboldened Hussein, thinking this was his chance to settle affairs with a long-time enemy.

Much of the wartime narrative is based on Iranian sources, but even without Iraqi accounts to balance it, there is much new material here: The intelligence warnings from SAVAMA that were ignored by Iran's leadership, prewar deployments and operations orders, and descriptions of how Tehran failed to react to the initial Iraqi attacks.

The first exchange of air attacks did damage to both sides, especially to merchant shipping, which, because of the sudden attack had no time to escape the war zone. Although the attacks had been initiated by Saddam, Iraqi shipping was just as surprised, and suffered many vessels sunk.

The role of Iran's hovercraft in the war is detailed for the first time. They were essential in evacuating civilians from areas under attack and bringing in reinforcements. Also newly reported, and of vital importance to Iran, was a coastal convoy system between Bushehr and Bandar-e Khomeini. A special war room was established to organize the nightly "caravans," which were covered by fighters, armed helicopters, and fast attack craft.

In addition to the convoys, Iran also began a campaign of targeting the Iraqi petrochemical industry. This included an assault by Iranian marines at Faw. There were numerous combats between ships and aircraft of each side, including a few unfortunate blue-on-blue incidents by the Iranians.

The book ends with Operation Morvarid, an Iranian attack on two oil platforms that the Iraqis were using a bases for attacks on the Iranian convoys. (This battle was published in the *Naval SITREP* Issue 37, October 2009, page 21). Iraqi small craft were based there as well as radar and other electronic sensors. In an operation that combined special operations forces, electronic warfare aircraft, as well as naval and fighter support, the two oil platforms were assaulted, their garrisons defeated, and then destroyed by explosive charges. The Iraqis reacted by sending a Polnocny-class amphibious ship, two tugs, two P-6 PT boats, and four Osas in pursuit. Helicopters flew in support of the Iraqi force.

This led to the battle of Kohwr Abdallah, which saw the Iraqi forces firing P-15 missiles at two *Kaman* (French La Combattante) class, who were covering the retreat of the rest of the Morvarid force. Using the wrecked oil platforms as shelter, the two *Kamans* were able to dodge many missiles. Iranian F-4E Phantoms armed with Maverick missiles reinforced the two *Kamans*, then more Iraqi Osas arrived, as well as MiG fighters. In the end, The Iranians lost one *Kaman* and an F-4E, while the Iraqis lost three Osas, a P-6, and as many as four MiGs, in addition to the oil platforms, sensors, and the company of infantry that garrisoned them.

There are plentiful and detailed descriptions of the hardware used by each side. The book is heavily illustrated by reproduction of Iranian documents, photos, and art by Tom Cooper. A second volume covering 1981 through 1984 has also been published. Recommended.

Larry Bond

(Force H, continued from 30)

Spoiler alert: In playtesting, a reinforced Force H (ignoring *Ark Royal*), concentrated and coordinated, is more than a match for *Bismarck* and *Prinz Eugen*.

References: *German Capital Ships and Raiders in WW2, Vol. 1 From Graf Spee to Bismarck*, Routledge, 2015

Notes: The scenario would benefit from having an umpire who would manage detections, increasing the commander's uncertainty. In the historical action, *Bismarck* was still capable of 28 knots. In practice, the risk of flooding meant that she kept well below this.

BT