

The Missile Boat War
The 1973 Arab-Israeli War at Sea
By Dave Schueler

The Soviet Union began developing and deploying naval Surface to Surface Missiles (SSM) in the early 1960s. However, the first successful SSM attack was not made until 1967 during the so called “War of Attrition” between Egypt and Israel. On October 21, 1967, the Israeli destroyer *Eilat* (an ex-British Z Class DD) was patrolling outside of the Egyptian city of Port Said when two Egyptian Komar Class missile boats attacked it with four SS-N-2 “Styx” missiles. The *Eilat* had little warning of the attack and WWII vintage equipment aboard her proved useless against the missiles. At least three of the four missiles hit the destroyer, quickly sinking it and opening the missile age at sea.

The success of the Styx missile continued during the 1971 Indo-Pakistani War. During this two week war the Indian Navy aggressively used its Soviet supplied missile boats against the unprepared Pakistani Navy. The Indian Navy reportedly fired 13 Styx missiles during the war, 12 of which hit, sinking several ships (including the Pakistani destroyer *Khaibar*) and damaging the petroleum storage facilities at Karachi. The results of the naval engagements of the 1971 Indo-Pakistani War continued to emphasize the deadly effectiveness of SSMs.

The 1973 Arab-Israeli War at sea would be the first conflict in which the primary naval weapon on both sides was the SSM. After the loss of the *Eilat*, the Israelis felt they could no longer try to maintain a traditional navy and undertook a new program that would not only change their navy, but would change naval warfare. The Israelis chose to convert their navy over to one where small fast missile-armed ships would be the main combat force. With this decision they began developing their own SSM, the Gabriel, and designing ships to carry the missile. But more importantly, the Israelis began to look for a way to defeat the Styx missile. For their missile boats the Israelis invested heavily in a new shipboard electronic warfare system, which included electronic support measures (ESM) to detect the enemy search radar and Styx homing radar, electronic countermeasures (ECM) to jam these radars, and chaff rockets to create false radar targets. By the time war broke out in 1973 the Israeli transition to the new missile boat navy was practically complete, but the entire force was still untested and many wondered if the new missile and electronic warfare systems would work.

The new Israeli Navy would get the chance to prove itself on the night of October 6, 1973, the opening night of the latest war between Israel and its Arab neighbors. While the rest of Israel’s armed forces were struggling to hold off their Arab attackers, the Navy went on the offensive sending five missile boats north to Syria. The objective of the Israeli force (composed of *Reshef*, *Miznak*, *Gaash*, *Hanit*, and *Mivtach*) was to bombard oil facilities at the Syrian port of Latakia and try to draw out and destroy any Syrian warships. The Syrians were not expecting this move by the Israelis and had only two picket ships (a P-4 torpedo boat and *Hittine*, a T-43 minesweeper) stationed outside of Latakia. The Israeli force first encountered the torpedo boat, which raised the alarm and headed for port, but the 76mm gun on *Hanit* quickly destroyed the small boat. With the alarm raised, three Syrian missile boats (a pair of Komars and one Osa) were dispatched to engage the Israelis. The Israeli commander, not knowing Syrian missile boats were on the way, continued to move after *Hittine*. Once the Israelis had closed the range, *Reshef* launched a pair of Gabriel missiles at the minesweeper, quickly sending it to the bottom.

Meanwhile the Syrian missile boats closed in and finally came within radar range of the Israelis. The Syrians, with the longer ranged Styx missile, quickly launched their missiles at the

Israeli ships. With missiles in the air the Israeli electronic warfare system went to work launching chaff rockets and putting the ECM systems into action. These two systems flooded the Syrian radar with contacts (after the battle the Syrians reported that there were at least 20 Israeli ships in the area). However, the Israelis were still unsure how their new electronic warfare systems would do against the incoming missiles. As the Styx missiles closed, it quickly became apparent that the electronic defenses had done their job as the Israelis watched the missiles fly pass their ships and dive harmlessly into the water. The Syrians didn't know what to make of the situation, but the two Komars (now out of missiles) turned around and started heading back to the port at full speed, while the Osa fired off its last two missiles. However, these missiles proved just as ineffective as the initial salvo. That was not the case for the Gabriel missiles though, the Israelis were able to close with the Syrian missile boats and use their new missile to destroy all of the Syrian vessels. In less than thirty minutes the face of naval warfare had changed forever.

During the remainder of the war there were several more missile boat engagements, but in all cases the Israeli electronic warfare and chaff systems were able to defeat the Styx missiles, while Gabriel missiles destroyed Syrian and Egyptian vessels. When the war ended the Arab navies had fired over 50 Styx missiles at the Israelis without recording a single hit. On the Israeli side around 70 Gabriel missiles had been expended with 14 Arab vessels sunk. The action during this war showed the continued importance of the SSM, but also showed that it could be defeated by a well designed and coordinated defense system.

The Campaign Game

The campaign covers naval actions from October 6th to October 12th, 1973. While fighting on land continued until the 24th, the war at sea was essentially over after the Battle of Baltim on the 12th of October. The campaign game is intended for two sides (the Israelis and the Arabs) and only covers action in the main (Mediterranean Sea) operating area (*Historical Note: there was some naval combat in the Red Sea, but the actions there were very limited and would not add to the campaign game*). There is room for three players/groups in this campaign. The first player/group commands the Israelis, the second the Egyptians, and the third commanding the Syrians. Note however that the Syrian Navy is rather small and may be knocked out of the fight early.

Each campaign game turn represents one day. During a day, each side has certain required missions to carry out; additionally, each side may conduct extra missions. The side that is able to successfully complete its missions and sink enemy ships with the fewest losses will win the campaign. Because of the nature of this war and missile boat tactics, all tactical battles in the campaign game are fought at night.

The campaign rules were written with the 'Bulldogs Away' rules in mind for conducting the tactical battles, but any modern naval rules system could be used (*Note: special rules for 'Bulldogs Away' are given in the Ship Details section*). All operational movement is planned and executed using the campaign rules.

The available forces and at start positions for the vessels are given below. These are not all of the forces that were available to each side, but this list covers the vessels that were involved in or could have been involved in the fighting covered by the campaign game. The Ship Details section has more information about the vessels used in the game.

Israel

At Start in Haifa: *Reshef, Keshet, Acco, Eilat, Gaash, Haifa, Hanit, Herev, Hetz, Misgav, Mivtach, Miznak, Sa'ar, Soufa*

Egypt

At Start in Port Said: 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 401, 402, Sinai, Assiout, Gharbia, 331, 332

At Sea in the Mediterranean: *Al Nasser, Al Zafr, Damiet, Suez*

Syria

At Start in Latakia: 20, 21, 40, 41, 42, 43, 44, 45, 60, 61, 62, 63, 64, 65, Hittine, Yarmouk

Summary of Campaign Game Turn Sequence

1. Vessel Status Checks
2. Mission Determination
3. Mission Assignment
4. Campaign Movement and Mission Resolution
 - Place Defensive Missions
 - Place Offensive Patrol Missions and resolve tactical battles
 - Return Offensive Patrol, Heavily Damaged, and Wrecked vessels to port
 - Place Bombardment Missions resolve tactical battles
 - Return all vessels to port
5. Determine Victory Points for the Day

Turn Sequence

Each campaign game turn represents one day, beginning on 6 October and continuing through 12 October. Each side may have several missions during each day. Because of the nature of this war and missile boat tactics, all fighting will occur at night. After the last actions of 12 October are resolved Victory Points for each side will be added up and a winner determined. Each side will receive points for completing missions, sinking enemy vessels, and for friendly vessels operational at the end of the game. The points for operational vessels represent the ability of a side to conduct further naval actions for the remainder of the war.

Vessel Status Checks - At the beginning of each campaign game turn, both sides must check the availability of their vessels. For each vessel in port the controlling player rolls percentile dice (d100) to see if it is available for a mission on this day. On a modified roll of 1 to 85 the vessel is available for missions. If the modified roll is greater than 85, the vessel cannot be used for any mission during that day. The availability die roll is modified as follows:

- The vessel was assigned any mission (except Interception) during the previous day: +10
- The vessel was not assigned to a mission during the previous day: -15
- All Arab vessels: +15
- The vessel's damage level is Wrecked: +70
- The vessel's damage level is Heavily Damaged: +50
- The vessel's damage level is Damaged: +25

If a damaged vessel passes the availability roll, it is considered repaired and fully operational. The modifier for the vessel's damage level remains in effect until the vessel passes an availability die roll. Modifier #2 is cumulative (i.e. if a vessel is not assigned to any missions for 3 days, -45 is added to its availability die roll).

Note: The Egyptian destroyers do not make availability checks. The destroyers are considered to always be available unless they have a damage level of Heavily Damaged or Wrecked. If a destroyer is Heavily Damaged or Wrecked, it is no longer available. Destroyers that have a damage level of Damaged roll for availability, but only to see if they are repaired (in this case only the Arab vessel and damage level modifiers are used). If the destroyer passes the roll, it is considered repaired.

Mission Determination - Each Navy must conduct at least one Defensive Patrol mission outside their main port each day (Haifa for the Israelis, Port Said for the Egyptians, and Latakia for the Syrians). In addition to the required Defensive Patrol mission, each Navy also rolls percentage dice (d100) and refers to the table below to determine if there are any other required missions for that Navy. Players do not have to complete a required mission, but each required mission that is not completed will have a negative effect on the player's Victory Point total. In addition to the required missions, the Israeli player may also conduct up to two additional Offensive Patrol missions; the Egyptian and Syrian player(s) may each conduct one additional Offensive Patrol mission.

Die Roll	Additional Required Missions		
	Israelis	Egyptians	Syrians
< 20	None	None	None
20 to 40	Offensive Patrol (Latakia or Lebanon)	None	None
41 to 60	Offensive Patrol (Port Said or Sinai)	Offensive Patrol (Sinai)	None
61 to 75	Bombardment (Latakia)	Offensive Patrol (Haifa)	Offensive Patrol (Lebanon)
76 to 90	Bombardment (Port Said)	Bombardment (Sinai)	Offensive Patrol (Lebanon)
91 to 100	Bombardment (Any)	Bombardment (Haifa)*	Offensive Patrol (Haifa)

* - See special notes in the Bombardment Mission explanation

Mission Assignment - There are four basic types of missions to which vessels may be assigned; 1 - Defensive Patrol, 2 - Offensive Patrol, 3 - Bombardment, and 4 - Interception. A player is not required to assign an available vessel to a mission, it may remain in port in reserve without any mission (Note: vessels that are in reserve may still participate in Interception missions). A player may have no more than one mission assigned to an area (i.e. you may not have an offensive patrol and bombardment mission assigned in to the same area). Each type mission and the restrictions for it are explained below:

- 1) Defensive Patrol: This mission is a patrol off the player's own main port area (Haifa for the Israelis, Port Said for the Egyptians and Latakia for the Syrians). A Defensive Patrol mission must have at least 1 vessel assigned to it, but no more than 4 vessels may be assigned to a single Defensive Patrol mission. Any type of vessel, except for Landing Craft type vessels, may be assigned to this mission.

A Defensive Patrol mission is considered successful if at least 1 vessel assigned to the patrol

survives the mission in Heavily Damaged or better condition. Any other result is considered a failure.

- 2) **Offensive Patrol:** This mission is a patrol off of the enemy's or a contested coast. A vessel must have a current speed of Medium or greater to participate in an Offensive Patrol mission. Israeli vessels may conduct Offensive Patrols in the Latakia, Lebanon, Sinai, and Port Said areas. Egyptian vessels may conduct Offensive Patrols in the Haifa and Sinai areas. Syrian vessels may conduct Offensive Patrols in the Lebanon and Haifa areas. An Offensive Patrol mission must have at least 1 vessel assigned to it, but no more than 8 vessels may be assigned to a single Offensive Patrol mission.

An Offensive Patrol mission is considered successful if at least 1 vessel assigned to the patrol survives the mission in Damaged or better condition. Any other result is considered a failure.

- 3) **Bombardment:** This mission is conducted off the enemy's or contested coast. At least one vessel capable of conducting a bombardment must be assigned to a bombardment mission. In order to qualify as a bombarding vessel, a vessel must have one of the following: 1) a gun mount $\geq 76\text{mm}$, 2) a Salvo Rocket Launcher, or 3) a Gabriel or SS-N-SA-Styx Surface to Surface Missile (SSM). Other vessels may be assigned to a bombardment mission to act as escorts, but no more than 8 vessels total may be assigned to a single Bombardment Mission. The results of bombardment missions are determined after any tactical battles are resolved. Syrian vessels may not conduct Bombardment missions.

When the Egyptian player is assigned a bombardment mission off Haifa, the Egyptian player secretly rolls a d6 to determine what vessels are participating in the bombardment. On a 1 - 4, the Egyptian player uses only one destroyer that is operating in the Mediterranean as the bombarding vessel; on a 5 - 6 the Egyptian player may use one or two destroyers (player's choice) that are operating in the Mediterranean as the bombarding vessels. If only one destroyer is available, then only one may be used. If no destroyers are available, the Egyptian player still loses the Victory Points for failing to complete the mission. No other Egyptian vessels may be assigned to bombard Haifa. (***Historical Note:*** *The Egyptian destroyers were patrolling in the Mediterranean acting as a distant blockade force. However they could have been called upon for bombardment missions.*)

A Bombardment mission is considered successful if the bombardment (see Bombardments below) is considered successful. Any other result is considered a failure.

- 4) **Interception:** This mission is used by reserve vessels to intercept any enemy vessels that are moving off the player's main port area (either on a bombardment or offensive patrol mission). Any available vessels that were not assigned to another mission (except for Landing Craft type vessels) may be assigned to this mission. The interception mission may only be used if a Defensive Patrol mission encounters the enemy OR if the enemy is conducting an Offensive Patrol or Bombardment Mission and no Defensive Patrol is available.

If a Defensive Patrol mission encounters the enemy, the player may call for an Interception Mission after the Defensive Patrol detects the enemy. No more than 5 vessels may be called out

for an Interception Mission. For the Israelis, the intercepting force arrives on the eastern side of the playing area d6 + 3 tactical turns after being called. For the Egyptians and Syrians, the intercepting force arrives in the playing area d6 + 5 tactical turns after being called. The Egyptians arrive on the southern side playing area and Syrians arrive on the eastern side of the playing area.

If a Defensive Patrol is not available, Interception Missions may be used against enemy Offensive Patrol and Bombardment Missions if the encounter roll, see the Tactical Battles section below, is successful.

When a mission is assigned, the vessels in it must be organized into units, with 1 or more vessels in each unit. There may be no more than 4 units in a mission and all units must enter the tactical playing area at the same time. Vessels in a unit may be no more than 10cm from each other, but may be organized in any manner within the unit. The speed for the unit must also be set at this time it is organized; the unit speed may not exceed the maximum speed of the slowest vessel in the unit. The unit formation and its speed may not be changed in any way until an enemy force is detected.

Campaign Movement and Operating Areas - There are five operating areas in the campaign game which represent the main regions of conflict during the war. These areas are (from north to south): 1 - Latakia (the area around the main Syrian Mediterranean port), 2 - Lebanon (the area off the Lebanese coast), 3 - Haifa (the Israeli coast, including the main Israeli naval port at Haifa), 4 - Sinai (the area north of the Sinai Peninsula), and 5 - Port Said (the Egyptian coast, including the naval base at Port Said). Once vessels have been assigned to a mission and units are organized, the missions are placed in their target operating area in the following order:

1. Place all Defensive Patrol Missions,
2. Place all Offensive Patrol Missions,
3. Check for and resolve tactical battles,
4. Return vessels to port (Note: All Offensive Patrols and any Heavily Damaged or Wrecked vessels must return to port)
5. Place all Bombardment Missions,
6. Check for and resolve tactical battles,
7. Resolve Bombardments,
8. Return all vessels to port,
9. Add up Victory Points for each side.

Note: If there both the Egyptian and Syrian Navies have Offensive Patrol missions planned for the Haifa area, resolve encounters for the Syrian Navy first, then the Egyptian Navy.

Tactical Battles

When forces from opposite sides are in the same area, a check must be made to see if a tactical battle occurs. Use the table below to determine if a surface engagement occurs; roll percentile dice (d100) for each potential encounter. If the die roll falls within the range, a tactical battle occurs and is played out using the 'Bulldogs Away' rules. Either side may roll for the encounter.

Mission Types	Die Roll
Offensive Patrol vs. Offensive Patrol	1 – 60
Offensive Patrol vs. Defensive Patrol	1 – 80
Bombardment vs. Offensive Patrol	1 – 60
Bombardment vs. Defensive Patrol	1 – 90
Bombardment vs. Interception	1 – 60
Offensive Patrol vs. Interception	1 – 40

If an encounter occurs, set up a normal play area (either 6'x4' or 8'x4' or 8'x6') and determine the weather. Defensive Patrols are set up first and may be placed within 2' of their friendly map edge (east for the Israelis or Syrians and south for the Egyptians), then the opposing player sets up his units on any map edge that is not friendly to the Defensive Patrol player. If no Defensive Patrols are in the battle, the opposing forces are set up with players alternately placing a unit on map edge (players each roll a die with the high roll setting up first). However, no unit may be set up in detection range of an enemy vessel. After the units are set up, the battle is ready to be resolved.

A battle is considered over once all the vessels on one side have been sunk or moved out of the play area (vessels may not exit from a map edge that is friendly to the enemy). After the battle any Heavily Damaged or Wrecked vessels must return to port, other vessels may continue on with their mission or return to port at the discretion of the controlling player or if required to do so by the rules.

Bombardments

After any battle, if vessels assigned to bombardment missions were not required to return to port (Heavily Damaged or Wrecked) and still meet the requirements of being a bombardment vessel (it has 1 gun mount \geq 76mm or a remaining SRL or SSM), they may conduct a bombardment. To conduct a bombardment, roll a d10. If the result is 6 - 10, the bombardment is considered successful. Modify the bombardment die roll as follows: +1 for each additional gun mount/rocket launcher/SSM, -3 for each Damaged ship conducting the bombardment. After all bombardments are resolved, return all ships to port and determine the Victory Points for the day.

Determining Victory Points for a Campaign Day

At the end of each day, each player adds up the Victory Points earned for that day from the list given below (*Note: Players only receive Victory Points for required missions*):

Required Mission	Victory Points for Success	Victory Point for Failure
Bombardment	12	-5
Offensive Patrol	10	-5
Defensive Patrol	5	-10

The Israeli Player receives the following Victory Points for sinking or Wrecking Arabs vessels:

Vessel	Sunk	Wrecked
P-4 Torpedo Boat	3	1
T-43 Minesweeper	3	1
Komar	7	3
Osa I	10	5
Destroyer	25	15

The Arab Player(s) receives the following Victory Points for sinking or Wrecking Israeli vessels:

Vessel	Sunk	Wrecked
Sa'ar 1	7	3
Sa'ar 2 Missile Boat	12	6
Sa'ar 3	18	9
Sa'ar 4	25	12

NOTE: A vessel can be Wrecked, repaired and Wrecked again any number of times.

Winning the Campaign

At the end of the sixth day of play, each side adds up the Victory Point totals from each day, then adds points as follows for each surviving undamaged vessel.

Vessel	Victory Points	Vessel	Victory Points
Sa'ar 1	5	Sa'ar 2 Missile Boat	10
Sa'ar 3	15	Sa'ar 4	20
P-4	1	T-43 Minesweeper	2
Komar	8	Osa I	12
Destroyer	10		

The side with the most Victory Points is the winner.

Ship Details

The name and class information for each vessel in the game is given below. Vessels of the same class are grouped together. The vessel information for 'Bulldogs Away' is also included here.

Israel

Crew Quality Level = Good, Command Quality = Average

Reshef, Keshet: Sa'ar 4 Class Missile Boats

Gaash, Hanit, Herev, Hetz, Sa'ar, Soufa: Sa'ar 3 Class Missile Boats.

Acco, Eilat, Haifa, Miznak: Sa'ar 2 Class Missile Boats. Note this class is slightly different than the one listed in 'Bulldogs Away'

Misgav, Mivtach: Sa'ar 1 Class Gunboats.

Name	Size	Dam Mod	Speed	Man.	Fire Control	EO	ESM	ECM	Decoys	Weapons
Sa'ar 4	Medium	+1	Fast	Medium	2 nd	Y	Y	1 st	Chaff x 3	1x76mm auto (FPS) 1x76mm auto (APS) 6xGabriel II (1) 1xHMG (P) 1xHMG (S)
Sa'ar 3	Medium	+1	Fast	Medium	2 nd	Y	Y	1 st	Chaff x 3	1x76mm auto (FPS) 1xGabriel I (3) 1xGabriel I (2) 1xHMG (P) 1xHMG (S)
Sa'ar 2 (M)	Medium	+1	Fast	Medium	2 nd	Y	Y	1 st	Chaff x 3	1x40mm auto (FPS) 1xGabriel I (3) 2xGabriel I (1) 1xHMG (P) 1xHMG (S)
Sa'ar 1	Medium	0	Fast	Medium	1 st	N	N	1 st	Chaff x 3	1x40mm auto (FPS) 1x40mm auto (PS) 1x40mm auto (APS) 1xHMG (P) 1xHMG (S)

Note: All Israeli vessels are equipped with 1 Long Range Chaff Rocket. Only the Sa'ar 4 class carried the Gabriel II type missiles during this time.

Egypt

Crew Quality Level = Trained, Command Quality = Mediocre

630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641: Osa I Class Missile Boat.

401, 402: Komar Class Missile Boat.

Sinai, Assiout: T-43 Class Minesweeper.

331, 332: Vydra Class Landing Craft.

Al Nasser, Al Zafr, Damiet, Suez: Skory Class Destroyer.

Syria

Crew Quality Level = Nondescript, Command Quality = Inept

20, 21: Osa I Class Missile Boat.

40, 41, 42, 43, 44, 45: Komar Class Missile Boat.

Hittine, Yarmouk: T-43 Class Minesweeper.

60, 61, 62, 63, 64, 65: P-4 Class Torpedo Boat.

Name	Size	Dam Mod	Speed	Man.	Fire Control	EO	ESM	ECM	Decoys	Weapons
Komar	Medium	+1	Fast	Small	1 st	N	N	N	None	2x25mm auto (FPS) 2xSS-N-2A (1)
Osa I	Medium	+1	Fast	Small	1 st	N	N	N	None	2x30mm auto (FPS) 2x30mm auto (APS) 4xSS-N-2A (1)
P-4	Small	+3	Fast	Small	None	N	N	N	None	2x21" TT (1) unguided 2xHMG (APS)
Skory	VLarge	-2	Fast	VLarge	1 st	N	N	N	None	2x130mm (FPS) 2x130mm (APS) 2x37mm (FPS) 2x37mm (APS) 2x21" TT (5) unguided
T-43	Large	-1	Slow	Large	1 st	N	N	N	None	1x37mm (FPS) 1x37mm (APS) 1xHMG (P) 1xHMG (S)
Vydra	Large	-1	Slow	VLarge	None	N	N	N	None	2x37mm (FPS) 2x37mm (APS) 1xLarge SRL

Sources

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