



**Special Operations Executive - Operation Boatswain:**

# **Last Contact**

**One step forward, two steps back in solving the mystery**

**Version 1.01**

The Association for the Commemoration of the Fallen Soldiers of the IDF Signal Corps, 2019

**Colonel (Ret) Daniel Rosenne**

# Background

# British – Jewish Agency Cooperation

- **In 1940, Nazi ring threatened the Jewish community in Palestine.**
  - The German army occupied Yugoslavia and Greece and reached Egypt from the West. Pro-Nazi Vichy regime ruled Lebanon and Syria.
    - ◆ Pro-Nazi revolution in Iraq (1941).
  - Fascist Italy and Japan joined Germany in an Axis alliance. The USA & USSR stood aside.
- **The Jewish community put its differences with the British aside and offered cooperation against Nazi Germany.**
  - A secret cooperation was established between the Haganah and SIS/MI6 Section D (Destruction), reorganized late 1940 as SOE (Special Operations Executive).
- **'Friends' (Haganah) network was established in the Middle East & Eastern Europe, supporting MI6 Section D/SOE activities.**
  - Arrangements were kept secret from the Colonial office, the Palestine authorities and Middle East command.
  - In 1940, several secret sabotage training schools for 'Friends' were established.

# Operation Boatswain

- **A Haganah volunteer force was trained for a bold and ambitious action beyond enemy lines – sabotage of a well fortified oil refinery in Tripoli, Northern Lebanon.**
- **The operational idea: denying aircraft fuel from Wehrmacht planes, prior to the planned British invasion of Lebanon and Syria (operation 'Exporter', which was delayed to 8<sup>th</sup> June).**
- **On Sunday, 18th May 1941, the *Sea Lion* Motor Cutter sailed from Haifa, never to be seen again.**
  - Aboard the boat were 23 Haganah members and SOE Officer, Major Sir Anthony Palmer.
- **To this day, their disappearance remains a mystery.**

# SOE Report, 2 May 1941

- ***“Thirty-five men [‘Friends’] have been intensively trained at TEL AVIV in all forms of irregular warfare, and they have also received instruction in seamanship. These men have been on an intensive and highly disciplined course for a period of some four months....***
- ***the [men] will be used (if we are in time) for attacks on two or three vitally important targets in SYRIA which the military have called upon us to undertake. These targets are the TRIPOLI topping plant and...***
- ***These will be highly dangerous missions – much more in the nature of military operations than sabotage...”***

Source: TNA HS 3/154

# The *Sea Lion* Diesel Cutter

- Built by Messrs. Thornycroft, London (Reading), 1939.
- Twin screw, twin engine, 60-foot cutter, with a speed of 19.5 knots.
- The vessel was a high-powered seagoing launch which belonged to the marine flotilla of the Palestine Police, with a regular crew of four or five, equipped for three to four days patrols.



Vessel underway on the Thames during builder's trials, spring 1939  
©National Maritime Museum, Greenwich, London

# In the service of the Palestinian Maritime Police, a mast was installed



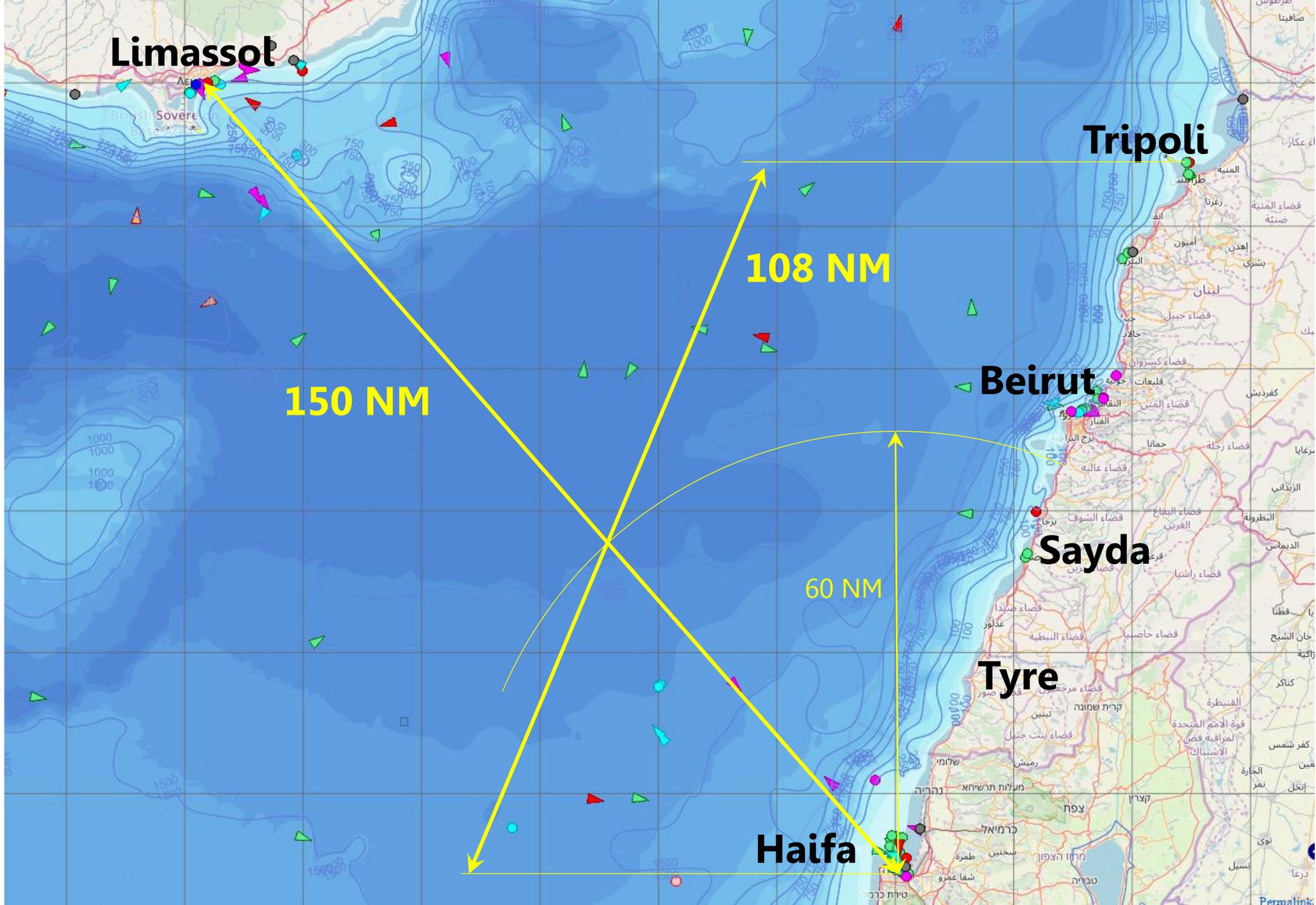
Courtesy of Haganah Historical Archives

**The 23  
Haganah  
Volunteers  
on a  
Practice  
Run**



Courtesy of  
Haganah Historical Archives

# Operation Area



Courtesy of  
[open-seamap.org](https://www.open-seamap.org/)

# **Wireless: Technical Background**

# Wireless Communications

- **The Haganah Signal Service supplied equipment but had no operational responsibility.**
  - In protest of the SOE cooperation arrangements, Simcha Even-Zohar, Head of the Signal Service, resigned in February 1941, and was replaced by Yerachmiel Belkin.
- **The boat was equipped with a suitcase Morse transmitter/receiver.**
  - Designed and manufactured by the Haganah Signal Service.
  - Frequency range: 3.5 to 7.5 MHz; Transmitter: single tube, 8 Watts, crystal controlled, CW; Receiver: direct receiver, two tubes.
- **Powered by a 6 Volts car battery, enabling 8 hours of operation.**
  - The boat opened communication for a short period every several hours; Coast station listening continuously.
- **Equipment capabilities covered all the operation area, although daytime range was limited.**

# A Haganah Suitcase Transmitter/Receiver

- Made for clandestine operation.
- 3 to 6.5 MHz.
- Morse code only.
- Low transmit power: 8-10 Watts
- 13 x 27 x 45 cm, 7.2 Kg.
- Secret facilities produced about 500 sets until Israel was established:
  - Sets for Illegal Immigration ships were secretly produced in France and Italy.
  - SOE was provided with 50 sets, used by agents in Greece and Yugoslavia.



This set, a later version, was used in Palmach Tamar Network  
Courtesy of Ilan Rozenman

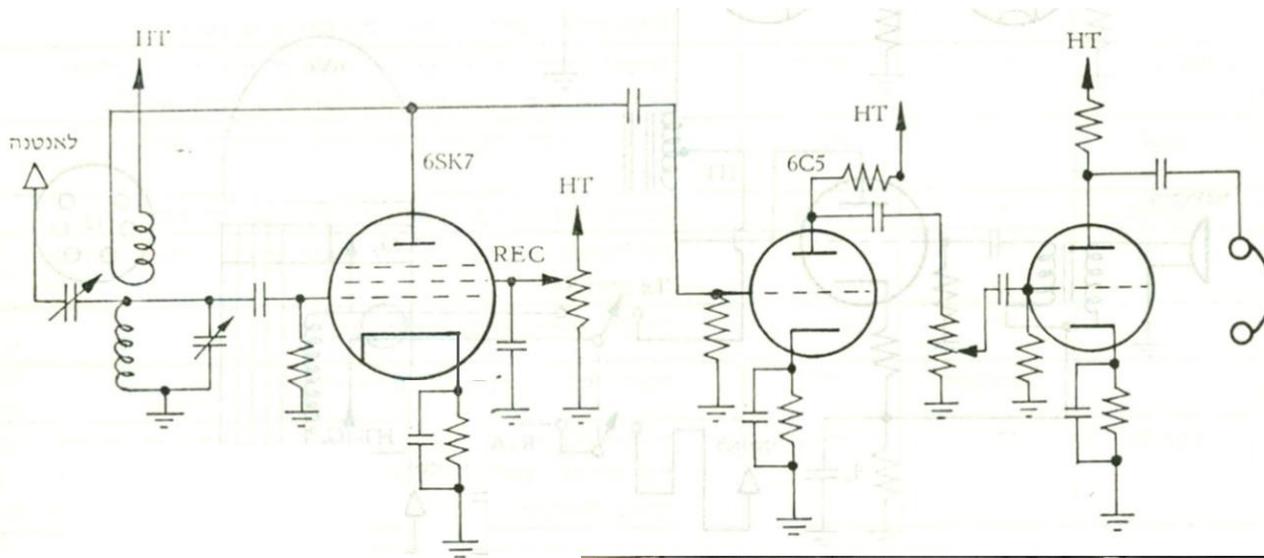


From The Association for the Commemoration of the  
Fallen Soldiers of the IDF Signal Corps collection

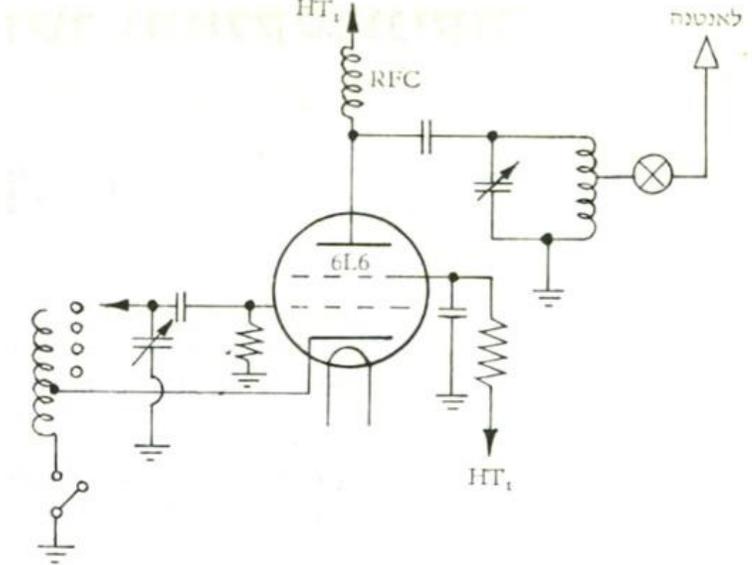
# Overtime, the Suitcase Transmitter/Receiver improved:

Higher Transmitter Power, sidetone, crystal replaced by variable frequency oscillator

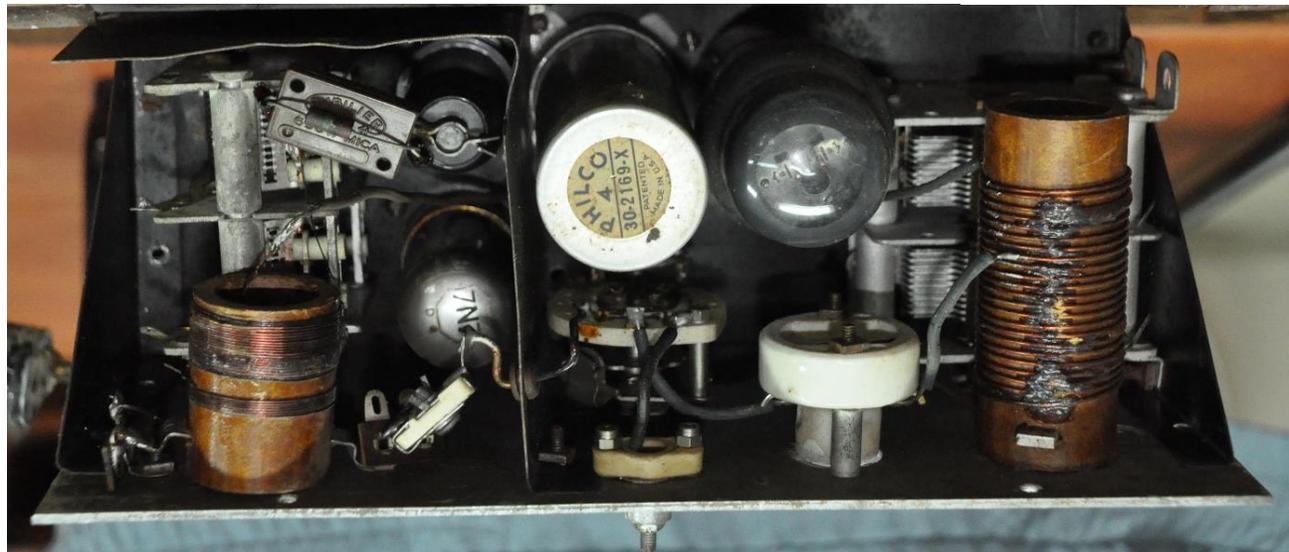
## Direct (Regenerative) Receiver



## Single Tube Transmitter



Receiver  
6N7 ,6SK7



Transmitter  
6V6

# Quartz Crystals

- Quartz crystal oscillators were developed for high-stability frequency reference during the 1920s and became common for transmitters frequency control in the 1930s.
  - Piezoelectric crystal, properly cut and mounted, behaves like a high quality resonant circuit, on precise frequency.
- During WW2, Crystals were based on natural crystals, mined in Brazil. Since the 1950s, synthetic crystals are used.

FT-243 Crystal, used during WW2



Miniature sealed crystals used in modern electronic devices



# Marine Distress Wireless

- **The international convention for the Safety of Life at Sea (SOLAS) was agreed in 1914.**
  - WW1 delayed its adoption. It was adopted in 1929.
- **SOLAS regulations required ships to carry wireless equipment and keep wireless watch.**
- **1931 Madrid radio Regulations adopted 500 KHz as international calling and distress frequency for Morse code.**
- **1938 Cairo Radio Regulation added 1,650 KHz as the international calling and distress frequency for Radio Telephony.**
  - Palestine, as a "dependent Territory", was party to these conventions.
- **The *Sea Lion*, built in 1939 and regularly operating off the Mediterranean coast, was most probably equipped with 1,650 KHz Radio Telephony.**

# Aboard the *Sea Lion*

- **Two antennas clearly visible, rigged from a short front mast to the main mast.**
- **Probably:**
  - One for Police network, 2480 KHz.
    - ◆ *Sea Lion* call sign: ZCA135.
  - The second for 1,650 KHz international calling and distress Radio Telephone channel.
- **Due to the very short time for arrangements prior to sailing, the wireless operator probably used one of the existing antennas.**



# **Wireless Communications During the Operation**

# Wireless Operator: Ephraim Veiman, 1920-1941

- **Born in Siedlce, Poland. Immigrated to Palestine with his family.**
- **Studied at Geula Tel Aviv high school, joined the Haganah in 1935, and was a member of the Signal Service.**
- **Served as Sergeant, wireless operators' instructor, Palestine Auxiliary Police Force.**
- **Volunteered to join operation Boatswain.**



Courtesy of Israeli MOD Memorial Site

# Communications During Operation

- **The *Sea Lion* sailed from Haifa on Sunday, 18 May 1941, 0700.**
  - Heavily loaded boat with men and equipment, rough sea, East wind.
- **No known written mission order.**
  - We don't know the planned sail route.
- **No known written signals order.**
  - We don't know who controlled the wireless communications.
- **The boat made the first wireless contact shortly after leaving Haifa.**
- **Last contact, 1100:**
  - ***"Boat OK about 60 [Miles] from Haifa."***
- **No known contact ever after.**

# Report on Last Wireless Contact

- **From:**
  - Jerusalem SOE HQ, Major K. Alexander (operations officer).
  - Sent: 27 May 1941.
- **To:**
  - DISTN S.O.2: Operations, SOE HQ, London.
  - A.C.S.S.: Assistant Chief of the Secret Intelligence Service (MI6).

Courtesy of TNA, HS 3/211

**FILE** *Syria* **ACTION** 16

NR.S.O.2/095  
JERUSALEM ALEXANDER DISTN S.O.2. A.C.S.S., G.7. III II I  
27.5.41. 1638 28.5.41. 0645 BST  
CXG 206

ADDRESSED LONDON 206 REPEATED CAIRO 127.  
MY IMMEDIATELY PRECEDING TELEGRAM.

*landing?*  
G. (GR. MUT.) BY SEA IN NAVAL LAUNCH ATTEMPTED ON  
MAY 18TH BY 22 FRIENDS LED BY D.H.96 *Palmer* REPEAT 96. WIRELESS,  
O.K. RECEIVED AT 1100 HOURS ON MAY 18TH. REPORTING BOAT O.K.  
ABOUT 60 <sup>miles?</sup> FROM HAIFA. SINCE THEN NO NEWS. WATCHER AT TRIPOLI  
REPORTS BOAT NEVER REACHED THERE. MAY HAVE ENCOUNTERED  
FRENCH NAVAL UNIT WHICH LEFT BEIRUT ABOUT MAY 18TH. ONLY  
APPARENT POSSIBILITIES ARE CAPTURE OR FOUNDERED. } *telegraph*  
H. INTENSIVE PROPAGANDA EFFORT FOR SYRIA AND IRAK AND BY  
AIR FROM PALESTINE AND BY +36 FROM TRANS JORDAN .  
*21477*

+ AS CODED.

TP 2334 29.5.41. (MR). *PR*

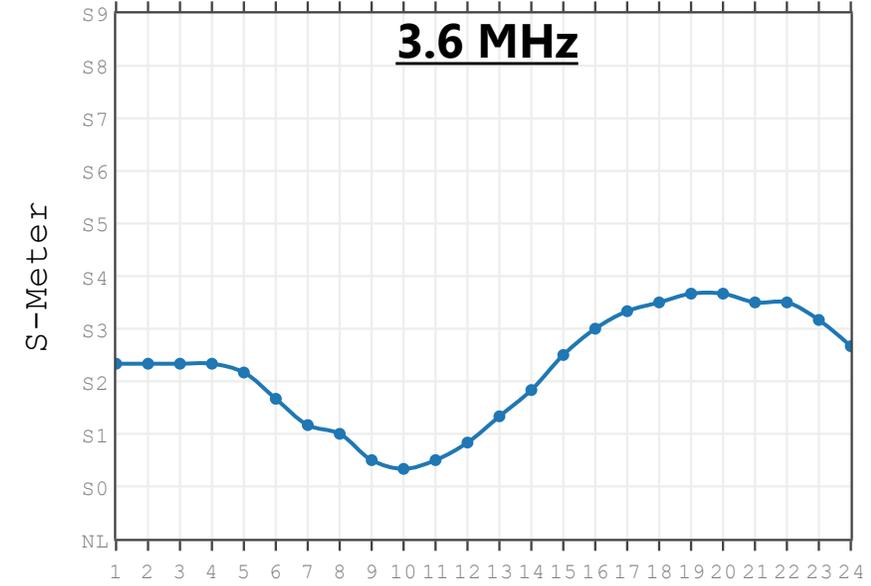
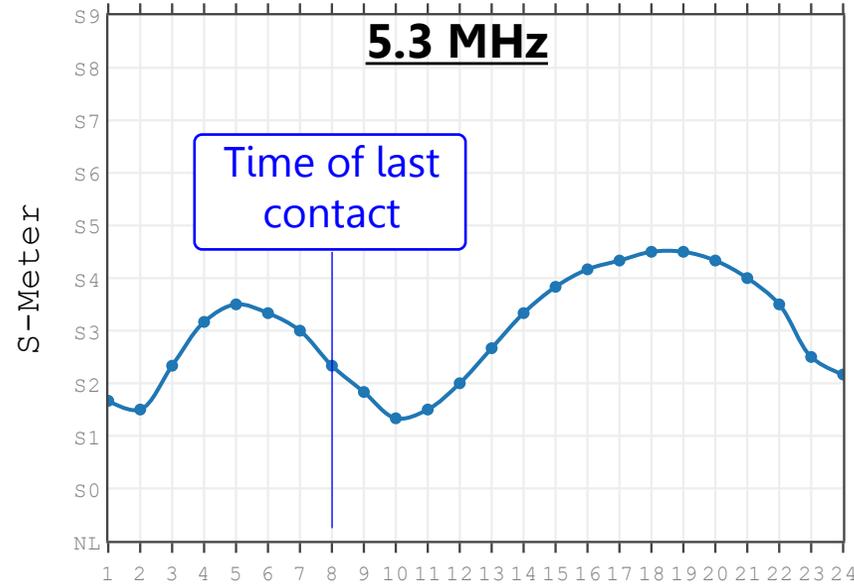
*Op*

30 MAY 1941

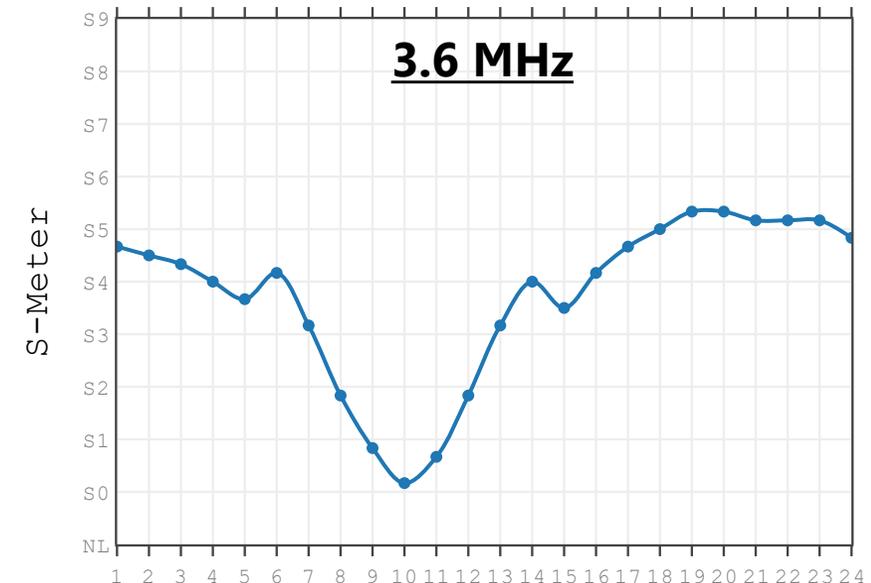
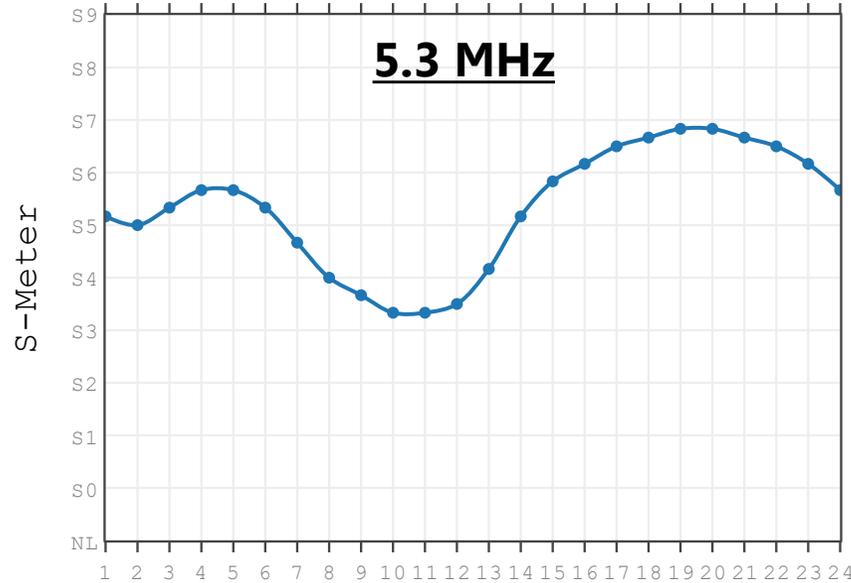
# Wireless Propagation Predictions, May 1941

## 60 NM Distance

- SSN = 49
- Transmitter = 5 Watts
- Antenna = 7 m whip
- Time: UTC



## 145 NM Distance



Calculation using  
VOA CAP Online

# New Light on the Mystery:

## Air Search



# Air Search

- **RAF 84 Squadron Blenheim IV aircraft carried out a reconnaissance mission, looking for a drifting boat, morning of 21<sup>st</sup> May.**
  - No similar RAF activity was detected.
- **Excerpt from 84 squadron operations records:**

*“Sgt. Bailey does recco for drifting motor boat off N. Palestinian coast”*
- **This raises several questions:**
  - Why was this air search unknown, and never reported by SOE?
  - Why **“drifting motor boat”** and not **“missing motor boat”**?
  - Did the Sea Lion send a distress call on the 1,650 KHz international distress channel?

# ● RAF Squadron 84 Operations Record (TNA AIR 27/696/7):

21793 Wt. 38505/3593 400,000 12/39-MGC & Co-51-3658

SUMMARY OF EVENTS.

R.A.F. Form 540 Page No. /.

*See instructions for use of this form in K.R. and A.C.I., para. 2869, and War Manual, Pt. II., chapter XX., and notes in R.A.F. Pocket Book.*

OPERATIONS RECORD BOOK

of (Unit or Formation) 84 Squadron, R.A.F., M.-E. No. of pages used for day .....

Place	Date	Time	Summary of Events	References to Appendices
	1941			
AGIR.	21.5.	A.M.	aircraft bombed and strafed RASHEID aerodrome. P/O. Keble-White returned from EGYPT with spares. Sgt. Bailey does recco for drifting motor boat off N. Palestinian coast.	"
HABBANIYA.	"	"	All our aircraft moved to "Y" landing ground.	"

## ● Other details are missing:

Ref.F. 765 A.

Owing to records being destroyed immediately prior to the evacuation from Greece, and to the fact that the squadron was required for operations inspite of lack of equipment and personnel, and also to the fact that there were three detachments operating simultaneously in three different countries, proper records not being kept by these detachments individually, it is impossible to compile accurately Forms 765 A. However all the detachments, at Aqir, H.4. and Habbaniya, were operating directly under their "Station Operations" during the months May and June. These Headquarters should therefore possess records appertaining to operations and expenditures of S.A.A. and Bombs.

*W. Russell*  
Squadron Leader, Commanding,  
No. 84 Squadron, R.A.F., IRAQ

**RAF  
Blenheim IV  
over Syrian  
Coast, 1941**



Courtesy of  
Imperial War Museum

# Drifting Motor Boat

- **Diesel Failure is still today a major cause of losing control and maritime distress calls.**
- **Properly maintained Diesel engines are reliable, but there are many reasons for failure:**
  - Fuel systems, overheating, electrical failure, air leak, etc.
- **In an over-loaded boat in a rough sea, there is another danger: sea water intake through the diesel exhaust**
  - Repair of this failure can't be done at sea.

**Small  
overloaded  
boat: *Shark*,  
a sister  
boat, at  
Jaffa harbor**



# Summary

# Summary: Wireless Communications

- **Evidence of orderly communications on 18<sup>th</sup> May.**
- **Reasons for air search – unknown.**
- **Main assumptions:**
  - The boat didn't reach its destination on the 18<sup>th</sup>, attempted again on the 19<sup>th</sup>, and failed.
    - ◆ Why was communications not established on the regular channel? No answer.
  - The boat sent a radio telephone distress call (Mayday) on 20<sup>th</sup> May, using 1,650 KHz international distress channel.
  - Due to the secret nature of the mission, the RAF was not aware that the drifting boat is taking part in an SOE operation.

# The *Sea Lion* Mystery

- **2008 Israeli MoD study, released 2011, reached the following conclusions:**
  - *Sea Lion* was never involved in fire incident with Vichy forces and never reached Tripoli.
  - The boat disappeared due to sea conditions, boat failure or a failure in the explosives carried on board.

# Conclusions

- **Boat and crew were lost at sea.**
- **High probability of boat failure due to overload and rough sea conditions.**
- **The reason for the air search could have been a distress call on 1.650 KHz international distress frequency.**
  - However, the 21<sup>st</sup> May air search failed to find the boat.

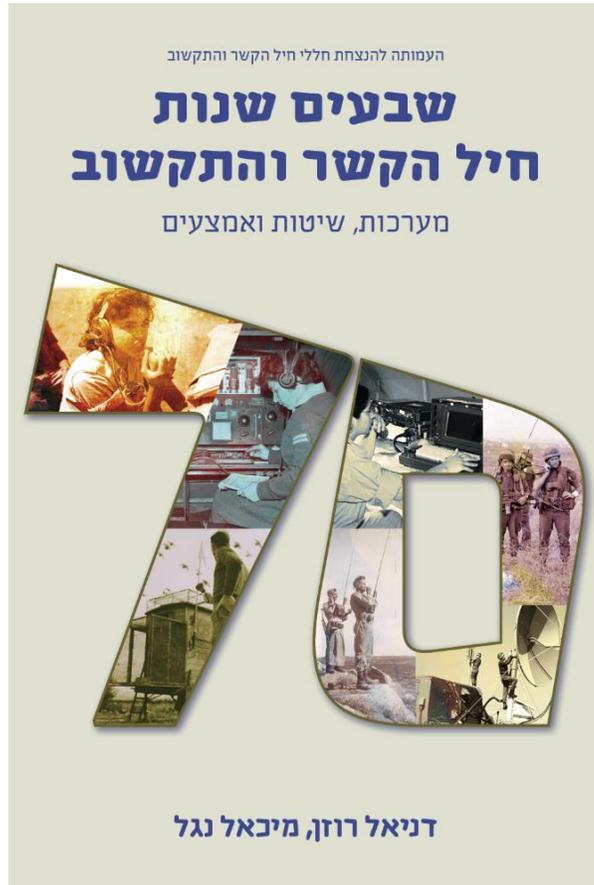
# Ariel Temes Memorial Beit Hakerem, Jerusalem

**The enemy reached the country's gates;  
My beloved son went to battle;  
He went to defend his homeland;  
Alas, my hero, my dear son, fell.**

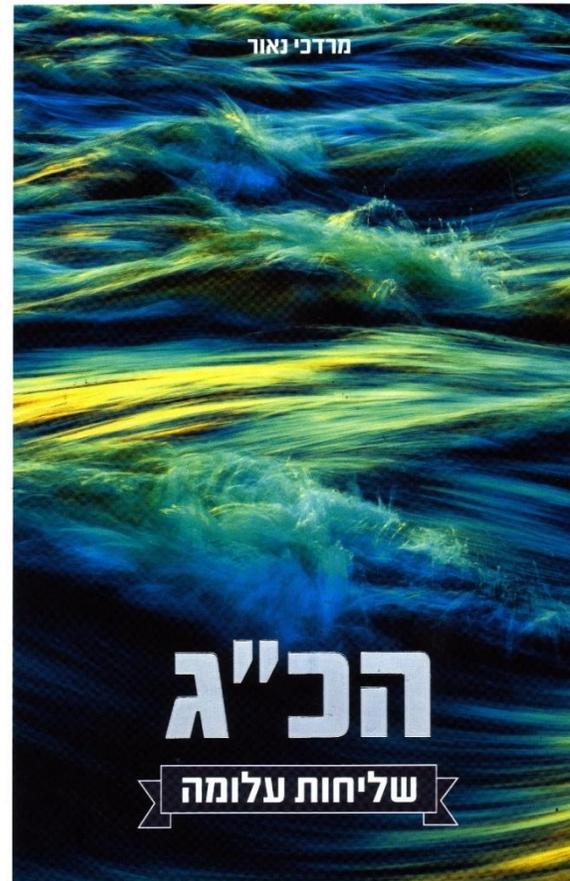
**Ariel Temes  
1919-1941**



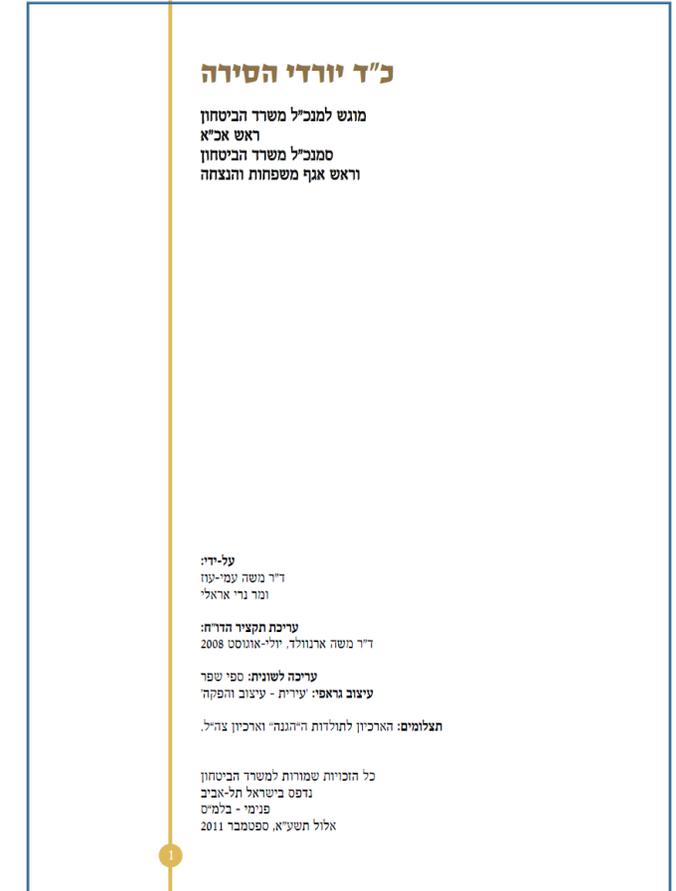
# Additional Information



Daniel Rosenne, Michael Nagel, **Seventy Years of the Israeli C4I Corps: Systems, Methods & Equipment**



Mordechai Naor, **The Kaf Gimel: Obscure Mission**



Moshe Ami-Oz, Neri Areli, **The twenty-four who went down with the ship**, Israeli MoD



**Hide not thy face from me in the day when I am  
in trouble; incline thine ear unto me: in the day  
when I call answer me speedily.**

Psalms, Chapter 102, Verse 2

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of the IDF Signal Corps, Yhaud-Monoson, Israel, 2019

[www.amutakesher.org.il](http://www.amutakesher.org.il)