



EWCG January/February 2019 Newsletter

Volume 1 Issue 1

A Happy New Year to all from your newsletter editor, Chris Geib, aka Mauser on the EWCG Forums. May you have a very prosperous and happy 2019. I hope you like the newsletter format. If you have pictures, suggestions, etc. send me your comments to mauser1951@att.net.

NEWS

1. The new 2019 Enigma codebooks are completed. To find them, on the website, you can click on the “Army/AF Codesheets” tab on menu strip, or for Kriegsmarine, click the “Kriegsmarine” tab and then click on the “M4 Advanced Procedures” sub tab. Near the bottom you will see a couple links in red, one for last year’s materials, and the next for the 2019 Advanced sheets. Please note, The K-book is common across a number of radio nets and code systems, so it is linked at the main subpage. The links will take you to a DropBox folder with a number of sub folders. There are code sheets for HYDRA, NEPTUN (a M3 net), THETIS, and TRITON radio nets. I’ve included the RHV cipher system this year for your interest and fun. Finally in this folder is a sub folder for the Kurzsignal and Short Weather (WKS) systems. Expect message challenges using these systems in the near future.
2. Now, take a look at the “Links” tab on the menu ribbon. Go down to the lower right and you will see the link to “The Library.” The very first two entries are codebooks that were used by the US military and various maritime businesses etc. during the war years and briefly after. The balance is some of the source materials in German that I derived much of our code books from. I have several additions yet to go as they need to be scanned. If you have any of these types of materials, and can provide in PDF format, I will be happy to upload these into the library. These are all public domain documents, feel free to download and use as you wish.
3. I am currently building a 3D printed M4 Enigma. I am looking for drawings, pictures, AutoCad files, anything that I can use in this project. My biggest challenge right now is getting detailed information on the Beta and Gamma thin wheels. Pictures of this project will be shared in this newsletter as construction progresses.
4. Well that’s the news for this version of the newsletter. Look forward to more news next newsletter.

Feature Article

As you recall in the last newsletter, I started an article on Kriegsmarine radio communications during WWII. I used a presentation with permission from Capt. Jerry Mason, USN (ret.). I covered some of

EWCG January/February 2019 Newsletter

the requirements to become a radioman on a U-boat and some of the equipment. This issue I'll cover the individual pieces of radio equipment and some of the radio circuits used during the war.

Also, as you recall, here is a table of radio gear typically found in the radio room aboard a U-boat.

Transmitters and Receivers

<u>Transmitters</u>	<u>Frequency</u>	<u>Power</u>	<u>Primary use</u>	<u>Comment</u>
Telefunken S406	3.75–15 MHz	200 W	U-boat to shore	Standard Tx.
Telefunken T200FK39	3–24 MHz	200 W	U-boat to shore	
Lorenz Lo 40K39	3–16.7 MHz	40 W	U-boat to shore	Backup Tx.
Telefunken Spez 2113	300–600 kHz	150 W	Beacon	
Lorenz Lo10UK39	37.8–48 MHz	10 W	Transceiver	Workup only
Lorenz Lo1UK35	41.55–45.75 MHz	10 W	Transceiver	
<u>Receivers</u>	<u>Frequency</u>		<u>Primary Use</u>	<u>Comment</u>
Telefunken E437S	1.5–25 MHz		Shore to U-boat	Standard Rec.
Telefunken T9K39	1.5–25 MHz			"Main"
Telefunken E52	1.5–25 MHz			"Köln"
Telefunken E381S	15 kHz–20 MHz			Backup Rec.
Telefunken T3PLLä38-2	15–33 kHz/70–1,200 KHz		Beacon & VLF receiver	
ELA 1012	145 kHz–21.8 MHz		Broadcast receiver	
Radione	150 kHz–22.2 MHz		Broadcast receiver	Entertainment

Let's start with the Telefunken S 406 S2/36 Transmitter:



This rig was 19 x 30 x 18 inches and weighed a whopping 198 pounds! It operated on 7 vacuum tubes, produced 200 watt output and required 220 V AC power.

EWCG January/February 2019 Newsletter

Next, we look at the Lorenz Lo40K39 Transmitter:



This radio was 40 watt, ran on 220 V AC had 3 vacuum tubes and weighed in at 163 pounds. You might wonder where you get 220 volts AC on a U-boat that runs on DC batteries. The radio room had a motor generator set that produced the required AC power.

This next radio is interesting as it was used as a beacon to allow other U-boats to home in on convoys. We are talking about the Telefunken Spez 2113 Transmitter:



Operated from 300-600 kHz, 150 watt CW, had 3 vacuum tubes, again powered by 220 V AC, and weighed in at 24 pounds.

Next newsletter I'll cover some of the receivers that are in the above table. And then finally, we will present U-boat radio nets/circuits. Watch for the next couple newsletters to finish this presentation!

EWCG January/February 2019 Newsletter

Challenges

Time for Enigma cipher challenges. Last newsletter, Message #3 was an M4 advanced message. The answers to the questions are:

1. What U-boat? U-68
2. How many torpedoes? 2
3. Name of the target ship? City of Cairo

Good job if you got these!

This newsletter Message #4 will be a major doozy for you. It is a Kurzsignal message. You will have your hands full. Be sure you have all the materials you will need to decode this. I'm using codesheets from the new 2019 pack for all these messages this time.

Message #1

This first message is based on the 2019 Luftwaffe key for January 22. Kenngruppen is in use for this message.

2335 1tle 1tle 80 BFM IOU

BDWUK MWPRB UNHWN GMJBB XOGEQ WKIEO JUOXW XTOCV UJFHW KOFEZ
ILNRK ZQTFU YQOXE BVVDH TLIIF OEWTS

Message #2

Message #2 for this newsletter uses the NEPTUN cipher. This cipher uses the M3 three-wheel Enigma. Advanced procedures are in effect. Take note on the keysheet that the Grundstellung setting is in the first column

[NEPTUN]

MAU 2335/22 002 037

CVAK VPAX PULD SULI ZEAX KPQS TTBA MWFO GHSH YDOH MZDE FDUH
QSUD GQBM MGXF BZDY MXBP URHH NEEZ NRUN JART JIGD UCCL MSBW
AITE FKMP CLUV JPJA YJRN DUFZ PZTX CSNI MZFE TVZP ERRU CVAK
VPAX

Message #3

EWCG January/February 2019 Newsletter

Here we are going to submit an M4 challenge based on a KTB report from uboatarchive.net. To read this message, you will need the following:

- Enigma M4 Keys HYDRA 2019, January
- HYDRA Bigram Tables 2019
- Kenngruppenbuch
- Marinefunknameliste U-Boat

[HYDRA-ADV]

MAU 2340/22 003 31

QWRF AHIK LHOZ CRDU DFTJ ZALR NVAC RGIS NQMD YKYK IQPW JPBW
JWQT BQEO JXYL DWER YQVA XIEV VKTF AJUK YSVV KNGB QGNA ZUTI
UHUQ LKML BCKH DSLZ ZCUH QWRF AHIK

Questions:

1. What was U-Boat?
2. Answer question in message

You can email me with your answers, OR, wait for the January/February newsletter where I will answer these questions. Good luck!

Now, had this been a Short Message from the U-Boat it would have looked something like this:

Message #4

This last message will be the toughest you've ever done. Take a look at the Quick reference Guide for Short Message Encrypting and Decrypting. The Kriegsmarine created this procedure to counter the allies ability to radio direction find submarines while they were transmitting. A good radio operator could Morse code this out in under 30 seconds. You will need 7 documents and a message sheet to decode this. Good Luck! One clue: the date is 22 January 2019.

[HYDRA-ADV]

BB

QBO

OWFT NMLB QFQJ JIPP GODP GER

QBO

Questions.

1. What is the U-boat?
2. What did he do?
3. What kind of ship?

EWCG January/February 2019 Newsletter

In Closing

Another newsletter has come and gone. I hope you are enjoying the new format and the Enigma challenges. Again, I want to remind you that if you belong to the website, but NOT the forum, please do check it out and consider joining. We will have more cipher challenges there in the coming months. Much of what I'll be posting there will be M4 advanced procedures and Short Message Procedure traffic. If you would like to submit a challenge, Email me the message. Please include the key information needed to decode the message so I can verify it. If you have Enigma pictures, please consider submitting them for the newsletter.

Here is a picture of wheels I, II, III of my 3D printed Enigma project. These are wired and electrically correct. When finished, I will have made a complete M4 Enigma, 95% of which will be 3D printed.



So for now, I'll say goodbye as I sit here 3D printing an M4 thin reflector body for my 3D printed Enigma machine.

Until next time,

Mauser sends.

EWCG January/February 2019 Newsletter