

Happy
Holidays!

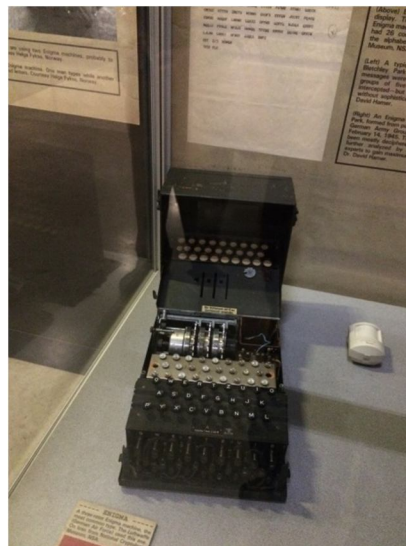
EWCG November/December 2018 Newsletter



Greetings and Happy Holidays to all Enigma fans, collectors, makers and those just interested in historical cryptography! I'm Chris Geib (aka Mauser), your new webmaster and newsletter author. I bring greetings from Bruce Culp, my predecessor, who has told me that treatment is going extremely well and he is doing much much better. I think between myself and Bruce's wife, we might have gotten him to actually go out and go fishing. I've given thought to the format of this newsletter and I hope you like it. Send me your comments to mauser1951@att.net.

NEWS

1. Enigma Reloaded 2018. – Enigma Reloaded 2018 was held on the air from 22 September to 6 October 2018. It was an international amateur radio contest to raise awareness of the Enigma, the efforts by the Poles, Bletchley Park and the US, to decipher Enigma messages and provide valuable intelligence to the Allies during WWII. W8BI, the Dayton Amateur Radio Association (DARA), original home to the National Cash Register (NCR) Company was one of the many Activation stations for the event. The National Museum of the United States Air Force houses a Luftwaffe 3-wheel Enigma machine (see below). NCR here in Dayton, Ohio was heavily involved with the Enigma decoding efforts and helped build a number of bombes for GCHQ in England. W8BI, recorded 370 individual radio contacts, mostly from Europe during the contest.



2. On 11 November, we celebrated the 100th anniversary of the end of WWI. The "War to end all wars", the "Great War", and other names, was as it turned out, a prelude to what was yet to come in Europe. Even 100 years later, we can all think of how WWI affected our own lives. In 1914, my great-grandparents put their teen age son on a steamer bound for the US. They sent

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him away to avoid the draft in Germany and possibly certain death in the war. He became a Master machinist, my mother was one of his children. On my father's side of the family, my grandfather and his brother both fought (and survived) in Europe during the final stages of the war.

3. The New Year is right around the corner and I'm trying to get the 2019 Enigma codebooks completed. For those of you who participate or monitor the EWCG Forum, (<http://enigmaworldcodegroup.freeforums.net/>) know that we provide Enigma keying material and various challenges during the year. Come check it out and join in the fun! I now have keying material and codebooks for Luftwaffe and Wehrmacht machines, and in 2019 we will have Kriegsmarine cipher keys for TRITON, HYDRA, and NEPTUN radio nets. As far as codebooks, the forum now has access to the WKS (Weather Short Signal), and soon an English translation of the Volume 1 (Satzbuch) for the Kurzsignal 1944. And that leads me to the last news worthy item,
4. I am building a library that will be publicly available via the forum. In it, I will have a number of items. This is a partial list:
 - a. Kurzsignalheft 1944, Volume 1
 - b. Kurzsignalheft 1944, Volume 2
 - c. Der Schlüssel M, Verfahren M Allgemein, M. Dv. Nr. 32/1
 - d. Reservehandverfahren Allgemein, RHV, M. Dv. Nr. 929/1
 - e. Schlüsselheft Nr. 16 zum RHV (the bigram tables)
 - f. Wetterkurzschlüssel, WKS (Short Weather Signal)
 - g. Signalschlüssel für den Funksignaldienst, 1939, M. Dv. Nr. 114

These are PDF copies of original documents (in German of course). If you just don't have a couple hundred thousand dollars in your back pocket for one of the rare original copies, you can download these for free. As I get more to add to the library, I'll update everyone here in the newsletter. Look for the opening of the library in the forum.

5. Well that's the news for this version of the newsletter. This will be a regular feature from now on.

Feature Article

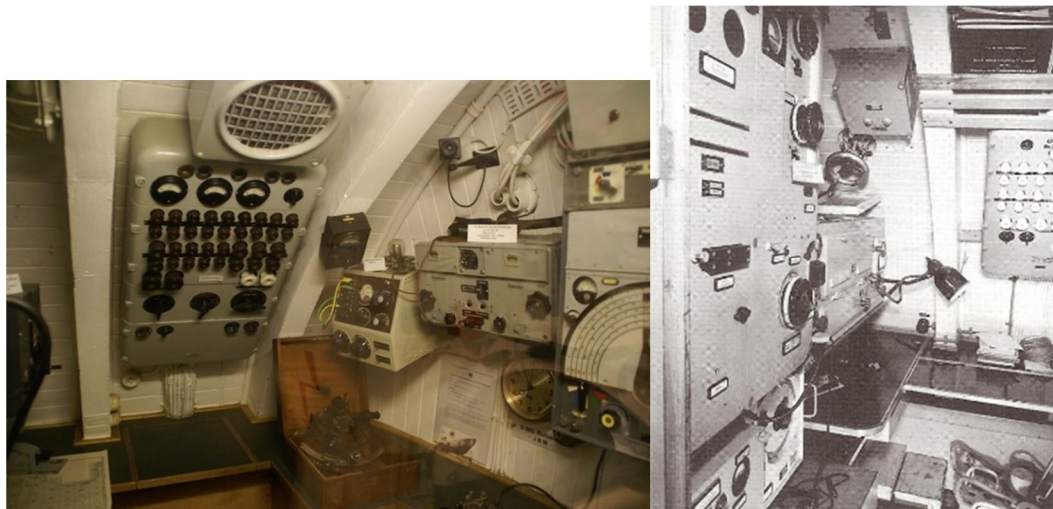
This newsletter I have some great material on German radio communications during WWII. I'm deriving this from a PowerPoint presentation kindly provided with permission by Capt. Jerry Mason, USN (ret.). A copy of his presentation can also be found at <http://uboatarchive.net>.

So, to be a radioman (Funkmaat) on a U-boat, the seaman went through about 17 months of training. The U-boat radio course was 3 months long. Interestingly, U-boat training was also only 3 months long! I'm sure submarine school at Groton today is much longer.

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There were generally up to 4 men assigned to the radio room on a U-boat. No less than two were on duty continuously, pulling 12 hours every 24. It was broken down into three 4-hour watches during daytime and two 6-hour watches at night. Interestingly, radio personnel also manned the listening room when the boat was submerged.

The radio room on U-boats was generally just forward of the Control room. The sound room was usually right next to the radio room. They were separated by wooden walls and hallway doors. They were tight and small, only 5 feet by 5 feet, and crammed with gear.



(Note the Enigma machine in lower right of 3rd picture)

On the next page, is a table of transmitters and receivers, frequencies and uses of each.

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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	Workups 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

Next newsletter I'll cover the individual pieces of radio equipment and some of the radio circuits used during the war.

Challenges

Time for Enigma cipher challenges. This newsletter the only clue you'll have is the messages are based on content in this newsletter or KTB messages from uboatarchive.net. So let's get started with a 3-wheel Enigma I Wehrmacht message.

Message #1

Use the U-571 codesheet for 23 Nov, 1944, no Kenngruppen, start to decrypt at MXUNX. Use reflector B for both messages #1 and #2.

2105 1tle 1tle 65 IUV ZXD

MXUNX GIIIJ XAMNV HNQUM TLEKI CJYMW MUCXM GEOAJ FPQBR XTJJA JBHHV
BLRBI OYHBC

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Message #2

For this message, use 24 November 1944, this uses Kennguppen, so start decoding at ITTWL

2345 1tle 1tle 151 QJH VEH

BXPZG ITTWL SWOYT XRXYO LOFXT PUYGK PWUDE JUMTQ YSJJZ SPCNH CBRJW
JKJJN MLJXT WLHFP GQVCW CWMOX ZTOCL MBSNS UKVJJ BEHVZ ZQLYT CEJ CZ
CDOLY FMPMC PDXOY FSKFU KAAQX RNLEH GBLPJ HONDA

Message #3

Now for a much more difficult challenge. During the war, the Kriegsmarine used a much more involved set of procedures to send and receive messages from the U-Boat fleet. From Fleet HQ to the U-Boats, messages were generally sent using a "long hand" procedure. From U-Boats to HQ used a "short hand" procedure called the Kurzsignale. When you look at the Advanced Procedures on the website, you will not find that, yet. It will be added in 2019. For now, to read this "long hand" message, you will need the following:

- Enigma M4 Keys TRITON 2018, November
- Bigram Tables 2018
- Kennguppenbuch
- Marinefunknameliste U-Boat

MGK 2126/06 004 51

JBBD KQLL JVFC IMZC MYIK BLWX ZFU Y KBXL FLUN DZDY CPXQ QANA HPCX
BOQJ WTJZ QFVR LSOY VL DL XCGT RWUG AHTO GSIC VNZE SHIJ SMJF ZWIT
VBEB SWGN MUCC PUWG TKBT CBGG VDMY WFXX QROF CUIS PICI DBKH VZIF
USZM PXJI HHKV WMXC DOIP OPKT WPVQ DXPX FCRD NXGJ JBBD KQLL

Questions:

1. What U-Boat?
2. How many torpedoes?
3. Name of the target ship?

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:

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⌘⌘

QXW

OFDV UQWK UEEZ JYWW OELB APSI CVD

QXW

Message #4

OK, I decided to end this newsletter with a WKS weather message.

QQ2355Z

D ZLRZ IMDM VQEQ JMKR XXNT VO

In Closing

Well, that about finishes this newsletter. I hope you enjoyed the new format and the Enigma challenges for this edition. 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 want to do Army and Air Force 3 wheel messages for us to be challenged by, please submit.

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

Until next time,

Mauser sends.