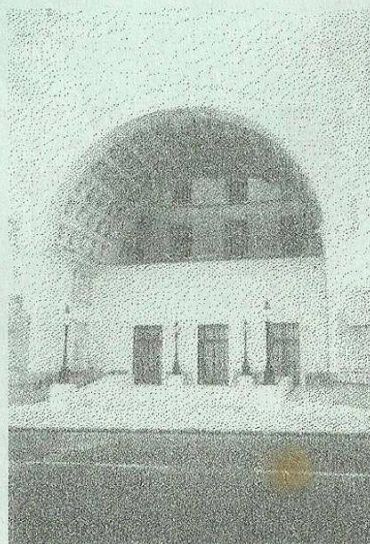
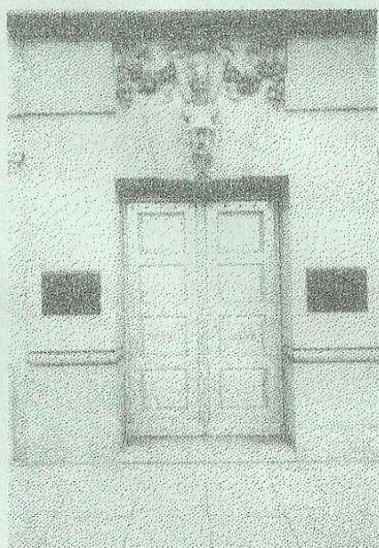
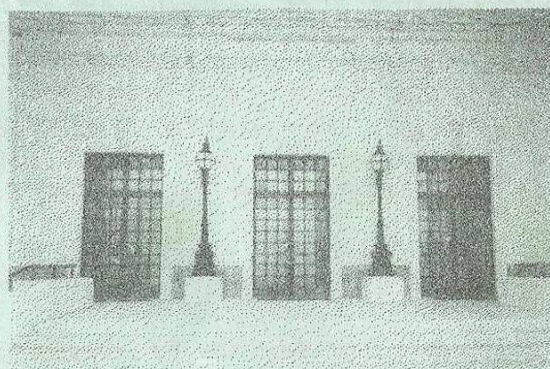
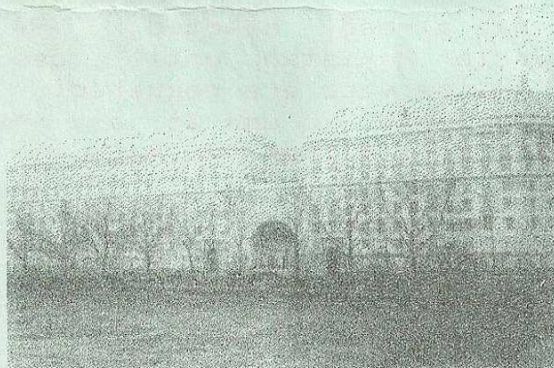
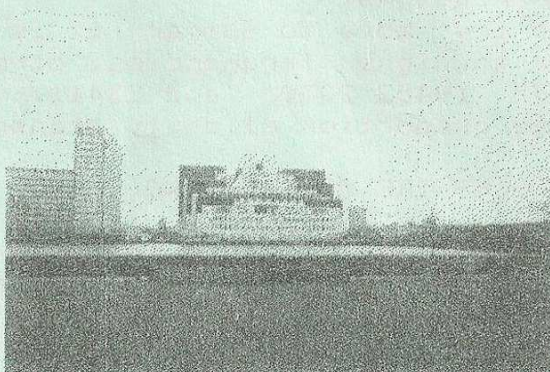
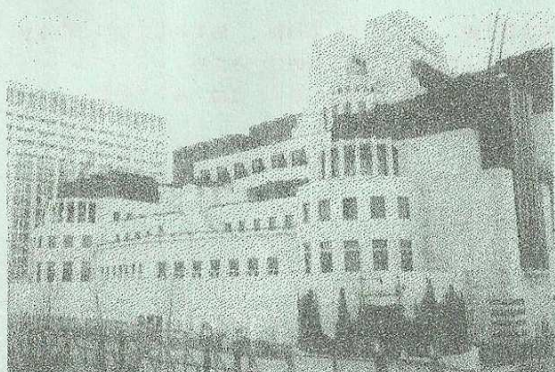


ENIGMA

EUROPEAN NUMBERS INFORMATION GATHERING
AND MONITORING ASSOCIATION



STATION NEWS AND LATEST LISTENING COMPILED FROM ENIGMA
MONITOR REPORTS IN BRITAIN EUROPE AND WORLDWIDE

ENGLISH LANGUAGE STATIONS

LINCOLNSHIRE POACHER

Transmission continue daily from ;

10.00 to 14.00 on 15682 (or 15610) 14487 & 16084

15.00 to 17.00 on 11545 13375 & 12603

18.00 to 22.00 on any three of the following

6485 6959 7337 9251 10426 12603

Signal strength on some of the 18.00 to 22.00 have improved considerably and modulation quality is more towards AM - this may suggest a different transmitter site is used for some transmissions.

With the move to Summer it is possible that the station may move to higher frequencies, others previously used are ;

16475 19452 20306 and 23411. Jamming continues to affect a large proportion of daily transmissions.

LINCOLNSHIRE POACHER TWO

An addition format using a new interval signal but the same voice format has recently started transmissions, initial operating patterns are still to be established but try ;

10.00 to 12.00 on 19884 & 20474

19.00 to 21.00 on 7484 & 8320 (no third channels found)

Jamming on the high frequencies has already started, 7484 suffers severe interference from Radio Pakistan until close down around 20.30. All logs of this new service are required.

The maximum transmitters of both services in use at any one time is 5. Signals are much weaker in Britain than the main Lincolnshire Poacher broadcasts.

THREE FIGURE ENGLISH

Still heard Monday to Friday and on alternative Saturday or Sunday s on a frequency between 9265 and 9292 kHz, calling 274 broadcast start at 08.20. (Messages prone to technical faults and breakdowns in mid-flow!)

READY READY

Operating on a rolling schedule this station is often hard to find - we have recently confirmed that transmissions are repeated 20 minutes after the first broadcast on a different frequency.

19.00 on Monday 4740 repeat not found

20.30 on Monday 4740 repeated at 20.50 on 4460 kHz

22.00 on Wednesday 5235 repeated at 22.20 on 4740 kHz

Operates a more active Morse version. See next Morse supplement.

PHONETIC ALPHABET STATIONS

Transmissions from this vast network continue on a wide frequency spread 24 hours per day. Based on listener reports we present the most upto date information available on stations heard in 1994.

The times given are a guide and you may well find transmissions at other times.

<u>FREQUENCY</u>	<u>CALLSIGN</u>	<u>REPORTED AT</u>
2120	CID/MIW	2245 0045
2270	JSR	1930 2000 2030
2515	VLB/MIW	2045 2145 0045 0145
2628	FTJ	2030 2100 2215 0000
2743	ULX	1900 2100 0030 0100
2953	SYN	2030 2130
3150	PCD/ART	1900 2000 2030 2100 2230 2330 +
3270	KPA	2015 2115 2215
3419	ART	1900 1930 2030 2100 2200 2330 +
3640	VLB	1945
3840	YHF	1730 2000 2030 2100 2200 2300 +
4165	SYN	2330 2130 2230
4270	PCD	2000 2030 2100 2200 2230 2300 +
4360	CID/MIW	1645 1745 1945 2145 2345 0045 +
4463	FTJ	1630 1730 2000 2100 2200 2300 +
4560	YHF	1630 2000 2030 2100 2330
4780	KPA/ULX	2115 0015 0115
4663	VLB/YHF	1745 1945 2345 0145
4880	ULX	1630 1700 1800 1900 2030 2100 +
5091	JSR	1600 1800 1930 2030 2100 2200 +
5230	VLB/MIW	1545 1745 2045 2145 2345 0145
5339	DEM	16.30 Very rare call-sign. Daytime
5473	ART	1700 2000 2030 2100 2200 2300 +
5629	SYN	1630 1730 2030 2230 0030 0130
5820	YHF	1600 1630 0000
6270	ULX/YHF	1500 1600 0700
6500	PCD	1600 0700
6745	VLB/CID	1545 1645 1745 2045 2145 2345 +
6840	EZI	2000 2230 0100
6912	DEM	1630 Very rare call sign. Daytime
7323	???	0600 New freq.
7445	KPA	1615 1715 2215 0015 0715
7540	JSR	0700 0730
7605	VLB/MIW	1445 1745 0745
7613	GPD	Very rare call-sign - last heard early 1993
7760	ULX	1600 0700 0730
7918	YHF	1600 1800 0900
8127	SYN	1545 1630 2045 2130 2345 0045 +
8465	CID/SYN	1600 2045 2230 2330 0030 0130 +
8641	MIW	1615 1715 1915 2115 2215 2315 +
9130	EZI	1500 1630 2100 2200 2230
9402	???	0830 New freq.
10125	CID	1445 1545 1745 2045 2145 2345 +
10352	VLB/SYN	0700 0730 0830 0930 1030
10648	YHF	0930
10820	VLB	0745 0845 0945 1045 1145 1245 +
10970	MIW	0815 0915 1015 1115 1215 1415 +
5715	ZWL	very rare call-sign. Evenings + Daytime

PHONETIC ALPHABET STATIONS continued.

11565	EZI	1000 1800 2100 2200 0100
12747	SYN	
12950	MIW	0715 0815 0915 1415 1615 0615
13533	EZI	1000 1300 1700
13921	CIO	0745 0845 1445 1545
14750	MIW	0615 0715 0915 1115 1215 1415 +
15980	EZI	1300 2100
17170	CIO	
17410	EZI	0830 0930 1100 1130 1300 1700
17966	CIO/SYN	0745 0845 1445
18178	MIW	0615 0715 0915 1415
19715	EZI	0830 0930 1100 1200
20425	???	
20740	SYN	
23195	???	

+ indicates traffic continues at interval after noted times.

Frequency list by Call Sign order with starting times after the hour.

ART	0000	ON THE HOUR	0030	MINUTES PAST HOUR
CIO	0000		0045	
EZI	0000		0030	
FT	0000		0030	
JSR	0000		0030	
KPA	0000		0015	
MIW	0000		0045	
OEM			0030	(Suffixes heard: 3,4,8,9)
PCD	0000		0030	
SYN	0000		0030	
ULX	0000		0030	
VLB	0000		0045	
YHF	0000		0030	
ZWL	0000		0030	(Always appears to use a 1 suffix)

These are the times you are likely to hear the transmissions starting. The call signal is sent prior to the message. Remember that if the call sign only is sent CIO CIO CIO a message will follow, CIO 1 CIO 1 CIO 1 indicates a test and for example CIO 2 CIO 2 CIO 2 means no message will follow, we are however uncertain as to the meaning of 3's and 4's which sometimes suffix call letters. 5's, 8's, 9's, 88's etc.

We have recently received the results of direction finding readings taken on two of the higher frequencies, 10648 and 13921 kHz. Reading indicate that these particular frequencies are transmitted from a location in Israel.

We would welcome reports on these stations and perhaps you may be able to fill in some of the missing frequencies and call signs. I believe this is the most comprehensive list of Phonetic Alphabet stations published for some years and we are most grateful to the following contributors for the help we have received, Richard in *****, Keith in Bognor Regis, Brian in Crawley and Fritz in Switzerland plus a number of other readers who sent in information concerning these stations.

MYSTERY STATION (NANCY ADAM SUSAN)

Following our appeal for information concerning this station the interest has been first class and I am pleased to file this report.

This you may remember is the station on 5530 kHz at 20.00 hrs; signal strength in Britain is poor but seems to be better in the South of England - good results are best achieved in Europe.

The station uses the 1948 Phonetic Alphabet and the mysterious words are in fact NANCY ADAM SUSAN - they are very over-pronounced and sound like YANKIE A-DAN SUZZAN, this is why we have had such difficulties with the station.

The format is :

NANCY ADAM SUSAN	- Repeated -
QUEEN THOMAS CHARLIE (x3)	- (QTC) - I have a message for you
NANCY ROBERT 3	- NR 3 - Message Number
GEORGE ROBERT 11	- GROUP - I have 11 groups

The full alphabet used by the station is ;

Adam, Baker, Charlie, David, Edward, Frank, George, Henry, Italy, John, King, Lewis, Mary, Nancy, Otto, Peter, Queen, Robert, Susan, Thomas, Union, Victor, William, X-Ray, Young, Zebra.

At the end of the message the station sends 'ROBERT ADAM' twice - which is AR in reverse - meaning end of message.

If the station does not have a message it sends the normal call sign NANCY ADAM SUSAN - followed by 'QUEEN ROBERT UNION' - QRU - I have no traffic for you. - several times

The information in this article was made possible by the receipt of several cassette recordings and a large monitoring effort, I would like to thank Marcel in France, Alan in Solihull, Richard in **** and Mike in Kent for the help we received.

This station is also featured in Langley Pierce's book which provides further information on its operations.

At the present time it is transmitting on the following schedule.

6715 kHz at 16.30 UTC	-
5530 kHz at 20.00 UTC	- NAS - Female Intro/Female Message
4130 kHz at 21.00 UTC	- MAS - Female Intro/Male Message

We would be very interested in any reports on this station and also areas where the signal strength is good. Readings in France are at present S2-3 which would suggest that the station is located outside Europe; we have asked our Middle East monitor to take a listen.

COUNTING STATION (CYNTHIA VOICE)

Full Message Transmissions

21.00 on Monday	6797/5716	17.00 on Friday	17567/18726
00.00 on Tuesday	5046	21.00 on Friday	7588 / 5413
18.00 on Wednesday	17567/18726	13.00 on Saturday	10529/ 7547
18.00 on Wednesday	10346/12238	14.00 on Saturday	20872/18225
21.00 on Wednesday	7588 / 5413	12.00 on Sunday	13555/16086
21.00 on Wednesday	9049	14.00 on Sunday	12110/12168
21.00 on Thursday	6797 / 7588	14.00 on Sunday	10723
21.00 on Thursday	9049	15.00 on Sunday	11123
		21.00 on Sunday	5715 / 4505

Control Message Transmissions Daily

00.30	7541 / 5205	13.30	16434/13423
01.30	7763	13.30	8560 /11440 Not Same
06.30	5205 / 9224	17.30	5205 / 8556
07.30	13581/16451		

NANCY ADAM SUSAN

Please see feature page

GERMAN LANGUAGE STATIONS

STATION N N N (Sends letter N in Morse Code for 5 Minutes prior to transmission).

Heard in the early morning and mid-evenings.

Monday	at 21.00 on 4644	Friday at 04.00 on 5072
Wednesday	at 21.00 on 5177	Friday at 21.00 on 5177
Thursday	at 20.00 on 4024 (now 5821)	

THREE NOTE ODDITY(Sends 3 Note Electronic tone for 5 Minutes prior to transmission).

This is a difficult station to find due to its monthly frequency changes.

April only-Friday	at 04.00 on 4327
April only-Friday	at 19.30 on 4583 (repeat of 04.00 hrs)
April only-Saturday	at 20.45 on 6640
April only-Sunday	at 21.15 on 4751

It was originally thought this station only sent one broadcast per week but others have recently being noted.

The Sunday transmission has changed radically since the turn of the year. January, February and March's messages all feature 5F groups that have never appeared in the 1993 messages. Another new feature of the messages sent in 1994 are
.....continued.

THREE NOTE ODDITY (CONTINUED)

the distinct breaks in the groups. So far though, no two messages have contained consistent blocks of groups. For example, January's messages had breaks after every five groups whereas February's message only had a break before the penultimate group. Because this station sends no identifier or group count, we believe the first four groups are some kind of header perhaps indicating the recipient. There are plenty of groups which appear in the first four groups across a number of different month's messages.

STATION 'NUI NOICHEN' (So called due to particular pronunciation).

There are two stations which sound very similar, 'Nui Noichen' and another German language station which is To help we have listed the 3 Figure call numbers heard so far.

NUI NOICHEN - 130,217,278,564,498 774, (774 uses a variant format with paired groups)
OTHER STATION 471,527,168,620,842,319

NUI NOICHEN (messages sent in single groups, often uses 4F 'decode key')

Monday at 20.00 on 6775 - repeated on 5775
Tuesday at 20.00 on 6775 - repeated on 5775
Tuesday at 06.30 on 7379 - repeated on 8177 and again on 9280
Thursday at 06.30 on 7379 - repeated on 8177 and again on 9279
Saturday at 08.00 on 13485- sending 44444,456,456,456,000 repeated.

If no message is sent the station sends the Nil identifier for 5 minutes then changes to the repeat frequency. If a message is sent then the repeat follows on the next frequency after the message ends. Messages all end with '000 000' - pronounced 'nül'.

OTHER STATION - Always ends transmission with '00000'.

This is not part of the same organisation but sounds very similar. Messages sent in paired groups very slowly.

Monday at 22.15 on 5315 This station is irregular
Tuesday at 22.30 on 4576 Tuesday 19:00 10460
Wednesday at 21.30 on 5360
Friday 20.20 8035

GERMAN 2 LETTER STATIONS (Send 2-Letters of Phonetic Alphabet, 'Delta Tango', 'Mike Delta' etc, and Electronic tones for 5 minutes starting on hour or half hour, best try 16.00 to 00.00.

Active Frequencies are; 2707 3228 3262 4543 4594 4821 4888
5015 5284 5732 5770 6853 7404 7532 7740 7753 7858 8173 9325
9450 also during early evening and daytime in Europe 10177
10460 10500 10740 11108 11545 12092 12314 13572 13890 14622
15610 16055 16220 16414 17430 18195 18575 19295 19755 20350

Listen out for call signs Mike Delta & Delta Mike which are in English.

the present schedule.

NOTES

WED. evening D-M
transmissions have
recently moved to 5340.
It is likely that Monday's
have done so also.
5748 may no longer be active.

Frequencies not at present active are 9457 8188 7585 7315 6901 4832. We would appreciate any logs of Swedish Rhapsody at times other than those listed.

One particular station gives good reception in Europe and may be based closer than the Americas. The station features a polite YL with the word "Attencion". Operates daily.

Mon	07.00	5415
Mon	08.00	7530 or 7525

SPANISH STATION CONTINUED

Mon 09.00	6795	Fri 06.00	6800
Tue 09.00	6795	Fri 07.00	7846
Wed 08.00	7530	Fri 08.00	7885
Thur 07.00	5415	Sat 09.00	6795
		Sun 07.00	5425

Try also 7887 8186 8136 7864 8872 5835 - all possibly active.

~~~~~  
~~~~~

ENIGMA NEWS FROM CHRIS

We really hope that you are enjoying ENIGMA Newsletter and appreciate all the letters and information we receive. I must apologise if we have not replied to your letter; over 90 readers have joined ENIGMA and the level of reader participation is very high. Unfortunately we produce the Newsletter in our spare time (and try to keep listening) so please bear with us ! But, keep writing.....

We will also answer as many questions as possible in our letters page. Every single log we receive is used to produce our latest listening section.....

Your comments and information, logs and observations are the success of ENIGMA and very much appreciated.

We hope to continue to bring you a quality Newsletter and in our September issue will set out our aims for the group, I hope that ENIGMA will cover the following subjects:

Voice Number Stations -
Morse Number Stations -
Single Letter HF Beacons -
'Pointless', Mysterious and Bizarre Transmissions -

We will define these in our September issue in greater detail.

IN ISSUE 6 OF ENIGMA NEWSLETTER
DEADLINE AUGUST 1ST DEADLINE AUGUST 1ST DEADLINE AUGUST 1ST

Part 2 of our Morse Special

"New" Morse Station Log-Book Section

Spying By Numbers - John Griffiths

Plus

Station News and Latest Listening

Simon Mason Writes

EAST EUROPEAN AND RUSSIAN LANGUAGE STATIONS

'BULGARIAN BETTY'

Daily at 13.55 to 14.05 on 4487 kHz. Czech language.
A Morse variant of this station remains active. See next Morse supplement.

STATION YT YT YT (Sends a morse call sign YT prior to and in-between each message, live female announcer).

Monday	at 06.30 on	4424	Thursday	at 18.00 on	4424 (occasional)
Monday	at 18.00 on	4424	Friday	at 20.00 on	4643
Wednesday	at 18.00 on	4424			

May operate on other days and at other times.

BUGLE STATION

Last heard several years ago this is believed to be part of the 'Ready Ready' set up, sends Bugle call prior to messages

Thursday at 19.30 on 4740 only heard once in April.

Other possible frequencies for this station are, 6675, 5500 & 5600. The station was quite infrequent even during its more active period between January 1989 and March 1990.

'GRAVEL VOICE' (This station uses a very rough sounding slavic Male announcer and is again infrequent). Probably Czech language.

Last reported at 00.00 on 2287 kHz

Again an irregular but very distinctive, also noted twice in late 1993 around 3320 kHz in the early morning. Also 6.3 MHz region. early evening.

RUSSIAN COUNTING MAN*

This is a recent discovery and needs more attention, the station is live with several Male operators, the format consists of Counts from 1 to 10 and certain phrases. Messages are rare.

Try Daily at around 17.58 - 18.03 on 4018 kHz (AM)
Timing is not always accurate so keep trying.

STATION BARBARAR (BARBARA)

Heard in Amsterdam on 17.09.92 and 03.08.93 in the mid evenings on 4432 kHz, Male Slavic announcer - live voice, Words like; Karol, Gustav, Josef, Barbarar, Maria, Ursula & in the second broadcast, Rajzda, Igor, Wladimir, Anna, Nicolai, Dmitri. Worth listening out for !!!.

* A second Slavic counting man operates on 4992 (USB) in early morning. Probably Polish language. They share several similarities.

DLX (Sends VVV de DLX in CW 5 minutes prior to all messages)

Present transmissions are sent on the hour to the following schedule;

23.00 - 04.00	3280	5301	11002
05.00 - 08.00	5301	6758	11002
09.00 - 11.00	6758	8141	11002
12.00 - 16.00	6758	8141	14977
17.00 - 21.00	3280	5301	8141

Frequency not at present active are 6282 and 4601, some transmissions are voice and some CW, identification numbers have stayed the same and the station has not adjusted to BST.

RUSSIAN MAN

3 distinct services continue on a wide range of frequencies, we will try to look at these in more detail in issue 6.

Russian Man in Russian - Natural Voice

Russian Man in Russian - Hollow mechanical sounding

Russian Man in English -

} Formats differ between these 2.

"GOVORIT RADIO RAM CHETIRYE" ("RADIO RAM FOUR SPEAKS")

I hope you will not mind if we give this station a mention. We first heard it in October 1993 and have taken a curious interest in it ever since. It operates on 3 simulcast frequencies;

Try 4745 5715 & 6700 at 21.30 on Sunday (DSB RC)

You cannot miss the station, it sends a wide (at least 10kHz) band signal with an ear splitting tone upto 45 minutes before the message. At approximately 21.33 a live Male or Female announcer starts with the words "Govorit Ram Chetirye",* then follows about 10 minutes of conversational style information and sometimes towards the end strings of numbers inter-spaced with the frequent words Drab/Noi.

It is sent in a mode difficult to resolve without suitable receiver. (4745 is the best audio) and I guarantee it will drive you nuts trying to work out what is going on. It was suggested that the station is some kind of MET set up, but I could not imagine any airliner trying to follow this information! I have searched old magazines (and new ones) along with frequency guides but none seem to mention this station.

In addition to the Sunday messages I have also heard it on occasional Monday s, Wednesday s and Friday s. Real MET information from the CIS is transmitted regularly on 8939 and 6630 kHz if you wish to compare. At the end of the message the tone comes back on and the 3 transmitters switch off one at a time upto 30 minutes after the broadcast. I can highly recommend this station if you enjoy an ENIGMA.

* This announcement is frequently omitted. (Often very unprofessional - whispering, giggling, laughter, shrieks, coughs and clicks enliven these broadcasts!)

THE STRICH (Sends a 3 figure identification followed by / 00 - very rarely sends a message but is widespread in both voice and CW but hard to find due to only 5 minute transmissions).
 ID's 017, 018 + 287 unaccountably send for 10 mins.

		ID			ID
Mon	0630 CW	5150 035	Thur	0400 CW	5150 ?
+ Mon	0730 CW	5860 552	Thur	0630 CW	6640 042
Mon	2000 CW	5520 558	Thur	0700 CW	5670 018
Mon	2030 CW	4465 287	Thur	8100 CW	8100 553
Mon	2100 SLAVIC	4465 755	Thur	2000 CW	5520 558
(1st Mon of Month)			Fri	5150 CW	0430 284
Thur	1230 CW	9180 312	Fri	0700 CW	5670 018
Tue	0630 CW	6640 047	Fri	0730 CW	5860 552
Tue	2000 CW	5520 558	Fri	2000 CW	5520 558
Wed	0600 GERMAN	6750 496	Sat	2000 CW	5520 558
Wed	0630 CW	5090 035	Sat	2100 CW	4465 287
Wed	0730 MCW	9030 507	Sun	1300 CW	8100 553
+ Mon	0730 CW	5550 017	Sun	2000 CW	4465 287

This is one of the most difficult stations to follow, some agents receive daily, some weekly and others only monthly calls. We have recently noted that 2 new identifiers have received CW messages - which, with this station, is very rare. *

The station sends voice transmissions in English, German and two unidentified Slavic languages; only frequencies known to be active in April are produced above. + simultaneous

The best voice transmission to listen out for is at present operating only on the first Monday of each month at 21.00 on 4465 kHz. Any logs of THE STRICH are very much appreciated.

NEW STAR RADIO (TAIWAN)

We have only received one report of this station but I can confirm that it is still operating on 8300 kHz in the afternoon period and in the late evenings.

SINGLE LETTER HF BEACONS

Active in 1994 and reported to date are the following ;

3090 L	3180 P	3195 R	3861 V	4040 F	4080 P/C
4301 S/C	4325 R	4453 R	4570 V	4643 V	5205 P/V
5305 P/S	5306 C/D	5880 C	6506 V	6967 C	7038 D
7039 C/S	and C/D	7451 R	10457 V	10872 C/D	

3290//3806//3808 C V's often exhibit variable irregular spacing even over short periods. 4570 has recently been sending ...

We are hoping to produce a feature about Single Letter High Frequency Beacons for a future issue and would appreciate log s information and comment concerning these mysterious operations. No one seems to have successfully identified the purpose or location of SLHFB's.

ACHTUNG ACHTUNG The longest Voice message ever heard was from the Russian Man who in March sent 401 groups on 8074 kHz at 19.00 - the message lasted over 2 hours ENDE ENDE.....

Letters to ENIGMA

Welcome to Letters to ENIGMA and another packed post bag of interesting questions, first off languages....Fritz writes from the South of Switzerland and asks why we deliberately write our German numbers on the cover in a particular way? Fritz says they are written:

Null, Eins, Zwei, Drei, Vier, Fünf, Sechs, Sieben, Acht, Neun.

Fritz also says that if you used "Fünf" & "Neun" in daily language you would be considered nuts! The answer to the question is really not very easy; some stations seem to change the numbers to make them easier to understand over the air, also no numbers stations use Zwei because it sounds too much like Drei so they all use Svo for the number 2. Staying on the subject Steffan in Germany tells me that some German numbers stations still have a Saxon (East German) accent but are coming from West Germany, and finally on German numbers Jake in Amsterdam feels that the 3 Note Oddity voice has a distinct Austrian inflection!

From German numbers to Russian, and Peter in Saffron Walden asks about the "Russian Man" numbers. I am pleased to help with this question and hope that all our readers will find this useful; the numbers are "spoken" in the following way:

1 Adean, 2 Dva, 3 Tri, 4 Chetirye, 5 Pyet, 6 Shest, 7 Syem, 8 Vosyem, 9 Devyet, 0 Null. I keep this in my log book and find it really helps when listening for identification and group counts. Peter also mentions the 2 different "Russian language" Russian Men, the first is the one we refer to has natural voice and the second is the one which sounds sort of tinny or whiny!

Calum in Isle of Lewis Scotland ask if we would review the new numbers station book - 'Intercepting Numbers Stations' by Langley Pierce. Well, we have pleasure in enclosing a review written by ENIGMA reader Mike Chace in this issue.

It is also a pleasure to welcome Mr Ted Allbeury to the ENIGMA group. You may have read some of Mr Allbeury's books - with titles such as "Secret Whispers", "No Place to Hide" & "A Wilderness of Mirrors". I am sure you can guess the subject matter.

ACHTUNG ACHTUNG! - "A GCHQ instructor informed me that...All Radio Officers must be able to count from 0-9 in all languages and that all countries are doing it" meaning Number Stations. **ENDE ENDE!** (anonymous contribution).

Moving out of Europe for a moment several readers have asked if we know of any South African numbers activity? We are not aware of any but if any other readers have any information we would be very happy to receive it.

And right round the World greetings to Ashley in New Plymouth New Zealand and all at the NZ - DX Times, pleased you enjoy ENIGMA.

Staying overseas and on the subject of Lincolnshire Poacher, our ENIGMA man in Dhahran has been monitoring the high frequency transmissions on 14487 15682 and 16084 and reports that the jamming (which is very strong in Britain) is very weak in Saudia Arabia. He suggests that the jamming transmitters may be situated in Europe. In a bid to locate Lincolnshire Poacher I am asking for anyone who may be visiting Cyprus to contact ENIGMA; the other interesting thing about Lincolnshire Poacher is the new "LP2" second service (see station news) which is very distant indeed; could this be situated in the Far East ?

Marcel in France sent in some interesting points, he ask if DFC37 and DFD21 were perhaps rented to the US Forces in Germany to send messages to people in Eastern Countries, after all the German Government gave facilities to Radio Liberty and Radio Free Europe.

Marcel also wonders if some of the messages may be for spy fishing vessels roving in European waters; perhaps they use cryptographs to avoid the mis-adventure of the US vessel PUEBLO which was caught by the North Koreans with KW7 crypto machines on-board.

ACHTUNG ACHTUNG! - Did you know the British spy Geoffrey Prime was using a Grundig Satellite (maybe model 1000 the old model with the S-Meter in the centre front panel) a receiver given to him by the Russians ! ENDE ENDE! (anonymous contribution).

Michiel writes from Doorn in the Netherlands and is DX editor of the "Radio Amateur Magazine" back in 1985 Michiel heard a numbers transmission in the 49 mb, at 6135 kHz, he wrote to the users of this frequency - Radios Free Europe and Radio Polonia, both replied with verification ! (copies of which we received at ENIGMA) - as Michiel says, the mystery deepens.

Now a letter from Bill in Maidenhead who asks about direction finding, Bill wonders if it is worth investing in a directional loop ? This is a subject I would like to ask other readers to help with ! The professionals use very sophisticated equipment but is it possible to build something yourself ? Any technical experts who would like to send in information would be very welcome. Another reader in Wales suggested buying some old DF equipment from the surplus store - again any information would be appreciated.

May I take this opportunity to thank everyone who wrote to us recently and for the information we have received.

WHY YOUR LOGS ARE IMPORTANT....every single station log we receive is entered onto a sheet for each station; the sheet covers Monday to Sunday 00.00 to 23.00 hrs and we insert the frequency in the space. These sheets build up the operating patterns times and frequencies and provide the basis of our ENIGMA Logbook and Latest Listening Section - the most up to date and accurate information is provided by YOU ! **THANK YOU.**

SIMON MASON WRITES...SILENT STATIONS 1989-1994

It is no surprise, given all of the major changes in Eastern Europe in the last 5 years, that the Number Station scene has mirrored these events. Many stations have disappeared forever, relics of a distant age - however one at least has risen from the grave. Known to Number Station monitors as Bulgarian Betty this station haunted the airwaves for many years with its 333 or 555 call up in the Czech language....

Si Si Si Pyat Pyat Pyat. An acquaintance of mine who used to be in the Finnish border guard told me of the many times he had to endure this station as Betty used their frequency of 4030 kHz night after night.

In December 1990 the station vanished but some time later in July of 1993 a friend at RAF Chicksands found the station on 5311 kHz at 13.55 UTC with a very short call up of 555 555 555 998 998 998 02 until 14.00 when it repeated a single 5F group. Later in the year it moved to 6976 and more recently 4485 kHz. The station was also noted on 29th September 1993 with what seem to be a one off broadcast on 7541 at 10.15 and 8026 at 11.00. *

Stations that have remained off the air include the Four Note Rising Scale station which was formerly on 3217 & 3820 kHz and the Gong station which used to haunt 3258 kHz every night. These two East German Stasi stations both ended around May 1990. The Four Note Rising Scale station was the subject of direction finding activity by an ENIGMA member in Western Europe who reports the transmissions emanated from an area on the axis joining Berlin to Wittenberg, from a site located between 20 and 50 km South West of Berlin.

The Rumanian Skylark used to fly quite regularly before the Rumanian Revolution, then it had a long rest before resuming activities around March 1990, however, it seems to have finally gone to roost as it has not been heard by myself at least since August 1992. ENIGMA direction finding information indicates that this station transmitted from a location just South East of Bucharest in Rumania.

The Drums and Trumpet station used to give a chill down the spine with it's "Last Post" style call up (recently revealed in Langley Pierce's book to be the Italian song 'Il Silenzio' - after the bugle call a military marching piece was sent and the female announcer started her 5 figure groups. After a long silence this station was recently reported again on 4740 kHz.

In November 1992 the long running Papa November also wound up it's long career and was followed a month later by the closure of DFC37 and DFD21. It was believed that these stations were operated by the West German intelligence service Bundesnachrichtendienst BND with traffic from DFC/DFD aimed at East Germany from transmitters located at Bonames just outside Frankfurt.

* A Morse version of this station is still active and frequent.

In some respects the activities of Papa November and DFC/DFD live on within the vast operation of the German Two Letter stations, indeed some agent numbers have been tagged on to current active call signs such as RD KR EL DT GK NU PZ and EG.

One of the more recent stations to leave the airwaves was the Five Dashes station which used the mogadon influenced young lady to send it s messages after signing on with 3 5 3 figure call signs. This English and german language station sent it s last message in mid April of 1993, so no longer can we hear the unforgettable voice saying "Seeben N o y n e r Ffunf Eins" in that characteristic drawl.

Recent 'scares' have included the NNN ... station which sends a string of C.W. dahdits prior to it s German messages and the station Swedish Rhapsody which recently vacated it s Saturday evening prime time slot on 4779 5340 and 6507 kHz. I'm pleased to say that both stations have been found alive and well after some anxious moments of tuning about the short wave dial.

These then have been some of the stations that have gone off the air within the last five years, hopefully for our small and specialised section of the short wave hobby the Number Stations will continue in one form or another.....and as some stations depart the air other new one s will appear. The C.I.A. spy scandal in February of this year shows that the notion that spying was somehow over after the cold war ended, a view which prevailed in some area s of the news media was somewhat naive to say the least.

The numbers are still with us.....

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#### TYROLEAN MUSIC STATION - UPDATE

On the subject of stations which are no longer on the air you may recall in issue 3 that we ran a feature about one of the very early Number Stations called the Tyrolean Music Station - this station was very active during the 1970's and operated on Saturday s and Sunday s on 6425 & 6660 kHz. The format included music and a 7 note orchestral interval signal taken from the Communist Internationale. At 12.00 a German Language male operator would announce the names of the agents e.g. Heinrich, Fowler, Dover. Messages would then follow for the agents, each separately with no group count.

We asked for any information about this station and are pleased to report that Short Wave Magazines - "Off The Record Page" edited by Andy Cadier carried the following information in January 1994.

" On the subject of spy stations, John Franklin of Ripley sheds some light on the Tyrolean Music Station, also mentioned in October. He, while in Germany, used direction finding techniques to trace this broadcast to Burg in what was then East Germany ".



### The Source of EC3Y : Husum/Germany, not Madrid

In recent months we have received various letters asking about a German call-sign that can be heard on Short Wave. The following is taken from an article in the American magazine Monitoring Times, but we feel sure that ENIGMA readers will find it very interesting. Nils Schiffhauer takes up the story.

.....Even in the United States there was heard a station with the call sign EC3Y, which was assumed to transmit from somewhere in Spain. No! you guessed wrong the first time! The signal around 9.1 MHz originates from BFST at Krumweg station in Husum, North Germany! I verified that only a short ten meters away from the antenna after the signal over-modulated my car radio. As a Short Wave Listener I am used to writing reports in order to get a QSL card. So I wrote what may be the very first reception report to a German numbers station - having the right address, and being 100% sure about the origin of the transmissions. The answer came bitter/sweet but politely: they "on principle" will not verify reception reports; yours sincerely...

Since I'm not "building castles in Spain" this answer was actually more than I expected. But speaking of Spain - is not EC3Y a callsign to be used in Spain rather than in Germany?

After looking it up in "international treaties" it turned out that EC3Y was a call sign for a novice ham license in Madrid. That left me puzzled. I considered it a clear case of illegal use of a call sign. And not only that, it was by a Government authority supposedly looking after the fulfilment of international treaties!

Since these days the Deutsche Bundespost is intensively controlling the (illegal) use of scanners, I asked them to also to look after the violation of international law under their own roof. Within one week I got a phone call from the PTT. It revealed the BFST used their callsign EC3Y for transmissions toward Spain, and would change the same day the PTT called me - to a legal one!

Immediately after hanging up, I jumped to my Yaesu FT-1000 to verify that. And they really did! since the 20th of January 1992, they no longer use EC3Y for their transmissions, the new call sign is DEA47 which is in accordance with international law.

~~~~~  
If you would like to listen to DEA47 the German Numbers Station it transmits Monday - Friday during the day time on two simulcast frequencies.

12283 kHz & 13582 kHz with the call sign VVV de DEA 47

Please let us have your traffic analysis for future issues of ENIGMA.

THE ENIGMA STORY BY RICHARD POWELL-ENIGMA READER

"ENIGMA", - a riddle - puzzling thing or person. This was the definition given in issue No. 1 of E.I.G.M.A. Many people who share our interest will also know it was a very successful World War 2 off line cypher machine used by the German Army, Air Force and Navy. It offered a very secure and quick way of enciphering messages in the field, in fact the Germans considered it an unbreakable cypher.

How did it work ?. The basic machine was contained in a small suitcase size box. There were three main parts, a keyboard with complete alphabet but no figures, twenty six lamps illuminating letters "A" to "Z", and a set of three rotors. Each rotor had 26 evenly spaced contacts on both sides and letters A to Z marked on it's circumference. Contacts on one face were connected to the other in random manner and, for example the "A" contact might be connected to the "W". When a key was pressed then an electrical circuit was made through the rotors to the lamp board. This alone would not have been very secure producing only a simple mono-alphabetic substitution, however, each time a key was pressed the code wheels were rotated one step rather like the miles on a car odometer, a different substitution was made and the corresponding lamp illuminated.

The story of how the code was broken is told in several books. More interesting is why it took so long for this information to be released. There are several reasons for this. After the war many of these machines were given to friendly countries and the knowledge that we could read their supposedly secure traffic would not have been in our interest. Roto machines were not only used by the Germans. Britain had the "Type X" and the United States the Haglin M-209. After the war there were similar but much improved versions with more rotors and different stepping arrangements. These too were issued to friendly powers, in fact advanced rotor cyphers were certainly in use with the United Kingdom's military up-to the mid 1970's.

The advent of small pocket calculator computer based equipment was probably it's death knell: the electro-mechanical versions requiring expensive skilled maintenance and servicing.

For those of you who would like to re-live the past and have a home computer, may I suggest simulating ENIGMA on your screens ?. A basic language version is listed in George Sassoon's book, detailed below.

Suggested further reading.

The Radio Hackers Code Book - George Sassoon Duckworth.
(Listings for ENIGMA to run on Sinclair Spectrum)

Cypher Systems - Beker & Piper Northwood Books.
(Descriptions and solutions for Haglin M-209)

Seizing The ENIGMA - David Kahn Souvenir Press.
(The Story of how the ENIGMA Cypher was Solved)

ENIGMA BOOKSHELF - NUMBER ONE

"Intercepting Numbers Stations" by Langley Pierce

Interproducts ISBN 095-19783-47, 1994, 94 pp

Don't be fooled by the rather American sounding title and the sensationalist "Top Secret" cover art, this book is an excellent addition to the Numbers monitor's armoury. We've been waiting for some time for an up-to date book to cover the developments in the European scene ever since Simon Mason's "Secret Signals" was published. The book is no doubt the result of some careful monitoring and the blurb tells us that this was accomplished over a period of some seven years of monitoring.

The book is grouped by intelligence communities - CIA (USA), M16 (Great Britain), BND (Germany), UDBA (Yugoslavia) and the KGB. Each such section then presents the details of each transmission format broadcast by its stations. Herein lies my main criticism, in that the link between many stations and their operators is, to say the least, tenuous. For example - why is Swedish Rhapsody operated by Austrian Intelligence? The author often omits any evidence or explanation for this assertions.

Nevertheless, each section is well laid out with the details of each station's characteristics, message format and content, frequencies, times and, most usefully, pronunciation. Where it has been possible to determine a station's schedule, this information is also included often in tidy tabular format. If I could suggest any improvement on each section's content, it would be the addition of information concerning the agents or addressees to which each stations directs its traffic. This often helps differentiate between stations with similar characteristics and when new stations take on old agents and thereby provide clues as to the operator. The book concentrates solely upon voice transmissions whereas we know that there are many Morse numbers stations, often operated by their voice counterparts. "Ready, Ready" is an example of such a station which operates on both voice and Morse.

The book's information is fairly well up-to-date and also contains a reasonable amount of relevant historical information, for example, the East German section. The book ends with the usual frequency list and bibliography. Obviously, with a book which is very much the author's sole work without reference to others, means that you'll have to spend some time in matching usual station names with this book's "KGB, format 2" style!

In summary, this a good, well-written book, up-to-date and well-detailed. I'd recommend that you purchase a copy or order it from your local library, The publisher, Interproducts, can be reached at 8 Abbot Street, Perth, PH2 0EB, Scotland, Tel 0738 441199. The book is priced at £9.95.

NUMBER STATION PUBLICATIONS

SECRET SIGNALS THE EURO - NUMBERS MYSTERY, by Simon Mason.

With almost 70 pages on Number Stations this book goes right back to the early 1970's - with information on the former East German operations and in-depth studies of the stations we can hear today.

Available in the United Kingdom from ;

Simon Mason, 26, Bloomfield Avenue, Hull, Humberside, HU5 5NH
Priced at £6.00 including postage and packing to the U.K.

Available in Germany from ;

Kurzwellen-Presse-dienst, Weender Str. 30, 3400 Gottingen.
Priced at 19,90 DM.

Available in the United States of America from ;
Tiare Publications P.O. Box 493, Lake Geneva WI 53147 USA
Priced at \$9.95 plus \$2 s/h (\$3 Foreign).

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INTERCEPTING NUMBER STATIONS, by Langley Pierce.

Based on 7 years of monitoring this book details frequencies times and languages, CIA, MI6, the KGB, the MOSSAD and many of the lesser known agencies are named. Information on how the codes are made up and the real purpose of Number Stations are described.

Available from ;

Interproducts 8 Abbot Street, Perth, Scotland, PH2 0EB.  
Priced £9.95 including U.K. Postage (add £1 Seamail or £2 Airmail for Overseas).

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UNO, DOS, CUATRO, A Guide to Numbers Stations by Havana Moon.

Priced \$13.95 plus \$2 s/h (\$3.00 foreign)

LOS NUMEROS, The Numbers Station Log by Havana Moon

Priced at \$4.00 plus \$2.00 s/h (\$3.00 foreign)

OR SPECIAL OFFER Get Los Numeros for just \$2.00 (no extra s/h) when purchased with Uno, Dos, Cuatro.

Tiare Publication P.O. Box 493, Lake Geneva WI 53147 U S A

MORSE NUMBER STATIONS - AN ENIGMA SPECIAL FEATURE

Although generally not as noticeable as voice stations there are many active morse stations to be found. Lacking distinctive tunes and voices many listeners may feel that these stations are less interesting, but this should n't be so as they are all part of the numbers game, and if anything, the lack of any identifiable language, makes them even more anonymous and mysterious.

For those of you new to this and who may be off put by having to learn morse, this need not be so. Letters are rarely used so only the numbers 9-0 need to be learned. Identifiers are repeated so often and usually slowly - that it's not difficult to log these.

A few points worth noting in order to positively identify these stations - remember we have no language or accent to go by - include such things as speed, endings, calls, paired or single groups and form of zeroes. (Some stations send long zeroes - five dashes - others short - a single dash).

Morse monitors are desperately needed so, here, to whet your appetite are a few of the more frequent stations. All these are easy to find - morse number stations, luckily for us, they tend to avoid the busy maritime bands where morse is often heard. (Regular listeners will come to recognise the military and diplomatic morse transmissions - which often operate for long periods, and learn to ignore them).

Key Information.

BT- means break	SK- means end of work
AR .-. means end	'?' .-. means repeat symbol
/ .-. means stroke	

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Let's look at some of the well known stations.

1) SWEDISH RHAPSODY - This is the morse counterpart of that familiar cheap music box - German language station. The format is similar to the voice transmissions with no obvious identifiers.

Format : Medium speed MCW, Long Zero s (Example only)

" U " repeated for 10 minutes before the hour.

On the hour " LOLO LOLO LOLO 48621 48621 / " repeated for 5 minute until 5 past the hour. Then BT BT Message of 50 or 100 Single 5 figure groups. If the message is 50 groups the " LOLO /48621 BT BT" precedes the repeat).

Transmission ends at 26 minutes past the hour with " AR SK AR SK" meaning - end of message end of work.



SWEDISH RHAPSODY CONTINUED.

Schedule - Week commencing Saturday -

|                   |                          |         |
|-------------------|--------------------------|---------|
| 2nd Week of Month | Tuesday @ 07.00          | on 4195 |
|                   | Wednesday @ 20.00        | on 4195 |
| 3rd Week of Month | Thursday @ 19.00 & 20.00 | on 5340 |
| 4th Week of Month | Wednesday @ 00.00        | on 5340 |

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2) STATION 'AR' The Morse Version of N N N . This network of morse transmissions is far more extensive than the voice version and has a regular schedule, as does N N N. It also uses the same frequencies. Transmissions are usually CW, but occasionally MCW, medium speed and always very strong - often the key clicks can be heard upto 30 kHz on either side of the carrier frequency.

Frequencies used are 4025# 4054# 4573# 4643# 4882 4945# 5738
5880# 6850# 6995# 6770 7650# 8180# 8623
9131 9268# 9120# (# also used by NNN).

This is a very active station sending several transmissions daily, sometimes 2 at the same time. Identifiers change gradually over the years, but some such as 181 and 621 have been heard since the 1970's. The present active identifiers include 131 181 237 401 522 621 712 723 726 735 812 815 827 849 945 & 962.

On the 25th of October 1993 a one off transmission was made on 11540 kHz at 07.00 addressed to 131. This 20 group message had a fault on the tape and was repeated when rectified at 07.10 UTC. A further repeat then took place on 13963 at 08.00. Like it's voice service NNN - Station GR normally works below 10 MHz and would appear to be a European operation. Perhaps 131 works out of Europe - the only other frequency used by this id has been 9268.

Unlike NNN with it's restricted group count of 15 20 25 30 35 Station 'AR' group counts can vary from 20-85. Schedules can be made for Station 'AR' but more work would be necessary. Most identifications are used and active times are between 04.00 and 07.00 on the hour and 12.00 and from 17.00 to 22.00 hrs on the hour. Only once has it been heard on the half hour at 04.30 UTC. The station transmits every day of the week except Friday.

Format : 3 figure identification repeated until 5 minutes past the hour. (slowly). then, GR38 followed by message of for example 38 pairs of 5 figure groups - sent faster.
"AR GR38 - repeat of message - AR". Uses a Long Zero.

3) O L X - This is the Morse version of the well known voice station. Short zero, CW, fast. The format : "V V V de OLX OLX" repeated for 5 minutes before the hour, then, faster 126 126 126 BT 011 011 repeated from the top of the hour for 5 minutes. Uses the same frequencies as the voice version and takes up about 50% of the transmissions.

The message then follows in paired 5 figure groups. The Call sign V V V means calling and de - means from . The figures 011 011 never change and appear pointless. ID's are regular and predictable.

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4) THE THREE LONG DASHES - This is probably the easiest one for beginners in Morse as its entire transmissions are always slow. It uses CW and short zeroes.

Frequencies are 3892 4272 4481 4665 4153 5433 5572 5622 5666  
6437 6735 6857 7426 8155 9234 9057 9097 9129 9342 10283  
11476. (6884 5474 5612 7990 6564 4382 5353 4125 4687 5247 4272 ALL NEW FREQS)

Identifications logged so far : 149 203 272 352 411 421 458  
417 679 732 781 823 864 903 926 967 347 271 158 419

This is a very active station but its schedule appears to be irregular. A rare format sends ID followed by 000 then message. e.g. 158 000 BT 110 etc

Format : Repeated 3 figure identification for 5 minutes until hour or half hour, e.g. " 903 903 then BT 110 24 BT " followed by message of 24 single 5 figure groups. Then BT, 903 is repeated 12 times " BT 110 24 BT " followed by repeat of message. Ends "BT - - - " (three long dashes). The figure before the group count in this example 110 always appears to be between 106 and 140, very often 110. This station has been heard at all times of day and night....but never on a Friday.

~~~~~  
5) 3 SHORT DASHES - MCW, fast, with short zeroes.

This station uses parallel frequencies 6725//5805 4660//5425 5538//6280 6508//7434, I have also heard it around 8.2 MHz and on 4870 5155 5662 and 7381, and very likely other frequencies exist. Sunday Monday & Wednesday only, very often at 17.00 but also noted at 07.00 09.00 09.55 15.00 22.00 and 05.30 UTC.

Identifications logged so far : 109 193 293 463 481 556 546.
These are heard frequently.

Format : "556 556 556"... repeated for 5 minutes - then " 24 24 11 11 BT BT " Message of 11 pairs of 5 figure groups then follow at much faster speed. Endings slow down again " BT BT 24 24 11 11 0 0 0 ", often the transmissions contain 2 or even 3 messages in which case end of first messages runs " BT BT 24 24 11 11 293 293 293 97 97 33 33 BT BT " would be followed by 2nd message (for 293) of 33 groups, which would end 97 97 33 33 0 0 0. Decode key either 2F or 3F.

Group counts vary between 11 & 42 and average about 30.

Not to be confused with 'Bulgarian Bette' morse station which also ends in '0 0 0'

6) 3 + 3 SHORT DASHES - CW fast, short zeroes.

From the frequencies used is this clearly a world-wide operation 4642 4636 5066 5124 5236 5267 5769 5787 5940 6857 6870 6880 7335 7523 7790 7935 8005 8035 8168 9195 9237 10117 10131 12172 12205 10235 13417 14815 17425 and probably many more...

Identifiers heard so far : 026 037 137 139 147 239 268 276 304 314 392 462 691 783 825 835 875 926 981.

Transmissions may begin at any 5 minute interval within the hour at any time of day or night, 7 days a week.

Format : Calls "926 926 926 0 0 0" for 5 minutes if no message is to follow or otherwise,

"926 926 926 1" then much faster "431 84 431 84" (the decoding key may be 4 figures). The message which follows is then 84 5 figure groups. The repeat occurs later and not in the same transmission. The station ends slowly with " 0 0 0 0 0 0 " after a short pause. This station format is identical to the "Nui Noichen" voice station and the six zero Russian Man. A two message transmission would begin "962 962 962 2".

~~~~~  
7) THE 5 DASHES - Heard less frequently than all the above, but is nevertheless active several times per month. Only two identifications logged so far : 102 and 897, it always uses MCW and sends its messages very fast ( 1 Group every 2.5 seconds), however id's are quite slow. New ID 415

Frequencies heard are 7738 8170 8180 9170 9319 9446. 8140

Format: Repeat identifications for 5 minutes on the hour or half hour e.g. 897 897 897... then "745 745 127 127 BT BT " message then follow 127 very fast pairs of 5 figure groups, ending BT BT 745 745 127 127 - - - - (slowly).

Times for this station logged are 06.00 07.00 14.00 19.00 20.00 19.30 20.30 UTC.

\* A second different station ending in 5 dashes recently began.

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8) THE STRICH - This is the morse counterpart of the voice station which transmits in English, German and two unknown Slavic Languages. The station has not been heard to send a voice or CW/MCW message for over 2 years but does appear often and sends the special /00 a five minute identification - such as 261/00 but no message, recent frequencies include 4090 5150 5550 and 6950. The station is however prone to sudden changes to its operating patterns. Speeds vary considerably - usually slow. Operates a regular schedule. ID's always appear at same times.

Morse identifiers heard for this station are CW, 018 019 042 043 044 287 503 552 553 558 588 and MCW, 035 284 508. 507 047 017

Transmissions end " BT - - - ". (018 lasts 10 minutes).
also 017 " 287

~~~~~  
Recently ID's 017 and 047 have sent long messages.



THINGS THAT GO BUZZ IN THE NIGHT (AND DURING THE DAY)  
-THE FIRST IN AN OCCASIONAL LOOK AT MEANINGLESS NOISES  
ON THE SHORT WAVE BAND....

Short wave is full of all kinds of interesting noises, you only have to venture outside the broadcast bands to hear them; most are well known and recognised forms of communications sent from authorised transmitters....and some are not....let's look at just a handful.

The Buzzer

Sending a signal on 4625 kHz for at least the last 10 years; no one seems to know just what it is. Tune in almost anytime and you will hear it. Harry Helms writing in SIGINT - Sept 1990 " 4625 kHz - this particular station has been heard in the United States and Europe for several years, yet no one has nailed down a definite location or purpose.

But... it was not always a buzz Simon Mason writes "the buzzer on 4625 kHz is not exactly the same as it was 10 years ago. The tone was a short pulse of RF sounding like a dot in C.W. or a time station but the rate seemed to be around 1.5 to 2 seconds".

A reader in France writes " the buzzer changed around 5 years ago from a 'pip' and at 59 minutes to the hour it used to change to a continuous rising a falling scale".

So what can we learn about a 10 year old mystery ? Fritz in Obfelden, Switzerland writes " the frequency is 4625.40 kHz and the mode is a contra-flow burst, the duration of each burst is 850 msec with a pause of 1450 msec at shift 150 Hz. (?) The amount of bits per burst is 250 and the bit length 3.4 msec." Another view is that it is merely 250Hz over-modulated A.M. carrier sending no intelligent data.

Over the weekend of February 19th 1994 the Buzzer turned up on 3320 kHz and later moved to 3329 kHz; using two receivers it was possible to confirm that the signal was synchronized with 4625 kHz. I have since heard it around the 3.3 mHz area.

If you tune to 4625 kHz in the European evenings you may hear a morse signal on the frequency sending a four figure number, the number is in fact the time at plus 3 hours UTC. Why someone should find it necessary to send this is also a mystery.

If you are beginning to get the feeling that we are going to just leave you with a mystery - do not despair - part if not all of the puzzle is solved. I am pleased to confirm that ENIGMA can exclusively reveal the location of the 4625 kHz buzzer, from direction finding information we have received the transmitter is situated just outside the Polish border in Byelorussia, but as for it's purpose I'm afraid that is still an ENIGMA.



Now you may recall how the Buzzer grew up from a 'pip' to a buzz. I asked ENIGMA reader Mike in Kent to have a listen to some other rather odd noises and this is his report.

### The 'Pip'

This transmits on 3757 kHz in the European evenings, I described it as a fake time signal...Mike reports 3757 kHz in the middle of the shared marine (fixed) and amateur band. Best signal 3754 kHz (slight drift) it may be a "fake" time signal but it's very accurate, 200 msec tone 1 sec repeat with no variations. My initial thought was a distorted SLHFB but the spacing is all wrong. I have listened every day at different times but heard no identification so that rules out a propagation beacon. (Recently it has also used 5450, but not at same time as 3757)

### The Echo

This started out on 4080 kHz but is now on 4119 kHz. Very narrow signal centred on 4080 kHz; it transmits a 1000 Hz tone followed by a 2000 Hz tone with no break. The tone duration is a constant 1500 msec but the interval varies from 2.5 msec shortest to 6 sec longest. The normal duration is 4.5 sec. The frequency (4080 kHz) lies exactly half way between marine duplex channels 6 & 7 these are 4078.5 & 4081.6. Mike suggests a possible Soviet Maritime beacon of sorts but wonders if the echo is the result of a weaker long path signal ?. (Usually sends burst of unmodulated carrier only)

### The Crackle

In AM on 5494 and SSB on 5505 this signal is audible in the evenings and causes interference to Shannon Air Radio on 5598. The signal is quite strong and sends a random crackle noise for hours on end. Mike writes...I was so intrigued I borrowed a audio spectrum analyzer and high speed digital storage scope - but no result - the "crackle" is so random that the audio analyzer can't lock on to any patterns and the storage scope did not overlay any 2 patterns even after 3 hours. (Also heard on 8020 and several other freqs.)

ENIGMA wrote to Shannon Air Radio to ask if they had received any complaints; we cannot imagine airliners enjoying this random sound when collecting information, but at the time of printing we have received no reply. Another reader informs ENIGMA that any complaints of interference to these types of transmissions would be dealt with by the Government-controlled radio direction finding station DTI/ Baldock (Monitoring Station). They have accurate DF and with other international monitoring stations are able to pin point sources of interference.

We hope you have enjoyed this short piece on "odd noises" and feel that these come under the scope of ENIGMA, along with voice and morse number stations and SLHFB's all in all the unexplained.....ENIGMA's.....of Short Wave.