

M901 – A Morse Mystery from 2014

Introduction

A chance finding by ENIGMA 2000 member Jean-Paul, (JPL), in January 2014 revealed a curious Morse schedule that resulted in the allocation of a temporary new ENIGMA ID & an investigation into the station.

A report on this station was included in the group's March 2014 newsletter, number 81, which is available on the ENIGMA 2000 website. This report contained the initial finding & logs of the station from 20 January to 26 February, when the report was submitted for the March newsletter.

Further monitoring of the station provided an intriguing insight into a thrice weekly schedule that evolved & changed modes before ending suddenly at the end of March 2014.

First Reports

Jean Paul (JPL) was logging one of the M89 transmissions on a new freq of 16720kHz on Sat 18 Jan when he caught the brief ending of a Morse transmission, sending QRU QRU SK SK..

Monitoring of the freq was started & transmissions were monitored regularly on Mon, Wed & Sat throughout the remainder of January & although some message serials were missing, no other schedules or transmissions were found. Reception was good into the UK but suffered from QSB which was severe at times.

Transmissions consisted of a call-up using the Call KLM (VVV KLM KLM KLM 1/50), followed by a single 50 group msg consisting of 5 figure single groups using the short zero, (single dash). The message ended with a slower QRU QRU SK SK.

At this time it appeared that the transmissions were a one-way broadcast, always on 16720kHz using the call KLM, although on 05 Feb a second transmission was found repeating the msg on 19292kHz 10 minutes later, at 0820z.

CW Transmissions

16720	0800 - 0815z	20 Jan	00111 023 50 20 0810 == 52124 ... LG 31855 ==	QRU QRU SK SK	BR	MON
	0810 - 0815z	22 Jan	00111 025 50 22 0810 == 22255... LG .255 ==		BR/GD	WED
	0810 - 0815z	25 Jan	00111 027 50 25 0810 == 75848... LG 78682 ==		BR	SAT
	0810 - 0815z	27 Jan	00111 028 50 27 0810 == 25555... LG 55999 ==	Tx in FSK mode**	BR/GD	MON
	0810 - 0815z	29 Jan	00111 030 50 29 0810 == 31874... LG 74593 ==		BR/GD/JPL	WED
	0810 - 0815z	01 Feb	00111 032 50 01 0810 == 54549... LG 24049 ==		BR/GD	SAT
	0810 - 0815z	03 Feb	00111 033 50 03 0810 == 39534... LG 63156 ==		BR/GD	MON

All other days monitored & NRH

** F1A Mode? (FSK Morse telegraphy)

Ary (AB) had reported a log of the station on 19292kHz as heard on Tue 14 Jan by one of his N&O members Paul H, but we had been unable to confirm this until Wed 05 Feb when Brian (BR) found the freq active at 0820z with a repeat sending of the 16720kHz 0810z transmission .

16720/19292	0810/0820z	05 Feb	00111 035 50 5 0810 == 62310... LG 51858 ==		BR/GD	WED
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Allocation of temporary ENIGMA ID - M901

On Wed 29 Jan a temporary ID of M901 was allocated to this station. As often seems to be the case, no sooner had we committed ourselves to print, changes occurred & the allocation was later amended to include changes to both freqs & formats.

Change to RTTY 50/500

Following three weeks of transmissions using the CW format , the schedule failed to appear on Sat 08 Feb, then on Mon 10 Feb instead of the expected preamble there was a short CW exchange with an unheard station,

The previous format of calling 'VVV KLM KLM KLM' was now replaced with a call to 'QSY to 20112' (Move freq to 20112kHz). So what was previously thought to be a one-way transmission was now confirmed to be a two-way contact.

This two-way exchange continued on the known schedule throughout February developing into a full-two way exchange, where the initiating station, (which was always the strongest of the two), would send a message, then the remote station would send a message in return.

In addition to the usual 'KLM' call, the call 'APW' was heard, but as there was no indication as to whether the calls used were from the originating station or of that being called, it is not possible to know which call belonged to which station.

There were some variations to mode. At times the RTTY, usually readable as 5 figure groups, was encrypted resulting in the decoder readout being unable to lock onto the signal, whereas on a couple of other occasions the mode used was some unknown digital mode that was similarly unreadable.

On more than one occasion the station calling failed to make contact & no message was sent. Then a further call was made on one of the other frequencies used before the schedule was finally abandoned.

Final Message

On Mon 31 March, an RTTY message was sent & a corresponding reply was sent by the remote station on 20112 kHz. This was the last that was heard from this schedule & despite listening & searching over the following days & weeks, no more was heard from these stations.

The serial of this last msg was 100 - the 100th message sent on this schedule. Was this a coincidence or was there some planning in the operation of this schedule? Possibly the sched changed times or freqs, (or both), with the change to April.

Conclusion

This was a most interesting schedule to follow & to watch the evolution & changes take place over the life of this schedule. I am most grateful to Ary Boender for his assistance & knowledge on the various nets operated by the Russian & the now independent countries that previously formed the USSR.

We can never be sure of the origins or purpose of this schedule, but it would seem most likely that the station belongs under the withdrawn ENIGMA ID M42, covering Diplomatic & intelligence nets operated by Russia.

However, as is not of core interest to ENIGMA, & is not as first thought, a possible new number station, the temporary allocation of M901 for this station was put on hold & finally withdrawn.

Was this station related to M65?

While searching for information to match or identify this station we came across a reference in an old original ENIGMA Control List of 1998, to a Morse station with a similar format. Unfortunately, the information about the station is minimal and is as follows:

M65 S 5f> == QRU QRU SK SK

The abbreviations indicate the station used the short zero, sent single 5-figure groups, ending QRU QRU SK SK – Exactly the same as our M901.

We have been unable to find any logs or other references to M65 in any of the old ENIGMA group newsletters & documents. At some time the designation was withdrawn, presumably as it was thought not to be a numbers station & again, regrettably, we can find no reference as to why or when this designation was withdrawn.

There is a quite considerable time lapse between the allocation of M65 & the logging of M901 & during that time there doesn't appear to have been any logs or reports of any Morse stations using the == QRU QRU SK SK format. Given the number of active Morse monitors over that period we would have expected that, if the station had been active, at least some reports would have been received.

This, along with the sparse information we have on M65, makes any conclusion about a link between the two stations impossible. It would, however, on the balance of probability seem quite likely that the two stations did originate from the same agency.

Further Logs

16720	0810z	10 Feb	KLM KLM KLM QSY 20112 QSY 20112 (Rpt) RTTY 50/500 (5f grps)	BR/GD	MON
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Call-up was repeated several times. The Morse was hand sent & poor quality. The Q was sent as an X, as it was the further phrase 'BK QRX K' The station then went into RTTY at 50bd (50/450) with a series of 5 fig grps, followed by a final CW exchange, 'NIL GB 88 SK' (Goodbye, love & kisses), presumably to a female Op.

16720	0810z	12 Feb	Short CW exchange 'QSL1 QSL1 NW NW'	RTTY 50/500	BR/GD	WED
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Due to poor sig strength the RTTY was unreadable. Following the RTTY a short CW sequence was sent ending 'NIL GB SK'

16720	0810z	15 Feb	'KLM KLM KLM QSY 20112 QSY 20112'	BR	SAT
20112	0815z	15 Feb	Brief CW exchange followed by RTTY 50/500 - Very weak	BR	SAT

16720	0810z	17 Feb	'KLM KLM KLM QSY 20112 QSY 20112'	BR/GD	MON
20112	0812z	17 Feb	Brief CW exchange followed by RTTY 50/500 - Weak	BR/GD	MON
16720	0815z	17 Feb	Presumed rpt of msg in RTTY 50/500. Ends CW 'V CFM GB 73 SK'	BR/GD	MON

16720 / 20112	0810z	19 Feb	Brief KLM call on 16720kHz. RTTY 50/500 msg on 20112kHz (Weak)	BR/GD	WED
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16720	0810 - 0815z	22 Feb	'KLM KLM KLM QSY 20112 QSY 20112 QSY 20112 K' (R5)	BR/GD	SAT
	0815 - 0820z	22 Feb	'KLM KLM KLM QSY 18151 QSY 18151 QSY 18151 K' (R5)	BR/GD	SAT
19292	0825 - 0828z	22 Feb	'KLM KLM KLM QSY 20112 QSY 20112 QSY 20112 K' (R3) 'SK' (NRH on 20112kHz or 18151kHz - No contact made, no msg sent)	BR/GD	SAT

Note: The call 'APW' was used at the beginning of the call-up then switched to KLM. - Possibly another link or location. (GD)

16720	0810z	24 Feb	'KLM KLM KLM QSY 21111 QSY 21111 QSY 21111 K (R5)	BR/GD	MON
	0815z	24 Feb	RTTY 50/500. Ends with CW 'OK 00111 058 200 CFM K NIL SK' (NRH on 21111kHz)	BR/GD	MON

18650 / 20112	0815z	26 Feb	RTTY 50/500 from 20112 (weak) then RTTY from 18650kHz 5 fig grps'	BR/GD	MON
16720 / 20112	0810 - 0830z	01 Mar	Brief KLM call on 16720kHz. Unknown mode used on both freqs	BR	SAT
16720 / 20112	0810 - 0820z	03 Mar	Brief KLM call on 16720kHz. RTTY 50/500 msg on both freqs	BR/GD	MON

Note: The call 'APW' was used by station on 20112kHz

16720 / 20112	0810 - 0830z	05 Mar	QSY to 18720kHz then 21720kHz. RTTY 50/500 msg on 20112kHz	BR	WED
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Encrypted RTTY

16720 / 20112 0810 - 0830z 08 Mar CW call-up. **Encrypted** RTTY 50/500 msg on 20112kHz then on 16720kHz BR/GD SAT
16720 / 20112 0810 - 0830z 10 Mar CW call-up. QSY to 17725kHz. Digital data exchanged? V Weak BR/GD MON
Note: The call 'APW' was used several times by station on 20112kHz
16720 / 20112 0810 - 0835z 15 Mar CW call-up with brief exchange. **Encrypted** RTTY 50/500 exchanged BR SAT
Note: The call 'APW' was used several times by station on 20112kHz

RTTY

16720/20112 0810 - 0830z 17 Mar CW Call-up. Brief exchange. RTTY 50/500 exchanged **5 fig grps** BR MON
0810 - 0821z 19 Mar CW Call-up. Brief exchange. RTTY 50/500 exchanged **5 fig grps** BR WED
Header: 00111 086 200 19 0810

No Contact

16720 only 0810 - 0819z 22 Mar CW call-up. KLM KLM KLM QSY 20112 QSY 20112 K (R15m) NRH BR SAT
KLM KLM KLM QSY 18198 QSY 18198 K (R4m) NRH BR SAT
16720 only 0810 - 0818z 24 Mar CW call-up. KLM KLM KLM QSY 20112 QSY 20112 K (R15m) NRH BR MON
KLM KLM KLM QSY 18151 QSY 18151 K (R3m) NRH BR MON

RTTY Again

16720/20112 0810 - 0821z 26 Mar CW Call-up. Brief exchange. RTTY 50/500 exchanged **5 fig grps** BR WED

Encrypted RTTY

16720 / 20112 0810 - 0828z 29 Mar CW call-up with brief exchange. **Encrypted** RTTY 50/500 exchanged BR SAT
Note: The call 'APW' was used several times by station on 20112kHz

RTTY Again

16720/20112 0810 - 0822z 31 Mar CW Call-up. Brief exchange. RTTY 50/500 exchanged **5 fig grps** BR MON
Header: 00111 100 200 31 0810 (200 grps in blocks of 50)

Mon Mar 03 - Decode

The 20112kHz end was quite weak as usual but I did manage to catch the header which was; 00111 050 200 3 0810 = = Note the similarity to the CW headers sent when the fast CW mode was used originally by this station. I missed the header on 16720kHz, but the signal was good and I was able to catch several sections of the msg;

34755 46567 76403 54887 76440 54337 78688 78205 05387 58605
40858 86773 25637 54401 27457 80637 37510 14218 81647 76644
87154 70860 10665 26743 68628 58606 73062 45120 02601 33455,
01801 88177 40072 24301 76784 52331 56367 43710 80641 46612
18202 40878 12004 55883 82076 63082 05424 23252 28412 53485

41646 36601 10380 53646 42782 66104 55657 44666 56888 22805
75876 87572 38846 21775 47026 87570 02711 25827 34314 66708
15531 62554 52807 22651 46727 02016 41703 83516 45853 25641
00030 02738 65282 82150 36775 53241 72470 36885 47211 06117
04406 34424 22250 34701 11337 72633 17886 05783 31737 38201

Note here that, as ENIGMA 2000 member Manolis pointed out on the earlier intercept of Mon 10 Feb, **no nines are used anywhere in the message.**

M901 16720kHz 0810z 20 Jan14

VVV KLM KLM KLM 1/50 (R2m)

NW NW

00111 023 50 20 0810 = =

52124 87757 82785 54876 15595 73213 50593 69954 52235 52442
50747 14952 53164 890 . . 66186 54629 46615 59423 83458 57955
85596 05266 57257 61292 55549 01555 33501 35746 28557 35150
55952 40455 69587 95045 21112 62164 35049 58613 94517 77471
79268 28964 93212 33223 85535 83862 15713 43633 22225 31855
= =

QRU QRU SK SK

Courtesy BR

Thanks to Guy (GD) for his help in monitoring this station & to Ary Boender, (AB) at Numbers & Oddities for his help & additional logs.

This report was originally published in the ENIGMA 2000 newsletter 81, March 2014 & has been adapted as a stand-alone article

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