

670	27364	92836	09428	61208	74982	36498	32764	81276	01
4986	40932	70987	32123	49817	26346	81287	65491	87364	81
721	75654	55656	12737	72727	72727	91918	63473	67867	70
723	87629	37677	32612	53498	71296	28756	18276	98716	87
7269	76329	74698	76857	98670	27601	56701	57601	73648	15
591	87364	87265	96710	27630	12673	84769	28743	98127	59
58	63298	75698	27465	87326	49876	28376	81273	98615	62
667	87432	74328	78674	29867	32867	67867	86786	43286	432
667	68768	68763	34234	34238	68768	62342	48273	48768	234
936	98432	32432	86743	43286	43286	43286	43286	43286	432
743	86743	86743	39867	32867	86743	43286	43286	43243	867
741	86743	86743	86743	86743	86743	86743	86743	86743	435
543	98798	98754	98754	98754	98754	29867	67543	67986	867
76	87698	69876	87698	69876	87612	12341	34867	86798	632
667	43298	65656	56756	56123	32143	14321	32143	14321	321
71	02787	58765	76587	58765	76587	58765	76587	58756	765
75476	76543	58765	36543	58765	36543	58765	36543	58765	587

Numbers & Oddities

a.k.a. The Spooks Newsletter

Edition # 191, August 2013

Editor: Ary Boender email: ary@luna.nl

Check for previous newsletters, info, sound samples and databases also:

NUMBERS & ODDITIES <http://www.numbersoddities.nl>

SPY NUMBERS ONLINE DATABASE <http://www.spynumbers.com/numbersDB>

UTILITY DXERS FORUM (UDXF) <http://www.udxf.nl>

START PAGE <http://home.luna.nl/~ary>

Further to last month's item about the cold war spy from Poland. I received a note from Maciej who says that most probably the transmitter sites of Warszawa Radio or Gdynia Radio were used or the MFA / intelligence transmitter site near Karmazynowa / Warszawa. Check Google Maps. There is a street view picture at this point. The Google map is below.

<https://maps.google.nl/maps?q=Karmazynowa,+Warschau,+Polen&hl=nl&ll=52.11173,21.026255&spn=0.004513,0.013078&sll=52.212992,5.27937&sspn=4.611501,13.392334&oq=Karmazynowa&t=h&hnear=Karmazynowa,+Warszawa,+mazowieckie,+Pole n&z=17>



Warszawa Radio was as you remember a very strong station and was heard all over the globe. After 1989 it was sold (in mid 90s) to Telekomunikacja Polska S.A. which was sold to a French company that decided that Poland needed no global HF station. This was the end of Warszawa Radio. The location and pictures of the ruins can be found here in Radiowek, the old Warszawa Radio site: <http://tinyurl.com/oc365ca> <http://tinyurl.com/ojyktlm>
<https://www.facebook.com/media/set/?set=a.168968706504184.46157.137181089682946&type=1>

This was one of Polish military RX/TX sites... but was dismantled:

<https://maps.google.com/maps?saddr=52.108983,20.986921&daddr=52.108798,20.987554&hl=pl&sll=52.109319,20.986848&spn=0.005594,0.013937&t=h&mra=mift&mrsp=1&sz=17&z=17>

This one is active:

<https://maps.google.com/maps?saddr=52.429455,20.881726&daddr=52.429389,20.881871&hl=pl&sll=52.429121,20.882778&spn=0.002777,0.006968&t=h&mra=mift&mrsp=1&sz=18&z=18>

This one too:

<https://maps.google.com/maps?q=Falenty&hl=pl&ll=52.142326,20.90032&spn=0.00559,0.013937&sll=52.429121,20.882778&sspn=0.002777,0.006968&t=h&hnear=Falenty,+pruszkowski,+mazowieckie,+Polska&z=17&layer=c&cbll=52.142326,20.90032&panoid=YUu167guJenm5DKomLC9lw&cbp=12,296.6,,0,9.7>

This one was active a while ago too :

<https://maps.google.com/maps?saddr=52.189715,20.973214&daddr=52.189671,20.97319&hl=pl&sll=52.189394,20.973203&sspn=0.001396,0.003484&t=h&mra=mift&mrsp=1&sz=19&z=19>

We have a huge pile of Russian military logs submitted by (mainly) Topol, Tom, and Wolfgang. Thanks guys and also a big thanks to everyone else who contributed, like JPL for his many M89 logs and last but certainly not least Don Schimmel for his HM01 logs.

We also have a write up about the ditto stations that appeared again in August.

Enjoy and don't forget to send us your logs and info.

VOICE STATIONS



E07

8173 kHz, 21-08, 2000 UTC:

147 1 69693 7008 56
35538 75334 89058 57813 38135 34242 99218 19543 66359 20834
67401 62572 17891 89861 39189 95995 88129 48250 21592 36750
05474 38061 50948 39071 41837 25922 28368 18172 58167 34279
01712 72487 74156 30836 40596 66781 12817 76794 30210 13667
68192 58135 80418 28815 87943 11218 36068 17494 59063 33094
97066 60068 54849 89193 74856 39145
000 000.



EV02 - US military Voice Loop

9225 kHz, 30-08, 0002 UTC: JFK inaugural speech & some FDR speeches. Possible signals training

9225 kHz, 30-08, 0035 UTC: FDR now with his "all we have to fear" speech. Now into fireside chats



S06

A very nice one was copied by Linkz. It was a S06c transmission and a really odd one as you can see. Also the end is a bit weird with 5 and 7 zero's.

16303 kHz, 12-08, 1450 UTC: 80533 80533 007 007 007 87933 87933 007 007 007

14363 kHz, 12-08, 1500 UTC: 85653 85653 007 007 007 82013 82013 007 007 007 007 007 007 00000 0000000



S21

5373 kHz, 27-08, 1742 UTC:

973 368 368 34 34

66803 16475 36339 31533 72231 34123 04304 44032 50946 10961

79993 96512 84015 51597 70476 45262 34549 60599 22837 42325

54072 98417 25045 33526 55428 71526 04763 87710 96749 98534

42047 91603 25483 89461

368 368 34 34 000



S28 - The Buzzer

Mode: USB

Frequency: 4625 kHz

01-08, 1124 UTC: MDZhB 10 403 BABYeJ 10 10 55 95
 01-08, 1135 UTC: MDZhB 78 141 GARTIT 19 56 23 04
 01-08, 1135 UTC: MDZhB 94 419 PARTYeRNYJ 62 96 80 04
 01-08, 1252 UTC: MDZhB 23 566 KARNOTIT 06 79 36 39
 01-08, 1349 UTC: MDZhB 49 322 GARNYeC 41 84 07 67
 01-08, 1349 UTC: MDZhB 60 772 PARAMIDIN 88 81 43 59
 20-08, 0206 UTC: MDZHB 69 37 BENZOKSI Priyom
 20-08, 0356 UTC: MDZHB 67 69 VERSTNYY Priyom
 22-08, 0826 UTC: MDZhB01 394 GARDKOT 26 57 70 11 Priyom
 22-08, 0834 UTC: MDZhB 53 451 LARVIKIT 64 57 33 67 Priyom
 22-08, 0834 UTC: MDZhB 40 729 TARAPAN 54 81 95 14 Priyom
 22-08, 0845 UTC: MDZhB 72 853 TsARAPANJe 79 06 57 29 Priyom
 22-08, 1018 UTC: MDZhB 54 220 TARANTAS 35 83 42 67 Priyom
 22-08, 1148 UTC: MDZhB 05 052 KARAKUDA 68 78 69 17 Priyom
 22-08, 1207 UTC: MDZhB 39 622 VARAJDA 40 48 14 44 Priyom
 22-08, 1314 UTC: MDZhB 50 432 PARASh 62 62 30 23 Priyom
 22-08, 1315 UTC: MDZhB 29 472 KAPShA 89 54 75 67 RAPUNTsEL 37 50 15 77 Priyom
 22-08, 1320 UTC: MDZhB 02 548 VAPOR 83 06 07 03 Priyom
 22-08, 1329 UTC: MDZhB 40 836 KAPIJa 47 45 94 69 Priyom
 22-08, 1334 UTC: MDZhB 73 784 KAPITALKA 04 46 70 18 Priyom
 28-08, 1449 UTC: MDZhB 30 083 VANT 25 87 24 05 Priyom



S32 - Squeaky Wheel

Mode: USB

Frequencies: 3838 kHz (night), 5473 kHz (day)

5473 kHz, 22-08, 1620 UTC: AL'FA-45 88 644 OKSAZOLON 85 064 176 priyom

5473 kHz, 22-08, 1732 UTC: AL'FA-45 32 994 NASSAU 62 62 86 73 priyom



RMv/RNv/RNAv/RAv

Russian military stations

Frequency: various

Mode: USB / voice

RADv

6680 kHz, 06-08, 2323 UTC Russian Air Defense. Positions etc.

5445 kHz, 27-08, 2320 UTC Russian Air Defense. Positions etc.

RMv

5410 kHz, 13-08, 0815 UTC Rumba73 in QSO with other OM's in the net. Radio checks. Some over modulated.

4449 kHz, 13-08, 0200 UTC Stations on the net Dinu40 (control, numbers correct, not sure of ident), Samara37, Adora05, Shura21 (numbers correct, not sure of ident)

3925 kHz, 17-08, 2325 UTC "53rd 129 125" repeated

4380 kHz, 17-08, 0515 UTC Coed traffic followed by Priyom.

5130 kHz, 17-08, 1120 UTC Konus-30 prime YANTRA, dayte kvitantsiyu (Konus-30 take the YaNTRA, give a receipt)

4550 kHz, 17-08, 1206 UTC Lisa-29 clg Liker-33

RNAv

11354 kHz

02-08, 1103 UTC Priboj w/52850 (Russian Navy AN-26) reporting departure from Ostafyevo and next is landing at Levashevo w/fuel 4050 kgs. At 1157 tries to contact Priboj w/no response. Reports to Novator that he passed point (?DURNO?) at 115 UTC at alt 5000 mtrs w/fuel 3100 kgs.

02-08, 1107 UTC 75100 calling Priboj w/no response. Contacts Novator, Murmansk reporting departure from (missed) at 1105 UTC w/fuel 11,500 kgs and ETA Levashevo at 1140 UTC

02-08, 1117 UTC Priboj w/Kraket requesting confirmation of landing of 52983. Priboj then calls 52893 w/no response.

05-08, 1311 UTC Priboj (Naval Air Transports Central Sector, Moscow) calling 88111 (unid) w/no response

09-08, 1323 UTC Priboj (Naval Air Transports Central Sector, Moscow) w/52891 (Russian Navy AN-26) reporting departure from Anapa at 1620 w/fuel 4400 kgs and ETA landing at (missed) 1920 MSK. Priboj relays flt info to Kraket (Naval Air Transports Western Sector, Kaliningrad).

12-08, 0958 UTC Priboj (Naval Air Transports Central Sector, Moscow) w/52843 (Russian Navy AN-26) reporting departure from location 432428 (unid) at 1020 MSK flt alt 5200 mtrs & landing at Taganrog Central at 1120 MSK w/fuel 4400 kgs

12-08, 1553 UTC Priboj w/52851 (Russian Navy AN-26) reporting departure from Ostafyevo at 1943 MSK w/fuel 5500 kgs at alt 4000 mtrs. Next is landing at Levashovo. (2013/08/12 RP-MD)

12-08, 1554 UTC Acft 52853 (Russian Navy AN-26) w/Novator (Naval Air Transports Northern Sector, Murmansk

26-08, 1101 UTC Priboj (Naval Air Transports Central Sector, Moscow) w/52861 (Russian Navy AN-26) reporting passing point (?OLOBA?) at 1540- MSK at alt 5800 mtrs w/fuel 4800 kgs. ETA land at Severomorsk 1640 MSK

RAv

6685 kHz

09-08, 1802 UTC Davlenie (Russian Air Force 6958th Aviation Base Taganrog) in radio checks w/Korsar, Klarnetist, Proselok (Russian AF 566th Military Transport Aviation Regiment, Bryansk)

09-08, 1820 UTC Korsar w/76747 (IL-76MD) reporting 2 hours into flt and passing point (missed) at alt 2800 mtrs w/fuel 30 tons

09-08, 1821 UTC Davlenie w/76724 (IL-76MD) reporting landing at Raspiska (unid) at 2220 MSK

09-08, 1822 UTC Korsar w/76726 (IL-76MD) reporting one hour into flt & passing point (?OWATA?) at alt 2700 mtrs and fuel 22 tons.

11360 kHz, 05-08

1156 UTC Korsar (Russian Air Force 6985th Aviation Base Pskov) calling 78831 (IL-76MD) w/no response

1446 UTC Korsar w/76613 (IL-76MD) reporting one hour into flt & passed point MEGAB (spelled) w/fuel 30 tons. Korsar relays flt info to Proselok (Russian AF 566th Military Transport Aviation Regiment, Bryansk)

1514 UTC Korsar in radio checks w/76790 (IL-76MD)

1602 UTC Proselok w/76818 (IL-76TD) reporting one hour into flt and passed point (?GETEK?) w/fuel 26 tons.

1743 UTC Korsar in radio checks w/76634 (IL-76MD)

1200 UTC Klarnetist (Russian Air Force 6955th Aviation Base Migalovo/Tver) w/radio checks w/78790 (IL-76MD).

1207 UTC Korsar (Russian Air Force 6985th Aviation Base Pskov) 1207 USB w/85041 (TU-154M) reporting landing at (missed) at 1905 MSK w/fuel 28 tons. At 1217 85041 calls Chkalovskij for radio check. At 1345 USB tells Korsar their next is landing at Keflavik at 1905 MSK. Fuel 20 tons

1333 UTC Korsar w/76747 (IL-76MD) reporting departure from (missed) w/fuel 23 tons, cargo 15 tons & 40 pax.

1524 UTC Acft 76796 (IL-76TD) calling Proselok (Russian AF 566th Military Transport Aviation Regiment Bryansk) w/no response. At 1610 reports to Korsar that their next destination is Chkalovskij, alt is 2800 mtrs and fuel is 44 tons

1531 UTC Acft 76745 (IL-76MD) calling Korsar & Proselok w/no response.

11360 kHz, 09-08

1158 UTC Korsar (Russian Air Force 6985th Aviation Base Pskov) w/76719 (IL-76MD) reporting landing at Tver /fuel 10 tons

1215 UTC Korsar w/76724 (IL-76MD-not heard) reporting departure from Chkalovskij w/28 tons of cargo

1230 UTC Korsar w/76745 (IL-76MD) reporting landing at Rostov-na-Donu at 1830 MSK

1305 UTC Klarnetist (Russian Air Force 6955th Aviation Base Migalovo/Tver) w/78807 (IL-76MD) reporting passing point (?PIGUE?) w/fuel 33 tons. Next is landing at Kursk ETA 1824 MSK.

1321 UTC Korsar w/78805 (IL-76MD-not heard) reporting departure from Chkalovskij at 1630 MSK w.61 tons cargo, alt 2700 mtrs, next is Novosibirsk. At 1538 Korsar confirms that 85805 has 3 hours left in flt and fuel is 38 tons

1353 UTC Korsar w/85605 (TU-154B-2) reporting departure from Sochi at 1300 UTC and ETA land at Chkalovskij 1510 UTC. Reports 2.5 hours fuel

8909 kHz

08-08, 1858 UTC Unid (O/M Russian) in radio checks w/98853 (unid O/M Russian).

08-08, 2004 UTC Acft 98853 (unid) calling Ochitska (poss Moscow) and unid stn w/no responses. At 2017 98853 pass msg 912/477/125 to Midyalka

08-08, 2007 UTC Acft 309?? (poss TU-95) calling Ochitska & Midyalka w/no responses

12-08, 1930 UTC Acft 78153 (prob TU-95) calling Midyalka (unid) w/no response

8909 kHz, 19-08

1834 UTC 30977 wkg Nezyanka and another unid ground controller. Poss radio ground checks prior to take off?

1846 UTC 05643 in comms checks w/Nezyanka & Ochitska

1910 UTC 30977 sends msg 304/785/833/064/362 to Ochitska

1922 UTC 30977 sends msg 822/785/833/214/142 to Ochitska

1938 UTC 05543 sends msg 270/304/685/324/214/478/893.to Nezyanka

1940 UTC 88417 in comms checks w/Ochitska & Nezyanka

2014 UTC 30977 to ? 827 909 940 552 094

2024 UTC 30977 sends msg 304/909/022/393/762 ro Nezyanka

2054 UTC 30977 to Medyanka 295 158 027 838 972

2101 UTC 88417 to Medyanka 359 832 045 027 (couldn't work out the rest)

2103 UTC 30977 sends msg 917/357/360/897/647/777 to Medyanka (thanks to Sasha for correcting my callsign)

2104 UTC 05543 sends msg 822/785/740/855/572 to Medyanka

2115 UTC 05543 sends msg 270/127/357/324/074/252/980 to Otchitska

2150 UTC 88417 calling Otchitska & Medyanka w/no response

2151 UTC 30977? to Ochitska 3?9 254 3?9 34? ??? ??0 3?0

2201 UTC 30977 to Medyanka 917 357 368 897 697 777

2203 UTC 05543 to Medyanka 822 785 740 855 572

2213 UTC 05543 to Ochitska 270 127 357 324 064 252 980

2319 UTC 88417 to Ochitska? 808 304 354 704 ?0? 332 528?

2325 UTC 30977 to Medyanka 917 158 027 960 762

2337 UTC 30977 to Medyanka 399 158 187 156 864

2344 UTC 88417 to Medyanka 127 158 324 726 533

2346 UTC ? to Ochitska ??? 332 252 023 302 ???

8909 kHz, 20-08

0039 UTC 88417 to Medyanka 927 357 162 897 772
0041 UTC 05543? to Ochitska 250 309 038 324 004 409 201
0053 UTC ? to Ochitska (too faint to copy)
0109 UTC ? to Ochitska
0116 UTC ? to Medyanka
0145 UTC ? to Pudyolka????? (not sure of this callsign)
0152 UTC 05543 calls Medyanka
0153 UTC 05543 calls Ochitska
0154 UTC 05543 calls Medyanka 05543 calls Ochitska
0205 UTC 30977 calls Medyanka (Medyanka replies but 30977 seems not to hear and keeps calling)
0210 UTC 05543 calls Medyanka
0212 UTC 30977 to Medyanka 527 268 987 627 805 893 206 591 093
0213 UTC 05543 to Medyanka 270 127 278 324 234 809 008
0220 UTC ? to Ochitska
0456 UTC 05543 to Medyanka 620 383 853 601 330
0514 UTC 05543 to Medyanka 523 353 (rest too faint to copy)
0610 UTC 88417 to Medyanka (too faint to copy)
0613 UTC 05543? to Ochitska 033 805 572
2211 UTC Acft 79915 calling Medyanka w/no response
2213 UTC Acft 30977 calling Medyanka w/no response
2217 UTC Otchitska w/05543 who sends msg 547/127/356/324/054/252/945
2119 UTC Acft 30977 w/acft 05543 & sends msg 506/649/829 after repeated tries to send this msg to Ochitska.
05543 then relays this msg to Otchitska
2233 UTC Otchitska w/79915 who sends msg 822/357/162/552/252/529
2234 UTC Otchitska w/79913 sends msg but fades out after 514/752/324/????????
2237 UTC Medyanka w/79915 w/msg 514/100/296/026/167. Acft 30978 calling Medyanka & Otchitska w/no response.
Medyanka responds and QSL's for msg 296/693/640/470/945

8909 kHz, 26-08

2234 UTC Medyanka calling 79913 (TU-95) w/no response
2238 UTC Medyanka calling 05543 (TU-85) & 88417 (TU-95) w/no response
2242 UTC Medyanka w/30977 (TU-95) reporting that he's ready for work in (missed)
2245 UTC Ochitska w/30977 in radio checks
2247 UTC Medyanka w/13625 (TU-95) in radio checks
2256 UTC Medyanka w/98594 w/no response
2303 UTC Medyanka w/13625 w/msg: 304/785/704/678/252/775
2315 UTC Medyanka w/30977 w/msg: 304/785/027/804/094
2322 UTC Acft 13625 calling Ochitska for radio checks w/no response. Medyanka responds w/hearability checks
2249 UTC Medyanka w/05543 w/ msg: 506/658/511
2353 UTC Medyanka w/13625 w/msg: 304/300/704/661/685/377
2355 UTC Medyanka sending msg 230/928/446/792/745/506/591/762 to acft 05543. First time I've seen controller send msg to acft

8909 kHz, 27-08

0006 UTC Medyanka calling 79913 w/no response. Then contacts 13625 asking if he has comms w/79913. 13625 replies he has no comms w/79913
0008 UTC Medyanka w/13625 w/127/300/402/693/732
0021 UTC Medyanka w/13625 relaying msg 822/300/324/813/658/916 from acft 79913
0032 UTC Medyanka w/13625 relaying msg 304/297/324/785/409/227 from 79913



V02a
Dirección General de Inteligencia

I think that it is safe to assume that both V02(a) and SK01 are no longer operational. Both haven't been heard for a while. Except for a few CW schedules all of the transmissions are now HM01 (combi of V02 and SK01).



V07

14823/13423 kHz, 11-08, 0500/0520 UTC:

845 845 845 1 845 845 845 1 845 845 845 1 845 845 845 1 845 845 845 1
 539 73 539 73
 50139 71089 21277 43790 31548 42939 33385 735?3 47318 19021
 53899 03474 797?7 47421 30251 98843 12434 39259 87930 31738
 3333? 30022 20937 45497 50720 24580 28113 52937 00142 52102
 54432 72381 35489 39489 07717 83039 15542 55739 50512 51?77
 71080 98778 07731 35112 82717 19783 35173 4731? 85173 97919
 93502 87?07 91128 44992 30839 13148 55981 23754 34790 07787
 09050 85222 44111 34357 73559 0243? 33577 9388? 07188 32173
 39584 42901 28491
 000 000

13423 kHz, 18-08, 0520 UTC: 845 845 845 000



V13 - New Star Broadcasting Station
星星廣播電台 Xīngxīng guǎngbò diàntái

Current schedules

Station #3: 13750 kHz, 0500 and 0600 UTC
 Station #4: 15388 kHz, 0700 and 0800 UTC
 Station #4: 13750 kHz, 1200 and 1300 UTC



V26

9153 kHz, 03-08, 0935 UTC: in progress

9153 kHz, 28-08, 1020 UTC: in progress

MORSE STATIONS



MX **Russian Military beacons**

Current cluster frequencies:

3594, 4558, 5154, 7039, 8495, 10872, 13528, 16332, 20048 kHz

Other frequencies:

L 6917.5, 8497.8 kHz

V 3658, 4150, 6809, 6928, 7027.5 kHz

R 5466 kHz (seldom reported these days)

W 8895 kHz (Air Force)

Cluster beacon slots:

.7 "D", Sevastopol

.8 "P", Kaliningrad

.9 "S", Severomorsk

.0 "C", Moscow

.1 "A", Astrakhan

.2 "F", Vladivostok

.3 "K", Petropavlovsk Kamchatskiy

.4 "M", Magadan

I haven't heard beacon "A" for ages. Is it gone?

Channel markers:

W: 8895 kHz

L: 8497.8 kHz, 18-08, 1745 UTC: Beacon "L" sending strings of LLLLLLF



M01

6884 kHz, 06-08, 0920 UTC:

260 260 308 308 30 30 = =

48400 48400 26100 26100 27867 27867 34988 34988 98336 98336 53014 53014

45379 45379 18021 18021 22107 22107 90871 90871 33754 33754 31883 31883

56547 56547 05977 05977 71137 71137 27953 27953 16507 16507 96755 96755

02089 02089 22329 22329 66523 66523 36423 36423 22609 22609 98519 98519

81517 81517 78545 78545 73009 73009 35843 35843 05862 05862 19509 19509

= = 308 308 30 30 000



M08a **Dirección General de Inteligencia**

I think that it is safe to assume that both V02(a) and SK01 are no longer operational. Both haven't been heard for a while. Except for a few CW schedules all of the transmissions are now HM01 (combi of V02 and SK01).

M08a schedules. Thanks to Don Schimmel for his monitoring activities.

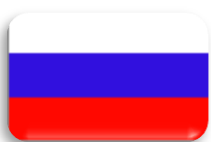
Monday	1400	8097	Wednesday	1400	8097	Friday	1400	8097
	2000	7554		2000	7554		2000	7554
	2300	8009		2300	8009		2300	8135
Tuesday	1400	8097	Thursday	1400	8097	Saturday	1400	8097
	2000	7554		2000	7554			
	2300	8135		2300	8135			



M12

13972 kHz, 05-08, 1320 UTC:

991 1 2917 219
31623 55051 53640 55671 38498 95555 43594 66562 66517 61787
72287 54180 20978 01152 09179 18097 24809 30222 62327 51990
64272 92607 12650 35963 48191 63037 32372 09611 49676 60??2
30819 46306 99388 53855 31686 96850 61521 16233 28836 16783
84392 04070 94565 51559 31746 97226 88366 40298 98849 75584
40678 53430 00955 79616 13129 67626 17697 66678 89785 48974
57693 93251 46703 83166 03559 78927 00237 51977 83051 91557
84350 89951 99646 72512 74413 97846 05477 37561 86061 10584
35581 53338 85012 63178 93655 73551 06581 04994 95141 52418
79776 92877 95552 61531 63791 71087 60079 63329 91277 09664
54327 33420 77330 14020 13965 68332 56047 14004 15775 83955
02827 32277 13721 97233 49847 16975 91102 99231 43475 57691
51272 01523 60368 02818 62915 44898 45102 60284 97784 38943
69674 25646 00472 51662 08526 84144 29538 62716 06157 58508
53443 23707 00805 85354 23772 43983 54231 19875 78582 92697
24547 41386 69537 49603 40307 48713 38082 12142 53744 78420
06500 09369 47659 92270 73851 69914 42927 31875 11551 85474
95002 26426 11403 95133 91946 80658 86856 70844 92436 20190
59054 84082 54982 19469 28632 64659 19326 30938 64268 58796
64247 44697 79178 29747 24718 15818 06845 66528 88836 48126
79034 24646 93938 62586 84042 30299 75278 41635 97112 71961
33790 78294 10867 38898 40169 63307 41110 98017 87579
000 000



M21 + variants ***Russian Air Defence Forces*** ***Бойска ПВО Voyska PVO***

Id 0: 3247, 5222
Id 8: 4904, 6422, 9367.5



M22 - 4XZ

Filippo sent us a note about 4XZ. He writes:

4XZ keyer malfunction on August 10

On August 10 all 4XZ frequencies (2680, 4331, 6379, 6607 monitored from Europe) displayed the same malfunction:

- *at least from 0020z, CW keyer stuck keyup or keydown for several seconds at a time*
- *from 0045z key down*
- *from 0050z off the air.*

Later in the day operation resumed, with a repeated error in the ID loop: one of the several VVV groups being sent as VVU, with a dot and dash fused into an extra long dash. Messages were not visibly affected.

Neither the intermittently "stuck" keyer nor the extra long dash can be explained as an on-off-keying hardware issue or as a data stream error. Both point to a system that performs an apparently very simple task in a rather convoluted way.



M32

Russian/CIS/Ukrainian

Military CW Stations

5123 kHz, 02-08, 1346 UTC: XXX XXX PABA PABA KORGET 375 K
 5220 kHz, 02-08, 1355 UTC: AM9S wkg JPYN, ANSW, W6GZ, C26B, F2DB etc. net check
 14842 kHz, 09-08, 1120 UTC: RGT77-net: XXX XXX WEGI WEGI 50207 PEREGUL 5184 3905
 13479 kHz, 09-08, 1122 UTC: REA4: XXX XXX REA4 REA4 04560 PEREGUL 5184 3905
 14842 kHz, 09-08, 1123 UTC: RGT77: XXX XXX RGT77 RGT77 15550 AKRIDIL 7180 9091
 12832 kHz, 09-08, 1124 UTC: RDL: XXX XXX WEGI WEGI 01398 50207 PEREGUL 5184 3905
 13479 kHz, 09-08, 1127 UTC: REA4: XXX XXX REA4 REA4 90718 AKRIDIL 7180 9091
 14842 kHz, 09-08, 1129 UTC: RGT77: XXX XXX WEGI WEGI 46269 KERGELEN 8456 3274
 12832 kHz, 09-08, 1130 UTC: RDL: XXX XXX RGT77 RGT77 80298 15550 AKRIDIL 7180 9091
 13479 kHz, 09-08, 1131 UTC: REA4: XXX XXX REA4 REA4 93743 KERGELEN 8456 3274
 14842 kHz, 09-08, 1132 UTC: RGT77: XXX XXX SHEU SHEU 12367 68476 SIRINKS 9382 0456
 13479 kHz, 09-08, 1135 UTC: REA4: XXX XXX REA4 REA4 05308 SIRINKS 9382 0456
 12832 kHz, 09-08, 1157 UTC: RDL: XXX RDL RDL 03893 42695 RAZNOKOL 9722 6754 K
 7255 kHz, 25-08, 1203 UTC: XXX XXX RLO RLO GUBKA 3 PO RAJONAM 68 73 K

16228 kHz, 26-08, 0701 UTC: XXX XXX LR43 LR43 000 100 TEH PROWERKA 00000 00000

This is a technical check message without any tactical meaning. They check all lines before a non-regular action or when the main equipment is changed. This must be logged on the receiving end.

If you see that kind of message on one line only, they changed a receiver, transmitter or crypto equipment.

4467 kHz, 0056-0101 UTC:

6PZU DE LMHJ RK. NR6Z DE LMHJ RK. NT5N DE LMHJ RK. MLP4 DE LMHJ RK. 2KQH DE LMHJ RK. LGNG DE LMHJ RK

VVV LIV4 838 17 12 0446 838 = ZAH 471 = PPPPP BJYC OOCheR WWBChQ PAIECh WPJPS ÖXGRL TKNChA ZXSZP ChOILD
MPEJM BJYC OOCheR ÄWPÄE 042 RPT AL

4419 kHz, 15-08, 0102-0116 UTC:

SJG7 DE LWGL QTC ZWL

LWGL 839 23 12 0450 839 = ZWL 906 = PPPPP GCNRCh JNUWU VChUTA EJJIX ÜÖÄLH ÖTDCl FINUJ KSKMT FXOAG
VFMLJ CDÄCB RVKCO ZKWDL MAAEN ÖÜVCT LChONN GCNRCh JNUWU ÄWPÄO 042 RPT AL

KJN3 DE Q1TI RK. HL9Y DE Q1TI RK. TIBD DE Q1TI RK. NQF2 DE Q1TI RK. KU2V DE Q1TI RK. NSKF DE Q1TI RK. A7TS DE Q1TI RK
ZZZE DE Q1TI RK

4416 kHz, 11-08, 2218 UTC:

RJD99 DE RAS82 QSA? QTC
RAS82 446 17 11 0103 446 = FOR RJD90 RJH74 = 11211 99687 10493 22200

4419 kHz, 11-08, 2314-2319 UTC:

A7TS DE Q1TI QTC
Q1TI 346 17 12 0306 346 = ZAP 289 =
PPPPP IMZYJ IDZID RFCChZ OHIKÄ WNJYD MVINF MCCLM KRJSch KHPMU CNFXK IMZYJ IDZID ÄWPÄE
042 RPT AL
Q1TI CK

4478.5 kHz, 11-08, 2343-2346 UTC:

SDDN DE OMCV RK
Q6AH DE OMCV RK
J1GG DE OMCV RK
7DPH DE OMCV RK

4416 kHz, 12-08, 0010 UTC: RJD99 DE RMLZ 12001 99666 10422 222//

4467 kHz, 12-08, 0056-0116 UTC:

6PZU DE LMHJ RK
NR6Z DE LMHJ RK
NT5N DE LMHJ RK
MLP4 DE LMHJ RK
2KQH DE LMHJ RK
LGNG DE LMHJ RK

VVV LIV4 838 17 12 0446 838 = ZAH 471 =
PPPPP BJYC OOChER WWBChQ PAIECh WPJPS ÖXGRL TKNChA ZXSZP ChoILD MPEJM BJYC OOChER ÄWPÄE
042 RPT AL

4419 kHz, 12-08, 0110-0116 UTC: SJG7 DE LWGL QTC ZWL

LWGL 839 23 12 0450 839 = ZWL 906 =
PPPPP GCNRCh JNUWU VChUTA EJJIX ÜÖÄLH ÖTDCI FINUJ KSKMT FXOAG
VFMLJ CDÄCB RVKCO ZKWDL MAAEN ÖÜVCT LChONN GCNRCh JNUWU ÄWPÄO
042 RPT AL

KJN3 DE Q1TI RK
HL9Y DE Q1TI RK
TIBD DE Q1TI RK
NQF2 DE Q1TI RK
KU2V DE Q1TI RK
NSKF DE Q1TI RK
A7TS DE Q1TI RK
ZZZE DE Q1TI RK

4449 kHz, 12-08, 0158-0203 UTC:

5QNJ QSA? K
A6VL DE LKJ7 QSA3 QSA? K
A6VL QSA3 QSU5 K
LKJ7 OK QSU5 K
A6VL DE WFEF QSA3 QSA? K
A6VL QSA3 QSU5 K
WFEF OK QSU5 K (followed by USB radio checks)
5QNJ QSA? K

A6VL DE WFEF QSA3 QSA? K
A6VL QSA3 K
A6VL DE LKJ7 QSA3 QSA? K
A6VL QSA3 K

4478.5 kHz, 12-08, 0228 UTC:

X7N8 DE OMCV RK
SDDN DE OMCV RK
Q6AH DE OMCV RK
J1GG DE OMCV RK
7DPD DE OMCV RK

4442 kHz, 12-08, 0250 UTC: NBWR K QSA3 K

4430 kHz, 12-08, 0301 UTC:

CW5B QSA? K (reply too weak to copy)
(another callsign checks in) QSA3 QSA? K
QSA3 RK
9FL? DE MBES QSA3 QSA? K
QSA3 RK

4449 kHz, 15-08, 0158-0203 UTC:

5QNJ QSA? K
A6VL DE LKJ7 QSA3 QSA? K
A6VL QSA3 QSU5 K
LKJ7 OK QSU5 K
A6VL DE WFEF QSA3 QSA? K
A6VL QSA3 QSU5 K
WFEF OK QSU5 K (followed by USB radio checks, see under RMv)
5QNJ QSA? K (5QNJ believed to be a collective callsign for the group, A6VL is the NCS)
A6VL DE WFEF QSA3 QSA? K
A6VL QSA3 K
A6VL DE LKJ7 QSA3 QSA? K
A6VL QSA3 K

4478.5 kHz, 15-08, 0228 UTC:

X7N8 DE OMCV RK. SDDN DE OMCV RK. Q6AH DE OMCV RK. J1GG DE OMCV RK. 7DPD DE OMCV RK

4442 kHz, 15-08, 0250 UTC: NBWR K QSA3 K

4430 kHz, 15-08, 0301 UTC:

CW5B QSA? K (reply too weak to copy)
(another callsign checks in) QSA3 QSA? K
QSA3 RK
9FL? DE MBES QSA3 QSA? K
QSA3 RK
(CW5B believed to be a collective for the group)

8828 kHz, 19-08,

2115 UTC ZT9H calls for radio checks: Q9Z7, NHSL, FRFK, QMED, AMOR, 8YLY, 4B1R, GLTY
2307 UTC ZT9H calls for radio checks: L8IY, 4G2B, AMQA, FC3U, 6D4X, T8AC, Q9Z7, NHSL, FRFK, QMED, AMOR,
8YLY, 4B1R, GLTY

8828 kHz, 20-08, 0005 UTC:

ZTH9 911 83 20 0300 911 = 573 =
AAAAA YURRR KIÜCN EFHPG UZLÜI TChChVZ ZOCUW LUÜUJ OETKK EVÜRS
EJWWX VRDGZ PRKEO WSEMW TQQÄX OCOÜM EDXMÄ CHNML LLEÄB BBOET
QVTSM KUBTÖ QWTAC DAXYG RHSIR ZOEAP JMDZP ChMNLK TÖLEH QVBBK
ÖDKFÖ TÄRAD RVJNV KGKGV ÄKFIZ VKWFCh BQNFP EZÜÜF AÖFJE DMEAK
IQFEB NZARB XÄJTE FXNCW PZCFC TOKKL SRNÄH CEZXP ÜJDDCh AVÖZS

HJBÖK KPUMY ZÜOÖL RCXBV QHPRV ÖPYGO RFZCM DUJÄB LAÖÖW NZFÖU
EÜVEZ SÖCEX QEGChS YÜSÜS FUBBI TYHEÄ AQÜIE OZHVm ChJGAK LAPChA
EDNSU FBHFM PUXHR UEJHA ÄSPFQ DOÄÖJ ÄXÄAV DOARI OQCTY TQÄÄCh
NSGTQ BKKZA RPT AL QLN

12692 kHz, 19-08, 0739 UTC:

i.p. 85583 63127 36881 74863 66517 38 iii
74863 66517 28069 65323 65756 29346 25125 29053 93534 98042
61597 57440 26467 41397 58076 66153 65229 82260 36512 17173
72562 98835 72129 65719 27939 55491 82882 56742 763.8 13560
15555 11494 51738 14131 785.8 71142 91065 35339 47636 64309
27883 34562 20061 =
RPT AL AR RJE56 K



M32a
Russian Navy
Voyenno-Morskoy Flot Rossii

Topol informs me that he identified RAL48 as (Rescue) Tug Nicolay Chiker

8345 kHz, 01-08, 0005-1835 UTC:

VVV RIW DE RMC99 QSA? QTC
RCV DE RFE70 QSA?
RMC99 382 16 1 0400 382 = SML FOR RJH45 RJH74 = 01001 99350 70196 22200
RCV DE RFE70 QSA2 (Sets up QYT)
VVV RCV DE RMYZ QSA? QTC
RMYZ 646 18 1 2202 646 = SML FOR RJE73 RJH45 = 01181 99351 10264 22200
VVV RIT DE RHC93 (faded)
VVV RIT DE RJ163 QSA? QTC
RJ163 193 18 1 2225 193 = SML FOR RJH45 RJH74 = 01181 99562 70104 22212

8345 kHz, 05-08, 2229-2333 UTC:

VVV RCV DE RGV82 QSA? (sets up QYT4)
RIW DE RJT22 QSA2
RIT DE RHC93
RIT DE RHC93 QSL 1303

8345 kHz, 06-08, 0002-0648 UTC:

RIW DE RJT22 QSA?
RCV DE RMYZ QSA? QTC
RMYZ 437 18 6 0400 437 = SML FOR RJE73 RJH45 = 06001 99351 10264 22200
RBIZ (hove to Tartus)
VVV RIW DE RMC99 QSA? QTC
RMC99 264 16 6 0410 264 = SML FOR RJH45 RJH74 = 06001 99355 70120 22222
RMYZ 99218 ENAR(stopped, stepped on by RJT22)
VVV RIW DE RMC99 QSA? QTC
RMC99 633 36 6 0601 633 = SML FOR RIT RCV RMP = 11111 84194 93382 06031 = + RMC99 (36fg message)
RCV DE RGV82 QYT4 QSX 6452
RCV DE RGV82 QYT4 QSX 8014/9248
RIT DE RLD69 QYT4 QSX 10728
VVV RMP DE RHL80 QSA?

8345 kHz, 10-08, 0555 UTC:

RCV DE RMRV = SML FOR RJH45 RJD38 = 10061 99383 10247 41 10906 20323 40119 56000 70200 81200 22254 00258 299//
09013 = + RMRV K

8345 kHz, 11-08, 0001-0014 UTC:

VVV RCV DE RMRV QSA? QTC
RMRV 221 17 11 0358 221 = SML FOR RJH45 RJD38 = 11001 99355 10225 22263
RCV DE RBIZ QSA? QTC
RBIZ 206 17 11 0400 206 = SML FOR RJE73 RJH45 = 11001 99349 10358 22200
VVV RCV DE RMYZ QSA? QTC
RMYZ 274 18 11 0400 274 = SML FOR RJE73 RJH45 = 11001 99351 10264 22200
VVV RIT DE RMC99 QSA? QTC
RMC99 274 16 11 0401 274 = SML FOR RJH45 RJH4 = 11001 99360 70152 22263

8345 kHz, 12-08, 0003-0202 UTC:

VVV RCV DE RMYZ QSA? QTC
RMYZ 575 18 12 0400 575 = SML FOR RJE73 RJH45 = 12001 99351 10264 22200
VVV RIW DE RMC99 QSA? QTC
VVV RIT DE RMC99 QSA? QTC
VVV RIW DE RMC99 QSA? QTC
VVV RIT DE RMC99 QSA? QTC
VVV RCV DE RMC99 QSA? QTC
RMC99 266 16 12 0400 266 = SML FOR RJH45 RJH74 = 12001 99360 70210 22263
VVV RIW DE RMC99 QSA? QTC

RMC99 632 36 12 0601 632 = SML FOR RIT RCV RMP =
11111 28375 32370 94069 26665 74785 32237 10143 74855 67517
56940 37178 73663 31533 08126 36408 41010 70412 49858 68006
97738 39633 80308 77755 93030 33937 93758 02021 18297 88838
46579 12031 = + RMC99

4360 kHz, 12-08, 0038 UTC: RMXV DE RIT QSA3

12464 kHz, 15-08, 0603-0711 UTC:

VVV RIW DE RCJG QSA? QTC
RCJG 181 18 15 1000 181 = SML FOR FOR RJH45 RJH74 = 15061 99095 70803 22200
VVV RIW DE RMC99 QSA? QTC
RMC99 599 16 15 1000 599 = SML FOR RJH45 RJH74 = 15061 99309 70388 22263

8345 kHz, 15-08, 0716-0725 UTC:

RIT DE RHY51 OK QSU1 SK K
RHY51 OK QRR3 QDW 11064

12464 kHz, 16-08, 0557-0707 UTC:

RCV DE RMRV
VVV RCV DE RJI30 (QSA? QTC)

8345 kHz, 16-08, 1715-2123 UTC:

RIT DE RFK93 K (very faint, sets up QYT4)
VVV RCV DE RJI30 QSA2
RCV DE RJI30 OK QSU1 QSX 8204 QWH 8734
VVV RCV DE RMRV QSA?
RCV DE RMRV OK QAP
VVV RCV DE RMRV QSA? QTC
RMRV 588 18 17 0035 588 = SML RJH45 RJD38 = 16211 99359 70063 22262
VVV RIT DE RFK93 QSA?

8345 kHz, 17-08, 0016-2353 UTC:

VVV RIT DE RMC99 QSA? QTC
RMC99 258 16 17 0401 258 = SML FOR RJH45 RJH74 = 17001 99277 70479 22263
VVV RCV DE RFH71 QSA3 QSA?
RCV DE RFH71 QSA2 K RCV DE RFH71 QYT4 QSX 6042 (continues to set up QYT4)
RFH71 OK QYT4 QWH 7640
RCV DE RFH71 OK QYT4 QWH 5322

VVV RIW DE RMC99 QSA? QTC
 RMC99 624 35 17 0601 624 (stopped)
 RMC99 624 35 17 0601 624 = SML FOR RIT RCV RMP = 11111 29757 45389 17030 = + RMC99 (35fg message)
 VVV RCV DE RMRV QSA?
 RCV DE RMRV QYT4?
 RCV DE RMRV OK QYT4 QWH 7662/9248 (continues to set up QYT4)
 VVV RIW DE RJT22 QSA?
 VVV RIW DE RJT22 QSA?
 RIT DE RJP98 QSA1 QRV
 RJP98 QSL 727
 VVV RCV DE RBIZ QSA? QTC
 RBIZ 607 17 17 2210 607 = FOR ??? = 17181 99359 10349 22200
 VVV RIW DE RMRV QSA? QTC
 RMRV 469 300 18 0345 469 = SML = MMMMM BHCVI (300 5FGs)

8345 kHz, 18-08, 0008-0550 UTC:

VVV RCV DE RBIZ QSA? QTC
 RBIZ ??? ?? 18 0400 ??? = FOR RJH73 RJH45 18001 9935? 10352 22232 (Note: beginning totally stepped on by other station, probably RMRV)
 RIW DE RMRV (still sending 300 group message)
 RMRV RPT AA 191 NCM (continues with message)
 RMRV RPT AA 292 (finally finishes message at 0103Z)
 RIW DE RMRV COR ADS SML FOR RIT
 RIW DE RMRV COR PBL 469 301 18 0340 535
 RIW DE RJT22 QYT4 QSX 17025/15532
 RMC99 632 35 18 0601 632 = SML FOR RIT RCV RMP = 11111 16272.....88188 18030 = + RMC99
 RCV DE RBIZ QSA3 QYT4 QSX 6912/10892
 VVV RIW DE RMRV QSA? QTC (tries 4 times, no answer)

Epic message from RMRV. Not seen one that long before, and MMMMM priority level? According to Fritzs site M is highest priority and never used in CW I have also noticed a trend with RMC99 sending a 11111 message at 0203z (give or take a minute) every night. Surely not training messages as previously stated elsewhere. They must be status reports. Looking at other 11111 messages I've picked up this year, nearly all have been sent around 0200z, with a few at 1400z and the odd random one (but all h+03 mins roughly)

8345 kHz, 20-08, 0531 UTC:

RMP DE RMRV 248 18 20 0925 248 = SML FOR RJH45 RJD38 RJH74 = 20061 99461 70079 41598 30710 10173 40252 50014
 70200 84100 22212 00180 299// 20013 = + RMRV K

4360 kHz, 12-08, 0038 UTC: RMXV DE RIT QSA3

12464 kHz

02-08, 1205 UTC: RIT DE RJ163 471 17 2 1605 471 = SML FOR RJH45 RJH74 = 02121 99601 70067 41297 81418 10150 49932 54010 72025 88710 22213 00130 299// 02013 = + RJ163 K
 02-08, 1805 UTC: RIT DE RJ163 126 17 2 2203 126 = SML FOR RJH45 RJH74 = 02181 99609 70051 41497 51406 10130 49946 52014 70351 85070 22213 00120 299// 02013 = + RJ163 K
 02-08, 0604 UTC: RIW DE RMC99 813 17 3 1000 813 = SML FOR RJH45 RJH74 RJD38 = 03061 9934 70189 41/98 40305 10230 40200 53010 70212 8//// 22200 00220 03012 = + RMC99 K
 02-08, 0608 UTC: RIT DE RJ163 ... = SML FOR RJH45 RJH74 = 03061 99628 70015 41998 01611 10130 49972 54000 70110 80000 22213 00120 299// 03013 = + RJ163 K)
 02-08, 0612 UTC: TUG MB-304. RCV DE RMYZ 437 18 3 1002 437 = SML FOR RJE73 RJH45 = 03061 99351 10264 41997 03414 10250 40100 54000 70200 80000 22200 00260 299// 399// 03014 = + RMYZ K
 09-08, 0601 UTC: RIW DE RMC99 317 17 9 1000 317 = SML FOR RJH45 RJH74 RJD38 = 09061 99360 70079 41/97 20803 10230 40160 54000 70200 8//// 22263 00210 09012 = + RMC99 K
 09-08, 0605 UTC: RCV DE RMYZ 341 17 9 1002 341 = SML FOR RJE73 RJH45 = 09061 99351 10264 41998 03414 10260 40100 54000 70200 80000 22200 00255 299// 399// 09014 = + RMYZ K
 10-08, 0601 UTC: RUSSIAN NAVY AO IVAN BUBNOV. RIW DE RCJG 767 19 10 0955 767 = FOR RIT = 11111 23376 51692 58382 75031 ... 10016 = + RCJG K
 10-08, 0609 UTC: TUG MB-304. RCV DE RMYZ 842 18 10 1002 842 = SML FOR RJE73 RJH45 = 10061 99351 10264 41998 03414 10250 40090 52020 70200 80000 22200 00260 299// 399//10014 = + RMYZ K

10-08, 0622 UTC: RIW DE RMC99 517 17 10 1002 517 = SML FOR RJH45 RJH74 RJD38 = 10061 99360 70115 41/98 20210 10230 40150 54000 70200 8//// 22263 00210 10012 = + RMC99 K

10-08, 1200 UTC: RCV DE RMRV 833 5 10 1600 833 = SML FOR WEGA385 = WJZEÄ RRTÄP PIPOI (10002 QRM)= + RMRV K QSL 833 ? K (LATER:) 833 5 10 1621 833 = SML = WJZEÄ RRTÄP PIPOI 10003 = + RMRV K

10-08, 1450 UTC: RCV DE RMRV 346 17 10 1845 346 = SML FOR RJH45 RJD38 = 10151 99371 10241 41597 01903 10273 40052 57000 70100 80000 22253 00255 20401 10013 = + RMRV K

20-08, 0602 UTC: RIW DE RMC99 486 16 20 1000 486 = SML FOR RJH45 RJH74 = 20061 99216 70645 41/98 30907 10250 40130 54000 70200 8//// 22263 00230 20012 = + RMC99 K

20-08, 0643 UTC: RCV DE RHN85 QSA2 K - FOR RJD25 QYT4 QSA NO K - FOR RJD25 QYT4 QWH? K - OK QYT4 QWH 7640 QSX 11143 K

20-08, 1020 UTC: RCV DE RIR96 222 15 20 1345 222 = FOR RJE73 RJH45 = 20091 99421 10298 41598 10903 10300 40160 510000 70200 81000 22252 00250 20012 = + RIR96 K

20-08, 1140 UTC: RIW DE RMRV 761 18 20 1525 761 = SML FOR RJH45 RJD38 RJH74 = 20121 99470 70069 41598 10707 10196 40266 53014 70200 83100 22212 00177 20502 20013 = + RMRV K

20-08, 1250 UTC: RIW QTC TO RIT RAL48 440 21 20 1602 440 = SML FOR RJH74 RJH45 = 20121 99668 10066 41397 62215 10117 40015 52011 70122 863// 22252 00130 20605 3//// 4//// 5//// 6//// 20017 = + RAL48 K

20-08, 1450 UTC: RIW DE RMRV 469 18 20 1845 469 = SML FOR RJH45 RJD38 RJH74 = 20151 99473 70063 41598 10906 10202 40266 51000 70100 81100 22212 00180 20502 20013 = + RMRV K

20-08, 1225 UTC: RIW DE RLX92 859 16 20 1605 859 = SML FOR RJH45 RJD38 = 20121 99582 10200 43/98 72201 10200 40200 52010 70212 86// 22243 1//// 20012 = + RLX92 K

11143 kHz, 20-08, 0802 UTC: TFC TO RHN85 AFTER COORD. ON 12464/10543

7080 kHz, 19-08, 0304 UTC:

RFH46
 RMW46
 RFR93 DE RMW46 ZSA ? K
 RMW46 DE R ZSA 3 ZSA ? K
 RPT K
 RMW46 DE RGR93 ZSA 3 ZSA ? K
 RMW46 ZSA 2 R K
 RGR94 DE RMW46 ZSA ? K
 RGR95 DE RMW46 ZSA ? K
 RMW46 DE R.... (QRM on freq)
 RMW46 ZSA 2 R K
 RGR96 DE RMW46 ZSA ? K
 RMW46 DE RGR96 ZSA 1 ZSA ? K
 RMW46 ZSA 4 R K

11000 kHz, 19-08, 1925 UTC:

RIR96 DE RIW K
 RIR AS 1 K
 RMRV DE RUK K
 RIW. QYT 4 QWH 12746 K
 RMRV DE RIW K
 RIW QYT 4 QSX 8328 K
 RIW R K

6989 kHz, 23-08, 1940 UTC:

... DE RAL2 K
 QSA4 QRU VA
 RBL66 DE RAL2 K
 QSA3 QRU VA. QRU SK
 RIB2 DE RAL2 K
 RAL2 DE RIB2 QSA 4 K
 QSA 2 QRU VA
 QRU VA (1942z - Silent)

4635 kHz, 25-08, 1215 UTC:

RMLZ 135 20 25 .600 135 = FOR RJH45 RJH74 RJD90 =
25121 99665 10349 41597 7..04 10120 ..232 52015 .0321 8//// 222// 0050 2//// 3//// 4//// .8.00 .5016 =
AR RMLZ K
RMLZ RPT
52015 K
RMLZ OK QRU K

7664//9145//11000 kHz, 25-08, 1900 UTC:

RMI93 DE RIW QSA?
RIW 844 32 25 2100 844 = FM RIT =
11111 63254 72206 26053 27663 14922 89587 29647 74833 99684
93022 38403 01717 93909 27878 98335 23921 98014 01603 09551
87213 33732 38945 51438 86909 32570 56957 28142 37977 72822 25030 = RIW K
8345 RIW DE RMI93 NR 844 RPT AA 17 K RIW repeats all after group 17
8345 RMI93 R 844 K

8345 kHz, 27-08, 0551-0620 UTC:

RIT DE RMI93 753 15 27 0950 753 = SML FOR RJH45 RJH74 = 27061 99681 10114 41597 72315 10140 40050 52000 79124 87720
22212 27011 = + RMI93 K

RIT DE RAL48 966 21 27 1005 966 = SML FOR RJH45 RJH74 = 27061 99608 70001 41696 82004 10130 40135 57007 70222 8////
22200 00135 299// 3//// 4//// 5//// 6//// 27017 = + RAL48 K

12464 kHz, 27-08, 0849-1220 UTC:

RCV DE RMGB 153 30 27 1140 153 = 26506 60663 07185 73074 ... (REPEAT MSG FROM RCV/RAA)

RMGB:NAVY TANKER IMAN RUS ---- CW RMGB 89988 LANELXNYJ 5204 2741 K

RIR96: NAVY LS AZOV (151) RUS 0902 CW RCV DE RIR96 123 15 27 1300 123 = FOR RJE73 RJH45 = 27091 99373 10016 41698
20506 10260 40140 53004 70100 82080 22262 00210 27012 = + RIR96

RMGB: NAVY TANKER IMAN RUS 0910 CW RMGB 62872 BOLELXQIK 1394 9712 K

RBIZ: NAVY PM-138 RUS 0910 CW RBIZ 62872 BOLELXQIK 1394 9712 K

RMYZ: NAVY TUG MB-304 RUS 0910 CW RMYZ 62872 BOLELXQIK 1394 9712 K

RIR96: NAVY LS AZOV (151) RUS 0910 CW RIR96 62872 BOLELXQIK 1394 9712 K

RBIZ: NAVY PM-138 RUS CW RCV DE RBIZ 523 16 27 1600 523 = FOR RJE73 RJH45 = 27121 99359 10348 41997 02703 10330
40070 57000 70200 22200 10280 20000 88000 27013 = + RBIZ K

RAL48: NAVY UNID RUS 1220 CW RIT DE RAL48 376 21 27 1615 376 = SML FOR RJH45 RJH74 = 270121 99606 70001 41196
83109 10127 40141 52003 70322 886// 22200 00133 20303 3//// 4//// 5//// 6//// 27017 = + RAL48 K

6989 kHz, 27-08, 1808 UTC:

RAL2 DE RIB2 QSA4 AA ? K
QSA4 QRU VA
QRU AR
RGH2DE RAL2 K
RGH2 ... AA .
QSA4 QRU VA
QRU VA
RMW2 DE RAL2 K
RMW2 QSA4? K
QSA4 QRU VA K
RU
RH.2DE RAL2 K

RAL2 DE RHQ2 QSA 4 K
QSA 5 QRU VA
VA
RHL66 DE RAL2 K
RAL2 DE RBR66 QSA 1 AA NO.
QSA4 QRU VA
SK

8345 kHz, 29-08, 0006-0605 UTC:

RCV DE RIR96 QRR 32
VVV RIT DE RAL48 QSA? QTC
RAL48 614 21 29 0405 614 = SML FOR RJH45 RJ(steppe on) 29001 99591 70013 22253 (used long zeros)
VVV RIT DE RMI93 QSA? QTC
RMI93 211 34 29 0540 211 = SML FOR RMP = 11111 30909 74983 29029 = + RMI93 (34 fg message)
RIT DE RMI93 QSA2
RMI93 OK QYT4 QSX 4153
RMI93 QYT4 QSA4 QSA?
RIT DE RMI93 QYT4 QMO
VVV RIT DE RMI93 QSA? QTC
RMI93 507 15 29 0952 507 = SML FOR RJH45 RJH74 = 29061 99704 10323 22232
RAL48 (too faint to copy)

8345 kHz, 30-08, 2248-2358 UTC:

RCV DE RIR96 QSA?
RCV DE RIR96 QSA1 K RCV DE RIR96 QYT4 QSA? (all one message)
RCV OK QYT QCM
RCV DE RIR96 QYT4 QLS
RCV DE RGV82 QSA3
RGV82 OK QYT4 QWH 6238
RCV DE RGV82 QYT4 QSA3
RGV82 OK QYT4 QWH 7988
RGV82 OK QYT4 QWH 7088
RGV82 OK QYT4 QWH 7380
RGV82 OK QYT4 QWH 8380
RCV DE RIR96 QYT4 QSX 7763
RCV DE RGV82 QYT4 QSX 7298

8345 kHz, 31-08, 0003-0343 UTC:

RCV DE RGV82 OK QYT4 QWH 6238
RCV DE RIR96 QYT4 QLS
RIR96 OK QYT4 QWH 10492
RIR96 OK QYT4 QMG2
VVV RCV DE RHI99 QSA?
VVV RCV DE RHI99 QSA? (sets up QYT4)



M32b
Russian Naval Aviation
Aviatsiya Voenno-morskogo Flota Rossii

8816 kHz, 02-08, 1155 UTC:

RUSSIAN NAVAL AIR TRANSPORT. RCB RJF94 DE 63182 QTO 1132 QRD XLLV XMKK QRE 1420 QAH 5800 QBD 4400 K



M32c
Russian Air Force
Voyenno-vozdushnye sily Rossii

Tom sent us the schedules of the Russian "Bear" net. Not all freqs are known so your help is welcome.

Period 1: 1st March until 5th May. Ground Control 8029 and 5620. Air 8170

Period 2: 6th May until 31st August. Ground Control 8895. Air ?

Period 3: 1st September until 31st October. Ground Control 8162 5835 and 5312. Air ?

Period 4: 1st November until 28/29th February. Ground Control 8112. Air ?

13479 kHz, 01-08, 0840-1740 UTC:

REA4 = 01 080 99900 31150 73842 89997 41702 10202 20204 82020 = REA4

REA4 = 01 090 99900 31150 73842 89997 41702 10202 20204 82020 = REA4

REA4 = 01 100 99900 31150 73842 89997 41702 10202 20204 82020 = REA4

XXX XXX REA4 90718 AKRIDAL 7180 9091

XXX XXX REA4 93743 KERGELEN 8456 3274

XXX XXX REA4 05308 SIRINKS 9382 0456

REA4 = 01 110 99900 31140 62596 59997 62803 10220 70135 84021 = REA4

XXX XXX REA4 85438 TRIKSIÄ 8140 2126

REA4 = 01 120 99900 31140 62596 59997 62803 10220 70135 84021 = REA4

XXX XXX REA4 68724 KAMERGER 1091 6045

XXX XXX REA4 02692 FANTIK 2302 3910

REA4 = 01 130 99900 31150 62596 70997 63004 10192 20136 74021 = REA4

7959 kHz, 01-08, 1740 UTC: REA4 = 01 170 99900 31140 27627 25560 70102 10255 20159 70222 87332 = REA4

4835 kHz

01-08, 1140 UTC: REA4 REA4 = 01110 99900 31340 62596 59997 62803 10??? 20135 84021 = REA4 K

01-08, 1240 UTC: REA4 REA4 = 01120 99900 31140 62596 59997 62803 10220 20135 84021 = REA4 K

01-08, 1340 UTC: REA4 REA4 = 01130 99900 31150 62596 70997 63004 10192 20136 84021 = REA4 K

01-08, 1440 UTC: REA4 REA4 = 01140 99900 31150 62596 70997 63004 10192 20136 84021 = REA4 K

01-08, 0940 UTC: REA4 REA4 = 01090 99900 31150 73842 89997 41702 10202 20204 82020 = REA4 K

01-08, 1040 UTC: REA4 REA4 = 01100 99900 31150 73842 89997 41702 10202 20204 82020 = REA4 K

02-08, 0840 UTC: REA4 REA4 = 02080 D I I I (mistaken keying) 02080 99900 73842 88997 51502 10225 20204 8003 = REA4 K
 last group should end with a 4 but it was not sent

02-08, 1040 UTC: REA4 REA4 = 02100 99900 73842 88997 51502 10225 20204 80034 = REA4 K

02-08, 1140 UTC: REA4 REA4 = 02110 99900 73842 88997 51502 10225 20204 80034 = REA4 K

02-08, 1440 UTC: REA4 REA4 = 02140 99900 62596 57697 83302 10216 20129 70404 85134 = REA4 K

7959 kHz, 17-08, 2040-2240 UTC:

REA4 = 17200 99900 22212 81460 83501 10114 20084 70222 = REA4

REA4 = 17210 99900 22212 81460 83501 10114 20084 70222 = REA4

REA4 = 17220 99900 27637 41960 60000 10298 20154 70222 85030 = REA4

(note: incorrect callsign for 27627)

8895 kHz, 19-08

W-markers at 1920, 1940, 2040, 2120, 2200, 2300, 2320 UTC

2256 UTC: XJSR DE TV6P QSA2

2313 UTC: XJSR DE TV6P QSA3

8896 kHz, 19-08 - Bear Net? (frequency had strange tone to it, like it wasn't tuned correctly)

Z-markers at 1940, 2000, 2100 UTC

8895 kHz, 20-08

W-markers at 0000, 0020, 0040, 0120, 0420, 0500, 0520, 0540, 1940 UTC

0000 UTC: CZI5 DE TV6P QSA3

0102 UTC: TV6P RPT

0103 UTC: MCF7 DE TV6P QSA3 (repeats a few times)

0105 UTC: TV6P QRV

0106 UTC: TV6P = 638 C =

0108 UTC: TV6P = 639 822 883 704 785 805 573 C =

0201 UTC: XJSR DE TV6P

0205 UTC: MCF7 DE TV6P QSA3 (repeats a few times)

0209 UTC: TV6P QRV

0211 UTC: MCF7 DE TV6P QRV

0212 UTC: TV6P = 161 179 985 027 614 591 089 C =

0309 UTC: CZI5 DE TV6P QSA3

0310 UTC: TV6P QRV

0311 UTC: TC6P = 539 822 970 833 545 591 655 C =

0629 UTC: MCF7 DE TV6P

1916 UTC: XJSR DE TV6P QSA4 K (TV6P) OK K

1924 UTC: OAVP DE TV6P QSA4 K (TV6P) OK K

1952 UTC: LW1C DE TV6P K (TV6P) RPT K

1957 UTC: LW1C DE TV6P = 219 785 833 363 479 600 C ? K

2002 UTC: OAVP DE TV6P K. OAVP DE TV6P QRV K. OAVP DE TV6P = 127 785 162 492 479 339 C ? K

8896 kHz, 20-08, 0000 UTC: "Z" marker**8895 kHz, 22-08**

W-markers at 1840, 1900 , 2020 UTC

2007 UTC: XJSR DE LBNC QRV K

8895 kHz, 27-08

W-markers at 1940, 2000, 2020, 2040 UTC

1934 UTC: XJSR DE KFE4 QSA 2 K

2008 UTC: XJSR DE KFE4 K @2008Z

2042 UTC: XJSR DE TV6P QSA 2 K @2024Z

TV6P QRV K

TV6P RPT GR 6 K

TV6P = 639 115 785 187 172 167 732 C ? K @2028Z

RPT K

TV6P = 639 115 785 187 172 577 732 C ? K @2030Z

TV6P = 639 115 785 187 172 56? 732 C ? K @2032Z

13479 kHz, 27-08, 1240 UTC:

REA4 = 31120 99900 30120 62596 39996 41204 10252 20103 70403 80001 = REA4



M89

Chinese military

Stations and strings:

VVV Q2M Q2M Q2M DE NYZ NYZ

V 7NPE 7NPE 7NPE DE QV5B QV5B

V DKG6 DKG6 DKG6 DE 3A7D 3A7D

V GKVZ GKVZ GKVZ DE Q7NW Q7NW

V RXP7 RXP7 RXP7 DE CZT2 CZT2

V H2FL H2FL H2FL DE DRV8 DRV8

V WITN WITN WITN DE GNXG GNXG

V JF3M JF3M JF3M DE LG5P LG5P

5500 kHz, 20-08, 1142 UTC:

VVV UGT COMM BT 3066/2015/Z03/9549 AR

5485 kHz, 20-08, 1156 UTC:

VVV VVV HR SVC GA NR 119 2000 RMKS 7310 TO 4845/4750 =
COMM/2045/LZ081AO/7319/4845 AR AGN
(Repeats msg) QSL ? HR WK NR 17 m

Note: I believe this is the first message copied from ASDF. The format of this
SVC COMM message matches that of GNXG which is now silent. As previously
stated, I believe that ASDF is a change in both callsign/frequencies for GNXG.
(JPL)

5555 kHz, 20-08, 1212 UTC:

GA K
BT ... NDU5 5ATU D3TA TA65 TTTN UDUT UAUN 36N7 3DN3 (Cont'd)
AR K
BT NDU5 AR K
BT BT 7UN7 AR K
BT BT 7UN7 AR K
R BT 6DNA AR K
BT 6DNA AR K
HR UGA
R R GA GA
... 71W 71W
R R 82W 82W 82W
R R 83W 83W
R R 95W 95W K
R R QSL 2026 K
SK SK
HO SK (1227z – Silent)

3330 kHz, 27-08, 1303 UTC, i.p.:

/2..R23\NR /305/C0364 OB/0276/2130/237./3056 AR
AR

4225//5500 kHz, 27-08, 1013 UTC:

V 7NPE 7NPE 7NPE DE QV5B QV5B
UGT COMM 2492/0505/Z04/1851 AR
VV TC1 = UGT COMM 2492/0505/Z04/1851 AR
VV TC2 = MSG NR 08/CCK 25 37 0827
VVV TC2 MSG NR 08/CCK 25 37 0827 AR
VV TC3 = UGT COMM 26.5/..35/G34/1851 AR
VV TC3 = UGT COMM 2605/1035/G34/1851 AR
VV TC4 = UGT GOMA 2069/13.0/G33/1852 AR
VV TC4 = UGT COMM 2069/1300/G34/1852 AR
VV TC5 = UGT COMM 2060/1.25/G36/1850 AR
VV TC5 = UGT COMM 2060/111./G36/1851 AR
VV TC6 UGT COMM = 2474/1615/31/1851 AR
VV TC6 UGT COMM = 2474/1615/31/1851 AR
V 7NPE 7NPE 7NPE DE QV5B QV5B – 1024z)
VV UGT COMM = 3486/1855/Z04/9549 AR
VV UGT COMM = 3486/1855/Z04/9549 AR
V 7NPE 7NPE 7NPE DE QV5B QV5B – 1029z)

4843 kHz, 31-08, 2152 UTC:

35DU 54UD 53ND 56D7 6A.U AT.? AT4U 3U6A 7AD5 TND7 (Cont'd) AR
= = 4TU5 3N7A 6D34 ND6T U7NA AD5U 5T43 (Cont'd) AR
= = U763 36N4 NAD3 547T 4TU7 (Cont'd) AR
= = 6UN5 D67A T6UA 3D.. (Cont'd) AR (2225z - Silent)

9277 kHz, 22-08, 1212 UTC:

= = AUN7 576D N36. .T4N TA6T U545 UT7T (Cont'd)
AR AR
.U GA K
..GA K
GA K
QSL19 EEE QSL 1930 K
R
MSG NR NR 103 CK 191 ..08 22 19.0 RMKS 3079 TO 1714 K
R (Signal beginning to fade a bit)
BT BT
A.DN T6U3 A7.. ND7 NLU57 4AN5 347T 34U5 T5T5 TTTU 4UNT (Cont'd)
AR AR
R GA K
H ... GA K
HR GA K
.. EEE *QSL 1845 K
HR MSG NR 104 CK 291 28 08 22 1945 RMKS BT 3079 TO 1714 AR K
BT
.NN4 5474 ATNA .65A 464U UTA5 NU3T NA..5 T5T5 TTT4 (Cont'd)
AR AR
R
R R (1259z - Silent)

3330 kHz, 22-08, 1712 UTC:

= 4D66 AR
VVV 7G .86 CK 3.. 24 08 23 0.00 =
D... 74N6 NUN6 D75T 6T46
III = UTA6 634T N357 D3.4
III = (Missed end - Return to R/S – 1727z)

9277 kHz, 27-08, 0144 UTC, i.p.:

463D 7TT5 UDU3 DTUT 35UA 3A4N 6754 (Cont'd)
? 3535 5UNU 5N7N 7UD7 DUA4 D7A5 (Cont'd)
(Sends ? when a mistake is made)
AR
K K K K K K
R AUU. (0154z - Silent)

5555 kHz, 27-08, 1308 UTC, i.p.:

1F/YBS QT AR K
R U GA
AGN GA
QSL 2111 K
HR 7G GA K
R 7G NR 07 CK 199 28 08 27 2100 RMKS 4694 TO 8367 K = =
U664 TA3? TA3T T5N4 5TUA 4U5N U6ND 43UT 7AD3 TANDTT3 4377 3TD4
(Cont'd)
AR AR K K
R R 2P
R 36W = 43UD AR K
R 35W = 3NA4 AR K
AGN
R 45W = 4D4A AR K
R 68W = NDN3 AR K
R .1W = N7U7 AR KR
R 1P
AGN
R 92 = TAND AR K = TAND AR K
R 9W = TAND AR K
R SK (1323z - Silent)

VARIOUS MODES



HM01

Dirección General de Inteligencia

I think that it is safe to assume that both V02(a) and SK01 are no longer operational. Both haven't been heard for a while. Except for a few CW schedules all of the transmissions are now HM01 (combi of V02 and SK01).

My old friend Don Schimmel sent me a whole bunch of HM01 logs and comments:

"Ary, I am passing along some thoughts I jotted down regarding the HM01 and M08a activity. The transmitter techs tune up a xmtr on a specified freq at the appropriate time. However, they apparently do not know if there is to be tfc passed until it either is handed to them or the message center forwards the traffic via a keying line direct to the xmtr.

Often a xmtr is tuned but then no tfc follows. When that happens, how long does a field agent listen before he concludes there is no tfc for himj? Or is there some means, as yet undetected by us, whereby the agent knows there will not be any tfc for him on that sked.

Frequently a xmtr is tuned on a freq other than the one assigned for that particular sked and they do not change to the correct freq. Instead they let the entire transmission be sent on that incorrect freq. This brings up the possibility that such tfc is dummy tfc unless they simply do not monitor the xmtr keying and therefore are not aware of the problem??

Based on the quantity of freqs/skeds, can one speculate as to how many agents are being served by these comms? Monitoring by SWLers has shown that on a given day there can be 15 transmission periods with 6 during the 0500-1000 period and 9 during the 1400-2300 period. Does each agent have two reception periods each day?? Your comments will be most welcome."

I think that Don has a good point there. We know that these guys are using the facilities of Radio Habana, so their tech guys will probably operate the transmitters. I think that they just get a list of times and freqs and that the messages are plugged in via landline directly from DGI.

I guess that the agents know when they can expect a message. I wouldn't be surprised if some of the RDFT transmissions would carry schedule info. The various freqs and times could indicate that the transmissions are intended for listeners in various countries. The traffic load may be the same every time so that in case of bad reception the agent can try another time and freq to get his message. On the other hand, it is also possible that a number of transmissions are indeed dummies and only a few of them (the agent knows which ones) are for real. Just my 2 cents ☺

Another thing that Don noticed is also interesting and I'd like to ask your help. Don writes the following:

"It appears in recent periods, that the 6 groups stayed the same for about 30 days before changing. On Aug 21 at the 2100 sked new groups appeared and they continued through the day. But then on Aug 22 the groups were changed again at the 1600 sked and they have continued since. I can't imagine what prompted them to just use new groups for one day?? Of course this may simply be another of their frequent blunders!!"

Any comments, please ??

NOTES:

- The traffic must be on a looped tape because often at the end of the period the transmissions begin again and run for a short while before they take it off the air and tune the xmtr for the next sked.
- Several instances of what sounds like a tape rewinding at high speed upon conclusion of a sked were heard.
- RDFT files included 31718600.TXT, 56073417.TXT, 30847867.TXT, 22017372.TXT, 81355132.TXT , 12863053.TXT

Day	UTC	kHz	kHz	kHz	kHz	Day	UTC	kHz	kHz	kHz	kHz
Sun	0500	5855				Wed	0600	5855	10345		
Sun	0600	5855	10345			Wed	0700	9330			
Sun	0700	9330				Wed	0800	5855	9065		
Sun	0800	9065				Wed	0900	9155	9240		
Sun	1000	5855	9155	11635		Wed	1000	5855	9155		
Sun	1400	8097				Wed	1600	11435			
Sun	1600	11435				Wed	1700	9155	11530		
Sun	1700	11530	11635			Wed	1800	11530	11635		
Sun	2000	7554	11635			Wed	2000	7554			
Sun	2200	10715	11635			Wed	2100	11635			
Sun	2300	8135	11530			Wed	2200	10715	11635		
Mon	0600	5855	10345			Thu	0500	14375			
Mon	0700	9330				Thu	0600	14375			
Mon	0800	9065				Thu	0700	13435			
Mon	0900	5855	9240	10715	11635	Thu	0800	11635			
Mon	1000	9155	5855			Thu	0900	11635	12120		
Mon	1500	11435				Thu	1000	11635	12180		
Mon	1600	11435				Thu	1600	11435			
Mon	1700	11530				Thu	1700	11530			
Mon	1800	11635				Thu	1800	11530	11635		
Mon	2000	11635				Thu	2000	7554			
Mon	2100	11635	10715			Thu	2100	16180			
Mon	2200	11635				Thu	2200	17480			
Mon	2200	10715				Fri	0000	9240			
Mon	2300	8009				Fri	0500	5855			
Tue	0500	14375				Fri	0600	10345			
Tue	0600	14375				Fri	0700	9330			
Tue	0700	13435				Fri	0800	5855	9065		
Tue	0800	11635				Fri	0900	5855	9240		
Tue	0900	12120	11635			Fri	1000	9155	10715	11635	12180
Tue	1000	12180				Fri	1600	11435			
Tue	1300	8097				Fri	1700	11530	11635		
Tue	1600	11435				Fri	1800	11635			
Tue	1800	11635				Fri	2100	10715	11635		
Tue	2000	7554				Fri	2200	10715	11635		
Tue	2100	16180				Fri	2317	8135	11530		
Tue	2200	17480				Sat	0500	14375			
Tue	2300	8135				Sat	0600	14375			
Wed	0600	5855	10345			Sat	0700	13435			
Wed	0700	9330				Sat	0800	11635			
Wed	0800	5855	9065			Sat	1000	11635	12120	12180	
Wed	0900	9155	9240			Sat	1600	11435			
Wed	1000	5855	9155			Sat	1700	11435	11530		
Wed	1600	11435				Sat	1800	11530	11635		
Wed	1700	9155	11530			Sat	2000	11635	17480		
Wed	1800	11530	11635			Sat	2100	16180			
Wed	2000	7554				Sat	2200	17480			
Wed	2100	11635				Sat	2300	17540			
Wed	2200	10715	11635								

M42 & X06



Modes:
Various digital modes, CW,
Tones (Мазелка / Mazielka)

Russian Government & Intelligence



M42

12209	30-7-2013	2100	Russian Intel. One message on Link 13366: 17251 00000 00000 00038 15371 16697 02733 15670	FSK 200/1000
10828	1-8-2013	1900	Russian Intel	FSK 200/500
8144	1-8-2013	1910	Russian Intel	FSK 200/500
5803	1-8-2013	1920	Russian Intel	FSK 200/500
10828	8-8-2013	1900	Russian Intel. 0000+++++++162)571	Baudot 200/500
16244	11-8-2013	1100	Russian Intel. Msg Nr 151 on Link 51737 Type 03452. Three others with different types, same nr, same link, different messages	FSK 200/1000
18273	11-8-2013	1530	Russian Intel. Msg Nr 096 on Link 13366 Type 13366. Stops for 5 mins and restarts at 15:30 with Msg Nr 002 on Link 20501 Type 07145	FSK 200/1000
11431	13-8-2013	2100	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000
9187	13-8-2013	2110	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000
7783	13-8-2013	2120	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000
16166.5	20-8-2013	0745	Russian diplo	CROWD-36
20823	23-8-2013	2333	Russian Intel	FSK 200/500
18397	23-8-2013	2348	Russian Intel, Moscow (repeat of earlier message on 20823kHz)	FSK 200/500
17482	24-8-2013	1200	Russian Intel	FSK 200/500
15967	24-8-2013	1210	Russian Intel	FSK 200/500
13396	24-8-2013	1220	Russian Intel	FSK 200/500
16166.5	25-8-2013	0810	Russian diplo	CROWD-36
8144	29-8-2013	1910	Russian Intel 00000+++++++162)5761	FSK 200/500
5803	29-8-2013	1920	Russian Intel 00000+++++++162)5761	FSK 200/500

M42a

10436	2-8-2013	2212	GRU HFDF net VVVV NWA NWA VVVVVVVVVV 5— IUE 87 34K VVVVV	CW
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X06

19405	1-8-2013	1252	Mazielka
17517	19-8-2013	1636	Mazielka. Sequence: 314265
18375	22-8-2013	1156	Mazielka. Sequence: 123456



Egyptian diplomatic stations

Modes: SITOR-A 100/170 & Codan-9001

17416.7 kHz, 07-08, 2248 UTC, SITOR-A 100/170:	Egyptian Embassy, Luanda with ATU-80 visa clearances and travel itineraries to MFA Cairo headed "jg: yphkg dlkg---mk"
16338.7 kHz, 19-08, 1428 UTC, SITOR-A 100/170	MFA Cairo
16341.7 kHz, 27-08, 1437 UTC, SITOR-A 100/170	MFA Cairo tfc to unid embassy
11033.0 kHz, 29-08, 1820 UTC, SITOR-A + Codan	99910: MFA Cairo wkg 11105 (XBVP) embassy Rome
6791.7 kHz, 31-08, 1949 UTC, SITOR-A 100/170	MFA Cairo clg XBVP Rome



Chinese diplomatic stations

18581 kHz, 15-08, 0640 UTC, 4+4 75 baud LSB:	Chinese Gov. Many calls VWXR DE MXHN, followed by messages sent in four number groups.
10236 kHz, 15-08, 1038 UTC, 4+4 75 baud LSB	Chinese Gov. Idled for long time then sent messages in four number groups.
10413 kHz, 15-08, 1025 UTC, 4+4 75 baud LSB	Chinese Gov. Long four number group messages sent ends with: 2426 2957 4820 4001 5427 2123 9689 5032 1761 0308 5698 0618 9353 4251 7356 8534 8309 6462 7548 8321 0186 3897 3974 0951 7138 2150 1905 6754 4763 1975 3079 6326 4103 1936 0674 9363 8365 5158 8795 5272 6768 8461 3607 0581 8205 5740 0849 7675 9042 6573 1741 2493 0391 9183 2746 2684 5481 3250 5430 QSL ? CY HW TKS /\$ XYXYXYXYXYXYXY OK HR NR 122- AHR NIL SK GB ENDDDDDENDDDDDENDDDDDENDDDD
10506 kHz, 17-08, 1124 UTC, 4+4 75 baud LSB	No traffic. Idled for twenty minutes then off.
11088 kHz, 17-08, 1020 UTC, 4+4 75 baud LSB	Messages in four number groups.
11091 kHz, 17-08, 1023 UTC, 4+4 75 baud LSB	Idled for long time then sent messages in four number groups.

UTILITY ROUND-UP

Polish Military

5037.5 kHz, 13-08, 0930 UTC: Polish military. Stations on the net: Fasburka-04, Ulises-94, Deblin-86, Ankier-33. Probably a training session with radio checks and Ulises-94 sends a message to the net:
100 30 1330 100 / SPKQ/ 00123 23567 41843 90654 09670 23156 65792 44900 21094 53110 22346 78312 78543 87305 12999 12346 43892 21075 27157 11234 22347 10972 11269 27409 18093 22488 20933 54800 33178.

Unid heard by JPL

6041 kHz, 28-08, 1138 UTC, CW: i.p. = 152 10 000



Beacons

Further to last month's unid "beacon", Glenn Hauser found the station one more time.

11979 kHz, 25-07, 0520 UTC: beacon sending "8"



Unid pips/ditter network

Pip / Ditter Network

The Pip/Ditter Network was on the air again. Reported on 2 and 3 August by Chris, Token and Mike. Here is Token's report:

I call this network "Pips" (since early 2012) in my logs to help differentiate it from pirate ditters and dashers in my logs. My log is a database I built years ago and giving this network a unique name helps me search occurrences and track trends.

There appear to be 2 transmitters and possibly 2 different locations. The pulse timing seen today of 125 msec per pulse and 6.0 sec pulse to pulse, no overlap of pulses across frequencies, only allows for 48 frequencies, but so far I have about 57 frequencies identified for today. There could, naturally, be more than 2 transmitter / networks, but so far I have seen nothing to support more than 2.

This network starts at the lowest frequency and makes a pulse, it then moves up to the next frequency and makes another pulse, and so on through the entire sequence, until it gets to the highest frequency, and then it starts over again at the lowest frequency.

Also, be aware that in the past this network has changed frequencies from time to time during the day. So that a given set of frequencies are only good at that time, an hour later they could (have been in the past) on a different set of freqs.

Most of these freqs peak to my east, but the weaker set seem to peak a bit more north than the stronger set.

I have a lot of recordings of this signal, and have been working to try and make sense of it.

I suspect it might be related to some chirpsounders. Some chirpsounders give a "pre-beep" on certain frequencies, such as 9050 kHz. The pre-beep frequencies seem to agree with a few frequencies in this Pips network. Could be coincidence, of course, but it just so happens that the pre-beeps match (duration) one of the pulse lengths seen from this network.

Speaking of "one of the pulse lengths", the current 125 msec pulse is not the only length seen, and the 6.0 seconds is not the only timing used. I have seen several pulse lengths from about 63 msec to 1.5 seconds, and pulse intervals from 3.0 to 10.5 seconds.

T!, Mojave Desert, California, USA

Frequencies used on August 2nd

5575	7700	9050	10575	13100	15550	17425	18625
6225	8275	9225	11025	13250	15625	17475	18625
6550	8825	9800	11150 *)	13325	16000	17650	19300
6725	8825	10025	11225	13875	16350	17950	
6750	8900	10050	11300	14400	16550	17975	
7025	8975	10450	12450	15100	16725 *)	18050	

Frequencies used on August 3rd

4450	6750	9225	11300	13500	16725 *)	18100	20250
4900	7700	10050	12025	13875	16925	18450	21150
5450	8000	10400	12450	14400	17475	18625	
5575	8275	10450	12475	15100	17650	18675	
5600	8825	10575	13100	15550	17950	19300	
6225	8900	11025	13250	15625	17975	19650	
6550	8975	11150 *)	13325	16000	18025	20100	
6725	9050	11225	13450	16350	18050	20175	

*) Note that 11150 and 16725 kHz are double pulsed.

LOGS SECTION

The logs are sorted on Enigma code, Date, UTC, Frequency.

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
---	28-7-2013		1138	6041	i.p. = 152 10 000	CW	(JPL)
---	17-8-2013	Sat	1757	7088.9	sending UU2 for 6 minutes then a message	CW	(AB)
---	29-8-2013	Thu	1651	5171	Unid sending 547 547 547 111 547 547 547 111	CW	(BCI)
CHN	15-8-2013	Thu	0640	18581	Chinese Gov. Many calls VWXR DE MXHN, followed by messages sent in four number groups.	4+4 75 baud LSB	(EW)
CHN	15-8-2013	Thu	1025	10413	Chinese Gov. Long four number group messages (see N&O 191)	4+4 75 baud LSB	(EW)
CHN	15-8-2013	Thu	1038	10236	Chinese Gov. Idled for long time then sent messages in four number groups.	4+4 75 baud LSB	(EW)
CHN	17-8-2013	Sat	1020	11088	Messages in four number groups.	4+4 75 baud LSB	(EW)
CHN	17-8-2013	Sat	1023	11091	Idled for long time then sent messages in four number groups.	4+4 75 baud LSB	(EW)
CHN	17-8-2013	Sat	1124	10506	No traffic. Idled for twenty mintes then off.	4+4 75 baud LSB	(EW)
E06	1-8-2013	Thu	0500	13930	210 468 109 = 98041	USB	(HFD)
E06	1-8-2013	Thu	0600	15890	210	USB	(HFD)
E06	16-8-2013	Fri	2130	5731	315 922 15 78023 74912 84729 84712 84933 ... 9871. 83921 83922 73811 74500 922 15 00000	USB	(MPJ)
E06	16-8-2013	Fri	2130	5731	315 902..15... splaterr audio, ends 00000	USB	(KK)
E06	18-8-2013	Sun	1016	8144	test i.p. 0 1 2 3 4	USB	(saber)
E06	26-8-2013	Mon	1902	14378	349 349 349 00000	AM	(MCO)
E06	26-8-2013	Mon	1922	13458	349 349 349 00000	AM	(MCO)
E07	31-7-2013		1900	14812	845 845 845 000	USB	(MPJ)
E07	5-8-2013	Mon	1900	14378	349 0	USB	(HFD)
E07	5-8-2013	Mon	1920	13458	349 0	USB	(HFD)
E07	7-8-2013	Wed	1730	12181	818 0	USB	(HFD)
E07	8-8-2013	Thu	2010	10753	3 min carrier prob. null msg	USB	(HFD)
E07	8-8-2013	Thu	2030	9147	3 min carrier prob. null msg	USB	(HFD)
E07	11-8-2013	Sun	1700	13881	818 1 922 96 = 63103	USB	(HFD)
E07	11-8-2013	Sun	1720	12181	818 1	USB	(HFD)
E07	11-8-2013	Sun	1740	10881	818 1	USB	(HFD)
E07	14-8-2013	Wed	2043	5773	long msg i.p. ends 000 000	USB	(AB)
E07	22-8-2013	Thu	2010	10753	716 0	USB	(HFD)
E07	22-8-2013	Thu	2030	9147	716 0	USB	(HFD)
E07	26-8-2013	Mon	1921	13380	260 260 260 000	AM	(MCO)
E07	28-8-2013	Wed	1900	14378	349 349 349 000	AM	(MPJ)
E07a	31-7-2013		2000	8173	147 1 17824 6179 61 41174 96572 05306 45592 75985 ... 41147 60439 47444 33733 79574 000 000	USB	(MPJ)
E07a	3-8-2013	Sat	0800	12177	148 0	USB	(HFD)
E07a	3-8-2013	Sat	0820	13477	148 0	USB	(HFD)
E07a	7-8-2013	Wed	2000	8173	147 0	USB	(HFD)
E07a	7-8-2013	Wed	2000	8173	147 147 147 000	USB	(MPJ)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
E07a	7-8-2013	Wed	2020	7473	147 0	USB	(HFD)
E07a	14-8-2013	Wed	0021	8173	... 05007 63033 07000 33733 70070 ends with 000 000	USB	(IJ2)
E07a	16-8-2013	Fri	1510	12213	241 1 515 73 = 46558	USB	(HFD)
E07a	16-8-2013	Fri	1530	11413	241 1	USB	(HFD)
E07a	16-8-2013	Fri	1550	10113	241 1	USB	(HFD)
E07a	21-8-2013	Wed	2000	8173	147 1 69693 7008 56 35538 75334 89058 ... 89193 74856 39145 000 000	USB	(GHn)
E07a	28-8-2013	Wed	2000	8173	147 147 147 000	USB	(GHn)
E07a	28-8-2013	Wed	2020	7473	147 147 147 000	USB	(MPJ)
E07a	29-8-2013	Thu	0430	7437	411 0	USB	(HFD)
E07a	29-8-2013	Thu	0450	8137	411 0	USB	(HFD)
E11	12-8-2013	Mon	1540	16335	228/00	USB	(Wade)
E11	13-8-2013	Tue	1045	9610	469/00 out	USB	(MSM/M PJ)
E11	21-8-2013	Wed	1300	14769	131/38 90712	USB	(HFD)
E11	28-8-2013	Wed	1045	9610	466/31 00224 85083 45783 37325 53628 ... 32410 98965 68128 97085 03817	USB	(MPJ)
E11a	13-8-2013	Tue	1400	13722	985/10 52031 13746 14701 13813 15616 96682 99412 14014 93975 61342 (repeats)	E11a	(MPJ)
E11a	13-8-2013	Tue	1810	14518	988/10 Attention 34631 16354 19784 25266 16952 26447 88196 37040 82546 89855 out	USB	(MPJ)
E11a	27-8-2013	Tue	1810	14518	986/10 Attention 27643 55166 57121 58097 80933 86232 60528 43247 55948 84650 Attention, msg rptd, out	USB	(MPJ)
E11a	30-8-2013	Fri	1710	10487	959/30 Attention 29072 23189 31052 45890 67917 ... 11356 41703 58659 33902 20627	USB	(MPJ)
E11a	31-8-2013	Sat	1400	13722	983/10	USB	(MPJ)
EGY	7-8-2013	Wed	2248	17416.7	Egyptian Embassy, Luanda with ATU-80 visa clearances and travel itineraries to MFA Cairo headed "jg: yphkg dlkg---mk"	SITOR-A 100/170	(MCO)
EGY	19-8-2013	Mon	1210	20101.7	Egyptian Embassy, Abuja messages headed "jg: kylq-----k" to MFA Cairo	SITOR-A 100/170	(MCO)
EGY	19-8-2013	Mon	1428	16338.7	MFA Cairo	SITOR-A 100/170	(LG2)
EGY	27-8-2013	Tue	1437	16341.7	MFA Cairo tfc to unid embassy	SITOR-A 100/170	(WP3)
EGY	29-8-2013	Thu	1820	11033	MFA Cairo. Calling/working XBVP Rome	SITOR-A/Codan	(PPA)
EGY	31-8-2013	Sat	1949	6791.7	MFA Cairo clg XBVP embassy Rome	SITOR-A 100/170	(BCI)
EV02	30-8-2013	Fri	0002	9225	JFK inaugural speech & some FDR speeches. Possible signals training	USB	(JLM)
EV02	30-8-2013	Fri	0035	9225	FDR now with his "all we have to fear" speech. Now into fire-side chats	USB	(JLM)
G06	2-8-2013	Fri	1900	11423	239 239 239 00000	USB	(MPJ)
G06	2-8-2013	Fri	2000	9268	239 239 239 00000	USB	(GHn)
G06	2-8-2013	Fri	2000	9268	239 239 239 00000	USB	(MPJ)
G06	8-8-2013	Thu	1830	6887	842 542 15 83642 38446 03811 93702 04845 68310 74277 58331 02849 03945 47921 73922 24681 29311 38221 542 15 00000	USB	(MPJ)
G06	12-8-2013	Mon	1800	5783	564 564 564 00000	USB	(MPJ)
G11	2-8-2013	Fri	2004	3815	In progress & unreadable	USB	(MPJ)
G11	4-8-2013	Sun	1755	5815	270/00	USB	(MPJ)
G11	4-8-2013	Sun	2000	3815	269/38 Achtung 50559 95785 02238 65235 54868 ... 24870 36335 08196 92802 55237	USB	(MPJ)
G11	11-8-2013	Sun	2000	3815	262/00	USB	(GHn)
G11	25-8-2013	Sun	2000	3815	262/00	USB	(GHn)
G11	30-8-2013	Fri	2000	3815	262/00	USB	(MPJ)
HM01	1-8-2013	Thu	0912	12120	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	1-8-2013	Thu	0957	11635	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	1-8-2013	Thu	0957	12180	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	1-8-2013	Thu	1601	11435	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	1-8-2013	Thu	1657	11530	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	1-8-2013	Thu	1757	11635	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
HM01	1-8-2013	Thu	2057	16180	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	0820	5855	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	0820	9065	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	0958	9155	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1016	11635	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1016	12180	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1558	11435	carrier on but no tfc.	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1605	11435	tape hung up? Keeps repeating uno unop uno, etc. Off air them back with rptd uno's. Finally correct 6 grps	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1609	11435	music and YL/SS briefly with news. Taken off air quickly. Operator probably patched Radio Havana SW bcst to the xmtr. At 1611 YL/SS on but skipped first of the 6 groups. On following announcements all 6 groups present.	AM	(DSch)
HM01	2-8-2013	Fri	1657	11530	same groups but few mins later no sig. I did not hear any RDFTS xmsns	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	1657	11635	same groups at but few groups skipped or faded out but again back on air.	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	2100	11635	partial grp then nothing. At 2103 hrd 62111 66161 then silent then 02631. Then groups sent in normal sequence.	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	2155	10715	same groups	AM/RDFT	(DSch)
HM01	2-8-2013	Fri	2306	11530	same groups	AM/RDFT	(DSch)
HM01	3-8-2013	Sat	0943	12120	i.p.	AM/RDFT	áá (LG2)
HM01	3-8-2013	Sat	1656	11530	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	3-8-2013	Sat	1752	11530	same groups but he should be on 11635 on this sked. Apparently realized mistake, sig off air.	AM/RDFT	(DSch)
HM01	3-8-2013	Sat	1759	11635	now on correct freq, same groups	AM/RDFT	(DSch)
HM01	3-8-2013	Sat	2055	16180	same groups	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	1027	5585	same groups	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	1027	9155	same groups	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	1027	11635	same groups	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	1557	11435	same groups	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	1703	11530	same groups. At start dropped first 3 digits of first group	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	2200	10715	same groups but started with 66161	AM/RDFT	(DSch)
HM01	4-8-2013	Sun	2257	11530	same groups	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	0851	9065	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	1011	5855	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	1011	9155	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	1536	11435	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	1657	11530	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	1958	11635	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	2130	11635	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	2149	11635	07022 etc	AM/RDFT	(DSch)
HM01	5-8-2013	Mon	2206	10715	07022 etc	AM/RDFT	(DSch)
HM01	7-8-2013	Wed	1827	11635	071827	AM/RDFT	(DSch)
HM01	7-8-2013	Wed	2059	11635	072059	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	1014	11635	07022 etc	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	1014	12180	07022 etc	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	1648	11435	07022 etc	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	1658	11530	07022 etc Audio on & off. 07022 etc.	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	2059	16180	07022 etc xmtr tuned at 2059, carrier on at 2051 and into 07022 etc at 2059 UTC	AM/RDFT	(DSch)
HM01	8-8-2013	Thu	2200	17480	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	0821	9065	07022 03631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	0958	5855	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	0958	9155	07022 etc. No audio on 9155 but it comes on at 0959	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	1559	11435	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	1658	11530	07022 etc	AM/RDFT	(DSch)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
HM01	9-8-2013	Fri	1757	11635	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	2058	11635	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	2137	10715	07022 etc	AM/RDFT	(DSch)
HM01	9-8-2013	Fri	2257	11530	07022 etc	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	1010	11635	07022 etc.	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	1010	12180	07022 etc.	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	1656	11435	tuning xmtr but he should be on 11530 kHz	AM	(DSch)
HM01	10-8-2013	Sat	1656	11530	now tuning on 11530. 07022 etc very weak & then unheard	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	1759	11635	Started but skipped few grps. 07022 etc	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	2002	17480	07022 etc	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	2056	16180	07022 etc	AM/RDFT	(DSch)
HM01	10-8-2013	Sat	2300	17540	very weak, almost unreadable,dropped at 2304	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	0735	9330	07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	1012	5855	07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	1012	9155	07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	1612	11435	07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	1658	11530	tuned xmtr, sent few grps then off air, back on, then off again. 07022 etc at 1700 UTC	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	1758	11635	started but then off and back on. 07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	2059	11635	dropped few grps then 07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	2200	10715	07022 etc	AM/RDFT	(DSch)
HM01	11-8-2013	Sun	2257	11530	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	0705	9330	??653 00000 ?0082 3?372	AM/RDFTáá	(LG2)
HM01	12-8-2013	Mon	1021	5855	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	1021	9155	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	1700	11530	07022 etc on & off several times, finally ok.	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	1758	11635	07022 etc. Also had problem getting started.	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	2100	11635	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	2115	10715	07022 etc	AM/RDFT	(DSch)
HM01	12-8-2013	Mon	2256	10715	66610 07023 03630 25522 18653 65111 ?6161 rdft file found to be corrupt	AM/RDFTáá	(LG2)
HM01	13-8-2013	Tue	0738	13435	07022 etc	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	0958	12180	07022 etc	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	1608	11435	07022 etc	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	1657	11435	07022 etc started here but he shud be on 11530 kHz	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	1658	11530	tuning and then 07022 etc.	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	1757	11635	07022 etc	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	2058	16180	07022 etc	AM/RDFT	(DSch)
HM01	13-8-2013	Tue	2204	17480	tuning, on & off, then with voice 07002 etc	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	0658	9330	07022 033631 37672 18653 62111 66161	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	0927	5855	07022 etc //9240 kHz	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	0927	9240	07022 etc //5855 kHz	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	0957	9155	07022 etc.	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	1040	5855	Female synthesized voice in Spanish with a five digit number alternating with RDFT data transmissions	AM/RDFT	(steve)
HM01	14-8-2013	Wed	1559	11435	07022 etc	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	1658	11530	07022 etc	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	1757	11635	07022 etc	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	2058	11635	07022 etc	AM/RDFT	(DSch)
HM01	14-8-2013	Wed	2158	11635	07022 etc this is wrong freq for this sked. Stopped and started again at 2203	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	0501	14375	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	0721	13435	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	0758	11635	07022 etc	AM/RDFT	(DSch)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
HM01	15-8-2013	Thu	0859	11635	07022 etc //11635 kHz	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	0859	12120	07022 etc //12120 kHz	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	1011	12180	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	1700	11530	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	1757	11635	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	2057	16180	07022 etc	AM/RDFT	(DSch)
HM01	15-8-2013	Thu	2157	17480	07022 etc	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	0044	9240	07022 etc //5855 kHz	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	0614	10345	07022 etc	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	0821	9065	07022 etc 160821	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	0944	5855	07022 etc //9240 kHz	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	0958	9155	07022 etc	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	1045	10715	Cuba spy numbers	AM/RDFT	(N2QHC)
HM01	16-8-2013	Fri	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	2101	11635	07022 etc	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	2235	10715	07022	AM/RDFT	(DSch)
HM01	16-8-2013	Fri	2300	11530	62111 66161 07022 03631 37672 18653	AM/RDFT	(Dan)
HM01	16-8-2013	Fri	2308	11530	07022	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	0539	14375	Spanish mechanical five digit voice with five digit number number.	AM/RDFT	(steve)
HM01	17-8-2013	Sat	0620	14375	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	0708	13435	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	0759	11635	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	1002	11635	07022 etc //12120 kHz	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	1002	12120	07022 etc //11635 kHz	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	1755	11635	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	2057	16180	07022 etc	AM/RDFT	(DSch)
HM01	17-8-2013	Sat	2156	17480	tuning at 2156. Brief sig then off. carrier back on, then starts with 37672 etc at 2214	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	0632	5855	07022 etc //5855 kHz	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	0632	10345	07022 etc //9155 kHz	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	0820	9063	18523 62111 56155	AM/RDFTáá	(LG2)
HM01	18-8-2013	Sun	0841	9065	Spanish language mechanical synthesized voice with five digit numbers alternating with RDFT data transmission.	AM/RDFT	(steve)
HM01	18-8-2013	Sun	1006	9155	07022 etc	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	1658	11530	audio on & off then 07022	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	1757	11635	07022 etc audio vy weak	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	2057	11635	07022 etc	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	2158	10715	07022 etc	AM/RDFT	(DSch)
HM01	18-8-2013	Sun	2258	11530	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	0841	9065	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	0859	5855	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	0859	9240	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	0859	10715	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	0859	11635	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	1008	9155	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	1557	11435	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	1657	11530	07022 etc	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	1959	11635	07022 etc 191757. No sig at 1759.	AM/RDFT	(DSch)
HM01	19-8-2013	Mon	2243	10715	DGI Havana Cuba CUB 09022 03621 18563 63111 66161 07022	AM/RDFT	(LG2)
HM01	20-8-2013	Tue	0608	14375	07022 etc	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	0927	12120	07022 etc	AM/RDFT	(DSch)

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HM01	20-8-2013	Tue	0957	12180	07022 etc	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	1337	8097	Tuned xmtr at 1337 but no transmission	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	1610	11435	07022 etc	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	1657	11530	07022 etc	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	1757	11635	07022	AM/RDFT	(DSch)
HM01	20-8-2013	Tue	2057	16180	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	0629	5855	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	0629	10345	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	1047	9155	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	1605	11435	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	1721	11530	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	1759	11530	07022 (shud be on 11635) goes off at 1759	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	1802	11635	07022 etc	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	2127	11635	(new groups) 35776 07714 78335 53035 30383 33213. NOTE: Started 2200 sked on 11635 then off air and tunes on 10715	AM/RDFT	(DSch)
HM01	21-8-2013	Wed	2158	10715	35776 07714 78335 53035 30383 33213	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0501	5855	56801 22574 15441 50182 08444 51835	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0602	10345	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0755	9330	(in here at end of xmsn) 50182 RDFT and off at 0755	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0757	9065	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0946	5855	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0946	9240	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	0959	9155	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	1558	11435	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	1700	11530	56801, voice vy weak 1700. voice better now at 1703	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	1759	11635	56801, etc, voice cutting in and out 231758	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	2057	11635	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	2158	10715	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	2311	11530	56801 etc	AM/RDFT	(DSch)
HM01	23-8-2013	Fri	2317	8135	56801, voice distorted but this shud be cut nbrs in CW	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	0501	14375	56801 and then cut out at 0457.	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	0818	11635	Female synthesized voice in Spanish. 5FGs alternating with RDFT data transmissions.	AM/RDFT	(steve)
HM01	24-8-2013	Sat	0954	12120	56801 etc	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	1005	12180	voice barely hearable. //11635 not hrd.	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	1556	11435	56801 etc	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	1657	11530	Starts with RDFT then off at 1656. At 1657: 56801	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	1957	11635	56801 etc	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	2111	16180	56801 etc	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	2156	17480	56801 etc	AM/RDFT	(DSch)
HM01	24-8-2013	Sat	2258	17540	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	0501	5855	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	1003	5855	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	1003	9155	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	1402	8097	NNWTA DWTWN AGNRN cut nbrs	CW	(DSch)
HM01	25-8-2013	Sun	1600	11435	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	1659	11530	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	1700	11635	56801 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	2003	7554	AGNRN NNWTA DWTNA cut nbrs in CW	CW	(DSch)
HM01	25-8-2013	Sun	2159	11635	56801 etc. Starts again 2159	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	2210	10715	Starts at 15441 etc	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	2257	8135	Distorted voice/RDFT but shud be cut nbrs in CW. Note: They must not have been monitoring the outgoing signal on 8135. They have screwed up this sked previously.	AM/RDFT	(DSch)
HM01	25-8-2013	Sun	2302	11530	Starts at 15441	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	0552	5855	56801 etc	AM/RDFT	(DSch)

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HM01	26-8-2013	Mon	0603	10345	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	0950	5855	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	0950	9240	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	1009	9155	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	1600	11435	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	1656	11530	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	1759	11635	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	2057	11635	56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	2200	11635	He shud be on 10715	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	2204	10715	Now on correct freq 56801 etc	AM/RDFT	(DSch)
HM01	26-8-2013	Mon	2252	8009	This shud be cut nbrs in CW. Instead is distorted voice plus RDFT	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	0531	4375	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	0809	11635	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	0933	11635	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	0933	12120	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	0959	12180	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	1555	11435	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	1659	11530	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	1801	11635	Starts at group 22574	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	1959	7554.8	Shud be M08a(cut nbrs in CW) but instead is voice xmted digital grps with pause after every 10 groups just like procedure for CW.	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	2059	16180	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	2200	17480	56801 etc	AM/RDFT	(DSch)
HM01	27-8-2013	Tue	2256	8135	This shud be cut nbrs in CW but instead is voice xmted 5F grps	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	0621	10345	56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	0840	5855	56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	0840	9065	56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	1020	9155	mixing with V26	AM/RDFT	(Rusl)
HM01	28-8-2013	Wed	1728	9155	56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	1755	11635	Cut nbrs in CW ARRG INWNA TDNRA then abruptly off 1757.	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	1759	11635	Now into HM01 format 56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	2014	7554	M08a Nil hrd, dropped at 282014	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	2057	11635	56801 etc	AM/RDFT	(DSch)
HM01	28-8-2013	Wed	2159	10715	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	0544	14375	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	0602	14375	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	0852	11635	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	0852	11635	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	1014	12180	56801 etc, both freqs vy weak	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	1600	11435	56801 etc Cutting in and out	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	1804	11530	56801 etc Still going at 1803	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	1806	11635	56801 etc	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	2006	7554	Cut nbrs	AM/RDFT	(DSch)
HM01	29-8-2013	Thu	2114	16180	Apparently have problems. Carrier on/off 2114. Then 2 OM/SS in USB laughing, one says he put photos on facebook, then off.	AM/RDFT	(DSch)
HM01	30-8-2013	Fri	0539	5855	Hrd just 1 grp, 56801, then off and nil more hrd.	AM/RDFT	(DSch)
HM01	30-8-2013	Fri	1558	11435	New grps? 37774 53124 81462 65623 55284 72765. Rpts these once more then off at 1558. Then goes with 56801 22574 15441 50182 08444 51835 just once and off at 1600. Apparently resumed at unknown time because hrd 56801 e	AM/RDFT	(DSch)
HM01	30-8-2013	Fri	1702	11530	carrier on but no tfc.	AM/RDFT	(DSch)
HM01	30-8-2013	Fri	2158	10715	56801 etc	AM/RDFT	(DSch)
HM01	30-8-2013	Fri	2158	11635	56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	0458	14375	56801etc 310458	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	1003	11635	56801 etc 12180	AM/RDFT	(DSch)

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HM01	31-8-2013	Sat	1003	12180	56801 etc 12180	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	1559	11435	2 2 2 2 2 tape hung up at 1559. 56801 etc at 1600	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	1659	11530	starts at 08444 51835 at 1659, then at 1700: 56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	1759	11635	56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	2059	16180	56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	2159	17480	56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	2256	17540	56801 etc	AM/RDFT	(DSch)
HM01	31-8-2013	Sat	2300	17540	51835 56801 22574 15441 50182 08444 sending number msg and data until 2350z. Then sent the six numbers preamble until 2354z and back to normal at 2356z	AM/RDFT	(Dan)
M01	1-8-2013	Thu	2000	4905	025 703 30 = = 00662 38936 64484 30428 76757 ... 77878 19207 44309 81686 77765 = = 703 30 000	CW	(MPJ)
M01	6-8-2013	Tue	0920	6884	260 260 308 308 30 30 = = 48400 48400 26100 26100 27867 ... 05862 19509 19509 = = 308 308 30 30 000	CW	(Gwr)
M01	13-8-2013	Tue	2001	4905	025 082 072 130 30 = = 42854 03412 26616 18790 23727 ... 48660 56894 76341 38540 23268 = = 071 071 30 30 000 //4906//4908 kHz	CW	(MPJ)
M01	27-8-2013	Tue	2000	4905	(Call missed) 910 30 63650 66633 800.. 44208 90584 ... 44248 26965 39839 05571 15491 910 30 000	CW	(MPJ)
M01	31-8-2013	Sat	1500	6436	025 415 30 55035 71871 65184 37135 .7499 ... 21850 66... 03593 85247 48500 415 30 000. //6435 kHz	CW	(MPJ)
M01a	21-8-2013	Wed	1701	8047	463 463 463 1 1353 94 1353 94 03110 54713 45580 45961 86876 70024 98754 00838 (Cont'd)	CW	(JPL-RUS)
M01b	1-8-2013	Thu	1505	5941	159 551 30 = 83789	CW	(HFD)
M01b	2-8-2013	Fri	1902	5075	336 121 35 = 39863 //5465	CW	(HFD)
M01b	2-8-2013	Fri	1902	5465	336 121 35 = 39863 //5075	CW	(HFD)
M01b	12-8-2013	Mon	1810	5735.17	364 304 30 = = 76387 74648 46876 42029 54603 ... 13953 53135 88295 04707 34171 = = 305 30 000 //5737.38	CW	(MPJ)
M01b	14-8-2013	Wed	1902	5776	127 then 5 fg.	CW	(Brit)
M01b	26-8-2013	Mon	1810	5736.15	364 305 30 = = 76387 74648 46876 42029 54601 ... 13953 53135 88295 04707 34171 = = 305 30 000. //5373.3//5126.2//5127.3	CW	(MPJ)
M01b	26-8-2013	Mon	1918	5476.16	858 305 30 //5151.14//5477.3	CW	(MPJ)
M01b	30-8-2013	Fri	1903	5466.15	(Call missed) 305 30 = = 76387 74648 46876 42029 54601 ... 13953 53135 88295 04707 34171 = = 305 30 000. //5076.15, 5077.3, 5467.3 kHz	CW	(MPJ)
M01b	30-8-2013	Fri	2010	4896.14	467 305 30 = = 76387 74648 46876 42029 54601 ... 13953 53135 88295 04707 34171 = = 305 30. Same msg as 19:03 sked. //4897.3, 5341.17, 5342.27 kHz	CW	(MPJ)
M03	4-8-2013	Sun	1420	7837.2	437/00	CW	(MPJ)
M03	7-8-2013	Wed	1115	7837	650/36 = = 96561 23694 90351 60271 92139 ... 03672 67371 29893 07592 51647 = = 650/36 ...	CW	(MPJ)
M03	8-8-2013	Thu	1115	7837	650/36 (stops) S ... dash ... M2114 12114 65436 49877 28 = = 650/36 (rptd) = = .6561 236.4 90351 60271 92139 12114 ... 03672 67371 29893 07592 51647 = = 000	CW	(MPJ)
M03	13-8-2013	Tue	1115	7837	272/00	CW	(MPJ)
M03	13-8-2013	Tue	1535	6524	798/31 = = 69974 01870 29284 03544 18566 83961 33.54 82693 25232 61097 = = 000	CW	(MPJ)
M08a	8-8-2013	Thu	2000	7554	RIGNA IANWN GUJWIA, 082000	CW	(DSch)
M08a	8-8-2013	Thu	2300	8135	Cuban cut nbrs at 2300. Went off air abruptly. At 2308 back on but heavy QRM on top of signal. Audio gone again so dropped at 2310 UTC	CW	(DSch)
M08a	9-8-2013	Fri	1400	8096	NWRRT DGTGN UNDNA Cuban cut nbrs	CW	(DSch)
M08a	9-8-2013	Fri	1959	7554	NIWTA DTDDA UUDWN Cuban cut nbrs	CW	(DSch)
M08a	9-8-2013	Fri	2259	8135	TGWRN ANGGN NWNNA Cuban cut nbrs	CW	(DSch)
M08a	10-8-2013	Sat	1408	8096	No sig at 1400. NNWTA DWTNN AGNRN at 1408	CW	(DSch)
M08a	12-8-2013	Mon	1427	8096	Cuban cut nbrs	CW	(DSch)
M08a	13-8-2013	Tue	1350	8096	RGNNN INRUA GWTIN	CW	(DSch)
M08a	13-8-2013	Tue	2005	7554	TTNRT NDDRN TRAWA	CW	(DSch)

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M08a	13-8-2013	Tue	2259	8135	NGIGA DNANN UWWUA	CW	(DSch)
M08a	14-8-2013	Wed	1403	8097	Cut nbrs	CW	(DSch)
M08a	14-8-2013	Wed	2009	7554	RAWRD YTWGA ANTTW	CW	(DSch)
M08a	14-8-2013	Wed	2300	8009	Cut nbrs	CW	(DSch)
M08a	15-8-2013	Thu	1413	8097	No sig at 1400. vy weak at 1413. Cut nbrs in CW	CW	(DSch)
M08a	15-8-2013	Thu	2007	7554	Cut nbrs in CW	CW	(DSch)
M08a	15-8-2013	Thu	2305	8135	Cut nbrs in CW. Very weak sig	CW	(DSch)
M08a	16-8-2013	Fri	2011	7554	No callup, he starts into tfc. Cut nbrs. 2nd msg TNGRN at 2012. 3rd msg AWDTA at 2022.	CW	(DSch)
M08a	19-8-2013	Mon	2011	7554	IIRA GGDTA TNRDN cut nbrs	CW	(DSch)
M08a	19-8-2013	Mon	2300	8009	Missed callup, Cut nbrs	CW	(DSch)
M08a	20-8-2013	Tue	1959	7554	DRIAN UTADA WDWRA cut nbrs	CW	(DSch)
M08a	21-8-2013	Wed	1359	8097	NWGGGA DGDAN UNRUN cut nbrs in CW	CW	(DSch)
M08a	23-8-2013	Fri	1427	8095	M08a cut nbrs in CW	CW	(DSch)
M08a	23-8-2013	Fri	2001	7554	M08a cut nbrs in CW	CW	(DSch)
M08a	26-8-2013	Mon	2018	7554	Did not hear the callup. Cut nbrs in CW	CW	(DSch)
M08a	29-8-2013	Thu	1412	8097	.TURI NRGAI IWWRN etc Cut nbrs	CW	(DSch)
M08a	29-8-2013	Thu	2258	8135	M08a AIGNN NTDWA DDRGN cut nbrs	CW	(DSch)
M08a	30-8-2013	Fri	1429	8097	Cut nbrs in CW	CW	(DSch)
M08a	31-8-2013	Sat	1358	8097	DWTNN AGNRN NNWTA cut nbrs	CW	(DSch)
M12	1-8-2013	Thu	0630	7484	402 0	CW	(HFD)
M12	1-8-2013	Thu	0650	8084	402 0	CW	(HFD)
M12	1-8-2013	Thu	1310	14468	451 0	CW	(HFD)
M12	1-8-2013	Thu	1331	13568	451 0	CW	(HFD)
M12	1-8-2013	Thu	1700	10343	124 1 6683 80 61101 83327 17379 86302 35479 ... 40951 36082 59237 87597 56708 000 000	CW	(MPJ)
M12	3-8-2013	Sat	2100	13369	314 1 1604 117 55775 10785 96206 02617 12324 ... 05637 21823 82027 17901 97223 000 000	CW	(MPJ)
M12	5-8-2013	Mon	0430	5792	796 796 796 000	CW	(FN)
M12	5-8-2013	Mon	0450	6992	796 796 796 000	CW	(FN)
M12	5-8-2013	Mon	1300	14964	991 1	CW	(HFD)
M12	5-8-2013	Mon	1300	14964	991 1 2917 219 31623	CW	(FN)
M12	5-8-2013	Mon	1320	13872	991 1 2917 219 31623	CW	(FN)
M12	5-8-2013	Mon	1320	13972	991 1	CW	(HFD)
M12	5-8-2013	Mon	1320	13972	991 1 2917 219 31623 55051 53640 63307 41110 98017 87579 000 000	CW	(Gwr)
M12	5-8-2013	Mon	1340	12164	991 1 2917 219 31623	CW	(FN)
M12	5-8-2013	Mon	1340	12164	991 1	CW	(HFD)
M12	5-8-2013	Mon	1800	9176	257 1	CW	(HFD)
M12	5-8-2013	Mon	1800	9176	257 1 4723 63 94795	CW	(FN)
M12	5-8-2013	Mon	1820	7931	257 1	CW	(HFD)
M12	5-8-2013	Mon	1820	7931	257 1 4723 63 94795	CW	(FN)
M12	5-8-2013	Mon	1840	6904	257 1	CW	(HFD)
M12	5-8-2013	Mon	1840	6904	257 1 4723 63 94795	CW	(FN)
M12	5-8-2013	Mon	1900	9176	257 1 4171 115 34960	CW	(FN)
M12	5-8-2013	Mon	1900	9176	257 1	CW	(HFD)
M12	5-8-2013	Mon	1920	7931	257 1	CW	(HFD)
M12	5-8-2013	Mon	1920	7931	257 1 4171 115 34960	CW	(FN)
M12	5-8-2013	Mon	1940	6904	257 1 4171 115 34960	CW	(FN)
M12	5-8-2013	Mon	1940	6904	257 1	CW	(HFD)
M12	6-8-2013	Tue	1830	10343	124 1 2425 62 63742	CW	(FN)
M12	6-8-2013	Tue	1850	9264	124 1 2425 62 63742	CW	(FN)
M12	6-8-2013	Tue	1910	8116	124 1 2425 62 63742	CW	(FN)
M12	7-8-2013	Wed	1500	13918	991 1 2917 219 31623 55051 53640 55671 38498 ... 40169 63307 41110 98027 87579 000	CW	(MPJ)
M12	7-8-2013	Wed	1500	13918	991 1	CW	(HFD)
M12	7-8-2013	Wed	1500	13918	991 1 2917 219 31623	CW	(FN)

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M12	7-8-2013	Wed	1520	12218	991 1 2917 219 31623	CW	(FN)
M12	7-8-2013	Wed	1520	12218	991 1	CW	(HFD)
M12	7-8-2013	Wed	1540	10818	991 1	CW	(HFD)
M12	7-8-2013	Wed	1540	10818	991 1 2917 219 31623	CW	(FN)
M12	7-8-2013	Wed	1700	8047	463 1 2335 100 28609	CW	(FN)
M12	7-8-2013	Wed	1720	6802	463 1 2335 100 28609	CW	(FN)
M12	7-8-2013	Wed	1740	5788	463 1 2335 100 28609	CW	(FN)
M12	7-8-2013	Wed	1830	11435	938 1 2355 63 77315	CW	(FN)
M12	7-8-2013	Wed	1830	11435	938 1 2355 63 77315 50839 06224 26481 45335 ... 50140 61521 58300 27539 08938 000 000	CW	(MPJ)
M12	7-8-2013	Wed	1850	10598	938 1 2355 63 77315	CW	(FN)
M12	7-8-2013	Wed	1910	9327	938 1 2355 63 77315	CW	(FN)
M12	7-8-2013	Wed	2100	8123	198 0	CW	(HFD)
M12	7-8-2013	Wed	2100	8123	198 198 198 000	CW	(FN)
M12	7-8-2013	Wed	2110	13369	314 314 314 000	CW	(FN)
M12	7-8-2013	Wed	2110	13369	314 0	CW	(HFD)
M12	7-8-2013	Wed	2120	6923	198 0	CW	(HFD)
M12	7-8-2013	Wed	2120	6923	198 198 198 000	CW	(FN)
M12	7-8-2013	Wed	2130	12179	314 314 314 000	CW	(FN)
M12	7-8-2013	Wed	2130	12179	314 0	CW	(HFD)
M12	8-8-2013	Thu	1700	9176	257 1 4579 98 26115 79323 37369 74174 15367 ... 72738 71076 53874 97845 60727 000 000	CW	(MPJ)
M12	9-8-2013	Fri	1700	10343	124 1	CW	(SP1)
M12	9-8-2013	Fri	1720	9264	124 1	CW	(SP1)
M12	9-8-2013	Fri	1740	8116	124 1	CW	(SP1)
M12	12-8-2013	Mon	1300	14964	991 1 496 81 73638	CW	(FN)
M12	12-8-2013	Mon	1320	13972	991 1 496 81 73638	CW	(FN)
M12	12-8-2013	Mon	1340	12164	991 1 496 81 73638	CW	(FN)
M12	12-8-2013	Mon	1600	11435	938 1 1087 115 23990	CW	(FN)
M12	12-8-2013	Mon	1620	10598	938 1 1087 115 23990	CW	(FN)
M12	12-8-2013	Mon	1640	9327	938 1 1087 115 23990	CW	(FN)
M12	12-8-2013	Mon	1700	9176	257 1 1381 79 64801	CW	(FN)
M12	12-8-2013	Mon	1720	7931	257 1 1381 79 64801	CW	(FN)
M12	12-8-2013	Mon	1740	6904	257 1 1381 79 64801	CW	(FN)
M12	12-8-2013	Mon	1800	9176	257 1 5821 65 66605	CW	(FN)
M12	12-8-2013	Mon	1820	7931	257 1 5821 65 66605	CW	(FN)
M12	12-8-2013	Mon	1840	6904	257 1 5821 65 66605	CW	(FN)
M12	12-8-2013	Mon	1900	9176	257 8819 108 60336 85798 45064 41139 34855 ... 42446 30567 79801 17835 84895 000	CW	(MPJ)
M12	12-8-2013	Mon	1900	9176	257 1 8819 108 60336	CW	(FN)
M12	12-8-2013	Mon	1920	7931	257 1 8819 108 60336	CW	(FN)
M12	12-8-2013	Mon	1940	6904	257 1 8819 108 60336	CW	(FN)
M12	13-8-2013	Tue	1830	10343	124 1 4787 66 11971	CW	(FN)
M12	13-8-2013	Tue	1850	9264	124 1 4787 66 11971	CW	(FN)
M12	13-8-2013	Tue	1910	8116	124 1 4787 66 11971	CW	(FN)
M12	14-8-2013	Wed	1500	13918	991 1 496 81 73638	CW	(FN)
M12	14-8-2013	Wed	1520	12218	991 1 496 81 73638	CW	(FN)
M12	14-8-2013	Wed	1540	10818	991 1 496 81 73638	CW	(FN)
M12	14-8-2013	Wed	1700	8047	463 1 5554 100 80885	CW	(FN)
M12	14-8-2013	Wed	1720	6802	463 1 5554 100 80885	CW	(FN)
M12	14-8-2013	Wed	1740	5788	463 1 5554 100 80885	CW	(FN)
M12	14-8-2013	Wed	1830	11435	938 1 1996 65 74741	CW	(FN)
M12	14-8-2013	Wed	1850	10598	938 1 1996 65 74741	CW	(FN)
M12	14-8-2013	Wed	1910	9327	938 1 1996 65 74741	CW	(FN)
M12	17-8-2013	Sat	2110	13369	314 314 314 000	CW	(MPJ)
M12	17-8-2013	Sat	2110	13369	314 314 314 000	CW	(FN)

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M12	17-8-2013	Sat	2130	12179	314 314 314 000	CW	(FN)
M12	19-8-2013	Mon	0430	5792	796 796 796 000	CW	(FN)
M12	19-8-2013	Mon	0450	6992	796 796 769 000	CW	(FN)
M12	19-8-2013	Mon	1300	14964	991 1 7021 177 76451	CW	(FN)
M12	19-8-2013	Mon	1320	13972	991 1 7021 177 76451	CW	(FN)
M12	19-8-2013	Mon	1340	12164	991 1 7021 177 76451	CW	(FN)
M12	19-8-2013	Mon	1600	11435	938 1 4233 113 23606	CW	(FN)
M12	19-8-2013	Mon	1620	10598	938 1 4233 113 23606	CW	(FN)
M12	19-8-2013	Mon	1640	9327	938 1 4233 113 23606	CW	(FN)
M12	19-8-2013	Mon	1700	9176	257 1 1567 72 72466	CW	(FN)
M12	19-8-2013	Mon	1720	7931	257 1 1567 72 72466	CW	(FN)
M12	19-8-2013	Mon	1740	6904	257 1 1567 72 72466	CW	(FN)
M12	19-8-2013	Mon	1800	9176	257 1 3845 64 42780	CW	(FN)
M12	19-8-2013	Mon	1820	7931	257 1 3845 64 42780	CW	(FN)
M12	19-8-2013	Mon	1840	6904	257 1 3845 64 42780	CW	(FN)
M12	19-8-2013	Mon	1900	9176	257 1 3373 113 77030	CW	(FN)
M12	19-8-2013	Mon	1920	7931	257 1 3373 113 77030	CW	(FN)
M12	19-8-2013	Mon	1940	6904	257 1 3373 113 77030	CW	(FN)
M12	20-8-2013	Tue	1830	10343	124 1 8840 61 38347	CW	(FN)
M12	20-8-2013	Tue	1850	9264	124 1 8840 61 38347	CW	(FN)
M12	20-8-2013	Tue	1910	8116	124 1 8840 61 38347	CW	(FN)
M12	21-8-2013	Wed	1500	13918	991 1 7021 177 76451	CW	(FN)
M12	21-8-2013	Wed	1520	12218	991 1 7021 177 76451	CW	(FN)
M12	21-8-2013	Wed	1540	10818	991 1 7021 177 76451	CW	(FN)
M12	21-8-2013	Wed	1700	8047	463 1 1353 94 03110	CW	(FN)
M12	21-8-2013	Wed	1720	6802	463 1 1353 94 03110	CW	(FN)
M12	21-8-2013	Wed	1740	5788	463 1 1353 94 03110	CW	(FN)
M12	21-8-2013	Wed	1830	11435	938 1 8963 67 94526	CW	(FN)
M12	21-8-2013	Wed	1850	10598	938 1 8963 67 94526	CW	(FN)
M12	21-8-2013	Wed	1910	9327	938 1 8963 67 94526	CW	(FN)
M12	22-8-2013	Thu	0630	7484	402 402 402 000	CW	(FN)
M12	22-8-2013	Thu	0650	8084	402 402 402 000	CW	(FN)
M12	22-8-2013	Thu	1310	14468	451 1 260 143 93293	CW	(FN)
M12	22-8-2013	Thu	1330	13568	451 1 260 143 93293	CW	(FN)
M12	22-8-2013	Thu	1350	12178	451 1 260 143 93293	CW	(FN)
M12	22-8-2013	Thu	1700	9176	257 1 6564 95 92052	CW	(FN)
M12	22-8-2013	Thu	1700	10343	124 1 8131 80 15074	CW	(FN)
M12	22-8-2013	Thu	1720	7931	257 1 6564 95 92052	CW	(FN)
M12	22-8-2013	Thu	1720	9264	124 1 8131 80 15074	CW	(FN)
M12	22-8-2013	Thu	1740	6904	257 1 6564 95 92052	CW	(FN)
M12	22-8-2013	Thu	1740	8116	124 1 8131 80 15074	CW	(FN)
M12	22-8-2013	Thu	1800	10343	124 1 3820 111 10499	CW	(FN)
M12	22-8-2013	Thu	1820	9264	124 1 3820 111 10499	CW	(FN)
M12	22-8-2013	Thu	1840	8116	124 1 3820 111 10499	CW	(FN)
M12	22-8-2013	Thu	1900	9176	257 1 3801 66 53091	CW	(FN)
M12	22-8-2013	Thu	1920	7931	257 1 3801 66 53091	CW	(FN)
M12	26-8-2013	Mon	1800	9176	257 1 7463 66 94401 36577 49980 95666 77009 ... 91417 79020 10728 68793 77964 000 000	CW	(MPJ)
M12	27-8-2013	Tue	1830	10343	124 1 51212 16844 45220 19367 32336 ... 17788 23170 25820 95003 52842 000 000	CW	(MPJ)
M12	28-8-2013	Wed	1520	12218	991 1 7783 73 28047 19377 15678 18295 60025 ... 48860 52300 91067 42104 58519 000 000	CW	(MPJ)
M12	28-8-2013	Wed	1830	11435	938 3999 70 05803 31695 78054 02328 01824 ... 01102 74924 36014 18285 98879 000 000	CW	(MPJ)
M12	31-8-2013	Sat	1310	14468	451/00	CW	(MPJ)
M12	31-8-2013	Sat	2110	13369	314 1 3778 123 72167 08945 96788 39066 44986 ... 20927 70871 02768 79669 71862 000 000	CW	(MPJ)

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M14	13-8-2013	Tue	1820	6856	163 724 15 83910 03841 00843 73921 72593 30273 48194 34322 83922 79685 72937 83427 93037 82123 18937 = = 824 15 00000 //6857//6858 kHz	CW	(MPJ)
M14	27-8-2013	Tue	1819	6857	163 824 15 = = 83910 03841 00843 73921 72593 30273 48194 34322 83922 79685 72937 83427 93037 82123 18937 = = 824 15 00000	CW	(MPJ)
M14	28-8-2013	Wed	1920	5938	417 472 15 = = 84032 79531 37273 83012 83912 83021 83021 83002 84921 17392 09647 96325 63875 73225 73813 = = 472 15 00000. (2X 83021 as sent)	CW	(MPJ)
M21	4-8-2013	Sun	2355	5221.5	Russian Air Defence	CW áá	(LG2)
M21	10-8-2013	Sat	2022	5222	=992350??0????? =992351??0????? =992352??0?????	CW	(JPL-FNL)
M21	10-8-2013	Sat	2027	4904	=992352??8????? =992353??8?????	CW	(JPL-FNL)
M21	10-8-2013	Sat	2306	9367.5	Russian Air Defence=990306??8????? =990307??8????? =990308??8?????	CW	(LG2)
M21	12-8-2013	Mon	2324	5222	PVO =990326??0?????	CW	(Brit)
M21	13-8-2013	Tue	2014	4904	Russian Air Defence =990014??8?????	CW	(MPJ)
M21	19-8-2013	Mon	2225	9367.5	Russian Air Defence (PVO)=990224?8?????	CW áá	(LG2)
M21	20-8-2013	Tue	0703	9367.5	Russian air defence =991104??8????? =991105??8?????	CW	(wp3)
M21	25-8-2013	Sun	2330	6001	= = AR AR VVV DE 4XZ 4XZ = = New freq?	CW	(RRB)
M21	28-8-2013	Wed	0400	6421.5	Russian Air Defense =990802??8????? =990803??8?????	CW	(WP3)
M21	28-8-2013	Wed	1137	6422	=991538??8????? =16848188184336 =16850188488636 =26850902060600	CW	(JPL-FNL)
M21	28-8-2013	Wed	2238	3247	=990242??0????? =990243??0?????	CW	(JPL-RUS)
M21	28-8-2013	Wed	2245	5222	=990249??0?????	CW	(JPL-RUS)
M21	29-8-2013	Thu	1107	9368	=991508??8?????	CW	(JPL-FNL)
M21	29-8-2013	Thu	1250	6422	=991650??8????? =16848181582550 =26848901050527	CW	(JPL-FNL)
M21	29-8-2013	Thu	1253	4904	=991653??8????? =991654??8?????	CW	(JPL-FNL)
M21	29-8-2013	Thu	1936	5222	=992339??0????? =992340?????????	CW	(JPL-FNL)
M22	10-8-2013	Sat	0020	2680	CW keyer stuck keyup or keydown for several seconds at a time. 0045z key down, 0050z off the air.	CW	(FC)
M22	10-8-2013	Sat	0020	4331	CW keyer stuck keyup or keydown for several seconds at a time. 0045z key down, 0050z off the air.	CW	(FC)
M22	10-8-2013	Sat	0020	6379	CW keyer stuck keyup or keydown for several seconds at a time. 0045z key down, 0050z off the air.	CW	(FC)
M22	10-8-2013	Sat	0020	6607	CW keyer stuck keyup or keydown for several seconds at a time. 0045z key down, 0050z off the air.	CW	(FC)
M22	13-8-2013	Tue	2146	4595	VVV VVV DE 4XZ 4XZ	CW á	(LG2)
M24	16-8-2013	Fri	1812	10423 67809 56575 = 729 103 00000	CW	(FN)
M32	2-8-2013	Fri	1346	5123	XXX XXX PABA PABA KORGET 375 K	CW	(Gwr)
M32	2-8-2013	Fri	1355	5220	AM9S wkg JPYN, ANSW, W6GZ, C26B, F2DB etc. netcheck	CW	(Gwr)
M32	7-8-2013	Wed	1445	14842	RGT77	CW	(LG2)
M32	8-8-2013	Thu	1845	10987	kwpf de cvnc k ar sk	CW	(Brit)
M32	9-8-2013	Fri	1120	14842	RGT77-net: XXX XXX WEGI WEGI 50207 PEREGUL 5184 3905	CW	(JU)
M32	9-8-2013	Fri	1122	13479	REA4: XXX XXX REA4 REA4 04560 PEREGUL 5184 3905	CW	(JU)
M32	9-8-2013	Fri	1123	14842	RGT77: XXX XXX RGT77 RGT77 15550 AKRIDIL 7180 9091	CW	(JU)
M32	9-8-2013	Fri	1124	12832	RDL: XXX XXX WEGI WEGI 01398 50207 PEREGUL 5184 3905	CW	(JU)
M32	9-8-2013	Fri	1127	13479	REA4: XXX XXX REA4 REA4 90718 AKRIDIL 7180 9091	CW	(JU)
M32	9-8-2013	Fri	1129	14842	RGT77: XXX XXX WEGI WEGI 46269 KERGELEN 8456 3274	CW	(JU)
M32	9-8-2013	Fri	1130	12832	RDL: XXX XXX RGT77 RGT77 80298 15550 AKRIDIL 7180 9091	CW	(JU)
M32	9-8-2013	Fri	1131	13479	REA4: XXX XXX REA4 REA4 93743 KERGELEN 8456 3274	CW	(JU)
M32	9-8-2013	Fri	1132	14842	RGT77: XXX XXX SHEU SHEU 12367 68476 SIRINKS 9382 0456	CW	(JU)
M32	9-8-2013	Fri	1135	13479	REA4: XXX XXX REA4 REA4 05308 SIRINKS 9382 0456	CW	(JU)
M32	9-8-2013	Fri	1137	14108	Gen. staff-net?G5CX 46253 43795 BEREZYaNIN 8085 6005	CW	(JU)
M32	9-8-2013	Fri	1157	12832	RDL: XXX RDL RDL 03893 42695 RAZNOKOL 9722 6754 K	CW	(JU)
M32	10-8-2013	Sat	1431	10963	4WQ1 DE C4NC K. R K. V829 DE C4NC K. R K. MQJG DE C4NC K. CW R K	CW	(JPL-RUS)

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M32	12-8-2013	Mon	1253	10536	XXX XXX RGT77 RGT77 23529 44547 KATAZIA 7114 4764 XXX XXX RGT77 RGT77 23529 44547 KATAZIA 7114 4764 K	CW	(JPL-FNL)
M32	12-8-2013	Mon	1254	10536	UUU XXX XXX WEGI WEGI 48260 18996 BEGNA 4138 8191 XXX XXX WEGI WEGI 48260 18996 BEGNA 4138 8191 K	CW	(JPL-FNL)
M32	17-8-2013	Sat	1940	14664	RDL RDL 4215 etc	CW	(LG2)
M32	17-8-2013	Sat	1943	14664	RDL RDL etc	CW	(LG2)
M32	18-8-2013	Sun	0839	10535	RDL 95643 16479 95643 K	Baudot 50/200	(LG2)
M32	19-8-2013	Mon	1002	12816	IWWP clg CYGV, OAZ6, GDXI, IRPL, 2OYW, YKNZ	CW	(WP3)
M32	19-8-2013	Mon	2115	8828	ZT9H calls for radio checks: Q9Z7, NHSL, FRFK, QMED, AMOR, 8YLY, 4B1R, GLTY	CW	(Topol)
M32	19-8-2013	Mon	2307	8828	ZT9H calls for radio checks: L8IY, 4G2B, AMQA, FC3U, 6D4X, T8AC, Q9Z7, NHSL, FRFK, QMED, AMOR, 8YLY, 4B1R, GLTY	CW	(Topol)
M32	22-8-2013	Thu	0700	13812	NER9 + message	CW	(MOR)
M32	23-8-2013	Fri	0741	13479	XXX XXX DNP9 DNP9 58806 SKOTNICA 3906 0296	CW	(JU)
M32	23-8-2013	Fri	0842	13479	XXX XXX DNP9 DNP9 88692 ROGOZOWYJ 1776 8026	CW	(JU)
M32	23-8-2013	Fri	0940	13479	REA4 REA4 = 23090 99900 22150 73842 86997 63001 10172 20148 80032 = REA4 K	CW	(JU)
M32	25-8-2013	Sun	1203	7255	XXX XXX RLO RLO GUBKA 3 PO RAJONAM 68 73 K	CW	(JPL-FNL)
M32	26-8-2013	Mon	0442	6804	PNDU clg 4O2P	CW	(BCI)
M32	26-8-2013	Mon	0701	16228	XXX XXX LR43 LR43 000 100 TEH PROWERKA 00000 00000	CW	(BCI)
M32	29-8-2013	Thu	0739	12692	i.p. 85583 63127 36881 74863 66517 38 iii	CW	(JPL-RUS)
M32	29-8-2013	Thu	0800	7957	i.p. R K. M1AI DE LE66 K. R K. J34D DE LE66 K. R K	CW	(JPL-RUS)
M32a	1-8-2013	Thu	1259	17468	Russian Navy "RHL80 RHL80 DE RIW RIW QYT 4 QXS 8330 K"	CW	(MCO)
M32a	4-8-2013	Sun	2355	5223	RG58 DE RCV R QYT4 QSA4 RCV R RG58 DE RCV R QYT4 QXS 6243 K RCV R K	CW	(LG2)
M32a	8-8-2013	Thu	1025	14587	Russian Navy. RDND DE RJE56 QRR QDW 10676. RJE56 DE RDND QRR3 SK. RNDN DE RJE56 SK	CW	(SP1)
M32a	10-8-2013	Sat	0646	14556	RIW clg RJT22	CW	(Brit)
M32a	11-8-2013	Sun	1640	6832	REO DE RMP QTC ... 11 1957 .73 = Prognoz Pogody msg	CW	(JPL-FNL)
M32a	12-8-2013	Mon	1302	10425	DE RAL2 K. RMW2 DE RAL2 K. RAL2 DE RMW2 QSA 4 K. QSA? QSA 4 QRU VA. QRU VA	CW	(JPL-FNL)
M32a	18-8-2013	Sun	0906	11418	RMPRussian Navy HQ Kaliningrad. DE RMP RMP SK K	CW	(LG2)
M32a	19-8-2013	Mon	0304	7080	RFR93 DE RMW46 ZSA ? K	CW	(JPL)
M32a	19-8-2013	Mon	1324	11000	RCJG DE RIW QTC K RIW 59 33 19 1323 589 = SML EMRIT = 2222	CW áá	(LG2)
M32a	19-8-2013	Mon	1400	11000	RFK93 RFK93 RFK93 DE RIW RIW QSA? K RIW QYT4	CW áá	(LG2)
M32a	19-8-2013	Mon	1401	11000	RMC99 RMC99 RMC99 DE RIW RIW QSA? QTC K	CW áá	(LG2)
M32a	19-8-2013	Mon	1922	8816	RJF94 wkg RJT	CW	(Brit)
M32a	20-8-2013	Tue	2325	11000	RIW: Russian Navy relayed NAWIP from RCV for Italia (Italy) Turci(Turkey) and Port Hajfa(Haifa) with coordinates	CW	(LG2)
M32a	23-8-2013	Fri	1601	10543	XXX XXX RJV RJV 82833 NEDOWESNYJ 6315 9804 K. R..... DE RCV K. RCV AS1. RCV OK QYT4 QWH 7984 K	CW	(JPL-FNL)
M32a	23-8-2013	Fri	1940	6989	... DE RAL2 K. QSA4 QRU VA. RBL66 DE RAL2 K. QSA3 QRU VA.	CW	(JPL-FNL)
M32a	24-8-2013	Sat	0741	10676	RJE56 DE RJD69 ZSD? K	CW	(JPL-FNL)
M32a	24-8-2013	Sat	0755	12691	RJE56 OK QYT4 QWH 8623 K	CW	(JPL-FNL)
M32a	25-8-2013	Sun	1215	4635	RMLZ 135 20 25 .600 135 = FOR RJH45 RJH74 RJD90 = 25121 99665 10349 41597 7..	CW	(JPL-FNL)
M32a	25-8-2013	Sun	1845	8345	RIW DE RMI93 25181 99630 10040 22282	CW	(Tom)
M32a	25-8-2013	Sun	1900	7664	//7664/9145/11000 RMI93 DE RIW QSA ? K (see N&O 191)	CW	(Tom)
M32a	28-8-2013	Wed	1540	7942	80302 10226 20152 70222 88030 = REA4 K (1541z)	CW	(JPL-FNL)
M32a	29-8-2013	Thu	0811	7161	RKP65 DE RMW32 ZSA ? K. RGF80 DE RMW32 ZTC AR ZTC AR ZTC AR. .2 32 20 12 05 = 999 = IPAKU HVD\HL TPAKW WPEKU BOIPA HJDYV DXBPM X.GEK UBL\EHG JVQDO XMPA KHAWUY YF (Cont&Ed)	CW	(JPL-RUS)
M32a	29-8-2013	Thu	1245	8136	VVV RIT DE RMXV QSA? K. RMXV K	CW	(JPL-RUS)
M32a	29-8-2013	Thu	1804	4635	FOR RJD90 RJH74 = 29151 99655 10394 41698 42206 10120	CW	(JPL-FNL)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
					40070 52010 20201 84022 22242 00096 20101 88000 2901. = AR RAS82 K		
M32a	29-8-2013	Thu	1925	11000	RIR96 DE RIW K. RIR AS 1 K. RMRV DE RUK K. RIW. QYT 4 QWH CW 12746 K. RMRV DE RIW K. RIW QYT 4 QSX 8328 K. RIW R K		(JPL-RUS)
M32a	29-8-2013	Thu	1938	5224	DE RCV QYT4 QCM K. DE RCV R K. RCV AS 1	CW	(JPL-FNL)
M32c	2-8-2013	Fri	1040	4835	REA4 REA4 = 02100 99900 73842 88997 51502 10225 20204 80034 = REA4 K	CW	(Gwr)
M32c	5-8-2013	Mon	0900	4835	REA4 REA4 = 05090 99900 04120 62596 50997 63103 10245 20134 83011 = REA4 K	CW	(Gwr)
M32c	5-8-2013	Mon	1800	8895	Russian Air Force "W"-markers at 1800, 1820, 1840 1900, 1920, 2000, 2020, 2040, 2100 UTC	CW	(Tom)
M32c	6-8-2013	Tue	0940	4835	REA4 REA4 = 06090 99900 27627 65560 63004 10276 20178 70202 86100 = REA4 K	CW	(Gwr)
M32c	12-8-2013	Mon	1820	8895	"W" Markers at 1820, 1840, 1900, 1920, 1940 2000 UTC	CW	(Tom)
M32c	13-8-2013	Tue	1920	8895	"W" Markers	CW	(Tom)
M32c	19-8-2013	Mon	2315	8895	Russian AF: xjsr xjsr xjsr de tv6p tv6p tv6p csa 2 k	CW	(Brit)
M32c	22-8-2013	Thu	1840	8895	W-Markers at 1840, 1900, 2020 UTC	CW	(Tom)
M32c	22-8-2013	Thu	2007	8895	XJSR DE LBNC QRV K.	CW	(Tom)
M32c	25-8-2013	Sun	0920	8895	W-markers at 0920, 0940 UTC	CW	(Tom)
M42	30-7-2013		2100	12209	Russian Intel. One message on Link 13366: 17251 00000 00000 00038 15371 16697 02733 15670	FSK 200/1000	(MPJ)
M42	1-8-2013	Thu	1900	10828	Russian Intel	FSK 200/500	(HFD)
M42	1-8-2013	Thu	1910	8144	Russian Intel	FSK 200/500	(HFD)
M42	1-8-2013	Thu	1920	5803	Russian Intel	FSK 200/500	(HFD)
M42	8-8-2013	Thu	1900	10828	Russian Intel. 0000+++++++162)571	Baudot 200/500	(MPJ)
M42	11-8-2013	Sun	1100	16244	Russian Intel. Msg Nr 151 on Link 51737 Type 03452. Three others with different types, same nr, same link, different messages	FSK 200/1000	(MPJ)
M42	11-8-2013	Sun	1530	18273	Russian Intel. Msg Nr 096 on Link 13366 Type 13366. Stops for 5 mins and restarts at 15:30 with Msg Nr 002 on Link 20501 Type 07145	FSK 200/1000	(MPJ)
M42	13-8-2013	Tue	2100	11431	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000	(IW)
M42	13-8-2013	Tue	2110	9187	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000	(IW)
M42	13-8-2013	Tue	2120	7783	Russian Intel. Link ID 45057. Msg Number 002. Msg Type 07145. Group Count 4: 01284 00000 00000 00047 62429 33704 00893 34256	FSK 200/1000	(IW)
M42	20-8-2013	Tue	0745	16166.5	Russian diplo	CROWD-36 ááá	(LG2)
M42	23-8-2013	Fri	2333	20823	Russian Intel	FSK 200/500	(MCO)
M42	23-8-2013	Fri	2348	18397	Russian Intel, Moscow (repeat of earlier message on 20823kHz)	FSK 200/500	(MCO)
M42	24-8-2013	Sat	1200	17482	Russian Intel	FSK 200/500	(HFD)
M42	24-8-2013	Sat	1210	15967	Russian Intel	FSK 200/500	(HFD)
M42	24-8-2013	Sat	1220	13396	Russian Intel	FSK 200/500	(HFD)
M42	25-8-2013	Sun	0810	16166.5	Russian diplo	CROWD-36 ááá	(LG2)
M42	29-8-2013	Thu	1910	8144	Russian Intel 00000+++++++162)5761	FSK 200/500	(JPL)
M42	29-8-2013	Thu	1920	5803	Russian Intel 00000+++++++162)5761	FSK 200/500	(JPL)
M42a	2-8-2013	Fri	2212	10436	GRU HFDF net VVVV NWA NWA VVVVVVVVVV 5- IUE 87 34K CW áá VVVVV		(LG2)
M51	13-8-2013	Tue	1134	6825	FAV228eme Regiment de Transmission, standard coded text lesson	CW	(LG2)
M51	13-8-2013	Tue	1134	6853	FAV228eme Regiment de Transmission, standard coded text lesson 25	CW	(LG2)
M51	13-8-2013	Tue	2130	9213	5-letter groups.	CW	(JLM)
M51	23-8-2013	Fri	1102	14671.5	French MIL Intel 5LGs	CW	(MCO)
M51	29-8-2013	Thu	0025	2810	NR 40 A 29 02:23:33 1985	CW	(Faux)

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M89	5-8-2013	Mon	1920	6840	vuv Q2M Q2M Q2M de NY NYZ	CW	(FN)
M89	5-8-2013	Mon	2321	5230	DKG6 DE 3A7D continuous repeat	CW áá	(LG2)
M89	8-8-2013	Thu	1933	11536	V RXP7 RXP7 RXP7 DE CZT2 CZT2	CW	(Brit)
M89	9-8-2013	Fri	1404	10998	In tfc: III = 6NU5 434D 373N TA47 (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1627	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1629	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1631	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1633	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	9-8-2013	Fri	1633	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	9-8-2013	Fri	1820	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	9-8-2013	Fri	1820	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	9-8-2013	Fri	1825	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1826	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	1828	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	9-8-2013	Fri	2134	7602	v dkg6 de 3a7d	CW	(Brit)
M89	10-8-2013	Sat	1514	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1516	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1620	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10-8-2013	Sat	1620	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	10-8-2013	Sat	1625	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1627	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1628	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	10-8-2013	Sat	1628	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	10-8-2013	Sat	1629	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1631	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1920	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	10-8-2013	Sat	1920	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	10-8-2013	Sat	1925	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1927	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	1928	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	10-8-2013	Sat	2345	7602	Chinese Mil. DKG6 DE 3A7D (repeated)	CW	(Topol)
M89	10-8-2013	Sat	2355	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1615	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	11-8-2013	Sun	1615	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	11-8-2013	Sun	1617	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1619	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1619	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1620	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	11-8-2013	Sun	1620	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	11-8-2013	Sun	1625	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1925	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1926	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1928	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1928	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1930	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	1931	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2204	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2206	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	11-8-2013	Sun	2206	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	11-8-2013	Sun	2208	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2208	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2210	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2212	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	11-8-2013	Sun	2220	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	11-8-2013	Sun	2220	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	12-8-2013	Mon	1408	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)

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M89	12-8-2013	Mon	1410	10998	V RXP7 (x3) DE CZT2 (x2)	CW	(JPL)
M89	12-8-2013	Mon	1412	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	12-8-2013	Mon	1412	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	12-8-2013	Mon	1414	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	12-8-2013	Mon	1414	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	12-8-2013	Mon	1416	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	12-8-2013	Mon	1418	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	12-8-2013	Mon	1419	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	12-8-2013	Mon	1419	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	12-8-2013	Mon	1420	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	12-8-2013	Mon	1420	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	12-8-2013	Mon	1820	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	12-8-2013	Mon	1820	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	12-8-2013	Mon	1825	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	12-8-2013	Mon	1828	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	12-8-2013	Mon	1828	5230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	12-8-2013	Mon	1830	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	12-8-2013	Mon	1832	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	12-8-2013	Mon	1832	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	12-8-2013	Mon	1834	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	12-8-2013	Mon	1834	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	16-8-2013	Fri	1042	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	16-8-2013	Fri	1042	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	16-8-2013	Fri	1044	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1046	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1059	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1102	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1120	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	16-8-2013	Fri	1120	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	16-8-2013	Fri	1250	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1252	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	16-8-2013	Fri	1254	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	16-8-2013	Fri	1254	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	16-8-2013	Fri	1255	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	16-8-2013	Fri	1255	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	17-8-2013	Sat	0303	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	17-8-2013	Sat	1620	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	17-8-2013	Sat	1620	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	17-8-2013	Sat	1626	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	17-8-2013	Sat	1626	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	17-8-2013	Sat	1629	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	17-8-2013	Sat	1631	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	17-8-2013	Sat	1633	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	17-8-2013	Sat	1633	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	19-8-2013	Mon	0247	7582	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	19-8-2013	Mon	0247	8110	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	19-8-2013	Mon	0320	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	19-8-2013	Mon	0320	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	19-8-2013	Mon	1011	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	19-8-2013	Mon	1011	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	19-8-2013	Mon	1016	6773	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	19-8-2013	Mon	1016	8040	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	19-8-2013	Mon	1018	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	19-8-2013	Mon	1019	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	19-8-2013	Mon	1020	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	19-8-2013	Mon	1020	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)

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M89	19-8-2013	Mon	1727	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	19-8-2013	Mon	2015	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	19-8-2013	Mon	2015	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	19-8-2013	Mon	2017	6773	V H2FL (x3) DE DRV8 (x2) (Cont'd) //8040	CW	(JPL)
M89	19-8-2013	Mon	2017	8040	V H2FL (x3) DE DRV8 (x2) (Cont'd) //6773	CW	(JPL)
M89	19-8-2013	Mon	2019	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	19-8-2013	Mon	2020	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	19-8-2013	Mon	2020	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	19-8-2013	Mon	2025	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	19-8-2013	Mon	2026	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	0157	7582	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	20-8-2013	Tue	0157	8110	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	20-8-2013	Tue	0720	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	20-8-2013	Tue	0720	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	20-8-2013	Tue	0727	7582	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	20-8-2013	Tue	0727	8110	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	20-8-2013	Tue	0731	8750	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1142	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	20-8-2013	Tue	1142	5500	QV5B: VVV UGT COMM BT 3066/2015/Z03/9549 AR /	CW	(JPL)
M89	20-8-2013	Tue	1151	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	20-8-2013	Tue	1151	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	20-8-2013	Tue	1153	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1154	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	20-8-2013	Tue	1154	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	20-8-2013	Tue	1156	5485	ASDF: VVV VVV HR SVC GA NR 119 2000 RMKS 7310	CW	(JPL)
M89	20-8-2013	Tue	1212	5555	In chat/tfc: GA K = ... NDU5 5ATU D3TA TA65 TT	CW	(JPL)
M89	20-8-2013	Tue	1512	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1907	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1910	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	20-8-2013	Tue	1910	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	20-8-2013	Tue	1912	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1913	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	20-8-2013	Tue	1913	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	20-8-2013	Tue	1915	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	1920	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	20-8-2013	Tue	1920	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	20-8-2013	Tue	1943	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	2100	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	2101	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	20-8-2013	Tue	2102	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	20-8-2013	Tue	2102	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	20-8-2013	Tue	2105	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	20-8-2013	Tue	2105	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	20-8-2013	Tue	2106	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	20-8-2013	Tue	2106	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4474	CW	(JPL)
M89	21-8-2013	Wed	0900	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	0902	8750	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	1820	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	21-8-2013	Wed	1820	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	21-8-2013	Wed	1825	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	21-8-2013	Wed	1825	5230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	21-8-2013	Wed	1826	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	1827	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	21-8-2013	Wed	1827	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	21-8-2013	Wed	1828	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	1830	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)

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M89	21-8-2013	Wed	2111	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	2112	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	2113	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	21-8-2013	Wed	2113	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	21-8-2013	Wed	2118	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	21-8-2013	Wed	2120	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	21-8-2013	Wed	2120	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	22-8-2013	Thu	1212	9277	In tfc: = = AUN7 576D N36. .T4N TA6T U545 UT7T	CW	(JPL)
M89	22-8-2013	Thu	1706	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	22-8-2013	Thu	1706	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4474	CW	(JPL)
M89	22-8-2013	Thu	1709	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	22-8-2013	Thu	1711	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	22-8-2013	Thu	1711	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	22-8-2013	Thu	1712	3330	V 2SLC in tfc: = 4D66 AR. VVV 7G .86 CK 3.. 24	CW	(JPL)
M89	22-8-2013	Thu	1716	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	22-8-2013	Thu	1720	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	22-8-2013	Thu	1720	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	22-8-2013	Thu	1958	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //10998	CW	(JPL)
M89	22-8-2013	Thu	1958	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd) //4474	CW	(JPL)
M89	22-8-2013	Thu	2000	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	22-8-2013	Thu	2000	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	22-8-2013	Thu	2002	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	22-8-2013	Thu	2004	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	22-8-2013	Thu	2004	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	22-8-2013	Thu	2006	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1145	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1148	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1152	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	23-8-2013	Fri	1152	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	23-8-2013	Fri	1154	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	23-8-2013	Fri	1154	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	23-8-2013	Fri	1547	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1549	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	23-8-2013	Fri	1549	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	23-8-2013	Fri	1551	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1553	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	23-8-2013	Fri	1553	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	23-8-2013	Fri	1555	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1913	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1914	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1915	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	23-8-2013	Fri	1915	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	23-8-2013	Fri	1916	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	23-8-2013	Fri	1916	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	23-8-2013	Fri	1917	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	23-8-2013	Fri	1920	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	23-8-2013	Fri	1920	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	24-8-2013	Sat	0015	5555	In tfc: 50 5050 = 3.457D54A5R 7G CQ GA. NR NR	CW	(JPL)
M89	24-8-2013	Sat	0720	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K (/10640) (R5	CW	(JPL)
M89	24-8-2013	Sat	0720	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K (/6840) (R5)	CW	(JPL)
M89	24-8-2013	Sat	0728	6773	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	24-8-2013	Sat	1206	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	24-8-2013	Sat	1209	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	24-8-2013	Sat	1211	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) (/10180) (S	CW	(JPL)
M89	24-8-2013	Sat	1211	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) (/5801) (Sa	CW	(JPL)
M89	24-8-2013	Sat	1212	5485	V YUQW (x3) DE ASDF (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)

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M89	24-8-2013	Sat	1637	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	24-8-2013	Sat	1639	3330	In tfc: A653 DU7U 4A34 4DA6 (Cont'ed) III = ...	CW	(JPL)
M89	24-8-2013	Sat	1658	5485	V YUQW (x3) DE ASDF (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)
M89	24-8-2013	Sat	1659	5230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)
M89	24-8-2013	Sat	2102	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd) (/10998	CW	(JPL)
M89	24-8-2013	Sat	2102	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd) (/4474	CW	(JPL)
M89	24-8-2013	Sat	2106	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)
M89	24-8-2013	Sat	2108	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)
M89	24-8-2013	Sat	2110	5485	V YUQW (x3) DE ASDF (x2) (Cont'd) (/N/H) (Sat	CW	(JPL)
M89	24-8-2013	Sat	2120	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K (/10640) (R5	CW	(JPL)
M89	24-8-2013	Sat	2120	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K (/6840) (R5)	CW	(JPL)
M89	25-8-2013	Sun	1540	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	25-8-2013	Sun	1540	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	25-8-2013	Sun	1542	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	25-8-2013	Sun	1542	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	25-8-2013	Sun	1544	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	1545	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	1546	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	1730	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	25-8-2013	Sun	1730	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	25-8-2013	Sun	1731	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	25-8-2013	Sun	1731	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	25-8-2013	Sun	1732	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	1733	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	1734	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	2204	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	25-8-2013	Sun	2204	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	25-8-2013	Sun	2207	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	2208	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	25-8-2013	Sun	2220	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	25-8-2013	Sun	2220	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	27-8-2013	Tue	0138	7582	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	27-8-2013	Tue	0138	8110	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	27-8-2013	Tue	0144	9277	In tfc: 463D 7TT5 UDU3 DTUT 35UA 3A4N 6754 (se	CW	(JPL)
M89	27-8-2013	Tue	0220	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	27-8-2013	Tue	0220	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	27-8-2013	Tue	1003	7582	V 7NPE (x3) DE QV5B (x2) (Cont'd) //8110	CW	(JPL)
M89	27-8-2013	Tue	1003	8110	V 7NPE (x3) DE QV5B (x2) (Cont'd) //7582	CW	(JPL)
M89	27-8-2013	Tue	1005	8040	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	1007	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	1009	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	1013	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	27-8-2013	Tue	1013	5500	In tfc: UGT COMM 2492/0505/Z04/1851 AR (see N&	CW	(JPL)
M89	27-8-2013	Tue	1255	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	1257	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	27-8-2013	Tue	1257	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	27-8-2013	Tue	1259	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	27-8-2013	Tue	1259	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	27-8-2013	Tue	1301	3330	In tfc: /2..R23\NR /305/C0364 OB/0276/2130/237	CW	(JPL)
M89	27-8-2013	Tue	1304	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	27-8-2013	Tue	1304	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	27-8-2013	Tue	1306	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	1308	5555	In tfc: 1F/YBS QT AR K. R U GA. AGN GA (see N&	CW	(JPL)
M89	27-8-2013	Tue	1520	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	27-8-2013	Tue	1520	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	27-8-2013	Tue	1525	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)

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M89	27-8-2013	Tue	1526	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd) //5500	CW	(JPL)
M89	27-8-2013	Tue	1526	5500	V 7NPE (x3) DE QV5B (x2) (Cont'd) //4225	CW	(JPL)
M89	27-8-2013	Tue	1528	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	27-8-2013	Tue	1528	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	27-8-2013	Tue	1532	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	27-8-2013	Tue	1532	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	27-8-2013	Tue	1533	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2020	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	27-8-2013	Tue	2020	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	27-8-2013	Tue	2025	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2026	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2028	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	27-8-2013	Tue	2028	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	27-8-2013	Tue	2029	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2031	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	27-8-2013	Tue	2031	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	27-8-2013	Tue	2032	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2227	10998	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2229	4225	V 7NPE (x3) DE QV5B (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2231	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	27-8-2013	Tue	2232	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	0520	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	29-8-2013	Thu	0520	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	29-8-2013	Thu	1258	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1301	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1302	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	29-8-2013	Thu	1302	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	29-8-2013	Thu	1304	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1902	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1904	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1906	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	29-8-2013	Thu	1908	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	29-8-2013	Thu	1908	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	30-8-2013	Fri	2226	4474	V RXP7 (x3) DE CZT2 (x2) (Cont'd)	CW	(JPL)
M89	30-8-2013	Fri	2228	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5230	CW	(JPL)
M89	30-8-2013	Fri	2228	5230	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	30-8-2013	Fri	2230	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	30-8-2013	Fri	2315	8040	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	30-8-2013	Fri	2320	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	30-8-2013	Fri	2320	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	31-8-2013	Sat	0940	8040	V H2FL (x3) DE DRV8 (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	0942	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	0944	8750	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	0946	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	1202	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	31-8-2013	Sat	1202	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	31-8-2013	Sat	1204	5588	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	1206	5801	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //10180	CW	(JPL)
M89	31-8-2013	Sat	1206	10180	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //5801	CW	(JPL)
M89	31-8-2013	Sat	1208	8750	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	1220	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //10640	CW	(JPL)
M89	31-8-2013	Sat	1220	10640	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)
M89	31-8-2013	Sat	1817	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	31-8-2013	Sat	1817	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	31-8-2013	Sat	1819	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	1820	4860	VVV (x3) Q2M DE NYZ (x2) QSA ? K //6840	CW	(JPL)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
M89	31-8-2013	Sat	1820	6840	VVV (x3) Q2M DE NYZ (x2) QSA ? K //4860	CW	(JPL)
M89	31-8-2013	Sat	1825	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	31-8-2013	Sat	1825	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	31-8-2013	Sat	1827	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	2129	3797	V H2FL (x3) DE DRV8 (x2) (Cont'd) //4512	CW	(JPL)
M89	31-8-2013	Sat	2129	4512	V H2FL (x3) DE DRV8 (x2) (Cont'd) //3797	CW	(JPL)
M89	31-8-2013	Sat	2132	3330	V MW3D (x3) DE 2SLC (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	2134	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	2136	5485	V YUQW (x3) DE ASDF (x2) (Cont'd)	CW	(JPL)
M89	31-8-2013	Sat	2140	3642	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //7602	CW	(JPL)
M89	31-8-2013	Sat	2140	7602	V DKG6 (x3) DE 3A7D (x2) (Cont'd) //3642	CW	(JPL)
M89	31-8-2013	Sat	2147	4474	V RXP7 (x3) DE CZT2 (x2)	CW	(JPL)
M89	31-8-2013	Sat	2152	4843	In tfc: 35DU 54UD 53ND 56D7 6A.U AT.? AT4U 3U	CW	(JPL)
MX	3-8-2013	Sat	1414	16332	Beacon "C" Moscow	CW	(MPJ)
MX	3-8-2013	Sat	2306	4505.5	Beacon "V"	CW	(LG2)
MX	6-8-2013	Tue	0910	8494.8	Beacon "P"	CW	(Gwr)
MX	6-8-2013	Tue	0910	8495	Beacon "C"	CW	(Gwr)
MX	6-8-2013	Tue	0910	8497.9	Beacon "L"	CW	(Gwr)
MX	10-8-2013	Sat	0948	10871.7	Beacon "D"	CW	(WP3)
MX	10-8-2013	Sat	0948	10872	Beacon "C"	CW	(WP3)
MX	12-8-2013	Mon	0746	16332	Beacon "C"	CW	(LG2)
MX	18-8-2013	Sun	1745	8497.8	Beacon "L" sending strings of LLLLLLF	CW	(AB)
MX	18-8-2013	Sun	1747	7038.7	Beacon "D"	CW	(AB)
MX	18-8-2013	Sun	1747	7038.9	Beacon "S"	CW	(AB)
MX	18-8-2013	Sun	1747	8494.7	Beacon "D"	CW	(AB)
MX	18-8-2013	Sun	1747	8494.9	Beacon "S"	CW	(AB)
MX	18-8-2013	Sun	1747	8495	Beacon "C"	CW	(AB)
MX	18-8-2013	Sun	1747	10871.7	Beacon "D"	CW	(AB)
MX	18-8-2013	Sun	1747	10871.9	Beacon "S"	CW	(AB)
MX	18-8-2013	Sun	1747	10872	Beacon "C"	CW	(AB)
MX	18-8-2013	Sun	1747	13527.7	Beacon "D"	CW	(AB)
MX	18-8-2013	Sun	1747	16331.7	Beacon "D"	CW	(AB)
MX	18-8-2013	Sun	1747	16331.9	Beacon "S"	CW	(AB)
MX	18-8-2013	Sun	1747	16332	Beacon "C"	CW	(AB)
MX	19-8-2013	Mon	1447	16331.7	Beacon "D" Odessa/Sevastopol	CW	(LG2)
MX	19-8-2013	Mon	1447	16331.9	Beacon "S" Severomorsk	CW	(LG2)
MX	19-8-2013	Mon	1447	16332	Beacon "C" Moscow	CW	(LG2)
MX	19-8-2013	Mon	2322	7122	Beacon "V"	CW	
MX	20-8-2013	Tue	2046	7027.5	Beacon "V"	CW	(AB)
RADv	6-8-2013	Tue	2323	6680	Russian Air Defense. Positions etc.	LSB	
RADv	27-8-2013	Tue	2320	5445	Russian Air Defense. Positions etc.	USB	
RMv	17-8-2013	Sat	1120	5130	Konus-30 primite YANTRA, dayte kvitantsiyu (Konus-30 take the YaNTRA, give a receipt)	USB	
RMv	17-8-2013	Sat	1206	4550	Lisa-29 clg Liker-33	USB	
RMv	17-8-2013	Sat	2325	3925	53rd 129 125 repeated	USB	(Topol)
S06	1-8-2013	Thu	1905	6984	349 0	USB	(HFD)
S06	3-8-2013	Sat	1605	6977	764 0	USB	(HFD)
S06	3-8-2013	Sat	1935	6772	426 0	USB	(HFD)
S06	5-8-2013	Mon	1905	6984	349 0	USB	(HFD)
S06	8-8-2013	Thu	1905	6984	349 0	USB	(HFD)
S06	12-8-2013	Mon	1815	15805	260 0	USB	(HFD)
S06	12-8-2013	Mon	1815	15805	370 379 370 00000	AM	(GHn)
S06	12-8-2013	Mon	1905	6984	349 0	USB	(HFD)
S06	12-8-2013	Mon	1915	13380	260 0	USB	(HFD)
S06	19-8-2013	Mon	1900	6986	349 349 349 00000	AM	(GU)
S06	20-8-2013	Tue	0823	7444	Tentative S06. In callup - Female - NNN 00000	AM	(JPL-

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
							RUS)
S06	22-8-2013	Thu	1905	6984	349 0	USB	(HFD)
S06	24-8-2013	Sat	1600	8123	764 0	USB	(HFD)
S06	24-8-2013	Sat	1935	6772	426 0	USB	(HFD)
S06	29-8-2013	Thu	1905	6984	349 0	USB	(HFD)
S06c	12-8-2013	Mon	1450	16303	80533 80533 007 007 007 87933 87933 007 007 007	USB	(linkz)
S06c	12-8-2013	Mon	1500	14363	85653 85653 007 007 007 82013 82013 007 007 007 007 007 00000 0000000	USB	(linkz)
S06s	2-8-2013	Fri	1210	14535	425 861 7 42046 54009 ...	USB	(Gwr)
S06s	13-8-2013	Tue	0953	7864	624 624 524 00000	USB	(MSM)
S11a	6-8-2013	Tue	0915	8530	484/00	USB	(Gwr)
S11a	6-8-2013	Tue	1020	11581	426/00	USB	(Gwr)
S21	27-8-2013	Tue	1742	5373	973 368 368 34 34 66803 16475 36339 31533 ... 91603 25483 89461 368 368 34 34 000	USB	(GU)
S28	1-8-2013	Thu	1124	4625	MDZhB 10 403 BABYeJ 10 10 55 95	USB	(Gwr)
S28	1-8-2013	Thu	1135	4625	MDZhB 78 141 GARTIT 19 56 23 04	USB	(Gwr)
S28	1-8-2013	Thu	1135	4625	MDZhB 94 419 PARTYeRNYJ 62 96 80 04	USB	(Gwr)
S28	1-8-2013	Thu	1252	4625	MDZhB 23 566 KARNOTIT 06 79 36 39	USB	(Gwr)
S28	1-8-2013	Thu	1349	4625	MDZhB 49 322 GARNYeC 41 84 07 67	USB	(Gwr)
S28	1-8-2013	Thu	1349	4625	MDZhB 60 772 PARAMIDIN 88 81 43 59	USB	(Gwr)
S28	20-8-2013	Tue	0206	4625	MDZHB 69 37 BENZOKSI Priyom	USB	(AB-EST)
S28	20-8-2013	Tue	0356	4625	MDZHB 67 69 VERSTNYY Priyom	USB	(AB-EST)
S28	22-8-2013	Thu	0826	4625	MDZhB01 394 GARDKOT 26 57 70 11 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	0834	4625	MDZhB 53 451 LARVIKIT 64 57 33 67 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	0834	4625	MDZhB 40 729 TARAPAN 54 81 95 14 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	0845	4625	MDZhB 72 853 TsARAPANJe 79 06 57 29 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	1018	4625	MDZhB 54 220 TARANTAS 35 83 42 67 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	1148	4625	MDZhB 05 052 KARAKUDA 68 78 69 17 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	1207	4625	MDZhB 39 622 VARAJDA 40 48 14 44 Priyom	USB	(AB-EST)
S28	22-8-2013	Thu	1314	4625	MDZhB 50 432 PARASH 62 62 30 23 Priyom	USB	(RsRus)
S28	22-8-2013	Thu	1315	4625	MDZhB 29 472 KAPShA 89 54 75 67 RAPUNTsEL 37 50 15 77 Priyom	USB	(AB-EST)
S28	22-8-2013	Thu	1320	4625	MDZhB 02 548 VAPOR 83 06 07 03 Priyom	USB	(AB-EST)
S28	22-8-2013	Thu	1329	4625	MDZhB 40 836 KAPIJa 47 45 94 69 Priyom	USB	(AB-EST)
S28	22-8-2013	Thu	1334	4625	MDZhB 73 784 KAPITALKA 04 46 70 18 Priyom	USB	(AB-EST)
S28	25-8-2013	Sun	1219	4625	Buzzer	USB	(JPL-FNL)
S28	28-8-2013	Wed	1449	4625	MDZhB 30 083 VANT 25 87 24 05 Priyom	USB	(AB-EST)
S30	22-8-2013	Thu	2258	3756	Pip	USB	(LG2)
S32	22-8-2013	Thu	1620	5473	AL'FA-45 88 644 OKSAZOLON 85 064 176 priyom	USB	(RsRus)
S32	22-8-2013	Thu	1732	5473	AL'FA-45 32 994 NASSAU 62 62 86 73 priyom	USB	(RsRus)
SK01	4-8-2013	Sun	2101	11635	RDFT transmissions started this sked, no initial callup of the 6 groups.	AM/RDFT	(DSch)
V07	11-8-2013	Sun	0500	14823	845 1 539 73 50139 71089 21277 ... 39584 42901 28491 000 000	AM	(Dan/HF D)
V07	11-8-2013	Sun	0500	14823	845 1 569 72 = 50129	USB	(HFD)
V07	11-8-2013	Sun	0520	13423	845 1 539 73 50139 71089 21277 ... 39584 42901 28491 000 000	AM	(Dan/HF D)
V07	11-8-2013	Sun	0520	13423	845 1	USB	(HFD)
V07	18-8-2013	Sun	0520	13423	845 845 845 000	AM	(Dan)
V13	6-7-2013		0600	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan	AM	(TI)
V13	23-7-2013		0705	15388	XingXing guangbo diantai Chi Kuanyin, Taiwan i.p.	AM	(TI)
V13	23-7-2013		1227	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan i.p.	AM	(TI)
V13	23-7-2013		1300	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan1. At 1333 UTC Windows shutdown sound	AM	(TI)
V13	24-7-2013		0800	15388	XingXing guangbo diantai Chi Kuanyin, Taiwan	AM	(TI)
V13	24-7-2013		1200	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan	AM	(TI)
V13	24-7-2013		1300	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan	AM	(TI)

enigma	date	day	UTC	Freq.	remarks	mode	Ctrb
V13	26-7-2013		1200	13750	XingXing guangbo diantai Chi Kuanyin, Taiwan	AM	(Ti)
V13	1-8-2013	Thu	1201	13750	New Star	USB	(steve)
V13	3-8-2013	Sat	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	3-8-2013	Sat	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	3-8-2013	Sat	0700	15388	New Star #4. Tune followed by code messages	USB	(AB-HK)
V13	7-8-2013	Wed	0500	13750	New Star#3. Tune followed by coded messages	USB	(AB-HK)
V13	7-8-2013	Wed	0600	13750	New Star#3. Tune followed by coded messages	USB	(AB-HK)
V13	7-8-2013	Wed	0700	15388	New Star#4. Tune followed by coded messages	USB	(AB-HK)
V13	7-8-2013	Wed	0800	15388	New Star#4. Tune followed by coded messages	USB	(AB-HK)
V13	10-8-2013	Sat	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	10-8-2013	Sat	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	11-8-2013	Sun	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	13-8-2013	Tue	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	15-8-2013	Thu	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	17-8-2013	Sat	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	17-8-2013	Sat	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	17-8-2013	Sat	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	17-8-2013	Sat	0700	15388	New Star #4. Tune followed by code messages	USB	(AB-HK)
V13	17-8-2013	Sat	0800	15388	New Star #4. Tune followed by code messages	USB	(AB-HK)
V13	18-8-2013	Sun	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	18-8-2013	Sun	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	20-8-2013	Tue	1200	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	20-8-2013	Tue	1300	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	22-8-2013	Thu	0500	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V13	22-8-2013	Thu	0600	13750	New Star #3. Tune followed by code messages	USB	(AB-HK)
V24	26-7-2013		1530	6310	South Korea	AM	(Ti)
V26	3-8-2013	Sat	0935	9153	in progress	USB	(rusl)
V26	28-8-2013	Wed	1020	9153	mixing with HM01	AM	(Rusl)
X06	1-8-2013	Thu	1252	19405	Mazielka 6 tone selcall tone seq. +875, 955, 841, 915, 814, 995Hz	USB	(MCO)
X06	19-8-2013	Mon	1636	17517	Mazielka. Sequence: 314265	USB	(GHn)
X06c	22-8-2013	Thu	1156	18375	Mazielka. Sequence: 123456	USB	(MCO)
XPA	1-8-2013	Thu	1730	12187	msg	MFSK	(HFD)
XPA	1-8-2013	Thu	1750	10787	msg	MFSK	(HFD)
XPA	1-8-2013	Thu	1750	10787	polytone broadcast	MFSK	(steve)
XPA	1-8-2013	Thu	1810	9383	polytone broadcast	MFSK	(steve)
XPA	1-8-2013	Thu	1810	9387	msg	MFSK	(HFD)
XPA	7-8-2013	Wed	0600	10868	msg	MFSK	(HFD)
XPA	7-8-2013	Wed	0620	12168	msg	MFSK	(HFD)
XPA	7-8-2013	Wed	0640	13368	msg	MFSK	(HFD)
XPA	8-8-2013	Thu	1740	10787	No decode	MFSK	(MPJ)
XPA	8-8-2013	Thu	1810	9387	No decode	MFSK	(MPJ)
XPA	13-8-2013	Tue	1750	10787	173 173 173 000. Message 03621 00001 00000 10140	MFSK-20/10Bd/USB	(MPJ)
XPA	20-8-2013	Tue	1811	9387	i.p.	MFSK	(SP1)
XPA2	2-8-2013	Fri	1944	13923	Russian Intel, Moscow	MFSK	(MCO)
XPA2	3-8-2013	Sat	1903	16167	Russian Intel, Moscow	MFSK	(MCO)

CONTRIBUTORS

AB	Ary Boender, Netherlands	JU	Jay Updike, W. Europe
AB-EST	Ary Boender via remote rx Estonia	KK2	Kristian K, Central Europe
AB-HK	Ary Boender via remote rx Hong Kong	LG2	Les G, UK
BCI	Bruno Casula, Italy	linkz	Linkz, S.E. France
Brit	Britzel	MCO	Mike Chace-Ortiz, PA, USA
Dan	Daniel, Argentina	MPJ	Jim, SW England
DSch	Don Schimmel, USA	MSM	Maciej, Poland
EW	Eddy Waters, Australia	N2QHC	N2QHC
Faux	Faux	PPA	Peter Poelstra, Netherlands
FC	Francesco Cecconi	RRB	Rafael Rodriguez, Bogota, Colombia
FN	Fritz Nusser, Switzerland	RSRu	via Radioscanner Russia
GHn	Gary Hagermann, UK	rusl	Russell, Australia
GU	Gerhard, Germany	Saber	SaberWing, N. Ireland
Gwr	Gwaspe	SP1	Sylvain, France
HFD	Hans-Friedrich Dumrese, Germany	steve	Steve
IW	Ian Wraith, UK	TI	Tomonori Izumi, Japan
JLM	Jack Metcalfe, KY, USA	Tom	Tom, Lincs, UK
JPL	JPL, Ontario, Canada	Topol	Tony, UK
JPL-FNL	JPL via remote rx Finland	Wade	Wade
JPL-RUS	JPL via remote rx Russia	WP3	Wolfgang Palmberger

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