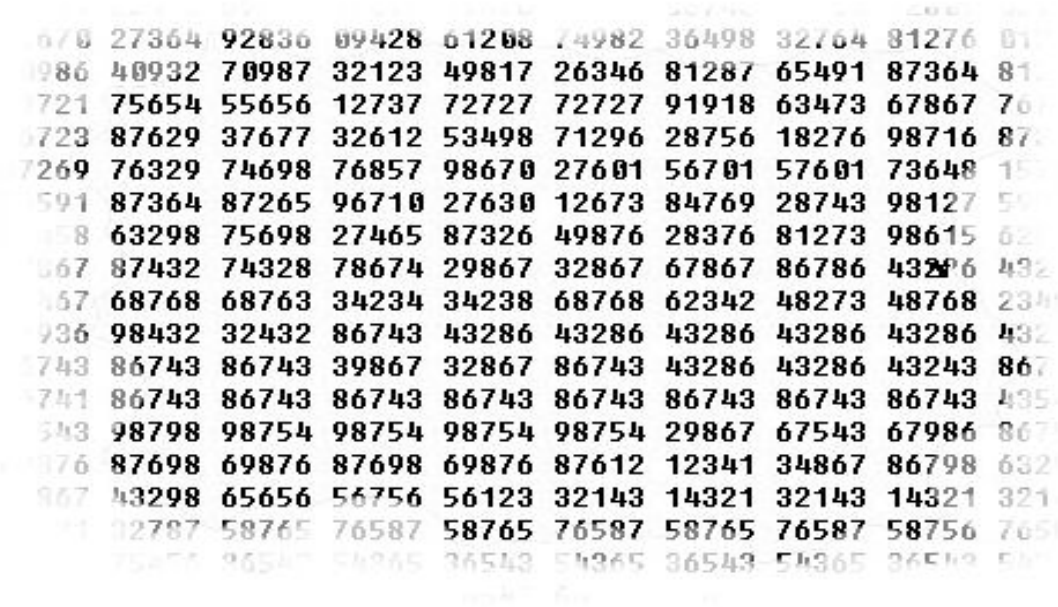

Numbers & Oddities

a.k.a. The Spooks Newsletter

Edition #218, November 2015

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Numbers & Oddities http://www.numbersoddities.nl

"Numbers & Oddities" a.k.a. the "Spooks Newsletter" is a newsletter for the members of the Utility DXers Forum (UDXF), the Spooks mailing list, HF Underground and everyone else who is interested in Numbers Stations.

"Numbers & Oddities" covers the fascinating world of Numbers Stations and other odd radio signals on shortwave.

Welcome to the 218th edition of Numbers & Oddities.

*Besides the usual logs and transcripts you will find a book review of **The Cold War Spy Pocket-Manual** and an overview of the experimental Russian digital modes, compiled by Linkz, in Appendix 1. Further several unid stations which we would like to identify. Also interesting are two reports from Token indicating that V24 is possibly active again and his write-up about an unid new Korean station: V28. It is still too early to be sure if it is really a numbers station and where it comes from, North or South Korea, or maybe even China. In Appendix 2 you will find a list of Russia's monolith stations.*

VOICE STATIONS

E06

13367/16287 kHz, 02-11/03-11, 1505/1605 UTC
759 320 61
26393 57939 61149 84989 70115 85248 32888 78141 00637 24064
70019 39132 82545 19863 87605 56625 00939 81986 26656 82228
21340 53501 47213 14667 05825 53045 81300 83269 21213 99569
00421 04218 17044 55946 77293 07979 55000 52339 46517 61367
13280 75320 93845 32681 05999 33627 28765 73332 85113 36529
20061 14423 17050 45725 99053 01701 51230 86715 60211 17333
22675
320 61 00000

6792 kHz, 02-11, 1800 UTC
910 834 57
86952 13790 14704 39068 43041 79601 01058 20640 50894 69253
09841 32745 97320 48125 46293 25736 27536 40689 79179 03065
59832 97432 16142 54034 74395 20163 41205 59738 07490 93293
64956 16542 04836 40560 27480 13750 79348 28349 49596 70679
73202 10758 45105 84218 14137 47919 24920 30809 51529 94370
69148 45157 13517 73619 39635 83545 48245
834 57 00000

4496 kHz, 02-11, 1830 UTC
834 57 57 00000
910 834 57
86952 13790 14704 39068 43041 79601 01058 20640 50894 69253
09841 32745 97320 48125 46293 25736 27536 40689 79179 03065
59832 97432 16142 54034 74395 20163 41205 59738 07490 93293
64956 16542 04836 40560 27480 13750 79348 28349 49596 70679
73202 10758 45105 84218 14137 47919 24920 30809 51529 94370
69148 45157 13517 73619 39635 83545 48245
834 57 00000

4836 kHz, 05-11, 2030 UTC
321 728 20
14259 22676 32782 32782 76723 89409 12215 74326 64070 90235
38085 59543 12319 74238 36664 12256 18841 73311 98089 12250
728 20 00000

18285/20140 kHz, 06-11, 0600/0700 UTC
507 398 124
73949 76918 59819 44444 60820 86673 06210 59276 46666 44633
18076 21023 27941 15950 10603 19546 80744 84710 97177 61491
11915 28152 54195 54891 66861 74566 04334 94263 98820 68329
35469 23940 29224 90503 97418 90546 53871 08440 43710 20585
74587 52823 10557 84052 61058 45595 50219 30030 72530 27195
60961 05181 94054 56551 80767 91098 66979 82271 37018 21443
18359 08452 69312 64790 18982 03559 67620 84150 24696 25818
92957 09081 80726 63532 72759 81335 93663 13794 88162 59982
00821 48001 95354 96937 91634 37636 48205 18843 60813 38729
14344 76228 97901 58457 01892 45903 42967 52303 39017 97495
63078 25220 73517 60103 29280 35243 84603 49969 98742 22973
24079 45134 31765 15377 29106 18001 98342 77349 73733 61743
53966 09455 51388 71499
398 124 00000

E07

10112/1112/12112 kHz, 11-11, 0700/0720/0740 UTC
111 1 126 103
61108 50645 29725 63751 15766 65141 59625 08447 20688 77038
77971 22893 57999 37879 84482 25691 30816 41812 98069 21695
20490 52202 22108 18890 10001 57847 00603 77206 19885 85239
94335 90465 75446 29173 12288 18748 74888 54339 16152 01214
56083 81814 81799 20575 84513 20919 85431 69308 23509 39034
25281 28973 25993 00090 12789 90045 87164 86159 41112 73041
23786 26985 51506 09653 71180 80923 94430 08514 77709 18131
62642 22272 64234 54207 38849 37665 37323 30282 51463 75268
37641 77791 51328 41371 11662 04936 94616 87185 44919 47610
97552 20758 02129 42739 95444 38463 71946 38571 55100 68575
49953 81441 14591
000 000

8153/6853/545 kHz, 11-11, 1800/1820/1840 UTC
184 1 244 61
66300 19595 09926 32820 19194 66074 94234 01750 62699 48760
73258 62471 68287 29515 96148 39333 93786 87937 87492 75458
47474 07262 11838 52752 66210 37737 18100 04510 51705 40695
13193 29659 08856 91723 50461 07837 31230 22092 12965 67262
04413 77870 65219 05627 36192 73304 63954 43641 17838 37276
55444 38106 93496 83607 34033 86413 11204 06435 02298 95761
61530
000 000

10112/11112/12112 kHz, 18-11/21-11/25-11/28-11, 0700/0720/0740 UTC
111 1 394 55
76631 55477 04291 16373 41359 98167 10491 91520 39427 40691
02195 02722 97432 83388 01494 50373 31657 48584 73189 28176
52521 18612 01181 23153 77356 65438 30303 81709 17333 44327
93469 05625 19654 70635 54510 40008 11058 15406 60732 84828
76469 79568 51268 89248 43320 94424 69266 47117 30083 72543
09650 42088 57329 03401 17774
000 000

5380 kHz, 24-11, 1832 UTC
825 136 52
21787 89148 47527 14194 80973 05084 76161 58743 20638 62312
21053 02873 63731 86391 59753 72391 17397 39784 05067 41045
08537 21907 47678 48157 23912 51235 69684 10847 29797 58158
32478 14030 24035 41317 67918 13421 86163 14708 57603 10516
86782 57941 15656 20645 31424 97535 68565 03615 24043 53637
38126 10458
136 52 00000

8153/6853/5453 kHz, 25-11/29-11, 1800/1820/1840 UTC
184 1 880 164
45645 26273 92246 44834 02015 86886 01186 46859 20989 68025
66248 15065 62290 20300 08147 48320 93815 27602 55531 13475
02256 37540 26633 58099 06596 04526 79390 29531 77106 18686
82344 43629 24709 50729 75874 89680 90807 55382 05540 66749
49719 91699 88070 74564 10309 49430 87254 44948 86687 87530
32510 68234 50271 01131 97143 98562 82486 23394 04127 36985
50506 65114 67785 72993 00179 .1669 51093 83418 79662 41452
68909 71206 41426 58667 88217 97245 15725 24436 32806 87815
54535 64834 91327 09060 41172 72407 58059 45239 76286 69146
85227 82290 93157 91433 29157 68712 00391 92685 32910 79138
22606 96819 34593 09983 94210 25999 26613 00009 39513 94177
49372 02408 60375 85138 07005 74748 94546 93084 20765 48963
69919 89589 24612 50413 91066 08563 53876 65753 28844 65751
31661 39037 46448 35699 86186 46364 24847 17270 31269 28303
53511 60291 92989 18350 66225 26591 06911 90921 65734 07823
83104 33936 18552 87518 22109 03893 07104 99723 16818 78494
75181 40769 31381 73128
000 000

E07a

5877 kHz, 04-11, 2100 UTC
825 1 19389 5649 65
06592 85671 64437 20325 67066 09546 79525 01336 76247 87708
62159 16822 78749 24845 96046 41860 97669 32127 16304 81179
49897 58654 64310 20585 66619 77690 38974 24030 61998 48526
11894 24391 43584 87837 29413 24464 54929 81959 15712 67614
68667 98766 12343 84877 85651 05956 78309 63367 90060 38631
82263 82694 42153 01069 01425 76740 68920 66912 18350 84716
44038 36591 91700 49806 17521
000 000

5111/5811/6911 kHz, 05-11, 0530/0550/0610 UTC
189 1 19389 5649 65
06592 85671 64437 20325 67066 09546 79525 01336 76247 87708
62159 16822 78749 24845 96046 41860 97669 32127 16304 81179
49897 58654 64310 20585 66619 77690 38974 24030 61998 48526
11894 24391 43584 87837 29413 24464 54929 81959 15712 67614
68667 98766 12343 84877 85651 05956 78309 63367 90060 38631
82263 82694 42153 01069 01425 76740 68920 66912 18350 84716
44038 36591 91700 49806 17521
000 000

5877/5277/4577 kHz, 25-11, 2100/2120/2140 UTC
825 1 17673 7104 79
79147 59964 58987 53690 66696 05914 18988 02130 60145 43701
21169 21772 56157 94707 52649 78677 20313 68694 03074 12107
90527 41891 64739 54089 01390 15888 84576 83008 94136 53568
09288 85616 92142 36205 42387 68832 79900 12633 82157 99708
13212 37435 17957 86050 52475 01786 63250 54642 41392 54775
43674 42795 53882 03074 95028 54103 39311 14537 07400 76697
83539 68259 53865 12999 79020 64277 26068 83465 45879 38421
13174 22309 74631 33848 90685 18941 65307 14549 38555
000 000

E11/ E11a

5082 kHz, 02-11, 0450 UTC
416/37 Attention
52739 50031 86215 69877 27802 56576 34975 45165 79141 08468
39744 00390 46615 98896 07032 64912 47561 21202 90410 16441
85345 42632 89047 48122 70792 48751 95991 02255 76706 42050
91286 01202 25155 92152 73441 72816 10612
Attention, rpt msg, out

9446 kHz, 02-11, 0900 UTC
534/35 Attention
82806 72115 42675 12741 24150 48160 25377 22100 45561 94786
37542 02445 61588 41694 59930 56388 15077 16470 28648 87041
78977 27786 19236 98840 22438 84138 69323 48970 84899 45685
63064 75521 03615 12250 07850
Attention, rpt msg, out

5082 kHz, 02-11, 0450 UTC / 5082 kHz, 05-11, 1730 UTC
416/37 Attention
52739 50031 86215 69877 27802 56576 34975 45615 79141 08468
39744 00390 46615 98896 07032 64912 47561 21202 90410 16441
85345 42632 89047 48122 70792 48751 95991 02255 76706 42050
91286 01202 25155 92152 73441 72816 10612
Attention, rpt msg, out

15632 kHz, 02-11, 1540 UTC
225/38 Attention
33907 25461 09807 46941 15180 37907 70658 59586 63484 57455
11095 44614 24232 02835 56676 32720 39017 41221 26876 80887
88848 18125 17075 08447 06292 38852 46224 80983 18319 25435
19924 20275 62459 76897 21153 36982 79166 49297
Attention, rpt msg, out

10125 kHz, 09-11/12-11, 0820 UTC
430/37 Attention
87587 87323 77681 10309 32021 06451 78535 53736 79901 25028
55209 71184 10541 20347 85539 73884 56713 96067 88387 42334
60830 00334 87124 25191 43063 76287 45013 40790 71793 52998
10975 01037 15431 27996 47334 56069 41728
Attention, rpt msg

9446 kHz, 09-11, 0830 UTC
649/35 Attention
36069 06947 29283 70087 43865 42886 55822 92505 40155 32326
25135 05131 61158 68817 81204 42561 42305 77174 37490 38720
33219 59006 83769 06756 13807 41485 23204 15556 02284 41212
40851 06740 78382 18974 19509
Attention, rpt msg, out

16112 kHz, 10-11/12-11, 0745 UTC
335/30 Attention
28732 07476 65307 89922 68031 41260 46727 87877 96145 34718
12376 07803 70374 30915 88889 19444 28083 75356 77750 38639
36120 67111 99628 88991 44134 94246 67228 68989 37051 95250
Attention, rpt msg, out

16112 kHz, 15-11, 0730 UTC
354/36 Attention
98155 65995 23611 72704 75407 61674 45877 87007 84600 76475
16122 50396 92395 94016 40102 53341 33991 28724 07552 47136
71667 56980 97346 15987 65437 96045 36991 95519 65724 98287
02275 16431 98921 97802 69334 28422
Attention, rpt msg, out

10213 kHz, 16-11, 0745 UTC
262/36 Attention
78833 68748 51691 36285 55472 13120 33545 02746 12714 64704
66274 37226 59640 47054 33688 20934 11534 97539 97075 04541
06761 89369 50467 11006 48517 38518 72108 68971 09265 59746
16179 88451 06637 04968 14404 26258
Attention, rpt msg, out

10800 kHz, 17-11/20-11, 0710 UTC
633/34 Attention
99507 41350 50302 16951 21039 79078 55685 46601 77700 28399
05391 73963 45815 43274 56809 99728 94946 44248 28906 21081
54290 53675 27895 18077 75870 25207 71325 45144 55618 31352
05977 11011 09014 46820
Attention, rpt msg, out

4505 kHz, 22-11, 1605 UTC
232/37 Attention
56064 68000 92913 82084 82447 09755 85726 41042 22430 11257
90682 98876 01207 05511 87735 43798 19489 12743 62742 75122
03944 72004 26945 34569 31270 78381 97779 99204 59896 11238
13589 09043 31499 66814 35934 80964 95329
Attention, rpt msg, out

7840 kHz, 24-11, 0745 UTC
517/33 Attention
72492 37261 53538 66843 71918 96258 70457 37964 47064 07575
32420 83312 68877 49479 27372 87087 09694 71021 23151 71312
25340 94948 57290 30884 37087 97666 68219 46122 96395 46485
92277 33369 79473
Attention, rpt msg, out

12153 kHz, 24-11/26-11, 1045 UTC
571/36 Attention
03360 04667 51152 08872 88330 36910 82754 56224 94871 49646
73031 81786 93531 71648 29240 34540 17563 17513 85093 41580
65529 67420 89585 45887 82110 05301 47457 83930 73024 36575
44349 84973 28093 46175 66581 41791
Attention, rpt msg, out

11100 kHz, 24-11/25-11, 1205 UTC
461/33 Attention
48968 97675 76605 96713 95951 73151 48944 11943 29274 07943
95754 92925 84219 18698 00465 98000 71539 19111 60244 59879
63613 52965 29953 78082 18597 29032 23063 44695 34971 93166
79581 60769 12654
Attention, rpt msg, out

10448 kHz, 25-11, 1625 UTC
978/36 Attention
69618 45270 58743 03355 14397 96814 75474 76939 44728 06536
04849 80448 39614 01623 81128 87235 58763 46647 25027 36288
24905 23952 70608 35933 17235 99573 69525 85029 93765 84598
28925 15259 24436 19564 .2946 89825
Attention, rpt msg , out

E17z

11170/9820 kHz, 05-11/12-11, 0800/0810 UTC
674 980 5 36260 51624 85734 51830 31226 980 5 00000

10635 kHz, 16-11, 1538 UTC
274 (R4m) 863 863 50 50 92342 92342 19208 19208 ... 22025 22. End of transmission.

11170 kHz, 26-11, 0800 UTC
674 935 8 37391 37446 86525 89203 33244 39054 35843 37259 935 8 00000

E25 / E25a

E25 is still alive. Daniel (Danix) copied these transmissions.

E25, 9450 kHz, 14-11, 1215 UTC
Intro song: Umm Kulthum - Enta Omri
835 837 1 1041 6920 8349 6852 9502 0211 2864 3009 0168 1578 6767 4377 6920 0787

E25a, 9450 kHz, 15-11, 1215 UTC
Intro song: Umm Kulthum - Enta Omri
830 2 Message, Message, Message, Rebeat, Rebeat, Rebeat

E25a, 9450 kHz, 26-11, 1217 UTC
No intro music. Callup: 837 (no single digit), Message, Message, Message, Rebeat, Rebeat, Rebeat. End Of Message. End Of Transmission

E25a, 6140 kHz, 27-11, 0800 UTC
No intro music. Callup: 017 5

E25a, 9450 kHz, 29-11, 1215 UTC
Intro song: Umm Kulthum - Enta Omri. Callup: 830 5. Ended 1221 UTC: Message, EOM, EOT.

E25a, 30-11, 0745 UTC
No intro music, Windows XP sound instead. Callup: 255 70. Ended: Rebeat (x2) 255 70 (x3) -age Message.

G06

4792 kHz, 13-11, 1930 UTC. Did not repeat final group (93988)
436 (R) 700 20
45456 23115 23433 17112 11288 93772 43557 87654 32478 65476
09898 76546 35345 37648 99976 22343 46537 66476 87488 98388
00000.

4519 kHz, 26-11, 1828 UTC, (2 mins early)
Note that the key is used as call !!! The recording is on the NO website.
271 (R) 20
14259 22676 32782 32782 76723 89429 12215 74326 64072 90235
38085 59543 12319 74238 36664 12256 18841 73311 98289 12252
271 20 00000

4792 kHz, 27-11, 1930 UTC
436 (R) 271 20
14259 22676 32782 32782 76723 89429 12215 74326 64072 90235
38085 59543 12319 74238 36664 12256 18841 73311 98289 12252
271 20 00000

S06

15721 kHz, 04-11, 0400 UTC
480 253 60
20028 47511 64457 46064 59716 87126 00327 74047 41141 93504
86986 73668 33266 36247 71342 48969 78835 16744 73700 43248
78203 31082 21059 99284 59205 63133 31281 73955 18992 37499
96589 49434 48782 87010 39805 08163 77462 14465 41785 63778
94963 53288 63486 65181 41371 56813 11096 15940 72689 70854
17666 76214 39204 69274 39690 39384 37379 57223 92058 00574
253 60 00000

19875/16067 kHz, 12-11, 0830/0930 UTC
842 516 32
51483 22348 37192 81337 13246 61424 34192 25882 91011 12094
29842 81176 80344 61229 78798 96943 87050 98875 11338 99837
95753 79863 35186 71325 03018 08180 51105 94404 94708 42524
74454 30115
516 32 00000

13397/9194 kHz, 23-11/24-11, 1500/1600 UTC
387 619 52
68588 36388 24187 71374 94193 97323 56225 82328 72626 56908
36843 26932 43327 49516 98827 48670 96552 65573 64987 89985
61485 10829 38263 11559 46387 25882 93105 17937 10492 64395
60304 50447 72322 53440 22467 33334 84129 84414 62328 84052
27118 07952 31078 23669 07173 31279 28899 48284 55753 41457
14895 47448
619 52 00000

S06c

8159 kHz, 16-11, 1645 UTC 11097 (R4)

18626 kHz, 27-11, 1100 UTC 11023 (R4)

S11a

7504 kHz, 03-11/6-11, 0915 UTC
484/32 Vnimanie
59888 72381 15346 29567 47003 61514 05360 74437 95864 84968
46614 83334 02317 71873 78786 26646 11675 67216 38803 26107
20738 99369 85801 49107 08812 54318 27010 75902 42633 90237
60484 65984
Vnimanie, rpt msg, konec

5815 kHz, 04-11, 1955 UTC
378/36 Vnimanie
57425 43402 62158 37572 54198 93425 89627 65570 48381 35076
16414 47037 97066 17033 58719 21386 52835 36964 67995 69173
78059 53828 23064 36781 01994 71402 89161 60061 42200 69188
41147 71655 07385 85669 61418 89721
Vnimanie, rpt msg, konec

9610 kHz, 10-11. 1020 UTC
422/33 Vnimanie
57216 73739 74343 95722 80978 47390 14159 19242 29325 91449
88023 75909 88044 09859 00385 14361 71919 80855 86559 82439
64369 59150 06239 21701 40243 74252 33525 53189 83896 97233
09686 29236 31392
Vnimanie, rpt msg, konec

12530 kHz, 16-11, 1015 UTC
477/36 Vnimanie
44243 27634 25588 30147 75634 11962 51854 39882 39692 67777
31336 46396 72237 18585 38556 41319 33035 65855 95357 12201
91962 79592 11100 19974 15099 60656 05100 20993 54277 97406
98541 78160 18662 75539 37569 60810
Vnimanie, rpt msg, konec

9200 kHz, 17-11, 1625 UTC
835/33 Vnimanie
58780 42765 61269 61506 12349 07837 18456 71930 11267 94044
59133 20279 62086 42839 79136 84628 68963 26093 12793 15023
12726 10435 61495 58627 51450 75592 80311 05718 19316 15493
00645 56984 92969
Vnimanie, rpt msg, konec

9200 kHz, 21-11, 1625 UTC. Repeat of 17-11 but the first group is different.
835/33 Vnimanie
52780 42765 61269 61506 12349 07837 18456 71930 11267 94044
59133 20279 62086 42839 79136 84628 68963 26093 12793 15023
12726 10435 61495 58627 51450 75592 80311 05718 19316 15493
00645 56984 92969
Vnimanie, rpt msg, konec

S28 - The Buzzer

Mode: USB
Frequency: 4625 & 6998 kHz

01-11, 1328 UTC	MDZhB 39942 VYeRIDON 34560709
01-11, 1235 UTC	MDZhB 94221 CYeRIJ 37241358
01-11, 1234 UTC	MDZhB 76567 BYeRILIT 10680287
02-11, 0905 UTC	MDZhB 87816 BYeRYeZOVAYa 74302532
02-11, 0856 UTC	MDZhB 63274 ChYeRYePICA 65854003 error in reading(sboj)
02-11, 0805 UTC	MDZhB 75987 PYeRYeNOSChIK 62602545
02-11, 0724 UTC	MDZhB 96350 PYeRYeSUShKA 03973321
05-11, 1752 UTC	MDZhB 07940 BYeLOPOLYeC 51612120 repeat of previous signal with corrected key group
05-11, 1744 UTC	MDZhB 27940 BYeLOPOLYeC 51612120 female voice on background
09-11, 1322 UTC	MDZhB 90345 TYeKSTOLIT 53052245
12-11, 1806 UTC	MDZhB 15354 DYeKANTACIYa 94267359
12-11, 1639 UTC	MDZhB 68068 BYeKAChiNYJ 59690839
12-11, 1635 UTC	Inaudible. Failed attempt of sendigng control signal
12-11, 0821 UTC	MDZhB 72264 BYeKMANIYa 50885652
13-11, 1118 UTC	MDZhB 18476 KYeIMICIN 25478129
13-11, 1026 UTC	Inaudible. Network tx sites switching
16-11, 1420 UTC	MDZhB 10727 BYeZSYeRDIYe 41056119
16-11, 0804 UTC	MDZhB 35703 BYeJLIF 85336995
16-11, 0803 UTC	MDZhB 23868 NYeIShYeTNYJ 16803038
19-11, 0800 UTC	MDZhB 84515 BYeZZOBNYJ 67640716

19-11, 0806 UTC MDZhB 00181 GYeZYeL' 55153182 Female voice on background
19-11, 1024 UTC MDZhB 39589 CYeZARIUM 60514339
24-11, 1303 UTC MDZhB 41488 MYeDSYeSTRA 46775024
26-11, 1239 UTC MDZhB 79886 MYeDOVKA 21749870
26-11, 1338 UTC MDZhB 98589 MYeDICYeL 23552003
29-11, 1227 UTC MDZhB 14746 UDAR 72284685
30-11, 1228 UTC MDZhB 69968 BYeDANTIN 92447025

S30 - The Pip

Modes: CW (Pip), USB (messages)
Frequencies: 3756 kHz (night), 5448 kHz (day)

5448 kHz, 01-11, 1344 UTC 8S1Shch 80621 VYeRNIN 04353184
5448 kHz, 01-11, 1327 UTC 8S1Shch 98326 GYeNDON 64410285
5448 kHz, 01-11, 1305 UTC 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS
3756 kHz, 02-11, 1826 UTC 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM
3756 kHz, 02-11, 1507 UTC 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T
3756 kHz, 02-11, 0804 UTC 8S1Shch 80920 SK?? 55679472
5448 kHz, 02-11, 0724 UTC 8S1Shch 27579 BAGRYeNNYJ 85460854
5448 kHz, 02-11, 0530 UTC 'O6P Y8VM 6I2Zh 8CShchJ 7Shch' N1DU 53OB 78MV DEAY JH'J
3756 kHz, 03-11, 1919 UTC 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL
3756 kHz, 03-11, 1710 UTC OSOG BO6C F56Shch 9GSA ZhBZI 4RVZ 3VS' DKJ1 ZhD9V 42BV
3756 kHz, 03-11, 0336 UTC FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B
3756 kHz, 04-11, 1400 UTC 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS
3756 kHz, 05-11, 1735 UTC 8S1Shch 21199 BAGRYaNNIK 60247595
3756 kHz, 10-11, 1820 UTC TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N
3756 kHz, 10-11, 1832 UTC PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z'
3756 kHz, 11-11, 1529 UTC 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG
3756 kHz, 12-11, 1953 UTC 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS error in reading
3756 kHz, 12-11, 1733 UTC 8S1Shch 51753 NADSADA 31142711
3756 kHz, 12-11, 1629 UTC 8S1Shch 49509 PANTORIFMA 87311996
5448 kHz, 12-11, 1333 UTC YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZI 4RVZ
5448 kHz, 12-11, 1215 UTC 8S1Shch 73740 RYeDOSLYeD 78570052 repeat of 1155z
5448 kHz, 12-11, 1155 UTC 8S1Shch 53740 RYeDOSLYeD 78570052
3756 kHz, 13-11, 1843 UTC 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T
3756 kHz, 13-11, 1647 UTC 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J
3756 kHz, 14-11, 0531 UTC 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM
3756 kHz, 14-11, 1617 UTC FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B
3756 kHz, 14-11, 1904 UTC OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV
3756 kHz, 15-11, 1858 UTC 27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS
3756 kHz, 15-11, 1748 UTC L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ
5448 kHz, 15-11, 0544 UTC 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL
3756 kHz, 16-11, 1802 UTC 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA
Pip USB signal is 500 kHz off freq, while carrier is ok
3756 kHz, 16-11, 1417 UTC 8S1Shch 87293 PARIZhANIN 30877212
Pip USB signal is 500 kHz off freq, while carrier is ok
3756 kHz, 17-11, 1703 UTC ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC
Message interrupted many times due to errors on the line
3756 kHz, 17-11, 1950 UTC SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV
Dlya test only for 9 units instead of the usual 10
3756 kHz, 18-11, 1839 UTC ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3
5448 kHz, 19-11, 0802 UTC 8S1Shch 41117 DISPROZIJ 34368816
3756 kHz, 19-11, 1653 UTC ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF
3756 kHz, 19-11, 1857 UTC 61HZh ZBIL L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM
3756 kHz, 23-11, 1549 UTC 8S1Shch 94418 HLUP 13213787
5448 kHz, 24-11, 0552 UTC 3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS
5448 kHz, 26-11, 0541 UTC OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV

5448 kHz, 26-11, 1235 UTC 8S1Shch 99921 KRANPAS 86138119
5448 kHz, 26-11, 1326 UTC 8S1Shch 73376 NYePRUDA 21489561
3756 kHz, 26-11, 1824 UTC L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ
5448 kHz, 29-11, 0537 UTC V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV
5448 kHz, 29-11, 1426 UTC 8S1Shch 80415 BRIFORUK 40098719
5448 kHz, 30-11, 0533 UTC INNC ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5
3756 kHz, 30-11, 1706 UTC VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS'
3756 kHz, 30-11, 1839 UTC DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1

S32 - Squeaky *Wheel*

Mode: USB
Frequencies: 3838 kHz (night), 5473//7009 kHz (day)

5473 kHz, 01-11, 1348 UTC AL'FA-45 37695 SOSLOVIYe 49804588
5473 kHz, 01-11, 1331 UTC AL'FA-45 63661 ARYeSIT 79594553
5473 kHz, 01-11, 1318 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 02-11, 1602 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 02-11, 1502 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07. S30 in the background
3828 kHz, 03-11, 1932 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828 kHz, 03-11, 1541 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 04-11, 1754 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828 kHz, 05-11, 1854 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34. S30 in the background
3828 kHz, 05-11, 1741 UTC AL'FA-45 08091 VAGONYeTChIK 93334171. S30 and CW control signal in the background
3828 kHz, 09-11, 1823 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828 kHz, 10-11, 2102 UTC SLIVA-94 RUZh'E-26 BIZON-64 KURGAN-40 STOROZh-62 ROSA-64
(Bizon is not called in the first call, only in the repeat)
3828 kHz, 11-11, 1635 UTC AL'FA-45 79103 CIBULYa 93342071 with S30 in the background
3828 kHz, 11-11, 1608 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26
3828 kHz, 11-11, 1413 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39
3828 kHz, 12-11, 1837 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 12-11, 1741 UTC AL'FA-45 84149 MYeGIBAL 57757151
3828 kHz, 13-11, 1750 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 with S30 in the background
3828 kHz, 14-11, 2105 UTC ROSA-64 YaHTA-94 KURGAN-40 NYeVKA-26 UTYoS-94
3828 kHz, 14-11, 1825 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
3828 kHz, 14-11, 1431 UTC STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39
3828 kHz, 15-11, 1601 UTC STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828 kHz, 16-11, 1646 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 16-11, 1455 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828 kHz, 16-11, 1423 UTC AL'FA-45 86009 LYeSISTYJ 86787656 first read interrupted by the marker
3828 kHz, 17-11, 2001 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
5473 kHz, 23-11, 1324 UTC KOVBOJ-39 Dlya test for only one unit!
3828 kHz, 23-11, 0328 UTC AL'FA-45 64748 VYROZhDYeNIYe 68741464
3828 kHz, 23-11, 1432 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 KOVBOJ-39
3828 kHz, 23-11, 1552 UTC AL'FA-45 88148 PODPOL'NYJ 75003464 with S30 in the background
3828 kHz, 23-11, 1912 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KOVBOJ-39
5473 kHz, 24-11, 1344 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 24-11, 1858 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
5473 kHz, 25-11, 1317 UTC SLIVA-94 LANDYSh-74 ALEUT-09 ZASLONKA-27 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 25-11, 1935 UTC STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
5473 kHz, 26-11, 1238 UTC AL'FA-45 00475 STYeKRYaRUS 95986875
5473 kHz, 26-11, 1330 UTC AL'FA-45 70795 BRIDYeLKA 40192809
3828 kHz, 26-11, 1531 UTC ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34
3828 kHz, 26-11, 1728 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 27-11, 1812 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27

3828 kHz, 28-11, 1432 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 27-11, 1812 UTC SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 28-11, 1432 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32
3828 kHz, 29-11, 1434 UTC KURGAN-40 DUBLYoR-68 STUPA-32 SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27
3828 kHz, 29-11, 1827 UTC RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07
7009 kHz, 30-11, 1232 UTC AL'FA-45 68255 ATARAKSIYa 85625135

S3850

Frequencies: 3850 kHz (night), 4940 kHz (day)
Mode: USB

3850 kHz, 05-11, 1743 UTC Pilot-28, ya Baron-78 25629 PULEMETCHIK 25810518
3850 kHz, 06-11, 0401 UTC PLAFON-78 Communication test
3850 kHz, 28-11, 0401 UTC BARON-78 Network test
3850 kHz, 28-11, 0402 UTC Network test: Tros-28, ya Baron-78
3850 kHz, 28-11, 0404 UTC BARON-78 Network test, count + call for Vektor-70
4940 kHz, 28-11, 1350 UTC BARON-78 99734 VYVARKA 87284750 sent for TROS-28, confirmation request at the end
4940 kHz, 28-11, 1406 UTC BARON-78 Network test
3850 kHz, 30-11, 0405 UTC BARON-78 Time signal and network tests
3850 kHz, 30-11, 0413 UTC BARON-78 LOG-09
3850 kHz, 30-11, 0416 UTC BARON-78 KOMFORT-35 Network test and count
4940 kHz, 30-11, 1420 UTC BARON-78 TROS-28

S5292

Frequencies: 5252 kHz USB

02-11, 1439 UTC RYeGATA-75 80932 PUZOVKA 37427392 count before the signal
02-11, 0722 UTC SYeKRYeT-39 47095 BYeLOGRAD 38632635
03-11, 0827 UTC VIZIR-21 65429 PRIKURKA 38425983 cw on background
03-11, 0825 UTC TRYeL'-31 37402 BOLGRAKA 68425963 count before the signal, cw on background
05-11, 1149 UTC RYeGATA-75 SYeKRYeT-39 37649 CIKADA 35219675 count before the signal
10-11, 1306 UTC VIZIR-21 BARZhA-08 37502 PUShNOJ 17368480
12-11, 0800 UTC SYeKRYeT-39 REGATA-75 00246 PYeMAChA 27373578 count before the signal, errors in callsign reading
18-11, 1302 UTC SYeKRYeT-39 REGATA-75 32221 ANKYeLOT 42678580

V02a
Dirección General de Inteligencia

8135 kHz, 10-11, 2259 UTC YL/SS 4FGs then stops. Then switched to M08a

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V24

V24 report by Token.

25 November:
I received an email yesterday asking me to listen to a recording to see if it was a possible V24 transmission. V24 was last known active on June 16, 2015.

The recording was apparently done at 1137 UTC, November 25, 2015, on the Hong Kong GT remote node. Frequency was 6215 kHz. The recording consisted of about 45 seconds of a female Korean pop group called Girls Generation, doing a portion of a song called Into the New World. No numbers were included in the recording.

6215 is a long used V24 frequency, going back to the late 1970's or early 1980's. There are no known or scheduled broadcast stations on that frequency.

I told the person asking that because there was only music present there was no way to tell if it was associated with V24 or not. Of course it could be, but there was no real indication there was any relation to V24. The choice of frequency and the pop Korean music (a habit V24 was starting to get into just before it ended) could possibly indicate V24 involvement, but only a mild "maybe".

However, I started looking at the frequency periodically from that point on. Since that time, 1137 UTC, Nov 25, to this time, 0600 UTC, Nov 26, the station has more or less continually transmitted the same song, "Into The New World", by Girls Generation, in a loop, now going on over 18 hours. There was a short period around 0200 UTC when it was just a carrier, or sometimes test tones on the transmission, but by 0210 it was back into the same song.

Could this be the V24 transmitters coming back into play? Only time will tell, but if you monitor Asian stuff you might want to occasionally check the old V24 frequencies (last active freqs were 4900, 5290, 5715, 6215, and 6310 kHz) to see if V24 is being reactivated.

26 November:
Over 24 hours later and the same song is still in a playback loop on 6215 kHz. At this time, 1320 UTC, November 26, 2015, 6215 is still playing a loop of Girls Generation, "Into the New World". Could this be a burn in period for a new transmitter?

I should take my own advice, "check old V24 frequencies", something I did not do until this morning. The same audio loop is playing on 4900 kHz (and still active on 6215 kHz), another historically active V24 frequency. I strongly suspect this is a test of new transmitters or facilities, and that V24 will be back in the near future.

28 November:
I have uploaded videos of the music on both 4900 and 6215 kHz. Of course, it is not very interesting because it is just music. But it was the same music sent, just one song repeatedly, for over 36 hours on two past V24 frequencies. The two frequencies were simulcast, there was no apparent delay between them other than normal propagation caused delays.

Propagation conditions and direction of arrival were consistent with past V24 transmission.

4900 kHz here: https://www.youtube.com/watch?v=tpGCPxdmdqc

6215 kHz here: https://www.youtube.com/watch?v=mCRvyX1FEys

Both frequencies here: https://www.youtube.com/watch?v=rYfpDscKLDE

T!, Mojave Desert, California, USA

V28

Token reports about a possible new Korean numbers station.

There is a possible new numbers station out of Asia that has periodically been reported on a few different lists for the last few weeks.

The station appears to be Korean language. It uses both an OM and YL voice. The schedule seen so far is roughly 3277 kHz, AM mode, at 1330 until about 1340 UTC, on 3277 kHz AM. The frequency varies slightly, but it is normally about 3277 kHz.

The format of the 3277 kHz transmission is not yet defined, and appears to be somewhat flexible. Several Korean speakers think the station is North Korean based on the accent of the female voice. However at one time that (North Korean accent) was also said of V24, and we know that station was South Korean.

Unfortunately the 3277 kHz station is very weak at my location, so the only way for me to hear the station is on Asian remotes. Since 1330 UTC is 0530 local time this is an inconvenient time to access remotes, as I am generally on my way to work at that time. I suspect I am going to be able to do little with this station and we are going to have to rely on Asian contributions to find out more.

My newest recording of this station is here: https://www.youtube.com/watch?v=AUqOkQjVcto

My logs for the new unid Korean language numbers station:
3277.12 kHz AM 1330z 22 November 2015 (remote tuner Japan) Token SUN
3276.84 kHz AM 1330z 23 November 2015 (remote tuner Japan) Token MON
3276.93 kHz AM 1330z 24 November 2015 (remote tuner Japan) Token TUE
3276.95 kHz AM 1330z 25 November 2015 (remote tuner Japan) Token WED
3276.91 kHz AM 1330z 26 November 2015 (remote tuner Japan) Token THR
3276.89 kHz AM 1330z 27 November 2015 (remote tuner Japan) Token FRI
3276.93 kHz AM 1330z 28 November 2015 (remote tuner Japan) Token SAT

The transmitter seems stable once tuned, but every day is a slightly different frequency of about 3277 kHz. Is it possible this transmitter has an analogue scale for frequency? These kind of minor variations in tuned frequency, but stable operation, are reminiscent of analogue operations.

From now on I will just report the frequency as 3277 kHz, however I wanted to document the variations.

This station is very difficult to hear at my location, so far any decent reception I have had has only been using Asian remotes.

I have looked in other time periods, but so far have not found any other schedules.

Chinese oddity station VC03 has been active on the same frequency in LSB. VC03 also apparently has a digital mode it uses. Because of this my best recordings are in USB mode, despite the new station being an AM transmission. The audio is distorted, no matter what reception mode is used.

My newest, and best to date, recording (Nov 28, 2015) here: https://www.youtube.com/watch?v=beniy0e8wLI

T!, Mojave Desert, California, USA

MORSE STATIONS

MX

Russian Military beacons

Current cluster frequencies:
3594, 4558, 5154, 7039/7508, 8495, 10872, 13528, 16332, 20048 kHz

Other frequencies:
L 5156.8, 6917.5, 8497.8 kHz
V 3658, 4150, 6809, 6928, 7027.5 kHz
R 5466 kHz
W, R, N, G, C, K, Z, L, V, Ü 5620, 5835, 8029, 8112, 8162, 8895 kHz (Tu-Bear net)

Cluster beacon slots:
.7 "D", Sevastopol
.8 "P", Kaliningrad
.9 "S", Severomorsk
.0 "C", Moscow
.1 "A", Astrakhan (inactive)
.2 "F", Vladivostok
.3 "K", Petropavlovsk Kamchatskiy
.4 "M", Magadan

M01

5320 kHz, 03-11, 1800 UTC
197 (R) 345 345 30 30 = =
56673 56673 75643 75643 67186 67186 87982 87982 71991 71991
58113 58113 22152 22152 07476 07476 65651 65651 60245 60245
86619 86619 56977 56977 08935 08935 99954 99954 26733 26733
00968 00968 05814 05814 66130 66130 70680 70680 43949 43949
69005 69005 82800 82800 18558 18558 63157 63157 21334 21334
52306 52306 97635 97635 28774 28774 38187 38187 02691 02691
= = 345 345 30 30 000

5320 kHz, 05-11, 1800 UTC
197 (R) 568 568 30 30 = =
10524 10524 31132 31132 06494 06494 71383 71383 01915 01915
43524 43524 63035 63035 50254 50254 70086 70086 49003 49003
01150 01150 43586 43586 95822 95822 01372 01372 14057 14057
21784 21784 86041 86041 47088 47088 04160 04160 01162 01162
49338 49338 94430 94430 28559 28559 11265 11265 45215 45215
72460 72460 23061 23061 34491 34491 78455 78455 48460 48460
= = 568 568 30 30 000

5645 kHz, 08-11, 0700 UTC
197 (R) 255 255 30 30 = =
33968 33968 79838 79838 25386 25386 94967 94967 99312 99312
54769 54769 76943 76943 74828 74828 77048 77048 87683 87683
7*298 7*298 75007 75007 94589 94589 64879 64879 23015 23015
75260 75260 15261 15261 04921 04911 73888 73888 54317 54317
22926 22926 90506 90506 97555 97555 *3716 **716 92382 92382
58580 58580 53*** ends before finishing the message
= = 255 255 30 30 0 0 0

5320 kHz, 10-11, 1800 UTC
197 467 30 =
26264 75931 31600 17467 70310 18033 52560 30304 38345 83706
08388 85468 41551 80419 70541 56034 27547 21302 37450 44320
16958 49951 74220 62356 95761 74118 32798 20763 21664 03830
= 467 30 000

5320 kHz, 12-11, 1800 UTC
197 505 30 =
23233 64117 39313 07015 19715 18735 25890 64114 46979 53195
65511 63136 21009 45956 30738 73511 84016 05527 62996 42533
41975 28547 90685 85994 55418 77389 79653 88804 10198 38353
= 505 30 000

5320 kHz, 24-11, 1800 UTC
197 (R) 289 30 =
85200 50245 24249 81074 46108 60754 92112 01306 74477 96455
71422 79943 13543 80891 10363 57775 02606 71868 93141 18204
14306 23193 31091 96743 00066 03547 40838 71147 38743 15432
= 289 30 000

4490 kHz, 24-11, 2000 UTC
197 (R) 803 30 =
53343 01572 67749 28196 90149 82347 61250 83094 98229 11185
38316 59767 83159 46014 08837 17962 25876 01417 97114 15433
08894 94927 90406 58273 94521 35922 26873 58231 77718 11265
= 803 30 000

M01b

2435//3520 kHz, 02-11, 1910 UTC
853 971 31 =
90755 44918 14815 98342 78172 16261 4 6046 34060 70990 83986
05176 79954 35030 84324 33863 28150 46620 32243 01448
25381 50260 64390 84334 02543 57373 17481 85986 34077 35569
81165
= 971 31 000

M01c

4813 kHz, 07-11, 1015 UTC
437 437 437 437 718 90 718 90
111 999 769 37 =
93464 36492 20336 65585 31032 09645 76295 01626 84841 88060
41123 71925 31994 05915 06484 52785 94788 93570 01116 25271
56499 30099 66061 78093 97004 89754 67491 61949 43929 37850
95305 32622 95930 66897 98494 51914 56213
= 769 37 000

4694 kHz, 18-11, 1401 UTC
629 629 629 778 40 778 40
629 629 629 778 40 778 40
111 999 111 999
435 10 = 96854 65213 15621 96854 81687 …
= 435 10 000
333 02 = 66213 000

4612 kHz, 18-11, 1544 UTC
938 938 938 763 32 763 32
938 938 938 763 32 763 32
111 999
379 35 = 26913 68771 08694 11818 51012 16137 …
= 379 35 111 000

4576 kHz, 19-11, 0938 UTC, i.p.
91080 35946 05819 87090 31768 …=
556 30
111 000

5018 kHz, 25-11, 1123 UTC
603 603 603 908 43 908 43
111 111 000

5018 kHz, 25-11, 1201 UTC
603 603 603 904 43 904 43
111 904 13 904 13 111 904 13 904 13
835 10 =
93203 36158 84509 07653 68835 59411 42579 32561 15591 78961 =
835 10 111 000

4326 kHz, 07-11, 0739 UTC
869 869 869 869 381 05 381 05

5350 kHz, 07-11, 0909 UTC
i.p. 04098 = 768 34 000

2040 kHz, 17-11, , 1904 UTC
459 459 459 987 69 987 69
459 459 459 987 69 987 69

4213 kHz, 18-11, 0557 UTC
i.p. 41148 66491 41513
= 680 35 000

4816 kHz, 18-11, 1344 UTC
i.p. 638 65443 28124 =
345 31
111 000

4814 kHz, 18-11, 1438 UTC, i.p.
36738 77576 37980 = 367 38
111 000

5440 kHz, 18-11, 1535 UTC
474 474 474 733 56 733 56
474 474 474 733 56 733 56

3839 kHz, 18-11, 1555 UTC
858 858 858 852 34 752 34

2559 kHz, 19-11, 0549 UTC
720 720 720 525 74 525 74
720 720 720 525 74 525 74
333 333

4326 kHz, 19-11, 0739 UTC
869 869 869 383 75 383 75
869 869 869 383 75 383 75

M03

4828 kHz, 05-11, 1320 UTC (VVV at 1316 UTC)
430/30 = =
52050 22297 75133 03683 98465 75889 03954 09882 68626 14500
57989 52090 47442 17380 21452 25084 04028 52275 83126 76468
44936 27237 79984 56844 09749 35160 51355 60007 90422 50898
= = 430/30 = = rpt msg = = 000

M08a
Dirección General de Inteligencia

M08a oddities

8096 kHz, 7-11, 1348 UTC	The transmitter was tuned at 1349z but no traffic till 1428z. Rechecked at 1448z, now in i.p.
7554 kHz, 9-11, 2000 UTC	No sign of M08a but two OM/EE on freq briefly and again at 2114z with Alfa Alfa call. Talking about South Carolina weather data
8096 kHz, 10-11, 1359 UTC	Sent callups just once and into tfc. 2nd callup is URTIA. 3rd callup is WTDAN. Completes tfc and off at 1431z
8096 kHz, 16-11, 1400 UTC	Keying messed up
8096 kHz, 19-11, 1358 UTC	No callup, right into traffic

M12

12205/13559/14728 kHz, 02-11, 1100/1120/1140 UTC
973 973 973 1 (R) 159 152 159 152
36989 59658 96079 05912 89283 95706 99641 99268 77225 43971
56776 46613 14373 30467 48155 64911 35093 63777 18063 06968
81713 57969 98257 18629 62696 09758 59935 96395 96138 15203
03254 28848 42938 83610 36280 07543 51102 88537 33231 95039
94434 17662 80191 81546 12618 79634 39317 13007 23128 15210
66439 76851 33009 24828 29711 15563 32491 50076 65480 46485
31190 46919 8I903 53586 13997 84527 81487 12294 74598 46675
39480 82845 87942 36547 94116 49931 38709 78167 66644 85805
00292 70345 04030 18962 18826 65193 41594 72610 65069 95329
06070 18094 72997 71479 29485 20764 41800 08132 85235 84970
97835 29928 21506 14501 81785 08796 93972 66936 75766 09717
66076 28785 98033 22922 59354 31977 60735 46865 86149 93385
98783 08330 35025 94496 34952 97245 15126 32150 99485 95874
10170 35137 10854 45693 81803 56482 30108 15668 66685 85150
60343 32212 33861 00247 55955 99548 26916 57945 26875 11571
14748 49354
000 000

15969/17479/18169 kHz, 05-11, 1010/1030/1050 UTC
941 941 941 1 (R) 3370 127 3370 127
08155 97236 95286 06038 00941 78746 04437 54619 85108 56404
63667 51631 74984 21631 69691 54075 28894 84935 87893 80026
66587 95804 48737 01250 71992 74795 48510 59916 12749 15906
51596 94311 39296 32787 19144 69591 22320 76562 62163 14264
18106 20258 53351 41738 68860 55851 42112 51708 66608 78260
37468 74432 02950 01182 99450 32457 23685 94281 58178 12708
70231 16266 01338 20920 73985 19945 32329 46171 37166 55140
59810 70198 31945 23758 81603 46506 22733 01724 61863 69323
27332 84867 50769 23465 96183 82054 93907 81071 60378 73122
91024 79487 42726 65550 12650 53637 77331 82382 00122 13447
63231 17714 11139 98026 16723 03311 84194 51962 58265 45550
80622 25295 97936 59079 69421 49060 96632 64259 76605 70426
95977 08695 87775 41841 04338 31259 45774
000 000

13386/12189/11491 kHz, 05-11, 1500/1520/1540 UTC
725 725 725 1 (R) 3626 111 3626 111
37576 84975 36294 12826 57692 47910 04575 05767 71614 65844
29392 44060 54489 48102 33877 87645 86754 12050 35009 59788
53154 59126 76891 79935 04584 26025 18705 55947 19258 64398
97962 63547 59946 77018 14556 40240 53423 11271 14411 74908
57291 15943 72003 72407 40138 32700 78969 74239 45646 32340
44204 90616 91352 13627 24431 88895 37132 82566 17368 00915
66460 33804 61094 86764 48606 29362 20571 99597 48106 04903
15453 09052 59646 98207 17109 60621 19785 28638 56341 19160
26984 89097 77006 97332 60955 12050 52889 42692 88835 92068
44754 10038 01698 72689 23463 37790 66997 68646 44148 78357
04048 35628 05706 59411 01894 62307 58729 78884 50717 28069
87782
000 000

10343/9264/8116 kHz, 05-11, 1800/1820/1840 UTC
124 124 124 1 (R) 7050 144 7050 144
50572 02824 43960 11137 37710 68989 11874 17314 68470 57487
07135 08990 97519 30220 08657 78033 52190 68489 65391 23216
19850 26162 51073 32479 61350 84619 94450 19530 99452 00351
46473 83802 47321 33263 96677 78804 81626 21622 08280 86711
56767 83087 14408 13998 61894 42309 63463 84279 10388 79094
02641 55576 33662 14689 19644 41463 74044 74342 82190 76270
76388 26695 99742 11811 44141 59443 74343 10774 45445 67647
74963 54877 46340 36533 02896 67627 69228 98497 05913 16298
01161 44788 75699 97093 82513 87340 12406 60138 17825 99391
52585 44663 43093 77931 84445 33524 42306 50113 50008 22464
44137 54444 41601 69049 66499 20573 48463 07514 40034 25144
92980 83777 60683 20489 41328 31717 70882 43896 73934 19036
28616 36871 63912 80194 89675 69554 74301 64570 85469 80275
14378 14949 83637 57139 09662 64290 38501 78807 51060 11129
90248 77628 10196 42239
000 000

8047/6802/5788 kHz, 05-11, 2000/2020/2040 UTC
463 463 463 1 (R) 7045 86 7045 86
76513 96960 96856 72365 22239 03118 57471 98490 91595 88448
75708 70276 08349 46897 00486 23603 01606 05822 35317 87863
28107 20831 97807 09187 68169 84S61 44412 16109 50390 43958
30053 62021 10969 58564 34304 54553 21867 11549 80361 93984
12841 23746 73449 52872 47049 17822 89566 07380 99466 86332
82474 68947 83766 61136 62785 16217 49420 66811 90682 31269
71361 27576 82697 93946 46593 96317 82770 55530 42222 86346
20793 15607 98193 10742 54612 24928 44355 62219 39627 30798
46655 86740 47230 89420 52425 50162
000 000

17479/18169 kHz, 08-11, 1030/1050 UTC
941 941 941 1 (R) 3370 127 3370 127
08155 97236 95286 06038 00941 78746 04437 54618 85108 56404
63667 51631 74984 21631 69691 54075 28894 84935 87893 80026
66587 95804 48737 01250 71992 74795 48510 59916 12749 15906
51196 94311 39296 32787 19144 69591 22320 76562 62163 14264
18106 20258 53351 41738 68860 55851 42112 51708 66608 78260
37468 74432 02950 01182 99450 32457 23685 94281 57178 12708
70231 16266 01338 20920 73985 19945 32329 46171 37166 55140
59810 70198 31945 23758 81603 46506 22733 01724 61863 69323
27332 84867 50769 23455 96183 82054 93907 81071 60378 73122
91024 79487 42726 65550 12650 53637 77331 82382 00122 03447
63231 17715 11139 98026 16723 03311 84194 51962 58265 44540
80622 25295 97936 59079 69421 49060 96632 64259 76605 70426
95977 08695 87775 41841 04338 31259 45774
000 000

7637/9137/10237 kHz, 28-11, 0600/0620/0640 UTC
612 612 612 1 (R) 9722 183 9722 183
24943 14186 45950 97378 94594 77454 82740 89385 56363 84529
27363 81503 43901 55843 73266 53095 78879 46357 24787 94406
74886 04367 18062 13037 48080 03121 56498 14297 08458 21187
22182 91015 24570 91201 17908 05217 61567 71006 08771 65984
56567 96760 69807 17365 14844 63827 09948 19365 31111 65897
50499 05668 09911 06688 27157 55406 48930 47397 83975 50497
70466 58287 50972 23790 19896 47383 65762 25884 64334 51923
01812 24715 45938 40148 19559 10243 38371 23249 35937 41484
18527 03725 25788 65605 87938 84399 23614 85286 64566 73761
07779 06035 58111 43696 29984 24130 17579 33768 28070 35271
62227 68228 37392 25565 92922 88103 09453 31712 17845 44837
52456 86248 14939 80202 31132 38412 73061 76609 27593 85751
54604 64286 88518 76770 69960 37200 54149 99231 93875 75668
95965 91866 31809 14613 19404 86334 66184 84535 18642 28617
48984 74662 29577 86061 10932 60030 83563 73548 38609 09614
38664 16004 34924 22201 73926 61903 92612 77517 47597 15571
13575 09598 39111 16028 22276 37685 74331 31804 67410 32281
78268 43019 23807 76940 42613 57160 20117 08881 26985 54237
28256 61533 50617
000 000

9162/8062/7562 kHz, 28-11, 1310/1330/1350 UTC
104 104 104 1 (R) 6481 159 6481 159
80383 15531 61400 29810 33415 54378 16940 08142 68518 02646
90566 26974 38538 85512 49207 19539 65166 43291 77904 73098
05660 32282 99938 53485 89338 32683 46694 92965 58745 32253
66086 27896 35172 89498 35019 37532 34189 21309 09211 14965
88488 44685 47390 05242 41694 61509 51371 50627 60774 62964
33561 45483 07086 37166 80434 51510 61370 78662 32114 61931
15932 29379 48639 68714 27492 87569 09153 99987 70357 73580
47182 00259 36844 31584 45307 3113Z 67894 09121 59321 09249
13450 47599 42265 11717 03950 76198 78351 82480 44908 27624
01091 28748 13288 52148 41645 40984 44550 26186 44806 39784
75235 93140 00207 19306 61687 69507 30057 28467 37962 90789
55955 74833 55399 65802 03207 29095 59714 78929 62116 42220
72994 15169 98340 40066 94796 14379 57083 50389 96475 27322
64534 74001 95702 00472 30584 84331 99795 06041 10181 58354
36437 30638 65259 30282 41976 41128 08423 37105 20819 16006
31419 43917 35269 01360 42080 17692 26168 38238 20165
000 000

8047/6802/5788 kHz, 30-11, 2000/2020/2040 UTC
463 463 463 1 (R) 6869 144 6869 144
42268 65660 95746 25659 80345 84533 07460 76581 62257 51735
43325 67636 44397 20312 71781 21561 50485 25613 80221 44189
14251 08747 57444 23579 58510 49112 72092 98838 91085 27850
80329 45570 62110 25085 86581 24009 19223 54275 65328 90803
08053 31189 61033 62011 16555 82537 44023 48863 74044 37688
19577 83198 93129 78070 13381 00449 75597 52471 19604 57330
73096 74005 65158 24815 49482 81809 37522 53562 76285 85304
37917 64520 95783 69187 53340 35310 93609 75093 23462 87034
57606 83686 45617 70882 32990 17306 11612 11364 34262 39881
97982 02447 52629 41583 53622 99519 51172 60587 17185 56573
42299 07714 13371 22779 36826 96943 78893 79331 72480 12582
87838 64836 49253 61535 20269 22987 56024 22658 60932 31578
72210 32559 76229 98656 22521 17044 59154 55681 87609 99995
51898 19027 14585 56844 56212 76134 53020 79066 55109 98095
45746 65639 93432 73443
000 000

M14

4636 kHz, 10-11, 1820 UTC
186 718 20 =
20192 94872 59403 67483 67224 21199 59430 68574 89902 24155
72819 41098 72910 48392 38291 75940 48392 57628 58299 11095
= 718 20 00000

10423/8167 kHz, 12-11, 1300/1330 UTC
058 324 57 =
06589 65583 05284 94374 31390 92243 90380 50215 19305 60068
94081 08334 91448 46023 37433 29988 09262 08064 38991 26879
00842 09709 06465 63116 89556 56830 89398 62373 48525 63829
78822 49891 29424 91402 64814 84045 39039 23073 87910 57139
62018 72676 45300 70137 53246 40000 37744 10995 48286 56744
68151 91305 65328 90006 27756 20923 97077
= 324 57 00000

4636 kHz, 24-11, 1820 UTC
186 133 15
12345 56565 32321 89012 45456 12356 12334 65656 78780 09876
13456 76890 65991 76765 89078
133 15 00000

Both the 0800 and 0900 UTC transmissions on 28-11 were full of errors.
The recordings are on the N&O website.

5430 kHz, 28-11, 0800 UTC
171 (R) 3 133 15 15
12345 12345 32321 32321 45451 45451 89012 89012 445456 445456
123566 1122356 12334 12344 65656 56565 78780 78780 09876 09876
13456 13456 76890 76890 65991 65991 76565 76765 8990078 889900
..-... 788
11333 133 15 15 00000

5560 kHz, 28-11, 0900 UTC
171 (R) ---- 133 133 15 15
12345 12345 32321 32321 45451 45451 89012 89012 45456 45456
12356 12356 12334 12344 46565 46565 788780 78780 09876 09876
13456 13456 76890 76890 65991 65991 76765 76765 89978 889077
11333 133 15 15 00000

M21 + variants
Russian Air Defence Forces
Войска ПВО Voyska PVO

4272 kHz, 02-11, 0550 UTC =990850??8????? = 990851??8????? =990852??8????? =990853??8????? =990854??8?????

6816 kHz, 17-11, 1219 UTC
517 9670 9160011700
9669 9844899 18
9669 9844895 19
9670 9844219 19
9670 9844215 20
9669 9844864 20
9669 9844857 21
9670 9844227 21

M41
Russian Air Defence Forces
Войска ПВО Voyska PVO

4054.5 kHz, 01-11, 0630 UTC	9929993368238 9929993343832 1929929
3572 kHz, 01-11, 1919 UTC	9771999318218 9781996582318 9773996583
5226 kHz, 07-11, 1525 UTC	i.p. RPT 07996 3449 1288 1090 1705 RPT 722194 9503 9985761 1617 2060 1635 = 72219405 47996 34491 2883 0900 1705 GGTU K RPT K VVVVVV 99857 6116172060 1635 672219405 47996 34491 2881 0900 1705 K AR
3717.5 kHz, 07-11. 1722 UTC	835 418 422 = 0174 835 312722= 017 3835 318 324 = 017 4835 318 424 =
4054.5 kHz, 08-11, 0531 UTC	SEQB 5EQB 5EQB AR //5402.5 kHz
2786.5 kHz, 12-11, 1820 UTC	PJFQ = 5574 2595 4948 3508 827 3438 9936 4099 731 8967 3896 … 809 = 3581 4386 5787 04478801 82305...
2795 kHz, 12-11, 1837 UTC	BFKG KUÔ 555 AR and BFKG BFKG BFKG QHEL UÔ 555 AR
2006.5 kHz, 17-11, 0530 UTC	5EQB 5EQB AR // 4054.5//5402.5 kHz

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M89 - Chinese military

Stations and strings:

V A7TR A7TR A7TR DE DI9Q DI9Q
V 5RAB 5RAB 5RAB DE M9AB M9AB
V 7NPE 7NPE 7NPE DE QV5B QV5B
V 6TRW 6TRW 6TRW DE J9NS J9NS
V 7NPE 7NPE 7NPE DE QV5R QV5R (faulty txm)
V 8CPZ 8CPZ 8CPZ DE XW6W XW6W
V 8DKB 8DKB 8DKB DE ODY8 ODY8
V 8PEX 8PEX 8PEX DE TI5F TI5F
V BNGC BNGC BNGC DE XSV85 XSV85
V BIQ9 BIQ9 BIQQ9 DE ISL2 ISL2
V BRH0 BRH0 BRH0 DE 8NGG 8NGG
V B9SR B9SR B9SR DE AL6R AL6R
V CQ CQ CQ DE DP91 DP91
V CQ CQ CQ DE DP0491 DP4091
V DKG6 DKG6 DKG6 DE 3A7D 3A7D
V DKSL DKSL DKSL DE ALSK ALSK
V DKIL DKIL DKIL DE ALSK ALSK (faulty txm)
V DP9J DP9J DP9J DE CQ CQ
V EI0B EI0B EI0B DE JHG2 JHG2
V GKLO GKLO GKLO DE TYUI TYUI
V GKN7 GKN7 HKN7 DE F3J5 F3J5
V H2FL H2FL H2FL DE DRV8 DRV8
V JKDJ JKDJ JKDJ DE SLBC SLBC
V M8JF M8JF M8JF DE RIS9 RIS9
V MW3D MW3D MW3D DE 2SLC 2SLC
V N4FM5 N4FM5 N4FM5 DE NAT491 NAT491
V PGG9 PGG9 PGG9 DE MI6Y MI6Y
V RA5J RA5J RA5) DE BP2S BP2S
V RXP7 RXP7 RXP7 DE CZT2 CZT2
V S2LZ S2LZ S2LZ DE YBA6YBA6
V SR3H SR3H SR3H DE FGH8 FGH8
V SXL6 SXL6 SXL6 de 9QFZ 9QFZ
V TKLO TKLO THLO DE TYUI TYUI
V TY9D TY9D TY9D DE EOX2 EPX2
V VTX7 VTX7 VTX7 DE TZ7B TZ7B
V VXL1 VXL1 VXL1 DE XIW2 XIW2
V WZG6 WZG6 WZG6 DE 4VTG 4VTG
V YUQW YUQW YUOQ DE ASDF ASDF
V ZRM7 ZRM7 ZRM7 DE LCM0 LCM0
V N4FM5 N4FM5 N4FM5 DE DUT491 DUT491
V Q5U8 Q5U8 Q5U8 DE 8QPP 8QPP
V QHV8 QHV8 QHV8 de 8QPP 8QPP
VVV Q2M Q2M Q2M DE NYZ NYZ
V DKSL DKSL DKSL DE ALSK ALSK
V 3A3J 3A3J 3A3J DE B4ZJ B4ZJ
V HER6 HER6 HER6 DE WU6L WU6L
V BR3S BR3S BR3S DE JU9D JU9D
V DGG6 DGG6 DGG6 DE 3A7D 3A7D (faulty ?)
V TY9D TY9D TY9D DE EPX2 EPX2
VVV VVV VVV 4GN 4GN 4GN DE DE QJ7 QJ7
VVV CQ CQ CQ DE UKNO UKNO
VVV WNF WNF WNF DE FXM FXM
VK6EN K6EN K63N DE D3MR D3MR
V DF4J DF4J DF4J DE D3MR D3MR
V FJ4B FJ4B FJ4B DE D4MR D4MR
V SNT9 SNT9 SNT9 DE D3MR D3MR
V DF4J DF4J DF4J DE D3MR D3MR
V 43A 43A 43A DE A34 A34
V K6EN K6EN K63N DE D3MR D3MR

JJT55
YSF0 DE 1CKT
CJ0B DE T3MP
GU96 DE 3CSZ
DVK5 DE KL6U
BG3Y DE KL6U
DVK5 DE KL6U
VRED DE CBVG
7L0U DE 47RU
XFG2 DE GAIA

6855 kHz, 06-11, 1009 UTC

NR 110/CCK 19 11 1098 RMKS 1183 TO 1618 AR
R GA K (Other station also on this frequency)
7G. = =
7NUA 3N4N NUTU U6A3 434U .563 3D47 (Cont'd)
R QSL ....
WK NR 1040 K
RR HR WK NR 207 K K
R NIL SK GB
OK SK GB

80471 kHz, 06-11, 1003 UTC

MSG NR 33 CK 399 19 1106 1903 RMKS 9100 TO 9359 K = =
7DD5 645U TUA7 A3T7 5U6A 7346 A763 6NUT TA63 TTT5 AT6U (Cont'd)

4444 kHz, 07-11. 2250 UTC

3186 9674 3420 699845960MMMM G0
TT0M TT00 TO 05 05
TTNA M00 TTM 0 05 05 4 000 05 05 05 05 05 (Cont'd)
= = T0123456789
103978432768B65 5U43724659022390U270M
0T841145658 9185192903
00176458A113827468 38209
46T50M6? 6203 9475 7083 0276 3U46 4568 2698
31..2MM? 3128 5709 0974 5.14 5372 (Cont'd)

6775 kHz, 12-11, 1917 UTC

1611/06/96/69/COMM/1680/DUTY AR
HR NR 1110 SK
SD2Y DE CV6K
HR SVC GA HR SVC GA =
1614/06/97/69/COMM/1680/DUTY AR = =
HR NR 1110 SK
VVV SD2Y DE CV6K
HR SVC GA HR SVC GA
= = 1704/.6/94/69/COMM/1680/DUTY AR AR
HR NR 1110 K
V SD2Y DE CV6K
HR SVC GA = =
1623/06/95/../COMM/.680/DUTY AR
1623/06/95/69/..COMM/
HR SVC GA

3330 kHz, 12-11, 1141 UTC

/8450 UGT COMM AAES =
80790/4676/2100/117NR..5/0.=
80790/46 EEE 64678/2100/117NR/1580P. AR
MSG NR 045 CK 301 44 1112 1930 =
UD5. 3U7T U.7T N7T4 3TAD 7D63 T635 DU74 TT.D TT3. (Cont'd)

7777 kHz, 12-11, 1152 UTC

GMYU.OP ASDF D5
QWERTY UIOPABIE DFGHJKLZ. XCVBNM
05 05 QWERTY UIOPASDRGHJK.ATEZKXCVBN..NBCXZLKJHGFDSAM
QWETEEEEEE QWERTY UIOPA.FGHJKLZY EEEEEEXXX
QWERTY UIOPL..GLJKLZA QWERTY .. E QWERTY UIOPASDRGH.KLDXC.TDENM
IREE QWET EEEEEE QWERTY UIOPABIFGHJKLZXCVBMNM
(Cont'd sending QWERTY)

6775 kHz, 13-11, 1427 UTC

1.04/../6/4COMM/1680/DUTY AR
= 1705/06/16/34/COMM/1680/DUTY AR
HR NR 1290 NIL SK

5421 kHz, 13-11, 1213 UTC

R GA K
R 11W GA = (Other station also on this frequency)
D454 734A 6546 D65N T64N U3AT DA74 6TTN 5TAN 3A7D 56ND (Cont'd) AR
R QSL 2018 K
R U MSG GA K
R HR MSG GA MSG NR 052 CK 99 72 1113 2018 RMKS 3375 TO 33.3 K K
R GA K
R 1W = 6UT. 765U T734 (Cont'd)

5624 kHz, 13-11, 1205 UTC

NR 88
R AS IEC =
MSG GA MSG NR 18/N AGN
MSG NR 18/CCK CK .5 55 1113 2000 RMKS CQ =
3...UATA 5657 5U. 5N.A TDA6 A373 AN4U TA64 TTUA TDAN (Cont'd) AR
JIN7 (Other stations on a different frequency)
R SK
LI4K
R SK
TU2C
R SK
4TBK
QSL ? K
R SK

6775 kHz, 15-11, 1549 UTC

VV SD2Y DE CV6K
Hr SVC =
= 1786/04/36/69/COMM EEEEEE
09/COMM/1680/DUTY AR
= 1790/05/99/09/COMM/1680/DUTY AR
= 1790/05/99/09/COMM/1680/DUTY AR
HR NR 132 HR NR 132 SK SK
VV SD2Y DE CV6K (Cont'd)
HR SVC GA (x3)
= 1764/05/99/69/COMM/1680/DUTY AR
= 1764/05/99/69/COMM/1680/DUTY AR
= 1764/05/99/69/COMM/1680/DUTY AR
HR NR 132 HR NR 132 SK SK

5240 kHz, 17-11, 1236 UTC

DE 4GVZ K
R = 7134 AR K
R HR NR 58 K
HR NR 58 K
R K
GA
R GA
QSL 2038 K
R HR FF NR .7/EX 2039 RMKS 1325 TO 3643 =
WHET1/LONY6 AR = WHET1/LONY6 AR K
AGN
R R GA GA
QR R R 1P 79W
89W K
R 80W K
R R 46W K
R R 11W
R R QSL 2049 K
R R HR 7G NR 07 CK 115 59 1117 2 A Q
VVV K HR QSL 2049 K
QSL 2049 K
HR 7G NR 07 CK 115 59 1117 205 AGN
NR 07 CK 115 59 1117 2050 RMKS 1325 TO 3643 K
D5D4 36UN 7N67 UT3T 6U5D 374A DU36 4DND TA6D TTA4 (Cont'd)

9123 kHz, 18-11, 0144 UTC

i.p. 6DA7 AR HR WK NR 1 AR K
IEC ? K
HR WK NR 11 AR K
R QSL ? K
QSL .945 HR WK NR .8 K
R RPT K

10786 kHz, 18-11, 0124 UTC

i.p. DDN7 77DT NAU4 6A4N UT5N A55A NT45
AR K
R 530W = AN7N AN7N K AR EEEEE AGN
30W = AN7N AN7N K K
R R 50W = 5TNA AR K
R R 54W = 6D36 AR K
SK GB K

6775 kHz, 19-11, 2130 UTC

SD2Y DE CV6K
Hr SVC GA HR SVC GA = =
1756/39/94/49/COMM/1680/DUTY AR =
1756/39/94/59 EEEEE =
1756/39/94/49/COMM/1680/DUTY AR
HR NR 110T HR N4 110T (Long zero followed by short zero)
E EX EX EX DE JJT55 JJT55 JJT55
VVV JJT55 VVV VVV JJT55 VA VVV VVV JJT88 VVV VVV JJT88 VA

5734 kHz, 20-11, 0342 UTC

R QSA 1 QSA ? K
R YSF0 DE 1CKT
N QSA 1 QSA ?
R YSF0 DE 1CKT
R QSA 1 QSA ? K
R CSUS
R YSF0 DE 1CKT
R QSA 1 QSA ? K
R YSF0 DE 1CKT
R QSA 1 QSA ? K
R CJ0B DE T3MP
R QSA 1 QSA ? K
R CJ0B DE T3MP
QSA 1 QSA ? K
R GU96 DE 3CSZ
R QSA 1 QSA ? K

5773/10180 kHz, 20-11, 0329 UTC

VVV DVK5 DE KL6U K
R .. PR QSA 2 QSA ? K
R QSA 2 QSA ? K
VVV DVK5 DE KL6U K
R QSA 2 AS
OK
VVV BG3Y DE KL6U K
VVV DVK5 DE KL6U K
R VRED DE CBVG R QSA 2 QSA ? K
R QSA 2 AS K
VV HR MSG GA
NR 001/T5S CK 256 26 1120 1120 RMKS CQ AGN
7G NR 001/TRS CK 256 26 1120 1120 RMKS CQ K
GA = =
T4AD TD36 TN.A 6TD6 6N3T D3T3 T5DA ATD3 D.AA 3T73 (Cont'd)

5788//10180 kHz, 20-11, 0306 UTC

7L0U DE 47RU
R QSA 1 QSA ? K
R 7LO R 7LOU DE 47RU
R QSA 1 QSA ? K
R 7LOU DE 47RU
R QSA 1 QSA ? K
R 7LOU DE 47AU R QSA
QSA 1 QSA 1 QSA 1 QSA 1 QSA 1 QSA 1
R 7LOU DE 47RA EEEEE 47RU
R QSA 1 QSA 1 QSA1
R 7LOU DE 47RU
R QSA 1 QSA 3 ?
R 7L0U DE 47RU
R QSA 1 QSA ? K
R 7L0U DE 47RU
R QSA
R 7L0U DE 47RU
R QSA 1 QSA ? K
R 7L0U DE 47RU
R QSA 1 QSA ? K
R 7L0U DE 47RU
R QSA 1 QSA ? K
R 7L0U DE 47RU
R QSA 1 QSA EEEEEE QSA 1 QSA ?
R 7L0U DE 47
R U R 7L0U DE 4
R 7L0U DE 47RU
R QSA
R 7L0U DE 47RU
R QSA 1 QSA ? K
R 7L0U DE 47RU
R QSA U EEEEEE
R 7L R7L0S UUU F
R 7L0U DE 47A AAA
R 7L0U DE EEEEE
R 7L0U DE 47RU
R QSA 1 QSA ? K
R A R 7LO
A6 AB AB CDE LTL ABCNEFGHIJKLMN0PQRSTUVWXZCMZ
ZCXW4HH Z.XW4.S R QPONNLKJIHGA
FEDCBBBA AAAA ABBBBB
ABCDEFNGHIII JKAWAAAAA
ABCDEFGHSIII AB ABCDEFGHIM
AB ABCDEFGHIJKLMN0PQRSTUVWXYZ (Sending the alphabet)
ZCXWUT ZCXWVUTSRQA.9NNP (Now sending alphabet backwards!)
ZCXWUT III SSSS ZCXWVUTS R QP0NMW AL AL AI
ZCXWVUTSRQPON.LDJIHGFEDCBA
ABCDEFGHIJKLWN0PQRSSS 0 ABCDEFGHIJKLMN0PQRSTUVWXCYYYZ

3358 kHz, 21-11, 1514 UTC

HR WK NR 011 K
HR WK NR 103 U MSG GA K
R MSG NR 001/CCK CK 91 27 1117 ..3.
745T T730 U0K GA =
556Z AR K
QSL 1238 HR MSG GA
GA
MSG W EEEEE
MSG NR 001/CCK CK 91 27 1117 1230 RMKS 3040 TO 8.50 = =
.57 AR K
QSL 1246 K
SK SK GB GB
555555

3358 kHz, 21-11, 1525 UTC

8450 TO 3040 K
GA
= 55674 AR K
QSL 1238 HR AGN GA K
GA MSG NR 001/CCK CK 91 27 1117 .230 RMKS 3040 TO 8450 =
VVV VVV VV XFG2 XFG2 DE GAIA GAIA K
R QSA 3 IEC = 3885 AR K
R RPT K
R IEC 3885 AR K
R IEC = 3885 AR K
R IEC = 388 EEEE R IEC = 3885 AR K
R HR WK NR 007 K

3811 kHz, 22-11, 2213 UTC

ND4N 35U6 3A3A U367 536A A3AD U3TA IIII =
3U64 5D76 UN5N 7N3N T557 (Cont'd)
AR K (Repeats groups)
R K
SK GB

5644 kHz, 24-11, 1353 UTC, i.p.

SVC GA
NR 46 245 RMKS 3507 TO 6.3/6792394
FM .FM FM 8243082402
FM 2092..243507 824 43051.
FM 1990196214501
FM = ...5078
FM 364 AR
FM .. 4 6792394..3..
FM 8243082402
FM 209278243507824 6430510
FM.. 7201 III .... QSL ?

6680 kHz, 25-11, 1117 UTC

7T5T 6N4D 6T34 UNND A53U 36AA ATN7
K
R 1P1.. K
RPT 1P 06W K (Both stations on this frequency)
R RP. 6U = .UU. AR K (Cont'd repeat groups)
6 NR K
QRJ QSY TO 6 NR K
OK

8175 kHz, 21-11, 0148 UTC

HR SVC NR =
1.3/10/30.09/ EEEEE 10 EEEEE = 162/10 EEEEE
1626/0//09/09/COMM/1680/DUTY AR
162./0./0/0./.9/COMM/1680/DUTY AR

3860 kHz, 30-11, 1345 UTC

T365 7AD3 UD4T 37AD 3.47 NUD3 7563 T57A 6AD4
III AR AR AR AR III AR AR AR AR
III III N P 6354 T.75DA4 D573 T453 (Cont'd)

5566 kHz, 30-11, 1353 UTC

GA GA GA GA GA GA GA GA GA GA GA
VV VV VV HR SVC GA VV HR SVC GA
VV HR SVC GA
NR NR N A NR NR NR NR 179
NR 179 179 NR 179
NR 179 1915 RMKS RMKS RMKS RMKS RMKS 3507 TO 6757/6797
VV HR SVC GA NR 179 1915 RMKS 3507 TO 6757/6797 = *)
COMM/2000/LZ725A7/3504677
VV S EEEEE VV VV HR SVC GA
NR 169 1915 RMKS 3507 TO 6757/6797 =
COMM/2000/LZ725A7/3504/6757 AR
AGN
NR 179 1915 RMKS 3507 TO 7EEEEEE 3507 TO 67../6797 =
COMM/2000/LZ725A78EEEE
COMM/2000/
VV HR SVC GA NR 99 AR EEEEEE
VV VV VV VVHR SVC GA
NR 179 1915 RMKS RMKS RMKS 3507 TO TO TO TO 6757/6797 =
COMM/2000/LZ725A7/3504/6757 AR
AGN AGN
NR 179 1915 RMKS 3507 TO 6757 6797 =
COMM/2000/LZ725A7/3504/6757 AR
QSL ? QSL ? QSL ? HR WK NR 23 QSL ? HR WK NR 23 HR WK NR 32 HR WK NR 23
SVC ZA Z.. GA GA A GA GA MA GA GA GA
NR 179 1915 RMKS 3507 TO 6757/

*) Same SVC message (NR 176) format/recipients used by ASKL on 9131kHz at 0300z earlier today

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6421//9131 kHz, 30-11, 0300 UTC

NR 176 2100 RMKS 3507 TO 6797 =
COMM/..45/LZ/.../3..4/6.97 AR AGN
NR 176 2100 RMKS 3507 TO 6797 =
COMM/.145/LZ720./350./6797 AR
QSL ? HR WK NR 26

M90 Czech army

4133 kHz, 16-11

0731 UUTC I6RI I6RI AR =
QTR QTR 08 :39
I6RI I6RI AR
QTC 897 = 1 30 16 0842 087 = I6RI = DNFVZ KADQS 04178 MISIS RFDPF .... = ZEC3 =
(rpt msg 2x) = FOR I6RI RPT AL QLN AR I6RI I6RI

4133 kHz, 16-11

0750 UTC I6RI I6RI AR
897 = 2 30 16 0851 087 = I6RI = KYZJY WBOPM IEPGF XUAXB FHDPQ YZFGU JHKCP TJILP FABDA IJNDR …
= FOR I6RI RPT AL QLN AR. I6RI I6RI AR

0801 UTC I6RI I6RI AR
897 = 3 30 16 0901 087 = I6RI = 02698 QLUZY NUETY 42454 …
= FOR I6RI RPT AL QLN AR
I6RI I6RI AR

0816 UTC I6RI I6RI AR AR QTR 09:16
= FOR I6RI 237 831 931 338 621 AR
I6RI I6RI AR

M95

Note:
It seems that XSV, XSV85, XSV70 and the 05 transmission are all related and therefore should all be logged as M95. They were formerly logged as M89.

8073 kHz, 02-11, 1138 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA PSE CY
NR 0938 CK 268 35 1102 1631 =
T4T TU3 UT5 3AN 3U7 TAU 773 353 4T3 (Cont'd)
AR
MSG AGN MSG AGN
NR 0939 CK 32 35 1102 1637 =
TAA N5U TTU N53 TAD N54 7TT TAT 746 76
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TUU
773 TU3 773 TU4 773 TU5 773 AA 77 ?77 AN
7AT N47 AR AR
MSG AGN
NR 0938 CK 268 35 1102 1631 =
TTU 3U6 3AN 3A (Cont'd)

8176 kHz, 02-11, 2300 UTC

i.p. 05 05 05 = MMCO MCO 7AL 05 05 AS 7700 05 05 M 05 05

8073 kHz, 03-11, 0010 UTC, i.p.

773 353 403 NN3 447 3D4 4DT 4D6 TAD 773 TU3
AR AR
HR 7G GA
NR 0941 CK 38 35 1102 07.. =
TAA N5U TT4 N53 TT6 N54 7TT TAA 746 7T5
77T T.. DNU T 7T7 TAU 773 TA7 773 TAD 773
TUU 773 TU3 773 TU4 773 TA5 773 TU6 773
TU6 773 TUT 773 7AN 7AD N47 3A4 7U4
AR AR

6836 kHz, 06-11, 1014 UTC: 05 05 05

8079 kHz, 07-11, 2314 UTC: i.p. 05 05

8073 kHz, 11-11, 0001 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA PSE CY
MSG NR 0961 CK 104 35 1111 0709 = =
TAA 3U4 3A4 TAU 773 TA7 773 TU4 773 TU5
773 353 4T3 NN3 447 3D5 4DT 4D6 TAD 773
357 4T4 NN3 446 467 3D4 4DT 4D6 TAN 773
TU3 773 357 35N 4A7 NN3 446 3D3 4DT 4D3
TUT 773 347 35N 4A7 NN3 445 3DU 4DT 4D3
TUA 773 356 4A7 NN3 435 3DT TTU 4DT 4D6
TUU 773 TU6 773 356 4A7 NN3 435 466 3DT
TTU 4DT 4D6 TU7 773 TUN 773 T3T 773 T3U
7773 357 N35 374 4T3 NN3 445 474 437 3DU
4DT 4D5 T3A 773 T33 773 353 373 4T3 NN3 III =
445 3DU 4DT 4D6 AR
A HR MSG GA
MSG NR 0962 CK 28 35 1111 0720 = =
TAA N5U TAA N53 TT6 N54 7TT TT3 746 7T5
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TU4
773 TU5 773 7AN 7AD N47 3A4 7U5 AR

8073 kHz, 11-11, 1136 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA PSE CY
NR 0963 CK 138 35 1111 1631 =
TAA 3U6 .AN 3U7 TAU 773 TA. (Cont'd) AR AR AR AR
A HR MSG GA
NR 0964 CK 28 35 1111 1646 =
TAA N5U TAA N53 TAD N54 7TT TT4 746 7T5
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TU4
773 TU5 773 7AN 7AD N47 3AN 7U5 AR AR
MSG AGN
NR 0963 CK 138 35 1111 1631 =
TAA 3U6 3AN 3U7 TAU 773 TA7 773 TU4 773 (Cont'd repeat messages)

8073 kHz, 05-11, 0009 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA PSE CY
NR 0947 CK 86 35 1105 0708 =
TT5 3U4 3A4 TAU 773 TU4 773 TU5 773 353
4T4 NN3 446 3D4 336 N3D 4T3 NN3 435 3D3
4DT 4D6 TA7 773 TAD 773 TAN 773 353 4A7
NN3 435 466 3D3 4DT 4D6 TUT 773 353 35D
4A7 NN3 445 3DU 4DT 4D3 TUA 773 UUU 773
TU3 773 TU7 773 357 373 4T4 NN3 435 474
437 3T3 4DT 4D6 TU6 773 357 4T4 NN3 435
3DT TTU 4DT 4D6 TUN N34 T33 773 353 37U
4T7 NN3 445 3DU 4DT 4D6 AR AR
AS AR AR MSG AGN
NR 0947 CK 86 35 1105 07 08 = (Repeats message)

5555 kHz, 10-11, 2351 UTC, i.p.

4AU3 E T T UUSAAA
AU3 ... VVVVVV BNBC BNMG B VVVV =
BNGC BNGC BNGC DE XSV XSV XSV
MGA AUF 44 UVVVVV R.UUUUUUAUUUASUUUUUUUUUUUU (Cont'd)
34AU3445666666
05 05 05 05 (Cont'd)
AU3 AR

8073 kHz, 12-11, 1135 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA PSE CY
NR 0967 CK 218 35 1112 1630 =
TAU 3U6 3AN 3U7 TAU (Cont'd)

8073 kHz, 19-11, 1136 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA
NR 0983 CK 122 35 1120 1653 =
TUT 3U6 3TN U7 TAU 773 TA7 773 353 (Cont'd)

8073 kHz, 22-11, 0005 UTC

V BNGC (x3) DE XSV85 (x2)
IZ GA HR MSG GA
MSG NR NR 0986 CK 106 35 1222 0702 = =
TUU 3U4 3A4 TAU 773 TA7 773 356 (Cont'd)

8073 kHz, 23-11, 1139 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA PSE CY
NR 0989 CK 297 35 1123 1646 = =
TE .. 3AN 3U7 TAU 773 TA7 773 356 (Cont'd) AR AR
AGN AGN
NR 0989 CK 297 35 1123 1646 =
TU3 3.3AN 3U7 TAU 773 TA7 773 356 (Cont'd) AR
7G GA
NR 0990 CK 48 35 1123 1649 =
TAA N5U TU3 N53 TAD 47T TTA 746 7T5 TT3 (Cont'd)

8073 kHz, 25-11, 1137 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA
NR NR 0997 CK 222 35 1125 1621 = =
T53 U63 AN 3U7 TAU 773 356 4T3 NN3 (Cont'd)

8073 kHz, 13-11, 1137 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA PSE CY
NR 0969 CK 187 35 1113 1603 =
TA3 3U6 3AN 3U7 TAU 773 TA7 773 TAD 773 (Cont'd)

8073 kHz, 15-11, 0003 UTC, i.p.

HR MSG PSE CY
NR 097. CK 10. NR 097. CK .0 35 1115 07.2 =
TA5 3U. ... (Cont'd)

8027 kHz, 15-11, 0009 UTC 05 05 05 05 05 05 05 05 05 VVVV 05 05

8073 kHz, 16-11, 0004 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSG GA
NR 0974 CK 94 35 1116 0654 =
TA6 3U6 3AN TAU 773 357 373 4T4 NN3 435
3DT TTU 4DT 4D6 TA7 773 TAD 773 356 4A7
NN3 445 3DU 4DT 4D6 TAN 773 TUT 773 TU3
773 356 4T7 NN3 434 3DT TTA N34 TTA ND4
TT5 4DT 4D6 TUA 773 TUU 773 35U 4A7 NN3
434 3DT TTA N34 TTA ND4 TT5 4DT 4D6 TU4
773 TU5 773 35U 4A7 NN3 435 466 3DT TTU
4DT 4D6 TU6 773 TU7 773 35U 4A7 NN3 445
3DU 4DT 4D6 TUN N34 T33 773 356 4T4 NN3
445 3DU 4DT 4D6 AR
MSG AGN
NR 0974 CK 94 35 1116 0654 =
TA6 3U6 3AN TAU 773 (Cont'd repeat message)

8073 kHz, 25-11, 0007 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA PSE CY
NR 0995 CK 125 35 1125 0726 = =
TU53U4 3A4 TAU 773 TA7 773 356 4T3 NN3 436 (Cont'd) AR AR AR
AGN MSG GA
NR 0996 CK 52 35 1125 0729 =
TAA N5U TU5 N53 TT6 N54 7TT TT3 746 767 TA4 (Cont'd)
AR AR AR
MSG AGN
NR 0995 CK 125 35 1125 0726 =
TU5 34 3A4 TAU (Cont'd repeat messages)

8073 kHz, 26-11, 0007 UTC

V BNGC (x3) DE XSV85 (x2)
HR MSGS GA
NR 0999 CK 108 35 1126 0704 =
TU6 3U4 3A4 TAU 773 353 4T3 NN3 44D 46N (Cont'd)
III 2P GA = (So it looks like a P (Part) is 100 groups)
357 373 4T3 NN3 446 3D3 4DT 4D6 AR
MSG GA NR NR 1 EEEEEE
HR 7G GA PSE CY
NR 1000 CK 44 35 1126 0716 =
TAA N5U TU6 N53 TT6 N54 7TT TT5 746 7T5
77T DN3 7T7 TAU 773 TA7 773 TAD 773 TAN
773 TUT 773 TUA 773 TUU 773 TU3 773 TU4
773 TU5 773 TU6 773 TU7 773 TUN 773 7AN
7AD N4
FM 31W 6.N =
773 TU5 773 TU6 773 TU7 773 TUN 773 7AN
7AD N47 3A4 7U5 AR AR (0022z)
7G AGN NR 1000 CK 44 35 1126 0716 =
TAA N5U TU6 (Cont'd repeat message)
AR AR (Switched to voice V26 – Female operator)

UM10 - 10-minutes net

3772 kHz, 03-11, 1516 UTC	A4JC	3772 kHz, 22-11, 1547 UTC	A4JC
3285 kHz, 03-11, 1519 UTC	4KUE	3772 kHz, 22-11, 2212 UTC	A4JC
3772 kHz, 10-11, 2211 UTC	A4JC	3285 kHz, 22-11, 1853 UTC	4KU3 //3958 kHz
3772 kHz, 15-11, 2018 UTC	A4JC	3772 kHz, 28-11, 1546 UTC	A4JC
3772 kHz, 21-11, 1519 UTC	A4JC	3772 kHz, 30-11, 1341 UTC	A4JC

DIGITAL MODES

HM01
Dirección General de Inteligencia

HM01 oddities

10715 kHz, 1-11, 2155 UTC	Started but stopped after couple callup groups. Then tuning tones and into msg for 1st callup group
11435 kHz, 2-11, 1606 UTC	Into RDFT, skipped the tuning tones, then 32432 32231 53875 61431 36887 67788
11435 kHz, 7-11, 1603 UTC	Tuned xmtr. Stopped and resumed in RDFT, no callup or tuning tones. 85760 10606 335366 57673 23835 14033
11435 kHz, 15-11, 1603 UTC	Tuning xmtr at 1603z then 48083 43333 32436 32234 53879 61435. Note: Did not send callup nor tuning tones
11435 kHz, 26-11, 1555 UTC	Transmitter tuned at 1555z. Transmission started at 1633z, 35 mins late. 17071 53765 72359 31576 81683 48864
11530 kHz, 26-11, 1658 UTC	Music briefly. Then 22222, tape hung up. Carrier goes off at 1702z. Back with rptd 22222 and then 17071 53765 72359 31576 81683 48864
11435 kHz, 29-11, 1607 UTC	17071 53765 72359 31576 81683 48864. Note: Tuning tones were not sent

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M42 & X06

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

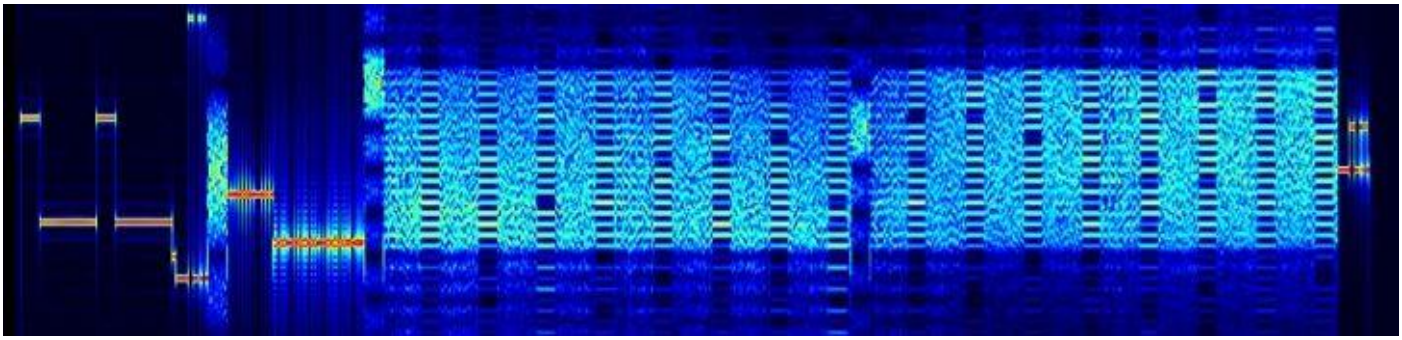
Russian Government & Intelligence

M42 – various modes

The Russian are experimenting with a number of new digital modes. Linkz compiled a number of them. See the Appendix for the details.

Thanks to Linkz, Danix and André for the following logs, recordings and picture.

The 17-tone OFDM/MPSK waveform is the same as in this video: https://www.youtube.com/watch?v=TpJiBrQckJY



Courtesy of Linkz

11517 kHz, 11-11, 0950 UTC FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
12087 kHz, 11-11, 0945 UTC, FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
13536 kHz, 11-11, 0940 UTC, FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
15697 kHz, 11-11, 0935 UTC, FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
17457 kHz, 11-11, 0930 UTC, FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
18041 kHz, 11-11, 0745 UTC, FSK + 17-tone OFDM/MPSK + BPSK 250Bd. Burst every 10 secs.
10250 kHz, 18-11, 1531 UTC, 5xMFSK-16 + BPSK 250Bd. Burst every 10 secs.
10250 kHz, 18-11, 1534 UTC, FSK 1600/2100Hz + BPSK 500Bd/250Bd + QPSK 2x62.5Bd QPSK + FSK 1500/1750Hz
10250 kHz, 18-11, 1559 UTC, FSK 1600/2100Hz + BPSK 500Bd/250Bd + QPSK 2x62.5Bd QPSK + FSK 1500/1750Hz
14690 kHz, 19-11, 1045 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted 1037-1038 UTC.
15626 kHz, 20-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted 0822-0823 UTC. QSX 16166 kHz
16166 kHz, 20-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted 0820-0823 UTC. QSX 15626 kHz
16230 kHz, 19-11, 1035 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted 1027-1028 UTC.
12172 kHz, 23-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted 0815 UTC. QSX 0830-0835z 13855 kHz, 0835-0935z 14422 kHz
13383 kHz, 23-11, 0920 UTC, MFSK-4/150bd/4000Hz/ACF=12.
13855 kHz, 23-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 12172 kHz QSY'd to 14422 kHz at 0835 UTC.
14422 kHz, 23-11, 0835 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 12172 kHz
14983 kHz, 23-11, 0910 UTC, MFSK-4/150bd/4000Hz/ACF=12.
16083 kHz, 23-11, 0900 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst noted
16166 kHz, 24-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12.
15626 kHz, 24-11, 0822 UTC, MFSK-4/150bd/4000Hz/ACF=12. Test burst
7823 kHz, 25-11, 1315 UTC, MFSK-4/150bd/4000Hz/ACF=12.
9223 kHz, 24-11, 1130 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
10463 kHz, 24-11, 1120 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
15622 kHz, 25-11, 0845 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
16157 kHz, 24-11, 1115 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
16216 kHz, 25-11, 1100 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
18592 kHz, 24-11, 1105 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
18530 kHz, 25-11, 1050 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
9069 kHz, 26-11, 1500 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
11094 kHz, 26-11, 1450 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
13473 kHz, 26-11, 1045 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
14819 kHz, 26-11, 1430 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
15611 kHz, 26-11, 1035 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
16136 kHz, 26-11, 1420 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast
9300 kHz, 27-11, 0545 UTC, MFSK-4/150bd/4000Hz/ACF=12. Probably test session. Ended 0550 UTC.
15626 kHz, 27-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 16163. Ended 0841 UTC.
15723 kHz, 27-11, 1045 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast, 30-45 secs.
16163 kHz, 27-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 15626. Expected 16166. Ended 0841 UTC.
18184 kHz, 27-11, 1035 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast, 30-45 secs.
5934 kHz, 30-11, 0430 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast. Ended 0435 UTC.
7542 kHz, 30-11, 0420 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast. Ended 0425 UTC. UTC,
12173 kHz, 30-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 13855. Ended 0915 UTC.
13434 kHz, 30-11, 1445 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast, 30-45 secs.
13855 kHz, 30-11, 0830 UTC, MFSK-4/150bd/4000Hz/ACF=12. QSX 12173. Ended 0838 UTC.

15880 kHz, 30-11, 1435 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast, 30-45 secs.
16083 kHz, 30-11, 0900 UTC, MFSK-4/150bd/4000Hz/ACF=12. Broadcast. Ended 0909 UTC.

6780 kHz, 16-11, 1636 UTC Very irregular test transmission, alternating between standby and null message format, signal sometimes inverted. Ended 1651z. FSK 200/1000/ACF288
18340 kHz, 25-11, 1023 UTC APW de KLM QSA ? K CW followed by digital traffic
19888 kHz, 26-11, 1548 UTC Russian diplo/intel, Cuba. Message on link 00041. FSK 200/1000

M42b – FSK 50/500

Freq.	Date	UTC	Details
2002	3-11	1828	IBUP wkg CAGR (Msg in FSK 50/500, ops chat in CW)
2839	2-11	0644	i.p. 98508 45632 16681 22327 65901 95260 ... = K. QRU ? K. R 99 0653. R NIL SK
3254	2-11	0651	CFM QRX 51197 51906 K. NIL SK
4019	1-11	1455	OBRA de WVXZ QSY 51131
4020	12-11	0400	UZC2 wkg UTN7 (Ops chat in CW, message in FSK 50/500)
4035	2-11	0446	SKYM wkg NRKV (msg in FSL 50/500, ops chat in CW)
4461	29-11	0550	PZAK wkg PLXW (Ops chat in CW, message in FSK 50/500) QSX 4046 kHz
4524	13-11	0632	QSA 4 QTC 1 in CW and messages in FSK 50/500
4538	15-11	1712	VFGK comms checks with DATZ (ops chat in CW, messages in FSK 50/500)
4538	17-11	1710	Ops chat in CW and message in FSK 50/500. VFGK comms checks with DATZ
4607	25-11	1148	NEPK de MNBV QSY 89064 K. QSA NO S K
4787	2-11	0446	NRKV wkg SKYM (msg in FSL 50/500, ops chat in CW)
4819	18-11	0522	LENJ de LTJQ QSA NO QSY 50600 K
4856	17-11	0622	VBY de QST QSY 42984 K
4856	19-11	0621	Ops chat in CW and message in FSK 50/500. QSA 4 QTC 1
4856	25-11	0624	251 0624 QTC 1 ZZC ZVP SLD K (Ops chat in CW, message in FSK 50/500) CFM NIL SK
5013	17-11	0808	CKSP OK QSW 86868 K
5033	17-11	0801	CKSP OK QLO 20 K
5253	25-11	1304	COLH de OPNS QSA ? K. R 792 1313. QTC 1 (Ops chat in CW, message in FSK 50/500)
5350	7-11	0903	QSA 3 QTC 1 (msg in FSK 50/500 and ops chat in CW)
5431	16-11	1533	L2RS comms checks with KE4T (ops chat in CW and messages in FSK 50/500)
5469	15-11	1536	AIFH comms checks with CDAP (ops chat in CW, messages in FSK 50/500)
5688	18-11	0524	Ops chat in CW and message in FSK 50/500. QRU ? And QRV R 188 0533 K AR
5768	17-11	0831	RQUD QSA 4 QSA ? K and OK QLP 20 K
5788	17-11	0833	RQUD OK QSW 87428 K
5833	10-11	0934	Wkd 1 outstation (ops chat in CW, message in FSK 50/500)
14356	25-11	0912	OJEK de 5NT8 QSA NO QSY 68985 K
14500	5-11	0802	RTK2 clg RRQ5, RSH1, RGV3 (Msg in FSK 50/500, ops chat in CW)
14622	4-11	0802	WSJ8 wkg K9M1 (Msg in FSK 50/500, ops chat in CW)
16261	26-11	0650	J7ML de WD6M QSA NO K

M42c – FSK 200/500. Frequencies mentioned are in USB = center frequency -2 kHz

6824/5156/4015 kHz, 05-11, 2000/2010/2020 UTC RYRYRY)5761 00000++++++++++162
7760/5214 kHz, 07-11, 1820/1830 UTC RYRYRY)5761 00000++++++++++162
20372 kHz, 14-11, 1301 UTC RYRYRY)5761 00000++++++++++162
5158 kHz, 19-11, 2011 UTC)5761 00000++++++++++162
20372/18349 kHz, 21-11, 1300/1310 UTC)5761 00000++++++++++162
12175/10669 kHz, 24-11, 1015/1025 UTC =8661 29300394791141420 ends)57667 00000++++++++++166
22866/20572/18277 kHz, 25-11, 0700/0710/0720 UTC =8571 642108177523113 ends)481054531200000+++++134
6824/5156/4015 kHz, 26-11, 2000/2010/2020 UTC)5761 00000++++++++++162
12175/10669/8022 kHz, 26-11, 1015/1025/1035 UTC =7681 42618225099528373 ends)58166 +++++++++++++++98
12175/10669/8022 kHz, 27-11, 1015/1025/1035 UTC)5761 00000++++++++++162
20372/18349/16247 kHz, 28-11, 1300/1310/1320 UTC)5761 00000++++++++++162
9245/7760/5214 kHz, 28-11, 1810/1820/1830 UTC RYRYRY)5761 00000++++++++++162

12175/10669/8022 kHz, 26-11, 1015/1025/1035 UTC

=7681 42618225099528373
=8022 074294283484885115
=8083 033997788288154114
=8784 95003628717621172
=8515 673274208322227125
=8606 321173928447911147
=8367 010117143448712165
=8908 88435165464364796
=7859 323476898678749185
=77910 89718269220778370
=73711 26455174581472491
=87412 07442036737658841
=85513 67675191529923564
=82914 507037589329218110
=84915 982580831571659111
=78916 22654188478016559
=83517 84732035103250470
=90118 54998899557663457
=83919 91664109703307542
=85120 205391279024902104
=81421 45725060728847579
=83422 265438551340576104

=86623 26995900426213432
=80924 422244272079822113
=85425 354577421645865147
=87726 93023965329352890
=87627 0498165724674329
=84928 93900806343512089
=88729 808884774953730130
=81730 748442564176692111
=83331 96885210910000060
=72032 000000000000000109
=72033 000000000000000146
=83534 000001056305216107
=83035 39364586844398648
=82436 681537289019230106
=85837 049533242832784150
=82238 178572658246623178
=78639 51884433355065474
=86840 84269959649014289
=87741 525591232124866127
=83042 578460695763242116
=85643 716854081505112119
=86144 653961347775460147

=85745 598151142831885161
=80046 37175588476931045
=84247 871670417252907130
=82448 657665402430398151
=81749 889629673292688105
=84550 94728249344457192
=87451 53705186098667784
=81252 06693398366934585
=82253 531786530973537109
=86254 91225809145297628
=82555 43437316630330969
=80156 936252825654541100
=78557 662242377621601150
=86058 579618543023609142
=83459 06089385623697262
=77460 125875020569617103
=87961 163978932226373115
=82262 85089277602035847
=82763 73637868208835760
=84464 07574534221706365
=84565 601132209300000138
)58166 ++++++++++++++++98

Thanks to Danix who wrote the whole message down as 5-figure groups. Note the null sequence which is the separation between two messages..

Message, now in 5-figure groups.

42618 22509 95283 07429 42834 84885 03399 77882 88154 95003
62871 76211 67327 42083 22227 32117 39284 47911 01011 71434
48712 88435 16546 43647 32347 68986 78749 89718 26922 07783
26455 17458 14724 07442 03673 76588 67675 19152 99235 50703
75893 29218 98258 08315 71659 22654 18847 80165 84732 03510
32504 54998 89955 76634 91664 10970 33075 20539 12790 24902
45725 06072 88475 26543 85513 40576 26995 90042 62134 42224
42720 79822 35457 74216 45865 93023 96532 93528 04981 65724
67432 93900 80634 35120 80888 47749 53730 74844 25641 76692
96885 21091

10563 05216 39364 58684 43986 68153 72890 19230 04953 32428
32784 17857 26582 46623 51884 43335 50654 84269 95964 90142
52559 12321 24866 57846 06957 63242 71685 40815 05112 65396
13477 75460 59815 11428 31885 37175 58847 69310 87167 04172
52907 65766 54024 30398 88962 96732 92688 94728 24934 44571
53705 18609 86677 06693 39836 69345 53178 65309 73537 91225
80914 52976 43437 31663 03309 93625 28256 54541 66224 23776
21601 57961 85430 23609 06089 38562 36972 12587 50205 69617
16397 89322 26373 85089 27760 20358 73637 86820 88357 07574
53422 17063 60113 22093

Explanation of the line format as used by M42c (FSK 200/500)

=83269 967768160259101149
123 4 5 6 7 8

1. Indicator whether the message continues ("=") or ends here (")").
2. "7" or "8" if #1 is "=", and "5" or "6" if #1 is ")".
3. Unknown, depends on line content. Always 2 digits.
4. Line number, occupies three characters. Padded with spaces afterwards if less than 3 digits.
5. 5-digit group #1.
6. 5-digit group #2.
7. 5-digit group #3.
8. Unknown, depends on line content. Up to 3 digits. Padded with spaces afterwards if less than 3 digits.

Each message always ends 00000, and if there are remaining 5-digit group slots, they're filled with +++++.

If more than one message in a transmission is delivered, they are separated by at least one line containing "000000000000000".

Note that there are no line breaks internally.

The final 5-figure group consists of the message number and group count. This group is not included in the group count. So the number of groups in a message is the group count + 1.

Example:
Final group: 22093 means message nr 22 and 94 5-figure groups in the message.

12175/10669/8022 kHz, 30-11, 1015/1025/1035 UTC

=8011 46526740871027870
=8622 77384400269534283
=8593 403102123702262119
=8414 93928330599805499
=7715 215291529910696110
=8436 68178219826741361
=8257 23925146964187836
=8698 306889550629804135
=8099 09178547699786536
=85210 71597692021555637
=80311 319662719144028103
=88812 30922996404313588
=84613 28304585548657449
=83214 090565118024371101
=81215 98108054475905136
=85416 54933150735156515
=85817 98765123046181964
=78418 143630603454782163
=81419 036536438628679178
=85720 719601584689588132
=84521 394556752391417110
=84522 02994180968825477
=86223 79874051340728790
=80724 226547409287223115
=75225 722541763987533148
=81826 859861866086735122
=85527 88983260794847065
=81928 082238698811052152
=78829 58519366428119681
=83830 487831141776139151
=86331 227712232333521121
=81532 89045510864208597
=80433 196433816298866103
=79734 403184917886163110
=88535 82977938134335169
=83336 005742305185755119
=81537 1826277465512212
=85538 42684134180428057
=86339 32479074840044787
=83840 193233090734350104
=84441 01668261810051392
=83042 166647321426693104
=85643 313208371032399137
=78044 36787248182719594
=83345 33997866688865933
=88346 434632515314082139
=82447 96689023983357894
=81548 240648149278907164
=87449 687411364751645105
=80550 07945407398493972

=84751 508684900626519147
=81752 95022012587103477
=82853 381621609897781173
=88454 936797290204330150
=85455 462414582749572136
=77356 00818618752736994
=80057 611521313270789159
=83358 851209814050853147
=82559 814123883922389123
=85960 13557181581828282
=89561 96131546733447835
=83662 97228958686966344
=85163 475023542565801125
=83164 81954614436436138
=88865 90508250567196392
=89866 778459154444321146
=80167 68679132957765690
=81868 667547800534692138
=84069 032951234113514116
=82070 53130151194530736
=85871 25999459039117388
=84672 887647044260062110
=83973 02431511663205696
=83974 113855138538020113
=84375 78593146906738181
=86276 47295311220643936
=83577 63370719517043584
=85778 455638378358042109
=78879 213040344398199152
=83080 918148173778994128
=81281 205041425789461183
=86482 99782582258651787
=85483 42784951112173197
=85984 546531804352027142
=83285 479778711450831119
=86186 90159184998343481
=81687 73167163627631579
=81288 775442382145060182
=85989 71464841517396397
=89190 95268898236162623
=85991 353410021044927104
=86192 898254315590453120
=83693 374598630030835162
=86394 365431210509314124
=80295 38897620266645437
=89496 211212506762830125
=87197 91652099296786268
=81998 93930494619399739
=81699 8082409234154448
=87710 056300795746562689

=79310 1429508318868890133
=84710 2271162758705499222
=81610 341996300147686256
=81510 465540092439508791
=83915 5147035839798366148
=84710 6976207550420983136
=80210 7935243132167444111
=76910 8672920528427023143
=86910 9096989327288750157
=80611 0120977327699769131
=78111 1520422153380174145
=84111 206978222679661269
=83611 340491588226121989
=82211 4321243223440730119
=87411 5479655803853487125
=81811 659214705116661056
=78111 701631567099374277
=81711 820816592916010332
=85811 9958180508091729103
=90712 0863909021204223135
=82412 185331539037558199
=86112 2215728190472533106
=85512 3806637216788461134
=84712 4114059636712004102
=81612 5671826742312274112
=87412 689248352348313971
=75212 799703283592914575
=84912 8873680857083060140
=84912 9134205700070169105
=86113 0191053807623439157
=83213 1231381274774791153
=82613 2721050472375885161
=88713 3863600845574584114
=83713 4438040913488917216
=81613 5632978644053133115
=76913 6402376275029136118
=82313 749529156120063052
=84313 8937900017561094151
=78513 9661659636208872119
=86314 090688793466166436
=87314 199064935632076694
=87814 24136947647218463
=82114 364306461828957485
=76814 4324077984928113135
=83014 5729538109698179210
=89014 673779693209285171
=82114 755293946816877373
=86214 8561285828525393178
=86314 9146591508040006145
)7511502344700000+++++139

M42d – FSK 200/1000. Frequencies mentioned are in USB = center frequency -2 kHz

Link 16404 / 16405

20656/18537/16234 kHz, 25-11, 0900/0920/0940 UTC
Block No 0 : Total Message Size 27 blocks : This transmission contains one message.
Block No 1 : Link ID 16405 : 24th of month : Msg Number 232 : Msg Type 07145 : Group Count (?) 176
29404 21906 56203 35961 05092 33963 61009 49997

20656/18537/16234 kHz, 26-11, 0900/0920/0940 UTC
Block No 0 : Total Message Size 27 blocks : This transmission contains one message.
Block No 1 : Link ID 16405 : 24th of month : Msg Number 232 : Msg Type 07145 : Group Count (?) 176
29404 21906 56203 35961 05092 33963 61009 49997

Link 20492

20714/18476/16212 kHz, 11-11, 1015/1025/1035 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20492 : 11th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
12836 00000 00000 02866 50076 33447 00893 26495

20714/18476/16212 kHz, 25-11, 1015/1025/1035 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20492 : 25th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
36716 00000 00000 00397 34753 35815 00893 07830

Link 20501

11439/9067/7646 kHz, 03-11, 1650/1710/1720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20501 : 3rd of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
53788 00000 00000 00060 36779 36496 00893 09592

9067/7646 kHz, 10-11, 1700/1710 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20501 : 10th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
39180 00000 00000 00852 12857 35946 00893 11281

11439/9067/7646 kHz, 17-11, 1650/1710/1720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20501 : 17th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
39180 00000 00000 00919 12857 34095 00893 42563

12222/10171/8135 kHz, 22-11/23-11, 1530/1540/1550 UTC
Block No 0 : Total Message Size 45 blocks : This transmission contains one message.
Block No 1 : Link ID 20501 : 20th of month : Msg Number 132 : Msg Type 07145 : Group Count (?) 44
29968 41781 56707 19020 26517 37740 47722 13475

11439/9067/7646 kHz, 24-11, 1650/1710/1720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 20501 : 24th of month : Msg Number 147 : Msg Type 07145 : Group Count (?) 4
45628 00000 00000 01373 32012 35391 00893 52735

8135 kHz, 29-11, 1550 UTC
Msg Nr 002/29th Type 07145 on Link ID 20501: 39181 00000 00000 01133 12857 35150 00893 28574

Link 32799

18542/16150/14732 kHz, 03-11, 1400/1410/1420 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 32799 : 3rd of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
37420 00000 00000 00530 21819 34912 00893 46488

14732 kHz, 10-11, 1420 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 32799 : 10th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
55564 00000 00000 00267 09187 34444 00893 35563

18542/16150/14732 kHz, 17-11, 1400/1410/1420 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 32799 : 17th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
17444 00000 00000 03936 29865 32804 00893 57971

18542/16150/14732 kHz, 24-11, 1400/1410/1420 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 32799 : 24th of month : Msg Number 100 : Msg Type 07145 : Group Count (?) 4
55564 00000 00000 03735 09187 03183 00893 30651

Link 32816 / 32817

16139 kHz, 25-11, 0620 UTC
Block No 0 : Total Message Size 46 blocks : This transmission contains one message.
Block No 1 : Link ID 32817 : 21st of month : Msg Number 085 : Msg Type 07145 : Group Count (?) 51
19680 00953 58795 19160 05640 07065 51660 41196

Link 32821

18551 kHz, 21-11, 1520 UTC
Message Nr 002/21st Type 07145 on Link 32821
43088 00000 00000 03802 22795 33655 00893 49587

22982/20717/18346 kHz, 28-11, 1530/1540/1550 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 32821 : 28th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
19141 00000 00000 02425 16767 35101 00893 27703

Link 36882

17421/15626/13383 kHz, 01-11, 1100/1110/1120 UTC
Block No 0 : Total Message Size 26 blocks : This transmission contains one message.
Block No 1 : Link ID 36882 : 30th of month : Msg Number 077 : Msg Type 07145 : Group Count (?) 164
13425 00725 60784 05804 48247 36632 45590 34178

18046/16212/14356 kHz, 28-11, 1100/1110/1120 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 36882 : 28th of month : Msg Number 080 : Msg Type 07145 : Group Count (?) 4
29245 00000 00000 01994 43092 00221 00893 37505

Link 40988

13379/11016/9137 kHz, 20-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 41 blocks : This transmission contains one message.
Block No 1 : Link ID 40988 : 17th of month : Msg Number 155 : Msg Type 07145 : Group Count (?) 16
03484 39689 15397 27930 10214 06651 58707 15927

6834/5267 kHz, 24-11, 2310/2320 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 40988 : 24th of month : Msg Number 157 : Msg Type 07145 : Group Count (?) 4
47908 00000 00000 02311 16071 35526 00893 44833

Link 45057

20866/18257/16111 kHz, 15-11/28-11/29-11, 1000/1010/1020 UTC
Block No 0 : Total Message Size 19 blocks : This transmission contains one message.
Block No 1 : Link ID 45057 : 10th of month : Msg Number 192 : Msg Type 07145 : Group Count (?) 110
61272 24164 37641 23088 44730 35440 17451 19088

Link 45075

20312/18181/16152 kHz, 11-11, 0800/0810/0820 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 45075 : 11th of month : Msg Number 132 : Msg Type 07145 : Group Count (?) 4
27732 00000 00000 00869 21930 36284 00893 07217

20312/18181/16152 kHz, 25-11, 0800/0810/0820 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 45075 : 25th of month : Msg Number 107 : Msg Type 07145 : Group Count (?) 4
24768 00000 00000 03396 26649 35963 00893 20281

Link 45079

8169/6985/5144 kHz, 02-11, 0500/0510/0520 UTC
Block No 0 : Total Message Size 73 blocks : This transmission contains 4 messages.
Block No 1 : Link ID 45079 : 30th of month : Msg Number 015 : Msg Type 07145 : Group Count (?) 244
21505 22485 27222 02935 38380 00999 44218 07586

Link 45114 / 45115

19014/17423/14986 kHz, 15-11, 0900/0910/0920 UTC
Block No 0 : Total Message Size 31 blocks : This transmission contains one message.
Block No 1 : Link ID 45115 : 10th of month : Msg Number 052 : Msg Type 07145 : Group Count (?) 206
01204 03541 02616 38444 06443 35669 37937 12317

19014/17423/14986 kHz, 28-11, 0900/0910/0920 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 45115 : 28th of month : Msg Number 055 : Msg Type 07145 : Group Count (?) 4
13673 00000 00000 03782 00643 03218 00893 26311

Link 45136 / 45137

12175/10154/8136 kHz, 02-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 38 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 30th of month : Msg Number 120 : Msg Type 07145 : Group Count (?) 253
10077 13008 16588 34119 01146 03254 01590 21832

10229/8080/6867 kHz, 02-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 38 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 30th of month : Msg Number 120 : Msg Type 07145 : Group Count (?) 253
10077 13008 16588 34119 01146 03254 01590 21832

12175/10154/8136 kHz, 03-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45137 : 2nd of month : Msg Number 122 : Msg Type 07145 : Group Count (?) 155
47212 19716 21353 32185 01146 32908 06771 26363

10229/8080/6867 kHz, 03-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 50 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45137 : 2nd of month : Msg Number 122 : Msg Type 07145 : Group Count (?) 155
47212 19716 21353 32185 01146 32908 06771 26363

12175/10154/8136 kHz, 04-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 44 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 3rd of month : Msg Number 127 : Msg Type 07145 : Group Count (?) 37
45812 49441 30441 32087 01146 39003 22707 06974

12175/10154/8136 kHz, 05-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 54 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 3rd of month : Msg Number 130 : Msg Type 07145 : Group Count (?) 223
23272 32055 23263 15114 55182 03144 17001 12607

10229/8080/6867 kHz, 05-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 54 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 3rd of month : Msg Number 130 : Msg Type 07145 : Group Count (?) 223
23272 32055 23263 15114 55182 03144 17001 12607

12175/10154/8136 kHz, 06-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains 0 messages.
Block No 1 : Link ID 45136 : 6th of month : Msg Number 162 : Msg Type 07145 : Group Count (?) 4
36408 00000 00000 00330 65099 32919 00893 61490

12175/10154/8136 kHz, 09-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 37 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 6th of month : Msg Number 135 : Msg Type 07145 : Group Count (?) 243
23220 52902 22688 15045 55182 01809 43348 13694

10229/8080/6867 kHz, 09-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 37 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 6th of month : Msg Number 135 : Msg Type 07145 : Group Count (?) 243
23220 52902 22688 15045 55182 01809 43348 13694

12175/10154/8136 kHz, 10-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 59 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 9th of month : Msg Number 137 : Msg Type 07145 : Group Count (?) 175
22792 14487 52727 27885 55182 34099 29613 63732

10229/8080/6867 kHz, 10-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 59 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 9th of month : Msg Number 137 : Msg Type 07145 : Group Count (?) 175
22792 14487 52727 27885 55182 34099 29613 63732

12175/10154/8136 kHz, 11-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 32 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 10th of month : Msg Number 142 : Msg Type 07145 : Group Count (?) 215
59508 40832 39312 27264 07583 34709 25073 60972

10229/8080/6867 kHz, 11-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 32 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 10th of month : Msg Number 142 : Msg Type 07145 : Group Count (?) 215
59508 40832 39312 27264 07583 34709 25073 60972

12175/10154/8136 kHz, 12-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 67 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 11th of month : Msg Number 145 : Msg Type 07145 : Group Count (?) 53
34000 18259 36354 32052 01146 04994 46695 09598

12175/10154/8136 kHz, 16-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 43 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 13th of month : Msg Number 150 : Msg Type 07145 : Group Count (?) 29
00680 33718 26744 01632 01146 06134 32277 10838

10229/8080/6867 kHz, 16-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 43 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 13th of month : Msg Number 150 : Msg Type 07145 : Group Count (?) 29
00680 33718 26744 01632 01146 06134 32277 10838

12175/10154/8136 kHz, 17-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 56 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 13th of month : Msg Number 152 : Msg Type 07145 : Group Count (?) 175
22756 38293 29590 29288 55182 35563 42733 38072

10229/8080/6867 kHz, 17-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 56 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 13th of month : Msg Number 152 : Msg Type 07145 : Group Count (?) 175
22756 38293 29590 29288 55182 35563 42733 38072

12175/10154/8136 kHz, 18-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 38 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 17th of month : Msg Number 170 : Msg Type 07145 : Group Count (?) 253
25156 48294 18406 23645 01146 02581 04005 38835

12175/10154/8136 kHz, 19-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 53 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 18th of month : Msg Number 172 : Msg Type 07145 : Group Count (?) 169
14460 01511 59945 05059 58024 32846 15034 55968

12175/10154/8136 kHz, 20-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 20th of month : Msg Number 162 : Msg Type 07145 : Group Count (?) 4
38776 00000 00000 02642 01146 33166 00893 49075

12175/10154/8136 kHz, 23-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 32 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 20th of month : Msg Number 177 : Msg Type 07145 : Group Count (?) 213
57012 07732 35801 39012 58024 33125 01817 17042

10229 kHz, 23-11, 1200 UTC
Block No 0 : Total Message Size 32 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 20th of month : Msg Number 177 : Msg Type 07145 : Group Count (?) 213
57012 07732 35801 39012 58024 33125 01817 17042

12175/10154/8136 kHz, 24-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 64 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45137 : 23rd of month : Msg Number 180 : Msg Type 07145 : Group Count (?) 87
45592 61808 09848 33755 01146 03602 53765 34815

10229/8080/6867 kHz, 24-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 64 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45137 : 23rd of month : Msg Number 180 : Msg Type 07145 : Group Count (?) 87
45592 61808 09848 33755 01146 03602 53765 34815

12175/10154/8136 kHz, 25-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 43 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 24th of month : Msg Number 185 : Msg Type 07145 : Group Count (?) 35
06660 17941 53011 33068 07583 06898 35037 39686

10229/8080/6868 kHz, 25-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 43 blocks : This transmission contains one message.
Block No 1 : Link ID 45137 : 24th of month : Msg Number 185 : Msg Type 07145 : Group Count (?) 35
06660 17941 53011 33068 07583 06898 35037 39686

12175/10154/8136 kHz, 26-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 60 blocks : This transmission contains 2 messages.
Block No 1 : Link ID 45136 : 25th of month : Msg Number 187 : Msg Type 07145 : Group Count (?) 199
44540 22872 43252 21669 58024 33339 30807 40451

12175/10154/8136 kHz, 27-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 27th of month : Msg Number 240 : Msg Type 07145 : Group Count (?) 4
22857 00000 00000 03898 55182 03254 00893 42860

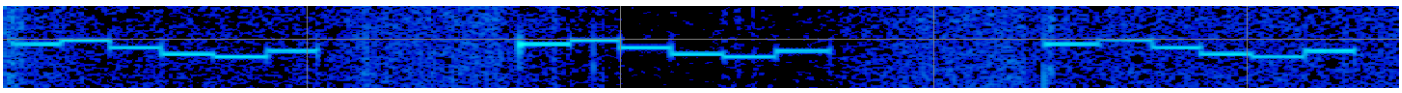
12175/10154/8136 kHz, 30-11, 0700/0710/0720 UTC
Block No 0 : Total Message Size 34 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 27th of month : Msg Number 192 : Msg Type 07145 : Group Count (?) 221
32377 58945 23989 09817 55182 34268 42244 15691

10229/8080/6868 kHz, 30-11, 1200/1210/1220 UTC
Block No 0 : Total Message Size 34 blocks : This transmission contains one message.
Block No 1 : Link ID 45136 : 27th of month : Msg Number 192 : Msg Type 07145 : Group Count (?) 221
32377 58945 23989 09817 55182 34268 42244 15691

Link 49202

20994/19161/17426 kHz, 11-11, 1000/1010/1020 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 49202 : 11th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
47932 00000 00000 02858 31827 34814 00893 19981

20994/19161/17426 kHz, 25-11, 1000/1010/1020 UTC
Block No 0 : Total Message Size 4 blocks : This transmission contains one message.
Block No 1 : Link ID 49202 : 25th of month : Msg Number 002 : Msg Type 07145 : Group Count (?) 4
22796 00000 00000 00336 28271 36255 00893 39109



X06. Sequence 564213

Freq	Date	UTC	Sequence
6986	26-11	1844	Mazielka. Sequence: 361245
6986	26-11	1954	Mazielka. Sequence: 361245
7705	26-11	1838	Mazielka. Sequence: 564213
9041	18-11	1512	Mazielka. Sequence: 645321
9106	12-11	1650	Mazielka. Sequence: 564213
9123	26-11	1625	Mazielka. Sequence: 564213
9163	8-11	1741	Mazielka. Sequence: 145632
9475	19-11	0830	Mazielka. Sequence: 23635
9475	19-11	0946	Mazielka. Sequence: 246135
10214	26-11	1515	Mazielka. Sequence: 263145
10270	3-11	1654	Mazielka. Sequence: 532614
12152	2-11	0906	Mazielka. Sequence: 641523
12157	3-11	0853	Mazielka. Sequence: 165423
12157	17-11	0850	Mazielka. Sequence: 164523
12177	9-11	1252	Mazielka. Sequence: 364152
12215	6-11	1011	Mazielka. Sequence: 361245
12224	9-11	0941	Mazielka. Sequence: 463125
13481	1-11	1330	Mazielka. Sequence: 452163
13517	9-11	0926	Mazielka. Sequence: 463125
14377	16-11	0845	Mazielka. Sequence: 432516
14547	6-11	1002	Mazielka. Sequence: 645321
14547	18-11	1505	Mazielka. Sequence: 645321
14570	6-11	0923	Mazielka. Sequence: 324615
14595	1-11	1318	Mazielka. Sequence: 452163
14655	11-11	0755	Mazielka. Sequence: 164253
14720	19-11	1233	Mazielka. Sequence: 241563
14812	12-11	1521	Mazielka. Sequence: 263145
14812	12-11	1522	Mazielka. Sequence: 263145

Freq	Date	UTC	Sequence
14812	12-11	1530	Mazielka. Sequence: 263145
14812	12-11	1531	Mazielka. Sequence: 263145
14825	2-11	0804	Mazielka. Sequence: 641523
14828	6-11	1309	Mazielka. Sequence 1--6--
14847	29-11	0807	Maziela. Sequence: 351264
14860	23-11	1024	Mazielka. Sequence: 542136
14947	29-11	0813	Maziela. Sequence: 351264
15687	3-11	0926	Mazielka. Sequence: 154263
15878	11-11	1143	Mazielka. Sequence: 621543
16117	9-11	0919	Mazielka. Sequence: 463125
16117	9-11	1007	Mazielka. Sequence: 463125
16117	23-11	0930	Mazielka. Sequence: 463125
16318	23-11	0930	Mazielka. Sequence: 463125
16319	6-11	0631	Mazielka. Sequence: 546213
17454	3-11	1137	Mazielka. Sequence: 325614
17465	19-11	1104	Mazielka. Sequence: 246135
17468	5-11	0701	Mazielka. Sequence: 436512
17511	2-11	0809	Mazielka. Sequence: 641523
18197	6-11	0938	Mazielka. Sequence: 645321
18206	3-11	0909	Mazielka. Sequence: 246531
18206	17-11	0930	Mazielka. Sequence: 246531
18245	6-11	0941	Mazielka. Sequence: 132456
18660	11-11	1157	Mazielka. Sequence: 621543
18750	2-11	0827	Mazielka. Sequence: 641523
19235	9-11	1012	Mazielka. Sequence: 463125
19405	5-11	1226	Mazielka. Sequence: 352416
19511	5-11	0709	Mazielka. Sequence: 314265
14827	27-11	1237	Mazielka. Sequence: 123456

XPA

8123/7523/6823 kHz, 03-11/05-11, 1900/1920/1940 UTC
158 158 158 1
01114 00217 35682 36102 21440 40256 91588 19666 71618 17786
14503 74326 39136 39733 57223 38158 34816 05488 26137 66116
41300 80491 37470 34636 31682 72963 34246 38094 78216 02776
31354 05306 00133 85853 05070 42741 19891 21194 80441 32135
84132 71054 52205 99195 32825 51557 76979 13823 92247 29713
83470 80926 55440 17753 92345 39169 43990 66557 99225 41823
50799 32363 49739 95131 34065 53274 75561 23769 88113 06921
94958 46019 88684 25348 56996 01231 43177 69694 56995 57925
76040 67863 54100 85276 03581 15149 42664 31566 07033 77849
06952 05099 51487 45276 36332 18190 89395 60687 29666 76182
51398 91469 84682 85202 00558 96348 91921 78121 99078 63414
70250 04813 54044 55765 44429 00140 49606 28988 47622 28020
35506 88068 35134 08835 05406 24355 66395 03832 32115 93800
85853 56926 89769 56410 86188 14460 19739 57898 80141 65065
38331 50697 65031 74870 31068 06442 84909 37241 85797 62705
79536 03130 21195 30825 53589 84619 14623 67091 92694 22117
28082 81741 39301 28183 07988 95691 36422 48005 84699 51976
58303 93873 98160 21054 55812 51804 39000 79583 86661 34297
84823 21761 95723 59245 16566 69989 88016 97186 05197 69788
15663 84451 49621 57823 55034 27447 56239 69419 39307 34337
81300 08771 19761 30053 92917 82784 87392 98540 82397 05522
17109 29168 61412 10344 07086 03348 45180 13257 67649 52211

11409/13509/14609 kHz, 04-11, 0700/0720/0740 UTC
456 456 456 1
07982 00225 10298 83602 05769 74329 94339 12418 17990 08279
39042 35968 28787 16630 44373 51628 10107 82473 65594 18550
18619 88357 99008 50494 21088 33689 96311 52876 50957 29381
08726 02138 62411 21196 86701 83059 23557 33664 41204 57673
00805 52053 81380 79562 20315 29004 39332 44362 00507 64413
69282 73657 49238 00167 45754 65466 70233 57281 47935 66988
43201 58010 57264 00738 54036 33342 22820 62336 83888 55514
35724 53978 50482 07041 72456 18064 75088 30393 74920 52013
63675 27008 74017 65417 60699 03967 53047 42801 11496 13631
21541 80958 68418 39086 48117 14223 72622 22821 67069 51688
01613 16097 21379 78889 97696 20994 40955 17922 69481 07236
40826 13530 37009 60604 68048 25195 81461 90652 42097 65631
64555 61470 44028 85869 61487 38113 61986 31716 37397 03080
97948 08158 11123 53641 76957 43615 25602 81145 82780 64201
44214 11252 71810 78733 72859 37639 05494 68255 41439 45224
40960 21877 18393 54842 66489 98687 67441 05235 63468 20990
70025 96036 83734 33610 61089 85220 43655 56133 59482 35238
72471 10637 36805 91913 49397 89638 74602 58396 10193 36600
00054 22223 82585 40335 80631 94215 74721 72498 43270 90773
56307 17411 65111 23358 64619 39054 51769 64136 20590 31171
24825 44206 09728 48428 47978 15059 88004 89976 14155 63325
28740 88857 29545 21060 69828 82471 76425 79711 66810 07210
60971 57493 24644 87100 76647 29931 34305 62017

11409/13509/14609 kHz, 11-11, 0700/0720/0740 UTC
456 456 456 000
07413 00001 00000 10140

8123/7523/6823 kHz, 17-11, 1900/1920/1940 UTC
158 158 158 1
08757 00239 09898 96201 13700 99584 22900 85663 73858 89151
91975 25429 13572 61952 85789 22152 48932 78958 17462 26661
59584 77274 80848 58747 99124 55972 47197 32730 35620 23628
89447 26847 06673 51371 75631 65942 07000 18045 79905 96036
32231 00551 70876 36161 13993 36943 86617 41154 90565 12670
32070 55256 90162 55234 44959 06497 10426 84297 90910 08512
43816 50529 02104 82626 61241 64137 58998 82781 40968 25200
81357 88505 92370 52086 43742 36154 69446 71083 54980 51920
56686 60248 04894 x1577 58041 50309 33149 60499 23959 19664
71498 73320 32205 77533 08476 21922 19582 09301 17758 35591
19426 6x357 57657 07072 66508 00778 95924 56661 88616 95012
96980 12070 01151 50945 68213 44316 17281 50470 26408 96478
84965 00405 37364 83337 22528 79836 11970 63204 70630 34461
33339 45577 15864 69145 16020 46294 31358 94052 01934 14647
62138 25313 61238 49231 56423 18017 03740 08643 18167 71442
23319 26241 09894 31867 28155 88007 77323 55451 13626 84343
29951 53391 98163 35278 39112 52779 46722 17221 10356 90478
02865 08216 53210 97388 792x7 51792 14337 65023 10603 17437
65096 14008 03284 67127 78569 26128 45396 92067 38945 04920
84105 64931 05406 53252 64990 65512 95630 32029 74999 75193
16084 44936 67880 92492 37992 99357 71422 32367 11402 11604
92041 53577 54199 68820 97436 95712 81374 97867 82473 45886
25193 89404 40129 16281 05154 23922 41756 94907 60462 80000
09771 53644 70400 22473 21125 73663 38252 77310 27566 83345
55250 45237

11409/13509/14609 kHz, 18-11/21-11, 0700/0720/0740 UTC
456 456 456 1
08118 00173 32342 42648 90406 69339 43557 83728 22466 25955
76997 98489 11470 90200 58226 16591 26323 41578 32320 44400
64675 95083 32977 29272 58937 61443 41023 40844 80522 21105
88984 09214 77882 90937 26454 64653 00088 03184 56647 04734
32352 09140 73010 73664 96588 39547 65666 77196 36207 60347
45202 90748 06295 63699 93032 49666 06389 13994 15686 92704
66890 90735 38467 28103 30039 95015 47035 26017 88289 14204
68653 37823 36350 23114 72778 07636 04054 81820 46253 96722
76725 68512 24898 10593 47803 59648 78183 14219 85057 69084
37878 10221 28286 72944 07816 61271 36946 87071 74876 87977
45459 64164 42970 28082 05429 60536 86774 11956 53387 15672
82850 00604 36052 35298 17888 53188 35756 46757 68275 08344
60893 20584 41436 45838 97177 42059 63272 11277 87583 78883
12327 26039 30601 57806 74729 53634 65412 54527 14197 71841
53015 42122 51952 53774 26667 19788 78620 58711 23447 17569
41442 48960 85255 13054 32762 85537 48273 07182 40197 99033
95184 92497 30331 95955 67364 44451 71668 38761 79418 61014
75846 44276 11398 95180 73661 32030

8123/7523/6823 kHz, 24-11, 1900/1920/1940 UTC
158 158 158 000
06040 00001 00000 10140

11409/13509/14609 kHz, 25-11/28-11, 0700/0720/0740 UTC
456 456 456 1
09363 00183 75177 58388 95301 74343 73854 21982 34074 86621
02338 67279 99704 20428 42880 95226 94664 23713 88536 51503
81205 95900 83803 67316 19249 78243 20858 21381 56329 57142
71767 97658 17653 10552 08203 75426 45482 75354 23033 45043
32661 18781 44734 45020 77237 59544 64175 86910 37795 08792
79136 74392 09111 22998 61741 55772 72988 68268 37139 64094
96888 02550 51428 08420 37905 95140 34407 47111 43196 69650
38226 47683 10651 10700 10931 67556 24082 45255 91465 21528
91502 30425 38621 12210 50796 73843 35987 92995 38532 62336
86936 51809 11804 12786 75724 97279 39792 30280 14960 90510
62522 67758 45350 28669 13025 08048 55871 80182 17074 83921
12313 30897 17596 43431 79936 53051 12606 24254 18364 15091
98548 75581 02784 24733 04229 70901 88310 01754 03346 25082
76306 01585 45317 03733 98490 55908 86701 03372 05088 52383
45068 18620 12400 26412 33456 25823 62640 38107 66719 44634
65408 64079 11488 84036 01574 96743 94958 12484 98851 29012
52821 61000 11776 44516 52001 00322 05139 38884 51612 37860
54882 41969 68225 75641 49396 49421 93208 33734 97670 69226
76189 45283 38988 39208 57977 41232

8123/7523/6823 kHz, 26-11, 1900/1920/1940 UTC
158 158 158 000
01044 00001 00000 10140

XPA2

18238/16238/14438 kHz, 01-11/04-11, 1300/1320/1340 UTC
04574 00001 00000 10140

16073/14973/14373 kHz, 02-11, 0800/0820/0840 UTC
02089 00067 93897 94840 91498 84974 65532 27621 24112 71243
15033 77883 92277 03464 98045 88750 63981 31591 29111 22778
53531 95026 61819 25957 00126 74044 17856 21709 33922 61684
64770 03328 30055 61480 95091 58728 52884 51465 57224 69557
58563 60555 68785 14532 22716 32782 22136 65171 87415 06166
67628 27803 61877 49384 58251 34040 28895 37064 87104 43040
03480 51247 83385 99279 33449 66764 05837 70335 55847 27137

18238/16238/14438 kHz, 03-11, 1300/1320/1340 UTC
08317 00001 00000 10140

17426/16114/14282 kHz, 06-11, 1400/1420/1440 UTC
08301 00001 00000 10140

16073/14973/14373 kHz, 09-11, 0800/0820/0840 UTC
04585 00001 00000 10140

18238/16238/14438 kHz, 10-11, 1300/1320/1340 UTC
04812 00133 36679 43085 84274 99428 49495 54629 02448 65166
98098 23154 56371 20324 38413 87234 97735 23297 26855 42726
20011 49239 45363 39217 66150 67542 87740 61369 54408 44056
55621 87065 94180 48646 88887 74686 70078 32685 52517 84557
58362 88457 76280 72684 50164 45661 26562 72250 32832 48467
80181 57112 06333 66755 70146 48335 55380 63310 58762 80184
21807 54733 14620 31338 84866 12625 36381 13333 62656 01483
88878 88370 11418 21451 33211 50008 67467 18766 88663 74033
51425 46624 38008 99990 62566 31335 01401 88018 52068 03820
30022 67726 63221 16481 31163 58558 50010 65235 77788 81060
13015 82326 81633 81584 56700 33126 75467 67240 80666 36143
00687 51116 58832 82287 15262 83166 42581 31378 43030 03858
88750 05830 01376 18335 82284 05158 41212 73546 00756 43913
53808 55021 74094 68768 67403 06135

16073/14973/14373 kHz, 11-11, 0800/0820/0840 UTC
03434 00001 00000 10140

14438 kHz, 15-11, 1340 UTC
09970 00001 00000 10140

16073/14973/14373 kHz, 16-11/18-11, 0800/0820/0840 UTC
09153 00155 10556 93289 12381 15905 03240 36070 14695 82055
59367 74410 44915 00112 58932 91141 91879 91241 89818 33045
05593 47505 90939 13132 20147 85002 56728 03084 43137 12845
95293 20685 52075 15420 99337 43599 73583 73514 61664 78731
64445 84845 73161 89881 04428 43722 38784 88920 80605 37810
76168 94841 79450 83900 96438 65658 56497 13789 39219 38163
38309 96957 45355 64720 31940 69764 28591 58365 48667 58561
10736 93007 71428 75717 11289 94142 46387 87666 33670 44896
25709 60205 85576 50026 11772 31765 12635 23892 08695 77884
72628 67750 95336 35688 34644 75006 22013 81311 02476 01677
48869 40544 38586 99396 22106 54839 88738 35720 66736 85240
12792 23177 10250 75624 85675 72867 71729 15165 69158 15464
25580 39386 39940 59019 63303 52066 95572 48753 75998 31187
90681 71755 43234 61417 35764 44431 07734 40094 73814 30303
97373 14378 24177 85006 02473 66599 76095 39946 91860 78315
94549 04443 67660 56905 72880 32391 96817 11724

14517/16017/17417 kHz, 17-11/20-11, 0700/0720/0740 UTC
00852 00109 38771 82562 20637 45043 73743 60995 96935 75139
15213 13765 51568 42418 73294 01408 73296 39813 37239 98219
12333 05183 18945 04034 29437 19759 25720 57372 62661 27759
17497 54559 53521 54674 12603 00828 57272 30256 92302 36294
39325 01307 64869 66044 96553 39159 53621 59161 40309 27977
61419 01800 95675 38126 33551 39071 99570 05077 44088 29323
23724 21006 51110 88051 93007 33277 57673 94826 58000 57957
86671 40461 65103 01375 51238 19199 15212 21233 30677 07666
65996 44277 27470 00060 70883 44959 92837 23236 92810 82227
64441 32255 32229 33492 74855 92664 78769 37100 47760 82135
19220 50352 72833 32772 10822 17659 84334 10038 31835 94943
37948 46630

18238/16238/14438 kHz, 17-11, 1300/1320/1340 UTC
03228 00001 00000 10140

17426/16114/14282 kHz, 20-11, 1400/1420/1440 UTC
03304 00001 00000 10140

16114/14828 kHz, 21-11, 1420/1440 UTC
07399 00001 00000 10140

18238/16238/14438 kHz, 22-11, 1300/1320/1340 UTC
01834 00001 00000 10140

16073/14973/14373 kHz, 23-11, 0800/0820/0840 UTC
07170 00001 00000 10140

14517/16017/17417 kHz, 24-11, 0700/0720/0740 UTC
09788 00001 00000 10140

18238/16238/14438 kHz, 24-11, 1300/1320/1340 UTC
06953 00001 00000 10140

16073/14973/14373 kHz, 25-11, 0800/0820/0840 UTC
03779 00001 00000 10140

14517/16017/17417 kHz, 27-11, 0700/0720/0740 UTC
06555 000001 00000 10040

17426/16114/14282 kHz, 27-11, 1400/1420/1440 UTC
01807 00097 45375 05983 63153 16686 57953 22434 10381 15464
24288 88465 90708 08715 62080 15614 70209 32934 76166 00106
68004 68636 08836 22038 38004 64653 87647 80517 04004 74218
68743 64181 21345 61492 37668 02280 06351 25287 36076 57368
70679 10525 27067 72308 56157 83499 23304 16942 25758 36858
10659 63136 28000 87437 61031 27666 04649 08227 64093 53386
42620 35894 07466 18148 80649 66048 02107 41254 69234 31687
26565 93245 26423 26081 15188 33851 49896 27798 02795 21722
32290 87244 22277 03857 74617 39931 40056 59611 46549 10526
63735 14696 47194 35920 36803 38402 95537 51423 64604 60274

17426/16114/14282 kHz, 28-11, 1400/1420/1440 UTC
08010 00001 00000 10140

18238/16238/14438 kHz, 29-11, 1300/1320/1340 UTC
05594 00075 38087 32551 81848 93056 22102 23933 27051 89860
43351 52282 55665 41362 64223 01397 93278 79926 84937 91854
71036 76299 09752 93699 94984 04889 81843 45701 35079 51465
00041 04961 42270 04478 39218 93750 91435 68765 13277 19921
33793 62736 33761 08636 10312 52024 14542 87485 15908 69269
80467 61576 10125 33389 92674 17344 62941 70891 95033 63993
77727 65732 58490 11091 04382 45992 98496 28976 23727 50387
24739 77507 00445 90399 91770 70284 22113 37211

16073/14973/14373 kHz, 30-11, 0800/0820/0840 UTC
04262 00091 46699 87358 63576 33751 52293 45196 92455 20012
35544 92342 22499 36686 27585 00754 97286 88063 06236 82246
15736 53731 10838 55658 36006 37803 06343 33633 38885 02830
88658 63303 33580 36423 36361 76288 36685 16463 11064 03611
88618 60086 33558 28808 73830 32124 38136 07588 65444 37814
45564 36084 33043 72578 57414 85677 16111 08283 67646 76610
90507 17776 28800 86383 72233 08467 13236 84440 10036 86133
86610 66000 55336 44366 35431 36636 00732 08614 20677 61120
21623 63240 00611 66015 65206 80246 37558 03883 34228 30030
33333 03900 23865 04251

Polish Intelligence

(E11 family)

9370 kHz, 02-11/04-11, 0845/0850 UTC
0353 0353 0353 0353 0353
88888 88888 82806 72115 42675 12741 24150 48160 25377 22100
45561 94786 37542 02445 61588 41694 59930 56388 15077 16470
28648 87041 78977 27786 19236 98840 22438 84138 69323 48970
84899 45685 63064 75521 03615 12250 07850 88888 88888
00039 00039

15915 kHz, 02-11, 1525/1530 UTC
0221 0221 0221 0221 0221
88888 88888 33907 25461 09807 46941 15180 37907 70658 59586
63484 57455 11095 44614 24232 02835 56676 32720 39017 41221
26876 80887 88848 18125 17075 08447 06292 38852 46224 80983
18319 25435 19924 20275 62459 76897 21153 36982 79166 49297
88888 88888
00042 00042

4505 kHz, 05-11, 1305/1310 UTC
0437 0437 0437 0437 0437
88888 88888 52050 22297 75133 03683 98465 75889 03954 09882
68626 14500 57989 52090 47442 17380 21452 25084 04028 52275
83126 76468 44936 27237 79984 56844 09749 35160 51355 60007
90422 50898 88888 88888
00034 00034

6836 kHz, 09-11/12-11, 0800/0805 UTC
0434 0434 0434 0434 0434
88888 88888 87587 87323 77681 10309 32021 06451 78535 53736
79901 25028 55209 71184 10541 20347 85539 73884 56713 96067
88387 42334 60830 00334 87124 25191 43063 76287 45013 40790
71793 52998 10975 01037 15431 27996 47334 56069 41728 88888
88888
00041 00041

9968 kHz, 09-11. 0815/0820 UTC
0446 0446 0446 0446 0446
88888 88888 36069 06947 29283 70087 43865 42886 55822 92505
40155 32326 25135 05131 61158 68817 81204 42561 42305 77174
37490 38720 33219 59006 83769 06756 13807 41485 23204 15556
02284 41212 40851 06740 78382 18974 19509 88888 88888
00039 00039

16388 kHz, 10-11/12-11, 0730/0735 UTC
0433 0433 0433 0433 0433
88888 88888 28732 07476 65307 89922 68031 41260 46727 87877
96145 34718 12376 07803 70374 30915 88889 19444 28083 75356
77750 38639 36120 67111 99628 88991 44134 94246 67228 68989
37051 95250 88888 88888
00034 00034

9576 kHz, 10-11, 1005/1010 UTC
0675 0675 0675 0675 0675
88888 88888 57216 73739 74343 95722 80978 47390 14159 19242
29325 91449 88023 75909 88044 09859 00385 14361 71919 80855
86559 82439 64369 59150 06239 21701 40243 74252 33525 53189
83896 97233 09686 29236 31392 88888 88888
00037 00037

12630 kHz, 16-11, 1000/1005 UTC
0745 0765 0765 0765 0765
88888 88888 44243 27634 25588 30147 75634 11962 51854 39882
39692 67777 31336 46396 72237 18585 38556 41319 33035 65855
95357 12201 91962 79592 11100 19974 15099 60656 05100 20993
54277 97406 98541 78160 18662 75539 37569 60810 88888 88888
00040 00040

9179 kHz, 17-11, 1610/1615 UTC
0877 0877 0877 0877 0877
88888 88888 58780 42765 61269 61506 12349 07837 18456 71930
11267 94044 59133 20279 62086 42839 79136 84628 68963 26093
12793 15023 12726 10435 61495 58627 51450 75592 80311 05718
19316 15493 00645 56984 92969 88888 88888
00037 00037

10359 kHz, 20-11, 0655/0700 UTC
0684 0684 0684 0684 0684
88888 88448 99507 41350 50302 16951 21039 79078 55685 46601
77700 28399 05391 73963 45815 43274 56809 99728 94946 44248
28906 21081 54290 53675 27895 18077 75870 25207 71325 45144
55618 31352 05977 11011 09014 46820 88888 88888
00038 00038

9179 kHz, 21-11, 1610/1615 UTC. Repeat of 17/11 but the first group is different
0877 0877 0877 0877 0877
88888 88888 52780 42765 61269 61506 12349 07837 18456 71930
11267 94044 49133 20279 62086 42839 79136 84628 68963 26093
12793 14023 12726 10435 61495 48627 51450 75592 80311 05718
19316 15493 00644 46984 92969 88888 88888
00037 00037

10641 kHz, 24-11/25-11, 1150/1155 UTC
0325 0325 0325 0325 0325
88888 88888 48968 97675 76605 96713 95951 73151 28944 11943
29274 07943 95754 92925 84219 18698 00465 98000 71539 19111
60244 59879 63613 52965 29953 78082 18597 29032 23063 44695
34971 93166 79581 60769 12654 88888 88888
00037 00037

7779 kHz, 26-11, 0630/0635 kHz
0574 0574 0574 0574 0574
88888 88888 72494 37261 53538 66843 71918 96258 70457 37964
47064 07575 32420 83312 68877 49479 27372 87087 09694 71021
23151 71312 25340 94948 57290 30884 37087 97666 68219 46122
96395 46485 92277 33369 79473 88888 88888
00037 00037

Q26 Digital version of V26/M95

Mode: 4+4 QPSK 75/3000 LSB

8073 kHz, 16-11, 1240 UTC
F BNGC BNGC BNGC DE VSF85 VSF85 F BNGC BNGC BNGC DE VSF85 VSF85
F BNGC BNGC BNGC DE VSF85 VSF85 F BNGC BNGC BNGC DE VSF85 VSF85
HR MSG GA PSE CY $
NR0975 CK127 35 1116 1550 . . .

Freq	Date	UTC	Details
8073	2-11	1130	XSV85 message
8073	5-11	0003	XSV85 message
8073	8-11	1033	XSV85 digital message
8073	11-11	0001	XSV85 digital messag
8073	12-11	1131	XSV85 digital message
8073	16-11	1240	F BNGC BNGC BNGC DE VSF85 VSF85 HR MSG GA PSE CY $ NR0975 CK127 35 1116 1550 ...
8073	19-11	1141	Digital message. Stops and begins again followed by male voice and again into 4+4
8073	22-11	0001	Message
8073	23-11	1130	Message
8073	25-11	0002	Message
8073	25-11	1129	Message
8073	26-11	0002	Message

XSL a.k.a. Slot Machine
Japan Maritime Self-Defense Force
海上自衛隊 Kaijō Jieitai

6250, 6417, 6445, 8313, 8588, 8703.5 kHz, 02-11, 2242 UTC, QPSK 1500Bd

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North Korean diplomatic stations

11300 kHz, 14-11, 1246 UTC, North Korean diplo, DPRK ARQ/600/600 LSB
12222 kHz, 14-11, 1412 UTC, North Korean diplo, DPRK ARQ/600/600 LSB
12850 kHz, 21-11, 1406 UTC, North Korean diplo, DPRK-ARQ/1200/1500 LSB
16008 kHz, 30-11, 1340 UTC, Unid North Korean Embassy, Europe, DPRK-ARQ 1200/1200 LSB

Egyptian diplomatic stations

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

14615 kHz, 2-11, 0831 UTC, Codan selcal 99910: Egyptian MFA Cairo clg 11102 Paris embassy, followed by CODAN 9001 traffic
16340 kHz, 21-11, 1446 UTC, MFA Cairo short ATU-A Arabic traffic, SITOR-A 100/170

UTILITY ROUND-UP

Unid stations

We have several unid stations that need to be identified. Any info about these stations / nets is most welcome.

13985 kHz, 16-11, 0745 UTC, USB, copied by Nick (NC)
Russian male operator repeating 1 0 3 in Russian. The recording is available from the N&O website.

10860 kHz, 25-11, 0231 UTC, CW, i.p. Logged by JPL using the Siberia remote tuner.
R 188PF 188PF QSA ? K MSG K
JK9N DE 188PF 188PF QSA ? MSG K
R GA K
R MSG NR 5 =
QAF 726 1030 9.0 QBA 4 QBB 5 CI 7000 WX ? AR K
R QSL 7G NR 4 = .10628 4O7Z EEE 4O7Z 1 5004O 84O7Z 1755Z AR K
R QSL VA
R K
H DE .8PB QSA ? MSG K
N GA K
R MSG BT 5 = QAF ...6 1030 900 QBA 4 QBB . .. .000 AR K
R QSL . K
JK9N DE 187OF QSA ? MSG K
R GA K
R MSG NR 3 = QAF .35 1034 12.0 QRE 6S8105 WX ?
R K
QSL 7G .. 4 = 1O628 4..7O1 53O4O GE4O...
R QSL VA
R VA

Looking at the Q-codes it might be an air force station.
QAF - I am at (place)
QBA - The horizontal visibility at (place) at ..
QBB - The amount, the type and height above official aerodrome elevation of the cloud base of the significant cloud at (place) at (hours) is ...
QRE - My estimated time of arrival at

6770 kHz, 25-11, 1110 UTC
JJ077 VVV VVV
JJ077 VVV VVV
JJO77 VVV VVV
JJ077 VA

Unid on 10470 kHz CW

All logs of this net are from JPL. Copied via remote receivers in the far east.

Last year it was logged on 10470 kHz, 12-01-2014, 0133 UTC
DE VOR VOR VOR
CQ CQ CQ GBV
CQ CQ CQ YRM YRM YRM QSV
.LF R .NN VA
CQ CQ DE YRM YRM QSV QSV K
R DE ROZ
R ZNN VA

10470 kHz, 18-11, 0132 UTC, i.p.
DE VOR VOR ZNN
V CQ CQ CQ DE YRM YRM YRM YRM QSV K
ROZ ROZ ZNN
VAI

10470 kHz, 21-11, 0131 UTC, i.p.
CQ DE YRM VVV QSV K
QSV K
ME (Another station - very weak)
CQ DE YRM VVV QSV K
VUI (Another station - very weak)
DE DE VOR ZNN ZNN VA
QSV K
CQ DE YRM VVV QSV K
QSV

10470 kHz, 25-11, 0131 UTC
CQ DE YRM VVV QSV K
NCJ DE NCJ
XRJ ZNN VA VA
QSV K
CQ DE YRM VVV QSV K
QSV K
IX VVV DE KLF KLF KLK
R
ZNN
VA EE
QSV K QSV K

10470 kHz, 26-11, 0132 UTC
CQ DE YRM VVV QSV K
DE
X.. ZNN
QSV K
DE DE DE DE
CQ DE YRM VVV QSV K
CQ DE YRM VVV QSV K
M... (0134z)
QSV K
DE DE QSV K
DE
ROZ ZNN VA
QSV K
DE

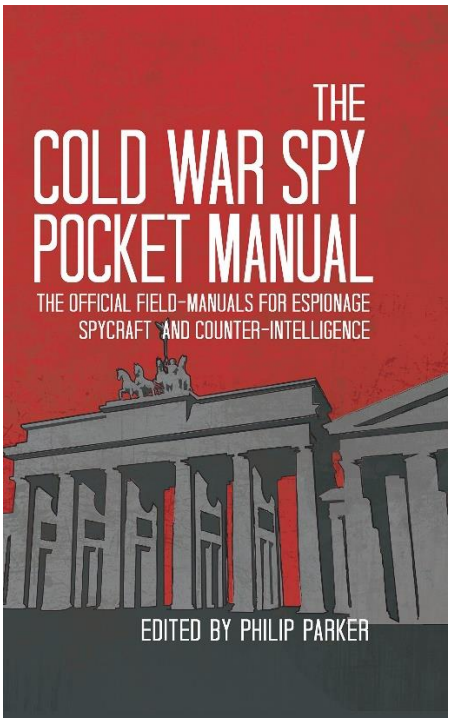
Intelligence news

The Cold War Spy Pocket-Manual

The Official Field-Manuals for Spycraft, Espionage
and Counter-Intelligence 1945-1968

Compiled and introduced by Philip Parker

ISBN: 9781910860021
Format: Hardback
Publisher: The Pool of London Press



"We were both at the appointed place on time at 4:00 PM. He had the green book and the tennis ball and I had the four gloves..."

It may sound like a line from an Ian Fleming novel but this is a quote taken from official handover notes from the KGB to their agent handlers in the US and their first meeting with agent Klaus Fuchs. The date: 1945 - the start of what was surely the golden age for espionage, the Cold War years.

Spy books and spy movies are quite popular these days. One of the new spy books is *The Cold War Spy Pocket Manual*, edited by former British diplomat Philip Baker. This book is somewhat different from other spy books because it is not the average spy novel nor does it cover the standard spy stories and agency info. The book is a combination of stories about spy operations, stories about defectors and manuals and directives from Soviet, East German, British and American intelligence agencies. A rather unusual but interesting combination.

Contents:

- In the early 1940's Camp 020, near Ham Common in Richmond, was set up by the British MI5 as an interrogation centre for enemy spies. The interrogation techniques used in Camp 020 were published in a document called *A Digest of Ham*, as guidelines for future use by the intelligence agencies and are now included in the Pocket Manual.

- Part of *The Official CIA Manual of Trickery and Deception* is included in the book. It gives some info on recognition signals and more. How to make contact when both parties do not know each other, or only one knows the other.

- *The Prikhodko Lecture,* written by Lieutenant-Colonel Ivan Prikhodko, of the GRU's Anglo-American Affairs Directorate, provides a manual for Soviet spies operating in the USA. It includes the characteristics of agent communications, guidelines for the use of VHF radio, dead drops and other ways to communicate.

- I found the *Undercover Residency* item the most interesting part of the Pocket Manual. It is written by Viktor Suvorov, which is the cover name of Vladimir Rezun who was a major in the GRU.

  The undercover residency is one of the basic forms of intelligence set-up for the GRU abroad. In every country where official Soviet representation exists there is a GRU undercover residency. Suvorov describes in detail how an undercover residency is set up and more importantly the roles of the various staff members like the Operational Officer, the Radio / Cipher officer, the Radio Monitoring Station Officer, the Technical Services Officer, etc.

  As a radio enthusiast I am of course interested in the communication items. I learned that the Radio / Cipher Officer was the second important person in the residency. He was so important that no-one was allowed to enter his radio/cipher room, not even his boss or the ambassador. He was only allowed to live in official Soviet embassy accommodation and was guarded around the clock. Neither the officer or his wife is allowed to leave the guarded territory. So in fact he was living in a cage. Not a nice life in my opinion. That is the reason why a deployment lasted no more than two years.

- *The Vassiliev Notebooks.*
  After the Cold War, the SVR decided to allow limited access to the KGB's archives to foreign publishers working with retired KGB operatives. One of the operatives is Alexander Vassiliev who compiled a number of notebooks which were later smuggled out of Russia. The notebooks concentrate on Soviet-American and Anglo-American affairs, including the Manhattan Project, which is described in Vassiliev's Yellow Notebook #1.

  The Manhattan Project was a research and development project that produced the first nuclear weapons during World War II. It was led by the United States with the support of the United Kingdom and Canada. The US papers about the Manhattan Project have been declassified and can be found here: https://www.osti.gov/opennet/manhattan_district.jsp

- *Berlin.*
  I guess that many of us are familiar with the stories about the Berlin Tunnel, a 300 metre long tunnel across the east-west border, dug in 1954 by an Anglo-American intelligence team to tap East German telephone lines. That was only one of the many western intelligence activities in Berlin during the Cold War. In November 1958 the STASI published their assessment of western intelligence operations in Berlin. The assessment covers the activities of the British, West German, French and American intelligence agencies in Berlin. Both the discovery of the tunnel and the STASI assessments are described in the Pocket Manual. Below excerpts from the part about the French intelligence activities:

  > IV. French secret service:
  > Sûreté National – organizes counter-espionage – above all [against the] MfS – [Unger [name]] West Berlin, Müllerstraße, uses violence in interrogations.
  >
  > DR[11]/Marine – works on Baltic coast – chiefly via Hamburg.
  > DR/SR[12]: (a) army (b) air force (c) political and economic espionage
  > Strict separation of responsibility.
  > Main base in Germany: Baden-Baden.
  > French are making preparations for withdrawal.
  > Equipping agents with radio sets.

Aids:
Japanese tissue paper (Seidenpapier)– shoes with hollow sole – radio sets – winder and board which opens out as well as Morse key. [handwritten note: [agent] does not need to be a radio operator]
Radio sets with tape just like the Americans.

Characteristic features:
French secret service is currently generous with financial resources – pays in advance monthly salary for one year, makes agents buy motorbikes and radio sets

- The final chapter of the book covers KGB's basic instructions for checking agents and includes a chapter of Vladimir Kuzichkin's book *Inside the KGB*. Kuzichkin was a Major in the KGB and was deployed in Iran. He escaped to Turkey with the help of the British MI6. The British brought Kuzichkin in contact with the CIA, which in turn contacted the government of Iran. His information led to the arrest of nearly 20 Soviet KGB field officers in Iran.

Conclusion:
I have read many books about espionage but this book is different from most other spy books. The inclusion of directives and manuals from various intelligence sources is why *The Cold War Spy Pocket Manual* is an interesting, informative, and entertaining book.

Reviewed by Ary Boender for Numbers & Oddities / UDXF

RUSSIAN MILITARY TRANSCRIPTS

Excerpts of Russian military logs submitted by: Ary, André, Ron, Tom.

RMv/RNv/RNAv/RAv/RADv
Russian military stations

Frequency: various Mode: USB / voice

RAv – Russian Air Force

11360 kHz, 21-11
0710 UTC Korsar clg 78810
0715 UTC Korsar wkg 82040 (1013 MSK landing at Parok (unid) fuel 60 tons)
0734 UTC Korsar clg 78803

11360 kHz, 28-11
1421 UTC Korsar (Russian Air Force 334th Air Transport Regiment, 6985th Air Base, Pskov) w/76718 (IL-76MD) reporting departure from (missed) at 1710 MSK w/53 tons fuel and next is Kvartet (Russian AB Taganrog).
1511 UTC Korsar w/78803 (IL-76MD) reporting departure from Tolmachevo
1517 UTC Korsar w/82040 (Russian AF AN-124) reporting landing at "the point" (Syria) at 1801 MSK w/48 tons fuel.
1521 UTC Korsar w/76773 (IL-76MD) reporting departure from Grachevka (Russian AB Akhtubinsk) at 1812 MSK next is Sochi.
1540 UTC Korsar w/78790 (IL-76MD) reporting departure from Tver at 1800 MSK and next is Kedr (Russian AB,Bryansk) at 1900 MSK.
1629 UTC 76718 (IL-76MD) USB calling Korsar w/no response.

RADv – Russian Air Defence
4380 kHz, 18-11, 1446 UTC Tracking (Russian Voice)
3238 kHz, 24-11, 1755 UTC Tracking (Russian Voice)

RMv – Russian Military

5759.5 kHz, 04-11, 0616 UTC	TARAK06 comms cheks with outstations
2413 kHz, 06-11, 1945 UTC	MARNA-11 clg GRIZAK-71 ROBIN-1452 VIEZIK-4659
4640 kHz, 07-11, 0848 UTC	COLCHAR-73 comms checks with outstations
3326.5 kHz, 08-11, 1619 UTC	SALVA-13 comms checks with outstations
6850.5 kHz, 18-11, 0609 UTC	DUSEK-74 comms checks with outstations

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M32
Russian / CIS Military CW Stations

12631 kHz, 02-11

0954 UTC	XXX XXX WEGI WEGI 61 JT x7923 LEVALYJ 7299 0523 K
1002 UTC	XXX XXX RGT77 RGT77 48078 10041 NESAGA 7145 2967 K
1003 UTC	XXX XXX WEGI WEGI 30860 86693 TEMNIK 2897 2424 K
1026 UTC	RDL RDL RDL 41415 1643T 41415 1643T 41415 1643T K XXX XXX

M32a
Russian Navy
Voyenno-Morskoy Flot Rossii

3547 kHz, 03-11, 1511 UTC

RDQ81 DE RMW46 ZSA 1 R K
RGR95 DE RMW46 ZSA ? K
RMW46 DE RGR95 ZSA 2 ZSA ? K
RGR95 DE RMW46 ZSA 3 R K
RGR92 DE RMW46 ZSA ? K

5131.5 kHz, 03-11, 1100 UTC XXX REO 52618 PIROMANA 2242 7029 K

12631 kHz, 26-11

0954 UTC	U U U RDL RDL 99408 45537 99408 45537 99408 45537 99408 K
0956 UTC	U U U RDL RDL RDL 28554 14409 28554 14409 28554 14409 K AR K U U U into BEE 50/200
1002 UTC	U U U RDL RDL RDL 28554 14409 28554 14409 28554 14409 K U U XXX XXX into BEE 50/200
1140 UTC	U U U RDL RDL RDL 88933 11776 88933 11776 88933 11776 K into BEE 50/200

M32c
Russian Air Force
Voyenno-vozdushnye sily Rossii

8112 kHz, 17-11, 1340/1420/1440/1500 UTC: W-marker: Bears Net

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LOGS SECTION

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
---	6770	25-11	1110	Wed	JJ077 VVV VVV JJ077 VVV VVV JJO77 VVV VVV JJ077 VA	CW	(JPL-Sib)
---	10470	19-11	0132	Thu	DE VOR VOR ZNN. V CQ CQ CQ DE YRM YRM YRM YRM QSV K. ROZ ROZ ZNN. VAI	CW	(JPL-Sib)
---	10470	21-11	0131	Sat	CQ DE YRM VVV QSV K. QSV K. ME (Another station) CQ DE YRM VVV QSV K. VUI (Another station) DE DE VOR ZNN ZNN VA QSV K. CQ DE YRM VVV QSV K. QSV	CW	(JPL-HK)
---	10470	25-11	0131	Wed	CQ DE YRM VVV QSV K. NCJ DE NCJ XRJ ZNN VA. CQ DE YRM VVV QSV K. VVV DE KLF KLF KLF R ZNN VA QSV K	CW	(JPL-Sib)
---	10470	26-11	0132	Thu	CQ DE YRM VVV QSV K. DE DE QSV K. ROZ ZNN VA QSV K	CW	(JPL-Sib)
---	10860	25-11	0233	Wed	R 188PF 188PF QSA ? K MSG K. JK9N DE 188PF 188PF QSA ? MSG K. R GA K. R MSG NR 5 = QAF 726 1030 ...	CW	(JPL-Sib)
---	13985	16-11	0745	Mon	Unid Russian OM repeating 1-0-3 over and over in Russian.	USB	(NC)
DPRK	11300	14-11	1246	Sat	North Korean diplo	DPRK ARQ/600/600 LSB	(PPA)
DPRK	12222	14-11	1412	Sat	North Korean diplo	DPRK ARQ/600/600 LSB	(PPA)
DPRK	12850	21-11	1406	Sat	North Korean diplo	DPRK-ARQ/1200/1500 LSB	(PPA)
DPRK	16008	30-11	1340	Mon	Unid North Korean Embassy, Europe	DPRK-ARQ 1200/1200 LSB	(MCO)
E06	4496	2-11	1830	Mon	910 834 57 86952 13790 14704 ... 39635 83545 48245 834 57 00000	USB	(Danix/PPA)
E06	4760	20-11	2130	Fri	472 569 20 14259	USB	(HFD)
E06	4836	5-11	2030	Thu	321 728 20 14259	USB	(HFD)
E06	4836	5-11	2030	Thu	321 728 20 14259 22676 32782 ... 73311 98089 12250 728 20 00000	USB	(AB/MPJ)
E06	4836	19-11	2029	Thu	321 569 569 20 20 5F message	USB	(PPA)
E06	4836	19-11	2030	Thu	321 569 20 14259 22676 32782 32782 76723 89409 ... 12256 18841 73311 98089 12250 569 20 00000	AM	(MPJ)
E06	5380	24-11	1832	Tue	825 136 52 21787 89148 47527 ... 53637 38126 10458 136 52 00000	USB	(KK2)
E06	6792	2-11	1800	Mon	910 834 57 86952 13790 14704 ... 39635 83545 48245 834 57 00000	USB	(DT)
E06	13367	2-11	1505	Mon	759 320 61 26393 57939 61149 ... 60211 17333 22675 320 61 00000	USB	(Avare/Danix)
E06	13367	3-11	1505	Tue	759 320 61 26393 57939 61149 ... 60211 17333 22675 320 61 00000	USB	(AB)
E06	16287	2-11	1605	Mon	759 320 61 26393 57939 61149 ... 60211 17333 22675 320 61 00000	USB	(Danix)
E06	16287	3-11	1605	Tue	759 320 61 26393 57939 61149 ... 60211 17333 22675 320 61 00000	USB	(AB)
E06	18285	6-11	0600	Fri	507 398 124 73949 76918 59819 ... 09455 51388 71499 398 124 00000	USB	(AB)
E06	18285	19-11	0600	Thu	507	USB	(HFD)
E06	20140	4-11	0705	Wed	ip	USB	(HFD)
E06	20140	6-11	0700	Fri	507 398 124 73949 76918 59819 ... 09455 51388 71499 398 124 00000	USB	(AB/Avare)
E07	5447	5-11	2130	Thu	744 0	USB	(HFD)
E07	5449	5-11	2130	Thu	744 744 744 000	AM	(AB)
E07	5449	26-11	2120	Thu	744 744 744 000 ???	AM	(AB)
E07	5453	8-11	1840	Sun	184 1 244 61 62300 19595 09926 32820 19194 ... 11204 06435 02298 95761 61530 000 000	AM	(MPJ)
E07	5453	11-11	1840	Wed	184 1 244 61 66300 19595 09926 ... 02298 95761 61530 000 000	AM	(AB)
E07	5453	25-11	1840	Wed	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	5453	29-11	1840	Sun	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	6777	5-11	2110	Thu	744 0	USB	(HFD)
E07	6777	5-11	2110	Thu	744 744 744 000	AM	(AB)
E07	6777	26-11	2100	Thu	744 744 744 000 ???	AM	(AB)
E07	6853	1-11	1820	Sun	184 0	USB	(HFD)
E07	6853	1-11	1820	Sun	184 184 184 000	AM	(AB)
E07	6853	4-11	1820	Wed	184 184 184 000	AM	(AB)
E07	6853	11-11	1820	Wed	184 1 244 61 66300 19595 09926 ... 02298 95761 61530 000 000	AM	(AB)
E07	6853	15-11	1820	Sun	184 184 184 000	AM	(AB/MPJ)
E07	6853	22-11	1820	Sun	184 184 184 000	AM	(AB)
E07	6853	25-11	1820	Wed	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	6853	29-11	1820	Sun	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	6924	2-11	2020	Mon	798 0	USB	(HFD)
E07	6924	2-11	2020	Mon	798 798 798 000	AM	(AB)
E07	6924	4-11	2020	Wed	798 798 798 000	AM	(MPJ)
E07	6924	9-11	2020	Mon	798 798 798 000	AM	(AB)
E07	6924	11-11	2020	Wed	798 798 798 000	AM	(MPJ)

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E07	6924	18-11	2020	Wed	798 798 798 000	AM	(MPJ)
E07	6924	30-11	2030	Mon	798 798 798 000	AM	(AB)
E07	7724	2-11	2000	Mon	798 0	USB	(HFD)
E07	7724	2-11	2000	Mon	798 798 798 000	AM	(AB)
E07	7724	4-11	2000	Wed	798 798 798 000	AM	(MPJ)
E07	7724	9-11	2000	Mon	798 798 798 000	AM	(AB)
E07	7724	16-11	2000	Mon	798 798 798 000	AM	(MPJ)
E07	7724	30-11	2000	Mon	798 798 798 000	AM	(AB)
E07	8153	1-11	1800	Sun	184 0	USB	(HFD)
E07	8153	4-11	1800	Wed	184 184 184 000	AM	(AB/MPJ)
E07	8153	11-11	1800	Wed	184 1 244 61 66300 19595 09926 ... 02298 95761 61530 000 000	AM	(AB)
E07	8153	15-11	1800	Sun	184 184 184 000	AM	(AB)
E07	8153	18-11	1800	Wed	184 184 184 000	AM	(AB)
E07	8153	18-11	1800	Wed	184 184 184 000	AM	(PPA)
E07	8153	22-11	1800	Sun	184 184 184 000	AM	(AB)
E07	8153	25-11	1800	Wed	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	8153	29-11	1800	Sun	184 1 880 164 45645 26273 92246 ... 40769 31381 73128 000 000	AM	(AB)
E07	10112	11-11	0700	Wed	111 1 126 103 61108 50645 29725 ... 68575 49953 81441 14591 000 000	USB	(AB)
E07	10112	18-11	0700	Wed	111 1 394 55 76631	USB	(HFD)
E07	10112	18-11	0700	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	10112	21-11	0700	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	10112	25-11	0700	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07	10112	28-11	0700	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07	11112	11-11	0720	Wed	111 1 126 103 61108 50645 29725 ... 68575 49953 81441 14591 000 000	USB	(AB)
E07	11112	18-11	0720	Wed	111 1	USB	(HFD)
E07	11112	18-11	0720	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	11112	21-11	0720	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	11112	25-11	0720	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07	11112	28-11	0720	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07	12112	11-11	0740	Wed	111 1 126 103 61108 50645 29725 ... 68575 49953 81441 14591 000 000	USB	(AB)
E07	12112	18-11	0740	Wed	111 1	USB	(HFD)
E07	12112	18-11	0740	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	12112	21-11	0740	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	USB	(AB)
E07	12112	25-11	0740	Wed	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07	12112	28-11	0740	Sat	111 1 394 55 76631 55477 04291 ... 57329 03401 17774 000 000	AM	(AB)
E07a	4577	4-11	2140	Wed	825 1 19389	USB	(HFD)
E07a	4577	4-11	2140	Wed	825 1	USB	(HFD)
E07a	4577	25-11	2140	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	5111	5-11	0530	Thu	189 1 19389 5649 65 06592 85671 64437 ... 91700 49806 17521 000 000	USB	(AB)
E07a	5111	5-11	0530	Thu	189 1 19389 5649 65 06592	USB	(HFD)
E07a	5111	26-11	0533	Thu	189 1 17673 message	USB	(MCO)
E07a	5277	4-11	2120	Wed	825 1	USB	(HFD)
E07a	5277	4-11	2120	Wed	825 1 19389	USB	(HFD)
E07a	5277	25-11	2120	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB)
E07a	5811	5-11	0550	Thu	189 1 19389 5649 65 06592 85671 64437 ... 91700 49806 17521 000 000	USB	(AB/F5JBR)
E07a	5811	5-11	0550	Thu	189 1 19389	USB	(HFD)
E07a	5877	4-11	2100	Wed	825 1 19389 5649 65 06592 85671 64437 20325 67066 ...	USB	(MPJ)
E07a	5877	4-11	2100	Wed	825 1 19389 5649 65 06592	USB	(HFD)
E07a	5877	18-11	2100	Wed	825 825 825 000	USB	(MPJ)
E07a	5877	25-11	2100	Wed	825 1 17673 7104 79 79147 59964 58987 ... 65307 14549 38555 000 000	USB	(AB/MPJ)
E07a	6838	13-11	1650	Fri	158 1 67460 6072 49 81141 06882 20173 09024 93166 ... 73074 14841 12933 73813 46996 000 000	USB	(MPJ)
E07a	6911	5-11	0610	Thu	189 1 19389	USB	(HFD)
E07a	6911	5-11	0610	Thu	189 1 19389 5649 65 06592 85671 64437 ... 91700 49806 17521 000 000	USB	(AB)

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E07a	7538	6-11	1630	Fri	158 158 158 000	USB	(AB)
E07a	7538	6-11	1630	Fri	158 0	USB	(HFD)
E07a	7538	20-11	1630	Fri	158 158 158 000	USB	(VH)
E07a	7538	20-11	1630	Fri	158 158 158 000	USB	(MPJ)
E07a	7638	27-11	1630	Fri	158 158 158 000	USB	(AB/MPJ)
E07a	8138	6-11	1610	Fri	158 0	USB	(HFD)
E07a	8138	6-11	1610	Fri	158 158 158 000	USB	(AB)
E07a	8138	13-11	1610	Fri	158 1 67460 6072 49 81141 06882 20173 09024 93166 ... 73074 14841 12933 73813 46996 000 000	USB	(MPJ)
E07a	8138	20-11	1610	Fri	158 158 158 000	USB	(MPJ)
E07a	8138	27-11	1610	Fri	158 158 158 000	USB	(AB/MPJ)
E07a	11553	7-11	0900	Sat	515 515 515 000	USB	(AB)
E07a	11553	14-11	0900	Sat	515 1 67460 6072 49 81141	USB	(HFD)
E07a	11553	28-11	0900	Sat	515 515 515 000	USB	(AB)
E07a	12153	7-11	0920	Sat	515 515 515 000	USB	(AB)
E07a	12153	14-11	0920	Sat	515 1 67460	USB	(HFD)
E07a	12153	21-11	0920	Sat	515 515 515 000	USB	(AB)
E07a	12153	28-11	0920	Sat	515 515 515 000	USB	(AB)
E07a	13553	14-11	0940	Sat	515 1 67460	USB	(HFD)
E11	4505	1-11	1605	Sun	232/00	USB	(Danix)
E11	4505	8-11	1605	Sun	232/00	USB	(MPJ)
E11	4505	10-11	1605	Tue	232/00	USB	(MPJ)
E11	4505	10-11	1605	Tue	232/00	USB	(AB)
E11	4505	24-11	1605	Tue	232/00	USB	(AB/MPJ)
E11	4505	29-11	1605	Sun	232/00	USB	(MPJ)
E11	5082	5-11	1730	Thu	416/37 Attention 52739 50031 86215 ... 73441 72816 10612 Attention, rpt msg, out	USB	(AB/MPJ)
E11	5082	19-11	1730	Thu	i.p. 416/00	USB	(SW2/MPJ)
E11	5409	5-11	1530	Thu	262/00	USB	(HFD)
E11	5409	19-11	1530	Thu	262/36 Attention 78873 68248 51691 ... 04968 14404 26258 OUT	USB	(SW2)
E11	5409	26-11	1530	Thu	262/00	USB	(GHn)
E11	5779	4-11	0315	Wed	253/00	USB	(HFD)
E11	6304	6-11	2000	Fri	576/00	USB	(HFD)
E11	6304	20-11	2000	Fri	576/00	USB	(MPJ)
E11	7840	3-11	0645	Tue	517/00	USB	(HFD)
E11	7840	3-11	0645	Tue	517/00	USB	(AB)
E11	7840	5-11	0645	Thu	517/00	USB	(AB)
E11	7840	12-11	0745	Thu	517/00	USB	(AB)
E11	7840	17-11	0645	Tue	517/00	USB	(AB)
E11	7840	19-11	0645	Thu	517/00	USB	(KK2/GHn)
E11	7840	19-11	0647	Thu	517/00	USB	(KK2)
E11	7840	24-11	0745	Tue	517/33 Attention 72492 37261 53538 ... 92277 33369 79473 Attention, rpt msg, out	USB	(AB)
E11	9443	4-11	1705	Wed	392/00	USB	(AB/MPJ)
E11	9443	4-11	1705	Wed	392/00	USB	(HFD)
E11	9443	11-11	1705	Wed	390/33 Attention 59142 55071 87474 60839 29717 ... 27710 55484 55529 15153 62559	USB	(MPJ)
E11	9443	18-11	1705	Wed	392/00	USB	(MPJ)
E11	9443	18-11	1705	Wed	392/00	USB	(AB)
E11	9443	21-11	1705	Sat	392/00	USB	(MPJ)
E11	9443	28-11	1705	Sat	392/00	USB	(AB/MPJ)
E11	9446	2-11	0830	Mon	649/00	USB	(HFD)
E11	9446	2-11	0830	Mon	649/00	USB	(AB)
E11	9446	6-11	0830	Fri	649/00	USB	(AB)
E11	9446	9-11	0900	Mon	534/00	USB	(AB)
E11	9446	23-11	0830	Mon	649/00	USB	(AB)
E11	9446	23-11	0900	Mon	534/00	USB	(AB)
E11	9446	25-11	0900	Wed	534/00	USB	(AB)
E11	9446	30-11	0830	Mon	649/00	USB	(AB)
E11	9446	30-11	0900	Mon	534/00	USB	(AB)
E11	9950	4-11	0930	Wed	270/00	USB	(AB)
E11	9950	4-11	0930	Wed	270/00	USB	(HFD)

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E11	9950	5-11	0930	Thu	270/00	USB	(AB)
E11	9950	11-11	0930	Wed	270/00	USB	(AB)
E11	9950	12-11	0930	Thu	270/00	USB	(AB)
E11	9950	26-11	0930	Thu	270/00	USB	(AB)
E11	10125	2-11	0820	Mon	438/00	USB	(AB)
E11	10125	2-11	0820	Mon	438/00	USB	(HFD)
E11	10125	5-11	0820	Thu	438/00	USB	(AB)
E11	10125	23-11	0820	Mon	438/00	USB	(AB)
E11	10125	26-11	0820	Thu	438/00	USB	(AB)
E11	10125	30-11	0820	Mon	438/00	USB	(AB)
E11	10213	2-11	0745	Mon	262/00	USB	(HFD)
E11	10213	2-11	0745	Mon	262/00	USB	(AB)
E11	10213	23-11	0745	Mon	262/00	USB	(AB)
E11	10213	30-11	0745	Mon	262/00	USB	(AB)
E11	10429	1-11	0805	Sun	311/00	USB	(AB)
E11	10429	1-11	0805	Sun	311/00	USB	(HFD)
E11	10429	4-11	0805	Wed	311/00	USB	(KK2/AB)
E11	10429	11-11	0805	Wed	311/00	USB	(AB)
E11	10429	15-11	0805	Sun	311/00	USB	(AB)
E11	10429	25-11	0805	Wed	311/00	USB	(AB)
E11	10429	29-11	0805	Sun	311/00	USB	(AB)
E11	10448	1-11	1625	Sun	978/00	USB	(HFD)
E11	10448	4-11	1625	Wed	972/00	USB	(AB)
E11	10448	8-11	1625	Sun	972/00	USB	(MPJ)
E11	10448	11-11	1625	Wed	972/00	USB	(MPJ)
E11	10448	15-11	1625	Sun	972/00	USB	(GHn)
E11	10448	15-11	1625	Sun	972/00	USB	(MPJ)
E11	10448	18-11	1525	Wed	972/00	USB	(MPJ/GHn)
E11	10448	22-11	1625	Sun	972/00	USB	(AB)
E11	10448	29-11	1525	Sun	978/36 Attention 69618 45270 58743 03355 14397 ... 15259 24436 19564 32943 89825	USB	(MPJ)
E11	10800	3-11	0710	Tue	633/00	USB	(AB)
E11	10800	3-11	0710	Tue	633/00	USB	(HFD)
E11	10800	6-11	0710	Fri	633/00	USB	(AB)
E11	10800	10-11	0710	Tue	633/00	USB	(AB)
E11	10800	24-11	0710	Tue	633/00	USB	(AB)
E11	10800	27-11	0710	Fri	633/00	USB	(AB)
E11	11100	10-11	1205	Tue	469/00	USB	(HFD)
E11	11100	18-11	1205	Wed	469/00	USB	(MPJ)
E11	12153	3-11	1045	Tue	576/00	USB	(AB)
E11	12153	10-11	1045	Tue	576/00	USB	(HFD)
E11	12153	10-11	1045	Tue	576/00	USB	(AB)
E11	12924	12-11	0710	Thu	491/00	USB	(HFD)
E11	12924	12-11	0710	Thu	491/00	USB	(AB)
E11	12924	19-11	0710	Thu	491/00	USB	(GHn)
E11	12924	21-11	0710	Sat	491/00	USB	(AB)
E11	12924	26-11	0710	Thu	498/38 Attention (unreadable)	USB	(AB)
E11	12924	28-11	0710	Sat	498/38 (unreadable)	USB	(AB)
E11	13046	6-11	0600	Fri	181/00	USB	(HFD)
E11	14666	10-11	1345	Tue	911/00	USB	(HFD)
E11	14666	17-11	1345	Tue	911/00	USB	(MPJ)
E11	14666	21-11	1345	Sat	911/00	USB	(HFD)
E11	14666	21-11	1346	Sat	911/00	USB	(VH)
E11	14666	24-11	1345	Tue	911/00	USB	(AB/GHn)
E11	14666	28-11	1345	Sat	911/00	USB	(MPJ)
E11	15632	1-11	1540	Sun	228/00	USB	(HFD)
E11	15632	9-11	1540	Mon	228/00	USB	(AB/MPJ)
E11	15632	23-11	1540	Mon	228/00	USB	(MPJ)
E11	15632	29-11	1540	Sun	228/00	USB	(MPJ)
E11	16112	3-11	0745	Tue	335/00	USB	(HFD)
E11	16112	5-11	0745	Thu	335/00	USB	(AB)
E11	16112	8-11	0725	Sun	352/00	USB	(AB)

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E11	16112	22-11	0730	Sun	352/00	USB	(AB)
E11	16112	24-11	0745	Tue	335/00	USB	(AB)
E11	16112	26-11	0745	Thu	335/00	USB	(AB)
E11	16112	27-11	0730	Fri	352/00	USB	(AB)
E11	18030	3-11	1300	Tue	133/00	USB	(HFD)
E11	18030	18-11	1300	Wed	133/00	USB	(MPJ)
E11	18030	25-11	1300	Wed	133/00	USB	(MPJ)
E11a	4505	22-11	1605	Sun	232/37 Attention 56064 68000 92913 ... 35934 80964 95329 Attention, rpt msg, out	USB	(AB)
E11a	5082	2-11	0450	Mon	416/37 52739	USB	(HFD)
E11a	5082	2-11	0450	Mon	416/37 Attention 52739 50031 86215 ... 73441 72816 10612 Attention, rpt msg, out	USB	(AB)
E11a	5082	2-11	0450	Mon	416/37 Attention 52739 50031 86215 ... 73441 72816 10612 Attention, rpt msg, out	USB	(AB)
E11a	5082	5-11	1730	Thu	416/37 52739	USB	(HFD)
E11a	7840	26-11	0745	Thu	517/33 Attention 72492 37261 53538 ... 92277 33369 79473 Attention, rpt msg, out	USB	(AB)
E11a	9446	2-11	0900	Mon	534/35 Attention 82806 72115 42675 ... 03615 12250 07850 Attention, rpt msg, out	USB	(AB)
E11a	9446	4-11	0900	Wed	534/35 82806	USB	(HFD)
E11a	9446	4-11	0900	Wed	534/35 Attention 82806 72115 42675 ... 03615 12250 07850 Attention, rpt msg, out	USB	(AB)
E11a	9446	9-11	0830	Mon	649/35 Attention 36069 06947 29283 ... 78382 18974 19509 Attention, rpt msg, out	USB	(AB)
E11a	9446	12-11	0830	Thu	649/35 Attention 36069 06947 29283 ... 78382 18974 19509 Attention, rpt msg, out	USB	(AB)
E11a	10125	9-11	0820	Mon	430/37 Attention 87587 87323 77681 ... 47334 56069 41728 Attention, rpt msg	USB	(AB)
E11a	10125	12-11	0820	Thu	430/37 Attention 87587 87323 77681 ... 47334 56069 41728 Attention, rpt msg	USB	(AB)
E11a	10213	16-11	0745	Mon	262/36 Attention 78833 68748 51691 ... 04968 14404 26258 Attention, rpt msg, out	USB	(AB)
E11a	10448	25-11	1625	Wed	978/36 Attention 69618 45270 58743 03355 14397 96814 ... o)	USB	(MPJ)
E11a	10800	17-11	0710	Tue	633/34 Attention 99507 41350 50302 ... 11011 09014 46820 Attention, rpt msg, out	USB	(AB)
E11a	10800	20-11	0710	Fri	633/34 Attention 99507 41350 50302 ... 11011 09014 46820 Attention, rpt msg, out	USB	(AB)
E11a	11100	24-11	1205	Tue	461/33 Attention 48968 97675 76605 ... 79581 60769 12654 Attention, rpt msg, out	USB	(AB)
E11a	11100	25-11	1205	Wed	461/33 Attention 48968 97675 76605 ... 79581 60769 12654 Attention, rpt msg, out	USB	(AB)
E11a	12153	24-11	1045	Tue	571/36 Attention 03360 04667 51152 ... 46175 66581 41791 Attention, rpt msg, out	USB	(AB)
E11a	15632	2-11	1540	Mon	225/38 Attention 33907 25461 09807 ,,, 36982 79166 49297 Attention, rpt msg, out	USB	(AB)
E11a	16112	10-11	0745	Tue	335/30 Attention 28732 07476 65307 ... 68989 37051 95250 Attention, rpt msg, out	USB	(AB)
E11a	16112	12-11	0745	Thu	335/30 Attention 28732 07476 65307 ... 68989 37051 95250 Attention, rpt msg, out	USB	(AB)
E11a	16112	15-11	0730	Sun	354/36 Attention 98155 65995 23611 ... 97802 69334 28422 Attention, rpt msg, out	USB	(AB)
E17z	9820	5-11	0810	Thu	674	USB	(HFD)
E17z	9820	5-11	0810	Thu	674 980 5 36260 51624 85734 51830 31226 980 5 00000	USB	(AB)
E17z	9820	12-11	0810	Thu	764 980 5 36260 51624 85734 51830 31226 980 5 00000	USB	(AB)
E17z	10635	16-11	1538	Mon	274 (R4m) 863 50 92342 19208 89048 91458 96180 15024 00178 98458 54014 92142 22025 End of transmission	AM	(Danix)
E17z	11170	5-11	0800	Thu	674 980 5 36260 51624 85734 51830 31226 980 5 00000	USB	(AB)
E17z	11170	5-11	0800	Thu	674 980 5 36260	USB	(HFD)
E17z	11170	12-11	0800	Thu	764 980 5 36260 51624 85734 51830 31226 980 5 00000	USB	(AB)
E17z	11170	26-11	0800	Thu	674 935 8 37391 37446 86525 89203 33244 39054 35843 37259 935 8 00000	USB	(AB)
E25	9450	14-11	1215	Sat	Song: Enta Omri; Callup: 835 837 1; Message to 835: 1041 6920 8349 6852 9502 0211 2864 3009 0168 1578 6767 4377 6920 0787	AM	(Danix)
E25a	6140	27-11	0800	Fri	No intro music. Callup: 017 5	AM	(Danix)
E25a	6140	30-11	0745	Mon	No intro music, Windows XP sound. Callup: 255 70. Ended: Rebeat (x2) 255 70 (x3) -age Message	AM	(Danix)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
E25a	9450	16-11	1215	Mon	Intro song: Umm Kulthum - Enta Omri; Callup: 830 2; ends "Message" (x3) "Rebeat" (x3)	AM	(Danix)
E25a	9450	26-11	1213	Thu	No intro music. Callup: 837 (no single digit). Ended "message (x3) rebeat beat EOM EOT"	AM	(Danix)
E25a	9450	28-11	1215	Sat	Intro song: Umm Kulthum - Enta Omri. Callup: 830 5. Ended 1221 UTC: Message, EOM, EOT.	AM	(Danix)
EGY	14615	2-11	0831	Mon	99910: Egyptian MFA Cairoclg 11102 Paris embassy, followed by CODAN 9001 traffic	Codan selcal	(AAI)
EGY	16340	21-11	1446	Sat	MFA Cairo short ATU-A Arabic traffic	SITOR-A 100/170	(PPA)
EGY	20126.7	22-11	1340	Sun	Egyptian Embassy, Bamako selcals SSTD (MFA Cairo) and asks for QSY to 20055 kHz	SITOR-A 100/170	(MCO)
G06	3728	2-11	1700	Mon	248 0	USB	(HFD)
G06	3728	9-11	1700	Mon	248 248 248 00000	USB	(AB/MPJ)
G06	4051	4-11	1300	Wed	248 0	USB	(HFD)
G06	4460	5-11	1300	Thu	298 298 298 00000 ?? very weak	USB	(AB/MPJ)
G06	4460	5-11	1300	Thu	329 0	USB	(HFD)
G06	4484	2-11	1800	Mon	248 0	USB	(HFD)
G06	4484	2-11	1802	Mon	248 248 248 00000	USB	(PPA)
G06	4519	26-11	1828	Thu	271 20 14259 22676 32782 ... 73311 98289 12252 271 20 00000 (2 mins early)	USB	(AB)
G06	4519	26-11	1830	Thu	271	USB	(HFD)
G06	4760	6-11	2130	Fri	472 728 30 14259 normally E06	USB	(HFD)
G06	4792	13-11	1930	Fri	436 720 20 45456	USB	(HFD)
G06	4792	13-11	1930	Fri	436 700 20 45456 23115 23433 ... 46537 66476 87488 98388 00000. Did not repeat final group (93988) (MPJ)	USB	(MPJ)
G06	4792	13-11	1932	Fri	436 722 722 22 22 5F message	USB	(PPA)
G06	4792	27-11	1930	Fri	436 271 20 14259 22676 32782 32782 76723 ... 12256 18841 73311 98089 12252 271 20 00000	USB	(MPJ)
G06	4946	4-11	1200	Wed	248 0	USB	(HFD)
G06	4946	4-11	1200	Wed	248 248 248 00000	USB	(MPJ)
HM01	9065	15-11	0752	Sun	48083 43333 32436 32234 53879 61435	AM/RDFT	(AB)
HM01	9065	20-11	0758	Fri	25522 32238 72353 31571 48087 43337	AM/RDFT	(AB)
HM01	9065	23-11	0759	Mon	25525 53762 72356 31573 81681 48861	AM/RDFT	(AB)
HM01	9155	1-11	0957	Sun	32431 48837 53873 55029 36885 67786	AM/RDFT	(AB)
HM01	9155	20-11	0958	Fri	25522 32238 72353 31571 48087 43337	AM/RDFT	(AB)
HM01	9240	1-11	0900	Sun	32431 48837 53873 55029 36885 67786	AM/RDFT	(AB)
HM01	9240	22-11	0858	Sun	25524 53761 72355 31572 48089 48861	AM/RDFT	(AB)
HM01	9240	23-11	0859	Mon	25525 53762 72356 31573 81681 48861	AM/RDFT	(AB)
HM01	9240	30-11	0912	Mon	i.p. 17071 53765 72359 31576 81683 48864	AM/RDFT	(AB)
HM01	9330	23-11	0746	Mon	i.p. 25525 53762 72356 31573 81681 48861	AM/RDFT	(AB)
HM01	10715	1-11	2155	Sun	Started but stopped after couple callup groups. Then tuning tones and into msg for 1st callup group	AM/RDFT	(DSch)
HM01	10715	2-11	2200	Mon	32432 32231 53875 61431 36887 67788	AM/RDFT	(Dan)
HM01	10715	6-11	2200	Fri	85760 10606 35366 57673 23835 14033	AM/RDFT	(Dan)
HM01	10715	8-11	2200	Sun	85760 10606 35366 57673 23835 14033	AM/RDFT	(Dan)
HM01	10715	9-11	2200	Mon	85760 10606 35366 57673 23835 14033	AM/RDFT	(Dan)
HM01	10715	11-11	2200	Wed	48081 43331 32434 32232 53877 61433	AM/RDFT	(Dan)
HM01	10715	13-11	2200	Fri	48083 43333 32436 32234 53879 61435	AM/RDFT	(Dan)
HM01	11435	1-11	1558	Sun	32431 48838 53874 61431 36886 67787	AM/RDFT	(DSch)
HM01	11435	2-11	1606	Mon	Into RDFT, skipped the tuning tones, then 32432 32231 53875 61431 36887 67788	AM/RDFT	(DSch)
HM01	11435	4-11	1604	Wed	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11435	7-11	1603	Sat	Tuned xmtr. Stopped and resumed in RDFT, no callup or tuning tones. 85760 10606 335366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11435	8-11	1604	Sun	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11435	9-11	1629	Mon	85760 10606 35366 57673 23835 14533	AM/RDFT	(DSch)
HM01	11435	10-11	1559	Tue	85760 10606 35366 57673 23835 14533	AM/RDFT	(DSch)
HM01	11435	11-11	1607	Wed	48081 43331 32434 32232 53877 61433	AM/RDFT	(DSch)
HM01	11435	12-11	1607	Thu	48081 43331 32434 32232 53877 61433	AM/RDFT	(DSch)
HM01	11435	13-11	1606	Fri	48083 43333 32436 32234 53879 61435	AM/RDFT	(DSch)
HM01	11435	14-11	1617	Sat	48083 43333 32436 32234 53879 61435	AM/RDFT	(DSch)
HM01	11435	15-11	1603	Sun	Tuning xmtr at 1603z then 48083 43333 32436 32234 53879 61435. Note: Did not send callup nor tuning tones	AM/RDFT	(DSch)
HM01	11435	16-11	1608	Mon	Very weak	AM/RDFT	(DSch)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
HM01	11435	17-11	1602	Tue	25521 32236 72351 61437 48085 43335	AM/RDFT	(DSch)
HM01	11435	18-11	1631	Wed	Too weak to copy	AM/RDFT	(DSch)
HM01	11435	19-11	1609	Thu	25522 32238 72353 31571 48087 43337	AM/RDFT	(DSch)
HM01	11435	20-11	1603	Fri	25523 53761 72354 31571 48088 43338	AM/RDFT	(DSch)
HM01	11435	21-11	1559	Sat	25524 53761 72355 31572 48089 48861	AM/RDFT	(DSch)
HM01	11435	22-11	1628	Sun	25525 53762 72356 31573 81681 48861	AM/RDFT	(DSch)
HM01	11435	25-11	1559	Wed	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	26-11	1555	Thu	Transmitter tuned at 1555z. Transmission started at 1633z, 35 mins late. 17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	27-11	1604	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	28-11	1558	Sat	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11435	29-11	1607	Sun	17071 53765 72359 31576 81683 48864. Note: Tuning tones were not sent.	AM/RDFT	(DSch)
HM01	11462	24-11	0858	Tue	25526 53763 72357 31574 81681 48862	AM/RDFT	(AB)
HM01	11530	3-11	1737	Tue	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11530	6-11	1742	Fri	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11530	11-11	1711	Wed	48081 43331 32434 32232 53877 61433	AM/RDFT	(DSch)
HM01	11530	12-11	1659	Thu	48082 43332 32435 32233 53878 61434	AM/RDFT	(DSch)
HM01	11530	12-11	1711	Thu	48081 43331 32434 32232 53877 61433	AM/RDFT	(DSch)
HM01	11530	16-11	1700	Mon	32437 32235 72351 61436 48084 43334	AM/RDFT	(DSch)
HM01	11530	18-11	1700	Wed	25521 32237 72352 61438 48086 43336	AM/RDFT	(DSch)
HM01	11530	23-11	1658	Mon	25526 53763 72357 31574 81681 48862	AM/RDFT	(DSch)
HM01	11530	26-11	1658	Thu	Music briefly. Then 22222, tape hung up. Carrier goes off at 1702z. Back with rptd 22222 and then 17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11530	27-11	1658	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11635	2-11	2115	Mon	32432 32231 53875 61431 36887 67788	AM/RDFT	(DSch)
HM01	11635	3-11	1802	Tue	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11635	5-11	1829	Thu	85760 10606 35366 57673 23835 14033	AM/RDFT	(DSch)
HM01	11635	27-11	1839	Fri	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11635	28-11	1831	Sat	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	11635	30-11	1759	Mon	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	12180	24-11	0958	Tue	25526 53763 72357 31574 81681 48862	AM/RDFT	(AB)
HM01	16180	5-11	2100	Thu	85760 10606 35366 57673 23835 14033	AM/RDFT	(Dan)
HM01	16180	21-11	2057	Sat	DGI	AM/RDFT	(VH)
HM01	16180	26-11	2059	Thu	17071 53765 72359 31576 81683 48864	AM/RDFT	(DSch)
HM01	17480	10-11	2200	Tue	48080 43331 32433 32231 53876 61432	AM/RDFT	(Dan)
HM01	17480	12-11	2200	Thu	48082 43332 32435 32233 53878 61434	AM/RDFT	(Dan)
HM01	17480	14-11	2200	Sat	48083 43333 32436 32234 53879 61435	AM/RDFT	(Dan)
M01	4490	5-11	2000	Thu	197 186 30 = = 95518 53863 32383 (32384) 74260 (74266) 29870 ... 72232 11459 54162 10076 17873 = = 186 30 000	CW	(MPJ)
M01	4490	10-11	2000	Tue	197 1#1 30 44951	CW	(HFD)
M01	4490	12-11	1959	Thu	197 905 30 = = 73061 44123 34269 06340 35865 ... 25789 17787 88835 13819 21840 = = 909 (!) 30 000. Many errors. VV K	CW	(MPJ)
M01	4490	17-11	2000	Tue	197 807 30 46655 60982 75594 47766 ... (very poor copy) ... 75702 89725 05859 17531 49530 = = 807 30 000	CW	(MPJ)
M01	4490	24-11	2000	Tue	197 (R) 803 30 = = 53343 01572 67749 ... 58231 77718 11265 = = 803 30 000	CW	(AB/MPJ)
M01	4490	26-11	2000	Thu	197 729 30 = = 62777 431.1 72187 51474 91261 ... 96156 00657 53965 15824 30621 = = 729 30 000	CW	(MPJ)
M01	5320	3-11	1800	Tue	197 345 30 56673	CW	(HFD)
M01	5320	3-11	1800	Tue	197 (R) 345 345 30 30 = = 56673 56673 75643 75643 67186 67186 ... 28774 28774 38187 38187 02691 02691 = = 345 345 30 30 000	MCW	(AB)
M01	5320	5-11	1800	Thu	197 (R) 568 568 30 30 = = 10524 10524 31132 31132 06494 06494 ... 34491 34491 78455 78455 48460 48460 = = 568 568 30 30 000	CW	(AB)
M01	5320	10-11	1800	Tue	197 467 30 = = 26264 75931 31600 17467 70310 ... 74118 32798 20763 21664 03830 = = 467 30 000	CW	(MPJ)
M01	5320	12-11	1800	Thu	197 505 30 = = 23233 64117 39313 07015 19715 ... 77889 79653 88804 10198 38353 = = 505 30 000	CW	(MPJ)
M01	5320	17-11	1800	Tue	197 926 30 = = 34961 89122 39385 04360 0023. ... (faded) ... 65452 ... 63708 = = 926 30 000	CW	(MPJ)
M01	5320	19-11	1800	Thu	197 234 30 = = 22954 09657 49020 17559 00459 ... 66131 35558 2..58 68051 62868 25676 = = 234 30 000. With errors.	CW	(MPJ)
M01	5320	19-11	1800	Thu	197 197 197 234 234 30 30 5F msg ending TTT	CW	(PPA)

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M01	5320	24-11	1800	Tue	197 (R) 289 30 = = 85200 50245 24249 ... 71147 38743 15432 = = 289 30 000	CW	(AB/MPJ)
M01	5465	2-11	0700	Wed	197 113 30	CW	(HFD)
M01	5645	8-11	0700	Sun	197 (R) 255 255 30 30 = = 33968 79838 25386 ... 97555 *3716 92382 5858T 53*** ends before finishing the message = = 255 255 30 30 000	CW	(AB)
M01	5810	7-11	1500	Sat	197 146 30 96587	CW	(HFD)
M01	6261	5-11	0615	Thu	932 40 = 53086 ... 761164 59529 39946 ... 93983 68432 90668 = 932 40 000	CW	(F5JBR)
M01a	5808	6-11	1425	Fri	320 76660 (R) followed a long message	CW	(MA2)
M01b	2405	6-11	2110	Fri	610 971 31 90755 //3180	CW	(HFD)
M01b	2425	16-11	2015	Mon	375 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 82165 = = 971 31 000 //3205 kHz	MCW	(MPJ)
M01b	2425	23-11	2015	Mon	375 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3205 kHz	MCW	(MPJ)
M01b	2425	30-11	2015	Mon	375 971 31 = = 90755 44918 14815 98342 78172 ... 17482 85926 34077 35569 81165 = = 971 31 000 //3205 kHz	MCW	(MPJ)
M01b	2435	2-11	1910	Mon	853 971 31 90755 //3519	CW	(HFD)
M01b	2435	9-11	1911	Mon	853 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3520 kHz	MCW	(F5JBR/Danix)
M01b	2435	23-11	1910	Mon	853 971 31 = = 90.55 44.18 14815 98.44 ... (impossible copy either freq) //3520 kHz	MCW	(MPJ)
M01b	2466	5-11	1932	Thu	910 973 31 90755 //3545	CW	(HFD)
M01b	2470	5-11	1932	Thu	910 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3545 kHz	MCW	(MPJ)
M01b	2470	12-11	1932	Thu	910 971 31 = = 90755 44918 1481. 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3545 kHz	MCW	(MPJ)
M01b	2470	19-11	1932	Thu	910 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3545 kHz	MCW	(MPJ)
M01b	2485	5-11	2042	Thu	382 973 31 90755 //3160	CW	(HFD)
M01b	2485	5-11	2042	Thu	(Callup missed) 971 31 = = 90755 44918 14815 18342 78172 16261 ...	MCW	(MPJ)
M01b	2485	12-11	2042	Thu	382 ... 31 (tfc unreadable both freqs) //3160 kHz	MCW	(MPJ)
M01b	2485	19-11	2042	Thu	38290755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3160 kHz	MCW	(MPJ)
M01b	2654	6-11	2002	Fri	866 971 31 90755 //3194	CW	(HFD)
M01b	2655	6-11	2002	Fri	866 ..1 31 = = 90755 46818 148.5 983.1 78973 ... //3195 kHz	MCW	(MPJ)
M01b	2655	13-11	2002	Fri	866 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3195 kHz	MCW	(MPJ)
M01b	2655	20-11	2002	Fri	866 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //3195 kHz	MCW	(MPJ)
M01b	3160	5-11	2042	Thu	382 973 31 90755 //2485	CW	(HFD)
M01b	3160	12-11	2042	Thu	382 ... 31 (tfc unreadable both freqs) //2485 kHz	MCW	(MPJ)
M01b	3160	19-11	2042	Thu	38290755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2485 kHz	MCW	(MPJ)
M01b	3180	6-11	2110	Fri	610 971 31 90755 //2405	CW	(HFD)
M01b	3194	6-11	2002	Fri	866 971 31 90755 //2654	CW	(HFD)
M01b	3195	6-11	2002	Fri	866 ..1 31 = = 90755 46818 148.5 983.1 78973 ... //2655 kHz	MCW	(MPJ)
M01b	3195	13-11	2002	Fri	866 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2655 kHz	MCW	(MPJ)
M01b	3195	20-11	2002	Fri	866 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2655 kHz	MCW	(MPJ)
M01b	3205	2-11	2015	Mon	375 971 31 90755	CW	(HFD)
M01b	3205	9-11	2015	Mon	375 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000	MCW	(MPJ)
M01b	3205	23-11	2015	Mon	375 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2425 kHz	MCW	(MPJ)
M01b	3519	2-11	1910	Mon	853 971 31 90755 //2435	CW	(HFD)
M01b	3520	9-11	1911	Mon	853 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2435 kHz	MCW	(F5JBR/Danix/MPJ)
M01b	3520	23-11	1910	Mon	853 971 31 = = 90.55 44.18 14815 98.44 ... (impossible copy either freq) //2435 kHz	MCW	(MPJ)
M01b	3545	5-11	1932	Thu	910 973 31 90755 //2466	CW	(HFD)
M01b	3545	5-11	1932	Thu	910 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2470 kHz	MCW	(MPJ)

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M01b	3545	12-11	1932	Thu	910 971 31 = = 90755 44918 1481. 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2470 kHz	MCW	(MPJ)
M01b	3545	19-11	1932	Thu	910 971 31 = = 90755 44918 14815 98342 78172 ... 17481 85986 34077 35569 81165 = = 971 31 000 //2470 kHz	MCW	(MPJ)
M01b	3545	26-11	1932	Thu	910 971 31 = = 90755 44918 14815 98342 78172 ...	MCW	(MPJ)
M01c	2040	17-11	1904	Tue	459 459 459 987 69 987 69 and 459 459 459 987 69 987 69	CW	(F5JBR)
M01c	2423	17-11	1743	Tue	124 124 124 80294 80294 124 124 124 80294 80294 111 124 124 124 81981 81981 ... 111 111 333 333 333 000 333 000	CW	(F5JBR)
M01c	2559	19-11	0549	Thu	720 720 720 525 74 525 74 and 20 720 720 525 74 525 74 and 333 333	CW	(F5JBR)
M01c	3839	18-11	1555	Wed	858 858 858 852 34 752 34	CW	(F5JBR)
M01c	4213	18-11	0557	Wed	i.p. 41148 66491 41513 = 680 35 000	CW	(F5JBR)
M01c	4326	7-11	0739	Sat	869 869 869 869 381 05 381 05	CW	(F5JBR)
M01c	4326	19-11	0739	Thu	869 869 869 383 75 383 75 and 869 869 869 383 75 383 75	CW	(F5JBR)
M01c	4571	19-11	0938	Thu	91080 35946 05819 87090 31768 ... = 556 30 and 111 000	CW	(F5JBR)
M01c	4612	18-11	1544	Wed	938 938 938 763 32 763 32 and 938 938 938 763 32 763 32 and 111 999 and 379 35 = 26913 68771 08694 11818 51012 16137 ... = 379 35 111 000	CW	(F5JBR)
M01c	4694	18-11	1401	Wed	629 629 629 778 40 778 40 / 629 629 629 778 40 778 40 / 111 999 111 999 / 435 10 = 96854 65213 15621 96854 81687 ... = 435 10 000 and 333 02 = 213 000	CW	(F5JBR)
M01c	4813	7-11	1015	Sat	437 437 437 437 718 90 718 90 and 111 999 769 37 = 93464 36492 20336 ... 98494 51914 56213 = 769 37 000	CW	(F5JBR)
M01c	4814	18-11	1438	Wed	36738 77576 37980 = 367 38 and 111 000	CW	(F5JBR)
M01c	4816	18-11	1344	Wed	638 65443 28124 = 345 31 and 111 000	CW	(F5JBR)
M01c	5018	25-11	1123	Wed	603 603 603 908 43 908 43 and 111 111 000	CW	(F5JBR)
M01c	5018	25-11	1201	Wed	603 603 603 904 43 904 43 and 111 904 13 904 13 111 904 13 904 13 and 835 10 = 93203 36158 84509 ... 32561 15591 78961 = 835 10 111 000	CW	(F5JBR)
M01c	5350	7-11	0909	Sat	i.p. 04098 = 768 34 000	CW	(F5JBR)
M01c	5440	18-11	1535	Wed	474 474 474 733 56 733 56 and 474 474 474 733 56 733 56 and	CW	(F5JBR)
M03	4505	2-11	1320	Mon	543/00	CW	(HFD)
M03	4505	2-11	1320	Mon	543/00 = = 000	CW	(AB)
M03	4505	18-11	1324	Wed	543/00 = = 000	CW	(F5JBR)
M03	4505	23-11	1320	Mon	543/?? barely audible	CW	(AB)
M03	4505	30-11	1320	Mon	543/00 = = 000	CW	(AB)
M03	4828	5-11	1320	Thu	430/30 = = 52050 22297 75133 ... 60007 90422 50898 430/30 = = rpt msg = = 000 (VVV at 1316z)	CW	(AB)
M03	4828	5-11	1320	Thu	430/30 52050	CW	(HFD)
M03	4828	8-11	1323	Sun	???/30 = = 52050 22297 75133 ... 60007 90422 50898 = = 000	CW	(JPL-FNL)
M081	8096	1-11	1414	Sun	In tfc	CW	(DSch)
M08a	7554	1-11	2009	Sun	AGNRN NNWTA DWTNN	CW	(DSch)
M08a	7554	3-11	1943	Tue	In tfc	CW	(DSch)
M08a	7554	5-11	1958	Thu	In tfc	CW	(DSch)
M08a	7554	7-11	2001	Sat	AGNRN NNWTA DWTNN	CW	(DSch)
M08a	7554	9-11	2000	Mon	No sign of M08a but two OM/EE on freq briefly and again at 2114z with Alfa Alfa call. Talking about South Carolina weather data	USB	(DSch)
M08a	7554	16-11	1858	Mon	AGNRN NNWTA DWTNN	CW	(DSch)
M08a	7554	18-11	2002	Wed	In tfc	CW	(DSch)
M08a	7554	18-11	2013	Wed	In tfc	CW	(DSch)
M08a	7554	19-11	2010	Thu	DDUNA (Only one callup grp)	CW	(DSch)
M08a	7554	21-11	2007	Sat	In tfc	CW	(DSch)
M08a	7554	27-11	2016	Fri	In tfc	CW	(DSch)
M08a	8009	4-11	2300	Wed	In tfc	CW	(DSch)
M08a	8009	7-11	2253	Sat	AGNRN NNWTA DWTNN into tfc	CW	(DSch)
M08a	8009	9-11	2305	Mon	In tfc	CW	(DSch)
M08a	8009	16-11	2256	Mon	In tfc, bad keying	CW	(DSch)
M08a	8009	18-11	2256	Wed	IDDNN GRRWA TGAGA	CW	(DSch)
M08a	8009	21-11	2300	Sat	In tfc	CW	(DSch)
M08a	8010	21-11	2300	Sat	DGI	CW	(VH)
M08a	8096	3-11	1403	Tue	In tfc	CW	(DSch)
M08a	8096	6-11	1347	Fri	WAUTN RDGDN UIAIA	CW	(DSch)
M08a	8096	7-11	1348	Sat	i.p. The transmitter was tuned at 1349z but no traffic till 1428z. Re-checked at 1448z, now in i.p.	CW	(DSch)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M08a	8096	10-11	1359	Tue	Sent callups just once and into tfc. 2nd callup is URTIA. 3rd callup is WTDAN. Completes tfc and off at 1431z	CW	(DSch)
M08a	8096	16-11	1400	Mon	Keying messed up	CW	(DSch)
M08a	8096	18-11	1401	Wed	In tfc	CW	(DSch)
M08a	8096	19-11	1358	Thu	No callup, right into traffic	CW	(DSch)
M08a	8096	24-11	1358	Tue	In tfc	CW	(DSch)
M08a	8096	25-11	1357	Wed	DNWDN ADAGN NRUAA into tfc	CW	(DSch)
M08a	8096	27-11	1408	Fri	In tfc.	CW	(DSch)
M08a	8097	15-11	1357	Sun	DGI	CW	(VH)
M08a	8097	15-11	1357	Sun	DGI	CW	(VH)
M08a	8135	1-11	2257	Sun	AGNRN NNWTA DWTNN. Note: Same msg texts all weekend skeds.	CW	(DSch)
M08a	8135	6-11	2300	Fri	In tfc	CW	(DSch)
M08a	8135	10-11	2259	Tue	IUNIA GRRTN TTTDN into tfc	CW	(DSch)
M08a	8135	12-11	2259	Thu	TDGTN AGTNA NNDUN into tfc	CW	(DSch)
M08a	8135	13-11	2303	Fri	In tfc	CW	(DSch)
M08a	8135	15-11	2259	Sun	In tfc	CW	(DSch)
M08a	8135	26-11	2253	Thu	In tfc.	CW	(DSch)
M08a	8135	27-11	2300	Fri	In tfc	CW	(DSch)
M12	4029	4-11	2240	Wed	460 1	CW	(HFD)
M12	4617	2-11	0530	Mon	638 638 638 000	CW	(AB)
M12	4617	2-11	0530	Mon	638 0	CW	(HFD)
M12	4617	23-11	0531	Mon	636 636 636 000	CW	(F5JBR)
M12	4629	4-11	2220	Wed	460 1	CW	(HFD)
M12	5317	2-11	0550	Mon	638 0	CW	(HFD)
M12	5429	4-11	2200	Wed	460 1	CW	(HFD)
M12	5788	4-11	1940	Wed	463 1	CW	(HFD)
M12	5788	4-11	1940	Wed	463 1 6379 131 93969 53509 45341 35033 71403 ... 57536 64762 67704 61410 67803 000 000	CW	(MPJ)
M12	5788	4-11	2040	Wed	463 1 470 180 17628 71368 37677 36214 64941 ... 76719 02538 54327 20158 60046 000 000	CW	(MPJ)
M12	5788	5-11	2040	Thu	463 1 (R) 7045 86 76513 96960 96856 ... 89420 52425 50162 000 000	CW	(AB/MPJ)
M12	5788	6-11	2040	Fri	463 1 604 185 31235 03806 57473 71220 14562 ... 59936 90411 44132 30274 67414 000 000	CW	(MPJ)
M12	5788	8-11	2040	Sun	463 1 5877 74 878.4 97430 49405 67424 .32.. ... 362.. 69488 2949. 49407 09414 000 000	CW	(MPJ)
M12	5788	9-11	1240	Mon	463 1 2493 84 16932 90706 17695 72462 74330 ... 74544 59887 62493 73082 82841 000 000	CW	(MPJ)
M12	5788	9-11	1840	Mon	463 1 3328 144 16300 78020 63479 64308 31401 ... .1532 76934 17017 58056 03377 000 000	CW	(MPJ)
M12	5788	10-11	2040	Tue	463 1 9109 90 10848 91426 42963 29596 23633 ... 66327 71600 42331 74532 56075 000 000	CW	(MPJ)
M12	5788	11-11	1940	Wed	463 1 1345 138 66574 04035 15285 30876 06067 ... 40990 12574 57413 88147 57592 000 000	CW	(MPJ)
M12	5788	12-11	2040	Thu	463 1 3519 66 94251 57886 40386 59283 59139 ... 28024 47619 6099. 05057 49316 000 000	CW	(MPJ)
M12	5788	13-11	2040	Fri	463 1 7948 78 96014 50702 99460 15741 83294 ... 00694 47644 67348 26736 55278 000 000	CW	(MPJ)
M12	5788	14-11	2040	Sat	463 1 2177 69 87560 99942 01161 43315 87924 ... 76613 87816 19546 66464 16328 000 000	CW	(MPJ)
M12	5788	15-11	2040	Sun	463 1 5699 85 44605 15940 12339 75871 79762 ... 49679 52057 08163 73230 63303 000 000	CW	(MPJ)
M12	5788	16-11	1840	Mon	463 1 9171 146 04549 93152 60086 95867 62867 ... 98605 29500 15747 27535 22099 000 000	CW	(MPJ)
M12	5788	16-11	2040	Mon	463 1 529 98 22682 94541 68897 43784 66251 ... 45359 51301 68228 50419 93262 000 000	CW	(MPJ)
M12	5788	17-11	2040	Tue	463 1 529 98 22..2 94541 68897 43784 66251 ... 45359 61301 68228 50419 93262 000 000	CW	(MPJ)
M12	5788	18-11	1940	Wed	463 1 7801 132 71155 43593 10623 99790 61280 40305 35945 00094 47781 44274 000 000	CW	(MPJ)
M12	5788	18-11	2040	Wed	463 1 3539 72 70708 35674 63088 43813 54262 ... 06355 90224 84144 48101 01738 000 000	CW	(MPJ)
M12	5788	19-11	2040	Thu	463 1 7250 86 68681 27059 08057 35972 47822 ... 29653 74240 45488 12021 61865 000 000	CW	(MPJ)
M12	5788	20-11	2040	Fri	463 1 200 161 99013 45826 64339 48711 44864 ... 12672 45221 02492 73963 18836 000 000	CW	(MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	5788	21-11	2042	Sat	i.p.	CW	(VH)
M12	5788	23-11	1840	Mon	463 1 2081 142 85273 13930 22764 98671 02418 ... 17570 20244 18690 97603 41289 000 000	CW	(MPJ)
M12	5788	23-11	2040	Mon	463 1 9624 65 56434 95067 04565 04769 33659 ... 06808 43397 32487 (32497?) 69972 19419 000 000	CW	(MPJ)
M12	5788	23-11	2040	Mon	463 1 8213 84 85504 53454 86679 26379 44881 ... 15986 50448 43077 42168 83687 000 000	CW	(MPJ)
M12	5788	24-11	2040	Tue	463 1 5610 81 10490 36790 33292 45611 01464 ... 19807 32140 46258 83200 21494 000 000	CW	(MPJ)
M12	5788	25-11	2040	Wed	463 1 8831 69 38963 56347 25490 17138 47366 ... 81968 48896 04815 24763 0.679 000 000	CW	(MPJ)
M12	5788	26-11	2040	Thu	463 1 1173 86 49288 50804 93645 50862 37614 ... 79269 44115 10291 62308 28955 000 000	CW	(MPJ)
M12	5788	27-11	2040	Fri	463 1 8033 82 18756 81341 97570 15127 33481 ... 92196 94211 50520 84435 31603 000 000	CW	(MPJ)
M12	5788	28-11	2040	Sat	463 1 3237 66 26003 53168 70969 40484 62986 ... 99761 90492 92542 35539 24466 000 000	CW	(MPJ)
M12	5788	29-11	2040	Sun	463 1 3908 84 22480 98710 56507 37109 35457 ... 54500 16251 98184 57623 44854 000 000	CW	(MPJ)
M12	5788	30-11	1840	Mon	463 1 (R) 6869 144 42268 65660 95746 ... 65639 93432 73443 000 000	CW	(AB/MPJ)
M12	5788	30-11	2040	Mon	463 1 6142 63 86390 35625 19891 78647 07087 ... 07462 35431 80590 52841 67673 000 000	CW	(MPJ)
M12	5884	12-11	0730	Thu	888 0	CW	(HFD)
M12	6802	4-11	1920	Wed	463 1 6379 131 93969 53509 45341 35033 71403 ... 57536 64762 67704 61410 67803 000 000	CW	(MPJ)
M12	6802	4-11	1920	Wed	463 1	CW	(HFD)
M12	6802	4-11	2020	Wed	463 1 470 180 17628 71368 37677 36214 64941 ... 76719 02538 54327 20158 60046 000 000	CW	(MPJ)
M12	6802	5-11	2020	Thu	463 1 (R) 7045 86 76513 96960 96856 ... 89420 52425 50162 000 000	CW	(AB/MPJ)
M12	6802	6-11	2020	Fri	463 1 604 185 31235 03806 57473 71220 14562 ... 59936 90411 44132 30274 67414 000 000	CW	(MPJ)
M12	6802	8-11	2020	Sun	463 1 5877 74 878.4 97430 49405 67424 .32.. ... 362.. 69488 2949. 49407 09414 000 000	CW	(MPJ)
M12	6802	9-11	1220	Mon	463 1 2493 84 16932 90706 17695 72462 74330 ... 74544 59887 62493 73082 82841 000 000	CW	(MPJ)
M12	6802	10-11	2020	Tue	463 1 9109 90 10848 91426 42963 29596 23633 ... 66327 71600 42331 74532 56075 000 000	CW	(MPJ)
M12	6802	11-11	2020	Wed	463 1 8355 87 1075. 92162 03946 17734 78779 ... 80865 21.90 91801 25772 66274 000 000	CW	(MPJ)
M12	6802	13-11	2020	Fri	463 1 7948 78 96014 50702 99460 15741 83294 ... 00694 47644 67348 26736 55278 000 000	CW	(MPJ)
M12	6802	14-11	2020	Sat	463 1 2177 69 87560 99942 01161 43315 87924 ... 76613 87816 19546 66464 16328 000 000	CW	(MPJ)
M12	6802	15-11	2020	Sun	463 1 5699 85 44605 15940 12339 75871 79762 ... 49679 52057 08163 73230 63303 000 000	CW	(MPJ)
M12	6802	16-11	1820	Mon	463 1 9171 146 04549 93152 60086 95867 62867 ... 98605 29500 15747 27535 22099 000 000	CW	(MPJ)
M12	6802	18-11	1920	Wed	463 1 7801 132 71155 43593 10623 99790 61280 40305 35945 00094 47781 44274 000 000	CW	(MPJ)
M12	6802	18-11	2020	Wed	463 1 3539 72 70708 35674 63088 43813 54262 ... 06355 90224 84144 48101 01738 000 000	CW	(MPJ)
M12	6802	19-11	2020	Thu	463 1 7250 86 68681 27059 08057 35972 47822 ... 29653 74240 45488 12021 61865 000 000	CW	(MPJ/PPA)
M12	6802	23-11	1820	Mon	463 1 2081 142 85273 13930 22764 98671 02418 ... 17570 20244 18690 97603 41289 000 000	CW	(MPJ)
M12	6802	23-11	2020	Mon	463 1 8213 84 85504 53454 86679 26379 44881 ... 15986 50448 43077 42168 83687 000 000	CW	(MPJ)
M12	6802	24-11	2020	Tue	463 1 5610 81 10490 36790 33292 45611 01464 ... 19807 32140 46258 83200 21494 000 000	CW	(MPJ)
M12	6802	25-11	2020	Wed	463 1 8831 69 38963 56347 25490 17138 47366 ... 81968 48896 04815 24763 0.679 000 000	CW	(MPJ)
M12	6802	26-11	2020	Thu	463 1 1173 86 49288 50804 93645 50862 37614 ... 79269 44115 10291 62308 28955 000 000	CW	(MPJ)
M12	6802	27-11	2020	Fri	463 1 8033 82 18756 81341 97570 15127 33481 ... 92196 94211 50520 84435 31603 000 000	CW	(MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	6802	28-11	2020	Sat	463 1 3237 66 26003 53168 70969 40484 62986 ... 99761 90492 92542 35539 24466 000 000	CW	(MPJ)
M12	6802	29-11	2020	Sun	463 1 3908 84 22480 98710 56507 37109 35457 ... 54500 16251 98184 57623 44854 000 000	CW	(MPK)
M12	6802	30-11	1840	Mon	463 1 (R) 6869 144 42268 65660 95746 ... 65639 93432 73443 000 000	CW	(MPJ)
M12	6802	30-11	2020	Mon	463 1 6142 63 86390 35625 19891 78647 07087 ... 07462 35431 80590 52841 67673 000 000	CW	(MPJ)
M12	6884	12-11	0750	Thu	888 0	CW	(HFD)
M12	6904	4-11	1840	Wed	257 1	CW	(HFD)
M12	6904	4-11	1840	Wed	257 1 845 84 42918 01484 24504 63934 80141 ... 56234 16624 64331 56838 22534 000 000	CW	(MPJ)
M12	6904	9-11	1940	Mon	257 1 436 111 00990 15785 98233 82022 44504 ... 28370 61305 48245 93354 40208 000 000	CW	(MPJ)
M12	6904	11-11	1840	Wed	258 1 3530 152 0.996 32543 59263 79262 45375 ... 16271 39323 4..52 ..360 64..0 000 000	CW	(MPJ)
M12	6904	11-11	1841	Wed	257 257 257 1 => 5f msg => Ending TTT TTT	CW	(PPA)
M12	6904	16-11	1940	Mon	257 1 8286 88 53657 90840 75682 06002 60630 ... 69234 76201 56062 77586 62560 000 000	CW	(MPJ)
M12	6904	18-11	1840	Wed	257 1 9586 138 87816 02661 56244 37949 02197 ... 51280 50358 23050 58982 01844 000 000	CW	(MJP)
M12	6904	23-11	1940	Mon	257 1 4962 90 32554 58427 33326 07916 45247 ... 10108 71052 52417 44023 79622 000 000	CW	(MPJ)
M12	6904	30-11	1940	Mon	257 1 8805 89 76194 79486 93288 49883 99110 ... 78674 98002 46612 65344 99696 000 000	CW	(MPJ)
M12	7462	5-11	1350	Thu	104 2992 129 87867 94886 78065 ... 28759 01710 92701 000 000	CW	(AB/MPJ)
M12	7462	5-11	1350	Thu	104 1	CW	(HFD)
M12	7462	19-11	1350	Thu	104 1 864 177 .5608 335.7 .1968 15544 4.880 ... 15821 85292 77214 84953 13481 000 000	CW	(MPJ)
M12	7462	28-11	1350	Sat	104 1 (R) 6481 159 80383 15531 61400 ... 26168 38238 20165 000 000	CW	(AB/MPJ)
M12	7637	21-11	0600	Sat	612 0	CW	(HFD)
M12	7637	28-11	0600	Sat	612 1 (R) 9722 183 24943 14186 45950 ... 28256 61533 50617 000 000	CW	(AB)
M12	7931	4-11	1820	Wed	257 1	CW	(HFD)
M12	7931	4-11	1820	Wed	257 1 845 84 42918 01484 24504 63934 80141 ... 56234 16624 64331 56838 22534 000 000	CW	(MPJ)
M12	7931	9-11	1920	Mon	257 1 436 111 00990 15785 98233 82022 44504 ... 28370 61305 48245 93354 40208 000 000	CW	(MPJ)
M12	7931	16-11	1920	Mon	257 1 8286 88 53657 90840 75682 06002 60630 ... 69234 76201 56062 77586 62560 000 000	CW	(MPJ)
M12	7931	18-11	1820	Wed	257 1 9586 138 87816 02661 56244 37949 02197 ... 51280 50358 23050 58982 01844 000 000	CW	(MJP)
M12	7931	23-11	1920	Mon	257 1 4962 90 32554 58427 33326 07916 45247 ... 10108 71052 52417 44023 79622 000 000	CW	(MPJ)
M12	7931	30-11	1920	Mon	257 1 8805 89 76194 79486 93288 49883 99110 ... 78674 98002 46612 65344 99696 000 000	CW	(MPJ)
M12	8046	20-11	2000	Fri	463 1 200 161 99013 45826 64339 48711 44864 ... 12672 45221 02492 73963 18836 000 000	CW	(MPJ)
M12	8047	4-11	1900	Wed	463 1	CW	(HFD)
M12	8047	4-11	1900	Wed	463 1 6379 131 93969 53509 45341 35033 71403 ... 57536 64762 67704 61410 67803 000 000	CW	(MPJ)
M12	8047	4-11	2000	Wed	463 1 470 180 17628 71368 37677 36214 64941 ... 76719 02538 54327 20158 60046 000 000	CW	(MPJ)
M12	8047	5-11	2000	Thu	463 1 (R) 7045 86 76513 96960 96856 ... 89420 52425 50162 000 000	CW	(AB/MPJ)
M12	8047	6-11	2000	Fri	463 1 604 185 31235 03806 57473 71220 14562 ... 59936 90411 44132 30274 67414 000 000	CW	(MPJ)
M12	8047	8-11	2000	Sun	463 1 5877 74 878.4 97430 49405 67424 .32.. ... 362.. 69488 2949. 49407 09414 000 000	CW	(MPJ)
M12	8047	9-11	1200	Mon	463 1 2493 84 16932 90706 17695 72462 74330 ... 74544 59887 62493 73082 82841 000 000	CW	(MPJ)
M12	8047	11-11	1900	Wed	463 1 1345 138 66574 04035 15285 30876 06067 ... 40990 12574 57413 88147 57592 000 000	CW	(MPJ)
M12	8047	12-11	1800	Thu	463 1 3519 66 94251 578.. 038.. 8.... 47619 6099. ... (faded). Rptd 20:20/6802-unreadable	CW	(MPJ)
M12	8047	13-11	2000	Fri	463 1 ... (traffic unreadable).	CW	(MPJ)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	8047	14-11	2000	Sat	463 1 2177 69 87560 99942 01161 43315 87924 ... 76613 87816 19546 66464 16328 000 000	CW	(MPJ)
M12	8047	15-11	2000	Sun	463 1 5699 85 44605 15940 12339 75871 79762 ... 49679 52057 08163 73230 63303 000 000	CW	(MPJ)
M12	8047	16-11	1800	Mon	463 1 9171 146 04549 93152 60086 95867 62867 ... 98605 29500 15747 27535 22099 000 000	CW	(MPJ)
M12	8047	16-11	2000	Mon	463 1 529 98 22682 94541 68897 43784 66251 ... 45359 51301 68228 50419 93262 000 000	CW	(MPJ)
M12	8047	18-11	1900	Wed	463 1 7801 132 71155 43593 10623 99790 61280 40305 35945 00094 47781 44274 000 000	CW	(MPJ)
M12	8047	18-11	2000	Wed	463 1 3539 72 70708 35674 63088 43813 54262 ... 06355 90224 84144 48101 01738 000 000	CW	(MPJ)
M12	8047	23-11	1800	Mon	463 1 2081 142 85273 13930 22764 98671 02418 ... 17570 20244 18690 97603 41289 000 000	CW	(MPJ)
M12	8047	23-11	2000	Mon	463 1 8213 84 85504 53454 86679 26379 44881 ... 15986 50448 43077 42168 83687 000 000	CW	(MPJ)
M12	8047	24-11	2000	Tue	463 1 5610 81 10490 36790 33292 45611 01464 ... 19807 32140 46258 83200 21494 000 000	CW	(MPJ)
M12	8047	25-11	2000	Wed	463 1 8831 69 38963 56347 25490 17138 47366 ... 81968 48896 04815 24763 0.679 000 000	CW	(MPJ)
M12	8047	26-11	2000	Thu	463 1 1173 86 49288 50804 93645 50862 37614 ... 79269 44115 10291 62308 28955 000 000	CW	(MPJ)
M12	8047	27-11	2000	Fri	463 1 8033 82 18756 81341 97570 15127 33481 ... 92196 94211 50520 84435 31603 000 000	CW	(MPJ)
M12	8047	28-11	2000	Sat	463 1 3237 66 26003 53168 70969 40484 62986 ... 99761 90492 92542 35539 24466 000 000	CW	(MPJ)
M12	8047	29-11	2000	Sun	463 1 3908 84 22480 98710 56507 37109 35457 ... 54500 16251 98184 57623 44854 000 000	CW	(MPJ)
M12	8047	30-11	1840	Mon	463 1 (R) 6869 144 42268 65660 95746 ... 65639 93432 73443 000 000	CW	(MPJ)
M12	8047	30-11	2000	Mon	463 1 6142 63 86390 35625 19891 78647 07087 ... 07462 35431 80590 52841 67673 000 000	CW	(MPJ)
M12	8062	5-11	1330	Thu	104 1	CW	(HFD)
M12	8062	5-11	1330	Thu	104 2992 129 87867 94886 78065 ... 28759 01710 92701 000 000	CW	(AB/MPJ)
M12	8062	28-11	1330	Sat	104 1 (R) 6481 159 80383 15531 61400 ... 26168 38238 20165 000 000	CW	(AB/MPJ)
M12	8116	3-11	2010	Tue	124	CW	(HFD)
M12	8116	5-11	1840	Thu	124 1	CW	(HFD)
M12	8116	5-11	1840	Thu	124 1 (R) 7050 144 50572 02824 43960 ... 77628 10196 42239 000 000	CW	(AB)
M12	8116	12-11	1840	Thu	124 1 4478 149 60468 99552 10676 97540 21094 ... 99600 81925 44396 78165 34532 000 000	CW	(MPJ)
M12	9137	21-11	0620	Sat	612 0	CW	(HFD)
M12	9137	28-11	0620	Sat	612 1 (R) 9722 183 24943 14186 45950 ... 28256 61533 50617 000 000	CW	(AB)
M12	9162	5-11	1310	Thu	104 2992 129 87867 94886 78065 ... 28759 01710 92701 000 000	CW	(AB/MPJ)
M12	9162	5-11	1310	Thu	104 1	CW	(HFD)
M12	9162	21-11	1310	Sat	104 1 864 177 4348. ....6 11.68 15544 13980 ...	CW	(MPJ)
M12	9162	28-11	1310	Sat	104 1 (R) 6481 159 80383 15531 61400 ... 26168 38238 20165 000 000	CW	(AB/MPJ)
M12	9176	4-11	1800	Wed	257 1 845 84 42918 01484 24504 63934 80141 ... 56234 16624 64331 56838 22534 000 000	CW	(MPJ)
M12	9176	4-11	1800	Wed	257 1	CW	(HFD)
M12	9176	9-11	1900	Mon	257 1 436 111 00990 15785 98233 82022 44504 ... 28370 61305 48245 93354 40208 000 000	CW	(MPJ)
M12	9176	18-11	1800	Wed	257 1 9586 138 87816 02661 56244 37949 02197 ... 51280 50358 23050 58982 01844 000 000	CW	(MJP)
M12	9176	23-11	1900	Mon	257 1 4962 90 32554 58427 33326 07916 45247 ... 10108 71052 52417 44023 79622 000 000	CW	(MPJ)
M12	9176	30-11	1900	Mon	257 1 8805 89 76194 79486 93288 49883 99110 ... 78674 98002 46612 65344 99696 000 000	CW	(MPJ)
M12	9264	3-11	1950	Tue	124 1	CW	(HFD)
M12	9264	5-11	1820	Thu	124 1	CW	(HFD)
M12	9264	5-11	1820	Thu	124 1 (R) 7050 144 50572 02824 43960 ... 77628 10196 42239 000 000	CW	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M12	9264	12-11	1820	Thu	124 1 4478 149 60468 99552 10676 97540 21094 ... 99600 81925 44396 78165 34532 000 000	CW	(MPJ)
M12	9327	4-11	2010	Wed	938 1	CW	(HFD)
M12	9327	4-11	2010	Wed	938 1 1743 53 35350 47629 77429 39058 51344 ... 29107 25863 70363 43591 31530 000 000	CW	(MPJ)
M12	10237	28-11	0640	Sat	612 1 (R) 9722 183 24943 14186 45950 ... 28256 61533 50617 000 000	CW	(AB)
M12	10343	3-11	1930	Tue	124 1	CW	(HFD)
M12	10343	5-11	1800	Thu	124 1 (R) 7050 144 50572 02824 43960 ... 77628 10196 42239 000 000	CW	(AB)
M12	10343	5-11	1800	Thu	124 1	CW	(HFD)
M12	10343	12-11	1800	Thu	124 1 4478 149 60468 99552 10676 97540 21094 ... 99600 81925 44396 78165 34532 000 000	CW	(MPJ)
M12	10598	4-11	1950	Wed	938 1	CW	(HFD)
M12	10598	4-11	1950	Wed	938 1 1743 53 35350 47629 77429 39058 51344 ... 29107 25863 70363 43591 31530 000 000	CW	(MPJ)
M12	10711	12-11	1740	Thu	546	CW	(HFD)
M12	11435	4-11	1930	Wed	938 1 1743 53 35350 47629 77429 39058 51344 ... 29107 25863 70363 43591 31530 000 000	CW	(MPJ)
M12	11435	4-11	1930	Wed	938 1	CW	(HFD)
M12	11491	5-11	1540	Thu	725 1 (R) 3626 111 37576 84975 36294 ... 50717 28069 87782 000 000	CW	(AB/MPJ)
M12	11491	5-11	1540	Thu	725 1	CW	(HFD)
M12	11491	12-11	1840	Thu	725 1 8631 116 03192 60311 26638 27221 872.5 ...	CW	(MPJ)
M12	11491	19-11	1540	Thu	725 1 4848 138 20210 13294 25473 25761 26533 ... 79145 35188 54293 01864 27088 000 000	CW	(MPJ)
M12	11491	19-11	1540	Thu	725 725 725 msg	CW	(SW2)
M12	11566	12-11	1720	Thu	546 0	CW	(HFD)
M12	12162	12-11	1700	Thu	546 1	CW	(HFD)
M12	12189	5-11	1520	Thu	725 1 (R) 3626 111 37576 84975 36294 ... 50717 28069 87782 000 000	CW	(AB/MPJ)
M12	12189	5-11	1520	Thu	725 1	CW	(HFD)
M12	12189	19-11	1520	Thu	725 1 4848 138 20210 13294 25473 25761 26533 ... 79145 35188 54293 01864 27088 000 000	CW	(MPJ)
M12	12189	19-11	1520	Thu	725 725 725 msg	CW	(SW2)
M12	12205	2-11	1100	Mon	973 1 (R) 159 152 36989 59658 96079 ... 11571 14748 49354 000 000	CW	(AB)
M12	13386	5-11	1500	Thu	725 1 (R) 3626 111 37576 84975 36294 ... 50717 28069 87782 000 000	CW	(AB/MPJ)
M12	13386	5-11	1500	Thu	725 1	CW	(HFD)
M12	13386	19-11	1500	Thu	725 1 4848 138 20210 13294 25473 25761 26533 ... 79145 35188 54293 01864 27088 000 000	CW	(MPJ)
M12	13386	19-11	1500	Thu	725 725 725 msg	CW	(SW2)
M12	13559	2-11	1120	Mon	973 1 (R) 159 152 36989 59658 96079 ... 11571 14748 49354 000 000	CW	(AB)
M12	14728	2-11	1140	Mon	973 1 (R) 159 152 36989 59658 96079 ... 11571 14748 49354 000 000	CW	(AB)
M12	15969	5-11	1010	Thu	941 1 (R) 3370 127 08155 97236 95286 ... 04338 31259 45774 000 000	CW	(AB)
M12	15969	5-11	1010	Thu	941 1	CW	(HFD)
M12	15969	12-11	1010	Thu	941 941 941 000	CW	(AB)
M12	15969	19-11	1010	Thu	941 941 941 msg	CW	(SW2)
M12	17443	13-11	1520	Fri	649 649 649 000	CW	(MPJ)
M12	17443	20-11	1520	Fri	649 649 649 000	CW	(AB/MPJ)
M12	17443	27-11	1520	Fri	649 649 649 000	CW	(AB/MPJ)
M12	17479	5-11	1030	Thu	941 1	CW	(HFD)
M12	17479	5-11	1030	Thu	941 1 (R) 3370 127 08155 97236 95286 ... 04338 31259 45774 000 000	CW	(AB)
M12	17479	8-11	1030	Sun	941 1 (R) 3370 127 08155 97236 95286 ... 04338 31259 45774 000 000	CW	(AB)
M12	17479	12-11	1030	Thu	941 941 941 000	CW	(AB)
M12	17479	19-11	1030	Thu	941 941 941 msg	CW	(SW2)
M12	17479	29-11	1320	Sun	941 941 941 000	CW	(AB)
M12	18169	5-11	1050	Thu	941 1	CW	(HFD)
M12	18169	5-11	1050	Thu	941 1 (R) 3370 127 08155 97236 95286 ... 04338 31259 45774 000 000	CW	(AB)
M12	18169	8-11	1050	Sun	941 1 (R) 3370 127 08155 97236 95286 ... 04338 31259 45774 000 000	CW	(AB)

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M12	18632	27-11	1500	Fri	649 649 649 000	CW	(AB/MPJ)
M12	18643	13-11	1500	Fri	649 649 649 000	CW	(MPJ)
M12	18643	20-11	1500	Fri	649 649 649 000	CW	(SW2/MPJ)
M14	4496	30-11	1832	Mon	910 245 245 67 67 97681 63306 64183 ... 82816 10138 21325 245 245 67 67 00000	CW	(F5JBR)
M14	4636	10-11	1820	Tue	186 718 20 = 20192 94872 59403 ... 57628 58299 11095 = 718 20 00000	CW	(AB)
M14	4636	10-11	1820	Tue	186 718 20 20192	CW	(HFD)
M14	4636	10-11	1821	Tue	186 186 186 186 and 718 718 20 20 = 10192 94862 509403 ...	CW	(CA2)
M14	4636	24-11	1820	Tue	186 133 15 12345 56565 32321 ... 65991 76765 89078 133 15 00000	CW	(AB)
M14	4761	11-11	1920	Wed	748 718 20 20192	CW	(HFD)
M14	4761	25-11	1920	Wed	748 718 20 = = 2-102 04982 59403 78493 78224 ... 72910 48392 57628 58299 11095 = = 718 20 00000	MCW	(MPJ)
M14	4975	6-11	1800	Fri	382 382 382 00000	CW	(AB)
M14	4975	6-11	1800	Fri	382 0	CW	(HFD)
M14	4975	20-11	1800	Fri	382 382 382 00000	MCW	(MPJ)
M14	5374	6-11	1700	Fri	382 0	CW	(HFD)
M14	5374	6-11	1700	Fri	382 382 382 00000	CW	(AB/MPJ)
M14	5375	20-11	1700	Fri	382 382 382 00000	CW	(AB/MPJ/PPA)
M14	5410	23-11	1538	Mon	i.p. 47574 22139 ... = 90551 31200 97268 05343 = = 527 527 69 69 00000	CW	(F5JBR)
M14	5430	28-11	0800	Sat	171 (R) 3 133 15 15 12345 12345 32321 32321 45451 45451 89012 89012 445456 445456 ... 76765 8990078 889900 ..-... 788 11333 133 15 15 00000 errors	CW	(AB)
M14	5560	28-11	0900	Sat	171 (R) ---- 133 133 15 15 12345 12345 32321 32321 45451 45451 89012 89012 45456 45456 ... 76765 76765 89978 889077 11333 133 15 15 00000 errors	CW	(AB)
M14	5947	22-11	0600	Sun	382 382 382 00000 stops at 0603z, pauze, 65x91 01187 79559 02244 08472 00172 3 W D 61 II 469	CW	(AB)
M14	6767	22-11	0700	Sun	382 382 382 00000	CW	(AB)
M14	8167	12-11	1330	Thu	058 324 57 = 06589 65583 05284 ... 27756 20923 97077 = 324 57 00000	CW	(AnEur)
M14	10423	12-11	1300	Thu	058 324 57 = 06589 65583 05284 ... 27756 20923 97077 = 324 57 00000	CW	(AnEur)
M21	3322	10-11	2015	Tue	Russian air defence =992316??0?????	CW	(PPA)
M21	4272	2-11	0550	Mon	Russian Air Defence =990850??8????? =990851??8????? =990852??8????? =990853??8????? =990854??8?????	CW	(CA2)
M21	4951.5	16-11	2019	Mon	Russian Air Defence =992320??T?????	CW	(PPA)
M21	4951.5	18-11	1750	Wed	Russian Air Defence =992052??0???? ... 2 minutes fast	CW	(MPJ)
M21	5136	28-11	1850	Sat	Grid tracking, cut numbers	CW	(AtB)
M21	5860.5	14-11	1452	Sat	=991753??0????? =991754??0???? =991755??0?????? =991756??0?????	CW	(F5JBR)
M21	6816	17-11	1219	Tue	517 9670 9160011700 9669 9844899 18 9669 9844895 19 9670 9844219 19 9670 9844215 20 9669 9844864 20 9669 9844857 21 9670 9844227 21	CW	(JPL-Sib)
M22	2680	7-11	1855	Sat	4XZ VVV and Messages //4331 kHz	CW	(F5JBR)
M22	4331	7-11	1855	Sat	4XZ VVV and Messages //2680 kHz	CW	(F5JBR)
M22	4331	11-11	2011	Wed	4XZ 5LG message	CW	(PPA)
M22	7050	11-11	1917	Wed	VVV de 4XZ	CW	(IARUMS)
M22	7050	12-11	0745	Thu	VVV de 4XZ	CW	(IARUMS)
M22	7050	13-11	2120	Fri	DE 4XZ + message	CW	(Au)
M22	8159	16-11	1825	Mon	4XZ: Navy Haifa 5L message after = nr 924 eb v hj6o 933161 nc3a gr 55 ==	CW	(PPA)
M22	8159	18-11	0127	Wed	5LGs offline crypto messages between VVV 4XZ	CW	(MCO)
m22	8159	19-11	1446	Thu	VVV de 4XZ = VVV de 4XZ =	CW	(F5JBR)
M22	10341	13-11	1803	Fri	4XZ 5LG coded message	CW	(PPA)
M22	17325	23-10	0707	Fri	VVV DE 4XZ	CW	(EW)
M32	3274	19-11	2257	Thu	8ZIW DE 1QT9 K. R K. TKQD DE 1QT9 K. R K. XTF2 DE 1QT9 K. R K. CEIB DE 1QT9 K. R K. IGPN DE 1QT9 K. R K. 6WO4 DE 1QT9 K	CW	(JPL-Sib)
M32	4250	27-11	0605	Fri	BOLT-14 comms checks with out stations	CW	(F5JBR)
M32	4256.5	4-11	0841	Wed	Russian Military XXX Q1Q2 30046 PATISIA 8795 1250 K	CW	(CA2)
M32	12631	2-11	0954	Mon	XXX XXX WEGI WEGI 61 JT x7923 LEVALYJ 7299 0523 K	CW	(AB)
M32	12631	2-11	1002	Mon	XXX XXX RGT77 RGT77 48078 10041 NESAGA 7145 2967 K	CW	(AB)
M32	12631	2-11	1003	Mon	XXX XXX WEGI WEGI 30860 86693 TEMNIK 2897 2424 K	CW	(AB)
M32	12631	2-11	1026	Mon	RDL RDL RDL 41415 1643T 41415 1643T 41415 1643T K XXX XXX	CW	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M32	13086	3-11	1048	Tue	PROGRES wkg LENI (RHN85) radio check	CW	(F5JBR)
M32a	3547	3-11	1511	Tue	RDQ81 DE RMW46 ZSA 1 R K. RGR95 DE RMW46 ZSA ? K. RMW46 DE RGR95 ZSA 2 ZSA ? K. RGR95 DE RMW46 ZSA 3 R K. RGR92 DE RMW46 ZSA ? K	CW	(JPL-Sib)
M32a	5131.5	3-11	1100	Tue	XXX REO 52618 PIROMANA 2242 7029 K	CW	(F5JBR)
M32a	5786	26-11	2050	Thu	REO de RMP QTC 113 17 26 1342 113 = 11111 17029 80059 99976 71709 ... 26016	CW	(MPJ)
M32a	7870	18-11	1716	Wed	REA REA DE RMP QTC 604 194 18 1955 604 = SML = Prognoz pogody	CW	(PPA)
M32a	8120	20-11	1303	Fri	RMP de RAA	CW	(Faux)
M32a	8345	17-11	1824	Tue	RMJA: Navy ship Tender KIL-158. RCV DE RMJA QSA?	CW	(PPA)
M32a	8345	20-11	1805	Fri	RHO62: Navy Ship Admiral Vladimirskiy. RCV DE RHO62 QSA? QTC	CW	(PPA)
M32a	12631	26-11	0954	Thu	U U U RDL RDL 99408 45537 99408 45537 99408 45537 99408 K	CW	(AB)
M32a	12631	26-11	0956	Thu	U U U RDL RDL RDL 28554 14409 28554 14409 28554 14409 K AR K U U U into BEE 50/200	CW	(AB)
M32a	12631	26-11	1002	Thu	U U U RDL RDL RDL 28554 14409 28554 14409 28554 14409 K U U XXX XXX into BEE 50/200	CW	(AB)
M32a	12631	26-11	1140	Thu	U U U RDL RDL RDL 88933 11776 88933 11776 88933 11776 K into BEE 50/200	CW	(AB)
M32a	16112	23-11	0910	Mon	i.p. ...84 58384 81501 94573 51085 04 526 03317 922 09 IIII 04 526 03317 922 09 0 37849 15131 15033 18235 18615 40710 75357 035587 23052 = RPT AL AR RAA K	CW	(AB)
M32c	8112	17-11	1340	Tue	W-markers	CW	(Tom)
M32c	8112	17-11	1420	Tue	W-marker: Bears Net 1420/1440/1500 UTC	CW	(MPJ)
M32c	8112	19-11	0940	Thu	W-markers	CW	(Tom)
M41	2006.5	12-11	1541	Thu	722 194998399892111387328 31 à RPT 722 à 5EQB AR	CW	(F5JBR)
M41	2006.5	15-11	0530	Sun	5EQB 5EQB AR 2006.5//4054.5//5402.5 kHz	CW	(F5JBR)
M41	2786.5	12-11	1820	Thu	PJFQ = 5574 2595 4948 3508 827 3438 9936 4099 731 8967 3896 à 809 = 3581 4386 5787 04478801 82305...	CW	(F5JBR)
M41	2795	12-11	1837	Thu	BFKG KUO 555 AR and BFKG BFKG BFKG QHEL UO 555 AR	CW	(CA2)
M41	3572	1-11	1919	Sun	9771999318218 9781996582318 9773996583	CW	(CA2)
M41	3717.5	7-11	1722	Sat	835 418 422 = 0174 835 312722= 017 3835 318 324 = 017 4835 318 424 =	CW	(F5JBR)
M41	4054.5	1-11	0630	Sun	9929993368238 9929993343832 1929929	CW	(CA2)
M41	4054.5	8-11	0531	Sun	5EQB 5EQB 5EQB AR //5402.5 kHz	CW	(F5JBR)
M41	4054.5	15-11	0530	Sun	5EQB 5EQB AR 2006.5//4054.5//5402.5 kHz	CW	(F5JBR)
M41	5226	7-11	1525	Sat	i.p. RPT 07996 3449 1288 1090 1705 RPT 722194 9503 9985761 1617 2060 1635 = 72219405 47996 34491 2883 0900 1705 GGTU K	CW	(F5JBR)
M41	5402.5	1-11	0530	Sun	5EQB 5EQB 5EQB AR	CW	(F5JBR)
M41	5402.5	8-11	0531	Sun	5EQB 5EQB 5EQB AR //4054.5kHz	CW	(F5JBR)
M41	5402.5	15-11	0530	Sun	5EQB 5EQB AR 2006.5//4054.5//5402.5 kHz	CW	(F5JBR)
M42	5934	30-11	0430	Mon	Russian Intel. Broadcast. Ended 0435 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	6780	16-11	1636	Mon	Very irregular test transmission, alternating between standby and null message format, signal sometimes inverted. Ended 1651z.	FSK 200/1000/ACF288	(Danix)
M42	6780	16-11	1652	Mon	Alternating between idling in 4-tone mode (tones 6774 6778 6782 6786) and reversals in 2-tone mode (tones 6782 6786). Ended 1700z.	MFSK-4/150bd/4000Hz/ACF12	(Danix)
M42	7542	30-11	0420	Mon	Russian Intel. Broadcast. Ended 0425 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	7823	25-11	1315	Wed	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	9069	26-11	1500	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	9223	24-11	1130	Tue	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	9300	27-11	0545	Fri	Russian Intel. Probably test session. Ended 0550 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	10250	18-11	1531	Wed	Russian Intel. Burst every 10 secs.	5xMFSK-16 + BPSK 250Bd	(Danix)
M42	10250	18-11	1534	Wed	Russian Intel.	FSK 1600/2100Hz + BPSK 500Bd/250Bd + QPSK 2x62.5Bd QPSK + FSK 1500/1750Hz	(Danix)
M42	10250	18-11	1559	Wed	Russian Intel.	FSK 1600/2100Hz + BPSK 500Bd/250Bd + QPSK 2x62.5Bd QPSK + FSK 1500/1750Hz	(Danix)
M42	10463	24-11	1120	Tue	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	11094	26-11	1450	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	11517	11-11	0950	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	12087	11-11	0945	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	12172	23-11	0830	Mon	Russian Intel. Test burst noted 0815 UTC. QSX 0830-0835z 13855 kHz, 0835-0935z 14422 kHz	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	12173	30-11	0830	Mon	Russian Intel. QSX 13855. Ended 0915 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)

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M42	13383	23-11	0920	Mon	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	13434	30-11	1445	Mon	Russian Intel. Broadcast, 30-45 secs.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	13473	26-11	1045	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	13536	11-11	0940	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	13855	23-11	0830	Mon	Russian Intel. QSX 12172 kHz QSY'd to 14422 kHz at 0835 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	13855	30-11	0830	Mon	Russian Intel. QSX 12173. Ended 0838 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	14422	23-11	0835	Mon	Russian Intel. QSX 12172 kHz	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	14690	19-11	1045	Thu	Russian Intel. Test burst noted 1037-1038 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	14819	26-11	1430	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	14983	23-11	0910	Mon	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15611	26-11	1035	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15622	25-11	0845	Wed	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15626	20-11	0830	Fri	Russian Intel. Test burst noted 0822-0823 UTC. QSX 16166 kHz	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15626	24-11	0822	Tue	Russian Intel. Test burst	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15626	27-11	0830	Fri	Russian Intel. QSX 16163. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15697	11-11	0935	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	15723	27-11	1045	Fri	Russian Intel. Broadcast, 30-45 secs.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	15880	30-11	1435	Mon	Russian Intel. Broadcast, 30-45 secs.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16083	23-11	0900	Mon	Russian Intel. Test burst noted	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16083	30-11	0900	Mon	Russian Intel. Broadcast. Ended 0909 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16136	26-11	1420	Thu	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16157	24-11	1115	Tue	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16163	27-11	0830	Fri	Russian Intel. QSX 15626. Expected 16166. Ended 0841 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16166	20-11	0830	Fri	Russian Intel. Test burst noted 0820-0823 UTC. QSX 15626 kHz	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16166	24-11	0830	Tue	Russian Intel.	MFSK-4/150bd/4000Hz/ACF=12	(F5JBR/Danix)
M42	16216	25-11	1100	Wed	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	16230	19-11	1035	Thu	Russian Intel. Test burst noted 1027-1028 UTC.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	17457	11-11	0930	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	18041	11-11	0745	Wed	Russian Intel. Burst every 10 secs.	FSK + 17-tone OFDM/MPSK + BPSK 250Bd	(Danix)
M42	18184	27-11	1035	Fri	Russian Intel. Broadcast, 30-45 secs.	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	18340	25-11	1023	Wed	APW de KLM QSA ? K	CW	(F5JBR)
M42	18530	25-11	1050	Wed	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	18592	24-11	1105	Tue	Russian Intel. Broadcast	MFSK-4/150bd/4000Hz/ACF=12	(Danix)
M42	19888	26-11	1548	Thu	Russian diplo/intel, Cuba. Message on link 00041	FSK 200/1000	(MCO)
M42b	2002	3-11	1828	Tue	IBUP wkg CAGR (Msg in FSK 50/500, ops chat in CW)	CW	(F5JBR)
M42b	2839	2-11	0644	Mon	i.p. 98508 45632 16681 22327 65901 95260 ... = K. QRU ? K. R 99 0653. R NIL SK	CW	(F5JBR)
M42b	3254	2-11	0651	Mon	CFM QRX 51197 51906 K. NIL SK	CW	(F5JBR)
M42b	4019	1-11	1455	Sun	OBRA de WVXZ QSY 51131	CW	(F5JBR)
M42b	4020	12-11	0400	Thu	UZC2 wkg UTN7 (Ops chat in CW, message in FSK 50/500)	CW	(CA2)
M42b	4035	2-11	0446	Mon	SKYM wkg NRKV (msg in FSL 50/500, ops chat in CW)	CW	(CA2)
M42b	4461	29-11	0550	Sun	PZAK wkg PLXW (Ops chat in CW, message in FSK 50/500) QSX 4046 kHz	CW	(F5JBR)
M42b	4524	13-11	0632	Fri	QSA 4 QTC 1 in CW and messages in FSK 50/500	CW	(F5JBR)
M42b	4538	15-11	1712	Sun	VFGK comms checks with DATZ (ops chat in CW, messages in FSK 50/500)	CW	(F5JBR)
M42b	4538	17-11	1710	Tue	Ops chat in CW and message in FSK 50/500. VFGK comms checks with DATZ	CW	(F5JBR)
M42b	4607	25-11	1148	Wed	NEPK de MNBV QSY 89064 K. QSA NO S K	CW	(F5JBR)
M42b	4787	2-11	0446	Mon	NRKV wkg SKYM (msg in FSL 50/500, ops chat in CW)	CW	(CA2)
M42b	4819	18-11	0522	Wed	LENJ de LTJQ QSA NO QSY 50600 K	CW	(F5JBR)
M42b	4856	17-11	0622	Tue	VBY de QST QSY 42984 K	CW	(F5JBR)
M42b	4856	19-11	0621	Thu	Ops chat in CW and message in FSK 50/500. QSA 4 QTC 1	CW	(F5JBR)
M42b	4856	25-11	0624	Wed	251 0624 QTC 1 ZZC ZVP SLD K (Ops chat in CW, message in FSK 50/500) CFM NIL SK	CW	(F5JBR)
M42b	5013	17-11	0808	Tue	CKSP OK QSW 86868 K	CW	(F5JBR)
M42b	5033	17-11	0801	Tue	CKSP OK QLO 20 K	CW	(F5JBR)
M42b	5253	25-11	1304	Wed	COLH de OPNS QSA ? K. R 792 1313. QTC 1 (Ops chat in CW, message in FSK 50/500)	CW	(F5JBR)
M42b	5350	7-11	0903	Sat	QSA 3 QTC 1 (msg in FSK 50/500 and ops chat in CW)	CW	(F5JBR)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M42b	5431	16-11	1533	Mon	L2RS comms checks with KE4T (ops chat in CW and messages in FSK 50/500)	CW	(F5JBR)
M42b	5469	15-11	1536	Sun	AIFH comms checks with CDAP (ops chat in CW, messages in FSK 50/500)	CW	(F5JBR)
M42b	5688	18-11	0524	Wed	Ops chat in CW and message in FSK 50/500. QRU ? And QRV R 188 0533 K AR	CW	(F5JBR)
M42b	5768	17-11	0831	Tue	RQUD QSA 4 QSA ? K and OK QLP 20 K	CW	(F5JBR)
M42b	5788	17-11	0833	Tue	RQUD OK QSW 87428 K	CW	(F5JBR)
M42b	5833	10-11	0934	Tue	Wkd 1 outstation (ops chat in CW, message in FSK 50/500)	CW	(CA2)
M42b	14356	25-11	0912	Wed	OJEK de 5NT8 QSA NO QSY 68985 K	CW	(F5JBR)
M42b	14500	5-11	0802	Thu	RTK2 clg RRQ5, RSH1, RGV3 (Msg in FSK 50/500, ops chat in CW)	CW	(F5JBR)
M42b	14622	4-11	0802	Wed	WSJ8 wkg K9M1 (Msg in FSK 50/500, ops chat in CW)	CW	(F5JBR)
M42b	16261	26-11	0650	Thu	J7ML de WD6M QSA NO K	CW	(F5JBR)
M42c	4015	5-11	2020	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	4015	26-11	2020	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	4016	12-11	2010	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	4016	12-11	2020	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	5156	5-11	2010	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	5156	26-11	2010	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	5158	12-11	2010	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	5158	19-11	2011	Thu	Russian Diplo/Intel.)5761 00000++++++++++162	FSK 200/500	(PPA)
M42c	5214	7-11	1830	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	5214	14-11	1830	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	5214	28-11	1830	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	6824	5-11	2000	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	6824	26-11	2000	Thu	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB/MPJ)
M42c	6926	12-11	2010	Thu	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	7760	7-11	1820	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	7760	14-11	1820	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	7760	28-11	1820	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	7761	14-11	1820	Sat	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	8022	26-11	1035	Thu	Russian diplo/intel. =7681 42618225099528373 ends with)58166 +++++++++++++++98	FSK 200/500	(AB)
M42c	8022	27-11	1035	Fri	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	8022	30-11	1035	Mon	Russian diplo/intel. =8011 46526740871027870 ends with)7511502344700000+++++139	FSK 200/500	(AB)
M42c	9245	14-11	1810	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	9245	28-11	1810	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	9246	14-11	1810	Sat	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	10669	24-11	1025	Tue	Russian diplo/intel. =8661 29300394791141420 ...)57667 00000++++++++++166 (mostly unreadable)	FSK 200/500	(AB)
M42c	10669	26-11	1025	Thu	Russian diplo/intel. =7681 42618225099528373 ends with)58166 +++++++++++++++98	FSK 200/500	(AB)
M42c	10669	27-11	1025	Fri	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	10669	30-11	1025	Mon	Russian diplo/intel. =8011 46526740871027870 ends with)7511502344700000+++++139	FSK 200/500	(AB)
M42c	12175	24-11	1015	Tue	Russian diplo/intel. Distorted sound	FSK 200/500	(AB)
M42c	12175	26-11	1015	Thu	Russian diplo/intel. =7681 42618225099528373 ends with)58166 +++++++++++++++98	FSK 200/500	(AB)
M42c	12175	27-11	1015	Fri	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(AB)
M42c	12175	30-11	1015	Mon	Russian diplo/intel. =8011 46526740871027870 ends with)7511502344700000+++++139	FSK 200/500	(AB)
M42c	16247	28-11	1320	Sat	Russian diplo/intel.)5761 00000++++++++++162	FSK 200/500	(AB/F5JBR)
M42c	16248	21-11	1320	Sat	Russian diplo/intel.	FSK 200/500	(VH)
M42c	16249	7-11	1320	Sat	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	18275	28-11	0720	Sat	Russian diplo/intel. (unreadable)	FSK 200/500	(AB)
M42c	18277	25-11	0720	Wed	Russian diplo/intel. =8571 642108177523113)481054531200000+++++134. 316 5FG's	FSK 200/500	(Danix)
M42c	18349	21-11	1310	Sat	Russian Diplo/Intel.)5761 00000++++++++++162	FSK 200/500	(MPJ)
M42c	18349	28-11	1310	Sat	Russian diplo/intel.)5761 00000++++++++++162	FSK 200/500	(AB/F5JBR)
M42c	18351	7-11	1310	Sat	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	20372	14-11	1301	Sat	Russian diplo/intel. RYRYRY)5761 00000++++++++++162	FSK 200/500	(PPA)
M42c	20372	21-11	1300	Sat	Russian Diplo/Intel.)5761 00000++++++++++162	FSK 200/500	(MPJ)
M42c	20372	28-11	1300	Sat	Russian diplo/intel.)5761 00000++++++++++162	FSK 200/500	(AB/F5JBR/MPJ)

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M42c	20374	7-11	1300	Sat	Russian diplo/intel.	FSK 200/500	(HFD)
M42c	20572	25-11	0710	Wed	Russian diplo/intel. =8571 642108177523113)481054531200000+++++134. 316 5FG's	FSK 200/500	(Danix)
M42c	22866	25-11	0700	Wed	Russian diplo/intel. =8571 642108177523113)481054531200000+++++134. 316 5FG's	FSK 200/500	(Danix)
M42d	5144	2-11	0520	Mon	Russian diplo/intel. Msg 015 on link 45079	FSK 200/1000	(AB)
M42d	5267	24-11	2320	Tue	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(AB)
M42d	6834	24-11	2310	Tue	Russian diplo/intel. Msg 157 on link 40988	FSK 200/1000	(AB)
M42d	6867	2-11	1220	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	6867	3-11	1220	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	6867	5-11	1220	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB)
M42d	6867	11-11	1220	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	6867	16-11	1220	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	6867	17-11	1220	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	6867	24-11	1220	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	6867	30-11	1220	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)
M42d	6868	9-11	1220	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	6868	10-11	1220	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	6868	25-11	1220	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB)
M42d	6985	2-11	0510	Mon	Russian diplo/intel. Msg 015 on link 45079	FSK 200/1000	(AB)
M42d	7646	3-11	1720	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7646	10-11	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7646	17-11	1720	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	7646	24-11	1720	Tue	Russian diplo/intel. Msg 147 on link 20501	FSK 200/1000	(AB)
M42d	8080	2-11	1210	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	8080	3-11	1210	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	8080	5-11	1210	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB/MPJ)
M42d	8080	9-11	1210	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	8080	10-11	1210	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	8080	11-11	1210	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	8080	16-11	1210	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	8080	17-11	1210	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	8080	24-11	1210	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	8080	25-11	1210	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB/MPJ)
M42d	8080	30-11	1210	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)
M42d	8135	22-11	1550	Sun	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	8135	23-11	1550	Mon	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	8135	29-11	1550	Sun	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(MPJ)
M42d	8136	2-11	0720	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	8136	3-11	0720	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	8136	4-11	0720	Wed	Russian diplo/intel. Msg 127 on link 45137	FSK 200/1000	(AB)
M42d	8136	5-11	0720	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB)
M42d	8136	6-11	0720	Fri	Russian diplo/intel. Msg 162 on link 45136	FSK 200/1000	(AB)
M42d	8136	9-11	0720	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	8136	10-11	0720	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	8136	11-11	0720	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	8136	12-11	0720	Thu	Russian diplo/intel. Msg 145 on link 45136	FSK 200/1000	(AB)
M42d	8136	16-11	0720	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	8136	17-11	0720	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	8136	18-11	0720	Wed	Russian diplo/intel. Msg 170 on link 45137	FSK 200/1000	(AB)
M42d	8136	19-11	0720	Thu	Russian diplo/intel. Msg 172 on link 45136	FSK 200/1000	(AB)
M42d	8136	20-11	0720	Fri	Russian diplo/intel. Msg 162 on link 45137	FSK 200/1000	(AB)
M42d	8136	23-11	0720	Mon	Russian diplo/intel. Msg 177 on link 45136	FSK 200/1000	(AB)
M42d	8136	24-11	0720	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	8136	25-11	0720	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB)
M42d	8136	26-11	0720	Thu	Russian diplo/intel. Msg 187 on link 45136	FSK 200/1000	(AB)
M42d	8136	27-11	0720	Fri	Russian diplo/intel. Msg 240 on link 45136	FSK 200/1000	(AB)
M42d	8136	30-11	0720	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)
M42d	8169	2-11	0500	Mon	Russian diplo/intel. Msg 015 on link 45079	FSK 200/1000	(AB)
M42d	9067	3-11	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	9067	10-11	1700	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB/MPJ)
M42d	9067	17-11	1710	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)

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M42d	9067	24-11	1710	Tue	Russian diplo/intel. Msg 147 on link 20501	FSK 200/1000	(AB)
M42d	9137	20-11	0720	Fri	Russian diplo/intel. Msg 155 on link 40988	FSK 200/1000	(AB)
M42d	10154	2-11	0710	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	10154	3-11	0710	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	10154	4-11	0710	Wed	Russian diplo/intel. Msg 127 on link 45137	FSK 200/1000	(AB)
M42d	10154	5-11	0710	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB)
M42d	10154	6-11	0710	Fri	Russian diplo/intel. Msg 162 on link 45136	FSK 200/1000	(AB)
M42d	10154	9-11	0710	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	10154	10-11	0710	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	10154	11-11	0710	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	10154	12-11	0710	Thu	Russian diplo/intel. Msg 145 on link 45136	FSK 200/1000	(AB)
M42d	10154	16-11	0710	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	10154	17-11	0710	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	10154	18-11	0710	Wed	Russian diplo/intel. Msg 170 on link 45137	FSK 200/1000	(AB)
M42d	10154	19-11	0710	Thu	Russian diplo/intel. Msg 172 on link 45136	FSK 200/1000	(AB)
M42d	10154	20-11	0710	Fri	Russian diplo/intel. Msg 162 on link 45137	FSK 200/1000	(AB)
M42d	10154	23-11	0710	Mon	Russian diplo/intel. Msg 177 on link 45136	FSK 200/1000	(AB)
M42d	10154	24-11	0710	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	10154	25-11	0710	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB)
M42d	10154	26-11	0710	Thu	Russian diplo/intel. Msg 187 on link 45136	FSK 200/1000	(AB)
M42d	10154	27-11	0710	Fri	Russian diplo/intel. Msg 240 on link 45136	FSK 200/1000	(AB)
M42d	10154	30-11	0710	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)
M42d	10171	22-11	1540	Sun	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	10171	23-11	1540	Mon	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	10229	2-11	1200	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	10229	3-11	1200	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	10229	5-11	1200	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB)
M42d	10229	9-11	1200	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	10229	10-11	1200	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	10229	11-11	1200	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	10229	16-11	1200	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	10229	17-11	1200	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	10229	23-11	1200	Mon	Russian diplo/intel. Msg 177 on link 45136	FSK 200/1000	(MPJ)
M42d	10229	24-11	1200	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	10229	25-11	1200	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB)
M42d	10229	30-11	1200	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)
M42d	10374	26-11	1350	Thu	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	11016	20-11	0710	Fri	Russian diplo/intel. Msg 155 on link 40988	FSK 200/1000	(AB)
M42d	11426	26-11	1340	Thu	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	11439	3-11	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	11439	17-11	1650	Tue	Russian diplo/intel. Msg 002 on link 20501	FSK 200/1000	(AB)
M42d	11439	24-11	1650	Tue	Russian diplo/intel. Msg 147 on link 20501	FSK 200/1000	(AB)
M42d	12175	2-11	0700	Mon	Russian diplo/intel. Msg 120 on link 45137	FSK 200/1000	(AB)
M42d	12175	3-11	0700	Tue	Russian diplo/intel. Msg 122 on link 45137	FSK 200/1000	(AB)
M42d	12175	4-11	0700	Wed	Russian diplo/intel. Msg 127 on link 45137	FSK 200/1000	(AB)
M42d	12175	5-11	0700	Thu	Russian diplo/intel. Msg 130 on link 45136	FSK 200/1000	(AB)
M42d	12175	6-11	0700	Fri	Russian diplo/intel. Msg 162 on link 45136	FSK 200/1000	(AB)
M42d	12175	9-11	0700	Mon	Russian diplo/intel. Msg 135 on link 45136	FSK 200/1000	(AB)
M42d	12175	10-11	0700	Tue	Russian diplo/intel. Msg 137 on link 45136	FSK 200/1000	(AB)
M42d	12175	11-11	0700	Wed	Russian diplo/intel. Msg 142 on link 45137	FSK 200/1000	(AB)
M42d	12175	12-11	0700	Thu	Russian diplo/intel. Msg 145 on link 45136	FSK 200/1000	(AB)
M42d	12175	16-11	0700	Mon	Russian diplo/intel. Msg 150 on link 45137	FSK 200/1000	(AB)
M42d	12175	17-11	0700	Tue	Russian diplo/intel. Msg 152 on link 45136	FSK 200/1000	(AB)
M42d	12175	18-11	0700	Wed	Russian diplo/intel. Msg 170 on link 45137	FSK 200/1000	(AB)
M42d	12175	19-11	0700	Thu	Russian diplo/intel. Msg 172 on link 45136	FSK 200/1000	(AB)
M42d	12175	20-11	0700	Fri	Russian diplo/intel. Msg 162 on link 45137	FSK 200/1000	(AB)
M42d	12175	23-11	0700	Mon	Russian diplo/intel. Msg 177 on link 45136	FSK 200/1000	(AB)
M42d	12175	24-11	0700	Tue	Russian diplo/intel. Msg 180 on link 45137	FSK 200/1000	(AB)
M42d	12175	25-11	0700	Wed	Russian diplo/intel. Msg 185 on link 45137	FSK 200/1000	(AB)
M42d	12175	26-11	0700	Thu	Russian diplo/intel. Msg 187 on link 45136	FSK 200/1000	(AB)
M42d	12175	27-11	0700	Fri	Russian diplo/intel. Msg 240 on link 45136	FSK 200/1000	(AB)
M42d	12175	30-11	0700	Mon	Russian diplo/intel. Msg 192 on link 45136	FSK 200/1000	(AB)

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M42d	12222	22-11	1530	Sun	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	12222	23-11	1530	Mon	Russian diplo/intel. Msg 132 on link 20501	FSK 200/1000	(AB)
M42d	13379	20-11	0700	Fri	Russian diplo/intel. Msg 155 on link 40988	FSK 200/1000	(AB)
M42d	13382	26-11	1330	Thu	Russian diplo/intel.	FSK 200/1000	(F5JBR)
M42d	13383	1-11	1120	Sun	Russian diplo/intel. Msg 070 on link 36882	FSK 200/1000	(AB)
M42d	14356	28-11	1120	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB)
M42d	14732	3-11	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	14732	10-11	1420	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	14732	17-11	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	14732	24-11	1410	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	14986	15-11	0920	Sun	Russian diplo/intel. Msg 052 on link 45115	FSK 200/1000	(AB)
M42d	14986	28-11	0920	Sat	Russian diplo/intel. Msg 055 on link 45115	FSK 200/1000	(AB/F5JBR)
M42d	15626	1-11	1110	Sun	Russian diplo/intel. Msg 070 on link 36882	FSK 200/1000	(AB)
M42d	16111	15-11	1020	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	16111	28-11	1020	Sat	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB/F5JBR)
M42d	16111	29-11	1020	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	16139	25-11	0620	Wed	Russian diplo/intel. Msg 085 on link 32817	FSK 200/1000	(AB)
M42d	16150	3-11	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	16150	17-11	1410	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	16150	24-11	1410	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	16152	11-11	0820	Wed	Russian diplo/intel. Msg 132 on link 45075	FSK 200/1000	(AB)
M42d	16152	25-11	0820	Wed	Russian diplo/intel. Msg 107 on link 45075	FSK 200/1000	(AB)
M42d	16212	11-11	1035	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	16212	25-11	1035	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB/F5JBR)
M42d	16212	28-11	1110	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB/MPJ)
M42d	16234	25-11	0920	Wed	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	16234	26-11	0920	Thu	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	16247	21-11	1320	Sat	Russian Diplo/Intel.	FSK 200/1000	(F5JBR)
M42d	17421	1-11	1100	Sun	Russian diplo/intel. Msg 070 on link 36882	FSK 200/1000	(AB)
M42d	17423	15-11	0910	Sun	Russian diplo/intel. Msg 052 on link 45115	FSK 200/1000	(AB)
M42d	17423	28-11	0910	Sat	Russian diplo/intel. Msg 055 on link 45115	FSK 200/1000	(AB/F5JBR)
M42d	17426	11-11	1020	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB)
M42d	17426	25-11	1020	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB)
M42d	18046	28-11	1100	Sat	Russian diplo/intel. Msg 080 on link 36882	FSK 200/1000	(AB)
M42d	18181	11-11	0810	Wed	Russian diplo/intel. Msg 132 on link 45075	FSK 200/1000	(AB)
M42d	18181	25-11	0810	Wed	Russian diplo/intel. Msg 107 on link 45075	FSK 200/1000	(AB)
M42d	18257	15-11	1010	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	18257	28-11	1010	Sat	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	18257	29-11	1010	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	18346	28-11	1550	Sat	Russian diplo/intel. Msg 002 on link 32821	FSK 200/1000	(AB)
M42d	18349	21-11	1310	Sat	Russian Diplo/Intel.	FSK 200/1000	(F5JBR)
M42d	18476	11-11	1025	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	18476	25-11	1025	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB/F5JBR)
M42d	18537	25-11	0910	Wed	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	18537	26-11	0910	Thu	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	18542	3-11	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	18542	17-11	1400	Tue	Russian diplo/intel. Msg 002 on link 32799	FSK 200/1000	(AB)
M42d	18542	24-11	1400	Tue	Russian diplo/intel. Msg 100 on link 32799	FSK 200/1000	(AB)
M42d	18551	21-11	1520	Sat	Russian Diplo/Intel. Msg 002 on Link 32821: 43088 00000 00000 03802 22795 33655 00893 49587	FSK 200/1000	(MPJ)
M42d	18551	28-11	1520	Sat	Russian diplo/intel.	FSK 200/1000	(AB)
M42d	19014	15-11	0900	Sun	Russian diplo/intel. Msg 052 on link 45115	FSK 200/1000	(AB)
M42d	19014	28-11	0900	Sat	Russian diplo/intel. Msg 055 on link 45115	FSK 200/1000	(AB/F5JBR)
M42d	19161	11-11	1010	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB)
M42d	19161	25-11	1010	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB)
M42d	20312	11-11	0800	Wed	Russian diplo/intel. Msg 132 on link 45075	FSK 200/1000	(AB)
M42d	20312	25-11	0800	Wed	Russian diplo/intel. Msg 107 on link 45075	FSK 200/1000	(AB)
M42d	20372	21-11	1300	Sat	Russian Diplo/Intel.	FSK 200/1000	(F5JBR)
M42d	20656	25-11	0900	Wed	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	20656	26-11	0900	Thu	Russian diplo/intel. Msg 232 on link 16405	FSK 200/1000	(AB)
M42d	20714	11-11	1015	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB)
M42d	20714	25-11	1015	Wed	Russian diplo/intel. Msg 002 on link 20492	FSK 200/1000	(AB/F5JBR)

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M42d	20717	28-11	1540	Sat	Russian diplo/intel. Msg 002 on link 32821	FSK 200/1000	(AB)
M42d	20866	15-11	1000	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	20866	28-11	1000	Sat	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB/F5JBR)
M42d	20866	29-11	1000	Sun	Russian diplo/intel. Msg 192 on link 45057	FSK 200/1000	(AB)
M42d	20994	11-11	1000	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB)
M42d	20994	25-11	1000	Wed	Russian diplo/intel. Msg 002 on link 49202	FSK 200/1000	(AB/F5JBR)
M42d	22982	28-11	1530	Sat	Russian diplo/intel. Msg 002 on link 32821	FSK 200/1000	(AB)
M51a	3341	4-11	1838	Wed	FAV22 5Chr groups	CW	(F5JBR)
M51a	4542	13-11	0624	Fri	FAV22 Encrypted messages	CW	(F5JBR)
M51a	6746	18-11	0607	Wed	FAV22 5LG 5FG punctuation	CW	(F5JBR)
M51a	6825	4-11	0856	Wed	VVV VVV VVV DE FAV22 FAV22 FAV22 QLH 3881/6825 KHZ MERCREDI-LECON NUMERO 03-2/1 VITESSE 720 CODE	CW	(AB)
M51a	6825	14-11	1452	Sat	FAV22: 5LGs, 5FGs, Punct.	CW	(MPJ)
M51a	6825	15-11	1625	Sun	FAV22: French Morse Practice 5LGs 5FGs Punct.	CW	(MPJ)
M89	3330	1-11	1941	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	2-11	1054	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	2-11	2238	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	3-11	1346	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	3-11	1509	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	5-11	1348	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	5-11	2102	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	6-11	1354	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	6-11	1946	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	7-11	1403	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	7-11	1743	Sat	MW3D de 2SLC V	CW	(F5JBR)
M89	3330	7-11	2241	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	8-11	1457	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	8-11	1825	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	9-11	1102	Mon	i.p. MSG NR 34 CK 301 .4 1109 1900 = 4T53 D4..	CW	(JPL)
M89	3330	10-11	1500	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	10-11	2207	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	11-11	1156	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	12-11	1141	Thu	i.p. /8450 UGT COMM AAES = 80790/4676/2100/117NR..5/0. =	CW	(JPL)
M89	3330	12-11	1529	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	12-11	1910	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	12-11	2001	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	13-11	1340	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	14-11	1818	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	15-11	1534	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	15-11	1825	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	16-11	1231	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	16-11	1957	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	17-11	1159	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	18-11	1230	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	18-11	2301	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	19-11	1125	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	19-11	2121	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	20-11	1144	Fri	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	21-11	1510	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	21-11	2102	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	22-11	1542	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	22-11	2157	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	22-11	2208	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	23-11	1218	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	23-11	1802	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	24-11	1347	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	24-11	2006	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	26-11	1555	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	27-11	1349	Fri	i.p. = 80790/4049/2220/237//8459 AR	CW	(JPL)
M89	3330	28-11	1527	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	29-11	1431	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3330	30-11	1339	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)

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M89	3330	30-11	1845	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	3358	21-11	1514	Sat	i.p. HR WK NR 011 K. HR WK NR 103 U MSG GA K (see N&O 218)	CW	(JPL)
M89	3358	21-11	1525	Sat	i.p. 8450 TO 3040 K GA = 55674 AR K (see N&O 218)	CW	(JPL)
M89	3387	30-11	1644	Mon	Net station comms checks with out stations	CW	(F5JBR)
M89	3456	30-11	1531	Mon	KBY6 comms checks with out stations	CW	(F5JBR)
M89	3642	1-11	1939	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	1-11	2231	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	2-11	1514	Mon	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	2-11	1519	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	2-11	2240	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	3-11	1514	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	5-11	1350	Thu	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	5-11	2103	Thu	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	6-11	1948	Fri	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	7-11	1739	Sat	DKG6 de 3A7D V	CW	(F5JBR)
M89	3642	7-11	2302	Sat	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	8-11	1455	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	8-11	1840	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	10-11	1503	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	10-11	2204	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	11-11	1319	Wed	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	12-11	1535	Thu	V DKG6 (x3) DE 3A7D (x2) //7601	CW	(JPL)
M89	3642	12-11	2003	Thu	V DKG6 (x3) DE 3A7D (x2) //7601	CW	(JPL)
M89	3642	13-11	1341	Fri	V DKG6 (x3) DE 3A7D (x2) //7601	CW	(JPL)
M89	3642	14-11	1821	Sat	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	15-11	0020	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	15-11	1535	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	15-11	1826	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	16-11	0023	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	16-11	1309	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	16-11	1958	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	18-11	0107	Wed	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	18-11	1232	Wed	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	19-11	2125	Thu	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	20-11	1540	Fri	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	21-11	0144	Sat	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	21-11	0204	Sat	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	3642	21-11	2103	Sat	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	22-11	1545	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	22-11	2128	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	22-11	2210	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	23-11	1804	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	24-11	1349	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	24-11	2008	Tue	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	26-11	1556	Thu	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	27-11	1644	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	28-11	1528	Sat	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3642	29-11	1732	Sun	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	30-11	1338	Mon	V DKG6 (x3) DE 3A7D (x2) //7602	CW	(JPL)
M89	3642	30-11	1846	Mon	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	3747	28-11	1547	Sat	i.p. 3U6N 3ADN 4UN5 T36D 4TU4 N73A	CW	(JPL)
M89	3767	30-11	1552	Mon	Net station comms checks with out stations on 3757 kHz	CW	(F5JBR)
M89	3777	1-11	1831	Sun	M8JF de RIS9 V	CW	(F5JBR)
M89	3777	1-11	1943	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	2-11	1052	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	2-11	2242	Mon	V M8JF (x3) DE RIS9 (x2) //4532 / 6793 and 8060	CW	(JPL)
M89	3777	3-11	1348	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	5-11	2106	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	6-11	1952	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	7-11	1407	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	7-11	2308	Sat	V M8JF (x3) DE RIS9 (x2) //4532 6793 and 8060	CW	(JPL)
M89	3777	8-11	0953	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)

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M89	3777	8-11	1827	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	9-11	0958	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	10-11	1505	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	11-11	1300	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	12-11	1149	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	12-11	1536	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	13-11	1351	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	14-11	1823	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	15-11	1536	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	16-11	1234	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	16-11	1958	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	17-11	1230	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	18-11	1236	Wed	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	18-11	2045	Wed	V M8JF (x3) DE RIS9 (x2) //4532 6793 and 8060	CW	(JPL)
M89	3777	20-11	1329	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	20-11	1541	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	21-11	1039	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	21-11	1520	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	21-11	2104	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	22-11	1548	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	22-11	2200	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	23-11	1117	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	23-11	1806	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	24-11	1409	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	24-11	2009	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	26-11	1558	Thu	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	27-11	1354	Fri	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	28-11	1529	Sat	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	29-11	1432	Sun	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	30-11	1342	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3777	30-11	1849	Mon	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	3811	22-11	2213	Sun	i.p. ND4N 35U6 3A3A U367 536A A3AD U3TA IIII =	CW	(JPL)
M89	3821	1-11	1945	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	3821	2-11	1057	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	2-11	2245	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	5-11	1352	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	5-11	2108	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	6-11	1954	Fri	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	8-11	1029	Sun	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	10-11	1506	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	10-11	2216	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	11-11	1301	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	13-11	1148	Fri	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	14-11	1824	Sat	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	15-11	1537	Sun	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	16-11	1237	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	16-11	2002	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	17-11	1226	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	18-11	1553	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	18-11	2243	Wed	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	19-11	2128	Thu	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	21-11	2136	Sat	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	22-11	1550	Sun	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	22-11	2201	Sun	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	23-11	1119	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	23-11	1809	Mon	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	24-11	2042	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	24-11	2309	Tue	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3821	26-11	1559	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	3821	27-11	1407	Fri	V DKSL (x3) DE ALSK (x2) //5644	CW	(JPL)
M89	3860	30-11	1345	Mon	i.p. T365 7AD3 UD4T 37AD 3.47 NUD3 7563 T57A 6AD4 III AR III N P 6354 T.75DA4 D573 T453 ...	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	3870	2-11	2247	Mon	i.p. 7N3T 5A3N 4D6U 7T4U 5T6N 7D3A 6U5D	CW	(JPL)
M89	4131	2-11	2251	Mon	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	5-11	2109	Thu	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	6-11	1955	Fri	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	7-11	2304	Sat	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	8-11	1454	Sun	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	10-11	2213	Tue	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	11-11	0255	Wed	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	12-11	2008	Thu	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	13-11	1657	Fri	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	15-11	0017	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	15-11	1829	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	15-11	2330	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	16-11	0024	Mon	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	16-11	1310	Mon	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	17-11	1228	Tue	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	18-11	0110	Wed	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	19-11	2138	Thu	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	20-11	1538	Fri	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	21-11	0146	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	21-11	1522	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	21-11	2144	Sat	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	22-11	1552	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	22-11	2218	Sun	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	23-11	1813	Mon	V JKDJ (x3) DE SLBC (x2) //N/H	CW	(JPL)
M89	4131	24-11	2045	Tue	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	24-11	2307	Tue	V JKDJ (x3) DE SLBC (x2) //4886	CW	(JPL)
M89	4131	28-11	1545	Sat	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	29-11	1738	Sun	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4131	30-11	1350	Mon	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4225	2-11	1512	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4225	8-11	1828	Sun	V 7NPE (x3) DE QV5B (x2) //5500	CW	(JPL)
M89	4225	30-11	1848	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	4444	7-11	2250	Sat	i.p. 3186 9674 3420 699845960MMMM G0 (see N&O 218)	CW	(JPL)
M89	4532	1-11	1943	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	1-11	2228	Sun	V M8JF (x3) DE RIS9 (x2) //6793 and 8060	CW	(JPL)
M89	4532	2-11	1052	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	2-11	2242	Mon	V M8JF (x3) DE RIS9 (x2) //3777 / 6793 and 8060	CW	(JPL)
M89	4532	3-11	1348	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	5-11	2106	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	6-11	1952	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	7-11	1407	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	7-11	2308	Sat	V M8JF (x3) DE RIS9 (x2) //3777 6793 and 8060	CW	(JPL)
M89	4532	8-11	0953	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	8-11	1827	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	9-11	0958	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	10-11	1505	Tue	V M8JF (x3) DE RIS9 (x2) //377	CW	(JPL)
M89	4532	11-11	1300	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	12-11	1149	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	12-11	1536	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	13-11	1351	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	14-11	1823	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	15-11	1536	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	16-11	1234	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	16-11	1959	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	17-11	1230	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	18-11	1236	Wed	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	18-11	2045	Wed	V M8JF (x3) DE RIS9 (x2) //3777 6793 and 8060	CW	(JPL)
M89	4532	19-11	1127	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	4532	19-11	2127	Thu	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	4532	20-11	1329	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	20-11	1541	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	4532	21-11	1039	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	21-11	1520	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	21-11	2104	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	22-11	1548	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	22-11	2200	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	23-11	1117	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	23-11	1806	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	24-11	1351	Tue	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	4532	24-11	1406	Tue	V M8JF (x3) DE RIS9 (x2) //4542	CW	(JPL)
M89	4532	24-11	1409	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	24-11	2009	Tue	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	24-11	2304	Tue	V M8JF (x3) DE RIS9 (x2) //6793 and 8060	CW	(JPL)
M89	4532	26-11	1558	Thu	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	27-11	1354	Fri	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	28-11	1529	Sat	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	29-11	1432	Sun	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	30-11	1342	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4532	30-11	1849	Mon	V M8JF (x3) DE RIS9 (x2) //3777	CW	(JPL)
M89	4542	24-11	1406	Tue	V M8JF (x3) DE RIS9 (x2) //4532	CW	(JPL)
M89	4720	8-11	1830	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	12-11	1530	Thu	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	12-11	2030	Thu	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	14-11	1830	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	15-11	1830	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	15-11	2330	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	16-11	1230	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	20-11	1330	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	20-11	1730	Fri	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	21-11	2130	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	23-11	1230	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	24-11	2030	Tue	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	24-11	2330	Tue	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	28-11	1530	Sat	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	29-11	1430	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	29-11	1730	Sun	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4720	30-11	1430	Mon	VVV WNF (x3) DE FXM (x2) QSA ? QSV K	CW	(JPL)
M89	4860	2-11	1120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	2-11	1520	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K	CW	(JPL)
M89	4860	3-11	0020	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	5-11	0020	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	5-11	2120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	8-11	1320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	8-11	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	11-11	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	11-11	1320	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	14-11	1820	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	15-11	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	15-11	2320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	16-11	0020	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	19-11	1120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	19-11	2120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	20-11	1320	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	21-11	2120	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	22-11	0020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	22-11	2220	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	23-11	1120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	23-11	1220	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	23-11	1820	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	24-11	2020	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	24-11	2320	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	25-11	1120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	4860	30-11	1420	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	4886	12-11	2008	Thu	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	13-11	1657	Fri	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	14-11	1921	Sat	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4886	15-11	0017	Sun	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	15-11	1829	Sun	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	15-11	2330	Sun	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	16-11	0024	Mon	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	16-11	1310	Mon	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	17-11	1228	Tue	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	18-11	2249	Wed	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4886	19-11	2138	Thu	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	20-11	1538	Fri	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	21-11	0146	Sat	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	21-11	1522	Sat	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	21-11	2144	Sat	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	22-11	1552	Sun	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	22-11	2218	Sun	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	24-11	2013	Tue	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	4886	24-11	2045	Tue	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	24-11	2307	Tue	V JKDJ (x3) DE SLBC (x2) //4131	CW	(JPL)
M89	4886	30-11	1851	Mon	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	2-11	1042	Mon	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	2-11	1518	Mon	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	11-11	1304	Wed	V JDDJ (x3) DE SLBC (x2) Sending JDDJ vice JKDJ.	CW	(JPL)
M89	5177	12-11	1206	Thu	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	13-11	1152	Fri	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	21-11	1041	Sat	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	22-11	1011	Sun	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	24-11	1404	Tue	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5177	25-11	1058	Wed	V JKDJ (x3) DE SLBC (x2)	CW	(JPL)
M89	5240	17-11	1236	Tue	DE 4GVZ K. R = 7134 AR K (see N&O 218)	CW	(JPL)
M89	5293	22-11	1011	Sun	R 33W = 75.. AR K. R ..W = IJR = N54T AR K R	CW	(JPL)
M89	5421	13-11	1213	Fri	i.p. R GA K. R 11W GA = (Other station also on this frequency)	CW	(JPL)
M89	5454	11-11	1304	Wed	i.p. 7A36 7TNA DU36 AUN4 6DN4 TD35 U3A4	CW	(JPL)
M89	5500	2-11	1056	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5500	3-11	1351	Tue	V UGT COMM BT 9602/2215/G31/5479 AR	CW	(JPL)
M89	5500	8-11	1828	Sun	V 7NPE (x3) DE QV5B (x2) //4225	CW	(JPL)
M89	5500	10-11	1502	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5500	16-11	1240	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5500	16-11	2000	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5500	23-11	1126	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	5555	2-11	1508	Mon	i.p. NR 348 NR 34/CK 56 GN4 3/C 7G NR 31 = 3UAA 3.7U TDU4 UN4N 5D3D 45D4 47T5 34NA ...	CW	(JPL)
M89	5566	30-11	1353	Mon	NR 179 1915 RMKS RMKS RMKS RMKS RMKS 3507 TO 6757/6797 (see N&O 218)	CW	(JPL)
M89	5588	3-11	0820	Tue	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	5-11	0942	Thu	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	8-11	0946	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	9-11	1004	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	11-11	0029	Wed	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	15-11	2323	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	16-11	0014	Mon	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	21-11	1043	Sat	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	22-11	0010	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5588	22-11	1015	Sun	V MW3D (x3) DE 2SLC (x2)	CW	(JPL)
M89	5624	12-11	1209	Thu	i.p. 3N57 6474 4544 A6UT DTA7 (IP - Cont'd - Machine sent - 1209z)	CW	(JPL)
M89	5624	13-11	1205	Fri	i.p. NR 88 R AS IEC MSG GA MSG NR 18/N AGN MSG NR 18/CCK CK	CW	(JPL)
M89	5644	2-11	1057	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	2-11	2245	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	3-11	1350	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	5-11	1352	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	5-11	2108	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	5644	6-11	1954	Fri	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	7-11	1405	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	7-11	2245	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	8-11	1029	Sun	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	10-11	1506	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	10-11	2216	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	11-11	1301	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	12-11	1151	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	12-11	1550	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	12-11	2028	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	13-11	1148	Fri	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	14-11	1824	Sat	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	15-11	1537	Sun	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	16-11	1237	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	16-11	2002	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	17-11	1226	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	18-11	1553	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	18-11	2243	Wed	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	19-11	1128	Thu	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	19-11	2128	Thu	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	20-11	1143	Fri	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	20-11	1326	Fri	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	21-11	2107	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	21-11	2136	Sat	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	22-11	1550	Sun	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	22-11	2201	Sun	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	23-11	1119	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	23-11	1809	Mon	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	24-11	1353	Tue	SVC GA. NR 46 245 RMKS 3507 TO 6.3/6792394 FM 8243082402	CW	(JPL)
M89	5644	24-11	2011	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	24-11	2042	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	24-11	2309	Tue	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	27-11	1407	Fri	V DKSL (x3) DE ALSK (x2) //3821	CW	(JPL)
M89	5644	28-11	1533	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5644	29-11	1434	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	5734	20-11	0342	Fri	i.p. R QSA 1 QSA ? K. R YSF0 DE 1CKT (see N&O 218)	CW	(JPL)
M89	5773	20-11	0329	Fri	VVV DVK5 DE KL6U K (see N&O 218)	CW	(JPL)
M89	5788	20-11	0306	Fri	i.p. 7L0U DE 47RU R QSA 1 QSA ? K (see N&O 218)	CW	(JPL)
M89	5801	3-11	0843	Tue	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	5-11	0857	Thu	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	6-11	0954	Fri	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	8-11	0949	Sun	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	11-11	0241	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	11-11	1158	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	12-11	1147	Thu	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	17-11	1225	Tue	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	5801	18-11	0627	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	19-11	1126	Thu	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	20-11	0305	Fri	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	20-11	1150	Fri	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	21-11	1030	Sat	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	22-11	1009	Sun	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	25-11	0228	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	25-11	1057	Wed	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	5801	30-11	0257	Mon	V DKG6 (x3) DE 3A7D (x2) //10180	CW	(JPL)
M89	6421	10-11	2347	Tue	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	11-11	0026	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	15-11	0024	Sun	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	15-11	2326	Sun	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	16-11	0018	Mon	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	16-11	0031	Mon	i.p. RMKS 3507 TO .987 = COMM/0915/LZ726..3504/6987 AR HR WK NR 31 //9131	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	6421	18-11	0113	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	21-11	1037	Sat	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	22-11	0014	Sun	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	22-11	1007	Sun	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	24-11	2336	Tue	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6421	30-11	0300	Mon	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	6466	22-11	1145	Sun	V DR4T (x3) DE TSW3 (x2) //9131	CW	(JPL)
M89	6680	25-11	1117	Wed	i.p. 7T5T 6N4D 6T34 UNND A53U 36AA ATN7 K. RPT 1P 06W K	CW	(JPL)
M89	6775	12-11	1917	Thu	V SD2Y DE CV6K = 1611/06/96/69/COMM/1680/DUD (see N&O 218)	CW	(JPL)
M89	6775	13-11	1427	Fri	i.p. = 1705/06/16/34/COMM/1680/DUTY AR HR NR 1290 NIL SK	CW	(JPL)
M89	6775	15-11	1549	Sun	i.p. VV SD2Y DE CV6K Hr SVC = (see N&O 218)	CW	(JPL)
M89	6775	19-11	2130	Thu	SD2Y DE CV6K HR SVC GA HR SVC GA = 1756/39/94/49/COMM/1680/DUTY AR =	CW	(JPL)
M89	6781	3-11	0824	Tue	i.p. 5U7T 6N3U 5D4A 4N6T 7D3U 5A6N	CW	(JPL)
M89	6793	1-11	2228	Sun	V M8JF (x3) DE RIS9 (x2) //4532 and 8060	CW	(JPL)
M89	6793	2-11	2242	Mon	V M8JF (x3) DE RIS9 (x2) //3777 / 4532 and 8060	CW	(JPL)
M89	6793	3-11	0824	Tue	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	5-11	0858	Thu	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	7-11	2308	Sat	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 8060	CW	(JPL)
M89	6793	11-11	0028	Wed	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	15-11	0016	Sun	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	15-11	2324	Sun	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	16-11	0015	Mon	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	18-11	0614	Wed	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6793	18-11	2045	Wed	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 8060	CW	(JPL)
M89	6793	24-11	2304	Tue	V M8JF (x3) DE RIS9 (x2) //4532 and 8060	CW	(JPL)
M89	6793	25-11	2346	Wed	V M8JF (x3) DE RIS9 (x2) //8060	CW	(JPL)
M89	6818	2-11	1335	Mon	i.p. 3UT5 TN4D D7T6 U5A3 NT4D	CW	(JPL)
M89	6840	2-11	1120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	3-11	0020	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	3-11	0820	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	5-11	0020	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	5-11	2120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	8-11	1320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	8-11	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	9-11	1020	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	11-11	0020	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	11-11	1320	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	14-11	1820	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	15-11	1820	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	15-11	2320	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	16-11	0020	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	18-11	0620	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	19-11	1120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	19-11	2120	Thu	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	20-11	1320	Fri	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	21-11	2120	Sat	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	22-11	0020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	22-11	1020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	22-11	2220	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	23-11	1120	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	23-11	1220	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	23-11	1820	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	24-11	2020	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	24-11	2320	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	25-11	0120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	25-11	0220	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //10640	CW	(JPL)
M89	6840	25-11	1120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6840	30-11	1420	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //4860	CW	(JPL)
M89	6855	6-11	1009	Fri	i.p. NR 110/CCK 19 11 1098 RMKS 1183 TO 1618 AR	CW	(JPL)
M89	7083	22-11	1611	Sun	i.p. RMKS 1202 TO 1243 K = A5D7 AUND 65T6 43A3 TD64 4UA5 ...	CW	(JPL)
M89	7601	13-11	1341	Fri	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	7602	1-11	1939	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	1-11	2231	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	2-11	1519	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	2-11	2240	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	3-11	1514	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	5-11	1350	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	5-11	2103	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	6-11	1948	Fri	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	7-11	2302	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	8-11	1455	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	8-11	1840	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	10-11	2204	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	11-11	1319	Wed	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	12-11	1535	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	12-11	2003	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	14-11	1821	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	15-11	0020	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	15-11	0333	Sun	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	7602	15-11	1535	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	15-11	1826	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	16-11	0023	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	16-11	1309	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	16-11	1958	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	18-11	0107	Wed	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	18-11	1232	Wed	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	19-11	2125	Thu	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	20-11	1540	Fri	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	21-11	0144	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	22-11	2210	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	23-11	1804	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	24-11	1349	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	24-11	2008	Tue	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	29-11	1732	Sun	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7602	30-11	1338	Mon	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	7777	12-11	1152	Thu	GMYU.OP ASDF D5 QWERTY UIOPABIE DFGHJKLZ. XCVBNM	CW	(JPL)
M89	7777	27-11	1356	Fri	i.p. UATU 546D 43D6 UTT7 3D67 T4A6 AR	CW	(JPL)
M89	8030	6-11	0958	Fri	i.p. UA36 53N3 45NT TNU6	CW	(JPL)
M89	8047	6-11	1003	Fri	i.p. MSG NR 33 CK 399 19 1106 1903 RMKS 9100 TO 9359 K	CW	(JPL)
M89	8060	1-11	2228	Sun	V M8JF (x3) DE RIS9 (x2) //4532 and 6793	CW	(JPL)
M89	8060	2-11	2242	Mon	V M8JF (x3) DE RIS9 (x2) //3777 / 4532 and 6793	CW	(JPL)
M89	8060	3-11	0824	Tue	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	5-11	0858	Thu	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	7-11	2244	Sat	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	7-11	2308	Sat	i.p. NR 1044 CK 93 40 1108 0710 RMKS 2010 TO 2449 2290 2200 = //3777 4532 and 6793	CW	(JPL)
M89	8060	10-11	2345	Tue	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	11-11	0028	Wed	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	15-11	0016	Sun	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	15-11	2324	Sun	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	16-11	0015	Mon	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	18-11	0111	Wed	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	18-11	0614	Wed	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8060	18-11	2045	Wed	V M8JF (x3) DE RIS9 (x2) //3777 4532 and 6793	CW	(JPL)
M89	8060	21-11	0138	Sat	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	22-11	0012	Sun	V M8JF (x3) DE RIS9 (x2)	CW	(JPL)
M89	8060	24-11	2304	Tue	V M8JF (x3) DE RIS9 (x2) //4532 and 6793	CW	(JPL)
M89	8060	25-11	2346	Wed	V M8JF (x3) DE RIS9 (x2) //6793	CW	(JPL)
M89	8063	22-11	1019	Sun	i.p. D54D A4T6 NU5A DN7N 7TNU 5U3A IIII = T33A 7AD6 457A D66A AN7U NDN6 ...	CW	(JPL)
M89	8064	8-11	1319	Sun	III = N4T4 UTD7 4653 N437 N3UN	CW	(JPL)
M89	8079	22-11	1129	Sun	i.p. 3567 6D7N UAN3 7A67 ...	CW	(JPL)
M89	8110	3-11	0026	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	8110	3-11	0819	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	8110	9-11	0958	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	8110	16-11	0017	Mon	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	8175	2-11	1103	Mon	i.p. /COMM/6../DUTY AR HR NR 1110 NIL SK	CW	(JPL)
M89	8175	21-11	0148	Sat	i.p. HR SVC NR = 1626/0//09/09/COMM/1680/DUTY AR	CW	(JPL)
M89	8888	3-11	0826	Tue	V 7NPE (x3) DE QV5B (x2)	CW	(JPL)
M89	9123	18-11	0144	Wed	i.p. 6DA7 AR HR WK NR 1 AR K. IEC ? K.	CW	(JPL)
M89	9131	1-11	2234	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	2-11	1048	Mon	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	3-11	0818	Tue	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	5-11	0856	Thu	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	6-11	0953	Fri	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	9-11	0954	Mon	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	10-11	2347	Tue	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	11-11	0026	Wed	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	15-11	0024	Sun	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	15-11	0335	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	15-11	2326	Sun	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	16-11	0018	Mon	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	18-11	0113	Wed	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	21-11	0140	Sat	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	21-11	1037	Sat	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	22-11	0014	Sun	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	22-11	1007	Sun	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	24-11	2336	Tue	V DKSL (x3) DE ALSK (x2) //6421	CW	(JPL)
M89	9131	25-11	0117	Wed	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	25-11	0225	Wed	V DKSL (x3) DE ALSK (x2)	CW	(JPL)
M89	9131	25-11	2345	Wed	V DKSL (x3) DE ALSK (x2) //10947	CW	(JPL)
M89	9131	30-11	0300	Mon	V DKSL (x3) DE ALSK (x2) NR 176 2100 RMKS 3507 TO 6797 = //6421	CW	(JPL)
M89	10169	8-11	1017	Sun	3D5D 763N 35NU AN64 4656 TA5U U6UD AR K. R R U MSG GA K	CW	(JPL)
M89	10171	22-11	1139	Sun	i.p. N4T3 T567 4N4. ..6N A634 4A6A ...	CW	(JPL)
M89	10180	3-11	0843	Tue	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	5-11	0857	Thu	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	6-11	0954	Fri	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	8-11	0949	Sun	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	9-11	0957	Mon	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	11-11	0241	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	11-11	1158	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	12-11	1147	Thu	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	13-11	1146	Fri	V DKG6 (x3) DE 3A7D (x2)	CW	(JPL)
M89	10180	18-11	0627	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	19-11	1126	Thu	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	20-11	0305	Fri	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	20-11	1150	Fri	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	21-11	0204	Sat	V DKG6 (x3) DE 3A7D (x2) //3642	CW	(JPL)
M89	10180	21-11	1030	Sat	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	22-11	1009	Sun	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	25-11	0228	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	25-11	1057	Wed	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10180	30-11	0257	Mon	V DKG6 (x3) DE 3A7D (x2) //5801	CW	(JPL)
M89	10640	3-11	0820	Tue	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	9-11	1020	Mon	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	18-11	0620	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	22-11	1020	Sun	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	25-11	0120	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10640	25-11	0220	Wed	VVV (x3) Q2M (x3) DE NYZ (x2) (R5) QSA ? K //6840	CW	(JPL)
M89	10708	18-11	0120	Wed	i.p. AR AGN R 52W = 76UN AR K. R 77W = 77N7 A7 AR K. U MSG GA K	CW	(JPL)
M89	10721	18-11	0116	Wed	i.p. QSA 2 K. = 3210 K. FF QSL 0917 K. FF HR NR 104 K. NIL SK GB	CW	(JPL)
M89	10786	18-11	0124	Wed	i.p. DDN7 77DT NAU4 6A4N UT5N A55A NT45 AR K	CW	(JPL)
M89	10947	2-11	1048	Mon	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	5-11	0856	Thu	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M89	10947	8-11	0947	Sun	V DKSL (x3) DE ALSK (x2)	CW	(JPL)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
M89	10947	25-11	2345	Wed	V DKSL (x3) DE ALSK (x2) //9131	CW	(JPL)
M90	4133	16-11	0731	Mon	I6RI I6RI AR and = QTR QTR 08 :39 and I6RI I6RI AR and QTC 897 = 1 30 16 0842 087 = I6RI = DNFVZ KADQS 04178 MISIS RFDPF	CW	(F5JBR)
M90	4133	16-11	0750	Mon	I6RI I6RI AR and 897 = 2 30 16 0851 087 = I6RI = KYZJY WBOPM IEPGF XUAXB FHDPQ ... = FOR I6RI RPT AL QLN AR I6RI I6RI AR	CW	(F5JBR)
M90	4133	16-11	0801	Mon	I6RI I6RI AR and 897 = 3 30 16 0901 087 = I6RI = 02698 QLUZY NUETY 42454 ... = FOR I6RI RPT AL QLN AR I6RI I6RI AR	CW	(F5JBR)
M90	4133	16-11	0816	Mon	I6RI I6RI AR ar QTR 09:16 and = FOR I6RI 237 831 931 338 621 AR and I6RI I6RI AR	CW	(F5JBR)
M95	5555	10-11	2351	Tue	BNGC BNGC BNGC DE XSV XSV XSV MGA AUF 44 UVVVVV R.UUUUUUAUUUASUUUUUUUUUUUU 34AU3445666666 05 05 05 05 AU3 AR	CW	(DSch)
M95	6836	6-11	1014	Fri	05 05 05	CW	(JPL)
M95	8027	15-11	0009	Sun	i.p. 05 05 05 05 05 05 05 05 05 VVVV 05 05	CW	(JPL-Sib)
M95	8073	2-11	1138	Mon	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 0938 CK 268 35 1102 1631 =	CW	(JPL-HK)
M95	8073	3-11	0010	Tue	i.p. 773 353 403 NN3 447 3D4 4DT 4D6 TAD 773 TU3 AR AR HR 7G GA NR 0941 CK 38 35 1102 07.. =	CW	(JPL-HK)
M95	8073	5-11	0009	Thu	V BNGC (x3) DE XSV85 (x2) HR MSG GA PSE CY NR 0947 CK 86 35 1105 0708 = TT5 3U4 3A4 TAU 773 TU4 773 TU5 773 353	CW	(JPL-HK)
M95	8073	8-11	1038	Sun	V BNGC (x3) DE XSV85 (x2) NR 0954 CK 239 35 1108 1.29 = T.. 35.. TU7 TAU 773 356 (Cont'd)	CW	(JPL-HK)
M95	8073	11-11	0013	Wed	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY MSG NR 0961 CK 104 35 1111 0709 = (see N&O 218)	CW	(JPL-HK)
M95	8073	11-11	1136	Wed	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 0963 CK 138 35 1111 1631 = (see N&O 218)	CW	(JPL-HK)
M95	8073	12-11	1135	Thu	V BNGC (x3) DE XSV85 (x2) HR MSG GA PSE CY NR 0967 CK 218 35 1112 1630 = TAU 3U6 3AN 3U7 TAU ...	CW	(JPL-HK)
M95	8073	13-11	0009	Fri	i.p. AR AR MSG AGN NR 0970 CK 108 35 1114 0709 = TA4 3U4 3A4 TAU 773 TA7 773 357 373 ...	CW	(MPJ)
M95	8073	13-11	1137	Fri	V BNGC (x3) DE XSV85 (x2) HR MSG GA PSE CY NR 0969 CK 187 35 1113 1603 = TA3 3U6 3AN 3U7 TAU 773 TA7 773 TAD 773 ...	CW	(JPL-HK)
M95	8073	17-11	1144	Tue	i.p. 773 353 4.. NN3 .5. AR MSG AGN NR 0977 CK 252 35 1117 15.9 = TA7 3U. .A. 3U7 TAA TAU 773 TA7 773 ...	CW	(JPL-HK)
M95	8073	19-11	1158	Thu	V BNGC (x3) DE XSV85 (x2) HR MSG GA CY MSG NR 0981 CK 271 35 1119 1701 =	CW	(JPL-HK)
M95	8073	20-11	1136	Fri	V BNGC (x3) DE XSV85 (x2) HR MSG GA NR 0983 CK 122 35 1120 1653 = TUT 3U6 3TN U7 TAU 773 TA7 773 353 ...	CW	(JPL-HK)
M95	8073	22-11	0005	Sun	V BNGC (x3) DE XSV85 (x2) IZ GA HR MSG GA MSG NR NR 0986 CK 106 35 1222 0702 = = TUU 3U4 3A4 TAU 773 TA7 773 356 ...	CW	(JPL-HK)
M95	8073	23-11	1139	Mon	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 0989 CK 297 35 1123 1646 = TAA N5U TU3 N53 TAD 47T TTA 746 7T5 TT3 ...	CW	(JPL-HK)
M95	8073	25-11	0007	Wed	V BNGC (x3) DE XSV85 (x2) HR MSGS GA PSE CY NR 0995 CK 125 35 1125 0726 = TU5 34 3A4 TAU ...	USB	(JPL-HK)
M95	8073	25-11	1137	Wed	V BNGC (x3) DE XSV85 (x2) HR MSG GA NR NR 0997 CK 222 35 1125 1621 = T53 U63 AN 3U7 TAU ...	USB	(JPL-HK)
M95	8073	26-11	0007	Thu	V BNGC DE XSV85 HR MSGS GA NR 0999 CK 108 35 1126 0704 = TU6 3U4 3A4 TAU 773 ...	USB	(JPL-HK)
M95	8079	7-11	2314	Sat	i.p. 05 05	CW	(JPL)
M95	8176	2-11	2300	Mon	i.p. 05 05 05 = MMCO MCO 7AL 05 05 AS 7700 05 05 M 05 05	CW	(JPL)
MX	3168.4	3-11	1641	Tue	Beacon L, St Petersburg	CW	(AB)
MX	3593.8	3-11	1646	Tue	Beacon P, Kaliningrad	CW	(AB)
MX	3658	5-11	1815	Thu	Beacon V	CW	(AB)
MX	3658	28-11	2232	Sat	Beacon V	CW	(AB)
MX	4557.7	19-11	2331	Thu	Beacon D, Sevastopol	CW	(SW2)
MX	4557.9	19-11	2332	Thu	Beacon S, Sevoromorsk	CW	(SW2)
MX	5153.5	14-11	1710	Sat	Beacon D, Sevastopol. Ought to be on 0.7 offset.	CW	(MPJ)
MX	5153.7	19-11	2333	Thu	Beacon D, Sevastopol	CW	(SW2)
MX	5153.8	3-11	1641	Tue	Beacon P, Kaliningrad	CW	(AB)
MX	5153.8	3-11	1646	Tue	Beacon P, Kaliningrad	CW	(AB)
MX	5153.9	3-11	1641	Tue	Beacon S, Sevoromorsk	CW	(AB)
MX	5153.9	3-11	1646	Tue	Beacon S, Sevoromorsk	CW	(AB)
MX	5154	14-11	1644	Sat	Beacon C, Moscow //10872 kHz	CW	(MPJ)
MX	5154	19-11	2334	Thu	Beacon C, Moscow	CW	(SW2)
MX	7508.7	3-11	1645	Tue	Beacon D, Sevastopol	CW	(AB)
MX	7508.7	12-11	1919	Thu	Beacon D	CW	(PPA)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
MX	7508.7	19-11	2335	Thu	Beacon D, Sevastopol	CW	(SW2)
MX	7508.9	3-11	1645	Tue	Beacon S, Sevoromorsk	CW	(AB)
MX	8494.8	23-11	0925	Mon	Beacon P	CW	(AB)
MX	8494.8	24-11	0931	Tue	Beacon P	CW	(AB)
MX	8494.9	3-11	1645	Tue	Beacon S, Sevoromorsk	CW	(AB)
MX	8494.9	24-11	0931	Tue	Beacon S	CW	(AB)
MX	8497.8	3-11	1638	Tue	Beacon L, St Petersburg	CW	(AB)
MX	10871.7	3-11	1643	Tue	Beacon D, Sevastopol	CW	(AB)
MX	10871.7	14-11	1643	Sat	Beacon D, Odessa/Sevastopol //5153.5 kHz	CW	(MPJ)
MX	10871.7	23-11	0922	Mon	Defective beacon D. Sends D D D D V V D D D D V V ...	CW	(AB)
MX	10871.9	23-11	0922	Mon	Beacon S	CW	(AB)
MX	10872	3-11	1643	Tue	Beacon C, Moscow	CW	(AB)
MX	10872	14-11	1644	Sat	Beacon C, Moscow //5154 kHz	CW	(MPJ)
MX	10872	23-11	0922	Mon	Beacon C	CW	(AB)
MX	13527.7	23-11	0924	Mon	Defective beacon D. Sends D D D D V V D D D D V V ...	CW	(AB)
MX	13527.9	23-11	0924	Mon	Beacon S	CW	(AB)
MX	13528	23-11	0924	Mon	Beacon C	CW	(AB)
MX	15327.7	3-11	1643	Tue	Beacon D, Sevastopol	CW	(AB)
MX	15328	3-11	1643	Tue	Beacon C, Moscow	CW	(AB)
MX	16331.7	3-11	1643	Tue	Beacon D, Sevastopol	CW	(AB)
MX	16331.7	23-11	0834	Mon	Defective beacon D. Sends D D D D V V D D D D V V ...	CW	(AAI)
MX	16331.7	23-11	0920	Mon	Defective beacon D. Sends D D D D V V D D D D V V ...	CW	(AB)
MX	16331.9	23-11	0920	Mon	Beacon S	CW	(AB)
MX	16332	23-11	0920	Mon	Beacon C	CW	(AB)
MX	20047.7	23-11	0923	Mon	Defective beacon D. Sends D D D D V V D D D D V V ...	CW	(AB)
MX	20047.9	23-11	0923	Mon	Beacon S	CW	(AB)
MX	20048	23-11	0923	Mon	Beacon C	CW	(AB)
POL	4505	5-11	1305	Thu	0437 88888 88888 52050 22297 75133 ... 60007 90422 50898 88888 88888 00034 00034	FSK 100/625	(AB)
POL	4505	5-11	1305	Thu	0437 88888 88888 52050 22297 75133 ... 60007 90422 50898 88888 88888 00034 00034	FSK 100/625	(AB)
POL	4828	30-11	1305	Mon	0547 00000	FSK 100/625	(AB)
POL	4828	30-11	1310	Mon	0547 00000	FSK 100/625	(AB)
POL	5831	5-11	0300	Thu	Polish Intel	FSK 100/625	(AB)
POL	5831	5-11	0305	Thu	Polish Intel	FSK 100/625	(AB)
POL	6836	2-11	0800	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	2-11	0805	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	5-11	0800	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	5-11	0805	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	9-11	0800	Mon	0434 88888 88888 87587 87323 77681 ... 47334 56069 41728 88888 88888 00041 00041	FSK 100/625	(AB)
POL	6836	9-11	0805	Mon	0434 88888 88888 87587 87323 77681 ... 47334 56069 41728 88888 88888 00041 00041	FSK 100/625	(AB)
POL	6836	12-11	0800	Thu	0434 88888 88888 87587 87323 77681 ... 47334 56069 41728 88888 88888 00041 00041	FSK 100/625	(AB)
POL	6836	12-11	0805	Thu	0434 88888 88888 87587 87323 77681 ... 47334 56069 41728 88888 88888 00041 00041	FSK 100/625	(AB)
POL	6836	16-11	0800	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	16-11	0805	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	23-11	0800	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	23-11	0805	Mon	0434 00000	FSK 100/625	(AB)
POL	6836	26-11	0800	Thu	0434 00000	FSK 100/625	(AB)
POL	6836	26-11	0805	Thu	0434 00000	FSK 100/625	(AB)
POL	6838	30-11	0800	Mon	0434 00000	FSK 100/625	(AB)
POL	6838	30-11	0805	Mon	0434 00000	FSK 100/625	(AB)
POL	7499	17-11	0900	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	17-11	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	20-11	0900	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	20-11	0905	Fri	0554 00000	FSK 100/625	(AB)
POL	7499	24-11	0900	Tue	0554 00000	FSK 100/625	(AB)
POL	7499	24-11	0905	Tue	0554 00000	FSK 100/625	(AB)
POL	7721	3-11	0630	Tue	0574 00000	FSK 100/625	(AB)
POL	7721	3-11	0635	Tue	0574 00000	FSK 100/625	(AB)

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POL	7772	5-11	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	5-11	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	12-11	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	12-11	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	17-11	0630	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	17-11	0635	Tue	0574 00000	FSK 100/625	(AB)
POL	7772	19-11	0630	Thu	0574 00000	FSK 100/625	(AB)
POL	7772	19-11	0635	Thu	0574 00000	FSK 100/625	(AB)
POL	7779	26-11	0630	Thu	0574 88888 88888 72494 37261 53538 ... 92277 33369 79473 88888 88888 00037 00037	FSK 100/625	(AB)
POL	7779	26-11	0635	Thu	0574 88888 88888 72494 37261 53538 ... 92277 33369 79473 88888 88888 00037 00037	FSK 100/625	(AB)
POL	9179	17-11	1610	Tue	0877 88888 88888 58780 42765 61269 ... 00645 56984 92969 88888 88888 00037 00037	FSK 100/625	(AB)
POL	9179	17-11	1615	Tue	0877 88888 88888 58780 42765 61269 ... 00645 56984 92969 88888 88888 00037 00037	FSK 100/625	(AB)
POL	9179	21-11	1610	Sat	0877 88888 88888 52780 42765 61269 ... 00645 56984 92969 88888 88888 00037 00037 Repeat of 17-11 but the first group is different.	FSK 100/625	(AB)
POL	9179	21-11	1615	Sat	0877 88888 88888 52780 42765 61269 ... 00645 56984 92969 88888 88888 00037 00037 Repeat of 17-11 but the first group is different.	FSK 100/625	(AB)
POL	9179	24-11	1610	Tue	0877 00000	FSK 100/625	(AB)
POL	9179	24-11	1615	Tue	0877 00000	FSK 100/625	(AB)
POL	9179	28-11	1610	Sat	0877 00000	FSK 100/625	(AB)
POL	9179	28-11	1615	Sat	0877 00000	FSK 100/625	(AB)
POL	9370	2-11	0845	Mon	0353 88888 88888 82806 72115 42675 ... 03615 12250 07850 88888 88888 00039 00039	FSK 100/625	(AB)
POL	9370	2-11	0850	Mon	0353 88888 88888 82806 72115 42675 ... 03615 12250 07850 88888 88888 00039 00039	FSK 100/625	(AB)
POL	9370	4-11	0845	Wed	0353 88888 88888 82806 72115 42675 ... 03615 12250 07850 88888 88888 00039 00039	FSK 100/625	(AB)
POL	9370	4-11	0850	Wed	0353 88888 88888 82806 72115 42675 ... 03615 12250 07850 88888 88888 00039 00039	FSK 100/625	(AB)
POL	9370	9-11	0845	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	9-11	0850	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	11-11	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	11-11	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	18-11	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	18-11	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	23-11	0845	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	23-11	0850	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	25-11	0845	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	25-11	0850	Wed	0353 00000	FSK 100/625	(AB)
POL	9370	30-11	0845	Mon	0353 00000	FSK 100/625	(AB)
POL	9370	30-11	0850	Mon	0353 00000	FSK 100/625	(AB)
POL	9576	3-11	1005	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	3-11	1010	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	6-11	1005	Fri	0675 00000	FSK 100/625	(AB)
POL	9576	6-11	1010	Fri	0675 00000	FSK 100/625	(AB)
POL	9576	10-11	1005	Tue	0675 88888 88888 57216 73739 74343 ... 09686 29236 31392 88888 88888 00037 00037	FSK 100/625	(AB)
POL	9576	10-11	1010	Tue	0675 88888 88888 57216 73739 74343 ... 09686 29236 31392 88888 88888 00037 00037	FSK 100/625	(AB)
POL	9576	17-11	1005	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	17-11	1010	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	20-11	1005	Fri	0675 00000	FSK 100/625	(AB)
POL	9576	20-11	1010	Fri	0675 00000	FSK 100/625	(AB)
POL	9576	24-11	1005	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	24-11	1010	Tue	0675 00000	FSK 100/625	(AB)
POL	9576	27-11	1005	Fri	0675 00000	FSK 100/625	(AB)
POL	9576	27-11	1010	Fri	0675 00000	FSK 100/625	(AB)
POL	9968	6-11	0815	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	6-11	0820	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	9-11	0815	Mon	0446 88888 88888 36069 06947 29283 ... 78382 18974 19509 88888 88888 00039 00039	FSK 100/625	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
POL	9968	9-11	0820	Mon	0446 88888 88888 36069 06947 29283 ... 78382 18974 19509 88888 88888 00039 00039	FSK 100/625	(AB)
POL	9968	16-11	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	16-11	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	20-11	0815	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	20-11	0820	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	23-11	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	23-11	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	27-11	0815	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	27-11	0820	Fri	0446 00000	FSK 100/625	(AB)
POL	9968	30-11	0815	Mon	0446 00000	FSK 100/625	(AB)
POL	9968	30-11	0820	Mon	0446 00000	FSK 100/625	(AB)
POL	10359	3-11	0655	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	3-11	0700	Tue	0684 00000	FSK 100/625	(AB)
POL	10359	6-11	0655	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	6-11	0700	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	20-11	0655	Fri	0684 88888 88448 99507 41350 50302 ... 11011 09014 46820 88888 88888 00038 00038	FSK 100/625	(AB)
POL	10359	20-11	0700	Fri	0684 88888 88448 99507 41350 50302 ... 11011 09014 46820 88888 88888 00038 00038	FSK 100/625	(AB)
POL	10359	27-11	0655	Fri	0684 00000	FSK 100/625	(AB)
POL	10359	27-11	0700	Fri	0684 00000	FSK 100/625	(AB)
POL	10641	24-11	1150	Tue	0325 88888 88888 48968 97675 76605 ... 79581 60769 12654 88888 88888 00037 00037	FSK 100/625	(AB)
POL	10641	24-11	1155	Tue	0325 88888 88888 48968 97675 76605 ... 79581 60769 12654 88888 88888 00037 00037	FSK 100/625	(AB)
POL	10641	25-11	1150	Wed	0325 88888 88888 48968 97675 76605 ... 79581 60769 12654 88888 88888 00037 00037	FSK 100/625	(AB)
POL	10641	25-11	1155	Wed	0325 88888 88888 48968 97675 76605 ... 79581 60769 12654 88888 88888 00037 00037	FSK 100/625	(AB)
POL	12630	2-11	1000	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	2-11	1005	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	5-11	1000	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	5-11	1005	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	9-11	1000	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	9-11	1005	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	12-11	1000	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	12-11	1010	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	16-11	1000	Mon	0745 88888 88888 44243 27634 25588 ... 75539 37569 60810 88888 88888 00040 00040	FSK 100/625	(AB)
POL	12630	16-11	1005	Mon	0745 88888 88888 44243 27634 25588 ... 75539 37569 60810 88888 88888 00040 00040	FSK 100/625	(AB)
POL	12630	23-11	1000	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	23-11	1005	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	26-11	1000	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	26-11	1005	Thu	0765 00000	FSK 100/625	(AB)
POL	12630	30-11	0900	Mon	0765 00000	FSK 100/625	(AB)
POL	12630	30-11	0905	Mon	0765 00000	FSK 100/625	(AB)
POL	15915	2-11	1525	Mon	0221 88888 88888 33907 25461 09807 ... 36982 79166 49297 88888 88888 00042 00042	FSK 100/625	(AB)
POL	15915	2-11	1530	Mon	0221 88888 88888 33907 25461 09807 ... 36982 79166 49297 88888 88888 00042 00042	FSK 100/625	(AB)
POL	15915	23-11	1525	Mon	0221 00000	FSK 100/625	(AB)
POL	15915	23-11	1530	Mon	0221 00000	FSK 100/625	(AB)
POL	16388	3-11	0730	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	3-11	0735	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	5-11	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	5-11	0735	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	10-11	0730	Tue	0433 88888 88888 28732 07476 65307 ... 68989 37051 95250 88888 88888 00034 00034	FSK 100/625	(AB)
POL	16388	10-11	0735	Tue	0433 88888 88888 28732 07476 65307 ... 68989 37051 95250 88888 88888 00034 00034	FSK 100/625	(AB)
POL	16388	12-11	0730	Thu	0433 88888 88888 28732 07476 65307 ... 68989 37051 95250 88888 88888 00034 00034	FSK 100/625	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
POL	16388	12-11	0735	Thu	0433 88888 88888 28732 07476 65307 ... 68989 37051 95250 88888 88888 00034 00034	FSK 100/625	(AB)
POL	16388	24-11	0730	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	24-11	0735	Tue	0433 00000	FSK 100/625	(AB)
POL	16388	26-11	0730	Thu	0433 00000	FSK 100/625	(AB)
POL	16388	26-11	0735	Thu	0433 00000	FSK 100/625	(AB)
Q26	8073	2-11	1130	Mon	XSV85 message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	5-11	0003	Thu	XSV85 message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	8-11	1033	Sun	XSV85 digital message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	11-11	0001	Wed	XSV85 digital messag	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	12-11	1131	Thu	XSV85 digital message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	16-11	1240	Mon	F BNGC BNGC BNGC DE VSF85 VSF85 HR MSG GA PSE CY $ NR0975 CK127 35 1116 1550 ...	4+4 75/3000 LSB	(EW)
Q26	8073	19-11	1141	Thu	Digital message. Stops and begins again followed by male voice and again into 4+4	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	22-11	0001	Sun	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	23-11	1130	Mon	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	25-11	0002	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	25-11	1129	Wed	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
Q26	8073	26-11	0002	Thu	Message	4+4 QPSK 75/3000 LSB	(JPL-HK)
RADv	2300	3-11	1701	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2545	12-11	1549	Thu	Tracking (Russian Voice)	USB	(F5JBR)
RADv	2545	21-11	0522	Sat	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	2762	3-11	1717	Tue	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	2762	12-11	1817	Thu	Tracking (Russian Voice)	LSB	(F5JBR)
RADv	3238	25-11	1755	Wed	Tracking (Russian Voice)	LSB	(F5JBR
RADv	3300	10-11	0439	Tue	Tracking (Russian Voice)	LSB	(CA2)
RADv	3328	8-11	1628	Sun	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3595	10-11	0522	Tue	Tracking (Russian Voice)	USB	(F5JBR)
RADv	3891	21-11	1920	Sat	Tracking (Russian Voice)	USB	(F5JBR)
RADv	4240	10-11	0901	Tue	Tracking (Russian Voice)	USB	(CA2)
RADv	4318	7-11	2328	Sat	Russian Air Defense, radar tracking	LSB	(JPL-FNL)
RADv	4380	18-11	1446	Wed	Tracking (Russian Voice)	USB	(F5JBR)
RADv	5426	10-11	0605	Tue	Tracking (Russian Voice)	LSB	(CA2)
RMv	2413	6-11	1945	Fri	MARNA-11 clg GRIZAK-71 ROBIN-1452 VIEZIK-4659	USB	(F5JBR)
RMv	3326.5	8-11	1619	Sun	SALVA-13 comms checks with outstations	USB	(F5JBR)
RMv	4342	10-11	0814	Tue	LABAZ-38 comms checks with out stations	USB	(CA2)
RMv	4640	7-11	0848	Sat	COLCHAR-73 comms checks with outstations	USB	(F5JBR)
RMv	5759.5	4-11	0616	Wed	TARAK06 comms cheks with outstations	USB	(F5JBR)
RMv	6850.5	18-11	0609	Wed	DUSEK-74 comms checks with out stations	USB	(F5JBR)
S06	3522	7-11	2100	Sat	738 0	USB	(HFD)
S06	3522	21-11	2100	Sat	738 0	USB	(HFD)
S06	3522	21-11	2101	Sat	738 738 738 00000	USB	(VH)
S06	4057	7-11	2000	Sat	738 0	USB	(HFD)
S06	5073	7-11	1605	Sat	491 0	USB	(HFD)
S06	5073	21-11	1605	Sat	491 0	USB	(HFD)
S06	6778	28-11	1600	Sat	491 0	USB	(HFD)
S06	6778	28-11	1600	Sat	491 491 491 00000	USB	(AB/MPJ)
S06	9194	23-11	1600	Mon	387 619 619 52 52 68588 68588 ... 47448 47448 619 619 52 52 00000	USB	(Danix)
S06	9194	24-11	1600	Tue	387 619 52 68588 36388 24187 ... 41457 14895 47448 619 52 00000	USB	(AB)
S06	13397	23-11	1500	Mon	387 619 619 52 52 68588 68588 ... 47448 47448 619 619 52 52 00000	USB	(Danix)
S06	13397	24-11	1500	Tue	387 619 52 68588 36388 24187 ... 41457 14895 47448 619 52 00000	USB	(AB)
S06	15721	4-11	0400	Wed	480 253 60 20028	USB	(HFD)
S06	15721	4-11	0400	Wed	480 253 60 20028 47511 64457 ... 57223 92058 00574 253 60 00000	USB	(AB)
S06	16067	5-11	0930	Thu	842	USB	(HFD)
S06	16067	12-11	0930	Thu	842 516 32 51483 22348 37192 ... 42524 74454 30115 516 32 00000	USB	(AB)
S06	16067	26-11	0930	Thu	842 ...	USB	(AB)
S06	19875	5-11	0830	Thu	842 907 31 17283	USB	(HFD)
S06	19875	12-11	0830	Thu	842 516 32 51483 22348 37192 ... 42524 74454 30115 516 32 00000	USB	(AB)
S06	19875	26-11	0830	Thu	842 ...	USB	(AB)
S06c	8159	16-11	1647	Mon	11097 (R4)	USB	(Danix)

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S06c	18626	27-11	1100	Fri	11023 (R4m)	USB	(Danix)
S06s	5250	3-11	0700	Tue	374 ...	USB	(AB)
S06s	5250	3-11	0700	Tue	374 918/5 89499	USB	(HFD)
S06s	5660	10-11	1010	Tue	893 460 5 05899	USB	(HFD)
S06s	5765	5-11	0900	Thu	624 908 5 #####	USB	(HFD)
S06s	5765	26-11	0900	Thu	624 ...	USB	(AB)
S06s	6315	5-11	0910	Thu	624	USB	(HFD)
S06s	6315	12-11	0910	Thu	624 908 5 73632 55263 38901 52711 63782 908 5 00000	USB	(AB)
S06s	6315	26-11	0910	Thu	624 ...	USB	(AB)
S06s	6320	3-11	0715	Tue	374	USB	(HFD)
S06s	6320	3-11	0715	Tue	374 ...	USB	(AB)
S06s	6320	10-11	0715	Tue	374 918 5 89499 31900 48366 36534 32840 918 5 00000	USB	(AB)
S06s	6440	10-11	1000	Tue	893	USB	(HFD)
S06s	6845	3-11	1500	Tue	537 906 8 33796 13577 74526 46647 79302 53516 25616 56069 906 8 00000	USB	(AB)
S06s	6845	3-11	1500	Tue	537 906 5 33796	USB	(HFD)
S06s	6845	17-11	1500	Tue	537 428 6 74930 51138 63518 63728 06034 63413 428 6 00000	USB	(AB)
S06s	7335	4-11	0830	Wed	745 296 8 82707	USB	(HFD)
S06s	7335	4-11	0830	Wed	745 296 8 82707 06123 22536 88280 84116 53718 78927 34694 296 8 00000	AM	(AB)
S06s	7335	25-11	0830	Wed	745 918 6 34031 33430 37536 34906 39698 35454 918 6 00000	USB	(AB)
S06s	7410	3-11	0730	Tue	427 530 6 46062	USB	(HFD)
S06s	7410	10-11	0730	Tue	427 530 6 46062 68672 97478 39685 30485 96632 530 6 00000	AM	(AB)
S06s	8057	2-11	0830	Mon	371 250 6 21767	USB	(HFD)
S06s	8057	2-11	0830	Mon	371 250 6 21767 53672 11834 81022 36903 41412 240 6 00000	USB	(AB)
S06s	8057	9-11	0830	Mon	371 250 6 21767 53672 11834 81022 36903 41412 250 6 00000	USB	(AB)
S06s	8057	30-11	0830	Mon	371 371 371 00000	USB	(AB)
S06s	8260	7-11	1210	Sat	254 809 6 88785 30340 30193 33584 84446 43403 809 6 00000	USB	(AB)
S06s	8260	7-11	1210	Sat	254	USB	(HFD)
S06s	8417	25-11	0820	Wed	471 268 5 80238	USB	(HFD)
S06s	8420	2-11	1300	Mon	831 209 5 52401	USB	(HFD)
S06s	8420	23-11	1300	Mon	831 245 6 11171 64385 82707 06123 22535 53718 245 6 00000	USB	(AB)
S06s	8420	30-11	1300	Mon	831 831 831 00000	USB	(AB)
S06s	8530	2-11	0840	Mon	371 250 6 21767 53672 11834 81022 36903 41412 240 6 00000	USB	(AB)
S06s	8530	2-11	0840	Mon	371	USB	(HFD)
S06s	8530	9-11	0840	Mon	371 250 6 21767 53672 11834 81022 36903 41412 250 6 00000	USB	(AB)
S06s	8530	23-11	0840	Mon	371 406 5 09394 76911 75155 92918 97067 406 5 00000	USB	(AB)
S06s	8530	30-11	0840	Mon	371 371 371 00000	USB	(AB)
S06s	8680	7-11	1200	Sat	254 809 6 88785 30340 30193 33584 84446 43403 809 6 00000	USB	(AB)
S06s	8680	7-11	1200	Sat	254 809 6 88785	USB	(HFD)
S06s	8812	5-11	0930	Thu	314 295 6 89360	USB	(HFD)
S06s	8812	12-11	0930	Thu	314 295 6 89360 32719 02517 43728 94512 36825 295 6 00000	USB	(AB)
S06s	8812	26-11	0930	Thu	314 957 6 31514 23800 35288 85892 44234 33666 957 6 00000	USB	(AB)
S06s	9170	3-11	1510	Tue	537 906 8 33796	USB	(HFD)
S06s	9170	3-11	1510	Tue	537 906 8 33796 13577 74526 46647 79302 53516 25616 56069 906 8 00000	USB	(AB)
S06s	9170	17-11	1510	Tue	537 428 6 74930 51138 63518 63728 06034 63413 428 6 00000	USB	(AB)
S06s	9170	24-11	1510	Tue	537 428 6 74930 51138 63518 63728 06034 63413 428 6 00000	USB	(AB)
S06s	9262	25-11	0830	Wed	471 268 5 80328 32229 37303 88934 39698 268 5 00000	USB	(AB)
S06s	9262	25-11	0830	Wed	471	USB	(HFD)
S06s	9540	5-11	0940	Thu	314	USB	(HFD)
S06s	9540	12-11	0940	Thu	314 295 6 89360 32719 02517 43728 94512 36825 295 6 00000	USB	(AB)
S06s	9540	26-11	0940	Thu	314 957 6 31514 23800 35288 85892 44234 33666 957 6 00000	USB	(AB)
S06s	10635	2-11	1310	Mon	831	USB	(HFD)
S06s	10635	30-11	1310	Mon	831 831 831 00000	USB	(AB)
S06s	10920	5-11	1210	Thu	425	USB	(HFD)
S06S	11532	3-11	0740	Tue	427	USB	(HFD)
S06s	11532	3-11	0740	Tue	427 530 6 46062 68672 97478 39685 30485 96632 530 6 00000	AM	(AB)
S06s	11532	10-11	0740	Tue	427 530 6 46062 68672 97478 39685 30485 96632 530 6 00000	AM	(AB)
S06s	11532	17-11	0740	Tue	427 836 5 42987 94184 47374 74154 08531 836 5 00000	AM	(AB)
S06s	11780	6-11	0930	Fri	516 902 7 46062 68672 94468 39685 30485 96632 52537 902 7 00000	AM	(AB)

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S06s	11780	6-11	0930	Fri	516 902 7 46062	USB	(HFD)
S06s	11780	20-11	0930	Fri	516 230 7 92971 30490 46481 33987 37393 48944 30643 230 7 00000	AM	(AB/SW2)
S06s	11830	4-11	0840	Wed	745	USB	(HFD)
S06s	11830	4-11	0840	Wed	745 296 8 82707 06123 22536 88280 84116 53718 78927 34694 296 8 00000. Hiccup in the call (745)	AM	(AB)
S06s	11830	25-11	0840	Wed	471 268 5 80328 32229 37303 88934 39698 268 5 00000	USB	(AB)
S06s	11945	3-11	0800	Tue	352 964 7 21667	USB	(HFD)
S06s	11945	3-11	0800	Tue	352 964 7 21767 53672 11834 81022 36903 41412 55678 964 7 00000	USB	(AB)
S06s	11945	10-11	0800	Tue	352 964 7 21767 53672 11834 81022 36903 41412 55678 964 7 00000	USB	(AB)
S06s	11945	24-11	0800	Tue	352 974 54545 50128 99477 83574 48874 94031 974 6 00000	USB	(AB)
S06s	12155	5-11	1200	Thu	425 870 6 62819 52638 02633 61153 64860 09706 870 6 00000	USB	(AB)
S06s	12155	5-11	1200	Thu	425 870 6 62819	USB	(HFD)
S06s	12155	19-11	1015	Thu	YL msg	USB	(SW2)
S06s	12365	4-11	1000	Wed	729 548 6 30588	USB	(HFD)
S06s	12365	11-11	1000	Wed	729 548 6 30588 39344 37296 27478 44986 74328 548 6 00000	USB	(AB)
S06s	12365	25-11	1000	Wed	729 836 5 36628 32225 30867 49980 48995 835 5 00000	USB	(AB)
S06s	12570	6-11	0940	Fri	516 902 7 46062 68672 94468 39685 30485 96632 52537 902 7 00000	AM	(AB)
S06s	12570	6-11	0940	Fri	516	USB	(HFD)
S06s	12570	20-11	0940	Fri	516 230 7 92971 30490 46481 33987 37393 48944 30643 230 7 00000	AM	(AB/SW2)
S06s	12830	2-11	0910	Mon	872 413 5 46062 68672 97478 39685 30485 413 5 00000	USB	(AB)
S06s	12830	2-11	0910	Mon	872	USB	(HFD)
S06s	12830	9-11	0910	Mon	872 413 5 46062 68672 97478 39685 30485 413 5 00000	USB	(AB)
S06s	12830	23-11	0910	Mon	872 410 5 01405 15003 24357 60583 38229 410 5 00000	USB	(AB)
S06s	12830	30-11	0910	Mon	872 872 872 00000	USB	(AB)
S06s	12952	5-11	0900	Thu	167 938 5 73990 62184 62819 04320 62718 938 5 00000	AM	(AB)
S06s	12952	12-11	0900	Thu	167 938 5 73990 62184 62819 04320 62718 938 5 00000	AM	(AB)
S06s	12952	26-11	0900	Thu	167 925 8 92325 36615 36491 49588 41061 83354 43309 43400 925 8 00000	AM	(AB)
S06s	13195	3-11	0810	Tue	352 964 7 21767 53672 11834 81022 36903 41412 55678 964 7 00000	USB	(AB)
S06s	13195	3-11	0810	Tue	352	USB	(HFD)
S06s	13195	10-11	0810	Tue	352 964 7 21767 53672 11834 81022 36903 41412 55678 964 7 00000	USB	(AB)
S06s	13195	24-11	0810	Tue	352 974 54545 50128 99477 83574 48874 94031 974 6 00000	USB	(AB)
S06s	13460	8-11	0630	Sun	524 891 6 60583 54545 50128 99477 83574 48874 891 6 00000	USB	(AB)
S06s	13470	1-11	0630	Sun	524 0	USB	(HFD)
S06s	13470	22-11	0630	Sun	524 973 6 89758 52343 79628 42432 56075 56281 973 6 00000	AM	(AB)
S06s	13565	12-11	0910	Thu	167 938 5 73990 62184 62819 04320 62718 938 5 00000	AM	(AB)
S06s	13565	26-11	0910	Thu	167 925 8 92325 36615 36491 49588 41061 83354 43309 43400 925 8 00000	AM	(AB)
S06S	14240	10-11	0610	Tue	438	USB	(HFD)
S06s	14240	17-11	0610	Tue	438 562 7 88620 58069 71673 74537 57440 10597 23521 562 7 00000	USB	(AB)
S06S	14280	4-11	1010	Wed	729	USB	(HFD)
S06s	14280	11-11	1010	Wed	729 548 6 30588 39344 37296 27478 44986 74328 548 6 00000	USB	(AB)
S06s	14280	25-11	1010	Wed	729 836 5 36628 32225 30867 49980 48995 835 5 00000	USB	(AB)
S06s	14675	2-11	0900	Mon	872 413 5 46062 68672 97478 39685 30485 413 5 00000	USB	(AB)
S06s	14675	2-11	0900	Mon	872 413 5 46062	USB	(HFD)
S06s	14675	23-11	0900	Mon	872 410 5 01405 15003 24357 60583 38229 410 5 00000	USB	(AB)
S06s	14675	30-11	0900	Mon	872 872 872 00000	USB	(AB)
S06s	16145	10-11	0600	Tue	438 267 5 33367	USB	(HFD)
S06s	16515	1-11	0640	Sun	524 0	USB	(HFD)
S06s	16515	8-11	0640	Sun	524 891 6 60583 54545 50128 99477 83574 48874 891 6 00000	USB	(AB)
S06s	16515	22-11	0640	Sun	524 973 6 89758 52343 79628 42432 56075 56281 973 6 00000	AM	(AB)
S07a	5277	11-11	2120	Wed	825 825 825 000	USB	(AB)
S07a	5877	11-11	2100	Wed	825 825 825 000	USB	(AB)
S11a	4828	3-11	0455	Tue	321/00	USB	(AB)
S11a	4828	3-11	0455	Tue	321/00	USB	(HFD)
S11a	4828	6-11	0455	Fri	321/00	USB	(AB)

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S11a	5815	4-11	1955	Wed	378/36 57525	USB	(HFD)
S11a	5815	6-11	1955	Fri	378/36 Vnimanie 57425 43402 62158 ... 85669 61418 89721 Vnimanie, rpt msg, konec	USB	(AB)
S11a	5815	11-11	1955	Wed	371/00	USB	(AB)
S11a	7504	3-11	0915	Tue	484/32 Vnimanie 59888 72381 15346 ... 90237 60484 65984 Vnimanie, rpt msg, konec	USB	(AB)
S11a	7504	3-11	0915	Tue	484/32 59888	USB	(HFD)
S11a	7504	6-11	0915	Fri	484/32 Vnimanie 59888 72381 15346 ... 90237 60484 65984 Vnimanie, rpt msg, konec	USB	(AB)
S11a	7504	10-11	0915	Tue	484/00	USB	(AB)
S11a	7504	20-11	0915	Fri	484/00	USB	(SW2)
S11a	7504	24-11	0915	Tue	484/00	USB	(AB)
S11a	7504	27-11	0915	Fri	484/00	USB	(AB)
S11a	9200	17-11	1625	Tue	835/33 Vnimanie 58780 42765 61269 ... 00645 56984 92969 Vnimanie, rpt msg, konec	USB	(AB)
S11a	9200	21-11	1625	Sat	835/33 Vnimanie 52780 42765 61269 ... 00645 56984 92969 Vnimanie, rpt msg, konec Repeat of 17-11 but the first group is different.	USB	(AB)
S11a	9200	28-11	1625	Sat	831/00	USB	(AB/MPJ)
S11a	9610	3-11	1020	Tue	426/00	USB	(AB)
S11a	9610	3-11	1020	Tue	426/00	USB	(HFD)
S11a	9610	6-11	1020	Fri	426/00	USB	(AB)
S11a	9610	10-11	1020	Tue	422/33 Vnimanie 57216 73739 74343 ... 09686 29236 31392 Vnimanie, rpt msg, konec	USB	(AB)
S11a	9610	17-11	1020	Tue	426/00	USB	(AB)
S11a	9610	20-11	1015	Fri	null msg	USB	(SW2)
S11a	9610	24-11	1020	Tue	426/00	USB	(AB)
S11a	12530	2-11	1015	Mon	475/00	USB	(AB)
S11a	12530	2-11	1015	Mon	475/00	USB	(HFD)
S11a	12530	5-11	1015	Thu	475/00	USB	(AB)
S11a	12530	9-11	1015	Mon	475/00	USB	(AB)
S11a	12530	12-11	1020	Thu	475/00	USB	(AB)
S11a	12530	16-11	1015	Mon	477/36 Vnimanie 44243 27634 25588 ... 75539 37569 60810 Vnimanie, rpt msg, konec	USB	(AB)
S11a	12530	19-11	1015	Thu	YL msg	USB	(SW2)
S11a	12530	30-11	0915	Mon	475/00	USB	(AB)
S11a	19099	4-11	0718	Wed	i.p. 382/00	USB	(AAI)
S11a	19099	4-11	0815	Wed	382/00	USB	(AAI)
S28	4625	1-11	1234	Sun	MDZhB 76567 BYeRILIT 10680287	USB	(Priyom)
S28	4625	1-11	1235	Sun	MDZhB 94221 CYeRIJ 37241358	USB	(Priyom)
S28	4625	1-11	1328	Sun	MDZhB 39942 VYeRIDON 34560709	USB	(Priyom)
S28	4625	2-11	0724	Mon	MDZhB 96350 PYeRYeSUShKA 03973321	USB	(Priyom)
S28	4625	2-11	0805	Mon	MDZhB 75987 PYeRYeNOSChIK 62602545	USB	(Priyom)
S28	4625	2-11	0856	Mon	MDZhB 63274 ChYeRYePICA 65854003 error in reading(sboj)	USB	(Priyom)
S28	4625	2-11	0905	Mon	MDZhB 87816 BYeRYeZOVAYa 74302532	USB	(Priyom)
S28	4625	3-11	1637	Tue	Buzzer channel marker on 4625//6998 kHz	USB	(AB)
S28	4625	5-11	1744	Thu	MDZhB 27940 BYeLOPOLYeC 51612120 female voice on background	USB	(Priyom)
S28	4625	5-11	1752	Thu	MDZhB 07940 BYeLOPOLYeC 51612120 repeat of previous signal with corrected key group	USB	(Priyom)
S28	4625	9-11	1322	Mon	MDZhB 90345 TYeKSTOLIT 53052245	USB	(Priyom)
S28	4625	12-11	0821	Thu	MDZhB 72264 BYeKMANIYa 50885652	USB	(Priyom)
S28	4625	12-11	1635	Thu	Inaudible. Failed attempt of sendigng control signal	USB	(Priyom)
S28	4625	12-11	1639	Thu	MDZhB 68068 BYeKAChiNYJ 59690839	USB	(Priyom)
S28	4625	12-11	1806	Thu	MDZhB 15354 DYeKANTAClYa 94267359	USB	(Priyom)
S28	4625	13-11	1026	Fri	Inaudible. Network tx sites switching	USB	(Priyom)
S28	4625	13-11	1118	Fri	MDZhB 18476 KYeIMICIN 25478129	USB	(Priyom)
S28	4625	16-11	0803	Mon	MDZhB 23868 NYeIShYeTNYJ 16803038	USB	(Priyom)
S28	4625	16-11	0804	Mon	MDZhB 35703 BYeJLIF 85336995	USB	(Priyom)
S28	4625	16-11	1420	Mon	MDZhB 10727 BYeZSYeRDIYe 41056119	USB	(Priyom)
S28	4625	19-11	0800	Thu	MDZhB 84515 BYeZZOBNYJ 67640716	USB	(Priyom)
S28	4625	19-11	0806	Thu	MDZhB 00181 GYeZYeL' 55153182 Female voice on background	USB	(Priyom)
S28	4625	19-11	1024	Thu	MDZhB 39589 CYeZARIUM 60514339	USB	(Priyom)
S28	4625	24-11	1303	Tue	MDZhB 41488 MYeDSYeSTRA 46775024	USB	(Priyom)
S28	4625	26-11	1239	Thu	MDZhB 79886 MYeDOVKA 21749870	USB	(Priyom)

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S28	4625	26-11	1338	Thu	MDZhB 98589 MYeDICYeL 23552003	USB	(Priyom)
S28	4625	28-11	2226	Sat	Channel marker (buzzer)	USB	(AB)
S28	4625	29-11	1227	Sun	MDZhB 14746 UDAR 72284685	USB	(Priyom)
S28	4625	30-11	1228	Mon	MDZhB 69968 BYeDANTIN 92447025	USB	(Priyom)
S28	6899	22-11	2050	Sun	Buzzer channel marker on 4625//6998 kHz	USB	(GHn)
S28	6998	2-11	1710	Mon	Buzzer channel marker on 6898//4625 kHz	USB	(GHn)
S28	6998	3-11	1637	Tue	Buzzer channel marker on 4625//6998 kHz	USB	(AB)
S28	6998	5-11	1338	Thu	Buzzer channel marker on 4625//6998 kHz	USB	(AB)
S28	6998	12-11	0741	Thu	Buzzer channel marker	USB	(AB)
S28	6998	21-11	1409	Sat	Buzzer channel marker on 6998//4625 kHz	USB	(VH)
S28	6998	25-11	1414	Wed	Buzzer channel marker	USB	(AB)
S30	3756	2-11	0804	Mon	8S1Shch 80920 SK?? 55679472	USB	(Priyom)
S30	3756	2-11	1507	Mon	12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T	USB	(Priyom)
S30	3756	2-11	1826	Mon	5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM	USB	(Priyom)
S30	3756	3-11	0336	Tue	FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B	USB	(Priyom)
S30	3756	3-11	1636	Tue	Pip channel marker	USB	(AB)
S30	3756	3-11	1710	Tue	OSOG BO6C F56Shch 9GSA ZhBZI 4RVZ 3VS' DKJ1 ZhD9V 42BV	USB	(Priyom)
S30	3756	3-11	1919	Tue	81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL	USB	(Priyom)
S30	3756	4-11	1400	Wed	27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS	USB	(Priyom)
S30	3756	5-11	1735	Thu	8S1Shch 21199 BAGRYaNNIK 60247595	USB	(Priyom)
S30	3756	10-11	1820	Tue	TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM FY5E F61N	USB	(Priyom)
S30	3756	10-11	1832	Tue	PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL L7O5 V'Z'	USB	(Priyom)
S30	3756	11-11	1529	Wed	53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS Z7PM S7ZhG	USB	(Priyom)
S30	3756	12-11	1629	Thu	8S1Shch 49509 PANTORIFMA 87311996	USB	(Priyom)
S30	3756	12-11	1733	Thu	8S1Shch 51753 NADSADA 31142711	USB	(Priyom)
S30	3756	12-11	1953	Thu	3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS error in reading	USB	(Priyom)
S30	3756	13-11	1647	Fri	'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV DEAY JH'J	USB	(Priyom)
S30	3756	13-11	1843	Fri	12CI 79AJ ShchT3O CIHS Z7PM S7ZhG Z'1B CI9V ZhSK4 HZ5T	USB	(Priyom)
S30	3756	14-11	0531	Sat	5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC ShchGJP TZLM	USB	(Priyom)
S30	3756	14-11	1617	Sat	FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B	USB	(Priyom)
S30	3756	14-11	1904	Sat	OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV	USB	(Priyom)
S30	3756	15-11	1748	Sun	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ	USB	(Priyom)
S30	3756	15-11	1858	Sun	27Shch' N1DU 53OB 78MV DEAY JH'J 12CI 79AJ ShchT3O CIHS	USB	(Priyom)
S30	3756	16-11	1417	Mon	8S1Shch 87293 PARIZhANIN 30877212	USB	(Priyom)
S30	3756	16-11	1802	Mon	7VNShch Zh7NZh YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA	USB	(Priyom)
S30	3756	17-11	1703	Tue	ZhSK4 HZ5T 5FSShch 8MUO TUZR 5J7Shch DMC3 49FT C2ZA INNC	USB	(Priyom)
S30	3756	17-11	1950	Tue	SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV	USB	(Priyom)
S30	3756	18-11	1839	Wed	ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5 VTH3	USB	(Priyom)
S30	3756	19-11	1653	Thu	ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF	USB	(Priyom)
S30	3756	19-11	1857	Thu	61HZh ZBIL L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM	USB	(Priyom)
S30	3756	23-11	1549	Mon	8S1Shch 94418 HLUP 13213787	USB	(Priyom)
S30	3756	26-11	1824	Thu	L7O5 V'Z' NLCE LI27 V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ	USB	(Priyom)
S30	3756	28-11	2226	Sat	Channel marker (pip)	USB	(AB)
S30	3756	30-11	1706	Mon	VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS'	USB	(Priyom)
S30	3756	30-11	1839	Mon	DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1	USB	(Priyom)
S30	5448	1-11	1305	Sun	3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS	USB	(Priyom)
S30	5448	1-11	1327	Sun	8S1Shch 98326 GYeNDON 64410285	USB	(Priyom)
S30	5448	1-11	1344	Sun	8S1Shch 80621 VYeRNIN 04353184	USB	(Priyom)
S30	5448	2-11	0530	Mon	'O6P Y8VM 6I2Zh 8CShchJ 7Shch' N1DU 53OB 78MV DEAY JH'J	USB	(Priyom)
S30	5448	2-11	0724	Mon	8S1Shch 27579 BAGRYeNNYJ 85460854	USB	(Priyom)
S30	5448	12-11	1155	Thu	8S1Shch 53740 RYeDOSLYeD 78570052	USB	(Priyom)
S30	5448	12-11	1215	Thu	8S1Shch 73740 RYeDOSLYeD 78570052 repeat of 1155z	USB	(Priyom)
S30	5448	12-11	1333	Thu	YMA5 VTH3 AGDT 'U1B OSOG BO6C F56Shch 9GSA ZhBZI 4RVZ	USB	(Priyom)
S30	5448	15-11	0544	Sun	81BR M7KS PMV5 L'GJ KZI' TShchShchS VKY1 HCLF 61HZh ZBIL	USB	(Priyom)
S30	5448	19-11	0802	Thu	8S1Shch 41117 DISPROZIJ 34368816	USB	(Priyom)
S30	5448	24-11	0552	Tue	3VS' DKJ1 ZhD9V 42BV 81BR M7KS PMV5 L'GJ KZI' TShchShchS	USB	(Priyom)
S30	5448	26-11	0541	Thu	OSOG BO6C F56Shch 9GSA ZhBZU 4RVZ 3VS' DKJ1 ZhD9V 42BV	USB	(Priyom)
S30	5448	26-11	1235	Thu	8S1Shch 99921 KRANPAS 86138119	USB	(Priyom)
S30	5448	26-11	1326	Thu	8S1Shch 73376 NYePRUDA 21489561	USB	(Priyom)
S30	5448	29-11	0537	Sun	V2MZ SB7Z 'O6P Y8VM 6I2Zh 8CShchJ 27Shch' N1DU 53OB 78MV	USB	(Priyom)
S30	5448	29-11	1426	Sun	8S1Shch 80415 BRIFORUK 40098719	USB	(Priyom)

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S30	5448	30-11	0533	Mon	INNC ShchGJP TZLM FY5E F61N 37CN MUDR 7VNShch Zh7NZh YMA5	USB	(Priyom)
S32	3828	2-11	1502	Mon	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07. S30 in the background	USB	(Priyom)
S32	3828	2-11	1602	Mon	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	3-11	1541	Tue	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	3-11	1636	Tue	Squeaky Wheel channel marker	USB	(AB)
S32	3828	3-11	1932	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	4-11	1754	Wed	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	5-11	1741	Thu	AL'FA-45 08091 VAGONYeTChIK 93334171. S30 and CW control signal in the background	USB	(Priyom)
S32	3828	5-11	1854	Thu	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34. S30 in the background	USB	(Priyom)
S32	3828	9-11	1823	Mon	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	10-11	2102	Tue	SLIVA-94 RUZh'E-26 BIZON-64 KURGAN-40 STOROZh-62 ROSA-64	USB	(Priyom)
S32	3828	11-11	1413	Wed	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	11-11	1608	Wed	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 RUZh'E-26	USB	(Priyom)
S32	3828	11-11	1635	Wed	AL'FA-45 79103 CIBULYa 93342071 with S30 in the background	USB	(Priyom)
S32	3828	12-11	1741	Thu	AL'FA-45 84149 MYeGIBAL 57757151	USB	(Priyom)
S32	3828	12-11	1837	Thu	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	13-11	1750	Fri	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 with S30 in the background	USB	(Priyom)
S32	3828	14-11	1431	Sat	STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39	USB	(Priyom)
S32	3828	14-11	1825	Sat	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	14-11	2105	Sat	ROSA-64 YaHTA-94 KURGAN-40 NYeVKA-26 UTYoS-94	USB	(Priyom)
S32	3828	15-11	1601	Sun	STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	16-11	1423	Mon	AL'FA-45 86009 LYeSISTYJ 86787656 first read interrupted by the marker	USB	(Priyom)
S32	3828	16-11	1455	Mon	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	16-11	1646	Mon	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	17-11	2001	Tue	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	23-11	0328	Mon	AL'FA-45 64748 VYROZhDYeNIYe 68741464	USB	(Priyom)
S32	3828	23-11	1432	Mon	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27 KOVBOJ-39	USB	(Priyom)
S32	3828	23-11	1552	Mon	AL'FA-45 88148 PODPOL'NYJ 75003464 with S30 in the background	USB	(Priyom)
S32	3828	23-11	1912	Mon	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34 KOVBOJ-39	USB	(Priyom)
S32	3828	24-11	1858	Tue	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	3828	25-11	1935	Wed	STOROZh-62 NYeVKA-26 KARTA-11 UTYoS-94 KOVBOJ-39 ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	26-11	1531	Thu	ROSA-64 DZhIGIT-46 OTPOR-89 YaHTA-94 FONTAN-34	USB	(Priyom)
S32	3828	26-11	1728	Thu	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	27-11	1812	Fri	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	27-11	1812	Fri	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	28-11	1432	Sat	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	28-11	1432	Sat	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	3828	28-11	2227	Sat	Channel marker (2-tone squeaky wheel)	USB	(AB)
S32	3828	29-11	1434	Sun	KURGAN-40 DUBLYoR-68 STUPA-32 SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	3828	29-11	1827	Sun	RUZh'E-26 BIZON-64 PYeSOChNYJ-21 ShULER-60 PENZA-07	USB	(Priyom)
S32	5473	1-11	1318	Sun	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	5473	1-11	1331	Sun	AL'FA-45 63661 ARYeSIT 79594553	USB	(Priyom)
S32	5473	1-11	1348	Sun	AL'FA-45 37695 SOSLOVIYe 49804588	USB	(Priyom)
S32	5473	23-11	1324	Mon	KOVBOJ-39 Dlya test for only one unit!	USB	(Priyom)
S32	5473	24-11	1344	Tue	SLIVA-94 LANDYSh-74 STAZhER-29 ALEUT-09 ZASLONKA-27	USB	(Priyom)
S32	5473	25-11	1317	Wed	SLIVA-94 LANDYSh-74 ALEUT-09 ZASLONKA-27 KURGAN-40 DUBLYoR-68 STUPA-32	USB	(Priyom)
S32	5473	26-11	1238	Thu	AL'FA-45 00475 STYeKRYaRUS 95986875	USB	(Priyom)

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S32	5473	26-11	1330	Thu	AL'FA-45 70795 BRIDYeLKA 40192809	USB	(Priyom)
S32	7009	30-11	1232	Mon	AL'FA-45 68255 ATARAKSIYa 85625135	USB	(Priyom)
S3850	3850	3-11	1633	Tue	Channel marker (long dash)	USB	(AB)
S3850	3850	5-11	1743	Thu	Pilot-28, ya Baron-78 25629 PULEMETCHIK 25810518	USB	(DJPr)
S3850	3850	6-11	0401	Fri	Plafon-78 communications test	USB	(DJPr)
S3850	3850	28-11	0401	Sat	Baron-78 Network test	USB	(Priyom)
S3850	3850	28-11	0402	Sat	Network test: Tros-28, ya Baron-78	USB	(Priyom)
S3850	3850	28-11	0404	Sat	BARON-78 Network test, count + call for Vektor-70	USB	(Priyom)
S3850	3850	30-11	0405	Mon	BARON-78 Time signal and network tests	USB	(Priyom)
S3850	3850	30-11	0413	Mon	BARON-78 LOG-09	USB	(Priyom)
S3850	3850	30-11	0416	Mon	BARON-78 KOMFORT-35 Network test and count	USB	(Priyom)
S3850	4940	28-11	1350	Sat	BARON-78 99734 VYVARKA 87284750 sent for TROS-28, confirmation request at the end	USB	(Priyom)
S3850	4940	28-11	1406	Sat	BARON-78 Network test	USB	(Priyom)
S3850	4940	30-11	1420	Mon	BARON-78 TROS-28	USB	(Priyom)
S4525	4525	3-11	1632	Tue	Channel marker (dash)	USB	(AB)
S4525	4525	20-11	1807	Fri	Channel marker (dash)	USB	(AB)
S4525	4525	24-11	2004	Tue	Channel marker (dash)	USB	(AB)
S4525	4525	28-11	2225	Sat	Channel marker (dash)	USB	(AB)
S5292	5292	2-11	0722	Mon	SYeKRYeT-39 47095 BYeLOGRAD 38632635	USB	(Priyom)
S5292	5292	2-11	1439	Mon	RYeGATA-75 80932 PUZOVKA 37427392 count before the signal	USB	(Priyom)
S5292	5292	3-11	0825	Tue	TRYeL'-31 37402 BOLGRAKA 68425963 count before the signal, cw on background	USB	(Priyom)
S5292	5292	3-11	0827	Tue	VIZIR-21 65429 PRIKURKA 38425983 cw on background	USB	(Priyom)
S5292	5292	3-11	1635	Tue	Channel marker D	USB	(AB)
S5292	5292	5-11	1149	Thu	RYeGATA-75 SYeKRYeT-39 37649 CIKADA 35219675 count before the signal	USB	(Priyom)
S5292	5292	10-11	1306	Tue	VIZIR-21 BARZhA-08 37502 PUShNOJ 17368480	USB	(Priyom)
S5292	5292	12-11	0800	Thu	SYeKRYeT-39 REGATA-75 00246 PYeMAChA 27373578 count before the signal, errors in callsign reading	USB	(Priyom)
S5292	5292	18-11	1302	Wed	SYeKRYeT-39 REGATA-75 32221 ANKYeLOT 42678580	USB	(Priyom)
S5292	5292	20-11	1808	Fri	Channel marker D	USB	(AB)
S5292	5292	27-11	0707	Fri	Test count 1 2 3 4 5 6 7 8 9 0	USB	(Priyom)
S5292	5292	27-11	0817	Fri	Test count 1 2 3 4 5 6 7 8 9 0	USB	(Priyom)
S5292	5292	28-11	2224	Sat	Channel marker D	USB	(AB)
UM10	3285	3-11	1519	Tue	10-mins net: 4KUE	CW	(JPL-Sib)
UM10	3285	22-11	1853	Sun	10-mins net: 4KU3 //3958 kHz	CW	(JPL-Sib)
UM10	3772	3-11	1516	Tue	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	10-11	2211	Tue	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	15-11	2018	Sun	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	21-11	1519	Sat	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	22-11	1547	Sun	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	22-11	2212	Sun	10-mins net: A4JC	CW	(JPL-Sib)
UM10	3772	28-11	1546	Sat	10-minutes net: A4JC	CW	(JPL-Sib)
UM10	3772	30-11	1341	Mon	10-minutes net: A4JC	CW	(JPL-Sib)
UM10	3938	22-11	1853	Sun	10-mins net: 4KU3 //3285 kHz	CW	(JPL-Sib)
V02a	8135	10-11	2259	Tue	YL/SS 4FGs then stops. Then switched to M08a	LSB	(DSch)
V07	14374	15-11	0140	Sun	883 883 883 1 ... 58107 41230 000 000	USB	(Dan)
V07	15874	1-11	0120	Sun	883 0	USB	(HFD)
V07	15874	1-11	0120	Sun	883 883 883 000	USB	(Dan)
V07	15874	8-11	0120	Sun	883 883 883 000	USB	(Dan)
V07	15874	15-11	0120	Sun	883 883 883 1 ... 58107 41230 000 000	USB	(Dan)
V07	18074	1-11	0100	Sun	883 0	USB	(HFD)
V07	18074	1-11	0100	Sun	883 883 883 000	USB	(Dan)
V07	18074	8-11	0100	Sun	883 883 883 000	USB	(Dan)
V07	18074	15-11	0100	Sun	883 883 883 1 ... 58107 41230 000 000	USB	(Dan)
V24	4900	26-11	1356	Thu	Probably V24. Song: Into The New World for over 36 hours	AM	(Token)
V24	6215	26-11	1356	Thu	Probably V24. Song: Into The New World for over 36 hours	AM	(Token)
V26	7553	5-11	0915	Thu	Chinese female operator	USB	(JPL-HK)
V26	8073	2-11	1120	Mon	XSV85 voice callup, male operator	USB	(JPL-HK)
V26	8073	3-11	0020	Tue	Female operator. Repeats the Q26 and M95 message	USB	(JPL-HK)
V26	8073	5-11	0001	Thu	XSV85 voice callup. Male operator	USB	(JPL-HK)

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V26	8073	11-11	0001	Wed	XSV85 callup. Male operator	USB	(JPL-HK)
V26	8073	11-11	0021	Wed	Message. Male operator	USB	(JPL-HK)
V26	8073	19-11	1130	Thu	XSV85 voice callup, male operator. At 1132z callup by female operator. At 1136z and 1140z again callups, now a male operator	USB	(JPL-HK)
V26	8073	22-11	0001	Sun	Callup, male operator	USB	(JPL-HK)
V26	8073	23-11	1129	Mon	Callup. Male operator	USB	(JPL-HK)
V26	8073	25-11	0001	Wed	Callup. Male operator	USB	(JPL-HK)
V26	8073	25-11	1129	Wed	Callup. Male operator	USB	(JPL-HK)
V26	8073	26-11	0001	Thu	Callup. Male operator	USB	(JPL-HK)
V26	8073	26-11	0025	Thu	Message. Female operator	USB	(JPL-HK)
V28	3277	22-11	1330	Sun	Unid Korean numbers station	AM	(Token)
V28	3277	23-11	1330	Mon	Unid Korean numbers station	AM	(Token)
V28	3277	24-11	1330	Tue	Unid Korean numbers station	AM	(Token)
V28	3277	25-11	1330	Wed	Unid Korean numbers station	AM	(Token)
V28	3277	26-11	1330	Thu	Unid Korean numbers station	AM	(Token)
V28	3277	27-11	1330	Fri	Unid Korean numbers station	AM	(Token)
V28	3277	28-11	1330	Sat	Unid Korean numbers station	AM	(Token)
X06	4542	27-11	1958	Fri	Mazielka. Sequence: 361245	MFSK	(Danix)
X06	6986	26-11	1844	Thu	Mazielka. Sequence: 361245	MFSK	(Danix)
X06	6986	26-11	1954	Thu	Mazielka. Sequence: 361245	MFSK	(Danix)
X06	7705	26-11	1838	Thu	Mazielka. Sequence: 564213	MFSK	(AB)
X06	9041	18-11	1512	Wed	Mazielka. Sequence: 645321	MFSK	(Danix)
X06	9106	12-11	1650	Thu	Mazielka. Sequence: 564213	MFSK	(Danix)
X06	9123	26-11	1625	Thu	Mazielka. Sequence: 564213	MFSK	(Sch)
X06	9163	8-11	1741	Sun	Mazielka. Sequence: 145632	MFSK	(Danix)
X06	9475	19-11	0830	Thu	Mazielka. Sequence: 23635	MFSK	(F5JBR)
X06	9475	19-11	0946	Thu	Mazielka. Sequence: 246135	MFSK	(Danix)
X06	10214	26-11	1515	Thu	Mazielka. Sequence: 263145	MFSK	(Sch)
X06	10270	3-11	1654	Tue	Mazielka. Sequence: 532614	MFSK	(JcK)
X06	12152	2-11	0906	Mon	Mazielka. Sequence: 641523	MFSK	(PUK)
X06	12157	3-11	0853	Tue	Mazielka. Sequence: 165423	MFSK	(PUK)
X06	12157	17-11	0850	Tue	Mazielka. Sequence: 164523	MFSK	(Danix)
X06	12177	9-11	1252	Mon	Mazielka. Sequence: 364152	MFSK	(PUK)
X06	12215	6-11	1011	Fri	Mazielka. Sequence: 361245	MFSK	(PUK)
X06	12224	9-11	0941	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	13481	1-11	1330	Sun	Mazielka. Sequence: 452163	MFSK	(PUK)
X06	13517	9-11	0926	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	14377	16-11	0845	Mon	Mazielka. Sequence: 432516	MFSK	(AAI)
X06	14547	6-11	1002	Fri	Mazielka. Sequence: 645321	MFSK	(PUK)
X06	14547	18-11	1505	Wed	Mazielka. Sequence: 645321	MFSK	(Danix)
X06	14570	6-11	0923	Fri	Mazielka. Sequence: 324615	MFSK	(PUK)
X06	14595	1-11	1318	Sun	Mazielka. Sequence: 452163	MFSK	(PUK)
X06	14655	11-11	0755	Wed	Mazielka. Sequence: 164253	MFSK	(Danix)
X06	14720	19-11	1233	Thu	Mazielka. Sequence: 241563	MFSK	(AAI)
X06	14812	12-11	1521	Thu	Mazielka. Sequence: 263145	MFSK	(Danix)
X06	14812	12-11	1522	Thu	Mazielka. Sequence: 263145	MFSK	(Danix)
X06	14812	12-11	1530	Thu	Mazielka. Sequence: 263145	MFSK	(Danix)
X06	14812	12-11	1531	Thu	Mazielka. Sequence: 263145	MFSK	(Danix)
X06	14825	2-11	0804	Mon	Mazielka. Sequence: 641523	MFSK	(AAI/PUK)
X06	14828	6-11	1309	Fri	Mazielka. Sequence 1--6--	MFSK	(Sch)
X06	14847	29-11	0807	Sun	Maziela. Sequence: 351264	MFSK	(Danix)
X06	14860	23-11	1024	Mon	Mazielka. Sequence: 542136	MFSK	(F5JBR)
X06	14947	29-11	0813	Sun	Maziela. Sequence: 351264	MFSK	(Danix)
X06	15687	3-11	0926	Tue	Mazielka. Sequence: 154263	MFSK	(PUK)
X06	15878	11-11	1143	Wed	Mazielka. Sequence: 621543	MFSK	(Danix)
X06	16117	9-11	0919	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	16117	9-11	1007	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	16117	23-11	0930	Mon	Mazielka. Sequence: 463125	MFSK	(AAI)
X06	16318	23-11	0930	Mon	Mazielka. Sequence: 463125	MFSK	(AAI)
X06	16319	6-11	0631	Fri	Mazielka. Sequence: 546213	MFSK	(F5JBR)
X06	17454	3-11	1137	Tue	Mazielka. Sequence: 325614	MFSK	(PUK)
X06	17465	19-11	1104	Thu	Mazielka. Sequence: 246135	MFSK	(Danix)

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X06	17468	5-11	0701	Thu	Mazielka. Sequence: 436512	MFSK	(PUK)
X06	17511	2-11	0809	Mon	Mazielka. Sequence: 641523	MFSK	(PUK)
X06	18197	6-11	0938	Fri	Mazielka. Sequence: 645321	MFSK	(PUK)
X06	18206	3-11	0909	Tue	Mazielka. Sequence: 246531	MFSK	(PUK)
X06	18206	17-11	0930	Tue	Mazielka. Sequence: 246531	MFSK	(Danix)
X06	18245	6-11	0941	Fri	Mazielka. Sequence: 132456	MFSK	(PUK)
X06	18660	11-11	1157	Wed	Mazielka. Sequence: 621543	MFSK	(Danix)
X06	18750	2-11	0827	Mon	Mazielka. Sequence: 641523	MFSK	(PUK)
X06	19235	9-11	1012	Mon	Mazielka. Sequence: 463125	MFSK	(PUK)
X06	19405	5-11	1226	Thu	Mazielka. Sequence: 352416	MFSK	(PUK)
X06	19511	5-11	0709	Thu	Mazielka. Sequence: 314265	MFSK	(PUK)
X06c	14827	27-11	1237	Fri	Mazielka. Sequence: 123456	MFSK	(AAI)
XPA	6823	3-11	1940	Tue	158 158 158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB)
XPA	6823	3-11	1940	Tue	msg	MFSK-20/10Bd	(HFD)
XPA	6823	5-11	1940	Thu	158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB/MPJ)
XPA	6823	17-11	1940	Tue	158 1 08757 00239 09898 ... 83345 55250 45237	MFSK-20/10Bd	(AB)
XPA	6823	24-11	1940	Tue	158 158 158 000 06040 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	6823	26-11	1940	Thu	158 158 158 000 01044 00001 00000 10140	MFSK-20/10Bd	(AB/MPJ)
XPA	7523	3-11	1920	Tue	158 158 158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB)
XPA	7523	3-11	1920	Tue	msg	MFSK-20/10Bd	(HFD)
XPA	7523	5-11	1920	Thu	158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB/MPJ)
XPA	7523	17-11	1920	Tue	158 1 08757 00239 09898 ... 83345 55250 45237	MFSK-20/10Bd	(AB)
XPA	7523	24-11	1920	Tue	158 158 158 000 06040 00001 00000 10140	MFSK-20/10Bd	(AB/MPJ)
XPA	7523	26-11	1920	Thu	158 158 158 000 01044 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	8123	3-11	1900	Tue	158 158 158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB)
XPA	8123	3-11	1900	Tue	msg	MFSK-20/10Bd	(HFD)
XPA	8123	5-11	1900	Thu	158 1 01114 00217 35682 ... 13257 67649 52211	MFSK-20/10Bd	(AB)
XPA	8123	17-11	1900	Tue	158 1 08757 00239 09898 ... 83345 55250 45237	MFSK-20/10Bd	(AB)
XPA	8123	24-11	1900	Tue	158 158 158 000 06040 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	8123	26-11	1900	Thu	158 158 158 000 01044 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	11409	4-11	0700	Wed	msg	MFSK-20/10Bd	(HFD)
XPA	11409	4-11	0700	Wed	456 1 07982 00225 10298 ... 29931 34305 62017	MFSK-20/10Bd	(AB)
XPA	11409	11-11	0700	Wed	456 456 456 000 07413 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	11409	18-11	0700	Wed	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	11409	21-11	0700	Sat	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	11409	25-11	0700	Wed	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA	11409	28-11	0700	Sat	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA	13509	4-11	0720	Wed	msg	MFSK-20/10Bd	(HFD)
XPA	13509	4-11	0720	Wed	456 1 07982 00225 10298 ... 29931 34305 62017	MFSK-20/10Bd	(AB)
XPA	13509	11-11	0700	Wed	456 456 456 000 07413 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	13509	18-11	0720	Wed	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	13509	21-11	0720	Sat	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	13509	25-11	0720	Wed	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA	13509	28-11	0720	Sat	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA	14609	4-11	0740	Wed	msg	MFSK-20/10Bd	(HFD)
XPA	14609	4-11	0740	Wed	456 1 07982 00225 10298 ... 29931 34305 62017	MFSK-20/10Bd	(AB)
XPA	14609	11-11	0700	Wed	456 456 456 000 07413 00001 00000 10140	MFSK-20/10Bd	(AB)
XPA	14609	18-11	0740	Wed	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	14609	21-11	0740	Sat	456 1 08118 00173 32342 ... 95180 73661 32030	MFSK-20/10Bd	(AB)
XPA	14609	25-11	0740	Wed	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA	14609	28-11	0740	Sat	456 1 09363 00183 75177 ... 39208 57977 41232	MFSK-20/10Bd	(AB)
XPA2	14282	6-11	1440	Fri	08301 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14282	20-11	1440	Fri	03304 00001 00000 10140	MFSK-16/20Bd	(AB/SW2)
XPA2	14282	27-11	1440	Fri	01807 00097 45375 ... 51423 64604 60274	MFSK-16/20Bd	(AB/MPJ)
XPA2	14282	28-11	1440	Sat	08010 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	14373	2-11	0840	Mon	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	14373	4-11	0840	Wed	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	14373	9-11	0840	Mon	04585 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14373	11-11	0840	Wed	03434 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14373	11-11	0840	Wed	msg	MFSK-16/20Bd	(HFD)
XPA2	14373	16-11	0840	Mon	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)
XPA2	14373	18-11	0840	Wed	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
XPA2	14373	23-11	0840	Mon	07170 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14373	25-11	0840	Wed	03779 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14373	30-11	0840	Mon	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	14438	1-11	1340	Sun	04574 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	3-11	1340	Tue	08317 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	3-11	1340	Tue	msg	MFSK-16/20Bd	(HFD)
XPA2	14438	10-11	1340	Tue	04812 00133 36679 ... 68768 67403 06135	MFSK-16/20Bd	(AB)
XPA2	14438	15-11	1340	Sun	09970 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	17-11	1340	Tue	03228 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	22-11	1340	Sun	01834 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	24-11	1340	Tue	06953 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14438	29-11	1340	Sun	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB)
XPA2	14517	17-11	0700	Tue	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	14517	20-11	0700	Fri	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	14517	24-11	0700	Tue	09788 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14517	27-11	0700	Fri	06555 000001 00000 10040	MFSK-16/20Bd	(AB)
XPA2	14828	7-11	1440	Sat	msg	MFSK-16/20Bd	(HFD)
XPA2	14828	7-11	1440	Sat	03928 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14828	14-11	1440	Sat	05170 00071 41197 80479 07471 ... 39783 55503 88877 57848 44605	MFSK-16/20	(MPJ)
XPA2	14828	21-11	1440	Sat	07399 00001 00000 10140	MFSK-16/20Bd	(MPJ/VH)
XPA2	14973	2-11	0820	Mon	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	14973	4-11	0820	Wed	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	14973	9-11	0820	Mon	04585 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14973	11-11	0820	Wed	msg	MFSK-16/20Bd	(HFD)
XPA2	14973	11-11	0820	Wed	03434 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14973	16-11	0820	Mon	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)
XPA2	14973	18-11	0820	Wed	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)
XPA2	14973	23-11	0820	Mon	07170 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14973	25-11	0820	Wed	03779 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	14973	30-11	0820	Mon	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	16017	10-11	0720	Tue	Unreadable	MFSK-16/20Bd	(AB)
XPA2	16017	17-11	0720	Tue	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	16017	20-11	0720	Fri	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	16017	24-11	0720	Tue	09788 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16017	27-11	0720	Fri	06555 000001 00000 10040	MFSK-16/20Bd	(AB)
XPA2	16073	2-11	0800	Mon	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	16073	4-11	0800	Wed	02089 00067 93897 ... 70335 55847 27137	MFSK-16/20Bd	(AB)
XPA2	16073	9-11	0800	Mon	04585 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16073	11-11	0800	Wed	03434 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16073	11-11	0800	Wed	msg	MFSK-16/20Bd	(HFD)
XPA2	16073	16-11	0800	Mon	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)
XPA2	16073	18-11	0800	Wed	09153 00155 10556 ... 32391 96817 11724	MFSK-16/20Bd	(AB)
XPA2	16073	23-11	0800	Mon	07170 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16073	25-11	0800	Wed	03779 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16073	30-11	0800	Mon	04262 00091 46699 ... 03900 23865 04251	MFSK-16/20Bd	(AB)
XPA2	16114	6-11	1420	Fri	08301 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16114	7-11	1420	Sat	msg	MFSK-16/20Bd	(HFD)
XPA2	16114	14-11	1420	Sat	05170 00071 41197 80479 07471 ... 39783 55503 88877 57848 44605	MFSK-16/20	(MPJ)
XPA2	16114	20-11	1420	Fri	03304 00001 00000 10140	MFSK-16/20Bd	(AB/SW2)
XPA2	16114	21-11	1420	Sat	07399 00001 00000 10140	MFSK-16/20Bd	(MPJ/VH)
XPA2	16114	27-11	1420	Fri	01807 00097 45375 ... 51423 64604 60274	MFSK-16/20Bd	(AB)
XPA2	16114	28-11	1420	Sat	08010 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	16238	1-11	1320	Sun	04574 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16238	3-11	1320	Tue	msg	MFSK-16/20Bd	(HFD)
XPA2	16238	3-11	1320	Tue	08317 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16238	10-11	1320	Tue	04812 00133 36679 ... 68768 67403 06135	MFSK-16/20Bd	(AB)
XPA2	16238	17-11	1320	Tue	03228 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16238	22-11	1320	Sun	01834 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16238	24-11	1320	Tue	06953 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	16238	29-11	1320	Sun	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB)

Code	Freq	Date	UTC	Day	Details	Mode	Ctrb
XPA2	17417	17-11	0740	Tue	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	17417	20-11	0740	Fri	00852 00109 38771 ... 94943 37948 46630	MFSK-16/20Bd	(AB)
XPA2	17417	24-11	0740	Tue	09788 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	17417	27-11	0740	Fri	06555 000001 00000 10040	MFSK-16/20Bd	(AB)
XPA2	17426	6-11	1400	Fri	08301 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	17426	20-11	1400	Fri	03304 00001 00000 10140	MFSK-16/20Bd	(AB/SW2)
XPA2	17426	27-11	1400	Fri	01807 00097 45375 ... 51423 64604 60274	MFSK-16/20Bd	(AB)
XPA2	17462	7-11	1400	Sat	msg	MFSK-16/20Bd	(HFD)
XPA2	17462	14-11	1401	Sat	05170 00071 41197	MFSK-16/20Bd	(PPA)
XPA2	17462	28-11	1400	Sat	08010 00001 00000 10140	MFSK-16/20Bd	(AB/MPJ)
XPA2	18238	1-11	1300	Sun	04574 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	18238	3-11	1300	Tue	08317 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	18238	3-11	1300	Tue	msg	MFSK-16/20Bd	(HFD)
XPA2	18238	10-11	1300	Tue	04812 00133 36679 ... 68768 67403 06135	MFSK-16/20Bd	(AB)
XPA2	18238	17-11	1300	Tue	03228 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	18238	22-11	1300	Sun	01834 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	18238	24-11	1300	Tue	06953 00001 00000 10140	MFSK-16/20Bd	(AB)
XPA2	18238	29-11	1300	Sun	05594 00075 38087 ... 70284 22113 37211	MFSK-16/20Bd	(AB/MPJ)
XSL	6250	2-11	2242	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)
XSL	6417	2-11	2230	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)
XSL	6445	2-11	2232	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)
XSL	8313	2-11	2242	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)
XSL	8588	2-11	2240	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)
XSL	8703.5	2-11	2235	Mon	Japanese navy (slot machine)	QPSK 1500Bd	(AB)

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SW2	Sam Wright, UK
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Tom	Tom, Lincs, UK
VH	Vince Havrilko

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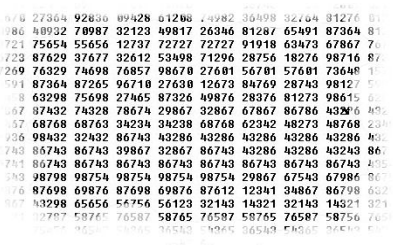
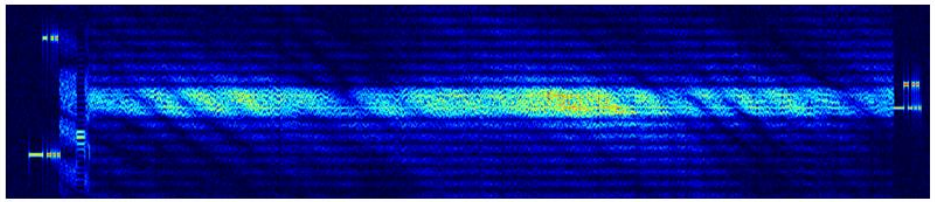
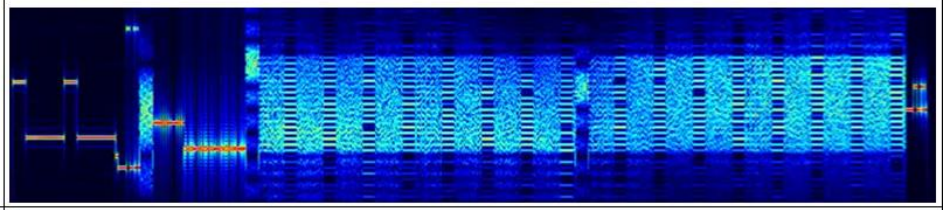
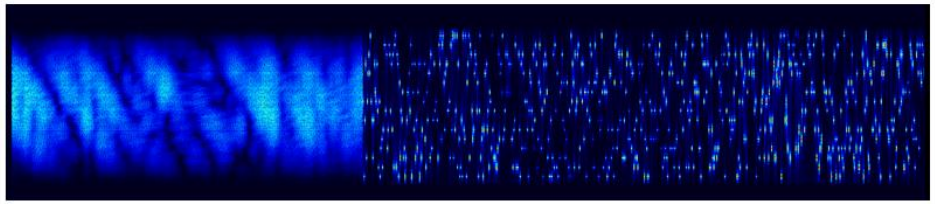
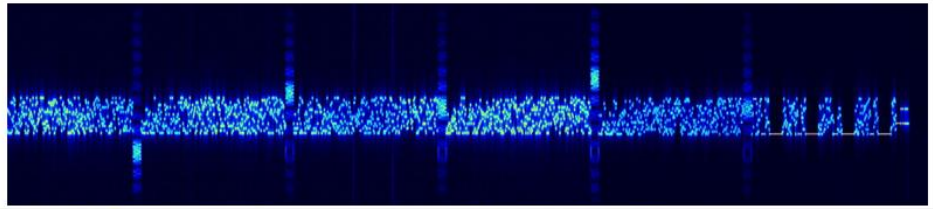
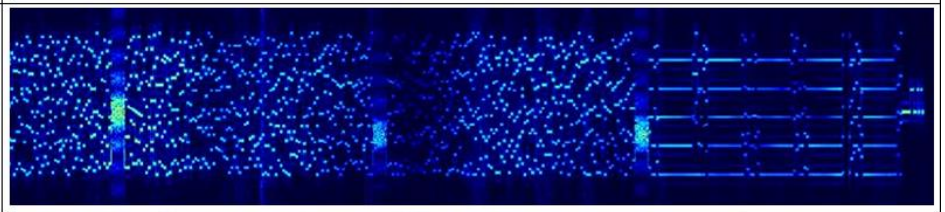
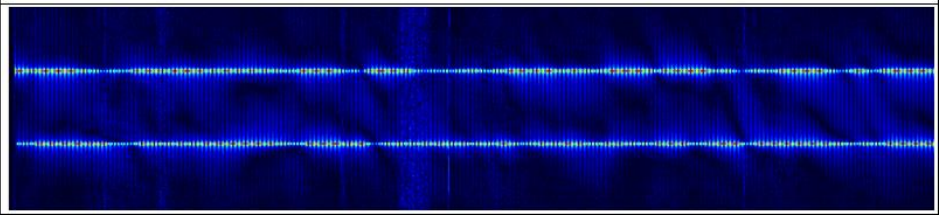


N&O

UDXF

Appendix 1

name	related to	preamble		datamode description
стра́нный-A	RUS INTEL	10 state or 9 state	420ms 1000Hz tone 128ms 2250Hz tone >128ms 1000Hz tone 64ms 2250Hz tone >64ms 1000Hz tone >64ms 2250Hz tone >64ms 1000Hz tone 520ms 500Bd BPSK > 250ms 1150Hz tone > 130ms 500Bd BPSK or 250ms 1200Hz tone > 100ms 1635Hz tone > 100ms 1200Hz tone 50ms 1635Hz tone > 50ms 1200Hz tone > 50ms 1635Hz tone > 50ms 1200Hz tone 250ms 1600Hz tone > 250ms 250Bd BPSK	2x 62.5Bd QPSK channels
стра́нный-B	RUS INTEL	16 state	500ms 1800Hz tone > 1500ms 1200Hz tone > 500ms 1800Hz tone > 1500ms 1200Hz tone 100ms 1000Hz tone 320ms 875Hz tone 128ms 2375Hz tone > 128ms 875Hz tone 64ms 2375Hz tone > 64ms 875Hz tone > 64ms 2375Hz tone > 64ms 875Hz tone 520ms 500Bd BPSK 1200ms 20Bd BPSK 2400ms 40Bd BPSK 520ms 250Bd BPSK	8 (n) x 62.5Bd QPSK channels w/ 250Bd BPSK break carriers: 1125Hz 1250Hz 1375Hz 1500Hz 1625Hz 1750Hz 1875Hz 2000Hz
стра́нный-C	RUS INTEL	1 state	continuous 1866.65 Bd dQPSK w/ gap at ~1380Hz for 2 minutes	1 x mFSK-16 tfc (~16.5Bd / 175Hz spacing) offset ~1850Hz or 1 x mFSK-16 tfc (~32.5Bd / 175Hz spacing) offset ~1850Hz
стра́нный-D	RUS INTEL	16 state	500ms 1800Hz tone > 1500ms 1200Hz tone > 500ms 1800Hz tone > 1500ms 1200Hz tone 100ms 1000Hz tone 320ms 875Hz tone 128ms 2375Hz tone > 128ms 875Hz tone 64ms 2375Hz tone > 64ms 875Hz tone > 64ms 2375Hz tone > 64ms 875Hz tone 520ms 500Bd BPSK 1200ms 20Bd BPSK 2400ms 40Bd BPSK 520ms 250Bd BPSK	1 x mFSK-16 (br:40Bd sh:40Hz) w/ 250Bd BPSK breaks every 10 secs (carrier changes from 2250Hz to 1000Hz)
стра́нный-E	RUS INTEL	16 state	500ms 1800Hz tone > 1500ms 1200Hz tone > 500ms 1800Hz tone > 1500ms 1200Hz tone 100ms 1000Hz tone 320ms 875Hz tone 128ms 2375Hz tone > 128ms 875Hz tone 64ms 2375Hz tone > 64ms 875Hz tone > 64ms 2375Hz tone > 64ms 875Hz tone 520ms 500Bd BPSK 1200ms 20Bd BPSK 2400ms 40Bd BPSK 520ms 250Bd BPSK	5 x mFSK-16 (br:20Bd sh:20Hz) w/ 250Bd BPSK breaks every 10 secs (carrier changes from 2250Hz to 1000Hz)
стра́нный-F	RUS INTEL		no preamble	FSK 16.1Bd/1000Hz in reversals, offset +1500Hz

	eot sequence	skeds seen so far	waveform AF spectrum view
	320ms 1500Hz tone 128ms 1750Hz tone > 128ms 1500Hz tone 64ms 1750Hz tone > 64ms 1500Hz tone > 64ms 1750Hz tone > 64ms 1500Hz tone	..00z ..05z ..10z ..15z ..20z ..25z or ..30z ..40z ..50z or ..00z ..10z ..20z ..30z ..40z ..50z	
	320ms 1500Hz tone 128ms 1750Hz tone > 128ms 1500Hz tone 64ms 1750Hz tone > 64ms 1500Hz tone > 64ms 1750Hz tone > 64ms 1500Hz tone	..30z ..35z ..40z ..45z ..50z ..55z	
	no eot sequence	..00z ..20z ..40z or ..00z ..10z ..20z ..30z ..40z ..50z	
	320ms 1500Hz tone 128ms 1750Hz tone > 128ms 1500Hz tone 64ms 1750Hz tone > 64ms 1500Hz tone > 64ms 1750Hz tone > 64ms 1500Hz tone	..30z ..35z ..40z ..45z ..50z ..55z	
	320ms 1500Hz tone 128ms 1750Hz tone > 128ms 1500Hz tone 64ms 1750Hz tone > 64ms 1500Hz tone > 64ms 1750Hz tone > 64ms 1500Hz tone	no skeds ?	
	no eot sequence	..00z ..05z ..10z ..15z ..20z ..25z ..30z ..35z ..40z ..45z ..50z ..55z	

Appendix 2

RUSSIAN MONOLITH STATIONS

Numbers & Oddities – www.numbersoddities.nl
Utility DXers Forum - UDXF - www.udxf.nl

The radio stations of the Russian Central Military Command are using priority codes and message formats from the Soviet days. They are described in the following document:

МИНИСТЕРСТВО ОБОРОНЫ СССР РУКОВОДСТВО ПО РАДИОСВЯЗИ ВООРУЖЕННЫХ СИЛ СССР	Ministry of Defense RADIO GUIDE Soviet Armed Forces
Часть 2	part 2
ПРАВИЛА РАДИОСВЯЗИ *Введено в действие директивой* *Генерального штаба Вооруженных Сил СССР* *от 19 мая 1986 года № 177/24/0945*	RADIO REGULATIONS *Enacted Directive* *General Staff of the Armed Forces of the USSR* *on May 19, 1986 № 177/24/0945*

The priority codes are described in chapter 1:

9. По важности и категориям срочности информация делится на следующие виды:
сигналы боевого управления и оповещения; радиограммы категорий срочности «Монолит», «Воздух», «Ракета»,«Самолет», и «Обыкновенная».
Сигналы категории срочности «Воздух» передаются вне всякой очереди после передачи всех видов сообщений категории срочности «Монолит».
Радиограммы различных категорий срочности передаются в такой последовательности:

«Монолит» - с перерывом передачи и приема сообщений всех других категорий срочности;

«Воздух» - после радиограмм категорий «Монолит» с перерывом передачи и приема радиограмм категорий срочности «Ракета», «Самолет» и тегорий срочности «Ракета», «Самолет» и «Обыкновенная»;

«Ракета» - после радиограмм категорий «Монолит», «Воздух» с перерывом передачи и приема радиограмм категории срочности «Самолет», и «Обыкновенная»;

«Самолет» - после радиограмм категорий «Монолит», «Воздух», «Ракета», с перерывом передачи и приема обыкновенных радиограмм.

Радиограммы категории срочности «Обыкновенная», передаются после радиограмм категории срочности «Самолет» в порядке их поступления.

При работе по открытому радиоканалу проставленная на радиограмме категория срочности кодируется по Таблице дежурного радиста или другим установленным порядком.

При работе с использованием международных позывных категория радиограммы передается открыто в сокращенном виде: «Монолит» (мнл), «Воздух» (взд),«Ракета» (ркт), «Самолет», (смл) и т. Д.

The priority codes are used both in full and shortened form.

Long form	Short form	English	Description
Монолит / Monolit	mnl	Monolith	The most urgent level, interrupts all traffic
Воздух / Vozdukh (Wozduh)	vzd (wzd)	Air	Interrupts all message types except Monolit
Ракета / Raketa	rkt	Rocket	Interrupts Samolet and Obyknovennaya messages
Самолет / Samolet	sml	Airplane	Interrupts Obyknovennaya messages
Обыкновенная / Obyknovennaya		Regular	

The formats of the messages is fully explained in chapter2 of the document. The document (in Russian) can be downloaded from the N&O website.

These flash messages are similar to the US NMCC Emergency Action Messages (EAM's). They are transmitted in voice, Morse and RTTY by Army, Navy and Air Force stations.

The most common format is: Callsign of the receiver xx xxx code word xx xx xx xx
Example: MDZhB 19 186 DIASPOR 62 47 13 50

Note that the callsign of the receiver is often a generalr callsign, like MDZhB. They are used to call all stations in a certain area or to call stations that belong to a certain command chain. When a specific station is called then the callsign belongs to that specific station is sent. Example: KARTA-11 98 255 KONOVID 5620 4081.

Morse flash messages begin with "XXX XXX". Examples: XXX XXX WEGI WEGI 70709 50277 KLOPOMOR 3277 2208 K and XXX XXX 1QRF 1QRF 52004 AMFIOBENY 8207 4863 ANALOJNYJ 3557 3950 K

Note that the general callsign MDZhB is also used in morse. The Russian morse character for the letter "Zh" is "B", so the callsign is MDVB. Example: XXX XXX MDVB MDVB 05282 MELOTIPI'A 39878693 DEKANTACI'A 73280877 K

VOICE STATIONS

In radio hobby circles the Russian Central Military Command stations that transmit the above mentioned priority codes and flash messages are called ***Monolith stations***. Some of these stations are well known to many people while other stations are not often logged. Below the list of the most reported voice stations.

Designator *)	Nick name	Channel marker	Callsign	General callsign	Frequency in kHz	Location
S28	Buzzer	Buzzing sound	Vulkan	MDZhB	4625, 6998	St. Petersburg and Moscow
S30	Pip	A single dot in morse	Akaciya	8S1Shch	3756 (night), 5448 (day)	Rostov-na-Donu
S32	Squeaky Wheel	2-tones			3828 (night), 5473 (day) Sometimes also on 7009 (day)	Probably Rostov-na-Donu
MX		"R" in morse		Plovets-41		Possibly Ekaterinburg
S6930				Katok-65	6930, 3218.5	
S5426				Arbat-50	5426	
S5292		"B" or "D" in morse		Fazan-37	5292	DFs point to a location NE of St Petersburg
S5790				Patron-79	4790	
S3850		Dash		Baron-78	3850 (night), 4940 (day)	Possibly Novorossijsk
S4525		Dash			4525	

*) Designators were assigned by ENIGMA, ENIGMA 2000, Priyom, Numbers & Oddities