



IARU Monitoring System Region 1

Monthly Newsletter 8 - August 2020

edited by Peter Jost, HB9CET, assisted by Gaspar Miró, EA6AMM

News and Info's

Dear colleagues

In August we found significantly more OTH radars from the Far East, especially the system known as "Foghorn" (nickname) with its typical 66.66 sps (chirps), burst duration of mostly 3.8s and a bandwidth of 10 kHz. But also the notorious Russian Container radar contaminated still our bands, especially 20m, daily. Therefore it is found all too often in our individual reports and fills many dozen lines.

In the last newsletter I pointed out the many footnotes in the ITU and CEPT frequency allocation plans. Due to numerous queries, I was a bit astonished that these footnotes are not well known everywhere, as they have to be taken into account in our work. The European Table of Frequency Allocations and Applications for the frequency range 8.3 kHz to 3000 GHz (the ECA Table) is provided in EFIS (ECO Frequency Information System), it can be accessed directly online or downloaded as pdf or Excel. Link [click here](#) !

The ECA Table in EFIS also contains ECA footnotes relevant to the European allocation, an application, or the frequency band and ITU Radio Regulations footnotes for Region 1. It's worth a visit.

Just as reminder, it is very important and very helpful that as many as possible member societies are making complaints to their regulators! Alone we have only little chance.

SK Georg Kehl DJ7KG

Our long-time volunteer Georg Kehl, DJ7KG, died on August 29, 2020 at the age of 82. Georg has made a name for himself through years of intensive observation of fishery buoys in the 10 m band. His regular reports met with interest far beyond Germany and were also included in the monthly newsletter of the IARU MS R 1.

Farewell Georg, we will miss you

Peter Jost, HB9CET, IARUMS R1 Coordinator a.I.

Detailed reports of national coordinators

Abbreviations used (as per IARUMS definitions)

aka = also known as | **BC** = Broadcast | **BD** = Baud, (or also Burst duration) | **BRI** = Burst repetition interval | **BW** = Bandwidth | **ca** = approximate | **CHN = PRC** = People's Republic of China | **DF** = Direction finding (radio location; see also TDoA) | **OTHR** = over the horizon radar | **FMCW** = frequency modulated continuous wave | **FMOP** = frequency modulated on pulse | **SH** = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = **unid** = unidentified | **vd** = various dates | **vt** = various times.

| DARC; Credits to monitors: Wolf DK2OM, Tom DF5JL, Harald DL5HAQ, Alex DB3TA, Martin DO1MFB, Martin DD3MA, Harald DJ3AS, Daniel DL3RTL | | | | | | | | | |
|--|------|-----|----|-----|-------|--------|---------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3500.0 | 1934 | 05 | 08 | | div. | A3E | | | Russian voices, probably pirates |
| 3510.0 | 1940 | 02 | 08 | BLR | unid | chirps | | 3k | mysterious chirps - Belarus - about 150 km se of Minsk |
| 3750.0 | 1629 | 26 | 08 | RUS | unid | PSK2A | 120 | 2600 | CIS-12 - Kaliningrad - shared band! |
| 3756.8 | 1800 | dly | 08 | RUS | unid | USB | | | RUS MIL - channel marker - 4 tones - Tuapse - East Black Sea (nw of Sochi) - night QRG (shared band!) |
| 7018.0 | 1818 | 25 | 08 | RUS | unid | PSK2A | 120 | 2600 | CIS12 (AT3004D) - Moscow |
| 7055.0 | vt | dly | 08 | UKR | unid | LSB | | | Music and Russian voices |
| 7057.0 | 1648 | 25 | 08 | CHN | | FMOP | | 10k | Chinese OTH radar -7052 - 7062 kHz - 50 sps - 5 sec bursts |

| DARC; Credits to monitors: Wolf DK2OM, Tom DF5JL, Harald DL5HAQ, Alex DB3TA, Martin DO1MFB, Martin DD3MA, Harald DJ3AS, Daniel DL3RTL | | | | | | | | | |
|--|------|----------|----|------------|-----------------------|-------|---------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 7070.0 | 1401 | 31 | 08 | RUS | | PSK2A | 120 | 2600 | CIS12 (AT3004D) - Sevastopol |
| 7100.0 | 1919 | 31 | 08 | CHN | | FMOP | | 10k | Chinese OTH radar - 7095 - 7105 kHz - 50 sps - 5 sec bursts |
| 7118.0 | 1659 | 31 | 08 | CHN | | FMOP | | 10k | Chinese OTH radar - 7113 - 7123 kHz - 66.66 sps - 3.8 sec bursts - "Foghorn" |
| 7140.0 | 1700 | 03 | 08 | ERI | VOBM | A3E | | 9k | Voice of Broad Masses 1 |
| 7170.0 | 1657 | 31 | 08 | CHN | | FMOP | | 10k | Chinese OTH radar - 7165 - 7175 kHz - 66.66 sps - 3.8 sec bursts - "Foghorn" |
| 7180.0 | 1700 | 01 | 08 | ERI | VOBM | A3E | | 9k | Voice of Broad Masses 2 |
| 7183.0 | 1648 | 25 | 08 | RUS | | FMOP | | 12k | OTH radar Contayner - 40 sps - nw of Saransk - 7177 - 7189 kHz |
| 7190.0 | 1850 | 01 | 08 | CHN | China Radio Intl. | A3E | | 40k | China Radio International on 7210 kHz - with splatters 7190 kHz - 7230 kHz - daily 1800 - 1900 utc |
| 10154.0 | 1746 | 22 | 08 | RUS | | FMOP | | 12k | OTH radar Contayner - 40 sps - nw of Saransk - 10148 - 10160 kHz |
| 14000.0 | 1400 | 05 daily | 08 | CHN | China Radio Intl. | A3E | | 9k | China Radio International - inter-modulation from 13855 and 13710 kHz - 13855 x 2 - 13710 = 14000 kHz |
| 14037.0 | 1054 | 28 | 08 | CHN | | FMOP | 66.66 | 10k | Chinese OTH radar - 14340 - 14350 kHz - 66.66 sps - 3.8 sec bursts and 50 sps alternating |
| 14116.0 | 1613 | 18 | 08 | RUS | | FMOP | | 12k | OTH radar Contayner - 40 sps - nw of Saransk- 14110 - 14122 kHz |
| 14157.0 | 1435 | 19 | 08 | RUS | | FMOP | | 12K | OTH radar Contayner |
| 14185.0 | 1610 | 28 | 08 | RUS | | FMOP | | 12K | OTH radar Contayner |
| 14194.0 | 1245 | 17 | 08 | RUS | | FMOP | | 12K | OTH radar Contayner - 40 sps - nw of Saransk - 14188 - 14200 kHz |
| 14221.0 | 2032 | dly | 08 | KAZ | | F1B | 50 | 200 | Kazakhstan - west of Almaty - mostly idling - every evening |
| 14265.0 | 1617 | 12 | 08 | CHN | | FMOP | | 10k | Chinese OTH radar - 14260 - 14270 kHz - 83 sps - 3.0 sec bursts |
| 14295.0 | 1520 | 28 | 08 | RUS | | FMOP | | 12K | OTH radar Contayner |
| 14343.0 | 0937 | 10 | 08 | CHN | | FMOP | 66.66 | 10k | Chinese OTH radar - 14338 - 14348 kHz - 66.66 sps - 3.8 sec bursts - "Foghorn" |
| 18080.0 | 0750 | dly | 08 | TWN CLA | Sound of Hope, Jammer | A3E | | | Sound of Hope - Taiwan and Chinese BC jammer - daily at 06 utc and later |
| 18168.0 | 1300 | 15 | 08 | RUS | | FMOP | | 12k | OTH radar Contayner - 40 sps - nw of Saransk- 18162 - 18174 kHz |
| 18176.0 | 0856 | 16 | 08 | CYP | | FMOP | | 20k | UK OTH radar Cyprus - 50 sps - 18166 - 18186 kHz |
| 21032.0 | 0916 | 12 | 08 | CYP | | FMOP | | 20k | UK OTH radar Cyprus - 50 sps - 21022 - 21032 kHz |
| 21438.0 | 0920 | 28 | 08 | RUS | RCV | A1A | | | RCV - RUS Navy Sevastopol with QTCs for RIP90, RHL82, RCIG - RCV daily active |
| 28860.0 | 0840 | 14 | 08 | IRN | | AMOP | | 45k | Iranian radar - 28837 - 28883 kHz - 150 sps and 313 sps alternating - North Iran daily! |

| IRTS; Michael, EI3GYB | | | | | | | | | |
|------------------------------|------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3636 | 1115 | 06 | 08 | EI/UK | | USB | | | 2 Ulster fishermen chatting. Reported by Richard, EI8JE. |
| 7055 | 1630 | 04 | 08 | RUS/UKR | | LSB | | | Russian-Ukrainian radio war. Very loud. Persistent nearly every day of the month. Plenty of abuse like "Ruski swini", "Lukashenka huila", "Paederasta" Ongoing pest! |
| 7057.5 | 1600 | 28 | 08 | | | F1B | | | Huge persistent signal. |
| 7060 | 1655 | 18 | 08 | UKR/RUS | | AM | | | Russian-Ukrainian radio war. More propaganda, profanities and agitation. |
| 7114 | 0100 | 05 | 08 | | | AMOP | | | Radar from 7114 to 7126 kHz. Huge signal, all frequencies unusable. |
| 7140 | 1730 | 04 | 08 | ERI | | AM | | | Radio Eritrea. Weak signal. Heard several times during the month. |
| 7161 | 1645 | 18 | 08 | | | PSK | | | Huge signal. |
| 7161.5 | 1420 | 06 | 08 | | | PSK | | | Link 11 Clew. Very strong. |
| 7165 | 1735 | 21 | 08 | | | PSK | | | Link 11 Clew. Strong and persistent. |
| 7174 | 1730 | 25 | 08 | | | AMOP | | | Radar from 7174 to 7208 kHz. |
| 7187 | 1215 | 18 | 08 | | | PSK | | | Strong and persistent signal. |
| 7191 | 2130 | 18 | 08 | | | AMOP | | | Radar from 7191 to 7204 kHz. Short heavy bursts. |
| 14096 | 0810 | 12 | 08 | | | AMOP | | | Radar from 14096 kHz to 14125 kHz. Big signal. |
| 14104 | 1705 | 17 | 08 | | | AMOP | | | Radar from 14104 to 14120 kHz. Strong signal. |
| 14112 | 1805 | 06 | 08 | | | AMOP | | | Radar from 14112 to 14125 kHz. Huge and persistent signal. |
| 14144 | 0840 | 24 | 08 | | | AMOP | | | Radar from 14144 to 14156 kHz. |
| 14178 | 0700 | 26 | 08 | | | AMOP | | | Radar from 14178 to 14198 kHz. Strong. |
| 14185 | 1730 | 21 | 08 | | | AMOP | | | Radar from 14185 to 14197 kHz. Strong and persistent. |
| 14256 | 0655 | 15 | 08 | | | AMOP | | | Radar from 14256 to 14273 kHz. Loud and persistent. |
| 14301 | 0815 | 12 | 08 | | | F1B | | | Permanent monster signal. |
| 14315 | 1630 | 18 | 08 | CHN | | FMOP | | | Chinese foghorn. Loud. |
| 14318 | 1140 | 30 | 08 | | | AMOP | | | Radar from 14318 to 14342 kHz. Huge persistent signal. |
| 14324 | 1605 | 25 | 08 | | | AMOP | | | Radar from 14324 to 14340 kHz. Huge and persistent signal. |

| MRASZ; Laci, HA7PL | | | | | | | | | |
|---------------------------|------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|----------------|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3547.0 | 1717 | 27 | 08 | | | PSK2 | | | CIS12 |
| 3547.0 | 1750 | 18 | 08 | | | PSK2 | | | CIS12 |
| 3547.0 | 1755 | 24 | 08 | | | PSK2 | | | CIS12 |
| 3581.8 | 1752 | 07 | 08 | | | PSK8A | 2400 | 2400 | Stanag-4285 |
| 3581.8 | 1742 | 11 | 08 | | | PSK8A | 2400 | 2400 | Stanag-4285 |
| 3581.8 | 1755 | 18 | 08 | | | PSK8A | 2400 | 2400 | Stanag-4285 |
| 3581.8 | 1751 | 24 | 08 | | | PSK8A | 2400 | 2400 | Stanag-4285 |

| MRASZ; Laci, HA7PL | | | | | | | | | |
|---------------------------|------|----|----|-----|-------|------|---------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3734.0 | 1741 | 11 | 08 | | | PSK2 | | | CIS12 |
| 7055.0 | 1816 | 01 | 08 | | | LSB | | | music, chaos |
| 7055.0 | 1751 | 07 | 08 | | | LSB | | | music, singing: "balalajka ruszka balalajka" |
| 7055.0 | 1510 | 23 | 08 | | | LSB | | | Propaganda, music, singing, chaos also on: 12, 13, 16, 19, 27 |
| 7108.5 | 1349 | 19 | 08 | | | F1B | | 200 | |
| 7182.5 | 1645 | 24 | 08 | | | OTHR | | | 7170- 7195 kHz |
| 10115.0 | 1738 | 11 | 08 | | | F1B | | 250 | |
| 14006.0 | 1314 | 03 | 08 | | | F1B | | 250 | |
| 14006.0 | 1219 | 06 | 08 | | | F1B | | 250 | |
| 14022.0 | 0730 | 02 | 08 | | | PSK2 | | | CIS12 |
| 14046.0 | 0735 | 02 | 08 | | | USB | | | "please 122"on russian language |
| 14114.0 | 1228 | 03 | 08 | | | OTHR | | | 14104 - 14124 kHz |

| PZK; Marek, SP3AMO + Miro, SP5GNI | | | | | | | | | |
|--|------|----|----|-----|-------|-------|---------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3500.0 | vt | vd | 8 | | | Pulse | | | S9 Heard on the entire band (corelated with 1822 kHz signals) |
| 3518.9 | 1931 | 19 | 8 | | | F1B | 50 | 200 | S5 Mutlitone, changeble modes |
| 3519 | 2050 | 25 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3519,3 S9+10 |
| 3526.7 | 1957 | 20 | 8 | | | F1B | 50 | 200 | S9 Mutlitone, changeble modes |
| 3527 | 2050 | 25 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3528,3 S9+10 |
| 3531.5 | 917 | 5 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3532,8 S7 |
| 3549.0 | 1650 | 26 | 8 | | | MFSK | | 1k0E | S 7/8 [5 x 120 Hz, sps 40 Hz], changeble modes |
| 3550 | 1812 | 18 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3531,3 S9+10 |
| 3550 | 2050 | 25 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3551,3 S9+10 |
| 3550 | 1932 | 26 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3551,3 S9+10 |
| 3550 | 1744 | 19 | 8 | | | PSK | | 1k20E | S9 sps 40 Hz |
| 3581.7 | vt | vd | 8 | | | UI | | 3k | STANAG? |
| 3611.3 | 1840 | 2 | 8 | | | UI | | 2k2 | STANAG? |
| 3632 | 835 | 4 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3633,3 S8 |
| 3682.0 | 1930 | 23 | 8 | | | MFSK | | 1k50E | S9 Mutlitone sps 40Hz |
| 3685 | 917 | 5 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3686,3 S8 |
| 3695.8 | 1745 | 13 | 8 | | | F1B | 50 | 250 | S9 |
| 3698 | 835 | 4 | 8 | RUS | | PSK | | 2k9 | CIS-12 pilot 3699,3 S9 |
| 3712 | 1135 | 21 | 8 | | | UI | | 3k0 | STANAG? |
| 3716 | vt | vd | 8 | | | F1B | | 250 | S9+15 |
| 3716.0 | 1930 | 21 | 8 | | | F1B | 50 | 200 | S5 |
| 3716.0 | 1845 | 26 | 8 | | | F1B | 50 | 200 | S9 |
| 3744.9 | 1803 | 19 | 8 | | | NON | | | 3 carrier lines and 10s transmissions |
| 3750 | 1935 | 26 | 8 | RUS | | PSK | | 2k9 | CIS-12 pilot 3751,3 S9+20 |
| 3750.0 | 1605 | 26 | 8 | | | MFSK | | 1k60E | S9 [5 x 120 Hz, sps 40 Hz], changeable modes |
| 3756.8 | 1754 | 19 | 8 | | | NON | | 750 | Beep - 2 Tones [1s sp] |

| PZK; Marek, SP3AMO + Miro, SP5GNI | | | | | | | | | |
|--|------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 3768 | 830 | 4 | 8 | | | F1B | | 1000 | short packets |
| 3771.7 | 1954 | 20 | 8 | | | F1B | 50 | 200 | S9 Mutlitone, changeable modes |
| 3774 | 2143 | 27 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3775,3 S9+20 |
| 3774.0 | 1850 | 21 | 8 | | | PSK | | 1k20E | S8 Mutlitone, changeable modes |
| 3797 | 1842 | 2 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 3798,3 S9 |
| 7000 | 1140 | 17 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 7001,3 S8 |
| 7000.0 | 2009 | 9 | 8 | | | Pulse | | | S9 Heard on the entire band (corelated with 1822 kHz signals) |
| 7000.6 | 1754 | 14 | 8 | | | FMOP | | 20k0E | OTHR - Start [6992,0 - 7012,0 kHz] |
| 7007.0 | 1808 | 6 | 8 | | | FMOP | | | OTHR S6 18.22 UTC QRT |
| 7008 | 1300 | 31 | 8 | | | F1B | | 240 | S9+10 |
| 7060 | 2045 | 14 | 8 | | | FMOP | | 14k | OTHR S9+ |
| 7070 | 1303 | 31 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 7071,3 S9+20 |
| 7088 | 2138 | 27 | 8 | | | FMOP | | 10k | OTHR a few seconds burst |
| 7113 | 1147 | 5 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 7114,3 S9+ |
| 7120 | 2204 | 21 | 8 | | | FMOP | | 16k | OTHR S9+20 |
| 7142.8 | 0655 | 13 | 8 | | | MFSK | | 1k0E | S9 7.00 UTC QRT |
| 7147.1 | 0710 | 13 | 8 | | | MFSK | | 1k0E | S9 713 UTC QRT, 715 UTC Start, 758 UTC QRT |
| 7159.5 | 1613 | 12 | 8 | | | PSK | | 1k60E | S 7/8 [9 x 120 Hz], [16.18 UTC QRT] |
| 7170 | 1830 | 21 | 8 | | | FMOP | | 12k | OTHR S9+10 |
| 7185.6 | 0839 | 19 | 8 | | | FSK/PSK | | 1k0E | S5 Mutlitone, changeable modes |
| 7186 | vt | 17 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 7187,3 S8 |
| 7198.5 | 1856 | 11 | 8 | | | PSK | | 0K9E0 | S9 5x120Hz 1905 UTC QRT |
| 14026 | 840 | 4 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 14027,3 S9 |
| 14026 | vt | 5 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 14027,3 S7 |
| 14112 | 955 | 16 | 8 | | | FMOP | | 12k | OTHR S7 |
| 14151 | 1118 | 17 | 8 | | | FMOP | | 16k | OTHR strong 1119 off |
| 14158 | 1400 | 18 | 8 | | | FMOP | | 14k | OTHR strong |
| 14162 | 931 | 17 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 14163,3 S7 |
| 14179 | 910 | 10 | 8 | | | FMOP | | 12k | OTHR S5 |
| 14185 | 1248 | 21 | 8 | | | FMOP | | 16k | OTHR S9+ |
| 14190 | 925 | 31 | 8 | | | FMOP | | 12k | OTHR S8 950 still on |
| 14195 | 900 | 10 | 8 | | | FMOP | | 12k | OTHR a few seconds burst |
| 14197 | 955 | 16 | 8 | | | FMOP | | 16k | OTHR S8 |
| 14237 | 951 | 16 | 8 | | | FMOP | | 10k | OTHR every a few seconds the burst |
| 14242 | 931 | 17 | 8 | RUS | | PSK-4 | | 2k9 | CIS-12 pilot 14243,3 S7 |
| 14258 | 842 | 4 | 8 | | | F1B | | 500 | |
| 14265 | 1908 | 18 | 8 | | | FMOP | | 14k | OTHR S8 |
| 14294.0 | 1026 | 28 | 8 | | | FMOP | | 12k0E | S 9 sps 40 Hz [14292,0 - 14304,0 kHz] |
| 14295.0 | 1455 | 18 | 8 | | | FMOP | | 10k0E | sps 40 Hz [14295,0 - 14305,0 kHz] |
| 14300 | 950 | 16 | 8 | | | FMOP | | 10k | OTHR the burst every a few seconds |
| 14327 | 2213 | 30 | 8 | | | FMOP | | 12k | OTHR |
| 14330 | 2030 | 14 | 8 | | | FMOP | | 12k | OTHR burst |
| 14335 | 1614 | 9 | 8 | | | FMOP | | 12k | OTHR a few seconds burst |

PZK; Marek, SP3AMO + Miro, SP5GNI

| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
|---------|------|----|----|-----|-------|------|---------|---------|---|
| 21003.0 | 0822 | 12 | 8 | | | FMOP | | 20k0E | sps 50 Hz S9 21003,0 - 21023,0 kHz, 08.28 UTC QRT |
| 21150 | 928 | 31 | 8 | | | FMOP | | 20k | OTHR S6 off at 930 |
| 21437.7 | 0847 | 19 | 8 | RUS | RCV | A1A | | 20 wpm | RIP90 de RCV QTC - mixed text |

REF; Francis, F5MIU

| kHz | UTC | DD | MM | ITU | IDENT | MODE | Baud | Sh /Bw | DETAILS |
|-------|------|----|----|-----|-------|------|------|--------|--|
| 14182 | 1702 | 25 | 8 | | | FMCW | | 15k | OTH Radar pulsed 25ms,S9+10 |
| 14195 | 0945 | 16 | 8 | | | FMCW | | 15k | OTH Radar pulsed 25ms,S7 |
| 14195 | 1612 | 28 | 8 | | | FMCW | | 15k | OTH Radar pulsed 25ms,S9+10 |
| 21000 | 0756 | 6 | 8 | | | USB | | 3kHz | Fishermans talking in (Spanish ?) regular QSO recorded |
| 28170 | 0800 | 7 | 8 | | | FMCW | | 15k | OTH Radar pulsed 40ms,S9+ |

RSK; Kamweti, 5Z4BV

| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH/ BW | DETAILS |
|---------|------|--------|----|-----|-------|-------|---------|--------|---|
| 7058 | vt | 27 | 8 | | ? | J3E-U | | 2k7 | Kiswahili/ vernacular QSO |
| 7073.5 | vt | nr.dly | 8 | KEN | ? | PSK-8 | 2400 | 2k75 | STANAG 4285 |
| 7075 | vt | occ. | 8 | | ? | J3E-U | | 2k7 | Vernacular QSO |
| 7089.1 | vt | nr.dly | 8 | KEN | ? | J3E-U | | 2k7 | Kiswahili/ vernacular QSO |
| 7090 | a.m. | 29 | 8 | | ? | J3E-U | | 2k7 | Vernacular msg net in central/ eastern Africa |
| 7115 | 1402 | 29 | 8 | | ? | J3E-U | | 2k7 | Vernacular QSO |
| 7120 | vt | dly | 8 | SOM | | H3E | | 2k9 | Commecial broadcast station Warsan Radio |
| 7140 | vt | dly | 8 | ERI | VOBM | A3E | | 6kE | Commecial broadcast station Voice of the Broad Masses 1 |
| 7150 | vt | nr.dly | 8 | KEN | ? | MFSK8 | 125 | 2000 | 2G ALE |
| 7188.5 | 0455 | 17 | 8 | KEN | ? | PSK-8 | 2400 | 2k75 | STANAG 4285 |
| 14097.5 | vt | nr.dly | 8 | RUS | ? | FMOP | 40 sps | 10k | Russian Kontayner |

RSGB; Richard, G4DYA

| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
|--------|--------------------------------------|----------------------------|----|-----|-------|------|---------|---------|---|
| 3510.0 | ady | dly | 08 | | | J3E | | 2K70E | USB 'The Air Horn' |
| 3756.0 | vt | dly | 08 | | | J3E | | 1K70E | USB 'The Pip' |
| 6999.0 | 1710 | 01 | 08 | | | J7D | | 2K70E | USB 6997.0 / CIS-12. OBW extending to 7000.3 pilot tone |
| 7000.0 | 0809 | 24 | 08 | | | J7D | | 2K70E | USB 6998.0 / CIS-12 |
| 7001.0 | 1922 | 03 | 08 | | | J7D | | 2K80E | USB 6999.0 / CIS-60 |
| 7008.0 | 1743 | 18 | 08 | | | F1B | | 200 | |
| 7018.0 | 1739 | 25 | 08 | | | J7D | | 2K70E | USB 7016.0 / CIS-12 |
| 7018.9 | 2222 2033 1000 1714 1405 | 01 02 03 17 25 | 08 | | | NON | | | Plain carrier. (Probably idling 7019.0 F1B) |

| RSGB; Richard, G4DYA | | | | | | | | | |
|----------------------------------|----------------------|----------------|----|-----|-------|------|---------|---------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 7019.0 | 0739 | 18 | 08 | | | F1B | | 200 | |
| 7021.0 | 0920 | 25 | 08 | | | J7D | | 2K70E | USB 7019.0 / CIS-12 |
| 7022.0 | 0736 | 18 | 08 | | | J7D | | 2K70E | USB 7020.0 / CIS-12 |
| 7038.485 7038.488 7038.492 | ady | dly | | CZE | OK0EU | A1A | | | For info: QRP propagation beacon cluster. Measured freqs ~12 Hz below nominal. |
| 7055.0 | 2314 | 01 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7056.0 | 1717 | 24 | 08 | | | J3E | | 3K00E | Non-amateur traffic / synthesised voice |
| 7057.0 | 1617 1451 | 28 30 | 08 | | | J7D | | 2K70E | USB 7055.0 / CIS-12 |
| 7064.0 | 2225 | 27 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7065.9 | 1842 0752 1828 | 20 21 23 | 08 | | | N0N | | | Plain carrier. (Probably idling 7066.0 F1B) |
| 7070.0 | 1434 | 31 | 08 | | | J7D | | 2K70E | USB 7068.0 / CIS-12 |
| 7074.39 | 1737 0942 0929 | 05 06 07 | 08 | | | A1N | | | Continuous dashes 2 per second |
| 7112.0 | 1347 | 25 | 08 | | | J7D | | 2K70E | USB 7110.0 / CIS-12 |
| 7118.0 | 2153 | 03 | 08 | | | J7D | | 2K70E | USB 7116.0 / CIS-12 |
| 7120.0 | 1836 | 19 | 08 | | | A3E | | | Unidentified BC |
| 7120.0 | 1919 | 03 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7124.0 | 1734 | 25 | 08 | | | F3N | 50 | 9K00E | OTH radar bursts |
| 7126.0 | 1842 | 19 | 08 | | | F3N | 50 | 9K00E | OTH radar bursts |
| 7131.0 | 2246 | 10 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7140.02 | vt | vd | 08 | ERI | VoBM1 | A3E | | | BC |
| 7159.0 | 1252 | 12 | 08 | | | B7D | | 6K00E | ISB / Link 11 CLEW |
| 7170.0 | 2216 | 05 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7177.0 | 1825 | 19 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 7183.0 | 1730 | 25 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7186.0 | 1705 0729 0759 | 17 18 20 | 08 | | | R7D | | 2K70E | USB 7184.0 / CIS-12 |
| 7191.0 | 2251 | 30 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7193.0 | 2244 | 07 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7197.0 | 1730 | 25 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 7200.0 | 1919 1236 | 21 26 | 08 | | | J7D | | 2K70E | USB 7198.0 / CIS-12 |
| 7210.0 | 19 20 | 1848 1821 | 08 | CHN | | A3E | | 44K0E | BC splattering ±22 kHz |
| 10100.8 | ady | dly | 08 | D | DDK9 | F1B | 50 | 450 | For info: Primary user: WX broadcast Legal! shared band |
| 10122.0 | 2212 | 03 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar. Ceased at 2213z. |
| 10130.0 | 0930 | 13 | 08 | G | | F3N | 50 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus. Ceased at 0932z. |
| 10149.0 | 1618 | 04 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 10154.0 | 1728 | 04 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |

| RSGB; Richard, G4DYA | | | | | | | | | |
|-----------------------------|--------------------------------------|----------------------------|----|-----|-------|------|---------|---------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 14008.0 | 1220 1427 1005 0902 0930 | 06 13 20 27 30 | 08 | | | F1B | | 250 | |
| 14011.0 | 0801 | 02 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14026.0 | 0754 1043 0734 0654 | 02 03 04 05 | 08 | | | J7D | | 2K70E | USB 14024.0 / CIS-12 |
| 14064.0 | 0953 | 27 | 08 | RUS | | B7D | | 6K60E | ISB / CIS-12 on both sidebands |
| 14090.0 | 1731 | 24 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14091.0 | 1804 | 05 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14101.9 | 0806 | 13 | 08 | | | J7D | | 2K80E | USB 14100.0 / CIS-60 |
| 14108.0 | 1028 | 24 | 08 | | | A1A | | | Unidentified non-amateur Morse |
| 14109.0 | 1532 | 03 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14110.0 | 0725 | 05 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14112.0 | 1440 | 25 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar. Ceased at 1442z. |
| 14118.0 | 0958 | 14 | 08 | | | J7D | | 2K70E | USB 14116.0 / CIS-12 |
| 14118.0 | 0919 | 30 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14139.0 | 1413 | 21 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14140.0 | 1658 | 04 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14143.0 | 0920 | 30 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14186.0 | 1045 | 07 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14190.0 | 1457 | 13 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14191.0 | 1038 | 28 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14193.0 | 1134 1233 | 20 31 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar. Ceased at 311249z. |
| 14242.0 | 1018 | 27 | 08 | | | J7D | | 2K70E | USB 14240.0 / CIS-12 |
| 14247.0 | 1706 | 18 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14258.0 | 0755 0806 | 19 24 | 08 | | | F1B | | 500 | RR 5.152? |
| 14264.0 | 0854 | 27 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar. Ceased at 0857z. |
| 14277.0 | 1417 | 21 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14281.0 | 0650 | 08 | 08 | CHN | | F3N | 66.6 | 9K00E | 'Foghorn' OTH radar bursts |
| 14291.0 | 1319 | 03 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14296.0 | 0952 | 28 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14299.0 | 1238 | 19 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14301.9 | 0841 | 12 | 08 | | | J7D | | 2K80E | USB 14300.0 / CIS-60. RR 5.152? |
| 14327.0 | 2245 | 30 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14328.0 | 1303 | 22 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 14336.0 | 0918 | 11 | 08 | | | F3N | 50 | 9K00E | OTH radar bursts |
| 14338.0 | 0855 | 27 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar. Ceased at 0857z. |
| 14340.0 | 1248 | 06 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |

| RSGB; Richard, G4DYA | | | | | | | | | |
|-----------------------------|------|----|----|-----|-------|------|---------|---------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 18090.0 | 0643 | 13 | 08 | G | | F3N | 50 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus |
| 18095.0 | 0817 | 29 | 08 | G | | F3N | 25 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus |
| 21030.0 | 0842 | 11 | 08 | G | | F3N | 50 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus. Ceased at 0844z. |
| 21150.0 | 0635 | 14 | 08 | | | J3E | | 2K70E | USB brief non-amateur voice messages on IBP frequency |
| 21240.0 | 1448 | 31 | 08 | G | | F3N | 25 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus. Ceased at 1449z. |
| 21270.0 | 1048 | 30 | 08 | G | | F3N | 25 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus. Ceased at 1049z. |
| 21385.0 | 1030 | 01 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 21410.0 | 0859 | 15 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 21416.0 | 0744 | 15 | 08 | RUS | | P0N | 40 | 12K0E | Container OTH radar |
| 21450.0 | 1452 | 31 | 08 | G | | F3N | 25 | 20K0E | Pluto OTH radar. British Western Sovereign Base Area, Cyprus. Ceased at 1455z. |
| 28179.67 | 0826 | 02 | 08 | | FF | A1A | | | Fishing buoy |
| 28330.0 | 1236 | 12 | 08 | | MOR | A1A | | | Fishing buoy |
| 28359.9 | 1007 | 28 | 08 | | K | A1A | | | Fishing buoy. Ident every 90s. |

| SRAL; Pekka, OH2BLU | | | | | | | | | |
|----------------------------|------------|----------|----|-----|-----------|----------|-------|-------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/BW | DETAILS |
| 7 MHz | 1635-0615 | * | 8 | RUS | Kontainer | FMOP | 40sps | 13k0E | *) Days: 5. 25. 29. 30. (WebSDR 30d) |
| 7 MHz | 0400-1730 | * | 8 | RUS | | FMOP | 10sps | 10k0E | *) Days: 4. 19. 20. 21. 23. 25. 30. |
| 7008.0 | 0715-0830 | 25 | 8 | RUS | | F1B | | 200H | |
| 7008.5 | 1040 | 26 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7010.0 | 0650-1055 | * | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 10. 24. 30. |
| 7016.0 | 0730-0810 | * | 8 | RUS | | F1B | | 500H | *) Days: 26. 27. 28. Unstable fq drifts 7014 - 7018 kHz |
| 7016.0 | 1000-1050/ | 31 | 8 | RUS | | F1B | | 250H | |
| 7018.0 | 0700-1755 | 24 25 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7019.0 | 0900-1900 | * | 8 | RUS | | F1B/ N0N | | 200H | *) Days: 1. 2. 3. 9. 10. 11. 12. 15. 17. 18. 25. |
| 7020.0 | 1000-1050 | 31 | 8 | RUS | | F1B | | 250H | |
| 7025.0 | 0500-1600 | * | 8 | RUS | | F1A/B | | 200H | *) Days: 1. 3. 5. 6. 7. 9. 10. 28. 30. |
| 7032.0 | 1020 | 31 | 8 | RUS | | F1B | | 500H | |

| SRAL; Pekka, OH2BLU | | | | | | | | | |
|----------------------------|------------|-----------|-----------|------------|--------------|-------------|-----------|--------------|--------------------------------------|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/BW | DETAILS |
| 7057.0 | 1340-1715/ | 14 28 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7058.0 | 0930-1615 | 13 17 | 8 | RUS | | F1B | | 200H | |
| 7060.0 | 1330-1403 | 12 13 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7066.0 | 0400-1655/ | * | 8 | RUS | | F1B/ N0N | | 200H | *) Days: 1. 16. 20. - 23. |
| 7070.0 | 1430-1720 | 31 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7089.9 | 1315-1325 | 31 | 8 | RUS | | F1B | | 800H | idling |
| 7096.0 | 1030-1400 | 20 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7099.0 | 1215 | 10 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7099.0 | 0520-0700 | 17 | 8 | RUS | | F1B | | 200H | |
| 7111.0 | 1205 | 10 | 8 | RUS | | F1B | | 200H | |
| 7112.0 | 0700-1430 | * | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 7. 11. 21. 28. |
| 7113.0 | 1200 | 5 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7131.0 | 1515-1600 | 6 | 8 | RUS | RMP | A1A | | 20H | |
| 7138.0 | 0600-1630 | * | 8 | RUS | | F1B | | 200H | *) Days: 29. - 31. |
| 7140.0 | 0400-0600 | * | 8 | ERI | VoBM | A3E | | 9k0 | *) Days: 5. 10. 18. - 28. 31. |
| 7142.0 | 0610-0630 | 12 | 8 | RUS | | J3E-u | | 3k0E | Simplex, male almost dsb, female usb |
| 7147.5 | 0735-0800/ | 13 | 8 | RUS | | J3E-u | | 3k0E | Simplex, male & female |
| 7149.5 | 1700-1755/ | 12 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7158.0 | 0645-1700 | * | 8 | RUS | | F1B/ N0N | | 250H | *) Days: 2. 21. 27. |
| 7160.0 | 1225-0610 | * | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 10. 12. 13. 26. |
| 7160.0 | 0835-0845 | 19 | 8 | RUS | RBL88 | A1A | | 20H | Calls RFN73 |
| 7161.0 | 0745-0750 | 9 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7169.0 | 1750 | 8 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7171.0 | 0900-1700/ | * | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 10. 19. 27. |
| 7176.0 | 0700-0810/ | 10 | 8 | RUS | | F1B | | 250H | |
| 7178.0 | 1750 | 16 | 8 | RUS | | J7D | 120 | 2k60E | |

| SRAL; Pekka, OH2BLU | | | | | | | | | |
|----------------------------|-------------|----------|----|-----|-----------|----------|-------|-------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/BW | DETAILS |
| 7186.0 | 0400-1830 | * | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 16. - 20. 25. carrier on 7184.0 kHz |
| 7187.0 | 0940-1340 | 9 | 8 | RUS | | F1B | | | |
| 7196.0 | 0400-1430 | * | 8 | RUS | V | A1A | | | *) Days: 1. 8. 9. 17. 23. 28. beacon (on 28. negative --- S ---) |
| 7198.0 | 1300-1640/ | 11 | 8 | RUS | | J7D | 120 | 2k60E | |
| 7200.0 | 0700-1330 | 22 26 | 8 | RUS | | J7D | 120 | 2K60E | Ship from St Peterburg to Kaliningrad |
| 10 MHz | 0400-1230 | 8 13 | 8 | CYP | | FMCW | 50sps | 20k0 | (WebSDR 4d) |
| 10 MHz | 0330-1730 | * | 8 | RUS | Kontainer | FMOP | 40sps | 13k0E | *) Days: 4. 12. 21. 24. 31. (WebSDR 17d) |
| 10 MHz | 1300-1730 | * | 8 | RUS | | FMOP | 10sps | 10k0E | *) Days: 1. 25. 31. |
| 14 MHz | 0500-1810 | * | 8 | RUS | | FMOP | 10sps | 10k0E | *) Days: 3. 5. 7. 8. 25. 31. |
| 14 MHz | 0400-1800 | dly | 8 | RUS | Kontainer | FMOP | 40sps | 13k0E | (WebSDR 26d) |
| 14 MHz | 0635-1755 | * | 8 | CHN | 'foghorn' | FMOP | 67sps | 10k0E | *) Days: 6. 7. 11. 12. 14. 16. 17. 24. 26. 27. 29. 31. |
| 14000.0 | /1357-1457/ | dly | 8 | CHN | CRI | A3E | | 9k0 | // 13710 kHz & 13855 kHz |
| 14008.0 | 0500-1330 | * | 8 | RUS | | F1B/ NON | | 250H | *) Days: 1. 2. 3. 5. 6. 8. 10. 11. 17. 19. 20. 21. 23. 27. 28. 30. |
| 14026.0 | 0500-1530 | 3 | 8 | RUS | | J7D | 120 | 2k60E | *) Days: 2. - 5. 11. - 13. 25. |
| 14102.0 | 0740-0830 | 13 | 8 | RUS | | J7D | 120 | 2k60E | |
| 14108.0 | 0630-1200 | * | 8 | RUS | | A1A | | 20H | *) Days: 2. 7. 23. 24. 29. 30. 5BL |
| 14117.0 | 1025-1125 | 9 | 8 | RUS | | J7D | 120 | 2k60E | |
| 14118.0 | 0745-0755 | 9 | 8 | RUS | | A1A | | 20H | |
| 14221.0 | 0400-0600/ | dly | 8 | KAZ | | F1B | | 200H | |
| 14240.0 | 0545-0555 | 15 | 8 | RUS | | F1B | | 250H | |
| 14258.0 | 0835-0845 | 4 | 8 | RUS | | F1B | | 500H | |
| 14272.0 | 0940-0950 | 5 | 8 | RUS | | A1A | | 20H | 5BL |
| 14292.0 | 1155-1310 | 19 26 | 8 | RUS | 4RFJ | A1A | | 20H | Calls MDWD |
| 18 MHz | 0740-1015 | * | 8 | CYP | | FMCW | 50sps | 20k0 | *) Days: 3. 8. 15. 16. 29. (WebSDR 12d) also 25sps |

| SRAL; Pekka, OH2BLU | | | | | | | | | |
|----------------------------|------------|----|----|-----|---------------|------|-------|-------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/BW | DETAILS |
| 18 MHz | 0630-1545 | * | 8 | RUS | | FMOP | 10sps | 10k0E | *) Days: 12. 25. 29. |
| 18 MHz | 0745-0915 | 15 | 8 | RUS | Kontainer | FMOP | 40sps | 13k0E | |
| 18080.0 | 0620-0800 | * | 8 | TWN | Sound of Hope | A3E | | 9k0 | *) Days: 5. 8. 9. 10. 11. 26. 29. 30. jammed by CNR |
| 21 MHz | 0800-1100 | * | 8 | CYP | | FMCW | 50sps | 20k0 | *) Days: 1. 10. 12. 13. 17. (WebSDR 8d) also 25sps |
| 21 MHz | 0745-0945 | * | 8 | RUS | Kontainer | FMOP | 40sps | 13k0E | *) Days: 2. 15. 20. (WebSDR 3d) |
| 21438.0 | /0830-1545 | * | 8 | RUS | RCV | A1A | | 20H | *) Days: 1. 2. 4. 8. 9. 13. 15. 19. 23. - 29. |
| 28860.0 | 0500-1715 | * | 8 | IRN | | FMCW | * | 60k0E | *) 150 & 313sps Days: 1. 2. 5. 9. 12. 14. 15. - 17. 19. - 21. 23. 25. 30. |
| 28 MHz | 0530-1830 | * | 8 | RUS | Taxi disp. | F3E | | 3k0E | 32 reports, *) Days: 1. 2. 3. 11. 14. 15. 17. 19. 22. |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|----------|--------|----|-----|-------|-------|---------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 7018 | 1752 | 25 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D |
| 7029 | 1936 | 27 | 08 | | | F1B | 200 | 75 | |
| 7038 | 1833 | 02 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca. 4 sec "Foghorn" |
| 7055 | 1806 vt* | 02 vd* | 08 | | | J3E-L | | | Speech, propaganda, music, loops, insults. UKR / RUS "radiowar". *often |
| 7057 | 1910 | 08 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca. 4 sec "Foghorn" |
| 7057 | 1948 | 09 | 08 | | | J3E-L | | | Speech, propaganda, music. UKR /RUS "radiowar" |
| 7057 | 0531 | 29 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7058 | 1657 | 29 | 08 | | | F1B | | 200H | |
| 7065.9 | vt* | vd* | | | | NON | | | Carrier. Long - lasting. * * often |
| 7096 | 2056 | 20 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7112 | 1353 | 25 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. Idling |
| 7120 | 2110 | 21 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7129 | 0053 | 15 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7140.02 | 1825 vt* | 02 vd* | 08 | | | A3E | | | BC "Voice of Broad Masses 1". *often |
| 7170 | 1818 | 22 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7175 | 1820 | 23 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7183 | 1732 | 25 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. 2 simultaneous TX on 4m: 7183 + 7197 kHz |
| 7186 | 1854 | 17 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. With carrier at 7184 kHz |
| 7193 | 2015 | 20 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 7197 | 1732 | 25 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner: 2 simultaneous TX on 40m: 7197 + 7183 kHz. |
| 10154 | 1800 | 22 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 25 August, 1717 UTC & 30 Aug., 1620 UTC |
| 13998 | 1747 | 10 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|-------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 14000 | 1433 vt* | 03 vd* | 08 | | | A3E | | | BC. * often |
| 14011 | 0604 | 02 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14013.8 | 0557 | 10 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D |
| 14021 | 0526 | 02 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14026 | 0520 vt* | 02 vd* | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. Long lasting. *Also on 03, 04 ,05, 11, 12, 25 August. |
| 14035 | 1903 | 23 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14052 | 0858 | 25 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. With carrier at 14050 kHz |
| 14058.5 | 0616 vt* | 20 vd* | 08 | | | F1B | 600 | 600 | DPRK-FSK 600 ARQ. * Often |
| 14064 | 0953 | 27 | 08 | | | XXX | 120 | 6K60E | CIS-12 DSB |
| 14066 | 1033 vt* | 20 vd* | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. Mostly idling. With carrier on 14064 kHz. *Also on 26 Aug., 0539 UTC |
| 14068.3 | 0538 | 01 | 08 | | | F1B | 600 | 600Hz | DPRK-FSK 600 |
| 14090 | 0533 | 05 | 08 | | | XXX | | 2K80E | OFDM. CIS-60 |
| 14090 | 0941 | 07 vt* | 08 vd* | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 08 Aug, 1719 UTC & 24 Aug., 1727 UTC |
| 14093 | 1503 | 17 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14095 | 0953 | 11 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14097 | 0913 vt* | 04 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 18 Aug, 1310 UTC |
| 14101.9 | 0916 vt* | 05 vd* | 08 | | | XXX | | 2K80E | OFDM. CIS-60 *Also on 13Aug , 0931 UTC and 19 Aug. 1221 UTC |
| 14104 | 1659 | 12 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14105 | 1625 | 30 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. |
| 14105.8 | 0943 | 27 | 08 | | | XXX | 120 | 6K60E | CIS-12 DSB |
| 14107 | 0814 | 27 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14108 | 0607 vt* | 02 vd* | 08 | | ** | A1A | 21 | | Encrypted QTCs. Cyrillic CW. *Often **idents: 7DSM, 3R9S, OHZG, ZNAK, YBEQ, ZT2C, 7DSM, 3R9S, WPWL, PLV4, IH3L, PLZC, Z9D9, NTGX, L9PA, SEGR, 7MFS, G93A, XQTH, 8JF5, QYLR, SZVQ, UI5T, TXJR |
| 14109 | 1524 vt* | 03 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 25 August., 1359 UTC |
| 14110 | 1402 vt* | 11 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 17 August, 1522 UTC |
| 14111 | 0601 vt* | 20 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 16 Aug. , 0709 UTC & 20 Aug., 0601 UTC |
| 14112 | 1227 vt* | 05 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 25 August, 1426 UTC |
| 14113 | 1656 | 17 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14113.5 | 1553 | 03 | 08 | | | F1B | 600 | 600 | DPRK-FSK 600 |
| 14114 | 0623 vt* | 05 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 11 August, 1520 UTC |
| 14116 | 0959 | 04 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14118 | 1101 | 09 | 08 | | | J7D | 120 | 2k70 | CIS-12 aka AT3004D |
| 14118 | 0949 | 10 | 08 | | | A1A | 17 | | Encrypted QTCs. Cyrillic CW characters used. Often. |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|-------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 14118 | 1843 | 19 | 08 | | | FMxx | 50 | 10KOE | Radar bursts. BD ca 4 sec. "Foghorn" |
| 14118 | 0528 | 26 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14121 | 1025 | 07 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. 2 simultaneous TX on 20 m: 14121 + 14186 kHz |
| 14121 | 1805 | 08 | 09 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14122 | 1928 | 25 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14124 | 1417 | 16 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14127 | 1619 | 11 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14129 | 1244 | 04 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14130 | 1242 | 29 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14131 | 1445 vt* | 03 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 22 August, 0908 UTC |
| 14132 | 0538 vt* | 13 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 23 August, 1408 UTC |
| 14134 | 1016 | 26 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca 4 sec. "Foghorn" |
| 14135 | 2133 | 18 | 08 | | | FMOP | 83.33 | 10KOE | OTHR bursts. BD ca 2.5 sec. |
| 14136 | 1511 | 25 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14140 | 1103 vt* | 02 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 04 August, 1708 UTC |
| 14141 | 1221 | 19 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14142 | 0612 | 10 | 08 | | | F1B | | 250HE | |
| 14143 | 1211 | 27 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14145 | 1841 | 19 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca 4 sec. "Foghorn" |
| 14148.5 | 1519 | 24 | 08 | | | F1B | 600 | 600H | DPRK-FSK 600 ARQ |
| 14149 | 1605 | 04 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14150 | 1415 | 10 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14152 | 1408 | 25 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14153 | 1511 | 06 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14153 | 0903 | 24 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14154 | 0929 vt* | 23 vd* | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec "Foghorn". *Also on 26 Aug., 1308 UTC |
| 14158 | 1509 | 10 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14158 | 1311 | 19 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. 3 simultaneous TX on 20m: 14158 + 14189 +14300 kHz |
| 14159 | 0627 | 14 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14159 | 1855 | 27 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14162 | 1017 vt* | 17 vd* | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. *Also on 27 August, 0928 UTC |
| 14165 | 1511 | 06 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14166 | 1222 | 25 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14175 | 0924 | 10 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14176 | 0921 | 21 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14180 | 1823 | 11 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14182 | 0943 | 28 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14083 | 1224 | 24 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14184 | 1306 vt* | 10 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 17 August, 1932 UTC |
| 14185 | 1615 vt* | 12 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 26 August, 0526 UTC |
| 14186 | 1025 | 07 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. 2 simultaneous TX on 20 m: 14186 + 14121 kHz |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|-------------|-----------|-----------|------------|--------------|-------------|----------------|----------------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 14186 | 1126 vt* | 18 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 24 Aug., 0605 UTC & 27 Aug., 1405 UTC |
| 14187 | 0903 | 17 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D |
| 14187 | 1149 | 28 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14188 | 1325 vt* | 20 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 25 August,1412 UTC |
| 14189 | 0624 | 14 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca 4 sec. "Foghorn" |
| 14189 | 1311 | 19 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. 3 simultaneous TX on 20m: 14189 + 14158 + 14300 kHz |
| 14189 | 0601 vt* | 21 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 27 August, 1043 UTC |
| 14190 | 1044 vt* | 20 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 20 August, 1044 UTC |
| 14191 | 0537 | 26 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14192 | 1044 | 28 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14193 | 1132 vt* | 20 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 20 Aug., 1132 UTC & 26 Aug., 0550 UTC |
| 14194 | 1151 vt* | 03 vd* | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. *Also on 08 August, 0758 UTC |
| 14197 | 0933 | 16 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14198 | 1050 | 16 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14202 | 0655 | 02 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14203.4 | 0533 | 26 | 08 | | | XXX | 600 | 600 | DPRK-FSK 600 ARQ |
| 14212 | 0526 | 26 | 08 | | | FMOP | 040 | 12K0E | OTHR Contayner |
| 14215 | 0844 | 16 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner. 2 simultaneous TX on 20m: 14215 + 14112 kHz |
| 14220 | 0559 | 21 | 08 | | | FMXX | 83.33 | 10K0E | Radar bursts. BD ca 3 sec. "Foghorn" |
| 14221 | 0535 vt* | 02 vd* | 08 | | | F1B | 50 | 250HE | *Often |
| 14223 | 0620 | 19 | 08 | | | FMOP | 40 | 20K0E | OTHR Contayner |
| 14226 | 0607 | 18 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14237 | 0726 | 16 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca 5 sec. "Foghorn" |
| 14240 | 0623 | 15 | 08 | | | F1B | 75 | 250HE | |
| 14241 | 1346 | 11 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14241.65 | 1020 | 17 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D. With carrier at 14240 kHz |
| 14242 | 1021 | 27 | 08 | | | J7D | 120 | 2K70E | CIS-12 aka AT3004D |
| 14246 | 1045 | 26 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts BD ca 4 sec. "Foghorn" |
| 14248 | 1136 | 25 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca 3 sec. "Foghorn" |
| 14249 | 1346 | 11 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca. 4 sec. "Foghorn" |
| 14247 | 0619 | 18 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca. 5 sec. "Foghorn" |
| 14253 | 0628 | 03 | 08 | | | FMXX | 66.66 | 10K0E. | Radar burst. BD ca. 4 sec. "Foghorn" |
| 14258 | 0929 | 04 | 08 | | | F1B | 50 | 500HE | |
| 14259 | 0642 | 02 | 08 | | | XXX | 50 | 10K0E | OTHR |
| 14260 | 0806 | 29 | 08 | | | FMXX | 10 | 40K0E | OTHR |
| 14264 | 0647 | 15 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14265 | 1151 | 10 | 08 | | | FMOP | 40 | 12K0E | OTHR Contayner |
| 14272 | 1728 | 12 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca. 5 sec "Foghorn" |
| 14276 | 0621 | 21 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca 4 sec "Foghorn" |
| 14277 | 2116 | 21 | 08 | | | FMXX | 66.66 | 10K0E | Radar bursts. BD ca 3.5 sec "Foghorn" |
| 14291 | 1140 | 25 | 08 | | | FMXX | 50 | 10K0E | Radar bursts. BD ca 5 sec "Foghorn" |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|-------------|-----------|-----------|------------|----------------------|-------------|----------------|----------------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 14292 | 1458 | 15 vt* | 08 vd* | | DU80 4RFJ DWDM | A1A | | | CW "DU80 DE 4RFJ K" + encrypted QTCs. *Also on 18 Aug., 1514 UTC & 20 Aug., 1519 UTC |
| 14295 | 0531 | 21 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14296 | 0926 | 28 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14298 | 1003 | 23 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14299 | 0601 | 19 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14300 | 1429 | 02 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14301 | 1343 | 28 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14300 | 1311 | 19 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. 3 simultaneous TX on 20m: 14300 + 14189 + 14158 kHz |
| 14301.9 | 1023 | 13 | 08 | | | XXX | | 2K80E | OFDM. CIS-60 |
| 14307 | 1314 | 2208 | | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14308 | 1725 | 12 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca 4 sec "Foghorn" |
| 14300 | 0749 | 16 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca 4 sec "Foghorn" |
| 14300 | 1232 | 19 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14314 | 1626 | 18 | 08 | | | FMXX | 83.33 | 10KOE | Radar bursts. BD ca. 2.5 sec |
| 14320.5 | 0805 | 04 | 08 | | | F1B | 600 | 600 | ARQ DPRK-FSK 600 |
| 14324 | 1436 | 15 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca. 5 sec "Foghorn" |
| 14325 | 0716 | 16 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14325 | 1013 | 22 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca. 5 sec. "Foghorn" |
| 14326 | 0547 | 26 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14327 | 1445 vt* | 18 vd* | 08 | | | FMXX | 66.66 | 10KOE | Radar burst. BD ca. 3.5 sec "Foghorn" *Also on 26 August, 1046 UTC |
| 14328 | 2136 vt* | 13 vd* | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. *Also on 22 Aug., 1300 UTC |
| 14329 | 0536 | 29 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14332 | 1157 | 04 | 08 | | | FMXX | 50 | 10KOE | Radar bursts. BD ca. 4 sec "Foghorn" |
| 14333 | 1515 | 25 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. 2 simultaneous TX on 20 m: 14333 + 14136 kHz |
| 14333 | 1039 | 27 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14335 | 0528 | 11 | 08 | | | FMXX | 20 | 160KOE | OTHR |
| 14336 | 0947 | 11 | 08 | | | FMXX | 50 | 10KOE | RADAR bursts. BD ca. 4 sec "Foghorn" |
| 14337 | 0939 | 23 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14340 | 1059 | 26 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 14342 | 0938 | 10 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca 4 sec "Foghorn" |
| 14345 | 0551 | 21 | 08 | | | FMXX | 66.66 | 10KOE | Radar bursts. BD ca 4 sec "Foghorn" |
| 14366 | 0624 | 18 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner. Splatter to 14341 kHz |
| 14390 | 1824 | 12 | 08 | | | XXX | 10 | 160KOE | OTHR. BW = 160 kHz! |
| 18070 | 0955 | 08 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 18080 | 0724 vt* | 03 vd* | 08 | | | A3E | | | BC. "Sound of Hope" *Also on 29. August, 0744 UTC. Often |
| 18090 | 1230 | 05 | 08 | | | FMCW | 25 | 20KOE | OTHR |
| 18090 | 0749 | 21 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 18095 | 0741 | 29 | 08 | | | FMOP | 25 | 20KOE | OTHR |
| 18168 | 1258 | 15 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 18170 | 0814 | 27 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 18170 | 1101 | 28 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 21000 | 1156 | 28 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 21030 | 0618 | 12 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 21054 | 0859 | 02 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 21090 | 0849 | 21 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |

| URE; Gaspar, EA6AMM | | | | | | | | | |
|----------------------------|-------------|-----------|----|-----|--------------|-------|------------|----------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 21145 | 1059 | 30 | 08 | | | FMOP | 25 | 20KOE | OTHR |
| 21150 | 0956 | 10 | 08 | | | FMCW | 25 | 20KOE | OTHR |
| 21150 | 0854 | 21 | 08 | | | J3E-U | | | Encrypted QTCs. Female voice. RUS language |
| 21210 | 0916 | 27 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 21310 | 1039 | 20 | 08 | | | FMCW | 50 | 20KOE | OTHR |
| 21416 | 0736 | 15 | 08 | | | FMOP | 40 | 12KOE | OTHR Contayner |
| 21438 | 0909 vt* | 24 vd* | 08 | | RCV RIP90 | A1A | | | QTCs.*Also on 28 Aug., 0932 UTC & 30 Aug., 1148 UTC. Often |
| 28860 | 1043 vt* | 09 vd* | 08 | | | XXX | 150 313 | Ca.45KOE | OTHR. *Often |

| USKA; Peter, HB9CET | | | | | | | | | |
|----------------------------|--------------|----------|----|-----|-------|--------------|------------|----------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD /sps | SH / BW | DETAILS |
| 7000.0 | 2201 | 31 | 08 | | | J3E-U | | | Spanish, maybe fishery |
| 7008.0 | 1244 | 31 | 08 | | | F1B | 75 | 250H | |
| 7018.9 | 1005 | 03 | 08 | | | N0N | | 10H | long lasting carrier |
| 7019.0 | 1149 | 18 | 08 | | | F1B | | 250H | |
| 7029.0 | 2036 | 27 | 08 | | | F1B | 75 | 200 | |
| 7055.0 | 0921 | 01 | 08 | | | J3E-L | | 2k70E | Russian-Ukraininen Radio war daily mutual insults, hate-raps, music |
| 7060.0 | 1356 | 12 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12 |
| 7064.0 | 2053 | 25 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12 |
| 7070.0 | 1257 | 31 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12; BPSK |
| 7077.0 | 0848 | 25 | 08 | | | J7D | | 2k70E | CIS 12 |
| 7110.0 | 1356 | 19 | 08 | | | F1B | | 250H | some fading |
| 7111.0 | 1626 | 31 | 08 | | | FMOP | 66.66 sps | ca 10kOE | OTHR, burst duration 3.8s: "Foghorn" |
| 7117.0 | 1640 | 31 | 08 | | | FMOP | 66.66 sps | ca 10kOE | OTHR, burst duration 3.8s: "Foghorn" |
| 7118.0 | 2256 | 03 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12 often |
| 7121.0 | 1940 | 31 | 08 | | | FMOP | 66.66 sps | ca 10kOE | OTHR, burst duration 3.8s: "Foghorn" |
| 7122.0 | 2149 | 31 | 08 | | | F1B | | 200H | |
| 7138.0 | 0955 | 31 | 08 | | | F1B | 50 | 200H | |
| 7140.0 | 1602 vt | 02 vd | 08 | ERI | VOBM | A3E | | ca 9kOE | BC: Voice of the broad Masses 1 |
| 7140.0 | 1238 | 28 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12 |
| 7154.0 | 0851 | 25 | 08 | | | FMxx | ca 2.6 sps | ca 30k0 | OTHR; (Codar like); weak, strong via JA |
| 7159.0 VFO USB | 1511 | 06 | 08 | | | G7D DQPSK | 75Bd | 3kOE | LINK11 CLEW SSB Mode |
| 7186.0 | 1139 | 18 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12 BPSK often |
| 7188.0 | 2304 | 03 | 08 | | | FMOP | 40 sps | 12kOE | OTHR; Contayner |
| 7200.0 | 1458 | 26 | 08 | | | J7D | 12x120Bd | 2k70E | CIS12, ship |
| 14000.000 | 1451 | 12 | 08 | | | N0N | | | long lasting carrier |
| 14000.0 | 0928 | 20 | 08 | | | F1B/ARQ | 600 | 600H | FRSK/ARQ system |
| 14008.0 | 0940 1406 | 02 13 | 08 | | | F1B | 50 | 250H | almost daily |
| 14026.0 | 0926 | 02 | 08 | | | J7D | 12x120 Bd | 2k70E | PSK-2; CIS12 aka AT3004D |
| 14026.0 | 0957 | 03 | 08 | | | J7D | 12x120 Bd | 2k70E | CIS12; TDoA near Moscow |
| 14050.0 VFO USB | 0945 | 25 | 08 | | | J7D | 12x120 Bd | 3k30E | PSK-2; CIS12 with carrier at 14050 (BW from carrier to Pilotone) |
| 14092.0 | 0928 | 01 | 08 | | | FMOP | 40 sps | 12kOE | OTHR; Contayner |

| USKA; Peter, HB9CET | | | | | | | | | |
|----------------------------|--------------|----------|----|-----|-------|-------|------------------|----------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD / sps | SH / BW | DETAILS |
| 14105.0 | 2016 1017 | 25 31 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14108.0 | 0957 | 20 | 08 | | | A1A | | 100H | Cyrillic, encrypted, often |
| 14136.0 | 1514 | 25 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14153.0 | 0943 | 24 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner; QRT: 0945 |
| 14158.0 | 1311 | 19 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14162.0 | 0948 | 17 | 08 | | | J7D | 12x120 Bd | 2k70E | CIS12 |
| 14175.0 | 1641 | 26 | 08 | | | FMxx | 66.66 sps | ca 10k0E | OTHR, puls duration 3.8s: "Foghorn" |
| 14189.0 | 1321 | 19 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14191.0 | 1649 | 18 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14193.0 | 1233 | 31 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14197.0 | 0942 | 20 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14216.0 | 0917 | 20 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14221.0 | 2259 | 18 | 08 | | | F1B | 50 Bd | 200H | CIS often |
| 14299.0 | 1342 | 19 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14327.0 | 2218 | 30 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 14328.0 | 1232 | 22 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 18095.0 | 0800 | 29 | 08 | | | FMCW | 25 sps | 2k80E | OTHR, UK base Cyprus |
| * 18170.0 | 0819 | 27 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner 18163-18175 kHz *) partially in 17m band |
| 21054.0 | 0912 | 02 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 21348.0 | 0925 | 02 | 08 | | | FMOP | 40 sps | 12k0E | OTHR; Contayner |
| 21438.0 | 1206 | 01 | 08 | | RCV | A1A | | 10H | TDoA: Area of Sevastopol daily |
| 28860.0 | 0908 | 17 | 08 | IRN | | AMOP? | 150 + 313 sps | ca 45k | OTHR, Bursts; long lasting, sweep rate alternating almost daily |

| VERON; Ruud, PG1R | | | | | | | | | |
|--------------------------|------|----|----|-------------|-------|-------|----------|---------|--|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD / sps | SH / BW | Details |
| 3638.0 | 1940 | 03 | 08 | CIS | UiCW | A1A | | | Strings of Cyrillic Morse |
| 3716.0 | 1950 | 03 | 08 | | UiPTR | F1B | | | Ptr |
| 7018.0 | 1700 | 02 | 08 | RUS | UiCAR | NON | | | long period |
| 7018.0 | 0937 | 03 | 08 | RUS | UiCAR | NON | | | carrier |
| 7055.0 | 1948 | 15 | 08 | UKR | UiBC | J3E-L | | | Music |
| 7055.0 | 1738 | 17 | 08 | | UiBC | LSB | | | political argus |
| 7055.0 | 1418 | 27 | 08 | UKR/ RUS | UiBC | J3E-L | | | Second TX; S7 |
| 7055.0 | 1704 | 29 | 08 | UKR | UiBC | J3E-L | | | Loop propaganda speech; S8 |
| 7138.0 | 2010 | 29 | 08 | CIS | UiPtr | F1B | | 200 | Idle; S7 QSB |
| 7140.0 | 1701 | 29 | 08 | | | A3E | | | S4 |
| 7186.0 | 1801 | 17 | 08 | | OTHR | FMOP | | | radar |
| 10108.0 | 0853 | 01 | 08 | CIS | | F1B | | | Revs/Ptr |
| 10118.0 | 0902 | 08 | 08 | | | F1B | | | Ptr |
| 10131.0 | 1251 | 19 | 08 | RUS | | F1B | | 250 | TDoA Nr Moscow; S7; shared band! |
| 10132.9 | 1243 | 19 | 08 | CIS | | J7D | | | CF; shared band! |
| 14008.0 | 0917 | 23 | 08 | RUS | | F1B | | 250 | Ptr 09.20 qrt |
| 14108.0 | 0917 | 08 | 08 | CIS | PLV4 | A1A | | | Z9D9 de PLV4 QRV K |
| 14108.0 | 0956 | 09 | 08 | CIS | LKKJ | A1A | | | IXCL de LKKJ QTC 525 47 9 1248 525 = 330 = MMMMM 5BL ending 382 RPT AL K |

| VERON; Ruud, PG1R | | | | | | | | | |
|--------------------------|------|----|----|-----|---------|------|----------|---------|---|
| kHz | UTC | DD | MM | ITU | IDENT | MODE | BD / sps | SH / BW | Details |
| 14108.0 | 1010 | 09 | 08 | CIS | LKKJ | A1A | | | 5FQ7 de LKKJ QTC 280 43 9 1250 280 = 330 = MMMMM 5BL AR |
| 14108.0 | 1013 | 09 | 08 | CIS | LKKJ | A1A | | | Calls to S9S8 OZZT P2NP HYK2 KT5E |
| 14108.0 | 0957 | 12 | 08 | CIS | SEGR | A1A | | | YPG9 de SEGR QTC ZBA 227 53 12 1250 227 = ZBA 437 = MMMMM 5BL ending 826 AR |
| 14108.0 | 0928 | 14 | 08 | CIS | KOXO | A1A | | | KIMB de KOXO QBE QYT6 K |
| 14108.0 | 0936 | 14 | 08 | CIS | PAW9 | A1A | | | NR7V de PAW9 QBE QYT6 K |
| 14108.0 | 0755 | 24 | 08 | | UiCW | A1A | | | 5L |
| 14108.0 | 1015 | 24 | 08 | CIS | QYLR | A1A | | | VKSN de QYLR QTC 724 44 24 1246 724 = 050 = MMMMM 5BL |
| 14108.0 | 1025 | 24 | 08 | CIS | QYLR | A1A | | | GHAV de QYLR QTC 082 41 24 1304 082 = 050 = MMMMM 5BL |
| 14118.0 | 0941 | 10 | 08 | CIS | OK7G | A1A | | | LZIF de OK7G QTC 800 34 10 1235 900 = ZSJ 676 = 5BL ending 083 |
| 14118.0 | 0946 | 10 | 08 | CIS | OK7G | A1A | | | LZIF de OK7G QTC 460 34 10 1238 460 = ZTO 676 = QNWB 5BL |
| 14158.0 | 1322 | 19 | 08 | RUS | UiRadar | FMOP | 40 | 12k0E | CF; S8 |
| 14170.0 | 0941 | 19 | 08 | | 12MPSK | PSK2 | | | AT3004D |
| 14184.0 | 1311 | 21 | 08 | | OTHR | FMOP | | | radar |
| 14190.0 | 0905 | 31 | 08 | RUS | OTHR | FMOP | | | Loc: 53 N 47 E approx. |
| 14234.0 | 0843 | 07 | 08 | | UiPTR | F1B | | | Revs |
| 14248.0 | 0951 | 28 | 08 | RUS | OTHR | FMOP | | | Loc: 53 N 55 E nr. Samara |
| 14257.0 | 0811 | 24 | 08 | RUS | | F1B | | 500 | Loc: 55 N 42 E approx. |
| 14258.0 | 0900 | 01 | 08 | | | F1B | | | Ptr |
| 14258.0 | 1040 | 27 | 08 | CIS | UiCW | A1A | | | VVV's 5F |
| 14299.0 | 1318 | 19 | 08 | RUS | UiRadar | FMOP | 40 | 12k0E | CF; S9+ |
| 21269.0 | 0947 | 30 | 08 | | UiRadar | FMOP | 25 | 20k0E | CF; S6 |

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<https://www.iaru-r1.org/spectrum/monitoring-system/>

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Many thanks to everyone who helped us in any manner, be it with first-class hardware or professional software. We cannot be successful without your valuable support!

Software and Literature

Monitoring is not always easy and trivial, especially not with digital modes. It requires certain basic knowledge, which we actually have thanks to our amateur radio exam. Many free-ware or inexpensive shareware programs are more than sufficient to analyze many modes. Unfortunately, there is hardly

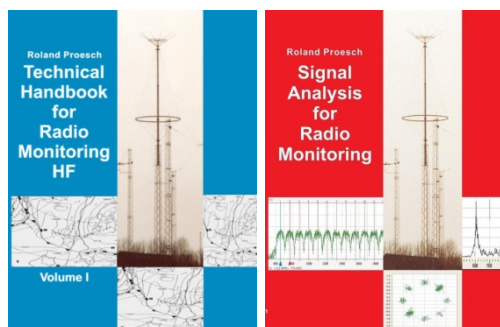
any software that can automatically recognize and classify modes. Classifiers as we know them in professional software are unfortunately not available as free- or shareware. There exists also a lot of very helpful literature (books, pdf's) and videos. A small selection is listed below, but there are many many more:

Software

| | | |
|-------------------------|---|-------------------------------|
| Audacity | http://audacity.sourceforge.net | Audio editor |
| MultiPSK | http://f6cte.free.fr | Multimode digital application |
| PC-ALE | http://hflink.com/pcale/ | ALE software |
| Rivet | http://www.signalshed.com/rivet/index.html | Online tool in JAVA |
| Sigmira | www.saharlow.com/technology/sigmira | Decoder software |
| Signals Analyzer | http://signals.radioscanner.ru | SA Offline Signal analyzer |
| Sorcerer | http://www.kd0cq.com/2013/07/sorcerer-decoder-download/ | Decoder software |
| Spectran | http://www.sdradio.eu/weaksignals/spectran.html | Signal analyser |
| SpectrumLab | www.qsl.net/dl4yhf/spectra1.html | Signal analyser |
| Visual Analyser | http://www.sillanumsoft.org/ | Analyser tool |

Books, pdf's and videos

- R. Prösch** <https://frequencymanager.de/>
DF3LZ
- Technical Handbook for Radio Monitoring HF, Volume I and II
 - Technical Handbook for Radio Monitoring VHF/UHF
 - Signal Analysis for Radio Monitoring
 - and many more



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8.9. 2020