



International Amateur Radio Union

Region 1



Monitoring System

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The monthly newsletter for Region 1

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Acknowledgements

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++ DF8FE – (Webmaster assis.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++
++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ PB2T – Hans (IARU R1 President) ++ 9A5W - Nikola (EC-IARU-R1
++ PTTs: German (BNetzA), BAKOM (Switzerland), OFCOM (UK) ++ Dutch AT ++ SK6AW – DX-Cluster ++ YO9RIJ - Petrica

Part 1: News and infos

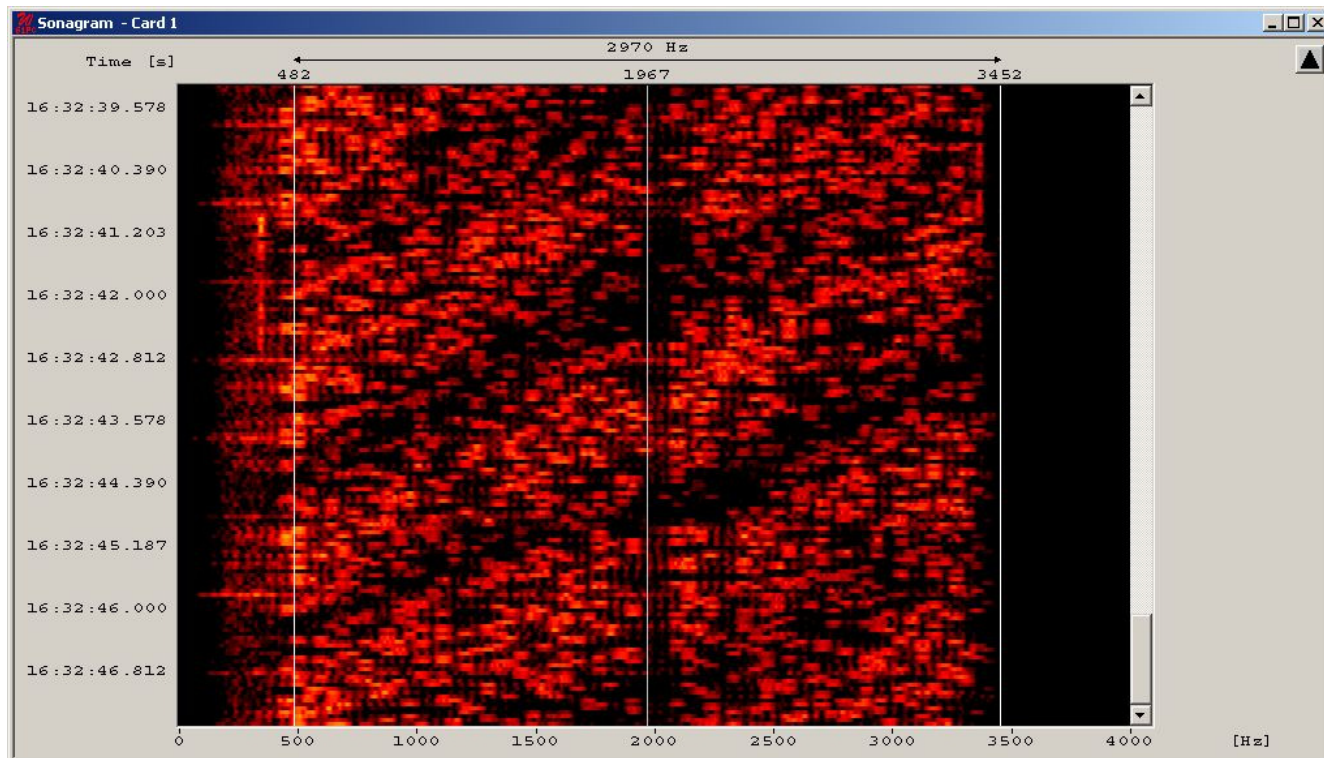
Part 2: Detailed reports of the national co-ordinators

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Part 1: News and Infos

1. New Multitone system on 10 MHz

A new multitone system appeared on 10107.6 kHz on Nov. 14th. Parameters: 2 x 34 tones and a centered gap. Location: Moscow, purpose unknown. Screenshot: DK2OM with W-Code



2. 1812 kHz – **Correction !!!**

The hyperbolic navigation system on 1812 kHz (14 tones – BRAS-3/RS10) is not located in Poland! The real location is Kaliningrad, Russia. Please excuse our earlier bearing errors! The system can be heard every evening.

3. Fishery traffic on our bands

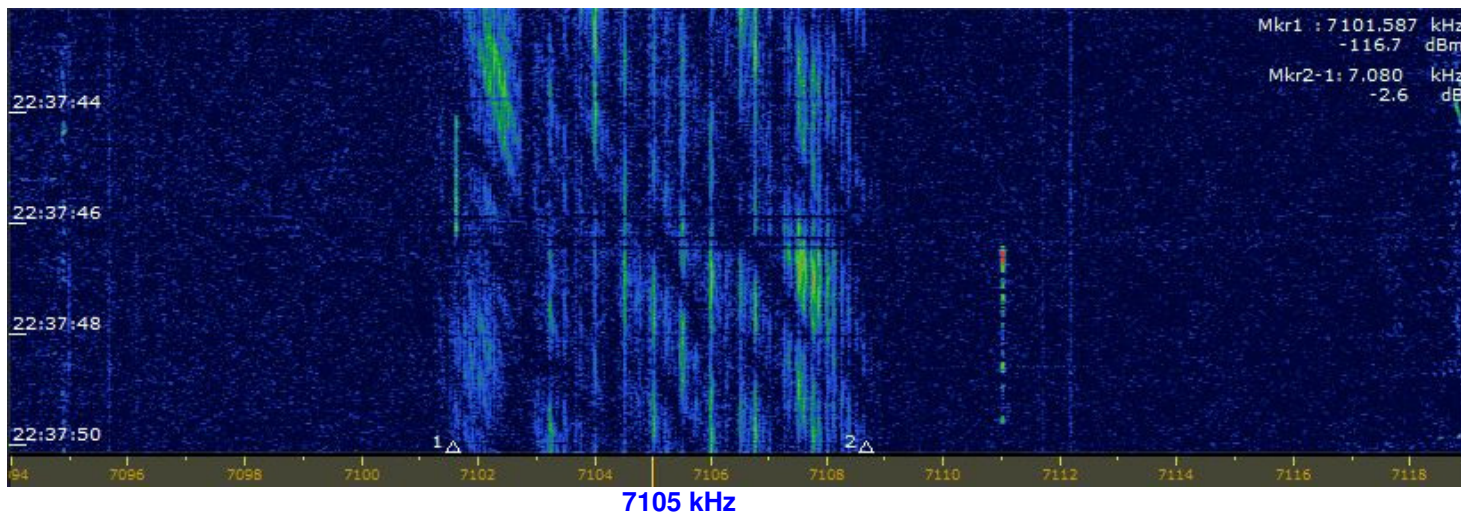
Fishery traffic every morning and evening on 3500 – 3550, 10101 and 10125 kHz on USB: Involved: Fishermen from France, Spain, Netherlands, Great Britain and Morocco. No callsigns, only names and sometimes very obscene. The Spanish fishermen used the vocoder CRY 2001 from time to time.

4. 3500 - 3800 kHz - **Russian OTH radar still running and no complaint by amateurs!**

The Russian OTH radar at Makhachkala (Dagestan – Caspian Sea) was active on various days and audible in Central Europe in the late evenings. Parameters: 43.5 sps covering 30 – 35 kHz. I did not get any complaint by Radioamateurs. Perhaps they believed to be disturbed by local QRM.

5. Chinese broadband system on 7105 kHz

HB9CET observed a broadband system on 7105 kHz transmitting from 2200 – 2300 utc every evening. The signal covers about 7 kHz, purpose unknown, perhaps a special kind of jammer. Location: West China. Screenshot: DK2OM with Perseus



6. Stanag4285 removed from 7101.8 kHz – a fast solution

Peter, HB9CET, found a Stanag4285 (PSK8, 2300 Bd, 2400 Hz, 600 bps long) on 7101.8 kHz on Nov. 4th. Bearings showed Cyprus. So I informed G4BOH, UK Monitoring System. Chris phoned the UK PTT at Baldock. Few minutes later the Stanag disappeared. **Many thanks to Peter and Chris for observations and assistance!**

7. Voice of Turkey with splatters on 7190 kHz

Voice of Turkey transmitted in German language on 7205 kHz every evening from 1830 – 1930 utc producing spuriuos emissions between 7190 and 7220 (7205 +/- 15 kHz!). The German PTT sent an official complaint.

8. Chinese radars on 7 MHz

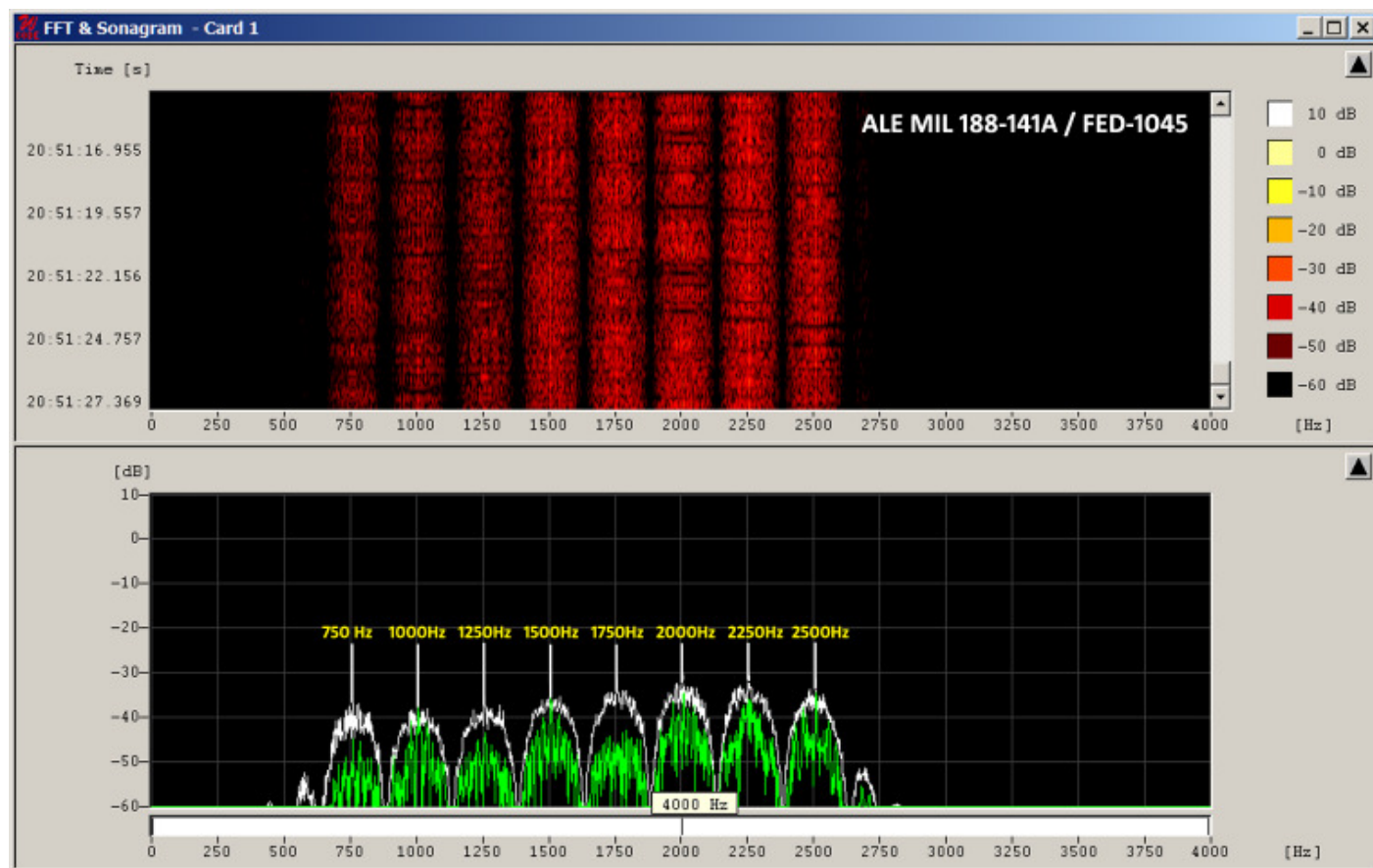
Chinese OTH radars were daily disturbing 7 MHz during the last weeks. Perhaps a result of the problems between China and Japan? Region 3 informed us that the Australian PTT sent an official complaint to China. But there was no reply. The whole Pacific region was affected.

9. ALE MIL-188-141A – FED 1045 (written by HB9CET - Peter)

Watching our bands we often find the very specific sound of MIL 188-141A emissions, also known as Automatic Link Establishment (ALE). Sounds like a dice shaker. Most of the emissions are intruders but some ALE is also ham traffic, mostly used by emergency networks like HFLINK (www.hflink.com). The most active ALE intruder QRG's in the last months have been 7000.0, 7010.0, 7020.0, 7070.0, 7197.0 and 18100.0 kHz (VFO USB), but there are many others. At 7197 kHz we listed more than 80 ID's within only a few days!

The MIL-188-141A signal, specified by the US Department of Defense is an 8-tone MFSK signal in the range 750 - 2500 Hz spaced 250 Hz apart. Each tone (symbol) is 8 ms long corresponding to 125 Baud and represents three bits giving a bit rate of 375 bps. The AF center frequency is 1625 Hz, the signal bandwidth 1750 Hz.

Picture: Sonogram and Spectrum of an ALE emission



soundfile: <http://www.iarums-r1.org/iarums/sound/ale.wav> (recording by DK2OM)

10. Homepage IARU Region 1

<http://www.iaru-r1.org/>

Homepage IARUMS Region 1

<http://www.iarums-r1.org>

Homepage IARUMS Region 2

<http://www.iaru-r2.org/>

Homepage IARUMS Region 3

<http://www.iaru-r3.org/ms/>

Intruderlogger Region 1

<http://peditio.net/intruder/bluechat.cgi>

ITU-Monitoring Reports:

<http://www.itu.int/ITU-R/index.asp?category=terrestrial&mlink=terrestrial-monitoring&lang=en>

11. Seasons Greetings below!

Part 2: Detailed reports of the national Co-ordinators

DD = day *** MM = month *** dly = daily *** vt = various times *** vd = various days *** BD = Baud *** SH = shift *** SP = spacing *** Mode = mode of transmission *** A3E = AM *** A1A = CW *** J3E-U = USB *** J3E-L = LSB *** FSK (F1B) = frequency shift keying *** PSK = phase shift keying *** OFDM = orthogonal frequency division multiplex ALE (MIL-188-141A) = automatic link establishment *** MUX = multiplex *** Ui (unid) = unidentified *** Illicit = illegal *** UiILL = unidentified illegal *** BC = broadcast *** MIL = military *** PTR = printer *** NGO = non governmental organization *** ITU = ITU country abbreviation *** PRC = People's Republic of China *** PLA = People's Liberation Army *** MFA = Ministry of Foreign Affairs *** MOI = Ministry of Interior *** MOPO = Ministry of Public Order *** IARUMS = IARU Monitoring System *** UTC = Universal Time Coordinated *** pps = pulses per second (earlier radar systems) *** sps = sweeps/sec (radar systems) *** FMCW = frequency modulated continuous wave (OTH and coastal Radars) 5BL = cyrillic 5 lettergroups

ARSK MONITORING OVERVIEW FOR November 2013

The broadcasts from Kampala on 7195 kHz, kHz continued as before, as well as Radio Hargeisha on 7120 kHz. What may be a longstanding but unidentified military net in East Africa on 7000 kHz as also observed.

E.H.M. Alleyne, 5Z4NU

ARSK – Kenya – 5Z4NU (Ted)

| H'd by | kHz | UTC | dd | mm | ITU | Identity | MODE | Details |
|--------|---------|-----------------------|----------|----|-------------------|--------------|------|---|
| ARSK | 7000.00 | vt | dly | 11 | E. Africa | NGO? | S1b | Vernacular, English. Messages in phonetics. |
| ARSK | 7120.0 | vt | dly | 11 | Rep.of Somaliland | Hargeisha | | Daily broadcasts. |
| ARSK | 7195.0 | 0650 to mid-afternoon | 10 to 30 | 11 | UGA | Uganda Radio | A3E | B'cast in KiSwahili, music, Luganda & English, to about 1200Z or later. |

DARC 1 – Germany – DG0JBJ (Mario)

DG0JBJ (Mario) observed 2 OTH radars on 20 m, 37 OTH radars on 15 m and 142 OTH radars on 10 m in November 2013. Mario is doing an excellent job!

DARC 2 – Germany - DK2OM (Wolf)

FSK transmissions -> center frequency between mark and space

PSK transmissions -> center frequency - ALE (MIL188-141A) -> USB frequency

exclusive bands -> black – shared bands -> blue - voice traffic -> green - BC -> red

SH = shift --- SP = spread (radar) – SPS = sweeps/sec (radar)

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|--------|------|-----|----|-----|-------|---------|------|-------|---|
| DK2OM | 1812,0 | 1920 | 08 | 11 | RUS | | USB LSB | | | 14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – daily, all day |
| DK2OM | 1881,4 | ady | dly | 11 | F | | QPSK | 100 | 100 | BC-PSK – radio navigation – Nantes – daily, all day |
| DK2OM | 1896,5 | ady | dly | 11 | D | | PSK8 | 2400 | 2400 | Stanag4285 – 600 bps long – German Navy – daily, all day |
| DK2OM | 1925,0 | vt | dly | 11 | I | IPL | USB | | | Livorno Radio, weather reports – daily, vt |
| DK2OM | 3500,0 | vt | dly | 11 | E | | USB | | | Spanish fishery – every evening |
| DK2OM | 3500,0 | 1837 | 27 | 11 | TUR | | FSK8 | 120 | 1750 | ALE, “201” - Turkish Red Crescent – legal! |
| DK2OM | 3500,0 | 2055 | 11 | 11 | HOL | | USB | | | Dutch fishery – also: 13.11.13 at 1930 utc |
| DK2OM | 3500,0 | 1835 | 27 | 11 | | | FSK8 | 125 | 1750 | Thales 3000 - |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|--------|------|-----|----|------|--------|--------------|------------|--------------|---|
| DK2OM | 3500,3 | 2236 | 15 | 11 | CIS | | A3E | | | CIS pirates, unstable carrier |
| DK2OM | 3501,0 | 2234 | 15 | 11 | CIS | | A3E | | | CIS pirates, unstable carrier |
| DK2OM | 3501,6 | 1955 | 13 | 11 | | | FSK8 | 125 | 1750 | Thales 3000 (3500.0 kHz RF) - |
| DK2OM | 3501,8 | 1358 | 12 | 11 | | | PSK8 | 2400 | 2400 | Stanag4285 – 600 bps long |
| DK2OM | 3502,0 | 1624 | 22 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – submode idle and traffic - Kaliningrad |
| DK2OM | 3502,0 | 1814 | 29 | 11 | ISR | | PSK4 PSK8 | 75 2400 | 2400 2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial in DSB mode (USB and LSB) - legal operation! – disturbing illegal Spanish fishery traffic – many thanks to Israel Navy1 |
| DK2OM | 3503,5 | 0750 | 19 | 11 | G | no ITU | FSK8 | 125 | 1750 | ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal! |
| DK2OM | 3506,4 | 2010 | 06 | 11 | ISR | | PSK2 PSK8 | 75 2400 | 2400 2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial |
| DK2OM | 3509,8 | 2000 | 01 | 11 | ISR | | PSK4 PSK8 | 75 2400 | 2400 2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial |
| DK2OM | 3516,0 | 1752 | 03 | 11 | BSea | | FSK8 | 125 | 1750 | Thales 3000 – Baltic Sea |
| DK2OM | 3517,2 | 2250 | 13 | 11 | E | | LSB | | | Spanish fishery |
| DK2OM | 3520,0 | 1736 | 28 | 11 | E | | USB | | | Spanish fishery |
| DK2OM | 3520,0 | 1730 | 21 | 11 | HOL | | USB | | | Dutch fishery |
| DK2OM | 3525,0 | 1715 | 21 | 11 | HOL | | USB | | | Dutch fishery |
| DK2OM | 3526,0 | 1648 | 19 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D - Kaliningrad |
| DK2OM | 3527,0 | 2012 | 08 | 11 | RUS | | F1B | 50 | 200 | Severomorsk daily |
| DK2OM | 3532,0 | 2020 | 18 | 11 | F | | PSK4 | 75 | 2400 | LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal! |
| DK2OM | 3535,0 | 0728 | 12 | 11 | F | | USB | | | Scandinavians |
| DK2OM | 3535,0 | 2315 | 14 | 11 | E | | USB | | | Spanish fishery – daily, various times |
| DK2OM | 3541,0 | 2235 | 12 | 11 | RUS | | F1B | 75 | 200 | area of Moscow |
| DK2OM | 3550,0 | vt | vd | 11 | ALG | | FSK8 | 125 | 1750 | ALE, “IU50” “IU52” “FN50” |
| DK2OM | 3550,0 | vt | dly | 11 | F | | A3E | | | French amateurs not respecting the bandplans – daily (unstable carriers) |
| DK2OM | 3550,0 | 1721 | 22 | 11 | RUS | | PSK2 | 120 | 2600 | AT3004D – submode idle – Russian ship Black Sea (western area) |
| DK2OM | 3550,8 | 2111 | 11 | 11 | ISR | | PSK4 PSK8 | 75 2400 | 2400 2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial – legal operation |
| DK2OM | 3553,8 | ady | dly | 11 | TUR | | PSK8 | 2400 | 2400 | Stanag4285 – TUR MIL - Ankara |
| DK2OM | 3555,0 | 1816 | 27 | 11 | HOL | | USB | | | Dutch fishery |
| DK2OM | 3560,0 | 2250 | 12 | 11 | E | | USB | | | Spanish fishery – also: 14.11.13 |
| DK2OM | 3567,5 | 1813 | 01 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – St. Peterburg |
| DK2OM | 3568,0 | 2014 | 08 | 11 | RUS | | F1B | 50 | 250 | Kaliningrad – also: 25.11.2013 at 1515 utc |
| DK2OM | 3574,5 | 1926 | 29 | 11 | UKR | | PSK2 | 120 | 2600 | AT3004D – submode idle - Sevastopol |
| DK2OM | 3580,0 | 2257 | 13 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – area of Moscow |
| DK2OM | 3581,5 | 1622 | 10 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – traffic and submode idle – Kaliningrad – also: 29.11.13 at 1954 utc |
| DK2OM | 3585,0 | 2000 | dly | 11 | TWN | HLL | F1C | | | 120 rpm, IOC 576, Wxfax - daily legal! |
| DK2OM | 3587,0 | vt | vd | 11 | E | no ITU | FSK8 | 125 | 1750 | ALE, “TVV” “TXX” - Spanish Guardia Civil |
| DK2OM | 3590,0 | 2133 | 14 | 11 | PAK | no ITU | FSK8 | 125 | 1750 | ALE, “KW” “KHAIBAR” – Pakistan navy |
| DK2OM | 3593,7 | 2013 | 06 | 11 | UKR | D | A1A | | | Cluster beacon – Sevastopol RUS Navy – “RCV” |
| DK2OM | 3595,0 | vt | dly | 11 | D | | FSK8 | 125 | 1750 | ALE – German customs |
| DK2OM | 3596,0 | 2014 | 06 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – submode idle and traffic - Kaliningrad |
| DK2OM | 3597,0 | vt | dly | 11 | D | | PSK8 | 2400 | 2400 | Link11 SLEW |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|--------|------|-----|----|-----|--------|------------|------|------------|--|
| DK2OM | 3606,0 | 1618 | 10 | 11 | RUS | | PSK4B | 120 | 2600 | AT3104D - Moscow |
| DK2OM | 3608,0 | 1946 | 29 | 11 | RUS | | F1B | 50 | 500 | Kaliningrad |
| DK2OM | 3617,0 | vt | dly | 11 | HRV | 9A5EX | FSK8 | 125 | 1750 | ALE, "9A5EX" – HAM-ALE - just for info |
| DK2OM | 3622,5 | 1800 | dly | 11 | J | JMH | F1C | | | Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!! |
| DK2OM | 3623,0 | 1940 | 22 | 11 | | | LSB | | | someone playing Russian music |
| DK2OM | 3630,0 | 1630 | 22 | 11 | RUS | | FMCW | | 40k 40k | OTHR – 43.5 sps – 3630 – 3670 kHz – Dagestan - also: 3790 – 3830 kHz |
| DK2OM | 3635,0 | 1733 | 23 | 11 | RUS | | FMCW | | 35k 35k | OTHR – 43.5 sps – 3635 – 3670 kHz – also: 3795 – 3830 kHz Makhachkala – Caspian Sea – |
| DK2OM | 3700,0 | 1718 | 29 | 11 | RUS | | FMCW | | 80k | OTHR – 43.5 sps – 3700.0 – 3780 kHz – 2 systems side by side - Makhachkala – Caspian Sea |
| DK2OM | 3720,0 | 1921 | 18 | 11 | RUS | | FMCW | | 30k 30k | OTHR – 43.5 sps – 3720 – 3750 kHz and 3760 – 3790 kHz Makhachkala – Caspian Sea |
| DK2OM | 3720,0 | 2210 | 11 | 11 | RUS | | FMCW | | 65k | OTHR – 43.5 sps – 3720 – 3785 kHz – Makhachkala – Caspian Sea |
| DK2OM | 3740,0 | 1541 | 16 | 11 | RUS | | FMCW | | 50k | OTHR – 43.5 sps – 3740 – 3790 kHz – Makhachkala – Caspian Sea |
| DK2OM | 3750,0 | 1939 | 24 | 11 | RUS | | FMCW | | 30k | OTHR – 43.5 sps – 3750.0 – 3780 kHz – Makhachkala – Caspian Sea |
| DK2OM | 3751,0 | 1520 | 25 | 11 | UKR | | PSK2A | 120 | 2600 | AT3004D - Ukraine |
| DK2OM | 3751,5 | 2210 | 18 | 11 | POL | no ITU | FSK8 | 125 | 1750 | ALE, "IZ3" "MI3" |
| DK2OM | 3751,8 | 1651 | 12 | 11 | HOL | | PSK8 | 2400 | 2400 | Stanag4285 – 600 bps long – area of Rotterdam |
| DK2OM | 3756,0 | ady | dly | 11 | UKR | | A3E | | | UKR – pip – 14 tones – hyperbolic navigation system – BRAS-2/RS-10 |
| DK2OM | 3761,5 | vt | vd | 11 | POL | | FSK8 | 125 | 1750 | ALE, "NI9" "PL7" "AB2" – Polish MIL |
| DK2OM | 3775,0 | 1823 | 01 | 11 | RUS | | FMCW | | 55k | OTHR – 43.5 sps – 3775 – 3830 kHz – Makhachkala – Caspian Sea – also: 04.11.2013 at 1730 utc |
| DK2OM | 3782,0 | ady | dly | 11 | POR | CTP | F1B | 75 | 850 | POR Navy headquarter Lisbon – disturbed by Russian OTH radar on 18.08.2013 at 1945 utc |
| DK2OM | 3791,0 | vt | vd | 11 | D | DK0ESD | FSK8 | 125 | 1750 | ALE, "DK0ESD" – just for info! |
| DK2OM | 3795,0 | 1820 | 27 | 11 | RUS | | FMCW | | 50k | OTHR – 43.5 sps – 3795 – 3845 kHz – Makhachkala – Caspian Sea |
| DK2OM | 7000,0 | 2053 | 27 | 11 | UKR | D | A1A | | | Cluster beacon – Sevastopol RUS Navy – "RCV" – spurious from 7038.7 kHz |
| DK2OM | 7000,0 | 2255 | 29 | 11 | | | LSB | | | |
| DK2OM | 7000,0 | 2254 | 29 | 11 | INS | | LSB | | | pirates from Sumatra |
| DK2OM | 7002,0 | 0755 | 08 | 11 | UKR | | PSK2A | 120 | 2600 | AT3004D - Sevastopol |
| DK2OM | 7012,9 | 0749 | 29 | 11 | | | OFDM | 30 | 2800 | OFDM60 - |
| DK2OM | 7017,2 | 1950 | 21 | 11 | SRB | | A1A | | | high speed A1A msgs of 5 character groups – figures and letters, also using "ar" and "sk" - Kosovo |
| DK2OM | 7018,0 | 1359 | 01 | 11 | RUS | | F1B | 100 | 1000 | most of the time idle – Russian airforce Moscow - – ident at full hour + 41 min – daily, all day |
| DK2OM | 7020,0 | vt | vd | 11 | | | FSK8 | 125 | 1750 | ALE, "CS5004A" "RS0013D" – NC3A network? – area of Kosovo |
| DK2OM | 7020,0 | 1117 | 29 | 11 | INS | | USB LSB | | | Indonesian pirates – village radio - daily |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|-----------------|--------------------------|-------|------|-------|--|
| DK2OM | 7020,0 | 1830 | 28 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar 47 sps – 5.4 sec bursts |
| DK2OM | 7034,0 | 2123 | 21 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar bursts – 66.67 sps – duration 3.8 sc |
| DK2OM | 7038,7 | 2020 | 02 | 11 | UKR | D | A1A | | | Cluster beacon – Sevastopol RUS Navy – “RCV” |
| DK2OM | 7038,8 | 2020 | 02 | 11 | RUS | P | A1A | | | Cluster beacon – Kaliningrad RUS Navy – “RMP” |
| DK2OM | 7038,9 | 2020 | 02 | 11 | RUS | S | A1A | | | Cluster beacon – Severomorsk RUS Navy – „RIT“ |
| DK2OM | 7039,0 | 2029 | 02 | 11 | RUS | C | A1A | | | Cluster beacon - Moscow RUS Navy - “RIW” |
| DK2OM | 7039,1 | --- | --- | 11 | KGZ | A | A1A | | | Cluster beacon – Bishkek RUS Navy – “RJH25” |
| DK2OM | 7039,2 | ady | dly | 11 | RUS | F | A1A | | | Cluster beacon - Vladivostok RUS Navy - “RJS” |
| DK2OM | 7039,3 | 2030 | 02 | 11 | RUS | K | A1A | | | Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC” |
| DK2OM | 7039,4 | 2030 | 02 | 11 | RUS | M | A1A | | | Cluster beacon – Magadan RUS Navy – „RTS“ |
| DK2OM | 7039,95 | ady | dly | 11 | I | IZ3DVW | A1A | | | IZ3DVW – uncoordinated beacon, daily, all day |
| DK2OM | 7040,0 | vt | dly | 11 | F | F6BAZ | FSK8 | 125 | 1750 | ALE, “F6BAZ” – just for info |
| DK2OM | 7040,5 | vt | dly | 11 | HRV | | FSK8 | 125 | 1750 | ALE, “9A5EX” “9A0ALE” – just for info |
| DK2OM | 7046,0 | 1710 | 18 | 11 | UKR | | PSK2A | 120 | 2600 | AT3004D - Sevastopol |
| DK2OM | 7047,0 | 0728 | 13 | 11 | UKR | | PSK2 | 120 | 2600 | AT3004D – submode idle - Sevastopol |
| DK2OM | 7049,5 | vt | dly | 11 | HRV G F | 9A0ALE M1DFO F6BAZ | FSK8 | 1250 | 1750 | Amateur ALE, just for info! |
| DK2OM | 7054,0 | --- | --- | 11 | RUS | | F1B | 50 | 200 | CIS50-50 - RUS Navy Moscow – not active |
| DK2OM | 7055,0 | 1825 | 28 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar 66.7 sps – 3.7 sec bursts |
| DK2OM | 7055,5 | vt | vd | 11 | GEO | | FSK8 | 125 | 1750 | ALE, “111” “132” “133” - Georgia |
| DK2OM | 7065,0 | 2034 | 02 | 11 | FEa | | FMCW | | 35k | ocean surface radar – 2.5 sps – 7065 – 7100 kHz – audible in Japan and Australia |
| DK2OM | 7065,0 | 2038 | 01 | 11 | CHN | | FMCW | | 35k | Chinese OTH radar 43.5 sps – 7065 – 7100 kHz |
| DK2OM | 7066,0 | 1822 | 28 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar 66.7 sps – 7.7 sec bursts |
| DK2OM | 7070,0 | vt | dly | 11 | GEO | no ITU | FSK8 | 125 | 1750 | ALE, “MV” “244” “686” “334” “204” “571” – daily active |
| DK2OM | 7070,0 | 2247 | 08 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D - Far East Russia |
| DK2OM | 7077,4 | 2053 | 27 | 11 | UKR | D | A1A | | | Cluster beacon – Sevastopol RUS Navy – “RCV” – spurious from 7038.7 kHz |
| DK2OM | 7088,8 | 1634 | 10 | 11 | S | SL0FRO | A1A | | | 7088.830 - cw-trainee, Sweden – kHz – SL0FRO - just for info! |
| DK2OM | 7089,8 | 1420 | 10 | 11 | TUR | | PSK8 | 2400 | 2400 | Link11 - SLEW – aircraft – Turkish SE coast |
| DK2OM | 7090,0 | 2030 | 18 | 11 | F | | PSK2A | 120 | 2600 | AT3004D – Russian ship close to Marseille |
| DK2OM | 7094,0 | 2250 | 29 | 11 | CTR | | unid | | | broadband signal – Costa Rica |
| DK2OM | 7098,0 | 0800 | 06 | 11 | RUS | | F1B | 75 | 250 | Moscow |
| DK2OM | 7099,5 | 1604 | 05 | 11 | HRV | 9A0ZG | FSK8 | 125 | 1750 | ALE, “9A0ZG” “9A5EX” “9A0OS” – daily - just for info! |
| DK2OM | 7101,8 | 1514 | 04 | 11 | CYP | | PSK8 | 2400 | 2400 | Stanag4285 – 600 bps long – Cyprus – finished on Nov. 5 th |
| DK2OM | 7102,0 | vt | dly | 11 | HRV SUI D | 9A0ALE | FSK8 | 125 | 1750 | ALE, “9A0ALE” “HB9MHB” “9A0ZG” “DK0ESD” – just for info! |
| DK2OM | 7102,0 | 0747 | 22 | 11 | RUS | | F1B | 75 | 200 | Severomorsk |
| DK2OM | 7105,0 | 2200 | 01 | 11 | CHN | | unid | | 7.5k | broadband digital signal – 7105 |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|-------------|--------|-------|------|-------|---|
| | | | | | | | | | | kHz center – daily at 2200 - 2300 utc – jammer? – West-China |
| DK2OM | 7105,0 | 2119 | 21 | 11 | CHN | | FMCW | | 55k | Chinese OTH radar – 43.5 sps – 7105 – 7160 kHz – disturbing Region 3 – also: 23.11.2013 at 2130 utc |
| DK2OM | 7110,0 | vt | dly | 11 | HRV | 9A0ALE | FSK8 | 125 | 1750 | ALE, “9A0ALE” – just for info |
| DK2OM | 7110,0 | 1951 | 22 | 11 | CHN | | FMCW | | 50k | Chinese OTH radar – 43.5 sps – 7110 – 7160 kHz - long lasting |
| DK2OM | 7111,0 | 1918 | 20 | 11 | RUS | | F1B | 50 | 250 | west of Kazan |
| DK2OM | 7112,5 | 2020 | 23 | 11 | E | | unid | | 3500 | unid broadband signal – perhaps from a defective transmitter – area of Madrid |
| DK2OM | 7120,0 | 1651 | 24 | 11 | SOM | | A3E | | 9k | Radio Hargaysa Somalia, daily |
| DK2OM | 7129,0 | 1919 | 25 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar 66.7 sps – 1.8 sec bursts |
| DK2OM | 7130,0 | 1115 | 29 | 11 | CHN | | FMCW | | 55k | Chinese OTH radar – 43.5 sps – 7130 – 7185 kHz – also: 29.11.13 at 1919 utc |
| DK2OM | 7133,0 | 0815 | 06 | 11 | RUS | P | A1A | | | Cluster beacon – Kaliningrad RUS Navy – “RMP” |
| DK2OM | 7149,5 | 2248 | 23 | 11 | RUS | | PSK2 | 120 | 2600 | AT3004D – submode idle - Severomorsk |
| DK2OM | 7159,0 | 0734 | 20 | 11 | | | F1B | 75 | 200 | |
| DK2OM | 7159,0 | 2131 | 23 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar bursts – 47 sps – duration 5.4 sc |
| DK2OM | 7185,5 | 1427 | 06 | 11 | D HRV | | FSK8 | 125 | 1750 | ALE, “9A5EX” “DK0ESD” just for info - daily |
| DK2OM | 7190,0 | 1830 | 24 | 11 | TUR | | A3E | | 30k | splatter from Voice of Turkey on 7205 kHz – (spurious 7190 – 7220 kHz) - location: Emirler |
| DK2OM | 7195,0 | 0800 | 07 | 11 | UKR | | F1B | 75 | 200 | Sevastopol |
| DK2OM | 7197,0 | vt | dly | 11 | TUR | | FSK8 | 125 | 1750 | ALE, “8241” “206102” “8151” “3021” “3761” “8021” “8141” – Turkish Sivil Avunma = Turkish Civil Defense - source: DL8AAM |
| DK2OM | 7197,0 | 1430 | 29 | 11 | UKR | | PSK2A | 120 | 2600 | AT3004D - Sevastopol |
| DK2OM | 7198,4 | 1055 | 09 | 11 | D | | F1B | 110 | 775 | 7198.383 kHz – area of Koblenz |
| DK2OM | 7200,0 | 2200 | dly | 11 | CHN TWN | | A3E | | | 2 BCs in Chinese language – Chinese BC and SOH |
| DK2OM | 10100,8 | ady | dly | 11 | D | | F1B | 50 | 450 | Baudot - German Weatherservice – legal! |
| DK2OM | 10101,0 | 1707 | 21 | 11 | MRC | | USB | | | Moroccan fishery - daily |
| DK2OM | 10101,2 | 1659 | 16 | 11 | E | | USB | | | Spanish pirates – area of Toledo - daily |
| DK2OM | 10107,6 | 1709 | 14 | 11 | RUS | | MFSK | | 3200 | 2 x 34 tones - Moscow |
| DK2OM | 10112,0 | ady | dly | 11 | TUR | | PSK8 | 2400 | 2400 | Stanag4285 – 600 bps long – NE of Izmir |
| DK2OM | 10113,0 | vt | dly | 11 | TUN | no ITU | FSK8 | 125 | 1750 | ALE, “TUD” |
| DK2OM | 10114,8 | 0627 | 03 | 11 | RUS | | F1B | 100 | 1000 | CIS14 – Penza - daily |
| DK2OM | 10120,0 | 1642 | 10 | 11 | | | A3E | | | unid BC – IM product? |
| DK2OM | 10125,0 | 1721 | 26 | 11 | E | | USB | | | Spanish fishery |
| DK2OM | 10125,0 | 1640 | 03 | 11 | POR? | | USB | | | pirates in Portuguese voice |
| DK2OM | 10130,0 | 1857 | 10 | 11 | MRC | | FSK8 | 125 | 1750 | Thales 3000 – West Sahara – daily - vt |
| DK2OM | 10131,8 | 1740 | 10 | 11 | IND | | PSK8 | 2400 | 2400 | Indian burst system |
| DK2OM | 10133,8 | 1625 | 15 | 11 | | | PSK8 | 2400 | 2400 | Link11-SLEW |
| DK2OM | 10134,0 | 0630 | 15 | 11 | | | USB | | | unid pirates |
| DK2OM | 10144,0 | ady | dly | 11 | D | DK0WCY | A1A | | | 10143.986 kHz - DK0WCY – German aurora beacon – just for info! |
| DK2OM | 10145,5 | vt | dly | 11 | HRV S / D F | 9A5EX | FSK8 | 125 | 1750 | ALE, “9A5EX” “SM5VRH” “DK0ESD” “F6BAZ” - just for info |
| DK2OM | 13998,4 | 1339 | 27 | 11 | F | | FSK8 | 125 | 1750 | Thales 3000 – until 14000.9 kHz – area of Nimes |
| DK2OM | 13999,0 | 0739 | 28 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – splatter from 13996 |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|-----|--------|-------|----------|-------|---|
| | | | | | | | | | | – 14003 kHz! - Moscow |
| DK2OM | 14001,0 | vt | dly | 11 | CHN | | FSK8 | 125 | 1750 | ALE, “397” |
| DK2OM | 14002,3 | 0757 | 09 | 11 | | | PSK8 | 2400 | 2400 | MIL-188-141B |
| DK2OM | 14009,3 | 0800 | 09 | 11 | | | PSK8 | 2400 | 2400 | MIL-188-141B |
| DK2OM | 14017,4 | 0807 | 09 | 11 | SRB | | A1A | | | highspeed CW – 5 figure groups – Pristina - Kosovo |
| DK2OM | 14026,0 | 0730 | 04 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – Moscow – traffic and submode idle – various days |
| DK2OM | 14036,0 | 1359 | 01 | 11 | RUS | | F1B | 100 | 2000 | harmonic from 7018 – REA4 - Moscow |
| DK2OM | 14047,5 | 0803 | 07 | 11 | CHN | | PSK4 | 75 | 2250 | PRC 4+4 - idle |
| DK2OM | 14052,0 | 1350 | 11 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D - Omsk |
| DK2OM | 14060,0 | vt | vd | 11 | ISR | | FSK8 | 125 | 1750 | ALE, “AAA” - Israel |
| DK2OM | 14064,0 | 1019 | 14 | 11 | RUS | | F1B | 100 | 250 | very unclear - Novgorod |
| DK2OM | 14086,0 | 0811 | 01 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D – submode idle and traffic - Moscow |
| DK2OM | 14109,0 | vt | dly | 11 | ISR | 4X1 | FSK8 | 125 | 1750 | ALE, “4X1” “CT2IXQ” – just for info! |
| DK2OM | 14116,0 | 1020 | 14 | 11 | | | F1B | 100 | 250 | very unclear - Kaliningrad |
| DK2OM | 14118,0 | 1354 | 11 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D - Moscow |
| DK2OM | 14185,0 | 2312 | 13 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar – 66.7 sps - 5.4 sec bursts |
| DK2OM | 14192,0 | 1313 | 04 | 11 | RUS | | F1B | 50 75 | 200 | RUS Navy Kaliningrad – often daily |
| DK2OM | 14205,0 | vt | dly | 11 | | no ITU | FSK8 | 125 | 1750 | ALE, “505” “822” – 60 deg. from DL - CHN ? |
| DK2OM | 14222,0 | 0741 | 02 | 11 | RUS | | PSK2A | 120 | 2600 | AT3004D - Moscow |
| DK2OM | 14225,0 | 2306 | 13 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar – 66.7 sps - 5.4 sec bursts |
| DK2OM | 14234,0 | ady | dly | 11 | RUS | REA4 | F1B | 100 | 2000 | harmonic from 7117 kHz - most of the time idle – Russian airforce Moscow – ident at 1441 utc on 14235.0 in A1A – daily, all day |
| DK2OM | 14245,0 | 2305 | 13 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar – 66.7 sps - 5.4 sec bursts |
| DK2OM | 14260,0 | vt | dly | 11 | SRB | | FSK8 | 125 | 1750 | ALE, “YU1BI” – just for info! |
| DK2OM | 14260,8 | 0825 | 12 | 11 | RUS | | OFDM | 25.5 | 2800 | OFDM 60 – Moscow – also: 14.11.13 at 1023 utc |
| DK2OM | 14263,0 | 0810 | | 11 | UKR | | A3E | | | female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine at Rivne |
| DK2OM | 14265,0 | vt | vd | 11 | TUR | | FSK8 | 125 | 1750 | ALE, “526” |
| DK2OM | 14280,0 | 0810 | 13 | 11 | UKR | | A3E | | | female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine at Rivne |
| DK2OM | 14290,0 | 2304 | 13 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar – 66.7 sps - 5.4 sec and 3.8 sec bursts |
| DK2OM | 14295,0 | vt | dly | 11 | SRB | YU1BI | FSK8 | 125 | 1750 | ALE, “YU1BI” – just for info! |
| DK2OM | 14295,1 | ady | dly | 11 | TJK | | A3E | | | 3rd from Radio Tajik on 4765 kHz |
| DK2OM | 14300,0 | 2308 | 13 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar – 66.7 sps – 3.8 sec bursts |
| DK2OM | 14308,3 | 1300 | 08 | 11 | CHN | | PSK4 | 75 | 2250 | PRC 4+4 - China |
| DK2OM | 14317,0 | vt | vd | 11 | UKR | RCV | A1A | | | RUS naval base Sevastopol - encrypted, cyrillic letters |
| DK2OM | 14323,5 | 1315 | 04 | 11 | RUS | | F1B | 600 | 600 | DPRK-FSK600 – 14323.480 kHz North Korean emba Moscow |
| DK2OM | 14326,8 | 1150 | 06 | 11 | CHN | | MFSK | | | 39 tones parallel - China |
| DK2OM | 14328,0 | vt | dly | 11 | CHN | | FSK8 | 125 | 1750 | ALE, “139” “534” “772” – West China |
| DK2OM | 14330,0 | vt | dly | 11 | | | FSK8 | 125 | 1750 | ALE, “BV4” |
| DK2OM | 14332,8 | 1220 | 06 | 11 | CHN | | MFSK | | | 39 tones parallel - China |
| DK2OM | 14344,7 | 2249 | 08 | 11 | CHN | | PSK8 | 2400 | 2400 | preamble similar MIL-188-110A - 600 bps short – 14344.650 kHz – daily, all day |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|-----------------|--------|-------|------|-------|--|
| DK2OM | 14346,0 | vt | dly | 11 | HRV RUS D | | FSK8 | 125 | 1750 | ALE, “9A0ZG” “RX3ARZ” “DK0ESD” – just for info – various times, daily |
| DK2OM | 14346,0 | vt | dly | 11 | THA | HS0ZEA | A1A | | | HS0ZEA beacon – 14345.950 kHz - every 5 minutes – just for info! |
| DK2OM | 18100,0 | vt | dly | 11 | MRC | no ITU | FSK8 | 125 | 1750 | ALE, “C3” “R3” |
| DK2OM | 18107,0 | vt | vd | 11 | RUS | RDL | F1B | 50 | 200 | Moscow – idle and traffic – Russian navy – various days and times – legal operation |
| DK2OM | 18138,0 | 0800 | 28 | 11 | RUS | | PSK2 | 120 | 2600 | AT3004D – Far East Russia |
| DK2OM | 18140,0 | vt | dly | 11 | SRB | YU1BI | FSK8 | 125 | 2600 | ALE, “YU1BI” – just for info! |
| DK2OM | 21000,0 | 1824 | 09 | 11 | B | | USB | | | Brazilian pirates – Rio de Janeiro with North Brazil – every Saturday |
| DK2OM | 21000,0 | vt | vd | 11 | E | | USB | | | Spanish fishery, Galician voice, daily, various times |
| DK2OM | 21000,0 | 1423 | 12 | 11 | INS | | USB | | | Indonesian pirates – also: 29.11.2013 at 0942 utc |
| DK2OM | 21000,0 | --- | --- | 11 | SDN | | USB | | | MFA Sudan – Khartoum with emba Yemen – voice traffic |
| DK2OM | 21000,0 | 0800 | 17 | 11 | CHN | | MFSK | | 6500 | Chinese multitone |
| DK2OM | 21002,1 | --- | --- | 11 | SDN | | F1B | 100 | 170 | 21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen |
| DK2OM | 21028,3 | 1543 | 08 | 11 | | | PSK4 | 75 | 2300 | Link11-CLEW |
| DK2OM | 21054,7 | 1033 | 07 | 11 | MRC | | USB | | | Moroccan fishery |
| DK2OM | 21096,0 | vt | dly | 11 | INS | YD00XH | FSK8 | 125 | 1750 | ALE, “YD00XH3” – daily, various times - just for info! |
| DK2OM | 21100,0 | 0943 | 01 | 11 | POR | | USB | | | Portuguese fishery - daily |
| DK2OM | 21111,0 | 0813 | 05 | 11 | RUS | | F1B | 50 | 200 | Chita – Far East Russia |
| DK2OM | 21111,0 | 1033 | 29 | 11 | FEa | | LSB | | | Far East pirates |
| DK2OM | 21140,8 | 1037 | 07 | 11 | MEa | | PSK8A | 2400 | 2400 | MIL-188-141B –App.C – daily, various times |
| DK2OM | 21145,0 | 0933 | 01 | 11 | MRC | | FSK8 | 125 | 1750 | ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” – various times, daily |
| DK2OM | 21375,0 | 0902 | 22 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar bursts – 21370 – 21380 kHz - 47 sps – duration 5.3 sec |
| DK2OM | 21438,0 | vt | dly | 11 | UKR | RCV | A1A | | | RIP90 de RCV - RUS Navy Sevastopol - daily |
| DK2OM | 21443,0 | 0910 | 22 | 11 | CHN | | FMCW | | 10k | Chinese OTH radar bursts – 21437 – 21447 kHz – 66.66 sps – duration 3.8 sec |
| DK2OM | 21446,0 | ady | dly | 11 | THA | HS0ZEA | A1A | | | HS0ZEA beacon – every 5 minutes - just for info! |
| DK2OM | 25000,0 | ady | dly | 11 | FIN | | A3E | | | time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day |
| DK2OM | 28000,0 | vt | dly | 11 | CIS | | F3E | | | 28000 – 29700 numerous CIS taxi nets – mostly Russia |
| DK2OM | 28000,0 | 1502 | 06 | 11 | B | | USB | | | Brazilian CBers |
| DK2OM | 28005,0 | ady | dly | 11 | RUS | | F3E | | | taxi net St. Peterburg, daily, all day |
| DK2OM | 28015,0 | 1702 | 03 | 11 | B | | USB | | | Brazilian CBers from 28215 kHz |
| DK2OM | 28025,0 | 1651 | 08 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28025,0 | 1123 | 13 | 11 | POR | | F1B | 51 | 320 | F1B bursts - west of Lisbon – daily - vt |
| DK2OM | 28035,0 | 1438 | 11 | 11 | E | | A3E | | | Spanish CBers |
| DK2OM | 28035,0 | 1453 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28035,0 | vt | dly | 11 | RUS | | F3E | | | taxi Moscow - daily |
| DK2OM | 28040,1 | 1705 | 09 | 11 | POR | | F1B | 51 | 320 | F1B bursts - west of Lisbon – Enagal GPS buoys |
| DK2OM | 28045,0 | 1453 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28051,0 | 1100 | 19 | 11 | CAm | | USB | | | mysterious oscillation – similar to sinus - Carribean region |
| DK2OM | 28055,0 | 1110 | 29 | 11 | RUS | | F3E | | | taxi Moscow |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|----------|-------|------|------|-------|---|
| DK2OM | 28055,0 | 1454 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28065,0 | 1455 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28065,0 | vt | dly | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28075,0 | 1530 | 08 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28085,0 | 1455 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28085,0 | 1010 | 08 | 10 | E | | A3E | | | Spanish CBers |
| DK2OM | 28095,0 | 1529 | 08 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28100,2 | ady | dly | 11 | POR | | F1B | 51 | 320 | F1B bursts - 28100.160 kHz - west of Lisbon – Enagal GPS buoys |
| DK2OM | 28105,0 | 1528 | 08 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28105,0 | vt | dly | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28115,0 | 1650 | 03 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28115,0 | vt | dly | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28135,0 | vt | dly | 11 | RUS | | F3E | | | RUS taxi - Barnaul |
| DK2OM | 28135,0 | 1652 | 03 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28145,0 | 1456 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28146,0 | vt | vd | 11 | ARG B | | FSK8 | 125 | 1750 | ALE, “LU8EX” “PY2TT” “DL1” – just for info! |
| DK2OM | 28165,0 | 1457 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28175,0 | 1457 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28185,0 | 1457 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28195,0 | 1458 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28200,0 | vt | dly | 11 | POR | | F1B | 51 | 320 | F1B bursts - west of Lisbon |
| DK2OM | 28205,0 | 1445 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28205,0 | 0915 | 22 | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28210,0 | 1411 | 12 | 11 | RUS | | F3E | | | Russian pirate playing music |
| DK2OM | 28215,0 | 1653 | 03 | 11 | B | | USB | | | Brazilian CBers |
| DK2OM | 28215,0 | 1033 | 14 | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28225,0 | 1445 | 06 | 11 | IRN | | FMCW | | 60k | OTH Radar Iran – 307 and 870 sps |
| DK2OM | 28225,0 | 1445 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28235,0 | 1446 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28245,0 | 1447 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28255,0 | 1448 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28255,0 | vt | dly | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28265,0 | 1711 | 29 | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 28275,0 | 1448 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28275,0 | 1102 | 01 | 11 | F | | FMCW | | 20k | OTH radar – 6 sps bursts - South France |
| DK2OM | 28285,0 | 1449 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28295,0 | 1449 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28305,0 | 1450 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28305,0 | vt | dly | 11 | RUS | | F3E | | | taxi - Arkhangelsk |
| DK2OM | 28305,0 | 1100 | 01 | 11 | POR | | A3E | | | Portuguese CBers |
| DK2OM | 28315,0 | 1450 | 06 | 11 | B | | A3E | | | Brazilian CBers |
| DK2OM | 28500,0 | 0946 | 10 | 11 | | | | | | frequency hopper |
| DK2OM | 29152,0 | 1037 | 13 | 11 | RUS | | F1B | 75 | 800 | harmonic from 7288 kHz (shift 200 Hz) – Nizhniy Novgorod |
| DK2OM | 29250,0 | --- | -- | 11 | E | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – 29249.905 kHz – Fuerteventura - daily, all day |
| DK2OM | 29252,0 | 1053 | 01 | 11 | | | F1B | 75 | 1000 | harmonic from 14626.0 kHz |
| DK2OM | 29375,0 | --- | -- | 11 | I | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – 29374.898 kHz – Galatone, South Italy - daily, all day |
| DK2OM | 29387,5 | --- | -- | 11 | IND | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – 29387,460 kHz – Indian NW coast, close to Pakistan - daily, all day |
| DK2OM | 29425,0 | 0914 | 16 | 11 | RUS | | F3E | | | taxi Moscow |
| DK2OM | 29450,0 | 1059 | 01 | 11 | MRC | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – 29449.870 kHz - area of El Aaiun – Morocco - daily, all day |
| DK2OM | 29500,0 | --- | -- | 11 | G | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – area of Gibraltar – daily, all |

| DK2OM | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH/SP | DETAILS |
|-------|---------|------|-----|----|-----|-------|--------|------|-------|---|
| | | | | | | | | | | day |
| DK2OM | 29525,0 | --- | --- | 11 | MRC | | F1B | 81.9 | 140 | Datawell-buoy “Waverider” – 29524.990 kHz - Agadir - Morocco – daily, all day |
| DK2OM | 29570,0 | 1043 | 07 | 11 | RUS | | PSK2 | 120 | 2600 | AT3004 – modem idle - Kaluga |
| DK2OM | 29660,0 | 1056 | 07 | 11 | RUS | | F1B | 44.7 | 1000 | harmonic from 14830 kHz - Krasnoyarsk |
| DK2OM | 29684,8 | --- | --- | 11 | I | | serial | | | serial modem, Italian MIL Brescia – Sporadic E! |
| DK2OM | 29699,8 | --- | --- | 11 | I | | serial | | | serial modem, Italian MIL Brescia – Sporadic E! |

IRTS – Ireland – EI5DD (Steve)

KARS – Kuwait – 9K2RR (Faisal)

MRASZ – Hungary - HA7PL (Laci)

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | SH | DETAILS |
|-------|---------|------|----|----|-----|-------|------|------|--------------------------------|
| MRASZ | 3540,0 | 1830 | 15 | 11 | | | A3E | | ui. fone |
| MRASZ | 3550,0 | 0549 | 1 | 11 | | | A3E | | french l. |
| MRASZ | 3593,8 | 2048 | 11 | 11 | UKR | D | A1A | | "D" beacon, On 27, 28 |
| MRASZ | 3740,0 | 1805 | 15 | 11 | | | OTHR | | 3740-3780 kHz |
| MRASZ | 3750,0 | 1653 | 28 | 11 | | | OTHR | | |
| MRASZ | 7016,0 | 1229 | 22 | 11 | | | PSK2 | | AT3004D |
| MRASZ | 7018,0 | 1756 | 1 | 11 | RUS | REA4 | F1B | 1000 | On 10, 11, 12, 22, 26, 27, 28 |
| MRASZ | 7038,7 | 1757 | 1 | 11 | UKR | D | A1A | | "D" beac. On 10,11,15,26,27,28 |
| MRASZ | 7038,8 | 1757 | 1 | 11 | RUS | P | A1A | | "P" beac. On 10,11,15,22,26,28 |
| MRASZ | 7038,9 | 1340 | 15 | 11 | RUS | S | A1A | | "S" beacon, On 26, 28 |
| MRASZ | 7039,0 | 1757 | 1 | 11 | RUS | C | A1A | | "C" beac. On 26, |
| MRASZ | 7050,6 | 1344 | 15 | 11 | | | A1A | | "HG4FC" beacon without perm. |
| MRASZ | 7076,0 | 1903 | 11 | 11 | | | A1A | | dotter |
| MRASZ | 7120,0 | 1758 | 1 | 11 | SOM | | A3E | | "Radio Hargaysa", On15,26,28 |
| MRASZ | 7155,0 | 1846 | 26 | 11 | | | A3E | | weak, hrd only carrier |
| MRASZ | 7169,0 | 1225 | 22 | 11 | | | F1B | 250 | ui. fone |
| MRASZ | 7195,0 | 1629 | 28 | 11 | | | A3E | | ui. fone |
| MRASZ | 10118,0 | 1725 | 15 | 11 | | | OTHR | | |
| MRASZ | 14192,0 | 0738 | 15 | 11 | RUS | | F1B | 200 | |
| MRASZ | 14295,0 | 1530 | 10 | 11 | TJK | | A3E | | 3rd. harmonic fm 4765 kHz |

OEVSU – Austria – OE3GSA (Gerd)

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH | DETAILS |
|-------|---------|------|----|----|------|-------|------|----|----|----------------------------------|
| oevsu | 3505,5 | 0842 | 13 | 11 | unid | unid | J3Eu | | | |
| oevsu | 7023,8 | 0612 | 30 | 10 | unid | unid | A1A | | | groups |
| oevsu | 7023,8 | 0640 | 30 | 10 | unid | unid | J3Eu | | | males chatting |
| oevsu | 10103,6 | 0545 | 07 | 11 | unid | unid | J3Eu | | | males chatting |
| oevsu | 14026,0 | 0600 | 26 | 11 | unid | unid | FMcw | | | OTHR |
| oevsu | 18108,8 | 1500 | 22 | 11 | unid | unid | J3Eu | | | male reading groups of 5 letters |

PZK – Poland – SP3UZ (Wladyslaw)

REP – Portugal – CT4AN (Jose Francisco)

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH | DETAILS |
|-----|--------|------|----|----|-----|-------|---------------|----|-----|--------------------------------------|
| REP | 3500 | 2327 | 04 | 11 | | | J3E-L | | | Fishermen, unid language |
| REP | 3500 | 2327 | 04 | 11 | | | J3E-L | | | Fishermen, unid language |
| REP | 3535 | 0810 | 12 | 11 | F | | J3E-L | | | French fishermen |
| REP | 3550 | 0753 | 05 | 11 | F | | A3E | | | INFRINGE IARU Band plan - AM mode |
| REP | 3700 | 2105 | 14 | 11 | E | | J3E-L | | | Fishermen |
| REP | 3708 | 0733 | 30 | 11 | RUS | | J3E-U | | | Navy |
| REP | 7000 | 2257 | 08 | 11 | E | | J3E-L | | | Spanish pirates, truckers |
| REP | 7000 | 2256 | 09 | 11 | E | | J3E-L | | | Spanish truckers |
| REP | 7005 | 2050 | 21 | 11 | | | J3E-L | | | Unid ops, engine sounds |
| REP | 7015 | 0808 | 19 | 11 | E | | J3E-U | | | Fishermen |
| REP | 7025 | 2211 | 05 | 11 | B | | F1B | 75 | 240 | Encrypted FSK |
| REP | 7030 | 2131 | 21 | 11 | B | | J3E-L | | | Brazilian pirates |
| REP | 7030 | 2132 | 21 | 11 | | | FMCW | | | Foghorn-like sound (oth radar?) |
| REP | 7032 | 2019 | 22 | 11 | | | J3E-L | | | Far-east unid. Language |
| REP | 7039,0 | 2301 | 09 | 11 | RUS | C | A1A | | | MOSCOW, ADY, DLY |
| REP | 7039,1 | 2211 | 18 | 11 | KGZ | A | A1A | | | KIRGISISTAN, ADY, DLY |
| REP | 7039,2 | 2255 | 09 | 11 | RUS | F | A1A | | | VLADIVOSTOK, ADY, DLY |
| REP | 7039,3 | 2132 | 16 | 11 | RUS | K | A1A | | | VOLGOGRAD, ADY, DLY |
| REP | 7038,6 | 2305 | 09 | 11 | RUS | S | A1A | | | KALININGRAD, ADY, DLY |
| REP | 7039,5 | 2258 | 16 | 11 | RUS | M | A1A | | | MAGADAN, ADY, DLY |
| REP | 7038,7 | 2155 | 18 | 11 | UKR | D | A1A | | | SEVASTOPOL, ADY, DLY |
| REP | 7038,8 | 2310 | 09 | 11 | RUS | P | A1A | | | MURMANSK, ADY, DLY |
| REP | 7105 | 2223 | 02 | 11 | CHN | | 8k00 A3EGN | | | Chinese BC station |
| REP | 7105 | 1929 | 22 | 11 | E | | J3E-U | | | Fishermen and wives with phone patch |
| REP | 7120 | 1803 | 12 | 11 | SOM | | 8k00 A3EGN | | | Radio Hargeysa ? |
| REP | 7120 | 0354 | 15 | 11 | SOM | | 8k00 A3EGN | | | Broadcasting |
| REP | 7171 | 2019 | 17 | 11 | | | J3E-L | | | Arabic lang. fishermen |
| REP | 10101 | 2029 | 01 | 11 | | | J3E-U | | | Unid male ops chatting |
| REP | 10101 | 2139 | 08 | 11 | | | J3E-U | | | Unids Arabic ops |
| REP | 10101 | 2029 | 01 | 11 | | | J3E-U | | | Unid male ops chatting |
| REP | 10116 | 2016 | 04 | 11 | | | J3E-U | | | Unid language ops |
| REP | 10116 | 2016 | 04 | 11 | | | J3E-U | | | Unid language ops |
| REP | 10121 | 0942 | 30 | 11 | E | | J3E-U | | | Spanish fishery |
| REP | 10125 | 1735 | 30 | 11 | E | | J3E-U | | | Spanish fishery |
| REP | 10130 | 2029 | 17 | 11 | MRC | | J3E-U | | | Moroccan fishermen |
| REP | 10132 | 2022 | 22 | 11 | | | J3E-U | | | Arabic talks |
| REP | 10140 | 2014 | 04 | 11 | MRC | | J3E-U | | | Moroccan fishermen, daily |
| REP | 10140 | 2302 | 09 | 11 | | | J3E-U | | | Op calling San Miguel in spanish |
| REP | 10143 | 2246 | 09 | 11 | POR | | J3E-U | | | Male op talking to wife, kids |
| REP | 14014 | 0218 | 14 | 11 | MRC | | J3E-U | | | Several Intruders |
| REP | 14190 | 1455 | 03 | 11 | I | | J3E-U | | | Italian Music jamming QSO's |
| REP | 18090 | 1423 | 17 | 11 | | | FMCW | | | OTH radar 20kHz |
| REP | 21000 | 1824 | 09 | 11 | B | | J3E-U | | | Brazilian fishermen |
| REP | 21105 | 1022 | 12 | 11 | | | J3E-U | | | Arab talking |
| REP | 21150 | 1420 | 17 | 11 | | | FMCW | | | OTH radar 20kHz |
| REP | 21205 | 0922 | 25 | 11 | E | | J3E-U | | | Fishermen talking |
| REP | 21340 | 2302 | 25 | 11 | | | FMCW | | | OTH radar |
| REP | 28015 | 1805 | 02 | 11 | B | | J3E-U | | | USB brazilian ops, daily |
| REP | 28015 | 1805 | 02 | 11 | B | | J3E-U | | | USB brazilian ops, daily |
| REP | 28065 | 0955 | 23 | 11 | RUS | | F3E | | | Taxis |
| REP | 28065 | 1944 | 30 | 11 | B | | A3E | | | Brazilian AM ops |
| REP | 28075 | 1428 | 11 | 11 | | | A3E | | | Taxis |
| REP | 28145 | 1554 | 20 | 11 | RUS | | F3E | | | Taxis |
| REP | 28150 | 0938 | 23 | 11 | RUS | | F3E | | | Taxis |
| REP | 28160 | 1731 | 11 | 11 | | | J3E-U | | | Unid language ops |
| REP | 28170 | 0006 | 30 | 11 | F | | A3E | | | CB's inside Ham Band |
| REP | 28175 | 2159 | 30 | 11 | F | | A3E | | | CB |
| REP | 28235 | 1708 | 30 | 11 | RUS | | F3E | | | Taxis |
| REP | 28580 | 0938 | 02 | 11 | | | FMCW | | | OTH radar |
| REP | 28580 | 0938 | 02 | 11 | | | FMCW | | | OTH radar |
| REP | 28700 | 1203 | 03 | 11 | | | F3E | | | INFRINGE IARU Band plan |
| REP | 28700 | 1203 | 03 | 11 | | | F3E | | | INFRINGE IARU Band plan |
| REP | 29070 | 1433 | 03 | 11 | | | FMCW | | | OTH radar |

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH | DETAILS |
|-----|-------|------|----|----|-----|-------|-------|----|-----|------------------------------|
| REP | 29070 | 1433 | 03 | 11 | | | FMCW | | | OTH radar |
| REP | 29170 | 1056 | 18 | 11 | RUS | | F3E | | | Russian taxi dispatcher |
| REP | 29250 | 1338 | 03 | 11 | | | F1B | 82 | 160 | Datawell buoy, idling |
| REP | 29250 | 1654 | 09 | 11 | | | F1B | 82 | 160 | Datawell buoy, idling |
| REP | 29250 | 1338 | 03 | 11 | | | F1B | 82 | 160 | Datawell buoy, idling |
| REP | 29255 | 1206 | 09 | 11 | | | F3E | | | Unid language ops, (S9+20dB) |
| REP | 29255 | 1206 | 08 | 11 | | | F3E | | | Unid language ops, (S9+20dB) |
| REP | 29360 | 1141 | 08 | 11 | | | J3E-U | | | Unid language male ops |
| REP | 29360 | 1141 | 03 | 11 | | | J3E-U | | | Unid language male ops |
| REP | 29620 | 0932 | 10 | 11 | | | FMCW | | | OTH radar |
| REP | 29620 | 0932 | 10 | 11 | | | FMCW | | | OTH radar |

RSGB - Great Britain – G4BOH (Chris)

| Society | kHz | UTC | DD | MM | ITU | IDENT | MODE | BAUD | SHIFT | REMARKS |
|---------|------|------|----|----|------|-------|-------------|------|-------|---|
| RSGB | 7108 | 0900 | 05 | 11 | NATO | | STANAG 4285 | 2400 | 2400 | Phoned Baldock with info, signal QRT about 3 mins. later! |

SRAL – Finland – OH2BLU (Pekka)

| Society | kHz | UTC | DD | MM | ITU | IDENT | MODE | BAUD | SHIFT | REMARKS |
|---------|--------|-----------|---------|----|-----|-------------|---------|------|-------|-------------------|
| SRAL | 7008,0 | 1245-1400 | 28. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 7009,0 | 1200-2030 | 27. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7012,0 | 1200-1300 | 6. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 7013,0 | 0705-1300 | 29. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7014,0 | 1400 | 24. | 11 | | UiPTR | F1B | | | |
| SRAL | 7015,0 | 0915-1200 | 11. 20. | 11 | | UiPTR | F1B | | | |
| SRAL | 7016,0 | 0930-1040 | 2. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7018,0 | 1000-2030 | dly | 11 | RUS | REA4 | F1B/N0N | | 1000 | |
| SRAL | 7022,0 | 0950 | 25. | 11 | RUS | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7038,7 | h24 | dly | 11 | UKR | D | A1A | | | Sevastopol |
| SRAL | 7038,8 | 0530-1930 | dly | 11 | RUS | P | A1A | | | Kaliningrad |
| SRAL | 7038,9 | h24 | dly | 11 | RUS | S | A1A | | | Severomorsk |
| SRAL | 7039,0 | 0530-1600 | dly | 11 | RUS | C | A1A | | | Moscow |
| SRAL | 7044,0 | 1100-1425 | 9. 13. | 11 | | UiPTR | F1B | | 500 | |
| SRAL | 7047,0 | 0300-0800 | 12. 13. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7089,0 | 0900-1000 | 11. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7098,0 | 0800-1400 | 6. 21. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 7102,0 | 0745-1300 | 14. 22. | 11 | RUS | UiPTR | F1B/N0N | | 200 | |
| SRAL | 7104,0 | 0800-1300 | 14. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7111,0 | 0610-0710 | 13. 21. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 7114,0 | 0545-0700 | 20. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7120,0 | 1500-1900 | dly | 11 | SOM | R. Hargeisa | A3E | | | |
| SRAL | 7125,0 | 0515 | 19. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7142,0 | 0745-1630 | * | 11 | | UiPTR | F1B | | 250 | Days: 15. 25. 27. |

| Society | kHz | UTC | DD | MM | ITU | IDENT | MODE | BAUD | SHIFT | REMARKS |
|---------|---------|-----------|---------|----|-----------|-----------------|------|------|-------|---------------------------------|
| SRAL | 7158,0 | 1320-1340 | 21. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7161,0 | 0545-0600 | 19. | 11 | RUS | RMV32 | A1A | | | |
| SRAL | 7164,0 | 0730-1300 | 14. 22. | 11 | | UiPTR | F1B | | | |
| SRAL | 7181,62 | 0700-0800 | 29. | 11 | | UiCarr | N0N | | | |
| SRAL | 7186,0 | 0745-1400 | 19. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7191,8 | 1020-1130 | 2. | 11 | | UiBC(?) | F3E | | | Russ. MX |
| SRAL | 7192,0 | 0720-0905 | 6. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 7193,0 | 1225-1250 | 1. 3. | 11 | | UiPTR | F1B | | | |
| SRAL | 7195,0 | 0330-0815 | 7. | 11 | | UiPTR | F1B | | 200 | |
| SRAL | 7195,0 | 1220 | 10. | 11 | RUS | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7196,0 | 1330-1400 | 21. | 11 | | UiPTR | F1B | | 500 | |
| SRAL | 7197,0 | 0625-1510 | 29. 30. | 11 | RUS | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7198,0 | 0130-0800 | 5. 8. | 11 | RUS | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 7198,8 | 0745-1535 | 8. 9. | 11 | | UiPTR | F1B | | 800 | |
| SRAL | 7198,8 | 1305-1320 | 23. | 11 | | UiBC(?) | F3E | | | Russ. MX |
| SRAL | 13999,0 | 0715-1335 | 11. 28. | 11 | | UiMUX | PSK2 | 120 | 2600 | Subcarrier 14000,3 kHz |
| SRAL | 14006,0 | 0920 | 11. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14026,0 | 0700-1335 | * | 11 | RUS | UiMUX | PSK2 | 120 | 2600 | Days: 4. 6. 8. 15. 17. 25. 26. |
| SRAL | 14036,0 | 1000-1305 | * | 11 | RUS | REA4 | F1B | | 2000 | 2f, days: 3.-22. 29. 30. |
| SRAL | 14052,0 | 1330 | 11. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14054,0 | 1355-1405 | 29. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14064,0 | 0940-1230 | 14. | 11 | RUS | UiPTR | F1B | | 200 | |
| SRAL | 14066,0 | 0910-1050 | 1. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14084,0 | 0925 | 7. | 11 | | UiCW | A1A | | | MR 5BL |
| SRAL | 14085,5 | 0815-0855 | 14. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14086,0 | 0910 | 1. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14116,0 | 0855-1230 | 14. | 11 | RUS | UiPTR | F1B | | 250 | |
| SRAL | 14118,0 | 1330 | 11. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14222,0 | 0650-0750 | 18. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14240,0 | 0900-1000 | 5. | 11 | | UiPTR | F1B | | 250 | |
| SRAL | 14242,0 | 0840 | 15. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14261,0 | 0630-1200 | 12. 13. | 11 | | UiMUX | PSK2 | 120 | 2600 | |
| SRAL | 14295,2 | 0200-1930 | dly | 11 | TJK | R Tojikiston | A3E | | | 3f 4765,07 kHz, Yangiyul TX |
| SRAL | 18000 | 0545 | 6. | 11 | CYP / TUR | UiOTHR | FMCW | | | 50Hz / 20 kHz |
| SRAL | 18138,0 | 0625-0905 | * | 11 | | UiMUX | PSK2 | 120 | 2600 | Days: 6. 7. 8. 22. 23. 27. 30. |
| SRAL | 21 MHz | 0615-1120 | * | 11 | CYP / TUR | UiOTHR | FMCW | | | 50Hz / 20 kHz, 5. 6. 8. 20. 23. |
| SRAL | 21438,0 | 0700-1430 | dly | 11 | | RCV | A1A | | | |
| SRAL | 24 MHz | 1340- | 1. 16. | 11 | CYP / | UiOTHR | FMCW | | | 50Hz / 20 kHz |

| Society | kHz | UTC | DD | MM | ITU | IDENT | MODE | BAUD | SHIFT | REMARKS |
|-------------|--------|-----------|--------|----|-----------|------------|------|------|-------|---|
| | | 1430 | | | TUR | | | | | |
| SRAL | 28 MHz | 0620-1340 | * | 11 | IRN | UiOTHR | FMCW | | | 307 & 870 Hz / 60 kHz, days: 2. – 22. |
| SRAL | 28 MHz | 0620-1430 | * | 11 | CYP / TUR | UiOTHR | FMCW | | | 25/50Hz / 20 kHz, days: 1.-9. 13.-16. 19. 20. 23. |
| SRAL | 28 MHz | 0705-1245 | 1.-25. | 11 | RUS | Taxi disp. | F3E | | | 298 reports |

USKA – Switzerland – HB9CET (Peter)

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH (BW) | DETAILS |
|-------------|----------------------------|------|----|----|-----|---------|--------|--------|---------|--|
| USKA | 6999.8 | 1703 | 17 | 11 | | | PSK-8 | 2400 | 2400 | partially in 40m band |
| USKA | 7000.0 | 2359 | 01 | 11 | | D | A1A | | | Beacon D often |
| USKA | 7000.0 | vt | vd | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A various ID's |
| USKA | 7000.0 | 2235 | 20 | 11 | | | J3E-U | | | unid language |
| USKA | 7000.0 | 0121 | 24 | 11 | | | N0N | | | long lasting carrier often |
| USKA | 7001.8 | 2203 | 10 | 11 | | | OFDM60 | 36.5 | 2k7 | followed by ALE and voice 44.5Hz spacing |
| USKA | 7002.8 | 1134 | 13 | 11 | | | FSK-4 | 125 | ~ 900 | spacing 300Hz |
| USKA | 7008.0 | 1142 | 13 | 11 | | | F1B | 75 | 250 | often |
| USKA | 7010.0 | vt | vd | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A, various ID's |
| USKA | 7014.0 | 0919 | 11 | 11 | | | F1B | 75 | 250 | |
| USKA | 7014.0 | 1157 | 13 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7018.0 | 0004 | 02 | 11 | RUS | REA4 | F1B | 100 | 1k | ID in F1A |
| USKA | 7020.0 | vt | vd | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A; various ID's |
| USKA | 7030.0 | 0005 | 02 | 11 | | | J3E-U | | 2K7 | far east language |
| USKA | 7036.0 | 0913 | 19 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7038.7 | 2349 | 01 | 11 | UKR | D | A1A | | | Beacon D Sevastopol daily |
| USKA | 7038.8 | 2329 | 22 | 11 | RUS | P | A1A | | | Beacon P Kaliningrad daily |
| USKA | 7038.9 | 2157 | 30 | 11 | RUS | S | A1A | | | Beacon S Murmansk daily |
| USKA | 7039.3 | 1156 | 09 | 11 | RUS | K | A1A | | | Beacon K Petropavlovsk daily |
| USKA | 7039.4 | 1158 | 09 | 11 | RUS | M | A1A | | | Beacon M Magadan daily |
| USKA | 7054.0 7065.0 7066.0 | 1803 | 28 | 11 | | | FMCW | 47 | ~10k | OTHR; BD approx 5.5s BRI approx 18.5s shifting frequency |
| USKA | 7070.0 | vt | vd | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A; many ID's daily |
| USKA | 7079.0 | 1926 | 29 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7089.8 | 1806 | 07 | 11 | | | G1D | 2400 | 2k6 | PSK-8: Link 11- SLEW often |
| USKA | 7101.8 | 1511 | 04 | 11 | | | G1D | 2400 | 2k4 | Stanag 4285 600bps/long |
| USKA | 7101.875 | 1358 | 22 | | | | A1 | | | Jammer, splatters > 2k |
| USKA | 7102.0 | 1358 | 22 | 11 | | | F1B | 75 | 250 | jammed by dotter |
| USKA | 7105.0 | 2249 | 08 | 11 | | | ? | | ~ 8k | unid: digital mode or jammer? daily |
| USKA | 7106.0 | 2139 | 10 | 11 | | | FMCW | 66.66 | 10k | OTHR BD approx 3s BRI 22s |
| USKA | 7110.0 | 2141 | 10 | 11 | | | FMCW | 66.66 | 10k | OTHR, shifting frequency |
| USKA | 7113.0 | 2141 | 10 | 11 | | | FMCW | 66.66 | 10k | OTHR, shifting frequency |
| USKA | 7114.0 | 0906 | 20 | 11 | | | J7D | | 2k7 | CIS 12 system idling (13 carriers) |
| USKA | 7117.0 | 2357 | 07 | 11 | | | F1B | 75 | 200 | |
| USKA | 7120.0 | 1714 | 04 | 11 | SOM | | A3E | | | Radio Hargaysa daily |
| USKA | 7149.0 | 0114 | 24 | 11 | | | J7D | | 2k7 | CIS12 system, idling |
| USKA | 7158.0 | 2155 | 10 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7158.0 | 2155 | 10 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7176.0 | 2055 | 13 | 11 | | | F1B | 75 | 250 | |
| USKA | 7184.0 | 1800 | 07 | 11 | | | J7D | 12x120 | 2k7 | CIS12 idling |
| USKA | 7186.0 | 1151 | 24 | 11 | | | J7D | 12x120 | 2k7 | PSK-4: CIS12 = AT3104D often |
| USKA | 7197.0 | vt | vt | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A, more than 80 different ID's |
| USKA | 7197.0 | 2103 | 23 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7198.0 | 2352 | 07 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 7198.0 | 1001 | 09 | 11 | | | A1A | | | Jammer, interfering hams |
| USKA | 7198.4 | 1001 | 09 | 11 | | | F1B | 109.4 | ~790 | slightly shifting QRG |
| USKA | 7200.0 | 2210 | 22 | 11 | | | A3E | | ~12k | BC, interfering 40m band daily sounds like Chinese language |
| USKA | 7200.0 | 2226 | 22 | 11 | | | | | ~20k | Jammer |
| USKA | 10150.0 | 1834 | 09 | 11 | | | FMCW | 50 sps | 20k | |
| USKA | 14006.0 | 0922 | 11 | 11 | | | J7D | | 2k7 | CIS12 idling |

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | BD | SH (BW) | DETAILS |
|--------------------------------------|----------------------------|------|----|----|-----|---------|--------|--------|---------|--|
| USKA | 14026.0 | 0905 | 04 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D often |
| USKA | 14036.0 | 1632 | 20 | 11 | | | F1B | 100 | 2000 | harmonic of 7018 100/1000 |
| USKA | 14052.0 | 1318 | 11 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D 2 pilot tones |
| USKA | 14064.0 | 1014 | 14 | 11 | | | F1B | 75 | 250 | |
| USKA | 14116.0 | 0944 | 14 | 11 | RUS | | F1B | | 250 | idling; from region Kaliningrad |
| USKA | 14118.0 | 1314 | 11 | 11 | | | J7D | 12x120 | 2k7 | PSK-2: CIS12 = AT3004D |
| USKA | 14192.0 | 1234 | 04 | 11 | | | F1B | 50 | 200 | often |
| USKA | 14261.0 | 1056 | 12 | 11 | | | OFDM60 | 36.5 | 2k7 | 44.5Hz spacing, Piloton |
| USKA | 14280.0 | 1014 | 13 | 11 | | | A3E | | | numbers station in Russian |
| USKA | 14302.0 | 0856 | 04 | 11 | | | | 83.3 | 10k | OTHR BD ~3.0 s, BRI ~12s |
| USKA | 14344.65 | 1608 | 11 | 11 | | | PSK-8 | 2400 | 2k4 | similar to MIL 188-110, modified burst system daily |
| USKA | 18100.0 | vt | vd | 11 | | various | MFSK8 | 125 | 1750 | MIL 188-141A, different ID's |
| USKA | 18137.5 | 0921 | 19 | 11 | | | J7D | | 2k7 | CIS12 system idling often |
| USKA | 18138.0 | 0803 | 28 | 11 | | | J7D | 12x120 | 2k7 | CIS12 often |
| USKA | 21140.8 | 0931 | 13 | 11 | | | PSK-8 | 2400 | 2k4 | unid system often |
| USKA | 7127.0 7129.0 7132.0 | 1655 | 28 | 11 | | | FMCW | 66.66 | 10k | OTHR shifting frequency BD approx 11.5s BRI 31.5s |
| USKA | 21410.0 | 1105 | 24 | 11 | | | FMCW | 50 sps | 20k | OTHR; over many hours! |
| USKA | 24990.0 | 0937 | 19 | 11 | | | FMCW | 50 sps | 20k | OTHR |
| USKA | 28065.15 | 1421 | 10 | 11 | | | F1B | 51 | 300 | GPS fishery buoy |
| USKA | 28085.0 | 1106 | 01 | 11 | | | FMCW | 50 sps | 20k | OTHR |
| USKA | 28505.0 | 0927 | 11 | 11 | | | | | ~50k | OTHR, varying sweep rates |
| USKA | 28600.0 | 1116 | 26 | 11 | | | FMCW | 25 sps | 20k | OTHR |
| USKA | 28845.0 | 1238 | 01 | 11 | | | FMCW | 25 sps | 20k | OTHR |
| USKA | 28930.0 | 1430 | 12 | 11 | | | FMCW | 50 sps | 20k | OTHR |
| USKA | 29152.0 | 1127 | 13 | 11 | | | F1B | 75 | 800 | harmonic of 7288 75/200 |
| USKA | 29160.0 | 1112 | 01 | 11 | | | FMCW | 25 sps | 20k | OTHR |
| USKA | 29230.0 | 0954 | 03 | 11 | | | FMCW | 25 sps | 20k | OTHR |
| USKA | 29450.0 | 1654 | 01 | 11 | | | F1B | 81.9 | 140 | Datawell buoy daily |
| <u>Errors and omissions excepted</u> | | | | | | | | | | |

Veron 1 – Netherlands – PA2GRU (Dick)

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | SHIFT | DETAILS |
|-------|---------|-------|----|----|-----|--------|-------|-------|---|
| VERON | 3523.0 | 18.35 | 25 | 11 | | Stanag | | | 18.36 QRT |
| VERON | 3524.0 | 20.43 | 27 | 11 | | UiPTR | F1B | | Ptr |
| VERON | 3527.0 | 20.43 | 27 | 11 | | UiPTR | F1B | | Revs |
| VERON | 3572.2 | 20.45 | 27 | 11 | | UiPTR | F1B | | Ptr |
| VERON | 3585.0 | 18.41 | 25 | 11 | | Stanag | | | |
| VERON | 3593.7 | 20.46 | 27 | 11 | UKR | D | A1A | | D-beacon |
| VERON | 3593.9 | 20.47 | 27 | 11 | RUS | S | A1A | | S-beacon |
| VERON | 3608.0 | 20.48 | 27 | 11 | | UiPTR | F1B | | Revs |
| VERON | 7018.0 | 21.37 | 27 | 11 | | UiCW | A1A | | Dotter (followed by: 5F) |
| VERON | 7018.0 | 21.41 | 27 | 11 | RUS | REA4 | A1A | | REA4 bt 27210 5F) |
| VERON | 7036.0 | 18.10 | 16 | 11 | | UiPtr | F1B | 250 | Ptr |
| VERON | 7038.7 | 14.50 | 10 | 11 | UKR | D | A1A | | D-beacon |
| VERON | 7038.7 | 18.34 | 16 | 11 | UKR | D | A1A | | Beacon Sevastopol |
| VERON | 7038.8 | 11.04 | 7 | 11 | RUS | P | A1A | | P-beacon. Parallel 7133,0 |
| VERON | 7038.8 | 16.03 | 16 | 11 | RUS | P | A1A | | Beacon Kaliningrad |
| VERON | 7038.9 | 18.34 | 16 | 11 | RUS | S | A1A | | Beacon Severomorsk |
| VERON | 7038.9 | 19.53 | 7 | 11 | RUS | S | A1A | | beacon S, |
| VERON | 7039.0 | 14.44 | 10 | 11 | RUS | C | A1A | | C-beacon (weak) |
| VERON | 7110.0 | 19.07 | 20 | 11 | RUS | UiPtr | F1B | 250 | Ptr |
| VERON | 7120.0 | 18.50 | 18 | 11 | SOM | BC | A3E | | Radio Hargaysa. Off air at 19.00 utc |
| VERON | 7133.0 | 11.02 | 7 | 11 | RUS | P | A1A | | P-beacon. Also 17/11 16.22 utc |
| VERON | 7150.0 | 15.36 | 27 | 11 | UKR | UiILL | J3e-U | | English, male voices, fishery |
| VERON | 7166.6 | 20.10 | 30 | 11 | E | UiILL | J3e-U | | Spanish male voices, fishery? |
| VERON | 7171.0 | 23.07 | 16 | 11 | | | | | Frequency hopper |
| VERON | 7198.0 | 18.45 | 16 | 11 | RUS | UiMux | PSK2 | 2600 | |
| VERON | 14026.0 | 08.03 | 4 | 11 | RUS | UiMUX | PSK | 2600 | 12 MPSK AT3004D |

| SOC | kHz | UTC | DD | MM | ITU | IDENT | MODE | SHIFT | DETAILS |
|-------|---------|-------|----|----|----------|---------|-------|-------|---|
| VERON | 14116,0 | 12.34 | 5 | 11 | | UiPTR | F1B | | Ptr |
| VERON | 14192,0 | 08.05 | 4 | 11 | RUS | UiPtr | F1B | 200 | Ptr, Russian Navy |
| VERON | 14216,0 | 10.44 | 28 | 11 | | OTHR | FMCW | | radar |
| VERON | 14261,0 | 11.27 | 12 | 11 | | OFDM | | | |
| VERON | 18165,0 | 10.38 | 2 | 11 | Portugal | UiILL | J3e-U | | Portugese, several male voices, fishery |
| VERON | 21265,0 | 13.13 | 16 | 11 | | | | | Frequency hopper |
| VERON | 21315,0 | 10.30 | 16 | 11 | Maroc | UiILL | J3e-U | | Arabic, male voices, fishery |
| VERON | 21410,0 | 11.27 | 24 | 11 | | UiRadar | FMCW | 30k | OTHR; 50 sps |
| VERON | 21438,0 | 14.35 | 10 | 11 | RUS | RCV | A1A | | RBE86 DE RCV QTC 732 23 10 1545 732 |
| VERON | 21438,0 | 14.35 | 10 | 11 | RUS | RCV | A1A | | BT NAWAREA (etc) |
| VERON | 21438,0 | 07.59 | 21 | 11 | RUS | RCV | A1A | | RBE86 DE RCV QTC 742 31 19 0401 742 |
| VERON | 21438,0 | 07.59 | 21 | 11 | RUS | RCV | A1A | | BT NAWIP (etc) |
| VERON | 24896,0 | 12.53 | 16 | 11 | | OTHR | FMCW | | radar |
| VERON | 28025,0 | 10.55 | 18 | 11 | | UiPTR | F1B | | Revs/Ptr (burst) |
| VERON | 28055,0 | 12.52 | 16 | 11 | RUS | Taxi | F3E | | taxi traffic female |
| VERON | 28085,0 | 13.45 | 1 | 11 | | OTHR | FMCW | | radar |
| VERON | 28145,0 | 10.48 | 24 | 11 | RUS | | F3E | | Taxi traffic |
| VERON | 28155,0 | 10.50 | 24 | 11 | RUS | | F3E | | Taxi traffic |
| VERON | 28185,0 | 11.45 | 30 | 11 | RUS | Taxi | F3E | | taxi traffic, female |
| VERON | 28255,0 | 10.52 | 24 | 11 | RUS | | F3E | | Taxi traffic |
| VERON | 28275,0 | 10.53 | 24 | 11 | RUS | | F3E | | Taxi traffic |
| VERON | 28475,0 | 15.11 | 3 | 11 | | OTHR | FMCW | | radar |
| VERON | 28480,0 | 11.05 | 17 | 11 | | UiRadar | FMCW | 50k | OTHR; 300 & 870 sps |
| VERON | 29165,0 | 13.01 | 7 | 11 | | OTHR | FMCW | | radar |

The monitoring team of IARU Region 1

Many thanks for your interest and help in 2013!

Seasons Greetings and Merry Christmas to all
our members and friends!

We wish you and your families a healthy and peaceful year 2014.

DK2OM – Wolf and HB9CET - Peter

credits:

Wavecom Elektronik – Buelach – Switzerland

SSB-Electronic – Iserlohn – Germany

BAZ – Special Antennas – Bad Bergzabern - Germany

go2SIGNALS - PLATH AG – Bern - Switzerland

German PTT (BNetzA = Federal Network Agency)

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