



International Amateur Radio Union

Region 1



# Monitoring System

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The monthly newsletter for Region 1

## September 2016

### The 30 members of the IARUMS Region 1 Monitoring Team:



### Acknowledgements

ARAT: 3V8CB – Ahmed ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ ASTRA: DL1BDF – Mustapha ++ DARC: DK2OM – Wolf ++ EARS: A61DJ – Obaid ++ ERASD: SU1SA – Sayed ++ HRS: 9A5DGZ – Gianluca ++ IARC: 4Z1AB – Amos ++ IRTS: EI3GYB - Michael KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ NRRL: LA4EU – Hans Arne ++ OEVS: OE3GSA – Gerd ++ PZK: SP9BRP – Jan ++ RAL: OD5RI – Riri ++ REF: F5MIU – Francis ++ REP: CT4AN – Jose ++ ROARS: A41MA - Younis ++ RSGB: M0VRR - Vaughan ++ SARL: ZS6NS - James ++ SRAL: OH2BLU - Pekka ++ SSA – Ullmar ++ UBA: ON8IM – Ivan +++ URE: EB1TR - Fabian ++ USKA: HB9CET - Peter ++ VERON: PA2GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite) ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ YB3PET – Titon (Co-ordinator Region 3) ++ DF8FE – (Webmaster assis.) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ 9K2RR – Faisal (EC-IARU-R1) ++ YO9RIJ – Petrica ++ PTTs: BAKOM (Swiss), BNetzA Konstanz (Germany) ++ OFCOM (UK) ++ Dutch AT

Part 1: News and infos

Part 2: Detailed reports of the national co-ordinators

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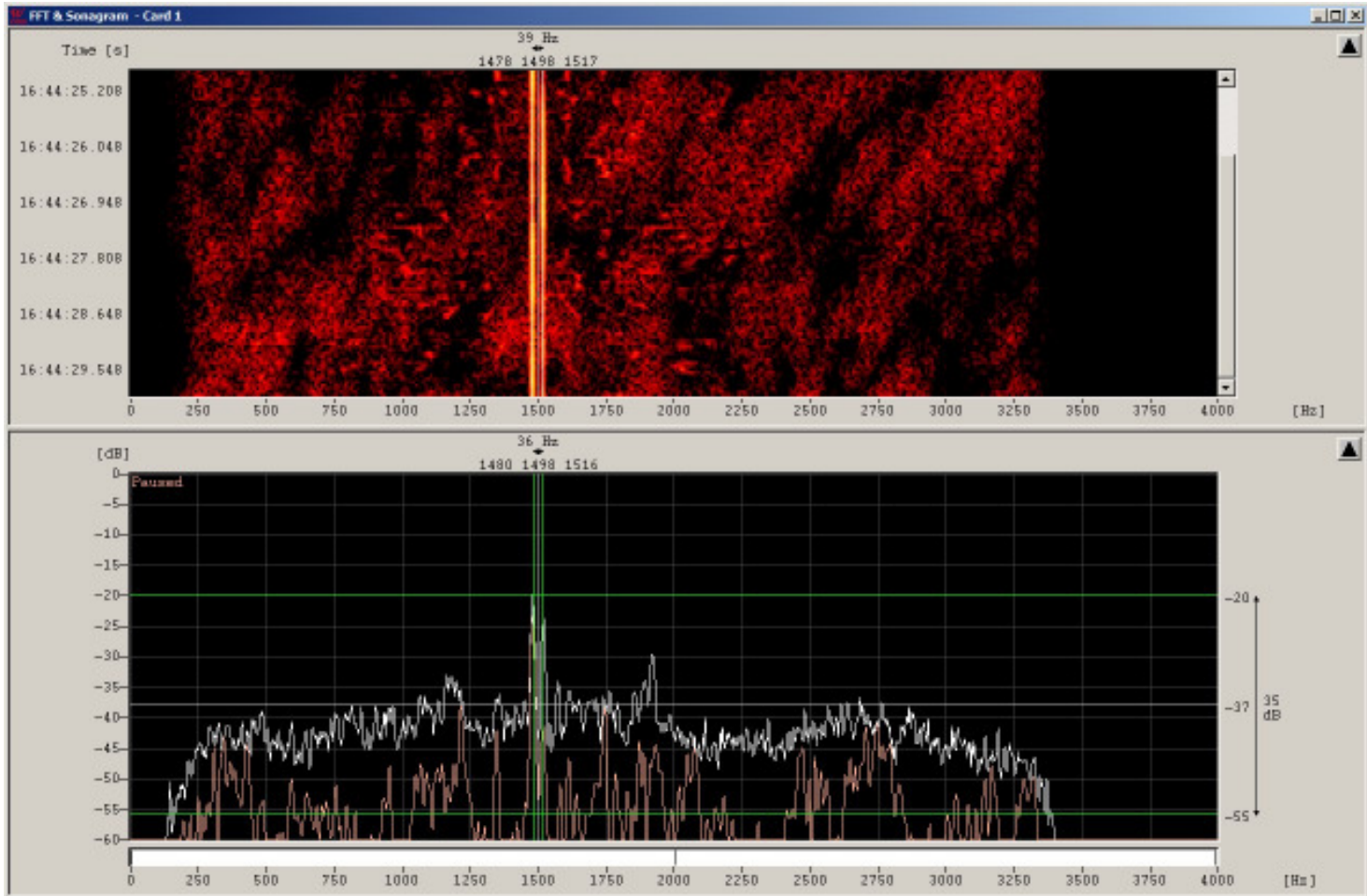
# Part 1: News and Infos

## 1. Radio Eritrea again on 7 MHz

We observed again Radio Eritrea on 7175.989 kHz and also on 7146.557 kHz with different programs (both disturbed by Radio Ethiopia with white noise). The German, Austrian and Swiss PTTs were informed for official complaints.

### Below:

You can see the carriers from Eritrea and Ethiopia on 7175 kHz, BC modulation on both sidebands and the white noise from Ethiopia. Screenshot: DK2OM with Wavcom W-Code on Sept. 22<sup>nd</sup> at 1644 UTC



## 2. Beacon "V" on 7091.5 kHz:

The CW-beacon "V" loop was daily audible on 7091.543 kHz. Location: Almaty, Kazakhstan.

## 3. Russian Radar Contayner on 7 and 14 MHz

The Russian radar Contayner was again active with long lasting transmissions on 7 and 14 MHz, often with many spurious emissions.

## 4. REA4 – again on 7117 kHz

The Russian airforce Moscow was again active on 7117 kHz on F1B – 100 Bd – 1000 Hz shift – mostly idling. The ident "REA4" was sent on CW at 1640 UTC on the mark-QRG. Observed by DK2OM on Sept. 7<sup>th</sup> at 1418 UTC.

## 5. Russian Navy Sevastopol on 14180 kHz

The Russian Navy (ident "RDL") was transmitting on 14180 kHz on F1B with 50 Bd and 200 Hz shift for several days. Location: Sevastopol – Crimea  
The German PTT filed an official complaint.

## 6. Russian MIL on 7016 kHz

A Russian MIL transmission on F1B (75 Bd – 250 shift) disturbed the CW-part on 7016 kHz for several days. Location: Moscow

## 7. Radar Iran on 28960 kHz

The Iranian radar was daily transmitting 28960 kHz on FMOP with 150 and 313 sps covering about 50 kHz with many spurious emissions. Due to bad conditions on 10 m the signals could not be found during the last September days.

## 8. Chinese broadband OTH radars on 14 MHz

I got some complaints about the “Woodpecker” on 14 MHz from different HAMs. But this was not the Russian “Woodpecker”. A Chinese broadband caused strong QRM on 14205 – 14365 kHz with 10 sps and blocks of 100 sec. Observed on Sept. 25<sup>th</sup> at 0846 UTC by DK2OM

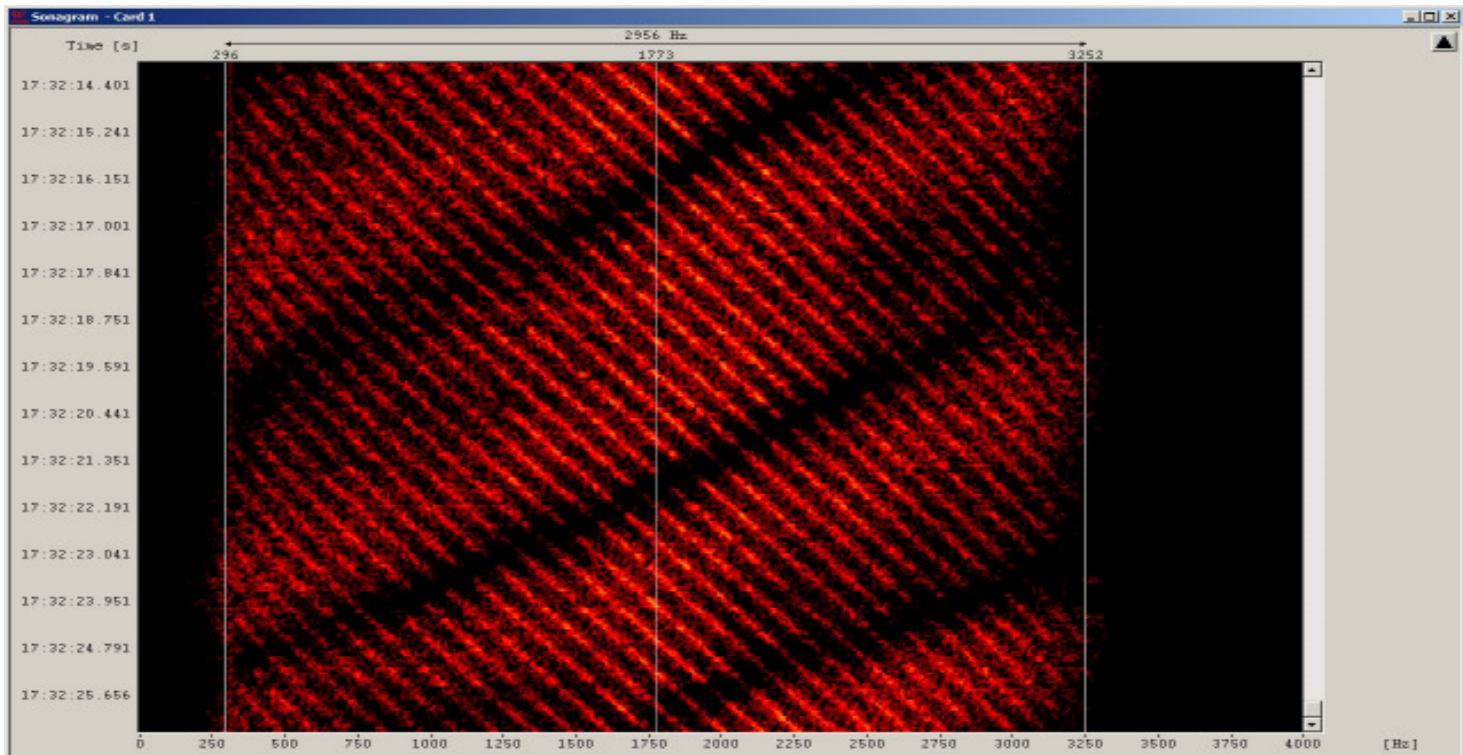
Another broadband OTH radar from China was detected on 14075 – 14235 kHz (10 sps) on Sept. 16<sup>th</sup> at 0900 UTC:

## 9. The situation on the 10 MHz-band (shared band)

HAMs observed many intruders on 10100 – 10150 kHz. All intruders are legal, except the fishermen. You can find many MIL-traffic from Africa, Europe and also from Far-East. Even the Australian OTH radar “JORN” appears there in burst-mode from time to time during the evening hours. Please observe the entries in my table!

## 10. Unknown signal on 3712 kHz

An unknown and strange signal was found on 3712 kHz on Sept. 21<sup>st</sup> at 1732 UTC. Perhaps a defective military system, location: Marseille – South France. Screenshot: DK2OM with Wavecom W-Code.



## 11. No changes or bad news

3590.0 kHz – USB – Spanish fishery with voice scrambler “CRY 2001” every evening  
6998.0 kHz - Russian buzzer – daily and all day  
7120.0 kHz – Radio Hargaysa Somalia  
7146.5 kHz – Radio Eritrea with Ethiopian QRM  
7175.0 kHz – Radio Eritrea with Ethiopian QRM  
7200.0 kHz – Radio Myanma  
7205.0 kHz – RFI = Radio France International) splattering down to 7185 kHz every evening  
14295.0 kHz - Radio Tajik (harmonic from 4765 kHz)

12. 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://iaru-r3.org/iaru-region-3-monitoring-system-newsletter/>  
Intruderlogger Region 1 <http://peditio.net/intruder/bluechat.cgi>  
ITU-Monitoring Reports <http://www.itu.int/en/ITU-R/terrestrial/monitoring/Pages/Regular.aspx>



## 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 \*\*\* **PRF** = pulse repetition frequency (radar) = **sps** \*\*\* **sps** = sweeps/sec (radar systems) \*\*\* **FMCW** = frequency modulated continuous wave (OTH radars)  
**FMOP** = frequency modulation on pulse (OTH radars) \*\*\* **5BL** = cyrillic 5 lettergroups

### ARSK MONITORING OVERVIEW FOR SEPTEMBER 2016

Radio Hargeisha remained on 7,120 kHz with broadcasts. As usual there were some local or Central African intruders observed on 7,000, 7,074 and 7,075 kHz.

E.H.M. Alleyne, 5Z4NU - ARSK National IARUMS Co-ordinator

#### ARSK – Kenya – 5Z4NU (Ted)

| H'd by | kHz    | UTC   | dd    | mm | ITU               | Identity  | MODE. | Details  |
|--------|--------|-------|-------|----|-------------------|-----------|-------|--|
| ARSK   | 7000.0 | vt    | dly   | 9  | E.<br>Africa      | ?         | J3Eu  | Unidentified, KiSwahili, East Africa. Possibly military. |
| ARSK   | 7074.0 | vt    | dly   | 9  | E.<br>Africa ?    | ?         | J3E   | Unidentified language,                                   |
| ARSK   | 7075.0 | vt    | dly   | 9  | E.<br>Africa      | ?         | J3Eu  | Unidentified language                                    |
| ARSK   | 7120.0 | vt    | dly   | 9  | Rep.of<br>Somalia | Hargeisha | A3E   | Broadcast  |
| ARSK   | 7145.0 | AM/PM | 25-30 | 9  | Eritrea           | VOBM?     | A3E   | Voice of the Broad Masses? Broadcast, Amharic, Arabic    |
| ARSK   | 7164.0 | vt    | dly   | 9  | E.<br>Africa?     | ?         | J3Eu  | Military? Phonetics, messages.                           |
| ARSK   | 7175.0 | AM/PM | 25-30 | 9  | Eritrea           | VOBM?     | A3E   | Probable hopping to avoid jamming                        |

#### DARC 1 – Germany – DG0JBJ (Mario) – OTH radar intrusions

DG0JBJ (Mario) observed **11** OTH radars on 40 m, **40** OTH radars on 20 m, **34** OTH radars on 17m, **13** OTH radar on 15 m and **2** OTH radar on 10 m in September 2016.

#### DARC 2 – Germany - DK2OM (Wolf)

**FSK transmissions -> center frequency between mark and space**

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

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

**SH = shift - SP = spread (radar) – SPS = sweeps/sec (radar)-> (aka PRF)**

| DK2OM | kHz    | UTC  | DD | MM | ITU | IDENT | MODE       | BD   | SH/SP | DETAILS  |
|-------|--------|------|----|----|-----|-------|------------|------|-------|--|
| DK2OM | 1812,0 | 2055 | 01 | 09 | RUS |       | USB<br>LSB |      |       | 14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day |
| DK2OM | 1852,0 | 2055 | 01 | 09 | I   | IPP   | USB        |      |       | Palermo Radio, weather reports   |
| DK2OM | 1855,0 | 2055 | 01 | 09 | I   | IQP   | USB        |      |       | San Benedetto Radio, weather reports   |
| DK2OM | 1876,0 | 2056 | 01 | 09 | I   | IQN   | USB        |      |       | Lampedusa Radio, weather reports   |
| DK2OM | 1888,0 | 2056 | 01 | 09 | I   | IPD   | USB        |      |       | Civitavecchia Radio, weather reports   |
| DK2OM | 1896,5 | 2057 | 01 | 09 | D   |       | PSK8       | 2400 | 2400  | Stanag4285 – 600 bps long –  |

| DK2OM | kHz    | UTC  | DD  | MM | ITU | IDENT  | MODE         | BD           | SH/SP        | DETAILS   |
|-------|--------|------|-----|----|-----|--------|--------------|--------------|--------------|---|
|       |        |      |     |    |     |        |              |              |              | German Navy – daily, all day  |
| DK2OM | 1925,0 | 1831 | 17  | 09 | I   | IPL    | USB          |              |              | Livorno Radio, weather reports  |
| DK2OM | 3500,0 | vt   | dly | 09 | TUR |        | FSK8         | 125          | 1750         | ALE, “2016” “4017” – Turkish Red Crescent – just for info!                      |
| DK2OM | 3501,0 | 2017 | 26  | 09 | E   |        | LSB          |              |              | Spanish fishery   |
| DK2OM | 3503,5 | vt   | dly | 09 | G   | no ITU | FSK8         | 125          | 1750         | ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!              |
| DK2OM | 3519,5 | 1628 | 12  | 09 |     |        | PSK8A        | 2400         | 2400         | Stanag-4285 – 600 bps long – idling – ship – Baltic Sea                         |
| DK2OM | 3520,0 | ---  | --  | 09 | KAZ |        | USB          |              |              | 2 women in Russian voice – Kazakhstan - often evenings                          |
| DK2OM | 3520,0 | 1916 | 01  | 09 | E   |        | USB          |              |              | Spanish fishery   |
| DK2OM | 3525,0 | 1724 | 26  | 09 | F   |        | PSK4         | 75           | 5800         | LINK11-CLEW on both sidebands (5800 Hz wide) – area of Marseille – legal!       |
| DK2OM | 3526,8 | 1923 | 15  | 09 |     |        | PSK8A        | 2400         | 2400         | Link11- SLEW – Baltic Sea   |
| DK2OM | 3527,0 | 1902 | 26  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D - Kaliningrad   |
| DK2OM | 3530,0 | 1745 | 08  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D - Crimea  |
| DK2OM | 3531,0 | ---  | --  | 09 | RUS | REA4   | N0N          |              |              | unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily                  |
| DK2OM | 3532,0 | 2018 | 27  | 09 | F   |        | PSK4         | 75           | 5800         | LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!           |
| DK2OM | 3535,0 | 1750 | 02  | 09 | E   |        | USB          |              |              | Spanish fishery – daily   |
| DK2OM | 3539,0 | 1903 | 11  | 09 | F   |        | USB          |              |              | French fishery  |
| DK2OM | 3541,2 | 1940 | 01  | 09 | F   |        | A3E          |              |              | French amateurs not respecting bandplans  |
| DK2OM | 3542,0 | 2050 | 05  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D – Rostov na Donu  |
| DK2OM | 3546,0 | 1937 | 21  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D – submode idle and traffic – Nizhny Novgorod                            |
| DK2OM | 3548,5 | 1936 | 21  | 09 | UKR |        | PSK2A        | 120          | 2600         | AT3004D - Kyiv  |
| DK2OM | 3550,0 | vt   | dly | 09 | F   |        | A3E          |              |              | French amateurs not respecting bandplans - daily                                |
| DK2OM | 3550,0 | vt   | vd  | 09 | ALG | no ITU | FSK8         | 125          | 1750         | ALE, “IU50” “IU52” “FN50”   |
| DK2OM | 3550,7 | 1956 | 05  | 09 | ISR |        | PSK4<br>PSK8 | 2400<br>2400 | 2400<br>2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - legal operation       |
| DK2OM | 3553,8 | ady  | dly | 09 | TUR |        | PSK8         | 2400         | 2400         | Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation |
| DK2OM | 3560,0 | 1935 | 17  | 09 | E   |        | USB          |              |              | Spanish fishery   |
| DK2OM | 3560,0 | 1844 | 20  | 09 | E   |        | USB          |              |              | Spanish fishery with voice scrambler CRY 2001                                   |
| DK2OM | 3570,0 | 2145 | 01  | 09 | E   |        | USB          |              |              | Spanish fishery   |
| DK2OM | 3570,0 | 1822 | 21  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D – St. Peterburg   |
| DK2OM | 3576,6 | ady  | dly | 09 | I   | IZ3DVW | A1A          |              |              | 3576.550 - uncoordinated beacon – disturbing JT65                               |
| DK2OM | 3582,0 | 2007 | 26  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D – St. Peterburg   |
| DK2OM | 3585,0 | 1935 | 08  | 09 | TWN | HLL    | FIC          |              | 800          | WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day - legal!                     |
| DK2OM | 3586,0 | 1800 | dly | 09 | G   |        | PSK2A        | 40           | 40           | encrypted – every evening Great Britain – purpose unknown                       |
| DK2OM | 3586,0 | 2029 | 28  | 09 | RUS |        | PSK2A        | 120          | 2600         | AT3004D – submode idle and traffic - Kaluga                                     |
| DK2OM | 3587,0 | vt   | vd  | 09 | E   | no ITU | FSK8         | 125          | 1750         | ALE, “TVV” “TXX” - Spanish Guardia Civil  |
| DK2OM | 3590,0 | vt   | dly | 09 | PAK | no ITU | FSK8         | 125          | 1750         | ALE, “KW” “KHAIBAR” – Pakistan navy   |
| DK2OM | 3590,0 | 1730 | 02  | 09 | E   |        | USB          |              |              | Spanish fishery – every evening   |
| DK2OM | 3590,0 | 2001 | 04  | 09 | E   |        | USB          |              |              | Spanish fishery with voice scrambler CRY 2001                                   |
| DK2OM | 3591,0 | 2012 | 28  | 09 |     |        | F1B          | 75           | 250          |   |

| DK2OM | kHz    | UTC  | DD  | MM | ITU | IDENT  | MODE       | BD   | SH/SP | DETAILS  |
|-------|--------|------|-----|----|-----|--------|------------|------|-------|--|
| DK2OM | 3593,7 | ---  | --  | 09 | RUS | D      | A1A        |      |       | Cluster beacon – Sevastopol<br>RUS Navy – “RCV”  |
| DK2OM | 3593,8 | ---  | --  | 09 | RUS | P      | A1A        |      |       | Cluster beacon – Kaliningrad<br>RUS Navy – “RMP”   |
| DK2OM | 3593,9 | ---  | --  | 09 | RUS | S      | A1A        |      |       | Cluster beacon – Severomorsk<br>RUS Navy – „RIT“   |
| DK2OM | 3594,0 | ---  | --  | 09 | RUS | C      | A1A        |      |       | Cluster beacon C - Moscow<br>RUS Navy - “RIW”  |
| DK2OM | 3595,0 | ---  | --  | 09 | RUS | K      | A1A        |      |       | Cluster beacon -<br>Petropavlovsk Kamchatskiy -<br>RUS Navy - Pacific fleet -<br>“RCC”   |
| DK2OM | 3596,0 | vt   | dly | 09 | D   |        | FSK8       | 125  | 1750  | ALE, “DK0ESD” – just for<br>info!  |
| DK2OM | 3596,0 | vt   | dly | 09 | J   |        | FSK8       | 125  | 1750  | ALE, “JHIESB” – just for info!   |
| DK2OM | 3605,5 | 1551 | 09  | 09 |     |        | PSK4A      | 50   | 1200  | Free-DV – 16 x 50 Bd PSK4A<br>– Ham-mode – just for info !   |
| DK2OM | 3617,0 | vt   | dly | 09 | HRV | 9A5EX  | FSK8       | 125  | 1750  | ALE, “9A5EX” – HAM-ALE -<br>just for info  |
| DK2OM | 3622,5 | 1936 | 08  | 09 | J   | JMH    | FIC        |      | 800   | Tokyo Meteo – 120 rpm – IOC<br>576 – daily, all day - legal!!!   |
| DK2OM | 3640,0 | vt   | dly | 09 | G   |        | FSK8       | 125  | 1750  | ALE, “XSS” - British MIL<br>Tascomm – just for info!   |
| DK2OM | 3642,0 | ady  | dly | 09 | CHN |        | A1A        |      |       | loop – DKG6 de 3A7D<br>Chinese military – daily, all day   |
| DK2OM | 3649,0 | vt   | vd  | 09 | ALG | no ITU | FSK8       | 125  | 1750  | ALE, “BI20” PA20”  |
| DK2OM | 3658,0 | ---  | --  | 09 | UZB |        | A1A        |      |       | beacon “V” - Tashkent  |
| DK2OM | 3683,0 | 1704 | 18  | 09 | CHN |        | PSK4A      | 60   | 2350  | PRC 30 tone modem – LSB<br>mode – pilot tone 450 Hz  |
| DK2OM | 3712,0 | 1730 | 21  | 09 | F   |        | unid       |      |       | broken signal – Marseille  |
| DK2OM | 3718,0 | vt   | vd  | 09 | FEa | 7CJK   | A1A        |      |       | loop “7CJK”  |
| DK2OM | 3720,0 | vt   | dly | 09 | S   |        | FSK8       | 125  | 1750  | ALE, “YU” “YT” “YV” “DZ”<br>– Swedish MIL  |
| DK2OM | 3751,5 | vt   | dly | 09 | POL | no ITU | FSK8       | 125  | 1750  | ALE, “IZ3” “MI3”   |
| DK2OM | 3756,0 | 1900 | dly | 09 | RUS |        | A3E        |      |       | RUS MIL – channel marker –<br>Tuapse – East Black Sea –<br>night QRG – daily – even<br>audible in Japan  |
| DK2OM | 3757,0 | ady  | dly | 09 | FEa | RIS9   | A1A        |      |       | “M8JF de RIS9” - loop  |
| DK2OM | 3761,5 | vt   | vd  | 09 | POL | no ITU | FSK8       | 125  | 1750  | ALE, “NI9” “PL7” “AB2” –<br>Polish MIL   |
| DK2OM | 3772,0 | ady  | dly | 09 | FEa | A4JC   | A1A        |      |       | “A4JC” - loop  |
| DK2OM | 3777,0 | 1700 | 18  | 09 | FEa |        | A1A        |      |       | “M8JF de RIS9” – loop – dly  |
| DK2OM | 3791,0 | vt   | vd  | 09 | D   | DK0ESD | FSK8       | 125  | 1750  | ALE, “DK0ESD” – daily just<br>for info!  |
| DK2OM | 3797,0 | ady  | dly | 09 | FEa |        | A1A        |      |       | “M8JF de RIS9” – loop  |
| DK2OM | 6998,5 | vt   | dly | 09 | POL |        | PSK8       | 2400 | 2400  | MIL-188-110A – until<br>7001.500 kHz – Polish MIL  |
| DK2OM | 7000,0 | 1338 | 17  | 09 | INS |        | USB<br>LSB |      |       | Indonesian pirates – daily – all<br>day - audible in Europe in the<br>evenings   |
| DK2OM | 7000,0 | ady  | dly | 09 | RUS |        | H3E        |      | 3.4 k | <b>buzzer – 1 sec bursts - 118 Hz<br/>AF rough sinus – carrier on<br/>6998.0 + upper sideband -<br/>with splatters 10 kHz wide –<br/>daily, all day - Moscow</b> |
| DK2OM | 7000,0 | 1940 | 05  | 09 | E   |        | USB        |      |       | Spanish fishery – also<br>29.09.2016 at 1645 utc   |
| DK2OM | 7001,5 | 0700 | vd  | 09 | POL |        | PSK8       | 2400 | 2400  | RF QRG 6998.5 kHz – 7000.3<br>kHz center - MIL-188-110A –<br>600 / 300 bps short – Polish<br>MIL   |
| DK2OM | 7005,0 | 0931 | 19  | 09 | INS |        | USB<br>LSB |      |       | Indonesian pirates   |
| DK2OM | 7008,0 | 1502 | 25  | 09 | RUS |        | PSK2A      | 120  | 2600  | AT3004D - Vladimir   |
| DK2OM | 7010,0 | 0930 | 19  | 09 | INS |        | USB<br>LSB |      |       | Indonesian and Philippine<br>pirates   |

| DK2OM | kHz     | UTC  | DD  | MM | ITU           | IDENT                    | MODE       | BD  | SH/SP | DETAILS  |
|-------|---------|------|-----|----|---------------|--------------------------|------------|-----|-------|--|
| DK2OM | 7015,0  | vt   | dly | 08 | INS           |                          | USB<br>LSB |     |       | Indonesian pirates   |
| DK2OM | 7016,0  | 1724 | 21  | 09 | RUS           |                          | F1B        | 75  | 250   | Moscow   |
| DK2OM | 7018,0  | ---  | --  | 09 | RUS           | REA4                     | F1B        | 100 | 800   | mostly idling – Russian<br>airforce Moscow – ident at full<br>hour + 41 min. on F1A            |
| DK2OM | 7019,0  | 1520 | 28  | 09 | CHN           |                          | PSK4A      | 60  | 2350  | PRC 30 tone modem - LSB<br>mode - pilot tone 450 Hz  |
| DK2OM | 7020,0  | 1254 | 13  | 09 | INS           |                          | USB<br>LSB |     |       | Indonesian pirates   |
| DK2OM | 7020,0  | ---  | --  | 09 | ALB           |                          | FSK8       | 125 | 1750  | ALE, “CS004A” “RS008D”<br>“RS0” – Albanian coast - daily                                       |
| DK2OM | 7022,0  | 0917 | 20  | 09 | RUS           |                          | PSK2A      | 120 | 2600  | AT3004D – Moscow   |
| DK2OM | 7025,0  | vt   | dly | 09 | INS           |                          | USB<br>LSB |     |       | Indonesian pirates   |
| DK2OM | 7026,0  | 1618 | 08  | 09 | RUS           |                          | PSK2A      | 120 | 2600  | AT3004D – area of Moscow   |
| DK2OM | 7027,5  | ---  | --  | 09 | UKR           | „V“                      | A1A        |     |       | beacon “V” – Kyiv  |
| DK2OM | 7030,0  | 1256 | 13  | 09 | INS           |                          | LSB        |     |       | Indonesian pirates   |
| DK2OM | 7030,0  | 1622 | 01  | 09 | FEa           |                          | FMCW       |     | 32k   | Codar like ocean surface radar<br>2.6 sps – 7030 – 7062 kHz                                    |
| DK2OM | 7035,0  | vt   | dly | 09 | INS           |                          | USB<br>LSB |     |       | Indonesian pirates   |
| DK2OM | 7035,0  | 0803 | 31  | 09 | RUS           |                          | FMCW       |     | 10k   | OTH burst radar Contayner - 10<br>sps - Gorodezh   |
| DK2OM | 7037,0  | 0704 | 20  | 09 | RUS           |                          | PSK2       | 120 | 2600  | AT3004D – submode idle –<br>Rostov na Donu   |
| DK2OM | 7039,0  | ---  | --  | 09 | RUS           | C                        | A1A        |     |       | Cluster beacon C - Moscow<br>RUS Navy - “RIW”  |
| DK2OM | 7039,1  | ---  | --  | 09 |               | A                        | A1A        |     |       | beacon “A” - loop  |
| DK2OM | 7039,2  | 1609 | 01  | 09 | RUS           | F                        | A1A        |     |       | Cluster beacon F - Vladivostok<br>RUS Navy - “RJS”   |
| DK2OM | 7039,3  | ---  | --  | 09 | RUS           | K                        | A1A        |     |       | Cluster beacon K<br>Petropavlovsk Kamchatskiy -<br>RUS Navy - Pacific fleet -<br>“RCC” - daily |
| DK2OM | 7039,4  | 1609 | 01  | 09 | RUS           | M                        | A1A        |     |       | Cluster beacon M – Magadan<br>RUS Navy – „RTS“ –<br>distorted with spurious<br>emissions       |
| DK2OM | 7040,0  | vt   | dly | 09 | INS           |                          | USB<br>LSB |     |       | Indonesian pirates   |
| DK2OM | 7040,0  | vt   | dly | 09 | F             | F6BAZ                    | FSK8       | 125 | 1750  | ALE, “F6BAZ” – just for info   |
| DK2OM | 7040,0  | ady  | dly | 09 | I             |                          | A1A        |     |       | <b>IZ3DVW – uncoordinated<br/>and unwanted beacon</b>  |
| DK2OM | 7040,5  | vt   | dly | 09 | HRV           |                          | FSK8       | 125 | 1750  | ALE, “9A5EX” “9A0ALE” –<br>just for info   |
| DK2OM | 7047,37 | vt   | vd  | 09 | D             |                          | FSK8       | 125 | 1750  | ALE, “DL0NOT” – just for<br>info!  |
| DK2OM | 7049,5  | vt   | vd  | 09 | HRV<br>G<br>F | 9A0ALE<br>M1DFO<br>F6BAZ | FSK8       | 125 | 1750  | Amateur ALE, just for info!<br>daily – various times   |
| DK2OM | 7050,0  | vt   | dly | 09 | RUS<br>UKR    |                          | LSB        |     |       | <b>music transmissions – private<br/>war ?</b>   |
| DK2OM | 7050,0  | 0340 | 13  | 09 | UKR           |                          | A1A        |     |       | “2B9W” de “TUJU” - Kyiv  |
| DK2OM | 7055,0  | 1952 | 21  | 09 | RUS           |                          | PSK2A      | 120 | 2600  | AT3004D – submode idle and<br>traffic - Moscow   |
| DK2OM | 7055,5  | vt   | vd  | 09 | MEa           | no ITU                   | FSK8       | 125 | 1750  | ALE, “111” “132” “133” -<br>Kaukasus   |
| DK2OM | 7070,0  | vt   | vd  | 09 | GEO           | no ITU                   | FSK8       | 125 | 1750  | ALE, “MV” “244” “686” “334”<br>“204” “571” – daily active                                      |
| DK2OM | 7070,0  | 0847 | 19  | 09 | I             |                          | LSB        |     |       | Italian music  |
| DK2OM | 7076,0  | 1245 | 20  | 09 | RUS           |                          | PSK2A      | 120 | 2600  | AT3004D - Vladimir   |
| DK2OM | 7086,0  | 1943 | 08  | 09 | CHN<br>?      |                          | FMOP       |     | 83k   | OTH radar – 7086 – 7169 kHz<br>– 86 sps  |
| DK2OM | 7088,8  | 1709 | 05  | 09 | S             | SL0FRO                   | A1A        |     |       | 7088.830 kHz - cw-trainee,<br>Sweden - SL0FRO - just for<br>info!                              |

| DK2OM | kHz           | UTC         | DD         | MM        | ITU                | IDENT  | MODE          | BD           | SH/SP        | DETAILS   |
|-------|---------------|-------------|------------|-----------|--------------------|--------|---------------|--------------|--------------|---|
| DK2OM | 7089,8        | ---         | --         | 09        | TUR<br>CYP         |        | PSK8          | 2400         | 2400         | Link11 - SLEW – aircraft – west of Cyprus   |
| DK2OM | 7090,5        | 2305        | 12         | 09        | RUS                |        | PSK2A         | 120          | 2600         | AT3004D – Severomorsk – also 14.09.2016 at 0809 utc   |
| DK2OM | 7091,5        | 1632        | 05         | 09        | KAZ                | „V“    | A1A           |              |              | 7091.543 kHz - loop with spurious – ident “V” – Almaty - Kazakhstan   |
| DK2OM | 7099,5        | vt          | dly        | 09        | HRV                | 9A0ZG  | FSK8          | 125          | 1750         | ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!   |
| DK2OM | 7102,0        | vt          | dly        | 09        | TWN                |        | FSK8          | 125          | 1750         | ALE, “BV4AS” – just for info!   |
| DK2OM | 7102,0        | 1630        | 22         | 09        | HRV<br>SUI<br>D    | 9A0MIL | FSK8          | 125          | 1750         | ALE, “9A0MIL” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!  |
| DK2OM | 7110,0        | vt          | dly        | 09        | HRV                | 9A0ALE | FSK8          | 125          | 1750         | ALE, “9A0ALE” – just for info   |
| DK2OM | 7110,0        | 1711        | 05         | 09        | F                  |        | A1A           |              |              | loop “369” – south of Paris   |
| DK2OM | 7110,0        | 2020        | 09         | 09        | RUS                |        | PSK2A         | 120          | 2600         | AT3004D - Sevastopol  |
| DK2OM | 7111,8        | 0910        | 10         | 09        | CHN                |        | FSK8          | 150          | 2250         | PRC4+4 idling – 8 x FSK 150 Bd  |
| DK2OM | 7112,0        | 1525        | 28         | 09        | CHN                |        | PSK4A         | 60           | 2350         | PRC 30 tone modem - LSB mode - pilot tone 450 Hz  |
| DK2OM | 7117,0        | 1418        | 07         | 09        | RUS                | REA4   | F1B           | 100          | 1000         | mostly idling – Russian airforce Moscow – ident on CW at 1640 utc on the mark-QRG                               |
| DK2OM | 7117,0        | 1913        | 07         | 09        | RUS                |        | F1B           | 75           | 200          | Moscow  |
| DK2OM | <b>7120,0</b> | <b>vt</b>   | <b>dly</b> | <b>09</b> | <b>SOM</b>         |        | <b>A3E</b>    |              | <b>9k</b>    | <b>Radio Hargaysa – Somalia – daily – even audible in Australia and Japan</b>                                   |
| DK2OM | 7122,0        | 1252        | 13         | 09        | RUS                |        | PSK2A         | 120          | 2600         | AT3004D – Far East-Russia   |
| DK2OM | 7126,7        | 0743        | 26         | 09        | ISR                |        | PSK4<br>PSK8  | 2400<br>2400 | 2400<br>2400 | hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - legal operation                                       |
| DK2OM | 7137,0        | vt          | dly        | 09        | TWN                |        | FSK8<br>LSB   | 125          | 1750         | ALE, “CBIUN” “CBWPC” “CQYTX” “CAPLJ” “CTFOJ” “CEGTO” “CSNYI” “CEIPN” “CRXWT” - Taiwanese navy – daily           |
| DK2OM | 7142,3        | 2234        | 14         | 09        | CHN                |        | OFDM          | 44.6         | 2400         | PRC 39 – PSK4B – East China   |
| DK2OM | <b>7146,5</b> | <b>1830</b> | <b>29</b>  | <b>09</b> | <b>ERI</b>         |        | <b>A3E/BC</b> |              | <b>9k</b>    | <b>carrier on 7146.557 kHz - Radio Eritrea</b>  |
| DK2OM | 7150,0        | 1938        | 08         | 09        | FEa                |        | FMCW          |              | 32k          | Codar like ocean surface radar 2.6 sps – 7150 – 7182 kHz  |
| DK2OM | 7151,0        | 0727        | 03         | 09        | RUS                |        | PSK2A         | 120          | 2600         | AT3004D – submode idle and traffic - Sevastopol   |
| DK2OM | 7156,0        | 1605        | 01         | 09        | FEa                |        | FMCW          |              | 32k          | Codar like ocean surface radar 2.6 sps – 7156 – 7188 kHz  |
| DK2OM | <b>7163,0</b> | <b>---</b>  | <b>--</b>  | <b>09</b> | <b>UKR</b>         |        | <b>A3E</b>    |              |              | <b>encrypted MSGs - SZRU in Rivne</b>   |
| DK2OM | 7174,0        | 1900        | 28         | 09        | RUS                |        | FMCW          |              | 13k          | OTH radar Contayner - 50 sps – Gorodezh   |
| DK2OM | <b>7175,0</b> | <b>0430</b> | <b>14</b>  | <b>09</b> | <b>ERI<br/>ETH</b> |        | <b>A3E</b>    |              | <b>9k</b>    | <b>carrier on 7174.989 kHz<br/>Radio Eritrea disturbed by<br/>Radio Ethiopia with white<br/>noise emissions</b> |
| DK2OM | <b>7175,0</b> | <b>1630</b> | <b>22</b>  | <b>09</b> | <b>ERI<br/>ETH</b> |        | <b>A3E</b>    |              | <b>9k</b>    | <b>carrier on 7174.989 kHz<br/>Radio Eritrea disturbed by<br/>Radio Ethiopia with white<br/>noise emissions</b> |
| DK2OM | 7176,0        | 1909        | 21         | 09        | RUS                |        | F1B           | 75           | 250          | Moscow  |
| DK2OM | 7183,0        | vt          | dly        | 09        | SUI                |        | FSK8          | 125          | 1750         | ALE, “HB9MHB” – just for info!  |
| DK2OM | 7184,0        | 1939        | 25         | 09        | RUS                |        | FMCW          |              | 13k          | OTH radar Contayner - 50 sps – Gorodezh   |
| DK2OM | 7185,5        | 0740        | 24         | 09        | D<br>HRV           |        | FSK8          | 125          | 1750         | ALE, “9A5EX” “DK0ESD” just for info - daily   |
| DK2OM | 7197,0        | vt          | dly        | 09        | TUR                | no ITU | FSK8          | 125          | 1750         | ALE, “206102” “318013” “328013” “355013” “365013”   |



| DK2OM | kHz            | UTC  | DD  | MM        | ITU        | IDENT         | MODE       | BD   | SH/SP      | DETAILS   |
|-------|----------------|------|-----|-----------|------------|---------------|------------|------|------------|---|
|       |                |      |     |           |            |               |            |      |            | “329018” “308013” “331730”<br>“355013” “337013” “381013”<br>“311013” Turkish<br>organisations and Turkish Civil<br>Defense - source: DL8AAM –<br>daily, various times |
| DK2OM | 7198,8         | 0759 | 25  | 09        | D          |               | PSK8A      | 2400 | 2400       | Stanag-4285 – area of<br>Nuernberg  |
| DK2OM | <b>7205,0</b>  | ---  | --  | <b>09</b> | <b>IRN</b> |               | <b>A3E</b> |      | <b>20k</b> | <b>Voice of Iran with splatters<br/>down to 7195 kHz and up to<br/>7215 kHz – 1920 – 1950 utc<br/>daily</b>   |
| DK2OM | <b>7205,0</b>  | ---  | --  | <b>09</b> | <b>F</b>   | <b>RFI</b>    | <b>A3E</b> |      | <b>40k</b> | <b>Radio France International<br/>splattering down to 7185 kHz</b>  |
| DK2OM | 10100,8        | ady  | dly | 09        | D          |               | F1B        | 50   | 450        | Baudot - German<br>Weatherservice – legal!  |
| DK2OM | 10110,0        | vt   | dly | 09        | SNG        | no ITU        | FSK8       | 125  | 1750       | ALE, “CN6” “68” – Singapore<br>Navy - Changi Naval Base   |
| DK2OM | 10112,0        | 0812 | 09  | 09        | I          |               | PSK8A      | 2400 | 2400       | Stanag-4285 – 600 bps long -<br>Rome  |
| DK2OM | 10113,0        | vt   | vd  | 09        | TUN        | no ITU        | FSK8       | 125  | 1750       | ALE, “TUD” “STAT5”<br>“STAT154”   |
| DK2OM | 10114,0        | vt   | dly | 09        | ALG        | no ITU        | FSK8       | 125  | 1750       | ALE, “BSF” “ZEN”<br>“CM2OR2”  |
| DK2OM | 10114,8        | 0717 | 30  | 09        | RUS        |               | F1B        | 100  | 1000       | CIS14 – Moscow - daily  |
| DK2OM | 10115,0        | vt   | dly | 09        | MRC        | no ITU        | FSK8       | 125  | 1750       | ALE, “100” “114” “201”<br>“XXZ” – Western Sahara  |
| DK2OM | 10115,0        | 0813 | 13  | 09        | RUS        |               | F1B        | 100  | 500        | Moscow  |
| DK2OM | 10116,0        | 1910 | 26  | 09        | RUS        |               | F1B        | 50   | 250        | Moscow  |
| DK2OM | 10116,5        | ---  | --  | 09        | AFS        |               | F7D        | 54.3 | 2120       | MHF50 – 33 tones - South<br>African navy  |
| DK2OM | 10120,0        | vt   | dly | 09        | ALG        | no ITU        | FSK8       | 125  | 1750       | ALE, “CM6” “01012016”   |
| DK2OM | 10121,0        | 1438 | 06  | 09        | RUS        |               | F1B        | 75   | 250        | Moscow  |
| DK2OM | 10122,0        | 0909 | 10  | 09        | CHN        |               | FMOP       |      | 50k        | OTH radar – 43 sps - 10095 –<br>10145 kHz   |
| DK2OM | 10123,0        | vt   | dly | 09        | ALG        | no ITU        | FSK8       | 125  | 1750       | ALE, “CM3” “COF” “BSF”<br>”CM2” “ESA” – Algerian<br>Airforce  |
| DK2OM | 10123,0        | 1632 | 26  | 09        | FEa        |               | USB        |      |            | Far East male persons   |
| DK2OM | 10123,0        | 1456 | 06  | 09        | RUS        |               | PSK2A      | 120  | 2600       | AT3004D - Moscow  |
| DK2OM | 10124,3        | 1556 | 27  | 09        | CHN        |               | PSK4A      | 75   | 2250       | 10124.275 kHz center -<br>PRC4+4 – traffic and idle –<br>daily – various times  |
| DK2OM | 10129,0        | vt   | dly | 09        | ALG        | no ITU        | FSK8       | 125  | 1750       | ALE, “CM1” “CTF” “772”  |
| DK2OM | 10131,0        | 1530 | 05  | 09        | RUS        |               | F1B        | 75   | 250        | Jekaterinburg   |
| DK2OM | 10132,0        | vt   | vd  | 09        | F          |               | USB        |      |            | French amateurs not respecting<br>bandplans   |
| DK2OM | 10133,0        | 0925 | 20  | 09        | RUS        |               | PSK2A      | 120  | 2600       | AT3004D - Sevastopol  |
| DK2OM | 10134,0        | 1849 | 02  | 09        | MRC        |               | USB        |      |            | Moroccan fishery  |
| DK2OM | 10136,0        | vt   | dly | 09        | ALG        | no ITU        | FSK8       | 125  | 1750       | ALE, “CM3” “BLD” “CNC”<br>“TF2”   |
| DK2OM | <b>10144,0</b> | ady  | dly | <b>09</b> | <b>D</b>   | <b>DK0WCY</b> | <b>A1A</b> |      |            | <b>10144.000 kHz - DK0WCY –<br/>German aurora beacon – just<br/>for info!</b>   |
| DK2OM | 10145,5        | vt   | dly | 09        | SUI        | HB9MHB        | FSK8       | 125  | 1750       | ALE, “HBMHB” - just for info<br>- daily   |
| DK2OM | 10145,5        | 0908 | 19  | 09        | TWN<br>AUS | BV4AS         | FSK8       | 125  | 1750       | ALE, “BV4AS” “VK4SAA” –<br>just for info!   |
| DK2OM | 10148,0        | 1255 | 02  | 09        | AUS        |               | FMOP       |      | 10k        | Australian OTH radar JORN –<br>20 and 23 sps – intro tones -<br>10148 – 10158 kHz   |
| DK2OM | 13995,0        | 0812 | 11  | 09        | RUS        |               | FMCW       |      | 13k        | OTH radar Contayner - 50 sps<br>Gorodezh – up to 14001.5 kHz  |
| DK2OM | 14000,0        | 1627 | 08  | 09        | FEa        |               | USB        |      |            | pirates from Java Sea - daily   |
| DK2OM | 14000,0        | 1850 | 25  | 09        | MRC        |               | USB        |      |            | Moroccan fishery  |
| DK2OM | 14001,8        | 1253 | 21  | 09        | S          |               | PSK8A      | 2400 | 2400       | Stanag-4285 - Gotland   |
| DK2OM | 14008,0        | 0750 | 14  | 09        | RUS        |               | F1B        | 50   | 500        | Moscow – also 26.09.2016 at   |

| DK2OM | kHz     | UTC  | DD  | MM | ITU           | IDENT  | MODE       | BD                           | SH/SP                           | DETAILS  |
|-------|---------|------|-----|----|---------------|--------|------------|------------------------------|---------------------------------|--|
|       |         |      |     |    |               |        |            |                              |                                 | 1041 utc   |
| DK2OM | 14026,0 | 0830 | 17  | 09 | RUS           |        | PSK2A      | 120                          | 2600                            | AT3004D – traffic and submode idle - Moscow  |
| DK2OM | 14030,0 | vt   | vd  | 09 | CHN           |        | FSK8       | 125                          | 1750                            | ALE, “Y” “473” “853”   |
| DK2OM | 14052,0 | 0738 | 17  | 09 | RUS           |        | PSK2A      | 120                          | 2600                            | AT3004D - Moscow   |
| DK2OM | 14075,0 | 0900 | 16  | 09 | CHN           |        | FMCW       |                              | 160k                            | Chinese broadband OTH radar – 14075 – 14235 kHz – 10 sps   |
| DK2OM | 14098,5 | 1252 | 20  | 09 | CHN           |        | OFDM PSK4B | 44.45                        | 2300                            | PRC 39 modem – NW China  |
| DK2OM | 14100,0 | vt   | dly | 09 | ALG           | no ITU | FSK8       | 125                          | 1750                            | ALE, “6206” “6204” “6212” “6202” “6203” “6207” “6217” “MTL” “IJ” – Mauritanian border – daily, all day |
| DK2OM | 14100,0 | ---  | --  | 09 | F             |        | FMCW       |                              | 20k                             | French OTH burst radar, 6 sps, similar Codar sounding, South France                                    |
| DK2OM | 14104,0 | 0803 | 09  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh  |
| DK2OM | 14105,0 | 1253 | 05  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps Gorodezh  |
| DK2OM | 14108,0 | ---  | --  | 09 | RUS           |        | A1A        |                              |                                 | “BXCS de 9KHQ” - RUS MIL area of Moscow – many spurious emissions                                      |
| DK2OM | 14109,0 | 1131 | 28  | 09 | TWN           | HAM    | FSK8       | 125                          | 1750                            | ALE, “BV4AS” – daily - just for info!  |
| DK2OM | 14109,0 | vt   | vd  | 09 | INS           | HAM    | FSK8       | 120                          | 1750                            | ALE, “YD00XH3” – just for info!  |
| DK2OM | 14109,0 | vt   | dly | 09 | S<br>HRV<br>D |        | FSK8       | 125                          | 1750                            | ALE, “SM3FXL” “9A4OS” “9A3BRV” “DK0ESD” - just for info!   |
| DK2OM | 14111,0 | 1300 | 03  | 09 | CHN           |        | FSK8       | 125                          | 1750                            | ALE, “201”   |
| DK2OM | 14111,0 | 0836 | 17  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh  |
| DK2OM | 14113,0 | 1232 | 02  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh – also 16.09.2016 at 0825 utc                                  |
| DK2OM | 14114,0 | 1345 | 08  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh  |
| DK2OM | 14132,0 | 0728 | 06  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh – splatters covering the whole band                            |
| DK2OM | 14133,0 | 0904 | 02  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh – also 18.09.2016 at 0740 utc                                  |
| DK2OM | 14135,0 | 0734 | 04  | 09 | RUS           |        | FMCW       |                              | 13k                             | OTH radar Contayner - 50 sps – Gorodezh  |
| DK2OM | 14135,0 | 1322 | 07  | 09 | RUS           |        | FMCW       |                              | 10k                             | OTH burst radar Contayner - 10 sps – Gorodezh – also 13.09.2016 at 1156 utc                            |
| DK2OM | 14136,5 | 1123 | 26  | 09 | CHN           |        | OFDM PSK4B | 44.45                        | 2300                            | PRC 39 modem and voice traffic on USB – West-China   |
| DK2OM | 14160,0 | vt   | dly | 09 | MRC           |        | FSK8       | 125                          | 1750                            | ALE, “9204” “9228” “9236”  |
| DK2OM | 14160,0 | 0829 | 16  | 09 | RUS           |        | F1B        | 75                           | 250                             | Moscow   |
| DK2OM | 14180,0 | 0913 | 01  | 09 | RUS           | RDL    | F1B        | 50                           | 200                             | RUS Navy - Sevastopol - daily  |
| DK2OM | 14192,0 | vt   | dly | 09 | RUS           |        | F1B        | 50<br>75<br>50<br>100<br>100 | 500<br>500<br>200<br>500<br>200 | RUS navy Kaliningrad - daily   |
| DK2OM | 14201,8 | 1013 | 02  | 09 | CHN           |        | PSK2       | 75                           | 2200                            | PRC 16 tone modem – USB mode – pilot tone 450 Hz - RF 14200.0 kHz - China – Shanghai - daily           |
| DK2OM | 14205,0 | vt   | dly | 09 | CHN           | no ITU | FSK8       | 125                          | 1750                            | ALE, “505” “822”   |
| DK2OM | 14205,0 | 0846 | 25  | 09 | CHN           |        | FMCW       |                              | 160k                            | Chinese broadband OTH radar – 10 sps – 100 sec blocks - 14205 – 14365 kHz                              |

| DK2OM | kHz            | UTC         | DD         | MM        | ITU        | IDENT  | MODE                  | BD        | SH/SP       | DETAILS   |
|-------|----------------|-------------|------------|-----------|------------|--------|-----------------------|-----------|-------------|---|
| DK2OM | 14211,0        | 0925        | 08         | 09        | UKR        |        | F1B                   | 50        | 250         |   |
| DK2OM | 14219,0        | 0805        | 09         | 09        | RUS        |        | FMCW                  |           | 10k         | OTH burst radar Contayner - 10 sps - Gorodezh   |
| DK2OM | 14221,0        | 2026        | 24         | 09        | KGZ        |        | F1B                   | 50        | 200         | CIS-50-50 - Bishkek – daily   |
| DK2OM | 14240,0        | 0855        | 16         | 09        | RUS        |        | F1B                   | 75        | 250         | Irkutsk   |
| DK2OM | 14240,0        | 0825        | 23         | 09        | RUS        |        | F1B                   | 50        | 250         | Moscow  |
| DK2OM | 14240,7        | 0856        | 10         | 09        | CHN        |        | PSK4A                 | 60        | 2350        | PRC 30 tone modem - LSB mode - pilot tone 450 Hz  |
| DK2OM | 14242,0        | 0932        | 12         | 09        | RUS        |        | PSK2A                 | 120       | 2600        | AT3004D – Novosibirsk   |
| DK2OM | 14260,0        | vt          | dly        | 09        | SRB        | YU1BI  | FSK8                  | 125       | 1750        | ALE, “YU1BI” – just for info!   |
| DK2OM | 14261,0        | 1248        | 05         | 09        | RUS        |        | FMCW                  |           | 13k         | OTH radar Contayner - 50 sps Gorodezh   |
| DK2OM | 14272,0        | ---         | --         | 09        | RUS        | RCV    | A1A                   |           |             | RUS Navy Sevastopol   |
| DK2OM | 14278,0        | 0745        | 14         | 09        | RUS        |        | F1B                   | 75        | 250         | Moscow  |
| DK2OM | 14288,0        | 1220        | 06         | 09        | RUS        |        | FMCW                  |           | 13k         | OTH radar Contayner - 50 sps Gorodezh – long lasting  |
| DK2OM | 14295,0        | vt          | dly        | 09        | SRB        | YU1BI  | FSK8                  | 125       | 1750        | ALE, “YU1BI” – just for info!   |
| DK2OM | <b>14295,0</b> | <b>1508</b> | <b>01</b>  | <b>09</b> | <b>TJK</b> |        | <b>A3E</b>            |           | <b>9k</b>   | <b>3<sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day</b>   |
| DK2OM | 14300,0        | 0840        | 05         | 09        | CHN<br>?   |        | PSK2A                 | 24.75     | 24.75       | 2 x PSK2A – 14300.0 +/- 250 Hz – 60 deg from DL   |
| DK2OM | 14301,8        | ---         | --         | 09        | CHN        |        | PSK2                  | 75        | 2200        | PRC 16 tone modem – USB mode – pilot tone 450 Hz - RF 14300.0 kHz - China – Shanghai – daily – all day        |
| DK2OM | 14302,0        | 1609        | 19         | 09        | RUS        |        | FMCW                  |           | 13k         | OTH radar Contayner - 50 sps – Gorodezh   |
| DK2OM | 14330,0        | vt          | dly        | 09        | TWN        |        | FSK8                  | 125       | 1750        | ALE, “BV4”  |
| DK2OM | 14334,0        | vt          | vd         | 09        | CHN        | no ITU | FSK8                  | 125       | 1750        | ALE, “249” “255” “763”  |
| DK2OM | 14340,0        | ---         | --         | 09        | RUS        |        | PSK2A                 | 120       | 2600        | AT3004D – Vladivostok with spurious emissions +/- 35 kHz and +/- 70 kHz - daily                               |
| DK2OM | 14340,0        | vt          | vd         | 09        | CHN        |        | FSK8                  | 125       | 1750        | ALE, “106” “591”  |
| DK2OM | 14346,0        | vt          | dly        | 09        | THA        | HSOZEA | A1A                   |           |             | HSOZEA beacon – 14345.950 kHz - every 5 minutes – daily - just for info!                                      |
| DK2OM | 14346,0        | vt          | dly        | 09        | POR        |        | FSK8                  | 125       | 1750        | ALE, “CT2IXQ” just for info – various times, daily  |
| DK2OM | <b>14347,0</b> | ---         | --         | <b>09</b> | <b>UKR</b> |        | <b>A3E</b>            |           |             | <b>female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne</b> |
| DK2OM | 14351,7        | ---         | --         | <b>09</b> | <b>E</b>   |        | <b>OFDM<br/>PSK4A</b> | <b>30</b> | <b>2700</b> | <b>OFDM 73 + intro tone – HFD+VL - experimental transmissions – Las Palmas – just for info!</b>               |
| DK2OM | <b>18080,0</b> | <b>0600</b> | <b>dly</b> | <b>09</b> | <b>TWN</b> |        | <b>A3E/BC</b>         |           |             | <b>Sound of Hope – Taiwan and Chinese BC jammer – daily at 06 utc and later</b>                               |
| DK2OM | 18100,0        | vt          | dly        | 09        | MRC        | no ITU | FSK8                  | 125       | 1750        | ALE, “A2” “A4” “A5” “A7” “S6” – “C3” “G401” “CD” “09” “G2” “LG6” “G301” “ELJADIDNET4” - daily, various times  |
| DK2OM | 18106,0        | vt          | vd         | 09        | POR        | CT2GOY | FSK8                  | 125       | 1750        | ALE, “CT2GOY” – just for info!  |
| DK2OM | 18107,0        | 1259        | 18         | 09        | RUS        | RDL    | F1B                   | 50        | 200         | CIS-50-200 - Moscow - idle and traffic – Russian navy – shared band!  |
| DK2OM | 18117,5        | vt          | vd         | 09        | POR        | CT2IXQ | FSK8                  | 125       | 1750        | ALE, “CT2IXQ” – just for info   |
| DK2OM | 18140,0        | vt          | dly        | 09        | SRB        | YU1BI  | FSK8                  | 125       | 2600        | ALE, “YU1BI” – just for info!   |
| DK2OM | 18150,0        | ---         | --         | 09        | RUS        |        | F1B                   | 100       | 1000        | harmonic from 9075 (100 Bd, 500 Hz) - Kaliningrad   |
| DK2OM | 21000,0        | vt          | vd         | 09        | INS        |        | USB                   |           |             | Indonesian pirates - daily  |
| DK2OM | <b>21000,0</b> | ---         | --         | <b>09</b> | <b>B</b>   |        | <b>USB</b>            |           |             | <b>Brazilian pirates – Rio de Janeiro with North Brazil – very often</b>                                      |

| DK2OM | kHz     | UTC  | DD  | MM | ITU | IDENT                   | MODE  | BD   | SH/SP | DETAILS  |
|-------|---------|------|-----|----|-----|-------------------------|-------|------|-------|--|
| DK2OM | 21000,0 | ---  | --  | 09 | SDN |                         | USB   |      |       | MFA Sudan – Khartoum with emba Yemen – voice traffic   |
| DK2OM | 21000,0 | ---  | --  | 09 | F   |                         | FMCW  |      |       | French OTH burst radar – every 15 minutes – South France                                       |
| DK2OM | 21000,0 | 0646 | 20  | 09 | MLD |                         | USB   |      |       | male net – Maldiv Islands  |
| DK2OM | 21002,2 | ---  | --  | 09 | SDN | !0000<br>!9999<br>!8888 | F1B   | 100  | 170   | 21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen                       |
| DK2OM | 21096,0 | 0802 | 17  | 09 | INS | YD00XH                  | FSK8  | 125  | 1750  | ALE, “YD00XH3” – daily, various times - just for info!   |
| DK2OM | 21096,0 | vt   | vd  | 09 | G   |                         | FSK8  | 125  | 1750  | ALE, “M1DFO” – just for info!  |
| DK2OM | 21131,0 | vt   | vd  | 09 | CHN | no ITU                  | FSK8  | 125  | 1750  | ALE, “A92” “L02” – Chinese diplo   |
| DK2OM | 21145,0 | vt   | dly | 09 | MRC | no ITU                  | FSK8  | 125  | 1750  | ALE, “B301”, “C3”, “IR4” “T4” “E4” “A2” “CD” “K3” “KB2” “J5” “GS4” “R3” – various times, daily |
| DK2OM | 21145,8 | ady  | dly | 09 | I   | IZ3DVW                  | A1A   |      |       | IZ3DVW beacon – 21145,790 kHz – daily, all day - not coordinated with IARU                     |
| DK2OM | 21160,0 | ---  | --  | 09 | RUS |                         | F1B   | 100  | 2000  | 4th from 5290 kHz (500 Hz shift) – St. Peterburg   |
| DK2OM | 21190,0 | ---  | --  | 09 | RUS |                         | F1B   | 100  | 1000  | harmonic from 10595 kHz - Moscow - daily   |
| DK2OM | 21226,0 | 0949 | 06  | 09 | AUS |                         | FMCW  |      | 10k   | OTH radar JORN in burstmode – 7 sps – 18 sec bursts - introtone                                |
| DK2OM | 21226,8 | 0916 | 08  | 09 | CHN |                         | PSK8A | 2400 | 2400  | MIL-188-110A – bursts – 300 bps - China  |
| DK2OM | 21244,0 | 0929 | 22  | 09 | AUS |                         | FMCW  |      | 10k   | OTH radar JORN in burstmode – 10 sps - introtone   |
| DK2OM | 21271,0 | 0931 | 15  | 09 | AUS |                         | FMOP  |      | 10k   | OTH radar JORN in burstmode – 50 sps – 1.3 sec bursts - introtone                              |
| DK2OM | 21315,0 | 0904 | 13  | 09 | CYP |                         | FMCW  |      | 20k   | OTH radar Cyprus – 25 sps  |
| DK2OM | 21365,0 | 0851 | 14  | 09 | CHN |                         | FMCW  |      | 10k   | OTH burst radar – 48 sps – 5.3 sec bursts – every 45 sec                                       |
| DK2OM | 21396,0 | 0932 | 08  | 09 | RUS |                         | F1B   | 75   | 500   | also 14.09.2016 – 0955 utc – from 10698 kHz - Omsk   |
| DK2OM | 21400,0 | ---  | --  | 09 | RUS |                         | F1B   | 50   | 2000  | harmonic from 5350 kHz – area of Moscow - daily  |
| DK2OM | 21409,5 | ---  | --  | 09 | RUS |                         | F1B   | 100  | 2000  | F1B 100 / 2000 - CIS14 – harmonic from 10704.75 - Jekaterinburg, RUS - daily                   |
| DK2OM | 21436,0 | ---  | --  | 09 | RUS |                         | PSK2A | 120  | 5200  | AT3004D – harmonic from 10718.0 kHz - Sevastopol   |
| DK2OM | 21438,0 | vt   | dly | 09 | RUS | RCV                     | A1A   |      |       | RIP90, RCV, RGX94 - RUS Navy Sevastopol - daily  |
| DK2OM | 21440,0 | 1024 | 06  | 09 | CHN |                         | A3E   |      | 15k   | splattering down to 21440 kHz – Radio Free Asia and CNR1 (Chinese jammer)                      |
| DK2OM | 21446,0 | ady  | dly | 09 | THA | HS0ZEA                  | A1A   |      |       | HS0ZEA beacon – every 5 minutes - just for info!   |
| DK2OM | 25000,0 | ady  | dly | 09 | FIN |                         | A3E   |      |       | time signal Helsinki – daily, all day – just for info!   |
| DK2OM | 28000,0 | vt   | vd  | 09 | B   |                         | A3E   |      |       | Brazilian CBers – 28000 – 28325  |
| DK2OM | 28000,0 | vt   | dly | 09 | CIS |                         | F3E   |      |       | 28000 – 29700 numerous CIS taxi nets – no change   |
| DK2OM | 28000,0 | 2100 | 07  | 09 | G   |                         | F3E   |      |       | UK CBers with roger beep   |
| DK2OM | 28010,1 | ---  | --  | 09 | POR |                         | F1B   | 51   | 300   | F1B bursts – west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                        |
| DK2OM | 28025,0 | ---  | --  | 09 | POR |                         | F1B   | 51   | 300   | F1B bursts – 28025.050 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily        |



| DK2OM | kHz     | UTC | DD | MM | ITU      | IDENT  | MODE | BD  | SH/SP | DETAILS  |
|-------|---------|-----|----|----|----------|--------|------|-----|-------|--|
| DK2OM | 28030,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 340   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28045,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 280   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28050,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 300   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28051,5 | --- | -- | 09 | POR      |        | F1B  | 51  | 300   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28060,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28065,1 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28065,8 | --- | -- | 09 | GAB      |        | A3E  |     | 980   | carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day |
| DK2OM | 28075,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28085,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 300   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28090,1 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily    |
| DK2OM | 28100,2 | --- | -- | 09 | POR      |        | F1B  | 51  | 300   | F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily    |
| DK2OM | 28102,1 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28125,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28146,0 | vt  | vd | 09 | ARG<br>B |        | FSK8 | 125 | 1750  | ALE, “LU8EX” “PY2TI” “DL1” – just for info!  |
| DK2OM | 28200,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 330   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28224,4 | --- | -- | 09 | GAB      |        | A3E  |     |       | carrier and dots +/- 770 Hz - bursts every 60 sec – Gabon – daily and all day              |
| DK2OM | 28249,6 | --- | -- | 09 | GAB      |        | A3E  |     | 1380  | carrier and dots +/- 745 Hz - bursts every 60 sec – Gabon – daily and all day              |
| DK2OM | 28250,5 | --- | -- | 09 | GAB      |        | A3E  |     | 1000  | carrier and dots +/- 500 Hz - bursts every 60 sec – Gabon – daily and all day              |
| DK2OM | 28275,1 | --- | -- | 09 | AF       |        | F1B  | 51  | 320   | F1B bursts -Atlantic Ocean - Enagal GPS buoys - daily                                      |
| DK2OM | 28312,5 | vt  | vd | 09 | POR      | CT2IXQ | FSK8 | 125 | 1750  | ALE. “CT2IXQ” – just for info  |
| DK2OM | 28315,0 | --- | -- | 09 | POR      |        | F1B  | 51  | 320   | F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily                    |
| DK2OM | 28335,0 | vt  | vd | 09 | E        |        | F3E  |     |       | Spanish CBers with roger beeps talking about echo-microphones                              |
| DK2OM | 28345,1 | --- | -- | 09 | GAB      |        | A3E  |     | 1060  | carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day              |

| DK2OM | kHz     | UTC  | DD | MM | ITU | IDENT | MODE | BD   | SH/SP | DETAILS   |
|-------|---------|------|----|----|-----|-------|------|------|-------|---|
| DK2OM | 28435,0 | ---- | -- | 09 | E   |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 28435.040 kHz – Costa del Sol – Malaga                              |
| DK2OM | 28459,8 | ---- | -- | 09 | GAB |       | A3E  |      | 1060  | carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28459,9 | ---  | -- | 09 | GAB |       | A3E  |      | 1060  | carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28499,8 | ---  | -- | 09 | MEa |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 28499.875 kHz – Persian Gulf  |
| DK2OM | 28701,1 | ---  | -- | 09 | GAB |       | A3E  |      | 1056  | carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28745,3 | ---  | -- | 09 | GAB |       | A3E  |      | 1060  | carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28751,2 | ---  | -- | 09 | GAB |       | A3E  |      | 1080  | carrier and dots +/- 540 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28751,3 | ---  | -- | 09 | GBN |       | A3E  |      | 1040  | carrier and dots +/- 520 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28801,5 | ---  | -- | 09 | GBN |       | A3E  |      | 1090  | carrier and dots +/- 545 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28845,5 | ---  | -- | 09 | GAB |       | A3E  |      | 1060  | carrier and dots +/- 530 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28901,1 | ---  | -- | 09 | GAB |       | A3E  |      | 1056  | carrier and dots +/- 528 Hz - bursts every 60 sec – Gabon – daily and all day                   |
| DK2OM | 28960,0 | 0800 | 11 | 09 | IRN |       | FMOP |      | 55k   | radar Iran – burst mode – 150 and 313 sps   |
| DK2OM | 29114,0 | ---  | -- | 09 | RUS |       | F1B  | 100  | 2000  | harmonic from 14557.0 kHz - Moscow  |
| DK2OM | 29249,9 | ---  | -- | 09 | E   |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29249.880 kHz – Spain Fuerteventura - daily, all day                |
| DK2OM | 29375,0 | ---  | -- | 09 | I   |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29374.898 kHz – Gallipoli, South Italy - daily, all day             |
| DK2OM | 29387,5 | ---  | -- | 09 | IND |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day |
| DK2OM | 29400,0 | ---  | -- | 09 | USA |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29400.070 kHz - USA north-east coast – NY daily, all day            |
| DK2OM | 29450,0 | ---  | -- | 09 | MRC |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29449.895 kHz - area of El Aaiun – Morocco - daily, all day         |
| DK2OM | 29500,0 | ---  | -- | 09 | G   |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – area of Gibraltar – daily, all day                                  |
| DK2OM | 29525,0 | ---  | -- | 09 | MRC |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29524.990 kHz - Agadir - Morocco – daily, all day                   |
| DK2OM | 29625,0 | ---  | -- | 09 | USA |       | F1B  | 81.9 | 140   | Datawell-buoy "Waverider" – 29625.024 kHz - USA north-east coast – daily, all day               |
| DK2OM | 29685,0 | ---  | -- | 09 | I   |       | VFT  |      | 2300  | Italian MIL - Brescia   |
| DK2OM | 29699,5 | ---  | -- | 09 | I   |       | VFT  |      | 1600  | Italian MIL - Brescia   |

## IRTS – Ireland – EI3GYB (Michael)

| SOC  | kHz    | UTC             | DD | MM | ITU             | IDENT | MODE    | DETAILS  |
|------|--------|-----------------|----|----|-----------------|-------|---------|--|
| IRTS | 1847   | 1615            | 26 | 09 | POR<br>or<br>MM |       | USB     | 2 male Portuguese fishermen, very strong signals.  |
| IRTS | 1860   | 1715            | 28 | 09 | E or<br>MM      |       | USB     | 2 male Spanish fishermen. Bad audio.   |
| IRTS | 3504   | 1830            | 06 | 09 | HOL<br>or<br>MM |       | USB     | 2 male Dutch fishermen.  |
| IRTS | 3504   | 1800            | 07 | 09 | HOL<br>or<br>MM |       | USB     | 2 Dutch fishermen. Motor noise. Strong signals.  |
| IRTS | 3525,6 | 1140            | 09 | 09 | UK<br>or<br>MM  |       | USB     | UK fishermen, 2 males. Names Mick and Joe. Ulster accent. They keep complaining about WX.  |
| IRTS | 3535   | 1806 to<br>1837 | 01 | 09 | POR<br>or<br>MM |       | USB     | 2 male Portuguese fishermen. Huge signals. Will meet again tomorrow.   |
| IRTS | 3535   | 1615            | 25 | 09 | UK<br>or<br>MM  |       | USB     | UK fishermen. 2 male persons. Scottish accent.   |
| IRTS | 3535.5 | 0753            | 22 | 09 | F or<br>MM      |       | USB     | 2 male French fishermen.   |
| IRTS | 3536.5 | 1440            | 22 | 09 | E or<br>MM      |       | USB     | 2 male Spanish fishermen. Very bad audio, but extremely strong signals.  |
| IRTS | 3550   | 1745 to<br>1810 | 01 | 09 | F or<br>MM      |       | USB     | 2 French fishermen. Very strong signals.   |
| IRTS | 3550   | 1145            | 11 | 09 | F or<br>MM      |       | USB     | 2 male French fishermen.   |
| IRTS | 3550   | 0530            | 22 | 09 | F or<br>MM      |       | USB     | 2 male French fishermen.   |
| IRTS | 3596   | 1750 to<br>1805 | 01 | 09 | UK<br>or<br>MM  |       | USB     | UK fishermen. Ulster accent. One is called Jim. Loud motor noise in the background.  |
| IRTS | 3610   | 1730            | 06 | 09 | HOL<br>or<br>MM |       | USB     | 2 male Dutch fishermen. Typical motor noise in background.   |
| IRTS | 3613   | 1200            | 04 | 09 | E or<br>MM      |       | USB     | 2 male Spanish fishermen.  |
| IRTS | 3654   | 0630            | 08 | 09 | POR<br>or<br>MM |       | USB     | 2 male Portuguese fishermen. Strong signals. Very bad audio on both sides.   |
| IRTS | 3654   | 1555            | 18 | 09 | POR<br>or<br>MM |       | USB     | 2 Portuguese male fishermen. Huge signals.   |
| IRTS | 3685   | 1100            | 01 | 09 | E               |       | Cry2001 | Spanish fishermen  |
| IRTS | 3739   | 0825            | 10 | 09 | POR<br>or<br>MM |       | USB     | 2 male Portuguese fishermen.   |
| IRTS | 3747   | 1800            | 30 | 09 | POR<br>or<br>MM |       | USB     | 2 male Portuguese fishermen.   |
| IRTS | 3776,5 | 1727 to<br>1755 | 28 | 09 | IRL<br>or<br>MM |       | USB     | 2 Irish fishermen. Cork accent. One of them is called Colum, the other John. Mentioned: Castletown. John says: " Talking to Brendan Ryan about fish price today. " "I'll give you a shout later around 9 ! "   |
| IRTS | 3776.5 | 1115 to<br>1128 | 22 | 09 | IRL<br>or<br>MM |       | USB     | 2 male Irish fishermen. Names: Colum and Padraic. Waterford and Cork accent. Usual quota of "fuck" and "shyte". Plenty of complains about everything. Fed up with the need for a licence for everything." I'll give you a shout around half past four !" |
| IRTS | 3777.5 | 1600            | 11 | 09 | F or<br>MM      |       | USB     | 2 male French fishermen.   |

| SOC  | kHz    | UTC          | DD | MM | ITU        | IDENT | MODE | DETAILS  |
|------|--------|--------------|----|----|------------|-------|------|--|
| IRTS | 5316   | 1650         | 18 | 09 | E or MM    |       | USB  | 2 male Spanish fishermen.UK allocation.  |
| IRTS | 5330   | 1230         | 16 | 09 | F or MM    |       | USB  | 2 French male fishermen. On EI spot frequency.   |
| IRTS | 5330   | 1345         | 17 | 09 | F or MM    |       | USB  | 2 male French fishermen. EI spot frequency.  |
| IRTS | 5332   | 0255         | 09 | 09 | E or MM    |       | USB  | 2 Spanish fishermen. Very low signals. EI allocation.  |
| IRTS | 5347   | 2100         | 09 | 09 | POR or MM  |       | USB  | 2 male Portuguese fishermen. Strong signals. Inside new HAM allocation on 5 MHz.   |
| IRTS | 5354   | 0930         | 24 | 09 | E or MM    |       | USB  | 2 Spanish fishermen, very strong signals. HAM 5 MHz allocation.  |
| IRTS | 5354   | 1550 to 1700 | 28 | 09 | E or MM    |       | USB  | A group of at least 4 male Spanish fishermen. One of them is around the Balearic Islands, another one between Sardinia and the Italian mainland. One was called Avelino. All very clear audio. Motor noise on all ships in the background. Signals of all ships 59 plus plus. Inside 5 MHz HAM allocation. |
| IRTS | 5355   | 1600         | 09 | 09 | F or MM    |       | USB  | 2 male French fishermen. Loud motor noise. Lots of signing and laughter. Inside new HAM allocation.  |
| IRTS | 5360   | 1945-2000    | 04 | 09 | POR or MM  |       | USB  | 2 Portuguese fishermen. Loud motor noise in the background. Huge signals. Inside new HAM allocation.   |
| IRTS | 5370   | 1704 to 1815 | 28 | 09 | POR or MM  |       | USB  | 2 male Portuguese fishermen. UK allocation.  |
| IRTS | 5385   | 1706 to 1715 | 28 | 09 | E or MM    |       | USB  | 2 male Spanish fishermen.UK allocation.  |
| IRTS | 5386   | 1825         | 03 | 09 |            |       |      | Radar from 5386 to 5417 KHz. Very strong. Inside UK 5 MHz allocation.  |
| IRTS | 5400   | 0710         | 26 | 09 | E or MM    |       | USB  | 2 male Spanish fishermen. EI spot frequency.   |
| IRTS | 5398.5 | 1755         | 30 | 09 |            |       |      | Radar from 5390 to 5400 KHz. EI spot frequency on 5 MHz.   |
| IRTS | 7000   | 2000         | 17 | 09 | RUS        |       | AM   | Buzzer. Every day, all day.  |
| IRTS | 7050   | 1700         | 18 | 09 | RUS or UKR |       | LSB  | Ukrainian- Russian radio war. Every day.   |
| IRTS | 7055   | 1705         | 18 | 09 | UKR or RUS |       | LSB  | Ukrainian- Russian radio war. Daily show.  |
| IRTS | 7160   | 1930         | 28 | 09 |            |       |      | Radar from 7160 to 7191 kHz. Massive signal.   |
| IRTS | 7175   | 1530         | 28 | 09 | ETH        |       |      | Jamming signal from Ethiopia directed at Eritrea.  |
| IRTS | 10121  | 0830         | 11 | 09 |            |       | USB  | 2 male voices chatting in Arabic. Maghreb accent. Probably MRC fishermen.  |
| IRTS | 10144  | 1710         | 28 | 09 |            |       |      | Radar from 10144 to 10175 KHz outside the HAM allocation.  |
| IRTS | 14094  | 1205         | 29 | 09 |            |       |      | Radar from 14094 to 14128 KHz. Very strong.  |
| IRTS | 14110  | 1045         | 06 | 09 |            |       |      | Radar from 14110 to 14148 KHz. Persistent and very strong.   |
| IRTS | 14113  | 1245         | 17 | 09 |            |       |      | Radar from 14113 to 14151 KHz. Big signal.   |
| IRTS | 14116  | 0915         | 02 | 09 |            |       |      | Radar from 14116 to 14150 KHz.   |
| IRTS | 14249  | 1200         | 07 | 09 |            |       |      | Radar from 14249 to 14291 KHz. Strong and persistent.  |
| IRTS | 14256  | 1822         | 29 | 09 |            |       |      | Radar from 14256 to 14271 KHz, on and off.   |
| IRTS | 14270  | 1230         | 06 | 09 |            |       |      | Radar from 14270 to 14308 KHz. Persistent and strong.  |
| IRTS | 18079  | 1100         | 22 | 09 |            |       |      | Radar from 18079 to 18106 KHz. Very strong signal.   |
| IRTS | 18159  | 1100         | 11 | 09 |            |       |      | Radar from 18159 all the way to 18195 KHz outside the HAM allocation. Huge signal.   |
| IRTS | 21196  | 1250         | 27 | 09 |            |       |      | Radar from 21196 to 21220 KHz.   |



**KARS – Kuwait – 9K2RR (Faisal)****MRASZ – Hungary - HA7PL (Laci)**

| SOC   | kHz     | UTC  | DD  | MM | ITU | IDENT | MODE | BD | SH    | DETAILS                                   |
|-------|---------|------|-----|----|-----|-------|------|----|-------|---|
| MRASZ | 3509,0  | 1825 | 1   | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 3531,0  | 1759 | 12  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 3534,9  | 1800 | 12  | 9  |     |       | N0N  |    |       |   |
| MRASZ | 3548,0  | 1830 | 21  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 3583,5  | 1836 | 20  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 3642,0  | 1817 | 21  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 3658,0  | 1741 | 12  | 9  |     |       | A1A  |    |       | "AYOCÄ ZPSÛT<br>ZYMFH"                    |
| MRASZ | 3696,9  | 1826 | 1   | 9  |     |       | N0N  |    |       |   |
| MRASZ | 3698,0  | 1828 | 21  | 9  |     |       | A1A  |    |       | "ZKGZP ÄXChWÄ<br>WÄPEY"                   |
| MRASZ | 3699,5  | 1841 | 20  | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 3748,0  | 1820 | 21  | 9  |     |       | F1B  | 50 | 500   |   |
| MRASZ | 3748,0  | 1826 | 21  | 9  |     |       | A1A  |    |       | "V V NIL SK"                              |
| MRASZ | 3750,0  | 1807 | 5   | 9  |     |       | A1A  |    |       | "RGR98 de RMW46 ZA3<br>R K"               |
| MRASZ | 3756,0  | 1806 | 19  | 9  |     |       | USB  |    |       |   |
| MRASZ | 3773,5  | 1853 | 20  | 9  |     |       | A1A  |    |       | "8M7F QTC 383 492T2<br>1.T 383=ZBM 349="  |
| MRASZ | 7000,0  | 1812 | 5   | 9  |     |       | LSB  |    |       | italian male                              |
| MRASZ | 7000,0  | 1711 | 7   | 9  |     |       | N0N  |    |       |   |
| MRASZ | 7000,0  | vt   | dly | 9  | RUS |       | H3E  |    | 3,4 k | buzzer                                    |
| MRASZ | 7016,0  | 1432 | 21  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 7016,0  | 1217 | 23  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 7020,0  | 1756 | 19  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 7031,0  | 1757 | 19  | 9  |     |       | N0N  |    |       |   |
| MRASZ | 7050,0  | vt   | dly | 9  |     |       | LSB  |    |       | russian/ukrainian, chaos,<br>music, curse |
| MRASZ | 7055,0  | 1810 | 21  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 7055,0  | vt   | dly | 9  |     |       | LSB  |    |       | russian/ukrainian, chaos,<br>music, etc   |
| MRASZ | 7080,0  | 1803 | 12  | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 7080,0  | 1800 | 19  | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 7090,5  | 1801 | 12  | 9  |     |       | PSK2 |    |       | AT3004D                                   |
| MRASZ | 7114,0  | 1800 | 19  | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 7116,5  | 1954 | 7   | 9  |     |       | N0N  |    |       |   |
| MRASZ | 7117,0  | 1817 | 7   | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 7117,0  | 1838 | 7   | 9  |     |       | A1A  |    |       | "V" string                                |
| MRASZ | 7117,0  | 1844 | 7   | 9  |     |       | A1A  |    |       | "5AXP de G0EBS K"<br>"BK BK RPT AA"       |
| MRASZ | 7120,0  | 1819 | dly | 9  | SOM |       | A3E  |    |       | Radio Hargaysa                            |
| MRASZ | 7170,0  | 1922 | 28  | 9  |     |       | OTHR |    |       | 7150-7190 kHz                             |
| MRASZ | 7175,0  | 1802 | 19  | 9  | ERI |       | A3E  |    |       | Radio Eritrea, hrd: 20, 21                |
| MRASZ | 7175,0  | 1428 | 20  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 7176,0  | 1811 | 21  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 10145,0 | 1819 | 1   | 9  |     |       | OTHR |    |       | 10145-10150 kHz                           |
| MRASZ | 14180,0 | 1821 | 1   | 9  |     |       | F1B  |    | 200   |   |
| MRASZ | 14192,0 | 1935 | 1   | 9  |     |       | F1B  |    | 500   | hrd: 28                                   |
| MRASZ | 14240,0 | 1213 | 23  | 9  |     |       | F1B  |    | 250   |   |
| MRASZ | 14274,1 | 1212 | 23  | 9  |     |       | F1B  |    | 400   |   |
| MRASZ | 14295,0 | vt   | dly | 9  | TJK |       | A3E  |    |       | Radio Tajik, 3rd.<br>harmonic             |
| MRASZ | 18107,0 | 1616 | 12  | 9  |     |       | F1B  |    | 200   |   |

**OEVSV – Austria – OE3GSA (Gerd)**

| SOC   | kHz     | UTC  | DD | MM | ITU  | IDENT | MODE | BD | SH | DETAILS                       |
|-------|---------|------|----|----|------|-------|------|----|----|-------------------------------|
| oevsv | 14015.0 | 0526 | 15 | 09 | BY   | unid  | J3E  |    |    | chinese male voice            |
| oevsv | 14015.0 | 0607 | 19 | 09 | unid | unid  | J3E  |    |    | mixed with dig. transmissions |
| oevsv | 14050.0 | 0513 | 23 | 09 | unid | unid  | F3E  |    |    | RTTY fast                     |
| oevsv | 14050.0 | 0700 | 01 | 09 | unid | unid  | FMCW |    |    | OTHR                          |
| oevsv | 18080.0 | 0735 | 01 | 09 | BY   |       | A3A  |    |    | old friends - chinese BC      |
| oevsv | 18080.0 | 0526 | 15 | 09 | BY   |       | A3A  |    |    | as allmost every day          |

**PZK – Poland – SP9BRP (Jan)****REF 1 – France – F5MIU (Francis) - F5JBR (Andre)**

| SOC | kHz    | UTC  | DD | MM | ITU | IDENT               | MODE | BD | SH  | DETAILS   |
|-----|--------|------|----|----|-----|---------------------|------|----|-----|---|
| REF | 1888.0 | 0201 | 07 | 09 | ITA | Civitavecchia (IPD) | USB  |    |     | Maritime Weather Transmissions  |
| REF | 3500.5 | 1719 | 09 | 09 | RUS | RJD99               | CW   |    |     | RJD99 Wkg RMU (RMU de RJD99 QTC SML) in Bcast   |
| REF | 3500.5 | 1735 | 10 | 09 | RUS | RJD56               | CW   |    |     | RJD56 Wkg REE5 (comms checks and QTCs) in Dx  |
| REF | 3500.5 | 1501 | 24 | 09 | RUS | RJD99               | CW   |    |     | RJD99 Wkg RAS82 RAY85 RBC89 RBE99 (comms checks and QtcS SML) in Duplex – For information the Qsx is on 4619.5 kHz  |
| REF | 3500.5 | 0511 | 27 | 09 | RUS | RJD99               | CW   |    |     | RJD99 Wkg RMB81 RAS82 RAY85 RBC89 RBE99 (comms checks and QtcS SML) in Duplex – For information the Qsx is on 4619.5 kHz AND send weather messages for RMU (collective callsign) in Bcast |
| REF | 3513.0 | 1642 | 11 | 09 | RUS | KARTA-60            | LSB  |    |     | CARTA-60 calling VOLTA-68 ; BORDER-74 ; PALMIR-98 (calling and comms checks) in Dx  |
| REF | 3513.0 | 1641 | 11 | 09 | RUS | KARTA-60            | LSB  |    |     | CARTA-60 calling VOLTA-68 ; BORDER-74 ; PALMIR-98 (calling and comms checks) in Dx  |
| REF | 3513.0 | 1645 | 22 | 09 | RUS | Plaz-66             | LSB  |    |     | CARTA-60 calling PILOT-81 ABOROK-42 (calling and comms checks) in Dx  |
| REF | 3523.0 | 1557 | 13 | 09 | RUS | Russian Military    | F1B  | 75 | 250 | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 3525.0 | 0448 | 14 | 09 | RUS | TUVU                | CW   |    |     | TUJU Wkg 7 outstations (calling and exchanges QSA) in Dx – For information : Qsx on 3350 kHz  |
| REF | 3525.0 | 1810 | 17 | 09 | RUS | TUVU                | CW   |    |     | TUJU Wkg 7 outstations (calling and exchanges QSA and QTCs – Validity callsigns : 10 days : change the 1, 11 and 21 of each month) in Dx – For information : Qsx on 3350 kHz              |

| SOC | kHz    | UTC  | DD | MM | ITU | IDENT            | MODE                 | BD              | SH   | DETAILS   |
|-----|--------|------|----|----|-----|------------------|----------------------|-----------------|------|---|
| REF | 3525.0 | 1800 | 22 | 09 | RUS | BLNO             | CW                   |                 |      | BLNO Wkg 7 outstations (calling and exchanges QSA and QTCs – Validity callsigns : 10 days : change the 1, 11 and 21 of each month) in Dx – For information : Qsx on 3350 kHz                    |
| REF | 3525.0 | 1802 | 26 | 09 | RUS | BLNO             | CW                   |                 |      | BLNO Wkg 7 outstations (calling and exchanges QSA and QTCs : groups 5 figures – Validity callsigns : 10 days : change the 1, 11 and 21 of each month) in Dx – For information : Qsx on 3350 kHz |
| REF | 3544.0 | 0335 | 09 | 09 | RUS | ChYRP            | CW                   |                 |      | ChYRP working RZYZV (Peer to peer connection: uses fixed code): QSO in telegraphy and message exchanges in digital mode (FSK 50 Bd 500 Hz) in Duplex  |
| REF | 3546.0 | 1656 | 21 | 09 | RUS | Russian Military | CIS-12/AT3 004D/ USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 3548.0 | 0315 | 07 | 09 | RUS | Russian Navy     | F1B                  | 50              | 200  | Encrypted messages – traffic to nuclear forces  |
| REF | 3543.5 | 1703 | 11 | 09 | RUS | HV5N             | CW                   |                 |      | HV5N (probably Collective callsign) comms checks in Broadcast (Send : HV5N QLW QRK ? QSA ? QXS = (REPEAT 2 TIMES) and AR) : For information Same transmission on 2471 kHz                       |
| REF | 3548.0 | 1711 | 11 | 09 | RUS | Russian Navy     | F1B                  | 50              | 200  | Encrypted messages – traffic to nuclear forces  |
| REF | 3543.5 | 1706 | 12 | 09 | RUS | HV5N             | CW                   |                 |      | HV5N (probably Collective callsign) comms checks in Broadcast (Send : HV5N QLW QRK ? QSA ? QXS = (REPEAT 2 TIMES) and AR) : For information Same transmission on 2471 kHz                       |
| REF | 3552.0 | 0342 | 09 | 09 | RUS | Russian Navy     | F1B                  | 50              | 200  | Encrypted messages – traffic to nuclear forces  |
| REF | 3552.0 | 1630 | 11 | 09 | RUS | Russian Navy     | F1B                  | 50              | 200  | Encrypted messages – traffic to nuclear forces  |
| REF | 3568.0 | 1714 | 26 | 09 | RUS | Russian Military | CIS-12/AT3 004D/ USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 3580.0 | 1417 | 24 | 09 | RUS | Russian Military | CIS-12/AT3 004D/ USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 3580.0 | 1713 | 26 | 09 | RUS | Russian Military | CIS-12/AT3 004D/ USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 3584.0 | 1500 | 15 | 09 | RUS | YFJA             | CW                   |                 |      | YFJA send QTCs for YWD7 (probably fixed callsign) in Broadcast  |

| SOC | kHz    | UTC  | DD | MM | ITU | IDENT            | MODE                | BD              | SH   | DETAILS  |
|-----|--------|------|----|----|-----|------------------|---------------------|-----------------|------|--|
| REF | 3590.0 | 1730 | 16 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode  |
| REF | 3592.0 | 1139 | 17 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode  |
| REF | 3594.5 | 1731 | 16 | 09 | RUS | RJD99            | CW                  |                 |      | RJD99 send weather messages (for RMU : collective callsign) and Wkg Ships (comms checks and QTCs : with Ship Locations) in Duplex – For information the Qsx is on 4537.5 kHz                                       |
| REF | 3642.0 | 1635 | 13 | 09 | CHN | 3A7D             | CW                  |                 |      | 3A7D calling DKG6 (Only : DKG6 de 3A7D V)  |
| REF | 3670.0 | 1431 | 27 | 09 | RUS | YAVERKA          | USB                 |                 |      | YAVERKA (RHC86) Calling VESTNIK (RMP) for comms checks in USB Mode (QSU1) in Dx – For information : The Qsx is on 4559   |
| REF | 3673.5 | 1633 | 08 | 09 | RUS | LUMR             | CW                  |                 |      | LUMR working 2 outstations (comms checks and QTCs) in Simplex  |
| REF | 3673.5 | 1231 | 13 | 09 | RUS | LRG1             | CW                  |                 |      | LRG1 Wkg 2 Outstations (comms checks and QTCs : 5 letters and 5 figures – preamble : 91 49 13 1000 91 = 72727 22512 68573 .../...) in Sx) in Simplex   |
| REF | 3673.5 | 1431 | 14 | 09 | RUS | LRG1             | CW                  |                 |      | LRG1 Wkg 2 Outstations (comms checks and QTCs : 5 letters and 5 figures – preamble : 91 49 13 1000 91 = 72727 22512 68573 .../...) in Sx) in Simplex   |
| REF | 3684.0 | 1617 | 17 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode  |
| REF | 3693.0 | 0613 | 08 | 09 | RUS |                  | CW                  |                 |      | VVV = ÛFQZD BchÔKC ÂREIJ PÛFQP ... / ... AR et VVV = ChÔQLE LVHJW ÛFQGX ... / ... AR et VVV = XBOTN CÂLVS JPWUQ ZXDTM ... / ... AR (For information : same transmission on 3693, 5207.5 and 6880 kHz)              |
| REF | 3720.0 | 1421 | 24 | 09 | RUS | MFWU             | CW                  |                 |      | MFWU Wkg 3 outstations (MSW5 TG5R SMPR and 5QVV (collective callsign) (comms checks and QTCs) in Sx – For information : Network heard with the same callsigns in March and April 2016: So probably fixed callsigns |
| REF | 3736.0 | 1444 | 23 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode  |



| SOC | kHz    | UTC  | DD | MM | ITU | IDENT            | MODE                | BD              | SH   | DETAILS  |
|-----|--------|------|----|----|-----|------------------|---------------------|-----------------|------|--|
| REF | 3738.0 | 1755 | 16 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode  |
| REF | 3736.5 | 1716 | 22 | 09 | RUS | FTLM             | CW                  |                 |      | FTLM Wkg 4 outstations (comms checks : calling and exchanges QSA) in Simplex   |
| REF | 3741.5 | 1715 | 22 | 09 | RUS | Russian Navy     | F1B                 | 50              | 200  | Encrypted messages – traffic to nuclear forces   |
| REF | 3741.5 | 1414 | 24 | 09 | RUS | Russian Navy     | F1B                 | 50              | 200  | Encrypted messages – traffic to nuclear forces   |
| REF | 3750.0 | 1800 | 05 | 09 | RUS | RMW46            | CW                  |                 |      | RMW46 working 14 outstations RGR88 ; RGR89 ; RGR90 ; RGR91 ; RFH46 ; RGR92 ; RGR93 ; RGR94 ; RGR95 ; RGR96 ; RGR97 ; RDQ81 ; RGR98 RGR99 (Use ZSA for Checks) in Simplex : The frequency is the Night Frequency                      |
| REF | 3750.0 | 1800 | 06 | 09 | RUS | RMW46            | CW                  |                 |      | RMW46 working 14 outstations RGR88 ; RGR89 ; RGR90 ; RGR91 ; RFH46 ; RGR92 ; RGR93 ; RGR94 ; RGR95 ; RGR96 ; RGR97 ; RDQ81 ; RGR98 RGR99 (Use ZSA for Checks) in Simplex : The frequency is the Night Frequency                      |
| REF | 3750.0 | 1800 | 15 | 09 | RUS | RMW46            | CW                  |                 |      | RMW46 working 14 outstations RGR88 ; RGR89 ; RGR90 ; RGR91 ; RFH46 ; RGR92 ; RGR93 ; RGR94 ; RGR95 ; RGR96 ; RGR97 ; RDQ81 ; RGR98 RGR99 (Use ZSA for Checks) in Simplex : The frequency is the Night Frequency                      |
| REF | 3750.0 | 1800 | 16 | 09 | RUS | RMW46            | CW                  |                 |      | RMW46 working 14 outstations RGR88 ; RGR89 ; RGR90 ; RGR91 ; RFH46 ; RGR92 ; RGR93 ; RGR94 ; RGR95 ; RGR96 ; RGR97 ; RDQ81 ; RGR98 RGR99 (Use ZSA for Checks and Qtcs : 5 figures) in Simplex : The frequency is the Night Frequency |
| REF | 3750.0 | 1800 | 24 | 09 | RUS | RMW46            | CW                  |                 |      | RMW46 working 14 outstations RGR88 ; RGR89 ; RGR90 ; RGR91 ; RFH46 ; RGR92 ; RGR93 ; RGR94 ; RGR95 ; RGR96 ; RGR97 ; RDQ81 ; RGR98 RGR99 (Use ZSA for Checks and Qtcs : 5 figures) in Simplex : The frequency is the Night Frequency |
| REF | 3755   | 1644 | 21 | 09 | RUS | Russian Military | CW                  |                 |      | Responses 6 outstations (comms checks and QTCs : AAAAA) - For information : The Net Station 2ZVA is on 3348 kHz and the network use daily callsigns  |
| REF | 3766.0 | 0236 | 07 | 09 | RUS | 2MMZ             | CW                  |                 |      | 2MMZ working 4 outstations (comms checks and QTCs) in Duplex   |
| REF | 3766.0 | 1700 | 13 | 09 | RUS | HVN6             | CW                  |                 |      | HVN6 Wkg 4 Outstations (comms checks and QTCs : 11111) in Dx (For information : Qsx on 3311 kHz)   |

| SOC | kHz    | UTC  | DD | MM | ITU | IDENT               | MODE                | BD              | SH   | DETAILS   |
|-----|--------|------|----|----|-----|---------------------|---------------------|-----------------|------|---|
| REF | 3775.0 | 0234 | 07 | 09 | RUS | Russian Military    | CW                  |                 |      | Responses 6 outstations (comms checks) - For information : The Net Station G7P9 is on 3348 kHz  |
| REF | 3775.0 | 1648 | 13 | 09 | RUS | Russian Military    | CW                  |                 |      | Responses 6 outstations (comms checks) - For information : The Net Station 8GN5 is on 3348 kHz  |
| REF | 3775.0 | 1743 | 16 | 09 | RUS |                     | CW                  |                 |      | Responses 6 outstations (comms checks and QTCs : AAAAA) - For information : The Net Station 9SYA is on 3348 kHz                                     |
| REF | 3775.0 | 1651 | 19 | 09 | RUS | Russian Military    | CW                  |                 |      | Responses 6 outstations (comms checks and QTCs : AAAAA) - For information : The Net Station NY1H is on 3348 kHz and the network use daily callsigns |
| REF | 3775.0 | 1718 | 22 | 09 | RUS | Russian Military    | CW                  |                 |      | Responses 6 outstations (comms checks and QTCs : AAAAA) - For information : The Net Station GMEZ is on 3348 kHz and the network use daily callsigns |
| REF | 3777.0 | 1647 | 13 | 09 | CHN | RIS9                | CW                  |                 |      | RIS9 wkd M8JF (Only : M8JF de RIS9 V)   |
| REF | 3773.5 | 1752 | 10 | 09 | RUS | 9PV2                | CW                  |                 |      | 9PV2 Wkg 4 outstations (comms checks) in Sx   |
| REF | 3778.0 | 0813 | 24 | 09 | RUS | Russian Military    | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 3789.0 | 1516 | 15 | 09 | RUS | Russian Air Defense | LSB                 |                 |      | Tracking in Russian Voice   |
| REF | 3789.0 | 1411 | 23 | 09 | RUS | Russian Air Defense | LSB                 |                 |      | Tracking in Russian Voice   |
| REF | 3789.0 | 1203 | 26 | 09 | RUS | Russian Air Defense | LSB                 |                 |      | Tracking in Russian Voice   |
| REF | 3797.0 | 0319 | 07 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 1832 | 10 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 1831 | 12 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 1536 | 15 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 1647 | 21 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 1413 | 23 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3797.0 | 0421 | 27 | 09 | RUS | RCV                 | CW                  |                 |      | RCV send messages (for RIC87) in Broadcast  |
| REF | 3799.0 | 1734 | 11 | 09 | RUS | WASSAM-26           | USB                 |                 |      | WASSAM-26 calling PARKIR-51 ASTRA-79 in Simplex   |
| REF | 7016.0 | 1439 | 22 | 09 | RUS | Russian Military    | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7016.0 | 0841 | 23 | 09 | RUS | Russian Military    | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7016.0 | 0843 | 24 | 09 | RUS | Russian Military    | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |

| SOC | kHz     | UTC  | DD | MM | ITU | IDENT            | MODE                | BD              | SH   | DETAILS   |
|-----|---------|------|----|----|-----|------------------|---------------------|-----------------|------|---|
| REF | 7016.0  | 0653 | 25 | 09 | RUS | Russian Military | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7020.0  | 0844 | 24 | 09 | RUS | Russian Military | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7020.0  | 0653 | 25 | 09 | RUS | Russian Military | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7080.0  | 0355 | 09 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 7088.5  | 1602 | 12 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 7088.5  | 0537 | 13 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 7088.5  | 1333 | 14 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 7108.0  | 0332 | 07 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode   |
| REF | 7134.0  | 1634 | 12 | 09 | RUS | Russian Navy     | F1B                 | 50              | 200  | Encrypted messages – traffic to nuclear forces  |
| REF | 7160.0  | 0628 | 20 | 09 | RUS | RMW32            | CW                  |                 |      | RMW32 Wkg outstations RFH39 ; RFH40 ; RFH41 ; RFH42 ; RFH44 ; RFH45 ; RFH47 ; RFH48 ; RFH49 ; RFH65 ; RFH66 (comms checks : use ZSA for QSO) in Simplex |
| REF | 7176.0  | 0704 | 21 | 09 | RUS | Russian Military | F1B                 | 75              | 250  | Encrypted messages – Frequency enabled for traffic in QYT9 Mode   |
| REF | 7200.0  | 1205 | 20 | 09 | RUS | Russian Military | CIS-12/AT3 004D/USB | 120 per channel | 2700 | Encrypted messages – Traffic in QYT4 Mode :Calling in USB mode (no callsign, only comms checks and Traffic in numeric mode QYT4                         |
| REF | 14180.0 | 1330 | 16 | 09 | RUS | Russian Navy     | F1B                 | 50              | 200  | Encrypted messages – traffic to nuclear forces (Heard : „XXX“ in telegraphy mode and trafic in FSK mode : Probably RDL)                                 |
| REF | 14180.0 | 1206 | 20 | 09 | RUS | RDL              | F1B                 | 50              | 200  | Encrypted messages – traffic to nuclear forces (Heard : „RDL and Groups 5 Figures“ in telegraphy mode and trafic in FSK mode.                           |

## REP – Portugal – CT4AN (Jose Francisco)

| SOC | kHz   | UTC   | DD  | MM | ITU | IDENT | MODE          | BD  | SH   | DETAILS                                  |
|-----|-------|-------|-----|----|-----|-------|---------------|-----|------|--|
| REP | 3590  | 19.16 | 02  | 09 | E   |       | J3E-U         |     |      | Spanish fishery w/ CRY2000 vocoder       |
| REP | 3600  | 20.00 | 03  | 09 | E   |       | J3E-U         |     |      | Fishery                                  |
| REP | 3640  | 20.32 | 01  | 09 | G   | XSS   | MFSK          |     |      | Mil Tascom                               |
| REP | 7004  | 19.47 | 19  | 09 |     |       | J3E-L         |     |      | Ola, ola, amateur op, tuning QRO         |
| REP | 7015  | 17.22 | 08  | 09 |     |       | J3E-L         |     |      | Intruders                                |
| REP | 7016  | 18.21 | 22  | 09 | RUS |       | F1B           | 75  | 250  | CIS modem, Russia                        |
| REP | 7032  | 18.15 | 04  | 09 |     |       | FMCW          | 50  | 17k  | OTH Radar                                |
| REP | 7038  | 22.20 | 23  | 09 | RUS | P     | A1A           |     |      | MURMANSK                                 |
| REP | 7056  | 17.50 | 21  | 09 |     |       | BPSK          |     |      | AT3004D w/ dit jammer on 3k pilot tone   |
| REP | 7120  | 17.41 | 16  | 09 | SOM |       | 8k00<br>A3EGN |     |      | Radio Hargaysa                           |
| REP | 7175  | 18.33 | 22  | 09 | ETH |       | A3E           |     |      | Radio Eritreia jammed by Radio Ethiopia  |
| REP | 7184  | 19.31 | 25  | 09 | RUS |       | FMCW          | 50  | 200  | OTH radar, Russia                        |
| REP | 10107 | 12.11 | 02  | 09 | MRC |       | J3E-U         |     |      | Fishery                                  |
| REP | 10116 | 22.14 | 20  | 09 |     |       | A3E           |     |      | Letters Station - 5 letters groups       |
| REP | 10134 | 19.20 | 02  | 09 | MRC |       | J3E-U         |     |      | Moroccan fishery                         |
| REP | 10135 | 19.30 | 06  | 09 |     |       | FMCW          |     |      | OTH radar                                |
| REP | 10141 | 18.59 | 06  | 09 | E   |       | J3E-U         |     |      | Spanish fishery                          |
| REP | 14000 | 19.38 | 12  | 09 | B   |       | J3E-U         |     |      | Brazilian intruders                      |
| REP | 14000 | 09.56 | 20  | 09 |     |       | J3E-U         |     |      | Unid language intruders                  |
| REP | 14000 | 19.32 | 24  | 09 | B   |       | J3E-U         |     |      | Brazilian intruders                      |
| REP | 14005 | 10.50 | 11  | 09 |     |       | F1B           | 300 | 425  | RY RY RY                                 |
| REP | 14029 | 10.31 | 27  | 09 |     |       | BPSK          | 120 | x 12 | AT3004D modem, 12x120bpsk 3k pilot       |
| REP | 14113 | 13.33 | 05  | 09 |     |       | FMCW          | 50  | 17k  | OTH radar                                |
| REP | 14115 | 12.06 | 29  | 09 |     |       | FMCW          | 50  | 18k  | OTH radar                                |
| REP | 14133 | 07.28 | 07  | 09 |     |       | FMCW          |     |      | OTH radar                                |
| REP | 14137 | 09.50 | 20  | 09 |     |       | FMCW          |     |      | Burst mode OTH radar                     |
| REP | 14141 | 21.03 | 19  | 09 | RUS |       | F1B           | 75  | 400  | Navy                                     |
| REP | 14180 | 09.15 | 09  | 09 | RUS |       | F1B           | 50  | 200  | CIS 36 modem, Russia mil - daily         |
| REP | 14185 | 14.11 | 26  | 09 | RUS |       | F1B           | 50  | 250  | CIS36-50, Russia                         |
| REP | 14222 | 07.40 | 07  | 09 |     |       | PSK2          | 120 | x12  | AT3004D modem, unid                      |
| REP | 14270 | 15.12 | 02  | 09 |     |       | FMCW          |     |      | Burst mode OTH radar                     |
| REP | 14282 | 10.59 | 17  | 09 | RUS |       | FMCW          | 50  | 18k  | Russian OTH radar                        |
| REP | 14285 | 10.45 | 01  | 09 |     |       | FMCW          |     |      | Burst mode OTH radar                     |
| REP | 18075 | 13.50 | 20  | 09 |     |       | FMCW          | 50  | 20k  | OTH radar                                |
| REP | 21144 | 13.23 | 24  | 09 | B   |       | J3E-U         |     |      | Brazilian intruders, coordinates         |
| REP | 28069 | 17.04 | 21  | 09 | NZ  |       | A1A           |     |      | Drifnet buoy                             |
| REP | 28102 | Dly   | Dly | 09 | CPV |       | F1B           | 51  | 300  | Enagal GPS buoy, off coast of Cape Verde |
| REP | 28115 | 20.43 | 19  | 09 | B   |       | J3E-U         |     |      | Brazilian truckers, daily                |
| REP | 28117 | 20.38 | 19  | 09 | B   |       | J3E-U         |     |      | Brazilian truckers, daily                |
| REP | 28120 | 11.00 | 07  | 09 | E   |       | F1B           | 50  | 200  | Enagal buoy                              |
| REP | 28145 | 20.37 | 19  | 09 | B   |       | A3E           |     |      | Brazilian truckers, daily                |
| REP | 28165 | 12.10 | 22  | 09 | RUS |       | F3E           |     |      | Taxi YL dispatcher                       |
| REP | 28165 | 20.36 | 19  | 09 | B   |       | A3E           |     |      | Brazilian truckers, daily                |
| REP | 28311 | 17.02 | 21  | 09 | NZ  |       | A1A           |     |      | Drifnet buoy                             |
| REP | 28385 | 17.02 | 21  | 09 | NZ  |       | A1A           |     |      | Drifnet buoy                             |
| REP | 29135 | 11.21 | 22  | 09 | RUS |       | F3E           |     |      | Taxi dispatcher                          |
| REP | 29150 | 13.03 | 22  | 09 |     |       | F1B           | 82  | 160  | Datawell buoy                            |
| REP | 29180 | 11.54 | 26  | 09 | RUS |       | F3E           |     |      | Taxi dispatcher                          |
| REP | 29250 | 12.05 | 17  | 09 |     |       | F1B           | 82  | 120  | Datawell buoy                            |

## RSGB - Great Britain – M0VRR (Vaughan)

## SRAL – Finland – OH2BLU (Pekka)

| Society | kHz     | UTC        | DD  | MM | ITU | IDENT  | MODE | BD  | SH   | REMARKS                     |
|---------|---------|------------|-----|----|-----|--------|------|-----|------|-----------------------------|
| SRAL    | 6998,0  | h24        | dly | 9  | RUS | UiTone | R3E  |     |      | 125 Hz tones                |
| SRAL    | 7000,0  | 0730-1817/ | *   | 9  |     | UiCarr | N0N  |     |      | Days: 7. 17. 18.            |
| SRAL    | 7006,0  | 1150       | 24. | 9  |     | UiPTR  | F1B  |     |      |                             |
| SRAL    | 7008,0  | 1355-1505/ | 25. | 9  |     | UiMUX  | PSK2 | 120 | 2600 |                             |
| SRAL    | 7016,0  | h24        | *   | 9  |     | UiPTR  | F1B  |     | 250  | Days: 13. 15. 21. – 26. 30. |
| SRAL    | 7018,75 | 1230-1300  | 13. | 9  |     | UiPTR  | F1A  |     | 250  | 5BL                         |



| Society | kHz     | UTC        | DD        | MM | ITU | IDENT          | MODE        | BD  | SH   | REMARKS                                   |
|---------|---------|------------|-----------|----|-----|----------------|-------------|-----|------|---|
| SRAL    | 7019,88 | 1010-1103/ | 2.        | 9  |     | UiCarr         | N0N         |     |      |   |
| SRAL    | 7020,0  | 0420-1930  | *         | 9  |     | UiPTR          | F1B         |     | 250  | Days: 23. - 25. 30.                       |
| SRAL    | 7022,0  | 1425-1430/ | 22.       | 9  |     | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7025,0  | 1120-1200  | 8.        | 9  |     | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7027,5  |            |           |    | UZB | V              | A1A         |     |      | QSY to 6928,0 kHz                         |
| SRAL    | 7035,0  | 1545-1615  | 25.       | 9  |     | UiPTR          | F1B         |     |      |   |
| SRAL    | 7037,0  | 0535-0830  | 21.       | 9  | RUS | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7039,0  | 0745-1345  | 3. 11.    | 9  | RUS | C              | A1A         |     |      | Moscow                                    |
| SRAL    | 7039,2  | 1340       | 11.       | 9  | RUS | F              | A1A         |     |      | Vladivostok                               |
| SRAL    | 7039,5  | 1240-1649  | 11. 12.   | 9  |     | UiCW           | A1A         |     |      | Hand keying "T T"                         |
| SRAL    | 7055,0  | 1715       | 21.       | 9  |     | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7059,0  | 1115-1200  | 15.       | 9  |     | UiPTR          | F1B         |     | 250  |   |
| SRAL    | 7066,0  | 0425-1615  | 23. - 25. | 9  |     | UiPTR          | F1B         |     |      |   |
| SRAL    | 7072,0  | 1145-1400  | 2.        | 9  |     | UiPTR          | F1B         |     | 200  |   |
| SRAL    | 7076,0  | 0915-1800  | 14.       | 9  |     | UiPTR          | F1B         |     | 250  |   |
| SRAL    | 7081,0  | 0830       | 17.       | 9  |     | UiCarr         | N0N         |     |      |   |
| SRAL    | 7090,5  | 0430-1930  | 12. - 14. | 9  | RUS | UiMUX          | PSK2        | 120 | 2600 | Carr. On 7088,5 kHz                       |
| SRAL    | 7090,5  | 1135-1155/ | 13.       | 9  |     | UiCarr         | N0N         |     |      |   |
| SRAL    | 7091,5  | 0810-1930  | dly       | 9  | UZB | V              | A1A         |     |      |   |
| SRAL    | 7099,0  | 1030-1050  | 19.       | 9  |     | UiPTR          | F1B         |     | 200  |   |
| SRAL    | 7103,0  | 1300-1320/ | 21.       | 9  |     | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7110,0  | 1745-0600  | 7. - 9.   | 9  | RUS | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7110,0  | 1710-1715/ | 5.        | 9  | F   | 369            | A1A         |     |      |   |
| SRAL    | 7114,0  | 1040-1110  | 3.        | 9  |     | UiPTR          | F1B         |     |      |   |
| SRAL    | 7116,6  | 1530-1845  | 19.       | 9  |     | UiCarr         | N0N         |     |      |   |
| SRAL    | 7117,0  | 0545-1045/ | *         | 9  | RUS | REA4           | F1B/<br>N0N |     | 1000 | Days: 7. 9. 11. - 13. 15. 18. 19. 21. 25. |
| SRAL    | 7120,0  | 0320-0430/ | dly       | 9  | SOM | R.Hargeis<br>a | A3E         |     |      |   |
| SRAL    | 7120,0  | 1500-1900/ | dly       | 9  | SOM | R.Hargeis<br>a | A3E         |     |      |   |
| SRAL    | 7146,6  | 0300-0500/ | 30.       | 9  | ERI | VoBME1         | A3E         |     |      |   |
| SRAL    | 7146,6  | 1420-1840  | 29. 30.   | 9  | ERI | VoBME1         | A3E         |     |      | On 30. Carrier 1840 - 2400                |
| SRAL    | 7150,7  | 1305-1855  | 23. 24.   | 9  |     | UiCW           | A3E         |     |      | Fast MR "QSY"                             |
| SRAL    | 7151,0  | 0745-1930  | 2. 3.     | 9  | UKR | UiMUX          | PSK2        | 120 | 2600 |   |
| SRAL    | 7160,0  | 0630-1000  | 20. 21.   | 9  | RUS | RMW32          | A1A         |     |      | 5F, 5BL                                   |
| SRAL    | 7162,0  | 1320-1347/ | 1.        | 9  |     | UiPTR          | F1B         |     | 250  |   |
| SRAL    | 7170,0  | 1250-1400  | 23.       | 9  |     | UiPTR          | F1B         |     | 200  |   |
| SRAL    | 7175,0  | 0300-      | *         | 9  | ERI | VoBME2         | A3E         |     |      | Days: 14. 17. - 30.                       |

| Society | kHz     | UTC        | DD      | MM | ITU       | IDENT           | MODE | BD  | SH   | REMARKS   |
|---------|---------|------------|---------|----|-----------|-----------------|------|-----|------|---|
|         |         | 0500       |         |    |           |                 |      |     |      |   |
| SRAL    | 7175,0  | 1430-1850/ | *       | 9  | ERI       | VoBME2          | A3E  |     |      | Days: 14. 17. – 30. Anthem at 1833 then NON until s/off |
| SRAL    | 7176,0  | 0900-1900  | 21.     | 9  |           | UiPTR           | F1B  |     | 250  |   |
| SRAL    | 7187,0  | 1845-1930  | 9.      | 9  |           | UiMUX           | PSK2 | 120 | 2600 |   |
| SRAL    | 7190,5  | 1600-1630  | 1.      | 9  |           | UiCarr          | N0N  |     |      |   |
| SRAL    | 7198,0  | 1100-1300  | 9.      | 9  |           | UiMUX           | PSK2 | 120 | 2600 |   |
| SRAL    | 7200,0  | 0930-1300/ | dly     | 9  | CHN       | CNR1            | A3E  |     |      | Used as jammer on TWN                                   |
| SRAL    | 7200,0  | 1300-1500/ | dly     | 9  | MMR       | R<br>Myanmar    | A3E  |     |      |   |
| SRAL    | 7200,0  | 2245-2400/ | dly     | 9  | MMR       | R<br>Myanmar    | A3E  |     |      |   |
| SRAL    | 7 MHz   | 0430-0445  | 21.     | 9  | RUS       | 29B6            | FMCW |     |      | 50Hz / 15 kHz, (WebSDR 7 days)                          |
| SRAL    | 10 MHz  |            |         | 9  | RUS       | 29B6            | FMCW |     |      | 50Hz / 15 kHz (WebSDR 8 days)                           |
| SRAL    | 14008,0 | 1015       | 11.     | 9  | RUS       | UiPTR           | F1B  |     | 250  |   |
| SRAL    | 14026,0 | 0640-1040  | 3. 26.  | 9  |           | UiMUX           | PSK2 | 120 | 2600 |   |
| SRAL    | 14160,0 | 0740-1200  | 16. 22. | 9  | RUS       | UiPTR           | F1B  |     | 250  |   |
| SRAL    | 14180,0 | 0415-1530  | dly     | 9  | RUS       | RDL             | F1B  |     | 200  |   |
| SRAL    | 14192,0 | 0900-1500  | *       | 9  | RUS       | UiPTR           | F1B  |     | 200  | Days: 6. 11. – 13.                                      |
| SRAL    | 14221,0 | 0315-0600/ | dly     | 9  | KGZ       | UiPTR           | F1B  |     | 200  |   |
| SRAL    | 14295,0 | 0400-1600  | dly     | 9  | TJK       | R<br>Tojikiston | A3E  |     |      | 3f 4765,00 kHz, Yangiyul TX                             |
| SRAL    | 14 MHz  | 0730-1415  | *       | 9  | RUS       | 29B6            | FMCW |     |      | 50Hz / 15 kHz, days: 1. 2. 4. 6. 7. 9. 11. 17. 18.      |
| SRAL    | 14 MHz  | 0700-1800  | dly     | 9  | RUS       | UiOTHR          | FMCW |     |      | 10Hz / 15 kHz, 30 sec transmit with 16 min cycle        |
| SRAL    | 18080,0 | 0740-0800  | *       | 9  | TWN       | SOH             | A3E  |     |      | Days: 3. 17. 18. + CHN jammer                           |
| SRAL    | 18 MHz  | 1345-1350  | 25.     | 9  | CYP / TUR | UiOTHR          | FMCW |     |      | 25/50Hz / 20 kHz, days: 20. 26. 29. (WebSDR 12 days)    |
| SRAL    | 21 MHz  | 0820-0837/ | 8.      | 9  | CYP / TUR | UiOTHR          | FMCW |     |      | 25/50Hz / 20 kHz (WebSDR 10 days)                       |
| SRAL    | 21438,0 | /0830-0910 | *       | 9  | RUS       | RCV             | A1A  |     |      | Days: 3. 11. 14.  |
| SRAL    | 24 MHz  |            |         | 9  |           | UiOTHR          | FMCW |     |      | No reports  |
| SRAL    | 28960,0 | 0600-1100  | *       | 9  | IRN       | UiOTHR          | FMCW |     |      | 150 & 313 Hz / 60 kHz , days: 3. 12. 13.                |
| SRAL    | 28 MHz  |            |         | 9  |           | UiOTHR          | FMCW |     |      | 25/50Hz / 20 kHz  |
| SRAL    | 28 MHz  | 0540-1715  | *       | 9  | RUS       | Taxi disp.      | F3E  |     |      | Days: 3. 9. - 15. 30. 78 reports                        |

### USKA – Switzerland – HB9CET (Peter)

| SOC   | kHz             | UTC  | DD | MM | ITU | IDENT | MODE  | BD     | SH (BW) | DETAILS  |
|---|-----------------|------|----|----|-----|-------|-------|--------|---------|--|
| <b>80 m band informational only! Primary allocation but shared with other also primary allocated services !</b> |                 |      |    |    |     |       |       |        |         |  |
| USKA  | 3525.0 (Center) | 2111 | 27 | 09 |     |       | DQPSK | 14x75  | 5k9     | LINK 11 CLEW; almost daily (STANAG 5511): ISB Mode |
| USKA  | 3530.0          | 2150 | 07 | 09 |     |       | J7D   | 12x120 | 2k7     | BPSK; CIS12  |
| USKA  | 3532.0 VFO USB  | 2117 | 27 | 09 |     |       | DQPSK | 14x75  | 5k9     | LINK 11 CLEW (STANAG 5511)                         |
| USKA  | 3548.0          | 2147 | 02 | 09 |     |       | F1B   | 50     | 200     | almost daily                                       |

| SOC  | kHz               | UTC         | DD       | MM | ITU   | IDENT  | MODE         | BD        | SH (BW) | DETAILS  |
|------|-------------------|-------------|----------|----|-------|--------|--------------|-----------|---------|--|
| USKA | 3549.0<br>VFO USB | 2218        | 05       | 09 |       |        | PSK8         | 2400      | ~2k7    | MIL188-110A (Hybrid), preamble 4 tones, 450Hz spacing                                      |
| USKA | 3553.8            | 2151        | 02       | 09 |       |        | G1D          | 2400      | ~2k4    | Stanag 4285; PSK8 almost daily   |
| USKA | 3570.5            |             |          | 09 |       |        | F1B          | 40.5 + 81 | 250     | sometimes also short F1A   |
| USKA | 3582.5            |             |          | 09 |       |        | F1B          | 50        | 200     | often  |
| USKA | 3586.0            | 2123        | 27       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 3658.0            | 2125        | 27       | 09 |       | V      | A1A          |           |         | Beacon V   |
| USKA | 3662.5            |             |          | 09 |       |        | F1B          | 75        | 250     |  |
| USKA | 3699.0            | 2227        | 05       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 3712.0            | 2106        | 08       | 09 |       |        | DQPSK        | 14x75     | 5k9     | LINK 11 CLEW; DSB mode   |
| USKA | 6998.0            | 2149        | 03       | 09 |       |        | H3E-U Bursts |           | ~3k6    | "Buzzer" up to ≥7001.5kHz daily  |
| USKA | 7026.0            | 2118        | 20       | 09 |       |        | OTHR         | 50 sps    | ~13k    | OTHR; occup. BW appx 30k   |
| USKA | 7027.0            | 2140        | 02       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 7030.0            | 2129        | 06       | 09 |       |        | J7D          | 12x120    | 2k7     | CIS12  |
| USKA | 7070.0            | 2149        | 29       | 09 |       | 811199 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7080.0            | 2021        | 08       | 09 |       |        | F1B          | 50        | 200     |  |
| USKA | 7089.5            | 2056        | 12       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 7091.565          | 2202        | 03       | 09 | KAZ   | V      | A1A          |           |         | Beacon V; with spurious daily  |
| USKA | 7112.0<br>VFO LSB | 2132<br>109 | 26<br>27 | 09 |       |        | BPSK         | 30x60Bd   | ~2k5    | Burst system; tone spacing 75 Hz. Preamble 4x PSK4 60Bd, spacing 600Hz; Pilottone at 450Hz |
| USKA | 7117.0            | 1443        | 07       | 09 |       | REA4   | F1B          | 100       | 1000    | ID in F1A (h+40)   |
| USKA | 7117.0            | 2146        | 07       | 09 |       |        | F1B          | 75        | 200     |  |
| USKA | 7120.0            | 1759        | 06       | 09 | SOM   |        | A3E          |           | 10k     | Radio Hargaysa   |
| USKA | 7124.0            | 0639        | 06       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 7135.0            | 1916        | 15       | 09 |       |        | F1B          | 50        | 200     |  |
| USKA | 7137.0            | 2103        | 04       | 09 |       |        | F1B          | 50        | 200     |  |
| USKA | 7146.557          | 1615        | 30       | 09 |       |        | A3E          |           | 10k     | BC   |
| USKA | 7151.0            | 2144        | 02       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 7171.8            | 2043        | 08       | 09 |       |        | PSK8         | 2400      | ~2k7    | MIL 188-141B; waveform BW2   |
| USKA | 7174.989          | 1557        | 30       | 09 | ERI   |        | A3E          |           | 10k     | BC; Voice of the broad masses (jammed)   |
| USKA | 7175.0            | 1557        | 30       | 09 | ETH ? |        | Noise        |           | ≥15k    | Jammer   |
| USKA | 7186.0            | 2215        | 05       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12; with carrier  |
| USKA | 7197.0            | 2048        | 29       | 09 | TUR   | 365013 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2057        | 29       | 09 | TUR   | 344018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2057        | 29       | 09 | TUR   | 367013 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2102        | 29       | 09 | TUR   | 377018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2108        | 29       | 09 | TUR   | 306023 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2118        | 29       | 09 | TUR   | 318018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2124        | 29       | 09 | TUR   | 314013 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2124        | 29       | 09 | TUR   | 381018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2125        | 29       | 09 | TUR   | 361013 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2126        | 29       | 09 | TUR   | 305013 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2128        | 29       | 09 | TUR   | 340018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2132        | 29       | 09 | TUR   | 123456 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2133        | 29       | 09 | TUR   | 347018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7197.0            | 2139        | 29       | 09 | TUR   | 319018 | MFSK8        | 125       | 1750    | MIL 188-141A   |
| USKA | 7200.0            | 2208        | 07       | 09 |       |        | F1B          | 50        | 200     |  |
| USKA | 10120.0           | 2141        | 07       | 09 |       |        | FMCW         | 50 sps    | 20k     | OTHR   |
| USKA | 14000.0           | 1508        | 07       | 09 |       |        | NON          |           |         | long lasting carrier (strong fading)   |
| USKA | 14008.0           | 1006        | 28       | 09 |       |        | F1B          | 50        | 250     | often  |
| USKA | 14052.0           | 1128        | 02       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 14114.0           | 1142        | 29       | 09 |       |        | OTHR         | 50 sps    | ~13k    | OTHR; occup. BW appx 30k   |
| USKA | 14115.0           | 1410        | 16       | 09 |       |        | OTHR         | 50 sps    | ~13k    | OTHR; occup. BW appx 30k   |
| USKA | 14135.0           | 1257        | 17       | 09 |       |        | OTHR         | 50 sps    | ~13k    | OTHR; occup. BW appx 30k   |
| USKA | 14171.0           | 1216        | 29       | 09 |       |        | J7D          | 12x120    | 2k7     | BPSK; CIS12  |
| USKA | 14180.0           | 1330        | 06       | 09 |       | RDL    | F1A          |           | 200     | Letters and figures often  |
| USKA | 14180.0           | 1335        | 06       | 09 |       |        | F1B          | 36+50     | 200     | CIS 36-50 almost daily   |
| USKA | 14192.0           | 1337        | 12       | 09 |       |        | F1B          | 50        | 200     |  |
| USKA | 14201.8           | 1129        | 02       | 09 |       |        | BPSK         | 16x75     | 2k2     | Burst system; 16 tones, 2 Pilottones   |

| SOC  | kHz     | UTC          | DD | MM | ITU | IDENT | MODE   | BD       | SH (BW) | DETAILS   |
|------|---------|--------------|----|----|-----|-------|--------|----------|---------|---|
|      |         |              |    |    |     |       |        |          |         | when idling short dots every 0.725s                       |
| USKA | 14204.0 | 0944         | 09 | 09 |     |       | OFDM60 | 35.55    | ~2k7    | PSK-8B modulated, tone spacing 44.44Hz; pilot tone at 3k3 |
| USKA | 14239.0 | 1031         | 09 | 09 |     |       | FMOP   | 10 sps   | ~10k    | OTHR; only short period                                   |
| USKA | 14241.5 | 1351         | 28 | 09 |     |       | PSK-8  | 2000     | ~2k0    | ev. RFSM2400 ?  |
| USKA | 14242.0 | 1117         | 02 | 09 |     |       | J7D    | 12x120   | 2k7     | BPSK; CIS12   |
| USKA | 14261.0 | 0742         | 08 | 09 |     |       | OFDM60 | 35.55    | ~2k7    | PSK-4B modulated, tone spacing 44.44Hz; pilot tone at 3k3 |
| USKA | 14272.0 | 1019         | 07 | 09 |     |       | FMCW   | 50 sps   | ~13k    | OTHR; occup. BW appx 30k                                  |
| USKA | 14281.0 | 1056         | 22 | 09 |     |       | FMCW   | 50 sps   | ~13k    | OTHR; occup. BW appx 30k                                  |
| USKA | 14340.0 | 1006         | 28 | 09 |     |       | J7D    | 12x120   | 2k7     | BPSK; CIS12 often   |
| USKA | 18085.0 | 1103         | 22 | 09 |     |       | FMCW   | 50 sps   | 20k     | OTHR  |
| USKA | 18095.0 | 1512         | 07 | 09 |     |       | FMCW   |          | 20k     | OTHR  |
| USKA | 18107.0 | 0831<br>0835 | 08 | 09 |     | RDL   | F1B    | 36<br>50 | 200     | CIS 36-50   |
| USKA | 18107.0 | 0836         | 08 | 09 |     |       | F1A    |          | 200     | letters and figures                                       |
| USKA | 18149.0 | 0936         | 21 | 09 |     |       | FMOP ? | 12.5sps  | 30k     | OTHR  |
| USKA | 18150.0 | 0823         | 19 | 09 |     |       | F1B    | 100      | 1000    | 2nd of 9075 kHz (100Bd 500Hz)                             |
| USKA | 21353.5 | 1412         | 16 | 09 |     |       | F1B    | 600      | 600     | ARQ system  |
| USKA | 28306.0 | 1943         | 12 | 09 |     |       | H3E-U  |          |         | Unident; roger beeps (no ham)                             |

### Veron – Netherlands – PA2GRU (Dick)

| SOC   | kHz     | UTC   | DD | MM | ITU     | IDENT   | MODE  | BD | SH  | DETAILS                                  |
|-------|---------|-------|----|----|---------|---------|-------|----|-----|--|
| VERON | 3646.0  | 19.30 | 5  | 9  | CIS     | UiCW    | A1A   |    |     | 5F                                       |
| VERON | 3797.0  | 19.37 | 5  | 9  | RUS     | RCV     | A1A   |    |     | RIC87 de RCV Prip<br>Noworossijsk 541    |
| VERON | 3797.0  | 19.44 | 5  | 9  | RUS     | RCV     | A1A   |    |     | RIC87 de RCV Prip<br>Noworossijsk 540    |
| VERON | 7037.0  | 23.22 | 11 | 9  |         | UiPtr   | F1B   |    | 200 |  |
| VERON | 7070.0  | 06.45 | 6  | 9  | E       | UiILL   | J3E-u |    |     | Spanish, several male<br>voices, fishery |
| VERON | 7080.0  | 20.02 | 11 | 9  |         | UiPtr   | F1B   |    | 200 |  |
| VERON | 7080.0  | 17.24 | 13 | 9  | CIS     | UiPTR   | F1B   |    |     | Revs/Ptr                                 |
| VERON | 7080.0  | 20.00 | 7  | 9  | ?       | ?       | F1B   |    | 200 | revs, ptr                                |
| VERON | 7117.0  | 15.41 | 9  | 9  | RUS     | REA4    | A1A   |    |     | 5F                                       |
| VERON | 7117.0  | 17.41 | 7  | 9  | RUS     | REA4    | F1A   |    |     | REA4 07160 99900 5F                      |
| VERON | 7137.0  | 17.23 | 13 | 9  | CIS     | UiPTR   | F1B   |    |     | Revs/Ptr also at 17/9 17.25<br>UTC       |
| VERON | 7175.0  | 18.05 | 27 | 9  | Eritrea | UiBC    | A3E   |    |     | speak, jammed by<br>Ethiopia Govt        |
| VERON | 10102,5 | 11.19 | 6  | 9  |         | UiPTR   | F1B   |    |     | Revs                                     |
| VERON | 14008,0 | 06.43 | 5  | 9  |         | UiPtr   | F1B   |    | 250 | Ptr                                      |
| VERON | 14008,0 | 09.29 | 11 | 9  | RUS     | UiCAR   | NON   |    |     | carrier S-9                              |
| VERON | 14008,0 | 08.43 | 11 | 9  | CIS     | UiPTR   | F1B   |    |     | Carrier/Revs/Ptr                         |
| VERON | 14014,0 | 10,14 | 12 | 9  | CIS     | WEGI    | A1A   |    |     | XXX WEGI 63448<br>WATMAN 1686 7142       |
| VERON | 14014,0 | 10.16 | 12 | 9  | CIS     | THL8    | A1A   |    |     | 5BL                                      |
| VERON | 14014,0 | 10.22 | 12 | 9  | CIS     | WEGI    | A1A   |    |     | XXX WEGI 46587<br>RV AWEJchIJ 8276 6515  |
| VERON | 14014,0 | 10.34 | 12 | 9  | CIS     | THL8    | A1A   |    |     | WXDN de THL8 ZNB<br>ZEM ZEA ZQT ZHA      |
| VERON | 14110,0 | 14.32 | 16 | 9  |         | OTHR    | FMCW  |    |     | radar                                    |
| VERON | 14132,0 | 07.43 | 6  | 9  |         | OTHR    | FMCW  |    |     | radar                                    |
| VERON | 14133,0 | 09.27 | 2  | 9  | RUS     | OTHR    | FMCW  |    |     | radar                                    |
| VERON | 14135,0 | 09.44 | 2  | 9  | RUS     | UiMUX   | PSK2  |    |     | 12 MPSK AT3004                           |
| VERON | 14150,0 | 19.28 | 11 | 9  | RUS     | UiRadar | FMCW  |    | 10k | OTHR Contayner; 10sps                    |
| VERON | 14160,0 | 08.18 | 16 | 9  |         | UiPTR   | F1B   |    |     | Ptr                                      |
| VERON | 14180,0 | 08.02 | 13 | 9  |         | UiPtr   | F1B   |    | 200 | Ptr                                      |
| VERON | 14180,0 | 11.02 | 10 | 9  |         | UiPtr   | F1B   |    | 200 |  |
| VERON | 14180,0 | 13.57 | 11 | 9  |         | UiPtr   | F1B   |    | 200 |  |
| VERON | 14180,0 | 11.21 | 6  | 9  | CIS     | UiPTR   | F1B   |    |     | Revs/Ptr                                 |
| VERON | 14180,0 | 11.33 | 6  | 9  | RUS     | RDL     | F1A   |    |     | RDL 89669 97315 K                        |

| SOC   | kHz     | UTC   | DD | MM | ITU | IDENT   | MODE | BD | SH  | DETAILS                              |
|-------|---------|-------|----|----|-----|---------|------|----|-----|--------------------------------------|
| VERON | 14180,0 | 11.43 | 6  | 9  | RUS | RDL     | F1A  |    |     | RDL 03882 64643 K                    |
| VERON | 14180,0 | 11.44 | 6  | 9  | RUS | RDL     | F1A  |    |     | RDL 30010 43128 K                    |
| VERON | 14180,0 | 14.08 | 9  | 9  | RUS | RDL     | F1A  |    |     | RDL 62130 30999 K                    |
| VERON | 14180,0 | 10.27 | 12 | 9  | CIS | WEGI    | D1A  |    |     | XXX WEGI 04974 46587<br>RVAWElchIJ   |
| VERON | 14180,0 | 08.44 | 15 | 9  | RUS | RDL     | F1A  |    |     | RDL 66427 47053 K                    |
| VERON | 14180,0 | 14.13 | 15 | 9  | RUS | RDL     | F1A  |    |     | RDL 43483 95784 K                    |
| VERON | 14180,0 | 17.29 | 22 | 9  | CIS | WEGI    | F1A  |    |     | UUU XXX WEGI 289 71<br>02149 POKAZWA |
| VERON | 14180,0 | 07.40 | 17 | 9  | RUS | RDL     | F1B  | 50 | 200 | revs, ptr                            |
| VERON | 14180,0 | 08.25 | 17 | 9  | RUS | RDL     | F1A  |    | 200 | 5F (6 groups)                        |
| VERON | 14192,0 | 08.01 | 13 | 9  |     | UiPtr   | F1B  |    |     | Ptr                                  |
| VERON | 14192,0 | 10.51 | 10 | 9  | RUS | UiPtr   | F1B  |    | 250 |                                      |
| VERON | 14192,0 | 19.37 | 11 | 9  | RUS | UiPtr   | F1B  |    | 200 | Idling                               |
| VERON | 14192,0 | 08.38 | 11 | 9  | CIS | UiPTR   | F1B  |    |     | Revs/Ptr also at 13/9 09.50<br>UTC   |
| VERON | 14240,0 | 14.24 | 23 | 9  |     | UiPTR   | F1B  |    |     | Ptr                                  |
| VERON | 14278,0 | 08.01 | 14 | 9  | RUS | UiPtr   | F1B  |    | 250 | Ptr                                  |
| VERON | 21369,0 | 10.32 | 10 | 9  | CYP | UiRadar | FMCW |    | 20k | OTHR; 50 sps                         |

# The monitoring team of IARU Region 1

credits:

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German BNetzA Konstanz

Many thanks for your interest!

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