



International Amateur Radio Union

Region 1



# Monitoring System

DK2OM – Wolf Hadel  
Co-ordinator of IARUMS Region 1  
Editor of the Newsletter

HB9CET – Peter Jost  
Vice Co-ordinator of IARUMS Region 1

The monthly newsletter for Region 1

## December 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) ++ OFCOM (UK) ++ Dutch AT

Part 1: News and infos

Part 2: Detailed reports of the national co-ordinators

Copyright © IARUMS Region 1 - DK2OM

## Part 1: News and Infos (screenshots DK2OM)

### 1. Italian pirate on 28001.5 kHz on SSTV

I found an Italian pirate on 28001.5 kHz transmitting on SSTV – Martin 1. His ident and exact location were mentioned. Details: Ident 1FS059 – date: Dec. 3<sup>rd</sup> – time: 1808 UTC – coordinates: on the top of the picture (North-East Italy) – Screenshot: Wavecom W-Code



### 2. What happens in the Regions 2 and 3?

#### Region 2 – South America - reported by XQ6FOD - Manfred

A while ago I was showing ham radio to a visitor, and while tuning through the bands, frankly we heard more intruders than hams. Fishermen on 14100 USB, more fishermen on 18100 USB, fishermen on the lower part of 40m (in USB too) - really the ham bands sound like marine bands these days. The ones I heard on 14100 had a Peruvian accent, those on 18100 sounded more Central American. Those I hear on 40m are mainly from my own country. While showing him digimodes, we found lots of QRM from OTHR, ionosounders, etc, disrupting reception. And the lower 330kHz of 10 meters is of course firmly in the grip of Brazilian CBers now. Hams already have lost that part of that band, for all practical purposes.

The ham bands aren't any longer what they used to be...

#### Region 3 – Australia – experiences, comments and proposals from VK5EEE - Lou

I'm not surprised to hear this about Latin American region. My antennas seem to favour that area but I almost never (at least on CW) hear any active radio hams there. I think it could be useful to report findings from around the world about the general state of QRM on our bands, and what could be done short, medium, long term to forecast and reverse these trends. In our area our 40m CW band is useless in the evenings due to strong SSB QRM every 5kHz USB and LSB -- which thus covers the entire CW band -- from powerful Indonesian pirates. These pirates also seem to occupy a great many frequencies between 10000 and 11400kHz – there are huge number of them in a population of 200 million.

#### **THAILAND A GOOD EXAMPLE**

But we can contrast Indonesia to Thailand where there are a total of ZERO pirates on HF. In HS-land you cannot buy any gear without showing license. You cannot import either without inspection. And you cannot operate in any location without a location license in addition to your operating license, and this system clearly works, no matter it is a bit slow to get a ham license.

This even though the HF population of HS amateurs is quite small, perhaps 200 or less, while the VHF population of HS amateurs is high, a quarter million or so. The radio amateur license density per population in Thailand is at a rough guess 10 times what it is in Australia.

#### **CW BAND PRIME TARGET FOR PIRATES**

For CW operators, the problem is pirates which almost invariably use SSB, of course use the CW band, because there, they hear no other SSB. They don't use the SSB parts of the band because then they would be afraid when they hear a strong local SSB radio amateur telling them off, or even direction finding them potentially. So some CW operators, myself included, have gravitated to the SSB part of the band, which after all is shared CW-SSB it's fine for CW, and due to radio amateur inactivity, it is also often empty.

Right now, 20m and 17m are open -- and yet tuning the entire bands from top to bottom and bottom to top

several times, I did not hear ONE radio amateur signal on CW nor SSB, nor Data.

### **NATIONAL SOCIETY FAILURE**

During the week day, and remember a great many hams are retired, I can more often than not tune the entire 40m band also without hearing any SSB, Data, nor CW. And this even though the now manifestly corrupt national society seeks in a misguided effort to make amateur radio a public CB social media extension, they have not succeeded. They have taken the view that amateur radio is in decline and the way to reverse that is to make it easier to get a license at least at lowest level (which still gives 100W, though officially 10W, to anyone sitting a short course without possibility of failure, and then access to 80m, 40m, 15m, 10m) and yet the vast majority of these don't get on air since amateur radio offers little to them compared to internet social media.

### **REASONS FOR EMPTY HAM BANDS IN AUSTRALIA**

So, why is there little activity on the ham bands in Australia, whether MF, HF, VHF, EHF etc? It is not just the low population density in the 1970s the bands were FULL of activity.

It is due to these factors:

Retirement villages and homes do not allow antennas. Just when hams should start enjoying their hobby they are relegated to sitting in front of FOX TV. XYLs dominate the OMs and do not allow their slaves to do anything without their permission, constantly demand their presence in exchange to stay slave. Those who are not retired see now benefit in amateur radio over social media, since the wow-factor and joy-factor of CW is not known to them. Restrictions of antennas even for those who live "free" in this underpopulated wide open space: nothing higher than 10m without expensive permission.

High noise levels on HF frequencies with imports never checked for compliance and authorities and national society careless about this problem. On the weekends they tune around and find nothing but button pushing "5NN" boring things, no chats or QSO, and conclude real amateur radio is dead

There are zero activities involving youth because to do so requires all sorts of licenses and insurance, youth are isolated in social media bubble from elders

### **FORECAST FOR AUSTRALIA**

The trend will continue for contest and automatic (not even frequent button pushing, only "on and off switch") as well as "DX 5NN TU" activities will increase, as there are still people who with no other way to get meaningful awards on their walls, are chasing wall paper. This in turn reinforces the frustration about the lack of REAL amateur radio (which at its most basic element includes an honest and meaningful signal report, to measure the home brew antenna if not transmitter and receiver), and the mantra that "without this activity there'd be no activity" while ignoring the massive collateral damage these \*unrestricted\* activities produce in combination with the above mentioned factors given as reason for empty ham bands in Australia.

Digital CW will continue to make faster uptake levels than Human CW because of the "quick fix" mentality of obtaining any level of results with minimal effort, thus driving CW onto other bands as DCW will continue to invade the exclusive CW bands rather than stick to the shared CW-Data bands.

SSB will continue to decline because there is almost no advantage and several disadvantages over speaking into a microphone on amateur radio bands compared to a mobile app on Internet.

Digital modes (including DCW as it develops further) will also become more "switch on, turn off volume, and leave switched on forever" where WSPR, JT etc will expand in use and 99% of digital operations will be automatic, without operator intervention, the operator only looking at the PC once a day or week to see what "QSO" he managed to achieve with QRP and without any care about inefficient antenna, high local noise level, lack of human activity, lack of equality with XYL, etc.

### **FUTURE RISK OF VACATING AMATEUR BANDS TO "FREE BANDING"**

Amateur Radio as a whole, in the future, may undergo a major change as authorities become less caring about HF spectrum other than as a resource to be sold off. If the next section "how to reverse the trend" is not observed, amateur radio bands will be taken over by pirates as in Indonesia and Latin America, to be shared with non-amateur amateurs, i.e. button pushing, volume down, automated stations. Those who wish to EXPERIMENT and COMMUNICATE at human level may be forced off the amateur bands and onto new self-found bands just as the "Free Banders" have done, taking advantage of quiet broadcast bands (Australia has now also vacated the broadcast bands as of January 2017) and former Marine bands, Fixed Service bands, etc. This seems to be inevitable because the availability of amateur radio equipment without license and carelessness of authorities makes it easy for pirates to operate such equipment, while only a technically gifted person could modify equipment to work on quiet non-amateur frequencies, which is where future "real" amateurs may migrate to avoid QRM levels and find human contact.

### **HOW TO REVERSE THE TREND?**

Authorities should copy the Shining Example of the Thai authorities with regard to import, sale and installation of HF radio equipment

Radio amateurs should form national unions by passing the national societies and leaving those to cater for button pushing and CB

Radio amateurs should seek ways to engage organisations, form clubs, and involve socially excluded and disadvantaged teaching CW

Concentration camps for the aged should be advocated with "care and quality of life" argument to allow internees to erect antennas

SOTA type activities should be encouraged and promoted so the public can see simple equipment, keys, fun



and fitness benefits

CW and home brew as the "heart and soul" of amateur radio and "wow factor" of stand-alone independent communications promoted

Concerted, coordinated and assisted action on reducing noise levels on HF frequencies, use funds from punitive fines on import violation

Pressure contest committees to write into the rules of contest, if not accurate reports, to restrict contest frequency use,

E.g. CQ WW CW Contest can stipulate 14010-14059, 14110-14150 for use in the CW contest, avoiding DX slot and chat-QSO/digi slots

REAL DX NEWS and REAL DXCC AWARD be started to highlight and publicise long-term resident and honest-report DX not DX Tourism

Allow more antennas, if Japan, Thailand can allow high towers in residential areas, Australia: Quality of Life Health not nanny state

Allow higher power when conditions demand it, VK contest & F stations run 1kW illegally, allow legal running of 1kW if no QRM caused

Work on removing OM fear of XYL threat with tact "My dear, would you prefer me down the pub drinking, or in the shack at the radio?"

Reviving Club activities to also involve families, youth, and not just technical talks, lectures but hands-on fun operating and constructing

A campaign on software writers to accurately label DCW as DCW and not CW on their digital mode products and software

Working to create an \*inexpensive\* home brew VFO tx/rx with 5W power out from 13V tri band 40/30/20m rig to fill a current void

Worry less about a little chirp and drift and more about human activity, bring back a little chirp and drift into the CW bands

Contact the many radio amateurs who gave up in disgust at the state of the hobby, and engage them in a revival of real amateur radio

Revive the fall-back fail-safe communications capability of amateur radio stations with activities and training in disaster communication

Form proper Amateur Radio Unions to handle the self-management aspects of amateur radio and licensing and reverse negative trends

Bring young and old, rich and poor, isolated and connected, together in activities that engage positively in a unique and versatile hobby

### 3. Radar Iran now on 28500 kHz

The Iranian radar was transmitting on 28500 kHz on FMOP with 225 and 334 sps covering about 36 kHz with many spurious emissions.

### 4. 7195 kHz – BC clandestine (probably Tinian)

The BC transmitter on 7195 is a clandestine radio operated by Radio Free Asia, as we have been reported. K1ZZ, Dave, promised to take action and look for a solution.

### 5. Moroccan MIL traffic on 21000 kHz

We found Moroccan MIL traffic on USB on 21000 kHz on Dec. 14<sup>th</sup>. Codan-beeps were audible.

### 6. 5 MHz – new band and fisherman's darling

A small part (15 kHz – 5351.5 - 5366.5 kHz) has been assigned on secondary base in Germany.

I was rather astonished to find Moroccan fishermen on 5353.0 kHz on USB on Dec. 21<sup>st</sup> at 1635 UTC.

### 7. No changes or bad news

3590.0 kHz – USB – Spanish fishery with voice scrambler "CRY 2001" often in the evenings

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

7180.0 kHz - Radio Eritrea with Ethiopian QRM

7185.0 kHz – Radio Eritrea with Ethiopian QRM

7200.0 kHz – Radio Myanmar

14295.0 kHz - Radio Tajik (harmonic from 4765 kHz)

### 8. 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>

**Let us try to save our bands as well as before in 2017!**

## 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 = othogonal 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 December 2016

Radio Hargeisha remained on 7,120 kHz with broadcasts and what is apparently the Voice of the Broad Masses, Eritrea, on 7,145 and 7,175 kHz. There are several persistent unidentified nets on 40 meters, apparently in east or central Africa.

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	12	E. Africa	?	J3Eu	Unidentified, KiSwahili, East Africa. Possibly military.
ARSK	7040.0	0825	29	12	E. Africa	?	J3Eu	Ungrammatical KiSwahili
ARSK	7074.0	vt	dly	12	E. Africa ?	?	J3E	Unidentified language,
ARSK	7075.0	vt	dly	12	E. Africa	?	J3Eu	Unidentified language
ARSK	7080.2	0330 0+	dly	12	?	?	J3Eu	Unidentified Chinese language.
ARSK	7089.0	0830	29	12	E. Africa?	?	J3Eu	Unidentified language.
ARSK	7120.0	vt	dly	12	Rep.of Somalia	Hargeisha	A3E	Broadcast
ARSK	7164.0	vt	dly	12	E. Africa?	?	J3Eu	Military? Phonetics, messages.
ARSK	7145.0	AM/PM	dly	12	Eritrea	VOBM	A3E	Voice of he Broad Masses? Broadcast, Amharic, Arabic
ARSK	7175.0	AM/PM	dly	12	Eritrea	VOBM	A3E	Probable hopping to avoid jamming

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

DG0JBJ (Mario) observed 6 OTH radars on 40 m, 15 OTH radars on 20 m, 57 OTH radars on 17m, 42 OTH radar on 15 m and 3 OTH radar on 10 m in December 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	3.5 – 30 MHz	1614	14	12	D		QRM			3.5 - 30 MHz disturbed by a neighbouring LED lamp – daily - various times
DK2OM	1812,0	2100	02	12	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – no carrier - daily, all day
DK2OM	1852,0	2038	24	12	I	IPP	USB			Palermo Radio, weather reports
DK2OM	1855,0	2006	10	12	I	IQP	USB			San Benedetto Radio, weather reports
DK2OM	1876,0	2038	24y	12	I	IQN	USB			Lampedusa Radio, weather

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										reports
DK2OM	1888,0	2007	10	12	I	IPD	USB			Civitavecchia Radio, weather reports
DK2OM	1896,5	2044	31	12	D		PSK8	2400	2400	Stanag4285 – 600 bps long – German Navy – daily, all day
DK2OM	1925,0	2043	31	12	I	IPL	USB			Livorno Radio, weather reports
DK2OM	3500,0	vt	dly	12	TUR		FSK8	125	1750	ALE, “2016” “4017” – Turkish Red Crescent – just for info!
DK2OM	3500,0	1932	05	12	D		QRM			<b>disturbed by a neighbouring LED lamp with S9</b>
DK2OM	3501,0	1448	20	12	UKR		FSK8	125	1750	ALE, “B10” “X”
DK2OM	3503,5	vt	dly	12	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” “XJR” – British MIL Tascomm – vt, daily - legal!
DK2OM	3504,0	2007	15	12	HOL		USB			<b>Dutch fishery</b>
DK2OM	3520,0	2140	15	12	E		USB			<b>Spanish fishery</b>
DK2OM	3522,0	1818	07	12	RUS		F1B	75	250	Kaliningrad
DK2OM	3524,0	2040	24	12	RUS		F1B	50	250	
DK2OM	3524,0	1656	14	12	RUS		PSK2A	120	2600	AT3004D – modem idle, submode idle and traffic – east of Moscow
DK2OM	3525,0	1700	14	12	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Marseille – legal!
DK2OM	3525,5	2056	09	12	UKR		A3E			<b>pirates – unstable carrier</b>
DK2OM	3526,8	1800	11	12	F		PSK4	75	2300	LINK11-CLEW – west of Marseille
DK2OM	3527,0	2000	04	12	RUS		F1B	50	200	Severomorsk
DK2OM	3531,0	---	--	12	RUS	REA4	N0N			unclean carrier - RUS airforce Moscow, ident: 1940 utc - daily
DK2OM	3532,0	1609	06	12	F		PSK4	75	5800	LINK11-CLEW on both sidebands (5800 Hz wide) – area of Brest – legal!
DK2OM	3535,0	1615	02	12	E		USB			<b>Spanish fishery</b>
DK2OM	3535,0	1640	09	12	F		USB			<b>French fishery</b>
DK2OM	3537,0	1700	22	12	RUS		PSK2	120	2600	AT3004D – modem idle -
DK2OM	3546,0	1953	09	12			A1A			only letter “R” - loop
DK2OM	3546,0	1445	19	12	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	3548,0	1824	05	12	RUS		F1B	50	200	Kaliningrad
DK2OM	3550,0	vt	dly	12	F		A3E			<b>French amateurs not respecting bandplans - daily</b>
DK2OM	3550,0	vt	vd	12	ALG	no ITU	FSK8	125	1750	ALE, “IU50” “IU52” “FN50”
DK2OM	3550,0	1957	26	12	CHN		FSK8	125	1750	ALE, “370” “823”
DK2OM	3550,5	2008	12	12	ISR		PSK4 PSK8	75 2400	2400 2400	hybrid modem – ISR Navy – PSK4 parallel and PSK8 serial - legal operation!
DK2OM	3553,8	ady	dly	12	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long - TUR MIL - Ankara – daily, all day - legal operation
DK2OM	3557,0	1535	16	12	RUS		F1B	75	250	
DK2OM	3557,0	1806	16	12	CHN		FSK8	125	1750	ALE, “348” “920”
DK2OM	3557,5	1818	29	12			PSK2A	120	2600	AT3004D -
DK2OM	3562,0	1639	16	12	RUS		PSK2A	12	2600	AT3004D – Kaliningrad
DK2OM	3563,0 LSB	1930	20	12	CHN		PSK4A	60	2350	PRC 30 tone modem - pilot tone 450 Hz
DK2OM	3568,0	1928	27	12			F1B	50	200	
DK2OM	3570,5	1940	23	12			F1B	73	240	idling – unclean – 3570.538 kHz center
DK2OM	3574,5	1934	27	12			PSK2A	120	2600	AT3004D -
DK2OM	3576,6	ady	dly	12	I	IZ3DVW	A1A			3576.550 - uncoordinated beacon – disturbing JT65
DK2OM	3580,0	2005	08	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	3581,0	2006	01	12	CHN		FSK8	125	1750	ALE, “174” “175”
DK2OM	3585,0	1752	31	12	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm, IOC 576, - daily, all day -

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										legal!
DK2OM	3586,0	1800	dly	12	G		PSK2A	40	40	encrypted – every evening Great Britain – purpose unknown
DK2OM	3586,0	2025	15	12	RUS		F1B	75	250	Kaliningrad
DK2OM	3587,0	vt	vd	12	E	no ITU	FSK8	125	1750	ALE, “TVV” “TXX” - Spanish Guardia Civil
DK2OM	3590,0	vt	dly	12	PAK	no ITU	FSK8	125	1750	ALE, “KW” “KHAIBAR” – Pakistan navy
DK2OM	3593,7	---	--	12	RUS	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DK2OM	3593,8	---	--	12	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DK2OM	3593,9	---	--	12	RUS	S	A1A			Cluster beacon – Severomorsk RUS Navy – „RIT“
DK2OM	3594,0	---	--	12	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	3595,0	---	--	12	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DK2OM	3596,0	vt	dly	12	D		FSK8	125	1750	ALE, “DK0ESD” – just for info!
DK2OM	3596,0	vt	dly	12	J		FSK8	125	1750	ALE, “JH1ESB” – just for info!
DK2OM	3606,0	1914	15	12	RUS		F1B	50	250	idling - Mocow
DK2OM	3617,0	vt	dly	12	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” – HAM-ALE - just for info
DK2OM	3622,5	ady	dly	12	J	JMH	F1C		800	Tokyo Meteo – 120 rpm – IOC 576 – daily, all day - legal!!!
DK2OM	3640,0	vt	dly	12	G		FSK8	125	1750	ALE, “XSS” - British MIL Tascomm – just for info!
DK2OM	3642,0	ady	dly	12	CHN		A1A			loop – DKG6 de 3A7D Chinese military – daily, all day
DK2OM	3642,8	2030	13	12	I		PSK8A	2400	2400	Stanag-4285 – 600 bps long - Lampedusa
DK2OM	3649,0	vt	vd	12	ALG	no ITU	FSK8	125	1750	ALE, “BI20” PA20”
DK2OM	3699,0	2130	10	12	ARS		FSK8	125	1750	ALE, “NAI” “RCI” – Saudi Arabian MIL
DK2OM	3718,0	vt	vd	12	FEa	7CJK	A1A			loop “7CJK”
DK2OM	3720,0	vt	dly	12	S		FSK8	125	1750	ALE, “YU” “YT” “YV” “DZ” – Swedish MIL
DK2OM	3751,5	vt	dly	12	POL	no ITU	FSK8	125	1750	ALE, “IZ3” “MI3”
DK2OM	3756,0	2050	31	12	RUS		A3E			RUS MIL – channel marker – Tuapse – East Black Sea – night QRG – daily – even audible in Japan
DK2OM	3757,0	ady	dly	12	FEa	RIS9	A1A			“M8JF de RIS9” - loop
DK2OM	3761,5	vt	vd	12	POL	no ITU	FSK8	125	1750	ALE, “NI9” “PL7” “AB2” – Polish MIL
DK2OM	3772,0	ady	dly	12	FEa	A4JC	A1A			“A4JC” - loop
DK2OM	3777,0	1736	22	12	FEa		A1A			“M8JF de RIS9” – loop – dly
DK2OM	3782,0	2112	21	12			PSK4B	120	2600	AT3104D -
DK2OM	3791,0	vt	vd	12	D	DK0ESD	FSK8	125	1750	ALE, “DK0ESD” – daily just for info!
DK2OM	3797,0	ady	dly	12	FEa		A1A			“M8JF de RIS9” – loop
DK2OM	5352,0	1636	22	12	D		A1A			<b>disturbed by a neighbouring LED lamp</b>
DK2OM	5353,0	1635	21	12	MRC		USB			<b>male Arabic persons - observation disturbed by a neighbouring LED lamp</b>
DK2OM	6998,5	0943	20	12	POL		FSK8	125	1750	MIL-188-141A – “BU2” “OL1” “SZ4” “ZE2” “MA3” until 7001.0 kHz – also voice traffic male and female - Polish MIL
DK2OM	7000,0	vt	dly	12	INS		USB LSB			Indonesian pirates – daily – all day - audible in Europe in the

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										evenings
DK2OM	7000,0	ady	dly	12	RUS		H3E		3.4 k	buzzer – 1 sec bursts - 118 Hz AF rough sinus – carrier on 6998.0 + upper sideband - with splatters 10 kHz wide – daily, all day - Moscow
DK2OM	7000,0	0950	15	12	E		USB			Spanish fishery
DK2OM	7000,0	0740	23	12	D		QRM			disturbed by a neighbouring LED lamp
DK2OM	7001,5	ady	dly	12	POL		PSK8	2400	2400	RF QRG 6998.5 kHz – 7000.3 kHz center - MIL-188-110A – 600 / 300 bps short – Polish MIL
DK2OM	7005,0	0946	14	12	INS		USB LSB			Indonesian pirates
DK2OM	7010,0	vt	dly	12	INS		USB LSB			Indonesian and Philippine pirates
DK2OM	7010,0	1529	01	12	ALB	no ITU	FSK8	125	1750	ALE, “RS0” - Tirana
DK2OM	7014,0	1526	01	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	7014,0	1148	13	12	RUS		PSK2	120	2600	AT3004D – submode idle – Far East Russia
DK2OM	7015,0	ady	vt	12	INS		USB LSB			Indonesian pirates
DK2OM	7018,0	---	--	12	RUS	REA4	F1B	100	800	mostly idling – Russian airforce Moscow – ident at full hour + 41 min. on F1A
DK2OM	7019,0 LSB	0928	11	12	CHN		PSK4A	60	2350	PRC 30 tone modem - LSB mode - pilot tone 450 Hz
DK2OM	7020,0	0949	14	12	INS		USB LSB			Indonesian pirates
DK2OM	7020,0	1945	26	12	ALB		FSK8	125	1750	ALE, “CS004A” “RS004D” “CS004” - daily
DK2OM	7025,0	0949	14	12	INS		USB LSB			Indonesian pirates
DK2OM	7027,5	---	--	12	UKR	„V“	A1A			beacon “V” – Kyiv
DK2OM	7030,0	0948	14	12	INS		LSB USB			Indonesian pirates
DK2OM	7035,0	0947	14	12	INS		USB LSB			Indonesian pirates
DK2OM	7036,0	2034	25	12			F1B	50	250	
DK2OM	7039,0	---	--	12	RUS	C	A1A			Cluster beacon C - Moscow RUS Navy - “RIW”
DK2OM	7039,1	---	--	12		A	A1A			beacon “A” - loop
DK2OM	7039,2	1020	27	12	RUS	F	A1A			Cluster beacon F - Vladivostok RUS Navy - “RJS”
DK2OM	7039,3	---	--	12	RUS	K	A1A			Cluster beacon K Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC” - daily
DK2OM	7039,4	1809	16	12	RUS	M	A1A			Cluster beacon M – Magadan RUS Navy – „RTS“
DK2OM	7040,0	0947	14	12	INS		USB LSB			Indonesian pirates
DK2OM	7040,0	vt	dly	12	F	F6BAZ	FSK8	125	1750	ALE, “F6BAZ” – just for info
DK2OM	7040,0	ady	dly	12	I		A1A			IZ3DVW – uncoordinated and unwanted beacon
DK2OM	7040,5	vt	dly	12	HRV		FSK8	125	1750	ALE, “9A5EX” “9A0ALE” – just for info
DK2OM	7047,37	vt	vd	12	D		FSK8	125	1750	ALE, “DL0NOT” – just for info!
DK2OM	7049,5	vt	vd	12	HRV G F	9A0ALE M1DFO F6BAZ	FSK8	125	1750	Amateur ALE, just for info! daily – various times
DK2OM	7050,0	vt	dly	12	RUS UKR		LSB			music transmissions – private war ?
DK2OM	7050,0	vt	dly	12	KGZ		FSK8	125	1750	ALE, “X” “810” “820615” “810698” – Kyrgyzstan MIL



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7053,0	1933	01	12	CHN		FMOP		10k	Chinese OTH radar - 50 sps – 5 sec bursts - jumping
DK2OM	7055,0	vt	dly	12	INS		LSB			Indonesian pirates
DK2OM	7055,5	vt	vd	12	MEa	no ITU	FSK8	125	1750	ALE, “111” “132” “133” - Caucasus
DK2OM	7060,0	1400	22	12	CHN		FMOP		10k	Chinese OTH radar - 67 sps – 4.1 sec bursts – jumping 7050 kHz
DK2OM	7063,0	2014	01	12	CHN		FMOP		10k	Chinese OTH radar - 50 sps – 5 sec bursts - jumping
DK2OM	7070,0	vt	vd	12	GEO	no ITU	FSK8	125	1750	ALE, “MV” “244” “686” “334” “204” “571” – daily active
DK2OM	7080,0	2015	14	12	EGY		USB PSK8 PSK4	2400	2400	EGY Navy with voice and serial modem PSK8 / PSK4 - precARRIER
DK2OM	7080,0	1445	27	12	CHN		FMOP		70k	Chinese OTH radar – 7080 – 7150kHz - 43 sps
DK2OM	7088,8	---	--	12	S	SL0FRO	A1A			7088.830 kHz - cw-trainee, Sweden - SL0FRO - just for info!
DK2OM	7089,0	1814	07	12	RUS		PSK2	120	2600	AT3004D – submode idle - Moscow
DK2OM	7089,8	---	--	12	TUR CYP		PSK8	2400	2400	Link11 - SLEW – aircraft – west of Cyprus
DK2OM	7091,5	ady	dly	12	KAZ	„V“	A1A			7091.543 kHz - loop with spurious – ident “V” – Almaty - Kazakhstan
DK2OM	7097,0	1938	01	12	CHN		FMOP		10k	Chinese OTH radar - 50 sps – 5 sec bursts - jumping
DK2OM	7099,5	vt	dly	12	HRV	9A0ZG	FSK8	125	1750	ALE, “9A0ZG” “9A5EX1P” “9A0OS” – daily - just for info!
DK2OM	7102,0	2056	27	12	TWN		FSK8	125	1750	ALE, “BV4AS” – just for info!
DK2OM	7102,0	vt	dly	12	HRV SUI D	9A0MIL	FSK8	125	1750	ALE, “9A0MIL” “9A2KS” “HB9MHB” “9A0ZG” “9A4OS” “DK0ESD” – just for info!
DK2OM	7105,0	2124	02	12	CHN		FMCW		10k	Chinese OTH radar - 50 sps – 10 sec bursts - jumping
DK2OM	7110,0	vt	dly	12	HRV	9A0ALE	FSK8	125	1750	ALE, “9A0ALE” – just for info
DK2OM	7117,0	---	--	12	RUS	REA4	F1B	100	1000	mostly idling – Russian airforce Moscow – ident on CW at 1640 utc on the mark-QRG
DK2OM	7120,0	1500	vd	12	SOM		A3E		9k	Radio Hargaysa – Somalia – daily – even audible in Australia and Japan
DK2OM	7130,0	1937	01	12	CHN		FMOP		10k	Chinese OTH radar - 50 sps – 5 sec bursts - jumping
DK2OM	7135,0	---	--	12			FSK8	125	1750	ALE, “UDR” “YDM”
DK2OM	7137,0	vt	dly	12	TWN		FSK8 LSB	125	1750	ALE, “CBIUN” “CBWPC” “CQYTX” “CAPLJ” “CTFOJ” “CEGTO” “CSNYI” “CEIPN” “CRXWT” - Taiwanese navy – daily
DK2OM	7142,0	0830	28	12	RUS		F1B	75	250	Kaliningrad
DK2OM	7144,0	1115	01	12	CHN		FMOP		32k	Chinese OTH radar – 7144 – 7176 kHz - 43 sps
DK2OM	7146,5	1812	07	12	ERI		A3E/BC		9k	carrier on 7146.557 kHz - Radio Eritrea + ETH QRM - daily
DK2OM	7156,0	1922	18	12	FEa		FMOP		32k	Codar like ocean surface radar 2.6 sps – 7156 – 7188 kHz
DK2OM	7163,0	---	--	12	UKR		A3E			encrypted MSGs - SZRU in Rivne
DK2OM	7175,0	1812	07	12	ERI ETH		A3E		9k	carrier on 7174.989 kHz Radio Eritrea disturbed by Radio Ethiopia with white noise emissions

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	7176,0	1941	01	12	CHN		FMOP		10k	Chinese OTH radar - 50 sps – 5 sec bursts - jumping
DK2OM	7176,0	0844	10	12	RUS		F1B	75	250	Moscow
DK2OM	7179,0	1334	01	12	IW		PSK2A	120	2600	AT3004D – Russian ship – Aegean region
DK2OM	7183,0	vt	dly	12	SUI		FSK8	125	1750	ALE, “HB9MHB” – just for info!
DK2OM	<b>7185,0</b>	<b>---</b>	<b>--</b>	<b>12</b>	<b>ERI ETH</b>		<b>A3E</b>		<b>9k</b>	<b>carrier on 7184.989 kHz Radio Eritrea disturbed by Radio Ethiopia with white noise emissions</b>
DK2OM	7185,5	vt	dly	12	D HRV		FSK8	125	1750	ALE, “9A5EX” “DK0ESD” just for info - daily
DK2OM	<b>7195,0</b>	<b>1530</b>	<b>20</b>	<b>12</b>			<b>A3E</b>			<b>clandestine – Radio Free Asia via Tinian – Mariana Islands</b>
DK2OM	7195,5 USB	1820	31	12	CHN		PSK4B	75	2250	7197.285 center - PRC4+4 - China
DK2OM	7197,0	vt	dly	12	TUR	no ITU	FSK8	125	1750	ALE, “206102” “318013” “328013” “355013” “365013” “329018” “308013” “331730” “355013” “337013” “381013” “311013” Turkish organisations and Turkish Civil Defense - source: DL8AAM – daily, various times
DK2OM	<b>7200,0</b>	<b>1046</b>	<b>07</b>	<b>12</b>	<b>MMR</b>		<b>A3E/BC</b>		<b>9k</b>	<b>Myanma Radio – 0900 – 1400 UTC - daily</b>
DK2OM	10100,8	ady	dly	12	D		F1B	50	450	Baudot - German Weatherservice – legal!
DK2OM	10110,0	vt	dly	12	SNG	no ITU	FSK8	125	1750	ALE, “CN6” “68” – Singapore Navy - Changi Naval Base
DK2OM	10113,0	vt	vd	12	TUN	no ITU	FSK8	125	1750	ALE, “TUD” “STAT5” “STAT154”
DK2OM	10114,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “BSF” “ZEN” “CM2OR2”
DK2OM	10114,8	0750	dly	12	RUS		F1B	100	1000	CIS14 – Moscow - daily
DK2OM	10115,0	vt	dly	12	MRC	no ITU	FSK8	125	1750	ALE, “100” “114” “201” “XXZ” – Western Sahara
DK2OM	10116,5	---	--	12	AFS		F7D	54.3	2120	MHF50 – 33 tones - South African navy
DK2OM	10120,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM6” “01012016”
DK2OM	10121,0	1003	29	12	RUS		F1B	75	250	Moscow - daily
DK2OM	10123,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “COF” “BSF” “CM2” “ESA” – Algerian Airforce
DK2OM	10123,0	1123	29	12	RUS		PSK2A	120	2600	AT3004D - Moscow
DK2OM	10125,0	1810	16	12	CYP		FMCW		20k	OTH radar Cyprus – 25 sps
DK2OM	10125,0	0820	31	12			PSK2A	120	2600	AT3004D -
DK2OM	10129,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM1” “CTF” “772”
DK2OM	10130,0	1453	01	12			FSK8	125	1750	ALE, “105002”
DK2OM	<b>10132,0</b>	<b>1032</b>	<b>10</b>	<b>12</b>	<b>F</b>		<b>USB</b>			<b>French “amateurs” not respecting bandplans</b>
DK2OM	10136,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “CM3” “BLD” “CNC” “TF2”
DK2OM	<b>10140,0</b>	<b>0845</b>	<b>30</b>	<b>12</b>	<b>E</b>		<b>USB</b>			<b>Spanish fishery</b>
DK2OM	<b>10144,0</b>	<b>ady</b>	<b>dly</b>	<b>12</b>	<b>D</b>	<b>DK0WCY</b>	<b>A1A</b>			<b>10144.000 kHz - DK0WCY – German aurora beacon – just for info!</b>
DK2OM	10145,5	vt	dly	12	SUI	HB9MHB	FSK8	125	1750	ALE, “HB9MHB” - just for info - daily
DK2OM	10145,5	vt	vd	12	TWN AUS	BV4AS	FSK8	125	1750	ALE, “BV4AS” “VK4SAA” – just for info!
DK2OM	10146,0	1135	13	12			PSK2A	120	2600	AT3004D – submode idle and traffic
DK2OM	<b>14000,0</b>	<b>vt</b>	<b>dly</b>	<b>12</b>	<b>FEa</b>		<b>USB</b>			<b>pirates from Java Sea - daily</b>
DK2OM	<b>14000,0</b>	<b>1540</b>	<b>04</b>	<b>12</b>	<b>D</b>		<b>QRM</b>			<b>disturbed by a neighbouring LED lamp with S9 – daily</b>

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										<b>various times</b>
DK2OM	14000,0	1044	09	12	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps – Gorodezh
DK2OM	14000,0	0830	16	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps Gorodezh with spurious emissions +/- 1 MHz from 13962 kHz
DK2OM	14000,0	1050	25	12	RUS		FMCW		13k	OTH radar Contayner Gorodezh - 50 sps –from 13980 kHz splattering up
DK2OM	14030,0	vt	vd	12	CHN		FSK8	125	1750	ALE, “Y” “473” “853”
DK2OM	14100,0	vt	dly	12	ALG	no ITU	FSK8	125	1750	ALE, “6206” “6204” “6212” “6202” “6203” “6207” “6217” “MTL” “IJ” – Mauritanian border – daily, all day
DK2OM	14100,0	---	--	12	F		FMCW		20k	French OTH burst radar, 6 sps, similar Codar sounding, South France
DK2OM	14101,3	1120	20	12	FEa		LSB			Far East pirates
DK2OM	14108,0	---	--	12	RUS		A1A			“BXCS de 9KHQ” - RUS MIL area of Moscow – many spurious emissions
DK2OM	14108,0	1224	08	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14109,0	vt	vd	12	TWN	HAM	FSK8	125	1750	ALE, “BV4AS” – daily - just for info!
DK2OM	14109,0	vt	dly	12	INS	HAM	FSK8	120	1750	ALE, “YD00XH” – just for info!
DK2OM	14109,0	vt	dly	12	S HRV D		FSK8	125	1750	ALE, “SM3FXL” “9A4OS” “9A3BRV” “DK0ESD” - just for info!
DK2OM	14109,0	vt	vd	12	G		FSK8	125	1750	ALE, “M1DFO” – just for info
DK2OM	14130,0	0930	25	12	RUS		FMCW		13k	OTH burst radar Contayner - 10 sps – Gorodezh
DK2OM	14160,0	vt	dly	12	MRC		FSK8	125	1750	ALE, “9204” “9228” “9236”
DK2OM	14192,0	vt	dly	12	RUS		F1B	50 75 50 100 100	500 500 200 500 200	RUS navy Kaliningrad - daily
DK2OM	14201,8	---	--	12	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	12	CHN	no ITU	FSK8	125	1750	ALE, “505” “822”
DK2OM	14211,0	0837	10	12	UKR		F1B	50	250	
DK2OM	14221,0	vt	vd	12	KGZ		F1B	50	200	CIS-50-50 - Bishkek – daily
DK2OM	14225,0	1252	29	12	ISR		FSK8	125	1750	ALE, “D62” – ISR Airforce
DK2OM	14260,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14268,0	0953	07	12	RUS		FMCW		13k	OTH radar Contayner - 50 sps – Gorodezh
DK2OM	14272,0	---	--	12	RUS	RCV	A1A			RUS Navy Sevastopol
DK2OM	14280,0	---	--	12	UKR		A3E			female voice with encrypted msgs – figures – “SZRU” = Foreign Intelligence Service of Ukraine in Rivne – every Wednesday at 1005 utc
DK2OM	14290,0	0845	24	12	CHN		FMOP		10k	Chinese OTH radar – 67 sps – 3.8 sec bursts – S9 in DL
DK2OM	14295,0	vt	dly	12	SRB	YU1BI	FSK8	125	1750	ALE, “YU1BI” – just for info!
DK2OM	14295,0	0955	04	12	TJK		A3E		9k	3 <sup>rd</sup> from Radio Tajik on 4765 kHz – daily, all day
DK2OM	14308,0	0909	06	12	RUS		F1B	75	500	Moscow
DK2OM	14330,0	vt	dly	12	TWN		FSK8	125	1750	ALE, “BV4”
DK2OM	14334,0	vt	vd	12	CHN	no ITU	FSK8	125	1750	ALE, “249” “255” “763”
DK2OM	14340,0	---	--	12	RUS		PSK2A	120	2600	AT3004D – Vladivostok with spurious emissions +/- 35 kHz

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										and +/- 70 kHz - daily
DK2OM	14340,0	vt	vd	12	CHN		FSK8	125	1750	ALE, "106" "591"
DK2OM	14346,0	vt	dly	12	THA	HS0ZEA	A1A			HS0ZEA beacon – 14345.950 kHz - every 5 minutes – daily - just for info!
DK2OM	14346,0	vt	dly	12	POR		FSK8	125	1750	ALE, "CT2IXQ" just for info – various times, daily
DK2OM	14346,8	1448	05	12			PSK8	2400	2400	Stanag-4285 – 600 bps long -
DK2OM	<b>14347,0</b>	---	--	<b>12</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>12</b>	<b>E</b>		<b>OFDM 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>12</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	18090,0	1400	28	12	CYP		FMCW		20k	OTH radar Cyprus – 50 sps
DK2OM	18100,0	vt	dly	12	MRC	no ITU	FSK8	125	1750	ALE, "A2" "A4" "A5" "A7" "S6" – "C3" "R3" "G401" "CD" "09" "G2" "LG6" "G301" "ELJADIDNET4" - daily, various times
DK2OM	18106,0	vt	vd	12	POR	CT2GOY	FSK8	125	1750	ALE, "CT2GOY" – just for info!
DK2OM	18107,0	vd	vt	12	RUS	RDL	F1B	50	200	CIS-50-200 - Moscow – idle and traffic – daily - Russian navy – shared band!
DK2OM	18117,5	vt	vd	12	POR	CT2IXQ	FSK8	125	1750	ALE, "CT2IXQ" – just for info
DK2OM	18140,0	vt	dly	12	SRB	YU1BI	FSK8	125	2600	ALE, "YU1BI" – just for info!
DK2OM	18150,0	---	--	12	RUS		F1B	100	1000	harmonic from 9075 (100 Bd, 500 Hz) - Kaliningrad
DK2OM	21000,0	1010	03	12	INS		USB			Indonesian pirates - daily
DK2OM	<b>21000,0</b>	---	--	<b>12</b>	<b>B</b>		<b>USB</b>			<b>Brazilian pirates – Rio de Janeiro with North Brazil – very often</b>
DK2OM	<b>21000,0</b>	---	--	<b>12</b>	<b>SDN</b>		<b>USB</b>			<b>MFA Sudan – Khartoum with emba Yemen – voice traffic</b>
DK2OM	21000,0	---	--	12	F		FMCW			French OTH burst radar – every 15 minutes – South France
DK2OM	21000,0	1328	14	12	MRC		USB			voice traffic with Codan beep – West Sahara
DK2OM	<b>21002,2</b>	---	--	<b>12</b>	<b>SDN</b>	<b>!0000 !9999 !8888</b>	<b>F1B</b>	<b>100</b>	<b>170</b>	<b>21002.15 kHz - Pactor 1 encrypted – MFA Sudan – Khartoum with emba Yemen</b>
DK2OM	21096,0	vt	dly	12	INS	YD00XH	FSK8	125	1750	ALE, "YD00XH3" – daily, various times - just for info!
DK2OM	21096,0	vt	vd	12	G		FSK8	125	1750	ALE, "M1DFO" – just for info!
DK2OM	21131,0	vt	vd	12	CHN	no ITU	FSK8	125	1750	ALE, "A92" "L02" – Chinese diplo
DK2OM	21145,0	1046	12	12	MRC	no ITU	FSK8	125	1750	ALE, "A" "B301" "C3", "IR4" "H4" "IR6" "T4" "E4" "A2" "CD" "K3" "KB2" "J5" "J52" "GR2" "GS4" "R3" "R301" "R33" "R8" "R5" "Y1" "S51" "S3" "S4" "S512" "S552" "G2" "G501" - various times, daily
DK2OM	21145,8	ady	dly	12	I	IZ3DVW	A1A			IZ3DVW beacon – 21145,790 kHz – daily, all day - not coordinated with IARU
DK2OM	21324,8	0930	07	12	FEa		PSK8A	2400	2400	LINK11-SLEW -
DK2OM	21353,5	1344	02	12	COD		F1B	600	600	DPRK-FSK 600 – Kinshasa – North Korean embassy
DK2OM	21438,0	0850	09	12	RUS	RCV	A1A			RIP90, RCV, RGX94 - RUS Navy Sevastopol - daily



DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	21446,0	ady	dly	12	THA	HSOZEA	A1A			HSOZEA beacon – every 5 minutes - just for info!
DK2OM	25000,0	ady	dly	12	FIN		A3E			time signal Helsinki – just for info – carrier on 25000 – dots on 25001 and 24999 – daily, all day – just for info!
DK2OM	28000,0	vt	vd	12	B		A3E			Brazilian CBers – 28000 – 28325 – daily, all day - no change
DK2OM	28000,0	---	--	12	CIS		F3E			28000 – 29700 numerous CIS taxi nets – no change
DK2OM	28000,0	1833	03	12	D		QRM			disturbed by a neighbouring LED lamp with S9
DK2OM	28001,5	1808	03	12	I	1FS059	F1C			Italian pirate transmitting pictures in SSTV - Martin 1
DK2OM	28010,1	---	--	12	POR		F1B	51	300	F1B bursts –west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28025,0	---	--	12	POR		F1B	51	300	F1B bursts – 28025.050 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28030,0	---	--	12	POR		F1B	51	340	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28045,0	---	--	12	POR		F1B	51	280	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28050,0	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28051,5	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28060,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,1	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28065,8	---	--	12	GAB		A3E		980	carrier and dots in USB and LSB, bursts every 60 sec – carrier – Gabon – daily and all day
DK2OM	28075,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28085,0	---	--	12	POR		F1B	51	300	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28090,1	---	--	12	POR		F1B	51	320	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28100,2	---	--	12	POR		F1B	51	300	F1B bursts - 28100.780 kHz - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28102,1	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28125,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon – Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28146,0	vt	vd	12	ARG B		FSK8	125	1750	ALE, “LU8EX” “PY2TI” “DL1” – just for info!
DK2OM	28200,0	---	--	12	POR		F1B	51	330	F1B bursts - west of Lisbon –

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28224,4	---	--	12	GAB		A3E			carrier and dots +/- 770 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28249,6	---	--	12	GAB		A3E		1380	carrier and dots +/- 745 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28250,5	---	--	12	GAB		A3E		1000	carrier and dots +/- 500 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28275,1	---	--	12	AF		F1B	51	320	F1B bursts -Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28312,5	vt	vd	12	POR	CT2IXQ	FSK8	125	1750	ALE. "CT2IXQ" - just for info
DK2OM	28315,0	---	--	12	POR		F1B	51	320	F1B bursts - west of Lisbon - Atlantic Ocean - Enagal GPS buoys - daily
DK2OM	28345,1	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	<b>28435,0</b>	----	--	<b>12</b>	<b>E</b>		<b>F1B</b>	<b>81.9</b>	<b>140</b>	<b>Datawell-buoy "Waverider" - 28435.040 kHz - Costa del Sol - Malaga</b>
DK2OM	28459,8	----	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28459,9	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	<b>28499,8</b>	---	--	<b>12</b>	<b>MEa</b>		<b>F1B</b>	<b>81.9</b>	<b>140</b>	<b>Datawell-buoy "Waverider" - 28499.875 kHz - Persian Gulf</b>
DK2OM	28500,0	1144	24	12	IRN		FMOP		36k	radar Iran - burst mode - 225 and 334 sps - also 25.12.2016 at 0910 utc
DK2OM	28701,1	---	--	12	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28745,3	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28751,2	---	--	12	GAB		A3E		1080	carrier and dots +/- 540 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28751,3	---	--	12	GBN		A3E		1040	carrier and dots +/- 520 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28801,5	---	--	12	GBN		A3E		1090	carrier and dots +/- 545 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28845,5	---	--	12	GAB		A3E		1060	carrier and dots +/- 530 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	28901,1	---	--	12	GAB		A3E		1056	carrier and dots +/- 528 Hz - bursts every 60 sec - Gabon - daily and all day
DK2OM	<b>28960,0</b>	<b>0827</b>	<b>09</b>	<b>12</b>	<b>IRN</b>		<b>FMOP</b>		<b>55k</b>	<b>radar Iran - burst mode - 150 and 313 sps - also 17.12.2016 at 0930 utc</b>
DK2OM	29114,0	---	--	12	RUS		F1B	100	2000	harmonic from14557.0 kHz - Moscow
DK2OM	<b>29249,9</b>	---	--	<b>12</b>	<b>E</b>		<b>F1B</b>	<b>81.9</b>	<b>140</b>	<b>Datawell-buoy "Waverider" - 29249.880 kHz - Spain Fuerteventura - daily, all day</b>
DK2OM	<b>29375,0</b>	---	--	<b>12</b>	<b>I</b>		<b>F1B</b>	<b>81.9</b>	<b>140</b>	<b>Datawell-buoy "Waverider" - 29374.898 kHz - Gallipoli, South Italy - daily, all day</b>

DK2OM	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DK2OM	29387,5	---	--	12	IND		F1B	81.9	140	Datawell-buoy "Waverider" – 29387.460 kHz – Indian NW coast, close to Pakistan - daily, all day
DK2OM	29400,0	---	--	12	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29400.070 kHz - USA north-east coast – NY daily, all day
DK2OM	29450,0	---	--	12	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29449.863 kHz - area of El Aaiun – Morocco - daily, all day
DK2OM	29500,0	---	--	12	G		F1B	81.9	140	Datawell-buoy "Waverider" – 29499.974 kHz- area of Gibraltar – daily, all day
DK2OM	29525,0	---	--	12	MRC		F1B	81.9	140	Datawell-buoy "Waverider" – 29524.990 kHz - Agadir - Morocco – daily, all day
DK2OM	29625,0	---	--	12	USA		F1B	81.9	140	Datawell-buoy "Waverider" – 29625.024 kHz - USA north-east coast – daily, all day
DK2OM	29685,0	---	--	12	I		VFT		2300	Italian MIL - Brescia
DK2OM	29699,5	---	--	12	I		VFT		1600	Italian MIL - Brescia

### **IRTS – Ireland – EI3GYB (Michael)**

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
IRTS	1841	1736 to 1757	03	12	HOL or MM		USB	Group of 3 male Dutch fishermen. Motor noise and VHF traffic in the background of one of them. Discussing weight of fish. Loud and clear audio from all of them.
IRTS	1896.5	0900	12	12	DL		PSK8	DL navy. Every day all day and night now with winter propagation. Frequencies from 1895.5 to about 1901 KHz not usable.
IRTS	3535	1334	06	12	F or MM		USB	2 male French fishermen. Weak signals.
IRTS	3560	1832	16	12	E or MM		USB	2 male Spanish fishermen just ending QSO. Very strong signals from both sides. Scottish fishermen. Loud and good audio. Motor noise in the background.
IRTS	3565	1835	13	12	RUS or UKR		USB	Male voice in Russian. Calling someone, getting no answer. Probably military.
IRTS	3615	1805	19	12	UKR		LSB	Plenty of Russian speaking persons, all shouting anti- Russian slogans. Revolutionary music. "Kill Putin !"
IRTS	3696	1833	15	12	E or MM		USB	2 male Spanish fishermen. Both very strong signals. One is called Jose. They stopped transmitting 2 minutes after I started calling CQ.
IRTS	3756	1915	04	12	RUS			"The Pip"- every day during all hours of darkness. Running now for 20 years or so non-stop.
IRTS	4717	1848 to 1853	03	12	POR or MM		USB	2 Portuguese fishermen. Bad audio from one of them. Signals itself very strong. One of them gets a phone call- you hear the phone ringing in the background. Conversation stops at that moment. Note- not a HAM frequency- just for info.
IRTS	4999	0925	03	12	E or MM		USB	Spanish Fishermen just ending QSO. Frequency is not a HAM frequency- just for info.
IRTS	5362	2030	31	12			USB	2 male Arab voices.
IRTS	5400	1245 to 1300	28	12	POR or MM		USB	2 male Portuguese fishermen.
IRTS	5403	0330	24	12			USB	Male voice calling in Spanish "Citon de Pascaltu me recibes ? ". Calling every 10 minutes or so from 0330 to 0410.

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	DETAILS
IRTS	5405	0240 to 0300	23	12			USB	2 male Arab voices, non- stop chat from 0240 to 0300. Back again from 0445 to 0455z. Not Maghreb accent. "Al'umam almuttahida" ( United Nations) mentioned several times.
IRTS	6238	1213	03	12	E or MM		USB	2 French fishermen, very good signals. Motor noise in background. Having a great chat with a lot of laughter. Non HAM frequency- just for info.
IRTS	7000	1950	07	12	RUS		AM	Buzzer, very strong.
IRTS	7050	1340	06	12	RUS/UKR		LSB	Ukrainian Russian propaganda war with revolutionary music and a lot of shouting. On most days until 2200 z or so.
IRTS	7055	1433-2155	06	12	RUS/UKR		LSB	Ukrainian-Russian propaganda war with plenty of music and shouting from both sides. Most days until late in the evening.
IRTS	7050.5	0356	09	12	E or MM		USB	Spanish fishermen. Very strong. "¡Hasta mañana!"
IRTS	7080	0340	19	12	RUS		USB	2 male voices reporting positions in Russian.
IRTS	7120	0351	09	12	SOM		AM	Radio Hargaysa. Strong signal. Every day, night and afternoon.
IRTS	7121.8	1850	10	12	INS or MM		USB	2 male Indonesian fishermen.
IRTS	7137	0039	10	12				Strong radar from 7137 to 7159 KHz. All frequencies unusable.
IRTS	7146.5	1830	10	12	ERI		AM	Radio Eritrea. Very strong. NX and NA with s/off at 1834z.
IRTS	7175	1831	10	12	ERI		AM	Radio Eritrea. Strong. S/off at 1833z
IRTS	7200	1230	02	12	Taiwan		AM	Voice of Free China, Taiwan. Every day all morning until s/off at 1300z. Big signal.
IRTS	7205	2124	11	12	F		AM	RFI, splattering down as far as 7190 KHz.
IRTS	10123	1925	10	12	KOR or MM		USB	2 male Korean fishermen. Good signal.
IRTS	10129	1602	06	12			USB	2 male voices with Arab containing a lot of French words. Probably Moroccan fishermen.
IRTS	10131	1832	19	12				Very strong radar from 10131 to 10155 KHz.
IRTS	10133	1140	31	12			USB	2 male Arab voices. Lively discussion. Maghreb accent. Still going strong an hour later.
IRTS	10133.3	0938 to 0955	03	12				2 Arab male voices, Maghreb accent
IRTS	10147	2000	07	12				Strong Radar from 10147 to 10170 KHz.
IRTS	10151.2	0951	14	12			USB	2 Maghreb fishermen. Bleeding down as far as 10148.7 KHz.
IRTS	14192	1216	05	12	RUS		F1B	RUS navy Kaliningrad. Every day, very strong during daylight hours.
IRTS	14295	1127	08	12	TJK		AM	Radio Tajikistan, 3 <sup>rd</sup> harmonic. Nearly every day audible .
IRTS	14345	1353	04	12			Digi	Weak digital signals
IRTS	18162	0843	03	12				Radar from 18162 to 18185 KHz. Persistent and strong.
IRTS	21297	1320	25	12				Radar from 21297 to 21320 KHz.

### KARS – Kuwait – 9K2RR (Faisal)

### MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	1852,0	1640	8	12			USB		air traffic informations
MRASZ	1888,0	1642	8	12			USB		italian air traffic informations
MRASZ	3513,0	2028	6	12			A1A		"PU1TIN name Hujlo QTH Kreml in Moscow"
MRASZ	3513,0	2008	16	12			LSB		russian
MRASZ	3520,0	2146	15	12			USB		unidentified



SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SH	DETAILS
MRASZ	3520,0	1733	17	12			USB		unidentified
MRASZ	3522,0	1441	16	12			F1B	250	
MRASZ	3527,0	2002	15	12			F1B	200	hrd: 26
MRASZ	3535,0	1707	17	12			USB		french
MRASZ	3548,0	1933	2	12			F1B	200	hrd: 4, 12, 1, 15, 16
MRASZ	3548,0	2153	15	12			A1A		dashes, deliberate disturbance
MRASZ	3557,0	1443	16	12			F1B	250	
MRASZ	3559,0	1516	2	12			PSK2		AT3004D
MRASZ	3560,0	2154	15	12			USB		unidentified
MRASZ	3562,0	1634	8	12			PSK2		AT3004D
MRASZ	3570,5	1729	6	12			F1B	250	
MRASZ	3576,0	1922	2	12			A1A		dotter, deliberate disturbance
MRASZ	3586,0	2001	15	12			F1B	250	
MRASZ	3586,0	1951	16	12			F1B	250	
MRASZ	3597,0	1546	26	12			PSK2		AT3004D
MRASZ	3600,0	1924	15	12			A3E		German and Dutch hams
MRASZ	3606,0	1959	15	12			F1B	250	
MRASZ	3610,0	1515	2	12			PSK2		AT3004D
MRASZ	3613,0	1701	8	12			LSB		music, chaos
MRASZ	3620,0	2000	16	12			A1A		quick dotter, deliberate disturbance
MRASZ	3624,0	1553	25	12			PSK2		AT3004D
MRASZ	3658,0	1946	30	12			A1A		slow "V" string
MRASZ	3748,0	2007	15	12			F1B	250	
MRASZ	7000,0	1424	2	12			H3E		hrd: 6, 11, 15, 25, 30
MRASZ	7000,0	0944	4	12			LSB		unidentified
MRASZ	7000,0	1052	11	12			LSB		italian hams
MRASZ	7000,0	1853	15	12			OTHR		7000-7150 kHz
MRASZ	7000,0	2057	15	12			OTHR		7000-7065 kHz
MRASZ	7022,9	1533	17	12			A1A		"V" string, deliberate disturbance
MRASZ	7031,0	1218	18	12			USB		russian
MRASZ	7036,0	1915	17	12			F1B	250	
MRASZ	7050,0	1220	18	12			LSB		russian
MRASZ	7050,0	0838	25	12			LSB		usual chaos
MRASZ	7055,0	1221	18	12			LSB		russian, cursing
MRASZ	7063,0	1636	8	12			F1B	250	
MRASZ	7118,0	1550	25	12			PSK2		AT3004D
MRASZ	7120,0	1615	4	12	SOM		A3E		R. Hargaysa, hrd: 6, 8, 12, 25, 26
MRASZ	7147,0	1615	4	12			A3E		
MRASZ	7165,0	1541	25	12			???		strong noise btw: 7165 - 7200 kHz
MRASZ	7175,0	1735	6	12			A3E		arabian, hrd: 30
MRASZ	7193,0	1433	16	12			F1B	200	
MRASZ	7200,0	1228	2	12			A3E		splatter till 7195 kHz
MRASZ	10128,0	1636	8	12			OTHR		10120-10136 kHz
MRASZ	14148,0	1230	2	12			OTHR		
MRASZ	14290,0	1021	25	12			OTHR		14290-14305 kHz
MRASZ	14295,0	0919	25	12	TJK		A3E		Radio Tajik, 3rd. harmonic, hrd: 25

### OEVSV – Austria – OE3GSA (Gerd)

### PZK – Poland – SP9BRP (Jan)

### REF 1 – France – F5MIU (Francis) - F5JBR (Andre)

SOC	kH	UTC	DD	M	M	ITU	IDENT	MODE	BD	SH	DETAILS
R.E.F.											<b>F5MIU December 2016</b>
REF	3500.5	0648	04	12	RUS	RJD56	CW				RJD56 Send messages (QTCs SML) for RCP en Broadcast

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REF	3500.5	1726	04	12	RUS	RJD56	CW			RJD56 Send messages (QTCs SML) for RCP en Broadcast
REF	3510.0	0842	08	12	RUS	Russian Military	CIS-12/AT30 04D/US B	120 per channel	2700	Encrypted messages
REF	3567.5	1400	04	12	RUS	409G	CW			409G Working 3 Outstations (QSO and QTCs) in Simplex
REF	3567.5	1356	06	12	RUS	409G	CW			409G Working 3 Outstations (QSO and QTCs) in Simplex
REF	3584.0	1338	05	12	RUS	YFJA	CW			YFJA Send messages for C25W (QTCs : 11111 – MMMMM) in Broadcast
REF	3622.0	0843	08	12	RUS	TW7T	CW			TW7T send messages QTCs : 72727) for AOV9 in Simplex
REF	3642,0	1845	06	12	CHN	3A7D	CW			3A7D wkd DKG6 (Only : DKG6 de 3A7D V)
R.E.F.	3660	1835	25	12			fmcw		10kHz	OTH radar S8 unident
REF	3690.5	1733	02	12	RUS	RKN	CW			RKN send messages (QTCS SML) in Broadcast
REF	3690.5	1724	04	12	RUS	RKN	CW			RKN Send des QTC SML en Broadcast
REF	3701,0	1654	04	12	RUS	Russian Military	CW			XXX WEGI 27536 URONOMARI 0618 4500 K
REF	3745.0	0630	01	12	RUS	APXH	CW			APXH working 3 soutstations (comms chekcs) in Simplex
REF	3762,0	0608	04	12	RUS	RAG43	CW			RAG43 Working RIT (QSO and QTC SML) in Duplex
REF	3762,0	1802	04	12	RUS	RAG43	CW			RAG43 Working RIT (QSO and QTC SML) in Duplex
REF	3762,0	0608	05	12	RUS	RAG43	CW			RAG43 Working RIT (QSO and QTC SML) in Duplex
REF	3762,0	1805	05	12	RUS	RAG43	CW			RAG43 Working RIT (QSO and QTC SML) in Duplex
REF	3773.3	1705	02	12	RUS	H5YI	F1A			H5YI working 7 outstations (comms checks and QTCs) in Duplex
REF	3784,0	0501	07	12	RUS	NFN2	CW			NFN2 Working 1 Outstations (QSO and QTCs) in Duplex
REF	3797,0	1508	07	12	RUS	Y3FS	CW			Y3FS Working 4 Outstations (QSO and QTCs) in Duplex
REF	7015	0707	09	12	RUS	RIT	CW			RIT send Alert message XXX : XXX RLO WETER 3 PO RAJONAM 672 73 K
R.E.F.	7120	1726	26	12			AM		10kHz	BC station S7 Arabic
R.E.F.	7146	1608	20	12			AM		20kHz	BC station S9 + & noise QRM
R.E.F.	7146	1608	22	12			AM		15kHz	BC station S9+ Arabic +noise
R.E.F.	7146	1825	25	12			AM		10kHz	BC station S9 Arabic
R.E.F.	7146	1726	26	12			AM		10kHz	BC station S9 Arabic
R.E.F.	7175	1825	25	12			AM		25kHz	BC station S9+20 Arabic no noise different program
R.E.F.	7175	1726	26	12			AM		25kHz	BC station S9+20 Arabic

SOC	kH	UTC	DD	M M	ITU	IDENT	MODE	BD	SH	DETAILS
										different program
R.E.F.	7180	1820	19	12			AM		15kHz	BC station Eritrea ? S9+10
R.E.F.	7180	1608	20	12			AM		20kHz	BC station S7 & noise QRM
R.E.F.	7180	1608	22	12			AM		15kHz	BC station S9 Arabic + noise
R.E.F.	10125	1730	16	12			fmcw		20kHz	OTH radar S9+10 pulsed 40ms
R.E.F.	10130	1738	4	12			fmcw		15kHz	OTH radar S9 pulsed 28/32Hz for 1 sec
R.E.F.	10130	1810	28	12			fmcw		20kHz	OTH radar S9+10 pulsed 20Hz
R.E.F.	14090	0846	23	12			fmcw		15kHz	OTH radar S9 pulsed 10Hz
R.E.F.	14130	0904	7	12			fmcw		10kHz	OTH radar S9 pulsed 15Hz , 3sec on - 3sec off
R.E.F.	14135	0900	30	12			fmcw		20kHz	OTH radar S9+20 pulsed 50Hz
R.E.F.	14138	0904	28	12			fmcw		12kHz	OTH radar S9 pulsed 5Hz
R.E.F.	14265	0906	15	12			fmcw		20kHz	OTH radar S4 pulsed 50Hz
R.E.F.	18075	0904	15	12			fmcw		20kHz	OTH radar S7 pulsed 50Hz
R.E.F.	18095	0858	28	12			fmcw		20kHz	OTH radar S9 pulsed 20Hz
R.E.F.	21170	0847	16	12			fmcw		20kHz	OTH radar S9 pulsed 50Hz
R.E.F.	21270	0904	30	12			fmcw		20kHz	OTH radar S9+20 pulsed 38mS
R.E.F.	21420	0851	10	12			fmcw		20kHz	OTH radar S4 pulsed 40Hz

### REP – Portugal – CT4AN (Jose Francisco)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3590	18.03	01	12	E		J3E-U			Spanish fishery w/ CRY2000 vocoder
REP	7020	19.29	19	12			J3E-L			Intruders / piracy
REP	7035	18.15	14	12			FMCW	50	17k	OTH Radar
REP	7120	17.01	20	12	SOM		8k00 A3EGN			Radio Hargaysa
REP	7145	Dly	22	12	ETH		A3E			Radio Eritreia jammed by Radio Ethiopia, dly
REP	7175	Dly	22	12	ETH		A3E			Radio Eritreia jammed by Radio Ethiopia, dly
REP	7195	10.21	20	12					8k	White noise? Unid mode
REP	10101	11.34	11	12			J3E-U			Unid Arabic language net
REP	10105	12.11	12	12	MRC		J3E-U			Fishery
REP	10120	18.33	22	12	MRC		J3E-U			Morrocan fishery
REP	10121.2	12.04	11	12	MRC		J3E-U			Moroccan fishery
REP	10127	19.19	22	12			FMCW	50	10k	10 second bursts OTH radar
REP	10131	18.22	22	12	MRC		J3E-U			Morrocan fishery
REP	10133	11.40	03	12			J3E-U			Unid language amateur ops
REP	10131.5	08.42	13	12	MRC		J3E-U			Moroccan fishery
REP	10135	18.59	12	12	E		J3E-U			Spanish fishery
REP	14000	11.00	10	12			F1B	300	425	RYRYRY ...
REP	14133	07.28	23	12			FMCW			OTH radar
REP	14185	14.11	23	12	RUS		F1B	50	250	CIS36-50, Russia
REP	14200	08.53	13	12			FMCW		100	Weak 100kHz wide OTH radar
REP	14222	07.40	28	12			PSK2	120	x12	AT3004D modem, unid
REP	14275	12.12	20	12			FMCW			Burst mode OTH radar
REP	14345	19.03	03	12			PSK8			STANAG 4285 NATO 600/long, unid
REP	18090	14.08	28	12	CYP		FMCW	50	20k	OTH radar Cyprus
REP	28069	16.00	20	12	NZ		A1A			Drifnet buoy
REP	28115	20.43	13	12	B		J3E-U			Brazilian truckers, daily
REP	28120	14.20	06	12	E		F1B	50	200	Enagal buoy
REP	28165	12.10	06	12	RUS		F3E			Taxi YL dispatcher
REP	28165	20.36	18	12	B		A3E			Brazilian truckers, daily
REP	28385	18.22	18	12	NZ		A1A			Drifnet buoy
REP	29135	11.21	12	12	RUS		F3E			Taxi dispatcher
REP	29150	15.44	12	12			F1B	82	160	Datawell buoy
REP	29180	11.54	24	12	RUS		F3E			Taxi dispatcher

**RSGB - Great Britain – M0VRR (Vaughan)****SRAL – Finland – OH2BLU (Pekka)**

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
SRAL	6998,0	0515-1500	dly	12	RUS	UiTone	R3E-u			125 Hz tones
SRAL	7008,0	0700-1330	*	12		UiPTR	F1B		250	Days: 11. 17. 22. 24.
SRAL	7014,0	1345-1610	1. 27.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7014,0	1150	12.	12		UiPTR	F1B			
SRAL	7017,6	1045-1415	*	12		UiCarr	N0N			Days: 1. 4. 5. 7. 8. 9. 12. 16. 20.
SRAL	7030,0	0730-1400	22. 28.	12		UiPTR	F1B		250	
SRAL	7031,0	0630-1300	18. - 20.	12		UiCarr	N0N			
SRAL	7034,0	1350	13.	12		UiMUX	PSK2	120	2600	
SRAL	7062,0	0825-0840/	7. 21.	12	RUS	464	R3E-u			Synth. Fem. Until 0830 N0N
SRAL	7072,0	1145-1345	27.	12		UiMUX	PSK2	120	2600	
SRAL	7073,0	1020-1350	28.	12		UiMUX	PSK2	120	2600	
SRAL	7076,0	0805	15.	12		UiPTR	F1B			
SRAL	7089,0	0615-1500	*	12		UiMUX	PSK2	120	2600	Days: 4. 6. 7. 9.
SRAL	7098,0	1310-1499	21.	12		UiPTR	F1B		250	
SRAL	7117,8	0700	8.	12		UiCarr	N0N			
SRAL	7118,0	0855-0920/	20.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7120,0	0330-0530	dly	12	SOM	R.Hargeis a	A3E			
SRAL	7120,0	1345-1400/	dly	12	SOM	R.Hargeis a	A3E			
SRAL	7120,0	/1500-1920/	dly	12	SOM	R.Hargeis a	A3E			
SRAL	7137,0	1340	2.	12		UiMUX	PSK2	120	2600	
SRAL	7142,0	0745-0930	21. 28.	12		UiPTR	F1B		250	
SRAL	7146,6	1400-1840/	*	12	ERI	VoBME1	A3E			Jammed by ETH Days: 1. 2. 4. 8. 10. 21. 22.
SRAL	7160,0	0700-0730	21.	12	RUS	RMW32	A1A			
SRAL	7160,0	0830-0850/	22.	12		UiMUX	PSK2	120	2600	
SRAL	7162,0	0900-0930	15.	12		UiPTR	F1B		250	
SRAL	7169,0	1020-1130	*	12		UiCW	A1A			Days: 9. 25. 28. 31.
SRAL	7169,0	0915	23.	12		UiPTR	F1B		250	
SRAL	7171,0	0830-1130	13. 23.	12		UiMUX	PSK2	120	2600	
SRAL	7175,0	1310-1837/	dly	12	ERI	VoBME2	A3E			Jammed by ETH
SRAL	7176,0	0930-1000	9.	12		UiPTR	F1B		250	
SRAL	7179,0	1330-1507/	1. 13.	12	RUS	UiMUX	PSK2	120	2600	
SRAL	7181,6	0910-1225	15.	12		UiCarr	N0N			
SRAL	7182,0	1215	29.	12		UiMUX	PSK2	2x120	2x2600	lsb & usb
SRAL	7182,8	1220-	4.	12		UiCarr	N0N			



Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	REMARKS
		1300								
SRAL	7194,0	0925-1030	21.	12		UiMUX	PSK2	120	2600	
SRAL	7193,0	0855-1415	*	12		UiPTR	F1B/ NON		200	Days: 1. 3. 7. 11. 19.
SRAL	7195,0	1500-1640	21.	12	USA	R.F.Asia	A3E			Tinian TX
SRAL	7198,0	1000-1315	*	12		UiMUX	PSK2	120	2600	Days: 1. 16. 18.
SRAL	7200,0	/1000-1300/	dly	12	CHN	CNR1	A3E			Used as jammer on TWN, with 2 transmitters +0 & -7 Hz.
SRAL	7200,0	1600-1700	24.	12	USA	R.F.Asia	A3E			Tinian TX
SRAL	7 MHz			12	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 3d)
SRAL	7 MHz	0600-1300	*	12	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec, with 16 min cycle. Days: 1. 2. 13. 22.
SRAL	10 MHz	1530-1730	29.	12	RUS	29B6	FMCW			50Hz / 15 kHz (WebSDR 26d)
SRAL	14242,0	0700	3.	12		UiMUX	PSK2	120	2600	
SRAL	14295,0	0500-1200	dly	12	TJK	R Tojikiston	A3E			3f 4765,00 kHz, Yangiyul TX
SRAL	14308,0	0710-0900	6. 7.	12	RUS	UiPTR	F1B		250	
SRAL	14 MHz	0700-1210	7.	12	RUS	29B6	FMCW			50Hz / 15 kHz, (WebSDR 6 d)
SRAL	14 MHz	0915-1210	*	12	RUS	UiOTHR	FMCW			10Hz / 15 kHz, 30 sec, with 16 min cycle. Days: 10. 11. 16. (WebSDR 29d)
SRAL	18 MHz	0645-1210	*	12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, days: 1. 3. 5. 11. 15. 26. (WebSDR 20d)
SRAL	21 MHz			12	CYP / TUR	UiOTHR	FMCW			25/50Hz / 20 kHz, (WebSDR 25d)
SRAL	21438,0	0850-1212	7. 13.	12	RUS	RCV	A1A			
SRAL	24 MHz			12		UiOTHR	FMCW			(WebSDR 3 days)
SRAL	28960,0	0630-1200	*	12	IRN	UiOTHR	FMCW			150 & 313 Hz / 60 kHz , days: 3. 6. 10. 11. - 15.
SRAL	28 MHz			12		UiOTHR	FMCW			25/50Hz / 20 kHz
SRAL	28 MHz			12	RUS	Taxi disp.	F3E			no reports

### USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
<b>80m band informational only, shared with other also primary allocated services !</b>										
USKA	3506.0	2312	09	12			MFSK8	125	1750	MIL 188-141A; To: BZ3
USKA	3524.0	2332	24	12			F1B	50	250	
USKA	3525.0 (Center)	1716	14	12			DQPSK	14x75	5k9	LINK 11 CLEW; almost daily (Stanag5511): ISP or DSP Mode
USKA	3548.0	1741	02	12			F1B	50	200	almost daily
USKA	3549.0 VFO USB	2221	05	12			PSK8	2400	~2k7	MIL188-110A (Hybrid), preamble 4 tones, 450Hz spacing
USKA	3553.8	2219	05	12			G1D	2400	~2k4	Stanag 4285; PSK8 almost daily
USKA	3556.875	1652	02	12			A1A			fast dots; jammer
USKA	3557.0	1652	02	12			F1B	75	250	often
USKA	3557.0 VFO USB	1419	07	12			J7D	12x120	2k7	BPSK; CIS12
USKA	3582.0	1719	14	12			F1B	50	200	almost daily
USKA	3582.0 VFO USB	0427	20	12			J7D	12x120	2k7	BPSK; CIS12
USKA	3591.0	2214	05	12			DQPSK	14x75	5k9k	LINK 11 CLEW almost daily

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
		2248	09							Stanag 5511; DSB mode
USKA	3624.0	1424	07	12			F1B	75	200	
USKA	3677.0 VFO USB	0431	20	12			J7D	12x120	2k7	BPSK; CIS12
USKA	3714.5 VFO USB	1723	14	12			J7D	12x120	2k7	BPSK; CIS12
USKA	3792.0	2208	05	12			F1B	50	200	
USKA	3792.0	2250	09	12			F1B	50	200	
USKA	3797.0	1702	02	12			J7D	12x120	2k7	BPSK; CIS12
USKA	6998.0	2332	01	12			H3E-U Bursts		~3k6	"Buzzer" up to $\geq 7001.5$ kHz daily
USKA	6998.5	0836 0838	29	12		OL1 GL7	MFSK8	125	1750	MIL 188-141A: TO GL7; SY1 TO: OL1; partially in 40m band
USKA	6998.5	0844	29	12			PSK8	2400	~2k4	MIL188-110A, partially in 40m band; various frame rates
USKA	7000.0	1348	07	12			J3E-U			unid language
USKA	7000.0	1500	15	12			J3E-U			Italian
USKA	7008.0	0501	11	12			F1B	50	250	
USKA	7008.0	0724	22	12			F1B	75	250	often
USKA	7010.0	2050	08	12		820414	MFSK8	125	1750	MIL 188-141A
USKA	7010.0	2101	08	12		920018	MFSK8	125	1750	MIL 188-141A
USKA	7010.0	2108	08	12		920002	MFSK8	125	1750	MIL 188-141A
USKA	7010.0	2117	08	12		810405	MFSK8	125	1750	MIL 188-141A
USKA	7010.0	2132	08	12		920001	MFSK8	125	1750	MIL 188-141A
USKA	7010.0	2158	08	12		810411	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2322	05	12			J3E-L		~2k4	Asian language and music. Most probably "indonesian "Village Radio"
USKA	7020.0	1928	06	12		810613	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	1943	06	12		810698	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	1953	06	12		810601	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2316	06	12		820609	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2318	06	12		820615	MFSK8	125	1750	MIL 188-141A
USKA	7020.0	2322	06	12		820699	MFSK8	125	1750	MIL 188-141A
USKA	7030.0	0504	11	12			F1B	50	250	
USKA	7030.0	0720	22	12			F1B	75	250	
USKA	7036.0	1651	22	12			F1B	50	250	
USKA	7050.0	2227	09	12		810616	MFSK8	125	1750	MIL 188-141A
USKA	7055.0	1739	02	12			J3E-L		~2k7	Patriotic music and slogans
USKA	7070.0	1841	02	12		810203	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	1938	02	12		244	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	1943	02	12		334	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	2047	02	12		288	MFSK8	125	1750	MIL 188-141A; to 571
USKA	7088.8	1237	07	12			J7D	12x120	2k7	BPSK; CIS12
USKA	7120.0	1636	02	12	SOM		A3E		10k	Radio Hargaysa almost daily
USKA	7134.0	1734	02	12			F1B	50	200	
USKA	7136.8	1141	09	12			J7D	12x120	2k7	BPSK; CIS12
USKA	7145.0	1640	02	12			Noise		appx 20k	Jammer often
USKA	7146.557	1640	02	12			A3E		10k	BC, jammed
USKA	7147.0	2233	09	12			?	50 sps	~13k	OTHR; occup. BW appx 30k Contayner 29B6
USKA	7157.8	0642	21				OFDM?		>3.15	unidnt signal; sharp edges
USKA	7168.9	0952	23				A1A			Jammer (dots only)
USKA	7169.0	0952	23	12			F1B	75	200	jammed
USKA	7170.0	2224	12	12			?	66.66 sps	10k	OTHR; PD 3.85s;
USKA	7174.991	1644	02	12	ERI		A3E		10k	BC; VOBM - voice of the broad masses: Eritrea (jammed)
USKA	7175.0	1644	02	12			Noise		>15k	Jammer
USKA	7188.0 VFO LSB	1357	07	12			BPSK	30x60Bd	~2k5	Burst system; tone spacing 75 Hz. Preamble 4x PSK4 60Bd, spacing 600Hz; Pilotone at 450Hz
USKA	7193.0	1406	07	12			F1B	50	200	CIS 36-50 often
USKA	7193.1	1406	07	12			A1A			Jammer (fast dots)
USKA	7195.0	1435	19	12			A3E		10k	BC, unident language
USKA	7195.0	1622	29	12			A1A			fast dots only

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7200.0	1149	09	12			A3E		~10k	BC, lower sideband down to 7195
USKA	7200.0	2001	20	12			?		~10k	Jammer ?
USKA	14192.0	1646	02	12			F1B	50	250	almost daily
USKA	14194.0	0746	14	12			F1B	50	500	
USKA	14290.0	0901	24	12			FMOP	66.66	~10k	OTHR; only short burst, short duration
USKA	14308.0	0931	06	12			F1B	75	500	(strong, -50dBm)
USKA	14318.55	0724 0732	14	12			PSK2B F1B	1200 650	1200	ARQ system
USKA	14346.8	0843	05	12			PSK8	2400	~2k7	STANAG 4285, (weak) Frame format 600 bps/long
USKA	14352.0	0945	29	12			FMCW	50 sps	10k	OTHR; BD appx 10s, BRI 40s
USKA	18070.0	1036	19	12			FMCW	25 sps	20k	OTHR
USKA	18075.0	1158	09	12			FMOP	12.5 sps	40k	OTHR
USKA	18090.0	1407	28	12			FMCW	50 sps	20k	OTHR
USKA	18165.0	1138	26	12			FMCW	50 sps	20k	OTHR
USKA	21010.0	0633	28	12			FMCW	50 sps	20k	OTHR
USKA	21050.0	0817	14	12			FMCW	50 sps	20k	OTHR
USKA	21100.0	0814	14	12			FMCW	25	20k	OTHR
USKA	21438.0	0952	18	12	RUS	RCV	A1A			letters and figures almost daily
USKA	28500.0	0922	24	12				227 + 334 sps	~ 30-40k	Burst system, BD 6.1 and 8.1s

### Veron – Netherlands – PA2GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3548,0	15.28	5	12	CIS	UiPTR	F1B		Revs/Ptr
VERON	3792,0	18.14	6	12		UiPTR	F1B		Ptr
VERON	6998,0	16.01	9	12	RUS	Buzzer	H3e		splatter in 40 m
VERON	6998,0	vt	vd	12	RUS		H3E	10k	Buzzer; 1 sec bursts; splatter in 40m band
VERON	7018,0	20.53	8	12	RUS	UiCAR	NON		carrier
VERON	7018,0	16.35	20	12	RUS	UiCAR	NON		carrier
VERON	7055,0	15.24	15	12	RUS/UKR		J3E-L		Music & Russian speech; S7
VERON	7089,8	vt	vd	12		UiMux	PSK8	2k4	
VERON	7175,0	14.59	8	12	ERI	BC	A3E		E.African speech; S7
VERON	7175,0	15.38	9	12	ERI	BC	A3E		Male voice; barely audible
VERON	7175,0	16.08	9	12	ERI	VOBM	A3E		BC speech
VERON	7175,0	16.42	12	12	ERI	VOBM	A3E		music
VERON	7175,0	15.20	15	12	ERI	BC	A3E		Speech; barely audible; S5
VERON	7175,0	vt	vd	12	ETH	Jammer		20k	White noise; up to S9
VERON	7193,0	14.34	7	12		UiCAR	NON		carrier
VERON	7196,0	13.27	6	12		UiMux	PSK8	2k4	Stanag system
VERON	7197,0	11.05	11	12	TUR		FSK8	1k8	
VERON	10101,0	11.21	11	12		Pirates	J3E-U		No calls; S4; Rumanian??
VERON	10121,0	09.44	20	12		UiPTR	F1B		Ptr
VERON	10123,0	09.55	12	12		UiPTR	F1B		Ptr
VERON	10135,0	13.40	11	12	AUS		FMCW	10k	23sps; bursts; JORN
VERON	14029,5	09.47	20	12		UiPTR	F1B		Ptr
VERON	14138,0	09.41	9	12	CIS	4SLH	A1A		QTC 362 34 9 1235 362 ZTX 885 5BL
VERON	14138,0	09.44	9	12	CIS	UiCW	A1A		to 4SLH QTC 489 wrk simplex very weak
VERON	14138,0	09.46	9	12	CIS	4SLH	A1A		R 489 K
VERON	14138,0	09.48	9	12	CIS	4SLH	A1A		1UI4 de 4SLH QTC 143 34 9 1245 143 5BL
VERON	14192,0	09.38	9	12		UiPTR	F1B		Ptr
VERON	14268,0	09.48	1	12		UiPTR	F1B		Ptr
VERON	14280,0	10.15	14	12	UKR		A3E		female voice encrypted msgs SZRU
VERON	14308,0	09.10	6	12		UiPTR	F1B		Ptr also at 7/12 09.30 UTC
VERON	21342,0	10.05	9	12	CIS	UiCW	F1A		XXX followed F1B Revs/Ptr
VERON	21342,0	10.09	9	12	RUS	RDL	F1A		RDL 01653 12860 K

<b>VERON</b>	21438,0	09.32	18	12	RUS	RCV	A1A		RIP90 de RCV QTC 478 Nawip 033
<b>VERON</b>	28040,0	16.21	9	12		Buzzer	H3e		
<b>VERON</b>	28126,0	09.52	20	12		UiCAR	A1A		Strong Carrier

# **The monitoring team of IARU Region 1**

**credits:**

**Wavecom Elektronik – Buelach – Switzerland**

**All HAMS, friends and contributors worldwide!**

**Many thanks for your interest!**

**compiled and published by DK2OM**

**January 2017**