



Monitoring System

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The monthly newsletter for Region 1

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The members of the IARUMS Region 1 Monitoring Team:



Acknowledgements

- ++ ARI: DH7SA – Salvatore ++ ARSK: 5Z4NU - Ted ++ DARC: DJ9KR - Uli ++ CAST: DL1BDF – Mustapha ++
- ++ EARA: SU1SA – Sayed ++ IRTS: EI4GXB - Ger ++ KARS: 9K2RR – Faisal ++ MARL: 9H1M – Dominic ++
- ++ MRASZ: HA7PL - Laci ++ NARS: 5N9AYM – Yusuf ++ OEVSU: OE3DMA – Alex ++ PZK: SP3SUZ – Wladyslaw ++
- ++ RAL: OD5MV – Raja ++ REP: CT4AN – Jose ++ RSGB: G4BOH - Chris ++ SARL: ZS1FCS - Fred ++
- ++ SRAL: OH2BLU - Pekka ++ UBA: ON4VJ - Johny ++ URE: EA5DY - Salvador ++ USKA: HB9CET - Peter ++
- ++ VERON: PA0GRU - Dick ++ ZRS: S56ZDB – Darko ++ G3VZV – Graham (satellite intrusions) ++
- ++ TG9ADV – Jorge (Co-ordinator Region 2) ++ ++ VK3MV – Peter (Co-ordinator Region 3) ++
- ++ DF8FE – Martin (Webmaster assistance) ++ DL8AAM (ALE) ++ DJ7KG (BUOYS) ++ DF5SX (BC) ++
- ++ DARC (server support) ++ OD5TE (Hani) ++ VE6SH – Tim (IARU President) ++ PB2T – Hans (IARU R1 President) ++
- ++ 9A5W - Nikola (EC-IARU-R1) ++ German PTT (BNetzA) ++ SK6AW – DX-Cluster

Part 1: News and infos

Part 2: Detailed reports of the national co-ordinators

Part 1: News and Infos

1. 9A5W now responsible to IARUMS Region 1

We were informed, that the EC-Member 9A5W (Nikola) is now responsible to the IARUMS Region 1 (Sun City result). Of course we are very glad about his election. Remember the Codar problems at RTZub Croatia about 2 years ago! There was an excellent cooperation between Nikola and our IARUMS Region 1.

We know: We can count on Nikola !



2. Do not forget the Intruder-Logger!

Besides our Intruder Alert System (Hani's idea!) we have our Intruder-Logger, which is also open to all users worldwide. You can store your intruder observations in real time mode! Do not forget to use this system and read the entries from all parts of the world! <http://peditio.net/intruder/bluechat.cgi>

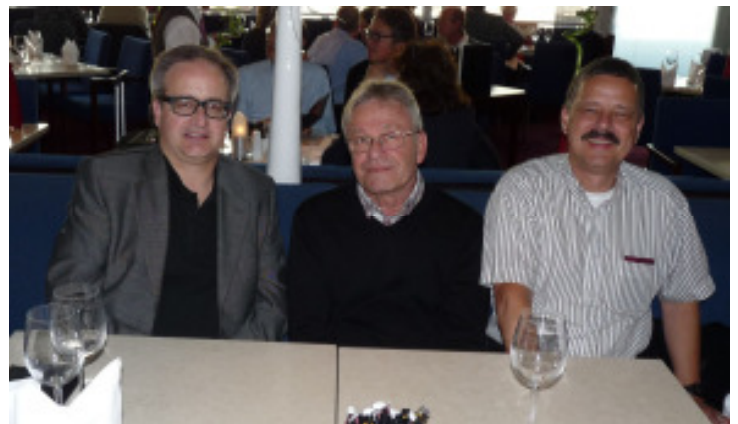
3. 28 MHz and 24 MHz – lost bands?

The situation in October was worse as ever before.

We found much CB-like traffic (AM, FM, SSB) between 28 and 29.7 MHz in September and again in October 2011. Origins: Europe, Brazil, Far East. Besides that we observed, that the band is still crowded of numerous CIS taxi-cabs in FM. The conditions on the upper bands are raising, so we are realize the "apocalypse" on our exclusive band. **VK4TJ, John, observed that even 24 MHz is daily abused by Asian Cbers.** He logged them on the following QRGs: 24890 – 24900 – 24905 - 24912.5 – 24915 – 24925 – 24935 - 24937.5 – 24945 – 24955 – 24965 – 24975 - 24985

4. Meeting at Frankfurt Airport

On Oct. 23rd VE6SH (Tim), PB2T (Hans) and DK2OM (Wolf) had a meeting at Frankfurt Airport discussing the improvement and the future of the IARU – Monitoring System.

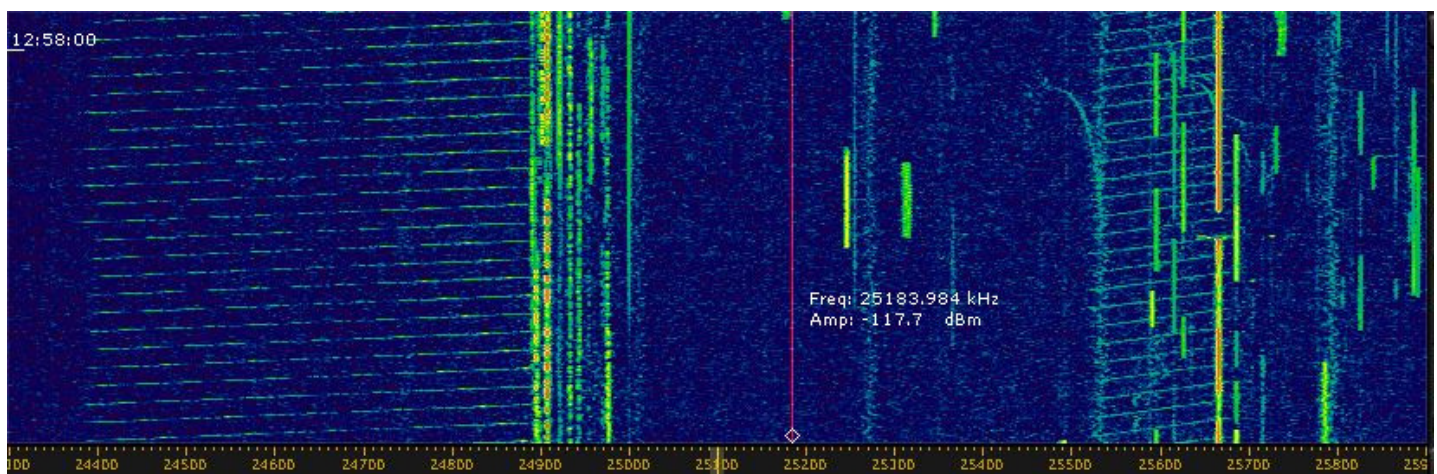


From left: VE6SH, Tim, President of the IARU, DK2OM, Wolf, Coordinator IARUMS Region 1, PB2T, Hans, President of the IARU Region 1

5. Codar Radars still (or again) disturbing 24 MHz

The Codar from Venice left 24 MHz and moved up to 25600 kHz. A bit later another Codar appeared on 24890 – 24900 (real spread: 24400 – 24900). It was also transmitting with 2 sweeps/sec and the typical blocks in each sweep.) 9A5W, Nikola, and HB9CET, Peter, supported my efforts to find out the source. Many thanks dear friends!. **Please observe the screenshot below! (DK2OM with Perseus)**

You can see a Codar Radar on 24400 – 24900 kHz and the Codar from Venice on 25600. The other vertical lines above our 24 MHz-band are caused by CIS taxi cabs, transmitting in FM (= F3E). The location of this Codar can be North- or Central-America – Sporadic-E conditions. We need more bearings and observations. Another Codar was found at the **USA West-Coast**, covering the whole 24 MHz-band.



6. **Observe the updates:** Gallery >
History of IARUMS R1 >

<http://www.iarums-r1.org/iarums/gallery.pdf>
<http://www.iarums-r1.org/iarums/history.pdf>

7. Homepage IARU Region 1 <http://www.iaru-r1.org/>
Homepage IARUMS Region 1 <http://www.iarums-r1.org>
Homepage IARUMS Region 2 <http://www.iaru-r2.org/>
Homepage IARUMS Region 3 <http://www.iaru-r3.org/ms/>

Part 2: Detailed reports from 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 *** MPSK12 (J7D) = 12 channel phase shift keying *** ALE (MIL-188-141A) = automatic link establishment *** MUX = multiplex *** Ui (unid) = unidentified *** Illicit = illegal *** UiILL = unidentified illegal *** BC = broadcast *** MIL = military *** PTR = printer *** NGO = non governmental organization *** ITU = ITU country abbreviation *** PRC = People's Republic of China *** PLA = People's Liberation Army *** MFA = Ministry of Foreign Affairs *** MOI = Ministry of Interior *** MOPO = Ministry of Public Order *** IARUMS = IARU Monitoring System *** UTC = Universal Time Coordinated *** pps = pulses per second (radar systems) *** sps = sweeps/sec (radar systems FMCW)

ARSK MONITORING OVERVIEW FOR OCTOBER 2011

Very few intruders were recorded, and my computer managed to delete the record, which I cannot duplicate – my apologies. No Somali illegal intruders were recorded in October, and there were far fewer from South Sudan which has recently signed up to the ITU protocol. Hopefully that will lead to better control in the country. There remain some in Francophone Central Africa using vernaculars and some French.

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

ARSK – Kenya – 5Z4NU (Ted)

not available

DARC 1 – Germany – DJ9KR (Ui)

Illegal voice traffic, BC transmissions, IM products, harmonics = blue

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	3500,0	1937	08	10	E	UiILL	J3E-U	Spanish fishery
DARC	3500,0	1914	23	10	E	UiILL	J3E-U	Spanish fishery
DARC	3520,0	1846	14	10	N.Eu	UiILL	J3E-U	Scandinavian fishery
	3535,0	0629	05	10	N.Eu	UiILL	J3E-U	Scandinavians
DARC	3550,0	0700	03	10	F	French Lis Amateurs	A3E	French lis amateurs, daily - --- AM in CW section is in contradiction of IARU Bandplan
DARC	3550,0	1910	29	10	N.Eu	UiILL	J3E-U	Scandinavians
DARC	3590,0	2034	27	10	E	UiILL	J3E-U	Spanish fishery
DARC	3600,0	1613	12	10	F	French Lis Amateurs	A3E	AM on CW section, heard F5EIX, F6AQU, F1APJ
DARC	7000,0	1939	09	10		UiILL	J3E-U	unid pirates, weak signals
DARC	7000,0	1755	19	10	E	EA1HBX	A1A	beacon of EA1HBX with ticking seconds, carrier and call sign - see www.qrz.com/db/ea1hbx !
DARC	7000,0	0720	27	10	E	EA1HBX	A1A	"beacons test" with ticking pulses, see www.qrz.com/db/ea1hbx !
DARC	7001,0	1535	12	10		UiMUX	XXX	mux rushing noise
DARC	7002,0	2129	20	10		UiBC	A3E	IM product
DARC	7009,0	2018	15	10	RUS	VoRussia	A3E	Russian px, church choir - is IM
DARC	7020,0	2148	13	10		UiBC	A3E	BC-IM
DARC	7038,7	2102	27	10	UKR	beacon D	A1A	beacon Sevastopol
DARC	7038,8	1756	19	10	RUS	beacon P	A1A	beacon Kaliningrad
DARC	7038,9	1756	19	10	RUS	beacon S	A1A	beacon Murmansk
DARC	7039,0	1756	19	10	RUS	beacon C	A1A	beacon Moscow
DARC	7041,8	2102	27	10	RUS	beacon L	A1A	beacon St. Petersburg
DARC	7054,0	0616	13	10	RUS	UiPTR	F1B	fast reversals, is RUS MIL Moscow
DARC	7054,0	2018	15	10	RUS	UiPTR	F1B	fast reversals, distorted chirpy signal
DARC	7105,0	0713	14	10		UiMUX	MSK	ALE heard
DARC	7114,0	2102	27	10		UiPTR	F1B	unid printer
DARC	7115,0	0710	14	10		UiMUX	XXX	roaring noise
DARC	7117,0	1621	10	10	RUS	REA4	F1B	fast reversals
DARC	7118,0	1750	19	10		UiPTR	F1B	fast reversals
DARC	7118,0	vt	27	10		UiPTR	F1B	fast reversals, heard 1553, 2102

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	7125,0	vt	dly	10	GUI	R.Conakry	A3E	reported in HFCC saison B11 0530 - 1000 and 1500 - 2300, but not heard / reported in October 2011
DARC	7130,0	1649	13	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer, at 1700: clear
DARC	7130,0	1750	19	10	ERI	VOBME	A3E	heard 1750 - 1800, s/off with song "Yiritriya", weak signal
DARC	7130,0	1553	27	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer, at 1700: clear
DARC	7130,0	1553	27	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME
DARC	7135,0	1621	10	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME
DARC	7135,0	vt	11	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME, heard 1559 - 1613
DARC	7175,0	1621	10	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME
DARC	7175,0	1621	10	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer
DARC	7175,0	vt	11	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME, heard 1533 - 1613
DARC	7175,0	vt	11	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer, heard 1533 - 1613
DARC	7175,0	1649	13	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer, at 1700: clear
DARC	7175,0	1750	19	10	ERI	VOBME	A3E	heard 1750 - 1800, s/off with song "Yiritriya"
DARC	7175,0	1553	27	10	ETH	ETH Govt. Jammer	JAM	white noise jammer on VOBME
DARC	7175,0	1553	27	10	ERI	VOBME	A3E	VOBME under heavy white noise jammer
	7175,0	vt	dly	10	ERI	VOBME	A3E	heard 0230 - 0430
DARC	7189,7	0051	08	10	CLN	R.Colombo	A3E	typical music
DARC	7197,0	0051	08	10		UiMUX	XXX	roaring noise
DARC	7200,0	1750	19	10	SDN	R.Omdurman	A3E	Arabic px
DARC	7200,0	vt	27	10		UiMUX	XXX	multiplex 0640 - 1552 - 2102
DARC	7200,0	1936	29	10	SDN	R.Omdurman	A3E	Ar px
DARC	7200,0	2055	30	10	SDN	R.Omdurman	A3E	Ar px
DARC	7200,0	2055	30	10	IRN	IRIB	N0N	warm up til 2100
DARC	7200,0	2100	30	10	IRN	IRIB	A3E	s/on with National Anthem, then px in Japanese voice, S9+20dB signal, s/off 2157 - 1st heard 30 October for HFCC B11-saison
DARC	7200,0	0335	31	10	SDN	R.Omdurman	A3E	Ar px, found // with IRIB
	7200,0	0335	31	10	IRN	IRIB	A3E	English px S9+30dB, found // with R.Omdurman
	7200,0	vt	dly	10	IRN	IRIB	A3E	0330 - 0430
DARC	7200,0	2155	31	10	IRN	IRIB	A3E	Japanese px
DARC	10100,0	1552	27	10	CHN?	Coastal Radar	FMCW	2.6 sps, heard 10060 - 10260 kHz
DARC	10105,0	vt	vd	10	E	UiILL	J3E-U	Spanish fishery, heard 11 18 at 1927, 1909
DARC	10115,0	1936	29	10	CHN?	Coastal Radar	FMCW	2.6 sps, heard 10115 - 10250 kHz
DARC	10120,0	2008	26	10	E	UiILL	J3E-U	Spanish fishery
DARC	10121,5	1927	27	10		UiILL	J3E-U	unid pirates, weak signals
DARC	10123,0	1934	28	10	MRC	UiILL	J3E-U	Moroccan fishery
DARC	10125,0	vt	06	10	NATO	PsyOPs	J3E-U	heard 1125 - 1130, English and Arabic voice - report SP3SUZ
DARC	10130,0	2107	27	10		UiOTH-Radar	FMCW	chirping pulses
DARC	10140,0	1639	14	10		UiOTH-Radar	FMCW	heard 10140 - 10170
DARC	10150,0	1600	18	10	CIS	UiILL	J3E-U	voice traffic in Russian voice, roger beep --- is outside ham band
DARC	10150,0	1546	21	10	I	UiILL	J3E-U	Italian pirates --- is outside ham band
DARC	10150,0	1633	21	10	TUR	UiILL	J3E-U	Turkish pirates --- is outside ham band

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	10150,0	0752	30	10	E	UiILL	J3E-U	2 male persons in Galician language, USB used
DARC	14000,0	1920	03	10	B	UiILL	J3E-U	North Brazilian Intruder Net
DARC	14000,0	1755	15	10	INS	UiILL	J3E-U	Far East pirates, singing and fooling around
DARC	14000,0	1745	19	10	CIS	UiILL	J3E-U	2 male persons in Russian voice
DARC	14000,0	1704	23	10	F.Ea	UiILL	J3E-U	pirates from Far East
DARC	14024,0	1650	13	10		UiMUX	XXX	mux rushing noise
DARC	14280,0	1656	13	10		UiOTH-Radar	FMCW	chirping pulses in bursts
DARC	14295,1	1500	07	10	TJK	R.Tajikistan	A3E	3f de 4765, daily
DARC	14295,1	0636	10	10	TJK	R.Tajikistan	A3E	is harmonic, S7
DARC	14350,0	0816	12	10	E	UiILL	J3E-U	pirates in Spanish voice, male to female, later to 14366 --- 14350 SSB-USB is outside ham band!
DARC	21000,0	1206	03	10	GRC	UiILL	J3E-U	pirates in Greek language, also phone patches
DARC	21000,0	0638	10	10		UiILL	J3E-L	pirates in LSB (is out of ham band)
DARC	21000,0	1935	12	10	E	UiILL	J3E-U	Spanish voice, QTE 220 degs.
DARC	21000,0	0615	20	10	RUS	UiILL	J3E-U	vocoder YAKHTA, location Yekaterinburg
DARC	21000,0	1110	20	10	E	UiILL	J3E-U	Spanish fishery
DARC	21001,5	0749	11	10	RUS	YAKHTA	F1B	vocoder and F1B synchro
DARC	21001,5	1320	14	10	RUS	YAKHTA	F1B	encoding signal
DARC	21007,7	1523	25	10	MRC	UiILL	J3E-U	Moroccan fishery
DARC	21135,0	1040	04	10	F.Ea	UiILL	J3E-U	pirates from Far East
DARC	21270,0	0916	13	10		UiOTH-Radar	FMCW	chirping pulses in bursts
DARC	21438,0	0919	13	10	UKR	RCV	A1A	Russian naval base Sevastopol
DARC	21440,0	0749	11	10		UiPTR	F1B	unid printer
DARC	21450,0	0848	13	10	E	UiILL	J3E-U	pirates in Spanish voice, male to female, later to 20960 --- 21450 SSB-USB is outside ham band!
DARC	29175,0	1118	09	10	CYP	Cyprus OH-Radar	FMCW	29175 - 29195, heard by DG0JBJ
DARC	29490,0	1140	15	10		UiOTH-Radar	FMCW	report DG0JBJ

DARC 2 – Germany – DJ9KR (Uli)
Illegal voice traffic (taxi and CB) on 28 – 29.7 MHz

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	28000,0	vt	vd	10	CIS	Taxi Traffic from CIS	F3E	DARC-MS received 180 reports concerning taxi traffic in Russian voice, range 28000 - 29665- 99 % of the reports are from DJ9KR and DK2OM
DARC	28000,0	vt	vd	10	CIS	Taxi Traffic from CIS	F3E	There is occupied almost any "channel" in steps of 5 or 10 kHz by taxi traffic from CIS / RUS. Further down see cities (in red colour) pin pointed by German Federal Network Agency in cooperation with telecoms. authorities from abroad with the help of Wolf DK2OM.
DARC	28000,0	1658	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28045,0	1820	12	10	S.Am	UiILL	J3E-U	Spanish voice, location South America
DARC	28045,0	1847	13	10	B	UiILL	J3E-U	pirates from Brazil, male to female
DARC	28055,0	1658	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28055,0	ady	dly	10	BLR	taxi-net	F3E	south of Minsk
DARC	28065,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice - location is Moscow
DARC	28075,0	1656	02	10	B	UiILL	A3E	CB-ers from Brazil

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	28075,0	0837	21	10	F.Ea	UiILL	A3E	pirates from Far East
DARC	28095,0	ady	dly	10	UKR	Taxi Traffic	F3E	female to male in Russian voice, location is Dnjepropetrovsk
DARC	28105,0	1656	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28105,0	1636	03	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28105,0	0929	10	10	F.Ea	UiILL	A3E	pirates from Far East
DARC	28125,0	1700	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28135,0	1735	08	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28165,0	11704	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28165,0	1427	15	10	CIS	UiILL	F3E	male person in Turkish voice
DARC	28175,0	1005	02	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location area of Samara
DARC	28175,0	1635	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28185,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is area of Volgograd
DARC	28190,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Krasnodar
DARC	28195,0	1200	30	10	F.Ea	UiILL	A3E	Far East pirates
DARC	28205,0	1628	03	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28205,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Omsk
DARC	28225,0	103	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28225,0	1657	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28235,0	1703	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28255,0	1657	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28265,0	1701	02	10	B	UiILL	A3E	CB-ers from Brazil
DARC	28265,0	ady	dly	10	UKR	Taxi Traffic	F3E	female to male in Russian voice, location is Dnjepropetrovsk
DARC	28300,0	1748	08	10	POR	UiILL	J3E-U	pirates in Portuguese language, no calls available!
DARC	28315,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Rostov na Donu
DARC	28330,0	0738	16	10		UiOTH-Radar	FMCW	S9+30dB
DARC	28350,0	1220	18	10	RUS	UiBC	A3E	music, Russian px, 3f?
DARC	28365,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Volgograd
DARC	28400,0	1220	18	10		UiILL	J3E	scrambled voice
DARC	28620,0	vt	31	10	TUR	UiOTH-Radar	FMCW	chirping pulses 20 kHz spread, heard 0743 - 0843, QTE 135 degs., location is possibly Turkey
DARC	28705,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Abakan
DARC	28720,0	ady	dly	10	KAZ	Taxi Traffic	F3E	female to male in Russian voice, location is Astana
DARC	28737,5	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Kaliningrad
DARC	28755,0	0733	19	10		UiOTH-Radar	FMCW	S9+20dB-signal, 30 kHz spread
DARC	28775,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Nizhny Tagil
DARC	28787,5	ady	dly	10	UKR	Taxi Traffic	F3E	female to male in Russian voice, location is Dnjepropetrovsk
DARC	28790,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Tscheljabinsk
DARC	28845,0	ady	dly	10	KAZ	Taxi Traffic	F3E	female to male in Russian voice, location is Kustanai
DARC	28862,5	ady	dly	10	KGZ	Taxi Traffic	F3E	female to male in Russian voice, location is Bishkek
DARC	28875,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Grosny
DARC	28895,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Grosny
DARC	28925,0	ady	dly	10	MNG	Taxi Traffic	F3E	female to male in unid voice, location is Mongolia
DARC	29087,5	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Grosny
DARC	29100,0	ady	dly	10	RUS	Taxi Traffic	F3E	female to male in Russian voice, location is Chita

CLUB	kHz	UTC	DD	MM	ITU	Call Sign	MODE	Remarks and Comments
DARC	29175,0	1118	09	10	CYP	Cyprus OH-Radar	FMCW	29175 - 29195, heard by DG0JBJ
	29175,0	1012	21	10	F	UiILL	F3E	French CB-ers
DARC	29490,0	1140	15	10		UiOTH-Radar	FMCW	report DG0JBJ
DARC	29550,0	0831	15	10		UiOTH-Radar	FMCW	heard 0831 just at s/off signal
DARC	29925,0	1234	18	10	CIS	Taxi Traffic	F3E	female to male in Russian voice, higher than ham band - just info!
DARC	29935,0	1509	17	10	CIS	Taxi Traffic	F3E	female to male in Russian voice, higher than ham band - just info!
DARC	29965,0	0935	28	10	CIS	Taxi Traffic	F3E	female to male in Russian voice, higher than ham band - just info!

DARC 3 – Germany - DK2OM (Wolf)

PSE observe:

FSK transmissions -> center frequency between mark and space

PSK transmissions -> center frequency (subtract the modem frequency!)

ALE (MIL188-141A) -> USB frequency – exclusive bands: black – nonexclusive: blue

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

DARC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DARC	1812,0	vt	vd	10	POL		A3E			Polish “PIP” – 10 tones – North-Poland – Baltic coast - POL Navy ? – legal operation
DARC	1876,8	ady	dly	10	G		PSK8	2400	2400	Stanag4285 - 1200 bps long - Scotland
DARC	1896,5	ady	dly	10	D		PSK8	2400	2400	Stanag4285 - 600 bps long - German Navy
DARC	3500,0	vt	dly	10	TUR	no ITU	FSK8	125	1750	ALE, “2015” “2016” “1020” “3010”- Turkish Red Crescent - legal
DARC	3501,0	2056	13	10						frequency hopper
DARC	3502,0	2019	13	10	RUS		F1B	81	250	Mitschurinsk
DARC	3503,5	vt	dly	10	G	no ITU	FSK8	125	1750	ALE – “XSS” “XPU” – British MIL Tascomm
DARC	3503,7	2049	13	10	ISR		PSK4	75	2700	MIL-188-110A hybrid-modem
DARC	3510,0	vt	dly	10	ALG	no ITU	FSK8	125	1750	ALE, “JE30” “PT30”
DARC	3516,0	1840	11	10	BLR		N0N		350	8 carrier system
DARC	3520,0	1745	26	10	?		PSK2	120	2600	AT3004D
DARC	3527,0	1900	dly	10	RUS		F1B	50	200	Severomorsk - daily
DARC	3530,0	1840	11	10	BLR		N0N		350	8 carrier system
DARC	3530,3	1950	04	10	EU		DQPSK	75	1400	Link11-CLEW - ship, Gulf of Biscaya
DARC	3531,0	1900	dly	10	RUS		A1A			33 dots/sec - Kaliningrad
DARC	3533,0	vt	dly	10	E	no ITU	FSK8	125	1750	ALE, “TZSC2” “TWBZ1” - Spanish Guardia Civil
DARC	3545,0	vt	dly	10	ALG	no ITU	FSK8	125	1750	ALE, “FL49” “FL57” “PT50” - ALG MIL + voice traffic USB and scrambler
DARC	3553,8	ady	dly	10	TUR		PSK8	2400	2400	Stanag4285 – TUR MIL - Ankara
DARC	3558,0	vt	dly	10			FSK8	125	1750	ALE, “102” “206”
DARC	3565,0	2123	04	10						frequency hopper
DARC	3567,0	2100	26	10	G		F1B	600	850	area of Manchester
DARC	3570,0	1747	26	10	RUS		PSK2	120	2600	AT3004D – SW of Moscow
DARC	3577,0	ady	dly	10	I	IZ3DVW	A1A			IZ3DVW – beacon not coordinated with IARU
DARC	3585,0	1700	dly	10	TWN	HLL	F1C			120 rpm, IOC 576, Wxfax - legal!
DARC	3590,0	vt	dly	10	PAK	no ITU	FSK8	125	1750	ALE, “KW” “BABUR” “KHA” “KHAIBAR” “BADR” “NASR”
DARC	3595,0	vt	dly	10	D	no ITU	FSK8	125	1750	ALE, „ZLST“ „ZPRI“ „ZSHO“ „ZBOR“ „ZEMD“ „ZHEL“

DARC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
										„ZKNI“ „ZBOR“ „BPLEZS“ German customs – North-Germany
DARC	3596,0	vt	dly	10	HRV	9A0ALE	FSK8	125	1750	Croatian emergency ALE-net --- for info!
DARC	3603,0	vt	vd	10	D	DA0EC	PSK8	2000	2000	RFSM 8000 – amateur emergency net - Berlin - legal operation - just for info!!!
DARC	3603,0	vt	dly	10	ALG?	no ITU	FSK8	125	1750	ALE, “PT01JL94” “JL05JL94”
DARC	3608,0	2100	27	10	RUS		F1B	50	200	Kaliningrad
DARC	3611,5	vt	dly	10	D		PSK8	200	500	German APRS Net in Robust Packet - just for info!
DARC	3617,0	vt	dly	10	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX1P” – HAM-ALE - just for info
DARC	3622,5	2100	24	10	J	JMH	FIC			Tokyo Meteo – 120 rpm – IOC576 – daily, legal!!!
DARC	3699,5	2058	27	10	RUS		F1B	50	200	Kaliningrad
DARC	3756,0	ady	dly	10	UKR		A3E			UKR – pip – 10 tones
DARC	3782,0	ady	dly	10	POR	CTP	F1B	75	850	POR Navy headquarter Lisbon
DARC	3798,0	2039	27	10	RUS		F1B	75	250	north of Moscow
DARC	5195,0	1630	18	10	G		PSK8	2400	2400	Stanag4285 disturbing aurora beacon DRA5 – source: central UK – problem solved by RSGB MS and Ofcom on Oct. 19 th
DARC	7000,0	vt	dly	10	IRQ	no ITU	FSK8	125	1750	ALE, “MEDOPS” “BMROPS” “LNGKNF” “EAGLE” “HFCFSR” “R23747” “ALZMED” “KALMED” “R24594” “T2Z224” US MIL
DARC	7000,0	2102	13	10	CHN		FMCW		90k	OTHR – 43.5 sps - 6940 - 7030 kHz
DARC	7000,0	1930	31	10	PAK		noise		50k	white noise 7008 - 7050 - area of Islamabad
DARC	7012,0	2022	28	10	PAK		noise		10k	white noise 7008 - 7016 - area of Islamabad
DARC	7018,0	0650	01	10	RUS		F1B	75	200	Kaliningrad
DARC	7020,0	vt	dly	10		no ITU	FSK8	125	1750	ALE, “RS0013” “CS004A” NATO NC3A-network
DARC	7026,0	1530	17	10	RUS		PSK2	120	2600	AT3004D - area of Bryansk
DARC	7037,0	1744	10	10	RUS		PSK2	120	2600	AT3004D - Moscow
DARC	7038,7	ady	dly	10	UKR	D	A1A			Cluster beacon – Sevastopol RUS Navy – “RCV”
DARC	7038,8	ady	dly	10	RUS	P	A1A			Cluster beacon – Kaliningrad RUS Navy – “RMP”
DARC	7038,9	ady	dly	10	RUS	S	A1A			Cluster beacon – Murmansk RUS Navy – „RIT“
DARC	7039,0	ady	dly	10	RUS	C	A1A			Cluster beacon - Moscow RUS Navy - “RIW”
DARC	7039,1	vt	dly	10	KGZ	A	A1A			Cluster beacon – Bishkek RUS Navy –
DARC	7039,2	ady	dly	10	RUS	F	A1A			Cluster beacon - Vladivostok RUS Navy - “RJS”
DARC	7039,3	vt	dly	10	RUS	K	A1A			Cluster beacon - Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - “RCC”
DARC	7039,4	1437	03	10	RUS	M	A1A			Cluster beacon – Magadan RUS Navy – „RTS“
DARC	7039,9	ady	dly	10	I	IZ3DVW	A1A			IZ3DVW – beacon not coordinated with IARU
DARC	7040,5	vt	dly	10	HRV	9A5EX	FSK8	125	1750	ALE, “9A5EX” - just for info!
DARC	7041,8	ady	dly	10	RUS	L	A1A			Cluster beacon “L” - St. Petersburg - dirty signal
DARC	7049,0	0709	04	10	RUS		F1B	75	200	Kaliningrad
DARC	7049,5	vt	dly	10	F	F4BXW1	FSK8	125	1750	ALE, “F4BXW1” - just for info!
DARC	7052,0	1608	12	10			F1B	50	250	
DARC	7054,0	1800	dly	10	RUS		F1B	50	200	CIS50-50 - RUS Navy Moscow – strange signal

DARC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DARC	7065,0	vt	dly	10	HRV	9A5EX	FSK8	125	1750	ALE, "9A5EX" - just for info!
DARC	7067,0	2113	13	10	KRE		FMCW		30k	Coastal Radar Pyongyang – 2.6 sps - 7067 - 7097 kHz
DARC	7070,0	2130	20	10	RUS		PSK2	120	2600	AT3004D - Naryan-Mar
DARC	7099,5	vt	dly	10	HRV	9A0ZG	FSK8	125	1750	ALE, "9A0ZG" - just for info
DARC	7102,0	vt	dly	10	HRV		FSK8	125	1750	ALE, "9A3COL" – just for info!
DARC	7110,5	vt	dly	10	HRV	9A0ALE	FSK8	125	1750	ALE, amateur net, just for info!
DARC	7111,9	vt	dly	10	KWT	no ITU	FSK8	125	1750	ALE, "UDAIRI" "ATFOPS" – UDAIRI = US MIL Camp Buehring / Kuwait
DARC	7114,0	1922	13	10			F1B	50	200	
DARC	7117,0	1945	dly	10	RUS	REA4	F1B	50	1000	Russian Airforce Moscow
DARC	7120,0	1745	22	10	KRE		FMCW		30k	Coastal Radar Pyongyang – 2.6 sps - 7120 - 7150 kHz
DARC	7121,0	0823	12	10	UKR		PSK2	120	2600	AT3004D -
DARC	7137,0	1530	31	10	RUS		F1B	50	200	Kaliningrad
DARC	7176,0	1716	02	10	RUS		F1B	75	250	Orenburg
DARC	7180,0	vt	dly	10	MRC	no ITU	FSK8	125	1750	ALE, "9201" "6350" "RC1"
DARC	7185,5	vt	dly	10	F	F4BXW	FSK8	125	1750	ALE, "F4BXW" - just for info!
DARC	7192,0	1535	25	10	RUS		F1B	75	250	Kaliningrad
DARC	7198,0	0630	05	10	RUS		PSK4	120	2600	AT3104D - Smolensk
DARC	10100,0	1918	02	10	CHN		FMCW		200k	Chinese Coastal Radar - 10020 - 10220 kHz - 2.6 sps
DARC	10100,0	2145	06	10	CHN		FMCW		290k	Chinese Coastal Radar - 2.6 sps – 10020 – 10290 kHz - also: 28.10.11
DARC	10106,0	vt	dly	10	ALG	no ITU	FSK8	125	1750	ALE, "OG100A" "OR200B" - Algerian MIL
DARC	10107,0	vt	dly	10			FSK8	125	1750	ALE, "193"
DARC	10110,0	vt	vd	10	SNG		FSK8	125	1750	ALE, "CN6" "68" – Singapore Navy - Changi Naval Base with frigate "RSS Formidable"
DARC	10112,0	ady	dly	10	TUR		PSK8	2400	2400	Stanag4285 – 600 bps long – TUR MIL - Izmir
DARC	10115,0	vt	dly	10		no ITU	FSK8	125	1750	ALE, "2001", "2011"
DARC	10116,5	2007	31	10	CIS		MFSK	54.3	2200	CIS36
DARC	10120,0	vt	dly	10		no ITU	FSK2	125	1750	ALE, "9066" "9067"
DARC	10120,0	2003	29	10						frequency hopper
DARC	10121,0	0819	04	10	RUS		F1B	75	200	
DARC	10127,0	0750	08	10	RUS		F1B	75	200	
DARC	10128,0	0920	31	10						frequency hopper
DARC	10130,0	0645	dly	10	USA		F1B	50	850	USA - Maine
DARC	10130,0	2112	27	10	CYP		FMCW		10k	OTH Radar Cyprus, 50 sps
DARC	10132,0	0641	23	10	RUS		F1B	75	200	Kaliningrad
DARC	10134,0	vt	dly	10	ALG	no ITU	FSK8	125	1750	ALE, "CM4" "COF" - Algerian Airforce
DARC	10136,5	vt	dly	10	F	F4BXW	FSK8	125	1750	ALE, "F4BXW" - just for info!
DARC	10140,0	1740	26	10						frequency hopper
DARC	10145,5	vt	dly	10	HRV	9A5EX	FSK8	125	1750	ALE, 9A5EX, just for info!
DARC	10146,0	vt	dly	10	ALG	no ITU	FSK8	125	1750	ALE, "ORG" "CM4" – ALG Airforce
DARC	10150,0	vt	dly	10		no ITU	FSK8	125	1750	ALE, "CFA" "CTA"
DARC	10150,0	1727	17	10						frequency hopper
DARC	10150,0	2130	26	10	RUS		FMCW		10k	OTHR - 40 sps - 6 sec-bursts every 24 sec – 10150 – 10160 kHz - area of St. Petersburg
DARC	14000,0	vt	dly	10	CYP	no ITU	FSK8	125	1750	ALE, "091" "1010"
DARC	14001,0	ady	12	10	G		NON			area of Glasgow
DARC	14002,0	1407	03	10			F1B	50	850	
DARC	14008,0	0720	03	10	RUS		F1B	50	500	Moscow
DARC	14026,0	1059	01	10	RUS		PSK2	120	2600	AT3004D - Moscow
DARC	14026,0	1445	04	10	RUS		PSK4	120	2600	AT3104D - East of Moscow
DARC	14035,0	0753	08	10	RUS		F1B	100	250	Murmansk
DARC	14037,0	vt	dly	10		no ITU	FSK8	125	1750	ALE, "313" "132" "932"
DARC	14060,0	1248	28	10	RUS		F1B	81	500	Orenburg
DARC	14088,0	2158	03	10		no ITU	FSK8	125	1750	ALE,

DARC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DARC	14107,5	1315	22	10	CHN		PSK2			OFDM PRC 39 tone
DARC	14120,0	1030	25	10	RUS		F1B	75	250	Moscow
DARC	14120,0	1034	25	10						frequency hopper
DARC	14192,0	vt	vd	10	RUS		F1B	50	500 200	CIS50-50 - RUS Navy Kaliningrad
DARC	14224,0	0814	12	10	RUS		F1B	75	500	
DARC	14242,0	1505	04	10	RUS		PSK2	120	2600	AT3004D - Moscow
DARC	14247,0	vt	dly	10	E	no ITU	FSK8	125	1750	ALE, "151" "250"
DARC	14260,9	0700	05	10	RUS		OFDM	30	2800	OFDM60 - area of Moscow
DARC	14291,0	0630	06	10	RUS		PSK4	120	2600	AT3104D - Moscow
DARC	14316,0	vt	dly	10	?	no ITU	FSK8	125	1750	ALE, "601" "611"
DARC	14325,1	vt	vd	10	FEa	no ITU	FSK8	125	1750	ALE, "776" "699" "475"
DARC	14341,0	vt	31	10	I	no ITU	FSK8	125	1750	ALE, "20" - area of Rome
DARC	14343,0	vt	dly	10		no ITU	FSK8	125	1750	ALE, "L06" "A98"
DARC	14344,7	ady	dly	10	CHN		PSK8	2400	2400	MIL-188-110A – 600 bps short - intro tone ACARS like – burst system
DARC	18107,0	vt	vd	10	RUS		F1B	36/50	200	Moscow
DARC	21000,0	vt	dly	10			FSK8	125	1750	ALE, "Y" "M7X"
DARC	21000,0	0850	12	10	RUS		OFDM		10k	OFDM system – 20995 - 21005 kHz – 10 kHz wide - Murmansk
DARC	21000,0	0800	07	10	RUS		F1B	39.3	1000	harmonic from 10500 – idling - Mitschurinsk
DARC	21000,0	1442	31	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps – 20990 - 21000
DARC	21001,5	0851	12	10	RUS		F1B	100	150	vocoder Yakhta synchro – north of Jekaterinburg
DARC	21002,0	0905	01	10	RUS		F7D	40	1300	Crowd36 - Moscow
DARC	21002,0	0924	04	10	?		PSK8	2400	2400	
DARC	21010,0	1320	31	10	TUR		FMCW		20k	OTH Radar SE Turkey, 50 sps
DARC	21032,0	1010	11	10	RUS		F1B	75	1000	harmonic - Far-East Russia
DARC	21070,0	0900	02	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps, disturbing PSK31 and RTTY
DARC	21089,5	vt	dly	10	HRV	9A5EX	FSK8	125	1750	ALE, "9A5EX" - just for info!
DARC	21228,5	1320	22	10	SRB		F1B	600	600	DPRK-FSK600 - KRE embassy Belgrade
DARC	21300,0	1251	03	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	21310,0	1019	11	10	CYP		FMCW			OTH Radar Cyprus, 50 sps
DARC	21375,0	1435	31	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	21400,0	0857	03	10	RUS		F1B	50 async	2000	harmonic from 5350 – area of Jekaterinburg - daily
DARC	21409,5	0610	17	10	RUS		F1B	100	2000	harmonic from 5352.375
DARC	21432,0	0900	13	10	ARG		FMCW		10k	OTHR – 50 sps - burst of 2.7 sec
DARC	21438,0	vt	vd	10	UKR	RCV	A1A			RIP90 de RCV - RUS Navy Sevastopol
DARC	24890,0	0814	04	10						frequency hopper
DARC	24900,0	1343	15	10			FMCW		500k	Codar Radar 24400 - 24900 kHz – 2 sweeps/sec – daily in the noons
DARC	24960,0	1235	28	10	CYP		FMCW		10k	OTH Radar Cyprus, 50 sps
DARC	24980,0	0833	27	10	CYP		FMCW		10k	OTH Radar Cyprus, 50 sps
DARC	24990,0	0823	16	10	CYP		FMCW		20k	spurious from OTHR on 25000 kHz – 50 sps
DARC	25000,0	ady	dly	10	FIN		A3E			time signal Helsinki – just for info
DARC	28000,0	1326	15	10						frequency hopper
DARC	28025,0	0844	15	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	28090,0	1240	29	10	CYP		FMCW		10k	OTH Radar Cyprus, 50 sps
DARC	28100,2	1622	03	10	POR		F1B	51	270	burst system -
DARC	28115,0	0949	02	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	28120,0	1605	05	10						frequency hopper
DARC	28181,5	1600	dly	10	CHL		F1B	300	750	bursts of 7 sec - every 52 sec – Santiago de Chile
DARC	28200,0	0642	04	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	28300,0	0809	01	10	TUR		FMCW		50k	OTHR nr Ankara – 50 sps

DARC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/SP	DETAILS
DARC	28330,0	0736	27	10	CYP		FMCW		10k	OTH Radar Cyprus, 50 sps
DARC	28620,0	0840	31	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps
DARC	29300,0	1007	02	10	TUR		FMCW		20k	OTHR nr Ankara – 50 sps
DARC	29550,0	0810	15	10	CYP		FMCW		20k	OTH Radar Cyprus, 50 sps

IRTS – Ireland – EI4GXB (Ger)

KARS – Kuwait – 9K2RR (Faisal)

MRASZ – Hungary - HA7PL (Laci)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
MRASZ	7009.0	1707	30	10			A3J-L			"Hello"
MRASZ	7009.0	1948	26	10		UiBC	A3E			russian language
MRASZ	7009.0	1950	14	10		"Ruszkij Mir"	A3E			Also hrd 6144, 6015, 7130 kHz,
MRASZ	7009.0	1945	20	10		UiBC	A3E			same as 7310 kHz, 7009.0 with some delay
MRASZ	7016.0	1749	26	10	RUS		F1B	75	250	
MRASZ	7038.8	ady	dly	10	RUS	P	A1A			beacon "P"
MRASZ	7038.7	ady	dly	10	RUS	D	A1A			beacon "D"
MRASZ	7039.4	1758	26	10	RUS		A1A			beacon "M"
MRASZ	7039.0	ady	dly	10	RUS	C	A1A			beacon "C"
MRASZ	7041.8	ady	dly	10	RUS	L	A1A			beacon "L"
MRASZ	7054.0	1704	30	10	RUS		F1B	50	200	
MRASZ	7054.0	1818	29	10	RUS		F1B	50	200	
MRASZ	7054.0	1853	28	10	RUS		F1B	50	200	
MRASZ	7054.0	1931	27	10	RUS		F1B	50	200	
MRASZ	7054.0	1747	26	10	RUS		F1B	50	200	
MRASZ	7054.0	1720	21	10	RUS		F1B	50	200	
MRASZ	7054.0	2023	14	10	RUS		F1B	50	200	
MRASZ	7087.0	1625	22	10		UiBC	A3E			
MRASZ	7117.0	1740	26	10	RUS	REA4	F1B	50	1000	
MRASZ	7117.0	1555	22	10	RUS	REA4	F1B	50	1000	
MRASZ	7117.0	2020	14	10	RUS	REA4	F1B		1000	fast reversals
MRASZ	7130.0	1749	26	10		UiBC	A3E			
MRASZ	7137.0	1832	29	10			F1B	?	200	
MRASZ	7175.0	1702	30	10		UiBC	A3E			
MRASZ	7175.0	1741	26	10		UiBC	A3E			arabian language
MRASZ	7179.0	1742	26	10			F1B	?	200	
MRASZ	7200.0	1745	26	10		UiBC	A3E			splatters down
MRASZ	7200.0	2010	14	10		unidentified	A3E			French language, splatters down
MRASZ	18068.0	1538	22	10		UiOTHR				till 18168 kHz OTHR
MRASZ	21300.0	1138	15	10		UiOTHR				21300-21340 kHz OTHR
MRASZ	21350.0	1139	15	10		UiOTHR				21350-21373, 21410-21430 OTHR

OEVSV – Austria – OE3DMA (Alex)

PZK – Poland – SP3UZ (Wladyslaw)

REP – Portugal – CT4AN (Jose Francisco)

Jose informs:

My Big Congratulations to Uli for the fine action over the Russian CB Taxis on 10 !

1 - Here is attached our log for October's MS Report.

2 - The situation referred to 25.11.2011 on 40m, 7.070 MHz (7.069,86 MHz, J3E-L, 50uV, -73dBm) with Portuguese music transmitted on Lower Sideband during some hours without any accepted stop to the on-air requests, was then communicated to our Anacom authority (ICP Centro PT - Communications Control Center in Barcarena) at 22.58 UTC and developed a tracking of it for DF. An official investigation was then open on my request.

3 - PLC is dropping down in Portugal due to the joined efforts of our EMC Team with ICP-Anacom field Eng. which have made a fine on-field collaborative work.

Due to the new EC Rules to the analysis of Radiated Interferences and the proliferation of optic-fiber cable installations, we found our way of action well choosed and followed till now, with positive results. The interfered Ham Stations are now a few compared after the authority's action against PT Telecom with some "go & stay-out-service" equipments and remote controlled notch filters action.

4 - Problem with Sodium-Vapour public lamps is increasing and interfering now deeply our 80m Band with levels sometimes ranging -70dBm.

This problem is being researched on Lab tests and the actions against it are to be taken and discussed with Anacom and National Energy Company.

5 - Domestic Energy Saver lamps interference problem on Lower Bands is being Lab analyzed and tested too over Philips and Chinese lamps.

6 - Pondered Noise floor measured on our HF Bands during October was averaged rising -2dBuV (-109dBm) even with spikes resulting from QRN and White noise from Sun's activity and its strong wind with a few Black-out situations. Propagation was detected as fair on Shortwaves.

Kind Regards, José

SOC	KHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	3575,0	06.54	19	10	F		A3E			French Amateurs INFRINGE IARU 80m BAND PLAN
REP	7003,5	19.17	29	10	E		J3E-U			Male and female voices
REP	7014,0	07.21	11	10	MRC		J3E-U			Fishermen to harbour
REP	7025,0	08.19	05	10	E		J3E-U			Fishermen sea-harbour
REP	7038,6	20.12	20	10	RUS	S	A1A			KALININGRAD, ADY, DLY 3.1uV S5
REP	7038,7	23.56	20	10	UKR	D	A1A			SEVASTOPOL, ADY, DLY 3.1uV S5
REP	7038,8	23.18	20	10	RUS	P	A1A			MURMANSK, ADY, DLY 0.2uV S1
REP	7039,0	23.09	20	10	RUS	C	A1A			MOSCOW, ADY, DLY 0.2uV S1
REP	7039,1	21.26	13	10	RUS	A	A1A			VOLGOGRAD, ADY, DLY 12.5uV S7
REP	7039,2	22.26	11	10	RUS	F	A1A			KAMCHATSKY, ADY, DLY 1.6uV S4
REP	7039,3	21.45	11	10	RUS	K	A1A			VOLGOGRAD, ADY, DLY 3.1uV S5
REP	7039,5	22.55	19	10	RUS	M	A1A			MAGADAN, ADY, DLY 6.3uV S6
REP	7041,0	21.58	19	10	RUS	L	A1A			St PETERSBURG, ADY, DLY 0.78uV S3
REP	7070,0	22.52	25	10	P		J3E-L			INFRINGE Portuguese Music Transmission 50uV S9
REP	7105,0	22.15	25	10	CHN		8k00 A3EGN			Radio Broadcasting (Chinese) 500uV S9+20
REP	7116,0	23.55	29	10	n.i.		J3E-U			Multitone scrambled voice
REP	7160,0	23.41	31	10	n.i.		J3E-U			Males and females discussing
REP	10103,0	20.03	26	10	MRC		J3E-U			Fishermen on sea
REP	10122,0	20.50	18	10	n.i.		J3E-U			Number stations
REP	10150,0	21.00	18	10	n.i.		J3E-U			English Meteo altitude info talks
REP	14000,0	08.30	19	10	n.i.		F1B	300	425	RY RY RY
REP	14100,0	21.00	21	10	E		J3E-U			Talks two male voices
REP	18100,0	18.42	04	10	n.i.		A3			Tone Modulated Carrier (not permanent)
REP	21004,0	23.05	09	10	n.i.		J3E-U			Inversed coding transmission
REP	21010,0	15.07	16	10	MRC		J3E-U			Male talks
REP	21012,5	18.14	06	10	MRC		J3E-U			Fishermen

SOC	KHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
REP	28050,0	18.50	04	10	RUS		A3E			CB's
REP	28065,5	18.00	04	10	RUS		A3E			CB's
REP	28135,0	11.30	05	10	RUS		F3E			Taxis
REP	28175,0	12.10	05	10	RUS		F3E			Taxis
REP	28245,0	14.20	08	10	RUS		F3E			Taxis
REP	28275,0	11.29	08	10	RUS		F3E			Taxis

RSGB - Great Britain – G4BOH (Chris)

SRAL – Finland – OH2BLU (Pekka)

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7000,0	0525-1525	*	10		UiMUX	J7D	12x120	12x200	Days: 12, 13, 26, 28
SRAL	7001,0	0900-1330	28	10		UiCarr	N0N			
SRAL	7008,0	0745-1530	5, 13	10	RUS	UiPTR	F1B		250	
SRAL	7013,0	0620-1020	13, 14	10		UiMUX	J7D	12x120	12x200	
SRAL	7016,0	0655-1400	*	10	RUS	UiPTR	F1B		200/250	Days: 12, 14, 31
SRAL	7018,0	0600-0700	1	10		UiPTR	F1B		200	
SRAL	7020,0	0645-1520	*	10		UiPTR	F1B		200/250	Days: 6, 7, 18, 20, 25, 26
SRAL	7026,0	1500-1711	16, 17	10		UiMUX	J7D	12x120	12x200	
SRAL	7030,0	0830-1330	*	10		UiPTR	F1B		250	Days: 1, 2, 18, 28
SRAL	7032,0	0430-1930	1-3, 13	10		UiMUX	J7D	12x120	12x200	Rostov on Don
SRAL	7035,0	1430-1700	13	10		UiPTR	F1B		250	
SRAL	7038,7	h24	dly	10	UKR	D	A1A			Sevastopol
SRAL	7038,8	h24	dly	10	RUS	P	A1A			Kaliningrad
SRAL	7038,9	h24	dly	10	RUS	S	A1A			Severomorsk
SRAL	7039,0	h24	dly	10	RUS	C	A1A			Moscow
SRAL	7041,8	h24	dly	10	RUS	L	A1A			St Peterburg
SRAL	7044,0	0850-1040	12	10		UiMUX	J7D	12x120	12x200	
SRAL	7051,0	0600-0720	2	10		UiMUX	J7D	12x120	12x200	
SRAL	7054,0	0300-0700	dly	10	RUS	REA4	F1B		200	Moscow
SRAL	7054,0	1700-2000	dly	10	RUS	REA4	F1B		200	Moscow
SRAL	7058,2	0530-1630	1 – 15	10		E	A1A			
SRAL	7059,0	0840-1300	*	10		UiPTR	F1B		250	Days: 11, 18, 27, 28
SRAL	7080,0	0645-1145	11	10		UiPTR	F1B		200	
SRAL	7081,0	0630-0800	19	10		UiMUX	J7D	12x120	12x200	
SRAL	7112,0	1030-1230	7	10		UiPTR	F1B		250	
SRAL	7114,0	0400-1820	*	10		UiMUX	J7D	12x120	12x200	Days: 7, 12, 13, 17, 18, 21
SRAL	7117,0	1300-2000	dly	10		RDL	F1B		1000	Moscow
SRAL	7119,0	0900-1530	*	10		UiPTR	F1B		225/250	Days: 3, 13, 18, 23, 28

Society	kHz	UTC	DD	MM	ITU	IDENT	MODE	BAUD	SHIFT	REMARKS
SRAL	7130,0	0300-0515	dly	10	ERI	VoBME 1	A3E			jammed by ETH
SRAL	7130,0	1500-1800	dly	10	ERI	VoBME 1	A3E			QSY on days 29 - 31, jammed by ETH until 1700
SRAL	7132,0	0400-2000	7-9	10	RUS	UiMUX	J7D	12x120	12x200	
SRAL	7137,0	1500-1800	*	10		UiPTR	F1B		250	Days: 15, 17, 20, 23, 24, 31, Kaliningrad
SRAL	7162,0	0745-1630	*	10		UiPTR	F1B		250	Days: 1, 3, 11, 18, 28, 31
SRAL	7174,5	1100-1700	24	10		UiPTR	F1B		250	
SRAL	7175,0	0300-0515	dly	10	ERI	VoBME 2	A3E			jammed by ETH
SRAL	7175,0	1400-1805	dly	10	ERI	VoBME 2	A3E			QSY on 31rd, jammed by ETH until 1700
SRAL	7176,0	0500-1930	*	10		UiPTR	F1B		250	Days: 2, 3, 11, 19, Orenburg
SRAL	7178,0	1010-1500	15, 22	10		UiMUX	J7D	12x120	12x200	
SRAL	7188,0	0655-1305	*	10		UiPTR	F1B		250	Days: 3, 8, 17, 19, 27, 30
SRAL	7190,0	1020-1400	*	10		UiMUX	J7D	12x120	12x200	Days: 6, 11, 13
SRAL	7196,0	0510-1315	*	10		FQWM etc.	A1A			Days: 3, 6, 8, 12, 20, 25, 28, 12-24: 9ASV, 25-31: L23W
SRAL	7198,0	0400-1730	*	10		UiMUX	J7D	12x120	12x200	Days: 5, 7, 8, 19, 25, 26, 27, Smolensk
SRAL	7200,0	0200-0500	dly	10	SDN	R Sudan	A3E			
SRAL	7200,0	1400-1530	dly	10	SDN	R Sudan	A3E			
SRAL	7200,0	1730-2030	dly	10	SDN	R Sudan	A3E			
SRAL	14000,0	1315	13	10		UiOTH R	P0N			50 Hz , 20 kHz wide
SRAL	14016,0	0700-0900	24	10		UiPTR	F1B			
SRAL	14240,0	0935-1438	10, 15	10		UiPTR	F1B			
SRAL	14242,0	0810-1200	7, 22	10	RUS	UiMUX	J7D	12x120	12x200	
SRAL	14269,0	0655-1530	17	10		UiPTR	F1B		250	
SRAL	14292,0	0620-0805	*	10	RUS	VRB7	A1A			Days: 2, 20, 28
SRAL	14295,1	0330-1930	dly	10	TJK	R Tojikiston	A3E			3f 4765,05 kHz, Yangiyul TX
SRAL	21001,5	0620-1340	6 - 28	10	RUS	UiPTR	F1B		150	Jekaterinburg, scrambled voices
SRAL	21 MHz	0530-1245	*	10	CYP	UiOTH R	P0N			Days: 1, 11, 15, 16, 17, 18, 50 Hz , 20 kHz wide
SRAL	24 MHz	0835-0930	19	10	CYP	UiOTH R	P0N			50 Hz , 20 kHz wide
SRAL	28 MHz	0750-1345	*	10	CYP	UiOTH R	P0N			Days: 2, 7, 13, 18, 19, 21, 23, 27, 31, 50 Hz , 20 kHz wide
SRAL	28 MHz	0620-1335	dly	10	CIS	UiVOX	F3E			538 reports

USKA – Switzerland – HB9CET (Peter)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	7000.0	2131	01	10		T1Z171	MFSK8	125	1750	MIL 188-141A daily
USKA	7000.0	0044	02	10		T2Z224	MFSK8	125	1750	MIL 188-141A daily
USKA	7000.0	0049	02	10		KALMED	MFSK8	125	1750	MIL 188-141A daily
USKA	7000.0	0147	02	10		ALZMED	MFSK8	125	1750	MIL 188-141A daily
USKA	7000.0	0824	26	10			J7D	12x120	2k6	BPSK: CIS12 = AT3004D
USKA	7001.0	1843	14	10			F1B	50	200	
USKA	7008.0	2026	31	10			F1B	75	250	
USKA	7016.0	0827	26	10			F1B	75	250	
USKA	7020.0	0826	25	10			F1B	75	250	
USKA	7021.0	0829	26	10			J7D	12x120	2k6	CIS12
USKA	7026.0	1535	16	10			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7032.0	2039	02	10			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7032.5	1515	14	10			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7037.0	2027	10	10			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D
USKA	7038.3	1413	01	10	RUS	K	A1A			Beacon K Petropavlovsk
USKA	7038.7	1413	01	10	UKR	D	A1A			Beacon D Sevastopol daily
USKA	7038.8	1412	01	10	RUS	P	A1A			Beacon P Kaliningrad daily
USKA	7038.9	1801	06	10	RUS	S	A1A			Beacon S Murmansk daily
USKA	7039.0	2005	13	10	RUS	C	A1A			Beacon C Moscow daily
USKA	7039.2	1839	02	10	RUS	F	A1A			Beacon F Vladivostok daily
USKA	7039.4	1840	02	10	RUS	M	A1A			Beacon M Magadan daily
USKA	7041.8	1839	14	10		L	A1A			Beacon L daily
USKA	7054.0	2007	04	10			F1B	50		curious F1B
USKA	7054.0	1841	14	10			F1B	50	200	
USKA	7070.0	2136	10	10		244	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	2140	10	10		288	MFSK8	125	1750	MIL 188-141A daily
USKA	7070.0	2340	10	10		344	MFSK8	125	1750	MIL 188-141A often
USKA	7070.0	1541	12	10		514	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	1547	12	10		571	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	2310	27	10		810209	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	0117	28	10		20943	MFSK8	125	1750	MIL 188-141A
USKA	7070.0	0405	28	10		686	MFSK8	125	1750	MIL 188-141A
USKA	7105.0	2234	25	10	CHN		A3E			BC (2 stations) daily
USKA	7105.0	2234	25	10	TWN		A3E			BC (2 stations) daily
USKA	7111.9	2003	18	10	KWT	UDAIRI	MFSK8	125	1750	MIL 188-141A
USKA	7113.9	2003	13	10			A1			illegal jammer (dash/dots only)
USKA	7114.0	2002	13	10			F1B	50	200	
USKA	7125.0	2030	31	10			A3			weak
USKA	7130.0	1630	07	10			A3E			BC, jammed
USKA	7130.0	1631	07	10			Noise		10 kHz	Jammer
USKA	7130.0	1757	31	10			A3E			BC, unid
USKA	7131.9	1751	31	10			A1			illegal jammer (dash/dots only)
USKA	7132.0	1751	31	10			F1B	50	200	
USKA	7132.0	1511	07	10			J7D	12x120	2k6	PSK-2: CIS12 = AT3004D often
USKA	7135.0	1526	06	10			A3E			BC often
USKA	7135.0	1526	06	10			Noise		10 kHz	Jammer often
USKA	7175.0	1523	06	10			A3E			BC often
USKA	7175.0	1523	06	10			Noise		10 kHz	Jammer often
USKA	7175.0	1728	25	10			A3E		~9 kHz	Music
USKA	7180.0	1756	31	10			A3E		9k	BC, unid
USKA	7192.0	1927	25	10			F1B	75	250	
USKA	7198.0	0908	27	10			J7D	12x120	2k6	QPSK: CIS12 = AT3104D
USKA	10155.0	2030	10	10			FMCW	2.6 sps	30 kHz	OTHR 10140 kHz up often
USKA	14000.0	0831	25	10			N0N			
USKA	14000.988	1126	14	10			N0N			long lasting carrier
USKA	14026.0	1538	06	10			J7D	12x120	2k6	PSK-4: CIS12 = AT3104D often
USKA	14120.0	1053	14	10			J7D	12x120	2k6	CIS12 = AT3004D, distorted
USKA	14344.7	2133	02	10			PSK-8	2400	2k4	MIL 188-110A modified, Bursts almost daily
USKA	18107.0	1534	06	09			F1B	50	200	CIS 36-50 almost daily
USKA	18107.0	0946	07	09		RDL	F1A	17 wpm	200	daily
USKA	21001.5	1139	14	10			F1B	100	150	
USKA	21001.5	0905	24	10			Vocoder			Vocoder
USKA	21001.5	0906	24	10			F1B	100	150	

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
USKA	28000.0	0814	25	10			NON			long lasting carrier
USKA	28470.0	1012	10	10			FMCW	50 sps	20 kHz	OTHR
USKA - part 2										
SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH	DETAILS
USKA	28045.0	1423	05	10			FM			Russian
USKA	28065.0	1056	12	10			FM			Russian
USKA	28085.0	1424	05	10			FM			Russian
USKA	28095.0	1303	26	10			FM			Russian
USKA	28115.0	1333	26	10			FM			Russian
USKA	28135.0	1051	12	10			FM			Russian
USKA	28135.0	1304	26	10			FM			Russian
USKA	28145.0	1424	05	10			FM			Russian
USKA	28150.0	1315	14	10			FM			Russian
USKA	28155.0	1050	12	10			FM			Russian
USKA	28165.0	1053	12	10			FM			Russian
USKA	28170.0	1015	10	10			FM			Russian
USKA	28175.0	1058	12	10			FM			Russian
USKA	28200.0	1221	14	10			FM			Russian
USKA	28205.0	1107	12	10			FM			Russian
USKA	28210.0	1108	12	10			FM			Russian
USKA	28215.0	1216	14	10			FM			Russian
USKA	28220.0	1054	12	10			FM			Russian
USKA	28225.0	1425	05	10			FM			Russian
USKA	28235.0	1053	12	10			FM			Russian
USKA	28250.0	1301	26	10			FM			Russian
USKA	28255.0	1425	05	10			FM			Russian
USKA	28260.0	1105	12	10			FM			Russian
USKA	28275.0	0959	03	10			FM			Russian
USKA	28285.0	0956	03	10			FM			Russian
USKA	28285.0	1052	12	10			FM			Russian
USKA	28335.0	1424	05	10			FM			Russian
USKA	28365.0	1104	12	10			FM			Russian
USKA	28535.0	1227	14	10			FM			Russian
USKA	28645.0	1001	03	10			FM			Russian
USKA	28655.0	1309	26	10			FM			Russian
USKA	28665.0	1312	26	10			FM			Russian
USKA	28700.0	1101	12	10			FM			Russian
USKA	28715.0	1316	26	10			FM			Russian
USKA	28735.0	1308	26	10			FM			Russian
USKA	28755.0	1234	14	10			FM			Russian
USKA	28915.0	1306	14	10			FM			Russian
USKA	28945.0	1103	12	10			FM			Russian
USKA	28945.0	1314	26	10			FM			Russian
USKA	28995.0	1257	14	10			FM			Russian
USKA	29045.0	1242	14	10			FM			Russian
USKA	29135.0	1315	26	10			FM			Russian
USKA	29575.0	1325	10	10			FM			Russian

Veron 1 – Netherlands – PA0GRU (Dick)

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	3608,0	19.55	19	10		UiPTR	F1B		Revs
VERON	3699,5	17.29	5	10		UiPTR	F1B		Revs
VERON	7000,5	14.41	18	10		UiCAR	NON		carrier, also 19/10 S9
VERON	7020,0	09.45	20	10	?	UiPtr	F1B	200	ptr
VERON	7022,0	09.00	25	10		UiPTR	F1B	250	Ptr
VERON	7038,7	21.01	29	10	UKR	D	A1A		Beacon Sevastopol
VERON	7038,8	21.01	29	10	RUS	P	A1A		Beacon Kaliningrad
VERON	7038,9	21.01	29	10	RUS	S	A1A		Beacon Murmansk
VERON	7039,0	21.01	29	10	RUS	C	A1A		Beacon Moscow
VERON	7039,2	16.58	20	10	RUS	F	A!A		F-beacon
VERON	7039,4	17.20	3	10	RUS	M	A1A		M-beacon
VERON	7041,8	20.59	29	10	RUS	L	A1A		Beacon St. Petersburg
VERON	7054,0	18.56	11	10	RUS	REA4	F1B	200	Ptr/Revs, also 20/10,

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	7054,0	22.18	30	10	RUS	UiPtr	F7B	500	5 channel printer
VERON	7054,0	06.00	4	10	RUS	UiPtr	F1B	200	revs, ptr. Stops at 07.00 UTC
VERON	7069,0	18.36	21	10		UiMUX	FSK		12 MPSK
VERON	7105,0	22.04	30	10	CHN		A3E		Chinese speach; s9+20
VERON	7117,0	19.51	10	10	RUS	REA4	F1B	1000	Ptr/Revs Airforce, also 12/10,20/10,
VERON	7137,0	18.58	24	10		UiPTR	F1B		Ptr
VERON	7175,00	17.14	11	10	Africa	UiJAM			white noise
VERON	7197,0	18.12	27	10		UiMux	FSK		12 mPSK , IDLING
VERON	10132,0	11.53	1	10		UiPTR	F1B		Ptr
VERON	14000,5	08.20	25	10		UiCAR	NON		carrier, S9
VERON	14008,0	07.09	8	10		UiCAR	NON		carrier
VERON	14008,0	04.50	12	10	?	UiPtr	F1B	500	ptr, revs
VERON	14026,0	14.30	14	10		UiMux	PSK2	2600	Very strong: s9+20
VERON	14026,0	10.28	13	10	?	PSK	J7D		Pilot on 14027,4 kHz
VERON	14051,0	08.00	19	10		UiMUX	FSK		12 MPSK
VERON	14118,0	10.00	24	10		UiPTR	F1B		Ptr
VERON	14192,0	17.27	23	10		UiPTR	F1B		Revs/Ptr
VERON	14192,0	04.54	12	10	?	UiPtr	F1B	500	revs
VERON	14195,0	18.50	29	10	I	UiILL??	J3E-u		Cont.repeating text: "Italian Bastard"
VERON	14235,0	07.11	8	10	RUS	UiMUX	FSK		12 MPSK
VERON	18092,0	15.41	8	10		OTHR	FMCW		radar, 18080-18100
VERON	18107,0	vt	vd	10		UiPTR	F1B		Carrier/Revs/Ptr
VERON	21001,5	09.30	20	10	?	UiPtr	F1B		ptr, narrow shift
VERON	24906,0	08.39	19	10		OTHR	FMCW		radar, wide
VERON	24946,0	12.58	7	10					Frequency hopper
VERON	28034,5	13.33	5	10	E.Eur.		F3E		Taxi business
VERON	28055,0	14.11	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28065,0	14.11	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28071,0	13.35	5	10		UiRadar	FMCW		OTHR 4 sps
VERON	28075,0	14.11	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28092,0	13.04	29	10		UiRadar	FMCW	22k	OTHR 50 sps
VERON	28100,0	13.36	5	10		UiRadar	FMCW		OTHR 2 sps
VERON	28100,0	09.07	20	10	E.Eur.		F3E		taxi female
VERON	28110,0	15.23	21	10	RUS	UiILL	F3E		taxi female
VERON	28115,0	15.24	21	10	RUS	UiILL	F3E		taxi female
VERON	28135,0	14.12	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28140,0	11.45	18	10	E.Eur.		F3E		Taxi female
VERON	28150,0	09.08	20	10	E.Eur.		F3E		taxi female
VERON	28155,0	09.44	23	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28155,2	13.21	18	10	E.Eur.		F3E		Taxi business
VERON	28165,0	15.19	21	10	RUS	UiILL	F3E		taxi female
VERON	28170,0	11.46	18	10	E.Eur.		F3E		taxi female
VERON	28175,0	09.45	23	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28178,5	13.25	14	10	E.Eur.		F3E		Taxi business
VERON	28185,0	14.12	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28190,0	13.50	6	10					Frequency hopper
VERON	28195,0	14.04	18	10	E.Eur.		F3E		taxi female
VERON	28205,0	15.25	21	10	RUS	UiILL	F3E		taxi female
VERON	28215,0	14.13	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28225,0	14.13	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28235,0	14.14	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28244,0	12.30	12	10	E.Eur.		F3E		Taxi business
VERON	28245,0	14.14	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28250,0	12.09	24	10	E.Eur.		F3E		taxi female
VERON	28254,0	13.28	14	10	E.Eur.		F3E		Taxi business
VERON	28255,0	14.14	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28262,0	14.25	19	10					Frequency hopper
VERON	28275,0	14.15	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28283,5	12.34	12	10	E.Eur.		F3E		Taxi business
VERON	28285,0	09.50	18	10	E.Eur.		F3E		taxi female
VERON	28289,0	14.27	19	10	E.Eur.		F3E		Taxi business
VERON	28295,0	14.15	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28299,0	13.33	14	10					Frequency hopper
VERON	28300,0	14.03	26	10	E.Eur.		F3E		taxi female

SOC	kHz	UTC	DD	MM	ITU	IDENT	MODE	SHIFT	DETAILS
VERON	28305,0	14.15	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28344,8	13.38	14	10	E.Eur.		F3E		Taxi business
VERON	28364,5	13.24	18	10	E.Eur.		F3E		Taxi business
VERON	28365,0	14.16	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	28386,0	13.49	21	10	E.Eur.				Frequency hopper
VERON	28400,0	09.51	23	10		OTHR	FMCW		radar
VERON	28417,0	13.52	21	10		UiRadar	FMCW	22k	OTHR 50 sps
VERON	28453,0	13.46	21	10		UiRadar	FMCW	35k	OTHR 50 sps
VERON	28462,0	13.56	6	10	E.Eur.				Frequency hopper
VERON	28596,0	13.40	14	10	E.Eur.				Frequency hopper
VERON	28656,0	14.57	19	10	E.Eur.		F3E		Taxi business
VERON	28915,0	14.16	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	29085,0	14.21	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	29155,0	14.22	19	10	Rus/Cis	UiILL	F3E		taxi female
VERON	29385,0	14.26	19	10	Rus/Cis	UiILL	F3E		taxi female

IARUMS Region 1

Many thanks for your interest!

The monitoring team of IARU Region 1

credits:

Wavecom Elektronik – Buelach – Switzerland

SSB-Electronic – Iserlohn – Germany

BAZ – Special Antennas – Bad Bergzabern - Germany

FTS – Funktechnik Seipelt – Hoppegarten - Germany

German PTT (BNetzA = Federal Network Agency)

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