



IARU Monitoring System Region 1 Monthly Newsletter 6 - June 2021

edited by Peter Jost, HB9CET and Gaspar Miró, EA6AMM

News and Info's

The over-the-horizon radars (OTHR) were and still are our main nuisance. The number of observations varies slightly, but is always within a similar range. The same is true for other radio systems (e.g., CIS12 etc).

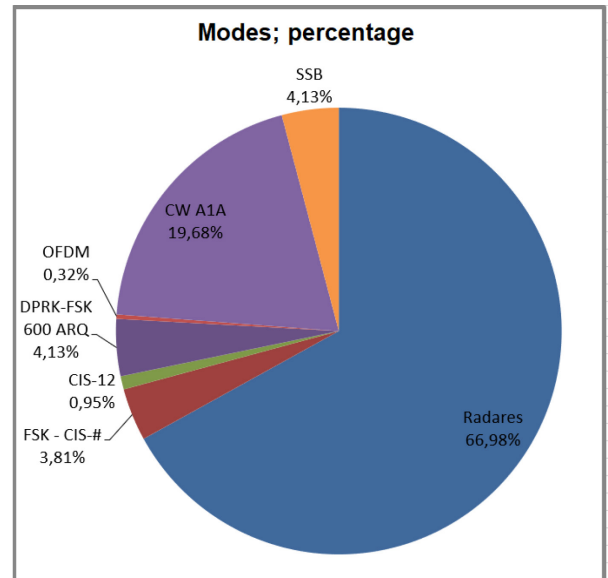
With the summer propagation conditions and thanks to several sporadic E-layers (Es for short), numerous driftnet radio buoys (DRB) and other fishing gear were heard again in the 10 m band, illegally serving the marking of fishing nets at sea. They can be mostly received at the 28000 kHz to 28450 kHz part of the 10 m band, their transmissions being short but sent repeatedly every few minutes all day long. For identification, a short letter code is transmitted in CW (A1A), consisting of 1 to 3 letters. Characteristic feature is also the mostly slowly rising preamble tone before the identifier follows. However, buoys with a constant carrier are also observed.

Occasionally there are also GPS buoys transmitting short bursts in FSK (F1B) with their position (scrambled).

At the end of this report a list of buoys heard in June by several colleagues is published, with some additional information.

Regularly encountered are also "radio pirates" who usually transmit without any identifier. It can be private persons or fishermen, but also CB radio operators who "stray" into the 10m band. Mostly transmitting in USB (J3E-U), rarely also FM (F3E) or AM (A3E). On 21000.0 kHz, fishermen with Spanish language can be found practically every day in USB, they were located in southern Spain area.

Also in June the radar on 14210 kHz (CF) was observed, (presumably a SuperDARN (Super Dual Auroral Radar Network). It is still under investigation which system it is.



Percentage of the different modes (by Gaspar, EA6AMM)

Silent Key 9K2RR, Faisal Alajmi

IARU is saddened to announce that IARU Region 1 Vice President Faisal Alajmi, 9K2RR, died as a result of COVID disease. This is tragic news. Faisal was a valued member of the Executive Committee and of the Region 1 team, as well as of the Monitoring System R1.

Faisal had been Region 1 Vice President. He was an energetic and active supporter of amateur radio in the Arab world and globally. Farwell



Detailed reports of national coordinators

Abbreviations used (as per IARUMS definitions; please do not use "own, home brew" abbreviations)

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

CF: Frequencies of digital signals are usually **Center Frequencies (CF)**, unless otherwise specified!

DARC; credits to monitors: Wolf DK2OM, Tom DF5JL, Daniel DL3RTL, Alex DB3TA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
1814.0 CF	vt	dly	06	RUS		USB LSB			14 tones – hyperbolic radio navigation system – BRAS-3/RS-10 – Kaliningrad – shared band
3510.0 RF	1800	dly	06	RUS		chirps		3k	mysterious chirps – 60 km east of Bryansk – shared band
3585.0	ady	dly	06	TWN	HLL	F1C		800	WX-fax Taiwan - 120 rpm. IOC 576 - daily. all day - legal!
3581.8	ady	dly	06	TUR		PSK8A	2400	2400	Stanag-4285 – Ankara – shared band!
3622.5	ady	dly	06	J	JMH	F1C		800	Tokyo Meteo – 120 rpm – IOC 576 – daily. all day - legal!
3756.8 RF	1800	dly	06	RUS		USB			RUS MIL – channel marker – 4 tones - Tuapse – East Black Sea (nw of Sochi) – night QRG
5361.8 RF	ady	dly	06	DNK		PSK8A	2400	2400	Stanag-4285 – assigned to Danish Navy – Frederikshavn - primary user!
7021.0	1908	14	06	CHN		FMOP	66.67	10k	OTHR 3.8s bursts
7039.0	dly	vt	06	RUS	C	A1A			cluster beacon "C" – Moscow – "RIW"
7039.3	1720	14	06	RUS	K	A1A			Cluster beacon "K" Petropavlovsk Kamchatskiy - RUS Navy - Pacific fleet - "RCC"
7039.4	1940	03	06	RUS	M	A1A			Cluster beacon "M" – Magadan RUS Navy – "RTS" - daily
7055.0	vt	dly	06	UKR		J3E-L		2k7	UKR – RUS Radio War
7065.0	2000	15	06	UKR		J3E-L		2k9	russian voices
7100.0	1930	27	06	UKR		LSB			music transmission – Russian voice
7109.0	2028	20	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 7029 – 7189 kHz
7112.0	1317	23	06	RUS		PSK2A	120	2600	CIS-12 – west of Moscow
7140.0	1705	dly	06	ERI	VOBM	A3E/BC		9k	7140.021 kHz – voice of the broad masses - Eritrea
7156.0	2007	07	06	CHN		FMOP	65.5	10k	Chinese OTH Radar – 7151 – 7161 kHz – 3.9 sec bursts
7173.0	1724	04	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 7167 – 7179 kHz
7180.0	1409	dly	06	ERI	VOBM	A3E		9k	7180.021 kHz - Radio Eritrea
7188.0	2113	23	06	CHN		A3E		34k	splatters from China Radio International on 7205 kHz
10100.0	ady	dly	06	FEa		USB			10100.0 – 10150.0 - Far East - crowded of pirates
14000.0	1400	daily	06	CHN		A3E		9k	China Radio International – intermodulation from 13855 and 13710 kHz – 13855 x 2 – 13710 = 14000 kHz
14008.0	1000	06	06	RUS		F1B	50	250	Moscow – very often
14029.0	1610	13	06	CHN		FMOP	50	10k	OTHR 5.1s bursts
14118.0	1731	12	06	CHN		FMOP	64.3	10k	Chinese OTH Radar – 14113 – 14123 kHz - 3.8 sec bursts
14136.0	2003	22	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 14130 – 14142 kHz

DARC; credits to monitors: Wolf DK2OM, Tom DF5JL, Daniel DL3RTL, Alex DB3TA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14154.0	1129	04	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 14148 – 14160 kHz
14176.0	1019	16	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 14096 – 14256 kHz
14199.0	0953	04	06	CHN		FMOP	50.4	10k	Chinese OTH Radar – 14194 – 14204 kHz – long lasting
14200.0	1437	16	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 14120 – 14280 kHz – long lasting
14210.0	1739	01	06			FMOP		5k	Superdarn ionospheric research Radar – 12 sec bursts - daily
14212.0	1206	04	06	UKR		NON + USB		2400	female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine in Rivne – every Thursday at 1206 utc – msgs at 1214 utc
14221.0	2035	dly	06	KAZ		F1B	50	200	Kazakhstan – west of Almaty - mostly idling - daily
14227.0	1349	13	06	CHN		FMOP	50.2	10k	Chinese OTH Radar – 14222 – 14232 kHz – 5.1 sec bursts
14252.0	1344	02	06	CHN		FMOP	65.5	10k	Chinese OTH Radar – 14247 – 14257 kHz - 3.8 sec bursts
14259.0	1734	16	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 14253 – 14265 kHz
14271.0	1019	03	06	CHN		FMOP	64.9	10k	Chinese OTH Radar – 14266 – 14276 kHz – 3.8 sec bursts
14277.0	1009	06	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 14197 – 14357 kHz
14280.0	1014	wed nesday	06	UKR		A3E			female voice with encrypted msgs – figures – "SZRU" = Foreign Intelligence Service of Ukraine in Rivne
14282.0	1329	05	06	CHN		FMOP	50.9	10k	Chinese OTH Radar – 14282 CF and 14275 CF – 15.4 sec bursts
14289.0	1846	22	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 14283 – 14295 kHz
14299.0	1610	13	06	CHN		FMOP	50	10k	OTHR 5.1s bursts
14301.0	1727	07	06	CHN		FMOP	41.1	10k	Chinese OTH Radar – 14296 – 14306 kHz – 6.1 sec bursts
14341.0	1655	15	06	RUS		FMOP	40	14k	OTHR
14403.0	1708	11	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 14323 – 14483 kHz
18080.0	0712	dly	06	TWN		A3E/BC			Sound of Hope – Taiwan and Chinese BC jammer – daily at 06 utc and later
18107.0	vt	vd	06	RUS	RDL	F1B	36/50	200	CIS-36-50 - Moscow – idle and traffic – often - Russian navy
18165.0	1202	13	06	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21000.0	1400	17	06	E		USB			Spanish fishery – like telephone – daily. various times
21011.0	0950	18	06	CYP		FMOP	50	20k	UK OTH Radar Cyprus – 21001 – 21021 kHz
21119.0	1253	30	06	CYP		FMOP	50	20k	UK OTH Radar Cyprus – 21109 – 21129 kHz
21150.0	1415	06	06	CYP		FMCW	50	20k	OTHR Pluto Cyprus
21169.0	0915	05	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 21163 – 21175 kHz
21222.0	0944	29	06	E		USB			Spanish fishery – long lasting

DARC; credits to monitors: Wolf DK2OM, Tom DF5JL, Daniel DL3RTL, Alex DB3TA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21260.0	1029	07	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 21180 – 21340 kHz
21274.0	1034	07	06	CHN		FMOP	10	160k	Chinese wideband OTHR – 21194 – 21354 kHz
21291.0	1454	12	06	CYP		FMOP	50	20k	UK OTH Radar Cyprus – 21281 – 21301 kHz
21325.0	1057	01	06	RUS		FMOP	40	12k	OTH Radar Contayner - w of Saransk – 21319 – 21331 kHz
21392.0	1252	10	06	CYP		FMOP	50	20k	UK OTH Radar Cyprus – 21382 – 21402 kHz
21402.0	0857	30	06	CHN		FMOP	50.0	10k	Chinese OTH Radar – 21397 – 21407 kHz – 5.1 sec bursts
21438.0	vt	dly	06	RUS	RCV	A1A			RCV - RUS Navy Sevastopol with QTCs RIP90 de RCV - daily active
28000.0	1725	07	06	I		USB			Italian male pirates – no calls – also 19.06.2021 at 1845 utc
28005.0	1622	13	06	I		A3E			Italian pirates
28055.0	1551	07	06	F		A3E			French pirates
28085.1	1941	09	06			F1B	51	300	Enagal GPS fishing buoy – encrypted
28135.0	1621	24	06	F		A3E			French pirates
28150.0	1916	25	06	I		A3E			Italian pirates
28165.0	1545	07	06	F		A3E			French pirates – also 10.06.2021 at 1628 utc
28275.0	0832	10	06				51	300	3 Enagal GPS fishing buoys, encrypted
28300.0	1510	29	06	I		USB			Italian pirates
28325.0	1110	21	06	F		F3E			French pirates
28650.0	1755	06	06	IRN		AMOP	313	46k	Iranian Radar - 28627 – 28673 kHz –
28806.0	1010	03	06	CYP		FMOP	50	20k	UK OTH Radar Cyprus – 28796 – 28816 kHz
28860.0	1950	01	06	IRN		AMOP	150 313	46k	Iranian Radar - 28837 – 28883 kHz – 150 sps and 313 sps alternating – daily
28960.0	1143	14	06	IRN		AMOP	226 333	46k	Iranian Radar - 28937 – 28983 kHz – 226 sps and 333 sps alternating
29600.0	1858	05	06	IRN		AMOP	313	60k	Iranian Radar - 29570 – 29630 kHz

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7055	1550	01	06	RUS/ UKR		LSB			Ukrainian-Russian radio war. Agitprop. Daily all day long. Persistent and loud.
7065	1930	15	06	RUS/ UKR		LSB			Ukrainian-Russian radio war. Music, shouting of slogans. Total chaos.
7113	1000	11	06			PSK			Strong and persistent signal
7171	2145	18	06			PSK			Link- 11 Clew. Strong and persistent.
7191.5	0745	30	06	E or MM		USB			Group of Spanish fishermen. Very strong signals. Loud motor noise in the background.
14140	1115	10	06			RADAR			Radar from 14140 to 14154 kHz. Strong. On and off.
14177	1630	20	06			RADAR			Radar from 14177 to 1414190 kHz. Very strong, persistent.
14177	1500	24	06			RADAR			Radar from 14177 to 14193 kHz.

IRTS; Michael, EI3GYB

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									Strong and persistent.
14178	1115	10	06			RADAR			Radar from 14178 to 14192 kHz. Huge persistent signals.
14180	0600	11	06			RADAR			Radar from 14180 to 14194 kHz. Medium signal, persistent.
14180	1745	18	06			RADAR			Radar from 14180 to 14192 kHz. Strong and persistent.
14183	1635	27	06			RADAR			Radar from 14183 to 1414197 kHz. Strong and persistent.
14254	1200	22	06			RADAR			Radar from 14254 to 14270 kHz. Strong, persistent.
18146	0950	19	06			RADAR			Radar from 18146 to 18180 kHz. Huge persistent signal. Still on at 1430z.
18156	0900	21	06			RADAR			Radar from 18156 to 18188 kHz. Huge and persistent signals.
18157	1300	24	06			RADAR			Radar from 18157 to 18180 kHz. Strong and persistent.
21000	1550	01	06	E or MM		USB			Group of Spanish fishermen. Some are very strong, others are very low. Also heard on 17 th at 1530z.
21130	0700	30	06			RADAR			Radar from 21130 to 21144 kHz. Strong and persistent.
21207	1115	21	06			RADAR			Radar from 21207 to 21230 kHz. Huge and persistent signals.
21430	1300	24	06			RADAR			Radar from 21430 to 21454 kHz. Medium signals. Persistent.
21438	0950	24	06	UKR		CW			Russian navy, Sevastopol, Crimea. Medium signal.
28218	0850	16	06	F		AM			French CB stations. Strong signals.
28830	1900	10	06	IRN		RADAR			Radar from 28830 to 28890 kHz. Medium signals. Still audible at 2030z.
28855	0845	16	06	IRN		RADAR			Radar from 28855 to 28970 kHz. Moving up and down the band. Drifting in and out. Also heard on the 19 th at 1000z.

OeVSV; Christoph, OE1VMC

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3731.0	2309	12	06			J3E-L		3000	Radio war / propaganda broadcast / music
14027.0	1455	06	06			J7D			CIS-12
14145.0	2140	07	06			RADAR		20K0	likely OTH Radar
14200.0	1914	18	06	G		RADAR		20K0	likely OTH Radar Pluto II
18165.0	1245	13	06	G		RADAR		20K0	OTH Radar Pluto II

PZK; Marek, SP3AMO

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
5361.0	0535	11	06			PSK		3K0E	S 9+10 dB [5361.0 - 5364.0 kHz]
7000.1	1801	12	06			RADAR		30K0E	7678.0 - 7018.0 kHz
7027.7	0430	04	06			PSK			
7065.2	0645	06	06			NON			S 7-9
7065.2	1750	08	06			NON			S 9
7065.5	0650	20	06			NON			S 7-9
7121.7	0515	27	06			F1B	50	200H	S 6-8

PZK; Marek, SP3AMO

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14182.6	0520	11	06		UI	RADAR	40	20KOE	S 8 OTHR
21437.0	0910	02	06	RUS	UI	A1A		20 wpm	S3-5 [mixed text]

REF; Francis, F5MIU

kHz	UTC	DD	MM	ITU	IDENT	MODE	Bd/sps	Sh /Bw	DETAILS
10130.0	1707	14	06			FMCW	20	10kHz	OTH Radar pulsed 50ms,S5
14105.0	1631	11	06			FMCW	40	10kHz	OTH Radar pulsed 25ms,S9+20dB
18162.0	1531	13	06			FMCW	50	20kHz	OTH Radar pulsed 20ms,S7
21115.0	0750	16	06			FMCW	40	15kHz	OTH Radar pulsed 20ms,S7
24895.0	0751	18	06			FMCW	40	10kHz	OTH Radar pulsed 25ms,S9
28650.0	1616	06	06			FMCW	?	60kHz	OTH Radar pulsed 40ms,S5 very strange modulation

RSGB; Richard, G4DYA

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3510.0	vt	vd	06			J3E		2K70E	USB 'The Air Horn'
3756.0	vt	vd	06			J3E		1K70E	USB 'The Pip'
5363.6	ady	01-24	06	DNK		G1D		2K40E	For info: Stanag 4285, Primary user.
7012.0	0815	11	06			J7D		2K70E	USB 7010.0 / CIS-12
7017.0	1658	07	06			J7D		2K70E	USB 7015.0 / CIS-12
7066.0	vt	vd	06			F1A/ F1B		200	Mostly idling on 7065.9
7074.790	0733	05	06			A1N			Continuous dashes or groups of dashes. ±10 Hz
7074.970	0945	24	06			A1N			Continuous dashes or groups of dashes. ±10 Hz
7074.990	vt	vd	06			A1N			Continuous dashes or groups of dashes. ±10 Hz
7075.010	1752	30	06			A1N			Continuous dashes
7099.0	2007	09	06					540H	Unidentified
7110.0	1222	23	06			F1B		250	
7116.9	1707	07	06			NON			Probably 7117.0 idling F1B
7140.019	vt	vd	06	ERI	VoBM1	A3E			BC. Approx times – varies daily
7170.0	1009	19	06			F1B		200	
10154.0	1629	15	06	RUS		PON	40	14KOE	Container radar
14008.0	vt	vd	06			F1B	50	250	
14026.0	1457	06	06			J7D		2K70E	USB 14024.0 / CIS-12
14111.0	0916	10	06	RUS		PON	40	14KOE	Container radar
14171.0	0727	05	06			J7D		2K70E	USB 14169.0 / CIS-12
14185.0	1400	27	06	RUS		PON	40	14KOE	Container radar
14188.0	1244	06	06	RUS		PON	40	14KOE	Container radar
14210.0	0858	29	06			PON	10	4K50E	
14258.0	0747	07	06			F1B		500	RR 5.152 ?
18091.0	1029	11	06	RUS		PON	40	14KOE	Container radar
18157.0	1213	10	06	RUS		PON	40	14KOE	Container radar
18165.0	1329 1116	13 14	06	G		F3N	50	20KOE	FMCW radar, RAF Akrotiri, Cyprus
18167.0	0803	05	06	RUS		PON	40	14KOE	Container radar
18169.0	0918	19	06	RUS		PON	40	14KOE	Container radar
18170.0	1244	24	06	G		F3N	50	20KOE	FMCW radar, RAF Akrotiri, Cyprus
18172.0	0756	02	06	RUS		PON	40	14KOE	Container radar
18175.0	0844	21	06	G		F3N	50	20KOE	FMCW radar, RAF Akrotiri, Cyprus

RSGB; Richard, G4DYA									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21010.0	1039	18	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21130.0	0724	05	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21168.0	0911	05	06	RUS		P0N	40	14K0E	Container radar
21170.0	1130 1312	07 19	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21200.0	1121	20	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21210.0	0759	23	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21230.0	1043	03	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21250.0	1120	19	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21390.0	1231	10	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
21438.0	0907	02	06	RUS	RCV	A1A	~20		Russian Navy, Sevastopol
21445.0	1244	24	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
28015.9	0829	14	06		II	A1A			Fishing buoy
28034.6	0757	29	06		FO	A1A			Fishing buoy
28039.9	1803	30	06		EZ	A1A			Fishing buoy
28040.0	1917	09	06		VV	A1A			Fishing buoy
28046.3	0834	14	06		VV	A1A			Fishing buoy
28046.4	1919	09	06		EZ	A1A			Fishing buoy
28079.8	0837	14	06		EZ	A1A			Fishing buoy
28080.0	1922	09	06		EZ	A1A			Fishing buoy
28110.0	1759	30	06		FA	A1A			Fishing buoy
28111.5	1025	14	06		BN	A1A			Fishing buoy
28165.0	0801	29	06			A3E			CB. French lang.
28179.6	0806	29	06		FA	A1A			Fishing buoy
28179.8	2024	09	06		FA	A1A			Fishing buoy
28189.9	2032 1042	09 14	06		FA	A1A			Fishing buoy
28199.8	0811	29	06		FA	A1A			Fishing buoy
28260.4	1052	14	06		SAF	A1A			Fishing buoy
28399,7	1103	14	06		EZ	A1A			Fishing buoy
28530.0	0833	10	06	IRN		P0N	150/ 313	45K0E	Radar
28630.0	1035	18	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
28650.0	vt	06- 08	06	IRN		P0N	313	45K0E	Radar
28700.0	0827	17	06	IRN		P0N	150/ 313	45K0E	Radar
28665.0	1650 0957	07 08	06			P0N	101.94	100K0E	Unknown
28805.0	1006	03	06	G		F3N	50	20K0E	FMCW radar, RAF Akrotiri, Cyprus
28850.0	1644 0818	10 11	06	IRN		P0N	150/ 313	45K0E	Radar
28860.0	0823	17	06	IRN		P0N	150/ 313	45K0E	Radar
29100.0	0821	17	06	IRN		P0N	150/ 313	45K0E	Radar
29170.0	0825	17	06	IRN		P0N	150/ 313	45K0E	Radar
29550.0	0834	17	06	IRN		P0N	150/ 313	45K0E	Radar
29700.0	0833	17	06	IRN		P0N	150/ 313	45K0E	Radar

RSK; Kamweti, 5Z4BV									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH/ BW	DETAILS
7040.0	vt	vd	06			J3E-U		2k7	Kiswahili/ vernacular QSO
7115.0	1402	7	06			J3E-U		2k5	Vernacular QSO
7150.0	vt	vd	06			J3E-U		2k5	Vernacular QSO
7150.0	vt	vd	06	KEN		MFSK	128	2k2	Call transmission
7159.0	vt	vd	06	KEN		8PSK		2k4	STANAG 4285
7172.0	vt	vd	06	COD		J3E-U		2k5	French/ vernacular QSO
7188.5 CF	vt	vd	06	KEN		8PSK		2k4	STANAG 4285
7200 CF	vt	vd	06			A3E		5kE	Unid AM American documentary 'rebroadcast'
14128.0	1515	19	06	CHN		RADAR	20 sps	20K0E	
14185.0	1502	19	06	CHN		RADAR	50 sps	20K0E	
21250.0	1550	14	06			RADAR	15 sps		
21303.0		19	06			RADAR	50 sps	20K0E	

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7 MHz	1700-1730	4 23	6	RUS		RADAR	40sps	13k0E	(WebSDR 15d) Kontainer
7 MHz	0515-1815	*	6	RUS		RADAR	10sps	10k0E	*) Days: 2. 4. 5. 9. 10. 11. 13. 17. 19. 22. 25. 26.
7 MHz	1520-1730	6	6	CHN		RADAR	50/67sps	10k0E	'foghorn'
7000.0	1830	23	6	RUS		J7D	120	2k60E	
7006.0	1030-1400	5	6	RUS		J7D	120	2k60E	
7008.0	1045-1200	22	6	RUS		F1B		250H	
7008.0	0945-1015	3	6	RUS		J7D	120	2k60E	
7012.0	0515-0915	11 20	6	RUS		J7D	120	2k60E	
7019.0	1435	25	6	RUS		F1B			
7020.0	0755	25	6	RUS		F1B			
7022.0	0755-1245	24 26	6	RUS		J7D	120	2k60E	
7025.0	0500-1535	*	6	RUS		F1A/B		200H	*) Days: 3. 5. - 10. 26. 28. 29.
7031.0	0515-1705	18 20	6	RUS		J3E-u		3k0E	brum, Russian vox
7039.0	0590-1830	*	6	RUS	C	A1A		20H	*) Days: 1. - 10. Beacon
7054.0	1630-1810	1	6	RUS		F1B		200H	
7055.0	0920-1140	11 24	6	RUS		F1B/ NON		250H	
7057.0	1440	16	6	RUS		J7D	120	2k60E	
7066.0	0500-1430	dly	6	RUS		NON/ F1B/A		200H	5BL
7072.0	0750-1020	17 18	6	RUS		J7D	120	2k60E	

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
7099.0	0600-1630	*	6	RUS	MSKZ etc	A1A	17	20H	*) Days: 1. 2. 3. 7. 8. 9. 13. - 17. 21. - 24. 5F, 5BL
7110.0	1210-1230	23	6	RUS		F1B		250H	
7114.0	1230-1234	23	6	RUS		J7D	120	2k60E	
7116.0	0720	26	6	RUS		A1A		20H	5F
7118.0	1800-1815	11	6	RUS		J7D	120	2k60E	
7122.0	0500-0545	27 29	6	RUS		F1B		250H	
7140.0	1540-1835	*	6	ERI	VoBM	A3E		9k0	*) Days: 2. 3. 6. 11. - 14. 16. 27. 30.
7169.0	0800-1030	11	6	RUS		F1B/ NON		200H	
7169.0	0940-1610	7 30	6	RUS		A1A	18	20H	5F
7170.0	0730-0745	1	6	RUS		J7D	120	2k60E	
7170.0	0500-1800	18 19	6	RUS		F1B		200H	
7172.0	0740	29	6	RUS		A1A	10	20H	Z- codes
7186.0	0830-1115	23 24	6	RUS		J7D	120	2k60E	
7187.5	1030-1830	5 12	6	RUS		F1B/ NON		250H	
7199.9	0520-1615	24 25	6			A3E		9k0	MX
10 MHz	1315-1530	9 11	6	CYP		RADAR	50sps	20k0	(WebSDR 3d)
10 MHz	1245-1645	*	6	RUS		RADAR	40sps	13k0E	*) Days: 5. 10. 14. 22. (WebSDR 5d) Kontainer
14 MHz	0500-1815	*	6	RUS		RADAR	40sps	13k0E	*) Days: 1. 4. 7. - 12. 16. - 22. 25. 28. 29. (WebSDR 21d) Kontainer
14 MHz	0500-1720	*	6	RUS		RADAR	10sps	10k0E	*) Days: 1. 2. 3. 10. 11. 14. 16. 21. 22. 23. 25. 29. 30.
14 MHz	0500-1830	*	6	CHN		RADAR	50/67sps	10k0E	*) Days: 1. - 5. 7. - 12. 14. - 18. 29. 'foghorn'
14 MHz	0500-1445	*	6	CHN		RADAR	10sps	160k0	*) Days: 1. 2. 4. 11. 16. 17. 18. 28.
14000.0	1400-1500	dly	6	CHN	CRI	A3E		9k0	intermod. 13710 & 13855 kHz
14008.0	0505-1220	*	6	RUS		F1B/ NON		250H	*) Days: 2. 6. 7. 9. 13. 14. 16. 18. 21. 25. 27.
14108.0	0615-0800	*	6	RUS	9FVU etc	A1A		20H	*) Days. 16. 25. 30.
14186.0	0820-0825	10 23	6	RUS		F1B		500H	
14210.0	0500-1730	dly	6			RADAR	10sps	5k0E	
14221.0	0330-0600	dly	6	KAZ		F1B		200H	

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH/BW	DETAILS
14221.0	0810-0823	2	6	RUS		F1B		500H	
14234.0	0955-1135	29	6	RUS		J7D	120	2k60E	
14258.0	0955	29	6	RUS		F1B		500H	ERP > 400W
18 MHz	0500-1500	*	6	CYP		RADAR	25/50sps	20k0	*) Days: 1. 2. 9. 11. 12. 13. 19. 20. 24. (WebSDR 9d)
18080.0	0600-0800	*	6	TWN		A3E		9k0	*) Days: 2. 6. 13. 25. 26. 27.
21 MHz	0515-1420	*	6	CYP		RADAR	25/50sps	20k0	*) Days: 3. 4. 5. 10. 18. 19. 20. 21. 22. 24. 30. (WebSDR 13d)
21 MHz	0805-0915	*	6	RUS		RADAR	40sps	13k0E	*) Days: 5. 8. 9.
21438.0	0830-1600	dly	6	RUS	RCV	A1A	20	20H	
28 MHz	0500-1800	*	6	IRN		RADAR	224/ 334	60k0E	*) Days: 1. 3. 4. 5. 6. 8. 9. 10. 11. 18. 19. 21. 22. 24. 25.
28 MHz	0500-1815	*	6	RUS	Taxi disp.	F3E		3k0E	*) Days: 1. - 4. 9. 10. 16. - 19. 24. 25. 30. 141 reports
28860.0	0500-1830	*	6	IRN		RADAR	150/ 313	60k0E	*) Days: 1. - 19. 21. - 27. 30.

URE; Gaspar, EA6AMM

a) Summarized

b) Detailed report

a) URE; Gaspar, EA6AMM summarized report

MODE	ITU	Bd / sps	SH / BW	RX	Details
RADAR	RUS	40	12K0E	50	OTHR Contayner
RADAR	G	50	20K0E	21	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
RADAR	G	12.5	40K0E	1	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
RADAR			ca 45K0E	19	SuperDARN (Super Dual Auroral Radar Network)
RADAR	IRN	150 / 313	ca 45K0E	25	QRG = 28860 kHz CF
RADAR	IRN	150 / 313	ca 45K0E	19	QRG: All along 10m band. OTHR
RADAR	IRN	226 / 333	ca 45K0E	11	QRG: 28960 kHz CF
RADAR	CHN	10	160K0E	5	Wideband OTHR
RADAR	CHN	50	10K0E	2	OTHR
RADAR	CHN	66.7	10K0E	31	Short bursts. "Foghorn"
RADAR	CHN	50	10K0E	20	Short bursts. "Foghorn"
RADAR	CHN	41.7	10K0E	4	Short bursts. "Foghorn"
RADAR	CHN	83.3	10K0E	2	Short bursts. "Foghorn"
F1B	RUS	50	250H	3	CIS-#
F1B	KAZ	75	200H	1	CIS-#
F1B	RUS	50	500H	2	CIS-#
F1B		600	600H	13	DPRK-FSK 600 ARQ
F1B			200H	2	QRG = 21001.5 kHz CF. FSK ARQ
F1B			ca 300H	3	QRG = 10 m band. 6 fishing buoys
J7D		120	2K60E	3	CIS-12
W7D			2K80E	1	OFDM. CIS-60
A1A	RUS			10	QRG = 21438 kHz. "RCV" QTC
A1A				52	QRG: 28000 to 28500 kHz. Fishing buoys. (TX every few min. Only 1 RX per different buoy counted)
J3E-U	E / MM			4	QRG = 21000 kHz USB. Spanish fishery

a) URE; Gaspar, EA6AMM summarized report

MODE	ITU	Bd / sps	SH / BW	RX	Details
J3E-U	E / MM			1	QRG = 21121 KhZ USB. Spanish fishery
J3E-U	E / MM			1	QRG = 21222 kHz USB. Spanish fishery
J3E-U				1	Unid people talking. Unknown language
J3E-U	I			1	QRG = 28300 kHz. Italian CBers
J3E-L				5	QRG = 7055 kHz LSB. UKR / RUS "radiowar"
A3E				3	QRG = 18080 kHz CF. AM. BC. "Sound of Hope"
• Total RADAR received:			211		
• Rest of modes received:			107		
• Total of intrusions received:			318		

b) URE; Gaspar, EA6AMM detailed report

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
7055.0	1947 vt*	16 vd*	06			J3E-L			Speech, propaganda, music, loops, UKR/RUS "radiowar". *Often
14007.9	1109	13	06	RUS		NON			Carrier from RUS F1B 14008 kHz CF system
14008.0	1146 vt*	07 vd*	06	RUS		F1B	50	250H	*Often
14017.0	0734	21	06	RUS		RADAR	40	12K0E	OTHR Contayner
14024.0	1623	10	06	CHN		RADAR	42	10K0E	Short bursts. Foghorn
14026.0	1004	13	06	RUS		J7D	120	2K70E	
14036.0	1722	12	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14038.5	0622	03	06			F1B	600	600H	DPRK-FSK 600 ARQ
14091.0	0643	07	06	RUS		RADAR	40	12K0E	OTHR Contayner
14095.0	0622	15	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14098.5	1337 vt*	28 vd*	06			F1B	600	600H	DPRK-FSK 600 ARQ. *Also on 30/06, 0740 UTC
14103.5	1338	28	06			F1B	600	600H	DPRK-FSK 600 ARQ
14105.0	1632	29	06	RUS		RADAR	40	12K0E	OTHR Contayner
14107.0	1441	12	06	CHN		RADAR	66.7	10K0E	Short bursts, Foghorn
14109.0	1702	24	06	RUS		RADAR	40	12K0E	OTHR Contayner
14113.0	1555	11	06	RUS		RADAR	40	12K0E	OTHR Contayner
14113.5	1340 vt*	18 vd*	06			F1B	600	600H	DPRK-FSK 600 ARQ. *Also on 24/06, 0808 UTC
14118.0	1606	29	06	RUS		RADAR	40	12K0E	OTHR Contayner
14119.0	1634	10	06	RUS		RADAR	40	12K0E	OTHR Contayner
14133.0	1757	09	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14140.0	1724 vt*	19 vd*	06	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 23/06, 1650 UTC
14146.0	0713	06	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14146.0	0719	09	06	RUS		RADAR	40	12K0E	OTHR Contayner.
14153.0	0957	04	06	CHN		RADAR	10	160K0E	Wideband OTHR
14154.0	1127	04	06	RUS		RADAR	40	12K0E	OTHR Contayner
14156.0	1656 vt*	08 vd*	06	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 09/06, 0608 UTC
14157.0	1613	25	06	RUS		RADAR	40	12K0E	OTHR Contayner
14159.0	0954	27	06	RUS		RADAR	40	12K0E	OTHR Contayner
14163.0	1228	03	06	RUS		RADAR	40	12K0E	OTHR Contayner
14164.0	0713	09	06	RUS		RADAR	40	12K0E	OTHR Contayner
14166.0	1835	14	06	RUS		RADAR	40	12K0E	OTHR Contayner
14171.0	1759	03	06	RUS		RADAR	40	12K0E	OTHR Contayner
14171.0	0719	05	06			J7D	120	2K70E	
14175.0	1700	08	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn

b) URE; Gaspar, EA6AMM detailed report

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14176.0	1632	24	06	RUS		RADAR	40	12K0E	OTHR Contayner
14177.0	1510	10	06	RUS		RADAR	40	12K0E	OTHR Contayner
14179.0	1726	03	06	RUS		RADAR	40	12K0E	OTHR Contayner
14180.0	0801	28	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14183.0	1534	30	06	RUS		RADAR	40	12K0E	OTHR Contayner
14184.0	1848	23	06	RUS		RADAR	40	12K0E	OTHR Contayner
14186.0	0558 vt*	11 vd*	06	RUS		RADAR	40	12K0E	OTRHR Contayner. *Also on 19/06, 1511 UTC
14187.0	0742	30	06	RUS		RADAR	40	12K0E	OTHR Contayner
14188.0	1722	28	06	RUS		RADAR	40	12K0E	OTHR Contayner
14189.0	1105 vt*	04 vd*	06	CHN		RADAR	40	12K0E	OTHR Contayner. *Also on 30/06, 1403 UTC
14190.0	0914 vt*	25 vd*	06	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 28/06, 1342 UTC
14191.0	0632	15	06	RUS		RADAR	40	12K0E	OTHR Contayner
14192.0	0610	09	06	RUS		RADAR	40	12K0E	OTHR Contayner
14196.0	1706	30	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14197.0	1811	04	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14198.35	0639	30	06			F1B	600	600H	DPRK-FSK 600 ARQ
14205.0	1835	14	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14210.0	0558 vt*	01 vd*	06			RADAR		4K50E	SuperDARN. Super Dual Auroral Radar Network. *Almost daily
14219.0	1707	04	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14225.0	0617	15	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14229.0	1559	30	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14230.0	1359	05	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14230.0	0757	22	06	CHN		RADAR	50	10K0E	OTHR
14233.0	1352	05	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14234.0	0925	29	06			J7D		2K70E	Submode Idle
14244.0	1127	07	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14244.0	1556	07	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14246.0	0718	20	06	CHN		RADAR	50	10K0E	OTHR
14258.0	0714 vt*	21 vd*	06	RUS		F1B	50	500H	*Also on 23/06, 0754 UTC
14258.0	0754	23	06	RUS		F1B	50	500H	
14259.0	0716	09	06	RUS		RADAR	40	12K0E	OTHR Contayner
14261.0	1432	29	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14264.0	1400	18	06	RUS		RADAR	40	12K0E	OTHR Contayner
14270.0	1010	03	06	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14275.0	1353	05	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14276.0	1015	18	06	CHN		RADAR	10	160K0E	Wideband OTHR
14279.0	1129	04	06	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14279.0	1650	30	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14280.0	0939	18	06	CHN		RADAR	10	160K0E	Wideband OTHR
14281.0	1400	05	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14289.0	0803	24	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14292.0	1630	10	06	CHN		RADAR	42	10K0E	Short bursts. Foghorn
14296.0	0716	20	06	RUS		RADAR	40	12K0E	OTHR Contayner
14298.0	1133	04	06	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14300.0	1814	04	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14300.0	1615	07	06	CHN		RADAR	41.7	10K0E	Short bursts. Foghorn
14300.0	1508	17	06	CHN		RADAR	10	160K0E	Wideband OTHR
14301.0	1431	29	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn

b) URE; Gaspar, EA6AMM detailed report

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
14303.0	1627	01	06	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14304.0	0628	07	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14305.0	1618	28	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14306.0	0801	24	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14313.0	0616	15	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14316.0	1011	03	06	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14317.0	1442	12	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14318.0	1429	29	06	CHN		RADAR	40	10K0E	Short bursts. Foghorn
14318.5	0611	03	06			F1B	600	600H	DPRK-FSK 600 ARQ
14322.0	1659	01	06	CHN		RADAR	50	10K0E	Short bursts. "Foghorn"
14322.0	0956	04	06	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14324.0	1613	03	06			F1B	75	200H	
14325.0	1625	23	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14326.0	1450	12	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14329.0	1522	07	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14329.0	1317	09	06	RUS		RADAR	40	12K0E	OTHR Contayner.
14330.0	1354	05	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14336.0	1426 vt*	29 vt*	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn. *Also on 08, 1455 UTC
14340.0	1130	07	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14340.0	0615	15	06	CHN		RADAR	83.3	10K0E	Short bursts. Foghorn
14343.0	1659	14	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
14348.6	1629	01	06			W7D			CIS-60
14350.0	0946	04	06	CHN		RADAR	66.7	10K0E	Short bursts. "Foghorn"
14354.0	0652	15	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
14413.0	1615	25	06	CHN		RADAR	10	160K0E	Wideband OTHR
18068.0	0640	15	06	RUS		RADAR	40	12K0E	OTHR Contayner
18080.0	0722 vt*	06 vd*	06			A3E			BC. Sound of Hope. *Often
18090.0	0735	24	06	G		RADAR			OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
18157.0	1143	10	06	RUS		RADAR	40	12K0E	OTHR Contayner
18158.0	0744	25	06	RUS		RADAR	40	12K0E	OTHR Contayner
18165.0	0640 vt*	10 vd*	06	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 28/06, 1209 UTC
18165.0	1339	13	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus.
18167.0	1020	19	06	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 20/06, 0707 UTC
18168.0	0626	03	06	RUS		RADAR	40	12K0E	OTHR Contayner
18170.0	1226	24	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus. *Also on 30/06, 1140 UTC
18175.0	0702	21	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21000.0	1102 vt*	01 vd*	06	E/M M		J3E-U			Spanish fishing. Southern accent. *Often
21001.5	1635	01	06			F1B	100	200H	ARQ. SH = 200 Hz, 100 Bd. *Also on 28/06, 1421 UTC
21010.0	0954	18	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21025.0	0715	17	06	G		RADAR	12.5	40K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus

b) URE; Gaspar, EA6AMM detailed report

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
21045.0	0639	16	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21114.0	0700	17	06	RUS		RADAR	40	12K0E	OTHR Contayner
21121.0	1553	28	06	E/M M		J3E-U			Spanish fishery. Southern accent
21123.0	0642	16	06	CHN		RADAR	66.70	10K0E	Short bursts. Foghorn
21128.0	1358	30	06	RUS		RADFAR	40	12K0E	OTHR Contayner
21130.0	0723	05	06	G		RADAR	50	20K0E	OTHR Pluto. Sovereign Base Area of Akrotiri, Cyprus
21135	0624	30	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21140.0	0705	30	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21170.0	1137	30	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21183.0	0741	12	06	RUS		RADAR	40	12K0E	OTHR Contayner
21183.0	0644	16	06	CHN		RADAR	83.3	10K0E	Short bursts. Foghorn
21200.0	1124	20	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21205.0	0811	24	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21210.0	0757	23	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21222.0	0833	29	06	E/M M		J3E-U			Spanish fishers. Galician and Spanish lang
21240.0	0726	30	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21248.4	1134	16	06			F1B	600	600H	DPRK-FSK 600 ARQ
21249.0	0649	16	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
21258.0	0726	14	06	CHN		RADAR	66.7	10K0E	Short bursts. Foghorn
21290.0	1437	12	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21320.0	1049	03	06	G		RADAR	50	20K0E	OTHR Pluto. Sovereign Base Area of Akrotiri, Cyprus
21324.0	1052	01	06	RUS		RADAR	40	12K0E	OTHR Contayner
21336.0	1133	07	06	RUS		RADAR	40	12K0E	OTHR Contayner
21390.0	1236	10	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign base Area of Akrotiri, Cyprus
21397.0	0838	24	06	CHN		RADAR	50	10K0E	Short bursts. Foghorn
21413.4	1043 vt*	03 vd*	06			F1B	600	600H	DPRK-FSK 600 ARQ. *Also on 16/06, 1138 UTC
21438.0	1231 vt*	03 vd*	06	RUS	RCV	A1A			"RCV" QTC. *Often
21445.0	1227	24	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
21448.5	1040 vt*	03 vd*	06			F1B	600	600H	DPRK-FSK 600 ARQ. *Also on 23/06, 0751 UTC
21448.6	0751	23	06			F1B	600	600H	DPRK-FSK 600 ARQ
28020.3	0652	11	06		MET	A1A			Fishing buoy
28020.8	0702	11	06		E6	A1A			Fishing buoy
28021.0	1100	14	06		CL	A1N			Fishing buoy
28025.1	1548	24	06			F1B		CA300H	Fishing buoy. Encrypted FSK, short bursts. Drifting

b) URE; Gaspar, EA6AMM detailed report									
kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
28030.1	1540	24	06			F1B		CA300H	Fishing buoy. Encrypted FSK, short bursts. Drifting
28036.5	0645	11	06		CC	A1A			Fishing buoy
28049.0	1518	12	06			F1B		300H	Fishing buoy. Drifting
28051.4	1412	11	06		AH	A1A			Fishing buoy
28054.6	1524	17	06		P	A1A			Fishing buoy
28066.0	1406	11	06		BQ	A1A			Fishing buoy.
28085.1	1323	10	06			F1B		300H	Fishing buoy. Encrypted FSK, short bursts. Drifting
28099.7	1336	10	06		CF	A1A			Fishing buoy
28101.9	1519	24	06			F1B		CA300H	Fishing buoy. Encrypted FSK, short bursts. Drifting
28104.4	1329	10	06		EE	A1A			Fishing buoy
28104.6	1157	16	06		FO	A1A			Fishing buoy
28114.7	1859	16	06		EI	A1A			Fishing buoy
28119.7	1010	15	06		EB	A1A			Fishing buoy
28121.2	1935	13	06		AL	A1A			Fishing buoy
28121.6	1532	17	06		BN	A1A			Fishing buoy
28134.5	1508	12	06		P	A1A			Fishing buoy
28138.9	1016	15	06			A1A			Fishing buoy
28139.7	0631	11	06		AC	A1A			Fishing buoy
28141.3	1117	13	06		DO	A1A			Fishing buoy.
28144.2	1603	24	06		O	A1A			Fishing buoy
28149.7	0717	10	06		AC	A1A			Fishing buoy
28150.7	1606	24	06		SN	A1A			Fishing buoy
28153.9	0719	16	06		FO	A1A			Fishing buoy
28161.6	1003	15	06		A	A1A			Fishing buoy
28161.6	1538	17	06		A	A1A			Fishing buoy
28163.9	1149	16	06		PU	A1A			Fishing buoy
28181.6	1248	11	06		LU	A1A			Fishing buoy
28189.8	0957	17	06		X	A1A			Fishing buoy
28209.5	1007	17	06		FE	A1A			Fishing buoy
28219.6	0752	12	06		EB	A1A			Fishing buoy
28229.7	1551	17	06		CF	A1A			Fishing buoy
28241.5	1116	14	06		K	A1A			Fishing buoy
28244.7	1927	16	06		EI	A1A			Fishing buoy
28246.4	0758	12	06		AE	A1A			Fishing buoy
28249.8	1134	13	06		AC	A1A			Fishing buoy
28259.7	1146	13	06		AC	A1A			Fishing buoy
28275.0	1959	13	06			F1B		CA300H	Fishing buoy. Encrypted FSK, short bursts. Drifting
28285.0	1417	09	06			J3E-L			UI people talking. UI language.
28289.5	1029	17	06		FE	A1A			Fishing buoy
28289.7	1858	13	06		IC	A1A			Fishing buoy
28291.9	1155	13	06		LC	A1N			Fishing buoy
28299.8	1042	15	06		TS	A1A			Fishing buoy
28299.8	1601	17	06		FD	A1A			Fishing buoy
28300.0	1626	17	06	I		J3E-U			Italian CBers
28336.5	1045	17	06		BQ	A1A			Fishing buoy
28349.6	1224	11	06		FR	A1A			Fishing buoy
28349.6	1032	15	06		EH	A1A			Fishing buoy
28359.6	1354	09	06		FK	A1A			Fishing buoy
28381.3	1241	11	06		PA	A1A			Fishing buoy

b) URE; Gaspar, EA6AMM detailed report

kHz	UTC	DD	MM	ITU	Ident	Mode	Bd/sps	SH/BW	Details
28391.7	1459	12	06		CL	A1A			Fishing buoy
28395.5	0730	16	06		MRT	A1A			Fishing buoy
28399.8	1349	09	06		E6 or ETH	A1A			Fishing buoy. (ID = E6 or ETH; not clear)
28409.7	1341	09	06		E6	A1A			Fishing buoy
28419.7	1211	11	06		EH	A1A			Fishing buoy
28421.2	0717	11	06		CL	A1A			Fishing buoy
28425.0	1204	11	06			RADAR	50	20K0E	OTHR continuous short bursts
28440.0	1220	11	06		EH	A1A			Fishing buoy
28550.0	0704	17	06	IRN		RADAR	150	CA45K0E	OTHR IRN. 150 & 313 sps, alternating
28550.0	0833	24	06	IRN		RADAR	150	CA45K0E	OTHR IRN. 150 & 313 sps, alternating
28600.0	0822	24	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating
28630.0	1051	18	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
28650.0	1519	08	06	IRN		RADAR	226 313	CA60K0E	226 & 313 sps, alternating.
28650.0	0638	09	06	IRN		RADAR	150	CA50K0E	OTHR, 150 and 313 sps, alternating
28650.0	0827	24	06	IRN		RADAR	150	CA45K0E	OTHR, 150 and 313 sps alternating
28680.0	0953	15	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
28700.0	0756	28	06	IRN		RADAR	226	CA45K0E	OTHR. 226 and 333 sps, alternating
28800.0	0801	25	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating.
28805.0	1013	03	06	G		RADAR	50	20K0E	OTHR Pluto. UK Sovereign Base Area of Akrotiri, Cyprus
28850.0	0645	10	06	IRN		RADAR	150/ 313	CA45K0E	150 and 313 sps alternating
28860.0	0707 vt*	03 vd*	06	IRN		RADAR	150 313	CA45K0E	OTHR. 150 and 313 sps, alternating. Long-lasting. *Almost daily
28900.0	1138	14	06	IRN		RADAR	150	CA45K0E	OTHR IRN, 150 and 313 sps, alternating.
28960.0	0629 vt*	14 vd*	06	IRN		RADAR	226 333	CA45K0E	OTHR. 226 and 333 sps alternating. Long-lasting *Often (received 9 days)
28970.0	0610	10	06	IRN		RADAR	150	CA45K0E	IRN OTHR. 150 and 313 sps, alternating
29000.0	0845	24	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps alternating
29200.0	0750	24	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps alternating
29250.0	0659	10	06	IRN		RADAR	150	CA45K0E	OTHR (313 and 150 sps). Constantly QSY along 10 m band
29250.0	0805	25	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating
29300.0	0757	25	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating
29300.0	0808	25	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating. QSY about every 4 minutes
29350.0	0649	10	06	IRN		RADAR	150	C45K0EA	OTHR. 150 and 313 sps alternating
29470.0	0948	17	06	IRN		RADAR	150	CA45K0E	OTHR. 150 & 313 sps alternating
29500.0	0756	25	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps, alternating
29600.0	1000	18	06	IRN		RADAR	150	CA45K0E	OTHR. 150 and 313 sps alternating
29700.0	0652	10	06	IRN		RADAR	150	CA45K0E	150 and 313 sps alternating.

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
5361.8 USB	0710		06	DNK		G1D PSK8	2400 Bd	2k70E	STANAG 4285: legal (primary user)!
7006.09	2149	01	06			A1N		10H	fast dots only

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
7039.4	2100	24	06	RUS	M	A1A		10H	Magadan; Letter beacon daily
7065.9	0950	24	06			N0N		10H	long lasting carrier
7066.0	1007	24	06			F1B		200H	
7066.0	1011	24	06			F1A		200H	
7072.0	1247 1327	30 30	06			J7D	12x120 Bd	2k70E	CIS12; 12x carrier + pilotone only now traffic, unstable signal!
7074.97	0956	24	06			A1A		ca 10H	groups of dashes often
7111.0 LSB	1613	25	06	CHN		G7D PSK-4	30x60 Bd	ca 2k50E	CHN30 (PRC30); Burst system; tone spacing 75 Hz; Preamble 4x PSK4 60Bd, spacing 600Hz; Pilot tone at 450Hz
7130.0	2155	01	06			FMOP	66.66 sps	10k0E	OTHR; short Bursts
7169.0	1603	30	06			A1A			encrypted; figures
7170.0	1438	18	06			F1B	75	200H	CIS
14000.0	1429	18	06	CHN?	CRI?	A3E		ca 9k0E	BC: China Radio International - inter-modulation of 13855 and 13710 kHz: 13855 x 2 -13710 = 14000 kHz
14008.0	0733 0931 1445	02 24 28	06	RUS		F1B	50 Bd	250H	often
14098.3	1236	30	06			F1B/ARQ		1k20E	ARQ system; stopped at 1239z
14103.45	1231	29	06			F1B/ARQ		1k20E	ARQ system
14108.0	0726	02	06			FMOP	40 sps	12k0E	OTHR; Contayner
14111.0	1425	28	06			FMOP	40 sps	10k0E	OTHR; BW only 10k!
14117.0	1217	29	06			FMOP	40 sps	12k0E	OTHR; Contayner
14118.0	1611	29	06			FMOP	40 sps	12k0E	OTHR; Contayner
14157.0	1622	25	06			FMOP	40 sps	12k0E	OTHR; Contayner, stopped 1626z
14179.0	1321	29	06			FMOP	40 sps	12k0E	OTHR; Contayner
14183.0	1544	30	06			FMOP	40 sps	12k0E	OTHR; Contayner
14189.0	0721 1225	02 30	06			FMOP	40 sps	12k0E	OTHR; Contayner long lasting often
14190.0	1606	28	06			FMOP	40 sps	12k0E	OTHR; Contayner
14234.0	1208	29	06			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilotone
14242.0	1228	30	06			J7D	12x120 Bd	2k70E	CIS12; BPSK or QPSK, pilotone
14262.0	1016	02	06			FMOP	40 sps	12k0E	OTHR; Contayner
14272.0	1033	18	06			OTHR	10 sps	160k0E	Wideband OTHR
14276.0	1706	02	06			FMOP	41 sps	10k0E	OTHR; Bursts
14301.9	1513	17	06			OTHR	10 sps	160k0E	Wideband OTHR; long lasting
14305.0	1622	28	06			FMOP	50 sps	10k0E	OTHR; Bursts
18165.0	0729	02	06			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus ?)
18172.0	0801	02	06			FMOP	40 sps	12k0E	OTHR; Contayner; partially in 17m band
21000.0	1356 1549	18 25	06			J3E-U		ca 2k70E	Spanish, probably Fishery: often
21010.0	1000	18	06			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus)
21121.0	1554	28				J3E-U		ca 2k40E	Spanish: Fishing
21324.0	1056	01	06			FMOP	40 sps	12k0E	OTHR
21335.0	1144	24	06			FMCW	50 sps	ca 20k0E	OTHR (UK-base Cyprus)
21438.0	1002	24	06		RCV	A1A		10H	TDoA: Area of Sevastopol daily
28020.28	1135	29	06			A1A		10 H	Fishing buoy
28021.3	1131	29	06		CL	A1A		10 H	Fishing buoy
28036.5	1631	09	06		EZ	A1A		10 H	Fishing buoy
28036.5	1637 1615	29 30	06		CY	A1A		10 H	Fishing buoy

USKA; Peter, HB9CET

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD / sps	SH / BW	DETAILS
28071.34	1600	19	06		IL	A1A		10 H	Fishing buoy
28079.85	1517	09	06		EZ	A1A		10 H	Fishing buoy
28085.0	1440	09	06			F1B		ca 300H	short FSK bursts, probably ENAGAL GPS Fishing buoy
28099.7	1549	17	06		CF	A1A		10 H	Fishing buoy
28104.4	1647	19	06			A1A		10 H	Fishing buoy
28150.7	1610	19	06		SI	A1A		10 H	Fishing buoy
28161.6	1542	17	06		A	A1A		10 H	Fishing buoy
28181.6	1329	29	06		LU	A1A		10 H	Fishing buoy
28275.0	0956	29	06			F1B	51	ca 300H	probably Enagal GPS Fishing buoy
28291.8	1554	17	06			A1A		10 H	Fishing buoy
28439.9	1644	29	06			A1A		10 H	Fishing buoy
28630.0	1019	18	06			FMCW	50 sps	20k0E	OTHR (UK-base Cyprus)
28650.0	1005	06	06	IRN			313 sps	ca 45k	OTHR; Bursts, only 313sps!
28860.0	1006	18	06	IRN			150 + 313 sps	ca 45k	OTHR, Bursts; long lasting, sweep rate alternating almost daily

VERON: Ruud PG1R, Credits to observers Dick PA0GRU, Joeke PA0VDV, Kees PA2CHM, Arie PA3CNK, Rene PA3EQO

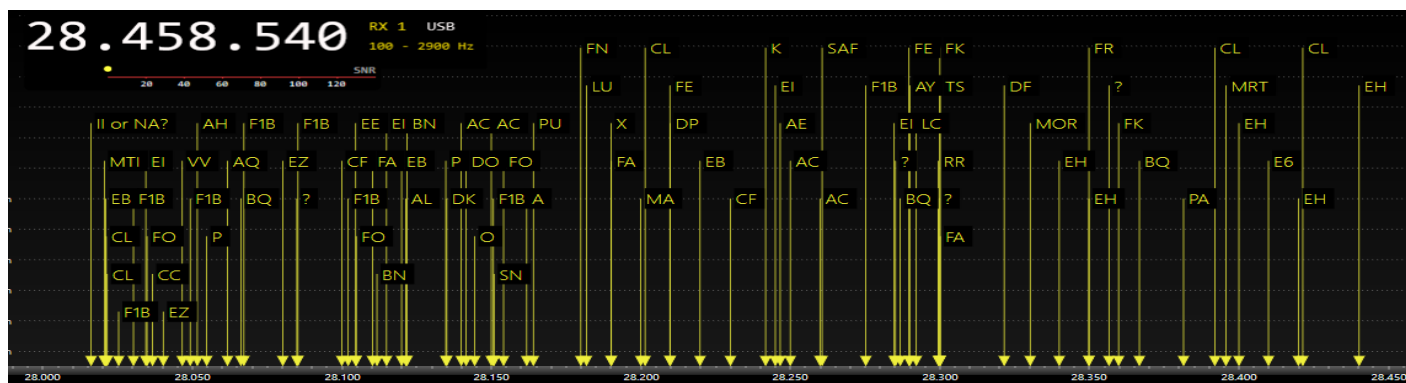
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7055.0	2020	05	06	UKR/RUS		J3E-L		2K7E	Political slogans & insults; many days
7055.0	1748	28	06	UKR/RUS		J3E-L		2k7E	Slogans & patriotic songs; 2 TX on same freq.
7066.0	0812	27	06	RUS		F1B		200H	Printer
10108.0	1530	07	06			F1B			UiPtr; Revs/Ptr
10145.0	1020	29	06			F1B			UiPtr; Revs/Ptr
14108.0	1010	05	06			A1A			UiCW; QTC 116 MMMMM 5BL
14108.0	1012	05	06		2JIB	A1A			HBFP de 2JIB QTC 400 51 5 1306 400 = 003 = MMMMM 5BL
14108.0	0934	08	06	CIS	ITLR	A1A			HODC de ITLR ZWU ZWP ZSB QYT6 K
14289.0	1856	22	06	RUS		RADAR	40	12K0E	OTHR Contayner
21032.0	0821	17	06	CYP/G		RADAR	12.5	40K0E	OTHR; RAF Akrotiri ?
21436.0	1022	05	06			F1B			UiPtr; Revs
21438.0	0920	19	06	RUS	RCV	A1A			RIP90 de RCV QTC 291 32 20 1238 291 = Nawip

Part 2: Fishing Buoys in the 10m band, June 2021

For many long years, we have often heard radio buoys in CW or FSK in the summer months in the 10m band, which serve to mark fishing buoys. We can only speculate about the point of origin of these signals and the operators of these fishing beacons. From our latitudes (DL, HB), the signals are pointing in a southerly or southwesterly direction (ca 160° - 230°), i.e. in the direction of southwest France, south Spain, Portugal

and North Africa, i.e. in the western Mediterranean and Atlantic.

After all, the drift nets can be many kilometers long. They allow fishermen to locate their nets or other fishing gear and find them again.



Raw frequency position of Driftnet- and other buoys for fishing gear in the 10m band

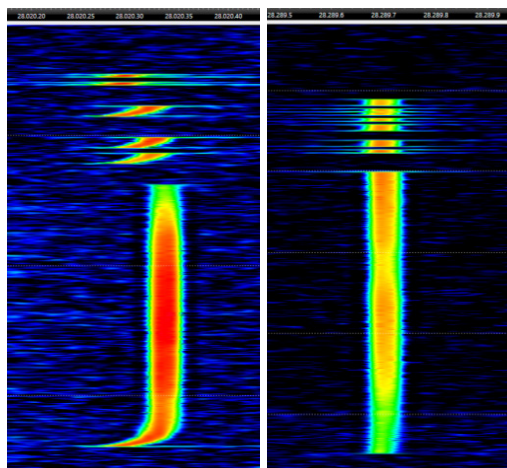
The following table shows buoys reported by various colleagues for June 2021 only:

kHz	DATE	UTC	MODE	IDENT	by
28015.9	13	1634	A1A	II	DK2OM
28020.4	09	1934	A1A	MTI	DK2OM
28020.78	11	0702	A1A	EB	EA6AMM
28020.9	07	1608	A1A	L	DK2OM
28021.2	13	1638	A1A	CL	DK2OM
28025.11	24	1548	F1B		EA6AMM
28030.06	24	1540	F1B		EA6AMM
28034.2	09	1400	A1A	EI	DK2OM
28035.8	08	2021	A1A	FO	DK2OM
28036.45	11	0645	A1A	CC	EA6AMM
28039.85	09	1558	A1A	EZ	DK2OM
28046.38	09	1917	A1A	VV	G4DYA
28048.96	12	1518	F1B		EA6AMM
28051.41	11	1412	A1A	AH	EA6AMM
28054.56	17	1524	A1A	P	EA6AMM
28066	11	1406	A1A	BQ	EA6AMM
28079.834	09	1501	A1A	EZ	HB9CET
28085.0	09	1443	F1B		HB9CET
28099.74	10	1336	A1A	CF	EA6AMM
28101.87	24	1519	F1B		EA6AMM
28104.38	10	1329	A1A	EE	EA6AMM
28104.58	16	1157	A1A	FO	EA6AMM
28110	30	1759	A1A	FA	G4DYA
28111	08	1957	A1A	FA	DK2OM
28111.5	08	2001	A1A	BN	DK2OM
28114.7	16	1859	A1A	EI	EA6AMM
28119.74	15	1010	A1A	EB	EA6AMM
28121.16	13	1935	A1A	AL	EA6AMM
28121.55	17	1532	A1A	BN	EA6AMM
28134.53	12	1508	A1A	P	EA6AMM
28138.86	15	1016	A1A	DK	EA6AMM
28139.7	11	0631	A1A	AC	EA6AMM
28141.34	13	1117	A1A	DO	EA6AMM
28141.41	29	1454	A1A	EE	EA6AMM
28144.2	24	1603	A1A	O	EA6AMM

kHz	DATE	UTC	MODE	IDENT	by
28149.74	10	0717	A1A	AC	EA6AMM
28150.66	24	1606	A1A	SN	EA6AMM
28153.85	16	0719	A1A	FO	EA6AMM
28161.58	15	1003	A1A	A	EA6AMM
28163.89	16	1149	A1A	PU	EA6AMM
28179.6	09	1552	A1A	FA	DK2OM
28181.5	07	1608	A1A	LU	DK2OM
28189.79	17	0957	A1A	X	EA6AMM
28189.91	09	2032	A1A	FA	G4DYA
28199.75	09	1438	A1A	MA	DK2OM
28209.48	17	1007	A1A	FE	EA6AMM
28209.6	11	1324	A1A	DP	DK2OM
28209.62	29	1507	A1A	AY	EA6AMM
28219.56	12	0752	A1A	EB	EA6AMM
28229.73	17	1551	A1A	CF	EA6AMM
28241.49	14	1116	A1A	K	EA6AMM
28244.74	16	1927	A1A	EI	EA6AMM
28246.37	12	0758	A1A	AE	EA6AMM
28249.74	13	1437	A1A	AC	DK2OM
28249.75	13	1134	A1A	AC	EA6AMM
28259.685	13	1146	A1A	AC	EA6AMM
28260.4	10	1526	A1A	SAF	DK2OM
28275	10	0833	F1B		DK2OM
28284.98	09	1509	A1A	EI	DK2OM
28286.5	19	1442	A1A	BQ	DK2OM
28289.45	17	1029	A1A	FE	EA6AMM
28289.69	13	1858	A1A	IC	EA6AMM
28289.7	17	1045	A1A	AY	DK2OM
28291.9	17	1255	A1A	LC	DK2OM
28299.3	25	1702	A1A	RR	DK2OM
28299.8	17	1601	A1A	FD	EA6AMM
28299.8	09	1548	A1A	FA	DK2OM
28299.83	15	1042	A1A	TS	EA6AMM
28301.3	08	2020	A1A	DL	DK2OM
28330	27	1029	A1A	MOR	DK2OM

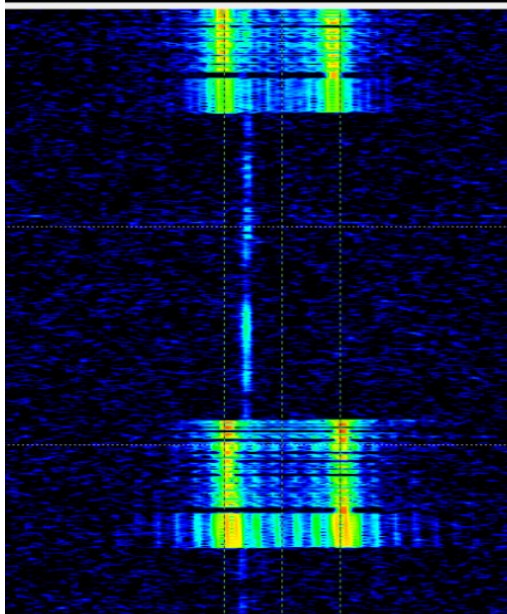
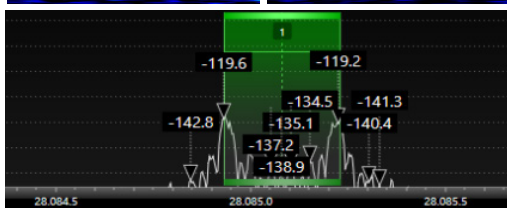
28336.5	17	1045	A1A	BQ	EA6AMM
28349.63	15	1032	A1A	EH	EA6AMM
28349.64	11	1224	A1A	FR	EA6AMM
28359.56	09	1354	A1A	FK	EA6AMM
28366.3	23	1449	A1A	BQ	DK2OM
28381.28	11	1241	A1A	PA	EA6AMM
28391.74	12	1459	A1A	CL	EA6AMM

28395.45	16	0730	A1A	MRT	EA6AMM
28399.8	09	1349	A1A	EZ	EA6AMM
28409.68	09	1341	A1A	EZ	EA6AMM
28419.69	11	1211	A1A	EH	EA6AMM
28421.16	11	0717	A1A	CL	EA6AMM
28440	11	1220	A1A	EH	EA6AMM



Screenshot from two CW Buoys.

On the left the typical rising signal.
On the right a buoy with constant carrier



Screenshot of a GPS Buoy

Very short FSK (F1B) bursts, encrypted transmission of GPS position and maybe some other short informations

Mainly observed with
- Bandwidth 270 to 300Hz
- Symbol rate often 51 Bd

Many thanks to all our valued helpers.

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