

SWL INFO by DIRK RIJMENANTS – ONL11714

IARU REGION 1 (EUROPE) HF BAND PLAN AND INTERNATIONAL HF BROADCAST (2012)

136 Khz	Ham
135.7 - 137.8	CW, QRSS and narrow band digital modes
160 Meter	Ham
1810 - 1838	CW, 1836 kHz - QRP Centre of Activity
1838 - 1840	Narrow band modes
1840 - 1843	All modes – digimodes, (*)
1843 - 2000	All modes, (*)
120 Meter	Broadcast
2300 - 2495	International broadcast - Tropical (regional)
90 Meter	Broadcast
3200 - 3400	International broadcast - Tropical
80 Meter	Ham
3500 - 3510	CW, priority for intercontinental operation
3510 - 3560	CW, contest preferred, 3555 kHz - QRS Centre of Activity
3560 - 3580	CW, 3560 kHz - QRP Centre of Activity
3580 - 3590	Narrow band modes - digimodes
3590 - 3600	Narrow band modes - digimodes, automatically controlled data stations
3600 - 3620	All modes - digimodes, automatically controlled data station, (*)
3600 - 3650	All modes, 3630 kHz - Digital Voice Centre of Activity, SSB contest preferred, (*)
3650 - 3700	All modes, 3690 kHz - SSB QRP Centre of Activity
3700 - 3800	All modes, SSB contest preferred, 3735 kHz - Image Centre of Activity 3760 kHz - Region 1 Emergency Centre of Activity
3775 - 3800	All modes, priority for intercontinental operation
75 Meter	Broadcast
3900 - 4000	International broadcast – Tropical band
60 Meter	Broadcast
4750 - 5060	International broadcast - Tropical band
49 Meter	Broadcast
5900 - 6200	International broadcast
42 Meter	Ham
7000 - 7025	CW, contest preferred
7025 - 7040	CW, 7030 kHz - QRP Centre of Activity
7040 - 7047	Narrow band modes - digimodes
7047 - 7050	Narrow band modes – digimodes, automatically controlled data stations
7050 - 7053	All modes - digimodes, automatically controlled data stations (*)
7053 - 7060	All modes - digimodes
7060 - 7100	All modes, SSB contest preferred 7070 kHz - Digital Voice Centre of Activity 7090 kHz - SSB QRP Centre of Activity
7100 - 7130	All modes, 7110 kHz – Region 1 Emergency Centre of Activity
7130 - 7200	All modes, SSB contest preferred, 7165 kHz - Image Centre of Activity
7175 - 7200	All modes, priority for intercontinental operation
41 Meter	Broadcast
7200 - 7450	International broadcast
31 Meter	Broadcast
9400 - 9900	International broadcast
30 Meter	Ham
10100 - 10140	CW, 10116 kHz - QRP Centre of Activity
10140 - 10150	Narrow band modes – digimodes

25 Meter	Broadcast
11600 - 12100	International broadcast
22 Meter	Broadcast
13570 - 13870	International broadcast – mostly Eurasia
20 Meter	Ham
14000 - 14060	CW, contest preferred, 14055 kHz - QRS Centre of Activity
14060 - 14070	CW, 14060 kHz - QRP Centre of Activity
14070 - 14089	Narrow band modes - digimodes
14089 - 14099	Narrow band modes - digimodes, automatically controlled data stations
14099 - 14101	IBP, exclusively for beacons
14101 - 14112	All modes - digimodes, automatically controlled data stations
14112 - 14125	All modes
14125 - 14300	All modes, SSB contest preferred, 14130 kHz - Digital Voice Centre of Activity 14195 kHz ± 5 kHz - Priority for Dxpeditions 14230 kHz - Image Centre of Activity 14285 kHz - SSB QRP Centre of Activity
14300 - 14350	All modes, 14300 kHz - Global Emergency centre of activity
19 Meter	Broadcast
15100 - 15800	International broadcast
17 Meter	Broadcast
17480 - 17900	International broadcast
17 Meter	Ham
18068 - 18095	CW, 18086 kHz - QRP Centre of Activity
18095 - 18105	Narrow band modes - digimodes
18105 - 18109	Narrow band modes - digimodes, automatically controlled data stations
18109 - 18111	IBP, exclusively for beacons
18111 - 18120	All modes - digimodes, automatically controlled data stations
18120 - 18168	All modes, 18130 kHz - SSB QRP Centre of Activity 18150 kHz - Digital Voice Centre of Activity 18160 kHz - Global Emergency Centre of Activity
15 Meter	Broadcast
18900 - 19020	International broadcast
15 Meter	Ham
21000 - 21070	CW, 21055 kHz - QRS Centre of Activity 21060 kHz - QRP Centre of Activity
21070 - 21090	Narrow band modes - digimodes
21090 - 21110	Narrow band modes - digimodes, automatically controlled data stations
21110 - 21120	All modes (excluding SSB) - digimodes, automatically controlled data stations
21120 - 21149	Narrow band modes
21149 - 21151	IBP, exclusively for beacons
21151 - 21450	All modes, 21180 kHz - Digital Voice Centre of Activity 21285 kHz - SSB QRP Centre of Activity 21340 kHz - Image Centre of Activity 21360 kHz - Global Emergency Centre of Activity
13 Meter	Broadcast
21450 - 21850	International broadcast

12 Meter	Ham
24890 - 24915	CW, 24906 kHz - QRP centre of activity
24915 - 24925	Narrow band modes - digimodes
24925 - 24929	Narrow band modes - digimodes, automatically controlled data stations (unattended)
24929 - 24931	IBP, exclusively for beacons
24931 - 24940	All modes - digimodes, automatically controlled data stations
24940 - 24990	All modes, 24960 kHz - Digital Voice Centre of Activity
11 Meter	Broadcast
25600 - 26100	International broadcast
10 Meter	Ham
28000 - 28070	CW, 28055 kHz - QRS Centre of Activity 28060 kHz - QRP Centre of Activity
28070 - 28120	Narrow band modes - digimodes
28120 - 28150	Narrow band modes - digimodes, automatically controlled data stations (unattended)
28150 - 28190	Narrow band modes
28190 - 28199	IBP, regional time shared beacons
28199 - 28201	IBP, worldwide time shared beacons
28201 - 28225	IBP, continuous duty beacons
28225 - 28300	All modes - beacons
28300 - 28320	All modes - digimodes, automatically controlled data stations
28320 - 29100	All modes, 28330 kHz - Digital Voice Centre of Activity 28360 kHz - SSB QRP Centre of Activity 28680 kHz - Image Centre of Activity
29110 - 29190	All modes - FM simplex (<i>H1 - H9</i>) – 10 kHz channels
29200 - 29300	All modes - digimodes, automatically controlled data stations
29300 - 29510	Satellite-downlink
29510 - 29520	Guard channel
29520 - 29590	All modes - FM repeater input (<i>RH1 – RH8</i>) – 10 kHz channels
29600	All modes - FM calling channel
29610	All modes - FM simplex-repeaters
29620 - 29690	All modes - FM repeater outputs (<i>RH1 – RH8</i>) – 10 kHz channels
29700	Band limit

DEFINITIONS

All modes CW, SSB and those modes listed as Centres of Activity, plus AM (Consideration should be given to adjacent channel users).

Image modes: any analogue or digital image modes within the appropriate bandwidth, for example SSTV and FAX.

Narrow band modes: all modes using up to 500 Hz bandwidth, including CW, RTTY, PSK etc.

Digimodes: any digital mode used within the appropriate bandwidth, for example RTTY, PSK, MT63 etc.

Sideband Usage Below 10MHz use lower sideband (LSB), above 10 MHz use upper sideband (USB).

(*) Lowest dial setting for LSB Voice mode: 1843, 3603 and 7053 kHz.

NCDXF/IARU BEACONS

These beacons help high-frequency radio users assess the current condition of the ionosphere.

18 beacons transmit one by one for 10 seconds in a 3 minutes cycle. On a one-hour cycle, the first beacon starts at the minutes 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54 and 57 and is followed by the remaining 17 beacons.

The first beacon differs for each frequency. The first beacon on 14.100 Mhz is beacon 1 (4U1UN), on 18.100 Mhz beacon 2(VE8AT), on 21.150 Mhz beacon 3 (W6WX), on 24.930 Mhz beacon 4 (KH6WO) and on 28.200 Mhz beacon 5(ZL6B).

NCDXF/IARU BEACONS				
1	2	3	4	5
14.100	18.110	21.150	24.930	28.200

Beacon Format (10 seconds)				
100 Watts		10 Watts	1 Watt	0.1 Watts
Callsign	Dash	Dash	Dash	Dash

Nr	Callsign	Beacon	Location	Position
1	4U1UN	United Nations	New York City	40°45' N 73°58' W
2	VE8AT	Canada	Eureka, Nunavut	79°59' N 85°57' W
3	W6WX	United States	Mt. Umunhum	37°09' N 121°54' W
4	KH6WO	Hawaii	Laie	21°38' N 157°55' W
5	ZL6B	New Zealand	Masterton	41°03' S 175°36' E
6	VK6RBP	Australia	Rolystone	32°06' S 116°03' E
7	JA2IGY	Japan	Mt. Asama	34°27' N 136°47' E
8	RR9O	Russia	Novosibirsk	54°59' N 82°54' E
9	VR2B	Hong Kong	Hong Kong	22°16' N 114°09' E
10	4S7B	Sri Lanka	Colombo	6°6' N 80°13' E
11	ZS6DN	South Africa	Pretoria	25°54' 18.28" S 28°15' 51.86" E
12	5Z4B	Kenya	Kariobangi	1°15' S 36°53' E
13	4X6TU	Israel	Tel Aviv	32°03' N 34°46' E
14	OH2B	Finland	Lohja	60°19' N 24°50' E
15	CS3B	Madeira	Santo da Serra	32°43' N 16°48' W
16	LU4AA	Argentina	Buenos Aires	34°37' S 58°21' W
17	OA4B	Peru	Lima	12°04' S 76°57' W
18	YV5B	Venezuela	Caracas	10°25' N 66°51' W

INTERNATIONAL CALL SIGN COUNTRY LIST

2AA – 9MZ

2AA-2ZZ	UK and Northern Ireland
3AA-3AZ	Monaco
3BA-3BZ	Mauritius
3CA-3CZ	Equatorial Guinea
3DA-3DM	Swaziland
3DN-3DZ	Fiji
3EA-3FZ	Panama
3GA-3GZ	Chile
3HA-3UZ	China
3VA-3VZ	Tunisia
3WA-3WZ	Viet Nam
3XA-3XZ	Guinea
3YA-3YZ	Norway
3ZA-3ZZ	Poland
4AA-4CZ	Mexico
4DA-4IZ	Philippines
4JA-4KZ	Azerbaijani Republic
4LA-4LZ	Georgia
4MA-4MZ	Venezuela
4NA-4OZ	Serbia & Montenegro
4PA-4SZ	Sri Lanka
4TA-4TZ	Peru
4UA-4UZ	United Nations
4VA-4VZ	Haiti
4WA-4WZ	Timor - Leste
4XA-4XZ	Israel
4YA-4YZ	International Civil Aviation Org
4ZA-4ZZ	Israel
5AA-5AZ	Libya
5BA-5BZ	Cyprus
5CA-5GZ	Morocco
5HA-5IZ	Tanzania
5JA-5KZ	Colombia
5LA-5MZ	Liberia
5NA-5OZ	Nigeria
5PA-5QZ	Denmark
5RA-5SZ	Madagascar
5TA-5TZ	Mauritania
5UA-5UZ	Niger
5VA-5VZ	Togolese Republic

5WA-5WZ	Samoa
5XA-5XZ	Uganda
5YA-5ZZ	Kenya
6AA-6BZ	Egypt
6CA-6CZ	Syria
6DA-6JZ	Mexico
6KA-6NZ	South Korea
6OA-6OZ	Somalia
6PA-6SZ	Pakistan
6TA-6UZ	Sudan
6VA-6WZ	Senegal
6XA-6XZ	Madagascar
6YA-6YZ	Jamaica
6ZA-6ZZ	Liberia
7AA-7IZ	Indonesia
7OA-7OZ	Yemen
7PA-7PZ	Lesotho
7QA-7QZ	Malawi
7RA-7RZ	Algeria
7SA-7SZ	Sweden
7TA-7YZ	Algeria
7ZA-7ZZ	Saudi Arabia
8AA-8IZ	Indonesia
8JA-8NZ	Japan
8OA-8OZ	Botswana
8PA-8PZ	Barbados
8QA-8QZ	Maldives
8RA-8RZ	Guyana
8SA-8SZ	Sweden
8TA-8YZ	India
8ZA-8ZZ	Saudi Arabia
9AA-9AZ	Croatia
9BA-9DZ	Iran
9EA-9FZ	Ethiopia
9GA-9GZ	Ghana
9HA-9HZ	Malta
9IA-9JZ	Zambia
9KA-9KZ	Kuwait
9LA-9LZ	Sierra Leone
9MA-9MZ	Malaysia

9NA – HLZ

9NA-9NZ	Nepal
9OA-9TZ	Congo
9UA-9UZ	Burundi
9VA-9VZ	Singapore
9WA-9WZ	Malaysia
9XA-9XZ	Rwanda
9YA-9ZZ	Trinidad and Tobago
A2A-A2Z	Botswana
A3A-A3Z	Tonga
A4A-A4Z	Oman
A5A-A5Z	Bhutan
A6A-A6Z	United Arab Emirates
A7A-A7Z	Qatar
A8A-A8Z	Liberia
A9A-A9Z	Bahrain
AAA-ALZ	United States of America
AMA-AOZ	Spain
APA-ASZ	Pakistan
ATA-AWZ	India
AXA-AXZ	Australia
AYA-AZZ	Argentina
BAA-BZZ	China
C2A-C2Z	Nauru
C3A-C3Z	Andorra
C4A-C4Z	Cyprus
C5A-C5Z	Gambia
C6A-C6Z	Bahamas
C7A-C7Z	World Meteorological Org
C8A-C9Z	Mozambique
CAA-CEZ	Chile
CFA-CKZ	Canada
CLA-CMZ	Cuba
CNA-CNZ	Morocco
COA-COZ	Cuba
CPA-CPZ	Bolivia
CQA-CUZ	Portugal
CVA-CXZ	Uruguay
CYA-CZZ	Canada
D2A-D3Z	Angola
D4A-D4Z	Cape Verde

D5A-D5Z	Liberia
D6A-D6Z	Comoros
D7A-D9Z	South Korea
DAA-DRZ	Germany
DSA-DTZ	South Korea
DUA-DZZ	Philippines
E2A-E2Z	Thailand
E3A-E3Z	Eritrea
E4A-E4Z	Palestinian Authority
E5A-E5Z	Cook Islands
EAA-EHZ	Spain
EIA-EJZ	Ireland
EKA-EKZ	Armenia
ELA-ELZ	Liberia
EMA-EOZ	Ukraine
EPA-EQZ	Iran
ERA-ERZ	Moldova
ESA-ESZ	Estonia
ETA-ETZ	Ethiopia
EUA-EWZ	Belarus
EXA-EXZ	Kyrgyzia
EYA-EYZ	Tajikistan
EZA-EZZ	Turkmenistan
FAA-FZZ	France
GAA-GZZ	UK and Northern Ireland
H2A-H2Z	Cyprus
H3A-H3Z	Panama
H4A-H4Z	Solomon Islands
H6A-H7Z	Nicaragua
H8A-H9Z	Panama
HAA-HAZ	Hungary
HBA-HBZ	Switzerland
HCA-HDZ	Ecuador
HEA-HEZ	Switzerland
HFA-HFZ	Poland
HGA-HGZ	Hungary
HHA-HHZ	Haiti
HIA-HIZ	Dominican Republic
HJA-HKZ	Colombia
HLA-HLZ	South Korea

HMA – TKZ

HMA-HMZ	North Korea
HNA-HNZ	Iraq
HOA-HPZ	Panama
HQA-HRZ	Honduras
HSA-HSZ	Thailand
HTA-HTZ	Nicaragua
HUA-HUZ	El Salvador
HVA-HVZ	Vatican City State
HWA-HYZ	France
HZA-HZZ	Saudi Arabia
IAA-IZZ	Italy
J2A-J2Z	Djibouti
J3A-J3Z	Grenada
J4A-J4Z	Greece
J5A-J5Z	Guinea-Bissau
J6A-J6Z	Saint Lucia
J7A-J7Z	Dominica
J8A-J8Z	Saint Vincent and the Grenadines
JAA-JSZ	Japan
JAA-JSZ	Japan
JTA-JVZ	Mongolia
JWA-JXZ	Norway
JYA-JYZ	Jordan
JZA-JZZ	Indonesia
KAA-KZZ	United States of America
L2A-L9Z	Argentine Republic
LAA-LNZ	Norway
LOA-LWZ	Argentine Republic
LXA-LXZ	Luxembourg
LYA-LYZ	Lithuania
LZA-LZZ	Bulgaria
MAA-MZZ	UK and Northern Ireland
NAA-NZZ	United States of America
OAA-OCZ	Peru
ODA-ODZ	Lebanon
OEA-OEZ	Austria
OFA-OJZ	Finland
OKA-OLZ	Czech Republic
OMA-OMZ	Slovak Republic
ONA-OTZ	Belgium

OUA-OZZ	Denmark
P2A-P2Z	Papua New Guinea
P3A-P3Z	Cyprus
P4A-P4Z	Netherlands Aruba
P5A-P9Z	North Korea
PAA-PIZ	Netherlands
PJA-PJZ	Netherlands Antilles
PKA-POZ	Indonesia
PPA-PYZ	Brazil
PZA-PZZ	Suriname
RAA-RZZ	Russian Federation
S2A-S3Z	Bangladesh
S5A-S5Z	Slovenia
S6A-S6Z	Singapore
S7A-S7Z	Seychelles
S8A-S8Z	South Africa
S9A-S9Z	Sao Tome and Principe
SAA-SMZ	Sweden
SNA-SRZ	Poland
SSA-SSM	Egypt
SSN-STZ	Sudan
SUA-SUZ	Egypt
SVA-SZZ	Greece
T2A-T2Z	Tuvalu
T3A-T3Z	Kiribati
T4A-T4Z	Cuba
T5A-T5Z	Somalia
T6A-T6Z	Afghanistan
T7A-T7Z	San Marino
T8A-T8Z	Palau
T9A-T9Z	Bosnia and Herzegovina
TAA-TCZ	Turkey
TDA-TDZ	Guatemala
TEA-TEZ	Costa Rica
TFA-TFZ	Iceland
TGA-TGZ	Guatemala
THA-THZ	France
TIA-TIZ	Costa Rica
TJA-TJZ	Cameroon
TKA-TKZ	France

HAM RADIO CODES

COMMON Q-CODES		
Signal	Question	Answer, Advice or Order
QRG	Will you indicate my exact frequency in kilocycles?	Your frequency is ... kc.
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is ... 1. Good. 2. Variable. 3. Bad.
QRJ	Are you receiving me badly? Are my signals weak?	I cannot receive you. Your signals are too weak.
QRK	What is the legibility of my signals (1 to 5)?	The legibility of your signals is ... (1 to 5).
QRL *	Are you busy?	I am busy (or busy with....). Please do not interfere.
QRM *	Are you being interfered with?	I am being interfered with.
QRN *	Are you troubled by static?	I am troubled by static.
QRO *	Must I increase power?	Increase power.
QRP *	Must I decrease power?	Decrease power.
QRQ *	Must I send faster?	Send faster ... (words per min.).
QRS *	Must I send more slowly?	Transmit more slowly ... (w.p.m.).
QRT *	Must I stop transmission?	Stop transmission.
QRU *	Have you anything for me?	I have nothing for you.
QRV *	Are you ready?	I am ready.
QRW	Must I advise ... that you are calling him on ... kc?	Please advise ... that I am calling him on ... kc.
QRX *	When will you call again?	I will call you again at ... hours (on ... kc.).
QRZ *	By whom am I being called?	You are being called by ...
QSA	What is the strength of my signals (1 to 5)?	The strength of your signals is ... (1 to 5).
QSB *	Does the strength of my signals vary?	The strength of your signals varies.
QSD	Is my keying correct? Are my signals distinct?	Your keying is incorrect; your signals are bad.
QSG	Must I transmit ... telegrams (or one telegram) at a time?	Transmit ... telegrams (or one telegram) at a time.
QSK *	Shall I continue the transmission of all my traffic?	I can hear you between my signals. Continue: I shall interrupt you if necessary.
QSL *	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram I sent you?	Repeat the last telegram you sent me.
QSO *	Can you communicate with ... directly (or through...)?	I can communicate with ... direct (or through...).
QSP	Will you relay to ...?	I will relay to ... free of charge.
QSV	Shall I send a series of VVV....?	Send a series of VVV.
QSX	Will you listen for ... (call sign) on ... kcs?	I am listening for ... on ... kcs.
QSY *	Shall I change to ... kilocycles without changing the type of wave?	Change to ... kc. without changing type of wave.
QSZ	Shall I send each word or group twice?	Send each word or group twice.
QTA	Shall I cancel nr ... as if it had not been sent?	Cancel nr ... as if it had not been sent.
QTB	Do you agree with my word count?	I do not agree with your word count; I shall repeat the first letter of each word and the first figure of each number.
QTC	How many telegrams have you to send?	I have ... telegrams for you or for
QTH *	What is your position (location)?	My position (location) is
QTR	What is the exact time?	The exact time is
QST *		General call preceding a message address to all amateurs and A.R.R.L. Members. This is in effect "CQ ARRL".
QRRR		Official A.R.R.L. "land SOS." A distress call for emergency use only.

* Most commonly used HAM codes

RST Code			
	R - Readability	S - Strength	T - Tone (often omitted)
1	Unreadable	Faint signal, barely perceptible	Sixty cycle a.c or less, very rough and broad
2	Barely readable, occasional words distinguishable	Very Weak	Very rough a.c., very harsh and broad
3	Readable with considerable difficulty	Weak	Rough a.c. tone, rectified but not filtered
4	Readable with practically no difficulty	Fair	Rough note, some trace of filteringfrequency
5	Perfectly readable	Fairly Good	Filtered rectified a.c. but strongly ripple-modulated
6	not used	Good	Filtered tone, definite trace of ripple modulation
7	not used	Moderately Strong	Near pure tone, trace of ripple modulation
8	not used	Strong	Near perfect tone, slight trace of modulation
9	not used	Very strong signals	Perfect tone, no trace of ripple or modulation of any kind

PHONETIC ALPHABET			
	NATO ARRL	DX	DX Alternate
A	Alpha	America	Amsterdam
B	Bravo	Boston	Baltimore
C	Charlie	Canada	Chile
D	Delta	Denmark	
E	Echo	England	Egypt
F	Foxtrot	France	Finland
G	Golf	Germany	Geneva
H	Hotel	Honolulu	Hawaii
I	India	Italy	Italy
J	Juliet	Japan	Japan
K	Kilo	Kilowatt	Kentucky
L	Lima	London	Luxembourg
M	Mike	Mexico	Montreal
N	November	Norway	Nicaragua
O	Oscar	Ontario	Ocean
P	Papa	Pacific	Portugal
Q	Quebec	Quebec	Queen
R	Romeo	Radio	Romania
S	Sierra	Santiago	Sweden
T	Tango	Tokyo	Texas
U	Uniform	United	Uruguay
V	Victor	Victoria	Venezuela
W	Whiskey	Washington	
X	X-Ray	X-Ray	
Y	Yankee	Yokohama	
Z	Zed/Zulu	Zanzibar	Zulu

MORSE CODE				
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