US Amateur Radio Bands

US AMATEUR POWER LIMITS — FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

40 Meters (7 MHz) 7.075 7.100 7.000 must first register with the Utilities Technology Council online at https://utc.org/plc-database-amateur-notification-process/ Amateurs wishing to operate on either 2,200 or 630 meters You need only register once for each band.

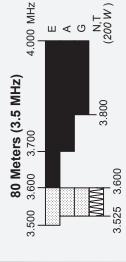


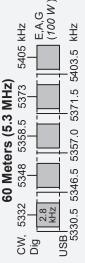


E,A,G

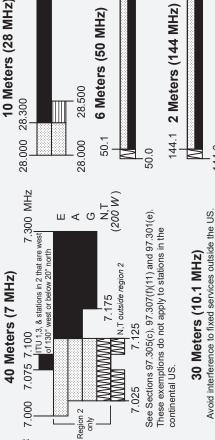
5 W EIRP maximum, except in Alaska within 496 miles of Russia where the power limit is 1 W EIRP.

E,A,G 2.000 MHz Avoid interference to radiolocation operations 160 Meters (1.8 MHz) from 1.900 to 2.000 MHz

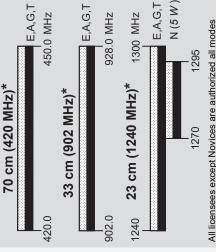




secondary basis with a maximum ERP of 100 W (relative to a General, Advanced, and Extra licensees may operate on a half-wave dipole antenna).









KEY

Note:

29.700 MHz

E,A,G N,T (200 W)

CW operation is permitted throughout all amateur bands.

except for 144.0-144.1 and 219-220 MHz. Test transmissions are authorized above MCW is authorized above 50.1 MHz

51 MHz, except for 219-220 MHz

= phone and image = RTTY and data

E,A,G,T

= SSB phone = CW only

= USB phone, CW, RTTY, and data.

E,A,G,T

148.0 MHz

144.0

E,A,G

200 Watts PEP

10.150 MHz

10.100

1.25 Meters (222 MHz)

forwarding systems *only* = Fixed digital message JUL

E = Amateur Extra

A = Advanced

G = General

N (25 W)

219.0 220.0

14.350 MHz

20 Meters (14 MHz)

14.150

14.000

ш∢б

225.0 MHz

E,A,G,T

T = Technician N = Novice See www.arrl.org/band-plan for detailed band plans.

ARRL

We're At Your Service

860-594-0200 (Fax 860-594-0259) ARRL Headquarters:

E,A,G

17 Meters (18 MHz)

14.150 14.225

14.025

14.175

18.168 MHz

18.110

21.450 MHz

15 Meters (21 MHz)

21.000

ш∢б

21.275

21.025

21.225

Publication Orders:

email: hq@arrl.org

Toll-Free 1-888-277-5289 (860-594-0355) email: orders@arrl.org www.arrl.org/shop

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Toll-Free 1-800-326-3942 (860-594-0355) Getting Started in Amateur Radio: email: newham@arrl.org

122.25-123.0 GHz

10.0-10.5 GHz # 24.0-24.25 GHz 47.0-47.2 GHz 76.0-81.0 GHz

> 2390-2450 MHz 5650-5925 MHz

12 Meters (24 MHz)

2300-2310 MHz 3400-3450 MHz

on the following frequencies:

134-141 GHz 241-250 GHz

Exams: 860-594-0300 email: vec@arrl.org

Copyright © ARRL 2023 rev. 07/25/2024 All above 275 GHz

No pulse emissions

24.930

24.890

E,A,G 24.990 MHz

Considerate Frequency Usage

1.800-2.000	CW	14.233	D-SSTV
1.800-1.810	Digital Modes	14.236	Digital Voice
1.810	CW QRP calling	14.285	QRP SSB calling
1.843-2.000	SSB, SSTV and	14.286	AM calling
1.910	SSB QRP	18.100-	RTTY/Data
1.995-2.000	Experimental	18.105–	Automatically
1.999–2.000	Beacons	18.110	IBP/NCDXF
3.500-3.510	CW DX window	18.162.5	Digital Voice
3.560	QRP CW calling	21.060	QRP CW calling
3.570-3.600	RTTY/Data	21.070-	RTTY/Data
3.585-3.600	Automatically	21.090-	Automatically
3.590	RTTY/Data DX	21.150	IBP/NCDXF
3.790-3.800	DX window	21.340	SSTV
3.845	SSTV	21.385	QRP SSB calling
3.885	AM calling	24.920-	RTTY/Data
3.985	QRP SSB calling	24.925-	Automatically
7.030	QRP CW calling	24.930	IBP/NCDXF
7.040	RTTY/Data DX	28.060	QRP CW calling
7.070–7.125	RTTY/Data	28.070-	RTTY/Data
7.100–7.105	Automatically	28.120-	Automatically
7.171	SSTV	28.190–	Beacons
7.173	D-SSTV	28.200	IBP/NCDXF
7.285	QRP SSB calling	28.385	QRP SSB calling
7.290	AM calling	28.680	SSTV
10.130–	RTTY/Data	29.000-	AM
10.140–	Automatically	29.300-	Satellite downlinks
14.060	QRP CW calling	29.520-	Repeater inputs
14.070-	RTTY/Data	29.600	FM simplex
14.095–	Automatically	29.620-	Repeater outputs
14.100	IBP/NCDXF		
14.1005–	Automatically		
14.230	SSTV		

Q Codes

QRG	Your exact frequency (or that of) iskHz.	Will you tell me my exact frequency (or that of)?
QRL	I am busy (or busy with).	Are you busy? (Used to ask if frequency is in use)
QRM	Your transmission is being interfered with (1–5).	Is my transmission being interfered with?
QRN	I am troubled by static (1-5).	Are you troubled by static?
QRO	Increase power.	Shall I increase power?
QRP	Decrease power.	Shall I decrease power?
QRQ	Send faster (wpm).	Shall I send faster?
QRS	Send more slowly (wpm).	Shall I send more slowly?
QRT	Stop sending.	Shall I stop sending?
QRU	I have nothing for you.	Have you anything for me?
QRV	I am ready.	Are you ready?
QRX	I will call you again at (onkHz).	When will you call me again?
QRZ	You are being called by (onkHz).	Who is calling me?
QRZ QSB	You are being called by (onkHz). Your signals are fading.	Who is calling me? Are my signals fading?
QSB	Your signals are fading.	Are my signals fading?
QSB	Your signals are fading. I can hear you between signals.	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by
QSB QSK QSL	Your signals are fading. I can hear you between signals. I am acknowledging receipt.	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt?
QSB QSK QSL QSO	Your signals are fading. I can hear you between signals. I am acknowledging receipt. I can communicate with direct (or via).	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by relay?
QSB QSK QSL QSO QSP	Your signals are fading. I can hear you between signals. I am acknowledging receipt. I can communicate with direct (or via). I will relay to	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by relay?
QSB QSK QSL QSO QSP QST	Your signals are fading. I can hear you between signals. I am acknowledging receipt. I can communicate with direct (or via). I will relay to General call to all amateurs (CQ ARRL).	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by relay? Will you relay to?
QSB QSK QSL QSO QSP QST QSX	Your signals are fading. I can hear you between signals. I am acknowledging receipt. I can communicate with direct (or via). I will relay to General call to all amateurs (CQ ARRL). I am listening to onkHz.	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by relay? Will you relay to? - Will you listen to onkHz?
QSB QSK QSL QSO QSP QST QSX QSY	Your signals are fading. I can hear you between signals. I am acknowledging receipt. I can communicate with direct (or via). I will relay to General call to all amateurs (CQ ARRL). I am listening to onkHz. Change to another frequency (orkHz).	Are my signals fading? Can I break in on your transmission? Can you acknowledge receipt? Can you communicate with direct or by relay? Will you relay to? Will you listen to onkHz? Shall I change to another frequency?

Prosigns

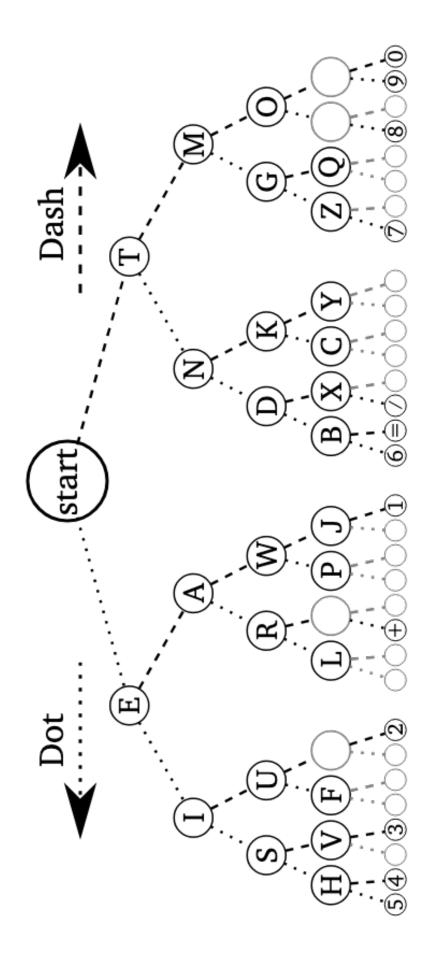
AR	End of message	Often sent as "di-dah-di-dah-dit" (•)
AS	Stand by	"di-dah-di-di-dit"; used to ask someone to wait
ВК	Break	Used to invite the other station to transmit immediately
ВТ	Separator	Break between thoughts or paragraphs ("dah-di-di-dah")
CL	Closing down	Used when signing off the air permanently or for the day
CQ	Calling any station	General call: "di-dah-di-dah" then "dah-dah-di-dah"
CT	Start of message	Used to begin formal traffic messages
EE	Error	Correcting a mistake; usually sent as "di-di-di-di" rapidly
K	Go ahead	Invitation for the other station to transmit
KN	Go ahead, named station only	Stronger version of K—only the called station should respond
R	Roger (message received)	Confirms receipt of last transmission
SK	End of contact	"Silent Key"; final sign-off (di-di-di-dah-di-dah)
SN	Understood	Used in formal message handling (equivalent to "QSL" or "Roger")

NATO Phonetic Alphabet

Α	Alpha	N	November
В	Bravo	0	Oscar
С	Charlie	Р	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	Т	Tango
Н	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Thiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
М	Mike	Z	Zulu

CW

Α	N	0	٠
В	O	1	!
C	Р	2	/
D	Q	3	(
Ε.	R	4)
F	S	5	&
G	Т -	6	:
н	U	7	;
I	V	8	=
J	W	9	+
K	X		
L	Υ	,	
M	Z	?	



SSB

A (Calling CQ): "CQ CQ CQ, this is K1ABC, Kilo One Alpha Bravo Charlie, calling CQ and standing by."

B (Responding): "K1ABC, this is W2XYZ, Whiskey Two X-ray Yankee Zulu."

A: "W2XYZ, good afternoon, you're 59 here in Boston, Massachusetts. Name is John, Juliet Oscar Hotel November. Back to you, W2XYZ from K1ABC."

B: "Thanks John, you're 59 as well in New Jersey. Name is Mike, Mike India Kilo Echo. Nice to meet you, John. K1ABC, this is W2XYZ."

A: "Very good Mike, thanks for the QSO. 73 and have a great day. K1ABC is now clear."

SSB Contest

Activator (**A**) **calling:** "CQ POTA, CQ Parks on the Air, this is K1ABC, Kilo One Alpha Bravo Charlie, calling CQ POTA and standing by."

Hunter (B) responds: "K1ABC, this is W2XYZ."

Activator (A): "W2XYZ, you're 59 into park K-1234."

Hunter (B): "Thanks for the 59. You're 57 in New Jersey. 73!"

Activator (**A**): "Copy the 57 New Jersey. Thanks for hunting! QRZ, this is K1ABC, park K-1234."

CW

A (Calling CQ): "CQ CQ CQ DE K1ABC K1ABC K1ABC K" (Calling any station, this is K1ABC, standing by)

B (Responding): "K1ABC DE W2XYZ W2XYZ K" (K1ABC, this is W2XYZ, over)

A: "W2XYZ DE K1ABC UR 599 IN MA. NAME JOHN. HW? W2XYZ DE K1ABC K" (You're 599 in Massachusetts. My name is John. How do you copy?)

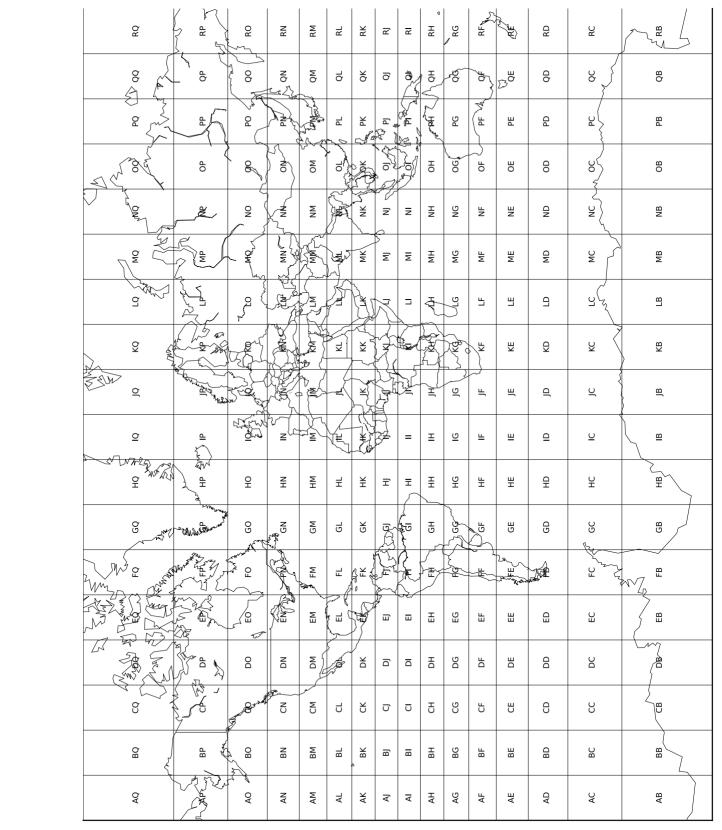
B: "K1ABC DE W2XYZ R UR 589 IN NJ. NAME MIKE. RIG KX3, 10W. WX SUNNY. K1ABC DE W2XYZ K"

(Roger, you're 589 in New Jersey. My name is Mike. My rig is a KX3 running 10 watts. Weather is sunny.)

A: "R TNX MIKE. 73 ES HPE CUAGN. W2XYZ DE K1ABC SK" (Roger, thanks Mike. Best regards and hope to see you again. Signing off.)

Callsign Country Prefixes

K, N, W	United States	EA	Spain
AA-AL	United States	СТ	Portugal
VE	Canada	LU	Argentina
VA, VO, VY	Canada	PY	Brazil
ZL	New Zealand	CX	Uruguay
VK	Australia	YV	Venezuela
JA, JE, JH	Japan	XE	Mexico
G, M	United Kingdom	TI	Costa Rica
F	France	OA	Peru
DL	Germany	CE	Chile
I	Italy	HL	South Korea
ON	Belgium	BY, BG, BH	China
ON PA	Belgium Netherlands	BY, BG, BH HS	China Thailand
PA	Netherlands	HS	Thailand
PA SM, SA	Netherlands Sweden	HS 9V	Thailand Singapore
PA SM, SA OH	Netherlands Sweden Finland	HS 9V VU	Thailand Singapore India
PA SM, SA OH LA, LB	Netherlands Sweden Finland Norway	HS 9V VU 4X, 4Z	Thailand Singapore India Israel
PA SM, SA OH LA, LB OE	Netherlands Sweden Finland Norway Austria	HS 9V VU 4X, 4Z ZS	Thailand Singapore India Israel South Africa Egypt United Arab
PA SM, SA OH LA, LB OE OK	Netherlands Sweden Finland Norway Austria Czech Republic	HS 9V VU 4X, 4Z ZS SU	Thailand Singapore India Israel South Africa Egypt
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