

# CB

## Citizens Band

channel	frequency	channel	frequency
1	26.965 MHz	21	27.215 MHz
2	26.975 MHz	22	27.225 MHz
3	26.985 MHz	23	27.255 MHz
4	27.005 MHz	24	27.235 MHz
5	27.015 MHz	25	27.245 MHz
6	27.025 MHz	26	27.265 MHz
7	27.035 MHz	27	27.275 MHz
8	27.055 MHz	28	27.285 MHz
9	27.065 MHz	29	27.295 MHz
10	27.075 MHz	30	27.305 MHz
11	27.085 MHz	31	27.315 MHz
12	27.105 MHz	32	27.325 MHz
13	27.115 MHz	33	27.335 MHz
14	27.125 MHz	34	27.345 MHz
15	27.135 MHz	35	27.355 MHz
16	27.155 MHz	36	27.365 MHz
17	27.165 MHz	37	27.375 MHz
18	27.175 MHz	38	27.385 MHz
19	27.185 MHz	39	27.395 MHz
20	27.205 MHz	40	27.405 MHz

**10 meters (33.8')** (minus a scosh)

FCC power limits:

4-watts output (AM)

12-watts output (SSB)

# VHF

30–46 MHz	2-way land mobile communication
30–88 MHz	Military VHF-FM, including SINCGARS
43–50 MHz	Cordless phones, walkie-talkies, rc toys, mixed 2-way mobile
<b>50–54 MHz</b>	<b>Amateur radio 6 meters</b>
54 - 88 MHz	TV channels 2 through 6
72–76 MHz	RC models, industrial remote control, and other devices
87.5–108 MHz	FM radio broadcasting
108–118 MHz	Air navigation beacons VOR
118–137 MHz	air traffic control, AM, 121.5 MHz is an emergency frequency
137-138 MHz	Space research, space operations, meteorological satellite
138–144 MHz	Land mobile, auxiliary civil services, satellite, space research,
<b>144–148 MHz</b>	<b>Amateur radio 2 Meters</b>
148-150 MHz	Land mobile, fixed, satellite
150–156 MHz	"VHF business band," public safety, MURS, 2-way land mobile
156–158 MHz	VHF Marine Radio, 156.8 MHz is maritime emergency and contact
159.8-161.6 MHz	Railways, trucking
160.6-162 MHz	Wireless microphones and TV/FM broadcast remote pickup
162.4–162.6 MHz	NOAA Weather Stations
174-216 MHz	television channels 7 - 13
174–216 MHz	professional wireless microphones
216–222 MHz	land mobile, fixed, maritime mobile
<b>222–225 MHz</b>	<b>amateur radio 1.25 meters</b>

# FRS

## Family Radio Service

channel	frequency	max
1	462.563	0.5 watt
2	462.588	0.5 watt
3	462.613	0.5 watt
4	462.638	0.5 watt
5	462.663	0.5 watt
6	462.688	0.5 watt
7	462.713	0.5 watt
8	467.563	0.5 watt
9	467.588	0.5 watt
10	467.613	0.5 watt
11	467.638	0.5 watt
12	467.663	0.5 watt
13	467.688	0.5 watt
14	467.713	0.5 watt

# GMRS

## General Mobile Radio Service

GMRS channel	simplex and repeater output	max power	repeater input
15	462.550	5.0 watt	467.550
16	462.575	5.0 watt	467.575
17	462.600	5.0 watt	467.600
18	462.625	5.0 watt	467.625
19	462.650	5.0 watt	467.650
20	462.675	5.0 watt	467.675
21	462.700	5.0 watt	467.700
22	462.725	5.0 watt	467.725

**70 centemeters (2' 4")**

0.38 - 5.0 watts output

*note how the GMRS frequencies interleave with the FRS, filling in between channels*

# UHF

225–420 MHz	: Government (meteorology, military aviation, and federal 2-way)
420–450 MHz	: Government radiolocation and amateur radio (70 cm band)
433 MHz	: Short range devices (automotive, alarms, home automation ...)
450–470 MHz	: UHF business, GMRS, FRS, 2-way "walkie-talkies", public safety
470–512 MHz	: TV channels 14–20 (also shared for land mobile 2-way radio)
512–698 MHz	: TV channels 21–51 (channel 37 used for radio astronomy)
806–824 MHz	: Public safety and commercial 2-way (formerly TV ch 70–72)
824–851 MHz	: Cellular phone, mobile phone, (formerly TV ch 73–77)
851–869 MHz	: Public safety and commercial 2-way (formerly TV ch 77–80)
869–896 MHz	: Cellular franchises, base station (formerly TV ch 80–83)
<b>902–928 MHz</b>	<b>: amateur radio, cordless phones, stereo, RFID, datalinks</b>
929–932 MHz	: Pagers
935–941 MHz	: Commercial 2-way radio
960–1215 MHz	: Aeronautical Radionavigation
<b>1240–1300 MHz</b>	<b>: Amateur radio (23 cm band)</b>
1452–1492 MHz	: Military use
1710–1755 MHz	: mobile phone uplink
1850–1910 MHz	: PCS mobile phone
1920–1930 MHz	: Cordless telephone
1930–1990 MHz	: PCS base stations
2110–2155 MHz	: AWS mobile phone downlink (DL) Operating Band
<b>2300–2310 MHz</b>	<b>: Amateur radio (13 cm band, lower segment)</b>
2310–2360 MHz	: Satellite radio (Sirius and XM)
<b>2390–2450 MHz</b>	<b>: Amateur radio (13 cm band, upper segment)</b>
2400–2484 MHz	: Wireless LAN, Bluetooth, RC aircraft, Microwave oven

# ham HF

## Frequency Range

1.80-2.00 MHz	160 meter band
3.50 – 4.00 MHz	80 meter band
5.3-5.4 MHz	60 meter channels
7.00-7.30 MHz	40 meter band
10.10-10.15 MHz	30 meter band
14.00-14.350 MHz	20 meter band
18.068-18.168 MHz	17 meter band
21.00-21.45 MHz	15 meter band
24.89-24.99	12 meter band
28.00-29.70	10 meter band
50-54 MHz	6 meter band

# Short Wave

## Frequency Range

2.30–2.495 MHz
3.20 – 3.40 MHz
3.90 – 4.00 MHz
4.75 – 5.06 MHz
5.90 – 6.20 MHz
7.20 – 7.60 MHz
9.40 – 9.90 MHz
11.60 - 12.20 MHz
13.57 - 13.87 MHz
15.10 - 15.80 MHz
17.48 - 17.90 MHz
18.90 - 19.02 MHz
21.45 - 21.85 MHz
25.60 - 26.10 MHz

**selected frequency allocations for comparison**

<b>HF</b>	7.0 - 7.3 MHz	amateur 40-meter
	14 - 14.35 MHz	amateur 20-meter
	28 - 28.7 MHz	amateur 10-meter
<b>VHF</b>	43 - 50 MHz	cordless phones
	50 - 54 MHz	amateur 6-meter
	54 - 88 MHz	tv channels 2 - 6
	87.5 - 108 MHz:	commercial FM
	108 - 137 MHz	air navigation
	144 - 148 MHz	amateur 2-meter
	156 - 158 MHz	maritime band
<b>UHF</b>	222 - 225 MHz	amateur 1.25-meter
<b>microwave</b>	450 - 2,500 MHz	cell phone
	900 - 2,400 MHz	cordless phones
	2,450 MHz	microwave oven

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