

## 2 Metre band – All licence classes

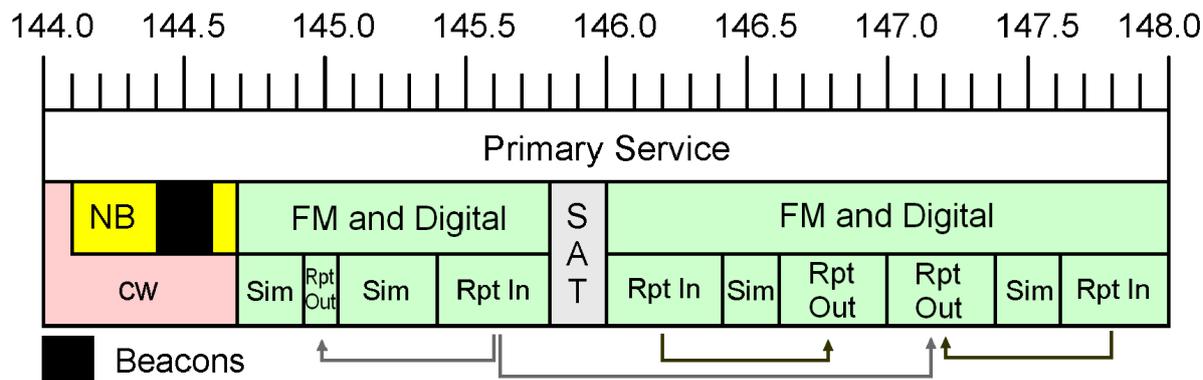
Please note the changes which have been adopted for frequencies between 144.700 and 145.800 MHz. These changes include rearrangement of simplex channels and the provision of extra repeater allocations for use in cases where none of the regular channels is available.

### Band Allocation

144 - 148 MHz

AMATEUR

Primary Service



144.000 - 144.700	NARROW BAND MODES	(Note 1)
144.000 - 144.025	Amateur Satellites (new IARU segment)	
144.000 - 144.100	EME	
144.100 - 144.400	CW / SSB	
144.100	Calling frequency: national primary	
144.200	Calling frequency: national secondary	
144.220 - 144.240	Digital DX modes	
144.240 - 144.300	Guard band: New Zealand beacons	
144.300	SSB chat frequency	
144.320 - 144.340	Digital DX modes	
144.300 - 144.500	Space communications	
144.400 - 144.600	Beacons	(Note 2)
144.600 - 144.700	Experimental	
144.700 - 144.900	DIGITAL SIMPLEX (12.5 or 25 kHz channel spacing)	(Note 4)
144.750	Digital High Site Hotspot	
144.800	Digital Narrow band calling	
144.925 - 145.050	REPEATER OUTPUTS (12.5 kHz channels) (paired with inputs at 145.525 - 145.650) The following legacy frequency to be avoided: VK6RIO Indian Ocean beacon (Perth area)	(Notes 5,7)
144.950		
145.075 - 145.400	FM AND DIGITAL SIMPLEX (25 kHz channels)	(Note 4)
145.100	Non-voice modes (RTTY, SSTV, Fax)	
145.175	National APRS frequency	
145.200	National WICEN frequency	
145.250	CW practice / information beacons (future)	
145.300	National ARDF frequency	
145.325	Internet gateways	
145.350	Internet gateways	
145.375	Internet gateways	

145.400 - 145.775	REPEATER INPUTS (12.5 and 25 kHz channels)	(Note 5)
145.4125 - 145.5125	Paired with outputs at 147.0125 - 147.1125	
145.5250 - 145.6500	Paired with outputs at 147.1250 - 147.250 or 144.9250 - 145.0500	
145.6625 - 145.750	Paired with outputs at 147.2625 - 147.350	
	Legacy frequencies to be avoided:	(Note 7)
145.575	Information beacons (Perth area)	
145.600	Broadcast relays (VK2)	
145.650	CW practice / information beacons (Sydney, Melbourne)	
145.700	ARDF Homing Beacons	
145.800 - 146.000	AMATEUR SATELLITES	(Note 3)
146.0125 - 146.400	REPEATER INPUTS (12.5 / 25 kHz channels)	(Note 5)
146.425 - 146.600	FM SIMPLEX (25 kHz channels)	
146.500	National voice calling frequency	
146.6125 - 147.0000	REPEATER OUTPUTS (12.5 / 25 kHz channels)	(Note 5)
147.0125 - 147.3750	REPEATER OUTPUTS (12.5 / 25 kHz channels)	(Note 5)
147.0125 - 147.1125	Paired with inputs at 147.6125 - 147.7125 or 145.4125 - 145.5125	
147.1250 - 147.250	Paired with inputs at 147.7250 - 147.850 or 145.5250 - 145.6500	
147.2625 - 147.3750	Paired with inputs at 147.8625 - 147.9750 or 145.6625 - 145.7750	
147.400 - 147.600	FM AND DIGITAL SIMPLEX (25 kHz channels)	
147.400	ATV liaison	
147.525	Internet gateways	
147.550	Internet gateways	
147.6125 - 147.975	REPEATER INPUTS	

#### Note 1: Narrow Band Modes

This segment is reserved for modes such as CW, digital modes and SSB with bandwidths up to 4 kHz. Weak signal operation has absolute priority. Calling frequencies should be used only to make initial contact and then vacated as soon as possible. Please avoid any terrestrial operation within the EME segment.

The following spot frequencies are recommended for digital DX operation using SSB-based modes:

- 144.220 / .320 Weak signal modes with bandwidths below 100 Hz, e.g. PSK and slow CW
- 144.225 / .325 Weak signal modes with bandwidths up to 750 Hz, e.g. MFSK, JT65 and similar
- 144.230 / .330 High speed meteor scatter modes with bandwidths up to 3 kHz, e.g. FSK441

Note that the segment 144.110 – 144.160 MHz is also used for international digital mode EME operation.

The band 144.3 - 144.5 MHz is not an IARU recognised satellite band, however some frequencies in this segment may be used at times for space communications.

#### Note 2: Beacons

Beacon frequencies are allocated on a call area basis, e.g. VK1: 144.410 - 144.419, VK2: 144.420 - 144.429 etc. Beacon frequency spacing is 2 kHz. The beacon segment should be kept clear of other transmissions, but note that the internationally recognised frequency for WSPR mode is 144.489 MHz (indicated dial frequency using USB). This corresponds to the WSPR signals actually occupying 144.4904 - 144.4906 MHz.

#### Note 3: Amateur Satellites

The satellite segment should be kept clear of all terrestrial operation.

**Note 4: Simplex Segments**

Any permitted mode and bandwidth may be used in these segments. FM channel spacing is 25 kHz. D-Star and other digital channel spacing is 12.5 or 25 kHz. Channels reserved for special purposes should be kept clear of other operation. For APCO P25 digital voice, Network Access Code (NAC) – 293.

**Note 5: Repeaters**

Channel spacing is 25 kHz for repeaters occupying 16 kHz bandwidth, or 12.5 kHz wherever possible for repeaters occupying 10.1 kHz bandwidth. Transmit - receive offset is 600 kHz, but 1.6 MHz offset may be used in the 147 MHz segment.

The alternative repeater input segment 145.400-145.800 (-1.6 MHz offset) and the repeater outputs in the 144.925-145.050 segment will only be allocated when no standard 600 kHz offset channels above 146 MHz are available.

The following channels are reserved for WICEN repeaters:

147.175	(all states)
147.125, 147.150	(NSW, Queensland)
146.925, 147.300	(Victoria)

**Note 6: Repeater Linking**

Our licence conditions require tone access for repeaters that are linked to repeaters in certain other bands, to prevent transmissions from being relayed on frequencies that the operators are not entitled to use. CTCSS is also used to activate selective linking or for interference protection.

The following CTCSS tones have been adopted for repeater access:

91.5 Hz:	For use with repeaters fitted with CTCSS for interference protection.
141.3 or 146.2 Hz:	To activate links to repeaters on other VHF/UHF bands.
85.4 Hz:	To activate links to other bands that some operators are not permitted to use.

The previously recommended 123 Hz tone is no longer recommended for future repeaters due to problems with false detecting.

**Note 7: New band plan implementation**

Existing legacy repeater, IRLP and AX25 licences allocated prior to September 2015 may remain on their existing frequencies until the licensees choose to initiate a frequency change. Some long established special purpose simplex frequencies (e.g. ARDF) may also need to remain for some time.