

# REVIEW OF 2 METRE BAND PLAN - MAY 2015

The band plan is currently subject to review. Changes are proposed to frequencies between 144.700 and 145.800 MHz. The purpose of the changes is to provide options for future repeater allocations in cases where no alternative channels are available. This may occur if the available channels have been exhausted, or in the case of interference issues.

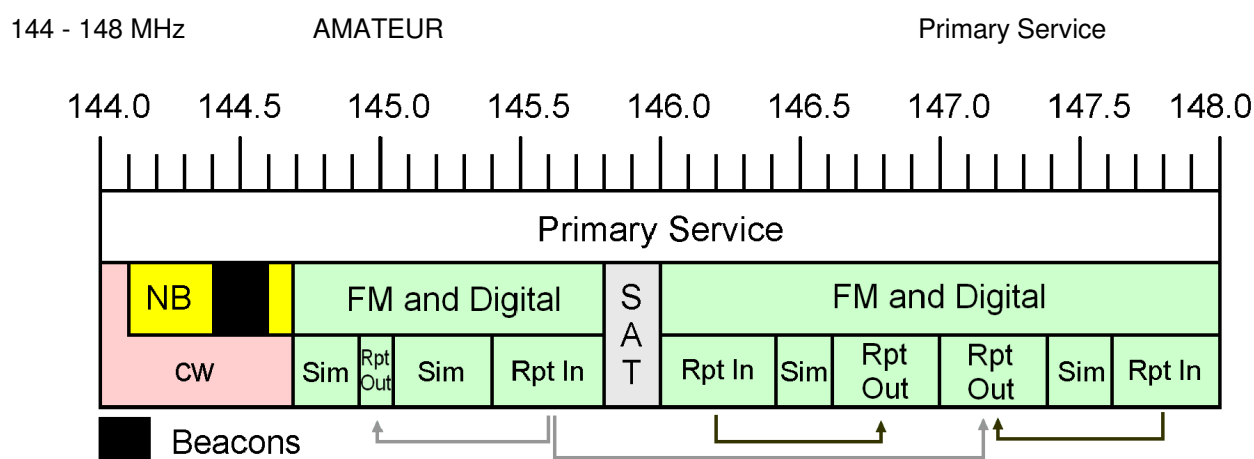
Current frequency allocations that will remain unchanged are shown in black. Segments where changes will occur are shown in blue.

Legacy Fixed Amateur licences: Existing fixed amateur station licensees in the 144.7 - 145.8 MHz allocation made under previous band plans can remain on their current active frequencies until such time as they elect to cancel their licenses or they elect to change frequency to one of the new allocations. There will be no compulsion to change or force frequency relocation. Should legacy stations end up in a situation where their presence is blocking the development of new systems, the operators of the incumbent and new proposed licensee will be asked to find a mutually agreeable resolution to the issue in the spirit of amateur radio cooperation.

The WIA invites comment on these proposed band plan changes.

## 2 Metre band – All licence classes

### Band Allocation



144.000 - 144.700	NARROW BAND MODES	(Note 1)
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)
144.625 - 144.675	Reserved - Experimental	
144.700 - 145.000	SIMPLEX - Digital (12.5 or 25 kHz channel spacing)	(Note 4)
144.700	AX25 Packet	
144.725	AX25 Packet	
144.750	Digital High Site Hotspot	
144.800	Digital Narrow band calling	
144.900	AX25 Packet	

144.925 - 145.050	REPEATER OUTPUTS (12.5 kHz channels) (paired with inputs at 145.525 - 145.650)	(Note 5)
145.075 - 145.400	SIMPLEX - General use (25 kHz channels) Non-voice modes (RTTY, SSTV, Fax) National APRS frequency National WICEN frequency CW practice / information beacons (future) National ARDF frequency Internet gateways Internet gateways Internet gateways	(Note 4)
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 - 145.775	Paired with outputs at 147.2625 - 147.375	
145.575	The following legacy frequencies to be avoided: Information beacons (Perth area)	
145.600	Broadcast relays (VK2)	
145.650	CW practice / information beacons (Sydney, Melbourne)	
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	SIMPLEX - Analog (25 kHz channels) 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 - 147.6725 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 147.8265 - 147.9750 or 145.6625 - 145.7750	
147.400 - 147.600	SIMPLEX (25 kHz channels) ATV liaison Internet gateways Internet gateways AX25 packet radio AX25 packet radio	
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 500 Hz, e.g. MFSK, JT44 and similar

144.230 / .330 High speed meteor scatter modes with bandwidths up to 3 kHz, e.g. FSK441

SSB operators should note that the segment 144.110 – 144.165 MHz is used in some countries 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 144.4885 MHz (indicated dial frequency using USB). This corresponds to the WSPR signals actually occupying 144.4899 - 144.4901 MHz.

#### **Note 3: Amateur Satellites**

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

#### **Note 4: General Use Segments**

Any mode with a bandwidth up to 100 kHz can 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, (suggested Astro ID - ACMA Client Number; 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 repeater segment 145.400-145.800 is a new segment (replacing the original 146.625-146.975 MHz -1.6 MHz offset repeaters) based on the 147.0125-147.3875 repeater outputs. It is also an alternative to the existing +600 kHz offset segment currently defined for these repeaters. It will be allocated only when an unresolvable pager interference issue exists, or when a 600 kHz offset cannot be used due to interference involving LM8 trunked mobile systems.

The repeater pairs with outputs in the 144.925-145.050 segment will only be allocated when no channels above 146 MHz are available. These pairs should be used for 16 kHz (25 kHz channel spacing) services only as a last resort. NOTE: legacy assignments in this segment must be respected.

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: Legacy fixed amateur licences**

Existing legacy repeater, IRLP and AX25 licences allocated prior to September 2015 may remain on their existing channels unless the licensees choose to initiate a frequency change. New services will be planned around these pre-existing licences.