Wireless Institute of Australia

Australian Amateur Band Plans

Updated June 2004

Introduction

Spectrum Management

International spectrum management is the responsibility of the International Telecommunications Union (ITU). The ITU Radio Regulations allocate separate bands for each service such as fixed, mobile, broadcasting or amateur. Some bands are shared by more than one service.

When bands are shared, services designated “Primary” are entitled to full protection from interference caused by secondary services. Secondary services must tolerate interference from primary services operating in the same band, and not cause any interference to primary services. Other services may also be permitted to share bands with primary and secondary services on a non-interference basis.

Each ITU member nation implements the Radio Regulations within its borders. Most member nations follow the ITU allocation tables fairly closely, although they do have the right to make variations to suit local requirements.

In Australia, spectrum management is the responsibility of the Australian Communications Authority (ACA). It determines frequency allocations and licence conditions for all transmitting stations in Australia and its territories.

Amateur Self-Regulation

Amateurs use a wide variety of different modes. Within one amateur band, activity can include CW, voice, satellite and EME activity, and ATV. The best way of avoiding clashes is to set aside different band segments for each of these activities, so that all amateurs can pursue their interests without interference.

Amateur band plans are voluntary agreements, often known as "Gentlemen's Agreements". They are sponsored by the WIA, but they are for the benefit of all amateurs. Most amateurs - WIA members or not - abide by the band plans because it makes sense to give everyone a fair go. Clashes still occur at times, and the usual reason is lack of awareness of the band plans. Most amateurs are willing to change frequency if the problem is explained to them politely.

Band Planning Guidelines

Band plans should satisfy a number of conflicting criteria:

- They should take local conditions into account, but they should be consistent with international usage.
- They should encourage spectrum efficiency, but they should also ensure that all modes have their fair share of spectrum space.
- They should take the popularity of each mode into account, while still providing enough spectrum space for less popular activities. For example, ATV requires far more bandwidth per operator than other modes; and activities such as EME are of major importance regardless of the number of stations involved.
- Band plans must be flexible enough to adapt to changing needs, but they tend to lose support if they are changed too often. The aim must be to think ahead and to make sure that future options are not closed off.

Mode Compatibility

Some modes require exclusive band segments, but others can coexist with similar modes in the same part of the band. On the HF bands, there are three main mode divisions: CW, digital data modes, and SSB. Image modes such as SSTV are usually sent as SSB signals, so these modes can be used in the SSB band segments.

AM receives little use nowadays because it is less efficient than SSB and occupies twice as much bandwidth. But it can still be found, mainly on 160 metres and sometimes around 29 MHz.

On 10 metres, there is also a fourth category for FM. This mode is quite popular above 29 MHz, but it should not be used on lower frequencies because of its wide bandwidth. It should also be noted that most HF radios cannot comply with ACA's bandwidth limit of 6 kHz for FM operation on bands below 10 metres.

On the VHF-UHF bands, the grouping of modes is slightly different. The three main groups are:

- CW and SSB: the preferred modes for weak signal work, including digital DX modes using SSB bandwidths.
- FM: not suitable for weak signal work and not compatible with SSB or CW. This category also includes modes such as packet, which usually use FM mode on the VHF bands.
- ATV: requires a very large bandwidth but has a very low power density, so it needs an exclusive interference-free band segment.

Calling Frequencies

On the VHF bands, the band plans include calling frequencies. These frequencies are "meeting places" and should be used only to make initial contact before moving to another frequency. If you "hog" the calling frequency you will prevent others from making calls or hearing more distant stations that may appear on the frequency.

Beacons

Beacons give an indication of band conditions and provide a warning of DX openings. They also serve as test signals for receiver calibration and testing. There should be no other transmissions within the beacon segments or on their band edges. This applies even if you are hundreds of kilometres away from the nearest beacon! On the VHF/UHF bands, beacon frequencies are allocated according to a geographic allocation plan with a frequency spacing of 2 kHz. Further information on beacon frequency allocations is included in the paper "Guidelines for Unattended Transmitters".

Satellite Segments

The band plans provide separate band segments for satellite operation. Satellite downlink bands should be kept clear of other transmissions at all times - right to the band edges. On bands where the satellite band joins an FM segment, there should be no FM operation on the bandedge.

FM Segments

FM operators can operate on any simplex channel or on unused repeater frequencies. The band plan SSB and beacon segments should be avoided at all times. It is also a good idea to avoid operating simplex on repeater input channels - you may unintentionally key up a distant repeater.

Further Information

The band plans are reviewed regularly, to keep up to date with changing patterns of activity. The band plans apply in all states, so any changes must be discussed and agreed in all states before they are adopted.

If a proposed new application requires a change to the band plan, or if you are aware of any band planning problems in your area, please advise FTAC or the Technical Advisory Committee in your state.

The paper "Guidelines for Unattended Transmitters" contains further information relating to technical standards, frequency allocation and licensing of all kinds of unattended stations including beacons, repeaters, links, digipeaters, gateways and linear translators. An additional section on Internet linking is also to be added shortly. Anyone wishing to set up a station in any of these categories should refer to the "Guidelines" paper as well as the band plans.

HF Bands

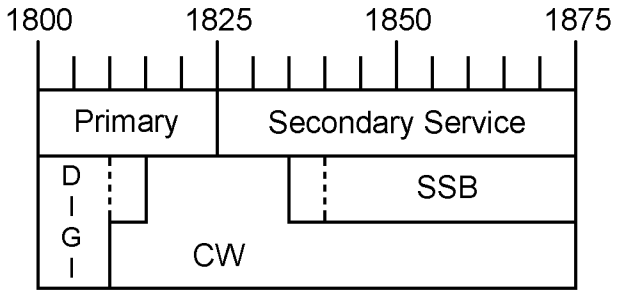
Band Allocations

All HF bands are available to Unrestricted, Intermediate and Limited licensees. Novice and Novice Limited licensees are permitted to operate in the following bands: 3525 - 3625 kHz, 21.125 - 21.300 MHz, and 28.100 - 28.600 MHz.

Note that in 2005 the licence classes will be replaced by a new thee-tier licence structure. For band allocations and privileges of the three new licence classes, please refer to the new 2005 LCD and related information published by the ACA and the WIA.

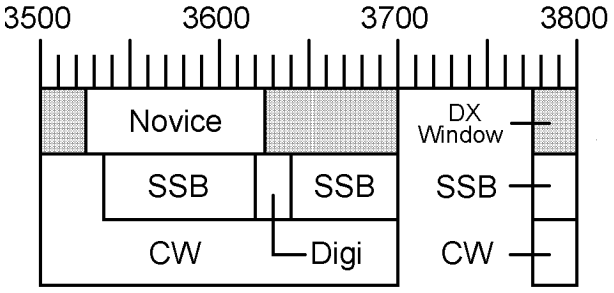
Footnotes for these bands appear after the 10 metre listing.

160 Metres



1800 -	1810	Digital modes	(Notes 1, 2)
1810 -	1840	CW only	(Note 1)
1840 -	1875	SSB / AM	(Note 1)

80 Metres

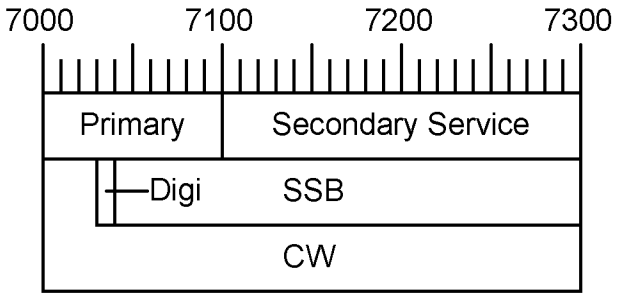


3.500 -	3.700	CW	
3.535 -	3.620	SSB	
3.600		WICEN frequency	
3.620 -	3.640	Digital Modes	(Note 2)
3.640 -	3.700	SSB	
3.776 -	3.800	DX Window	

NOTE: DX WINDOW

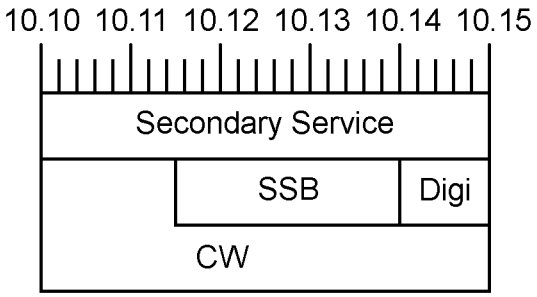
Emissions must not extend below 3776 kHz. Therefore when using LSB, the suppressed carrier frequency should be no lower than 3779 kHz.

40 Metres



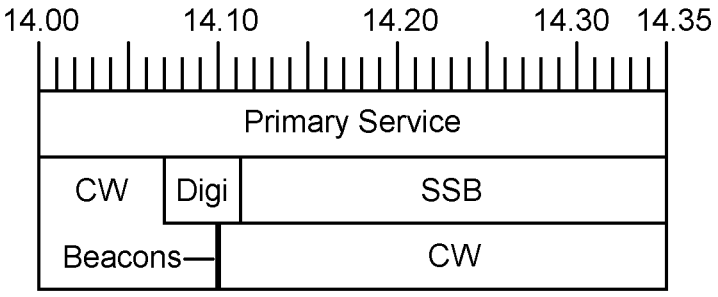
7.000 -	7.300	CW	
7.030 -	7.040	Digital Modes	(Note 2)
7.040 -	7.300	SSB	
7.075		WICEN frequency	

30 Metres



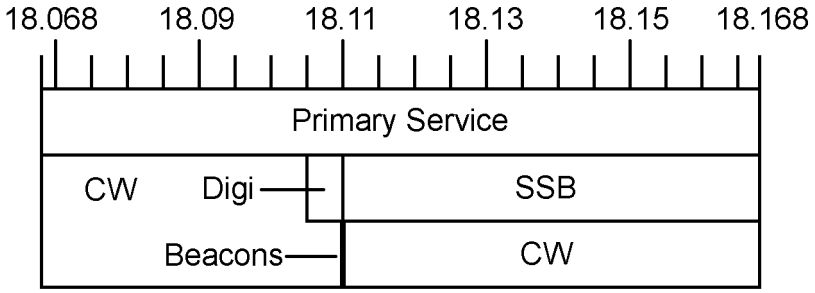
10.100 -	10.150	CW	
10.115 -	10.140	SSB	
10.115		WICEN frequency	
10.140 -	10.150	Digital Modes	(Note 2)

20 Metres



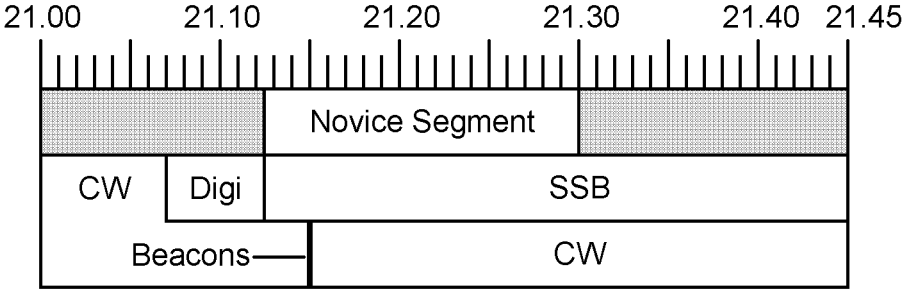
14.000 -	14.350	CW	
14.070 -	14.112	Digital Modes	(Note 2)
14.070 -	14.080	Amtor, PSK etc.	
14.080 -	14.095	RTTY	
14.095 -	14.112	Packet Radio	
14.100		IBP Beacons	(Note 3)
14.112 -	14.350	SSB	
14.125		WICEN frequency	
14.230		SSTV calling frequency	(Note 2)
14.250		FAX calling frequency	(Note 2)

17 Metres



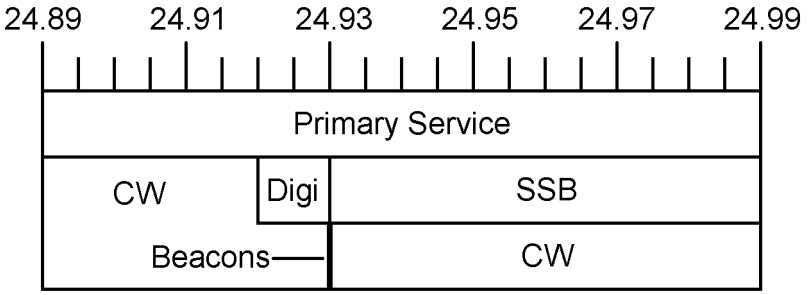
18.068 -	18.168	CW	
18.100 -	18.110	Digital Modes	(Note 2)
18.110		IBP Beacons	(Note 3)
18.110 -	18.168	SSB	
18.150		WICEN frequency	

15 Metres



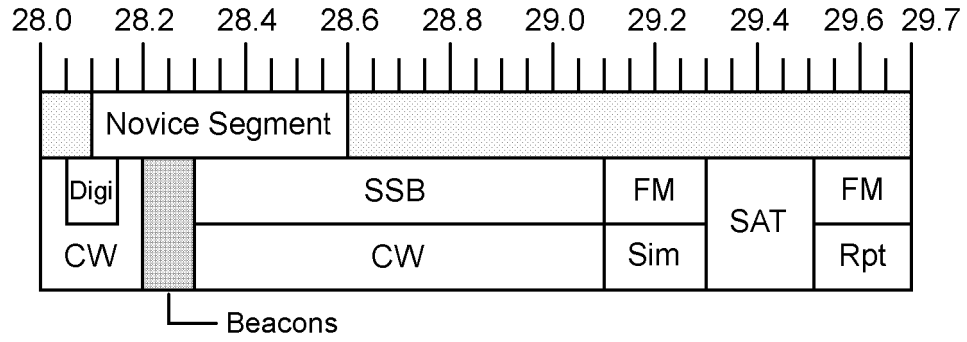
21.000 -	21.450	CW	
21.070 -	21.125	Digital Modes	(Note 2)
21.150		IBP Beacons	(Note 3)
21.150 -	21.450	SSB	
21.190		WICEN frequency	
21.340 +/- 5 kHz		SSTV calling frequency	(Note 2)

12 Metres



24.890 -	24.990	CW	
24.920 -	24.930	Digital Modes	(Note 2)
24.930		IBP Beacons	(Note 3)
24.930 -	24.990	SSB	
24.950		WICEN frequency	

10 Metres



28.000 -	28.200	CW AND DIGITAL MODES	(Note 2)
28.000 -	28.050	CW only	
28.050 -	28.150	Digital Modes	
28.150 -	28.200	CW only	
28.190 -	28.200	IBP Beacons	(Note 3)
28.200 -	28.300	Continuous Duty Beacons	(Note 3)
28.300 -	29.100	CW / SSB / AM	
28.450		WICEN frequency	
28.680 +/- 5 kHz		SSTV calling frequency	(Note 2)
28.885		International 6 Metre liaison frequency	
29.110 -	29.290	FM SIMPLEX	(Note 5)
29.120		Simplex repeater gateway frequency	
29.200		National calling frequency	
29.250		Recommended packet frequency	
29.300 -	29.510	AMATEUR SATELLITES	(Note 4)
29.510 -	29.700	FM REPEATERS AND SIMPLEX	(Note 6)
29.520 -	29.580	Repeater inputs	
29.600		International simplex calling frequency	
29.620 -	29.680	Repeater outputs	

Notes for 160 - 10 Metre Bands

Note 1: 160 Metres

DX operation has absolute priority between 1810 and 1840 kHz. Digital mode operation may occur up to 1815 kHz, but only for contacts with overseas stations that cannot operate below 1810 kHz. SSB operation may occur down to 1835 kHz, but only for contacts with overseas stations that cannot operate above 1840 kHz. Operation may vary from the band plan during times when all stations within working range are in full daylight.

Note 2: Modes

"Digital Modes" includes all modes such as RTTY, packet and Amtor, using FSK or PSK and with bandwidths up to 1.12 kHz. The SSB segment can also be used for image transmission modes such as SSTV or Fax, using bandwidths up to 4 kHz. On 10 metres, the recommended segment for AM is 29.0 - 29.1 MHz.

Note 3: Beacons

The beacon segments should be kept clear of all other transmissions.

Note 4: Amateur Satellites

Amateur satellites may operate in the bands 7.0 - 7.1, 14.0 - 14.250, 18.068 - 18.168, 21.0 - 21.45, 24.89 - 24.99 and 28.0 - 29.7 MHz. Current satellites operate between 21.16 - 21.30 and 29.3 - 25.50 MHz. The 10 metre satellite segment should be kept clear of all other transmissions.

Note 5: FM Simplex

Maximum permitted bandwidth for FM is 16 kHz on 10 metres, and 6 kHz on lower bands. Most multimode transceivers cannot comply with the 6 kHz bandwidth limit and should not be used in FM mode below 10 metres. Please avoid operation on 29.300 or 29.500 MHz, as this can interfere with satellite downlinks.

Note 6: FM Repeaters

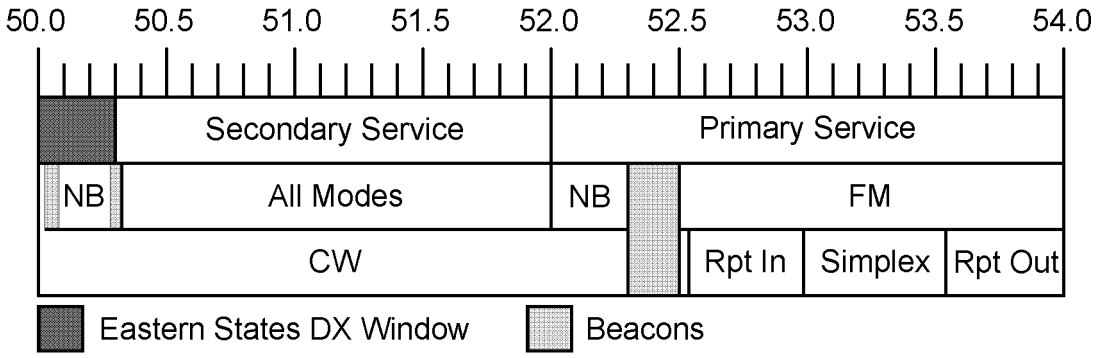
The standard repeater input frequencies are 29.52, 29.54, 29.56 and 29.58 MHz. Some overseas repeaters operate on 10 kHz spaced channels. Repeater offset is 100 kHz. Further details on repeaters and simplex repeater gateways are in the paper “Guidelines for Unattended Transmitters”.

6 Metre Band

Band Allocation

50 - 52 MHz	BROADCASTING	Primary Service
	AMATEUR	Secondary Service (Note 1)
52 - 54 MHz	AMATEUR	Primary Service

NOTE: The band 45 - 52 MHz is allocated on a primary basis to the Broadcasting Service for television channel 0. Amateur operation below 52 MHz is permitted on the condition that no interference is caused to reception of Channel 0 television stations. In eastern call areas (VK1, 2, 3, 4 and 7), operation is restricted to the band 50.000 - 50.300 MHz, using only CW (100 watts), SSB (100 watts) or FSK (30 watts). No operation is permitted within 120 km of main channel 0 stations, or within 60 km of translators which have their outputs or inputs on channel 0.



50.000 -	50.300	NARROW BAND MODES	(Note 1)
50.000 -	50.080	CW only	
50.020 -	50.080	Beacons	(Note 2)
50.080 -	50.100	International DX window	
50.100 -	50.150	CW / SSB: International DX only	
50.110		International DX calling frequency	
50.150 -	50.280	CW / SSB: DX or local	
50.200		Australian calling frequency	
50.220 -	50.240	Digital DX modes	
50.280 -	50.320	Beacons	(Note 2)
50.320 -	52.000	ALL MODES	
52.000 -	52.500	NARROW BAND MODES	(Note 1)
52.000 -	52.100	CW only	
52.100 -	52.300	SSB	
52.100		Calling frequency	
52.300 -	52.500	Beacons	(Note 2)
52.525 -	53.975	FM SIMPLEX AND REPEATERS	(Notes 3,4)
52.525		International simplex calling frequency	
52.550 -	52.975	Repeater inputs	
53.000		Simplex: data (BBS forwarding)	
53.025 -	53.100	Simplex: data (general use)	
53.125 -	53.525	Simplex: voice	
53.150		National WICEN frequency	
53.300		National ARDF frequency	
53.500		National voice calling frequency	
53.550 -	53.975	Repeater outputs	

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. International practice is to keep the segment below 50.150 MHz clear at all times for international DX operation, and to use 50.150 MHz and above for contacts within the country or region. Calling frequencies should be used only to make initial contact and then vacated as soon as possible. The calling frequencies are 50.110 MHz for international DX only, and 50.200 MHz for all other operation.

The following spot frequencies are recommended for digital DX operation using SSB-based modes:
50.220 Weak signal modes with bandwidths below 100 Hz, e.g. PSK and slow CW
50.225 Weak signal modes with bandwidths up to 500 Hz, e.g. MFSK, JT44 and similar
50.230 High speed meteor scatter modes with bandwidths up to 3 kHz, e.g. FSK441 or fast Hellschreiber

Note 2: Beacons

The beacon segments should be kept clear of other transmissions. Beacon frequency spacing is 2 kHz.

On 50 MHz, beacons in the eastern states are confined to the DX window. The international beacon sub-band is 50.020 - 50.080 MHz. To reduce overcrowding in the lower end of the DX window, the following alternative frequencies for beacons have been adopted:

For call areas VK1, VK2, VK3, VK4, and VK7:	50.280 - 50.299 MHz.
For call areas VK5, VK6, VK8, VK9 and VK0:	50.300 - 50.319 MHz.

On 52 MHz, beacon frequencies are allocated on a call area basis, e.g. VK1: 52.410 - 52.419, VK2: 52.420 - 52.429 etc. Further details on beacon frequency allocations are in the paper "Guidelines for Unattended Transmitters".

Note 3: FM Simplex

Channel spacing is 25 kHz. Channels reserved for special purposes should be kept clear of other operation.

Note 4: Repeaters

The repeater split is 1 MHz (negative offset) and the channel spacing is 25 kHz. Seven repeater channels are reserved for exclusive use in the following call areas:

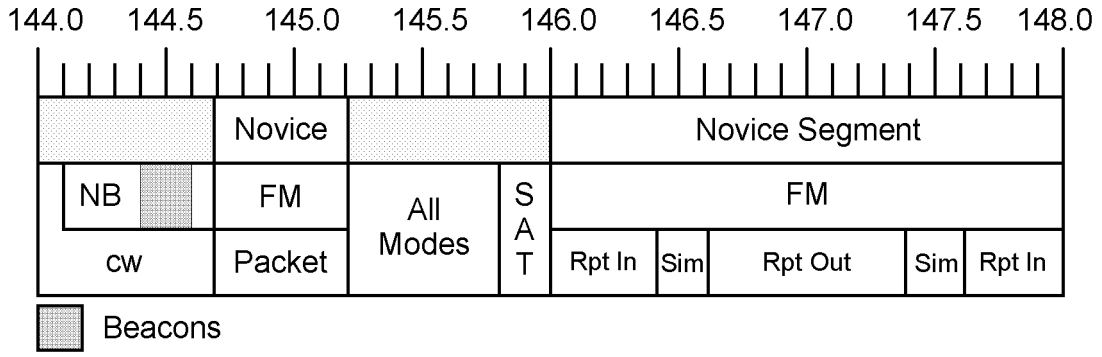
52.750 / 53.750 - VK5/8	52.800 / 53.800 - VK6
52.825 / 53.825 - VK7	52.850 / 53.850 - VK2
52.900 / 53.900 - VK3	52.950 / 53.950 - VK4

The remaining channels are available for use in any call area.
Repeater channels are co-ordinated nationally to reduce the possibility of interstate sporadic E interference.

2 Metre Band

Band Allocation

144 - 148 MHz AMATEUR Primary Service



144.000 - 144.700	NARROW BAND MODES	(Note 1)
144.000 - 144.050	EME only	
144.050 - 144.100	CW only	
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	
144.300 - 144.500	Space communications	
144.400 - 144.600	Beacons	(Note 2)
144.625 - 144.675	General / Experimental	
144.700 - 145.200	PACKET RADIO	(Note 4)
144.950	Space communications only	
145.075 - 145.150	High speed systems	
145.175	National APRS frequency	
145.200	National WICEN frequency	
145.225 - 145.775	ALL MODES	(Note 4)
145.225 - 145.275	General / Experimental	
145.300	National ARDF frequency	
145.325 - 145.525	FM voice simplex	
145.550	Space communications only	
145.575	Information Beacons	
145.600	RTTY (AFSK)	
145.625	SSTV / Fax (AFSK)	
145.650 - 145.675	CW practice beacons / broadcast relays	
145.700	ARDF homing beacons	
145.800 - 146.000	AMATEUR SATELLITES	(Note 3)
146.025 - 147.975	FM SIMPLEX AND REPEATERS	(Notes 4,5,6)
146.025 - 146.400	Repeater inputs - group A	
146.425 - 146.600	Simplex	
146.500	National voice calling frequency	
146.600	RTTY (AFSK)	
146.625 - 147.000	Repeater outputs - group A	
147.025 - 147.375	Repeater outputs - group B	

147.400 -	147.600	Simplex
147.400		ATV liaison
147.575 -	147.600	Packet radio
147.625 -	147.975	Repeater inputs - group B

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 Weak signal modes with bandwidths below 100 Hz, e.g. PSK and slow CW
144.225 Weak signal modes with bandwidths up to 500 Hz, e.g. MFSK, JT44 and similar
144.230 High speed meteor scatter modes with bandwidths up to 3 kHz, e.g. FSK441 or fast Hellschreiber

For linear translators, recommended centre frequencies are 144.350 or 144.370 MHz, with a maximum bandwidth of 15 kHz.

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, and this may cause temporary interference to SSB and beacon reception. Apart from contacts with space shuttle stations, there should be no FM operation of any kind in this segment.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. 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. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

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

Note 4: All Mode, Packet Radio and FM Simplex Segments

Channel spacing is 25 kHz. Channels reserved for special purposes should be kept clear of other operation. The space shuttle frequencies on 144.950 and 145.550 MHz should be kept clear of all terrestrial operation.

Note 5: FM Repeaters

Channel spacing is 25 kHz, and offset is 600 kHz. Inputs and outputs may be reversed but this is not recommended. Vacant repeater output frequencies can be used as simplex channels, but repeater inputs should be avoided.
The following channels are reserved for WICEN repeaters:

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

Recommended frequencies for simplex IRLP repeater gateways are vacant repeater output frequencies, preferably above 147 MHz, or band plan simplex channels between 147.425 and 147.550 MHz that are not use for other purposes in the local area.

Note 6: Repeater Linking

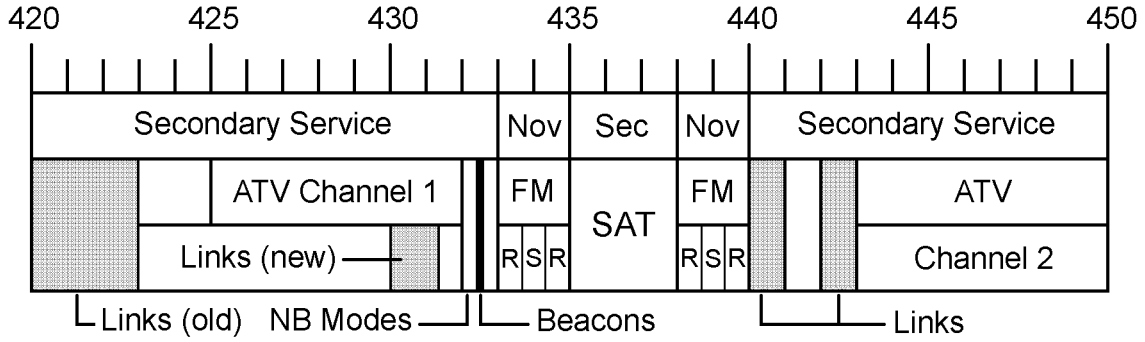
Our licence conditions require tone access for 2 metre repeaters linked to repeaters in other bands, to prevent Novice transmissions from being relayed on frequencies they are not entitled to use. The following CTCSS tones have been adopted for repeater access:
123 Hz: For use with repeaters fitted with CTCSS for interference protection.
141.3 Hz: For use by unrestricted or limited licensees to activate links to other VHF/UHF bands.

A draft policy has also been adopted for selective repeater linking using DTMF access control.

70 Cm Band

Band Allocation

420 - 450 MHz	RADIOLOCATION	Primary Service
420 - 450 MHz	FIXED, MOBILE	Primary Service
420 - 430 MHz	AMATEUR (restricted access in some states)	Secondary Service
430 - 450 MHz	AMATEUR	Secondary Service
435 - 438 MHz	AMATEUR SATELLITE	Permitted on non-interference basis



NOTE: Operating restrictions apply in areas where some or all of the 420 - 430 MHz band has been assigned to non-amateur services. The affected areas are parts of VK2, VK3, VK4 and VK6. Please refer to the current ACA Amateur Licence Conditions Determination and other ACA material for details of operating restrictions in these areas.

420.000 - 423.000	REPEATER LINKS Being phased out in some states	(Note 7)
425.000 - 432.000	ATV CHANNEL 1 Being phased out in some states	(Note 8)
430.025 - 430.975	REPEATER LINKS - Segment A	(Note 7)
431.025 - 431.250	REPEATER LINKS - Segment B	(Note 7)
431.275 - 431.975	RESERVED	(Note 9)
432.000 - 433.000	NARROW BAND MODES	(Note 1)
431.950 - 432.050	EME only	
432.050 - 432.100	CW only	
432.100 - 432.400	CW / SSB	
432.100	Calling frequency: national primary	
432.200	Calling frequency: national secondary	
432.220 - 432.240	Digital DX modes	
432.240 - 432.300	Guard band: New Zealand beacons	
432.300	SSB chat frequency	
432.400 - 432.600	Beacons	(Note 2)
432.625 - 433.000	RESERVED	(Note 9)
433.025 - 434.975	FM SIMPLEX AND REPEATERS	(Notes 4, 5, 6)
433.025 - 433.725	Repeater inputs - Group A	
433.750 - 434.250	Simplex	
433.750	RTTY (AFSK)	
433.775	SSTV / Fax (AFSK)	
433.800	WICEN	
434.050 - 434.250	Packet Radio	
434.275 - 434.975	Repeater inputs - Group B	
435.000 - 438.000	AMATEUR SATELLITES	(Note 3)
438.025 - 439.975	FM SIMPLEX AND REPEATERS	(Notes 5,6)

438.025 - 438.725	Repeater outputs - Group A	
438.750 - 439.250	Simplex	
438.800	WICEN	
438.850	National ARDF frequency	
439.000	National voice calling frequency	
439.050 - 439.075	Packet Radio	
439.200 - 439.250	Packet Radio	
439.275 - 439.975	Repeater outputs - Group B	
440.025 - 440.975	REPEATER LINKS - Segment C	(Note 7)
441.025 - 441.975	RESERVED	(Note 9)
442.025 - 442.975	REPEATER LINKS - Segment D	(Note 7)
443.000 - 450.000	ATV CHANNEL 2	(Note 8)

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan. For linear translators, recommended centre frequencies are 432.350 or 432.370 MHz, with a bandwidth up to 15 kHz.

Note 2: Beacons
The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 432.410 - 432.419, VK2: 432.420 - 432.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites
The satellite segment should be kept clear of all terrestrial operation.

Note 4: LIPD Allocation
Stations operating between 433.050 and 434.790 MHz may experience interference from LIPDs (“Low Interference Potential Devices”). Repeaters have no protection from interference caused by LIPDs.

Note 5: FM Simplex
Channel spacing is 25 kHz. Channels reserved for special purposes should be kept clear of other operation.

Note 6: FM Repeaters
Channel spacing is 25 kHz, and offset is 5 MHz. Vacant repeater output frequencies can be used as simplex channels, but input frequencies should be avoided. The following repeater channels are reserved for WICEN portable repeaters: 438.275, 438.625, 439.925, 439.975 MHz. Recommended frequencies for simplex IRLP repeater gateways are vacant repeater output frequencies between 438.050 - 438.725 or 439.275 - 439.775 MHz.

Note 7: Repeater Links
Conditions apply as per Note 6 of the 2 metre band plan. Use of the 420 MHz link segment is being phased out in areas where some or all of the 420 - 430 MHz band has been assigned to non-amateur services.
The suggested use of the 430 / 440 MHz link segments is:
Segments A + C: Standard 10 MHz offset pairs for use at most link sites.
Segments A + D: 12 MHz offset pairs for use only at sites where repeaters are co-sited with TX low links.
Segments B + D: 11 MHz offset pairs for use only at sites with multiple co-sited links that require frequency separation in both the 430 and 440 MHz segments.

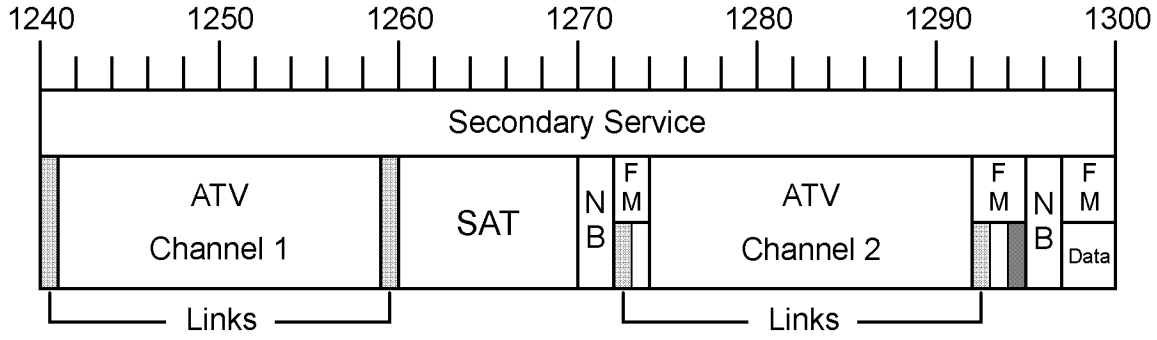
Note 8: Amateur Television
Video carrier frequencies are: Channel 1 426.250 MHz, Channel 2 444.250 MHz. Transmissions must be VSB only. Use of ATV Channel 1 no longer complies with the band plan in states where 420 - 430 MHz restrictions apply.

Note 9: Reserved Segments
These band segments are reserved for possible future use in the event of further band allocation changes or increasing LIPD problems. Until otherwise allocated they may be used for any purpose.

23 Cm Band

Band Allocation

1240 - 1300 MHz	RADIOLOCATION	Primary Service
1240 - 1260 MHz	RADIONAVIGATION - SATELLITE	Primary Service
1240 - 1300 MHz	AMATEUR	Secondary Service
1260 - 1270 MHz	AMATEUR SATELLITE (uplinks)	Permitted on non-interference basis



1240.000 -	1241.000	REPEATER LINKS - Group A	(Note 6)
1241.000 -	1259.000	ATV CHANNEL 1	(Note 7)
1259.000 -	1260.000	REPEATER LINKS - Group A	(Note 6)
1260.000 -	1270.000	AMATEUR SATELLITES	(Note 3)
1270.000 -	1272.000	NARROW BAND MODES (Possible future use)	(Note 1)
1270.000 -	1270.600	Same pattern as 1296.000 - 1296.600	
1270.600 -	1272.000	General / Experimental / Linear Translators	
1272.025 -	1273.000	REPEATER LINKS - Group B	(Note 6)
1273.025 -	1273.975	REPEATER OUTPUTS	(Note 5)
1274.000 -	1292.000	ATV CHANNEL 2	(Note 7)
1292.025 -	1293.000	REPEATER LINKS - Group B	(Note 6)
1293.025 -	1293.975	REPEATER INPUTS	(Note 5)
1294.000 -	1294.975	FM SIMPLEX	(Note 4)
1294.000		National voice calling frequency	
1294.750		RTTY (AFSK)	
1294.775		SSTV / Fax (AFSK)	
1294.800		WICEN	
1294.850		National ARDF frequency	
1295.000 -	1297.000	NARROW BAND MODES (Recommended segment)	(Note 1)
1295.000 -	1295.900	General / Experimental	
1295.900 -	1296.050	EME only	
1296.050 -	1296.100	CW only	
1296.100 -	1296.400	CW / SSB	
1296.100		Calling frequency: national primary	
1296.200		Calling frequency: national secondary	
1296.220 -	1296.240	Digital DX modes	
1296.240 -	1296.300	Guard band: New Zealand beacons	
1296.400 -	1296.600	Beacons	(Note 2)
1296.600 -	1297.000	General / Experimental / Linear Translators	
1297.025 -	1300.000	FM SIMPLEX (DATA)	(Note 4)
1297.025 -	1297.975	General - 25 kHz channel spacing	
1298.100 -	1299.900	High speed - 100 kHz channel spacing	

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan. The 1270 MHz segment is reserved for possible future use.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 1296.410 - 1296.419, VK2: 1296.420 - 1296.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

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

Note 4: FM Simplex

Channel spacing is 25 kHz, or 100 kHz in the high speed data segment. Channels reserved for special purposes should be kept clear of other operation.

Note 5: FM Repeaters

Channel spacing is 25 kHz, and the offset is 20 MHz. Vacant repeater output frequencies can be used as simplex channels, but repeater inputs should be avoided. The following channels are reserved for special uses:
Data (regenerative repeaters): 1293.900, 1293.925, 1293.950, 1293.975
WICEN portable repeaters: 1293.650, 1293.750

Note 6: Repeater Links

Two sets of link pairs are available, Group A on 1240/1259 MHz and Group B on 1272/1292 MHz. Wider offsets can be obtained with cross-group pairing, e.g. 1240 / 1292 MHz for a 52 MHz offset.

Note 7: Amateur Television

Both channels may be used for AM or FM, simplex or repeater operation. Recommended uses are:

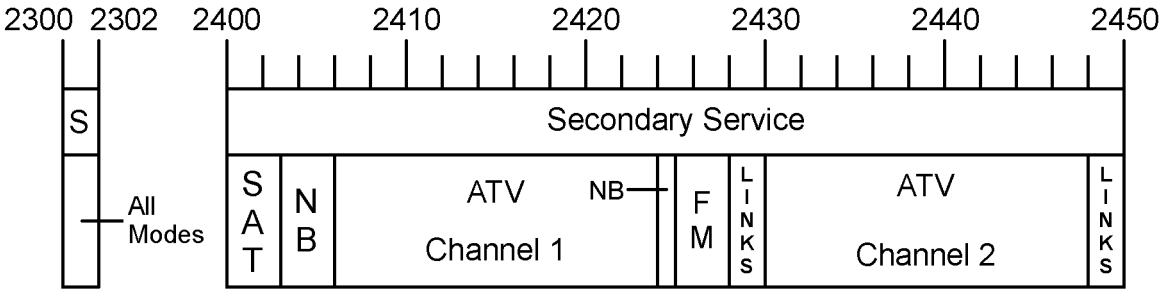
Channel 1: Simplex or repeater inputs
FM 1250 +/- 9 MHz
AM Video 1242.250 MHz, audio 1247.750 MHz
AM Video 1253.250 MHz, audio 1258.750 MHz

Channel 2: Simplex or repeater outputs
FM 1283 +/- 9 MHz
AM Video 1275.250 MHz, audio 1280.750 MHz
AM Video 1286.250 MHz, audio 1291.750 MHz

13 Cm Band

Band Allocation

2300 - 2450 MHz	FIXED, MOBILE	Primary Services
2300 - 2450 MHz	RADIOLOCATION	Primary Service
2400 - 2450 MHz	INDUSTRIAL / SCIENTIFIC / MEDICAL	
	(Other services must accept any harmful interference from ISM devices).	
2300 - 2302 MHz	AMATEUR	Secondary Service
2400 - 2450 MHz	AMATEUR	Secondary Service
2400 - 2450 MHz	AMATEUR SATELLITE	Permitted on non-interference basis



2300.000 -	2302.000	ALL MODES	
2400.000 -	2403.000	AMATEUR SATELLITES	(Note 3)
2403.000 -	2406.000	NARROW BAND MODES (Recommended segment)	(Note 1)
2403.000 -	2403.100	EME only	
2403.100 -	2403.400	CW / SSB	
2403.100		Calling frequency: national primary	
2403.200		Calling frequency: national secondary	
2403.220 -	2403.240	Digital DX modes	
2403.400 -	2403.600	Beacons	(Note 3)
2403.600 -	2406.000	General / Experimental / Linear Translators	
2406.000 -	2424.000	ATV CHANNEL 1	(Note 6)
2424.000 -	2425.000	NARROW BAND MODES (Possible future use)	(Note 1)
2425.000 -	2428.000	FM SIMPLEX	(Note 4)
2425.000		National voice calling frequency	
2425.750		RTTY (AFSK)	
2425.775		SSTV / Fax (AFSK)	
2425.800		WICEN	
2425.850		National ARDF frequency	
2426.000 -	2428.000	Data	
2428.025 -	2429.975	FM DUPLEX	(Note 5)
2430.000 -	2448.000	ATV CHANNEL 2	(Note 6)
2448.025 -	2449.975	FM DUPLEX	(Note 5)

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan.

The 2403 MHz segment may have to be moved if required by future amateur satellite allocations. The 2424 MHz segment is reserved for possible use for EME contacts with Japan and New Zealand, which have their weak signal segments in this part of the band.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 2403.410 - 2403.419, VK2: 2403.420 - 2403.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

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

Note 4: FM Simplex

Channel spacing is 25 kHz, or 100 kHz in the high speed data segment. Channels reserved for special purposes should be kept clear of other operation.

Note 5: FM Duplex

These segments are for duplex links with an offset of 20 MHz. Recommended channel spacing is 25 kHz, or 100 kHz for high speed data, with voice links in the lower half of the segment and data links in the upper half.

Note 6: Amateur Television

Both channels may be used for AM or FM, simplex or repeater operation. Satellites have absolute priority in the lower end of the band, and the availability of Channel 1 is conditional upon its not being required for future satellite use. Channel 2 is recommended as the primary channel. Recommended uses are:

Channel 1 (secondary): Simplex or repeater output.
FM ATV on 2415 +/- 9 MHz, or AM (video 2415.000 MHz, audio 2420.500 MHz).

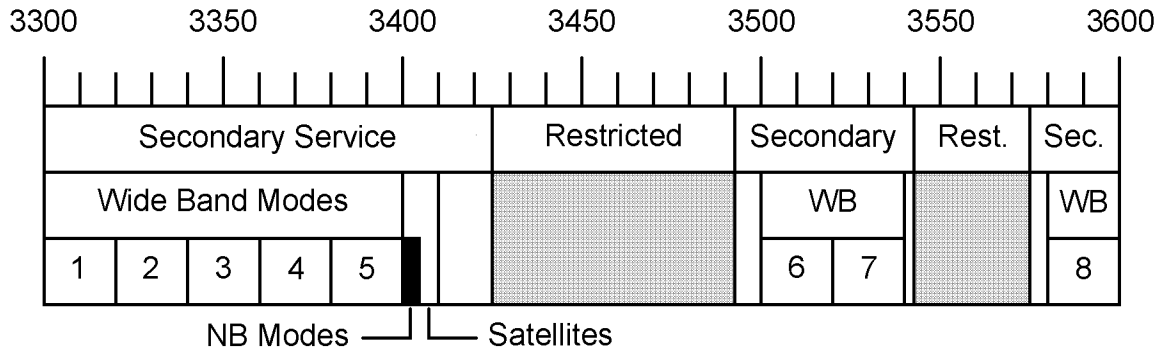
Channel 2 (primary): Simplex or repeater input
FM ATV on 2439 +/- 9 MHz, or AM (video 2439.000 MHz, audio 2444.500 MHz).

9 Cm Band

Band Allocation

3300 - 3600 MHz	RADIOLOCATION	Primary Service
3300 - 3600 MHz	AMATEUR	Secondary Service
3400 - 3410 MHz	AMATEUR SATELLITE	Permitted on non-interference basis
3400 - 3600 MHz	FIXED SATELLITE (Space to Earth)	Secondary Service
3400 - 3600 MHz	FIXED, MOBILE	Secondary Service

NOTE: In the band segments 3425.0 - 3442.5 MHz and 3475.0 - 3492.5 MHz, operation is prohibited in and around most major population centres. In the segments 3442.5 - 3475.0 MHz and 3542.5 - 3575.0 MHz, operation is prohibited in most parts of Australia. For full details, please refer to the current ACA Amateur Licence Conditions Determination.



3300.000 -	3400.000	WIDEBAND MODES	(Note 5)
3300.000 -	3320.000	Channel 1: ATV	
3320.000 -	3340.000	Channel 2: Voice or data	
3340.000 -	3360.000	Channel 3: Simplex, any mode	
3360.000 -	3380.000	Channel 4: ATV	
3380.000 -	3400.000	Channel 5: Simplex, any mode	
3400.000 -	3410.000	AMATEUR SATELLITES	(Note 3)
3400.000 -	3402.000	NARROW BAND MODES	(Note 1)
3400.000 -	3400.100	EME only	
3400.100 -	3400.400	CW / SSB	
3400.100		Calling frequency: national primary	
3400.200		Calling frequency: national secondary	
3400.220 -	3400.240	Digital DX modes	
3400.400 -	3400.600	Beacons	(Note 2)
3400.600 -	3402.000	General / Experimental / Linear Translators	
3402.000 -	3403.000	FM SIMPLEX (VOICE)	(Note 4)
3403.000 -	3405.000	FM SIMPLEX (DATA)	(Note 4)
3405.000 -	3425.500	ALL MODES	
3425.000 -	3492.500	NO OPERATION	
3500.000 -	3600.000	WIDEBAND MODES	(Note 5)
3500.000 -	3520.000	Channel 6: ATV	
3520.000 -	3540.000	Channel 7: Voice or data	
3542.500 -	3575.000	NO OPERATION	
3580.000 -	3600.000	Channel 8: ATV	

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 3400.410 - 3400.419, VK2: 3400.420 - 3400.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

There are no amateur satellites currently operating or planned for this band.

Note 4: FM Simplex

Recommended channel spacing is 100 kHz. Channels reserved for special purposes should be kept clear of other operation.

Note 5: Wideband Modes

These segments are for wideband simplex operation or duplex links. Suggested uses are:

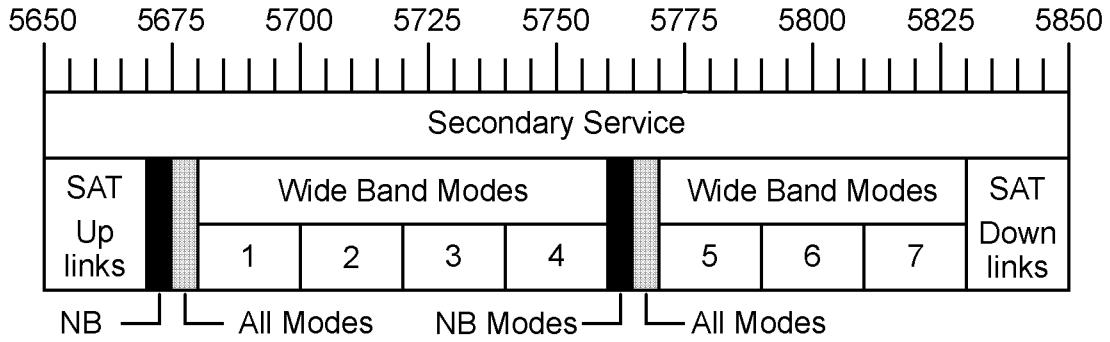
ATV: FM ATV with +/- 9 MHz bandwidth, or AM ATV. Video carrier at centre of channel. Recommended duplex link channels: For 60 MHz offset, channels 1 and 4. For 140 MHz offset: channels 4 and 6. For 200 MHz offset, channels 1 and 6. For 280 MHz offset, channels 1 and 8. Recommended simplex channel: channel 3.

Data or Voice: Recommended channel spacing is 100 kHz, or 1 MHz for high speed data, excluding upper and lower segment edges, with voice links at the lower end of the segment and data links at the upper end. Recommended duplex link segments are a frequency pair from channels 2 and 7, for example 3321.0 and 3521.0 MHz (200 MHz offset).

6 Cm Band

Band Allocation

5650 - 5850 MHz	RADIOLOCATION	Primary Service
5650 - 5725 MHz	SPACE RESEARCH	Secondary Service
5650 - 5850 MHz	AMATEUR	Secondary Service
5650 - 5670 MHz	AMATEUR SATELLITE (uplinks)	Permitted on non-interference basis
5830 - 5850 MHz	AMATEUR SATELLITE (downlinks)	Secondary Service



5650.000 -	5670.000	AMATEUR SATELLITES	(UPLINKS)	(Note 3)
5670.000 -	5672.000	NARROW BAND MODES	(Possible future use)	(Note 1)
5672.000 -	5673.000	FM SIMPLEX (VOICE)	(Possible future use)	(Note 4)
5673.000 -	5675.000	FM SIMPLEX (DATA)	(Possible future use)	(Note 4)
5675.000 -	5680.000	ALL MODES		
5680.000 -	5760.000	WIDEBAND MODES		(Note 5)
5680.000 -	5700.000	Channel 1: ATV		
5700.000 -	5720.000	Channel 2: Data		
5720.000 -	5740.000	Channel 3: Voice		
5740.000 -	5760.000	Channel 4: ATV		
5760.000 -	5762.000	NARROW BAND MODES (Recommended segment)		(Note 1)
5760.000 -	5760.100	EME only		
5760.100 -	5760.400	CW / SSB		
5760.100		Calling frequency: national primary		
5760.200		Calling frequency: national secondary		
5760.220 -	5760.240	Digital DX modes		
5760.400 -	5760.600	Beacons		(Note 2)
5760.600 -	5762.000	General / Experimental / Linear Translators		
5762.000 -	5763.000	FM SIMPLEX (VOICE)		(Note 4)
5763.000 -	5765.000	FM SIMPLEX (DATA)		(Note 4)
5765.000 -	5770.000	ALL MODES		
5770.000 -	5830.000	WIDEBAND MODES		(Note 5)
5770.000 -	5790.000	Channel 5: Data		
5790.000 -	5810.000	Channel 6: Voice		
5810.000 -	5830.000	Channel 7: ATV		
5830.000 -	5850.000	AMATEUR SATELLITES	(DOWNLINKS)	(Note 3)

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan. The 5670 MHz segment is reserved for possible future use.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 5760.410 - 5760.419, VK2: 5760.420 - 5760.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

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

Note 4: FM Simplex

Recommended channel spacing is 100 kHz. Channels reserved for special purposes should be kept clear of other operation. The segments at 5672 and 5673 MHz are reserved for possible future use.

Note 5: Wideband Modes

These segments are for wideband simplex operation or duplex links. Suggested uses are:

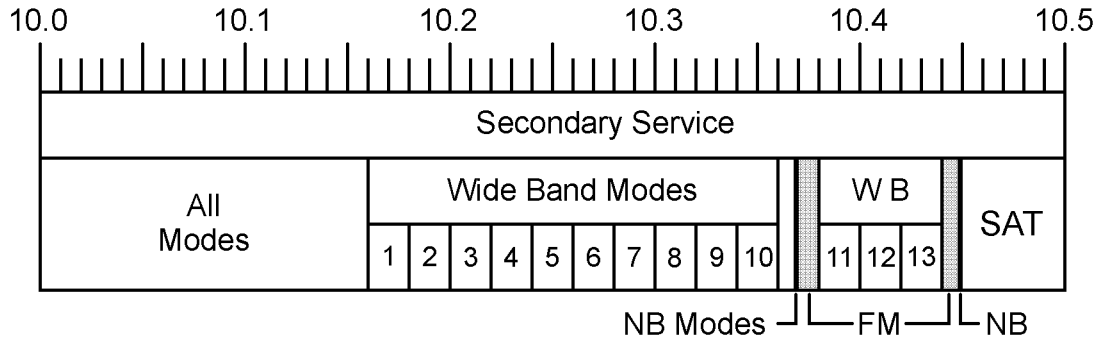
ATV: FM ATV with +/- 9 MHz bandwidth, or AM ATV. Video carrier at centre of channel. Recommended use for duplex links is channel 4 input and channel 7 output for 70 MHz offset, or channels 1 and 7 for 130 MHz offset.

Data or Voice: Recommended channel spacing is 100 kHz, or 1 MHz for high speed data, excluding upper and lower segment edges. Duplex offset is 70 MHz.

3 Cm Band

Band Allocation

10.000 - 10.500 GHz	RADIOLOCATION	Primary Service
10.000 - 10.025 GHz	METEOROLOGICAL SATELLITE	Secondary Service
10.000 - 10.500 GHz	AMATEUR	Secondary Service
10.450 - 10.500 GHz	AMATEUR SATELLITE	Secondary Service



10000.000 -	10160.000	ALL MODES		
10160.000 -	10360.000	WIDEBAND MODES		(Note 5)
10160.000 -	10180.000	Channel 1: Data		
10180.000 -	10200.000	Channel 2: Voice		
10200.000 -	10220.000	Channel 3: ATV		
10220.000 -	10240.000	Channel 4: Data		
10240.000 -	10260.000	Channel 5: Voice		
10260.000 -	10280.000	Channel 6: ATV		
10280.000 -	10300.000	Channel 7: Data		
10300.000 -	10320.000	Channel 8: Voice		
10320.000 -	10340.000	Channel 9: ATV		
10340.000 -	10360.000	Channel 10: Simplex, any mode		
10360.000 -	10368.000	ALL MODES		
10368.000 -	10370.000	NARROW BAND MODES (Recommended segment)		(Note 1)
10368.000 -	10368.100	EME only		
10368.100 -	10368.400	CW / SSB		
10368.100		Calling frequency: national primary		
10368.200		Calling frequency: national secondary		
10368.220 -	10368.240	Digital DX modes		
10368.400 -	10368.600	Beacons		(Note 2)
10368.600 -	10370.000	General / Experimental / Linear Translators		(Note 3)
10370.000 -	10371.000	FM SIMPLEX (VOICE)		(Note 4)
10371.000 -	10380.000	FM SIMPLEX (DATA)		(Note 4)
10380.000 -	10440.000	WIDEBAND MODES		(Note 5)
10380.000 -	10400.000	Channel 11: Data		
10400.000 -	10420.000	Channel 12: Voice		
10420.000 -	10440.000	Channel 13: ATV		
10440.000 -	10447.000	FM SIMPLEX (DATA)	(Possible future use)	(Note 4)
10447.000 -	10448.000	FM SIMPLEX (VOICE)	(Possible future use)	(Note 4)
10448.000 -	10450.000	NARROW BAND MODES	(Possible future use)	(Note 1)
10450.000 -	10500.000	AMATEUR SATELLITES		

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 “Digital DX modes” segment includes recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan. The 10448 MHz segment is reserved for possible future use.

Note 2: Beacons

The beacon segment should be kept clear of other transmissions. Beacon frequencies are allocated on a call area basis, e.g. VK1: 10368.410 - 10368.419, VK2: 10368.420 - 10368.429 etc. Beacon frequency spacing is 2 kHz. Further details are in the paper "Guidelines for Unattended Transmitters".

Note 3: Amateur Satellites

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

Note 4: FM Simplex

Recommended channel spacing is 100 kHz. Channels reserved for special purposes should be kept clear of other operation.

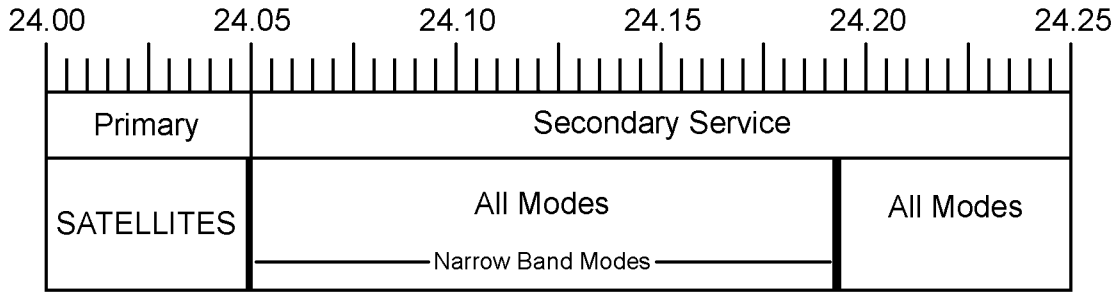
Note 5: Wideband Modes

These segments are for wideband simplex operation or duplex links. A variety of duplex offsets between 60 and 220 MHz can be obtained by choosing the appropriate channel pairs. Suggested uses are:
ATV: FM ATV with +/- 9 MHz bandwidth, or AM ATV. Video carrier at centre of channel.
Data or Voice: Recommended channel spacing is 100 kHz, or 1 MHz for high speed data, excluding upper and lower segment edges.

1.25 Cm Band

Band Allocation

24.00 - 24.05 GHz	AMATEUR	Primary Service
24.00 - 24.05 GHz	AMATEUR SATELLITE	Primary Service
24.05 - 24.25 GHz	RADIOLOCATION	Primary Service
24.05 - 24.25 GHz	AMATEUR	Secondary Service
24.05 - 24.25 GHz	EARTH EXPLORATION SATELLITE	Secondary Service



24.000 -	24.050	AMATEUR SATELLITES
24.048 -	24.050	NARROW BAND MODES (Recommended segment) Same pattern as for lower bands
24.050 -	24.192	ALL MODES
24.192 -	24.194	NARROW BAND MODES (Alternative segment)
24.194 -	24.250	ALL MODES

Bands Above 24 GHz

47.00 -	47.20 GHz	AMATEUR & AMATEUR SATELLITE	Primary Service
76.00 -	77.50 GHz	RADIO ASTRONOMY & RADIOLOCATION	Primary Services
76.00 -	77.50 GHz	AMATEUR & AMATEUR SATELLITE	Secondary Service
76.00 -	81.00 GHz	SPACE RESEARCH	Secondary Service
77.50 -	78.00 GHz	AMATEUR & AMATEUR SATELLITE	Primary Service
77.50 -	79.00 GHz	RADIO ASTRONOMY	Secondary Service
78.00 -	81.00 GHz	AMATEUR & AMATEUR SATELLITE	Secondary Service
78.00 -	81.00 GHz	RADIOLOCATION	Primary Service
79.00 -	81.00 GHz	RADIO ASTRONOMY	Primary Service
122.25 -	123.00 GHz	FIXED, MOBILE , SPACE RESEARCH, EARTH EXPLORATION SATELLITE, INTER-SATELLITE	Primary Services
		AMATEUR	Secondary Service
134.00 -	141.00 GHz		
142.00 -	144.00 GHz	AMATEUR & AMATEUR SATELLITE	Primary Service
144.00 -	149.00 GHz	RADIOLOCATION	Primary Service
144.00 -	149.00 GHz	AMATEUR & AMATEUR SATELLITE	Secondary Service
144.68 -	144.98 GHz	RADIO ASTRONOMY	Primary Service
145.45 -	145.75 GHz	RADIO ASTRONOMY	Primary Service
146.82 -	147.12 GHz	RADIO ASTRONOMY	Primary Service
241.00 -	248 GHz	RADIOLOCATION	Primary Service
		AMATEUR & AMATEUR SATELLITE	Secondary Service
248.00 -	250 GHz	AMATEUR & AMATEUR SATELLITE	Primary Service