



Australian Amateur Band Plans

Updated January 2013

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 and Media Authority (ACMA). 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 need to 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. The same applies to digital voice modes that occupy much the same bandwidth as an SSB signal.

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, when running FM, cannot comply with ACMA's bandwidth limit of 8 kHz for 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 details on beacon frequency allocations are available from the Technical Advisory Committee.

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.















Newer digital voice modes such as D-Star commonly share the band plan FM segments.

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 the Technical Advisory Committee.

Further information about technical standards, frequency allocation and licensing of unattended stations (including beacons, repeaters, links, gateways etc) is available on request from the Technical Advisory Committee.

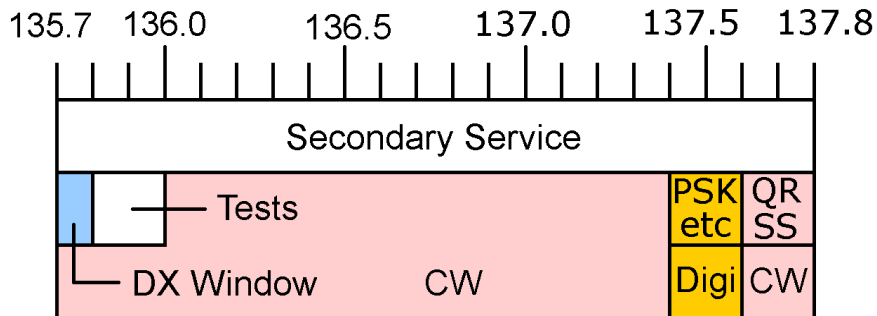
Key to the Colours used in the Band Plan Diagrams

| | | | | | |
|---|--------------|---|---------------|---|--------------------|
|  | CW |  | FM |  | Links |
|  | NB Digi |  | Digital Voice |  | Satellites |
|  | SSB |  | Wide Band |  | DX Window |
|  | All NB Modes |  | ATV |  | Restricted Segment |
|  | Beacons |  | All Modes | | |

LF and MF Bands

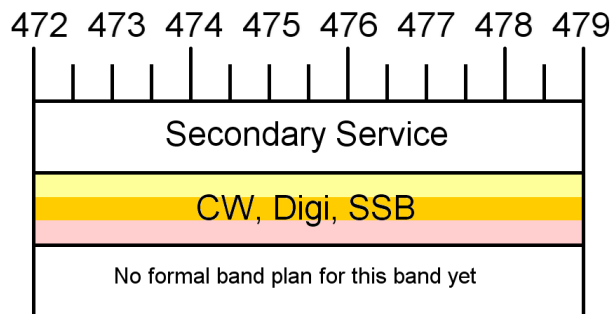
2200 Metre Band – Advanced Licensees only

The following plan is recommended as an interim plan for the 2200 metre band. This plan is based on the unofficial 2200 metre band plan adopted by LF operators in ITU Region I.



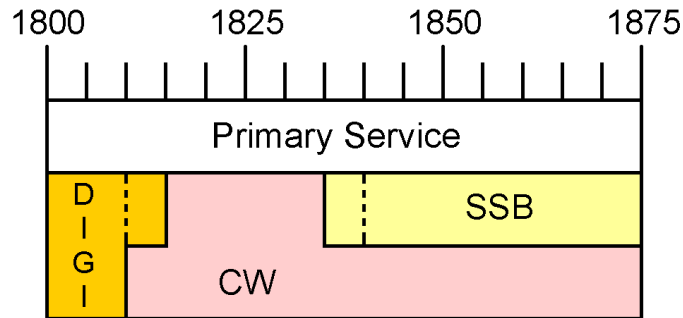
| | |
|-------------------|--|
| 135.7 - 137.4 kHz | CW only |
| 135.7 - 135.8 kHz | International DX window |
| 135.8 - 136.0 kHz | Test transmissions and test beacons |
| 136.0 - 137.4 kHz | Normal CW operation (centre of activity 136.5 kHz) |
| 137.4 - 137.6 kHz | Narrow band digital modes, e.g. PSK (centre of activity 137.5 kHz) |
| 137.6 - 137.8 kHz | Slow CW modes, e.g. QRSS |

630 Metre Band - Advanced Licensees only



ACMA licence conditions for this band permit the use of any mode with a maximum bandwidth of 2.1 kHz.

160 Metre Band – Advanced Licensees only



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

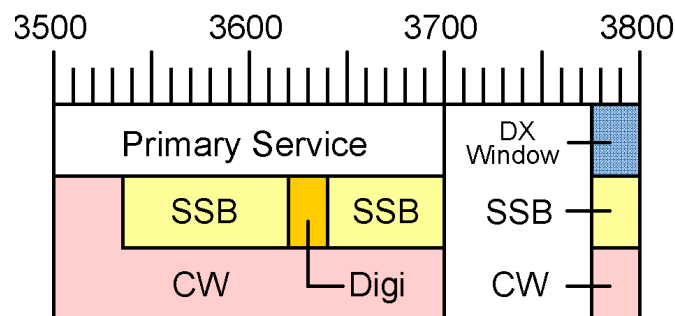
Notes

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.

HF Bands

Footnotes for these bands appear after the 10 metre listing.

80 Metre Band – 3500 -3700 kHz All licence classes 3776 - 3800 kHz Advanced licensees only

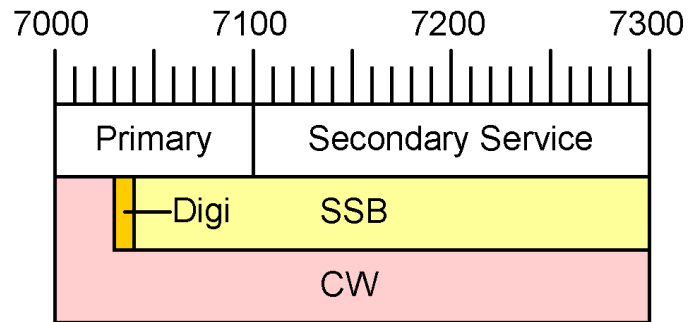


| | | |
|---------------|--|----------|
| 3.500 - 3.700 | CW | |
| 3.535 - 3.620 | SSB | |
| 3.600 | WICEN frequency | |
| 3.600 | IARU Region III emergency centre frequency | |
| 3.620 - 3.640 | Digital data modes | (Note 1) |
| 3.640 - 3.700 | SSB | |
| 3.776 - 3.800 | DX Window | |

NOTE: DX WINDOW

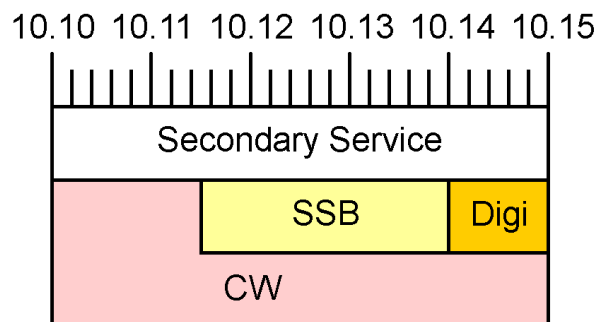
Emissions must not extend below 3776 kHz. Therefore when using LSB, the suppressed carrier frequency should be no lower than 3779 kHz.

40 Metre Band – All licence classes



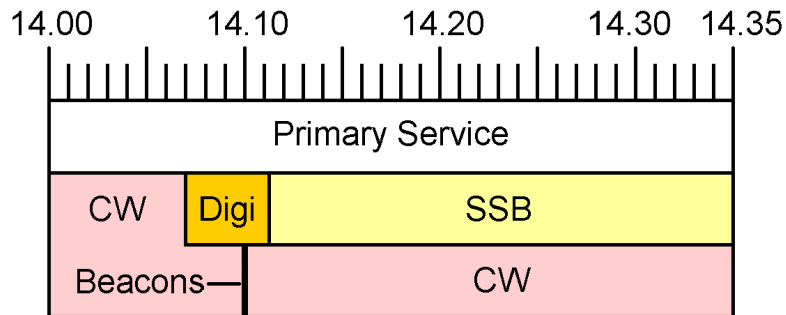
| | | |
|---------------|--|----------|
| 7.000 - 7.300 | CW | |
| 7.030 - 7.040 | Digital data modes | (Note 1) |
| 7.040 - 7.300 | SSB | |
| 7.075 | WICEN frequency | |
| 7.110 | IARU Region III emergency centre frequency | |
| 7.130 - 7.150 | WIA news transmissions | |

30 Metre Band – Advanced licensees only



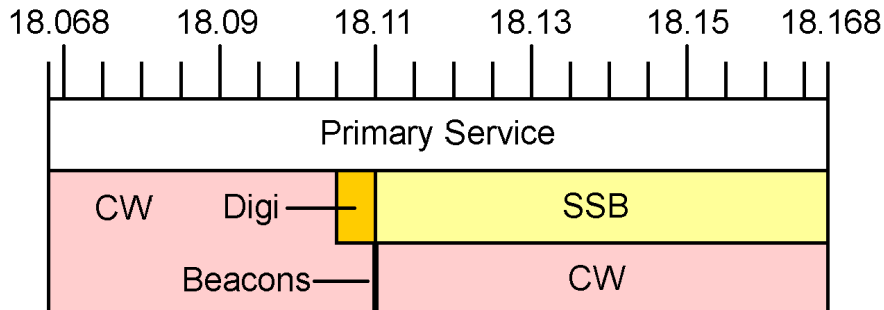
| | | |
|-----------------|--------------------|----------|
| 10.100 - 10.150 | CW | |
| 10.115 - 10.140 | SSB | |
| 10.115 | WICEN frequency | |
| 10.140 - 10.150 | Digital data modes | (Note 1) |

20 Metre Band – Advanced & Standard licensees



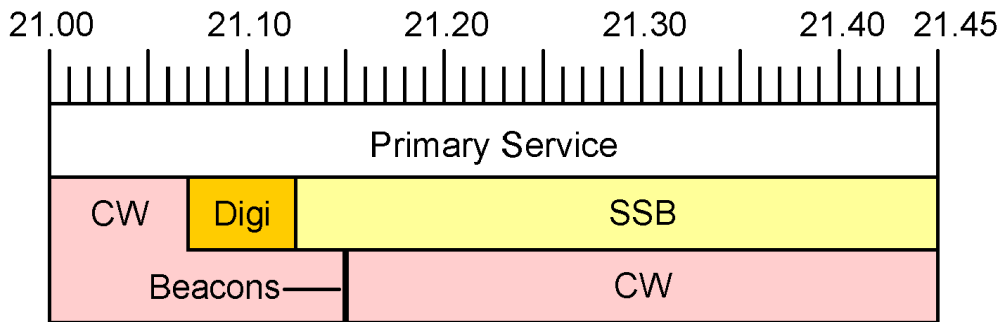
| | | |
|-----------------|--|----------|
| 14.000 - 14.350 | CW | |
| 14.070 - 14.112 | Digital data modes | (Note 1) |
| 14.070 - 14.080 | Amator, PSK etc. | |
| 14.080 - 14.095 | RTTY | |
| 14.095 - 14.112 | Packet Radio | |
| 14.100 | IBP Beacons | (Note 2) |
| 14.112 - 14.350 | SSB | |
| 14.125 | WICEN frequency | |
| 14.230 | SSTV calling frequency | (Note 1) |
| 14.250 | FAX calling frequency | (Note 1) |
| 14.300 | IARU Region III emergency centre frequency | |

17 Metre Band – Advanced licensees only



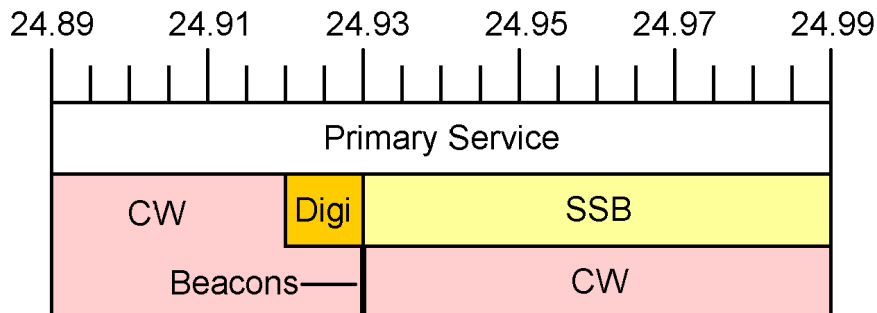
| | | |
|-----------------|--|----------|
| 18.068 - 18.168 | CW | |
| 18.100 - 18.110 | Digital data modes | (Note 1) |
| 18.110 | IBP Beacons | (Note 2) |
| 18.110 - 18.168 | SSB | |
| 18.150 | WICEN frequency | |
| 18.160 | IARU Region III emergency centre frequency | |

15 Metre Band – All licence classes



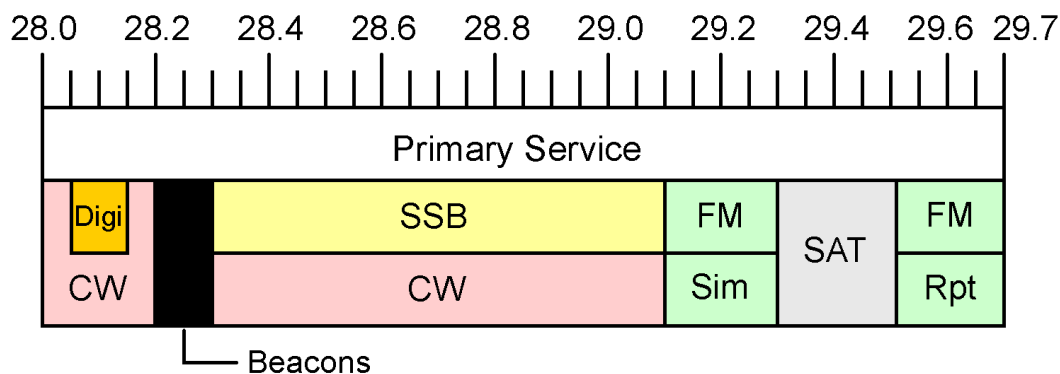
| | | |
|------------------|--|----------|
| 21.000 - 21.450 | CW | |
| 21.070 - 21.125 | Digital data modes | (Note 1) |
| 21.150 | IBP Beacons | (Note 2) |
| 21.150 - 21.450 | SSB | |
| 21.190 | WICEN frequency | |
| 21.340 +/- 5 kHz | SSTV calling frequency | (Note 1) |
| 21.360 | IARU Region III emergency centre frequency | |

12 Metre Band – Advanced licensees only



| | | |
|-----------------|--------------------|----------|
| 24.890 - 24.990 | CW | |
| 24.920 - 24.930 | Digital data modes | (Note 1) |
| 24.930 | IBP Beacons | (Note 2) |
| 24.930 - 24.990 | SSB | |
| 24.950 | WICEN frequency | |

10 Metre Band – All licence classes



| | | |
|------------------|---|----------|
| 28.000 - 28.200 | CW AND DIGITAL MODES | (Note 1) |
| 28.000 - 28.050 | CW only | |
| 28.050 - 28.150 | Digital data modes | |
| 28.150 - 28.200 | CW only | |
| 28.190 - 28.200 | IBP Beacons | (Note 2) |
| 28.200 - 28.300 | Continuous Duty Beacons | (Note 2) |
| 28.300 - 29.100 | CW / SSB / AM | |
| 28.390 | Recommended intra-VK calling frequency | |
| 28.450 | WICEN frequency | |
| 28.680 +/- 5 kHz | SSTV calling frequency | (Note 1) |
| 28.885 | International 6 Metre liaison frequency | |
| 29.110 - 29.290 | FM SIMPLEX | (Note 4) |
| 29.120 | Simplex repeater gateway frequency | |
| 29.200 | National calling frequency | |
| 29.250 | Recommended packet frequency | |
| 29.300 - 29.510 | AMATEUR SATELLITES | (Note 3) |
| 29.510 - 29.700 | FM REPEATERS AND SIMPLEX | (Note 5) |
| 29.520 - 29.580 | Repeater inputs | |
| 29.600 | International simplex calling frequency | |
| 29.620 - 29.680 | Repeater outputs | |

Notes for the 80 - 10 Metre Bands

Note 1: Modes

"Digital Data Modes" includes all modes such as RTTY, packet and Amtor, using FSK or PSK and with bandwidths up to 2 kHz. The SSB segment can also be used for digital voice modes and image transmission modes such as SSTV or Fax, using bandwidths up to 4 kHz, or for AM. On 10 metres, the recommended segment for AM is 29.0 - 29.1 MHz.

Note 2: Beacons

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

Note 3: 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 21.160 - 21.300 and 29.300 - 29.500 MHz. The 10 metre satellite segment should be kept clear of all other transmissions.

Note 4: FM Simplex

Maximum permitted bandwidth for FM is 16 kHz on 10 metres, and 8 kHz on lower bands. Most multimode transceivers cannot comply with the 8 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 5: 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 repeater planning and frequency allocations are available from the Technical Advisory Committee.

6 Metre Band – 50 - 52 MHz *Advanced licensees only* 52 - 54 MHz *Advanced & Standard licensees*

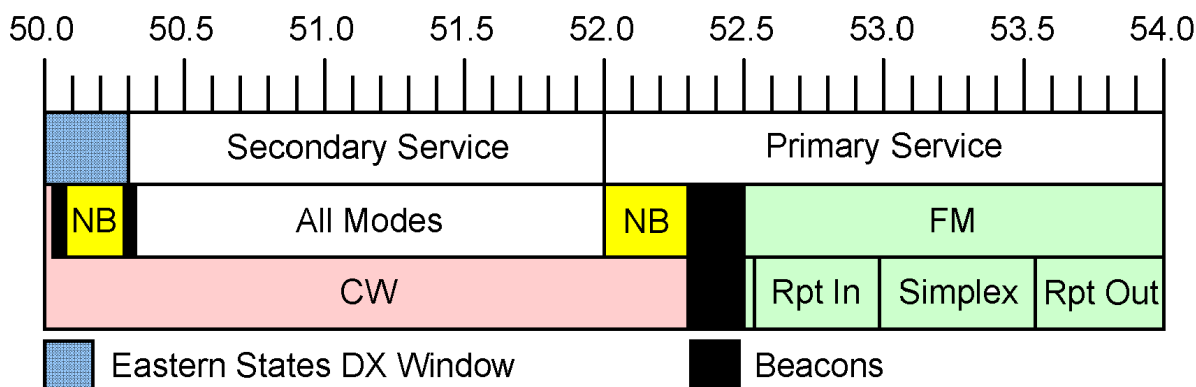
Band Allocation

| | | |
|-------------|-------------------------|--------------------------------------|
| 50 - 52 MHz | BROADCASTING AMATEUR | Primary Service Secondary Service |
| 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. In the eastern call areas VK1, VK2, VK3 and VK4, operation on frequencies below 52 MHz is subject to the following restrictions:

- Amateur stations may operate only within the sub-band 50.000 - 50.300 MHz.
- Permitted modes and maximum power limits are: CW (100 watts), SSB (100 watts) or FSK (30 watts).
- No operation on any frequency below 52 MHz 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.
- No operation is permitted if it causes interference to reception of Channel 0 television.

Please refer to the ACMA Amateur Licence Conditions Determination (LCD) for full details of these restrictions.



| | | |
|-----------------|------------------------------------|----------|
| 50.000 - 50.300 | NARROW BAND MODES | (Note 1) |
| 50.000 - 50.080 | CW only | |
| 50.020 - 50.080 | International 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 - 50.300 | Beacons (VK1,2,3,4,7) | (Note 2) |
| 50.300 - 50.320 | Beacons (VK5,6,8,9,0 only) | (Note 2) |
| 50.320 - 52.000 | ALL MODES (VK5,6,8,9,0 only) | |
| 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 | Simplex: data (general use) | |
| 53.050 | Simplex: data (recommended APRS channel) | |
| 53.075 - 53.100 | Simplex: data (general use) | |
| 53.125 - 53.525 | Simplex: voice | |
| 53.150 | National WICEN frequency | |
| 53.300 | National ARDF 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

Note 2: Beacons

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. (The 52 MHz beacon segment is being phased out as beacons move down to 50 MHz).

The beacon segments should be kept clear of other transmissions.

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. Six repeater channels are reserved for re-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.

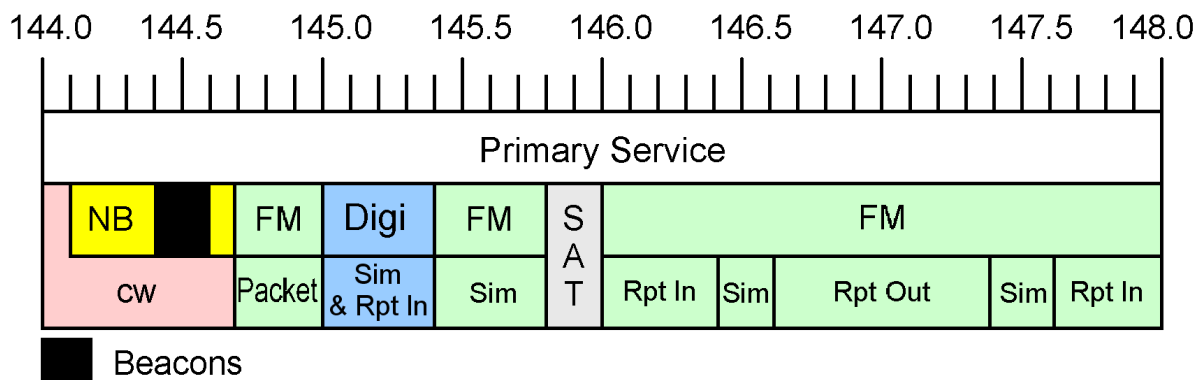
2 Metre Band – All licence classes

Band Allocation

144 - 148 MHz

AMATEUR

Primary Service



| | | |
|-------------------|---------------------------------------|----------|
| 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 | FM PACKET RADIO | (Note 4) |
| 144.950 | Space communications only | |

Please note proposed changes for frequencies between 145.000 and 145.450 MHz

| | |
|-------------------|--|
| 145.000 - 145.150 | DIGITAL MODES - 12.5 kHz CHANNEL SPACING |
| 145.000 | Digital simplex |
| 145.0125 | Digital repeater input |
| 145.025 | Digital simplex |
| 145.0375 | Digital repeater input |
| 145.050 | Digital simplex |
| 145.0625 | Digital repeater input |
| 145.075 | Digital simplex |
| 145.0875 | Digital repeater input |
| 145.100 | Digital simplex |
| 145.1125 | Digital repeater input |
| 145.125 | D-Star simplex 1 (primary channel) |
| 145.1375 | Digital repeater input |
| 145.150 | D-Star simplex and hot spot channel |
| 145.175 - 145.200 | FM PACKET SIMPLEX - 25 kHz CHANNEL SPACING |
| 145.175 | National APRS frequency |
| 145.200 | National WICEN packet frequency |

| | | |
|---------------------|---|-----------------|
| 145.225 - 145.400 | ALL MODES - 12.5 kHz CHANNEL SPACING | |
| 145.225 | Reserved - experimental | |
| 145.2375 | Digital repeater input | |
| 145.250 | Reserved - experimental | |
| 145.2625 | Digital repeater input | |
| 145.275 | Reserved - experimental | |
| 145.2875 | Not used (guard for ARDF channel) | |
| 145.300 | National ARDF frequency | |
| 145.3125 | Not used (guard for ARDF channel) | |
| 145.325 | Simplex | |
| 145.3375 | Digital repeater input | |
| 145.350 | Simplex | |
| 145.3625 | Digital repeater input | |
| 145.375 | Simplex | |
| 145.3875 | Digital repeater input | |
| | | |
| 145.400 - 145.775 | FM SIMPLEX | |
| 145.400 | IRLP/Echolink nodes | |
| 145.425 | IRLP/Echolink nodes | |
| 145.450 | IRLP/Echolink nodes | |
| 145.475 - 145.525 | FM voice simplex | |
| 145.550 | Space communications only | |
| 145.575 | Information Beacons | |
| 145.600 | Non-voice modes (RTTY, SSTV, Fax) | |
| 145.600 | WIA broadcast relays (VK2) | |
| 145.650 - 145.675 | CW practice beacons / broadcast relays | |
| 145.700 | ARDF homing beacons | |
| 145.725 | D-Star Comms Site Elevated Hot Spot | |
| | | |
| 145.800 - 146.000 | AMATEUR SATELLITES | (Note 3) |
| | | |
| 146.025 - 147.975 | FM SIMPLEX AND REPEATERS | (Notes 4, 5, 6) |
| 146.025 - 146.400 | FM Repeater inputs - group A | |
| 146.0375 - 146.3875 | Digital Repeater inputs | |
| | | |
| 146.425 - 146.600 | FM Simplex | |
| 146.500 | National voice calling frequency | |
| 146.600 | Non-voice modes (RTTY, SSTV, Fax) | |
| 146.6125 - 146.9875 | Digital Repeater outputs | |
| 146.625 - 147.000 | FM Repeater outputs - group A | |
| 147.025 - 147.375 | FM Repeater outputs - group B | |
| 147.400 - 147.600 | Simplex | |
| 147.400 | ATV liaison | |
| 147.575 - 147.600 | Packet radio | |
| 147.625 - 147.975 | FM 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 / .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.

The Experimental segment is reserved for specialised experimental use, including possible future linear translators.

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 frequency 144.489 MHz is recognised internationally for DX experiments using WSPR mode.

Note 3: Amateur Satellites

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

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

FM channel spacing is 25 kHz. D-Star and other digital channel spacing is 12.5 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. For APCO P25 digital voice, (suggested Astro ID - ACMA Client Number; Network Access Code (NAC) – 293.

Note 5: Repeaters

FM repeaters: Channel spacing is 25 kHz, and offset is 600 kHz. The following channels are reserved for WICEN repeaters:

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

Digital repeaters use frequencies on odd multiples of 12.5 kHz in between the existing 25 kHz spaced FM repeater channels.

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. |

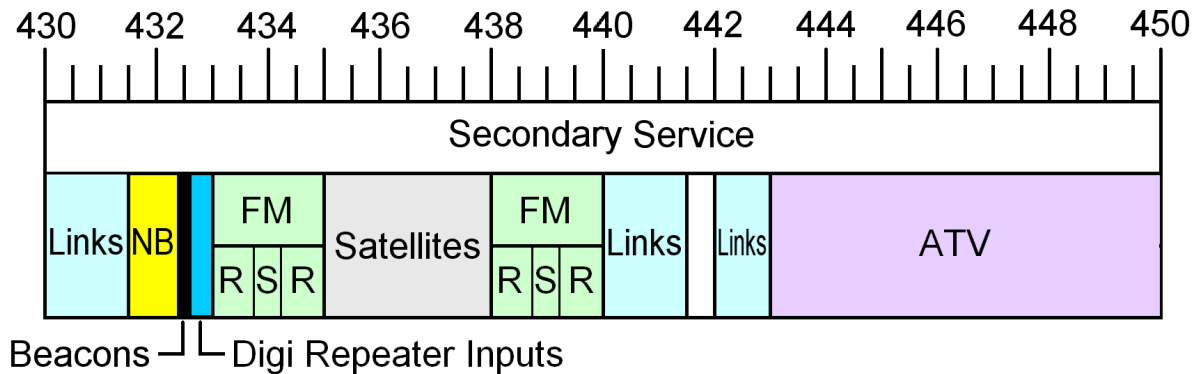
The previously recommended 123 Hz tone is no longer recommended for future repeaters due to problems with false detecting.

70 Cm Band – All licence classes

Band Allocation

| | | |
|---------------|---------------------------------------|-------------------------------------|
| 420 - 450 MHz | RADIOLOCATION | Primary Service |
| 420 - 450 MHz | FIXED, MOBILE | Primary Service |
| 420 - 430 MHz | AMATEUR (no access from January 2013) | Secondary Service |
| 430 - 450 MHz | AMATEUR | Secondary Service |
| 435 - 438 MHz | AMATEUR SATELLITE | Permitted on non-interference basis |

NOTE: From January 2013, the 420 - 430 MHz band segment is no longer available for normal amateur operation.



| | | |
|-------------------|---------------------------------------|-----------------|
| 430.025 - 430.975 | REPEATER LINKS - Segment A | (Note 7) |
| 431.000 - 431.475 | REPEATER LINKS - Segment B | (Note 7) |
| 431.500 - 431.900 | RESERVED | (Note 9) |
| 431.600 - 431.700 | Experimental | |
| 431.900 - 432.000 | EME Guard band | |
| 432.000 - 432.600 | NARROW BAND MODES | (Note 1) |
| 432.000 - 432.100 | EME | |
| 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 | |
| 432.320 - 432.340 | Digital DX modes | |
| 432.400 - 432.600 | Beacons | (Note 2) |
| 432.625 - 432.975 | DIGITAL REPEATER INPUTS | (Note 6) |
| 433.025 - 434.975 | FM SIMPLEX AND REPEATERS | (Notes 4, 5, 6) |
| 433.025 - 433.750 | Repeater inputs - Group A | |
| 433.775 - 434.250 | Simplex | |
| 433.800 | WICEN | |
| 433.900 | Non-voice modes (RTTY, SSTV, Fax) | |
| 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 - 438.750 | FM Repeater outputs - Group A | |
| 438.025 - 438.375 | Digital repeater outputs | |
| 438.775 - 439.250 | Simplex | |
| 438.800 | WICEN | |
| 438.850 | National ARDF frequency | |
| 438.8875 | D-Star simplex 2 | |
| 438.900 | D-Star simplex 1 (primary channel) | |
| 438.9125 | D-Star simplex 3 and hot spot channel | |
| 438.925 | D-Star Comms Site Elevated Hot Spot | |
| 438.950 | Recommended APCO P25 simplex frequency | |
| 439.000 | National FM voice calling frequency | |
| 439.050 - 439.075 | Packet Radio | |
| 439.100 | APRS | |
| 439.150 - 439.175 | Recommended for simplex IRLP/Echolink nodes | |
| 439.200 - 439.250 | Packet Radio | |
| 439.275 - 439.975 | FM Repeater outputs - Group B | |
| 440.025 - 440.975 | REPEATER LINKS - Segment C | (Note 7) |
| 441.000 - 441.475 | REPEATER LINKS - Segment D | (Note 7) |
| 441.500 - 442.000 | RESERVED | (Note 9) |
| 442.025 - 442.975 | REPEATER LINKS - Segment E | (Note 7) |
| 443.000 - 450.000 | ATV | (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" segments include 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

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. The beacon segment should be kept clear of other transmissions.

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: Simplex

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

Recommended simplex frequencies: For D-Star digital simplex operation – 438.900 (primary), secondary 438.9125 (secondary), and 438.925 (simplex 3 and hotspot channel). For APCO P25 digital voice – recommended channel 438.950 (suggested Astro ID - ACMA Client Number; Network Access Code (NAC) – 293).

Note 6: Repeaters

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. Repeater channels reserved for WICEN portable repeaters: 438.275, 438.625, 439.925, 439.975 MHz.

Digital repeaters use channel pairs with output frequencies between 438.025 and 438.375 MHz, using a 5.4 MHz TX/RX offset. For areas where beacons are co-located with repeaters, Digital repeaters will be allocated to the upper end of the repeater segment, with 5 MHz offset and output frequencies on odd multiples of 12.5 kHz between 439.8125 and 439.9875 MHz.

Note 7: Repeater Links

Conditions apply as per Note 6 of the 2 metre band plan. The 420 MHz link segment is unavailable in areas where some or all of the 420 - 430 MHz band has been assigned to non-amateur services. Segments A and C are the preferred link segments for use at most link sites. Segments A and E are 12 MHz offset pairs for use at sites where repeaters are co-sited with TX low links. Segment D is preferred for 11 MHz offset pairs for use at sites with multiple co-sited links that require frequency separation in both the 430 and 440 MHz segments.

Note 8: Amateur Television

AM transmissions must be VSB only. Video carrier frequency 444.250 MHz. For digital ATV, the recommended standard is DVB-T using a 7 MHz bandwidth centred on 446.500 MHz.

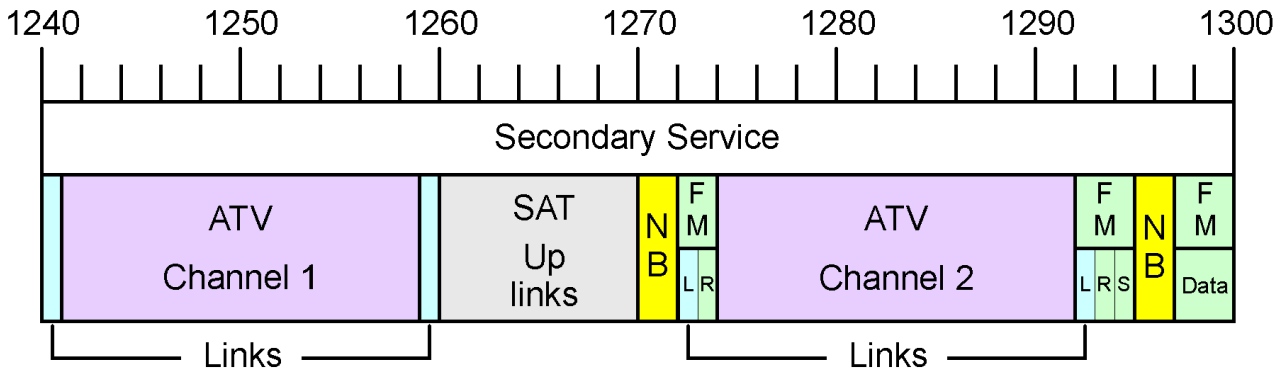
Note 9: Reserved Segments

These band segments are reserved for future use for experimental and other purposes, including linear translators. The segment beginning at 441.000 MHz is reserved because the corresponding segment at 431 MHz is allocated to other purposes.

23 Cm Band – Advanced and Standard licensees only

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 7) |
| 1241.000 - 1259.000 | ATV CHANNEL 1 | (Note 8) |
| 1259.000 - 1260.000 | REPEATER LINKS - Group A | (Note 7) |
| 1260.000 - 1270.000 | AMATEUR SATELLITES | (Note 3) |
| 1270.000 - 1272.000 | NARROW BAND MODES (Possible future use) | (Note 1) |
| 1270.000 - 1271.000 | Same pattern as 1296.000 – 1297.000 | |
| 1271.000 - 1272.000 | Experimental | |
| 1272.025 - 1273.000 | REPEATER LINKS - Group B | (Note 7) |
| 1273.025 - 1273.975 | FM REPEATER OUTPUTS | (Note 6) |
| 1274.000 - 1292.000 | ATV CHANNEL 2 | (Note 8) |
| 1292.025 - 1293.000 | REPEATER LINKS - Group B | (Note 7) |
| 1293.025 - 1293.975 | FM REPEATER INPUTS | (Note 6) |
| 1294.000 - 1294.975 | FM SIMPLEX | (Note 4) |
| 1294.000 | National voice calling frequency | |
| 1294.800 | WICEN | |
| 1294.850 | National ARDF frequency | |
| 1294.900 | Non-voice modes (RTTY, SSTV, Fax) | |
| 1295.000 - 1297.000 | NARROW BAND MODES | (Note 1) |
| 1295.000 - 1295.900 | General / Experimental | |
| 1295.900 - 1296.100 | EME | |
| 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 | |
| 1296.320 - 1296.340 | Digital DX modes | |
| 1296.400 - 1296.600 | Beacons | (Note 2) |
| 1296.600 - 1297.000 | Experimental | |
| 1297.025 - 1300.000 | SIMPLEX (DATA) | (Note 5) |
| 1297.025 - 1297.400 | General FM - 25 kHz channel spacing | |
| 1297.500 - 1299.900 | Digital – 200 kHz channel spacing | |
| 1297.500 | D-Star – recommended national calling frequency | |
| 1297.900 | D-Star Comms Site Elevated Hot Spot | |

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" segments include recommended spot frequencies for SSB-based digital modes, on the same pattern as in Note 1 of the 2 metre band plan.

The Experimental segment is reserved for specialised experimental use, including possible future linear translators. The 1270 MHz segment is reserved for possible future use.

Note 2: Beacons

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. The beacon segment should be kept clear of other transmissions.

Note 3: Amateur Satellites

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

Note 4: FM Simplex Segment

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

Note 5: Simplex (Data) Segments

The 1297.025 – 1297.400 MHz segment is recommended for FM data modes, with 25 kHz channel spacing. The 1297.500 – 1297.900 MHz segment is recommended for D-Star simplex operation with 200 kHz channel spacing. The channels between 1298.100 and 1299.900 MHz are used for the simplex ports of D-Star repeaters.

Note 6: FM Repeaters

Channel spacing is 25 kHz, and the offset is 20 MHz.

Digital (D-Star) repeaters will be allocated frequencies spaced at 200 kHz intervals in the upper part of the repeater segment (primary frequency 1273.900 / 1293.900 MHz).

Note 7: 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 8: Amateur Television

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

Channel 1: Simplex or repeater inputs

| | |
|-----|--|
| FM | Maximum bandwidth 18 MHz, centred on 1250 MHz |
| DVB | Bandwidth 7 MHz, centred on 1246 MHz or 1255 MHz |

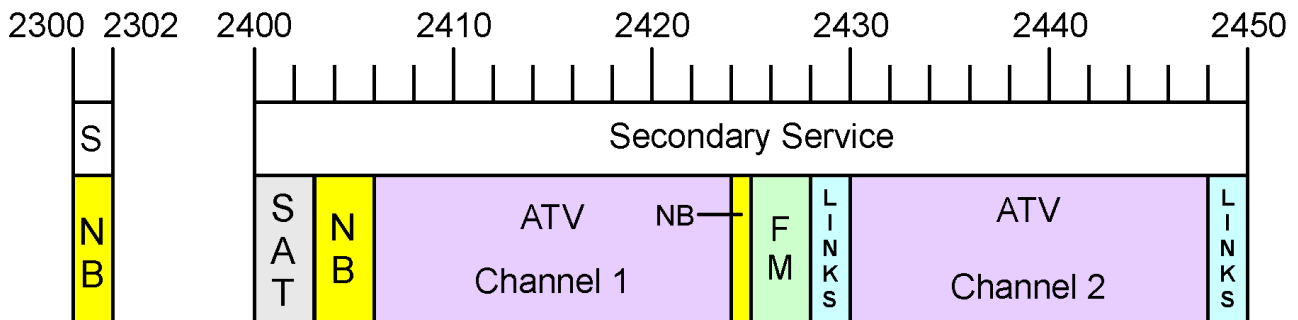
Channel 2: Simplex or repeater outputs

| | |
|-----|---|
| FM | Maximum bandwidth 18 MHz, centred on 1283 MHz |
| DVB | Bandwidth 7 MHz, centred on 1278 or 1287 MHz |

13 cm Band – 2300 - 2302 MHz Advanced licensees only
2400 - 2450 MHz Advanced & Standard licensees

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 | NARROW BAND MODES | (Note 1) |
| 2400.000 - 2403.000 | AMATEUR SATELLITES | (Note 3) |
| 2403.000 - 2406.000 | NARROW BAND MODES | (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 2) |
| 2403.600 - 2406.000 | Experimental | |
| 2406.000 - 2424.000 | ATV CHANNEL 1 | (Note 6) |
| 2424.000 - 2425.000 | NARROW BAND MODES (JA - ZL) | (Note 1) |
| 2425.000 - 2428.000 | FM SIMPLEX | (Note 4) |
| 2425.000 | National voice calling frequency | |
| 2425.800 | WICEN | |
| 2425.850 | National ARDF frequency | |
| 2425.900 | Non-voice modes (RTTY, SSTV, Fax) | |
| 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 Experimental segment is reserved for specialised experimental use, including possible future linear translators.

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.

The segment 2300 – 2302 MHz is recommended for use in areas where the weak signal segment on 2403 MHz suffers unacceptable interference from digital links and other devices, and also for crossband EME contacts with overseas stations operating on 2304 MHz.

Note 2: Beacons

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. The beacon segment should be kept clear of other transmissions.

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 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:

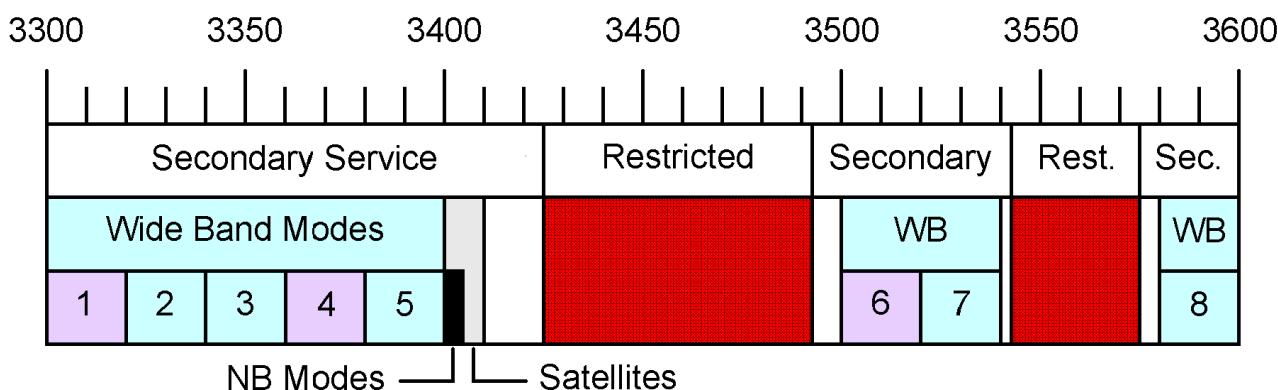
| | |
|------------------------|---|
| Channel 1 (secondary): | Simplex or repeater output |
| FM or DVB | Maximum bandwidth 18 MHz, centred on 2415 MHz |
| DVB | Bandwidth 7 MHz, centred on 2411 or 2419 MHz |
| Channel 2 (primary): | Simplex or repeater input |
| FM or DVB | Maximum bandwidth 18 MHz, centred on 2439 MHz |
| DVB | Bandwidth 7 MHz, centred on 2435 or 2443 MHz |

9 Cm Band – Advanced licensees only

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 ACMA 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 | Experimental | |
| 3402.000 - 3404.000 | FM SIMPLEX | (Note 4) |
| 3410.000 - 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: Any mode | |

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 Experimental segment is reserved for specialised experimental use, including possible future linear translators.

Note 2: Beacons

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. The beacon segment should be kept clear of other transmissions.

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 (channels 1, 4 or 6):

FM or DVB Maximum bandwidth 20 MHz, centred on the channel midpoint

DVB Maximum bandwidth 10 MHz, centred 5 MHz above or below the channel midpoint

Recommended use for duplex links is channel 1 input and channel 6 output.

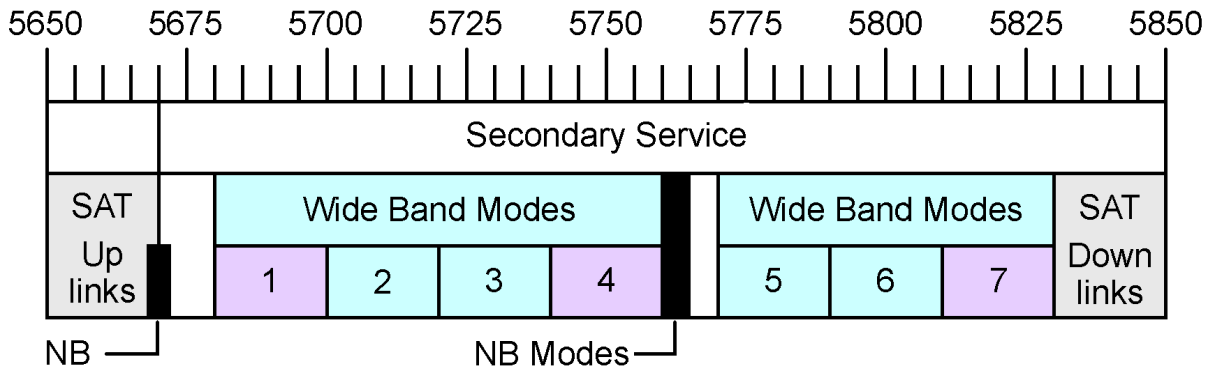
Data or Voice:

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.

6 Cm Band – Advanced & Standard licensees

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) |
| 5668.000 - 5670.000 | NARROW BAND MODES (Possible future use) | (Note 1) |
| 5670.000 - 5672.000 | FM SIMPLEX (Possible future use) | (Note 4) |
| 5672.000 - 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 | (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 | Experimental | |
| 5762.000 - 5764.000 | FM SIMPLEX | (Note 4) |
| 5764.000 - 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 Experimental segment is reserved for specialised experimental use, including possible future linear translators.

Note 2: Beacons

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. The beacon segment should be kept clear of other transmissions.

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 (channels 1, 4 or 7):

FM or DVB Maximum bandwidth 20 MHz, centred on the channel midpoint

DVB Maximum bandwidth 10 MHz, centred 5 MHz above or below the channel midpoint

Recommended use for duplex links is channel 1 input and channel 7 output.

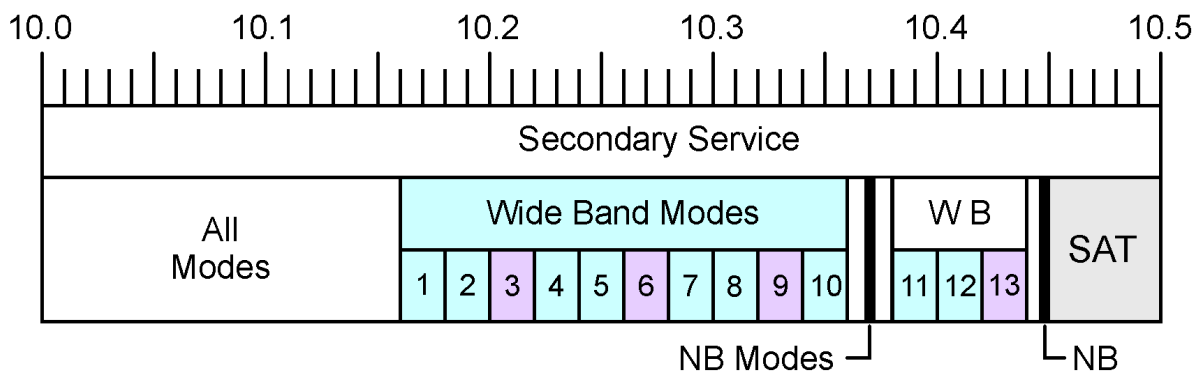
Data or Voice:

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 – Advanced licensees only

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 | (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 | Experimental | |
| 10370.000 - 10372.000 | FM SIMPLEX | (Note 4) |
| 10372.000 - 10380.000 | ALL MODES | |
| 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 - 10448.000 | ALL MODES | |
| 10448.000 - 10450.000 | NARROW BAND MODES (Possible future use) | (Note 1) |
| 10450.000 - 10500.000 | AMATEUR SATELLITES | (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 Experimental segment is reserved for specialised experimental use, including possible future linear translators. The 10448 MHz segment is reserved for possible future use.

Note 2: Beacons

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. The beacon segment should be kept clear of other transmissions.

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 (channels 3, 6, 9 or 13):

FM or DVB Maximum bandwidth 20 MHz, centred on the channel midpoint

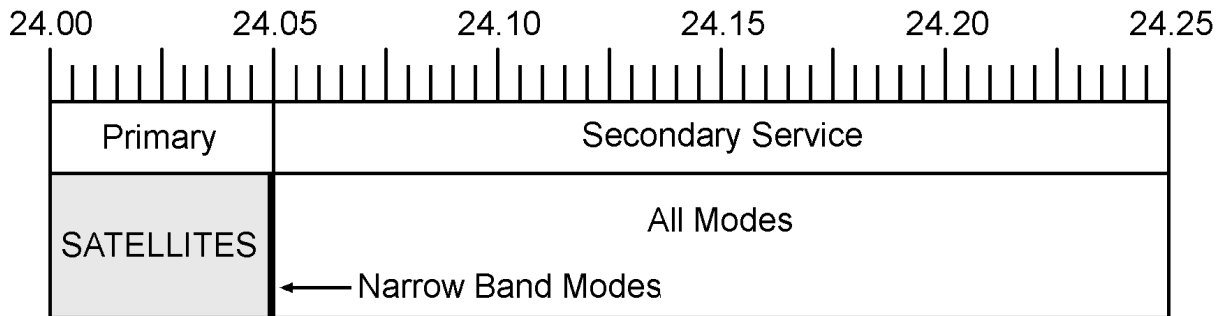
DVB Maximum bandwidth 10 MHz, centred 5 MHz above or below the channel midpoint

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

12 mm Band – Advanced licensees only

Band Allocation

| | | |
|---------------------|-----------------------------|-------------------|
| 24.000 - 24.050 GHz | AMATEUR | Primary Service |
| 24.000 - 24.050 GHz | AMATEUR SATELLITE | Primary Service |
| 24.050 - 24.250 GHz | RADIOLOCATION | Primary Service |
| 24.050 - 24.250 GHz | AMATEUR | Secondary Service |
| 24.050 - 24.250 GHz | EARTH EXPLORATION SATELLITE | Secondary Service |

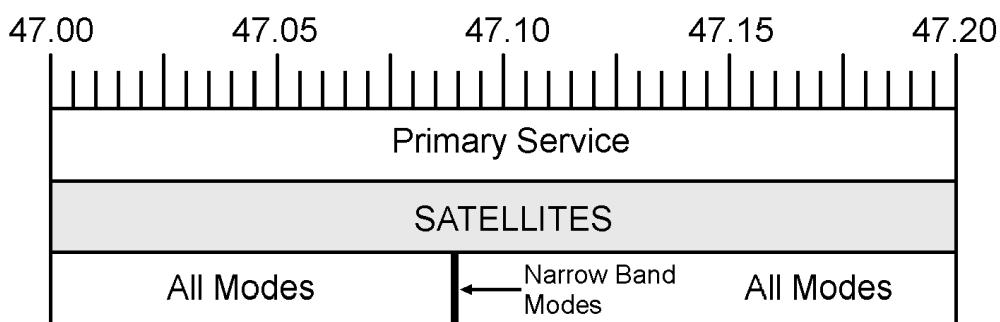


| | | |
|----------|--------|---------------------------------|
| 24.000 - | 24.050 | AMATEUR SATELLITES |
| 24.048 - | 24.050 | NARROW BAND MODES |
| | | Same pattern as for lower bands |
| 24.050 - | 24.250 | ALL MODES |

6 mm Band – Advanced licensees only

Band Allocation

| | | |
|---------------------|-----------------------------|-----------------|
| 47.000 - 47.200 GHz | AMATEUR & AMATEUR SATELLITE | Primary Service |
|---------------------|-----------------------------|-----------------|

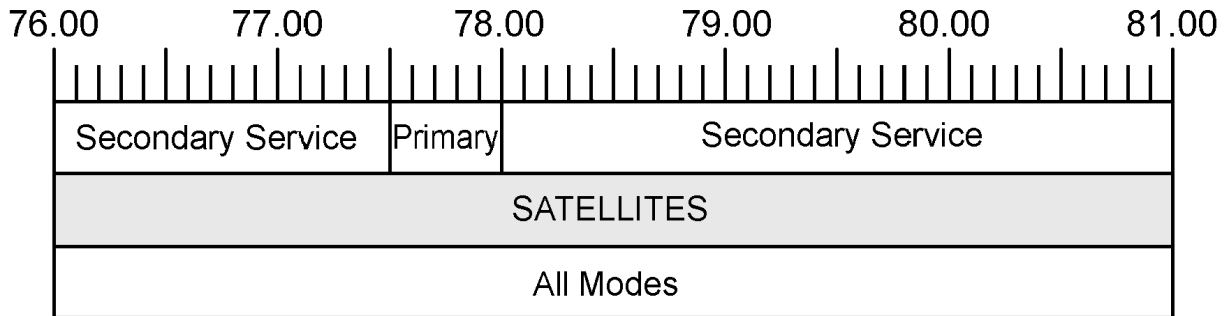


| | | |
|----------|--------|---------------------------------|
| 47.000 - | 47.088 | ALL MODES |
| 47.088 - | 47.090 | NARROW BAND MODES |
| | | Same pattern as for lower bands |
| 47.090 - | 47.200 | ALL MODES |

4 mm Band – Advanced licensees only

Band Allocation

| | | |
|---------------------|---------------------------------|--------------------|
| 76.000 - 77.500 GHz | RADIO ASTRONOMY & RADIOLOCATION | Primary Services |
| 76.000 - 77.500 GHz | AMATEUR & AMATEUR SATELLITE | Secondary Services |
| 76.000 - 81.000 GHz | SPACE RESEARCH | Secondary Service |
| 77.500 - 78.000 GHz | AMATEUR & AMATEUR SATELLITE | Primary Services |
| 77.500 - 79.000 GHz | RADIO ASTRONOMY | Secondary Service |
| 78.000 - 81.000 GHz | AMATEUR & AMATEUR SATELLITE | Secondary Services |
| 78.000 - 81.000 GHz | RADIOLOCATION | Primary Service |
| 79.000 - 81.000 GHz | RADIO ASTRONOMY | Primary Service |



76.000 - 81.000 ALL MODES

Higher Bands – Advanced licensees only

| | | |
|-----------------------|---|--|
| 122.250 -123.000 GHz | FIXED, MOBILE , SPACE RESEARCH, EARTH EXPLORATION SATELLITE, INTER-SATELLITE AMATEUR | Primary Services Secondary Service |
| 134.000 -136.000 GHz | AMATEUR & AMATEUR SATELLITE RADIOLOCATION | Primary Services Secondary Service |
| 136.000 - 141.000 GHz | RADIO ASTRONOMY, RADIOLOCATION AMATEUR & AMATEUR SATELLITE | Primary Services Secondary Services |
| 241.000 – 248.000 GHz | RADIOLOCATION AMATEUR & AMATEUR SATELLITE | Primary Service Secondary Service |
| 248.000 – 250.000 GHz | AMATEUR & AMATEUR SATELLITE | Primary Service |