

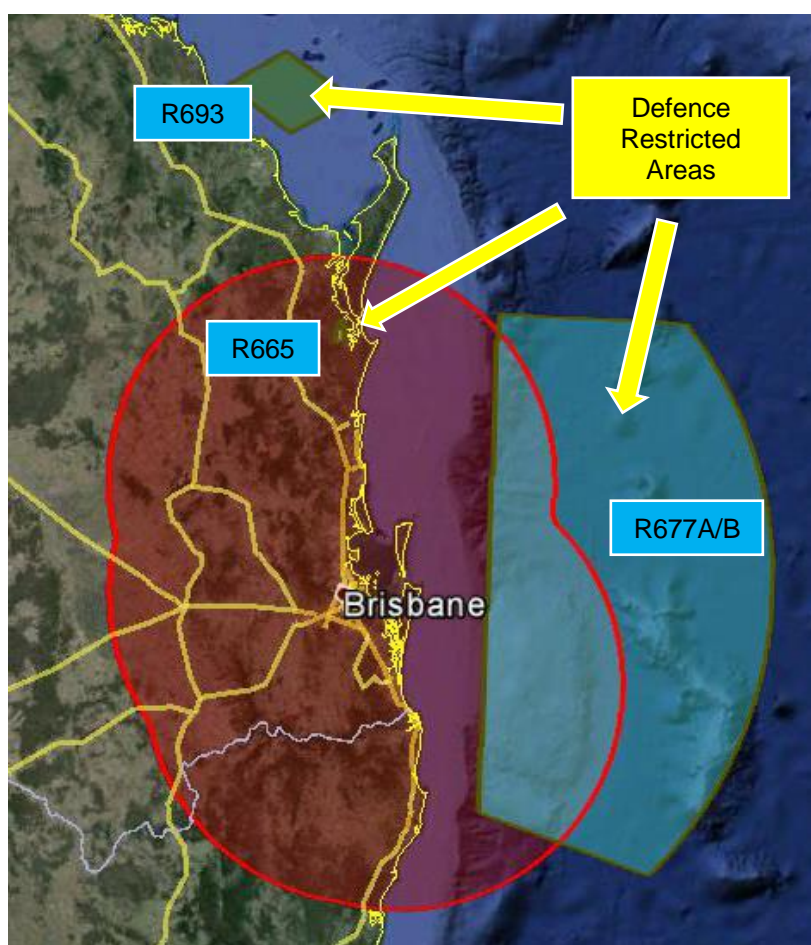
## 1. SCOPE

Free TV Operational Practice OP 63 is a guideline for use of radio frequency spectrum bands for the application of electronic news gathering (ENG) and television outside broadcast (TVOB) in the Brisbane / Gold Coast area.

This Operational Practice has been developed to assist all those involved in ENG and TVOB operations in the Brisbane / Gold Coast area with relevant instructions for access to and coordination of the bands assigned by the Australian Communications and Media Authority for ENG and TVOB operations as specified in ACMA's Radiocommunications Advisory Licensing instruction (RALI) FX 21.

## 2. FREQUENCY BAND ASSIGNED and LICENSED to ENG and TVOB

This Operational Practice applies in the Brisbane / Gold Coast areas and their surrounds as defined by the combined area of the red line in Figure 1 (hereafter referred to as the "red zone"). This zone is an area 150km radius from Brisbane CBD, Surfers Paradise and Bald Knob.



**Figure 1 Brisbane / Gold Coast Area Definition**

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Channel arrangements for TOB services in the frequency bands 2010 - 2110 MHz and 2200 - 2300 MHz are illustrated in Figure 2. Each channel in the raster is identified by a three or four character code used by broadcasters for coordination and planning.

Since 31 January 2016, the sub-band 2268-2300 MHz has been available for use by FOX Sports, which coordinates the subscription television (STV) use of this sub-band.

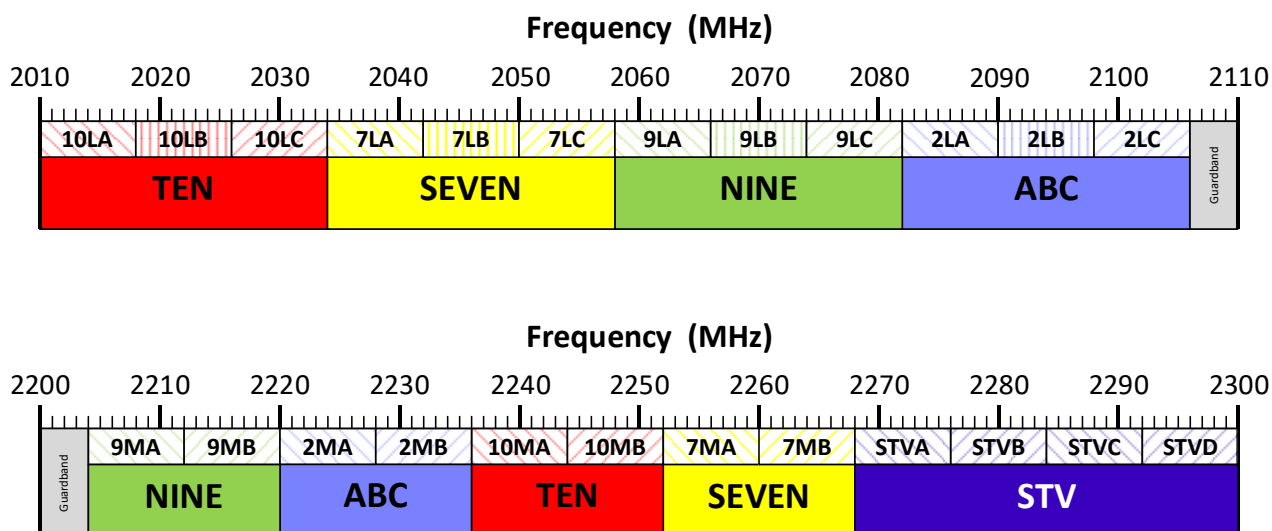


Figure 2: 2 GHz and 2.2 GHz TOB channeling arrangements

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### 3. PERMISSABLE EQUIPMENT SPECIFICATIONS FOR ENG and TVOB OPERATIONS

Across the 3 bands in which TVOB and ENG are permitted to operate, there are a range of power, height and equipment type limits that apply in various band segments. These are shown in Table 1. The figures provide for effective isotropic radiated power (EIRP) radiated within an 8 MHz channel and height limits are above the local ground height.

Full equipment specifications are provided in Appendix A.

**Table 1 TOB Equipment Permitted in the 2 GHz and 2.2 GHz Bands**

Frequency Range (MHz)	Wireless Cameras	TVOB Vans and Temporary Links	Helicopters and other airborne links
	EIRP	EIRP	EIRP
2010 -2110	26 dBm	62.5 dBm	62.5 dBm
2200 -2268	26 dBm	62.5 dBm	Not permitted
2268 - 2300	26 dBm	62.5 dBm	Not permitted

### 4. FREQUENCY COORDINATION

#### 4.1 Interference to ENG and TVOB receivers

In the 2 GHz band, all fixed microwave links are cleared within the red zone and there are no satellite uplinks so no interference should be encountered. The upper edge of the band may encounter some interference from public telecommunications services in the adjacent band, so guardbands have been assigned in the TVOB / ENG channel plans to cater for this interference.

In the 2.2 GHz band, all fixed microwave links are cleared within the red zone and there are no satellite downlinks so no interference should be encountered from these services. The Department of Defence operates aeronautical mobile telemetry (AMT) systems in the band 2200 2300 MHz in South East Queensland in Restricted Areas R665, R677A, R677B and R693 as shown in Figure 1. Restricted Areas R677A and R677B are used more frequently than R665 and R693. Licensed frequencies are at 2255 MHz, 2265 MHz and 2275 MHz, each with a 2 MHz bandwidth.

Operations will mainly be conducted from RAAF Base Amberley near Ipswich. AMT transmissions shall occur only while within the restricted areas. Department of Defence are obliged to provide advice of AMT operations prior and this should be checked before deployment to assess if links may suffer any interference, but this would most likely be only immediately adjacent to the coast.

Therefore, before deploying links in the 2.2 GHz band adjacent to the coast or longer links from coastal locations, broadcasters should check the advice from Defence to assess if the link will suffer any interference.

The upper edge of the bands may encounter some interference from public telecommunications services in the adjacent band, but a 2 MHz guardband exists immediately above 2300 MHz, to the likelihood of interference is reduced.

## 4.2 Interference from ENG and TVOB transmitters

In both the 2 GHz and 2.2 GHz bands, operation of TVOB / ENG services will not interfere with other services.

## 4.3 Summary

Table 2 summarises the types of equipment that may be used in different segments of the 2 GHz and 2.2 GHz bands and co-ordination with other services. If a band segment row is all green, no co-ordination is required.

**Table 2 Co-ordination / Spectrum Sharing Summary - 2 GHz and 2.2 GHz Bands**

Frequency Range (MHz)	Typical TOB Equipment	Interferors			Co-ordination Requirements	
		Fixed Links	Earth Stations	Defence	Where TOB may be the victim	Where TOB may be the interferor
2010 - 2110	All types of TOB links					
2200 - 2268	All types of TOB links except helicopters				Defence to advise broadcasters of AMT operations	
2268 - 2300	All types of TOB links except helicopters.				Defence to advise broadcasters of AMT operations	Co-ordinate as required with other TOB operations

### Legend

	No TOB operations allowed, so not applicable
	No spectrum sharing so no co-ordination required
	Spectrum Sharing with low impact to TOB / ENG, no co-ordination required by broadcasters or TOB operators, check advice provided by other users of the spectrum
	Spectrum sharing with low impact from TOB / ENG, co-ordination required by broadcasters with other spectrum users

There are no coordination requirements for broadcasters use of the 2.5 GHz mid band gap.

## 5. REFERENCES FOR SPECTRUM USAGE FOR ENG AND TVOB OPERATIONS

RALI FX-21 Television Outside Broadcasting Services in the Bands 1980-2110 MHz and 2170-2300 MHz.

RALI FX-21 can be found on the ACMA's website, [here](#).