



# RADIO AND SATELLITE COMMUNICATIONS

Radio communications is one of Customs key enabling technologies. All around Australia, and in offshore air and marine environments, Customs rely on an extensive network of radio and satellite communications to fulfil its role in protecting Australia's borders.

Customs extensive high frequency (HF), and ultra high frequency (UHF) networks are vital to maintaining operational communications, both within the organisation, and between Customs and its partner agencies.

## LONG-RANGE RADIO COMMUNICATIONS

HF radio is the backbone of Customs long-range communications. HF radio allows transmission over very long distances, but its narrow bandwidth limits transmission largely to voice or low speed data.

Ensuring effective communications coverage around Australia's vast coastline and maritime territories requires a huge network of HF radio infrastructure.

The Customs HF network is one of the largest in the country, second only to the Department of Defence.

HF radio systems are installed in all Customs vessels, Coastwatch aircraft, regional and district offices and vehicles. Transportable units are also deployed to support operations in remote areas.

## LONG-RANGE SATELLITE COMMUNICATIONS

Customs also makes extensive use of satellite equipment to enhance its long-range communications capabilities.

As well as standard Iridium and InMarSat systems, Customs has developed and deployed a single box satellite solution called the TacPac (Tactical Pack), which provides encrypted voice and data capabilities.

## SHORT-RANGE COMMUNICATIONS

Customs uses digital UHF radios to support operations in local areas within a radius of 40-50 kilometres.

The network is constantly being upgraded and expanded to meet changing needs of Customs. It is fully encrypted to provide secured support to Customs short-range tactical operations.

UHF radios are installed in all vessels, Coastwatch aircraft, regional and district offices and vehicles. Customs officers in airports and wharf/cargo areas also use portable UHF headsets.

To support operations that extend beyond a fixed UHF network, Customs has more than 30 portable repeater stations. These units can be deployed to relay signals and expand the communication radius available during an operation. Coastwatch aircraft are also capable of providing an airborne repeater function.

As well as being able to communicate within Customs and with partner agencies, Customs officers need to make radio contact with members of the public, commercial ships, yachts and other recreational craft. Where this need exists, Customs officers are able to use UHF citizen band (CB), 26 MHz CB, and VHF radios. All customs vessels are fitted with marine VHF radios to converse with civilian vessels.

## FUTURE OF RADIO COMMUNICATIONS

As with all of its technologies Customs works to keep abreast of continuing advances in radio and satellite technology, ensuring that its communication requirements are met in an ever changing environment.

## FOR MORE INFORMATION

For information on any other Customs matter, contact the Customs Information and Support Centre on 1300 363 263 or email [information@customs.gov.au](mailto:information@customs.gov.au) or browse the website [www.customs.gov.au](http://www.customs.gov.au)