

What I Need to Know

- Radio is a vital tool for Rural Fire Service operations. It provides a means of command and coordination of operations, as well as safety back-up for firefighters. In recent years, the Rural Fire Service has promoted the use of Very High Frequency (VHF) as the preferred carrier and provided subsidies to brigades to assist them purchase equipment.
- QFRS urban appliances mainly use UHF frequencies and many rural brigade appliances are dual-fitted with VHF and UHF radios.
- Other fire-related-organisations: DPI Forestry, Department of Natural Resources and Mines (DNR&M) and the Environment Protection Agency (EPA) use VHF. DPI has developed an extensive network of repeater stations made available to the other agencies on a commercial basis.
- The VHF low band spectrum is currently the primary radio communication system of the Rural Fire Service. While some brigades still utilise Ultra High Frequency (UHF CB), it is generally used only in areas west of the Great Dividing Range.

STATE BANDPLAN

The Queensland Fire and Rescue Service Bandplan applies Statewide. It has two components:

- Mandatory Elements
 - The mandatory elements as indicated within the attached standard procedure guidelines will be programmed in all radios.
- Discretionary Elements
 - Where the mandating block does not show frequency allocation, individual Areas are permitted to program channels to conforming frequencies to tailor the Bandplan to their own needs.

AREA BANDPLANS

- Area Bandplans will vary according to the availability of communication facilities (QFRS Firecom links; DPI repeaters; other agencies), and will be subject to approval by the Assistant Commissioner, Rural Operations.
- Area Bandplans must conform to the mandatory elements of the State-wide Bandplan. Although these are stand-alone systems, an Area Bandplan must be established in conjunction with adjoining Area Director, Rural Operations, to ensure common practices are followed when sharing facilities; e.g., Bandplans of adjoining Areas should show them as using the same channel of DPI Forest Service repeaters.

FREQUENCY OWNERSHIP

QFRS – Rural Operations

The listed Bandplan frequencies are licensed to QFRS and the Rural Operations; the use of those frequencies without authority is illegal.

- Repeaters
 - The Assistant Commissioner, Rural Operations, must approve the establishment of dedicated repeater facilities. The allocation of specific frequencies shall be advised by the Australian Communications Authority (ACA).
 - Access to DPI repeaters has been accorded to the Assistant Commissioner, Rural Operations to extend the VHF communication system as required. Radio communication protocols will be strictly observed. Courtesy requires the system owners and commercial clients have non-emergency priority.

- Frequencies Licensed to Other Agencies
 - The use of such frequencies should be restricted to inter-agency operations, and should form only part of the Area Bandplan, provided the frequency owner approves.
- Licensing
 - All base station radios must be licensed with the Australian Communications Authority (ACA), with the licences registered in the name of the Assistant Commissioner, Rural Operations. The Assistant Commissioner, Rural Operations is exempt from the payment of licence fees.

Battery Maintenance

- One of the common difficulties with portable communications equipment is the gradual decline in battery performance after the first year of service. Also referred to as memory loss, this is related to premature aging of the battery and often occurs without the knowledge of the user. A common symptom of a depleted battery is the inability to transmit although the 'receive' function may still work. Given its relatively short life span, the battery can be considered an expensive item.
- Although the battery may be fully charged, it may eventually get to a point where it may hold less than half its original capacity, resulting in unexpected downtime. Under normal conditions, a marginal battery holds enough reserve capacity until recharged. However, in an emergency, a marginal battery cannot provide the extra power that is needed and the system subsequently fails.
- It is a mistake to pamper a battery by giving it light duty followed by plenty of recharge. Battery life can be significantly extended by implementing a routine exercise cycle, using a simple 240 volt timer, charging your portable radio for between 1.5 to 2 hours per day. This will keep the batteries charged to near maximum level. Do not leave batteries or radios in chargers which are turned on for an indefinite period of time. This can seriously reduce the life of the battery. NiCad batteries should be exercised monthly. Other types of battery will have different requirements and must be treated in accordance with the manufacturer's instruction.

How I do it

- Requests by individuals or organisations for information relating to the communications infrastructure should, in the first instance, be referred to the Area Director, Rural Operations.
- Radios will be programmed at the point of purchase.
- Re-programming of radios will be carried out at the discretion and by the authority of the Area Director, Rural Operations.
- Standard voice procedures, mobile identification and operational procedures are outlined in the reference material identified below and are to be implemented uniformly.

Reference Materials

- Area Reference Manual - Business Rule: A5.3.4 – Manage Rural Area Communications
- Operations Doctrine, QFRS
- Field Incident Guide (FIG)
- QFRS Radio Procedures Guide