

LAND ROVER OWNERS' CLUB OF TASMANIA INC

TWO WAY RADIOS USAGE ON CLUB TRIPS

There is no doubt, as anyone who has ever been on a Club trip will tell you, of the worth of a two way radio on any outing. The Club uses UHF CB radio as its standard for in vehicle communication on trips. They are useful for passing on important route information and other details as well as providing an "ice breaker" for new comers in communication with other members.

As in most avenues of life, courtesy, consideration for others and common sense are the important factors in ensuring effective radio communications. Without them, misunderstandings will be frequent and otherwise avoidable problems will negate the radio's benefits. On the CBRS (Citizens' Band Radio Service) band which we use, (UHF 476 to 477 MHz), it is not essential to follow formal procedures to the letter but some knowledge of them is useful.

Use of microphone

It is most important that one does not speak directly "into" the microphone (i.e. parallel to one's mouth) but rather that the mike is held at an angle to the mouth (up to 90 degrees) so you talk across it.

Transmitting & receiving

UHF radio is not like a telephone, because transmission and receiving are separate operations. You cannot interrupt someone who is speaking and must wait until he/she finishes (usually indicated by *OVER*) before responding. The result of double transmissions are - unintelligible garbled sound without meaning, usually at a critical point on some remote bush track!

Calling

When calling someone, it is only necessary to use the two call signs involved - no other words such as "Have you got a copy?" or "Are you out there, Henry?" etc are required.

It is usual practice when calling to state the called party's call sign first, followed by your own - for example "Lima 7 - Lima 19". Remember, what you are saying in effect is "Hey you, this is me". In acknowledgement, the called party should answer merely by stating his/her call sign, possibly followed by "Go ahead". If the called party (station) hears you, he/she will answer anyway without the extra embellishment.

It is important to state the call sign of the station you want to talk to first and then your own call sign since the station being called should recognise his/her call sign even over other chatter in the vehicle and will prick his/her ears up. By this time, you will be identifying yourself and the called party will know who is calling. This saves the caller from having to call more than once (in theory, anyway!). In recent times the Club has tended to move away from callsigns. Real names are being used more often but at times callsigns are still useful. The same principles of use apply.

Etiquette

Once contact has been made, the conversation will proceed back and forth between the two parties. It is desirable, however, that each party pauses momentarily before responding at the end of an *OVER*. This will allow time for any third party who may be listening to break into the conversation. The procedure here is for the third party to simply transmit the word "BREAKER" between overs, thereby signaling his/her wish to break in to the conversation. The replying station must "ACKNOWLEDGE THE BREAKER" and either allow immediate entry into the conversation or ask the Breaker to stand by in the event urgent information still has to be passed to the first party.

At the end of any conversation, it is desirable that each station clears the airways by stating he/she is doing just that:

- *Lima 7 clear and listening* or *Lima 7, Out* indicates I have finished my conversation, anyone else is now welcome to use this channel, but if you want to talk to me, I am still available.
- *Lima 7 closing down* means I am switching my radio off and I am therefore unavailable right now for further contact and conversation.

Formal radio usage requires the number of words to be kept to a minimum and for those that are transmitted to be as clear and unmistakable as possible.

- *ROGER* Your message has been received and understood, nothing else. It does not mean Yes or No - the unmistakable words for these are *AFFIRMATIVE* or *NEGATIVE*.
- *SAY AGAIN* is the correct response if you have not understood a message, rather than *What was that?, I beg your pardon, I did not understand you etc.*

Repeaters

UHF radio transmission occurs essentially in straight lines from point to point, but the radio waves can be bounced off hills, cliffs and so on. Hilly terrain may limit the radio's usage and sometimes direct (Simplex) contact between two stations is impossible even over distances as short as a few hundred metres.

A very effective way of extending a UHF CB radio's range is to make use of an intermediate station (Repeater) on a high point, which will give greater coverage. However, since it is not possible for a transceiver to transmit and receive on the same frequency at the same instant, some modification to the system is necessary. This takes the form of a Repeater Offset whereby two different frequencies are utilised, one to transmit and the other to receive. Channels 1 to 8 are teamed with Channels 31 to 38 for this purpose. In different areas of Tasmania, repeaters are installed utilising all these pairs.

Around Hobart, Repeaters 1/31 and 5/35 are set up on Mt Faulkner, 2/32 on Herringback to serve the Huon. Channels 5 and 35, incidentally, are recognised throughout Australia as designated Emergency Channels, and as such they **must not**

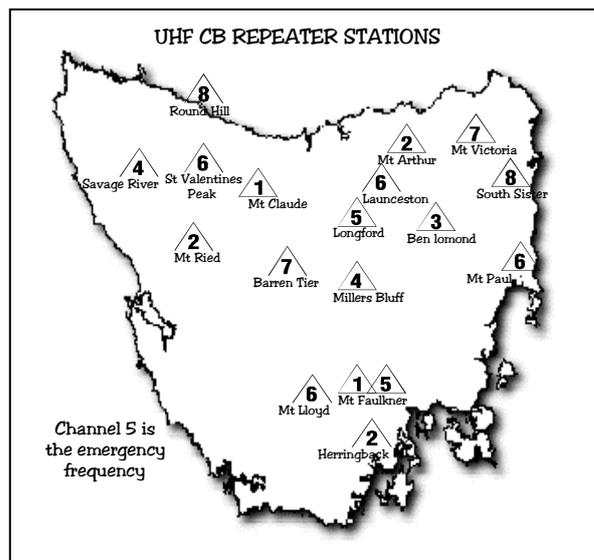
be used for ordinary routine transmissions. It is very important that Channels 1 to 8 and 31 to 38 are not used for simplex operation, that is direct from one station to another, as this will obviously interfere with the operation of any repeater which your transmission may reach.

There is nothing difficult about the use of a repeater - the operator merely has to ensure his/her radio is set to the repeater (DUPLX) mode, usually by pushing a special button for the purpose, before commencing transmission. Every now and again during the use of a repeater, one will hear a Morse Code signal superimposed over voice transmissions. This is the repeater's own identification number, which, for legal reasons, must be transmitted periodically.

Since the range of a repeater is so much greater (usually because of their much higher elevation) than that of radios used in the simplex mode, it follows that many more users will have access to them and will also want to use them at times. Adherence to correct radio procedures is therefore essential if everyone is to derive full benefit from their use. In addition, some repeaters are powered by storage batteries which are recharged by solar and wind generated power. Lengthy or continuous unrestricted use is likely to exhaust the batteries which may take an unduly long time to recharge, especially during extended periods of calm cloudy weather in winter. They should not therefore be used when direct (simplex) communication, on frequencies not set aside for repeater use, is possible, or for long conversations. Operating procedures for repeater transmission are more or less as outlined earlier in this article.

Emergency procedures

Emergency calls must receive priority at all times. Should you need to make an emergency call when the repeater is in use (assuming Repeater 5 cannot be used for whatever reason) follow the Breaker procedure outlined above by transmitting the words EMERGENCY BREAKER between overs. On Channel 5, a TASVEC monitor should answer your call. He/she will request full details of the emergency (which are tape recorded for future reference) for passing on to the Police, Ambulance Service, Tas Fire Service or whoever. If such a monitor does not answer on Channel 5, someone else with access to a telephone may do. If there is no response at all then try any other repeaters in the area. Repeater 5 is a voluntary service, operated solely by unpaid volunteers. It is



run by TASVEC (previously known as CREST) who will always welcome donations towards their costs.

In conclusion, a quote in part from a British Post Office leaflet - Citizens' Band Radio - Code of Practice would be appropriate:

Use common sense when using CB and do not transmit when it would be risky to do so, for example when holding a microphone may interfere with your ability to drive safely, or when explosives are being used or stored in the near vicinity. (The electric lead attached to a detonator can, under certain circumstances, act as a very effective aerial, producing sufficient power to fire the detonator).

Operations

- 1. Listen for several seconds before you transmit** to ensure you will not be transmitting on top of another conversation.
- 2 Keep conversations short** when the channels (especially repeaters) are busy so that everyone has a fair share.
- 3. Keep each transmission short** and listen often for a reply, or you may find that the station you were talking to has moved out of range or that reception has changed for some other reason.
- 4. Always leave a short pause before replying** so that other stations may join the conversation.
- 5. CB slang isn't necessary**, plain language is just as effective.
- 6. Be patient with newcomers and help them.**
- 7. At all times and on all channels give priority to calls for help.**