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# Para-Quad Fortitude News

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Don Pugh, a new quadriplegic, discusses the benefits of radio to the disabled with Bruce Jacobs and Bob Wynn.



# Ham Radio for Rehabilitation

The radio conversation was in no way unusual. "VK6ZAT, this is VK6DN", I said. "How are you today, Bruce? The temperature is going up to 40°C. Sure glad my room is air conditioned." What was unusual was that I had just broken my neck at the cervical five, six and seven level three days before. Lying in the Intensive Care Unit of the Royal Perth (Rehabilitation) Hospital, my body was paralysed from the shoulders down. Only my arms could move and those only weakly upwards.

The effects were devastating on a person who had been leading an active life of hiking, bicycling, scuba diving and flying. As a Canadian from Toronto who had arrived in Perth in 1977 to teach High School, I enjoyed the sun-filled "Sandgroper" life, and extended my stay from one to three years. In December, 1978, a lift in a car from Perth to Adelaide proved tragic. The monotony of the Nullabor Plains early in the morning caused the driver to doze at the wheel and the car rolled over. Asleep at the time, I regained consciousness to find myself still firmly strapped in the passenger's seat, but unable to move a single limb. Transferred to Kalgoorlie by ambulance, and flown to Perth by the Flying Doctor Service, my x-rays brought the bad news that my spinal cord was severed and I would be confined to a wheelchair for life.

During registration I was assigned to Sir George Bedbrook, a pioneer and world renowned authority in the field of spinal injuries. During our first meeting, the topic of amateur radio was discussed and Sir George described his friendship with Jim Rundle, (VK6RU), a local amateur. He had enabled Sir George to communicate on the air with a South African amateur, who was the director of a large and progressive spinal unit. A call by Sir George to Jim led to the erection outside the Intensive Care Unit of a two metre antenna. Two metre F.M. radio is a very high frequency mode of amateur radio communication, which permits local mobile, portable and base station operation within a 30 mile radius about a central relay station. This allows all amateurs to listen in to and to enter into any conversation going through the relay as they so desire. Because of the limited number of amateurs using the two metre band, most of them know each other by name, and have a considerable knowledge of each other's interests. They are usually members of a friendly and co-operative fraternity, The Wireless Institute of Australia.

Once the antenna was erected, a nurse was able to hold my portable walkie-talkie and operate the Off-On switch. Within a short time, I was in touch with my amateur friends. My first contact was with Bruce Jacobs, (VK6ZAT), an active amateur who is also confined to a wheelchair due to loss of his legs. After a few contacts with Bruce, it became most apparent that modifications to the system were required, as I could not continue to impose on the busy nurses for any extended time. Discussions between Bruce and another amateur, Bob Wynn, (VK6WY), a paraplegic who lectures in electronics at a technical college, led to a proposed solution. Bob, with a number of other interested amateurs, built an automatic scanner, which allowed my receiver to

lock on in sequence for three seconds, each of the ten most actively used frequencies in the Perth area. If any channel was in use, the scanner locked on that channel. If I cared to talk on that channel, all I had to do was drop my arm momentarily onto a sensitive air bulb switch and turn on my transmitter. Hitting the switch again would turn off the transmitter and allow reception of my friends' conversation. The pressure required to operate the bulb was only a few grams, and I had to raise my arm only a few centimetres to clear the bulb, which was the limit of my ability at that time. Due to my weakness, it was possible for me to leave my transmitter on, which would lock the relay station "On", preventing other amateurs from using it. Bob later installed a timing circuit, which cut off my transmitter at the end of three minutes, putting the set back into receive condition. This allowed other amateurs to use the system again.

During operation the microphone was mounted on a swinging boom fitting into a mount, one of which was fixed to the head posts on each side of the bed. Thus I could talk whether I was lying on my back or on either of my sides. Since I was turned from one position to another every two hours by the hospital staff, this feature was most important.

During the next six to eight weeks, rigidly confined to bed in spinal traction, amateur radio played an important rehabilitation role. Firstly, talking and listening to my friends on the radio provided a pleasant alternative to watching television at a time when it was impossible for me to read. Secondly, communication with my amateur friends was tremendously supportive, especially when I saw what Bruce and Bob could do, and how they could live a normal, married and productive life, even on wheels. Thirdly, as my condition became known on the air, I was visited by many Perth amateurs. This both cheered me up and encouraged me to persevere in my recovery. Finally, the radio provided me with a link with normal life as it had been before the accident.

In the hospital setting following an accident, quadriplegics at first are unhappy and often depressed, not only because they are secured to their beds by steel calipers embedded in their skulls, but because they are unable to do so little as roll over, or even to scratch their heads. The psychological need for the continuation of old interests and activities is acute. The ability to carry out easily and successfully an interesting activity such as operating a radio, calling up friends and talking to people of similar interests was, for me, a good way to avoid the depression suffered in the early days by many spinal patients. Yet, much as I enjoyed the contact with the outside world, I regretted my inability at that time to communicate with the other patients. I felt that the availability of suitably modified C.B. radios, for rent, would permit bed-ridden patients within the hospital to share their experiences and offer mutual support. It could be that the introduction of C.B. radios for non-amateurs could be an important rehabilitative agent, possibly even superior to rental television, as the patient is actually participating in, and accomplishing, an activity.

After five months in the hospital, I still use the two metre set, though not as frequently as during the early days. Application has been made to establish within the hospital my high frequency radio transmitter, which will enable me to communicate all over the world. With the establishment of this station, it may be possible to interest other patients in a hobby ideally suited to those on wheels. Communication by radio with the handicapped of other countries may

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increase understanding of the nature of the disability, and techniques being used elsewhere to deal with it. Certainly, the hobby has aided my rehabilitation and has given me objectives to work for in the near future, which may be of further assistance.

Support in permitting the construction of my radio hobby has been appreciated. The initiative taken by Sir George Bedbrook is symptomatic of the progressive techniques being used by the Royal Perth (Rehabilitation) Hospital. It is hoped that the use of radio within hospitals will spread. Happier and more quickly rehabilitated patients provide ample justification.

**DON PUGH**

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