

# WD4NUN REPEATER UPGRADES



BACKGROUND: The hardware for the original WD4NUN repeater was donated by Vince Ott, WD4NUN (SK). The repeater is located at the Berkeley County, South Carolina, landfill tower.

The original hardware was later removed and replaced by newer hardware with the old equipment going into storage. The old equipment was later put back into service, with the addition of an outboard CW IDer, as the backup repeater. The backup is located at the 150', derrick style tower at the Berkeley County EOC and utilizes a single, 4 bay antenna with a duplexer.

The main repeater currently is a VERTEX VR-5000 operating at 25W, no PL tone and a 127.3 Hz tone on the repeater output. This repeater utilizes separate transmit and receive antennas with no duplexer.

MAIN REPEATER UPGRADES: A new Yaesu VXR-7000 repeater has been purchased. Robert AE4RJ has fronted the money for this purchase and any help to defray the costs would be greatly appreciated. Contact Robert at [ae4rj\(AT\)amsat.org](mailto:ae4rj(AT)amsat.org)

At the suggestion of the Southeastern Repeater Association (SERA), the VXR-7000 has been programmed to operate with an input/output tone of 91.5 Hz. The PL tone will prevent inadvertent keying of the repeater by out-of-area repeaters utilizing the same input frequency. The output tone will allow users to prevent out-of-area repeaters, utilizing the same output frequency, from breaking squelch on their programmed radios.

**All Berkeley ARES/RACES members, and other users, will need to program their radios accordingly.**

Since the repeater is located in an area with **very** limited access, a remote DTMF controller board will be added to control power to the repeater, in compliance with FCC rules regarding control of repeaters.

A duplexer will be used in the repeater antenna feed-line to allow a 70 CM transceiver to share the existing antenna and operate the DTMF activated, remote control functions.

The only remote control functions enabled will be repeater power ON or OFF.

BACKUP REPEATER UPGRADES: The VR5000 repeater will become the new backup repeater and be re-programmed to operate with a 91.5Hz input/output.

Because of the accessibility of this repeater, no remote control functions will be installed.

The former backup repeater will be held in reserve and possibly be re-tuned to function as a portable repeater, using an available, itinerant repeater pair.

