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SR-04 with Internal 900 MHz or 2.4 GHz Frequency Hopping Spread Spectrum Radio

Setup Procedures:

The radio management port is always operating at 19,200 bps and it uses the same port for the data I/O and the management. The radio typically has a composite rate of 56,700 bps when installed in the SR-04.

Radio Setup Procedure:

1. Use a terminal or PC connected to the SR-04 management port or to Port 1, using the Port 1 setup function. The management port is always at 9600 bps, Port 1 can be set at speeds up to 57.6.
2. Set the SR-04 composite port to 19,200 bps using the CN command. The composite port of the SR-04 is asynchronous when set to 19,200 bps.
3. Use the CM command to connect to the radio modem. Make the necessary changes to the radio. As the SR-04W comes from the factory, the only item that might need to be changed is usually the call book, which is the radio address.
4. After changing the radio settings as desired, use the <escape> key to back out of the radio setup.
5. Change the SR-04 composite port back to the correct speed, usually 57,600 bps, to match the radio modem data rate. Use the CN command to change the network rate.

Background Information:

The SR4 firmware adds the new network management port command Configure Modem (CM) to permit direct access to the device connected to the network port. The CM command allows access to the modem when the network DCD signal is ON or OFF. The CM command shows a warning message if the network is set for SYNC operation and a second message if the network DCD is ON, but the connection occurs anyway. Note that if the network is set for SYNC, it is not changed when the CM command is executed.

When CM is active, all other SR4 multiplexer operations are suspended, and a direct connection is enabled to the common channel modem from the network management port or Port 1 if port 1 setup is enabled. All characters sent to the network management port are sent to the common channel, and all characters from the common channel are passed to the network management port. No flow control is implemented but there are character buffers in both directions and rate conversion can take place. Typing <ESC><ESC> terminates the CM command.

When an internal data radio is installed in the SR4, a control signal is needed to place the radio into setup mode (push the config button). On the SR4 main board, there is a latch that is wired to provide this control signal capability. The SR4 firmware includes the code to drive this output latch.