#5401

Using FreeWave radio modems with Control Microsystems SCADAPack RTUs

September 5, 2000

FreeWave Technologies spread spectrum radio modems can be used with Control Microsystems SCADAPack RTUs to provide reliable monitoring and control over the geographical area administered by most water and wastewater utility districts. The 115.2 Kbps maximum data rate of FreeWave's modems makes it possible to operate the SCADAPack RTUs at their maximum data rate. This enables network polling to be done in a fraction of the time that would be required with leased line or license-radio based networks. Network operating costs are also reduced because there are no recurring costs associated with FreeWave radio modems and no FCC license is required.

Radio setup

Use of FreeWave modems with SCADAPack RTUs requires the modems to be set for Modbus RTU operation, the specific settings for these parameters are shown below. Consult the FreeWave User Manual for more information.

Parameter	Setting	Main Menu Location of Parameter
MODBus RTU	1	Set Baud Rate
Master Packet Repeat	3	Edit Multipoint Parameters

RS-232 Modification

SCADAPack RTUs use RS-232 pin 9 as an auxiliary power supply output. This pin is used as a ground by FreeWave modems. For use with SCADAPack RTUs, the connection between pin 9 on the RS-232 connector on the FreeWave modem and pin 9 on the SCADAPack RTU must be broken. This can be done by removing pin 9 from the RS-232 connector on either the FreeWave modem or the SCADAPack RTU. Removal of this pin will not affect the operation of either the Freewave modem or the SCADAPack RTU.