Theory of Operation – RF Relay Model RFR-200
Savi Technology, Inc.

The RF Relay operates in the following sequential manner:

1) The RF Relay is normally in a "wait" state during which there are no Radio transmissions of any kind.

2) LonWorks signals are received from the network by the Combiner Module. Inside, the transceiver, and router receive the data, convert it, and send it to the RS-232 serial port for output to the RF Modem.

3) The RF Modem receives the data and transmits it at 900 MHz spread spectrum through coaxial cable to the up/down converter.

4) The up/down converter receives the signal, converts it to 2.4 GHz spread spectrum and transmits it via coaxial cable to the omni-directional antenna.

5) A 9 dBi omni-directional antenna is used to transmit the 2.4 GHz spread spectrum signal to one or more identical systems connected to the network where the process is reversed. These transmissions fall under 15.247 of FCC Part 15 regulations.