

## Theory of Operation of RCV1000

Radio Control Valve is a water/gas valve that is remotely controlled by a handheld device.

Qtronic's model RCV1000 Radio Control valve is using a 915MHz radio frequency transceiver. The RCV works on the 3.6V lithium battery. The extreme low power design makes the device last over 10 years. The unit is housed in a plastic enclosure and mounted on top of a shutoff valve.

A handheld controller equipped with the same transceiver module. The handheld controller sends a FM radio signal that contains the unit's ID and message code.

In the event of opening the valve, the operator can select the RCV which needs to be opened from a list, and sends a "open message" that contains the ID to that particular RCV. The RCV checks the received message and compares the ID with a pre-stored device ID. If the ID matches, the RCV opens the valve accordingly. The RCV replies to the handheld controller with a feedback signal.

The same principle applies when the operator needs to close the valve, check RCV status.

This FM 915MHz transceiver module contains a 10 byte preamble and manufacturer's ID. RF baud rate is 25000bps.

Handheld

RCV01

