



# RAINMAN

## *Remote Irrigation Controller*

The Remote Irrigation Controller (RIC) is an intelligent radio device that controls the activation of irrigation solenoid valves. These valves can be positioned over short or long distances throughout an irrigation system without the need for wires.

The RIC is available in a high or low power version:

**RIC HP LICENSED** for transmission distances up to 20km; and

**RIC LP LICENCE EXEMPT** (Spread Spectrum) for transmission ranges up to 1km

Both versions include RIC Field unit(s) and a RIC Master unit.

The Master unit is the entry point to the RIC network. Commands are sent to the Master via the serial port of the **RAINMAN Mp** irrigation controller and are presented to the network over the air interface and sent to the Field units.

The Field unit is the endpoint of the RIC network and the point that is connected to the solenoid. Commands arrive at the field unit via the air interface, are executed and responses are generated with status reported back to the **Mp**.

All irrigation programming for the RIC is done via the **RAINMAN Mp** irrigation controller.

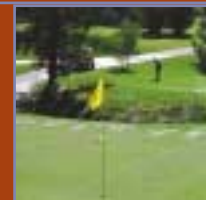
Typical RIC applications include Parks & Gardens, Vineyards, Golf Courses and Agriculture.

### Features

- Up to 16 RICs can be controlled by a **RAINMAN Mp** irrigation controller
- Powered by a battery charged from an integrated solar panel for complete independent operation
- Operates without sunlight for up to 5 days (dependent on battery capacity)
- Controls up to 8, 2 or 3-wire 12 VDC latching irrigation solenoids
- Two inputs for water flow monitoring
- Accumulates volume and calculates average flow rate
- Remote diagnostics
- Information on signal strength, battery voltage and solar voltage available at the **RAINMAN Mp**
- Automatic solenoid shut-off if comms fail
- Sequential solenoid turn off function for power conservation
- Externally visible LEDs to display status and diagnostic information
- RICs are housed in weatherproof enclosures
- RIC field units can be used as repeater stations to send commands to other RICs in the field



**HIGH or LOW  
POWER VERSION**



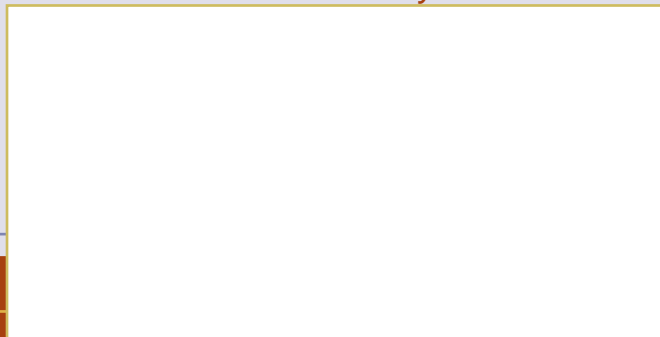
## TECHNICAL SPECIFICATIONS

**HP**

**LP**

<b>Range</b>	Up to 20km	Up to 1km
<b>RF Transmit Power</b>	Up to 5W (+37dBm)	25mW (14dBm)
<b>Operating Frequencies (MHz)</b>	148-174	433
<b>Interface Ports:</b>		
<b>Main Connector</b>	DB9 Female	DB25 Male
<b>Auxiliary Connector</b>	DB9 Female	DB25 Male
<b>Minimum Receive</b>		
<b>Decode Level</b>	-101dBm @ 10 <sup>4</sup> raw BER	-95dB @ 10 <sup>6</sup> raw BER
<b>Error Detection</b>	16 Bit CRC with packet re-transmits (ARQ)	16 Bit CRC with packet re-transmits (ARQ)
<b>Antenna Connector</b>	BNC (50Ω) Female	BNC (50Ω) Female
<b>Power Requirements</b>	9–16VDC (negative ground)	9–16VDC (negative ground)
<b>Power Consumption:</b>		
<b>Transmit</b>	(@5W) 1.3A	(@25mW) 60mA
<b>Receive</b>	76mA	40mA
<b>Sleep Mode</b>	67mA	1mA
<b>Operating Environment</b>	-10°C to +60°C	-10°C to +60°C
<b>Solar Panel Voltage</b>	12VDC	3VDC
(field unit only)	IP54	IP54
<b>Solenoids - latching</b>	4A	4A
(field unit only)		
<b>Flow Meter</b> (field unit only)	50Hz max	50Hz max
<b>Battery</b> (field unit only)	12VDC	12VDC

*Distributed by*



Note - RAINMAN has a policy of continued development, specifications are subject to change without notice.