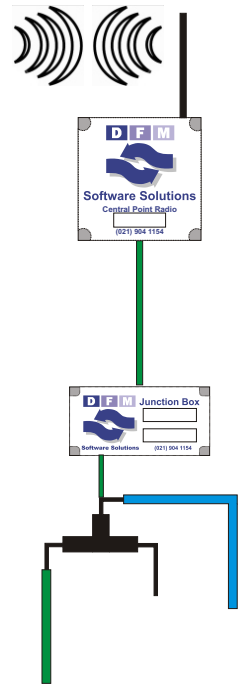# Irrigation Automation Equipment

Our Irrigation Automation equipment can be implemented as one complete system or individual components as needed. Please review the different components for more information.

RVU (Radio Valve Controller)

The RVU module controls valves remotely. This radio unit eliminates wires, reducing maintenance and theft problems. The reply-back radio communication ensures system reliability. No solar panels required (but can be supplied separately).
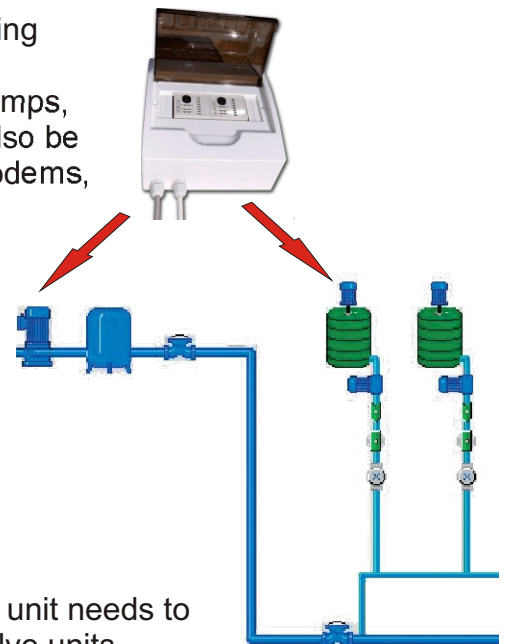
• 4 channel 12Vdc latching outputs
• 1 channel digital input for remote control
• Reply-Back radio communication protocol
• Radio signal repeater functionality included (unlimited repeater chains)
• Radio signal strength = tested 2km line of sight (DQD+RSSI logged)
• Power supply = 3.6V D-Cell long life lithium battery (voltage logged)
• Battery life expectancy under normal operating conditions = 2 years
• Steel bracket mounting 4 solenoids with cable junction box
• 12Vdc latched NO solenoids available on request
• Charge pump latch pulse booster capabilities per channel
• Programmable NID (network ID) and RID (receiver ID)
• Programmable frequencies with channel hopping capabilities

ICU (Irrigation Control Unit)

The ICU is implemented as a pump-house controller, directly interfacing with the PC. This unit logs water flows, EC and Ph meters, as well as controlling fertilizer injection equipment. This unit also controls the pumps, valves, mixers and flush systems. System overwrite conditions can also be implemented. The ICU can also be connected to long-range radio modems, for remote control systems.

• 8 channel 24Vac IO pump-house controller
• LED status indication
• Up to 8 relay isolated 24Vac outputs
• Up to 8 opto-isolated 24Vac inputs
• ICU's can be daisy chained
• RS485 and/or RS232 master interface protocol
• RS485 slave interface protocol

RPS (Remote Pump Start Unit)

The remote pump start unit can control up to 4 pumps or valves. This unit needs to be mains supplied (24Vac). It can also act as data repeater for the valve units. It can also be configured to interpret DLC broadcasting information to control its outputs.

• 4 channel 24Vac output controller
• Manual & Automatic operation
• 24Vac supply
• Can be used in conjunction with DLC
• Reply-Back radio communication protocol
• Radio signal repeater functionality included (unlimited repeater chains)
• Radio signal strength = tested 2km line of sight (DQD+RSSI logged)
• Programmable NID (network ID) and RID (receiver ID)
• Programmable frequencies with channel hopping capabilities
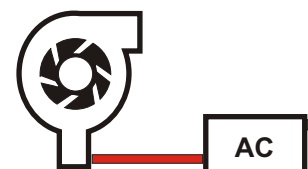
Tel/Fax: 021 904 1154
dfm@dfmsoftware.co.za
www.dfmsoftware.co.za

Irrigation Automation Equipment

DLC (Dam Level Controller)

The dam level controller is a input condition monitoring unit, which
broadcasts conditions like dam levels. It can be configured to control
outputs on any RVU, ICU or RPS.

• 1 channel digital input for remote control
• Reply-Back radio communication protocol
• Radio signal repeater functionality included (unlimited repeater chains)
• Radio signal strength = tested 2km line of sight (DQD+RSSI logged)
• Power supply = 3.6V D-Cell long life lithium battery (voltage logged)
• No solar panels required (but can be supplied separately)
• Battery life expectancy under normal operating conditions = 5 years
• Programmable NID (network ID) and RID (receiver ID)
• Programmable frequencies with channel hopping capabilities
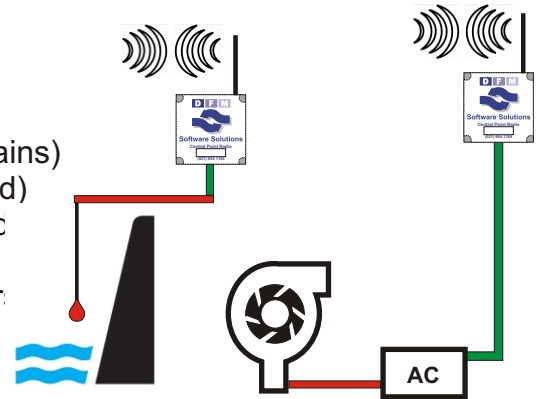
RPT (Radio Data Repeater)

In cases where long distances between radio units need to be covered,
it is recommended that a data repeater to be installed between these units.
The repeater works in broadcast mode, where it can repeat radio signals
from one radio to many other radio units. Solar panel options are available
on repeaters where high data traffic is required.

• Reply-Back radio communication protocol
• Radio signal repeater functionality (unlimited repeater chains)
• Radio signal strength = tested 2km line of sight (DQD+RSSI logged)
• Power supply = 3.6V D-Cell long life lithium battery (voltage logged)
• No solar panels required (but can be supplied separately)
• Battery life expectancy under normal operating conditions = 1 year
• Programmable NID (network ID) and RID (receiver ID)
• Programmable frequencies with channel hopping capabilities

CPR (Central Point Radio)

A central point radio (or radio data server) is required for linking the
control system to a PC, or linking an ICU onto the system.

• Reply-Back radio communication protocol
• Radio signal repeater functionality (unlimited repeater chains)
• Radio signal strength = tested 2km line of sight (DQD+RSSI logged)
• Power supply = 9Vdc
• RS232 interface protocol
• Data storage capabilities
• Programmable NID (network ID) and RID (receiver ID)
• Programmable frequencies with channel hopping capabilities