

RAINMAKER RM-1 CONTROLLER

New Features in Version 1.5x Software

- Number of flow zones increased from 4 to 127.
- Two flow zones can be allocated per station.
- Programs can be run and tested without Translators attached.
- Force only one station active at a time for visual checking on walk-around.
- Decoder addresses copied in the RM-1. These can be downloaded to Translators.
- Printer Line Feed after Carriage Return can be turned on or off.

Flow Zones.

127 flow zones allows for more precise flow management. A good example of their use would be allocating a different flow zone for each Green. If correctly sized, one half of the Green at a time could be watered, but many different Greens at once. 127 zones allow capacity for 36 holes with a different flow zone for each Green and Fairway.

Each station in the 'Config' can be allocated to two different flow zones. An example might be to allocate a series of Greens to a high capacity zone representing the flow limitations of the main pipe, and then each Green to its own individual flow zone to limit just one half to come on at once. Each station has an entry labelled 'Hydraulic Zone A' and 'Hydraulic Zone B'.

The 'Pump' screen has now been modified to allow individual zone capacity to be defined, or a range of zones with the same capacity ('Zx..Zy'). A 'Print' key has been defined to allow printout of this information.

Run RM-1 Without Translators.

To allow programming the configuration away from the site, the RM-1 can be made to simulate communications rather than have to be connected to Translators at all times. To enter this temporary mode, power up the RM-1 with the number 3 key held down. A message will announce when the key can be released. Normal communications mode will be restored on next power-up.

To achieve this, the decoder addresses are copied in the RM-1. These may be downloaded to the Translators by pressing the 'DnLoad' button in the 'Main Menu'. This automatically ends simulation mode.

When in comms simulation mode, the commands normally destined for the Translators are instead transmitted blind in ASCII form to the Remote Control Port. These can be displayed using a terminal emulator (e.g. Hyperterminal) and a suitable serial RS232 cable (available from Tonick).

One Station at a Time.

For diagnostic purposes, it is helpful to operate just one station at a time, suppressing the flow management. Using this technique, each station will operate alone in the watering order specified. The 'Walk Around' order will run sprinklers in the order the course is played. A one or two minute runtime will allow the water to be followed.

To enter this temporary mode, power up the RM-1 with the number 4 key held down. A message will announce when the key can be released. Normal flow management mode will be restored on next power-up.

Download Decoder Addresses from RM-1 to Translators.

Hitherto, it has only been possible to configure an RM-1 if all the Translators are connected. Now, using the simulate communications mode, it is possible to configure the RM-1 stand-alone. To achieve this, copies of the decoder addresses are now stored in the RM-1. These may later be downloaded to the Translators, after they have been connected and their cable numbers set, by pressing the 'DnLoad' button in the RM-1 'Main Menu'.

Under normal controller operation, the RM-1 commands a *station number* to turn on or off. The relevant Translator converts this to the corresponding decoder address from its internal memory.

The download feature is also useful if a replacement Translator is needed. It is no longer necessary to remove the 8 pin EEPROM memory from the old Translator and put it into the new.

Printer Line Feed.

Although a standard PC printer, with parallel interface, will work with the RM-1, it has been necessary to set up the printer to insert an automatic Line Feed (LF) after receipt of a Carriage Return (CR). With some printers, this can be a chore. The RM-1 can now be configured to insert a LF after a CR, which allows an unmodified printer to be used 'straight out of the box'.

To activate the auto LF, turn on the RM-1 with the number 1 key held down. A message will announce when the key can be released.

To remove the auto LF, turn on the RM-1 with the number 2 key held down, as above.

The settings will remain in force until changed in the above manner. As shipped from the factory, the auto LF will be OFF.

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