Rain8net
Updated 6/1/09

Description:

A 12 position terminal strip is found on both the slaves and master. Only the master requires a 24 VAC source on 11 & 12. The valves on all units, both master and slave, connect in the usual manner.

There is a single RS232 (RJ12 jack) connection between the controlling PC and the "master" Rain8. The 24VAC power and network communications are transferred from master to slave-to-slave etc.

The network connection for the slave units is an 8-conductor RJ45. Each unit has a pair of these modular jacks to pass on data and power to the next one in a daisy chain. Each slave unit also has a 6-conductor RJ12 RS232 connection that is used only to assign the address during the initial configuration.

Protocol normal operation

All data in and out is formatted in 3 byte code groups. Configure port as 4800 bps N-8-1. DTR & RTS should be taken high to provide power for the initial configuration.

A great program from Docklight allows you send and received hex commands directly to a Rain8net.
Download it here: http://www.docklight.de/download_en.htm

New 8/25/08: The first byte range from C0 – CF has been   reserved for MCS use.

Inbound to the Rain8 Zone ON & OFF control

First byte = header (40h)
Second byte = address (01h - FEh)
Third byte =
        Zone number (1 – 8) in lower nibble and
        Command (3 = ON & 4 = off) in upper

Example (all 3 bytes) for module address 1:
        zone1 on = 40 01 31 (hex)
        zone1 off = 40 01 41 (hex)

The response of the Rain8 is to execute any command then send back the same three bytes as an ACK.

All Off (local module only)

First byte = 40h
Second byte = module address
Third byte = 55h

If the address in the second byte does not match with any Rain8 active on the network, no response is transmitted back, otherwise the same three bytes are send back and all zones on the module specified are turned off.

Status Request Response

First byte = 40h
Second byte = module address
Third byte = F0h

The third byte of the Rain8net response is the bit pattern of active zones.

For example if zones 1, 2 & 8 are active the binary response would be 10000011 or B3 hex

If the address in the second byte does not match with any Rain8 active on the network, no response is transmitted back.

COM Check

A COM check can be made sending 70h in the first byte. The remaining two bytes can be anything. If there is any Rain8 on line it will send back three bytes.

Global All Off

First byte = 20h
Second byte = 55h
Third byte = 55h

Turns off all zones regardless of address. Does not respond back.

Input Features

Read rain switch status
Send:
> First byte = 50h
> Second byte = module address in hex
> Third byte = EFh

Responds with 50h & EFh in first two bytes and 00 if switch closed or 64h if switch open, in third byte
No response if no address match or if rain sensor option not enabled

Read flow meter counter
Send:
> First byte = 50h
> Second byte = module address in hex
> Third byte = E0h

Responds with 50h in first byte and 16 bit counter value in last two bytes
No response if no address match or if flow meter option not enabled

Clear flow meter counter
Send:
> First byte = 50h
> Second byte = module address in hex
> Third byte = E7h

Responds by echoing back above command
No response if no address match or if flow meter option not enabled