

CLOUDMASTER

IRRIGATION CONTROL SYSTEM



Cloudmaster LAN Connection

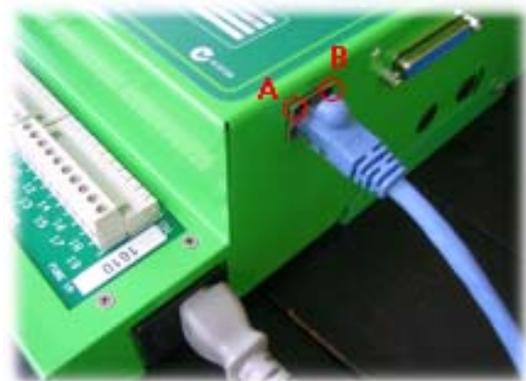
Communications between central PC running the Cloudmaster Windows software and the Cloudmaster unit can be achieved by a number of methods including:

1. Direct cable
2. CDMA cellular network
3. Telephone land line
4. Dedicated radio channel
5. Power line modem using mains wiring
6. Cable or wireless LAN (Local Area Network)

This information sheet describes the installation and configuration of the LAN connection method. It is assumed you have a good knowledge of PCs, PC networks and the keypad operation of the Cloudmaster unit. Also, your Cloudmaster must be fitted with the LAN option and its software version must be V2.6.0e or later. This can be displayed with operation 90.

Cable Connection and Indicator Lights

The photo shows the location of the LAN cable connection on the right hand side of the unit. The two bi color leds marked 'A' and 'B' indicate 10Base-T and 100Base-T link activity respectively. Amber color indicates half duplex operation and green full duplex. Solid on indicates a physical connection to the LAN and blinking indicates the Cloudmaster PC program has established a valid link with the unit.



Configuration and Addressing

Before starting, run operation 91 and set both the RS232 and Radio/LAN baud rates to 9600. Setting up of all parameters can be done over the network using Telnet if the MAC address is known, otherwise the dumb terminal method must be used. This involves connecting a dumb terminal (such as a PC running a HyperTerminal session) to the DB25 on the Cloudmaster. This is the easier of the 2 methods and will be covered first.

Dumb Terminal Method and Getting the MAC Address

Run operation 92, set 'Duration' to 250 and 'Pipe data > DB25' to LAN. Connect a dumb terminal, with baud rate set to 9600, to the DB25 on the Cloudmaster unit. Power off the Cloudmaster unit, hold down the 'x' (lower case) key on the terminal keyboard and then power the Cloudmaster back on. Within 5 seconds of seeing text appear on the dumb terminal screen, take your finger off the 'x' and press 'Enter'. After completing the section 'LAN Configuration' below, run operation 92 again and set 'Duration' to 0. If you are running HyperTerminal you will be able to pan up and see the MAC address which is the first text sent to the screen.

Telnet Method

If you know the IP address of the Cloudmaster unit, start a Telnet session by clicking 'Run' from the windows start menu and type the command 'telnet x.x.x.x 9999' where x.x.x.x is the IP address and there is a single space either side of the IP address. Click OK and then press Enter within 5 seconds of

seeing the MAC address response from the Cloudmaster. Proceed to the section 'LAN Configuration' below.

If you want to initially configure the unit through the network and you know the MAC address but not the IP address, you can use Address Resolution Protocol (ARP) method to assign a temporary IP address as follows:

1. Create an entry in the ARP table by clicking 'Run' from the windows start menu and type the command '**arp -s x.x.x.x m:m:m:m:m:m**' where **x.x.x.x** is the required IP address and **m:m:m:m:m:m** is the MAC address of the Cloudmaster.
2. Open a Telnet connection to port 1 using the command '**telnet x.x.x.x 1**' from the command prompt. The connection will fail but the unit will temporarily change its IP address to '**x.x.x.x**'.
3. Open a Telnet connection to port 9999 using the command '**telnet x.x.x.x 9999**' from the command prompt and then press 'Enter' within 3 seconds of seeing a response.
4. Proceed to the section 'LAN Configuration' below.

LAN Configuration

The following shows an actual set up session to set the Cloudmaster's IP address to 192.168.0.123 and its port number to 32514. Operator responses are in bold. Press 'Enter' to retain default settings. More detailed information is available at http://www.lantronix.com/pdf/XPort_UG.pdf

```
MAC address 00204A86887A          9 Save and exit      Your choice ? 1
Software version 01.8 (040806) XPTEXE
AES library version 1.8.2.1
Press Enter to go into Setup Mode
.
.
Change Setup:
0 Server
1 Channel 1
3 E-mail
5 Expert
6 Security
7 Defaults
8 Exit without save
9 Save and exit      Your choice ? 0

IP Address : (000) 192.(000) 168.(000) 0.(000) 123
Set Gateway IP Address (N) ?
Netmask: Number of Bits for Host Part (0=default)
(0)
Change telnet config password (N) ?

Change Setup:
0 Server
1 Channel 1
3 E-mail
5 Expert
6 Security
7 Defaults
8 Exit without save
9 Save and exit      Your choice ? 9

Parameters stored ...

Baudrate (9600) ?
I/F Mode (4C) ?
Flow (00) ?
Port No (10001) ? 32514
ConnectMode (C0) ?
Send '+++' in Modem Mode (Y) ?
Auto increment source port (N) ?
Remote IP Address : (000) .(000) .(000) .(000)
Remote Port (0) ?
DisConnMode (00) ?
FlushMode (00) ? 80
Pack Cntrl (00) ? 02
DisConnTime (00:00) ?:
SendChar 1 (00) ?
SendChar 2 (00) ?

Change Setup:
0 Server
1 Channel 1
3 E-mail
5 Expert
6 Security
7 Defaults
8 Exit without save
9 Save and exit      Your choice ? 9

Parameters stored ...
```

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