



Ethernet Adapter User Manual

Communications Accessory for CS3500 Controller
Part Number: ACC-ETN-007

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Overview

The Ethernet Adapter allows connectivity to the CS3500 irrigation controller through an 802.11 b/g Wireless Network, or 100 megabit CAT-5 Ethernet cabling.

Features

- Allows connectivity on local area networks (LAN or WLAN)
- An internet connection is possible with a Public IP Address
- Serial pass-through support for temporary connections to the CS3500 controller (such as a Radio Remote)

1. Wireless network antenna
2. Serial connection to CS3500 controller
3. Optional power input
4. Wired Ethernet port
5. Temporary connection for radios, etc.
6. Status Lights

Also included in the box:

Power adapter and 3-foot serial cable



Basic Requirements

- Acclima Irrigation Manager software.
- PC with Ethernet port or 802.11 b/g WiFi capability.
- A local area network operating within range of the CS3500 controller.

Internet Access

Your network administrator may assist you in mapping a public IP address to the Ethernet adapter to allow connectivity to the device from outside your local area network. This will allow you to connect to the device from the internet anywhere in the world! For this to be possible, you must lease a public IP address from your internet service provider.

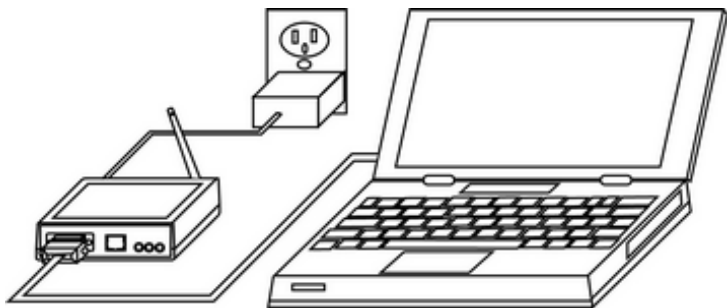
Configuring the Ethernet Adapter

Before the Ethernet Adapter can be used, it must be configured to operate on your local area network. This configuration process can be done very quickly if you have knowledge of your network configuration and have access to a computer running Acclima's Irrigation Manager software.

The following instructions will guide you through the configuration process.

Attaching the adapter to your PC

Connect a serial cable or “USB to Serial Adapter” from your PC to the “Computer/Remote” port on the front of the Ethernet Adapter. Connect the provided power adapter. The power light on the right should light up. Other lights may momentarily illuminate as well – this is normal.

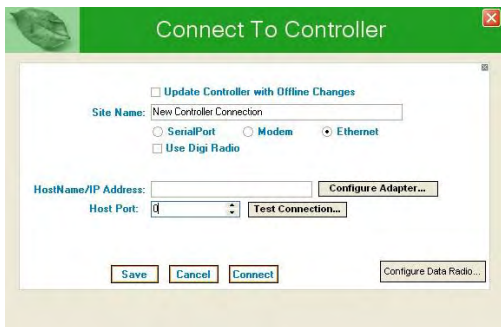


Launching Irrigation Manager

Launch the Irrigation Manager software. If this is the first time you have run the software, you will be given a choice of connection types. Choose “Connect Through Ethernet”.

If you have connected to a controller before, you will see a list of controller connections. Press the “New Connection” button. Make sure the “Ethernet” connection type has been selected in the new connection dialog.





From the Ethernet connection dialog, you will be able to configure your Ethernet adapter. Press the “Configure Adapter...” button. The computer will scan your serial ports searching for a connected Ethernet Adapter. If the adapter is not located, press “cancel” and repeat the attempt. The adapter may not respond immediately after it has been plugged in, and may require 30-60 seconds before it will respond to Irrigation Manager.

Entering your Local network Settings

Once the connection to the Ethernet Adapter has been established, your current network settings will be displayed. These must be set according to the local area network that the CS3500 irrigation controller will be connected to. Note that in many cases, this will not be the same local area network that your computer is connected to.



1. Select your desired Network Interface. Choose Ethernet if you are using a CAT-5 wire for communications, or Wireless for 802.11b/g wireless networks.



2. Select the port that the Ethernet Adapter will listen on. This is the port that accepts incoming connections. Check with your network administrator to make sure you use a port that is allowed on your network and is not used for other types of network communications. Ports 0, 9999, and 80 are reserved for use by the adapter and should not be used. Acclima recommends setting the port to 10001.

If you are using the Wireless network option, configure the SSID and security settings to match those of the router on your wireless LAN. For Wireless connectivity, SSID is required. (The SSID is the name of the wireless network.) Consult with your network administrator to configure the wireless security settings.

Wireless Network Configuration

Network Name (SSID)

Wireless Network Security

Security

Authentication

Encryption

Key Type Hex Pass Phrase

Key

Re-type Key

3. If there is a DHCP server on your network, you may configure the adapter with a hostname and allow it to automatically obtain an IP addresses from the DHCP server. Using a Static IP is a more common approach.

IP Configuration

HostName

Obtain IP Address Automatically

Use the following IP Settings:

IP Address

Subnet Mask

Default Gateway

4. If you wish to use a Static IP address for the adapter, select the “Use the following IP settings” option. In this case you

should enter the IP Address for the CS3500 Controller, its Subnet Mask, and the Gateway address for your local network. Consult your network administrator to find out what these should be.

IP Configuration

HostName

Obtain IP Address Automatically

Use the following IP Settings:

IP Address

Subnet Mask

Default Gateway

5. Once you are finished configuring the adapter, click the “Save” button at the bottom of the screen. The settings will be saved and the adapter will be reset for the new settings to take effect.

Installation

Before the Ethernet adapter is installed, it should be configured to operate on the local area network where it will be installed. Please complete the section “Configuring the Ethernet Adapter” before continuing.

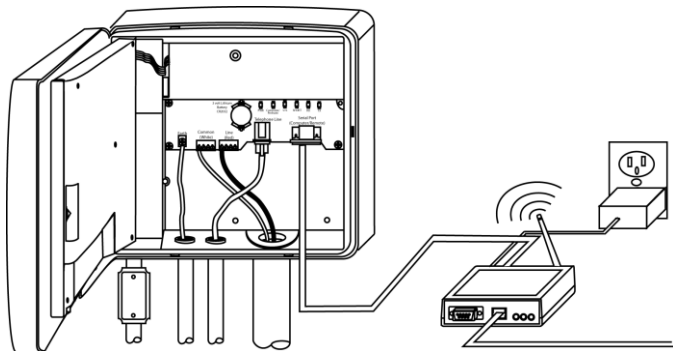
Choosing a location

The Ethernet Adapter is not suited for outdoor installation unless it is protected by another enclosure. The Ethernet Adapter should be installed indoors, inside the CS3500 controller enclosure (wired option only), or inside a weatherproof cabinet. If the distance between the controller and the Ethernet adapter is greater than a few feet, then the power adapter may be required, otherwise the Ethernet adapter can draw its power from the controller. If you are using the wireless capability of the Ethernet adapter, the antenna must be free from any

metal or wires that may interfere with the radio signal. Do not install the Ethernet Adapter in a metal cabinet if you use the wireless option.

Wiring Connections

The following diagram shows how the Ethernet adapter is connected to a CS3500 controller:



In the connection diagram, both the Wireless and wired options are shown. Only one of these is required. If you are using the wired Ethernet connection on the front of the Ethernet Adapter, the antenna is not required and can be removed. Alternatively, if the wireless Ethernet connection is being used, the wired connection to the front of the Ethernet Adapter is not required.

The power adapter as shown in this diagram is only necessary if the Ethernet Adapter is more than a few feet away from the CS3500 controller. The Ethernet Adapter can draw power from the CS3500 controller if the cable losses are not significant. The Ethernet Adapter package includes a 3-foot serial cable that is capable of providing adequate power without the power adapter.

Testing Connectivity to the Ethernet Adapter

Once the Ethernet Adapter has been wired to the controller, you should test the connection to make sure everything is working properly. This can be done using Irrigation Manager Software. Run the software on your computer and return to the Ethernet Connection dialog where the Ethernet Adapter was previously configured. Make sure the correct HostName or IP address for your adapter has been entered and that the connection is configured to use the correct port.

Site Name: Central Park

Modem Connection Ethernet Connection

HostName/IP Address: 192.168.40.102 Configure Adapter...

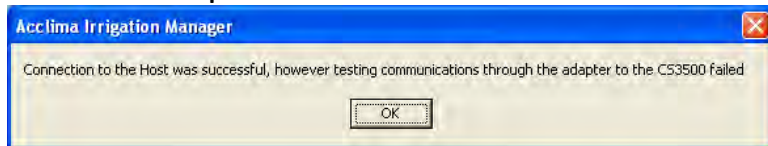
3010 Test Connection...

Press the “Test Connection...” button. The software will attempt to locate your controller using the settings you have provided. Results will be displayed in a message window as follows:

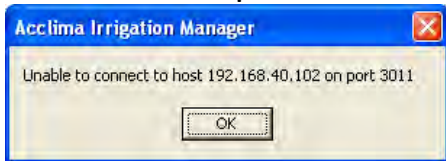
Successful Test:



The Ethernet Adapter works, but the cable between the adapter and the controller has problems:



Unable to contact the Ethernet Adapter:



This indicates a problem with the IP address or port number used in the connection. You should reconfigure the Ethernet adapter to make sure that the IP address (or hostname) and port used in the connection correspond to the IP address (or host name) and port that the Ethernet Adapter has been configured to use. If you are unable to connect to an adapter that has been configured to use the Wireless network, you may need to check with your network administrator to make sure the adapter is configured with the correct SSID and security settings.

Operation

Now that the Ethernet Adapter has been configured, installed, and tested, you are ready to connect to a controller. The connection was automatically configured when you tested the connection earlier. However, you should consider the following points:

- If your computer is connecting to the controller over the same local area network, a Public IP Address is not required and the IP settings for Irrigation Manager will match the configured settings for the Ethernet Adapter.
- If you are using a Public IP address to provide internet access to your controller, the IP Address setting for Irrigation Manager will be the Public IP address, and will not match the configured Local IP address that you programmed into the adapter.

- If you are using a Public IP Address to provide internet access to your controller, and you have a computer connected to the same Local Area Network that the Controller is using, then the Local IP Address settings that you configured your Ethernet Adapter with should be entered into Irrigation Manager (since the internet is not used for that connection). Offsite computers that use the internet would still use the Public IP Address.

Once you have determined your proper network settings, enter them into the New Ethernet Connection dialog in Irrigation Manager. Press “Save” to add this to your connection list.



Now you should have a new controller connection available. Using this new connection is no different from using a serial or telephone modem connection. Whenever you would like to connect to your controller, select the connection of interest and then press the Connect button.





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