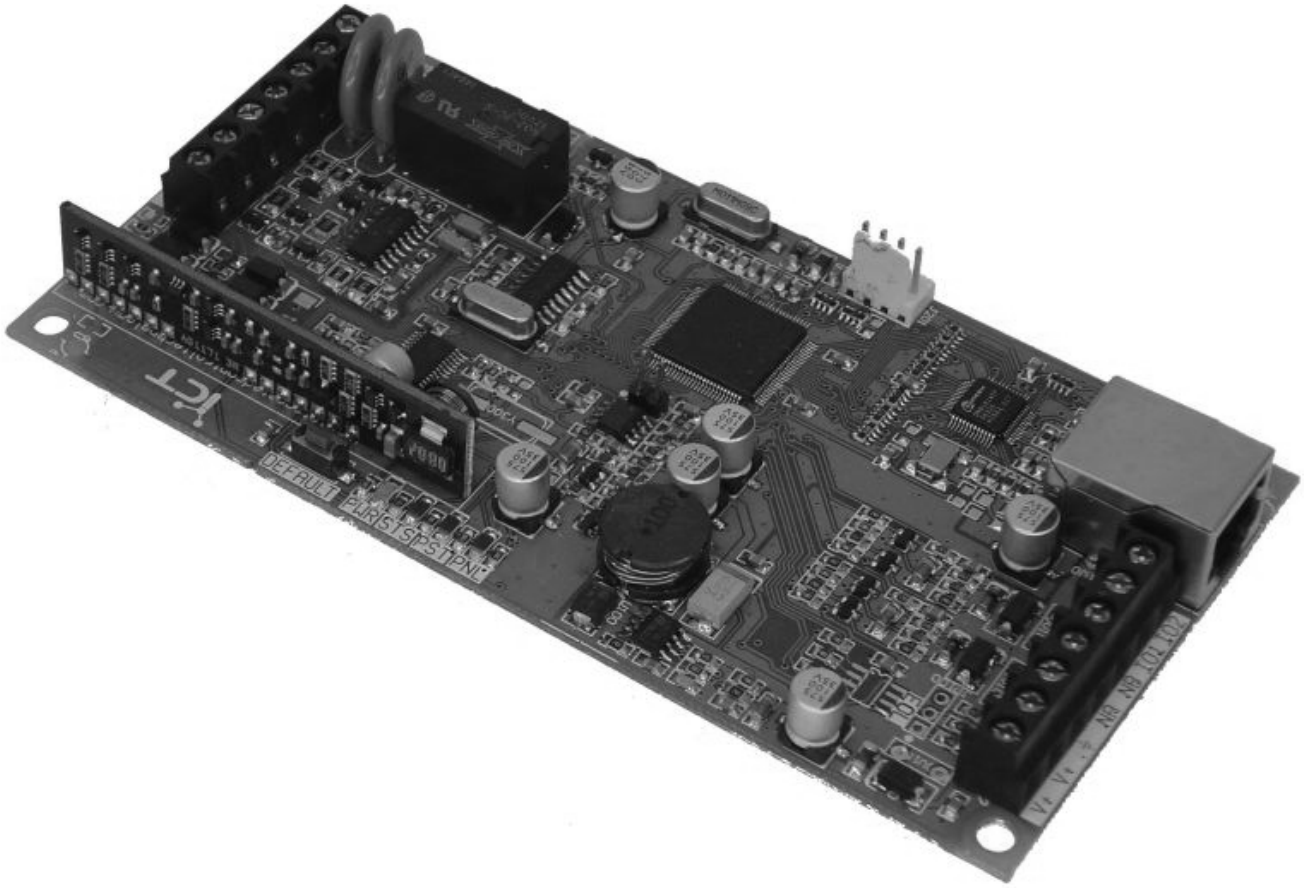
PostX

CRX-POSTX

IP Reporting Module



Installation Manual

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INTRODUCTION

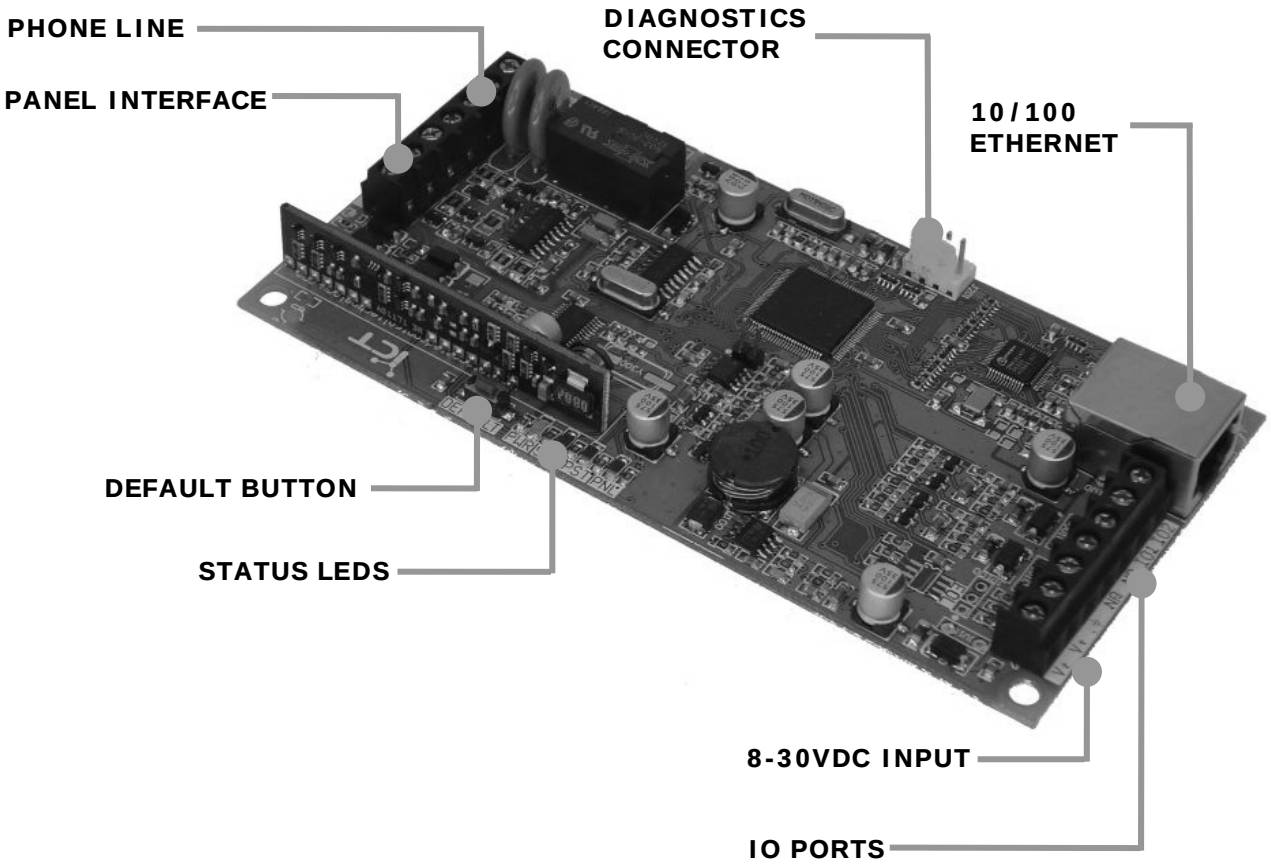

Figure 1 – PostX IP Reporting Module PCB Overview

Features

- Full PSTN Phone Line Emulation Circuit that will interface with any alarm panel.
- 10/100 Base-T Ethernet
- Independent Modem that supports downstream phones.
- 4 Configurable Inputs or Outputs
- Small Physical size to fit inside existing installations
- 8-30VDC power supply
- Emulates a full CID Receiver
- UDP and TCP based IP reporting protocols
- Configurable 128, 192 or 256 bit AES Encryption
- Fully configurable through Internet Explorer
- Backup reporting options
- 64 Message Queue

The latest version of this document and all application notes can be found at:
http://www.integratedcontroltechnology.com/download.php

PostX Specifications

The following specifications are important and vital to the correct operation of the PostX IP Reporting Module. Failure to adhere to the specifications will result in any warranty or guarantee that was provided becoming null and void.

Integrated Control Technology continually strives to increase the performance of its products and as a result the specifications may change without notice. It is recommended that you always consult www.integratedcontroltechnology.com for the latest documentation and product information.

Power Supply	
Voltage	12VDC (10VDC - 30VDC)
Current	110mA (Idle)
	220mA (Peak, panel off hook)
Communication	
Ethernet	10/100 Auto Negotiation
Full PSTN Emulation	
Modem Security Reporting	
Outputs	
2 PGM Outputs	50mA (Max) Open Collector
Inputs	
4 Configurable Zone Inputs	
Dimensions	
PCB Dimensions	140mm (L) X 70mm (W) x 13mm (H)
	5.5" (L) X 2.75" (W) x 0.51" (H)
Temperature	
Operating	5˚- 55˚ Celsius
	41˚ - 131˚ Fahrenheit
Humidity	0%-85% (Non-Condensing)
Storage	-10˚- 85˚ Celsius
	14˚ - 185˚ Fahrenheit

It is important that the unit is installed in a dry cool location that is not affected by humidity. Do not locate the unit in air conditioning or a boiler room that can exceed the temperature or humidity specifications.

INSTALLATION

Package Contents

When receiving the PostX IP Reporting Module you should find the kit contains the items listed below. The kit type is clearly labelled on the packaging and will tell you what your kit contains. Please note that if you do not have the correct contents contact your distributor immediately.

CRX-POSTX-PCB	**PostX IP Reporting Module PCB Only**
Contents:	*CRX-POSTX Printed Circuit Board*
	4 X Plastic Mounting Standoffs
	8 X 1K Ohm Resistors

Location and Mounting

The PostX is available as a PCB Only (Printed Circuit Board) or complete unit supplied with a metal cabinet. It is recommended that the cabinet provided be used where possible, as this provides the best mounting and installation solution as well as the required cable entry and termination space.

When installing the PostX ensure that there is adequate clearance around all sides of the enclosure and air flow to the vents of the enclosure are not restricted. It is recommended to install the PostX in a location that will facilitate easy access for wiring.

1. Insert the plastic stand-offs in to the locations to mount the PCB board.
2. Calculate the location and position of the enclosure and mark the holes for the keyhole points in the top left and right locations. This will allow you to screw in the screws and then hang the box on them adjusting the location to suit.
3. Ensure a solid fixing point and screw in the two screws. Before tightening the top screws insert the tamper bracket in the slot provided on the right side of the enclosure.
4. Fix the enclosure securely using the remaining mounting holes on the bottom left, right and centre of the enclosure.
5. When stacking the units insert the longer plastic standoffs from the rear of the board in to the larger holes and snap in tightly to allow the second unit to be stacked. This must be done before the lower board is in place.
6. Insert the PCB in to the enclosure and mount using the plastic standoffs inserted during step one.

Install the enclosure when the circuit board is NOT installed on the plastic stand-offs. This will reduce the risk of damage caused by debris during the installation process.

Earth Ground Connection

The PostX IP Receiver Module has a connection for earth ground. For best results a cold water pipe should be used with a pipe wiring clamp. If a cold water pipe is not available connect to a suitable ground connection in the installation.

A minimum 14AWG solid copper wire should be used from the PostX's earth connection point to the clamp on the cold water pipe. If other earth clamps are present at the same connection point connect the clamp below the existing units.

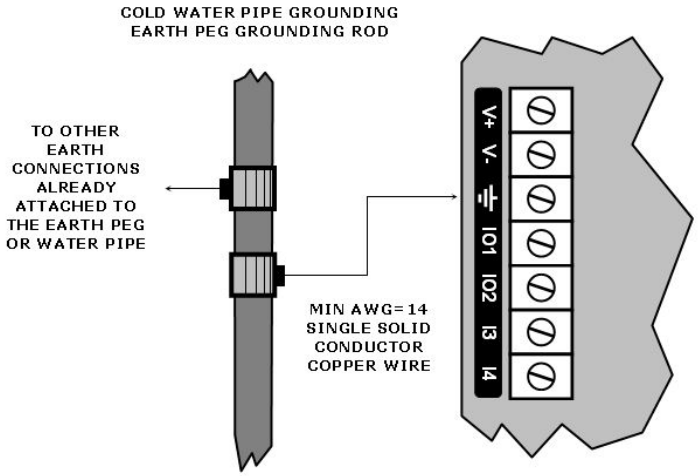

Figure 2 - PostX Main Earth Ground Connection

DC Power

The PostX IP Receiver Module should be powered from a dedicated DC power source rated for a minimum 200mA Load. This DC power source must supply a constant DC voltage of between 10VDC and 30VDC.

When the PostX is being used for backup reporting it is recommended to use a battery backed up power source to ensure the PostX will not stop reporting in the case of a power failure.

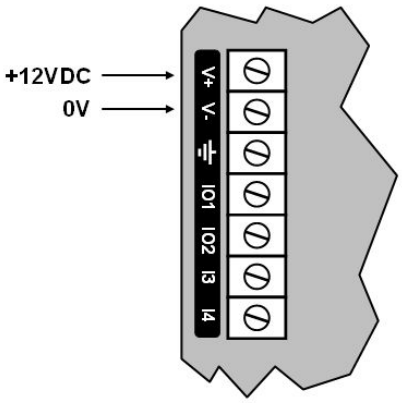

Figure 3 - DC Power Wiring, 10VDC - 30VDC, 200mA

Termination of wiring to the PostX while power is applied may cause serious damage to the PostX and will VOID ALL WARRENTIES OR GUARANTEES. Power the PostX ONLY after all wiring, configuration and jumper settings are completed and verified.

Panel Interface

The PostX has a fully featured PSTN phone line emulation circuit for interfacing to any PSTN device. This interface generates all of the appropriate voltages for powering the connected device. In most applications this device will be an Alarm Panels modem. Figure 4 shows how to connect the existing PSTN device to the PostX IP Receiver Module, simply connect the Tip and Ring from the device to the terminals marked Tp (Tip Panel) and Rp (Ring Panel).

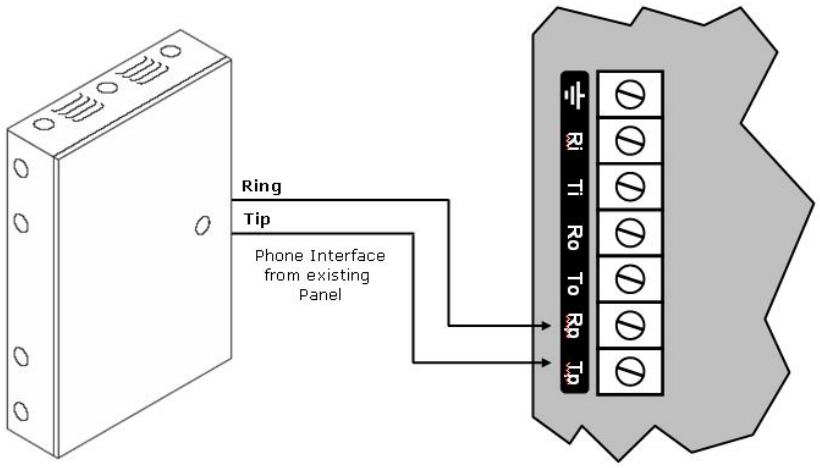

Figure 4 - Wiring Interface to Existing Alarm Panel

NEVER connect the Phone Line Emulator (Terminals Rp and Tp) to a normal phone line. Permanent damage will be done to the PostX IP Reporting module if this is attempted.

Telephone Dialler

The PostX also has an out bound modem that can be used for PSTN – PSTN routing or as a backup to the IP Reporting. The telephone lines can be directly connected to the PostX IP Reporting Module using the onboard telephone connection terminals.

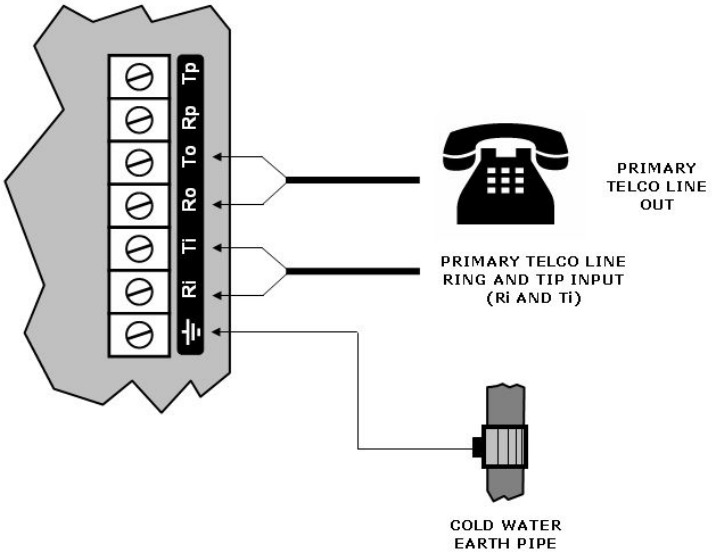

Figure 5 - Telephone Line Connection

It is recommended that the earth connection for the telephone and main power supply (refer section *Earth Ground Connection in Page 4*) earth be run separately and should be terminated on the cold water pipe or similar grounding point within the installation.

Ethernet 10/100 Network Interface

The PostX can communicate over a 10/100 Ethernet network using the TCP/IP protocol. This is used for IP Reporting and configuration of the module using an Internet Browser.

The default IP address is set to a static IP address of 192.168.1.2 with a subnet mask of 255.255.255.0. These IP address settings are commonly used for internal networks. There are a number of ways to change the IP address of the PostX, see Changing the IP Address on Page 22.

When installing an Ethernet connection the PostX should be interfaced using a standard segment (<100M in length) and should be connected to a suitable Ethernet hub or switch.

Installing the PostX on an active network requires knowledge of the configuration and structure for the network. Always consult the network or system administrator and ask them to provide you with a fixed IP address that can be assigned to the PostX Module.

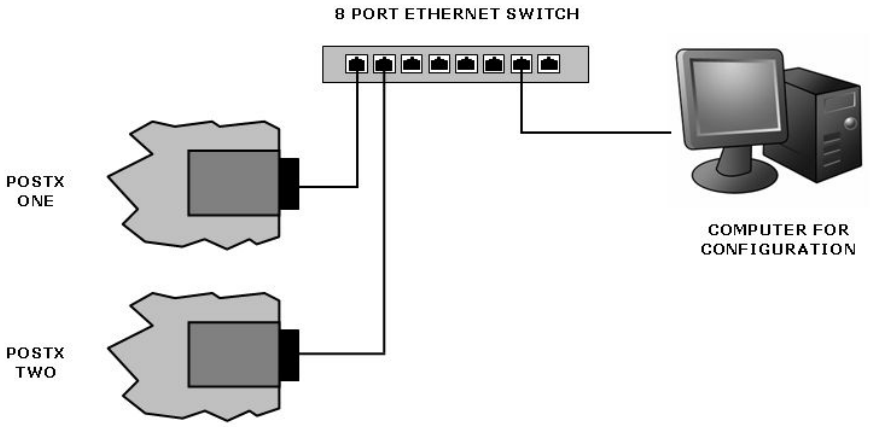

Figure 6 - Ethernet 10/100 Switch/ Hub Connection

Temporary direct connections can be used for onsite configuration by using a standard Ethernet cable.

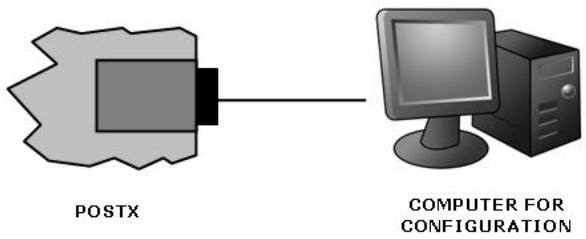

Figure 7 - Ethernet 10/100 Direct Connection

ETHERNET CONNECTIVITY

Introduction

This section details how to establish an Ethernet connection with the PostX IP Receiver Module. When the PostX comes out of the box it is set to a static IP address of 192.168.1.2. If your computer network is on this subnet, and no other computer on the network has the IP address of 192.168.1.2 then you will be able to connect to the PostX straight away.

Installing the PostX on an active network requires knowledge of the configuration and structure for the network. Always consult the network or system administrator and ask them to provide you with a fixed IP address that can be assigned to the PostX Module.

Finding the IP Address

Before attempting to connect to the PostX IP Reporting Module it is necessary to know the IP Address that it is currently set to. This can be done either using the software provided on the CD that came with the PostX called "ICTNET Module Sniffer" or by returning the IP address to default using the DEFAULT button.

ICTNET Module Sniffer

Open the application 'ICTNET Module Sniffer.exe' that can be found on the CD supplied with the PostX. Click on the 'Search' button and a list of all Integrated Control Technology modules will be displayed in the main window. You can double click on any of the PostX modules to open the configuration web page in an Internet Browser.

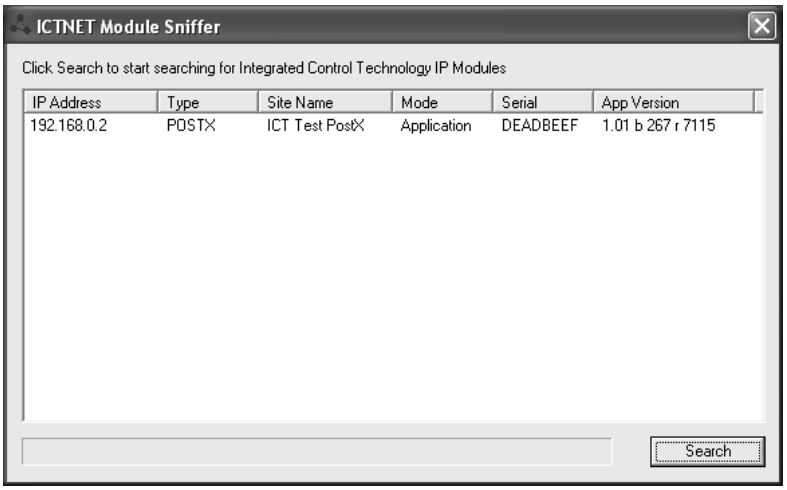

Figure 8- ICTNET Module Sniffer Software for Finding a Module's IP Address

Static IP Address using the Default Button

To change the IP address to a static address of 192.168.1.2 and a subnet mask of 255.255.255.0 complete the following steps:

1. Hold the DEFAULT button down until both the STS and PST LED's are flashing together.
2. Press the DEFAULT button once, making sure the PNL LED flashes.
3. Wait until only the STS LED is flashing, the PostX will now have a known static IP address.

Changing the IP Address

Changing the IP Address using the Web Interface

If you can connect to the PostX the easiest way to change the IP Address is using the web interface. Open up an Internet Browser (e.g. Internet Explorer or Mozilla Firefox) and type the IP Address of the PostX into the address bar. The User Login screen will come up as shown in Figure 12 - PostX Web Interface Login on Page 11. Enter a valid username and password to login as an Administrator.

By default the PostX comes with two users for the web interface.
Administrator Access Level: Username = admin, Password = admin
User Access Level: Username = user, Password = user

To help ensure your PostX cannot be configured by invalid users change the default passwords for the web interface before commissioning the installation.

Click on the 'Network' link in the left hand menu to get to the Network Configuration page. To enable the DHCP service, click on the "Obtain an IP address automatically" radio button or continue to use a static IP Address and enter in the new IP Address you wish to use. Once you have made all of the changes you require click on the 'Save' button to save the changes. For the changes to take effect you must restart the PostX.

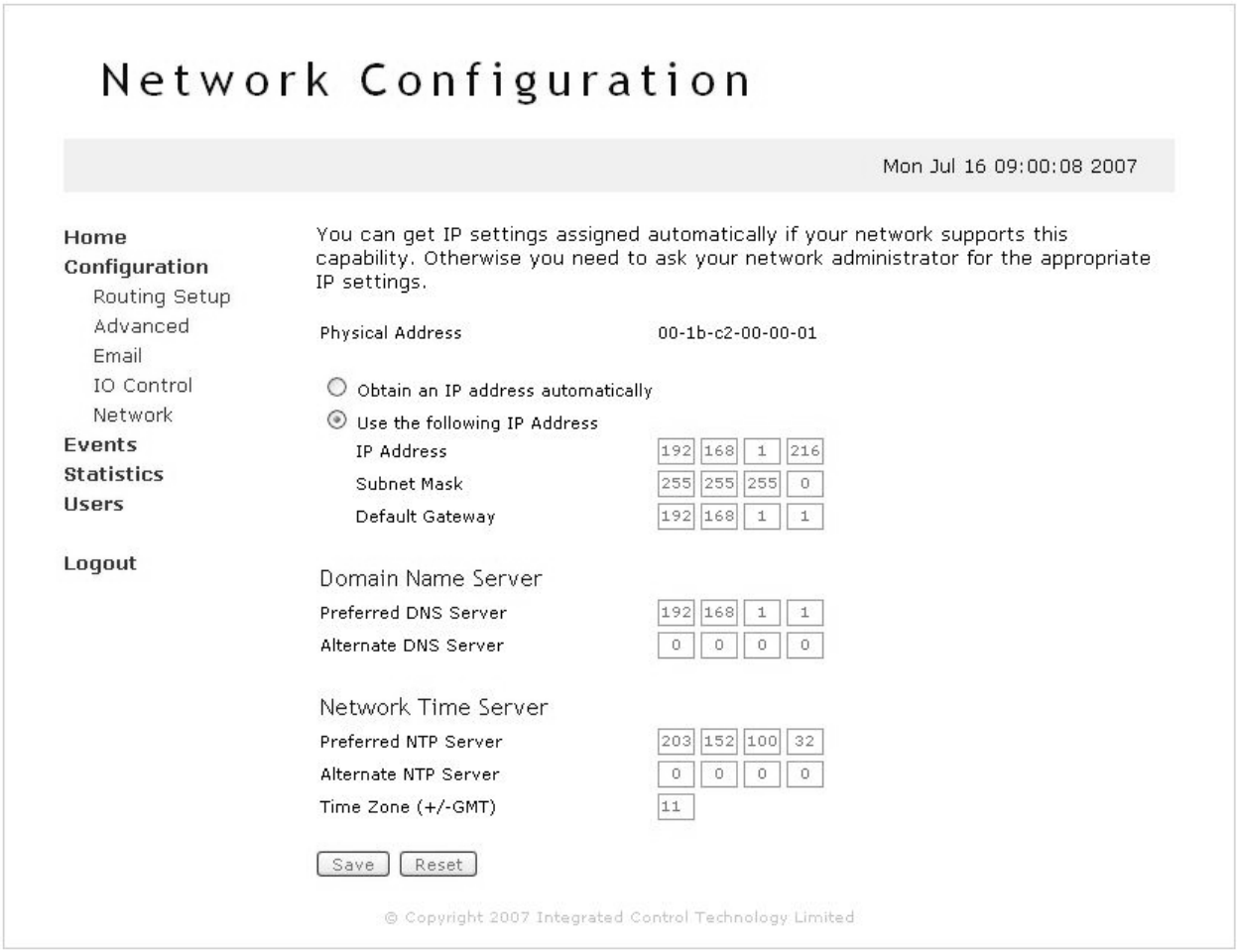

Figure 9 - Web Interface Network Configuration

Dynamic IP Address Using DHCP

The PostX support Dynamic IP Address Allocation (DHCP), to use this there must be a DHCP server on the network you are attempting to connect to. If you can't select DHCP from the web interface complete the following steps:

1. Hold the DEFAULT button down until both the STS and PST LED's are flashing together.
2. Press the DEFAULT button twice, making sure the PNL LED flashes for each button press.
3. Wait until only the STS LED is flashing, the PostX will now start the DHCP service an attempt to obtain an IP Address.
4. Use "ICTNET Module Sniffer" as described above to find out the IP Address that has been assigned to the PostX.

Do not press the DEFAULT button during start up; this will force the PostX into a Boot loader mode. When the PostX is in this mode both of the Panel and PSTN LED's are ON and the Status LED flashes faster. To exit this mode restart the PostX without holding the DEFAULT button down.

Changing the IP address using a "ping" command

If you need to change the IP Address from 192.168.1.2 to an IP Address on the same subnet (i.e. a 192.168.1.xxx IP Address) use the following method. To do this you must know the MAC address of the PostX Module. This can be found on the PostX's label, see Label Details on page 31 for more information.

The following example shows how to change the PostX's IP Address to 192.168.1.36.

1. Confirm the IP Address you want to use has no computer already assigned to this address. This can be done by attempting to "ping" that IP Address before you plug the PostX into the network, see Pinging a Device on page 10.
2. Once you are happy there is no computer at your new IP address type arp –s [ip address] [mac address] into the command prompt as shown below.
   `arp –s 192.168.1.36 00-1B-C2-05-06-45`
3. Now send a Ping to the PostX, type the following into the command prompt:
   `ping 192.168.1.36`
4. The IP Address of the PostX has now been changed to 192.168.1.36

An arp ping as detailed above can only be one ONCE to a PostX device. This is to ensure no one can change an IP Address maliciously.

Pinging a Device

Ping is an application that runs in Microsoft Windows and is a very useful tool for helping to diagnose an IP Address related issue. It can be used to test a connection with the PostX. The following instructions detail how to ping a device.

1. Open a command prompt on your Microsoft Windows computer (Click Start>Run, then type “cmd” into this window and click “OK”).
2. Type `ping 192.168.1.23` into the command prompt and press ENTER.
3. Wait for the command prompt to respond. Figure 10 shows a ping attempt where the IP address was not found where as Figure 11 shows a successful ping attempt where the IP address was found.

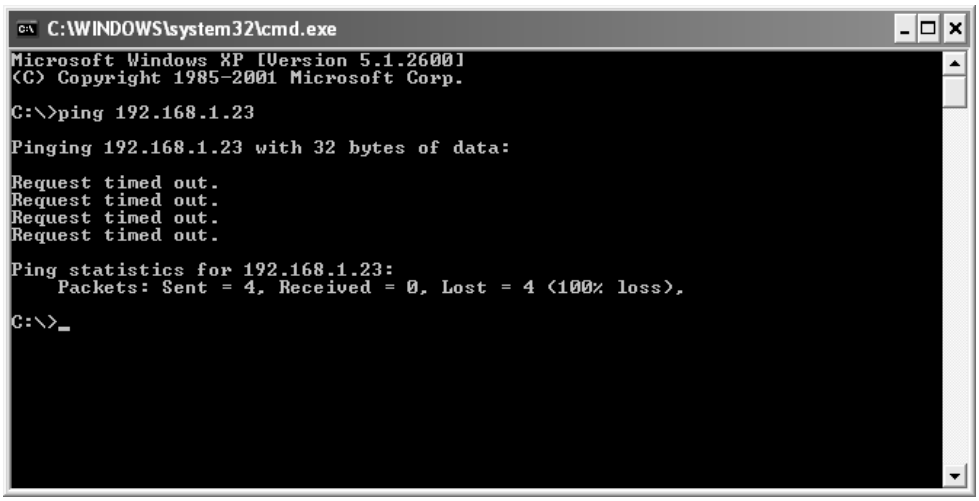

Figure 10 - Console Screenshot of a Ping where the IP Address cannot be found

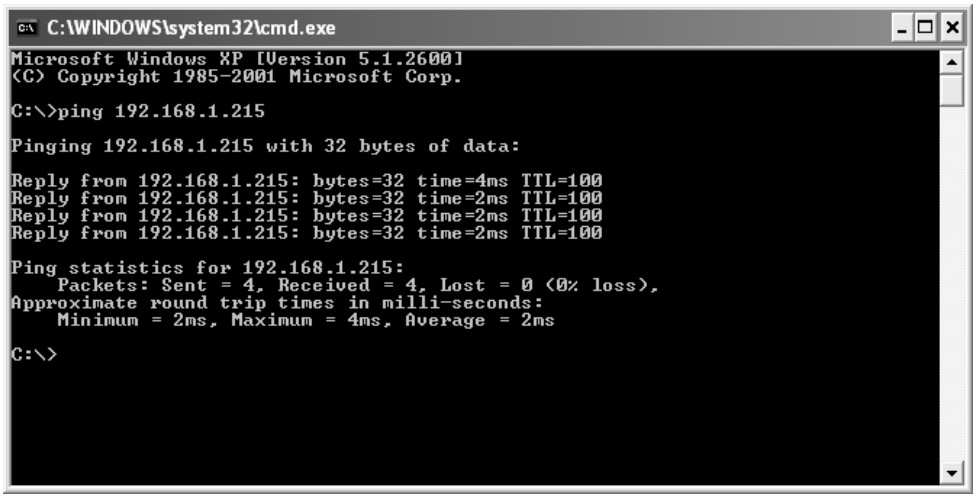

Figure 11- Console Screenshot of a Successful Ping

WEB INTERFACE

Configuration for the PostX is done through the built in Web Interface. To access this open a web browser (e.g. Internet Explorer or Mozilla Firefox) and type the IP Address of the PostX into the address bar. As all of the web pages in the PostX are secure, the Login screen will appear first. You must have a valid username and password to continue. Table 1 details the default login accounts.

Username	Password	Access Level
admin	admin	Administrator
user	user	User

Table 1 - Default Web Interface Login Details

The PostX has an internal Web Server which contains all of the web pages used for the configuration. It does not require the Internet or use any external web sites.

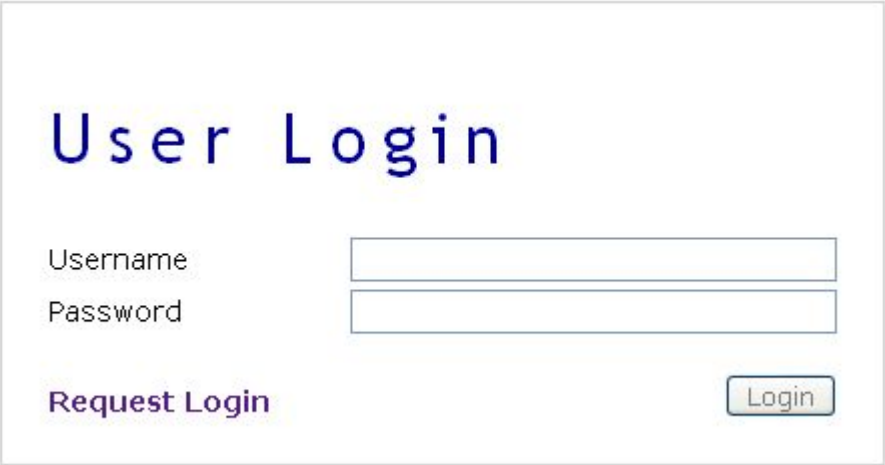

Figure 12 - PostX Web Interface Login

Once you enter a correct username and password the Web Server home page will be displayed, from here you can get to all of the other pages through the menu on the left hand side of the page.

See Web User Management on Page 24 for more details about user login.

ROUTING SETUP

Introduction

To configure the Routing Options for the PostX click on the 'Routing Setup' link using the web interface. Figure 13 shows an example configuration for the PostX IP Reporting Module. Note that this example uses all the features, and therefore they are all displayed. When you select the features (for example Backup PSTN reporting) they will become visible.

Figure 13 - Routing Setup Screen Shot

General Options

These options are general across all modes of operation.

Site Name

The Site Name should be set to a useful name as it is included with each ArmorIP reporting message sent to the monitoring station.

Account Code

This is the account code that is sent with each ArmorIP or Contact ID reporting message sent to the monitoring station.

Always use this Account Code

Selecting this option will replace the account code in the received Contact ID message with this account code. It will only use the first 4 digits of the account code entered.

PABX Emulation

If the Alarm Panel the PostX is connecting too is expecting to dial through a PABX this option needs to be enabled. When the PABX Number is dialled the PostX starts the dial tone again until the panel starts dialling the external line.

PABX Number

This is the number the panel dials to obtain an external line and must be set if the PABX emulation is enabled.

Log Poll Events

Log the send poll and received ACK poll events. Disabling this option will leave more space for other events in the buffer.

Routing Mode

The PostX operates in two different modes, IP Reporting and PSTN Router.

IP Reporting

In this mode the PostX will send any Contact ID messages that it receives from the connected Alarm Panel to the IP Address configured. To set this up change the mode to be 'IP Reporting' and enter the primary IP Address into the IP 1 field, this is the IP Address of the monitoring station you wish to report to.

Before setting these options you must contact your Monitoring station to find out the IP Address(s), the IP Port and the Reporting Format they use. Once you know all of these details you can enter them into the IP configuration.

When the Poll Time is enabled the PostX will send a Poll Message to the monitoring station every x seconds (depending on the configuration). It is recommended to use this option to help monitor the Internet Link between your PostX and the Monitoring station. If the poll messages fails the PostX does not attempt to send it through a backup reporting path, it will continue to send this event to the server at IP Address 1. When the connection does fail to IP 1 all non poll messages will be attempted to be sent over any configured backup channels.

To use a backup IP connection set IP 2 to be non-zero. After eight failed attempts of sending a message to IP 1 the PostX will then attempt to send the message to IP 2. If the 'Backup the IP connection to the PSTN connection' option is checked and the PostX fails to send the

message to IP 2 then it will attempt to send the message using the phone number in PSTN 1. If the message cannot be sent the PostX will attempt to send it using PSTN 2 if there is a phone number configured.

Most networks will have a firewall between the PostX and the Internet. It is necessary to configure the firewall to allow the IP messages through so the PostX can communicate with the monitoring station. If the Port being used is 10000 and you are using ArmorIP (UDP) the firewall must let UDP packets on 10000 through both inbound and outbound.

PSTN Router

In this mode the PostX will only attempt to send the received Contact ID messages using the PSTN modem to the phone numbers that are configured. It discards the phone number the Alarm Panel is attempting to report to and will only report to the phone numbers configured.

When the Poll Time is enabled the PostX will send a Poll Message to the monitoring station every x seconds (depending on the configuration). It is recommended to use this option to help monitor the PSTN link between your PostX and the Monitoring station.

The PostX will attempt to dial the phone number configured in PSTN 2 if it cannot connect to a monitoring station using the phone number in PSTN 1.

IP Reporting Formats

The PostX supports seven IP Reporting formats and two PSTN Reporting formats.

For all IP based formats the IP Address and Port of the monitoring station must be entered.

ArmorIP (UDP)

This format communicates with an ArmorIP® Server using UDP as the transport layer. When using this format the Account Code must be set to be the same 8 digit code as is saved in the ArmorIP® Server the PostX is communicating with. Using UDP to send the messages is faster than TCP as it is a connectionless protocol, the ArmorIP (UDP) Protocol includes acknowledge and retry messages to ensure that the message has been received by the Server.

ArmorIP (TCP)

This format communicates with an ArmorIP® Server using TCP as the transport layer. When using this format the Account Code must be set to be the same 8 digit code as is saved in the ArmorIP® Server the PostX is communicating with.

ArmorIP-E (UDP)

This is the encrypted version of the ArmorIP protocol. It uses an AES encryption algorithm that is selectable for 128, 192 or 256 bit encryption. Figure 14 shows the settings for the ArmorIP Encryption, these can be found on the 'Advanced' page on the PostX. If 'Use Default Settings' is selected, make sure that this is also selected in the ArmorIP® Server, when this is selected no other details need to be entered. If you want to increase the security use a custom key that must be entered in both the PostX and the ArmorIP® Server.

Figure 14 - ArmorIP Encryption Settings (advanced.php)

For maximum security it is recommend using an Encryption Key that contains both letters and numbers and does not form a known word.

This format uses the UDP layer as the transport mechanism.

ArmorIP-E (TCP)

This is the encrypted version of the ArmorIP protocol the same as detailed above. This format uses the TCP layer though as its transport mechanism.

Contact ID (UDP)

This format is an ASCII based format that only contains the Contact ID message. In all instances the message will be 16 characters long with the format detailed below.

The form of the message is: ACCT MT QXYZ GG CCC S, where:

ACCT	4 Digit Account Number
MT	2 Digit Message Type
Q	1 Digit Event Qualifier
XYZ	3 Digit Event Code
GG	2 Digit Group Number
CCC	3 Digit Zone Number
S	1 Digit Checksum

To acknowledge this message the server must send back an identical copy of this message. UDP is used as the transport layer for this protocol.

Contact ID (TCP)

This format is identical to Contact ID (UDP) except is uses TCP as the transport layer.

Alarm NZ

This format communicates with Alarm NZ's Central Monitoring Station Alarm Receivers using TCP.

Patriot LS30

This TCP format communicates with the LS30 task in Patriot Alarm Monitoring Software.

PSTN Reporting Formats

Contact ID

This is the standard Ademco Contact ID protocol. If the poll is enabled a valid 4 digit Client Code must be entered into the 'Account Code' field in the 'Routing Setup' web page (routing.php). The poll message will be generated using this account code, all other messages will be sent using the account code received from the panel.

SIA

This is the standard SIA 2000 protocol. If the poll is enabled a valid 6 digit Client Code must be entered into the 'Account Code' field in the 'Routing Setup' web page (routing.php). The poll message will be generated using this account code, all other messages will be sent using the account code received from the panel.

Email Events

The PostX IP Reporting Module can also be configured to send an Email to a selected address when an inbound message is received from the attached panel. This can be sent on every event that is received, or once the event buffer is full (approximately 8 messages). To use this option the Email settings (email.php) must be setup (see Email Setup on Page 22).

General Settings

The General Settings for the PostX IP Reporting Module are found on the "Advanced Configuration" page (advanced.php).

Modem Dial Attempts

This is the maximum number of attempts the PostX will make to dial a PSTN Monitoring station. Once this number of attempts is exceeded the PostX will change to use the next phone number or reporting path.

Modem Dial Time

The Modem Dial time is the length of time in seconds between phone calls.

Max Report Count

The Maximum Report Count is the maximum number of Contact ID messages that will be sent to the monitoring station in one connection. When this is exceeded the PostX IP Reporting Module disconnects from the monitoring station and waits for the period of time set in Modem Dial Time before attempting to call the monitoring station again (if there are more messages to send).

Max IP Attempts

The Max IP Attempts is the maximum number of times the PostX IP Reporting Module will attempt to send a message to a Monitoring station for the IP formats.

IP Connection Timeout

The IP Connection Timeout is the number seconds the PostX waits for a response for an IP message.

INPUT AND OUTPUT CONTROL

Introduction

The PostX IP Reporting Module has 2 configurable ports that can be either an Input or an Output and 2 fixed Inputs. Each input is independently configured and can send Contact ID messages or Emails when the input state changes. The outputs can be used to indicate when communication has been lost on both the IP and PSTN interfaces.

General Setup

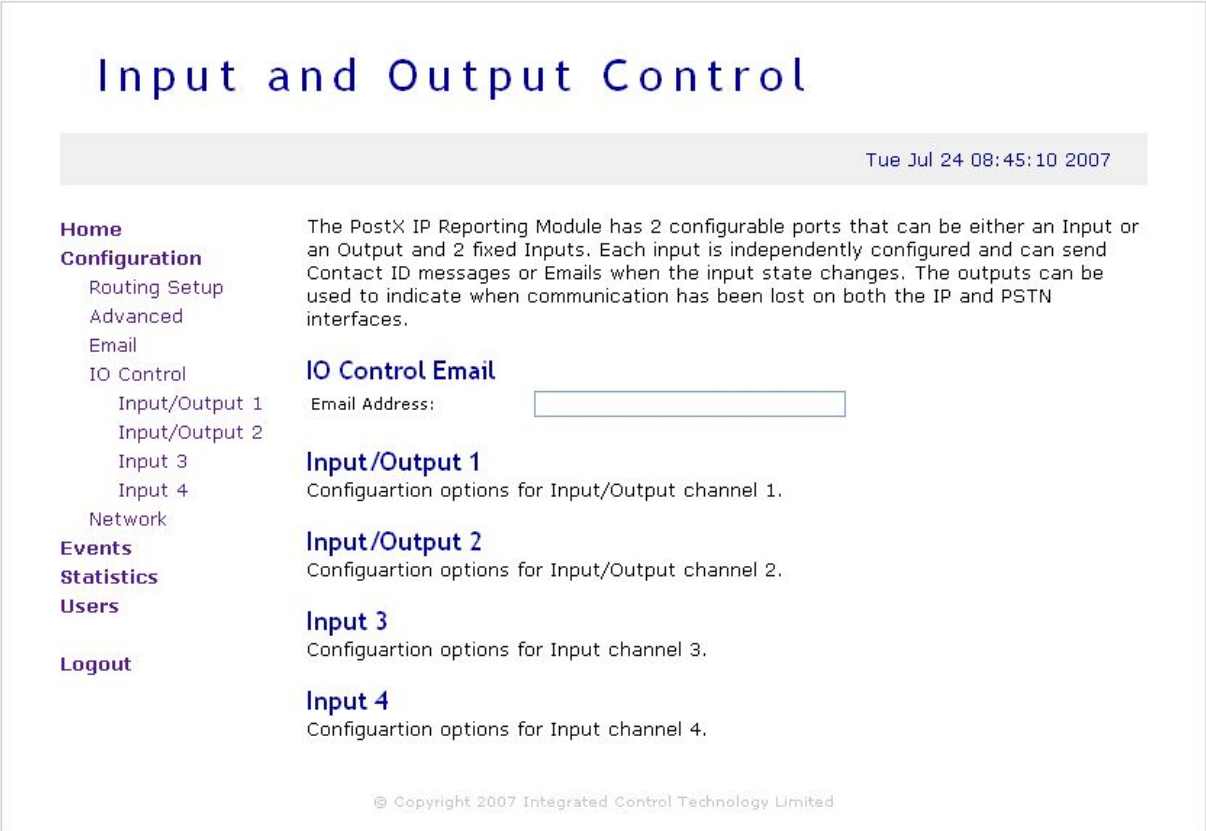

Figure 15 - Input and Output Control Main Page

Input Mode

The PostX IP Reporting Module can monitor the state of up to 4 zone inputs such as magnetic contacts, motion detectors and temperature sensors. Devices connected to these zones can be installed to a maximum distance of 300m (1000ft) from the PostX when using 22 AWG. The PostX supports normally opened and normally closed configurations with or without EOL resistors on a per zone configuration setting.

When using a zone with the EOL resistor configuration, the PostX generates an alarm condition when the state of a zone changes and generates a tamper alarm condition when a wire fault (Short) or a cut wire (Tampered) in the line occurs.

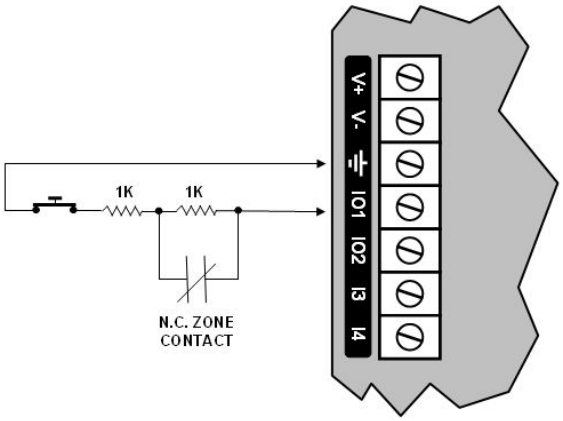

Figure 16 - EOL Resistor Zone Configuration

The zone input is in the closed state when there is 1Kohm resistance between the terminal and ground. If the zone contact opens leaving 2Kohm resistance between the terminal and ground the zone moves into the open state.

When using the No Resistor configuration (i.e. EOL Resistor option not checked), the PostX only monitors the opened and closed state of the connected input device generating the Open (Alarm) and Closed (Sealed) conditions.

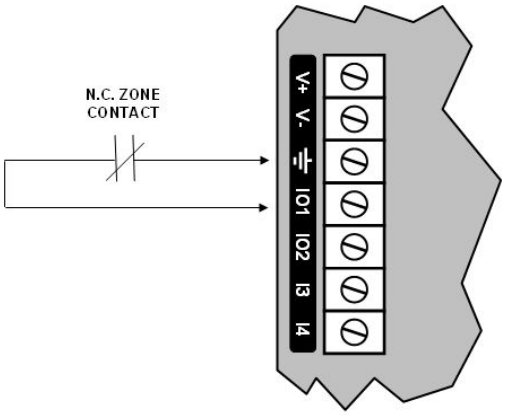

Figure 17 - Normally Closed Zone Configuration No Resistors

Contact ID Messages

Each input can be independently configured to send an Ademco Contact ID message when the zone changes state. These messages will be sent using the settings defined in the Router Setup (routing.php). So if this is set to use IP Reporting, the Contact ID message generated will be sent using IP Reporting to IP Address 1 first just the same as when a Contact ID message is received.

Account Code

This is a 4 digit code that the monitoring station uses to identify where the Contact ID message has come from.

Event Code

This is the standard 3 digit Contact ID event code to indicate the type of event that is being reported. Table 1Table 2 shows some example event codes that may be used, contact your monitoring station to find out more details.

Event Code	Event Type
130	Burglary Alarm
140	General Alarm
146	Silent Burglary
150	24 Hour Non-Burglary
300	System Trouble
380	Sensor Trouble

Table 2 - Example Ademco Contact ID Event Codes

Group Number

The Group Number or Area Number is a 2 digit code to indicate the group or area that the event belongs too. Use 00 to indicate there is no specific group or area information.

Zone Number

The Zone Number or User Number is the 3 digit code to indicate the specific zone that has had the event. Use 000 to indicate that there is no specific zone or user information.

Email Messages

Each input can also be configured to send an email when the zone changes state. This email is sent to the email address saved in the main Input Output Control settings (io.php) labelled as “IO Control Email”.

To have a zone send an email the “Send Email Message” checkbox must be checked as shown in Figure 18. For the settings shown here when the zone opens the following email will be sent by the PostX.

```
Site Name:  ICT PostX Module
Zone Message: Zone 1 Opened
Time Stamp: Fri Jul 27 14:52:55 2007
```

The PostX should be configured to send the appropriate message when the input changes state.

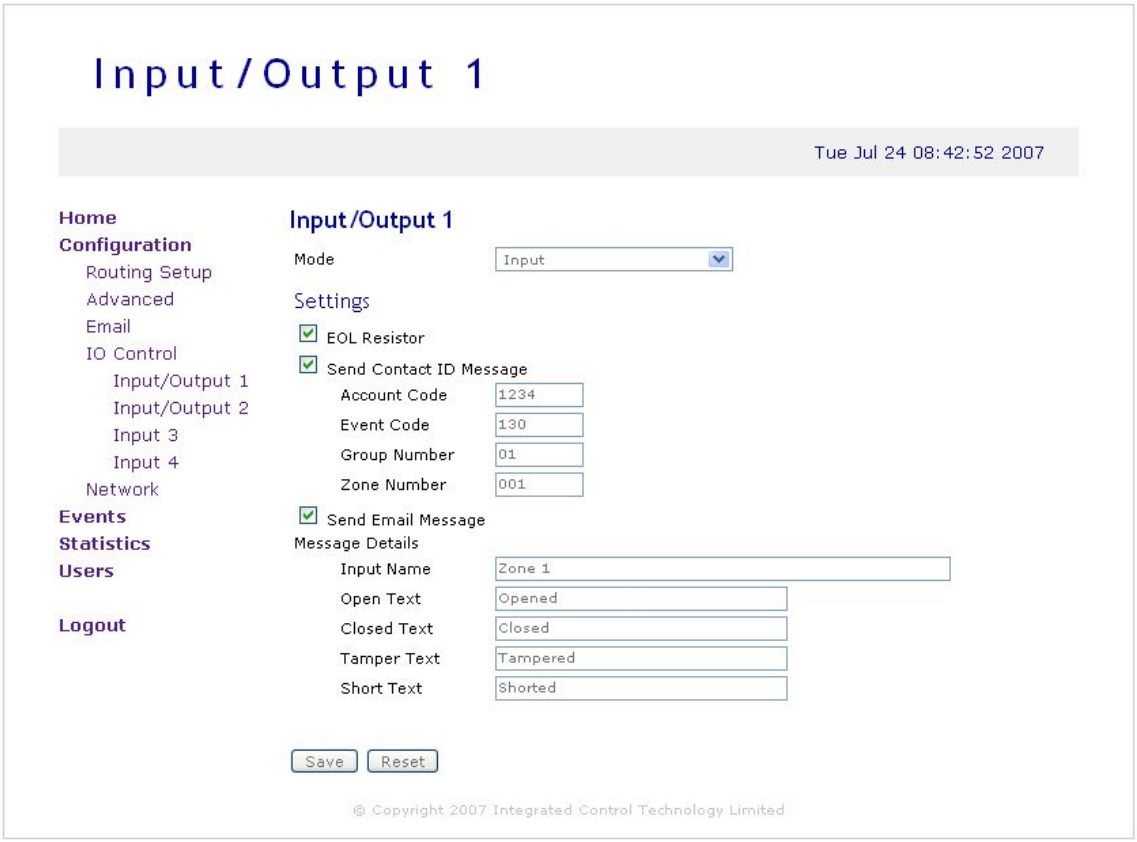

Figure 18 - Input Mode Setup

Output Mode

The first 2 channels (IO1 and IO2) can be configured to be outputs that are activated when the PostX loses the IP, PSTN or either connection.

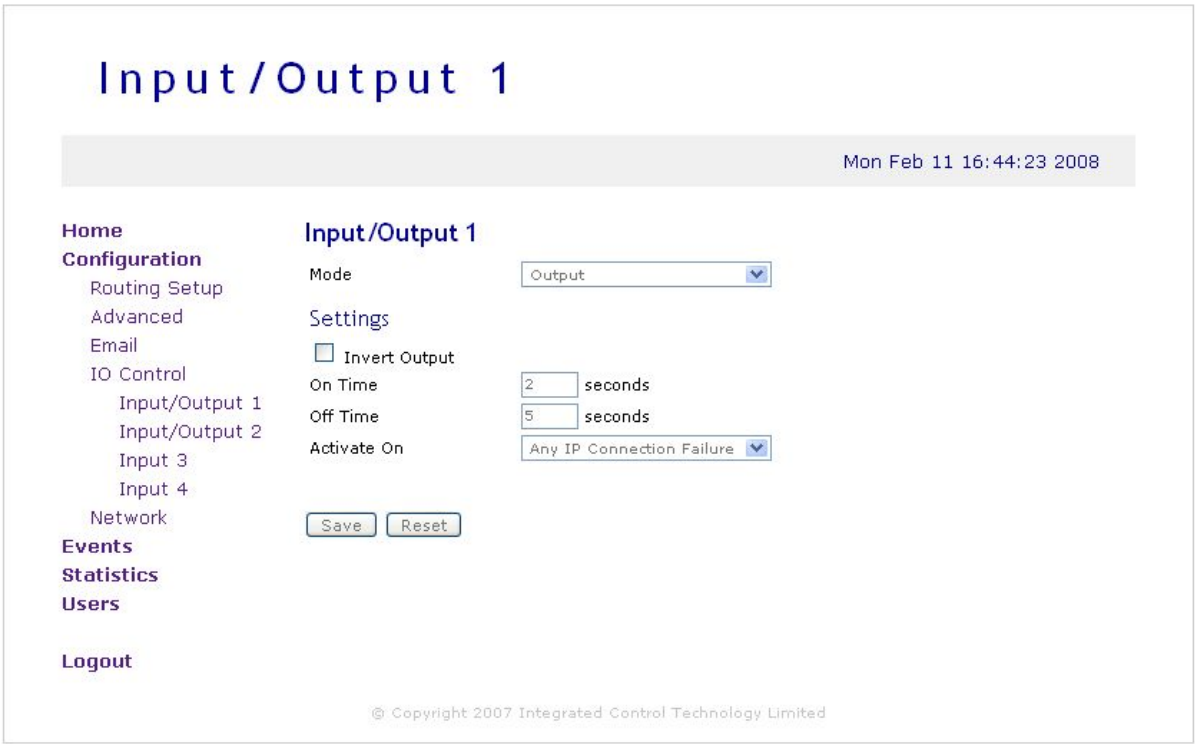

Figure 19 - Output Mode Setup

Invert Output

When enabled the state of the output will be inverted.

On Time

When the On Time is configured to be non-zero the output will activate for this number of seconds and then turn off. If the Off Time is also non-zero the output will only remain off for this period of time and will then turn on again for the On Time, configuring both the On and Off times creates a pulsed output. This can be 0-255 seconds.

Off Time

When the Off and Off Times are configured to be non-zero the output will pulse on and off at this period. This can be 0-255 seconds.

Activate On

The output can be activated based on the selected failure. Below is a list of the available options.

- Any Connection Failure
- Any IP Connectoin Failure
- Any PSTN Connectoin Failure
- Primary IP Connectoin Failure
- Both IP Connectoin Failure
- Primary PSTN Connectoin Failure
- Both PSTN Connectoin Failure

TCP/IP SERIAL PORT

The PostX IP Reporting Module has a configurable serial port that can be accessed through a TCP connection; effectively creating an Ethernet enabled serial port.

For more information about using this feature contact Integrated Control Technology through their website, www.integratedcontroltechnology.com

EMAIL

Introduction

The PostX IP Reporting Module can send an Email to a selected address when an inbound message is received from the attached panel. If this option is being used the outgoing mail server (SMTP) must be setup.

Setup

The email is setup in the "Email" web page in the PostX as shown in Figure 20 below. To ensure the emails get through and are not stopped by spam filters a valid email address must be entered. The PostX does not receive any email, so you can use any active email address.

The IP Address of the SMTP server that is to be used needs to be entered. If the SMTP server is not provided by the ISP (Internet Service Provider) the PostX is using then it will require authentication. Enter the username and password for the account into the appropriate fields in the webpage.

Once the settings are entered click on "Test Account Settings…" This takes you to a new page, enter in your email address and click send. The PostX will attempt to send an email to this address. If it does not get through in a reasonable amount of time re-check your settings.

Figure 20 - Email Setup Webpage

DUPLICATE CONFIGURATION

The PostX's configuration can be uploaded and downloaded to allow easy duplicate programming of the device. After the network settings for the PostX are made, this include IP Address, Subnet Mask and Gateway all other settings can be downloaded from a configuration file.

Creating a Configuration File

To create configuration file setup a PostX with all the required settings. Open the Microsoft ® Command Prompt (Start > All Programs > Accessories > Command Prompt). Type in the following command using the IP Address of the PostX IP Reporting Module

```
tftp –i 192.168.1.2 GET config.bin
```

This will create a file called "config.bin" in the same directory where you typed in the command. This file is the default configuration file you can download to any other PostX.

Downloading a Configuration File

Once a configuration file is created it can be downloaded to any other PostX. Open the Microsoft ® Command Prompt (Start > All Programs > Accessories > Command Prompt). Change to the directory where the configuration file has been saved. Type in the following command using the IP Address of the PostX IP Reporting Module

```
tftp –i 192.168.1.2 PUT config.bin
```

Restart the PostX for the new Configuration to take effect.

WEB USER MANAGEMENT

Introduction

To access any web pages in the PostX the user must be logged in. The PostX supports up to four users with 2 different access levels.

Setup

To add or edit users to the PostX go to User Management web page, too see this you must be logged in with an Administrator user. To add a new user click on the “Add” button, this will open a new page. Enter in the details of the new User here and click on the Save button.

To edit an existing user click on the appropriate check box and then click on the “Edit” button. This will open a new page where you can edit the user’s settings.

To delete a user again select the appropriate check box and click on the “Delete” button. The PostX will not delete Administrative users, so they are not accidentally deleted leaving no valid login. If you wish to delete an Administrator first edit the user and change the Access Level to ‘None’ or ‘User’, then delete the user.

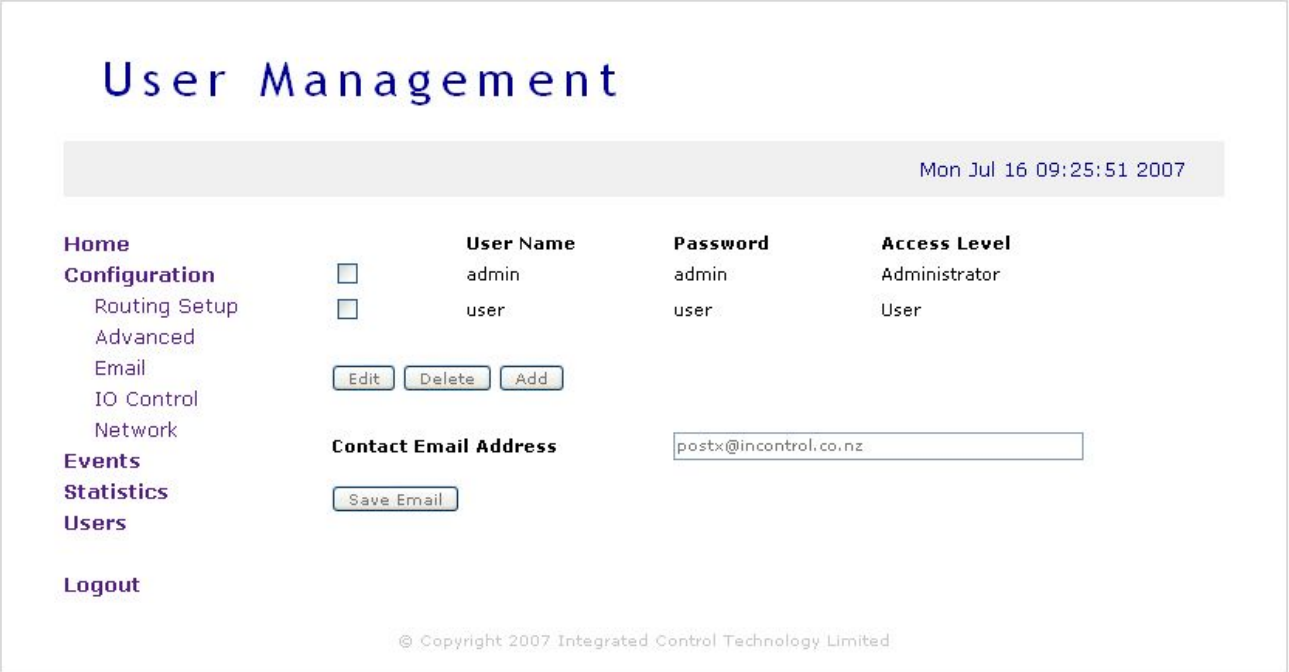

Figure 21 - User Management Screen Shot

If you delete all the users and log out you will NOT be able to log back into the PostX.

Access Levels

The PostX supports two access levels, Administrator and User. When logged in with an Administrator account the user can access all pages and change any parameter. Where as the User access level only allows access to the homepage (index.php) and to the events web page (events.php).

Default Users

The PostX comes with two default users as detailed in Table 3 - Default Login Accounts.

Username	Password	Access Level
admin	admin	Administrator
user	user	User

Table 3 - Default Login Accounts

COMMAND LINE INTERFACE

The PostX also provides a command line interface to help with set up diagnostics. This can be accessed with through a Telnet session or using an ACC-232 dongle that plugs into the Diagnostics Connector (see Page 1).

To connect using Telnet type telnet xxx.xxx.xxx.xxx 9000 into the Windows Command Prompt and press enter. The command prompt "ICTNET>" will come up when a connection has been made. To terminate the telnet session type "exit" into the command prompt.

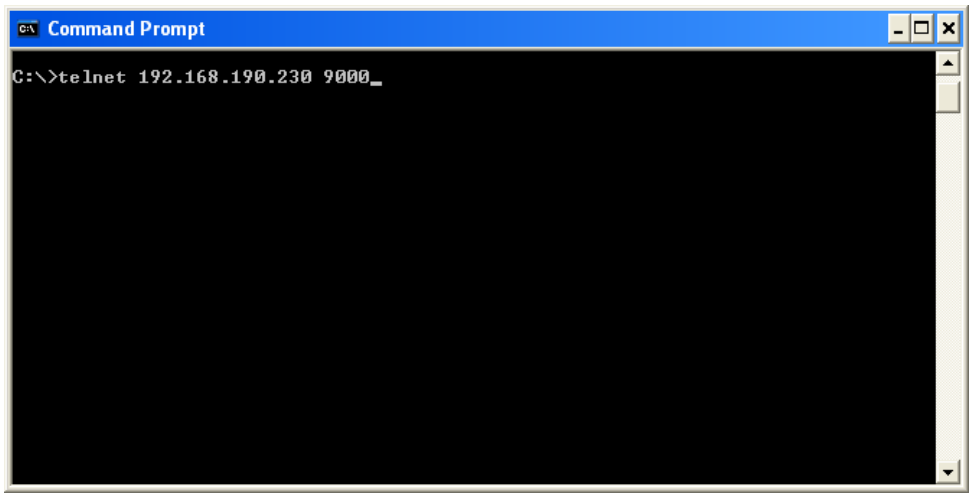

Figure 22 - Starting a Telnet Session with a PostX

To start using the RS232 interface, apply power to the PostX and connect the ACC-232 to both the PostX and to an available serial port on your computer. Open a Terminal Program such as HyperTerminal or TeraTerm with the baud rate set to 38400 (38400,8,n,1). Press ENTER or ESC to get the command prompt.

DO NOT use an ACC-485 to attempt to connect to the PostX. Attempting to do so may cause irreparable damage to the device.

Command	Example	Description
arp –a	arp –a	List all the entries in the ARP table (IP Address and MAC Address details)
arp –d	arp –d	Delete the ARP cache. This is useful if the IP Address of a device you are trying to talk to has changed.
boot	boot	Restart the PostX in Boot Mode. NOTE: This will disable the command line interface.
default	default	Default the PostX to factory settings.
dhcp	dhcp	Display the DHCP Client details
dhcp –d	dhcp –d	Start the DHCP Server discovery process. NOTE: this does not change the PostX into the DHCP mode, and will resume in the previous saved mode when the PostX restarts.
emac	emac	Display the statistics for the Ethernet interface
exit	exit	Disconnects an active Telnet session.
ipconfig	ipconfig	List the details of the IP setup, IP Address, Gateway, Subnet Mask etc.
ipconfig -all	ipconfig –all	Extended IP configuration details
ping	ping 192.168.1.1	Send a ping command to the selected IP Address
restart	restart	Restart the PostX.
set ip	set ip 192.168.1.56	Set the IP Address. The PostX must be restarted before this change will take place.
set gateway	set gateway 192.168.1.1	Set the Gateway Address. The PostX must be restarted before this change will take place.
set mask	set mask 255.255.0.0	Set the Subnet Mask. The PostX must be restarted before this change will take place.
set dns1	set dns1 192.168.1.1	Set the Primary DNS Server. The PostX must be restarted before this change will take place.
set ntp1	set ntp1 202.156.2.125	Set the Primary SNTP Time Server. The PostX must be restarted before this change will take place.
sntp	sntp 202.156.2.125	Updates the time from the SNTP server at the given IP Address. This can be used to confirm the SNTP server is working before you save it in the Network Configuration.
system	system	Display the System details, including Serial Number and Software Version.
time	time	Displays the current time stored in the PostX

Table 4 - PostX Command's

STATUS INDICATION

Status Introduction

The PostX IP Reporting Module includes extensive diagnostic indicators that can aid the installer in diagnostic faults and conditions. In some cases an indicator may have multiple meanings depending on the status indicator display at the time.

Power Indicator (PWR)

The Power Indicator is located on the top edge of the PCB and indicated that power is applied to the PostX Module. The Power LED is on constantly when power is applied to the PostX, if this LED is not on the PostX will not be working.

Status Indicator (STS)

The Status Indicator is located on the top edge of the PCB and indicates the status of the PostX. If the PostX Module is operating normally the LED will indicate this by **FLASHING** at 1 second intervals. If the LED is **ON CONSTANTLY** the PostX is still starting up, waiting until the LED starts flashing before attempting to do anything with the PostX.

PSTN Indicator (PST)

The PSTN Indicator is located on the top edge of the PCB and indicates when the modem is off hook. The LED is **ON** constantly when the on board modem has taken control of the line and is attempting to connect to a monitoring station.

Panel Indicator (PNL)

The Panel Indicator is located on the top edge of the PCB and indicates when the subscriber phone goes off hook. In normal operation this is when the connected panel has gone off hook and is attempting to connect to the PostX. The LED is **ON** constantly while the subscriber line is off hook.

Ethernet Link Indicator (LINK)

The Ethernet Link Indicator is located next to the Ethernet Jack. The Link LED is **ON** constantly when it senses a “live” Ethernet connection is detected, if no connection is found the LED is off. If a cable is plugged into the Ethernet Jack but it is not terminated to another Ethernet device at the other end the Link LED will remain off, as no “live” connection is found.

Ethernet Data Indicator (DATA)

The Ethernet Data Indicator is located next to the Ethernet Jack and Link LED. The LED **FLASHES** for 100ms when an Ethernet packet is transmitted or received. This is very useful when debugging your Ethernet link to make sure you are receiving packets you have sent from another device.

WARNINGS

"The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with the minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services."

"This equipment can be set up to carry out test calls at pre-determined times. Such test calls will interrupt any other calls that may be set up on the line at the same time. The timing set for such test calls should be discussed with the installer."

"The timing set for test calls from this equipment may be subject to 'drift'. If this proves to be inconvenient and your calls are interrupted, then the problem of timing should be discussed with the equipment installer. The matter should NOT be reported as a fault to Telecom Faults Service."

"In the event of any problem with this device, it is to be disconnected, and a CPE item connected to one of its terminal ports may be connected directly in its place. The user should then arrange for the product to be repaired. Should the matter be reported to Telecom as a wiring fault, and the fault is proven to be due to this product, a call-out charge will be incurred."

LABEL DETAILS

The PostX IP Receiver Module has a unique label on it. This contains details that maybe of use to you.

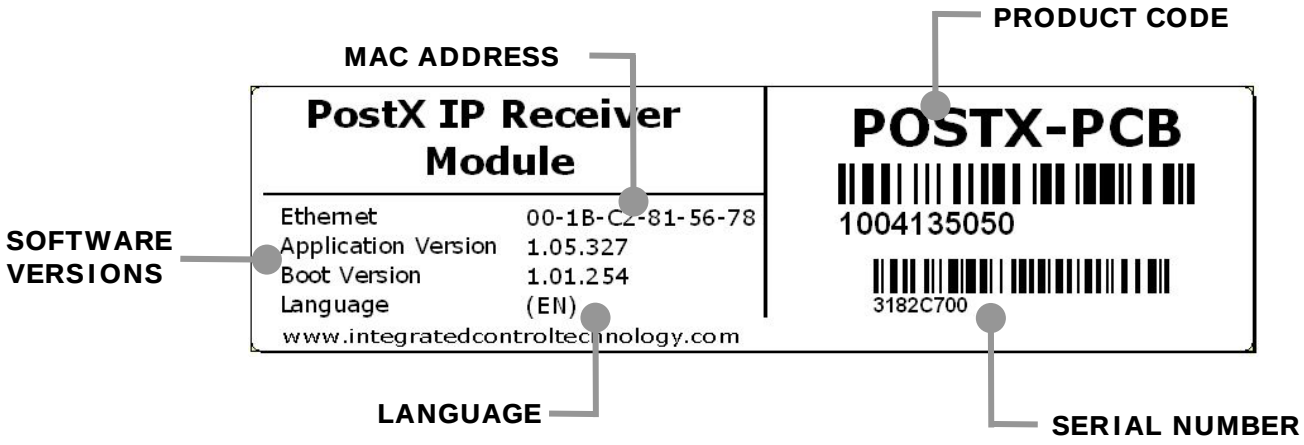

Figure 23 - PostX Label Details

ORDERING INFORMATION

Product Codes

Please use the following product codes when placing an order for the PostX IP Reporting Module.

CRX-POSTX-PCB	PostX IP Reporting Module (PCB Only)	
	Includes	*Accessory Bag*

Manuals and literature are available at the Integrated Control Technology website in the documentation section. If you require manuals on CD-ROM please request a literature CD-ROM from the website.

WARRANTY

Warranty Introduction

The PostX IP Reporting Module is covered under the Integrated Control Technology standard terms and warranty agreement. This document can be downloaded from the Integrated Control Technology web site or obtained by return fax.

Contact

Integrated Control Technology welcomes all feedback. Please visit our website or use the information below.

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