



PRO3

3-Series Control System[®]

Supplemental Guide

Crestron Electronics, Inc.

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PRO3: 3-Series Control System®

Introduction

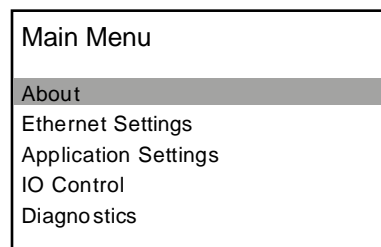
The PRO3's Nav Pad and LCD display can be used to configure and monitor the PRO3's operations.

Alternatively, Crestron Toolbox™ and the PRO3's built-in web interface can also be used. For details, refer to the Crestron Toolbox help file and the AV3/PRO3 DO Guide (Doc. 7721) at www.crestron.com/manuals.

Configuration

Press **HOME** to display the **Main Menu**, shown below.

Main Menu



The **Main Menu** is divided into seven sections:

- **About** displays the controls system's IP address, hostname, MAC address, and firmware information.
- **Ethernet Settings** configures and displays the PRO3's Ethernet settings.
- **Application Settings** selects a program to register, run or stop, and provides information about the selected program.
- **IO Control** monitors and operates the PRO3's input and out ports.
- **Diagnostics** displays information about the connected devices, hardware configuration, and error logs.
- **Reboot** provides controls for rebooting the PRO3.
- **Screen Setup** configures the front panel display.

Press up or down on the Nav Pad to highlight the desired selection, and then press the center button of the Nav Pad to select it. Press **HOME** at any time to return to the **Main Menu**. Press **BACK** at any time to return to the previous screen.

About

Select **About** to display the **About** menu. The **About** menu displays the PRO3's IP address, hostname, MAC address and firmware details.

About Menu

About
IP Address: 172.30.16.25
Hostname: PRO3-7F28F5E6
MAC Address: 00:10:7e:26:f6:c3
Firmware Version: v1.010.0060
Firmware Details

To view firmware details, press up or down on the Nav Pad to highlight **Firmware Details**, and then press the center button of the Nav Pad.

To cancel and return to the previous menu, press **BACK**.

Ethernet Settings

Select **Ethernet Settings** to display the **Ethernet Settings** menu. The **Ethernet Settings** menu displays the status of the Ethernet connection (**Link**, green indicates active) and provides options to view and configure settings for the LAN connection, the control subnet, DNS servers, ports, webserver, SSL, MyCrestron, and Ethernet Diagnostics. Press up or down on the Nav Pad to highlight the desired selection, and then press the center button of the Nav Pad to select it.

Ethernet Settings Menu

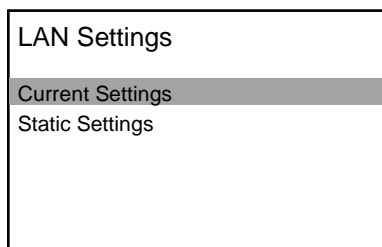
Ethernet Settings
Link ■
LAN
Control Subnet
DNS Servers
Advanced Settings
MyCrestron

LAN

Select **LAN** from the **Ethernet Settings** menu to edit settings for the LAN connection. The **LAN Settings** menu is displayed.

If any changes are made, the PRO3 must be rebooted. For details on rebooting the PRO3, refer to "Reboot" on page 15.

LAN Settings Menu



Select **Current Settings** to view the current settings, or select **Static Settings** to manually change the settings.

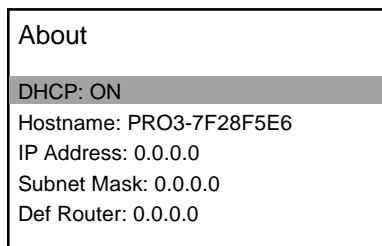
Current Settings

Selecting **Current Settings** displays the settings for DHCP operation, hostname, IP address, subnet mask, default router, and domain name.

Static Settings

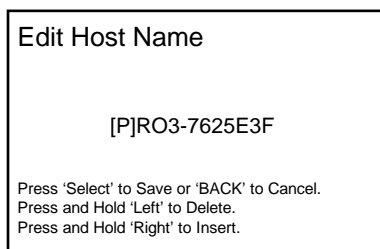
Selecting **Static Settings** allows editing of the DHCP settings, host name, IP address, subnet mask, default router, and domain name.

Static Settings Screen



- **DHCP** changes the setting for DHCP operation. The PRO3 can obtain an IP address, a subnet mask, and the default router information from a DHCP server. To enable or disable DHCP, press up or down on the Nav Pad to highlight **DHCP: On** or **DHCP: Off**, and then press the center button of the Nav Pad. The setting toggles between **On** and **Off**. The default setting is **DHCP: On**.
- **HostName** shows the PRO3's hostname. Highlight the hostname, and then press the center button of the Nav Pad to change it.

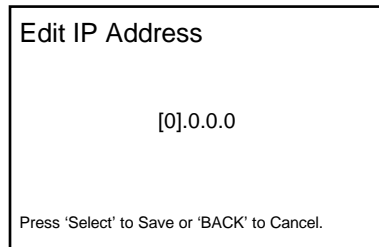
Edit Host Name Screen



- Use the left and right buttons on the Nav Pad to select a character to change.

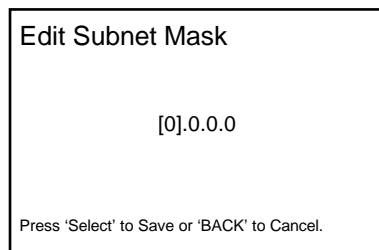
- o Use the up and down buttons on the Nav Pad to browse the list of possible characters.
 - o Press and hold the left button on the Nav Pad to delete a character.
 - o Press and hold the right button on the Nav Pad to insert a character.
 - o Press the center button of the Nav Pad to save the new hostname.
 - o Press **BACK** to cancel.
- **IP Address** shows the IP address 0.0.0.0. Highlight the IP address, and then press the center button of the Nav Pad to change it.

Edit IP Address Screen



1. Press up or down on the Nav Pad to set the first octet of the IP address.
 2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
 3. Set each octet until the correct IP address is displayed.
 4. To save the IP address and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.
- **Subnet Mask** shows the subnet mask address 0.0.0.0. Highlight the subnet mask, and then press the center button of the Nav Pad to change it.

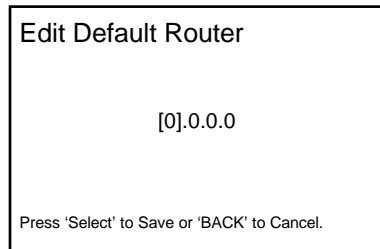
Edit Subnet Mask Screen



1. Press up or down on the Nav Pad to set the first octet of the subnet mask.
2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
3. Set each octet until the correct subnet mask is displayed.
4. To save the subnet mask and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.

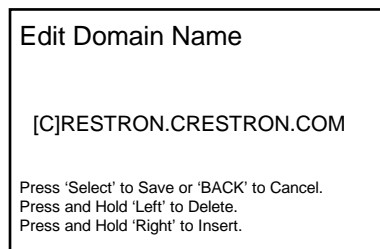
- **Def Router** shows the default router address 0.0.0.0. Highlight the default router, and then press the center button of the Nav Pad to change it.

Edit Default Router Screen



1. Press up or down on the Nav Pad to set the first octet of the default router.
 2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
 3. Set each octet until the correct default router is displayed.
 4. To save the default router and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.
- **Domain** shows the domain name crestron.crestron.com. Highlight the default router, and then press the center button of the Nav Pad to change it.

Edit Domain Name Screen



1. Press up or down on the Nav Pad to set the first octet of the default router.
2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
3. Set each octet until the correct default router is displayed.
4. To save the default router and return to the **LAN Static Settings** menu, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.

Control Subnet

Select **Control Subnet** from the **Ethernet Settings** menu to view and edit settings for the control subnet connection. The **Control Subnet** menu displays the status of the control subnet connection (**Link**, green indicates active) and provides information and configuration options for the MAC address (information only), IP address (information only), routing prefix (automatic or manually set), and port forwarding (information only). Press up or down on the Nav Pad to highlight the desired selection, and then press the center button of the Nav Pad to select it.

If any changes were made, the PRO3 must be rebooted. For details on rebooting the PRO3, refer to “Reboot” on page 15.

Control Subnet Menu

Control Subnet
Link ■
MAC Address: 00:10:7e:26:3c:b6
IP Address: 10.0.0.1
Automatic Mode: On
Routing Prefix
Port Forwarding

Select **Current Settings** to view the current settings or select **Static Settings** to manually change the settings.

Automatic Mode

Automatic mode determines if the control system will automatically configure a routing prefix or if a routing prefix is to be entered manually.

Press up or down on the Nav Pad to highlight **Automatic Mode: On**, and then press the center button of the Nav Pad. A new screen is displayed, prompting the user to enter a routing prefix. Refer to “Routing Prefix” below for details on setting the routing prefix.

Automatic mode turns off when the routing prefix is saved. If Automatic mode is off and the center button of the Nav Pad is pressed, the mode turns on after a brief pause for the system to update.

Routing Prefix

Edit the routing prefix by pressing up or down on the Nav Pad to highlight **Routing Prefix**, and then press the center button of the Nav Pad. For details on using routing prefixes, refer to the “IP Considerations Guide for the IT Professional Design Guide”, (Doc. 4579) at www.crestron.com/manuals.

NOTE: If the Automatic mode is on, the routing prefix cannot be changed.

Edit Routing Prefix Screen

Edit Routing Prefix
[0].0.0.0/0
Press 'Select' to Save or 'BACK' to Cancel.

1. Press up or down on the Nav Pad to set the first octet of the routing prefix.
2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
3. Set each octet until the correct routing prefix is displayed.

4. To save the routing prefix and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.

Port Forwarding

Select **Port Forwarding** to view the list of ports dedicated to the control subnet. Highlight a port, and then press the center button of the Nav Pad to view details about that port in a new screen. Details include the external port number, internal port number, IP address or hostname, and protocol.

DNS Servers

Select **DNS Servers** to add or delete primary and secondary DNS servers.

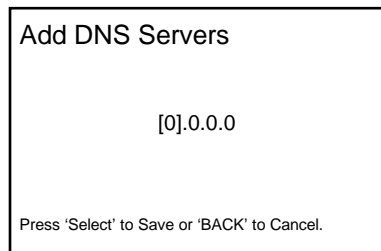
NOTE: If DHCP is in use, DNS servers are automatically added and can only be viewed. They cannot be deleted.

If any changes are made, the PRO3 must be rebooted. For details on rebooting the PRO3, refer to “Reboot” on page 15.

Add

Select **Add New** to add a DNS server.

Add DNS Servers Screen



The screenshot shows a rectangular screen with a black border. At the top, it says "Add DNS Servers". In the center, there is a text input field containing "[0].0.0.0". At the bottom, it says "Press 'Select' to Save or 'BACK' to Cancel."

1. Press up or down on the Nav Pad to set the first octet of the DNS server.
2. Press left or right on the Nav Pad to move the cursor between octets and select one for editing.
3. Set each octet until the correct default router is displayed.
4. To save the default router and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.

Delete

To delete a DNS server entry, perform the following:

1. Press up or down on the Nav Pad to highlight the DNS server to be deleted, and then press the center button of the Nav Pad.
2. Press the center button of the Nav Pad to delete the entry or press **BACK** to cancel.

Advanced Settings

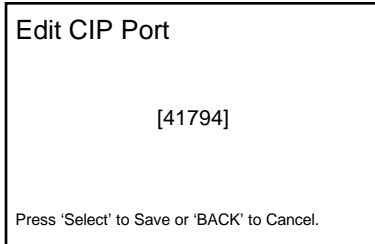
Select **Advanced Settings** to display and change the port numbers of regular and secure CIP, CTP, and Web ports. Web server and SSL functionality can be controlled as well.

Port Assignments

Perform the following to view or configure the regular and secure CIP, CTP, and web ports:

1. Press up or down on the Nav Pad to highlight the port to be adjusted, and then press the center button of the Nav Pad.

Edit a Port Screen (CIP Port Shown)



The screenshot shows a rectangular screen with a black border. At the top, it says "Edit CIP Port". In the center, the number "[41794]" is displayed. At the bottom, it says "Press 'Select' to Save or 'BACK' to Cancel."

2. Press up or down on the Nav Pad to display the port number to be used.
3. To save the port number and return to the previous screen, press the center button of the Nav Pad. To cancel the operation and return to the previous screen, press **BACK**.

NOTE: Changing the CIP Port to something other than 41794 disables access to the web-based setup program.

If any changes are made, the PRO3 must be rebooted. For details on rebooting the PRO3, refer to "Reboot" on page 15.

Web Server

The PRO3's built-in web server can be enabled or disabled using the front panel controls.

To enable or disable the web server, press up or down on the Nav Pad to highlight **Webserver: On** or **Webserver: Off**, and then press the center button of the Nav Pad. The setting toggles between **On** and **Off**. The default setting is **Webserver: On**.

NOTE: Setting the Webserver to **Off** disables access to the web-based setup program.

SSL Controls

The PRO3 can use SSL encryption for web services. For details on using SSL, refer to the 3-Series Control System Reference Guide (Doc. 7150) at www.crestron.com/manuals.

To enable and configure SSL, press up or down on the Nav Pad to highlight **SSL**, and then press the center button of the Nav Pad to view the possible settings.

- **Off** turns off the SSL capabilities of the PRO3. This is the default.
- **Self** sets up self-signing certificates.
- **CA** uses an authority to assign the SSL settings.

To view information about the SSL certificate, press up or down on the Nav Pad to highlight **SSL Cer**, and then press the center button of the Nav Pad. Information about the certificate is shown on the front panel display.

Start Program Status

The PRO3 can be configured so that programs do not start until an Ethernet connection has been made and is fully operational. To configure this feature, press up or down on the Nav Pad to highlight **Start Program Status**, and then press the center button of the Nav Pad to switch between **On** and **Off**. When set to **On**, programs cannot start until an Ethernet connection has been made and is fully operational. When set to **Off**, there is no restriction to when a program can start.

MyCrestron

To use the PRO3 with the MyCrestron.com dynamic DNS service, perform the following procedure:

1. Use a PC with Internet Explorer to navigate to <http://www.mycrestron.com>, and register the system with Crestron®. Use the information provided from the MyCrestron website to complete the information on the “MyCrestron” screen shown in step 2.
2. On the PRO3, press up or down on the Nav Pad to highlight **MyCrestron**, and then press the center button of the Nav Pad. To configure the settings for the dynamic DNS server, follow the procedure below:

My Crestron Screen

My Crestron
Domain:
Password:
Register this System
Status

- a. Press up or down on the Nav Pad to highlight **Domain**, and then press the center button of the Nav Pad to enter the name that was chosen.

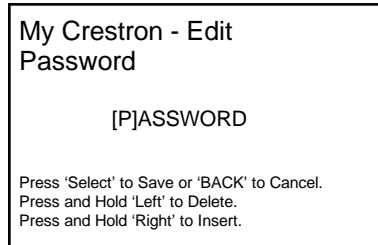
My Crestron Edit Domain Screen

My Crestron - Edit Domain
[S]MITH HOME
Press 'Select' to Save or 'BACK' to Cancel. Press and Hold 'Left' to Delete. Press and Hold 'Right' to Insert.

- i. Use the left and right buttons on the Nav Pad to select a character to change.
- ii. Use the up and down buttons on the Nav Pad to browse the list of possible characters.

- iii. Press and hold the left button on the Nav Pad to delete a character.
 - iv. Press and hold the right button on the Nav Pad to insert a character.
 - v. Press the center button of the Nav Pad to save the new domain name or press **BACK** to cancel.
- b. Press up or down on the Nav Pad to highlight **Password**, and then press the center button of the Nav Pad to enter the password that was chosen.

My Crestron Edit Password Screen



- i. Use the left and right buttons on the Nav Pad to select a character to change.
- ii. Use the up and down buttons on the Nav Pad to browse the list of possible characters.
- iii. Press and hold the left button on the Nav Pad to delete a character.
- iv. Press and hold the right button on the Nav Pad to insert a character.
- v. Press the center button of the Nav Pad to save the new hostname or press **BACK** to cancel.

Once the domain name and passwords are entered, the control system registers itself with MyCrestron every 5 minutes. To force an immediate registration, press up or down on the Nav Pad to highlight **Register This System**, and then press the center button on the Nav Pad.

To view the status of the connection to the MyCrestron.com service, press up or down on the Nav Pad to highlight **Status**, and then press the center button on the Nav Pad. The display shows the current IP address, the IP address when the system last checked, and when the system last registered successfully with the MyCrestron.com service.

Ethernet Diagnostics

Use the PRO3's built-in Ethernet diagnostic tools to perform various troubleshooting steps.

Tests can be run on the PRO3 to verify network connections. Use the up or down buttons on the Nav Pad to highlight the desired test, and then press the center button on the Nav Pad to start it.

Select **Ping Def. Router** to test the router connection. When the test is completed, the results are shown on the display.

To verify external communications, select **Ping Crestron.com**. When the test is completed, the results are shown on the display.

Select **Who** to display a list of devices that are connected to the control system via the Ethernet connection. These devices may be Crestron Ethernet devices, third party Ethernet

devices, and PCs (including any PC using Crestron Toolbox to connect to the processor over Ethernet).

NOTE: Changing the CIP Port to something other than 41794 results in disabling access to this setup program from a Web browser. In order to re-enable access, use Crestron Toolbox to connect to the control system, and set the CIP Port back to 41794.

Application Settings

Select **Application Settings** to display the **Application Settings** menu.

Application Settings Menu

Application Settings
1: V1A
2: SMITH RESIDENCE
3: PROTOTYPE
4: DEMO
5:

The **Application Settings** menu displays all of the programs that are loaded on the PRO3. Press up or down on the Nav Pad to highlight the desired program, and then press the center button of the Nav Pad to display controls for registering the program, starting or stopping the program, viewing the program's IP table, or viewing the program's comments.

Application 1 Screen

Application 1
* Register/Unregister
* Start/Stop
IP Table
Comments

Register and Unregister Programs

Before a program can be started, it has to be registered. At startup, only the registered programs are started.

To register or unregister a program, press up or down on the Nav Pad to highlight **Register/Unregister**, and then press the center button of the Nav Pad. If the program is not registered, it becomes registered and an asterisk appears. If a program is already registered, it becomes unregistered and the asterisk disappears.

Start and Stop Programs

A program that is running can be stopped and a program that is not running can be started. To start or stop a program, press up or down on the Nav Pad to highlight **Start/Stop**, and then press the center button of the Nav Pad. If the program is not running, it starts and an asterisk appears. If a program is running, it is stopped and the asterisk disappears.

IP Table

The IP table of a running program can be viewed by pressing up or down on the Nav Pad to highlight **IP Table**, and then pressing the center button of the Nav Pad. Press **BACK** to return to the previous screen.

NOTE: If a program is not running, its IP table cannot be displayed.

Comments

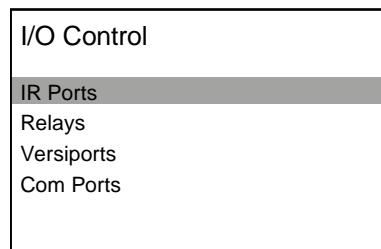
A running program's programmer comments can be viewed on the front panel display. To view comments, press up or down on the Nav Pad to highlight **Comments**, and then press the center button of the Nav Pad. Press **BACK** to return to the previous screen.

NOTE: If a program is not running, its comments cannot be displayed.

I/O Control

Select **I/O Control** to display the **I/O Control** menu.

I/O Control Menu

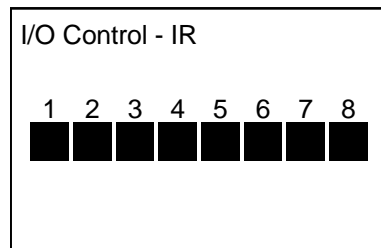


The **I/O Control** menu displays the different types of input and output ports on the PRO3. Press up or down on the Nav Pad to highlight the desired port type, and then press the center button of the Nav Pad to display information about the input or output port.

IR Ports

Select **IR Ports** to monitor the activity on the built-in infrared ports.

I/O Control - IR Screen

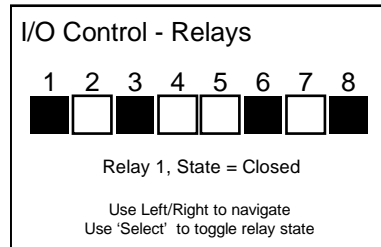


The port number's indicator turns green when there is activity on the corresponding infrared port.

Relays

Select **Relays** to monitor and control the status of the built-in relays.

I/O Control - Relays Screen

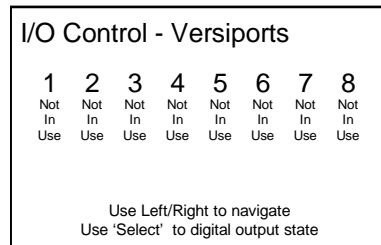


Closed relays are indicated in red while open relays are indicated in black. To toggle a relay between the open and closed states, press left or right on the Nav Pad to highlight the desired relay, and then press the center button of the Nav Pad to toggle its state.

Versiports

Select **Versiports** to view activity on the Versiports. When a port is in use, the port configuration (**Digital In**, **Digital Out**, or **Analog In**) is displayed for that port number. If the port is not in use, **Not In Use** is displayed.

I/O Control - Versiports Screen

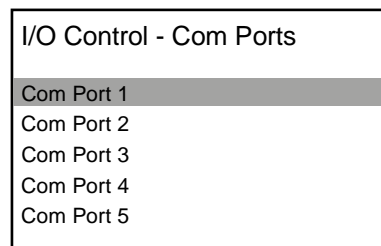


To edit the port configuration, select a port by pressing left or right on the Nav Pad to highlight the desired port, and then press the center button of the Nav Pad to toggle between the different configurations.

Com Ports

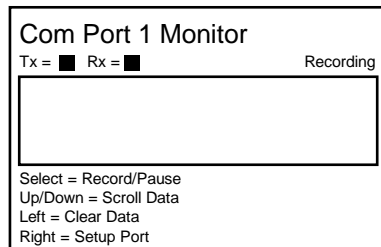
Select **Com Ports** to display the **I/O Control - Com Ports** menu.

I/O Control - Com Ports Menu



The **I/O Control - Com Ports** menu displays a list of the serial ports on the PRO3. Press up or down on the Nav Pad to highlight the desired serial port, and then press the center button of the Nav Pad to display com port's monitor screen.

Com Port 1 Monitor Screen

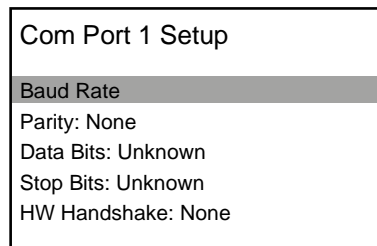


The monitor displays incoming and outgoing data. Transmitted data is displayed in red and received data is displayed in green.

Use the Nav Pad and the center button to perform the following actions:

- Press the center button of the Nav Pad to record transmitted and received data. Press the center button again to pause.
- Press up or down on the Nav Pad to scroll through transmitted and received data.
- Press left on the Nav Pad to clear data from the screen.
- Press right on the Nav Pad to configure the com port. The **Com Port Setup** menu is displayed.

Com Port 1 Setup Menu

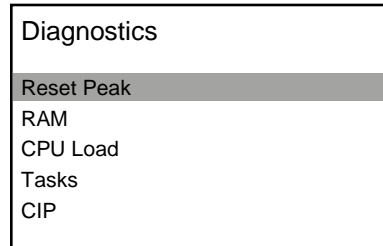


1. Press up or down on the Nav Pad to highlight the parameter to be adjusted, and then press the center button on the Nav Pad to display the available settings.
2. Press up or down on the Nav Pad to highlight the desired setting, and then press the center button of the Nav Pad to select it.
3. Repeat steps 1 and 2 for every parameter to be adjusted.
4. Press **BACK** to return to the previous screen.

Diagnostics

Select **Diagnostics** to display the **Diagnostics** menu.

Diagnostics Menu



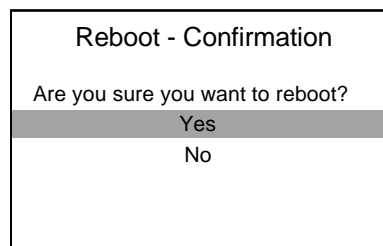
The **Diagnostics** menu is used to provide information about the control system, connected devices, hardware configuration, and error logs. Press up or down on the Nav Pad to highlight the desired information, and then press the center button of the Nav Pad to display details. Press **BACK** to return to the previous screen.

- Select **Reset Peak** to reset the peak values of RAM, tasks, and TX and RX values for CIP, TCP, and Cresnet®.
- Select **RAM** to display the total, current, and minimum RAM used by the PRO3.
- Select **CPU Load** to display the current and peak CPU loads, both numerically and by bar graph.
- Select **Tasks** to display the current and peak number of tasks performed by the PRO3.
- Select **CIP** to display statistics for CIP network traffic.
- Select **TCP** to display statistics for TCP network traffic.
- Select **Cresnet** to display statistics for Cresnet network traffic.
- Select **Show Cresnet Devices** to a list of Cresnet devices connected to the network.
- Select **Show Hardware Configuration** to display a list of card slots.
- Select **Show Message Log** to display events that are stored in the message log.
- Select **Show Last Reboot Message** to display the final message stored before the control system was reset last.

Reboot

Select **Reboot** to reboot the control system.

Reboot - Confirmation Screen

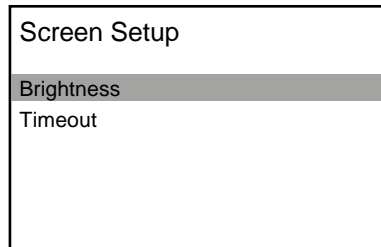


Press up or down on the Nav Pad to highlight **Yes** or **No**, and then press the center button of the Nav Pad.

Screen Setup

Select **Screen Setup** to adjust the front panel display's brightness and timeout settings.

Screen Setup Menu



The **Screen Setup** menu displays options for adjusting the brightness and timeout settings. Press up or down on the Nav Pad to highlight the parameter to be adjusted, and then press the center button of the Nav Pad to display controls for adjusting the selected option.

Brightness

Press up or down on the Nav Pad to adjust the brightness level, and then press **BACK** to return to the previous screen.

Timeout

Press up or down on the Nav Pad to highlight the desired timeout setting, and then press the center button of the Nav Pad to set it.

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Supplemental Guide – DOC. 7330D
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06.15
Specifications subject to
change without notice.