iSeries
PC Program
User’s Guide

Colortran Inc.
Manufacturers of Lighting and Control Systems

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1. **Introduction**

1.1. *i Series PC Software*

The *i Series* PC software allows for complete configuration of the *i Series* dimmer rack. The rack status may also be monitored through this software. The software features a user-friendly interface which allows for faster configuration of the rack than would be possible through the *i Series* Hand Held Terminal.

After the PC has configured the racks, the configuration data may be stored on:
- the PC hard drive
- the PC floppy drive or

The configuration may also be printed for reference and storage purposes.

The *i Series* PC program may not be used to:
- configure the Panic dimmers (this is a hardware setting)
- control dimmers directly (only through Hand Held Terminal)
- create or execute node mode backup looks (only through Hand Held Terminal)

1.2. **System Requirements**

1.2.1. Colortran Hardware

The *i Series* PC software requires the following Colortran equipment to run:

- the program disk provided
- an *i Series* dimmer rack (including)
- an *i Series* control module (and)
- *i Series* dimmers installed in the rack

1.2.2. Other Hardware

The *i Series* PC software requires the following non-Colortran equipment to run:

- an IBM compatible computer with the following features:
- 386sx 25MHz processor or faster
- 4 megabytes of RAM
- a VGA display (monochrome type for portables is acceptable)
- 2 meg of space on the hard drive for the program
- 500k of space on the hard drive for each rack configuration
- a high density (1.44k) 3.5" disk drive
- installed DOS version 6.0 or later
- serial communications capabilities (see below)
The i Series PC program can communicate to the control module through a serial port. Serial communications may be either pre-wired into the rack or accessible through the front serial port of the control module.

To connect for serial communications, the following equipment is required:

♦ an available serial port on the computer
♦ a 9-pin serial cable (1 to 1 pin out) to connect the computer to the rack

Important Notes:

1. A mouse, trackball or other pointing device is not required, but the PC program features pull down menus, dialog boxes, push buttons and other graphic oriented objects that lend themselves well to be used with one of these pointing devices. Therefore, while a pointing device is not required, it is recommended.

2. Colortran only supports running the i Series PC program through Microsoft DOS. Running the program under Windows or OS/2 is not supported.

3. Using this program also requires a basic knowledge of DOS and computers. An understanding of such tasks as changing the disk drive prompt, using disk file directories, and pointing and clicking with a mouse are required. This information is widely available in DOS books in the computer section of book stores, if a DOS manual is not already provided with the computer system being used.
1.3. **Modes of Operation**

1.3.1. Configuration

In configuration mode, the PC program modifies a new or existing rack configuration then downloads it to the rack. It is recommended that lights be turned off during the configuration process, since a change in configuration may cause a change in the lights being controlled. Therefore, during a download, lights are turned off, and when the download is complete, the lights are turned back on, potentially with different results.

1.3.2. Monitoring

In monitoring mode, the PC program displays the condition of the rack and its dimmers. This is typically done after configuration is complete. Some of the conditions reported back are low or high dimmer load, dimmer overtemp, dimmer not present, and power usage.
2. Connecting the Hardware

2.1. Serial Connection

Serial connection will occur either through the serial port in the front of the control module, or through a serial connector pre-wired at the time the dimmer rack was installed. To connect to the computer, simply connect the 9-pin serial cable from either of these connectors to the available serial port of the computer.

2.2. Network Connection

Network connection is available only if the rack has been pre-wired for this option at the time the rack was installed. To connect to the computer, simply attach the supplied BNC connector to the network interface device installed in the computer.

3. Using the Software

3.1. Installing the Software

1. Turn on the computer.
2. Insert the i Series program disk in the floppy drive (usually the "a" drive).
3. If the computer is running DOS, skip to the next step. If the computer is running Windows, exit Windows by double clicking on the upper left hand corner of the Program Manager window, and responding with Yes when prompted regarding exiting windows.
4. At the "c:" prompt (using the hard disk):
   a. Type "md iseries" and press Enter
      (make a directory for the program and its files)
   b. Type "cd iseries" and press Enter
      (move to the directory called iseries)
   c. Type "copy a:.* c:" and press Enter
      (copy all the floppy disk files onto the hard disk)

Substitute the proper letters for the disk drives to accommodate your system, if "c" and "a" are not appropriate.

3.2. Running the Software

1. Turn on the computer.
2. If the computer is running DOS, skip to the next step. If the computer is running Windows, exit Windows by double clicking on the upper left hand corner of the Program Manager window, and responding with Yes when prompted regarding exiting windows.
3. At the "c:" prompt type "cd iseries", then hit the Enter key. Make sure the space is included between the words. If you have installed the software on a drive, other than the "c:" drive, change the prompt to the proper letter and then execute step 3.
4. Type "iseries" then hit the Enter key.
3.3. **Software Conventions**

The i Series PC software uses a graphics oriented interface to allow faster and easier data entry and retrieval. This program was designed to work well with a mouse or other pointing device, but is also fully functional without these devices.

The program is divided into different boxes, each containing different tasks. To configure the rack, fill in the required information in the relevant boxes. To monitor a rack, open the rack monitoring boxes.

**Pull Down Menus**

The boxes may be opened either through the "pull-down menus" or through other boxes. The pull-down menu is the horizontal list of key words at the top of the screen. Each of the key words is a topic header for the commands or boxes available through it. Selecting one of these key words will "pull down" the related list of commands or boxes. To select one of the key words, either double click on the word with the mouse, or hit the Alt key, use the left and right arrows to select different key words, then select the Enter key. To select one of the commands or boxes in the pull down list, either click on it with the mouse or use the down or up arrow keys to select it, then select the Enter key.

**Using the Boxes**

Once a box is opened, commands may be executed or data may be entered. The type of command or data depends on the box and explained in detail in the course of this manual, however, there is a structure to the box contents which is used to a varying degree by all boxes. The contents and structure of the boxes is defined as follows:

The title of the box appears at the top of the opened box. An opened box contains a choice of commands or fields for entering or editing data. Each command or field is located in a different "region" of the box. To select a field either select it with the mouse pointer or move to that region with the Tab, Shift-Tab, or arrow keys. Once at the desired field, type in the data. To execute a command that does not require an entry, select with the mouse pointer, or move to the command and press the Enter key.

The following are descriptions of the appearance and usage of other box contents.

- **box border**: double line surrounding the outer edge of the box. The box may be moved to another part of the screen by moving the mouse pointer to the top border and dragging the box to another location.

- **box close button**: located in the upper left hand corner of the box. When the mouse double clicks on this button, the box closes. The Esc key on the keyboard will also close the box.

- **push button**: often located in the bottom part of the box. Shaped like a rectangle with a shadow, and contain the name of the command. Common command buttons are Set, Ok and Cancel.

- **radio button**: indicated by a parenthesis, ( ). Several of these will be grouped within the same region of the box, and only one within the same group may be selected at a time. The group of radio buttons is often titled with a description of the group. The currently selected item contains a dot between the parenthesis.

- **entry field**: a rectangle of a different color than the background. May include a label describing the type of data required within the field.
scroll bar: a vertical shaded bar with up and down triangles on each end, and a current page indication within the bar. Indicates that the area may be paged up and down to show additional information. When that region is selected, the paging keys may be used to scroll the information. The mouse may also be used directly on the scroll bar to page the area.

Esc key: on the keypad may be used to close the open box, or the open box on top, if more than one box is open at once.

Set push button: is featured in boxes containing configuration edits. If the edits are not set before the box is closed, the edits are lost.
4. Fast Configuration

The i Series dimmer rack is shipped pre-configured at the factory. Standard racks are shipped with the defaults as listed in Section 5.4, Default Rack Configurations. Custom racks are shipped configured to comply with the project drawings. The basic steps to change an existing rack configuration are:

♦ Create a New configuration file on the PC
♦ Upload the factory configuration from the rack into the New file
♦ Save the factory configuration (for safety)
♦ Save the factory configuration, with an "editing" file name
♦ Edit the configuration
♦ Download the edited configuration to the rack

Please become familiar with the entire process before attempting to reconfigure the rack.

Note: Some commands may be password protected. See Section 9, Advanced Configuration for instructions on using the password.

4.1. Creating a New Configuration File

1. Select the File pull down menu topic.
2. Select the New Configuration command.
3. Select the Ok button when the confirmation box appears. The program generates a new configuration file for editing.

![Figure 1: New Configuration Confirmation Box](image)

At this point, the new configuration file is editable. As with many computer programs, save your work periodically while editing the contents of the file. For information on saving the file, refer to the next section, titled Downloading, Storing and Retrieving Configurations.
4.2. Uploading the Factory Configuration from the Rack

**Note:** attempting to communicate to the rack by Uploading, Downloading or Monitoring when the PC is not connected to the rack may cause the PC program to lock up. If this occurs, turn the computer off, then back on.

To upload the configuration to the rack through a serial or network connection:

1. Select the File pull down topic.
2. Select Upload/Download from the pull down menu.
3. Select Serial Port or Network, depending on the type of connection used.
4. Select the Upload push button at the bottom of the box.

If the upload is successful, the box will display the message "Connecting..." then begin to count up as it uploads the configuration.

If the upload is unsuccessful, the message "No ack" appears in the box. If this occurs, recheck the serial cable connections from the PC to the rack. Close the box, then reopen it and attempt to Upload again.

![Figure 2: Upload/Download Commands in the File Pull Down Menu](image)

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4.3. Saving to the computer's hard disk or floppy drive

If the file is new, first use the Save As command to give the file a name and a location. After using Save As, use the Save command to update changes to the file. The Save As command may also be used to save a configuration under a different name or to a different location (hard drive or floppy disk). For purposes of fast configuration, use the Save As command first to save a backup copy of the factory configuration, for safety purposes. Then use the Save As command to save to a file that will be edited and downloaded.

The configuration file is actually saved as 17 separate files, all featuring the same file name, but with different extensions. The minimum file size is approximately 225K.

To use the Save As command:

1. Select the File pull down topic.
2. Choose Save As from the pull down list. Then do one of the following:

   To Save As to the current directory on the hard drive:
   3a. Type the 8 character file name. Do not type in an extension. Use DOS rules for acceptable names. By default, the file will be saved to the directory in which the program was installed.

   An example is "RACK1FAC" for the factory configuration or "RACK1NEW" for the new configuration.
To Save As to a different directory on the hard drive:
3b. Type the drive letter, directory path, and the file name in standard DOS syntax. Do not type an extension for the file name.

An example of this type of entry is "C:\SERIES\CONFIGUR\FILE1".

To Save As to a floppy disk:
3c. Type the drive letter, the directory path (if any), and the file name in standard DOS syntax. Do not type an extension for the file name.

An example of this type of entry is "A:FILE1".

Figure 4: Save As Box

4.4. Editing the Configuration

Edit the configuration as desired.

Instructions for most of the common configuration changes are located in Section 7, Basic Custom Configuration and in Section 8, Configuring for a ColorNet® Network.
4.5. **Downloading the Edited Configuration to the Rack**

Note: attempting to communicate to the rack by Uploading, Downloading or Monitoring when the PC is not connected to the rack may cause the PC program to lock up. If this occurs, turn the computer off, then back on.

To download the configuration to the rack through a serial connection:

1. Verify that the correct rack name appears in top line of the screen, on the right side. (If the rack name is incorrect, select the Edit pull down topic, select Node List from the pull down menu, select the correct rack name, then select the OK button to close the window.)
2. Select the File pull down topic.
3. Select Upload/Download from the pull down menu.
4. Select Serial Port or Network, depending on the type of connection used.
5. Select the Download push button at the bottom of the box.

If the download is successful, the box will display the message “Connecting...” then begin to count up as it downloads the configuration.

If the download is unsuccessful, the message “No ack” appears in the box. If this occurs, recheck the serial cable connections from the PC to the rack. Close the box, then reopen it and attempt to Download again.

![Upload/Download Port Box](image)

**Figure 5: Upload/Download Port Box**
5. Default Configuration

5.1. Introduction to Configuration

The i Series dimmer rack is extremely flexible and contains many options, including multiple sources of dimmer data input and options for manipulation of dimmer data output. Configuring the dimmer rack specifies all the items necessary to convert dimmer data input to actual dimmer firing.

**Note:** Some commands may be password protected. See Section 9, Advanced Configuration for instructions on using the password.

Configuration can be as simple as specifying default settings, or as individual as the needs of the installation or individual production require. This section of the manual explains default rack settings and basic custom configuration. Additional configuration settings are described in the sections titled *Basic Custom Configuration*, *Configuring for a Network* and *Advanced Configuration*.

5.2. Before Reconfiguring

To configure the rack, first determine how data is entering the rack, how it will be processed by the rack, and how it is output to the dimmers or other racks. Specifically, ascertain the following information about the rack or system of racks:

**Single Rack, non-network systems**

♦ source of dimmer data into the rack: input A or B or both
♦ dimmer protocol being used (DMX-512 or CMX)
♦ dimmer module type for each slot in the rack
♦ what is the rack circuit numbering of each rack
♦ how are the dimmer inputs assigned to the circuits (mapped)

**Multiple Rack Systems require the following additional information**

♦ if the racks are linked through the network or not

**Networked Rack Systems require the following additional information**

♦ which other rack, Medallion console or other ColorNet device is the source of dimmer data
♦ the unique Name of each device on the ColorNet
♦ which racks will communicate with which VPCs, if any
5.3. Creating a New Configuration File

1. Select the File pull down menu topic.
2. Select the New Configuration command.
3. Select the Ok button when the confirmation box appears. The program generates a new configuration file for editing.

At this point, the new configuration file is editable. As with many computer programs, save your work periodically while editing the contents of the file. For information on saving the file, refer to the next section, titled Downloading, Storing and Retrieving Configurations.

![Configuration Confirmation Box]

Figure 6: New Configuration Confirmation Box

5.4. Default Rack Configurations

The default rack configuration command determines the following rack settings:

- rack name
- source of dimmer data
- type of dimmers in rack
- number of dimmers in rack
- names of the output dimmers
- mapping of dimmer data input

A "default" rack must meet the following requirements:

- dimmer data input is DMX-512
- dimmer data input is wired to input A only and is non-networked
- all dimmers in rack are 2.4kw (96 output dimmers)
- output dimmers are numbered either sequentially or phase balanced
- mapping of dimmer data inputs to output dimmer numbers is 1 to 1
- rack is 1 of 4, each rack using the next higher of 96 dimmer names and dimmer inputs
- if rack is networked, no other rack in system uses rack name assigned (Rack 1 > Rack 4)
To configure the rack to be one of default racks 1-5:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu.
3. Select the Default Rack button. This opens another window.
4. Select the Default Setting number through 1st rack through 5th rack radio buttons.
5. Select the numbering scheme of the rack circuits, Sequential or Phase Balanced, through their radio buttons.
6. Select the Set button to execute the change in the configuration file.
7. Select the Ok button or the Esc key to close the box.

![Figure 7: Default Rack Settings Box](image)

<table>
<thead>
<tr>
<th>Rack Slot</th>
<th>Phase</th>
<th>Sequential Numbering</th>
<th>Phase Balanced Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>17</td>
<td>B</td>
<td>33</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>B</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>33</td>
<td>C</td>
<td>65</td>
<td>5</td>
</tr>
<tr>
<td>34</td>
<td>C</td>
<td>66</td>
<td>6</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Table 1: Sequential and Phase Balanced Slot Numbering
<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack Name</td>
<td>Rack 1 (&gt;5)</td>
</tr>
<tr>
<td>Target Voltage</td>
<td>115 (or 230)</td>
</tr>
<tr>
<td>Phases</td>
<td>3</td>
</tr>
<tr>
<td>Slots</td>
<td>48</td>
</tr>
<tr>
<td>Slot Names</td>
<td>Sequential or Phase balanced</td>
</tr>
<tr>
<td>Module Type</td>
<td>All dual</td>
</tr>
<tr>
<td>Line Regulation Speed</td>
<td>Fast</td>
</tr>
<tr>
<td>Resistance Compensation</td>
<td>Off</td>
</tr>
<tr>
<td>Response Time Speed</td>
<td>Fast</td>
</tr>
<tr>
<td>ENR</td>
<td>Off</td>
</tr>
<tr>
<td>Load Value</td>
<td>0</td>
</tr>
<tr>
<td>Load Alarm</td>
<td>Off</td>
</tr>
<tr>
<td>Temp Alarm</td>
<td>110</td>
</tr>
<tr>
<td>Voltage Alarm</td>
<td>Off</td>
</tr>
<tr>
<td>Protocol Setting, Input A</td>
<td>DMX</td>
</tr>
<tr>
<td>Protocol Setting, Input B</td>
<td>CMX</td>
</tr>
<tr>
<td>Echo to Net (Inputs A and B)</td>
<td>Off</td>
</tr>
<tr>
<td>Echo to Net (Inputs D Analog)</td>
<td>On</td>
</tr>
<tr>
<td>Inputs (A and B) Enabled</td>
<td>On</td>
</tr>
<tr>
<td>Inputs (D Analog) Enabled</td>
<td>Off</td>
</tr>
<tr>
<td>Pile-on Source 1</td>
<td>A (local DMX)</td>
</tr>
<tr>
<td>Pile-on Source 2</td>
<td>B (local CMX)</td>
</tr>
<tr>
<td>Priorities</td>
<td>0 (both, pile-on)</td>
</tr>
<tr>
<td>Remapping</td>
<td>Sequential or Phase balanced</td>
</tr>
<tr>
<td>Minimum Level</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Level</td>
<td>100</td>
</tr>
<tr>
<td>Non Dim Level</td>
<td>0 (Off)</td>
</tr>
<tr>
<td>Profile</td>
<td>0 (None)</td>
</tr>
<tr>
<td>Normal Backup Mode Entry</td>
<td>Hold Look 0 seconds, Fade Out 2 seconds</td>
</tr>
<tr>
<td>Forced Backup Mode Entry</td>
<td>Go To Look 1</td>
</tr>
<tr>
<td>Owned VPCs (Rack 1 only)</td>
<td>VPC1</td>
</tr>
</tbody>
</table>

Table 2: Default Rack Settings
6. **Downloading, Uploading, Saving and Loading Configurations**

To implement the new configuration, download it to the rack. Downloading not only programs the control module, but also the rack backplane. The rack backplane allows communication between the control module and the dimmers and between the main and backup control modules. Once the rack backplane is programmed, any control modules connected to it are automatically updated to match its configuration. The update to the control modules will occur at the time of the download or whenever a control module is plugged in.

Storing the configuration on a place other than the rack backplane is not required, but may be desirable for archival or backup purposes. The backplane configuration storage consists of FLASH EPROM chips that hold their memory for 10 years, do not require batteries, and may be re-written 10,000 times.

Retrieving the configuration from the backplane into the PC is called Uploading. Uploading is useful for reviewing and/or editing the rack configuration.

The rack configuration may also be stored to and retrieved from:
- the PC hard drive
- a PC floppy disk
- an EEPROM card inserted into the rack's control module
6.1. Download Configuration to Rack

Note: attempting to communicate to the rack by Uploading, Downloading or Monitoring when the PC is not connected to the rack may cause the PC program to lock up. If this occurs, turn the computer off, then back on.

Once the configuration is complete, download it to the rack.

To download the configuration to the rack through a serial connection:

1. Verify that the correct rack name appears in top line of the screen, on the right side. (If the rack name is incorrect, select the Edit pull down topic, select Node List from the pull down menu, select the correct rack name, then select the OK button to close the window.)
2. Select the File pull down topic.
3. Select Upload/Download from the pull down menu.
4. Select Serial Port or Network, depending on the type of connection used.
5. Select the Download push button at the bottom of the box.

If the download is successful, the box will display the message "Connecting..." then begin to count up as it downloads the configuration.

If the download is unsuccessful, the message "No ack" appears in the box. If this occurs, recheck the serial cable connections from the PC to the rack. Close the box, then reopen it and attempt to Download again.

Figure 8: Upload/Download Port Box
6.2. **Uploading a Configuration from a Rack**

*Note: attempting to communicate to the rack by Uploading, Downloading or Monitoring when the PC is not connected to the rack may cause the PC program to lock up. If this occurs, turn the computer off, then back on.*

To review or edit a rack configuration, upload the configuration from the rack into a New File. An existing file name may also be used, but its contents will be replaced with the uploaded configuration after any Save command.

**To upload the configuration to the rack through a serial connection:**

1. Select the File pull down topic.
2. Select Upload/Download from the pull down menu.
3. Select Serial Port or Network, depending on the type of connection used.
4. Select the Upload push button at the bottom of the box.

If the upload is successful, the box will display the message "Connecting..." then begin to count up as it uploads the configuration.

If the upload is unsuccessful, the message "No ack" appears in the box. If this occurs, recheck the serial cable connections from the PC to the rack. Close the box, then reopen it and attempt to Upload again.

![Upload/Download Port Box](image)

**Figure 9: Upload/Download Port Box**
6.3. Saving to the computer's hard disk or floppy drive

If the file is new, first use the Save As command to give the file a name and a location. After using Save As, use the Save command to update changes to the file. The Save As command may also be used to save a configuration under a different name or to a different location (hard drive or floppy disk).

The configuration file is actually saved as 17 separate files, all featuring the same file name, but with different extensions. The minimum file size is approximately 225K.

To use the Save As command:

1. Select the File pull down topic.
2. Choose Save As from the pull down list. Then do one of the following:

   To Save As to the current directory on the hard drive:
   3a. Type the 8 character file name. Do not type in an extension. Use DOS rules for acceptable names. By default, the file will be saved to the directory in which the program was installed.

   An example is "RACK1FAC" for the factory configuration or "RACK1NEW" for the new configuration.

   To Save As to a different directory on the hard drive:
   3b. Type the drive letter, directory path, and the file name in standard DOS syntax. Do not type an extension for the file name.

   An example of this type of entry is "C:\SERIES\CONFIGUR\FILE1".

   To Save As to a floppy disk:
   3c. Type the drive letter, the directory path (if any), and the file name in standard DOS syntax. Do not type an extension for the file name.

   An example of this type of entry is "A:FILE1".
Figure 10: Save As Box

To use the Save command:

1. Select the File pull down topic.
2. Choose Save To Disk from the pull down list.
3. Select the Ok push button to confirm the Save command.

Figure 11: Save Information Box
6.4. **Loading (Retrieving) from the computer's hard drive or floppy disk**

Retrieving a configuration file from the hard drive or floppy disk closes the current configuration and loads an existing configuration into memory for reviewing or editing. Any changes to the current configuration that are not saved before the configuration is retrieved are lost.

**To use the Retrieve From Disk command:**

1. Select the File pull down topic.
2. Choose Retrieve From Disk from the pull down list. The Select a File dialog box appears. Do one of the following:

   **To Retrieve from the current directory on the hard drive:**
   
   3a. In the list of files in the Files list box, select the file name desired, and select the Open button. Information about the selected file (path, size, last write date and time) appear in the status bar below the list of file names.

   **To Retrieve from a different directory on the hard drive:**
   
   3b. At the end of the list of files in the Files list box, select the ".." and then other directory names to navigate around the hard drive to find the desired file. In the list of files, select the file name desired. Information about the selected file (path, size, last write date and time) appear in the status bar below the list of file names. Select the Open button to retrieve that file.

   **To Retrieve from a floppy disk:**
   
   3c. In the Name field, type "a:" then the directory name (if any) and "*..ncf" then Enter. Any existing configuration files are listed in the Files list box. In the list of files, select the file name desired. Information about the selected file (path, size, last write date and time) appear in the status bar below the list of file names. Select the Open button to retrieve that file.

![Figure 12: Retrieve/Select a File Box](image)

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7. Basic Custom Configuration

7.1. Overview

Basic custom configuration is necessary for racks not conforming to the requirements of default rack configuration. The following functions are covered in basic rack configuration:

♦ Creating and Naming the Rack
♦ Configuring the Dimmer Data Input Ports
♦ Using the Password
♦ Some configuration commands are password protected. These commands are Level 2 commands.

To Access Level 2 commands:

1. Select the Edit pull down topic.
2. Select the Access Level command from the pull down menu. The Access Level window appears.
3. Type in the Level 2 password: 5625.
4. Press Enter. A window appears, indicating that the Access Level is now Level 2.
5. Press Enter to dismiss this window.
Assigning Dimmer Module Types
Naming the Output Dimmers
Assigning Dimmer Data Inputs to Output Dimmers
Assigning Dimmer Data Input Sources and Priorities

Note: Some commands may be password protected. See Section 9, Advanced Configuration for instructions on using the password.

Functions involved in ColorNet® network configurations are described in the section titled Configuring for a ColorNet® Network. Advanced functions, such as dimmer profiles, min/max and non-dim levels, rack alarms and dimmer data input protocol configuration are described in the section titled Advanced Configuration.
7.2. **Creating and Naming the Rack**

A single configuration file can contain the configurations of multiple racks. To edit the configuration of a rack, the rack must first be created and named in the configuration file.

To create and name a rack:

1. Select the Edit pull down menu topic.
2. Select the Node List Modify command. The Node List box appears, listing the current nodes in the configuration file (a node may be a Rack (DIM) or a VPC (Video Peripheral Controller).

![Node List Box](image)

**Figure 13: Node List Box**
3. Select the Enter key, while the cursor is on an empty line, to open the Node List Modify box and create a new Rack. If the cursor is on an existing node name, selecting the Enter key will open the same box, but will edit the settings of that node. Double clicking with the mouse on an empty or filled line will also open the Node List modify box.

![Node List Modify Box](image)

Figure 14: Node List Modify Box

4. Select the Node Name field, and type in a node name. The node name is used in all other windows to identify the node being edited or monitored.

5. Select the Node Type field, and select the DIM radio button.

6. Select the Set button to retain the changes.

Leave this window open for the next set of instructions on configuring for dimmer data inputs. If the inputs do not need to be configured, select the OK button to dismiss the Node List Modify window. Select the OK button in the Node List window to dismiss it. The last selected node name becomes the current "edit" node. Its name appears in the top line of the screen, on the right hand side.
7.3. Configuring the Dimmer Data Input Ports

Once the rack has been created and named, its dimmer data input ports must be configured for use by the rack. If these ports are not configured, the rack has no source of dimmer data, and its dimmers can only be controlled through direct dimmer control by the Hand Held Terminal. If the dimmer data to be used by the rack originates from a network source and not through one of the 2 dimmer data terminals on the rack backplane, refer to the section titled Configuring for a ColorNet® Network for instructions on configuration for networked dimmer data.

To configure the dimmer data input ports:

1. In the Node List Modify window, in the Input Port field, select radio button A or B. "A" is the DMX/CMX 1 input and "B" is the DMX/CMX 2 input.
2. In the Echo to Net field, select Off.
3. In the Enabled field, select On, or verify that it is already selected.
4. Select the Set button at the bottom of the window to retain the changes.
5. If both the A and B ports are used, repeat steps 1 - 4 to configure the other port.
6. Select OK to close the Node List Modify window.
7. Verify that the desired rack (node) is highlighted, and select OK to close the Node List window. The rack name appears in the title bar (top line) of the screen, indicating that this is the rack that will be edited through in all the other screens. (To edit a different rack, return to the Node List window, highlight a different rack, and exit the window.)

Figure 16: Node List Modify Box
7.4. Naming the Output Dimmers

The names given to the output dimmers will probably match those on the label of the rack. A different name may be given to each individual circuit in the rack. Therefore, a "dual" type dimmer will have two dimmer names for that slot, a "single" type dimmer will have one name for that slot, and a "double" type dimmer will have one name for two slots.

These dimmer names are the names used in the remap table, the rack monitoring windows and for direct dimmer control through the Hand Held Terminal.

Names may be assigned individually (per slot) or by using the Fill command to set a range of names to a range of dimmers.

To name the output dimmer names individually:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.

![Slot Settings Box](image)

Figure 16: Slot Settings Box

3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.

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5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.

6. In the Dimmer Ident field, type in the new dimmer name for that dimmer.

7. Select the Set button to retain the changes.

8. Select the OK button to return to the Slot Settings window.

9. Repeat steps 4-8 for all desired dimmers.

10. Select the OK button in the Slot Settings window to dismiss the window.
To name the output dimmer names through the Fill command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Name button. The Fill Names window appears.
5. Type the desired first name of the range in the Start with (name) field.
6. Type the first slot number for the first name in the range in the From Slot field.
7. Type the last slot number in the range in the thru slot field.
8. Select the Set button to execute the Fill command. The specified slots are filled with the specified sequential range of names.
9. Repeat steps 5-8 if different ranges of slots need different ranges of names within the rack.
10. Select the OK button to dismiss the Fill Names window.
11. Select the OK button to dismiss the Slot Settings window.
7.5. Assigning Dimmer Data Inputs to Output Dimmers

Assigning dimmer data inputs to output dimmers requires two steps:

First, since the rack can accept and combine at least two sources of dimmer data, the appropriate source (or sources) of dimmer data must be identified and applied. This section describes how local DMX/CMX 1 and 2 inputs are applied to the output dimmers. (For information on applying networked dimmer data to the output dimmers, refer to the section on Configuring for a Network.)

After the sources of dimmer data are defined, the incoming dimmer data must be mapped (also known as “patched”) to the output dimmers. This remapping can be done one dimmer at a time, or through a Fill command, which maps a range of inputs to a range of output dimmers.

7.5.1. Assigning Dimmer Data Input Sources and Priorities

Assigning dimmer data inputs involves selecting the A and/or B (DMX/CMX 1 and/or 2) sources of dimmer data and applying them to any of the 4 Pile-on # columns of the Mapping table. The same source of dimmer data may be applied to more than one of the 4 Pile-on # columns, and in fact this may be desirable, as each column has its own mapping and priority.

Each of the 4 Pile-on columns also receives a priority number of 0-5. The priority number determines how the 4 sources of dimmer data interact. A value of 5 is the highest priority, and a value of 0 always piles on to any other number. This means that if one of the 4 pile-on sources has a priority of 5, as long as it is “present” (dimmer data is being received) any lower numbered sources (1-4) are ignored. If any of the other 3 pile-on source columns have an equal priority, they are piled on. If a higher priority source of dimmer data becomes “inactive” (stops being received), the next higher source (or sources) stop being ignored and start outputting.
To assign a dimmer data input source and its priority:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.

3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Shift-Tab to the Pile-on # desired (1-4).
5. Select the Enter key, or double click with the mouse, on the desired Pile-on #. The Pile-on Source window will appear.
6. Verify that the correct Pile-on # appears in the upper left corner of the window.
7. If the Node Name in the field under Pile-on # Settings does not match the Node Name in the Dimmer Remapping and Attribute window, use the Select button to show a list of nodes (racks and VPCs), and select the correct node name. (A different node name may only be used if networked dimmer data is used. See the section on Configuring for a Network for more details.)
8. Select radio button A or B in the Input Port field. The Source ID field should automatically update to match this selection.
9. Type in the priority (0-5) in the Priority field.
10. Select the Set button to retain the changes.
11. Select the OK button to dismiss the window.
12. Repeat steps 4-11 to configure all desired sources of dimmer data.
13. Select the OK button to dismiss the Dimmer Mapping and Attributes window.

7.5.2. Mapping Dimmer Data to Output Dimmers

Mapping dimmer data to output dimmers assigns each of the dimmer levels coming into the rack and applies it to one of the dimmers in the rack. It is roughly similar to softpatching dimmers to channels in a lighting console. It is different in that up to 4 different sources of dimmer data may be patched to the same output dimmer simultaneously. Which dimmer level actually outputs to the dimmer depends on the priority level applied to the input. (See the explanation of priority levels, above).

The dimmer data input numbers that are mapped to the output dimmers are numbered 1-512, one for each of the dimmer numbers coming in on the DMX/CMX input. The same input number may be mapped to any number of output dimmers (i.e. input dimmer 1 can be mapped to output dimmers 1-5 and 6 and 10, etc. if desired.) An output dimmer need not have any input dimmers mapped to it, but the dimmer will then never be controllable except through the Hand Held Terminal.

The output dimmers are listed by the user given names in physical (slot) order, not numerical order. The list appears on the far left side of the table. The input dimmer sources were designated when assigning dimmer data sources to pile-on #s 1-4. (See above.) They are identifiable as A or B, for DMX/CMX inputs 1 or 2, listed below the Pile-on numbers 1-4.

The mapping may be accomplished individually (on a dimmer by dimmer basis), or with a Fill command (to map a selectable range of dimmers with one command).
To map input dimmers to output dimmers individually:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Pile-on# and Output Dimmer number. Either Tab or click with mouse to get there. (Known bug: if mouse is used, must tab, then shift tab back to the field. It is not immediately editable.)
5. Type in the input dimmer number (1-512).
6. Use the Arrow or Tab keys to select another dimmer in the same or a different pile-on source column.
7. Repeat steps 5 and 6 as necessary to fill the table.
8. If no input dimmer is desired for an output dimmer, leave or assign a 0 in that space. Do not leave any assignments “empty”.
9. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
10. When input dimmer assignment is complete, select the Set button to retain all changes.
11. Select the OK button to dismiss the window.

To map input dimmers to output dimmers using the Fill command:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Pile-on# and Output Dimmer number. Either Tab or click with mouse to get there.
5. Select the Fill button. The Fill window appears.
6. Verify that the Start Dimmer is the correct output dimmer for the start of the range. If it is not, select the field and type in the correct output dimmer number.
7. Type the first input dimmer number in the Fill with dimmers field.
8. Type the last input dimmer number in the thru field. If the Fill command will fill up to the last dimmer in the rack, a higher number than necessary is acceptable, and any excess is truncated from the mapping table.
9. Select the Set button to execute the Fill command.
10. Repeat steps 6-9, as necessary, to fill other ranges from the same pile-on # to the output dimmers.
11. Select the OK button to dismiss the Fill window.
12. Select the Set button in the Dimmer Mapping and Attributes window to retain the changes in the mapping table.
13. Repeat steps 4-12, as necessary, to map other pile-on # sources of dimmer data to the output dimmers.
14. Select the OK button to dismiss the Dimmer Mapping and Attributes window.
8. Configuring for a ColorNet® Network

The i Series dimmer racks allow for dimmer rack monitoring through the ColorNet® network system. This requires connecting a VPC (Video Peripheral Controller) to the network cable attached to the rack at the time the rack was installed. Network connectors are provided at some place external to the dimmer rack if this option was installed.

As a minimum, a single monitor must be connected to the VPC. A VKP (Video Key Pad) is required if a page of rack dimmers other than the first page is to be remotely monitored.

8.1. Modifying the node list

A VPC can only be assigned to monitor a rack if it is owned by (attached to) the rack through rack configuration. This is because there may be several racks and/or several VPCs on the same network. In the configuration program, add the VPCs to the list of all nodes in the configuration (the rack and VPCs in the system), then "Add" ownership of the VPCs to the rack. The VPC ID number is required in order to add it to the list of VPCs owned by the rack. This ID number is distinct for each VPC, and is attained by powering on the VPC with a monitor connected to it before the VPC is connected to the network. A VPC can be deleted from the node list, or freed from ownership by the rack for later use.

8.1.1. Adding a VPC

To add a VPC to the node list:

1. Select the Edit pull down menu topic.
2. Select the Node List Modify command. The Node List window appears, listing the current nodes in the configuration file (a node may be a Rack (DIM) or VPC (Video Peripheral Controller)).
3. Select the Enter key, while the cursor is on an empty line, to open the Node List Modify window and create a new VPC. If the cursor is on an existing node name, selecting the Enter key will open the same window, but will edit the settings of that node.
4. Select the Node Name field, and type in the VPC ID number. The node name is used in all other windows to identify the node being edited or monitored.
5. Select the Node Type field, and select the VPC radio button.
6. Select the Set button to retain the changes.
7. Select the OK button to dismiss the Node List Modify window.
8. Repeat steps 3-8 as necessary to add the required number of VPCs to the node list.
9. Select the OK button to dismiss the Node List window.

8.1.2. Deleting a VPC

To delete a VPC from the node list:

1. Select the Edit pull down menu topic.
2. Select the Node List Modify command. The Node List window appears, listing the current nodes in the configuration file (a node may be a Rack (DIM) or VPC (Video Peripheral Controller)).
3. Select the Delete button to delete the selected VPC.
4. Select the OK button to dismiss the Node List window.
8.2.  **owning a VPC**

To own a VPC:

1. Select the **Rack** pull down topic.
2. Select **VPC Ownership** from the pull down menu. The VPC Ownership window appears.
3. Verify that the **Rack Node** listed is the correct rack for ownership of the VPC. (If the wrong rack is currently selected, access the Node List window through the Edit pull down menu and select the correct rack.)
4. Select the **Select** button next to the **Add VPC** field. A list of possible VPCs appears. If the desired VPC is not in the list, it has not yet been added to the Node List in the manner listed in the prior section.
5. Select the desired VPC by using the Arrow keys and the Enter key, or by double clicking with the mouse on the VPC name. The selected VPC becomes the current VPC in the Add VPC field.
6. Select the **Add** button at the bottom of the window to Add that VPC to the list of those already owned by the rack. The VPC name automatically moves from the Add VPC field to the **Owned VPCs** field.
7. Repeat steps 4-6 to add all required VPCs to rack ownership.
8. Select the **OK** button to dismiss the window.

8.3.  **Freeing a VPC**

To free a VPC from rack ownership:

1. Select the **Rack** pull down topic.
2. Select **VPC Ownership** from the pull down menu. The VPC Ownership window appears.
3. Verify that the **Rack Node** listed is the correct rack for ownership of the VPC. (If the wrong rack is currently selected, access the Node List window through the Edit pull down menu and select the correct rack.)
4. Select the **Select** button next to the **Owned VPCs** field. A list of possible VPCs appears. If the desired VPC is not in the list, it is not yet owned by the rack or possibly has not been added to the Node List in the manner listed in the prior section.
5. Select the desired VPC by using the Arrow keys and the Enter key, or by double clicking with the mouse on the VPC name. The selected VPC becomes the current VPC in the Owned VPCs field.
6. Select the **Free** button at the bottom of the window to free that VPC from ownership by the rack. The VPC name automatically moves from the Owned VPCs field to the Add VPC field.
7. Repeat steps 4-6 to free all required VPCs from rack ownership.
8. Select the **OK** button to dismiss the window.
9. Advanced Configuration

Advanced configuration includes some configuration functions that require the factory password in order to implement. These "factory" functions, for the most part, involve configuration changes that would require changes to the wiring and/or dimmer module keying of the rack. Call Colortran Field Service before attempting one of these configurations, or damage to the equipment could occur.

9.1. Using the Password

Some configuration commands are password protected. These commands are Level 2 commands.

To Access Level 2 commands:

1. Select the Edit pull down topic.
2. Select the Access Level command from the pull down menu. The Access Level window appears.
3. Type in the Level 2 password: 5625.
4. Press Enter. A window appears, indicating that the Access Level is now Level 2.
5. Press Enter to dismiss this window.
9.2. Assigning Dimmer Module Types

The dimmer module types per slot in the rack are determined at the factory and are enforced by the load wiring and dimmer module per slot keying of the rack. Therefore, changes to these settings should not need resetting once the rack is installed. Consult project drawings.

Different module types include dual (2 circuit breakers per slot), single (1 circuit breaker per slot), double (1 circuit breaker per two slots, requiring the upper slot to be designated "empty") and airflow modules.

The type of module in each slot may be set individually per slot, or through All Single or All Dual commands.

To set the module type for dimmer slots individually:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the Dimmer Type field, select the radio button of the appropriate dimmer type (Single, Dual, Double High, Airflow or Empty). The slot prior to a Double High dimmer type must be an Empty.
7. Select the Set button to retain the changes.
8. Select the OK button to return to the Slot Settings window.
9. Repeat steps 4-8 for all desired dimmers.
10. Select the OK button in the Slot Settings window to dismiss the window.

To set the module type for dimmer slots through All Single/Dual buttons:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the All Single (or All Dual) button. The rack slot settings update to reflect the change.
5. Select the Set button to retain the changes.
6. Select the OK button in the Slot Settings window to dismiss the window.
9.3. Line regulation speed

The line regulation speed may be set to Slow, Fast or Off. The line regulation must be set to off if the dimmer is configured to be a non-dim dimmer. This setting may be configured individually per dimmer or through a Fill Settings command.

To set the line regulation speed of Individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the Line Regulation group box, select the radio button of the appropriate speed: Off, Slow or Fast. If the dimmer is a non-dim, this must be set to Off.
7. Select the Set button to retain the changes.
8. Select the OK button to return to the Slot Settings window.
9. Repeat steps 4-8 for all desired dimmers.
10. Select the OK button in the Slot Settings window to dismiss the window.

To set the line regulation speed through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the Line Regulation group box, select the radio button of the appropriate speed: Off, Slow or Fast. If the dimmer is a non-dim, this must be set to Off.
6. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
7. Select the OK button in the Slot Settings window to dismiss the window.
9.4. **Resistance compensation**

Resistance compensation is used to compensate for problems on the load such as overly long cable lengths. Compensation is set to either On or Off, and the compensation value is specified in Ohms. This setting may be configured individually per dimmer or through a Fill Settings command.

To set the resistance compensation of individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the R Compensations group box, select the radio button of the appropriate setting: On or Off.
7. If this setting is On, type in the appropriate Ohms value in its entry field.
8. Select the Set button to retain the changes.
9. Select the OK button to return to the Slot Settings window.
10. Repeat steps 4-9 for all desired dimmers.
11. Select the OK button in the Slot Settings window to dismiss the window.

To set the resistance compensation through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the R Compensations group box, select the radio button of the appropriate setting: On or Off.
6. If this setting is On, type in the appropriate Ohms value in its entry field.
7. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
8. Select the OK button in the Slot Settings window to dismiss the window.
9.5. Response time speed

The response time speed adjusts the speed at which the dimmer responds to level changes. This setting may be configured individually per dimmer or through a Fill Settings command.

To set the response time speed of individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the Response Time group box, select the radio button of the appropriate speed: Slow or Fast.
7. Select the Set button to retain the changes.
8. Select the OK button to return to the Slot Settings window.
9. Repeat steps 4-8 for all desired dimmers.
10. Select the OK button in the Slot Settings window to dismiss the window.

To set the response time speed through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the Response Time group box, select the radio button of the appropriate speed: Slow or Fast.
6. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
7. Select the OK button in the Slot Settings window to dismiss the window.
9.6. ENR (Electronic Noise Reduction) mode

This setting is used to significantly quiet the noise made by dimming certain types of lamps. This feature must be configured by a Colortran Field Service Engineer and requires special training of the end user, in addition to special labeling of the rack. This setting may be configured individually per dimmer or through a Fill Settings command.

To set the ENR mode of individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the ENR group box, select the radio button of the appropriate setting: On or Off.
7. Select the Set button to retain the changes.
8. Select the OK button to return to the Slot Settings window.
9. Repeat steps 4-8 for all desired dimmers.
10. Select the OK button in the Slot Settings window to dismiss the window.

To set the ENR mode through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the ENR group box, select the radio button of the appropriate setting: On or Off.
6. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
7. Select the OK button in the Slot Settings window to dismiss the window.
9.7. **Minimum and maximum levels**

Minimum and maximum levels are applied per output dimmer to indicate the minimum and maximum level that dimmer will always output. The dimmer data inputs will be scaled between these two levels. The settings appear in two columns to the right of the pile-on/mapping table of the Dimmer Mapping and Attribute window. These settings may be applied to dimmers individually or through a Fill command.

To apply minimum and maximum levels to output dimmers individually:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Min. or Max. Level and Output Dimmer number. Either Tab or click with mouse to get there. (Double click with the mouse to immediately edit the field.)
5. Type in the desired min. or max. level (0-100).
6. Use the Arrow or Tab keys to select another dimmer in the Min. or Max. Level column.
7. Repeat steps 5 and 6 as necessary to fill the table. Do not leave any assignments "empty".
8. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
9. When input dimmer assignment is complete, select the Set button to retain all changes.
10. Select the OK button to dismiss the window.

To apply minimum and maximum levels to output dimmers using the Fill command:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Min. or Max. Level and Output Dimmer number. Either Tab or click with mouse to get there.
5. Select the Fill button. The Fill Min or Max. Level window appears.
6. Type in the level (0-100) in the Min. or Max. Level field.
7. Type the first output dimmer number in the Fill from dimmers field.
8. Type the last output dimmer number in the thru field.
9. Select the Set button to execute the Fill command.
10. Repeat steps 6-9, as necessary, to fill other levels to the output dimmers.
11. Select the OK button to dismiss the Fill window.
12. Select the Set button in the Dimmer Mapping and Attributes window to retain the changes in the mapping table.
13. Repeat steps 4-12, as necessary, to apply Min and Max levels to the output dimmers.
14. Select the OK button to dismiss the Dimmer Mapping and Attributes window.
9.8. Non dim levels

Non-dim levels are applied per output dimmer to indicate the trigger level that causes the dimmer to fire at its full level. A dimmer that has the Non-dim level applied is otherwise unregulated. The setting appears in one column to the right of the pile-on/mapping table of the Dimmer Mapping and Attribute window. This settings may be applied to dimmers individually or through a Fill command.

To apply a Non-dim trigger level to output dimmers individually:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Non-dim and Output Dimmer number. Either Tab or click with mouse to get there. (Double click with the mouse to immediately edit the field.)
5. Type in the desired Non-dim level (0-100).
6. Use the Arrow or Tab keys to select another dimmer in the Non-dim column.
7. Repeat steps 5 and 6 as necessary to fill the table. Do not leave any assignments "empty".
8. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
9. When input dimmer assignment is complete, select the Set button to retain all changes.
10. Select the OK button to dismiss the window.

To apply Non-dim trigger levels to output dimmers using the Fill command:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Non-dim and Output Dimmer number. Either Tab or click with mouse to get there.
5. Select the Fill button. The Fill Non-dim Level window appears.
6. Type in the level (0-100) in the Non-dim. Level field.
7. Type the first output dimmer number in the Fill from dimmers field.
8. Type the last output dimmer number in the thru field.
9. Select the Set button to execute the Fill command.
10. Repeat steps 6-9, as necessary, to fill other Non-dim levels to the output dimmers.
11. Select the OK button to dismiss the Fill window.
12. Select the Set button in the Dimmer Mapping and Attributes window to retain the changes in the mapping table.
13. Repeat steps 4-12, as necessary, to apply Non-dim levels to the output dimmers.
14. Select the OK button to dismiss the Dimmer Mapping and Attributes window.
9.9. Dimmer Profiles

9.9.1. Creating dimmer profiles

Profiles are applied per output dimmer to change the fade curve of a dimmer. If no profile is specifically created and assigned, then the curve is the IES square law. 5 different profiles may be created and applied to the output dimmers. A single profile may be assigned to any number of output dimmers. The setting appears in a column to the right of the pile-on/mapping table of the Dimmer Mapping and Attribute window. This settings may be applied to dimmers individually or through a Fill command.

To create a dimmer Profile:

1. Select the Rack pull down topic.
2. Select Dimmer Profiles from the pull down menu. The Dimmer Profile window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Select the desired Profile Number from the radio buttons labeled 1 through 5.
5. Move the edit cursor to the desired Output Level edit field. Either Tab or click with mouse to get there. (Double click with the mouse to immediately edit the field.)
6. Delete the existing value and type in the desired level (0-100).
7. Use the Arrow or Tab keys to select another Output Level.
8. Repeat steps 5 through 7 as necessary to create the profile. Do not leave any assignments "empty".
9. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
10. Select the OK button to dismiss the window.
9.9.2. Applying dimmer profiles

A single profile may be assigned to any number of output dimmers. The appears in a column to the right of the pile-on/mapping table of the Dimmer Mapping and Attribute window. This settings may be applied to dimmers individually or through a Fill command.

To apply Profiles to output dimmers individually:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Profile and Output Dimmer number. Either Tab or click with mouse to get there. (Double click with the mouse to immediately edit the field.)
5. Type in the desired Non-dim. level (0-100).
6. Use the Arrow or Tab keys to select another dimmer in the Non-dim column.
7. Repeat steps 5 and 6 as necessary to fill the table. Do not leave any assignments "empty".
8. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
9. When input dimmer assignment is complete, select the Set button to retain all changes.
10. Select the OK button to dismiss the window.

To apply Non-dim trigger levels to output dimmers using the Fill command:

1. Select the Edit pull down topic.
2. Select Remap Table from the pull down menu. The Dimmer Mapping and Attribute window appears.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the position corresponding the row and column of the desired Profile and Output Dimmer number. Either Tab or click with mouse to get there.
5. Select the Fill button. The Fill Profile Level window appears.
6. Type in the profile number (1-5) in the Profile field.
7. Type the first output dimmer number in the Fill from dimmers field.
8. Type the last output dimmer number in the thru field.
9. Select the Set button to execute the Fill command.
10. Repeat steps 6-9, as necessary, to fill other profiles to the output dimmers.
11. Select the OK button to dismiss the Fill window.
12. Select the Set button in the Dimmer Mapping and Attributes window to retain the changes in the mapping table.
13. Repeat steps 4-12, as necessary, to apply other Profiles to the output dimmers.
14. Select the OK button to dismiss the Dimmer Mapping and Attributes window.
9.10. **Input Dimmer Protocol settings (DMX, CMX or OFF)**

The i Series dimmer rack features places to land to Dimmer Data Input lines. Each input of each rack may be selected to be DMX-512 or CMX (Colortran's proprietary protocol). The input may also be set to OFF. Check your lighting control console or architectural control system to verify which protocol is correct for your system.

To set the Input Dimmer Protocol to DMX, CMX or OFF:

1. Select the Edit pull down topic.
3. Verify that the correct rack name appears in the Node Name field in the upper left corner of the window.
4. Move the edit cursor to the desired Input Port (A or B) edit field. Either Tab or click with mouse to get there. (Double click with the mouse to immediately edit the field.)
5. Select the desired protocol (DMX or CMX or OFF) from the pushbuttons.
6. Use the Arrow or Tab keys to select another Input Port.
7. Periodically, select the Set button to retain the changes. (They are not saved as editing occurs.)
8. Select the OK button to dismiss the window.
9.11. Setting Rack Alarms

9.11.1. Load value and load alarm status

The load value and alarm status are optional settings. They cause the Load Low and High messages to appear in all locations of dimmer monitoring. If the load alarm is not turned on, these messages will not appear in the monitoring locations. The load value indicates the trip point for the alarm to appear. The load value should be as close to the actual load as possible, and may be learned automatically through the PC monitoring window.

To set the load value and load alarm status of individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the Dimmer Load entry field, enter the desired load value in Watts (i.e., 1000, 2400, ...).
7. In the Load Alarm group box, turn the alarm from Off to On.
8. Select the Set button to retain the changes.
9. Select the OK button to return to the Slot Settings window.
10. Repeat steps 4-9 for all desired dimmers.
11. Select the OK button in the Slot Settings window to dismiss the window.

To set the load value and load alarm status through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the Dimmer Load entry field, enter the desired load value in Watts (i.e., 1000, 2400, ...).
6. In the Load Alarm group box, turn the alarm from Off to On.
7. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
8. Select the OK button in the Slot Settings window to dismiss the window.
9.11.2. Temperature alarm value

The temperature alarm is an optional setting that alerts the user that the dimmer is in a overtumbine warming condition. This overtumpine warming appears in all locations of dimmer monitoring. The default value is 110 degrees Celsius. This warming level does not affect the shutdown level of the dimmer module.

To set the temperature alarm value of individual dimmers:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the desired Dimmer in the main area of the screen. (This area is a large table containing columns of data for slot numbers, dimmer type, dimmer name, load, and other dimmer attributes.) The selected dimmer name appears in a vertical bar.
5. Edit that dimmer by either selecting the Enter key or by double clicking on that dimmer with the mouse. The Settings window appears.
6. In the Temp Alarm entry field, enter the desired load value in degrees Celsius.
7. Select the Set button to retain the changes.
8. Select the OK button to return to the Slot Settings window.
9. Repeat steps 4-8 for all desired dimmers.
10. Select the OK button in the Slot Settings window to dismiss the window.

To set the temperature alarm value through the Fill Settings command:

1. Select the Rack pull down topic.
2. Select the Slot Settings command from the pull down menu. The Slot Settings window appears.
3. Verify that the Node Name field contains the correct rack name. (If it doesn't, select the correct rack through the Node List window.)
4. Select the Fill Settings button in the upper right area of the window. The Fill Settings window appears.
5. In the Temp Alarm entry field, enter the desired load value in degrees Celsius.
6. Select the Set button to apply the changes to all dimmers in the rack and return to the Slot Settings window.
7. Select the OK button in the Slot Settings window to dismiss the window.
9.12. Backup Mode Configuration

9.12.1. What is Backup Mode?

The i Series dimmer rack features the ability to execute pre-programmed lighting sequences without the presence of dimmer data input. This is known as Backup mode. (Other, non-Normal modes of operation include Panic and Backup Power modes). Backup mode will occur automatically in case of the loss of all dimmer data inputs, or can be "forced" into, overriding the dimmer data inputs, through an external input that has been wired to the rack backplane.

The i Series dimmer rack maintains up to 99 backup looks, each with separate fade times or manual fade times. These looks are created and executed from the i Series Hand Held Terminal through the Record Look, Time, Go, Stop/Reverse and Go to Look keys.

9.12.2. Backup Mode Entry: Normal or Forced

The dimmer rack may be programmed to perform different actions depending on whether Backup mode is entered Normally (loss of all dimmer data input) or is Forced (through an external input).

The rack can maintain the current look for a designated period of time, and then Go To one of the pre-programmed looks. Usually, it is desirable to set the Normal entry mode to hold the current dimmers for a maximum of a few seconds, then fade to Look 0. This would be the natural operation when turning off a lighting control console at the end of a work shift, for example.

If forcing the system into Backup mode, however, it may be more desirable to execute one of the pre-programmed lighting looks immediately, in order to turn on certain audience or worklights.

All settings of the Backup Mode occur through the Backup Mode Defaults window, accessed under the Edit pull down topic, in the Node Backup pull down selection.