



**Manufacturer: Clockaudio**

**Model: CDT-3**

**Device Type: Dante Pendant Ceiling Microphone**

## TABLE OF CONTENTS

GENERAL INFORMATION .....	2
INITIAL SETUP .....	4
DEVICE COMMUNICATION BLOCK .....	6
LED STATE CONTROL BLOCK .....	7
LED BRIGHTNESS CONTROL BLOCK.....	8

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## GENERAL INFORMATION

PROCESSING LIBRARY NAME:	Clockaudio CDT-3 (C303-D) v2.0
VERSION:	2.0
AUTHORED BY:	Control Concepts Inc.
SUMMARY:	This custom block suite controls all features of the CDT-3.
GENERAL NOTES:	<ul style="list-style-type: none"><li>The CDT-3's LED brightness can be adjusted within the range of 0 to 255 in increments of 1. To simplify the implementation and ensure successful use of this functionality outside of a typical control system, these custom blocks only allow brightness to be adjusted from 10% to 100% in increments of 10%.</li><li>The Device Communication block manages communication status with the device. Once the device is communicating with Tesira, it will pulse a logic signal from its 'Initialize Out' node, which can be connected to the other custom blocks in this suite.</li></ul>
DEVICE USED FOR TESTING	Biamp TesiraFORTE VI (3.17.0.12)
SAMPLE PROGRAM:	Clockaudio CDT-3 v2.0 Demo.tmf
REVISION HISTORY:	<p>v1.0 – Initial Release</p> <p>v1.1 – Added knockout system to Device Communication block for more reliable connection status and synchronization.</p> <p>v2.0 – No changes have been made.</p>



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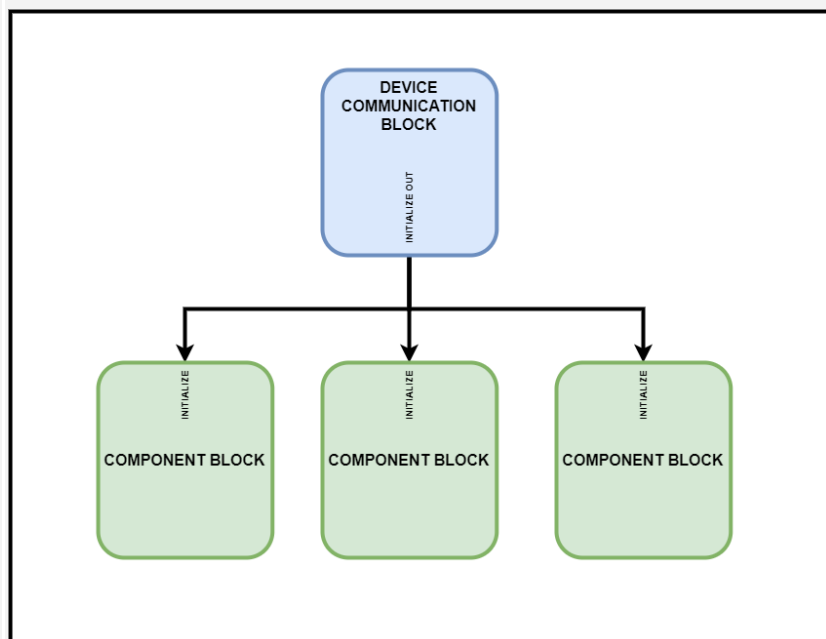
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## INITIAL SETUP

Clockaudio Biamp Tesira Custom Block Topology:

These custom blocks can control all of the features of a specific Clockaudio device. To accommodate all the features, the controls were broken out into separate blocks, so the user can decide which features need to be used to preserve programming time and cleanliness of the configuration. The 'Device Communication' block should always be used, as it starts communication with a specific Clockaudio device and ensures that all the other 'component' blocks controlling the same Clockaudio device get initialized. Below is a diagram showing the basic topology of how these blocks should be connected. Please refer to the demo configurations to see a detailed setup of all the blocks being utilized.

**BEFORE USING BLOCKS:**



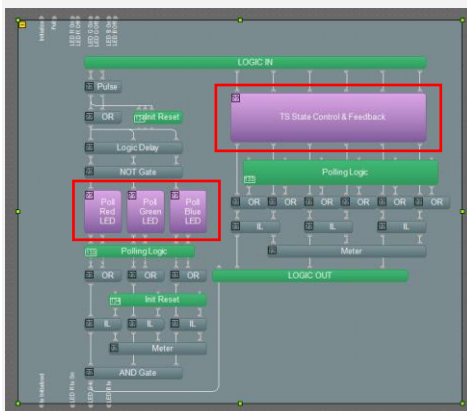
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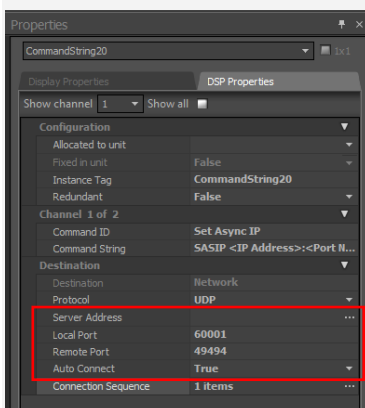
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For blocks to function properly and establish communication with the Clockaudio device, each Network Command String block within each Clockaudio custom block must be configured with an IP Address of Clockaudio device, Local Port and Remote Port. By default, the remote port is: 49494. The local port can be any value between 1 and 65534. **IMPORTANT: If you are controlling more than one Clockaudio device, you must use a unique local port on the blocks associated with each device. Each Network Command String block can have the same local port if they are communicating with the same Clockaudio device.** To configure these properties, each Clockaudio block must be opened and the Network Command String blocks must be located. They should be relatively easy to find, because they are the only purple colored blocks within the custom block.

Step 1: Find the network command string blocks within the custom blocks. Below is an example. *NOTE: The use of this specific custom block is optional. This is just a generic example of what Network Command String blocks will look like within the Clockaudio custom blocks.*



Step 2: Right click on Network Command String block and select 'Properties'.



Step 3: Configure the Server Address (IP Address of Clockaudio device), Local Port and Remote Port. Once this is set up and configuration is pushed to device, all configured blocks should automatically connect to the specified Clockaudio device.

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## DEVICE COMMUNICATION BLOCK



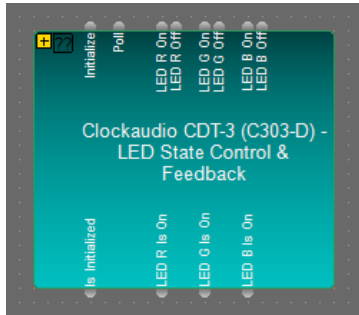
<b>Reinitialize</b>	Pulse this input node to reinitialize all CDT-3 blocks connected to the 'Initialize Out' output node.
<b>Is Communicating</b>	High to indicate the block is communicating with the device.
<b>Initialize Out</b>	Pulses high after establishing communication with CDT-3 or after setting the 'Reinitialize' input high. This output node must be connected to the 'Initialize' input nodes of other CDT-3 blocks in order to function properly.

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## LED STATE CONTROL BLOCK



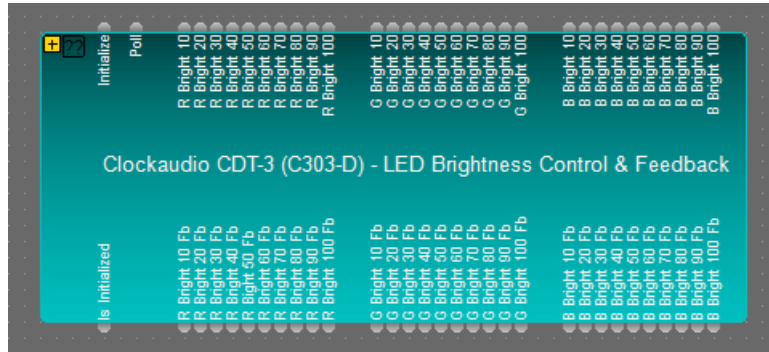
<b>Initialize</b>	Set this input node high to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'CDT-3 Device Communication' block.
<b>Poll</b>	Pulse input node high to poll device for current state.
<b>LED R On</b>	Pulse this input node to turn on Red LED channel.
<b>LED R Off</b>	Pulse this input node to turn off Red LED channel.
<b>LED G On</b>	Pulse this input node to turn on Green LED channel.
<b>LED G Off</b>	Pulse this input node to turn off Green LED channel.
<b>LED B On</b>	Pulse this input node to turn on Blue LED channel.
<b>LED B Off</b>	Pulse this input node to turn off Blue LED channel.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>LED R Is On</b>	High to indicate Red LED channel is on.
<b>LED G Is On</b>	High to indicate Green LED channel is on.
<b>LED B Is On</b>	High to indicate Blue LED channel is on.

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## LED BRIGHTNESS CONTROL BLOCK



<b>Initialize</b>	Set this input node high to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'CDT-3 Device Communication' block.
<b>Poll</b>	Pulse input node high to poll device for current state.
<b>R Bright [x]</b>	Pulse this input node to set Red LED brightness. [x] = Brightness (10 – 100).
<b>G Bright [x]</b>	Pulse this input node to set Green LED brightness. [x] = Brightness (10 – 100).
<b>B Bright [x]</b>	Pulse this input node to set Blue LED brightness. [x] = Brightness (10 – 100).
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>R Bright [x] Fb</b>	High to indicate Red LED Brightness. [x] = Brightness (10 – 100).
<b>G Bright [x] Fb</b>	High to indicate Green LED Brightness. [x] = Brightness (10 – 100).
<b>B Bright [x] Fb</b>	High to indicate Blue LED Brightness. [x] = Brightness (10 – 100).