Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

TABLE OF CONTENTS

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

GENERAL INFORMATION	
PROCESSING LIBRARY NAME:	Clockaudio CDT100 MKI v1.1
VERSION:	2.0
AUTHORED BY:	Control Concepts Inc.
SUMMARY:	This custom block suite controls all features of the CDT100 MKI.
GENERAL NOTES:	• 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. • Unsolicited feedback must be set up in the properties of the 'Button Feedback Logic' block in order to receive information from unit when a button has been pressed. • IMPORTANT: Each Tesira Network Command String Block should be assigned a UNIQUE local port starting at port 60001. The remote port should be set at 49494 on every Network Command String Block.
DEVICE USED FOR TESTING	Biamp TesiraFORTE VI (4.2.2)
SAMPLE PROGRAM:	Clockaudio CDT100 v2.0 Demo.tmf
REVISION HISTORY	v1.0 – Initial Release v1.1 – Added strikeout system to Device Communication block for more reliable connection status and synchronization. v2.0 - Adjusted demo and help documentation to reflect new local port allocation.

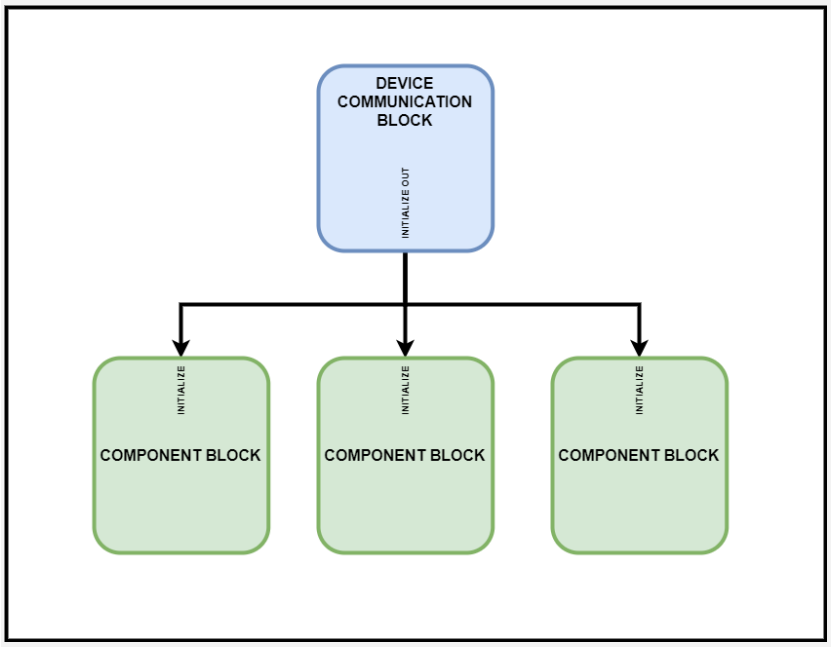
Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

INITIAL SETUP

BEFORE USING BLOCKS:

Clockaudio Biamp Tesira Custom Block Topology:

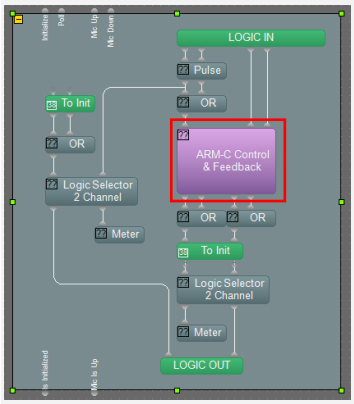
These custom blocks can control all the features of a specific Clockaudio device. To accommodate all the features, the controls were broken out into separate blocks, so the user can decide which features need to be used to preserver programming time and cleanliness of the configuration. The 'Device Communication' 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.



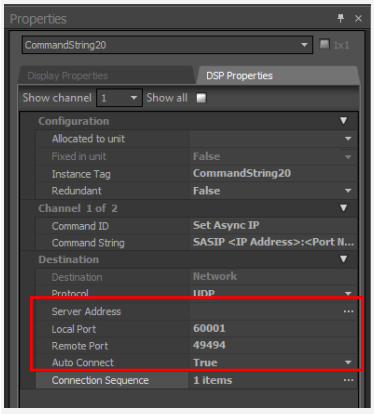
Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

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.

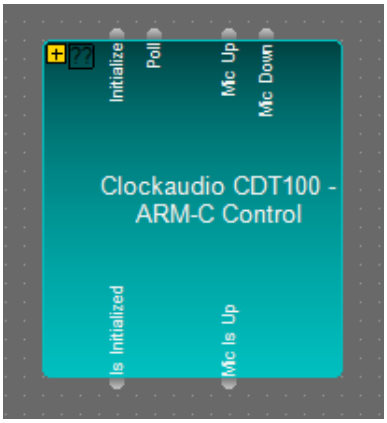
Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

DEVICE COMMUNICATION BLOCK

Reinitialize	Pulse this input node to reinitialize all CDT100 blocks connected to the 'Initialize Out' output node.
Set MKI	Pulse this input node to put CDT100 into MKI Mode.
Set MKII	Pulse this input node to put CDT100 into MKII Mode.
Is Communicating	High to indicate the block is communicating with the device.
Is MKI	High to indicate the device is in MKI Mode.
Is MKII	High to indicate the device is in MKII Mode.
Initialize Out	Pulses high after establishing communication with CDT100 or after setting the 'Reinitialize' input high. This output node must be connected to the 'Initialize' input nodes of other CDT100 blocks in order to function properly.

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

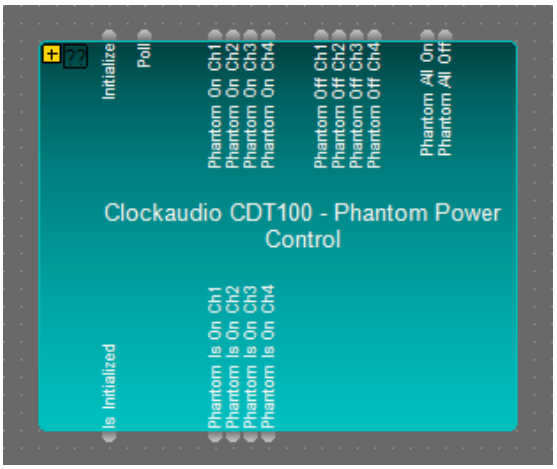
ARM-C CONTROL BLOCK



Initialize	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 'CDT100 Device Communication' block.
Poll	Pulse input node high to poll device for current state.
Mic Up	Pulse this input to put connected motorized microphone into the 'up' position.
Mic Down	Pulse this input to put the connected motorized microphone into the 'down' position.
Is Initialized	High to indicate the block is initialized.
Mic Is Up	High to indicate that the motorized microphone is in the 'up' position.

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

PHANTOM POWER CONTROL BLOCK



Initialize	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 'CDT100 Device Communication' block.
Poll	Pulse input node to poll device for current state.
Phantom On Ch[x]	Pulse this input node to turn on phantom power on specified channel.
Phantom Off Ch[x]	Pulse this input node to turn off phantom power on specified channel.
Is Initialized	High to indicate the block is initialized.
Phantom Is On Ch[x]	High to indicate phantom power is on for a specified channel.

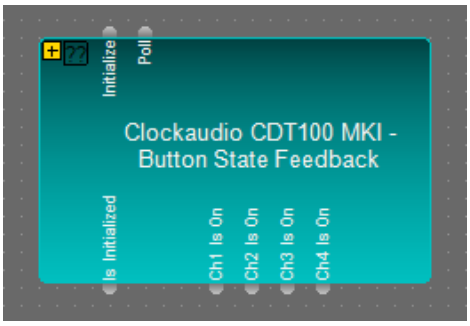
Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

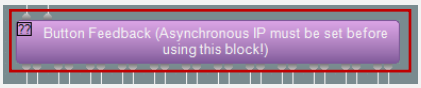
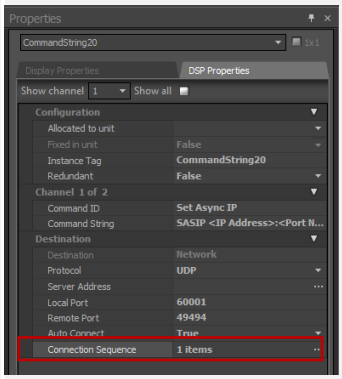
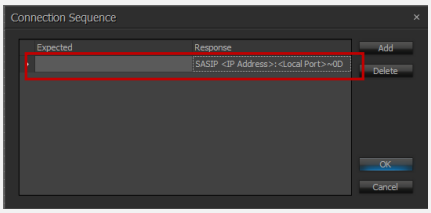
PRESET CONTROL BLOCK

Preset Save	Pulse this input node to save device settings as a preset.
Preset Load	Pulse this input node to load saved preset.
Preset Saved	Pulses high for 2.5 seconds to indicate a preset has been saved.
Poll Out	Pulses high to indicate that a preset has been loaded. This logic output node is typically connected to the 'Poll' input node of applicable Clockaudio CDT100 blocks.

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

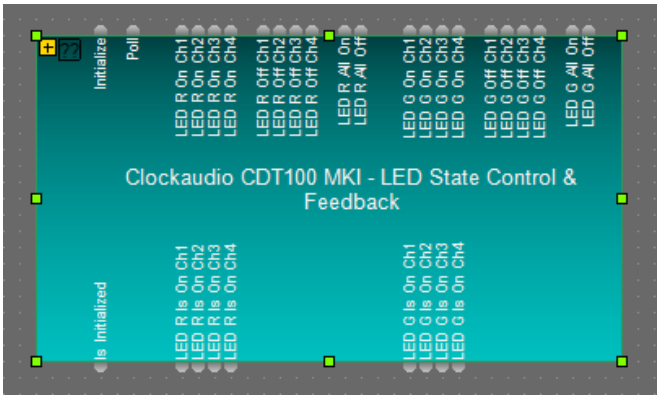
BUTTON STATE FEEDBACK BLOCK



IMPORTANT: Before using this block, and to receive unsolicited feedback from device, the Asynchronous IP Address must be set using the 'Connection Sequence' property for the main Network Command String block within this custom block. The IP address must be the IP of the Tesira unit controlling the Clockaudio device. If using multiple instances of this block, the local port number must be different than the others. For example, if my Tesira's IP Address is 192.168.1.100 and my local port is set to 60001, then my Connection Sequence Response should be: **SASIP 192.168.1.100:60001~0D** **ALSO IMPORTANT: If you are using more than one Tesira DSP in a system, the unit that the block is allocated to is the IP address you should use for asynchronous feedback.**	Right click on block and select 'Properties'.  Modify the 'Connection Sequence' property.   Enter the 'SASIP' command into the 'Response field. This will ensure that the Asynchronous IP has been set when the block has established connection.
Initialize	Pulse this input node 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 'CDT100 Device Communication' block.
Poll	Pulse input node to poll device for current state.
Is Initialized	High to indicate the block is initialized.
Ch[x] Is On	High to indicate a button press has been detected on a specified channel.

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

LED STATE CONTROL BLOCK

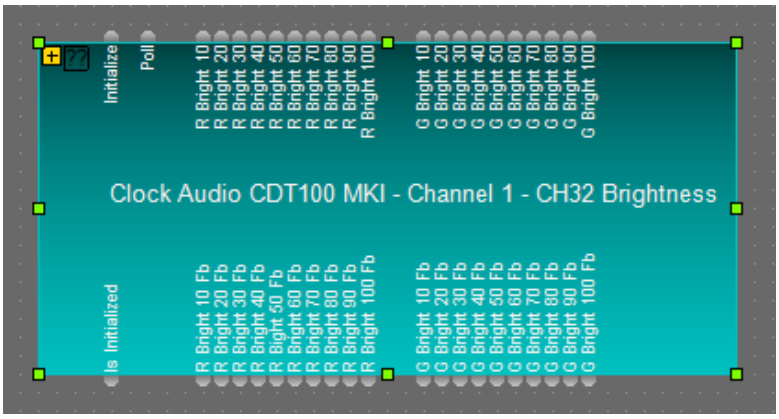


Initialize	Set this input node high to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'CDT100 Device Communication' block.
Poll	Pulse input node high to poll device for current state.
LED R On Ch[x]	Pulse this input node to turn on a single Red LED channel.
LED R Off Ch[x]	Pulse this input node to turn off a single Red LED channel.
LED R All On	Pulse this input node to turn on all Red LED channels.
LED R All Off	Pulse this input node to turn off all Red LED channels.
LED G On Ch[x]	Pulse this input node to turn on a single Green LED channel.
LED G Off Ch[x]	Pulse this input node to turn off a single Green LED channel.
LED G All On	Pulse this input node to turn on all Green LED channels.
LED G All Off	Pulse this input node to turn off all Green LED channels.
Is Initialized	High to indicate the block is initialized.

LED STATE CONTROL BLOCK (continued)	
LED R Is On Ch[x]	High to indicate single Red LED channel is on.
LED G Is On Ch[x]	High to indicate single Green LED channel is on.

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

CH32 BRIGHTNESS CONTROL BLOCK (INDIVIDUAL CHANNEL)



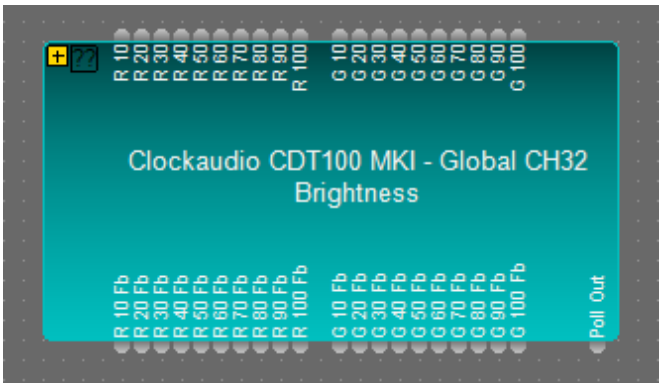
NOTE: This block will only control the CH32 Brightness of one specific channel on the CDT100 specified in the block's name.

To control all brightness in unison, use the Global CH32 Brightness Control Block

Initialize	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 'CDT100 Device Communication' block.
Poll	Pulse input node high to poll device for current state. Typically connected to the 'Poll Out' output node of the 'Global CH32 Brightness' block if being used.
R Bright [x]	Pulse this input node to set Red LED brightness. [x] = Brightness (10 – 100).
G Bright [x]	Pulse this input node to set Green LED brightness. [x] = Brightness (10 – 100).
Is Initialized	High to indicate the block is initialized.
R Bright [x] Fb	High to indicate Red LED Brightness. [x] = Brightness (10 – 100).
G Bright [x] Fb	High to indicate Green LED Brightness. [x] = Brightness (10 – 100).

Manufacturer: Clockaudio
Model: CDT100 MKI
Device Type: 4-Channel Dante Microphone Aggregator

GLOBAL CH32 BRIGHTNESS CONTROL BLOCK



R [x]	Pulse this input node to set Red LED brightness on all channels. [x] = Brightness (10 – 100).
G [x]	Pulse this input node to set Green LED brightness on all channels. [x] = Brightness (10 – 100).
R [x] Fb	High to indicate Global Red LED Brightness. [x] = Brightness (10 – 100).
G [x] Fb	High to indicate Global Red LED Brightness. [x] = Brightness (10 – 100).
Poll Out	Pulses output node high whenever any input node has gone high. Typically connected to the 'Poll' input node of CH32 Brightness blocks that control individual channels.