

**Manufacturer: Clockaudio**

**Model: TIM-1000**

**Device Type: Dante Tracking Ceiling Microphone**

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## GENERAL INFORMATION

PROCESSING LIBRARY NAME:	Clockaudio TIM-1000 v2.0
VERSION:	2.0
AUTHORED BY:	Control Concepts Inc.
SUMMARY:	This custom block suite controls all features of the TIM-1000.
GENERAL NOTES:	<ul style="list-style-type: none"><li>The TIM-1000'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 (4.2.2)
SAMPLE PROGRAM:	Clockaudio TIM-1000 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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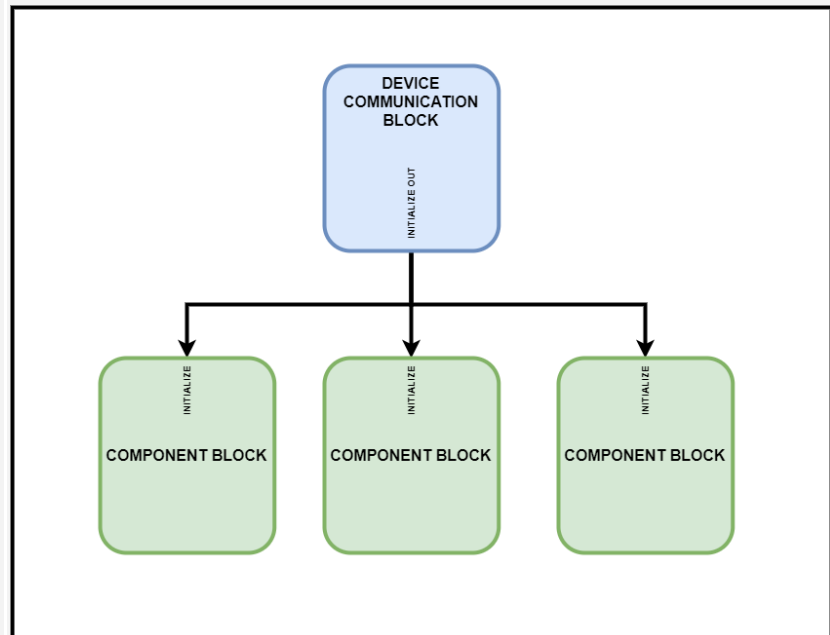
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## INITIAL SETUP

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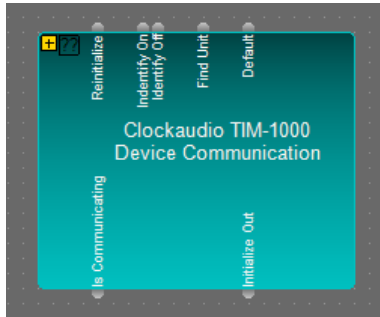
**Step 3: Configure the Server Address (IP Address of Clockaudio device), Local Port and Remote Port.**  
Once this is set up and configuration is pushed to device, all configured blocks should automatically connect to the specified Clockaudio device.

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## DEVICE COMMUNICATION BLOCK



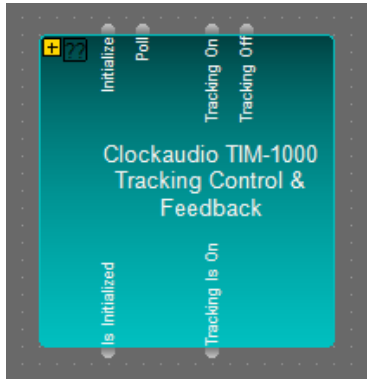
<b>Reinitialize</b>	Pulse this input node to reinitialize all TIM-1000 blocks connected to the 'Initialize Out' output node.
<b>Identify On</b>	Pulse this input node to turn on Identify feature. When on, the LED will turn white and blink intermittently until turned off.
<b>Identify Off</b>	Pulse this input node to turn off the Identify feature.
<b>Find Unit</b>	Pulse this input node to turn on the Find Unit feature. Like the Identify feature, when triggered the LED will turn white and blink intermittently, but will automatically stopped after several seconds.
<b>Default</b>	Pulse this input node to set the device to default state.
<b>Is Communicating</b>	High to indicate the block is communicating with the device.
<b>Initialize Out</b>	Pulses high after establishing communication with TIM-1000 or after setting the 'Reinitialize' input high. This output node must be connected to the 'Initialize' input nodes of other TIM-1000 blocks in order to function properly.

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## TRACKING 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 'TIM-1000 Device Communication' block.
<b>Poll</b>	Pulse input node high to poll device for current state.
<b>Tracking On</b>	Pulse this input node to turn tracking on.
<b>Tracking Off</b>	Pulse this input node to turn tracking off.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>Mic Is Up</b>	High to indicate that tracking is on.

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## NOISE SUPPRESSION CONTROL BLOCK



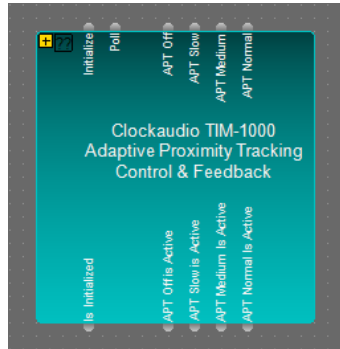
<b>Initialize</b>	Set this input node high to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'TIM-1000 Device Communication' block.
<b>Poll</b>	Pulse this input node to poll device for current state.
<b>Noise Sup On</b>	Pulse this input node to turn noise suppression on.
<b>Noise Sup Off</b>	Pulse this input node to turn noise suppression off.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>Noise Sup Is On</b>	High to indicate noise suppression is on.

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## ADAPTIVE PROXIMITY TRACKING CONTROL BLOCK



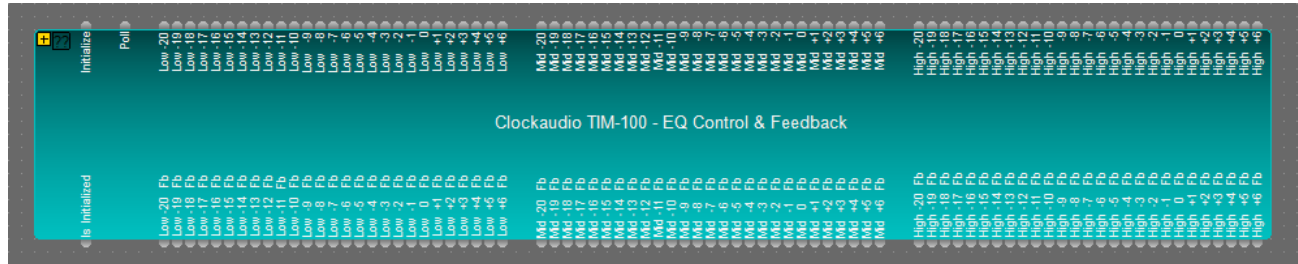
<b>Initialize</b>	Set this input node high to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'TIM-1000 Device Communication' block.
<b>Poll</b>	Pulse this input node to poll device for current state.
<b>APT Off</b>	Pulse this input node to turn off Adaptive Proximity Tracking.
<b>APT Slow</b>	Pulse this input node to set Adaptive Proximity Tracking to Slow.
<b>APT Medium</b>	Pulse this input node to set Adaptive Proximity Tracking to Medium.
<b>APT Normal</b>	Pulse this input node to set Adaptive Proximity Tracking to Normal.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>APT Off Is Active</b>	High to indicate Adaptive Proximity Tracking is off.
<b>APT Slow Is Active</b>	High to indicate Adaptive Proximity Tracking is set to Slow.
<b>APT Medium Is Active</b>	High to indicate Adaptive Proximity Tracking is set to Medium.
<b>APT Normal Is Active</b>	High to indicate Adaptive Proximity Tracking is set to Normal.

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## EQ CONTROL BLOCK



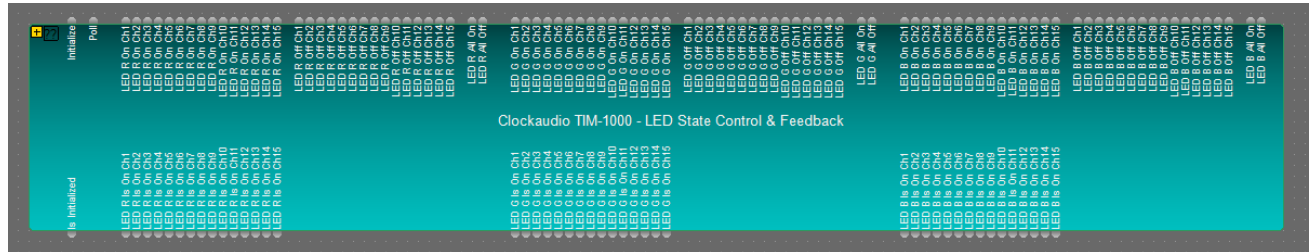
<b>Initialize</b>	Pulse this input node to initialize block. This will ensure the block is communicating with the device and set its output(s) to the proper state. This input node should be connected to the 'Initialize Out' output node of the 'TIM-1000 Device Communication' block.
<b>Poll</b>	Pulse input node to poll device for current state.
<b>Low [x]</b>	Pulse input node to set EQ level on the Low EQ band. [x] = -20 to +6.
<b>Mid [x]</b>	Pulse input node to set EQ level on the Mid EQ band. [x] = -20 to +6.
<b>High [x]</b>	Pulse input node to set EQ level on the High EQ band. [x] = -20 to +6.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>Low [x] Fb</b>	High to indicate the EQ level of the Low EQ band. [x] = -20 to +6.
<b>Mid [x] Fb</b>	High to indicate the EQ level of the Mid EQ band. [x] = -20 to +6.
<b>High [x] Fb</b>	High to indicate the EQ level of the High EQ band. [x] = -20 to +6.

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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 'CDT100 Device Communication' block.
<b>Poll</b>	Pulse input node high to poll device for current state.
<b>LED R On Ch[x]</b>	Pulse this input node to turn on a single Red LED channel.
<b>LED R Off Ch[x]</b>	Pulse this input node to turn off a single Red LED channel.
<b>LED R All On</b>	Pulse this input node to turn on all Red LED channels.
<b>LED R All Off</b>	Pulse this input node to turn off all Red LED channels.
<b>LED G On Ch[x]</b>	Pulse this input node to turn on a single Green LED channel.
<b>LED G Off Ch[x]</b>	Pulse this input node to turn off a single Green LED channel.
<b>LED G All On</b>	Pulse this input node to turn on all Green LED channels.
<b>LED G All Off</b>	Pulse this input node to turn off all Green LED channels.
<b>LED B On Ch[x]</b>	Pulse this input node to turn on a single Blue LED Channel
<b>LED B Off Ch[x]</b>	Pulse this input node to turn off a single Blue LED Channel
<b>LED B All On</b>	Pulse this input node to turn on all Blue LED channels.

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#### LED STATE CONTROL BLOCK (continued)

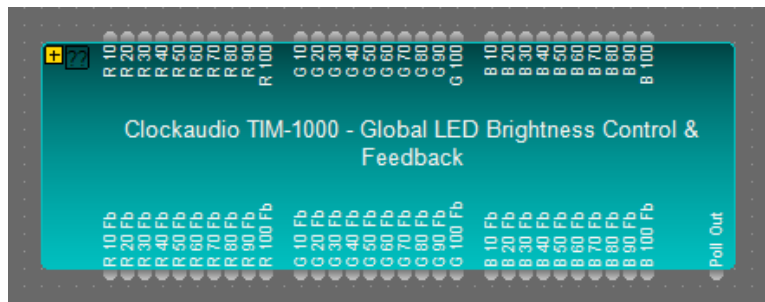
<b>LED B All Off</b>	Pulse this input node to turn off all Blue LED channels.
<b>Is Initialized</b>	High to indicate the block is initialized.
<b>LED R Is On Ch[x]</b>	High to indicate single Red LED channel is on.
<b>LED G Is On Ch[x]</b>	High to indicate single Green LED channel is on.
<b>LED B Is On Ch[x]</b>	High to indicate single Blue LED channel is on.

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## GLOBAL LED BRIGHTNESS CONTROL BLOCK



<b>R [x]</b>	Pulse this input node to set Red LED brightness on all channels. [x] = Brightness (10 – 100).
<b>G [x]</b>	Pulse this input node to set Green LED brightness on all channels. [x] = Brightness (10 – 100).
<b>B [x]</b>	Pulse this input node to set Blue LED brightness on all channels. [x] = Brightness (10 – 100).
<b>R [x] Fb</b>	High to indicate Global Red LED Brightness. [x] = Brightness (10 – 100).
<b>G [x] Fb</b>	High to indicate Global Red LED Brightness. [x] = Brightness (10 – 100).
<b>B [x] Fb</b>	High to indicate Global Red LED Brightness. [x] = Brightness (10 – 100).
<b>Poll Out</b>	Pulses output node high whenever any input node has gone high.