

Manufacturer: Clock Audio**Model: TIM-1000****Device Type: Tracking Intelligent Microphone****GENERAL INFORMATION**

SIMPLWINDOWS NAME:	Clock Audio TIM1000 v3.4.1
SUMMARY:	This module provides control and feedback of the Clock Audio TIM-1000 via UDP. It also provides true feedback.
GENERAL NOTES:	• The module utilizes a "Heartbeat" to maintain communication with the device. This heartbeat will begin once preliminary initialization is complete. Should a heartbeat response not be received, the module will attempt to send the heartbeat two more times in succession. If neither of these responses is received, the module will consider communication with the device to be broken, will clear all existing data and output signals, and will attempt to re-establish communication with the device every 10 seconds. Once communication has been re-established, the module will automatically re-initialize. • At this time, multiple instances of this module (and the others in this module suite) can be added to a program but they must all be added to the <u>same</u> program slot. • Though the poll frequency is at your discretion, it is recommended not to poll faster than every 30 seconds. Faster poll frequencies may bog down the device with unneeded/extraneous requests/communication.
CRESTRON HARDWARE REQUIRED:	Crestron 3-Series, 4-series and VC-4 processors <u>ONLY</u> .
SETUP OF CRESTRON HARDWARE:	Connect Crestron 3-Series, 4-Series or VC-4 processor via Ethernet port to same network that the device is on. Configure IP address of both Crestron processor and the device (ensure subnet settings match).
OPS USED FOR TESTING:	N/A
SAMPLE PROGRAM:	N/A

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PARAMETERS

IP_Address	P	Parameter to be entered reflecting the IP Address of the device which the module will be communicating with.
IP_Port	P	Parameter to be entered reflecting the remote port on the device to be used for UDP communication (Default as of this writing is 49494).
Adapter_Type	P	Parameter to be selected reflecting the Ethernet Adapter Type to be used. In most cases, adapter type should remain at the default (LAN). However, if using a processor with dual NIC cards (such as a CP3N) or controlling via the control subnet, it may be necessary to change the adapter type.
Brightness_Type	P	Parameter to be entered reflecting the type of brightness adjustment to use. The TIM-1000 is capable of utilizing either of 2 different brightness adjustments: Duty Cycle and Standard. Duty cycle allows adjustments in increments of 10 (from 10 – 100) while Standard allows for much more granular control (from 0 – 255). Note: based on testing during development, it is recommended to use Duty Cycle unless you have a specific need for more granular control.
Adapter_IP_Override	P	The module, by default, will query the Crestron processor for the IP address of the selected adapter type and use that IP address when subscribing for unsolicited responses from the device. Occasionally, we have seen that the IP address provided by the Crestron processor is incorrect or will not work with a specific network configuration. In cases such as these, this parameter has been provided to allow for manually entering the IP address to which you want unsolicited device responses to be sent to. If you leave this signal at the default value (0.0.0.0) it will use the default automatic adapter IP addressing built into the module. If, however, you enter an IP address in this parameter, it will use that address for feedback subscriptions. It is recommended to leave the value at default (0.0.0.0) unless you find there is a specific need to enter a manual address here.

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CONTROL

Reinitialize	D	Pulse to initialize communication with the device. The initialization process will poll the device for its current state. Once all the expected data is returned by the device, the module will be considered "initialized" and will operate normally. Module will automatically attempt to initialize when program starts up.
Enable_Debug	D	Set high to enable internal SIMPL# messages to be printed in Debugger. Set low to disable.
Poll	D	Pulse to poll the device for current state.
Enable_Passback	D	Set high to allow for sending all received responses from the device out of the Passback_Text serial signal. This can be useful for expanding the capabilities of your system beyond what the module directly supports.
Passsthrough_Text	S	This signal allows for sending commands directly to the device. Commands sent on this signal will be queued automatically within the module and will append all necessary command delimiters. This signal can be useful for expanding the capabilities of your system beyond what the module directly supports.
Identify_Unit_Off	D	Pulse to turn off the Identify feature.
Identify_Unit_On	D	Pulse to turn on the Identify feature. When on, the LED will turn white and blink intermittently until turned off.
Find_Unit	D	Pulse to trigger the Find Unit feature. Like the Identify feature, when triggered the LED will turn white and blink intermittently. Unlike the Identify feature, the blinking will automatically stop after several seconds.
Defaults	D	Pulse to set the device to default state.
Tracking_Off	D	Pulse to turn tracking off.
Tracking_On	D	Pulse to turn tracking on.
Tracking_Toggle	D	Pulse to toggle the tracking state.
NoiseSup_Off	D	Pulse to turn noise suppression off.
NoiseSup_On	D	Pulse to turn noise suppression on.
NoiseSup_Toggle	D	Pulse to toggle the noise suppression state.
Apt_[X]	D	Pulse to select a setting for Adaptive Proximity Tracking.
EQ_[X]_Set	A	Set EQ level on a particular equalizer band. Valid values: 0 - 65535

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LED_R_On_Ch[x]	D	Pulse to turn on a single Red LED channel.
LED_R_Off_Ch[x]	D	Pulse to turn off a single Red LED channel.
LED_R_Toggle_Ch[x]	D	Pulse to toggle the state of a single Red LED channel.
LED_R_All_Off	D	Pulse to turn off all Red LED channels.
LED_R_All_On	D	Pulse to turn on all Red LED channels.
LED_G_On_Ch[x]	D	Pulse to turn on a single Green LED channel.
LED_G_Off_Ch[x]	D	Pulse to turn off a single Green LED channel.
LED_G_Toggle_Ch[x]	D	Pulse to toggle the state of a single Green LED channel.
LED_G_All_Off	D	Pulse to turn off all Green LED channels.
LED_G_All_On	D	Pulse to turn on all Green LED channels.
LED_B_On_Ch[x]	D	Pulse to turn on a Blue Red LED channel.
LED_B_Off_Ch[x]	D	Pulse to turn off a single Blue LED channel.
LED_B_Toggle_Ch[x]	D	Pulse to toggle the state of a single Blue LED channel.
LED_B_All_Off	D	Pulse to turn off all Blue LED channels.
LED_B_All_On	D	Pulse to turn on all Blue LED channels.
LED_R_Bright_Set_Ch[x]	A	Set brightness level on a single Red LED channel. Valid values: 0 - 65535
LED_R_All_Bright_Set	A	Set brightness level on all Red LED channels. Valid values: 0 - 65535
LED_G_Bright_Set_Ch[x]	A	Set brightness level on a single Green LED channel. Valid values: 0 - 65535
LED_G_All_Bright_Set	A	Set brightness level on all Green LED channels. Valid values: 0 - 65535
LED_B_Bright_Set_Ch[x]	A	Set brightness level on a single Blue LED channel. Valid values: 0 - 65535
LED_B_All_Bright_Set	A	Set brightness level on all Blue LED channels. Valid values: 0 - 65535

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FEEDBACK

Is_Communicating	D	High to indicate the module is communicating with the device.
Is_Initialized	D	High to indicate the module is initialized and that data has been synchronized between the module and the device.
Debug_Enabled	D	High to indicate that debugging has been enabled and internal SIMPL# messages will be printed in Debugger.
Poll_Enabled	D	High to indicate that polling has been enabled.
Passback_Enabled	D	High to indicate that passback has been enabled and the module will send all received responses from the device out of the Passback_Text serial signal
Passback_Text	S	If Passback_Enabled is high, all responses from the device will be returned on this serial signal.
IP_Address_Text	S	Value reflecting the IP Address of the device.
Tracking_Is_On	D	High to indicate tracking is currently on.
NoiseSup_Is_On	D	High to indicate noise suppression is currently on.
Apt_[X]_Is_Active	D	High to indicate a setting for Adaptive Proximity Tracking is active.
EQ_[X]_Level	A	Value indicating the current level of a particular equalizer band. Valid values: 0 - 65535
LED_R_Is_On_Ch[x]	D	High to indicate the Red LED for a specific channel is on.
LED_G_Is_On_Ch[x]	D	High to indicate the Green LED for a specific channel is on.
LED_B_Is_On_Ch[x]	D	High to indicate the Blue LED for a specific channel is on.
LED_R_Bright_Level_Ch[x]	A	Value indicating the current brightness level of the Red LED for a specific channel. Valid values: 0 - 65535
LED_G_Bright_Level_Ch[x]	A	Value indicating the current brightness level of the Green LED for a specific channel. Valid values: 0 - 65535
LED_B_Bright_Level_Ch[x]	A	Value indicating the current brightness level of the Blue LED for a specific channel. Valid values: 0 - 65535

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OPS USED FOR TESTING:	CP3: 1.8001.0214
	MC4: 2.8001.00086.01
	VC-4: 4.0003.00045
SIMPL WINDOWS USED FOR TESTING:	4.2800.00
CRES DB USED FOR TESTING:	217.0500.001.00
DEVICE DATABASE:	200.25500.001.00
SYMBOL LIBRARY USED FOR TESTING:	1182
SAMPLE PROGRAM:	Clock Audio TIM1000 v3.4.1 Demo IP