

Sonance SONAMP 875 Crestron Module V2 Application Guide

Description

This module allows a Sonance SONAMP 875 amplifier to be controlled by any X-Generation or 2-series Crestron control processor



NOTE: The amplifier must be properly configured to enable RS-232 control. Refer to the Amplifier's Instruction Manual for specific instructions. The amplifier's power switch must be in the "On" position and the "A.C. On" indicator illuminated for the amplifier to be controlled or monitored.

Supported Processors

(no compact flash support required)

Any X-Generation or 2-Series Crestron Processor

Module Application

It is strongly suggested that you load the supplied demonstration program and touchpanel to gain an understanding of the application of the module before you attempt to implement the module in your own program.

This module provides control for four zones (consisting of a total of eight individual channels) on the Sonance SONAMP 875, including power, mute, BBE and feedback for fault indication, front panel trim pot levels, and audio and voltage trigger input status.

This module allows you to set the volume and mute for either a *zone* or *channel* (a zone is a left and right pair. For example, Zone 1 is channels 1 and 2, Zone 2 is channels 3 and 4, etc).

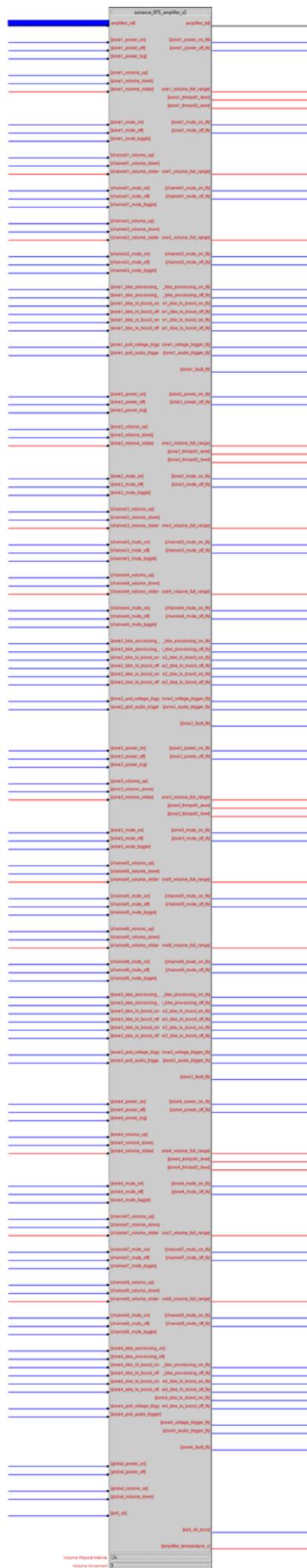
You should use only the zone or channel volume controls for each channel or channel pair on the amplifier, they should not be used simultaneously. The power for a zone, however, must be on to control either of the channels that belong to that zone.

Zone Number	Channel Number
Zone 1	Channel 1
	Channel 2
Zone 2	Channel 3
	Channel 4
Zone 3	Channel 5
	Channel 6
Zone 4	Channel 7
	Channel 8

If a fault is reported, the amplifier's power feedback will automatically be forced low. You may attempt to clear the fault by pulsing the [\[zoneX_power_on\]](#) or [\[zoneX_power_tog\]](#) digital inputs.

It is suggested that you pulse the [\[poll_all\]](#) input once at program startup to determine the current status of the amplifier, most status changes will be automatically reported by the amplifier and processed by the module when the module is running.

(Note: Audio and Voltage Triggers are not automatically reported by the amplifier. If you are utilizing these inputs, it is necessary to periodically poll the amplifier by pulsing either the [\[poll_all\]](#) digital input to pull all inputs, or alternatively, pulsing the [\[zoneX_poll_voltage_trigger\]](#) or [\[zoneX_poll_audio_trigger\]](#) inputs. The accuracy of the audio trigger varies depending on program volume level, content, and the setting of the "Auto On" trim pot on the amplifier's front panel.



Signal & Parameter Descriptions

Note: For any pair of channels, either the Zone or Channel controls may be used, however, you should not use both controls simultaneously for the same zone (For example use either the Zone 4 Volume and Mute controls or the Channel 7 and 8 Volume and Mute controls)

DIGITAL INPUTS

[zoneX_power_on]	Pulse to turn the respective amplifier zone (1-4) on.
[zoneX_power_off]	Pulse to turn the respective amplifier zone (1-4) off.
[zoneX_power_tog]	Pulse to toggle the amplifier zone's power
[zoneX_volume_up]	Pulse to increment the zone volume by the number of units specified in Volume Increment; hold high to send the volume down command repeatedly (speed controlled by the Volume Repeat Interval parameter)
[zoneX_volume_down]	Pulse to decrement the zone volume; hold high to send the volume down command repeatedly
[zoneX_mute_on]	Pulse to activate mute on the respective zone
[zoneX_mute_off]	Pulse to deactivate mute on the respective zone
[zoneX_mute_toggle]	Pulse to toggle mute on the respective zone
[channelX_volume_up]	Pulse to increment the channel volume by the number of units specified in Volume Increment; hold high to send the volume down command repeatedly (speed controlled by the Volume Repeat Interval parameter).
[channelX_volume_down]	Pulse to decrement the channel volume; hold high to send the volume down command repeatedly.
[channelX_mute_on]	Pulse to activate mute on the respective channel
[channelX_mute_off]	Pulse to deactivate mute on the respective channel
[channelX_mute_toggle]	Pulse to toggle mute on the respective channel
[zoneX_bbe_processing_on]	Pulse to turn BBE processing on the respective zone on
[zoneX_bbe_processing_off]	Pulse to turn BBE processing on the respective zone off
[zoneX_bbe_hi_boost_on]	Pulse to set high frequency boost on the respective zone to +9dB
[zoneX_bbe_hi_boost_off]	Pulse to set high frequency boost on the respective zone to +6dB
[zoneX_bbe_lo_boost_on]	Pulse to set low frequency boost on the respective zone to +9dB
[zoneX_bbe_lo_boost_off]	Pulse to set low frequency boost on the respective zone to +6dB
[zoneX_poll_voltage_trigger]	Pulse to poll for the current status of the voltage trigger on the respective zone
[zoneX_poll_audio_trigger]	Pulse to poll for the current status of the audio trigger on the respective zone
[global_power_on]	Pulse to turn all amplifier channels on
[global_power_off]	Pulse to turn all amplifier channels off
[global_volume_up]	Pulse to increment the volume in all zones by one unit; hold high to send the volume up command repeatedly (speed controlled by the Volume Repeat Interval parameter)
[global_volume_down]	Pulse to decrement the volume in all zones by one unit; hold high to send the volume down command repeatedly (speed controlled by the Volume Repeat Interval parameter)
[poll_all]	Pulse to poll the amplifier for the status of all settings.

ANALOG INPUTS

[zoneX_volume_slider]	Full range (0-100%) input to set the volume of the respective zone on the amplifier
[channelX_volume_slider]	Full range (0-100%) input to set the volume of the respective channel on the amplifier

SERIAL INPUTS

amplifier_rx\$	Tie to the RX\$ line of the RS-232 port symbol.
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DIGITAL OUTPUTS

[zoneX_power_on_fb]	High when the respective amplifier zone (1-4) is on.
[zoneX_power_off_fb]	High when the respective amplifier zone (1-4) is off.
[zoneX_mute_on_fb]	High when the respective amplifier zone is muted*
[zoneX_mute_off_fb]	High when the respective amplifier zone is not muted*
[channelX_mute_on_fb]	High when the respective amplifier channel is muted*
[channelX_mute_off_fb]	High when the respective amplifier channel is not muted*
[zoneX_bbe_processing_on_fb]	High when BBE processing is active on the respective zone
[zoneX_bbe_processing_off_fb]	High when BBE processing is not active on the respective zone
[zoneX_bbe_hi_boost_on_fb]	High when the zone's high frequency boost is +9dB
[zoneX_bbe_hi_boost_off_fb]	High when the zone's high frequency boost is +6dB
[zoneX_bbe_lo_boost_on_fb]	High when the zone's low frequency boost is +9dB
[zoneX_bbe_lo_boost_off_fb]	High when the zone's low frequency boost is +6dB
[zoneX_voltage_trigger_fb]	High when the zone's voltage trigger is active.
[zoneX_audio_trigger_fb]	High when the zone's audio trigger is active.
[zoneX_fault_fb]	High when the zone has reported a fault condition.
[poll_all_busy]	High when the amplifier is busy polling for all settings

ANALOG OUTPUTS

[zoneX_volume_full_range]	Full range (0-100%) output containing the current volume level of that zone *.
[channelX_volume_full_range]	Full range (0-100%) output containing the current volume level of that channel *.
[zoneX_trimpot1_level]	Full range (0-100%) output containing the current level of the zone's trim pot ("L")
[zoneX_trimpot2_level]	Full range (0-100%) output containing the current level of the zone's trim pot ("R")
[amplifier_temperature_c]	Amplifier's current reported temperature, in degrees Celsius

* = When using the **zone** controls to affect the amplifier's output, only the **zone** feedback for those channels will be updated; when using the **channel** controls to affect the amplifier's output, only the **channel** feedback for that channel will be updated.

SERIAL OUTPUTS

amplifier_tx\$	Tie to TX\$ line of RS-232 port symbol
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PARAMETERS

Volume Repeat Interval	Amount of time, in seconds, to wait before repeating a volume up or down command, if held.
Volume Increment	Number of increments (1-5) to adjust the volume up or down by on each Volume Repeat Interval

Contents

The distribution package for this module should include:

Sonance_875_Amplifier_v2.umc	Crestron User Module for controlling SONAMP 875 amplifier.
Sonance_875_feedback_processor_v2.usp	SIMPL+ file used within the amplifier module
Sonance_875_feedback_processor_v2.ush	SIMPL+ header file
Sonance_875D_v2.vtp	Demo XPanel touchpanel file
Sonance_875_demo_v2.smw	Demo program for Pro2 processor
Sonance_875_module_v2_Help.pdf	This help file

Revision History

V2 lincoln 2006.11.09

Added channel control features; updated help file to reflect the importance of using only zone or channel controls.

V1 lincoln 2006.06.21

Initial release

Development Environment

Version 1 of this module was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Hardware

Crestron PRO2 Processor	v3.155.1143
Crestron TPMC-10 Touchpanel	v1.1.0801

Software

Crestron SIMPL Windows	Version 2.07.36
Crestron Vision Tools Pro-e	Version 3.5.1.7
Crestron Database	Version 18.2.6
Crestron Symbol Library	Version 396
Crestron Device Library	Version 396