



## Crestron Interface Module Help

**File Name:** AVR-380 single Zone1/2 V3.usp

**Release Date:** 25/06/13

**Version:** 3.0

**2 Series CUZ:** v4.007.0004

**3 Series CUZ** v1.005.0015

**Manufacturer:** Arcam

**Device Model:** AVR-380

**Device OS Version:** 3.27

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**Symbol Name:** AVR-380 Single Zone 1/2 V3    Also supports AVR-450 & 750

**Outline:** This module is designed to provide a primary interface between a Crestron SIMPL Windows control program and the Arcam AVR-380 2 zone amplifier. The module is written in the Crestron SIMPL+ programming language, and is suitable for use in any Crestron 2 or 3 series processor. All timings and polling requests are handled internally so very little additional symbols should be required. It is advisable to study the sample program for a clear example of suitable implementation.

### Device Setup Notes:

Though much of this module has been designed and test to work with OS version 3.27. If your Arcam hardware does not have this version of OS, please upgrade before use.

**Hardware Connectivity:** CNXCOM, C2-COM, ST-COM, not suitable for 1 way serial control

- RS232
- Speed: 38400
- Data Bits: 8
- Stop Bits: 1
- Parity: None
- No Flow Control

**Cable Type:** Null Modem

CRESTRON	Female	Female	DEVICE
2	←	→	3
3	→	←	2
5	←	→	5

### Program Implementation

The module is designed to control any of the 2 AV zones of the AVR-380, though certain features are only available to zone 1; such as Direct Mode, Output Resolution etc. The zone to be controlled is simply specified in the Zone parameter at the top of the module. If it is required to control more than one zone, then additional modules should be added for each zone, and these interlinked as shown in the example program.

**Unused signals:** If any signals are not require simply comment them out, either using the // signal name, or use the Ctrl + i "make symbol complete" shortcut. Do Not use 0 (zero) to terminate any inputs or outputs.

### Module Connections

INPUTS	
Enable	Hold this signal high (logic on), when you wish to use the module. Normally connected to a signal than goes high shortly after system boot. For example connect to the output of a DELAY, say 10 seconds, with a 1 on the trigger of the delay. Do not try to pulse the ENABLE input. Once this input is high the module will continuously poll the AVR-600 for its status. If the signal goes low (logic off) the module will stop all functions. If you are intending to connect to the AVR via a TELNET connection use the CONNECT_FB signal to drive the Enable high after a connection is established.
PowerOn	Pulse this signal to bring the AVR-600 zone out of standby
PowerOff	Pulse this signal to put the AVR-600 zone into of standby
Input_CD, Etc	Pulse to select input for zone, if the zone is in standby the module will automatically send the zone Power On command and then the source command.

MuteOn	Pulse to put zone into audio mute
MuteOff	Pulse to bring zone out of audio mute
MuteOnOff	Pulse to toggle the current mute state of zone
DirectOnOffZ1	Pulse to toggle Zone 1 direct mode
NavUp_PresetUp	Pulse to move OSD menu navigation up, or to select the next tuner preset
NavDn_PresetDn	Pulse to move OSD menu navigation down, or to select the previous tuner preset
NavLeft_TuneDn	Pulse to move OSD menu navigation left, or to select the next tuner frequency up
NavRight_TuneUp	Pulse to move OSD menu navigation left, or to select the next tuner frequency down
NavPageUp	Pulse to move OSD menu navigation page up
NavPageDn	Pulse to move OSD menu navigation page down
EnableTunerUpdates	Hold this signal high (logic on) to ensure module requests and decodes tuner status. Can be held high all the time, but would be better link to an OR symbol with inputs from AM, FM & DAB Source FB signals. See example program
DecodeModeNext	Pulse to select next decode mode for zone (2ch and Multi-channel)
ResolutionNextZ1	Pulse to select next decode mode for zone (2ch and Multi-channel)
VolumeUp	Hold to Increase volume, Connect directly to panel button press to raise zone volume
VolumeDn	Hold to Decrease volume, Connect directly to panel button press to lower zone volume
SetVolume	Allows direct setting of zone volume, valid values range: 0-65535 (0-100%) can be connected to panel slider, <b>but be cautious as this will allow instant volume level changed to 100%!</b>
RecallPreset	Allows direct recall of a tuner preset station, valid value range: 1 - 50
SavePreset	Allows direct storing of current tuner station to preset number: 1 - 50
SourceSelect	Allows zone source to be changed by asserting an analog value in range: <ul style="list-style-type: none"> <li>1. CD</li> <li>2. BD</li> <li>3. AV</li> <li>4. SAT</li> <li>5. PVR</li> <li>6. VCR</li> <li>7. (not used)</li> <li>8. AUX</li> <li>9. DISPLAY</li> <li>10. (not used)</li> <li>11. FM</li> <li>12. DAB</li> <li>13. (not used)</li> <li>14. NET</li> <li>15. USB</li> <li>16. STB</li> <li>17. GAME</li> </ul> <p><b>Setting a value of 0 (zero) will put the zone into standby, like PowerOff</b></p>
Zone2Tx\$	Connect Tx\$ from Zone 2 module to this input in multi-zone systems, see example program
Rx\$	Serial data received from AVR-600 COM port, Rx signal

OUTPUTS	
PowerOnFb	Goes high (logic on) when the AVR-600 zone is out of standby
PowerOffFb	Goes high (logic on) when the AVR-600 zone is in standby
Input_CD_Fb, Etc	Goes high to show current selected input for zone, No more than one of these signal will be high at once. (Break before Make)
MuteOnFb	Goes high to show zone is in audio mute
MuteOffFb	Goes high to show zone not in audio mute
DirectFb	Goes high to show Zone 1 direct mode
TunerFreqFb\$	Outputs the current station frequency, with Khz or Mhz suffices as required, connect to indirect text object on control panel.
RDSText\$	Outputs the current FM station RDS text information when received by tuner. If the FM signal is poor this data may be sporadic, connect to indirect text object on control

	panel.
RDS_DABType\$	Outputs the current FM or DAB/Sirius radio programme Type/Category information as received from the broadcaster, connect to indirect text object on control panel.
RDS_DLS_Info\$	Outputs the current DLS information from DAB/Sirius station, connect to indirect text object on control panel.
DABStation\$	Outputs the current DAB station name, connect to indirect text object on control panel.
NETStatus\$	Outputs the current Network playback status; Navigating, Playing, Paused, Busy/Not Playing, connect to indirect text object on control panel.
DecodeMode2CH\$	Outputs the current 2 channel decode mode, connect to indirect text object on control panel. Possible values (including null) are: "Mono", "Stereo", "Pro Logic II / x Movie Mode", "Pro Logic II / x Music Mode", "Pro Logic II Matrix", "Pro Logic II Game", "Dolby Pro Logic Emulation", "Neo:6 Cinema"Neo:6 Music"
DecodeModeMCH\$	Outputs the current Multi channel decode mode, connect to indirect text object on control panel. Possible values (including null) are: "Mono down-mix", "Stereo down-mix", "Multi-channel mode", "Dolby EX / DTS-ES mode", "Pro Logic IIx movie mode", "Pro Logic IIx music mode"
OutputResolution	Outputs the current Zone 1 Screen resolution mode as a value from 1 - 6, where: 1 = SD Interlaced. 2 = SD Progressive. 3 = 720p. 4 = 1080i. 5 = 1080p 6 = 'Preferred'
VolumeFb	Outputs the current zone volume in range: 0-65535 (0-100%) can be connected to panel, Gauge, Digital Gauge or Slider.
Volume\$	Outputs the current zone volume as displayed on AVR-600, "00.0" - "99.0", connect to indirect text object on control panel. Note: only zone 1 is capable of 0.5 volume steps.
TunerPresetFb	Outputs the current a tuner preset station, valid value range: 1 - 50
SourceSelect	Outputs the current zone source value in range: 1. CD 2. BD 3. AV 4. SAT 5. PVR 6. VCR 7. (not used) 8. AUX 9. DISPLAY 10. (not used) 11. FM 12. DAB 13. (not used) 14. NET 15. USB 16. STB 17. GAME
Zone2Rx\$	Connect to Rx\$ on Zone 2 module to this outputs received data for zone 2 in multi-zone systems, see example program
Tx\$	Serial data sent from AVR-600 COM port, Tx signal

#### PARAMETERS

Zone	The number of the AVR-380 zone to be controlled by this instance of the module; 1 - 2
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