

**Partner: Sony**  
**Model: STR-ZAxx**  
**Device Type:AV-Receiver**

**GENERAL INFORMATION**

<b>SIMPLWINDOWS NAME:</b>	Sony AVR STR-ZAxx v1.1
<b>CATEGORY:</b>	Receiver/Processor
<b>VERSION:</b>	1.1
<b>SUMMARY:</b>	Controls power, volume, input selection, surround mode and displays true feedback via TCP/IP
<b>GENERAL NOTES:</b>	This module will control all available functions on a Sony STR-Zaxx AV surround receiver. Discrete power on/off, volume adjust/mute, input selection and surround mode select functions are included. True feedback is provide for power state, input selected, mute state, volume and tuner frequency/presets.
<b>CRESTRON HARDWARE REQUIRED:</b>	3-Series Processor
<b>SETUP OF CRESTRON HARDWARE:</b>	TCP/IP Port 33336
<b>VENDOR FIRMWARE:</b>	v. 1.009
<b>VENDOR SETUP:</b>	TCP/IP control must be enabled by going into the Sony On-Screen Menu, selecting Setup-> Install Setup->External Control set to "On".
<b>CABLE DIAGRAM:</b>	N/A

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**CONTROL:**

<b>Initialize</b>	D	Pulse to Initialize the module. The module will be ready to be used once the <b>Module_is_Initialized</b> Output is set high.
<b>Main_Power_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn main zone power on or off.
<b>Zone_2_Power_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn zone 2 power on or off.
<b>Zone_3_Power_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn zone 3 power on or off.
<b>Main_Select_&lt;Input&gt;</b>	D	Pulse to select <Input> for main zone.
<b>Zone_2_Select_&lt;Input&gt;</b>	D	Pulse to select <Input> for zone 2.
<b>Zone_3_Select_&lt;Input&gt;</b>	D	Pulse to select <Input> for zone 3.
<b>Main_Change_Input</b>	A	Change the input for main zone. 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Zone2_Change_Input</b>	A	Change the input for main zone 2 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Zone3_Change_Input</b>	A	Change the input for main zone 3 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Main_Volume_&lt;Up/Down&gt;</b>	D	Pulse to adjust main zone volume.
<b>Zone_2_Volume_&lt;Up/Down&gt;</b>	D	Pulse to adjust zone 2 volume.
<b>Zone_3_Volume_&lt;Up/Down&gt;</b>	D	Pulse to adjust zone 3 volume.
<b>Main_Change_Volume</b>	A	Change the main zone volume. Range: 0-100%.
<b>Zone2_Change_Volume</b>	A	Change the zone 2 volume. Range: 0-100%.
<b>Zone3_Change_Volume</b>	A	Change the zone 3 volume. Range: 0-100%.
<b>Main_Mute_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn main zone mute on or off.
<b>Zone_2_Mute_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn zone 2 mute on or off.
<b>Zone_3_Mute_&lt;On/Off/Toggle&gt;</b>	D	Pulse to turn zone 3 mute on or off.
<b>Select_&lt;AM/FM&gt;_Band</b>	D	Pulse to select AM or FM band.

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Select_FM_<Stereo/Mono>_Band	D	Pulse to select stereo or mono mode. Can only be used when FM band is selected.
Change_Tuner_Frequency	A	Change the tuner frequency. AM: 530-1710 (x1 KHz) FM: 760-1080 ( x0.1 MHz)
Tuning_Step_<+/->	D	Pulse to change the tuner frequency by 1 step.
Tuning_Scan_<+/->	D	Pulse to scan the tuner frequency for the next station. Press another tuner input to stop scanning.
Tuning_Select_Step_Size_<9k/10k>	D	Pulse to change the step size to 9k or 10k.
Tuner_Key_<0-9>	D	Pulse to enter a tuner frequency.
Tuner_Key_Clear	D	Pulse to clear the entered tuner frequency.
Tuner_Key_Enter	D	Pulse to select the entered tuner frequency.
Tuner_Preset_<Up/Down>	D	Pulse to select the next or previous tuner preset.
Select_Tuner_Preset_<1-30>	D	Pulse to select tuner preset <1-30>.
Clear_Tuner_Preset	D	Pulse to clear the tuner preset selection.
Change_Tuner_Preset	A	Change the tuner preset. Range 1-30.
Import_Custom_Preset_<1/2/3/4>	D	Pulse to set the current settings as custom preset <1/2/3/4>.
Select_Custom_Preset_<1/2/3/4>	D	Pulse to select custom preset <1/2/3/4>
GUI_<Up/Down/Left/Right/Enter>	D	Pulse to select OSD command <Up/Down/Left/Right/Enter>.
GUI_Home	D	Pulse to select OSD command Home.
GUI_Return	D	Pulse to select OSD command Return.
GUI_Display	D	Pulse to select OSD command Display.
GUI_Option_Menu	D	Pulse to select OSD command Option Menu.
GUI_AM/PM_Menu	D	Pulse to select OSD command AM/PM Menu.
Select_Speaker_Out_<A/B/AB/Off>	D	Pulse to select speaker output <A/B/AB/Off>
Change_Bass_<Front/Center/Surround/ Fronthigh>	A	Change the bass value for the <Front/Center/Surround/Fronthigh> speaker. Range: -10 to 10.

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Change_Treble_<Front/Center/Surround/Fronthigh>	A	Change the treble value for the <Front/Center/Surround/Fronthigh> speaker. Range: -10 to 10.
Set_Soundoptimizer_<Low/Normal/Off>	D	Pulse to set the sound optimizer to <Low/Normal/Off>.
Soundfield_<+/->	D	Pulse to select the next or previous soundfield mode.
Set_hddcstype_<Studio/Theater/Dynamic>	D	Pulse to set the hddc type to<Studio/Theater/Dynamic>.
Inceilingmode_<On/Off>	D	Pulse to turn inceiling mode on or off.
Turn_Puredirect_<On/Off>	D	Pulse to pure direct on or off.
Dualmono_<On/Off>	D	Pulse to turn dual mono on or off.
Select_HDMI_Out_<A/B/AB/Off>	D	Pulse to select HDMI output <A/B/AB/Off>.
Select_Audio_Out_<Amp/TVamp>	D	Pulse to select main zone audio output <Amp/TV Amp>.
Select_Zone2_Audio_Out_<Amp/Z2_TV/Z2_Amp>	D	Pulse to select zone 2 audio output <Amp/Z2 TV/Z2 Amp>.
Set_Volume_Display_<db/Step>	D	Set volume step mode to db or step. Db: the volume feedback will ouputed by <Main/Zone2/Zone3>_Volume_db_Text Step: the volume feedback will be outputted by <Main/Zone2/Zone3>_Volume_Step_Analog and <Main/Zone2/Zone3>_Vollume_Step_Text
Trigger_1_Control_<On/Off>	D	Pulse to turn the first 12V trigger on or off.
Trigger_2_Control_<On/Off>	D	Pulse to turn the second 12V trigger on or off.
Trigger_3_Control_<On/Off>	D	Pulse to turn the third 12V trigger on or off.

### FEEDBACK:

Module_is_Initialized	D	Set high to indicate that module is ready to be used.
Main_Power_Is_<On/Off>	D	Indicates the main zone power status.
Zone2_Power_Is_<On/Off>	D	Indicates the zone 2 power status.
Zone3_Power_Is_<On/Off>	D	Indicates the zone 3 power status.

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<b>Main_&lt;Input&gt;_is_Selected</b>	D	.Indicates the currently selected main zone input.
<b>Zone2_&lt;Input&gt;_is_Selected</b>	D	Indicates the currently selected zone 2 input.
<b>Zone3_&lt;Input&gt;_is_Selected</b>	D	Indicates the currently selected zone 3 input.
<b>Main_Selected_Input_Analog</b>	A	.Indicates the currently selected main zone input. 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Zone2_Selected_Input_Analog</b>	A	Indicates the currently selected zone 2 input. 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Zone3_Selected_Input_Analog</b>	A	Indicates the currently selected zone 3 input. 1: Tuner, 2: AM, 3: FM, 4: BD/DVD, 5: Game, 6: SAT/CATV, 7: Video, 8: TV, 9: SA-CD/CD, 10: AUX, 11: STB
<b>Main_Volume_db_Text</b>	S	Indicates the main zone volume level in db. (db mode)
<b>Main_Volume_Step_Analog</b>	A	Indicates the main zone volume level in %. (step mode)
<b>Main_Vollume_Step_Text</b>	S	Indicates the main zone volume level in %.(step mode)
<b>Zone2_Volume_db_Text</b>	S	Indicates the zone 2 volume level in db. (db mode)
<b>Zone2_Volume_Step_Analog</b>	A	Indicates the zone 2 volume level in %. (step mode)
<b>Zone2_Vollume_Step_Text</b>	S	Indicates the zone 2 volume level in %.(step mode)
<b>Zone3_Volume_db_Text</b>	S	Indicates the zone 3 volume level in db. (db mode)
<b>Zone3_Volume_Step_Analog</b>	A	Indicates the zone 3 volume level in %. (step mode)
<b>Zone3_Vollume_Step_Text</b>	S	Indicates the zone 3 volume level in %.(step mode)
<b>Main_Mute_is_&lt;On/Off&gt;</b>	D	Indicates the main zone mute status.
<b>Zone2_Mute_is_&lt;On/Off&gt;</b>	D	Indicates the zone 2 mute status.
<b>Zone3_Mute_is_&lt;On/Off&gt;</b>	D	Indicates the zone 3 mute status.
<b>Tuner_Frequency_Analog</b>	A	Indicates the tuner frequency. AM: 530-1710 (x1 KHz) FM: 760-1080 ( x0.1 MHz)
<b>Tuner_Frequency_Text</b>	S	Indicates the tuner frequency.
<b>Tuner_Frequency_Input_Text</b>	S	Indicates the frequency that was inputted by the tuner keypad.

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<b>Tuner_Preset_&lt;1-30&gt;_is_Selected</b>	D	Indicates the currently selected tuner preset.
<b>Tuner_Selected_Preset_Analog</b>	A	Indicates the currently selected tuner preset. Range 1-30.
<b>Soundoptimizer_&lt;Normal/Low/Off&gt;_is_Selected</b>	D	Indicates the selected sound optimizer mode.
<b>Soundfield_Text</b>	S	Indicates the currently selected soundfield mode.
<b>Puredirect_is_&lt;On/Off&gt;</b>	D	Indicates the selected pure direct state.
<b>Volume_Display_&lt;db/Step&gt;_is_Selected</b>	D	Indicates the selected volume display mode.

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**TESTING:**

<b>OPS USED FOR TESTING:</b>	1.011.0023
<b>SIMPL WINDOWS USED FOR TESTING:</b>	4.02.65
<b>DEVICE DB USED FOR TESTING:</b>	66.02.001.00
<b>CRES DB USED FOR TESTING:</b>	51.05.007.00
<b>SYMBOL LIBRARY USED FOR TESTING:</b>	948
<b>SAMPLE PROGRAM:</b>	Sony AVR STR-ZAxx v1.1 MC3 Demo
<b>REVISION HISTORY:</b>	v1.0 – Initial Release v1.1 – Fixed bug for volume scaling when using the analog input to set the volume. Fixed bug where feedback wasn't properly processed when selecting CD/SACD Input. Fixed bug where TCP Client was not properly re-connecting after connection loss