

Partner: Yamaha
Model: RX-Z7 & RX-V3900
Device Type: Receiver



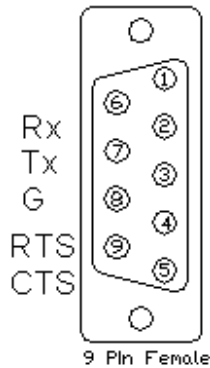
GENERAL INFORMATION

SIMPLWINDOWS NAME:	Yamaha RX-Z7 + RX-V3900 Receiver v2.0
CATEGORY:	Receiver/Processor
VERSION:	2.0
SUMMARY:	Controls the RX-Z7 & RX-V3900 receivers and provides true feedback.
GENERAL NOTES:	<p>This module controls the Yamaha RX-Z7 & RX-V3900 receivers. It provides true feedback. All standard run time functions are included. It was tested with the RX-Z7.</p> <p>NOTE: This module displays menus for the iPod and Net/USB inputs. The feedback for the menus may take up 1.5 seconds to update.</p> <p>NOTE: Zone 4 volume is fixed.</p> <p>NOTE: NOT ALL FUNCTIONS ARE AVAILABLE ON ALL UNITS.</p>
CRESTRON HARDWARE REQUIRED:	C2-COM, ST-COM
SETUP OF CRESTRON HARDWARE:	RS232 Baud: 9600 Parity: N Data Bits: 8 Stop Bits: 1
VENDOR FIRMWARE:	1.10
VENDOR SETUP:	You must go into the Advanced Setup and turn the RS232C STANDBY to YES. Also on the RX-Z7, after turning the main power on, you must go to Menu>Setup>Network>Network Standby and set it to On.
CABLE DIAGRAM:	CNSP-532

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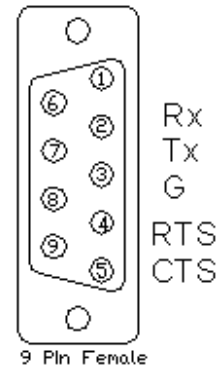


Rear View of Connector



CNSP-532

Rear View of Connector



CONTROL:

Master_Power_On/Off	D	Pulse to turn all zones on or off.
Main_Zone_Power_On/Off/Toggle	D	Pulse to turn the main zone power on and off.
Main_Zone_Volume_Up/Down	D	Press and hold to adjust the main zone volume.
Main_Zone_Volume_Mute_On/Off/Toggle	D	Pulse to turn the main zone volume mute on and off.
Input_*	D	Pulse to select the main zone input.
Main_Zone_Sleep_*	D	Pulse to set the sleep time for the main zone.
Effect_*	D	Pulse to select the desired surround sound effect.
Input_Mode_*	D	Pulse to select the input mode.
Zone_*_Power_On/Off/Toggle	D	Pulse to turn the zone 2, 3 or 4 power on and off.
Zone_*_Volume_Up/Down	D	Press and hold to adjust the zone 2 or 3 volume. Zone 4 volume is fixed.
Zone_*_Volume_Mute_On/Off/Toggle	D	Pulse to turn the volume mute on and off for zones 2, 3 and 4.
Zone_*_Input_*	D	Pulse to select the zone 2, 3 or 4 input.
Zone_*_Sleep_*	D	Pulse to set the sleep time for zones 2, 3 and 4.
Preset_*_Mem_*	D	Pulse to store the current volume level in a preset for the desired zone.
Preset_*_Rec_*	D	Pulse to recall the desired volume preset for the desired zone.
HD_Radio_AM/FM	D	Pulse to select the AM or FM band.

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HD_Radio_Search_Mode_*	D	Pulse to select the desired search mode.
HD_Radio_Preset/Frequency_Up/Down	D	Pulse to start scanning through the presets or frequencies.
HD_Radio_Frequency_Key_*	D	Pulse to enter the desired tuner frequency. You must pulse the enter key input to send the new channel number.
HD_Radio_Program_*	D	Pulse to select the desired HD Radio tuner program.
HD_Radio_Preset_*	D	Pulse to select the desired HD Radio tuner preset.
XM_Search_Mode_*	D	Pulse to select the desired XM search mode.
XM_Channel_Up/Down	D	Pulse to step to the next or previous channel.
XM_Category_Up/Down	D	Pulse to step to the next or previous category.
XM_Preset_Up/Down	D	Pulse to step to the next or previous XM preset.
XM_Channel_Key_*	D	Pulse to enter the desired XM Channel. You must pulse the enter key input to send the new channel number.
XM_Preset_*	D	Pulse to select the desired XM preset.
Sirius_Search_Mode_*	D	Pulse to select the desired Sirius search mode.
Sirius_Channel_Up/Down	D	Pulse to step to the next or previous Sirius channel.
Sirius_Category_Up/Down	D	Pulse to step to the next or previous Sirius category.
Sirius_Preset_Up/Down	D	Pulse to step to the next or previous Sirius preset.
Sirius_Channel_Key_*	D	Pulse to enter the desired Sirius Channel. You must pulse the enter key input to send the new channel number.
Sirius_Preset_*	D	Pulse to select the desired Sirius preset.
iPod_Control_Mode_*	D	Pulse to select the desired iPod control mode.
iPod_Repeat_*	D	Pulse to select the desired iPod repeat mode.
iPod_Shuffle_*	D	Pulse to select the desired iPod shuffle mode.
iPod_Play/Stop/Pause/Skip_Forward/Skip_Reverse	D	Pulse to control the iPod playback.
iPod_Menu	D	Pulse to get the current menu from the iPod.

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iPod_Cursor_*	D	Pulse to move through the iPod menu.
iPod_Select	D	Pulse to select the highlighted iPod menu item.
iPod_Page_Up/Down	D	Pulse to page up and down through the iPod menus.
Net/USB_Repeat_*	D	Pulse to select the desired Net/USB repeat mode.
Net/USB_Shuffle_*	D	Pulse to select the desired Net/USB shuffle mode.
Net/USB_Play/Stop/Pause/Skip_Forward/Skip_Reverse	D	Pulse to control the Net/USB playback.
Net/USB_Preset_*	D	Pulse to select the desired Net/USB preset.
Net/USB_Menu	D	Pulse to get the current menu from the Net/USB.
Net/USB_Cursor_*	D	Pulse to move through the Net/USB menu.
Net/USB_Select	D	Pulse to select the highlighted Net/USB menu item.
Net/USB_Page_Up/Down	D	Pulse to page up and down through the Net/USB menus.
Net/USB_Bookmark_*	D	Pulse to turn the Net/USB bookmark on and off.
Initialize	D	Pulse to get the initial system status. This is only necessary once.
From_Device	S	Serial signal to be routed from a 2-way serial com port.

FEEDBACK:

Master_Power_is_On/Off	D	High to indicate the current state of the master power.
Main_Zone_Power_is_On/Off	D	High to indicate the main zone's current power status.
Main_Zone_Volume_Gauge	A	Analog value indicating the main zone's current volume level. To be displayed using a bar graph on a touch panel.
Main_Zone_Volume_Mute_is_On/Off	D	High to indicate the main zone's current volume mute state.
Input_is_*	D	High to indicate the main zone's current input.
Main_Zone_Sleep_is_*	D	High to indicate the current sleep timer setting.
Effect_is_*	D	High to indicate the currently selected surround effect.
Input_Mode_is_*	D	High to indicate the currently selected input mode.

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Zone_*_Power_is_On/Off	D	High to indicate the current power state for the zones 2, 3 and 4.
Zone_*_Volume_Gauge	A	Analog signal indicating the current volume level for zones 2 and 3.
Zone_*_Volume_Mute_is_On/Off	D	High to indicate the current volume mute state for zones 2, 3 and 4.
Zone_*_Input_is_*	D	High to indicate the currently selected input for zones 2, 3 and 4.
Zone_*_Sleep_is_*	D	High to indicate the current sleep timer setting for zones 2, 3 and 4.
HD_Radio_Band_is_AM/FM	D	High to indicate the HD Radio's current band.
HD_Radio_Search_Mode_is_*	D	High to indicate the current HD Radio search mode.
HD_Radio_Frequency_Text	S	Serial signal indicating the current HD Radio Frequency number or the channel number being entered using the HD Radio Frequency keys.
HD_Radio_Station_Name_Text	S	Serial signal indicating the current HD Radio Station Name.
HD_Radio_Station_is_Tuned/Not_Tuned	D	High to indicate whether or not a station is tuned.
HD_Radio_Tuned_Station_is_Stereo/Not_Stereo	D	High to indicate whether the currently tuned station is stereo or not.
HD_Radio_Tuned_Station_is_HD/Not_HD	D	High to indicate whether the currently tuned station is HD or not.
HD_Radio_Program_is_*	D	High to indicate the currently selected HD Radio program.
HD_Radio_Preset_is_*	D	High to indicate the currently selected HD Radio preset.
XM_Search_Mode_is_*	D	High to indicate the currently selected search mode.
XM_Does_not_Exist/_is_not_Connected/ Is_Not_Ready/is_Ready	D	High to indicate whether the XM tuner is connected and ready.
XM_Channel_Number_Text	S	Serial signal indicating the current XM Channel number or the channel number being entered using the XM Channel keys.
XM_Category_Text	S	Serial signal indicating the current XM category.
XM_Channel_Name_Text	S	Serial signal indicating the current XM Channel name.
XM_Artist_Text	S	Serial signal indicating the current XM artist.
XM_Song_Text	S	Serial signal indicating the current XM song.
XM_Antenna_Signal_Level_is_*	D	High to indicate the XM Signal level.
XM_Preset_is_*	D	High to indicate the currently selected XM Preset.

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Sirius_Search_Mode_is_*	D	High to indicate the currently selected search mode.
Sirius_Does_not_Exist/_is_not_Connected/_Is_Not_Ready/_is_Ready	D	High to indicate whether the Sirius tuner is connected and ready.
Sirius_Channel_Number_Text	S	Serial signal indicating the current Sirius Channel number or the channel number being entered using the Sirius Channel keys.
Sirius_Category_Text	S	Serial signal indicating the current Sirius category.
Sirius_Channel_Name_Text	S	Serial signal indicating the current Sirius Channel name.
Sirius_Artist_Text	S	Serial signal indicating the current Sirius artist.
Sirius_Song_Text	S	Serial signal indicating the current Sirius song.
Sirius_Composer_Text	S	Serial signal indicating the current Sirius composer.
Sirius_Antenna_Signal_Level_is_*	D	High to indicate the Sirius Signal level.
Sirius_Parental_Lock_is_On/Off	D	High to indicate the parental lock state of the current Sirius channel.
Sirius_Preset_is_*	D	High to indicate the currently selected Sirius Preset.
iPod_Control_Mode_is_*	D	High to indicate the current iPod control mode.
iPod_Repeat_is_*	D	High to indicate the current iPod repeat mode.
iPod_Shuffle_is_*	D	High to indicate the current iPod shuffle mode.
iPod_is_Playing/Stopped/Paused	D	High to indicate the current play state of the iPod.
iPod_Does_not_Exist/_is_not_Connected/_Is_Not_Ready/_is_Ready	D	High to indicate whether the iPod Dock is connected and ready.
iPod_Current_Menu_Name_Text	S	Serial signal indicating the name of the current iPod menu.
iPod_Line_*_Text	S	Serial signal indicating the items in the current iPod menu list.
iPod_Current_Line_Value	A	Analog value indicating the currently highlighted line in the iPod menu. Could be used to drive multi mode buttons on a touch panel.
iPod_Artist_Text	S	Serial signal indicating the current iPod artist.
iPod_Album_Text	S	Serial signal indicating the current iPod album.
iPod_Song_Text	S	Serial signal indicating the current iPod song.
Net/USB_Repeat_is_*	D	High to indicate the current Net/USB repeat mode.

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Net/USB_Shuffle_is_*	D	High to indicate the current Net/USB shuffle mode.
Net/USB_is_Playing/Stopped/Paused	D	High to indicate the current playback state of the Net/USB.
Net/USB_Artist_Text	S	Serial signal indicating the current Net/USB artist.
Net/USB_Album_Text	S	Serial signal indicating the current Net/USB album.
Net/USB_Song_Text	S	Serial signal indicating the current Net/USB song.
Net/USB_Sub_Input_is_*	D	High to indicate the currently selected Net/USB sub input.
Net/USB_Current_Menu_Name_Text	S	Serial signal indicating the name of the current Net/USB menu.
Net/USB_Line_*_Text	S	Serial signal indicating the items in the current Net/USB menu list.
Net/USB_Current_Line_Value	A	Analog value indicating the currently highlighted line in the Net/USB menu. Could be used to drive multi mode buttons on a touch panel.
To_Device	S	Serial signal to be routed to a 2-way serial com port.

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**TESTING:**

OPS USED FOR TESTING:	4.001.1012
SIMPL WINDOWS USED FOR TESTING:	2.12.31
SYMBOL LIBRARY USED FOR TEXTING:	659
DEVICE DB USED FOR TESTING:	26.07.002.00
CRESTRON DB USED FOR TESTING:	21.03.028.00
SAMPLE PROGRAM:	Yamaha RX-Z7 + RX-V3900 Receiver v2.0 Demo
REVISION HISTORY:	<p>V. 1.0 – Original Release</p> <p>V. 1.1 – 6-30-2009 – Fixed an issue with list display when the list is sent to the Crestron in more than 2 packets. Change the way that the volume ramps works. Volume is now adjusted in 5.0dB steps when the volume is below -40.0dB, in 2.0dB steps when the volume is above -40.0dB and below -20.0dB, 1.0dB steps when the volume is above -20.0dB and below -10.0dB and in 0.5dB steps when the volume is above -10.0dB. This method is from Yamaha.</p> <p>V. 1.2 – 8-5-2009 – Changed the way in which the module polls for feedback. This has improved the speed of the status. Added more information about the setup of the Yamaha receiver.</p> <p>V. 1.3 – 9-14-2009 – Found a situation which can cause a continuous polling loop. Fixed that issue. Also fixed an issue with the volume feedback.</p> <p>V. 1.4 – 9-17-2009 – Repaired an issue where the initial volume for zones 2 and 3 did not display.</p> <p>V. 2.0 – 4-20-2010- Changed the way that the module polls for status. The new Yamaha firmware version 1.10 and higher now notify the Crestron that status has changed. This means we do not need to constantly poll for status. It also allows for more instantaneous updates of the metadata.</p>