












ADA Tune Suite Satellite Radio Tuner Module Application Guide

Description

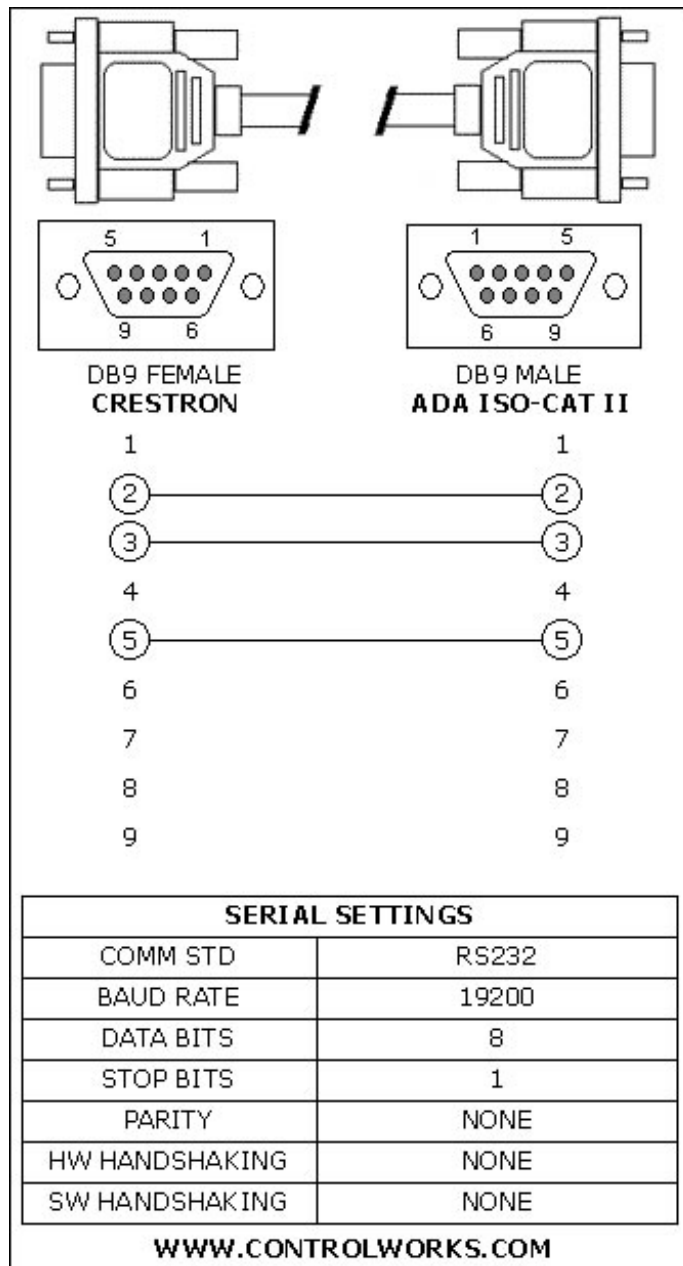
This module is used to control the ADA XM Radio Tuner or the ADA Sirius Radio Tuner when installed in a Tune Suite chassis.

Supported Processors

Any 2-Series Crestron Processor

Compatibility			Processor Requirements	
 2-Series Compatible	 NOT CNMSX Compatible	 NOT System Builder Compatible	 Ethernet REQUIRED	 Compact Flash REQUIRED
	 CNMSX	 System Builder Compatible	 Ethernet NOT REQUIRED	 Compact Flash NOT REQUIRED

Serial Cable Pinout



Module Application

In order for the module to communicate with the proper tuner, both the ADA Bus Address and the ADA Module (slot) Address must be properly defined in the parameter fields at the bottom of the Crestron module.

If you are using a combination of ADA keypads with a Crestron control system, your Bus Address switch will be set to position '9', 'A', or 'B'; if you are using ONLY a Crestron control system with NO ADA keypads your Bus Address switch will be set to either 'C' or 'D'. No other Bus Address switch position will display the proper data on the Crestron Touchpanels. The ADA Module (slot) Address is determined by what slot the tuner card is physically placed in, inside the tuner chassis. For backward compatibility between the chassis, The Module Address parameter will be '1', '2', or '3'. A tuner in slot '4' is defined by a change in the Bus Address parameter on the Crestron module, not on the tuner chassis.

In most instances, a single tuner chassis will be used with up to 3 tuner cards. In this scenario, it is recommended that you use the first ADA Bus Address that is applicable for your installation. That is, if you are using a single tuner chassis with ADA keypads set the ADA Bus Address switch to position '9' on the rear of the tuner chassis. If you are not using any ADA keypads (Crestron control only) set the ADA Bus Address Switch to 'C' on the rear of the tuner chassis.

Please refer to the following table to correctly set the Bus Address and Slot Address parameter on the module for the tuner that will be controlled.

Addressing for systems with ADA keypads with Crestron Touchpanels

Tune Suite Address Selector Switch	Tune Suite Module Slot	Crestron Module 'Bus Address' Parameter	Crestron Module 'Module Address'
9	1	0	1
	2	0	2
	3	0	3
	4	1	1
A	1	1	2
	2	1	3
	3	2	1
	4	2	2
B	1	2	3
	2	3	1
	3	3	2
	4	3	4

Addressing for systems with Crestron Touchpanels Only

Tune Suite Address Selector Switch	Tune Suite Module Slot	Crestron Module 'Bus Address'	Crestron Module 'Module Address'
C	1	0	1
	2	0	2
	3	0	3
	4	1	1
D	1	1	2
	2	1	3
	3	2	1
	4	2	2

Signal and Parameter Descriptions

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

channel_up...down	Pulse to change channel up or down through all available channels
category_up...down	Pulse to change to next or previous category
station_up...down.....	Pulse to change channel up or down in the current category
preset_up...down	Pulse to change to the next or previous preset
keypad_0...9	Pulse for direct channel entry
keypad_clear	Pulse to clear keypad entry
keypad_ent.....	Pulse to tune the channel number entered with the keypad.
preset_1...20	Press and hold to set the selected channel in a preset location. Pulse this input to recall A previously stored preset.
[preset_1...20_clear]	Pulse to clear the stored preset. A new preset Press and hold will replace the last stored Preset in a given location. Only needed if no Preset is desired in a preset location.
[serial_number]	Pulse to display the tuners serial number in the channel number field.
[software_version].....	Pulse to show the tuners software version in the channel number field.
[signal_display].....	Pulse to show the tuners signal strength in the channel number field.
[exit_info]	Pulse to clear signal, software or serial number display.

ANALOG INPUTS

This module does not utilize any analog inputs

SERIAL INPUTS

ada rx\$ route to serial rx\$ for suite 16 COM port

DIGITAL OUTPUTS

[preset_store_confirm].....	Signal is high while a preset input is held high and pulses once when the preset is stored
preset_1...20 fb	Signal is high to reflect that the corresponding preset has been selected

ANALOG OUTPUTS

keypad.....	Displays channel number entered on keypad
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SERIAL OUTPUTS

ada_tx\$	Route to serial tx\$ for suite 16 COM port
channel_number\$	Route to serial text field to display the currently selected channel number
channel_name\$	Route to serial text field to display the currently selected channel name (note that the channel name field includes the "XM" or "SR" prefix on the channel number, as well as the preset name or number, if applicable. Information about the radio, such as serial number, version number, and signal strength are also displayed in this field.)
category\$	Route to serial text field to display the currently selected category
artist\$	Route to serial text field to display the currently selected artist
song\$	Route to serial text field to display the currently selected song
preset_1...20_text\$	Route to serial text on button of the corresponding preset to display the channel name on the button

PARAMETERS

Bus Address.....	Enter the bus address that the tuner is communicating on (NOTE: This may or may not be the address that the tuner is physically configured to use. See detail)
Module Address	Enter the slot position of the tuner from the table above. (NOTE: This may or may not be the physical slot number that the tuner is in. See detail)

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-729-4640. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at <http://www.thecontrolworks.com/customerlogin.aspx>.

Distribution Package Contents

The distribution package for this module should include:

ADA_Sat_Radio_Tuners_help_v3.pdf	this help file
ADA_Sat_Radio_Tuners_v3.umc	Crestron user module to insert in program
ADA_Tune_Suite_Demo_PRO2_v3.smw	example program (PRO2)
ADA_Tune_Suite_XPANEL_v3.vtp.....	example XPANEL (800x600)

Revision History

V3 jim@controlworks.com 2008.06.11

-No changes, revision only to match the other tuner modules in the suite

V2 lincoln@controlworks.com 2006.09.20

-Fixed: Issue with control of FM tuner in slots 2 and 3. No other changes were made.

-Fixed: Incorrect delimiter being parsed.

V1 lee@controlworks.com 2006.07.26

-First release

Development Environment

This module version 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.

ADA Hardware	Software Version
XM	2.1
Sirius	1.0
Crestron Hardware	Firmware Version
Crestron PRO2 Processor	3.155.1243
Software	Software Version
Crestron SIMPL Windows	2.10.25
Crestron Vision Tools Pro-e	3.7.2.8
Crestron Database	19.04.010
Crestron Symbol Library	541
Crestron Device Library	541

ControlWorks Consulting, LLC Module License Agreement

Definitions: *ControlWorks*, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 8001 Mayfield Rd, Chesterland, OH 44026. *You* and *Dealer* refer to the entity purchasing the module. *Client* and *End User* refer to the person or entity for whom the Crestron hardware is being installed and/or will utilize the installed system. *System* refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein. *Module* refers to files required to implement the functionality provided by the module and may include source files with extensions such as UMC, USP, SMW and VTP. *Demo Program* refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module. *Software* refers to the Module and the Demo Program.

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Provision Of Support

We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous version of the module, modifications to the module not made by Us, to persons who have not purchased the module from Us. In addition, we may decline to provide support if the Demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should ControlWorks discontinue support for a module.

Modification of Software

You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Module in whole or part. You may modify the Demo Program. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from You modifying the Software in any manner.

Indemnification/Hold Harmless

ControlWorks, in its sole and absolute discretion may refuse to provide support for the application of the Module in such a manner that We feel has the potential for property damage, or physical injury to any person. Dealer shall indemnify and hold harmless ControlWorks Consulting LLC, its employees, agents, and owners from any and all liability, including direct, indirect, and consequential damages, including but not limited to personal injury, property damage, or lost profits which may result from the operation of a program containing a ControlWorks Consulting, LLC Module or any component thereof.

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