



ADA Tune Suite HDM-1 Radio Tuner Module Application Guide






Description

This module is used to control the ADA HDM-1 Tuner when installed in a Tune Suite chassis.

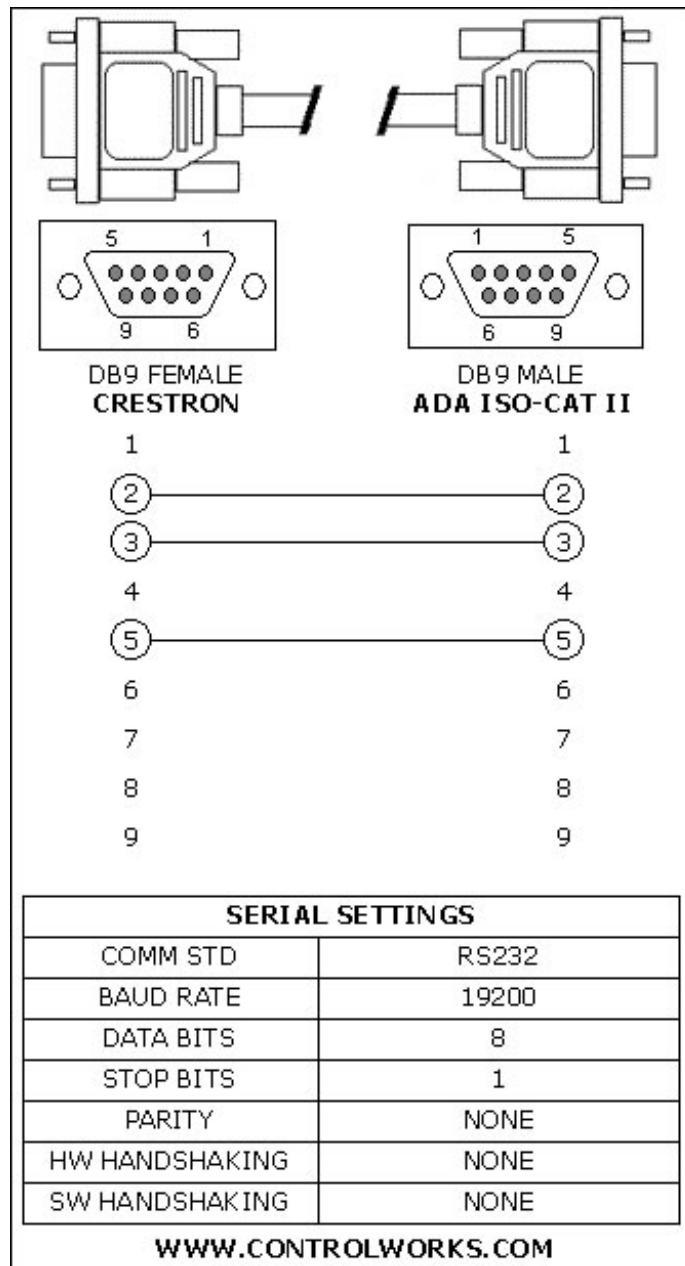
In order for the module to work correctly you **must properly define** both the **ADA Bus and Tuner Slot Position**. Please refer to the *Bus and Slot Position Table* included in this help file.

Supported Processors

Any 2-Series Crestron Processor

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

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 must be set to position '9', 'A', or 'B'; if you are using ONLY a Crestron control system with NO ADA keypads your Bus Address must 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 on the next page 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

hdm_tuner_up/down.....	Increments and decrements the frequency
hdm_seek_up/down.....	Increments and decrements the seek function
hdm_preset_up/down	Increments and decrements the stored presets
[hdm_digital_analog_mono_toggle]	Rings through digital, analog, and mono
hdm_band_toggle.....	Toggles between the tuner bands
[hdm_update_deemphasis].....	x
[hdm_deemphasis_toggle].....	x
[hdm_update_filter].....	Displays current noise filter state
[hdm_filter_toggle].....	Toggles noise filter between off and auto
[hdm_update_am_seek_level].....	x
[hdm_update_am_seek_level_up]	x
[hdm_update_am_seek_level_down].....	x
[hdm_update_fm_seek_level]	x
[hdm_update_fm_seek_level_up]	x
[hdm_update_fm_seek_level_down]	x
[hdm_update_wx_seek_level]	x
[hdm_update_wx_seek_level_up].....	x
[hdm_update_wx_seek_level_down]	x
[hdm_update_frequency].....	Displays current tuner frequency
[hdm_enter_preset_mode]	Enters the mode for storing presets
[hdm_exit_preset_mode]	Exits the mode for storing presets
[hdm_delete_preset].....	Deletes the current preset station
[hdm_select_preset_up/down]	Selects which preset to store to
[hdm_select_character_up/down]	Scrolls thru characters for station naming
hdm_keypad_0/9	Numeric keypad inputs
hdm_keypad_enter.....	Numeric keypad enter
hdm_keypad_decimal_point.....	Numeric keypad decimal point
[hdm_update_software_ver]	Displays the current software version

ANALOG INPUTS

This module does not utilize any analog inputs

SERIAL INPUTS

ada_rx\$ route from serial rx\$ for Tune Suite COM port

DIGITAL OUTPUTS

This module does not utilize any digital outputs

ANALOG OUTPUTS

This module does not utilize any analog outputs

SERIAL OUTPUTS

ada_tx\$	Route to serial tx\$ for Tune Suite COM port
tuner_display\$	Route to serial text field to display station info
channel_number\$	Route to serial text field to display channel number
catagory\$	Route to serial text field to display data stream
artist\$	Route to serial text field to display artist
song	Route to serial text field to display song

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_Tune_Suite_HDM-1_v3.umc	Crestron User Module HDM-1
ADA_HD_Tuner_String_Compare_v1.usp	SIMPL+ file used within the HDM-1 module
ADA_HD_Tuner_String_Compare_v1.ush	SIMPL+ header file
ADA_Tune_Suite_Xpanel_v3.vtp	Demo touchpanel for Xpanel touchpanel
ADA_Tune_Suite_Demo_PRO2_v3.smw	Demo program for PRO2 processor
ADA_Tune_Suite_HDM-1_Help_v3.pdf	Help file for HDM-1 module

Revision History

V3 lee@controlworks.com 2008.06.11

-Initial release, versioned to match the other tuner modules

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
HDM-1	3.1
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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