








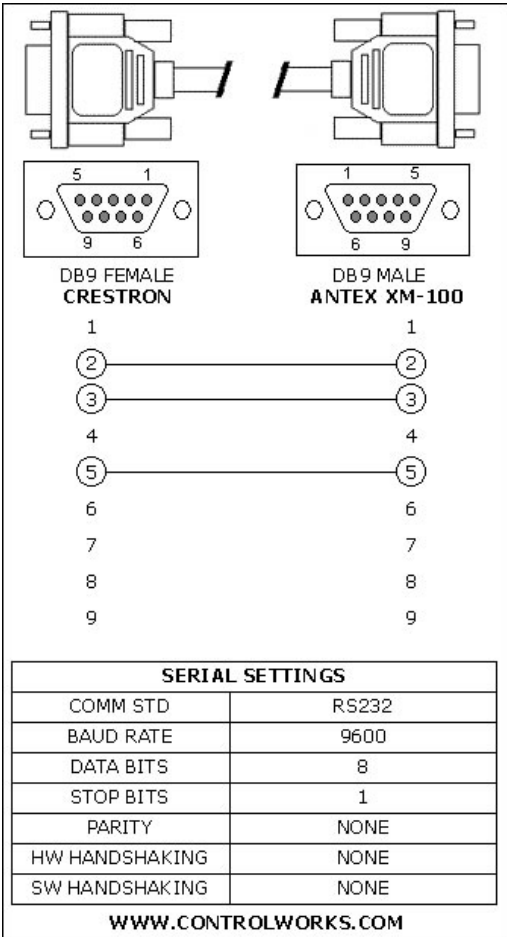
# Antex XM-100 Full Control Module v2 Module Application Guide

## Description

This module provides full control of an Antex XM100 XM Radio Tuner.

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

# Serial Cable Pinout



## Module Application

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### Press and Hold Presets

The press-and-hold presets store the name and channel number in the processor's NVRAM. Upon first loading the program, you may have gibberish on the press-and-hold buttons. To resolve this, you can press-and-hold to store a preset in each location. Alternately, you can erase the NVRAM of your processor by typing "nvramclear" at the command prompt in Viewport or Toolbox. This will erase all NVRAM in your program, not just the presets. If you have other information stored in the NVRAM, it will be lost

# Signal and Parameter Descriptions

Bracketed signals such as “[signal\_name]” are optional signals

## DIGITAL INPUTS

power_on .....	powers the XM-100 on
power off .....	powers the XM-100 off
keypad_0-9, ent, clear .....	tie to keypad for direct channel entry
category_up/down .....	surf category up/down in. Touchpanel will display currently playing info for channels. When the users stops changing channels for 3 seconds, the selected channel is tuned.
channel up/down .....	surf channel up/down
skip/unskip_channel .....	skips/unskips current channel from being accessed during channel/category surfing. Direct keypad entry will still bring up skipped channels.
preset_1-10 .....	recalls a previously stored preset channel. To store a preset, hold the button down for 3 seconds. The name of the channel will appear on the button. Both the channel name and number are stored in non-volatile memory.
preset_update .....	refresh indirect text on preset buttons
get_serials .....	pulse to poll for radio serial number
activate_unsolicited_feedback .....	pulse to activate unsolicited feedback. This command is automatically sent if the Crestron reboots or sends the power on command to the Antex.
poll_for_signal_strength .....	hold high to poll for signal strength. Do not leave held high during normal use (too much traffic).
poll .....	pulse to force an active poll of radio status. Use sparingly to avoid traffic issues. Unsolicited feedback is provided.
lockout_keypad_0-9, ent, clear .....	tie to keypad for locking/unlocking channels
lock_channel/unlock_channel .....	pulse to lock or unlock a channel. Locking a channel prevents any access, by preset, surfing, or direct entry. Used for parental control.

## ANALOG INPUTS

This module does not utilize any analog inputs.

## SERIAL INPUTS

antex_rx\$ .....	route to serial rx\$ for Antex's COM port
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## DIGITAL OUTPUTS

power_on_fb .....	feedback for when XM-100 is on
power_off_fb .....	feedback for when XM-100 is off
preset_1-10_fb .....	feedback for preset buttons.
lockout_channel_fb .....	pop up subpage for entering channel to lockout

## ANALOG OUTPUTS

signal_value .....	an analog value from 0-3 that represents the signal level none, poor, good and excellent respectively. The demo panels use a multimode button to display the current signal level. Active only when poll_for_signal_strength is held high.
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channel ..... currently tuned channel  
keypad\_display ..... tie to digital gauge for direct entry keypad  
password ..... tie to digital gauge above password keypad  
lockout\_channel ..... tie to digital gauge above lockout keypad

### **SERIAL OUTPUTS**

antex\_tx\$ ..... route to serial tx\$ for Antex's COM port  
serial\_number\$ ..... serial number for activation  
channel\$ ..... name of channel currently playing  
category\$ ..... name of category currently playing  
artist\$ ..... name of artist currently playing  
song\$ ..... name of song currently playing  
preset\_1-10\$ ..... channel names to be displayed on preset buttons.  
These names are pulled down from the satellite at the time the preset is stored. If the lineup changes, simply store a new preset by holding down the button for 3 seconds.

### **PARAMETERS**

This module does not utilize any parameters.

# Support

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This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email [support@controlworks.com](mailto:support@controlworks.com) or call us at 440-449-1100. 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

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The distribution package for this module should include:

XM100_v2_help.pdf .....	this help file
XM-100 Full Control v2.umc .....	Crestron user module to insert in program
XM-100 Presets v2.umc .....	Crestron user module for fixed presets
XM-100 Demo TPS4500 v2.vtp .....	example touchpanel (TPS-4500)
XM-100 Demo XPANEL v2.vtp.....	example XPANEL (1024x768)
XM-100 Demo v2.smw .....	example program (MC2E)

### Preset Module

A second module "XM-100 Presets v2.umc" is also included. This is to facilitate changing channels from fixed presets within the program (such as from icons on a touchpanel).

## Revision History

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v2 tom@controlworks.com 2005.10.20

Resolved issue with preset text not storing properly without MSP outside of module

caleb@controlworks.com 2005.10.21

Added power polling logic

v1 lincoln@controlworks.com 2005.07.22

First release- ported from XM3000 module V1

## Development Environment

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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.

### Hardware

Crestron PRO2 Processor ..... v3.137

Crestron TPS-6000 Touchpanel ..... v2.002

### Software

Crestron SIMPL Windows ..... Version 2.06.20

Crestron Database ..... Version 17.3.3

Crestron Symbol Library ..... Version 352

Crestron Device Library ..... Version 352

Crestron Vision Tools Pro-E ..... Version 3.3.4.0 Build 20050603:1

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