








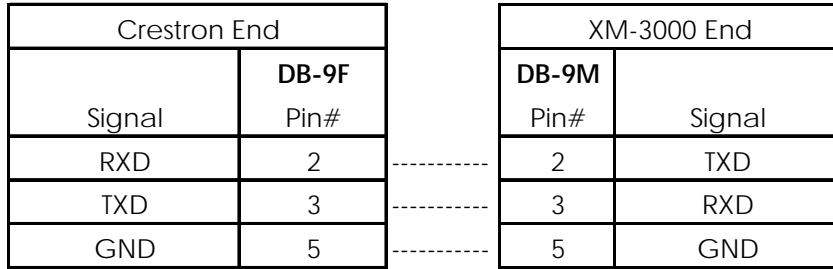
Antex XM-3000 Full Control Module V2 Module Application Guide

Description

This module provides full control of an Antex XM-3000 Sirius Radio Tuner.

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

Serial Cable Pinout



Communications Format:

9600 BPS

No Parity

8 Data Bits

1 Stop Bit

No hand shaking

Module Application

Firmware Requirements

Note: This module requires that V6.10.111 of the Antex firmware is running in the XM-3000. To check the firmware level press and hold POWER on the front of the XM-3000. Use CHANNEL UP and DOWN and SELECT to navigate to XM ID NUMBERS.

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 XM3000 on
power off	powers the XM3000 off
z1_keypad_0-9, ent, clear	tie to keypad in zone 1 for direct channel entry
z2_keypad_0-9, ent, clear	tie to keypad in zone 2 for direct channel entry
z3_keypad_0-9, ent, clear	tie to keypad in zone 3 for direct channel entry
z1_category_up/down	surf category up/down in zone 1. Touchpanel will display currently playing info for channels. When the users stops changing channels for 3 seconds, the selected channel is tuned.
z2_category_up/down	surf category up/down in zone2
z3_category up/down	surf category up/down in zone3
z1_channel up/down	surf channel up/down in zone1
z2_channel up/down	surf channel up/down in zone2
z3_channel up/down	surf channel up/down in zone3
z1_skip/unskip_channel	skips/unskips current channel in zone1 from being accessed during channel/category surfing. Direct keypad entry will still bring up skipped channels. Skipping is applied on a zone-by-zone basis, so the channel will still be accessed during surfing in other zones.
z2_skip/unskip_channel	skips/unskips current channel in zone2
z3_skip/unskip_channel	skips/unskips a channel in zone3
z1_preset_1-20	recalls a previously stored preset channel for zone 1. Each zone stores a unique list of 20 presets. 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.
z2_preset_1-20	presets for zone 2
z3_preset_1-20	presets for zone 3
z1_preset_update	refresh indirect text on zone 1 preset buttons
z2_preset_update	refresh indirect text on zone 2 preset buttons
z3_preset_update	refresh indirect text on zone 3 preset buttons
get_serials	pulse to poll for serial numbers
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).
z1_poll	pulse to force an active poll of zone 1 status. Use sparingly to avoid traffic issues. Unsolicited feedback is provided.
z2_poll	pulse to force an active poll of zone 2 status
z3_poll	pulse to force an active poll of zone 3 status
password_keypad_0-9, ent, clear	tie to keypad for changing parental password
change_password	pulse to begin process of changing password
z1_lockout_keypad_0-9, ent, clear	tie to keypad for locking/unlocking channels in zone 1
z2_lockout_keypad_0-9, ent, clear	tie to keypad for locking/unlocking channels in zone 2
z3_lockout_keypad_0-9, ent, clear	tie to keypad for locking/unlocking channels in zone 3
z1_lock_channel/z1_unlock_channel	pulse to lock or unlock a channel for zone 1. Locking a channel in a zone prevents any access, by preset,

surfing, or direct entry. Used for parental control. Requires password to lock or unlock.
 z2_lock_channel/z2_unlock_channel pulse to lock or unlock a channel for zone 2.
 z3_lock_channel/z3_unlock_channel pulse to lock or unlock a channel for zone 3.

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

antex_rx\$ route to serial rx\$ for Antex's COM port

DIGITAL OUTPUTS

power_on_fb feedback for when XM-3000 is on
 power_off_fb feedback for when XM-3000 is off

 z1-3_preset_1-20_fb feedback for preset buttons in each zone.
 old_password_fb pop up subpage for entering old password when changing password
 new_password_fb pop up subpage for entering new password when changing password
 z1-3_lockout_channel_fb pop up subpage for entering channel to lockout
 z1-3_lockout_password_fb pop up subpage for entering password 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.
 z1_channel currently tuned channel for zone 1
 z2_channel currently tuned channel for zone 2
 z3_channel currently tuned channel for zone 3
 z1-3_keypad_display tie to digital gauge for direct entry keypad
 chapter_3 do not use digital gauges
 password tie to digital gauge above password keypad
 z1-3_lockout_channel tie to digital gauge above lockout keypad

SERIAL OUTPUTS

antex_tx\$ route to serial tx\$ for Antex's COM port
 z1-3_serial_number\$ serial numbers for each zone for activation
 z1-3_channel\$ name of channel currently playing in each zone
 z1-3_category\$ name of category currently playing in each zone
 z1-3_artist\$ name of artist currently playing in each zone
 z1-3_song\$ name of song currently playing in each zone
 z1-3_preset_1-20\$ 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

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

The distribution package for this module should include:

XM-3000 Full Control v2 help.pdf	this help file
XM-3000 Full Control v2.umc	Crestron user module to insert in program
XM-3000 Presets v2.umc	Crestron user module for fixed presets
XM-3000 Demo TPS4500 v2.vtp	example touchpanel (TPS-4500)
XM-3000 Demo XPANEL v2.vtp	example XPANEL (1024x768)
XM-3000 Demo v2.smw	example program (PRO2)

Preset Module

A second module "XM-3000 Presets v1.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

V2 lincoln@controlworks.com 2005.07.22

Adjusted upper limit of lockout keypad to 255d

V1 jim@controlworks.com 2004.11.15

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.

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

ControlWorks Consulting, LLC Module License Agreement

Definitions:

ControlWorks, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 701 Beta Drive, Suite 22 Mayfield Village, Ohio 44143-2330. *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.

Disclaimer of Warranties

ControlWorks Consulting, LLC software is licensed to You as is. You, the consumer, bear the entire risk relating to the quality and performance of the Software. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from any defect in the Software, even if ControlWorks Consulting, LLC had reason to know of the possibility of such damage. If the Software proves to have defects, You and not Us must assume the cost of any necessary service or repair resulting from such defects.

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.

License Grant

Software authored by ControlWorks remains the property of ControlWorks. ControlWorks grants You the non-exclusive, non-transferable, perpetual license to use the Software authored by ControlWorks as a component of Systems programmed by You. This Software is the intellectual property of ControlWorks Consulting, LLC and is protected by law, including United States and International copyright laws. This Software and the accompanying license may not be transferred, resold, or assigned to other persons, organizations or other Crestron Dealers via any means.

The use of this software indicates acceptance of the terms of this agreement.

Copyright (C) 2009 ControlWorks Consulting, LLC All Rights Reserved – Use Subject to License.
US Government Restricted Rights. Use, duplication or disclosure by the Government is subject to restrictions set forth in subparagraphs (a)-(d) of FAR 52.227-19.