

DAS-AMFM AM/FM Tuner Module

Overview

Add AM/FM Radio functionality to your Mi Series or Tango system with the DAS-AMFM AM/FM Tuner Module (FG1110-01).

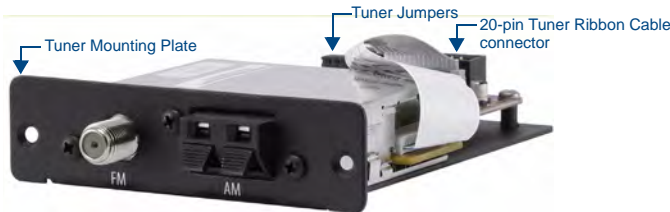


FIG. 1 DAS-AMFM Satellite Radio Tuner Module

- The DAS-AMFM Tuner Module can be used with both Mi-Series and Tango Audio Controllers.
- All Mi-Series and Tango Audio Controllers come equipped with a DAS-AMFM Tuner Module. The Mi-Series and Tango Audio Controllers support two Tuner Modules (DAS-AMFM and/or DAS-SIRIUS) in any combination (one of each, or two of either module). Refer to the DAS-SIRIUS Installation Guide for details on installing the DAS-SIRIUS Tuner Module.
- Each Tuner Module uses 1 source input on the Audio Controller.

Installing/removing Tuner Modules requires removing the cover from the Audio Controller, removing the Tuner Option cover plate from the rear panel of the Controller, installing the Tuner Module, and setting Jumpers on both the Tuner Module to specify each Tuner as either TUNER 1 or TUNER 2, and on the Interface Board pin-bus of the Audio Controller to enable/disable Tuner 1 and 2.

WARNING: Disconnect all power sources before opening the chassis. Failure to disconnect power before performing this installation may cause injury or death.

FIG. 2 provides orientation for the various internal components that must be accessed to install the Tuner and set the Jumpers.

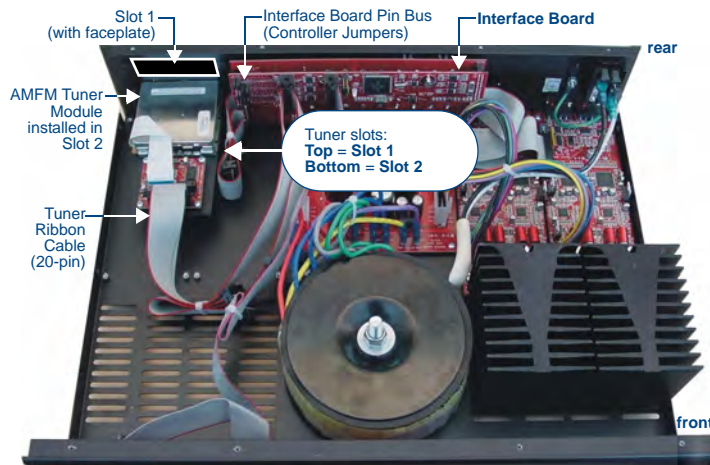


FIG. 2 Audio Controller - Internal view

CAUTION: Make sure to discharge all static electricity from your body before touching any components of the tuner modules or the audio controller. Failure to do so may lead to permanent damage to the tuner or controller.

Setting the Jumpers

Mi-Series and Tango Audio Controllers come equipped with one DAS-AMFM Tuner Module, installed into Slot 2 (see FIG. 2). Mi-Series and Tango Audio Controllers support 2 Tuner Modules in any combination, this document describes installing the DAS-AMFM Tuner Module into Slot 1, leaving the factory-installed DAS-AMFM Tuner Module in Slot 2.

Note: Because of the location of the Jumpers in the Controller and on the Tuner Module, it may be easier to make all jumper settings before installing the Tuner Module in the Controller.

Audio Controller Jumpers - Location

Examine the configuration of the jumpers on the left-side Interface Board Pin Bus, as seen when viewing the Interface Board from the front of the Controller (FIG. 3).

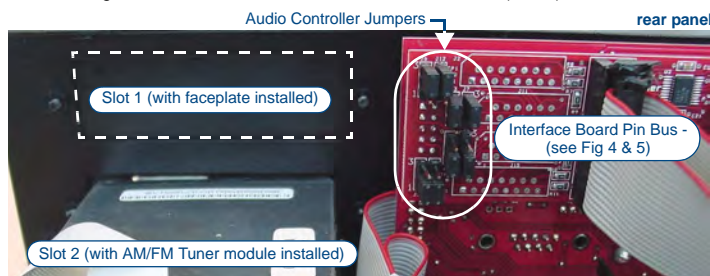


FIG. 3 Audio Controller - Interface Board Pin Bus / Jumpers

Audio Controller Jumpers - ON/OFF Settings

- ON position = pins 3 and 2 jumpered (with pin 1 exposed).
- OFF position = pins 2 and 1 jumpered (with pin 3 exposed).

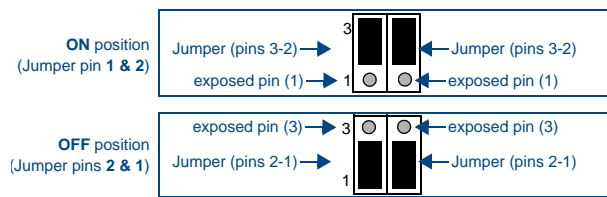


FIG. 4 Controller Jumper Settings

Audio Controller Jumpers - Dual Tuner Setting

If two tuner modules are to be used, the Audio Controller jumpers should all be set to ON, as shown in FIG. 5:

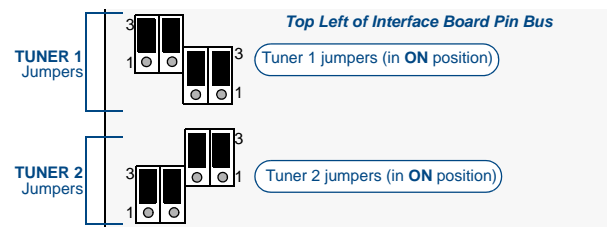


FIG. 5 Audio Controller Jumper Configuration (Dual Tuners)

Move the TUNER 2 jumpers to the ON position by connecting the top 2 sets of pins (pins 3-2) and leaving the bottom pins (pin 1) exposed.

DAS-AMFM Tuner Module Jumpers

There are jumpers on the DAS-AMFM Tuner Module that must be set to differentiate Tuner 1 from Tuner 2 in the Controller.

Note: All DAS-AMFM AM/FM Tuner Modules are shipped in the Dual Tuners Tuner 1 configuration.

The instructions for setting these jumpers differ based on the color of the "Interface Board" (red or green), as described below:

Red Interface Boards

Examine the configuration of the jumpers located on the Tuner Modules, to the right of the 20-pin ribbon cable connector (as seen when viewing the installed modules from the front of the controller).

- Note that there are two rows of 5 pins as shown in FIG. 6.
- With only a single tuner, all pins are jumpered.



FIG. 6 Tuner Module Jumper Configuration (Red Interface Boards)

Green Interface Boards

Examine the configuration of the jumpers located on the Tuner Modules, to the right of the 20-pin ribbon cable connector (as seen when viewing the installed modules from the front of the controller). Note that there are two rows of 5 pins (FIG. 7).

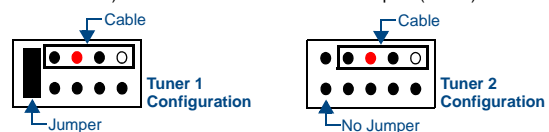


FIG. 7 Tuner Module Jumper Configuration (Green Interface Boards)

Remove all jumpers from the new tuner, and attach the 2-wire (red and white) end of the cable included with your kit to the pins (FIG. 8):

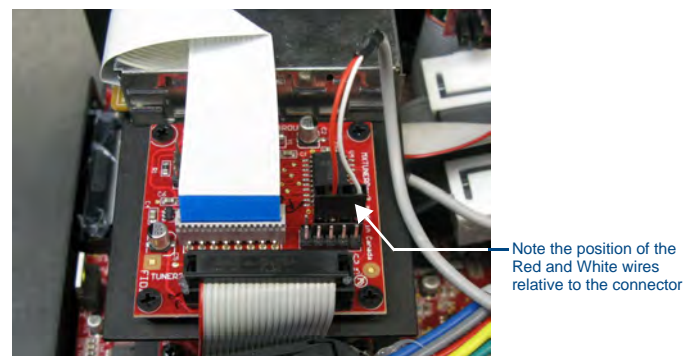


FIG. 8 Audio Controller - 2-wire end of cable connected to the tuner assembly.

Removing the Pre-Installed DAS-AMFM Tuner Module

Mi Series Audio Controllers include one DAS-AMFM Tuner Module as a standard accessory. Since each tuner module uses one source input on the audio controller, in some cases it may be desirable to remove the tuner module in order to use that source input for other purposes.

1. Remove the cover from the controller.
2. Carefully remove the ribbon cable from the tuner module.
3. Remove the screws from the Tuner module cover plate at the right top corner of the rear panel and slide the tuner module out of the chassis.
4. Place all jumpers in the "Off" position (FIG. 9).

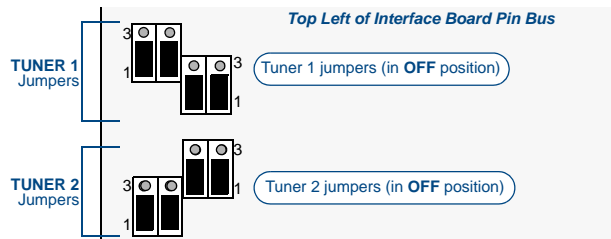


FIG. 9 Audio Controller Jumper Configuration (Dual Tuners)

5. Replace the unit cover.

Installing a Second DAS-AMFM Tuner Module

The following steps describe installing a second DAS-AMFM tuner module into Slot 1 (in addition to the DAS-AMFM module that comes pre-installed in Slot 2). In these instructions, the second tuner is referred to as "Tuner 2".

1. Remove the cover from the controller.
2. With the back of the unit facing you, remove the screws from the Tuner Option cover plate at the right top corner of the rear panel (FIG. 10) and remove the plate. Retain the screws, as they will be used to install the tuner module.

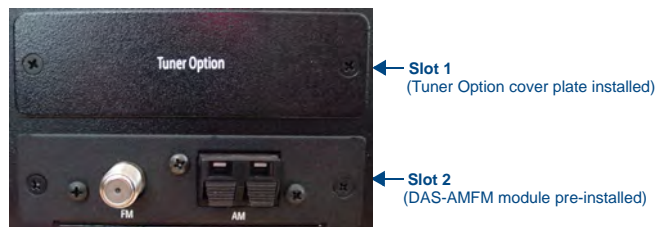


FIG. 10 Rear Panel - Tuner Slots 1 and 2

3. Carefully insert the second DAS-AMFM tuner module into Slot 1, with the electronics facing up, and use the screws that attached the Tuner Option cover plate to secure the tuner to the controller.

Note: Be careful not to damage the ribbon cable on the top of the Tuner module.

4. Place the Rear Panel connector at the end of the ribbon cable (FIG. 11) on the Interface Board pin-bus, keeping the red stripe at the top.

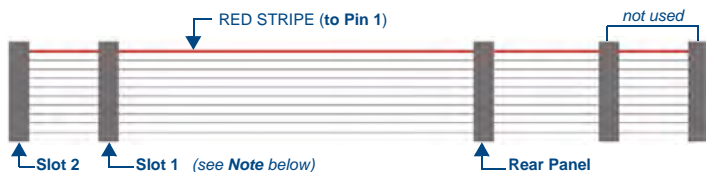


FIG. 11 Tuner Ribbon Cable

5. Connect the "Slot 1" connector on the ribbon cable to the Tuner 2 module (FIG. 12).

Note: The ribbon cable must be oriented so that the red stripe is connected to Pin 1 on the connector.

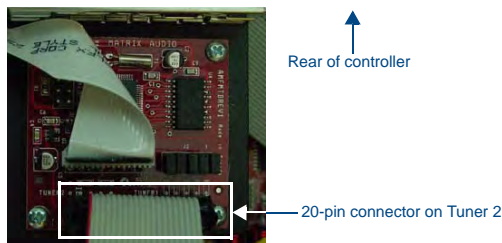


FIG. 12 Tuner 2 Module Connection

- Verify that both ends of the cable are securely plugged into their respective boards through the 20-pin connectors (FIG. 13).

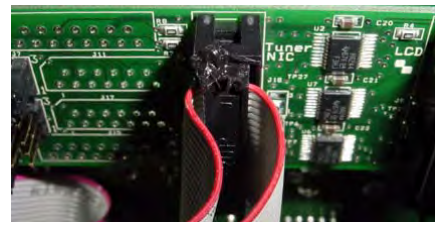


FIG. 13 20-Pin Connector and Ribbon Cable

6. Replace the two screws that were removed when the Tuner Option cover plate was removed to secure the faceplate of the DAS-AMFM to the controller.
- FIG. 14 provides a view of the inside of the controller, with two tuners installed.

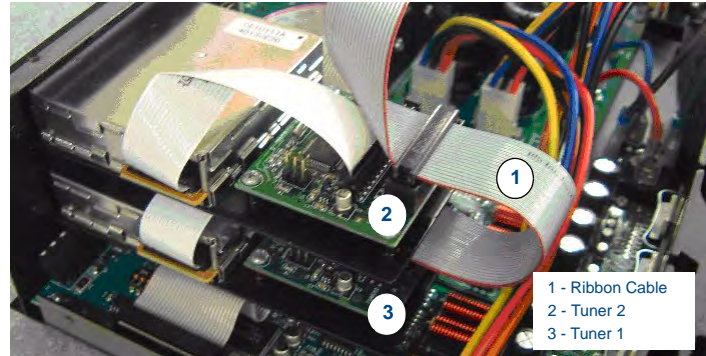


FIG. 14 Dual Tuner Cable Connection

Note: While it is recommended that you use the Slot 2 connector on the ribbon cable to connect the Tuner installed in Slot 2 (in this case, the DAS-AMFM Tuner), the ribbon cable itself does not determine which Tuner is Tuner 1 and Tuner 2. This determination is set by the jumper settings on each Tuner Module (see "Dual Tuner Installation Instructions" above). Therefore, it is not required that the connections indicated in FIG. 11 are followed exactly, as long as the Tuner Jumper Settings are set correctly for each Tuner Module installed.

7. On units with green Interface Boards only: Connect the supplied cable from the tuner to the Interface Board as shown in FIG. 15.

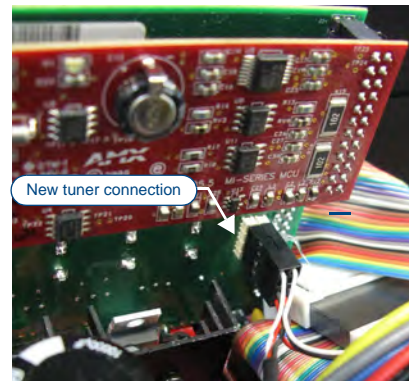


FIG. 15 Connection of the cable to the left-side pins on the back of the interface board.

Note: The 3-wire end connects to the open pins on the Interface Board with the white wire pointed up.

8. Use the supplied cable ties to secure the cable loosely as illustrated in FIG. 16:

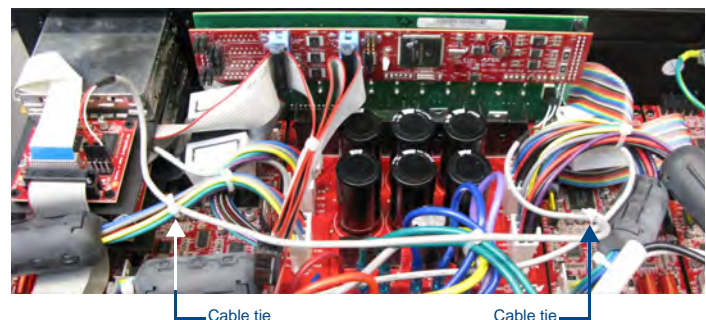


FIG. 16 Cable Routing

