Integration Note

Manufacturer:	Audio Design Associates (ADA)
Model Number(s):	**Tune Suite (Quadritune)**
Core Module Version:	
Comments:	Quadritune v2.2, TFM-1 v2.1, HDM-1 v3.2, XM v2.01, Sirius v1.0
Document Revision Date:	1/28/2013

OVERVIEW AND SUPPORTED FEATURES

The Tune Suite tuner is a modular tuner system that allows for the use of up to 4 tuners of varying types within a single chassis controlled by a single RS-232 port. The line includes modular tuners of the following types: **AM/FM/WX**, **HD AM/FM**, **XM Satellite**, and **Sirius Satellite**.

The Tune Suite provides an RS-232 connection through the ISO-CAT II or ISO-232 isolation box. This serial connection to the **g!** system provides full two-way communications, enabling reliable control as well as providing feedback to the **g!** system when changes occur at the tuner.

Up to seven of these chassis can be daisy chained together via the ADA bus to expand the number of tuners available.

UNSUPPORTED FEATURES:

The WX Weather band provided by the TFM-1 module is not currently supported.

Any feature not specifically noted as supported should be assumed to be unsupported.

INTEGRATION REQUIREMENTS

1. During the rough-in phase install the necessary power and A/V cabling for the tuner.
2. Also during the rough-in phase, run a Cat5 wire from the location of the tuner and isolation box back to the Network Assembly of the **g!** system to provide the serial connection needed to control the tuner. Refer to the **RS-232 Connection Options** Integration Note for other serial connection options.
3. Install the tuner and other home audio or theater components.
4. Program the tuner according to the manufacturer's documentation: see **ADA Programming** below.
5. Test the tuner with the audio / video equipment to ensure that the stations tune and play correctly.
6. Connect the **g!** system to the tuner electrically. See the connection diagram for more information.
7. Configure the **g!** system for the tuner and confirm communication between the tuner and the **g!** system controller.
8. Test the system by changing stations from the Viewer interface.

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ADA PROGRAMMING

The ADA must be programmed according to normal ADA instructions, with the following additional requirements:

SWITCH SETTINGS ON ISOLATION BOX

The isolation box (ISO-CAT II) has switches which must be set as follows:

1. Set switches 1, 2 and 3 Down
2. Switch 4 Up.

UNIT ADDRESS SETTINGS:

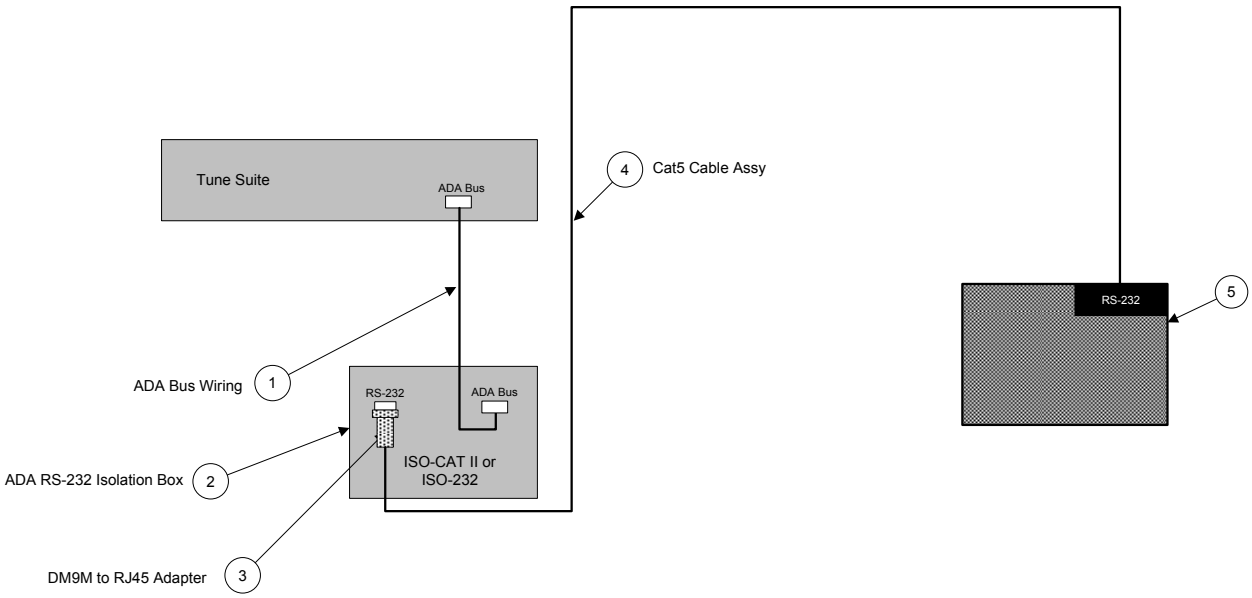
The Tune Suite features a rotary switch on the rear of the unit to configure the address settings for the unit and its modules.

1. Select a setting that supports 19200 baud and provides adequate addressing for the number of the modules you have installed (some settings do not provide an address for the 4th module).
2. If you are using a Sirius or XM tuner, select a setting that supports “5 Line Touch Screen”. This will enable individual feedback for station name, artist, track name, etc. that the HomeLogic Interface needs.
3. Program the SETUP menu for the Unit Address via the front display. Match the address setting to the digit you selected on the rear rotary switch to allow the front display to communicate properly with the installed modules. This is accomplished with the following steps on the front display unit:
    - Press the “Select” knob in and hold for 5 seconds until the SETUP menu appears.
    - Rotate the “Select” knob to move the cursor down to the address line.
    - Rotate the “Tune” knob to change the address.
    - Rotate the “Select” knob until the cursor is on the “M+” item and press the “Select” knob to exit the menu.

CONNECTION DIAGRAMS

Note: The Quadritune does not supply power to the ISO-CAT. If an ISO-CAT connection is being used to control the Quadritune, a separate power supply is required for the ISO-CAT. See the ISO-CAT installation instructions provided by ADA.

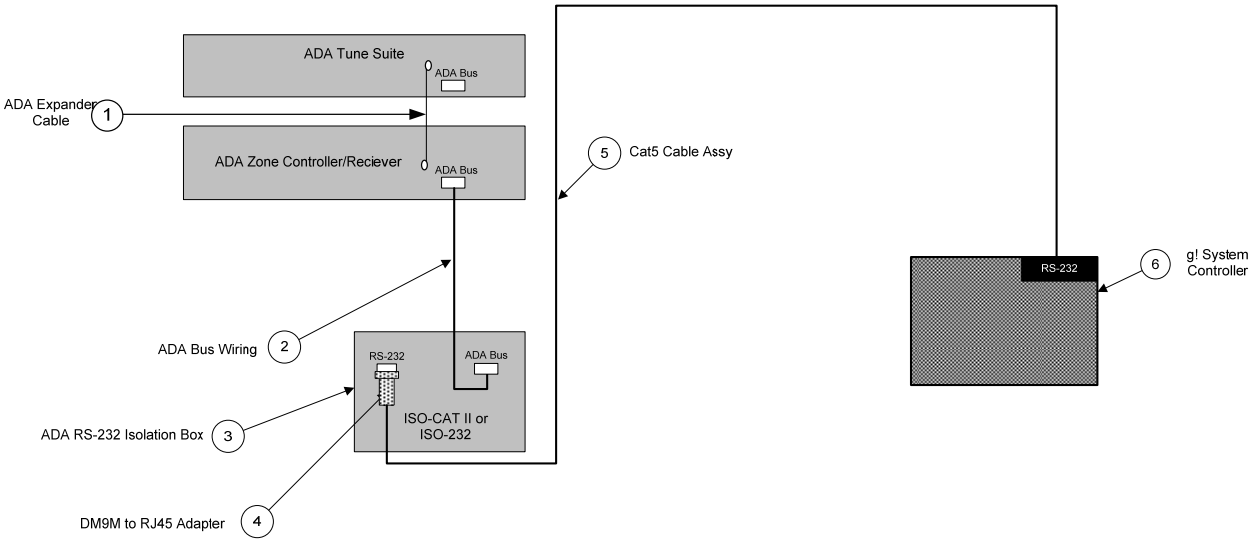
WIRING FOR STANDALONE UNIT



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	ADA Bus Wiring	Installer	N/A	ADA Bus	Screw x Screw	3C 18awg Shielded cable (alt. 4C 16AWG speaker cable) 15' Max wire run length
2	ADA RS-232 Isolation Box	ADA	ISO-CAT II or ISO-232	ADA Bus x RS-232	Screw x DB9 Female	Use add'l power as ada specifies
3	RJ45 x DB9 male adapter	ELAN	HW-CB-307	RS-232	RJ-45 Female X DB-9 Male	
4	Cat5 Cable Assy	Installer	N/A	RS-232	RJ-45 Male x RJ-45 Male	
5	g! System Controller	ELAN	Various (e.g. HC12)	RS-232 & Ethernet	RJ-45	

WIRING OPTION WHEN USED IN CONJUNCTION WITH AN ADA ZONE CONTROL/RECEIVER PRODUCT



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	ADA Expander Cable	ADA		ADA Bus	4-pin ADA Connector	Required to link multiple ADA chassis
2	ADA Bus Wiring	Installer	N/A	ADA Bus	Screw x Screw	3C 18awg Shielded cable (alt. 4C 16AWG speaker cable) 15' Max wire run length
3	ADA RS-232 Isolation Box	ADA	ISO-CAT II or ISO-232	ADA Bus x RS-232	Screw x DB9 Female	Use add'l power as ada specifies
4	RJ45 x DB9 male adapter	ELAN	HW-CB-307	RS-232	RJ-45 Female X DB-9 Male	
5	Cat5 Cable Assy	Installer	N/A	RS-232	RJ-45 Male x RJ-45 Male	
6	g! System Controller	ELAN	Various (HC12)	RS-232 & Ethernet	RJ-45	

g! CONFIGURATION DETAILS

The following table provides settings used in the **g!** Configurator. Please refer to the ***g!*** *Configurator Reference Guide* for more details.

- "<Select>" Select the appropriate item from the list (or drop-down) in the Configurator.
- "<User Defined>", etc. Type in the desired name for the item.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default:ADA ISO-CAT)	
	Type	**Serial Port**	
	Communication Type	**ADA Bus**	
	Location	<User Defined> (Not Required)	
	COM Port	<Select>	
Audio Tuners	**Name**	<User Defined> (Default: **ADA *XXX* Tuner**)	Add Tuner 1
	Device Type	**ADA *XXX* Tuner**	*XXX* = Tuner type per your module configuration
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **ADA ISO-CAT**)	
	Address | Module	**Configure to match setting at tuner**	Set to match your address settings for this module
Audio Tuners	**Name**	<User Defined> (Default: **ADA *XXX* Tuner**)	Add Tuner 2 (*see note 1)
	Device Type	**ADA *XXX* Tuner**	XXX = Tuner type per your module configuration
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **ADA ISO-CAT**)	
	Tuner ID	**Configure to match setting at tuner**	Set to match your address settings for this module
Audio Tuners	**Name**	<User Defined> (Default: **ADA *XXX* Tuner**)	Add Tuner 3 (*see note 1)
	Device Type	**ADA *XXX* Tuner**	*XXX* = Tuner type per your module configuration
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **ADA ISO-CAT**)	
	Address | Module	**Configure to match setting at tuner**	Set to match your address settings for this module
Audio Tuners	**Name**	<User Defined> (Default: **ADA *XXX* Tuner**)	Add Tuner 4 (*see note 1)
	Device Type	**ADA *XXX* Tuner**	XXX = Tuner type per your module configuration
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **ADA ISO-CAT**)	
	Tuner ID	**Configure to match setting at tuner**	Set to match your address settings for this module
<Audio Zone Controllers>	Add an Audio Zone Controller: refer to the Integration Note for your particular receiver or zone controller. (See Note 2)		

Notes:

1. Add only as many tuners as you have installed in your Quadritune.
2. You must add an Audio Zone Controller to get a tab in the Viewer interface.
   For compatible receivers and zone controllers, refer to the Integration Note for the particular system.
   For a single zone where the device is connected to a basic amp, refer to the **Single Zone Audio** Integration Note.

COMMON MISTAKES

1. Incorrect settings on the ISO-CAT or ISO-232 interface module. Check to see that the button configuration is correct on the module. Refer to section **ADA Programming** for information.
2. Incorrect setup of the tuner modules. Make sure that the tuner module and address are set up correctly in the **g!** Configurator.
3. Incorrect address for the display unit. If you have an empty LCD display on unit after changing address: check to ensure that your address setting for the dial on the back of the tuner match the settings you have configured thru the unit's display.
4. Conflicting address setting when using multiple tuners. If you have multiple Tune Suites, be sure you do not have multiple units with the same rotary switch address settings.