DigiLinX™ Application Note

Using 1-Way RS-232 to Control Sources

Dealer Setup 2.4 and higher offer installers the ability to control a number of source types via RS-232 instead of IR. The RS-232 is 1-way control and is intended to provide a more reliable means of control for sources.

The following source types can be controlled via RS-232.

- DVD/Blu-Ray players
- CD players
- DVR
- Tuner

Currently there is NO one-way control of receivers or displays that are connected to TheaterLinX.

Implementing 1–way RS-232 Control

RS-232 control is implemented via a LUA driver file. LUA is the driver language used by the DigiLinX system. *NetStreams* provides templates for each source type these templates need to be modified for the specific device you are using based on the RS-232 protocol for the device.

One of the following encoding devices is required to do 1-way RS-232 source control.

- MLA101
- MLA4000
- MLAV300
- MLAV9300-CS

IT IS CRITICAL THAT THE APPROPRIATE CABLE BE USED OTHERWISE THE RS-232 CONTROL WILL NOT FUNCTION.

- *NetStreams* 3.5mm to DB9 cable (DigiLinX products transmit on Pin 2 and receive on pin 3)
- Male to Male DB9 Gender bender (Optional depends on source)
- Null modem cable (Optional depends on source)

Once you have physically connected the devices with the appropriate cables you need to tailor the LUA driver template for your specific device.

Tailoring the LUA Driver Template

LUA Driver templates are located in a sub-directory where your dealer setup application was installed. The default directory for dealer setup is \Program Files\DigiLinX Dealer Setup.

With the default installation directory, the LUA driver templates are located in

\Program Files\DigiLinX Dealer Setup\upgrades\01_19_2009\Driver Templates\

The date 01_19_2009 is the latest upgrade date for version 2.4, it will be later dates for future versions of DigiLinX Dealer Setup.

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There are four driver templates:

- CDTemplate.lua for CD players
- DVDTemplate.lua for DVD and Blu-Ray players
- DVRTemplate.lua for DVRs
- Tuner Template.lua for tuners

First, under the DigiLinX Dealer Setup directory create a directory called: drivers. The directory with the defaults should be \Program Files\DigiLinX Dealer Setup\Drivers

Copy the appropriate lua template to the Drivers directory and rename it appropriately. For example SonyBluRay.lua if you are controlling a Sony Blu-Ray.

Setting the appropriate communication settings

Now open the .lua in a text editor such as Notepad. See figure 1 below.

Figure 1: Open .lua file in Notepad

Now you need to set the correct serial control parameters. These settings will depend on the source you are connecting too. Check the source RS-232 Protocol guide. Search for 'baud=' as shown in Figure 2.

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Figure 2: Search dialog in Notepad

The line you will find after the search will look like

port = "comm://default;baud=9600;bits=8;parity=0;stop=1"

Verify the appropriate baud, bit rate, parity, and stop bit for the device you are trying to control.

Setting the Appropriate Serial Command Strings For Your Source

Search for 'CmdTable ='

You will find a table as shown in Figure 3. These are the available commands for this source type.
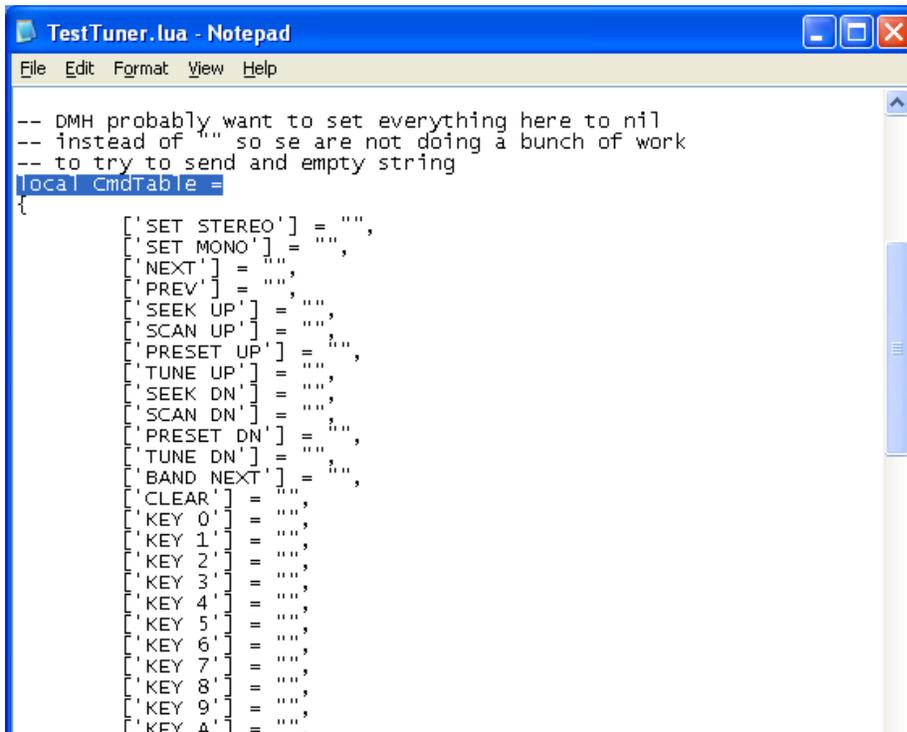
Figure 3: Command Table for Tuner Source

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Edit the command table with the appropriate RS-232 strings. For example,

To enter the RS-232 command for TUNE UP:

> Locate the TUNE UP command line:

>> ['TUNE UP'] = "",

> Add the appropriate RS-232 command for the source to do a TUNE UP between the quotes

>> ['TUNE UP'] = "W 1 6 1",

> Note that in most RS-232 Protocols you are required to put a Carriage Return to indicate an end of command. Use %0D to indicate a Carriage Return.

>> ['TUNE UP'] = "W 1 6 1%0D",

Once you have edited the file save it and open DigiLinX Dealer Setup.

Once you've opened Dealer Setup, add the appropriate encoder, for example an MLA101 as shown in Figure 4 below.
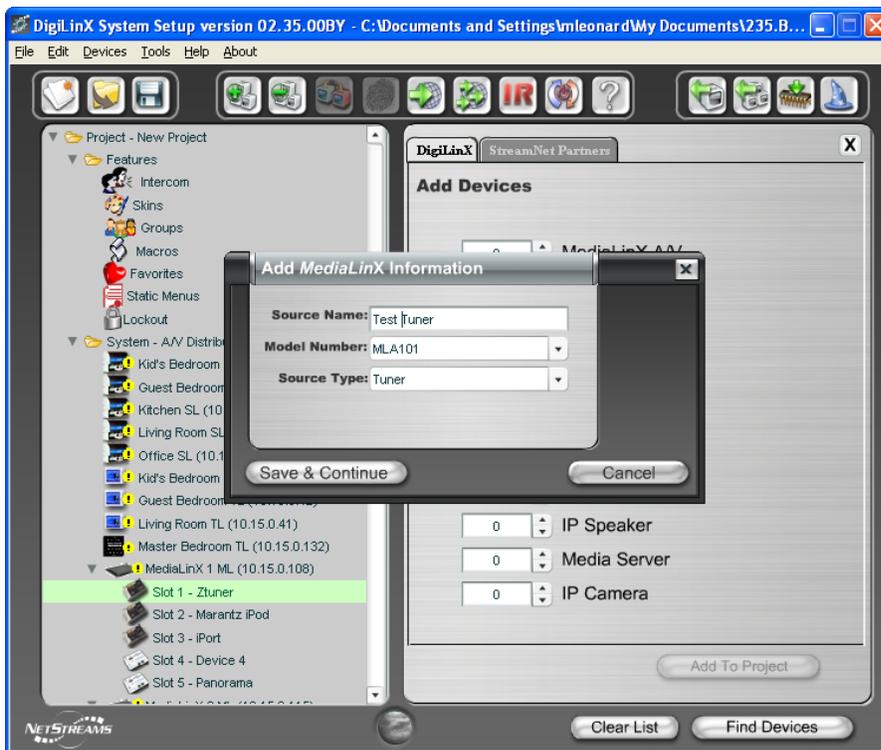
Figure 4: Adding an MLA101 for control of a Tuner

Once the device is added click on the device and click on the source tab for the MLA101. You will see the screen shown in Figure 5.

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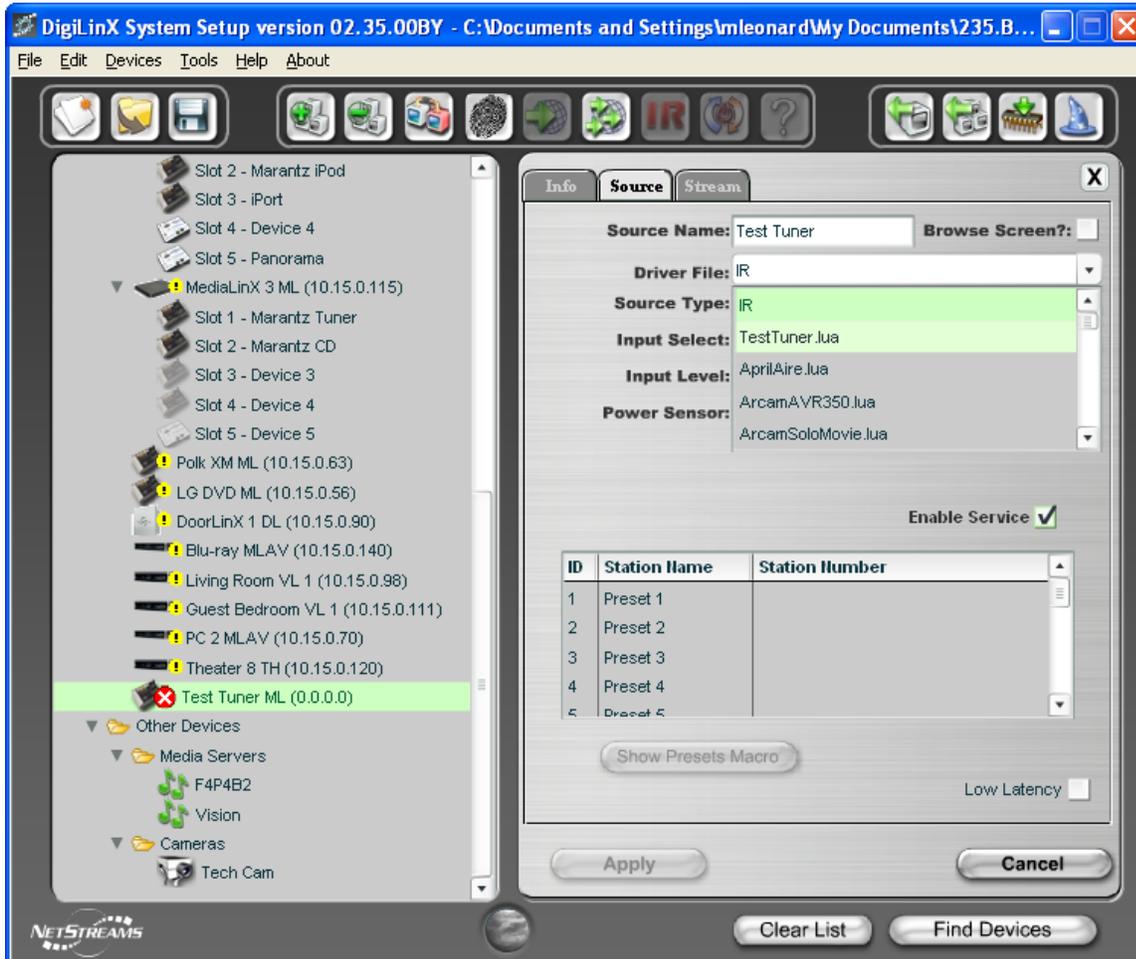
Figure 5: Source tab for MLA101

Click the drop down for the driver file and select your modified lua file. Apply the changes.

Match the device as you normally would, ensure you have the latest firmware then update the configuration for your device.

The device should now be controllable via RS-232.

If you require further assistance please contact *NetStreams* Technical Support.