



Animated Lighting

Quick Reference
and
Troubleshooting

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Quick Reference and Troubleshooting

Selecting one of Monster Brain's Built-in Shows

Provided with ProSeries PO-16MB(x) and PO-8MB(x).

Selecting a Show:

1. Plug the lights into the receptacles and plug-in the power cord.
2. Rotate the show selection dial on the Monster Brain to the desired number/letter.
3. Press **Reset** on the Monster Brain controller to start the selected show.

Making a Routine that Starts Up a Show

Requires Animation Director and Monster Brain.

Creating a Startup Routine:

1. In Animation Director, click **Digital** and identify applicable digital/analog inputs. Click **X10** and identify applicable house/unit codes.
2. Select the **Startup Routine tab** and select one or more trigger conditions. Or select **Always** so the show runs continuously when running.

Days of the Week: When selected, choose what time of which days you would like your show to start and stop. Note: When using Days of the Week, be sure to set the time in the Monster Brain and use a backup battery in case of power failure.

Digital Input: When selected, choose the condition of a digital input to trigger your show to start.

Analog Input: When selected, choose the value of an analog input to trigger your show to start.

X10 Received: When selected, choose the house and unit code of an X10 input to trigger a show to start.

3. Select whether your show runs continuously, runs once, or randomizes the selected routines from the **When Triggered area** of the Startup Routine tab.
4. Check the **Initialize box** to refresh Light group information whenever a show starts.
5. To include the Startup routine with your other show routines and store them on Monster Brain, refer to the section *Moving a Show to Monster Brain*.

Applying Light Behavior in a Grid Routine

Requires Animation Director.

Manipulating Lights in a Grid routine:

1. In Animation Director, click **Lights** to identify all your lights.
2. Right-click in the **Routines list** and choose **Add Grid Routine** to create a new grid routine.
3. In the Grid tab, turn lights on and off by clicking cells in the grid adjacent to the lights you want to manipulate. That light color is activated during that point along the grid timeline.
4. Change points along the timeline by right-clicking the column headings and selecting **Change Column Time**. Select how you want the time altered, then either drag the slider or enter a new value in the box. Multiple columns can be selected and adjusted simultaneously.

5. Change light effects by right-clicking a column heading and selecting **Change Light Effects**. Select the desired effects settings. The column heading in the grid turns yellow to indicate an effect, rate, or style change.

To set the behavior of the current light when the next light in series is activated, use the **Style** setting. **Set** turns off the current light instantly when the light in the next cell is activated. **Fade** uses the **Fade Rate** setting to fade the current light off when the light in the next cell is activated. **Add** keeps the current light on through the timeline until **Add** or **Set** is applied.

Synchronizing Lights to Music

Requires Animation Director and a music file.

Creating a “Song” Routine:

1. In Animation Director, right-click in the **Routines list** and choose **Add Grid Routine** to create a new grid routine.
2. In the **Add New Routine window** click **Browse** in the **Optional Song area** of the window.
3. After selecting a song, click **OK** to add the grid routine to your show.
4. In the main menubar of Animation Director, choose **Grid >Audio Wizard** to tap out the beat of the selected song which in turn applies transition points in the grid’s timeline. To work with tracks, choose one from the **Tracks list** above the grid.
5. In the **Audio Wizard**, click **Start** to cue the selected song.
6. After the 3-second countdown, click in the **Click Here button** to mark the spots in the song where you want timeline transitions to occur.
7. Click **Stop** to halt playback. Click **Reset** to start over.
8. Click **OK** to exit the **Audio Wizard** and apply the timeline transitions to the grid. The timeframes shown in the column headings correspond with the points in time that you clicked in the Audio Wizard.
9. Click in the grid cells to activate the applicable lights during each point along the timeline.
10. Change light effects by right-clicking a column heading and selecting **Change Light Effects**. Then select the desired effects settings. The column heading in the grid turns yellow to indicate an effect, rate, or style change.

Testing Grid Routines in Animation Director

Requires Animation Director.

Running Grid Routines Using Grid Animation:

1. In Animation Director, right-click in the **Routines list** and choose **Add Grid Routine** to create a new grid routine.
2. Define the routine by clicking in grid cells to activate the lights and other devices in your show. Right-click the column headings to choose options that make adjustments to the timeline and specify the behavior you want the show components to perform.
3. When you’re ready, click **Run Live** above the grid to watch the grid animate and move through the grid’s timeline.

To run ALL the Grid routines that you’ve created, check the boxes next to the ones you want to run. Then select any Grid routine in the **Routines list** and choose **Routines > Run All Grid Routines Live** from Animation Director’s main menubar. When the **Run Routines window** is displayed, click **Trigger Now** to start the animation. Click **Stop** to halt it. If you close the window, the animation stops.

If you want to run Grid routines against the actual lights and other devices in your show, you'll need to connect everything together, and give them power.

1. Click **System** in Animation Director. Then, in the **Setup tab**, make sure that the box is checked next to **Communicate Through Monster Brain**.
2. In the **Version tab**, click **Get Info** to verify that communication is occurring between Monster Brain and Animation Director.
3. Run the Grid routine(s) as instructed in the section above. This way you can watch the grid animate and see how your timeline settings are applied to the actual show components.

Testing Source Code Routines in Animation Director

Requires Animation Director and connections made between Monster Brain and controllers, as well as to the lights and other devices in your show. Connect Monster Brain to your PC with the serial cable and give power to all.

Running Source Code Routines:

1. Click **System** in Animation Director. Then, in the **Setup tab**, make sure that the box is checked next to **Communicate Through Monster Brain**.
2. In the **Version tab**, click **Get Info** to verify that communication is occurring between Monster Brain and Animation Director.
3. Right-click in the **Routines list** and choose **Add Code Routine** to create the code routines you want in your show.
4. To run the Source Code routines that you've created, check the boxes in the **Routines list** next to the code routines that you want to run.
5. Click **Compile** to compile the code in all the selected routines. Be sure to fix any errors indicated at the bottom of the Animation Director window, then Compile again.
6. Make sure your **Startup routine** is set up to trigger the show. Click **Load** to move the show to Monster Brain.
7. Click **Run** to run the show. Click **Stop** to halt it.

Testing Grid/Source Code Routines in the Visualizer

Requires Animation Director and the Visualizer Plug-in.

Running Routines Using the Visualizer:

1. In Animation Director, right-click in the **Routines list** and choose **Add Code Routine** or **Add Grid Routine** to create the routines you want in your show.
2. In the Visualizer, draw the show components that you want to simulate.
3. Click the **Routines button** to return to Animation Director.
4. Choose **Routines > Visual Simulation** from Animation Director's main menubar.
5. **To test Source Code routines:** in the **Routines list** in Animation Director, check the boxes next to the code routines you want to run. Then click **Compile** and then **Run**.
6. **To test Grid routines:** in the **Routines list** in Animation Director, check the boxes next to the Grid routines you want to run. Then choose **Routines > Run All Grid Routines Live** in Animation Director's main menubar.

Moving a Show to Monster Brain

Requires Animation Director and Monster Brain connected to your PC with a serial cable.

Moving a Show to Monster Brain:

1. Click **System** in Animation Director. Then, in the **Setup tab**, make sure that the box is checked next to **Communicate Through Monster Brain**.
2. In the **Version tab**, click **Get Info** to verify that communication is occurring between Monster Brain and Animation Director.
3. Click **Compile** to compile all your Grid and Source Code routines. Fix any errors and Compile again.
4. Choose **File > Save Show** to save and name your show.
5. Click **Load** to coordinate the current show with a number/letter on Monster Brain's show dial, as well as move the show to Monster Brain.
6. Click **Run** to see the show perform before moving all your show components to their ultimate destination.
7. Engage the trigger that starts the show.
8. Click **Stop** to halt the show.

Running a Light Macro in Stand-Alone Mode

Requires Animation Director and a serial connection from your PC to the Light controller.

Running a Macro:

1. In Animation Director, click **Lights**.
2. In the **Controllers tab**, identify the Light controller.
3. In the **Macros tab**, build your macro then click **Download** to store the macro on the Light controller.
4. Install the jumper over pins 1 on the Light Controller, then connect the lights to the Light Controller.
5. On the Light controller choose the letter/number that matches the one you chose in the **Macros tab** when you created the macro.
6. Press the **Reset button** on the Light Controller to start the selected macro.
7. To run a different macro, repeat steps 3 through 6.

Serial Cable Test

Instructions

1. Connect the Female Side of the DB9 Serial Cable into the PC's serial port.
2. Open HyperTerminal on your PC. The Default location is START / All Programs / Accessories / Communications / HyperTerminal
3. Enter a name for the connection in the 'Connection Description' window and click OK.
4. In the 'Connect To' Window Select 'COMx' (where x is the number of your COM Port) in the 'Connect Using' selection box and click OK.
5. In the 'COMx Properties' window select the settings as shown in Figure 1 and click OK.
6. Type a few characters on the keyboard with the HyperTerminal window in focus. There should not be anything appearing on the screen when you type.
7. On the Male Side of the DB9 Serial Cable, short (connect) pins 2 and 3 as shown in Figure 2.
8. Type a few characters on the keyboard with the HyperTerminal window in focus. You should see characters appear on the screen as you type. The characters that appear may not be the same as the one you type. The importance is that data is being transmitted and received to and from the PC.
9. If this test passes then your serial port and serial cable are working properly. If this test fails make sure that your settings are correct or try another serial cable. You do not need to save the connection in HyperTerminal.

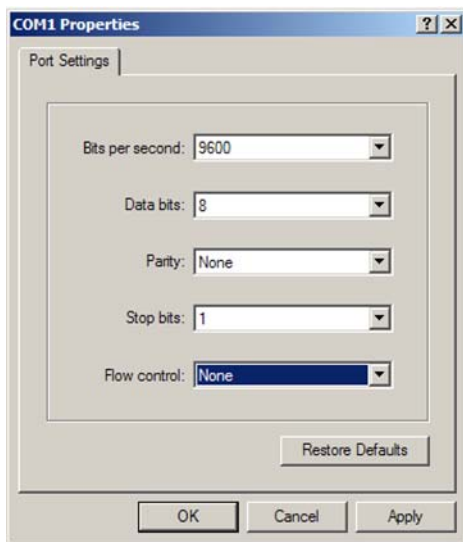


Figure 1

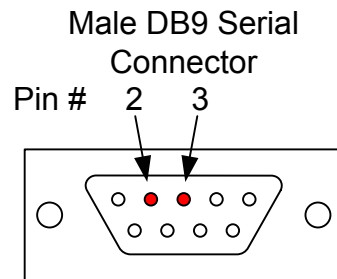


Figure 2

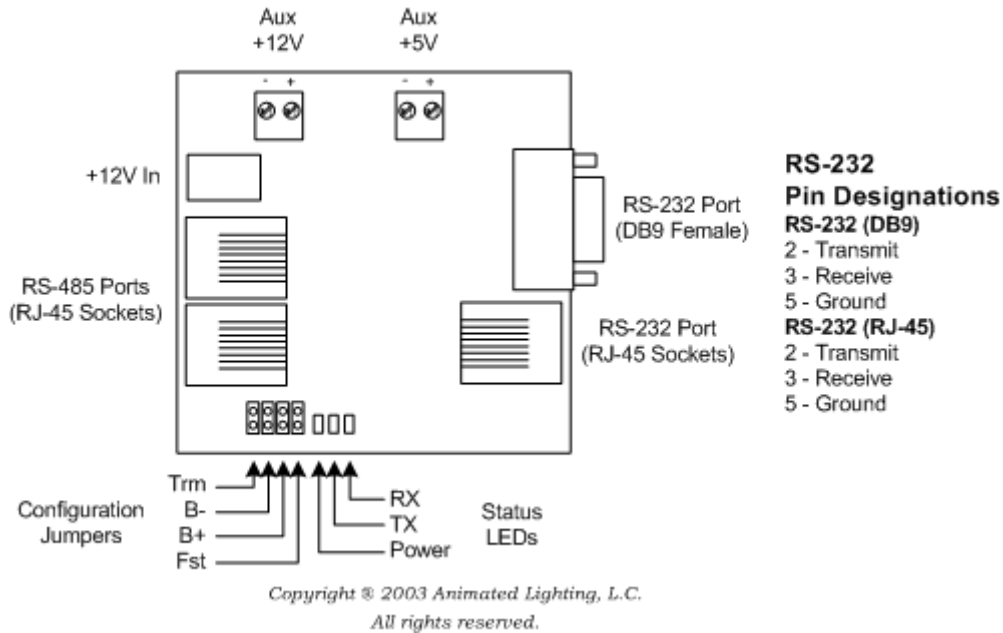
CONV-2 RS485 Converter Instructions

The RS485 Converter board is a bidirectional interface for converting RS232 signals to and from RS485 signals. It can be used in several configurations along with Animated Lighting's other controller boards.

Features include automatic baud rate adjustment; transmit/receive indicator LEDs, and auxiliary power inputs and outputs for connection to other devices. There are two RS232 connectors and two RS485 connectors.

The converter is ideal for connecting a PC to a network of Animated Lighting controllers including the LC-16 light controller as well as digital and sound controllers.

Connections – There are several connectors used on the converter board.



Power In - Power is typically supplied by a 12 volt DC wall power brick such as those sold by Animated Lighting. This 12 volts is also available on a terminal block to power low-current devices and is protected from reverse polarity connections. The 12VDC terminal block may also be used to power this board from another source (like a LC unit). See below for more information.

Aux 12 Volts DC out – This terminal block can be used to power other low current 12 volt DC devices, eliminating multiple power bricks. This output is limited to 500 milliamps or less and is not regulated. The power available comes directly from the Power In connector through a diode.

You can also power this converter board using the terminal block as an input – receiving 12 volts DC from another board. This input is not protected from reverse polarity so care should be taken when using it as an input as reversed power could destroy the board.

Aux 5 Volts DC Out – This terminal block can be used to power low current 5 volt DC devices. It provides a regulated 5 volts and is limited to 500 milliamps. You cannot use this terminal block as an input.

RS232 (DB9 Connector) – This DB9 connector is intended to connect to your computer's serial port. It is intended for use with a straight-through male to female serial cable. The pins are wired as follows: Transmit = 2, Receive = 3, Ground = 5.

RS232 (RJ45 Connector) – This RJ45 serial (RS232) connector is intended to connect to systems that use modular jacks instead of a DB9 connector. The pins are wired as follows: Transmit = 2, Receive = 3, Ground = 5.

RS485 In/Out – These two RJ45 jacks are used to connect the converter to the Animated Lighting controller network. Both connectors are identical so you can use either one. All controllers on the network are connected in a daisy chain. Standard Category 5 network cabling can be used to connect the controllers. These cables are available from your local electronics store, most large hardware stores such as Home Depot or Lowes, or Animated Lighting.

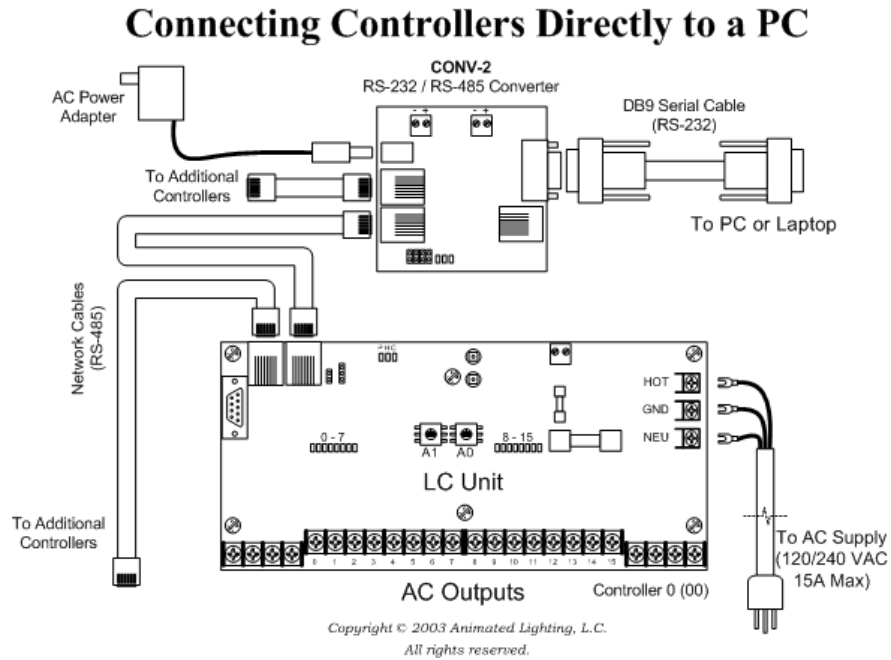
Jumpers – There are four jumpers used on the converter board:

- RS485 Termination (labeled Trm) - There is a termination jumper for the RS485 connection. In small setups or short cable runs this jumper doesn't need to be installed. On longer runs, this jumper should be installed on the first and last boards in the daisy chain.
- B- and B+ – These jumpers are not used in Animated Lighting's network configuration.
- Fst – This jumper is not used in Animated Lighting's network configuration.

Indicator LEDs – There are three indicator LEDs on the board. The first one is the Red power LED and it lights continually if the board is powered on. The second Green LED lights when data is being received from the RS485 network. The third Yellow LED lights when data is being transmitted to the RS485 network. Note that unless there is a lot of data being transmitted, these LEDs will not light very brightly.

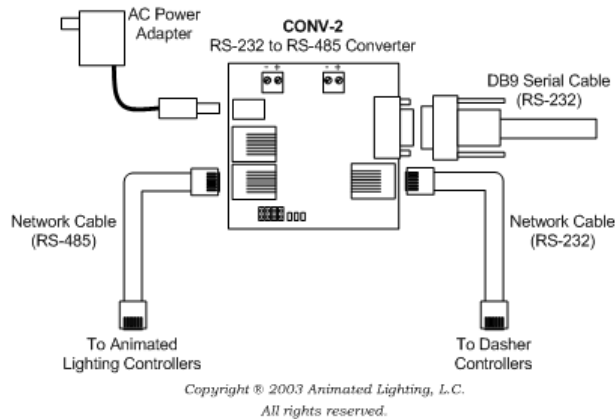
System Configurations –There are a variety of different system configurations possible using the converter.

1. PC to Animated Lighting network – This is the most common configuration. This configuration is used when the Animation Director software communicates with controller boards on Animated Lighting’s RS485 network without using a Monster Brain™ animation processor. It allows bidirectional communications with all controllers.



2. PC to RS232 and RS485 controllers (A) – This configuration can be used when there is a mixture of RS232 and RS485 controllers on the network. The PC RS232 output connects to all of the RS232 controller boards as well as the converter. Only the RS485 controllers can send data back to the PC.

Using Animated Lighting Controllers and Dasher Controllers Together



3. PC to RS232 and RS485 controllers (B) – You can use two converter boards to extend your RS232 network. Since RS485 is much better at communicating long distances at high speeds, you can connect one converter to your PC to convert the RS232 to RS485. You can then connect another to convert the RS485 back to RS232 to operate any RS232 controllers.

Extending RS-232 Signals

