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The Animated Lighting IRSFC24FB Signal Repeater is a key component in installations where long distances are involved between the computer and the light controllers. Typical venues include shopping malls, race tracks or stadiums. The RS-485 signaling protocol is rated to go thousands of feet and handle up to 32 controllers with no problem but there are environmental issues where the signal repeater can take a marginal signal, clean it up, regenerate it and make it usable again to go further distances and address more controllers.

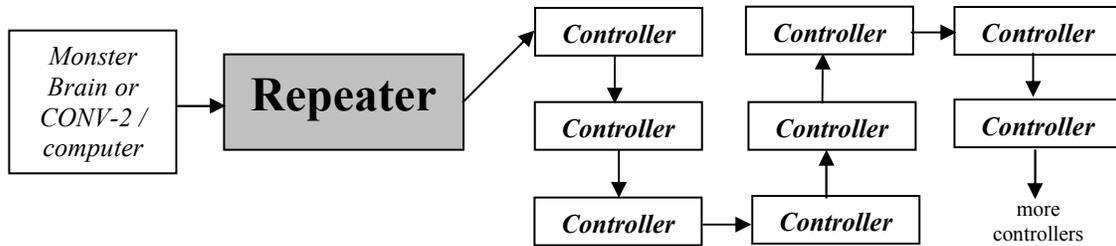
The IRSFC24FB is a product from R.E. Smith and modified to work with Animated Lighting controllers.

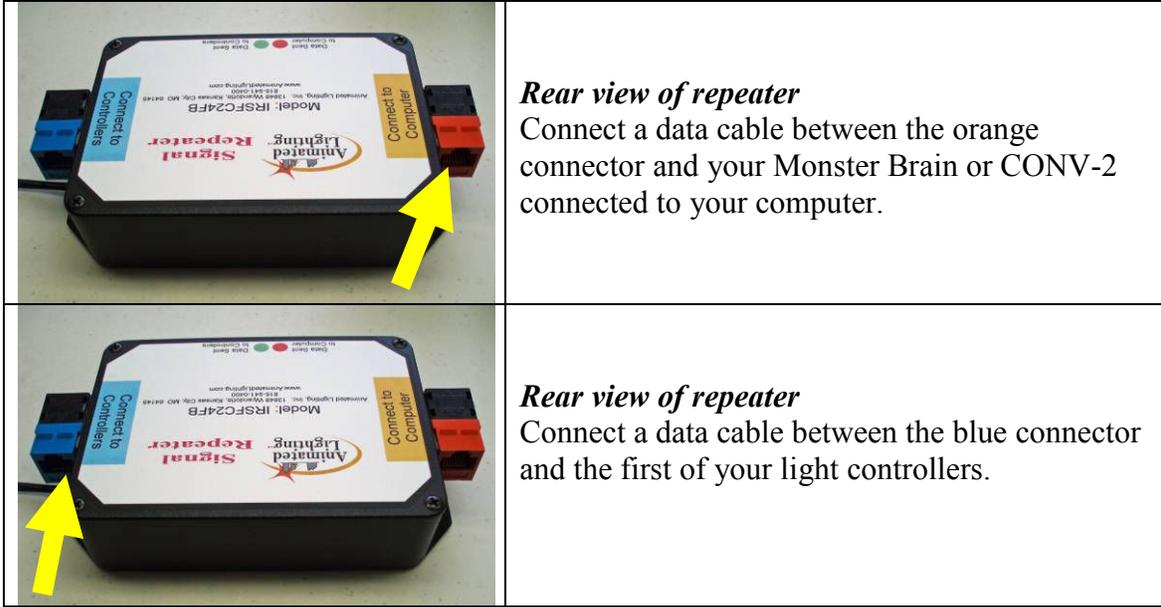
Installation Considerations:

The repeater is not meant to be mounted outside and exposed to the weather. Sensitive electronics are built into this unit so it should be mounted in a dry environment or in the same place as your computer or Monster Brain. If the repeater must be used outdoors, make sure it is mounted in a weather resistant enclosure.

Connections:

The repeater sits in the normal data path between your Monster Brain or CONV-2 and the Animated Lighting controllers. In many cases, putting the repeater next to the Monster Brain will work fine. Using the same cable as in the rest of your installation (CAT-5 computer cables with standard RJ-45 connectors works fine); insert the repeater in series with your normal data stream.

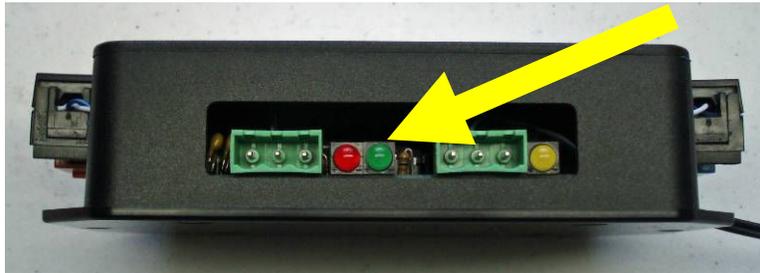




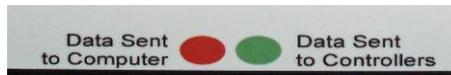
Connect the repeater power supply to a standard wall outlet. You will not see any lights on the repeater illuminate.

Status Lights:

On the front of the repeater are several indicator lights. These can be very useful in troubleshooting and/or confirming information is flowing over your data cables. When the repeater is connected in series with your data cable path as above, the green light will flash when your Monster Brain or computer is sending information to the controllers. The red light will flash when data is being sent from the controllers back to your Monster Brain or computer. In typical installations, the green light will be flashing the most.



Can't remember which light does what? Simply check the legend on top of the repeater.



Other Connectors:

On the front of the repeater are two three-pin connectors. These are wired in parallel with the blue and orange connectors on the side of the unit. See the schematic to tap into these connections.

Troubleshooting:

The unit does not seem to be working.

Make sure the power supply is plugged in. There are no indicator lights showing power is on when the unit is not doing anything. If the RED or GREEN status lights blink when you are running a show, the repeater is working correctly.

The RED light blinks more than the GREEN light.

Chances are the repeater is installed backwards. No damage is being done but it is easy to swap the cables going into the orange and blue connectors to make the GREEN light blink more.

The Monster Brain is sending data but the controllers are not doing anything.

The repeater is an active device and needs power. Make sure it is connected to a working wall plug. No power to the repeater means the signal stops at the repeater and never makes it to the controllers.

The repeater seems to be working but I still have controllers acting odd.

Typically, the repeater is placed next to the computer, CONV-2 or Monster Brain strictly for convenience. Depending on your environment, the repeater might need to be placed closer to the controllers (in a weather resistant enclosure). Since the repeater sits in-line with the data stream, it can be placed almost anywhere.

Why doesn't the yellow light on the front of the repeater ever come on?

The yellow indicator light is only functional when the repeater is used in a non-Animated Lighting configuration.

What is RS-485?

We thought you would never ask. In a nutshell, the RS-485 standard addresses the issue of data transmission, where a balanced (differential) transmission line is used in a multi-drop (party line) configuration (or point-to-point if only two devices are on the network). Up to 32-nodes (drivers and receivers) are allowed on one multi-drop, bi-directional network. At the four-thousand foot distance limit, data rates of up to 100K bps are allowable but a repeater might be necessary. RS-485 specifies a 2-wire, half-duplex communications bus in the Animated Lighting environment.

