Soundsculpture RC4-RX4-MINI
Operating Notes

R1.0 JDS Nov-2004-11-04

Refer to the Soundsculpture RC4 Operation Notes for additional information about the RC4 system.

Soundsculpture - ***Solid State of the Arts.*™**
1-866-258-4577
www.theatrewireless.com

Disclaimers

Not for Use Where Human Safety May Be At Risk

The Soundsculpture RC4 radio system has not been evaluated by any safety agency for use where human safety may be at risk. Soundsculpture Incorporated accepts no liability if RC4 equipment is used for such purposes.

Not for Control of Pyrotechnical Devices

The Soundsculpture RX4-32 receiver should not be used to control pyrotechnical devices. A brief output surge at the receiver during power-up could trigger these devices. Soundsculpture Incorporated accepts no liability if RC4 equipment is used for such purposes.

No 3rd Party Safety Marking is Provided

While every attempt has been made to ensure product and user safety, no 3rd-party safety evaluation has been done on the Soundsculpture TX32D transmitter or RX4-32 receiver. These devices are operated at the user's own risk and Soundsculpture accepts no liability, either direct or consequential, arising from the use of this equipment.

Overview of the RC4-RX4-MINI

The RX4-MINI is Soundsculpture's smallest, most portable receiver for the RC4 wireless dimming system. It can be used in small props, costumes, and anywhere else with limited space. Just like the larger RX4-32 and RX4-HO receivers, the RC4-MINI provides up to four channels of dimming. It is fully compatible with the RC4 system and is configured from the transmitter, just like the other RC4 receivers.

Refer the Soundsculpture RC4 Operation Manual for detailed information about setting up, programming, and operating your RC4 system. Most details about the RX4-32 also apply to the RX4-MINI.

Summary of Differences Between the RX4-MINI and the RX4-32

The block diagram from the RX4-MINI is nearly identical to the diagram for the RX4-32, but it does not include auxiliary power inputs.

The circuit board traces in the RX4-MINI are narrower and cannot carry as much current. To save space, the mosfet power drivers do not have heatsinks. For both of these reasons, the current handling of the MINI receiver is substantially less than other RC4 receivers (but it's still pretty high).

Unlike the other RC4 receiver models, Programming and diagnostics of the LAWN-II radio module in the MINI receiver requires partial disassembly of the receiver. Most users will never configure their radio modules, so this is not a serious issue.

Because of a lack of space in the MINI receiver, the radio antenna is mounted in one end of the enclosure, below the cover. Over long distances, better radio performance may result when this end of the receiver is facing towards the transmitter rf tranceiver. Over short distances, antenna position will have no affect on performance, provided the antenna area is not blocked by metal or batteries (this is also true for other receiver models). The antenna end of the enclosure is clearly marked on the unit.

Connections and Wiring

The RX4-MINI 10-pin power connector has the same pin-out as the standard power I/O connector on other RC4 receivers. Refer to the RC4 Operating Notes for additional details.

Maximum power handling is 50W per channel, 200W maximum. When running at maximum power, it is recommended to limit the maximum time the channel is activated to avoid overheating the mosfet power drivers.

The highest fuse rating that should ever be used in a MINI receiver is 16A. In practice, the smallest appropriate fuse should be used for the connected load. If you are running a single 50W MR15 lamp, use a 5A fuse. Use fast-blow fuses to protect the power driver electronics.

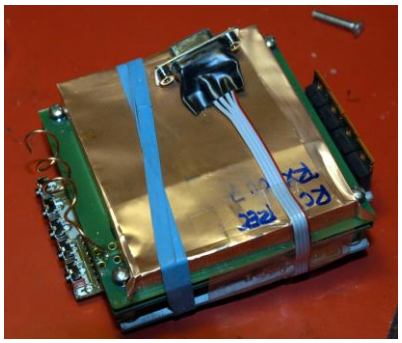
RX4-MINI receivers are shipped with 5A fuses installed.

Programming

Programming receiver channels, low-level cut-off, and dimmer/switch mode is done the same way for all RC4 receivers. The positions of the recessed buttons and LED indicators are slightly different, and are clearly marked.

Lawn-II RF Module Setup

Programming and diagnostics of the LAWN-II radio module in the MINI receiver requires partial disassembly of the receiver. Below the bottom cover, inside the unit, is a 9-pin D-Sub connector.



Pins 2, 3, and 5 are standard RS232 connections, pin 5 common (GND) for both data and power. Pin 9 is used for 12VDC power in. RS232 can connect directly to a PC with a standard cable (pin 2 to 3, crossover, in each direction). 12VDC must be provided to pin 5 (GND) and pin 9 (+V). Avoid routing 12V to the connected PC, do not use pin 9 on the connection to the PC.

With a working data and power connection, Lawn-II configuration is the same as for other RC4 receivers, as documented in the RC4 Operationg Manual.

Note that Lawn-II radios never require configuration under normal circumstances.

Rattling Sound

Shaking the RX4-MINI receiver you will hear a rattle inside. It's ok! The hanging diagnostics connector under the bottom cover knocks around a little bit. This connector is secured adequately, despite the sound.

If it really, really, bothers you, put a small piece of soft foam under the cover to capture and hold the connector. Do not significantly block airflow inside the box and do not apply undue pressure on the thin copper skin of the radio module.

Soundsculpture - ***Solid State of the Arts.™***

Contact: James Smith
Soundsculpture Incorporated
1-866-258-4577
support@theatrewireless.com
www.theatrewireless.com