

# LUTRON®

## *For Your Information ...*

### IR/RS232 Interface for Bang & Olufsen® Beo4® Remote Control and RadioRA®

APPLICATION  
NOTE

#119

#### Overview

The IR/RS232 interface allows the *Bang & Olufsen Beo4* remote control to emulate up to 10 room/scene buttons, raise/lower, All On and All Off from any *RadioRA* Master Control, utilizing an IR/RS232 interface from LinTronic of Denmark and a Lutron *RadioRA* Serial interface.

#### Equipment

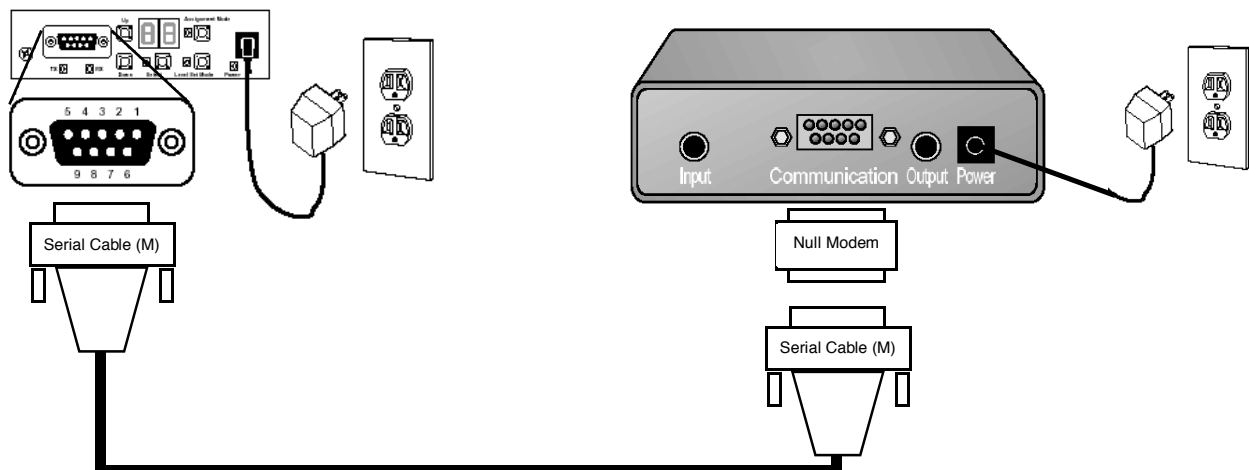
- (1) Lutron Serial Interface
  - RA-RS232 or RA-SBT-CHR
- (1) LinTronic TT455-RX-002
- (1) Male to Male Serial Cable
- (1) Null Modem adapter
- (1) 9-18 V 350-800 mA power adapter



LinTronic TT455-RX-002 Available from  
LinTronic  
Vorningvej 43, Hammershoej  
8830 - Tjele - Denmark  
Phone: +45 8645 0410  
order on line:  
[www.lintronic.dk](http://www.lintronic.dk)

#### Wiring

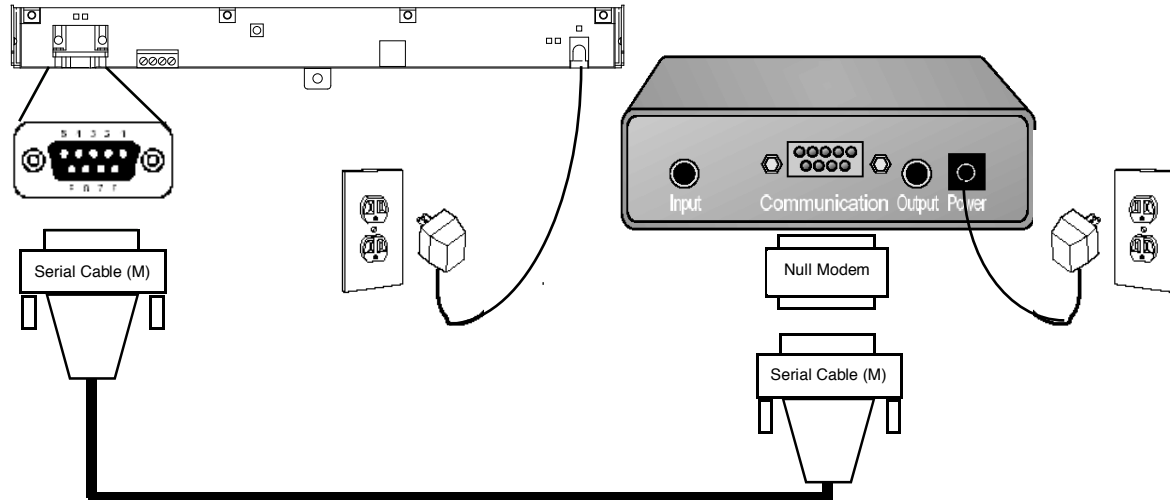
#### RadioRA RS232 Interface



Need additional assistance? Call the Lutron Technical Support Center 1-800-523-9466  
Please provide exact model number when calling.

## Wiring

### Chronos™ System Bridge and Timeclock



## Button Programming

Communication parameters:

9600 Baud, 8 data bits, 1 stop bit, no parity, no hardware handshaking

From the factory, the LinTronic TT455-RX-002 comes configured as follows:

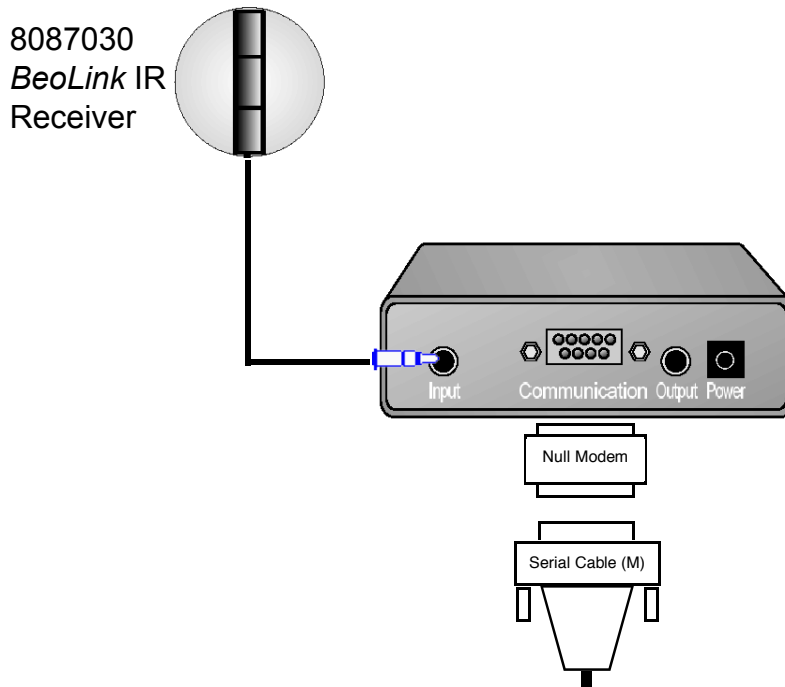
Beo4				RA-RS232			Command
LIGHT 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 1, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 1 ON
LIGHT 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 2, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 2 ON
LIGHT 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 3, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 3 ON
LIGHT 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 4, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 4 ON
LIGHT 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 5, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 5 ON
LIGHT 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 6, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 6 ON
LIGHT 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 7, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 7 ON
LIGHT 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 8, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 8 ON
LIGHT 9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 9, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 9 ON
LIGHT 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 10, ON	<input type="checkbox"/>	<input type="checkbox"/>	Phantom Button 10 ON
LIGHT GREEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 16, ON (All ON)	<input type="checkbox"/>	<input type="checkbox"/>	ALL ON
LIGHT RED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, 17, ON (All OFF)	<input type="checkbox"/>	<input type="checkbox"/>	ALL OFF
LIGHT YELLOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, Raise, ON	<input type="checkbox"/>	<input type="checkbox"/>	Raise
LIGHT BLUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP, Lower, ON	<input type="checkbox"/>	<input type="checkbox"/>	Lower

LIGHT 1-0 buttons on the Beo4® remote are programmed to affect the ON function of phantom buttons 1 -10 in the *RadioRA* Serial Interface . Phantom buttons can be programmed as either ROOMS or SCENES. If a different set of commands are desired from the LinTronicTT455-RX-002 the unit can be ordered with custom programming from LinTronic (011 45 2876 7699 or [lintronic@mail.dk](mailto:lintronic@mail.dk)). At this time, there is no additional charge for programming.

Instructions on programming phantom buttons for a *RadioRA* Serial Interface can be found in the RA-RS232 Setup and Installation Guide Addendum For *RadioRA*® RS232 Interface or in the RA-SBT-CHR Setup and Installation Guide For *RadioRA*® Chronos™ System Bridge and Timeclock .

## IR Placement

Infrared signals are transmitted through line-of-sight. The LinTronics receiver has a infrared receiver on the front. The box is 10 cm long and can be placed on any surface. In addition, a BeoLink® IR receiver can be used to extend the signal, allowing the TT-455-RX-002 to be hidden.



## Command Transmission

Commands transmitted from the Beo4® remote can take up to 2.8 seconds to complete. All commands from the Beo4 remote will be processed, even duplicate commands. Example - three pushes of the Light Green button will produce the ALL ON command in the RadioRA® system three times and can take up to 8.4 seconds. Other commands from RadioRA Master Controls may wait until all three ALL ON commands are implemented.

### Worldwide Technical and Sales Assistance

If you need assistance call the toll-free **Lutron Technical Support Center**. Please provide exact model number when calling.  
(800) 523-9466 (U.S.A., Canada, and the Caribbean)  
Other countries call (610) 282-3800  
Visit us on the web at [www.lutron.com](http://www.lutron.com)

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