

## Stereo Balun Specifications:

### Models and Dimensions:

UDR-Stereo (in-wall Decora™ version): 4.1"h x 1.4" w x 2.0"d.  
UDS-Stereo (in-wall Decora™ version): 4.1"h x 1.4" w x 2.0"d.  
UR-Stereo (black enclosure): 1.1"h x 2.6"w x 2.8"d (28 x 66 x 71 mm).  
US-Stereo (black enclosure): 1.1"h x 2.6"w x 2.8"d (28 x 66 x 71 mm).

### Input and Outputs:

Send Unit: two stereo input RCA jacks, one 3.5mm mono infrared emitter jack, one RJ-45 out-jack, one-DC power input.  
Receive Unit: Three RCA output jacks, one RJ-45 in-jack, one-DC power input.

### Audio Input Impedance:

Receive Unit: 20k ohms, max 3 Vp-p.  
Frequency Response: 10Hz-50kHz +/- 3 dB

### Power:

Send Unit: 12 VDC unregulated (one PS1202 will power one each send and receive).  
Receive Unit: 12 VDC unregulated (one PS1202 will power one each send and receive).

### Infrared:

Send Unit: One stereo 3.5mm jack to connect one single or one dual emitter.  
Receive Unit: One triple 3.5 mm jack to connect a three wire Knoll or other infrared receiver. Supplies 12 VDC power for infrared receiver without requiring another power supply.

## Warranty

Knoll Systems warrants balun products sold in the USA and Canada by authorized Knoll dealers to be free of defects in materials and workmanship. This warranty extends for three full years from the date of purchase by the original consumer. Any products returned to Knoll Systems and found to be defective by Knoll Systems within the warranty period will be repaired or replaced at Knoll System's option, at no charge. Knoll Systems will not be responsible for the actual cost of installation or removal of the product, nor for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights. You may have additional legal rights that vary from state to state.

### Knoll Systems [www.knollsystems.com](http://www.knollsystems.com)

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## UDR-Stereo Receiver UDS-Stereo Sender UR-Stereo Receiver US-Stereo Sender



## Installation Instructions v1.1

**Warning:** To be installed and/or used in accordance with appropriate electrical codes and regulations. If you are not sure about any part of these instructions, consult a qualified electrician.

**Caution:** Do not install this product in an electrical junction box with 110V or higher unless an approved barrier separates the high and low voltage sections.

**Introduction:** Thank you for your purchase of a Knoll active balun system. This system is specifically designed to send a stereo line level and an infrared signal safely down a cat 5 or cat 5e wire up to 1000 feet without encountering noise problems. Balun is an acronym for:

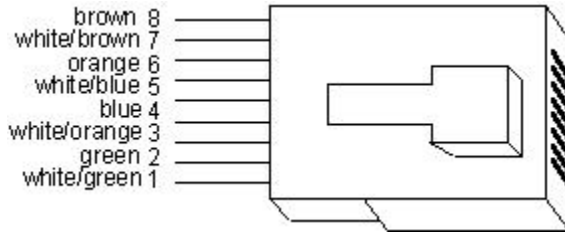
### **BAL**ance – **UN**balance

The send module takes a conventional stereo line level signal and balances it (signal is not tied to a ground reference) then sends it via cat 5 to the receive module (with power from the send module). The receive module unbalances the stereo signal back to its former state. This process does not allow any stray magnetism of any sort to contaminate the signal while it is being transported.

### Features:

- Tabletop box design or Decora™ style available.
- Safely sends stereo signals up to 1000' (300 m).
- Sends infrared signal from receiver back to sender.
- PS1202 power supply required on send side only.
- Mix and match tabletop and decora style.

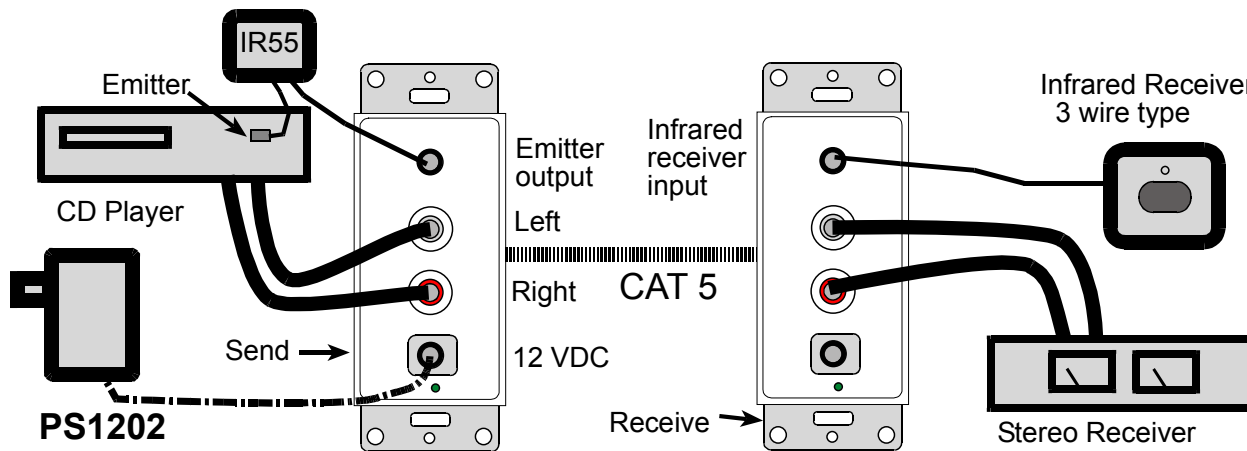
**Wiring:** A send module (UDS-Stereo or US-Stereo) needs to be connected to a Knoll receive module (UDR-Stereo or UR-Stereo) to work correctly. The send and receive module are connected using a single cat 5 wire using all 8 conductors. Connection is made with the RJ45 connector (RJ45 plug not supplied). Always use standard cat 5 wiring practices. Using the correct wire pairs and polarity is **VERY** important.



**Connection to stereo source equipment:** Connect the two UDS-Stereo or US-Stereo to gold RCA jacks with a good quality gold connector RCA jumper cable to the appropriate **stereo output** jacks on your receiver, tuner, CD player, switcher or other equipment. If there is a switched power outlet on your output equipment, you may want to plug the PS1202 power supply to the switched outlet.

**Make sure a good quality RJ45 8-8 crimper is used to connect the RJ45 connector to the cat 5 wire. Poor crimping and mismatched wires are the most frequent cause of installation problems.**

**Power requirements:** The Knoll balun system requires a single PS1202 power supply connected to the send unit only. In certain cases with very long leads a higher voltage PS1506 15 VDC power supply may be required if some noise or distortion is evident.



**Connection to the amplifier, TV or other components:** Connect the two gold RCA jacks on the UDR-Stereo or UR-Stereo with a good quality gold connector RCA jumper cable to the appropriate **stereo input** jacks on your amplifier, receiver, TV or other component. Make sure the correct stereo input is selected.

**Multiple Connection(s):** If the stereo signal needs to be sent to more than one receiver, this can easily be accomplished by paralleling or Y cording the inputs to the stereo send unit. Depending on the source components output, it should be acceptable to Y cord up to ten send baluns. Each Knoll stereo send balun is connected to one stereo receive balun. Each stereo send unit requires a PS1202 power supply.

There is no balun hub available for the stereo balun system.

**Infrared:** The Knoll stereo balun system can carry infrared signals from the receive unit to the send unit. To do this a three wire infrared receiver (not supplied) is connected to the triple connection 3.5mm stereo jack on the receive unit. The receive unit supplies 12 VDC power for the receiver, so a separate infrared power supply is not required. An IR54 or IR55 connection module is connected using the ground and IR output terminals on the IR54 or IR55 and a mono 3.5mm jack connected to the send module. The tip is the IR output. Infrared emitters are then connected to the IR54 or IR55. **If an emitter is directly connected to the send unit without a connection block,** a 470 ohm dropping resistor needs to be inserted in series in the emitter wire or the emitter will fail after a short period of time. Any infrared commands sent from the receiver on the Knoll stereo receive balun end is sent to the infrared emitter on the Knoll stereo balun send side and rebroadcast there.

The Knoll send receive system does not have any user adjustments and is completely automatic. If need be, please call our tech line for details at 1 800 566 5579.

This product may contain lead that some states have determined are harmful. Wash you hands after touching this product.

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