Component Balun Specifications:

Models and Dimensions
US4-Hub: 16-3/4 x 1-3/4 x 11-1/2" (425 x 45 x 292 mm)

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

Video Bandwidth: 450 MHz @ -3 dB.

S/PDIF Input and Output: 0.5 V to 2 V RMS.

Video Input and Output: 0.5 V to 2 V RMS.

Input and Outputs:
Quad Receive Modules: four gold RCA input jacks, one RJ-45 out-jack, one-DC power input.

US4-Hub: Four RCA input jacks, six RJ-45 output jacks, one DC power input, one input and one output link RJ45 jack.

Power
Receive Unit: 12 VDC 40mA.
US4-Hub: 15 VDC (one PS1506 included).

Warranty

Knoll Systems warrants its 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 Systems 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.

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US4-HUB Installation Instructions

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.

Introduction: Thank you for your purchase of a Knoll active balun system. This system is specifically designed to send a three wire Pb, Pr, Y component or RGB and Digital Audio or S/PDIF (Dolby® digital or DTS®) signals safely down a single cat 5 or cat 5e wire up to 500 feet (250 feet for 1080p) without encountering signal degradation problems. Balun is an acronym for:
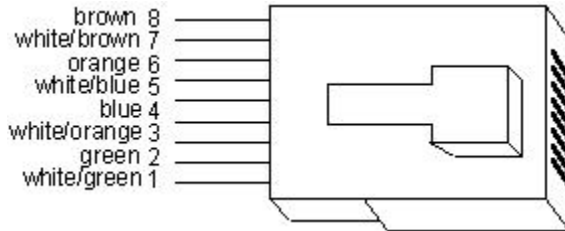
BALance – **UN**balance

The hub is a send module and takes a conventional component signal and balances it (signal is not tied to a ground reference) then sends it via cat 5 to a receive module. The receive module unbalances the component 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.

This US4-Hub requires up to six Knoll US Quad receive modules (enclosure or decora in-wall style) to operate. Each quad receive unit also requires a PS1202 power supply.

Features:

- Stackable 17" enclosure.

- Will safely send 480i/p, 720p and 1080i/p signals.

- Power supply included.

- Mix and match decora style and tabletop style quad receive modules.

Wiring: Knoll receive modules (UDR-Quad or UR-Quad) are connected to the US4-Hub with cat 5 unshielded wires using all 8 conductors. Connection is made

```
brown    8
white/brown  7
orange   6
white/blue   5
blue     4
white/orange 3
green    2
white/green  1
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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. Each cat 5 wire run is a home run and wires cannot be shared with two quad receive modules.

Connection to stereo video source equipment: Connect the four US4 Hub gold RCA jacks with a good quality gold connector four wire component RCA jumper cable to the appropriate *three component output and digital audio output* jacks on your DVD, dish receiver, D-VHS, VCR, stereo or other equipment. If there is a switched 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 US4-Hub comes with a 15 VDC power supply. Each Quad receive module requires a Knoll PS1202 power supply.

> **Note: The quad receive modules can be either decora in-wall style or enclosure style as desired.**

Connecting Quad receive modules on to the Projector, TV or other components: See documentation shipped with the receive units.

Multiple Connection(s): If more than six component receivers are required in a system, multiple US4-HUB's can be connected together. To wire together a second, third, etc. US4-HUB, connect the LINK OUT of the first US4-HUB to the LINK IN of the second US4-HUB using a short as possible **tested** cat 5 jumper with RJ45 connectors, using all 8 wires. Connect the LINK OUT of the second US4-HUB to the LINK IN of the third US4-HUB and so on. In this example the second and third hubs do not have RCA jacks connected but do have their PS1506 power supply connected.

IMPORTANT: All of the US4-HUB's not connected via RCA jacks, but with a cat 5 wire daisy chained from another US4-HUB need to have their LINK switch positioned in the OUT position. The US4-HUB with RCA jacks connected needs to have the LINK switch in the IN position. UR receive units do not have any alterations.

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.

Decora™ is a trademark of Leviton Manufacturing.