# **Composite and Analog Stereo Balun Specifications:**

Models and Dimensions:

UTP-Hub: 6.5" h x 3.4" w x 1.75" d (165 x 86 x 45 mm)

Video Bandwidth: 50 MHz @ -3 dB.

Audio Bandwidth: 5 Hz - 100 kHz @ +/-3 dB.

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

#### Input and Outputs:

One video RCA jack, Two stereo input RCA jacks, one RJ45 input jack, six RJ45 output jacks, one DC power jack.

#### Power

Receive Unit: PS-1506 (included) 15 volt DC 600 mA. Supplies power for up to six receive modules.

# 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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# UTP-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 composite and analog stereo audio down a single cat 5 or cat 5e wire up to 1000 feet (300 meters) without encountering signal degradation problems. Balun is an acronym for:

## BALance – UNbalance

The hub is a send module and takes a conventional composite and analog stereo signals, balances it (signal is not tied to a ground reference) then sends it via cat 5 to up to six receive modules. The receive module unbalances the signals back to their former state (ground referenced). This process does not allow any stray magnetism of any sort to contaminate the signal while it is being transported.

This UTP-HUB requires up to six Knoll UB-Receive and /or UB-Rec modules (enclosure or decora in-wall style) to operate. The UTP-HUB provides power for up to six receive modules.

## Features:



- Wall mountable or smc style enclosure.
- Will safely send 480i/p, 720p and 1080i/p signals.
- Power supply included.
- Mix and match decora style and tabletop style receive modules.

Wiring: Knoll receive brown 8 modules are white/brown 7 connected to the orange 6 UTP-Hub with cat 5 white/blue 5 unshielded wires blue 4 white/orange 3 using all 8 green 2 conductors. white/green 1 Connection is made with the RJ45

connector (RJ45 plug not supplied). Always use standard cat 5 568A 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 receive modules.

**Connection to stereo video source equipment**: Connect the three UTP-Hub gold RCA jacks with a good quality gold connector RCA jumper cables to the appropriate *composite (yellow center)* and *analog left/right (white/red) audio output* jacks on your DVD, dish receiver, VCR, stereo or other equipment. If there is a switched outlet on your output equipment, you may want to plug the UTP-Hub's PS1506 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 UTP-Hub comes with a 15 VDC power supply. This power supply can power the UTP-HUB and up to six receive modules.

Note: The receive modules connected to the UTP-HUB can be either decora in-wall style or enclosure style as desired.

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

**Input connections to multiple Media System Hubs**. When more than six rooms require connection to the media hub, two or more hubs can be connected together. The cat5 wire home runs to the UTP-Receive are the same as above.

To connect **multiple hubs** to a nearby audio video source using the RCA jack inputs, the three RCA jacks (for video left and right) are simply Y cored together (video to video to video, left to left to left and right to right) on all the hubs. Set the first hub dip switches using the single and first hub switch diagram below. Set the switches on the second hub and all other subs using the diagram 2<sup>nd</sup> and more Hubs Switch.

# Switch Identification

Switch	1	2	3	4	5	6	7
Input Output	RCA	RCA	RCA	75 ohr	RJ45	RJ45	RJ45

Single and First Hub Switch

Switch	1	2	3	4	5	6	7
Off					Х	Х	Χ
On	X	Х	Х	Χ			

2nd and more Hubs Switch

Switch	1	2	3	4	5	6	7	
Off				Х	Х	Х	Χ	
On	X	X	X					

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 your hands after touching this product.

Decora<sup>™</sup> is a trademark of Leviton Manufacturing.