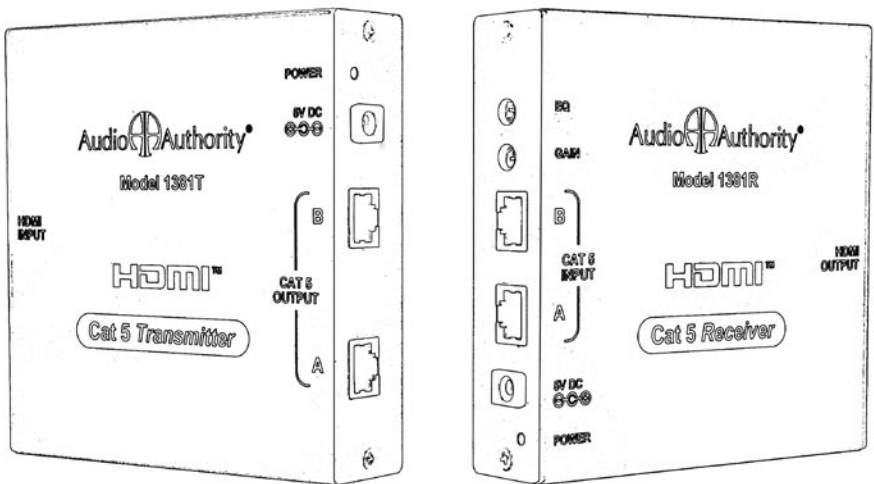


# User Manual

## Model HDP-11

### Cat 5 HDMI Extender



1381T and 1381R

Audio  Authority®

# User Manual

## Model HDP-11 Cat 5 HDMI Extender



### **WARNINGS**

- Read these instructions before installing or using this product.
- To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.
- This product must be installed by qualified personnel.
- Do not open the cover—there are no user-serviceable parts inside.
- Do not expose this unit to excessive heat.
- Install only in dry, indoor locations.
- Clean the unit only with a dry or slightly dampened soft cloth.

### **LIABILITY STATEMENT**

Every effort has been made to ensure that this product is free of defects. Audio Authority cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

Audio Authority reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable.

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## Table Of Contents

<b>1.0</b>	<b>Introduction</b>	<b>4</b>
<b>2.0</b>	<b>Checking Package Contents</b>	<b>4</b>
<b>3.0</b>	<b>Installation</b>	<b>5</b>
<b>4.0</b>	<b>Operating the Units</b>	<b>8</b>
<b>5.0</b>	<b>Troubleshooting</b>	<b>9</b>
<b>6.0</b>	<b>Specifications</b>	<b>10</b>
<b>7.0</b>	<b>Limited Warranty</b>	<b>11</b>
<b>8.0</b>	<b>Regulatory Compliance</b>	<b>12</b>
<b>9.0</b>	<b>Contact Information</b>	<b>12</b>

## **1.0 INTRODUCTION**

Thank you for purchasing this Cat 5 HDMI extender system from Audio Authority. The HDP-11 transmits HDMI signals over Cat 5e/6 cables to achieve distances many times those possible using an HDMI cable. The HDP-11 can achieve distances of 450 feet (150m) with 1080p and embedded 2-channel audio.

The HDP-11 employs a combination of digital and analog transmission methods over two Cat 5 cables (Cat 5, Cat 5e or Cat 6 Unshielded Twisted Pair (UTP) cables may be used). Cat 5 cable A carries the digital video and audio signals, and cable B carries the HDCP and DDC channels. When transmitting video signals that are not protected by HDCP, it is possible that only cable A may be required. Call Audio Authority technical support for details.

Audio Authority offers an extensive line of audio and video switchers, converters, and distribution amps available for purchase online at [www.audioauthority.com](http://www.audioauthority.com) or through authorized dealers.

## **1.1 SYSTEM FEATURES**

- Resolutions to 1080p @ 60Hz, 1920x1200
- Normal operation requires two Cat 5, 5e or Cat 6 cables
- Maximum distance 450 feet (150 meters)
- HDMI digital audio embedded (2-channel PCM)
- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications
- Single cable operation is sometimes possible, depending on source
- Compatible with HDMI and DVI-D signals
- Gain and EQ controls on 1381R Receiver optimize digital and analog signals for long distances
- Locking power connector ensures system stability

## 2.0 CHECKING PACKAGE CONTENTS

Before connecting the HDP-11, please make certain the following items are in the shipping carton. (If you purchased the 1381T or 1381R separately, ignore irrelevant items.)

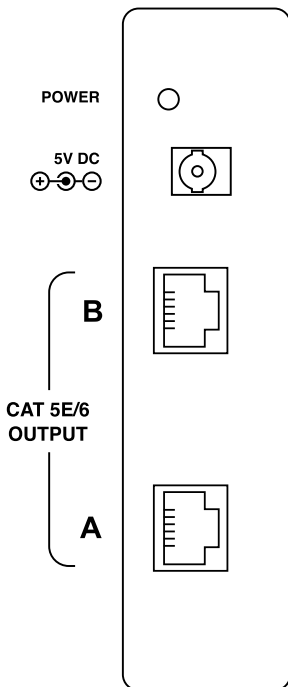
- 1381T Transmitter
- 1381R Receiver
- 5V DC Power Adapter
- User Manual

Note: Please retain the original packing material in case you need to return the unit. If you find any items are missing, contact Audio Authority immediately. Have the model number and invoice available for reference when you call.

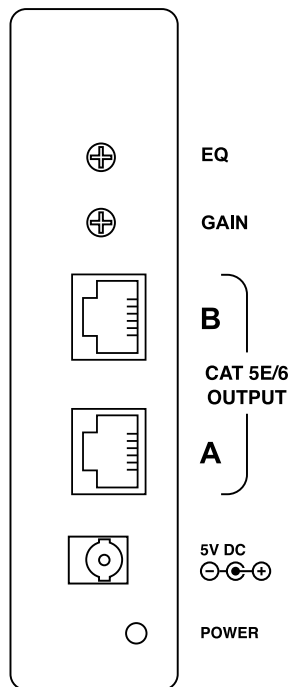
## 3.0 INSTALLATION

Before connecting the HDP-11 Cat 5 extender system, verify that the display device on the receiving end can support the output resolution and signal format by connecting it directly to the source device via a short, known good, HDMI cable.

The panel drawings below show the Cat 5 signal output/input connections, power connections and adjustable controls. (The HDMI input and output jacks on opposite end of each unit are not shown.)



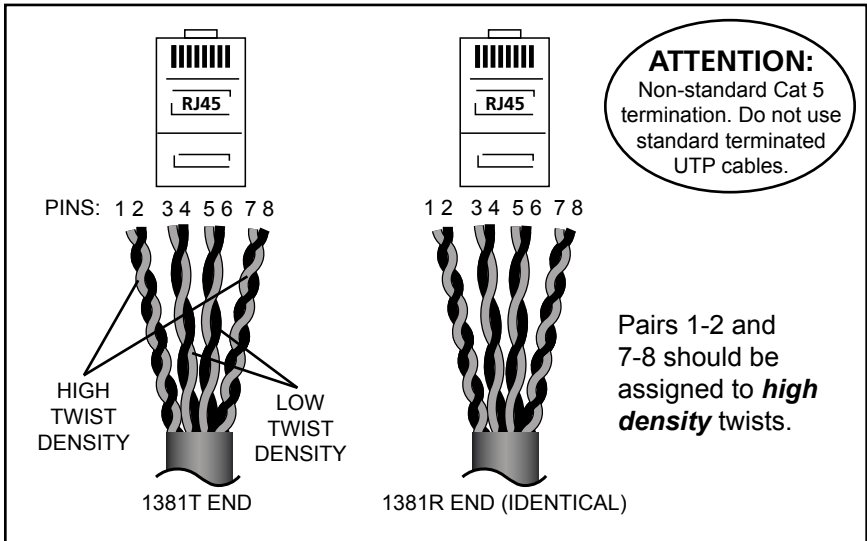
**Transmitter Model 1381T**



**Receiver Model 1381R**

### 3.1 TERMINATING CAT 5E/6 CABLES

Do not use cables terminated with standard EIA-568A or B pairing. The special pairing shown below is required for best performance.



Correct pairing is vital, and should always be checked with a network cable tester. The correct pairing is straight through, pin-to-pin, as shown.

### 3.2 IMPORTANT: TWIST DENSITY

Cat 5e/6 cable pairs have different twist densities (twist pitches). There are two pairs with high density twist and two pairs with low density. Pairs 1-2 and 7-8 should be assigned to **high density** twists. Failure to assign correct twist densities can result in image jitter. Twist densities can be seen by stripping off about four inches of insulation.

Colors vary by manufacturer, so once you identify the high density twist pairs, use the chart below to assign the colors to the correct RJ-45 pins.

	PIN	WIRE COLOR	TWIST DENSITY
	1		HIGH
	2		
	3		LOW
	4		
	5		LOW
	6		
	7		HIGH
	8		

### 3.3 CONNECTING THE HARDWARE

1. Connect the HDMI source device's output to the HDMI INPUT connector of the 1381T Transmitter, using a short, high quality, HDMI cable.
2. Connect a correctly terminated and tested Cat 5 cable to the Cat 5 Output A connector of the Transmitter. Connect a second Cat 5 cable to the Cat 5 Output B. Mark the cables at both ends so that you do not inadvertently swap them. Do not connect the AC adapter until the Cat 5 cables are correctly connected to both the transmitter and the receiver.

Again, always test the HDMI source on the intended display with a known good HDMI cable before using the HDP-11. This precaution insures that the source can be (and is) set to a resolution that is compatible with the display, and that both are functioning correctly together.

3. At the remote location, connect the appropriate Cat 5 cables to the Cat 5 Input A and B connectors of the 1381R Receiver. Be careful not to interchange the A and B cables. Cable A must be connected to both the transmitter and the receiver and Cable B must be connected to the B inputs on both devices in most cases, depending on the source.
4. Connect the HDMI OUTPUT of the 1381R to the HDMI input of the video display or other device, using the appropriate cable.
5. Connect the supplied AC adapters first to the 1381T and 1381R and then to the AC outlets.
6. Turn on the source device and video display. The source video signal should appear on the display. If not, consult the Troubleshooting Guide in this manual.

## **4.0 OPERATING THE UNITS**

The only user adjustments on the HDP-11 are the 1381R Receiver's Equalization and Gain controls which may be adjusted to improve the appearance of the video signal. Adjustment is not normally required on shorter cable runs but receivers located at the end of cable runs near the limit of specified range may benefit from Equalization and/or Gain adjustments. EQ and Gain settings are retained by the Receiver even when power is removed.

### **4.1 ADJUSTING EQUALIZATION**

Locate the EQ (Equalization) and GAIN adjustments on the side of the 1381R Receiver. The EQ control is at the top of the left side, and the Gain Control is just below it.

Symptoms: On long cable runs, the high frequency detail can be compromised, which appears as a "soft" or "smeared" picture. The effect is most evident in text and other hard, high contrast edges.

Adjust the EQ to sharpen the image. While viewing an image on a display connected to the 1381R Receiver, insert a small screwdriver into the EQ adjustment on the side panel of the 1381R. Turn the screwdriver gently until the image is optimal.

### **4.2 ADJUSTING GAIN**

If the image is too dark or too bright, insert the screwdriver into the Gain adjustment and rotate until the brightness of the image is optimal. When using long Cat 5 cables, you may notice an increase in video noise (sometimes called "snow") in the picture at higher gain settings.

## 5.0 TROUBLESHOOTING

- Poor image quality: see the previous section, Operating the Units.
- No surround sound (multi-channel audio): this system does not accept multi-channel digital audio; adjust the source to output 2-channel PCM digital audio.
- No picture: perform the verifications below.
- Check the HDMI cables at all four connections to see if any of the connectors have become loose.
- Make certain the 1381T and 1381R are connected to live AC outlets and check the power indicators on both units.
- Use a network cable tester to make certain your Cat 5/5e/6 cable is terminated correctly and the RJ-45 connectors are securely attached to the cable at both ends. Check for cable defects or damage.
- Connect the display device directly to the source with the 1381T HDMI connection cable, then test with the 1381R connection cable. If an image is present under those circumstances the display, the source, and the HDMI cables can be eliminated as the cause of the problem.
- If the above circumstances do not produce a picture, try a short, known good HDMI cable, and make sure the source is set up to output a resolution that the display can accept.

If you encounter difficulty, contact the Audio Authority Technical Service department via email: [support@audioauthority.com](mailto:support@audioauthority.com), or call 800-322-8346 or 859-233-4599.

## 6.0 SPECIFICATIONS

<b>Digital Audio/Video I/O</b>	
1381T Transmitter – HDMI In	1x via HDMI connector
1381R Receiver – HDMI Out	1x via HDMI connector
<b>Cat 5e/6 Connections I/O</b>	
1381T Transmitter – Cat 5e/6 output	2x via RJ-45 (A & B)
1381R Receiver – Cat 5e/6 input	2x via RJ-45 (A & B)
<b>Cat 5e/6 Structure</b>	
Cat 5 Connector A	HDMI video/audio signal
Cat 5 connector B	HDCP/DDC control signal
<b>Video Performance</b>	
Maximum resolution	Up to 1920x1200, 1080p/60Hz
TMDS clock speed	1.65MHz
Data bit rate	1.65Gbps
Maximum range	450 feet (150m)
<b>Audio Performance</b>	
PCM Digital Audio	2-channel audio
<b>Environmental</b>	
Operating Temperature	0° to +50° C (+32° to +122° F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-10° to +70° C (12° to +158° F)
Storage Humidity	10% to 90%, Non-condensing
<b>Regulatory Approvals</b>	
Transmitter and Receiver	FCC, CE, RoHS
Power Supply	UL, CUL, CE, PSE, GS, RoHS
<b>Cable Requirements</b>	
Cat 5, Cat 5e or Cat 6	Network Grade, Premium
<b>Mechanical</b>	
Dimensions: H-W-D inches (mm)	1.18 x 4.84 x 4.92 (30x123x125)
<b>Weight</b>	
	1381T 1.54 lbs (700g)
	1381R 1.54 lbs (700g)
<b>Accessories Included</b>	
Power Adapter	5 VDC@2A, Locking DC
User Manual	
<b>Warranty</b>	
Limited Warranty	1 Year Parts and Labor

## **7.0 LIMITED WARRANTY**

If any consumer product from Audio Authority fails due to defects in materials or workmanship within one year from the date of the original sale to the end-user, Audio Authority guarantees that we will replace the defective product at no cost. Freight charges for the replacement unit will be paid by Audio Authority (ground service only). A copy of the invoice showing the item number and date of purchase (proof-of-purchase) must be submitted with the defective unit to constitute a valid in-warranty claim.

Units that fail after the warranty period has expired may be returned to the factory for repair at a nominal charge, if not damaged beyond the point of repair. All freight charges for out-of-warranty returns for repair are the responsibility of the customer. Units returned for repair must have a Return Authorization Number assigned by the factory.

This is a limited warranty and is not applicable for products which, in our opinion, have been damaged, altered, abused, misused, or improperly installed. Audio Authority makes no other warranties either expressed or implied, including limitation warranties as to merchantability or fitness for a particular purpose. Additionally, there are no allowances or credits available for service work or installation performed in the field by the end user.

## **7.1 WARRANTY SERVICE PROCEDURES**

If you suspect a product defect, contact Audio Authority's Technical Service Department at 800-322-8346 or 859-233-4599 for assistance in verifying the problem. If a defect or potential defect is suspected, a replacement unit will be shipped immediately on a defect-exchange basis and a Return Authorization Number will be issued for the return of the defective product. Replacement units are sent out at the Manufacturer's Suggested Retail Price which is debited to the Customer's Credit Card at the time of shipment. Once we receive the defective unit back at the factory, it will be evaluated under the conditions of this warranty and if found to be in-warranty, a full credit will be issued to the Customer's Credit Card. Return freight charges for the defective unit are the customer's responsibility. Please contact our Technical Service Department for complete details concerning all in and out of warranty service matters.

We appreciate your confidence in our products and services and will always strive to meet or exceed your needs.

## **8.0 REGULATORY COMPLIANCE**

The HDP-11 system has been tested for compliance with CE and FCC rules and regulations. The Power Adaptor/Supply included has been tested for compliance with UL, CUL, CE, PSE, and GS rules and guidelines. This product and its power supply are RoHS compliant.

## **9.0 CONTACT INFORMATION**

If you have questions or require assistance with this product in areas not covered by this manual, please contact Audio Authority using the information below.

Audio Authority Technical Service  
800-322-8346 M-F 8:30 AM to 5:00 PM, EST  
International: 859-233-4599 Fax: 859-233-4510  
Send email to: [support@audioauthority.com](mailto:support@audioauthority.com)

Audio Authority Corporation  
2048 Mercer Road  
Lexington, Kentucky 40511-1071  
USA



2048 Mercer Road, Lexington, Kentucky 40511-1071  
Phone: 859-233-4599 • Fax: 859-233-4510  
Customer Toll-Free USA & Canada: 800-322-8346  
[www.audioauthority.com](http://www.audioauthority.com)