XTENDEX® Series

ST-C5CMPDA-600

ST-C5CMPSA-600

EXTENDERS

Installation and Operation Manual

**ST-C5CMPDA-600
HD Video/Digital
Audio Extender**

TRADEMARK

XTENDEX is a registered trademark of Network Technologies Inc in the U.S. and other countries.

COPYRIGHT

CHANGES

The material in this guide is for information only and is subject to change without notice. Network Technologies Inc reserves the right to make changes in the product design without reservation and without notification to its users.

Shielded CAT 5,5e, or 6 cable must be used to connect to the CAT5 ports in order to meet CE emission and immunity requirements.

C ϵ

CE Statement

We, Network Technologies Inc, declare under our sole responsibility that the ST-C5CMPDA-600 and ST-C5CMPSA-600 are in conformity with European Standard EN55022.

Note: CAT5 connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products should not be run underground, outdoors or between buildings.

⚠ *WARNING: Outdoor or underground runs of CAT5 cable could be dangerous and will void the warranty.*

TABLE OF CONTENTS

TABLE OF FIGURES

INTRODUCTION

The XTENDEX Series **ST-C5CMPDA-600** CAT5 Extender (XTENDEX) is designed to connect and extend the signals from one high-definition (HD) video and digital (coax / SPDIF) audio source to two high-definition televisions (HDTV) and digital audio devices, one of each local and one of each remote. Possible digital video and audio sources include a DVD player, cable television box, home entertainment system, etc..   Digital audio devices include a HDTV, Home Theater System, Digital Audio Receiver, or Digital Speaker set, etc..   The remote HDTV and audio device can be located as much as 600 feet away from the source via Category 5 unshielded twisted-pair cable. The local HDTV and audio device will be located near the source.

The XTENDEX Series **ST-C5CMPSA-600** CAT5 Extender is the same as the ST-C5CMPDA except that it is compatible with a stereo line-level audio source and devices (HDTV Speakers, Home Theater or Stereo System, Stereo Amplifier, Headphones, Computer Speakers, etc..) instead of a digital audio source and devices.

The XTENDEX Series Extender is extremely simple to install and has been thoroughly tested to insure reliable performance. Through the use of Category 5 cable it is possible to economically increase the flexibility of an entertainment system. Here are some of the features and ways this can benefit the user:

- Allows the placement of a HDTV and audio devices in a location where only these parts are needed without having the audio/video source there too, taking up valuable space

- Allows an audio/video source (DVD player, cable television box, stereo amplifier, home entertainment system, etc), to be seen and heard by both a local and/or remote set of devices (up to 600 feet away)

- Compatible with component video

- Provides crisp and clear 1080i resolution up to 1920x1080 with a 30MHz bandwidth and 720p resolution up to 1280x720 with a 37 MHz bandwidth

- Video quality adjustment, for varying lengths of cable, is automatic providing optimum image quality

- Digital transmission of audio signals reduces any loss in quality

- HDTV connections are dedicated connectors for YPbPr

- Hot-plugging of all video and audio connections is supported

MATERIALS

Materials Included with this kit:

- ✓ NTI XTENDEX ST-C5CMPDA or ST-C5CMPSA Local Unit
- ✓ NTI XTENDEX ST-C5CMPDA or ST-C5CMPSA Remote Unit
- ✓ 2- 120VAC or 240VAC at 50 or 60Hz-9VDC/1.0A AC Adapters
- ✓ This owner's manual

Additional materials may need to be ordered, depending upon the configuration:

- ➢ CAT5/5e/6 unshielded twisted-pair cable(s) terminated with RJ45 connectors wired straight thru- pin 1 to pin 1, etc. (see pg. 10 for proper EIA/TIA 568 B wiring method)
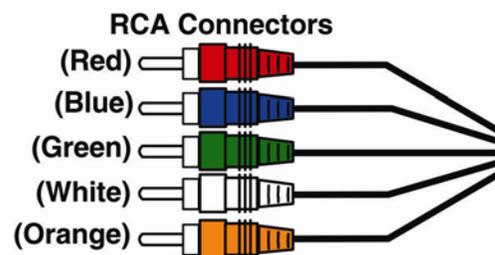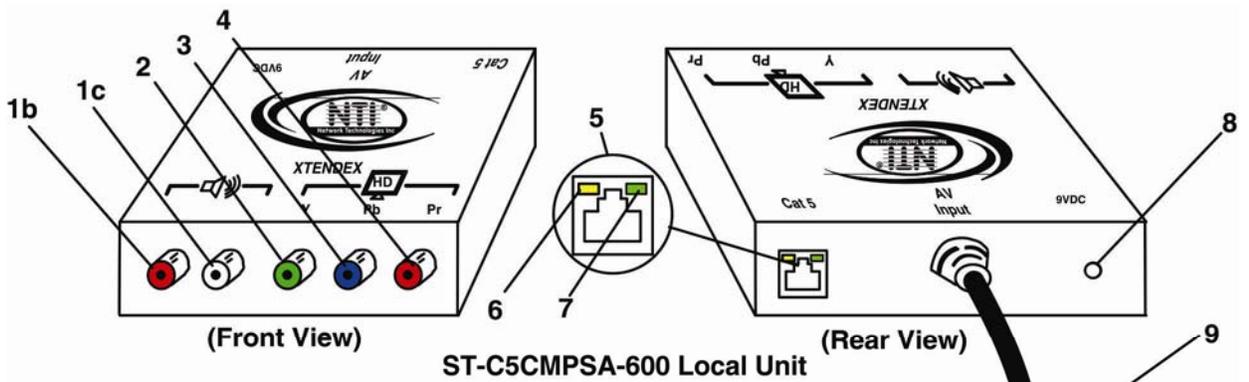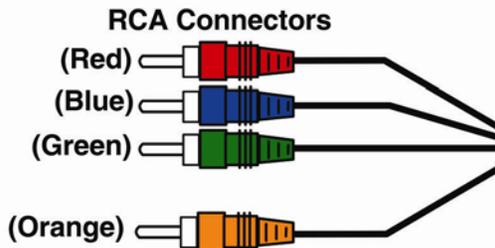
Note: CAT5/5e/6 shielded twisted-pair cable(s) must be used to meet CE emission and immunity requirements.

Contact your nearest NTI distributor or NTI directly for all of your KVM needs at 800-RGB-TECH (800-742-8324) in US & Canada or 330-562-7070 (Worldwide) or at our website at http://www.networktechinc.com and we will be happy to be of assistance.

Cables needed

Audio and Video cables with RCA connectors will be required for connecting the HDTV and audio devices to the XTENDEX Local and Remote Units.

Purpose	Cable needed
Video for ST-C5CMPDA-600 and ST-C5CMPSA-600	75 ohm coax cable with 3 RCA connectors on each end (red,green,blue)
Audio for ST-C5CMPDA-600	Coax cable for digital audio
Audio for ST-C5CMPSA-600	Standard stereo audio cable with RCA connectors

(Front View)
ST-C5CMPDA-600 Local Unit
(Rear View)

RCA Connectors
(Red)
(Blue)
(Green)
(Orange)

(Front View)
ST-C5CMPSA-600 Local Unit
(Rear View)

RCA Connectors
(Red)
(Blue)
(Green)
(White)
(Orange)
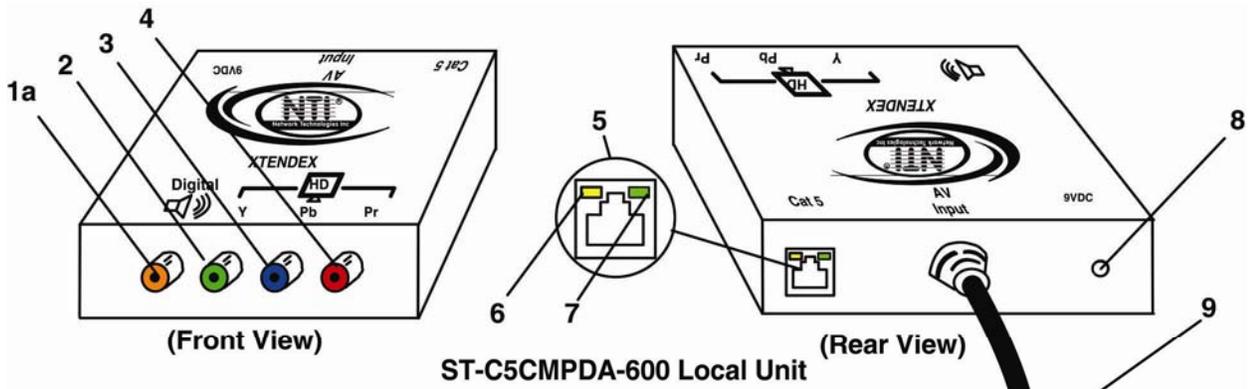
FEATURES AND FUNCTIONS

1a. Orange RCA jack- for connection of local digital (coax / SPDIF) audio device's "audio in"

1b. Red RCA jack- for connection of local right line level stereo audio device

1c. White RCA jack- for connection of left local line level stereo audio device

2. Green RCA jack- for connection of "Y" component lead from local HD television

3. Blue RCA jack- for connection of "Pb" component lead from local HD television

4. Red RCA jack- for connection of "Pr" component lead from local HD television
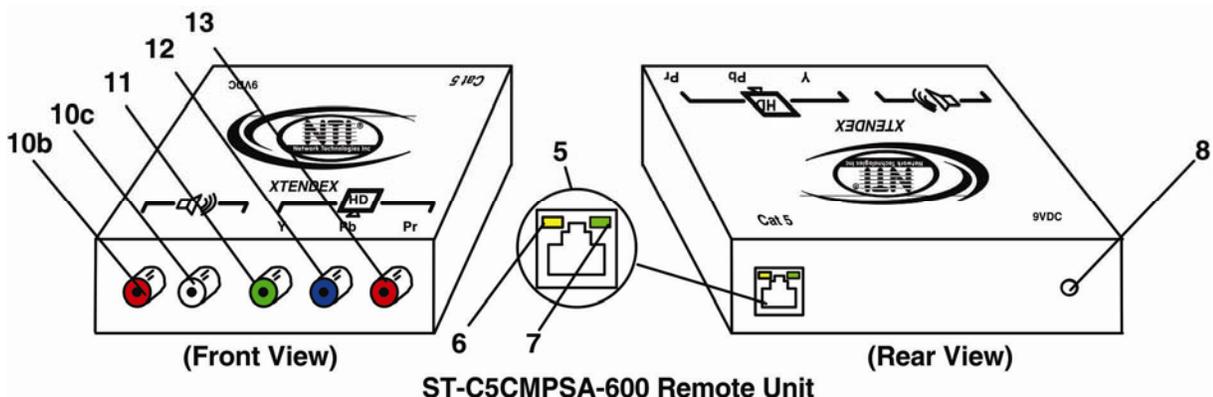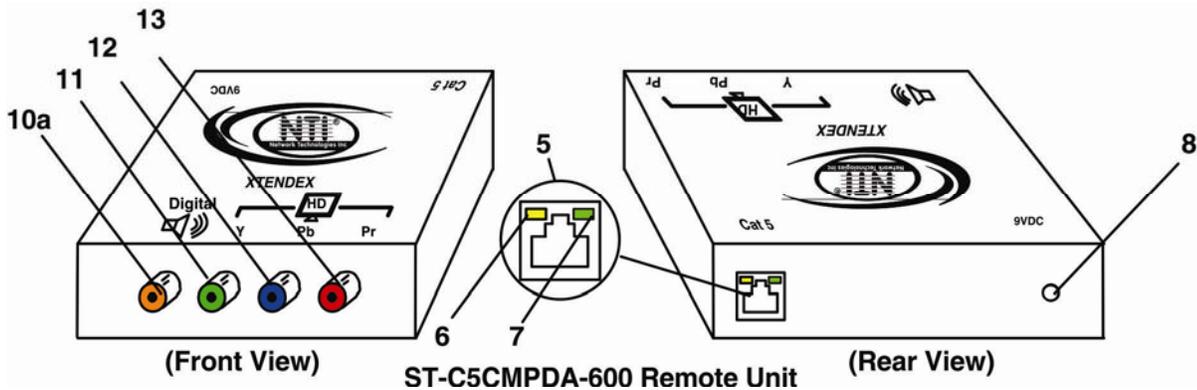
> **Note: Local device connections (items 1-4) are not required for Remote Unit operation**

5. Cat 5- RJ45 female- for connecting the CAT 5 cable

6. Yellow LED- traffic indicator- illuminates when there is traffic between the local and remote units

7. Green LED- power indicator- illuminates when power has been supplied to the unit

8. 9VDC- 1.0A- connection jack for the AC adapter

9. A/V Input- for connecting to audio/video signal source:

A/V Cable Connections

Connector Color	Connect to
Red	"Pr" on video source
Blue	"Pb" on video source
Green	"Y" on video source
Orange	Digital audio source (coax / SPDIF) (ST-C5CMPDA ONLY)
	Right channel of stereo audio source (ST-C5CMPSA ONLY)
White	Left channel of stereo audio source (ST-C5CMPSA ONLY)

10a. Orange RCA connector- for connecting remote digital audio device's "audio in"

10b. Red RCA connector- for connecting remote right line level stereo audio device

10c. White RCA connector- for connecting remote left line level stereo audio device

11. Green RCA connector- for connecting "Y" component lead from remote HD television

12. Blue RCA connector- for connecting "Pb" component lead from remote HD television

13. Red RCA connector- for connecting "Pr" component lead from remote HD television

ST-C5CMPDA-600 Remote Unit (Front View) (Rear View)

ST-C5CMPSA-600 Remote Unit (Front View) (Rear View)

LIMITATIONS

- The audio output of the XTENDEX is compatible with self-powered stereo speakers.   Otherwise, connect the audio outputs to an audio receiver.

PREPARATION FOR INSTALLATION

- Locations should be chosen for the HDTV and speakers that also have space to connect the Remote and Local Units within the distance provided by the cables.

- The CAT5 cables must be run to the locations where the Remote and Local Units will be connected.   Be careful to route the cables away from any sources of magnetic fields or electrical interference that might reduce the quality of the video and audio signals (i.e. AC motors, welding equipment, etc.).

- All cables should be installed in such a way that they do not cause stress on their connections to the equipment.   Extended lengths of cable hanging from a connection may interfere with the quality of that connection.   Secure cables as needed to minimize this.

Note: CAT5 connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products should not be run underground, outdoors or between buildings.

⚠ *WARNING: Outdoor or underground runs of CAT5 cable could be dangerous and will void the warranty.*

INSTALLATION

Installing The Local Unit

1. Plug the cables of the Local Unit into the audio/video source. (See Fig. 1) as per the chart below.

Connector Color	Connect to
Red	"Pr" on video source
Blue	"Pb" on video source
Green	"Y" on video source
Orange	Digital audio source (ST-C5CMPDA ONLY)
	Right channel of stereo audio source (ST-C5CMPSA ONLY)
White	Left channel of stereo audio source (ST-C5CMPSA ONLY)
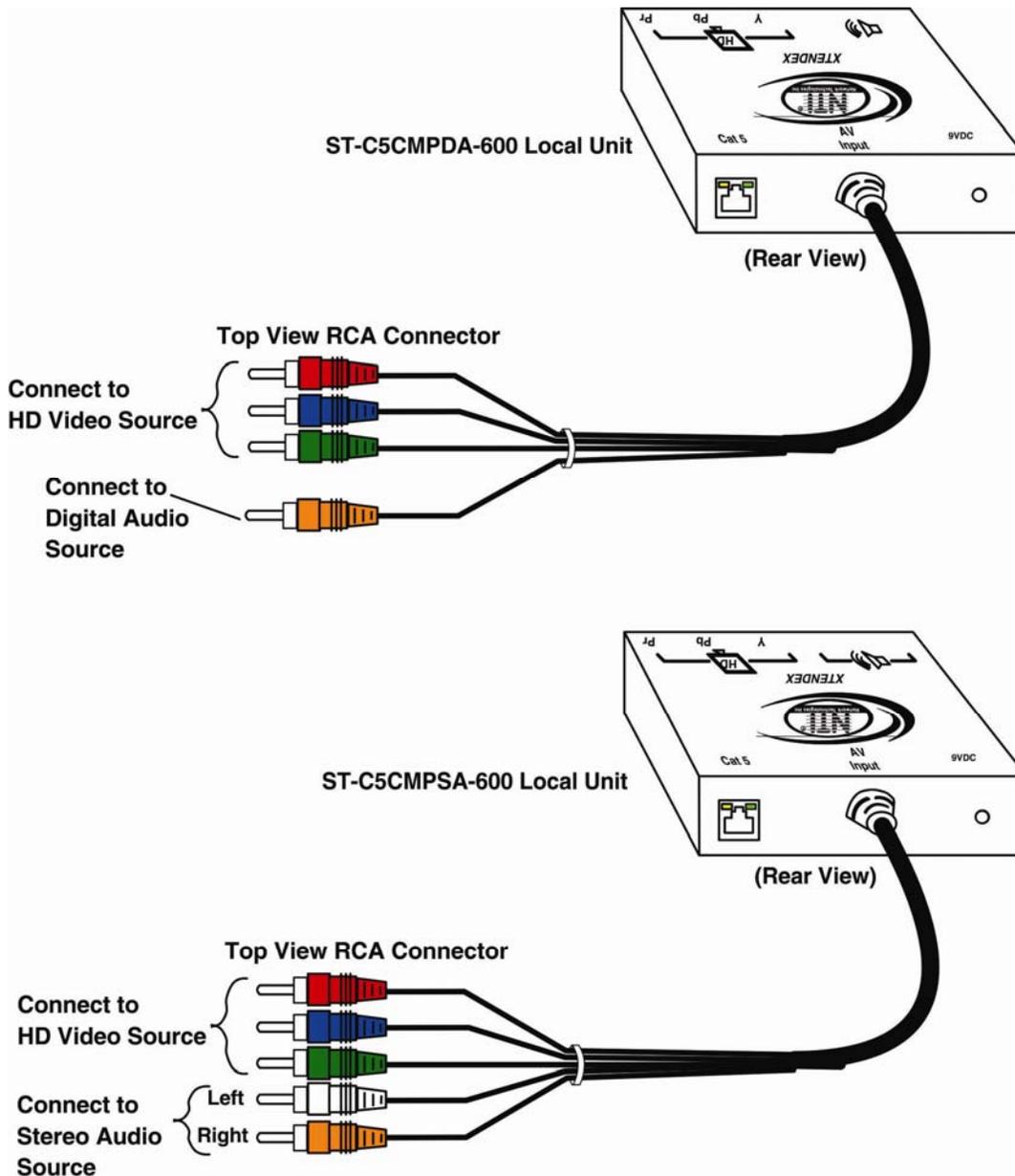
2.   Connect 75 ohm RCA cables between the local HDTV and the RCA connectors marked "Y", "Pb", and "Pr" on the local unit as shown in Fig. 2.

3.   Connect coax cable for digital audio (ST-C5CMPDA-600 only) or stereo audio cable (ST-C5CMPSA-600 only) between the audio connection(s) and the audio device.   See Fig. 2.

(Note- Connecting devices to the Local Unit is optional. A local HDTV and audio device is not required for the Remote Unit to work)
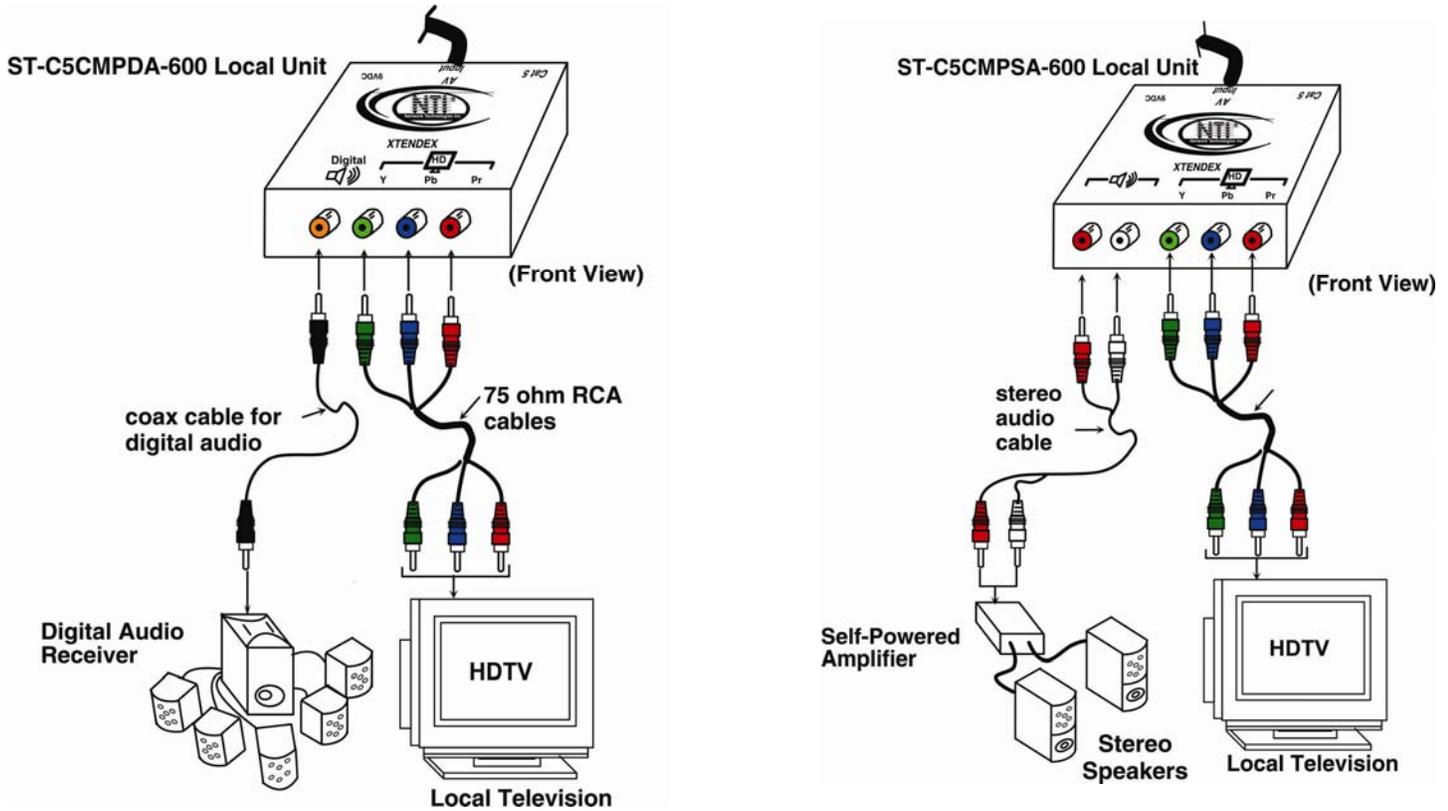

Figure 2- Connect the local television and audio device to the Local Unit

Connect The CAT5 Cable

Connect the CAT5 cable to the "Cat 5" port on the Local Unit. (See Fig. 3.) When properly inserted the cable end should snap into place.

Note: If an RJ45 wall outlet is being used, connect the other end of the extension cable to the RJ45 wall outlet.

⚠ *WARNING: Never connect the XTENDEX to an Ethernet card, Ethernet router, hub or switch or other Ethernet RJ45 connector of an Ethernet device. Damage to devices connected to the Ethernet may result.*
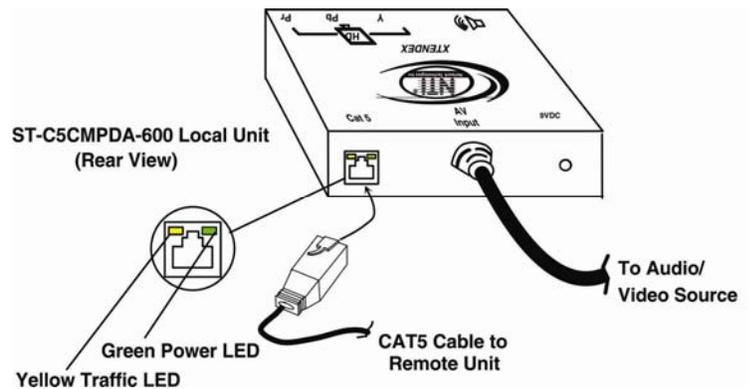

Figure 3- Connect CAT5 cable to Local Unit

Installing The Remote Unit

1. Position the Remote Unit such that the CAT5 cable, the HD television cable, the speakers, and the AC adapter power connector can each reach the Remote Unit without putting strain on the cables.

2. Connect 75 ohm RCA cables between the remote HDTV and the RCA connectors marked "Y", "Pb", and "Pr" on the Remote Unit as shown in Fig. 2.

3. Connect coax cable for digital audio (ST-C5CMPDA-600 only) or stereo audio cable (ST-C5CMPSA-600 only) between the audio connection(s) on the Remote Unit and the audio device.   See Fig. 2.
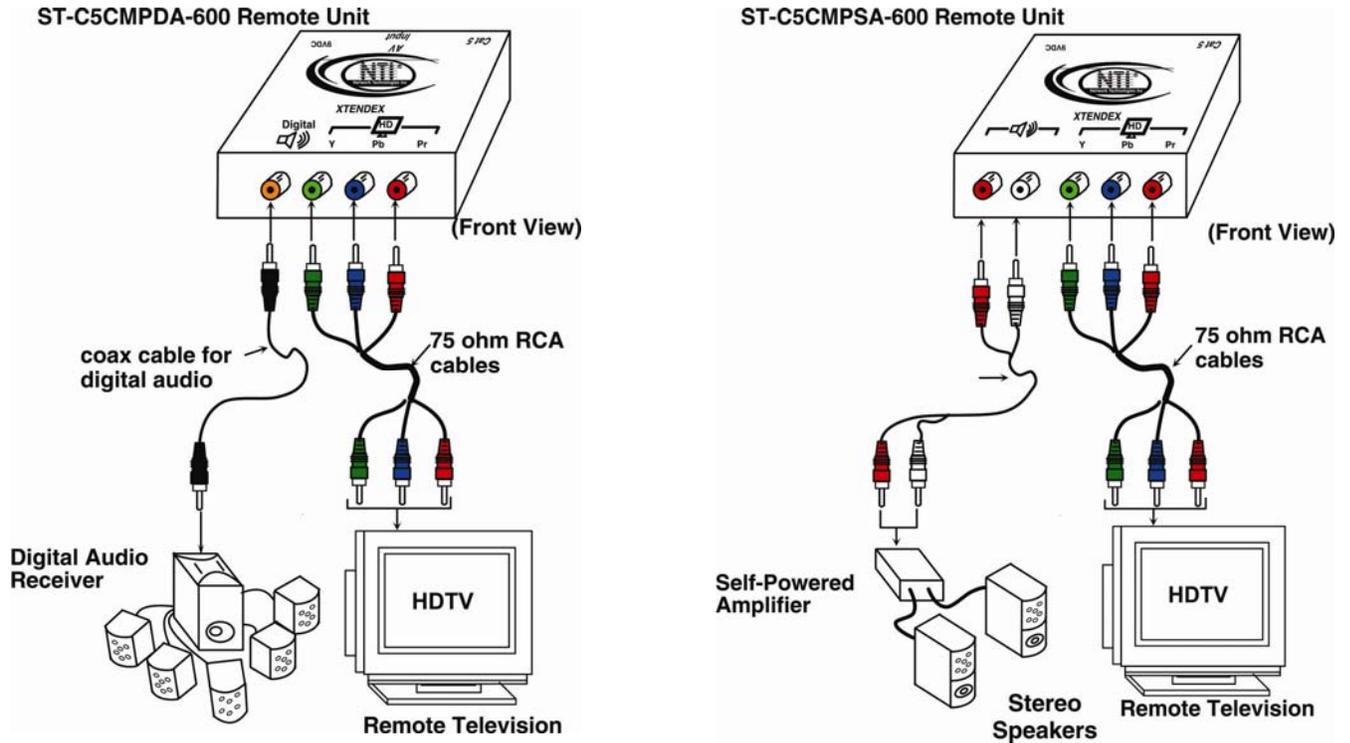

Figure 4- Connect the Extended Components to the Remote Unit

Connect the CAT5 cable

Make sure the CAT5 cable has been installed in accordance with the "Preparation for Installation" instructions on page 5. Connect the CAT5 cable to the "Cat 5" port on the Remote Unit. (See Fig. 5.)   When properly inserted the CAT5 cable end should snap into place.

Note: If an RJ45 wall outlet is being used, connect the other end of the extension cable to the RJ45 wall outlet.

⚠️ *WARNING: Never connect the XTENDEX to an Ethernet card, Ethernet router, hub or switch or other Ethernet RJ45 connector of an Ethernet device. Damage to devices connected to the Ethernet may result.*
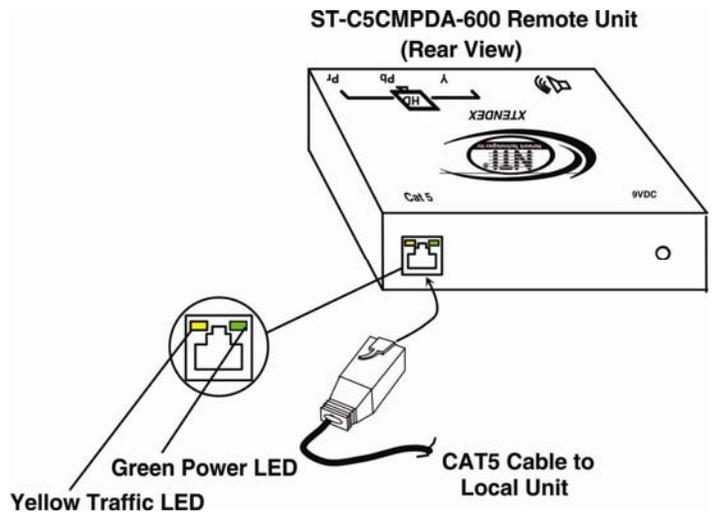

Figure 5- Connect the CAT5 cable to the Remote Unit

Plug-in and Power Up

1. Plug the power cords from the HD television, audio/video source, and speakers (if applicable) into power outlets if this has not already been done.

2. Connect each AC adapter power connector to the 9VDC ports on the Remote and Local Units   Plug each AC adapter into a power outlet.   The green LED on the RJ45 connector of both the Remote and Local Units should illuminate, indicating that a proper power connection has been made to them.   (See Fig. 6.)
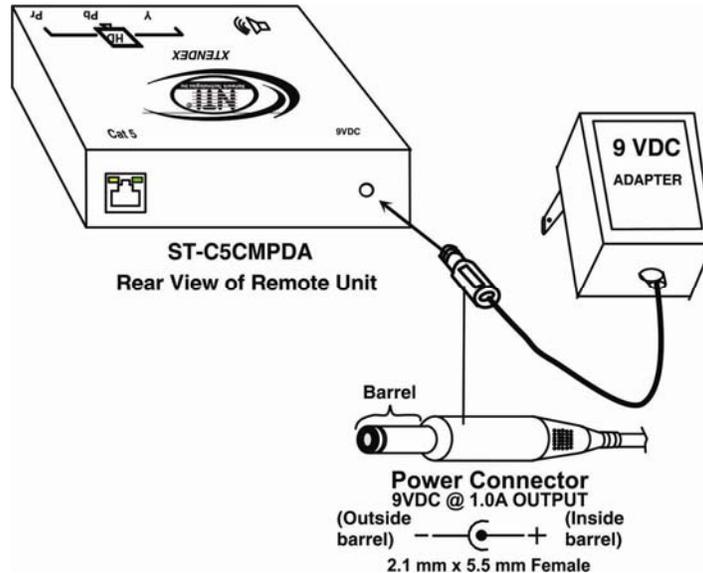
Figure 6- Connect the AC adapter to the Remote Unit

3. Turn ON the audio/video source, HD television, and the speakers.   They should each react as if they were directly connected to each other.

Note: The yellow LED on each RJ45 connector will illuminate anytime data traffic is passing between the Local and Remote Units, indicating proper CAT5 cable connection and communication.

VIDEO QUALITY

Automatic Video Quality Adjustment

Video quality adjustment is done automatically to assure the image is as clear as possible.

TECHNICAL SPECIFICATIONS

Video	
Compatibility	HDTV Component- Y,Pb, Pr
Connectors	RCA
Video Maximum I/O Levels	1.45Vp-p (no offset)
Input / Output Impedance	75 Ohms
Maximum Resolutions	1080i and 720p @ 600ft 1080p @ 400ft
Stereo Audio	
Signal Type	Line Level, stereo, unbalanced
Audio Connectors	RCA
Audio Frequency Response	20Hz to 20Khz, $\pm$ 1dB
Signal-to-Noise Ratio (SNR)	76 dBA
Total Harmonic Distortion and Noise	0.017%
Stereo Crosstalk	-70 dB
Audio Maximum I/O Levels	3.1Vp-p
Output Impedance	Max 2K Ohms, unbalanced
Digital Audio	
Signal Type	S/PDIF
Connectors	RCA
Input/Output Level	0.5 Vp-p
Stereo Crosstalk	-70 dB
Input / Output Impedance	75 Ohms
General	
Interconnect Cable	CAT5/5e/6 Solid UTP EIA/TIA 568 B wiring w/ male RJ45 connectors
Remote and Local Unit Power	120V or 240V at 50 or 60Hz-9VDC/1.0A via AC Adapters (2)
Environmental	+10°C to +40°C, up to 90% RH, Non-condensing
Size (In.) WxDxH	3.25x3.4x1

INTERCONNECTION CABLE WIRING METHOD

The connection cable between the remote and local is terminated with RJ45 connectors and must be wired according to the EIA/TIA 568 B industry standard.   Wiring is as per the table and drawing below.

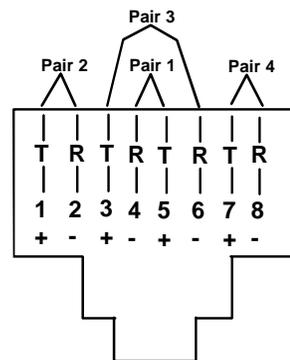| Pin	Wire Color	Pair	Function
1	White/Orange	2	T
2	Orange	2	R
3	White/Green	3	T
4	Blue	1	R
5	White/Blue	1	T
6	Green	3	R
7	White/Brown	4	T
8	Brown	4	R

Figure 7- View looking into RJ45 female

Note: CAT5 connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products should not be run underground, outdoors or between buildings.

WARNING: Outdoor or underground runs of CAT5 cable could be dangerous and will void the warranty.

TROUBLESHOOTING

Each and every piece of every product produced by Network Technologies Inc is 100% tested to exacting specifications.   We make every effort to insure trouble-free installation and operation of our products. If problems are experienced while installing this product, please look over the troubleshooting chart below to see if perhaps we can answer any questions that arise.   If the answer is not found in the chart, a solution may be found in the knowledgebase on our website at http://information.networktechinc.com/jive/kbindex.jspa or please call us directly at (**800) 742-8324 (800-RGB-TECH)** or **(330) 562-7070** and we will be happy to assist in any way we can.

Problem	Cause	Solution
Remote or Local Unit green power LED does not illuminate	• Power supply is not connected or plugged-in.	• Make sure outlet is live and AC adapter is plugged-in. (one for the Remote and one for the Local) • Make sure 9VDC jack is fully connected
No Video on HDTV	• One or more video cables is loose or disconnected. • No power to Remote or Local Units. • CAT5 cable is not connected.	• Check all video cable connections • Make sure green LEDs are illuminated for local and remote. If not, see solution above. • Check cable connections. Make sure they are snapped-in properly and completely.
Video Picture is not sharp or is smeared	• All Video Cables are not firmly seated. • CAT5 cable is too long. • The CAT5 cable is not properly connected. • Video not adjusted	• Check all connections. Make sure all cables are fully seated. • Verify length is within specified limits-600'. • Check cable connections. Make sure they are snapped-in properly and completely. • Check cable connections and power cycle.
The picture is black and white, or missing a color	The video cable is not making good contact or CAT5 cable is loose.	Make sure all cables are properly connected.
A constant vertical wobble appears down the screen	CAT5 cable is too close to a strong power source.	Reroute CAT5 cable if possible.
Video goes blank for a second or two	• Electrical power system is very noisy, particularly the ground. • The CAT5 cable is not properly connected.	• Make sure the interconnection cable is not near any power lines. • Check cable connections. Make sure they are snapped-in properly and completely.
No audio	• Audio cable is not properly plugged in • Speakers are not plugged in • CAT5 cable is not properly connected	• Check all cable connections • Verify speakers are connected and powered • Check CAT5 cable connections

WARRANTY INFORMATION

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at **(800) 742-8324** (800-RGB-TECH) or **(330) 562-7070** or visit our website at http://www.networktechinc.com for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.