## Overview

Because the Precis HT (Home Theatre) Distribution Matrix is available in four configurations, the illustrations in this guide may differ from the model you purchased. The *Precis HT Instruction Manual* contains complete documentation for this product (including individual signal specifications); see the *AMX AutoPatch CD* or visit **www.amx.com**.

| Precis HT Systems | | |
|---|---|---|
| **Models** | **Configuration** | **Description** |
| FGP37-0804-A4B | 8x4 | Component Video (RCA) + Stereo + Digital Audio |
| FGP37-0804-34B | 8x4 | Component Video (BNC) + Stereo + Digital Audio |
| FGP37-1208-A4B | 12x8 | Component Video (RCA) + Stereo + Digital Audio |
| FGP37-1208-34B | 12x8 | Component Video (BNC) + Stereo + Digital Audio |

**Note:** *All Precis HT systems support digital volume control and have an integral Precis X/Y Control Panel.*

## General Specifications

| Specifications | |
|---|---|
| Approvals | CE, ETL, cETL |
| MTBF | 87,600 hours |
| AC Power | 100 VAC to 240 VAC single phase, 50 Hz to 60 Hz |
| Fuse | 1 A, 250 V, 5 mm x 20 mm |
| Power Consumption (max.) | 80 Watts |
| Power Consumption (typical) | 57 Watts per fully loaded enclosure |
| Thermal Dissipation (max.) | 273 BTU/hr. |
| Thermal Dissipation (typical.) | 194 BTU/hr. per fully loaded enclosure |
| Operational Temperature | 32° F to 110° F (0° C to 43° C) |
| Humidity | 0 to 90% non-condensing |
| Enclosure Dimensions | 10.4 in. (26.4 cm) depth<br>17.4 in. (44.2 cm) width without rack ears<br>18.8 in. (47.7 cm) width with rack ears<br>5.2 in. (13.2 cm) height 3 RU |
| Weight | Approximately 12 lbs (5.4 kg) per enclosure |

## Installation

### Rack Mounting – standard EIA 19 in. (48.26 cm) rack
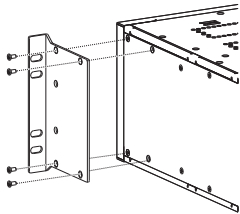
#### To rack mount a Precis HT enclosure:



1. Attach rack ears (4 screws each); as shown.
2. Place the Precis HT in the rack, leaving a minimum of one empty rack unit above and below (required); three empty rack units above and below are recommended.
3. Secure enclosure to the rack with screws.

**Tip**: *When placing in the rack, keep in mind the optimal viewing angle for the control panel is eye level.*

**FIG. 1** Attach rack ears to sides of enclosure

### Attaching Input & Output Cables/Wires

Before attaching all cables/wires, attach only the input and output connectors for the first source and the first destination. Execute a test switch (see reverse page). When the test switch is successful, attach the rest of the input and output cables and wires.

### Video Connectors

Precis HT models can be ordered with either RCA or BNC connectors for video. Component signals (e.g. Y/Pb/Pr) require multiple video cables. The example below shows three RCA cables attached for routing a three-component signal through Output 8.
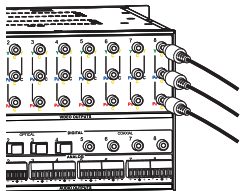


#### To attach video cables:

1. Insert the RCA plugs into the RCA jacks according to the labels on the enclosure.
   **Or**
   Fasten the BNC cables onto the BNC connectors according to the labels on the enclosure (BNC not shown).

**FIG. 2** Insert RCA plugs into RCA jacks

## Audio Connectors

Typically, a Precis HT system uses one set of audio connectors. For information on switching both the analog and digital audio sets of connectors, see the *Instruction Manual* on the CD or at **www.amx.com**.

### Stereo Audio Connectors – 5-Term

Stereo audio connections use 5-position terminal blocks that can be wired for balanced (differential) or unbalanced (single-ended) audio (FIG. 3).
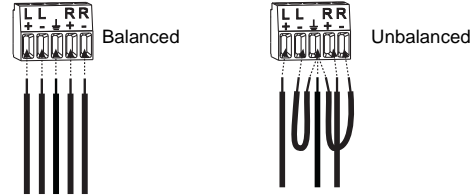


**FIG. 3** Stereo audio wiring

**Note:** *When using shielded twisted-pair wire, connect the shield (ground) at one end only (recommend receiving end) to minimize low frequency noise (see FIG. 4).*

Source and destination devices will require either balanced or unbalanced (single-ended) connections. More than one of the options shown in FIG. 4 can be used in the same system.
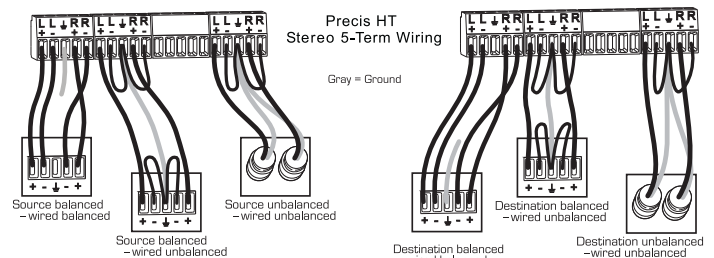


**FIG. 4** Options for source-to-Precis HT-to-destination 5-Term wiring

### Digital Audio Connectors – Optical and Coaxial

TosLink® connectors are optical and S/PDIF connectors are coaxial. (Remove the protective caps from the TosLink® jacks.)
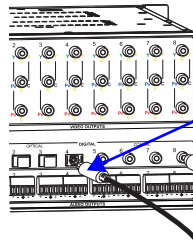


**FIG. 5** Attach TosLink & S/PDIF connectors

## Establishing External Control (if applicable)

The Precis HT can be controlled by attaching an external control device/system to the CONTROL port or to the REMOTE port, which uses AutoPatch XNNet protocol for AMX AutoPatch devices.

### Serial Control (PCs, AMX Control Devices, & third-party controllers)

Use a null modem cable matching the pinout in FIG. 6 for RS-232 without hardware flow control. Connect the PC (or other serial controller) to the CONTROL port on the enclosure. The Precis HT requires pins 2, 3, and 5 only.
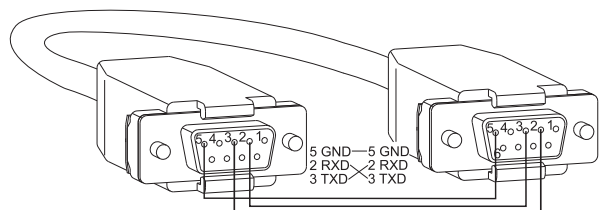


**FIG. 6** RS-232 null modem cable pin diagram

## To establish external serial control:

1. Plug the null modem cable into the enclosure's CONTROL port (FIG. 7).
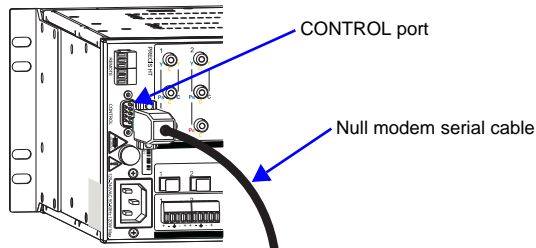


**FIG. 7** Attach null modem serial cable

2. Plug other end of the cable into the serial port on the serial controller/device.
3. Open serial communication software and set port settings to match the Precis HT settings (baud rate = 9600, data bits = 8, stop bit = 1, parity and flow control = none).

## XNNet Control (SBCs, remote control panels, etc.)

**Communication Cable Requirements:**
- Two-conductor, 20 AWG, 7/28 strand cable with a drain wire or shield, such as Alpha 2412C (customer supplied)
- Maximum cable length: 1,000 ft. (305 m) total, including linked devices

On large control networks, termination may be required on the last linked device; for termination information, see the device's documentation.
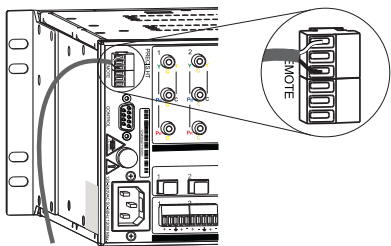
## To establish external XNNet control:



**FIG. 8** Insert wires into REMOTE port

1. Attach XNNet link cable to XNNet device according to the device instructions.
2. Unplug either REMOTE connector on the Precis HT and loosen the screws.
3. Insert XNNet link cable wires according to FIG. 8 (either wire can be inserted in either outside slot).
4. Tighten screws and plug in the REMOTE connector.

## Applying Power

**Important:** *We recommend attaching all power cords to a surge protector and/or an AC line conditioner.*

### To apply power:

1. Attach power cord and plug into power source (turn on power source if necessary). The Power Indicator on the front of the enclosure illuminates a constant green.
2. Apply power to any external devices (SBCs, etc.) and then to the source and destination devices.

## Completing the Installation

The Precis HT ships with a factory default switch that routes the signal from Input 1 to all outputs. Before using the system for normal operations, disconnect the default switch and execute a test switch to verify that the system is working correctly.

### To complete the installation:

1. Disconnect the factory default switch (for instructions, see the specific type of controller in the next column).
2. Execute a test switch that routes Input 1 to Output 2 using one of the following control options. For component signals that require multiple connectors (e.g., an RGsB signal requiring three connectors), all cables for that signal *must* be attached before executing the test switch.
3. Attach remaining source and destination devices.

## Control Options Startup & Test Switch

**Control Panel** – when power is applied, the Power LED indicator on the front illuminates**.**
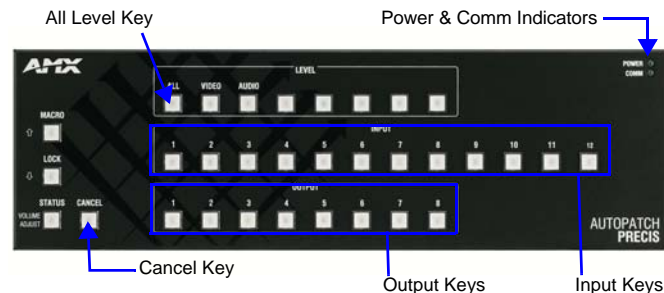


**FIG. 9** Precis HT 12x8 front control panel

To disconnect the default switch: press Cancel Key to ensure panel is in Switch mode. Press the All Level Key, which illuminates. Press Input Key 1, which flashes. After a moment, all Output Keys illuminate. Press each Output Key; as each key turns off, the output is disconnected from the input.

To execute the test switch: press Cancel Key to ensure panel is in Switch mode. Press the All Level Key, which illuminates. Press Input Key 1, which flashes. Press Output Key 2. When Output Key 2 illuminates, the switch is successful.

**AMX Control Devices** – the Precis HT is compatible with a number of AMX control devices. For control programming information, see the instruction manual for the specific interface.

**APControl 3.0** – install and open the program. From the APControl Launchbar menu, select System / New; select Heritage System / Next; select Manual Configuration Entry / Next; enter VMs and number of inputs and outputs; click Add VM / Next; finish Wizard instructions.

To disconnect the default switch: From the Launchbar menu, select Views/CrossBar and click on all active crosspoints to disconnect them.

To execute the test switch: From the Launchbar menu, select Views/CrossBar and click on the crosspoint for Input 1 / Output 2.

**APWeb** – connect the APWeb Module (see the APWeb Module documentation and Quick Start Guide). For instructions on disconnecting the default switch and executing a test switch, see the APWeb Instruction Manual on the CD.

**BCS Commands (HyperTerminal)** – when power is applied, a short splash screen appears.

To disconnect the default switch: enter DLOI1T into the terminal emulation program. When DLOI1T  appears, the command is successful.

To execute the test switch: enter CL0I1O2T into the terminal emulation program. When CL0I1O2T appears, the switch is successful.

## Audio Adjustment

All Precis HT models support Volume Control and Input Gain Control for the analog audio signals. Dual-function keys on the Control Panel are used to adjust audio. The Volume Adjust (Status) Key places the system in volume adjust mode, the Up Arrow (Macro) Key increases volume, and the Down Arrow (Lock) Key decreases volume.

### To access audio adjustments:

1. Press and hold down the Volume Adjust (Status) Key until it blinks.
2. Select the output or input needing adjustment.
3. Increase audio by pressing and releasing the Up Arrow (Macro) Key.
   **Or**
   Decrease audio by pressing and releasing the Down Arrow (Lock) Key.
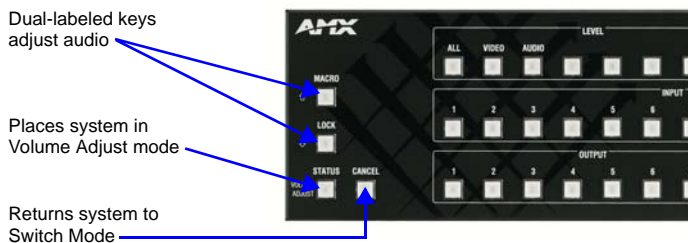4. Press the Cancel Key when done with audio adjustments (does not cancel audio adjustments).



**FIG. 10** Audio adjustment keys

## Additional Information Covered in Precis HT Instruction Manual

See the Instruction Manual on the CD or at **www.amx.com** for the following:
- Control panel operations (including locking/unlocking)
- Executing macros (local presets which must be pre-defined in XNConnect)

## Reference Document for Precis HT

The "BCS Protocol Instruction Manual" is on the *AMX AutoPatch CD* and at **www.amx.com**.