

Overview

The CAT-5 RGBHV Transmitter (TX) and Receiver (RX) work together or work in conjunction with CAT-5 RGBHV boards on an AMX AutoPatch Distribution Matrix. This guide contains complete information for the TX and RX when used as a pair. Product model numbers vary depending on the type of installation and length of cable (see table below). For additional information on using modules or boards in conjunction with a distribution matrix, see the distribution matrix's instruction manual on the *AMX AutoPatch Software & Documentation CD* or visit www.amx.com. For adding or replacing boards on the AF-10 and for AF-10 specifications, see the "AF-10 Quick Start Guide."

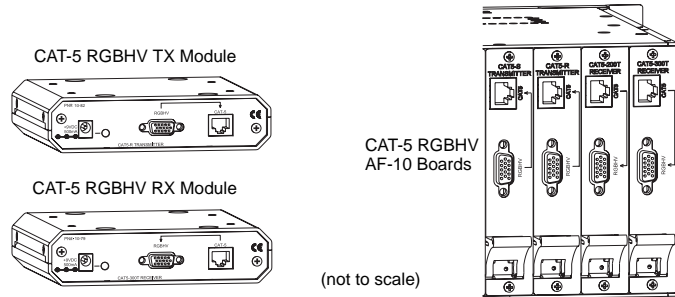


FIG. 1 CAT-5 RGBHV TX & RX are available as modules & AF-10 boards (see table below)

TX & RX Installation Types

Transmitters and Receivers pairs are available for two types of installation.

- Transmitter-to-Receiver: TX passes source signal directly to RX
- Transmitter-to-Matrix-to-Receiver: TX passes source signal to a distribution matrix, which routes the signal to a corresponding RX (allowing for switching to multiple destinations)

Each type of TX is tuned to work with a corresponding RX installation type. A TX of one type must be used with an RX of the same type. Use the table below to determine TX and RX installation types.

TX & Corresponding RX Installation Types	
TX	RX
Transmitter-to-Receiver	
FG1010-82, Module FG1040-467, AF-10	FG1010-73 (100 ft., 30.48 m), Module
	FG1010-76 (200 ft., 60.96 m), Module
	FG1010-79 (300 ft., 91.44 m), Module
	FG1040-458 (100 ft., 30.48 m), AF-10
	FG1040-461 (200 ft., 60.96 m), AF-10
	FG1040-464 (300 ft., 91.44 m), AF-10
Transmitter-to-Matrix-to-Receiver	
FG1010-85, Module FG1040-470, AF-10	FG1010-88 (25 ft., 7.62 m), Module
	FG1010-91 (100 ft., 30.48 m), Module
	FG1010-94 (200 ft., 60.96 m), Module
	FG1010-97 (300 ft., 91.44 m), Module
	FG1040-473 (25 ft., 7.62 m), AF-10
	FG1040-476 (100 ft., 30.48 m), AF-10
	FG1040-479 (200 ft., 60.96 m), AF-10
	FG1040-482 (300 ft., 91.44 m), AF-10

Specifications

General Specifications	
Approvals	CE, UL, cUL
Signal Type	RGBHV
Supported Cable Types	CAT-5, CAT-5e, CAT-6
Power Consumption (max.) & Connector – Module	+12 V - +24 V DC @ 5 Watts 2.1 mm DC power jack
Power Consumption (max.) – AF-10	120 VAC / 240 VAC, 50 - 60 Hz
Humidity	0 to 90% non-condensing
Operational Temperature	32° - 110° F (0° - 43° C)
Dimensions – Module	5.22 in. (13.26 cm) depth 5.82 in. (14.78 cm) width 1.42 in. (3.61 cm) height w/out feet
Weight – Module	Approximately 1.5 lb. (0.68 kg)
Connectors	RJ-45 and HD-15

Video Specifications

Input Level (max.)	+/-1 V
Input Impedance	75 ohms
Output Level (max.)	+/-1 V
Output Impedance	75 ohms
HV Sync Input/Output	TTL
Resolution	From VGA (640x480) to UXGA (1600x1200 @ 60 Hz) over all distances ≤400 feet
Typical Bandwidth	150 MHz @ +/-3 dB over 300 ft. (91.44 m) of CAT-5 cable (module to module)

Cable Requirements

Use any of the following UTP cable: CAT-5, CAT-5e, CAT-6, or skew-free.

The cable length must equal the specified distance for the receiver (see the first table in the column to the left); extra cable may be required to achieve the receiver's specified length. Cable is available in fixed lengths.

Each cabled TX and RX pair allows up to 300 ft. (91.44 m) to maintain specifications. Total distance must be <400 ft. (121.92 m).

Important: The recommended skew ratio for all cable is <25 nS per 328 ft. (100 m).

System Setup

A typical setup using a Transmitter-to-Receiver CAT-5 RGBHV TX and RX is illustrated in FIG. 2. The modules and AF-10 boards may be mixed in four different ways (see the "combinations" list in FIG. 2).

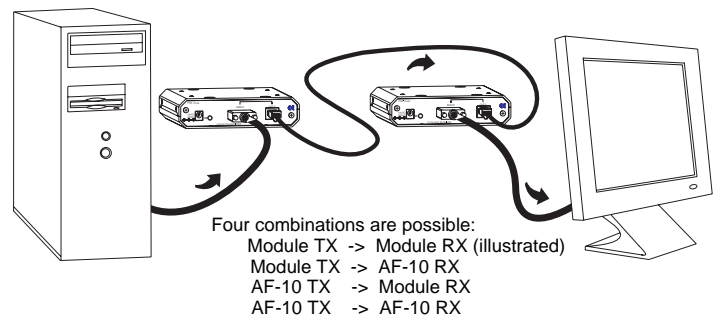


FIG. 2 System setup for a Transmitter-to-Receiver type installation

A typical setup using a Transmitter-to-Matrix-to-Receiver CAT-5 RGBHV TX and RX is illustrated in FIG. 3. The modules and AF-10 boards may be mixed in four different ways (see the "combinations" list in FIG. 3).

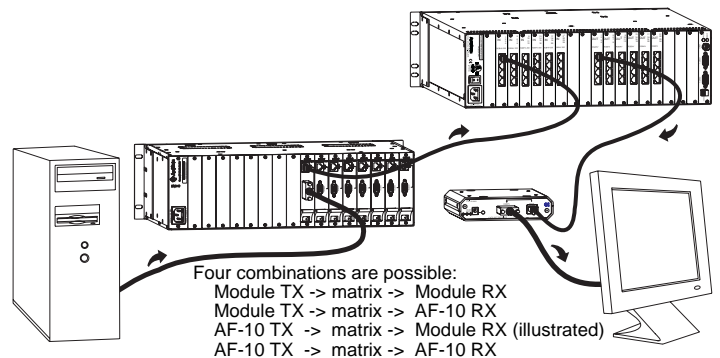


FIG. 3 System setup for a Transmitter-to-Matrix-to-Receiver type installation

Installation
Modules

Important: Always use a UL approved power source. Check the power source's documentation for information specific to that power source.

To attach connectors & power to a module:

- 1. Insert the RJ-45 connector into the RJ-45 (CAT-5) receptacle (FIG. 4).

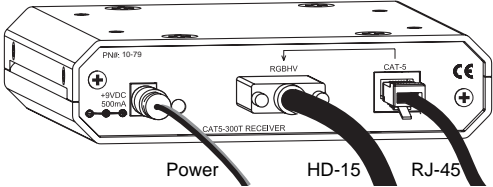


FIG. 4 Attach RJ-45, HD-15, & power connectors

- 2. Insert the HD-15 connector (see pinout in FIG. 6) into the HD-15 (RGBHV) receptacle (FIG. 4).
- 3. Plug the power cord into the power jack and into the power source.

AF-10 Boards

Important: Always use a UL approved power source. Check the power source's documentation for information specific to that power source.

To attach connectors & power to AF-10 boards:

- 1. Insert the RJ-45 connector into the RJ-45 (CAT-5) receptacle (FIG. 5).

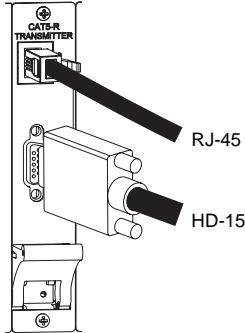
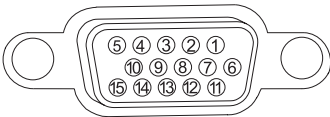


FIG. 5 Attach RJ-45 & HD-15 connectors

- 2. Insert the HD-15 connector (see pinout in FIG. 6) into the HD-15 (RGBHV) receptacle (FIG. 5).
- 3. Plug the power cord into the AF-10 power receptacle and into the power source.

TX & RX HD-15 Pinouts

HD-15 connectors on TX and RX modules and boards use the pinouts in FIG. 6.



Input		
1. Red	6. Red GND	11. ID Bit
2. Green	7. Green GND	12. ID Bit
3. Blue	8. Blue GND	13. Horizontal Sync
4. ID Bit	9. NC	14. Vertical Sync
5. GND	10. GND	15. ID Bit
Output		
1. Red	6. Red GND	11. ID Bit
2. Green	7. Green GND	12. ID Bit
3. Blue	8. Blue GND	13. Horizontal Sync
4. ID Bit	9. NC	14. Vertical Sync
5. GND	10. GND	15. ID Bit

FIG. 6 HD-15 connector pinouts

