



CAT5 Audio Video Computer Training Kit



**CUSTOMER
SUPPORT
INFORMATION**

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500)
FREE technical support, 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746
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**FEDERAL COMMUNICATIONS COMMISSION
AND
CANADIAN DEPARTMENT OF COMMUNICATIONS
RADIO FREQUENCY INTERFERENCE STATEMENTS**

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

Trademarks

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Normas Oficiales Mexicanas (NOM)

Electrical Safety Statement

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

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1. Specifications

SYSTEM	
Resolution	Up to 1600x1200 @ 75 Hz
System cable	Shielded CAT5 FTP cable
Max distance	110m/360ft
Input/Output Video Signals	Analog signal red, green, blue 0.7v p-p 75 Ohm
Sync.	TTL compatible
Horizontal/Vertical Sync. Polarity	Positive/Negative
Audio	Mono
Operating Temperature	0°C to 40°C/32°F to 104°F
Storage Temperature	-40°C to 70°C/-40°F to 158°F
Warranty	3 Years

	ONE PORT TRANSMITTER	EIGHT PORT SWITCH	REMOTE UNIT
Cables & Connectors	VGA In - HDD15M VGA Out - HDD15F System Out - RJ45 Mic/Headphone/Sc In/Out - Jack Controller - MiniDin8F	System In - RJ45 System Out - RJ45	System In - RJ45 CPU VGA - HDD15M Screen - HDD15F Audio In/Out - Jack
Dimensions	150 x 94 x 42mm/ 0.59 x 0.37 x 0.16ft	118 x 96 x 42mm/ 0.39 x 0.31 x 0.14ft	78 x 62 x 32mm/ 0.31 x 0.24 x 0.13ft
Power supply	AC/DC Power Adapter 12VDC 1A	AC/DC Power Adapter 12VDC 1A	12 VDC, 160 mA from Transmitter or Eight Port Switch

2. Introduction

The CAT5 Audio Video Computer Training system combines real time multimedia broadcasting with multi-functional, network based, classroom control.

The CAT5 Audio Video Computer Training system can run heavy multimedia applications that no network structure can support, thus freeing up valuable network resources.

2.1 System components

The CAT5 Audio Video Computer Training system consists of the following Hardware (HW) and software components:

- 1 One Port Transmitter (AC165A) + Control Unit
- 1 Eight Port Switch (AC157A-8)
- 3 Remote Units (AC158A-REM)
- CAT5 Audio Video Computer Training software + AVI cable.

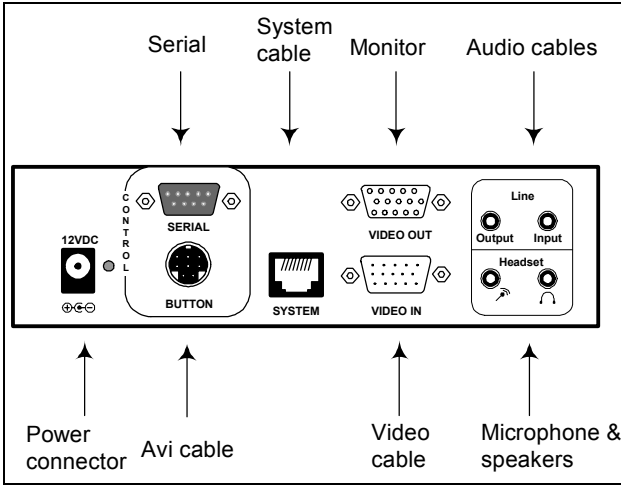
The Quick Installation Guide explains how to install and operate the hardware.

To install and operate the CAT5 Audio Video Computer Training software, see the CAT5 Audio Video Computer Training software User Guide.

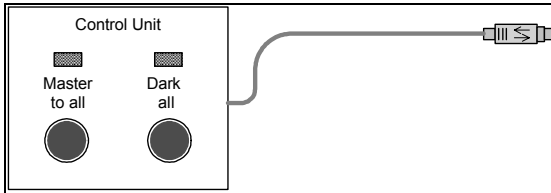
Shielded CAT5 FTP cables connect the CAT5 Audio Video system. The Remote Units can be up to 110m/360ft away from the One Port Transmitter.

2.2 The CAT5 Audio Video system units

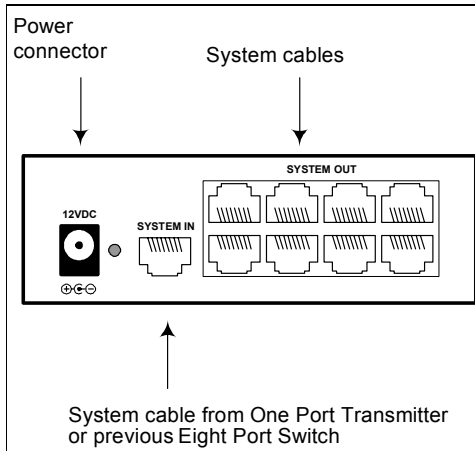
The figures below illustrate the One Port Transmitter, Control Unit, Eight Port Switch and Remote Unit.



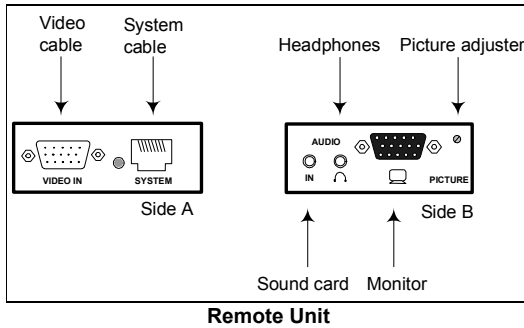
One Port Transmitter



Control Unit



Eight Port Switch



2.3 Expanding the CAT5 Audio Video system

You can expand the CAT5 Audio Video system to 512 Remote Units by having up to 3 levels of Eight Port Switches. The Eight Port Switches on levels 1 and 2 can each be connected to 8 Remote Units or 8 Eight Port Switches. Each Eight Port Switch on level 3 can have 8 Remote Units connected to it. (See the configuration diagram on page 12).

3. Installation

3.1 Pre-installation instructions

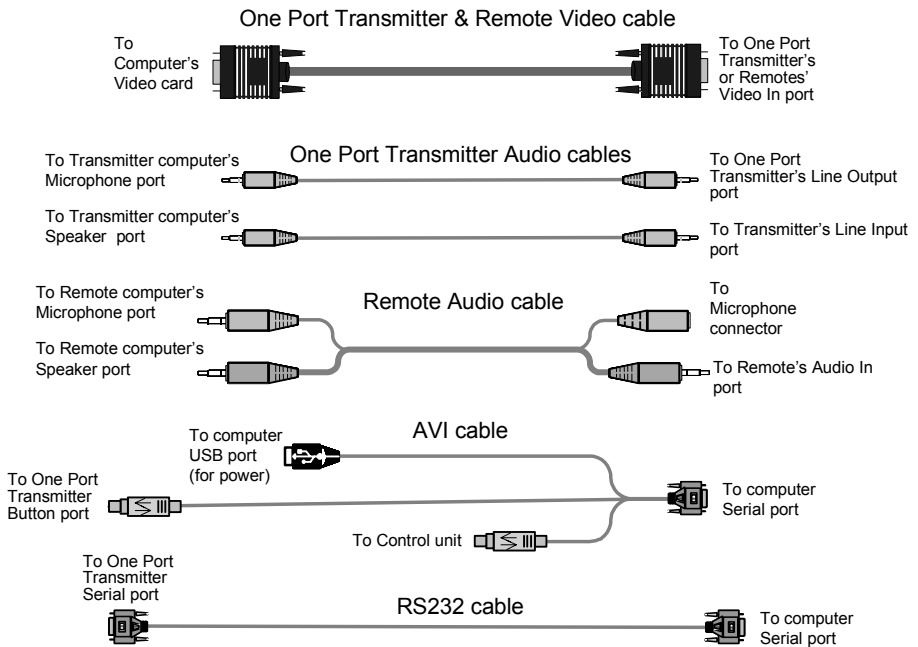
Note

In the CAT5 Audio Video system the CAT5 cables carry electrical power. Therefore do **NOT** connect them to any other device. To avoid this we recommend you attach the stickers provided to the ends of each CAT5 cable.

Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

3.2 The cables

The cables are illustrated below.

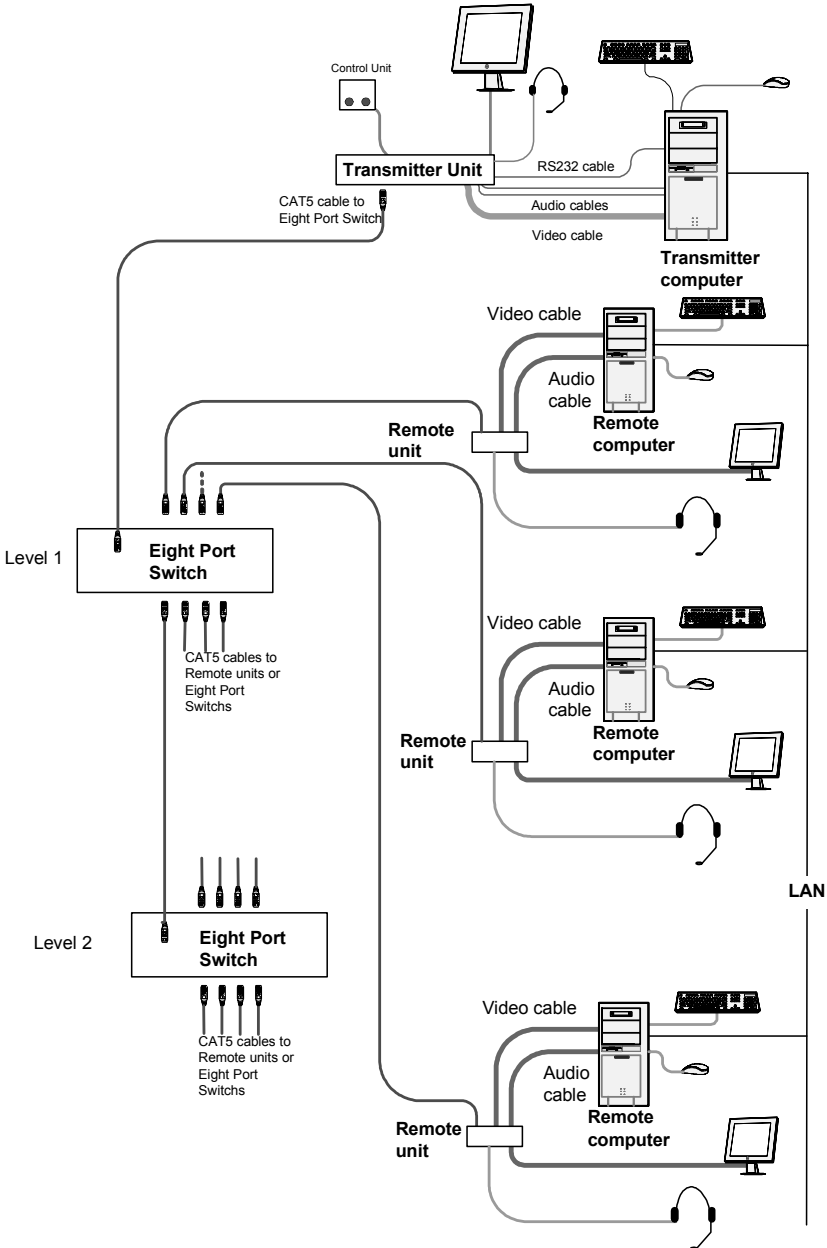


3.3 Power supply

Connect the One Port Transmitter and Eight Port Switches to the power supply with 12 VDC, from the AC/DC adapter provided. The Remote Units receive 12 VDC, 160 mA via the CAT5 cables from the Eight Port Switch.

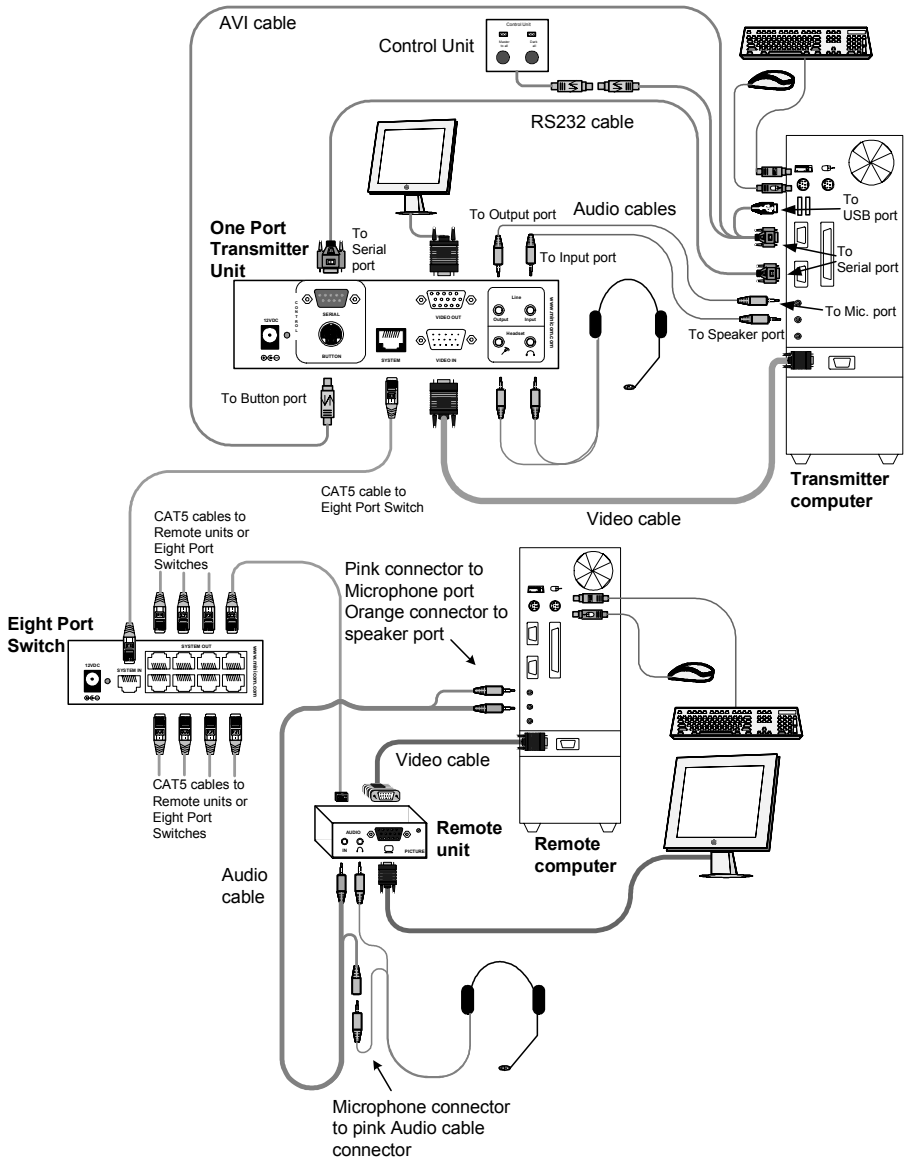
3.4 The system configuration

The figure below illustrates the system configuration.



3.5 Detailed connections

The figure below illustrates the detailed connections of the system units.



4. Operating the system

Operate the system with the Control Unit or RS232 Serial control.

4.1 RS232 Serial control

For RS232 Serial control, connect the RS232 cable as illustrated on page 13 above.

4.2 The Control Unit

Operate the CAT5 Audio Video system with the Control Unit. The Control Unit performs the following functions:

4.2.1 Master to all

Press the **Master to all** button to send the teacher's screen with audio to all remote screens /speakers. The LED above the button lights up.

Press the button again to release the remote screens/speakers.

4.2.2 Dark all

Press the **Dark all** button to darken all remote screens. The LED above the button lights up. (This does not affect audio broadcasting).

Press the button again to release the remote screens.

4.2.3 Adjusting the picture quality

When the broadcast screen needs adjusting, use a small screwdriver to turn the Picture adjuster on the Remote Unit.

4.3 CAT5 Audio Video Computer Training software

The above 2 functions can also be performed from the CAT5 Audio Video Computer Training software. See the CAT5 Audio Video Computer Training software User Guide for these and many other software functions.

5. Troubleshooting

5.1 Calling Black Box

If you determine that your CAT5 Audio Video Computer Training Kit is malfunctioning, *do not attempt to alter or repair it*. It is not user-serviceable. Contact Black Box Technical Support at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- The nature and duration of the problem;
- When the problem occurs;
- The components involved in the problem;
- Any particular application that, when used, appears to create the problem or make it worse; and
- The results of any testing you've already done.

5.2 Shipping and Packaging

If you need to transport or ship your CAT5 Audio Video Computer Training Kit:

- Package it carefully. We recommend that you use the original container.
- If you are returning the unit, include everything you received with it. Before you ship a unit back to Black Box for repair or return, contact us to get a Return Authorization (RA) number.



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