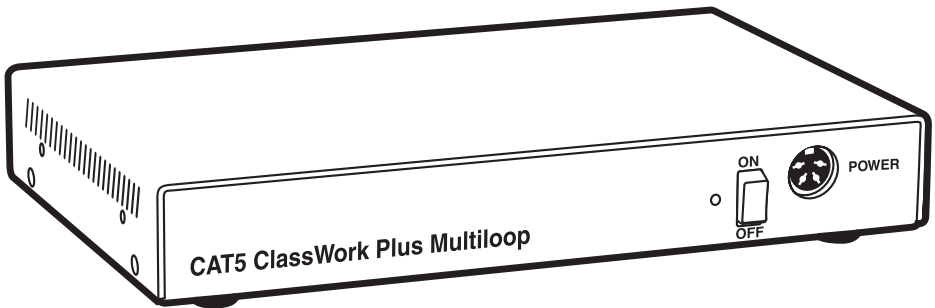




CAT5 ClassWork Plus Multiloop



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INFORMATION**

Order **toll-free** in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
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Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
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**FEDERAL COMMUNICATIONS COMMISSION
AND
INDUSTRY CANADA
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 J 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 Industry Canada.

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 Industrie Canada.

**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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Contents

Chapter	Page
1. Specifications	6
2. Introduction	7
3. Installation	8
3.1 Configuration	8
3.2 Installation Steps	9
3.3 Mapping the Classroom Layout Using ClassWork Plus Multiloop . .	10

1. Specifications

Maximum Number of Workstations: 63 +1

Topology: Tree

Management: (1) Instructor Control Unit (hardware management unit) for every Instructor Interface Unit

Platforms: PC or PS/2®

Resolution: 1280 x 1024; 75 MHz

Cabling: CAT5 FTP (Foil Shielded Twisted Pair) solid wire 2 x 4 x 24 AWG (America Wire Gauge) cable with RJ-45 male connectors attached at each end

Transmission Distance: Maximum 980 ft. (300 m)

Operating Systems Supported: Windows® 9x, Windows NT®, Windows 2000, Novell®, DOS, Linux, UNIX®

Temperature: Operating: Up to 158°F (70°C); Storage: -40 to +158°F (-40 to +70°C)

Power: AC844A: Input: 120 VAC, 60 Hz, 20 watts; Output: 9 VAC, 1400 mA; AC844AE: Input: 230 VAC, 50 Hz

Size: 1.75"H x 8.75"W x 6.4"D (4.5 x 22.2 x 16.3 cm)

Weight: 0.5 lb. (0.2 kg)

2. Introduction

The CAT5 ClassWork Plus classroom has one long loop that connects up to 31 student units with the teacher unit. With the ClassWork Plus Multiloop, you can have up to five smaller loops in one classroom, giving you the following advantages:

- Lets you connect up to 63 Student Units to the ClassWork Plus system.
- Increases the overall system cable distance of up to 980 ft. (298.7 m). The maximum length of the system cable in each loop should be less than 200 ft. (61 m).
- Increases the overall quality of the ClassWork Plus system.



Figure 2-1. ClassWork Plus Multiloop front view.

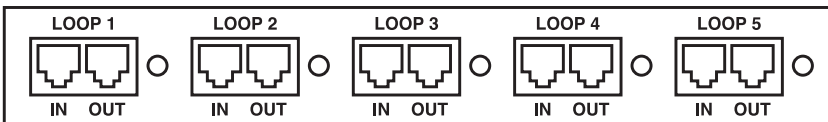


Figure 2-2. ClassWork Plus Multiloop rear view.

3. Installation

3.1 Configuration

Figure 3-1 illustrates the Multiloop configuration.

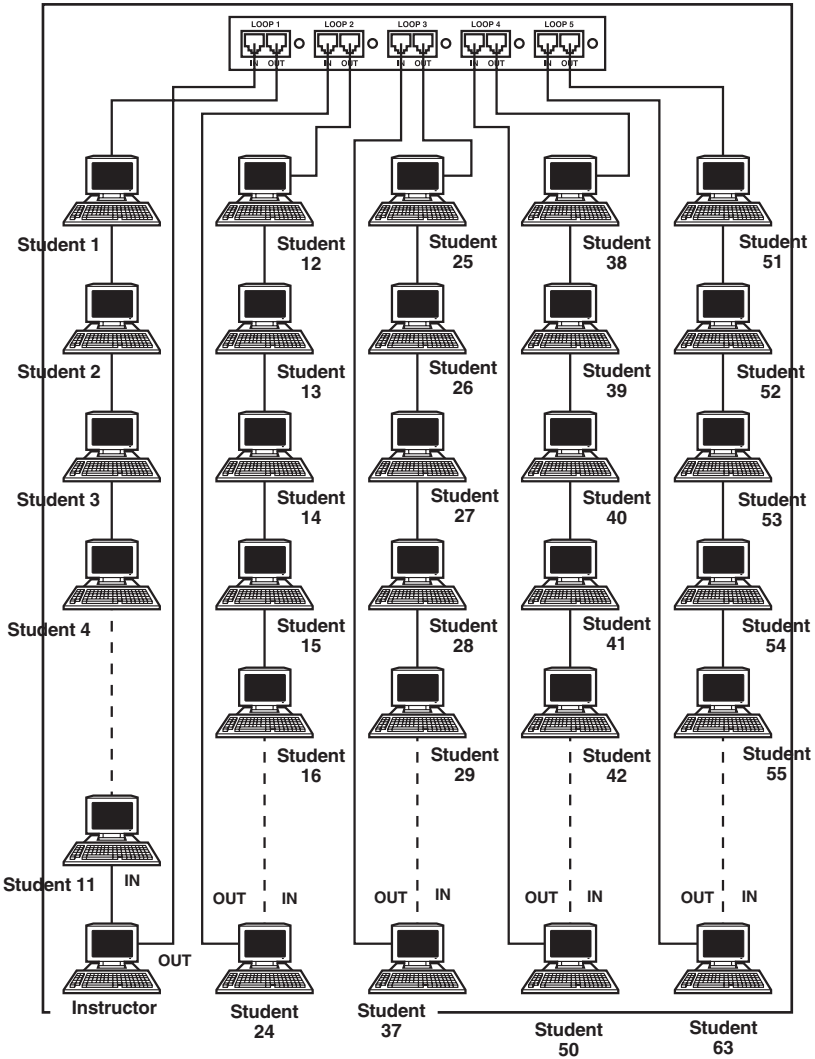


Figure 3-1. ClassWork Plus Multiloop configuration.

3.2 Installation Steps

Before connecting the ClassWork Plus Multiloop, set up the classroom layout by evenly dividing the Student stations between all five loops. The Teacher Unit *must always be* in Loop 1. The maximum number of ClassWork Plus Multiloop units in each loop should be no more than 16.

1. Place the CAT5 ClassWork Plus Multiloop away from fluorescent lights, strong magnetic and electromagnetic fields, and all other sources of electrical noise.
2. Connect the 9-VAC power adapter to the power connector on the ClassWork Plus Multiloop's front panel and plug the cord into a wall socket.
3. Connect the loops using standard CAT5 FTP system cable as follows:
 - a. Connect the OUT port of Loop 1 of the Multiloop to the IN port of the first ClassWork Plus unit.
 - b. Connect the OUT port of the last ClassWork Plus unit in the loop to the IN port of Loop 1 of the Multiloop. For best performance, connect the Teacher Unit as the last station in Loop 1.
 - c. Connect the other loops to the rest of the ClassWork Plus units, as described above.
4. Set the Student Units' ID numbers according to your classroom layout. To set the ID numbers, see the CAT5 ClassWork Plus manual (AC840A-R2).

3.3 Mapping the Classroom Layout Using the ClassWork Plus Multiloop

Map the classroom layout before operating the ClassWork Plus system. To map the classroom layout:

1. Switch on all computers and ClassWork Plus units.
2. Press the following key sequence on the Teacher Control Unit (TCU):

<PRINT><MASTR><ENTER><PRINT><PRINT><5><5><ENTER>

During the mapping, all five green LEDs on the ClassWork Plus Multiloop's rear panel will light. Once the mapping finishes, it is saved in the memory, and all the green LEDs darken.

3. Wait for 30 seconds, then press the <PRINT> key. The ClassWork Plus system will now operate.

NOTE

Each time you switch the ClassWork Plus Multiloop, press the Reset button located on the rear panel of the TCU.

When a ClassWork Plus command is sent to a loop, the green LEDs near the RJ-45 connectors of that loop light.

REMINDER

Always perform the classroom mapping procedure every time you change the classroom setup.



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