BLACK BOX®
NETWORK SERVICES

OCTOBER 2001
AC850A
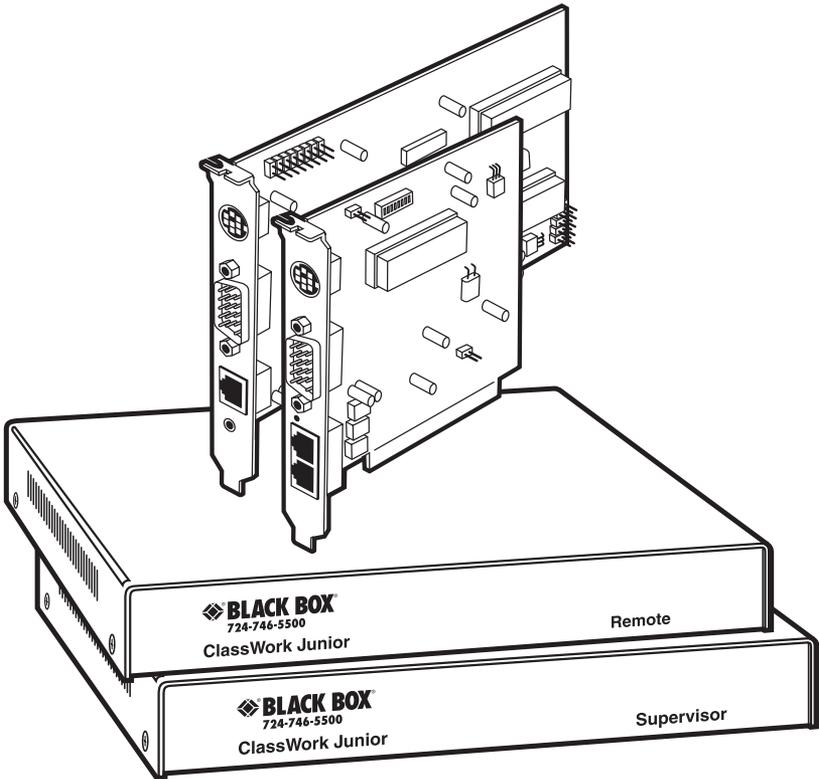**AC851C**
AC852A
AC853A

ClassWork Junior

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 connectado 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 fisica 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 lineas de energia.

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 objectos liquidos 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: Objectos 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 (continued)

1. Specifications

Maximum Number of Remote PCs: 31

Resolution: Up to 1280 x 1024 pixels

Refresh Rate: 75 Hz

Transmission Distance: From Supervisor computer to last Remote computer in the chain: Up to 360 ft. (110 m)

System Requirements: CPUs: IBM AT, PS, and 100% compatibles; Video: SVGA, VGA, or XGA

System Cable Specification: RJ-45 male/RJ-45 male connector, Ethernet 100BASE-T4 CAT5 FTP cable

Connectors: Supervisor Card or Unit: (1) RJ-45 system port, (1) HD15 female screen in/out, (1) 8-pin mini-DIN female for keyboard and mouse, (1) 3.5-mm jack for serial options; Remote Card or Unit: (2) RJ-45 system ports, (1) HD15 female screen in/out, (1) 8-pin mini-DIN female for keyboard and mouse

Power: Cards: From the PCI interface: *Supervisor Card:* +5 volts/250 mA, -12 volts/120 mA; *Remote Card:* +5 volts/250 mA, -12 volts/100 mA; *Standalone Units:* 115 VAC, 60 Hz, external

Size: *Supervisor Card:* 6.5" x 5.2" (16.5 x 13.2 cm); *Remote Card:* 5.2" x 4.1" (13.2 x 10.4 cm); *Supervisor Standalone Unit:* 8.6"H x 6.4"W x 1.8"D (21.8 x 16.2 x 4.6 cm); *Remote Standalone Unit:* 9.2"H x 8.8"W x 4.6"D (23.4 x 22.4 x 11.7 cm)

2. Introduction

The ClassWork Junior is a keyboard, video, and mouse (KVM) distribution switch. With the ClassWork Junior, you can connect up to 32 computers in one system.

2.1 The ClassWork Junior Versions

The ClassWork Junior comes in two versions: an internal PCI Card version and an external Box version.

NOTE
The two versions are fully compatible with each other.

2.2 The System

The ClassWork Junior system is linked in a daisychain pattern by 100BASE-T4 CAT5 FTP cables. It works with:

- IBM compatible AT®, PS/2, or mixed-type computers, Silicon Graphics, or UNIX® computers.

- VGA, SVGA, or XGA video standards.

- All major computer and server manufacturers.

- IntelliMouse®, Logitech WheelMouse, and IBM® Trackpoint™.

- Microsoft DOS, Windows 3.1, 95, 98, NT, and 2000, Novell, UNIX, Linux, SGI, and BeOS.

The ClassWork Junior gives you:

- Control and monitoring capabilities over 31 Remote Cards or boxes from one Supervisor Card or box.

- The option to connect a keyboard, video, and mouse—referred to as a local workstation—to any Remote computer.

- A transmission range of up to 360 ft. (110 m).

- Matrix configuration of up to 6 x 31.

The ClassWork Junior system consists of:

- An Supervisor Card or a Supervisor Unit box.

- A Remote Card or a Remote Unit box for each Remote computer.

- Cabling, as described in **Chapter 5**.

2.3 OSD Technology

The ClassWork Junior superimposes a menu on the Supervisor computer screen. The On-Screen-Display (OSD) consists of three sections. From the OSD, you activate various functions. These functions are described in **Chapters 6** and **7**.

2.4 The Local Workstation

A Remote computer with a keyboard, video, and mouse attached is called a Remote unit with a Local Workstation.

The Supervisor and the local user can both work on the Remote computer with a one-second access-timeout. This means that when one of them stops working for even one second, the other can take control.

2.5 ClassWork Junior Configuration

Figures 2-1 and 2-2 show the ClassWork Junior configuration for the Card and Box versions respectively.
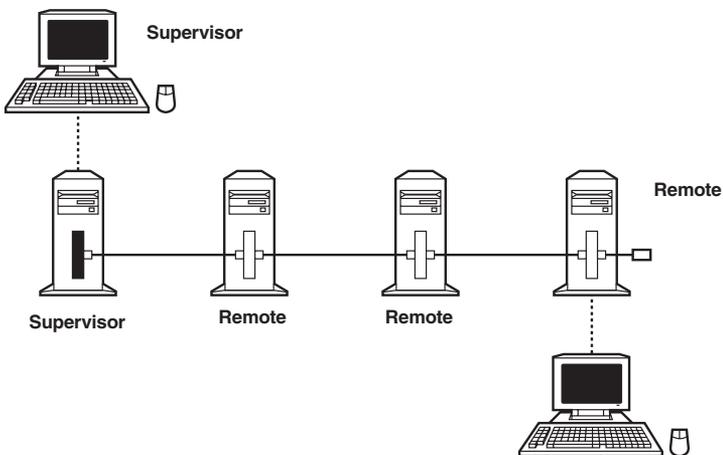
Figure 2-1. The ClassWork Junior Card configuration.
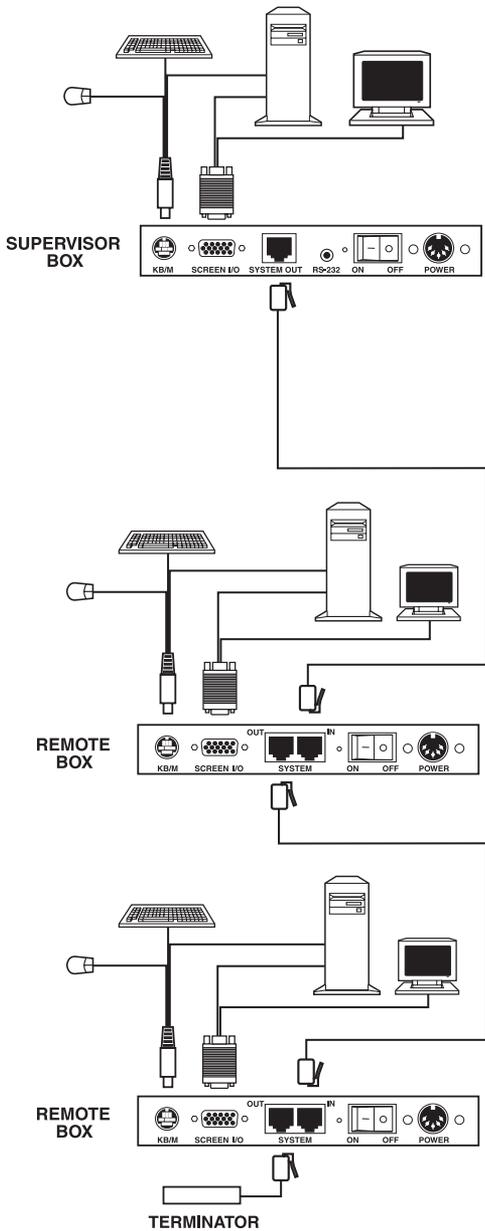
Figure 2-2. The ClassWork Junior Box configuration.

3. The ClassWork Junior Units

Both versions of the ClassWork Junior incorporate the same technology.

3.1 The Card Version

The ClassWork Junior system consists of two different types of PCI cards: one for the Supervisor and one for each Remote.

Figure 3-1 shows the Supervisor PCI Card.
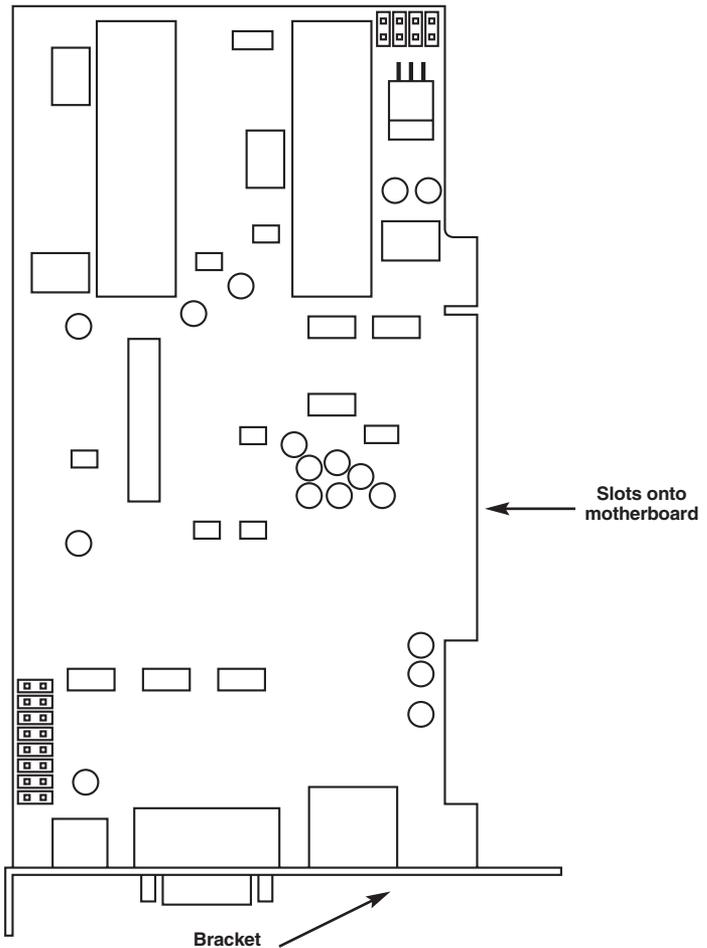
Figure 3-1. The Supervisor PCI Card.

Figure 3-2 shows the Remote PCI Card.
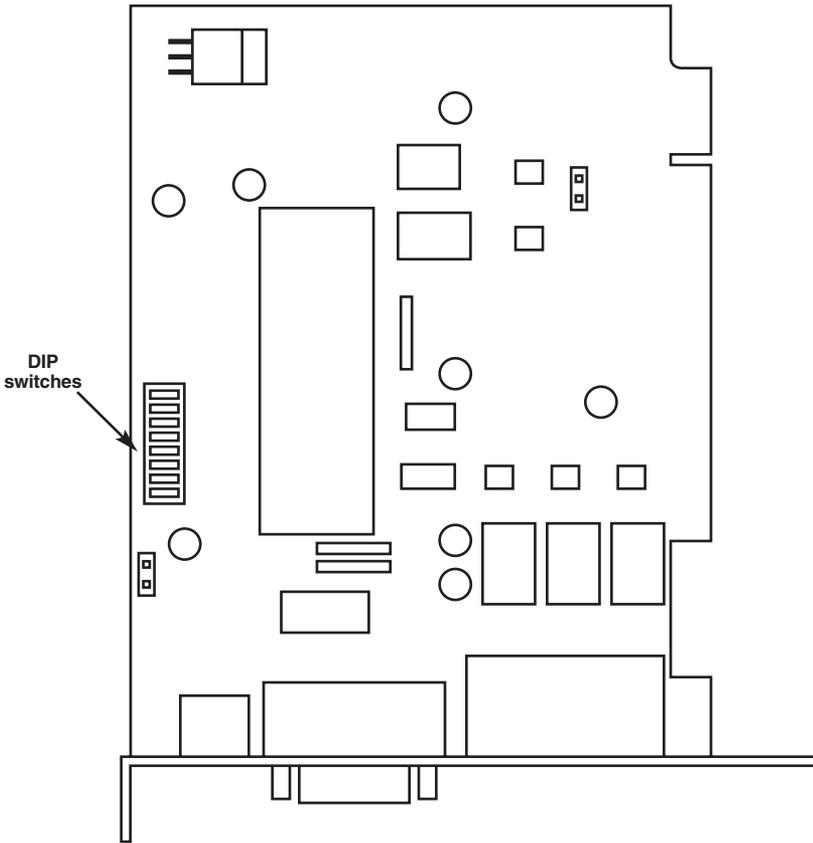
Figure 3-2. The Remote PCI Card.

3.2 The Box Version

Figure 3-3 shows the front view of the Supervisor Unit box.
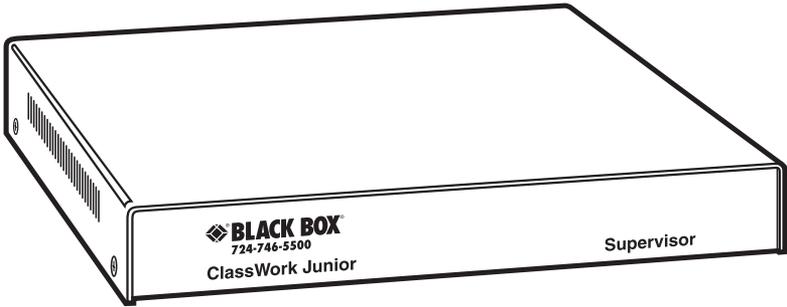
Figure 3-3. The Supervisor Unit box.

Figure 3-4 shows the front view of the Remote Unit box.
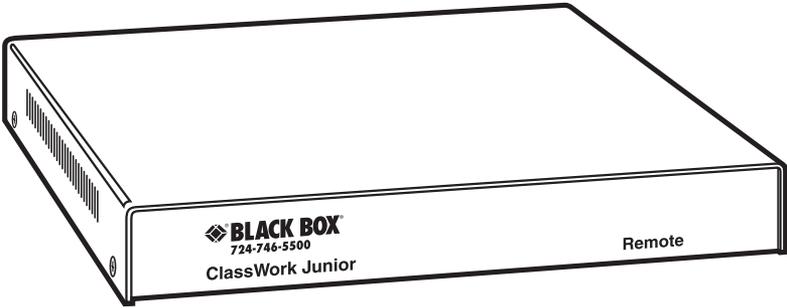
Figure 3-4. The Remote Unit box.

3.3 Setting the Remote Unit's ID Number

Set the Remote Unit box or Card's ID Number by adjusting the DIP switches. The DIP switches of the Box version are located on the underside of the box. See Figure 3-2 for DIP switch location on the Cards.

Set the ID Number on each Remote Card using DIP switches. See Figure 3-5.
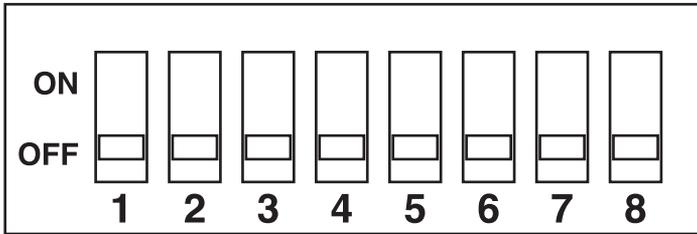
Figure 3-5. Setting the ID Number.

The ID Numbers are set using binary numbers. See Table 3-1. (OFF=0, ON=1)

CAUTION
Do not set the identical ID Number for two Remote Cards.

NOTE
DIP switches 7 and 8 are inactive. Always set them to the OFF (0) position.

Table 3-1. Setting the Remote Cards' ID Numbers.

Slave Number	ID Numbers							
	1	2	3	4	5	6	7	8
2	0	1	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0
4	0	0	1	0	0	0	0	0
5	1	0	1	0	0	0	0	0
6	0	1	1	0	0	0	0	0
7	1	1	1	0	0	0	0	0
8	0	0	0	1	0	0	0	0
9	1	0	0	1	0	0	0	0
10	0	1	0	1	0	0	0	0
11	1	1	0	1	0	0	0	0
12	0	0	1	1	0	0	0	0
13	1	0	1	1	0	0	0	0
14	0	1	1	1	0	0	0	0
15	1	1	1	1	0	0	0	0
16	0	0	0	0	1	0	0	0
17	1	0	0	0	1	0	0	0
18	0	1	0	0	1	0	0	0
19	1	1	0	0	1	0	0	0
20	0	0	1	0	1	0	0	0
21	1	0	1	0	1	0	0	0
22	0	1	1	0	1	0	0	0
23	1	1	1	0	1	0	0	0
24	0	0	0	1	1	0	0	0
25	1	0	0	1	1	0	0	0
26	0	1	0	1	1	0	0	0
27	1	1	0	1	1	0	0	0
28	0	0	1	1	1	0	0	0
29	1	0	1	1	1	0	0	0
30	0	1	1	1	1	0	0	0
31	1	1	1	1	1	0	0	0
32	0	0	0	0	0	1	0	0

0=OFF   1=ON

3.4 The Supervisor Card's ID Number

The Supervisor Card is preset to ID Number 1. It's listed in the OSD window as "1 CLASSWORKS JUNIOR INSTRUCTOR."

4. Installing the ClassWork Junior Cards

Before installing the Card:

- Switch OFF all computers.

- Disconnect all power cords.

CAUTION

To avoid electrostatic damage to the Card, discharge any static electricity you may be carrying. You can do this by touching any grounded object.

To install the ClassWork Junior Cards:

1. Remove the computer covers.

2. Insert the Supervisor Card into any available PCI slot of one computer.

3. Insert each Remote Card into any available PCI slot of each of the Remote computers.

4. Replace the computer covers.

5. Connecting the System

Before connecting the ClassWork Junior system:

- Switch off all computers.

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

- Make sure that the total cable length between the Supervisor Card and the last Remote Card does not exceed 360 ft. (110 m).

5.1 Connecting the ClassWork Junior Supervisor Card to a PS Type System

Figure 5-1 shows the ports on the Supervisor Card version.
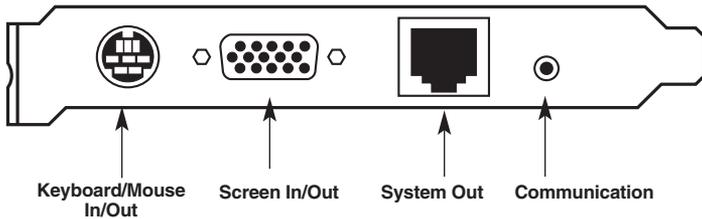
Figure 5-1. Ports on the Supervisor Card.

Figure 5-2 shows the ports on the Supervisor Box version.
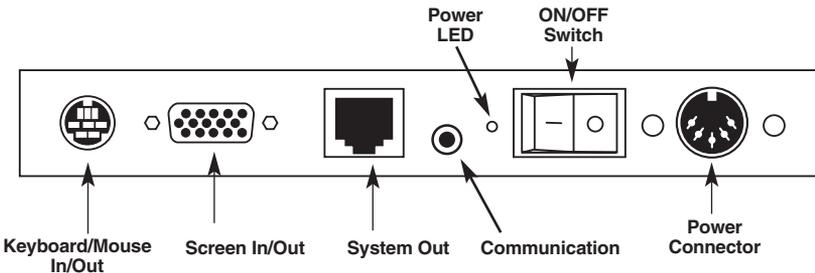
Figure 5-2. Ports on the Supervisor Box.

Both versions of the Supervisor Unit use the following four cables:

- System cable.

- Communication cable.

- Keyboard/Mouse In/Out cable for PS type CPUs.

- Screen In/Out cable.

The latter two cables are longer for the Box version than for the Card version.

Only the Box version of the Supervisor Unit uses the following:

- Power adapter

- Power cord

5.1.1 CONNECTING TO AN AT TYPE COMPUTER

Special adapter cables connect the ClassWork Junior Supervisor Card to an AT type CPU. Call Black Box Technical Support at 724-746-5500 for additional details.

5.1.2 CONNECTING THE SYSTEM CABLE

The System cable consists of a single 4-pair 100BASE-T4 CAT5 FTP (Foiled Twisted Pair) cable with RJ-45 male connectors attached at each end. Figure 5-3 shows the FTP cable.
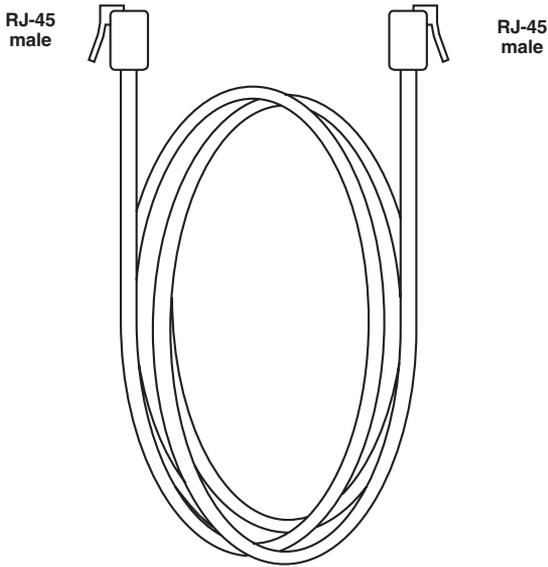
RJ-45 male   **RJ-45 male**

Figure 5-3. The FTP System cable.

Figure 5-4 illustrates the RJ-45 male pinout and wire diagram.

1 - Orange
2 - Orange/White
3 - Blue
4 - Green/White
5 - Green
6 - Blue/White
7 - Brown
8 - Brown/White
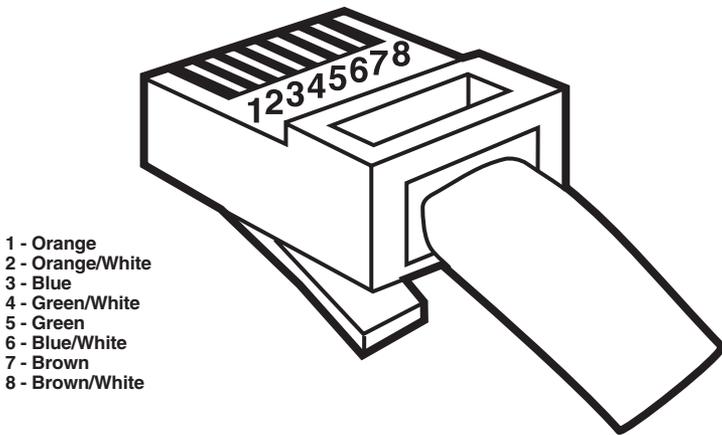
Figure 5-4. The RJ-45 male connector.

To connect the System cable to the Supervisor Unit:

1. Connect one of the System cable's RJ-45 male connectors to the Supervisor Unit's System Out port.

2. Connect the other System cable's RJ-45 male connector to a Remote Unit's System In port.

5.1.3 KEYBOARD/MOUSE IN/OUT CABLE FOR PS TYPE COMPUTERS

6-pin mini-DIN male to mouse

6-pin mini-DIN male to keyboard

6-pin mini-DIN female to CPU's mouse port

6-pin mini-DIN female to CPU's keyboard port

ClassWork Junior Supervisor Keyboard/Mouse In/Out Port
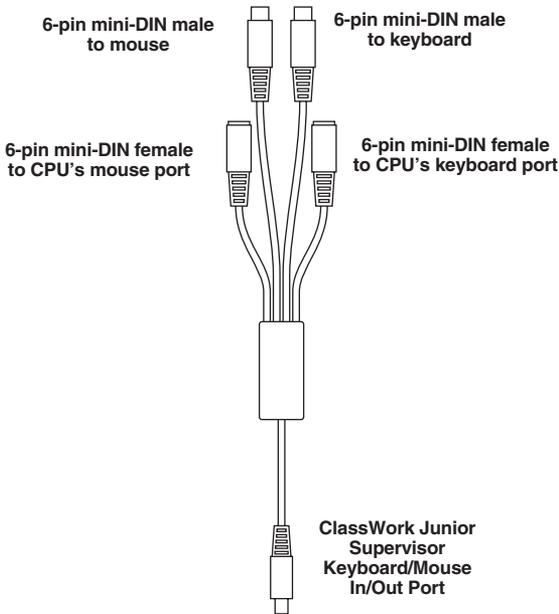
Figure 5-5. The Supervisor Card's Keyboard/Mouse In/Out cable for PS.

To connect the Keyboard/Mouse In/Out cable to the Supervisor Unit:

1. Connect the cable's 6-pin mini-DIN male connector to the Supervisor Unit's Keyboard/Mouse In/Out port.

2. Connect the 6-pin mini-DIN female Mouse Out connector to the mouse's 6-pin mini-DIN male connector.

3. Connect the 6-pin mini-DIN male Mouse In connector to the mouse port on the CPU's rear panel.

4. Connect the 6-pin mini-DIN female Keyboard Out connector to the keyboard's 6-pin mini-DIN male connector.

5. Connect the 6-pin mini-DIN male Keyboard In connector to the Keyboard port on the CPU's rear panel.

5.1.4 CONNECTING THE SCREEN IN/OUT CABLE
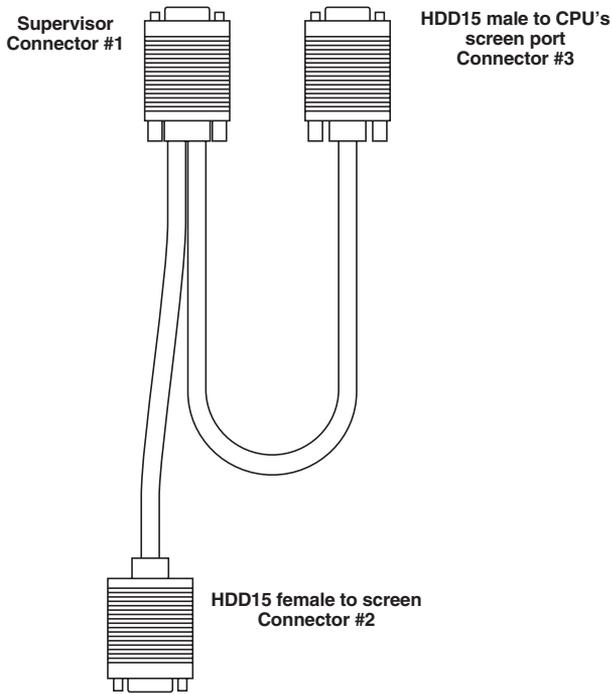
Figure 5-6. The Supervisor Screen In/Out cable.

To connect the Screen In/Out cable to the Supervisor Unit:

1. Connect the cable's connector #1 to the Supervisor Unit's Screen In/Out port.

2. Connect the monitor's Screen cable to the cable's connector #2.

3. Connect the cable's connector #3 to the Screen port on the CPU's rear panel.

5.2 Connecting the ClassWork Junior Remote Unit to a PS Type System

The Remote Unit is compatible with the following computer types:

- AT

- PS

- Mixed type, combining PS and AT computers in the same system

5.2.1 LOCAL WORKSTATION

You have the option to connect a local workstation to one or all of the Remote computers. You can then work with the Remote computer locally.

5.2.2 CONNECTING THE REMOTE CARD

Figure 5-7 shows the ports on the Remote Unit Card version.
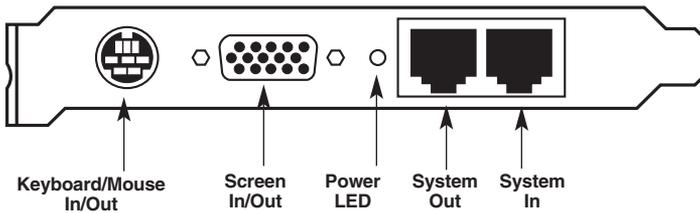
Figure 5-7. Ports on the Remote Card.

Figure 5-8 shows the ports on the Remote Unit Box version.
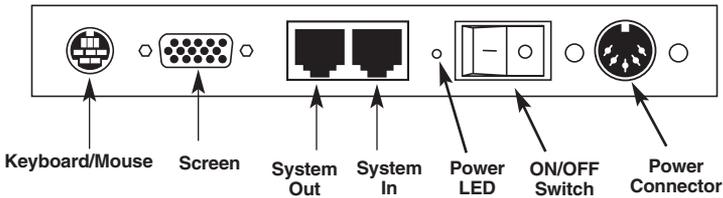
Figure 5-8. Ports on the Remote Unit box.

Both versions of the Remote Unit use the following three cables:

- System cable

- Keyboard/Mouse cable for PS

- Screen cable

Only the Box version of the Remote Unit uses the following:

- Power adapter

- Power cord

5.2.3 CONNECTING THE KEYBOARD/MOUSE CABLE FOR PS TYPE COMPUTERS

Figure 5-9 shows the Keyboard/Mouse cable for PS.
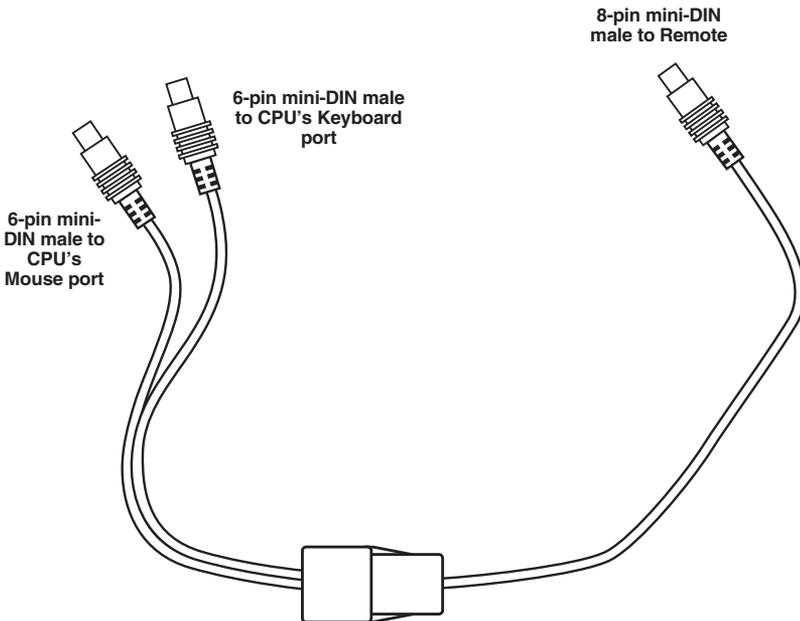
Figure 5-9. The Remote Local Workstation Keyboard/Mouse In/Out Cable.

To connect the Keyboard/Mouse In/Out cable to the Remote Unit:

1. Connect the cable's 8-pin mini-DIN male connector to the Remote Unit's 8-pin mini-DIN female port.

2. Connect the 6-pin mini-DIN male Mouse connector to the mouse port on the CPU's rear panel.

3. Connect the 6-pin mini-DIN male Keyboard In connector to the keyboard port on the CPU's rear panel.

5.2.4 CONNECTING THE REMOTE UNIT SCREEN CABLE
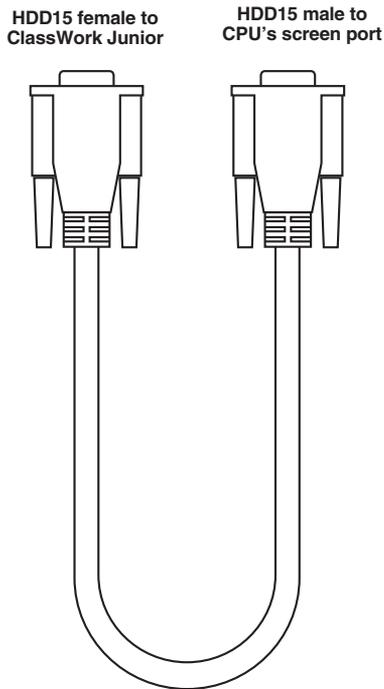
Figure 5-10. The Remote Unit Local Workstation Screen cable.

To connect the Screen cable to the Remote Unit:

1. Connect the cable's HDD15 female connector to to the Remote Card's HDD15 male Screen port.

2. Connect the cable's HDD15 male connector to the HDD15 female screen port on the CPU's rear panel.

5.2.5 CONNECTING THE SYSTEM CABLE

The System cable links the ClassWork Junior Supervisor Unit and Remote Units in a daisychain pattern. See Figure 5-11.
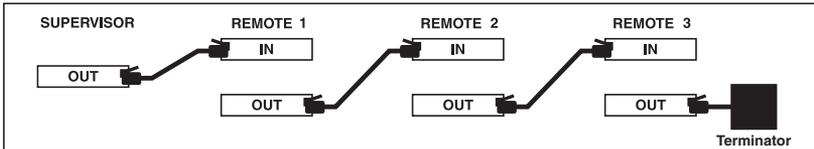
Figure 5-11. The System cable connections.

To connect the System cable to each Remote Unit:

1. Connect one RJ-45 male connector to the first Remote's RJ-45 female System Out port.

2. Connect the other RJ-45 male connector to the next Remote's RJ-45 female System In port.

Connect all the Remote Units in this way.

Connect a terminator to the RJ-45 System Out port of the last Remote Unit in the series.

You can also connect each unit to the unit that is physically closest to it. For example, you can connect the Supervisor Unit to Remote #4, and Remote #4 to Remote #2.

Before installing the System cable, we recommend that you work out how to connect all the units using the shortest possible length of cable. A shorter cable length increases video quality and reduces noise.

5.2.6 CONNECTING THE REMOTE UNIT WITH A LOCAL WORKSTATION

When a ClassWork Junior Remote Unit has a Local Workstation attached, you connect the following cables to that Remote Unit:

Both versions of the Remote Unit use the following three cables:

• System cable

- Keyboard/Mouse In/Out cable for PS

- Screen In/Out cable

Only the Box version of the Remote Unit uses the following:

- Power adapter

- Power cord

Connecting the System Cable

To connect the System cable, see **Section 5.2.5**.

5.2.7 CONNECTING THE KEYBOARD/MOUSE IN/OUT CABLE FOR PS TYPE COMPUTERS

To connect the Keyboard/Mouse In/Out cable to the Remote Unit:

1. Connect the cable's 8-pin mini-DIN male connector to the Remote Unit's 8-pin mini-DIN female port.

2. Connect the 6-pin mini-DIN female Mouse Out connector to the mouse's 6-pin mini-DIN male connector.

3. Connect the 6-pin mini-DIN male Mouse In connector to the mouse port on the CPU's rear panel.

4. Connect the 6-pin mini-DIN female Keyboard Out connector to the keyboard's 6-pin mini-DIN male connector.

5. Connect the 6-pin mini-DIN male Keyboard In connector to the Keyboard port on the CPU's rear panel.

6-pin mini-DIN male
to CPU's Mouse port

6-pin mini-DIN male
to CPU's Keyboard
port

6-pin mini-DIN
female to Mouse

6-pin mini-DIN
female to Keyboard

8-pin mini-DIN
male to Remote
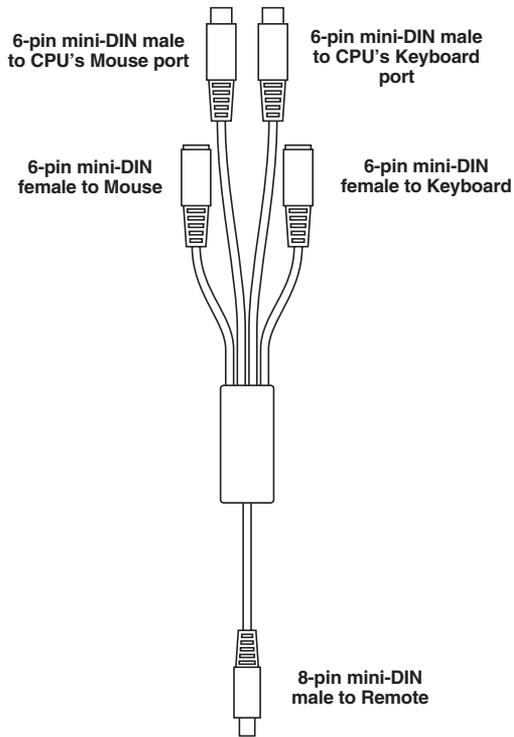
Figure 5-12. The Remote Local Workstation Keyboard/Mouse In/Out cable.

5.2.8 CONNECTING THE REMOTE UNIT SCREEN IN/OUT CABLE

HDD15 female to Remote Connector #2

HDD15 male to CPU's Screen Port Connector #3

HDD15 female to Remote Unit Connector #1
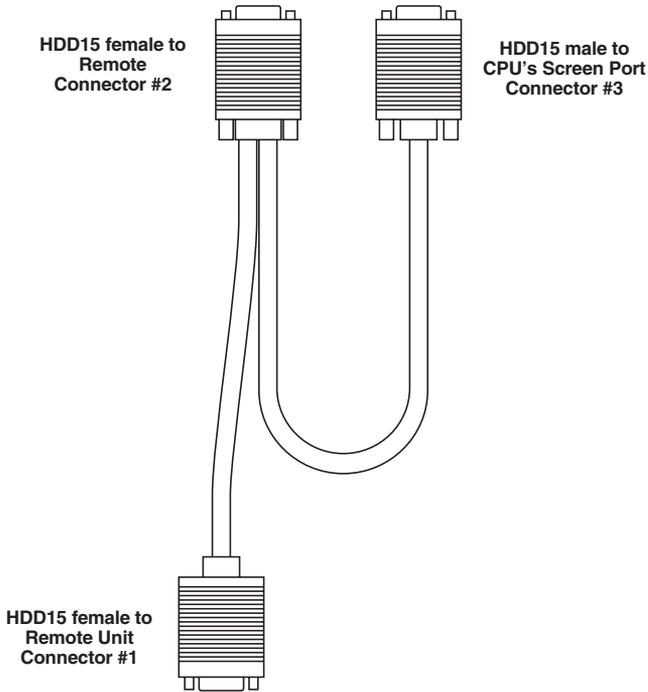
Figure 5-13. The Remote Unit Local Workstation Screen In/Out cable.

To connect the Screen In/Out cable to the Remote Card:

1. Connect the cable's connector #1—see Figure 5-13—to the Remote Card's Screen In/Out port.

2. Connect the monitor's screen cable to the cable's connector #2.

3. Connect the cable's connector #3 to the screen port on the CPU's rear panel.

5.3 Connecting the ClassWork Junior Units to an AT Type Computer

You can connect the ClassWork Junior Supervisor Cards and Boxes and Remote Cards and Boxes to an AT type computer.

There are two adapter cables for the Remote Unit, and three for the Supervisor or Remote Unit with a Local Workstation.

NOTE
You must always use a PS type mouse.

5.3.1 ADAPTER CABLES FOR THE REMOTE UNIT

The two cables are:

• Mouse adapter cable. See Figure 5-14.

• Keyboard In adapter cable. See Figure 5-15.

Both cables connect to the Remote Keyboard/Mouse In/Out cable. See Figure 5-9.

6-pin mini-DIN female
to 6-pin mini-DIN male
Mouse In connector

DB9 female to
CPU's Serial
Mouse port

Figure 5-14. The Mouse adapter cable.

6-pin mini-DIN female
to 6-pin mini-DIN
male Keyboard In
connector

5-pin DIN male to
CPU's Keyboard port
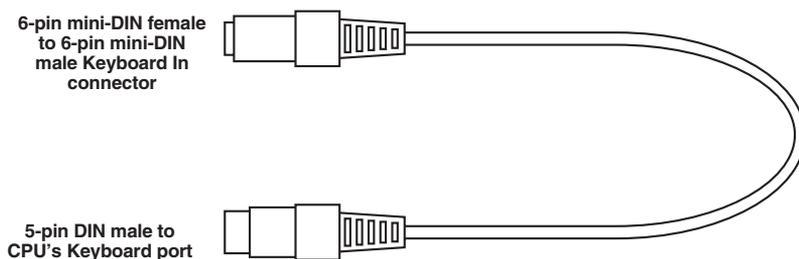
Figure 5-15. The Keyboard In adapter cable.

5.3.2 CONNECTING THE MOUSE ADAPTER CABLE

Connect the Mouse adapter cable:

1. 6-pin mini-DIN female to the Keyboard/Mouse 6-pin mini-DIN male Mouse In connector.

2. DB9 female to the CPU's Serial Mouse port.

5.3.3 CONNECTING THE KEYBOARD IN ADAPTER CABLE

Connect the Keyboard In adapter cable:

   1. 6-pin mini-DIN female to the Keyboard/Mouse 6-pin mini-DIN male
      Keyboard In connector.

   2. 5-pin mini-DIN male to the CPU's Keyboard port.

5.3.4 ADAPTER CABLES FOR THE SUPERVISOR OR THE REMOTE UNIT WITH A LOCAL WORKSTATION

The three cables are:

   • Mouse adapter cable. See Figure 5-14.

   • Keyboard In adapter cable. See Figure 5-15.

   • Keyboard Out adapter cable. See Figure 5-16.
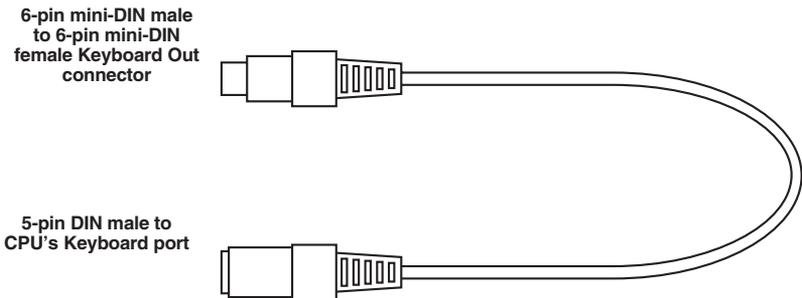
Figure 5-16. The Keyboard Out adapter cable.

   All three cables connect to the Supervisor or Remote Keyboard/Mouse In/
Out cable. See Figures 5-5 and 5-12.

5.3.5 CONNECTING THE MOUSE ADAPTER CABLE

Connect the Mouse adapter cable:

   1. 6-pin mini-DIN female to the Keyboard/Mouse In/Out 6-pin mini-DIN male
      Mouse In connector.

   2. DB9F to the CPU's Serial Mouse port.

5.3.6 CONNECTING THE KEYBOARD IN ADAPTER CABLE

Connect the Keyboard In adapter cable:

1. 6-pin mini-DIN female to the Keyboard/Mouse In/Out 6-pin mini-DIN male Keyboard In connector.

2. 5-pin DIN male CPU's Keyboard port.

5.3.7 CONNECTING THE KEYBOARD OUT ADAPTER CABLE

Connect the Keyboard Out adapter cable's:

1. 6-pin mini-DIN male to the Keyboard/Mouse In/Out cable's 6-pin mini-DIN female Keyboard Out connector.

2. 5-pin DIN female to the Keyboard.

5.3.8 CONNECTING THE SYSTEM TO THE POWER SUPPLY

The Supervisor and Remote Cards draw their power via the computer's motherboard.

The Card Version

The Supervisor and Remote Cards draw their power via the computer's motherboard.

The Box Version

The Supervisor and Remote Unit boxes draw their power from the electricity supply via a power adapter and power cord.

5.3.9 CONNECTING THE POWER ADAPTER AND POWER CORD

1. Connect the Power Adapter's 4-pin DIN male connector to the Remote Card's Power connector.

2. Connect the Power Adapter's Power connector to the Power cord.

3. Connect the Power cord to the wall socket.

5.4 The ClassWork Junior Configuration

Figure 5-17 shows the ClassWork Junior Card system connections in detail.
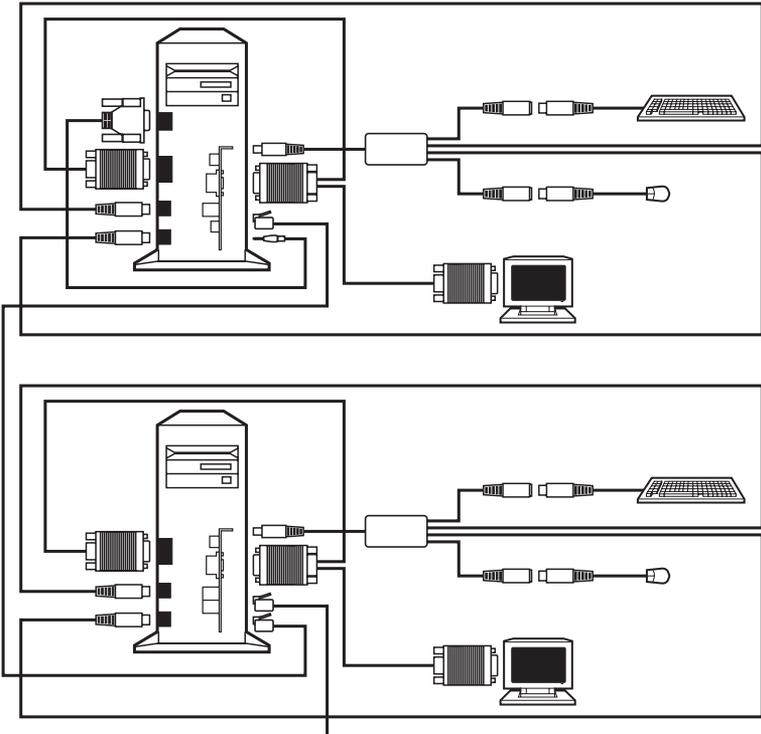
Figure 5-17. The ClassWork Junior Card system connections.

Figure 5-18 shows the ClassWork Junior Supervisor Box system connections.
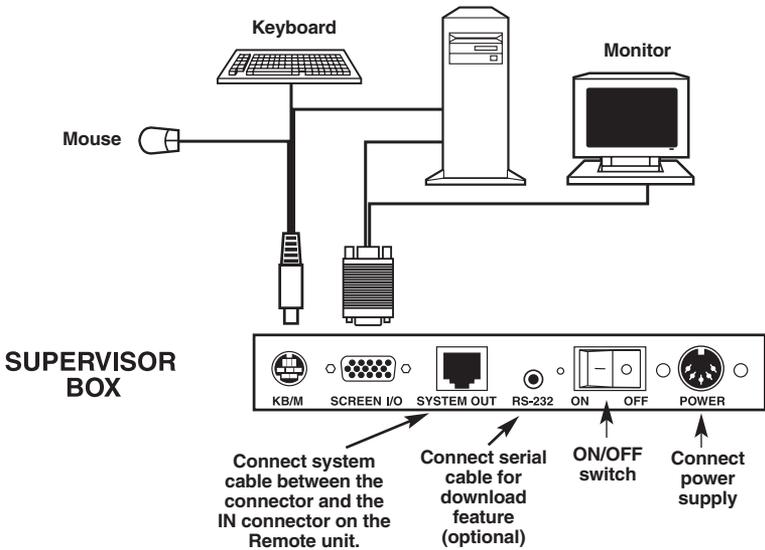
Figure 5-18. The ClassWork Junior Supervisor Box system connections.

Figure 5-19 shows the ClassWork Junior Remote Box system connections.
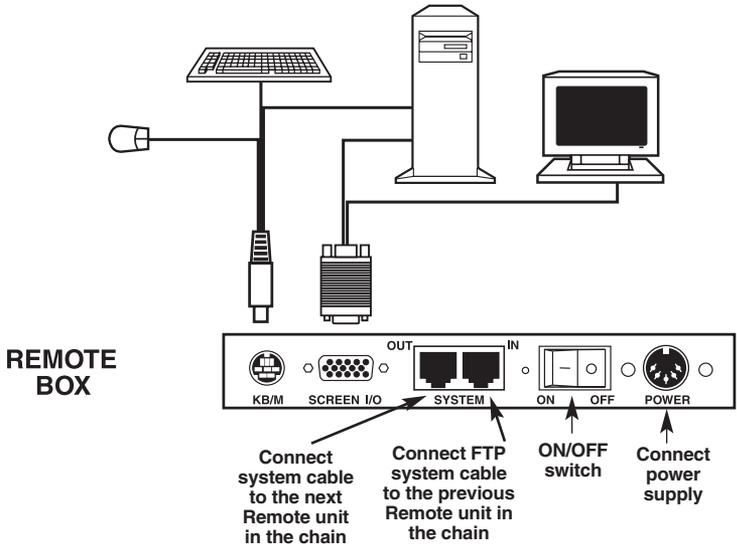
Figure 5-19. The ClassWork Junior Remote Box system connections.

6. The OSD Functions

You control and monitor the Remote computers in the ClassWork Junior system through an On-Screen-Display (OSD) on the Supervisor screen. The OSD contains a number of windows which are accessed using hotkeys. Each window has its own special functions.

6.1 Displaying the OSD

To display the OSD:

Press **Shift** twice. The Main window appears. See Figure 6-1. You can access all the other windows from the Main window.

The OSD is divided into three sections. These are:

- Name

- Stations

- Instructions and hotkeys (discussed later)

```
Name ─────────────► BLACK BOX CORPORATION
                        CLASSWORK JUNIOR

                       SELECT COMPUTER

              1. CLASSWORK JUNIOR INSTRUCTOR
              2. COMPUTER 2
              3. COMPUTER 3
   Stations   4. COMPUTER 4
              5. COMPUTER 5
              6. COMPUTER 6
              7. COMPUTER 7
              8. COMPUTER 8

 Instructions   ESC    EXIT    SELECT
 and            CONNECT TO CPU
 Hotkeys        F1 HELP       F2 EDIT      F3 SETUP
                F4 SCAN       F5 TUNE      F10 UPGRADE
```
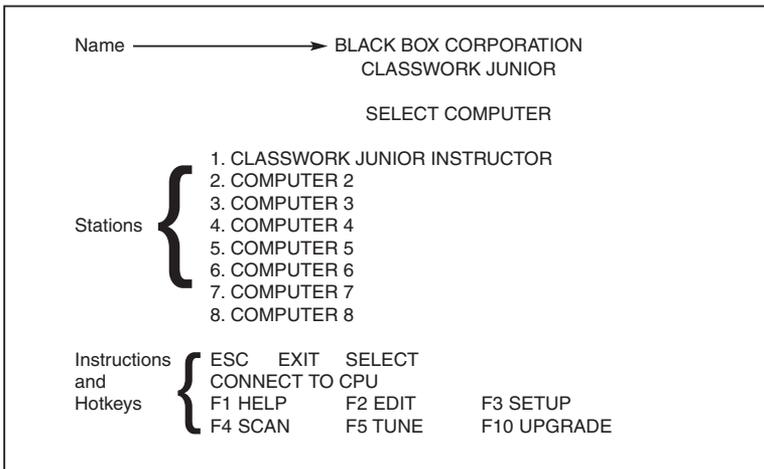
Figure 6-1. The Main window.

6.2 The Name Section

The Name section displays the name as illustrated in Figure 6-1.

6.3 The Stations Section

The Stations section displays the computers in groups of eight (1 through 8, 9 through 16, 17 through 24, and 25 through 32).

To navigate between the groups:

Use the **Up** and **Down** Arrow keys.

6.3.1 LINE COLOR CODES

Each computer line can be one of three colors. The meaning of each color is as follows:

- *Yellow*: Connected and switched on computer.

- *Black*: Connected and switched on computer with a Local Workstation attached and presently being used locally. After remaining idle for 30 seconds, it changes to yellow.

- *Blue*: Unconnected or switched off computer.

6.3.2 SELECTING A COMPUTER

You monitor or control a Remote computer from the Main window.

To select a computer:

1. Navigate to the desired computer with the Up and Down Arrow keys,

   or,

   In the "Select Computer" line, type the computer number. See Figure 6-1.

2. Press **Enter**. The selected Remote's screen replaces the Supervisor's screen. A Confirmation tag appears showing which Remote computer is accessed. See Figure 6-2.

2	COMPUTER 02

Figure 6-2. The Confirmation tag.

To return to the Manager screen, press **Shift** twice.

6.4 Image Adjusting

You can adjust the image of any Remote computer screen from the Main window.

To adjust the screen image:

1. Navigate to the Remote computer you wish to adjust.

2. Press **F5**. The screen image of the selected computer appears, together with the Image Adjusting tag. See Figure 6-3.

```
2        COMPUTER 2
         |. . . . . . . . .|. . . . . . . . . .|
```
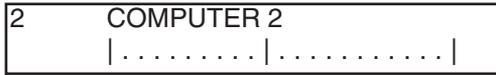
Figure 6-3 The Image Adjusting tag.

3. Adjust the image by using the **Right** and **Left** Arrow keys.

4. Press **Esc**.

NOTE

Picture quality is relative to distance. The farther away a Remote computer is from the Supervisor position, the lower the image quality.

6.5 The Edit Mode Window

You edit data in the Edit Mode Window.

To display the Edit Mode window, press **F2**. The words "Edit Mode" and the relevant instructions appear (see Figure 6-4 on the next page).
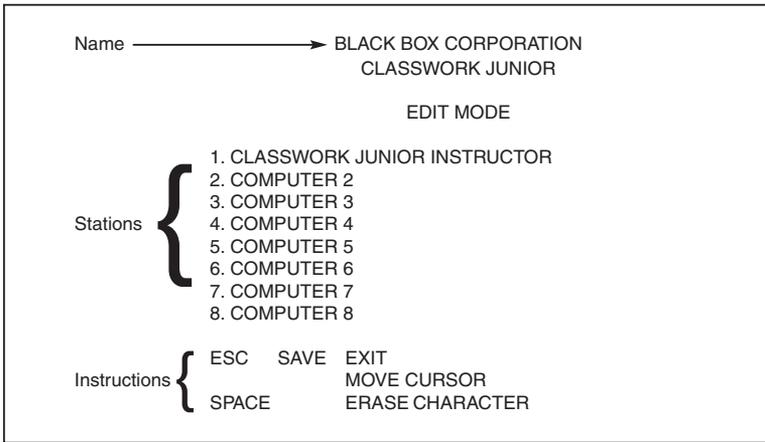
Figure 6-4. The Edit Mode window.

NAVIGATING BETWEEN SECTIONS

You can edit the text in both the Name and Stations sections.

To navigate between the Name and Station sections, use the **Up** and **Down** Arrow keys.

6.6 Editing Options

The editing options below apply to all OSD windows in which you can edit characters.

You can either overwrite or erase a character.

To overwrite a character:

1. Navigate to it using the Arrow keys.

2. Type the new character.

To erase a character:

1. Navigate to it using the Arrow keys.

2. Press the Space bar. The character disappears. A blank space replaces the erased character.

To erase a sequence of characters:

    1. Navigate to the first character in the sequence.

    2. Press and hold down the Space bar until you erase the sequence.

6.6.1 EDITING THE NAME SECTION

You can substitute the text in the Name section with up to 30 characters in each of the two lines. A space constitutes a character.

6.6.2 EDITING THE STATIONS SECTION

The numbering at the start of each line is fixed and cannot be edited.

    You can substitute the data that appears after the number with up to 20 characters per line.

6.6.3 EDITING A GROUP OF LINES IN THE STATIONS SECTION

You can edit a group of lines with the same data change.

To edit a group:

    1. Navigate to the first line you want to change.

    2. Type the desired change.

    3. Press **End** twice. The rest of the column downwards takes on the same change.

6.6.4 SAVING CHANGES

To save changes in all OSD windows and return to the Main window, press **Esc**.

6.7 The Setup Window

Use the Setup window to set parameters and configure settings.

To display the Setup window:

Press **F3**. The Setup window with the relevant instructions and hotkeys appears. See Figure 6-5.

```
┌─────────────────────────────────────────────────────────┐
│                  BLACK BOX CORPORATION                   │
│                    CLASSWORK JUNIOR                      │
│                                                          │
│         SCAN        DISP        KB       DRV     MOUSE   │
│   1     030         030         PS       MS      MS      │
│   2     030         030         PS       MS      MS      │
│   3     030         030         PS       MS      MS      │
│   4     030         030         PS       MS      MS      │
│   5     030         030         PS       MS      MS      │
│   6     030         030         PS       MS      MS      │
│   7     030         030         PS       MS      MS      │
│   8     030         030         PS       MS      MS      │
│                                                          │
│   F6 - AUTOSKIP     ON          ESC      SAVE  +   EXIT  │
│   F8 - KB MODE      US          999      CONT      DISP  │
│   F9 - HOTKEY       CTRL  F12                            │
│         TAB         CURSOR CONTROL                       │
└─────────────────────────────────────────────────────────┘
```

Figure 6-5. The Setup window.

The Setup window contains 6 columns, as follows:

Column	Function
Numbers	Computer numbers in groups of 8
SCAN	Scanning time period in seconds
DISP	Confirmation tag display time in seconds
KB	The keyboard mode, either PS or UNIX
DRV	The mouse driver type
MOUSE	The mouse type

In the DISP column, you determine the amount of time the Supervisor screen displays the Confirmation tag—see Figure 6-2—showing which Remote computer is being accessed.

6.7.1 CHANGING THE SCAN AND DISP TIME SPANS

The SCAN and DISP time spans are preset to 030 seconds. You can adjust these times to suit your needs.

To change the time span:

1. Navigate with the Arrow keys to the time span you want to change.

2. Type the desired time span.

3. Press **Esc**.

When typing over a group of three digits, the cursor automatically reverts to the first digit once you edit the third digit.

6.7.2 NAVIGATING BETWEEN THE SCAN AND DISP COLUMNS

To move horizontally, between the first digit in the SCAN column and the first digit in the DISP column:

Press **Tab**

or,

Use the **Right** and **Left** Arrow keys.

6.7.3 CHANGING THE TIME SPAN OF A GROUP OF COMPUTERS

You can change the time spans of the SCAN and DISP columns from a particular computer downwards.

To change the time span:

1. Navigate to the time span of the first computer you wish to change.

2. Type in the desired change.

3. Press **End** twice. The remainder of the column takes on the same change.

4. Press **Esc**.

6.7.4 REMOVING A COMPUTER FROM THE SCANNING SEQUENCE

To remove a computer from the scanning sequence:

1. Type **000** in the SCAN column.

2. Press **Esc**.

6.7.5 CONSTANTLY DISPLAYING THE CONFIRMATION TAG

To constantly display the Remote computer Confirmation tag:

1. Type **999** in the DISP column.

2. Press **Esc**.

6.7.6 CHANGING THE KB COLUMN

You need to set the KB mode to **UN** when working on a UNIX computer. Otherwise, set the KB column to **PS**.

To change the KB column from PS to UN or vice versa:

1. Place the cursor on the first character.

2. Press the Spacebar. The display interchanges between **PS** and **UN**.

3. Press **Esc**.

6.7.7 THE DRV COLUMN

The ClassWork Junior system can function with computers that have different operating systems and different mouse types. Each mouse type has its own particular Mouse driver.

The Supervisor's computer always has a mouse attached. This is not necessarily the case with the Remote's computer.

6.7.8 THE SUPERVISOR'S COMPUTER SETTING

Determine the setting for the Supervisor's computer in the DRV column by matching the computer's operating system and mouse type. See **Appendix A**.

6.7.9 THE REMOTE'S COMPUTER SETTING

Determine the setting for the Remote's computer in the DRV column by matching the operating system and mouse type of each computer in the table. See **Appendix B**.

6.7.10 CHANGING THE SETTING IN THE DRV COLUMN

1. Place the cursor on the first character.

2. Press the Spacebar. The display interchanges between the different possible settings. Continue pressing until you reach the required setting.

3. Press **Esc**.

NOTE

When you don't know which mouse driver is installed, set the listing in the DRV column to PS.

6.7.11 THE MOUSE COLUMN

The Mouse column and the DRV column are interrelated. When you change the setting in the DRV column, the listing in the Mouse column will automatically change to match the DRV column.

6.7.12 CHANGING THE OSD DISPLAY HOTKEY

The default Hot-key to display the OSD, is **Shift**, **Shift**. You can replace this hotkey with any of the following:

• Pressing **Ctrl** twice.

• Pressing **Ctrl**, then **F11**.

• Pressing **Ctrl**, then **F12**.

With a choice of four different hotkeys, you can operate up to four OSDs from one KVM position. Each OSD will then have a different display hotkey. This is useful for cascading ClassWork Junior systems.

To change the hotkey:

1. Press **F9**. The hotkey changes from pressing **Shift** twice to pressing **Ctrl** twice. Continue pressing until you reach the required hotkey.

2. Press **Esc**.

6.7.13 CHANGING THE KEYBOARD LANGUAGE

The keyboard language is preset to US English. You can change it to German or French.

To Change the Keyboard Language:

1. Press **F8** until you reach the desired language.

2. Press **Esc**.

6.7.14 SKIPPING OUT UNCONNECTED OR SWITCHED-OFF COMPUTERS

When navigating through the list of computers, you can skip out the unconnected or switched-off computers with Autoskip. By default, Autoskip is activated.

To activate or deactivate Autoskip, press **F6**.

NOTE

Autoskip will also skip any active computer set to 000 in the Scan column.

When Autoskip is inactive and the computer being scanned is switched off, the Supervisor's screen appears dark.

6.8 Scanning Computers

Scan computers from the Main window.

To start scanning, press **F4**. During scanning a Confirmation tag appears, showing which Slave computer is presently displayed. See Figure 6-6.

```
1              Computer 1
F4             STOP SCAN
```
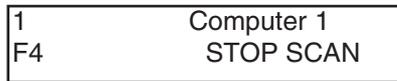
Figure 6-6. The Scan Confirmation tag.

To stop scanning, press **F4**, or press **Shift** twice.

6.9 The Help Menu Window

For a list of the hotkeys and their functions, go to the Help Menu window.

To access the Help menu window, press **F1**. See Figure 6-7.

```
                    BLACK BOX CORPORATION
                    CLASSWORK JUNIOR

                         HELP MENU

  F1    HELP          F4    SCAN - ON/OFF
  F2    EDIT          F5    IMAGE TUNING
  F3    SETUP         F6    AUTOSKIP - ON/OFF
  F7    SET PASSWORD
  F8    KB - US/DE/FR
  F9    HOTKEY  SETUP SHIFT - SHIFT /
        CTRL - CTRL/CTRL - F11/CTRL-F12
  F10   FIRMWARE UPGRADE

                         ESC EXIT
  OSD VER 2                              17/AUG/99
```
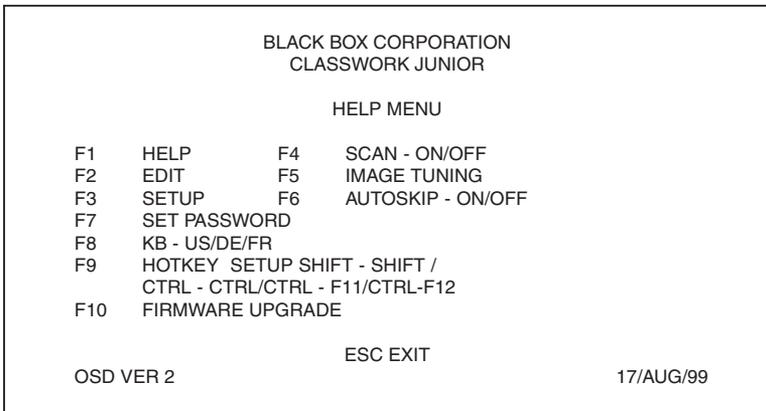
Figure 6-7. The Help menu.

Press **Esc** to exit the Help menu.

6.10 Closing the OSD

To close the OSD, go to the Main window and press **Esc** or **Enter**.

6.11 Reverting to the Factory-Set OSD

The Administrator can revert to the factory-set OSD. This involves closing and opening Jumper JP3 on the PCI Supervisor Card.

To close and open Jumper JP3:

FOR THE CARD VERSION

1. Switch off the Supervisor's computer, and disconnect the power cord and all cables.

2. Remove the cover, and extract the Supervisor Card.

3. Locate Jumper JP3 and put it in the closed position. See Figure 6-8 and Figure 6-9.
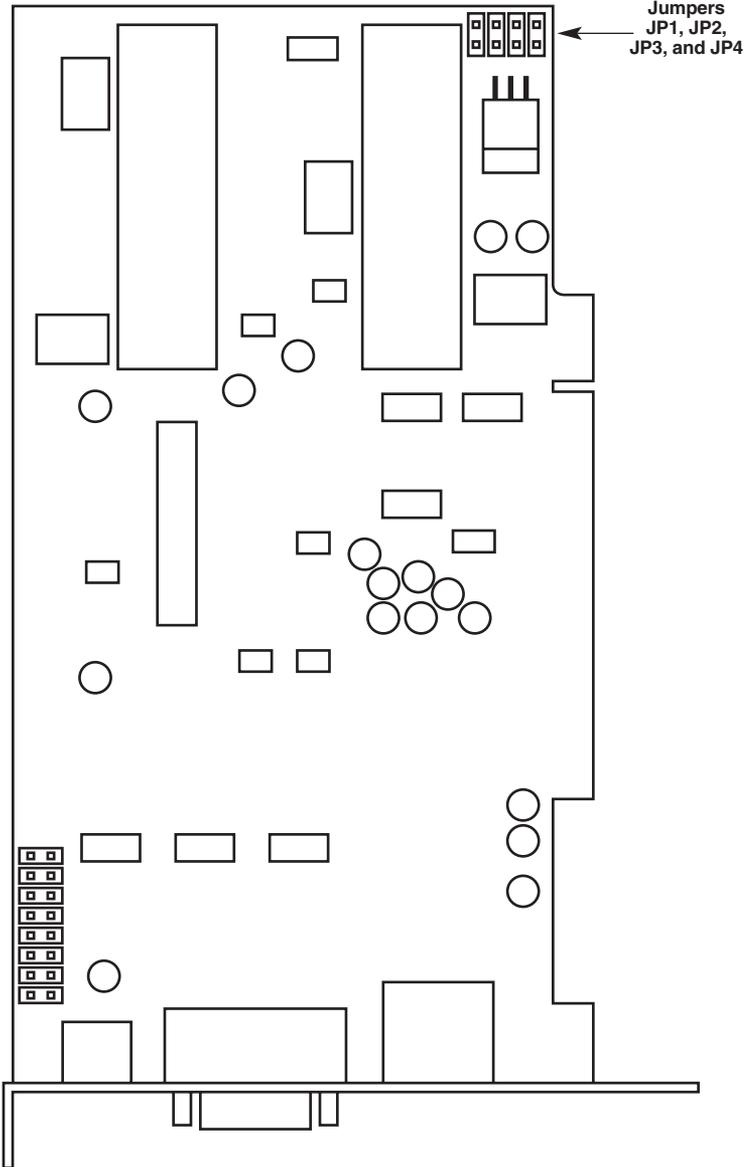
Figure 6-8. The Supervisor Card.

Jumper – Closed	Jumper – Open
■ ■	■ ■

Figure 6-9. Jumper closed and open.

4. Reinsert the Supervisor Card and replace the cover.

5. Reconnect the power cord and all cables. Switch on the computer.

6. Wait ten seconds. Switch off and disconnect the power cord and all cables.

7. Remove the cover and extract the Supervisor Card.

8. Put Jumper JP3 in the open position.

9. Reinsert the Supervisor Card and replace the cover.

10. Reconnect the power cord and all cables, and switch on the computer.

FOR THE BOX VERSION

1. Switch off the Supervisor box and computer.

2. Disconnect the power cord and all other cables from the Supervisor box.

3. Unscrew the back of the Supervisor box.

4. Locate Jumper JP3 and close it. See Figure 6-8 and Figure 6-9.

5. Replace the back of the Supervisor box.

6. Reconnect the power cord and all cables, and switch on.

7. Wait ten seconds. Switch off and disconnect the power cord and all cables.

8. Unscrew the back of the Supervisor box.

9. Open Jumper JP3.

10. Reinsert the Supervisor Card and replace the back of the box.

11. Reconnect the power cord and all cables and switch on.

Once you adjust jumper JP3, the OSD appears as in Figure 6-1.

7. Password Protecting the OSD

When you need to limit server access to specific individuals, we recommend password protecting the OSD.

There are three levels of password protection. Each level has its own particular security status. The levels are described below.

7.1 Administrator (Status A)—Highest

The Administrator can:

- Access all passwords and hotkeys.

- Monitor and work on any Remote computer.

- Modify any password and its status.

7.2 Supervisor (Status S)—Middle

The Supervisor can:

- Access all hotkeys except the password hotkey.

- Monitor and work on any Remote computer.

7.3 User (Status U)—Lowest

The User can:

- Access all hotkeys except the password hotkey.

- Monitor, but not work on any Remote computer.

You can have up to eight passwords, divided among the three security levels.

7.4 Enabling Password Protection

By default, password protection is disabled. Enabling password protection involves opening a jumper on the PCI Supervisor Card.

To enable password protection:

FOR THE CARD VERSION

1. Switch off the Supervisor computer. Disconnect the power cord and all other cables. Remove the cover.

2. Extract the Supervisor Card.

3. Locate Jumper JP2 and open it. See Figure 7-1 and Figure 7-2.
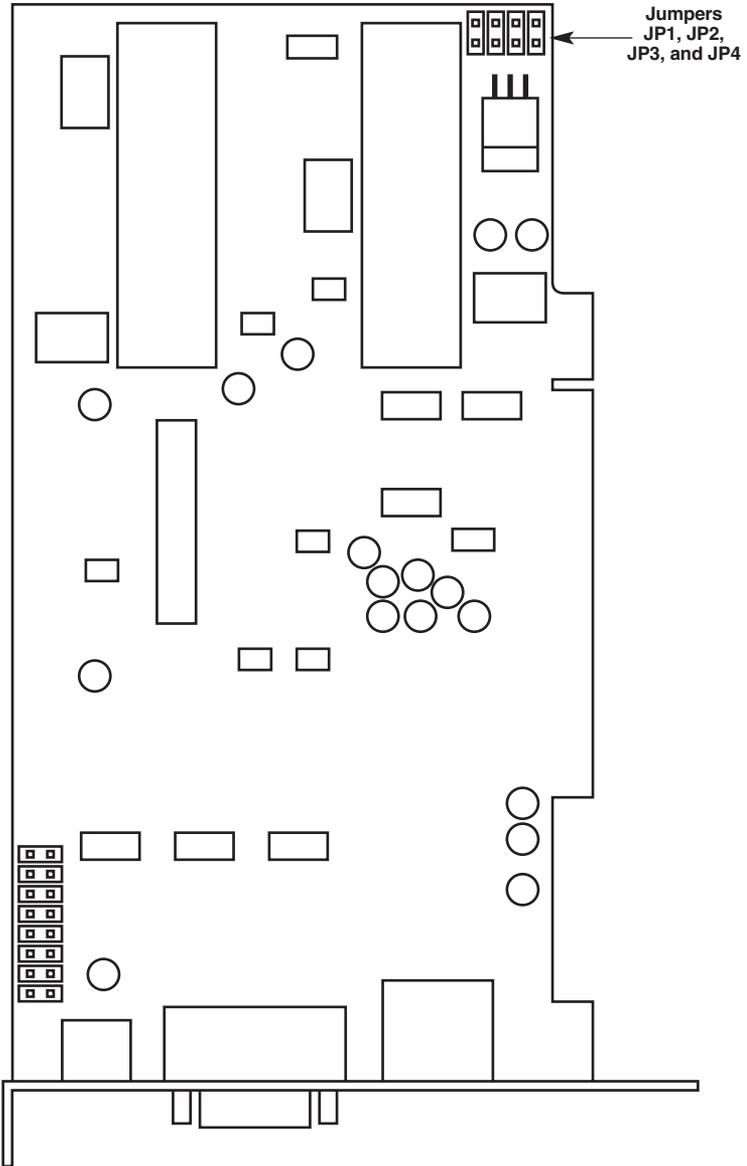
Figure 7-1. The Supervisor Card.

Closed – Password Disabled	Open – Password Enabled
JP2 ■ ■	JP2 ■ ■
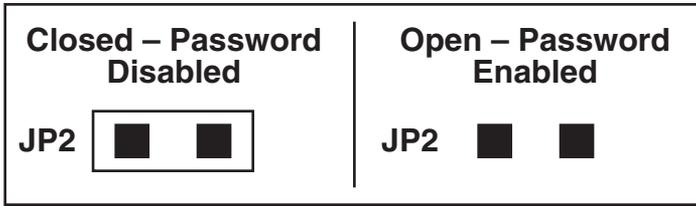
Figure 7-2. Jumper JP2.

4. Replace the Supervisor Card and the computer's cover.

5. Reconnect the power cord and all cables, and switch the computer on. Password protection is now enabled.

FOR THE BOX VERSION

1. Switch off the Supervisor box and computer.

2. Disconnect the power cord and all other cables from the Supervisor box.

3. Unscrew the back of the Supervisor box.

4. Locate Jumper JP2 and open it. See Figure 7-1 and Figure 7-2.

5. Replace the back of the Supervisor box.

6. Reconnect the power cord and all cables, and switch on the box. Password protection is now enabled.

7.5 Entering a Password

Once password protection is enabled, you can only access the OSD by entering the appropriate password.

The default Administrator's password is "ADMIN." The passwords of the other two security statuses are set by the Administrator (see **Section 7.6**).

To access the OSD:

1. Press **Shift** twice. The **Enter Password** box appears. See Figure 7-3.

```
┌─────────────────────────────────────┐
│           ENTER PASSWORD            │
│                                     │
│ BACKSPACE- ERASE     ESC - EXIT    │
└─────────────────────────────────────┘
```

Figure 7-3. The Enter Password box.

2. Type in the appropriate password.

3. Press **Enter**.

7.6 Setting Up a Password

Once the Administrator enters his password, the Main window of the OSD appears.

In the instructions and hotkey section "F7 PASSWORD" appears. See Figure 7-4.

```
┌─────────────────────────────────────────────────────┐
│              BLACK BOX CORPORATION                  │
│                CLASSWORK JUNIOR                     │
│                                                     │
│                 SELECT COMPUTER                     │
│    1      CLASSWORK JUNIOR INSTRUCTOR               │
│    2      COMPUTER 2                                │
│    3      COMPUTER 3                                │
│    4      COMPUTER 4                                │
│    5      COMPUTER 5                                │
│    6      COMPUTER 6                                │
│    7      COMPUTER 7                                │
│    8      COMPUTER 8                                │
│   ESC    EXIT    SELECT                             │
│   CONNECT TO CPU                                    │
│   F1 HELP      F2 EDIT       F3 SETUP               │
│   F4 SCAN      F5 TUNE       F7 PASSWORD            │
└─────────────────────────────────────────────────────┘
```

Figure 7-4. The OSD window with the F7 hotkey.

Press **F7**. The Password Set Up window appears. See Figure 7-5. The Administrator sets up passwords in this window.

```
                   BLACK BOX CORPORATION
                      CLASSWORK JUNIOR

                  . . . . . NAME . . . . . PASSWORD
        1         ADMINISTRATOR        ADMIN
        2
        3
        4
        5
        6
        7
        8

        ESC    SAVE + EXIT
               TAB    CURSOR        CONTROL
        DEL  . ERASE PASSWORD
```
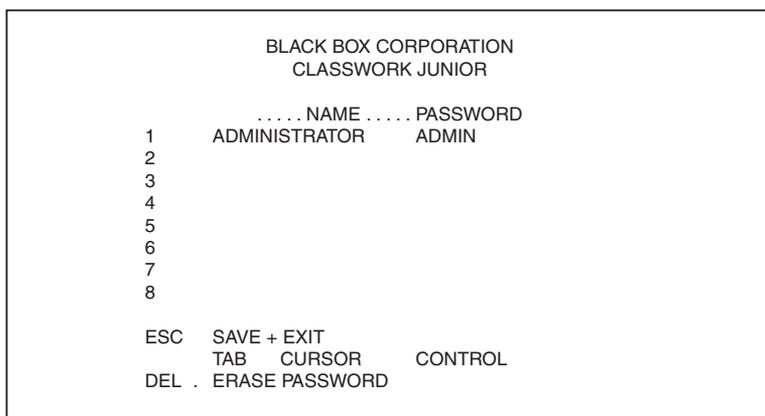
Figure 7-5. The Password Set Up window.

NOTE

Password characters are not case-sensitive, and a space can be a password character.

To set up a password:

1. Navigate to the desired line number.

2. Type:

   • Login name in the Name column.

   • Password in the Password column (between 1 and 8 characters).

   • Status in the Status column (A for Administrator, S for Supervisor, and U for User).

3. Press **Esc**.

7.7 Changing a Password

The Administrator can change any Name, Password, or Status from the Password Set Up window.

To change a password:

1. Navigate to the desired line number.

2. Type the desired change.

3. Press **Esc**.

7.8 Reverting to the Default Password

If the Administrator forgets the password, he can revert to the default password. This involves closing and opening jumper JP4 on the PCI Manager card. Once you do this, the system will recognize the default password.

7.9 Closing and Opening Jumper JP4

FOR THE CARD VERSION

1. Switch off the Supervisor computer, and disconnect the power cord and all cables.

2. Remove the cover, and extract the Supervisor Card.

3. Locate Jumper JP4 and put it in the closed position. See Figure 7-1 and Figure 7-6.
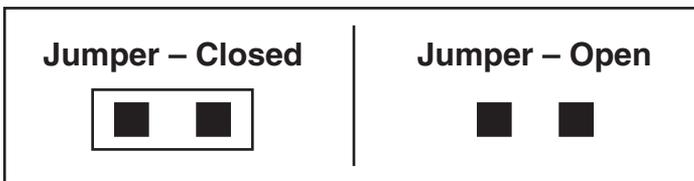
Figure 7-6. Jumper JP4.

4. Reinsert the Supervisor Card and replace the cover.

5. Reconnect the power cord and all cables, and switch the computer on.

6. Wait ten seconds. Switch off the computer and disconnect the power cord and all cables.

7. Remove the cover and extract the Supervisor Card.

8. Put Jumper JP4 in the open position.

9. Reinsert the Supervisor Card and replace the cover.

10. Reconnect the power cord and all cables, and switch the computer on.

FOR THE BOX VERSION

1. Switch off the computer and Supervisor box.

2. Disconnect the power cord and all other cables from the Supervisor box.

3. Remove the cover of the Supervisor box.

4. Locate Jumper JP4 and close it. See Figure 7-1 and Figure 7-6.

5. Replace the cover of the Supervisor box.

6. Reconnect the power cord and all cables, and switch the Supervisor box on.

7. Wait ten seconds. Switch off and disconnect the power cord and all cables.

8. Unscrew the cover of the Supervisor box.

9. Open Jumper JP4.

10. Replace the cover of the Supervisor box.

11. Reconnect the power cord and all cables and switch on.

NOTE

If the system fails to recognize the default password, check that Jumper JP4 is open.

8. Troubleshooting

8.1 Troubleshooting Tips

When using ClassWork Junior Update software, you may sometimes get
a Communication Error message.

8.1.1 THE SUPERVISOR CARD

When updating the Supervisor Card and a Communication Error message appears,
do the following:

1. Check that the communication cable's stereo plug is connected to the
   Supervisor's communication port.

2. Check that the communication cable's DB9 female connector is connected
   to the DB9 male serial port on the CPU's rear panel.

Electricity failure

When the electricity fails while updating the ClassWork Junior Supervisor
or OSD firmware, do the following:

1. Switch off the Supervisor's computer and disconnect the power cord.

2. Open the cover, extract the Supervisor Card, and put Jumper JP7 in
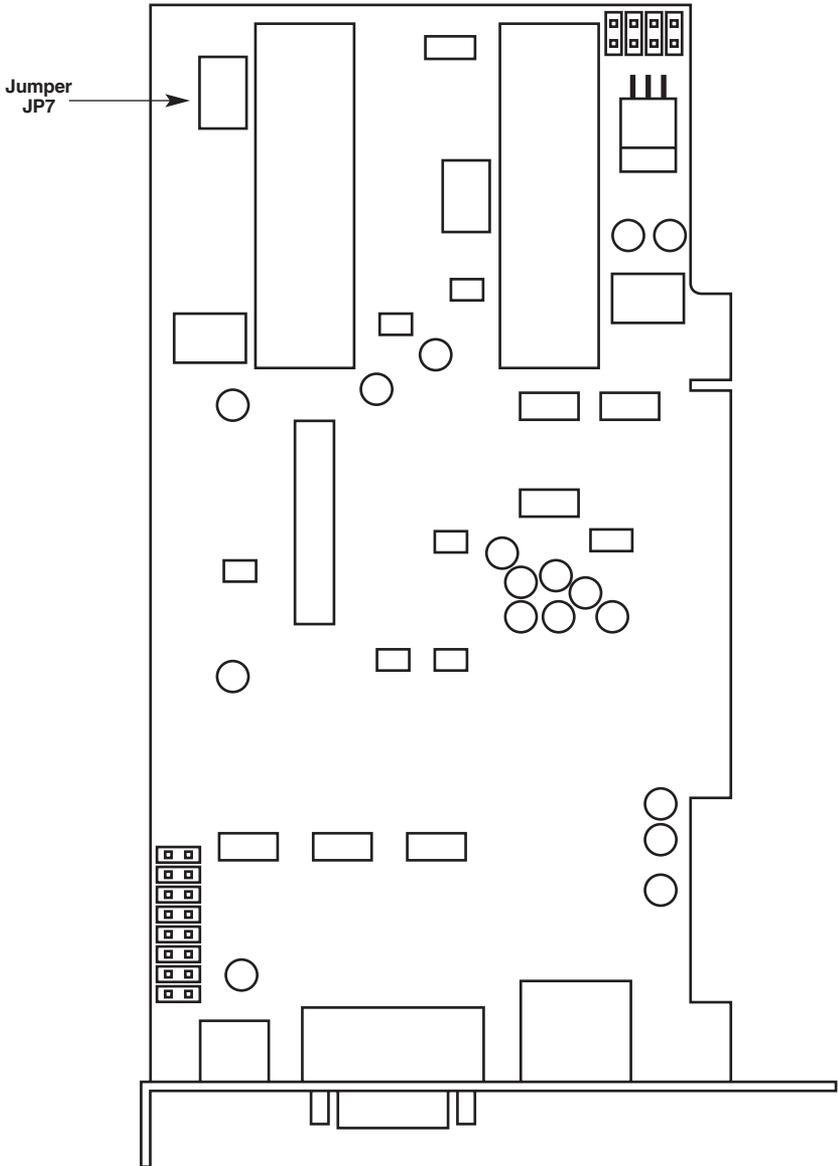   the closed position. See Figure 8-1.

Figure 8-1. Jumper JP7.

3. Reinsert the Supervisor Card, close the cover, and reconnect the power cord.

4. Switch on the computer. Damage to the ClassWork Junior firmware prevents you from displaying the OSD.

5. Start the ClassWork Junior Update program, and carry out the download process again. Where you were updating the OSD *and* the Supervisor firmware, you must first update the OSD.

   Since Jumper JP7 is closed, the ClassWork Junior Update program does not show the firmware version number after completing the download.

6. Switch off the Supervisor's computer and disconnect the power cord.

7. Open the cover, extract the Supervisor Card, and put Jumper JP7 in the open position.

8. Reinsert the Supervisor Card, close the cover, and reconnect the power cord.

9. Check the OSD and make sure the system functions properly.

10. In the ClassWork Junior Update program, check that the firmware version number appears.

   If the OSD will not display, or the firmware version number fails to appear, call Black Box Technical Support at 724-746-5500.

8.1.2 THE REMOTE CARD

When updating a Remote Card and a Communication Error message appears, do the following:

1. Check that the communication cable's stereo plug is connected to the Supervisor Card's communication port.

2. Check that the communication cable's DB9 female connector is connected to the DB9 male serial port on the CPU's rear panel.

3. Check that the system cable is connected.

4. Restart the download process *and* make sure the Firmware Upgrade mode is activated.

Electricity failure or a rattling noise

When the electricity fails while updating the Remote Card firmware, or if you hear a rattling noise from the relay on the Remote Cards, do the following:

1. Switch off and disconnect the Remote computer from the power supply.

2. Open the cover of the Remote computer, extract the Remote Card, and put Jumper JP9 in the closed position. See Figure 8-2.
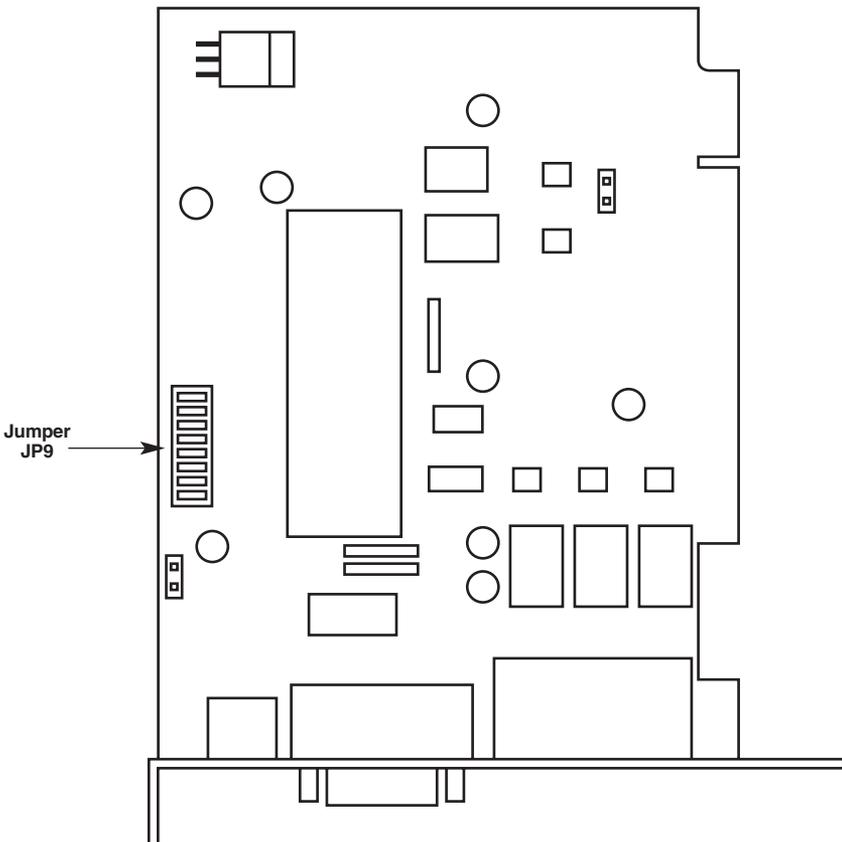
Figure 8-2. Jumper JP9.

3. Reinsert the Remote Card, close the cover, reconnect the power cord, and switch on the computer.

4. Start the ClassWork Junior Update program, and carry out the download process again for all the Remote computers.

   Because Jumper JP9 is closed, the ClassWork Junior Update program does not show the firmware version number after completing the download.

5. Switch off the Remote computer and disconnect the power cord.

6. Open the cover, extract the Remote Card, and put Jumper JP9 in the open position.

7. Reinsert the Remote card, close the cover, and reconnect the power cord.

8. Check that the system functions properly.

9. In the ClassWork Junior Update program, check that the firmware version number appears.

If the system fails to function properly, or the firmware version number fails to appear, call Black Box Technical Support at 724-746-5500.

8.2 Calling Black Box

If you determine that your ClassWork Junior is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box 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.

8.3 Shipping and Packaging

If you need to transport or ship your ClassWork Junior:

• Package it carefully. We recommend that you use the original container.

• If you are shipping the ClassWork Junior for repair, make sure you include everything that came in the original package. Before you ship, contact Black Box to get a Return Authorization (RA) number.

Appendix A. The Supervisor Computer DRV Setting

Operating System	Mouse	Mouse Driver	DRV Setting
MS-DOS®	PS/2	PS/2®	PS
MS-DOS	MS IntelliMouse®	PS/2	PS
MS-DOS	Logitech® Wheel	PS/2	PS
MS-DOS	IBM Scroll mouse	PS/2	PS
MS-DOS	Genius Net Mouse	PS/2	PS
Windows 3.1	PS/2	PS/2	PS
Windows 3.1	MS IntelliMouse	PS/2	PS
Windows 3.1	Logitech Wheel	PS/2	PS
Windows 3.1	IBM® Scroll mouse	PS/2	PS
Windows 3.1	Genius Net Mouse	PS/2	PS
Windows 95	PS/2	PS/2	PS
Windows 95	MS IntelliMouse	PS/2	PS
Windows 95	Logitech Wheel	PS/2	PS
Windows 95	IBM Scroll mouse	PS/2	PS
Windows 95	Genius Net mouse	PS/2	PS
Windows 95	MS IntelliMouse	MS Intelli	MS
Windows 95	Logitech Wheel	Logitech	LG
Windows 95	IBM Scroll mouse	IBM	IB
Windows 95	Genius Net mouse	Genius	GN
Windows 98	PS/2	Built-in	PS
Windows 98	MS IntelliMouse	Built-in	MS
Windows 98	Logitech Wheel	Built-in	MS
Windows 98	IBM Scroll mouse	Built-in	PS
Windows 98	Genius Net Mouse	Built-in	PS
Windows 98	MS IntelliMouse	MS Intelli	MS
Windows 98	Logitech Wheel	Logitech	LG
Windows 98	IBM Scroll mouse	IBM	IB
Windows 98	Genius Net Mouse	Genius	GN
Windows 2000	PS/2	Built-in	PS
Windows 2000	MS IntelliMouse	Built-in	MS
Windows 2000	Logitech Wheel	Built-in	MS
Windows 2000	IBM Scroll mouse	Built-in	PS

Operating System	Mouse	Mouse Driver	DRV Setting
Windows 2000	Genius Net Mouse	Built-in	PS
Windows 2000	MS IntelliMouse	MS Intelli	MS
Windows 2000	Logitech Wheel	Logitech	LG
Windows 2000	IBM Scroll mouse	IBM	IB
Windows 2000	Genius Net Mouse	Genius	N/A
Windows NT 4.0	PS/2	Built-in	PS
Windows NT 4.0	MS IntelliMouse	Built-in	PS*
Windows NT 4.0	Logitech Wheel	Built-in	PS
Windows NT 4.0	IBM Scroll mouse	Built-in	PS
Windows NT 4.0	Genius Net Mouse	Built-in	PS
Windows NT 4.0	MS IntelliMouse	MS Intelli	MS
Windows NT 4.0	Logitech Wheel	Logitech	LG
Windows NT 4.0	IBM Scroll mouse	IBM	IB
Windows NT 4.0	Genius Net Mouse	Genius	GN
UNIX, Linux®	PS/2	Built-in	PS
UNIX, Linux	MS IntelliMouse	Built-in	PS
UNIX, Linux	Logitech Wheel	Built-in	PS
UNIX, Linux	IBM Scroll mouse	Built-in	PS
UNIX, Linux	Genius Net Mouse	Built-in	PS
Mac® with Mac Adapter	Only PS/2 mouse supported		
Sun with Sun Adapter	Only PS/2 mouse supported		
PC Adapter	Only PS/2 mouse supported		

*Depends on the type of the mouse installed with Windows NT 4.0.

N/A—No driver was available at the time of writing.

Appendix B. The Remote Computer DRV Setting

Operating System	Local Mouse Type	Mouse Driver	DRV Setting
DOS	Not connected	Built-in	PS
Windows 3.1	Not connected	Built-in	PS
Windows 95	Not connected	Built-in	PS
Windows 98	Not connected	Built-in	MS
Windows NT 4.0	Not connected	Built-in	PS, MS*
Windows 2000	Not connected	Built-in	MS
UNIX, Linux	Not connected	Built-in	PS
Mac with Mac Adapter	Not connected	Built-in	PS
Sun® with Sun Adapter	Not connected	Built-in	PS
PC Adapter	Not connected	Built-in	PS
DOS	PS/2 mouse	Built-in	PS
Windows 3.1	PS/2 mouse	Built-in	PS
Windows 95	PS/2 mouse	Built-in	PS
Windows 98	PS/2 mouse	Built-in	PS
Windows NT® 4.0	PS/2 mouse	Built-in	PS
Windows 2000	PS/2 mouse	Built-in	PS
UNIX, Linux	PS/2 mouse	Built-in	PS
Mac with Mac Adapter	PS/2 mouse	Built-in	PS
Sun with Sun Adapter	PS/2 mouse	Built-in	PS
PC Adapter	PS/2 mouse	Built-in	PS
DOS	MS IntelliMouse	Built-in	PS
Windows 3.1	MS IntelliMouse	Built-in	PS
Windows 95	MS IntelliMouse	Built-in	PS
Windows 98	MS IntelliMouse	Built-in	MS
Windows NT 4.0	MS IntelliMouse	Built-in	PS, MS*

*Depends on the type of mouse installed with Windows NT 4.0

N/A—No driver was available at the time of writing.

Operating System	Local Mouse Type	Mouse Driver	DRV Setting
Windows 2000	MS IntelliMouse	Built-in	MS
UNIX, Linux	MS IntelliMouse	Built-in	PS
DOS	Logitech Wheel	N/A	PS
Windows 3.1	Logitech Wheel	N/A	PS
Windows 95	Logitech Wheel	Logitech	LG
Windows 98	Logitech Wheel	Logitech	LG
Windows NT 4.0	Logitech Wheel	Logitech	LG
Windows 2000	Logitech Wheel	Logitech	LG
DOS	IBM Scroll mouse	N/A	PS
Windows 3.1	IBM Scroll mouse	N/A	PS
Windows 95	IBM Scroll mouse	IBM	IB
Windows 98	IBM Scroll mouse	IBM	IB
Windows NT 4.0	IBM Scroll mouse	IBM	IB
Windows 2000	IBM Scroll mouse	IBM	IB
DOS	Genius Net Mouse	Genius	PS
Windows 3.1	Genius Net Mouse	Genius	PS
Windows 95	Genius Net Mouse	Genius	GN
Windows 98	Genius Net Mouse	Genius	GN
Windows NT 4.0	Genius Net Mouse	Genius	GN
Windows 2000	Genius Net Mouse	Genius	GN

*Depends on the type of mouse installed with Windows NT 4.0

N/A—No driver was available at the time of writing.

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