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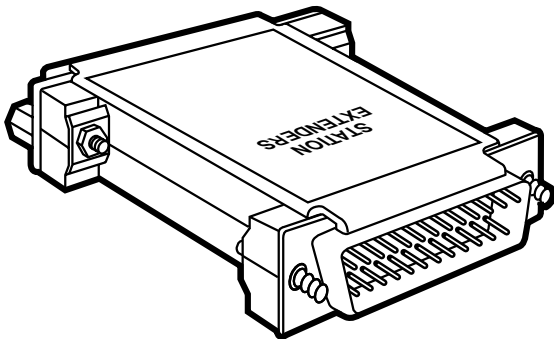
AC250A	AC254A	AC258A
AC251A	AC255A	AC259A
AC252A	AC256A	PS255A
AC253A	AC257A	EHN250-0050

APRIL 1998
EHN250-0100
EHN250-0150
EHN250-0200

Station Extenders

Station Extender Power Supply

Station Extender Cable



CUSTOMER SUPPORT INFORMATION

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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 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 debe 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.

1. Specifications

Indicators	(1) Green Power LED
Connectors	AC250A: <i>LINK: DB25M</i> <i>Computer: DB25F</i> AC251A: <i>LINK: DB25M</i> <i>Keyboard-Monitor-Mouse: DB25F</i> AC252A: <i>LINK: DB25M</i> ServSwitch: DB25M
Operating Temperature	32° to 131°F (0° to 55°C)
Humidity	Up to 85%, noncondensing
Altitude	Up to 10,000 feet (3048 m)

Power	AC250A: 5 VDC, 50 mA from CPU; AC251A: 5 VDC, 1000 mA from transformer; AC252A: 9 VDC, 50 mA from ServSwitch; PS255A: 100 to 240 VAC, 50-60 Hz
Size	AC250A, AC251A, AC252A: 2.5"H x 2.1"W x 0.6"D (6.4 x 5.3 x 1.5 cm)
Weight	AC250A, AC251A, AC252A: 2 oz. (56.7 g); AC254A, AC258A: 2 lb. (0.9 kg); AC253A, AC255A, AC257A, AC259A: 3 lb. (1.4 kg); AC256A: 1 lb. (0.5 kg)

2. Introduction

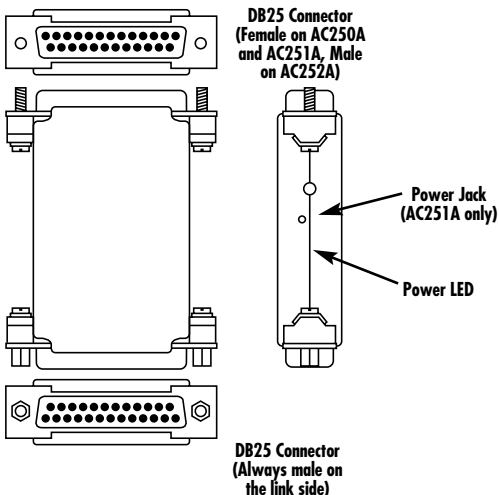
2.1 Description

Your Station Extender package includes two Station Extender units and this manual. There may also be an autosensing power adapter (PS255A) and CPU or keyboard cables, depending on which model you have ordered. The Station Extenders connect to each other with a LINK cable (part number EHN250-xxxx). This cable is purchased separately and is required for installation.

Station Extenders work in pairs, and can be thought of as a transmitter unit and a receiver unit connected by a single cable. Each unit plugs into one end of the equipment to be interconnected. The two units are then connected with the LINK cable. The Station Extender units are truly plug-and-play. Once connected to the equipment, the extender system acts like a regular cable. There are no user installation steps other than connecting the units.

The figure on the next page shows the Station Extender. There are 3 types of Station Extenders. AC250A is used on the CPU side. AC251A is used

on the keyboard side. AC252A (pictured below) is used with ServSwitches. There is a DB25 connector at each end of the Station Extender. One end is always a male connector and is marked LINK CABLE. The LINK cable is always a female-to-female cable and connects to this end. The other DB25 connector is either male or female, depending on the model. It connects to your equipment through a cable or directly to a ServSwitch.



STATION EXTENDERS

AC250A has a female connector at the equipment end marked COMPUTER. AC251A has a female connector at the equipment end marked KEYBOARD-MONITOR-MOUSE. AC252A has a male connector at the equipment end marked SERVSWITCH. The genders of the connectors have been chosen to make it difficult to connect the system incorrectly.

The green LED on the side of the unit lights when the Station Extender is receiving power. When used with ServSwitches, which indicate CPU power on the front of the switch, the power state of the CPU is passed through correctly, regardless of whether the Station Extender is powered on or not. AC251A has a power jack on it for connecting a transformer, which powers the keyboard and mouse.

The units are most commonly sold as kits with any cables or transformers bundled in (see **Section 2.3**). The LINK cable is always sold separately. Transformer power cords are also purchased separately—call Black Box.

There are four applications for the Station Extender (see **Chapter 3**). Connect the Station Extenders and cables as shown in the proper diagram.

2.2 Features

- Extends PC keyboard, mouse, and monitor up to 200 feet (60.9 m) from computer.
- Supports both PS/2® and RS-232 mice.
- Direct connect to switches such as ServSwitch (part numbers SW721A-R2 through SW725A-R2) or ServMaster (part number SW990A or SW990AE).
- Supports up to 1280 x 1024 video.
- Small and application-transparent.

2.3 Models Available

The three basic units are:

AC250A	Station Extender-PC (for the CPU side)
AC251A	Station Extender-K/V/M (for the keyboard side)
AC252A	Station Extender-SW (for the ServSwitch side)

STATION EXTENDERS

The kits available are:

- AC253A Station Extender PC-K/V/SM
(CPU to Keyboard-Monitor-
RS-232 Mouse)
- AC254A Station Extender PC-SW-SM
(CPU to ServSwitch for RS-232 Mouse)
- AC255A Station Extender SW-K/V/SM
(ServSwitch to Keyboard-Monitor-
RS-232 Mouse)
- AC256A Station Extender SW-SW
(ServSwitch to ServSwitch)
- AC257A Station Extender PC-K/V/PS2M
(CPU to Keyboard-Monitor-
PS/2 Mouse)
- AC258A Station Extender PC-SW/PS2M
(CPU to ServSwitch for PS/2 Mouse)
- AC259A Station Extender SW-K/V/PS2M
(ServSwitch to Keyboard-Monitor-
PS/2 Mouse)

The power supply available is:

- PS255A Station Extender Power Supply

The cables available for the link side are:

EHN250-0050	Station Extender Cable, 50 ft.
EHN250-0100	Station Extender Cable, 100 ft.
EHN250-0150	Station Extender Cable, 150 ft.
EHN250-0200	Station Extender Cable, 200 ft.
EHN250-0250	Station Extender Cable, 250 ft.

The cables available for the computer side are:

EHN048	VGA/AT/Serial
EHN049	EGA/AT/Serial
EHN051	VGA/PS2/PS2

The cables available for the keyboard/monitor/mouse side are:

EHN052	VGA/AT/Serial
EHN053	EGA/AT/Serial
EHN054	VGA/PS2/PS2

3. Installation

3.1 CPU to Keyboard-Monitor-Mouse

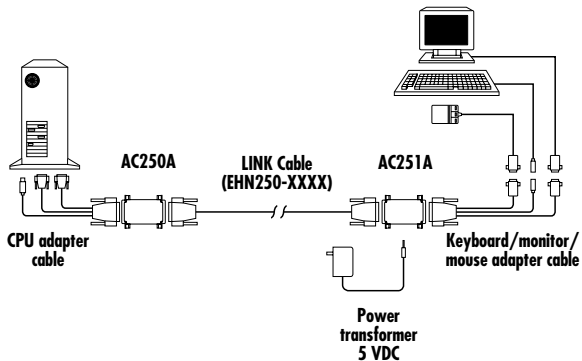
This installation requires the parts shown in the table on the next page. The LINK cable is also required for installation and is purchased separately. Connect the parts together as shown in **Figure 3-1**.

The units are most often sold as kits. Kit part number AC257A is for PS/2 mice. It contains items 1, 2, 3a, 4a, and 5.

Kit part number AC253A is for RS-232 mice. It contains items 1, 2, 3b, 4b, and 5.

ITEM	PART NUMBER	DESCRIPTION
1	AC250A	Station Extender used on CPU side.
2	AC251A	Station Extender used on keyboard side.
3a 3b	EHN051 (PS/2 mouse) or EHN048 (RS-232 mouse)	CPU adapter cable used to connect CPU to AC250A.
4a 4b	EHN054 (PS/2 mouse) or EHN052 (RS-232 mouse)	Keyboard-monitor-mouse adapter cable used to connect keyboard, monitor, and mouse to AC251A.
5	PS255A (100 VAC) or PS255A (240 VAC)	Power transformer (5 VDC) used on keyboard side.
6	EHN250-xxxx, where xxxx is the length of cable in feet	Link cable to interconnect AC250A and AC251A.

STATION EXTENDERS



**Figure 3-1. Station Extender Connection—
CPU to Keyboard-Monitor-Mouse.**

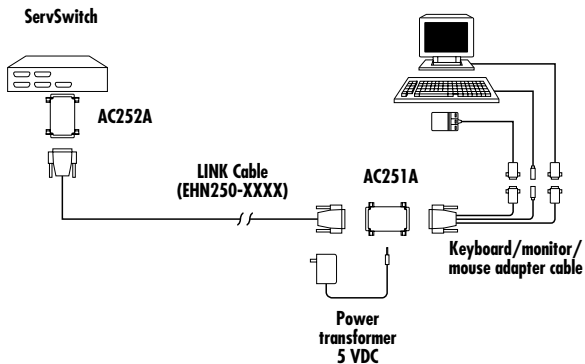
3.2 ServSwitch to Keyboard-Monitor-Mouse

This installation requires the parts shown in the table below. The LINK cable is also required for installation and is purchased separately. Connect the parts together as shown in **Figure 3-2**.

The units are most often sold as kits. Kit part number AC259A is for PS/2 mice. It contains items 1, 2, 3a, and 4.

Kit part number AC255A is for RS-232 mice. It contains items 1, 2, 3b, and 4.

ITEM	PART NUMBER	DESCRIPTION
1	AC252A	Station Extender used on switch side.
2	AC251A	Station Extender used on keyboard side.
3a 3b	EHN054 (PS/2 mouse) or EHN052 (RS-232 mouse)	Keyboard-monitor-mouse adapter cable used to connect keyboard, monitor, and mouse to AC251A.
4	PS255A (100 VAC) or PS255A (240 VAC)	Power transformer (5 VDC) used on keyboard side.
5	EHN250-xxxx, where xxxx is the length of cable in feet	Link cable to interconnect AC252A and AC251A.



**Figure 3-2. Station Extender Connection—
ServSwitch to Keyboard-Monitor-Mouse.**

3.3 CPU to ServSwitch

This installation requires the parts shown in the table below. The LINK cable is also required for installation and is purchased separately. Connect the parts together as shown in **Figure 3-3**.

The units are most often sold as kits. Kit part number AC258A is for PS/2 mice. It contains items 1, 2, and 3a.

Kit part number AC254A is for RS-232 mice. It contains items 1, 2, and 3b.

ITEM	PART NUMBER	DESCRIPTION
1	AC250A	Station Extender used on CPU side.
2	AC252A	Station Extender used on switch side.
3a	EHN051 (PS/2 mouse)	CPU adapter cable used to connect CPU to AC250A.
3b	EHN048 (RS-232 mouse)	
4	EHN250-xxxx, where xxxx is the length of cable in feet	Link cable to interconnect AC250A and AC252A.

STATION EXTENDERS

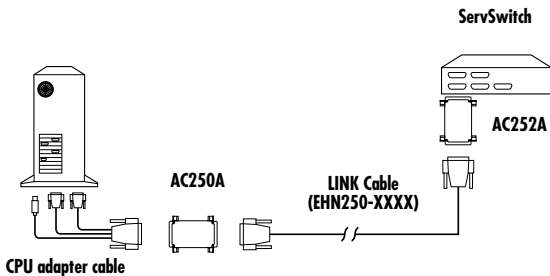


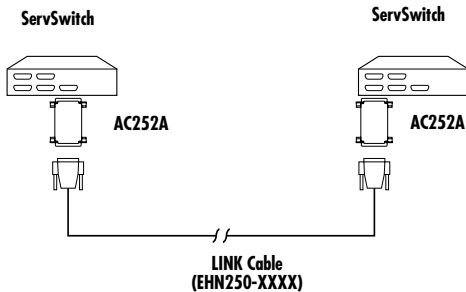
Figure 3-3. Station Extender Connection—CPU to ServSwitch.

3.4 ServSwitch to ServSwitch

This installation requires the parts shown in the table below. The LINK cable is also required for installation and is purchased separately. Connect the parts together as shown in **Figure 3-4**.

The units are most often sold as kits. Kit part number AC256A contains 2 pieces of item 1.

ITEM	PART NUMBER	DESCRIPTION
1	AC252A (two required)	Station Extender used on switch side.
2	EHN250-xxxx, where xxxx is the length of cable in feet	Link cable to interconnect AC252A and AC252A.



**Figure 3-4. Station Extender Connection—
ServSwitch to ServSwitch.**