BLACK BOX®
NETWORK SERVICES

ELECTRONIC X AND CLEVER CODE-OPERATED SWITCHES
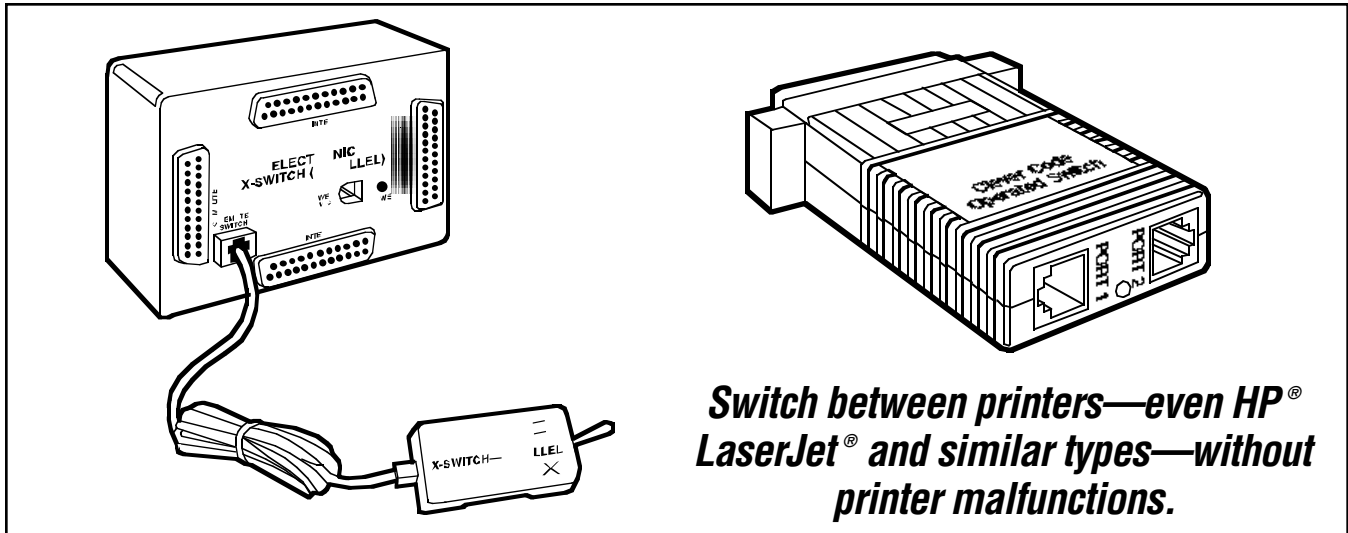
Switch between printers—even HP® LaserJet® and similar types—without printer malfunctions.

Key Features

▶ *Two users can share two devices simply and inexpensively.*

▶ *Electronic switching is the only safe, recommended way to share HP LaserJet printers.*

▶ *The switch itself is small and unobtrusive; its remote control unit mounts conveniently on any nearby flat surface.*

▶ *To switch devices via software, choose the Clever Code-Operated Switch.*

What to do? You need to switch between two users and/or two printers, at least one of which is a laser printer. If you use a manual switch, you could cause the laser printer to malfunction or even damage it—and you'll probably void its warranty— because manual switches can create spikes and surges on the line. But electronic switches can be so expensive…

Don't despair—our Electronic X Switch could be just the thing you're looking for. Its electronic switching is smooth, causes no transients, and is actually recommended by HP for its laser printers. And the price won't spike your budget, either.

Mount the included remote-control unit—shown at the end of the cable in the illustration above—on any convenient surface nearby with the included tape-backed VELCRO type fasteners.

This switch also lets you double your distance—run parallel cable up to 20 ft. (6.1 m) or serial cable up to 50 ft. (15.2 m) from both sides of the switch.

When you need to switch between the attached devices, move the toggle switch on the remote control to the opposite position. In one of these positions (the one marked with the parallel lines), the Electronic X Switch connects computer A straight through to printer (or other peripheral) A and computer B to printer B. In the other position (the one marked with the crossed lines), the switch cross-connects computer A to printer B and computer B to printer A.

Even if you just want to have one user switch between two printers, or to share a single peripheral between two users, the Electronic X Switch functions perfectly well as an AB switch.

While the Electronic X Switch can share two peripherals between one or two users, the Clever Code-Operated Switch shares two peripherals with just one user. It functions in the same way as the Electronic X Switch, except that it switches devices via software instead of electronically. This tiny switch uses software commands that you select to switch one RS-232 async device between two other RS-232 devices.

For more information on both the Electronic X Switch and the Clever Code-Operated Switch, see the Technically Speaking section on page 3.

#11165

With the Electronic X Switch, share two printers between two computers as needed.

(SW078A)

(SW078A)
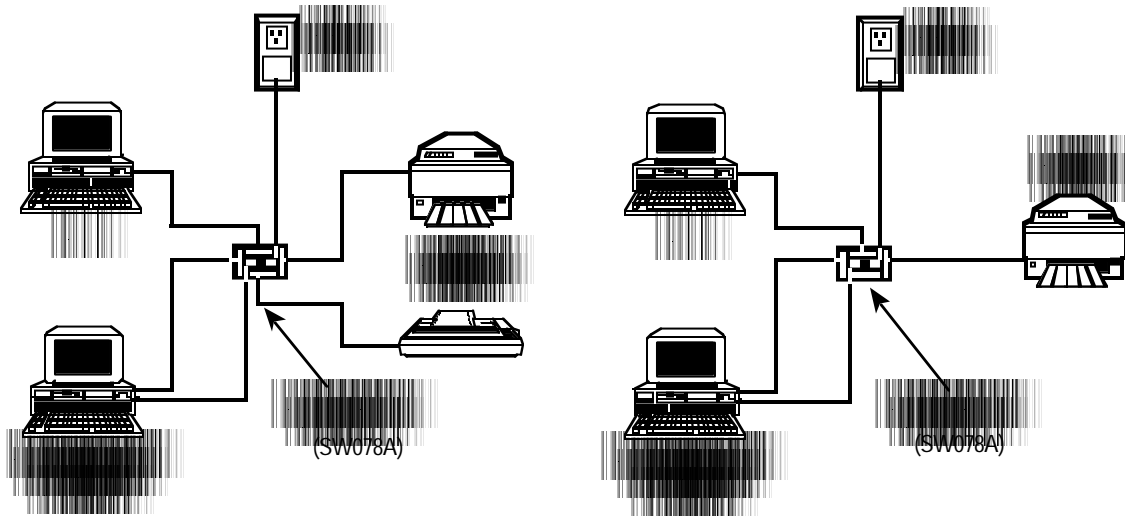
Choose the Clever Code-Operated Switch to share one RS-232 device with two other RS-232 devices.

Clever Code
Operated Switch
(TS104A)

▼
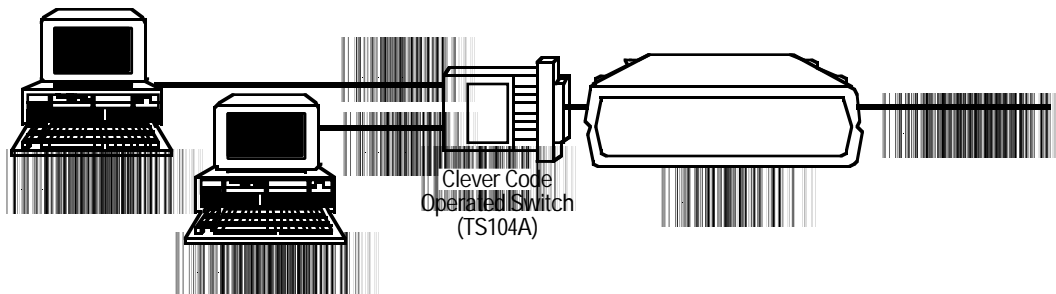
Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognise any of these situations?
- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.

- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p. m. and you need help, but your vendor's tech support line is closed.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely

important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

Specifications

Electronic X Switch

Compliance: FCC Part 15 Class A, DOC Class/MDC classe A

Protocol: SW078A models: Transparent to protocol; SW079A models: Asynchronous

Data Format: Transparent to data format

Flow Control: SW078A models: Transparent to flow control; SW079A models: Hardware (CTS/DSR/DTR)

Data Rate: Transparent to data rate

Maximum Distance:
SW078A models: 20 ft. (6.1 m) on either side of the switch;
SW079A models: 50 ft. (15.2 m) on either side of the switch

Leads Supported:
SW078A models: Pins 1 through 12 and 14 through 16 are switched; Pin 13 is pulled high with a 500-ohm resistor; Pins 17 through 25 are pulled low with 1-kohm resistors;

SW079A models: Pins 2 through 6, 8, 20, and 22 are switched; Pins 1 and 7 are tied common

User Controls: (1) 2-position AA/BB vs. AB/BA toggle switch on tape-mountable remote control unit

Interface: SW078A models: IBM PC parallel;
SW079A models: EIA RS-232 serial;
All models: Computer ports configured as DCE, device ports configured as DTE

Connectors: SW078 models:
(1) RJ-11 female for remote control;
(4) DB25 female: (2) labeled COMPUTER (for data input), (2) labeled PRINTER (for data output);
SW079 models: (1) RJ-11 female for remote control;
(4) DB25 male: (2) labeled COMPUTER (for data input), (2) labeled PRINTER (for data output)

Indicators: (1) Power LED

Power: SW078A, SW079A: From wallmount power supply PS078A:
Input: 115 VAC, 60 Hz;
Output: 9 VAC;
SW078AE, SW079AE: From desktop power supply PS078E:
Input: 220 VAC, 50 Hz;
Output: 9 VAC

Size: 4.1"H x 6"W x 2"D (10.4 x 15.2 x 5.1 cm)

Weight: 1.2 lb. (0.5 kg)

Clever Code-Operated Switch

Configuration: Channels 1 and 2: DCE; Channel 3: DTE

Transmission: Asynchronous, full duplex

Baud Rate: Selectable for 1200, 2400, 4800, 9600, 19,200, or 38,400 bps

Word Size: 7 or 8 data bits

Parity: Odd, even, mark, space, or none

Stop Bits: 1 or 2

Flow Control: Hardware (RTS/CTS), software (X-ON/X-OFF)

Buffer Size: 2 KB

Interface: Channels 1 and 2: RJ-45; Channel 3: DB25 male; Both: V.24/RS-232-C

Connectors: (1) DB25 male, (2) RJ-45 female

Indicators: (1) Power LED

Operating Temperature: 32 to 158°F (0 to 70°C)

Relative Humidity Tolerance: Up to 95%, noncondensing

Maximum Altitude Tolerance: Up to 15,000 feet (4572 m)

Power: No AC power or batteries required; Derives power from the RS-232 interface

Size: 2.1"H x 2.7"W x 7.4"D (5.3 x 6.9 x 18.8 cm)

Weight: 0.1 lb. (0.05 kg)

Technically Speaking

Electronic X Switch

The Parallel Electronic X Switch models (SW078A) regenerate data signals, doubling the total distance you can run to 40 ft. (12.2 m)—up to 20 ft. (6.1 m) on either switch side.

If you need to go farther, you can attach one of the hypercables to the computer side (EQHYP5) or the printer side (EQHYP4), but not both at the same time.

The Serial Electronic X Switch models' (SW079A) COMPUTER ports are DB25 female and are configured as DCE, so you should use straight-through pinned cable to connect computers to them.

The PRINTER ports are DB25 male and configured as DTE, just like the serial ports on older (PC/XT and compatible) computers. Use cross-pinned cable to connect printers to them.

Clever Code-Operated Switch

The Clever Code-Operated Switch operates in one of two modes: data and command. By default, the switch automatically enters Data Mode when powered on. This mode allows data to flow between the two default channels. The switch also "listens" for a character string (from any channel) to tell the device to switch channels or to enter Command Mode.

In Command Mode, you can send AT commands to the switch to change speed, data format, and other user-configurable parameters. But you can change channels from either Data Mode or Command Mode.

What's Included

Electronic X Switch
- (1) Electronic X Switch
- (1) Remote Control Unit, hardwired to a 6.5-ft. (2-m) flat-satin RJ-11 cable with an RJ-11 male connector
- (4) Tabs of mounting-tape-backed VELCRO® type fastener
- (1) Power supply
- (1) Users' manual

Clever Code-Operated Switch
- (1) Clever Code-Operated Switch
- (1) Power supply
- (1) Users' manual

Ordering Information

ITEM	CODE
Parallel Electronic X Switch	
115-VAC	SW078A
220-VAC	SW078AE
Serial Electronic X Switch	
115-VAC	SW079A
220-VAC	SW079AE

For the parallel switch…

Parallel Printer Cable, Male/Male, 10-ft. (3-m)	EYN600-0010-MM
PC Parallel Hypercable, DB25 Male/Centronics 36 Male	EQHYP4
DB25 Hypercable, DB25 Male/DB25 Male	EQHYP5

For the serial switch…

RS-232 Cable, 25-Conductor, Male/Male, 10-ft. (3-m)	ECM25C-0010-MM
RS-232 Cable (NEC® CL2)	ECM12C
AT Modem Cable, Standard, DB9 Female/DB25 Male, 9-Conductor, 28 AWG	BC00301
Serial Printer Cable, PC/XT™ Style DB25 Male/DB25 Female	BC00901

To connect the switch to two RS-232 serial devices, use an adapter and an RJ-45 modular cable…

Modular Adapter Kits	
DB25 Male–RJ-45 Female, 8-Wire	FA025
DB25 Female–RJ-45 Female, 8-Wire	FA027
DB9 Male–RJ-45 Female, 8-Wire	FA066
DB9 Female–RJ-45 Female, 8-Wire	FA065

To switch devices via software, order…

Clever Code-Operated Switch	TS104A

For the code operated switch, you might also need cable…

RJ-45 (8-Wire) Modular Cable, Straight-Pinned, 14-ft. (4.3-m)	ELO8MS-14