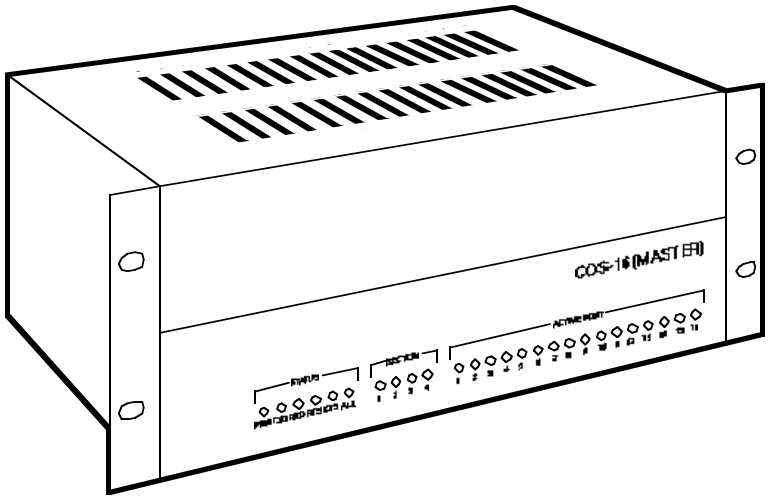
BLACK BOX®
NETWORK SERVICES

Code-Operated Switch-16



Handle the big switching jobs—the ones with up to 16 devices—without ever leaving your desk. This switch makes it happen.

With simple ASCII codes, you can use a computer to access at least 16 RS-232 devices—or as many as 64.

Key Features

- *Huge capacity—the base model switches common-port access between 16 ports, and can be expanded to handle 64.*
- *Convenient code-based switching means you can control all of your devices from one computer.*
- *No accidental switching—code-repetition feature separates Switch commands from data.*
- *Optional broadcast mode distributes data to all ports.*
- *Runs at data rates up to 19.2 kbps.*

Bring the ease of "soft switching" to large RS-232 applications with our biggest code-operated switch, the Code-Operated Switch-16 (COS-16). It works just as smoothly as a mechanical switch, but you activate it by sending a two-character ASCII code from your PC rather than by pressing a button or turning a knob.

Switching is simple. From a PC, modem, or terminal installed on the common port, just send the prefix (arming) character to alert the COS-16, then send the port-selection character. Electronic relays instantly direct data to the proper port.

With code-based switching, you can use your local or remote PC to receive data from or transmit data to any of a huge collection of RS-232 terminals, peripherals, or lab or industrial equipment.

The COS-16 can handle all varieties of data, including binary and graphics files, even though these can contain exact equivalents of the COS-16's two-character switching codes. When you use the COS-16's "code repetition" feature, the unit waits for two, four, or even eight consecutive occurrences of the prefix character before recognizing a selection character and redirecting your data. This precaution dramatically lowers the odds of a switching error.

The COS-16 also has a "broadcast mode" feature. In broadcast mode, the device on the common port can simultane-ously transmit to all connected devices. This makes sending bulletins and upgrading firmware much easier.

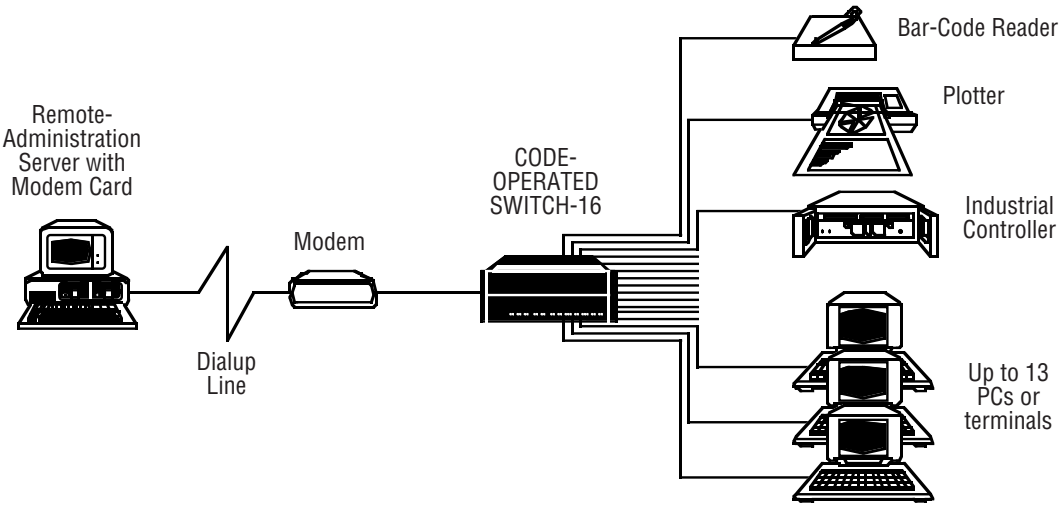
With the basic COS-16, you can switch between up to 16 devices. To add more devices (up to a total of 64), just add one, two, or three 16-Port Expansion Units.

We also offer an RS-422 version of the COS-16 as a special quote; call for details.

Typical Applications

The COS-16 fits any site that relies on a large number of RS-232 devices—peripherals, terminals, lab equipment, etc. It's ideal for monitoring remote equipment or data-collection devices, polling bar-code readers, exercising units under test, or broadcasting to market-quote displays.

Connect one computer to as many as 16 RS-232 peripheral, laboratory, or data-input devices.



Technically Speaking

- The prefix (arming) character of the COS-16's switching code can be any ASCII character you choose. However, this character will pass through the COS-16 to the connected device, so we recommend using a nonprintable control code.
- The port-selection characters are the 64 ASCII characters from "@" (40 hex) to "DEL" (7F hex)—one for each possible port. The COS-16 absorbs the port-selection character rather than passing it through.

Specifications

Interface — EIA RS-232; Common port: DTE; Switched ports: DCE

Protocol — Asynchronous

Code Set — ASCII

Data Format — Either 7 data bits with even, odd, mark, or space parity, or 8 data bits with no parity (user-selectable); 1 stop bit (fixed)

Flow Control — None

Operation — Full duplex

Data Rate — 150 bps to 19.2 Kbps, user-selectable

Maximum Distance — 15.2 m to attached devices over standard RS-232 cables

User Controls — (2) Bottom-mounted 8-position DIP switches for selecting the prefix character, code repetition, broadcast mode, and data rate; (1) Internal jumper for 110/220-VAC selection

Indicators — (26) Front-mounted LEDs: (16) Active Port; (4) Section; (1) each of PWR (power), TXD, RXD, RTS, CTS, ALL (broadcast)

Connectors — (17) Rear-mounted DB25 female for data: (1) common, (16) switched; (1) Rear-mounted IEC 320 power inlet

Leads Supported — Pins 2 through 5 on all ports

Power — Through 1.8-m detachable power cord, power inlet, and internal power supply:
Input: *Either* 110 VAC, 60 Hz, *or* 220 VAC, 50 Hz (user-selectable);
Consumption: 30 watts

MTBF — 30,000 hours

Size — 8.9H x 43.9W x 22.9D cm

Weight —
Master unit: 3.2 kg; Expansion units: 1.8 kg

The complete package:

- The Code-Operated Switch-16.
- A users' manual.
- A detachable power cord with a NEMA 5-15P plug

Additional equipment you might need:

- One or more Expansion Units. Each Expansion Unit adds 16 more switched ports and consists of a large daughterboard assembly that you can easily install in the base unit's chassis.
- One or two Rackmount Kits. To rackmount a master unit *or* a master unit plus one Expansion Unit, you'll need one Kit. You'll need two Kits to rackmount a master unit plus two or three Expansion Units.
- An asynchronous RS-232 modem for long-distance off-site control of your devices.
- An RS-232 line driver for control from an office on another floor or from a data centre in a nearby building.
- RS-232 cable.
- AC and data-line surge protectors.
- Interface converters to connect RS-422, RS-423, RS-449, RS-485, V.35, or X.21 devices to the COS-16.
- A country-specific power cord for operating the COS-16 outside of North America.
- Communications software.

Ordering Information

This information will help you place your order quickly.

PRODUCT NAME	ORDER CODE
Code-Operated Switch-16 (Master)	SW056A
16-Port Expansion Unit for COS-16	SW057A
Rackmount Kit	RM056

Call for details on the RS-422 option for this switch.