



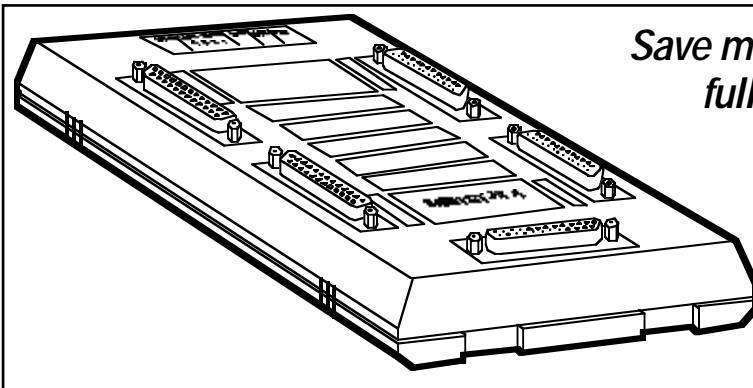
# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

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Black Box Corporation.

Black Box Network Services • 464 Basingstoke Road • Reading, Berkshire, RG2 0BG • Tech Support: 0118 965 6000 • www.blackbox.co.uk • e-mail: techhelp@blackbox.co.uk

## MINISTAT-FOUR



*Save money and space with this tiny but full-featured four-port stat mux.*

### Key Features

- ▶ **Multiplexes as many as four data streams into one.**
- ▶ **Supports all popular data rates from 300 to 19,200 bps, as well as a wide variety of data formats and flow control.**
- ▶ **Small footprint (1.2 x 4 x 7.3 inches) for easy placement.**
- ▶ **Resident password-protected configuration program can be run even from a dumb terminal.**
- ▶ **Configuration can be down-loaded from the local unit to the remote unit or vice versa.**
- ▶ **Full suite of indicators and loopback tests for easy troubleshooting.**

**D**ata lines and cabling: In our modern world, we seem to need them to go from every point to every other point. But do we really need the hassle and expense of running multiple lines from Point A to Point B?

Not necessarily. One of our MiniStat-Four ("MS-4") statistical multiplexors can take the data from two, three, or four asynchronous serial inputs ("subchannels"), mesh it into a single 19,200-bps synchronous output, and send it to another MS-4 across just one line or cable. The remote MS-4 then recreates the original data streams and forwards them on to their destinations.

The MiniStat-Four is flexible enough to be used in many different applications. The subchannels can use any standard data rate from 300 bps up to 19,200 bps. The data can have 5, 6, 7, or 8 data bits; even, odd, or no parity; and 1, 1.5, or 2 stop bits. And a number of flow-control options are available: You can use no flow control, MS-4-to-subchannel X-ON/X-OFF

(software) flow control, or end-to-end X-ON/ X-OFF or DTR (hardware) flow control, and you can even redefine the X-ON and X-OFF characters if necessary (see **Technically Speaking** on the next page).

And configuration is a snap. The MiniStat-Four's menu-driven configuration program is resident in its own firmware; you can run it from any attached terminal or terminal-emulating PC without using up valuable memory or disk space. The program is protected by a user-definable password; once you finish using it, you can save the new configuration in the MS-4's nonvolatile memory, and/or automatically configure the MS-4 at the other end of the composite link.

If you want to know the status of the MiniStat-Four, its eight LEDs will show you the unit's power and synchronisation states, whether or not an error has been detected, and subchannel and composite data activity. If data isn't getting through or is being garbled, the MS-4 can perform local and remote loopback tests of the composite link or any of the subchannels. And if the composite link goes through a modem pair, the MS-4 can also perform local analogue and remote digital modem loopbacks.

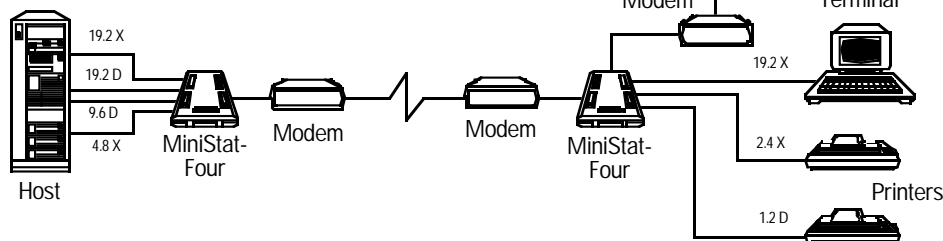
### Typical Applications

Run a single long cable to connect as many as four distant terminals, printers, or other peripherals to your async host.

Multiplex serial data from multiple servers onto a single cable for leased-line transmission.

**Don't pay for four cables or modem connections—squeeze all four channel lines onto one cable with the MiniStat-Four!**

**KEY**  
 19.2 = 19.2 Kbps  
 9.6 = 9.6 Kbps  
 4.8 = 4.8 Kbps  
 2.4 = 2.4 Kbps  
 1.2 = 1.2 Kbps  
 D = DTR flow control  
 X = X-ON/X-OFF flow control



## Specifications

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

**Interface:**

TIA RS-232 (ITU-TSS V.24):  
 Subchannels: DCE;  
 Composite: DTE

**Protocol:**

Subchannels: Asynchronous;  
 Composite: Synchronous proprietary variant of HDLC framing as defined in ITU-TSS X.25 level 2

**Clock Source:** Composite: External

**Data Format:**

Subchannels: 5, 6, 7, or 8 data bits; 1, 1.5, or 2 data bits; even, odd, or no parity;  
 Composite: HDLC frames

**Flow Control:**

Subchannels:  
 Hardware: DTR/CTS, end-to-end (DTE-to-DTE);  
 Software: X-ON/X-OFF, either end-to-end (DTE-to-DTE) or subchannel-to-DTE (user-selectable); users can choose any extended-ASCII characters from 11 hex (DC1) to 14 hex (DC4) or 91 hex to 94 hex to be the X-ON and X-OFF characters

**Operation:** Point-to-point

**Data Rate:**

Subchannels: 19,200, 14,400, 9600, 7200, 4800, 2400, 1200, 600, or 300 bps (user-selectable);  
 Composite: Up to 19,200 bps (depends on external clock rate)

**Maximum Distance:** 50 ft. (15.2 m) from the MiniStat-Four to any attached device

**User Controls:** (3) Internal jumpers:

Normal/initialisation, Pin 21 enable/disable, and grounds connect/disconnect; Menu-driven terminal program accessible from a PC or terminal attached to any subchannel port; configuration can be downloaded across the composite line from either MiniStat-Four to the other

**Diagnostics:** Local and remote subchannel and composite loopback tests; when the composite line passes through a modem pair, local analogue and remote digital loopback tests

**Indicators:** (8) Rear-mounted LEDs: SYNC (power/ synchronisation), ERR (error), TEST, (4) subchannel activity, (1) composite activity

**Connectors:**

(5) Top-mounted DB25 female:  
 (4) Subchannel, (1) Composite

**Power:** External power supply:  
 Input: 120 VAC at 60 Hz;  
 Output: 9 to 12 VDC, 300 mA, tip positive/ring (sleeve) negative

**Temperature Tolerance:** 32 to 122° F (0 to 50° C)

**Humidity Tolerance:** Up to 95% noncondensing

**Size:** 1.2"H x 4"W x 7.3"D (3 x 10.2 x 18.5 cm)

**Weight:** 12 oz. (350 g)

## Technically Speaking

- To avoid conflicts with applications that might use the normal X-ON and X-OFF characters for other things, you can have the MS-4 use any of the characters from 11 to 14 or 91 to 94 hex for X-ON or X-OFF.
- The MS-4 has three internal jumpers. Use one to reset the unit to its factory-default configuration. Use the next to select whether DB25 Pin 21 is a signal-quality or remote-loopback lead. Use the third if you want to connect signal and chassis grounds.

## Additional equipment you might need:

- RS-232 cable for connecting devices to the MiniStat-Four. Use straight-through-pinned cable to attach DTEs to the subchannel ports or a DCE to the composite port. To attach a DCE to a subchannel port, you'll need a tail-circuit cable; to attach a DTE to the composite port, you'll need a null-modem cable.

## Ordering Information

ITEM	CODE
MiniStat-Four .....	MX865A-R2
OPTIONAL ACCESSORY	CODE
RS-232 Cable, DB25 Male to:	
DB25 Female, Straight,	
5-ft. (1.5-m) .....	ECM25C-0005-MF
DB25 Male, Straight,	
5-ft. (1.5-m) .....	ECM25C-0005-MM
DE9 ("DB9") Female, Straight,	
6-ft. (1.8-m) .....	EVMBMC-0006
DB25 Male, Tail-Circuit,	
Custom Lengths .....	EYN255C
DB25 Female, Null-Modem,	
Custom Lengths .....	EYN250C-MF