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# 1. Specifications

**Indicators** — LEDs: TD, RD, Main, Spare, Power

**Controls** — 3 pushbuttons: Auto, Main, Spare

**Interface** — V.35

**Connectors** — (3) V.35

**Pins Switched** — C, D E, F, H, P, R, S, T, U V, W, X, Y, AA

**Leads Monitored** — RTS, CTS, DSR, DTR, DCD, or RI

**Relays** — Latching type, with gold-cadmium-silver contacts;  
Initial contact resistance: 50 milliohms;  
Expected life: 10,000,000 operations

**Power** — 115-VAC, 60 Hz; 230-VAC, 50-Hz unit available

**Size** — 2"H x 7"W x 6"D (5.1 x 17.8 x 15.2 cm)

**Weight** — 3.6 lb. (1.6 kg)

## 2. Introduction

The V.35 Fallback Switch brings automatic backup to your V.35 communications system. In an emergency, it will redirect data from a main line to a secondary high-speed DDS line.

This switch adds an extra safeguard for your data. The monitoring and fallback functions it provides will reduce the chances of a disastrous and expensive break in your V.35 communications channel.

This switch will respond to one of six leads—RTS, CTS, DTR, DSR, DCD, or RI—in either a mark or space condition.

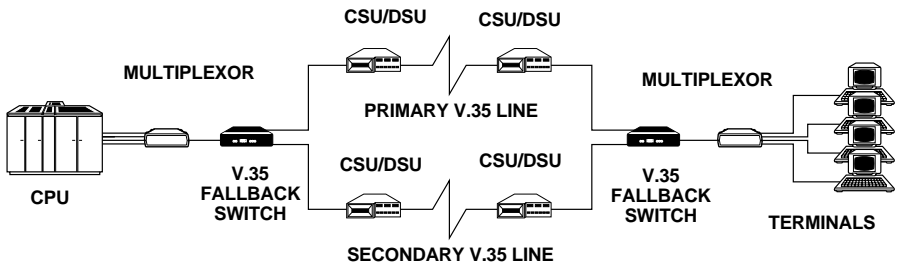
Manual front-panel switches allow you to override the automatic setting at any time.

Mechanical latching relays carry out the switch action. In the event of a power failure, they eliminate the possibility of disruption, since they retain the last position switched.

### 2.1 Applications

The Switch sits between your CPU or multiplexor and your main and spare CSU/DSUs. A rackmount unit is also available for multi-line V.35 installations—up to 16 V.35 Switch Cards will fit into the rack.

**Figure 2.1** shows two typical Switch sites running data through a pair of switches.



**Fig. 2.1** Location of V.35 Fallback Switch—Typical Applications

## 3. Installation

It takes just minutes to set up the V.35 Fallback Switch. Before you begin, you'll need to have ready a small Phillips screwdriver and the cables you'll run between the Switch and your modems.

Also, you'll want to know which lead you wish the Switch to monitor—RTS, CTS, DSR, DTR, DCD, or RI—and the state—Mark (+12 volts) or Space (-12 volts).

### 3.1 Setting The Shunt Jumpers

Unplug the switch. Unscrew the four corner screws at the rear of the case. Remove the circuit board.

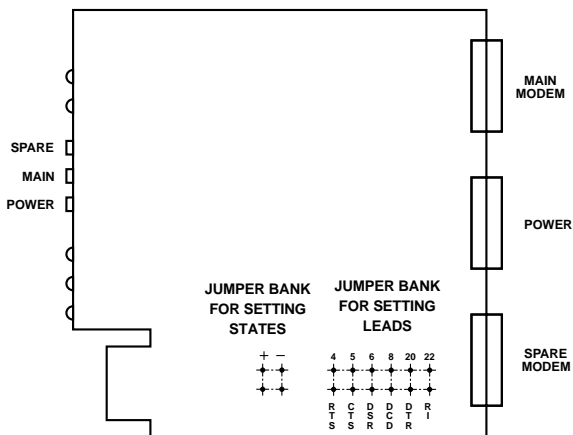
Two jumper banks lie on the face of the board. The eight-position bank governs which lead of the backup line will be monitored, and the two-position bank governs the state that will trigger the Switch.

**Figure 3.1** shows the arrangement of the pins within the banks. Use the diagram to set the jumpers for the lead and the state you wish.

### 3.2 Cabling and Powering the Switch

Connect your host device to the common connector mounted on the rear panel of the Switch. Connect the modem on your primary line to the connector marked MAIN, and the modem on your secondary line to the connector marked SPARE.

Plug the power module into the 4-prong power connector on the rear of the case.



**Fig. 3.1** Jumper Bank Locations.

# 4. Operation

The Switch is designed to require little supervision. When it is in automatic mode, occasional checks are all it requires.

## 4.1 Indicators

A pair of LEDs on the front panel indicate activity on the Transmit and Receive data leads, while another pair indicates the line connected to the common port. A fifth LED remains lit as long as the Switch has power.

## 4.2 Automatic Switching

The pushbutton marked “Auto” sets the Switch for automatic operation. In automatic mode, the Switch reads the level of either the RTS, CTS, DTR, DSR, DCD, or RI lead of the secondary line.

When the lead reaches the proper predetermined state of Mark or Space, the Switch redirects data to the secondary line. When the lead reaches the opposite state, the Switch returns to the primary line.

The relays within the switch are mechanical latching assemblies. During a power failure, the relays will retain the last position switched. They may also be overridden at that time—see **Section 4.3**.

## 4.3 Manual Switching

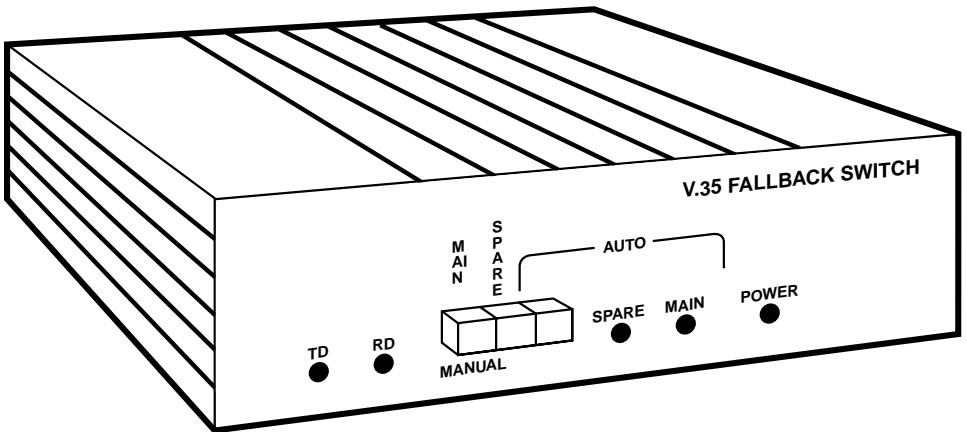
You may override the automatic mode by pressing one of the pair of buttons labeled “Manual.” “Main” mechanically sets the switch to your primary line, “Spare” to your secondary line.

The positions of the pair of buttons are the only reliable signs of the course of your data. In manual mode the LEDs do not give a true indication of your operational line.

**NOTE:** Manual override allows you to use the Switch during a power failure.  
If the Switch loses power, use the manual switches to change its setting.



## V.35 Fallback Switch



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