

Your Synxcom SM19202FP-DIN is a 19200/9600/4800/2400/1200 bps modem designed for 4-wire full-duplex, or 2-wire half-duplex operation over a voice-band leased line or private line. This quick-start guide will let you get your modem “up and running” as quickly as possible. It contains all the information you need to configure and install your modem. If you require detailed instructions and descriptions, see the Synxcom SM19202FP-DIN Fast Poll Modem User’s Guide (520-01015-001) supplied with your modem package.

## 1 Unpack the Modem

Your package should include the following items:

- At least one Model SM19202FP-DIN or Model SM19202FP-DIN-DC modem
- A switching power supply module for 90-265VAC input ( for model SM19202FP-DIN only)
- A 4-conductor leased-line cable
- A 2-wire DC power cable (SM19202FP-DIN-DC modem only)
- This quick-start guide and user’s guide or CD-ROM

When unpacking, check for physical damage. If physical damage is noted, file a claim with the shipping carrier. Compare the items received to the packing list. If an item is missing or damaged, contact your place of purchase.



## 2 Configure Your Modem

You configure the modem using the three sets of DIP switches (S1, S2 and S3) at the top side of the unit. No other jumpers or switches are inside the modem. To access the switches for configuration, use a sharp pin or small screw driver to press the switch lever to the down(ON) or up (OFF) positions. Set the switches to suit your configuration requirements.

### IMPORTANT

You must re-cycle the power to the modem before the new configuration will take effect. It is important to verify if the DTE or RTU will provide RTS signal to the modem or just uses the 3-wire interface (TD, RD, SG). Setting the DIP switches incorrectly will likely be getting no communications or data errors between modems and RTUs.

**Note:** In the following configuration switch tables “OFF” is equivalent to “UP” and “ON” is equivalent to “DOWN”

### Switch Settings

DIP Switch (S1)	Switch Settings	
	ON (Down)	OFF/UP (Default)
S1-1 to S1-3: Modem Data Rate	<b>19200:</b> S1=OFF, S2=OFF, S3=OFF <b>9600:</b> S1=ON, S2=OFF, S3=OFF <b>4800:</b> S1=ON, S2=ON, S3=OFF <b>2400:</b> S1=OFF, S2=ON, S3=OFF <b>Bell202T:</b> S1=OFF, S2=OFF, S3=ON <b>V.23:</b> S1=ON, S2=ON, S3=ON	
S1-4: Character Format	11 bits (8-E-1)	10 bits (8-N-1) 10 bits (7-E-1)
S1-5: Auto RTS	Enabled(keyed by TD)	Supplied by DTE
S1-6: Leased line or Radio Operation	Radio (Push-to-talk)	Leased Line
S1-7: 2-/4-wire leased line	2-wire, half duplex	4-wire, full duplex
S1-8: TX Impedance	Controlled by RTS	600 ohms
S1-9: Remote DLB	Enabled	Disabled
S1-10: For Test Only	Factory Test Only	Normal Operation

DIP Switch (S2)	Switch Settings	
	ON (Down)	OFF/UP (Default)
S2-1 to S2-3: Transmit Output Level	From 0 to -14 dBm (see the table below)	
S2-4: Modem Receive Dynamic Range	-10 to -43dBm	0 to -30dBm
S2-5: TX Cable Equalizer	Enabled	Disabled
S2-6: RX Cable Equalizer	Enabled	Disabled
S2-7: Anti-streaming	Active (27 sec)	Inactive
S2-8: RTS-CTS Delay (Bell 202T only)	33 msec	8 msec
S2-9: Transmit Carrier Control	Forced ON	Controlled by RTS
S2-10: Re-train Enabled	Enabled	Disabled

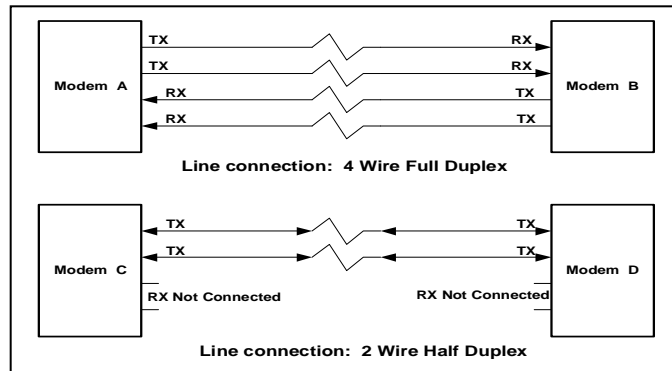
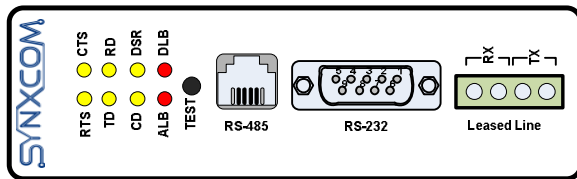
DIP Switch (S3)	Switch Settings	
	ON (Down)	OFF/UP (Default)
S3-1 to S3-3: DTE/RTU Interface: (RS-232/RS-485 Select)	RS-232: S1=OFF, S2=OFF, S3=OFF RS-485(4W): S1=ON, S2=OFF, S3=ON RS-485(2W): S1=OFF, S2=ON, S3=OFF	
S3-4: Receiver Termination (Leased Line)	Hi-Z (Multi-point)	<b>600 Ohms (Default)</b>

### Transmit Output Level

Transmit Level	S2-1 through S2-3 Switch Settings		
	S2-1	S2-2	S2-3
0 dBm	OFF	OFF	OFF
-2 dBm	OFF	OFF	ON
-4 dBm	OFF	ON	OFF
-6 dBm	OFF	ON	ON
-8 dBm	ON	OFF	OFF
-10 dBm	ON	OFF	ON
-12 dBm	ON	ON	OFF
-14 dBm	ON	ON	ON

### 3 Connect to a Transmission Line

Configure the modem transmission line interface for a 2- or 4-wire analog connection. For 4-wire full-duplex, one pair sends data (Tx-A and Tx-B) and another pair receives data (Rx-A and Rx-B). For 2-wire half-duplex, TX pair is used for transmit and receive. Transmit/receive pairs are non-polarized.



### 4 Connect to a Voltage Source

The modem back panel has a 2-position screw terminal power interface connector. The DC voltage of the input power is non-polarized. To suit your application, the modem can be powered from the following power sources:

- Model SM19202FP-DIN (with AC-DC power converter): 90 to 265 Volts AC, 50 to 60 Hz, single phase or 100 to 400 VDC. Converter output is a 12 VDC source that will power the modem.
- Model SM19202FP-DIN-DC (DC version): 10 to 60 Volts DC. A power cord is included to make this connection.

### 5 Connect to a Host DTE

The modem back panel has a female, 9-pin RS-232 connector that accepts an attached RS-232 device. The DTE or RTU you attach must conform to the standard pin assignments for DB-9 RS-232/V24 as DCE.

### 6 Power Up the Modem

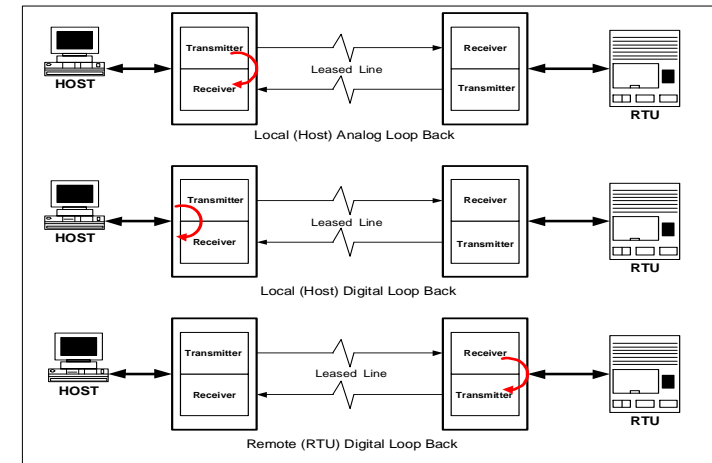
Power up your modem by connecting it to an appropriate voltage source and verify that the DSR LED is ON.

### 7 Verify Your Installation

The modem front panel has a push button for performing several diagnostic and loopback tests. After configuring and connecting the modem to your DTE and leased line, power it up and verify that it and your DTE are working properly.

- **Local analog loopback.** Press the button once (ALB LED goes ON). When a DTE is connected to the modem's RS-232 port, the transmit data loops back to the DTE as receive data. This test verifies the modem transmitter and receiver, its RS-232 interface, and the attached cable.
- **Local digital loopback.** Press the button twice (DLB LED goes ON). When a DTE is connected to the modem's RS-232 port, transmit data loops back to the DTE as receive data. This test verifies the modem's RS-232 interface and the attached cable.

- **Remote digital loopback** (requires 2 modems). Set the local modem's RTS signal to low. Press the local modem's diagnostics test button three times. When the ALB and DLB LEDs go ON, raise the local modem's RTS signal to start the test. The ALB and DLB LEDs of the remote modem go ON when the modem responds to remote digital loopback. This test verifies both modems' transmitters and receivers and the leased line. Be sure switch S1-9 is in the ON position to let the remote modem respond to remote digital loopback requests. This test is only available in fast-poll mode at 2400 bps or higher.



Congratulations! Your modem is ready for operation.

#### Synxcom Technical Support

Synxcom Technical Support is available to answer your support questions Monday - Friday, from 8:00 to 5:00 PST:

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 Web site: www.synxcom.com