Getting Started

Includes setup information

With Your

Faxsenger

A COMMUniqué Series Modem

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Getting Started *with your* Faxsenger
1st Printing - November 1993

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Stand-Alone Setting Up

Setting up your Faxsenger for Stand-Alone Applications involves these steps:

- Connecting the serial cable
- Connecting the Telephone Cable
- Plugging in the Power *or* inserting Batteries

Connecting the Serial Cable

The Faxsenger is designed to operate with a serial data stream, where the data is passed to and from the modem over a Serial Cable. Your modem package includes a Standard Serial Cable (DB25 Female to DB25 Male connector) for Asynchronous operations. Follow these steps to connect the Serial Cable.

1. Turn Off the power supply on your computer, monitor and printer.
2. Check the power switch in the front panel of Faxsenger is at off position.
3. Plug the male end of the Serial Cable into the port labeled SER. A on the back of the modem.
4. Plug the female end of the Serial Cable into the Serial Port of your computer.

Fig. 1 Connecting the Serial Cable to a PC with DB25 to DB25 Connector

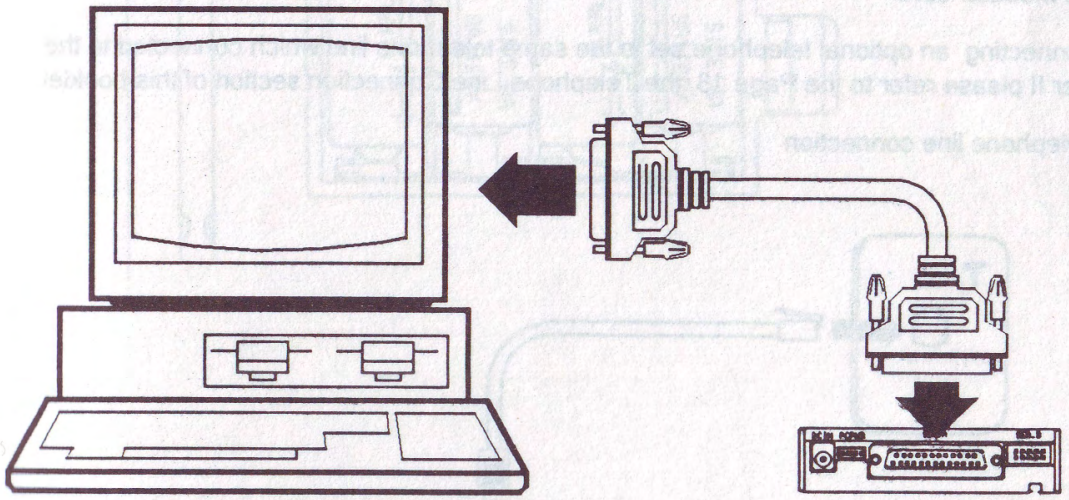
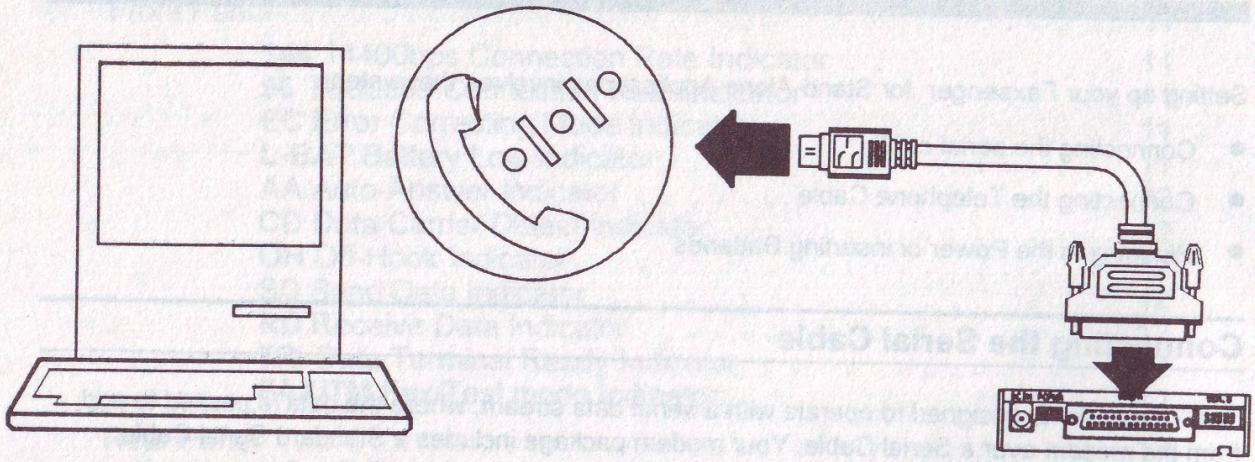


Fig. 2 Connecting the serial Cable to Macintosh



Connecting the Telephone Cable

Plug one end of the modular cable (supplied) into the jack labeled LINE and the other end into the wall telephone jack.

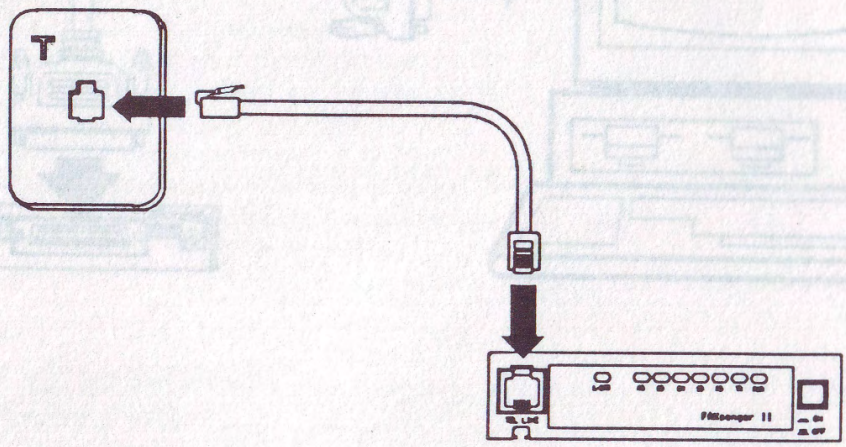
This is the only section involving Faxsenger's set-up in the case that the modem has been fixed to your PC. When your Faxsenger is connected to a telephone line, it is ready for use. Go to Page 9 for the Faxsenger's Basic Operation.

Note:

a. Adapter/Changer may be needed if your wall jack is differ from our modem jacks or the supplied telephone modular cord.

b. For connecting an optional telephone set to the same telephone line which connected to the Faxsenger II please refer to the Page 18, the Telephone Line Connection section of this booklet.

Fig. 3 Telephone line connection



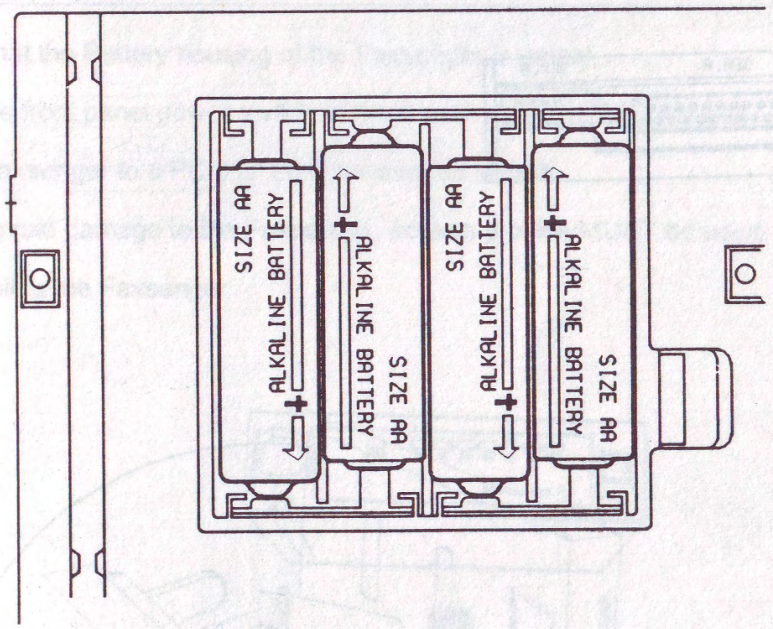
Inserting Batteries

If Battery operation is desired inset batteries as shown:

CAUTION

DISCONNECT THE TELEPHONE LINE CONNECTION TO THE MODEM BEFORE OPENNING THE BATTERY COVER

Fig. 4 Batteries insertion



Plugging in the Power Adapter

As a general rule you should connect the power cord to the modem first, then plug in the power adapter.

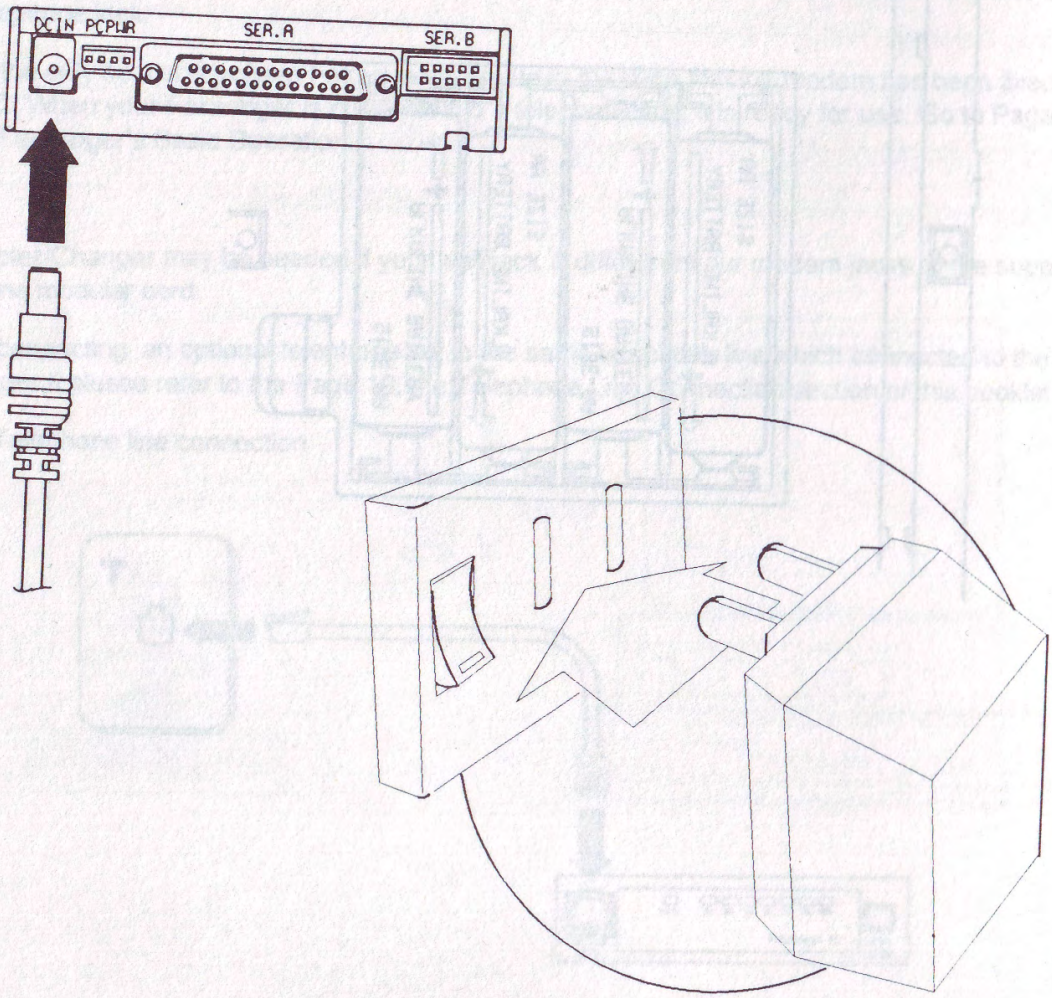
1. Insert the power cord into the receptacle labeled DC IN at back of the modem.

2. Plug the power adapter into a standard power outlet.

3. The Faxsenger is connected to the PC and telephone line and the power adapter and is ready for use. You may now go to Page 9 the Base Operation Section to start to communication with other modem with the Faxsenger.

Technique Support required? Call at (852) 489 90966 (Voice call only).

Fig. 5 Power adapter connection



PC Rack Mounting Set-up

Rack mounting the Faxsenger is an ideal for the original equipment manufacturer (OEM) who plans to build-in a high performance Fax/Data modem to complete their computer systems. This section provides the instructions for installing the Faxsenger modem to a target system - IBM PC/AT or it's compatible machines.

To fix Faxsenger to a 3.5" floppy disk drive rack involves these steps.

- Mounting the Faxsenger to a PC
- Connecting the Serial Cable
- Connecting the Power Supply
- Connecting the Telephone Cable for Testing Purpose

Mounting the Faxsenger

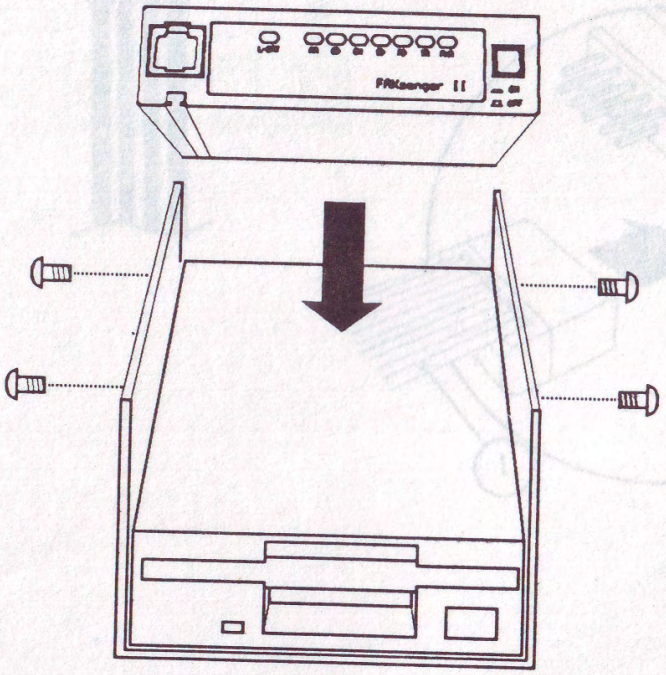
1. Ensure that the Battery housing of the Faxsenger is empty.

2. Check the front panel power switch of the Faxsenger is at OFF position.

3. Fix the Faxsenger to a PC 3.5" FDD housing as shown.

NOTE: To avoid damage to the Faxsenger, screws provide MUST be used.

Fig. 6 Mounting the Faxsenger



Connecting the Serial Flat Cable

The Faxsenger is designed to operate with a serial data stream, where the data is passed to and from the modem over a Serial Cable. Your modem package includes a Serial Flat Cable (10 pin Header to 10 pin Header) for Asynchronous Operations. Follow test steps to connect the Serial Flat Cable to a PC/AT Type Serial Interface Card.

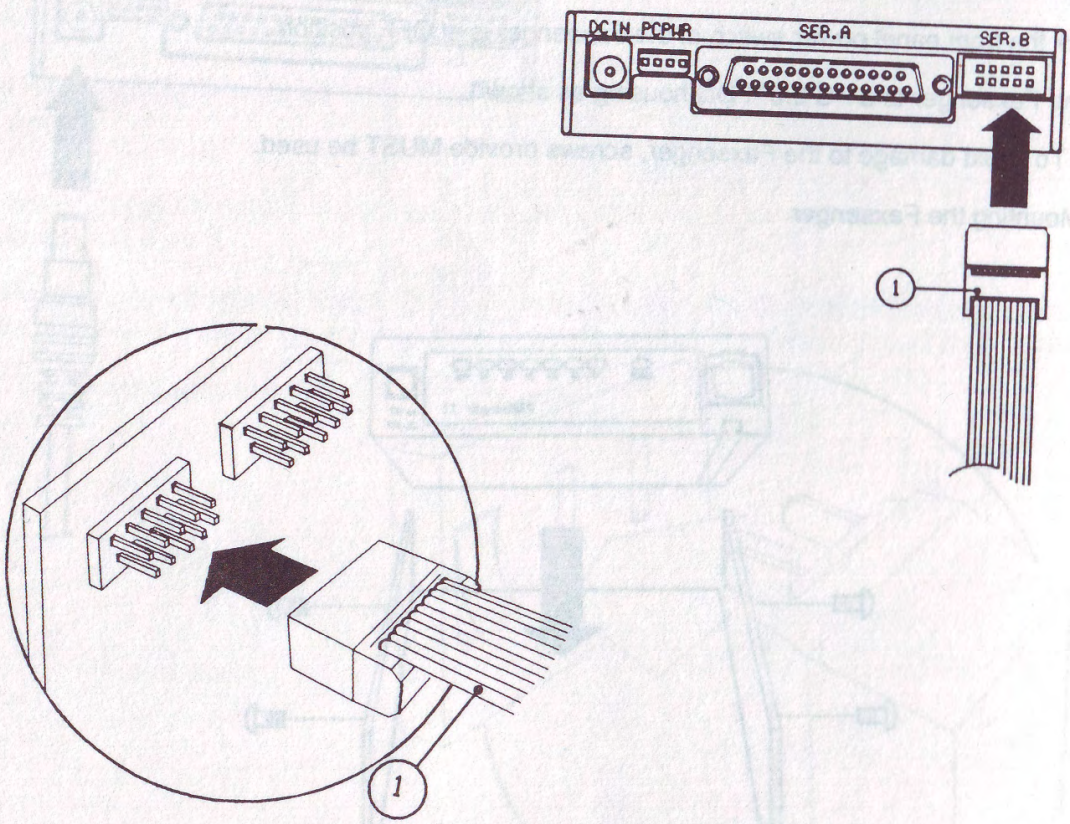
1. Check the 10 pin serial interface connector of the target AT serial card is complied to the Faxsenger requirement as shown in Page 16 Fig.14 SER.B Connector.

2. Turn OFF power supply to your system.

3. Check the power switch in the front panel of Faxsenger is at OFF position.

4. Plug the other end of the serial flat cable into the serial port of an AT type serial interface card, connecting the modem to COM2 or COM4 is recommended.

Fig.7 Connecting the serial cable to AT serial card



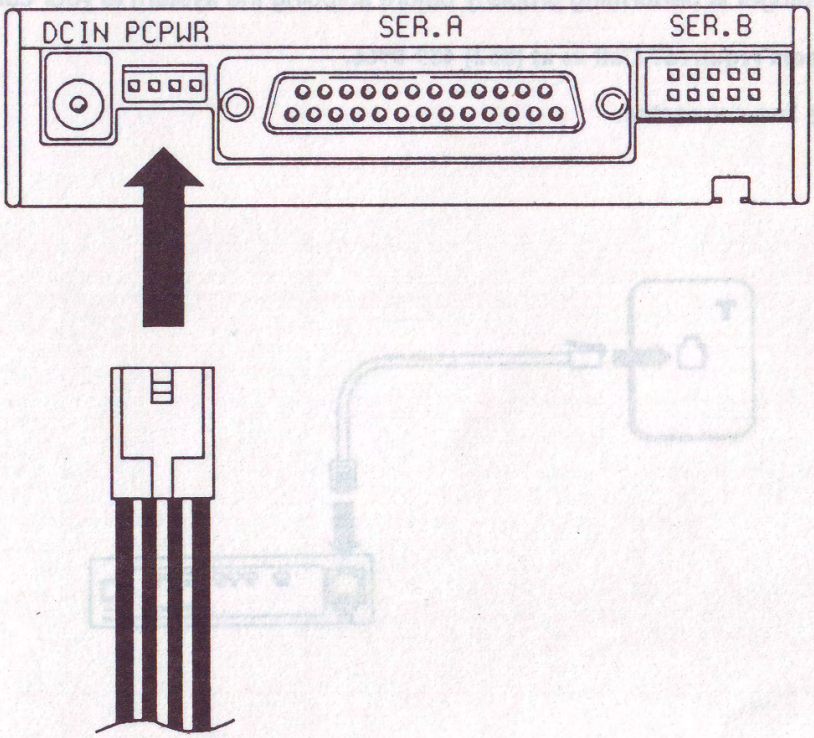
Connecting the PC Power Supply to Modem

The power supply for 3.5" FDD is used when Faxsenger is Rack Mounted.

1. Check that the 3.5" FDD power supply connector arrangement complied to manufacturer's requirement, see Page 20 Fig. 17 Power Inlets.

2. Plug the 3.5" FDD power connector to the receptacle labeled PC PWR in the back of the Faxsenger.

Fig.8 PC Power to Faxsenger



Connecting the Telephone Cable for a test

Plug one end of the modular cable (supplied) into the jack labeled LINE and the other end into the wall telephone jack.

NOTE:

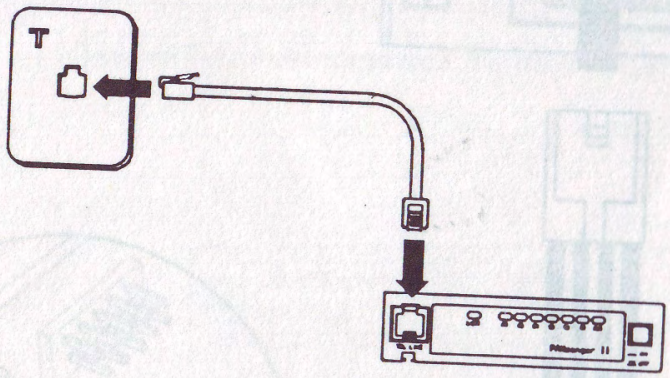
1. Adapter may be needed if your wall jack is differ from our modem jacks or the supplied telephone modular cord.

2. For connecting an optional telephone set to the same telephone line which connected to the Faxsenger, refer to the TECHNICAL INFORMATION - Page 14 The Telephone Connection section of this booklet.

3. The Faxsenger is connected to the PC and telephone line and the PC power supply and is ready for test. Complete the Basic Operation Section, Data Operation Section and Fax Operation, to ensure the Faxsenger is performing properly before shipping the system to your customer.

Technique Support required? Call us at (852) 489-0966.

Fig.9 Telephone line connection



Basic Operation

Operating in Data Mode

After configuring and installing the modem, you are now ready to make a connection with another modem.

Configurating the communication software

1. Load (or install) your communication program in to your computer.

2. If the modem is used as a data modem, configuration the communications parameters of the program (Set COM level, DTE speed, data length, parity, and number of stop bits) to match that of the data modem that you are calling.

Configuration to sophisticated communication programs such as Mirror, PCanywhere, Close-Up, Telix, Crosstalk, Procomm, Mircopone II, e.g., typical parameters could be:

Modem Type Selection :	HAYES V-Series xxxx or HAYES Ultra xxxx	
Data Format:	Parity	No
	Data bits	8
	Stop bit	1
DTE Speed Setting :	57600bps	
Flow Control Option :	CTS/RTS (Hardware Flow Control)	
	other Flow control option such as DTR/DSR, XON/XOFF has to be turned OFF.	

3. If the modem is used for some application that in lower speed direct mode, such as HEXACON, TDCLink, e.g., the modem has to be set as follow:

AT&Q0N0S37=6 <Enter>

Where "AT" is the command perfix, "&Q0" sets the modem in non-buffer direct mode operation, "N0" and "S37=6" sets the modem establish a 2400bps connection.

Operating the communications software

You can either follow the instructions of the communications program manual or use "AT" commands to operate the modem. The first method is useful for transferring files, receiving file. periodic dialing, and performing other functions supported by your communications program; stop here and refer to your communications program for this method. The second method gives the user direct control of the modem but requires someone who is knowledgeable on "AT" commands. Detailed descriptions to the "AT" commands could be found in the COMMUniqué Reference booklet that came with your modem. Beginners are recommended to read through the FUNDAMENTALS SECTION in the COMMUniqué USER MANUAL.

1. Invoke the terminal mode in your communications package.

2. Enter AT and make sure that "OK" is returned. Enter AT&F to reset modem configurations to default values. All instructions to the modem are communicated through AT commands. For example, ATD is the AT command for the modem to dial; all AT commands start with the "AT" characters.

3. To dial, enter ATDTnnnnnnn or ATDPnnnnnnn where nnnnnnn is the phone number of a remote modem (try calling a local Bulletin Board Service or BBS). Use ATDT if you have a touch tone line and ATDP if you use a pulse dial line.

4. You should hear some high pitch tones then something that sounds like static after the remote modem picks up your call. If the call progress went smoothly, you should see CONNECT on your terminal. You can send data to the remote by sending characters via your keyboard. If you are calling a BBS, pressing carriage return and "ESC" will usually prompt the BBS to respond with a greetings message and a login message.

5. After you have finished your session with the remote modem, you may want to hang up (if the remote modem doesn't hang you up automatically). To hang up, type in three plus signs "+++" in a row (delay less than one second between characters) to get to the AT command mode and you should see "OK". Then type in ATH and your modem should hang up the connection. You may dial another modem by repeating this section.

Note: Please refer to FUNCTIONAL DESCRIPTION Section of the COMMUniqué USER MANUAL for detailed information on setting up the V.42bis/V.42 and MNP option for the Modem.

Operating in FAX Mode

The Modem performs G3 fax modes supporting EIA-578 Service Class 1 commands, and EIA-592 Service Class 2 commands.

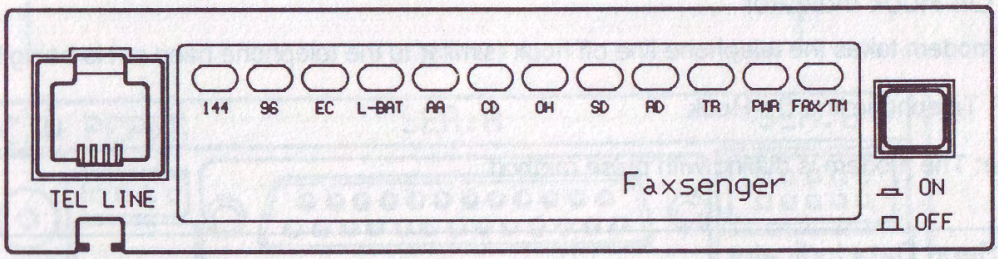
Refer to your fax communications software package that bundled with your modem to configure the modem to send or receive fax transmissions.

Connectors and Indicators

Front Panel

The front panel indicators correspond to the serial port circuit designations and connection rates.

Fig. 10 Front Panel



TELEPHONE LINE - Connects the modem directly to the telephone line (wall jack).

POWER SWITCH - Turns the power to the modem on, off or reset the modem.

144 14400bps Connection Rate Indicator

ON: When on-line, the speed of the established connection is 14400bps (or Higher for V.FC models).

OFF: When on-line, the speed of the established connection is lower than 14400bps.

96 9600bps Connection Rate Indicator

ON: When on-line, the speed of the established connection is 12000 or 9600bps.

OFF: When on-line, the speed of the established connection is lower than 2400bps.

EC Error Correcting Mode Indicator

ON: When on-line, an Error Correcting Connection or/and Data Compression mode has been established.

OFF: When on-line, a non EC has been established.

L-BAT Battery Low Indicator

ON: Warning. Replace new batteries for a reliable operation.

OFF: Battery condition normal.

AA Auto-Answer Indicator

ON: When the modem is configured for auto answer (S0>0).

OFF: The modem will not auto-answer incoming calls.

Pulsing: The modem detects an incoming call. It flashes on each "RING".

CD Data Carrier Detect Indicator

ON: The modem is connected with a remote modem.

OFF: A remote carrier signal is actually lost.

OH Off-Hook Indicator

The modem takes the telephone line off hook (similar to the telephone hand set is being lifting).

OFF: Telephone line On-Hook.

Pulse: The modem is dialing with pulse method.

SD Send Data Indicator

FLASH:

(Command Mode) The DTE is sending a command string to the modem.

(On-Line Mode) The modem is sending data to the remote modem.

RD Receive Data Indicator

FLASH:

(Command Mode) The modem is sending response to the DTE.

(On-Line Mode) The modem is receiving data from the remote modem.

TR Data Terminal Ready Indicator

ON: DTE Serial Port Ready.

FLASH: DTE not ready.

FAX/TM Fax/Test mode Indicator:

ON: The modem is in Fax operating mode.

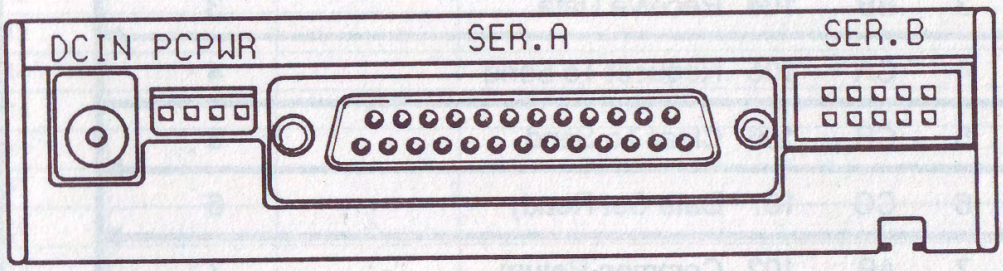
FLASH: The modem is in Test mode.

Rear Panel

Fig. 11 Rear Panel

DC IN - Provides 9V DC power to the modem from AC/DC power adapter.

SER.B - This is a 10 pin header, it connects the modem to a PC/AT type serial port internally via a 10 pin flat cable.



PC PWR - Provides power to the modem from FDD power supply arrangement when the modem is rack mounting inside a PC.

SER.A - This is a female, D-type, 25 pin connector. It connects the modem to any standard RS-232C Serial interface.

RS-232-C Interface

The DB-25 Female 25-pin interface connector in the rear panel conforms to CCITT recommendation V.28 and V.24 specifications. These are entirely compatible with Electronics Industry Association (EIA) specification 232C for Asychronous operations. The RS-232C connector carries input\output data and status and control signals between the modem and data terminal equipment. The Modem and DTE connections are shown in Table T.1(a & b) and the pin assignments of the connector are listed in the Table T.2 (a & b) . The Serial Interface Signal are described in Table T.3.

Table T.1a - Serial (SER.A) Connector Signal Configuration **(DB25 to DB25)**

SER.A	PIN#	EIA	V.24	FUNCTION	PIN#	DTE
	2	AB	103	Transmit Data	2	
	3	BB	104	Receive Data	3	
	4	CA	105	Request To Send	4	
	5	CB	106	Clear To Send	5	
	6	CC	107	Data Set Ready	6	
	7	AB	102	Common Return	7	
	8	CF	109	Data Carrier Detect	8	
	20	CD	108	Data Terminal Ready	20	
	22	RI	125	Ring Indicator	22	

Table T.3b - Serial (SER.A) Connector Signal Configuration **(DB25 to MAC DIN-8)**

SER.B	PIN#	EIA	FUNCTION	PIN#	MAC DIN-8
	2	AB	Transmit Data	HSKi	2
	3	BB	Receive Data	RxD	5
	4	CA	Request To Send	HSKo	1
	20	CD	Data Terminal Ready		
	5	CB	Clear To Send	HSKi	2
	7	AB	Common Return	GND	4

Table T.5a SER.A Connector Pin Assignments

Pin No.	Mnemonic	V.24 Circuit	Signal Name
1	-	-	-
2	TXD	103	Transmitted Date
3	RD	104	Received Data
4	RTS	105	Request To Send
5	CTS	106	Clear To Send
6	DSR	107	Data Set Ready
7	SG	102	Signal Ground
8	DCD	109	Data Carrier Detect
9	-	-	-
10	-	-	-
11	-	-	-
12	-	-	-
13	-	-	-
14	-	-	-
15		-	-
16	-	-	-
17	-	-	-
18	-	-	-
19	-	-	-
20	DTR	108/2	Data Terminal Ready
21	-	-	-
22	RI	125	Ring Indicator
23	-	-	-
24	-	-	-
25	-	-	-

Fig. 13 SER. A (DB25) CONNECTOR

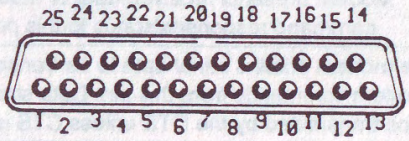


Table T.5b SER.B Connector Pin Assignments

Pin No.	Mnemonic	V.24 Circuit	Signal Name
1	DCD	109	Data Carrier Detect
2	RD	104	Received Data
3	TXD	103	Transmitted Data
4	DTR	108/2	Data Terminal Ready
5	SG	102	Signal Ground
6	DSR	107	Data Set Ready
7	RTS	105	Request To Send
8	CTS	106	Clear To Send
9	RI	125	Ring Indicator
10	-	-	-

Fig. 14 SER.B Connector

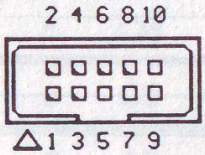


Table T.6 Serial Interface Signal Definitions

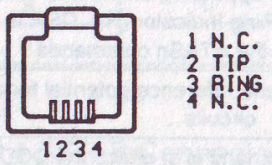
CCITT V.24	EIA RS232C	SER.A PIN	SER.B PIN	NAME	DESCRIPTION
103	BA	2	3	transmit Data (TD)	Modem presents received data or modem command responses/status to this pin.
104	BB	3	2	Receive Data (RD)	The modem obtains serial data to be transmitted or modem commands from this pin. Data should not be transmitted by the DTE unless CTS is ON.
105	CA	4	7	Request To Send (RTS)	In the Asynchronous speed buffering data mode, RTS on allows the modem to transfer received data from the line to the DTE; RTS OFF inhibits the modem form transferring received data from the line to the DTE. In synchronous data mode, the AT&R command controls whether or not the state of the CTS output follows the state of the RTS input.

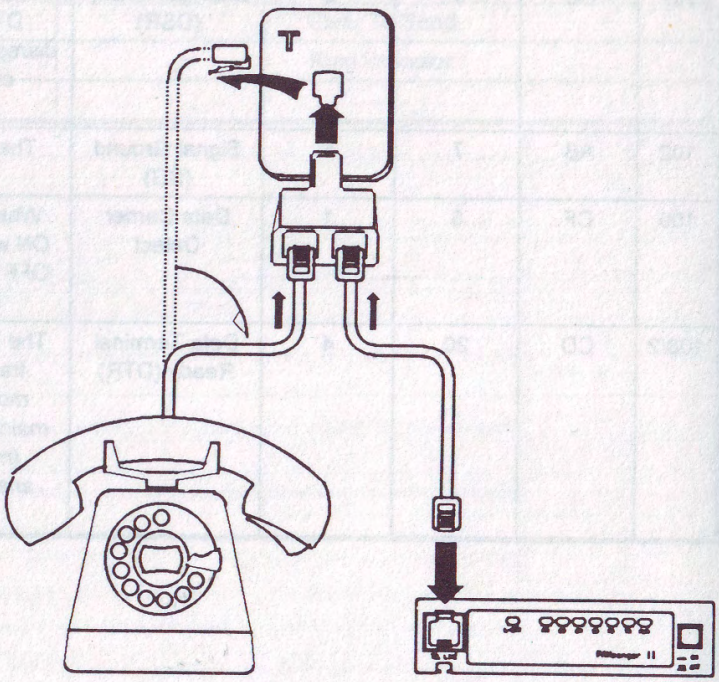
CCITT V.24	EIA RS232C	SER.A PIN	SER.B PIN	NAME	DESCRIPTION
106	CB	5	8	Clear To Send (CTS)	The CTS output indicates whether or not the modem is ready to accept transmit data from the DTE for transmitting to the line. CTS ON indicates the modem will accept data from the DTE. CTS OFF indicates the modem will not accept data from the DTE. The CTS output is controlled by the AT&R command in the synchronous data mode and by the AT&Kn command in the asynchronous data mode.
107	CC	6	6	Data Set Ready (DSR)	The DSR output indicates modem status to the DTE. DSR OFF indicates that the DTE is to disregard all signals appearing on the interchange circuits except Ring Indicator (RI). DSR is controlled by the AT&Sn commands.
102	AB	7	5	Signal Ground (SG)	The common ground reference potential for all circuits.
109	CF	8	1	Data Carrier Detect	When AT&C1 command is in effect, the DCD is ON when a carrier is detected on the telco line or OFF when carrier is not detected. DCD is always ON when AT&C0 command is in effect.
108/2	CD	20	4	Data Terminal Ready (DTR)	The DTR is turned ON when the DTE is ready to transmit receive data. DTR ON prepares the modem to be connected to the telco line, and maintains the connection established by the DTE (manual answering) or internally (automatic answering). DTR OFF place the modem in the disconnect state.

The Telephone Line Connection

You may connect the modem to an existing telephone line which is presently used for normal voice calls. Having disconnected the phone and plugged in and ONE-to-TWO adapter (NOT included in the modem package) instead, and connect the phone to one of the adaptor outlet and plug the modem in the other outlet so that you could use the phone for voice when the modem is not operating. **Don't pick up the phone when the modem is in-use.**

Fig. 15 LINE Jack





Power Requirement

Three power supply arrangement for different applications could be used for the Faxsenger as desired.

1. STAND-ALONE Using an external power converter to provide 9VDC and fed to the rear panel connector labeled as DC IN.

2. BATTERY OPERATED STAND -ALONE Insert 4 "AA" dry shell to the Faxsenger's Battery housing.

3. PC RACK MOUNTING Plugging in a Floppy Disk Drive power connector to the power inlet labeled as PC PWR that maintenance free power is fed to the Faxsenger. The Faxsenger receiving power from the PC power supply unit every time you turn on your PC. The Faxsenger could be turned off or reset using the ON/OFF switch on the front panel.

Functional Specifications

Model		144	192	240	288
Data Operating Mode	V.FC 28800bps	NO	NO	NO	YES
	V.FC 24000bps	NO	NO	YES	YES
	V.FC 19200bps	NO	YES	YES	YES
	V.32bis	YES	YES	YES	YES
	V.32	YES	YES	YES	YES
	V.22bis, V.22, V.21, Bell 103/212A	YES	YES	YES	YES
FAX Operating Mode	V.17	YES	YES	YES	YES
	V.29, V.27, V.27ter, V.21Ch2	YES	YES	YES	YES
Synchronous Operation		NO	NO	NO	NO
Asynchronous Operation		YES	YES	YES	YES
Leased Line Operation		YES	YES	YES	YES
Highest DTE Speed	115200bps	-	YES	YES	YES
	57600bps	YES	-	-	-
Error Correction	V.42, MNP 2-4	YES	YES	YES	YES
Data Compression	V.42bis, MNP5	YES	YES	YES	YES
Software command	AT Command Set	YES	YES	YES	YES
	Fax Class 1 Command	YES	YES	YES	YES
	Fax Class 2 Command	YES	YES	YES	YES
NVRAM directory Stored Profile		YES	YES	YES	YES
Programmable Speaker Volume Control		YES	YES	YES	YES
Flow Control	XON/XOFF	YES	YES	YES	YES
	RTS/CTS	YES	YES	YES	YES
Speed Buffering		YES	YES	YES	YES
Automatiic Format/Speed Sensing		YES	YES	YES	YES
Diagnostics	Loopback with Selftest	YES	YES	YES	YES
	Power-on Selftest	YES	YES	YES	YES
Auto retrain		YES	YES	YES	YES
Line Quality receive level monitoring		YES	YES	YES	YES

Physical and Environment Specifications

PHYSICAL	
Length	149mm
Width	101mm
Height	25.5mm
ENVIRONMENTAL	
Storage Temperature	0C ~ 57C
Operating Temperature	0C ~ 50C

Electrical Specifications

POWER	BATTERY	DC-IN	PC PWR
	4 x 1.5V "AA"	9VDC 300mA	12VDC 200mA

Fig. 17 Power Inlets