

Protek

1200 MODEM

Instruction Manual

PROTEK 1200 MODEM

The Protek 1200 modem is a state of the art device to allow transmitting and receiving of computer data through the normal domestic telephone lines.

It allows you to communicate with other computer users via your computer, sending and receiving messages and programs. With certain limitations¹, the two computers need not necessarily be the same! As well as communicating with other computers, you can also receive and transmit to data bases that are set up to the 1200/75 Baud international standard.

The modem can be used with any standard rotary dial or push button telephone apart from Trimphones and non-standard specialist telephones. There is no need to have any modification done to your telephone installation.

SETTING UP

The modem requires four AA sized batteries, two are housed in each end of the unit.

Rechargeable Ni-Cd batteries can be used. We recommend type OM2004, which are available from :
Circuit plc (Mail Order), Park Lane, Broxbourne, Herts
EN10 7NQ.

1. See software notes which are enclosed with the Interface set.

The modem will operate with a standard or TTL level RS 232/423 interface that will support a split Baud rate. If you have any queries, please contact the computer manufacturer's technical staff. (ZX Spectrum users should note that the RS 232 port supplied with Interface 1 is not able to support the modem.)

In order to simplify the use of the modem a range of interface packs have been developed which include all that is required for you to connect your modem to the following micros: BBC 'Model B', ZX Spectrum 48K, Commodore 64K, Oric/Atmos 48K, Electron.

If you purchase a Protek Interface Pack, please refer to the instruction book supplied with it for details of setting up and operating the modem.

If a Protek interface is not being used, the modem should be connected to the computers serial interface using a suitable cable. A data sheet is available for those who wish to configure their own cable.

USING THE MODEM

The modem can be used in one of two modes:

1200/75

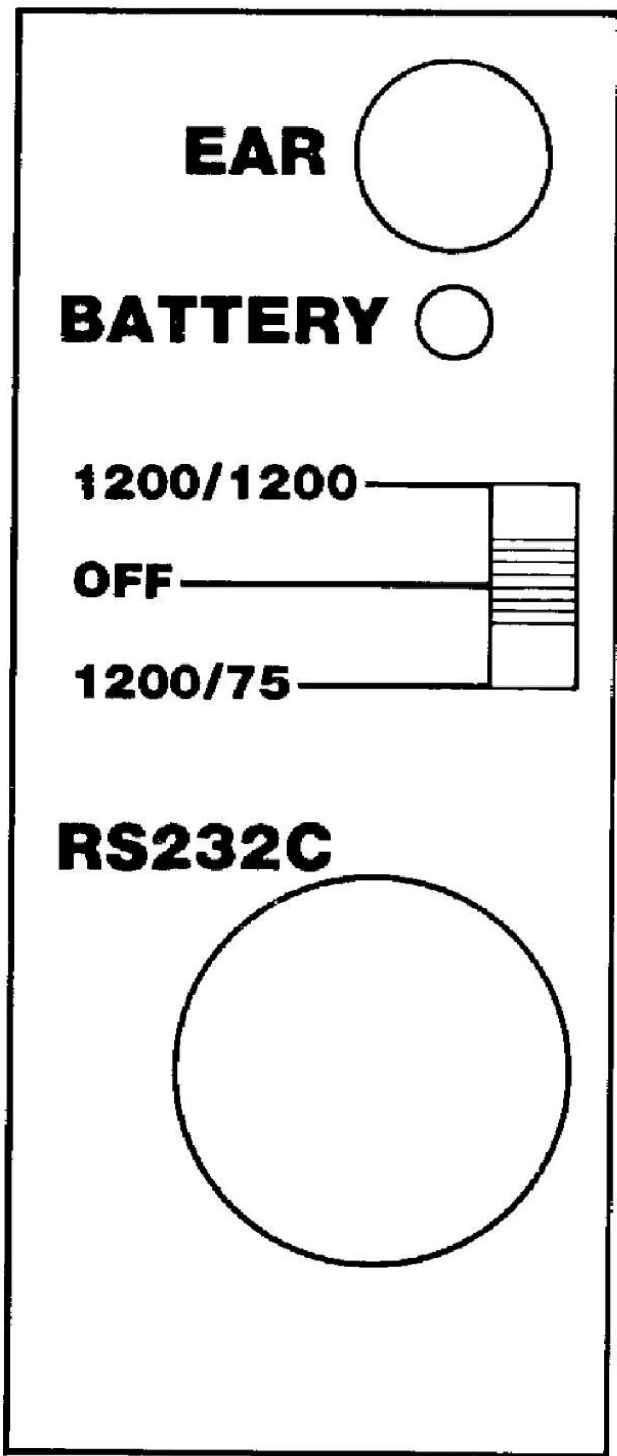
In this mode, the modem will communicate with 1200/75 Baud rate data bases e.g. Prestel, Micronet and BT Gold. The modem transmits data at 75 Baud, that is 7.5 bytes per second, and receives at 1200 Baud, that is 120 bytes per second. The modem is operating full duplex in this mode.

1200/1200

This mode is used for inter-computer communications. The transmit and receive rates are 1200 Baud, that is 120 bytes per second. The modem is operating half duplex, each end of the data link must establish whether it is the "transmit" or the "receive" terminal. The software supplied with the Protek Interface Sets caters for this protocol.

The modes are selected by means of a three position switch shown in figure 1. The centre position is "off". If the modem is switched to either of the two mode positions, the red battery indicator will be illuminated. If the batteries are too weak to power the modem, the indicator will not illuminate. The socket marked EAR is used for the earpiece supplied. This allows the user to monitor the telephone call without disturbing the acoustical link.

The telephone handset should be firmly inserted into the modem's rubber cups, with the earpiece of the telephone at the end with the switches. (This is marked on labels on the underside of the unit.) A useful check is that the cable to the computer should be at the opposite end to the cable on the telephone handset. To minimise data errors due to the carbon microphone and loudspeaker in the telephone handset, the modem should be laid on its side when the handset is attached.



↖ Earpiece
Socket

↖ Battery
Indicator

↖ Mode
Switch

↖ Computer
Connector

Fig. 1 Front Panel.

If you are using the software supplied by Protek refer to the instruction book for a detailed description of the procedure for preparing your computer for modem operation. If you are using other software, refer to the relevant documentation supplied with it.

Insert the earpiece if desired and dial the number of the data base or the user with whom you wish to communicate. If the line is free and contact is made the computers should now be in contact and data can be transmitted or received in the manner that the software permits.

TECHNICAL SPECIFICATION

1. Operational Modes

The unit operates in 2 modes:

1200/75

The modem transmits data at 75 Baud (390/450 Hz).

The modem receives data at 1200 Baud (1300/2100 Hz).

The modem operates in full duplex.

1200/1200

The modem transmits data at 1200 Baud (1300/2100 Hz).

The modem receives data at 1200 Baud (1300/2100 Hz).

The modem operates in half duplex.

There will be no echo back from the remote end.

2. Power

Four AA Batteries housed internally. Battery life approximately 30-50 hours continuous use.

3. Connections

Input/Output—5 pin 180 DIN Socket

Pin 1 = Ground

Pin 2 = Serial In (Modem input)

Pin 3 = Serial Out (Modem output)

Pin 4 = 5 V *

Pin 5 = Answer/Originate †

*For future expansion only. If power is connected to this pin, the batteries must be removed.

†Not used to a standard specification. Please send an A4 SAE to Protek Computing Ltd if you require further information.

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