

56K ESP-2 MODEM

User's manual

Version 1.0

Thank you

Thank you very much for purchasing this product from the Trust range. We wish you hours of fun with it. Please read this manual carefully before using the product.

Registration

Register your purchase now at the Trust Internet site (www.trust.com) and you could win one of the fabulous prizes. The web site is also the place to look for dealer addresses, comprehensive product information, drivers, and FAQs (Frequently Asked Questions).

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1. Introduction

This manual is intended for users of the 56K ESP-2 Modem. Prior knowledge is not necessary for the installation and use of this product

If you have any questions after reading this manual, please contact one of the Trust service centres. You will find information on the service centre nearest to you at the back of this manual. You can also visit the Trust website (www.trust.com) for support, comprehensive product information, drivers, and FAQs (Frequently Asked Questions).

The following conventions have been used in this manual to indicate instructions:

- <key>** Here you should press a key. The name of the key is given between brackets.
- 'System'** This is a specific term used in a program. These are the terms used by, for example, Microsoft Windows 95.
- [DIR]** Key in the text shown in square brackets [...].
- (term)** The text between the parentheses (...) is the English term, e.g. (File) used in the figure referred to.

Additional information will be shown as follows:

Note: *Turn off the computer before connecting the product.*

The example assumes that the letter "D" has been assigned to your CD-ROM station. If your system uses a different drive letter for your CD-ROM player, for example "E", you should replace "D" by "E".

2. Safety

1. The 56K ESP-2 Modem has been designed to be connected to a standard analog telephone line. Do not connect the device to a digital telephone system or network, as this can cause damage and may be dangerous.
2. Use the modem in dry environments only.
3. The 56K ESP-2 Modem has to be connected to the computer. Disconnect the power plug from the mains supply. Do not connect anything to the computer while it is still connected to the mains supply. This is dangerous
4. During thunderstorms it is best to disconnect the telephone from the wall outlet to prevent damage from lightning strikes.

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3. Installation on the analog telephone network

This chapter tells you how to connect the modem to your computer.

3.1 Hardware

Once you have unpacked the equipment you should find the following:

- This Quick Installation Manual
- CD-ROM with drivers and manuals
- Telephone cable
- Telephone plug (optional, not always supplied)

If anything is missing or damaged, please contact your dealer.

Note: *Turn off the PC and all other equipment connected to it and take the plugs out of the wall sockets before opening the PC.*

Note: *Not all models are supplied with a telephone plug. If a plug has not been included and you need one, please contact your supplier.*

Note: *Some 56K ESP-2 Modem models have to be connected at the back with a narrow 9-pin serial cable instead of a wide 25-pin serial cable.*

Your modem has to be connected to your PC. The cables required to do this are supplied. Follow the instructions below:

1. Switch off the computer.
2. Insert the wide 25-pin serial cable plug into the serial port at the back of the modem.
3. Insert the other end of the serial cable into the serial port of your PC. This is usually COM2. The cable has two connections. Choose the plug that fits.
4. Connect your telephone line to the 'LINE' input on the back of the modem.
5. Insert the telephone cable from the box into the telephone plug. It may be that you have a particular variant for a particular country where the telephone plug is fixed to the cable. In that case, carry on with step 6.
6. Insert the telephone plug into the telephone socket
7. Turn the main switch of the modem to "OFF". Insert the adapter cable into the socket marked "POWER" at the back of the modem.
8. Insert the plug into a socket.
9. If required, connect your telephone to the socket on the modem marked "PHONE". Some 56K ESP-2 Modem models only have one socket at the back.

This means that the telephone has to be connected up in some other way, e.g. via a junction box or at the back of the modem plug.

10. Pick the receiver up and listen for the dialling tone to check whether the telephone cables have been connected up properly.
11. If necessary: connect a speaker or a headphone set to the modem socket marked "SPK" and a microphone to the socket marked "MIC".
12. Turn the modem on. The modem performs a self test, after which the equipment is ready for use.
13. Turn the computer on. Now you can install the software.

Note: *The speaker and microphone connections are optional and therefore not available on all models.*

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3.2 Driver

3.2.1 DOS

No special installation is required for DOS programs, but you do need a communication program for DOS. This is not supplied. You have to obtain it yourself.

You need the following information about your modem in order to start the installation:

- The COM port to which the modem is connected.
- The speed. You can select a maximum of 115k2 bps.
- The transport operating system. RTS/CTS usually works well. You are advised not to use Xon / Xoff. This can lead to communication problems with certain services.

You can test the modem as follows:

1. Start your communications program.
2. Set the correct COM port.
3. Turn on the terminal mode.
4. Type [at] and press <Enter>. The modem should now indicate 'OK' or 'O'. If the modem sends nothing back, check the settings. If necessary, refer to the "Troubleshooting" section for more information.

3.2.2 Windows 3.1x

The same as for DOS.

3.2.3 Windows 95

The driver has to be installed from the CD-ROM before the modem can be used.

The installation process can differ from what is described below. This is because there are various versions of Windows 95. If something is not clear, consult the Windows Help function for further information.

1. Start Windows 95. The 56K ESP-2 Modem is automatically recognised by Windows.
2. Insert the CD-ROM with the drivers into your CD-ROM player.
3. Click on 'Next' and then on 'Other Locations'.
4. Now type: 'D:\Win95' and then click on 'OK'. A message appears that the 'Trust 56K ESP-2 Modem drivers have been found'.
5. Click on 'Finish'. After you have clicked on 'Finish', some versions of Windows 95 may ask you again for the location of the driver. In that case, do the following: click on 'OK'; type in the path [D:\WIN95] and press <Enter>.

3.2.4 Windows 98

The driver has to be installed from the CD-ROM before the modem can be used.

1. Start Windows 98.
2. The 56K ESP-2 Modem is automatically recognised by Windows.
3. Place the CD-ROM with the driver in your CD-ROM drive. Click on 'Next'.
4. Ask Windows to search for the best driver (recommended) (Figure 1). Click on 'Next'. Figure 2 will appear.



Figure 1: Windows searches for the best driver

5. Select the last option 'Specify a location' (Figure 2)
6. Enter 'D:\Win98' and then click on 'Next'.



Figure 2: Installation in Windows 98

7. The drivers are found. Click on 'Next' again.
8. Click on 'Finish' to complete the installation. In some cases you may have to specify the location of the driver again after you have clicked on 'Finish'. In that case, do the following: key in the path [D:\WIN98] and press <Enter>.

3.2.5 Windows NT

Note: *The installation process for Windows NT described here assumes that you have not as yet had another modem in your system.*

Installing the modem

1. Start Windows NT and log on as 'Administrator'.
2. Place the CD-ROM supplied in your CD-ROM player.
3. Click on 'Start', choose 'Settings' and then click on 'Control Panel'. The control panel is displayed.
4. Double click on the 'Modems' icon. The screen in Figure 3 is displayed.

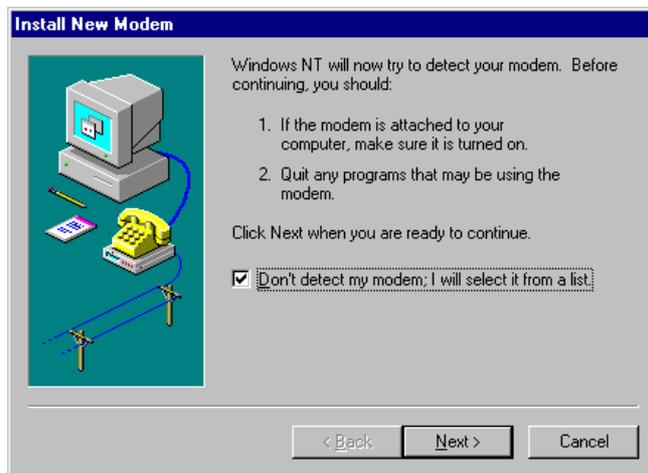


Figure 3: Installing the modem

- Choose 'Don't detect my modem; I will select it from a list' and then click on 'Next'. Next, the screen in Figure 4 is displayed.

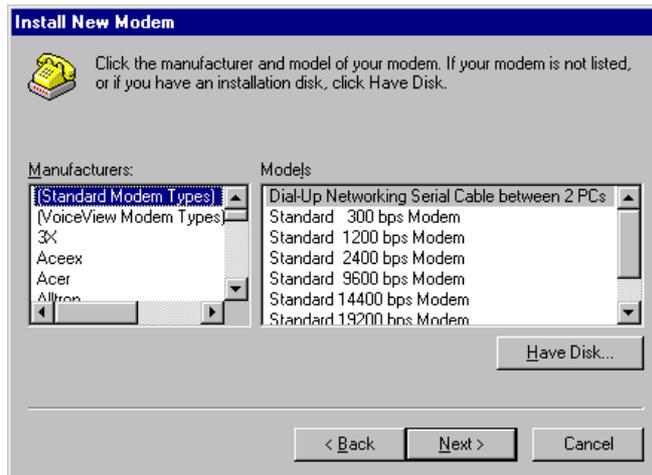


Figure 4: List of modems

- Click on 'Have Disk...'.
 - Type in the command: 'D:\WINNT4' and then click on 'OK'. A different list of modems is displayed.

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- Click on 'Trust 56K ESP-2 Modem'. The line turns blue. Then click on 'Next'. A new window is displayed (Figure 5).

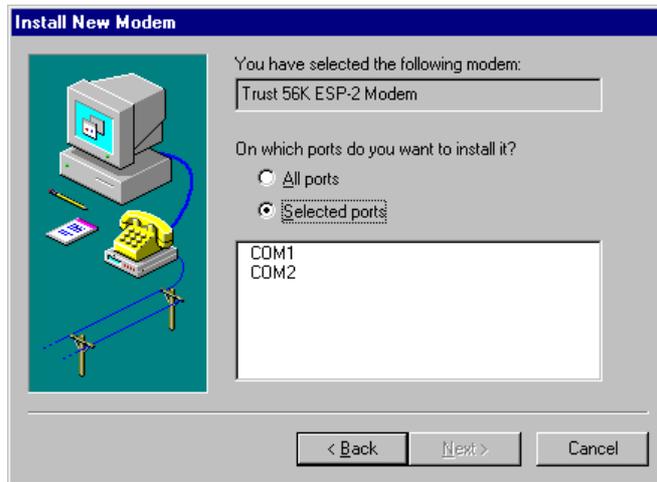


Figure 5: Selecting the communications port

- Select the option 'Selected ports' by clicking on it once and then select the communications port that your modem is connected to. Then click on 'Next'. A new window is displayed.
- Select the country you are in and fill in the appropriate area code. If you use a connection through a PABX, fill in the number you have to dial in order to obtain an outside line. Click on 'Next'.
- Click on 'Finish'.
- In the new window, click on 'Close'. Your modem is now installed.

3.2.5.1 Setting the modem for Internet use

1. Double click on 'My computer' on the desktop.
2. Then double click on 'Dial-Up Networking'. A message appears saying that 'Dial-Up Networking' has not yet been installed.
3. Click on 'Install'. The files are copied and after a while a new window is displayed in which you have to select your modem (Figure 6).



Figure 6: Selecting the modem in 'Dial-Up Networking'

4. Ensure that the Trust 56K ESP-2 Modem has been selected in 'RAS Capable Devices' and then click on 'OK'. The window in the background is now displayed.
5. Click on 'Continue'. A number of files are copied and then a new window is displayed (Figure 7).

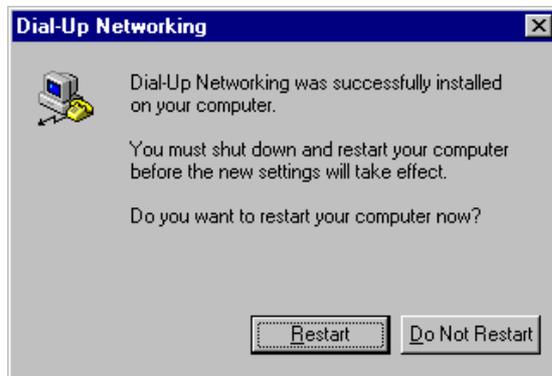


Figure 7: Restarting the computer

6. Click on 'Restart' to restart the computer.

The 'External access adapter' has been successfully installed. Now you have to enter information about your Internet provider. You do this by double-clicking on 'Dial-Up Adapter' in 'This Computer' and following the instructions displayed on screen. If you encounter problems you are advised to contact your Internet provider's help desk.

3.3 Sending and receiving fax messages

3.3.1 DOS

No software for DOS is supplied. If you wish to fax using DOS you will have to select a fax program compatible with Class 1 fax modems.

3.3.2 Windows 3.1x

The same as for DOS.

3.3.3 Windows 95/98 and NT4

Use the CD-ROM supplied to install the software. You have to install the 32-bit version. Read the extensive instructions regarding this program. They can be found on the CD-ROM.

4. Instructions for use

The modem is operated by applications. The modem has an application that makes all the modem's functions accessible. These applications have to be installed before you can use them. See the appropriate instructions for more information.

If your modem fails to work properly or if the connection is very slow, ring again. In many areas the quality of the telephone lines leaves much to be desired.

This type of modem has many indicator lamps. These tell you whether the modem has made a connection. The lamps mean the following:

TST	Test / error status	Lights up if the modem is in the diagnostic mode
HS	High Speed	Lights up when the modem is working at 2400 bps or more
AA	Auto Answer	Lights up on an incoming call
CD	Carrier Detect	Lights up when connection has been established
OH	Off Hook	Modem is using the telephone line
RD	Receive Data	Lights up when the modem is receiving data from another modem
SD	Send Data	Lights up when the modem is sending data to another modem
TR	Terminal Ready	Lights up when the DTR signal is active
MR	Modem Ready	Lights up when the modem is ON
CS	Clear to Send	Lights up when the CTS signal is active
RS	Request to Send	Lights up when the RTS signal is active
TD	Send Data	Lights up when the modem is sending data to another modem
RD	Receive Data	Lights up when the modem is receiving data from another modem
DTR	Terminal Ready	Lights up when the DTR signal is active
CTS	Clear to Send	Lights up when the CTS signal is active
DCD	Carrier Detect	Lights up when a connection is established
PWR	Power	Lights up when the modem is ON

56K ESP-2 Modem

The modem can be turned on and off with the POWER switch. If the modem is turned off when a connection is in progress, the connection is interrupted immediately. It is not recommended that you break off a connection in this way.

5. Maintenance

The 56K ESP-2 Modem needs no special maintenance. If necessary, clean it with a soft damp cloth.

Do not use meths or any other aggressive cleansing fluid on the plastic housing. This can cause damage.

Never place the modem or the adapter under water or any other fluid. This is dangerous and it renders the modem useless.

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6. Troubleshooting

This section is intended to help you solve any problems you may encounter. If you cannot find the answer to your problem here, contact your supplier.

Problem	Possible cause	Solution
The modem is not reacting.	The modem COM port setting is different from the software port setting.	Check that the communications software is set to the correct COM port and IRQ setting.
	There is a mistake in the initialization string.	Check that the modem has been properly set by the communications software. You may be asked to enter an 'initialization string'. Type [AT&F] or call the help desk of the service you are trying to contact.
Modem connects, but no data appear on screen.	The communications parameters have been set incorrectly.	Check that the communications settings (speed, data bits, stop bits and parity bits) have all been set correctly and are the same on both sides of the connection. Check that the hardware flow control (standard setting RTS/CTS) both on the modem and in the software has been turned on.
	The system is waiting for you.	Press the <ENTER> key several times. The remote system may be waiting until it has received data from you before starting its own transmission.
Modem dials, but fails to connect.	Bad connection.	Redial.
	Problem with PABX.	Try a direct outside line.
	Wrong number.	Check the number. Check the number you need to dial to obtain an outside line on internal exchanges and the wait character (,).
	Wrong communications standard.	Contact the service for the correct communications settings.

Problem	Possible cause	Solution
Modem detects errors during communication with a remote modem.	You have a call waiting.	Make sure the "Call Waiting" feature is disabled.
	Data flow control wrong.	Make sure that the RTS/CTS hardware flow control is turned on.
	Bad connection.	Contact your telephone company for an answer to the problem.
Modem reproduces speech unclearly.	Wrong type of modem selected in software.	Check that the correct type of modem has been selected in the voice/fax software.
	Computer too slow.	Check that your computer is fast enough for speech functions (38.4 kbps). Speech functions make intensive use of the CPU and therefore require at least a 486 CPU.
Error message: 'No Dial Tone'.	Telephone line is in use.	Wait until the line is free.
	'Phone' and 'Line' connections interchanged.	Connect the telephone line to the 'Line' socket and not to the 'Phone' socket.
	Telephone line is out of service.	Test with a normal telephone set and repair.
	Incompatible dialling tone or PABX.	Use a direct outside line, or include the command 'XI' in the full dialling command to disable dialling tone detection, e.g. ATXIDT<tel.no.>
Modem fails to react to commands.	Modem has no power supply, no lamps are lit.	Check that the modem is turned on. Press the adapter plug in firmly to make sure it is properly connected.
	Wrong serial port set in the software.	Check the settings of your communications program. External modems are usually connected to COM2.
	Serial cable not connected.	Check the cable or push it in firmly. If the cable was not connected properly and you are using Windows 95/98, restart the computer in order to set the drivers.

7. Trust Service Centers

If you have any questions after reading this manual, please contact one of the Trust Service Centers.

Keep the following in mind, however:

- If you have any questions regarding the use of a product or if you are looking for the latest drivers, you can find this information at the Trust web site (www.trust.com). The majority of the FAQ's (Frequently Asked Questions) are listed here. You can also download the latest drivers directly from the site.
- If you are unable to find the information you need at the Trust web site or if you are unable to access the site, please contact your nearest Trust Service Center.
- Keep in mind that the waiting time may be longer if you call between 12:00 AM and 2:00 PM.
- **DO NOT RETURN** any products to the Trust Support Center addresses below. You may return the products via your Trust dealer.

Country:	Contact:
UK Ireland	UK Office Internet www.trust.com E-mail trustuk@globalnet.co.uk Mail Aashima Distribution U.K. Ltd. Trust Support PO Box 5277 Witham CM8 3XU United Kingdom Fax +44-(0)1376-514633 Phone +44-(0)1376-500000 (from 9:30 till 17:00)
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Appendix A: Technical specifications

Modulation standards	V.34, V.34+, V.32bis, V.32, V.29, V.27ter, V.23, V.22bis, V.22, V.21 ch2, V.17, Bell212/103
56 kbps standard	X2 and V.90
Synchronous protocol	V.80 for video conferencing H.324 standard
Compression	V.42bis, MNP Class 5
Error correction	V.42, MNP Classes 2-4
Host interface	RS-232 serial port
FAX group	Group III
FAX commands	Class 1
Power consumption	3 W max.
Temperature	In operation: 0° to 55°C; Storage: -20° tot 80°C

Appendix B: Conditions for a 56K connection

Under certain conditions your 56K ESP-2 Modem will be able to receive data at a maximum speed of 56,000 bits per second. If a connection cannot be established at 56,000 bps, the modem will automatically step down to a lower speed.

A speed of 56,000 bps is only possible *for receiving data* under the following conditions:

- You are connected to the Internet.
- Your Internet provider offers a 56,000 bps compatible connection at the number you are calling.
- You are connected to the Internet provider through a modern (digital) telephone exchange. Ask your telephone company if you do not know if this is the case.
- You are using a direct analog line and not a connection via a PABX or ISDN.

Under all other conditions, and for *sending data* the maximum speed is 33,600 bps.

Note: *The speed depends on the quality of the telephone line. The 56K ESP-2 Modem will reduce the speed if the connection is bad.*