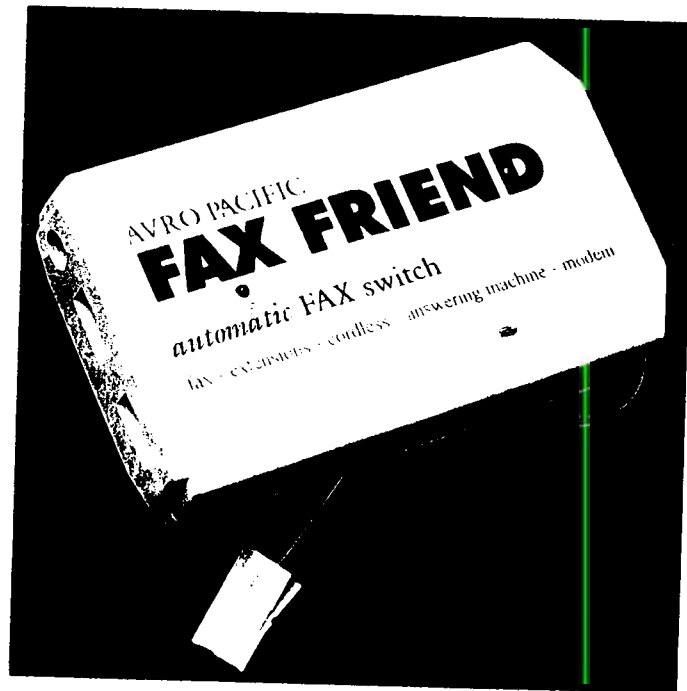


FAX FRIEND

USER and APPLICATIONS GUIDE



- ★ **FAX & PHONE** ON A SINGLE LINE
- ★ **REMOTE CONTROL** OF YOUR **FAX** FROM ANY EXTENSION
- ★ **WORKS WITH CORDLESS** TELEPHONES
- ★ **EASY TO INSTALL** - JUST PLUG INTO ANY TELEPHONE SOCKET
- ★ **FULLY APPROVED**, COST EFFECTIVE & **PABX** COMPATIBLE
- ★ **NO RECORDED VOICE**, TONES OR CLICKS

FAX FRIEND WORKS WITH ALL TYPES OF **FAX MACHINES** INCLUDING THOSE WITH A "BUILT-IN" TELEPHONE SWITCH. IT IS COMPATIBLE WITH ALL TYPES OF ANSWERING MACHINE AND CAN BE USED WITH **FAX** AND **DATA** MODEMS.

USER APPLICATION GUIDE

You can install and use your fax friend in under 5 minutes, following these simple instructions.

Connections

1. Connect Fax Friend to the Electricity supply using the power adaptor provided.
2. Connect Fax Friend to a convenient telephone socket (near to your Fax or Fax Modem)
3. Plug your Fax or Fax modem into the socket marked Line 2 on Fax Friend.
4. If using an Answering machine, connect it to the socket marked Line 1 on Fax Friend. If not, the socket marked Line 1 can be used as an extra telephone extension socket.

Operation

When a call comes in, your telephones will ring as normal and the call can be answered by you or by your answering machine. Fax Friend will switch the call to the Fax machine or Fax Modem on Line 2 in any of the following situations:

1. The answering machine takes the call

If the call is a fax, Fax Friend will detect the tones and automatically switch the call to Line 2. The Fax or Fax modem will then take the call. If not, the answering machine will take a message as normal.

2. The call is answered by a person

If fax tones are heard on the line, switch the call to the Fax by dialling a simple code. On Touch Tone phones dial 10, on Pulse phones dial 8. *The code (tone only) can also be dialed from the caller's telephone.

3. Neither the answering machine nor a person answers the call

In default Fax Friend will switch the call to the fax after a number of rings. This number can be altered but is set in the factory to 8 rings.

Important Notes

Set your answering machine to answer after the minimum number of rings (normally 2). Record an answering machine

HELPLINE 01 642 575095

message of under 15 seconds. Set Fax Machine to answer after the minimum number of rings.

These steps are advisable because the calling fax machine may "time out" after a period of around 35 seconds.

The following Answering machine message is suggested: "I am not available at the moment, please leave a message after the tone. To send a fax please dial 10 and push the start button on your fax when you hear the tone. Thank you." This message allows callers to send faxes manually when required. Automatic faxes will be detected by Fax Friend and switched to Line 2.

If your answering machine has a "VOX" switch, set it to **LOW**.

DIPSWITCH SETTINGS

The small dipswitches on Fax Friend are factory set as follows 1 & 4 **ON** - 2, 3 & 5 **OFF**. This setting will suit over 90% of applications.

For switching between a Data modem and a Fax machine/Fax modem, please see the notes for switch 2.

The above information is all that is needed to install and operate Fax Friend successfully in the vast majority of applications. Some common questions and answers follow, together with more detailed information and other alternative options and applications.

AN OVERVIEW

Fax Friend is a passive Fax switch which works in parallel with your line. It does not actually answer calls but allows you, your fax or answering machine to do so. It allows all your telephone extensions to work normally and gives you the ability to switch calls to your Fax by dialling a simple code. It can also detect Fax Calling tones (or CNG) when the call has been taken by an answering machine. Fax Friend is transparent in operation and does not put tones, clicks or other noises onto the line.

Common Questions and Answers

- Why use Fax Friend when many modern Fax machines have a "Built-in" Fax switch?

- A** Most built-in Fax switches work well only with one telephone. They usually do not operate well with extension telephones, particularly Cordless types.
- Q** Why should I set my answering and fax machines to the minimum number of rings?
- A** Because the calling fax machine may "Time out" after about 35 seconds.
- Q** I have a telephone handset on my Fax machine. Will it still be able to use this?
- A** Yes, it can be used for outgoing calls and sending faxes, but it will not ring on incoming calls as the call will be switched to Line 1.
- Q** Can Fax Friend be used with services such as call reminder or call forwarding?
- A** No. These services take place at the telephone exchange and Fax Friend cannot switch these calls.
- Q** My Fax has a built-in Fax switch, how do I use it with Fax Friend?
- A** You can still have all the advantages of Fax Friend. If possible, turn off the built-in Fax switch function.

- Q** For best results, where should I connect my answering machine?
- A** Connect to the socket marked Line 1 on Fax Friend.
- Q** I have a pulse telephone, can I still switch calls to my Fax?

- A** Yes, just use the **SEND** instead of the normal code (110) and **START** instead of a Fax machine from Line 1 and then press my Fax Start button?
- A** No. Fax calls must be originated from Line 2.

Alternative settings for dipswitches

The Factory settings for Fax Friend are suitable for 90% of applications. If you wish to alter any switches, please read the following information carefully before proceeding.

SWITCH 1 Tone Control

If, for some reason you do not wish to use the normal code "10" for **SEND** calls to line 2, for instance, in the unlikely event that this would affect other telecoms equipment, you can select the alternative code "x0" by setting switch 1 **OFF** (down).

SWITCH 2

If you wish your modem to automatically answer the phone, set Switch 2 to the **ON (UP)** position. After a short period of time, the modem will "listen" for fax tones.

This can be used if you wish to switch between a Data modem in Line 1 and a Fax Modem in Line 2. In this event, set your data modem to auto-answer and hang up after a maximum of 20 seconds if it does not hear Carrier tone (Hayes command S7 register). Once the data modem has finished the call, the Fax modem will be brought on line and will "listen" for Fax tones. If no Fax tones are detected, the Line will be dropped after a short period.

With Switch 2 in the **ON (UP)** position, Timing mode can be switched on and off by dialling the following code either from your own telephone or from the calling handset (Tone only) **ON 7# ZS1001**

SWITCHES 3 & 4

These control the default setting which switches the call to Line 2 if the call is not answered. The Factory setting is

SWITCH 2 Timing Mode

If you wish your calls to be transferred to Line 2 automatically whenever you hang up, set Switch 2 to the **ON (UP)** position. Fax Friend will then hold the line for a short period after you have hung up enabling Line 2 to "listen" for fax tones.

This can be used if you wish to switch between a Data modem in Line 1 and a Fax Modem in Line 2. In this event, set your data modem to auto-answer and hang up after a maximum of 20 seconds if it does not hear Carrier tone (Hayes command S7 register). Once the data modem has finished the call, the Fax modem will be brought on line and will "listen" for Fax tones. If no Fax tones are detected, the Line will be dropped after a short period.

With Switch 2 in the **ON (UP)** position, Timing mode can be switched on and off by dialling the following code either from your own telephone or from the calling handset (Tone only) **ON 7#2 OFF 7#3**

SWITCHES 3 & 4 Ring Counting

These control the default setting which switches the call to Line 2 if the call is not answered. The Factory setting is

8 rings, which is ideal for most of machines and Fax modems. The follows:

| | | |
|-----------------|---------------------|--------------|
| 8 rings | 3 Off (Down) | 4 On |
| 4 rings | 3 On (Up) | 4 Off |
| 12 rings | 3 On (Up) | 4 On |

Ring counting functions switch
3 Off (Down) **4 Off**

The function can also be switched following simple codes from either telephone (Tone-Only):

Ring Counting function **OFF**
Dial 7#0 Ring Counting function

SWITCH 5 Not Used

Self Test procedure

If you suspect that your Fax Friend is not working, you can perform the following self test:

1. Take the handset off the telephone

2. Remove the power supply connection from Fax Friend and reconnect after a few seconds.

If the circuit is OK, Fax Friend will bleep 3 times.

OTHER APPLICATIONS

Connection to a single line PBX system

Fax Friend can be connected "in front" of the PBX with the PBX in Line 1 and the Fax machine or Fax modem in Line 2. See Diagram A.

Connection to an extension on a

Multi-line PBX system

Fax Friend can be connected to an extension in exactly the same way as if the extension were a telephone line. See Diagram B.

"Granny Flat" Installation

Fax Friend can be used to switch a call to another telephone in Line 2 in place of a Fax machine. If you wish to switch such a call, just dial 10 and the telephone in Line 2 will ring a maximum of 5 times enabling that call to be answered, with privacy on that extension. See Diagram C.

Power Fail operation

If the power should fail, telephone services will not be affected by Fax Friend which will also reset itself when power is re-connected.

Lightning Strikes

Fax Friend has built in protection circuits to minimise the risk of damage from surges in telephone and power line current. However, such lightning strikes can sometimes damage all types of connected equipment including Fax Friend. It is advisable to disconnect all such equipment during heavy electrical storms which are fortunately rare.

STATUTORY APPROVAL INFORMATION.

The following information relates to the conditions under which your Fax Friend is approved by the British Approvals Board for Telecommunications (BABT) and should be read to ensure that the apparatus is used correctly.

- a) This apparatus is APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them. The Approved number for this apparatus is: S/42223/T/503386
- b) This apparatus is suitable for connection to exchange lines on the Public Switched Telephone Network directly or via a compatible Private Branch Exchange.

Note: The supplier of the apparatus should be consulted for an up-to-date list of compatible PBXs. Please refer to the definition of a PBX for PSTN lines in BS67789 Section 6.1 Clause 2.4 identifying such mandatory requirements as are appropriate.

- c) It cannot be guaranteed that the apparatus will operate under all possible conditions of connection to compatible PBXs. Any cases of difficulty should be referred in the first instance to the supplier of the apparatus.
- d) This apparatus is not suitable for connection to:
- (i) 1+1 Carrier Systems
 - (ii) Shared lines or payphones.
- e) This apparatus is approved for use of the following facilities:
- (i) Series connection sockets for connection of telephones, telephone answering machines facsimile machines and modems.
 - (ii) Automatic ringing generator
 - (iii) Automatic ring counting.
 - (iv) Automatic detection of fax and modem calling tones and certain MF tones.

Any other usage will INVALIDATE the approval of the apparatus if as a result it then ceases to comply with the standards against which its approval was granted.

- f) The voltage drop introduced by this apparatus between any of the series connection ports and the PSTN line connection is 500mV at a line current of 40 mA. The introduction of this voltage drop may occasionally cause difficulties in making calls from other apparatus connected to the PSTN via this apparatus such as problems in telephone conversation being experienced by both parties to a call. In the unlikely event of such problems occurring the user should contact the supplier of this apparatus.

- g) Connect only apparatus complying with BS6301 to the ports marked Line 1 and Line 2 on Fax Friend.

- h) Only one Fax Friend apparatus may be connected between a main apparatus and the PSTN in a single installation.

- i) Connection of power supply.

This apparatus is intended for use only with the power adaptor supplied with the Fax Friend. Other usage will invalidate any approval given to this apparatus if as a result it ceases to comply with BS6301:1982.

- j) This apparatus may be used on Telecommunication Systems employing loop disconnect or MF signalling.

- k) The Ringer Equivalence Number (REN) of the Fax Friend is 0.5. The REN is an indication of the performance of the ring detect parameters of the apparatus when used with other equipment connected to the same PSTN line. The sum of individual REN values for all pieces of equipment connected to such a line should not exceed a total REN of 4. A telephone supplied by British Telecom may be assumed to have a REN of 1 unless otherwise stated.