



BT Digital Access USB

User Guide for
Mac OS

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Foreword

Characteristics of the BT Digital Access USB

The BT Digital Access USB is an ISDN Hot Plug & Play adapter.

It manages ISDN-based services – two B channels which allow connections to be made at ISDN speeds (64kbps if only one call is being made, or 128kbps if both channels are being bonded to make two simultaneous calls). The D channel allows the B channel transmissions to take place and controls the call signalling.

Knowledge Required

In this User Guide, we assume that you are already familiar with the Mac OS 9.0, 9.1 or 9.2 user interface and utilities. If necessary, please refer to the Apple Mac tutorials under the Help menu for further information on Internet Basics and Mac Basics.

Prior knowledge of telecommunications is not necessary when using the BT Digital Access USB and this User Guide. However, basic notions about ISDN and the Internet would be helpful.

Technical Documentation

This Guide contains practical information to help you install and use the BT Digital Access USB with Mac OS 9.0, 9.1 and 9.2.

Electronic documentation in PDF format is provided on the BT Digital Access USB CD-ROM; notably:

- the User Guide for Mac OS (this manual);
- A set of Frequently Asked Questions (FAQs);
- an installable version of Adobe Acrobat to view the documentation.

To read the documents:

1. Place the CD-ROM into your Apple Mac's CD-ROM drive.
2. Double-click on the CD-ROM icon.
3. You should see the User Guide and FAQ icons. *If you cannot see the FAQ icon, please expand the window by dragging the cursor on the bottom right hand corner of the window downwards with the mouse button pressed.*
4. Double-click the document you wish to read. *If for any reason you are having difficulty opening either document, you may have an old version of Acrobat Reader. If this is the case, upgrade to the version on the CD-ROM by double-clicking the Acrobat Reader 5.0 Installer icon.*

If you wish to use the BT Digital Access USB with Windows 98, Windows Me, Windows XP Home, Windows XP Professional or with Windows 2000 Professional, please consult the User Guides for these systems provided on the BT Digital Access USB CD-ROM. These can be accessed from the BT Digital Access USB Document Viewer program which is executed when the CD-ROM is inserted in a Windows PC.

Technical Support

This User Guide contains practical information that will help you to install and use the BT Digital Access USB. We hope that it will allow you to get up and running quickly and simply.

However, should you experience trouble installing the BT Digital Access USB, please first consider the points below:

- If you are not sure that you have correctly carried out the installation, do not hesitate to uninstall the BT Digital Access USB drivers (see page 31) and to repeat the installation from the beginning.
- Consult the Frequently Asked Questions (FAQs) document on the CD-ROM. See the preceding “Technical Documentation” section for details on how to view and/or print this document.
- Refer to the “Identifying and Solving Problems” chapter on page 27. If you still cannot solve the problem using this chapter, don’t worry. Carefully note what you are doing and what happens. Then contact the appropriate Helpdesk, as outlined in your Welcome Pack, and provide them with this information. They will either assist you directly or put you in contact with the appropriate department to help you.

Required Configuration

The following configuration is needed in order to install the BT Digital Access USB drivers:

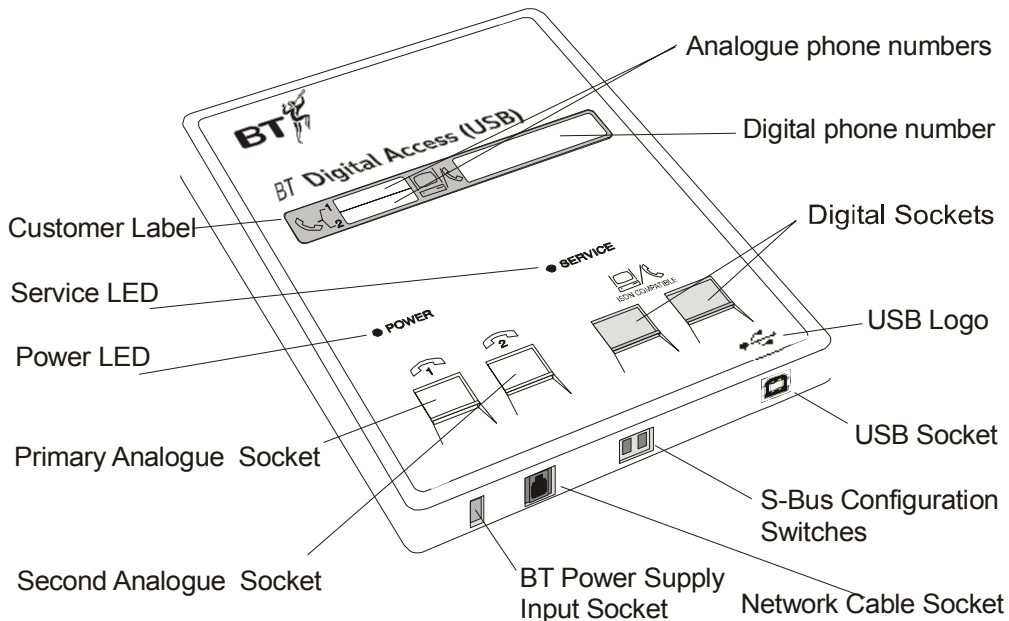
- an Apple Mac with a CD-ROM reader and a USB port, running Mac OS 9.0, 9.1 or 9.2.
- BT Digital Access (USB) service.

The BT Digital Access USB



Please carry out the BT Digital Access USB driver installation before connecting your USB cable to one of the Apple Mac's USB ports.

Before starting the installation check that your BT Digital Access (USB) service is operational by listening for dial-tone on a telephone plugged into one of the analogue (white) sockets. Save any work and exit any open applications on your computer.



Installing the BT Digital Access USB Software

To install the BT Digital Access USB drivers, follow these steps:

1. Place the CD-ROM in your Apple Mac's CD-ROM reader.
2. Double-click the CD-ROM icon.
3. Double-click the **Driver Installation** folder.
4. Double-click the **Installation of BT DA USB** icon.

5. Click the **Install** button



6. When the installation is complete, restart your Apple Mac.



Connecting the BT Digital Access USB

After your Apple Mac has restarted: -

1. Your USB cable can be identified by the connectors at each end that have the USB logo marked on them.

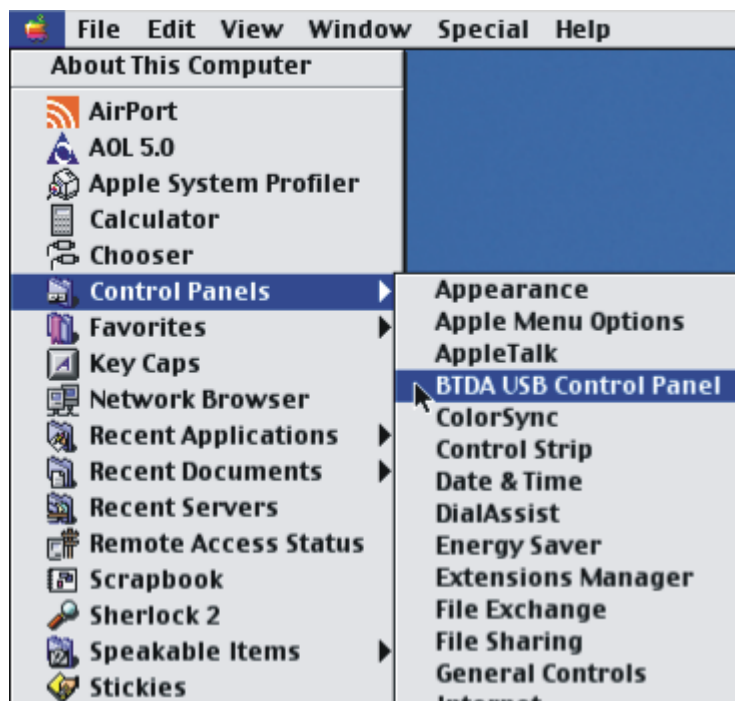


2. Plug the connector with the square end into the USB socket of the BT Digital Access (USB) box. The USB socket is on the bottom edge of the BT Digital Access (USB) box on the right-hand side. The socket is aligned with the USB logo on the front of the case. The connector is plugged in with the USB logo on the cable visible (i.e. facing towards you).
3. Connect the other end of the USB cable with the flat connector to one of the Apple Mac's USB connectors.

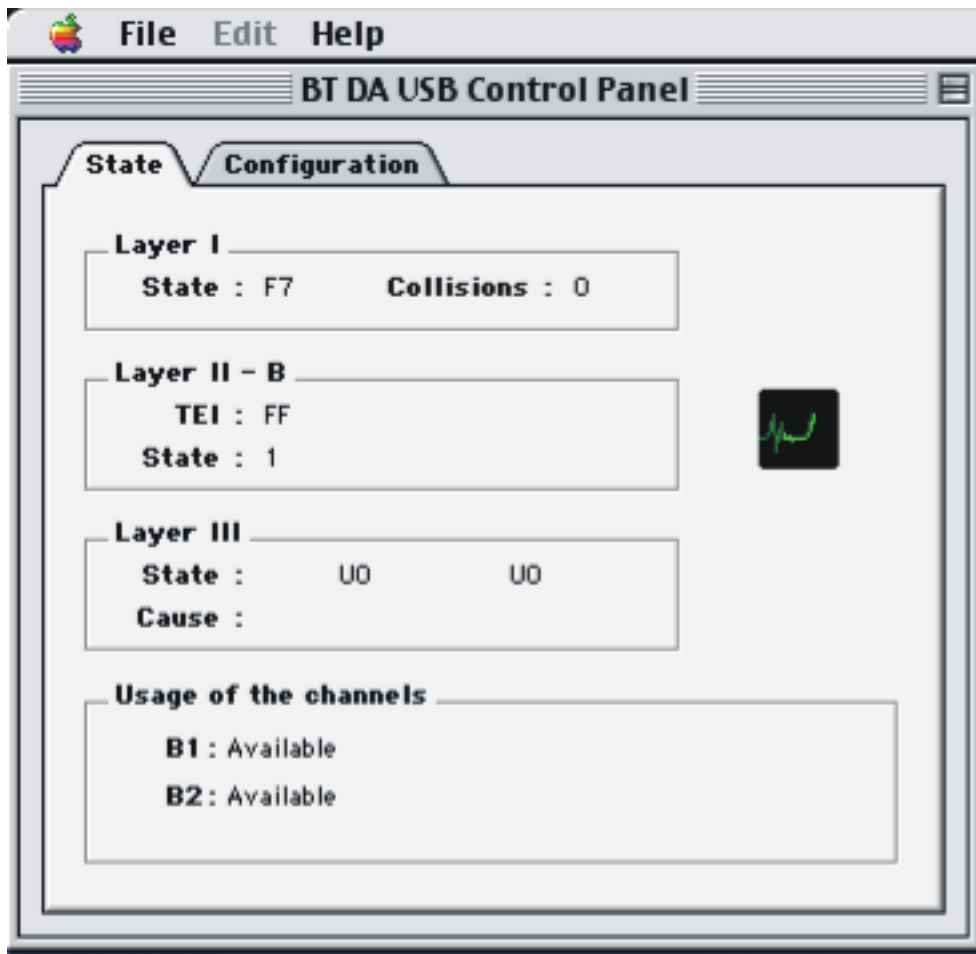
Note: you can also connect the BT Digital Access USB to the USB connector of a hub connected to your Apple Mac.

Once it is connected, the BT Digital Access USB will be automatically recognised by the Apple Mac operating system (USB *Hot Plug & Play* technology).

4. To check the installation, launch the **BTDA USB Control Panel**, which can be found in the **Control Panels** in the **Apple** menu



5. Check that a 'heartbeat' signal is active in the small window. This confirms that the BT Digital Access USB service is operational.



Internet Connection

Internet connections using the BT Digital Access USB are provided through the Apple Remote Access software program that is integrated with the Apple Mac operating system.

The BT Digital Access USB drivers can provide an Internet connection using PPP (point-to-point protocol) at either 64kbps, 128kbps or dynamically between 64kbps and 128kbps depending on channel usage.

Some Internet Service Providers (ISPs) or Private Networks use connection methods other than PPP (point-to-point protocol), such as V.120 or X.75. Your ISP or Network Administrator can provide guidance on which is appropriate.

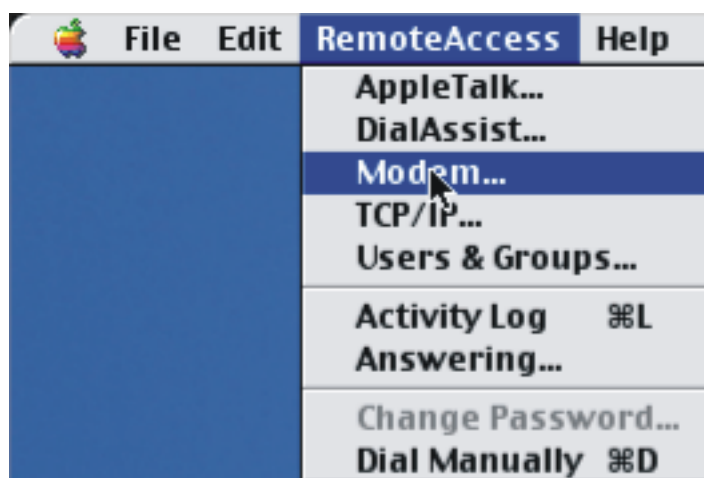
This chapter will explain how to configure the Apple Remote Access software program that is integrated with the Apple Mac operating system for all protocols detailed above.

Note: Some ISPs may provide a CD or disk that automatically sets up the Internet access for you. In that case follow their instructions selecting 'BT Digital Access USB' as the modem when prompted.

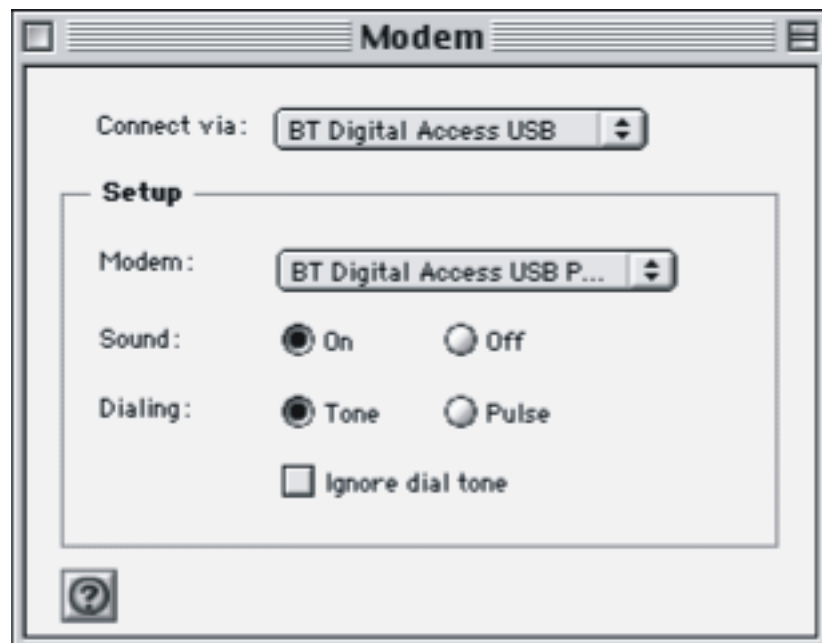
Connection Settings For PPP (point-to-point protocol)

The Remote Access program is used to configure the connection:

1. Launch **Remote Access**, which can be found in the **Control Panels** in the **Apple** menu.
2. From **Remote Access** on the toolbar at the top of your screen (not in the main **Remote Access** window that has opened up), select **Modem...**



3. A window appears, wherein you can choose the equipment (**Connect via**) and the communications profile (**Modem**) to be used for the connection.



- In the **Connect via** PopUp menu, select **BT Digital Access USB**.
 - In the **Modem** PopUp menu, select **BT Digital Access USB PPP/MLPPP**. This is the communications profile that is normally handled by ISPs.
 - Do not change the other settings.
4. Click on the window closing box, and then save the configuration modifications.
 5. In the main **Remote Access** window:
 - Enter the **Name** and **Password** (connection identifiers) as they were provided to you by your ISP, bearing in mind that these are case-sensitive, i.e. lowercase, uppercase or a mixture of lowercase and uppercase letters.



The Name and Password you enter here must not be mixed up with the Account Name and Password for your e-mail – they may not be the same.

- If you do not want to have to enter your password for each connection, check the **Save password** box.



However, if you choose to do this, you must know that any person gaining access to your Apple Mac will be able to connect to the Internet while using your account.

- In the **Number** field, enter the ISDN number for your ISP.



ISPs sometimes have different numbers for ordinary telephone communications via an analogue modem and for communications with ISDN. If you are not sure, check with your ISP in order to confirm the ISDN call number. You need to use this number when connecting with the BT Digital Access USB.

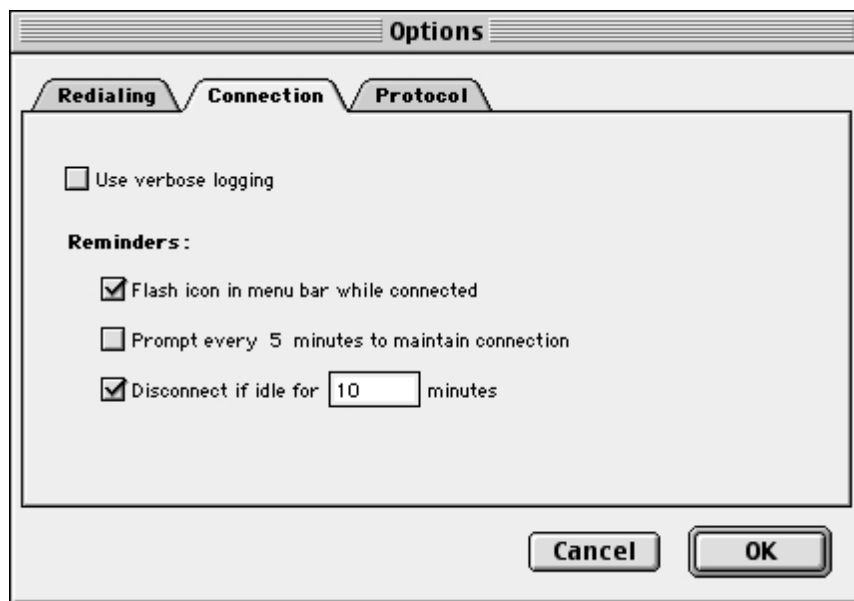


6. The other Remote Access settings, particularly those involving the TCP/IP protocols, are the same as for an analogue connection and are provided by your ISP. To access the supplementary settings, click on Options....

This User Guide does not include any information on the supplementary settings that can vary according to your requirements and according to your ISP.

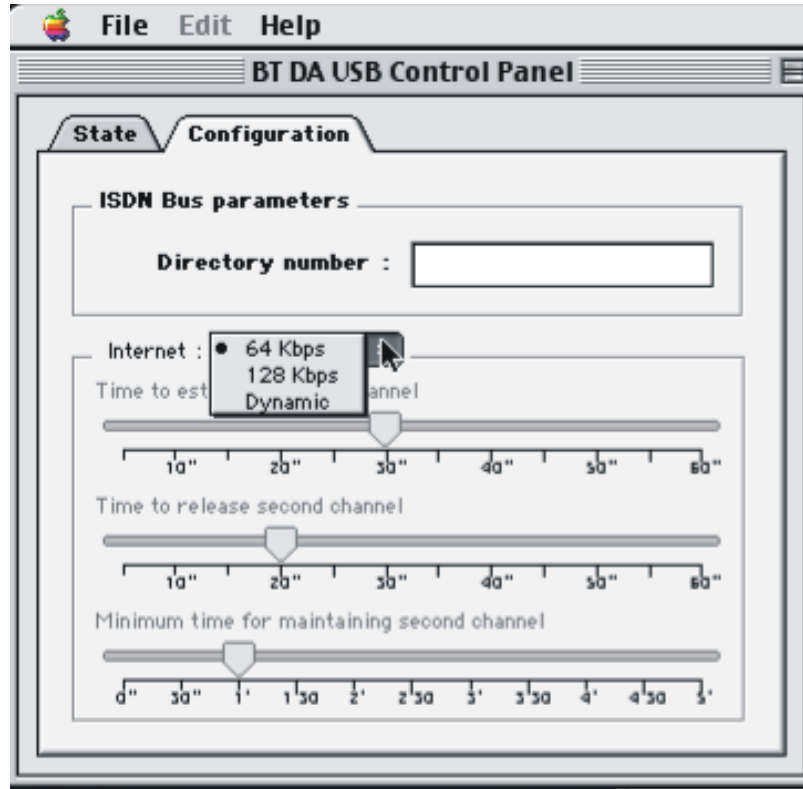
As an example, if you want to program automatic disconnection, in the event that you forget to disconnect yourself on any given occasion, proceed as follows:

- Click on the **Connection** tab.
- Check **Disconnect if idle for ... minutes** and indicate the number of minutes of inactivity after which the system should disconnect. Click on **OK** to validate.



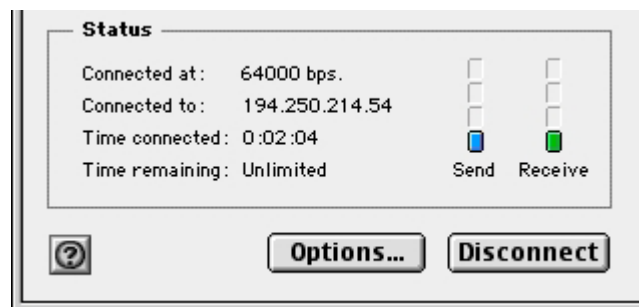
Establishing a 64kbps Connection

For a standard 64kbps connection using a single ISDN channel, launch the **BTDA USB Control Panel**, which can be found in the **Control Panels** in the **Apple** menu. Click the **Configuration** tab and within **Internet**, select **64kbps**. *Note that if you have a connection already established the new setting will not take effect until the next time you connect.*



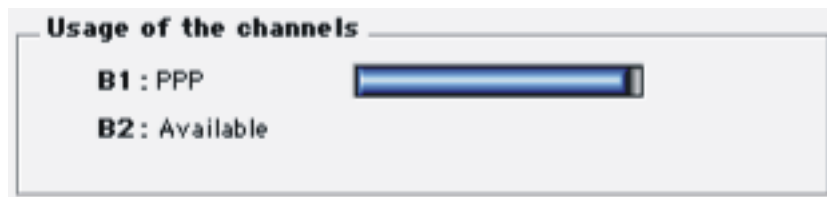
- To launch the connection procedure, click on **Connect** in the main **Remote Access** window (refer to “Connection Settings for PPP (point-to-point protocol)” on page 10 for further information).

If the connection is established correctly, you are now connected to the Internet. The **Remote Access** window then changes its appearance, and now presents the connection parameters (rate, connection duration etc.). A **Disconnect** button is available to interrupt the connection.



- You can now launch your Internet browser.

The **State** tab of the **BT Digital Access USB Control Panel** will indicate that channel B1 is connected along with data transfer usage.



When you have concluded your Internet session, don't forget to disconnect.

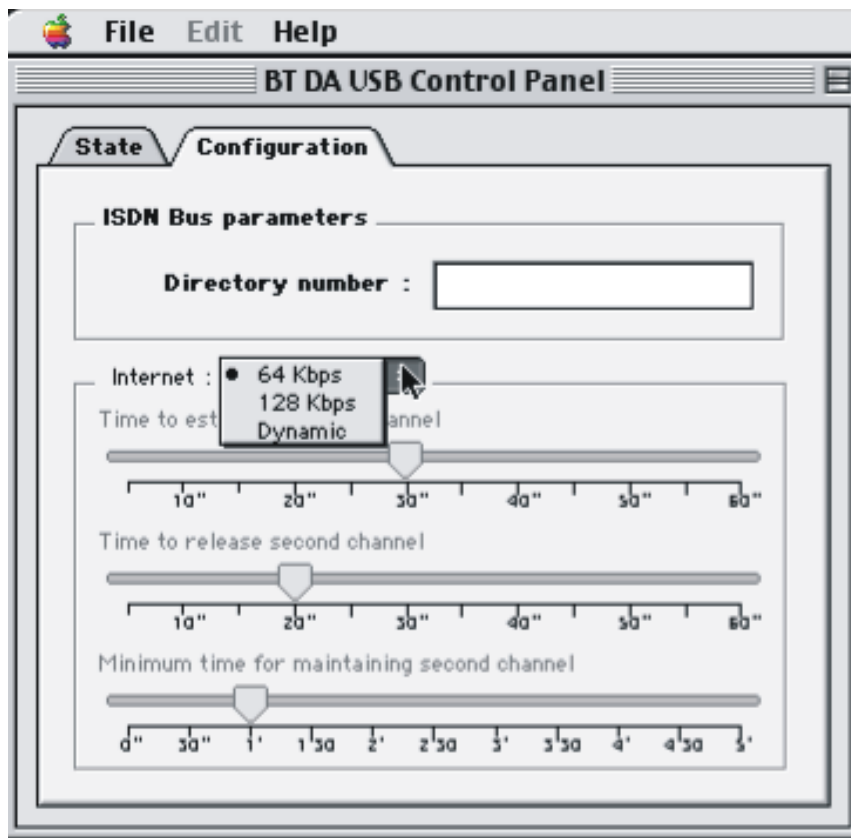
Establishing a 128kbps Connection

A 128kbps connection is made using MLPPP (simultaneous use of two 64kbps B ISDN channels grouped into one 128kbps logical pathway). This is also known as 'channel bonding'.

IMPORTANT

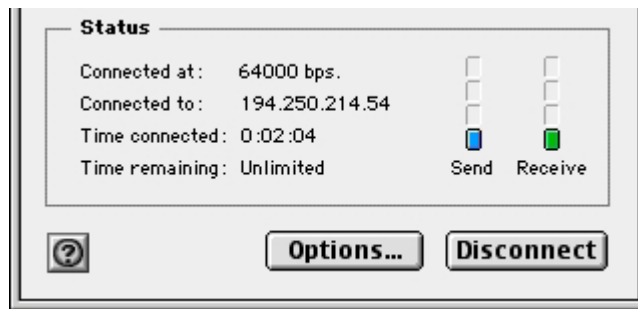
- A 128kbps connection may require a special subscription with your ISP.
- When making a 128kbps connection, you are making two calls and hence will be billed for two calls.
- As both available channels of your BT Digital Access USB line are being used, you will NOT be able to make or receive other calls (a telephone call, for example). You may be able to rent a service from your telecom operator that allows the caller to leave a message if they contact you when your line is engaged on a 128kbps call.

Launch the **BTDA USB Control Panel**, which can be found in the **Control Panels** in the **Apple** menu. Click the **Configuration** tab and within **Internet**, select **128kbps**. *Note that if you have a connection already established the new setting will not take effect until the next time you connect.*



- To launch the connection procedure, click on Connect in the main Remote Access window (refer to "Connection Settings for PPP (point-to-point protocol)" on page 10 for further information).
- You may wish to open the State tab of the BTDA Control Panel to monitor the usage of the channels (see below for more info).

If the connection is established correctly, you are now connected to the Internet. The **Remote Access** window then changes its appearance, and now presents the connection parameters (rate, connection duration etc.). A **Disconnect** button is available to interrupt the connection.

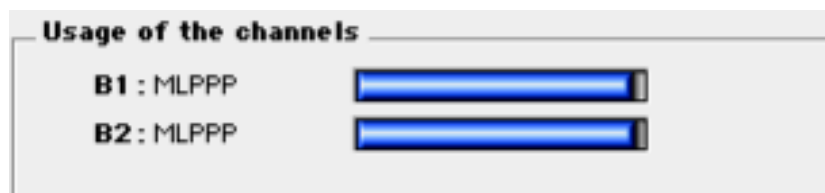


- You can now launch your Internet browser.



The *Remote Access* window will state an incorrect connection rate of 64000 bps. To confirm a 128kbps connection, launch the *BTDA USB Control Panel* (see below).

The **State** tab of the **BTDA USB Control Panel** will indicate that channel B1 and channel B2 are connected along with data transfer usage on both channels.



If channel B2 data transfer usage is generally low, it might be better to create a 128kbps Dynamic connection. See the following chapter for further details.



When you have concluded your Internet session, don't forget to *Disconnect*.

Establishing a 128kbps Dynamic Connection

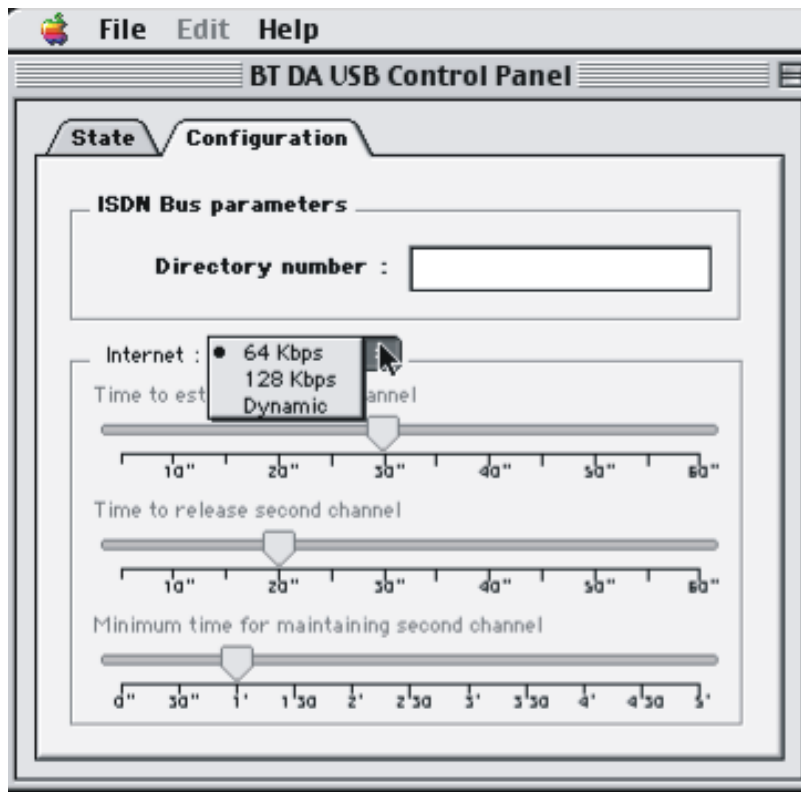
A 128kbps Dynamic connection is made using MLPPP (simultaneous use of two 64kbps B ISDN channels grouped into one 128kbps logical pathway) and Bandwidth on Demand. This means that the second B channel will be dynamically disconnected and reconnected as required. For example, the connection may drop down to a one-channel 64kbps connection for simple Internet browsing and increase to a two-channel 128kbps connection for a large download. In this way, you can optimise the usage comfort / cost ratio of your communications. It also means that, when you don't need it, a spare channel will be available to make or receive another call, such as a telephone call.

IMPORTANT

- *A 128kbps connection may require a special subscription with your ISP.*
- *When making a 128kbps connection, you are making two calls and hence will be billed for two calls.*
- *As both available channels of your line are being used at times, you will not be able to make or receive other calls when the second B channel is connected (a telephone call, for example), unless you manually **Disconnect B2** in the **State** tab of the **BTDA USB Control Panel** (see below).*
- *Should you wish to make, or receive, another call when connecting to the Internet over a 128kbps Dynamic connection, you must first **Disconnect B2** as described here. This disconnection will not automatically happen if, for example, you pick up the receiver of a telephone plugged into one of the analogue ports, or if someone dials one of your BT Digital Access telephone numbers. In the first case, you would not hear dial tone, and in the second case, the caller would receive congestion (engaged) tone.¹*
- *If you make another call (a telephone call, for example), the second B channel cannot be used for your Internet connection until the other call has ended.*

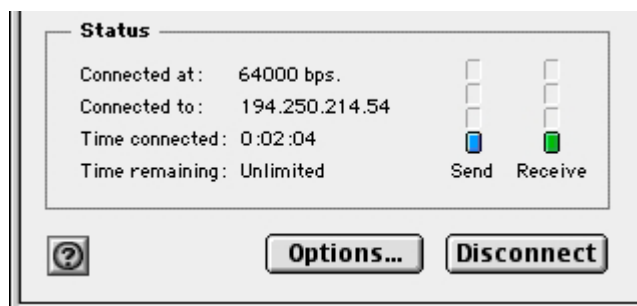
¹ You may be able to rent a service from your telecom operator that allows the caller to leave a message if they contact you when your line is engaged on a 128kbps call.

Launch the **BTDA USB Control Panel**, which can be found in the **Control Panels** in the **Apple** menu. Click the **Configuration** tab and within **Internet**, select **Dynamic**.



- To launch the connection procedure, click on **Connect** in the main **Remote Access** window (refer to “Connection Settings for PPP (point-to-point protocol)” on page 11 for further information).
- You may wish to open the **State** tab of the **BTDA Control Panel** to monitor the usage of the channels (see below for more info).

If the connection is established correctly, you are now connected to the Internet. The **Remote Access** window then changes its appearance, and now presents the connection parameters (rate, connection duration etc.). A **Disconnect** button is available to interrupt the connection.

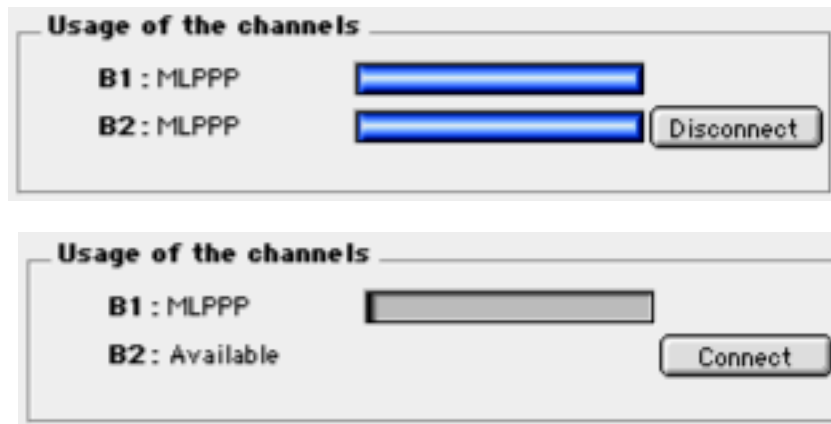


You can now launch your Internet browser.

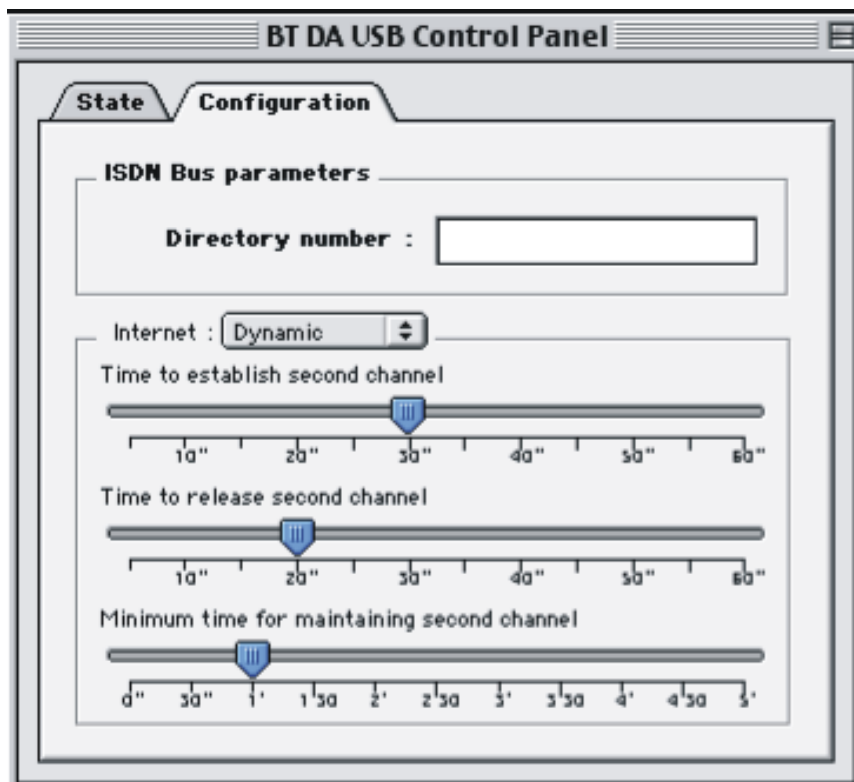


The *Remote Access* window will always state a connection rate of 64000 bps. To confirm whether the second B channel is being used, launch the *BTDA USB Control Panel* (see the next page).

The **State** tab of the **BTDA USB Control Panel** will indicate that channel B1 is connected with data transfer usage and indicate the status of channel B2 (whether currently connected and if so, data transfer usage on this channel also).



The second B channel can be manually disconnected and connected from this screen. You may wish to **Disconnect** the second B channel in order to make or receive another call (a telephone call, for example). You may wish to **Connect** the second B channel if a large download has commenced whilst Internet browsing, in order to benefit from increased bandwidth straightaway (note - clicking the **Connect** button will force a constant 128kbps connection. In this case you must **Disconnect** to return back to a 64kbps connection, as the parameters of your dynamic connection are not taken into account).



In Dynamic mode, the channels will be used according to the parameters indicated in the **Configuration** tab of the **BTDA USB Control Panel**.

The parameters of your dynamic connection can be adjusted in the **Configuration** tab.

- **Time to establish second channel:** if using a single B channel at 64kbps and 80% or more of the bandwidth is occupied, this is where you indicate how long the system will wait before connecting on both channels at 128kbps.
- **Time to release second channel:** if using both B channels at 128kbps but the bandwidth is suitable for one channel at 64kbps, this is where you indicate how long the system will wait before returning to a single channel of 64kbps.
- **Minimum time for maintaining second channel:** if using both channels at 128kbps, you can choose a minimum operation time for maintaining this 128kbps connection.

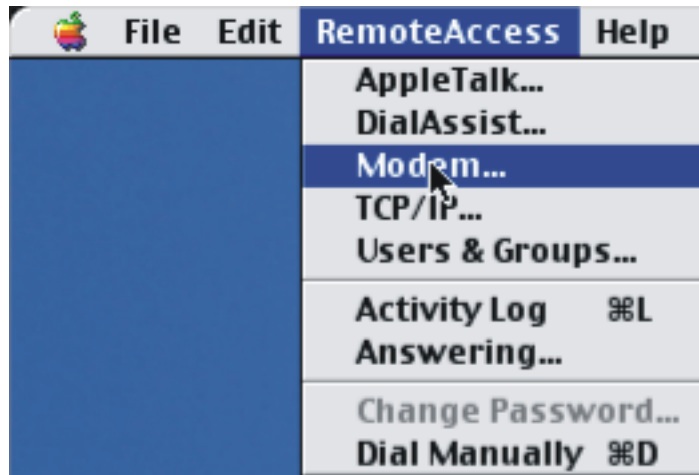


When you have concluded your Internet session, don't forget to *Disconnect*.

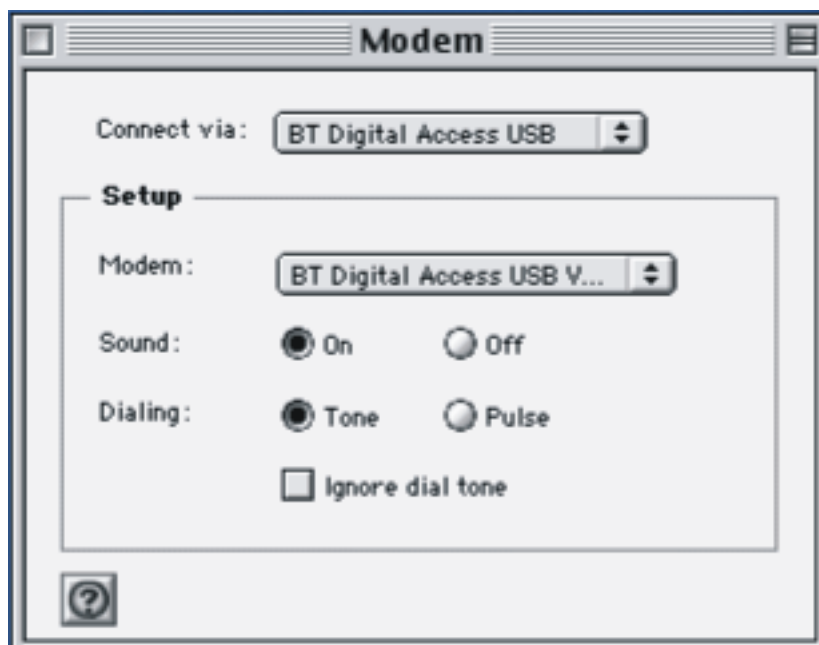
Connection Settings For V.120

The Remote Access program is used to configure the connection:

1. Launch **Remote Access**, which can be found in the **Control Panels** in the **Apple** menu.
2. From **Remote Access** on the toolbar at the top of your screen (not in the main **Remote Access** window that has opened up), select **Modem...**

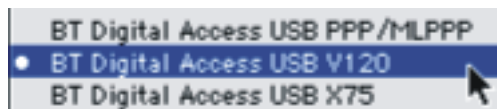


3. A window appears, wherein you can choose the equipment (**Connect via**) and the communications profile (**Modem**) to be used for the connection.



- In the **Connect via** PopUp menu, select **BT Digital Access USB**.

- In the **Modem** PopUp menu, select **BT Digital Access USB V120**. This is the communications profile that is handled by some ISPs and/or some Private Networks.



- Do not change the other settings.
4. Click on the window closing box, and then save the configuration modifications.
 5. In the main **Remote Access** window:
 - Enter the Name and Password (connection identifiers) as they were provided to you by your ISP or Network Administrator, bearing in mind that these are case-sensitive, i.e. lowercase, uppercase or a mixture of lowercase and uppercase letters.



The name and Password you enter here must not be mixed up with the Account Name and Password for your e-mail – they may not be the same.

- If you do not want to have to enter your password for each connection, check the Save password box.



However, if you choose to do this, you must know that any person gaining access to your Apple Mac will be able to connect to your ISP or Private Network while using your account.

- In the Number field, enter the ISDN number for your ISP or Private Network.



ISPs and Private Networks sometimes have different numbers for ordinary telephone communications via an analogue modem and for communications with ISDN. If you are not sure, check with your ISP or Network Administrator in order to confirm the ISDN call number. You need to use this number when connecting with the BT Digital Access USB.

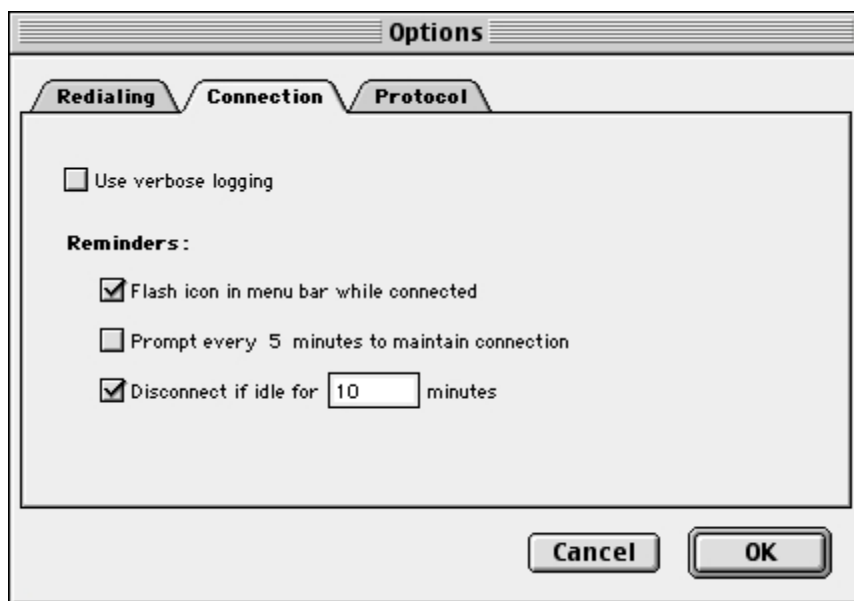


6. The other **Remote Access** settings, particularly those involving the TCP/IP protocols, are the same as for an analogue connection and are provided by your ISP or Network Administrator. To access the supplementary settings, click on **Options...**

This User Guide does not include any information on the supplementary settings that can vary according to your requirements and according to your ISP or Private Network.

As an example, if you want to program automatic disconnection, in the event that you forget to disconnect yourself on any given occasion, proceed as follows:

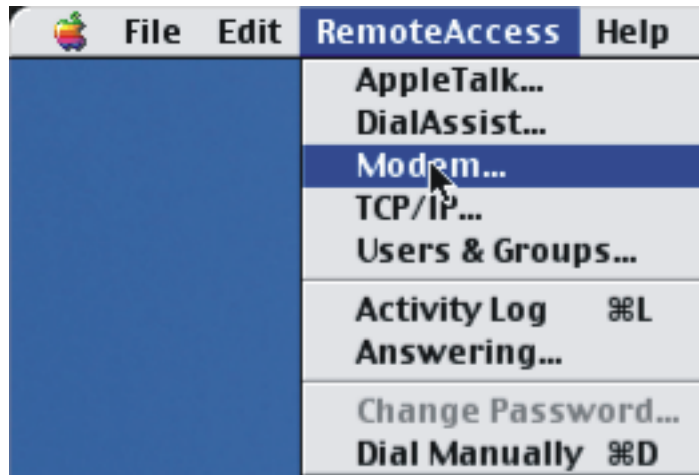
- Click on the **Connection** tab.
- Check **Disconnect if idle for ... minutes** and indicate the number of minutes of inactivity after which the system should disconnect. Click on **OK** to validate.



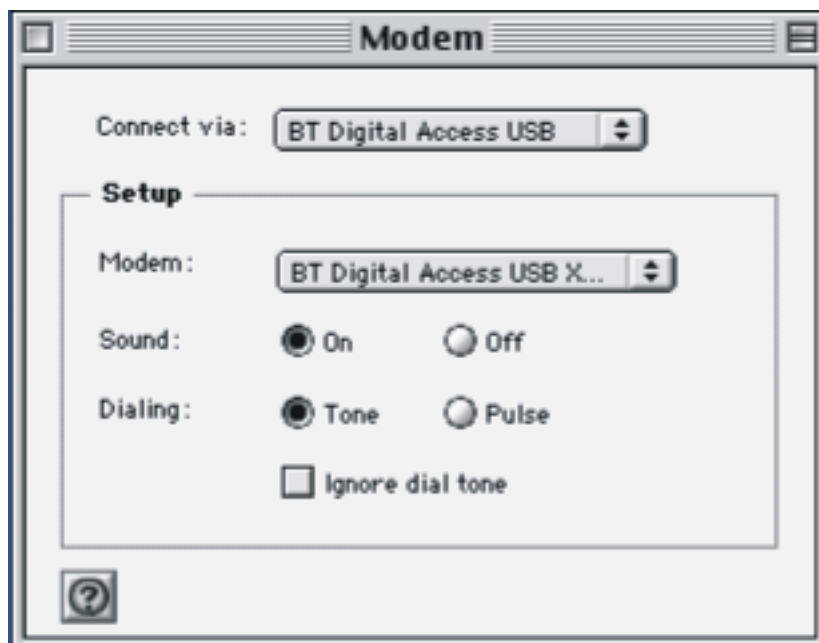
Connection Settings For X.75

The Remote Access program is used to configure the connection:

1. Launch **Remote Access**, which can be found in the **Control Panels** in the **Apple** menu.
2. From **Remote Access** on the toolbar at the top of your screen (not in the main **Remote Access** window that has opened up), select **Modem...**

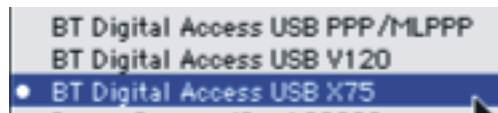


3. A window appears, wherein you can choose the equipment (**Connect via**) and the communications profile (**Modem**) to be used for the connection.



- In the **Connect via** PopUp menu, select **BT Digital Access USB**.

- In the **Modem** PopUp menu, select **BT Digital Access USB X75**. This is the communications profile that is handled by some ISPs and/or some Private Networks.



- Do not change the other settings.
4. Click on the window closing box, and then save the configuration modifications.
 5. In the main **Remote Access** window:



- Enter the **Name** and **Password** (connection identifiers) as they were provided to you by your ISP or Network Administrator, bearing in mind that these are case-sensitive, i.e. lowercase, uppercase or a mixture of lowercase and uppercase letters.



The name and Password you enter here must not be mixed up with the Account Name and Password for your e-mail – they may not be the same.

- If you do not want to have to enter your password for each connection, check the **Save password** box.



However, if you choose to do this, any person gaining access to your Apple Mac will be able to connect to your ISP or Private Network while using your account.

- In the **Number** field, enter the ISDN number for your ISP or Private Network.



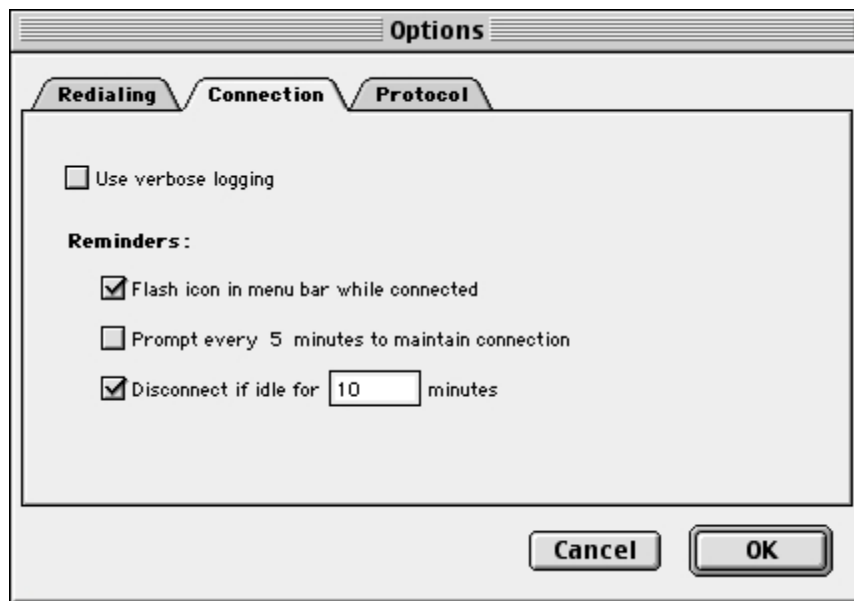
ISPs and Private Networks sometimes have different numbers for ordinary telephone communications via an analogue modem and for communications with ISDN. If you are not sure, check with your ISP or Network Administrator in order to confirm the ISDN call number. You need to use this number when connecting using the BT Digital Access USB.

6. The other **Remote Access** settings, particularly those involving the TCP/IP protocols, are the same as for an analogue connection and are provided by your ISP or Network Administrator. To access the supplementary settings, click on **Options...**

This User Guide does not include any information on the supplementary settings that can vary according to your requirements and according to your ISP or Private Network.

As an example, if you want to program automatic disconnection, in the event that you forget to disconnect yourself on any given occasion, proceed as follows:

- Click on the **Connection** tab.
- Check **Disconnect if idle for ... minutes** and indicate the number of minutes of inactivity after which the system should disconnect. Click on **OK** to validate.



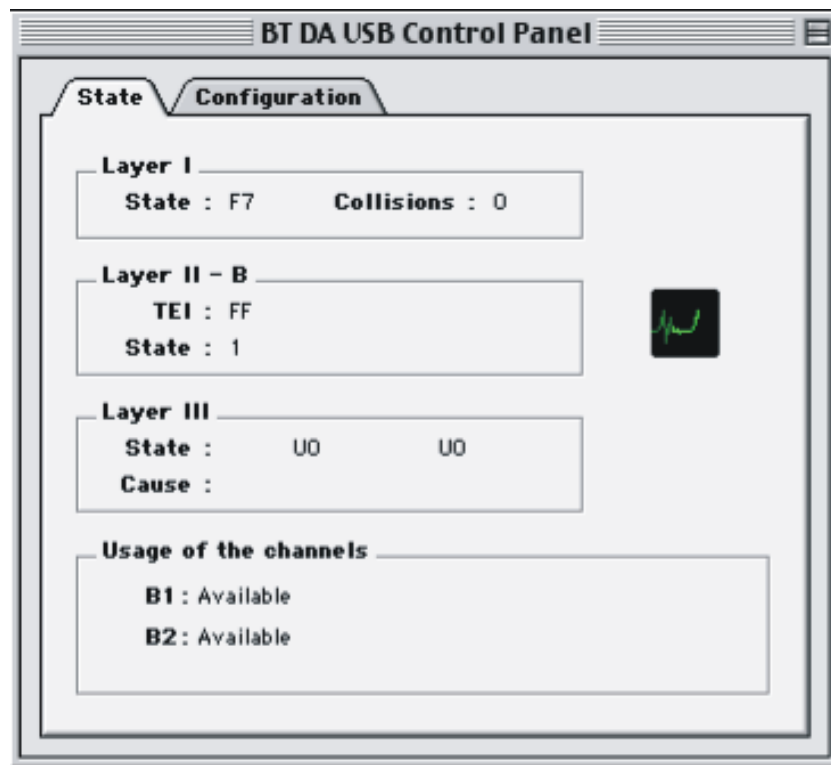
Identifying and Solving Problems

The BT Digital Access USB, its software and its documentation have been created to be used by everyone. The BT Digital Access USB has been designed with reliability in mind. However, it is only one of the parts that make up your telecommunication solution. If you encounter any difficulties, keep in mind that these may be due to the following:

- a problem when installing, setting up, or using, the BT Digital Access USB, Apple Mac operating system (and/or its accessories) or the communication software;
- an incorrect configuration of your Apple Mac (in that case, the BT Digital Access USB only reveals the problem);
- a connection problem (defective cabling, poorly joined connectors/plugs...);
- a problem with your line;
- a problem inherent to the site or the service with which the connection is to be established (ISP, Private Network, remote Apple Mac or other equipment...);
- trying to correspond with someone using incompatible equipment (for example, different communication profiles, incompatible software, ...)

Stay positive, this chapter provides guidelines on how to identify and solve the problem yourself. You are going to use the **BT Digital Access USB Control Panel** tool, which shows you the status of the exchanges between the BT Digital Access USB and the network at any given moment.

In the **Apple** menu, select the **Control Panels**, and then the **BT Digital Access USB Control Panel**. The following window will appear:



Verification of the D Channel Parameters

Layer I Verification

Look at the value indicated opposite **State** in the “Layer I” area:

- **F3** or **F7**: normal state. The BT Digital Access USB is recognised by the Apple Mac operating system and its driver is loaded. Proceed to verify layer II – B.
- **F2**: anomaly. The driver of the BT Digital Access USB has not been loaded. Refer to “Technical Support” on page 5.

Layer II - B Verification

Look at the value indicated opposite **TEI** in the “Layer II - B” area:

- a number is shown: the TEI is correctly assigned. The BT Digital Access USB is correctly identified by the ISDN network. Proceed to verify layer III.
- **FF**: anomaly. The TEI is not assigned. The BT Digital Access USB is not identified by the ISDN network. Proceed as follows:
 1. Try restarting the driver by unplugging the USB cable and plugging it in again.
 2. If step **1** has not solved the problem (the value of TEI remains FF), it may be that the BT Digital Access line is out of service. Check to see if the Service LED is lit on the BT Digital Access (USB) unit. If it is not lit then there is a problem with the BT Digital Access line. Refer to “Technical Support” on page 5.
 3. There may be a hardware problem with the BT Digital Access (USB) unit. Refer to “Technical Support” on page 5.

Layer III Verification

For layer III verification, you must organise the windows on your Apple Mac screen so that you can observe the parameters of the **State** tab of the **BT Digital Access USB Control Panel** while trying to connect using your communication software.

Before trying to connect, the value indicated opposite **State** is **U0**. This is its normal state of inactivity (no incoming or outgoing calls).

1. Attempt to establish a connection in your communication software (e.g. attempt to dial your ISP).
 - the value changes from **U0** to **U3**: normal situation. The BT Digital Access USB receives the dialling request from the communication software and tries to establish a connection.
 - the value remains at **U0**: anomaly. The BT Digital Access USB does not receive the dialling request from the communication software. The software’s settings have not been correctly executed (e.g. you are not dialling the ISP correctly). Verify them and go back to step **1**.

2. After the value has changed to **U3**:

- the value changes from **U3** to **U10** (intermediate states may appear rapidly): normal situation. Your call has been received by the remote site. You are physically connected.
- the value goes back to **U0**: the call has failed despite the proper functioning of the BT Digital Access USB. An error number is displayed next to the **Cause** title (see “Appendix: “List of ISDN Disconnect Reasons” on page 34). The main causes are as follows:
 - ✓ the number you have indicated in your communication software is incorrect. Verify it.
 - ✓ the number you have called is busy. Try again later.
 - ✓ the remote site is not accepting calls. Notify your remote site administrator of the problem.

3. After the value has changed to **U0**:

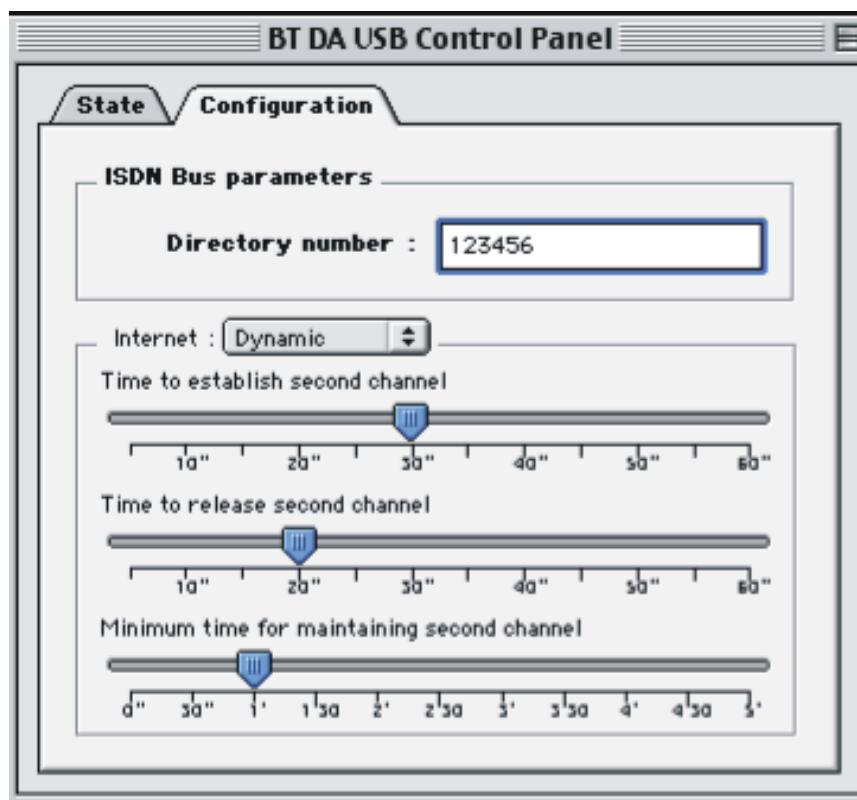
- the value remains at **U10**: normal situation. The call has been taken care of by the remote software and you are now ready to exchange data.
- the value goes back to **U0**: you have been disconnected by the remote site or your software. The most frequent causes for this disconnection are the following:
 - ✓ the communication profiles that you and your correspondent use are incompatible. Contact your calling party and determine a common communication profile. If necessary, change the settings of your communication software.
 - ✓ the remote site has disconnected you voluntarily because of an identification failure (Internet, remote access...). Verify your identification parameters. If the problem persists, contact your correspondent and request confirmation of your identification parameters.

Configuration of the ISDN Address

- This is only necessary if you have MSN (Multi Subscriber Numbering) enabled on your line and you want the BT Digital Access USB to respond to one of the numbers.

Note: If you are not using MSN, then this does not apply to you, and you do not have to read this section.

In the **Apple** menu, select the **Control Panels**, and then the **BT Digital Access USB Control Panel**. Click the **Configuration** tab:



Fill in the **Directory number** field:

- Enter the digital phone number (without the area code) assigned to the BT Digital Access USB (this is the number associated with the blue sockets), or the MSN you want associated with the BT Digital Access USB.

Uninstalling the Drivers

Automatic Uninstall of Drivers



Before you commence the uninstall procedure, disconnect the USB cable.

Should you decide to uninstall the BT Digital Access USB drivers using the BT Digital Access USB CD (preferred method), follow these steps:

1. Place the CD-ROM in your Apple Mac's CD-ROM reader.
2. Quit all open applications.
4. Double-click on the CD-ROM icon.
5. Double-click the **Driver Installation** folder.
6. Double-click on the **Installation of BT DA USB** icon.
7. Select **Custom Remove** option.
8. Select the **BT Digital Access USB**.
9. Click the **Remove** button.



Manual Uninstall of Drivers



Before you commence the uninstall procedure, disconnect the USB cable.

1. Delete each of the five files contained in your Apple Mac's **System Folder** by selecting them and sliding them towards the garbage can:
 - The **BT Digital Access USB** file in the **System Folder / Extensions**.
 - The **BT Digital Access USB PPP / MLPPP** file in the **System Folder / Extensions / Modem scripts**.
 - The **BT Digital Access USB V120** file in the **System Folder / Extensions / Modem scripts**.
 - The **BT Digital Access USB X75** file in the **System Folder / Extensions / Modem scripts**.
 - The **BT DA USB Control Panel** located in the **System Folder / Control Panels**.
2. Then empty the garbage can.

Glossary

Bandwidth on Demand	<p>This refers to a method by which your computer can change between 64kbps and 128kbps connections automatically depending on the amount of data being transmitted.</p> <p>In contrast, a normal connection stays at 64kbps or 128kbps until the user changes it.</p>
Bps	Bits per second
Dial-up access	<p>This refers to the way that a remote computer can access the Internet or another computer network. The computer makes a phone call to an access server and then sends data across the phone line to the access server which links it to the Internet.</p>
Dynamic ETSI	<p>See 'Bandwidth on Demand' above</p> <p>European Telecommunications Standards Institute – standardised body who produce telecommunications standards that are adopted throughout Europe and beyond.</p>
ISDN	<p>Integrated Services Digital Network – this is the service provided on the blue digital sockets. ISDN enables faster communication than ordinary analogue modems and also provides much quicker connection times, typically less than 3 seconds.</p>
ISP	<p>Internet Service Provider – This is the company that provides access to the Internet. They connect your phone call from your computer to the Internet.</p>
kbps	<p>Kilo bits per second – the units in which the speed of communication links are measured. <i>Note : there are eight bits in one byte of data.</i></p>
MLPPP	<p>Multi-link PPP – this is a way of combining two 64kbps ISDN connections into one 128kbps connection, for example to provide faster Internet access.</p>
PPP	<p>Point to Point protocol – this is the favoured method for carrying data between two computers over a dial-up connection.</p>
TA	<p>Terminal Adapter – this is the generic name given to ISDN equipment that is used by computers to connect over ISDN.</p>
TEI	<p>Terminal Endpoint Identifier – a unique value given to each piece of equipment connected to a digital line.</p>
USB	<p>Universal Serial Bus – this is a universally accepted standard for connecting peripherals to computers, such as printers, scanners and modems.</p>
V.120	<p>A transmission protocol that allows data to be carried between two computers over a dial-up connection.</p>
X.75	<p>A transmission protocol that allows data to be carried between two computers over a dial-up connection.</p>

Appendix

List of ISDN Disconnect Reasons

(Refer to “Verification of the D Channel Parameters” on page 28)

Reference: ETSI

- 1 Unallocated number**
You have dialled a number that doesn't exist – check that you have entered the number correctly.
- 2 No route to specified transit network**
- 3 No route to destination**
- 6 Channel unacceptable**
- 7 Call awarded and being delivered in an established channel**
- 16 Normal call clearing**
- 17 User busy**
The number you have dialled is busy.
If you are trying a Connection Test, check that no other phones connected to this line are in use.
- 18 No user responding**
If you are trying a connection test, check that you are dialling the correct number.
- 19 No answer from user (user alerted)**
If you are trying a connection test, check that you are dialling the correct number.
- 21 Call rejected**
- 22 Number changed**
The number you have dialled isn't recognised – check that the number hasn't changed and that you have input it correctly.
- 26 Non-selected user clearing**
- 27 Destination out of order**
- 28 Invalid number format**
Check that you have typed the phone number correctly and that you have not missed out any of the digits.
- 29 Facility Rejected**
- 30 Response to status enquiry**

31 Normal clearing, unspecified reason

34 No circuit or channel available

Either

- a) The number you have dialled is busy, or
- b) Both of your B-channels are busy.

If you are trying a Connection Test, check that no other phones connected to this line are in use.

38 Network out of order

41 Temporary failure

42 Switching equipment congestion

Network congestion. Please retry.

43 Access information discarded

44 Requested channel or circuit not available

47 Resources unavailable, unspecified reason

This can occur if the line is not communicating with the exchange.

- Try restarting your computer (after closing all applications and saving any data) and redialling.
- Check that the 'Service' LED is illuminated on the BT Digital Access USB unit. If necessary report the issue to your service operator.

49 Quality of service unavailable

50 Requested facility not subscribed

57 Bearer capability not authorized

58 Bearer capability not presently available

63 Service or option not available, unspecified reason

It is not possible for the network to complete the call you are trying to make. Check that you are not trying to dial using prefixes your line is not set up for.

65 Bearer capability not implemented

66 Channel type not implemented

69 Requested facility not implemented

70 Only restricted digital information bearer capability is available

79 Service or option not implemented, unspecified reason

81 Invalid call reference value

82 Identified channel does not exist

83 A suspended call exists, but this call identity does not

84 Call identity in use

85 No call suspended

86 Call having the requested call identity has been cleared

88 Incompatible destination

You dialled a phone number that is incompatible with the type of call you are making. For example, you may be trying to make a data call to an analogue phone, or a voice call to a computer that is expecting a data call. Check that you have typed the correct phone number.

If you are trying to carry out the connection test, check that you have entered the correct telephone number, not any of the analogue phone numbers.

The digital number is associated with the Blue sockets and should be written on the right-hand part of the label on the front of the BT Digital Access USB unit.

91 Invalid transit network selection

95 Invalid message, unspecified reason

96 Mandatory information element is missing

97 Message type non-existent or not implemented

98 Message not compatible with call state or message type non-existent or not implemented

99 Information element non-existent or not implemented

100 Invalid information element contents

101 Message not compatible with call state

102 Recovery on timer expiry

111 Protocol error, unspecified reason

127 Interworking, unspecified reason (unassigned) number