



Digital Satellite Internet PC Receiver
(External USB type)

Pent @ U

User's Guide

Pent@U

Pent@U © Copyright 1999

Pentamedia Co., Ltd. All right reserved. All other trademarks are the properties of their respective owners. Product specification and product availability are subject to change without notice.

PentaMedia Co., Ltd.

4Fl. Sooam Bldg. 66-1 Yangjae-Dong, Seocho-Ku, Seoul, Korea 137-130

Tel : +82-2-3463-3164

Fax : +82-2-3461-9486

Email : info@pentamedia.com

PentaMedia (Europe) Ltd.

Cedar House, Cedar Lane, Frimley, Camberley, GU16 5HY U.K.

Tel : +44 (0) 1276 675858

Fax : +44 (0) 1276 675959

Email : salesuk@pentamedia.com

http : www.pentamedia.com

Warranty

This PentaMedia product is warranted for the period of one year from the original date of purchase, against defective materials and workmanship. In the event that warranty service is required, customer should return the product to PentaMedia, authorized resellers or authorized service center.

Warranty Conditions

1. The warranty is valid only if, when warranty service is required, the warranty card is fully and properly completed and is presented with the original invoice or sales slip or confirmation, and the serial number on the product has not been defaced.
2. PentaMedia's warranty is limited to the reconditioning or, at its discretion, replacement of the product or the defective part.
3. Authorized parties of PentaMedia must carry out warranty reconditioning. No re-imbursement will be made for repairs carried out by non authorized parties of PentaMedia and, any such repair work and damage to the products caused by such repair work will not be covered by the warranty.
4. This product is not considered to be defective in materials nor workmanship by reason that it requires adaptation in order to conform to national or local technical or safety standards in force in any country other than the one for which the product was originally designed and manufactured. The warranty will not cover, and no re-imbursement will be made for such adaptation or any damage, which may result.
5. The warranty covers none of the followings:
 - a) Periodic check ups, maintenance and repair or replacement of parts due to normal wear and tear.
 - b) Cost relating to transport, removal or installation of the product.
 - c) Misuse, including the failure to use this product for its normal purposes or incorrect installation.

- d) Damage caused by Lightning, Water, Fire, Acts of God, War, Public Disturbances, incorrect main voltage or any other cause beyond the control of PentaMedia.
- 6. The warranty is valid for any person who legally acquired possession of the product during the warranty period.
- 7. During the applicable warranty period, the product returned to us or authorized parties by PentaMedia must be pre-authorized by us with a return material authorization no. Marked on the outside of package. Replacement or reconditioning for the product may be obtained by delivering the defective product accompanied by a copy of the dated proof of purchase, sent prepaid, insured, and packaged appropriately.

.....
Any part of this User's Guide can be deleted or modified by discretion of manufacturer without prior notice to any users.

Preface

Thank for choosing Pent@U - high speed External Satellite Receiver with standard USB interface.

This newly introduced product will bring a new experience to your PC life.

Nowadays, PC is becoming an important part of our daily life and a critical tool for our personal and business purposes. The introduction of Internet has brought innovation to satisfy your demands for information covering most of areas, and introduction of Pent@U will satisfy your demands for high speed download of big files and contents and it can be used for Internet, Multicasting, WEB casting, etc. Pent@U propuses an easy installation to use not only for PC users, but also for notebook PC users.

Content

Warranty	3
Preface	5
Content	6
1. Features & System - Parts	7
General Features	8
System Requirement	8
Packaged parts	8
2. Hardware Installation	9
How to Install	10
3. Software Installation	17
How to Install	18
4. Program Start	21
Main Program Screen	22
Tuner	22
New	25
Transponder	27
Exit	28
5. Setting-Up Internet	29
How to Configure Transponder	30
How to Configure Modem Connection ..	32
How to Setup Modem Connection	33



Chapter 1

Features & System Parts

General Features

1. Ability (To receive satellite broadcast and Internet data)

- Controllable satellite local frequency (950 MHz ~ 2150 MHz)
- Fine adjustment (0 MHz ~ 1.0 MHz)
- Symbol rate (2 MSPS ~ 45 MSPS)
- Viterbi rate - 1/2, 2/3, 3/4, 5/6, 7/8, Auto
- Band control (C, KU)
- LNB control (Hor, Ver)
- 22K On/Off
- DiSEqC 1.0

System Requirement

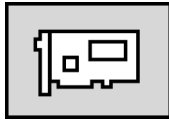
1. System requirement (Minimum requirement)

- IBM PC or compatible
- VGA card
- VGA monitor (Screen refresh rate more than 60 Hz is recommended)
- Windows 95(OSR2), 98
- Sound card (Optional)
- Speaker (Optional)

Packaged parts

1. Part

1. Pent@U Box
2. User's Guide
3. Program Install CD or Diskette
4. USB Cable
5. Ac Adapter (12V, 3A)



Chapter 2

Hardware Installation

How to Install

1. Turn off your PC.
2. Connect Pent@U with your PC using USB cable.
3. Connect AC adapter in Pent@U DC-IN port..
4. Install satellite dish antenna.

Make sure to connect satellite dish antenna cable to Pent@U's antenna connector as shown in *Figure1*. If you have antenna installation problem, please contact local dish distributor.

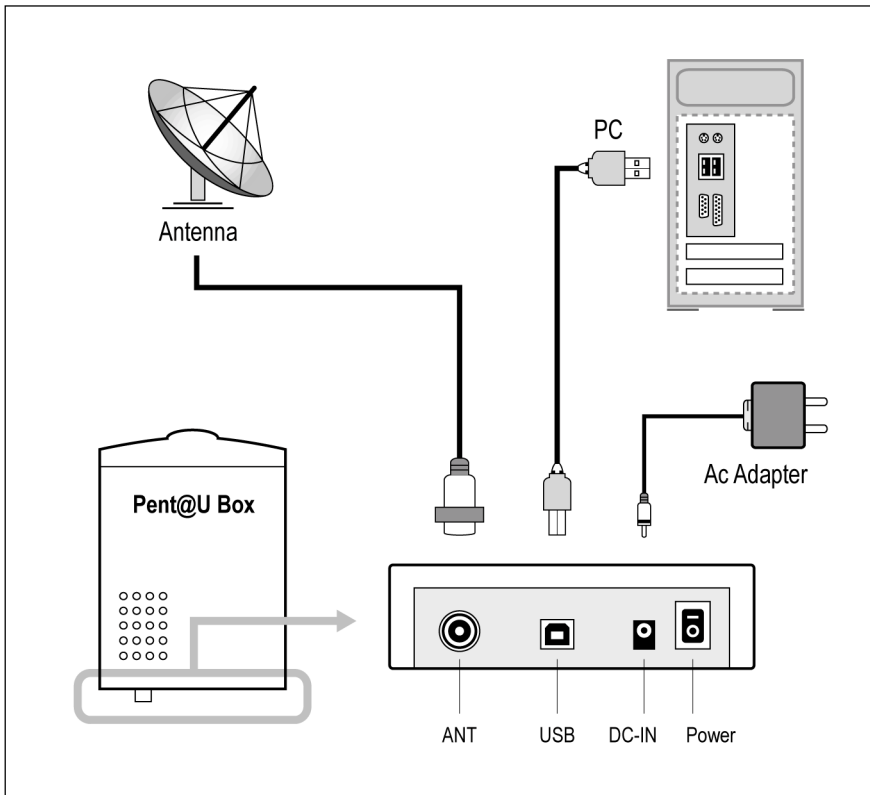


Figure1 - Typical Pent@U connection

5. When hardware installation is complete, turn on your PC.

6. Install USB driver.

1. Turn on your PC.
2. Turn on Pent@U Box. When you turn on Pent@U will appear **Add New Hardware Wizard** with *Pent@U USB Satellite Receiver* message, then click **Next**.



- Install HW 1

3. Next window is to search the driver for Pent@U. **Check on Search for the best driver for your device**, and click **Next**.



- Install HW 2

4. Next window is to search the driver. Please check on **Floppy disk drivers** and click **Next**. It start the search automatically.



- Install H/W 3

5. When search is well, it will appear **PMUSB0.INF**, then click **Next**.



- Install H/W 4

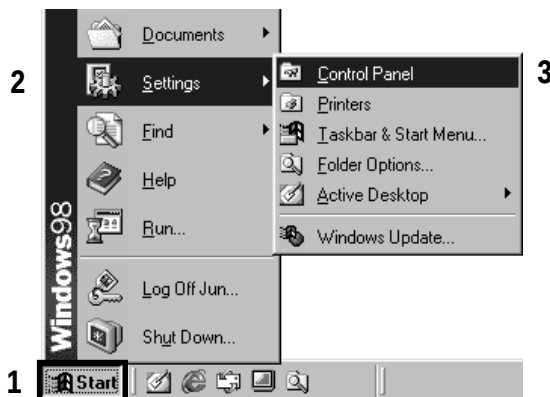
6. Now, PentaMedia USB Driver installation is complete, click **Finish**.



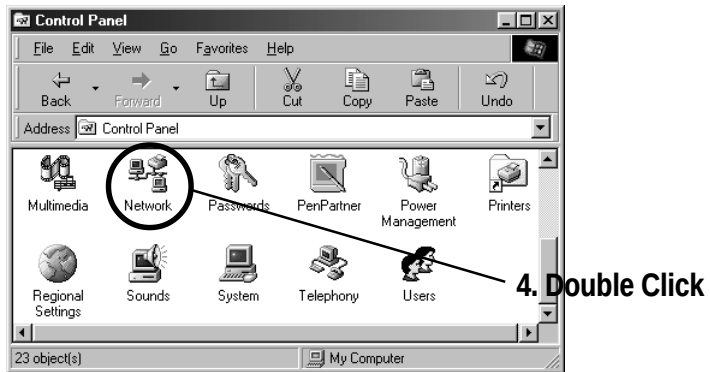
- Install H/W 5

7. Install in Network Pent@U USB Satellite NIC manually.

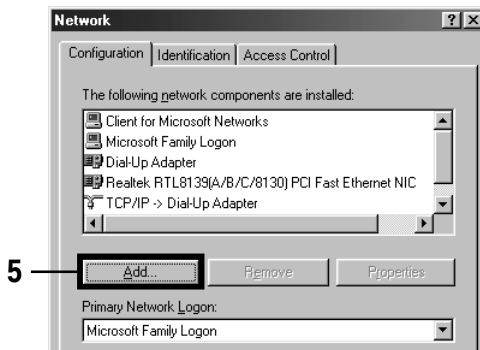
1. Click Start>Setting>Control Panel.



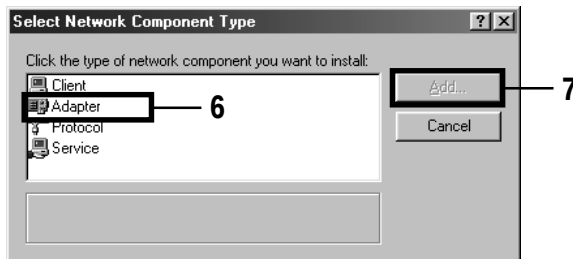
2. On Control Panel, double click **Network**.



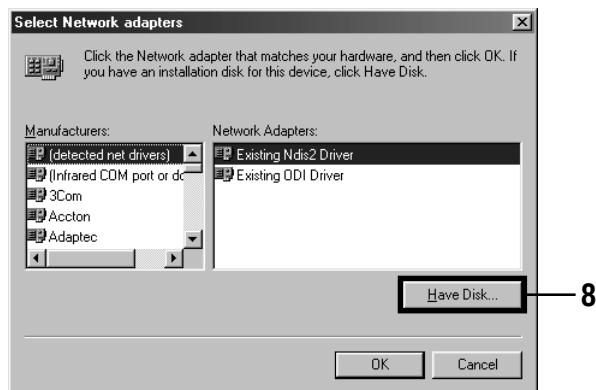
3. On **Network** window, click **Add**.



4. You can see Select **Network Component Type** window. Click on **Adapter** and click **Add** or double click on Adapter.



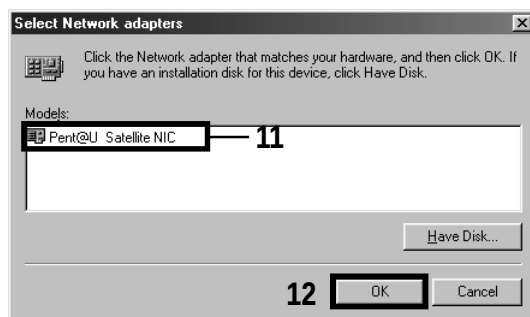
5. On **Select Network Adapters** window, click **Have Disk...** button.



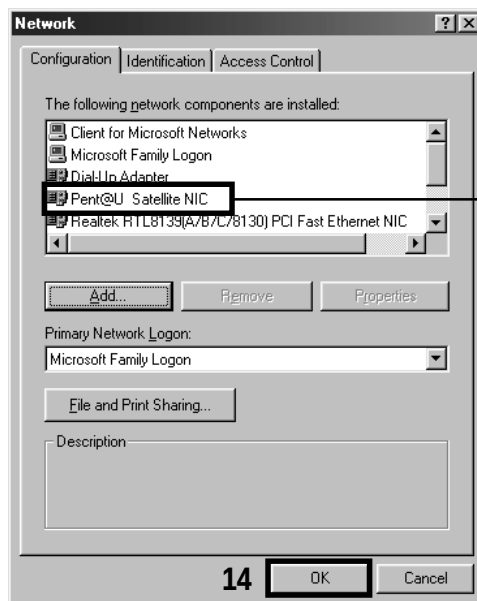
6. On **Install From Disk** window, you must indicate where can find driver.



7. When the search is completed, on **Select Network Adapters** window appear **Pent@U Satellite NIC**. Click on **Pent@U Satellite NIC** and click **OK**.



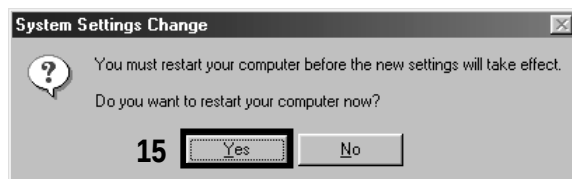
8. Now you can see on Network **Pent@U Satellite NIC**.



13. Check here

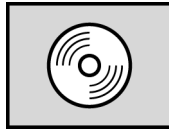
If you use
Windows 95(OSR2),
double click.

9. Network Adapter installation is completed, and PC restart automatically.



8. If you use Windows 95(OSR2), please do following settings:

1. Click **Start>Settings>Control Panel>Network**.
2. Double click **TCP/IP Pent@NET Satellite NIC**.
3. Select **Specify an IP address** and enter IP Address of **125.0.0.1** and Subnet Mask of **255.255.255.0**.



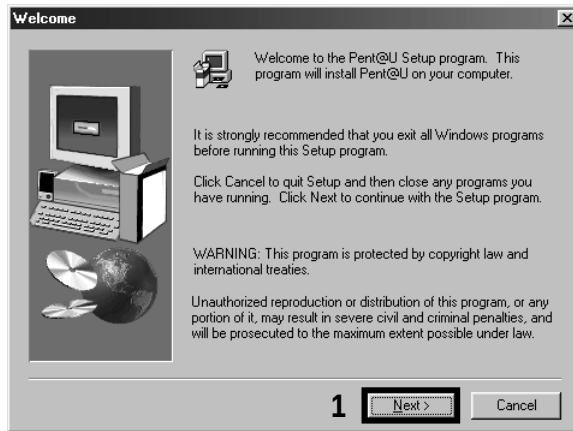
Chapter 3

Software Installation

How to Install

1. Installation

1. Insert installation disk on floppy drive and open file manager from start up menu.
2. Double click **setup.exe** from the file manager.



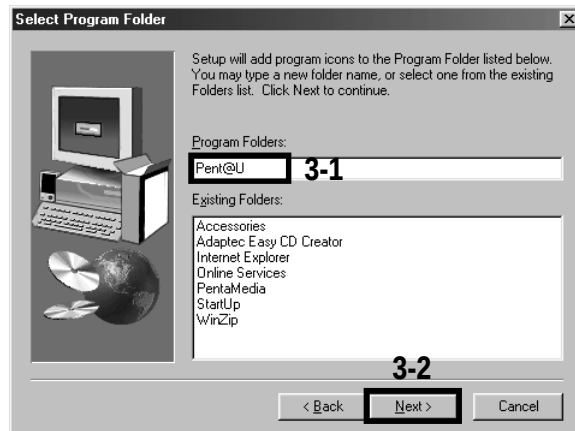
- Install S/W 1

3. To install to this folder, click **Next**. If you want to install to a different folder, click **Browse**.



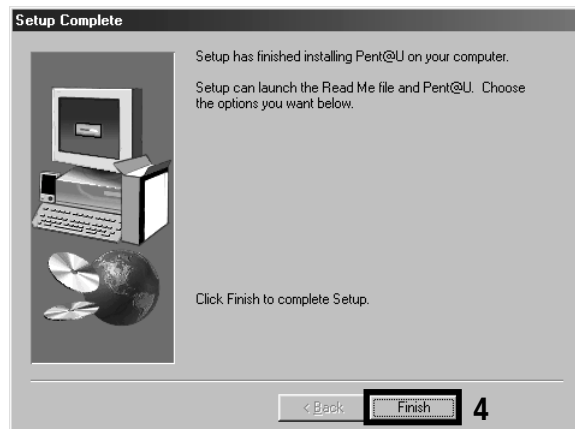
- Install S/W 2

4. Type new name in Program Folder to change folder name. If you want to select default name, click **Next** button.



- Install S/W 3

5. Now, your computer is copying all necessary programs into the hard disk drive.
6. The installation is complete automatically.

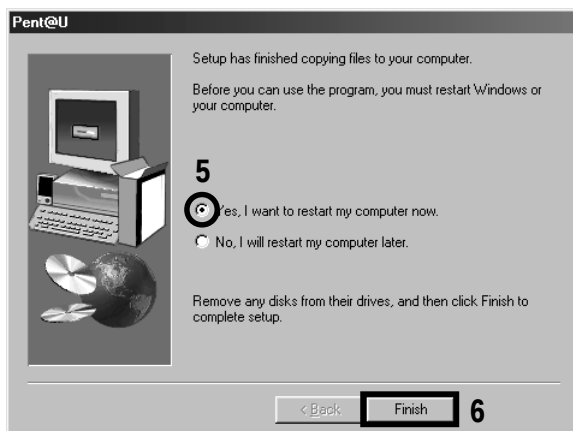


- Install S/W 4

7. After finishing installation, its basic directory structure is as follows;

```
C:\Program Files\Pent@U\Pent@U.exe  
    \AviaGTX.img  
    \Uninst.isu  
    \XX.dll  
    \Satconnect.exe
```

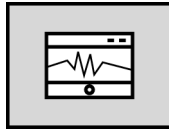
8. The Program restarts your PC automatically when it finishes to install.



- Install S/W 5

9. Start program

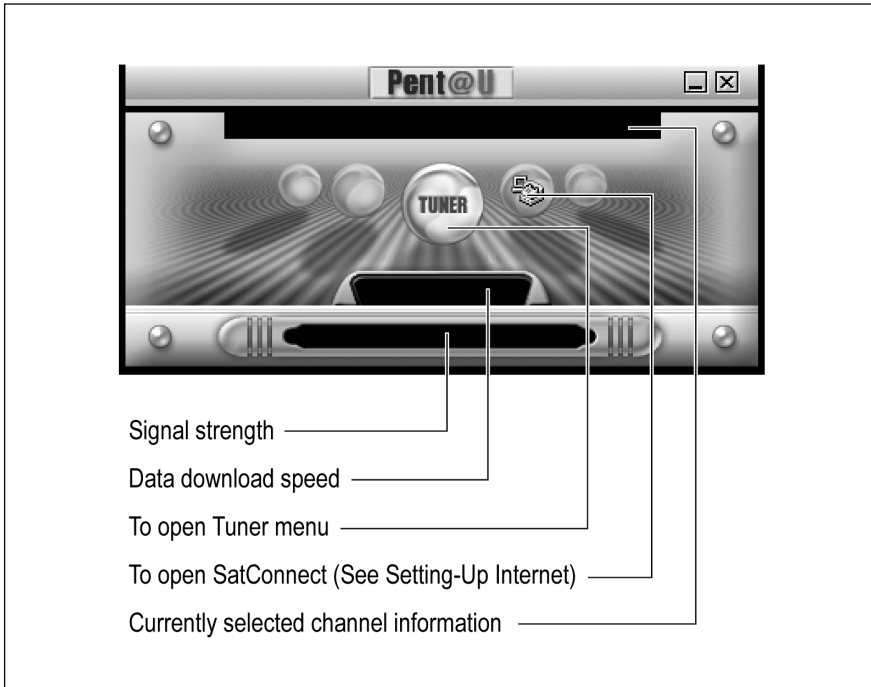
- 1) Click **Start>Program>PentaMedia>Pent@U VerX.XX** or,
- 2) Click **Start>Run**, then type
C:\Program Files\Pent@U\Pent@U.exe.



Chapter 4

Program Start

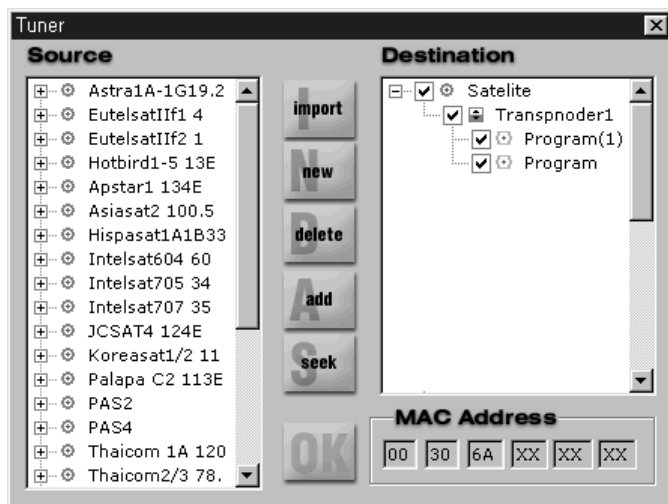
Main Program Screen



Pent@U main screen

Tuner

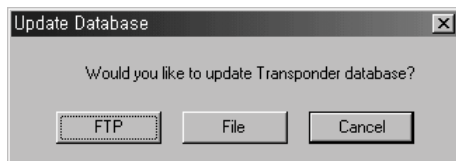
This dialogue box contains all the information of database regarding satellites, transponders and available channels. You can see transponders by clicking + as sub-directories. Also you can make enable and disable satellites, transponders and channels by checking marks with mouse.



1. Import (Currently not providing)

To use this function, your modem should be able to be connected to your **ISP**. If you are LAN user, you are ready to use it.

Once you click this button, following message will be shown.



1. FTP

Once you press this button, your computer will be connected to **www.pentamedia.com** and **import.dtb** file will be downloaded from PentaMedia server. While downloading satellite transponder database will be updated automatically.

2. File

If you deleted satellite/transponders on purpose or by accident and you want to bring it back, press this button. Last updated import.dtb files will be copied. This function is available only once you downloaded database using FTP command at least once.

3. Cancel

To cancel database update.

2. New

This button is to register new satellite or transponder. You can make new satellite and transponders name.

3. Delete

This button is to delete registered channel/transponder.

4. Add

This button is to add selected satellites or transponders to Destination window.

5. Seek

This button is to receive channel information from the selected transponder after locking Tuner. You can seek all transponders when you put cursor on satellite name of Destination window and you can stop Seek function by pressing **Stop** while seeking is in progress.

6. MAC (Media Access Control) Address

Address assigned for reception of satellite Internet service. You can filter IP frames with a particular address.

7. Symbol explanation



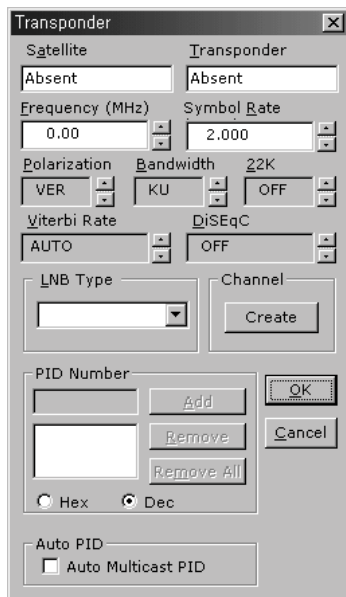
: Satellite



: Transponder

New

This program is to register new broadcasting channel into database.



The screenshot shows a 'Transponder' configuration window with the following fields and controls:

- Satellite:** Text field containing 'Absent'.
- Transponder:** Text field containing 'Absent'.
- Frequency (MHz):** Spin box set to 0.00.
- Symbol Rate:** Spin box set to 2,000.
- Polarization:** Spin box set to 'VER'.
- Bandwidth:** Spin box set to '22K'.
- Viterbi Rate:** Spin box set to 'AUTO'.
- DiSEqC:** Spin box set to 'OFF'.
- LNB Type:** A dropdown menu.
- Channel:** A button labeled 'Create'.
- PID Number:** A list box with two empty slots, and buttons 'Add', 'Remove', and 'Remove All' to its right.
- Radio buttons:** 'Hex' and 'Dec' (selected).
- Auto PID:** A checkbox labeled 'Auto Multicast PID'.
- Buttons:** 'OK' and 'Cancel' buttons are located on the right side of the window.

1. Satellite

This box is to register new satellite name into database. If you type same satellite name and add new transponder, it will be registered as a transponder of the same satellite.

2. Transponder

This box is to register new transponder name into database.

3. Frequency

This box is to register frequency of new channel into database.

4. Symbol rate

This box is to register symbol rate of new channel into database.

5. Polarization

This box is to register polarization of new channel into database.

6. Bandwidth

This box is to register frequency of new channel into database. You can select **C** or **Ku** band.

7. 22 K

This box is to register 22 KHz tone of new channel. You can select ON or OFF.

8. Viterbi rate

This box is to register Viterbi rate of new channel. If you select AUTO mode, it can detect Viterbi rate automatically.

9. DiSEqC 1.0

This box is to set DiSEqC controller input port.

10.LNB type

This box is to register local LNB type.

11.Channel

This box is to create new channel.

12.PID Number

Enter PID number (hex, dec) provided by your Internet service provider and use **Add/Remove/Remove All** to register PID numbers into database to get Internet data or multicast stream. Click **Hex** if PID number is Hexadecimal, also click **Dec** if PID number is Decimal.

13.Auto PID

This box is for only Multicast filtering of **European Online** (EOL) Internet service user.

Transponder

This chapter describes how to set transponder using Transponder dialogue box.

1. Satellite

This box shows currently selected satellite name.

2. Transponder

This box shows currently selected satellite transponder name.

3. Frequency

This box is to set RF frequency of transponder.

4. Symbol rate (Symbol range: 2 MSPS ~ 45 MSPS)

This is used to make very fine adjustment of symbol rate.

5. Polarization

To select polarity of horizontal and vertical LNB.

6. Bandwidth

For selecting **C** band or **KU** band.

7. 22 K

For selecting the 22 K ON or OFF function.

8. Viterbi rate

For selecting 1/2, 2/3, 3/4, 5/6, 7/8, or AUTO Viterbi rate function.

9. DiSEqC 1.0

For DiSEqC 1.0 Supporting.

10.LNB type

This is for selecting None, 9.30 GHz, 9.75 GHz, 10.0 GHz, 10.6 GHz, 10.75 GHz, 11.30 GHz, Universal. It is set to **None** for C-band LNB.

If you do not find LNB type for Ku-band from the list box, select None and enter calculated IF value by below equation into Frequency column manually;

IF = RF-LNB local frequency

RF is radio frequency emitted by the satellite you use. IF value should be in the range of 950 MHz ~ 2150 MHz.

11.Channel

It is to create new channel manually.

12.PID Number

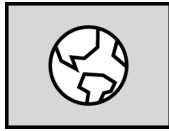
Enter PID number (hexadecimal) provided by your Internet service provider and use **Add/Remove/Remove All** to register PID numbers into database, or remove it out of database. Click **Hex** if PID number is in Hexadecimal, also click **Dec** if PID number in Decimal.

13.Auto PID

This box is for only Multicast filtering of **European Online** (EOL) Internet service user.

Exit

To exit Pent@U, click **Exit** or **ALT+F4** key.



Chapter 5

Setting-Up Internet

How to Configure Transponder

You can not use satellite without subscription to a satellite Internet service. For more detail installation, please contact with your **ISP** (Internet Satellite Provider).

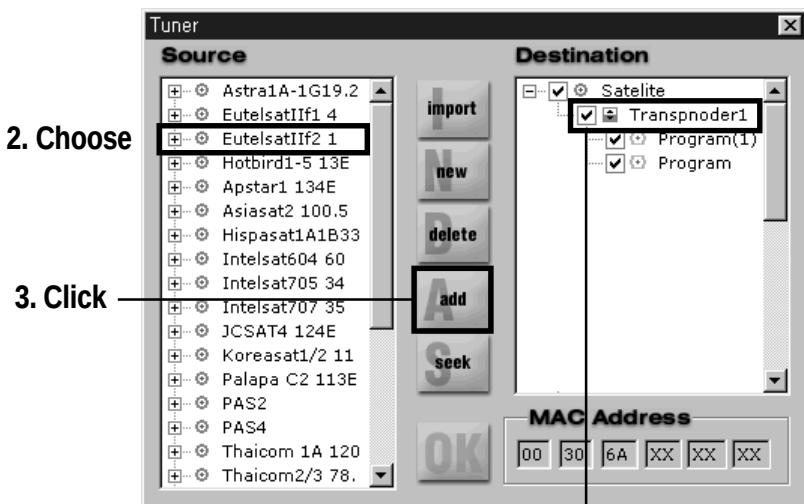
1. Insert PID on Transponder that you have selected.

1. Run Pent@U program.



1. Click

2. Click **TUNER** icon.



2. Choose

3. Click

4. Double click

3. Select satellite and click **ADD**.

You can select satellite or only the sub channels of transponder you want to use.

4. Double click selected transponder for data broadcasting.

5. Please type **PID** number, which is provided by your ISP, on Transponder dialogue box that the Internet data is carried. Then press **OK**.

5. Type PID NO.

6. Please click **OK** on Tuner window.

2. Access Internet

When you can see the name of satellite and data or channel service provider, now you can access Internet.

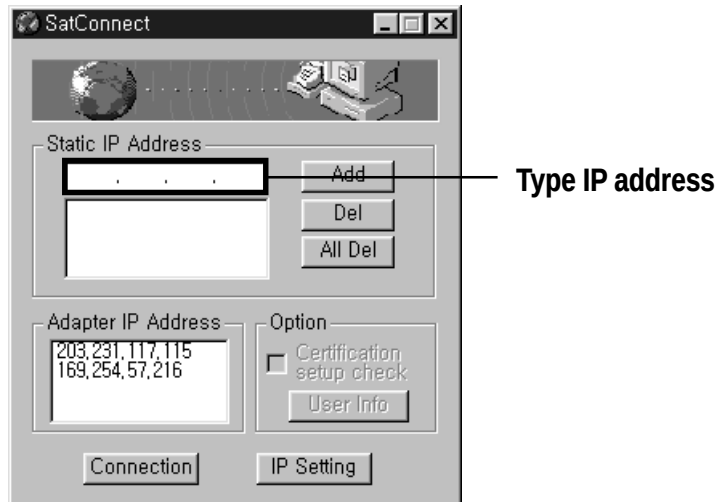
How to Configure Modem Connection

IMPORTANT : This connection program is only for **Europe IP filtering user**.

Mac filtering user does not need to use it.

1. Satconnect.exe

1. Run Pent@U program.
2. Click **Telephone call** icon.
3. Now you can see **SatConnect**. This window is to help to connect with Internet satellite provider.



4. Insert **IP address**.

you can put in various IP address of respective services.

This service is only for IP filtering user.

5. When you have finished inputting all of data, you can start Internet.

To setup modem connection, see 'How to Setup modem connection'.

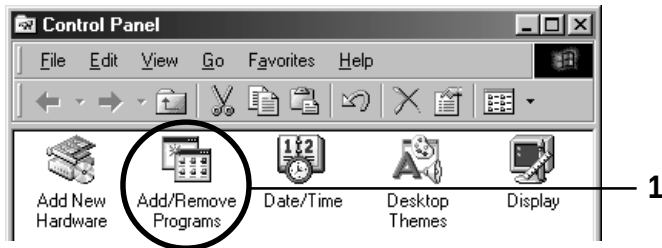
How to Setup Modem Connection

This process shows establishment of modem connection to service provider with high-speed data broadcasting services.

1. Dial_Up Networking

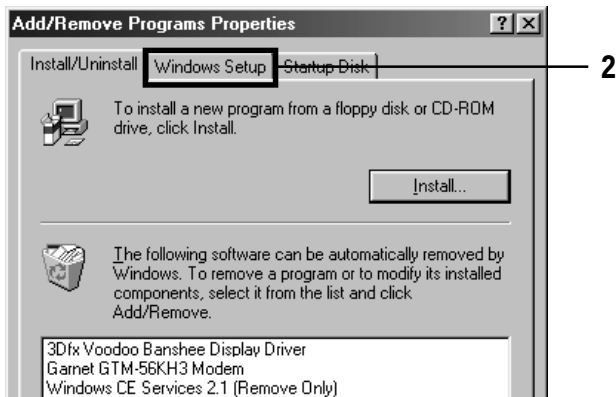
If Dial_Up Networking has not been installed in your system, install **Dial_Up Networking** as follows. If it has been installed, go **No.2.**

1. Click **Start> Setting> Control Panel.**

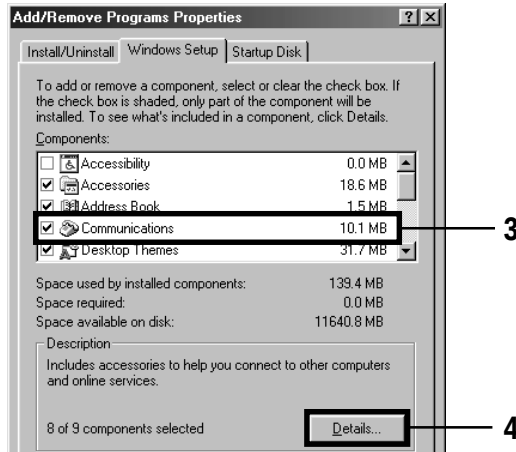


2. Double click **Add/Remove Programs** icon.

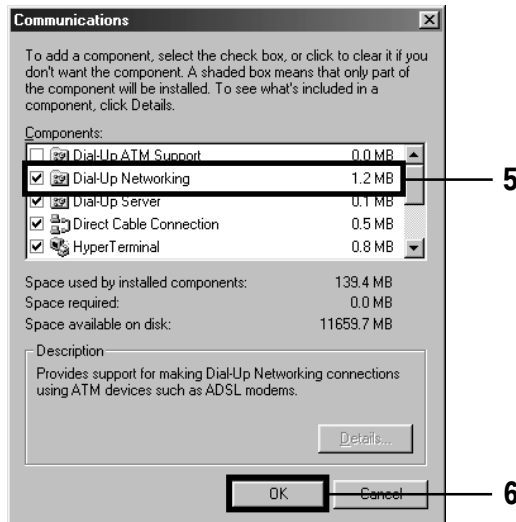
3. Click **Windows Setup**.



4. Click **Communications** and **Details**.



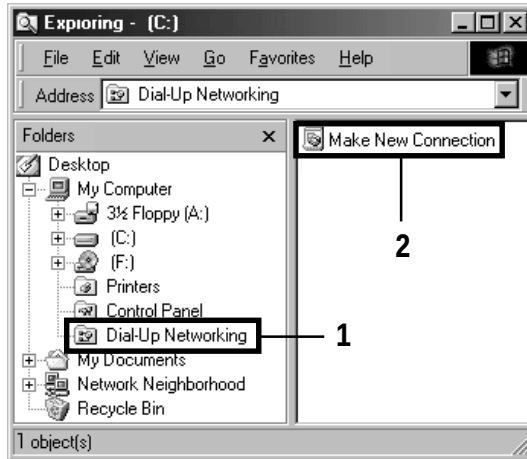
5. Check **Dial_Up Networking** and click **OK** to confirm.



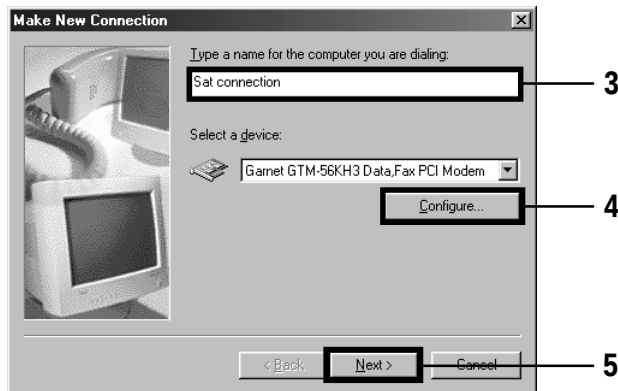
6. At last, **Dial_Up Networking** is installed on your PC. Now, you can utilize **Make New Connection** contained in Dial_Up Networking folder.

2. Make New Connection

1. Click **Start>Programs>Windows Explorer**.



2. Click **Dial-Up Networking** and double click **Make New Connection** at the next frame.

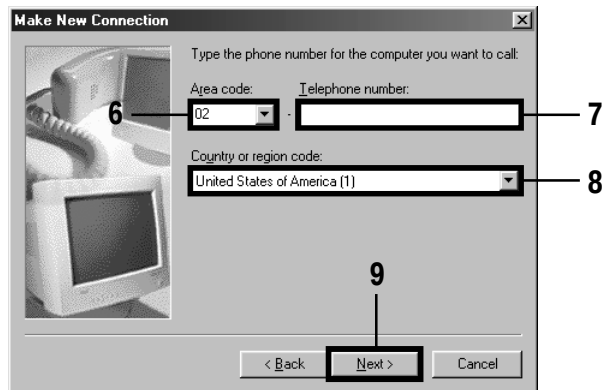


3. Type the name of service provider that you want to be connected.

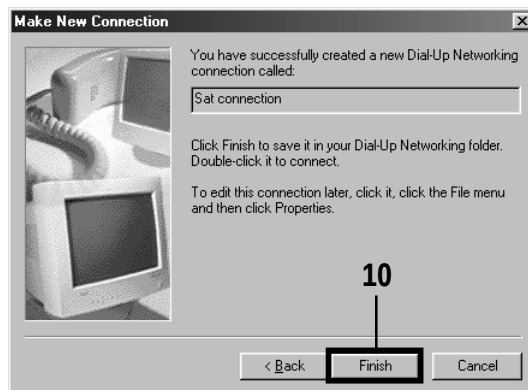
4. To select modem, Click **Configure**.

5. When you have selected the modem, click **Next**.

6. Input **Area code**, **Telephone number** and **Country code** of the service provider. Then click **Next**.



7. Click **Finish** after confirming the message displayed on the box.



3. Start Internet

1. Double click Pent@U icon.
2. Start modem connection with your satellite Internet service.
3. When modem connection is done, you can surf with Internet browser.

FCC RF

INTERFERENCE STATEMENT

NOTE :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment,

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.