PentaMedia
DIGITAL MEDIA SOLUTION

Digital Satellite Internet PC Receiver

Pent@VALUE

User's Guide

Pent@VALUE

Pent@VALUE © Copyright 2001

PentaMedia Co., Ltd. All rights 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.

H.Q 4Fl. Sooam Bldg. 66-1, Yangjae-dong,
Seocho-gu, Seoul, Korea 137-130
Tel : +82-2-3463-3164
Fax : +82-2-3461-9486

Factory 407, D-dong, Technopark, 151,
Yatap-dong, Bundang-gu, Sungnam-si,
Kyunggi-do, Korea 463-070
Tel : +82-31-706-6524,6534
Fax : +82-31-701-6539

Email **:** sales@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@VALUE - high speed PC satellite data receiving card.

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@VALUE will satisfy your demands for high speed download of big files and contents and it can be used for Internet, Multicasting, WEB casting, etc.

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

Preparation for Driver Installation 10

Windows 98/SE/ME 11

Window 2000 18

3. Software Installation 27

How to Install 28

4. Program Start 31

Main Program Screen 32

About 32

Tuner Information 32

Tuner 33

Transponder 35

Tray Icon 38

Exit 38

5. Setting-Up Internet 39

How to Set up Modem Connection 40

Transponder Setting for Multicast..... .44

Transponder Setting for Satellite Internet ..46

Windows 2000 Note 48

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

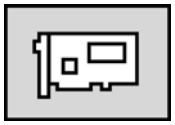
1. System requirement (Minimum requirement)

- IBM PC or compatible (Celeron 300MHz or above)
- VGA card
- VGA monitor (Screen refresh rate more than 60 Hz is recommended)
- Windows 98, SE, ME, 2000

Packaged parts

1. Part

1. Pent@VALUE board
2. User's Guide
3. Program Install CD or Floppy Disk



Chapter 2

Hardware Installation

Preparation for Driver Installation

1. Turn off your PC.

2. Plug in Pent@VALUE board into your PC.

Open your computer box and plug in Pent@VALUE board into any empty PCI slot.

3. Install satellite dish antenna

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

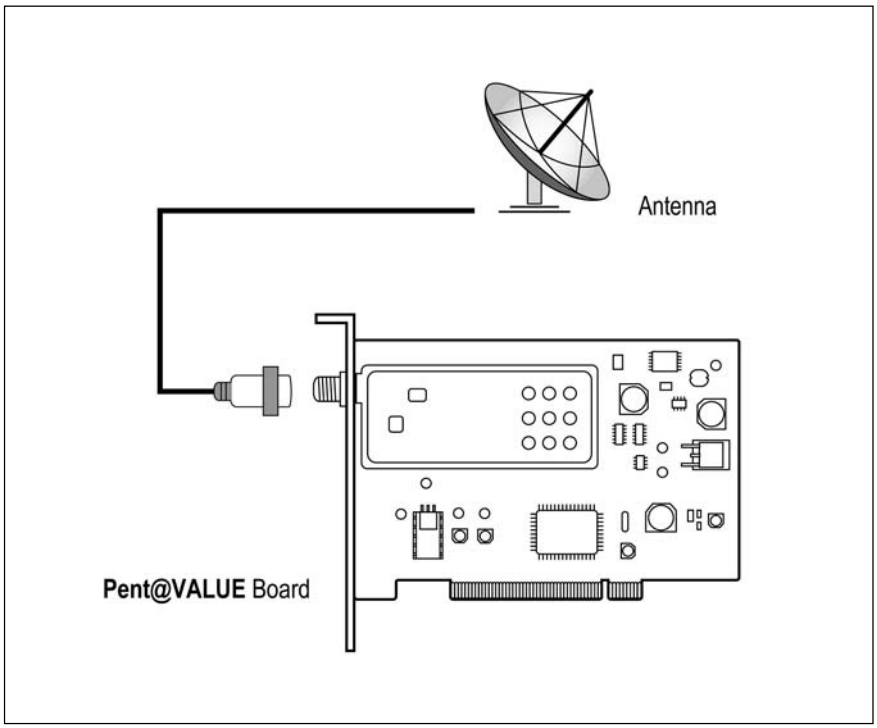


Figure1 - Typical Pent@VALUE connection

Window 98/SE/ME

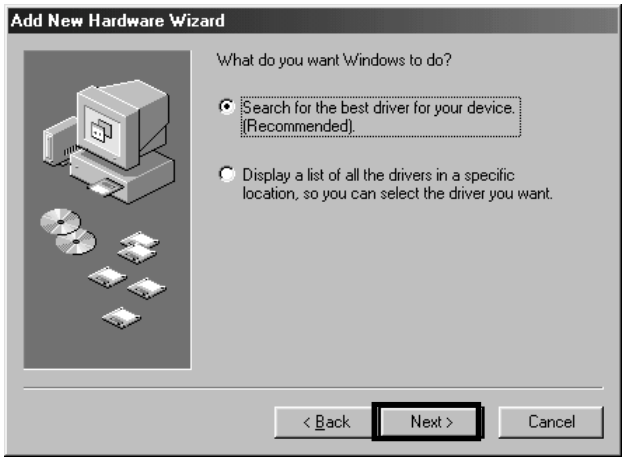
1.Pent@VALUE Driver Installation

(1)Pent@VALUE WDM DVB Processor driver installation

1) Windows will check new hardware and ask for the driver

2) Click [Next]

3)Select "Search for the best ...." and click [Next].



4) Insert installation CD or Floppy disk, and click [Next].

5) After detecting the driver, click [Next].

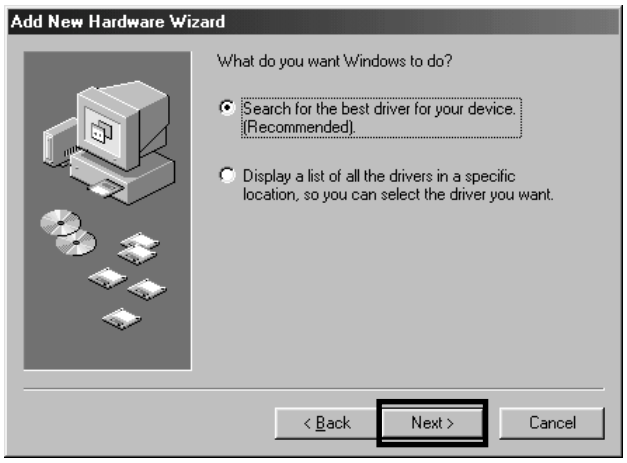
6) After copying all the driver files, click [Finish].

2.Pent@VALUE Satellite NIC Driver Installation

1) Windows will ask for the driver.

2) Click [Next]

3)Select "Search for the best..." and click [Next].



4) Insert installation CD or Floppy Disk, and click [Next].

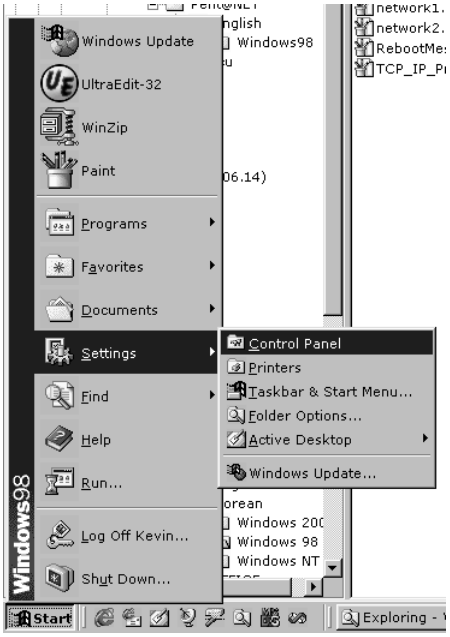
5) After detecting the driver, click [Next].

6) After copying all the driver files, click [Finish].

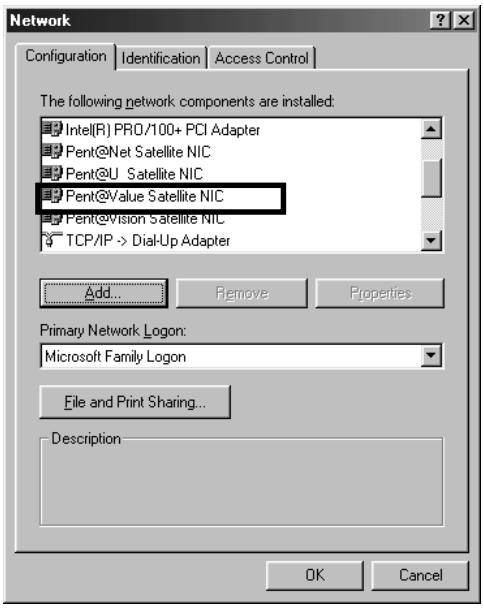
7) After successful installation of driver, click [Yes] for reboot.

2.Check Pent@VALUE driver installation

To confirm whether driver is successfully installed or not, go to S**ettings>Control Panel>Network** and check whether **Pent@VALUE Satellite NIC** is there as following picture.



Control Panel
File Edit View Go Favorites Help
Address Control Panel
Accessibility Options
Add New Hardware
Add/Rem... Programs
Date/Time
DirectX
Display
Fonts
Gaming Options
Internet
Keyboard
Modems
Mouse
Multimedia
Network
ODBC (32bit)
Passwords
Power Managem...
Printers
1 object(s) selected
My Computer


Network
Configuration
Identification
Access Control
The following network components are installed:
Intel(R) PRO/100+ PCI Adapter
Pent@Net Satellite NIC
Pent@U Satellite NIC
Pent@Value Satellite NIC
Pent@Vision Satellite NIC
TCP/IP -> Dial-Up Adapter
Add...
Remove
Properties
Primary Network Logon:
Microsoft Family Logon
File and Print Sharing...
Description
OK
Cancel

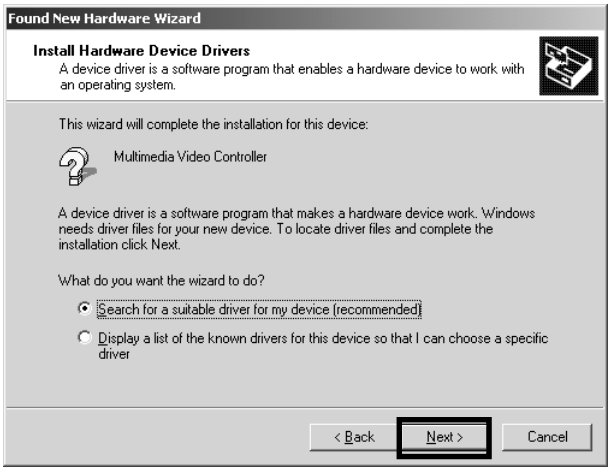
Windows 2000

1.Pent@VALUE Driver Installation

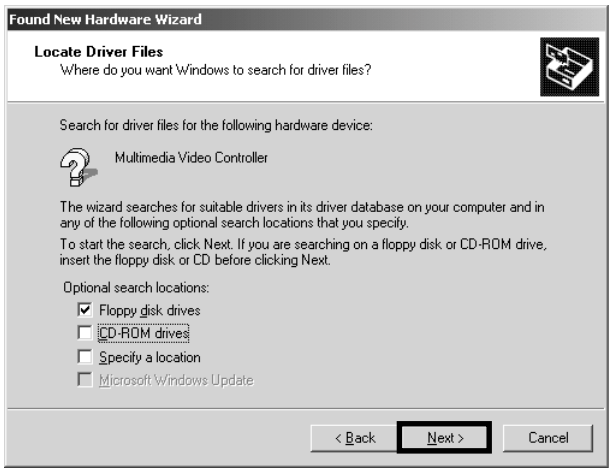
(1) Pent@VALUE WDM DVB Processor Driver Installation.

1)Click [Next]

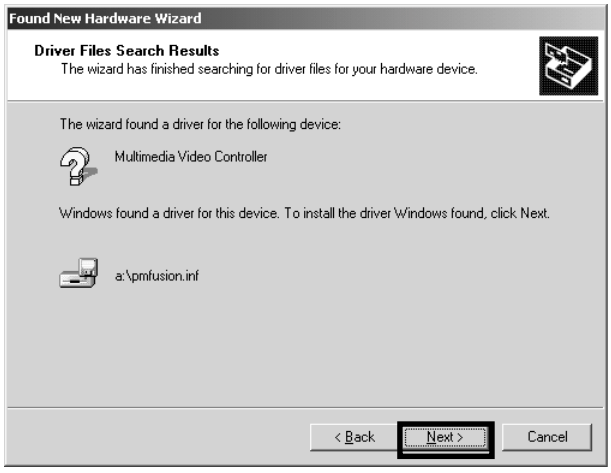
2) Select "Search For a suitable driver.." and click [Next].



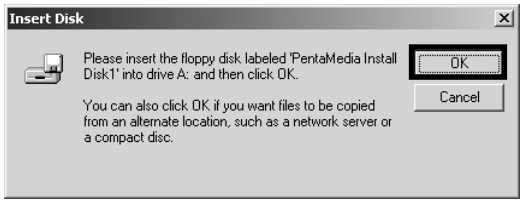
3) Insert installation CD or Floppy disk and click [Next].



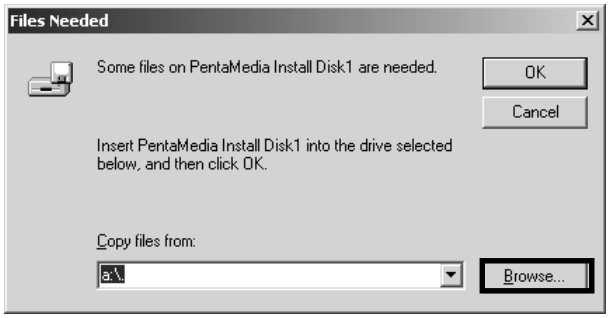
4) After detecting the drive, click [Next].



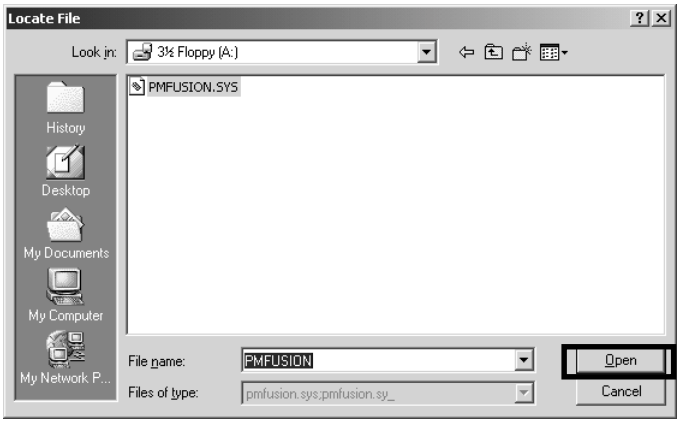
5) Click [OK].



6) Click [Browse].



7) Select the file and click [Open].

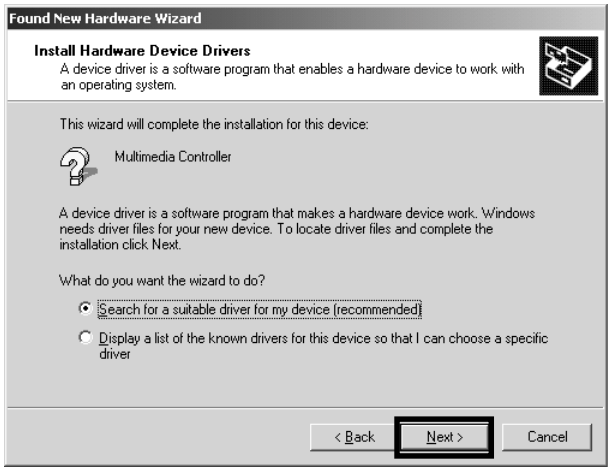


8) If DWM DNB processor was successfully installed, you will see the following dialogue box.

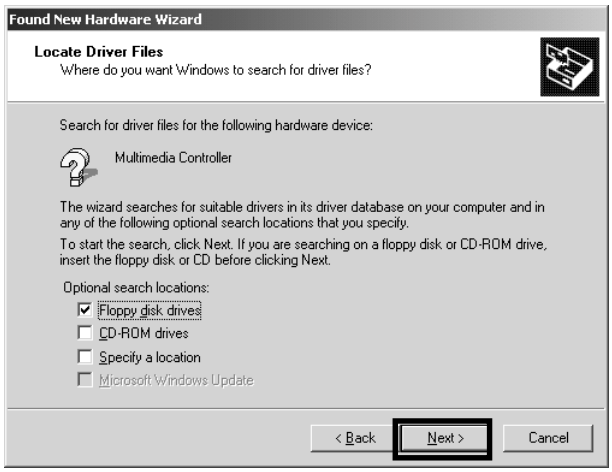
2.Pent@VALUE Satellite NIC Driver Installation.

1) Click [Next]

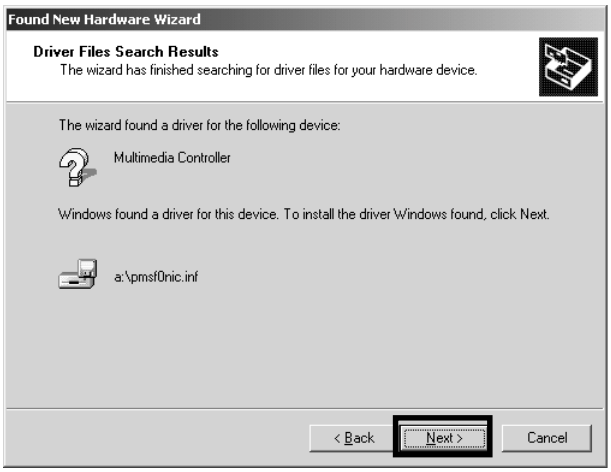
2) Select “Search for a suitable driver...” and Click [Next].



3) Insert installation CD or Floppy disk and click [Next].



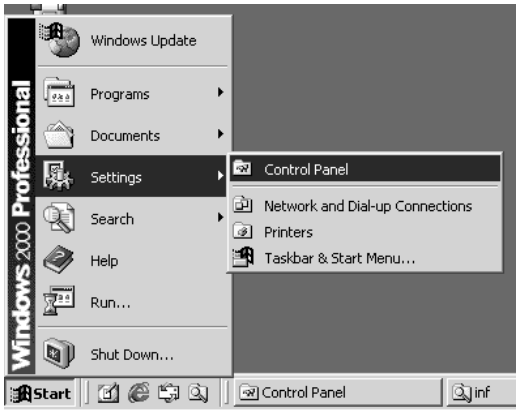
4) After detecting the drive, click [Next].

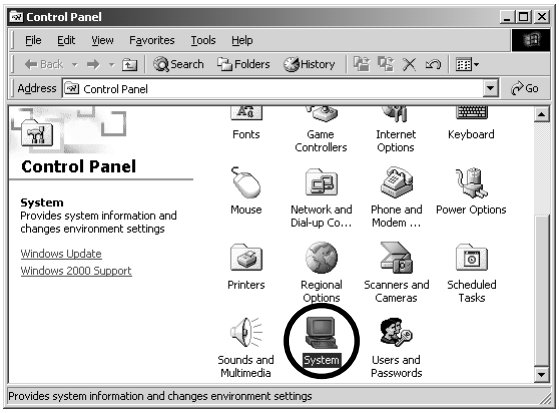


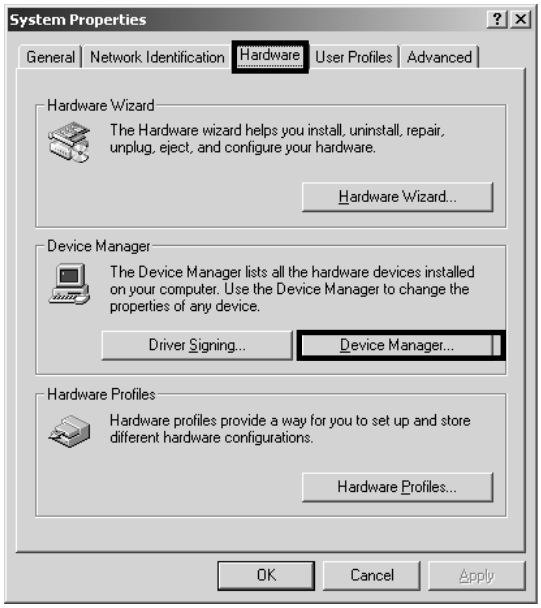
5) If driver was found successfully, you will see following dialogue box.

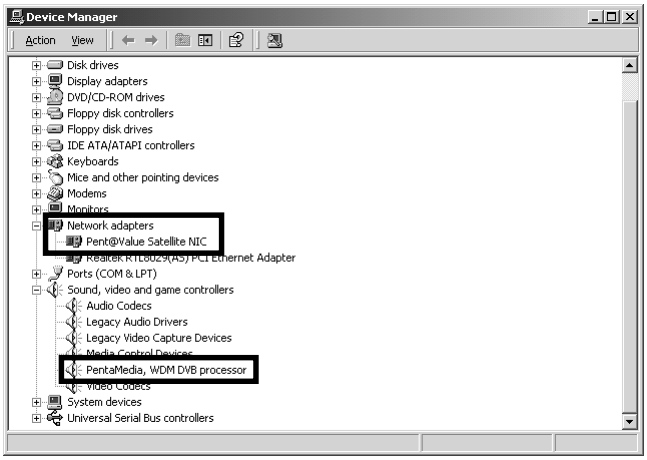
2. Check Pent@VALUE driver installation

To confirm whether driver is successfully installed or not, go to **Settings ->Control Panel ->System ->Hardware ->Device Manager** and check whether **Pent@VALUE Satellite NIC** and **PentaMedia WDM DVB Processor** are there as following picture.






System Properties
General
Network Identification
Hardware
User Profiles
Advanced
Hardware Wizard
The Hardware wizard helps you install, uninstall, repair, unplug, eject, and configure your hardware.
Hardware Wizard...
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Driver Signing...
Device Manager...
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles...
OK
Cancel
Apply


Device Manager
Action
View
Disk drives
Display adapters
DVD/CD-ROM drives
Floppy disk controllers
Floppy disk drives
IDE ATA/ATAPI controllers
Keyboards
Mice and other pointing devices
Modems
Monitors
Network adapters
Pent@Value Satellite NIC
Ports (COM & LPT)
Sound, video and game controllers
Audio Codecs
Legacy Audio Drivers
Legacy Video Capture Devices
PentaMedia, WDM DVB processor
System devices
Universal Serial Bus controllers

Digital Satellite Internet PC Receiver

Pent@VALUE User's Guide

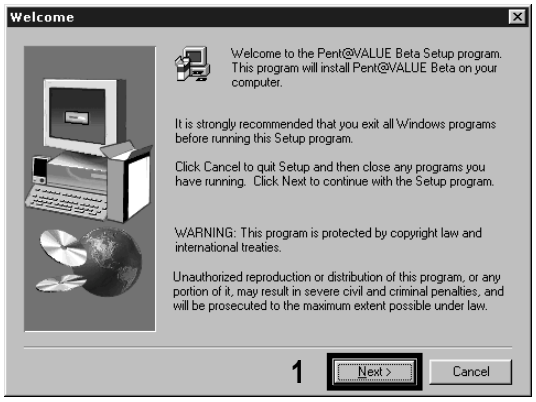
Chapter 3

Software Installation

How to Install

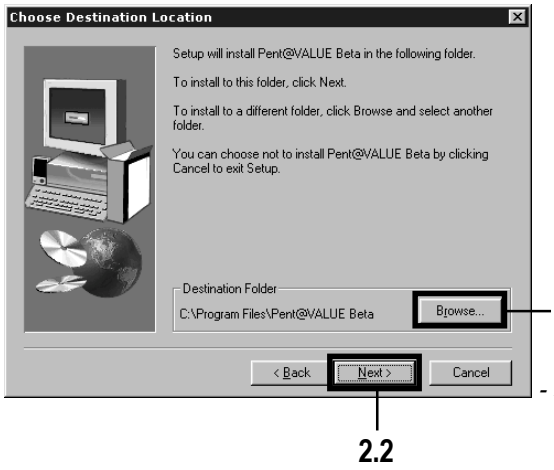
1. Installation

1. Insert installation Floppy disk or CD and open File manager from start up menu.
2. Double click **setup.exe** from File manager.



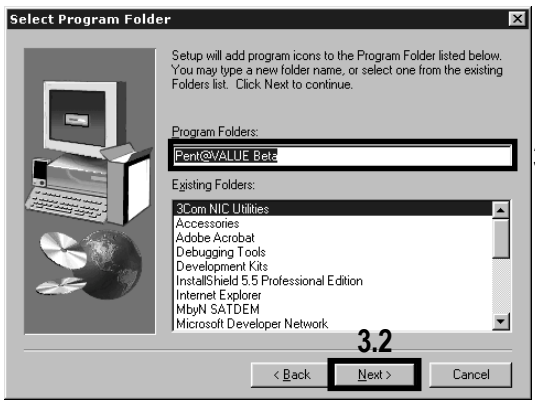
- Install program 1

3. Click **Next** to install to default folder**.** If you want to install to a different folder, click **Browse**.



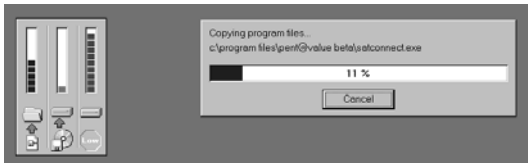
- Install program 2

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



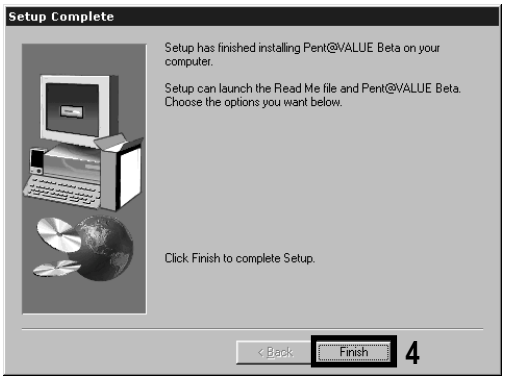
- Install program 3

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



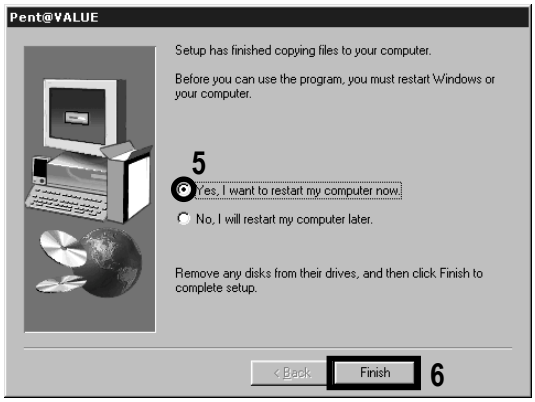
- Install program 4

6. Click **Finish** to complete installation.



- Install program 5

7. After finishing installation, program will ask to restart your computer. Choose **Yes** and click **Finish**.



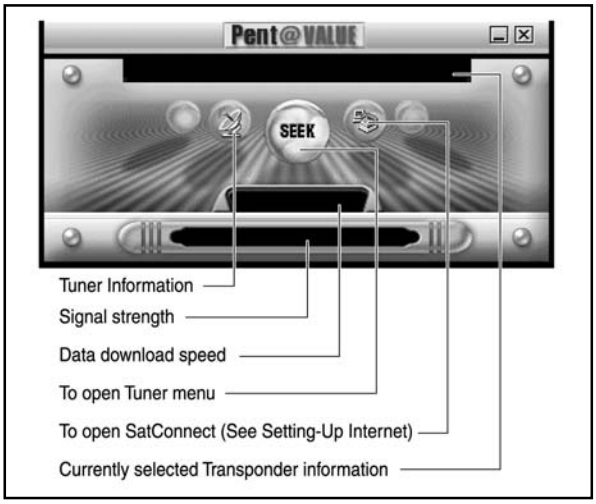
- Install program 6

8. To Start program
   1) Click **Start>Program>PentaMedia>Pent@VALUE X.XX**
   2) Click **My Computer Icon** on the Desktop.
      C:\Program Files\Pent@VALUE X.XX\Pent@VALUE.exe.
   3) Click **Pent@VALUE X.XX** in Windows Desktop.

Chapter 4

Program Start

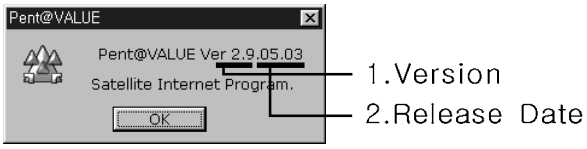
Main Program Screen



Pent@VALUE main screen

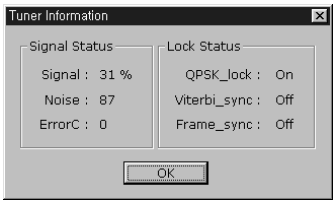
About

It shows Version number and release Date.



Tuner Information

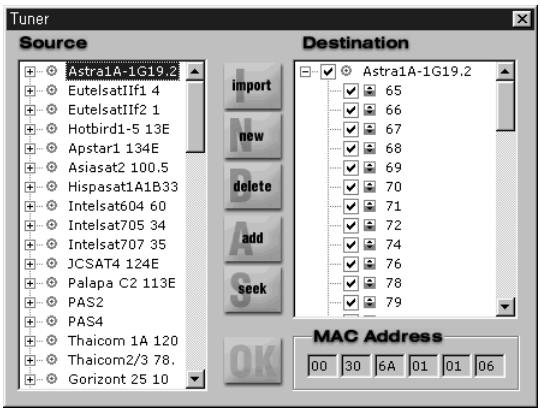
This dialog box shows tuner information.



Signal:The quality of the signal.
Noise:The noise component of the signal.
ErrorC:The number of error data-byte.
QPSK_lock:Whether the QPSK demodulator is phase locked or not.
Viterbi_sync:Whether the Viterbi decoder has successfully established byte-synchronization or not.
Frame_sync:Whether the FEC chip has successfully established word sync and frame or not

Tuner

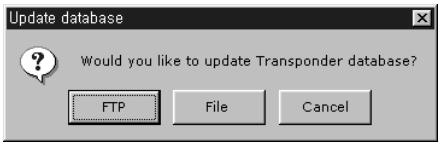
This dialogue box contains all the information of database regarding satellites, transponders. You can see transponders by clicking + as sub-directories. Also you can make enable and disable satellites, transponders by checking marks with mouse.



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**

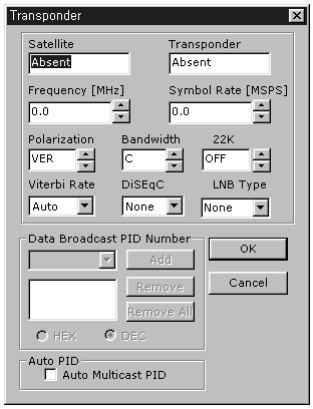
   The Satellite/Transponder database will be updated by last downloaded import.dtb file.

3. **Cancel**

   To cancel database update.

2. New

This button is to add new transponders. Input new transponder infomation on the dialogue box emerging while you click the button. If you close the dialogue box after finishing the input, the new transponder will be added to the Source.



3. Delete

This button is to delete registered satellite/transponder.

4. Add

You can seek transponder only in the Destination. Therefore you need to add satellites or transponders in the Source to the Destination. For the above, you use this button. If you select satellite or transpon-

der and click this button, satellite and transponder will be added to the Destination.

5. Seek

This button is to seek the selected transponder after locking Tuner. You can seek only one transponder.

6. MAC (Media Access Control) Address

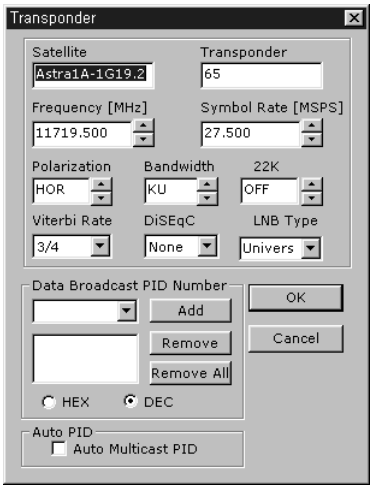
Address assigned for reception of satellite Internet service. You can filter MAC frames with a particular address.

7. Symbol explanation

: Satellite : Transponder

Transponder

This chapter describes 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.

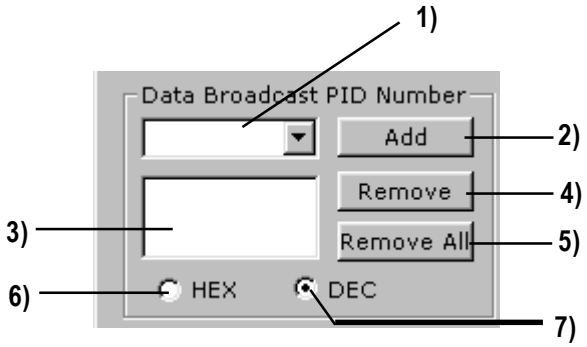
10.LNB type

In case LNB is for C band, select None. In case LNB is for KU band and value is specified in the following list, select value. If there does not exist your specified LNB value, select None in the LNB list, and re-set frequency (IF) using the following fomula;

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.PID Number

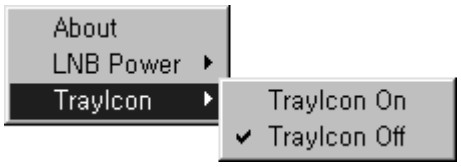


1) Type or select your PID.
2) Click [ADD]
3) List of PIDs of the service
4) Remove selected PID
5) Remove all PIDs in the list box
6) PID value is in Hex
7) PID value is in Dec

12.Auto PID

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

Tray Icon



Make / Delete tray icon.

If you select "Tray Icon On", Icon will be made on Tray Bar placed in right-bottom. In the state of receiving data from satellite, Tray Icon keeps revolving as much as 90° clockwise.

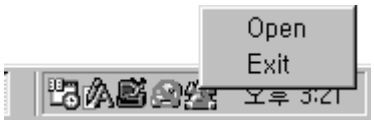
Exit

1. In case, Tray Icon doesn't exist ;

Click exit with mouse.

2. In case, Tray Icon does exists ;

Click Tray Icon with right button of mouse and select exit.



Chapter 5

Setting-Up Internet

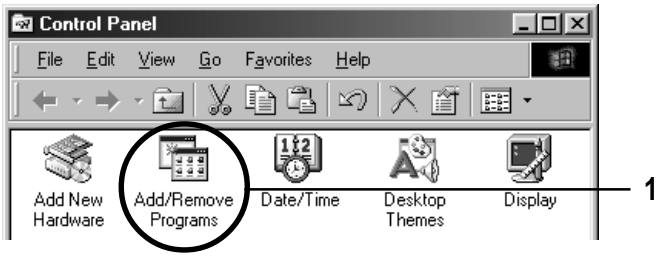
This process shows how to establish modem connection to service provider with high-speed data broadcasting services.

How to Setup Modem Connection

1. Dial-Up Networking

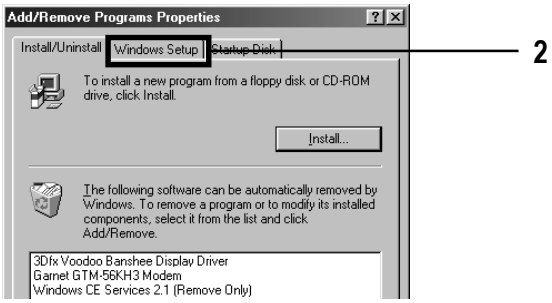
If Dial-Up Networking has not been installed in your system, install **Dial-Up Networking** as follows. If it has been installed, go **No.2**.

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

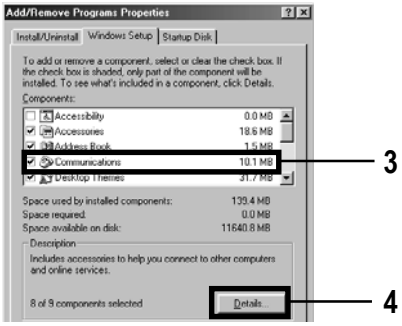


2. Double click **Add/Remove Programs** icon.

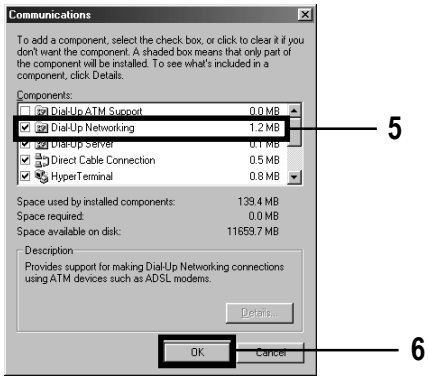
3. Click **Windows Setup**.



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



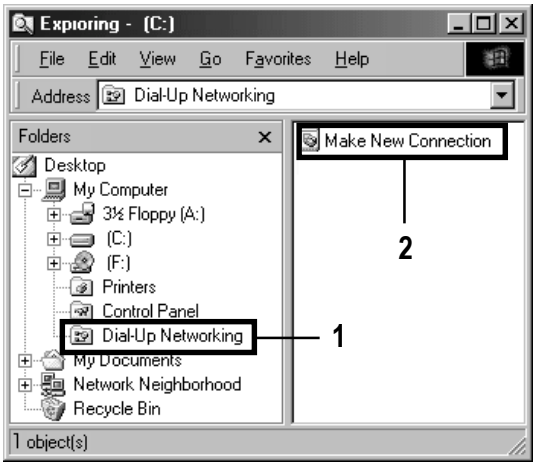
5. Check **Dial_Up Networking** and click **OK** to confirm.



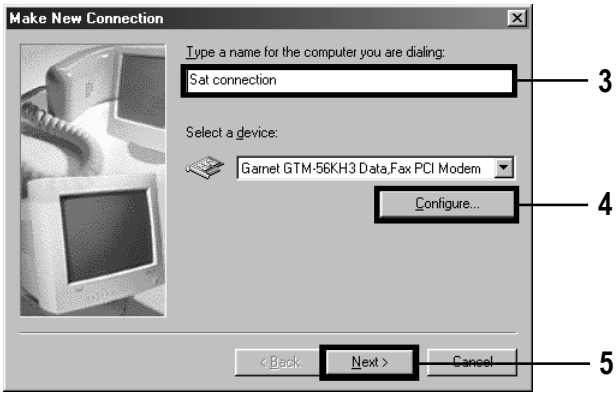
6. At last, **Dial_Up Networking** is installed on your PC. Now, you can utilize **Make New Connection** contained in Dial_Up Networking folder.

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.

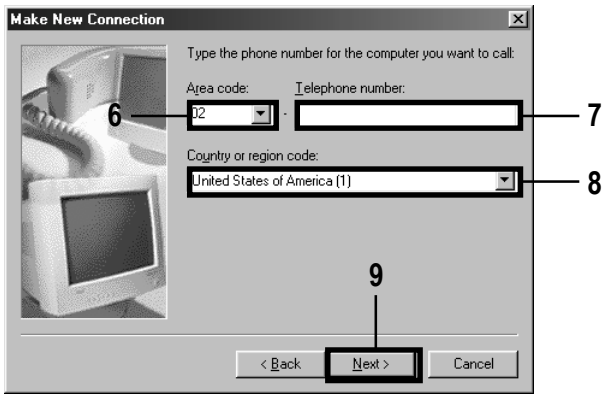


3. Type the name of service provider that you want to be connected.

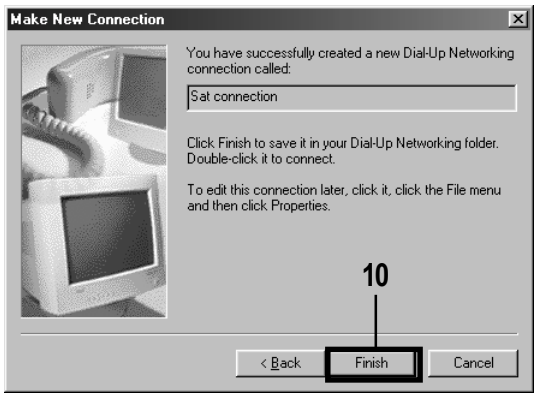
4. To select modem, Click **Configure**.

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.



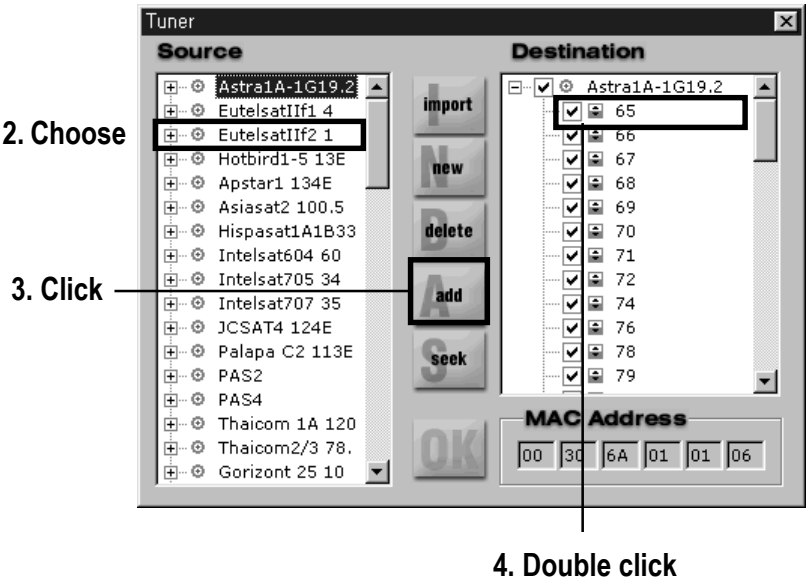
Transponder Setting for Multicast

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@VALUE program and click **[SEEK]** button.

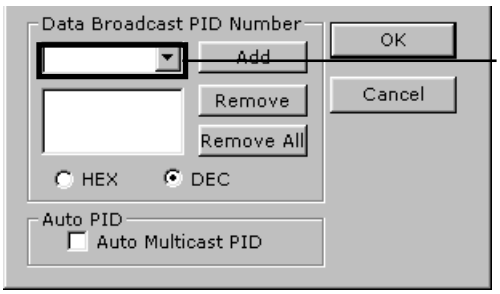
2. Select satellite in the Source.



3. Click **[ADD]**.

4. Double click selected transponder in the Destination for multicast data.

5. Please type **PID** number, which is provided by your ISP, on Transponder dialogue box.

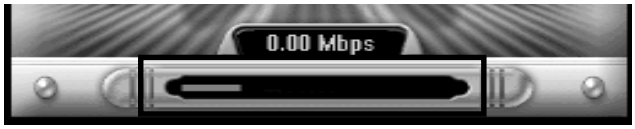


6. Please click **[Add]** on Transponder dialogue box.

7. Click **[OK]** on Transponder dialogue box.

8. Select your transponder and click [**Seek**]. Then, Close tuner dialogue box by clicking [**OK**].

2.Reception Status



If the signal shows up to green, reception is OK.

If the signal shows just Red only, you may have to check antenna status/other parameter values.

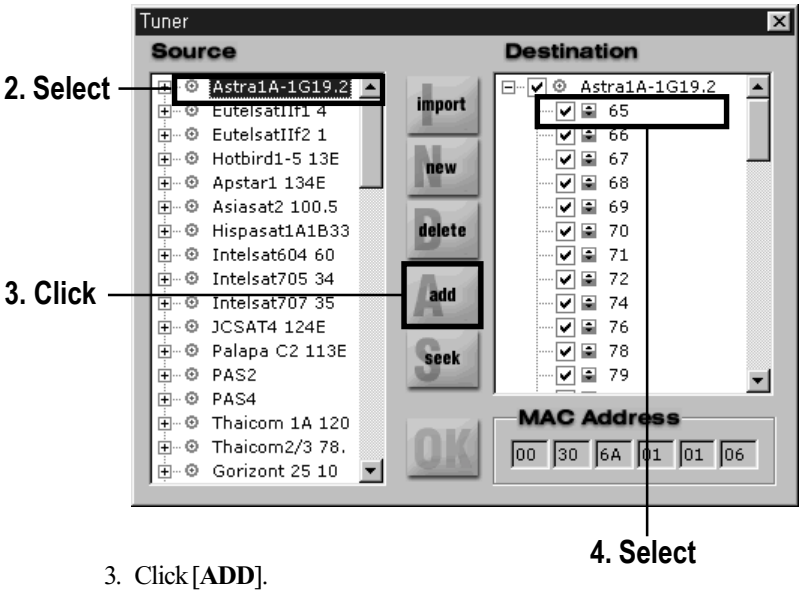
Transponder Setting for Satellite Internet

IMPORTANT : This connection program is only for **Europe IP filtering user.**
Mac filtering user does not need to use it.

1. Seek the transponder

1. Run Pent@VALUE program and click **[SEEK]** button.

2. Select Satellite in the Source.



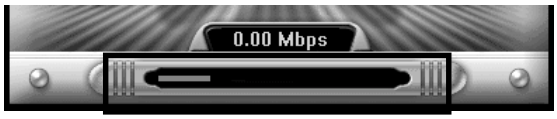
3. Click [**ADD**].

4. Select transponder in the Destination for data broadcasting.

5. Click [**SEEK**]

6. Click [**OK**]

2.Reception Status



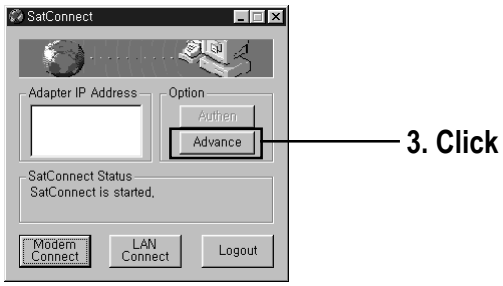
If the signal shows up to green, reception is OK.

If the signal shows just Red only, you may have to check antenna status/other parameter values.

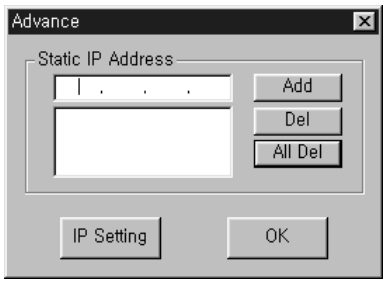
3.Setting Satellite IP Address

1. Click [**Telephone Call**] button

2. Now You can see SatConnect Program. This window is to help to connect with Internet Satellite provider.



3.Click [**Advanced**] button.



4.Insert IP address.

You can put in various IP address of respective service.

This service is only for IP filtering user.

5.Click [**IP setting**] button

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

Windows 2000 Note

Windows 2000, formerly Windows NT 5.0 was released in 2000. There are many changes to the installation instructions for this new operating system. Please note that any changes to drivers or instructions for Windows 2000 will be found on our web site.

Please refer to our website (http://www.pentamedia.com) for more information.

NT's user can obtain Pent@VALUE driver from www.pentamedia.com

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.