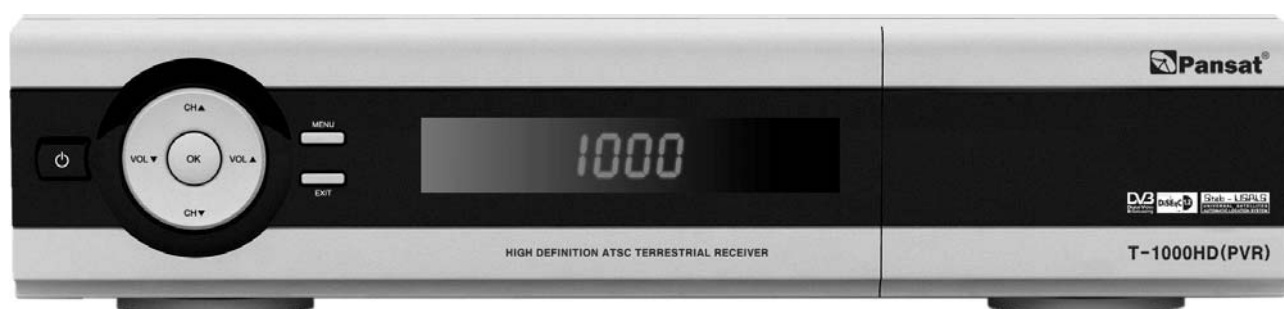




USER'S GUIDE

T-1000

**HIGH-DEFINITION DIGITAL
TERRESTRIAL & CABLE RECEIVER**

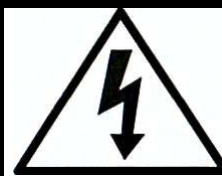


Panarex Electronics
Sun Valley, California, U.S.A.

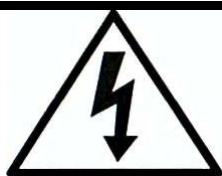
IMPORTANT SAFETY INSTRUCTIONS



CAUTION
RISK OF ELECTRONIC SHOCK
DO NOT OPEN



CAUTION : TO REDUCE THE RISK OF ELECTRONIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PART INSIDE.
REFER SERVICE TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and servicing instruction in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER’S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE TO CATV SYSTEM INSTALLER

THIS REMINDER IS APROVED TO CALL THE CATV SYSTEM INSTALLER’S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSED TO THE POINT OF CABLE ENTRY AS PRACTICAL.

CAUTION

The AC power cord provided with this product is polarized (one blade wider than the other).

To prevent electrical shock, match wide blade of plug to wide slot, fully insert the AC plug into a standard 120V~, 60Hz polarized outlet.

NOTE

Never connect the plug to an electrical source other than one providing 120V~, 60Hz power. Use only the attached power cord. If the polarized AC cord does not fit into a non-polarized outlet, do not cut or file the blade. You are responsible for having the obsolete outlet replaced with a polarized outlet.

If you feel a static discharge when touching the unit, and the unit does not function, simply unplug the unit from the outlet. When you plug the unit back in, it should work normally.

Do not install power cords near any heating element or cooking appliances.

Important Safeguards

IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR RECEIVER EQUIPMENT AND RETAIN FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

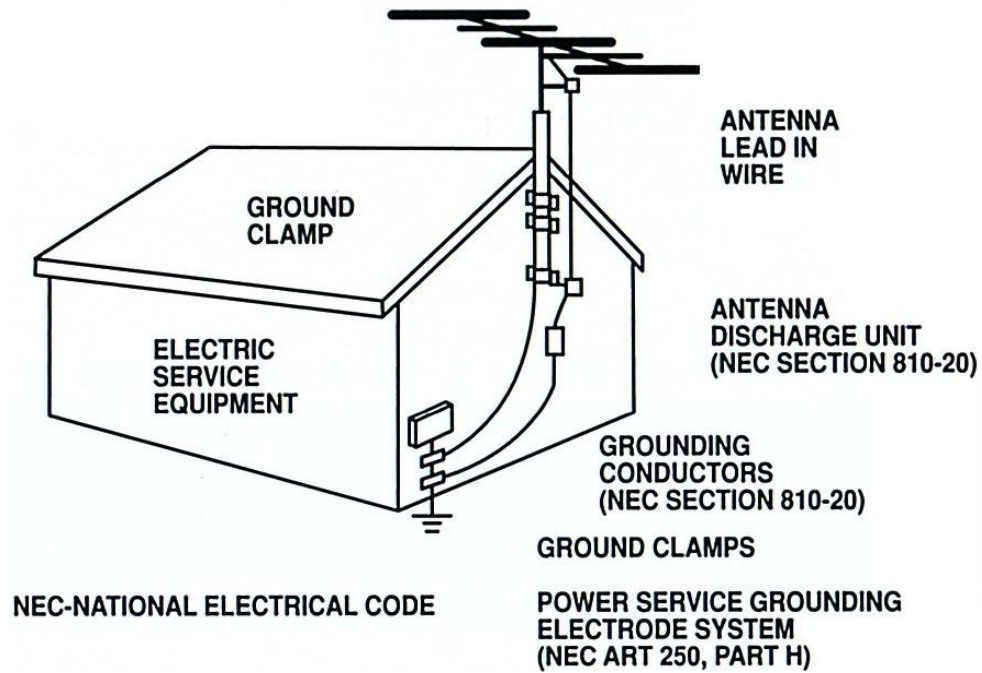
- 1 Read all of these instructions.
- 2 Save these instructions for later use.
- 3 Unplug this Receiver equipment from the wall outlet before cleaning. Do not use liquid cleansers or aerosol cleanser. Use a damp cloth for cleaning.
- 4 Do not use attachments not recommended by the Receiver equipment manufacturer as they may result in the risk of fire, electric shock or other personal injury.
- 5 Do not use this Receiver equipment near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, or the like.
- 6 Do not place this Receiver equipment on an unstable cart, stand, or table. The Receiver equipment may fall. Causing serious injury to a child or adult, and serious damage to the equipment. Use only with a cart or stand recommended by manufacturer, or sold with the Receiver equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 6A An appliance and cart combination should be moved with care. Quick stop, excessive force, and uneven surface may cause the appliance and cart combination to overturn.
- 7 Slot and openings in the cabinet and the back or bottom are provided for ventilation and to ensure reliable operation of the Receiver equipment; and to protect it from overheating, these opening, must not be blocked by placing the Receiver equipment on a bed, sofa, rug, or other similar surface. (This equipment should never be placed near or over a radiator or heat register) This Receiver equipment should not be placed in a built-in installation, such as a bookcase, unless proper ventilation is provided.
- 8 This Receiver equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your Receiver dealer or local power company.
- 9 This Receiver equipment is equipped with a polarized alternation current line plug (a



plug having one blade wider than the other). This plug will fit into a power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

- 10 Do not allow anything to rest on the power cord. Do not locate this Receiver equipment where the cord will be abused by persons walking on it.
- 11 Follow all warnings and instructions marked on the Receiver equipment.
- 12 For added protection for this Receiver equipment during the lightning storm, or when it is left unattended and unused for long period of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges. Important Safeguards.
- 13 An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuit, or where it can fall into such power lines or circuit. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuit, as contact with them might be fatal.
- 14 Do not overload wall outlets and extension cords, as this can result in fire or electric shock.
- 15 Never push objects of any kind into this Receiver equipment through openings, as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on the Receiver equipment.
- 16 Do not attempt to service this Receiver equipment yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 17 Unplug this Receiver equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions :
 - (a) When the power-supply cord or plug is damaged or frayed.
 - (b) If liquid has been spilled, or objects have fallen into the Receiver equipment.
 - (c) If the Receiver equipment has been exposed rain or water.
 - (d) If the Receiver equipment does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by qualified technician to restore the TV receiver to its normal operation.
 - (e) If the Receiver equipment has been dropped or the cabinet has been damaged.
 - (f) When the Receiver equipment exhibits a distinct change in performance – this indicate a need for service.
- 18 When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 19 Upon completion of any service or repair to this Receiver equipment, ask the service technician to perform safety checks to determine that the Receiver is in a safe operating condition.
- 20 If an outside antenna or cable system is connected to the Receiver, be sure the antenna or cable system is grounded so as to provided some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA NO.70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING



FCC RF INTERFERENCE STATEMENT

NOTE :

This equipment has been tested and found to comply with the limit 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 will 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 the receiver.
- Connect the equipment into an outlet circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technician 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 guarantee or manufacturer could void the users authority to operate such equipment.

PREFACE

I. OVERVIEW

1. WHAT IS THIS PRODUCT FOR?
2. WHAT FEATURE DOES THIS PRODUCT OFFER?
3. FOR YOUR SAFETY
4. PLEASE CHECK THE FOLLOWING ACCRSSORIES ARE ENCLOSED
5. HOW TO USE THE REMOTE CONTROL KEY
6. FRONT PANEL
7. REAR PANEL
8. CONNECTION DIAGRAM

II. OPERATING

1. START UP
2. INSTALLATION
3. EDIT CHANNEL
4. USER SETUP
5. SYSTEM TOOLS
6. GAME
7. USB
8. CHANNEL LIST
9. PROGRAM GUIDE
10. AUDIO CHANGE
11. MULTI PICTURES
12. RECALL THE FAVORITE CHANNEL

III. Optional Items

1. UHF REMOTE CONTROL KIT
2. UNIVERSAL III REMOTE CONTROL
3. S2 KIT

IV. SPECIFICATION

V. TROUBLE SHOOTING

I. OVERVIEW

1. WHAT IS THIS PRODUCT FOR?

This product is designed for using Digital Terrestrial & Cable and allows you to enjoy a lot of broadcasting whenever you want to watch it anytime. By simply pressing the button of the remote control unit, the vivid picture and life –like sound of digital broadcasting that your TV portrays through this product, allows you to watch whatever channel you wish of the digital broadcasting.

Through this manual you will notice that the operation is easy to use.

This manual will help you get the most from this product and guide you through Installation, channel selection and many other functions.

In case you experience any difficulties to use this product, please consult the relevant section of this manual.

From now on, enjoy digital broadcasting with digital terrestrial & cable receiver!!!

2. WHAT FEATURE DOES THIS PRODUCT OFFER?

2.1 General Features

- ATSC High Definition (Single MP@HL, MPEG-1, MPEG-2)
- USB 2.0 Host 2 Interface - Firmware Update
- Support EPG (Electronic Program Guide)
- High Definition Video Output : HDMI and Component(Y, Pb, Pr)
- Audio decoding : MPEG-1, MPEG-2, MUSICAM, Dolby AC-3
- 54 ~ 866(VHF low, VHF high, UHF band) MHz input Frequency (IF Loop throughout)
- Variable Input Symbol Rate (1~90Msps)
- Multi Language OSD
- User selectable video output resolution (480p, 720p, 1080i)
- Fast Channel Change & Scan
- 1,000 Channels TV & Radio Program
- Timer setting supports automatic Turn-ON & Recording
- Digital S/PDIF (Digital Audio or Dolby AC3 Stream out)
- External SATA HDD PVR (Format function, Recording, Playback)
- Software Upgrade via USB Memory Stick or RS232C (Receiver to Receiver, PC to Receiver)
- PIG (Picture In Graphic), Multi-Picture, Zoom function
- 5 Favorite List & 100 programs per each
- Powerful Channel Editing Function (Favorite, Move, Find, Sort, Delete, Skip, Lock, Edit)
- Support Diseq Smart Antenna(EIA/CEA-909 standard interface)
- IR RCU (Remote Control Unit)
- UHF- Ready (U-50 Kit Optional)
- DVB-S2 Ready (S2 Tuner Kit optional)

3. FOR YOUR SAFETY

- Do not open the cover. It may cause malfunction or electric shock.
- When you do not use the product for a long time, please pull the power cord out from the outlet.

Also do not use a damaged power cord that may cause fire or electric shock.

- Do not use install the product in a humid area.
- Do not cover the product or place anything heavy on the product, Keep clear space around the product for sufficient ventilation.
- Avoid using spray or liquid materials around the product. Don't make other materials

come into the inside the product.

- Do not connect to modify cables when the product is plugged in.
- Socket-outlet shall be installed near the equipment and shall be easily accessible.
- Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases shall be placed on the apparatus.







4. PLEASE CHECK THE FOLLOWING ACCRSSORIES ARE ENCLOSED

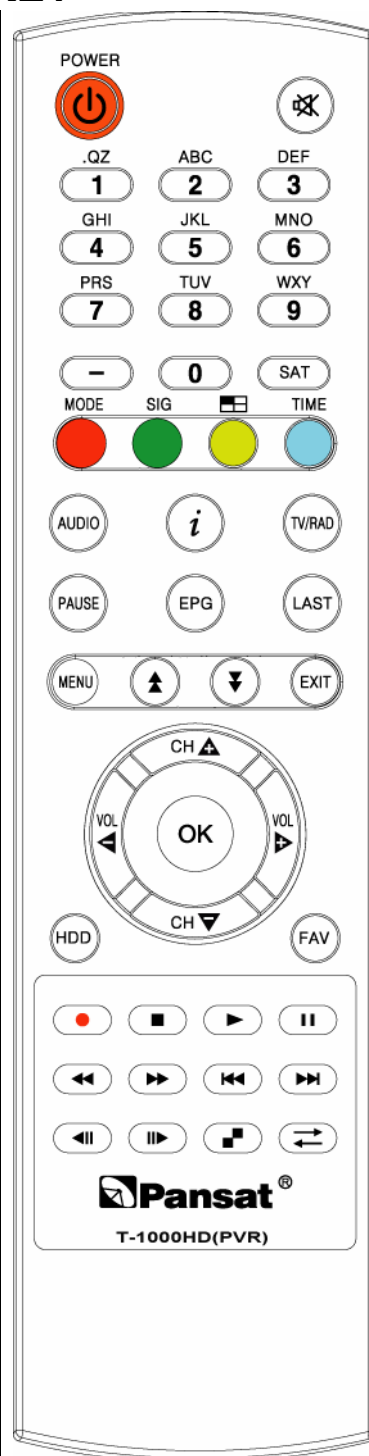
- User manual 1 set
- Remote Control Unit 1 Set
- Batteries (AAA Type) 2EA
- A/V Cable

Note !

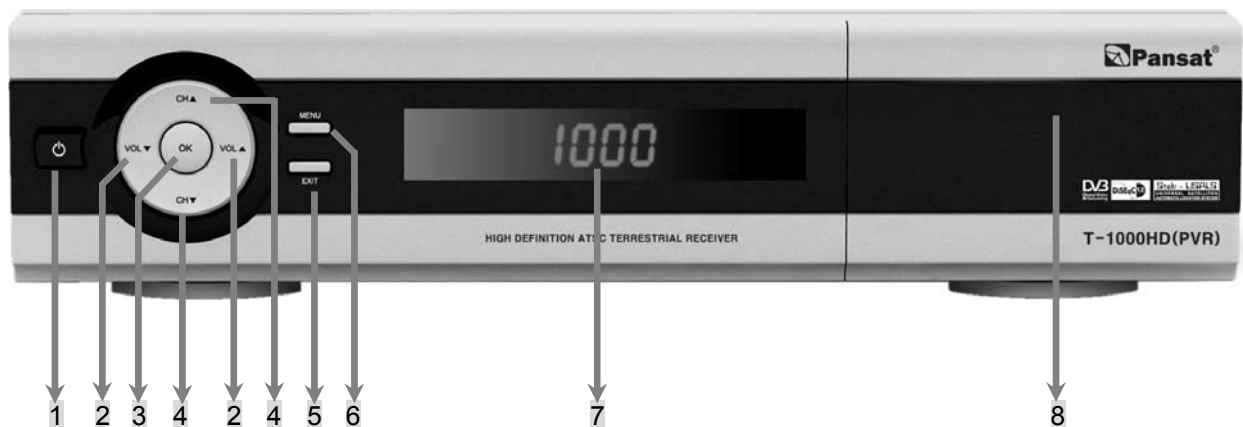
If any of the accessories listed above are missing, Please contact the sales outlet where this product was initially purchased.

5. HOW TO USE THE REMOTE CONTROL KEY

Key	Function
	Turns the equipment on/off
	Sounds Off/On
TV/RAD	Toggles between TV and Radio operation
SIG	Shows signal / quality level
TIME	Shows current Time
PAUSE	Holds the picture or release the pause
AUDIO	Selects audio mode (mono / Stereo, left only and right only).
FAV	Enter favorite program or Exit from Favorite Program
INFO	Shows channel information, such as channel number, channel name, Frequency, Polarity, Symbol Rate, Video PID, Audio PID and PCR PID
EPG	Shows program information
LAST	Returns to previous program
MENU	Enters main menu screen. Or exits menu screen
	Execute page down function in the menu
	Execute page up function in the menu
EXIT	Moves to upper menu
	Channel up/down Moves the cursor upward/downward in the menu screen
OK	Shows Channel list. Confirms selection
VOL 	Volume down/up Change the value of a selected line
0~9	Changes channel directly. Controls the numerical operation. Input the alphabet in the name edit screen
HDD	Enter Hard Disk (Record) menu
SAT	Enter programmed satellite list

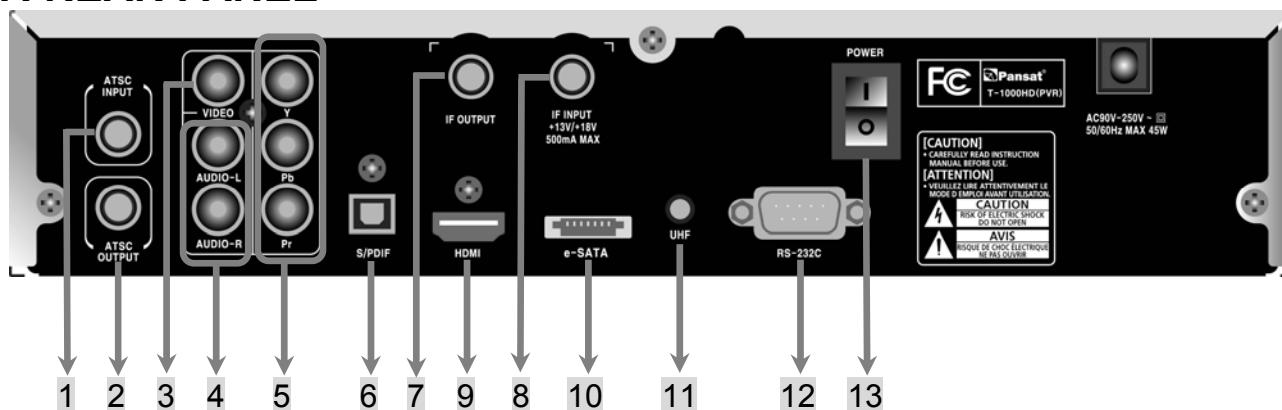


6. FRONT PANEL



- 1 POWER**
To put power in and out of standby mode
- 2 VOLUME**
To make volume up and down.
Moves the cursor upward/downward in the menu screen
- 3 OK**
To confirms selection, To show Channel List
- 4 CHANNEL**
To move up and down in the menus, To change channels
- 5 EXIT**
To move to upper menu
- 6 MENU**
To enter main menu screen
- 7 DISPLAY**
To show channel number, error messages, remote control commands and time in standby mode
- 8 USB**
USB port (When you open the front door, you an see USB port).

7. REAR PANEL



NO	NAME	FUNCTION
1	ATSC INPUT	ATSC / Cable signal input
2	ATSC OUTPUT	Loop-through signal output
3	VIDEO	Composite Video Output
4	AUDIO-L/R	Left/Right Audio Output
5	YPbPr	Component video output
6	S/PDIF	For digital audio output
7	IF INPUT	IF INPUT from LNB to receiver (Satellite option)
8	IF OUTPUT	IF Loop-through output (Satellite option)
9	HDMI	HDMI Audio/video output
10	e-SATA	External SATA HDD interface
11	UHF	UHF Remote Control kit (UHF RCU option)
12	RS 232	Connect Serial Port
13	AC SWITCH	AC Power ON/OFF (Reset Function)

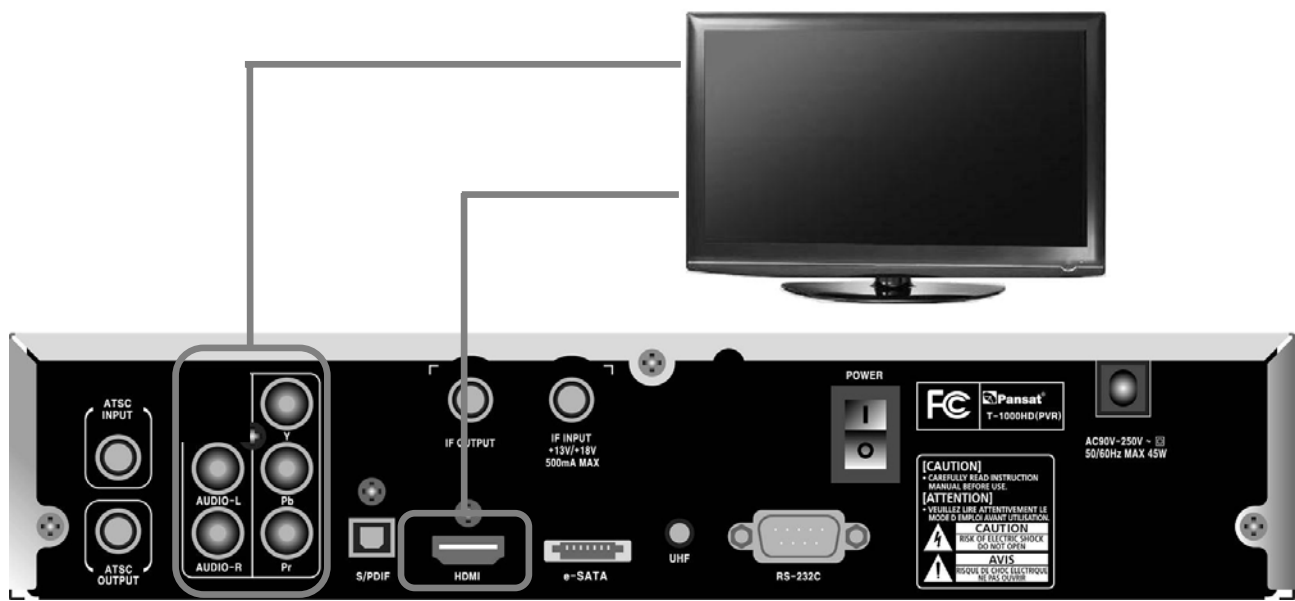
8. CONNECTION DIAGRAM

Connecting to TV using CVBS(Composite Video) port



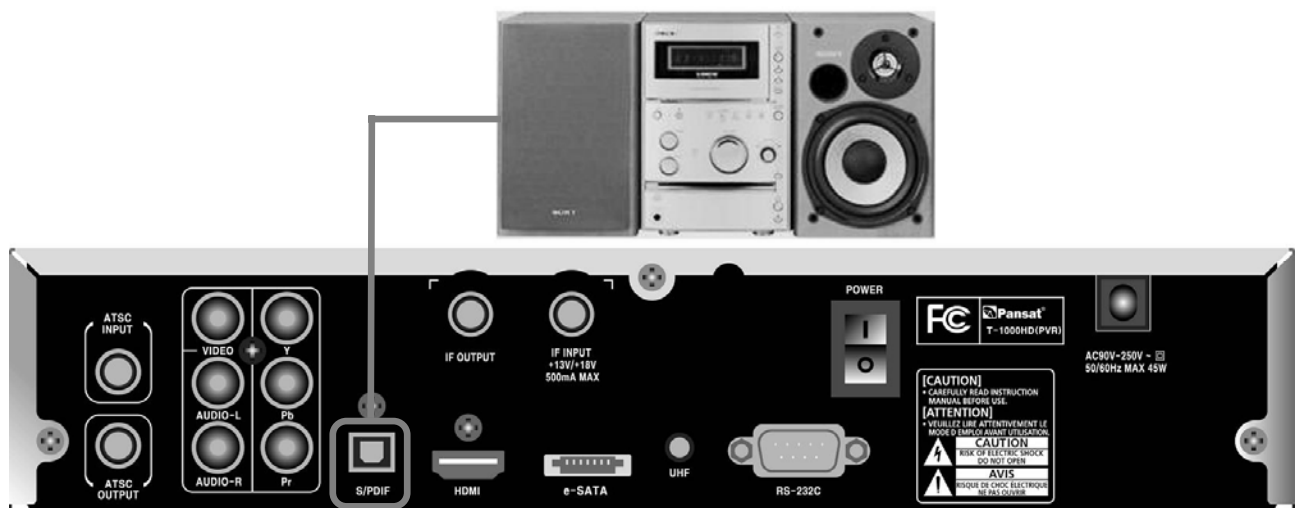
Connect Receiver's CVBS output and Audio L/R output to TV

Connecting to digital TV using YPbPr port OR HDMI port.



Connect Receiver's YPbPr output and Audio L/R output to a YPbPr in and Audio L/R in of TV or connect Receiver's HDMI port to HDMI port of TV.
Please refer TV's user manual for detailed YPbPr and/or HDMI connection method.

Connecting TV to A/V receiver (Dolby digital amplifier)



Connect Receiver's optical audio output port to A/V receiver.

II. OPERATING

1. Start Up

Please follow the brief procedure below and watch the satellite programs.

- 1) Select the User Setup and confirm Language
- 2) Select the Installation for terrestrial or cable
- 3) Execute scanning to find program
- 4) Exit from installation after all programs are searched.

1.1 Language

When the receiver is turned on for the first time, main menu is appeared as below photo.

You can find desired menu by using ◀ ▶ ▲ ▼ key and select desired menu by press [OK] key. Select the user setup and press [OK] or ▶ to enter Language menu as below photo and can select the desired language by using ◀ ▶ or [OK] key to confirm it.



* This Receiver supports 10 languages.

English, French, German, Italian, Spanish, Portuguese, Russian, Turkish, Polish and Arabic

2. Installation

Press the [OK] or ▶ key to enter Installation menu as below photo and use common password "0000". Parental control and channel edit are not accessible until channel scanned and saved.



2.1 Automatic Scan

Select a specific media by using ◀ ▶ keys between Terrestrial or Cable.

Select frequency range by using ◀ ▶ keys.

Press [OK] to start scan procedure in the 'Start Scan'



2.2 Manual Scan

Select a specific media by using ◀ ▶ keys between Terrestrial or Cable.

Select frequency range by using ◀ ▶ keys.

Press [OK] to start scan procedure in the 'Start Scan'



3. Channel Edit

Press the [OK] or ▶ key to enter Edit Channel menu and press ▲ ▼ key to select menu items and press ◀ key or [Exit] key to go back to main menu.



3.1 Channel Edit window

You can move highlight by press ▲ ▼ key and press [OK] key to implement between Sort, Move, Delete, P-Lock, Skip, Rename. You can press [Menu] or [Exit] keys to go back to “Edit Channel” menu.



3.2 Edit – Sort

Press [OK] key can open the “Sort” window. There are seven kinds of sorting ways. You can press ▲ ▼ key to move highlight and press [OK] key to confirm your selection.



3.3 Edit – Move

Press [OK] key to enter the “Move” window. Press ◀ ▶ key to toggle a mark. There will show a “moving mark” of the selected channel. You can move the selected channel to the position that you want to place by press ▲ ▼ key And press ◀ ▶ key to confirm your decision.



3.4 Edit – Delete

Press [OK] key, then press ▲▼ key to select delete method and press [OK] key.

Press ◀▶ key to make a mark.

Press [OK] to delete and press [OK] key again to confirm delete in the “Press OK to save or EXIT” information window.



3.5 Edit – P-Lock

Press [OK] key can enter lock mode and press ▲▼ key to move the highlight and press [◀▶] key to toggle parental lock or un-lock.



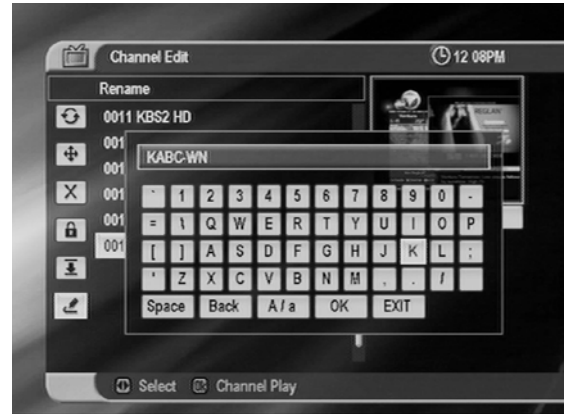
3.6 Edit – Skip

Press [OK] key can enter skip mode and press ▲▼ key to move the highlight and press [◀▶] key to toggle skip mark.



3.7 Edit – Rename

Press [OK] key can enter rename mode and press ▲▼ key to move the highlight and press ◀ ▶ key to enter keyboard type window. After edit name move to place of [OK] and press [OK] key.

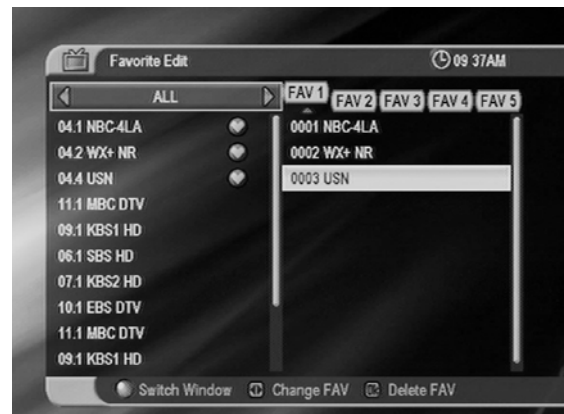


3.8 Favorite Edit

You can change destination favorite 1 ~ 5 by using [FAV] key.

Press ▲▼ to highlight channel to save specific FAV and press [OK] to toggle register channel.

Press [RED] key to switch right hand window where you can delete favorite channel in the specific favorite group.



4. User Setup

In this USER SETUP mode, you can select the sub-mode by pressing [OK] and ▲▼ key. The changed set-up is activated and stored by pressing [EXIT] key.

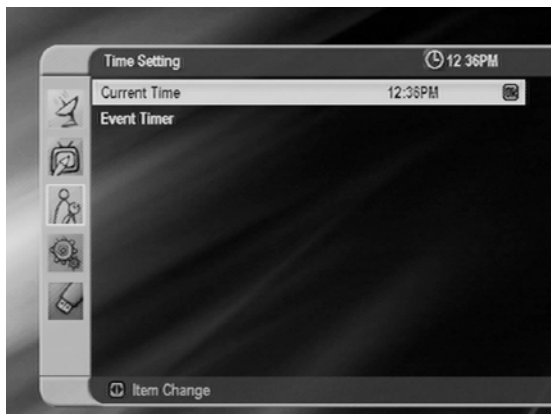


4.1 Time Setting

4.1.1 Current Time

After selecting Time mode, you can adjust the time as follows.

- Current Year : Set up by pressing numeric keys.
- Current Month / Day : Set up by pressing numeric keys.
- Current Time : Set up by pressing numeric keys.



4.1.2 Timer List

After selecting timer, you can see timer list and adjust the time as follows.

- Time zone
- summer time
- Timer mode : Once, Daily
- Wakeup time : Set up by pressing numeric keys
- Sleep Time : Set up by pressing numeric keys



4.2 Parental Control

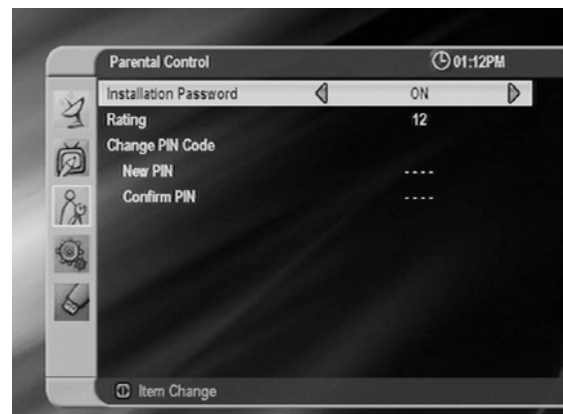
After selecting parental control and entering the correct password, the screen appears. The default password at the factory is "0-0-0-0". You may change the PIN code, which is your password in other word, and lock the receiver to prevent children from watching programs.

4.2.1 Installation Password

You can set the function of parental control by pressing ◀ ▶ keys as "ON" or "OFF".

4.2.2 Rating

You can set an age limit (All, 12, 15, 18)



4.2.3 Change PIN Code

You can change the PIN Code (Password) if you want.

- (1) Enter the new password.
- (2) Reenter the new password to confirm.

Warning ! You must remember the exchanged password because it is used in several functions as follows.

Password required

- (1) To show parental locked channels
- (2) To enter parental control menu
- (3) To enter edit menu
- (4) To execute factory setting
- (5) To enter installation menu

In case of forgotten password programmed, call Pansat's dealer to get master factory password.

4.3 Language Setting

4.3.1 OSD Language

Press EXIT key after you select your preferable language and audio language by using ◀ ▶ keys.

English, German, French, Spanish, Italiano, Portuguese, Turkish, Arabic

4.3.2 Audio Language

Select the preferable Audio language by using ◀ ▶ keys.



4.4 AV Setting

4.4.1 TV Screen Format

You can set the TV aspect ratio (4:3 for normal TV & 16:9 for wide TV) by pressing ◀ ▶ keys.

4.4.2 Video Format

You can set by pressing ◀ ▶ keys (480p, 720p, 1080i).

4.4.3 Display Format

You can select Full screen or Letter Box.

4.4.4 Closed Caption

Select 'ON' or 'OFF' by using ◀ ▶ keys.



4.5 OSD Setting

You can adjust the Banner timeout and transparency level by using ◀ ▶ keys.



5. System Setup

5.1 System Information

Show the information of model name, data and version of STB.



5.2 Factory Setting

Once the Factory setting is selected and chooses “Yes” and type password by pressing 4-digit numeric keys followed by OK key, whole parameters will be changed to the default value written in the factory. If you do not want to continue this mode, press [EXIT] key before you enter password.

Common password is “0000”. In case selected password is forgotten, call Pansat’s dealer to get factory master password.

You can select factory setting as follows :

- (1) Default setting “Channel Data”.
- (2) Default setting “All Data”.



6. USB

- (1) USB menu can be watched after inserting USB stick and the menu list can be displayed.
- (2) Flash ROM writing file is in code backup folder and channel data is in channel data backup folder.
- (3) Select Flash ROM writing file and press [OK]. API code transfer menu is displayed and API code download is executed.
- (4) After API code download is done, "Complete" message is displayed and then the receiver starts rebooting.
- (5) Select the file in channel data folder and press [OK] key. Channel data transfer menu is displayed and channel data download is executed.
- (6) API code and channel data uploading is possible.
- (7) In API code uploading, API code is saved in code backup folder of USB and in channel data uploading, channel data file is saved in channel data backup folder of USB. Selected file will be displayed one by one.



Warning !

Please use USB memory stick only.
Don't use any other like USB charger.
Don't use USB related products which cannot meet DC5V & Max.100mA.

7. Channel List

You can see the channel list as shown in the figure by pressing OK key.

To watch another channel, move the cursor to the channel you want by using ▲▼ PG↑ PG↓ and press [OK] key.

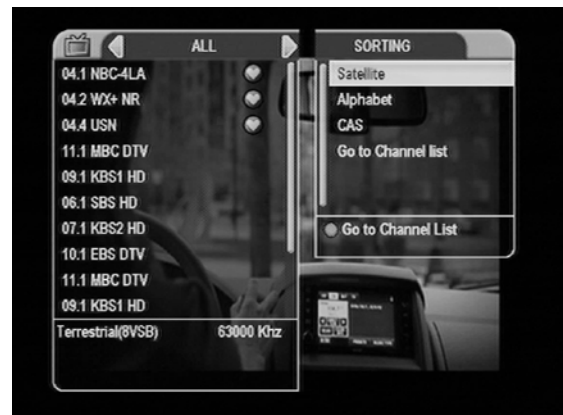
If favorite channels are saved, the list is changed from channel list TV to favorite list.

Pressing [TV/RADIO] key changed list Radio, you can exit from the list menu by pressing [EXIT] key.



7.1 List Sorting

If you press the [RED] key, you can sort the channels by Satellite(with option), Alphabet, CAS.



7.2 List Finding

If you press the [GREEN] key, you can find the channel including the alphabet which you enter.



8. Program Guide

The title and start time of the program is shown as in the figure after pressing [EPG] key. Select the particular channel and press [OK] key then the channel will be changed.

If you want to watch TV with full screen, press [EXIT] key.

By press [RED] key, you can switch between multi channel EPG mode and single channel EPG mode.

By press [GREEN] key, you can change to event timer menu.



9. Audio change

In multilingual program, favorite language is selected by pressing [AUDIO] key and ▲▼ key.

Audio mode (L-left, R-right, L/R-stereo) can be changed by pressing [AUDIO] key and ◀▶ key.



10. Recall the Favorite channel

Press [FAV] key to recall a stored favorite channel.

Favorite channel is programmed and stored in the Favorite Edit menu.



III. Optional Items

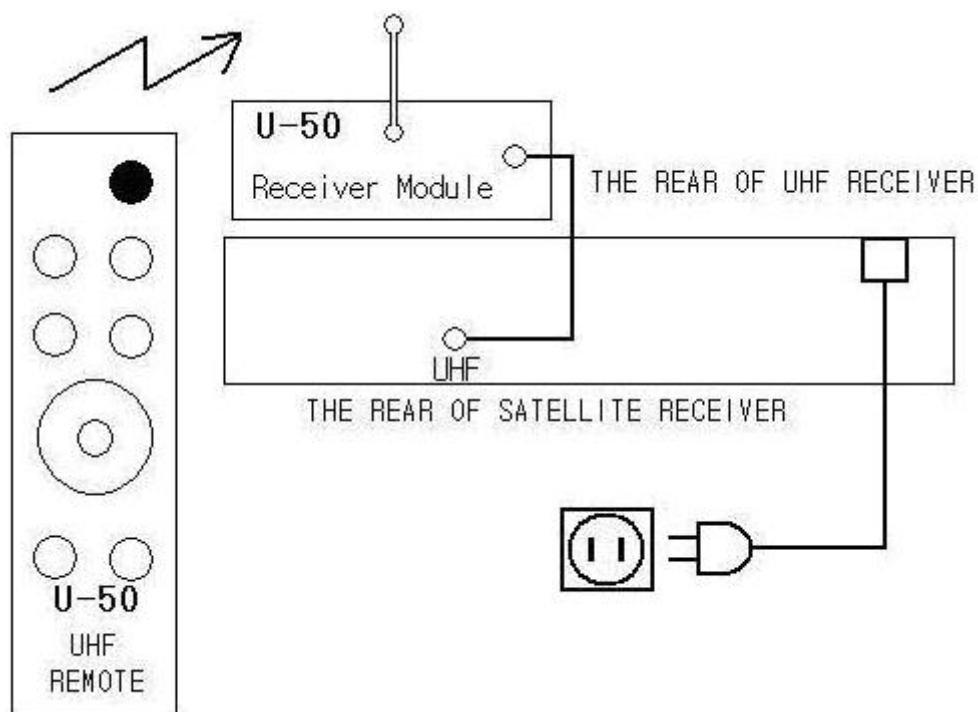
1. UHF Remote Control Kit (Optional)

1.1 Kit List

- UHF Receiver Module (U-50)
- UHF Remote Control (U-50)
- Battery (AAA Type)-2pcs

1.2 Installation

- Get the AC power plug out of the receiver from the wall socket.
- Connect the UHF receiver module to the UHF on the rear of the receiver.
- Plug the AC power cord and turn on the receiver
- Use UHF remote controller.



IV. SPECIFICATION

ATSC Tuner

1RF Input Connector	F-type, IEC169-24
1RF output(loop through out)	F-type, zero power
Frequency Range	NTSC all band, 54MHz ~ 866MHz
ATSC A/53 compliant	8/16 VSB and MMDS 2/4/8/16 VSB
ITU-T J.83 Annex B, C compliant	64/256 QAM
Integrated de-interleaver	RAM for all modes
Relative low power consumption	

MPEG transport Stream A/V Decoding

De multiplex	MPEG-2 ISO/IEC 13818-1(MPEG-2 system)
Input stream	Max. 90Mbit/s
Aspect Ratio	4:3(default), 16:9 letterbox
Video Decoding	ISO/IEC 13818-2(MPEG2 vidoe) MP@HL,
Audio Decoding	ISO/IEC13818-3(MPEG2 audio/MUSICAM) Dolby AC-3
Video Output	HDMI, Component (YPbPr), CVBS
Audio Mode	Single Channel /Dual Channel, Stereo, Joint Stereo
Audio Sampling Frequency	16/22.05/24/32/41.1/48 KHz

Microprocessor & Memories

Main Processor	ARM926
CPU Clock	280MHz
Flash Memory	8 Mbyte
SDRAM	128 Mbyte
EEPROM	32 Kbit

A/V output

Component Jack	Y, Pb ,Pr
Video RCA	1 output
Audio RCA	2 output(Reft,Right)
Digital Audio	1 coxial output S/PDIF
HDMI	

Front Panel

Display	4Digits LED
8 keys	Power, Channel Down/Up, Volume up/down, Menu, Exit, OK
USB	USB2.0 1 Host

Data port

Connector	9 pin D-sub Type
Protocol	RS232 Asynchronous
Data Rate	Max. 19.2Kbps

Rear Panel

ATSC Tuner	1 input with loop through out
S2 Tuner	Option
UHF RCU	Stereo Jack
3RCA	Video, Audio L, Audio R
Component Jack	RCA Jack(Y,Pb,Pr)
HDMI	
Data Port	RS 232
Power Switch	Rocker Type
Power cord	Fixed type on the body
SPDIF	Optic
e-SATA	

Remote Control

Type	IR RCU
Battery	2x1.5V AAA Type

Power Supply

Input Voltage	AC 90-250V, 50/60Hz
Power Consumption	Max. 18 Watts
Type	SMPS(Switching mode power supply)

Physical Specification

Dimension (W x D x H)	280x210x45mm
Weight	1.8kg
Accessories	RCU, Battery, User manual

V. TROUBLE SHOOTING

There may be various reasons for the abnormal of the unit. Therefore, if the unit does not work properly,

Check the unit according to the procedures shown in the table below.

Problem	Possible causes	Remedy
LED on front panel Does not light	AC Power cord disconnected	Connect power cord properly into the power socket
No Picture or Sound	Wrong connection of the Video/audio output to TV input Terminal	Connect two terminals correctly with component cable, RCA or RF cable
	Wrong connection of antenna cable	Connect the antenna cable Correctly
	Wrong direction of antenna	Adjust the direction of antenna
	No signal or weak signal	Check the cable connections,
	Wrong setting of channels Information in MENU screen	Type the setting value correctly
Black-and-white Screen or V-Hold	Your TV mode is different from broadcasting mode	Use TV of same mode Use the NTSC/PAL converter Connection to the receiver and TV
The remote controller is not working	Battery exhausted	Change the batteries
	Fluorescent light interfering with the remote controller	Switch off the light
	Remote controller is incorrectly aimed	Aim the remote control at the receiver
Distorted menu screen	Too high brightness and contrast level of TV set	Adjust brightness and contrast to low level
Not working	Process Down	Remove the power code or AC switch OFF/ON



LIMITED WARRANTY

PANAREX Inc. warrants to the original purchaser that this product shall be free from defects in workmanship and material for two years from the date of original purchase. During this warranty period PANAREX will provide free of charge both part and labor necessary to correct defects in workmanship or material.

This warranty does not cover damage due to lightning, fire, flood, or other acts of God, damage from accident abnormal conditions, improper use, or faulty installation, unauthorized software/hardware modification or damage by attempts to repair the unit other than by the authorized service of PANAREX.

PANAREX's liability under this warranty is limited to servicing or adjusting equipment returned to PANAREX authorized service centers with freight prepaid.

Panarex

Electronics

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