Pansat®

USER'S GUIDE

250SM

DIGITAL SATELLITE RECEIVER

Panarex Electronics

SUN VALLEY, CALIFORNIA, U.S.A.

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 Satellite Receiver equipment should not be placed in a built-in installation, such as a bookcase, unless proper ventilation is provided.

8 This Satellite 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 Satellite Receiver dealer or local power company.

9 This Satellite Receiver equipment is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the 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 Satellite Receiver equipment where the cord will be abused by persons walking on it.

11 Follow all warnings and instructions marked on the Satellite Receiver equipment.

12 For added protection for this Satellite Receiver equipment during a lightning storm, or when it is left unattended and unused for long periods 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 circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, 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 Satellite Receiver equipment through openings, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the Satellite Receiver equipment.

16 Do not attempt to service this Satellite 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 Satellite 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 Satellite Receiver equipment.
    (c) If the Satellite Receiver equipment has been exposed to rain or water.

(d) If the Satellite 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 a qualified technician to restore the TV receiver to its normal operation.

(e) If the Satellite Receiver equipment has been dropped or the cabinet has been damaged.

(f) When the Satellite Receiver equipment exhibits a distinct change in performance - this indicates 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 repairs to this Satellite Receiver equipment, ask the service technician to perform safety checks to determine that the Satellite Receiver is in a safe operating condition.

20 If an outside antenna or cable system is connected to the Satellite Receiver 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 N0.70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING

ANTENNA LEAD IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS (NEC SECTION 810-20)

GROUND CLAMPS

NEC-NATIONAL ELECTRICAL CODE

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
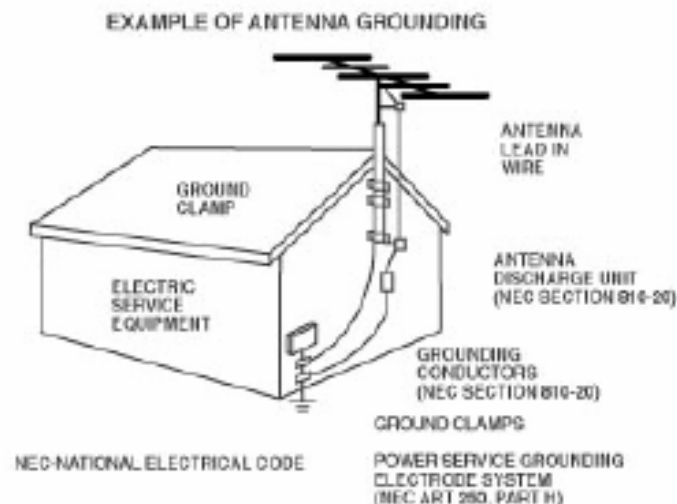
FCC RF INTERFERENCE STATEMENT

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.

PREFACE

1. OVERVIEW

2. OPERATING

3. SPECIFICATION

4. TROUBLE SHOOTING

1. OVERVIEW

1. WHAT IS THIS PRODUCT FOR?

This product is designed for using Digital Satellite 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 satellite receiver!!!

2. WHAT FEATURE DOES THIS PRODUCT OFFER?

2.1 General Features

▪ 10days EPG (Electronic Program Guide)

▪ Full Compliant of MPEG-2 Digital & DVB broadcasting

▪ 950-2, 150 MHz input Frequency (IF Loop Throughout)

▪ Variable Input Symbol Rate (1-45Msps)

▪ Multi Language OSD

▪ Automatic PAL/NTSC Conversion

▪ Fast Channel Change

▪ 5,000 Channel TV & Radio Program

▪ Flexible reception of SCPC & MCPC from C/Ku-Band Satellites

▪ S/PDIF (Digital Audio or Dolby AC3 Stream out)

▪ Timer Function (Automatic Turn On/Off by Setting Function)

▪ 256 Colors (Graphic Use Interface) Number

▪ PIG (Picture In Graphic)

▪ 5 Favorite List & 100 programs per each

▪ Powerful Channel Editing Function

- Sorting: Alphabetic, Satellite, FTA/Scramble, Parental Lock

- Move, Delete, Favorite Edit

- Parental Lock, Channel Rename, Channel Skip

▪ Manual PID/Satellite & TP/Network Scan

▪ **Blind Scan**

- Satellite Scan – Simultaneous Scan with various Satellites

- DiSEqC 1.2 & USALS Compatible

- Comparable of Setting the Frequency for SMATV System

- Software Upgrade via **USB Memory Stick** or RS232C (Receiver to Receiver, PC to Receiver)

- UHF- Ready

- S-VHS Out

- Universal Remote Control

2.2 Additional Features

- RTC (Real Time Clock)

- Component Out (YPbPr)

- Integrated USB2.0 (Host), Support to USB Memory Stick

- **Multi pictures (Max. 16)**

2.3 Conditional Access

- Conditional Access – Conax CAS Embedded

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

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 this receiver on/off. In the standby mode, it is automatically changed to TV mode that enables to watch terrestrial TV broadcasting.
TV/SAT	Toggles between TV & SAT
TV/VCR	Toggles between TV & VCR
TIME	Time shows current Time
🔇	Sounds Off/On
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
TV/RADIO	Toggles between the TV service and radio service
PAUSE	Holds the picture or release the pause
SIG	Shows signal quality
AUDIO	Selects audio mode (Stereo, left only and right only). Select language in case of Multilingual program.
MENU	Enters main menu screen. Or exits menu screen
EXIT	Moves to upper menu
CH ▲▼	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
LAST	Returns to previous program
FAV	Enter favorite program or Exit from Favorite program
0~9	Changes channel directly. Controls the numerical operation. Input the alphabet in the name edit screen
⯯	Execute page down function in the menu
⯭	Execute page up function in the menu

SAT	Classifies satellite by satellite
???	???
TTX	Teletext
SUB	Subtitle

Operating Principle

▪ Select an item by using up and down key and change the value of the highlighted (selected) item by using keys shown

　on the screen. Press OK to enter to the sub-menu if there is no instruction marks on the screen.

▪ The items is automatically stored and moved the upper menu by pressing the 'EXIT' key

▪ You can return to normal mode at any time by pressing the menu key from the menu mode

6. FRONT PANEL

1. POWER

   To put Power in and out of standby mode.

2. VOLUME

   To make volume up and down.

3. CHANNEL

   To move up and down in the menus, To change channels.

4. Menu

   To enter main menu screen.

5. Exit

   To move to upper menu.

6. Select

   To enter selected menu screen.

7. **Display**

   To show channel number, error messages, remote control commands and time in standby mode.

7. REAR PANEL

NO	NAME	FUNCTION
1	S-VHS	Super Video output to TV or VCR
2	UHF	Option for UHF Remote Control lit
3	S/PDIF	For digital audio output
4	RS232	Serial port used for software upgrade
5	L	Left Audio Output
6	R	Right Audio Output
7	Y	Component Video Output
8	Pb	Component Video Output
9	TV OUT	Output to TV
10	IF OUTPUT	IF Loop-through output to 2nd receiver
11	IF INPUT	IF INPUT from LNB to receiver
12	Modulator Switch	CH 3/4 Switch
13	ANT IN	Input from terrestrial TV antenna
14	Pr	Component Video Output
15	VIDEO	Composite Video Output
16	AC SWITCH	AC Power ON/OFF (Reset Function)
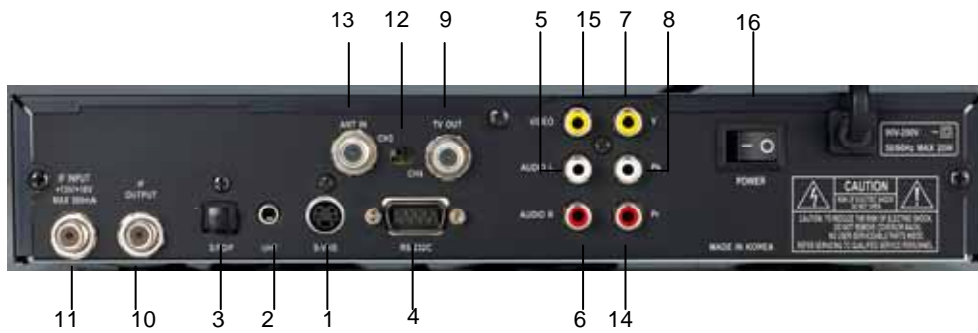
8. SIMPLE DIGITAL CONNECTION

When connecting receiver to TV and VCR with RF Cable (Single Antenna)
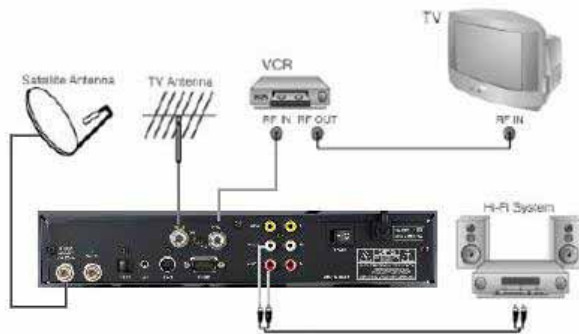
9. ANALOGUE / DIGITAL CONNECTION

When connecting receiver to analogue receiver and VCR with RF Cable
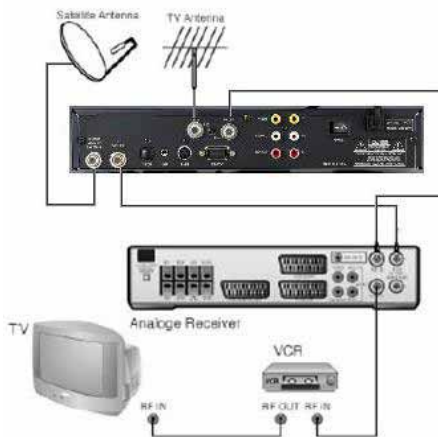
2. OPERATING

1. Start Up

If you are watching TV through the RF-cable, you need to adjust the Channel number. The type of TV and Channel numbers are set to PAL-G and Channel 38 at the factory. For USA, Ch3 is factory preset.

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

1) Select the language

2) Select the antenna setup in main menu screen

3) Adjust LNB configuration per each satellite

4) Execute scanning to find program

5) Exit from installation after all programs are searched.

1.1 Language

When the receiver is turned on for the first time, the language selection menu is appeared as in the Fig 1-1. Select the desired language and press OK to confirm it.

This Receiver supports **8 languages**.

English

German

French

Spanish

Italiano

Portuguese

Turkish

Arabic

[Fig 1-1]

2. Installation

Press the OK Key. Use common password "0000". Parental control and channel edit are not accessible until satellite channel scanned and saved. Antenna setup is appeared on screen as upper second figure.

2.1 Antenna Setup

In this section you could know how to operate LNB set-up.

2.1.1 Satellite

• When you adjust the LNB set-up,

  you select the satellite using **OK** key.

• Adjust LNB type , LNB Lo-Freq, 22kHz, DiSEqC, LNB pov

• You can cancel the satellite you chose using **EXIT** key.

2.1.2 TP

Select a specific transponder by using the   keys.

2.1.3 LNB type

Select LNB type using   keys.

There are 5 LNB alternatives.

• Universal 1 (9750MHz & 10600 MHz)

• Universal 2 (9750MHz & 10750 MHz)

• Single-SL (5150MHz & 5750 MHz)

• Single-SH (5150MHz & 5750 MHz)

• Standard for USA (10750 or 11250)

• Single Stack (10750(V) or 11250(H))

22KHz control is automatically set for each LNB alternative **or you can change it by yourself.**

2.1.4 LNB Lo-Freq

If the required LNB frequency is not available, select "Standard" and then input the frequency manually using the numeric keys.

2.1.5 22Khz

In case you are using a Dual LNB or two antennas connected to a 22KHz tone switch box, make 22KHz tone switch "ON" or "OFF" to select an LNB or an antenna.

2.1.6 DiSEqC

• DiSEqC 1.0, 1.2, 1.3 (STAB USALS) is compatible

  • DiSEqC 2X1 & 4X1 is usually available.

2.1.7 Positioner Setting

It is used to set the DiSEqC 1.2 motor & USALS

If you have no positioner equipment, select "Disable". Otherwise, you can select either DiSEqC 1.2 or USALS.

1) DiSEqC 1.2

(1) Current position

Select the position number by using   keys (#0~#26:default define, #27~#49: user define)

(2) Movement

Select East / West by using   keys and press OK to stop

(3) East Limit Set

Move the position to the most eastern position and press **OK** then East Limit is stored.

(4) West Limit Set

Move the position to the most western position and press **OK** then East Limit is stored.

(5) Limits Disable

Select Disable limits by using **OK** key

(6) Go to reference

Select go to reference by using **OK** key

2) USALS (DiSEqC 1.3)

(1) Satellite Position

It points out the position of saved satellite. You can change the position of the satellite by numeric keys.

(2) My Longitude

Please input Local Longitude by numeric keys

(3) My latitude

Please input Local Latitude by numeric keys

(4) Reference position

This is the same as DiSEqC 1.2 Reference

(5) Move

The satellite's position of (1) and the one calculated by value of (2) & (3) will be shown. Press **OK** key and it will

move.

(6) Store

Please select "Store" and the current position will be saved.

2.1.8 Satellite Scan

After all LNB setting is finished, adjust antenna direction toward satellite until signal quality level maximized. Then select

and confirm Satellite scan to start scan and saved.

If you press **SIG** key on RCU, signal strength menu will be displayed in the screen.

2.2 Satellite scan

Scan all the transponder of selected satellites.

(1)Press **OK** key and Select wanted satellite by using ▼&▲ keys.

(If you want to scan several satellites once, you can control   keys.)

Then press **OK** key to execute scanning.

  (2) You can select satellite whatever you chose though.

  (3) Transponder will be consecutively scanned all selected satellites.

2.3 Advanced & TP Scan

Select TP is scanning in this menu.

  (1) Select a satellite

  (2) Select TP in TP list.

  (3) Set Scan Option by using   keys. Select items in the list and press **OK.**

  (4) You can set the PID to search program in PID Scan item.

  (5) Then press **OK** to search in Scan Start.

2.4 Blind Scan

Blind Scan enables to search and scan all channels in the satellite without any preprogrammed data.

2.4.1 How to add a new satellite

  1. Select the satellite name with   keys

  2. If you want to add a new satellite, press **OK** key.

2.4.2 LNB Configuration

Please refer to 2.1 Antenna Setup

2.4.3 Symbol range

 • Select Full, High or Low

 • Full : High and Low

 • High :>7.5M   • Low :<7.5M

2.4.4 Polarity

 • Select Horizontal / Vertical with   keys.

 • All : High and Low

 • Horizontal : Scan Horizontal TP only.

 • Vertical : Scan Vertical TP only.

2.4.5 Scan

 • Select Scan type with   keys.

 • When you select **OK** key, the scanning will start.

2.5 SAT & TP Edit

In this mode, you can add the New Satellite and the New transponder information.

Also you can update or delete the transponder information.

2.5.1 How to add a new satellite

• Select "New" in the satellite name by using numeric key or CH ▲ ▼ keys. Press VOL   keys to move digit.

• Maximum number of characters is 12-digit.

• Press **OK** key.

• Enter the Down frequency, Symbol Rate and LNB Polarity.

• Press **EXIT** or **OK** key, then new transponder information is stored.

2.5.2 How to rename a satellite

• Press **OK** after selecting a satellite of which you want to change name.

• Select "Rename" in the menu.

• Enter new name by using numeric key or CH▲ ▼ keys and press **OK** key.

2.5.3 How to Delete/Restore a satellite

• Press **OK** key after selecting a satellite you want to delete.

• Press **OK** to confirm, otherwise press **EXIT** to cancel. The color of the deleted satellite name in the list is changed.

• The satellite which has had already searched channels cannot be deleted.

• To restore the deleted satellite, move the cursor to the deleted satellite and press **OK** key. Then select "Restore" in

  the screen and press **OK** key.

2.5.4 How to add a new transponder

• Press **OK** after selecting a satellite

• Select Edit TP and then Transponder list is shown.

• Press **OK** key selecting "NEW" in the transponder list

• Enter the Down frequency, Symbol Rate and LNB Polarity.

• Press **EXIT** or **OK**. Then new transponder information is stored.

2.5.5 How to delete or update a transponder added

• Press **OK** key after selecting a satellite

• Select Edit TP, then transponder list is shown

• Select a transponder you want to delete or update.

• Press **OK** on the TP you want to Edit or Delete.

• You can see the Edit or Delete in the small-menu.

• In case you want to edit a TP list,

    Select EDIT and press **OK** key.

Enter Down frequency, LNB polarity and Symbol Rate and press **EXIT** or **OK**

Then New TP date is automatically updated.

• In case you want to delete a TP

Select Delete in the small menu, press **OK** key.

Then the TP selected is deleted.

3. Channel Edit

3.1 Channel Edit

You can edit channels of Satellite in this mode.

(1)   You can sort the channels out upon your Preference.

(2)   You can rearrange the channel list.

(3)   You can delete channels.

(4)   You can skip channels.

(5)   You can change the channel name, as you want.

(6)   To enter channel edit mode, you need to press 4 digits password (factory setting is "0-0-0-0").

3.1.1 How to sort the channel

(1)   Press OK after selecting Sort

(2)   Sub mode will be appeared as follows

   ▪ ALL

   ▪ Alphabetic

   ▪ Satellite

   ▪ TP order

   ▪ FTA/Scramble

   ▪ P-Lock

   ▪ S-ID

   Select the mode that you want to sort and press **OK**

(3)   Press **EXIT** to exit from this mode.

3.1.2 How to move the channel

(1)   Press **OK** key after Selecting **Move** key

(2)   Press **OK** to select a channel to move and then move the selected channel to the new position by using CH

   ▲▼ keys.

(3)   Repress **OK** key.

3.1.3 How to delete the channel

(1) Select Delete and press **OK**

(2) Select a channel you want to delete by using the   keys.

(3) Press **OK** key.

(4) All channels that you selected are deleted.

3.1.4 How to lock/unlock the channel

(1)   Select P-LOCK and press **OK**.

(2)   Select the channel that you want to lock and press **OK**

(3)   This channel is now locked and the symbol of lock will be shown as a locked channel.

(4)   You can release the locked channel if you press **OK** after selecting the locked channel.

(5)   Once locked channel is selected while watching television, password is requested.

(6)   Picture and sound is appeared after the correct password is given by pressing the numeric key.

3.1.5 How to SKIP the channel

(1)   Select SKIP and press **OK**

(2)   Select the channel you want to hide

(3)   Press **OK**

3.1.6 How to rename the channel

(1)   Press **OK** after selecting RENAME mode

(2)   Select the channel of which you want to change name

(3)   Press **OK** to enter the character input mode

(4)   Put new names, as you want using the 4 arrows keys and numeric key. The maximum number of characters

       is 20.

(5)   After completion of entering new, press **OK**

3.2 Favorite Edit

(1)   Select one channel of channel list.

(2)   Press **OK**, then this channel is moved to the favorite channel list.

(3)   For deleting a channel from the favorite list, press   key to go to Favorite List, select one channel to delete

       and press **OK**. The selected channel disappears in favorite list.

4. User Setup

In this USER SETUP mode, you can select the sub-mode by pressing **OK** and CH ▲ ▼ key.

The changed set-up is activated and stored by pressing **EXIT** key.

4.1 Time

After selecting Time, you can adjust the time. Also you can set the wakeup time and sleeping time to turn receiver on

and off automatically according to the time programmed.

4.2. Parental Control

After selecting Parental control and entering the correct password,

the screen as shown in the right appears. The default password at the factory

is "0-0-0-0"You may change the PIN code, which is your password

in other words, and lock the receiver to prevent children

from watching programs.
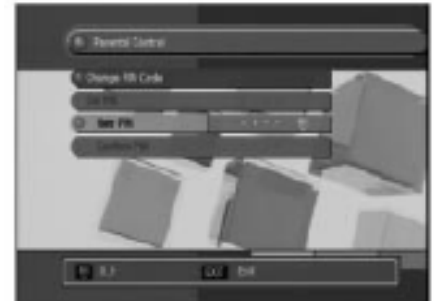
4.2.1 Change PIN Code

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

(1) Enter the Old password. If you enter this mode for the first time after purchasing the receiver, the OLD PIN Code

is the default password.

(2) Enter the new password.

(3) 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 channel edit menu

(4)   To execute factory setting

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

4.3 Language

Press **EXIT** key after you select your preferable language and audio language by using VOL   keys.

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

4.4 AV Output Setting

4.4.1 TV Type

You can set the TV type (PAL, NTSC and AUTO) by pressing VOL   keys.

If the setting value is Auto, then TV is set automatically by source program.

So, the source program is PAL, TV set PAL source program is NTSC, TV set NTSC.

In case you selected PAL mode accidentally and the TV picture rolling up and down, press remote button as follows to recover.

Power Off -> SAT -> SIG -> Power ON

4.4.2 Aspect ratio

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

4.4.3 Closed caption

You can set the closed caption ON/OFF.

4.5 OSD setting

You can adjust the transparency level and Banner timeout by using   key

5. System Setup

5.1 DATA Transfer (Receiver to Receiver)

   1) Connect Null Modem RS 232 Cable (Pin #2 & #3 twisted) between master and slave receiver.

   2) Leave the slave receiver power on condition all the time until completion of date transfer.

   3) Hook up the master receiver to the TV and select "SW Transfer" at "User Setup" screen.

   4) Select "Api Ver" or "Ch Data" by using "Vol   " or "Vol   " button. Then press "CH" button to start transfer. During
       data transfer, processing percentage will be displayed on the screen.

Warning! Do not disturb data transfer by touching any Remote button, RS232 Cable, IF Cable, RCA Cable etc. during data transfer period until "Please wait for saving" message disappeared. Interruption of data transfer could damage the receiver's Flash memory chip which makes the receiver dead and void warranty.

5.2 Factory Setting

Once the Factory setting is selected and the collect password is given by pressing 4-digit numeric keys followed by OK key, whole parameters are changed to the value written in the factory. That is, factory setting functions your STB (Set Top Box) the first stage. 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.

5.3. System Information

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

6. Channel List

▪ You can see the channel list as shown in the above 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. Program Guide

▪ The title and start time of the program is shown as in the right figure after pressing EPG key.

▪ Select the particular channel you. The channel will be changed.

▪ If you want to watch TV with full screen, Press EXIT.

8. Audio change

▪ In multilingual program, favorite language is selected by pressing **AUDIO** key and CH▲▼ keys

▪ Audio mode (L-left, R-right, L/R-stereo) can be Changed by pressing **AUDIO** key and VOL　　 key.

9. USB Memory Stick (DC 5V,　Max.100mA)

Warning!

Please use USB Memory Stick Memory only.

Don't use any other product like USB Charger.

1. USB menu can be watched after inserting USB Stick in Normal Video mode 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 CH 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 save in Channel Data Backup folder of USB. Selected files (up to 20) will be played one by one.

10. Multi Pictures

1. Press ▭▭ and select the Multi Picture mode (2X2 or 3X3 or 4x4) that you want.

2. Move the cursor and select one picture to play

11. Embedded

▪ If you insert Smart Card inside the receiver smart card reader, the receiver will recognize it automatically.

12. Recall the Favorite channel

▪ Press **FAV** key to recall a stored favorite channel.

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

13. Download Procedure between Receiver & PC

1. Turn the receiver power on.

2. Connect Null Modern RS232C cable (#2&3 twisted) between PC and the receiver.

3. Open the GTROM Loader

4. Select the BIN file to download.

5. Select the file type and press download.

6. Press DOWNLOAD.

7. Wait until Download and the receiver Flash write are fully completed.

Warning!

Do not interrupt the receiver power until download and flash write are fully completed. Otherwise the receiver will be damaged or dead

3. SPECIFICATION

Embedded Smart Card Slot	1 Smart Card Reader
USB2.0 with On-The-Go	1 Host

Front-End

1 Input Connector	F-type, IEC 169-24
IF Input Frequency	950MHz to 2150MHz
IF Loop Throughout	950MHz to 2150MHz
IF Frequency	Zero-IF
Input Level	-65 dBm~-25 dBm
LNB Power	13 /18VDC / 500mA Max
DiSEQqC Control	Diseqc 1.2 & USALS Compatiable
Band Switch	22KHz Tone
Demodulation	QPSK
Symbol Rate	1~45 Msps(SCPC,MCPC)
Viterbi Decoding Rate	1/2,2/3,3/4,5/6 and 7/8
Reed Solomon Decoding	FEC: 204, 188. t=8

MPEG transport Stream A/V Decoding

Demultiplex	According to ISO/IEC 13818-1
Input syream	Max. 90Mbit/s
Aspect Ratio	4:3, 16:9
Video Resolution	720x576 (PAL), 720X480 (NTSC)
Audio Decoding	MPEG Layer I & II
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	VIRGO SE
CPU Clock	150 MHz
Flash Memory	8 Mbyte
SDRAM	32 Mbyte
EEPROM	32 Kbit

Data port

Connector	9 Pin D-Sub Type
Protocol	RS232 Asynchronous
Data Rate	Max. 19.2Kbps

RF Modulator

Connector	IEC 169-24, Male/ Female
Frequency	CH3 (61.25MHz), CH4 (67.25 MHz)
Output Channel	CH 3-4
TV Standard	NTSC
Preset Channel	Ch3-4,Changeable by Menu Screen

Front Panel

4 Digits LED	Channel Number Display
8 keys	Volume Up/Down, Channel Down/Up, OK, Power, Menu, Exit
Smart Card Interface	1 Slot
USB Memory Card Slot(Max. 500mA)	1 Host

Rear Panel

IF Input	F-type Connector
IF Loopthrough output	F-type Connector
6 Phone (Cinch)	Video, Audio L, Audio R, YPbPr
S/PDIF Optical	
S-VHS	
UHF	
Modulator	
RS232 Serial Port	9 Pin D-Sub Type

Remote Control

Type	IR Remote
Battery	2x1.5V AAA Type

Electrical and Mechanical

Input Voltage	AC 90 -240V, 60Hz
Power Consumption	Max. 25 Watts
Standby Power	Less than 11 Watts
Size(WxHxD)	290x200x55mm
Weight	2.1kg

4. 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 scart cable or 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