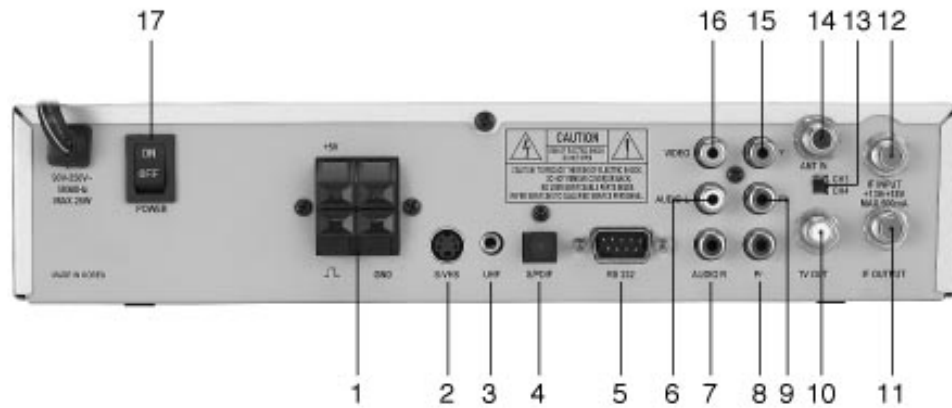



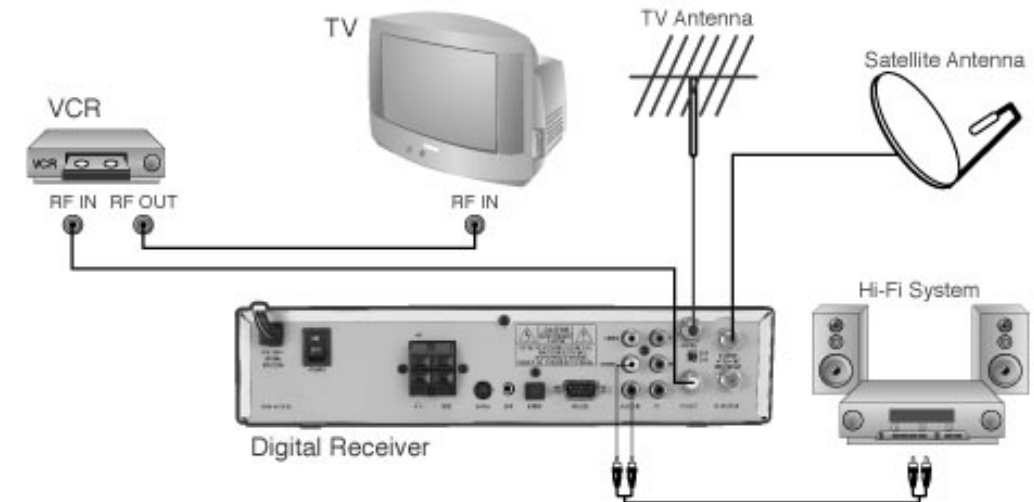
3. REAR PANEL



NO	NAME	FUNCTION
1	+5 GND 	Used for mechanical polarizer Used for switching external signal (LNB)
2	S-VHS	Super Video output to TV or VCR
3	UHF	Option for UHF Remote control kit
4	S/PDIF	For Digital Audio out
5	RS232	Serial port used for software downloading
6	L	Left audio output
7	R	Right audio output
8	Y	Component Video Output
9	Pb	Component Video Output
10	TV OUT	Output to TV
11	IF OUTPUT	IF Loop-through output to 2nd receiver
12	IF INPUT	IF INPUT from LNB to receiver
13	Modulator Switch	CH 3/4 Switch
14	ANT IN	Input from terrestrial TV antenna
15	Pr	Component Video Output
16	VIDEO	Composite video output
17	AC SWITCH	AC Power ON / OFF (Reset Function)

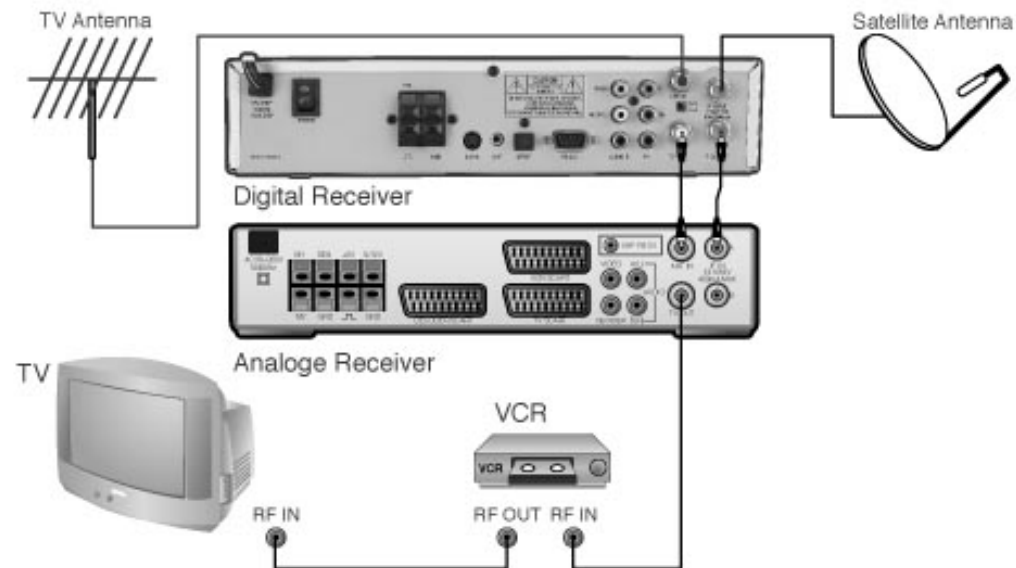
4. SIMPLE DIGITAL CONNECTION

When connecting receiver to TV and VCR with RF cable (Single Antenna)



5. ANALOG / DIGITAL CONNECTION

When connecting receiver to analog receiver and VCR with RF Cable



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, Ch.3 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 7 languages.

- English,
- German,
- French,
- Portugal,
- Spanish,
- Turkish,
- Arabic,



[Fig 1-1]

2. Installation



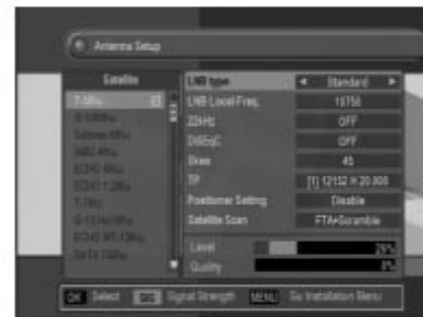
Press the OK key. Use common password "0000". Parental control and channel edit are not accessible until satellite channels scanned and saved. Antenna setup is appeared on screen as upper second figure.

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 ◀&▶ key.
- After selecting the satellite, Press OK
- Adjust LNB type, LNB Lo-Freq, 22kHz, DiSEqC, LNB power, 0/12V, TP, Positioner Setting.
- You can cancel the satellite you chose using ◀&▶ key.



2.1.2 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) / 10175(H))

22kHz control is automatically set for each LNB alternative.

If Universal 1 or 2 is selected, 22kHz control should be "off state."

2.1.3 LNB Lo-Freq

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

For USA : C-Band L/O : 5150 MHz

Ku-Band L/O : 10750 MHz, 11250MHz

2.1.4 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.

2.1.5 DiSEqC

- DiSEqC 1.0, 1.2, 1.3 (STAB USALS) is compatible.
- DiSEqC 2X1 & 4X1 is usually available.

2.1.6 Skew

In case that LNB with mechanical polarizer is used in your system.

Adjust skew value by using "◀/▶"key and check signal status bar at the same time. Keep on adjusting at the maximum signal status.

2.1.7 TP

Select a specific transponder by using the VOL ◀▶ keys.

2.1.8 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: users define)

(2) Movement

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

(3) Nudge East / West

Select Nudge East / West by using ◀▶ keys and press OK to save current position

(4) East Limit Set

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

- (5) West Limit Set
Move the position to the most western position OK then East Limit is stored
- (6) Limits Disable
Select Disable limits by using OK key
- (7) Go to reference
Select got 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 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 present position will be saved.

2.1.9 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 on the screen.

2.2 Satellite scan

Scan all the transponder of selected satellites.

- (1) Press OK key and Select wanted satellite by using ▼&▲key
(If you want to scan several satellites once, You can control by ◀▶ keys)
Then press OK key to execute scanning.
- (2) You can select satellites whatever You chose though. It is possible to search only for 4 satellites among satellites you chose.
- (3) Transponder will be consecutively scanned all selected satellites.



2.3 TP scan

- Selected TP is scanned in this menu
- (1) Select TP scan in the installation menu
- (2) Select a satellite
- (3) Select TP to scan by using the ▲▼ key (using ◀▶ keys you can multiscan), then press OK to search

2.4 Network Scan

- Procedure for setting up is same as TP scan.
- Advantage: All the TPs belong to same network group will be automatically scanned.

2.5 Advanced Scan

- Advanced Scan is used to scan the new TP of which the parameters have been entered manually. After setting the search parameters like down frequency, symbol rate and polarity by using the numeric keys and VOL ◀▶ keys, press "OK."
- Setting Video PID/Audio PID/PCR PID
- You can set the PID to search program.
- After setting the PID values, press OK key.

2.6 Smart Search

Smart Search enables to search and scan all channels in the satellite without any preprogrammed data.

2.6.1 How to add a new satellite

- 1. Select the satellite name with ◀▶ keys.
- 2. If you want to add a new satellite, press the OK key.



2.6.2 LNB Configuration

Please refer to 4.1 Antenna Setup.

2.6.3 Symbol range

- Select Full, High or Low
- Full : High and Low
- High : >7.5M • Low : <7.5M

2.6.4 Polarity

- Select Horizontal / Vertical with ◀▶ keys.
- All : Scan Horizontal and Vertical.
- Horizontal : Scan Horizontal TP only.
- Vertical : Scan Vertical TP only.



2.6.5 Scan

- Select Scan type with ◀▶ keys.
- When you select the OK key, the scanning will start.

2.7 Edit TP/ Satellite

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

Also you can update or delete the transponder information.

2.7.1 How to add a new satellite

- Select "New" in the satellite name the using the numeric key or CH ▲▼ key, 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, the new transponder information is stored.

2.7.2 How to rename the 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.

2.7.3 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.

2.7.4 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, the new transponder information is stored

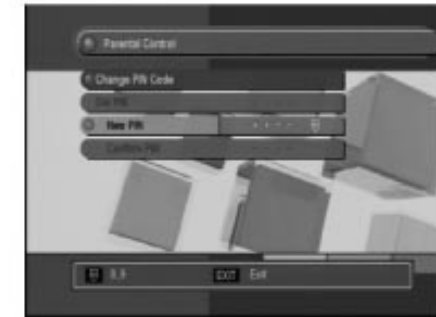
2.7.5 How to delete or update a transponder added

- 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 list TP
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. 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 selected programs.



3.1 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.

* In case of forgotten password programmed, call dealer to get master factory password.

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

Password is required

(1) To show parental locked channels

(2) To enter Parental Control menu

(3) To enter channel edit menu

(4) To execute factory setting

4. Channel Edit

In this mode.

- (1) You can sort the channels out upon your Preference.
- (2) You can rearrange the channel list.
- (3) You can delete channel.
- (4) You can adjust the favorite channel list, as required.
- (5) You can skip channels.
- (6) You can change the channel name, as you want.
- (7) To enter channel edit mode, you need to press 4 digit password (factory setting is "0-0-0-0")

4.1 How to sort the channel

- (1) Press OK after selecting Sort.
- (2) Sub mode will be appeared as follows
 - Alphabetic
 - Satellite
 - FTA/Scramble
 - P-Lock
- (3) Select the mode among the 4 kinds of mode that you want to sort and press OK
- (4) Press EXIT to exit from this mode.



Note

The Format of Sorted List

- Alphabetic & Satellite: In Alphabetical order
- FTA/Scramble: The Free channels first & the scrambled channels later and vice-versa
- P-Lock: The channels of P-Lock first

4.2 How to move the channel

- (1) Press the '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.

4.3 How to delete the channel

- (1) Select "Delete" and press "OK."
- (2) Select a channel you want to delete by using the ◀▶ key.
- (3) Press OK key.
- (4) All channels that you selected are deleted.

4.4 How to store/release the favorite channel

- (1) Select "Favorite" and press "OK."
- (2) Press "OK", then this channel is included to the favorite channel list.
- (3) The mark stands for the favorite channel.
- (4) To delete a channel from the favorite list, go to the marked channel and Press "OK".

4.5 How to lock/unlock the channel

- (1) Select P-LOCK in the screen as shown 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.

4.6 How to SKIP the channel

- (1) Select "SKIP" and then press "OK"
- (2) Select the channel you want to hide
- (3) Press "OK"

4.7 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

5. User Setup

In this USER SETUP mode, you can select the sub-mode as shown on the [Fig 6] by pressing the OK key and CH ▲▼ key. The changed set-up is activated and stored by pressing the EXIT key.



5.1 Language

Press the EXIT key after you select your preferable language by using VOL ◀▶ key.

English, German, French, Portugal, Spanish, Turkish, Arabic, Croatia

5.2 Aspect ratio

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

5.3 TV Type (USA Standard is NTSC)

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 → TAST → SIG → Power ON

5.4 Time Setting

After selecting the Time Setting, 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.



5.5 Modulator

If you want to watch the broadcasting through, the modulator output, you could change the modulator channel as follows after pressing the OK key to enter the sub-menu.

- (1) NTSC is supported.
- (2) You can adjust the Modulator type by pressing VOL ◀▶ key.
- (3) You can adjust Modulator type, you can go back to the previous mode by pressing EXIT or OK key.
- (4) The adjusted data is programmed automatically when the EXIT key is pressed.
- (5) Modulator channel can be changed from the channel 3 to channel 4.
 - 1) Set TV channel to 3 and find menu screen.
 - 2) Select modulator column and change the channel number by ◀▶ key.
 - 3) Press "EXIT" key to store and menu screen is appeared.
 - 4) Tune TV channel to the channel newly stored as in the above.

5.6 OSD setting

You can adjust the transparency level by using ◀▶ key.

5.7 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 data transfer.
- 3) Hook up the master receiver to the TV and select "SW Transfer" at "User Setup" screen.
- 4) Select "Ver Code" 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.

6. Factory Setting

Once the Factory setting is selected and the correct 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.



7. System Information

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

8. 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 ◀▶ keys ▲▼ 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 change from channel list to channel list Radio You can exit from the channel list menu by pressing "EXIT" key or "OK" key.



9. 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.



10. Audio change

- In multilingual program, favorite language is selected by passing AUDIO key and CH ▲▼ keys
- Audio mode (L-left, R-right, L/R-stereo) can be Changed By pressing AUDIO key and VOL ◀▶ key.



11. SD Memory



1. FLASH UPGRADE (SD CARD to RECEIVER)

- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select the Bin file to transfer (Version code or CH data) and press OK button. **** Enter BACK UP to find the files previously backed up from the receiver.**
- Wait until the receiver fully rebooted after writing completed (about 40 seconds).



2. FLASH BACK UP (RECEIVER to SD CARD)



- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select BACKUP and press OK button.
- Code Backup: Press Red button on the remote and make desired file name up to 8 digits, move cursor to OK font and press OK button. Wait about 10 seconds to complete. CH Data Backup: Press Green button on the remote and repeat same as above.
(Note : MMC CARD may be also interfaced)

3. MP 3 PLAY



- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select MP 3 and press OK button.
- Select the MP 3 file to play and press OK button.
- For multiple MP 3 play, use left/right volume buttons to select or cancel the files to play. All selected files (up to 20) will be played one by one.

play. All selected files (up to 20) will be played one by one.

12. Embedded

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



13. Recall the Favorite channel

- Press the FAV key to recall a stored favorite channel.
- Favorite channel is programmed and stored in the channel edit menu.

14. Download Procedure between Pansat 3500S & PC

- Turn the receiver power on.
- Connect Null Modem RS232C cable (#2&3 twisted) between PC and the receiver.
- Open the GTRom Loader of 3500S model.
- Select the BIN file to download.
- Select the File type and press Download.
- 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 UHF REMOTE CONTROL KIT(Optional item)



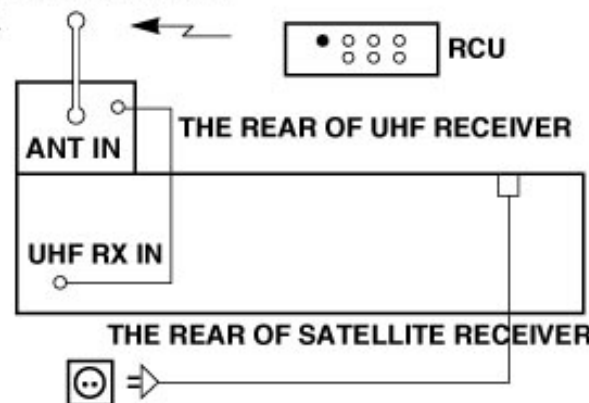
WARNING : To prevent electrical shortage, do not install the UHF Receiver on the condition that AC power cord of the Satellite Receiver is plugged in.

3.1 KIT LIST

1. UHF Receiver
2. UHF Antenna
3. UHF Remote Control
4. Battery(AAA Type) - 2pcs.

3.2 INSTALLATION

1. Take off the AC power plug of the Satellite Receiver from the wall socket.
2. Connect the UHF antenna to ANT IN.
3. Connect the Cable Assembly to the UHF RX IN on the rear of the Satellite Receiver.
4. Plug the AC powercord and turn on the receiver.
5. Use UHF Remote Controller.



3.3 SPECIFICATION

UHF Receiver	FREQUENCY	912.00MHz
	MODULATION MODE	FSK
	UHF INPUT LEVEL (SENSITIVITY)	-95dBm
	WHIP ANTENNA	177mm
	SIZE(mm)	65 x 96 x 33
UHF Remote Control	INDOOR USE	About 60m
	OUTDOOR USE	About 200m
	BATTERIES(AAA Type)	1.5V x 2pcs.

SPECIFICATIONS 4

Embedded smart card slot

1 Smart Card Reader

SD-CARD Interface

1 SD-Card compatible memory card slot

(Note : MMC CARD may be also interfaced)

Front-End

2 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~ -25dBm
 LNB Power 13/18VDC / 500mA Max
 DiSEqC Control Version 1.3 Compatible
 Band Switching 22KHz Tone
 Demodulation QPSK
 System Rate 1~45 Msps (SCPC, MCPC)
 Viterbi Decoding Rate 1/2, 2/3, 3/4, 5/6, 7/8
 Reed Solomon Decoding FEC: 204, 188. t=8
 DiSEqC 1.3 Compatible (STAB USALS)

MPEG Transport Stream & A/V Decoding

Demultiplex According to ISO/IEC 13818-1
 Input Stream Max. 90Mbit/s
 Aspect Ratio 4:3, 16:9
 Video Resolution 720 x 576(PAL), 720 x 480 (NTSC)
 Audio Decoding MPEG layer I and II
 Audio Mode Single/Dual Channel, Stereo, Joint Stereo
 Audio Sampling Frequency 16/22,05/24/32/44,1 48khz

Microprocessor & Memories

Main Processor STi 5518 BVB, ST20 32 bit
 CPU Clock 81MHz(100 MIPS)
 Flash Memory 2 Mbyte
 SDRAM 16 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 CH 3 (61.25MHz)
 CH4 (67.25 MHz)
 Output Channel CH 3-4
 TV Standard NTSC
 Preset Channel CH3, Changeable by Menu Screen

Front Panel

4 Digits LED Display Channel Number Display
 8 Keys Power, Channel Up/Down, Volume Up/Down, OK, Exit, Menu

Rear Panel

IF Input F-type Connector
 IF Loophrough output F-type Connector
 6 Phone (Cinch) Video, Audio L, Audio R, YPbPr

S/PDIF Optical

Skew 3 Push Terminal (5V, GND, PULSE)
 S-VHS
 UHF
 Modulator
 RS232 Serial Port 9 Pin D-sub Type
 Y/Pb/Pr Digital Component Video Out

Remote Control

Type Infra-red
 (Carrier Freq : 38 KHz)
 Battery 2 x 1.5V AAA Type

Electrical and Mechanical

Input Voltage AC90-250, 50/60Hz
 Power Consumption Max. 55 Watts
 Standby Power Less than 5 Watts
 Dimension 290 x 200 x 65 mm
 2.1 kgs

5 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 satellite antenna cable	Connect the antenna cable correctly
	Wrong direction of satellite antenna	Adjust the direction of antenna
	No signal or weak signal	Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna
	Wrong setting of channel information in MENU screen	Type the setting value correctly
Black-and-white screen or V-Hold	Your TV mode is different from satellite broadcasting mode	Use TV of same mode
		Use the NTSC/PAL converter connected 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