

Digital Satellite Receiver

User' s Guide

FOR YOUR SAFETY

Information contained in this manual is subject to change without notice. No part of this publication may be copied, reproduced, or translated to another language for any purpose.

FOR YOUR SAFETY

- Be sure to read the user manual before starting the operation of the receiver.
- Do not open the housing. The receiver contains high-voltage components and parts.
- Even after switching off the receiver still contains high-voltage for a while.
- Do not expose to rain or moisture.
- Do not make objects or fluid enter the housing through the ventilation slot. If any spilt liquid went into to the housing, unplug the power cord and call your local service provider.
- Do not place close to any heat source.
- Do not press with hard or heavy object.
- To protect possible malfunction by lighting, we recommend you to use power surge unit. Call your local dealer for advise.

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For Your Safety

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BEFORE GETTING STARTED

1.1 Main Features

- Easy Menu Function
- TV Guide Function
- RF Output Function
- Electronic Program Guide(EPG) for On Screen Channel Information
- Software Upgrading Function Through RS-232C Cable by PC
- Perfect DiSEqC 1.2 and 0/12V Support for Various Antenna System or 2-LNB on 1 Antenna System
- Supports of Ku/C band, SCPC and MCPC
- Additional Audio Output Function for Connection to Hi-Fi Audio System
- Other Functions of Remote Controller, Receiving Level Selection, Channel Editing, Menu Language Selection and Audio Selection
- Digital free-to-air Satellite Receiver
- NTSC & PAL Output Function

Regardless of the TV type, NTSC and PAL channels can be viewed by selection

Note

When PAL channel is viewed on NTSC TV, small deletion on up & down sides of the screen may occur and it is normal, as its conversion is managed by software. And darker color on the bottom side of the screen may occur, when NTSC channel is viewed on PAL TV.

- 1200 Transponders and 1820 Channel Memory Function
- Teletext Supported
- Multi Language Function(Menu, Audio)

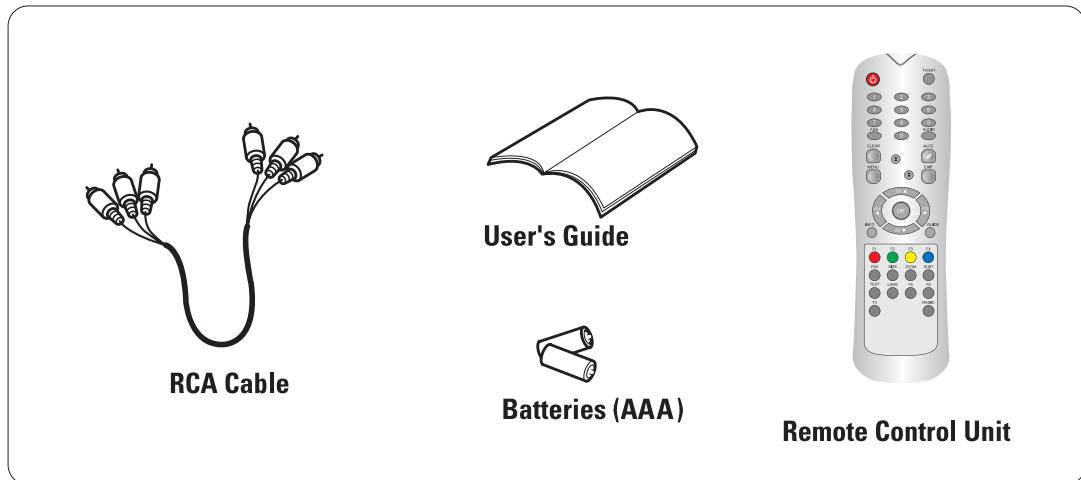
1.2 Accessories

RCA cable

User's Guide

Batteries(AAA)

Remote Control Unit



CONTROLS AND FUNCTIONS

2.1 Front panel



STANDBY ON

Turn the power on/off.

Volume ◀ ▶

Control volume, change item on menu or input frequency value.

Channel ▲ ▼

Change channel, move menu, or input frequency value.

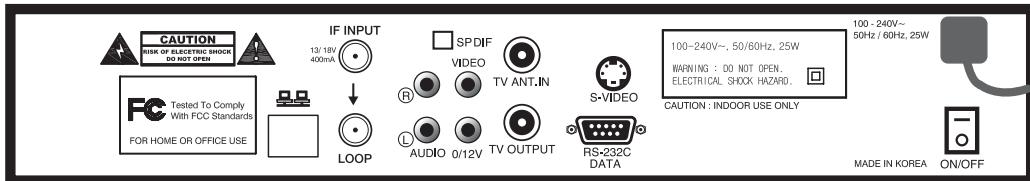
OK

Select menu or value on menu item.

MENU

Shows the menu application.

2.2 Rear pannel



IP Connection

Network interface

DIGITAL

It receives signals from the LNB in the range of 950 ~ 2150MHz. Connect a satellite dish to DIGITAL.

OUT

It sends signal to the another receiver.

AUDIO

It provides stereo audio output. Connect the audio on TV to AUDIO with RCA cable.

SPDIF

Output for connection to a digital amplifier

VIDEO

It provides composite video output. Connect the Video on TV to VIDEO with RCA cable.

0/12 VOLT

The 0/12V jack provides 0 or 12V output for external LNB switch.

TV ANT IN

The signal supplied to this connector from a TV antenna will be sent to TV antenna output. Connect a TV antenna to TV ANT IN.

TV OUTPUT

It provides a modulated audio and video from the receiver. Connect the TV/VCR on TV to TV/VCR with the RF cable.

S-Video

It provides high definition screen.

RS-232C DATA

It receives data by connecting to PC for software upgrading. Connect with RS-232C cable a PC and receiver.

ON/OFF

The switch is to turn on or off the main power of the receiver mechanically.

CONTROLS AND FUNCTIONS

2.3 Remote Control Unit

Open the controller cover on the back and insert two batteries (AAA - 1.5V).



POWER

Turn the power on/off.

TV/SAT

Select between TV Channels and Satellite channels for RF output.

Numeric(0~9)

Change channel or input frequency value.

F. BK

It is to move to previous channel.

AUDIO

Select Stereo, Main or Sub from multi language channels available.

CLEAR

Clear wrong number input or delete channel from TV (Radio) list or favorite channel list.

MUTE

Deactivate current sound.

MENU

Shows the menu application.

Page UP/DOWN

Move to previous/next page on TV(Radio), Favorite Channels or Edit TV(Radio) Channels.

EXIT

Exit from the menu.

Volume ▲ ▼

Control volume, change item on menu or input frequency value.

Channel ▲ ▼

Change channel, move menu, or input frequency value.

OK

Select menu or value on menu item.

INFO

Shows the information of current channel. Click the INFO button twice, TELETEXT mode will be displayed.

GUIDE

Shows the broadcasting information.(Video - Audio - LNB)

FAV

Add TV or Radio channel to the favorite list on Edit TV(Radio) Channels, or watch favorite channel from your favorite list.

WIDE

Select between standard 4:3 and wide 16:9 screen sizes.

SUBT

Visible / Invisible For the Subtitle.

TEXT

Change to Teletext mode.

LANG

Select the audio language from 2 or more audio language channels available.

TV

Change to TV mode from radio channel.

RADIO

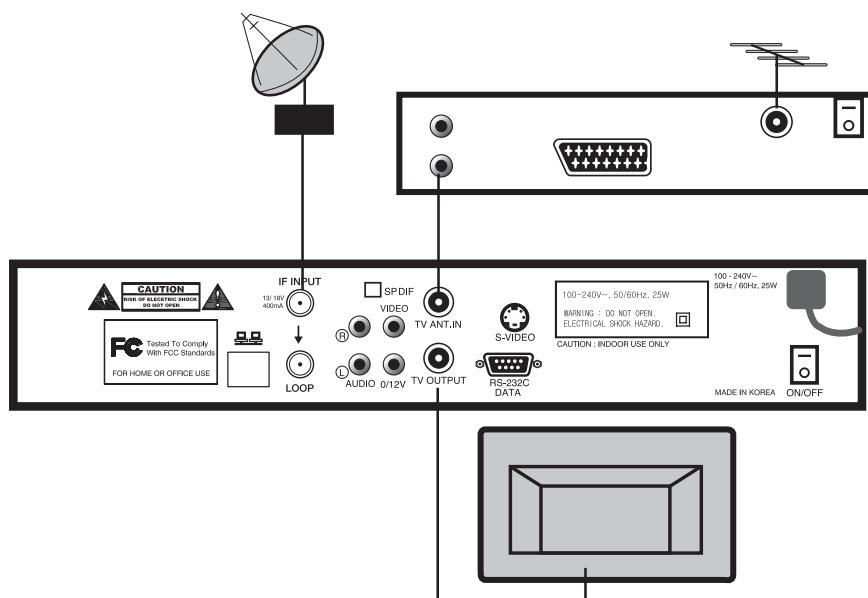
It is for fast change to radio mode from TV channel. Shows the current Radio program list.

Connections

3.1 Connecting to the TV, VCR and Satellite Antenna

It is not necessary to adjust power, as the product is of free - voltage (110~220V)

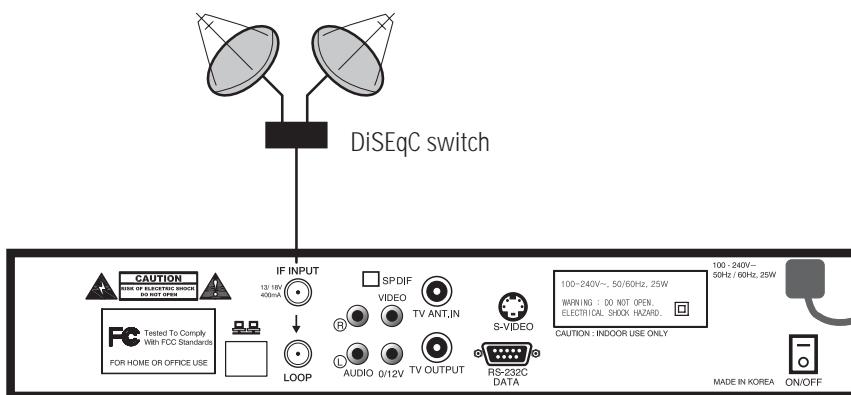
1. Connect the RF cable from the TV OUTPUT on the satellite receiver to a TV and connect the RF modulate on the VCR and the TV ANT.IN.
3. Connect an antenna to the LNB socket on the VCR or other receiver and cable of the satellite dish to the DIGITAL on the satellite receiver.



3.2 Connecting DiSEqC switch

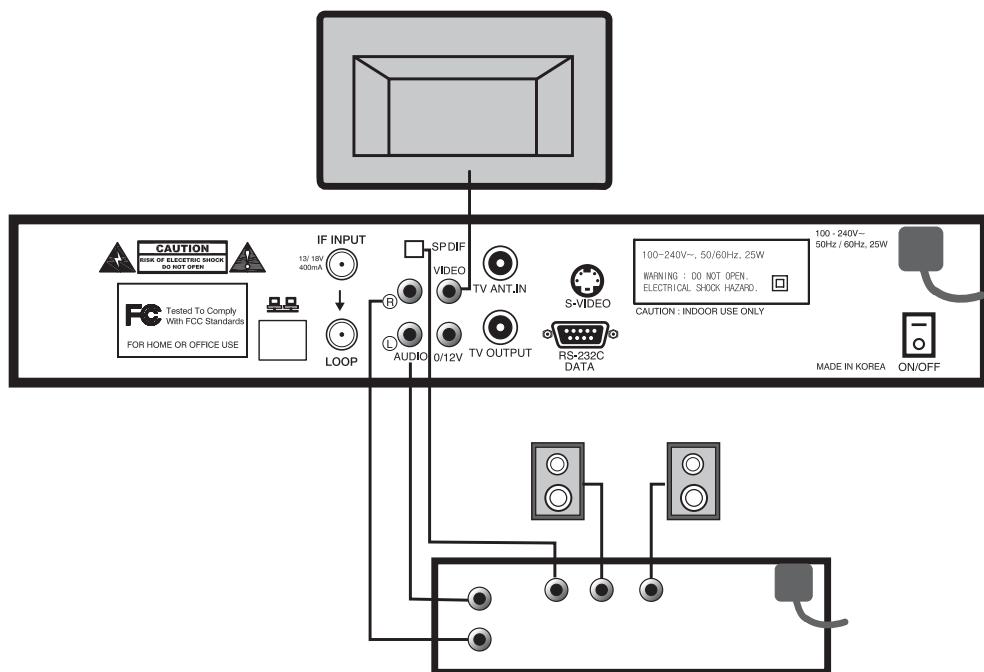
If you have one antenna equipped with many LNBs or two antennas with one LNB on each, you need a DiSEqC switch.

1. Connect the LNBs to a DiSEqC switch at first.
2. Connect the antenna cable to the OUT connector on the DiSEqC switch and connect the end of the cable to the DIGITAL on the satellite receiver.



3.3 Connecting to the TV, HiFi system and 0/12V switch

1. Connect the RCA cable from the VIDEO INPUT on the TV to the VIDEO on the satellite receiver.
2. To use 0/12V switch, connect one cable of the 0/12V switch to the 0/12V on the satellite switch and connect another cable to the DIGITAL on the satellite receiver.
3. Connect a RCA stereo cable from the AUDIO RL on the satellite receiver to the AUDIO RL on the HiFi system.



Settings and Operations

4.1 Basic Settings

If it is the first time using a receiver, you should set parameters for system configuration. Refer to the following section.

1. Turn on your TV and Satellite receiver.
2. Press the MENU button, main menu screen will appear as shown below.



<LNB Power>

1. Select Installation on the Main Menu.
2. Select LNB Power.



3. If LNB Power is independently supplied from outside source, set the LNB Power OFF. Otherwise set it ON.

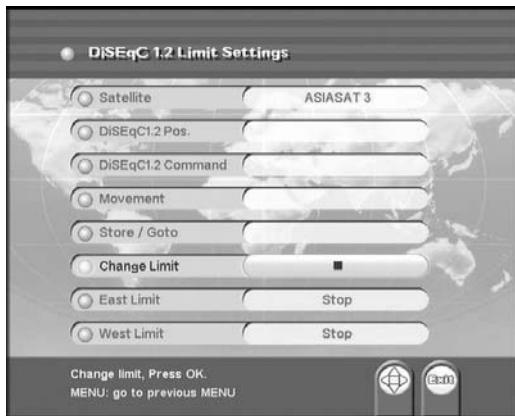


4. After completion of LNB Power setting, go back to Installation menu by pressing MENU.

<DiSEqC 1.2 Limit Settings>

If you have a DiSEqC 1.2 motoried system to control your satellite antenna you have to make the following setting. First, you must select ON on DiSEqC 1.2 of LNB Setting in the TP Configuration. < **Please refer to the TP Configuration section** >

1. Select DiSEqC 1.2 Limit Settings of the installation.
2. You should set the East Limit and West Limit of your satellite antenna. If you use the satellite receiver at first. Press OK button on the Change Limit item, set the East/West Limit.



3. Select satellite you want and DiSEqC1.2 Pos. will be set automatically.



Satellite / DiSEqC1.2 Pos.

The Satellite shows current name of satellite, and DiSEqC1.2 Pos. shows positioner value of the current satellite.

DiSEqC1.2 Command

DiSEqC1.2 Command changes the current mode between Installer and User.

Movement

In User mode this is used to tune the position of the motor. In Installer mode this is used

Settings and Operations

to search for the position of a satellite manually.

Store

Stores the current position of the motor for the selected satellite name.

Goto

Moves the motor to the stored position of the selected satellite name.

<TP Configuration>

You have to know valid value for your LNB at first.

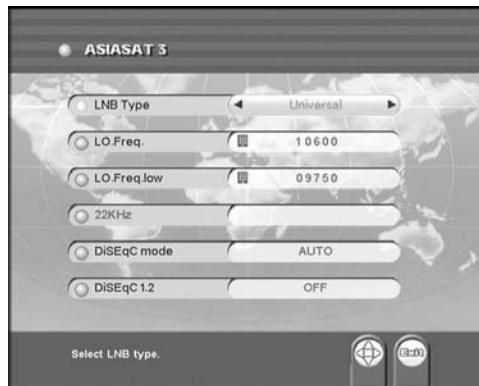
1. Select TP Configuration of the installation.
2. Select correct name of Satellite. If there is no proper satellite name listed in the item, select one from any of USER1 ~ USER 19.



3. To change value of LNB from each satellite, press OK button from LNB.



< Standard >



< Universal >

4. For universal type of LNB, select Universal from LNB Type item and input the LNB frequency value on Freq.High and Freq.Low by using VOL **◀ ▶** or numeric key.

For standard type of LNB, select Standard from LNB Type and input correct value on Freq..

5. While only 1 antenna is in use, set the 0/12V switch and DiSEqC mode. to Disable. In case of STANDARD, select OFF from 22KHz. If more then 1 antenna is in use, select 0V or 12V from 0/12V SWITCH, or select a proper position from Mini A, Mini B, DiSEqC 1 ~ DiSEqC 4 by different DiSEqC type as you are using DiSEqC switch.

6. Select Search Channels on the TP Configuration press OK, all the available TP will be searched automatically.

7. Move to desired TP with CH **▲ ▼** on the RCU. If there are no transponder data which you want, move to Add New TP and press OK button.



8. Select the desired satellite. And input correct values of Frequency, Polarization and Symbol Rate. Select the Polarization value as Hor or Ver. If you did not know accurate polarization value select Auto.

Note

You should find the correct data from satellite magazine or internet(<http://www.SATCOD>

9. After all the values are input, select Search Channels and wait until the automatic search is complete

If FTA only is selected as YES, only free channels will be searched without scrambled pay channels. Otherwise all channel with scrambled pay channels will be searched. Scrambled pay channels is marked as \$ at the beginning of the channel name.

After successful completion of channel searching, move to TV Channels or Radio Channels on MAIN MENU to select currently received channels. Then you should select the TV channel or Radio channel which you want. After then you can watch the TV program or listen to the radio.

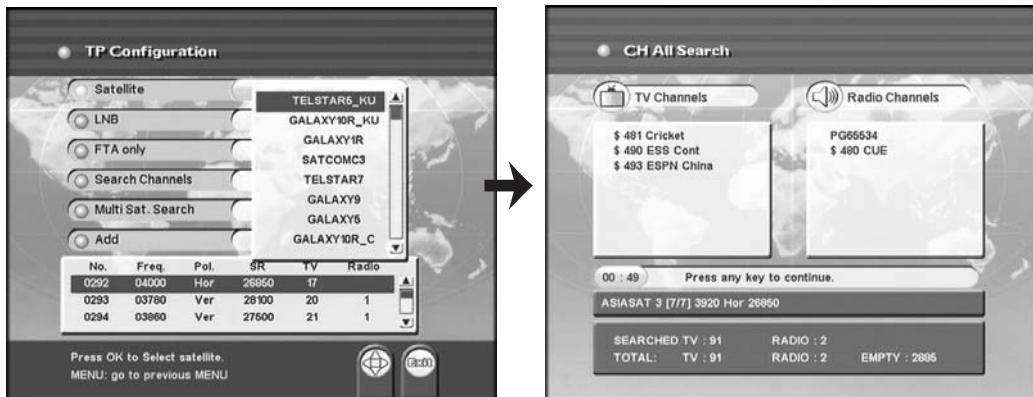
Settings and Operations

Note

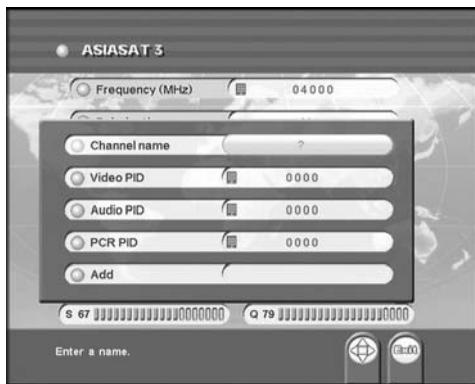
Depending on certain TP or satellite, the Network Search function may not work.

10. To use the Multi Search function, connect the DiSEqC switch or set the DiSEqC 1.2 of Installation. You can search all the channels from the satellites which you select.

Select the satellites by FAV button, and press Multi Search.



11. In case of searching a certain satellite which can not be searched by TP Search, add channels by PID. Select Add Channel and input proper Channel name and input the values of Video PID, Audio PID and PCR PID. Then, press OK button from the Add item.



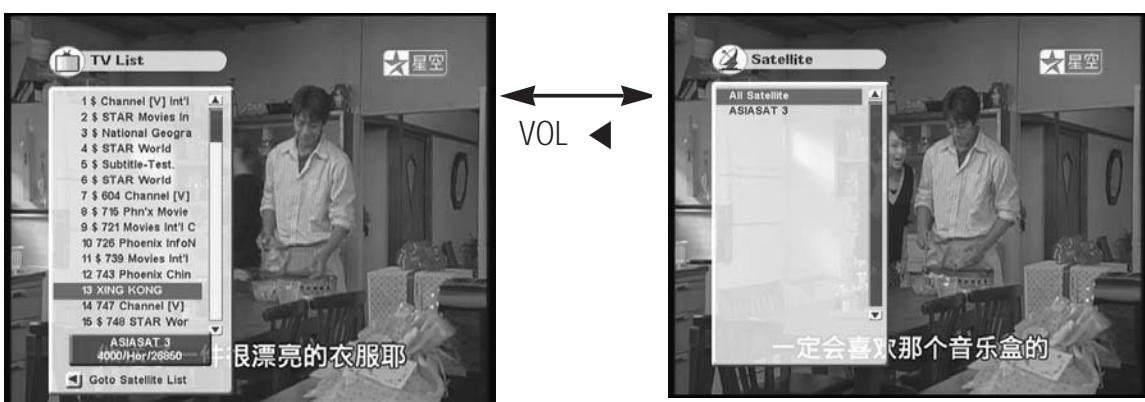
[Network Search]

Network search function is enable to search new TPs and all channels in all TPs.

*Network Search : TP Configuration --> Search Channels(Network Search)
--> Network Search(Search TP)

4.2 Viewing TV(or Radio)

1. Press the Power button.
2. Press the TV(or Radio) button.
3. If you want to see all TV channel list, click the MENU button and then select the TV Channels(or Radio Channels). TV Channels(or Radio Channels) window will appear.
Click the  , you will see current Satellite name box. Select any satellite in the satellite name box, only the TV list of selected satellite will be displayed.



Viewing Favorite Channel



1. Press FAV key.
2. Select a CH   . To move to next or previous page, press PAGE UP/DOWN buttons on Favorite TV(or Radio) List.

Settings and Operations

Edit TV Channels / Edit Radio Channels

From these menus you can creat and edit channel list.

Press OK button from Edit TV Channels and similar screen will be shown as below.



Edit Satellite List.

You can select your own satellites by creating favorite satellite list.

To change the name of satellites, press "INFO" button on RCU.



Arrange channel

To change the channel orders from TV List, press OK button from your desired channel. Then you should move to desired number by pressing CH \blacktriangle \blacktriangledown , after then press OK button. Its orders will be changed.

Delete channel

To delete a certain channel from current TV List, press CLEAR button on the channel to be deleted. To confirm the deletion, press CLEAR button once more. To cancel the deletion procedure, press FAV button.

>Create favorite channel

You can create favorite channel list, containing the channel which you want to watch frequently.

Press FAV button on channel you want, and then selected channel will be moved to Favorite List box. To delete the desired channel from the Favorite List, press CLEAR button.

Help function

You can see the functions of each button in Edit TV List. Select the HELP button.



Sort

If you want to sort channels in order, select the SORT button in Edit channels.

You can select the order you want.



Lock Channels

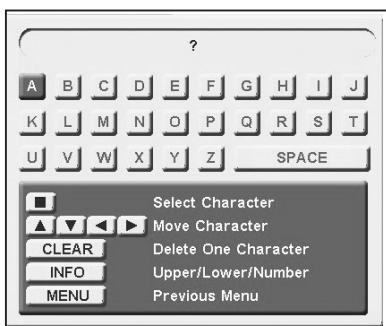
From here you can lock channels in any of the lists in order to prevent your children from watching.

If you have the password already and want to lock a certain channel, press F.BK button at the desired channel. Everytime you watch the channel, the unit will ask you to input password.

Settings and Operations

Edit Channel Name

1. Press INFO button on Edit TV or Edit Radio list. Cursor will be moved by using VOL **◀ ▶**, CH **▲ ▼**.



2. Press OK button on desired alphabet. To delete pre-selected alphabet, press CLEAR button.
3. To change character set(upper, lower, number), press INFO button. By using MENU button, it will be automatically stored and moved to previous menu.

Parental Control

If you use this function you have to enter the password everytime you start this satellite receiver.

1. Select Parental Control on the installation.
2. To secure program setting and installation, select Change Password.



3. Input 4 digits New Password. And input password Confirm New once more. After all the password function is set, the unit will ask you to input password to get into the menus of Installation and System Settings. Input correct password which was already stored.



If the password is forgotten, contact your service provider.

4.3 Other functions

Audio Selection

If broadcasting channel is supporting multi language, different language can be selected from Audio Selection.

1. To select different language on current channel, select Audio Selection on the Main Menu.

2. Press OK button on your favorite language.

According to different audio data on each channel, up to 4 different audio language types can be selected.

TV Guide

Press GUIDE button of RCU for channel information. This function works in digital mode only.



Teletext function

Pressing the TEXT button will open a Teletext page. Select teletext pages with the numeric buttons on the RCU.



From Teletext Screen

CLEAR

Overlay background screen and teletext mode according to the following

Settings and Operations

order(transparency - Teletext only - Opacity)

INFO

Hold of current Teletext page

PAGE UP/DOWN

Move previous and next page in one

CH UP/DOWN

Move previous and next page in one

FAV/TV/RADIO/F.BK/LANG/AUDIO

100/200/300/400/500/600 page level

0 ~ 9

Select Teletext page

EXIT

Exit teletext mode

Clock Function

- From the Front Panel

Menu button

The clock shows 12:00 o'clock on the front panel when the power is off. If user press MAIN button, the 12:00 o'clock is on and off continually and then user can set up the time using the VOL, CH, OK buttons. If user press MENU button again, the setting is finished and the time works regularly.

Channel button

This CH ▲ ▼ allows user to set up the time.

Volume button

This VOL ◀ ▶ allows user to set up the minute.

OK button

This OK button allows user to finish the setup of time. If user press OK button after setting up time, the on and off is gone on the front panel and the time works regularly.

[Screen Division Function]

You can check other channels (still picture mode) while you are watching a specific alive channel with this function.

1. *In the full screen mode, press "OSD" key in the Remote Control then you will get 4 divided pictures.*

2. By pressing "VOL ◀ ▶" key, you can select a frame one by one.
Selected frame will provide you a live picture.
3. By pressing "CH ▲ ▼" key, you can change the channel in the selected frame.
4. Press "Exit" key, then the function goes to the full screen mode.
5. If you press "OSD" key one more time in the No.1 stage above, you will have 13 divided pictures and operations are same as above.

Settings and Operations

4.4 System Settings

Please make sure to press OK button always, after the changing items of System Settings.



• *Language Setting*

Select the language which you desire to display on the screen for your system. Press OK button to get in more options.



Audio language

Only if a current channel contains 2 or more audio language information, set the Audio Language as English or other favorite language. Then press OK button for its confirmation.

Menu Language

For menu language selection, select desired language from Menu Language of system Settings.

Subtitle Mode

Subtitle is a printed version of the dialogue, narration, and/or sound effects of a TV program. Subtitle will appear at either the top or bottom of the screen during Subtitle Language

Please select the primary and secondary languages in your area.

TV Standard

Except for a few, most countries are using PAL system for TV signal, accordingly set TV Standard as PAL. To be more flexible for NTSC or PAL signal from different satellites, select MULTI for automatic signal conversion. Then press OK button for its confirmation.

Time Adjustment

To set the receiver time for EPG(Electronic Program Guide), set the time according to GMT(Greenwich Mean Time) by using CH **▲ ▼**. If EPG in England is needed to set, adjust as 00:00. In the case of Beijing, adjust as 08:00.

Time Settings

Use clock, sleep, on/off Timer function by choosing time settings menu.

1. Press CH(**▲ ▼**) buttons or number buttons to set the local time.
2. Set the time STB turns on with on Timer setting menu.



3. Select a channel you wish to see in running the on Timer function.



4. Set the time STB turns off with off Timer setting menu.

Settings and Operations



TV Aspect Ratio

Select 4:3 for normal TV or 16:9 for wide TV. Then press OK button for its confirmation. If 4:3 ratio is selected on normal TV for wide channel, both left and right side of the screen will be a bit trimmed. If 16:9 ratio is selected on normal TV for wide channels the screen trim symptom will not occur. However the screen will be in narrow view.

Wide screen will be properly viewed, only when wide channel is broadcasting.

Initialization

Press OK button from Initialization. If you want initialization, select OK button, otherwise, select any button of remote controller. The receiver will be turned off and on automatically after 1~2 seconds to initialize all the values to factory setting mode.

As this procedure will clear and set to factory default values, end users are not recommended to operate this function.

4.5 Game

Select Game on the Main Menu.



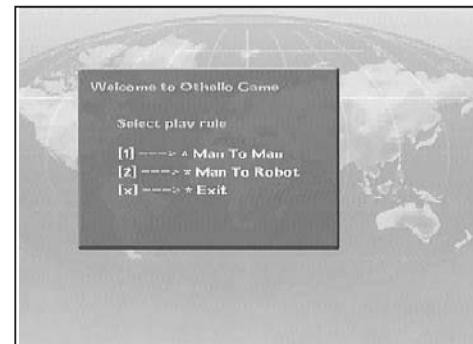
1. To play game.

Select Game & Press OK.

2. Select play mode by using number buttons & press Exit to Exit.

3. Select the color & press OK.

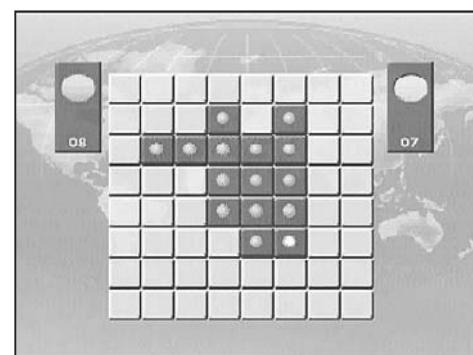
4. Now play the game.



1



2



3

Appendix

5.1 Troubleshooting

SYMPTOM	SOLUTION
<i>No picture display and no LED channel display</i>	Check the power connection
<i>No picture display with normal LED channel display</i>	1. Check the connection with TV 2. Check the connection between TV outside input and receiver cable
<i>No satellite channel with MAIN MENU screen on</i>	1. Check the LNB, Frequency, Polarization and Symbol Rate from Installation menu 2. Check the connection of receiver or Antenna angle
<i>No sound with normal screen display</i>	1. Check between sound output connector and TV 2. Check if it is not in MUTE condition
<i>Remote control unit does not work</i>	Check if the batteries in remote control unit are dead

5.2 Specification

<i>LNB/Tuner</i>	RF input frequency	950 to 2,150MHz
	RF input level	-65 to -25dBm
	LNB control	DiSEqC1.0/1.2
	LNB power	13V/18V(Max.400mA)
	LNB tone switch	22KHz±2KHz(0.6Vp-p)
	External LNB switch	0/12V(100mA)
<i>MPEG</i>	Video	MPEG-II Main Profile@Main Level
	Audio	MPEG-II layer I&II
<i>VIDEO</i>	Resolution	720 × 576
	Video output level	1Vp-p into 75 Ω
	Aspect ratio	4:3, 16:9
<i>Audio</i>	Frequency range	20Hz to 20KHz
	Sampling frequency	32/44.1/48KHz
	Frequency response	20Hz to 20KHz Hi-Fi Quality Digital stereo
	Audio output level	2V rms into 600 Ω
<i>General Data</i>	Supply voltage	100~240V (AC, 50/60Hz)
	Power consumption	Max.25W
	Operating temp.	0°C ~ 50°C
	Storage temp.	-40°C ~ 65°C
	Dimensions	340(W) × 247(D) × 67.5(H)mm
	Weight	3.0Kg

5.3 Glossary

LNB

Low Noise Block converter. The LNB is an electronic unit mounted on satellite dish to receive signals reflected by the dish and convert to signals.

L.O. frequency

Local Oscillator frequency as a part of LNB. It converts the satellite frequency to usable signals for the receiver.

Polarization

Polarization allows several programs to be fitted into same frequency band.

Symbol Rate

Size of the digital package transmission

Parental Control

The function is to allow parents to lock channels for unsuitable viewers. A locked program can only be unlocked with the password.

DVB

Digital Video Broadcast. International standard for digital TV broadcasting

MPEG

Moving Picture Experts Group, A system for compression of digital data

RF

Radio Frequency

EPG

Electronic Programming Guide. Program information is displayed on the TV screen, depending upon the satellite condition.

MHz

Abbreviation for MegaHertz. The prefix mega means million, and Hertz means cycles per second.

DiSEqC

Digital Satellite Equipment Control

Appendix

NTSC

National Television Standards Committee

PAL

Phase Alternate Line

Ku band

11~18GHz Frequency

C band

3~4GHz Frequency

SCPC

Single Channel Per Carrier

MCPC

Multi Channel Per Carrier

PID

Packet Identifier.

TP

TransPonder

SCART, RCA

A connector for connection of Satellite receiver, VCR and TV sets.

VCR

Video Cassette Recorder.

Made in Korea

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment

WARNING

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.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of 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:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help