



USER'S MANUAL

AF-6018 CR

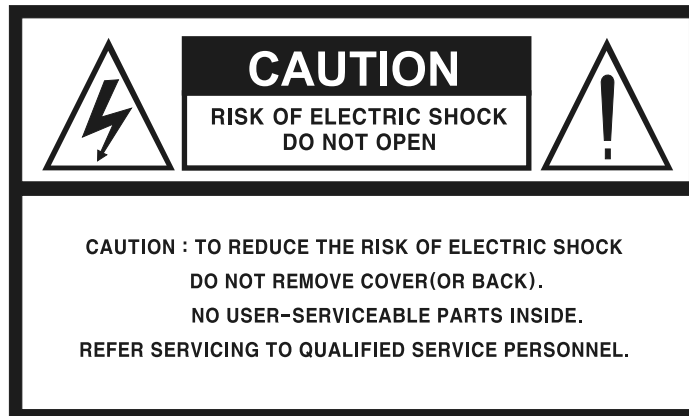


DIGITAL SATELLITE RECEIVER

Important safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, refrigerators, stoves, or other apparatus(including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only the attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, backer, or table specified by the manufacturer, or sold with the apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long period of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, for example power supply cord or plug is damaged, exposed to rain or moisture, does not operate normally, or dropped.
15. Safety Check-up
On completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operation condition.
16. Wet Location Marking
"This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus"





The lightning flash with a arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to a person.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE"

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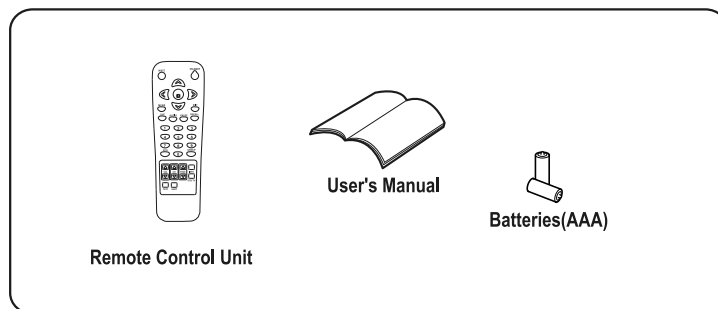
Before You Begin

1.1 Main Features

- Easy Graphic MENU Interface
- RS-232C Port for Updating Control Software and Additional Service
- Supports DiSEqC 1.2
- Multi-language Function
- Last channel Memory
- 256 Color Graphic User Interface
- Front Panel Buttons & IR Remote Control User Interface
- Editing Functions(TV or Radio, Group, Channel Name, PID, Parameter, Satellite name, Sort)
- EPG for On Screen Channel Information
- Channels Memory for Multi-satellite
- Digital Audio Output S/PDIF (※ **Optional**)
- OSD Teletext
- DVB Subtitle (※ **Optional**)
- USALS (※ **Optional**)

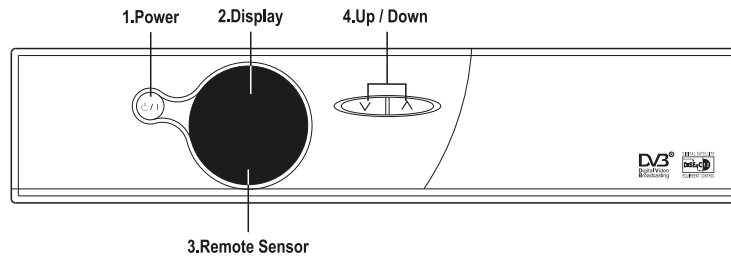
1.2 Accessories

- User's Manual
- Remote Control Unit
- Batteries



Controls and Functions

2.1 Front Panel



1. Power Button

Turns the receiver On/Off.

2. Display (4-digit/7-Segment)

The 4-digit displays channel information. In STANDBY mode, the 7-segment displays local time.

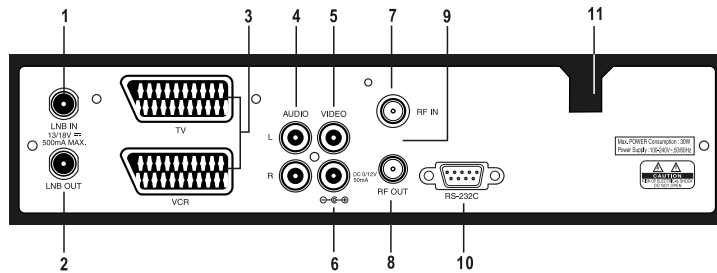
3. Remote Sensor

Detects infrared signal from Remote Control Unit.

4. Up/Down Button

Changes channels in the No-menu State and moves the cursor up/down in the Menu state.

2.2 Rear Panel



1. LNB IN (13/18V 500mA MAX)

Connect the coaxial cable from LNB.

2. LNB OUT

Connect to other STB.

3. SCART TV, VCR (※ Optional)

Connect the TV/VCR of TV/VCR to TV/VCR with a SCART cables.

4. AUDIO

This audio sockets provide stereo audio output.

5. VIDEO (Video Output)

This video jack provides a composite video output.

6. 0/12V OUTPUT or S/PDIF (※ Optional)

DC 0/12V controls output voltage for external switch. When you use two LNBs or Antennas, you can select one of them by switching 0/12V .

S/PDIF connects digital audio terminal for digital audio output .

7. RF-IN (※ Optional)

Connect the terrestrial antenna.

8. RF-OUT (※ Optional)

Connect to the TV.

9. Modulator (※ Optional)

American Standard	European Standard
VHF 3-4 Selection.	UHF 21-69 Selection.

10. RS-232C

Connect a PC. RS-232C transfers data to the external computer (Baud rate 115200)

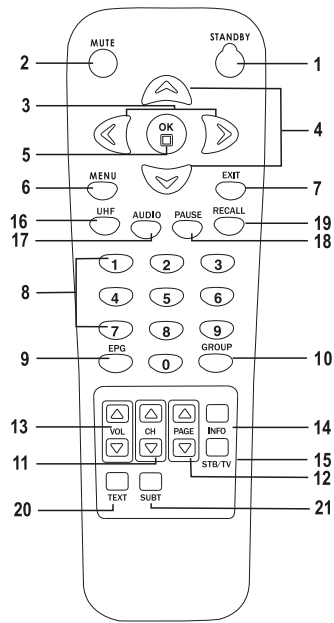
11. Electric Inlet Lead

100~240V AC(Auto-selectable), 50~60Hz+/-5%.

Make sure to check the power specification.

2.3 Remote Control Unit (RCU)

You can start the receiver, operate on-screen menu, and use a variety of key function.



1. STANDBY

Turns the receiver On/Off.

2. MUTE

Mutes audio output.

3. LEFT/RIGHT (◀/▶)

- ① If you press Left/Right button while watching channel, you can adjust Volume level.
- ② If you press Left/Right button on the menu status you can move to Left/Right side.

4. UP/DOWN (▲/▼)

Changes channels in the No-menu state and moves up/down in the Menu state.

5. OK

Confirms the choice with the highlighted menu item. When you press the **OK** button watching TV or listening to Radio, the channel list will appear . If you press the **EXIT** button on the final menu state, you can move to the previous menu.

6. MENU

Shows the Main menu in No-menu and the TV-Radio program screen in the Menu state.

7. EXIT

Exits from the present menu and moves to the previous menu.

8. NUMERIC KEYS (0-9)

Control the numerical operation and especially change channels directly.

9. EPG

Display the TV/Radio Program Guide.

10. GROUP

Make favorite group by satellite, TV , Radio and by your Choice.

11. CH ▲/ CH ▼

Select CH.

12. Pg▲ / Pg▼

Move Up/Down a page in the channel list.

13. VOL▲/ VOL▼

Adjust volume level.

14. INFO

Shows the information of the current program. If you press the **INFO** button, the channel info box will be shown continuously even though the preset time for channel info box elapsed. If you press the **INFO** or **EXIT** button again, the channel info box will be disappeared.

15. SAT/TV

Select TV Mode and Set-Top Box mode.

16. UHF (※Optional)

Sets UHF Menu.

17. AUDIO

Select Audio Mode as Stereo, Left or Right and Audio Language.

18. PAUSE

To pause the Video Screen.

19. RECALL

If you press recall button, previous Channel will be shown.

20. TEXT

Pressing the TEXT button will open a Teletext page.

21. SUBT (※Optional)

Displays " Sub-Title".

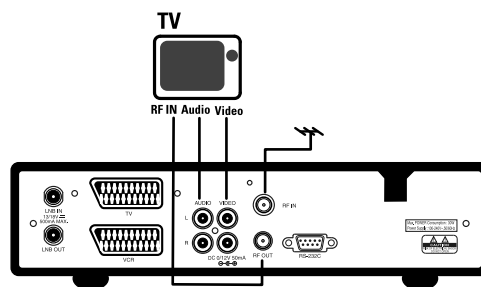
Connections

- Install the receiver in horizontal position.
- Do not put any heavy stuff such as a TV on the receiver.
- Do not install the receiver in the place as follows: Vibrating, direct sunrays, humid place, too high or low temperature, and no ventilated place.

3.1 Connecting to TV & VCR

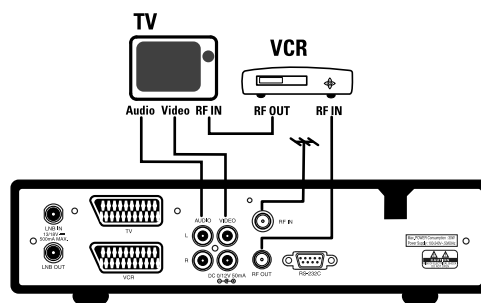
Receiver to TV with RF

1. Connect the TV antenna to RF-IN.
2. Connect the RF-OUT of Receiver to RF-IN of TV.
3. Connect the Video and Audio of TV to the Video and Audio.
4. Go to section **3.2 Connecting to Dish** then connect your dish.



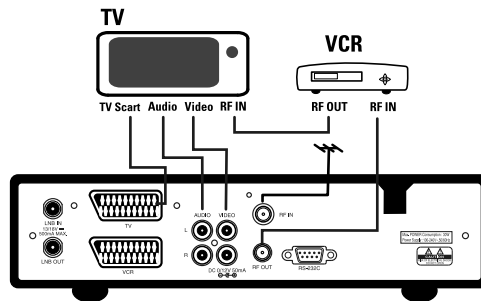
Receiver to TV and VCR with RF

1. Connect the TV antenna to RF-IN.
2. Connect the RF-OUT of receiver to RF-IN of VCR.
3. Connect the RF-OUT of VCR to the RF-IN of TV.
4. Connect the Video and Audio of TV to the Video and Audio of receiver.
5. Go to section **3.2 Connecting to Dish**, then connect your dish.



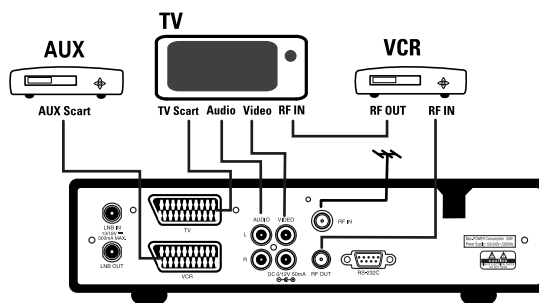
Receiver TV and VCR with Scart Cables

1. Connect the TV antenna to RF-IN.
2. Connect the RF-IN of VCR to RF-OUT of receiver.
3. Connect the RF-OUT of VCR to the RF IN of TV.
4. Connect the Video and Audio of TV to the Video and Audio.
5. Connect the TV Scart of TV to TV with fully featured Scart cable.
6. Go to section **3.2 Connecting to Dish** then connect your dish.



Receiver to TV, VCR and Decoder with Scart Cable

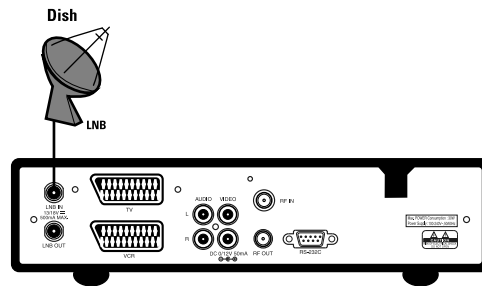
1. Connect the TV antenna to RF-IN.
2. Connect the RF-IN of VCR to RF-OUT of receiver.
3. Connect the RF-OUT of VCR to the RF-IN of TV.
4. Connect the Video and Audio of TV to the Video and Audio.
5. Connect the TV Scart of TV to TV with fully featured Scart cable.
6. Connect the Decoder Scart of Decoder to AUX with fully featured Scart cable.
7. Go to section **3.2 Connecting to Dish** then connect your dish.



3.2 Connecting to Dish

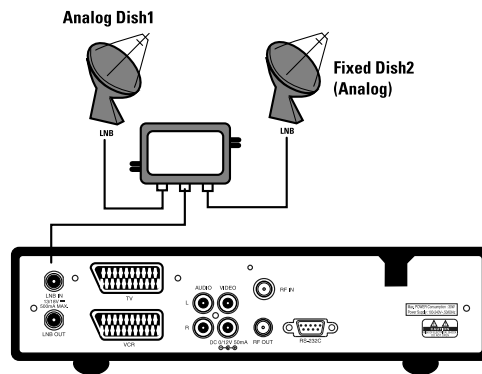
Dish

Connect the satellite antenna cable to LNB-IN.



2 Fixed Dishes Using DiSEqC

Connect the output of DiSEqC to LNB-IN of the receiver.



Connect a S/PDIF Fiber-Optic cable (※ Optional)

If you are watching a programme with a Dolby Digital soundtrack you can enjoy the higher quality sound of the Dolby Digital audio by connecting the STB to an external Dolby Digital television or amplifier. Do this by connecting the optical S/PDIF output of the STB to the optical S/PDIF input of the external Dolby Digital product (television, amplifier,....)

Settings and Operations

4.1 Installation Wizard (First time Installation)

- Turn on your TV and receiver.
- If it is the first time using a receiver, you should set parameters for system configuration.
Press the **MENU** button. Refer to the following section for detailed information about System configuration

1. Language setting

Choose your preferable language.



2. UHF setting (European Standard)

Choose your UHF channel.



3. Edit satellite

Choose your preferable satellite by **OK** button. If you don't choose satellite, press **OK** button again. If you want to do the next performance, press **EXIT** button.



4. Antenna Setting

While cursor key is on satellite, if you press **OK** button, you can select satellite. While cursor key is on LNB Type, if you press **OK** button, it will select LNB frequency. While cursor key is on motor setting, if you select "enable" and press **OK** button, it will show how to set up DisEqc 1.2



After setting the parameters according to the satellite, you can start search by pressing **OK** button on the highlighted "Search Start". After Searching is finished, press red button to go to Channel Edit menu. If you press "Exit" button after searching, it goes to "Antenna Setting" menu

5. Automatic Search

You can choose quick & detail search by **Left/Right** key if you choose detail search, you can add symbol rate.



6. Time setting

Adjusts your time.



Tips How to use the icon

1. Search Channel



2. Edit



3. Setup



4. Tools



4.2 Basic Settings

1. Search Channel

In order to install the receiver properly you have to perform a **Basic Settings**.

When you have finished the setup procedure, you can start watching TV or listening to Radio. During the basic settings, a short information is displayed at the bottom of the menu screen.

- ① Turn on your TV and receiver.
- ② Press the **Menu** button to display the Search channel menu.
This mode is to start the receiver to finding channels.



1-1. Antenna Setting

This mode is to make setting equipment outside. Press the **OK** button on the Antenna Setting of the Search Channel. The Following window will appear. Select one of the alternative satellite names, specify the LNB frequency, set the Tone switch & the DiSEqC switch according to the installed switch box & DiSEqC. Other parameter values are changed automatically according to satellite name.



- **22KHz** : Select "On" or "Off" for setting
- **0/12Volt Switch (※Optional)** :
Select "0 Volt" or "12 Volt" for setting
- **LNB Power** : Select "On" or "Off" for setting
- **FTA Only** : Select "Yes" or "No" for channel search.

- ① When the Cursor is on satellite, if you press OK button, it will show satellite list from which you can select favorable satellites.
- ② When the Cursor is on LNB TYPE, if you press OK button, it will show LNB Low, High Frequency. You can edit Frequency.
- ③ When the Cursor is on motor setting, if you choose "enable" and press OK button, it will show DiSEqC 1.2 setting.

A. DiSEqC 1.2

Select necessary parameter to use Motor.



B. Limit Setting

To avoid malfunction of motor, make a limit for motor from east to west.



C. USALS (※ Optional)

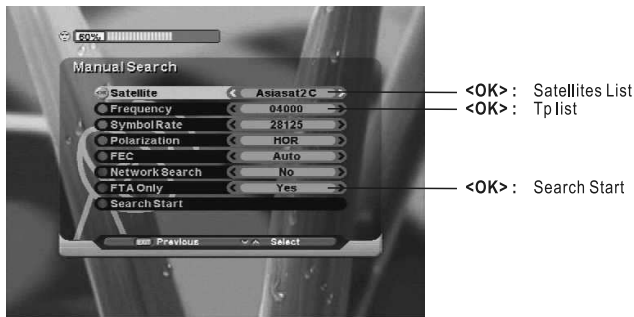
Set longitude and latitude of the present location and then adjust antenna to proper direction.



1-2. Manual Search

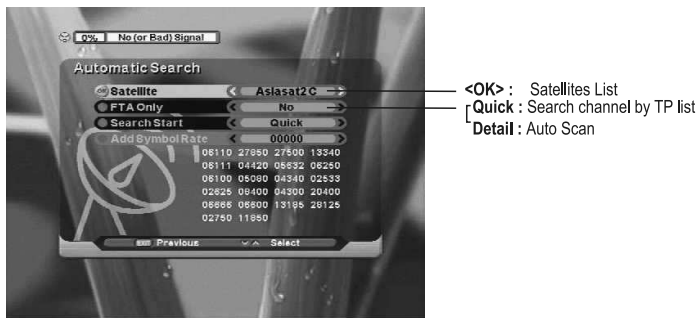
After antenna setting, this menu can help find particular channels.

Make a suitable parameter on Frequency, Symbol rate, Polarization, FEC. While cursor key is on satellite, if you press **OK** button, you can select satellite. While the cursor key is on Frequency, if you press **OK** button, you can edit, add, delete frequency list. While cursor key is on search start, if you press **OK** button, searching will start.



1-3. Automatic Search

After antenna setting, Automatic Search can be used for easier search. If you choose quick search, it will search channel by TP list. If you choose detail search, it will search auto scan you add symbol rate. When the cursor is on satellite start, press OK button. Then it will search channels automatically.



4.3 Edit

After finishing setting, edit screen will show as below.



1. Edit channel

Edit a channel by creating, lock, moving, and deleting.



2. Edit Satellite

Edit a satellite by renaming, adding, and deleting.



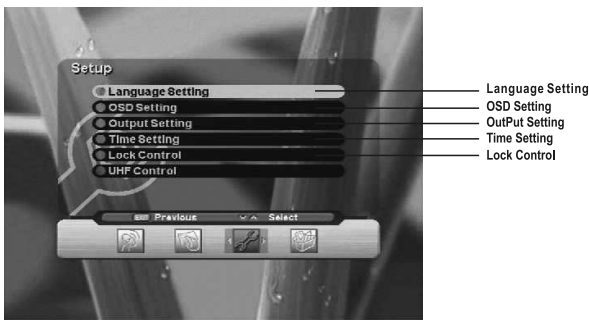
3. Edit Transponder

Edit a transponder by editing, adding, and deleting.



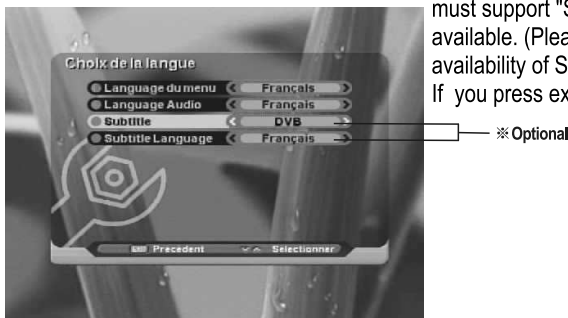
4.4 SETUP

This helps set additional function such as language, OSD, Output, Time, Lock control, and UHF control.



1. Language Setting

Select language for menu and Audio language and Subtitle language. Select " **Language setting**" with ◀/▶ key and the press the **OK** button. Select a desired language as English or others. To enable "subtitle", please select "On" on Subtitle and select "Subtitle" language. But broadcaster must support "Subtitle" if you want "Subtitle" available. (Please check broadcaster for the availability of Subtitle.)



2. OSD Setting

Change wanted mode for Info bar hide-out time, Background, Sound effect, OSD Transparency or Load default.



A. Infobar Hide-Out

1. Select "OSD Setting" with ▲/▼ key.
2. Select duration time by using the ◀/▶ Key. (1Sec, 3Sec, 5 Sec, 10Sec, Continue)

B. Background Image

1. Select "Background image" with ▲/▼ key .
2. Select different kind of image by using ◀/▶ key.

C. Sound Effect

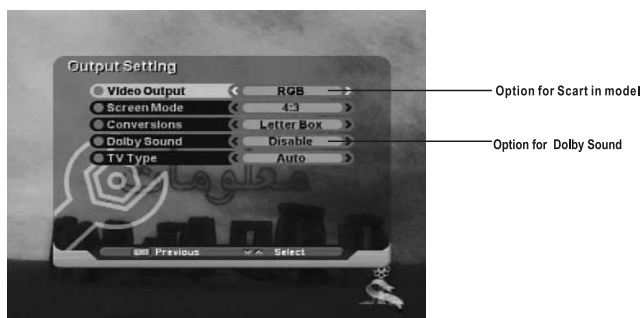
1. Select "Sound Effect" with ◀/▶ key.

D. OSD Transparency

1. Select "OSD Transparency" ▲/▼ key.
2. Change the transparency of OSD by ◀/▶ key.

3. Output Setting

Set suitable setting for connecting equipment such as TV , AC3 Decoder.



Aspect ratio conversions

Here is a description of how the aspect ratio conversion will be done depending on the selected display aspect ratio conversion mode chosen, the received stream and the user's television set aspect ratios.

16:9 Stream on a 16:9 TV



whatever the mode

4:3 Stream on a 4:3 TV

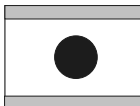


whatever the mode

4:3 Stream on a 16:9 TV



letter-box



pan and scan



combined



ignore

16:9 Stream on a 4:3 TV



letter-box



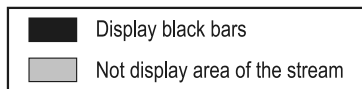
pan and scan



combined



ignore



4. Time Setting

Set time for current time, wake up time, and sleep time.



A. Current Time

1. Press ◀/▶ key to select "Current Time"
2. Input the local time by pressing number button.

B. Wakeup Timer

1. Press ◀/▶ key to select "Wakeup Timer"
2. To set Wakeup Timer in work, Select "Enable"

C. Wakeup Time

1. Press ◀/▶ key to select "Wakeup Time"
2. Time Enter the time in which the STB will power on.

D. Sleep Timer

1. Press ◀/▶ key to select "Sleep Timer"
2. To set Sleep Timer to Work, Select "Enable"

E. Sleep Time

1. Press ◀/▶ key to select "Sleep Time"
2. Enter the time in which the STB will switch off to standby mode.

5. Lock Control

This menu helps prevent wrong usage receiver.
Use Age limit, menu lock, and password.



A. Age Lock

1. Press ◀/▶ key to select "Age Lock"
2. To block certain channels by viewer's age, select "Yes" by using the ◀/▶ keys.

B. Age Limit

1. Press ▲/▼ key to select "Age Limit"
2. Enter desired age to be blocked to certain channel by ◀/▶ keys.

C. Menu Lock

1. Press ▲/▼ key to select "Menu Lock"
2. To restrict entry to certain menu for securing program settings or installation.
3. Select "Yes" by using the ◀/▶ Keys.

D. Current Password

1. Press ▲/▼ key to select "Current Password"
2. Enter current password by pressing number.

E. New Password

1. Press ▲/▼ key to select "Current Password"
2. Enter 4 digit number, which you want as new password after entering the current one.

F. Confirm Password

1. Press ▲/▼ key to select "Confirm Password"
2. To Confirm the new password, input same password.

6. UHF Control

(※ Option ⊕ This menu can be provided when the receiver has RF Modulator)
Sets UHF channel and PAL Standard.



4.5 Tools

This menu helps to see the information of receiver and restore FACTORY SETTING on receiver .



1. Information

Shows H/W and S/W version, company name



2. Signal Level

Shows signal strength and quality



3. Factory Setting

This menu helps to restore factory setting.



4. Game

You can play games Tetris or Block Out.



4.6 HOT KEYS

This section explains the general information while watching TV or listening to Radio.

1. "INFO" Key

Whenever you change the channel(or volume) by pressing the CH + /CH - (▲/▼), program information window will appear in a few seconds. You can also select how long the information will be shown in the User Preference menu.



2. "OK" Key

While watching TV or listening to Radio, you can get the channel list by pressing the **OK** button on the remote control.

The Channel list will be open.

And if you want to return to the previous mode, press **EXIT** button.

3. "GROUP" Key (favorite key)

This key helps to make up 20 favorite groups including "TV", "Radio", "Satellites" and groups you name.



Button on remote control

"Red": Sort by name	"Green": Sort by date
"Yellow": Sort by FTA	"Blue": Undo

- ▲, ▼ : Select certain Group and channel
- ◀, ▶ : Move Group and channel list
- CH + , CH - : Change Channel
- VOL + , VOL - : Change Volume

Attention

If you want to create new group list, go to edit channel by menu button.
Press red button on remote control to create new group list.

4. Program Guide (EPG)

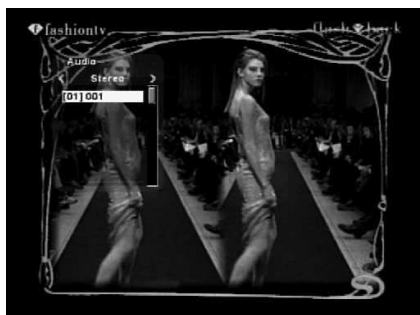
Press **EPG** button on the remote control, you can get the TV Program guide.
It is possible only if the broadcaster provide the service.



- Left/Right : Group mode
- Up/Down : Channel mode
- Ch + /Ch - : Channel mode
- OK : EPG Schedule view
- Vol + /Vol - : Volume mode

5. Audio Information

Select "**AUDIO**" button to change audio Stereo, Mono, Left, Right
Press the **AUDIO** button on the remote control, you can select the Audio language and Mode.
The Language Information window shows the input audio language and you can select the Audio language. Press the **UP/DOWN** button to move to another item.



4.7 TELETEXT

- Pressing the **TEXT** button will open a Teletext page (If Teletext is transmitted).
Select Teletext pages with the numeric buttons on the remote control.
- ▲/▼ will show the next or previous Teletext page.
- Press **EXIT** or **TEXT** to return to TV/Radio mode.



4.8 Subtitle (※ Optional)

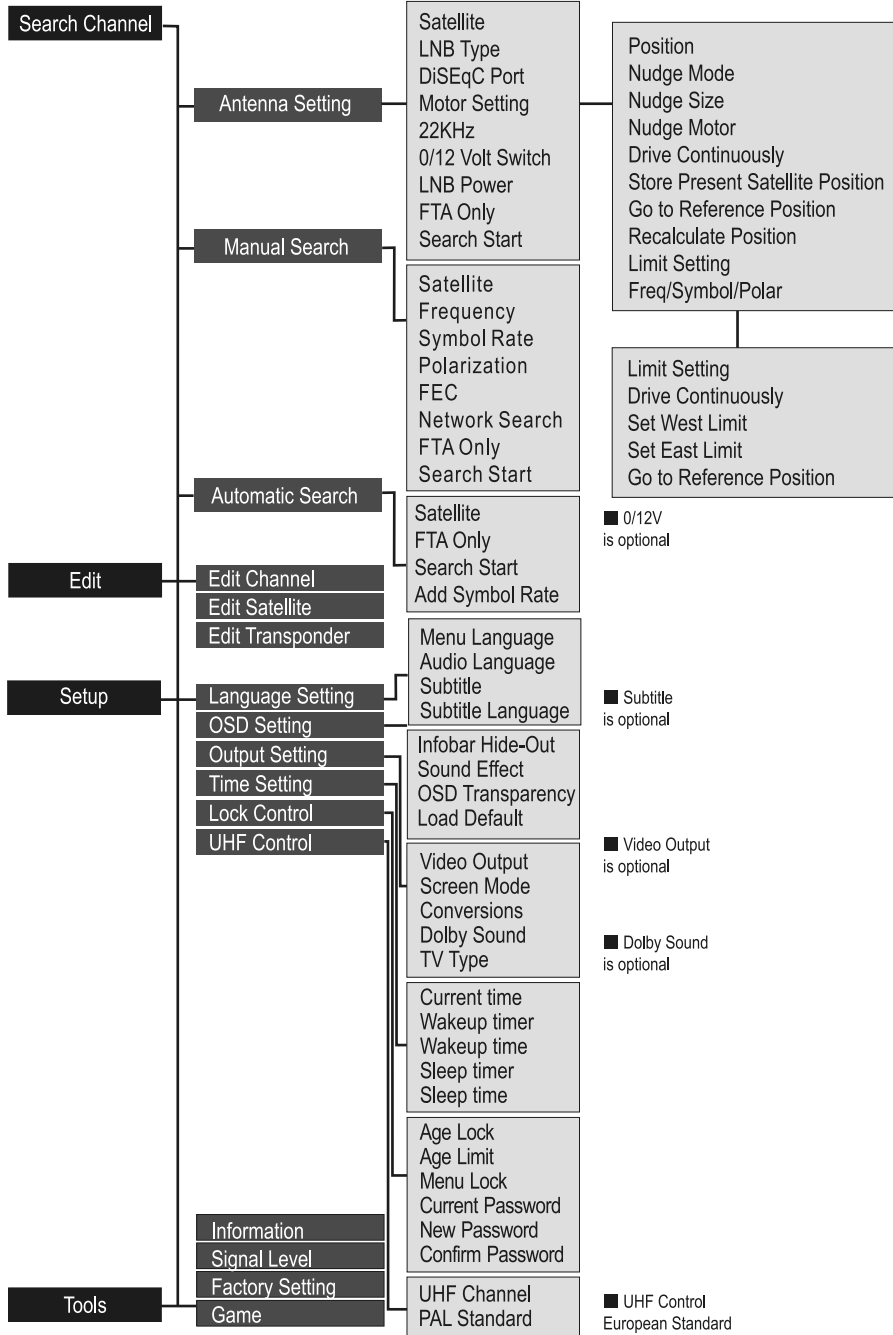
- Press the **SUBT** button, then a dialogue box will be open.
- You can select language.
- Press **EXIT** or **OK** to go to the previous mode.



- (D) : DVB Subtitle
- (T) : Teletext Subtitle



Menu Map



Additional Informations

A.1 Trouble Shooting

There may be various reasons for the abnormal operation of the receiver. Check the receiver according to the procedures shown below.

If the receiver does not work properly after checking it, please contact the dealer. Don't open the receiver. It may cause a dangerous situation.

Symptom	Cause	Remedy
The display on front panel does not light up.	The power cord is not plugged in.	Check whether the power cord is plugged in to the wall outlet.
No picture or sound.	Wrong connection of the Audio/ Video output of the receiver to TV.	Connect the Audio/Video output of the receiver to TV correctly.
	Wrong connection of the satellite antenna.	Connect the antenna cable correctly.
	No or Bad signal message appears.	Check other device connected between LNB and the receiver, or adjust the antenna position.
	Audio muting.	Press the Mute button.
	TV power off.	Turn TV on.
No picture.	The receiver can't receive the signal.	Check the antenna cable, replace the cable, or connect the cable to the receiver tightly.
	Incorrect values of some tuner parameters.	Set the values of tuner parameters correctly in the Installation menu.
The remote control does not work	The batteries in the remote control are not properly inserted or exhausted.	Check whether the batteries are inserted correctly in your remote control.
		Check the batteries, and if they are exhausted, replace them.

A.2 Technical Specifications

1. Tuner & Demodulator

RF input Connector	F-Female, IEC 169-24
RF Frequency Range	950MHz to 2150MHz
Input Impedance	75 Ω Unbalanced
Input Signal Level	-65 dBm to -25dBm
IF Frequency	Zero IF
LNB Power	Vertical : 13.0V dc Horizontal : 18.0V dc Current : 500mA (MAX) Overload Protection
LNB Control	DiSEqC 1.0, DiSEqC 1.2
Band Switch Control	22KHz Tone
22KHz Tone	Frequency : 22 \pm 2 KHz Amplitude : 0.6 \pm 0.2V
Demodulation	QPSK
Symbol Rate	2 to 45Ms/s

2. A/V Decoding

Transport Stream	MPEG-2 ISO/IEC 13818 Transport Stream Specification
Profile Level	MPEG-2 MP@ML
Input Rate	Max, 60 Mbit/s
Aspect Ratio	4:3, 16:9 (Letter Box)
Video Resolution	720 x 576(P AL), 720 x 480(NTSC)
Audio Decoding	MPEG Layer I & II
Audio Mode	Single Channel / Dual Channel Joint Stereo / Stereo
Sampling Rate	32, 44.1 & 48 Khz 96 Khz
Graphic Engine	3-display Plane 1-Background Plane / 256 Full Color

3. Memory

CPU	STi 5518
Flash Memory	2 Mbytes
Graphic & System Memory(SDRAM)	8 Mbytes

4. A/V Data In/Out

TV SCART(※ Optional)	Video Output (CVBS, RGB) Audio Output
VCR SCART(※ Optional)	Video Output (CVBS) Video Input (CVBS) Audio In/Output
VIDEO	RCA/Cinch, Video Output (CVBS)
AUDIO R/L	RCA/Cinch Volume & Mute Control
RS-232C	Transfer Rate 115.2Kbps 9 Pin D-sub Type

5. RF-Modulator (※**Optional**)

■ American Standard

RF-Connector	F Type(Female)
Output Channel	CH 3, CH4
TV standard	NTSC-M
Switch Position	CH 3

■ European Standard

RF-Connector	75Ω, IEC 169-2, Male/Female
Frequency	470 to 860 MHz
Output Channel	CH 21~69 for the Demodulator
TV standard	PAL B/ G/ I/ D / K/ M
Preset Channel	CH 21 (or TBD) Software Changeable by Menu

6. Power Supply

Input Voltage	100 to 240 VAC, 50Hz/60Hz
Type	SMPS
Power Consumption	Max. 30W

7. Environment

Operating Temperature	+5 °C ~ +50 °C
Storage Temperature	- 40 °C ~ +65 °C

8. Physical Specification

Size (W x D x H)	260 x 180 x 55 mm
Weight(Net)	1.5 kg

A.3 Glossary of Terms

DiSEqC

Digital Satellite Equipment Control.

EPG

Electronic Program Guide. A software that enables viewers to navigate easily among the large number of channels provided by digital technology, in order to select the service they desire.

FEC

Forward Error Correction. Correction of fault bits in the receiver signal.

LNB(Low-Noise Block converter)

The LNB is an electronic unit mounted on the satellite dish. It receives the signals reflected by the dish and converts them to signals that can be used by the satellite receiver.

PIN /number

Personal Identification Number. A four-digit code that is used for locking/unlocking e.g. with the parental control feature.

Parental control

A feature that allows parents to lock programs that they consider unsuitable for children. A locked channel or program can only be unlocked with the password.

Polarization

Polarization allows several programs to be fitted into the same frequency band. The signals from a satellite are transmitted either with linear (vertical or horizontal) polarization or circular (right or left) polarization.

RS-232C

Serial data port.

Set-Top Box (STB)

A set-top box is a device that enables a television set to receive and decode digital television broadcasts (Satellite or Terrestrial or Cable). Set-top boxes are also called receivers.



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