



DSB-4700F

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MF60-00325A



REV. 1.0

DIGITAL SATELLITE RECEIVER **DIGITAL SATELLITE RECEIVER**

Warning! Important Safety Instructions

	CAUTION <small>RISK OF ELECTRIC SHOCK DO NOT OPEN</small>	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR THE USAGE
<p>CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT. INSERT FULLY.</p>
<p>ATTENTION: POUR EVITER LES CHOCs ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.</p>

	<p>The lightning flash with arrowhead symbol with an exclamation mark is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.</p>
	<p>The exclamation mark with an exclamation mark symbol is intended to alert the user to the presence of important operating and maintenance (see care instructions in the User's Manual) instructions in the literature accompanying the product.</p>

<p>WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.</p>

Thank You for Choosing Samsung

Thank you for choosing Samsung! Your new Samsung Digital satellite receiver represents the latest in IRD technology. We designed it with easy-to-use on-screen menus and closed captioning capabilities, making it one of the best products in its class. We are proud to offer you a product that will provide convenient, dependable service and enjoyment for years to come.

Warning! Important Safety Instructions

Always be careful when using your product. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

- Read all safety and operating instructions before operating your product.
- Keep the safety and operating instructions for future reference.
- Heed all warnings on the product receiver and in the operating instructions.
- Follow all operating and maintenance instructions.
- Unplug the product from the wall outlet before cleaning. Use a damp cloth; do not use liquid or aerosol cleaners.
- Never add any attachments and/or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock, or other personal injury.
- Do not use the product where contact with or immersion in water is a possibility, such as near bath tubs, sinks, washing machines, swimming pools, etc.
- Do not place the product on an unstable cart, stand, tripod, bracket, or table where it can fall. A falling product can cause serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Follow the manufacturer's instructions when mounting the unit, and use a mounting accessory recommended by the manufacturer. Move the product and cart with care. Quick stops, excessive force, and uneven surfaces can make the unit and cart unsteady and likely to overturn.
- Provide ventilation for the product. The unit is designed with slots in the cabinet for ventilation to protect it from overheating. Do not block these openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface. Do not place it near a radiator or heat register. If you place the product on a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions for mounting.
- Operate your product 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 appliance dealer or local power company.



Warning! Important Safety Instructions

- Use only a grounded or polarized outlet. For your safety, this product is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact your electrician to replace your outlet.
- Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- Unplug the product from the wall outlet and disconnect the antenna or cable system during a lightning storm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-line surges.
- Avoid overhead power lines. An outside antenna system should not be placed 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, be extremely careful to keep from touching the power lines or circuits. Contact with such lines can be fatal.
- Do not overload the wall outlet or extension cords. Overloading can result in fire or electric shock.
- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts. Never spill liquid of any kind on the product.
- Do not attempt to service the product yourself. Refer all servicing to qualified service personnel. Unplug the unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - when the power-supply cord or plug is damaged
 - if liquid has been spilled on the unit or if objects have fallen into the unit
 - if the product has been exposed to rain or water
 - if the product does not operate normally by following the operating instructions
 - if the product has been dropped or the cabinet has been damaged
 - when the product exhibits a distinct change in performance
- If you make adjustments yourself, adjust only those controls that are covered by the operating instructions. Adjusting other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal.
- When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in additional damage to the unit.
- Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in a safe operating condition.

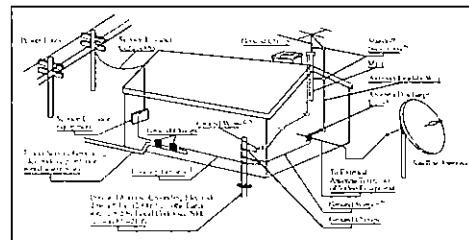
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Outdoor Antenna Grounding

Be sure the antenna is properly grounded to provide some protection against voltage surges and built-up static charges.

Example of Antenna Grounding as per National Electrical Code



Note to CATV System Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Note: NEC 610-21 (f)

A bonding jumper not smaller than No. 6 AWG copper or equivalent shall be connected between radio and televisions equipment grounding electrode and the power grounding electrode system at the building or structure served where separate electrodes are used.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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 technician for help.

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GENERAL FEATURES

1. USER SECTION

- ▶ 4000 PROGRAMMABLE CHANNELS
- ▶ SOFTWARE DOWNLOAD VIA SATELLITE & PC(Secure!)
- ▶ ADVANCED ELECTRONIC PROGRAM GUIDE
- ▶ MULTI LANGUAGE SUPPORTED FOR OSD
- ▶ SUBTITLE SUPPORTED WITH MULTI LANGUAGE
- ▶ DISEqC 1.2 SUPPORTED
- ▶ FULL FUNCTION INFRARED REMOTE CONTROL UNIT
- ▶ 7 SEGMENT LED DISPLAY
- ▶ AUTO AND MANUAL SCAN FACILITY
- ▶ CHANNEL ORGANIZING(PROGRAMMABLE)
- ▶ RCA OUTPUT
- ▶ LOW POWER CONSUMPTION
- ▶ 9 FAVORITE LISTS
- ▶ AUTO UPDATED EPG
- ▶ 15 TIMERS TO RESERVE PROGRAMS(EVENTS) FOR TURNING ON/OFF

2. TUNER SECTION

- ▶ 950-2150 MHz WIDE BAND TUNER
- ▶ IF OUTPUT WITH DC PASS LOOP FOR ANALOG RECEIVER
- ▶ SUPPORTING DISEqC 1.2 VERSION
- ▶ 13V/18V SWITCHING
- ▶ 22KHz CONTINUOUS TONE CONTROL

3. VIDEO SECTION

- ▶ DVB-S COMPLIANT
- ▶ MPEG-2 VIDEO(MP&ML)
- ▶ 2-45 MS/s SYMBOL RATE
- ▶ COMPATIBLE FOR BOTH SOPC/MOPC
- ▶ SUPPORTS ASPECT RATIO 4:3(NORMAL) AND 16:9(WIDE SCREEN)
- ▶ MODULATOR OUTPUT

4. AUDIO SECTION

- ▶ MPEG 1 AUDIO LAYER I & II
- ▶ MONO, DUAL, STEREO AND JOINT STEREO AUDIO MODE
- ▶ 32, 44, 1 AND 48 KHz SAMPLING FREQUENCIES
- ▶ VOLUME CONTROL AND MUTE FUNCTION THROUGH REMOTE CONTROL UNIT

CONNECTING YOUR "STB"

1. LOCATION OF THE RECEIVER

Your "STB" should be placed under proper ventilation. Don't put in completely enclosed cabinet that will restrict the flow of air, resulting in overheating. The location should be safeguarded from direct sunlight, excess moisture, rough handling or household pets. Avoid stacking other electronic components on the top of the receiver. The location should be safely accessible by the cable from your antenna system.

2. CONNECTING THE RECEIVER WITH ANTENNA SYSTEM

After installing your antenna system, connect the coaxial cable from the LNB of your antenna to "DISH INPUT" terminal marked at the rear of the STB. All cable connectors should be finger-tightened; do not use any kind of wrench while tightening connectors. The cable should be 75 ohm impedance coaxial twisted at the end with an "F" type connector.

3. CONNECTING THE RECEIVER TO TV

To connect the receiver with your television, you can follow two methods: through RF cable, and through to RCA cable. Connect the RF cable to the terminal marked "TV" at the rear panel of STB and its other end to the TV RF input socket. In the case of connecting your TV through RCA cable, connect the Receiver Terminal marked Video to the TV Port.

4. CONNECTING YOUR ANALOG RECEIVER

To facilitate the user using analog receiver to view analog channels, the STB has been provided with a loop through terminal marked as "LOOP". Connect the coaxial cable from this terminal to the IF input terminal of your analog receiver. Now by keeping the STB in standby, you will be able to tune and view analog channels from your analog receiver.

5. CONNECTING YOUR VCR

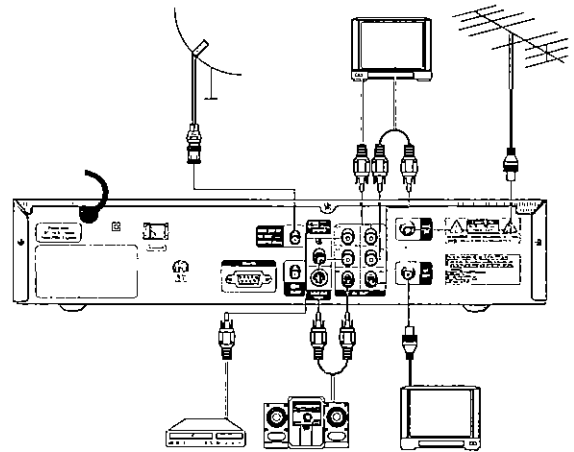
To connect a VCR, the STB has been provided with RCA at the rear marked "AV OUT". Using a RCA connector, the VCR can be connected to the receiver.

6. CONNECTING EXTERNAL AUDIO/HI-FI-SYSTEM

To connect any external Audio Hi-Fi system, the receiver has been provided with two RCA connectors at the back of the receiver, marked with Audio L and R respectively to connect the Left and Right Audio.

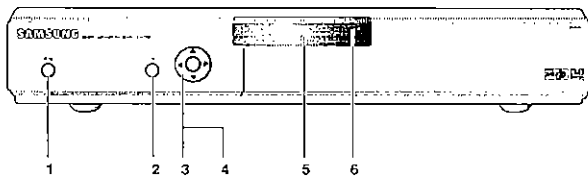
..... CONNECTING YOUR "STB"





Connecting Figure



DESCRIPTION

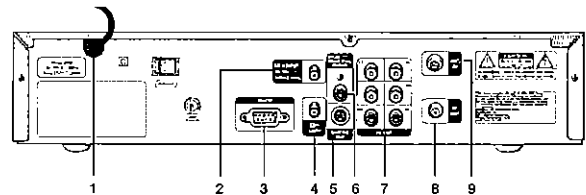
Front Panel



1.  This key is for turning the receiver on and Standby.
2.  This key is for entering and confirming any data to the receiver in the menu system. This key is for selecting the item. Press while viewing TV and a list of channels is displayed.
3.  These keys are for changing the channel's during watching TV and for moving the highlight bar for selecting options on the menu.
4.  These keys are for increasing and decreasing the volume level manually during watching TV and for moving the highlight bar for selecting options on the menu.
5. **7 Segment Display** This LED display will show the current channel number. While the receiver is in Standby mode, the display will show the current time.
6. **Infrared Sensor** This is to receive the IR commands from the Remote Control Unit.

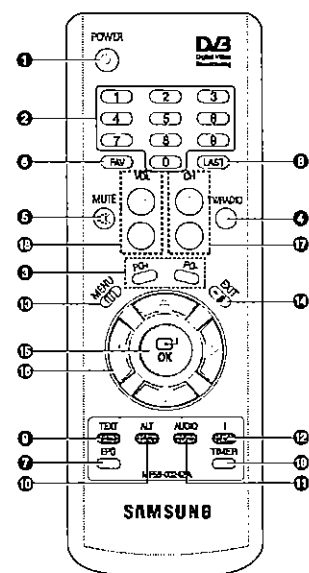
DESCRIPTION

Rear Panel



1. **AC MAINS** This is to plug in the AC mains power cord. The input AC voltage range is 100V, 60Hz supply.
2. **DISH INPUT** This port is to connect the coaxial cable from LNB of your dish. The IF input is provided through this port and the input frequency range is 950-2150 MHz. Also the voltage switching 13V and 18V is passed through this port.
3. **RS 232 DATA PORT** This is used to connect your receiver to a computer for reading and loading data information. (only for service)
4. **LOOP** To enable the connection of an Analog receiver. The receiver is provided with this 'LOOP' port.
5. **S-VIDEO OUT** This is used to connect STB to your TV by using S-VHS cable.
6. **0/12V OUT** This is used to connect to an external LNB switch.
7. **AV OUT** These RCA connectors are used to connect any external video and audio.
8. **RF OUT** This is used to connect to your TV via RF cable. (Preset to channel 3)
9. **ANT IN** This is used to connect your local RF channels to your TV through Loop.

Remote Control



Note When inserting batteries, make sure that the polarity is correct.

DESCRIPTION

1. POWER

This is for switching the receiver ON/STANDBY mode.

2. 0-9 NUMERICAL keys

These keys are for entering numerical values and to select the channel directly by entering its number.

3. PG+/PG-

These keys are for moving up or down pages on the menu and TV/Program list.

4. TV/RADIO

This key is for toggling between the TV channel and Radio channel.

5. MUTE

This key is for toggling between normal & muted audio.

6. FAV

Use the key to switch between favorite lists.

7. EPG

Electronic Program Guide key displays the TV/Radio Program guide.

8. LAST

This key is for calling up directly whatever channel you were watching from the list.

9. TEXT(GREEN)

This key is for selecting the subtitle mode. This key functions same as the GREEN key on the menu. Press it once and subtitle appears. You can select the language you want using the channel up/down keys.

DESCRIPTION

10. ALT(YELLOW)

This key is for selecting the soundtrack list for the current service. This key functions same as the YELLOW key on the menu. Press it once and sound track appears. Press it twice and video track appears. The sound and video track services are not provided for every channel and depend on the conditions the operator is in. This key is for displaying the help message in the sub-menu.

11. AUDIO(BLUE)

This key is for changing the Audio to the left, right or both channels. This key functions same as the BLUE key on the menu.

12. I (INFORMATION) (RED)

This key is for displaying the program information box in the screen. This key functions same as the RED key on the menu. Press it once and you can get simple information on the program. Press it twice and you can get detailed information on the channel in text box.

13. MENU

This key is for opening up the menu or returning to the previous menu.

14. EXIT

This key is for exiting a menu or returning to the previous menu or exiting some banners.

15. OK

This key is for entering and confirming any data to the receiver in the menu system. This key is for selecting the item. Press while viewing TV and a list of channels is displayed.

16. ◀/▶/▲/▼

These keys are for moving the highlight bar for selecting options on the menu.

17. CH ▲/CH ▼

These keys are for changing channels.

18. VOL+/VOL-

These keys are for increasing or decreasing the volume.

19. TIMER

This key is for reserving events(programs) into timer(s) in EPG. If a event is set in timer, it will be turned on/off automatically based on start/end time of event. This key activates/deactivates timer(s) in EPG as toggle type. After activating EPG screen by pressing [EPG] key, you can select the interesting event (program) using the ▲/▼ keys and ◀/▶ keys. Then, press 'timer' key. If this event is reserved in the timer, Ⓢ is displayed on the right corner of this event name. 'EPG' on 'Event Repetition' in 'Time & Timer Settings' menu is displayed, too. However, if there is no event on EPG for the channel, this Timer can't be supported.

BASIC FUNCTIONS

1. Display Screen

Before you can view the television program, you must perform the installation. Therefore you will see only menu images at first. After the television channels have been programmed, you will see the following picture (banner) each time you switch channels:



- Press the **RED (i)** key in view mode.
- Select the channel by pressing **NUMERICAL (0-9)** keys or **▲ / ▼** keys and select **TV/RADIO** key to move to TV or Radio channel.

You will also see this picture each time you change channels. When you press **TV/RADIO** key on the Remote Control Unit, **TV** and **RADIO** program are toggled.

Detailed program information

- Press the **RED (i)** key twice while you are viewing a program.

First you will see the banner described above. After the **RED (i)** key is pressed in the second time, detailed information for current program can be displayed on another banner, if there is more information. When this information is more than one page, **PG+ / PG-** keys can be used for page up and down.

Note : This service depends on service provider.

2. Volume Control

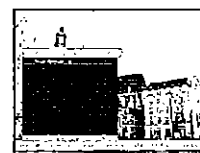


To control the volume level :

- Press **◀ / ▶**, **VOL-** or **VOL+** keys to adjust the volume level.
- Press **MUTE** key to turn to silence mode.
- Press **MUTE** key again or **◀ / ▶** keys in order to cancel the mute function.

3. Select Soundtrack

- Press **YELLOW(ALT)** key to see the soundtrack list.
- Press **▲ / ▼** and **OK** key to select one.



4. Select Videotrack

- Press **YELLOW(ALT)** key twice to see the videotrack list.
- Press **▲ / ▼** and **OK** key to select one.



5. Sub channel List

When subchannels are available on current channel (program) after changing channel, **[C]** is displayed at the right corner on the banner. In this case, press the **YELLOW(ALT)** key. Then you can get all subchannel list. Select subchannel which you want among subchannel list.

6. Service List

- Press **OK** key to while you are viewing a program.
- Select list by pressing **TV/RADIO** or **FAV** key.

The icon **↔** behind the channel name symbolises scrambled channel, and the **🔒** icon behind the channel name shows parental lock channel.

- Select the channel by pressing **▲ / ▼**, **PG+ / PG-**.
- Press **OK** key to watch that channel.

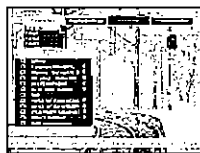
The colour key corresponds the following service list

- **Green(TEXT)** key : Favorites
- **Yellow(ALT)** key : Alphabetical
- **Blue(AUDIO)** key : Provider
- **Red (i)** key : Transponder



6.1 Service Favorites

- Press the **GREEN(TEXT)** key on the control unit to select the Favorites list.
- Press the **GREEN(TEXT)** key to switch between favorite list and channel list.
- Use the **▲ / ▼, PG+/PG-** keys to select a favorite group or a channel that you want.



6.2 Service Alphabetical

- Press the **YELLOW(ALT)** key on the remote control unit to select the Alphabetical list.
- Press the **YELLOW(ALT)** key to switch between alphabet list and channel list.
- Use the **▲ / ▼, PG+/PG-** keys to select a Alphabetical group or a channel that you want.



6.3 Service Provider

- Press the **BLUE(AUDIO)** key on the remote control unit to select the Provider list.
- Press the **BLUE(AUDIO)** key to switch between Provider list and channel list.
- Use the **▲ / ▼, PG+/PG-** keys to select a Provider group or a channel that you want.



6.4 Service Transponder

- Press the **RED(i)** key on the remote control unit to select the Transponder list.
- Press the **RED(i)** key to switch between Transponder list and channel list.
- Use the **▲ / ▼, PG+/PG-** keys to select a Transponder group or a channel that you want.



7. Program Information

EPG-Electronic Program Guide

The electronic program guide gives you information for the channels.

- Note :**
1. This service depends on service provider.
 2. After receiver recognized the GMT-time from the signal which takes few seconds, it can display correct EPG information.



- Press **EPG** key while you are viewing a program

This function is displayed on the screen by using only time. You will see "EPG" in the LED display of the receiver.

- **GREEN(TEXT)** key: Green key is for moving back to the previous date.
- **YELLOW(ALT)** key: Yellow key is for moving to the next coming date.
- **BLUE(AUDIO)** key can be used for page up, if there is more information than one page.
- **RED(i)** key can be used for page down, if there is more information than one page.

Time interval can be adjusted by press keys as followings on EPG screen:

1 key: 1 hour and 30 minutes **2 key:** 30 minutes **3 key:** 15 minutes

With the **TV/RADIO** or **FAV** key you can browse among the various programs lists.

- Select the channel by pressing **▲ / ▼, PG+/PG-** keys and press **OK** key to watch this channel. Current event can be returned by pressing **LAST** key during moving events on this channel.
- When the **TIMER** key on the remote control is pressed in the EPG screen, if the current channel involves an event, timer is set immediately and the set timer is indicated on the EPG screen. A program that has been set in this way is indicated on Timer Field of Time & Timer Setting.

8. Subtitle

When the current broadcasting program provides subtitle, press the **GREEN(TEXT)** key to see the current subtitle language list. If Subtitle is available on current program, **[S]** is displayed on the banner after changing program/channel; or pressing **RED(i)** key.



To change the subtitle language:

- Press the **GREEN(TEXT)** key to see the subtitle language list.
- Use the **▲ / ▼** keys to select a subtitle language you want.
- Press the **OK** key and then the subtitle language you want is displayed.

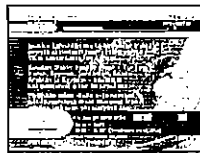
The menu display is carefully created and user friendly to assure the easy operation of the receiver by the user.

9. Audio Mode

You can choose a mode among left, right or stereo using the **BLUE(AUDIO)** key.

To change the audio mode:

- Press the **BLUE(AUDIO)** key to select the left, right or stereo.
- Press the **EXIT** key to save and escape from this menu.



10. Near Video on Demand (NVOD)

If the changed channel is a NVOD service channel, [N] is displayed at the right corner on the banner.

In this case, press the **YELLOW(ALT)** key.

Then you can get all NVOD list.

Select NVOD program among those lists.

Select the desired time to watch using the **▲ / ▼** keys.

and then press the **OK** key to watch the desired program.



11. Multi feed channel or subchannel

If the changed channel is a multi feed service channel, [C] is displayed at the right corner on the banner.

In this case, press the **YELLOW(ALT)** key.

Then you can get all subchannel list.

Select a program among those list, using the **▲ / ▼** keys.

and then press the **OK** key to watch the selected program.



OPERATING THE RECEIVER

Main Menu

After installing your antenna system and STB with appropriate connectors.

- Plug in the AC main power and switch on the receiver.
- Press **MENU** key to bring up the main menu.
The LED display will show "MENU".

The following on screen display will appear:

The sub menu topics will be displayed.

For the sub-menus Installation, Channel Organising and Parental Lock you need the PIN Code.

Before you begin with the "Installation" menu, you should check in the 4th menu "System Setup" whether all the information there is applicable for you.



- To see the help message, press the **YELLOW(ALT)** key.

1. Installation

The menu provides settings for customizing, adding new services and displaying the status of the receiver.

- Select "Installation" in the main menu mode to select the sub menu.
- Enter the **PIN Code**.

If you have not entered your own PIN Code then the PIN Code **0000** applies, which was set at the factory



1.1 LNB Setting

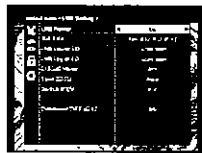
You can select the satellite and LNB setting conditions to execute channel search and you can alter the settings for 22KHz tone. The parameters set in this menu are needed for programming the channels for the "Auto scanning" and "Manual scanning".

The necessary information can be found at your antenna and LNB brochures, or you can ask your dealer.

- Select LNB power supply "On".
- Select the desired satellite name.
- Select the LNB type (frequency).
- Select the DiSEqC Mode (Off, DiSEqC A, DiSEqC B, DiSEqC C, DiSEqC D, Tone Burst A, Tone Burst B)

If you are using a Positioner, select Positioner DiSEqC1.2 ("Yes" or "No")

22KHz: In case you are using a dual LNB or two antennas connected to a 22KHz tone switch box, with the 22 KHz tone switch ("On", "Off" or "Auto") you can switch between both LNB or antennas.



1.2 Positioner Setting

If you have a DiSEqC 1.2 motorized system which is fully compatible with DiSEqC1.2, then you can take advantage of the DiSEqC 1.2 functions available.

- Select Satellite.
- Select any transponder from above satellites and check out the Frequency, Symbol Rate, FEC and Polarity.

In case problems arise, ask your dealer. Sometimes this transponder may not exist due to broadcasting. It is better to select main transponder among them for the desired satellite.

- Select from Menu Mode:

"User" mode : Enables control of basic positioner function recommended for beginners. General user uses "User" mode.

"Installer" mode : This is used to search for the position of a satellite manually.



1.2.1 User Mode

- **Select Driving Mode:**

You have an option to choose the positioner's movement type: **Continuous, Step or Time.**

- Position the antenna with north, south, east and west and use the ◀ / ▶ / ▲ / ▼ key to drive motor. ◀ key drives to west, ▶ key drives to east, ▲ key drives to north and ▼ key drives to south.

- If you finished driving of motor, select "Store current Position." and press OK key, to reset new driving motor.

Note : The level indicated in the "Signal Status" is only for reference. The signal quality may be adequate even though the level indicated is not maximum.

- Go to Stored Position.

When the stored position is reached then screen displays "Stop", you can now continue with the further operations.

- Select the Calculate Sat Positions to recalculate the satellite position and OK key.



1.2.2 Installer Mode

After checking the positioner's state, installer should use this menu. He should set the "Disable Limits" before using User mode.

- Select the Drive Motor West/East and use the ◀ / ▶ keys to drive motor.

◀ key drives to west and ▶ key drives to east.

- Select "Enable Limit", in order to enable "Set Limit".
- Select "Disable Limit", in order to disable "Set Limit".
- Select "Reset Positioner" and OK key to reset positioner.



1.3 Auto Scanning

The sub menu **"Auto Scanning"** will enable download the channels automatically from the preprogrammed satellites.

To download channels automatically:

You can select All/Off/Only Free option mode with the the **◀/▶** keys in each satellite, which can be displayed more by the **PG+/PG-** keys.

- Off :** No Scan
- All :** Scan all the channels
- Only Free :** Scan free channels

- Press **OK** key.

Auto Scanning menu will be displayed.

All the channels in the list from the selected satellite will be automatically downloaded.

After scanning you will see **"Your digital receiver found..."**. Then, you should press **OK** key to store all channels into STB.



1.4 Manual Scanning

To tune-in new channels and weak signals, the STB has been provided with the option **"Manual Scanning"** where the channel data can be entered by the user.

After selecting the **"Manual Scanning"** from the Installation Menu, the following screen will be displayed:

- Select the target satellite for manual search. In order to scan programs from the satellite which is not listed on this menu, select 'Satellite 1', 'Satellite 2' or 'Satellite 3'. In case of 'Satellite 1', 'Satellite 2' or 'Satellite 3', all information about the satellite which you are interested in should be put.
- Load a transponder. This option will enable the user to load any transponder from the preprogrammed list available within the receiver.

Note : Especially on New transponder at Load TR, this new transponder can be added into transponder list so that you can use it on Auto Scanning later, only if at least one channel is found with this new transponder. In order to save it, press **OK** key. In order to get 'NEW' as new transponder at Load TR, enter '0' at Load TR or go to 'NEW' using the **◀/▶** keys.



- Input the frequency of the transponder you want to find.
- Input the symbol rate of the transponder you want to find.
- Select the FEC(Forward Error Correction)of the transponder you want to find. You can select the value of 1/2, 2/3, 3/4, 5/6, 7/8 or Auto.
- Select the polarization of the transponder you want to find. **(Horizontal/Vertical/Circular Left/Circular Right)** In the case of horizontal, 18V and in the case of vertical, 13V are output through LNB line.
- Select Scan Mode **"All"** or **"Only Free"**.
- Set **"Yes"** on Network Search. You can get more channels from transponder using the homing transponder. Additionally, you can get **'Not Name'** on the screen. This service depends on the information from broadcasting signal.
- Select PID searching **"Yes"**, only if you are interested in SCPC program. You can manually search by entering individual PID(Packet Identifier)(Video/Audio/PCR) values.
- After select option, press **OK** key to start the scan process.

1.5 SMATV Scanning

In case that several generations use Antenna and LNB in common, search the service the from 950 to 2150MHz.

- Select Searching Type **"Automatic"** or **"Manual"**.
- Select Scan Mode **"All"** or **"Only Free"**.
- You can input alternative symbol rate from 1st to 4th.

- Note :**
1. When your searching type is set to Automatic during **SMATV** scanning, you have only to enter the alternative symbol rate(1-4) you want.
 2. When your searching type is set to Manual during **SMATV** scanning, you must enter both frequency and symbol rate.
 3. DiSEqC switch can be supported for SMATV on 'LNB Settings'. SMATV as the satellite on 'LNB Settings' should be selected for supporting DiSEqC switch.

When you select **"Automatic"**, STB will search all available channels based on symbol rates over whole frequencies. On the other hand, it will scan channels with exact information for symbol rate and frequency on **"Manual"**.



1.6 Reset to Factory Defaults

This is to recover the Factory set values in case the user has encountered some problems after changing any values of channel data and others which may be in error.

The screen display will be as follows:

At the request window, if you press **OK** key, the receiver will be reset to factory default settings automatically.

Note : This cause your previous settings to be deleted!
All settings and information including channel data will be deleted.



2. Channel Organising

The "Channel Organising" menu has seven functions: This menu is for removing some channels from channel list which are related with designated Satellite or Transponder. And it provides making favorite list and moving channel position as you want.

- Enter the PIN Code.

If you have not entered your own PIN Code 0000 applies, which was set at the factory.



2.1 Delete Satellite

- Select the desired satellite list you want to delete by pressing **RED (i)** key.
- Press **OK** key for confirmation.

Note : This feature doesn't delete satellite itself but deletes the list of channels registered at the selected Satellite.



2.2 Delete Transponder

- Select the desired transponder list you want to delete by pressing **RED (i)** key.
- Press **OK** key for confirmation.

Note : This feature doesn't delete transponder itself but deletes the list of channels registered at the selected transponder.



2.3 Delete Channel

- Select the desired channel you want to delete by pressing **RED (i)** key.
- Press **OK** key for confirmation.



2.4 Delete All Channels

At the request window, press **OK** key to delete all channels and press **EXIT** to exit.



2.5 Delete Scrambled Channels

At the request window, press **OK** key to delete scrambled channels and press **EXIT** to exit.



2.6 Favorite Channels

You can immediately register the present channel to the desired Favorite Group.
In addition, you can register a channel to multiple favorite groups.

- Select the desired Favorite Group (FAV1 – FAV9) using the **FAV** key.
- Select the desired channel list using the **▲ / ▼** or **PG+/PG-** keys or numeric keys at the **TV** or **RADIO** list window.
- Press the **RED(i)** key and then register the selected channel at the Favorite Group.
- Then press the **OK** key for confirmation.



You can change TV list or Radio list by the **TV/RADIO** key and change favorite list by the **FAV** key.

- When you press the **TV/RADIO** key, TV list and Radio list are toggled.
- Press the **FAV** key to select another favorite list.

To delete channels from Favorite Group:

- Select a channel list to delete with **▲ / ▼** or **PG+/PG-** keys or numeric keys.
- Press the **RED(i)** key to delete the selected channel from the favorite channels.

Note : One favorite list can contain max. 200 channels.

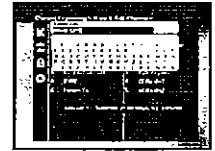
2.7 Move & Edit Channel

- Select the TV/RADIO list with **◀ / ▶** or **TV/RADIO** key.
- Select a channel in the TV or Radio list with **▲ / ▼** or **PG+/PG-** keys or numeric keys.
- Select channel by pressing the **RED(i)** key.
- Press the **▲ / ▼** or **PG+/PG-** keys to change the position of the channel you want, and press the **OK** key for confirmation.
- If you want to return the channel to the initial position, do not press the **OK** key but press the **BLUE(AUDIO)** key.



To edit Channel Name

- Select the TV/RADIO list with **◀ / ▶** or **TV/RADIO** key.
- Select a channel to rename with **▲ / ▼** or **PG+/PG-** keys or numeric keys.
- Press **GREEN(TEXT)** key, Font Table will be displayed.
- Select desired font table using the **Num.1-6** keys.
- Select desired character with **◀ / ▶ / ▲ / ▼** and then press the **OK** key to paste character to the string.



Note : **RED** key : Backspace.

EXIT key : To exit font table without changing channel name.

PG+/PG- key : To move the highlight "Move & Edit Channel" is applied on the all channel list.

- Press the **MENU** key and then press the **OK** key to save the set data.

3. Parental Lock

This "Parental Lock" feature sets viewing restrictions and prevents unauthorized access to your STB through the PIN (Personal Identification Number), which is a 4 digit number. (The factory preset PIN Code : 0000)

On selecting this menu, you will have two options: to set lock for any desired channel and to change your PIN value.

- Enter PIN Code.

If you have not entered your own PIN Code then the **PIN Code 0000** applies, which was set at the factory.

3.1 Set Channel Lock

- Select the channel by pressing ▲ / ▼, PG+/PG-, ◀ / ▶ or numeric keys.
- When you press the **TV/RADIO** key, TV list and Radio list are toggled.
- Select the channel lock by pressing **RED(i)** key.
- Press **OK** key for confirmation.

This will lock the channel. Whenever you need to view the channel, you will have to enter the PIN at the request window.

After entering PIN Code to able to access a parental locked channel, it will work on all parental locked channels. It means that you can access all parental locked channels with entering PIN Code on any parental locked channel successfully.

To cancel the lock :

- Press **RED(i)** key again in order to cancel the lock.



3.2 Change PIN Code

To change the PIN Code, select the second option "Change PIN Code"

This will take you to the following menu:

In this option, you need to enter the current PIN Code at the first cursor, and at the second cursor enter the desired PIN Code.

To confirm, you need to enter the new PIN Code again.

Please remember the PIN Code should be a 4 digit numerical value.

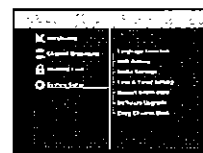
THE FACTORY PRESET PIN Code : 0 0 0 0.

Note : If you forget the PIN Code, refer to "System Information" part. Once you change password, please do not forget and keep well



4. System Setup

This option enables you to change the factory preset system settings as per your requirements.

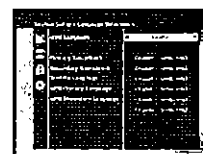


4.1 Language Selection

The "Language Selection" option allows the user to select the desired language of the OSD, Soundtrack, Subtitle or EPG. However, these languages for Soundtrack, Subtitle and EPG depend on broadcasting.

For example, even the language for Subtitle can be selected, it may not be supported because of no Subtitle on the program.

- To accommodate user from different regions speaking different languages, OSD languages are available 20 languages.
- To select the desired language menu, press ◀ / ▶ keys to change language and press **OK**.
- The OSD Language, Soundtrack, Subtitle, or EPG will vary according to the selected language.



4.2 OSD Setting

You can set the OSD transparency, the display time, Color Scheme and OSD Position.

- Select OSD Transparency level.
The OSD Transparency level from 0 to 100%.
Setting is made with the numeric keys, ◀/▶ keys or PG+/PG- keys.
- ◀/▶ keys : Setting in increment of 1%.
- PG+/PG- keys : Setting in increment of 10%.



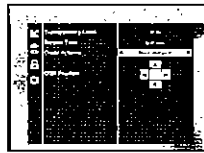
Note : This transparency is NOT applied to color scheme with "User Defined" option.

- Set the display duration of the information (banner) box displayed in the screen.
The time ranges from 0.5 to 60.0 seconds.
Setting is made with the numeric keys, ◀/▶ keys or PG+/PG- keys.
- ◀/▶ keys : Adjusting in increment of 0.5sec.
- PG+/PG- keys : Adjusting in increment of 1 sec.

- Set the Color Scheme :

You can change color according to your preference, (ie background, text, symbol, line, etc)

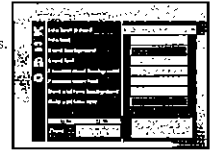
- ◀/▶ keys : select the color scheme mode.
- Color scheme 1: changes the menu to sky blue color.
- Color scheme 2: changes the menu to green color.
- Color scheme 3: changes the menu to dark brown color.
- User defined: Sets the color according to user preference.
- EPG colors: Sets the color in the EPG menu.



Note : Color scheme 1, 2 and 3 may be changed in the future by upgrading software

To set User defined mode or EPG color mode

- Press the GREEN(TEXT) key.
The item which you want to change will appear.
- Move the item which you want to change using the ▲/▼ keys.
- Set the color you want using the ◀/▶ keys.
- Press the OK key to set.



To see the help message, press the YELLOW(ALT) key.

OSD Position

- Place the cursor on the position you want, and press the ▲/▼ keys or ◀/▶ keys until the screen moves to the position you want.
The screen will move to the position you want.

4.3 Media Settings

You can set the various media settings you want. Place the cursor on this sub menu and press OK.

- Press the ▲/▼ keys to move the sub items and press the ◀/▶ keys to select the option.
- Press the OK key to confirm.
- Press the MENU/EXIT keys to exit the menu.
- Select the TV system : NTSC, PAL → (auto)NTSC, SECAM → (auto)NTSC, NTSC → (auto)PAL, NTSC → (auto)SEC, PAL, SECAM
- Select the TV type according to your TV.
STANDARD 4: 3 ratio or WIDE SCREEN 16 : 9 ratio type.
- Select the aspect ratio conversion : Letter box, Pan & Scan, Mixed or Full
- Select the Video Signal Type : Composite
- Select the RF Channel : CH 3, CH 4



4.4 Time & Timer Setting

1) Time

- Place the cursor on this sub menu and press **OK**.
- Press **◀/▶** keys to change local time in Time Zone.
The local time will be changed according to your location.

GMT is referred to the standard time of Greenwich by broadcasting signal. This cannot be changed.



2) Timer

15 timers are supported including timer(s) from EPG.

- Select the timer number on 'Timer' using **◀/▶** keys from 1 to 15.
- Press the **◀/▶** keys to choose event repetition you want to reserve :
Daily, Every Sunday, Every Monday, Every Tuesday, Every Wednesday,
Every Thursday, Every Friday, Every Saturday, Once.
If the timer is set from EPG screen, EPG is displayed on 'Event Repetition'.
- Press the **Numerical (0-9)** keys to set the time you want and press the **◀/▶** keys to choose a switch time you want to reserve. If set time on 'Switch-on Time' is same as one on 'Switch-off Time', this timer works for 24 hours.
- Select TV program to set the event program by pressing **◀/▶** keys.
When you press the **TV/RADIO** key, TV program and Radio program are toggled.
- Even you can set timers on Daily and Every Monday or Every Sunday, etc.
The priority has the repetition event which is less. For example, when you set timers on Once and daily, 'Once' will work in stead of 'Daily' at that day. If the timer is running, 'Running' message with a timer number is displayed on 'Timer'.

4.5 System Information

If you have to contact your service provider or a service center they might ask for information available from this menu. Place the cursor on this sub menu and press the **OK** key. The following will be the on-screen display.

- Note :** If you forgot PIN Code, press '0' key four times. Then, current PIN Code is displayed.
Keep in mind that your children or other people can get this PIN Code using this method.



4.6 Software Upgrade

This service is not available yet.



4.7 Copy Channel Data

If you want to copy the channel data from one receiver to another, please follow the instruction below. Please make your own channel data, such as favorite & lock channel with your own master box. Then take your master box when you install another box.

1. Plug on both master & slave receivers.
2. Master Box(Installed Box) : Stand-by Mode
3. Slave Box(Installing Box) : Menu Mode
4. Connect 2 Boxes with RS232 serial cable
(Both end should have male connector with crossed signals)
5. Select the 'System Setup' and press the OK key.
6. Select the 'Copy Channel Data' with the ▲ / ▼ keys.
7. Press 'OK' to start channel data copy



TROUBLESHOOTING

Problem	Possible cause	Solution of the problem
No display/LED on the front panel. No power supply	Power cord not plugged in correctly	Power cord plug in correctly
No picture on the screen	Receiver is Standby mode. Signal not connected tightly to video output of television. Incorrect channel or video output selected on television	Set receiver to "On". Check connection and correct. Check channel and video output and correct (TV instruction manual)
No sound	Audio cord is connected incorrectly. Sound is "Mute". Muting active	Check connection and correct. Increase brightness on television set. Press the MUTE key
Remote Control does not operate correctly	Incorrect operation. Batteries dead or inserted incorrectly	Point remote control towards the Receiver. Replace batteries or insert correctly
Poor picture quality signal strength is	Signal strength is low	Check all connections. Check the "Auto Scanning" menu, correct alignment of your antenna
On-Screen Error Message "Searching for signal"	Antenna cable not connected correctly. LNB detected via the correct position of the satellite antenna. LNB is set to "OFF" in LNB Setting menu	Check connection and correct Change LNB. Check position, use correct. Check the signal strength in the "Auto Scanning" menu
On-Screen Error Message "Channel data copy next next"	Signal is not yet set	Scan of in "Auto scanning" or "Manual scanning" menu

DISPOSAL

The device, packaging material (e.g. Styrofoam) and the batteries must never be disposed of with household refuse. Please obtain appropriate information about the regulations in your community, and dispose of all refuse in accordance with regulations at the separate locations provided.

TECHNICAL SPECIFICATIONS

***** TECHNICAL SPECIFICATIONS *****

Power supply

Type : SMPS
 Input voltage : AC 100V ~ 60 Hz
 Fuse rating : 250 V/T1.6AH

Tuner

Freq. Range : 950 ~ 2150 MHz
 Input signal level : -65 ~ -25 dBm
 Channel selection : PLL frequency synthesizer
 Input impedance : 75 Ω unbalanced
 Connector type : I type female
 LNB power control : 13 V/18 V, 22 kHz tone
 DiSEQC : 1,2 supported

Demodulator

Type : QPSK DEMODULATION (DVB-S)
 Symbol rate : 2 ~ 45 Ms/s
 Inner FEC : Viterbi Convolutional
 Coding Rate - 1/2, 2/3, 3/4, 5/6, 7/8
 Outer FEC : Reed Solomon Coding (204, 186), 1 - 8

Video decoder

System decoding : MPEG 2 ISO/TEC 13818
 (Transport Stream)
 Profile and level : MPEG 2 MP@ML (4:2:2)
 Data rate : 1 ~ 15 Mb/s
 Video formats : 4:3 (normal) & 16:9 (widescreen)
 Picture resolution : 720(H) x 576(V) x 50 fields/sec

Audio Decoder

System decoding : MPEG 1 ISO/TEC 11172-3 layer I & II
 Audio mode : MONO, DUAL, STEREO, JOINT STEREO
 Sampling frequency : 32, 44.1, 48 kHz

A/V output

RCA JACK : VIDEO (CVBS), AUDIO R&L

RF modulator

Modulator output : CH 3 or 4 (preset to CH 3)
 Video type : NTSC
 UHF output level : 66 ± 5 dBµV
 Output connector : female
 Ant. O/P connector : IEC female
 Tuning method : PLL frequency synthesizer

Serial data interface

Standard : RS232C, Max 115.2 kB
 Connector type : 9 pin D-type female

MEMO

MEMO