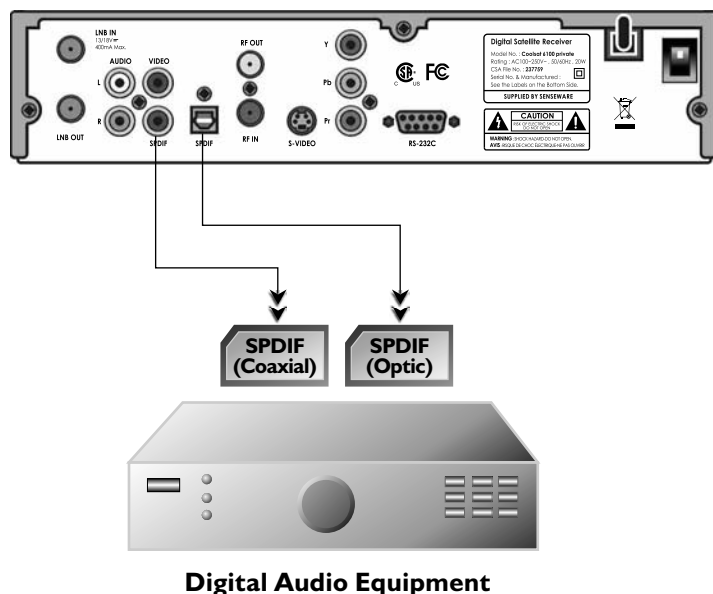


3. Receiver to Digital Audio Equipment

- ① To get better quality audio, you can use digital audio via coaxial or optic cable.
If you have a digital audio equipment, connect SPDIF to Digital audio input of the equipment.
(Coaxial or Optic)
- ② Connect other jacks to the appropriate jacks of TV or VCR refers to above section, **1. Receiver to TV with the RF and 2. Receiver to TV and VCR.**



Guide of Functions

1. Select Channel

To select the desired channel, you can use below methods.

1.1 Using UP/DOWN buttons

You can navigate between channels using UP/DOWN buttons. Whenever you press the UP(DOWN) button, current channel will be changed to next(previous) channel. You have to press UP or DOWN button until find the channel you want.

1.2 Using NUMERIC buttons

If you know the channel number, enter the number directly using NUMERIC buttons.

1.3 Using Channel List

To select the desired channel in the channel list, you should firstly display the channel list using OK button.
Use ARROW buttons to select a desired channel and press OK button.

In the Channel List window, you can also use additional functions with COLOR buttons.
Press RED button, you can sort the channels by Alphabet, Transponder, Group and CAS.
Press GREEN button, you can add the channel to one of 10 favorites.



2. Information Window

If, you want to view the current channel information window press INFO button. Then the Information window will appear.
This Information window is automatically displayed when changing channels. This window contains many items such as channel number, channel name, scrambled channel, Teletext, subtitle, Dolby Digital symbol, duration time and so on.
Press INFO button once more, you can get more detailed information.



3. Multi-Picture Display

Press the BLUE button to display multiple pictures and RED button display 9 or 12 multiple pictures option.



4. Electronic Program Guide(EPG)

Electronic Program Guide (EPG) helps you navigate through all the possible viewing options.

The EPG supplies information such as program listings, start/end times and detailed information about the program listings for all available channels. The availability and amount of these program details will vary, depending on the particular broadcaster.



- ① If you press EPG button, EPG menu will be displayed.
- ② Press the ARROW buttons to move to other channel or to see previous/next guide.
- ③ Press EPG button once to view full EPG (Entertainment Program Guide) and press button once more to go back.
- ④ Press GREEN button to view next day EPG and RED button to view EPG for previous day.
- ⑤ Select the program by using the ARROW buttons then set the timer by pressing OK.

5. Satellite List

Select the SAT (satellite) button to view all satellite listings. Scroll through the various satellites using the ARROW buttons, and select the appropriate satellite by pressing OK.

6. Favorite Group

Select the FAV (favorite) button to view all favorite groups. Scroll through the various favorite groups using the ARROW buttons, and select the appropriate satellite by pressing OK.

7. Volume Control

- ① To control audio volume while you are watching a channel, press LEFT/RIGHT button to control volume.
- ② Volume control bar will be appeared in top of the screen.
- ③ When necessary, press MUTE button to turn audio sound on/off.

8. PAUSE

The PAUSE button is used to freeze the video. Press PAUSE button once more to resume the video.

9. Closed Caption

To display of Close Captioning press C.C on your remote control. Close Captioning is based on the transmitted data.

10. Audio Track

You can select the audio language list by pressing the AUDIO button. Use the ARROW buttons to choose the audio track from the list then press OK to change.

Guide of Main Menu

To display the menu, press MENU button at any time. You can select the sub menu using ARROW buttons. The selected sub menu becomes highlighted. When you have selected the sub menu you want, press the OK button. If you want to return to the previous menu, press the EXIT button. And if you want to exit from the menu, press the MENU button.



1. Installation

1.1 Dish Setting

Select the antenna and LNB settings for channel search. The values that are set in this menu will be available for selection in other channel searching menus.



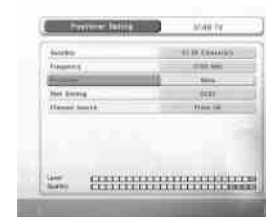
- ① Satellite : Select the satellite what you want to search the channel.
 - Press the LEFT/RIGHT button to select the satellite.
 - Select the wanted satellite name.
 - If the desired satellite name is not listed then select User Defined.
 - The keyboard will appear and you can type the satellite name directly.
- ② Frequency : Select frequency what you want to check the signal.
- ③ LNB Power : Select the LNB power.
- ④ LNB Type : Select the LNB type.
- ⑤ LNB Frequency : Select the L.O. frequency that is set to antenna.
 - Use the LEFT/RIGHT buttons to select the LNB frequency.
 - If the required LNB frequency is not available, then select '0' and enter the frequency manually using the NUMERIC buttons.
 - When you select Universal in LNB type, both 9750 and 10600 are supported at the same time. And LNB 22KHz setting is disabled.
- ⑥ LNB 22KHz : When you use a dual LNB or two antennas connected to a 22KHz tone switch box, make 22KHz tone switch enable or disable to select LNB or antenna.
- ⑦ DiSEqC SW : Press OK button to set DiSEqC SW.
 - DiSEqC 1.0 : If you use a DiSEqC 1.0 switch, use the LEFT/RIGHT buttons to select one of the DiSEqC inputs.
 - DiSEqC 1.0 (Distant) : If you use additional DiSEqC 1.0 switch, use the LEFT/RIGHT buttons to select one of the DiSEqC inputs.
 - DiSEqC 1.1 : If you use a DiSEqC 1.1 switch, use the LEFT/RIGHT buttons to select one of the DiSEqC inputs.
- ⑧ Channel Search : Press OK button to move to Channel Search menu directly.

1.2 Positioner Setting

- ① Satellite : Select the satellite what you want to search the channel.
 - Press the LEFT/RIGHT button to select the satellite.
 - Select the wanted satellite name.
 - If the desired satellite name is not listed then select User Defined.
 - The keyboard will appear and you can type the satellite name directly.
- ② Frequency : Select frequency what you want to check the signal.
- ③ Positioner : Select the positioner.

None

- Dish Setting : Press OK button to move to Dish Setting menu directly.
- Channel Search : Press OK button to move to Channel Search menu directly.



DiSEqC 1.2

- Move : To move the dish, press LEFT/RIGHT button.
- Fine Move : To move the dish in detail, press LEFT/RIGHT button.
- Positioner Command : To use various positioner command, command using LEFT/RIGHT button. Then press OK button to execute.
- Dish Setting : Press OK button to move to Dish Setting menu directly.
- Channel Search : Press OK button to move to Channel Search menu directly.



USALS

- Move : To move the dish, press LEFT/RIGHT button.
- Fine Move : To move the dish in detail, press LEFT/RIGHT button.
- Dish Longitude : Enter the dish longitude using NUMERIC buttons.
- Dish Latitude : Enter the dish latitude using NUMERIC buttons.
- Go To : Press OK button to move the dish to configured position.
- Positioner Command : To use various positioner command, select command using LEFT/RIGHT button. Then press OK button to execute.



1.3 Channel Search

- ① Satellite : Select the target satellite for search.
- ② Search Mode : Select the following search mode.

Auto Search Mode

- Search Type : Select the search type.
- Network Search : You can select Off or On. When you select 'On', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- Start Search : Press OK button to start search.
- Dish Setting : Press OK button to move to Dish Setting menu directly.



Blind Search Mode

- Frequency : Set Auto to search whole frequency, Set Manual to search only desired frequency.
- Polarity : Select the Horizontal or vertical polarization you wish to search.
- Search Type : Select the search type.
- Start Search : Press OK button to start search.
- Dish Setting : Press OK button to move to Dish Setting menu directly.



Manual Search Mode

- Frequency : Select the frequency from the list to search.
- Symbol rate : Enter the symbol rate using the NUMERIC buttons.
- Polarity : Select the polarity.
- Search Type : Select the search type.
- Network Search : You can select Off or On. When you select 'On', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- Start Search : Press OK button to start search.
- Dish Setting : Press OK button to move to Dish Setting menu directly.



Advanced Search Mode

- Frequency : Select the frequency from the list to search.
- Symbol rate : Enter the symbol rate using the NUMERIC buttons.
- Polarity : Select the polarity. (Vertical/Horizontal)
- Video PID : Enter the video PID using the NUMERIC buttons.
- Audio PID : Enter the audio PID using the NUMERIC buttons.
- PCR PID : Enter the PCR PID using the NUMERIC buttons.
- Start Search : Press OK button to start search.



1.4 System Recovery

- ① System restore to factory default : This menu allows you to restore the factory set values in case the user has encountered some problems after changing any new values of channel data and others which may be in error. Press OK button to erase all channels and restore default setting.
- ② System restore to stored position : This menu allows you to restore the stored values including channel data and system parameters. Press OK button to restore all data.
- ③ Store system data : If you want to use system parameters and channel data in the future, this menu allows you to store current state. Press OK button to store current state.



1.5 System Information

This displays general information about what hardware and software version your receiver is running on.

2. System Setting

2.1 Time Setting

- ① Time Setting : To set the current time, you can use two modes; Auto and Manual.

Auto Time Setting

- Local Offset : Enter the offset value using the standardized information of current channel area.
- Daylight Saving : If you want to apply daylight saving, select the country using ARROW buttons.

Manual Time Setting

- Date : Enter the calendar date by using ARROW up/down button than press OK to finish.
- Time : Enter the time by using the NUMERIC buttons.



- ② Clock Mode : Select the type of clock display (12 Hours/24 Hours) using ARROW buttons.
- ③ Wake Up Mode : Enter the time for the receiver to automatically power ON.
 - Wake Up Time : Enter the turn-on time of STB using NUMERIC buttons.
 - Wake Up Channel : Select the channel when STB is turn on. Press OK button to display channel list.
- ④ Sleep Mode : the time for the receiver to automatically switch OFF and go to standby mode.
 - Sleep Time : Enter the turn-off time of STB using NUMERIC buttons.

2.2 Timer Manager

Current time is based on the TDT (Time Description Table) in the satellite signal for the current program. Press GREEN button to set the current time, Press RED button to cancel out the set time. To change set time from current program, press OK button to make change. The time setting will be added automatically from the standardized time on EPG.



2.3 UI Setting

- 1 Info Box Position : Set the information window position.
- 2 Info Box Display Time : Set the display duration of information window displayed on the screen after changing channels.
- 3 Volume Bar Display Time : Set the display duration of volume bar displayed on the screen after changing volume.



2.4 Parental Control

Access to channels and programs is controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access parental control menu, the pop-up window will instruct you to input a PIN code. (If necessary, you can change it.)

NOTE The default PIN code is '0000'

- 1 Censorship : Set the parental guidance rating of highlighted censorship classification. The parental level is given as age-based numbers.
- 2 Change Pin code : To change your PIN code, input the new PIN code using NUMERIC buttons. To verify the new PIN code, input the new PIN code again.
- 3 System : Set the accessibility of System menu.
- 4 Installation : Set the accessibility of Installation menu.
- 5 Configuration : Set the accessibility of Configuration menu.
- 6 Edit Channel : Set the accessibility of Edit Channel menu.



2.5 Language Setting

- 1 Menu Language : Select the desired menu language by using the ARROW buttons.

NOTE

The kind of languages can be changed depending on the country. Languages are subject to change without prior notice.



- 2 Audio Language : Select the default language for audio when changing channels. If no language is provided, then the default language of current channel will be automatically selected.

- 3 Subtitle Language : Select the default language for subtitle when changing channels.

2.6 A/V Output Setting

- 1 TV Type : Select the TV types. (PAL/NTSC/Auto) In Auto mode, the STB is automatically selected as NTSC or PAL according to the channel played.
- 2 TV Aspect Ratio : Select the aspect ratio of TV which is connected to STB. (4:3/16:9)
- 3 Display Format : Select the format which the video is to be displayed on screen. (Letter Box/Pan Scan) In case of 16:9 mode, this option is not available.
- 4 Sound Mode : Set the audio mode which is output from the RCA jack. (Stereo/Mono/Left/Right)
- 5 Closed Caption : Turns the closed captions On/Off.
- 6 RF Channel : Select a RF channel. (3/4)
- 7 Picture Adjust : Adjust brightness, contrast and color of screen.



3. Channel List

3.1 Channel List Manager

Channel List Manager menu will be appeared when press OK button. Select the below menu by press YELLOW Button.

- 1 Lock Channels : All channel lists will be shown on left side of window, right side will show make channel to be lock. By using ARROW and OK button you may move the chosen channel to right side window to lock channel.



- ② Move Channels : All Channel Lists will be shown on left window, Channel Lists for moving will be shown on right window. Move the Channel to Right window by using ARROW and OK button, then right window channels will be moved to related location when select desired location from the left window.



- ③ Delete Channels : All channel lists will be shown on left side of window. By using ARROW and OK button you may select channels to be delete. And press GREEN button to delete the selected channels.



- ④ Skip Channels : All channel lists will be shown on left side of window, right side will show make channel to be skip. By using ARROW and OK button you may move the chosen channel to right side window to skip channel.



- ⑤ Set Favorites : Press FAV button to mark the favorite group list. Once, favorite group is chosen, left side window will show all channel list marked and right side window will show only the marked channel list. Using ARROW and OK buttons you may add any channel to the favorite group or delete any channel from the favorite group.



- ⑥ Edit Channel Name : All channel lists will be shown on left side of window. Move the highlighted bar to the channel what you want to edit its name and press OK button. Then you can see the virtual keyboard. Using ARROW and OK buttons, you can edit the channel name.



3.2 Channel List Option

- ① Channel List Preview :
Setting 'ON': Channel will be played when press 'OK' by moving from the Channel List to other channel. To erase Channel List on screen, press 'OK' one more time.
Setting 'OFF': Channel will be played when press 'OK' by selecting channel. Channel List will be disappeared.

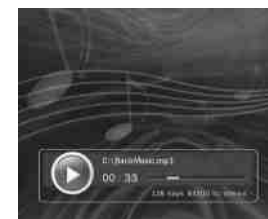


- ② Lock Favorite Popup : When set ON, press GREEN button to open set favorite menu and enter PIN code. When set OFF PIN code is not required.
③ View Only Filtered List : When set ON, only filtered list will be shown on the channel list. When Turn OFF, all list will be shown on the channel list.

4. Utilities

4.1 MP3 Player

Stick the external USB memory into the provided USB port on front panel. Once inserted, press OK button to read external USB memory stick and choose the MP3 file from the window you want to play.



4.2 Image Viewer

You can display the image file that is in the external USB memory stick on the screen. Select the image file (jpeg format) and press OK button to display the image.



4.3 Format (USB)

If You want to format the external USB memory devices on your STB, connect external USB memory on front panel, and select Format (USB) by using MENU button and ARROW buttons. When popup window appear, you can confirm the process on format of external USB devices.

NOTE Before Format the USB device, please copy all your files into a temporary directory of your PC, because the process will delete all the existing USB information.



4.4 Data Transfer

① Transfer All System data to USB storage:

If you want to use system parameters and channel data in the future, this menu allows you to store current state. Press OK button to store current state to external USB storage.



② Transfer Channel data to USB storage :

If you want to use channel data in the future, this menu allows you to store current channel data. Press OK button to store current channel data to external USB storage.

③ Data download from USB storage :

This menu allows you to download the stored data from external USB storage. Press OK button to download data.

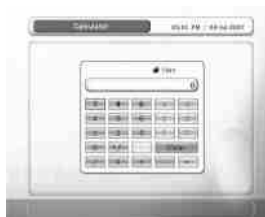
4.5 Calendar

To display calendar, press OK button. Utilize ARROW buttons to choose the date, button UP/DOWN will switch from past/next month.



4.6 Calculator

To use a calculator, press OK button.



4.7 Games

To enjoy a Game, press OK button. And you can play the Game(CAKEPIA).



Troubleshooting

Problem	Solution
Does not display any message on the front panel.	<ul style="list-style-type: none"> - Check the main power cable and check that it is plugged into a suitable power outlet. - Check you have switched the STB main power switch ON at the rear of the STB.
No Picture	<ul style="list-style-type: none"> - See 'Does not display any message on the front panel' above. - Check the video output port is firmly connected to the TV or VCR. - If you are using the RF output, check that the RF lead is connected firmly to the STB and TV/VCR. - Check that you have selected the correct channel or Video Output on your TV. - If you are using the RF Output, check that you have correctly tuned the UHF channel of the STB or TV. - Check the brightness level of the TV.
Poor picture quality	<ul style="list-style-type: none"> - See 'No Picture' above. - Check the signal level, if this is low then try adjusting the alignment of your dish.
No Sound	<ul style="list-style-type: none"> - See 'No Picture' above. - Check the volume level of the TV and STB. - Check the Mute status of the TV and STB.
Remote Control does not operate	<ul style="list-style-type: none"> - Point remote control directly towards the STB. - Check and replace batteries.
No or Bad Signal	<ul style="list-style-type: none"> - Check the LNB ; Replace LNB if necessary. - Check the cable from the LNB. - Check the position of the dish; realign dish if necessary. - If you are using a DiSeqC 1.0 switch, check that you have connected the LNBs to the correct connections on the switch. - Check the 'Signal Level' and the 'Signal Quality'.

Specifications

Tuner & Channel Decoder

Input Connector	F-type, IEC 169-24, Female
Loop through out	F-type, IEC 169-24, Female
Frequency Range	950MHz ~ 2150MHz
Input Impedance	75Ω, unbalanced
Signal Level	-65 to -25dBm
LNB Power	13/18VDC, max.400mA
22KHz Tone	(22 2)KHz, (0.6 0.2)V
DISEqC Control	VI.0/1.2/USALS Compatible
Demodulation	QPSK
Input Symbol Rate	2 ~ 45 Ms/s
FEC Decoder	1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7

MPEG Transport Stream A/V Decoding

Transport Stream	MPEG-II ISO/IEC 13818
Profile Level	MPEG-II MP@ML
Input Rate	Max. 15Mbit/s
Video Formats	4:3 LetterBox, 4:3 PanScan, 16:9
Video Resolution	720 x 576, 720 x 480
Audio Decoding	MPEG / MusiCam Layer I & II
Audio Mode	Stereo / Joint stereo / Mono
Sampling Rate	32KHz, 44.1KHz and 48KHz

Main System

Main Processor	Conexant Virgo(32-bit RISC CPU 180 MIPS)
Memory	Flash-ROM : 2 MBytes SDRAM : 32 MBytes

Audio / Video & Data IN/OUT

Video	CVBS Video Output (RCA) S-VHS Video Output (Mini-DIN) Y/Pb/Pr Video Output (RCA)
Audio L/R	RCA(Volume and Mute Control) AC-3 Dolby Digital (RCA & Optical)
RS-232C	9 pin D-SUB (Male) type, Transfer rate 115Kbps
USB	USB 2.0 Host Support

RF Modulator

RF Connector	IEC 169-24, Female
Frequency	CH 3 : 61.25MHz CH 4 : 67.25MHz
Output Channel	CH 3 / CH 4
TV Standard	NTSC-M
Preset Channel	CH 3 (or TBD) Software changeable by Menu

Front Panel

Slot	1 USB Host Slot
Buttons	3 Buttons (CH UP/DOWN, STANDBY)
Display	7-Segment (Channel No. or Time)
Indicators	2 LEDs (STANDBY, REMOTE)

Power Supply

Input Voltage	AC 100 ~ 250V, 50/60Hz
Type	SMPS
Power Consumption	Max. 20W
Standby Power	Max. 8W
Protection	Separate Internal Fuse & Lighting protection

Physical Specification

Size (W x H x D)	260mm X 55mm X 210mm
Weight (Net)	1.2 Kg
Operating Temp.	0℃ ~ +45℃
Storage Temp.	-10℃ ~ +70℃