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SYMBOLS USED ON THE RECEIVER

The next paragraphs explain the meaning of the symbols, present on the receiver.



The Digital Video Broadcasting logo.

A broadcast standard for digital radio and television using MPEG-2 compression.



The caution risk of electrical shock - do not open symbol

This symbol tells you that you are not allowed to open the receiver. Only authorized (service) technicians are allowed to open the box.



The lightning flash with arrowhead symbol within an equilateral triangle 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.



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 appliance.

SAFETY INSTRUCTIONS

Please read these safety instructions through carefully, before operating the receiver.

Please observe all warnings and instructions on the equipment and contained in these operating instructions.

Be sure to read this user's manual before starting your operation.

Never open the cover. It is very dangerous to touch the inside of the unit due to possible electric shock.

Install the unit horizontally. Unbalanced installation may cause the unit to be damaged by itself.

When you don't use this unit for a long time, please pull the power cord from the outlet. Also do not use a damaged power cord.

When the unit is suddenly moved to a hot area from a cold area, it may cause problems. In that case, turn off the power, and turn on after 1-2 hours.

Do not touch the power with wet hand. If there is liquid flowing into the unit, pull out the power cord immediately because it may cause fire or electric shock.

Install the unit in a place with:

good ventilation

suitable temperature

no direct sunrays

low humidity

low vibration influence

Place the unit in a well ventilated and no heat environment.

Do not put heavy objects on the unit.

I.GENERAL INFORMATION

1. Preface

The Set top Box is a high cost-effective digital receiver. It is fully compliant with MPEG-2 and DVB-T standards. It provides the enhanced OSD Multi-language-menu. Equipped with the latest technology and design, the receiver is ensured to offer high reliable performance for your digital life.

2. Main Features

- ✧ Fully DVB-T & MPEG-2 Compliant
- ✧ Software upgrade via RS-232 serial port
- ✧ Parental lock
- ✧ Multi-language Subtitle output supported
- ✧ Multi-language OSD and friendly user menu
- ✧ Aspect ratio 4:3 and 16:9
- ✧ Multi-language Audio supported
- ✧ 1000 channels memory space
- ✧ 7 days Electronic Program Guide and Information Plate
- ✧ 256 bit (TRUE) colors on screen display (OSD) supported
- ✧ Closed Caption
- ✧ Auto program update
- ✧ Timer function supported
- ✧ Program parameters memorization when power-off
- ✧ Support Video On Demand

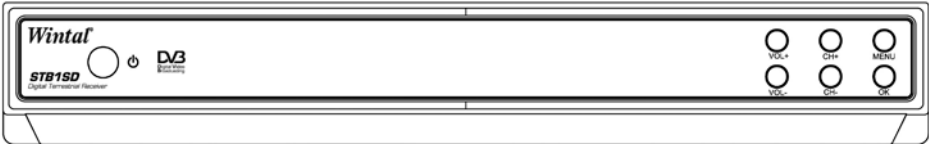
- ✧ PAL/ NTSC/SECAM supported
- ✧ Automatic power on/off supported
- ✧ Logical channel number (LCN) Supported
- ✧ Signal level & quality indicator
- ✧ Standby with low consumption
- ✧ Time adjustment
- ✧ Antenna Feed 5V Supported

3. General Operation of the Receiver

The everyday operation of your receiver is accessed via user friendly on screen displays and menus. These menus can help you get the most from your STB, guiding you through installation and channel manager with its various functions to enhance your viewing pleasure. All functions can be accessed through the Remote Control Unit and the front panel buttons provide access to many functions. Please be aware that new software may change the functionality of the receiver. Should you experience any difficulties with the operation of your unit, please consult the relevant section of this manual or Trouble Shooting. Alternatively call your dealer or a customer service adviser.

Note: Instructions and figures in the manual are just for your reference. If any discrepancy exists, the goods are subject to your purchase of practical object.

4. Front Panel



Press to switch between operation and standby modes

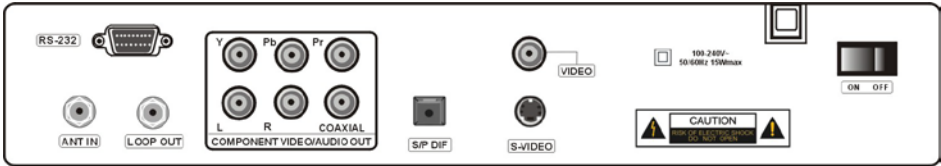
MENU: Show the Main Menu and command box on the screen

OK: Execute the selected item in the menu

CH: When watching, change to the previous or next channel, or move to the next higher or lower item in the menu.

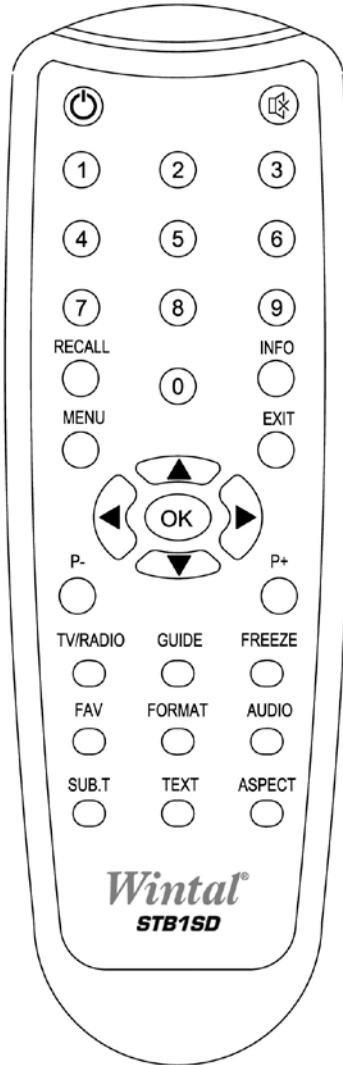
VOL: When watching a channel, adjust the volume or move to the left or right item in the menu.

5. Rear Panel



- RS232:** Connect to a PC for software upgrade * *for servicing purposes only*
- ANT IN:** Connect to a terrestrial antenna
- LOOP OUT:** Connect to another receiver (RF loop through output from digital tuner)
- YPbPR:** Component video output. Supports high definition output
- L/R AUDIO:** This socket outputs analog audio L/R signal.
- COAXIAL:** This socket connects to a coaxial socket on your surround sound system.
- S/P DIF:** This socket connects to a hi-fi system
- VIDEO:** This socket outputs composite video signal.
- S-VIDEO:** This socket outputs separate S-Video signal.
- 100-240V~:** Power supply
- ON/OFF:** Main power switch

6. Remote Control Unit





: Press to switch between Operation and Standby modes



: Press to temporarily cut off the sound

0-9 : Enter required numbers in the input box or select a channel to watch

RECALL: Press to switch back to previous channel

INFO : Show information of the current channel

MENU : Display the Main Menu on the screen

EXIT : Press to return to the previous menu or escape from the item

OK : Press to execute the selected item in the menu, or to confirm the desired value in input mode.



: Move cursor up/down/left/right, Page up/down, Volume +/-

p- / p+: Press to move up/down a page in the channel list

TV/RADIO: Switch between TV and Radio modes

GUIDE : Display EPG (Electronic Program Guide) menu

FREEZE: Switch between Pause and Play

FAV: Display the favorite channel list

FORMAT: Used to switch between different video output modes

AUDIO : When watching a channel, press to switch the audio languages

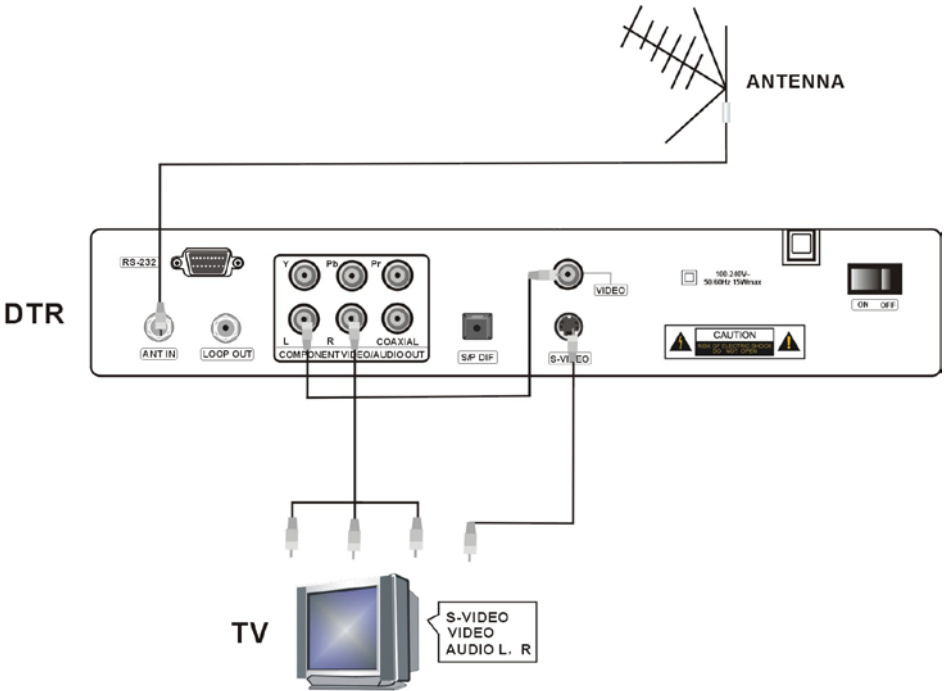
SUB.T: Subtitle hotkey will select DVB bitmap type titles. Note that subtitles may not always work as the broadcaster may not provide the service

ASPECT: Use this hotkey to select your television screen format. Continuously press this button to toggle through the different modes.

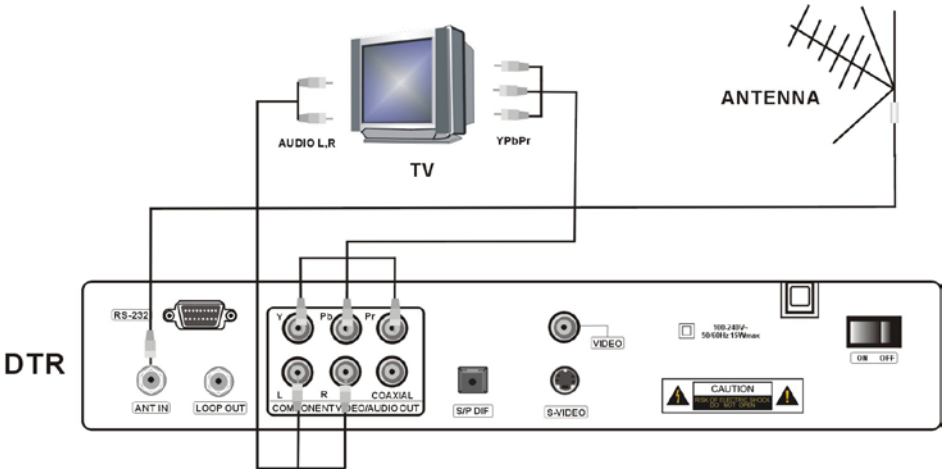
7. Installation of STB

This section explains the installation of the receiver. Refer to the manuals supplied with the equipment for the installation of outdoor equipment such as the dish antenna. When adding new equipment, be sure to refer to the related parts of the manual for the installation. The default output for this STB is Component (Red, Green, Blue) and Composite AV (Yellow, Red, White) always on. To use SVHS first tune in all channels via Composite AV connected to Tune refer to page 15 Program search. Then to switch to SVHS press TV/AV.

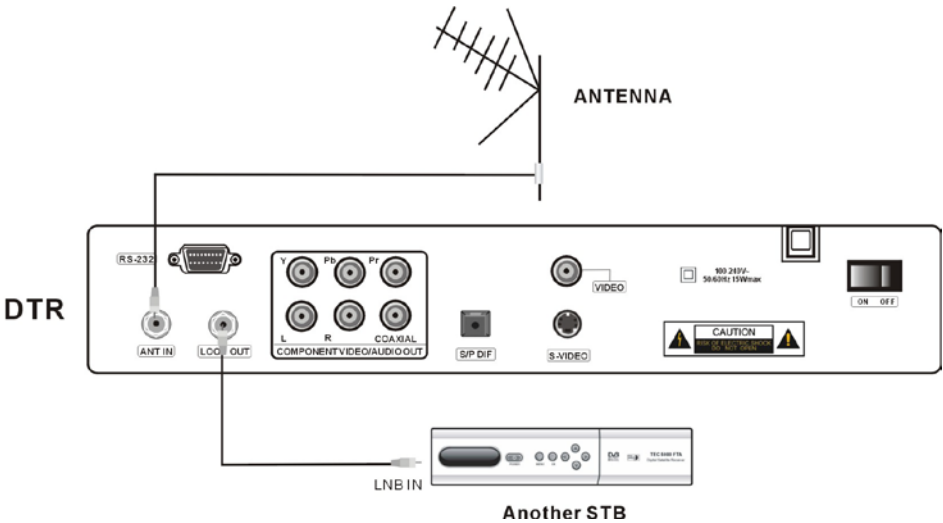
7.1 Connecting to a Television



7.2 Connecting to TV using YPbPr support



7.3 Connecting to another receiver



NOTE: This connection figure is for reference only. Connectors on the rear panel may be in different places or even be omitted due to different STB models.

II. MENU STRUCTURE

Open the main menu by pressing the **MENU** button.

- **Program List**
 - ❖ TV Program List
 - ❖ Music Program List
 - ❖ Sort
- **Program Search**
 - ❖ Automatic Search
 - ❖ Manual Search
- **Parental Control**
 - ❖ Channel Lock
 - ❖ Parental Setting
 - ❖ Change PIN
- **System Setting**
 - ❖ Video Setup
 - ❖ Language
 - ❖ Time Setting
 - ❖ System Schedule
- **Accessory**
 - ❖ System Information
 - ❖ Factory Default
 - ❖ System update



Navigate with the arrow button and enter the submenus by pressing the “**OK**” button. Enter the upper menu level, or exit the main menu by pressing the “**EXIT**” button.

1. Program List

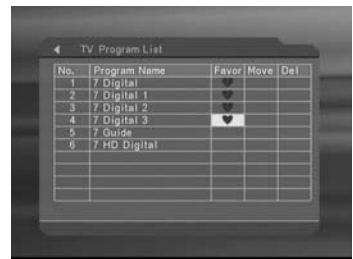
1.1 TV Program List

From the menu "TV Program List", the user can rename, sort, lock and add channels to favorite. Select the list you want to modify, the TV-list and press the "OK" button.

❖ Favorite

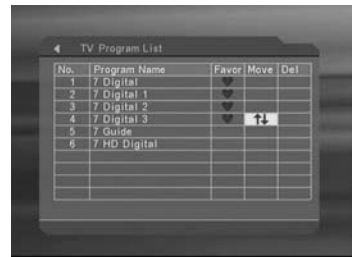
Move the selector to the "Favor"-column. Select the channels you want to add as favorites by press the "OK" button. The selected favorite is marked with "♥".

In channel view mode, press the "FAV" button to display the favorites.



❖ Move

Select the channel that you want to move and press **OK** key, the \updownarrow icon appears. Move the channel in the list with the \blacktriangle \blacktriangledown buttons. When the channel is in its desired place, press the "OK" button.



❖ Del

Move the selector to the "Del"-column. Select desired channel and press **OK** key. The channels are marked with a "X" icon. If you want to cancel this operation, please press **OK** key again at this channel.



1.2 Music Program List

This has the same operation as the 1.1 TV Program List. Please refer to point 1.1 above.

1.3 Sort

The channels can be sorted in alphabetical order, by channel number or channel ID. The channel ID is assigned to each channel according to the broadcast information. The channel ID is different from the channel number. Go to the submenu "Sort" and select the desired sorting method and press the [OK]-button.



2. Program Search

The STB has provided two ways to search program: Automatic Search and Manual Search.

2.1 Automatic Search

After pressing **OK** to enter the Automatic Search menu, the message with "Do you want to erase your previous channel list?" will be displayed on the screen. If you want to erase the previous channels, please press **OK** key, otherwise press **Exit**. After executing your decision, the system will start to search program automatically.



During the searching process, **EXIT** key is used to finish the whole process. After searching well, new searched TV and Music programs will be added to the corresponding program list.

2.2 Manual search

It's possible to search for single transponders with the "Manual Search".

Select the pre-defined channel no. with the desired parameters for the search. If the frequency of the selected channel is receiving a signal, the signal indication-bars will clearly indicate a per-centual signal strength and quality. Press the **OK**-button to start the search. The found channels will be added to the channel list.



3. Parental Control

Parental Control enables the channel lock with a 4 digit security code. In the default setup the code is "0000". Enter the parental control submenu by entering the code with the numeric buttons and then select "OK".



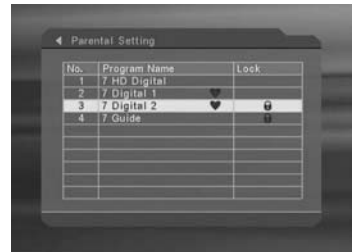
3.1 Channel Lock

Select NO or YES by using ◀▶ keys. If YES is selected, a password is needed before you enter the Program Search menu.

3.2 Parental Setting

This function allows you to lock the channel with a password in order to prevent children from accessing the channel.

You can also protect your installed data and information using the Channel Lock.



In this menu, move the cursor to the channel which you want to lock, and press **OK**, the locking mark will be display on the selected channel name. If you want to cancel the operation, press **OK** key again on the selected channel.

NOTE: Unless you enter the correct password, you can not watch the locked channel.

3.3 Change PIN

Change pin-code from the submenu selection "Change PIN". Enter the old PIN, followed by the new PIN, twice. End by selecting "OK".



4. System Setting

The settings for video, audio and time can be adjusted in the "System Setting" menu. The system timer can also be activated from this menu.

4.1 Video Setup

Display Type: Select the actual screen ratio of the TV 16:9 for wide screen-TV and 4:3 for traditional TV-format.

Video Output: Select YPbPr or S-Video.



4.2 Advanced Setting

Antenna Power : The user can activate the antenna power for passive antennas (without signal amplification).

LCN(LOGICAL CHANNEL NUMBER) : By pressing ◀▶ keys, select the option to be ON or OFF. If it is ON, then all the channels will be listed according to their logical channel number.



4.3 Language

Select the menu language, and the default settings for audio and subtitling.



4.4 Time Setting

In order to display the local time correctly, it may be necessary to set a time offset indicating the difference between local time and GMT. When GMT-time is active, the time information is received from the broadcast and adjusted according to the selected time zone. The time zone in Finland is +02:00 during normal time and +03:00 during summer time.

GMT usage: Select the ON or OFF.

If select OFF, you can set Date and Time by using numeric key on the RCU.

If select ON, you can select proper option according to the time zone you are in.



4.5 System Schedule

You can store ten channels at one time by using the function.

Select a task from Schedule list, and press **OK** to move the cursor to the Detail window.

Mode: select Stop, Once or Daily by using **◀▶** keys.

Start Date: Enter the start date by using the numeric key on the RCU.

Start Time: Enter the start time by using the numeric key on the RCU.



End Time: Enter the end time by using the numeric key on the RCU.

Channel No.: Select the desired channel No.

After setting well, press **OK** to finish.

The task can be set to inactive or active by using ◀▶ keys in the schedule.

5. Accessory

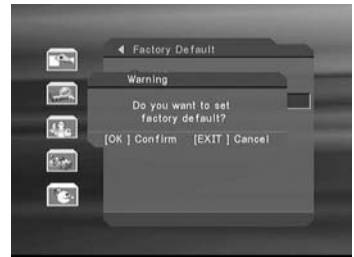
5.1 System Information

In this menu, you can view the system version.

5.2 Factory Default

Select the Factory Default item in the Accessory menu and press the **OK** key. A sub-menu will seek your confirmation. Select YES key to restore factory defaults.

Note : Reset to Defaults should be used with care as all programs found will be erased and Parameters re-set to factory default using this function.

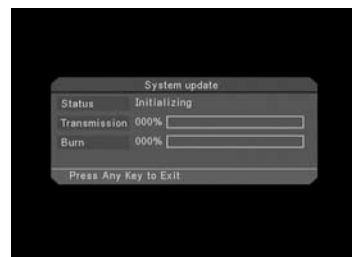


5.3 System update

** Used for Servicing purposes only*

The STB can upgrade new system version by using RS232.

1. Power off the master and slave STB.
2. Connect master STB to slave STB by a crossed 'RS232 serial cable'. (Data will transfer from master STB to slave STB)
3. Power on the master receivers.
4. Enter the System update window,



5. Power on the slave STB, the upgrade will start automatically,
6. Power off the two STBS.
6. Plug off the 'RS232 serial cable'.
7. Now reset the STB and enjoy the fantastic DTV programs.

6. Shortcut Key Functions

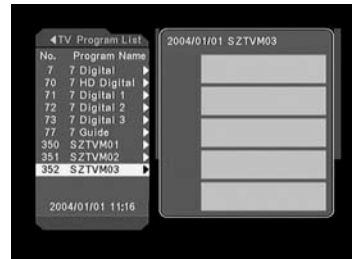
The basic TV and Radio functions of your receiver are described below:

6.1 Electronic Program Guide (EPG)

In normal view mode, press **GUIDE** key on the RCU to get into EPG Info.

The up-left side of this window is program list where you can use **▲▼** keys to select desired program. The content is shown in up-right PIG (picture in graphic).

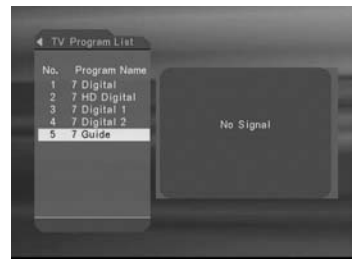
In program list: If you want to know details about one EPG, pressing **▶** key at this EPG. Press **EXIT** to return to previous menu, or press **MENU** key to close this window.



6.2 Program List

Display the Program List by pressing the **OK** key on the RCU (whilst not in Menu mode). Use **▲▼** keys to step through the programs available. Press the **OK** key on RCU to select a different program.

The program list extinguishes after pressing **EXIT** or **MENU** keys.



6.3 Audio Select

Should a particular program be available in more than one language, under the non-menu mode, pressing AUDIO key on the RCU will display Audio Select menu. ◀▶ Keys are used to switch among the preprogrammed options.



6.4 Volume

Audio Volume can be adjusted using ◀▶ on the RCU, for TV or Radio services. MUTE function is also available on the RCU.

6.5 Information

On the non-menu mode, by pressing ▲▼ keys to select a channel, a channel bar, which includes current channel's information and short EPG, will be shown at the bottom of the screen.

If you want to know details about the current channel, pressing **INFO** key on the RCU to display the Program Info window.

6.6 Subtitle

The Green **SUB.T** key on the RCU opens and closes the Subtitles or Closed Captions function, when the broadcaster provides this service. Activating any menu closes Subtitles or Closed Captions automatically. Powerful built in error correctors ensure Closed Captions display flawlessly.




III. TECHNICAL SPECIFICATION

TUNER	
Input frequency	174 ~ 860MHz UHF & VHF
Bandwidth	7MHz or 8 MHz
Input level	-72 ~ -20 dBm
Input impedance	75Ω
DEMODULATION	
Demodulation	QPSK, 16QAM, 64QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Mode	2K, 8K
Guard	1/4, 1/8, 1/16, 1/32
DEMULTIPLEXER	
Standard	ISO/IEC 13818-1
Input max. bit stream rate	104Mbps(Serial) / 7.5MBps(Parallel)
VIDEO DECODING	
Standard	ISO/IEC 13818-2 MPEG-2 MP@ML
Aspect ratio	4:3, 16:9
Video resolution	720×576 (PAL), 720×480 (NTSC)
AUDIO DECODING	
Standard	ISO/IEC 13818-3

Output mode	Mono, Dual-channel, Stereo
Sample frequency	32, 44.1, 48KHz
AV OUTPUT	
Video de-emphasis	CCIR REC.405-1, 625LINES
Video bandwidth	5.5MHz
Video output impedance	75Ω
Video output level	1.0Vp-p
Audio output frequency	20Hz~ 20KHz
Audio output Impedance	Low
POWER	
Input voltage	100-240~
Power consumption	15W max
AMBIENT	
Operation temperature	0°C ~ 40°C

IV. TROUBLE SHOOTING

Note : If you cannot solve the problem by referring to the above trouble shooting, please contact your re-seller.

Problem	Possible Causes	What To Do
The display on the front panel does not light up.	Main cable is not connected.	Check that the main cable is plugged into power socket.
No sound and picture, but the front panel shows time.	The unit is in standby mode.	Press the  key on the RCU.
No sound or picture.	Poor signal quality or bad interconnections	Check the antenna system Check cable connections.
Bad picture/ Blocking error.	Signal is too strong.	Try a signal attenuator to the RF IN port.
No picture appears on the TV screen.	The system is connected by RCA leads and TV is not in AV/EXT mode.	Check that you have selected the correct channel or Video Input on your TV.
There is interference on your digital terrestrial channel.	The system is connected using RF leads and the output channel of the receiver interferes with an existing terrestrial channel or Video signal.	Change the receiver output channel to a more suitable channel.
The RCU is not working.	Battery exhausted.	Change the battery.