Contact Samsung Electronics U.K.

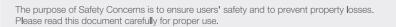
If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

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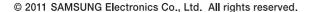
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This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

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Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

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The purpose of the Safety Concerns section is to ensure the safety of users and prevent property damage. Please read this document carefully for proper use.

# Conventions



#### Warning

Provides information or instructions that you should follow in order to avoid personal injury or fatality.



#### Caution

Provides information or instructions that you should follow in order to avoid a service failure or damage to your Set Top Box (STB).



#### Note

Indicates additional information for reference.



#### Checks

Provides the operator with checkpoints for stable system operation.

# **Symbols**



#### Warning or Caution

Indication of a general caution



#### Restriction

Indication for prohibiting an action with a product



#### Instruction

Indication demanding a specific action



# **WARNING**

#### **Power**



Insert the power plug firmly.



Do not touch the main body, power cable, or power plug with wet hands.



Do not connect multiple devices to a single outlet simultaneously.



If video/audio cable generates heat after connection, pull out the power plug and contact customer service immediately.

#### Installation/Maintenance



Install the product in an area with good ventilation.



Do not install in humid or dusty areas, and avoid installing near heating devices.



Keep flammable substances or sprays away from the Set Top Box (STB).



Do not place heavy objects on this product.



Do not cover the top.



Pull out the power plug during thunderstorms or when not used for a prolonged period of time.



Pull out the power plug at once and contact customer service if unusual noise, smell or smoke is emitted.

#### General



Check if the coaxial cable is correctly grounded before connecting to the STB.



This product complies with 21 CFR Chapter 1, subchapter J.



Class 1 LED Product.



# CAUTION

#### **Power**



Connect your TV to the Set Top Box (STB) after powering off the TV and the STB by pulling out the power plugs.



Before connecting the power source, a permanent protective earth connection to the cable distribution should be made



The socket outlet should be installed near the equipment and easily accessible.

#### Installation/Maintenance



Install the product correctly complying with the instructions in the user guide.



Do not place any metal items such as pins, paper clips or coins on the top of the product.



Do not spray water directly on the unit and do not use chemicals such as wax. mosquito spray, alcohol or detergent.



Risk of electric shock, DO NOT OPEN.



Ensure the product is placed on a stable surface.



Wipe the product with a soft and dry cloth when cleaning.



Do not disassemble, repair, or modify.



Connect two coaxial cables from the LNBs both to SAT IN 1 and SAT IN 2 on the back of your STB.



Do not insert any items into the product.



#### Cautions regarding data loss (HDD management)

- 1. When handling, take care not to damage the data in the hard disc.
- Hard discs are vulnerable to problems caused by the external environment or to impact during use, so take care not to damage the device.
- Take care not to move the set-top box while the power is on, or to subject it to impact, as this may damage the data.
- 2. Situations where the hard disc and data may be damaged
  - The hard disc and data may be damaged if subjected to shock while moving the set-top box or during installation.
  - The hard disc and data may be damaged when the set-top box is reset (reconfigured) or if there is a power outage while the hard disc is running.
  - Data may be irrecoverable for a variety of several reasons (e.g. a virus infection).
  - The hard disc and data may be damaged by turning the power off while recording or playing.
  - Files may be damaged or bad sectors may result if the set-top box is subjected to shock or moved while the hard disc is operating.

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# freesat+ HD digital TV recorder

freesat+ HD digital TV recorder (SMT-S7800) provides high quality video and audio broadcasting and interactive services.

# **Key Functions**

#### HD Video Display (High Definition)

Supports high-resolution video output of up to 1080p, enabling you to enjoy clear and sharp video.

#### Electronic Program guide (EPG)

Using the EPG, you can check the programme information and broadcasting schedule of a desired channel, and schedule the programmes to watch.

You can record programmes and set up scheduled recordings.

You can search the programme by Day/Time/Category/Search Text.

## Time shifting

As the channel you are watching is recorded, you can watch missed portions of the live programmes.

You can pause live TV programme for a certain amount of time, and resume it to watch. The STB allows maximum 120 minutes of recording for time shifting.

## Recording

You can record live TV or radio programmes on the Hard Disk Drive (HDD).

## You can record a maximum of two programmes at a time.

## Library

You can pause, play, rewind and forward for recorded contents.

# **Package Contents**

Please make sure the following items are contained in your product package box.

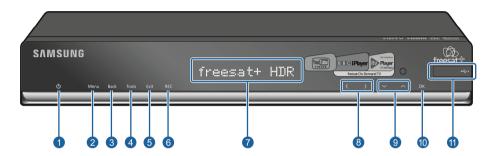


# Names and Functions

This section describes the name and function of the parts.

# Touch Pad and Front Panel

This section describes the touch pad and front panel.



| Name           | Description  |  |
|----------------|--|--|
| 1 Power        | Change the STB state to standby or active mode.  - Active Mode: The STB is in operation mode and you can get broadcasting.  - Low Power Standby Mode: The STB stops running, all the services are suspended except Blue LED. (No Front Display, No TV Service, No Cooling FAN) |  |
| 2 Menu         | Display the main menu.   |  |
| 3 Back         | Return to the previous menu.   |  |
| 4 Tools        | Takes you to the 'Tools' Menu.   |  |
| <b>6</b> Exit  | Exit the menu and channel guide.   |  |
| 6 REC          | Records programmes on HDD.   |  |
| Display screen | Displays the programme information, etc.   |  |
| 8 >            | Enter time shift mode and move the menu in horizontal direction.   |  |
| <b>9</b> ~ / ^ | Change the channel and move the menu in vertical direction.  |  |
| <b>®</b> ОК    | Select the menu and function.  |  |
| ① USB          | Connect to a USB storage device.   |  |



When you press the STANDBY button ( ) whilst the STB is in Active Mode, the STB will switch to Active Standby Mode. After a period of 5 minutes, the STB will switch to Low Power Standby Mode.

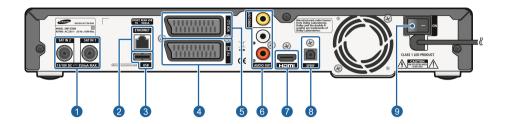
During normal operation every day, the STB will switch momentarily from Low Power Standby Mode to Upgrade Mode for a moment. In this mode, the STB will automatically check for upgrades that are being broadcasted.



When you press the STANDBY button ( 😈 ) whilst the STB is Low Power Standby Mode, the STB will switch to Active Mode.

# Rear Panel

This section describes the names and functions of the ports on the rear panel.



| Name                         | Description  |
|------------------------------|--|
| 1 SAT IN1 / SAT IN2          | A port which connects an LNB to an STB with a coaxial cable.   |
| 2 ETHERNET                   | A LAN port which connects a LAN cable.   |
| 3 USB                        | A port which is connected to a USB storage device.   |
| 4 TV SCART                   | A TV SCART output port which is connected to a TV with a SCART cable.  |
| 6 VCR SCART                  | A VCR SCART output port which is connected to a VCR with a SCART cable.  |
| 6 VIDEO/<br>AUDIO OUT (L, R) | A Video/Audio output port which is connected to a normal analogue TV, VCR, Radio, etc. with a video/audio cable. |
| 7 HDMI OUT                   | An HDMI output port which is connected to a TV with a standard HDMI cable.                                       |
| 3 SPDIF                      | A digital audio output port, which is connected to an audio system with an SPDIF port with an optical cable.     |
| Power on/off switch          | Switch for turning the STB power on/off.   |

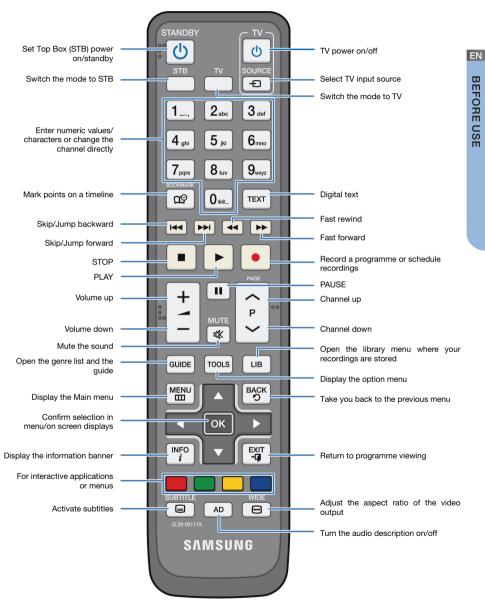


You need two cables for a freesat+ installation so that you can watch one channel and record another.

You also need a satellite dish with a multiple LNB (which is the protruding antenna of the dish).

# Remote Control

This section describes the function of each button on the remote control.





#### Loading batteries in the Remote Control

Alkaline batteries, not standard batteries, should be used for the remote control to ensure longer use. If you use standard batteries, it may cause problems in operating the remote control.

- Two identical and new batteries should be used for the remote control.
- When the remote control is not used for a long time, remove the batteries.

## TV Operation Setting with a Remote Control

You can operate the TV with a remote control. There are two ways to programme the remote control.

| Usin | g Automatic Code Search   |
|------|---|
|      |   |
| 1    | Turn on the TV.   |
|      |   |
| 2    | Press and hold the <b>TV</b> button ( ) for more than 5 seconds until the LED on the remote control blinks. |
|      |   |
| 3    | Press and release the <b>Programme Up</b> button ( ) until the TV turns off.                                |
|      |   |
| 4    | If the TV turns off, press and release the $\mathbf{OK}$ button ( $\boxed{OK}$ ).                           |
|      | <u> </u>  |

## **Entering TV Manufacturer Number**

- Check the 'TV manufacturer number' in the 'Annex' to see the relevant 3digit TV manufacturers number, and turn on the TV. (See page 63).
- Press and hold the TV button ( ) for more than 5 seconds until the 2 LED on the remote control blinks.
- Enter the 3-digit number, and then the LED will blink. 3
  - If you get no response, try the automatic code search in the previous page.
- If the TV turns off, press and release the **OK** button ( OK ), then the LED 4 blinks three time.



- A limited number of TVs made by other manufacturers may be controlled by the remote control, and some functions may not work.
- If you leave the remote control with no battery (or a flat battery) for a long time, your TV settings may be deleted.
- When a connected device is an integrated TV model (VCR, DVDP), take care when using the remote control because it may operate both of simultaneously.
- If the configuration number does not work, try another number.

# INSTALLATION

This section describes how to install the STB (SMT-S7800).

# Installation Environment

The table below shows the installation environment for the STB.

| Item                      | Description                 |
|---------------------------|-----------------------------|
| Operating Temperature     | 0-40°C                      |
| Operating Humidity        | 20-80% (40°C)               |
| Rated Voltage, Frequency  | AC 230 V +/- 15%, 50 Hz     |
| Rated Power Consumption   | Max. 40 W                   |
| Broadcasting Rx Frequency | 950 ~ 2150 MHz channel 8Mhz |



#### When Using and Installing the Product:

The product must be used under the specified environment. Otherwise, it may damage or shorten the life of the product.



#### When Connecting an STB to Peripherals

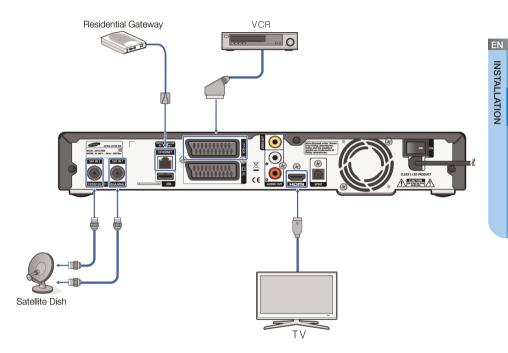
- Ask a service technician to check if the TV or VCR power supply where an STB will be connected is properly grounded. If not, there is a risk of fire.
- If excessive heat is produced from cables after connecting the video/audio cables, contact your service centre. It may cause a fire.



If the STB is stored at a low temperature, HDD-related functions might not work properly. This is not a malfunction. You need to boot the system at room temperature, wait about half an hour, and then reboot it again.

# **Peripheral Device Connection**

This section describes how to connect cables and peripheral devices to the STB. Typical device connections are shown in the following figure.



(The product image may differ from the actual product.)

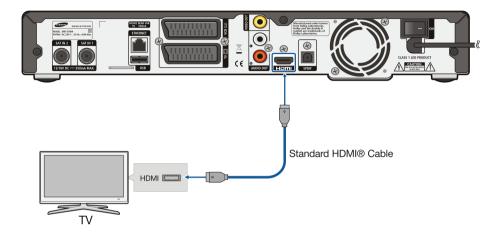


You need two cables for a freesat+ installation so that you can watch one channel and record another.

You also need a satellite dish with a multiple LNB (which is the protruding antenna of the dish).

## Connection to a TV with an HDMI Port

This section describes how to connect the STB to a TV with an HDMI port.



Connect the HDMI port on the rear of the STB to the HDMI port of the TV by using a standard HDMI® cable.



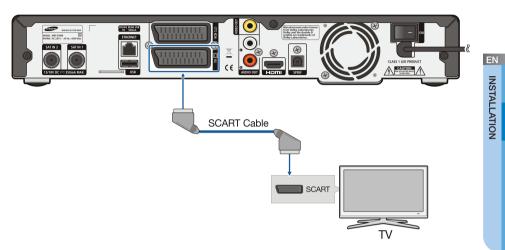
#### High Definition Multimedia Interface (HDMI)

The SMT-S7800 incorporates HDMI® technology.

The HDMI port is a video-audio integrated port to provide high-definition images by connecting an STB to a HD TV. Connect it to the HDMI port on a HD TV.

# Connection to a TV with a SCART Port

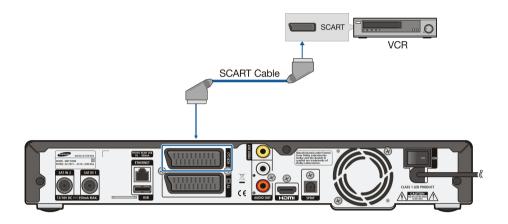
This section describes how to connect the STB to a TV with a SCART port.



Connect the TV SCART port on the rear of the STB to the SCART port of the TV by using a SCART cable.

# Connection to a VCR with a SCART Port

This section describes how to connect a VCR to a STB with a SCART cable.



Connect the VCR SCART port of the STB to the SCART port of the VCR by using a SCART cable.



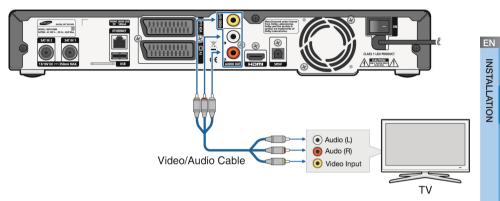
#### When Connecting to a VCR:

When connecting to a VCR, power off both the VCR and the STB and pull out both power plugs before connecting. You can also do the connection by referring to the VCR's User Manual.

- VCR may not record programmes including anti-record signals properly.

# Connection to a TV/VCR with a Composite Port

This section describes how to connect the STB to either a TV or VCR with a Composite (VIDEO/AUDIO OUT) port.



## **Video Connection**

Using a video cable, connect the VIDEO OUT port on the rear panel of the STB to the VIDEO IN port of the TV/VCR.

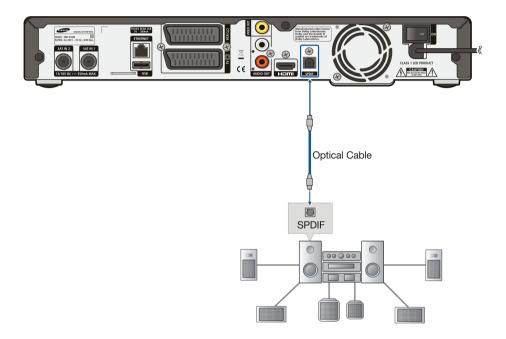
## **Audio Connection**

Using an audio cable, connect the AUDIO OUT (L/R) ports on the rear panel of the STB to the AUDIO IN (L/R) ports of the TV/VCR.

Be sure to match audio ports with plugs of the same colour.

# Connection to a Digital Audio Receiver or **Amplifier**

This section describes how to connect a digital audio amplifier or home theatre system that has a Dolby Digital decoding function.



Using an optical cable for digital audio, connect the DIGITAL AUDIO OUT port at the rear of the body to the **DIGITAL AUDIO IN (SPDIF)** port of a Dolby Digital audio receiver or amplifier.

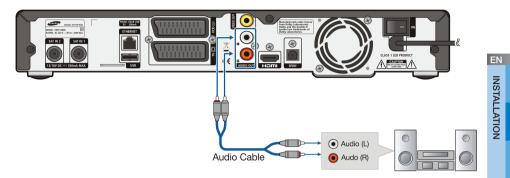


#### When Connecting to a Dolby Digital Audio Receiver or Amplifier:

- Even when a Dolby Digital amplifier is connected to a digital voice output port. connect the voice output port to the voice input port of the TV, for when the TV speaker is used.
- When digital voice output is used, adjust the volume of the digital amplifier, not of the receiver.

# Connection to an Audio Receiver or Amplifier

This section describes how to connect an audio receiver or amplifier.



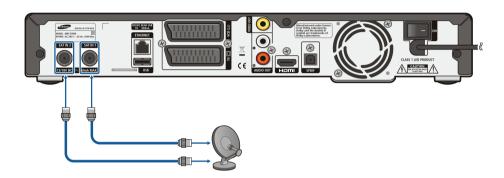
Using the audio cable, connect the AUDIO port at the rear of the STB to the AUDIO port of an audio receiver or amplifier.

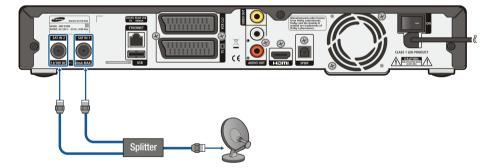
## Connection to Satellite Dish

The freesat service requires a satellite dish. Existing dishes may be suitable, (see http://www.freesat.co.uk for more information).

If you do not have a satellite dish installed, please ask your dealer to recommend a local dish installation engineer.

Connect two coaxial cables from the LNBs both to SAT IN 1 and SAT IN 2 on the back of your receiver. All cable connectors should only be tightened with your fingers; do not use any kind of wrench to tighten the connectors.







#### If you want to connect through a splitter:

- Use a splitter with DC pass on SAT IN 1.
- Only a limited number of frequencies can be turned simultaneously.

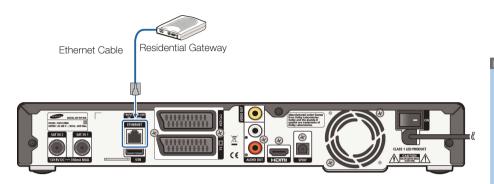


You need two cables for a freesat+ installation so that you can watch one channel and record another.

You also need a satellite dish with a multiple LNB (which is the protruding antenna of the dish).

# **Network Connection**

This section describes how to connect a residential gateway.



Connect the **ETHERNET** port on the rear panel of the STB with the residential gateway using an Ethernet cable.

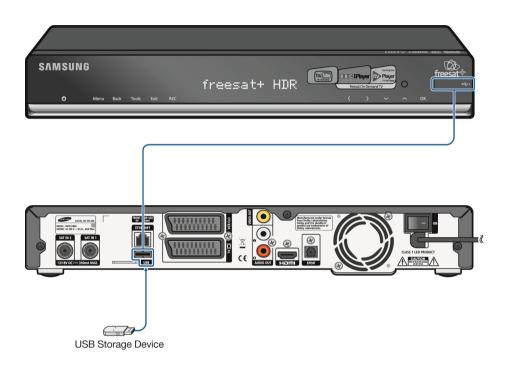


## Ethernet cable

A shielded Ethernet cable is recommended.

# **USB Connection**

This section describes how to connect a USB storage device.



Connect the USB storage device containing photos, music and/or movie files to the **USB** port at the front/rear of the product.



The External HDD device is not supported.

The USB HUB is not supported.

# HOW TO USE THE PRODUCT

# Installation Wizard

Before you can view the television programmes, you must run the installation wizard that starts when the Set Top Box (STB) is first powered up.

## Step 1

When the product is connected to the TV for the first time the product will display the initial User Settings screen. User Settings allows you to set the language, screen ratio, display format and resolution. Press the Navigation Left/Right buttons ( ) to choose the options. Select the [Next] button and press the OK button ( ) on the remote control.





Setting 'Screen ratio' and 'Resolution' is dependent on the type of TV you have. A dish with only one LNB can be supported by choosing "SAT IN 1" for "Antenna setup".

## Step 2

Check the cables are connected. If the cables are connected correctly, the signal strength will be displayed.

Select the [Next] button and press the **OK** button ( or ) on the remote control.



## Step 3

Enter your full postcode using the numeric buttons on the remote control. To use the on screen keyboard press the Green button on the remote control. Select the [Next] button and press the **OK** button ( ok ) after entering your postcode.





Space is required between the first and second part of your post code.

EN

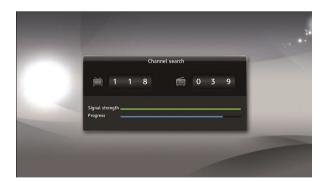
## Step 4

You will see a summary screen after set-up is complete. Select the [Finish] button and press the **OK** button ( ok ) to complete the installation.



## Step 5

The STB will carry out a channel scan in order to find all the freesat channels.



## Step 6

After successful scanning, a results screen will be shown indicating the numbers of TV and radio channels found. Select the [Save] button and press the OK button ( ok ) to confirm.



## Final

The STB software will be updated if a new software is available.



# **Using the Basic Functions**

# Display icons

| Icon     | Definition          | Icon        | Definition               |
|----------|---------------------|-------------|--------------------------|
| •        | Favourite channel   | AAC+        | AAC+ sound               |
| •        | Lock channel        | <b>™</b> D  | Dolby Digital Sound      |
| HD       | HD channel          | <b>™</b> D+ | Dolby Digital Plus Sound |
| HD▶      | HD simulcast        | AD          | Audio description        |
| £        | Paid channel        | Subtxt      | DVB Subtitle             |
| 13       | Parental Lock       | TXT         | Digital text             |
| 0        | Watch timer         | protect     | Protected library        |
| S        | Series record timer | N           | New recording            |
| <u> </u> | Record Timer        | 4:3         | 4:3 Screen Ratio         |
| <u>S</u> | Subtitle available  | 14:9        | 14:9 Screen Ratio        |
| STEREO   | Audio stereo        | 16:9        | 16:9 Screen Ratio        |
| MONO     | Audio mono          | 6           | Guidence                 |
| ///AAC   | AAC sound           |             | Recording in progress    |

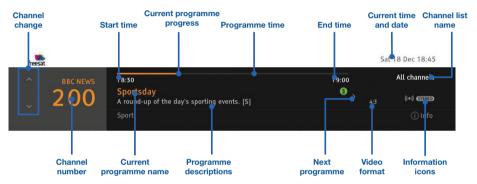
## **Service Information**

Changing to another screen or pressing the **INFO** button ( i ) displays channel information on the screen.

- You can see the details of a programme, time etc.

#### Information Banner

You can see the information banner by pressing the **INFO** button ( i) once whilst watching a programme.



- You can see the next programmes on the current channel and another channel using the Navigation buttons.
- You can confirm the current programme's status (channel, title, broadcast time and record setting).

## **Changing Channels**

You can move for channels by using the **PROGRAMME**  $\checkmark$ / $\land$  button (  $\begin{vmatrix} P \\ \checkmark \end{vmatrix}$  ).

## Volume Control/Mute

You can adjust the volume using the **VOLUME** button ( | + | ).

To turn off the sound, press the **MUTE** button ( 

...
...
...
...

When it is pressed again, sound is turned on.

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## Channel List / Favourite Channel

Pressing the **OK** button ( ox ) on the remote control displays the channel list on the screen.

- Pressing the **Yellow** button allows you to set a favourite channel.

## Guide

You can see the Electronic Programme Guide (EPG) for all channels.

Press the **GUIDE** button ( GUIDE ) on the remote control whilst watching a programme and select the channel genre.

To see the programme information, follow the below steps

- 1. On [Channel Genre], select the channel genre using the **Navigation** button on the remote control.
- 2. Press the **OK** button ( OK ).

# **Using the Main Functions**

## Time shifting

The STB automatically saves the previous minutes of the channel being watched or the radio channel being listened to. (Maximum 120 minutes) This time shifting mode makes it possible to stop live mode, rewind and review a programme that was recorded moments before.



To pause a programme, press the **Pause** button ( ). To resume the current programme, press the **Play** ( ) or **Pause** button ( ). To go back to the live programme, press the **Stop** button ( • ).

#### **Tick Modes**

| Mode         | Remote Control      | Speed                         |
|--------------|---------------------|-------------------------------|
| Fast Rewind  | 44                  | x1, x2, x4, x8, x16, x32, x64 |
| Fast Forward | <b>&gt;&gt;</b>     | x1, x2, x4, x8, x16, x32, x64 |
| Slow Rewind  | <b>Ⅱ</b> → <b>←</b> | x1/2, x1/4, x1/8, x1/25       |
| Slow Forward | II <b>→ →</b>       | x1/2, x1/4, x1/8, x1/25       |

## Jump Modes

| Mode          | Remote Control | Description                  |
|---------------|----------------|------------------------------|
| Jump Backward | 144            | Jump backward by 15 seconds. |
| Jump Forward  | <b>▶▶</b> I    | Jump forward by 60 seconds.  |

## Seek Modes (only when play banner is displayed.)

| Mode          | Remote Control | Description         |
|---------------|----------------|---------------------|
| Seek Backward | •              | Time seek backward. |
| Seek Forward  | ·              | Time seek forward.  |

## **Video Recording**

To record TV channels and Radio channels, press the **Record** button ( ). You can record a programme not only whilst watching the desired programme, but also after selecting the desired programme from the information banner, the TV guide or the Search menu.



- You can simultaneously record 2 programmes.
- Programmes to be recorded display a red icon in the information banner and the channel ist.
- If the programme is to be broadcasted at a later time or day, the STB will automatically book it, and will record it when it is broadcasted.
- You can see the recorded programmes list in the Library List by pressing the **MENU** button ( menu ) and select the [Library] category.
- Press the **Stop** button ( ) or **Record** button ( ) in the programme you are recording to stop video recording.
- You can delete a booked programme in the Library List.



#### Watching a 3rd channel

When 2 recordings are in progress from the 2 different transport streams you can watch another programme from them.

# Main Menu

If you press the **MENU** button ( ) whilst watching the live TV, the main menu screen is displayed as follows:



Main Menu Guide/ Channel / Library/Media/ Samsung WebTV / Settings

- Select a desired item by using the Left/Right button. (
- When a desired menu is found, press the **OK** button ( ok ) to move to the selected menu screen.



#### **Before Using the Product**

The information contained in this chapter may be subject to change by a programme provider without prior written notice.

EN

# Guide

### **Channel Genre**

'Channel Genre' allows you to view channels by genre. (e.g. News & Sports, Entertainment, Music, Radio, etc)

To use 'Channel Genre', follow these steps:

- 1. Press the **MENU** button ( ) on the remote control.
- Select the [Guide] category and press the **OK** button ( OK ) on the remote control.



Or

1. Press the **GUIDE** button ( GUIDE ) on the remote control.

#### Guide

You can see the Electronic Programme Guide (EPG) for all channels, which displays the programme list per channel, programme details, etc.

Press the **GUIDE** button ( GUIDE ) on the remote control whilst watching a programme and select the channel genre.

To see the programme information, follow the steps below

- On [Channel Genre], select the channel genre using the **Navigation** buttons on the remote control.
- 2. Press the **OK** button ( OK )

The **Colour** buttons on the remote control operate the functions displayed at the bottom of the screen:



Jump back /forward two hours using the **Red** or **Green** button, or one day using the **Yellow** or **Blue** button.

Search by Day/Time/Category/Search Text using the TOOLS button ( 10015 ).

- Press the **TOOLS** button ( TOOLS ) on the remote control
- In the pop-up you can choose:
- [Day], [Time], [Category] by pressing the **Left/Right** buttons (

# **Guide (continued)**

- You can search by text.
- Select the Search Text option, press the **OK** button (
- ) input the search text. - Using the **Left/Right/Up/Down** buttons (
- Confirm using the **OK** button ( OK ).

Select a channel programme using the Navigation buttons and then press the OK button ( ok ) to watch the channel in a small screen.

You can record programmes by selecting your desired programme from the programme guide and pressing the **Record** button ( • ) on your remote control.

Press the **OK** button ( OK ) on your remote control for watching desired programme.

When the start time for the scheduled programme arrives, the recording channel is not displayed automatically. Pressing the **Record** button ( ) again cancels the scheduling. You can view the list of scheduled programmes from [Main Menu] > [Library] 

Timer]

Search by Day/Time/Category/Search Text using the **TOOLS** button ( TOOLS ).

- You can set two types of "Timer":
  - Select the desired programme from the programme list.
  - Press the **Record** button ( ) on the remote control for record timer.
  - Press the **OK** button ( OK ) on the remote control for watch timer.
  - To the right of the chosen programme, the "record" or "watch" icon will be visible.
  - If there is a "Timer" conflict appropriate information will be displayed.
  - In the case of "Watch" timer, when the programme is starting, a pop-up with this information will be displayed on the screen.
    - In the case of "Record", you can choose if you want to record "Series", or "Once".
    - "Series" can be used if the programme is part of a series.
  - Pressing the **Record** button ( ), or **OK** button ( or ) again on the programme cancels the timer.

# **Channel**

### Channel

You can see the pop-up window of the channel list.

- Pressing the **OK** button ( **OK** ) on the remote control displays the channel list on the screen.
- Pressing the **Left/Right** buttons ( , ) allows you to navigate between channel lists (All Channels, Entertainment, News & Sport, FAV, etc)
- Pressing the **Yellow** button allows you to create a favourite channel list, and the **Red** button to lock/unlock the current channel.





You can use the following features by selecting the **TOOLS** button ( TOOLS ). Sort by name: Sort channel list by name.

Sort by number: Sort channel list by channel number.

Delete service: Delete selected channel.

# **Channel (continued)**

### **Favourite Channel**

Set channels you watch frequently as Favourites. To show all favourite channels, press the **Navigation** buttons ( ) or ( ) on the channel list.

SAMSUNG

To add a favourite list, follow these steps:

- 1. Pressing the **Yellow** button allows you to create a favourite channel.
- 2. Select [Create new FAV. List].
- 3. Confirm with the **OK** button ( OK ).
- 4. Using the **Left/Right/Up/Down** buttons ( , , , , ) input the FAV. name.
- 5. Confirm using [Save] option.
- 6. Choose channels by pressing the **OK** button ( OK ) on the left side of the menu. If you chose all necessary channel to new FAV., press **BACK** button ( Chosen channels will be available on the new FAV. list.



You can use the following features by selecting the **TOOLS** button (  $^{\text{TOOLS}}$  ).

Sort by name: Sort channel list by name.

Sort by number: Sort channel list by channel number.

Rename list: Rename favourite list.

Renumber: Renumber channels on your favourite list.

Delete FAV.list: Delete selected favourite list.



ΕN

# **Library**

### Contents

You can see a list of the TV programmes that you have recorded and are recording.

- Pressing the INFO button ( ) on the remote control displays the programme information of the selected recording.
- Pressing the **OK** button ( OK ) on the remote control will playback the selected content.



#### **Bookmarks**

- 1. Press the **BOOKMARK** button ( ) whilst watching a recording.
- 2. If you want to navigate through bookmarks, press the **TOOLS** button ( volume of the recording in bookmarks
- 3. Using the **Left/Right** buttons ( ) navigate through bookmarks.
- 4. Press **OK** button ( OK ) to choose the selected bookmark position.



To pause a programme, press the **Pause** button ( **II** ). To resume the current programme, press the **Play** ( **II** ) or **Pause** button ( **II** ). To go back to the live programme, press the **Stop** button ( **II** ).

#### **Tick Modes**

| Mode         | Remote Control  | Speed                         |
|--------------|-----------------|-------------------------------|
| Fast Rewind  | 44              | x1, x2, x4, x8, x16, x32, x64 |
| Fast Forward | <b>&gt;&gt;</b> | x1, x2, x4, x8, x16, x32, x64 |
| Slow Rewind  | Ⅱ → ◄           | x1/2, x1/4, x1/8, x1/25       |
| Slow Forward | ■ → ▶           | x1/2, x1/4, x1/8, x1/25       |

#### Jump Modes

| Mode          | Remote Control | Description                  |  |
|---------------|----------------|------------------------------|--|
| Jump Backward | 144            | Jump backward by 15 seconds. |  |
| Jump Forward  | <b>▶</b> ▶     | Jump forward by 60 seconds.  |  |

### Seek Modes (only when play banner is displayed.)

| Mode          | Remote Control | Description         |  |
|---------------|----------------|---------------------|--|
| Seek Backward | •              | Time seek backward. |  |
| Seek Forward  | •              | Time seek forward.  |  |

#### To delete the recording, following step:

- 1. Select the programme by pressing the **Yellow** button.
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Delete] on tools pop up window.

#### To move a recording programme, follow these steps:

- 1. Select the programme by pressing the Yellow button.
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Move] on the tools pop-up window.
  - Press the **Green** to create a new folder.
  - Press the **Red** button to see the main folders.
  - Press the Yellow button to Move a file.

#### To create a new folder, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 2. Select [New folder].
- 3. Press the **OK** button ( OK ).
- 4. Input the name of the folder using the Left/Right/Up/Down ( , , , , ) buttons.
- 5. Confirm with the **OK** button ( OK ).

#### To lock record, follow these steps:

- 1. Select the programme. (Only one programme at a time.)
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Lock] on the tools pop-up window.
- 4. Enter your PIN code.
- 5. Confirm with the **OK** button ( OK ).

#### To unlock record, follow these steps:

- 1. Select a locked programme. (Only one programme at a time.)
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Unlock] on the tools pop-up window.
- 4. Enter your PIN code.
- 5. Confirm with the **OK** button ( OK ).

#### To protect record, follow these steps:

- 1. Select the programme. (Only one programme at a time.)
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Protect] on the tools pop-up window.
- 4. Enter your PIN code.
- 5. Confirm with the **OK** button ( OK ).

Note that the [HDD auto-eraser] option will be not available for this file.

#### To unprotect record, follow these steps:

- 1. Select a protected programme. (Only one programme at a time.)
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Unprotect] on the tools pop-up window.
- 4. Enter your PIN code.
- 5. Confirm with the **OK** button.

Note that the [HDD auto-eraser] option will be available for this file.

#### To sort records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Sort].
- 3. Press the **OK** button ( OK ).
- 4. Choose the sorting mode.
- 5. Choose the sorting order.
- 6. Confirm with the **OK** button ( OK ).

To select all records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Select All].
- 3. Press the **OK** button ( OK ).

To deselect all records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Deselect All].
- 3. Confirm with the **OK** button ( OK ).

#### Timer

You can see the list of the recording programmes and the scheduled recording programmes.

To delete a recording programme or a scheduled recording programme, follow these steps:

- 1. Select the programme by pressing the Yellow button
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Delete] in the tools pop-up window.



To multiple delete scheduled recordings, follow these steps:

- 1. Select the programmes by pressing the Yellow button
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Delete] on the tools pop-up window.
- 4. Confirm with the **OK** button ( OK ).

To sort scheduled recording programmes, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 2. Select [Sort] on the tools pop-up window.
- 3. Confirm with the **OK** button ( OK ).

To select all records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Select All].
- 3. Confirm with the **OK** button ( OK ).

### To deselect all records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Deselect All].
- 3. Confirm with the **OK** button ( OK ).

# Media

Make sure that the USB storage device or network is connected correctly before using the Media Menu.

#### Supporting

- ▶ Only use USB devices that have been formatted with the FAT16/32.
- ▶ The Standard JPEG/MP3/ AVI(XviD) format only is supported.
- ► Read, delete, copy and move are supported.





- Before connecting your device to the product, please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss.
- The External HDD device is not supported.
- The USB HUB is not supported
- The Copy-protection or Digital Rights Management (DRM) file is not supported.
- Certain types of USB Digital camera and audio devices may not be compatible with this product.
- If you are using the USB extension cable for this purpose, you may encounter a problem such as unrecognised USB devices or a failure to read internal files.
- In standby mode, USB device is not recognised.
- Do not disconnect the USB device whilst it is loading.

If the problem of the unrecognised USB device persists or the internal file list is corrupt or a certain file could not be played, connect the USB device to the PC and format it in a proper file system, then check it again.

# Media (continued)

### **USB**

You can play contents using a USB storage device.

To connect a USB storage device device, follow these steps:

- 1. Turn on your product.
- Connect the USB storage device containing photos, music and/or movie files to the USB port at the front/rear of the product.
- 3. When the USB storage device is connected to the product, you can see the USB directory on the Media screen.

#### **HDD**

You can play contents from an HDD.

- When the HDD is ready, you can see HDD directory on the Media screen.

#### **Network**

You can play contents which are in your PC by using the contents sharing server with Windows Media Player11 or Windows Media Player12.

- When the network is available, you can see Network directory on the Media screen.



In network device, additional functionality (Delete, Copy, Move, etc) is not supported.

JPEG/MP3/AVI(XviD) format only are supported.

# Media (continued)

#### Photo / Music / Video / All

#### Photo category

You can see a thumbnail of image files.

When you select an image file you can see a slideshow.

Only standard JPEG files are supported.

#### Music category

Only standard MP3 files are supported.

#### Video category

Only standard XviD files are supported.

#### All category

You can see all files on the available media.

You can see additional information by pressing the INFO button on the remote control if a file has additional information.

#### To delete the files, follow these steps:

- 1. Select the files by pressing the **Yellow** button.
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Delete] on the tools pop-up window.
- 4. Confirm with the **OK** button ( OK ).

#### To move files, follow these steps:

- 1. Select files by pressing the Yellow button
- 2. Press the **TOOLS** button ( TOOLS ) on the remote control.
- 3. Select [Move] on the tools pop-up window.
- Press the Green button to create a new folder.
- Press the Red button to see main folders.
- Press the Yellow button to move files.

# Media (continued)

#### To create a new folder, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [New Folder].
- 3. Confirm with the **OK** button ( OK ).
- 4. Input the name of the folder using the **Left/Right/Up/Down** ( , , , , ) buttons.
- 5. Confirm with the **OK** button ( OK ).

#### To sort files, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Sort].
- 3. Press the **OK** button ( OK ).
- 4. Choose sorting mode.
- 5. Choose sorting order.
- 6. Confirm with the **OK** button ( OK ).

#### To select all records, follow these steps:

- 1. Press the **TOOLS** button ( TOOLS ).
- 2. Select [Select All].
- 3. Confirm with the **OK** button ( OK ).

# Samsung WebTV



### YouTube™

You can see the YouTube™ Spotlight, Top Rated, Most Viewed, and More contents list and search YouTube™ content.

To view further content sign into your YouTube™ account.

To do this, you must create a YouTube™ account first.

- After sign-in, you can see Uploads, Favourites, Playlists and Subscriptions.



# Samsung WebTV (continued)



You can use the following features by selecting the **TOOLS** button ( TOOLS ).

Settings: Set the option 'play next video when current video ends' and 'filter videos that may not be suitable for minors'.

Set Geography: You can see videos that include the geographical location you select.

#### After sign-in,

- Add to Favourites : add a video to your favourites list.
- Add to Subscriptions : add a video to your subscriptions list.
- Rate : allows you to rate videos
- Flag Video: add a complaint about a video.
- \* Some content may be not supported because of product limitations.
- \* SAMSUNG does not warrant continuous availability of service.

# **Settings**

You can set Set Top Box (STB) options.

- You can change the options listed below [Channel], [Sound], [Picture], [Language], [Library/Media], [System]
- CI Plus (Coming soon)
   All options are displayed according to the CI manufacturer.

# Settings → Channel



#### Freesat scan

You can scan freesat channels. Enter your full postcode using the numeric buttons on the remote control. To use an on-screen keyboard, press the **Green** button on the remote control.

When recording is in progress you cannot use this functionality.

- Select the [Start] button and press the **OK** button ( OK ) to start scanning.
- Wait until the scan is completely finished.
- Select the [Save] button and press the OK button (  $\boxed{ \text{OK} }$  ) to apply the scan.

#### **Guide timeline**

You can set a Guide timeline value

- 60 minutes
- 120 minutes
- 240 minutes

# <u>Settings</u> → Channel (continued)

### Parental rating

You can set the Parental rating value.

- You can choose one from: Adult Only, Unblocked

#### Adult service

You can choose whether to use Adult Services.

- Visible
- Hidden

#### Parental setting

You can choose whether to protect your PIN code or not.

- Pin code protected
- Not protected
- The default PIN code is 0000.

#### Service mode

You can choose whether to use Freesat mode or not.

When recording is in progress you cannot use this functionality.

- If you choose 'Non Freesat' you can scan the channels manually.

#### Channel edit

Select a service from the left-hand part of the menu.

Move the cursor to the right menu.

Select an alternative service from the right-hand part of the menu and press the **OK** button ( ok ).

The selected channel will be replaced by the original one.

# Settings → Sound



### **Dolby Digital / DTS**

Allows you to enable/disable the Dolby Digital Sound, which is available when the programme provider supports Dolby Digital Sound.

- The default setting is Off.

Following table is created based on HDMI/SPDIF audio output.

| Dolby Digital/<br>DTS | Digital volume control | Input audio format                    | Output audio<br>format             | Volume control on STB |
|-----------------------|------------------------|---------------------------------------|------------------------------------|-----------------------|
|                       |                        | Dolby Digital /<br>Dolby Digital Plus | Dolby Digital / Dolby Digital Plus |                       |
| On Off                | Off                    | HE AAC                                | DTS                                | Not Available         |
|                       |                        | Other audio formats (e.g. DTS, MPEG)  | PCM                                | Not Available         |
| On                    | On                     | All audio formats                     | PCM                                | Available             |
| Off                   | Off                    | All audio formats                     | PCM                                | Available             |
| Off                   | On                     | All audio formats                     | PCM                                | Available             |

## Digital volume control

Allows you to control the volume of digital output by using remote controller.

# Settings → Sound (continued)

### **Audio primary**

You can change the language for the Audio primary.





### **Audio secondary**

You can change the language for the Audio secondary, which is available if an Audio secondary service is provided by the programme provider.

- Select the default language for the Audio secondary using the **Up/Down** button ( . . . . . . . . .





### **Audio description**

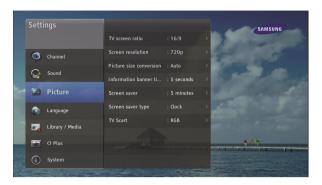
You can choose whether to use Audio description.

### Audio delay

You can set Audio delay manually. You can set the time difference to the speaker output of a home theatre.

- The **Left/Right** button ( ) is used to adjust the time.

# Settings → Picture



### TV screen ratio

You can change the TV screen ratio.

Allows you to change the screen output ratio.

- 4:3 and 16:9 ratios are available.

### Screen resolution

You can change the screen resolution.

- Auto, Use TV's feature, 576p, 720p, 1080i, 1080p 50Hz

### Picture size conversion

Allows you to change the screen output type.

| TV screen ratio | Picture size conversion                                    |  |
|-----------------|--|--|
| 4:3             | Auto, 16:9 Letter box, 14:9 Letter box, Centre Cut Out     |  |
| 16:9            | Auto, 4:3 Pillar box, 14:9 Pillar box, 16:9 Centre Cut Out |  |

# Settings → Picture (continued)

#### Information banner timeout

Allows you to change the display time for the service information that appears at the top of the screen when you change channels or press the **INFO** button ( $\bigcap_{i}^{\text{NFO}}$ ).

#### Screen saver

You can set the time delay for the screen saver.

- If there is no input from the remote control for a given period of time, the menu window disappears. Enter the required no-input time.

#### Screen saver type

You can choose the type of screen saver.

- If you choose 'slideshow' for the screen saver, you need to select the picture directory to be used for the slideshow.

#### TV Scart

You can choose the Scart output type.

- The default setting is RGB.

# <u>Settings</u> → <u>Language</u>



### **OSD Language**

On Screen Display (OSD) is used to change the language of the menu screen.

### **Automatic subtitles**

Allows you to enable/disable subtitles.

-To enable them, select On.

# **Subtitles primary**

Allows you to change the primary language for the subtitles.

# **Subtitles secondary**

Allows you to change the secondary language for the subtitles.

- Subtitles are available when a secondary language service is provided by the programme provider.

# Settings → Library / Media



### USB auto-open

Allows you to automatically open the Media when the USB storage device is connected.

### Time shift recording

Allows you to switch time shift recording auto-start on/off when you change channel.

### Time shift buffer

Allows you to set the time shift buffer duration.

- 30 minutes, 60 minutes, 120 minutes

#### HDD auto-eraser

Allows you to erase the oldest recorded programme from the library automatically. Immediately after the HDD free space goes below 15% (low disk space level), autoeraser starts erasing unprotected recordings. After each erase, the free space level is checked and if it is over 15%, auto-eraser stops working.

- PROTECT/UNPROTECT can be chosen from TOOLS button ( TOOLS ).
- The default setting is Off.

### **HDD** capacity

Displays the HDD usage information.

- You can format the HDD using the format button.

# Settings → System



#### Product information

Displays information on the product.

- You can check the Brand ID, Product ID, Firmware version, Software version, Serial number and Last SW update information.

### Change PIN code

Change PIN Code allows you to change the current password.

To change the password use the following steps:

- 1. Select [Change PIN code] and press the **OK** button ( OK ).
- 2. Enter the current PIN code using the numeric buttons.
- 3. Enter the New PIN code and enter again in [Confirm new PIN code].
  - The default PIN code is 0000.

#### **Network setting**

Use the Automatic IP/DNS configuration when connecting your product to a network that supports DHCP.

To set up Network automatically use the following steps:

- 1. Connect your product to your LAN.
- 2. Press the **MENU** button ( ) on the remote control, and select [Settings], [System], [Network setting].
- 3. Set IP Configuration to [Automatic].
- 4. Automatic acquires and enters the required internet values automatically.
- 5. Select the **OK** button ( OK ).
- 6. A pop-up will appear to let you know if the IP configuration was a success or if it failed.

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# Settings → System (continued)

Use the Manual IP/DNS configuration when connecting your product to a network that requires a static IP address.

To set up the Network manually use the following steps:

- 1. Connect your product to your LAN.
- 2. Press the **MENU** button ( ) on the remote control and select [Settings], [System], [Network setting]
- 3. Set IP Configuration to [Manual].
- Enter the IP Address, Subnet Mask, Gateway, and DNS Server values. Use the number buttons
  on your remote control to enter numbers and Navigation buttons to move from one entry field
  to another.
- 5. Select the **OK** button ( OK ).
- 6. A pop-up will appear to let you know if the IP configuration was a success or if it failed.

#### Software upgrade

Software upgrade allows you to update the system software to maintain the highest performance of the product.

When recording is in progress you cannot use this functionality.

To update software, follow these steps:

### [Automatic Update]

- 1. Select [Auto] and select the [Search] button and press the **OK** button ( OK ) on the remote control
- 2. When new software is detected, download the software immediately.
- 3. If there is no new software to upgrade, a popup will appear.

#### [Manual Update]

- 1. Select [Manual] using the Navigation buttons on the remote control.
- Select the appropriate values for Satellite, Frequency, Transponder, Symbol Rate, Polarity, FEC, Modulation and PID.
- 3. Select the [Search] button and press the **OK** button ( OK ) on the remote control.
- 4. When new software is detected, download the software immediately.
- 5. If there is no new software to upgrade, a popup will appear.



Automatic or manual software update is only available in freesat mode.

# Settings → System (continued)

#### [USB Update]

- 1. Insert a USB storage device which has a new software in its root directory.
- 2. Select [From USB] and select the [Search] button and press the **OK** button ( OK ) on the remote control.
- 3. When new software is detected, the software will be updated.
- 4. The STB will reboot after the upgrade is completed.



You can find USB-upgradable software at the following web site if available: www.samsung.com/uk

Software upgrade using the USB port must be performed with a USB flash memory stick only.

Please be careful not to disconnect the power or remove the USB drive until upgrade is complete.

#### Reset to defaults

[Reset to defaults] enables you to restore the product to the factory default.



Please note that once you perform a 'Reset to defaults', all data such as the channel setting, channel list and all user configured data will be deleted.

#### To reset to the defaults, follow these steps:

- 1. Press the **MENU** button ( menu ) and Select [Setting].
- 2. Select [System] and [Reset to defaults].
- Enter the PIN code.
  - The default PIN code is 0000.
- 4. Select [Reset to defaults] using the **Navigation** buttons and press the **OK** button ( OK ).



5. When factory reset is completed the product will restart and the [User Settings] window will appear on the screen.

### Power-save mode (additional)

Allows you to turn on/off an additional power-save mode option.

If there is no interaction more than 3 hours between users and the STB in the period of midnight ~ 5 A.M., the STB with the option turned on goes from live mode to standby mode.



Please refer to the pages 8~9 for the active standby mode and low-power standby mode.

This section describes how to handle the problems that may occur whilst using the STB.

If the STB operates abnormally, first check the following:

If the problem persists, contact your local service centre.



### Screen

| Trouble                           | Solution  |
|-----------------------------------|---|
| Nothing appears on the TV screen. | <ol> <li>Check if the TV and STB are powered on.</li> <li>Check the connection status of the cable between TV and STB.</li> <li>Check if the TV input is set to an external input mode.         STANDBY     </li> <li>Press the STANDBY button ( ) to check if the STB is in standby mode.</li> </ol> |
| The menu screen is not displayed. | Power on the STB and then press the <b>MENU</b> button (  ) on the remote control.      If pressing the <b>MENU</b> button (  ) still does not display the menu screen properly, contact your local service centre.   |



### **Remote Control**

| Trouble                           | Solution  |
|-----------------------------------|---|
| The remote control does not work. | <ol> <li>Check if the remote control is suitable for the STB.</li> <li>Replace the batteries with new ones and check if the remote control works normally.</li> <li>Check if the batteries are inserted correctly.</li> <li>Check if there is an obstacle between the STB and the remote control.</li> <li>Operate the remote control nearer to the STB to see if it works normally.</li> </ol> |



| Trouble                                     | Solution   |
|---|--|
| The TV produces no audio.                   | Check the connection status of the cable between<br>the audio port of the TV/audio system and the<br>AUDIO OUT port at the rear of the STB.  |
|   | 2. If the cable is connected normally, check if the MUTE function is enabled. If the MUTE function is enabled, press the <b>MUTE</b> button ( ) on the remote control to disable it. |
| I cannot remember the password for the STB. | The default password for the STB is '0000'.  If you cannot remember the password, contact your local service centre. You can specify a new password after initialising it.           |



# **TV Manufacturer Numbers**

The TV manufacturers and associated numbers that can be supported by a remote control are listed in the table below.

| Manufacturer  | Setting Numbers   | Manufacturer          | Setting Numbers  |
|---------------|---|-----------------------|--|
| SAMSUNG       | 001 002 003 004 005 006 007 008 009 010 050 066 076 102 195 217 365 379 421                       | ASUKA                 | 050 076 123 378 379  |
| A.R. SYSTEMS  | 049 152   | ATLANTIC              | 049 050 071 113 152 236 379  |
| ACCENT        | 049 152   | ATORI                 | 195  |
| ACEC          | 112   | AUCHAN                | 107 425  |
| ACURA         | 195   | AUDIOSONIC            | 049 074 076 152 182 195 213 379 421                                |
| ADMIRAL       | 065 076 163 171 190 307 324 369 466 481   | AUDIOTON              | 050 076 379 421  |
| ADYSON        | 379   | AUSIND                | 090 407  |
| AGASHI        | 076 379   | AUTOVOX               | 050 071 078 079 080 083 090 156 236 324 379<br>407 413 449 468 470 |
| AGEF          | 324   | AWA                   | 018 049 131 152 195 226 320 379 426 433                            |
| AIKO          | 049 076 102 141 152 172 195 225 379   | AYOMI                 | 411  |
| AIWA          | 377 459   | BAIRD                 | 074 102 182 209 218 379 409  |
| AKAI          | 049 050 055 066 076 102 107 123 139 141<br>150 152 172 182 195 209 225 379 428 433<br>437 471 475 | BANG &<br>OLUFSEN     | 324 483  |
| AKIBA         | 049 123 152 380 378   | BARCO                 | 107 371 480  |
| AKITO         | 049 106 152   | BASIC LINE            | 049 107 123 195 226 378  |
| AKURA         | 049 076 123 195 378 426 470   | BASTIDE               | 379  |
| ALARON        | 042 379   | BAUR                  | 049 107 150 152 172 247 249 357 414 454 470<br>475                 |
| ALBA          | 018 049 050 107 123 134 163 168 195 225<br>232 379 413 421 457                                    | BEKO                  | 152 241 421 433 460  |
| ALBIRAL       | 371   | BEON                  | 049 152 163  |
| ALCYON        | 407   | BEST                  | 213 421  |
| ALLORGAN      | 050 094 236 379   | BESTAR                | 049 152 226 421  |
| ALLSTAR       | 049 152   | BINATONE              | 379  |
| AMPLIVISION   | 113 379 421 425   | BLACKSTAR             | 413  |
| AMSTRAD       | 012 049 076 123 131 152 172 195 225 426<br>476  | BLACKTRON             | 378  |
| ANAM          | 049 152 195   | BLACKWAY              | 378  |
| ANAM NATIONAL | 049 152   | BLAUPUNKT             | 057 060 113 247 249 345 451 454 481                                |
| ANGLO         | 076 195   | BLUE SKY              | 049 123 152 195 217 232 378 380 457                                |
| ANITECH       | 049 076 152 195 407   | BLUE STAR             | 378  |
| ANSONIC       | 045 049 107 112 152 195 210 226 391 413<br>421  | BONDSTEC              | 413  |
| ARC EN CIEL   | 074 182 186 424 453 463   | BOOTS                 | 050 106 379  |
| ARCAM         | 379 424   | BPL                   | 049 152 378  |
| ARISTONA      | 049 050 065 079 112 152 160   | BRADFORD              | 162  |
| ARTHUR MARTIN | 107 127 136 139 153 307 425   | BRANDT                | 014 074 182 186 218 424 436 452 462                                |
| ASA           | 020 065 078 080 091 146 171 197 307 324<br>375 408 449  | BRANT<br>ELECTRONIC   | 074 453 463  |
| ASBERG        | 049 152 407   | BRANT<br>ELECTRONIQUE | 074 182 186 453  |
| ASORA         | 195   | BRINKMANN             | 049 152 163  |
| ASTRA         | 195   | BRIONVEGA             | 049 065 083 152 167 172 324 356 476                                |

| Manufacturer             | Setting Numbers   | Manufacturer             | Setting Numbers  |
|--------------------------|---|--------------------------|--|
| BRITANNIA                | 379   | DENKO                    | 076  |
| BROTHER                  | 076   | DENON                    | 126  |
| BRUNS                    | 065 324   | DERWENT                  | 105  |
| BSR                      | 094 107 110 139 168   | DESMET                   | 049 113 152  |
| втс                      | 123   | DIGATRON                 | 049  |
| BUSH                     | 018 049 076 094 106 107 123 134 139 142 172<br>193 195 209 217 225 226 232 307 378 379 457<br>458 470 480 | DIGILINE                 | 049 152  |
| BUSH(UK)                 | 107 168   | DIXI                     | 049 152 195 379 413  |
| CAPSONIC                 | 049 076 152 380   | DORIC                    | 104 105  |
| CARREFOUR                | 018 177   | DREAN                    | 049 152  |
| CASCADE                  | 049 064 152 195   | DTS                      | 195  |
| CASIO                    | 049 152   | DUAL                     | 049 050 107 139 152 156 168 182 243 379 414<br>417 424 468 470                 |
| CATHAY                   | 049 152   | DUAL TEC                 | 040 050 168 195 379  |
| CCE                      | 049 152 379   | DUMONT                   | 045 065 080 102 139 146 324 375 379 449 469                                    |
| CENTURY                  | 049 152<br>065 163 324 411 413 481  | DUMONT-<br>FINLUX<br>DUX | 020 045 078 091 104<br>049 112 152   |
| CGE                      | 011 090 093 094 107 139 142 163 168 346 348   | DYNATRON                 | 049 152  |
| CGE                      | 369 407 413 421 480   | DINAIRON                 | 049 132  |
| CIHAN                    | 217   | ELBE                     | 049 107 123 152 172 210 243 369 391 411 421<br>435                             |
| CIMLINE                  | 123 134 195   | ELBIT                    | 217  |
| CITY                     | 195   | ELCIT                    | 045 046 062 065 104 107 150 168 324 413  |
| CLARIVOX                 | 049 125 163   | ELCIT                    | 045 046 062 065 104 107 150 168 324 413  |
| CLATRONIC<br>CMS HIGHTEC | 045 049 076 113 123 152 195 225 379 407 413<br>421<br>379   | ELECTA ELECTRO TECH      | 076 378<br>195   |
| COMTEL                   | 125 217   | ELEKTA                   | 076 378  |
| CONCORDE                 | 195   | ELG                      | 049 152  |
| CONDOR                   | 045 049 050 113 152 163 195 210 378 379 413   | ELIN                     | 020 049 107 139 152 172 195 379 470 479  |
| CONTEC                   | 421 467<br>018 131 195 320 379  | ELITE                    | 049 123 152 467  |
| CONTINENTAL              | 014 074 182 186 232 424 453 462 463   | ELMAN                    | 045 168  |
| EDISON<br>COSMEL         | 195 213   | ELTA                     | 195 076 379  |
| CROSLEY065               | 090 093 094 104 107 139 324 346 348 407 413   | EMERSON                  | 012 042 049 065 113 152 225 324 378 413 475                                    |
| CROWN                    | 469 481<br>049 152 163 170 195 209 232 407 421 470  | ERRES                    | 481<br>049 112 152   |
| CRYSTAL                  | 477   | ESC                      | 049 112 152  |
| CS                       | 123 379 413   | ESTELE                   | 310  |
| ELECTRONICS<br>CTC       | 413   | ETRON                    | 049 107 139 152 195  |
| CTC CLATRONIC            | 045   | EURO-FEEL                | 076  |
| CURTIS MATHES            | 126 190   | EUROMANN                 | 049 076 152 379 421  |
| CYBERTRON                | 123   | EUROPA                   | 049 152  |
| DAENYK                   | 042   | EUROPHON                 | 045 046 049 050 068 107 120 152 168 379 413                                    |
| DAEWOO                   | 049 123 152 193 195 226 379 456 464   | EXPERT                   | 071 107 236 425  |
| DAINICHI                 | 123 379   | EXQUISIT                 | 049 152 413  |
| DANSAI                   | 049 076 141 152 195 379   | FAMILY LIFE              | 049 152  |
| DANSETTE                 | 426   | FENNER                   | 152 195 226  |
| DANTAX                   | 421   | FERGUSON                 | 049 050 074 076 080 082 102 103 182 218 247                                    |
| DATSURA                  | 209   | FIDELITY                 | 409 411 436 452 472<br>049 050 076 107 152 225 307 379 475                     |
| DAWA                     | 049 152   | FILSAI                   | 050 379  |
| DAYTON                   | 049 152 195 226   | FINLANDIA                | 033 139 172 197 209 307 375 470 474  |
| DE GRAAF                 | 107 139 209 307 479   | FINLUX                   | 020 042 045 049 078 080 090 091 102 104 107                                    |
|                          |   |                          | 139 146 152 163 197 210 324 375 379 407 408<br>428 429 437 449 469             |
| DECCA                    | 049 102 106 120 217   | FIRST LINE               | 045 049 094 102 107 134 139 152 191 195 209<br>210 226 379 411 413 457 470     |
| DECCA(UK)                | 046 049 050 102 106 131 152 379   | FISHER                   | 018 041 050 065 069 102 104 107 139 156 172<br>209 320 324 379 408 414 421 470 |
| DEITRON                  | 049 152   | FLINT                    | 049 102 123 152 380  |

| Manufacturer         | Setting Numbers   | Manufacturer   | Setting Numbers   |
|----------------------|---|----------------|---|
| FNR                  | 045   | HEMA           | 195 379   |
| FORMENTI             | 049 090 107 113 139 307 324 379 407 467 469<br>480 481  | HEMMERMANN     | 150 470   |
| FORMENTI-<br>PHOENIX | 050 104 113 307   | HIFIVOX        | 074 182 186 424 453 463   |
| FORTRESS             | 190 324   | HIGASHI        | 050   |
| FRABA                | 049 152 421   | HIGHLINE       | 049 076 152   |
| FRIAC                | 045 049 152 195   | HIKONA         | 123   |
| FRONTECH             | 066 076 139 195 307 379 413 466 470 477   | HINARI         | 012 018 042 049 066 094 107 123 134 139 195<br>209 232 307  |
| FUJITSU              | 042 045 071 102 107 195 236 379   | HISAWA         | 123 378 380 425   |
| FUJITSU<br>GENERAL   | 195 379   | HIT            | 324   |
| FUNAI                | 042 076 094   | HITACHI        | 018 020 033 049 050 074 086 099 102 104 107<br>110 126 127 139 150 152 162 168 171 182 186<br>218 238 307 379 466 469 470 472 479 |
| GALAXI               | 045 049 152   | HITACHI FUJIAN | 013   |
| GALAXIS              | 045 049 152 163 421   | HITSU          | 123 195 380   |
| GALERIA              | 124   | HORNYPHON      | 049 112 152   |
| GBC                  | 104 107 139 168 195 226 480   | HOSHAI         | 123 380   |
| GE                   | 074 182 218 378   | HUANYU         | 193 226 379   |
| GEANT CASINO         | 107 425   | HYGASHI        | 379   |
| GEC                  | 049 102 104 107 120 152 171 172 307 379 470   | HYPER          | 050 168 195 379 413   |
| GEC(UK)              | 046 050 102 107 150 162   | HYPERSONIC     | 172   |
| GELOSO               | 062 104 107 139 168 171 195 226 307 413 469   | HYPSON         | 049 076 152 217 378 379 380 425   |
| GENERAL              | 481<br>064 074 182  | IBERIA         | 049 152   |
| <u> </u>             | 195   | ICE            | 049 076 123 152 195 225 379   |
| GENERAL<br>TECHNIC   |   |                |   |
| GENEXXA              | 049 123 152 307 426 466   | ICES           | 123 379   |
| GOLDLINE             | 379<br>213  | IMPERIAL       | 011 049 090 093 094 107 142 152 163 168 307 346 348 369 407 413 421 470 480 049 152   |
| GOODMANS             | 018 042 049 076 102 134 139 141 152 182 193   | INGELEN        | 090 104 136 139 153 162 171 198 232 435 466   |
| GORENJE              | 195 218 225 226 232 379 428 450 456 464<br>421  | INGERSOLL      | 195   |
| GPM                  | 123   | INNO HIT       | 046 049 050 066 102 123 152 195 217 379 407   |
|                      |   |                | 413   |
| GRADIENTE            | 049 152 170 177   | INNOVATION     | 049 152   |
| GRAETZ               | 049 090 104 136 139 152 153 162 171 172 198<br>225 307 466 469 475                                      | INTERACTIVE    | 210   |
| GRANADA              | 013 018 033 041 049 102 104 105 112 120 152 171 172 198 209 218 238 241 307 379 407 425 470 471 472 474 | INTERBUY       | 076 195 413   |
| GRANADA (UK)         | 046 050 090 107 139 162 307   | INTERFUNK      | 049 065 067 074 090 104 107 112 139 150 152<br>153 172 182 307 324 413 421 453 463 466 475  |
| GRANDIN              | 049 107 113 123 152 195 378 380 425 435   | INTERNAL       | 049 152   |
| GRONIC               | 045 379   | INTERVISION    | 045 049 055 076 107 123 152 225 232 378 379 380 413 421   |
| GRUNDIG              | 049 080 090 152 232 247 249 407 454 455   | IR             | 346   |
| HALIFAX              | 076 379   | IRRADIO        | 049 066 090 123 152 195 407 413   |
| HAMPTON              | 379   | ISUKAI         | 049 123 152 378   |
| HANIMEX              | 094   | ITC            | 379 480   |
| HANSEATIC            | 018 049 050 094 104 107 113 152 172 195 241 324 378 379 391 421 455 467 470 475                         | ITS            | 049 076 123 152 225 378 379   |
| HANTAREX             | 045 046 049 152 195   | ІТТ            | 042 090 107 134 139 150 157 162 171 172 193 197 198 209 307 375 428 466 469 470 471 475 479                                       |
| HANTOR               | 049 152   | ITT-NOKIA      | 042 090 104 107 134 136 139 150 153 162 171 172 193 197 198 209 307 375 470 428 433 435 437                                       |
| HARLEY               | 042   | ITV            | 076 049 152 413   |
| DAVIDSON<br>HARWOOD  | 049 152 195 426   | JEAN           | 018   |
| HAUPPAUGE            | 049 152   | JEC            | 141   |
| HAVERMY              | 190   | JET POINT      | 365   |
| нсм                  | 049 076 123 152 163 195 378 379 426   | JVC            | 018 103 123 170 182 225 409 433 439 465   |
|                      |   |                |   |

| Manufacturer             | Setting Numbers  | Manufacturer                  | Setting Numbers   |
|--------------------------|--|-------------------------------|---|
| KAISUI                   | 049 050 123 152 195 378 379 380  | MAGNAFON                      | 045 046 050 068 090 120 379 407 481   |
| KAMOSONIC                | 050  | MAGNAVOX                      | 018 042 049 152   |
| KAMP                     | 379  | MAGNUM                        | 440 441 443 444   |
| KAPSCH                   | 071 107 172 236 466  | MANDOR                        | 076   |
| KARCHER                  | 020 045 049 050 068 076 107 152 195 217 378<br>421 435                     | MANESTH                       | 076 094 113 134 141 152 379 467   |
| KATHREIN                 | 455  | MANHATTAN                     | 049 195   |
| KAWASHO                  | 379  | MARANTZ                       | 049 152 455   |
| KB ARISTOCRAT            | 107  | MARELLI                       | 324   |
| KENDO                    | 045 049 055 134 152 172 210 413 421 435 476                                | MARK                          | 049 152 195 226 379   |
| KENNEDY<br>KINGSLEY      | 071 079 104 107 139 236 369 480<br>379                                     | MASUDA<br>MATSUI              | 123 195 225   |
|                          |  |                               | 012 018 041 049 050 094 100 102 106 107 131 134 141 150 152 171 195 209 218 225 232 247 307 379 380 470 |
| KLARMAX<br>KNEISSEI      | 371  | MAXIMAL                       | 139   |
|                          | 049 152 210 243 369 391 411 421 435  | MAXWELL                       | 371   |
| KOLSTER<br>KONKA KRAKING | 045 049 152 470<br>411 049 123 152 225                                     | MEDIATOR<br>MEDION            | 049 112 152<br>049 152 195 217 457  |
| KONTAKT                  | 232  | MEGAS                         | 435   |
| KORPFI                   | 049 152  | MEGATRON                      | 126   |
| KORTING                  | 065 094 113 324 421  | MELECTRONIC                   | 020 049 074 152 182 193 195 197 210 226 375   |
|                          |  |                               | 379 408 413 428 429 466 470   |
| KOSMOS                   | 049 152  | MELVOX                        | 425   |
| KOTRON                   | 076 426  | MEMOREX                       | 099 195 217   |
| KOYODA                   | 195  | MEMPHIS                       | 102 125 195 213   |
| KRAKING                  | 411  | MERCURY                       | 049 152 195   |
| KRIESLER<br>KTV          | 050 065 079 112 152 160<br>050 379   | METZ<br>MICROMAXX             | 049 065 067 070 092 247 324 412 420 454 481<br>049 152 195  |
| KURO                     | 445  | MICROSTAR                     | 440 441 443 444   |
| KYOSHU                   | 076 163 426  | MINERVA                       | 080 090 232 247 249 407 454   |
| LECSON                   | 049 152  | MINOKA                        | 049 152 426 470   |
| LEMAIR                   | 210  | MITSUBISHI                    | 013 018 049 065 105 131 152 157 190 247 324   |
| 1 =1100                  | 040 407 450 405 000  | *****                         | 454   |
| LENCO                    | 049 107 152 195 226  | MIVAR                         | 046 050 058 072 081 090 120 379 391 407 414<br>421 434  |
| LENOIR<br>I ESA          | 050 195<br>413   | MONACO<br>MORGAN S            | 195<br>049 152  |
| LESA                     | 049 076 094 102 152  | MOTION                        | 407   |
| LG(GOLDSTAR)             | 049 050 055 107 139 152 168 172 182 195 219                                | MOTOROLA                      | 190   |
|                          | 379 413 414 421 460 501 502 503 504 505 506<br>507                         |                               |   |
| LIESENK &TTER            | 049 112 152 345  | MTC                           | 152 379 421 470   |
| LIFE                     | 440 441 443 444  | MTEC                          | 106   |
| LIFETEC                  | 049 076 123 152 195 226 440 441 443 444<br>195                             | MULTISTAND<br>ARD<br>MULTITEC | 045<br>049 152 195  |
| LLOYD_S<br>LOEWE         | 035 049 089 120 152 324 391 421  | MULTITECH                     | 045 046 049 050 120 152 195 379 407 413 421   |
| LOEWE OPTA               | 035 049 069 120 132 324 391 421  | MURPHY                        | 470<br>102 104 105 107 171 307 379  |
| LOGIK                    | 131 225  | MURPHY (UK)                   | 162   |
| LOGIX                    | 195  | MUSIKLAND                     | 123   |
| LUMA                     | 071 107 110 152 171 172 195 210 226 236 307                                | MYRYAD                        | 455   |
| LUMATRON                 | 049 076 107 152 172 236 379  | NAD                           | 172 209 475   |
| LUX MAY                  | 049 152 195  | NAIKO                         | 049 152   |
| LUXOR                    | 042 050 090 107 127 139 150 172 197 209 307<br>375 428 429 470 472 473 475 | NAKIMURA                      | 049 152 226   |
| LYCO                     | 076  | NAONIS                        | 040 071 079 110 171   |
| MAAZ                     | 371  | NAT                           | 085 151   |
| MADISON                  | 049 152  | NATIONAL                      | 033 085 104   |
| MAGNADYNE                | 045 046 062 065 104 107 120 139 150 168 324<br>413 469                     | NEC                           | 018 049 113 131 152 177 195 226 379 380   |

| Manufacturer          | Setting Numbers   | Manufacturer              | Setting Numbers   |
|-----------------------|---|---------------------------|---|
| NECKERMANN            | 011 049 050 065 107 139 152 163 210 247   | PATHE CINEMA (F)          | 050 168   |
|                       | 249 307 324 357 379 413 421 455 470 481   |                           |   |
| NEDIATOR              | 152   | PATHE MARCONI             | 014 074 182 186 424 453 462 463   |
| NEI                   | 049 125 152 225 477   | PAUSA                     | 195   |
| NESCO                 | 042 413   | PAUZA                     | 195   |
| NETSAT                | 049 152   | PERDIO                    | 049 102 107 113 152 467   |
| NETWORK               | 213   | PERFEKT                   | 049 152   |
| NEUFUNK               | 049 152 195 435   | PERSHIN                   | 425   |
| NEW TECH              | 049 050 152 182 195 379   | PHILCO                    | 011 016 049 065 090 093 094 104 107 126<br>142 152 163 168 324 346 348 369 407 413<br>421 480 481                             |
| NEW WORLD             | 123   | PHILEX                    | 471   |
| NICAMAGIC             | 379   | PHILHARMONIC              | 379   |
| NIKKAI                | 018 049 076 102 123 125 139 141 152 195<br>213 379 066  | PHILIPS                   | 014 049 050 065 079 089 112 152 160 182<br>193 216 217 220 226 247 249 324 427 455<br>482                                     |
| NOBLEX                | 049 076 152   | PHOENIX                   | 049 050 102 104 107 113 152 324 379 421   |
| NOBLIKO               | 045 050 080 090 379 407   | PHONOLA                   | 049 050 065 079 112 152 160 324 379   |
| NOGAMATIC             | 074 182 186 424 453 463   | PILOT                     | 049 152   |
| NOKIA                 | 090 104 107 134 136 139 150 153 157 162<br>171 172 193 197 198 209 226 307 375 428<br>429 433 437 465 470 475 478 479 | PIONEER                   | 049 074 152 172 182 209 218 307 421 427<br>466  |
| NORDMENDE             | 049 074 083 150 152 182 186 218 247 307<br>424 453 463 469 481  | PLANTRON                  | 049 076 152 195   |
| NOVATRONIC            | 020 049 152 226   | PLAYSONIC                 | 379   |
| OCEANIC               | 086 094 104 107 108 109 139 172 209 425<br>466 469 475  | POLICOM                   | 074   |
| OCEANIC (F)           | 150   | POPPY                     | 195   |
| ODEON                 | 076   | PORTLAND                  | 226   |
| OKANO                 | 049 076 102 152 421   | POWERPOINT                | 232   |
| OMEGA                 | 076   | PRANDONIPRINCE            | 046 090 120 171 172 307 407 413   |
| ONCEAS                | 050   | PRECISION                 | 379   |
| ONWA                  | 123 225   | PREMIER                   | 142   |
| OPERA                 | 049 152   | PRIMA                     | 076 195 307   |
| OPTIMUS               | 099   | PRINCE                    | 046 171   |
| OPTONICA              | 190   | PRINZ                     | 102 470   |
| ORBIT                 | 049 152   | PROFEX                    | 107 139 195 407 475   |
| ORION                 | 012 042 045 049 076 094 113 131 134 139   | PROFI-TRONIC              | 045 049 152   |
| ORLINE                | 150 152 191 195 216 366 367 426 467<br>049 123 152  | PROLINE                   | 049 102 112 191 366 436   |
| ORMENTIPHOENIX        | 104   | PROSONIC                  | 049 085 151 152 195 225 226 379 421   |
| ORMOND                | 195   | PROTECH                   | 045 049 076 125 139 152 163 195 379 413   |
| OSAKA                 | 066   | PROVISION                 | 457 470 477 480<br>049 152  |
| OSAKI                 | 049 066 076 102 106 123 152 226 379 426   | PYE                       | 050 065 079 112 152 160 226 324   |
| osio                  | 049 152   | PYMI                      | 049 112 152 195 226 324   |
| oso                   | 123   | QUADRA VISION I           | 425   |
| OSUME                 | 018 102 123   | QUASAR                    | 045 046 068 099 413   |
| OTAKE                 | 450   | QUELLE                    | 018 020 049 050 074 076 078 080 090 091<br>094 113 131 139 146 150 152 153 172 195<br>247 249 320 345 346 348 357 379 408 413 |
| OTTO VERSAND          | 018 049 050 074 094 104 107 113 134 139<br>152 172 190 218 247 249 357 362 379 413<br>414 454 455 467 469 470 480 481 | QUESTA                    | 449 451 454 470 475 480 481<br>018  |
| P.T ACTRON            | 217   | RADIALVA                  | 049 074 107 123 152   |
| PAEL                  | 050 379   | RADIOLA                   | 014 049 050 065 079 112 152 160   |
| PALLADIUM<br>PALSONIC | 049 107 152 163 210 247 324 357 379 413<br>421 470  | RADIOMARELL<br>RADIONETTE | 045 046 062 065 104 105 150 152 168 324<br>413  |
| PANAMA                | 049 055 076 152 379 426<br>049 076 152 195 379 413  | RADIONETTE                | 020 150<br>049 152  |
|                       |   |                           |   |
| PANASONIC             | 016 049 099 104 107 139 151 152 172 396<br>420 466 469 481  | RADIOTONE                 | 049 076 152 163 195 421 426   |
| PANAVISION            | 049 152 210   | RANK ARENA                | 018   |
| PATHE CINEMA          | 107 113 379 391 411 425 467 470 480 481   | RCA                       | 190 218 436   |

TCM

440 441 443 444

451 454 469 481

018 049 066 113 152 247 249 307 320 345

SIEMENS

307 407 414 421 467

# Product Specifications

Design and specifications are subject to change without prior notice.

| Item                               | Description                                     |  |  |
|------------------------------------|---|--|--|
| Model Name                         | SMT-S7800                                       |  |  |
| Receiver                           | DVB-S/S2  |  |  |
| Input Connector Type               | F-Type IEC female in accordance with IEC 169-24 |  |  |
| Input Impedance                    | 75 Ω  |  |  |
| Broadcasting Rx Frequency          | 950 ~ 2150 MHz                                  |  |  |
| Broadcasting Rx Level              | -25 ~ -65 dBm (average power)                   |  |  |
|                                    | -25 ~ -65 dBm (average power)                   |  |  |
|                                    | Vertical: +13.3V(+14.3V at high voltage)        |  |  |
| LND D                              | Horizontal: +18.3V(+19.3V at high voltage)      |  |  |
| LNB Power & Polarization           | LNB Rating :                                    |  |  |
|                                    | LNB 1IN - Max, 13/18V 250mA                     |  |  |
|                                    | LNB 2 IN - Max, 13/18V 250mA                    |  |  |
| 20141. T                           | Frequency: 22 ± 4KHz                            |  |  |
| 22KHz Tone                         | Amplitude : 0.7 $\pm$ 0.2V                      |  |  |
| Type of Broadcasting Rx Modulation | QPSK, 8PSK                                      |  |  |
| Lead Or schol Bala                 | DVB-S : 2 ~ 45MS/s                              |  |  |
| Input Symbol Rate                  | DVB-S2: 10 ~ 30MS/s(QPSK, 8PSK)                 |  |  |
| Channels Bandwidth                 | 7 and 8 Mhz                                     |  |  |
| Output Connector Type              | IEC male in accordance with IEC 60169- 2        |  |  |
| A dia O to t Bot                   | Stereo (left/right): 1 port                     |  |  |
| Audio Output Port                  | Digital Audio (SPDIF): 1 port                   |  |  |
| Video (Audio Compunent Outro) Dort | HDMI output: 1 port                             |  |  |
| Video/Audio Concurrent Output Port | SCART: 2 ports (TV/VCR)                         |  |  |
| USB                                | USB 2.0: 2 ports (front/rear)                   |  |  |
| Rated Voltage, Frequency           | AC 230 V ± 15%, 50 Hz                           |  |  |
| Rated Power Consumption            | Max. 40 W                                       |  |  |
| Operating Temperature              | 0~40°C  |  |  |
| Operating Humidity                 | 20~80% (40°C)                                   |  |  |
| Dimensions (mm)                    | 360 (L) × 270 (W) × 50 (H)                      |  |  |
| Weight                             | 2,495 g   |  |  |

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