OPTICUM

User Manual
Of Digital Set Top Box

OPTICUM 7002T

Please read this User Manual carefully to ensure proper use of this product and keep this manual for future reference.

Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

Safety is Important

To ensure your safety and the safety of others, please ensure you read the Safety Instructions before you operate this product.

Keep this information in a safe place for future reference. Please read all the safety information before using the product.
Safety Considerations.

- Position the cables so that they cannot be walked on or pinched by items placed on or against them.
- Do not use the set top box in humid or damp conditions.
- Do not allow the set top box to get wet.
- Do not expose the set top box to dripping or splashing.
- Do not place water filled objects such as vases on top of the set top box.
- Do not place naked flame sources, such as candles, on the top of the set top box.

Cleaning

- ALWAYS unplug the set top box before you clean it.
- Do not use liquid or aerosol cleaners.
- Clean the set top box with a soft, damp (not wet) cloth.

Ventilation

- The slots and openings on the set top box are for ventilation. Do not cover or block them as it may cause overheating.
- NEVER let children push anything into the holes or slots on the case.

Servicing

- There are no user serviceable parts in this set top box.
- When servicing, refer to qualified service personnel.
- Consult your dealer if you are ever in doubt about the installation, operation or safety of this unit.

Battery Disposal

- Please ensure batteries are disposed of safely.
- Never dispose of batteries in a fire or with other household waste.
- Check with your local authority for disposal regulations.

This symbol indicates that this product incorporates double insulation between hazardous mains voltage and user accessible parts. When servicing use only identical replacement parts.
WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or cords.

1. The apparatus shall not be exposed to dripping or Splashing and that no objects filled with liquids, such as Vases, shall be placed the apparatus.

2. The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

3. To be completely disconnect the power input, the mains plug of apparatus shall be disconnected from the mains.

4. The mains plug of apparatus should not be obstructed or should be easily accessed during intended use.

Table of Contents

Introduction

This Digital Set Top Box is a Free-To-Air digital terrestrial receiver, allowing you to access free-to-air digital terrestrial TV channels and radio broadcasts on your TV set. Its digital reception covers VHF & UHF band. Compared with the analog TV programs, digital TV programs eliminate the noise and interference but offer high quality video and audio. An on-screen initial installation guide is provided so that you can easily start to enjoy watching the programs. In addition, a fully featured remote controller is included that offers you access to every feature with a simple press of a button.

Main Features

Full comply with European Digital Set Top Box standard
Full MPEG2 ISO/IEC 13818 transport stream compliant audio/video decoding
Bandwidth of 6/7/8MHz supported
COFDM demodulator
Automatic/manual channel search
Channel edit, moving and deletion
Parental lock control
NTSC/PAL converting automatically and manually
EPG (Electronic Program Guide) and Teletext function
Multiple-language OSD
Supports multi-subtitle
RS-232 serial port for software upgrade
Dual SCART(TV SCART output/VCR SCART input)
Tuner RF in/loop through
SDTV only
Full function remote control

Package Contents

Before installation, please check the items of the package.
The package should contain the following items:
~ Digital Set Top Box   x1
~ Remote Controller   x1
~ AAA Battery for the remote controller   x2
~ User's Manual   x1

Front Panel and Rear Panel

1. Front panel

① **POWER BUTTON:** Used to turn on or off of the main power of the unit.
② **REMOTE CONTROL SENSOR:** Used to receive the signal from the remote control.
③ **Standby Indicator:** Used to visually show power state of the set top box, the green LED will show if turned on the set top box and the red LED will be light if the set top box entered standby mode.
④ **CHANNEL UP/DOWN:** Used to change channels without using the remote control.
⑤ **STANDBY BUTTON:** Used to switch the set top box on and off.

2. Rear panel
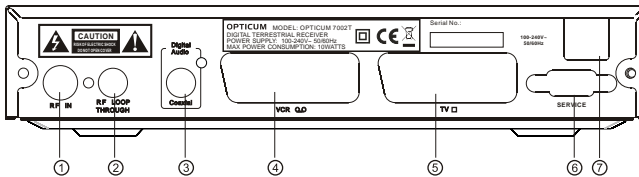
① **RF IN :** This socket connects to your external aerial.
② **RF LOOP THROUGH:** This socket will bypass the RF signal to either your TV or another video system.
③ **COAXIAL:** This socket connects to a coaxial socket on your surround sound system.
④ **VCR SCART:** This socket connects to either a DVD or other video system.
⑤ **TV SCART:** This socket connects to your TV.
⑥ **RS-232 PORT:** This socket is only used for software upgrade.
⑦ **MAINS CABLE:** This is used to connect to your main power supply.

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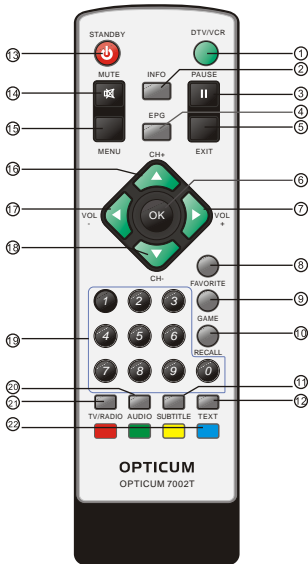
Remote Key Function:

1. DTV/VCR: Used to switch between the VCR SCART input and the DTV output mode.

2. INFO: Used to display information about the channel being viewed or further information about the program when in small EPG screen.

3. PAUSE: Used to pause or playback the program being viewed .

4. EPG: Used to display information about the program being viewed and what's on next.

5. EXIT: Used to return to the previous screen or menu.

6. OK: Used to confirm a selection within a menu.

7. VOL+: Used to move around the menu screens or changing the volume in non-menu state.

8. FAVORITE: Used to access your favourite channels.

9. GAME: Used to select 4 built-in mini games: Mine, Tetris, Gomoku, Calendar.

10. RECALL: Used to switch between the last two viewed channels.

11. SUBTITLE: Used to switch between different subtitles that are broadcasted

12. TEXT: Used to open teletext OSD display if teletext available in the broadcasted stream.

13. STANDBY: Used to switch the set top box toon and off.

14. MUTE: Used to turn the sound on or off.

15. MENU: Used to open the main menu window.

16. CH+: Used to move around the menu screens or selecting the channels in non-menu state.

17. VOL-: Used to move around the menu screens or changing the volume in non-menu state.

18. CH-: Used to move around the menu screens or selecting the channels in non-menu state.

19. NUMBER KEYS: Used to select channel numbers or input numbers in menus.

20. AUDIO: Used to set the sound output, the available settings are STEREO, LEFT, RIGHT, MONO.

21. TV/RADIO: Used to switch between TV channels and Radio stations.

22. COLOR KEYS(RED/GREEN/YELLOW/BLUE): Used to operate different functions in TEXT screen or other menus.

Note: SUBTITLE/TEXT/LANGUAGE may not be available for all channels

Installing the Batteries

Remove the battery cover from the remote control and put 2xAAA size batteries inside the compartment.

The diagram inside the battery compartment shows the correct way to install the batteries.

1.Open the cover	2.Install batteries	3.Close the cover
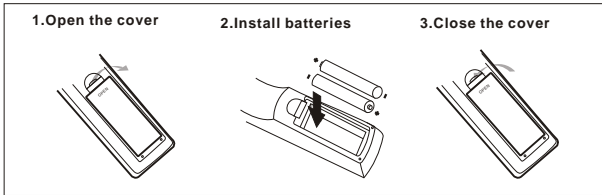
Using the Remote Control

To use the remote control, point it towards the front of the digital set top box
The remote control has a range of up to 7 metres from the set top box at an angle of up to 60 degrees.
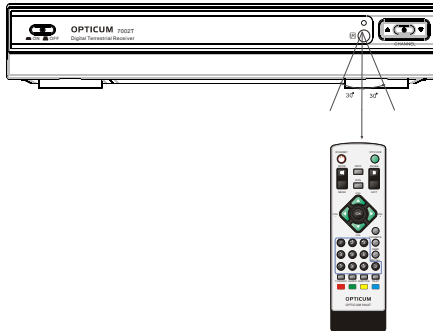
The remote control will not operate if its path is blocked.

Sunlight or very bright light will decrease the sensitivity of the remote control.

Connections

Caution: Make sure to check the voltage specification of the wall outlet is the same rating with the receiver. To prevent the risk of electric shock, do not open the cover or the back of the receiver.

Connecting to a TV Set

TV Aerial

TV

RF IN

RF LOOP THROUGH

Digital Audio

Coaxial

VCR

TV

SERVICE

100-240V~ 50/60Hz

Connecting to TV and VCR

TV Aerial

TV

Digital Audio Coaxial

RF IN RF LOOP THROUGH VCR TV SERVICE

100-240V~ 50/60Hz

VCR

RF IN

RF OUT

SCART
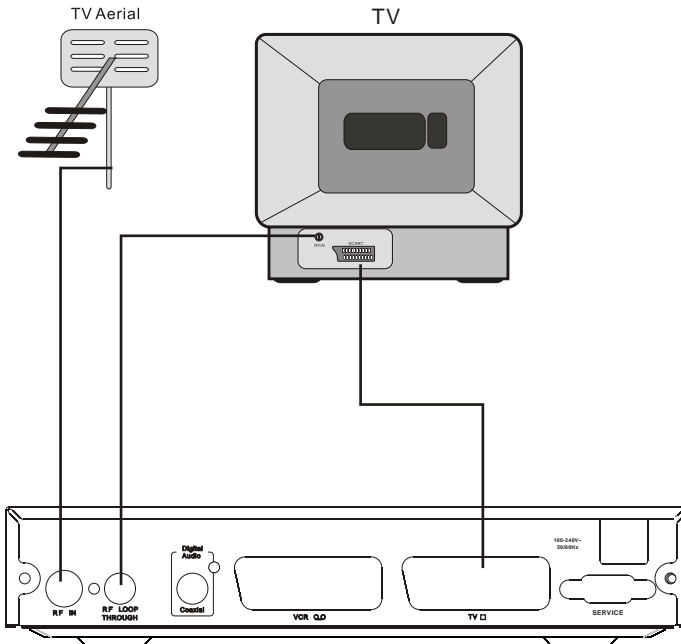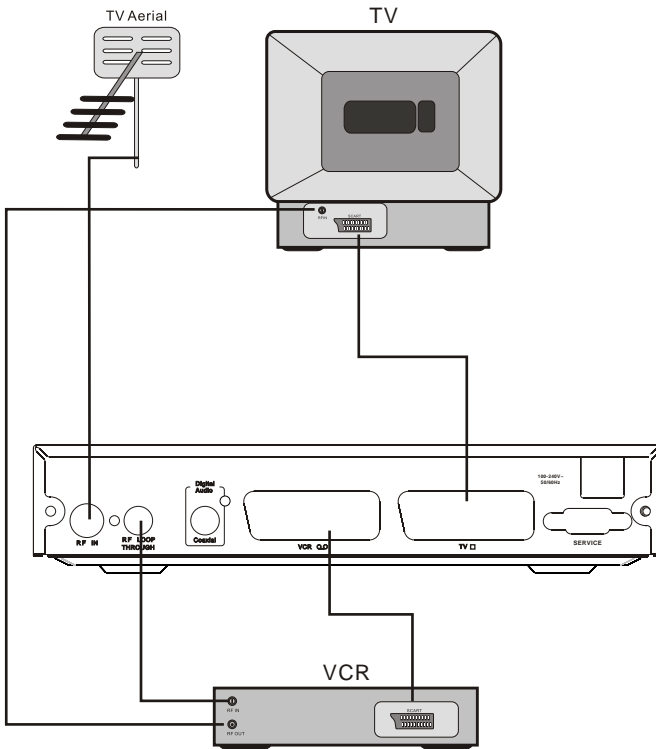
Note: When connecting the receiver to other equipment, e.g., TV, VCR and amplifier, make sure to refer to relevant user manual for instruction. Also, make sure you disconnect all the equipments from the mains supply before the connection.

First Time Installation

After all the connections have been made properly, switch on your TV. Make sure the receiver is connected to the mains and press **Power** to switch the receiver on. If you are using the receiver for the first time, a **First Time Installation** menu will be displayed to guide you through the initial setup. Use the remote controller to finish the setup.

1. At the **First time installation** menu, select **YES** and press **OK** on the remote controller to proceed.

First Time Installation

Do you want to start first time
Installation Wizard?

YES   NO
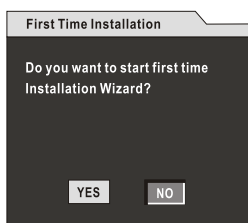
2. Enter your regional settings, include your Region, OSD Language, Time Zone and Antenna Power. Then select **NEXT** to proceed.

First Time Installation (1)

Region	◄ England ►
Language	English
Time Zone	GMT + 00:00
Antenna Power	OFF

BACK   NEXT

Note: Make sure to select the region you are located since the receiver will scan the channels based on the bandwidth of the region you selected. If your region is not on the list, you are recommended to conduct a manual search. Refer to " Manual Search " on page 16 for details.

3. Select **Yes** to start the automatic channel search.
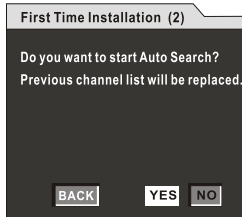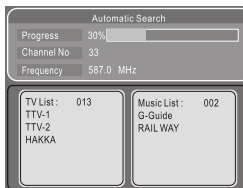
First Time Installation (2)

Do you want to start Auto Search?
Previous channel list will be replaced.

BACK   YES NO

4. Wait to complete the scanning.
   In case you want to stop the scanning, press the **EXIT** key.
   The channels already found will still be stored.

Automatic Search

Progress	30%
Channel No	33
Frequency	587.0 MHz

TV List : 013	Music List : 002
TTV-1	G-Guide
TTV-2	RAIL WAY
HAKKA	

5. When finished, all active channels found will be stored
   automatically. The last found channel will be played.

Now you are ready to watch digital terrestrial TV channels and radio
broadcasts.
   In case you skip the **First Time Installation** screen, you can still
   specify your **Regional Setting** and **Program Search** via the on-
   screen setup menu.

   The **Regional Setting** menu can be accessed via **Main Menu** >
   System Settings > **Regional Setting.** Refer to " Regional Setting "
   on page 20 for details.

   The **Program Search** menu can be accessed via **Main Menu** >
   Program Search > **Automatic Search / Manual Search.** Refer to "
   Automatic Search " on page 15 for details.

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Basic Operations

Once program search is completed, you can start to watch digital terrestrial TV channels and radio broadcasts. Some typical operations are given in this chapter.

Switching On and Off

Whenever you are not using the receiver, press the **Standby** key on remote control or button on the receiver to put it into standby mode.

Changing Channels

To switch between different channels, you can:

- Press **OK** to display the channel list and **UP/DOWN** to select a desired channel.

TV Program List	
No.	Program Name
1	DIMO
2	FTV
3	FMTV
4	FTVN
5	TTV-1
6	TTV-2
7	HAKKA
8	CTS

- Press the **CH+ / CH-** key or buttons on the receiver to go to the previous/next channel.
- Use the numeric keys to select a channel number.
- Use the **RECALL** key to return to the previous viewed channel.

Whenever you change a channel, a banner appears at the bottom of the screen displaying the basic information on the current channel.

```
TV  13  HAKKA                    LR
```

TV/Radio   Channel Name   Sound Mode
        Channel No.
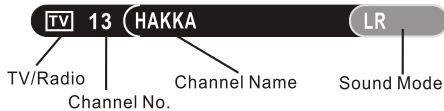
Adjusting the Volume

Press the **VOL+ / VOL-** key to adjust the volume.

```
Volume   ||||||||||
```

Watching Favorite List
> You can press **FAVORITE** to watch your preset favorite channels.
> To create your favorite list, go to **Main Menu** > **Program List.**
> Refer to " Creating Favorite Channel Groups " on page 13 for
> detailed information.

Displaying information
> To display the detailed information of the current channel, press
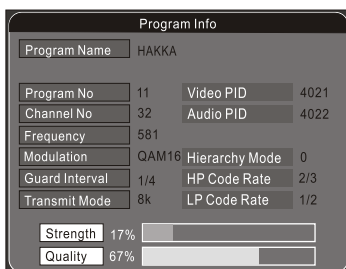> the **INFO** key.

Program Info			
Program Name	HAKKA		
Program No	11	Video PID	4021
Channel No	32	Audio PID	4022
Frequency	581		
Modulation	QAM16	Hierarchy Mode	0
Guard Interval	1/4	HP Code Rate	2/3
Transmit Mode	8k	LP Code Rate	1/2
Strength	17%		
Quality	67%		

Choosing Subtitle
> You can press the **SUBTITLE** key to select or close subtitles on
> the screen. The available subtitles depend on the broadcaster.

Subtitle Language
ENG
OFF

Freezing
> When watching a channel, you can freeze the current screen by
> pressing the **PAUSE** key. Pressing it again disables the freeze
> function.

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Displaying EPG

To view the EPG (electronic program guide) provided by the content provider:

1. Press the **EPG** key and then use the **Up / Down** key highlight a desired channel to preview the EPG. To view today's complete EPG, press the **Right** key.

2. When today's complete EPG is displayed, use the **Up / Down** key to scroll along the EPG. To view the EPG of next/previous day, press the **UP / Down** key continuously.
To see the highlighted EPG details, press the **Right** key.

3. The detailed EPG screen will show as below if pressed the **Right** key.

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4. To exit the detailed EPG screen, press the **Left** key.

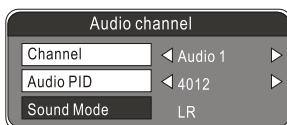**Displaying Text**
Press the **TEXT** key to open a teletext page (if teletext is transmitted).
Press **TEXT** key again to close it.

Selecting Sound Mode
To switch the sound mode between LL (left), RR (right) and LR (stereo), press the **Audio** key.

Audio channel		
Channel	◀ Audio 1	▶
Audio PID	◀ 4012	▶
Sound Mode	LR	

Using the On-Screen Setup Menu

The receiver features an on-screen menu providing access to a variety of setup and management controls.
Use the remote controller to navigate through the menu and activate required settings.

Managing Program List
Main Menu > Program List > TV / Radio Program List
All active channels are listed in the **Program List,** allowing you to make your own favorite channel group, move, delete or sort channels.

Creating Favorite Channel Groups

This feature allows you to group your favorite channels. To create your favorite groups:
1. Select the channel which you would like to add to the group and go to the **Favor** column.
2. When the **Favor** column of the desired channel is highlighted, one red heart symbol would appear after pressed the **OK** key. Pressing the **OK** key again will un-select the channel from the favorite group.
3. Once your favorite group is created, you can press the **FAVORITE** keys to quickly access your favorite channels.

No.	Program Name	Favor	Move	Del
	Program edit table			
1	DIMO			
2	FTV	♥		
3	FMTV			
4	FTVN			
5	TTV-1			
6	TTV-2			
7	HAKKA			
8	CTS	♥		
9	CTS-IQ			
10	CTS-EQ			

Moving a Channel
1. Select the channel which you like to move and go to the **Move** column.
2. Press **OK** and a ↓ ↑ symbol will be displayed.
3. Use the **Up / Down** key to move the channel to a desired position.

No.	Program Name	Favor	Move	Del
	Program edit table			
1	DIMO			
2	FTV			
3	FMTV			
4	FTVN			
5	TTV-1		↑↓	
6	TTV-2			
7	HAKKA			
8	CTS			
9	CTS-IQ			
10	CTS-EQ			

Deleting a Channel

1. Select the channel which you like to delete and go to the **Del** column.
2. Press **OK** and an **X** symbol will be displayed. Repeat this step in the channel to be deleted.
3. Press **EXIT** or **MENU** and the marked channel will be deleted.

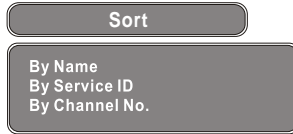| No.	Program Name	Favor	Move	Del
	Program edit table			
1	DIMO			✕
2	FTV			
3	FMTV			✕
4	FTVN			
5	TTV-1			
6	TTV-2			
7	HAKKA			
8	CTS			
9	CTS-IQ			
10	CTS-EQ			

Sorting Channels

1. Go to **Main Menu** > **Program List** > **Sort.**
2. You can sort the channels by the channel name, service ID or channel number. Select one method as required.

```
             Sort

  By Name
  By Service ID
  By Channel No.
```

3. Press **MENU** or **EXIT** to return the program list.
   The list is now sorted by the specified order.

Program Search
Automatic Search

    1. Enter the **Automatic Search** menu via **Main Menu** > **Program Search** > **Automatic Search.**
    2. Select **OK** to start auto search.

```
  Warning

    Do you want to start Auto Search?

    OK                    Cancel
```
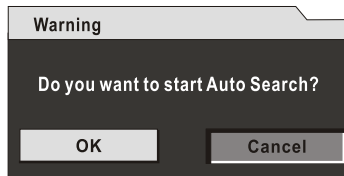
    3. Select whether to erase your previous channel list as required.
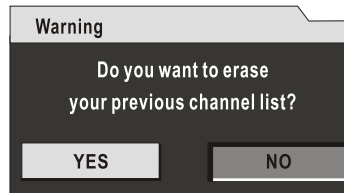
```
  Warning
            Do you want to erase
          your previous channel list?

    YES                    NO
```

4. Wait to complete the scanning.
   In case you want to stop the scanning, press the **EXIT** key.
   The channels already found will still be stored.


Automatic Search
Progress	30%
Channel No	33
Frequency	587.0 MHz

TV List : 013
TTV-1
TTV-2
HAKKA

Music List : 002
G-Guide
RAIL WAY
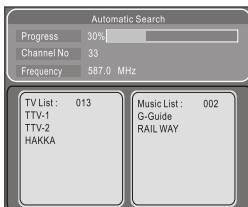
5. When finished, the last found channel will be played.

Manual Search
   If any channel is missing after auto search, or you want to add
   newly launched channels, you can use **Manual Search** to scan
   the desired channels. To manually search the target channel,
   you must know its parameters, e.g., the channel number. After the
   channel is found, it is appended to the current channel list.
   1. Enter the **Manual Search** menu via **Main Menu** > **Program
      Search** > **Manual Search.**
   2. Specify the appropriate channel number in the **Channel No**
      field by pressing **Right/Left** or the numeric keys. Upon your
      selection, the frequency and bandwidth values are changed
      accordingly.
   3. Select **OK** to start manual search.

Manual Search

Channel No.	◁ 28 ▷	
Frequency	557.0	MHz
Bandwidth	6	MHz

OK

| Strength | 35% |
| Quality | 55% |
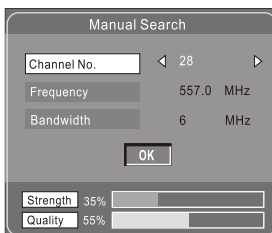
4. If no signal is found, a message indicating no signal will appear.
   Otherwise scanned channel will be saved and appended to the
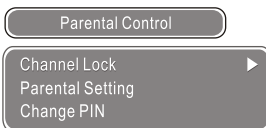   current channel list.

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Parental Control

This feature allows you to prevent children or unauthorized people from watching channels.

1. Go to **Main Menu** > **Parental Control.** First, you will need to enter PIN as prompted to use the parental control menu. (The default PIN is 6666.)

```
Enter Parental PIN

Enter PIN          ★ ★ ★ ★
                          _

             OK
```
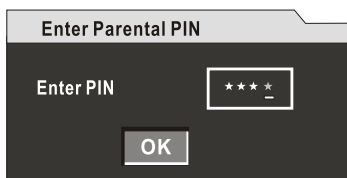
2. After correct PIN input, the following options are provided:

```
Parental Control

Channel Lock              ▶
Parental Setting
Change PIN
```

Channel Lock: Allows you to activate or de-activate the overall parental control. When set to **YES,** all the channels with locking settings will be locked.

```
        YES
    ☞  NO
```

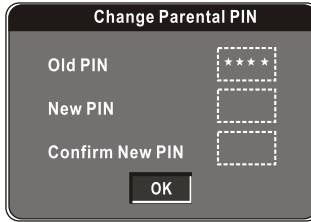**Parental Setting:** In the channel list, select the channel you want to lock and then press **OK.** A padlock symbol will be displayed. To remove the lock, press **OK** again.

No.	Program Name	Lock
1	DIMO	
2	FTV	🔒
3	FMTV	
4	FTVN	
5	TTV-1	
6	TTV-2	
7	HAKKA	
8	CTS	
9	CTS-IQ	
10	CTS-EQ	

Parental Setting

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Change PIN: Allows you to change the PIN. A PIN can be composed of 1 to 4 digits. To change the PIN, enter the old, new PIN in the provided fields. After pressing **OK,** a message indicating **PIN Code Changed** will appear.

```
┌─────────────────────────────────┐
│     Change Parental PIN         │
│                                 │
│  Old PIN              ┌ * * * * ┐│
│                       └ ─ ─ ─ ─ ┘│
│  New PIN              ┌ ─ ─ ─ ─ ┐│
│                       └ ─ ─ ─ ─ ┘│
│  Confirm New PIN      ┌ ─ ─ ─ ─ ┐│
│                       └ ─ ─ ─ ─ ┘│
│                   ┌──────┐       │
│                   │  OK  │       │
│                   └──────┘       │
└─────────────────────────────────┘
```

Note: To activate the parental control feature, **Channel Lock** must be set to **YES.** If you want to lock particular channels while keeping other channels unlocked, use **Parental Setting** table to make the settings.

Watching Locked Channels

Once a channel is locked, whenever one want to watch the locked channel, correct PIN must be entered.

```
┌─────────────────────────────────┐
│     Enter  Parental  PIN        │
│                                 │
│   Enter PIN           ┌ * * * * ┐│
│                       └ ─ ─ ─ ─ ┘│
└─────────────────────────────────┘
```

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System Settings

TV Standard
This option allows you to select your TV system among **PAL, NTSC** and **Auto.**

```
   TV Standard

      PAL
      NTSC
  ☞  AUTO
```

Display Type

This option allows you to select the aspect ratio of the video output. If you are using normal 4:3 TV, it is OK to view the regular 4:3 content being broadcasted. But occasionally broadcasters transmit widescreen content; in this situation, you can choose how to display it in a conventional TV set.

☐ **4:3 LB (Letterbox)** For conventional 4:3 TV. The full width of a widescreen content is displayed on a normal TV with black bars above and below the picture.

☐ **4:3 PS (Pan & Scan)** For conventional 4:3 TV. It crops the left and right edges of a widescreen content to fit a normal TV.

☐ **16:9 -** If you are using a wide screen TV, select this option.

```
┌─────────────────────────┐
│      Display Type       │
├─────────────────────────┤
│  ☞  4:3 PS              │
│     4:3 LB              │
│     16:9               │
└─────────────────────────┘
```

Video Output

Set the video mode as **CVBS** or **RGB.**

```
┌─────────────────────────┐
│      Video Output       │
├─────────────────────────┤
│     CVBS               │
│  ☞  RGB                │
└─────────────────────────┘
```

Antenna Power

The default setting is **OFF.** Set this option to **ON** if this receiver box is connected to an external active antenna that amplifies the received signal**.** This receiver box can supply 5V DC at 50mA maximum.

Caution: If you are using a normal passive antenna, make sure to set this setting to **OFF .**

```
┌─────────────────────────┐
│      Antenna Power      │
├─────────────────────────┤
│  ☞  OFF               │
│     ON                 │
└─────────────────────────┘
```

Regional Setting

Region: Select the region or country you are located. Depending on the country you select, the on-screen-display language and time zone settings change accordingly.
OSD Language: Select the on-screen-display language as required.
Time Zone: Select an appropriate time zone to display the local time correctly. Both EPG and system schedule need a correct time zone setting.
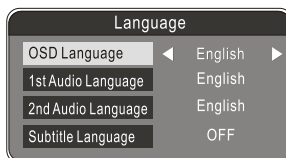
```
                  Regional Setting
   Region          ◄  England    ►
   OSD Language        English
   Time Zone           CMT+00:00
```
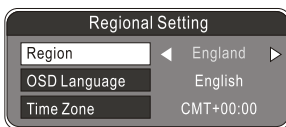
Language

   OSD Language: Select the on-screen-display language as required.
   1 st /2nd Audio Language: This option allows you to select your
   first and second choice for the audio language. If neither of your
   selected language is available on the program transmitted, the main
   language of the program will be used. You can alternatively press the
   AUDIO key to use another available language.
   Subtitle Language: Allows you to select the subtitle language.
   If your selected language is not available on the program transmitted,
   the main language of the program will be used. You can also
   select **OFF** to close the subtitle on the screen.

```
                      Language
   OSD Language        ◄  English    ►
   1st Audio Language     English
   2nd Audio Language     English
   Subtitle Language        OFF
```

Time Setting
Select an appropriate time zone to display the local time
correctly. Both EPG and system schedule need a correct time
zone setting.
GMT usage: Allows you to enable/disable Greenwich Mean
Time (GMT) usage.
If you know the GMT time zone of your location, set **GMT usage**
to **ON** and select an appropriate time zone. If you prefer to set
the time manually, select **OFF** in **GMT usage** item and then
manually select the date and time.

```
                   Time Setting
   GMT usage        ◄  ON          ►
   Time Zone           CMT+00:00
```
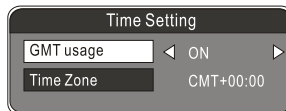
System Schedule

This feature allows the receiver to automatically switch on and tune to a pre-specified channel for a pre-set length of time. You can use this feature to schedule recording if your receiver is connected to a VCR or recorder or as reminders of certain programs. Up to 10 tasks can be scheduled.

1. In the **Schedule** pane, use the **Up / Down** key to select a task and use **Right / Left** key to switch between **Inactive** and **Active.**
2. Press **OK** to enter the **Detail** pane.
3. Enter the following settings as required. Use the **Up / Down** key to move between setting items, the **Right / Left** key to switch between available selections and numeric keys to enter numeric value.
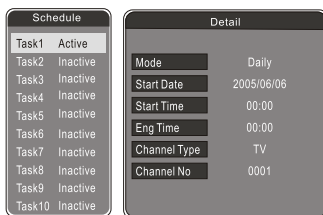   **Mode:** You can repeat the task by setting the frequency as **Once, Daily** or **Weekly.** Or you can select **Stop** to disable the task.
   Start and End Time: Enter the start and end time that automatically turns on and off the receiver.
   Channel Type: Select TV or radio channel as required.
   Channel No: Select the channel to be played at scheduled time.
4. When the setting is done, press **MENU** or **EXIT** to save the changes.

Schedule	
Task1	Active
Task2	Inactive
Task3	Inactive
Task4	Inactive
Task5	Inactive
Task6	Inactive
Task7	Inactive
Task8	Inactive
Task9	Inactive
Task10	Inactive

Detail	
Mode	Daily
Start Date	2005/06/06
Start Time	00:00
Eng Time	00:00
Channel Type	TV
Channel No	0001

Game

This option includes 4 built-in mini games: **Mine, Tetris, Gomoku, Calendar.**

Accessory

System Information

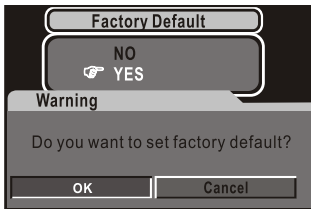This option allows you to view the current system information.

System Information

SW: v1.08
HW: 212U.IO.LG352(N).9013
Date: DD/MM/YY

Factory Default

This option allows you to resume factory defaults.

1. To reset defaults, select **OK.**

Factory Default

NO
☞ YES

Warning

Do you want to set factory default?

| OK | Cancel |

2. All programs you have searched will be erased and all parameters, e.g., the regional settings, languages and favorite lists, will return to the factory default.
3. After restoring defaults, a **First Time Installation** screen appears asking if you would like to conduct an automatic scan search.

System Update

Whenever a software update is available, the receiver can be upgraded for new features.

System Update

Status	Initializing
Tansmission	000%
Burn	000%

Press Any Key to Exit.
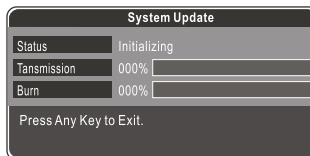
Personal Style

This option allows you to customize the menu settings.
You can set the **Menu Color**, **Transparency level**, **Border Pattern** and **Entry Animation** as preferred.

Personal Style	
Menu Color	◀ Blue ▶
Transparency Level	8
Border Pattern	Round
Entry Animation	Right

Troubleshooting

If you experience problems with this receiver or its installation, in the first instance please read carefully the relevant sections of this User Manual and this Troubleshooting section.

Problem	Possible cause	What to do
Standby light not lit	Mains lead unplugged	Check mains lead
	Mains fuse blown	Check fuse
No signal found	Aerial is disconnected	Check aerial lead
	Aerial is damaged/misaligned	Check aerial
	Out of digital signal area	Check with dealer
No picture or sound	Viewing incorrect SCART output	Press the DTV/VCR button
	Tuned to digital teletext channel	Retune to another channel
Mosaic blocks in picture or picture freezes	Aerial may not be compatible	Check aerial
Scrambled channel message	Channel is scrambled	Select an alternative channel
Forgotten channel lock code		Re-install channels to cancel channel lock
No response to remote control	Receiver off	Plug in and turn on receiver
	Handset not aimed correctly	Aim handset at front panel
	Front panel obstructed	Check for obstructions
	Remote control batteries are inserted incorrectly	Check batteries direction
	Handset batteries exhausted	Replace remote control batteries
After moving the receiver to another room, find can't receive the digital reception	The aerial feed may come through a distribution system which may reduce the digital signal now received by the receiver	Try a direct feed from the antenna

Specifications

Item	Specification	
Tuner	Frequency Range	VHF: 174MHz to 230MHz UHF: 470MHz to 862MHz
	Input Impedance	75 Ohms unbalanced
	Signal Input Level	-78 ~ -25 dbm
	Bandwidth	6 / 7 / 8 MHz
Demodulation	Demodulator	COFDM
	OFDM Modulation	2K, 8K FFT, SFN and MFN
	Packet Carries	2K/8K
	Guard Interval	1/4, 1/8, 1/16, 1/32
Connectors	RF IN	IEC 169-2 female connector
	RF LOOPTHOUGH	IEC 165-2 male connector
	TV SCART	Composite video(CVBS), RGB, audio L/R
	VCR SCART	Composite video, audio L/R
	COAXIAL	RCA, for SPDIF digital audio output
	RS-232	DB-9 male serial port, for software upgrade
Power	Input	100-240V~ 50/60Hz
	Consumption	10 W max.
Display	Decoder Module	PAL, NTSC
	Resolution	720 x 576(PAL); 720 x 480(NTSC).
	Aspect Ratio	4:3 (Letterbox, Pan & Scan),16:9
Decoding	Video	MPEG2 Transport MP@ML
	Audio	MPEG2 Audio Layer I&II
Others	Compliance	ETSI EN 300 744 DVB-T Compliance
	Sound Mode	Right, Left, Stereo

*Specifications are subject to change without further notice.

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed at the end of life separately from your household waste. There are separate collection systems for recycling in the EU. For more information, please contact the local authority or your retailer where you purchased the product.