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HD Digital Receiver

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# User's Manual

## HD-FOX T2

The default password is 0000.



**HUMAX**

Thank you for purchasing a HUMAX product. Please read this user's manual carefully to be able to safely install, use and maintain the product at maximum performance. Keep this user's manual next to your product for future reference. The information in this user's manual is subject to change without notice.

## **Copyright (Copyright © 2010 HUMAX Corporation)**

Not to be copied, used or translated in part or whole without HUMAX's prior consent in writing except approval of ownership of copyright and copyright law.

## **Warranty**

The warranty does not cover parts which may become defective due to misuse of the information contained in this manual.

## **Meaning of Symbols**



To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.



This symbol indicates dangerous voltage inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

## **Warnings, Cautions and Notes**

Throughout the whole manual, pay special attention to the following marks that indicate hazardous situations.

### **Warning**

Indicates a hazardous situation which could result in serious injury.

### **Caution**

Indicates a situation which could damage the equipment or other apparatus.

### **Note**

Indicates additional information to make the user aware of possible problems and information of any importance to help understand, use and maintain the installation.

# Notice

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## **'WEEE' Instructions**



This product should not be disposed with other household wastes at the end of its working life. Please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. This will prevent possible harm to the environment or human health from uncontrolled waste disposal.

### **Domestic users:**

Please contact either the retailer where you purchased this product or their local government office for details of where and how they can take this item for environmentally safe recycling.

### **Business users:**

Contact your supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

## **Trademarks**

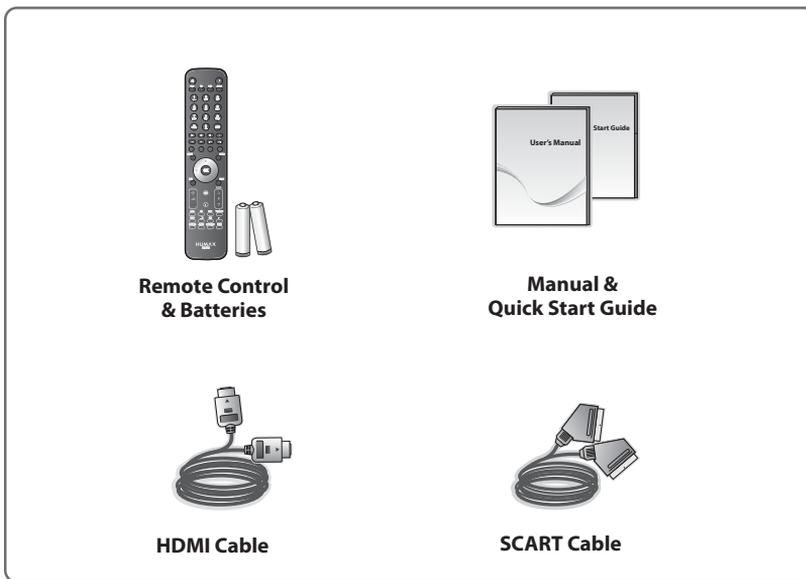
- Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks of registered trademarks of HDMI Licensing LLC.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

<b>Notice</b>	<b>1</b>	Software Update	39
		Antenna Power	40
<b>Quick Start Guide</b>	<b>4</b>	Factory Default	40
1. Checking Accessories	4	OTA (Over the Air)	41
2. Product Overview	4		
3. Connections	8	<b>System</b>	<b>42</b>
4. Powering On	10	System Information	42
5. Installation Wizard	11	Signal Detection	42
6. Menu Overview	13	Power Management	43
		Network	43
<b>Basic Operation</b>	<b>14</b>	<b>Appendix</b>	<b>44</b>
Changing Channels	14	Specification	44
Volume / Mute / Audio	14	Service and Support	45
Display Format / Resolution	15	Safety Warning	46
Programme Information (i-plate)	16	Trouble Shooting	48
Sleep Timer	17	Error Message	50
Subtitle	17	Glossary	51
Text and Interactive Services	17	Remote Control Code List	53
<b>Channel List</b>	<b>18</b>	OPEN SOURCE SOFTWARE NOTICE	79
Changing Channels	18		
Editing Channels in Channel List	19		
<b>Managing Channels</b>	<b>20</b>		
Editing Channels	20		
Editing Favourite Channels	22		
<b>TV Guide</b>	<b>23</b>		
Watching Programmes	23		
Setting Reminders	24		
Finding Programmes	25		
Scheduling Reminders	26		
<b>Media List</b>	<b>27</b>		
Using Video List	29		
Using Music List	30		
Using Photo List	31		
<b>Preferences</b>	<b>33</b>		
Parental Control	33		
Language Setting	34		
Setting Power On/Off Timer	34		
Video Setting	35		
Audio Setting	36		
Screen Display	37		
<b>Installation</b>	<b>38</b>		
Automatic Search	38		
Manual Search	39		

# Quick Start Guide

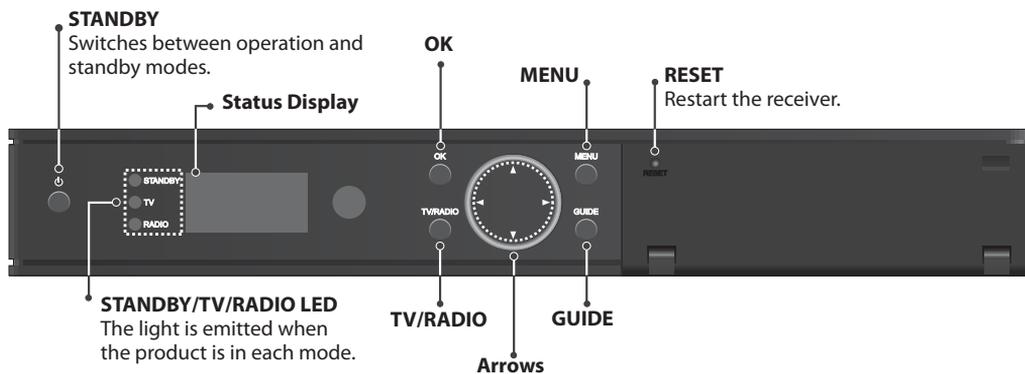
## 1. Checking Accessories



**Note:** The accessories may vary according to area.

## 2. Product Overview

### Front Panel

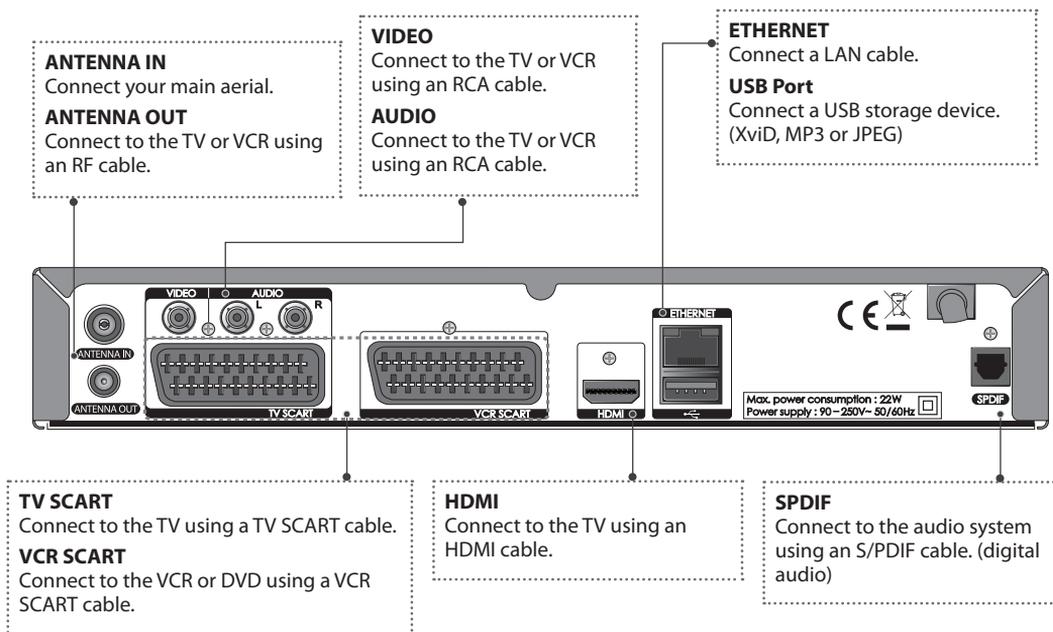


**Note:** The image shown may differ from the actual product.

# Quick Start Guide

English

## Rear Panel

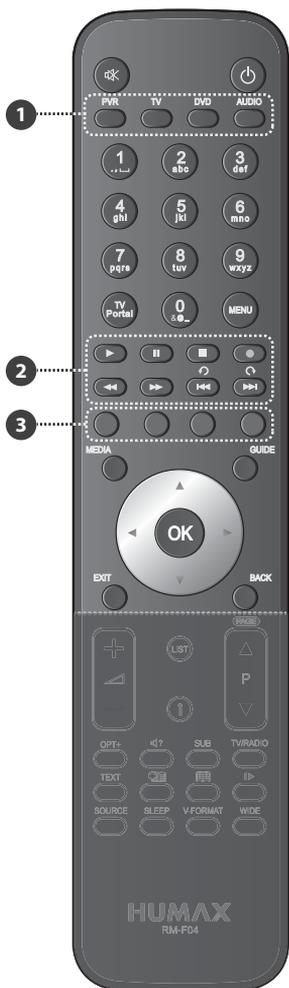


**Note:** The image shown may differ from the actual product.

# Quick Start Guide

## Remote Control

To control the product please make sure that the PVR mode is selected on the remote control.



**MUTE** Mutes audio

**STANDBY** Switches between operation and standby modes.

**1 MODE** Changes the mode of remote.

**NUMERIC (0-9)**

**TV Portal** Reserved for future functionality. Access to Humax TV Portal.

**MENU** Displays the main menu.

**2 Playback Control Buttons** ▶ Play, ⏸ Pause, ■ Stop, ● Record (Reserved for future functionality) ◀◀ Rewind, ▶▶ Fast Forward, ◀◀ Previous, ▶▶ Next, ⏮ Instant Replay, ⏭ Skip

**3 COLOUR Buttons** Colour keys for interactive applications.

**MEDIA** Displays the media list.

**GUIDE** Displays the programme guide.

**ARROW Buttons** Moves the cursor up, down, left or right.

**OK** Selects a menu or confirms.

**EXIT** Exits all On-Screen Display (OSD) screens.

**BACK** Returns to the previous screen.

### Note:

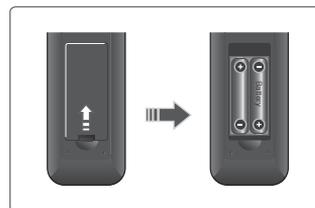
- The image shown may differ from the actual product.
- Some playback control buttons may not function depending on the contents.



- VOLUME** Adjusts the audio volume.
- P▲/P▼** Changes the channel or page.
- LIST** Displays the channel list.
- i (Information)** Displays the channel and programme information.
- OPT+** Displays the channels attributes.
- AUDIO** Displays the audio list.
- SUB** Displays the subtitle language list.
- TV/RADIO** Switches between TV and radio modes.
- TEXT** Enters the digital text service.
- SOURCE** Controls the output of TV SCART.
- SLEEP** Sets the sleep timer.
- V-FORMAT** Sets the resolution of video.
- WIDE** Sets the display format.
-   Reserved for future functionality. Add Bookmark/Show Bookmark List.
-  Slow Play

## Inserting Batteries

1. Press the hook upward and lift the battery cover off.
2. Insert the batteries (supplied) matching the plus(+) and minus(-) at each end.
3. Close the cover.

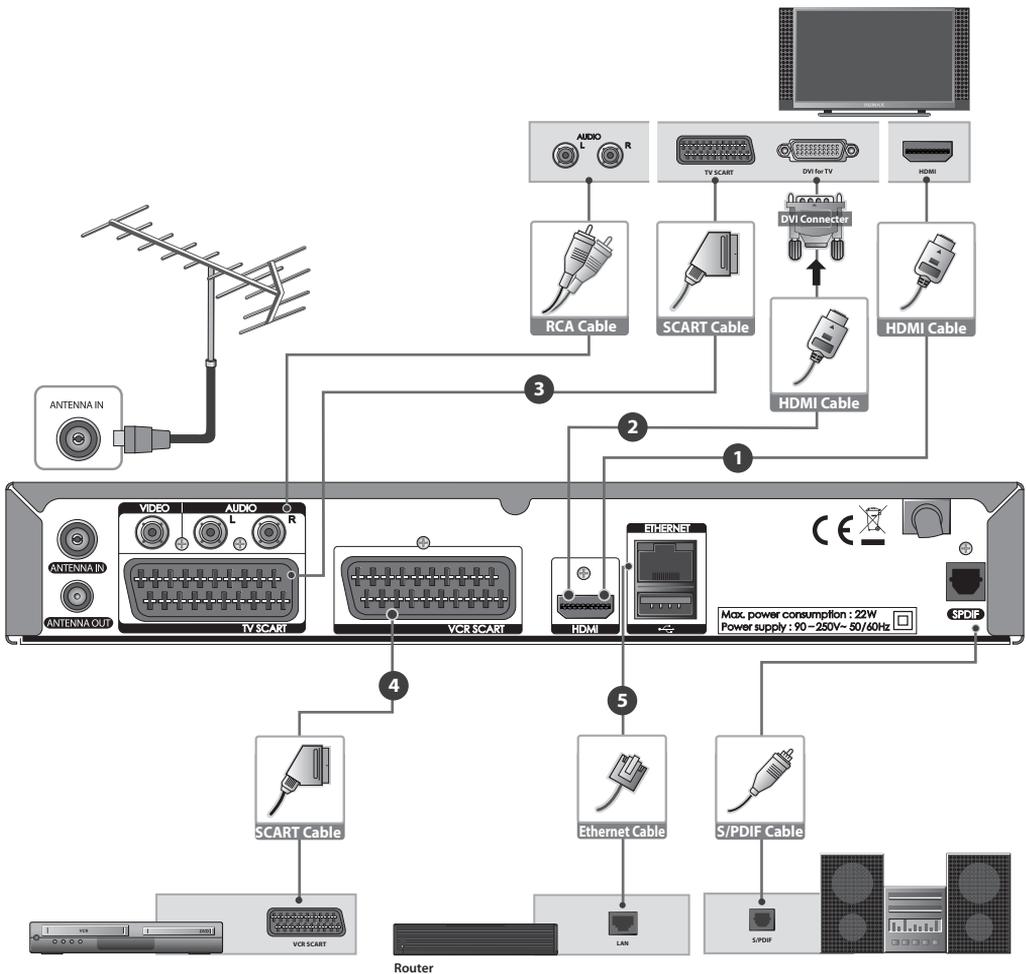


# Quick Start Guide

## 3. Connections

This section describes how to connect your product to match your particular devices setup and to gain optimum signal quality. The product provides various interfaces to connect to the TV, VCR or other devices. Select the most appropriate procedure depending on the device you have.

**Note:** If you encounter any problems setting up your product, please contact your local retailer or Humax Customer Helpline.



## Connecting the Antenna

Connect the aerial to the **ANTENNA IN**.

## Connecting the TV and VCR

You can select one of the following connections depending on the device you have.

### ❶ TV with the HDMI connector;

For the best picture quality, connect the product and TV using a HDMI cable.  
When using a HDMI cable it is not necessary to also use a scart cable.

### ❷ TV with the DVI connector;

For very good picture quality, connect the product and TV using a HDMI cable and a HDMI-to-DVI converter for video.

You will also require a RCA cable(Audio L/R) connected to the necessary connection(s) on your TV/Display for Audio.

Please refer to your TV/Display user manual for further information on the connections required for Audio.

### ❸ TV with the SCART connector;

For good picture quality, connect the product and TV using a SCART cable (TV SCART).

### ❹ TV with the SCART connector;

To output video and audio to an external recorder connect the product to the recorder using a SCART cable. (VCR SCART).

### For additional audio connections you can either

1. Connect the product and TV using an RCA cable (Audio L/R).
2. When using the digital audio system, connect the product and the digital audio system using a S/PDIF cable.

**Note:** Connecting your TV directly to the audio/video output of the product will assure a more vivid picture and enhance your viewing enjoyment.

## Connecting the Network

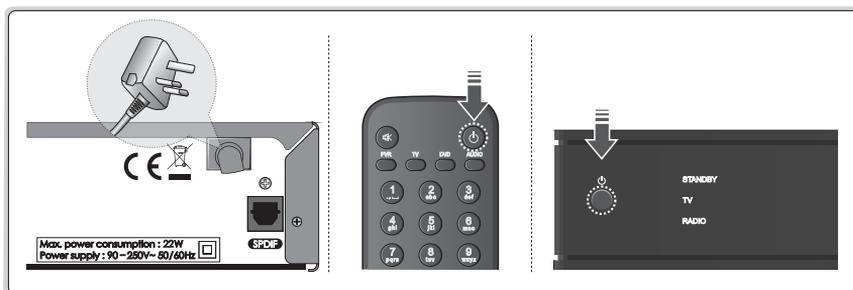
### ❺ Connecting to the LAN;

Connect one end of the Ethernet cable to the receiver and the other end to the LAN router.

# Quick Start Guide

## 4. Powering On

1. Connect the power cord of the product to a wall outlet.
2. Power on by pressing the **STANDBY** button on the remote control or the **STANDBY** button at the front of the product.



**Note:** To control the product please make sure that the PVR mode is selected on the remote control.

## 5. Installation Wizard

When powering on your product for the first time after purchase or performing the factory default in menu, the installation wizard will operate automatically.

**Note:** If you exit the installation wizard without fully completing the channel searching procedure, you may not have all of the channels available. In this case, you can use the **Settings > Installation** menu to search for more channels.

### 1. Preferred Language

Select a language for audio and subtitle.



### 2. Display

Set the video output to your TV.



### 3. Automatic Search

Channel search will begin automatically. Save the found channels when the search is complete.



# Quick Start Guide

## 4. Configure Network

Configure the network settings to connect to your router. Please leave the Configure IP as DHCP if you are unsure of this setting.



## 5. Result

The result of the Installation Wizard is shown. Select **Finish** to exit the wizard.



## 6. Menu Overview



	Channel List
	TV Guide
	Video
	Music
	Photo
	<b>Settings</b> 

### Preferences

- Parental Control
- Language
- Time
- Video
- Audio
- Screen Display

### Edit Channels

- Edit Favourite List
- Edit Channel List

### Installation

- Automatic Search
- Manual Search
- Software Update
- Antenna Power
- Factory Default

### System

- System Information
- Signal Detection
- Power Management
- Network

## How to Navigate



Displays the Menu OSD



Moves among menus or options



Selects (Enters) a menu or confirms a selection



Changes or adjusts the option



Goes back to the previous screen



Enters the number (0~9)



Exit all On-Screen

# Basic Operation

## Changing Channels

You can change the channels in several ways.

- ❖ Press the **P▲/P▼** button.
- ❖ Enter the channel number directly. **(0-9)**
- ❖ Go to the channel list or TV guide and select a channel.

**Note:** Press the **TV/RADIO** button to switch between TV and radio channels.

## Volume / Mute / Audio

- ❖ To adjust the audio volume, press the **▲+ / ▲-** button.
- ❖ To mute the audio temporarily, press the **MUTE** button.

### Setting Audio Options

Audio options are available only when the programme supports multiple audio languages.

1. Press the **AUDIO** button.  
Each time you press this button, the audio language changes or the Audio Description soundtrack will be selected.
2. Select the audio direction if available.

**Note:**

- The mute button will not mute the audio if connected via the SPDIF connection, please control the volume via your Amplifier.
- The mute function remains set while you change channels.
- You cannot set the audio direction when the programme is broadcast in Dolby Digital.



## Display Format / Resolution

### Setting Display Format

Press the **WIDE** button to set the display format according to the screen ratio. Each time you press this button, the value changes.

- Screen ratio 4:3: **Auto - Letterbox 16:9 - Letterbox 14:9 - Centre**
- Screen ratio 16:9: **Auto - Pillar Box - Zoom**

**Note:** Refer to **Display Format** for details.



### Setting Resolution

Press the **V-FORMAT** button to set the resolution of the screen. Each time you press this button, the value changes.

- **576i - 576p - 720p - 1080i - 1080p - Original**

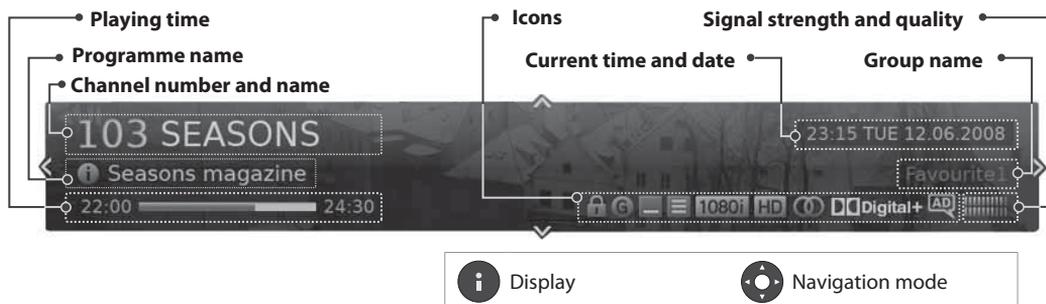
**Note:** When connected with a HDMI cable you may only be able to change to the resolutions that the TV supports..



# Basic Operation

## Programme Information (i-plate)

The i-plate is an information banner that is displayed for a certain period of time whenever you change channels. Press the **i** button while watching a programme to display the i-plate. Press the **EXIT** button to hide.



- **Viewing detailed programme information**  
Press the **i** button again while the i-plate is displayed.
- **Viewing previous/next programme information**  
Press the **◀/▶** button while the i-plate is displayed. Press the **OK** button to set reminders for future programmes.
- **Viewing programme information of other channels**  
Press the **▲/▼** button while the i-plate is displayed. Press the **OK** button to change to the selected channel.

## Icons

The icons represent the information and services provided.

	Locked programme		Teletext
	Pay TV / encrypted programmes (CAS icons)		Resolution
	Parental guidance programme		HD programme
	Scheduled programme (Blue: Reminder)		Multiaudio
	Subtitle		Dolby Digital audio
			Dolby Digital Plus audio

**Note:** Programme information is not displayed when there is no programme information.

## Sleep Timer

Press the **SLEEP** button to set the automatic turn off time.

Each time you press this button, the value changes.

- **Sleep Off - 10 - 20 - 30 - 60 - 90 - 120 minutes**



## Subtitle

You can select the subtitle language when subtitle information is provided.

Press the **SUB** button.

Each time you press this button, the subtitle language changes.

### Note:

- You can choose to always display the subtitle when available.
- The  icon appears when the DVB subtitle is supported.



## Text and Interactive Services

If your chosen channel has digital teletext features, you can access them. Teletext services often load automatically shortly after the digital teletext window is displayed. In which case, simply follow the on screen instructions. (Press colour buttons)

1. Press the **TEXT** button to access digital teletext.
2. Press the **TEXT** button again to return to normal viewing.
3. Press the **P▲/P▼** button to exit this service.

# Channel List

The channel list will help you find the channel you want to watch quickly and easily.

You can access the channel list in several ways.

- ❖ Press the **LIST** button.
- ❖ Press the **MENU** button and select **Channel List**.

## Changing Channels

Select the channel you want to watch and press the **OK** button. The displayed channel will change.

### Note:

- : Locked channel, : Pay TV / encrypted programmes (CAS icons)
- Press the **i** button to view the detailed programme information.
- Press the **LIST** or **EXIT** button to exit.

## Advanced Options

### Changing Group

You can display the list of the selected channel group.

➤ **TV, HDTV, Radio, Favourite 1~5, Recent**

1. Press the **▶** button.
2. Select a channel group.
3. Press the **OK** button.

**Note:** Press the **TV/RADIO** button to switch between TV and Radio groups.

### Sorting Channels

Press the **RED** button to sort the list in numerical or alphabetical order.



## Editing Channels in Channel List

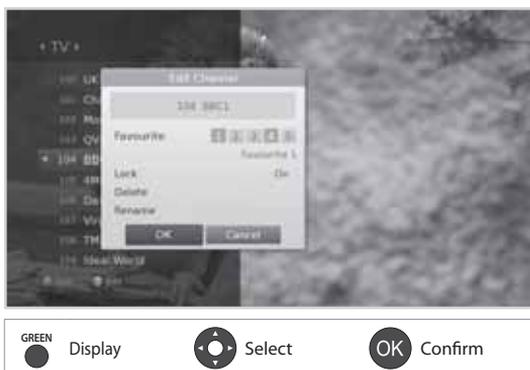
You can lock, delete or rename each channel in the channel list, as well as in menu. To edit the multiple channels, go to the **Settings > Edit Channels** menu.

### Locking / Deleting / Renaming Channels

1. Select a channel you want to edit and press the **GREEN** button.
2. Select an option.
  - **Lock:** Select **On** or **Off**.
  - **Delete:** Press the **OK** button.
  - **Rename:** Press the **OK** button and enter the name in the keyboard.
3. Select **OK** to save and exit.

#### Note:

- Refer to **Edit Channels** for details
- The default password is 0000. If you have forgotten your password, please contact Humax Customer Support.



### Setting Favourite Channels

You can select your favourite channels and include them in the five favourite groups.

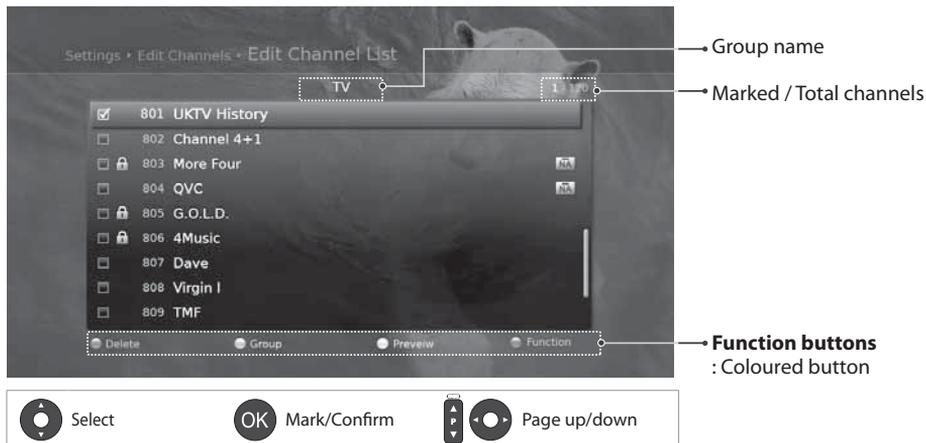
1. Select a channel and press the **GREEN** button.
2. Select **Favourite**.
3. Select a favourite group you want to include the channel in and press the **OK** button.  
To remove a channel from a favourite group, select the group and press the **OK** button again.
4. Select **OK** to save and exit.

# Managing Channels

## Editing Channels

The **Edit Channel List** menu will help you delete, move lock or rename multiple channels.

**MENU** → **Settings** → **Edit Channels** → **Edit Channel List**



### Note:

- : Locked channel, : Pay TV / encrypted programmes (CAS icons)
- Press the **MENU** or **EXIT** button to exit. Press the **BACK** button to return to the previous screen.

## Deleting Channels

1. Select the channels using the **▲/▼** and **OK** button.
2. Press the **RED** button.

## Locking / Unlocking Channels

1. Select the channels using the ▲/▼ and **OK** button.
2. Press the **BLUE** button.
3. Select **Lock**. To unlock, select **Unlock**.

## Renaming Channels

1. Select a channel to rename.
2. Press the **BLUE** button.
3. Select **Rename**.
4. Enter the name in the keyboard.

## Advanced Options

### Changing Group

To list the channels of other groups, press the **GREEN** button and select a group you want.

**Note:** Press the **TV/RADIO** button to switch between TV and Radio groups.

### Changing Background

You can change the channel displayed in the background while editing.

1. Select the channel you want to watch.
2. Press the **YELLOW** button. The displayed channel will change.

### Selecting / Releasing All Channels

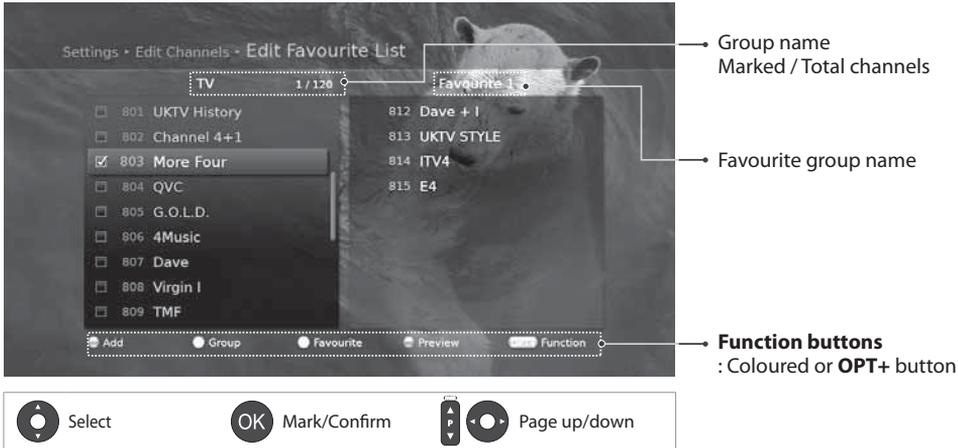
1. Press the **BLUE** button.
2. Select **Select All**.
3. To release all, select **Release All**.

# Managing Channels

## Editing Favourite Channels

The **Edit Favourite List** menu will help you add or remove channels from the favourite groups.

**MENU** → **Settings** → **Edit Channels** → **Edit Favourite List**



**Note:** Press the **MENU** or **EXIT** button to exit. Press the **BACK** button to return to the previous screen.

## Adding / Removing Favourite Channels

1. Press the **YELLOW** button and select the favourite group you want to edit.
2. To add channels to the favourite list, select the channels you want to add using the **▲/▼** and **OK** button in the left column and then press the **RED** button. The added channels will appear in the right column.
3. To remove channels from the favourite list, select the channels you want to remove in the right column and then press the **RED** button.

## Moving Channels

1. Select the channels using the **▲/▼** and **OK** button.
2. Press the **GREEN** button.
3. Move the selected channels to the location you want using the **▲/▼** and **OK** button.

**Note:** You can move the channels in the right column only.

The TV guide is an on-screen guide of grid type which displays the programme information of channels in time and date order.

You can access the TV guide in several ways.

- ❖ Press the **GUIDE** button.
- ❖ Press the **MENU** button and select **TV Guide**.

**Note:** Press the **GUIDE** or **EXIT** button to exit. Press the **BACK** button to return to the previous screen.

The screenshot shows a TV Guide interface with the following callouts:

- Preview
- Current time and date
- Information of the selected programme:** channel number & name, programme name, simple information, favourite group, network type, and icons
- Time bar
- Function buttons**: Coloured button

Below the screenshot is a control bar with the following buttons:

- Select
- OK Tune/Reserve
- Page up/down

**Note:**

- Press the **i** button to view the detailed programme information.
- : Scheduled programme (Blue: Reminder)
- : Present time, : DRM(Digital Rights Management) icon

## Watching Programmes

1. Select a programme and press the **OK** button. The programme will be displayed in the preview.
2. Press the **OK** button again to exit the TV guide and watch the programme.

# TV Guide

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## Setting Reminders

1. Select a future programme and press the **OK** button.
2. Select **Reminder** and press the **OK** button.  
Press the **OK** button again to cancel the reservation.  
The reserved programmes will be added automatically in **Schedule**.

### Note:

- If the programme is overlapped with another programme, adjust the reservation appropriately.
- If the channel is locked, you will be prompted to enter your password before watching.  
The default password is 0000. If you have forgotten your password, please contact Humax Customer Support.
- In standby mode the product will switch on to the channel when the programme starts.
- You can reschedule reminders .(Refer to **Scheduling Reminders**.)

## Advanced Options

### Quick Navigation

Press the ◀▶ button to move to the previous/next programme.

Press the ◀◀▶▶ button to jump back/ahead two hours.

Press the ◀◀▶▶ button to move to the previous/next day.

### Changing Group

To list the channels of other groups, press the **BLUE** button and select a group you want.

### Note:

- Press the **TV/RADIO** button to switch between TV and Radio groups.
- To search specific programmes, go to **Find Programmes** by pressing the **GREEN** button. (Refer to **Finding Programmes**.)

## Finding Programmes

**Find** will help you find the programmes more specifically using the keyword or genre.

### By Keyword

1. Press the **GREEN** button.
2. Select **Keyword** and press the ► button.
3. Select a keyword and press the **OK** button.
4. Press the **YELLOW** button to confirm.

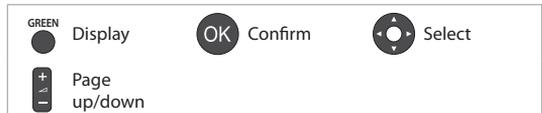
**Note:** To enter a new keyword, select **New Keyword**.

### By Genre

1. Press the **GREEN** button.
2. Select **Genre** and press the ► button.
3. Select a genre and press the **OK** button.
4. Select the specific genre and press the **OK** button. (if provided)

### Note:

- Press the **i** button to view the detailed programme information.
- Press the **OK** button to watch a found programme. (Refer to **Changing Channels.**)
- You can set reminders for future programmes. (Refer to **Setting Reminders.**)



# TV Guide

## Scheduling Reminders

**Schedule** lists reminders and will help you manage them in more detail.

1. Press the **YELLOW** button.
2. You can add, edit or delete your reminders.
  - To add, select **New Reminder** and press the **OK** button.
  - To edit, select a reminder and press the **OK** button.
  - To delete, select a reminder and press the **BLUE** button.
3. **Reminder** will pop up. You can change the options you want using the **▲/▼/◀/▶**, **NUMERIC(0~9)** and **OK** buttons.
4. Select **OK** to save and exit.



### Note:

- Press the **i** button to view the detailed programme information.
- You can easily set reminders in TV guide, Find Programmes or i-plate navigation mode. (Refer to **Setting Reminders, Find Programmes** or **Programme Information**)

You can playback video, music or photo files.

- ❖ Press the **MEDIA** button.
- ❖ Go to **MENU** ▶ **Video/Music/Photo**.

## Switching Storage

1. Press the **BLUE** button to display the type of storage.
2. Select the storage type and press the **OK** button.
  - ▶ **USB**: Displays each partition of the USB.
  - ▶ **Network**: The DLNA server is searched. Select the type of the server.

### Note:

- Only one USB icon will appear even when there are more than one USB.
- The network icon is displayed only when the network has been connected.



## Switching Media

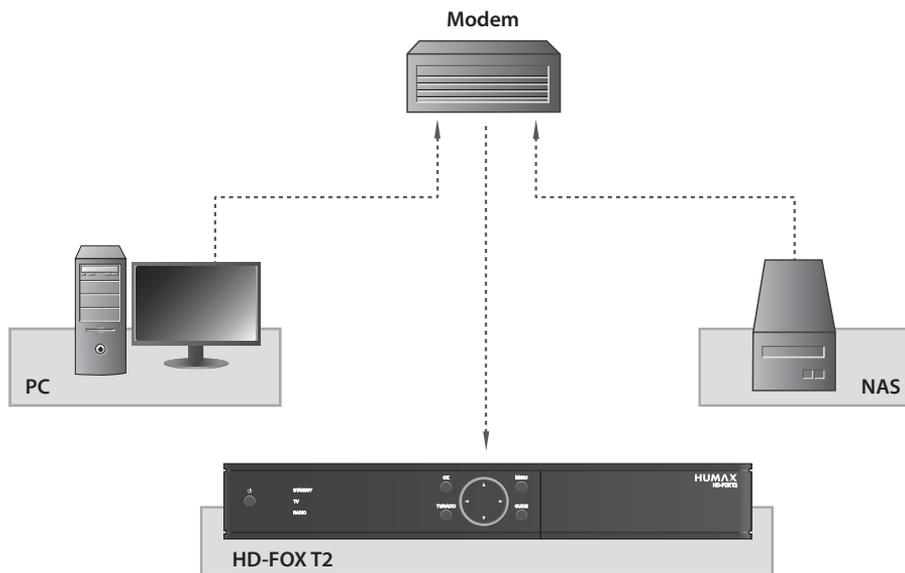
1. Press the **YELLOW** button to switch the media.
2. Select the media type and press the **OK** button.
  - ▶ **Video, Music, Photo**



# Media List

## Using the DLNA Server

You can have access to DLNA servers such as the PC or NAS (Network attached storage) and play the video, music or photo files. To connect to a DLNA server, the receiver must be connected to the local network.



## Playing Video Files in Network

1. Go to **MENU>Video**
2. Press the **BLUE** button and select **Network**.
3. Select the DLNA server from the list and select the folder the video file is located in.
4. Select the video file and play the file.

### **Note:**

- Playing music and photo files is similar as playing video files.
- You can download DLNA tools such as Media Server 11 (<http://www.microsoft.com/windows/windowsmedia/de/player/11/default.aspx>) and XBMC (<http://www.xbmc.org>). The software can be downloaded and updated in each website.

## Using Video List

MENU → Video



## Playing Files

Select a file and press the **OK** button. Playback will start from the recently viewed point. To select multiple files, select the files and press the **RED** button.

### Note:

- If a folder is selected, the file within the folder will not play unless it is selected.
- You will be prompted to enter the password when playing locked files.
- You can view Xvid files only.

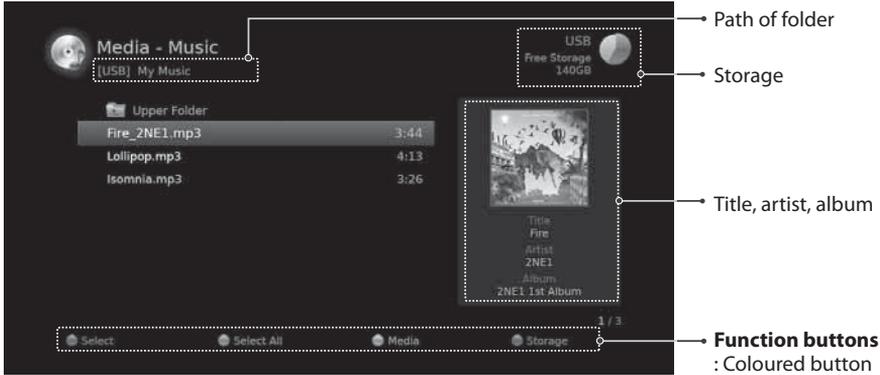
	Playback		Pauses
	Stops		Move to the previous chapter and replay the scene.
	Fast Forward		Move to the next chapter and skip scenes.
	Fast Backward		Jump to the previous or next scene.
	Playback in slow		

**Note:** Some playback control buttons may not function depending on the contents.

# Media List

## Using Music List

MENU → Music



## Playing Music Files

To play all files in the folder, press the **OK** button. If you want to play the selected files only, select the files and press the **OK** button.

## Music Player

The music player is displayed while playing back a music file.



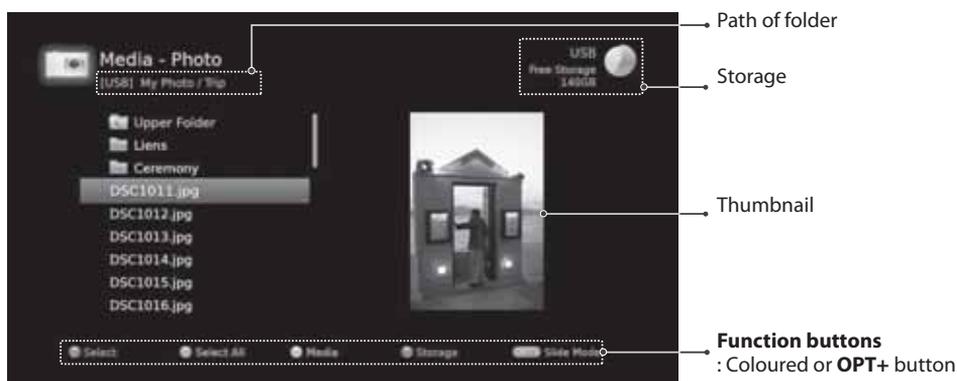
	Plays or pauses		Plays
	Plays the previous file		Pauses
	Plays the next file		Stops the music player and displays the list
	Exits the music player		Plays the first file
	Changes the play mode (once, repeat, shuffle)		Plays the last file

## Using Photo List

**MENU** → **Photo**

### Photo Slideshow

To slideshow all photos in the folder, press the **OK** button. If you want to slideshow the selected photos only, select the photos and press the **OK** button.



	Pauses slideshow		Stops slideshow and displays photo list
	Shows the next photo		Continues slideshow
	Shows the previous photo		Shows the first photo
	Exits slideshow		Shows the last photo

### Info Banner

Press the **PAUSE** button to pause the slideshow and display the information banner.



# Media List

## Slide Mode

1. Press the **OPT+** button.
2. The **Slide Mode** is displayed.
  - > **Display Time:** The duration the photo is displayed.
  - > **Music Play:** Determines whether to play music file during slideshow or not.
  - > **Folder:** The folder the music file is located in. Press the **OK** button to display the list of music files and select a folder.



In this chapter you can set options for parental control, language, time, video, audio and screen display.

**Note:** Press the **MENU** or **EXIT** button to exit. Press the **BACK** button to return to the previous screen.

## Parental Control

**MENU** → **Settings** → **Preferences** → **Parental Control**

You will be prompted to enter the password to access this menu.

**Note:** The default password is 0000. If you have forgotten your password, please contact Humax Customer Support.

### Changing Password

You can change the current password. This password is prompted every time a password blocked menu is accessed.

1. Select **Change Password**.
2. Enter the new password.
3. Enter the new password for verification.



# Preferences

## Language Setting

**MENU** → Settings → Preferences → Language

You can set the preferred language for audio and subtitle.

1. Select **Preferred Language**.
2. Select the language.

**Note:**

- You can change the audio or subtitle language by pressing the **AUDIO** or **SUB** button while watching a programme.
- The Preferred Language will be the priority when you change channels or restart the product.



## Setting Power On/Off Timer

**MENU** → Settings → Preferences → Time

1. To turn on the product automatically, select **Power On Timer** and select **Set Timer**.
2. Enter the time.
3. Set the options for the power on timer.
  - **Channel:** Select the channel to be displayed when powering on.
  - **Volume:** Adjust the volume of the audio when powering on.
  - **Repeat:** Select the repeat mode of the power on timer.
4. To turn off the product automatically, select **Power Off Timer** and select **Set Timer**.
5. Enter the time.



**Note:** The power on time and power off time should be set different from each other.

## Video Setting

MENU → Settings → Preferences → Video

### Setting TV Screen Ratio

You can select the screen ratio of your TV.

1. Select **Screen Ratio**.
2. Select an option.
  - **16:9 - 4:3**



### Setting Display Format

You can select the display format according to the screen ratio of your TV.

1. Select **Display Format**.
2. Select an option.
  - Screen ratio 4:3: **Auto - Letterbox 16:9 - Letterbox 14:9 - Centre**
  - Screen ratio 16:9: **Auto - Pillarbox - Zoom**

**Note:** You can set the display format by pressing the **WIDE** button while watching a programme. Refer to **Display Format / Resolution**.

Screen ratio	Display Format			
4:3	 <b>Auto</b>	 <b>Letterbox16:9</b>	 <b>Letterbox14:9</b>	 <b>Centre</b>
16:9	 <b>Auto</b>	 <b>Pillarbox</b>	 <b>Zoom</b>	

### Setting TV SCART / VCR SCART

You can select the video signal output option for the TV SCART or VCR SCART.

1. Select **TV SCART** or **VCR SCART**.
2. Select an option.
  - TV SCART: **CVBS – S-Video – RGB**
  - VCR SCART: **CVBS – S-Video**

# Preferences

## Audio Setting

MENU → Settings → Preferences → Audio

### Setting Audio Description

You can set to narrate the on-screen visuals which is used for visually impaired viewers.

1. Select **Audio Description**.
2. Select an option.
  - **On - Off**

**Note:** Not all channels/programmes will provide Audio Description; for further information please contact the Broadcaster.



### Setting Digital Audio Output

You can select the digital audio signal output of your product.

1. Select **Digital Audio Output**.
2. Select an option.
  - **Stereo - Multi-channel**

### Setting Lip-Sync

You can adjust the sound difference of audio and video.

1. Select **Lip-Sync**.
2. Adjust the lip-sync using the ◀/▶ button. Pressing the right button increases the audio speed and pressing the left button decreases it.

## Screen Display

**MENU** → Settings → Preferences → Screen Display

### Setting Info Display Time

You can set the duration the information box is displayed every time the channel is switched.

1. Select **Info Display Time**.
2. Select an option.
  - **Off - 1~20 sec**

### Setting Transparency

You can set the transparency of the On-Screen Display.

1. Select **Transparency**.
2. Select an option.
  - **Off - 25% - 50% - 75%**

### Setting Subtitle Display

You can set to display the subtitle automatically or not.

1. Select **Subtitle Display**.
2. Select an option.
  - **On - Off**

### Setting Subtitle Font

You can adjust the subtitle font.

1. Select **Subtitle Font**.
2. Select an option.
  - **Variable - Fixed**



# Installation

Installation menu allows you to search the available TV and radio channels. Software update, antenna power and factory default setting are also available in this section.

**MENU** → **Settings** → **Installation**

**Note:**

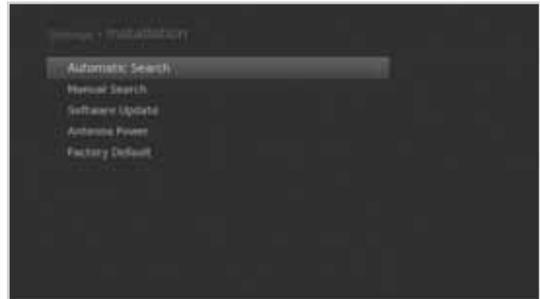
- You will be prompted to enter the password to access this menu. The default password is 0000. If you have forgotten your password, please contact Humax Customer Support.
- Press the **BACK** button to save the changes and return to the previous screen. Press the **MENU** or **EXIT** button to exit.

## Automatic Search

You can search channels automatically without entering any other information.

1. Select **Automatic Search**. Channel search starts.
2. Select **Save** and press the **OK** button to save the results.

**Note:** Select **Stop** and press the **OK** button to stop the channel search.



## Manual Search

You can search channels manually by searching parameters.

1. Select **Manual Search**.
2. Configure the search options.
  - **Channel:** Select the channel.
  - **Frequency:** Enter the frequency.
  - **Transmission:** Select **DVB-T** or **DVB-T2**.
  - **Bandwidth:** Select the bandwidth.
  - **Network Search:** Select **On** or **Off**.
3. Select **Search** and press the **OK** button.
4. Select **Save** and press the **OK** button to save the results.



### Note:

- Select **Stop** and press the **OK** button to stop the channel search.
- For information on the correct channel numbers to use in your area please visit <http://www.digitaluk.co.uk>. Please select the "I am in the aerial installation trade" option when searching your postcode.

## Software Update

**MENU** → **Settings** → **Installation** → **Software Update**

1. Select **Software Update**.
2. Select **Automatic Update** if you want to update the software automatically.
3. Select **Manual Update** if you want to update the software by entering the options manually.
  - **Channel:** Select the channel.
  - **Frequency:** Enter the frequency.
  - **Transmission:** Select **DVB-T** or **DVB-T2**.
4. Select **Search** and press the **OK** button to search new software.



### Note:

- The product is designed to search for software updates at 4am each morning if the product is in Standby mode; we recommend that you switch the product to standby mode each evening after viewing so that the product is updated automatically.
- To check if Software Updates are available for your product please visit [http://www.dtg.org.uk/industry/download\\_schedule.php](http://www.dtg.org.uk/industry/download_schedule.php).

# Installation

## Antenna Power

MENU → Settings → Installation → Antenna Power

Active antenna is a portable or indoor antenna which needs power supply from the product because it does not have power cord for itself. Connect an active antenna to the **ANTENNA IN** on the rear of the product.

1. Select **5V Antenna Power**.
2. Select an option.
  - **On:** 5V power is supplied from the active antenna cable.
  - **Off:** No power supplied

**Note:** Most domestic aerial installation will not require the Antenna Power option to be switched on. Please check with your aerial installer if this is required for your aerial.



## Factory Default

MENU → Settings → Installation → Factory Default

1. Select **Factory Default**.
2. Select **Yes**.
3. You will be prompted to enter the password. Enter the password.

**Note:** When performing the Factory Default all user configuration/settings will be reset to the Factory Settings.



## OTA (Over the Air)

In order to maintain proper performance of the product, it is essential to have the most up-to-date software. Visit the Humax website to check the latest news and newly released software versions. (<http://www.humaxdigital.com/uk>) It is recommended that you periodically check for the availability of software update. For the Over Air Download Schedule please visit [http://www.dtg.org.uk/industry/download\\_schedule.php](http://www.dtg.org.uk/industry/download_schedule.php).

OTA, an abbreviation of **Over-the-Air**, is a standard for the transmission of software through a broadcast system. OTA is simply an alternative method for downloading software versions. However, the manufacturers reserve the right for deciding the release of the software for their products by beaming the latest software versions over the air via aerial. The software update via aerial will only occur under the following circumstances.

1. The equipment should have the appropriate loader software.

**Caution:** Please note that if the normal loader software is not equipped, the product may not be updated or operate properly after software update.

2. The manufacturer decides to release the software via a designated channel.
3. The equipment must be tuned properly to the same antenna equivalent to that of the manufacturer.
4. Update software when the signal strength and quality is high. If the weather is not favorable, and the signal strength and quality are not recommendable, perform the software update later.

**Caution:**

- Please be careful to keep the power on and the power cord plugged in during software update. If the power is off during software update, fatal damage may be caused to the product.
- Please be careful not to pull out the signal line (co-axial cable) during software update. Update may be interrupted and the product may not operate.

**Note:**

- It may take 5~10 minutes to update software.
- ther functions will not activate while software update takes place.
- You cannot schedule programmes during software update.

## Updating New Software

When new software is detected, you can choose to download the software immediately or later.

- **Yes:** Update the software now.
- **No:** Ignore the message.
- **Later:** Display the message when entering standby mode.

Note that all functions will be disabled during software update.

# System

In **System**, system information, signal detection, power management and network options are available.

**Note:** Press the **MENU** or **EXIT** button to exit. Press the **BACK** button to return to the previous screen.

## System Information

**MENU** → **Settings** → **System** → **System Information**

The system information is displayed.

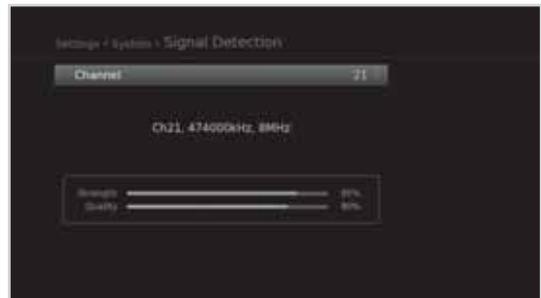


## Signal Detection

**MENU** → **Settings** → **System** → **Signal Detection**

You can check the signal strength and quality of the searched channels.

**Note:** We recommend that the Signal Strength is above 30% and the Signal Quality is above 70% in order to receive the channels without picture/sound breakup.



## Power Management

MENU → Settings → System → Power Management

### Setting Power Saving in Standby

You can minimise the standby power consumption to below 1W.

1. Select **Power Saving in Standby**.
2. Select **On** to deactivate the certain features and minimise the power consumption.

**Note:** When **Power Saving in Standby** is switched **On** the Time on the front display will not appear when in standby, nor will the Antenna Out loop-through the signal to a connected device.



### Setting Automatic Power Down

The receiver automatically enters standby mode for power saving if no user interaction occurs for 3 hours.

1. Select **Automatic Power Down**.
2. Select **On** to enter standby mode automatically if no user interaction occurs for 3 hours.

**Note:** The message will be displayed before entering standby mode. If no selection is made for 30 seconds, the receiver enters standby mode automatically.

## Network

MENU → Settings → System → Network

### Configuring IP (LAN)

1. You can configure the Ethernet setting options.
  - **DHCP:** Apply the options according to the DHCP.
  - **Manual:** Enter the options manually,

Select **Apply** and press the **OK** button.

**Note:** When entering the IP address manually, enter 3 digits in a row.



# Appendix

## Specification

Tuner & Channel	
Input Connector	IEC 169-2 Female
Frequency Range	174MHz to 230MHz 470MHz to 862MHz
Signal Level	-10 to -70 dBm
Demodulation	OFDM
Mode	DVB-T : 2K, 8K DVB-T2 : 1K, 2K, 4K, 8K, 16K, 32K
FEC Mode	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Guard Intervals	DVB-T : 1/4, 1/8, 1/16, 1/32 DVB-T2 : 1/4, 1/8, 1/16, 1/32, 1/128, 19/128, 19/256
Audio/Video Decoding	
Audio Decoding	Dolby Digital Plus
Audio Mode	Single channel/Dual channel/Joint stereo/Stereo
Video Decoding	HD MPEG2 /SD MPEG2 / MPEG4(H.264/AVC)
Video Format	4:3, 16:9, Letter Box
Video Resolution	1080p, 1080i, 720p, 576p, 576i
Memory	
Flash Memory	32MB
RAM	320MB
EEPROM	8KB
Audio/Video In/Out	
Video	TV-SCART, VCR-SCART, RCA, HDMI/HDCP
Audio	TV-SCART, VCR-SCART, Audio L/R, S/PDIF (Digital Audio Output)
Data In/Out	
USB	USB 2.0 Host (5 V $\overline{=}$ 500mA Max.)

<b>RJ-45</b>	Ethernet 10/100Mbps
<b>Power Supply</b>	
<b>Input Voltage</b>	90-250V a.c., 50/60Hz
<b>Type</b>	SMPS
<b>Power Consumption</b>	Max. 22W (Standby: 0.72W)
<b>Protection</b>	Separate internal fuse. The input should be protected against lightning.
<b>Physical Specification</b>	
<b>Size (w/h/d)</b>	280mm x 45mm x 200mm
<b>Weight</b>	1.42Kg
<b>Operating Temperature</b>	0 °C to +45 °C

**Note:** The specifications are subject to change without notice.

## Service and Support

Information concerning troubleshooting, software upgrade and product support is provided in the following websites and call centers. Should your product require warranty service, please contact HUMAX to obtain the appropriate authorization.

### HUMAX Call Center

<b>UK</b>	<b>Tel:</b> <b>Opening Hours:</b> <b>E-mail:</b> <b>Website:</b> <b>Language:</b>	0844 669 8800 Mon - Fri 09:00 – 17:30 (excluding Bank Holidays) uksupport@humax-digital.co.uk www.humax-digital.co.uk English
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# Appendix

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## Safety Warning

This product has been manufactured to comply with international safety standards. Please read the following safety precautions carefully.

### Safety Instructions and Precautions

#### 1. MAINS SUPPLY

- Operate this product only from the type of power supply indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company.
- Disconnect the product from the mains before you start any maintenance or installation procedures.

#### 2. OVERLOADING

- Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock.

#### 3. LIQUID

- The product should not be exposed to liquid of any kind. In addition, no objects filled with liquid should be placed on the apparatus.

#### 4. CLEANING

- Disconnect the product from the wall outlet before cleaning.
- Use a light damp cloth (no solvents) to dust the product.

#### 5. VENTILATION

- The slots on top of the product must be left uncovered to allow proper airflow into the unit.
- Do not stand the product on soft furnishings or carpets.
- Do not stack electronic equipments on top of the product.

#### 6. ATTACHMENTS

- Do not use any unsupported attachments as these may be hazardous or cause damage to the product.

#### 7. LIGHTNING, STORM OR NOT IN USE

- Unplug the product from the wall outlet and disconnect the antenna during a thunderstorm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-surges.

#### 8. EXTRANEIOUS OBJECTS

- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts.

#### 9. REPLACEMENT OF PARTS

- When replacement of parts is required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitution may result in additional damage to the unit.

#### 10. CONNECTION

##### [Satellite] CONNECTION TO THE SATELLITE DISH LNB

- Disconnect the product from the mains before connecting or disconnecting the cable from the satellite dish. Failure to do so can damage the LNB.

##### [Cable] CONNECTION TO THE CABLE TV SIGNAL

- Connect all components before plugging any power cords into the wall outlet. Always turn off the product, TV and other components before you connect or disconnect any cables.

##### [Terrestrial] CONNECTION TO THE AERIAL

- Disconnect the product from the mains before connecting or disconnecting the cable from the aerial. Failure to do so can damage the aerial.

## 11. CONNECTION TO THE TV

- Disconnect the product from the mains before connecting or disconnecting the cable from the TV. Failure to do so can damage the TV.

## 12. EARTHING

[Satellite] The LNB cable must be earthed to the system earth for the satellite dish.

## 13. LOCATION

- Place the product indoors to avoid exposing it to lightning, rain or sun. Do not place it near a radiator or heat register.
- We recommend that the product has 10 cm clearance from any other appliances susceptible to electromagnetic influences, such as a TV or a VCR.
- Do not block the openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface.
- If you place the product on a rack or a bookcase, ensure that there is adequate ventilation and that you have followed the manufacturer's instructions for mounting.
- Do not place the product on an unstable cart, stand, tripod, bracket, or table where it can fall. A falling product can cause serious injury to a child or adult, and serious damage to the appliance.

## Warning

### 1. To avoid damage of the power cord or plug;

- Do not modify or process the power cord or plug arbitrarily.
- Do not bend or twist the power cord.
- Make sure to disconnect the power cord holding the plug.
- Keep heating appliances as far as possible from the power cord in order to prevent the cover vinyl from melting.
- The mains plug, as a disconnection device, shall remain readily accessible by the user.

### 2. To avoid electrical shock;

- Do not open the main body.
- Do not insert metal or inflammable objects inside the product.
- Do not touch the power plug with wet hands.
- Disconnect the power cord in case of lightning.

### 3. To avoid damage of product;

- Do not use the product when it is out of order. If you continue to use the product when defective, serious damage can be caused. Make sure to contact your local product distributor if the product is out of order.
- Do not insert metal or alien substance into the slots for the modules or Smartcards. (where applicable) It may cause damage to the product and reduce its life span.

### 4. To avoid damage of the hard disk drive (PVR only)

- Do not move the product or turn the power off suddenly while the hard disk drive is running.
- The company shall not be liable for any corruption of data on the hard disk drive caused by carelessness or misuse.

# Appendix

## Trouble Shooting

Before contacting your local service centre, please read the tips below carefully. If the problem persists after completing the following procedure, please contact your local product distributor or service centre for further instructions.

### 1. No message displayed on the front display. (The product will not switch on.)

- Check the main power cable and make sure it is plugged into a suitable power outlet.
- Check that the mains supply is switched on.
- Connect the power cable to a different power outlet.
- Check that the power switch is on at the rear of the product. (where applicable)

### 2. No picture

- Make sure that the product is powered on and in operation mode. (Press the **STANDBY** button)
- Make sure that the AV cable is firmly connected to the TV.
- Make sure that the antenna cable is properly connected to the product.
- Make sure that you have selected the correct AV Channel / Input on your TV set (refer to your TV user manual for more information)
- Be sure to activate channel search.
- Check the brightness level of the TV.
- Check if the channel is currently on air. Contact the broadcaster to ensure that the channel is running.
- Press the SOURCE button if the product is in external input mode. (where applicable)
- **Satellite:** Make sure that the antenna setting in the menu is correct.

### 3. Poor picture/sound quality

- Install the antenna in an obstacle-free place.
- Make sure there is no mobile phone or microwave oven near the product.
- Keep the power and the antenna cables apart from each other.
- Check the signal levels and adjust your antenna if the level is too low. The signal level may be affected by weather conditions.

**Note:** If the antenna is covered with snow or the RF is weakened by heavy rain, the condition of the sound and picture may temporarily be poor. However, the poor sound and picture quality due to weather conditions cannot be accepted as a malfunction of product.

- **[Satellite]** Check that your dish alignment is correct.
- **[Satellite]** Change the satellite dish for a larger one as this will increase the signal levels received.
- **[Satellite]** Replace the LNB with a lower noise factor in cases where the noise factor is too high.
- **[Satellite]** Replace the LNB with a new one in case it is damaged or out of order.
- **[Terrestrial]** Adjust the antenna direction to get a better picture.
- **[Terrestrial]** Set the antenna power in menu to On, if you use the active antenna to improve the reception. (where applicable)

### 4. No or poor sound

- Check that your AV cable is connected correctly.
- Check the volume levels of your TV set and the product.
- Check if the product or TV is on mute.
- Check audio type or soundtrack option in the AV menu. (where applicable)

### 5. Remote control does not operate.

- To control the product, the top end of the remote control should point directly towards the receiving part of the product.
- Remove and reinsert the batteries in the remote control.

- Replace the batteries in the remote control for a new set.
  - Set the remote control to STB or PVR mode, if you are using the universal remote control. (where applicable)
- 6. Cannot make reservations.**
- Check that no previous reservations are conflicting with the new reservation.
- 7. No password information is given.**
- The default password is always **0000**.
- 8. Channel search does not work.**
- **Satellite:** Make sure that the antenna setting in the menu is correct.
  - **Terrestrial:** Make sure that the antenna is connected correctly.
  - **Terrestrial:** Use the appropriate antenna capable of receiving VHF or UHF channels for your area.
- 9. Cannot update new software.**
- You can get an update. If the product does not show a message requesting update, this means no software is available.
- 10. The product makes a humming noise. (PVR only)**
- The noise is from the fan; the hard disk is operating normally. This kind of noise is inevitable but seldom noticeable.
- 11. Cannot record programmes. (PVR only)**
- The hard disk is full. Delete unnecessary programmes and make space for new recording.
  - Check if recording is overlapped with another channel. Stop the current recording or wait until the recording is finished.
  - Check that the product is switched on when recording starts.
- 12. Cannot operate TSR (Time Shifted Recording). (PVR only)**
- TSR may not be available during recording. Wait until recording is finished.
  - Delete unnecessary programmes and make space for new recording.
- 13. Cannot playback. (PVR only)**
- To playback the recorded file of a scrambled channel, use the Smartcard. In case it has been a long time since you last recorded, this may not work. Contact the product distributor.
  - The signal during recording may be weak or the hard disk too full.
- 14. Cannot change channels while recording. (PVR only)**
- Certain channels may not be changed due to restriction of the tuner or connection type.

# Appendix

## Error Message

Error message	Possible causes	What to do
<b>No or bad signal [Satellite]</b>	The satellite dish is not pointing at the satellite.	Adjust dish alignment.
	Signal is too weak.	Increase the LNB voltage or connect a signal amplifier.
	Satellite dish is too small.	Change to a larger dish.
	Problem with LNB.	Change the LNB.
	Wrong antenna setting.	Set the antenna correctly.
<b>No or bad signal [Cable]</b>	The cable is not connected.	Make sure the cable is connected correctly.
	The cable may be damaged or defective.	Exchange the cable.
	The channel is not broadcasting.	Exchange the cable.
<b>No or bad signal [Terrestrial]</b>	The aerial is not pointing properly.	Adjust aerial. Check the cable from the aerial. If you cannot resolve the problem, you may need to have your aerial and installation tested by a professional.
<b>The channel is scrambled or not available.</b>	The channel has a signal, but no audio or video.	Confirm if the channel is currently on air.
	The channel has been deleted by the broadcasting company.	Check if the channel is currently on air
	The channel is for data broadcasting.	Remove the channel from the channel list and check for new transponder details.
<b>The audio is not available.</b>	The channel has a video signal, but no audio.	Press the audio button to confirm that the channel has audio options.
<b>No access</b>	No access	Make sure you are subscribed to the channel.
	No authorization.	If the product has been turned off for a long time (standby or power off), please wait for authorization. It may take up to 60 minutes.

## Glossary

### **CVBS (Composite Video Baseband Signal)**

A technology for transmitting video signals via a cable. Mixes luminance (brightness) and the chrominance (colour) signals together.

### **DiSEqC (Digital Satellite Equipment Control)**

A DiSEqC compatible receiver relies on a switching box which detects the 22kHz tone pulsing rapidly on and off. In this way, a specially designed receiver can control numerous LNBs through a DiSEqC switching box.

### **Dolby Digital**

An encoding system that digitally compresses up to 5.1 discrete channels of audio (left front, centre, right front, left surround, right surround) into a single Bitstream. A low frequency effect (LFE) channel is included providing the sound needed for special effects.

### **DVB (Digital Video Broadcasting)**

Set of standards that define digital broadcasts using satellite, cable or terrestrial systems.

### **EPG (Electronic Programme Guide)**

An electronic equivalent to a printed television listings magazine; it is an application used with digital set-top boxes and digital television sets to list current and scheduled programs that are or will be available on each channel, including a short summary or commentary for each program. The information supplied in the EPG is sent and updated by the channel broadcaster.

### **FEC (Forward Error Correction)**

A technique for error control of data transmission.

Frequency

The property of a signal measured in cycles per second (=Hz).

### **FTA (Free- To-Air)**

An unscrambled broadcaster allowing customers to view channels or services without paying any subscription.

### **HDD (Hard Disk Drive)**

The primary computer storage medium, which is made of one or more aluminum or glass platters, coated with a ferromagnetic material.

### **Hi-Fi (High Fidelity)**

The characteristics of audio devices that can play back all the audio frequencies a person can detect, which is the range of 16Hz-20KHz. Sometimes it is used to indicate good quality of audio devices such as stereo tape recorders.

### **LNB (Low Noise Block)**

A device that is mounted on an arm facing your satellite dish, focusing on satellite signals. A LNB converts signals received from satellite to a lower frequency and sends them to a satellite receiver via coaxial cable.

### **NVOD (Near Video On Demand)**

A technology that allows customers to view the start of popular programmes or films within a short period from the time they make their selection. This is possible as the broadcaster sends multiple copies with staggered start times.

### **OSD (On Screen Display)**

OSD displays the basic information necessary for the users to configure monitor or TV settings. OSD information may include brightness, contrast, tuning, RGB adjustment, and screen size and position.

### **OTA (Over the Air)**

A standard for the transmission of software for equipment, through a broadcast system. Manufacturers reserve the right for deciding the release of the software for their products.

### **PID (Packet Identifier)**

A set of numbers identifying stream packets contained within a single data stream.

### **PIP (Picture In Picture)**

A function that allows you to display two different TV channels (or TV inputs) on a single screen.

# Appendix

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## **Polarisation**

The direction of the electrical and magnetic fields of a signal. Satellites use both vertical and horizontal polarisation. Means that a frequency can be used twice.

## **PVR (Personal Video Recorder)**

Video recorder that can record and playback programmes directly using the embedded hard disk drive(s).

## **QPSK (Quaternary Phase Shift Keying)**

Digital modulation technique in which the carrier phase can have one of four possible values.

## **RF (Radio Frequency)**

Television signals are modulated onto RF signals and are then demodulated by your television's or STB's tuner.

## **RF Modulator**

Enables you to output the receiver's digital signals to a TV's RF (Aerial) input, allowing you to connect the receiver to a TV set without a SCART connection.

## **RGB (Red – Green – Blue)**

A technology for transmitting video signals via a cable. RGB is a system to represent red, green, and blue colours on a TV or monitor display. Red, green, and blue can be combined in various proportions to obtain any colour.

## **RS-232C**

A connection to allow you to connect to a PC to update receiver's software.

## **SCART**

A 21-pin connector standard to connect two pieces of Audio-Visual equipment such as a TV and a VCR. Each device will have a 21-pin female connection; a cable with male connection at both ends is used for connecting the devices.

## **Smartcard**

A credit card sized card that contains updateable chip memory. It is used for accessing Pay TV (encrypted) channel or services when inserted into an appropriate receiver.

## **S/PDIF (Sony/Philips Digital Interface format)**

A standard format for the transfer of digital audio signals. It allows the transfer of digital audio between two devices without any conversion to and from analogue, which could degrade the signal quality.

## **S-Video (Super-Video)**

Sometimes referred to as Y/C video; a technology for transmitting video signals via a cable. It is a video signal transmission in which the luminance (brightness) and the chrominance (colour) signals are transmitted separately to achieve superior picture clarity.

## **Transponder**

A satellite is divided up in parts called transponders. A transponder is one distribution section of the satellite. Each transponder can be used for distribution of several channels or services.

## **Trick-Play**

Pause, Fast Forward/Fast Rewind, Slow Motion, Instant Replay, Commercial Skip, Repeat A-B.

## **TSR (Time Shifted Recording)**

A function that records the present programme temporarily to support trick-play.

## Remote Control Code List

### 1. Using the Universal Remote Control

1. Select the mode(PVR, TV, DVD, AUDIO) you want to set by pressing the corresponding button on the remote control. The button will blink once.
2. Keep pressing the button for 3 seconds until the button lights on.
3. Enter the 3-digit code. Every time a number is entered, the button will blink. When the third digit is entered, the button will blink twice.
4. If a valid 3-digit code is entered, the product will power off.
5. Press the **OK** button and the mode button will blink three times. The setup is complete.
6. If the product does not power off, repeat the instruction from 3 to 5.

**Note:**

- When no code is entered for one minute the universal setting mode will switch to normal mode.
- Try several setting codes and select the code that has the most functions.

#### Remote Control Function List

The keys on the remote control function as in the list below.

**Note:** Some keys may not function depending on the product.

Button	TV	DVD	AUDIO
<b>STANDBY</b>	POWER	POWER	POWER
	MUTE	MUTE	MUTE
<b>PVR</b>			
<b>TV</b>			
<b>DVD</b>			
<b>AUDIO</b>			
<b>1</b>	DIGIT 1	1	INPUT 1
<b>2</b>	DIGIT 2	2	INPUT 2
<b>3</b>	DIGIT 3	3	INPUT 3
<b>4</b>	DIGIT 4	4	INPUT 4
<b>5</b>	DIGIT 5	5	INPUT 5
<b>6</b>	DIGIT 6	6	INPUT 6
<b>7</b>	DIGIT 7	7	INPUT 7
<b>8</b>	DIGIT 8	8	INPUT 8
<b>9</b>	DIGIT 9	9	INPUT 9
<b>0</b>	DIGIT 0, 11	0	INPUT 0
<b>TV Portal</b>			
<b>MENU</b>	MENU	MENU	MENU/MODE

# Appendix

Button	TV	DVD	AUDIO
▶	TEXT EXPAND	PLAY	PLAY
	TEXT HOLD	PAUSE	PAUSE
■	PIP INPUT	STOP	STOP
●	PIP MOVE	RECORD, OPEN CLOSE	RECORD
◀◀	PIP OFF	REWIND, SEARCH REVERSE; SCAN	DVD SEARCH REW, CD SEARCH REW, REW
▶▶	PIP	FAST FORWARD, SEARCH FORWARD; SCAN	FAST FORWARD, DVD SEARCH REW, CD SEARCH REW, REW
◀◀	TEXT MIX	SKIP -, TRACK -, CHAPTER -	DVD SKIP -, CD SKIP -, SKIP -
▶▶	TEXT OFF, TV	SKIP, TRACK +, CHAPTER +	DVD SKIP+, CD SKIP +, SKIP +
<b>RED</b>	RED	RED	RED
<b>GREEN</b>	GREEN	GREEN	GREEN
<b>YELLOW</b>	YELLOW	YELLOW	YELLOW
<b>BLUE</b>	BLUE	PROGRAMME	BLUE
<b>MEDIA</b>			
<b>GUIDE</b>	GUIDE	GUIDE	DSP MODE
<b>OK</b>	OK	OK	OK
<b>UP</b>	UP	UP	UP
<b>LEFT</b>	LEFT	LEFT	LEFT
<b>RIGHT</b>	RIGHT	RIGHT	RIGHT
<b>DOWN</b>	DOWN	DOWN	DOWN
<b>EXIT</b>	EXIT	EXIT, RETIRN	EXIT
<b>BACK</b>	LAST, RECALL; PP; LAST CHANNEL	CLEAR	REPEAT
<b>VOL+</b>	VOL+	VOL+	VOL+
<b>VOL-</b>	VOL-	VOL-	VOL-
<b>i</b>	INFO, OSD; DISPLAY	INFO, OSD; DISPLAY	INFO
<b>LIST</b>		LIST	
<b>P+</b>	P+	P+	P+
<b>P-</b>	P-	P-	P-
<b>TEXT</b>	TEXT	PVR MENU	
🔊?		AUDIO, LANGUAGE	SURROUND
<b>SUB</b>	SUBTITLE, LANGUAGE; CC	SUBTITLE	

Button	TV	DVD	AUDIO
<b>TV/RADIO</b>	TV/DTV ATV/DTV; D/A; DTV/TV; DTV; DIGITAL	HDD, DVD/HDD	BAND
<b>OPT+</b>			RANDOM
	TEXT SUBPAGE TEXT TIME		RANDOM
	TEXT INDEX	TITLE	
	TEXT POSITION TEXT CANCEL; TEXT UPDATE	SLOW; STEP	
<b>SOURCE</b>	SOURCE, AV, 55INPUT; TV/AV	SOURCE, TV/DVD, TV/DISK	SOURCE, FUNCTION
<b>SLEEP</b>	SLEEP	SLEEP	SLEEP
<b>V-FORMAT</b>	TEXT SIZE; TEXT EXPAND; FTB		
<b>WIDE</b>	WIDE, FORMAT, 16:9, ASPECT; ZOOM	ZOOM	

## 2. TV Code List

Brand	Code
<b>A.R. Systems</b>	102, 006, 080, 066
<b>Accent</b>	006
<b>Acer</b>	261, 278, 305
<b>Acoustic Solutions</b>	210, 312, 324, 370, 386, 428, 477
<b>Acura</b>	002
<b>ADL</b>	224
<b>Admiral</b>	043, 014, 015, 023
<b>Advent</b>	192, 342
<b>Adyson</b>	034, 035
<b>AEG</b>	211, 256, 327, 489
<b>Agashi</b>	043, 034, 035
<b>AGB</b>	094
<b>Agef</b>	014
<b>Aiko</b>	006, 061, 043, 074, 002, 004, 011, 028, 034, 035, 065
<b>Aim</b>	006, 171
<b>Airis</b>	316, 413, 473
<b>Aiwa</b>	139, 141, 445
<b>Akai</b>	102, 006, 098, 144, 145, 111, 061, 043, 074, 148, 232, 280, 128, 122, 461, 109, 462, 489, 094, 084, 083, 065, 035, 034, 033, 028, 023, 011, 004, 002, 154, 321
<b>Akiba</b>	006, 036, 080, 045
<b>Akito</b>	006, 044
<b>Akura</b>	006, 144, 134, 204, 043, 036, 002, 026, 045, 071, 298, 327, 376, 451
<b>Alaron</b>	034
<b>Alba</b>	006, 144, 134, 204, 087, 064, 036, 005, 108, 473, 455, 447, 388, 099, 084, 077, 072, 065, 059, 034, 023, 002
<b>AlfaView</b>	220
<b>All-Tel</b>	190, 238
<b>Allorgan</b>	032, 035
<b>Allstar</b>	006
<b>Amitech</b>	131, 241
<b>Amoi</b>	315
<b>Amplivision</b>	064, 035, 049

# Appendix

<b>Amstrad</b>	006, 204, 043, 036, 074, 002, 023, 026, 062, 065, 071, 094, 128, 410, 436, 451
<b>Anam</b>	006, 002
<b>Anam National</b>	006, 129
<b>Andersson</b>	210, 211
<b>Anglo</b>	043, 002
<b>Anitech</b>	006, 043, 002, 045
<b>Ansonic</b>	006, 134, 064, 002, 017, 023, 042, 048, 066, 070, 285
<b>AOC</b>	120, 266, 335
<b>Apollo</b>	083
<b>Apró</b>	420
<b>Arc En Ciel</b>	020
<b>Arcam</b>	034, 035
<b>Ardem</b>	006, 144
<b>Arena</b>	006
<b>Aristona</b>	102, 006
<b>ART</b>	204
<b>Arthur Martin</b>	023
<b>ASA</b>	010, 014, 017, 018, 055
<b>Asberg</b>	006
<b>Asora</b>	002
<b>Asuka</b>	043, 036, 034, 035, 045
<b>Atec</b>	340, 387
<b>Atlantic</b>	006, 032, 034, 042, 049
<b>Atori</b>	002
<b>Auchan</b>	023
<b>AudioSonic</b>	006, 144, 086, 145, 043, 064, 036, 002, 020, 035, 066, 190, 250, 405, 473
<b>Audioton</b>	086, 043, 064, 035
<b>Audiovox</b>	079
<b>Aumark</b>	009
<b>Autovox</b>	014, 032, 035, 056, 097
<b>AVC</b>	472
<b>Aviouis</b>	352
<b>Awa</b>	111, 005, 019, 002, 003, 035, 079, 271
<b>Axxent</b>	002
<b>Baier</b>	192

<b>Baird</b>	011, 012, 020, 033, 035, 054, 218
<b>Bang &amp; Olufsen</b>	014
<b>Barco</b>	023
<b>Basic Line</b>	102, 006, 134, 204, 036, 080, 002, 023, 035, 045, 053, 066, 211
<b>Bastide</b>	035
<b>Bauer</b>	171, 344
<b>Baur</b>	006, 030, 061, 028, 056, 093, 096, 097, 101
<b>Bazin</b>	035
<b>Beaumarck</b>	027
<b>Beko</b>	006, 144, 086, 145, 111, 064, 072, 172, 361, 405
<b>Belson</b>	138, 201, 215
<b>Belstar</b>	204
<b>BenQ</b>	223, 328, 329
<b>Bensten</b>	258, 436, 437
<b>Beon</b>	006, 072
<b>Berthen</b>	134
<b>Best</b>	064
<b>Bestar</b>	006, 064, 066
<b>Bestar-Daewoo</b>	066
<b>Binatone</b>	035
<b>Black Diamond</b>	444, 204, 211
<b>Blackway</b>	036, 045
<b>Blaupunkt</b>	030, 005, 080, 025, 028, 096, 101
<b>Blue Media</b>	340, 387
<b>Blue Sky</b>	102, 006, 144, 134, 204, 145, 087, 036, 080, 091, 119, 045, 215, 229, 254, 265, 310, 361, 380, 445
<b>Blue Star</b>	045
<b>BlueH</b>	391
<b>Boca</b>	361
<b>Boman</b>	256
<b>Boots</b>	002, 035, 044
<b>Bork</b>	265
<b>Bosch</b>	049
<b>BPL</b>	006, 033, 045, 202
<b>Brandt</b>	120, 144, 103, 020, 046, 052
<b>Brimax</b>	380
<b>Brinkmann</b>	006, 134, 086, 072, 095

# Appendix

English

<b>Brionvega</b>	006, 014, 062
<b>Britannia</b>	034, 035
<b>Brother</b>	043
<b>Bruns</b>	014
<b>BSR</b>	023
<b>BTC</b>	036
<b>Bush</b>	102, 006, 144, 134, 204, 138, 087, 061, 043, 036, 005, 108, 376, 373, 370, 361, 355, 352, 327, 388, 430, 431, 432, 440, 448, 451, 473, 476, 477, 478, 002, 033, 035, 044, 045, 056, 059, 065, 066, 095, 133, 164, 210, 213, 229, 232, 250
<b>Canton</b>	036
<b>Capsonic</b>	043
<b>Carad</b>	134, 204, 113
<b>Carena</b>	006, 080
<b>Carrefour</b>	006, 005, 010
<b>Carver</b>	025
<b>Cascade</b>	006, 002
<b>Casio</b>	006
<b>Cat</b>	373, 504
<b>Cathay</b>	006, 386
<b>CCE</b>	006
<b>cello</b>	397, 410, 418, 419, 420
<b>Centrum</b>	204
<b>Centurion</b>	006
<b>Century</b>	014
<b>CGE</b>	064, 023, 072
<b>Changhong</b>	180
<b>Chimei</b>	475, 415
<b>Cimline</b>	036, 002
<b>Cineral</b>	079
<b>Cinex</b>	128, 213, 327
<b>Citizen</b>	009
<b>City</b>	002
<b>Clarivox</b>	006, 010, 072
<b>Classic</b>	091
<b>Clatronic</b>	006, 144, 043, 064, 036, 002, 035, 049, 065, 256
<b>Clayton</b>	204
<b>CMS</b>	034

<b>CMS Hightec</b>	035
<b>Concorde</b>	002
<b>Condor</b>	006, 043, 064, 002, 034, 045, 049, 070, 072
<b>Conia</b>	179, 201, 298, 376
<b>Conrac</b>	172
<b>Contec</b>	006, 005, 002, 034
<b>Continental Edison</b>	087, 020, 046
<b>Cosmel</b>	006, 002
<b>Crosley</b>	014, 023
<b>Crown</b>	006, 144, 134, 204, 086, 145, 087, 111, 143, 064, 361, 135, 072, 071, 053, 033, 002
<b>Crown Mustang</b>	135
<b>CS Electronics</b>	036, 034
<b>CTX</b>	395
<b>Curtis Mathes</b>	009, 015, 021, 024, 079
<b>Cybertron</b>	036
<b>Cytronix</b>	246
<b>D-Vision</b>	102, 006, 451
<b>Daewoo</b>	102, 006, 124, 444, 036, 441, 406, 341, 338, 271, 249, 195, 192, 190, 164, 133, 119, 091, 079, 066, 035, 034, 002
<b>Dainichi</b>	036, 034
<b>Daitsu</b>	237
<b>Dansai</b>	006, 005, 002, 004, 033, 034, 035
<b>Dansette</b>	071
<b>Dantax</b>	144, 204, 086, 145, 064, 361, 445, 450
<b>Datsura</b>	033
<b>Dawa</b>	006
<b>Daytek</b>	221, 269, 271
<b>Dayton</b>	002, 221, 269
<b>Daytron</b>	006, 002, 066
<b>De Graaf</b>	098, 007, 023, 033
<b>DEC</b>	258
<b>Decca</b>	006, 011, 035, 044, 094, 118
<b>Dell</b>	235, 278
<b>Denko</b>	043
<b>Denon</b>	021

# Appendix

Denver	006, 108, 214, 256, 352, 410, 453, 473, 489
Desmet	006, 002, 014, 049
DGM	436
Diamant	006
Diamond	181
DiBoss	293
Digatron	006
Digihome	210, 370
Digiline	006, 134, 018
Digimate	198
Digital Device	340
Digitek	310, 380
Digitrex	478
Digix Media	195
Dixi	006, 002, 014, 035
DL	199, 258
DMTech	260, 438, 449, 454, 456
Domeos	134
Dream Vision	379
DTS	002
Dual	006, 204, 208, 035, 042, 054, 056, 095, 097, 164, 210, 219, 237, 468
Dual Tec	035
Dumont	010, 011, 014, 017, 035
Durabrand	285, 361, 453
Dux	006
Dynatech	035
Dynatron	006
e-motion	380
E:max	256, 316
Easy Living	230, 326, 402
Ecco	162
ECE	006
Edison-Minerva	087
Eiki	150
Elba-Sharp	094
Elbe	102, 006, 113, 036, 028, 035, 042, 048, 062, 070, 075, 094, 099, 121
Elcit	014, 023, 094

Elekta	043, 045
Element	376
Elfunk	204, 222
ELG	006
Elin	006, 098, 061, 002, 017, 056
Elite	006, 036, 049
Elta	043, 002
Emerson	006, 144, 134, 444, 086, 061, 064, 010, 014, 027, 045, 049, 065, 119
Emperor	045
Envision	266
Epson	243, 184, 186
Erae	267
Erres	006
ESC	006, 035
Etron	002, 023
Eurofeel	043, 035
Euroman	006, 043, 064, 034, 035
Europa	006
Europhon	006, 035, 094
Evesham	230, 340, 370, 382, 387
Evesham Technology	387
Evolution	395
Excors	467
Expert	023, 032, 042
Exquisit	006
FairTec	268
Fenner	002, 066
Ferguson	006, 120, 098, 103, 030, 204, 012, 020, 029, 046, 052, 054, 077, 292, 447, 476
Fidelity	006, 061, 043, 023, 026, 029, 034, 065, 071, 093, 097
Filsai	035
Finlandia	098, 061, 011, 023, 033, 055
Finlux	102, 006, 144, 145, 333, 327, 172, 122, 118, 094, 089, 084, 083, 070, 055, 035, 023, 018, 017, 014, 011, 010
Firstline	102, 006, 144, 134, 204, 061, 341, 267, 265, 250, 215, 172, 119, 097, 070, 066, 056, 050, 035, 034, 033, 011, 002

# Appendix

English

<b>Fisher</b>	061, 064, 005, 008, 011, 014, 017, 033, 035, 056, 097	<b>Gorenje</b>	064
<b>Flint</b>	006, 113, 043, 036, 080, 011	<b>GPM</b>	036
<b>Force</b>	210	<b>Gradiente</b>	006, 025, 207
<b>Forgestone</b>	029	<b>Graetz</b>	144, 087, 061, 023, 053, 065, 211
<b>Formenti</b>	006, 014, 023, 034, 049	<b>Gran Prix</b>	128
<b>Formenti-Phoenix</b>	034, 049	<b>Granada</b>	006, 098, 103, 005, 019, 038, 011, 023, 033, 035, 053, 054, 060, 081, 083, 094, 008
<b>Fortress</b>	014, 015	<b>Grandin</b>	102, 006, 144, 134, 204, 145, 113, 036, 080, 272, 270, 269, 246, 220, 215, 195, 190, 119, 066, 049, 045, 023, 002
<b>Fraba</b>	006, 064	<b>Gronic</b>	035
<b>Friac</b>	006, 113, 064, 002, 091	<b>Grundig</b>	102, 006, 030, 087, 142, 005, 108, 498, 476, 448, 447, 445, 430, 405, 370, 271, 267, 250, 225, 135, 121, 010, 101, 096, 028, 077
<b>Frontech</b>	043, 002, 023, 035	<b>Grunkel</b>	211
<b>Fujimaro</b>	190	<b>H &amp; B</b>	172, 456
<b>Fujitsu</b>	002, 011, 032, 035, 042, 137, 173, 187	<b>Haier</b>	138, 344, 392, 339
<b>Fujitsu General</b>	002, 032, 035, 137	<b>Halifax</b>	043, 034, 035
<b>Fujitsu Siemens</b>	172, 211, 230, 246, 268, 369	<b>Hallmark</b>	027
<b>Funai</b>	144, 134, 043, 275, 336, 369, 407	<b>Hampton</b>	034, 035
<b>Galaxi</b>	006	<b>Hanimex</b>	036, 443
<b>Galaxis</b>	006, 064	<b>Hanns.G</b>	402
<b>Gateway</b>	394	<b>Hannspree</b>	262, 263, 264, 342, 401, 402, 463
<b>GBC</b>	036, 002, 023, 066	<b>Hanseatic</b>	102, 006, 120, 144, 124, 061, 064, 172, 133, 097, 095, 091, 067, 056, 049, 048, 045, 035, 014, 002
<b>GE</b>	015, 027, 045, 052, 079, 150, 442	<b>Hantarex</b>	006, 002, 094, 190, 260, 289
<b>GEC</b>	006, 061, 011, 023, 035, 056, 094	<b>Hantor</b>	006
<b>Geloso</b>	002, 023, 066	<b>Harsper</b>	190
<b>General</b>	020, 046, 082	<b>Harwa</b>	162, 218, 238
<b>General Technic</b>	002	<b>Harwood</b>	006, 087, 002, 071
<b>Genexxa</b>	006, 036, 002, 023, 071	<b>Hauppauge</b>	006
<b>Gericom</b>	172, 190, 195, 220, 224, 246, 340, 388	<b>Havermy</b>	015
<b>Go Video</b>	009	<b>HCM</b>	006, 043, 036, 002, 035, 045, 071, 072
<b>Gold</b>	397, 413, 484, 485	<b>Hema</b>	002, 035
<b>Goldfunk</b>	134	<b>Hemmermann</b>	056, 097
<b>GoldHand</b>	034	<b>Hifivox</b>	020
<b>GoldStar</b>	006, 144, 145, 111, 061, 001, 007, 020, 023, 027, 034, 035, 047, 067	<b>Higashi</b>	034
<b>Gooding</b>	087	<b>Highline</b>	006, 043
<b>Goodmans</b>	102, 006, 120, 144, 103, 134, 124, 444, 204, 087, 043, 036, 005, 478, 211, 232, 477, 250, 476, 271, 445, 355, 370, 373, 440, 376, 382, 383, 386, 002, 004, 011, 035, 047, 052, 054, 065, 066, 084, 091, 094, 119, 121, 133, 172, 195, 210		

# Appendix

<b>Hikona</b>	036, 452
<b>Hinari</b>	006, 043, 036, 005, 002, 033, 059, 077, 443
<b>Hisawa</b>	144, 113, 036, 080, 045
<b>Hisense</b>	102, 092, 165, 254, 265, 366, 491
<b>Hit</b>	014
<b>Hitachi</b>	006, 098, 124, 204, 208, 005, 019, 037, 146, 152, 153, 163, 169, 193, 197, 007, 206, 210, 217, 227, 295, 296, 330, 377, 399, 424, 483, 020, 021, 023, 027, 035, 054, 056, 060, 076, 081, 083, 084, 085, 089, 091, 094, 018, 106, 107, 011
<b>Hitachi Fujian</b>	019
<b>Hitsu</b>	113, 036, 080, 002
<b>HMV</b>	014
<b>Hoeher</b>	144, 190, 211, 327
<b>Home Electronics</b>	111
<b>Hornlyphon</b>	006
<b>Hoshai</b>	036, 080, 045
<b>Huanyu</b>	034, 066
<b>Hugoson</b>	198, 224
<b>Humax</b>	505, 299, 506, 507, 245, 319, 322, 411, 433, 479
<b>HYD</b>	271
<b>Hygashi</b>	034, 035
<b>Hyper</b>	002, 034, 035
<b>Hypersonic</b>	061
<b>Hypson</b>	102, 006, 144, 134, 204, 086, 145, 043, 080, 035, 045, 118
<b>Hyundai</b>	164, 190, 192, 241, 244, 271, 291, 317, 338, 340, 341, 439
<b>Iberia</b>	006
<b>ICE</b>	006, 043, 036, 034, 035, 065
<b>ICeS</b>	036, 034
<b>iDEAL</b>	327
<b>Igo</b>	226
<b>IlSonic</b>	271, 308, 342
<b>Iiyama</b>	193, 198, 224
<b>Imperial</b>	006, 064, 056, 072, 121, 487
<b>Indiana</b>	006
<b>InFocus</b>	212, 220, 283
<b>Ingelen</b>	144, 113, 087, 023

<b>Ingersol</b>	002
<b>Inno Hit</b>	036, 002, 011, 035, 045, 047, 094, 211
<b>Innovation</b>	095
<b>Innowert</b>	190, 246
<b>Interbuy</b>	006, 043, 002
<b>Interfunk</b>	006, 061, 014, 020, 023, 056, 093
<b>Internal</b>	102, 444, 119
<b>Intervision</b>	006, 086, 087, 043, 036, 080, 002, 035, 045, 067, 095
<b>Irradio</b>	006, 036, 002, 047, 065, 147
<b>Isukai</b>	006, 036, 080, 045
<b>ITC</b>	035, 049
<b>ITS</b>	006, 043, 036, 034, 045, 065
<b>ITT</b>	098, 113, 061, 023, 029, 033, 053, 055, 056, 083, 084, 097
<b>ITT Nokia</b>	098, 113, 111, 061, 023, 033, 053, 055, 056, 083, 084
<b>ITV</b>	006, 043, 066
<b>JDV</b>	451
<b>Jean</b>	005, 307, 308
<b>JEC</b>	004
<b>JMB</b>	102, 124, 077, 091
<b>JNC</b>	378
<b>Jocel</b>	143
<b>Jouge</b>	284
<b>Jubilee</b>	102
<b>JVC</b>	111, 036, 005, 129, 130, 015, 029, 065, 072, 137, 149, 207, 264, 362, 408, 496
<b>Kaisui</b>	006, 036, 080, 002, 034, 035, 045
<b>Kamp</b>	034
<b>Kapsch</b>	061, 017, 023, 032, 042
<b>Karcher</b>	144, 113, 111, 043, 064, 045, 164, 327, 451
<b>Kathrein</b>	102, 195
<b>Kawa</b>	065
<b>Kawasho</b>	034
<b>KB Aristocrat</b>	023
<b>Kendo</b>	006, 204, 113, 064, 062, 067, 070, 095, 099, 128, 210, 285, 333
<b>Kennedy</b>	023, 032, 075

# Appendix

English

<b>Kennex</b>	204	<b>Liesenk &amp; Tter</b>	006
<b>Keymat</b>	258, 300, 398, 436, 437	<b>Liesenkotter</b>	006
<b>Kingsley</b>	034	<b>Lifetec</b>	006, 144, 134, 204, 208, 036, 002 066, 095, 137
<b>Kioto</b>	142	<b>Lloyd's</b>	002
<b>Kiss</b>	170	<b>Local India TV</b>	002, 033, 109, 280
<b>Kiton</b>	006, 134	<b>Lodos</b>	204, 210
<b>Kneissel</b>	102, 006, 113, 064, 042, 048, 062 066, 070, 075, 091	<b>Loewe</b>	006, 064, 014, 048, 093, 094, 123 131, 167, 414, 434
<b>Kobra</b>	290	<b>Logic</b>	494
<b>Kolster</b>	006, 036, 056	<b>Logik</b>	204, 001, 003, 029, 162, 195, 224, 292, 376, 464, 465, 466
<b>Konig</b>	006, 016	<b>Logix</b>	134, 095
<b>Konka</b>	006, 144, 036, 065, 072, 126, 158, 201	<b>Luker</b>	451
<b>Kontakt</b>	087	<b>Luma</b>	204, 002, 023, 032, 042, 062, 066, 070
<b>Korpel</b>	006	<b>Lumatron</b>	006, 043, 012, 023, 032, 035, 042
<b>Korting</b>	064, 014, 049	<b>Lux May</b>	006, 002
<b>Kosmos</b>	006	<b>Luxor</b>	098, 204, 061, 023, 033, 035, 047, 055, 056, 060, 083, 084, 122, 211
<b>Kotron</b>	071, 440	<b>LXI</b>	022
<b>Koyoda</b>	002	<b>M Electronic</b>	006, 144, 124, 030, 061, 361, 133, 093, 089, 084, 070, 066, 056, 055, 054, 046, 035, 034, 023, 020, 018, 017, 002
<b>Kreisen</b>	192, 293	<b>Madison</b>	006
<b>KTV</b>	035	<b>MAG</b>	298, 376
<b>Kuba</b>	056	<b>Magnadyne</b>	014, 023, 094, 097
<b>Kyoshu</b>	071, 072	<b>Magnafon</b>	012, 034, 094
<b>Kyoto</b>	023, 034, 035	<b>Magnavox</b>	005, 003
<b>L&amp;S Electronic</b>	144, 172, 190	<b>Magnin</b>	442
<b>LaSAT</b>	086	<b>Magnum</b>	006, 144, 145, 128, 242
<b>Lava</b>	293	<b>Mandor</b>	043
<b>Lavis</b>	204	<b>Manesth</b>	006, 043, 004, 035, 049
<b>Leader</b>	002	<b>Manhattan</b>	006, 134, 204, 164, 192, 237, 293
<b>Lecson</b>	006	<b>Maqma</b>	290, 340, 378, 404
<b>Lemair</b>	070	<b>Marantz</b>	102, 006, 071, 140, 277, 317
<b>Lenco</b>	006, 108, 017, 066, 352, 452	<b>Marelli</b>	014
<b>Lenoir</b>	002, 214	<b>Mark</b>	006, 144, 145, 002, 034, 035, 066
<b>Lentec</b>	316	<b>Marks and Spencer</b>	420
<b>Lexsor</b>	218, 303	<b>Marquant</b>	478
<b>Leyco</b>	006, 043, 011	<b>Mascom</b>	327, 432
<b>LG</b>	102, 006, 144, 145, 138, 061, 064, 248, 281, 354, 367, 368, 384, 396, 416, 417, 425, 426, 215, 209, 067, 047, 035, 034, 027, 023, 002, 001, 236, 257		

# Appendix

<b>Master's</b>	091
<b>Masuda</b>	036
<b>Matsui</b>	102, 006, 144, 030, 204, 087, 005, 080, 074, 153, 195, 097, 094, 369, 445, 077, 447, 065, 059, 056, 052, 044, 035, 033, 028, 011, 008, 004, 003, 002
<b>Matsushita</b>	129
<b>Maxent</b>	394, 160
<b>Maxim</b>	213, 327, 451
<b>Medialine</b>	220, 449
<b>Mediator</b>	102, 006
<b>Medion</b>	102, 006, 144, 134, 204, 138, 208, 172, 195, 093, 040, 210, 213, 219, 230, 285, 327, 370, 440, 456
<b>Megas</b>	113
<b>Megatron</b>	021, 027
<b>MEI</b>	204
<b>Memorex</b>	204, 002, 009, 027
<b>Memphis</b>	002, 011
<b>Mercury</b>	006, 002
<b>Metronic</b>	120
<b>Metz</b>	006, 134, 030, 108, 014, 028, 063, 096, 101, 211, 318
<b>MGA</b>	027, 442
<b>Micromaxx</b>	006, 134, 204, 121, 172, 256, 456
<b>Microspot</b>	343
<b>Microstar</b>	172
<b>Mikomi</b>	204, 153, 210
<b>Minato</b>	006
<b>Minerva</b>	030, 087, 019, 010, 028, 094, 096, 101
<b>Minoka</b>	006, 071
<b>Mirai</b>	369, 423, 482
<b>Mirror</b>	440
<b>Mistral Electronics</b>	029
<b>Mitsai</b>	327
<b>Mitsubishi</b>	102, 006, 204, 005, 019, 014, 015, 027, 093, 096, 191, 311
<b>Mivar</b>	034, 035, 047, 048, 094, 112
<b>Mogen</b>	374, 410
<b>Monaco</b>	002

<b>Morgan's</b>	006
<b>Motorola</b>	015
<b>MTC</b>	064, 009, 034, 056, 093
<b>MTEC</b>	044
<b>MTlogic</b>	144, 473
<b>Multibroadcast</b>	029
<b>Multitec</b>	006, 134, 204, 086, 327
<b>Multitech</b>	006, 086, 043, 064, 002, 034, 035
<b>Murphy</b>	017, 023, 034
<b>Musikland</b>	036
<b>Mx Onda</b>	298, 376
<b>MyCom</b>	271
<b>Myrica</b>	369
<b>Myryad</b>	102
<b>NAD</b>	006, 061, 190
<b>Naiko</b>	006, 111, 157, 451
<b>Nakimura</b>	006, 066
<b>Narita</b>	451
<b>NAT</b>	038
<b>National</b>	038
<b>NEC</b>	005, 002, 003, 025, 035, 040, 049, 066, 140, 239, 379
<b>Neckermann</b>	102, 006, 064, 014, 028, 049, 056, 070, 072, 101
<b>NEI</b>	006, 204, 065
<b>Neon</b>	237, 389
<b>Neovia</b>	190, 192, 220, 260, 267, 268, 271, 273, 449, 454
<b>Nesx</b>	389
<b>Netsat</b>	006
<b>NetTV</b>	160
<b>Neufunk</b>	102, 006, 144, 113, 036, 002
<b>New Tech</b>	102, 006, 002, 035, 054
<b>New World</b>	036
<b>Nextier</b>	338
<b>NFREN</b>	170
<b>Nicam</b>	097
<b>Nicamagic</b>	034
<b>Nikkai</b>	006, 043, 036, 005, 002, 004, 011, 034, 035
<b>Nikkei</b>	144

# Appendix

English

<b>Nikko</b>	027
<b>Nobliko</b>	010, 034
<b>Nogamatic</b>	020
<b>Nokia</b>	098, 113, 111, 061, 023, 033, 049, 053, 055, 056, 066, 083, 084, 089, 122
<b>Norcent</b>	266, 335
<b>Nordic</b>	035
<b>Nordmende</b>	006, 144, 103, 030, 020, 046, 054, 242, 280, 499
<b>Normerel</b>	006
<b>Northern Star</b>	220
<b>Novatronic</b>	006, 018, 066
<b>Novita</b>	273
<b>Oceanic</b>	098, 061, 023, 033, 083
<b>Odeon</b>	043
<b>Okano</b>	006, 043, 064, 002, 011
<b>Olidata</b>	271
<b>Omega</b>	043
<b>Onida</b>	207, 226
<b>Onimax</b>	144
<b>Onn</b>	380, 465, 477, 495, 497, 500, 501
<b>Onwa</b>	036, 074, 065, 109
<b>Onyx</b>	380, 397
<b>Opera</b>	006
<b>Optimus</b>	129, 024
<b>Optoma</b>	234, 346, 371
<b>Orbit</b>	006
<b>Orcom</b>	300
<b>Orion</b>	102, 006, 144, 204, 467, 458, 457, 456, 448, 445, 443, 385, 218, 195, 131, 097, 094, 077, 071, 059, 050, 049, 003
<b>Orline</b>	006, 036
<b>Ormond</b>	134, 204
<b>Orsowe</b>	094
<b>Osaki</b>	102, 006, 043, 036, 011, 035, 044, 059, 066, 071
<b>Osio</b>	006, 047
<b>Oso</b>	036
<b>Osume</b>	006, 036, 005, 011
<b>Otic</b>	298, 376

<b>Otto Versand</b>	102, 006, 030, 061, 005, 038, 028, 020, 035, 049, 054, 056, 015, 093, 096, 097, 101
<b>Pacific</b>	102, 144, 204, 208, 077, 256
<b>Packard Bell</b>	254, 293
<b>Pael</b>	034
<b>Palladium</b>	102, 006, 144, 064, 208, 035, 056, 028, 070, 072, 095, 101, 023, 121, 131, 014
<b>Palsonic</b>	006, 138, 043, 001, 035, 072, 218, 238, 303
<b>Panama</b>	006, 043, 002, 034, 035
<b>Panasonic</b>	006, 098, 061, 129, 038, 023, 063, 094, 187, 251, 294, 353, 359, 279, 306
<b>Panavision</b>	006, 070
<b>Pathe Cinema</b>	023, 034, 048, 049
<b>Pathe Marconi</b>	020
<b>Pausa</b>	002
<b>Penney</b>	009, 022, 027, 442
<b>Perdio</b>	006, 011, 023, 034, 045, 049
<b>Perfekt</b>	006
<b>Petters</b>	006
<b>Philco</b>	006, 064, 014, 021, 072
<b>Philex</b>	029
<b>Philharmonic</b>	035
<b>Philips</b>	102, 006, 061, 459, 435, 429, 395, 310, 302, 297, 247, 125, 110, 101, 073, 066, 054, 029, 014, 002
<b>Phocus</b>	144, 242, 250, 361, 405
<b>Phoenix</b>	006, 086, 064, 011, 014, 023, 034, 049
<b>Phonola</b>	102, 006, 014, 029, 034
<b>Pilot</b>	142
<b>Pioneer</b>	006, 086, 061, 064, 020, 023, 024, 046, 073, 093, 136, 159, 233, 277, 286, 381
<b>Pionier</b>	086, 064, 327
<b>Plantron</b>	006, 043, 002
<b>Playsonic</b>	006, 144, 145, 035, 053, 361, 405
<b>Polaroid</b>	298, 312, 355, 376, 383, 390, 240
<b>Poppy</b>	002
<b>Portland</b>	066, 119

# Appendix

<b>Powerpoint</b>	006, 138, 087, 201
<b>Prandoni-Prince</b>	061, 094
<b>Precision</b>	035
<b>Premier</b>	199
<b>Prima</b>	043, 002, 071, 218, 238, 303
<b>PrimeView</b>	340
<b>Prinston</b>	204, 145
<b>Prinz</b>	061, 011, 056, 097
<b>Profex</b>	061, 002, 023
<b>Profi</b>	002
<b>Profilo</b>	327
<b>Profitronic</b>	006
<b>Proline</b>	006, 120, 124, 204, 011, 050, 070, 118, 121, 271, 324, 386, 450
<b>Prosco</b>	002
<b>Prosonic</b>	006, 144, 134, 064, 034, 035, 065, 066, 389, 403, 428, 437, 467, 486
<b>Protech</b>	006, 134, 204, 086, 043, 002, 035, 045, 056, 072
<b>Proton</b>	027
<b>ProVision</b>	102, 006, 144, 256
<b>Proxima</b>	150, 152
<b>Pvision</b>	192, 310, 456
<b>Pye</b>	102, 006, 014, 056, 066, 101
<b>Pymi</b>	002
<b>QONIX</b>	352
<b>Quadral</b>	036
<b>Quasar</b>	002, 190
<b>Quelle</b>	006, 134, 030, 204, 061, 101, 097, 096, 093, 056, 028, 020, 017, 010, 003
<b>Questa</b>	005
<b>R-Line</b>	006
<b>Radialva</b>	036, 023
<b>Radiola</b>	102, 006, 035
<b>Radiomarelli</b>	006, 014, 094
<b>RadioShack</b>	006, 027
<b>Radiotone</b>	006, 134, 204, 043, 064, 002, 071, 072, 128
<b>Rank</b>	010
<b>Rank Arena</b>	005

<b>RBM</b>	010
<b>RCA</b>	120, 015, 442
<b>RealITV</b>	237
<b>Reality</b>	237
<b>Recor</b>	006
<b>Rectiligne</b>	006
<b>Rediffusion</b>	098, 061, 005, 055
<b>Redstar</b>	006
<b>Reflex</b>	006, 134, 204
<b>Relisys</b>	190, 192, 193, 194, 220, 221, 271, 310, 333, 338, 341, 355, 390
<b>Remotec</b>	006, 015, 021, 026
<b>Reoc</b>	144
<b>Revox</b>	006
<b>Rex</b>	043, 023, 032, 042, 070, 099
<b>RFT</b>	006, 043, 011, 014
<b>Roadstar</b>	006, 144, 134, 204, 145, 043, 036, 002, 045, 072, 214, 440
<b>Robotron</b>	014
<b>Rolson</b>	178, 267
<b>Rover</b>	193
<b>Royal Lux</b>	064, 052, 071
<b>Saba</b>	120, 098, 144, 103, 061, 014, 020, 023, 046, 052, 054, 090, 094, 335
<b>Sagem</b>	113, 080, 182, 253, 337
<b>Saisho</b>	043, 002, 003, 023, 035, 094, 097
<b>Saivod</b>	006, 134, 204, 143, 211, 327, 451
<b>Sakai</b>	023
<b>Salora</b>	098, 061, 023, 033, 047, 056, 060, 084, 094, 118, 122, 213, 219, 327
<b>Salsa</b>	052
<b>Sambers</b>	094
<b>Sampo</b>	394, 160
<b>Samsung</b>	102, 006, 043, 064, 108, 115, 231, 252, 276, 287, 332, 345, 350, 351, 372, 442, 474, 488, 490, 492, 228, 176, 175, 127, 095, 047, 035, 034, 033, 027, 023, 011, 009, 002
<b>Sandra</b>	034, 035
<b>Sansui</b>	006, 142, 131, 148, 189, 267, 326
<b>Santon</b>	002

# Appendix

English

<b>Sanyo</b>	204, 064, 005, 019, 442, 370, 363, 358, 357, 356, 222, 200, 150, 140, 097, 053, 048, 035, 034, 033, 025, 023, 017, 011, 008, 003, 002, 240
<b>SBR</b>	102, 006, 029
<b>Schaub Lorenz</b>	098, 144, 086, 111, 061, 056, 066, 215, 256, 267
<b>Schneider</b>	102, 006, 144, 134, 204, 061, 208, 036, 451, 450, 293, 128, 097, 095, 065, 056, 054, 042, 035, 023, 010
<b>Scotch</b>	027
<b>Scotland</b>	023
<b>Scott</b>	214
<b>Sears</b>	022, 026, 027
<b>Seaway</b>	124
<b>Seelver</b>	204
<b>SEG</b>	006, 134, 204, 087, 043, 036, 005, 285, 211, 210, 119, 062, 056, 035, 034, 002
<b>SEI</b>	006, 014, 023, 032, 056, 094, 097
<b>Sei-Sinudyne</b>	006, 014, 032, 094, 097
<b>Seleco</b>	023, 032, 042, 055, 062, 065, 070, 075, 099
<b>Semp</b>	022
<b>Sencora</b>	002
<b>Sentra</b>	004
<b>Serino</b>	113, 080, 015, 034
<b>Sharp</b>	005, 130, 216, 015, 029, 088, 094, 177, 274, 334, 365, 409, 166, 288
<b>Shintoshi</b>	006
<b>Shivaki</b>	006, 077
<b>Siarem</b>	014, 023, 094
<b>Siemens</b>	006, 030, 028, 096, 101
<b>Siera</b>	102, 006
<b>Siesta</b>	064
<b>Silva</b>	006, 061, 034, 128
<b>Silva Schneider</b>	006, 213, 327, 451
<b>Silvano</b>	108
<b>Silver</b>	145, 061, 005
<b>SilverCrest</b>	204
<b>Singer</b>	006, 074, 002, 014, 052, 075
<b>Sinotec</b>	162

<b>Sinudyne</b>	006, 061, 014, 023, 032, 056, 094, 097
<b>Skantic</b>	060
<b>SKY</b>	006, 195, 271, 300, 307, 308, 340, 341, 342, 343, 344, 391, 400, 421
<b>SKY Brazil</b>	195
<b>Sliding</b>	170, 190, 195, 256, 269, 270, 272
<b>SLX</b>	134
<b>Smaragd</b>	087
<b>Soemtron</b>	190, 246
<b>Sogera</b>	049
<b>Sogo</b>	271, 473
<b>Solavox</b>	006, 098, 061, 011, 023
<b>Sonawa</b>	036
<b>Soniko</b>	006
<b>Sonitron</b>	064, 033, 035, 053
<b>Sonix</b>	271, 389
<b>Sonneclair</b>	006
<b>Sonoko</b>	006, 043, 002, 035, 045
<b>Sonolor</b>	098, 061, 023, 033, 045
<b>Sontec</b>	006, 064, 002
<b>Sony</b>	006, 301, 005, 446, 412, 393, 375, 360, 325, 255, 203, 185, 174, 058, 003
<b>Sound &amp; Vision</b>	036, 066
<b>Soundesign</b>	027
<b>Soundwave</b>	006, 204, 145, 049, 072, 420
<b>Spectra</b>	002
<b>Squareview</b>	026
<b>Ssangyong</b>	002
<b>Standard</b>	006, 204, 036, 002, 035, 049, 066, 380
<b>Starlite</b>	006, 043, 002, 023
<b>Stenway</b>	036, 045
<b>Stern</b>	043, 023, 032, 042, 070, 099
<b>Strato</b>	006, 043, 002, 403
<b>Strong</b>	210, 211
<b>Stylandia</b>	035
<b>SunBrite</b>	284
<b>Sungoo</b>	470
<b>Sunkai</b>	113, 087, 036, 080, 050, 059, 190

# Appendix

<b>Sunstar</b>	006, 043, 002, 065
<b>Sunstech</b>	456
<b>Sunwood</b>	006
<b>Superla</b>	034, 035, 094
<b>SuperTech</b>	102, 006, 036, 002, 034
<b>Supra</b>	002, 066
<b>Susumu</b>	036, 046, 052
<b>Sutron</b>	002
<b>SVA</b>	108, 190
<b>Swedx</b>	340
<b>Swissflex</b>	481
<b>Swisstec</b>	481, 480, 422, 421, 401, 400, 391, 344, 343, 342, 341, 340, 308, 307, 300, 271, 195, 190
<b>Sydney</b>	034, 035
<b>Sylvania</b>	026, 275, 427
<b>Sysline</b>	006
<b>Sytong</b>	034
<b>Tactus</b>	044
<b>Tandberg</b>	061, 020, 063
<b>Tandy</b>	036, 011, 015, 023, 035
<b>Targa</b>	237, 267
<b>Tashiko</b>	005, 023, 025, 034, 035
<b>Tatung</b>	006, 003, 011, 035, 044, 094, 118, 215, 230, 256, 267, 326, 327, 382, 383, 395
<b>TCL</b>	142, 321
<b>TCM</b>	144, 172, 242, 456
<b>Teac</b>	006, 144, 134, 138, 143, 043, 080, 002, 025, 026, 027, 056, 093
<b>Tec</b>	006, 002, 035, 042, 052, 082
<b>Tech Line</b>	006, 134, 211, 285
<b>Tech Lux</b>	214
<b>Techica</b>	036
<b>Technema</b>	049
<b>Technica</b>	118, 451
<b>Technics</b>	102, 129
<b>Technika</b>	422, 428, 465, 468, 480, 493
<b>TechniSat</b>	102, 131, 237
<b>Technisson</b>	144, 242, 361
<b>Technosonic</b>	102, 120, 091, 195, 256, 258, 436, 437, 451, 468

<b>Technotrend</b>	316, 378
<b>Techwood</b>	204, 211
<b>Teckton</b>	271
<b>Tecnimagen</b>	102
<b>Teco</b>	205
<b>Tedelex</b>	002, 035, 380
<b>Teiron</b>	002
<b>Tek</b>	168
<b>Teknika</b>	009
<b>TELE System</b>	192
<b>Teleavia</b>	046, 054
<b>Telecor</b>	006, 036, 023, 035, 042
<b>Telefunken</b>	006, 120, 144, 103, 086, 320, 202, 105, 090, 082, 055, 054, 052, 046, 020, 016, 012, 348
<b>Telefusion</b>	006
<b>Telegazi</b>	006, 043, 036, 023, 042
<b>Telemagic</b>	150
<b>Telemeister</b>	006, 049
<b>Telesonic</b>	006
<b>Telestar</b>	102, 006
<b>Teletech</b>	006, 134, 204, 002
<b>Teleton</b>	005, 032, 035, 042, 056
<b>Televideon</b>	023, 034, 049
<b>Televiuew</b>	006
<b>Tempest</b>	002
<b>Tennessee</b>	006
<b>Tensai</b>	006, 204, 145, 036, 002, 017, 018, 035, 049, 065, 066, 067
<b>Tenson</b>	002, 049
<b>Tevion</b>	102, 006, 144, 134, 204, 208, 468, 405, 403, 376, 355, 327, 298, 246, 242, 232, 230, 172, 128
<b>Textet</b>	036, 002, 034, 035, 066
<b>Textla</b>	165
<b>Thes</b>	467, 469, 471
<b>Thomson</b>	006, 120, 103, 020, 046, 052, 054, 056, 082, 335
<b>Thorn</b>	006, 061, 005, 100, 096, 093, 091, 054, 052, 044, 029, 020, 017, 012, 011, 004
<b>Thorn-Ferguson</b>	012, 029, 052, 054, 091

# Appendix

English

<b>Time</b>	378, 454, 455
<b>Tiny</b>	238
<b>TMK</b>	027
<b>Tobishi</b>	310
<b>Tokai</b>	006, 134, 204, 002, 011, 023, 035, 066
<b>Tokaido</b>	204
<b>Tokyo</b>	004, 034
<b>Tomashi</b>	036, 045
<b>Topline</b>	134, 204
<b>Toshiba</b>	030, 204, 005, 115, 129, 092, 447, 364, 313, 304, 242, 212, 211, 183, 100, 039, 022, 020, 010, 009, 004, 236, 257
<b>Tosumi</b>	451
<b>Towada</b>	035, 056
<b>Toyoda</b>	002
<b>Trakton</b>	043
<b>TRANS-continents</b>	102, 006, 134, 204, 035, 118, 190, 269, 272
<b>Transonic</b>	006, 108, 002
<b>Transtec</b>	034
<b>Trident</b>	035, 094
<b>Trio</b>	298, 376
<b>Tristar</b>	043, 036, 029
<b>Triumph</b>	102, 006, 055, 094
<b>Tsoschi</b>	045
<b>TVTEXT 95</b>	102
<b>TWF</b>	432
<b>Uher</b>	006, 086, 064, 032, 042, 049, 066, 072, 084
<b>Ultravox</b>	006, 014, 023, 034, 066
<b>UMC</b>	308, 340, 343, 391, 400, 422, 480, 481, 493
<b>Unic Line</b>	006, 080, 083
<b>United</b>	006, 144, 204, 145, 108, 397, 445, 451
<b>Universal</b>	006
<b>Universum</b>	006, 134, 030, 204, 061, 043, 064, 005, 115, 070, 072, 083, 084, 089, 093, 096, 097, 101, 122, 172, 211, 285, 062, 056, 055, 047, 035, 025, 020, 018, 017, 010, 003, 002

<b>Univox</b>	006, 014, 023
<b>V2max</b>	190
<b>V7 Videoseven</b>	195, 224, 237, 271, 369, 394
<b>Venturer</b>	324, 386, 428
<b>Vestel</b>	006, 134, 204, 035, 211, 333, 370
<b>Vexa</b>	006, 002
<b>Vibrant</b>	044
<b>Victor</b>	005
<b>Videocon</b>	092
<b>Videologic</b>	036, 034
<b>Videologique</b>	036, 034, 035
<b>VideoSystem</b>	006
<b>Videotechnic</b>	034, 035, 049, 066
<b>Videoton</b>	023, 060
<b>Vidikron</b>	150, 277
<b>Vidtech</b>	027
<b>Viewpia</b>	192
<b>Viewsonic</b>	307, 308, 323, 335, 349, 391, 394, 259, 331
<b>Visiola</b>	034
<b>Vision</b>	006, 035, 049
<b>Vistar</b>	032
<b>Vistron</b>	265, 460
<b>Vivax</b>	250, 258
<b>Vivid</b>	250
<b>Vortec</b>	006
<b>Voxson</b>	006, 014, 023, 072
<b>Waltham</b>	006, 134, 204, 020, 035, 060, 072, 077
<b>Wards</b>	009, 022, 024, 027
<b>Watson</b>	006, 144, 134, 204, 036, 002, 023, 049, 095, 271, 285
<b>Watt Radio</b>	023, 034, 056, 097
<b>Wega</b>	006, 005, 014
<b>Wegavox</b>	002
<b>Welltech</b>	014
<b>Weltblick</b>	035, 049
<b>Weltstar</b>	204
<b>Westinghouse</b>	189
<b>Wharfedale</b>	102, 006, 095, 189, 256, 327, 370, 452, 453, 477, 502

# Appendix

<b>White Westinghouse</b>	006, 034, 049, 119
<b>Wilson</b>	102
<b>Windsor</b>	134, 204
<b>Windstar</b>	045
<b>Windy Sam</b>	102
<b>World-of-Vision</b>	190, 193, 195, 198, 224, 242, 246, 340, 389
<b>X-View</b>	215
<b>Xenius</b>	124, 133
<b>XLogic</b>	188
<b>Xomax</b>	397
<b>Xoro</b>	218, 224, 229, 303, 404, 503
<b>Xrypton</b>	006
<b>Yakumo</b>	342
<b>Yalos</b>	398
<b>Yamaha</b>	169, 314, 330, 184
<b>Yamishi</b>	006, 036, 080, 035, 045
<b>Yokan</b>	006
<b>Yoko</b>	006, 043, 064, 036, 002, 034, 035, 053
<b>Yorx</b>	036
<b>Ytawai</b>	316
<b>Zanussi</b>	032, 035
<b>Zenith</b>	119, 236
<b>Zenor</b>	053
<b>TV/VCR Combo</b>	
<b>Aiwa</b>	445
<b>Amstrad</b>	026
<b>Beko</b>	086
<b>Black Diamond</b>	444
<b>Blue Sky</b>	119, 445
<b>Daewoo</b>	444, 119
<b>Dantax</b>	445
<b>Emerson</b>	444, 119
<b>Ferguson</b>	120, 012
<b>Fidelity</b>	026
<b>Finlux</b>	017
<b>Firstline</b>	119
<b>GE</b>	015, 442
<b>GoldStar</b>	006

<b>Goodmans</b>	444, 066, 119, 445
<b>Grandin</b>	119
<b>Grundig</b>	102, 006, 030, 101, 445
<b>Hanimex</b>	443
<b>Hinari</b>	005, 443
<b>Internal</b>	444, 119
<b>Irradio</b>	147
<b>LG</b>	027
<b>Magnin</b>	442
<b>Matsui</b>	445
<b>MGA</b>	442
<b>Mitsubishi</b>	102, 015
<b>Orion</b>	443, 445
<b>Penney</b>	442
<b>Philips</b>	102, 006
<b>Portland</b>	119
<b>Radiola</b>	102
<b>RCA</b>	015, 442
<b>Saba</b>	120
<b>Samsung</b>	442
<b>Sanyo</b>	442
<b>Schneider</b>	102, 006
<b>SEG</b>	119
<b>Sharp</b>	015
<b>Siemens</b>	006
<b>Sony</b>	301, 446
<b>Teac</b>	026
<b>Technics</b>	102
<b>Thomson</b>	120
<b>United</b>	445
<b>Universum</b>	018
<b>White Westinghouse</b>	119
<b>TV/VCR/DVD Combo</b>	
<b>Bush</b>	448
<b>Ferguson</b>	447
<b>Grundig</b>	448
<b>Matsui</b>	447
<b>Orion</b>	448

## 3. DVD Code List

Brand	Code	Brand	Code
<b>3D LAB</b>	038	<b>Belson</b>	136, 181
<b>4Kus</b>	106	<b>Belsonic</b>	136
<b>A-Trend</b>	063	<b>Berthen</b>	156
<b>Acoustic Solutions</b>	066, 062, 114, 193, 208	<b>Binatone</b>	181
<b>AEG</b>	073, 077, 058, 075, 113, 181	<b>Biostek</b>	148
<b>AFK</b>	105, 181	<b>Black Diamond</b>	062
<b>Airis</b>	057, 081, 109, 117, 216	<b>Blu:sens</b>	113, 117
<b>Aiwa</b>	036, 115	<b>Blue Nova International</b>	117
<b>Akai</b>	077, 075, 093, 100, 113, 162, 212	<b>Blue Sky</b>	059, 077, 057, 062, 086
<b>Akira</b>	149	<b>BlueTinum</b>	136
<b>Akura</b>	093, 103, 113, 136	<b>Boghe</b>	094
<b>Alba</b>	038, 059, 066, 057, 062, 064, 103, 140, 162, 185, 216	<b>Boman</b>	093
<b>Alize</b>	104	<b>Bose</b>	189
<b>Altacom</b>	109	<b>Brainwave</b>	073, 100
<b>Amitech</b>	073, 013, 087	<b>Brandt</b>	033, 039
<b>Amstrad</b>	073, 077, 062, 104, 136	<b>Broksonic</b>	059
<b>Amuseer</b>	120	<b>Bush</b>	066, 082, 057, 062, 064, 065, 103, 120, 127, 129, 140, 162, 172, 216, 217
<b>AMW</b>	091	<b>Cambridge Audio</b>	070
<b>Ansonic</b>	082, 071, 120, 136	<b>Cat</b>	076, 181
<b>Apex Digital</b>	057, 094, 116, 134	<b>CCE</b>	066
<b>Arena</b>	100	<b>cello</b>	164, 198, 205
<b>Aristona</b>	038, 052, 214	<b>Centrum</b>	058, 062, 076, 110, 181, 185
<b>ASCOMTEC</b>	181	<b>CGV</b>	070, 100
<b>Asono</b>	109	<b>Chili</b>	135, 136
<b>Atacom</b>	109	<b>Cinea</b>	085
<b>Audiola</b>	149, 224	<b>Cinetec</b>	062, 091
<b>Audiosonic</b>	181, 216	<b>CJ Digital</b>	156, 204
<b>Audix</b>	062	<b>Classic</b>	066, 164
<b>Autovox</b>	062	<b>Clatronic</b>	057, 058, 075, 113, 181
<b>Auvio</b>	086	<b>Clayton</b>	062
<b>Axion</b>	066	<b>CMX</b>	156
<b>Basic Line</b>	062, 185	<b>Coby</b>	066, 120
<b>Baze</b>	093	<b>Codex</b>	113
<b>BBK</b>	109	<b>Commax</b>	117, 135
<b>Bellagio</b>	094	<b>Compacks</b>	081, 211
<b>Bellwood</b>	081	<b>Contel</b>	075
		<b>Continental Edison</b>	082, 091

# Appendix

<b>Crown</b>	073, 062, 100
<b>Cybercom</b>	082
<b>CyberHome</b>	063
<b>Cytron</b>	061, 119
<b>D-Vision</b>	100
<b>Daenyx</b>	091
<b>Daewoo</b>	073, 018, 061, 063, 083, 091, 129, 130, 159
<b>Dalton</b>	097
<b>Dansai</b>	073, 100, 162
<b>Dantax</b>	038, 077, 062, 065, 122
<b>Daytek</b>	091
<b>Dayton</b>	091, 106
<b>DCE</b>	082
<b>Decca</b>	073, 100
<b>Denon</b>	032, 049, 151
<b>Denver</b>	057, 075, 093, 117, 128, 136, 148, 181, 216
<b>Denzel</b>	055
<b>Desay</b>	086
<b>Dgtec</b>	057
<b>Difrnce</b>	211
<b>Digihome</b>	062
<b>DigiLogic</b>	062, 159
<b>Digitech</b>	172
<b>Digitek</b>	013
<b>Digitrex</b>	217
<b>Digix Media</b>	081
<b>DiK</b>	082
<b>Dinamic</b>	075
<b>Disney</b>	082
<b>DiViDo</b>	061
<b>DK Digital</b>	082, 116
<b>Dragon</b>	082
<b>DreamX</b>	104
<b>DSE</b>	164
<b>Dual</b>	066, 082, 077, 055, 062, 129, 140
<b>Durabrand</b>	082, 058, 062, 128, 140, 159
<b>E:max</b>	026, 113, 117, 156, 161
<b>eBench</b>	105

<b>ECC</b>	066
<b>Eclipse</b>	065, 070
<b>Elfunk</b>	062, 087
<b>Elin</b>	073
<b>Ellion</b>	013, 087
<b>Elta</b>	073, 057, 075, 087, 100, 104, 113, 161, 204
<b>Eltax</b>	113, 117, 149
<b>Emerson</b>	043, 061
<b>Enterprise</b>	043
<b>EuroLine</b>	058, 075, 100, 113, 120, 131, 156
<b>F&amp;U</b>	203
<b>Ferguson</b>	059, 062, 093, 162, 164
<b>Finlux</b>	067, 043, 073, 057, 070
<b>Fintec</b>	140
<b>Firstline</b>	062, 086, 090, 140
<b>Fisher</b>	056
<b>Funai</b>	059, 058
<b>Gateway</b>	106
<b>GE</b>	064
<b>Global Link</b>	109
<b>Global Solutions</b>	072
<b>Global Sphere</b>	105
<b>Go Video</b>	090
<b>Gold</b>	198
<b>GoldStar</b>	067, 043
<b>Goodmans</b>	066, 077, 062, 065, 094, 103, 105, 116, 140, 164, 181, 217
<b>GoWell</b>	156
<b>GPX</b>	067
<b>Graetz</b>	055
<b>Gran Prix</b>	082, 093
<b>Grandin</b>	062, 113, 116, 204
<b>Greenhill</b>	064
<b>Grundig</b>	038, 039, 059, 077, 056, 061, 062, 094, 097, 129, 156, 162, 164, 172
<b>Grunkel</b>	073, 082, 077, 136
<b>GVG</b>	073
<b>H &amp; B</b>	013, 062, 085, 087, 113, 204

# Appendix

English

<b>Hanseatic</b>	067, 077
<b>Harman/Kardon</b>	060, 111, 135
<b>Harwa</b>	211
<b>HCM</b>	075
<b>HDT</b>	061
<b>HE</b>	066, 181
<b>Henss</b>	062
<b>Hikona</b>	124
<b>HiMAX</b>	086
<b>Hitachi</b>	042, 054, 062, 185
<b>Hiteker</b>	057, 181
<b>Hoeher</b>	082, 062, 081, 094, 109, 140
<b>Home Electronics</b>	073, 066
<b>Home Tech Industries</b>	109, 156, 181
<b>HotMedia</b>	105
<b>Humax</b>	052, 225
<b>HYD</b>	113
<b>Hyundai</b>	087
<b>Ingelen</b>	075
<b>Inno Hit</b>	062
<b>International</b>	159
<b>Irradio</b>	090, 100, 109, 113
<b>ISP</b>	059
<b>it's</b>	064
<b>Jamo</b>	097
<b>Jaton</b>	055
<b>JDB</b>	066
<b>JGC</b>	140
<b>JMB</b>	059
<b>JVC</b>	045, 038, 033, 107, 147, 176
<b>Kansas Technologies</b>	113, 140
<b>Kazuki</b>	136
<b>Kendo</b>	082, 057, 062
<b>Kennex</b>	073, 062, 093
<b>Kenwood</b>	032, 037
<b>KeyPlug</b>	156
<b>Kiiro</b>	073
<b>King Vision</b>	136, 156
<b>Kiss</b>	055, 085

<b>KXD</b>	088, 117, 135, 181
<b>Lawson</b>	072
<b>Leiker</b>	091
<b>Lenco</b>	073, 062, 124
<b>Lexia</b>	072
<b>LG</b>	067, 043, 077, 090, 143, 179, 186
<b>Lifetec</b>	082, 119
<b>Limit</b>	072
<b>LiteOn</b>	106, 126, 157, 165
<b>LM</b>	156
<b>Lodos</b>	062
<b>Loewe</b>	038, 067
<b>Logic</b>	222
<b>Logik</b>	062
<b>Logix</b>	061
<b>Lumatron</b>	067, 059, 061, 062, 100, 117, 172, 215
<b>Lunatron</b>	067
<b>Luxman</b>	042
<b>Luxor</b>	062, 064, 094, 162, 164
<b>Magnat</b>	181
<b>Magnavox</b>	038, 033, 052, 058, 062, 103
<b>Magnex</b>	065
<b>Magnum</b>	129
<b>Majestic</b>	149, 224
<b>Manhattan</b>	061, 062
<b>Manta</b>	136
<b>Marantz</b>	038
<b>Mark</b>	062
<b>Marquant</b>	073, 217
<b>Matsui</b>	059, 057, 062, 094, 162, 164
<b>Maxim</b>	062, 091, 114
<b>MBO</b>	066, 164
<b>MDS</b>	062
<b>Mecotek</b>	073
<b>Mediencom</b>	070
<b>Medion</b>	067, 082, 119, 157
<b>MEI</b>	077
<b>Memorex</b>	082

# Appendix

<b>Metz</b>	041, 035, 062, 185
<b>MiCO</b>	065, 070, 116
<b>Micromaxx</b>	059, 162
<b>Micromedia</b>	038, 033
<b>Micromega</b>	038
<b>Microsoft</b>	163, 194
<b>Microstar</b>	082
<b>Minax</b>	062
<b>Minoka</b>	073, 100
<b>Mitsubishi</b>	062
<b>MixSonic</b>	101
<b>Mizuda</b>	073
<b>Monyka</b>	055
<b>MPX</b>	086
<b>MTlogic</b>	216
<b>Mustek</b>	066, 148, 164
<b>Muvid</b>	136, 156, 204
<b>Mx Onda</b>	070, 116
<b>Myryad</b>	116
<b>Mystral</b>	082
<b>NAD</b>	067
<b>Naiko</b>	073, 094
<b>Neom</b>	136, 156
<b>Neon</b>	013
<b>Neufunk</b>	055
<b>Nevir</b>	073, 082, 057
<b>Nexius</b>	077
<b>Next Base</b>	160
<b>NFREN</b>	081
<b>Nikkai</b>	181
<b>Nikkei</b>	116
<b>Norcent</b>	181
<b>Nordmende</b>	082
<b>Nortek</b>	204
<b>Oasis-Media</b>	148
<b>Olidata</b>	057
<b>Onkyo</b>	033, 046, 169
<b>Onn</b>	223
<b>Onyx</b>	198

<b>Oopla</b>	106
<b>Opera</b>	215
<b>Optim</b>	086
<b>Optimus</b>	035
<b>Orbit</b>	091, 156
<b>Orion</b>	059, 062, 113, 127, 162
<b>Ormond</b>	062
<b>Pacific</b>	082, 072, 077, 062, 071
<b>Packard Bell</b>	082, 117, 158
<b>Palladium</b>	059, 062, 179
<b>Panasonic</b>	032, 146, 155, 173, 178, 180
<b>Panda</b>	076, 135
<b>peekTon</b>	093, 109
<b>Philips</b>	038, 033, 052, 058, 106, 118, 121, 137, 167, 170, 191, 192, 195, 196, 210, 209
<b>Pioneer</b>	041, 035, 016, 048, 133, 141, 145, 175, 183, 220
<b>PJ</b>	181
<b>Play It</b>	156
<b>Plu2</b>	087
<b>Polaroid</b>	134
<b>Powerpoint</b>	091
<b>Prinz</b>	082
<b>Prism</b>	082, 061
<b>ProCaster</b>	094, 200
<b>Proline</b>	057, 094, 122, 165, 193
<b>Proson</b>	062
<b>Prosonic</b>	130, 208
<b>ProVision</b>	066, 117, 136, 181
<b>Pye</b>	038, 052
<b>QONIX</b>	077
<b>Quartek</b>	158
<b>Radionette</b>	067, 090, 179
<b>Radiotone</b>	062
<b>Raite</b>	055
<b>RCA</b>	168
<b>REC</b>	032
<b>Redstar</b>	073, 071, 075, 093, 125, 181
<b>Relisys</b>	119

# Appendix

English

<b>Reoc</b>	072, 092
<b>Revoy</b>	085
<b>Richmond</b>	113
<b>Roadstar</b>	066, 057, 062, 093, 110, 172
<b>Ronin</b>	091
<b>Rotel</b>	045
<b>Rowa</b>	064
<b>Rownsonic</b>	076
<b>Saba</b>	039, 204
<b>Saivod</b>	082, 071
<b>Salora</b>	067
<b>Sampo</b>	117
<b>Samsung</b>	032, 042, 017, 022, 069, 099, 152, 166, 182, 197, 199, 219, 080
<b>Sansui</b>	059, 013, 070
<b>Sanyo</b>	056, 062
<b>Scan</b>	061, 087
<b>ScanMagic</b>	066, 164
<b>ScanSonic</b>	162
<b>Schaub Lorenz</b>	073, 075, 100, 104, 156
<b>Schneider</b>	038, 082, 052, 077, 061, 062, 075, 090, 110, 122, 214
<b>Schoentech</b>	062
<b>Scientific Labs</b>	072
<b>Scott</b>	057, 097, 113, 125, 181
<b>Seeltech</b>	109, 156
<b>SEG</b>	055, 062, 091, 140, 185, 215
<b>Shanghai</b>	057
<b>Sharp</b>	058, 062, 090, 127
<b>Sherwood</b>	067, 064
<b>Shinco</b>	064
<b>Siemssen</b>	123
<b>Sigmatek</b>	109, 200
<b>Siltex</b>	109
<b>Silva</b>	075, 093
<b>Silva Schneider</b>	067, 082, 090, 093
<b>SilverCrest</b>	014, 015, 105
<b>Sinudyne</b>	116
<b>Sistemas</b>	057
<b>Skantic</b>	038, 062

<b>SKY</b>	013
<b>Skymaster</b>	066, 072
<b>Skyworth</b>	093
<b>Sliding</b>	100
<b>SM Electronic</b>	066, 072, 105
<b>Smart</b>	061, 062
<b>Sogo</b>	136, 203, 216
<b>Sontech</b>	131
<b>Sony</b>	036, 089, 096, 098, 139, 142, 150, 171, 177, 184, 188, 190, 201, 202
<b>Sound Color</b>	113
<b>Soundmaster</b>	072
<b>Soundwave</b>	062, 140
<b>Standard</b>	082, 072, 075, 093
<b>Star Clusters</b>	105, 110
<b>Starmedia</b>	109
<b>Stein</b>	148
<b>Strato</b>	105, 123
<b>Strong</b>	062
<b>Sunkai</b>	073, 087
<b>Sunstar</b>	001
<b>Sunstech</b>	082, 148, 149
<b>Suntronic</b>	001
<b>Sunwood</b>	075, 093
<b>Supervision</b>	072, 105
<b>Supratech</b>	203, 213
<b>SVA</b>	057
<b>Swisstec</b>	206, 218
<b>Sylvania</b>	058, 207
<b>Symphonic</b>	058
<b>Synn</b>	072
<b>Syscom</b>	081
<b>Sytech</b>	148, 200
<b>Tamashi</b>	125
<b>Tandberg</b>	062, 162, 185
<b>Tangent</b>	117
<b>Targa</b>	110, 157, 179
<b>Tatung</b>	073, 162
<b>Tchibo</b>	067

# Appendix

<b>TCM</b>	067, 077
<b>Teac</b>	067, 072, 061, 064, 071, 110
<b>Tec</b>	093
<b>Technica</b>	162
<b>Technics</b>	032, 178
<b>Technika</b>	073, 082, 100, 140, 162, 206, 208, 218, 221
<b>Technisson</b>	100
<b>Technosonic</b>	100
<b>Techwood</b>	062, 140, 185
<b>Telefunken</b>	039
<b>Teletech</b>	072, 062
<b>Tensai</b>	073
<b>Tevion</b>	093, 097, 110, 123, 131, 164, 181, 215
<b>Textorm</b>	136
<b>Theta Digital</b>	041
<b>Thomson</b>	039, 116, 160, 168
<b>Time</b>	013
<b>Tokai</b>	077, 055, 075, 093, 113
<b>Tom-Tec</b>	076, 148
<b>Top Suxess</b>	109
<b>Toshiba</b>	033, 059, 132, 138, 153, 154, 169, 187
<b>TRANS-continents</b>	082, 081, 091, 113, 117
<b>Tredex</b>	086
<b>Trevi</b>	082
<b>TSM</b>	109
<b>TVE</b>	062
<b>Umax</b>	104
<b>UMC</b>	206, 218, 221
<b>United</b>	059, 066, 058, 062, 075, 081, 100, 105, 113, 120, 131, 156, 172, 198
<b>Universum</b>	067, 043, 077, 062, 090, 110, 140
<b>Vecatech</b>	136
<b>Venturer</b>	077, 169, 193, 208
<b>Vestel</b>	062, 140, 185
<b>Vieta</b>	061
<b>Voxson</b>	066, 082
<b>Waitec</b>	066, 104, 109, 113

<b>Walkvision</b>	064
<b>Waltham</b>	062, 140
<b>Welkin</b>	082
<b>Wellington</b>	062
<b>Weltstar</b>	062
<b>Wharfedale</b>	077, 062, 070, 100, 124, 172
<b>Wilson</b>	082, 113
<b>Windsor</b>	062
<b>Windy Sam</b>	042
<b>Wintel</b>	101
<b>Woxter</b>	104, 109
<b>Xbox</b>	163, 194
<b>Xenius</b>	077
<b>Xomax</b>	198
<b>Xoro</b>	108, 226
<b>Yakumo</b>	094
<b>Yamada</b>	091, 094, 104, 106, 126, 135, 136
<b>Yamaha</b>	032, 038, 052, 079
<b>Yamakawa</b>	055, 091, 215
<b>Yukai</b>	066, 164
<b>Zenith</b>	033, 043
<b>TV/DVD Combo</b>	
<b>Acoustic Solutions</b>	193, 208
<b>Airis</b>	216
<b>Akai</b>	212
<b>Alba</b>	216
<b>Audiosonic</b>	216
<b>Bush</b>	062, 216, 217
<b>cello</b>	198, 205
<b>Dantax</b>	122
<b>Denver</b>	128, 216
<b>Digitrex</b>	217
<b>Gold</b>	198
<b>Hikona</b>	124
<b>Logic</b>	222
<b>Marquant</b>	217
<b>MTlogic</b>	216
<b>Onn</b>	223
<b>Onyx</b>	198

<b>Philips</b>	210
<b>Proline</b>	193
<b>Prosonic</b>	208
<b>Sliding</b>	100
<b>Sogo</b>	216
<b>Swisstec</b>	218

<b>Technika</b>	208, 221
<b>UMC</b>	221
<b>Venturer</b>	193, 208
<b>TV/VCR/DVD Combo</b>	
<b>Ferguson</b>	059
<b>Matsui</b>	059

## 4. VCR Code List

Brand	Code
<b>Accent</b>	009
<b>Adventura</b>	001
<b>Adyson</b>	009
<b>Aiwa</b>	003, 028, 001, 029, 002, 068, 102
<b>Akai</b>	028, 029, 023, 012, 020
<b>Akiba</b>	009
<b>Akura</b>	009
<b>Alba</b>	010, 021, 028, 001, 009, 029, 023
<b>Allorgan</b>	020
<b>Allstar</b>	010
<b>America Action</b>	021
<b>Amstrad</b>	021, 001, 009
<b>Anam</b>	021, 003, 019, 020
<b>Anam National</b>	019
<b>Anitech</b>	009
<b>Ansonic</b>	001
<b>Aristona</b>	010
<b>ASA</b>	010, 003
<b>Asha</b>	020
<b>Asuka</b>	010, 003, 001, 009
<b>Audiolab</b>	010
<b>Audiosonic</b>	021
<b>Audiovox</b>	003
<b>AVP</b>	001, 029
<b>Awa</b>	003, 024, 005
<b>Baird</b>	021, 001, 011, 012
<b>Basic Line</b>	021, 009, 011
<b>Beaumarck</b>	020
<b>Beko</b>	011

<b>Bell &amp; Howell</b>	011
<b>Bestar</b>	021
<b>Black Diamond</b>	051
<b>Black Panther</b>	021
<b>Blaupunkt</b>	010, 019
<b>Blue Sky</b>	021, 003, 028, 051, 009, 029, 031, 068, 102
<b>Bondstec</b>	009
<b>Brandt</b>	024, 025
<b>Brinkmann</b>	028
<b>Bush</b>	010, 021, 028, 001, 051, 009, 029, 023, 068
<b>Calix</b>	003
<b>Carena</b>	010
<b>Carrefour</b>	006
<b>Carver</b>	010
<b>Casio</b>	001
<b>Cathay</b>	021
<b>CCE</b>	021, 009
<b>Centrum</b>	044
<b>CGE</b>	001
<b>Cimline</b>	009
<b>Cineral</b>	021
<b>Citizen</b>	021, 003
<b>Clatronic</b>	001, 009
<b>Colt</b>	009
<b>Combitech</b>	029
<b>Condor</b>	021
<b>Craig</b>	003, 009, 020
<b>Crown</b>	021, 003, 009, 031

# Appendix

Cybernex	020
Cyrus	010
Daewoo	021, 050, 051, 029, 006
Dansai	021, 009
Dantax	029, 068
Daytron	021
De Graaf	010, 011, 007, 004
Decca	010, 001, 029, 008
Deitron	021
Denko	009
Denon	004
Diamant	003
Dual	010, 021, 028, 001
Dumont	010, 001, 011
Durabrand	051, 044
Elbe	021
Elcatech	009
Electroponic	003
Elin	020
Elsay	009
Elta	021, 009
Emerex	002
Emerson	021, 050, 003, 001, 009, 006, 005
ESC	021, 020
Ferguson	021, 028, 001, 024, 025, 068
Fidelity	001, 009, 029, 030, 020
Finlandia	010, 003, 001, 011, 007, 005, 004, 012, 019
Finlux	010, 001, 011, 004
Firstline	021, 003, 028, 009, 006, 005, 004, 031, 102
Fisher	011
Flint	028
Frontech	009
Fujitsu	001
Funai	001, 044
Galaxi	001
Galaxis	021
Garrard	001
GE	007, 020

GEC	010
General Technic	028
Genexxa	011
Go Video	030, 102
GoldHand	009
GoldStar	003, 001, 031, 102
Goodmans	010, 021, 050, 003, 028, 001, 051, 009, 029, 020, 068
GPX	003
Gradiente	001
Graetz	011, 020
Granada	010, 003, 001, 011, 007, 004, 019, 020
Grandin	021, 003, 001, 009, 068
Grundig	010, 028, 009, 024, 029, 019, 068
Hanimex	029
Hanseatic	010, 003
Harley Davidson	001
Harwood	009
HCM	009
Hinari	021, 009, 029, 020
Hisawa	029
Hischito	006
Hitachi	010, 001, 004, 020, 044
Hoehner	021, 051
Hornyphon	010
Hughes Network Systems	004
Hypson	021, 003, 001, 009, 029, 031
Imperial	001
Ingersol	020
Inno Hit	009
Interbuy	003, 009
Interfunk	010, 011
Internal	021, 050
International	021, 003, 051
Intervision	021, 003, 028, 001
Irradio	010, 003, 009, 102
ITT	011, 012, 020
ITV	021, 003

# Appendix

English

<b>JBL</b>	021
<b>JMB</b>	028, 029, 068
<b>Joyce</b>	001
<b>JVC</b>	008
<b>Kaisui</b>	009
<b>Karcher</b>	010, 021, 051
<b>KEC</b>	021, 003
<b>Kendo</b>	021, 003, 028, 051, 009, 023, 012
<b>Kenwood</b>	008
<b>KLH</b>	009
<b>Kneissel</b>	021, 003, 028, 029
<b>Kodak</b>	003
<b>Korpel</b>	009
<b>Kyoto</b>	009
<b>Lenco</b>	021
<b>Leyco</b>	009
<b>LG</b>	021, 003, 001, 031, 102
<b>Lifetec</b>	028
<b>Lloyd's</b>	001
<b>Loewe</b>	010, 144, 003
<b>Logik</b>	009, 012, 020
<b>Lumatron</b>	044, 102
<b>Lunatron</b>	102
<b>Lux May</b>	009
<b>Luxor</b>	009, 011, 007, 005, 023, 012
<b>LXI</b>	003
<b>M Electronic</b>	003, 001
<b>Magnasonic</b>	021, 044
<b>Magnavox</b>	010, 001
<b>Magnin</b>	020
<b>Magnum</b>	051
<b>Manesth</b>	010, 009, 006
<b>Marantz</b>	010
<b>Mark</b>	021, 001
<b>Mascom</b>	051
<b>Mastec</b>	051
<b>Master's</b>	021
<b>Matsui</b>	003, 028, 029, 020, 068
<b>Mediator</b>	010

<b>Medion</b>	028, 051, 029
<b>Memorex</b>	003, 028, 001, 011, 007, 020
<b>Memphis</b>	009
<b>Metronic</b>	010
<b>Metz</b>	010, 144, 003, 019, 084
<b>MGA</b>	005, 020
<b>MGN Technology</b>	020
<b>Micormay</b>	028
<b>Migros</b>	001
<b>Minolta</b>	004
<b>Mitsubishi</b>	010, 051, 008, 007, 005, 031
<b>Motorola</b>	007
<b>MTC</b>	001, 020
<b>Multitec</b>	003
<b>Multitech</b>	001, 009
<b>Murphy</b>	001
<b>Myryad</b>	010
<b>NAD</b>	011
<b>Naiko</b>	028, 051
<b>National</b>	019
<b>NEC</b>	003, 011, 008
<b>Neckermann</b>	010
<b>Nesco</b>	001, 009
<b>Neufunk</b>	102
<b>Nikkai</b>	021, 009
<b>Nikko</b>	003
<b>Noblex</b>	020
<b>Nokia</b>	010, 021, 011, 007, 004, 023, 012, 020
<b>Nordmende</b>	051, 024, 008, 025
<b>Oceanic</b>	010, 001, 024, 011, 007, 012
<b>Okano</b>	021, 028, 009, 023
<b>Olympus</b>	019
<b>Onimax</b>	051
<b>Optimus</b>	007, 030, 044
<b>Orbit</b>	009
<b>Orion</b>	028, 029, 068
<b>Orson</b>	001
<b>Osaki</b>	003, 001, 009

# Appendix

<b>Osume</b>	009
<b>Otto Versand</b>	010
<b>Pace</b>	029
<b>Pacific</b>	028, 001, 051, 068
<b>Palladium</b>	003, 028, 009
<b>Palsonic</b>	001, 009
<b>Panasonic</b>	144, 019, 084
<b>Pathe Cinema</b>	005
<b>Penney</b>	003, 004, 020
<b>Pentax</b>	004
<b>Perdio</b>	001
<b>Philco</b>	009
<b>Philips</b>	010, 044
<b>Phoenix</b>	021
<b>Phonola</b>	010
<b>Pilot</b>	003
<b>Pioneer</b>	010, 008, 004
<b>Portland</b>	021, 050
<b>Prinz</b>	001
<b>Profitronic</b>	010, 020
<b>Proline</b>	021, 001, 051, 024, 025
<b>Prosc0</b>	021
<b>Prosonic</b>	021
<b>Protech</b>	010, 009
<b>ProVision</b>	021
<b>Pye</b>	010
<b>Quasar</b>	021
<b>Quelle</b>	010
<b>Radialva</b>	010, 003, 009, 007
<b>Radiola</b>	010
<b>Radionette</b>	003, 102
<b>RadioShack</b>	003, 001
<b>Radix</b>	003
<b>Randex</b>	003
<b>RCA</b>	024, 007, 004, 020
<b>Realistic</b>	003, 001, 011, 007
<b>Reoc</b>	028
<b>RFT</b>	009
<b>Roadstar</b>	010, 021, 003, 009, 020, 068

<b>Royal</b>	009
<b>Saba</b>	021, 024, 025
<b>Saisho</b>	028
<b>Salora</b>	011, 005, 012
<b>Samsung</b>	006, 030, 020, 068
<b>Sanky</b>	007
<b>Sansei</b>	007
<b>Sansui</b>	001, 009, 008, 012
<b>Sanyo</b>	011, 008, 007, 020
<b>Saville</b>	021, 029, 020
<b>SBR</b>	010
<b>ScanSonic</b>	020
<b>Schaub Lorenz</b>	028, 001, 011, 023, 012
<b>Schneider</b>	010, 021, 003, 028, 001, 051, 009, 029, 004, 020, 102
<b>Scott</b>	005, 044
<b>Sears</b>	003, 001, 011, 004
<b>Seaway</b>	021
<b>SEG</b>	010, 021, 050, 051, 009, 020, 044
<b>SEI</b>	010
<b>Sei-Sinudyne</b>	010
<b>Seleco</b>	003
<b>Semp</b>	006
<b>Sentra</b>	009
<b>Setron</b>	009
<b>Sharp</b>	007, 040, 102
<b>Shintom</b>	009, 011
<b>Shivaki</b>	003
<b>Shogun</b>	020
<b>Siemens</b>	010, 003, 024, 011
<b>Siera</b>	010
<b>Silva</b>	003
<b>Silva Schneider</b>	102
<b>Silver</b>	021
<b>SilverCrest</b>	051
<b>Singer</b>	009, 006
<b>Sinudyne</b>	010, 029
<b>Smaragd</b>	028
<b>Sonneclair</b>	009

# Appendix

English

<b>Sonorol</b>	007
<b>Sontec</b>	021, 003
<b>Sony</b>	001, 002, 012, 095, 112
<b>Soundwave</b>	003, 028
<b>Ssangyong</b>	009
<b>Standard</b>	021
<b>Stern</b>	021
<b>Sunkai</b>	021, 028
<b>Sunstar</b>	011
<b>Suntronic</b>	011
<b>Sunwood</b>	009
<b>Supra</b>	003
<b>Sylvania</b>	010, 001, 005
<b>Symphonic</b>	001, 044
<b>Tandberg</b>	021
<b>Tandy</b>	001, 011
<b>Tashiko</b>	010, 003, 001, 007, 020
<b>Tatung</b>	010, 028, 001, 029, 007, 005
<b>Tchibo</b>	028
<b>TCM</b>	028
<b>Teac</b>	003, 001, 051
<b>Tec</b>	009
<b>Tech Line</b>	009
<b>Technics</b>	010, 019
<b>TechniSat</b>	028
<b>Technosonic</b>	029
<b>Teknika</b>	003, 001
<b>Telefunken</b>	021, 024, 025
<b>Telerent</b>	019
<b>Teletech</b>	021, 001, 009
<b>Tenosal</b>	009
<b>Tensai</b>	021, 003, 001, 009
<b>Tevion</b>	028, 051
<b>Texet</b>	021
<b>Thomas</b>	001
<b>Thomson</b>	021, 024, 008, 025
<b>Thorn</b>	003, 011
<b>TMK</b>	020
<b>Tokai</b>	003, 009, 011

<b>Topline</b>	028
<b>Toshiba</b>	010, 029, 006, 005, 030, 068
<b>Totevision</b>	003, 020
<b>Towada</b>	009
<b>Tradex</b>	010
<b>Uher</b>	020
<b>Ultravox</b>	021
<b>Unitech</b>	020
<b>United</b>	028, 068
<b>Universum</b>	010, 003, 028, 001, 011, 012, 020, 102
<b>Vector</b>	006
<b>Victor</b>	008
<b>Video Concepts</b>	006
<b>Video Technic</b>	001
<b>Videomagic</b>	003
<b>Videosonic</b>	020
<b>Villain</b>	001
<b>Wards</b>	010, 001, 009, 006, 007, 004, 020
<b>Watson</b>	010, 051, 029
<b>Weltblick</b>	003
<b>Wharfedale</b>	044
<b>White Westinghouse</b>	021, 009
<b>World</b>	028
<b>XR-1000</b>	001, 009
<b>Yamishi</b>	021, 009
<b>Yokan</b>	009
<b>Yoko</b>	003, 009, 020
<b>Zenith</b>	050, 001
<b>ZX</b>	028, 029
<b>TV/VCR Combo</b>	
<b>Aiwa</b>	001, 029, 068, 102
<b>Alba</b>	029
<b>Amstrad</b>	001
<b>Beko</b>	011
<b>Bestar</b>	021
<b>Blue Sky</b>	021, 029, 068
<b>Bush</b>	029, 068

# Appendix

<b>Citizen</b>	021
<b>Colt</b>	009
<b>Daewoo</b>	021, 050
<b>Dantax</b>	029, 068
<b>Emerson</b>	021, 050
<b>Ferguson</b>	021, 001, 025, 068
<b>Fidelity</b>	001
<b>Firstline</b>	021
<b>Funai</b>	001
<b>GE</b>	007, 020
<b>GoldStar</b>	003, 031
<b>Goodmans</b>	021, 050, 029, 068
<b>Grandin</b>	021, 068
<b>Grundig</b>	010, 029, 068
<b>Hanimex</b>	029
<b>Harley Davidson</b>	001
<b>Hinari</b>	029
<b>Hitachi</b>	001
<b>Hypson</b>	003
<b>Internal</b>	021, 050
<b>JBL</b>	021
<b>JMB</b>	029
<b>Kneissel</b>	021, 029
<b>LG</b>	003, 031
<b>Lloyd's</b>	001
<b>Magnasonic</b>	021, 044
<b>Magnavox</b>	010, 001
<b>Magnin</b>	020
<b>Matsui</b>	029, 068
<b>Medion</b>	029
<b>Memorex</b>	003
<b>MGA</b>	020
<b>Mitsubishi</b>	010, 007
<b>Orion</b>	029, 068
<b>Pace</b>	029
<b>Pacific</b>	068
<b>Penney</b>	003, 020
<b>Philips</b>	010

<b>Portland</b>	050
<b>Radiola</b>	010
<b>RCA</b>	007, 020
<b>Saba</b>	024
<b>Samsung</b>	030, 020, 068
<b>Sansui</b>	001
<b>Sanyo</b>	020
<b>Saville</b>	029
<b>Schneider</b>	010, 001
<b>Sears</b>	003, 001
<b>SEG</b>	050
<b>Sharp</b>	007
<b>Siemens</b>	010
<b>Sinudyne</b>	029
<b>Sony</b>	001, 002, 112
<b>Sylvania</b>	010
<b>Symphonic</b>	001
<b>Tatung</b>	029
<b>Teac</b>	001
<b>Technics</b>	010
<b>Technosonic</b>	029
<b>Telefunken</b>	021
<b>Thomas</b>	001
<b>Thomson</b>	021, 025
<b>Toshiba</b>	029, 030, 068
<b>United</b>	068
<b>White Westinghouse</b>	021
<b>Zenith</b>	011

## 5. Audio & AUX Code List

Brand	Code
<b>Amplifier</b>	
Acoustic Solutions	078, 082, 084, 094
Cambridge Audio	106
Curtis Mathes	014
Denon	012
Durabrand	089, 090
Goodmans	093
Hitachi	089
JBL	042
Logitech	074
Magnat	042
Magnum	094
Mustek	093
Optimus	014, 029
Pacific	094
Pioneer	014, 029
RCA	014
Sven	090
Tevion	094
Trice	090
upXus	078
Vieta	042
Yamaha	016, 030
<b>Accessory</b>	
Apple	038
Sony	008
Yamaha	121, 122
<b>Receiver</b>	
Acoustic Solutions	087
AEG	071, 072
AFK	071
Aiwa	005, 073
Akai	004, 021, 072, 087
Alba	087, 088
All-Tel	072
Amstrad	024, 072
Anam	021
Arcam	044
ASCOMTEC	071
Audiolab	043
Audiosonic	071
Audiotronic	043
Bang & Olufsen	028
Basic Line	088
Belson	071
Binatone	071
Blue Sky	072, 087
Bose	046, 099
Bush	027
Cambridge Audio	080, 101
Cat	071
CCE	065
Centrum	045, 071
Clatronic	027, 071
Cosmotron	027
Daewoo	076
Dantax	018, 072
Denon	067, 025, 036, 075
Denver	071
DiK	027
Dual	045, 072
eBench	024, 027
Elta	024, 027, 072
EuroLine	098
Fine Arts	043
Firstline	027
Garrard	013, 018
Genexxa	010
Global Sphere	098
Goodmans	021, 024, 027, 071, 072
Grundig	043, 013, 027, 035, 087
Grunkel	024, 072
Hanseatic	072
Harman/Kardon	043, 056, 003, 011, 057, 060
Harwood	024

# Appendix

HCM	072
HE	071
Hitachi	088
Hitech	024
Hiteker	071
Home Tech Industries	071
Hyundai	087
Inkel	020
Intersound	024
JBL	056, 057
JVC	001, 019, 068
Kenwood	033, 061, 091, 010
Kioto	027
Kompernass	027
KXD	071
LG	054, 086, 125
Lifetec	027
LXI	024
Magnat	071
Magnavox	043, 035
Marantz	043, 049, 031, 035, 053
Matsui	024, 027
MBO	065
Medion	027, 087
MEI	072
Metz	088
Micromega	043
Microstar	027
MTlogic	087
Musicmagic	035
Mustek	065
Mx Onda	024, 027
Myryad	043
NAD	015, 021
Nexius	072
Nikkai	071
Nikkei	024
Norcent	071
NTDE Geniesom	024

Onkyo	006, 063, 114
Optimus	032, 010, 024
Orient Power	024
Orion	018
Palladium	027, 045, 054, 072, 086
Panasonic	109, 085, 058, 059, 062, 110, 111, 113, 128
Paramount Pictures	045
PCCW	128
Philips	043, 049, 031, 035, 048, 053, 117
Phonotrend	020
Pioneer	052, 032, 010, 039, 081, 097
PJ	071
Polk Audio	053
Prima Electronic	027
Proline	027, 072
ProVision	071
QONIX	072, 087
Radionette	054, 100
Recco	027
Redstar	071
Revox	007, 010, 035
Roadstar	027
Rotel	026
Samsung	013, 055, 119, 123, 083
Sansui	021, 035, 098
Sanyo	024
Schneider	003, 024, 045, 072
Scott	071
SEG	088
Sharp	010, 022, 070, 100
Sherwood	020, 022
Siemens	021
Silva Schneider	027, 072, 086
SilverCrest	087
Sony	040, 034, 047, 103, 107, 037, 066, 077, 079, 096, 108, 116, 118, 124
Soundwave	021
Stereophonics	032
Sumida	024

# Appendix

English

<b>Sunfire</b>	061
<b>T+A</b>	050, 105
<b>TAG McLaren</b>	043
<b>Tandberg</b>	088
<b>Targa</b>	054
<b>TCM</b>	027
<b>Teac</b>	018, 021
<b>Technics</b>	109, 085, 058, 059, 011, 110
<b>Techwood</b>	088
<b>Tedelex</b>	098
<b>Tevion</b>	071
<b>Thorens</b>	043
<b>Thorn</b>	024
<b>Tokai</b>	072
<b>Toshiba</b>	092

<b>United</b>	072, 098
<b>Universum</b>	013, 021, 024, 027, 045, 072, 076, 095
<b>Venturer</b>	027, 072
<b>Vestel</b>	088
<b>Victor</b>	001
<b>Waitec</b>	065
<b>Watson</b>	027
<b>Wellfund</b>	024
<b>Welltech</b>	027
<b>Wharfedale</b>	072
<b>Xenius</b>	072
<b>Yamaha</b>	009, 002, 010, 017, 023, 041, 051, 064, 069, 112, 115, 120
<b>Yukai</b>	065
<b>Zenith</b>	024

MDB1.3

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# Appendix

not necessarily be able to recompile the application to use the modified definitions.)

- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
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