



HDS-600RS



User Guide











IMPORTANT SAFETY INFORMATION!

Read these instructions carefully before using the product.

Install Safely

- Place the unit on its feet on a firm, stable, horizontal surface.
- Unplug the equipment from the power socket during installation and follow all connection instructions.
- The mains plug must remain easy to unplug from the power socket once the equipment is installed.
- DO NOT place heavy objects on the equipment.
- · Keep plastic packaging away from babies and children.

Protect from water

- DO NOT expose the equipment to rain, moisture, dripping or splashing.
- DO NOT place objects filled with liquids, such as vases or drinks, on or near the equipment.

Prevent overheating

- Locate the equipment in an open, well ventilated area away from heat sources such as heaters, other electrical equipment or direct sunlight.
- DO NOT block any of the ventilation openings, for example with magazines, curtains or tablecloths.

General Precautions

- DO NOT place naked flames such as lighted candles on or near the equipment.
- Whenever it is plugged into a live power socket, this equipment is still connected to the mains even if the equipment is turned off.
- DO NOT remove the cover due to risk of electric shock from live parts inside.
- DO NOT allow objects to drop or be pushed inside the equipment, for example by children.
- DO NOT expose the remote control batteries to excessive heat such as fire or sunshine.

Equipment Care

- Unplug the equipment from the power socket before cleaning. Clean with a dry or slightly damp cloth.
- If the equipment is damaged, unplug it from the power socket and have it checked by qualified personnel before operating it any further.

Hard Drive

- DO NOT move the receiver whilst the power is on.
- DO NOT expose the receiver to intense vibration or magnetic objects, such as loud speakers, transformers etc.

Disposal

 The crossed-out wheeled bin symbol indicates that the equipment should not be disposed of with other household waste at the end of its working life and should be dealt with separately - contact the place of purchase or local authorities for details.



 Uncontrolled disposal of such waste can harm the environment and human health due to the presence of hazardous substances, so your role in preventing this is important.

Contents

	IMPORTANT SAFETY INFORMATION!	1
1.	Introduction	6
	Unpacking the Box	7
	Controls and Connectors	 8
2.	Putting It All Together	10
	Satellite Inputs	10
	Connecting to the Internet	10
	Remote Control	11
	HDMI-TV Connections	12
	SCART-based Connections	13
	Audio Connections	14
3.	Getting Started	15
	Switching on for the First Time	16 17 18
	Tuner Issues Single Tuner Mode Checking the Signals	21
	Controlling your TV	23
	Viewing Changing Channel Sound Controls	24

	The Information Bar	25
	Subtitles	
	Text and Interactive Services	
	Watching freesat On Demand TV	27
	Pause, Rewind and Fast Forward	28
	Recording Programmes	29
	Stopping a Recording	30
	Series Linking	30
4.	Moving On	31
	The Main Menu	31
	Using the Guide	32
	Setting Reminders	32
	The Guide's Genres	
	Using Programme Information	34
	Creating a Favourites List	
	Editing a Favourites List	
	Renaming a Favourites List	
	Using the Library	
	Managing Scheduled Recordings	
	Using Apps	41
	Internet Connection Information	41
5.	Using TV anywhere	42
	Accessing your TV anywhere on a Mobile Device	42
	Your HDS-600RS Sling Settings	43
	Sling Client Connections Settings	
	Rename your HDS-600RS	
	Change Password	
	Sling 'Activity Light' Settings	45
6.	Settings	46
	Languages	46
	TV, Audio & Library Setup	47

	Sling	49
	Parental Control	49
	Menu Preferences	50
	Network Setup	50
	Power Options	51
	Technical Information	51
	Tuning Preferences	51
	Factory Reset	51
7 .	Getting Help	52
	Updates	
	Over the Air Updates Internet Software Updates	
	Manual Software Update	
	FAQs	53
	Contacting Customer Support	55
8.	Remote Control TV Codes	56
	Programming the Remote with Control Codes	56
	Scanning through Control Codes	56
	TV Manufacturers' Control Codes	57
9.	Symbols and Icons	66
	Symbols on HDS-600RS	66
	Information Icons	67

1. Introduction

Thank you for purchasing your EchoStar SlingLoaded® HDS-600RS freesat+ set-top box.

The HDS-600RS is a state-of-the-art high definition digital video recorder (DVR) combining dual channel **freesat** satellite television reception with the flexibility of personal video recording.

- SlingLoaded[®] watch your *TV anywhere* and control the HDS-600RS from a PC, MAC or suitable mobile device over the Internet or via your broadband mobile network.
- Receives over 150 subscription-free freesat channels.
- HDMI-enabled watch high definition TV (when connected to a HDTV via HDMI).
- Pause and rewind live TV.
- Record two channels simultaneously or watch one channel while recording another.
- Integrated 500GB hard disk drive.
- Optical digital audio output for high quality audio, e.g. Dolby® Digital.

Unpacking the Box

Carefully unpack the box and familiarise yourself with each item:

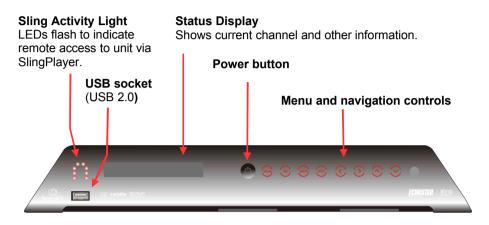
- The HDS-600RS unit
- 1 Power cable (1.8m)
- 1 HDMI cable (1.5m)
- 1 Network cable (2.0m)
- 1 Remote control
- 2 AAA size batteries
- User Guide
- Quick Start Guide



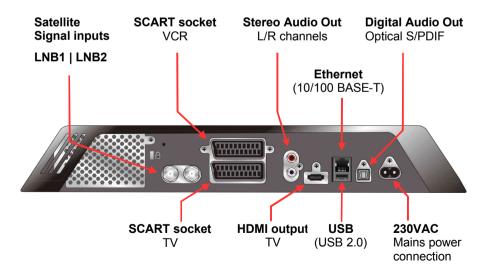
Controls and Connectors

This section shows the main features of your HDS-600RS unit.

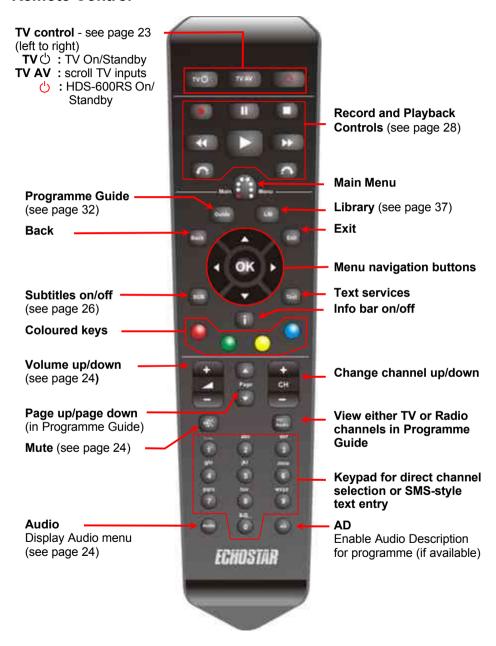
Front View



Rear View



Remote Control



2. Putting It All Together

This section describes the basic connections you need to operate your set-top box. Your HDS-600RS rear panel has connections for many types of audio and video equipment as well as two Satellite LNB inputs. In particular, there are connections for two types of video output:

- TV with HDMI input
- TV, Video and DVD appliances with SCART connectors

There are also connections for two types of audio output and USB ports for connecting memory sticks.

Satellite Inputs

The HDS-600RS is designed to use two satellite LNB inputs. It will operate with a single input but many of the advanced functions will not be available. If you intend to use a single input ensure that it is connected to LNB1 (see page 8). We strongly advise that two feeds are connected.

Your satellite dish should be aligned to the Astra 2 satellite at 28.2°E.

Connecting to the Internet

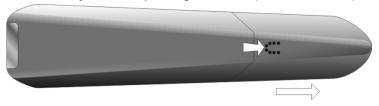
The HDS-600RS is designed to work with a wired Ethernet connection. If your router is not in the same room as your HDS-600RS you can used a pair of 'Power-line' devices (for example: Sling Link, see www.myechostar.com for details) which use the home electrical wiring to carry the Ethernet signal.

Before connecting an Ethernet cable to the HDS-600RS, unplug the HDS-600RS from the mains. With the connection to your network in place, reconnect your HDS-600RS to the mains. It may take the HDS-600RS a few minutes to start up the first time it is connected to the router.

To check your internet connection, see page 41.

Remote Control

- 1. Remove the wrapping from the two AAA batteries supplied with the unit.
- 2. Turn the remote control over. Open the battery cover by pressing down on the symbol and pushing the cover (as shown below).



3. Slide the two AAA size batteries into the compartment so that '+' and '-' marks on the batteries and inside the remote control match up.

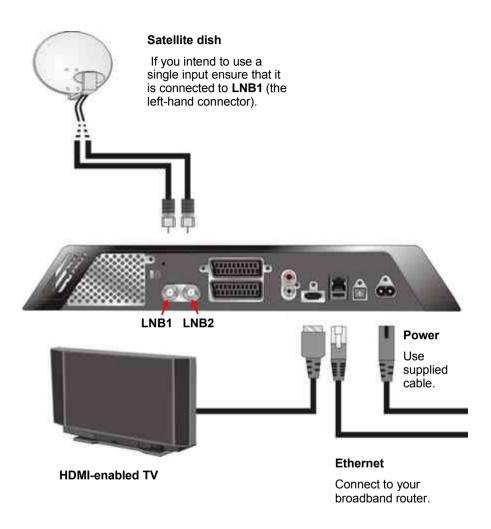


4. Replace the battery cover.

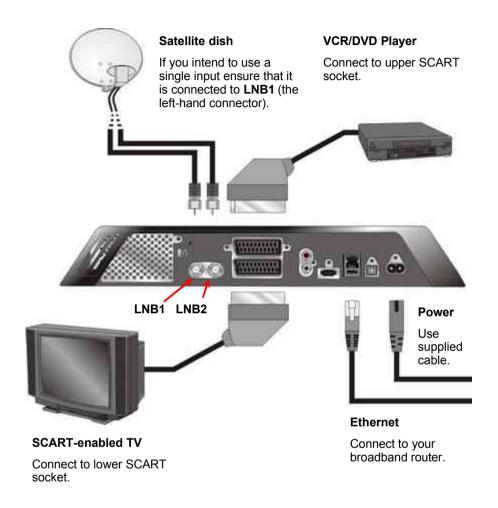
The unit displays a warning message on screen when the batteries need replacing. Also, the LED on the remote will make an additional flash after a button has been released.

Tip. When changing the batteries, remove the cover and gently tap the remote into the palm of you hand and the batteries should drop out.

HDMI-TV Connections



SCART-based Connections



Tip. If you have the choice, you should use a HDMI connection for your TV. Only use good quality, screened cables.

Audio Connections

Your TV is equipped with basic speakers and audio is transmitted on the HDMI and SCART connections. However, for the best performance, you could connect external audio equipment such as a music centre or home theatre system using one of the two available audio outputs:

- RCA/phono sockets for stereo audio (white and red jacks).
- Digital audio output for Dolby Digital or DTS-capable receivers (Optical S/PDIF).

Tip. Cables are not supplied for stereo audio and digital audio outputs.



3. Getting Started

Before you switch on the power to your HDS-600RS, check the following:

- Have you put batteries in the remote control (see page 11)?
- Is the unit connected correctly (see page 10)?
- Is the TV switched on?

Switching on for the First Time

Press (On/Standby button) either on the remote or on the front of the unit.

The HDS-600RS may take up to a minute to power up the first time.

When initialisation is complete, the Setup Wizard is displayed. This will guide you through the process of setting up your satellite signal and detecting **freesat** channels.



Follow the on-screen instructions to set up your HDS-600RS.

Press **OK** to start the installation process.

Note. The HDS-600RS will start the installation process when it locates the home transponder – this may take several minutes

STEP 1: Enter your Postcode



- 1. Using the numbered buttons on the remote*, enter your postcode. The HDS-600RS requires your postcode to be able to access your correct regional programme listings.
- If you make a mistake, press the RED button to delete the last character you entered.
- 3. When you've entered a valid postcode, you'll be prompted to press the **BLUE** button to continue. Check that the postcode is correct before you do so.

*This method of text input is called *multi-tap*: the same system used to enter text messages on mobile phones. Each key represents 3 or 4 characters. For example, the "2" key represents **a**, **b**, **c** and **2**. To enter a **b** character, you would press the "2" key twice. To enter a number **2**, you would press the key four times. If you need two successive characters that are on the same key, enter the first one, then pause for a few seconds before entering the second one. So, to type **b2**, you would press the "2" key twice, pause, and then press the "2" key a further four times.

STEP 2: Set the PIN (optional)



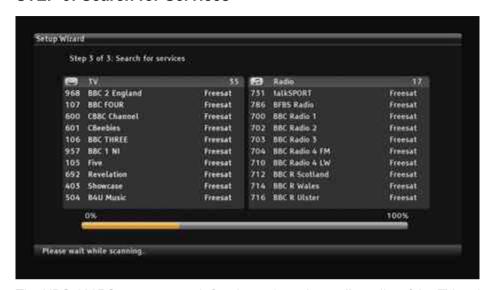
The unit now gives you the option to set a PIN code to restrict the viewing of any programmes broadcast or recorded with parental guidance advice. Before a user can view these programmes, they will need to enter the PIN code.

Tip. You can choose to enable or disable PIN protection at any time through the Settings menu (see page 49).

- 1. Use the ▲ and ▼ keys to choose the required option:
 - No PIN Protection
 - Set PIN Protection
- 2. Press **OK** to accept.
- 3. If you select **Set PIN Protection**, use the numbered buttons on the remote to enter a PIN number
- 4. Press the **BLUE** button to save the PIN.

Tip. If you don't enter a PIN, the unit will use the default code "0000". If you have forgotten your PIN, see page 49.

STEP 3: Search for Services



The HDS-600RS starts a search for channels and compiles a list of the TV and radio services it has found. The bar at the bottom of the screen indicates progress.

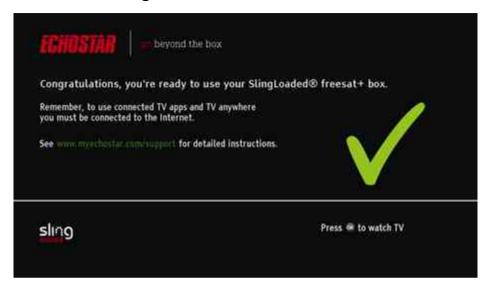
About freesat

freesat offers over 150 digital satellite TV and radio channels including BBC and ITV HD channels. It is a subscription-free service with channels and services being added all the time.

For more information, and a complete list of channels, visit:

www.freesat.co.uk

STEP 4: Watching TV



Once the HDS-600RS has successfully completed its search for channels, the screen shown above is displayed. If this is not the case, see **Tuner Issues** on the next page.

Press **OK** to watch TV. The unit will show the first channel in its list of detected channels.

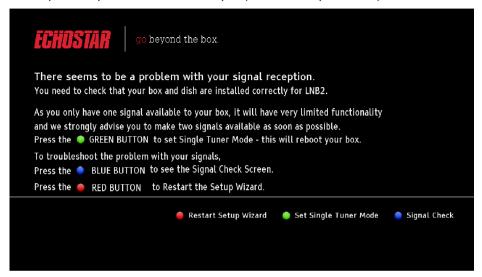
All done!

- To learn how to set up the remote for use with your TV, go to page 23.
- To find out how to make recordings, go to page 29.
- To read about the Programme Guide, go to page 32.
- To explore TV anywhere, go to page 42.

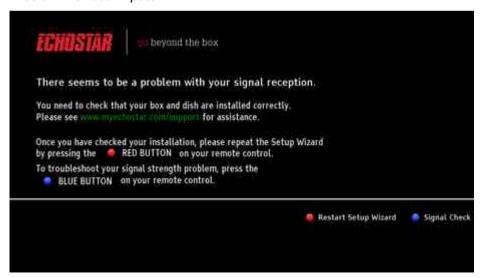
Tuner Issues

Your HDS-600RS will display one of the following screens if it discovers a problem with your satellite reception:

One input OK, problem with other input (in this example, LNB2):



Problem with both inputs:



If you see one of these screens, check your satellite input connections.

The unit offers you some or all of the following options:

- Press the RED button to run the wizard again. Choose this option if you have found and rectified a problem with your satellite connections.
 If you have not identified the cause of the problem yet, press the BLUE button (see *Checking the Signals* on the next page).
- Press the GREEN button if you have only connected a single input from your dish and this has been detected successfully by the unit (see Single Tuner Mode, below).
- Press the BLUE button to check your input signals (see Checking the Signals on the next page).

Single Tuner Mode

If you have only connected a single input from your dish, and it has been detected successfully by the unit, press the **GREEN** button to set the unit to **Single Tuner Mode**.

Note. Functionality will be limited if only one signal used. We strongly advise that 2 feeds are connected. If you do use a single feed, ensure you have connected it to LNB1 – see page 8.

Note. If your satellite dish only has a single LNB do not attempt to split this to create two inputs for the HDS-600RS. This approach does not work. You will need to install a multiple-LNB.

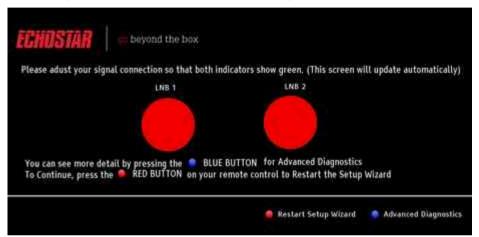
Upgrading from Single Tuner Mode

If you upgrade your satellite receiver from a single to a dual system, you will need to perform a factory reset to allow the unit's second tuner to operate (see page 51). This action will delete your timed recording schedules but will not delete existing recordings.

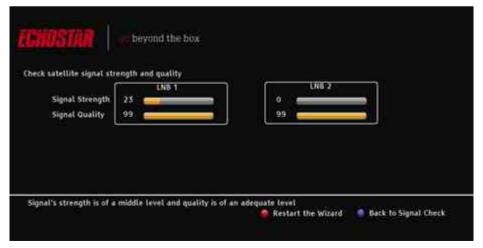
Checking the Signals

To check the signal strength after running the wizard, press the **BLUE** button.

The signal check page shows two spots on the screen, indicating the signal status on each of the inputs. A **RED** spot indicates a connection problem; a **GREEN** spot shows that the connection is acceptable.



Press the **BLUE** button again to see more information about signal strength on the two feeds. Make a note of this information if you need to contact your installer about a problem with your signal feeds.



Controlling your TV

The HDS-600RS remote control has a number of buttons that can be used to control your TV. These are:

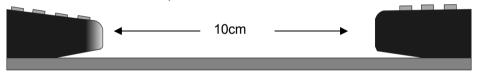


Volume up/down Mute TV On/Standby TV source

To be able to use these buttons, your HDS-600RS remote needs to 'learn' the appropriate codes from your TV's remote (you could also program the remote with the appropriate control codes for your TV - see page 56).

To capture the control codes from your TV's remote control:

1. Position the HDS-600RS remote and the TV remote facing each other, on a level surface, 10cm apart.



HDS-600RS remote TV remote

- Press and hold down the ▼and OK keys together. The Main Menu button will flash briefly and, after about 5s, will remain illuminated. Release the ▼and OK keys. The remote is now in its learning mode.
- 3. On the HDS-600RS remote, press the key you want to programme, for example **Volume +.**
- On the TV remote, press and hold the corresponding key (in this case, Volume +). The Main Menu button flashes; when it stops release the remote key.
- 5. The HDS-600RS remote has now learned the code for this function.
- 6. Repeat the procedure (from step 3) for the other keys you want to programme.
- 7. When you have finished, press the **OK** key.
- 8. The **Main Menu** button will flash rapidly 10 times to confirm programming is complete and return the remote to its normal mode.

Viewing

Changing Channel



You can change channel in several ways:

- Press the channel up or channel down key.
- Enter the channel number.
- Press OK to display the channel list and use the ▲ and ▼ keys to select the desired channel and then press OK to view.
- Press the **Guide** key, use the arrow keys to select a genre and then press **OK** (see page 32).
- To see a list of all available channels, press the Guide key twice.

Whenever you change channel, the information bar is displayed across the bottom of the screen for a few seconds.

Sound Controls

Tip. You will need to program the **VOL+/-** and **MUTE** keys to function with your TV (see page 23).



Adjusting the volume

To adjust the sound level, use the **VOL+** /- button on the remote.

Muting the sound

To turn the sound off, press the **MUTE** button. To restore sound, press the **MUTE** button again or use the **VOL +/-** button.

The Audio menu

Press the **AUDIO** key to view audio quality options. Use the arrow keys to select the required option. Press **OK**.

The Information Bar



The Information Bar is displayed across the bottom of the screen for a few seconds whenever you change channel. It shows details about the current channel and programme.

You can also view it at any time by pressing the **i** key.

Use the ▲ and ▼ keys to view different channels.

Use the ◀ and ▶ to browse across the programmes scheduled for transmission on this channel.

Press the **GREEN** key to set a reminder; the unit will alert you when the program is about to start (see page 32).

Press the **BLUE** key to change the picture size (the current resolution is shown in the top right corner of the info bar's symbol area.

Press the **Record** button to record the highlighted programme (or stop the recording if it is already in progress).



Tip. The information icons on the right hand side give you additional information about the programme (see page 67). For example the type of transmission (HD or SD), the resolution, the availability of subtitles, text or interactive services.

Subtitles



Press the **SUB** key to display the Subtitle menu.

Use the ▲ and ▼ keys to select the subtitle language. Press **OK** to select.

Tip. If you use subtitles, you won't be able to access text services at the same time. For Language selection, see page 46.

Text and Interactive Services

Some channels (BBC, ITV) offer text or interactive services. Press the **Text** key to display the service. These services are only available when you are watching live TV with subtitles off.





Watching freesat On Demand TV

To access BBC iPlayer, and other On Demand TV services, your HDS-600RS must be connected to a suitable broadband connection (see page 41).

Tip. BBC iPlayer can be found at Channel 901 and ITV Player will be at Channel 903 when it launches (at the time of printing)

You can also access BBC iPlayer from any BBC channel (except *CBBC* or *CBeebies*).

- 1. Press the **Text** or red button.
- 2. Follow the on-screen instructions to access BBC iPlayer (service 7001).

Tip. The appearance and operation of **freesat** On Demand TV may change since the services are undergoing continual development - visit www.freesat.co.uk for the latest information.

Pause, Rewind and Fast Forward

When watching TV, there's no need to miss any of the action. You can pause "live" TV for up to one hour. You can rewind a programme to see a scene again and then fast forward onwards to rejoin the live action.

When you pause a programme, the unit will continue to save the output from the current channel for up to one hour. Thereafter, it will begin to play back the programme from where you left off and continue to save live transmissions.

Tip. The HDS-600RS saves up to one hour of the current channel's transmissions for you to rewind and replay. This buffer is reset whenever you change channel: you can only rewind as far as the last channel change.



Press the **PAUSE** button to pause playback.

Press the **STOP** button to halt the current programme.

Press **FAST FORWARD** to double the playing speed. Repeated presses of the button doubles the fast forward speed up to 64 times normal playing speed.

Press **SKIP FORWARD** to advance timeshifted or recorded content by 30 seconds.

Press the **PLAY** button to resume your viewing after pausing, rewinding or fast forwarding.

Press **FAST REWIND** to rewind the programme. Repeated presses of the button doubles the rewind speed up to 64 times normal playing speed.

Press **SKIP BACKWARD** to 'rewind' the programme by 10 seconds.

Tip. These buttons have the same functions when you are viewing recorded programmes.

Recording Programmes



Press the **RECORD** button to start recording live TV.

If you want to record a different channel:

- Press the GUIDE button, browse to and highlight the programme you want to record (see page 34) and then press the RECORD button.
- Press the INFO button, browse to and highlight the programme you want to record (see page 25) and then press the RECORD button.

Press the **LIBRARY** button to access previously recorded programmes (see page 37).

You can also access the Library (see page 37) from the main menu (see page 31).

To show that a programme is scheduled to be recorded, a symbol is shown in the icon section (see page 67) of the Info bar and Favourites list. In the Programme Guide, the scheduled programme is highlighted in red.

If you change your mind, and want to cancel a scheduled recording:

- 1. Select the programme in the Programme Guide.
- Press the RECORD button.
- 3. Press the red button to cancel the recording.
- Press OK to confirm.

Tip. Current and future recordings are listed in the **LIBRARY** under *Scheduled Recordings* and can be edited or deleted there (see page 37).

Stopping a Recording

To cancel the recording of a live programme, press the **■** (stop) button.

Press the **OK** button to stop the recording or press the **Back** button to dismiss the message and continue recording the programme.



Tip. To stop the recording of a future programme, select it in the guide (see page 34) or info bar (see page 25), press the Record button and then follow the on-screen prompts.

Series Linking

When you press the record button, the HDS-600RS displays this message if the programme is part of a series.

To just record the selected programme:



- 1. Press the ▼ key to highlight *Record Just This Programme*.
- Press OK.

To record the selected programme and automatically record all other programmes in the same series, simply press the **OK** button.

4. Moving On

The previous chapter described the basic use of your HDS-600RS unit for watching TV and for making and viewing recordings. This section describes the onscreen Main Menu. Within the Main Menu you have access to the Programme Guide, your Favourites Lists, Library, Apps and Settings.

The Main Menu

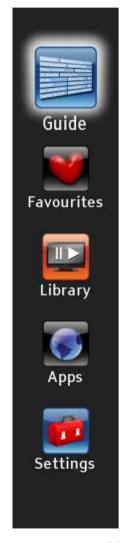


Press the **MAIN MENU** button on the remote to access the unit's advanced functions:

- Guide (see page 32)
- Favourites (see page 35)
- Library (see page 37)
- Apps (see page 40)
- Settings (for Sling settings, see page 43; for all other settings, see page 46)

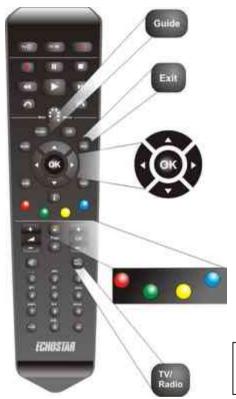
The Main Menu bar is displayed on the left side of the screen. To navigate the main menu and its sub-menus, use the arrow keys (either on the remote or the front of the unit) to highlight the option you want and press the **OK** button to select it.

Press the **EXIT** button to hide the Main Menu bar.



Using the Guide

The Guide lists all the channels you can view and has programme details for up to 7 days. You can use the guide to select your current viewing channel, to record another programme or to schedule future recordings.



Press the **GUIDE** key once to see the list of genres (or select GUIDE on the Main Menu). Press it twice to see all channels.

Press the **EXIT** key to return to your current program.

Use the ▲ and ▼ keys to select the channel of interest and then use the ◄ and ► keys to view current and future program details.

Press the **OK** key to view a highlighted program (if it is currently being broadcast). If the program is not currently being broadcast, pressing the OK button will set a reminder (see below).

The **RED**, **GREEN**, **YELLOW** and **BLUE** keys can be used to move the guide information forward or back by 2.5 hours or 1 day at a time.

Tip. When in normal TV viewing mode, use the TV/Radio key to toggle between radio and TV services.

Setting Reminders

You can set a reminder from the Info bar (see page 25) or from the Guide (see above). When you do so, the HDS-600RS will alert you two minutes before the programme is scheduled to start so you can switch channels or record the programme. Unless you cancel the alert, it will remain on screen until two minutes after the scheduled start time.

Programmes with a reminder set are highlighted in green in the programme guide and have a green circle in the symbols area of the guide and info bar (see page 67).

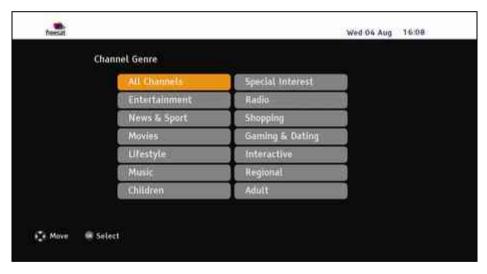
Dealing with a reminder

- Press **OK** to switch channels and view the programme.
- Press the **Record** button to record the programme and continue with your current viewing.
- Press the **Back** button to dismiss the reminder and continue with your viewing.



The Guide's Genres

freesat provides you with access to over 150 TV channels. To organise these, the Guide is divided into a number of genres.



Use the ▲ and ▼ keys to highlight a genre and then press **OK** to view its channels.

Tip. To view the All Channels category quickly, press the GUIDE button twice.

Using Programme Information

Within a channel list, use the ▲ and ▼ keys to select the channel of interest and then use the ◀ and ▶ keys to highlight programmes. Information about the programme is provided by the information icons (see page 67).

Use the coloured buttons to move the guide information forward or back by 2.5 hrs (a full screen) or 1 day at a time:

RED Move guide back by 2.5 hours (not available for

programmes already broadcast).

GREEN Move guide forward by 2.5 hours (a full screen).

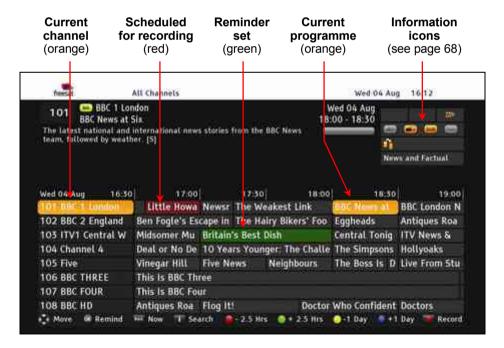
YELLOW Move guide back by 1 day (not available for programmes

already broadcast).

BLUE Move guide forward by 1 day.

Press **OK** to set a reminder for the highlighted programme.

Press the **Record** button to record the highlighted programme (or to stop a recording if it is already scheduled or in progress).



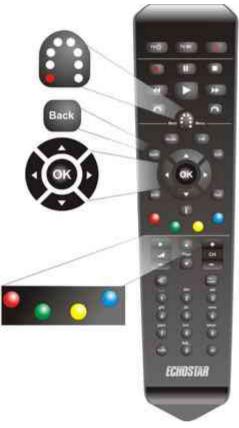
Creating a Favourites List

freesat provides you with access to over 150 TV channels. Finding your usual viewing channels in the Guide listings can therefore be difficult and time-consuming. To make channel selection easier, you can create up to four Favourites lists: reduced listings showing just those channels that you watch regularly.

To select or edit a Favourites list:

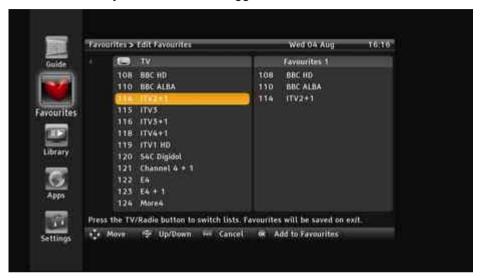
- Press the Main Menu button.
- Use the ▼ key to highlight FAVOURITES, then press OK.
- Use the ► and ▼ keys to highlight the Favourites list you want to set up or edit. By default, the Favourites feature is turned off and the lists are named Favourites 1, 2, 3 or 4.
- 4. Choose one of the following options:
 - To set-up or edit the selected list, press the YELLOW button. Go to section Editing a Favourites List on page 36.
 - To change the name of the selected favourite list, press the GREEN button. Go to Renaming a Favourites List on page 36.
 - To select an existing
 favourites list press the OK
 button. If the list has been
 set up, the unit enables it for channel selection. If the list is empty, a
 status message is displayed; press the OK button again to continue.
 - To clear the selected list, click on the **RED** button.

Use the Channel buttons (see page 24) or the Information bar (see page 25) to select channels from within an active Favourites list.



Editing a Favourites List

Press the **YELLOW** button to create or edit the selected Favourites list. Press the **TV/RADIO** key on the remote to toggle between radio and TV services.



Adding channels

To add a channel to the Favourites list, select it in the left-hand list using the ▲ and ▼ buttons. Then press **OK**. The channel is added to the Favourites list.

Repeat the procedure to add further channels to the list.

Deleting channels

To delete a channel from the Favourites list:

- 1. Use the ▶ key to scroll across to the list.
- Use the ▲ and ▼ keys to highlight the channel to be removed from the list.
- 3. Press the RED button.

Renaming a Favourites List

Press the **GREEN** button to change the name of the selected Favourites list. You can use the numeric keys to enter your text in multi-tap style or, alternatively, press the **YELLOW** button to use a virtual keyboard.

- In multi-tap style, press the **BLUE** button to switch to capital letters.
- In virtual keyboard mode, press the BLUE button to switch to symbols.

Press the **GREEN** button to save the new name or the **Back** button to discard any changes and revert to the original name.

Using the Library

The Library stores your recorded programmes. You can access the **Library** from the Main Menu or directly by pressing the **LIB** key on the remote control.

Tip. Your HDS-600RS is fitted with a 500GB hard drive with a capacity to record about 120 hours of HD programmes or 300 hours of SD programmes. In the lower left corner of the *Library* screen the HDS-600RS displays the percentage of the drive currently occupied by recorded programmes.

Playing a recorded programme

Use the ▲ and ▼ buttons to highlight the recording you want to view and press **OK**. If you have viewed the recorded programme previously you can choose to resume viewing or restart from the beginning of the recording.



At the end of the recording the Library menu is re-displayed.

Deleting a recording immediately

- 1. Select the recording you want to delete using the ▲ and ▼ buttons.
- 2. Press the **RED** key to delete the selected recording immediately.

Deleting a recording after a specified period

- Select the recording in the Library list.
- 2. Press the **GREEN** key to change the protection options on the recording.
- 3. To save the recording for a specified period, press the ▶ key and choose from the following options:
 - Save Forever (the default option)
 - Save for 1 week.
 - Save for 2 weeks.
 - Save for 1 month.
 - Save for 2 months.
 - Delete now.

Tip. Recordings may be manually deleted at any time if there is insufficient space on the hard disk drive for a new recording.

Renaming a recording

- 1. Select the recording in the Library list and press the **GREEN** key.
- 2. Press the ▼ key to select the *Rename* menu option.
- 3. Press the ▶ key and use the *multi-tap entry method* screen to enter a new name.
- 4. Press the **GREEN** button to save the new name or the **Back** key to discard any changes and revert to the original name.

Password-protecting recordings

- 1. Select the recording in the Library list.
- Press the **BLUE** key to change the protection options on the recording. If the recording has previously been locked, you will need to enter the password to unlock it.

Managing Scheduled Recordings

To view a list of current and future recordings:

- 1. Select **LIBRARY** from the main menu.
- 2. Select the Scheduled Recordings option.



Editing a recording schedule

To edit an existing timer event:

- 1. Use the ▲ and ▼ keys to select the timer event and then press **OK**.
- 2. Use the ▲ and ▼ keys to select alternative times or channels for the programme you want to record.
- 3. Use the ◀ and ▶ keys to select the next programme in the series (if you have asked for the whole series to be recorded).

Deleting a scheduled recording

- Use the ▲ and ▼ keys to navigate up and down the timer list. Select the listing to be deleted.
- 2. Press the **RED** key to delete an existing timer event.
- 3. Press **OK** to save settings and return to the Timer Menu.

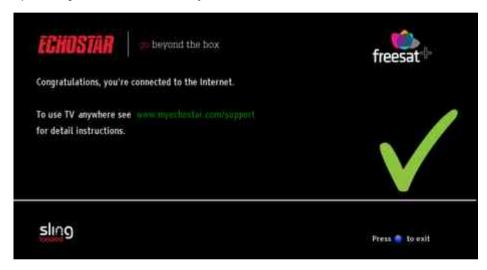


Using Apps

The Apps menu is reserved for future Internet-based Video & Audio services. Applications will automatically be added to this menu as they become available as part of HDS-600RS software updates (see page 52).

Internet Connection Information

Click on the **SlingLoaded** icon in the Apps menu for information about setting up **TV anywhere** and to check your internet connection.



5. Using TV anywhere

TV anywhere allows you to watch live or recorded programming from your HDS-600RS on a supported Windows or Macintosh based computer or supported mobile device.

To use TV anywhere you need to:

- Connect your HDS-600RS to the internet (see page 10).
 You will require an unrestricted Internet connection (upload from HDS-600RS) of at least 150kbps to watch on a mobile phone or 256kbps from a computer or laptop. These are the minimum specifications: higher bit rates will result in a better picture quality.
- Visit <u>watch.slingbox.com</u> using a Windows or Macintosh computer on your home network.
- 3. Sign into or create your Sling Account.
- 4. Click on the HDS-600RS icon within the Sling Directory listing and enter the admin password. By default the **admin** password is "admin".

Tip. You can change this password at any time from within Sling Settings. For instructions on how to change your password read the section 'Change Password' on page 44

Accessing your TV anywhere on a Mobile Device

You can watch Live and recorded TV from your SlingLoaded HDS-600RS on many of the leading mobile platforms.

Visit <u>uk.slingbox.com/go/spm</u> to learn more.

Your HDS-600RS Sling Settings

Press the Main Menu button.

Use the ▲ and ▼ keys to highlight **Settings** option. Press **OK**.

Use the ▲ and ▼ keys to highlight the **Sling** menu option. Press **O**K.

The Sling menu is PIN-protected. The default is "0000". Please change this to a more secure code as soon as possible (see page 49).



Sling Client Connections Settings

Enable All This setting allows you to access your HDS-600RS from

both inside and outside of the home. This is the default

setting.

Disable All This disables all SlingPlayer functionality. No connections

will be permitted if this option is selected.

Enable Local Only This setting only allows connections from within the home.

Connections originating from clients outside the local network (such as over the internet) will be refused.

Rename your HDS-600RS

The default name is 'HDS-600RS'.

You can use the 0-9 & A-Z keys to rename your HDS-600RS. The SlingLoaded name helps identify your HDS-600RS device within your Sling Account.

Tip. It is recommended to choose a 'friendly' name if you have other Slingboxes or SlingLoaded devices within your Sling Account.

Change Password

The default password is "admin". It is strongly recommended that you change the password.

You can use the **0-9 & A-Z** keys to change the Sling password.

Tip. You will need this password to gain access to your SlingLoaded HDS-600RS when using SlingPlayer from a supported computer or mobile device.

Sling 'Activity Light' Settings

You can use the Sling Settings menu to determine how the Sling activity lights (the LEDs on the front left-hand side of the HDS-600RS) behave when your HDS-600RS is being accessed by SlingPlayer.



Enable All When enabled, the Sling Activity Light will illuminate

during a SlingPlayer connection session. This is the

default setting.

Disable All This setting disables the Sling Activity Light when

any SlingPlayer connection is made and streaming is

in progress.

Enable Local Only When selected, only local 'around the home'

connections will illuminate the Sling Activity Light.

Enable WAN only When selected, only 'outside of the home'

connections will illuminate the Sling Activity Light.

6. Settings

The Settings menu allows you to configure the unit and to set personal preferences. Navigate the menus using the \blacktriangle \blacktriangledown and \blacktriangleright keys. Press the **OK** key to choose an option.

Note. In the following tables, a setting marked by a * symbol is the default factory setting.

The main menu categories are:

- Languages
- TV, Audio & Library Setup
- Sling see the previous chapter
- Parental Control
- Menu Preferences
- Network Setup
- Power Options
- Technical Info
- Tuning
- Factory Reset

Languages

The Languages menu allows you to choose the primary options for Subtitles, Data Services (digital interactive services) & Primary Audio:

	,
Subtitles	Off* English Welsh Gaelic
Data Service	Off English* Welsh Gaelic
Primary Audio	English* Welsh Gaelic
Audio Description	Off* On

TV, Audio & Library Setup

The *TV*, *Audio & Library* menu allows you to select the correct display and audio outputs to suit your TV and to set up the Library settings for the recording and playback of programmes. The following table lists the options. Please visit **www.myechostar.com/support** if you need any help.

Category	Menu	Sub-menu	Options
	TV Type		4:3 16:9*
SD TV Setup	Picture Format: Standard		RGB* Composite S-Video
	Screen Blanking		Wait 60 Seconds Off* Instant
	HD Resolution		576i 720p* 1080i Best Available
HD TV Setup	Picture Format		4.3 deep pillarbox 14.9 pillarbox 16.9 centre cutout Recommended* Anamorphic "stretch
	Screen Blanking		Wait 60 Seconds Off* Instant
	Restore Default Settings		
	Audio Delay		Digital Audio Output Analogue Audio Output
Audio Delay	Audio Adjustment		Off Low Medium High*

Category	Menu	Sub-menu	Options
	HDMI		{Auto} Stereo/Surround* PCM Stereo Only
Digital Audio Setup	SPDIF		Stereo only Dolby Digital*
	Midnight mode		Off* On
HDCP Setup			Always On* Automatic
	Recording Setup	Recording Start:	Timed Auto*
		Auto Conflict Resolution	No* Yes
		Series Recording	Never Always Prompt*
Librani		Allow Recommend- ations	Off On*
Library Setup	Playback Setup	Default Skip Forward	5 Seconds* 10 Seconds 20 Seconds 40 Seconds
		Default Skip Backward	5 Seconds* 10 Seconds 20 Seconds 40 Seconds
	Re-Initialise Hard Disk	CAUTION! THIS WILL DELETE ALL YOUR RECORDINGS	
	Check for disk errors Performs a disk check – WARNII take several hours and you will n watch TV or record during this pr		s and you will not be able to

Sling

See TV anywhere (page 42)

Parental Control

This menu allows you to safeguard your children from unsuitable programmes by restricting their access to certain channels, content or features. Parental Control relies on you creating and applying a secure PIN code to channels or programmes. It should be memorable for you, but not for your children, and you should change it regularly.

Tip: If you forget your PIN then use "2846" to gain access and set a new PIN immediately.

The Parental Control menu options are as follows:

	<u> </u>		
Change PIN	Choose this option to enter and confirm a new PIN. Note. This PIN also protects access to TV anywhere (see page 42).		
	Apply PIN protection to one or more channels.		
	Use the arrow keys to highlight the channel you want to lock; then press the OK button.		
Service Locks	Tip: use the Page Up/Page Down keys to step through the guide.		
	If you want to watch a locked channel, press the RED button and enter the PIN code.		
Pin Protection	Protect all recorded programmes which carry a guidance notice. If an attempt is made to play such a recording before the 9pm watershed, the viewer is prompted to enter the PIN code.		
	PIN Required PIN Not Required*		
	Choose PIN protection settings for content accessed via the Internet		
IP Pin Protection	Required for everything Guidance programmes only Not Required*		

Adult Channels	Hide all adult channels on the guide, information bar and favourites lists. This will also hide recordings taken from adult channels and delete any timers set for recording programmes from adult channels.		
	Show Hide*		

Menu Preferences

Use this menu to change the appearance of text in the settings menus.

Transparency	Solid (Menu background is opaque but clearer) Low Medium* High (Menu backgrounds are fully transparent)
Guide Font Size	Normal Large Automatic*

Network Setup

This menu can be used to view and configure network settings. In most cases, *Auto Setup* will correctly configure your network and internet connection via a local DHCP server or DHCP-enable router. If you encounter any networking problems, visit www.myechostar.com/support. It may be necessary to disable *Auto Setup* to configure the connection manually. Unless this is the case, or you are an experienced with network configurations, you are not recommended to change this setting.

Auto Setup	Enable* Disable	
The Francisco information object this common the other many attitudes of the		

Tip. For more information about this or any other the menu settings, visit www.myechostar.com/support.

Power Options

Power-saving settings can be configured using this menu. Options allow you to select the power consumption in standby mode.

Power Mode	Ultra low power mode		
Power saving mode used when unit enters standby:	Lowest power consumption but the receiver will take longer to switch to the active or ON state (Sling features will not be available).		
Standby.	Normal low power mode*		
	In this mode, library functionality and Sling features will be available.		
Inactivity Standby	Define time period before the receiver goes into standby if no remote control or front panel keys are operated: Off, 4 Hours*, 5 Hours, 6 Hours		

Technical Information

This menu displays software version and other technical information.

Tuning Preferences

Services	Choose the channel to be displayed when the HDS-600RS is powered up.	
Manual scan	Carry out a manual scan for services by setting Set Frequency, Symbol Rate and LNB Polarisation (advanced users only)	
Regional channel customisation	Choose different regional channels to those assigned during setup.	
Viewing Mode	freesat* Non freesat	

Factory Reset

Choose this option to restore the default configuration settings.

Note. In addition to removing all your personal settings, this will cancel any scheduled recordings. Existing recordings are not affected and previously saved content will not be deleted.

7. Getting Help

Updates

Your HDS-600RS can be updated in three ways:

- Automatically, over the air via the Satellite signal.
- Automatically, over your Internet connection.
- Manually: download the update from <u>www.myechostar.com/support</u>, saving it onto a memory stick and then applying it yourself.

Over the Air Updates

Over the Air (OTA) updates, with new channel and transmission information, are provided by **freesat** from time to time. The HDS-600RS receives these automatically. A pop-up message will be displayed on screen when an update is available.

Internet Software Updates

From time to time, Echostar will issue software updates. When a new version of the HDS-600RS software is available, a pop-up message is displayed on screen. Follow the instructions to download and install the update (requires an active Internet connection).

Manual Software Update

You can manually update the HDS-600RS by following the steps below:

- 1. Visit <u>www.myechostar.com/support</u> to locate the latest software.
- 2. Copy the update file to an empty USB memory stick.
- Insert the USB memory stick into either the front or rear USB ports (see page 8). The screen will display a message confirming that the USB memory stick has been detected and shows the version number of the software update.
- 4. The HDS-600RS will reset and the front panel then displays "Loading..." followed by "Please wait".
- 5. The updating process may take up to 5 minutes. When it is complete, the HDS-600RS will automatically restart.

FAQs

If you can't find a solution to a problem here, please visit www.myechostar.com/support

No lights on HDS-600RS; it doesn't switch on

- Check that the mains lead is plugged in to the power socket and the power socket is switched ON.
- Try a different power socket.
- Try a different power lead or check the fuse.

No TV picture

- Check that the HDS-600RS is plugged in, switched on and has had sufficient time to warm up.
- Make sure the HDS-600RS is not in Standby (you can bring the unit out of standby by pressing the standby button on the front of the unit).
- Ensure the AV cable (either HDMI or SCART) is firmly connected to the unit and to the TV.
- Ensure that the antenna cables are firmly connected to the unit and are in good condition.
- Ensure that the TV is set up with the HDS-600RS and is not configured to receive input from an external device such as a DVD Player.
- Check that the TV is switched on and that the brightness level is set correctly.
- Try changing channel: the selected channel may be off air.

No sound

- Ensure the AV cable (either HDMI or SCART) is firmly connected to the unit and to the TV.
- Check the volume level of your TV or Audio/Theatre System (if connected).
- Check that the HDS-600RS, TV or Audio/Theatre System are not set to MUTE.

Poor picture or sound quality

- Ensure that the satellite dish is installed correctly (away from trees or other obstacles) and is providing a good quality signal (see page 20).
- Picture quality may be temporarily affected by bad weather (heavy rain, snow).
 Check the signal level coming from your dish (see page 20).
- If you have poor signal strength you may wish to consider changing the satellite dish for a larger one as this will increase the signal levels received.
- Check the LNB for damage as moisture inside the LNB will affect signal strength

and quality.

Note. Newer LNBs will have a lower noise factor which will improve noise reduction.

- Check that the satellite input cables are connected properly.
- Try another channel; the problem may be due to a transmission fault.

The remote control doesn't work

- Does the Main Menu button light up on the remote when you press any buttons on the remote?
- Ensure that you are holding the remote control correctly with the lens at the top of the control pointing at the HDS-600RS.
- Ensure that the receiver on the HDS-600RS is not covered by, for example, papers and that the remote is within range.
- Check that the batteries have charge and are in good condition. Try removing and replacing the batteries making sure they are inserted in the correct orientation.
- Replace the batteries with a new set.

The remote doesn't control the TV or change the volume

 You need to ensure your remote control is set-up correctly to control your TV. – see page 11. This will be necessary whenever you change the batteries.

The HDS-600RS didn't record a programme

- Check that both antenna cables are connected.
- Check that your hard disk has sufficient space for further recordings (see page 37).
 To make space, delete some old recordings that you have already viewed.
- The unit should tell you if your scheduled recordings use more resources than the product can support – check the scheduled recording (see page 39) and make changes if necessary.
- Did the unit have power when the programme is scheduled to be transmitted? The HDS-600RS will wake from standby to record a programme but it must have power to be able to do this.

iPlayer isn't available

- Check that your HDS-600RS is connected to your router and that the Ethernet cables are firmly inserted at both ends.
- Check there is a broadband connection available (see page 41). Can you access the Internet from other devices?
- Check to make sure you are meeting the system requirements to use iPlayer by visiting the help section at www.bbc.co.uk/iplayer/.
- If you are experiencing issues with connecting and using BBC iPlayer, visit www.myechostar.com/support.

TV anywhere doesn't work

- Check that your HDS-600RS is connected to your router and that the Ethernet cables are firmly inserted at both ends.
- Check there is a broadband connection available (see page 41). Can you access the Internet from other devices? Contact your Internet Service Provider if there is a problem.
- Try accessing the BBC iPlayer on your HDS-600RS to verify your internet connection.
- Make sure you are meeting the system requirements to use the *TV anywhere* features. Is there adequate data bandwidth available on your Local Area Network?
- Ensure you are using the correct password (see page 44).
- If you continue to experience issues with connecting and using TV anywhere, please refer to the support section on www.myechostar.com.

No channels found during installation

As instructed by the Setup Wizard, press the Blue button to check the signal reception (see page 20). If there is no signal on one or both inputs, check the connections. Contact your satellite dish installer if there is no signal on either input and you are satisfied that the connection to the unit is sound.

Contacting Customer Support

For the latest product information, technical support, downloads and updates please visit:

www.myechostar.com/support

8. Remote Control TV Codes

Programming the Remote with Control Codes

Search the table in this section for your TV manufacturer. Make a note of the control code (or codes) used by the manufacturer. Use the following procedure to program your remote control:

- 1. Press and hold both the **TV** \circlearrowleft and **OK** keys on the remote control for at least 5 seconds. The **Main Menu** button will illuminate.
- Using the numbered keys, enter the 3 digit code listed for your make of TV.
- 3. The Main Menu button will flash once and remain lit.
- Press the **OK** button.
- 5. The **Main Menu** button will flash 3 times and then turn off to confirm programming is complete.
- 6. Press the **TV** \circlearrowleft button to test if your TV can be switched on and off.

If the manufacturer uses several codes, you may need to repeat the sequence until you find the right code.

Scanning through Control Codes

If the manufacturer of your TV is not listed, or the specified code does not work use the following procedure to scan through all programmed remote codes.

- 1. Press and hold both the **TV** \circlearrowleft and **OK** keys on the remote control for at least 5 seconds. The **Main Menu** button will illuminate.
- 2. Press CH+ or CH- until your TV turns on.
- 3. When your TV switches off, press **OK** to store the code.

Tip. If neither of these methods is successful, please try the learning mode (see page 23).

TV Manufacturers' Control Codes

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
3M	006	ATLANTIC	049 050 071 113 152 236 379
A.R. SYSTEMS	049 152	ATORI	195
ACCENT	049 152	AUCHAN	107 425
ACEC	112	AUDIOSONIC	049 074 076 152 182 195 213 379 421
ACER	484 329	AUDIOTON	050 076 379 421
ACURA	195	AUDIOVOX	051
ADCOM	015	AUSIND	090 407
ADMIRAL	065 076 163 171 190 307 324 369	AUTOVOX	050 071 078 079 080 083 090 156 236 324 379 407 449
ADVENTURA	022	AVENTURA	056
ADYSON	379	AVION	058
AEG	044	AWA	018 049 131 152 195 226 320 379 426 433
AGASHI	076 379	AYOMI	411
AGAZI	027	BAIRD	074 102 182 209 218 379 409
AGB	028	BANG & OLUFSEN	324 319
AGEF	324	BARCO	107 371
AIKO	049 076 102 141 152 172 195 225 379	BASIC LINE	049 107 123 195 226 378
AIWA	377 459	BASTIDE	379
AKAI	049 050 055 066 076 102 107 123 139 141 150 152 172 182 195 209 225 379 428 433 437	BAUMATIC	097
AKIBA	049 123 152 378 380	BAUR	049 107 150 152 172 247 249 357 414 454
AKITO	049 106 152	BAZIN	337
AKURA	049 076 123 195 378 426	BEAUMARK	350
ALARON	042 379	BEKO	152 241 421 433 460
ALBA	018 049 050 107 123 134 163 168 195 225 232 379 421 457	BELSON	044
ALBIRAL	371	BELSTAR	115
ALCYON	407	BENNET	214
ALLORGAN	050 094 236 379	BENQ	017
ALLSTAR	049 152	BEON	049 152 163
AMPLIVISION	113 379 421 425	BERKENP	338
AMSTRAD	004 049 076 123 131 152 172 195 225 426	BEST	213 421
ANAM	049 152 195	BESTAR	049 152 226 421
ANAM NATIONAL	049 152	BIAZET	388
ANGLO	076 195	BIFONIC	401
ANITECH	049 076 152 195 407	BIGSTON	401
ANSONIC	045 049 107 112 152 195 210 226 391 421	BINATONE	379
AOC	032 034	BLACK DIAMOND	114
APEX	036 037	BLACK STAR	062
APEX DIGITAL	038 039	BLACKTRON	378
ARC EN CIEL	074 182 186 424 453 463	BLACKWAY	378
ARCAM	379 424	BLAUPUNKT	057 060 113 247 249 454
ARISTONA	049 050 065 079 112 152 160	BLUE SKY	049 123 152 195 217 232 378 380 457
ARTHUR MARTIN	107 127 136 139 153 307 425	BLUE STAR	378
ASA	020 065 078 080 091 146 171 197 307 324 375 408 449	BONDSTEC	063
ASBERG	049 152 407	BOOTS	050 106 379
ASORA	195	BPL	049 152 378
ASTRA	195	BRANDT	008 074 182 186 218 424 436 452 462
ASUKA	050 076 123 378 379	BRANDT	074 453 463
AGUINA	000 010 120 310 318	ELECTRONIC	077 700 400

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
BRANDT	074 182 186 453	DAENYK	042
ELECTRONIQUE			
BRAUN	084	DAEWOO	049 123 152 193 195 226 379 456 464
BRENDSTAR	087	DAINICHI	123 379
BRINKMANN	049 152 163	DANSAI	049 076 141 152 195 379
BRIONVEGA	049 065 083 152 167 172 324	DANSETTE	426
BRITANNIA	379	DANTAX	421
BROKSONIC	095	DATSURA	209
BROTHER	076	DAWA	049 152
BRUNS	065 324	DAYTON	049 152 195 226
BSR BTC	094 107 110 139 168 123	DCE DE GRAAF	117 107 139 209 307
BUSH	018 049 076 094 106 107 123 134	DECCA	049 102 106 120 217
DOSIT	139 142 172 193 195 209 217 225 226 232 307 378 379 457 458	DECCA	045 102 100 120 217
BUSH(UK)	107 168	DECCA(UK)	046 049 050 102 106 131 152 379
CAPSONIC	049 076 152 380	DEITRON	049 152
CARREFOUR	018 177	DELL	118 119
CASCADE	049 064 152 195	DENKO	076
CASIO	049 152	DENON	126
CATHAY	049 152	DENVER	121
CCE 049	152 379	DERWENT	105
CENTREX	021	DESMET	049 113 152
CENTURION	049 152	DIBOSS	122
CENTURY	065 163 324 411	DIGATRON	049
CGE	002 090 093 094 107 139 142 163 168 369 407 421	DIGILINE	049 152
CIHAN	217	DISHNETWORK	130
CIMLINE	123 134 195	DIXI	049 152 195 379
CITY	195	DORIC	104 105
CLARITY CLARIVOX	030 049 125 163	DREAN DREAMVISION	049 152 132 133
CLARIVOX	049 125 163 045 049 076 113 123 152 195 225	DTS	195
	379 407 421		
CMS HIGHTEC	379	DUAL	049 050 107 139 152 156 168 182 243 379 414 417 424
COMPUTRON	101	DUAL TEC	040 050 168 195 379
COMTEL	125 217	DUMONT	045 065 080 102 139 146 324 375 379 449
CONCORDE	195	DUMONT-FINLUX	020 045 078 091 104
CONDOR	045 049 050 113 152 163 195 210 378 379 421	DURABRAND	135
CONTEC	018 131 195 320 379	DUX	049 112 152
CONTINENTAL EDISON	008 074 182 186 232 424 453 462 463	DWIN	137
COSMEL	195 213	DYNAMIC	138
CRAIG CROSLEY	111 065 090 093 094 104 107 139 324 407	DYNATRON DYNEX	049 152 140
CROWN	049 152 163 170 195 209 232 407 421	ELBE	049 107 123 152 172 210 243 369 391 411 421 435
CRYSTAL	115	ELBIT	217
CS ELECTRONICS	123 379	ELCIT	045 046 065 104 107 150 168 324
CTC CLATRONIC	045	ELECTA	076 378
CURTIS MATHES	126 190	ELECTROGRAPH	157
CYBERTRON	123	ELECTROHOME	158
ELECTRO TECH	195	GEC	049 102 104 107 120 152 171 172 307 379
ELEKTA	076 378	GEC(UK)	046 050 102 107 150 162
ELEMENT	159	GELOSO	104 107 139 168 171 195 226 307
ELG	049 152	GEMSOUND	176

ELIN	TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
ELITE				
ELMAN				
ELTA 196 076 379				
EMERSON 004 042 049 085 113 152 225 324 GM 178 ERRES 049 112 152 GMG 179 ESC 049 152 GOLDHAND 379 ETRON 049 107 139 152 195 GRANADA 013 018 033 041 049 102 104 105 112 120 EURO-FEEL 045 046 049 050 068 107 120 152 GOLDSTAR(LG) 049 050 055 107 139 152 168 172 182 185 EXPERT 071 107 236 425 GOLDSTAR(LG) 049 050 055 107 139 152 168 172 182 185 EXQUISIT 049 152 GORENJE 421 FERMUS DIT 049 152 GPM 123 FERRUS DI 049 050 070 470 6808 082 102 103 GRADIENTE 049 152 170 177 FERRUS DI 049 050 070 470 6808 082 102 103 GRADIENTE 049 050 107 139 182 237 147 177 FERRUS DI 049 050 070 670 670 680 082 102 103 GRADIENTE 049 050 070 138 182 237 162 171 172 FIDELIS 165 GRANDA GRADIENTE 049 050 073 138 182 185 162 171 172 FILLIA 050 379 GRANDA GRADIENTE 049 050 073 138 182 183 162 171 172 FILLIA 050 379 GRANDA GRADIENTE 049 050 073 138 182 183 182 171				
ERRES 049 112 152 GMG 179 ESA 164 ESC 049 152 ETRON 049 107 139 152 195 GRANADA 113 160 033 041 049 102 104 105 112 120 152 177 172 189 209 216 238 241 307 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 163 379 179 179 179 179 179 179 179 179 179 1				
ESA 184 (2011) 379 (2011) 379 (2011) 218 (2011) 218 (2011) 218 (2011) 218 (2011) 218 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (2011) 219 (20		378		
ESC 049 152 GOLDLINE 213 ETRON 049 107 139 152 195 GRANADA 101 101 103 041 049 102 104 105 112 120 152 161 071 171 172 198 208 218 238 241 307 379 407 425 161 071 171 172 198 208 218 238 241 307 379 407 425 161 071 172 172 172 172 172 172 172 172 172 1				
ETRON 049 107 139 152 195 EURO-FEEL 045 046 049 050 068 107 120 152 EURO-FEEL 045 046 049 050 068 107 120 152 EURO-FEEL 071 107 236 425 EXPERT 071 107 236 425 EXPERT 071 107 236 425 EXQUISIT 049 152 EAMILY LIFE 049 152 GOODMANS 018 042 049 076 102 134 139 141 152 182 6FAMILY LIFE 049 152 GRADIENTE 6RADIENTE 152 195 226 FERGUSON 049 050 076 107 150 225 307 379 FINLANDIA 182 218 247 409 411 336 452 FIDELITY 049 050 076 107 152 225 307 379 FINLANDIA 033 139 172 197 209 307 375 FINLANDIA 200 045 045 049 094 102 107 134 139 152 FINLANDIA 101 101 101 101 101 101 101 101 101 10		***		379
152 171 172 198 209 218 238 241 307 379 407 425 618 379 407 425 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 379 618 214 60 011 618 379 618 214 60 011 618 379 618 214 60 011 618 379 618 21 68 172 182 195 618 379 141 421 460 011 618 21 68 172 182 195 618 218 225 226 232 379 428 450 456 648 424 421 618 218 225 226 232 379 428 450 456 648 424 421 618 218 225 226 232 379 428 450 456 648 421 618 218 225 226 232 379 428 450 456 648 421 618 218 218 225 226 232 379 428 450 456 648 421 618 218 218 218 225 226 232 379 428 450 456 648 421 618 218 218 218 225 226 232 279 428 450 456 648 421 618 218 218 218 225 226 678 218 225 226 232 279 428 450 456 648 421 618 218 218 218 218 225 226 678 218 225 230 678 218 225 230 678 218 225 230 678 218 225 230 678 218 225 230 678 218 225 230 678 218 225 230 678 218 225 230 678 218 218 225 230 678 218 225 230 678 218 218 218 225 230 678 218 218 218 218 218 218 218 218 218 21				
168 379	ETRON	049 107 139 152 195	GRANADA	152 171 172 198 209 218 238 241 307 379
193 195 218 225 226 232 379 428 450 456 464 464 464 464 464 464 464 464 464	EURO-FEEL		GOLDSTAR(LG)	
FAMILY LIFE	EXPERT	071 107 236 425	GOODMANS	193 195 218 225 226 232 379 428 450 456
FENNER 152 195 226 FERGUSON 182 218 247 409 010 104 105 139 152 153 162 171 172 FERGUSON 182 218 247 409 411 436 452 FIDELIS FIDELIS 165 FIDELITY 169 050 076 107 152 225 307 379 FILSAI 103 139 172 197 209 307 375 FILSAI 102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 191 195 209 210 226 379 411 457 FISHER 108 041 050 065 069 102 104 107 139 156 172 209 303 4375 FIRST LINE 191 195 209 210 226 379 411 457 FINEN 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 200 300 41 101 101 113 152 172 195 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 200 300 340 370 300 340 370 300 340 370 300 340 370 300 340 370 300 340 370 370 FIRST LINE 191 195 200 210 210 210 210 210 210 210 210 210	EXQUISIT	049 152	GORENJE	421
FENNER 152 195 226 FERGUSON 182 218 247 409 010 104 105 139 152 153 162 171 172 FERGUSON 182 218 247 409 411 436 452 FIDELIS FIDELIS 165 FIDELITY 169 050 076 107 152 225 307 379 FILSAI 103 139 172 197 209 307 375 FILSAI 102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 191 195 209 210 226 379 411 457 FISHER 108 041 050 065 069 102 104 107 139 156 172 209 303 4375 FIRST LINE 191 195 209 210 226 379 411 457 FINEN 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 209 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 200 300 41 101 101 113 152 172 195 FIRST LINE 191 195 200 210 226 379 411 457 FIRST LINE 191 195 200 210 200 300 340 370 300 340 370 300 340 370 300 340 370 300 340 370 300 340 370 370 FIRST LINE 191 195 200 210 210 210 210 210 210 210 210 210				
FERGUSON 049 050 074 076 080 082 102 103 182 218 247 409 411 436 452 FIDELIS 165 FIDELITY 165 06RANADA(UK) 046 050 090 107 139 162 307 FILSAI FILSAI 050 379 FINLANDIA 033 139 172 197 209 307 375 FINLANDIA 020 042 045 049 078 080 090 091 102 104 107 139 168 152 153 164 157 187 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 094 102 107 134 139 152 191 195 209 210 226 379 411 457 FISHER 018 041 050 050 099 107 113 139 307 324 379 FORMENTI-PHOENIX 049 102 123 152 380 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 045 049 152 195 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 113 159 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 113 159 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 113 152 172 195 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 113 152 172 195 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 113 152 172 195 FORMENTI-PHOENIX 050 104 113 307 HANTAREX 050 094 104 107 139 168 195 206 379 HANTAREX 050 094 104 107 139 168 105 207 HANTAREX 050 094 104 107 139 168 195 206 379 HAVERMY 190 FULITSU 094 095 074 102 107 195 236 379 HAVERMY 190 FULITSU 094 105 094 FULITSU 094 105 094 105 094 105 094 105 094 105 095 095 095 095 095 095 095 095 095 0				
FIDELIS FIDELITY O49 050 076 107 152 225 307 379 FILSAN 050 379 FINLANDIA 033 139 172 197 209 307 375 FINLUX 020 042 045 049 078 080 090 091 102 104 107 139 168 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 049 102 107 134 133 152 FINLY 191 195 209 210 226 379 411 457 FISHER 018 041 050 065 069 102 104 107 139 156 172 209 320 324 379 408 FIRST LINE 049 102 123 152 380 FIRST LINE 049 105 104 113 307 FIRST LINE 049 102 123 152 380 FIRST LINE 049 102 123 152 352 340 FIRST LINE 049 102 123 152 152 152 152 152 152 152 152 153 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163 152 163		049 050 074 076 080 082 102 103		049 090 104 136 139 152 153 162 171 172
FIDELITY FILSA FILSA FILSA FILSA FINLANDIA FINLANDIA FINLANDIA FINLANDIA FINLUX 020 042 045 049 078 080 090 91 102 104 107 139 146 152 163 197 210 324 375 379 407 408 424 429 437 449 FIRST LINE PIRST LINE PIR	FIDELIS		GRANADA(UK)	
FILSAI 050 379 GRENADIER 181 GRONIC 045 379 FINLANDIA 033 139 172 197 209 307 375 GRONIC 045 379 FINLUX 020 042 045 049 078 080 090 091 102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 094 102 107 134 139 155 FIRST LINE 018 040 065 069 102 104 107 139 146 172 209 320 324 379 408 414 427 FISHER 018 040 1050 065 069 102 104 107 139 156 172 209 320 324 379 408 414 421 FLINT 049 102 123 152 380 HAMPTON 379 FIRST LINE 049 000 107 113 139 307 324 379 HANNS-G 022 029 FORMENTI 049 000 107 113 139 307 324 379 HANNS-G 022 029 FORMENTI-PHOENIX 050 104 113 307 HANSEATIC 018 049 050 094 104 107 113 152 172 195 241 324 378 379 391 421 455 FORTRESS 190 324 HANTOR 049 152 FRABA 049 152 421 HANTOR 049 152 FRABA 049 152 421 HANTOR 049 152 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FRUITSU 042 045 071 102 107 195 236 379 FUJITSU GENERAL 195 379 HAVERWY 190 FUJITSU GENERAL 195 379 HAVERWY 190 FUNAI 045 049 152 163 421 HEMMERMANN 150 GALEXIA 169 HEM 152 163 421 HEMMERMANN 150 GALEXIA 169 049 152 183 78 HIGASHI 050 GALEXIA 169 074 182 183 78 HIGASHI 050 GALEXIA 173 HIGASHI 050 GALEXIA 173 HIGASHI 050 GALEXIA 173 HIGASHI 050 GALEXIA 173 HIGASHI 050 GEBER 175 HILINE 188 GEBBR 175 HILINE 188 GEBBR 175 HILINE 188 GEBBR 175 HILINE 188 HISAWA 123 378 380 425 KAISUI 049 050 123 152 195 378 379 380		049 050 076 107 152 225 307 379	, ,	
FINLANDIA FINLUX 020 042 045 049 078 080 090 091 102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 094 102 107 134 139 152 191 195 209 210 226 379 411 457 FISHER 018 041 050 065 069 102 104 107 139 156 172 209 320 324 379 408 414 421 FLINT 049 102 123 152 380 FNR 045 FORMENTI 049 090 107 113 139 307 324 379 FORMENTI-PHOENIX 050 104 113 307 FRABA 049 152 421 FRABA 049 152 421 FRONTECH 066 076 139 195 307 379 HANTOR 040 076 123 152 195 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 HARWOOD 049 152 195 426 HAWPOND 049 152 163 421 HARWOOD 049 152 195 426 HAWPENU 040 076 123 152 163 195 378 379 426 GALAXI 045 049 152 163 421 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMA 196 379 HEMA 197 379 HEMA 190 379 HEMA 190 379 HAWERMY 190 GALAXIS 045 049 152 163 421 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMA 195 379 GALAXIS 046 049 152 183 78 HIGASHI 050 GATEWAY 173 GBC 104 107 139 168 195 226 HIGHLINE HINARI 108 049 050 094 107 123 134 139 HISAWA 123 378 380 425 KAISER KAISER KAISER KAISER KAISER KAISUI 049 050 102 152 232 247 249 407 454 455 GEONIC O45 049 152 195 GEONIC O45 049 152 HISAWA HISAWA 123 378 380 425 KAISER KAISER KAISER CAPA KAISER CAPA KAISER CALSILI O49 090 152 232 247 249 407 454 455 GEONIC O45 049 152 195 197 HARLER 327 HALIER 327 HAMPTON 379 HAMPTON 379 HAMPTON 379 HAPMINEX 046 049 050 094 104 107 113 152 172 195 241 324 378 379 394 421 455 FORTICE O45 049 152 195 HARLEY DAVIDSON 049 152 195 426 HA				
FINLUX 020 042 045 049 078 080 090 091 102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 094 102 107 134 139 152 191 195 209 210 226 379 411 457 FISHER 018 041 050 065 069 102 104 107 139 156 172 209 320 324 379 408 414 421 FLINT 049 102 123 152 380 FAMBER OH 045 HANINEX 094 FORMENTI 049 090 107 113 139 307 324 379 407 FORMENTI-PHOENIX 050 104 113 307 HANSEATIC 018 049 059 404 102 107 134 139 152 241 324 378 379 391 421 455 FORTRESS 190 324 HANTAREX 045 049 152 195 HANTOR 045 HANTOR 049 152 421 HANTOR 045 HANTOR 049 152 421 HANTOR 045 HANTOR 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 HAUPAUGE FUJITSU GENERAL 195 379 FUJITSU GENERAL 195 379 FUNAL 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 GALAXI 045 049 152 163 421 HEMM HEMM 195 379 FUNAL GALAXI 046 049 152 163 421 HEMM 190 GALERIA 169 GALERIA 169 GALERIA 169 GALERIA 169 GALERIA 169 GATEWAY 173 GBC 104 107 139 168 195 226 HIGHLINE 188 GEBBR 175 HINARI HISAWA 123 378 380 425 KAISER KAISER KAISER KAISER 194 KAISER 194 KAISER 194 KAISER 194 KAISER 194 195 195 195 195 195 195 195	-	033 139 172 197 209 307 375	GRONIC	045 379
102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429 437 449 FIRST LINE 045 049 094 102 107 134 139 152 191 195 209 210 226 379 411 457 FISHER 018 041 050 065 069 102 104 107 139 156 172 209 320 324 379 408 414 421 FLINT 049 102 123 152 380 FNR 045 FORMENTI 049 090 107 113 139 307 324 379 407 FORMENTI-PHOENIX 050 104 113 307 HANIBEX 049 152 421 FRIAC 045 049 152 421 FRIAC 045 049 152 195 FRONTECH 066 076 139 195 307 379 HARWOOD 042 045 071 102 107 195 236 379 HAUFPAUGE FUJITSU 042 045 071 102 107 195 236 379 HAVERMY 190 FUNAL 045 049 152 163 421 HEMA 049 076 123 152 163 195 379 HAVERMY 190 GALAXIS 045 049 152 163 421 HEMA 169 GALAXIS 045 049 152 163 421 HEMA 169 GALAXIS 045 049 152 163 421 HEMA 169 GALERIA 169 GALERIA 169 GALERIA 169 GALERIA 175 HIGHINE 188 GEBER 175 HINARI HISAWA 123 378 380 425 KAISER 214 HISAWA 123 378 379 387 379 380 045 060 093 107 123 134 139 195 209 232 307 HISAWA HISAWA 123 378 380 425 KAISER 214 HISAWA HISAWA 123 378 379 380 045 KAISER 214 HISAWA HISAWA 123 378 379 380 045 KAISER 214 HISAWA HISAWA HISAWA 123 378 379 380				*
191 195 209 210 226 379 411 457	1 11/20/	102 104 107 139 146 152 163 197 210 324 375 379 407 408 428 429	CHONDIC	040 000 000 102 202 247 240 407 404 400
139 156 172 209 320 324 379 408	FIRST LINE		HAIER	327
FNR 045 049 090 107 113 139 307 324 379 HANIMEX 094 090 107 113 139 307 324 379 HANNS-G 022 029 FORMENTI-PHOENIX 050 104 113 307 HANSEATIC 018 049 050 094 104 107 113 152 172 195 241 324 378 379 391 421 455 FORTRESS 190 324 HANTAREX 045 046 049 152 195 FRABA 049 152 421 HANTOR 049 152 195 FRIAC 045 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HILINE 188 GEBER 175 HINARI 040 040 060 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISUI 049 050 123 152 195 378 379 380	FISHER	139 156 172 209 320 324 379 408	HALIFAX	076 379
FORMENTI 049 090 107 113 139 307 324 379 HANNS-G 022 029 FORMENTI-PHOENIX 050 104 113 307 HANSEATIC 018 049 050 094 104 107 113 152 172 195 241 324 378 379 391 421 455 FORTRESS 190 324 HANTAREX 045 046 049 152 195 FRABA 049 152 421 HANTOR 049 152 FRIAC 045 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HAWDOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAUPPAUGE 049 152 FUJITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMA 195 379 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HILINE 188 GEBER 175 HINARI 040 040 060 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FLINT	049 102 123 152 380	HAMPTON	379
## FORMENTI-PHOENIX 050 104 113 307	FNR	045	HANIMEX	094
FORTRESS 190 324 HANTAREX 045 046 049 152 195 FRABA 049 152 421 HANTOR 049 152 FRIAC 045 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAVERMY 190 FUNITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMAEMANN 150 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISUI 049 050 123 152 195 378 379 380	FORMENTI		HANNS-G	022 029
FRABA 049 152 421 HANTOR 049 152 FRIAC 045 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAUPPAUGE 049 152 FUJITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 HEMA 195 379 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 115 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FORMENTI-PHOENIX	050 104 113 307	HANSEATIC	
FRIAC 045 049 152 195 HARLEY DAVIDSON 042 FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAUPPAUGE 049 152 FUJITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMERMANN 150 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FORTRESS	190 324	HANTAREX	045 046 049 152 195
FRONTECH 066 076 139 195 307 379 HARWOOD 049 152 195 426 FUJITSU 042 045 071 102 107 195 236 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMERMANN 150 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FRABA	049 152 421	HANTOR	049 152
FUJITSU 042 045 071 102 107 195 236 379 HAUPPAUGE 049 152 FUJITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMERMANN 150 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FRIAC	045 049 152 195	HARLEY DAVIDSON	042
FUJITSU GENERAL 195 379 HAVERMY 190 FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMEMANN 150 GALERIA 169 HIFVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FRONTECH	066 076 139 195 307 379	HARWOOD	049 152 195 426
FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMANN 150 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 040 18 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FUJITSU	042 045 071 102 107 195 236 379	HAUPPAUGE	049 152
FUNAI 042 076 094 HCM 049 076 123 152 163 195 378 379 426 GALAXI 045 049 152 HEMA 195 379 GALAXIS 045 049 152 163 421 HEMMANN 150 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 040 18 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FUJITSU GENERAL	195 379	HAVERMY	190
GALAXIS 045 049 152 163 421 HEMMERMANN 150 GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	FUNAI	042 076 094		049 076 123 152 163 195 378 379 426
GALERIA 169 HIFIVOX 074 182 186 424 453 463 GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GALAXI	045 049 152	HEMA	195 379
GATEWAY 173 HIGASHI 050 GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GALAXIS	045 049 152 163 421	HEMMERMANN	150
GBC 104 107 139 168 195 226 HIGHLINE 049 076 152 GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GALERIA	169	HIFIVOX	074 182 186 424 453 463
GE 074 182 218 378 HIKONA 123 GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GATEWAY	173	HIGASHI	050
GEANT CASINO 107 425 HILINE 188 GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GBC	104 107 139 168 195 226	HIGHLINE	049 076 152
GEBER 175 HINARI 004 018 042 049 066 094 107 123 134 139 195 209 232 307 HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GE	074 182 218 378	HIKONA	123
HISAWA 123 378 380 425 KAISER 214 HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GEANT CASINO	107 425	HILINE	188
HISENSE 009 326 025 KAISUI 049 050 123 152 195 378 379 380	GEBER	175	HINARI	
	HISAWA	123 378 380 425	KAISER	214
HIT 324 KAMOSONIC 050	HISENSE	009 326 025	KAISUI	049 050 123 152 195 378 379 380
	HIT		KAMOSONIC	

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
HITACHI	018 020 033 049 050 074 086 099	KAMBROOK	215
111710111	102 104 107 110 126 127 139 150	TOWNERCON	210
	152 162 168 171 182 186 218 238		
HITACHI FUJIAN	307 379 014 309 013	KAMP	379
HITSU	123 195 380	KAPSCH	071 107 172 236
HORNYPHON	049 112 152	KARCHER	020 045 049 050 068 076 107 152 195 217
HORIVITHON	043 112 132	TOTOTIEN	378 421 435
HOSHAI	017	KATHREIN	455
HYGASHI	379	KAWASHO	379
HYPER 050	168 195 379	KB ARISTOCRAT	107
HYPERION	192	KENDO	045 049 055 134 152 172 210 421 435
HYPERSONIC	172	KENNEDY	071 079 104 107 139 236 369
HYPSON	049 076 217 378 379 380 425	KENWOOD	219
HYUNDAI	194	KINGSLEY	379
IBERIA	049 152	KIOTA	221
IBERVISAO	196	KLARMAX	371
ICE	049 076 123 152 195 225 379 123 379	KLEGG KLH	222 223
ICES	123 379	KNEISSEL	049 152 210 243 369 391 411 421 435
ILO IMPERIAL	002 049 090 093 094 107 142 152	KOBIC	227
IIVIPERIAL	163 168 307 369 407 421	KOBIC	221
INDIANA	049 152 090 104 136 139 153 162	KOLSTER	045 049 152
	171 198 232 435		
INFOCUS	200	KONKA	049 123 152 225
INGERSOLL	195	KONIG	228
INNO HIT	046 049 050 066 102 123 152 195 217 379 407	KONTAKT	232
INNOVATION	049 152	KORPEL	049 152
INSIGNIA	201	KORTING	065 094 113 324 421
INTERACTIVE	210	KOSMOS	049 152
INTERBUY	076 195	KOTRON	076 426
INTERECORD	202	KOYODA	195
INTERFUNK	049 065 067 074 090 104 107 112 139 150 152 153 172 182 307 324 421 453 463	KRAKING	411
INTERNAL	049 152	KRIESLER	050 065 079 112 152 160
INTERVISION	045 049 055 076 107 123 152 225	KTV	050 379
	232 378 379 380 421 ITL 203		
IRRADIO	049 066 090 123 152 195 407	KURO	445
ISUKAI ITC	049 123 152 378 379	KYOSHU KYOTO	076 163 426 107
ITS	049 076 123 152 225 378 379	LEADER	231
ITT	042 090 107 134 139 150 162 171	LECSON	049 152
	172 193 197 198 209 307 375 428	LLOGOIV	040 132
ITT-NOKIA	042 090 104 107 134 136 139 150 153 162 171 172 193 197 198 209	LEGEND	054
ITV	307 375 428 433 435 437 076 049 152	LEMAIR	210
JINLIPU	207	LENCO	049 107 152 195 226
JEAN	018	LENOIR	050 195
JEC	141	LESA	233
JET POINT	365	LEYCO	049 076 094 102 152
JVC	018 103 123 170 182 225 409 433	LIESENK & TTER	049 112 152
KAIDO	439 465 007 212	LIFE	440 441 443 444
LIFETEC	049 076 123 152 195 226 440 441	MINTEK	246
LLOVD O	443 444	MICAKAI	040
LLOYD_S	195	MISAKAI	248
LOEWE	035 049 089 120 152 324 391 421	MITSUBISHI	013 018 049 065 105 131 152 190 247 324

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
	001		454 053
LOEWE OPTA	035 046 049 065 120 144 152 213 324	MIVAR	046 050 072 081 090 120 379 391 407 414 421 434
LOGIK	131 225	MONACO	195
LOGIX	195	MORGAN_S	049 152
LUMA	071 107 110 152 171 172 195 210 226 236 307	MOTION	407
LUMATRON	049 076 107 152 172 236 379	MOTOROLA	190
LUX MAY	049 152 195	MOXI	251
LUXOR	042 050 090 107 127 139 150 172 197 209 307 375 428 429	MTC	152 379 421
LYCO	076	MTEC	106
MAAZ	371	MULTISTANDARD	045
MADISON	049 152	MULTITEC	049 152 195
MAGNADYNE	045 046 065 104 107 120 139 150 168 324	MULTITECH	045 046 049 050 120 152 195 379 407 421
MAGNAFON	045 046 050 068 090 120 379 407	MURPHY	102 104 105 107 171 307 379
MAGNAVOX	018 042 049 152	MURPHY(UK)	162
MAGNUM	440 441 443 444	MUSIKLAND	123
MANDOR	076	MYRYAD	455
MANESTH	076 094 113 134 141 152 379	NAD	172 209
MANHATTAN	049 195	NAIKO	049 152
MARANTZ	049 152 455	NAKIMURA	049 152 226
MARELLI	324	NAONIS	040 071 079 110 171
MARK	049 152 195 226 379	NAT	085 151
MASCOT	239	NATIONAL	033 085 104
MASUDA	123 195 225	NEC	018 049 113 131 152 177 195 226 379 380 010 025
MATSUI	004 018 041 049 050 094 100 102 106 107 131 134 141 150 152 171 195 209 218 225 232 247 307 379 380	NECKERMANN	002 049 050 065 107 139 152 163 210 247 249 307 324 357 379 421 455
MAXAM	240	NEDIATOR	152
MAXENT	242	NEI	049 125 152 225
MAXIMAL	139	NESCO	042
MAXWELL	371	NETSAT	049 152
MEDIATOR	049 112 152	NETWORK	213
MEDION	049 152 195 217 457 328	NEUFUNK	049 152 195 435
MEGAS	435	NEW TECH	049 050 152 182 195 379
MEGATRON	126	NEW WORLD	123
MELECTRONIC	020 049 074 152 182 193 195 197 210 226 375 379 408 428 429	NICAMAGIC	379
MELVOX	425	NIKKAI	018 049 076 102 123 125 139 141 152 195 213 379 066
MEMOREX	099 195 217	NOBLEX	049 076 152
MEMPHIS	102 125 195 213	NOBLIKO	045 050 080 090 379 407
MERCURY	049 152 195	NOGAMATIC	074 182 186 424 453 463
METZ	049 065 067 070 092 247 324 412 420 454	NOKIA	090 104 107 134 136 139 150 153 162 171 172 193 197 198 209 226 307 375 428 429 433 437 465
MGA	244	NORDMENDE	049 074 083 150 152 182 186 218 247 307 424 453 463
MICROMAXX	049 152 195	NOTHERN STAR	255
MICROSTAR	440 441 443 444	NOVATRONIC	020 049 152 226
MINERVA	080 090 232 247 249 407 454	NOVA	303
MINOKA	049 152 426	NUVISION	310
OCEANIC	086 094 104 107 108 109 139 172 209 425	PERFEKT	049 152
OCEANIC(F)	150	PERSHIN	425
ODEON	076	PHILCO	002 016 049 065 090 093 094 104 107 126

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
TV Manufacturer	Control Codes	TV Manufacturer	Control Codes 142 152 163 168 324 369 407 421
O GENERAL	330	PHILHARMONIC	379
OKANO	049 076 102 152 421	PHILIPS	008 049 050 065 079 089 112 152 160 182
			193 216 217 220 226 247 249 324 427 455 482 025
OLEVIA	331	PHOCUS	047
OLYMPIC	332	PHOENIX	049 050 102 104 107 113 152 324 379 421
OMEGA	076	PHONOLA	049 050 065 079 112 152 160 324 379
ONCEAS	050	PILOT	049 152
ONWA	123 225	PIONEER	049 074 152 172 182 209 218 307 421 427 003
OPERA	049 152	PLANTRON	049 076 152 195
OPTIMUS	099	PLAYSONIC	379
OPTOMA	333	POLAROID	343
OPTONICA	190	POLICOM	074
ORBIT	049 152	POPPY	195
ORIENT	336	PORTLAND	226
ORION	004 042 045 049 076 094 113 131 134 139 150 152 191 195 216 366 367 426	POWERPOINT	232
ORLINE	049 123 152	PRANDONI-PRINCE	046 090 120 171 172 307 407
ORMENTI-PHOENIX	104	PRECISION	379
ORMOND	195	PREMIER	142
OSAKA	066	PRIMA	076 195 307
OSAKI	049 066 076 102 106 123 152 226 379 426	PRINCE	046 171
OSIO	049 152	PRINCESS	344
oso	123	PRINZ	102
OSUME	018 102 123	PROFEX	107 139 195 407
OTAKE	450	PROFI-TRONIC	045 049 152
OTHER LINE	337	PROLINE	049 102 112 191 366 436
OTTO VERSAND	018 049 050 074 094 104 107 113 134 139 152 172 190 218 247 249 357 362 379 414 454 455	PROSCAN	345
OVP	338	PROSONIC	049 085 151 152 195 225 226 379 421
P.T ACTRON	217	PROTECH	045 049 076 125 139 152 163 195 379 457
PACIFIC	316	PROTON	346
PAEL	050 379	PROVISION	049 152
PALLADIUM	049 107 152 163 210 247 324 357 379 421	PYE	050 065 079 112 152 160 226 324
PALSONIC	049 055 076 152 379 426 019 023 052	PYMI	049 112 152 195 226 324
PANAMA	049 076 152 195 379	QUADRA VISION	425
PANASONIC	016 049 099 104 107 139 151 152 172 396 420 461 304 305	QUASAR	045 046 068 099
PANAVISION	049 152 210	QUELLE	018 020 049 050 074 076 078 080 090 091 094 113 131 139 146 150 152 153 172 195 247 249 320 357 379 408 449 454
PANAVOX	339	QUESTA	018
PANORAMIC	340	RADIALVA	049 074 107 123 152
PATHE CINEMA	107 113 379 391 411 425	RADIOLA	008 049 050 065 079 112 152 160
PATHE CINEMA(F)	050 168	RADIOMARELLI	045 046 065 104 105 150 152 168 324
PATHE MARCONI	008 074 182 186 424 453 462 463	RADIONETTE	020 150
PAUSA	195	RADIOSHACK	049 152
PAUZA	195	RADIOTONE	049 076 152 163 195 421 426
PERDIO	049 102 107 113 152	RANK ARENA	018
RCA	190 218 436	SEARS	042
REALISTIC	350	SEG	018 045 049 050 076 107 152 172 195 232 379 407 457
RECOR	049 152	SEI	004 045 049 094 107 139 152 236 324 357

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
RECTILIGNE	049 152	SEI SINUDYNE	446
REDIFFUSION	018 059 104 105 139 171 172 307	SELECO	040 071 079 107 110 152 171 172 210 236 243 307 369
REDIFFUSION(UK)	150 162	SENCORA	195
REDSTAR	049 152	SENTRA	123 139 141 195
REFLEX	049 152	SERINO	380 435
REGENTE	351	SHARP	018 094 170 190 320 362 308
REOC	460	SHERWOOD	374
REVOX REX	049 152 421 040 071 079 107 110 152 171 210 236 243 307	SHORAI SHOW	042 094 376
RFT	076 102 241 324 391 421	SIAM	049 152
RHAPSODY	379	SIAREM	045 046 065 104 107 120 139 324
R-LINE	049 152	SIEMENS	018 049 066 113 152 247 249 307 320 454
ROADSTAR	049 076 123 152 163 195	SIERA	050 065 079 112 152 160
	065 324	SIERRA	
ROBOTRON	****		049 112 152
RODEX	049 152	SIESTA	421
ROSITA	354	SILVA	049 152 379
ROWA	458	SILVER	018 042 049 076 152 172
ROWSONIC	050	SIM2	381
ROYAL LUX	421 426	SINGER	045 049 065 104 152 195 324 369 425
RUNCO	356	SINOTEC	383
RTF	065	SINUDYNE	004 045 065 094 104 107 134 139 150 152 172 210 216 236 324 357 366 367
SABA	046 065 074 077 107 120 139 172 182 186 218 307 324 424 436 452 453 463	SKANTIC	307
SACCS	411	SKY	049 152 487 490
SAGEM	378 380 435 311	SKYWORTH	448
SAISHO	004 050 076 107 131 134 195 307 379	SMARAGD	384
SAKURA	359	SOGERA	113
SALORA	033 107 127 136 139 150 153 171 172 198 209 307	SOLAVOX	066 102 107 139 172 307
SAMBERS	045 046 068 090 120 407	SOLE	386
SAMPO	360	SONAWA	123
SAMSUNG	049 050 066 076 102 152 195 209 217 365 379 414 421 455 486 488 318	SONIQ	322 323 325
SANDRA	379	SONITRON	209 379 421
SANELA	411	SONNECLAIR	049 152
SANSUI	049 152 225	SONOKO	049 050 076 152 195 378 379
SANTON	195	SONOLOR	107 139 172 209 357 425
SANYO	018 020 041 049 050 065 102 107 131 152 195 198 209 320 379 391 408 421 314	SONTEC	049 094 152 421
SAVE	049 152	SONY	018 045 131 211 357 358 370 301 302
SBR	049 112 152	SOUNDMASTER	387
SCEPTRE	372	SOUND & VISION	045 123 226
SCHAUB LORENZ	090 104 136 139 153 162 171 198 307 433 005	SOUND WAVE	049 113 163
SCHNEIDER	008 040 049 050 065 069 079 104 107 112 123 139 152 156 160 168 172 182 195 225 243 307 379 382 414 417 457	SOUNDESIGN	042
SCOTT	042	SPECTRA	195
SSANGYONG	195	TEDELEX	379
STANDARD	049 050 113 123 152 195 226 379	TEIRON	195
STAR	388	TEKNANT	400
-		TEKNIKA	042
STARLIGHT	049 076 107 152 195	IEKNIKA	U4Z

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
STENWAY	123 378	TEKON	401
STERN	040 071 079 107 110 152 171 236 243 307	TELEAVIA	008 074 182 186 218 424 453 462 463
STRATO	049 076 152 195	TELECOR	049 107 123 152 379
STRONG	312	TELEFAC	402
SUNKAI	049 094 123 134 152 191 232 367 380	TELEFUNKEN	049 064 074 082 152 182 186 187 218 230 424 436 452 453 463 489
SUNSTAR	049 152 195 225	TELEFUSION	049 152
SUNWOOD	049 152 195	TELEGAZI	049 076 107 123 152
SUPERLA	379	TELEMEISTER	049 113 152
SUPERTECH	049 123 152 195 379	TELEOPTA	404
SUPRA	195 226	TELERENT	405
SUSUMU	123 218	TELESONIC	049 152
SUTRON	195	TELESTAR	049 152
SWISSTEC	48	TELETECH	049 152 195 213
SYDNEY	379	TELETON	018 067 071 107 236 379
SYLVANIA	392	TELEVIDEON	050 104 107 113 379
SYMPHONIC	393	TELEVISO	425
SYSLINE	049	TEMCO	094
SYTONG	379	TEMPEST	049 152 195
TACTUS	106	TENNESSEE	049 152
TADISTAR	394	TENSAI	020 050 055 094 113 123 152 195 225 226 379 450
TALENT	395	TENSON	413
TANDBERG	065 074 078 172 182 210 213 420 449	TESMET	439
TANDY	050 102 123 190 307 379	TETUNG	046
TARGA	397	TEVION	049 152 195 313
TASHIKO	018 050 107 177 379	TEXET	050 123 195 226 379
TATUNG	049 050 102 106 120 131 152 217 379	THOMSON	008 024 026 049 064 074 134 152 182 186 218 230 424 436 453 462 463 321
TCL	398	THORN	049 102 103 106 141 152 218 226 408 409 411 454 464
TCM	440 441 443 444	THORN-FERGUSON	074 076 080 082 103 218 357 358 375
TEAC	049 076 152 163 195 217 378 380 426 457 458 012 010	TMK	416
TEC	040 050 064 168 195 213 218 243 379	ТОВО	418
TECH LINE	049 152 195	TOKAI BA	018 045 128 141 369 379
TECHNISAT	061	TOWADA	045 379
TECHNOL	399	TOYODA	195
TECHICA	123	TRAKTON	076
TECHNEMA	113	TRANS CONTINENS	046 049 152 171 307 379
TECHNICS	099	TRANSONIC	049 152 380 458
TECHNOL ACE	042	TRANSTEC	379
TREVI	419	WALTHAM	049 152 163 182 307 379
TRIAD	422	WATSON	049 107 113 123 152 195 247
TRIDENT	379	WATT RADIO	045 050 068 104 107 139 150 379
TRISTAR	123	WEGA	018 049 139 152 324
TRIUMPH	004 046 049 128 152 197 375	WEGA COLOR	065 088
TRIVISION	430	WEGAVOX	195
TRUTEK	431	WELTBLICK	113 152
UHER	049 069 071 080 090 113 152 163 226 236 307 407 414 421	WESTINGHOUSE	094 152
ULTRA	409	WESTON	168
ULTRAVOX	045 049 050 065 104 107 139 152 226 324 379	WHARFEDALE	049 152
UNIC LINE	049 152	WHITE	045

TV Manufacturer	Control Codes	TV Manufacturer	Control Codes
UNIC RADIO	438	WHITE WESTINGHOUSE	049 050 113 152 213 379
UNITED	049 152 491	WINBOOK	470
UNIVERSUM	002 004 018 020 049 074 076 094 107 131 152 163 172 195 197 210 213 247 320 357 375 379 407 408 421 428 429 437 454	WINCO	426
UNIVOX	049 107 152 213 324 411	WINDSTAR	378
UTAX	050	WINTAL	315
VANGUARD	447	WINTERNITZ	471
VEGAVOX	163	WORLD-TECH	473
VESTEL	049 107 125 152 379	XRYPTON	049 152
VEXA	152 195	YAMAHA	474 075 096
VICTOR	170	YAMISHI	049 123 152 378 379 380
VIDEO SYSTEM	049 152	YOKAN	049 152
VIDEOLOGIQUE	123 379	YOKO	049 050 076 123 152 195 379 421
VIDEOSYSTEM	049 152	YORX	123
VIDEOTECHNIC	113 226 379	ZANUSSI	040 071 079 110 152 171 236 307 379
VIDEOTON	107	ZENITH	475
VIDIKRON	045	ZOPPAS	040 071 079 110 171 307
VIDION	451		
VIDTECH	018		
VIEWSONIC	073		
VIORE	466		
VIPER	213		
VISIOLA	379		
VISION	049 113 152		
VISOREX	442		
VISTAR	172 236		
VIZIO	467		
VOLTEC	074		
VORTEC	152		
VOXSON	049 065 090 152 163 171 307 324 407		
WALKIE	469		

9. Symbols and Icons

Symbols on HDS-600RS

Symbol	Meaning
CE	The product complies with applicable EU directives.
X	Do not dispose of with normal household waste.
⚠ []i	Caution, read the instructions.
	The equipment has additional insulation and does not need to be earthed.
~	Alternating Current.
•	USB connector.
HDMI	HDMI logo.
HIGH-DEFINITION MULTIMEDIA INTERFACE	This logo tells you that the receiver incorporates High- Definition Multimedia Interface technology.
	HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
DOLBY	Dolby Digital Plus logo.
DIGITAL PLUS	Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
	freesat logo
freesat +	This logo tells you that this equipment is capable of receiving free-to- air digital satellite signals and has built in recorder.
	freesat is a registered trade mark and the "freesat" logo is a trademark of Freesat (UK) Ltd.

Symbol	Meaning
chao	Sling logo.
SII::9	This logo tells you the receiver is capable of place shifting your TV content.
	HD logo
[HD]	This logo tells you the receiver is capable of receiving and displaying HD content.

Information Icons

Icon	When displayed (programme guide or info bar)
SUB	Contains one or more subtitle components.
SUB	Does not contain any subtitles.
DJp+	Contains a Dolby Digital Plus audio component.
DOD	Contains a Dolby Digital audio component, but not Dolby Digital Plus.
AD#	Contains an Audio Description component.
(AD)	Does not contain an Audio Description component.
F	Contains more than one audio language component.
	Contains only one audio language component.
	Broadcast in more than one discreet part with one or more other programmes between the parts.
<u>576</u> p	The current output resolution on HDMI is 576p .
ZZKU	The current output resolution on HDMI is 720p.
<u>i. Fi</u>	The current output resolution on HDMI is 1080i.
	The programme is broadcast in SD. An HD version of the programme is also available at the same, or at an earlier, or at a later, time on a different channel.

	Programme has an associated recommendation.
J.	This is a radio service (audio only).
Text	This is a text only (i.e. MHEG) service.
	A future recording has been scheduled for this programme.
0	This programme is currently being recorded.
0	A Reminder has been set for this programme.
NA	Channel N/A.
	This is a TV service (audio and video).
G	This recording is subject to parental guidance.
(N)	This recording is locked
	or This channel is locked
	This recording was not completed successfully.
	This event is broadcast in HD (720p, 1080i, or 1080p).
	This programme is part of a series.
Text	Text service available on this channel.
Text	Text service unavailable on this channel.

Visit Us

You can register your product and receive the latest news on updates and support by visiting us at:

www.myechostar.com

For further information on freesat please go to www.freesat.co.uk Follow freesat on twitter.com/freesat_TV Like freesat on facebook.com/freesat



Dolby and the double-D symbol are registered trademarks of Dolby laboratories. HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Copyright @ 2011 EchoStar Technologies L.L.C. Sling Media, SlingLoaded and SlingPlayer are the registered or unregistered trademarks of Sling Media, Inc. All other brand and product names are or may be trademarks of, and are used to identify products or services of, their respective owners.

EchoStar Europe, Beckside Design Centre, Millennium Business Park, Station Road, Steeton, Keighley, West Yorkshire BD20 6QW.

Part No: 172852 Rev01