

TOSHIBA
Leading Innovation >>>



Série
AV56*
DIGITAL

REGZA



Contents

INSTALLING YOUR TV

Safety Precautions	4
Installation and important information	5
The remote control	6
Inserting batteries and effective range of the remote	6

CONNECTING YOUR TV

Connecting external equipment	7
Connecting an HDMI™ or DVI device to the HDMI input	8
To connect an HDMI device	8
To connect a DVI device	8
Connecting a computer	9
To connect a PC to the HDMI terminal	9
Using the controls	10
Switching on	10
Using the remote control	10
Using the controls	10

SETTING UP YOUR TV

Startup Application	11
Quick Setup	11
Auto Tuning	12
Auto Channel Update	12
Analogue switch-off	12
DTV Settings	13
Channels	13
Manual Tuning	13
ATV Manual Tuning	14
Tuning	14
Skip	15
Sorting positions	16

CONTROLS AND FEATURES

General controls	17
Selecting positions	17
The Time Display – analogue only	17
Stereo and Bilingual transmissions	17
Sound controls	17
Volume controls and mute sound	17
Bass, Treble and Balance	17
Bass Boost	17
Dual	18
Stable Sound®	18
Dynamic Range Control	18
Widescreen viewing	19
Picture controls	21
Picture Position	21
Backlight	21
Picture preferences	22
Black/White Level	22
Cinema Mode	22
Colour Temperature	22
3D Colour Management	23
Base Colour Adjustment	23
Active Backlight Control	23
MPEG NR – Noise Reduction	23
DNR – Digital Noise Reduction	23
Automatic Format (Widescreen)	24
4:3 Stretch	24
Blue Screen	24
Side panel adjustment	24
Picture still	24
Panel lock	24
The timers	25
Programme Timers – digital only	25

Sleep Timer	25
Digital on-screen information and Programme Guide	26
Information	26
Guide	27
Genre selection/searching	27
Digital settings – parental control	28
Setting the PIN	28
Parental Setup	28
Digital settings – Channel Options	29
Selecting favourite channels	29
Favourite Channel Lists	29
Locking channels	29
TV/Radio Mode	29
Digital settings – other settings	30
Subtitles	30
Audio languages	30
Common Interface	30
Software Upgrade	31
Version	31
Auto Upgrade	31
Searching for New Software	31
Reset TV	31
Input selection and AV connections	32
Input selection	32
INPUT signal selection	32
HDMI Audio	33
Lip Sync Latency	33
Digital Output	33

TEXT SERVICES

Text services	34
Selecting modes	34
Text information	34
Navigating pages using Auto	34
Navigating pages using List	34
Control buttons	35

PROBLEM SOLVING

Questions and Answers	36
------------------------------------	----

INFORMATION

Notes	38
Information	39
Specifications and accessories	40

Safety Precautions

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken to obtain the best results and for safety to be assured. Please read the points below for your own safety. They are of a general nature, intended to help with all electronic consumer products and some points may not apply to the goods you have just purchased.

Air Circulation

Leave more than 10cm clearance around the television to allow adequate ventilation. This will prevent overheating and possible damage to the television. Dusty places should also be avoided.

Heat Damage

Damage may occur if the television is left in direct sunlight or near a heater. Avoid places subject to extremely high temperatures or humidity. Place in a location where the temperature remains between 5°C (41°F) min. and 35°C (94°F) max.

Mains Supply

The mains supply required for this equipment is 220-240v AC 50/60Hz. Never connect to a DC supply or any other power source. DO ensure that the television is not standing on the mains lead.

DO NOT cut off the mains plug from this equipment, this incorporates a special Radio Interference Filter, the removal of which will impair its performance.

IF IN DOUBT PLEASE CONSULT A COMPETENT ELECTRICIAN.

Do

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and inter-connections between pieces of equipment) are properly made and in accordance with the manufacturers' instructions. Switch off and withdraw the mains plug before making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

DO NOT REMOVE ANY FIXED COVERS AS THIS WILL EXPOSE DANGEROUS AND 'LIVE' PARTS.

THE MAINS PLUG IS USED AS A DISCONNECTING DEVICE AND THEREFORE SHOULD BE READILY OPERABLE.

Do not

DO NOT obstruct the ventilation openings of the equipment with items such as newspapers, tablecloths, curtains, etc. Overheating will cause damage and shorten the life of the equipment.

DO NOT allow electrical equipment to be exposed to dripping or splashing or objects filled with liquids, such as vases, to be placed on the equipment.

DO NOT place hot objects or naked flame sources, such as lighted candles or nightlights on, or close to equipment. High temperatures can melt plastic and lead to fires.

DO NOT use makeshift stands and NEVER fix legs with wood screws. To ensure complete safety, always fit the manufacturers' approved stand, bracket or legs with the fixings provided according to the instructions.

DO NOT leave equipment switched on when it is unattended, unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off by withdrawing the plug, make sure your family know how to do this. Special arrangements may need to be made for people with disabilities.

DO NOT continue to operate the equipment if you are in any doubt about it working normally, or it is damaged in any way – switch off, withdraw the mains plug and consult your dealer.

WARNING – excessive sound pressure from earphones or headphones can cause hearing loss.

ABOVE ALL – NEVER let anyone, especially children, push or hit the screen, push anything into holes, slots or any other openings in the case.

NEVER guess or take chances with electrical equipment of any kind – it is better to be safe than sorry.

Installation and important information

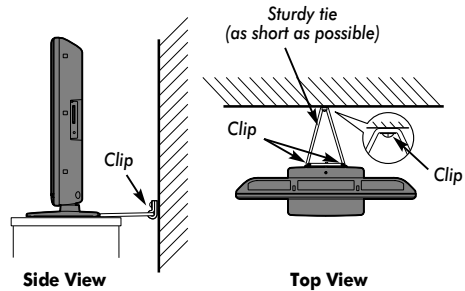
Where to install

Locate the television away from direct sunlight and strong lights, soft, indirect lighting is recommended for comfortable viewing. Use curtains or blinds to prevent direct sunlight falling on the screen.

Place on a sturdy platform, the mounting surface should be flat and steady. It should be secured to the wall with a sturdy tie using the clip on the back of the stand, or secured to the platform using the fixing strap located underneath the table top stand, this will prevent it from falling over.

The LCD display panels are manufactured using an extremely high level of precision technology, however sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a sign of a malfunction.

Make sure the television is located in a position where it cannot be pushed or hit by objects, as pressure will break or damage the screen, and that small items cannot be inserted into slots or openings in the case.



Please take note

EXCLUSION CLAUSE

Toshiba shall under no circumstances be liable for loss and/or damage to the product caused by:

- i) fire;
- ii) earthquake;
- iii) accidental damage;
- iv) intentional misuse of the product;
- v) use of the product in improper conditions;
- vi) loss and/or damage caused to the product whilst in the possession of a third party;
- vii) any damage or loss caused as a result of the owner's failure and/or neglect to follow the instructions set out in the owner's manual;
- viii) any loss or damage caused directly as a result of misuse or malfunction of the product when used simultaneously with associated equipment;

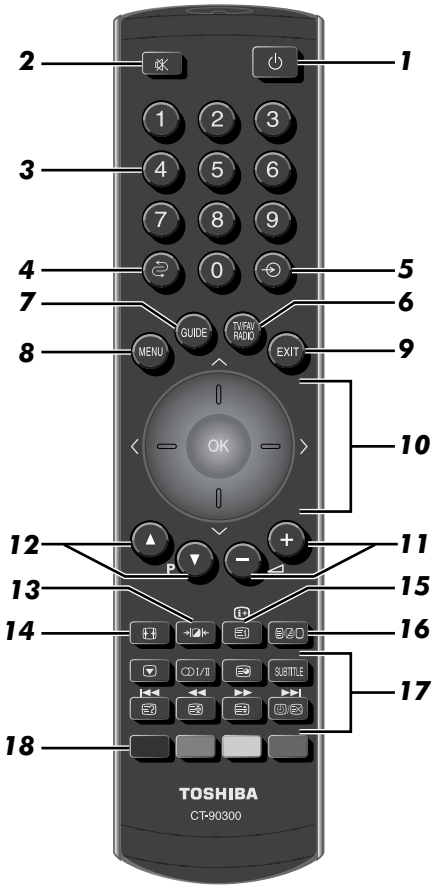
Furthermore, under no circumstances shall Toshiba be liable for any consequential loss and/or damage including but not limited to the following, loss of profit, interruption of business, the loss of recorded data whether caused during normal operation or misuse of the product.

- If stationary images generated by 4:3 broadcasts, text services, channel identification logos, computer displays, video games, on screen menus, etc. are left on the television screen for any length of time they could become conspicuous, it is always advisable to reduce both the brightness and contrast settings.
- Very long, continuous use of the 4:3 picture on a 16:9 screen may result in some retention of the image at the 4:3 outlines, this is not a defect of the LCD TV and is not covered under the manufacturers warranty. Regular use of other size modes (eg: Superlive) and varying the "side panel" brightness (if available on the model) will prevent permanent retention.

The remote control

Simple at-a-glance reference of your remote control.

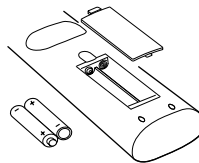
English



- 1 For On/Standby mode
- 2 To mute the sound
- 3 Number buttons
- 4 To return to the previous programme
- 5 To select input from external sources, **analogue** or **digital** TV
- 6 To switch between TV, Radio and Favourite channels when in **digital** mode
- 7 To display the **digital** on-screen Programme Guide
- 8 On-screen Menus
- 9 To exit Menus

- 10 When using menus press ^ (up), v (down), < (left) and > (right) to move the cursor on the screen. **OK** to confirm your selection
- 11 To alter the volume
- 12 To change programme positions and text pages
- 13 Selectable picture preferences
- 14 Widescreen viewing
- 15 To display on-screen information
- 16 To call up text services in **analogue** mode and interactive services in **digital** mode
- 17 **When in TV mode:**
 - Still picture
 - Stereo/bilingual transmissions
 - Digital Subtitles
 - Time display
- When using the Programme Guide:**
 - 24 hours
 - + 24 hours
 - 1 page
 - + 1 page
- 18 Text and interactive service control buttons

Inserting batteries and effective range of the remote



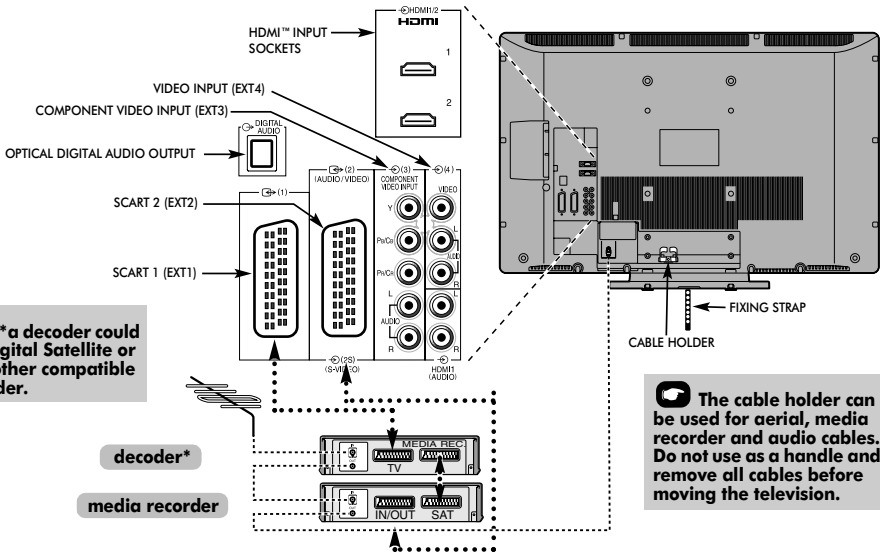
Remove the back cover to reveal the battery compartment and make sure the batteries are inserted the right way round. Suitable battery types for this remote are AAA, IEC R03 1.5V.

Do not combine a used, old battery with a new one or mix battery types. Remove dead batteries immediately to prevent acid from leaking into the battery compartment. Dispose of them in a designated disposal area. **Warning:** batteries must not be exposed to excessive heat such as sunshine, fire or the like.

The performance of the remote control will deteriorate beyond a distance of five metres or outside an angle of 30 degrees from the centre of the television. If the operating range becomes reduced the batteries may need replacing.

Connecting external equipment

Before connecting any external equipment, turn off all main power switches. If there is no switch remove the mains plug from the wall socket.



English

* a decoder could be Digital Satellite or any other compatible decoder.

The cable holder can be used for aerial, media recorder and audio cables. Do not use as a handle and remove all cables before moving the television.

Aerial cables: -----

Connect the aerial to the socket on the rear of the television. If you use a decoder* and/or a media recorder it is essential that the aerial cable is connected through the decoder and/or through the media recorder to the television.

SCART leads:

Connect the video recorder **IN/OUT** socket to the television. Connect the decoder **TV** socket to the television. Connect the media recorder **SAT** socket to the decoder **MEDIA REC.** socket.

Before running **Auto Tuning** put your decoder and media recorder to **Standby**.

The phono sockets alongside the COMPONENT VIDEO INPUT sockets will accept L and R audio signals.

The Digital Audio Output socket enables the connection of a suitable surround sound system.

HDMI™ (High-Definition Multimedia Interface) is for use with a DVD, decoder or electrical equipment with digital audio and video output. It is designed for best performance with 1080i and 1080p high-definition video signals but will also accept and display VGA, SVGA, XGA, WXGA, SXGA, 480i, 480p, 576i, 576p and 720p signals.

PC format signals will also display as shown on page 39.

NOTE: Although this television is able to connect to HDMI equipment it is possible that some equipment may not operate correctly.

A wide variety of external equipment can be connected to the back of the television, therefore the relevant owners manuals for all additional equipment must be referred to.

We recommend SCART 1 for a decoder and SCART 2 for a media recorder.

If connecting S-VIDEO equipment, set the **INPUT** for **EXT2**. See page 32.

If the television automatically switches over to monitor external equipment, return to normal television by pressing the desired programme position button. To recall external equipment, press **↺** to select between **DTV**, **EXT1**, **EXT2**, **EXT3**, **EXT4**, **HDMI1**, **HDMI2** or **ATV**.

When the external input mode is selected while viewing DTV mode, the SCART socket does not output video/audio signals.

If **▼** button is pressed while viewing DTV mode, the picture on your screen and the SCART output will become a still picture.

DOLBY DIGITAL PLUS Manufactured under license from Dolby Laboratories.

Dolby and the double-D symbol are registered trademarks of Dolby Laboratories.

HDMI HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.

Connecting an HDMI™ or DVI device to the HDMI input

The HDMI input on your television receives digital audio and uncompressed digital video from an HDMI source device, or uncompressed digital video from a DVI (Digital Visual Interface) source device.

This input is designed to accept HDCP (High-Bandwidth Digital-Content Protection) programme material in digital form from EIA/CEA-861-D-compliant [1] consumer electronic devices (such as a set-top box or DVD player with HDMI or DVI output). For acceptable video signal formats, see page 39.

NOTE:

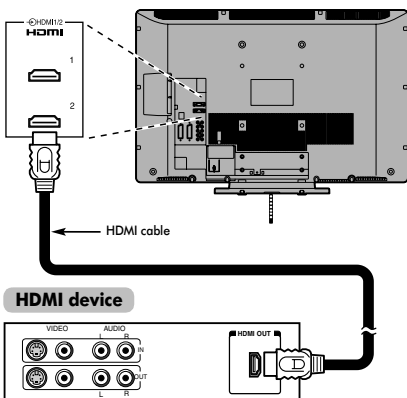
- Some early HDMI equipment may not work properly with your latest HDMI TV, due to the adoption of a new standard. Please unplug your HDMI cable first and then try setting **Lip Sync** to "Off". Your early HDMI source should operate properly with your television. See page 33.
- Supported Audio format: Linear PCM, sampling rate 32/44.1/48kHz.


To connect an HDMI device

Connect an HDMI cable (type A connector) to the HDMI terminal.

For proper operation, it is recommended that you use an HDMI cable with the HDMI Logo (HDMI).

- If your HDMI connection is capable of 1080p and/or your television is capable of refresh rates greater than 60Hz, you will need a Category 2 cable. Conventional HDMI/DVI cable may not work properly with this mode.
- HDMI cable transfers both video and audio. Separate analogue audio cables are not required (see illustration).
- See "HDMI1 Audio" on page 33.

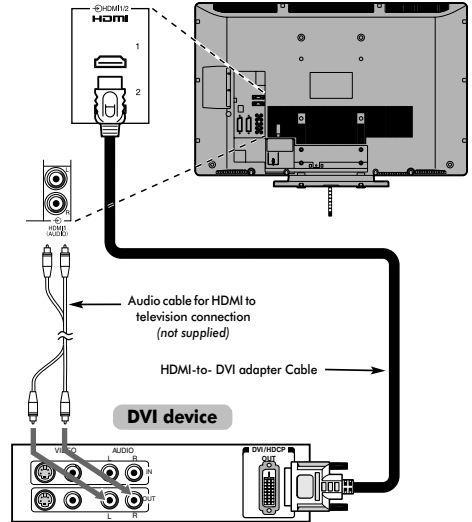


To view the HDMI device video, press the  button to select HDMI1 or HDMI2 mode.

To connect a DVI device

Connect an HDMI-to-DVI adapter cable (HDMI type A connector) to the HDMI1 terminal and audio cables to the HDMI1 (AUDIO) socket (see illustration).

- The recommended HDMI-to-DVI adapter cable length is 6.6 ft (2m).
- An HDMI-to-DVI adapter cable transfers video only. Separate analogue audio cables are required.
- See "HDMI1 Audio" on page 33.



NOTE:

To ensure that the HDMI or DVI device is reset properly, it is recommended that you follow these procedures:

- When turning on your electronic components, turn on the television first, and then the HDMI or DVI device.
- When turning off your electronic components, turn off the HDMI or DVI device first, and then the television.

[1] EIA/CEA-861-D compliance covers the transmission of uncompressed digital video with high-bandwidth digital content protection, which is being standardized for reception of high-definition video signals. Because this is an evolving technology, it is possible that some devices may not operate properly with the television. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

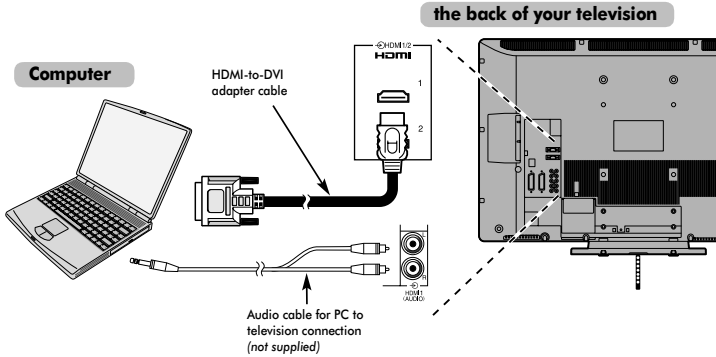
Connecting a computer

With an HDMI connection, you can watch your computer's display on the television and hear the sound from the television's speakers.

To connect a PC to the HDMI terminal

When connecting a PC to the HDMI terminal on the television, use an HDMI-to-DVI adapter cable and an analogue audio cable.

If connecting a PC with an HDMI terminal, use an HDMI cable (type A connector). A separate analogue cable is not necessary (see page 8).



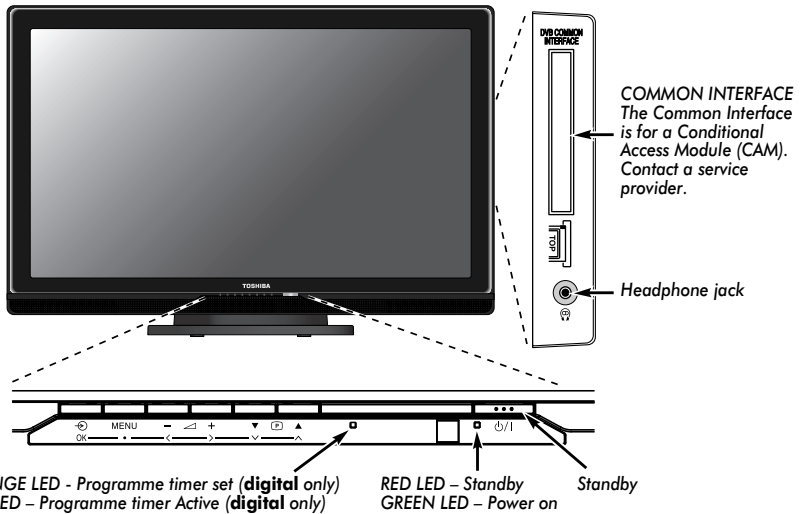
For acceptable PC and video signal formats, see page 39.

NOTE:

- The edges of the images may be hidden.
- If connecting a certain PC model with a unique PC signal, the PC signal may not be detected correctly.

Using the controls

Whilst all the necessary adjustments and controls for the television are made using the remote control, the buttons on the television may be used for some functions.



Switching on

If the RED LED is unlit check that the mains plug is connected to the power supply. If the picture does not appear press **⏻** on the remote control, it may take a few moments. The GREEN LED will be lit.

To put the television into Standby press **⏻** on the remote control. To view the television press **⏻** again. The picture may take a few seconds to appear.

Using the remote control

Press **Ⓜ** on the remote control to see the menus.

The menu appears as a list of five topics. As each symbol is selected by pressing **<** or **>** on the navigation ring on the remote control, its respective options will appear below.

NOTE: The same menu is displayed in DTV (Digital TV) and ATV (Analogue TV) modes; however some items are greyed out in each case.

To use the options, press **^** and **v** on the remote control to move up and down through them and **Ⓜ**, **<** or **>** to select the required choice. Follow the on-screen instructions. The functions of each menu are described in detail throughout the manual.

Using the controls

To alter the volume press **-** **⏮** **+**.

To alter the programme position press **v** **Ⓜ** **^**.

Press **MENU** and **<**, **>**, **^** or **v** to control the sound and picture options.

Press **MENU** to finish.

To select an external input, press **Ⓜ** until the appropriate input source is selected as described on page 32.

Please always refer to the owner's manual of the equipment to be connected for full details.

Please note: Inserting the headphone plug will mute the sound from all speakers.

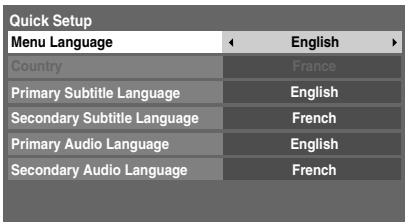
Startup Application

Before switching on the television put your decoder and media recorder to **Standby** if they are connected.

To set up the television use the buttons on the remote control as detailed on page 6.

Quick Setup

- 1 Press the button. The **Quick Setup** screen will appear. This screen will appear the first time that the television is switched on and each time "Reset TV" is executed.



- 2 Press or to select the menu language **Français** or **English**.

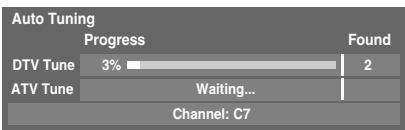
Country is fixed to **France** in this model.

- 3 Press to highlight **Primary Subtitle Language**, **Secondary Subtitle Language**, **Primary Audio Language** or **Secondary Audio Language** and use or to select your preferred language.

- 4 Press to display the **Auto Tuning** startup screen. To execute **Auto Tuning** highlight **Start Scan** and press again.

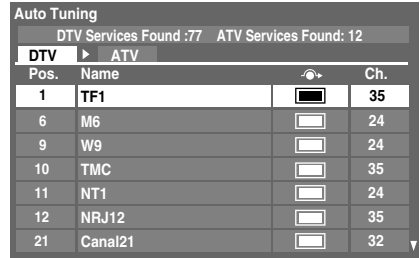
The television will start to search for available ATV and DTV channels. The progress bar will indicate the scan status.

You must allow the television to complete the search.

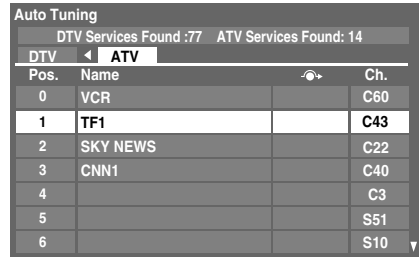


When the search is complete the television will automatically select position one.

The **Auto Tuning** results screen will display the services that are found.



- 5 Press or to view the **DTV** (digital channel) or **ATV** (analogue channel) lists.



- 6 Use or to move through the list to select a channel then press to view.

NOTE: The time will be set automatically by transmission but can be advanced or decreased by up to 3 hours using **Local Time Setting**.

PLEASE NOTE

The **Quick Setup** menu can also be displayed at any time from the **SETUP** menu.

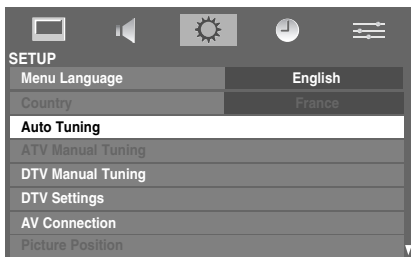
Auto Tuning

NOTE: As new services are broadcast it will be necessary to re-tune the television in order to view them.

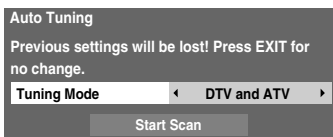
Auto Tuning will completely re-tune the television and can be used to up date the channel list.

It is recommended that Auto Tuning is run periodically to ensure that all new services are added. All current channels and settings, i.e. favourites and locked channels, will be lost.

- 1 Press **MENU** and use < or > to select **SETUP** menu. Use **✓** to highlight **Auto Tuning**. Press **OK**.



- 2 A screen will appear warning that previous programmes and settings will be deleted.



Use < or > to select **DTV and ATV**, **DTV** or **ATV**, then highlight **Start Scan** and press **OK** to continue with the **Auto Tuning**.

The television will start to search for all available DTV and/or ATV services.

You must allow the television to complete the search.

When the search is complete the **Auto Tuning** screen will display the services found.

- 3 Use **✓** or **^** to move through the list to select a channel then press **OK** to view.

Auto Channel Update

If the **Auto Channel Update** is set to **On**, when the TV is in standby mode, Digital Tuning is automatically executed and any new channels are stored.

- 1 Press **MENU**, and select **SETUP** menu.
- 2 Use **✓** to highlight **DTV Settings** and press **OK**.
- 3 Press **✓** to select **Auto Channel Update** and use < or > to select **On**.

Analogue switch-off

This is a **digital** television which is integrated to allow the use of both **digital** and **analogue** services. However, during the lifetime of this set it is very likely that **analogue** services will be switched off to allow for more new **digital** services.

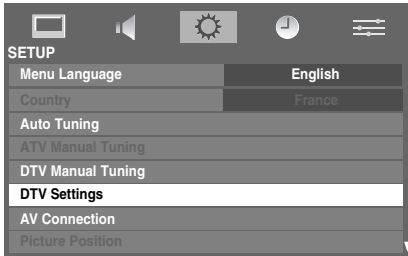
This 'switch-off' will happen in a number of phases, which will be advertised in your area well in advance. It is recommended that at each phase the television is re-tuned to ensure that existing and new **digital** services can be viewed without disruption.

DTV Settings

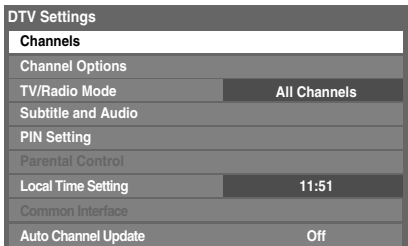
Channels

The channel order may be changed to suit your personal preference.

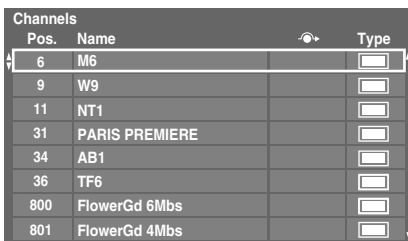
- 1 Press **(MENU)**, and select **SETUP** menu.
- 2 Use **▼** to highlight **DTV Settings** and press **(OK)**.



- 3 Select **Channels** from the **DTV Settings** menu and press **(OK)**.



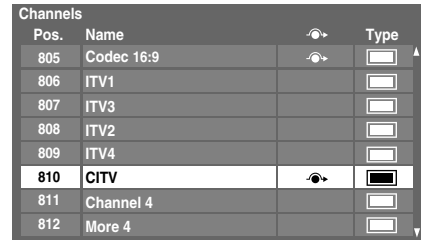
- 4 With the list of channels showing use **▼** or **▲** to highlight the channel you want to move and press **(OK)**.



- 5 Use **▼** or **▲** to move through the list to your preferred position. As you do so the other channels will move to make room.

- 6 Press **(OK)** to store your move. Repeat as necessary, then press **(EXIT)**.

The Skip setting for the highlighted channel can be switched between "Set/Not Set" by pressing the **RED** button on the remote control. This feature allows you to set channels that will be skipped when **P▼** or **P▲** are used to tune. However, these channels will still be available by direct number entry (when tuned a **👁️** icon will be displayed in the banner to indicate as a skipped channel).

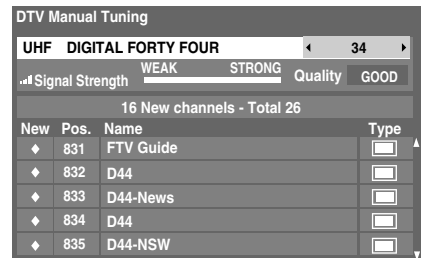


English

Manual Tuning

This feature is available for service engineers or can be used for direct channel entry if the multiplex channel is known.

- 1 Select **DTV Manual Tuning** from the **SETUP** menu and press **(OK)**.
- 2 Enter the multiplex number using the number buttons or use **<** or **>** to adjust the number up or down and then press **(OK)**. The television will automatically search for that multiplex.



When the multiplex is found any channels that are not currently in the channel list will be added and the channel information at the top of the screen will be updated.

- 3 Repeat as necessary. Press **(EXIT)** to finish.

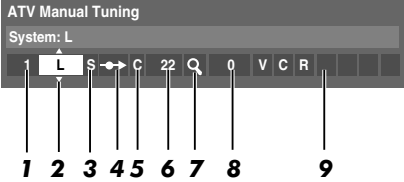
ATV Manual Tuning

Tuning

The television can be tuned-in manually using **ATV Manual Tuning**. For example: if the television cannot be connected to a media recorder/decoder with a SCART lead or when you want to tune-in a station on another **System**.

Use **<** and **>** to move across the screen and select any of the **ATV Manual Tuning** options. Then use **^** or **v** to adjust the settings.

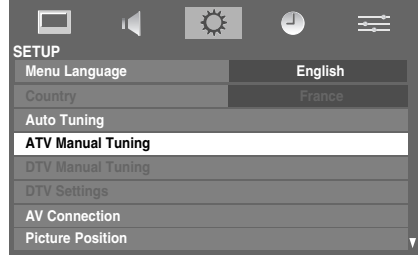
English



- 1 Position:**
The number to be pressed on the remote control to tune the channel.
- 2 System:**
Specific to certain areas.
- 3 Colour System:**
Factory set to Auto, should only be changed if problems are experienced, i.e. NTSC input from external source.
- 4 Skip:**
☞ means nothing has been stored or the facility to skip the channel is ON. See page 15.
- 5 Channel:**
The channel classification and the channel number on which a station is being broadcast.
- 6 Search:**
Search up and down for a signal.
- 7 Fine Tuning:**
Only used if interference/weak signal is experienced. See page 36.
- 8 Station:**
Station identification. Use the **^** or **v** and **<** or **>** buttons to enter up to seven characters.

To allocate a position on the television for a decoder and media recorder: turn the decoder on, insert a pre-recorded film in the media recorder and press PLAY, then manually tune.

- 1** Press **(MENU)** and using **<** or **>** select the **SETUP** menu. With **v** highlight **ATV Manual Tuning** and press **(OK)** to select.



- 2** Use **^** or **v** to highlight the position required e.g. we suggest **Pos. 0** for a media recorder.

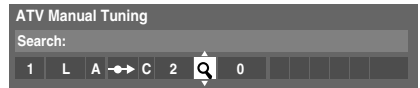
Pos.	Channel	Station
1	C2	
2	S10	
3	C7	
4	S40	
5	C22	
6	C25	
7	C28	
8	C30	

Different **Channel** numbers may be displayed.

- 3** Press **(OK)** to select. If the channel is set to skip, **Skip** must be removed before storing.



- 4** Press **>** to select **System** and use **^** or **v** to change if required.
- 5** Then press **>** to select **Search**.
- 6** Press **^** or **v** to begin the search. The search symbol will flash.



- 7 Each signal will show on the television, if it is not your media recorder, press \wedge or \vee again to restart the search.
- 8 When your media recorder signal is found, press \triangleright to move along to **Station**. With \wedge , \vee , \langle and \triangleright put in the required characters, e.g. **VCR**.



- 9 Press **OK** to store.
- 10 Repeat for each **position** you want to tune or, press **MENU** to return to the list of channels and select the next number to tune.
- 11 Press **EXIT** when you have finished.
- 12 To name external equipment, e.g. DVD on EXT2, press \odot to select $\odot 2$, then select **Manual Settings** from the **SETUP** menu.
- 13 Press \triangleright to select **Label** then using \wedge , \vee , \langle and \triangleright put in the required characters.



PLEASE NOTE

This television has direct channel entry if the channel numbers are known. Select the **ATV Manual Tuning** screen in **Step 3**. Enter the **Position number**, the **System**, then **C** for standard (terrestrial) channels or **S** for cable channels and the **Channel number**. Press **OK** to store.

Skip

To prevent certain channels from being viewed, positions can be skipped. The remote control must be removed as the channels will still be available using the number buttons. Channels can then be watched as normal using the controls on the television, but the television will not show the skipped channel positions.

- 1 Select **ATV Manual Tuning** from the **SETUP** menu.

Pos.	Channel	Station
1	C2	
2	S10	
3	C7	
4	S40	BBC1
5	C22	BBC1
6	C25	
7	C28	
8	C30	

- 2 Use \wedge or \vee to highlight the position to be skipped and press **OK** to select.
- 3 Press \triangleright to select **Skip**.
- 4 Use \wedge or \vee to turn **Skip** on. Press **OK**.

\odot on the screen indicates a skipped position.



- 5 Press **MENU** and repeat from **Step 2** or press **EXIT**.

Each position has to be *individually* selected. To turn **Skip** off, repeat the procedure for each position.

Skipped positions **cannot** be selected by **P▲** and **P▼** or by the controls on the television, but **can** still be accessed by the number buttons on the remote control.

English

Sorting positions

Channels may be moved and stored to the position of your choice.

- 1 Select **ATV Manual Tuning** from the **SETUP** menu.
- 2 With the list of channels now showing use **^** or **v** to highlight the channel you want to move and press **>**.

The selected channel will be moved to the right of the screen.

English

ATV Manual Tuning		
Pos.	Channel	Station
2	S10	
3	C7	
4	C40	BBC1
5	C22	BBC1
1	C2	
6	C25	
7	C28	
8	C30	

- 3 Use **^** or **v** to move through the list to your preferred position. As you do so the other channels will move to make room.
- 4 Press **<** to store your move.
Repeat as necessary, then press **EXIT**.

General controls

Selecting positions

To select a position use the numbered buttons on the remote control.

Positions can also be selected using **P▲** and **P▼**.

To revert to the previous position press **↶**.

To display on-screen information i.e. position, input mode or stereo/mono signal, press **[+]**. Press again to cancel.

The Time Display – analogue only

The time display facility allows the current (text service) time to be seen on the television screen.

Press **[⏰]**/**[EX]** whilst watching a normal television broadcast to see a time display from the broadcaster. It will remain on screen for about 5 seconds.

NOTE: This display may not be available in some cases.

Stereo and Bilingual transmissions

For ATV programmes

If stereo or dual language broadcasts are transmitted the word **Stereo** or **Dual** will appear on the screen each time positions are changed, disappearing after a few seconds. If the broadcast is not in stereo the word **Mono** will appear.

Stereo... Press **[⏸]**/**[II]** to select **Stereo** or **Mono**.

Bilingual... Bilingual transmissions are rare. If they are transmitted the word **Dual** will display. Choose the required programme number and if the word **Dual** appears press **[⏸]**/**[II]** to select **Dual 1**, **Dual 2** or **Mono**.

For DTV programmes

For stereo or dual mono broadcasts, press **[⏸]**/**[II]** and use **<** or **>** to select settings.

Mode Display	Pressing >
⊖ Stereo	Stereo → Left → Right
● Dual mono	Dual 1 → Dual 2 → Dual
○ Mono	–
⊙ Surround	–

For multi-audio track broadcasts, press **[⏸]**/**[II]** repeatedly to change the audio language (see 'Audio language' on page 30).

Sound controls

Volume controls and mute sound

Volume

Press **⏮** or **⏭** to adjust the volume.

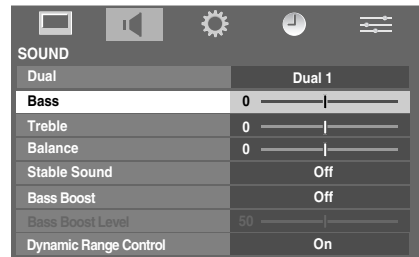
Sound Mute

Press **[M]** once to turn the sound off and again to cancel.

Bass, Treble and Balance

The sound controls are accessible in **digital** and **analogue** modes.

- Press **[MENU]** and **<** or **>** to select **SOUND**.

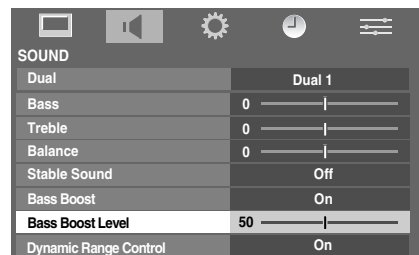


- Press **▼** to highlight **Bass**, **Treble** or **Balance** and **<** or **>** to change the setting.

Bass Boost


Bass Boost enhances the depth of the sound on the TV speakers. The difference will only be noticeable on sound with a strong bass.

- In the **SOUND** menu press **▼** to highlight **Bass Boost**. Use **<** or **>** to select **On**.
- Then press **▼** to highlight **Bass Boost Level** and using **<** or **>** adjust to suit your preference.



Dual

If a programme or film is being broadcast with a soundtrack in more than one language, the **DUAL** feature allows selection between them.

- 1 Press  and select the **SOUND** menu.
- 2 Use \downarrow to highlight **Dual** then press \leftarrow or \rightarrow to choose between **Dual 1** or **Dual 2**.

Stable Sound®

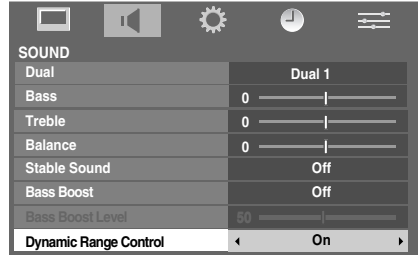
The **Stable Sound** feature limits high volume levels on the TV speakers, preventing the extreme changes in volume that can occur when channels are changed or a programme switches to a commercial.

- 1 Select the **SOUND** menu.
- 2 Use \downarrow to highlight **Stable Sound** then press \leftarrow or \rightarrow to select **On** or **Off**.

Dynamic Range Control

This feature allows control of audio compression for some digital TV programmes except MPEG-1 and MPEG-2 audio.

- 1 Select the **SOUND** menu.
- 2 Use \downarrow to highlight **Dynamic Range Control** then press \leftarrow or \rightarrow to select **On** or **Off**.

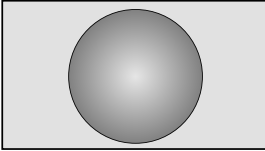


NOTE: If the **Stable Sound** and **Dynamic Range Control** features are both set to **On**, each effect may not be noticeable.

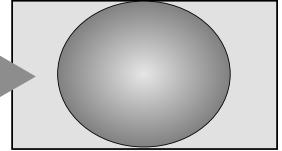
Widescreen viewing

Depending on the type of broadcast being transmitted, programmes can be viewed in a number of formats. Press **[F]** repeatedly to select between **Native**, **Wide**, **Super Live 2**, **Cinema 2**, **4:3**, **Super Live 1**, **Cinema 1**, **Subtitle** and **14:9**.

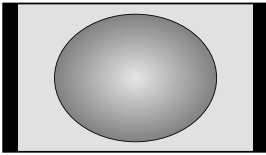
SUPER LIVE 1



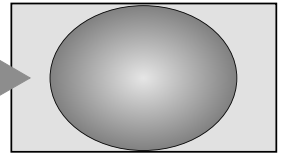
This setting will enlarge a 4:3 image to fit the screen by stretching the image horizontally and vertically, holding better proportions at the centre of the image. Some distortion may occur.



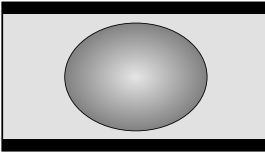
SUPER LIVE 2



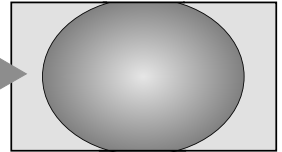
If a 'side panel format' signal is being received this setting will enlarge the image to fit the screen by stretching the image horizontally and vertically, holding better proportions at the centre of the image. Some distortion may occur.



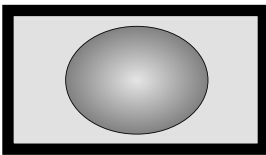
CINEMA 1



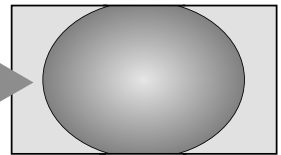
When watching 'letterbox format' films/video tapes, this setting will eliminate or reduce the black bars at the top and bottom of the screen by zooming in and selecting the image without distortion.



CINEMA 2

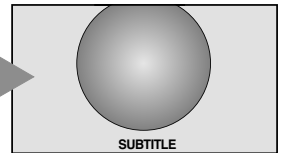


When watching 'all sides panel' films/video tapes, this setting will eliminate or reduce the black bars at all sides of the screen by zooming in and selecting the image without distortion.



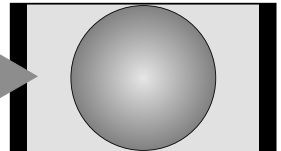
SUBTITLE

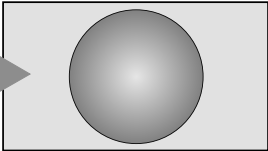
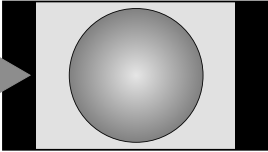
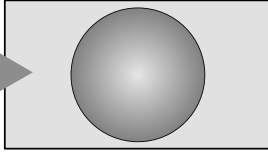
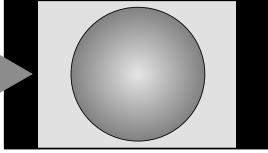
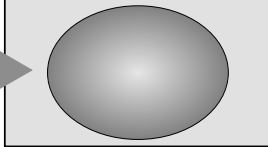
When subtitles are included on a letterbox format broadcast, this setting will raise the picture to ensure that all the text is displayed.



14:9

Use this setting when watching a 14:9 broadcast.



WIDE	<p>Use this setting when watching a widescreen DVD, widescreen video tape or a 16:9 broadcast (when available). Due to the range of widescreen formats (16:9, 14:9, 20:9 etc.) black bars may be visible on the top and bottom of the screen.</p>	➔	
4:3	<p>Use this setting to view a true 4:3 broadcast.</p>	➔	
NATIVE	<p>When using a PC connected via HDMI this setting will show the picture without over scan, i.e. WYSIWYG. This option is only available when watching video signal source via HDMI.</p>	➔	
PC NORMAL	<p>When using a PC connected via HDMI, this setting will show the picture without over scan, i.e. WYSIWYG. This option is only available when watching PC signal source via HDMI.</p>	➔	
PC WIDE	<p>When using a PC connected via HDMI, this setting will show the picture without over scan and side panel. This option is only available when watching PC signal source via HDMI.</p>	➔	

Press **F4** to display the list of available widescreen formats. Use **^** and **v** to highlight the required format and **OK** to select.

AV format

Picture Size
Native
Wide
Super Live 2
Cinema 2
4:3
Super Live 1
Cinema 1
Subtitle
14:9

PC format

Picture Size
PC Normal
PC Wide

Using the special functions to change the size of the displayed image (i.e. changing the height/width ratio) for the purposes of public display or commercial gain may infringe on copyright laws.

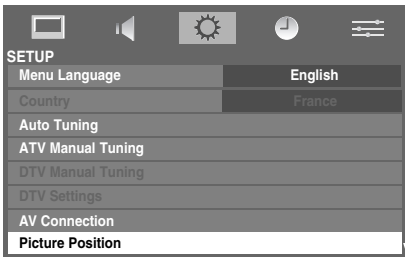
Picture controls

Most of the picture controls and functions are available in both **digital** and **analogue** modes.
PLEASE NOTE: features not available will be greyed out.

Picture Position

The picture position may be adjusted to suit personal preference and can be particularly useful for external inputs.

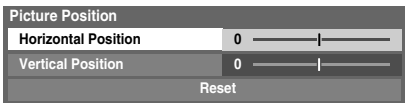
- 1 In the **SETUP** menu press \vee until **Picture Position** is highlighted.



- 2 Press OK to view the options available for the picture format that has been selected.
- 3 Press \wedge and \vee to select an option, then \lt or \gt to adjust the settings.

The options alter depending on currently selected widescreen format and the input signal.

In **Cinema 2:**

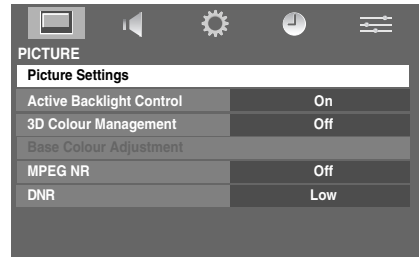


To return to the original factory settings select **Reset** in the **Picture Position** menu and press OK .

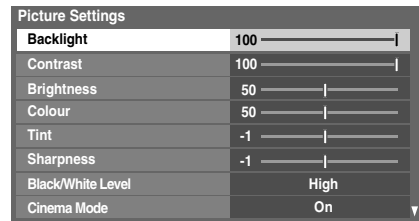
Backlight

Adjusting the **Backlight** can improve the clarity of the screen when viewing.

- 1 In the **PICTURE** menu press \vee to select **Picture Settings**, then press OK .



- 2 In the **Picture Settings** menu press \vee to select **Backlight**.
- 3 Press \lt or \gt to adjust.



Picture preferences

This television offers the choice of personalising the picture style. Press →|← to view the different styles available:

Dynamic, Standard, Movie, Game* and **PC**** are preset options and affect many features/settings within the television. You can customise current picture mode settings as desired. For example, while selecting "**Dynamic**," if you change the following items, such as **Backlight, Contrast, Brightness, Colour, Tint, Sharpness, Black/White Level, Cinema Mode** and **Colour Temperature**, your new setting is stored as "User Setting."

* **Game** mode is available in external input mode (other than aerial input). When you select Game mode, suitable widescreen formats will be selected.

** **PC** mode is available in HDMI input mode.

- 1 Select **Picture Settings** from the **PICTURE** menu.

Picture Settings	
Backlight	100
Contrast	100
Brightness	50
Colour	50
Tint	-1
Sharpness	-1
Black/White Level	High
Cinema Mode	On

- 2 Use < or > to adjust the **Contrast, Brightness, Colour, Tint** and **Sharpness**.

Black/White Level

Black/White Level increases the strength of dark areas of the picture which improves the definition.

- 1 In the **Picture Settings** menu press ∨ until **Black/White Level** is highlighted.

Picture Settings	
Backlight	100
Contrast	100
Brightness	50
Colour	50
Tint	-1
Sharpness	-1
Black/White Level	High
Cinema Mode	On

- 2 Press < or > to select **Low, Middle, High** or **Off**. The effect depends on the broadcast and is most noticeable on dark colours.

Cinema Mode

If there are lines or jagged edges in the film or programme being viewed, selecting **Cinema Mode** can help correct this by smoothing out the picture.

- 1 In the **Picture Settings** menu press ∨ to select **Cinema Mode**.
- 2 Press < or > to select **On** or **Off**.

NOTE: When a DVD with subtitles is being played this mode may not work correctly.

Colour Temperature

Colour Temperature increases the 'warmth' or 'coolness' of the picture by increasing the red or blue tint.

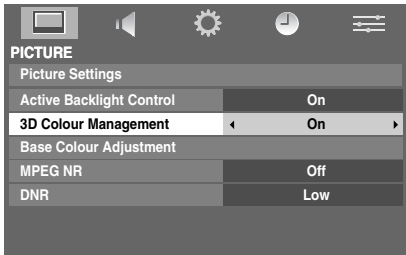
- 1 In the **Picture Settings** menu press ∨ until **Colour Temperature** is highlighted and press **OK**.
- 2 Press < or > to select **Cool, Natural** or **Warm** to suit your preference.

Picture Settings	
Contrast	100
Brightness	50
Colour	50
Tint	-1
Sharpness	-1
Black/White Level	High
Cinema Mode	On
Colour Temperature	Cool

3D Colour Management

When **3D Colour Management** is set to **On** it allows the 'Base Colour Adjustment' feature to become available.

- 1 In the **PICTURE** menu press \vee to select **3D Colour Management**.

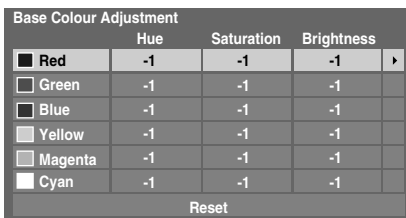


- 2 Press \langle or \rangle to select **On** or **Off**.

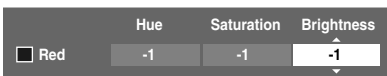
Base Colour Adjustment

The **Base Colour Adjustment** feature allows the adjustment of individual colours to suit personal preference. This can be useful when using an external source.

- 1 In the **PICTURE** menu press \vee to select **Base Colour Adjustment**, then press **OK**.
- 2 Press \wedge or \vee to select an option, then \rangle to move to the adjustment window.



- 3 Press \langle or \rangle to select **Hue**, **Saturation** or **Brightness**, then press \wedge or \vee to adjust the settings as required.



To return to the original factory settings select **Reset** and press **OK**.

Active Backlight Control

When **Active Backlight Control** is activated it will automatically optimise the backlighting levels for dark scenes.

- 1 In the **PICTURE** menu press \vee to select **Active Backlight Control**.

- 2 Press \langle or \rangle to select **On** or **Off**.

MPEG NR – Noise Reduction

When watching a DVD the compression may cause some words or picture elements to become distorted or pixelated. Using the **MPEG NR** feature reduces this effect by smoothing out the edges.

- 1 Select **MPEG NR** from the **PICTURE** menu. Use \langle or \rangle to select **Low**, **Middle**, **High** or **Off** to suit your preference.


DNR – Digital Noise Reduction

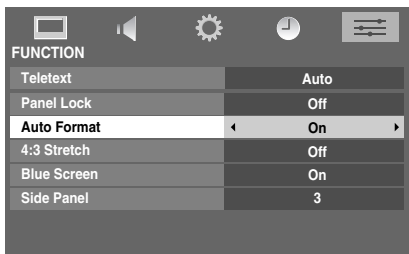
DNR enables you to 'soften' the screen representation of a weak signal to reduce the noise effect.

- 1 Select **DNR** from the **PICTURE** menu.
- 2 Use \langle or \rangle to select **Low**, **Middle**, **High**, **Auto** or **Off**. The differences may not always be noticeable (for the best result use lower settings as picture quality can be lost if the setting is too high).

Automatic Format (Widescreen)

When this television receives a true Widescreen picture and **Auto format is On**, it will automatically be displayed in Widescreen format, irrespective of the television's previous setting.

- 1 Press  and < or > to select the **FUNCTION** menu.




FUNCTION	
Teletext	Auto
Panel Lock	Off
Auto Format	On
4:3 Stretch	Off
Blue Screen	On
Side Panel	3

- 2 Press  to highlight **Auto Format**, then < or > to select **On** or **Off**.


4:3 Stretch

When **4:3 Stretch** is activated the size switching system changes 4:3 programmes into full screen picture.

- 1 In the **FUNCTION** menu press  to highlight **4:3 Stretch**.
- 2 Press < or > to select **On** or **Off**.


Blue Screen

When **Blue Screen** is selected the screen will turn blue and the sound will be muted on analogue channels and external input modes when no signal is received.

- 1 In the **FUNCTION** menu press  to highlight **Blue Screen**.
- 2 Press < or > to select **On** or **Off**.



Side panel adjustment

The **Side Panel** feature lightens or darkens the band on each side of the screen when in 4:3 or 14:9 format. This helps prevent image retention of the band and can also make viewing in bright or dark conditions more comfortable.

- 1 In the **FUNCTION** menu press  until **Side Panel** is highlighted.
- 2 Press < or > to adjust.

Picture still

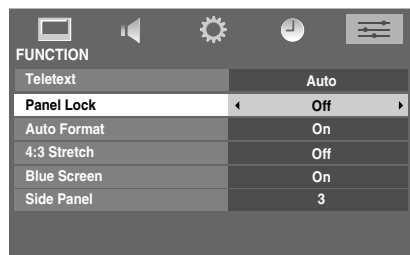
This feature is used to hold a still image on the screen.

Press  to hold an image on the screen, press  again to cancel.

Panel lock

Panel lock disables the buttons on the television. All buttons on the remote control can still be used.

- 1 From the **FUNCTION** menu select **Panel Lock** and choose **On** or **Off** using < or >.



FUNCTION	
Teletext	Auto
Panel Lock	Off
Auto Format	On
4:3 Stretch	Off
Blue Screen	On
Side Panel	3

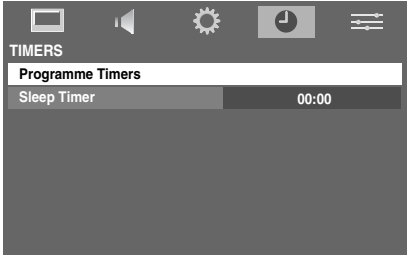
When **Panel Lock** is **On**, a reminder will appear when the buttons on the television are pressed. **If the standby button is pressed the television will switch off and can only be brought out of standby by using the remote control.**

The timers

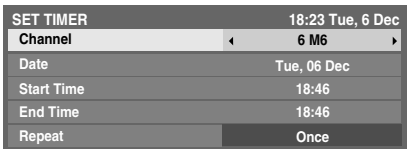
Programme Timers – digital only

This feature will set the television to go to a specific channel at a certain time. It can be used to view a particular programme, or by setting the mode to daily or weekly, can be used to view a series of programmes.

- 1 Press **MENU** and < or > to select the **TIMERS** menu.



- 2 Press **v** to select **Programme Timers**, then press **OK**.
- 3 Press **v** if necessary to select an open timer position, then press **OK**. The **SET TIMER** menu will now appear on screen.
- 4 Press **^** and **v** to go through the list adding the details of the programme by using the number buttons and < and > to make selections.



- 5 When all the details have been entered press **OK** to save the timer.

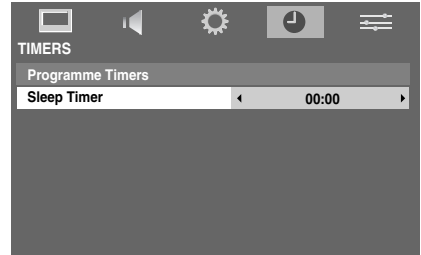
The ORANGE/RED programme timer indicator on the front of the television will be lit (see page 37 for details).

PLEASE NOTE: When a timed programme is about to start, an information screen will appear offering the option of watching or cancelling the programme. The menus and other channels will not be available during the timed programme unless the programme timer is cancelled.

Sleep Timer

The television can be set to turn itself **Off** after a certain length of time.

- 1 Press **MENU** and < or > to select the **TIMERS** menu.



- 2 Press **v** to select **Sleep Timer**. Use the number buttons to set the required time. For example, to switch the television off in one and a half hours enter 01:30, or press >/< to increase/decrease in steps of 10 minutes.
- 3 Press **EXIT** to finish.
- 4 To cancel the **Sleep Timer**, enter zero in the above setting.

Digital on-screen information and Programme Guide

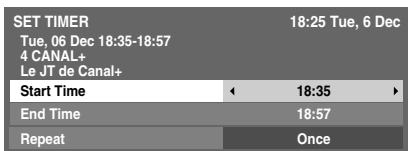
When viewing in **digital** mode, the on-screen information and programme guide provide access to programme details for all available channels.

Information

- 1 Press **i+**, the information screen will appear giving details of the channel and programme currently being viewed.



- 2 Press **^** or **v** to select the "Now", "Next" or "Also" information guide.
- 3 To record the following programme, select "Next" and, press **OK**. The **SET TIMER** screen will appear.



- 4 The details of the programme will have been added to the timer. Press **OK** to save.

To indicate that a timer has been set, a clock icon will be displayed in the **Next** and **Also** fields of the information screen.

- 5 Press **v** to select **Also**. Details of programmes that have started on other channels will be provided. Use **<** or **>** to change the display contents.

On-screen Information icons

	Icon	Description
Service info		Service type (TV, Radio)
		Skip
Audio info		Mono
		Stereo
		Dual mono
		Surround
Audio/Subtitle info		Hard of Hearing
Event info		Video format (HD, SD)
		Video Aspect
		Teletext
		Subtitle (Single, Multi)
		Multi-audio track
		Parental rating
		Encrypted
Timer info		Timer status

Guide

- 1 Select the on-screen guide by pressing **GUIDE**, the guide screen will appear highlighting details of the channel and programme currently being viewed. This may take a few moments to appear.

←← Thu 6 • Fri 7 • Sat 8 • Sun 9 • Mon 10 • Tue 1 • Wed 12 • Thu 13 →→	18:24 Thu, 6 Dec				
All Channels	← 18:00	18:30	19:00	19:30	20:00 →
6 M6	LES SIMPSON	TOP MODEL			
9 W9	SUMMERLAND	SUMMERLAND	LES SIM...		
11 NT1	Nicky La...	Street fight...	Dragon B...	Dragon B...	K 2000
31 PARIS PREMIERE	MA SORCIE...	HAPPY DAYS	HAPPY DAYS		
34 AB1	Evamag	21 jump street	Jerry Springer Show	City guys	L...
800 FlowerGd 6Mbs					
801 FlowerGd 4Mbs					
802 FlowerGd 2Mbs					
804 Codec 4:3					
806 ITV1					
807 ITV3					
808 ITV2					
809 ITV4					

You can switch the time scale to 1.25 or 2.5 hours by pressing the **RED** button.

NOTE: Only channels selected by the TV/Radio Mode are displayed. Skipped channels are not displayed.

- 2 Press **<** or **>** for information on other programmes scheduled for the channel selected.
- 3 For details of other programmes currently available, press **^** and **v** to scroll up and down the channel list. As channels are selected details of the programme currently being broadcast will appear. Press **<** or **>** to view information for future programmes.
- 4 For information on a highlighted programme press **i+**.
NOTE: In order for the recording operation to work properly, the media recorder must be set to the same time as the TV. Regarding the process for recording, please refer to the owner's manual of the recording equipment.
- 5 Press **▶▶** to move the **Guide** forward by 24 hours, press **◀◀** to go back. Pressing **▶▶▶** or **◀◀◀** will move the **Guide** forwards or backwards a page at a time.
Press **P▼** to advance to the next page, press **P▲** to go back to the previous page.

Genre selection/searching

From the guide screen, you can use the genre selection and search features.

- 1 Press the **YELLOW** button from the guide screen. The **Genre Colour Setup** window will appear.
- 2 With the focus on a particular genre, press the desired colour key to assign. Four colours will be available to set. Press **(MENU)** to go back to the guide screen.
- 3 Press the **GREEN** button to access the **Genre Search** screen.



Genre Search		18:26 Tue, 6 Dec
Movies		
34 AB1	Hard Rain	Wed,27 Apr 0:15- 1:45
31 PARIS PREMIERE	Red Corner	Wed,27 Apr 22:15- 23:55
11 NT1	The Lawnmower Man	Thu,28 Apr 1:20- 3:00
9 W9	A Vow to Kill	Fri,29 Apr 1:30- 3:00
34 AB1	Parenthood	Sat,30 Apr 0:45- 2:40
11 NT1	Body and Soul	Sat,30 Apr 1:15- 3:00
31 PARIS PREMIERE	The Nun's Story	Sat,30 Apr 15:00- 17:30
9 W9	Red Corner	Sat,30 Apr 23:20- 1:15
11 NT1	The Real Blonde	Sun,1 May 0:40- 2:00
31 PARIS PREMIERE	Critters	Sun,1 May 0:40- 2:20
11 NT1	Indiana Jones and the Temple of Doom	Sun,1 May 21:10- 23:20
11 NT1	The Jackal	Sun,1 May 23:20- 1:15
34 AB	Coup De Ville	Mon,1 May 1:10- 3:00

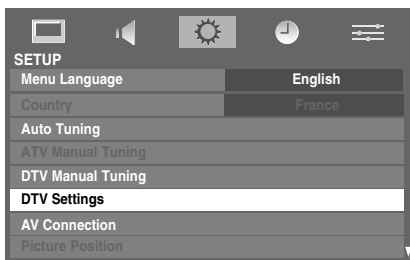
- 4 Press **<** or **>** to select the genre. Programmes listed will change for the new genre. Press **^** or **v** to highlight a particular programme.
- 5 When a current programme is selected, pressing **(OK)** will tune to that programme. When a future programme is selected, pressing **(OK)** will open the **SET TIMER** menu.
- 6 For information on a highlighted programme press **i+**.
- 7 To exit the **Genre Search** and go back to the guide screen, press the **GREEN** button.

Digital settings – parental control

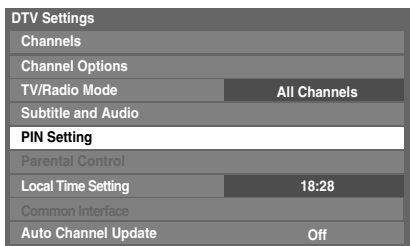
In order to prevent viewing of unsuitable films and programmes, channels and menus can be locked. These can then only be accessed with a security code PIN when in **digital** mode.

Setting the PIN

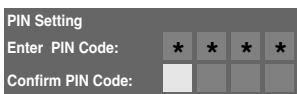
- 1 Press **MENU** and **>** to select the **SETUP** menu.
- 2 Use **<** to select **DTV Settings** then press **OK**.



- 3 Press **<** to highlight **PIN Setting** then press **OK**.



- 4 Using the number buttons enter a four digit number. Once entered you will be prompted to confirm by entering again.



The PIN number is now set.

If the PIN code has been set, when **Auto Tune** and **Reset TV** are executed, entering the PIN will be necessary.

Parental Setup

The **Parental Control** feature allows you to block programmes according to their rating levels. If a PIN has been set, you will need to enter it before adjusting the level.

- 1 In the **Parental Control** menu press **<** to select **Parental Setup**.



- 2 Use **<** or **>** to choose options (**None** or age settings (4-18)).

To view blocked programmes, enter the PIN. To reactivate the Parental Control, turn the TV off and then on again.

Digital settings – Channel Options

Selecting favourite channels

Favourite Channels creates a list of the **digital** channels that are watched most. Four lists can be created, these can be a mixture of television and radio channels.

- 1 From the **DTV Settings** menu press \vee to select **Channel Options** and press **OK**.

Channel Options								
Pos.	Type	Name	Fav.	1	2	3	4	🔒
6	<input type="checkbox"/>	M6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	W9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	<input type="checkbox"/>	NT1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	<input type="checkbox"/>	PARIS PREMIERE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	<input type="checkbox"/>	AB1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	<input type="checkbox"/>	TF6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
800	<input type="checkbox"/>	FlowerGd 6Mbs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
801	<input type="checkbox"/>	FlowerGd 4Mbs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 2 Use \wedge \vee \langle \rangle to go through the list of channels. Press **OK** to select the ones required. A tick will appear in the box as they are selected.

To select all channels in the highlighted column, press the **RED** button. To erase all channels in the highlighted column, press the **GREEN** button.

Favourite Channel Lists

- 1 Press the **TV/FAV RADIO** button. The **Channel Lists** will appear. Press \langle or \rangle to select TV/Radio Mode and Favourites 1-4. The number of favourites available depends on how many lists have been created.

Channel Lists	
All Channels	
6	M6
9	W9
11	NT1
31	PARIS PREMIERE
34	AB1
800	FlowerGd 6Mbs
801	FlowerGd 4Mbs
802	FlowerGd 2Mbs
804	Codec 4:3
806	ITV1

- 2 Press \wedge or \vee to highlight a channel and press **OK** to watch.

Locking channels

Locking Channels stops the viewing of **digital** channels, they can only be accessed by entering the **PIN**.

- 1 From the **DTV Settings** menu press \vee to select **Channel Options** and press **OK**.
- 2 Press \rangle repeatedly to select the Locked Channel list.
- 3 Use \wedge and \vee to go through the list of channels. Press **OK** to select the ones required. A tick will appear in the box.

If a PIN has already been set, PIN entry will be required to set the locked channels.

Channel Options								
Pos.	Type	Name	Fav.	1	2	3	4	🔒
6	<input type="checkbox"/>	M6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	<input type="checkbox"/>	W9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	<input type="checkbox"/>	NT1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	<input type="checkbox"/>	PARIS PREMIERE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	<input type="checkbox"/>	AB1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	<input type="checkbox"/>	TF6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
800	<input type="checkbox"/>	FlowerGd 6Mbs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
801	<input type="checkbox"/>	FlowerGd 4Mbs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 4 Press **EXIT**.
- 5 From this point on, when any of the channels in the **Locked Channel** list are selected the PIN must be entered before they can be accessed.

TV/Radio Mode

*This feature determines the channel list profile that will be applied to regular channel changing, the programme guide, and the **TV/FAV RADIO** button in digital mode.*

- 1 From the **DTV Settings** menu press \wedge or \vee to select **TV/Radio Mode**.
- 2 Use \langle or \rangle to select **All Channels**, **TV** or **RADIO**.

NOTE: When setting to **TV** or **RADIO**, using the **P \vee** and **P \blacktriangle** button will now only access that particular type of channel, however channels that are not in the currently selected list can still be selected by direct position number entry.

Digital settings – other settings

Subtitles

In digital mode, this feature will show subtitles on the screen in the selected language provided they are being broadcast.

- 1 In the **SETUP** menu press \vee to select **DTV Settings**.
- 2 Press **OK**, then press \wedge and \vee to highlight **Subtitle and Audio**.
- 3 Press \vee to select **Subtitle** and use \langle or \rangle to select **On** or **Off**.

Subtitle and Audio	
Subtitle	Off
Subtitle Type	Normal
Primary Subtitle Language	French
Secondary Subtitle Language	English
Audio Type	Normal
Primary Audio Language	French
Secondary Audio Language	English

- 4 Press \vee to select **Subtitle Type** and use \langle or \rangle to select **Normal** or **Hard of Hearing**.
- 5 Press \vee to select **Primary Subtitle Language** or **Secondary Subtitle Language** and use \langle or \rangle to select an option.

The **SUBTITLE** button can also be used to select **On** or **Off**, and to select subtitle language if more than one subtitle is available.

Audio languages

This feature allows a programme or film to be viewed with a choice of soundtrack language, provided they are currently being broadcast.

- 1 In the **Subtitle and Audio** menu press \vee to select **Audio Type** and use \langle or \rangle to select **Normal** or **Hard of Hearing**.
- 2 Press \vee to select **Primary Audio Language** or **Secondary Audio Language** and use \langle or \rangle to select an option.

If more than one soundtrack is available, use the \square/\square button to select between them.

Common Interface

The *Common Interface Slot*, situated on the side of the television, enables the insertion of a CAM (Conditional Access Module) and card. These are purchased from a service provider and allow additional subscription broadcasts to be viewed. For information see a service provider.

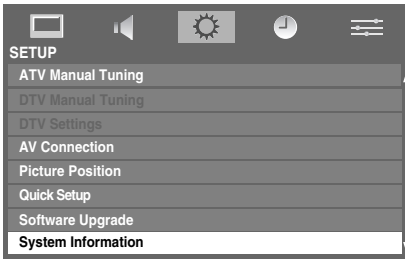
- 1 Insert the CAM and card into the Common Interface Slot, following the instructions provided with the CAM. A box will appear on screen to confirm that the CAM has been inserted.
- 2 In the **DTV Settings** menu press \wedge or \vee to select **Common Interface** and press **OK**.
- 3 Details of the CAM should now be available.

Software Upgrade

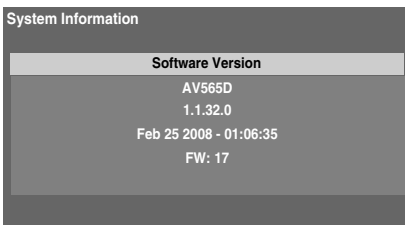
Version

This feature can be used to check the version of software currently installed.

- 1 From the **SETUP** menu press \wedge or \vee to select **System Information**.



- 2 Press **OK** to display the **Software Version**.



Auto Upgrade

When **Auto Upgrade** is set to **On** (default setting), the television will automatically upgrade while in standby if new software is available.

- 1 From the **SETUP** menu press \wedge or \vee to select **Software Upgrade** and press **OK**.
- 2 Press \vee to select **Auto Upgrade**.
- 3 Use \leftarrow or \rightarrow to select **On** or **Off**.

Searching for New Software

If preferred, software upgrades can be searched for manually using **Search for New Software**.

- 1 In the **Software Upgrade** menu press \wedge or \vee to select **Search for New Software**.
- 2 Press **OK**. The television will automatically start searching for a software upgrade, the progress bar will move along the line.

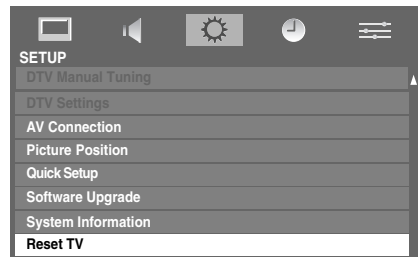
SEARCHING FOR NEW SOFTWARE
Searching for a new software upgrade for this TV.
Searching

If an upgrade is found the television will automatically start downloading. If not, a screen will appear stating that an upgrade is unavailable.

Reset TV

Selecting **Reset TV** will reset all TV settings, including stored channels, to their original factory values.

- 1 In the **SETUP** menu press \vee until **Reset TV** is highlighted.




- 2 Press **OK** to select. A screen will appear warning that all settings will be lost. Press **OK** to continue.

When the set powers back on, the **Quick Setup** screen will appear. Press **OK** to continue, the television will then auto tune. (See 'Quick Setup' section on page 11.)

Input selection and AV connections

See page 7 for a clear view of the back connection recommendations.

Most media recorders and decoders send a signal through the SCART lead to switch the television to the correct *Input* socket.





Alternatively press the external source selection button  until the picture from connected equipment is shown.

This button must be used to view equipment connected using the COMPONENT VIDEO INPUT (**EXT3**) and the VIDEO INPUT (**EXT4**).

An **S** in the display e.g.  **2S (EXT 2S)**, indicates the input is set for an S-Video signal.

Input selection

Use the *Input Selection* window if the television does not switch over automatically.



- At any time by pressing  a list will appear on screen showing all inputs and external equipment. Use  and  to highlight an input and  to select.

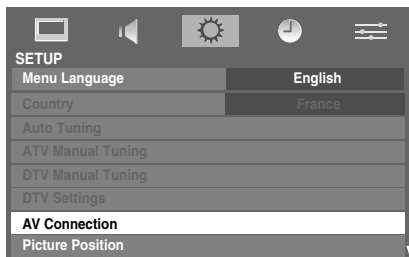




HDMI™ displays equipment connected to *Input HDMI* on the back of the television.

INPUT signal selection

This specifies the type of signal going into SCART 2 (**EXT2**) on the back of the television. Please refer to the manufacturer's instructions for the connected equipment.

- In the **SETUP** menu press  until **AV Connection** is highlighted, then press .



- With  or  select either **AV** or **S-VIDEO** as the required **input** for **EXT2**.



If video colour is absent, try the alternative setting.

HDMI1 Audio

If the connected HDMI source does not support digital audio, plug the audio cable into **HDMI1 (AUDIO)** on the back of the television (as shown in the 'Connecting an HDMI™ or DVI device to the HDMI input' section), then use the **HDMI1 Audio** setting.

- 1 In the **AV Connection** menu press \checkmark to highlight **HDMI1 Audio** and using \leftarrow or \rightarrow select **Auto** or **Analogue**.

AV Connection	
HDMI1 Audio	Auto
Lip Sync	Off
EXT2 Input	AV
Digital Output	PCM

If the sound is missing select an alternative setting.

NOTE: HDMI1 supports digital and analogue sound, HDMI2 is digital sound only.

Certain DVD disk formats may not output from this TV (32/44.1/48kHz and 16/20/24 bits are acceptable).

Lip Sync Latency

Lip Sync can synchronize the sound and picture. This feature is only available for HDMI equipment compatible with Lip Sync.

NOTE: Disconnect the HDMI cable before changing the **Lip Sync** setting. If the HDMI cable is connected, a message will appear.

- 1 Select the appropriate HDMI input from the input selection window.
- 2 In the **AV Connection** menu press \checkmark to highlight **Lip Sync**.
- 3 Using \leftarrow or \rightarrow select **On** or **Off**.

Digital Output

When connecting a surround sound amplifier to the digital audio output (Sony/Philips Digital Interface Format [S/PDIF]), the following options can be selected.

PCM: this mode outputs PCM format to the digital audio output socket.

Auto: this mode outputs Dolby Digital or PCM to the digital audio output socket providing it is being broadcast.

Dolby Digital \rightarrow Dolby Digital
 Dolby Digital Plus \rightarrow Dolby Digital
 MPEG \rightarrow PCM

- 1 In the **AV Connection** menu press \checkmark to select **Digital Output**.
- 2 Use \leftarrow or \rightarrow to select **PCM** or **Auto**.

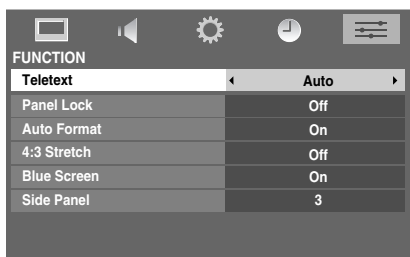
Text services

This television has a multi-page text memory, which takes a few moments to load. It offers two **Modes** of viewing text – **Auto** will display **Fasttext**, if available. **List** will store your four favourite pages.

Selecting modes

The text character set will be automatically chosen by the language setting in the **SETUP** menu.

- 1 Select **Teletext** from the **FUNCTION** menu.
- 2 With < or > choose **Auto** or **List** then press **EXIT**.



Text information

The / / button:

To view text services press / / . Press again to superimpose the text over a normal broadcast picture and again to return to normal viewing. Channels cannot be changed until text is cancelled.

The first text page shown will be the *initial* page.

Any text page can be accessed by entering the 3 digit page number using the numbered buttons, pressing the coloured buttons or pressing **P▲** to advance to the next page and **P▼** to go back to the previous page.

Sub-pages

The pages on the screen will dynamically update as sub-pages are received.

To access the sub-pages selector press then use **P▲** and **P▼** to view them.

Once selected, the sub-page you are viewing will be highlighted and, as the television loads any additional sub-pages, the colour of the numbers will change, indicating that these pages have been loaded.

These sub-pages will remain available to view until another page is chosen or, in normal TV mode, the channel is changed.

Navigating pages using Auto

If **Fasttext** is available four coloured titles will appear at the base of the screen.

To access one of the four given subjects, press the relevant coloured button on the remote control.

For further information on your particular text system(s), see the broadcast text index page or, consult your local Toshiba dealer.

Navigating pages using List

The four coloured choices at the bottom of the screen are numbers – 100, 200, 300 and 400, which have been programmed into the television's memory. To view these pages press the relevant coloured buttons.

To change these stored pages press the relevant coloured button and enter the 3 digit number. This number will change in the top left of the screen and in the coloured highlight.

Press **OK** to store. **Whenever OK is pressed all four page numbers showing at the bottom will be stored and the previous ones will be lost.**


If **OK** is not pressed the selection will be forgotten when the channel is changed.

Other pages may be viewed by entering the 3 digit page number – but DO NOT press **OK** or these pages will be stored.


Control buttons

Below is a guide to the functions of the remote control text buttons.

To display the index/initial page:

Press  to access the index/initial page. The one displayed is dependant on the broadcaster.


To display a page of text:

Press  to display text. Press again to superimpose text over a normal picture. Press again to return to normal television viewing. Channels cannot be changed until this has been done.



To access sub-pages:

For use with **P▲** and **P▼** to view sub-pages when available.


To reveal concealed text:

To discover the solutions on quiz and joke pages press the  button.



To hold a wanted page:

At times it is convenient to hold a page of text. Press  and  will appear in the top left of the screen. The page will be held on screen until the button is pressed again.

To enlarge the text display size:


Press  once to enlarge the top half of the page, press again to enlarge the bottom half of the page. Press again to revert to normal size.

To select a page whilst viewing normal picture:

Enter the page number then press , normal picture will be displayed. The television will indicate when the page is ready by changing the colour of the page number at the top of the screen. Press  to view the page.

To display news flashes:

Select the news flash page for the chosen text service (see the index page of text service). The news flashes will be displayed as and when they are broadcast.

 **Remember to cancel text before changing channels - press the  button twice.**

Questions and Answers

Below are the answers to some of the most common queries.
For more information go to www.toshiba.co.uk

Q *Why is there no sound or picture?*

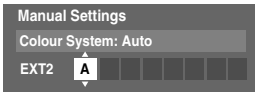
A Check the television is not in standby mode. Check the mains plug and all mains connections.

Q *There is a picture, but why is there little or no colour?*

A When using an **external** source, for instance, a poor quality video tape, if there is little or no colour, improvements may sometimes be achieved. The colour is factory set to **Auto** to automatically display the best colour system.

To check that you have the best colour:

- 1 With the external source playing, select **Manual Settings** from the **SETUP** menu.



- 2 With \wedge or \vee choose between **Auto**, **PAL**, **SECAM**, **NTSC 4.43** or **NTSC 3.58**.

Q *Why doesn't the video/DVD being played show on screen?*

A Make sure the VCR or DVD player is connected to the television as shown on page 7, then select the correct input by pressing \odot .

Q *Why is there a picture but no sound?*

A Check all lead connections.
No sound or unacceptable format sound may be received.
Check the volume has not been turned down or that sound mute has not been selected.

Q *Why is the VCR/DVD picture in black and white?*

A Check the correct **input** has been chosen, **S-VIDEO** or **AV**. See **AV Connections** on page 32.

Q *What else can cause a poor picture?*

A Interference or a weak signal. Try a different television station. **Fine Tuning** may help.

- 1 Select the **ATV Manual Tuning** menu. Highlight the station and press \odot , then press \triangleright to select **Fine Tuning**.

- 2 Using \wedge or \vee adjust to get the best picture and sound. Press \odot and then \odot .



Q *Why don't the controls of the television work?*

A Check that **Panel Lock** is not **On**.

Q *Why doesn't the remote control work?*

A Check that the batteries aren't dead or inserted incorrectly.

Q *Why is there a message permanently on the screen?*

A Remove it by pressing [i+] .

Q *Why is the digital channel locked?*

A The channel has been selected in **Locked Channels** (see 'Digital Settings' section).

Q *Why can only certain digital channels be viewed?*

A A **Favourite** list has been selected (see 'Favourite Channels' section), set the feature to **All Channels** or change channels by using the number buttons.

Q *Why are some of the digital subscription channels unavailable?*

A Your subscription needs upgrading. Contact your service provider.

Q Why is the soundtrack in English when a different audio language has been selected?

A The programme is currently being broadcast with an English soundtrack only.

Q Why is there incorrect or no sound when in DTV mode?

A Press **◀/▶** to ensure the hard of hearing option has not been selected.

Q What can be done if the PIN number has been forgotten?

A Use the Master PIN code of 1276, then change to a number of your choice. Ensure that no-one else can use the Master PIN by removing the Owner's Manual.

Q Why when digital subtitles have been selected are they not showing on screen?

A Subtitles are not currently being transmitted by the broadcaster.

Q Why are there problems with analogue text?

A Good performance of text depends on a good strong broadcast signal. This normally requires a roof or loft aerial. If the text is unreadable or garbled, check the aerial. Go to the *main index* page of the text service and look for the *User Guide*. This will explain the basic operation of text in some detail. If further information is needed on how to use text see the *text section*.

Q Why are there no analogue text sub-pages?

A There are none broadcast or they have not yet loaded. Press the **◀** button to access. (See *text section*).

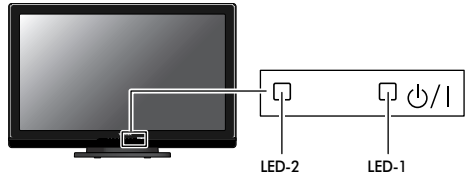
Q Why is a page number visible at the top of the screen but no text?

A Text has been selected but Teletext information is currently unavailable on the current source.

Q Why are the LEDs on the front of the television flashing?

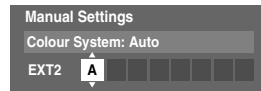
A Check the table below.

LED indication		Condition	Solution
LED-2	LED-1		
OFF	Green (Solid)	The TV is operating properly.	–
OFF	Red (Solid)	Standby with Power-On	–
Orange (Solid)	Red (Solid)	Programme timer set (Digital mode)	–
Red (Solid)	Green (Solid)	Programme timer Active (Digital mode)	–
OFF	RED Blinks 0.5 sec cycle	Power protect detection.	Turn OFF the TV and unplug the power cord. Plug the power cord in again and turn ON the TV.
OFF	Red Blinks 1 sec cycle	Abnormal operation of BUS line.	



Q Why are the colours wrong when an NTSC source is played?

A Connect the source via a SCART lead and play. Select **Manual Settings** from the **SETUP** menu.



1 Set the Colour to **Auto** and exit.

2 Go to the **Picture Settings** menu and adjust the tint.

Q Why don't the devices connected via HDMI operate properly?

A Make sure to use cables with the HDMI logo **HDMI** (see page 8).

Some early HDMI equipment may not work properly with the latest HDMI TV products, due to new standard adoption. Try setting **Lip Sync** to **Off**.

Notes

For your own records

Cleaning the screen and cabinet...

Turn off the power, clean the screen and cabinet with a soft, dry cloth. We recommend that you **do not** use any proprietary polishes or solvents on the screen or cabinet as this may cause damage.

Disposal...

The following information is only for EU-member states:

Disposal of products

The crossed out wheeled dust bin symbol indicates that products must be collected and disposed of separately from household waste. Integrated batteries and accumulators can be disposed of with the product. They will be separated at the recycling centres.

The black bar indicates that the product was placed on the market after August 13, 2005.

By participating in separate collection of products and batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health.

For more detailed information about the collection and recycling programmes available in your country, please contact your local city office or the shop where you purchased the product.



Disposal of batteries and/or accumulators

The crossed out wheeled dust bin symbol indicates that batteries and/or accumulators must be collected and disposed of separately from household waste.

If the battery or accumulator contains more than the specified values of lead (Pb), mercury (Hg), and/or cadmium (Cd) defined in the Battery Directive (2006/66/EC), then the chemical symbols for lead (Pb), mercury (Hg) and/or cadmium (Cd) will appear below the crossed out wheeled dust bin symbol.

By participating in separate collection of batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health.

For more detailed information about the collection and recycling programmes available in your country, please contact your local city office or the shop where you purchased the product.



Hg Cd Pb

Information

Before connecting any external equipment, turn off all main power switches. If there is no switch, remove the mains plug from the wall socket.

Acceptable video or PC signals through the HDMI terminals

Format	Resolution	V. Frequency	H. Frequency	Pixel Clock Frequency
480i	720 × 480i	59.940/60.000Hz	15.734/15.750kHz	27.000/27.027MHz
576i	720 × 576i	50.000Hz	15.625kHz	27.000MHz
480p	720 × 480p	59.940/60.000Hz	31.469/31.500kHz	27.000/27.027MHz
576p	720 × 576p	50.000Hz	31.250kHz	27.000MHz
1080i	1920 × 1080i	59.940/60.000Hz	33.716/33.750kHz	74.176/74.250MHz
1080i	1920 × 1080i	50.000Hz	28.125kHz	74.250MHz
720p	1280 × 720p	59.940/60.000Hz	44.955/45.000kHz	74.176/74.250MHz
720p	1280 × 720p	50.000Hz	37.500kHz	74.250MHz
1080p	1920 × 1080p	59.940/60.000Hz	67.500kHz	148.500MHz
1080p	1920 × 1080p	50.000Hz	56.250kHz	148.500MHz
1080p	1920 × 1080p	30.000Hz	33.750kHz	74.250MHz
1080p	1920 × 1080p	25.000Hz	28.125kHz	74.250MHz
1080p	1920 × 1080p	24.000Hz	27.000kHz	74.250MHz
VGA	640 × 480	59.940Hz	31.469kHz	25.175MHz
		72.809Hz	37.861kHz	31.500MHz
		75.000Hz	37.500kHz	31.500MHz
SVGA	800 × 600	60.317Hz	37.879kHz	40.000MHz
		72.188Hz	48.077kHz	50.000MHz
		75.000Hz	46.875kHz	49.500MHz
XGA	1024 × 768	60.004Hz	48.363kHz	65.000MHz
		70.069Hz	56.476kHz	75.000MHz
		75.029Hz	60.023kHz	78.750MHz
WXGA	1280 × 768	59.995Hz	47.396kHz	68.250MHz
		59.870Hz	47.776kHz	79.500MHz
		74.893Hz	60.289kHz	102.250MHz
	1360 × 768	60.015Hz	47.712kHz	85.500MHz
SXGA	1280 × 1024	60.020Hz	63.981kHz	108.000MHz
		75.025Hz	79.976kHz	135.000MHz

Specifications and accessories

DVB-T Broadcast systems/channels	Broadcast systems/channels
VHF 05-10 (VHF 01-05) UHF 21-69	PAL-I UHF UK21-UK69
	PAL-B/G UHF E21-E69 VHF E2-E12, S1-S41
	SECAM-L UHF F21-F69 VHF F1-F10, B-Q
	SECAM-D/K UHF R21-R69 VHF R1-R12

Video Input PAL, SECAM, NTSC 3.58/4.43

External connections

EXT1	Input/Output	21-pin SCART	RGB, A/V
EXT2	Input/Output	21-pin SCART	A/V, S-video
EXT3	Input	Phono jacks Phono jacks	Y, P _B /C _B , P _R /C _R Audio L + R
EXT4	Input	Phono jack Phono jacks	Video Audio L + R
HDMI 1/2	Input	HDMI™ (Audio LIP SYNC supported)	
HDMI1 Audio		Phono jacks	Audio L + R
Digital Audio Output (S/PDIF)		Optical	

Stereo Nicam
2 carrier system

Visible Screen Size (approx.) Model 32 80cm
37 94cm

Display 16:9

Sound output (at 10% distortion) Main 10W + 10W

Power consumption as specified in EN60107-1 : 1997 Model 32 120W
37 173W

Standby (approx.) Model 32 0.8W
37 0.8W

Dimensions (approx.) Model 32 55cm (H) 80cm (W) 22cm (D)
37 62cm (H) 91cm (W) 25cm (D)
(Height dimension includes foot stand)

Weight (approx.) Model 32 14.0kg
37 18.0kg

Headphone socket 3.5mm stereo

Operating condition Temperature 5°C - 35°C (41°F - 94°F)
Humidity 20% - 80% (non-condensing)

Accessories Remote control
2 batteries
(AAA, IEC R03 1.5V)

DVB is a registered trademark of the DVB Project



Printed on recycled paper. 100% Chlorine free.

© Toshiba Information Systems (U.K.) Limited
All rights reserved.

Reproduction in whole or part without written permission is strictly prohibited.

Toshiba Information Systems (U.K.) Limited

Consumer Products Division,
European Service Centre,
Admiralty Way, Camberley,
Surrey, GU15 3DT, UK

Specification is subject to change without notice.

License Information
used with
Toshiba Televisions

Information

The software pre-installed in TOSHIBA Digital Televisions consists of multiple, independent software components. Each software component is copyrighted by TOSHIBA or a third party.

The TOSHIBA Digital Television uses software components that are distributed as freeware under a third-party end-user license agreement or copyright notice (hereinafter referred to as a "EULA"). Some EULAs require that the source code of the applicable component be disclosed as the condition for distributing the software component in executable format.

You can check the software components subject to such EULA requirements on the following Home Page:

URL: <http://tesc.toshiba.co.uk/Web/Website.nsf/ContentFrameSet?OpenFrameset>

In addition, some of the software components which are used in TOSHIBA Digital Televisions include the software that are made or developed originally by Toshiba. These software and accompanied documents are copyrighted by TOSHIBA, and protected by Copyright Act, an international treaty's articles and other governing laws.

The software components which are made or developed originally by TOSHIBA and not subject to EULAs are not a target of source code offering.

TOSHIBA provides a warranty for the TOSHIBA Digital Television you have purchased under conditions set forth by TOSHIBA. However, some of the software components distributed under an EULA are made available for use by the user on the assumption that they are not copyrighted or warranted by TOSHIBA or any third party. These software components are licensed to the user free of charge and therefore are not covered by a warranty within the scope of the applicable laws. These software components are not subject to any copyrights or other third-party rights and are provided in "as is" condition without any warranty, whether express or implied. "Warranty" here includes, but not limited to, an implied warranty for marketability or fitness for specific uses. All risks associated with the quality or performance of these software components are assumed by the user. TOSHIBA shall not be liable whatsoever for any cost of repair or correction or other incidental expense incurred in connection with a defect found in any of these software components. Unless specified under the applicable laws or in a written agreement, a party who changes or redistributes the software with consent from the copyright holders or based on the aforementioned licenses shall not be held liable whatsoever for any loss arising from the use of or inability to use such software. The same applies even when the copyright holders or relevant third parties have been informed of the possibility of such loss. "Loss" here includes normal, special, incidental and indirect loss (including, but not limited to, the loss of data or its accuracy; loss incurred by the user or any third party; and interface incompatibility with other software). Please read each EULA for details on the use conditions and items that must be observed regarding these software components.

The table below lists the software components pre-installed in TOSHIBA Digital Televisions, which are subject to EULAs. The user should read the applicable EULAs carefully before using these software components. The EULAs are exhibited in their original text (English) as exactly written by the respective parties other than TOSHIBA.

Pre-Installed Software	EULA
Linux Kernel busybox	Exhibit A
glibc gcc	Exhibit B
malloc	Exhibit C
JPEG	Exhibit D
FreeType	Exhibit E
ICU	Exhibit F

Exhibit A

GNU GENERAL PUBLIC LICENSE Version 2, June 1991

Copyright © 1989, 1991 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software – to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation’s software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of the free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights you have. You must make sure that they too, receive or can get the source code. Also you must show them these terms so they know their rights.

We protect your right with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author’s protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors’ reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent license, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone’s free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This license applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The “Program”, below, refers to any such program or work, and a “work based on the Program” means either the program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the terms “modification”.) Each licensee is addressed as “you”.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the program or any portion of it, thus forming a work based on the program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these condition:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program, or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified Program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the program itself is interactive but does not normally print such an announcement, your work based on the program is not required to print such an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative and collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributors need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying and distributing the Program (or any works based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any works based on the Program), the recipient automatically receives a License from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipient's exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If as a consequence of a court judgement or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradicts the conditions of the License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program. If any portion of this section is held invalid or unenforceable under any particular circumstances, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patent to other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance upon consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the general Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.
Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.
10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and use of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU, SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<One line to give the program's name and a brief idea of what it does.>

Copyright © 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode.

Gnomovision version 69, Copyright © 19yy name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type "show w". This is free software, and you are welcome to redistribute it under certain conditions; type "show c" for details.

The hypothetical commands "show w" and "show c" should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than "show w" and "show c"; they could even be mouse-clicks or menu items – whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program; if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the 'Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

Exhibit B

GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

Copyright © 1991, 1999 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software – to make sure the software is free for all its users.

This License, the Lesser General Public License, applies to some specially designated software packages – typically libraries – of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software or use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can link them with the library after making changes to the library and recompiling it. Also you must show them these terms so they know their rights.

We protect your rights with a two step method: (1) we copyright the library, and (2) we offer you this license which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that original authors' reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

- 0.** This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorised party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you". A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables. The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the terms "modification".) Each licensee is addressed as "you". "Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library. Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using a library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.
You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the program or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these condition:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- c) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it. Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative and collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a Library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the Sections 1 and 2 above provided that you accompany it with the complete corresponding machine readable source code, which must be distributed under the terms of sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License. However, linking "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the Library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by the License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means that you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
 - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
 - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
8. You may not copy, modify, sublicense, link with or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying and distributing the Library (or any works based on the Library), you indicate your acceptance of the License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
10. Each time you redistribute the Library (or any works based on the Library), the recipient automatically receives a License from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipient's exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
11. If, as a consequence of a court judgement or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradicts the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstances, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents to other property right claims

or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance upon consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.
14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<One line to give the library's name and a brief idea of what it does.>

Copyright © 19yy <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA.

Also add any information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

Exhibit C

This is a version (aka dlmalloc) of malloc/free/realloc written by Doug Lea and released to the public domain. Use, modify, and redistribute this code without permission or acknowledgement in any way you wish. Send questions, comments, complaints, performance data, etc to dl@cs.oswego.edu

* VERSION 2.7.2 Sat Aug 17 09:07:30 2002 Doug Lea (dl at gee)

NOTE: There may be an updated version of this malloc obtainable at <ftp://gee.cs.oswego.edu/pub/misc/malloc.c>
Check before installing!

Exhibit D

This software is based in part on the work of the Independent JPEG Group.

Exhibit E

Portions of this software are copyright © <2007> The FreeType Project (www.freetype.org). All rights reserved.

Exhibit F

ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1995-2006 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1995-2006 International Business Machines Corporation and others

All rights reserved.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.



Printed on recycled paper. 100% Chlorine free.

VX1A00106500