

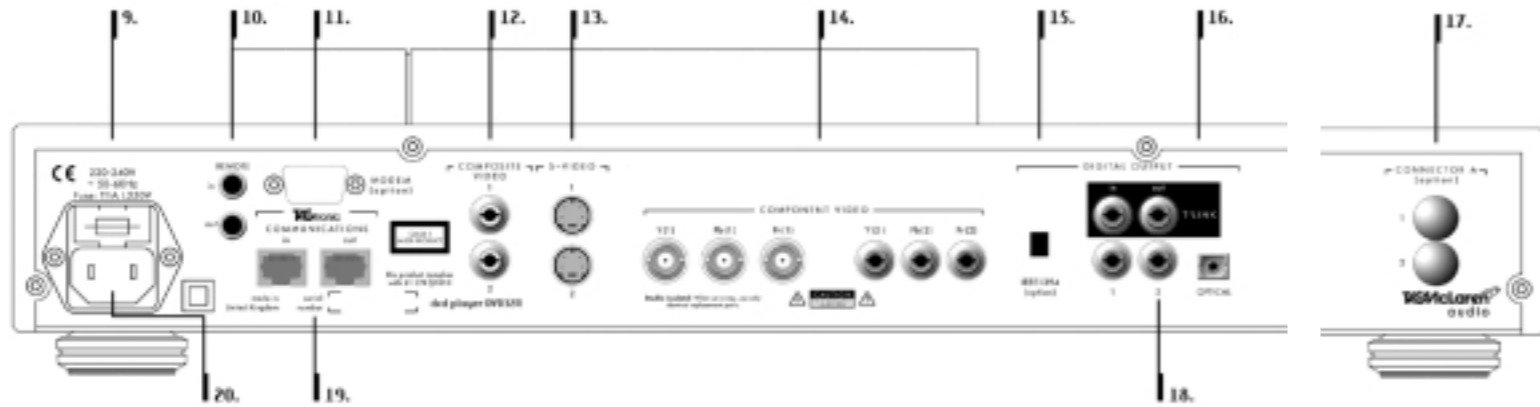
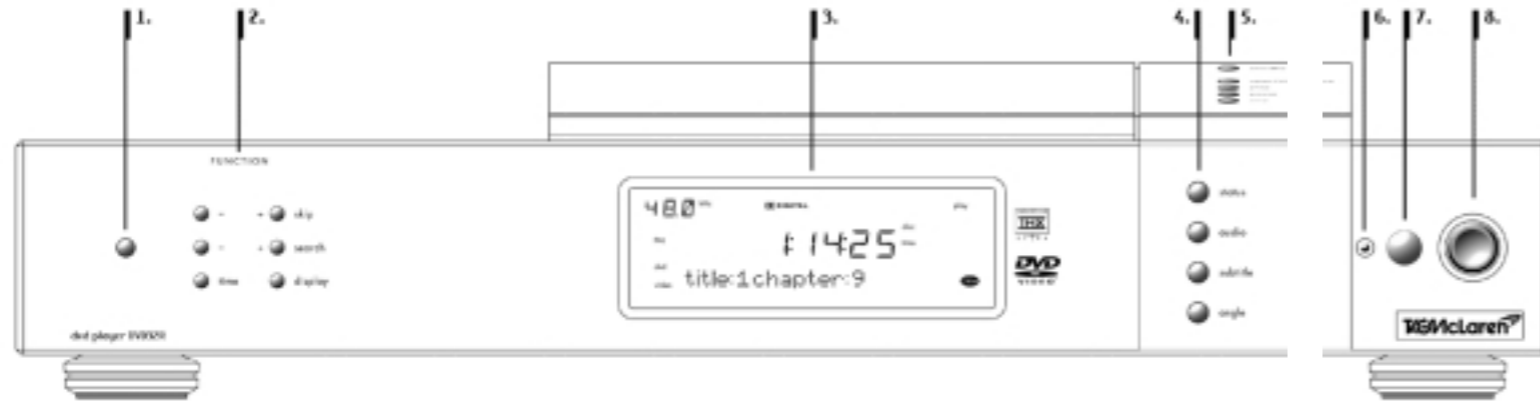


dvd player DVD32R

6596W

version v1.16, v1.16.04, v1.16.1

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Dr. Udo Zucker
Chief Executive Officer
TAG McLaren Audio

welcome to



TAG McLaren Audio exists with one aim in mind: to produce the very best audio and audio-visual equipment.

Like many people, I often have my best ideas when relaxing to a piece of music or watching a movie. For years, knowing the technical capabilities of TAG McLaren, I have nurtured the ambition to push music and movie reproduction to the absolute limit without compromising ease of use; that's why we formed TAG McLaren Audio.

At the core of our development team are highly experienced engineers whose heritage of award-winning hi-fi and world-

Pushing technological boundaries; TAG McLaren's F1 electronics



'home cinema experience'

beating electronic control systems is envied by many and equalled by few. There are many immediate spin-offs into audio from our expertise in automotive electronics, mechanical engineering and the material science of Formula One motor racing: multi-layer printed circuits, fast digital signal processing, electronic noise suppression, radio frequency technology and software expertise to name but a few, all prerequisites of an outstanding audio product.

TAG McLaren's aim is sonic perfection combined with aesthetic delight and solid build quality – a rare combination in hi-fi but one which TAG McLaren Audio is already delivering.

Dr Udo Zucker



Thank you for purchasing the TAG McLaren Audio

dvd transport DVD32R

The DVD32R is a high performance video source that supports a wide range of video outputs, making it the perfect choice for home cinema installations. The DVD32R is an ideal complement to the TAG McLaren Audio theatre AV32R but also complements many other high-performance audio-visual processors.

There are many outstanding features included in this high-performance DVD player DVD32R. Within this manual we focus on the operation of the DVD32R. If you want to know more about the technical background, which led to this outstanding player, then please refer to our in-depth technical documentation which can be found in the DVD32R product section at our website www.tagmclaren.com.

performance and formats

- Europe's first THX™ Ultra-approved DVD player for NTSC and PAL
- Compatible with DVD-Video and CD music (8 and 12 cm)
- Native support of PAL and NTSC video formats
- Composite, S-Video and Component outputs
- Very low jitter clock re-times the SPDIF audio data, resulting in very high quality signal timing of the digital audio data
- The TAGtronic Synchronisation Link T²L allows the DVD32R to synchronise its master clock to the clock within the TAG McLaren Audio av processor AV32R, resulting in a very low-noise, ultra-low jitter reference right next to the audio output DACs. The result is a crisper, cleaner and much more controlled sound. This is a world first for a DVD player!

key building blocks

- Heavy, mass loaded, suspended DVD mechanism to minimise the effects of external vibration on the rotating disc
- Dual wavelength DVD mechanism for optimum performance when playing DVDs and CDs
- Mediamatics/National Semiconductor's 32 bit RISC processor for best audio and video quality
- Powerful 16-bit microcontroller
- Stable multi-frequency internal clocks
- Round-core transformer
- 12 independent power supplies
- Premium-grade audio components
- Broadcast-quality video components

inputs and outputs

- Two Composite and two S-Video outputs
- Two multi-standard Component video outputs, one using RCA phono and one BNC connectors for best picture quality
- Three digital audio outputs (two coaxial SPDIF and one optical)
- TAGtronic Synchronisation Link T²L, input and output for daisy chaining
- Enhanced TAGtronic Communications Bus, input and output for daisy chaining

ease of use

- Fully remote controlled
- Unique setup wizard lets you forget printed user manuals
- Learning backlit remote control for main functionality
- Second remote for added CD functionality (option)
- User configurable auto-standby function
- TAGtronic Communications Bus for inter-product communication and firmware upgrades

upgrade paths

- Prepared for DVD-Audio, progressive scan and digital video output, pending copyright clearance. Hardware and software upgrade required
- Operating software upgrades, distributed via the Internet using the Enhanced TAGtronic Communications Bus
- Prepared for upgrade to IEEE 1394 (Firewire), modem connection and RCA connection for future functionality

construction

- Mixed technology construction, leaded and surface mount for optimum results
- Multi-layer printed circuit board for best signal to noise ratio
- Vibration damping of chassis panels for best sound and picture quality
- Sorbothane™ mounting feet for best vibration isolation

Enhanced TAGtronic Communications Bus support

The TAGtronic Communications Bus can be user configured to activate the following features if the DVD32R is connected to the AV32R and/or 100x5R:

- Relaying remote commands between TAGtronic Communications Bus equipped products
- Sending all products into standby
- Synchronising display brightness
- Displaying AV32R status messages on the DVD32R video outputs

...regional coding

Regional coding has been defined by the developers of the DVD standard (the licensors) to protect the sequential patterns of distribution for the motion picture producers' copyrighted works. In line with these copy protection laws, your DVD32R has been configured for one of six regions (1 to 6), dependent upon the country of destination. The region of your DVD32R is clearly shown on the packaging beside the mains operating voltage and frequency, and can also be obtained from the information screen via the setup menu. Simply press **menu**, **5** and a screen, similar to the one shown below, appears:

player information

```

▶ model :          DVD32R
  serial number :  DVD-....
  regional code  :   2
  software version :  V...
    
```

In the example above, the DVD32R is set to region code 2.

We know that you are keen to get your DVD32R working. This section describes the connections required to make your DVD32R fully functional and have you viewing your favourite movies as quickly as possible. Refer to page 2 for diagrams to help you find your way around your DVD32R⁽¹⁾.

before you start

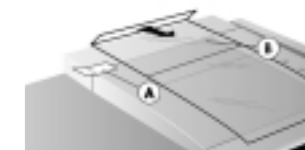
Make sure that all components of your audio-visual system are disconnected from the AC supply whenever you change any connections.

After removing the DVD32R from its packing, most carefully remove the tape (A) and the protective film (B) from its cover.

Carefully open with your hand the drawer to remove the transport protection inside the drawer. There are 2 different ways the DVD32R can be packed for shipment. Please compare with the pictures shown, to decide which version you DVD32R has been packed to.

packing version 1:

Please remove the transit screw (B) by carefully unscrewing it. Now pull carefully the transport card (C) out before slowly removing the transport tape (A). Finally pull very, very carefully the transport foam from the laser assembly. Make sure you don't apply force to the laser whilst pulling the foam out. Do not touch the laser optics!



A. tape
B. film

packing version 1



A. tape
B. transit screw
C. transit card
D. transit foam

1. Throughout the instruction manual, **bold** print indicates the lettering that you will find on the panels of your DVD32R and Remote

**before you start
(cont'd)****packing version 2:**

First pull very, very carefully the transport foam (e) from the laser assembly. Make sure you don't apply force to the laser whilst pulling the foam out. Do not touch the laser optics! Now remove the four screws (c), using the tool (d) supplied with your DVD32R. Please make sure you don't lose any of the washers (b). Make also sure you don't twist the transport card (a) whilst removing the screws. After you have removed all four screws, remove the transport card.

Please keep the original packing and use it whenever your DVD32R is transported. Shipping without the appropriate transit protection will invalidate your warranty. A detailed packing instruction is available from our website or our helpdesk@tagmclaren.com

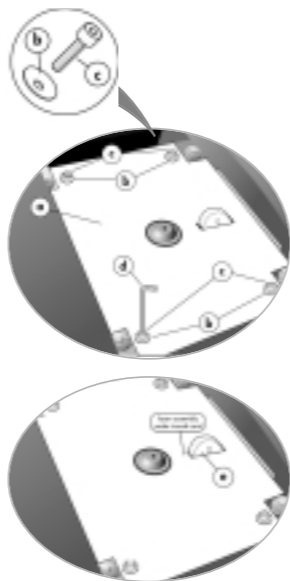
positioning

Your DVD32R is designed to run warm during normal operation. Please ensure that there is adequate ventilation above and below the unit. We recommend that you do not place your DVD32R near any heat sources such as radiators or in direct sunlight.

Do not expose your DVD32R to dripping or splashing liquids. Do not place objects filled with liquid, such as vases, on or near to it.

Do not place the DVD32R on top of the AV32R (or other electronics), it will harm both products because of restricted ventilation.

packing version 2

**power connection**

Check that the power button is out so that power is off when you plug in⁽¹⁾. Using the cable supplied, connect the socket on the back of your DVD32R to an AC supply outlet.

**video display
connection**

Your DVD32R has three different types of video output; **COMPONENT VIDEO**⁽²⁾, **S-VIDEO**⁽³⁾ and **COMPOSITE VIDEO**. By definition, Component video will give better quality than S-Video, which in turn will give much better quality than Composite video. You should therefore use the highest quality video type which your video display device or video processor can support, and connect directly from your DVD32R using high quality video cables (for example our F3-10-SVID S-Video cable or our F3-10-VID Composite/Component cable).

**surround sound
(audio visual)
processor connection**

Your DVD32R has two types of digital output; Two coaxial SPDIF (called **DIGITAL OUTPUT 1** and **2**) and one **OPTICAL**. We recommend to use one of the coaxial connections for best sound quality. Using a high quality digital interconnect, such as our F3-10-DIG, connect the **DIGITAL OUTPUT 1** or **2** of your DVD32R to a digital input on your AV processor.

1. The power button is a latching switch. One press will hold it in; the next will release it
2. If you intend to use Component video for best video quality, the picture may appear in false colours until your DVD32R has been setup correctly
3. S-Video is also available on the Y (luminance) and Pb (chroma) 'component' connectors to achieve a higher quality S-Video connection (compared to the standard S-Video connector)



**TAGtronic
Synchronisation
Link (T²Link)**

If you use the DVD32R with the TAG McLaren AV32R you can also connect the output labelled 'sync' on the AV32R to the input labelled **T²Link in** on your DVD32R using a high quality analogue cable, such as our F3-10-ANA. This connection provides synchronisation between the AV32R and DVD32R which, when enabled⁽¹⁾, further enhances the sound quality produced by the AV32R. The DVD32R will also work with your AV32R without this connection so you could activate the T²Link at a later stage.

Your DVD32R is shipped with a shorting plug in the T²Link (Sync) input. It is recommended that the shorting plug be left in place if no connection to the AV32R is made, for best sound quality.

ATTENTION: do not connect the shortening plug to either the **T²Link in** or **T²Link out** connector when using the TAGtronic Synchronisation Link, as this will interfere with the Link.

Only one shortening plug is required if the TAGtronic Link is used.

switching on

Press the power button in. The blue power LED will come on, followed by 'SELFTEST', then the software version, shown on the front panel display.

**adaptive control**

The DVD32R's sliding door runs on precision bearings, attached to a polished steel bar and a Teflon glider. It is operated by an electric motor pulling it forward or backwards using a steel cable.

A 'perfect' door movement would close/open the door as fast as possible whilst being smooth and silent, almost like opening or closing a bank's heavy safe door. Such 'perfect' movement is extremely difficult to achieve and maintain as all mechanical constructions tend to change their performance with temperature and over time. The DVD32R employs an 'adaptive door control strategy' which conquers the limitations of the mechanics by measuring every door movement and comparing it with the last one and a stored 'perfect' movement. If the movement was too fast the DVD32R will slow down the next one, if it was too slow it will accelerate it. Sometimes the prediction for the next movement might not be perfectly right, just missing the optimum, visible to a focussed observer by a short stalling of the door movement, just for a fraction of a second, before being accelerated. This is completely normal.

**watching it
learn**

You can 'force' the DVD32R to re-start its adaption (recommended if the door movement was obstructed) by switching the power to the DVD32R off and on again (using the power switch on the front). After that, observe how the DVD32R tries to find that perfect setting again, with each door movement being smoother than the one before.

automatic door closing

The door, when open, covers part of the essential cooling arrangement of the DVD32R. This isn't a problem as long as the door is not kept open for too long, a condition the DVD32R monitors for you all the time. As soon as the DVD32R considers it essential to close the door to provide extra cooling to your valuable DVD32R electronics, it will shut the door automatically, after giving you an approx. 10 second warning to remove your hands. During the warning, the front display (if switched on) and the on-screen display will count down whilst the blue light inside the DVD32R door will flash.

after long switch-off periods

If the DVD32R is switched off for a longer period or is started from a low temperature the grease between the precision bearings and polished steel bar, holding the door, might be 'sticky'. The result is that the electrical motor cannot open the door because the safety switches will detect a 'blocked door' condition and hence will interrupt the opening sequence, showing 'DOOR ERR' and the request to switch the player off and on again. Do this and when re-trying to open the sliding door, carefully assist with your hand the door movement during opening. As soon as the stickiness is removed, the door will work as smoothly as before.

standby

The DVD32R has a standby mode which can be entered by pressing **standby** either on the front panel or Remote. The blue power LED will be dimmed and the display switched off. Normal operation may be resumed by pressing any button on the front panel or Remote. You can keep the DVD32R in standby for long periods of time without penalty of a high electricity bill, as the DVD32R includes its own low-current standby transformer and circuitry.

remote control

Your DVD32R is supplied with a backlit **system-remote**⁽¹⁾, suitable for controlling all main functions of your complete home cinema, for day to day operation. For more details see the following pages.

inserting batteries

Before using the remote for the first time, you will need to insert the batteries supplied (be sure to insert the batteries with the polarity as indicated). For optimum operation you should point the Remote towards your DVD32R when using it. The red Remote active LED on the front panel flashes when commands are received from the Remote.



system-remote

1. The **system-remote** is identical to the one shipped with the TAG McLaren av processor AV32R

system-remote

The backlit system-remote is designed to control your complete home cinema system. The system-remote comes preprogrammed and ready to use for many TAG McLaren Audio products, namely the TAG McLaren av processor AV32R, five-channel amplifier 100x5R and your DVD player DVD32R. Other devices which are not preprogrammed to work with the system-remote will need to be 'learnt'. To program the system-remote for other devices, you will need the original remote control for the unit you wish to control. Details of how to program the system-remote are included at the end of this manual.

controlling the DVD32R

Before you can control the DVD32R with the system-remote you must first select DVD as the device to control. This is done by pressing the **DVD** key in the **REMOTE SELECTION** area at the top of the system-remote. The DVD32R will remain selected by the Remote until another unit is chosen via the **REMOTE SELECTION** area. Once the DVD32R has been selected, the DVD32R can be controlled from the system-remote. A red light on the front panel of the DVD32R will flash when commands from the system-remote are received, and the 'DVD' key in the **REMOTE SELECTION** area will light briefly with each key press.

context sensitive remote keys

The system-remote, once switched to operate the DVD32R, is a Context - Sensitive Remote, meaning keys operate differently, depending on the content on your television. What might sound initially confusing is very intuitive. Just do what you instinctively would do and you can control the DVD32R with very few keys - a perfect solution for operating a hi-performance home cinema in the dark.

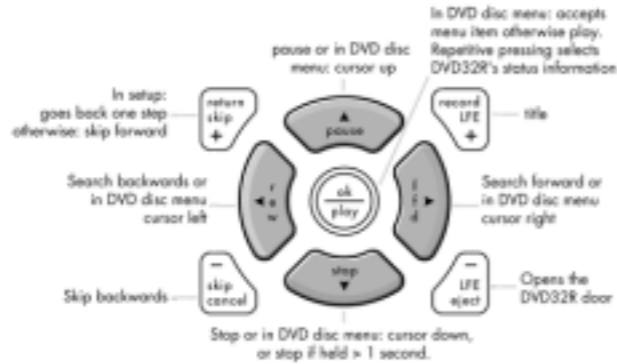
Example: Playing a DVD requires you to open the DVD32R door, insert a DVD and start it after selecting any special function from the DVD disc menu. The system-remote lets you do all this by using very few keys, all located around the remote control's central cursor keys. **eject** opens the door, **play** starts spinning the disc until it reaches the DVD disc menu⁽¹⁾. (The DVD disc menu is the page from which you usually select any special settings, such as audio modes, subtitles, documentary etc.)

Whilst in the DVD disc menu the cursor keys change their usual function from **rev**, **ffw**, **stop** and **pause** to ◀, ▶, ▼ and ▲, allowing you to navigate through the DVD disc menu options. Once you have selected the item you want, simply press the **play=ok** key.

If you wish to stop the DVD while in the disc menu, simply hold down the **stop** key for more than one second.

1. If the DVD doesn't automatically invoke the DVD disc menu, the menu key will bring it up

Overview of the context sensitive keys:



the menu key can call up the DVD disc menu and the DVD32R setup

The **menu** key activates the DVD disc menu, if a DVD is playing. If not playing a disc (stopped or none loaded) **menu** key will activate the DVD32R's setup menu, (just as the av menu key would activate the AV32R's setup menu)¹⁾.

manual selection of the cursor keys

The transport function keys **rev**, **ffw**, **stop**, and **pause** change, as described above their functionality to the cursor control ◀, ▶, ▲ and ▼ when the DVD is within the DVD disc menu. Some DVDs do not allow the DVD32R to detect the presence of the DVD disc menu automatically. In this case pressing **menu** for more than two seconds will force the DVD32R to switch over the transport function to the cursor control. The keys remain in the cursor control state until you press **menu** again for more than two seconds.

1. You need to stop the disc before setup can be activated



stop key

If a disc is playing (and not in the DVD disc menu), **stop** will stop the disc, allowing you to resume from exactly the same position when you press **play**. Pressing **stop** a second time will clear the resume buffer, meaning **play** will now start the DVD/CD from its beginning. In the DVD disc menu, **stop** becomes **cursor down**, unless it is held for more than one second.

setup wizard

Configuring for the optimum performance ...let the setup wizard guide you through a perfect setup but close the DVD32R's door first.

Attention:

When the player is in setup mode many control buttons, such as open/close are temporarily de-activated. Setup cannot be invoked when the DVD32R's door is open or a disc is playing.



To maximise the performance from your DVD32R, it is essential to configure it correctly; this will ensure it performs at its very best. Without this setup you might significantly reduce your player's potential.

Configuring your DVD32R will be very simple as the DVD32R includes a comprehensive step-by-step setup wizard. After connecting the DVD player DVD32R to your display device, e.g. a television, your surround sound processor and the power simply press setup on the DVD32R's Remote. You can also press 'menu' on the system-remote if the disc has stopped, otherwise this key will invoke the menu of the DVD you are playing.

Attention:

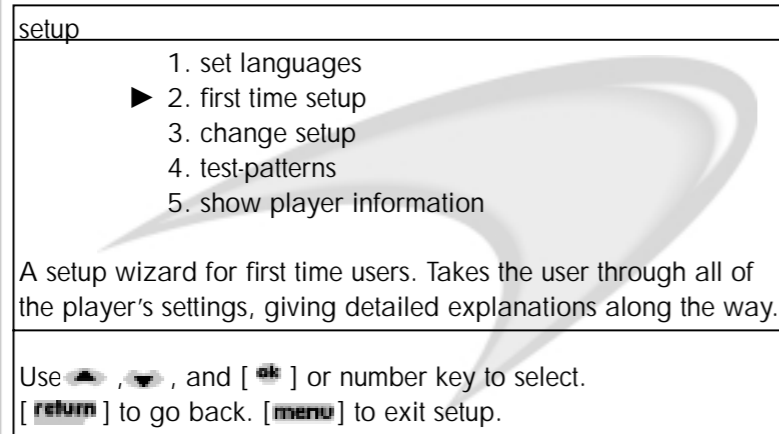
The DVD32R setup menus can only be accessed when the DVD32R's door is closed and no disc is playing.



**setup wizard
(cont'd)**

Depending on the software version loaded in your DVD32R, the player might support several languages for the player setup menus and on screen display information. It is recommended that you select your preferred language before commencing with the setup wizard. This is done using **set languages** from the menu.

The Setup Wizard is invoked if you select **first time setup**. Alternatively, if you are an experienced user, select item 3, **change setup**, which allows you to individually configure each feature.



After activating the setup wizard, we suggest you sit back and relax whilst the wizard takes you step-by-step through the entire setup procedure. At the end you will not only have covered all possible features but will also have perfectly mastered and configured them. It is time well spent!

After the setup is completed
...let's go through the player's controls

**front display
brightness**

Pressing **display** will cycle through the display brightness options. You can customise the brightness levels, including the brightness during play, by using the DVD32R's menus. When your DVD32R is switched on the display will be set to the intensity level which was last set⁽¹⁾. The DVD32R allows you to define a different display brightness when a disc is playing (or even to switch off the display). The display can also be configured to automatically switch off after a given time interval.

**if the TAGtronic
Communications
Bus is connected**

If you have connected the TAGtronic Communications Bus between the DVD32R and the TAG McLaren av processor AV32R, and the AV32R⁽²⁾ is configured to synchronise the DVD32R's front display brightness to the AV32R's, then your manual setting will be overridden whenever the AV32R changes its front display brightness. The DVD32R can also be configured to override the AV32R's settings. If both products are configured to define the display brightness, then the last change (either from the DVD32R or AV32R) will take precedence.

For details see paragraph 'TAGtronic Communications Bus' later in this manual and the AV32R user manual.

1. If 'display off' is selected the display will after power up show up for a few seconds before switching off. This will allow you to see the currently selected function
2. The AV32R needs to run software version v3.3 or higher

- time display** Press **time** while a disc is playing to cycle through the four time display modes:
1. chapter (track) time elapsed
 2. chapter (track) time remaining
 3. title (disc) time elapsed
 4. title (disc) time remaining
- skip** The **skip + / -** buttons only operate when the disc is playing. They provide the ability to move forwards (**skip +**) and backwards (**skip -**) through the chapters (tracks) on the disc; on each key press either moving forward or backwards one chapter (track).
- search** The **ffd ► / ◀ rew** keys only operate when the disc is playing. They provide the ability to search forwards (**search + >**) and backwards (**< search -**) in time, through the disc, for DVD even at two speeds - medium and fast. Pressing either key once will start a medium speed search, and pressing the same key again, a high speed search. A third press will resume normal play. Normal play can also be resumed at any time by pressing **play**.
- slow motion** Slow motion is only available when playing a DVD. **◀ rew / ffd ►** and **skip + / -** have a dual function when used with the **pause** key. Press **pause** to pause the picture and to enter slow motion mode.

- slow motion (cont'd)** Pressing **ffd ►** will start slow movement forward, pressing **ffd ►** again will move even slower. Pressing **ffd ►** a third time will pause the picture again.
- Pressing **◀ rew** after pause will activate slow movement backwards, pressing **◀ rew** again activates pause.
- single frame display** Pressing **skip + / -** causes the DVD to skip forwards, or backwards, by one frame (if activated from pause). Repeated presses of **skip + / -** continues the skip, frame by frame.
- Pressing **play** deactivates slow motion mode.
- skip+/skip- ◀ rew, ffd ► from pause if a CD is played** Executing a direct track entry (such as entering the number of the next track) or pressing **skip +**, **skip -**, **◀ rew** or **ffd ►**, whilst a CD is paused, moves the reading point to the selected disc position before pausing there. Pressing **play** will start playing from the reading position (disc jockey function).
- direct entry whilst playing a disc** The number keys on the Remote can be used to jump directly to a specific chapter (track) on the disc. Just enter the number (1 to 99) using the Remote keys to make the jump. If a number greater than the last chapter (track) number is entered, then the last chapter (track) will be played (which is often the DVD's menu).
- menu** **menu** is used to bring up the menu screen for the DVD if a DVD is playing. Pressing **menu** again will resume play from where it was interrupted.
1. If no disc is playing **menu** will bring up the DVD32R's setup

title The title of a DVD, if available, can be accessed pressing the **record/LFE** or **0/title** key. The **0/title** key will only be interpreted as title if the DVD32R isn't in any number editing mode. A second press will resume play from where it was interrupted by the first press⁽¹⁾.

audio Repeated presses of the **audio** key scroll through the available (audio) options on a DVD, assuming more than one option is available.

subtitle Repeated presses of the **subtitle** key scroll through the available subtitle options on a DVD, assuming subtitles are available.

angle Repeated presses of the **angle** key scroll through the available camera angles on a DVD, assuming more than one camera angle is available.

special functions **Special Functions** are features which tend to be used infrequently and hence are not represented by a direct access key on the DVD32R remote control. Pressing the **record LFE+** key for more than 2 seconds will show the **Special Function** menu. Pressing **record LFE+** briefly again will leave the **Special Function** menu, as will do the activation of any Special Function.

1. On some DVDs the title key will bring up the disc's menu, depending on how the disc was authored

special functions (cont'd) **Special Functions**

>repeat..
 random..
 goto

The function selected, in the example above **repeat..**, will also be repeated in the DVD32R front display, allowing you to select special functions without a display device or when playing a CD.

Dots behind a menu item, e.g. **repeat..**, indicate a related sub-menu. You can switch between menus using the **▼**, **▲** keys and between sub-menus using the **◀**, **▶** keys.

special function repeat...

This function allows to repeat an interval (**repeat selection**), a title (**repeat title**) or the complete disc (**repeat all**).

Move the cursor to **repeat..** using the **▼**, **▲** keys, then branch to the following sub-menus, pressing **▶** :

>repeat selection..
 repeat title
 repeat all
 repeat off

repeat selection... Move the cursor to **repeat selection.. ►**, then press to select the sub-menu which allows to specify the start and the end point of the selection

>select 'start' of the selection
select 'end' of the selection

Whilst playing mark the begin of the selection by placing the cursor at **select 'start' of the selection** and press **ok**. Wait until the disc has reached the desired end point, then mark the end by choosing **select 'end' of the selection** and **ok**. The interval marked with start and stop will now be repeated until **repeat selection..** is turned off using **repeat off**.

repeat title Select this special function if you want to repeat the current title when playing a DVD or the current track when playing a CD. The title/track will be repeated until **repeat selection..** is turned off using **repeat off**.

repeat all Select this special function if you want to repeat the complete disc until deactivated selecting **repeat off**.

special function random (only for CD) To replay the tracks on a CD in random order select **random..**, then press **►** to select **random play**, followed by **ok**. The **random** indicator in the front display will light up. (only visible on the DVD32R front display as a CD will switch of video)

random play is deactivated pressing **stop** twice or selecting **random..**, followed by **random play off**.

special function goto Playing a DVD activates **go to title: _ _**. Type in the title you want to go to using the numeric pad of the remote control. Pressing **ok** or waiting for a few seconds will start the selected title⁽¹⁾, if available.

1. Please do not confuse title with chapters. Many DVDs have only 1 title or use the title sequence for advertising, copy right or trademarks statements

**TAGtronic
Communications
Bus**

A CD only includes a single title, therefore **goto** is identical to 'direct entry whilst playing a disc', as described earlier in this manual.

The DVD32R features the Enhanced TAGtronic Communications Bus. This allows TAG McLaren Audio products to exchange information and work seamlessly together to form an effective, fully integrated system. The DVD32R⁽¹⁾ offers at present four configurable features:

- relay remote commands
- synchronise display brightness
- show AV32R status
- send standby commands to products connected to the Bus

**relay remote
commands**

Your DVD32R has the capability to relay remote control commands received by its IR receiver onto the Enhanced TAGtronic Communications Bus. This is ideal when some of your equipment is in a location that does not permit direct line of sight from the Remote and also opens up the possibility of multi-room control.

**synchronised
display
brightness**

Rather than having to individually control the display brightness of each piece of your TAG McLaren Audio system, it is possible to synchronise their brightness to match the display on your DVD32R. This not only gives single point control of display brightness, but also allows display appearance to be consistent across all products.

1. This requires DVD32R software v1.16, AV32R software v3.3 and 100x5R v3.0 (or higher)

**show AV32R
status**

If your video device is directly connected to your DVD32R (or routed through the AV32R without using the output + on-screen display) the Enhanced TAGtronic Communications Bus can be used to convey on-screen information from the AV32R to the DVD32R. When this feature is enabled⁽¹⁾, on-screen information from the AV32R is overlaid onto the video signal in the DVD32R. The AV32R transmits status messages (press **ok** with the AV remote control), volume and surround information. It does not send the setup screens of the AV32R.

**relay standby
commands**

The DVD32R can be configured to relay standby commands onto the TAGtronic Bus. This provides a means of putting all products into standby using a single press of **standby**. Similarly, all products can be brought out of standby using the same key. If the DVD32R is configured for auto-standby⁽²⁾, then this too will cause a standby command to be relayed on to the bus.

1. It requires that your AV32R runs software version 3.3 or later
2. Auto-standby puts the DVD32R into standby if it 'idles' for a user selectable time. See 'first time setup' in the DVD32R setup menu for details (on-screen)

test patterns

The DVD32R is the world's first dvd player with an in-built test pattern generator to assist you in adjusting your picture, PAL or NTSC, for best performance.

Many display devices are wrongly adjusted when leaving the factory because they need to overcome the bright lighting in the show rooms from which they are usually selected. However, once installed at home, the viewing conditions vary considerably from those in the show rooms, hence display devices need re-calibrating.

Most important for a perfect picture is the absence of surrounding light in the room, particularly light which can hit the screen. An often suggested low brightness light, placed behind the screen (hence preventing it from reflecting in the screen) should only be used if you want to watch tv leisurely for a long period of time. For best movie presentation, keep the surrounding light intensity as low as possible.

It is not just the absence of surrounding light which can improve the performance of your display device, it is also the colour of the walls, as these will also reflect light, emitted (or reflected, when using a front projector) from your screen, 'bouncing' it back on to the screen to 'wash-out' the picture. The perfect home cinema would be pitch black with no added light in the room! Not the most pleasant of rooms, but highly effective. The result would be great picture quality, assuming the display device is up to the task and adjusted properly. A more practical solution are walls painted in darker colours without a reflective surface.

**brightness
(black level)**

Black is the absence of light, and this is the first parameter you should adjust. Use the display device's black level control which some manufacturers call, quite inappropriately, brightness.

The DVD32R includes two test patterns, PLUGE 1 and PLUGE 2, which will allow you to adjust the black level until black becomes 'really' black (and not just a dark grey). If you select the black level too high then a scene filmed at night looks like a scene filmed in the afternoon (as black will be replaced by dark grey). However, if the black level is set too low then the picture will lose detail in dark scenes.

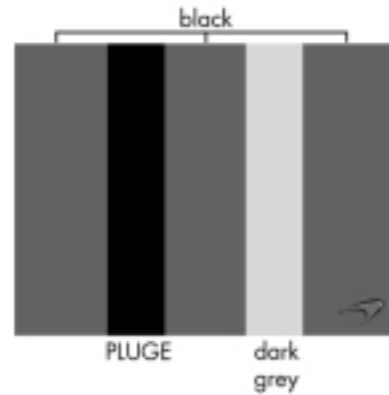
Both test-patterns include a signal, created by hardware circuitry inside your DVD32R⁽¹⁾, which produces a level which is electrically below black, i.e. invisible if the black level of the display device is correctly adjusted. This signal is called PLUGE (Picture Line Up Generating Equipment). Both test patterns include also, right of PLUGE, separated by a black zone, a bar in dark grey (electrically above black, exactly by the same amount as PLUGE is below).

If the black level is correctly adjusted then PLUGE is not longer visible but the dark grey bar still (just) is.

PLUGE 2 contains, in addition to PLUGE 1, a brilliant white field allowing to check if the black level is affected by high picture contrast.

1. The DVD32R will not display the blacker than black test signals recorded on some test discs as it will remove those 'out of spec' signal levels. Some video processors will not display PLUGE at all

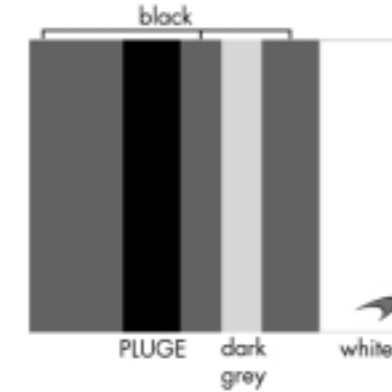
pluge 1 The PLUGE 1 signal will look like this with black level (brightness) set too high.



Turn the brightness⁽¹⁾ up until you can clearly see the PLUGE bar. Then turn the brightness slowly down until the PLUGE bar just disappears in the dark background⁽²⁾. Don't turn the brightness down too much, you should always see the grey bar to the right of the PLUGE bar⁽³⁾.

1. If you intend to play both PAL and NTSC then you need to make sure you have set the 'NTSC black level' (->setup->change setup->video->black level) correctly before you carry out this adjustment as both are interrelated. This will make sure that the black level is maintained when switching between PAL and NTSC
2. Black is the absence of light. You will only achieve a 'deep' black if you prevent additional light from hitting your screen
3. Some projectors, for example LCD and DLP types, cannot achieve real black (the absence of light) because of their internal construction. You can easily test this by standing between the projector and the screen when displaying the PLUGE 1 test pattern. If you can see your shadow on the black background (assuming there is total darkness in the room) then they still output light whilst trying to produce black. This is characteristic for these projector types and not a fault

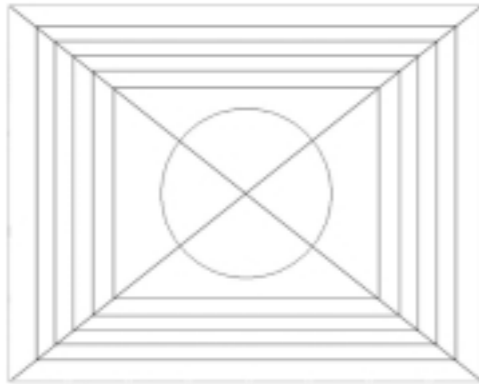
pluge 2 The PLUGE 2 signal will look like this with the black level (brightness) set too high.



PLUGE 1 has low average intensity, whilst PLUGE 2 includes a white bar. Adjust the black level using both test-patterns (PLUGE 1 and PLUGE 2), and if the settings differ use the average of both. Only the very best display devices are able to maintain a constant black level independent of the picture content. You might need to select an average of both calibrations.

cross-hatch

The cross hatch included in the DVD32R is a multi-purpose test-pattern which will allow adjustment of contrast, and sharpness.



cross hatch shown on a 4:3 display device

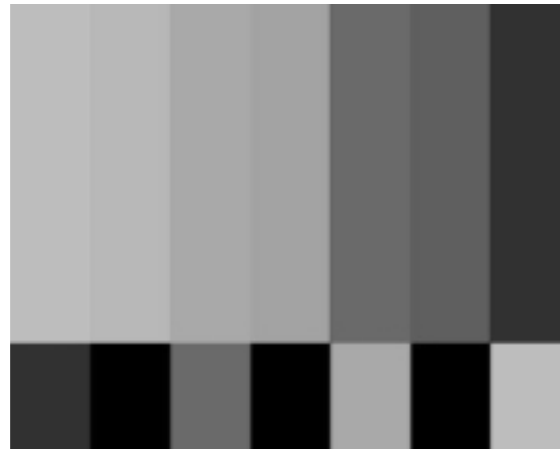
The test pattern includes a series of black lines on a white background. Adjust the contrast, after having set the black level correctly, so that white becomes solid without blurring into the black lines and without turning the black lines into grey. Cross-check your setting by turning back to the PLUGE 2 test-pattern and check that the bright white field (PLUGE 2) isn't blurred into the black background. Some display devices allow a very high contrast setting without blurring, others will always blur.

**cross-hatch
(cont'd)**

On some display devices the black lines will have a second or even multiple lines beside them, usually shown in a light grey. They can be caused by many reasons, for example poor cables between the DVD player and the display device or - usually only available in NTSC - a wrongly adjusted sharpness control. Use good cables, such as our S-Video or digital cable (for Composite or Component) and turn the sharpness right down to remove these artifacts. Frequently you might find that you cannot remove those extra lines completely.

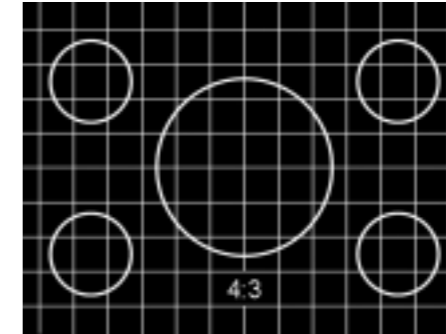
colour

The colour test-pattern allows you to adjust Colour (and Tint in NTSC⁽¹⁾). Adjust those two parameters until yellow looks yellow (without including too much red) and Red is not over-saturated. You might use filters, available from specialist suppliers, which will allow you to more objectively adjust colour.



black and white representation of the colour test pattern

1. CRT projectors usually allow colour, (tint) and the individual colours red, blue and green

aspect ratio

These test patterns output a cross hatch of white lines on a black background, including several perfect circles. If the geometry of your display device or the output format of the DVD32R aren't correctly set these circles will look distorted. Make sure your display device is switched to the correct aspect ratio and you have set the DVD32R correctly (see setup->change set up->video->aspect ratio⁽¹⁾).

On a 4:3 standard tv the cross hatches 4:3 and 16:9 letterbox should look undistorted. On a 16:9 display device all 3 test patterns should look correct, assuming the correct zoom mode is selected (e.g. none, letterbox, anamorphic)

1. A projector usually needs manual switching between the three aspect ratios

convergence Many display devices form white by generating a mixture of the primary colours red, green and blue which our eyes add to white. If these colours aren't hitting exactly the same spot they won't form perfect white. This is called imperfect 'convergence'

Convergence of some display devices, primarily projectors, can be user adjusted, others will need a service engineer or aren't adjustable at all. The quality of the convergence can be checked using any of the Aspect Ratio test-patterns as they show white lines on a black background.

If the white lines aren't white but show the prime colours, shifted against each other, then the convergence need adjustment.

software upgrades distributed via the internet One of the most flexible aspects of DVD32R is that the software is stored in re-programmable memory. The software can be upgraded using a PC connected via the TAGtronic Communication Bus.

Details of our future upgrades will be published on our website, www.tagmclaren.com, and the updates themselves will be downloadable for user installation via a PC.

TAG McLaren Audio equipment is designed to give optimum performance for many years.

running in Just like a high-quality car, the performance of DVD32R will improve during the first few weeks of operation. The electronic components will then have reached and settled down to near-perfect specification.

warming up Every time you switch on your DVD32R, the performance will improve until the components reach their optimum operating temperature.

fuses There is a fuse in the power socket on the back of your DVD32R. To change the fuse, unplug the power cable and pull out the fuse carrier drawer.

The fuse carrier contains a spare fuse. This is the first one you see when you open the carrier. It is essential that you use a fuse of the correct type and rating.

There are no other user-serviceable parts inside your DVD32R.

cleaning In order to maintain the appearance of your DVD32R you can clean it as follows:

before cleaning always disconnect DVD32R from the AC supply.

any grease or dirt on the case may be removed with a dry soft lint-free cloth. Do not use any liquids, solvents or abrasives.

take great care not to get any liquid inside the case. If this happens you should have your DVD32R serviced.

service The only servicing you should carry out yourself is described in the previous section. All other servicing should only be carried out by our authorised service agents.

If service is required, please contact your authorised TAG McLaren Audio retailer or arrange it directly via our website: www.tagmclaren.com. If your DVD32R is still under guarantee, please refer to the guarantee card which gives you details on how to claim against the guarantee.

Please keep the original packaging and use it whenever your DVD32R is transported. A detailed packing instruction is available from www.tagmclaren.com or can be requested from our helpdesk@tagmclaren.com. Shipping without the appropriate transit protection will invalidate your warranty.

Programming the system-remote control

The system-remote comes preprogrammed and ready to use for the following TAG McLaren Audio products:

- audio-visual processor theatre AV32R
- five-channel amplifier 100x5R
- dvd player DVD32R

Other devices which are not pre-programmed to work with the system-remote will need to be 'learnt'. To program the system-remote for other devices, you will need the original remote control for the unit you wish to control.

programming the system-remote

Some devices (other than those listed above) may partially work with the system-remote as supplied. To check this, select the desired unit using one of the **REMOTE SELECTION** keys and try pressing a few of the keys. If the device responds as expected, you may only need to edit the set-up for that unit by programming one or two keys, as explained on the following pages, otherwise you will need to program the Remote for all commands.



learning new commands

To 'learn' new commands:

1. Select the device you wish to program by pressing the appropriate **REMOTE SELECTION** key on the system-remote.
2. Place the system-remote and the remote of the unit you want to control on a flat surface. Line up the remote controls head to head, about 5 to 10cm (2 to 3in) apart.
3. Simultaneously press and hold the **REMOTE SELECTION** key selected in step 1 and the **ok** key for about four seconds. The learning status LED will turn yellow to indicate that the Remote is now in learning mode⁽¹⁾.
4. Press and release the key on the system-remote which you want to program⁽²⁾. The status LED will flash yellow.
5. Press and hold for approximately three seconds the key on the original remote control which corresponds to the function you want the system-remote to learn. The status LED will flash shortly in green if the code is correctly understood. If it flashes red then you need to restart with step 4 as the code was not understood by the remote.
6. Release the key on the original remote and re-press and hold it for approximately a further three seconds. If the learning process has been successful, the status LED will flash green twice, then return to yellow. If the LED flashes red you need to restart with step 4 as the code could not correctly be interpreted by the remote.

Repeat steps 4 through 6 to program further keys.

1. The Remote will stay in learning mode for 20 seconds, after which it will return to normal operation mode if there have been no further key presses
2. The macro keys **m1** to **m4** can be programmed with new commands, but if they are used for the macro feature (see 'programming macro features') the new command will be over-riden



learning new commands (cont'd)

- Once you have finished teaching the system-remote all the desired commands from the original remote, you must store them by simultaneously pressing the appropriate **REMOTE SELECTION** key and the **ok** key for about four seconds.

Once you have stored the 'learnt' functions, test the keys you have taught to make sure that they are programmed correctly.

If the system-remote has problems learning from the original remote⁽¹⁾, you should:

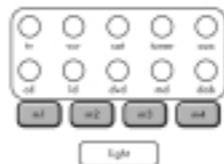
- check that the original remote has fresh batteries
- avoid fluorescent lights and strong sunlight, which may interfere with the learning process
- increase or decrease the distance between the two remote controls (within a range of 2 to 15cm / 1 to 6in)

programming macro features

The keys **m1** to **m4** and **standby** can act as macro keys. These can be programmed to store up to 10 commands to send together with one key press. Any key press function (except **mute**, **CH +** and **CH -**) can be programmed into the macro keys. There are 2 groups of macros, one used if the **av**, **cd**, **dvd** or **amp** remote selection keys have been pressed, the other for the **sat**, **tv**, **vcr** or **ld** keys; i.e. there are a total of 10 macros available.

When using the macro functions, it can take up to 10 seconds to transmit a 10-key sequence. You should keep the system-remote pointing towards the appropriate unit while the commands are being transmitted to ensure they are received correctly.

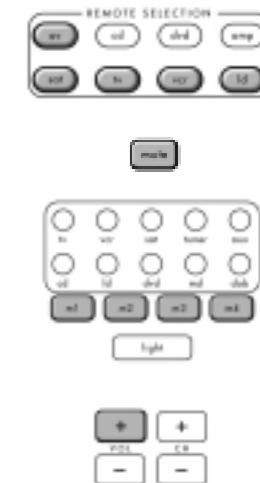
- Some remote controls operate at non-standard infra-red, UHF or ultrasonic frequencies, and cannot be learnt; this is sometimes also caused by unusual or complex functions which are not universally recognised. If you continue to experience problems programming the system-remote, please consult your retailer for advice



programming a macro function

To program in a macro function:

- Simultaneously press the **REMOTE SELECTION** key for the set of macros you wish to program (**av** or **sat**) and the **mute** key. The learning status LED and the **REMOTE SELECTION** key will both turn red to indicate that the Remote is in macro learning mode⁽¹⁾.
- Press one of the macro keys **m1** to **m4** or **standby** to which you wish to allocate the functions.
- Press the keys for the commands (up to 10) you want stored in the macro key⁽²⁾.
- Press the **CH +** (or **CH -**) key to store your selections. The learning status LED and the **REMOTE SELECTION** key will both flash red twice, then go out.
- To use the macro, simply press the macro button.



- The Remote will stay in macro learning mode for 20 seconds, after which it will return to normal operation mode if there have been no further key presses
- You can select functions to control another unit as part of a macro by first pressing the appropriate **REMOTE SELECTION** key before pressing the keys for the desired functions. This **REMOTE SELECTION** key press counts as one of the 10 presses you may store in the macro key

erasing single commands

To erase a learnt command from a key:

1. Simultaneously press the **REMOTE SELECTION** key for the appropriate device and the **ok** key until the status LED turns yellow and the chosen **REMOTE SELECTION** key is lit.
2. Press the key for the function which you wish to erase. The **REMOTE SELECTION** LED will turn off and the status LED will flash continuously yellow.
3. Press the **light** key. The status LED will flash green twice then turn a constant yellow colour. The chosen **REMOTE SELECTION** key LED will turn back on.

Repeat steps 2 and 3 to erase any other learnt commands for the selected device.

4. To finish, simultaneously press and hold the **REMOTE SELECTION** and **ok** keys. The **REMOTE SELECTION** key LED will go out and the status LED will flash yellow twice then go out.

**erasing a macro function**

To erase a macro function:

1. Simultaneously press the appropriate **REMOTE SELECTION** key (**av** or **sat**) and the **mute** key until the learning status LED turns red.
2. Press the macro key (**m1** to **m4** or **standby**) you wish to erase.
3. Press the **CH +** (or **CH -**) key. The learning status LED will flash red twice then go off.

erasing all commands for one device

To erase ALL learnt commands for one device:

1. Press the **REMOTE SELECTION** key for the appropriate device and the **ok** key simultaneously until the status LED turns yellow and chosen **REMOTE SELECTION** key is lit.
2. Press and hold the **light** key. The status LED will flash red five times and the selected devices LED will turn off. Release the **light** key; the status LED will flash green twice then turn a steady yellow and the selected device key LED will turn on again.
3. To finish, press and hold the **REMOTE SELECTION** and **ok** keys simultaneously. The **REMOTE SELECTION** key LED will go out and the status LED will flash yellow twice then go out.

erasing all commands for all devices

To erase ALL learnt commands for ALL devices:

1. Press and hold the **tv REMOTE SELECTION** and **light** keys simultaneously. The status LED will flash red 10 times, then green once, yellow once and turn off⁽¹⁾.

remote control warning

You will, from time to time, have to replace the batteries in your system-remote. During the battery changing operation the Remote will remember your programmed commands, but you should avoid pressing any key on the Remote during battery changing as you may lose all your stored settings.

1. Caution – this will erase every function that you have programmed into the Remote

This section is for those of you who really want to know the 'insides' of your DVD32R. You will not miss out on any of the functions or performance of your DVD32R if you choose not to read any further.

laser type	dual focus, semiconductor laser
playable disc types	DVD-Video CD CD-R
	digital audio outputs
supported output formats	Linear PCM Dolby Digital DTS
sample rates	44.1, 48.0 and 96.0 kHz
word lengths	16, 20 and 24 bit
IEC958 output level	0.5 V p-p into 75 ohm load
TOSLINK™ output level	-18 dBm (wavelength 660 nm)

	video outputs
	s-video and composite video outputs
supported output television standards	PAL-B/D/G/H/I PAL M NTSC-M
	output levels
composite	1 V p-p (75 ohm load, negative sync.)
S-video	Y-signal: 1 Vp-p (75 ohm load, negative sync.) C-signal: PAL: 300 mVp-p (75 ohm load) NTSC: 286 mVp-p (75 ohm load)
component video outputs	Y-signal: 1 Vp-p (75 ohm load, 300 mV sync.) P _b (B-Y)-signal: 700 mVp-p (75 ohm load) P _r (R-Y)-signal: 700 mVp-p (75 ohm load)
power requirements	100/115/230 V AC 50/60 Hz by model variant
power consumption	operating: 35 W (typical) standby: less than 5 W (typical)

dimensions	445 x 320 x 100 mm
weight	9.6 kg (approx.)
operating temperature	5 – 35 °C
operating humidity	5 – 90 %
storage temperature	-5 – 55 °C

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