cinemizer^{OLED}

Operating instructions

ZEISS

Overview

Introduction

Requirements

ATTENTION: For your own safety, read the complete instructions on the usage of the cinemizer ® OLED multimedia video glasses in this manual, the safety information in the quick guide for the cinemizer OLED multimedia video glasses (provided in the package and available from www.zeiss.com/cinemizer/documents) and the instructions for the devices to which the cinemizer OLED multimedia video glasses are connected, before you use the cinemizer OLED.

The following are required to use the **cinemizer** OLED video glasses:

- A device with a USB connection for charging the battery, if necessary,

- A playback device, e.g. a computer, iPod/iPhone, gaming console, etc.

- A connection adapter (HDMI®, iPod/iPhone), or connection cable (3.5mm 4-pin jack to cinch)

! If a stationary image (e.g. a log-on screen or permanently displayed image/icon) remains on the screen for an extended period, you may still see it as a feint residual image, even after the image has been changed. This is termed "burn-in". For this reason avoid the playback of unchanging images! If feint residual images are visible, they can be eliminated by playing back varied content that fills the screen.

Registration
Please register at www.zeiss.com/cinemizer/registration to receive notifications directly when a firmware update is available.

The multimedia video glasses

As you look into the **cinemizer** OLED video glasses you will obtain the visual impression of a television picture with a screen diagonal of 105 cm at a distance of 2 metres.
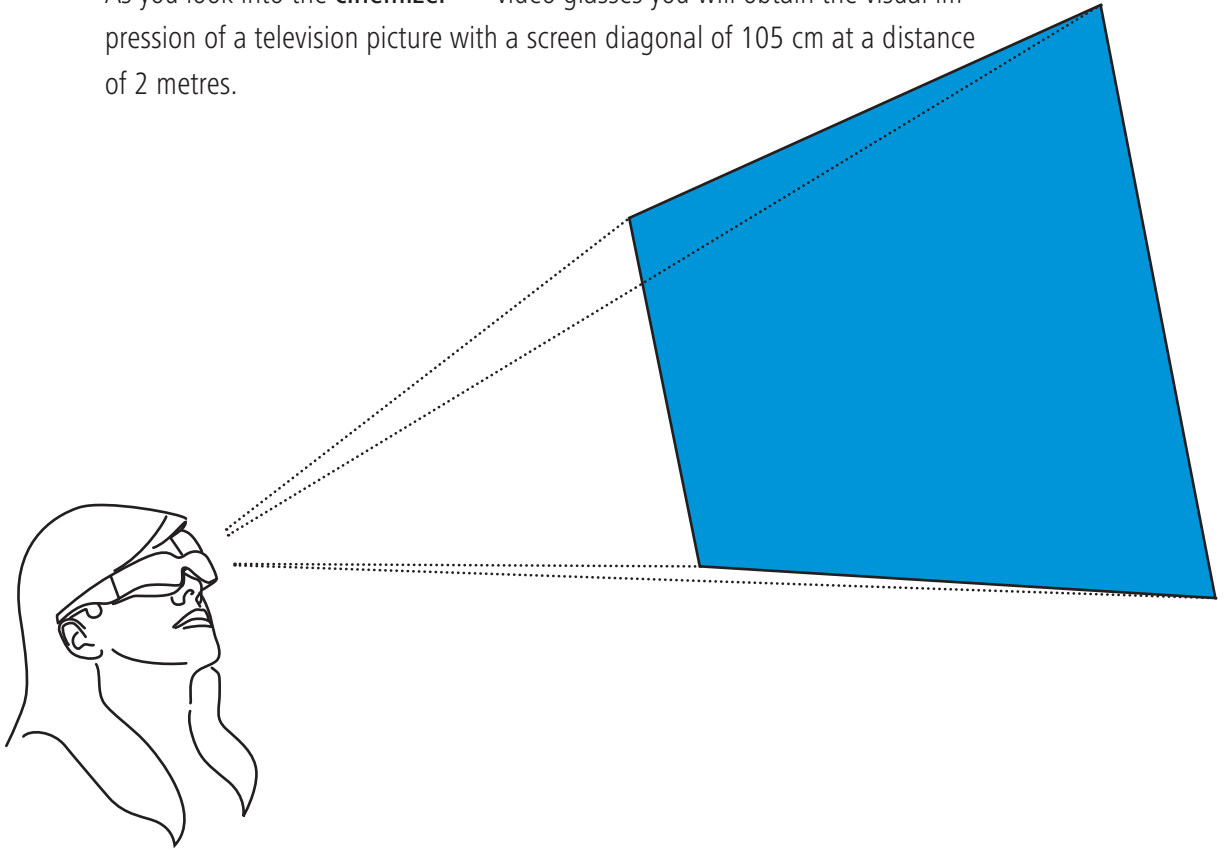
The ergonomic design and simple acuity adjustment between -5 and +2 dioptres for each eye make the **cinemizer** OLED video glasses very convenient to wear, even for the wearers of spectacles.

The stereo 3D support converts the **cinemizer** OLED multimedia video glasses into a portable 3D screen of universal application with which you can immerse yourself in virtual worlds.

cinemizer ® OLED **at a glance**

Contents of the package

Travel case

Battery box

cinemizer-HDMI® adapter
(HDMI® mini jack type C)

HDMI® to mini HDMI®
Adapter cable
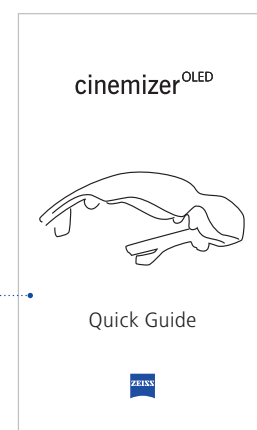
Mini USB cable
Video cable 3.5mm to 3 x cinch

cinemizer OLED

Nose pad

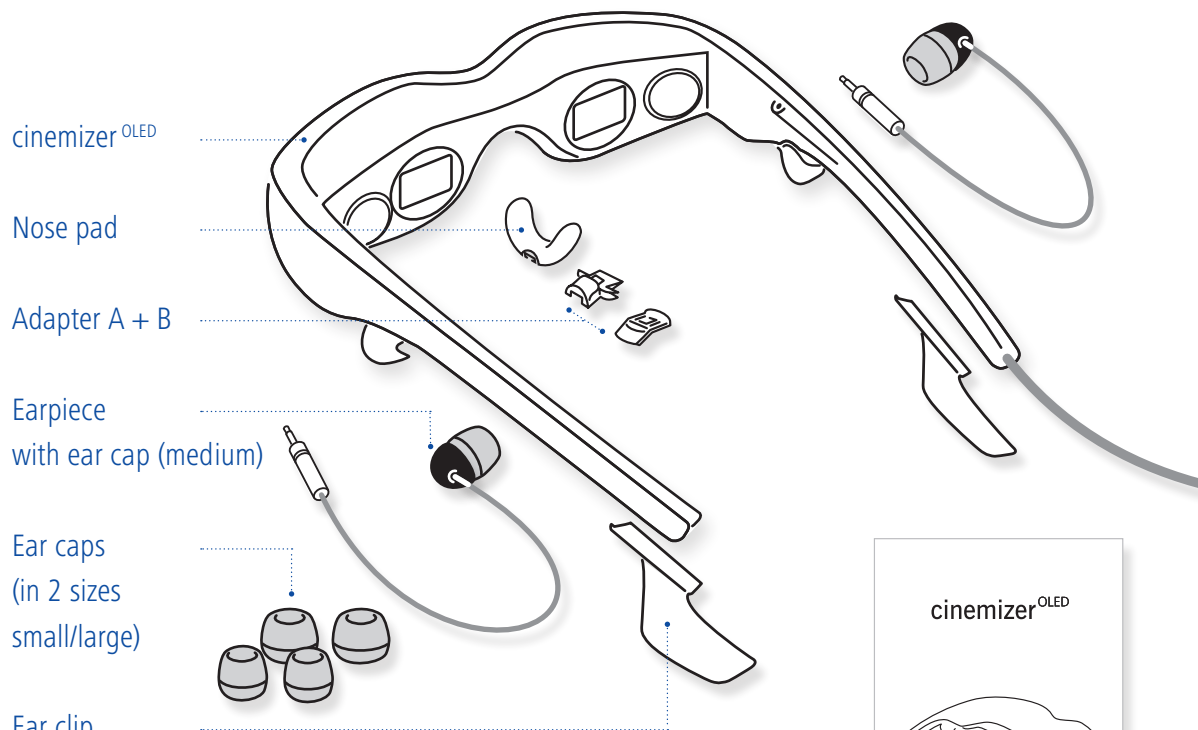Adapter A + B

Earpiece
with ear cap (medium)

Ear caps
(in 2 sizes
small/large)

Ear clip

Quick guide and safety instructions

cinemizer OLED

Quick Guide

ZEISS
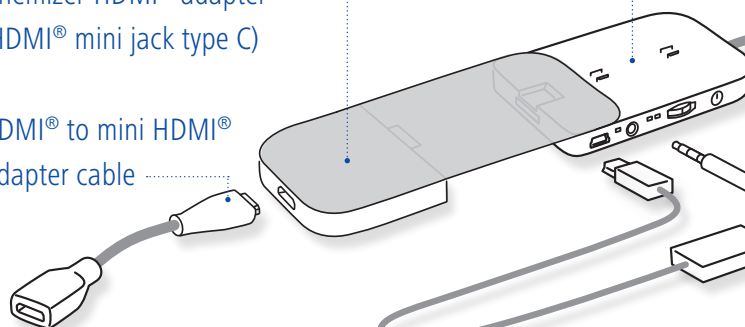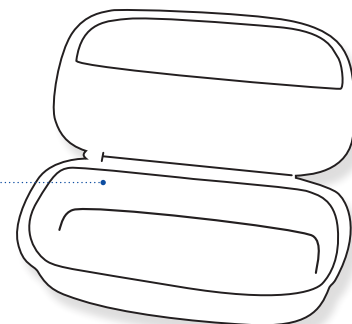
cinemizer ^{OLED} controls

Nose pad
for the ergonomic adjustment of the position of the glasses

Viewing window
for different eye distances (59-69mm)

Adjustment wheel
for the stepless adjustment of the acuity for each eye
(-5 to +2 dioptres)

Ear clip
for fixing the glasses ergonomically

Removable earpiece

Earpiece storage clip (magnetic)
for the safe storage of the earpieces

Battery box controls

cinemizer socket
for the connection of the HDMI® adapter or optionally an iPod/iPhone adapter

Earpiece jack
for the connection of stereo earpieces (3.5mm)

Reset button
for resetting the video glasses

On/Off button
video glasses

Multifunction switch
for activating the On-Screen Display (OSD), switching between 2D and 3D mode and for adjusting the volume

Mode LEDs
2D/3D mode display

AV-in jack
for connecting (3.5mm, 4-pin) other playback devices

Battery status LED
charging/battery status display

Mini USB jack
for charging the battery
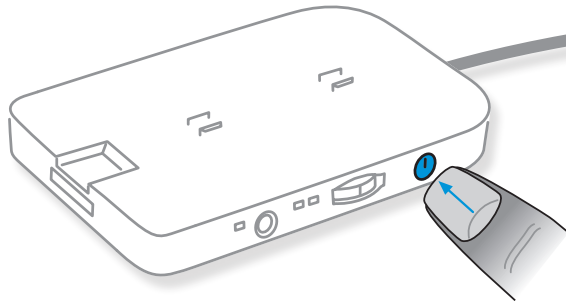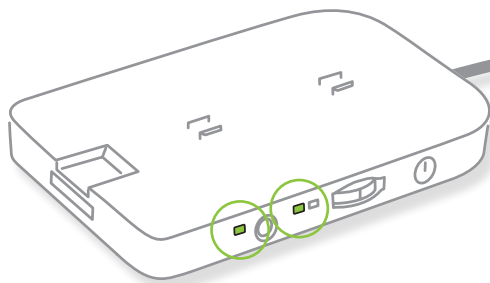
Usage

Powering on the cinemizer ^{OLED} video glasses

Power on the **cinemizer** ^{OLED} video glasses by briefly pressing the On/Off button until the mode and then the battery status LEDs illuminate.
If an LED does not illuminate green after pressing the On/Off button, the battery is probably discharged and you should charge the battery for the **cinemizer** ^{OLED} video glasses using a USB cable. If the battery has been fully discharged, it can take up to 15 minutes until the battery status LED starts to flash on charging the **cinemizer** ^{OLED} via USB.

As long as video signal is not provided via the cinemizer HDMI® adapter or iPod/iPhone adapter, the text **"NO SIGNAL"** appears on the virtual screen in the multimedia video glasses. If a signal is not provided within 2 minutes of powering on, the **cinemizer** ^{OLED} power off automatically (time out).

**Powering off the cinemizer ^{OLED} video glasses**

If powered on, the **cinemizer** ^{OLED} can be powered off by pressing the On/Off button. The battery status and video mode LEDs go out.

Nose pad adapter

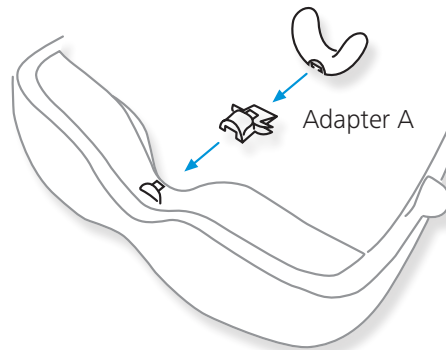The soft silicone nose pad adapter ensures you find it pleasant to wear the **cinemizer** OLED glasses on your nose. Due to anatomical differences in the shapes of faces and noses, comfort can be improved using the optional nose pad adapters A and B.
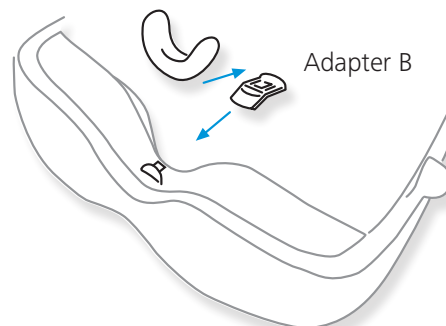
The nose pad can be fastened in 3 different ways:

1) Nose pad without adapter

2) Node pad with adapter A
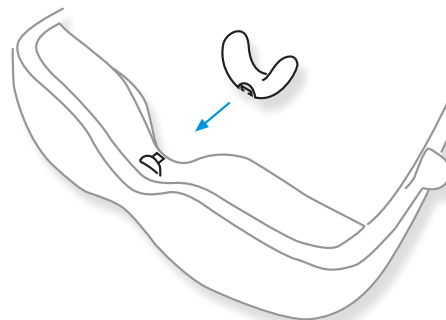
Adapter A

3) Nose pad with adapter B

Adapter B

! The simplest method is to try all 3 ways and decide which suits you best.

Ear clips

The ear clips for the **cinemizer** OLED help both to securely attach the glasses to your head and to reduce the weight on your nose. You can then comfortably wear and use the **cinemizer** OLED video glasses for an extended period.
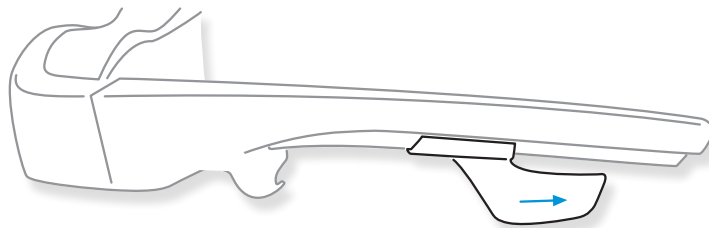
Prior to putting on the **cinemizer** OLED video glasses, please push the ear clips a little to the rear, put on the glasses and then push the ear clips from the rear to your ears.
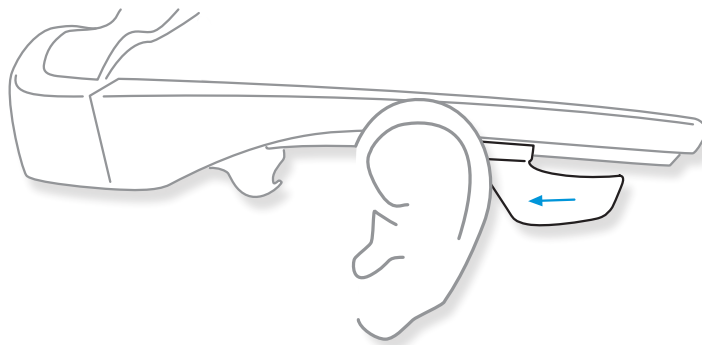
! Prior to putting away the **cinemizer** OLED multimedia video glasses in the travel case, you should remove the ear clips and place them loose in the travel case. In this way the ear clips are not subjected to mechanical forces that may irreparably damage them.

1   2   3
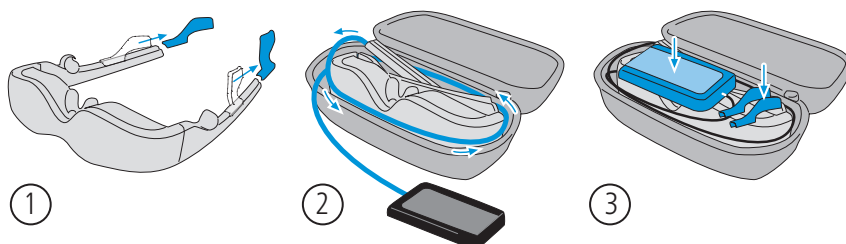
Acuity

The **cinemizer** OLED video glasses offer stepless adjustment of the acuity in the range from -5 to +2 dioptres. In this way wearers of spectacles with the need for eyesight correction in this range can use the **cinemizer** OLED video glasses without using their spectacles. Before you adjust the acuity, you should have adjusted the nose pad and the ear clips to suit you. You can continuously correct the dioptres separately for each eye using an adjustment wheel. However it is not possible to correct astigmatism.
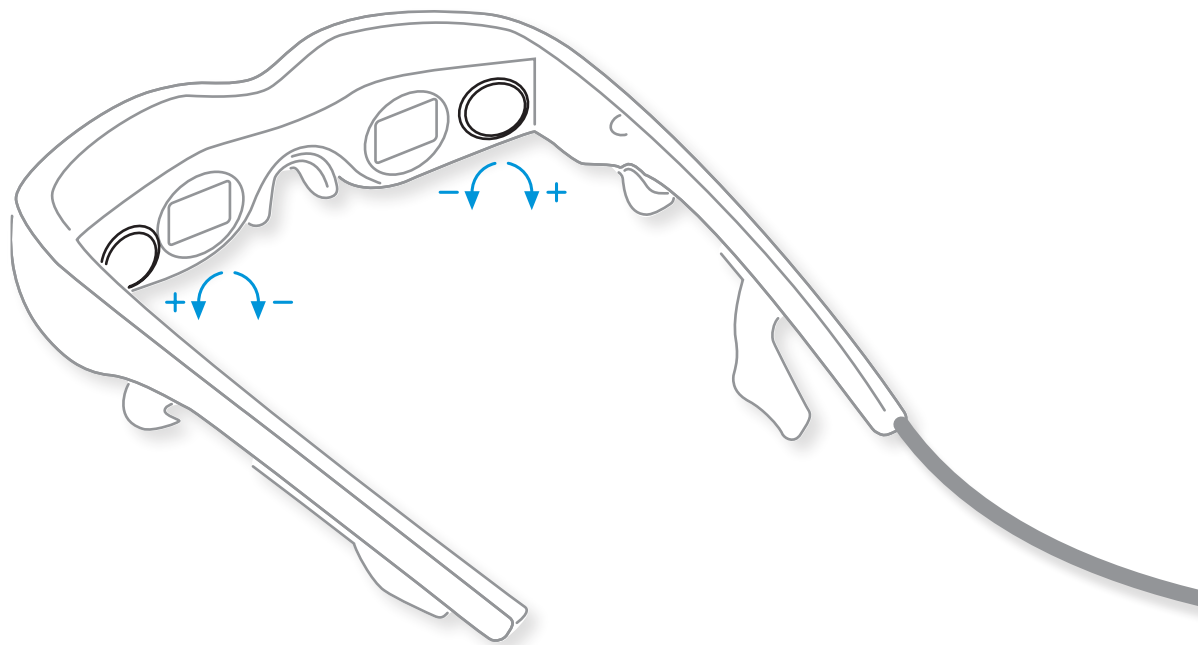
! Please turn the adjustment wheel until the picture is sharp.
For this purpose close one eye while you make the adjustment for the other eye.

Earpieces

You can enjoy stereo sound with the **cinemizer** OLED using the two earpieces.

1. Connect earpieces

The earpiece connectors are connected as shown in figures 1-3.
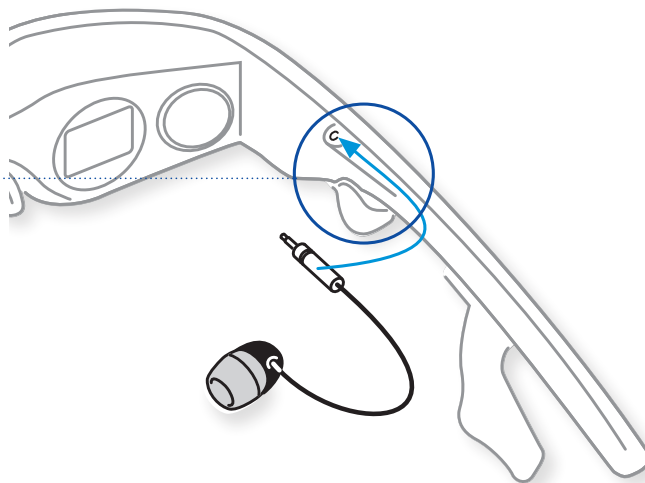
First the connector is loosely fitted in the 2.5mm jack, then pushed with the fingernail until it engages, and finally the cable pressed into the cable channel.
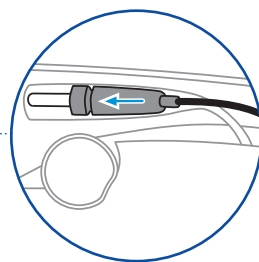
1	2	3
Insert connector loosely into the jack.	Push to the stop using your fingernail.	Press cable into the cable channel.
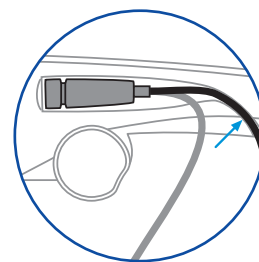
2. Use earpieces

With the glasses opened, please take the earpieces out of the magnetic storage clips and put on the **cinemizer** ^{OLED} glasses. Please insert the earpieces in your ears.
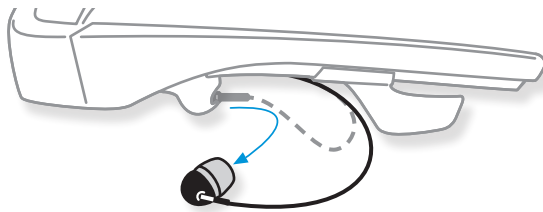
The rubberised ear caps fitted to the earpieces are important for the correct seating of the earpieces.
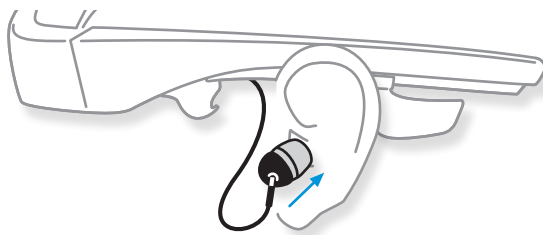
Ear caps
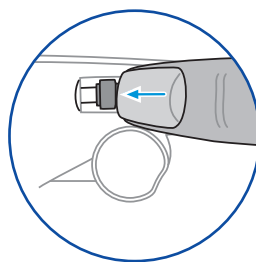Ear caps in three different sizes are included with the earpieces: small (S), medium (M) and large (L). Please try the different sizes and decide which size is most suitable for you. The medium-sized ear caps are fitted in the factory.

Proceed as follows to fit different size ear caps:
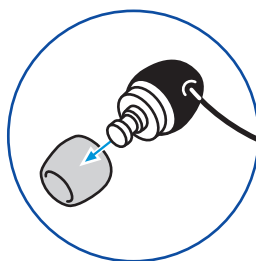
1
Pull the ear cap off the earpiece.
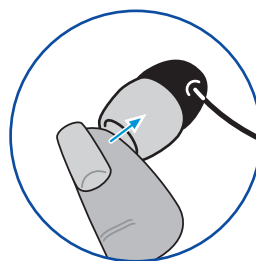
2
Push the different size ear cap onto the earpiece.

Stereo audio jack

If you want to use your own stereo earphones, you can connect them to the 3.5mm stereo audio jack provided.
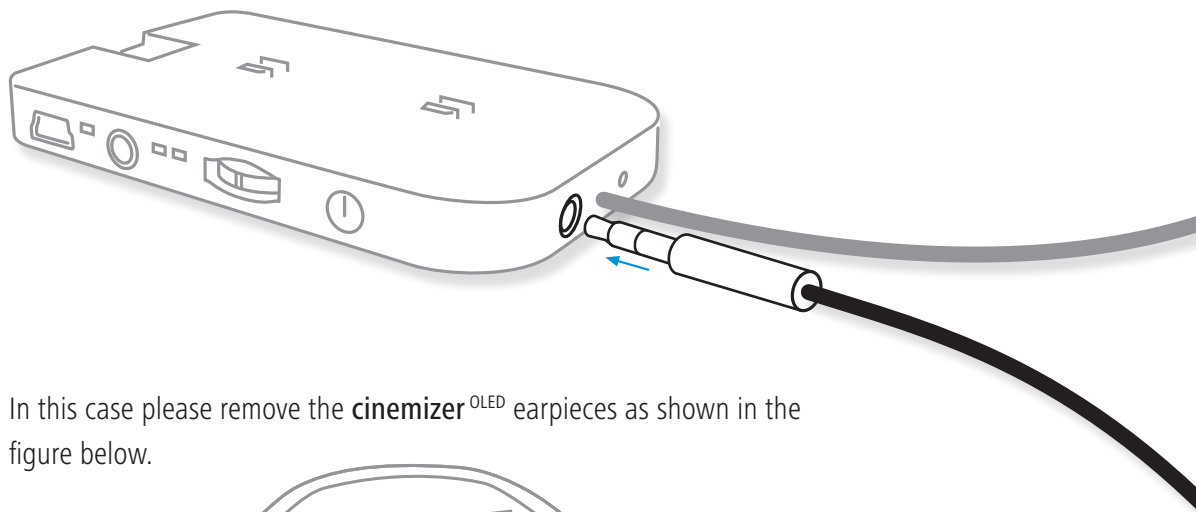
In this case please remove the **cinemizer** OLED earpieces as shown in the figure below.

1	2	3
Remove cable from the cable channel.	Press briefly using your fingernail.	Tilt slightly to remove the connector.
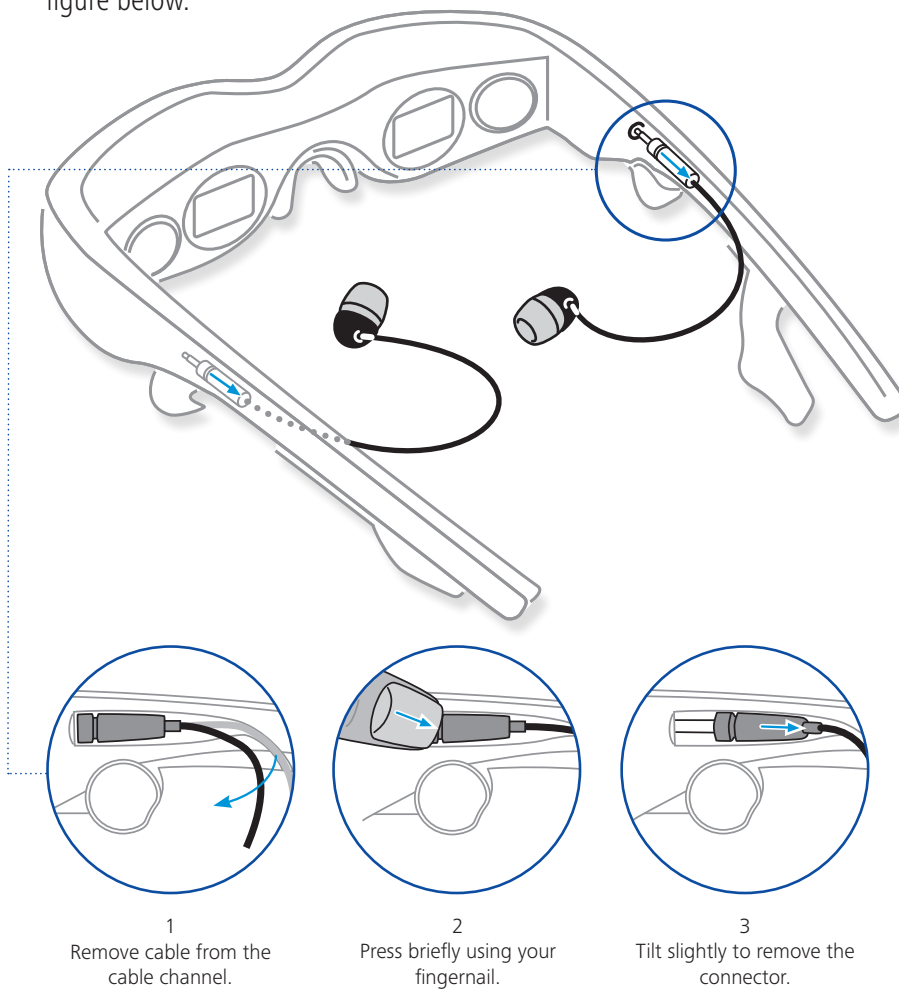
Volume

You can change the volume of the **cinemizer** OLED video glasses using the multifunction switch.
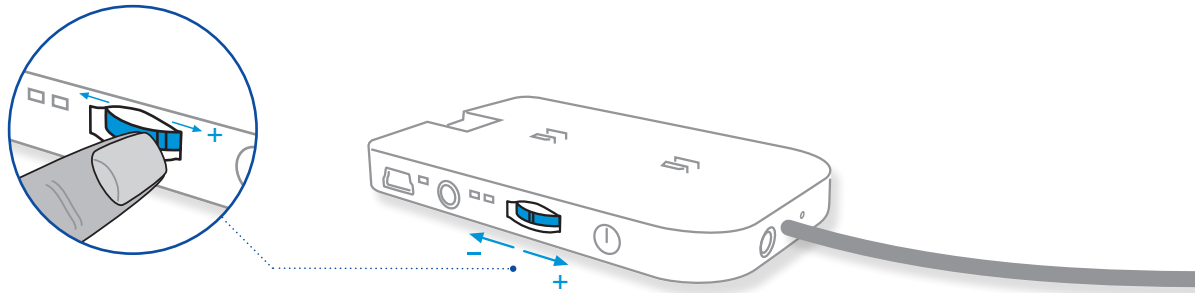
On the usage of an iPod or iPhone with the **cinemizer** OLED glasses, the volume control on the iPod or iPhone is inhibited. On some iPod or iPhone models, the volume may still be indicated on the display if the volume buttons are actuated, but the volume in the **cinemizer** OLED will not change.

! With an iPod or iPhone connected you can only adjust the volume on the **cinemizer** OLED.

Each time you change the volume, the volume symbol will be displayed briefly on the virtual screen in the **cinemizer** OLED glasses.

| Mute | Lowest volume | Maximum volume |

A total of 11 different volume settings and a mute setting are available. Each time you power on the **cinemizer** OLED video glasses the volume is set to the default volume, which is 50% of the maximum volume.

Integrated battery

The integrated battery allows you to use the **cinemizer** ^{OLED} glasses for up to 6 hours while you are travelling. The battery must have been fully charged prior to use. It takes approx. 2.5 hours to charge the battery.

Connection	Operating time in hours
Video cable	6
iPod/iPhone	6
HDMI®	2.5

Battery status

When the **cinemizer** ^{OLED} is powered on, the battery status LED indicates to you the charge status of the battery. Low battery capacity is signalled by an orange (critical) or red (very critical) LED.
If the battery status LED illuminates red or orange, you should try to charge the battery using a USB cable.

Battery status LED   Battery status

Illuminated red
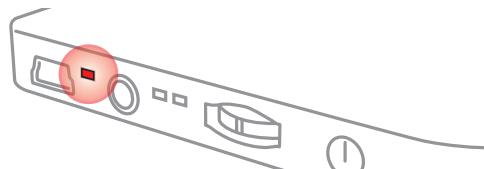
The battery capacity is very low and therefore it is imperative the battery is charged. Depending on the playback device and the connection used (HDMI®, iPod, video), the battery will be able to supply power for max. 30 minutes.

Illuminated orange
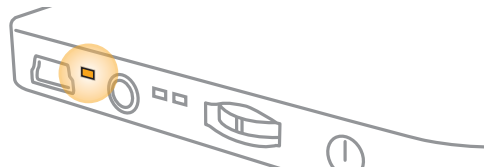
The battery capacity is low and therefore the battery should be charged. Depending on the playback device and the connection used (HDMI®, iPod, video), the battery will be able to supply power for max. 60 minutes.

Illuminated green
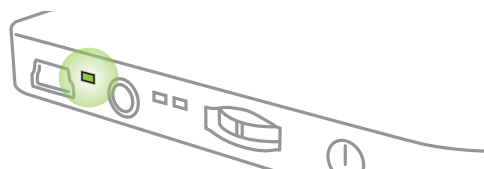
The battery for the **cinemizer** ^{OLED} video glasses is charged. Depending on the playback device and the connection used (HDMI®, iPod, video), the **cinemizer** ^{OLED} can be operated portably for up to 6 hours.

If the battery charge drops below one of the two limits (orange, red) during operation, the related battery symbol will be displayed on the screen in orange or red.

| Charging recommended | Very critical charge status Charging recommended | Charging imperative |
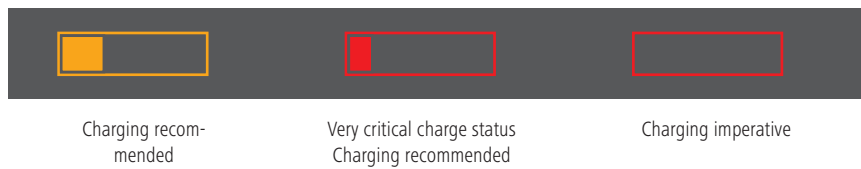
With the **cinemizer** OLED powered on, the battery symbol is also displayed briefly in the glasses if the volume is changed using the multifunction switch.
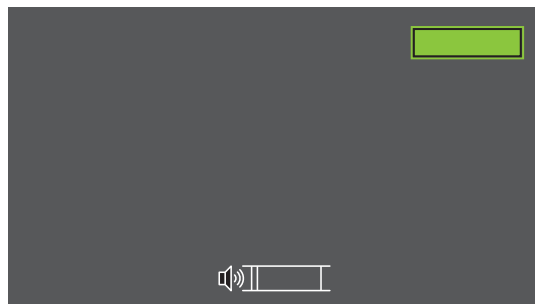
Battery charging

To charge the **cinemizer** ^{OLED} battery you can connect the USB cable supplied to either a computer or a USB mains power supply plug. It is recommended to ensure the power source supplies at least 500 mA (e.g. USB 2.0).

While you charge the **cinemizer** ^{OLED} battery, the battery status LED flashes. The colour of the flashing battery status LED indicates the battery capacity in 3 different colours.

If the battery is completely discharged, the battery status LED will not flash immediately when the video glasses are connected using a USB cable. Please leave the **cinemizer** ^{OLED} video glasses connected to the PC via the USB cable for at least 15 minutes. Then disconnect the USB cable and connect again. The charging function is continued and the battery status LED illuminates.
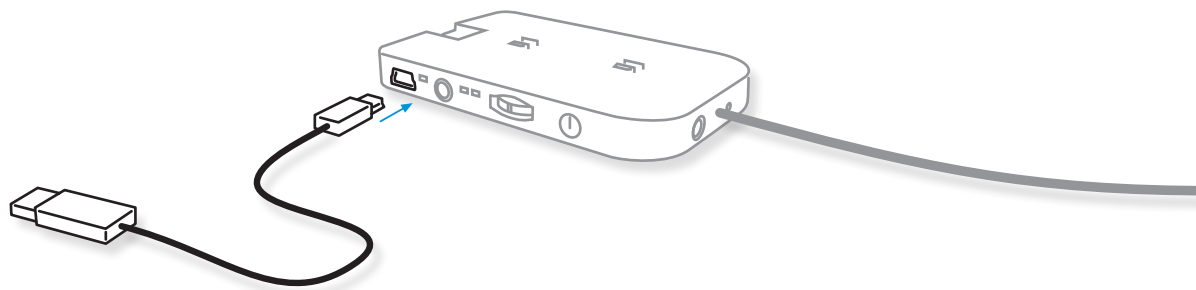
The charging activity is indicated in the on-screen display by a progress bar in the battery symbol. This symbol is only visible if the volume is changed using the multifunction switch.

Battery status LED	Battery status
Flashing red	The battery capacity is very low. After charging for approx. 40 minutes the colour of the battery status LED will change from red to orange.
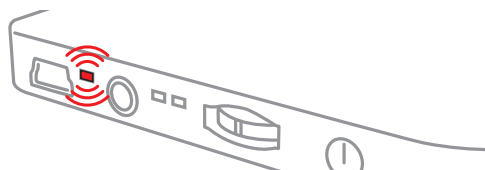
Flashing orange	The battery charging status has reaches a state that is sufficient for approx. 1-3 hours of operation depending on the playback device and the connection used.
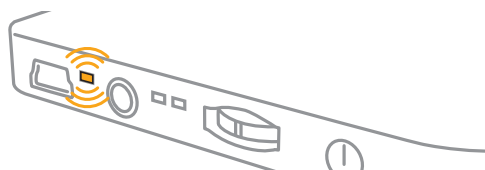
Flashing green	The battery capacity is almost fully charged.
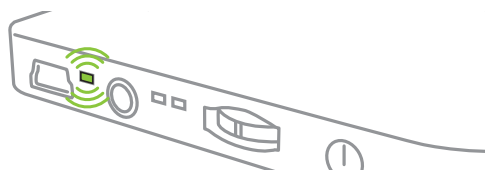
The battery is fully charged when the battery status LED no longer flashes, but instead is continuously illuminated green.

Please read the safety instructions on the rechargeable battery in the section "Safety and usage" in the short guide included in the package.

HDMI® connection

The **cinemizer**^{OLED} multimedia video glasses are supplied with a cinemizer-HDMI® adapter. Using this adapter the video glasses can be connected, e.g. to games consoles, Blu-ray players or **other** playback devices with an HDMI® interface.

HDMI® to mini HDMI®
adapter cable

cinemizer-HDMI® adapter
HDMI® mini jack (type C)

HDMI® cable
(is not included!)
Connector type is dependent on the
playback device

Games console

Blu-ray player
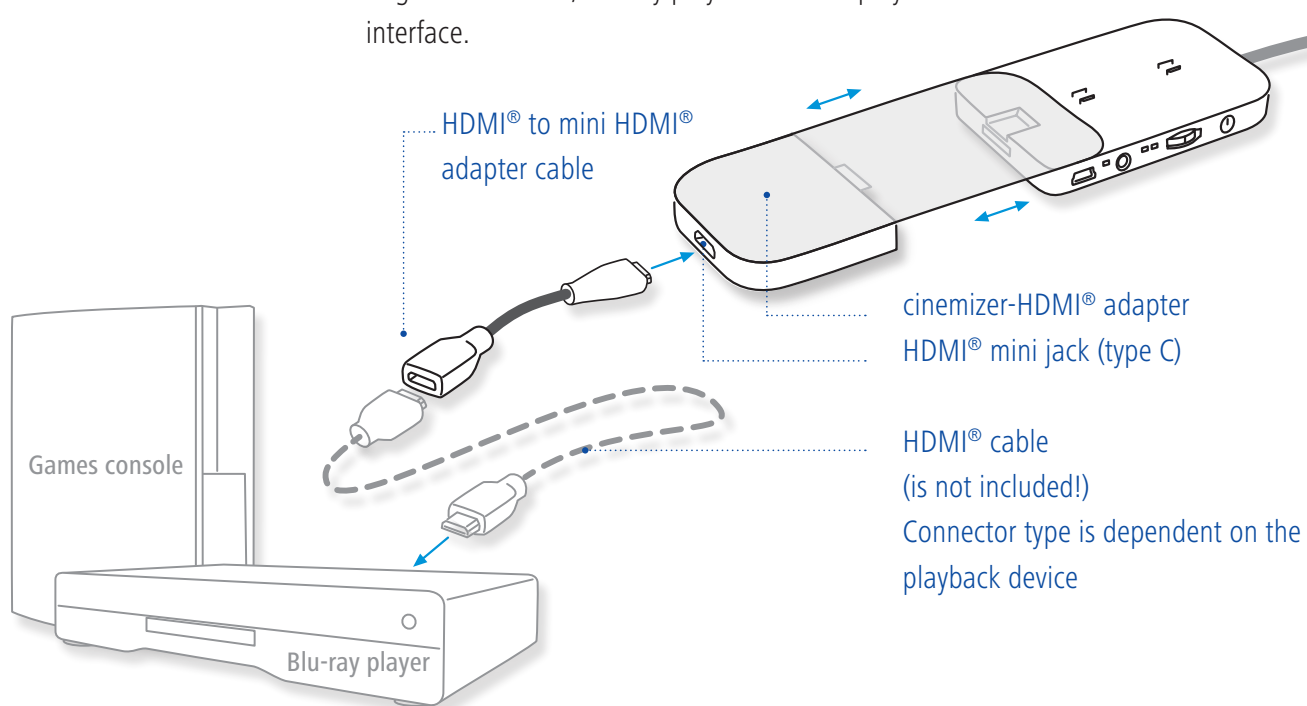
Connect the HDMI® adapter to the battery box for the **cinemizer**^{OLED} and connect your playback device using an appropriate HDMI® cable. The jack on the cinemizer-HDMI® adapter is compliant with the mini HDMI® specification (type C). Please check the type (A, C or D) of HDMI® jack on the play-back device before you purchase an HDMI® cable. Suitable HDMI® cables or adapters are available in any online electronics shop or electronics dealer.

The cinemizer-HDMI® adapter supports the following resolutions:

480p/576p
1280 x 720p   50/60Hz
1920 x 1080i   50/60Hz
1920 x 1080p   50/60Hz
1920 x 1080p   24Hz

In addition the 3D mode as per the HDMI® 1.4 specification for the resolu-tions 720p and 1080p is supported.

iPod/iPhone connection

To use the **cinemizer**^{OLED} multimedia video glasses with an iPod or iPhone an "Adapter Kit for iPod and iPhone" is available. This accessory kit, available from dealers or online shops (www.zeiss.com/cinemizer/shops), contains an adapter and a base plate with 3 retaining pads; these pads are placed one on top of the other on the base plate depending on the thickness of the iPod or iPhone model used. The **cinemizer**^{OLED} multimedia video glasses support all iPod and iPhone models capable of video playback.

The **cinemizer**^{OLED} multimedia video glasses support the "composite" and "component" video signals supplied by iPod and iPhone models. Depending on which video signal (576i, 480i, 576p, 480p) your iPod or iPhone supplies, the iPod/iPhone automatically communicates with the **cinemizer**^{OLED} video glasses to provide the best image quality.

Retaining pad(s)

iPod/iPhone base plate
Battery box
iPod/iPhone adapter
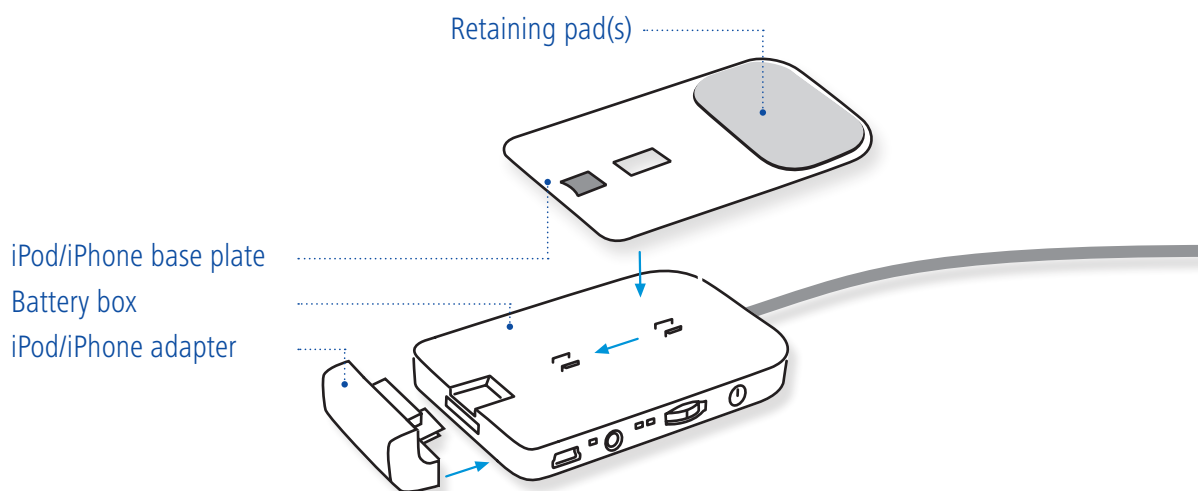
Should the retention properties of the retaining pads become less effective, you should wash off particles of dirt from the retaining pads using a little soap and water. Please do not use brushes as these could damage the surface of the nano pads.

Connection of smartphones and tablets via MHL and Lightning

New iPod, iPhone and iPad models with the Lighting connector are not mechanically compatible with the cinemizer adapter kit for iPod and iPhone. Smartphones and tablets with, e.g., the Android or iOS operating system transmit the contents of the display digitally via an HDMI interface to the exterior.

These new Apple models profit from digital video transmission and can be connected to the **cinemizer** ^{OLED} via HDMI using the Apple „Lightning Digital AV Adapter". Other manufacturers of smartphones or tablets (e.g. Samsung, Motorola etc.) sell so-called MHL adapters that in turn permit connection to the **cinemizer** ^{OLED} via HDMI. Exceptional image quality is achieved by the digital image transmission. Normally the complete contents of the display are also transmitted digitally to the **cinemizer** ^{OLED} multimedia glasses, a feature that makes possible mobile video and also mobile gaming with breath-taking image quality.

Lightning or MHL to HDMI adapter cable
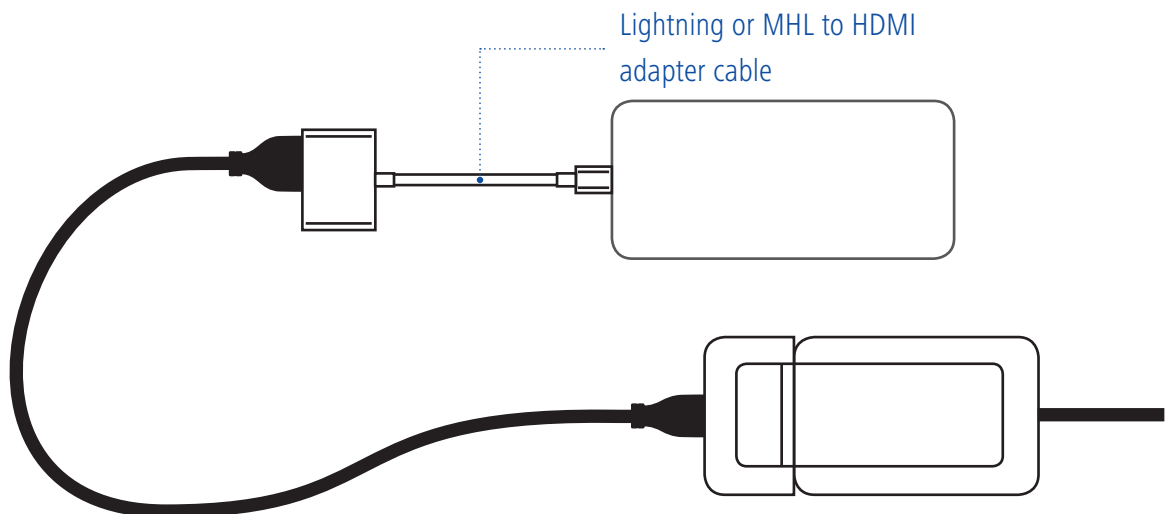
Other playback devices via cinch video cable

All playback devices that output a "video composite" signal via the familiar yellow cinch jack can be connected (e.g. DVD players, mobile phones, smartphones, games consoles, multimedia hard disks, camcorders, digital reflect cameras, etc.) using the 3.5 mm AV-In jack integrated into the **cinemizer** OLED battery box.
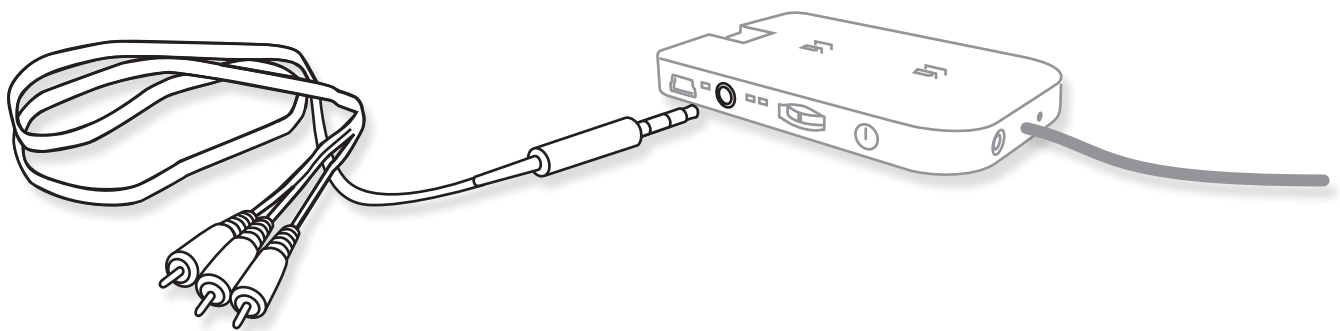
A video cable is required for this connection; this cable in included in the package and is available from dealers or online shops (www.zeiss.com/cinemizer/shops).

! Please note that the iPod/iPhone or HDMI adapter must be removed on playback via the AV-In jack!

On purchasing a video cable, it is **IMPERATIVE** you pay attention to the correct PIN assignment.

Pin 1 = GND/Common
Pin 2 = Video
Pin 3 = Audio right
Pin 4 = Audio left
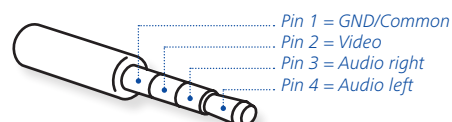
Travel case

To protect the **cinemizer** OLED multimedia video glasses during transport, you can place them in the travel case supplied.

Prior to placing the **cinemizer** OLED multimedia video glasses in the travel case, you should remove the ear clips and place them loose in the travel case. In this way the ear clips are not subjected to mechanical forces that may irreparably damage them.

Please proceed as follows:
1) First pull the ear clips off the two arms.
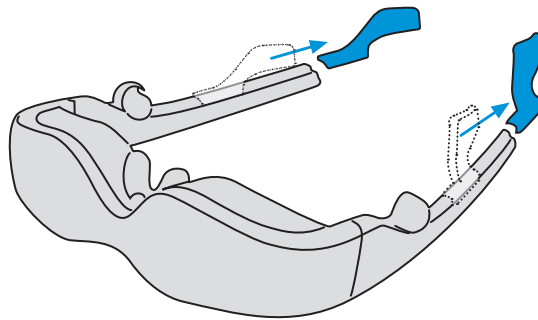
2) Place the glasses with the arms folded in the travel case.
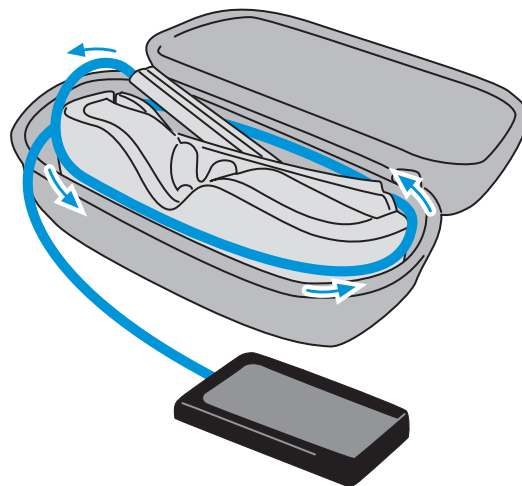
3) Wind the cable around the glasses.

4) Place the black battery box with the adapter connected adapter and the ear clips removed previously on the **cinemizer** OLED and close the travel case.
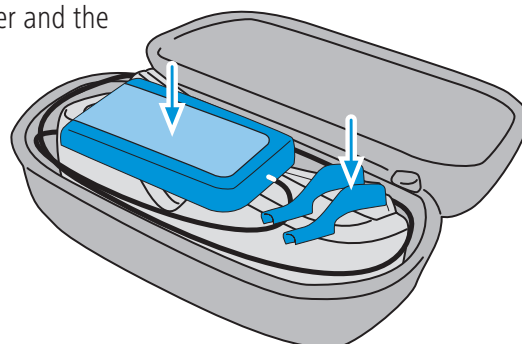
4. Additional functions

3D support

The **cinemizer** ^{OLED} multimedia video glasses support real 3D. This feature is also termed stereo 3D or stereoscopic 3D.

A stereoscopic 3D video or image always contains 2 images:

1. The perspective from the point of view of the left eye and
2. The perspective from the point of view of the right eye.

Left retinal image
of left half of the stereo image

Right retinal image
of right half of the stereo image
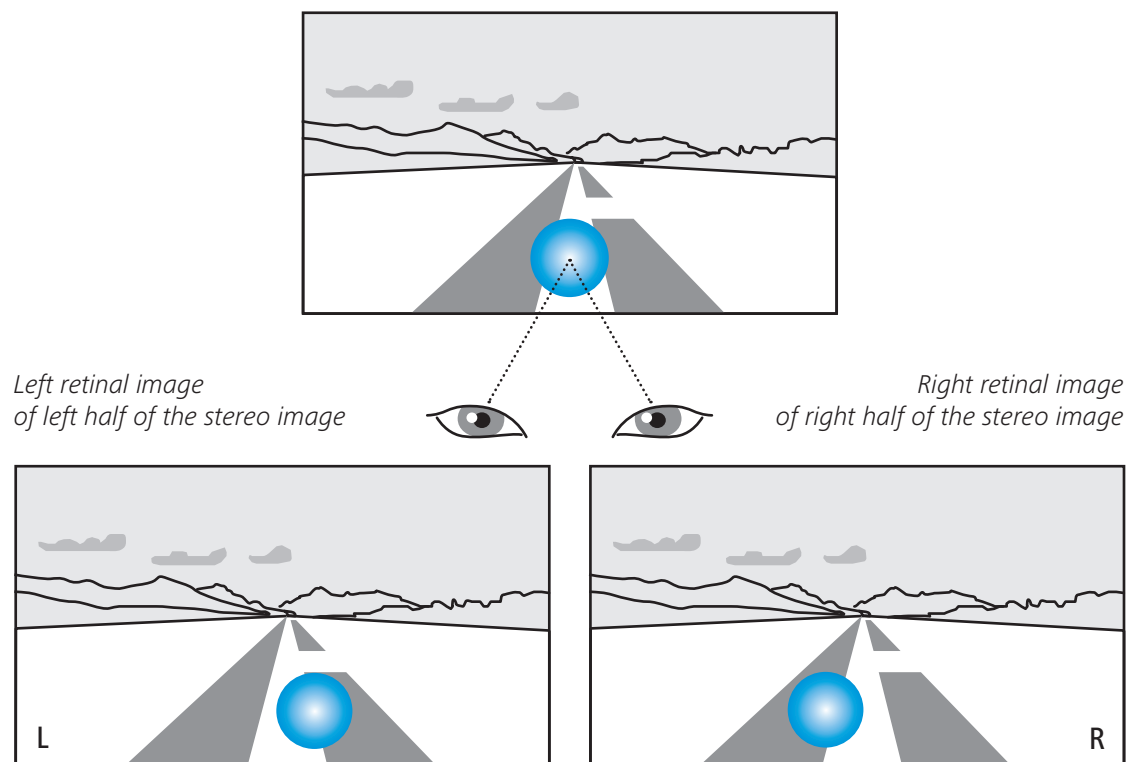
On supply with 3D content with the 3D mode activated, the **cinemizer** ^{OLED} displays the related image for the left and right eye. I.e. the images are separated as appropriate from the content played back and adapted for the left and right display.

After powering on the 2D video mode is set by default. You can change between the 2D and 3D video mode by pressing the multifunction switch for approx. 3 seconds.
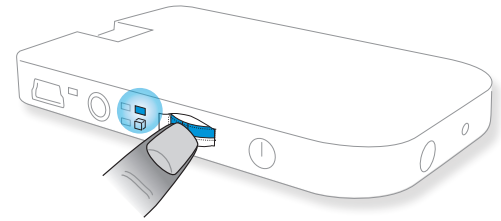
The 3D mode is signalled by the blue mode LED.

2D mode

3D mode
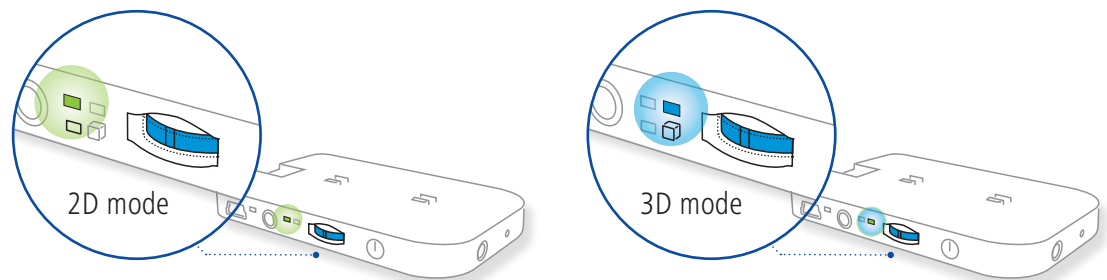
If a device is connected via the HDMI® interface and this playback device **is able to provide** 3D via HDMI® 1.4 (frame packing), it is not possible to switch manually between 2D and 3D in the **cinemizer** OLED glasses. In this case the playback device takes over the signalling of 2D or 3D content and the **cinemizer** OLED switches over automatically. You must set whether you want 2D or 3D on the playback device, e.g. Blu-ray player, PS3 etc.
After switching over to the 3D mode, the 3D mode LED (⬠) illuminates and the 2D mode LED (▭) goes out.
The following table shows the type of playback that supports 3D formats and the recommended formats.

| Connection	Video source	Resolution	Video mode	3D format			
				Side-by-side	Top/bottom	Line interleave	HDMI® 1.4
External AV In	3.5 mm	720 x 576i	PAL composite	✓	-	-	-
		720 x 480i	NTSC composite	✓	-	-	-
iPod/iPhone adapter	iPhone (1G)	720 x 576i 720 x 480i	Component interlaced 576i / 480i	✓	-	-	-
	iPod touch 1G			✓	-	-	-
	iPod 5th gen			✓	-	-	-
iPod/iPhone adapter	iPhone 3G/3Gs	720 x 576p 720 x 480p	Component progressive 576p / 480p	✓	✓	-	-
	iPhone 4			✓	✓	-	-
	iPod touch 2G/3G			✓	✓	-	-
	iPod nano 3G - 5G			✓	✓	-	-
HDMI® adapter	HDMI® playback device	480p/576p	SD	✓	✓	-	-
		1280 x 720p 50/60Hz	HD ready 720p	✓	✓	-	-
		1920 x 1080i 50/60Hz	HD 1080i interlaced	✓	-	-	-
		1920 x 1080p 50/60Hz	Full HD 1080p	-	✓	✓	-
		1920 x 1080p 24Hz	Full HD 1080p24 (cinema)	-	-	-	-
		1920 x 1440p 60Hz	HDMI® 1.4 720p frame	-	-	-	✓
		1920 x 2160 24Hz	HDMI® 1.4 1080p frame	-	-	-	✓

*Table 1 - 3D formats supported by the **cinemizer** OLED multimedia video glasses (recommended 3D formats ✓)*
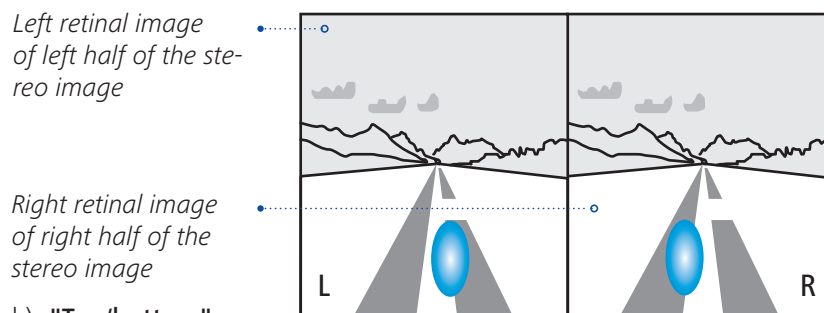
The **cinemizer** ^{OLED} video glasses save the last 3D format setting used.

You will find general information on the topic of "Stereo 3D" on the **cinemizer** ^{OLED} homepage www.zeiss.com/cinemizer/3d.

If you activate the 3D mode with a long press on the multifunction switch, please ensure specially formatted 3D content is available and you have set the correct 3D format on the OSD.
The **cinemizer** ^{OLED} multimedia video glasses do **not** convert normal films or games to 3D. The **cinemizer** ^{OLED} multimedia video glasses support, depending on the playback and resolution, the following standard 3D formats:

a) **"Side-by-side"** – also known as "Parallel" The related stereo images are reduced to 50% of the original width so that both images fit in one video frame.

Left retinal image of left half of the stereo image

Right retinal image of right half of the stereo image

b) **"Top/bottom"**
The related stereo images are reduced to 50% of the original height so that both images fit in one video frame.

Left retinal image of left half of the stereo image

Right retinal image of right half of the stereo image
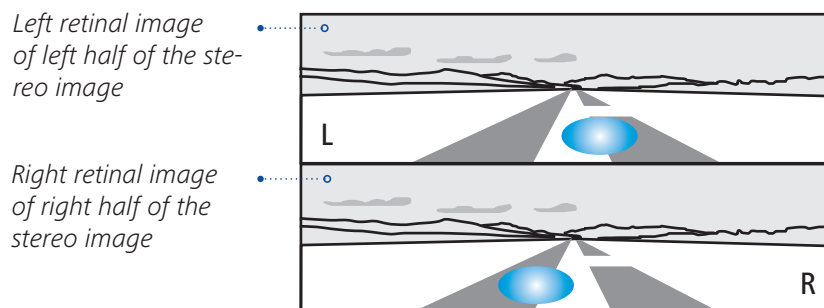
c) Line interleaved

The related stereo images are reduced to 50% of the original height so that both images fit in one video frame.

1. Line left
2. Line right
etc.
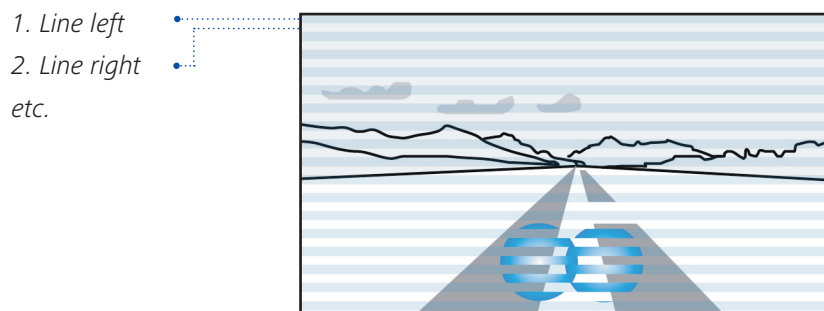
d) Frame packing

2 complete images using frame packing (HDMI® 1.4)
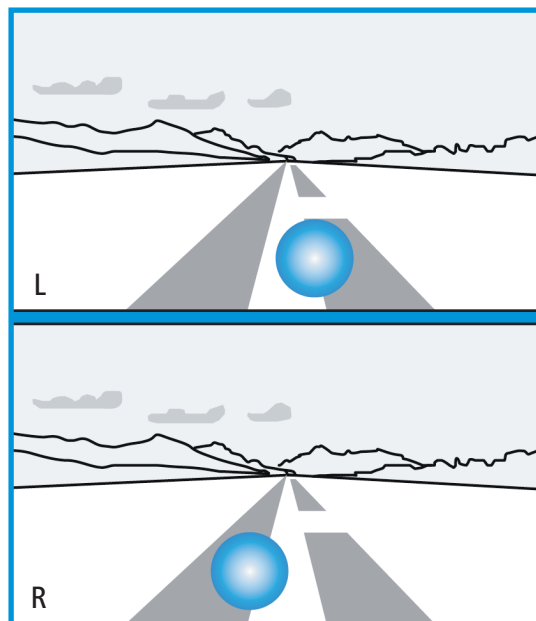
You can set the appropriate 3D format ("Side-by-side", "Top/bottom" or "Line interleaved") using the On-Screen Display (OSD). This does not apply for stereo 3D content provided via HDMI® using frame packing (HDMI® 1.4).

OSD settings

Activation of the OSD

You can change the settings for the multimedia video glasses using the integrated On-Screen Display (OSD). The on-screen display is a menu displayed in the virtual image generated by the video glasses.
You can activate the OSD by briefly pressing the multifunction switch.

VIDEO	Side-by-Side (L/R)
3D-Mode	Side-by-Side (R/L)
Aspect	Top/Bottom (L/R)
Contrast	Top/Bottom (R/L)

INFO
   Connection
   Status

◀◀◀   Back
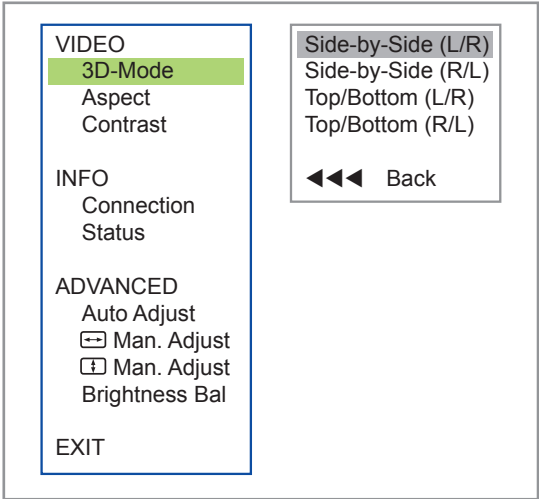
ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊞ Man. Adjust
   Brightness Bal

EXIT
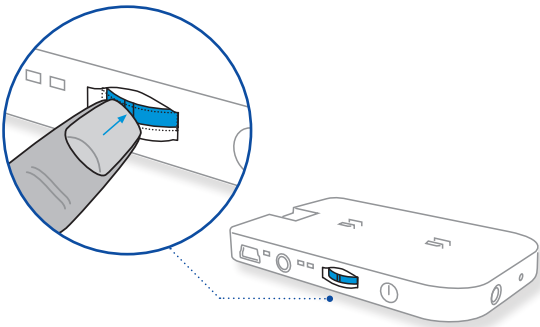
The menu page on the left contains the main menu and the menu page on the right contains the settings menu. The green bar always indicates the actual position of the cursor, which is either on the main menu or on the settings menu.

If you do not undertake any actions with the OSD activated, the OSD disappears automatically after 7 seconds.

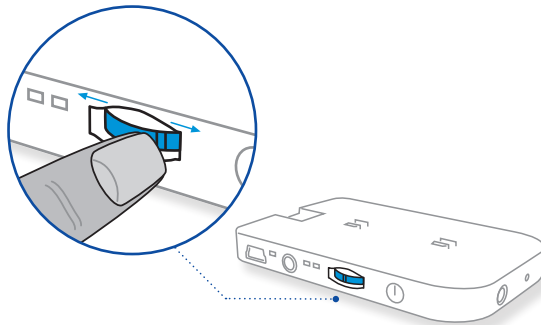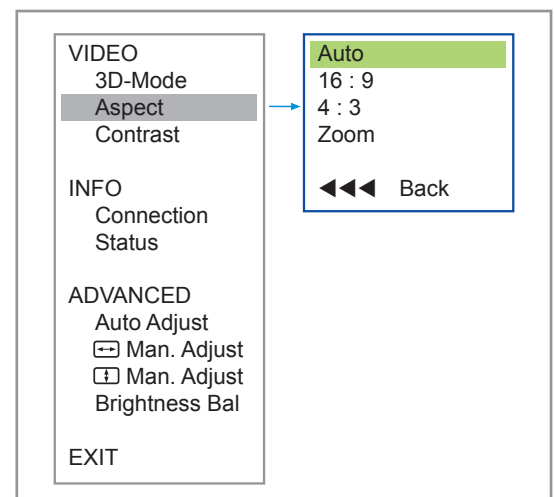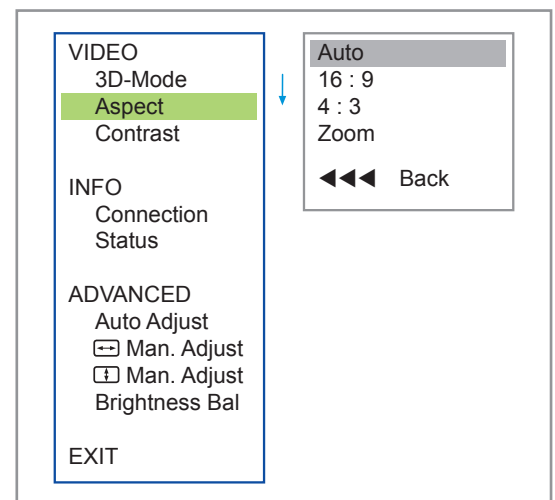## Navigation in the OSD

After activation of the OSD you can navigate up and down on the main menu by pushing the multifunction switch in the appropriate direction.

As you navigate up and down on the main menu, the current setting on the settings menu is displayed marked by a light-blue bar.
To make settings in a specific menu item, please navigate to this point on the main menu and then press the multifunction switch.
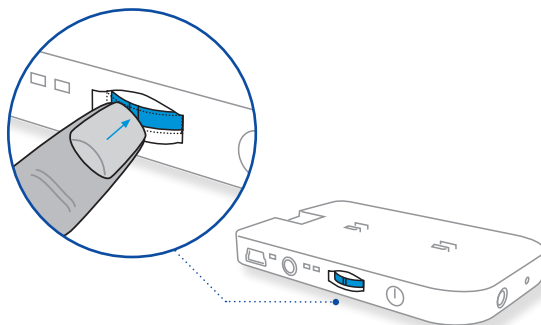
The cursor then jumps from the main menu to the settings menu. Make the necessary settings on the settings menu by pushing the multifunction switch in the appropriate direction. The setting is applied by pressing once. With the exception of the two menu items "Horizontal Man. Adjust" and "Vertical Man. Adjust", the active cursor then changes back to the main menu.

Menu panel 1:

VIDEO
3D-Mode
Aspect
Contrast

INFO
Connection
Status

ADVANCED
Auto Adjust
Man. Adjust
Man. Adjust
Brightness Bal

EXIT

Side-by-Side (L/R)
Side-by-Side (R/L)
Top/Bottom (L/R)
Top/Bottom (R/L)

◄◄◄   Back

Menu panel 2:

VIDEO
3D-Mode
Aspect
Contrast

INFO
Connection
Status

ADVANCED
Auto Adjust
Man. Adjust
Man. Adjust
Brightness Bal

EXIT

Auto
16 : 9
4 : 3
Zoom

◄◄◄   Back

Menu panel 3:

VIDEO
3D-Mode
Aspect
Contrast

INFO
Connection
Status

ADVANCED
Auto Adjust
Man. Adjust
Man. Adjust
Brightness Bal

EXIT

Auto
16 : 9
4 : 3
Zoom

◄◄◄   Back

If you do **not** want to make any changes or do **not** want to apply the changes, move the cursor to the " ◀◀◀ Back" field and confirm by pressing the multifunction switch or wait until the OSD disappears after approx. 7 seconds.

```
VIDEO                      Side-by-Side (L/R)
   3D-Mode                 Side-by-Side (R/L)
   Aspect                  Top/Bottom (L/R)
   Contrast                Top/Bottom (R/L)

INFO
   Connection              ◀◀◀   Back
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊞ Man. Adjust
   Brightness Bal

EXIT
```
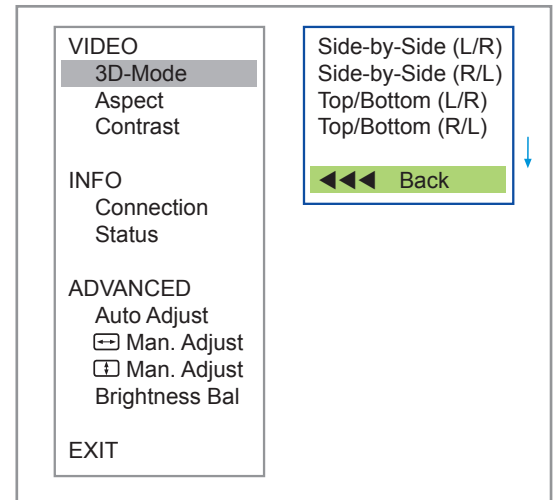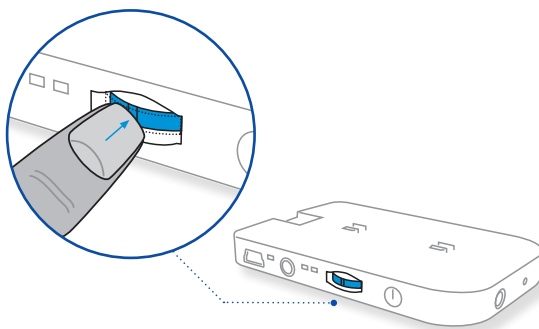
In the case of the two menu items

⊟ Man. Adjust,
⊞ Man. Adjust,

the changes must be specifically confirmed using "Store settings".

It the changes are not confirmed using "Store settings" (by pressing the multifunction switch once), the changes are not applied.

Video

3D-Mode
The supported 3D formats are displayed on the settings menu for selection as a function of the device connected and the resolution used. If a device is not yet connected, it is not possible to change to the 3D mode settings menu. In this case this main menu item is not available.

! Important: the 3D formats supported depend on the resolution used and the playback device or adapter used. An overview of the 3D format supported is given in section 4 in "3D support".

If a 3D video played back in side-by-side or top/bottom in the **cinemizer** OLED is not cleanly separated in the middle, a small amount of the image content for one eye will be seen in the other eye in the 3D mode. This problem can be corrected using the ⊟ "Horizontal Man. Adjust" function for side-by-side or ⊞ "Vertical Man. Adjust" for top/bottom.

Side-by-Side (L/R)

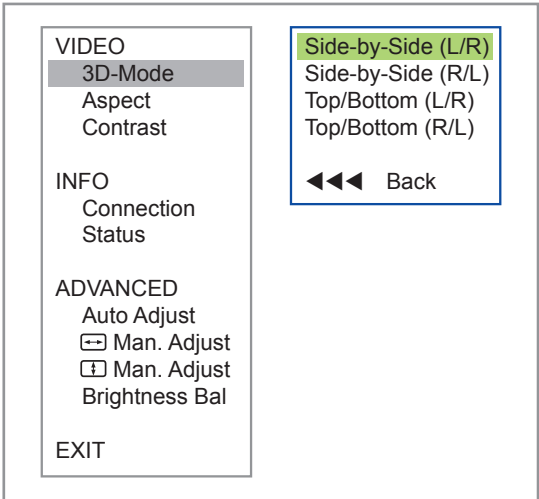The default 3D mode is set to "Side-by-Side (L/R)", as this is the most common 3D format. With this format the left sub-image displays the perspective from the point of view of the left eye and the right sub-image the perspective from the point of view of the right eye.
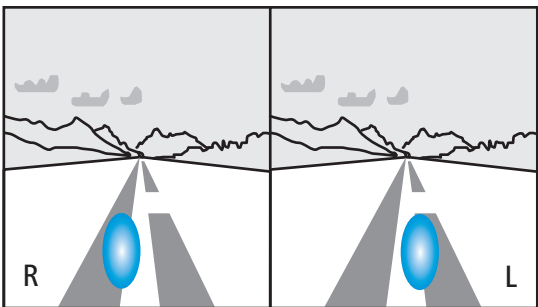

Side-by-Side (L/R)

```
VIDEO                    Side-by-Side (L/R)
   3D-Mode               Side-by-Side (R/L)
   Aspect                Top/Bottom (L/R)
   Contrast              Top/Bottom (R/L)

INFO                     ◄◄◄   Back
   Connection
   Status

ADVANCED
   Auto Adjust
   ⬌ Man. Adjust
   ⬍ Man. Adjust
   Brightness Bal

EXIT
```
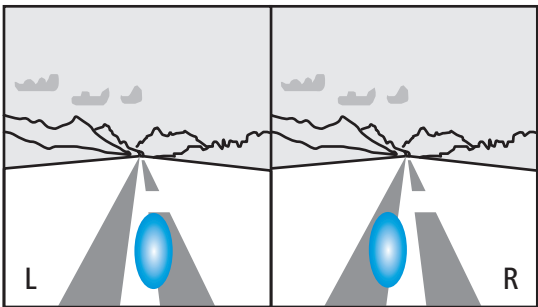
Side-by-Side (R/L)

With the format "Side-by-Side (R/L)" the perspectives are reversed compared to the previous 3D format.

Side-by-Side (R/L)

```
VIDEO                    Side-by-Side (L/R)
   3D-Mode               Side-by-Side (R/L)
   Aspect                Top/Bottom (L/R)
   Contrast              Top/Bottom (R/L)

INFO                     ◄◄◄   Back
   Connection
   Status

ADVANCED
   Auto Adjust
   ⬌ Man. Adjust
   ⬍ Man. Adjust
   Brightness Bal

EXIT
```
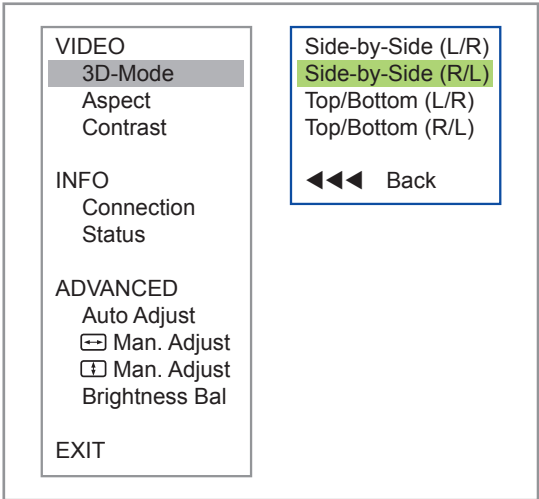
With both side-by-side variants (L/R and R/L) the related stereo images are reduced to 50% of the original width so that both images fit in one video frame.

An overview of the resolutions that support the 3D format side-by-side is given in the section "3D support".

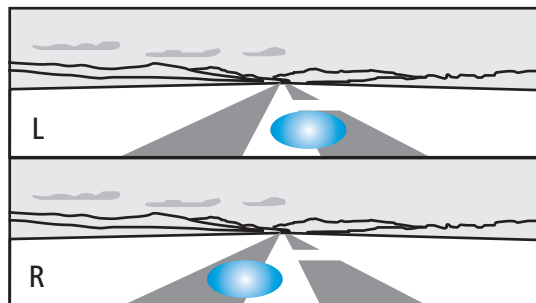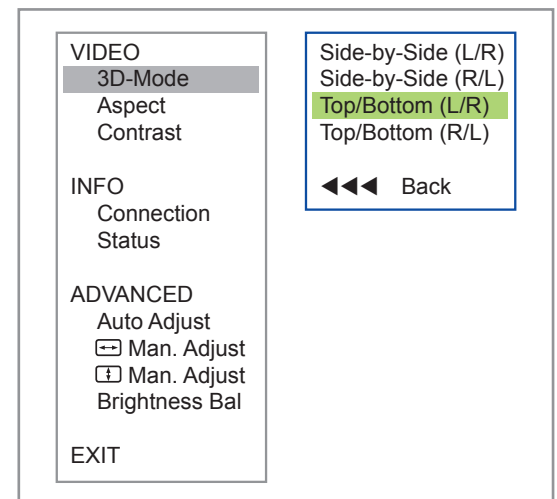## Top/Bottom (L/R)

Another 3D format supported is the so-called "top/bottom" 3D format. With this format the perspectives (left/right) are arranged one above the other.

Top/Bottom (L/R)

Top/Bottom (R/L)

If the perspectives (left/right) of your 3D film or 3D game are arranged such that "top" forms the right perspective and "bottom" forms the left perspective, then please select the mode "Top/Bottom (R/L)".
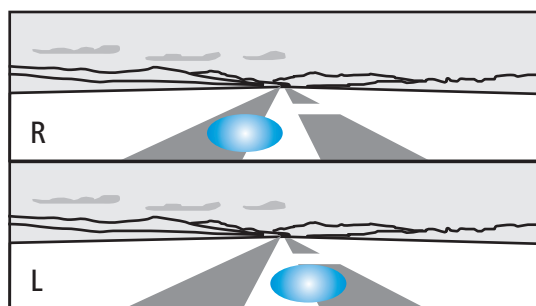
Top/Bottom (R/L)
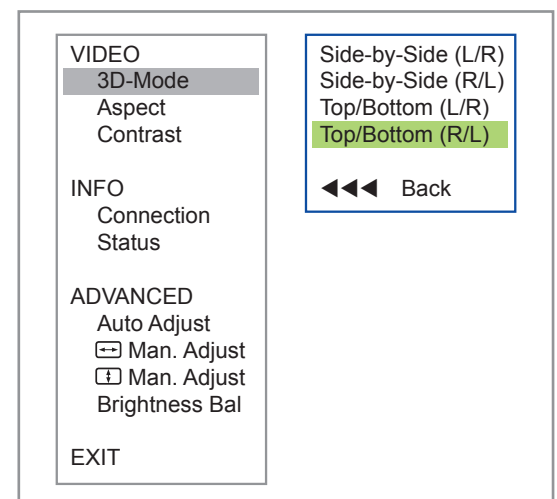
With both top/bottom variants (L/R and R/L) the related stereo images are reduced to 50% of the original height so that both images fit in one video frame.

An overview of the resolutions that support the 3D format top/bottom is given in the section "3D support".

Line interleaved

On the provision of "line interleaved" 3D con-
tent, the left and right perspectives are nested
alternately in each other. I.e. a line with the left
perspective is followed with a line for the right
perspective etc.

Line interleaved (L/R)

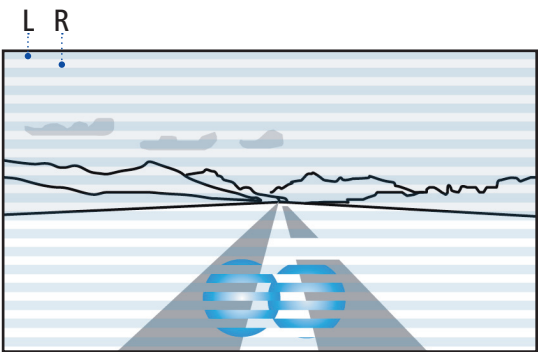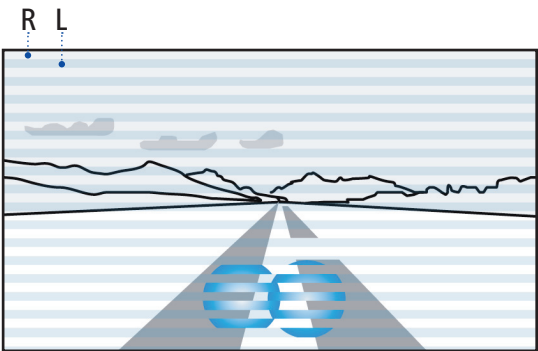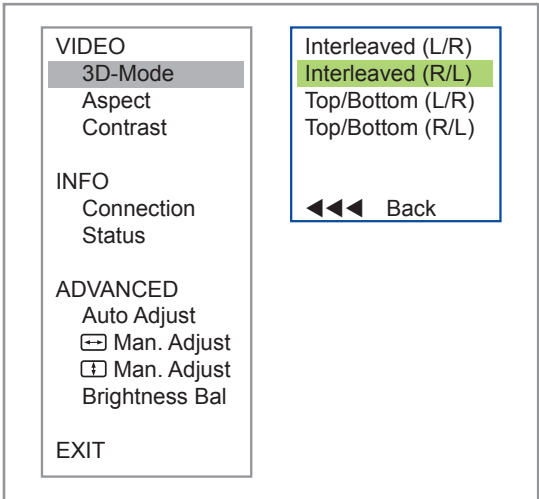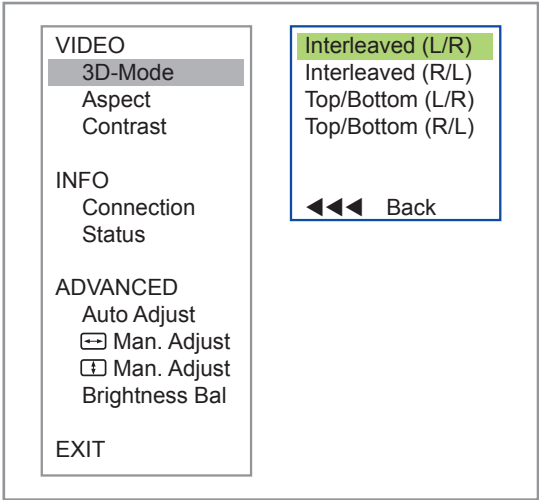| VIDEO		Interleaved (L/R)
3D-Mode		Interleaved (R/L)
Aspect		Top/Bottom (L/R)
Contrast		Top/Bottom (R/L)
INFO		
Connection		◀◀◀ Back
Status		
ADVANCED		
Auto Adjust		
⬌ Man. Adjust		
⬍ Man. Adjust		
Brightness Bal		
EXIT		

If the left and right perspectives are reversed,
you can select the format "Interleaved (R/L)"
on the settings menu. In this case it is expected
that a line for the right image is provided first
followed by a line for the left image etc.

Line interleaved (R/L)

| VIDEO		Interleaved (L/R)
3D-Mode		Interleaved (R/L)
Aspect		Top/Bottom (L/R)
Contrast		Top/Bottom (R/L)
INFO		
Connection		◀◀◀ Back
Status		
ADVANCED		
Auto Adjust		
⬌ Man. Adjust		
⬍ Man. Adjust		
Brightness Bal		
EXIT		

With both line interleaved variants (L/R and R/L) the related stereo images are reduced to 50% of
the original height so that both images fit in one video frame.
An overview of the resolutions that support the 3D format line interleaved is given in the section
"3D support".

HDMI® 1.4 - frame packing

In the case of HDMI® 1.4, unlike the previous 3D formats (side-by-side, top/bottom and line interleaved) 2 complete images are transmitted in the so-called "frame packing format". This is only possible using the standard HDMI® 1.4. If a film or game in 3D is provided via HDMI® 1.4, the 3D mode in the **cinemizer** ^{OLED} video glasses is activated automatically. It is not possible or necessary to switch to the 3D mode, as the playback device signals whether the content is in 2D or 3D format. It is therefore not necessary to make any changes on the menu item "3D-Mode". In this case the settings menu is not available.
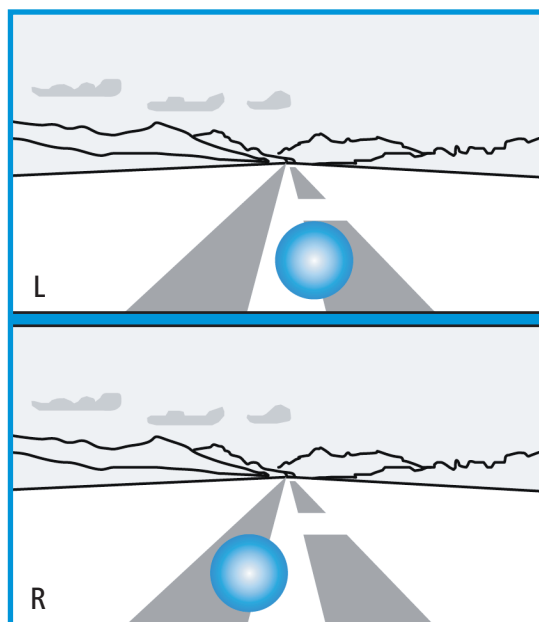
2 complete images using frame packing
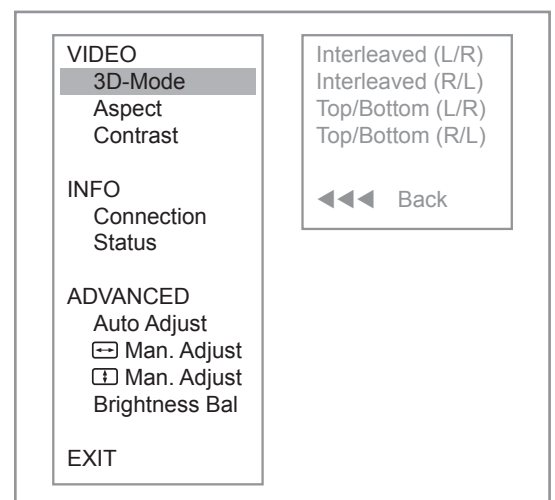
Aspect

16 : 9

4 : 3

The aspect ratio defines the ratio between the lengths of the sides of the image for films or games. Using the "Aspect" menu you can set the aspect ratio for the image displayed. This setting is available for iPod and iPhone and in the case of playback via the AV video cable. But not in the case of HDMI®. The default setting is "Auto" and stands for automatic detection and setting. Normally signals are provided by the playback device that make it possible to identify the image aspect ratio for the film or game played. If this signal is not available, you can set manually the aspect ratio you prefer (16:9/4:3).

Auto

The **cinemizer** ᴼᴸᴱᴰ detects the aspect ratio signal defined by the playback device and adjust the aspect ratio correspondingly. If this aspect ratio signal is not available, the "4:3" aspect ratio is set automatically.

```
VIDEO                    Auto
   3D-Mode               16 : 9
   Aspect                4 : 3
   Contrast              Zoom

INFO                     ◄◄◄   Back
   Connection
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊡ Man. Adjust
   Brightness Bal

EXIT
```

16:9

With this setting you can change the aspect ratio to the wide screen format 16:9.

```
VIDEO                    Auto
   3D-Mode               16 : 9
   Aspect                4 : 3
   Contrast              Zoom

                         ◄◄◄   Back
```
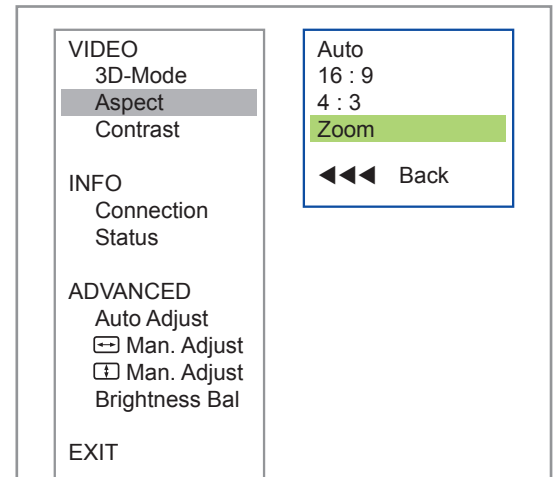
4:3

With this setting you can change the aspect ratio to 4:3.

```
VIDEO                    Auto
   3D-Mode               16 : 9
   Aspect                4 : 3
   Contrast              Zoom

                         ◄◄◄   Back
```

Zoom

This setting enlarges the image horizontally and vertically. This setting is useful if you have Blu-ray films in the 21:9 format and as a result there are black bars at the top and bottom. This option can be switched on to see a full screen image. This setting is only possible with 1080p/24Hz.
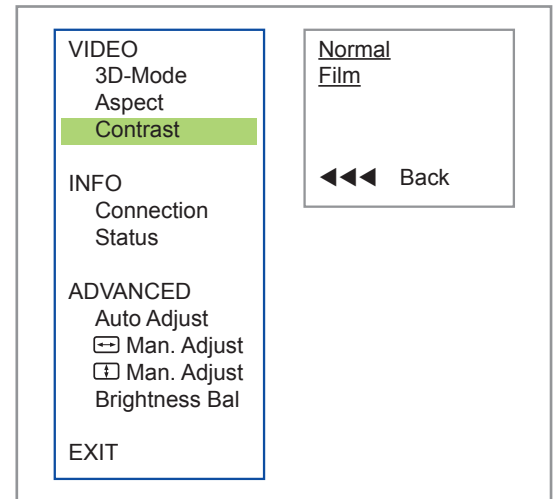
```
VIDEO                        Auto
    3D-Mode                  16 : 9
    Aspect                   4 : 3
    Contrast                 Zoom

INFO                         ◄◄◄   Back
    Connection
    Status

ADVANCED
    Auto Adjust
    ⬌ Man. Adjust
    ⬍ Man. Adjust
    Brightness Bal

EXIT
```

⚠ The aspect ratio can also be set on the majority of playback devices. Please read the related section in the manual for your playback device.
If you are using an iPod and change the aspect ratio with the device connected and in operation, it is imperative you ensure the film or video is re-started, as a change in the aspect ratio during playback will not be detected by the iPod.

Contrast

The default setting is "Normal" and should provide the best image quality for the majority of applications.
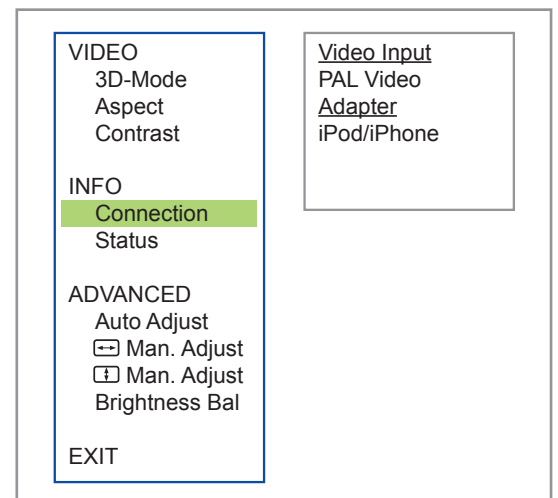
In some films with very dark scenes, the setting "Film" should be selected to obtain better contrast in dark scenes.

```
VIDEO                          Normal
   3D-Mode                     Film
   Aspect
   Contrast
                               ◀◀◀   Back
INFO
   Connection
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊡ Man. Adjust
   Brightness Bal

EXIT
```
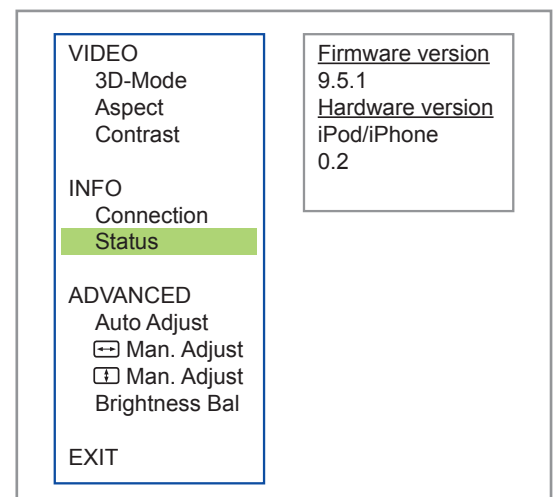
Info

The two menu items **Connection** and **Status** contain general system parameters. Settings cannot be made here.

If you select **Connection**, you will see information on which signal is being played back over which interface to the **cinemizer** ᴼᴸᴱᴰ.

```
VIDEO                          Video Input
   3D-Mode                     PAL Video
   Aspect                      Adapter
   Contrast                    iPod/iPhone

INFO
   Connection
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊡ Man. Adjust
   Brightness Bal

EXIT
```

With the menu item **Status** selected you can see the system hardware and software version.

```
VIDEO                          Firmware version
   3D-Mode                     9.5.1
   Aspect                      Hardware version
   Contrast                    iPod/iPhone
                               0.2
INFO
   Connection
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊡ Man. Adjust
   Brightness Bal

EXIT
```
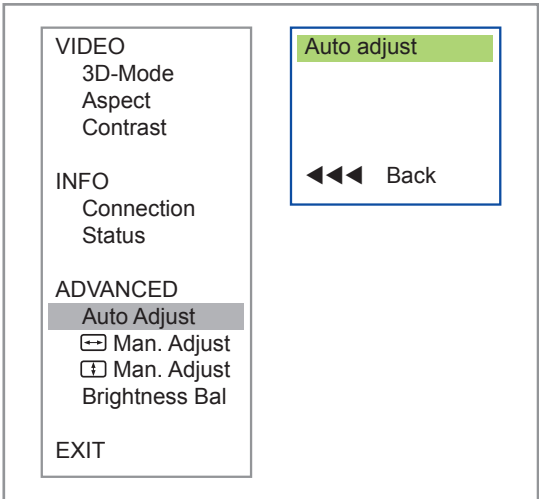
Advanced

The settings on the "Advanced" menu normally only need to be changed or modified in exceptional cases.

Auto Adjust
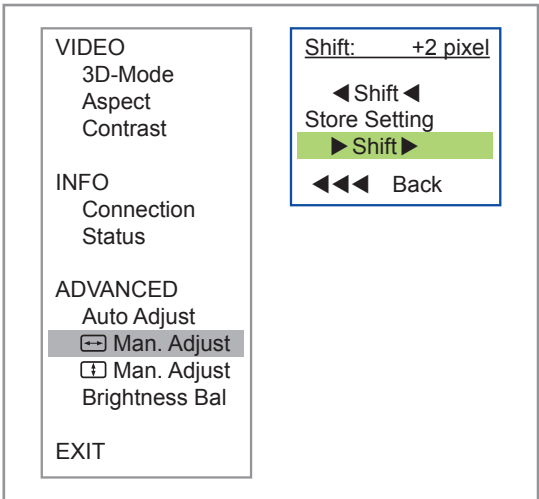
By activating the "Automatic Adjust" function the **cinemizer**^{OLED} is prompted to scan the input signal and adjust the image if necessary.
This function is only supported in case of HDMI® playback.

```
┌──────────────────────┬──────────────────┐
│ VIDEO                │ Auto adjust      │
│    3D-Mode           │                  │
│    Aspect            │                  │
│    Contrast          │                  │
│                      │                  │
│ INFO                 │ ◀◀◀   Back       │
│    Connection        │                  │
│    Status            │                  │
│                      │                  │
│ ADVANCED             │                  │
│    Auto Adjust       │                  │
│    ⬌ Man. Adjust     │                  │
│    ⊡ Man. Adjust     │                  │
│    Brightness Bal    │                  │
│                      │                  │
│ EXIT                 │                  │
└──────────────────────┴──────────────────┘
```

⬌ Man. Adjust

If the separation of the left and right image is not exactly in the middle of the original video you can move the image horizontally using the manual adjustment function. This function is particularly useful in case of 3D playback in the format side-by-side. Select and confirm the "◀Shift◀" element to move the image to the left. Each time the function is confirmed the image moves one pixel to the left. Similarly with "▶Shift▶" the image moves one pixel to the right. The absolute shift is displayed in the line at the top, e.g. "Shift: +2pixel" and is visible in the background at the same time.
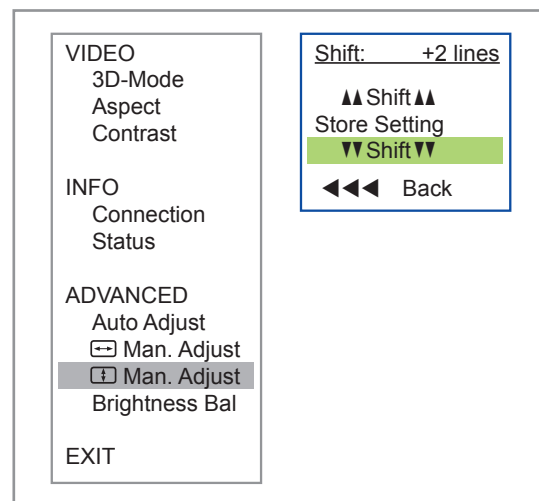After changing the image position, it is **imperative** you confirm this change. For this purpose click the "Store Setting" field, the active cursor leaves the settings menu and changes to the main menu.

```
┌──────────────────────┬──────────────────┐
│ VIDEO                │ Shift:   +2 pixel│
│    3D-Mode           │                  │
│    Aspect            │    ◀ Shift ◀     │
│    Contrast          │ Store Setting    │
│                      │    ▶ Shift ▶     │
│ INFO                 │ ◀◀◀   Back       │
│    Connection        │                  │
│    Status            │                  │
│                      │                  │
│ ADVANCED             │                  │
│    Auto Adjust       │                  │
│    ⬌ Man. Adjust     │                  │
│    ⊡ Man. Adjust     │                  │
│    Brightness Bal    │                  │
│                      │                  │
│ EXIT                 │                  │
└──────────────────────┴──────────────────┘
```

If you make changes, but do not explicitly confirm this change using "Store Setting", the changes are not applied when you leave the settings menu using "◀◀◀ Back" or if do not undertake any action for 7 seconds and as a result the OSD disappears automatically.
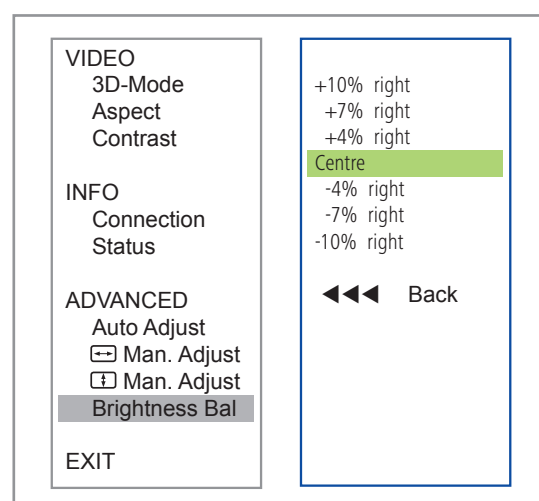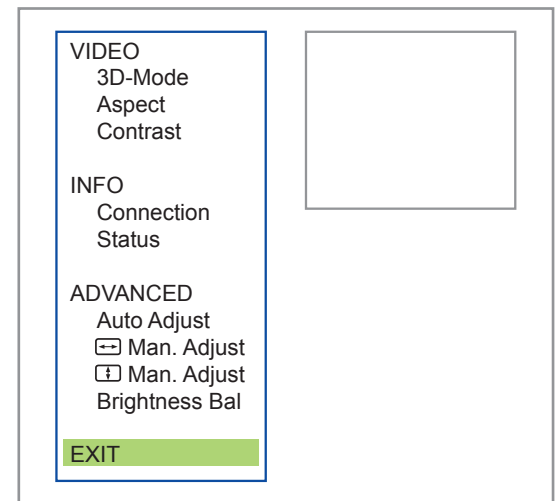
⬍ Man. Adjust

You can change the vertical position of the image using the function for the manual vertical adjustment. Select and confirm the "▲▲ Shift ▲▲" element to move the image upward. Each time the function is confirmed the image moves up one pixel. Similarly with each click on "▼▼ Shift ▼▼" the image moves down one pixel. The absolute shift is displayed in the line at the top, e.g. "Shift: +2 lines" and is visible in the background at the same time. After changing the image height, it is **imperative** you confirm this change. For this purpose click the "Store Setting" field, the active cursor leaves the settings menu and changes to the main menu.

```
VIDEO                      Shift:       +2 lines
   3D-Mode
   Aspect                      ▲▲ Shift ▲▲
   Contrast                  Store Setting
                               ▼▼ Shift ▼▼
INFO
   Connection              ◀◀◀   Back
   Status

ADVANCED
   Auto Adjust
   ⬌ Man. Adjust
   ⬍ Man. Adjust
   Brightness Bal

EXIT
```

If you make changes, but do not explicitly confirm this change using "Store Setting", the changes are not applied when you leave the settings menu using "◀◀◀ Back" or if do not undertake any action for 7 seconds and as a result the OSD disappears automatically.

Brightness Bal

If you should perceive different brightness on the two displays, you can increase or reduce the brightness to obtain displays with brightness that is subjectively the same. The two displays are set in the factory to the same brightness. For the manual change 6 brightness levels (+4%, +7%, +10%, -4%, -7%, -10%) are defined for the right display. As soon as you navigate to one of the pre-defined brightness levels, you can see the result already in the background. If you press the multifunction switch with a brightness level selected, this level will be applied.

```
VIDEO
   3D-Mode                 +10%  right
   Aspect                   +7%  right
   Contrast                 +4%  right
                           Centre
INFO                        -4%  right
   Connection               -7%  right
   Status                  -10%  right

ADVANCED
   Auto Adjust             ◀◀◀    Back
   ⬌ Man. Adjust
   ⬍ Man. Adjust
   Brightness Bal

EXIT
```

Exit

If you want to leave the on-screen display,
please navigate to and click the "Exit" field.
If you do not undertake any further actions for
more than 7 seconds with the on-screen display
activated, the on-screen display disappears
automatically.

VIDEO
   3D-Mode
   Aspect
   Contrast

INFO
   Connection
   Status

ADVANCED
   Auto Adjust
   ⊟ Man. Adjust
   ⊡ Man. Adjust
   Brightness Bal

EXIT

5. **Accessories**

Adapter kit for iPod and iPhone (30 Pin)

The adapter kit for iPod and iPhone is available
as an accessory for the **cinemizer** ^{OLED} and can
be purchased from dealers and online shops.
A list of current dealers is available at
www.zeiss.com/cinemizer/shops.
In principle all iPod and iPhone models capa-
ble of playing back video are supported by the
adapter kit. You will find more detailed infor-
mation on this kit in the section "iPod/iPhone
connection" in this document.
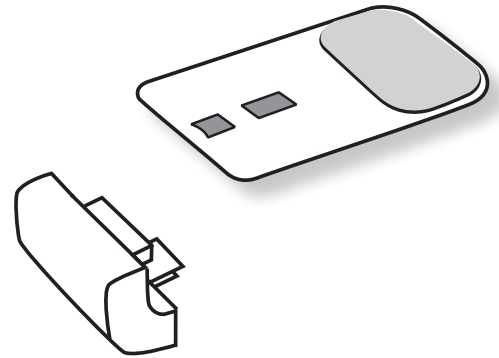
Headtracker (movement sensor)

The **cinemizer** OLED Headtracker is connected to the computer via a standard USB connector and is immediately detected as a PC mouse by all common operating systems such as Windows, Linux and OS X; it is then ready to use. As a result the Headtracker is suitable for all applications that can be controlled using a computer mouse and it is possible to look around a virtual room with natural movements of the head. The **cinemizer** OLED Headtracker features very fast reaction times and very little latency.

The **cinemizer** OLED Headtracker is therefore particularly suitable for playing immersive games.
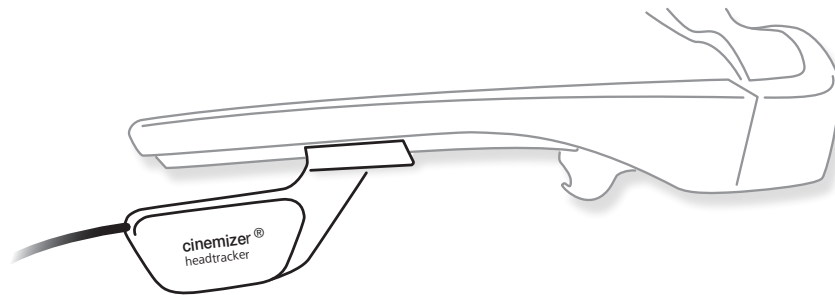
The **cinemizer** OLED Headtracker is attached to the right arm of the video glasses and head movements are then detected by diverse sensors. Connect the Headtracker to a computer via USB and then do not move it for approx. 10 seconds. During this time the Headtracker undertakes a self-calibration.

The speed of the Headtracker can be set using an additional program (tray icon).
The software is available at
www.zeiss.com/cinemizer/software.

A getting started guide is available for download at www.zeiss.com/cinemizer/documents.
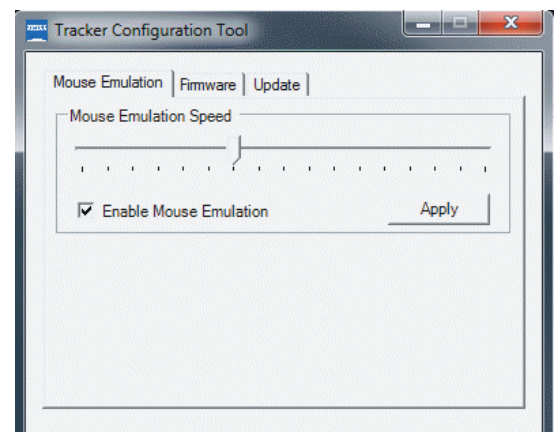
For professional applications an SDK is avai-
lable for direct access to the sensor data (raw
data and quaternions) from the USB HID.
In this way the sensor data from the 3rd rotati-
on axis and absolute viewing angle information
can also be used in applications.

3rd rotation axis
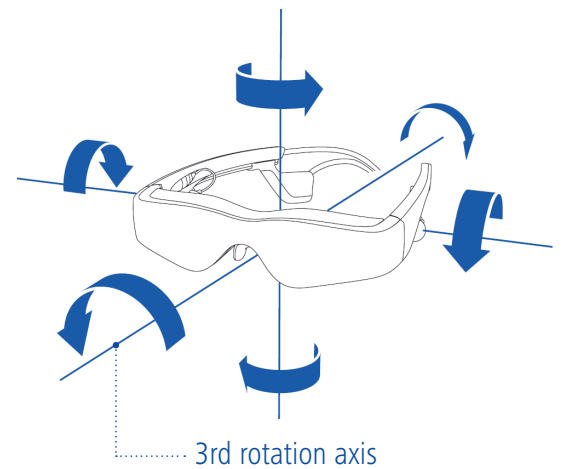
To obtain the cinemizer headtracker SDK please fill in the web formular
under www.zeiss.com/cinemizer/headtrackerSDK.

First name:

Last name:

Country:
Germany

Email:

I have already a cinemizer multimedia glasses
○ Yes   ○ No

Would you like to get the cinemizer headtracker SDK?
○ Yes   ○ No

Do you have a specific question about the headtracker? Please write it in the
text field below.

Field of application
☐ Gaming
☐ First Person View (FPV)
☐ Immersive learning (eLearning / eTraining)
☐ CAD visualization (e.g. architecure)
☐ Other

› Submit

Light shield

The Eyeshield is an accessory for the **cinemizer** OLED video glasses that shields the user from the outside world.
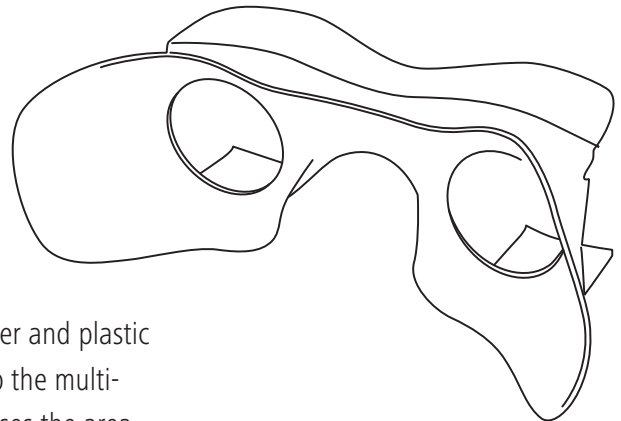
The flexible insert made of soft rubber and plastic can be straightforwardly attached to the multimedia glasses and completely encloses the area around the eyes.
If you use the **cinemizer** OLED for instance as an external viewfinder or to watch films on the move, sunlight and other sources of interference from the outside are completely excluded.
On playing games the outside world is completely shut out by the light shield and the player can intensively immerse completely in virtual worlds.

6. Further information
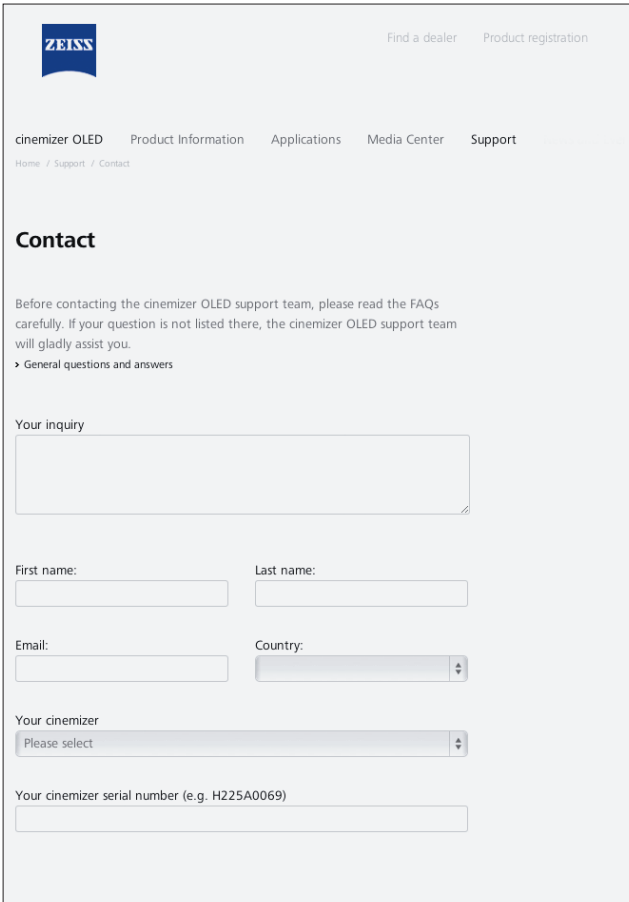
You will find comprehensive information on the multimedia video glasses on the website
www.zeiss.com/cinemizer

cinemizer ^{OLED} **support website**

You can read frequently asked questions related to the **cinemizer** ^{OLED} and their answers at
www.zeiss.com/cinemizer/faq.

Technical support

Before you contact technical support with technical questions, please make sure you have
first read through the questions on the FAQ page. Should your questions still not have been
answered, please contact technical support. For this purpose go to www.zeiss.com/cinemizer/
support and complete the related form.

7. Index

ZEISS