User manual

mezzo

Please read this user manual carefully prior to installation, use and maintenance for your own safety and in order to avoid damages on your system.

⊙ REINECKER

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Konformitätserklärung
Declaration of conformity

Wir erklären in alleiniger Verantwortung für alle unsere Systeme, dass diese mit den folgenden Normen oder normativen Dokumenten übereinstimmen.

We declare under our sole responsibility that the systems, which have been brought into the market by us, meet the requirements of the following directives.

mezzo

Richtlinie 93/42/EWG
des Rates vom 14. Juni 1993 über Medizinprodukte
Risikoklasse I nach Anhang IX Regel 12
CE Konformität nach Anhang VII
und
RoHS II (EG Richtlinie 2011/65/EU)

Council directive 93/42/EEC
of 14th June 1993 concerning medical devices
risk class I according to Annex IX standard 12
CE conformity of Annex VII
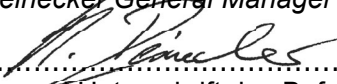*and*
RoHS II (Council directive 2011/65/EEC)

Die CE– Kennzeichnung auf dem Gerät dokumentiert diese Übereinstimmung.
The CE mark on the system points out this accordance.

M. Reinecker Geschäftsführer
M. Reinecker General Manager

Alsbach-Hähnlein,
……………………………………
16.09.2019
……………………………………
Ort und Datum der Ausstellung
Place and date of issue

……………………………………
Name und Unterschrift des Befugten
Name and signature of the authorized person

Content

I. General information

Important notes on the operation of the reading system mezzo!

Please read them carefully prior to the operation of the reading system!

Notes on the electromagnetic compatibility (EMC)

This reading system is suited for use in all set-ups including the domicile that are connected directly to a public power supply for buildings with residential purposes.

This reading system is designed for the use in the indicated electromagnetic environment. The user should ensure the use in the indicated environment.

This reading system operates on HF-Energy exclusively for its own function. Therefore the emitted interference of high frequency disturbances is very low and the interference with other appliances operated close-by is improbable. When operating the reading system simultaneously with other systems, however, the possibility of disturbances of the system or other systems should not be neglected.

For this reason it should be ensured that the system is not placed directly beside or on top of another system. If the set-up of this system in the proximity of medical, measuring devices cannot be avoided, the operator of these devices has to be informed that it is necessary to observe the performance of the system to control the conventional use of the system in the chosen set-up.

Electronic devices are sensitive towards electric discharge and towards high frequency electromagnetic fields.

Attention:
In order to avoid high frequency disturbances the operator should respect a minimum distance of one meter to portable and mobile HF-telecommunication devices. Please also see chapter: Safety advice.

Storage of the user manual

The user manual is an essential part of your reading system. Please keep the booklet in a safe place for future reference.

Product description

mezzo is a compact desktop video magnifier system, which magnifies text and pictures. It may be used permanently for private and professional appliance. The text or pictures are being captured by the integrated camera and then displayed on the monitor.

- mezzo convinces through razor-sharp picture quality in high resolution and through its user friendliness.
- FullHD camera magnifies text and pictures in the best picture quality, a minimum of picture noise and a highreduction of reflections when reading glossy papers or looking at glossy surfaces.
- The high resolution LED flat srceen is available in different monitor sizes. They are mostly infinitely variable and can be adjusted ergonomically, thanks to their spring compensation.
- Due to its compact design and folding mechanism, mezzo can be easily installed and transported.

- mezzo is available with firmly integraded battery as power only system.
- In combination with one of the optionally available XY-tables the user may increase the comfort of the use.

Medical device

This reading system is classified as a medical device, class I according to 93/42/EEC, Annexe IX, standard 12. For the distribution to countries outside the EU the respective country-specific guidelines have to be regarded.

Purpose

This opto-electronic reading system is a medical device to assist with the reading and magnifying of printed text and pictures. Visually impaired people can compensate for their loss of visual acuity by using this device.

Evolution and lifetime of products

The Medical Device Directive regulates by law that manufacturers of medical devices shall determine a period of safety operation of a product. We fulfill hereby legal requirements and determine - for formal reasons - a period of three years after date of first purchase.

Note:
The mentioned life span does not reflect the complete life span of the mezzo.
It is rather an indication on when the product might be obsolete and substitution might be recommended due to new product developments.

Safety advice

mezzo has to be installed in closed and dry rooms only. Do not plug mezzo into an electrical circuit that is also being used for any life sustaining or support systems.

The device may not be used in the patients environment.

This device should not be operated in explosion-endangered environments. This opto-electronic device should only be installed in conjunction with modern electrical circuitry.

Combination with other medical products

Warning: This reading system must not be located directly besides, next or on top of another medical life sustaining device. If the device is used near another electrical device, monitor the other device to ensure that it is working properly. In case of doubt please contact Reinecker Vision GmbH or any licensed distribution partner.

Precautions by alteration of the performance of the system

Stop using the reading device if technical features or performances should change. Switch the device OFF and disconnect the power supply from the mains wall socket. Refer directly to your authorized dealer or to Reinecker Vision GmbH Service Center.

Do not use the system again in this condition.

Reinstatement/installation and maintenance

This device may be technically maintained and reconditioned by Reinecker Vision GmbH only or by an authorized technician. Reinstatement may only take place after the system has been cleaned and safety checked.

Cleaning of the system

- mezzo has to be disconnected from the power supply before cleaning.
- Clean the system with a slightly damp cloth and a mild household detergent.
- Interior of device must NOT come in contact with liquids.

Special advice for transport and storage

For reasons of safety, the unit must only be transported and stored in the original packing. The unit must be stored in dry and closed rooms in the original packing.

The following conditions for transport and storage have to be respected:

- Air pressure 700 - 1000 hPa
- Temperature range +5°C to + 50°C
- Relative air humidity 30% to 80%

Disposal of the unit according to EU directive 2002/96/EEC

mezzo contains of electronic components. To avoid damage to the environment, the country-specific rules have to be respected.
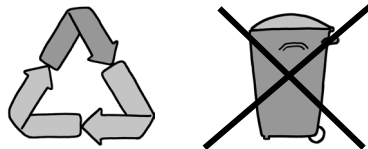
Power supply

Only use the original power supply and cables which are included in the delivery by Reinecker Vision GmbH.

Caution: The use of any other equipment might lead to an increased electromagnetic emission and to a product damage.

Safety of batteries

For safety reasons, the manufacturer recommends changing the battery after two years. If the battery has not been changed after this period of time, the manufacturer accepts no responsibility and excludes any recourse.

Safety instructions to avoid damage

Please respect the following instructions for your own safety:

1. Do not plug the AC adapter into a faulty electrical outlet. Doing so may cause electrical shock or fire.

2. Do not touch the AC adapter with wet hands.

3. Only use the original power supply and cables which are included in the delivery by Reinecker Vision GmbH. The use of any other equipment might lead to a product damage.

4. For mezzos with battery operation only: Only use the original battery, which is included in the delivery by Reinecker Vision GmbH. The use of any other equipment might lead to a product damage.

5. Do not expose the system to direct sunlight or to very hot or cold environment, as this would harm the picture quality.

6. Do not operate this device below +5°C or above +40°C.

7. No liquids must reach the interior of the system. Only operate the device in a dry environment.

8. The device may not be operated next to medical devices (patients environment).

9. Do not lean on the screen, touch the screen with any object or lay heavy objects on the device. This may cause damage to the device.

10. Do not try to repair or to dismantle the system by your own. This would automatically void the warranty. If you need any technical assistance please get in contact with the local distributor or with Reinecker Vision GmbH.

11. Always switch OFF the system and disconnect it from the power supply before cleaning it. Only use a soft and slightly damped cloth. Only use a mild household detergent. Do not use alcohol containing or strong detergents.

II. Instructions for the reading system mezzo

Delivery content
- Reading system mezzo
- Power adapter 12V DC / 5000mA
- Adapter cable (country-specific)
- User manual / Service information

Overview of all available mezzo models
- mezzo Focus with 16"- class monitor, mains operation   **MEZFO162**
- mezzo Focus with 20"- class monitor, mains operation   **MEZFO200**
- mezzo Vario with 20"- class monitor, mains operation   **MEZVA200**

- mezzo Focus 20″ mains operation, incl. XY-table   **MEZF20X1**
- mezzo Focus 24″ mains operation, incl. XY-table   **MEZF24X1**
- mezzo Vario 24″ mains operation, incl. XY-table   **MEZV24X1**

- mezzo Vario with 16"- class monitor, battery/mains operation   **MEZVAB62**

Available options
- XY-table with friction brake   **ZBXTFIX0**
- XY-table mobile   **ZBMEZZXT**
- Carrying bag for mezzo 16″   **ZBMEZZTA**
- Carrying bag for mezzo 20″ incl. XY-table   **MEZVARTA**

The mezzo cameras

mezzo is available in combination with the following camera types:

Vario camera: FullHD camera with optical zoom/auto-focus
- Magnification from approx. 1x to 127x (dependent on monitor size)
- (LVHD) - Technology: high quality pictures with virtually no picture noise
- (NELE) - Technology: reduces shadows while hand writing and reflections while reading from shiny surfaces

Focus camera: FullHD camera with digital zoom/auto-focus
- Magnification from approx. 2,1x to 45x (dependent on monitor size)
- (LVHD) - Technology: high quality pictures with virtually no picture noise

Installation of the system

Unpack your mezzo carefully and place it on a solid horizontal surface. If you have not purchased an optionally available stand that fits to the product you must provide a solid surface for the system with sufficient surface area.

Set up your mezzo as described below:
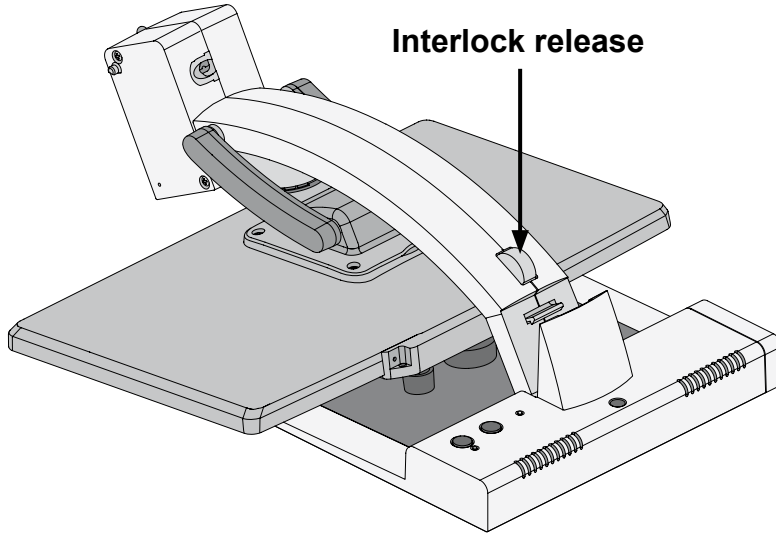
Interlock release

- Folded mezzo for transport.

AC input

Operation buttons located on the base plate
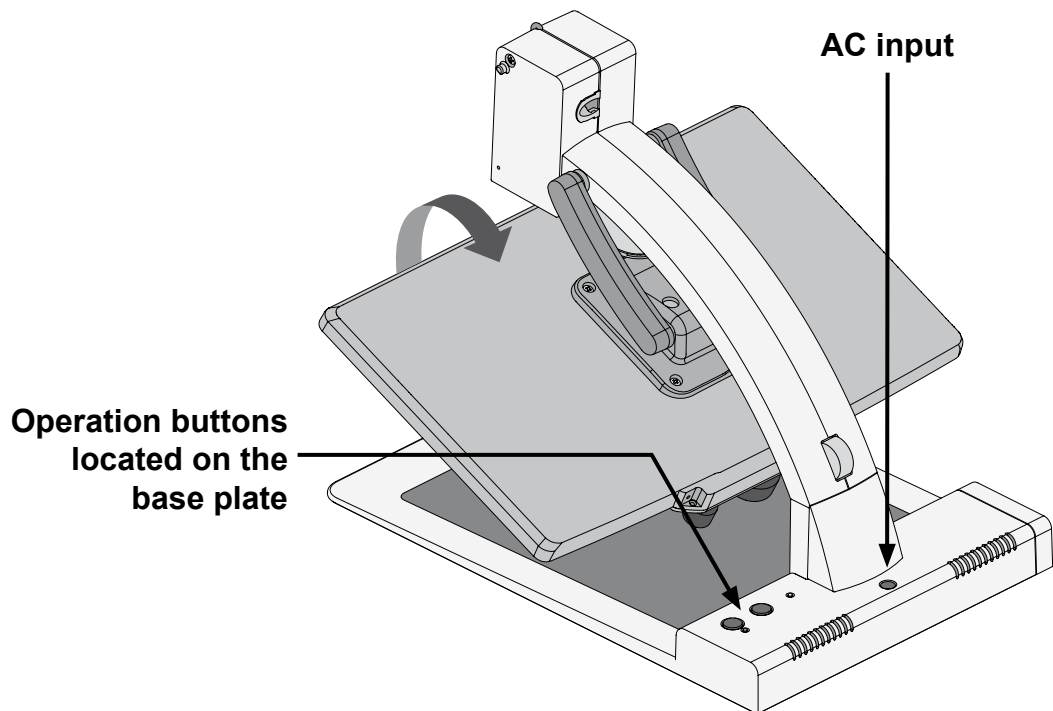
- Bring the monitors arm in the upright position until the interlock release snaps in.

● Move the monitor upwards.

Control panel

Camera ——— ——— **LED light**
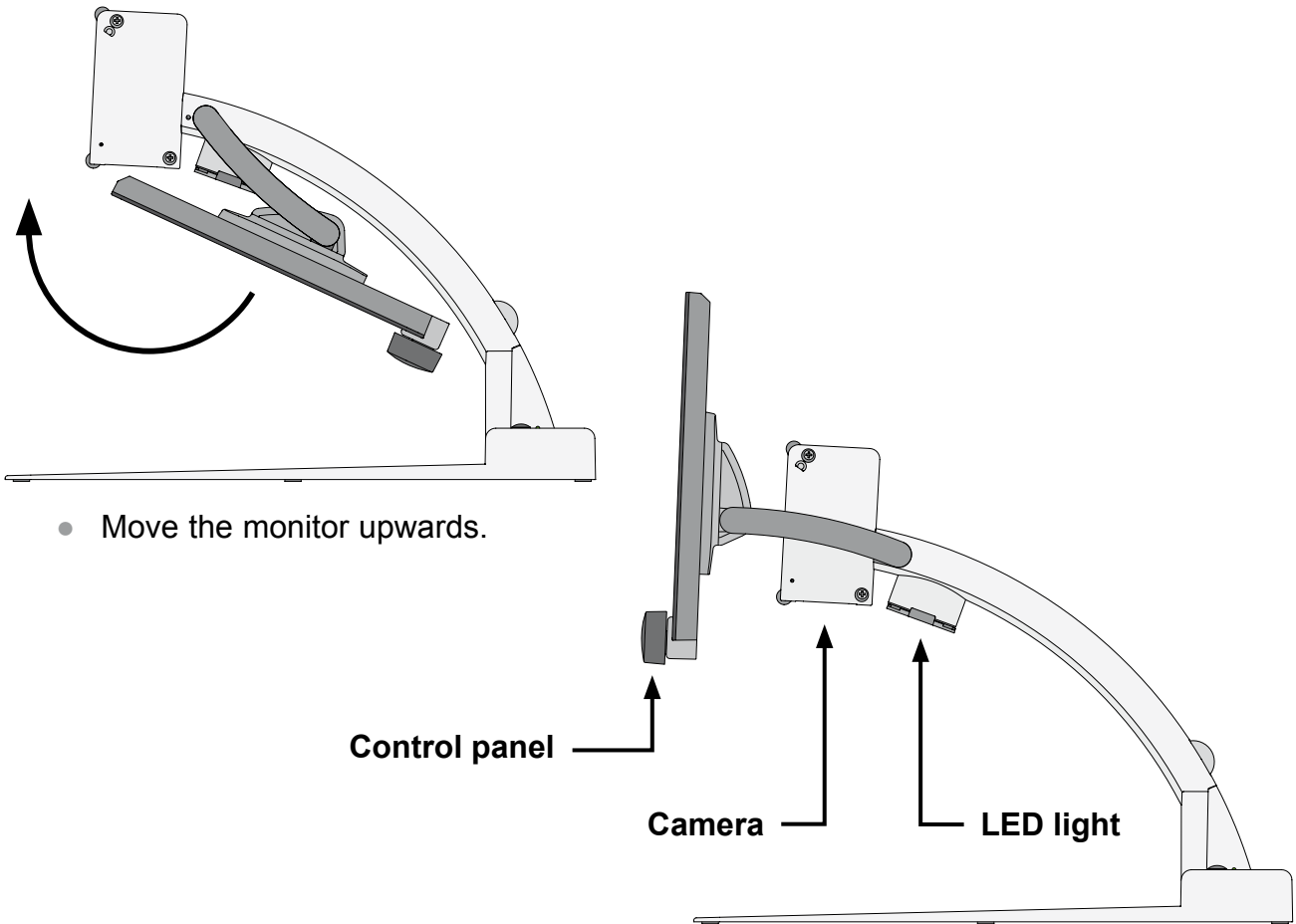
Note:
The factory setting of the swivel arm is adjusted to the weight of the respective monitor (16"/20"/24").

Connection of the unit

Connect the power supply to a mains wall socket and plug the adapter end of the cable into the AC input socket (12V DC) located on the base plate of the mezzo.

Note:
The supplied plug-in power supply is exclusively for the operation of this device. Please do not use any other power adaptor or cable. Once the device is plugged in, it is ready to use.

AC input

12 VDC

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ON
OFF

Adapter cable

mains wall socket
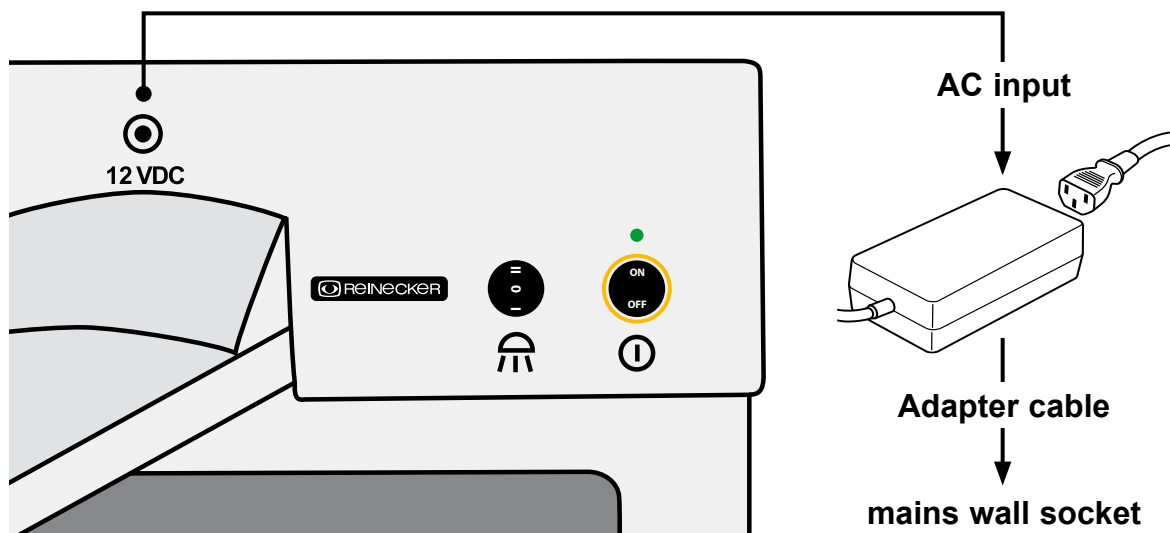
Alignment of monitor

Due to the monitor's technology contrast and brightness change depending on the angle of view.

The highly flexible monitor arm enables you to adjust the monitors height and angle according to your best ergonomic position.

All positions may be adjusted by the three-dimensional moveable monitor.
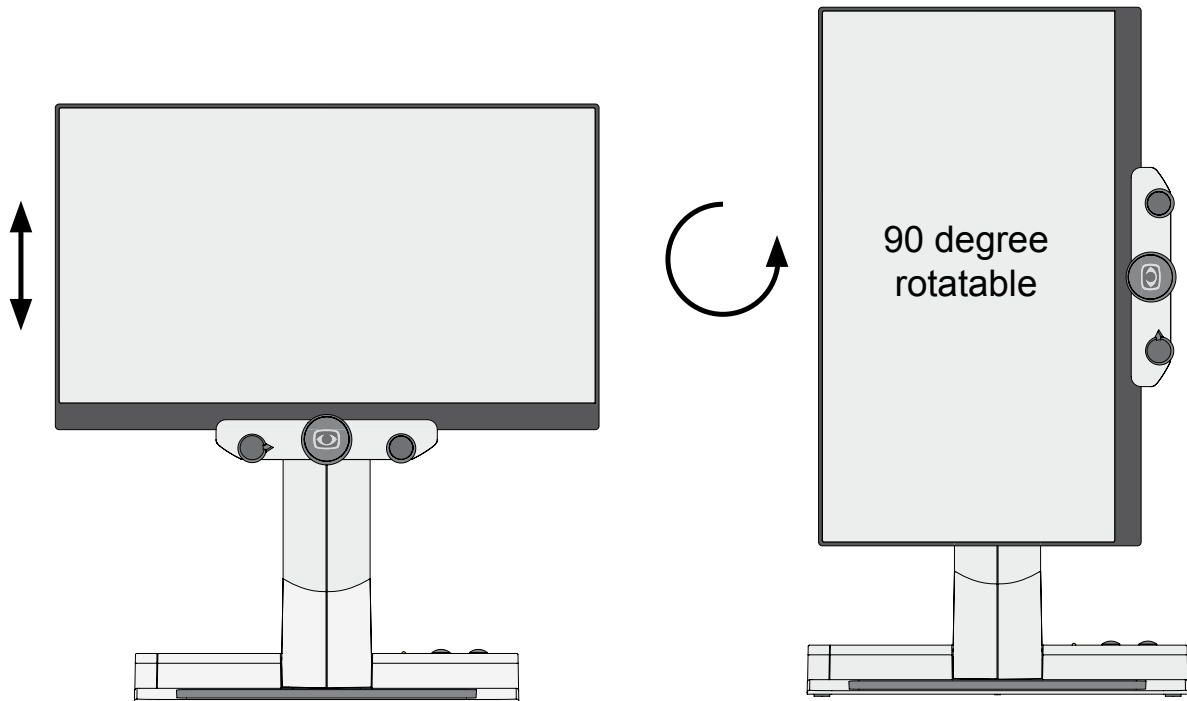
- The monitor can be moved vertically up and down.

- The monitor can be rotated counter-clockwise by 90 degree in order to make column reading easier.

  The automatic rotation of the displayed image is only possible with mezzo Vario 16" and 20".

  **Note: All 24"-mezzos and all Focus models are not rotatable.
  The mezzo Focus 16" monitor is only rotated for packaging. The displayed image will not rotate.**
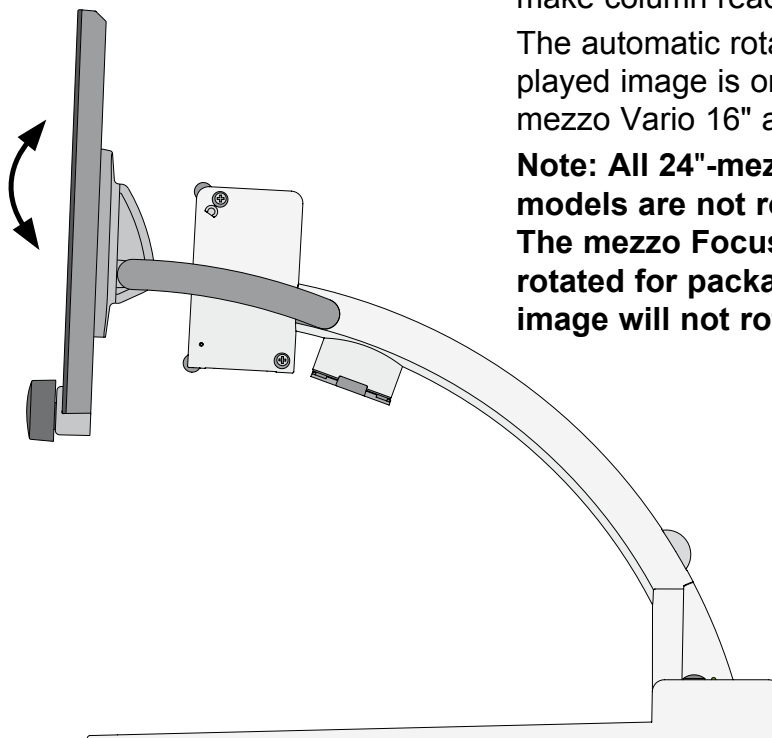
- The monitor can be tilted vertically.

Alignment of the XY-table mezzo

If your mezzo has a XY-table (ZBXTFIX0 or ZBXTFIXM) with friction brakes, the friction can be continuously adjusted with the lever located in front of the table by pushing the lever slowly from the left to the right.

By pushing the lever from the very left side (no friction at all) to the center, you will fix the y-axis. By pushing the lever to the very right side, you will also fix the x-axis (lock).
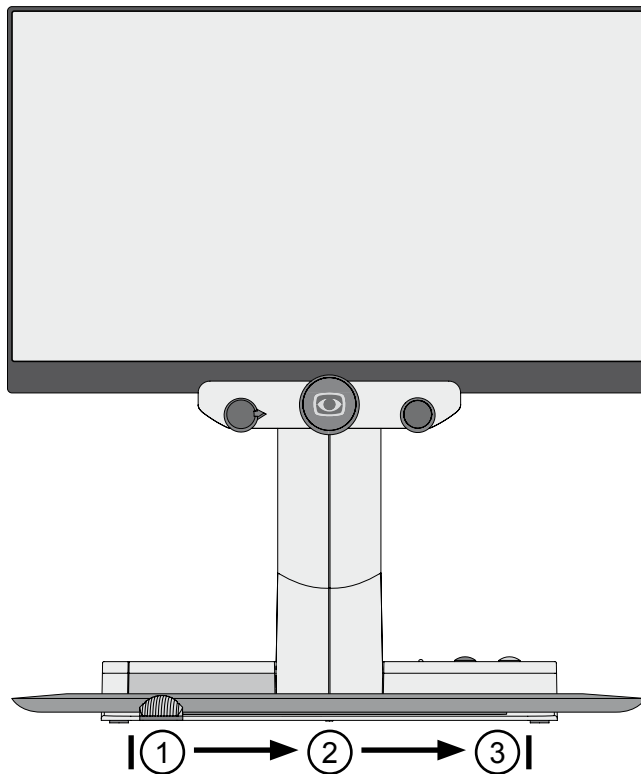
1. Left: no friction at all

2. Left to center: fixing the y-axis

3. Center to right: fixing the x- and y-axis (lock)

Description of the control elements

Control panel on base plate –
for all mezzos with mains operation only
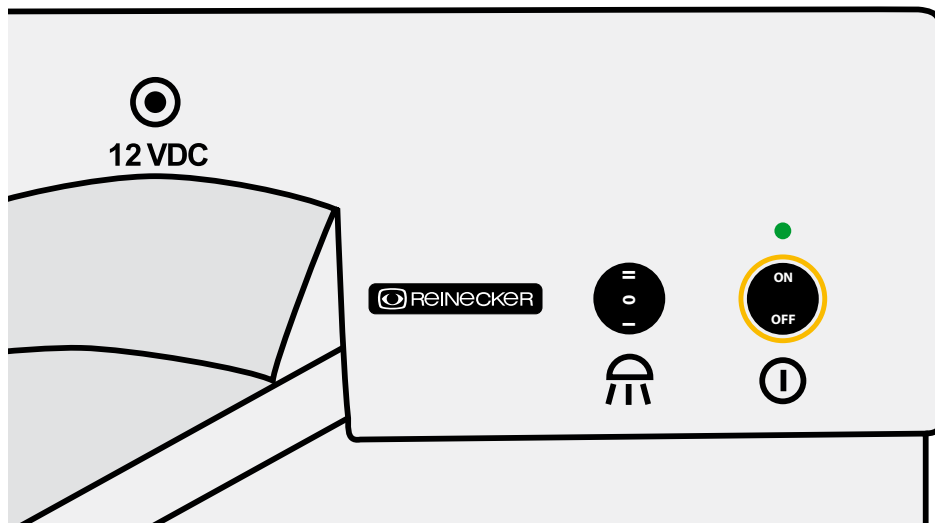
Power switch ON/OFF

Only after connecting mezzo successfully to the power supply, the device can be switched ON or OFF using the toggle switch. After switching ON, the green power LED above the toggle switch lights up.

When the device will be turned OFF, the latest used settings are saved automatically.

When switching ON again, the latest used settings are reactivated.

Attention!:
If the reading table is not lit up after switching ON the device, please check if the LED-light is ON (please see next paragraph).

Light adjustment (50%/OFF/100%)

Press the toggle switch to adjust the LED lighting accordingly:

I = LED-light min. 50%

0 = LED-light OFF

II = LED-light max. 100%

General note on using the LED-light

While using the device, it could be helpful to switch OFF or reduce the LED-light of the device, for example, when the light in the room or from outside changes (sun-light).

Control panel on base plate –
for all mezzos with battery operation
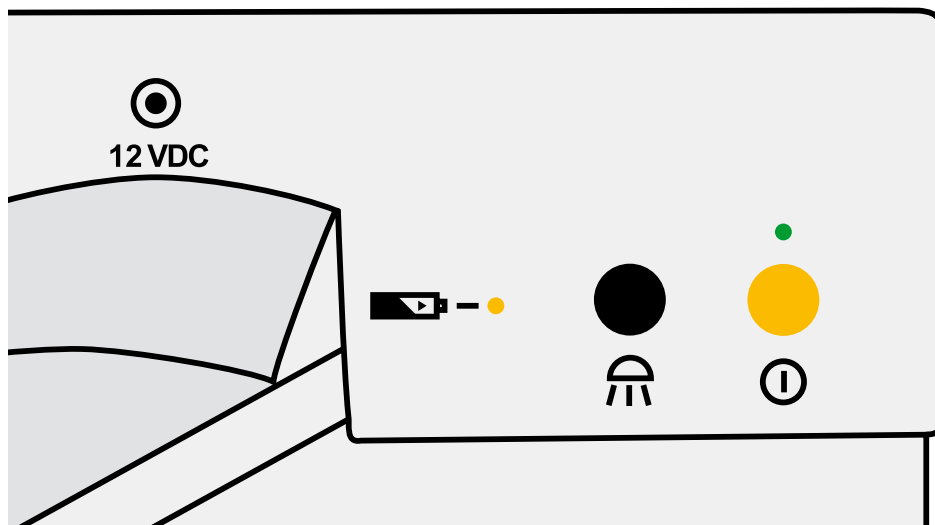
Power switch ON/OFF

The device can be switched ON or OFF by briefly pressing the yellow button. When the device is switched ON the green LED lights on.

When the device will be turned OFF, the latest used settings are saved automatically. When switching ON again, the latest used settings are reactivated.

Attention!:
If the reading table is not lit up after switching ON the device, please check if the LED-light is ON (please see next paragraph).

Light adjustment (ON/OFF/Dim)

By pressing the black button briefly the illumination can be turned ON or OFF.

By pressing and holding the black button, the illumination can be dimmed. When releasing the black button, the illumination intensity will be set and saved.

Please note:
The latest used illumination will be reactivated when turning the device ON the next time.

Indicator for rechargeable battery

Indicates the status of the built-in battery.

Note: When the battery is nearly empty, the device switches OFF automatically.

In this case, connect the device to the power supply and recharge the battery. During charging, the yellow battery indicator on the device lights up.

Monitor control panel

Colour mode selection
Menu selection ON/OFF

Zoom +/-
Auto-focus ON/OFF
Overview Mode

Brightness/Contrast
Line marker/Shadowing
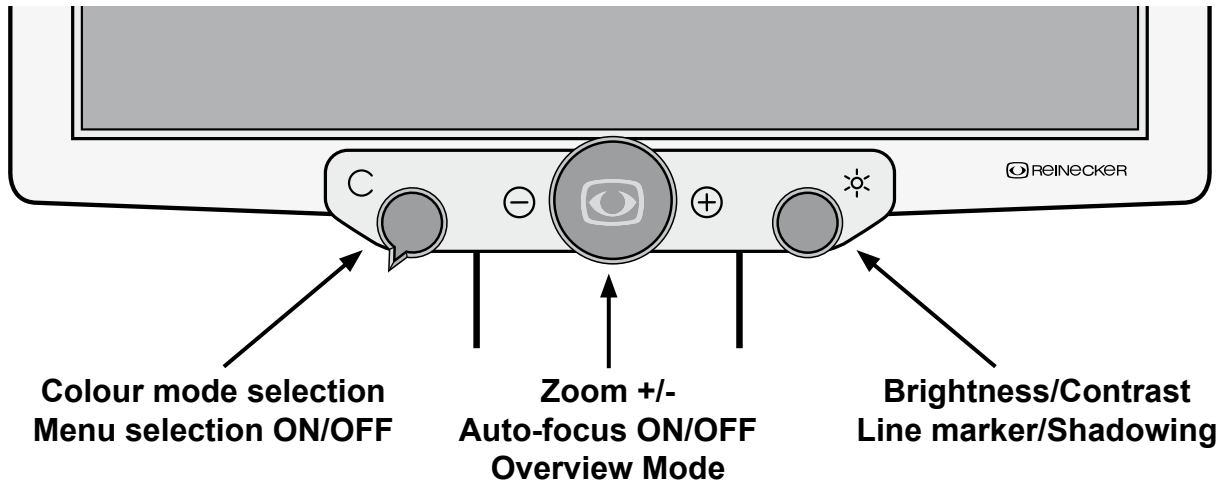
Left button:

Colour mode selection

By turning the colour mode selection-button from the left to the right the following colour modes (factory setting) can be selected:

Position 1:   full colour display

Position 2:   black font, white background

Position 3:   white font, black background

Position 4:   green font, black background

Position 5:   yellow font, black background

Position 6:   yellow font, blue background

The chosen colour mode appears temporarily on the lower side of the screen (when activated).

Note: Individual colour combinations can be defined via the internal menu. You also have the possibility to reduce the colour combinations. If you, for example, reduce the 6 combinations to four, these four combinations are evenly divided on the positions of the button.

Menu selection ON/OFF (mezzo Vario)

Keep the left button pressed for approx. 2 sec. to enter the internal menu.
To exit, turn the central button to the menu selection "exit" and press the central button briefly to confirm exit.

Menu selection ON/OFF (mezzo Focus)

Keep the left button pressed for approx. 4 sec. to enter the internal menu.
Press the left button briefly to exit the internal menu.

Central button:

Zoom +/-

By turning the central button (from left to right) text and pictures can be zoomed in and out continuously.
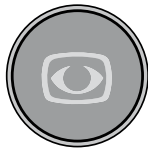
The magnification range from approx. 1x - 127x, depending on the integrated camera, depends on the distance between the camera and the object to be displayed.

The last magnification set will be memorized and displayed when turning the mezzo ON again.

The current magnification will be displayed briefly at the bottom of the screen (this display can be deactivated in the user menu).

Note: The camera is equipped with an auto-focus. When turning the central button to the maximum magnification, objects of a height of (>) 15 cm shall be displayed sharply.

Auto-focus ON/OFF

By briefly pressing and releasing the central ("zoom") button the auto-focus can be activated/deactivated. By having the auto-focus activated, the camera adjusts the picture sharpness automatically..

Overview mode

When you are reading at a higher magnification level and want to find out which part of the page you have reached, this function helps you to get the overview.

Press the central („zoom") button at a higher magnification level for approximately 2 seconds until the overview mode is activated. The image on the screen will minimise and you will see an overview of the whole document/image/printed text. A faded cross will appear and indicate the area that is currently being magnified. Once the central button is released it will return back to the reading mode and selected magnification level.

Right button:

Automatic colour saturation

Brightness and colour saturation are automatically adjusted, colours are displayed true to original. The colour saturation range can also be adjusted in the menu.

Brightness/Contrast
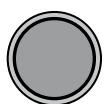
The right control button adjusts brightness and contrast.
That means that both, bright and dark image zones change equally. (Turning from left to right).

Left stop: lowest contrast, lowest brightness

Right stop: maximum contrast, maximum brightness

Line marker and shadowing

mezzo Vario: By pressing and turning the right button, line marker and shadowing will be activated.
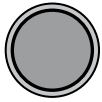
From the left-hand stop of the control button up to the center, the shadowing is activated uniformly from above and below.

From the center position to the right-hand stop the line marker is active. It can be set horizontally over the entire monitor.

To deactivate those functions, press the button again.

Line marker and shadowing

mezzo Focus: By pressing the right control button the horizontal function of line marker/shadowing will be activated.
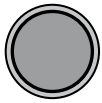
From the left-hand stop of the control button up to the center, the line marker is activated. It can be set horizontally all over the entire monitor.

From the center position of the button up to the right-hand stop, the shadowing becomes evenly active from top to bottom.

The vertical line marker/shadowing will be activated by pushing the button again.

Pushing the button again deactivates the line marker/shadowing function.

Power ON/OFF

Operation with power supply and cables

Make sure that the delivered power adapter and cable are connected properly with a wall socket and mezzo AC input 12V DC.

Power ON

Press the ON/OFF button to switch ON the device. When the mezzo and the base plate is illuminated, you can put a page or an object onto the table.

All the possible settings – for example zoom, colour or brightness- can be adjusted individually.

Power OFF

Switch OFF the device by pressing the ON/OFF button.

Automatic saving of device settings

All latest used settings of the device will be active, when switching ON the device again.

Replacement of lighting

The electronic magnifier is equipped with a high power LED Illumination.
If replacement of the lamp is required it should only be done by a specialist or by Reinecker Vision GmbH.

Important note to the use of power supply

Please only use the power supply included in the delivery. Use of any other power supply will void the warranty!

Operation of rechargeable battery

(mezzo with battery operation only)

Attention: In order to assure a long life span of the rechargeable battery you must follow the instructions for charging and operating the battery:

- The yellow battery indicator LED on the device does not expire until the charging process has finished.
- If the device is not used for a longer period (more than 1 month), the battery must be fully charged. Even if the device is switched OFF, the battery can discharge until deep discharge. This should be avoided, as the rechargeable battery can be damaged.

Use of battery

- Plug-in power supply is not connected.
- Keep pressing the ON/OFF button for approx. 1 second; device is ready to be used.
- Directly after switching ON, the battery charging status appears briefly on the screen.
- As soon as the battery charging status on the screen starts blinking, the battery must be charged immediately. Only a few minutes remain before the unit switches OFF automatically.
- If the device continues to run on battery mode, the battery must first be fully charged.

Charging of battery

- The battery charge indicator is blinking or the device has switched OFF.
- Please connect plug-in-power supply.
- The yellow battery control LED at the unit lights up - the battery is charging.
- When the battery is fully charged, the battery control LED will turn OFF.
- The device is ready again for battery operation.
- While charging the battery, the device can be used without restriction. In this way, the battery can be charged during operation.

Operating time once the battery had been fully charged

- With 16" class monitor: approx. 5,0 hours (depending on the illumination used)
- Charging time is approx. 5,0 hours, when the unit is turned OFF.

Description of the menu settings mezzo Vario

Menu selection

Press the colour selection button for approx. 2 seconds until the menu appears on the screen.

Main Menu	
Brightness	**+50**
Contrast	**+50**
Colour Saturation	**- 30**
Ruler / Mask	**OFF**
Ruler / Mask Settings...	
AF Modus	**Continuous/Zoom**
Reset to Factory Settings	
Recall User Settings...	
Advanced Settings...	
Exit	

Adjust menu settings

Move up/down the menu
Turn the central zoom button in order to navigate through the menu.

Select an item in the menu
Press the central zoom button in order to open the menu selection.

Change menu selection
Turn the central zoom button in order to change menu settings.

Confirm and select the menu selection
Press the central zoom button in order to confirm menu settings.

Exit main menu
Navigate to "exit menu" in order to quit

Note: You can alternatively press the colour mode button shortly to exit the menu.

Explanation of the menu content

The image shows in detail how the menu is structured.

Main Menu	← Menu level 1
Advanced Settings	← Menu level 2
Special Settings	← Menu level 3
Customize Buttons	← Menu level 4
Function	**adjustment range** | explication

Menu settings

Main Menu	
Brightness	**Brightness adjustment range from -50 to +50**
Contrast	**Brightness adjustment range from -50 to +50**
Colour Saturation	**Brightness adjustment range from -50 to +50**
Ruler / Mask	**OFF** | deactivate line marker and shadowing
	Ruler | activate line marker
	Mask | activate shadowing

Main Menu	
Ruler / Mask Settings	
Ruler / Mask	**OFF** | deactivate line marker and shadowing
	Ruler | activate line marker
	Mask | activate shadowing
Ruler Position	**0 to 100** | adjust line marker position
Mask Position	**0 to 100** | adjust shadowing
Ruler Mode	**Horizontal** | Lineal horizontal ausrichten
	Vertikal | Lineal vertikal ausrichten
Mask Mode	**Left/Right** | Shadowing left/right; shadowing up to 50%
	Top/Bottom | Shadowing top/bottom; shadowing up to 50%
	Left/Right FS | Shadowing left/right; shadowing up to 90%
	Top/Bottom FS | Shadowing top/bottom; shadowing up to 90%
	Full-Screen | Shadowing covers whole screen
Mask Transparency	**50% | 25% | 0%**

Main Menu	
Ruler / Mask Settings	
Ruler Colour	
Red	**adjustment range from 0 to 31**
Green	**adjustment range from 0 to 31**
Blue	**adjustment range from 0 to 31**
Return	

Main Menu	
AF Mode	**Semi-Automatic | Semi-Autom. + Zoom | Continuous/Zoom**
Reset to Factory Settings	Return to factory settings
Recall User Settings	Return to customer selected settings
Advanced Settings	*(see overview)*
Exit	

Overview:	Advanced Settings	
	Colour Combination Setup	
	Anti Reflection Mode	**Auto (5)**
	Monitor Brightness	**100**
	Language	**English**
	Perform White Balance	
	White Balance Mode	**Auto**
	Sharpness Settings	
	OSD Messages	**OFF**
	Special Settings	
	Return	

Main Menu	
Advanced Settings	
Colour Combination Setup	
Colour Combination 1-6	
Mode	**Disabled** | **Full Colour** | **Grayscale** | **False Colour**
Foreground	**Black** | **Red** | **Green** | **Blue** | **Yellow** | **Magenta** | **Cyan** | **White** | **User 1** | **User 2**
Background	**Black** | **Red** | **Green** | **Blue** | **Yellow** | **Magenta** | **Cyan** | **White** | **User 1** | **User 2**
Swap Fore-/ Background	invert foreground and background colours
Return	

Main Menu	
Advanced Settings	
Colour Combination Setup	
User colours	
User colour 1 - Red	**adjustment range from 0 to 31**
User colour 1 - Green	**adjustment range from 0 to 31**
User colour 1 - Blue	**adjustment range from 0 to 31**
User colour 2 - Red	**adjustment range from 0 to 31**
User colour 2 - Green	**adjustment range from 0 to 31**
User colour 2 - Blue	**adjustment range from 0 to 31**
Return	

Main Menu	
Advanced Settings	
Anti-Reflection Mode	**OFF** | **ON** | **Auto (0-9)** | adjust default value
Monitor Brightness	**adjustment range from 37 to 100**
Language	**English** | **German** | **French** | **Norwegian**
Perform White Balance	execute white balance
White Balance Mode	**Auto** | **One-Push**

Main Menu	
Advanced Settings	
Sharpness Settings	
Real Colour Sharpness	**adjustment range from 0 to 24**
False Colour Sharpness	**adjustment range from 0 to 24**
Return	

Main Menu	
Advanced Settings	
OSD Messages	**ON** | **OFF**
Special Settings	*(see overview)*
Return	

Overview:	Special Settings	
	Zoom Extension	**ON**
	Max. Digital Zoom	**3.5x**
	Customize Buttons	
	Store User Settings	
	Recall User Settings	
	Reset to Factory Settings	
	Expert Settings	
	Monitor size	**24"**
	Return	

Main Menu	
Advanced Settings	
Special Settings	
Zoom Extension	**ON** | **OFF**
Max. Digital Zoom	**OFF** | adjustment range from 1,5x to 15x

Main Menu	
Advanced Settings	
Special Settings	
Store User Settings	Confirm selection to the user setting to save
Recall User Settings	Confirm selection to the user setting restore
Reset to Factory Settings	Confirm to the factory setting restore
Expert Settings	Access - only by authorized service
Monitor size	**16"** class | **20"** class | **24"** class
Return	

Description of the menu settings mezzo Focus

Menu selection

Press the colour selection button for approx. 3 to 4 seconds until the menu appears on the screen.

Main Menu	
Colour Saturation	+50
Language	English
AF Mode	auto
Min. magnification	standard
Max. magnification	standard
Grid Frequency	50Hz
Monitor Brightness	80%
Reset to Factory Settings	
Advanced Settings	
Exit	

Adjust menu settings

Move up/down the menu
Turn the central zoom button in order to navigate through the menu.

Select an item in the menu
Press the central zoom button in order to open the menu selection.

Change menu selection
Turn the central zoom button in order to change menu settings.

Confirm and select the menu selection
Press the central zoom button in order to confirm menu settings.

Exit main menu
Navigate to "exit menu" in order to quit

Note: You can alternatively press the colour mode button shortly to exit the menu.

Explanation of the menu content

The image shows in detail how the menu is structured.

Main Menu	← Menu level 1
Advanced Settings	← Menu level 2
Colour Combination Setup	← Menu level 3
User colours	← Menu level 4
Function	**adjustment range** | explication

Menu settings

Main Menu	
Colour saturation	**adjustment range from -50 to +50**
Language	**English** | **German** | **Italian** | **Japanese**
AF Mode	**auto** | **push** (By push button)
Min. magnification	**low** | **standard**
Max. magnification	**high** | **standard**
Grid Frequency	**50Hz** | **60Hz**
Monitor Brightness	**100%** | **75%** | **50%** | **25%**
Reset to Factory Settings	Confirm to the factory setting restore
Advanced Settings	*(see overview)*

Overview:	**Advanced Settings**
	Colour Combination Setup
	Set Ruler Colour
	Mask Transparency
	OSD Messages
	Reflection Filter
	Save User Settings
	Recall User Settings
	Change Factory Settings
	Return

Main Menu	
Advanced Settings	
Colour Combination Setup	
Colour Combination 1-6	
Mode	**Disabled | Full Colour | Grayscale | False Colour**
Foreground	**Black | Red | Green | Blue | Yellow | Magenta | Cyan | White | User 1 | User 2**
Background	**Black | Red | Green | Blue | Yellow | Magenta | Cyan | White | User 1 | User 2**
Swap Fore-/ Background	invert foreground and background colours
Return	

Main Menu	
Advanced Settings	
Colour Combination Setup	
User colours	
User colour 1 - Red	**adjustment range from 0 to 31**
User colour 1 - Green	**adjustment range from 0 to 31**
User colour 1 - Blue	**adjustment range from 0 to 31**
User colour 2 - Red	**adjustment range from 0 to 31**
User colour 2 - Green	**adjustment range from 0 to 31**
User colour 2 - Blue	**adjustment range from 0 to 31**
Return	

Main Menu	
Ruler / Mask Settings	
Ruler Colour	
Red	**adjustment range from 0 to 31**
Green	**adjustment range from 0 to 31**
Blue	**adjustment range from 0 to 31**
Return	

Main Menu	
Advanced Settings	
Mask Transparency	**50% | 25% | 0%**
OSD Messages	**ON | OFF**
Reflexion Filter	**ON | OFF**
Save User Settings	Confirm selection to the user setting to save
Recall User Settings	Confirm selection to the user setting restore
Change Factory Settings	Access - only by authorized service technicians
Return	

Troubleshooting

Problem	Solution
No image is shown.	Check the mains connection, the cable connection to the monitor and that all relevant systems are switched ON or activated.
Screen is dark.	Check the brightness and contrast settings of the camera/monitor.
True colour is not displayed correctly.	Check your reading material, colour mode setting, brightness, colour saturation and camera lighting.
Battery does not charge or battery charging indicator does not light.	Check that the power supply is correctly connected to the mains socket and that the adapter cable is correctly connected to the mezzo.

Technical details

mezzo **16"- class monitor**	LED flat screen monitor 16"- class | approx. 41 cm (1366 x 768 pixel) **mezzo Vario** height adjustable, vertically inclinable, 90° rotatable **mezzo Focus** height adjustable, vertically inclinable	Weight: approx. 5,2 kg without XY-table Measurements (WxHxL) expanded: approx. 38 x 50 x 52 cm folded: approx. 38 x 17 x 52 cm
optional: with battery	Operating time approx. 5,0 h (depending on the illumination used) Charging time approx. 5,0 h	Lithium-Polymer battery, not exchangeable by the user*
mezzo **20"- class monitor**	LED flat screen monitor 20" - class | approx. 49 cm (1600 x 900 pixel) **mezzo Vario** height adjustable, vertically inclinable, 90° rotatable **mezzo Focus** height adjustable, vertically inclinable	Weight: approx. 6,2 kg without XY-table Measurements (WxHxL) expanded: approx. 46 x 50 x 52 cm folded: approx. 46 x 18 x 52 cm
mezzo **24"- class monitor**	LED flat screen monitor 24"- class | approx. 60 cm (1920 x 1080 pixel) **mezzo Vario** height adjustable, vertically inclinable **mezzo Focus** height adjustable, vertically inclinable	Weight: approx. 10,5 kg with XY-table Measurements (WxHxL) expanded: approx. 53 x 53 x 52 cm folded: approx. 53 x 22 x 52 cm
Colour modes	True colours, preset and individually adjustable artificial colour modes	
Auto-focus	Can be switched OFF	

*Exchanging of battery: The battery exchange may only be executed by Reinecker Vision GmbH or a licensed partner.
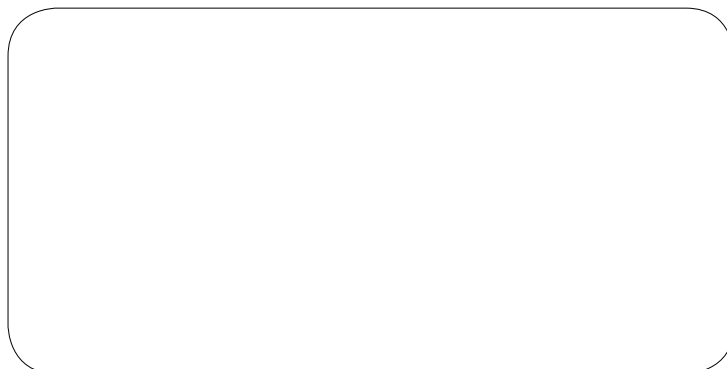
Warranty Information

1. Reinecker Vision GmbH grants a warranty of 24 months (warranty period only valid within the European Union) against defects in manufacture counted from date of invoice ex Reinecker Vision GmbH.

2. All parts that have been replaced when repairing the unit will automatically become property of Reinecker Vision GmbH.

3. Damage caused by improper use or by non-compliance with the operating instructions will result in the invalidation of the warranty.

4. Interventions from persons other than Reinecker Vision GmbH authorised specialists may lead to invalidity of warranty.

5. Partial warranty is valid for light sources serving to illuminate the reading object, batteries and other parts subject to wear and tear.

6. If a warranty claim is necessary, the system has to be returned to the manufacturer in Alsbach-Hähnlein or to your authorized dealer in the original packaging including all components. The manufacturer does not carry the cost for transport, packaging and insurance.

Phone number: +49 6257 93110

View our General Terms and Conditions.

Your authorized distributor:

Notes
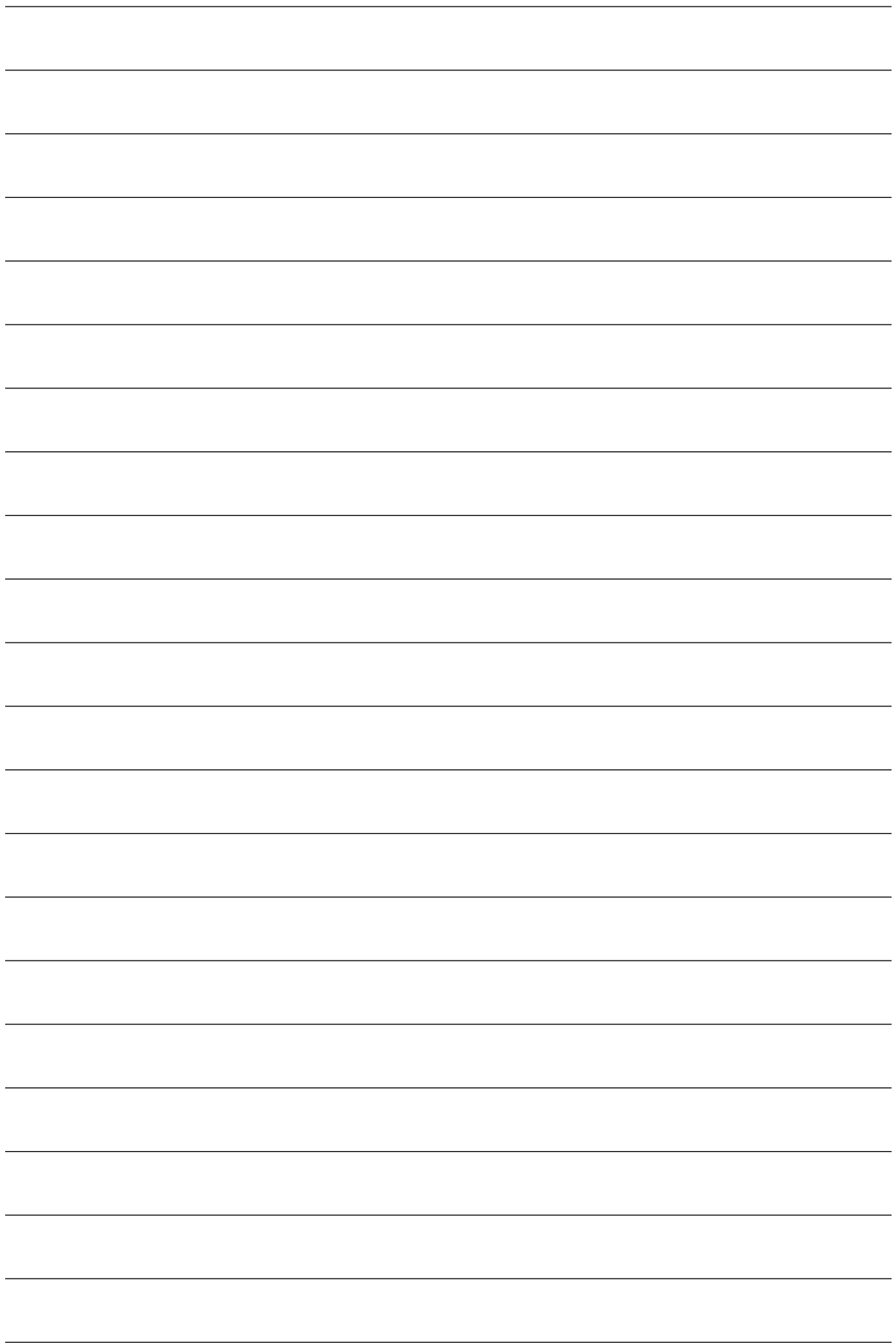
Type:	mezzo
Serial number:	
Manufacturer:	Reinecker Vision GmbH
Final examination:	
Power supply:	100 VAC – 240 VAC 50-60 Hz
With plug-in power supply:	12V DC/5000mA
Power consumption:	max. 80 watt

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In case service is necessary, please contact your authorized distributor.

Bitte wenden Sie sich bei Fragen oder einem Servicefall direkt an unser Hauptwerk in Alsbach-Hähnlein oder an eine unserer Niederlassungen.

Bei im Ausland erworbenen Produkten kontaktieren Sie im Servicefall bitte Ihren dort ansässigen Händler.

REINECKER