Renfert

making work easy

EASY view 3D

Quick Start Guide

Made in Germany

Introduction

This Quick Start Guide contains instructions on the operation of the product and relevant safety information.

For detailed information about the device, see the instructions for use which you can download from our website at **www.renfert.com/p915**.

Enter the following item number: 24000500.

Symbols used

This manual contains symbols also found on the appliance itself with the following meaning:

Danger
Immediate risk of injury. Consult accompanying documents!

Electrical current
This indicates a risk of injury due to electrical current.

Caution
Risk of damage to the unit if the instruction is not followed.

Notice
A general notice that improves and eases use.

The appliance complies with applicable EU directives.

Within the EU, this device is subject to the provisions of the directive 2002/96/EC (WEEE directive).

Other symbols are explained when displayed.

Safety

Correct use of the unit

The system is used for digital stereo-magnification in 2D and 3D in real-time and for documentation.

Unapproved Use

Only spare parts and accessories supplied or authorized by Renfert GmbH may be used with this product. If other spare parts or accessories are used, this could have a detrimental effect on the safety of the device, increase the risk of serious injury and lead to damage to the environment or the device itself.

Hazards and Warnings

General information
► **Granted protection is not given any longer in case the unit is not operated according to the instruction manual on hand.**
► **The unit should only be operated using a mains cable with a country-specific plug system. Any modification required should only be carried out by an electrician.**
► **The unit should only be operated if the data on the rating plate corresponds with the data of regional mains voltage.**
► **The unit should only be plugged into earthed sockets.**
► **The mains socket should be easily accessible.**
► **Disconnect the unit from the mains before working on electrical parts.**
► **Regularly check connecting cables (such as power cables), hoses and housing (for example, the control panel) for damage (for example, kinks, tears, porosity) or deterioration due to aging.**
  Do not operate units with damaged connection cables, hoses or housing parts or other defects!
► **Damaged equipment must be taken out of service immediately. Disconnect from mains and secure against being switched on again. Send the device in for repair!**
► **Operate the equipment only under supervision.**
► **Observe national accident prevention regulations!**
► **It is the responsibility of the operator that national regulations during operation and regarding a repeated safety inspection of electrical equipment are complied with.**
  For Germany these are the regulation 3 by DGUV (German Statutory Accident Insurance) in relation with VDE (Association for Electrical & Electronic Technology) 0701-0702.

Specific information

► **Do not look into the lighting.**
► **As with all optical magnification systems, working with the system for long periods can lead to symptoms of fatigue. Take breaks regularly.**
► **The 3D goggles do not replace protective eye equipment in any way.**

⚠ **Safety instructions for the monitor can be found in the instructions for use in the internet.**

Approved personnel

The appliance may only be operated and serviced by trained personnel.

Product description

General description

The EASY view 3D system consists of a head with two cameras, lighting and the image processing unit, as well as a 3D-capable monitor including 3D goggles.

Assemblies and functional elements

See Fig. 1 (on inside cover)

1	Head	**8**	Monitor power switch
2	Support arm with base	**9**	Tool for clamping force adjustment (Allen key)
3	Monitor	**10**	Foot switch
4	EASY view 3D power supply	**11**	Mouse
5	Monitor power supply	**12**	Desk pad
6	Height adjustment (focus)	**13**	3D goggles
7	EASY view 3D power switch	**14**	USB memory stick

Connections
See Fig. 2 (on inside cover)

20	Power supply	**23**	Foot switch
21	HDMI output	**24**	USB port for mouse
22	USB port for USB memory stick	**25**	Network

Standard Delivery

1 EASY view 3D head with power supply unit and power cord
1 Support arm with cable and base with universal clamp
1 Monitor with power supply unit and power cord
1 3D goggles
1 USB memory stick
1 Mouse
1 Foot switch
1 Desk pad
1 Quick Start Guide

Accessories

Accessories and their use are described in the instructions for use in the internet.

Commissioning

Setup

⇒ Place the desk pad (12) on the work table.

### Mounting the support arm

ℹ ***The support arm should preferably be mounted on the back or side of the table top, at least 400 mm away from the front edge.***
This makes it possible to optimally utilize the entire swiveling range of the support arm.

⇒ Mount the base with the universal clamp on the back or side of the work table.

⇒ Insert the support arm (2) into the base. Make sure that the red plastic disc (30) is placed between the base and the support arm.
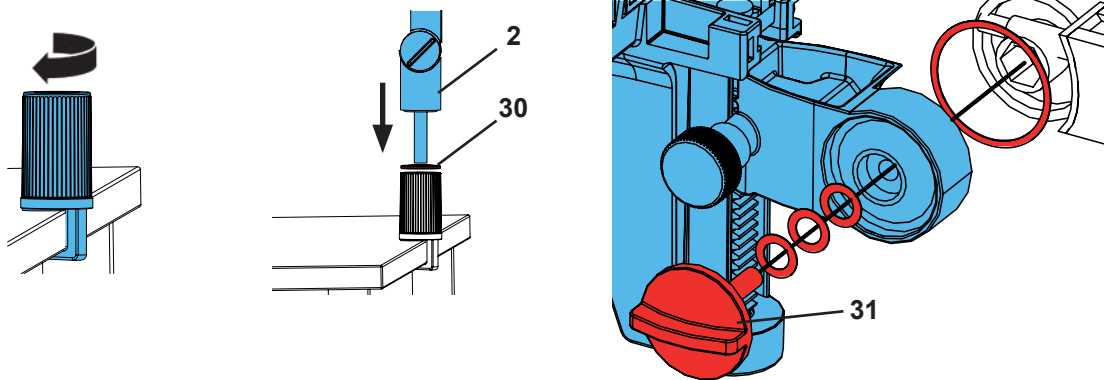
⇒ Place the mouse (11) next to the desk pad.

⇒ Place the foot switch (10) under the table and insert the cable for the foot switch into the foot switch.

Mounting the head

Four washers are needed for mounting the head.

Three small washers have already been threaded onto the fastening screw (31) in the correct sequence. The large washer is attached to the head with an adhesive strip with a red end.

⇒ Remove the adhesive tape with the red end.

⇒ Loosen the fastening screw (31) on the support arm.

⇒ Attach the fastening screw with all three small washers through the adapter of the head.

⇒ Make sure that the three small washers (gold / black / gold) and the large washer are in the correct order as shown in the figure.

⇒ Insert the adapter with the fastening screw and tighten the fastening screw until the head no longer tilts downward.

Positioning the monitor

⇒ Position the monitor so that it is directly in the field of view. The distance to the observer should be between 50 and 70 cm.

⇒ Align the monitor (tilt, rotate using stand) so that the viewing direction is perpendicular to the monitor in all planes.

Adjusting the clamping force

In order to achieve a stable position of the head, the clamping forces of the three joints (32, 33, 34, Fig. 1) can be adjusted individually.

- Swiveling the head right / left
  - Screw the clamping screw (35, Fig. 1) with the included tool (9).
- Height adjustment
  - Screw the clamping screw (36, Fig. 1) with the included tool (9).

Electrical connection

! Several plugs and related connector sockets are defined with a color coding. When connecting the components, make sure that the color coding is correct! Improperly connected components can become damaged by too high voltage!

Connections on the head

The cables are connected on the back of the head.

⇒ Monitor cable ==> HDMI connection (21).
  Pull the HDMI cable (37) straight out of the back and then remove it from the retaining clip.

⇒ Foot switch cable ==> connection (23).

⇒ Mouse cable ==> connection (24).

⇒ USB memory stick ==> connection (22).

⇒ Network extension cable ==> in connection (25).

⇒ Power supply of the head (integrated into the support arm) ==> connection (20).
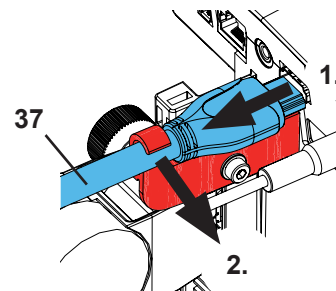
EASY view 3D head power supply

The EASY view 3D power supply (4) has a cable with an angled jack plug (38).

⇒ Plug the jack into the socket on the cable of the power supply, which protrudes at the base of the support arm.
 Ensure that the color coding is correct between the connection cable and socket!
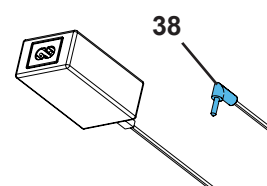
! Never plug the jack plug into the connection for the foot switch (23)! This will destroy the head.

⇒ Insert the power cord into the power supply unit and into the building wall socket.

Connecting the monitor

⇒ Monitor cable ==> DVI input of the monitor (41).

⇒ Secure plug with integrated screws.

⇒ Power supply ==> DC 12 V (40).
  Ensure that the color coding is correct between the connection cable and socket!

⇒ Insert the power cord into the power supply unit and into the building wall socket.
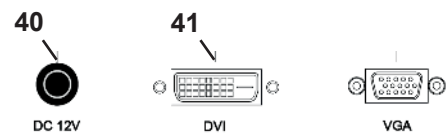
Operation

Switching on

⇒ Switch on the monitor by pressing the power button (8).

⇒ Switch on the head using the power switch (7).

  ♦ The lighting goes on.

  ♦ **After about 20 seconds**, an image appears on the monitor.

The cone of light on the table top describes an area whose center is captured by the optics.

Stand-by

If there is no movement below the head for more than 10 minutes and the mouse has not been moved for more than 10 minutes, the lighting and the monitor output are switched off (monitor power button (8) flashes).

The stand-by mode is ended when the mouse is moved or movement takes place in the detection range of the optics.

Adjusting the monitor

In most cases, the monitor can be used with its basic settings.

Details on the monitor can be found in the instructions for use in the internet.

Set up

There are two options for focusing the image:
- Coarse adjustment by moving the head with the support arm.
- Fine adjustment through height adjustment (6).

The following procedure is recommended:

⇒ Align the head parallel to the table.

⇒ Place the object on the desk pad within the cone of light.

⇒ Set the head to the middle of the height adjustment.

⇒ Set the head on the support arm so that the object can be seen on the monitor and if necessary adjust the height adjustment.

This allows you to quickly correct the focus for objects with different heights.

System settings

The current settings of the system are displayed on the monitor at the bottom left.

As soon as the mouse is moved, the monitor displays the available settings and with which element of the mouse the setting can be changed.

2D / 3D representation	Magnification (15 x, 20 x)	Object mode (ceramic, metal, standard, neutral)
![2d 3d icons]	![15x 20x icons]	![C M S icons]
A	**B**	**C**

⇒ Left mouse button (A)
  ♦ Switch between 2D and 3D display
	⇒ Mouse wheel (B) rotation forward / backward
	  ♦ Switch of magnification between 15 x and 20 x
	⇒ Press / rotate the mouse wheel (B)
	  ♦ Adjust the brightness of an object mode (see instructions for use on the internet).
		⇒ Right mouse button (C)
		  ♦ Switch object modes

In addition, the current IP address and the host name of the EASY view 3D head are displayed.

Screen shot / still image

Using the foot switch, the monitor image can be frozen (still image) or also stored on the USB memory stick (screen shot).

Still image

⇒ Press the foot switch for more than 1 sec.

  ♦ The still image is displayed, meaning the monitor image is frozen.

While the still image is displayed, the following actions can be performed:

⇒ Briefly press the foot switch.

  ♦ The screen contents are saved to the USB stick as a screen shot.

⇒ Press the foot switch for more than 1 sec.

  ♦ Switch back to the live image.

Saving a screen shot

Screen shots are only saved as 2D images.

⇒ Briefly press the foot switch.

♦ The screen contents are saved to the USB stick as a screen shot.

♦ The screen shot icon appears on the monitor.

♦ The file name is displayed on the monitor during the save operation.

♦ No other actions are possible during the save operation (approx. 5 sec.).

The file name has the following format:
* IMGxxx.bmp
* xxx = sequential counter 000 to 999

If the USB memory stick is then connected to a PC, the file names can be changed as usual, for example, to assign them to a customer.

Accessing the USB stick via a network

If the EASY view 3D head is connected to a local network via the network port (25) and the network extension cable (already inserted in the cable channel), the images (screen shots) of the USB stick in the head can be accessed over the network. Details can be found in the instructions for use in the internet.

Working with 3D

When working in 3D mode, the 3D goggles must be worn.

Monitor

Details on the monitor can be found in the instructions for use in the internet. Renfert recommends not changing the factory settings of the monitor as the basic settings for the EASY view 3D.

Cleaning / Maintenance

The device does not contain any internal parts that require maintenance.

Wipe the housing, including the lighting, only with a slightly moistened cloth. Do not use disinfectant or cleaning agents or compressed air.
Clean monitor only with a dry cloth. Because of the natural product used, the desk pad may build an oily coat. It is possible to wipe it off with a grease dissolving cleaning agent such as a commercially available dishwashing liquid.

CAUTION!
Risk of getting burned on hot lenses of the lighting!
Clean only when the unit is switched off and has cooled down.

Removing the cable from the cable duct / guiding it into the cable duct

See images at the end of this manual.

Spare parts

You can find components subject to wear and the spare parts on the spare part list in the internet at **www.renfert.com/p918**.

Enter the following item number: 24000500.
The components excluded from the warranty (such as consumables or parts subject to wear and tear) are marked on the spare part list. Serial number and date of manufacturing are shown on the type plate of the unit.

Troubleshooting

Details can be found in the instructions for use in the internet.

Disposal Instructions

Within the European Union units with this symbol should not be disposed of in unsorted domestic waste.

For more information regarding proper disposal please apply at your local authorities.

Subject to alteration