User Manual

MANO XXL

EN



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

REINECKER

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I. General Information

Important notes on the operation of MANO XXL!

Please read them carefully prior to the operation of the device!

Notes on the electromagnetic compatibility (EMC)

MANO XXL is suited for the use in all set-ups including the domicile that are connected directly to a public power supply for buildings with residential purposes.
MANO XXL is designed for the use in the indicated electromagnetic environment. The user should ensure the use in the indicated environment.
MANO XXL 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 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 (e.g. microwaves) the operator should respect a minimum distance of one meter/three feet to portable and mobile HF-telecommunication devices. Please also see chapter “Safety advice” on page 9 or on page 10.

Storage of the user manual

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

Product description

MANO XXL is a system to magnify text and images with the following benefits:

- 10.1“ LCD-Display (approx. 25,5 cm).
- Continuous magnification ranges from approx. 2x – 32x.
- ergonomic and compact design with fold-out stand for easy use.
- light weight (700 g) for comfortable use at home, or on the go

Cleaning of the system

Before cleaning, disconnect the unit from the power supply.
Clean the device with a mild household cleaner and a microfiber cloth.
Do not allow any liquids to enter the device.

Special advice for transport and storage

For safety reasons, the unit must only be shipped 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 to 1000 hPa
- Temperature range + 5 °C to + 50 °C
- Relative humidity 30% to 80%

Important note on reading, capturing and playback of medication leaflets

Dosage and quantity information from medication leaflets, read from the screen or, if a read-aloud function in your system is available, played back, must always be checked and reconfirmed independently! Always ask your doctor, pharmacist or a person you trust about dosing of medications!

Power supply

Only use the original power supply which is included in the delivery by Reinecker Vision GmbH.
Caution: The use of any other power supply besides the original, might lead to an increased electromagnetic emission and to product damage.

Disposal or transfer of the device

This equipment may retain user settings and stored images if disposed of or transferred. Prior to disposing or transferring MANO XXL, remove all personal content from the device, as described in “Restore to Factory Settings” on page 22.

I.I General Information – valid for MANXXLP3

The order code of your device can be found on the type label on the device or on the packaging.

Purpose

This electronic magnifier 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.

Medical device

This device is classified as a medical device, class I according to (EU) 2017/745, Annexe VIII, standard 13. For the distribution to countries outside the EU the respective country-specific guidelines have to be regarded.

Declaration of conformity, CE mark

CE

You can request a copy of the declaration of conformity in written form from Reinecker Vision GmbH, Sandwiesenstr. 19, 64665 Alsbach-Hähnlein or view it at www.reineckervision.de/en/eu-doc

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 system. It is rather an indication on when the product might be obsolete and substitution might be recommended due to new product developments.

Combination with other medical devices

If the operator/user wants to operate this device in conjunction with other life sustaining medical devices, please get in touch with Reinecker Vision GmbH or with your local dealer, prior to operation.

Safety advice

The device has to be set up and operated in closed and dry rooms only. Do not plug the device 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 device should only be installed in conjunction with a state-of-the-art electrical circuit.

Precautions by alteration of the performance of the device

Should any of the technical features or performances change (failure, malfunction etc.), the device must be turned OFF and the battery must be taken out. **Please do not switch ON the device again.** Refer directly to your authorized dealer or to Reinecker Vision GmbH Service Center.

Reinstatement, installation and maintenance

This device may be technically repaired and reconditioned by Reinecker Vision GmbH only or by an authorized technician. The device may only be used again after a safety check, thorough cleaning and disinfection.

Environmentally friendly disposal (Directive 2012/19/EU)



MD

Within the EU the respective national implementations of the Directive 2012/19/EU for the sustainable re-use and proper recycling of electrical and electronic equipment applies.
For countries outside the EU (e.g. Switzerland), the respective national implementations for the regulatory requirements for environmentally friendly disposal and recycling applies.

List of symbols used

	Manufacturer		Country of manufacture
#	Model number	REF	Catalogue number
SN	Serial number		Caution
MD	Medical device	UDI	Unique Device Identifier
	Consult instructions for use		Temperature limit

I.II General Information – valid for MANXXLP3LV

The order code of your device can be found on the type label on the device or on the packaging.

Purpose

MANO XXL is a system for magnifying text and pictures.

Declaration of Conformity (DoC), CE/FCC mark

You can request a copy of the declaration of conformity in written form from Reinecker Vision GmbH, Sandwiesenstr. 19, 64665 Alsbach-Hähnlein or view it at www.reineckervision.de/en/int-doc

Safety advice

The device may only be set up and operated in closed and dry rooms. The device should not be operated in explosion-endangered environments. The device may only be connected to a state-of-the-art circuit.

Repair and maintenance

The device may only be serviced and repaired by Reinecker Vision GmbH or an authorized dealer.

Environmentally friendly disposal



The device contains electronic components.
To avoid environmental damage, the respective country-specific laws and regulations for the disposal of the device must be respected.

II. Safety instructions

Please respect the following safety instructions:

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 which is included in the delivery by Reinecker Vision GmbH. The use of any other equipment might lead to a product damage.
4. If the system is equipped with batteries, only original parts from Reinecker Vision GmbH should be used for replacement.
5. Do not expose the system to direct sunlight or extreme heat or cold temperatures, as this would harm the picture quality.
6. Do not operate this device below +10°C or above +35°C.
7. Keep liquids away from the system. Only operate the device in a dry environment.
8. The device should not be operated next to medical devices (patients environment).
9. Do not press or drag objects across the touch display. Do not lean on the screen 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 on your own. That would immediately void the warranty. If you need any technical assistance please contact your distributor or Reinecker Vision GmbH.
11. Always turn the system OFF 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

III. Instructions on the use of MANO XXL

Scope of delivery

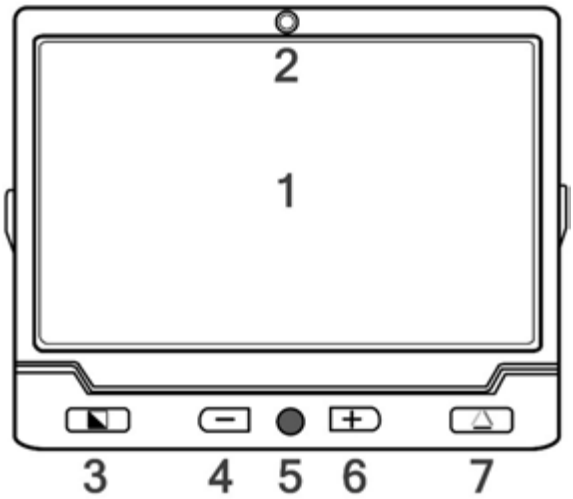
The following components are integrated in the delivery:

- HD magnifier MANO XXL
- Power supply incl. connection cable
- HDMI cable (1,5 m)
- Protection bag
- Microfiber cloth
- User manual

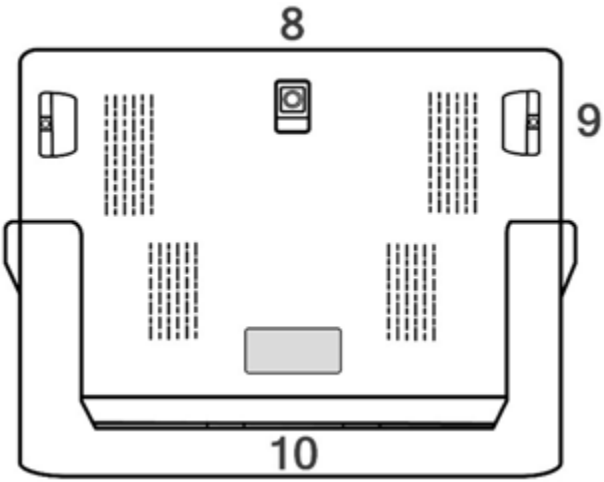
Commissioning

Before using MANO XXL for the first time, you have to charge the battery. Further information can be found under “Battery Charging” on page 14.

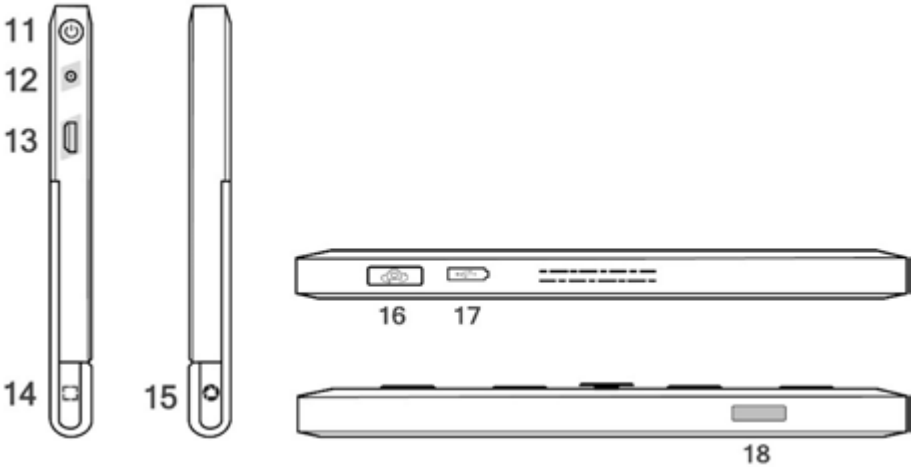
Compositions



1. LCD Screen
2. front camera
3. enhanced color (elevated square)
4. zoom out (recession tactile)
5. joystick
6. zoom in (elevated knob)
7. true color (elevated triangle)



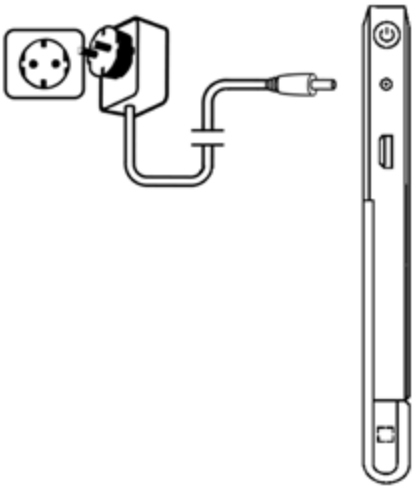
8. rear camera
9. LED lights
10. reading/writing stand



11. ON/OFF button
12. power port
13. HDMI port
14. line marker and mask + search function
15. freeze button
16. camera switch
17. power port
18. focus control

Battery Charging

- Connect the supplied power cable to the power adapter.
- Connect the supplied power cable to the unit's power port.
- Plug the power adapter into an AC outlet and start charging.



Power LED

Charging when the unit is OFF, the power LED will be green, and then auto turn OFF when fully charged. A full Charge will take about 5 hours and will support the unit working for about 4.5 - 5.5 hours (depending on type of use).

Charging when the unit is ON, the power LED will be green.

When the unit is ON without charging, the power LED will be green when the battery level is high and will be red when the battery is dying. It is a signal to charge the battery as long as the red light starts to flash.

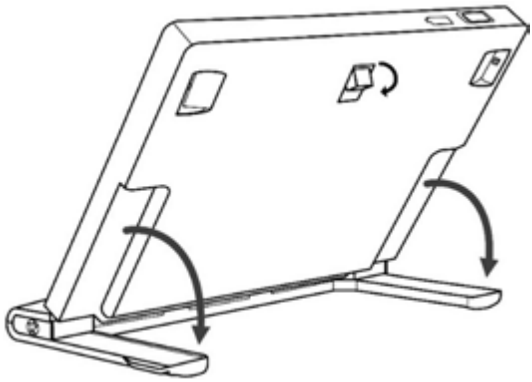


You can also check the battery status by pressing the ON/OFF button. Refer to the following instructions for more details. Further information can be found in chapter “operation

Integrated Stand

With integrated foldaway writing stand at an ergonomic viewing angle, MANO XXL can satisfy users' desire to read more and for a long time in a comfortable position. Also, there's enough space under the camera to work the pen. Unfold the stand as the following figure shows.

The rear camera is designed to auto rotate according to the status of the stand, so that both the near view and far view are supported on this unit. Please fold the stand when view in a distance.



Foldable Reading/Writing Stand

MANO XXL Stand is elaborately designed for the MANO XXL to make reading/ handwriting easier for visual impaired people.



The stand is extremely compact and lightweight, and the operation is also very simple and intuitive. Enjoy hand-free reading and hand-writing with a sufficient space.

Further information on set-up and handling can be found from page 23 ff.

Operation

ON/OFF button


Press and hold the ON/OFF button for 3 seconds to turn ON/OFF the unit.

When the unit is ON, press the ON/OFF button to check the current status of battery capacity, freeze mode, focus status, and beep.

Press other buttons when holding the ON/OFF button will make combo functions. Refer to the following instructions for more details.

Beep Type

- unit ON/OFF beep
- button beep
- threshold beep
- low battery beep

Beep Control

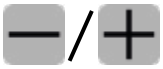

Press and hold the ON/OFF button and press the true color button to turn ON/OFF the beep.

Camera Switch


Turn the camera switch left to open the rear camera for near view and far view.

Turn the camera switch right to open the front camera for mirror view.

Magnification


Press the zoom in button to increase the magnification step by step or hold the zoom in button for continuous magnification.

Press the zoom out button to decrease magnification and hold the zoom out button for continuous decrease.

Magnification range when standing on table: 2x – 32x

Color Mode

A color mode is a predefined color combination. Full color mode is suitable for viewing pictures or maps.

Enhanced color mode is combined with different foreground and background colors which can help to read more clearly.


Press the enhanced color button, to go through the enhanced color combination list.


Press the true color button to return to the full color mode.


Press and hold the enhanced color button for 3 seconds to enter the customized color page.


Use the joystick and the true color button to activate/ deactivate the enhanced color combination.


No operation for 8 seconds or short press the ON/OFF button or long press the enhanced color button to exit the customized color page.

Enhanced color combinations (16 modes)

The following enhanced color combinations are available:


white and black


white and blue


green and black


black and blue


yellow and black


blue and yellow

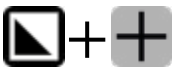

black and violet

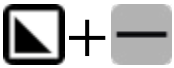

white on red


red on black

Contrast (in Enhanced Color Mode)

The contrast of the screen can be adjusted in the enhanced color mode.


Press and hold the enhanced color button and press the zoom in button to increase the brightness.


Press and hold the enhanced color button and press the zoom out button to decrease the brightness.

Factory default value will be highlighted green.

Brightness

Brightness of the screen can be adjusted in both full color mode and enhanced color mode.

Press and hold the ON/OFF button and press the zoom in button to increase the brightness.

Press and hold the ON/OFF button and press the zoom out button to decrease the brightness.

Factory default value will be highlighted green.

Lighting

Press and hold the Power button and press the Focus Control button, to switch between the 4 lighting statuses:



lights all OFF



lights all ON



left light ON, right light OFF



left light OFF, right light ON

Press and hold the ON/OFF button and press the freeze button to turn ON/OFF the two LED lights simultaneously

Focus Control

Click the focus control button to lock the focus, a red frame appears around the screen, which is especially useful when hand-writing.

Click the focus control button again to unlock the focus, the red frame disappears

Image freeze

Freezing an image on the LCD screen can be useful for further reading. At this status, magnification as well as color change is still allowed for a better experience.


Press the freeze button to lock the active image.
Press the freeze button again to unlock.


For the locked image with increased magnification, you can use the joystick to navigate around freely.

Image Storage


Long press the freeze button for 3 seconds to store the current image. You can save more than 1000 images

Note: When the saved images reach the maximum value (memory full icon appears), you will need to delete some images from the gallery as described below before you are able to save new images.

Image Gallery


To enter the gallery, long press the true color button for 3 seconds.


Slide the joystick to select the target image from the thumbnail page. Press the true color button to view the target image. You can view and navigate the image with the same operations described in the image freeze section. Press the freeze button to close the image and return to the gallery.


To get to the previous or next image, press the ON/OFF button to pop up the previous and next page icon. Press the zoom in/out buttons to turn pages without exiting to the gallery.


When in the gallery, press the locate button to select the target image which needs to be deleted. Press the locate button again to confirm, or any other buttons to cancel.

When in the gallery, hold the locate button for 5 seconds to delete all images. Press the locate button again to confirm, or any other buttons to cancel.


Long press the freeze button for 3 seconds to activate the multi-selection.


Use the joystick and true color button to choose the target pictures and you can delete the selected pictures at once.


Pressing the locate button will pop up a confirm box. Press the true color button to confirm deletion and the enhanced color button to cancel.

Long press the freeze button again or long press the true color button or short press the ON/OFF button to cancel the multi-selection.

Long press the true color button for 3 seconds or short press the ON/OFF button to exit the gallery.

In the gallery, keeping sliding the joystick down/up can quickly turn the pages.

Line & Mask


Press the locate button to switch among different Reading Line & Mask modes.


Hold the locate button and then click the enhanced color button to change the line color.

One horizontal line


Press and hold the locate button and slide the joystick up/down to change the position of horizontal reading line. Slide the joystick left/right to decrease/increase the width of the line.

One vertical line


Press and hold the locate button and slide the joystick left/right to change the position of vertical reading line. Slide the joystick up/down to increase/decrease the width of the line.

Horizontal mask


Press and hold the locate button and slide the joystick up/down to change the position of the masks. Slide the joystick left/right to narrow/enlarge the distance between the masks.

Vertical mask


Press and hold the locate button and slide the joystick left/right to change the position of the masks. Slide the joystick up/down to enlarge/narrow the distance between the masks.

Normal, no line & mask



Pressing the ON/OFF button will quickly exit the line & mask modes.

Find



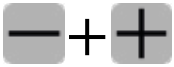
Long press the locate button, until a red location box appears. Move and change the content in the location box, aiming it at the part you want to view, and then press the locate button, again and the image will return back to the previous magnification with the refreshed content.

For example, you are viewing one part of a map with a certain magnification. Then you want to see another part without changing your favorable magnification. Then the function would be convenient and useful for you.

Live Panning

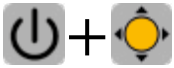


You can use the joystick when in the real-time video mode to move the magnified image section in order to see more without moving the unit.



Press the zoom in and zoom out buttons at the same time to re-center the image (a red dot appears).

Two ways to quickly jump to the start/end point:



press and hold the ON/OFF button and slide the joystick or quickly push the joystick in the same direction twice.

For example, if you have finished reading a horizontal line and want to read from the beginning of the next line, please hold the ON/OFF button and slide the joystick left or just quickly push the joystick left twice. The start point or end point will be auto recorded and refreshed according to the maximum navigation range when reading.

The navigation speed can be adjusted in three levels: slow, medium (the factory default) and fast. Push the joystick to one side and press the zoom in/out to increase/decrease the reading speed.

Memory

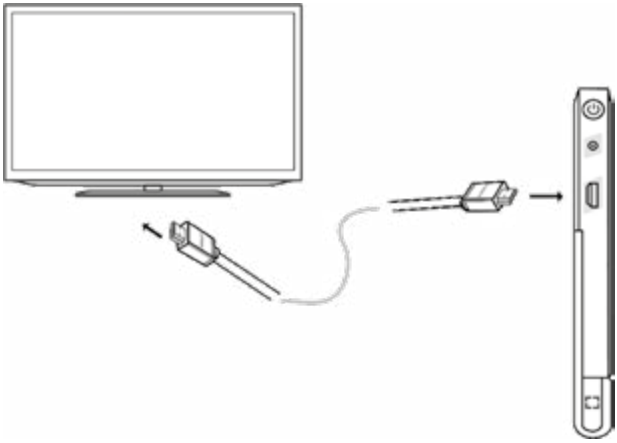
The unit will memorize automatically the most recent settings such as color mode, magnification, beep when power is OFF normally and apply them when the unit is ON next time

Change refresh rate (60Hz to 50Hz)

Press and hold the ON/OFF button and the color button for about 3 seconds, to change the refresh rate from 60Hz to 50Hz or the other way around. Change when necessary, only if there is a unpleasant flicker on the screen.

HDMI Output

Connect the unit to your external display device with HDMI cable for a better and larger viewing (resolution 1080p).



Auto Power Saving

If no operation and no move for over 3 minutes, the unit will turn OFF automatically.

Press and hold the ON/OFF button and click the enhanced color button to turn ON/OFF the Auto Power Saving function manually (factory default is ON).
(Pay attention to the moon symbol)

Restore to Factory Settings

Long press the freeze button and the locate button at the same time for 5 seconds to reset to the default factory settings. Auto power OFF when reset is done.

Hardware Reset

Long press the freeze button and the locate button at the same time for 5 seconds to reset to the default factory settings. Auto power OFF when reset is done.

IV. Foldable Reading/Writing Stand



Construction



Unfold procedure

Step 1: Separate the legs apart.



Step 2: Split the legs to form the V shape.



Step 3: Slide the MANO XXL into the slot of tray until it locks into place.



Use Case

The stand is multi-functional to assist:

- Reading
- Handwriting
- Far view
- Mirror view

The operations may be varied based on different use cases. The following cases are our recommended modes of operation.

Case 1: Reading Mode

Adjust your comfortable reading angle.

.



Note: With the built-in auto recognition mechanism, the device can auto recognize the stand and turn ON the lights for a better experience.

Warning:

Never look directly into the light source. This could damage your eyes.

Case 2: Handwriting Mode



The first steps are the same as for handwriting mode (see variant 1): Tilt the MANO to the reading angle that is most comfortable for you.

There are four light statuses which can be applied to help the handwriting:



lights all OFF



lights all ON



left light ON, right light OFF



left light OFF, right light ON



Press and hold the ON/OFF button and click the freeze button to turn ON/OFF the two LED lights simultaneously (The operation is compatible for all firmware version).



Press and hold the ON/OFF button and press the focus control button to switch from three light statuses: Left light ON, Right light ON and All lights ON/OFF (based on the latest setting).

Shadow reducing when handwriting

For example, if you are left-handed, turn OFF the left LED light. If you are right-handed, you can turn OFF the right LED light to reduce the shadow.



Case 3: far view

Adjust the viewing angle as the picture shows.
Rotate the device around and face the back camera to the object which you want to view.

.



Note: With the built-in auto recognition mechanism, the device can auto recognize the far view case in the stand and turn OFF the lights automatically.

Case 4: mirror view

Rotate the device around and face the front camera to the object which you want to view.

Turn the camera switch right to open the front camera for mirror view.



Fold procedure

The folding procedure is as simple as unfolding.
Step 1:

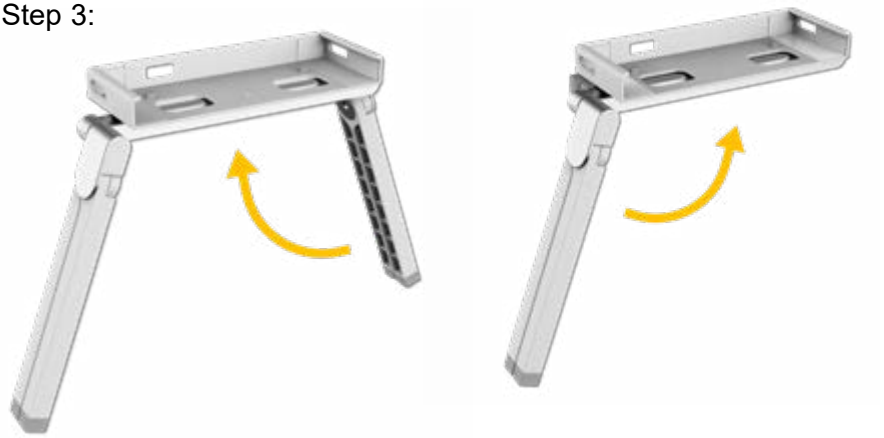


Step 2:



Attention:
Be careful not to jam your fingers when folding the legs of the stand.

Step 3:



Step 4:



V. Troubleshooting

The unit does not turn ON

- Connect to the power adapter
- Charge the battery
- Hardware Reset

Black screen or White screen

- If the unit is sitting on a flat pure surface, the screen may be black or white. Lift the unit up to ensure change happens.
- Adjust the magnification
- Adjust the color mode
- Restart the unit
- Hardware Reset

The image does not change

- If the unit enter the freeze mode or playback mode, the image will not change.
- Press ON/OFF button to check the current status
- Restart the unit
- Hardware Reset

Smudges or blemishes on the screen

- Adjust brightness
- Clean the LCD screen and camera

Please contact your local distributor if problem is not solved.

VI. 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 authorized specialists may lead to invalidity of warranty.
5. The liability for material defects does not include light sources serving to illuminate the reading object and other parts subject to wear and tear, e.g. rechargeable batteries.
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. Prior to returning the system, a RMA number issued by Reinecker Vision is required. Please have the exact serial number of your system before hand.

Phone number: +49 6257 9311-0

View our General Terms and Conditions.

Your authorized distributor:

VII. Technical Details

Type	**MANO XXL** (MANXXLP3/MANXXLP3LV)
Display	10.1-inch wide LCD, HD screen
Camera	autofocus, HD
Magnification	approx. 2x - 32x
Color mode	true color; up to 16 enhanced color modes adjustable
Size (W x H x D)	approx. 24.5 x 2.2 x 20 cm
Weight	approx. 700 g
Operating time	up to approx. 4.5 to 5.5 hours (depending on operation mode)
Charging time	approx. 5.5 hours
Power adapter	Input: 110-240V; Output: 5V/3A

Foldable Stand	
Size (W x H x D)	folded: approx. 30.5 x 5.3 x 10.2 cm
Weight	approx. 560 g
Adjust angle	0-30° in reading/handwriting mode 0-90° in distance view/mirror view mode

Manufacturer

Reinecker Vision GmbH
International Contact

sales department, customer relations:
Sandwiesenstraße 19
DE-64665 Alsbach-Hähnlein

customer service:
Erlenweg 3
DE-64665 Alsbach-Hähnlein

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SRN: DE-MF-000025998

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

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

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

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