



USER MANUAL



+1 305-882-0120

5555 NW 74 Av. Miami, Fl 33166 sales@mercoframes.net www.mercoframes.com

CONTENTS

1	Safety	6
1.1	Symbols	6
1.2	Intended use	10
1.3	Contraindication	10
1.4	Precautions	11
2	Device overview	13
2.1	Controls and display icons	14
3	Getting started	16
3.1	Part list and unpacking	16
3.2	Preparations	16
4	Features	19
4.1	Quick menu	19
4.2	Camera settings	21
4.3	Optics settings for Pictor Retina Module	23
4.4	Optics settings for Pictor Anterior Module	25
5	Imaging with Pictor	26
5.1	Retina Module	27
5.2	Anterior Module	28
5.3	After imaging	29
6	Important information	30
6.1	Environmental conditions	
6.2	Error messages	30
6.3	Cleaning	
6.4	Service and repair	
6.5	Battery	
6.6	Disposal	
6.7	Technical description	
6.8	Electromagnetic compatibility	
6.9	Compliance	
6.10	Warranty	
Α	Appendix - WLAN	43
A.1	Wireless settings	43
A.2	Volk Client PC software	
Notes		45
Index		46

1. SAFETY

The information in this manual applies to the Volk Pictor Prestige ophthalmic camera. The specifications in this manual are subject to change without prior notice due to continuing product development. The latest version of this manual can be downloaded at www.volk. com/support where you can also find more training materials.

This user manual explains the safety precautions and introduces the device and its proper operation. The device must be used according to this user manual. The user manual and other documentation enclosed with the Pictor Prestige should be kept accessible to users at all times to ensure that the information required for use of the device is readily available.



CAUTION!



Read the user manual carefully before commissioning this device. It contains important information regarding user and patient safety.

1.1 SYMBOLS

The symbols used in this user manual or on device labels refer to important safety information or manufacturing information. Whenever you see these symbols, read the accompanying information carefully and observe all safety notes and information in this user manual and on device labels.



WARNING!

Indicates a hazardous situation which could result in patient injury, harm or death if appropriate safety precautions are not followed.



CAUTION!

Indicates a situation which could result in device harm, damage or malfunction if the appropriate precautions are not followed.



NOTE!

Important information: please read and follow carefully.



Read the instructions for use carefully

Failure to follow these instructions could place the patient or operator at risk.



Radio frequency radiation

The device has WLAN functionality. Electromagnetic interference may occur in the vicinity of equipment.



FCC Declaration of conformity

The device emits RF radiation. Electromagnetic interference from the device is under limits approved by the Federal Communications Commission.



Prescription device

Symbol for: "Caution: Federal law restricts this device to sale by or on the order of a physician or licensed practitioner."



Type BF applied parts

The eye cup which is in physical contact with the patient, is electrically isolated and protected against electric shock.



Class II power supply



For indoor use only

Power supply designed primarily for indoor use only according to IEC 60417



Plug socket for power supply (Positive polarity)

Voltage and current



Disposal specification

European directive on waste electrical and electronic equipment (WEEE) 2012/19/EU specifies the disposal.



Disposal specification

European directive on waste electrical and electronic equipment (WEEE) 2008/19/EU specifies the disposal.



Battery disposal specification

The device has a rechargeable lithium-ion battery which can be recycled.



Manufacturer

The symbol is accompanied by the date of the manufacture, and the name and the address of the manufacturer.

SN

Serial number

The first four digits of the serial number indicates the week (digits 1-2) and year (digits 3-4) of the manufacture.

GTIN

Global trade item number

REF

Reference number



GS1 Unique Device Identification



Keep away from water



Fragile

Handle with care.



Do not use hand hooks



Keep out of direct sunlight



Number of units packed



Temperature limitations



Humidity limitations



Atmospheric pressure limitations

12 INTENDED USE

Volk Pictor Prestige is a medical digital camera that is used with dedicated optics modules intended to capture images and video of the fundus of the eye and surface of the eye.

Volk Pictor Prestige Camera with Volk Pictor Prestige Retina Module is intended to capture digital images and video of the fundus of the human eye.

Volk Pictor Prestige Camera with Volk Pictor Prestige Anterior Module is intended to capture digital images and video of the surface of the human eye and surrounding areas.

1.3 CONTRAINDICATION

Volk Pictor Prestige is classified as Group 2 based on standard ISO 15004-2:2007. The daily usage time and maximum allowed number of pulses presented below is calculated on the basis of optical classification results.

WARNING!



The light emitted from this instrument is potentially hazardous. The longer the duration of exposure and the greater the number of pulses, the greater the risk of ocular damage. Exposure to light from this instrument when operated at maximum output will exceed the safety guideline after:

Pulsed light

- 6300 still images / eye / day for Pictor Retina Module
- 250 still images / eye / day for Pictor Anterior Module

Or alternatively continuous light

- 90 min video recording / eye / day for Pictor Retina Module
- 8 min video recording / eye / day for Pictor Anterior Module

Please note that the exposure time in video recording and the number of pulses in still imaging from all light sources are cumulative and additive. If the intensity of any of the light sources is reduced to half of the maximum output, the exposure time or number of pulses for that light source to reach the exposure safety guideline is doubled.

Since prolonged intense light exposure can cause ocular damage, the use of the device for ocular examination should not be unnecessarily prolonged, and the brightness setting should not exceed what is needed to provide clear visualization of the target structures. Infants, persons with aphakia or diseased eyes will be at greater risk of ocular damage. The risk may also be increased if the person being examined has had any exposure with the same instrument or any other ophthalmic instrument using a visible light source during the previous 24 hours.

1.4 PRECAUTIONS



WARNING!

Volk Pictor Prestige is not suitable for use in explosion risk areas or in the presence of flammable anesthetics.



WARNING!

Place the PC and Pictor Charging Station outside the patient environment (at a distance of at least 1.5 meters from the patient).



WARNING!

To avoid contamination, clean the eye cup before each use with a new patient.



WARNING!

Do not leave the eye cup in direct sunlight as it may heat up and cause burns.



WARNING!

In order to avoid touch current during imaging, do not touch the system connector and the patient simultaneously.



CAUTION!

Volk Pictor Prestige is intended for use inside, in normal room temperature, and normal humidity. Do not use the device in an environment where there is a possibility of water condensation on or inside the device.



CAUTION!

The device may only be used for the specified purpose and according to national regulations, consistent with the applicable industry standards and occupational safety and accident prevention regulations.



CAUTION!

Federal law restricts this device to sale by or on the order of a physician or licensed practitioner.



CAUTION!

No modification of this equipment is allowed.



CAUTION!

Only use accessories and battery provided by Volk with this product.



CAUTION!

Only use USB cable and the power source provided by Volk with this product. If you need replacement USB cable or power source, please contact the manufacturer or your local distributor. USB cable must be connected only to the USB port of a PC that complies with the IEC 60950 standard. Only connect Pictor Charging Station to an electricity supply which corresponds to the supply voltage of the device.



CAUTION!

The connection between the camera and the PC is USB and/or WLAN. Any authorization procedures should be carried out in the PC. If the PC is connected to a customer network, make sure the appropriate safety measures are applied, such as Antivirus and Firewall protection.



CAUTION!

If there are breaks in device covers or other visual defects, contact Volk Customer Service or a Volk-certified service facility.



CAUTION!

Repair and maintenance work may only be performed by authorized specialists. Contact your Volk representative for repairs and maintenance work on the device.

2. DEVICE OVERVIEW



Volk Pictor Prestige is a modular ophthalmic camera that is designed for use in a medical environment. It is intended to capture digital images and video of the fundus of the eye and surface of the eye for documentation and consultation. Pictor Camera is used with interchangeable optics modules Pictor Retina Module and Pictor Anterior Module. Optics modules are attached to the camera with bayonet connectors.

Pictor Camera has a WLAN module which enables wireless data transfer to a PC. Captured images and recorded videos can also be transferred to a PC via USB connection when the camera is placed on Pictor Charging Station. In addition, Pictor Charging Station is a dual charger used for charging the battery inside the camera and spare battery.

Pictor Retina Module is intended for non-mydriatic fundus imaging. In non-mydriatic imaging no mydriasis is needed because infrared light is used for targeting the fundus and white light is flashed when an image is taken. The pupil does not respond to the infrared light so examination is convenient for the patient. With small pupils it is recommended to use mydriatic drops. Pictor Retina Module has nine internal fixation targets for the patient to fixate on during imaging. The middle fixation target provides a macula-centred image.

Pictor Anterior Module is intended for imaging the surface of the eye and surrounding areas. Pictor Anterior Module has two light sources for imaging: white and cobalt blue. Cobalt blue light enables capturing of fluorescent images. There are four focus windows to focus the image.



NOTE!

The device may only be operated by persons who have been properly trained or who have the required knowledge and experience to do so. The device may only be used in accordance with its intended use.



2.1 CONTROLS AND DISPLAY ICONS

Battery level, WLAN, patient, fixation target, brightness level and diopter value indicators are shown on the camera display.

Pictor Camera is powered on and off by pressing the power button. Opening the camera menu is done by pressing the Central Navigation Roller, which is also used for navigating in the menu together with back button.







Power on

Open camera menu and navigate

Back button

Images are captured by pressing the dual action shutter. If the performance of Pictor Camera is abnormal, it can be forced to shut down by pressing the power and back buttons simultaneously for seven seconds or longer.





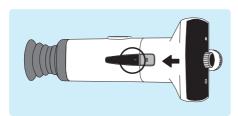


Shutter button for image capture

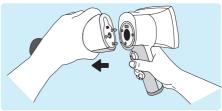
Forced shutdown

The battery charging indicator LED is on when the camera is placed on Pictor Charging Station for charging. There is also an LED indicator in Pictor Charging Station for indicating spare battery charging.

Optics modules are detached by pressing the eject button on the top of the camera.







Detach the module

3. GETTING STARTED

3.1 PART LIST AND UNPACKING

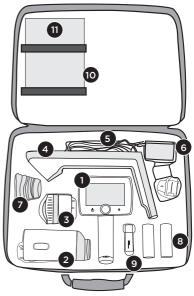
The Volk Pictor Prestige sales package contains the following items:

DEVICES

- 1. Camera
- 2. Retina Module
- 3. Anterior Module

ACCESSORIES

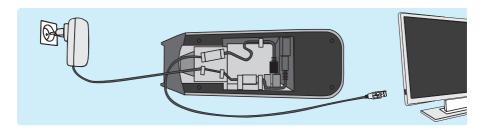
- 4. Charging Station
- 5. USB Cable
- 6. Power Supply
- 7. Eye Cup (2 pcs)
- 8. Battery (2 pcs)
- 9. USB Flash Drive
- 10. Cleaning Cloth
- 11. User Manual and other material



Open the sales packaging. Remove Volk Pictor Prestige and accessories from the sales package and check that all parts are present and undamaged. Packaging materials should be retained for future relocation or repair.

3.2 PREPARATIONS

Place Charging Station (4) next to the PC. Charging Station must be outside the patient environment at a distance of least 1.5 meters from the patient. Connect the USB cable (5) and the power supply cable (6) to Charging Station and to the PC and to the mains.



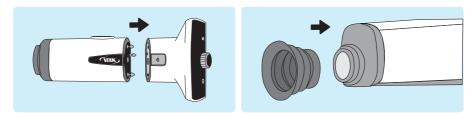


NOTE!

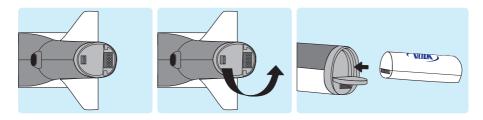
Position the power supply so that the mains plug is easily disconnected.

Both Retina Module (2) and Anterior Module (3) are attached to Pictor Camera (1) by connecting firmly the bayonet legs of the optics module to the bayonet holes of the camera. Avoid touching the camera lens with bayonet legs in order to prevent scratches. To detach the optics module, press the eject button on the top of the camera and take the camera and optics module apart.

Place the eye cup (7) on the optics ring of Pictor Retina Module (2).

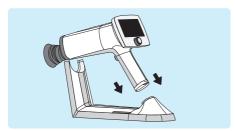


Install the **battery (8)** in **Pictor Camera (1).** Ensure that the camera is powered off when placing the battery. Open the battery cover by sliding the battery cover release knob. Insert the battery and press the cover firmly into place.



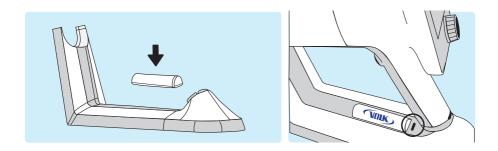
Place the camera on **Charging Station (4)** for charging. The camera will fit on **Charging Station** when **Retina Module (2)** is attached. Place the handle of the camera carefully onto the connector of Charging Station and move the front part of the optics module onto the support. Excessive force should be avoided in order to prevent the camera and Charging Station connectors from breaking. Pictor Camera is in power save mode while placed on Pictor Charging Station and it is powered on when lifted from Pictor Charging Station.

The battery charging indicator LEDs on the handle of the camera blink when the battery is being charged. When the battery is fully charged, all indicator LEDs are lit. When charging for the first time, charge the battery fully. In daily use, charge the battery when the battery level is low. Charging the battery at any level is not harmful for the battery.



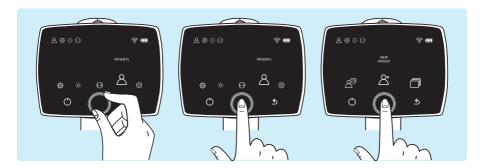


Pictor Charging Station can be used as an external charger for the spare battery. Set the spare **battery (8)** connectors to the **Charging Station (4)** connectors and put the spare battery in place. The spare battery charging indicator LED on Charging Station blinks when the battery is being charged, and is lit when the spare battery is fully charged.



Remove Pictor Camera from Charging Station by first lifting the optics module from the support and then lifting carefully the handle of the camera from the Charging Station connectors.

It is recommended to create a new study for each patient. A new study is created in the *patients menu* by selecting the **'New patient study'** item. It is also recommended that image data storage is always erased between patients after the images have been transferred to the PC.



If Pictor Camera is not used for more than two minutes, the device will go into power save mode. It is powered on from power save mode by using any control button. Pictor Camera will power off if not used for more than 10 minutes.

Pictor Camera has a WLAN module which enables wireless data transfer to the PC. The separate PC software needs to be installed on the PC to allow wireless data transfer. Instructions on the operation of wireless settings and PC software are in Appendix A.

4. FEATURES

When Pictor Camera is powered on, enter the menu by either pressing or rotating navigation roller.

To move between menu items, turn navigation roller to the left or right.

Press navigation roller to select the item. Exit the menu level by pressing the back button.



4.1 QUICK MENU



FOCUS

Change focus mode by selecting the focus item by pressing navigation roller and choose either manual or autofocus. When focus mode is set to manual, a diopter scale is shown on the screen and focus can be adjusted from -20 to +20 diopters. Accept the selection by pressing navigation roller. In autofocus mode, the camera finds correct focus automatically. The autofocus range is from -15 to +10 diopters.



BRIGHTNESS

Imaging light brightness for Pictor Retina Module can be adjusted from 0 to 10 and the default value is 5. It is also possible to reduce the brightness setting below 1, to 0.8, 0.6, 0.4, and 0.2, if needed. To adjust brightness, select the brightness item, choose a suitable value by turning navigation roller and press navigation roller to set the value.

For Pictor Anterior Module, it is possible to change the imaging LED between white and blue. When the desired LED is selected, the imaging light brightness can be adjusted from 0 to 10 in a similar way as described above.



SETTINGS

To change camera- or optics-specific settings, select the 'Settings' item by pressing navigation roller. Camera and optics-specific settings are described in the following chapters.



PATIENTS

In the patients menu, it is possible to create a new study for images, to preview captured images or to select four image sequence (only when Volk Pictor Retina Module is used).

A new study is recommended for each patient. Select the 'New patient study item by pressing navigation roller to create a new study. An anonymous study is created for the patient unless there is a patient list where you can select the patient by using navigation roller. A patient can also be deleted from the patient list.

Select 'Image browser' item by pressing navigation roller to preview captured images. To view the latest captured images in current patient study, select 'IMG'. If you want to preview images from other studies, select the study/patient whose images you wish to preview. Then select the desired image from the selected study by using the navigation roller. When the image is shown, the image can be zoomed by pressing the navigation roller. It is also possible to delete complete studies or single images.

When imaging with Volk Pictor Retina Module, there is a possibility to select the 'Four image sequence' item by pressing navigation roller. By selecting four image sequence, a new patient study is created and the camera will guide to take both macula and disc centered images from patient's right and left eyes. After each capture, the image can be zoomed, retaken or you can choose to continue to the next sequence.



TARGET LEDS FOR PICTOR RETINA MODULE

Volk Pictor Retina Module has nine internal fixation targets for the patient to fixate on during imaging. The middle fixation target is on by default and it provides a macula centred image. To change the fixation target, select the target LEDs item, then turn navigation roller left or right to choose the suitable LED and press navigation roller to set the fixation target.



FOCUS WINDOWS FOR PICTOR ANTERIOR MODULE

Volk Pictor Anterior Module has four focus windows for the user to focus the image on different areas during autofocus imaging. The right focus window is selected by default and the image is focused to the right side. To change the focus window, select focus window item, then turn navigation roller left or right to choose a suitable area and press navigation roller to set the focus window area.

4.1 CAMERA SETTINGS



RESET

To restore settings to factory defaults, choose the reset item & press navigation roller. The camera prompts a question "Restore default settings?" for confirmation. The camera needs to be restarted to reset.



LANGUAGE

There are nine language options in Volk Pictor: *English, Finnish, French, Italian, Japanese, Portuguese, Spanish, Chinese and German,* and the default language is English. To change language, press navigation roller, then turn left or right to choose the desired language and set the language by pressing navigation roller The camera needs to be restarted to activate the new language.



ERASE IMAGE MEMORY

To erase images and videos from the camera's memory card, press navigation roller. Ensure that you have transferred images and videos to a safe location before erasing the image memory.



WIRELESS

Volk Pictor Prestige has a WLAN module that enables wireless connection to a PC. To change wireless settings, press navigation roller. Appendix A provides instructions for wireless settings.



ADVANCED CAMERA SETTINGS

To see more camera-specific settings, press navigation roller. The advanced camera settings include Date & Time, USB write protection, Camera information, and Start query options, which are described below.



DATE & TIME

To change the date/time settings, press navigation roller. To set the day, month, year, hours and minutes, turn navigation roller left or right and press navigation roller to select the next field. The date format is exceptionally MM DD YYYY except for Japanese and Chinese. Time is shown in the 24-hour format.



USB WRITE PROTECTION

USB write protection can be enabled or disabled, by default USB write protection is on. When USB write protection is on, modifying the memory card content is prevented. Copying files from the memory card to PC is possible.



CAMERA INFORMATION

Check camera information by pressing navigation roller. To browse software version, WLAN software version, HW version and camera serial number (ID), press navigation roller.



START QUERY

Choose the start query from erasing image memory, creating a new study, starting four image sequence or no query at all. The camera prompts the start query after powering on the device. When the 'Erase' query is chosen, the camera will ask whether all images and videos should be deleted. When the 'Study' query is chosen, the camera will ask if a new study should be created. If 'Four image sequence' is selected, the camera will guide to take both macula and disc centered images from patient's right and left eyes. If 'No query' is selected, the camera will go directly to live view after powering on or when removed from Pictor Charging Station.

4.3 OPTICS SETTINGS FOR PICTOR RETINA MODULE



QUICK IMAGING

Quick imaging can be enabled or disabled. When quick imaging is on, the camera returns to live view immediately after image capturing, and when it is off, instant preview with different choices is shown after imaging. In instant preview, it is possible to zoom, mark the imaged eve (left/right) and delete the image. Quick imaging is off by default.



HALF PRESS CAPTURE

Half press capture can be enabled or disabled. Half press capture is off by default. When half press capture is on, the functionality of dual action shutter is changed to:

- Manual focus: image is captured when the dual action shutter is pressed half way down
- Autofocus: image is captured after focusing when the dual action shutter is kept pressed half way down



CAPTURE MODE

There are two capture modes in Volk Pictor Prestige: still imaging and video recording. To choose capture mode, use navigation roller.



ADDITIONAL IMAGE

In addition to color image, there are two alternative imaging modes in Volk Pictor: Red-free and Low-red. When either one is selected, the camera saves an additional image (Red-free or Low-red) together with the original image. To save only the original image, choose 'None'. In the Red-free setting, the camera uses only the green channel to save the image, and in the Low-red setting the camera saves a red reduced image in addition to the original image.



ADVANCED OPTICS SETTINGS

To see more optics-specific settings, press navigation roller. The advanced optics settings include Capture settings in image, automatic IR contrast stretching, IR image, image quality analysis and centering options.



CAPTURE SETTINGS IN IMAGE

Writing capture settings to the image can be enabled or disabled. If it is on, the brightness level and diopter value are written in the lower right-hand corner of the image. The writing capture settings in image is off by default.



AUTOMATIC IR CONTRAST STRETCHING

Automatic IR contrast stretching can be enabled or disabled. If automatic IR contrast stretching is on, the infrared live view brightness and contrast is adjusted automatically according to the image content. Automatic IR contrast stretching is off by default.



IR IMAGE

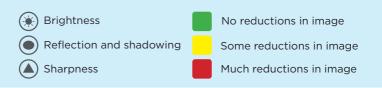
In addition to color image, there is also the possibility to capture an IR image. Use navigation roller to choose whether to aim and to capture the image with IR light. Only image captured with IR light will be saved.



IMAGE QUALITY ANALYSIS

The image quality analysis assists to evaluate the image quality of the captured image. The analysis level can be set to be 'Basic', 'Strict' or 'Very strict' by using navigation roller. The image quality analysis is off by default.

After an image is taken, brightness, reflection and shadowing, and sharpness are analyzed to assist the evaluation of the quality of the captured image. The results are shown with the symbols and with three different symbols presented below.





CENTERING

Centering allows adjustment of the imaging area to correspond with the view area. First select vertical or horizontal adjusting by using navigation roller. Move the image to the middle of the screen by turning navigation roller.

4.3 OPTICS SETTINGS FOR PICTOR ANTERIOR MODULE



QUICK IMAGING

Quick imaging can be enabled or disabled. When quick imaging is on, the camera returns to live view right after image capturing and when it is off, instant preview with different choices is shown after imaging. In instant preview, it is possible to zoom, mark the imaged eye (left/right), and delete the image. Quick imaging is off by default.



HALF PRESS CAPTURE

Half press capture can be enabled or disabled. Half press capture is off by default. When half press capture is on, the functionality of the dual action shutter is changed to:

- Manual focus: image is captured when the dual action shutter is pressed half way down
- Autofocus: image is captured after focusing when the dual action shutter is kept pressed half way down



CAPTURE MODE

There are two capture modes in Volk Pictor Prestige: still imaging and video recording. To choose capture mode, use navigation roller. Pictor Camera is used with interchangeable optics modules Pictor Retina Module and Pictor Anterior Module. Use Pictor Retina Module to capture fundus images and Pictor Anterior Module to capture images of the surface of the eye and surrounding areas.

5. IMAGING WITH PICTOR

Volk Pictor Prestige has two capture modes: still imaging and video recording. When recording video with Pictor Retina Module, the patient's eyes need to be dilated. Capture mode is selected from the optics- specific settings in the menu.

Select focus mode to manual or autofocus from the quick menu. When focus mode is set to manual, a diopter scale is shown on the screen and focus can be adjusted. In autofocus mode, the camera finds correct focus automatically.

- For Pictor Retina Module, it is recommended to use manual focus. Manual focus is adjusted according to the patient's refractive error. When the patient has hyperopia, set the focus to be positive by turning navigation roller to right, and when the patient has myopia, set the focus to be negative by turning navigation roller left
- For Pictor Anterior Module, it is recommended to use autofocus.

Adjust **imaging light brightness** from the guick menu.

• When imaging with Pictor Retina Module, the suitable brightness setting depends on the pigment of the patient's eye and age of the patient. For adult patients with blue or green eyes, the right setting is approximately 3 to 5 and for patients with brown eyes 6 to 8. If images are too bright, it is possible to reduce brightness below 3. Respectively, brightness can be increased up to 10, if images are too dark.





• When imaging with Pictor Anterior Module, first select the imaging light to be white or blue and then set the brightness. The default value is 5, which is suitable for most imaging situations.

Pictor Retina Module has nine internal fixation targets for the patient to fixate on during imaging. The middle fixation target is automatically on and it provides a macula center image. Change the fixation target from the quick menu.

There are four focus windows in Pictor Anterior Module to focus the image on different areas during autofocus imaging. The right focus window is selected by default. Change the focus window from the guick menu.

Create a **new study** for each patient from the 'Patients' menu.

5.1 RETINA MODULE

When imaging with Pictor Prestige Retina Module, the examination room should be as dim as possible. It is recommended that both the patient and the examiner are seated during the examination. It is also possible to perform the examination when the patient is lying down.

Ask the patient to keep the eye aligned with the target light and to cover the other eye. Approach the pupil and stabilize the camera by supporting the optics module



on your thumb and place your fingers on the patient's forehead. Press the eye cup firmly around the examined eye. The pupil is approached until the reflection from the eye fundus can be seen. The right imaging distance is about 2 cm (0.8 inches).

The aim help circle on the display guides when to capture an image. When the retina is not fully in view, the circle is red. Once the aim is good and the retina fully appears on the screen, the circle turns green.

CAPTURING STILL IMAGES:

- Manual focus: Take a still image by pressing the dual action shutter all the way down.
- Autofocus: Automatic focusing begins when the dual action shutter is pressed half way down. After successful focusing, an image is captured when the dual action shutter is pressed all the way down. An alternative way to capture an autofocused image is to keep the dual action shutter pressed all the way down when the camera first focuses and then captures an image.

RECORDING VIDEOS:

- Manual focus: To record a video keep the dual action shutter pressed all the way down. When the dual action shutter is released, the recording ends.
- Autofocus: Automatic focusing starts when the dual action shutter is pressed half way down. After successful focusing, a video is recorded when the dual action shutter is pressed all the way. When the dual action shutter is released, the recording ends. An alternative way to record an autofocused video is to keep the dual action shutter pressed all the way down when the camera first focuses and then begins a video recording. When the dual action shutter is released, the recording ends.

5.2 ANTERIOR MODULE

It is recommended that both the patient and the examiner are seated during imaging with Pictor Prestige Anterior Module. Place the eye cup of Anterior Module around the patient's eye. Stabilize the camera by supporting the optics module on your thumb and place your fingers on the patient's forehead. Aim the image so that reflection of imaging light on eye is outside of the focus window shown on the display. Ask the patient to look in different directions so that different areas can be imaged.



CAPTURING STILL IMAGES:

- Manual focus: Take a still image by pressing the dual action shutter all the way down.
- Autofocus: Automatic focusing begins when the dual action shutter is pressed half way down. After successful focusing, an image is captured when the dual action shutter is pressed all the way down. An alternative way to capture an autofocused image is to keep the dual action shutter pressed all the way down when the camera first focuses and then captures an image.

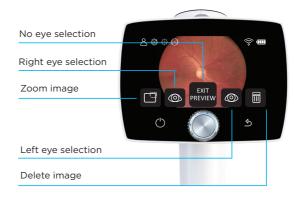
RECORDING VIDEOS:

- Manual focus: To record a video, keep the dual action shutter pressed all the way down. When the dual action shutter is released, the recording ends.
- Autofocus: Automatic focusing starts when the dual action shutter is pressed half way down. After successful focusing, a video is recorded when the dual action shutter is pressed all the way. When the dual action shutter is released, the recording ends. An alternative way to record an autofocused video is to keep the dual action shutter pressed all the way down when the camera first focuses and then begins a video recording. When the dual action shutter is released, the recording ends.

5.3 AFTER IMAGING

After capturing a still image, the image preview is shown on camera display. The image specific query is shown after pressing or rotating navigation roller. In preview query there is the possibility to zoom the captured image, select a side of imaged eye and delete the captured image.

When the image is zoomed by pressing navigation roller, first the center of image is displayed as zoomed. To view the periphery of the image as zoomed, turn navigation roller left or right. Note that the zoomed areas overlap.



There is also a possibility to select the side of the imaged eye in image preview by choosing either 'Left' (OS) or 'Right' (OD) by using navigation roller. In addition, the captured image can be deleted in image preview. Note that if the image is deleted, it is not transferred over WLAN or saved to the memory card. To exit from image preview without selecting the side of the imaged eye, select 'Exit preview'. The image is then saved to the memory card and transferred over WLAN.

Captured images and recorded videos are saved to the memory card. When WLAN is used, Pictor Camera transfers captured images and recorded videos to the PC automatically immediately after imaging. Please note that wireless transfer is paused if the camera is placed on Pictor Charging Station during wireless transfer. The camera will continue wireless transfer when removed from Pictor Charging Station.

Images and videos can also be transferred to PC from the memory card when the camera is placed on Pictor Charging Station. Pictor Camera will display a 'Connected' message when the device is connected to a PC via USB. The image data transfer method to PC is similar to any other USB mass storage device. The device does not need any drivers to be installed on the PC. Writing to the memory card from PC is disabled by default. When the Pictor Camera is not used, it may be stored on Pictor Charging Station. Storing the device on Charging Station is not harmful for the battery.

When the memory card or image counter is full, Pictor Camera will display a message with request to erase the image memory. First copy the images to a safe location and then select 'Erase image memory' from the device menu to erase images and videos from the camera memory card. The image counter will also be reset.



NOTE!

If images are corrupted or not transferred to the PC, the original images are saved to the memory card. Please try again to transfer images to the PC via USB.

6. IMPORTANT INFORMATION

6.1 ENVIRONMENTAL CONDITIONS

The device is intended for use indoors. Do not store or use the device in ambient conditions other than those prescribed.

	USE	STORAGE	TRANSPORTATION
TEMPERATURE	+10 °C to +35 °C	-20 °C to +35 °C	-20 °C to +50 °C
RELATIVE HUMIDITY	10% to 80%	10% to 85%	10% to 85%
ATMOSPHERIC PRESSURE	800 hPa to 1060 hPa	500 hPa to 1060 hPa	500 hPa to 1060 hPa



NOTE!

THIS INSTRUMENT DOES NOT MEET THE REQUIREMENTS OF ISO 15004-1 FOR STORAGE, DO NOT STORE THIS INSTRUMENT IN CONDITIONS WHERE THE TEMPERATURE MAY RISE ABOVE +35 °C OR FALL BELOW -20 °C.

Please also note that electromagnetic compatibility information and recommended separation distances between portable and mobile RF communications equipment and Volk Pictor Prestige are given in Chapter 6.8.

Protection against harmful ingress of water or particulate matter is defined as IPXO (Equipment not protected against the ingress of water).

6.2 FRROR MESSAGES

Volk Pictor Prestige will display error messages to indicate error situations. An error message is always displayed with an explanatory message providing information about possible actions.

ERROR MESSAGE	POSSIBLE ACTION
Optics failure #	Please detach the optics module and restart the camera. Error code identifies the error and it may be needed by customer service.
Light Source Temperature Too High	This indicates that the light source temperature exceeds the safety limits. Please wait until the camera cools down. This may take several minutes.
Image Storage Not Found	This indicates that there is a problem with the memory card. Please contact customer service for more information.
Battery Failure	The battery is either not properly in place or has been damaged. Please try reinstalling or replacing the battery and restart.

Optics module not detected	The camera is not able to detect the optics module. Please detach the optics module and restart the camera.
Patient list upload failure	This indicates that there is a problem with patient list uploading. Please retry. If the problem persists, please contact customer service.
Unable to create new study	The patient already has five studies and it is not possible to create a new study. Copy images to a safe location and select 'Erase image memory' from Camera settings.
Charging failure	This indicates that Pictor Camera is not properly connected to Charging Station. Please reconnect the camera to Charging Station.
Optics communication failure	This indicates that there is a problem with the optics module. Please reattach the optics module.
Autofocus calibration needed	Volk Pictor Prestige needs to be calibrated. Please hold the camera horizontally and press navigation roller to calibrate.
Memory erasing failed	This indicates that there is a problem with memory erasing. Please retry. If the problem persists, please contact customer service.
System memory not available	This indicates that there is a problem with the system memory. Please restart the camera.
Image counter full	Pictor Camera can store 9,999 images. Once the image counter is full, copy the images to a safe location and select 'Erase image memory' from Camera settings.

If the device behaves abnormally, Pictor Camera can be forced to shut down by pressing the power and back buttons simultaneously for seven seconds or longer.

The manufacturer of Volk Pictor Prestige will provide software updates as needed throughout the lifecycle of Volk Pictor Prestige to continue to guarantee its safety and effectiveness.



NOTE!

If a malfunction cannot be rectified, please contact your local distributor or Volk customer service.

6.3 CLEANING



CAUTION!

Do NOT use aggressive or abrasive cleaning agents or the following chemicals for cleaning:

- Mineral spirits, paint thinner, benzene, gasoline, lamp oil
- Strong / corrosive acids (such as sulphuric acid)
- Strong / corrosive bases (such as sodium hydroxide)
- · Bleaching agents
- · Nail polish remover

Use of ammonia-based cleaners on the liquid crystal display (LCD) may cause damage to the display.

The Volk Pictor Prestige is a precision optics instrument that should be handled with care. Please note the following cleaning instructions:

- · Shut down the device before cleaning
- Remove Charging Station from mains before cleaning
- Disinfect device parts with soft cloth moistened with alcohol (e.g. 70% ethanol).

Avoid touching lenses and system connectors in Pictor Camera and Pictor Charging Station.

• Lenses may be cleaned with a cleaning cloth. A moist-cleaning tissue can also be used.

Cleaning the screen:

- Clean the screen using a soft, clean cloth moistened with neutral cleaning agents or ethanol
- Do not use any chemical solvents, acids or alkaline solutions

Clean the eye cup before each use on a new patient:

- Disinfect the eye cup with a soft cloth moistened with alcohol (e.g. 70% ethanol); or
- Soak the eye cup in a glutaraldehyde-based solution or hydrogen peroxide and peracetic acid solution
- Rinse the eye cup under running water
- Dry the eye cup (e.g. with clean paper towel) before subsequent use

If a replacement eye cup is needed, please contact customer service or your local distributor. The eye cup should be replaced when:

- Discolored
- Deteriorated
- Shattered, cracked or disintegrated



NOTE!

Volk Pictor Prestige is not intended to be sterilized.



NOTE!

Ensure that no moisture penetrates the system during cleaning and disinfection.

6.4 SERVICE AND REPAIR

The user of the device is allowed to replace the battery and clean the device, which are instructed in this user manual. There are no other maintenance procedures that can be carried out by the user. All servicing and repairs other than replacing the battery and cleaning the device must be carried out by Volk or Volk-authorized service facilities and service personnel. Volk will make available work instructions to repair those parts of medical electrical equipment that Volk has designated as repairable by service personnel. If your device requires a warranty, extended warranty or non-warranty repair service, contact Volk Customer Service (volk@volk.com) or your local distributor. Estimates for non-warranty repairs are provided at the currently valid charge; however the device must be sent to Volk for an estimate. When you contact customer service, the representative will record all necessary information and will provide a Return Authorization Number. Prior to returning any product for repair, a Return Authorization Number must be obtained.

6.5 BATTERY



CAUTION!

Only use the battery provided by Volk with this product. Do not use a damaged or leaking battery. Do not disassemble, modify, crush or destroy the battery pack. Doing so can cause battery fluid leakage, heat generation, burns, fire and/or explosion.



CAUTION!

Charge the battery with Pictor Charging Station only. Use of an unrecommended charger may cause battery fluid leakage, overheating of the battery, or may cause the battery to explode.

Pictor Camera has a rechargeable Li-ion battery that is charged when the camera is placed on Pictor Charging Station, which is connected to the mains. Pictor Charging Station can also be used as an external battery charger for the spare battery included in sales case. The battery pack is specially designed and manufactured for this device. Volk Customer Service or your local distributor provide suitable battery packs. The label on the battery includes the following information:

Li-ion Rechargeable Battery 3.65V / 2750mAh / 10.038Wh 50001781, 1INR19/65, INR18650-29E Provided for Volk Optical Inc. by Celltech (Zhongshan) Ltd. CAUTION! Do not disassemble or modify Do not short-circuit Do not dispose in fire Do not expose to high temperature

 $\hbox{Li-ion Rechargeable Battery } 3.65 \hbox{V} / 2750 \hbox{mAh} / 10.038 \hbox{Wh } 50001781, 1 \hbox{INR19}/65, INR18650-29 \hbox{E Provided for Volk Optical Inc. by Celltech (Zhongshan) Ltd. CAUTION! Do not disassemble or modify Do not short-circuit Do not dispose in fire Do not expose to high temperature$

Normal battery service life is expected to be 1-2 years. When the battery is at the end of its service life, the usage time of the device is reduced. It is recommended to remove the battery if the device is stored for more than 2 months.

6.6 DISPOSAL



NOTE!

Electrical and electronic devices must be disposed of separately from household waste.

The device contains electronic components. At the end of its lifetime, the device and its integrated batteries should be disposed of in accordance with relevant national regulations.



NOTE!

Packaging materials should be retained for future relocation or repair.

If you decide to dispose of the packaging material, submit it to a recognized collection system for recycling.

6.7 TECHNICAL DESCRIPTION



CAUTION!

Only use the USB cable, battery and power source provided in the sales package. If you need replacement USB cable, battery or power source, please contact the manufacturer or your local distributor.



CAUTION!

The development, production and maintenance of this device, together with associated risks, are based on an expected device lifetime of five years. Modifications to the product or failure to follow the manufacturer's instructions may substantially reduce the expected service life and significantly increase the risks associated with the use of this device.

CAMERA

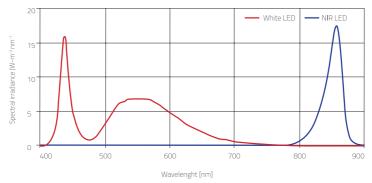
CAMERA			
Model:	Volk Pictor Prestige		
Image Sensor:	CMOS, 5.0 Megapixels		
Image Memory Type:	Internal 8 GB Memory		
Display:	4", TFT-LCD, 800x480 pixels, 16.7 M colors		
Image Format:	JPEG (file extension: jpg)		
Video format:	MPEG-4 (640 x 480)		
USB Connectivity:	USB 1.1, compatible with USB 2.0 and 3.0		
WLAN Connectivity:	802.11 bgn, wpa2 Operating frequency range: 2412 - 2472MHz (Channels 1-13) Modulation: OFDM (802.11 a/g/n), DSSS/CCK (802.11b) Maximum output power: 17.25 dBm Maximum antenna gain: 1.9 dBi		
Operating systems:	Microsoft Windows 7*, Windows 8.1*, Windows 10*. macOS (three latest versions) No driver installation needed.		
Dimensions:	122 (w) x 202 (h) x 97 (d) mm		
Weight:	473 g		
Battery:	50000655, 3.63V, 2600 mAh Rechargeable Li-Ion battery Li-Ion cell with integrated safety circuit 50001508, 3.65V, 2750 mAh Rechargeable Li-ion battery Li-ion cell with integrated safety circuit		
Usage time:	Approximately 2 h		
Device life time:	Approximately five years		
OPTICS FOR RETINA IMAGING			
Model:	Volk Pictor Prestige Retina Module		
Dimensions:	69 (w) x 74 (h) x 160 (d) mm		
Weight:	324 g		
Illumination:	Infrared LED for aiming. Visible white LED for imaging, 10 illumination brightness levels. 9 red LEDs for internal fixation targeting		
Maximum luminance:	3.0 cd/cm2		
	I control of the cont		

Field of view: $50 \times 40^{\circ}$

Diopter compensation: from -20 D to +20 D

Image resolution: 2368 x 1776 pix (total 4.2 Mpix, effective area 3.38 Mpix)

Spectral output at working distance:

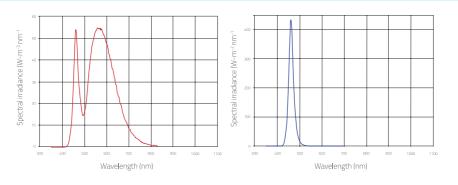


White and Infrared LED when operated in continuous mode

OPTICS FOR ANTERIOR IMAGING

Model:	Volk Pictor Presitge Anterior Module	
Dimensions:	71 (w) x 80 (h) x 78 (d) mm	
Weight:	105 g	
Illumination:	Visible white and cobalt blue LED for imaging, 10 illumination brightness levels Maximum luminance output level towards eye: 192 cd/cm2	
Image resolution:	2560 x 1920 pix	

Spectral output at working distance:



White LED when operated in continuous mode

Blue LED when operated in continuous mode

CHARGING STATION

Model:	Volk Pictor Prestige Charging Station
Dimensions:	107 (w) x 147 (h) x 300 (d) mm
Weight:	683 g
Switching power supply	
Type 1:	CINCON TRG10R090 Input: 100—240 V, -0.4 A, 47—63 Hz Output: 9 V, 1.1 A, 10 W
Type 2:	XP Power ACM12US09 Input: 100-240 V, 0.5 A, 50-60 Hz Output: 9 V, 1.33 A, 12 W
USB Cable:	Type: A to mini B Length: 1.5 m

Memory Stick

Memory stick including Volk Client PC Software and Instructions for use.

Cleaning Cloth

Cleaning cloth for cleaning lens and display.

Intellectual Property Right Information

Windows 7, Windows 8.1 and Windows 10 are trademarks of Microsoft Corporation. macOS is a trademark of Apple Inc.

Camera software: Software is based in part on the work of the Independent JPEG Group.

Patent Information

This product is protected by the following patent numbers and their corresponding national rights: US 8,078,667, US 8,960,910, US 9,033,507, ZL200880006260.2, ZL200880101934.7, ZL201180045540.6, ZL201380000912.2, EP2122560, EP2699144, EP2197334, FI122533, FI119531, FI126159, JP5171845, JP5658371, JP6084284, TW468147, KR10-1522115, HK184041.

Additional patent applications are pending.

6.8 ELECTROMAGNETIC COMPATIBILITY

This device has been tested and found to comply with the limits for medical devices to the IEC 60601-1-2:2014. Special precautionary measures apply to this device with regard to electromagnetic compatibility (EMC). To avoid electromagnetic disturbances, the device may only be operated and serviced in accordance with the user manual and using the components supplied by Volk. If the performance of Volk Pictor Prestige is lost or degraded due to electromagnetic disturbances, it may cause unexpected or adverse operation of this device. If a malfunction cannot be rectified, please contact your local distributor or Volk customer service.



CAUTION!

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment/other equipment should be observed to verify that they are operating normally. The device should not be operated in the vicinity of high-frequency surgical equipment.



CAUTION!

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.



CAUTION!

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Volk Pictor Prestige including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Replacement cables may only be purchased at Volk. The use of accessories, any converters or cables which are not specified in this user manual or have not been purchased as spare parts from Volk can result in increased emissions or reduced immunity of the device.

MANUFACTURER'S DECLARATION - ELECTROMAGNETIC IMMUNITY

Volk Pictor Prestige maintains basic safety and performance when used in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

IMMUNITY TEST	IEC 60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT - GUIDANCE
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±2 kV, ±4 kV, ±6 kV, ±8 kV indirect contact ±2 kV, ±4 kV, ±6 kV, ±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.

Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines	±2 kV for AC power supply	Mains power quality should be that of a typical commercial or hospital environment.	
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000- 4-11	0% UT for 0.5 at 8 φ angles; 0% 1 cycle; 70% UT for 25 cycles; 0% for 5 sec	0% UT for 0.5 at 8 φ angles; 0% 1 cycle; 70% UT for 25 cycles; 0% for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Volk Pictor Prestige requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery.	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.	
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz & 6 Vrms ISM frequency	3 Vrms 150 kHz to 80 MHz & 6 Vrms ISM frequency	Portable and mobile RF communications equipment should be used no closer to any part of Volk Pictor Prestige, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2 \ VP$ $d = 1.2 \ VP$ 80 MHz to 800 MHz	
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz AM Modulation & 9-28 V/m 385 MHz to 6.0 GHz Pulse Modulation	3 V/m 80 MHz to 2.7 GHz AM Modulation & 9-28 V/m 385 MHz to 6.0 GHz Pulse Modulation	d = 2.3 √P 800 MHz to 2.7 GHz, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^A , should be less than the compliance level in each frequency range ^B .	
			Interference may occur in the vicinity of equipment marked with the following symbol:	

NOTE 1 UT is the AC mains voltage prior to application of the test level

NOTE 2 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 3 The ISM (industrial, scientific and medical) bands between 0.15 MHz and 80 MHz are 6.765-6.795 MHz; 13.553-13.567 MHz; 26.957-27.283 MHz and 40.66-40.70 MHz.

NOTE 4 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

A) Field strengths from fixed transmitters, such as base stations for radio (cellular/ cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Volk Pictor Prestige is used exceeds the applicable RF compliance level above, Volk Pictor Prestige should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Volk Pictor Prestige.

B) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

MANUFACTURER'S DECLARATION - ELECTROMAGNETIC EMISSIONS

Volk Pictor Prestige maintains basic safety and performance when used in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

EMISSIONS TEST	COMPLIANCE LEVEL	ELECTROMAGNETIC ENVIRONMENT (GUIDANCE)
RF emissions CISPR 11	Group 1	Volk Pictor Prestige uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment RF emissions
CISPR 11	Class B	Volk Pictor Prestige is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000- 3-2	Not Applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

SEPARATION DISTANCES

Volk Pictor Prestige maintains basic safety and performance when used in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of Volk Pictor Prestige can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and Volk Pictor Prestige as recommended below, according to the maximum output power of the communications equipment.

Rated maximum	Separation distance according to frequency of transmitter (m)			
output power of transmitter (W)	from 150 kHz to 80 MHz d = 1.2 √P	from 80 MHz to 800 MHz d = 1.2 √P	from 800 MHz to 2.7 GHz d = 2.3 √P	
0.01	0.12	0.12	0.23	
O.1	0.38	0.38	0.73	
1	1.2	12	2.3	
10	3.8	3.8	7.3	
100	12	12	23	

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

6.9 COMPLIANCE

The classification of Volk Pictor Prestige according to the standard IEC 60601 1:2005+A1:2012

- Volk Pictor Prestige is internally powered ME equipment
- Volk Pictor Prestige has type BF applied parts
- Protection against harmful ingress of water or particulate matter is classified as IPXO
- Volk Pictor Prestige is not intended to be sterilized
- Volk Pictor Prestige is not intended for use in an oxygen rich environment
- Volk Pictor Prestige is classified for continuous operation

	CAMERA	RETINA MODULE	ANTERIOR MODULE	CHARGING STATION
EU Directive 93/42/EEC	Class 1	Class 2 a	Class 1	Accessory
FDA21 CFR 886.1120	Class 1	Class 2	Class 1	Accessory
ISO 10940:2009	-	Complies	-	-
ISO 15004-1:2006	-	Complies	Complies	-
ISO 15004-2:2007	-	Group 2	Group 2	-
IEC 62471:2006	-	Extempt Group	Extempt Group	-

This declaration shall be rendered invalid if changes are made to the product without the manufacturer's authorization.

6.10 WARRANTY

Volk Pictor Prestige is covered by a limited warranty granted by Volk.

SUBMITTING A CLAIM

Any claim under this warranty must be submitted in writing before the end of warranty period to Volk. The claim must include a written description of the failure to the device.

WARRANTY DOES NOT COVER

Products that have been subjected to abuse, accident, alternation, modification, tampering, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation of the product, or if the model or serial number has been altered, tampered with, defaced or removed. The warranty does not cover damage caused by dropping the device or damage caused by normal wear. Repair or service done by a non-Volk-authorized service facility is not covered by the warranty.

A. APPENDIX - WLAN

A.1 WIRFLESS SETTINGS

Pictor Camera has a WLAN module that enables wireless connection to a PC or other client device. In order to change wireless settings, open the wireless menu from camera settings by using Navigation Roller

WIRELESS

In wireless menu, there are four options: Wireless, Access point mode, Network mode and Connection details.

Wireless

First you need to set wireless connection to on to enable WLAN. When wireless connection is set to on, either access point mode or network mode can be used, but not at the same time.

Connection details menu shows the information of established connection. The information consists of

network name and camera IP and MAC addresses. The camera access point credentials are also embedded in the QR code stickers provided in your carry case with this user manual.



Access point mode

In access point mode Pictor Camera sets up a camera-specific access point to which the PC can connect. First set access point on in camera menu. Then connect PC to the created access point. After connection is done, open Volk Client for image transfer.

Network mode

In network mode Pictor Camera can connect to available networks. Set network mode on in the camera menu, then browse available networks and select the desired network by using navigation roller. After selecting the network, enter the network password to the camera. After connection is done, open Volk Client for image transfer.

Wireless communication issues

In case the wireless communication between the camera and the PC delays, the images will transfer slowly. You can follow the progress of the transfer from Volk Client PC software. Volk Client PC software will inform, if the wireless communication between the camera and the PC failures and images cannot be transferred. In case, the wireless transfer will not be completed, images can be transferred via USB connection.

To improve wireless communication between the camera and the PC, you can move the camera closer to the PC and ensure that there are no large obstacles between the camera and the PC. Check, that there are no other RF sources near the camera or the PC. You can also change the network in order to try to improve the wireless communication.

A.2 VOLK CLIENT PC SOFTWARE

The PC software Volk Client enables WLAN connectivity from PC or other client device to Pictor Camera. With Volk Client software you can wirelessly connect PC or other client device to Pictor Camera and define the image destination folder into which images will be transferred.

The memory stick provided with the device includes Volk Client software and Volk Client Quick Guide. The Quick Guide instructs more specifically how to use Volk Client and how to install/uninstall Volk Client software. Volk Client has a support for Windows 7°, Windows 8.1° and Windows 10° in addition to iPad with iOS 11.0 or newer.



NOTES

INDEX

Aim help	27
Charging battery	12, 17, 18
Field of view	35
Fluorescent images	13
Forced shut down	15,31
Image preview	20, 29
Imaging distance	27
Label	6, 33
Non-mydriatic imaging	13
Navigation Roller	15, 19, 29
PC software	18, 37, 43
Power save	17, 18
Refractive error	26
Resolution	36
Saving to memory card	29
Select side of imaged eye	29
Serial number	8, 22
Software version	22
Sterilization	32, 41
Transferring images to PC	13, 18, 29, 43
USB connection	13, 16, 29, 35
Wireless/WLAN connection	13, 18, 21, 29, 35, 43
Zoom	20, 29