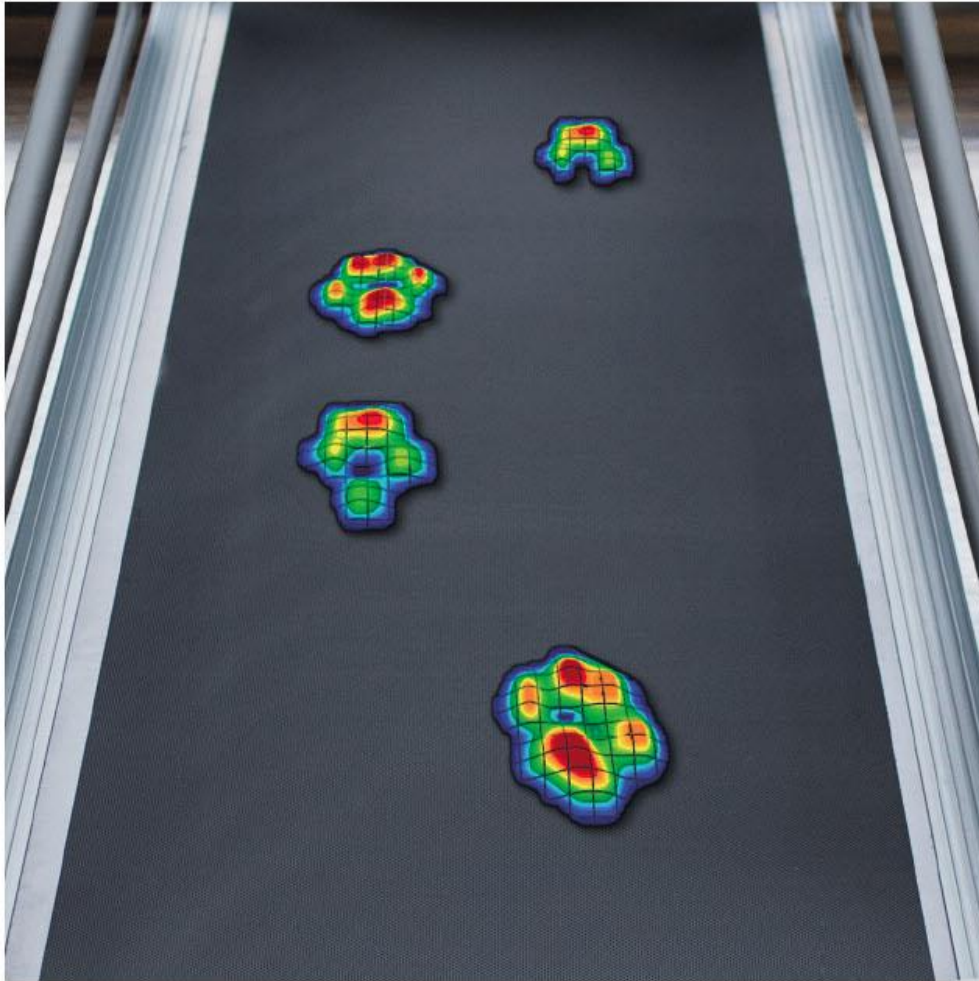


Specifications and Operating Instructions



CAMID
GAIT ANALYSIS



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1 User Notes

1.1 Introduction

2 Introduction

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Illustrations of this manual may differ.

2.1 Manufacturer Information



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88316 Isny im Allgäu	E-Mail	support@zebris.de
Germany	Web	www.zebris.de



NOTE

Please always provide the serial number of the product for inquiries!

2.2 Structure of the Canid Gait System user manual

The Canid Gait measuring system consists of a treadmill, the pressure distribution measuring sensors and the corresponding application software, including the PC. The sensors and treadmill can also be used completely independently of each other and feature a separate power supply and CE mark.

The user manual for the Canid Gait measuring system therefore consists of several sections:

1. Canid Gait specifications and hardware user manual
2. Animal Analysis Suite user manual for the application software
3. Specifications and user manual supplied by the treadmill manufacturer
4. User manual and specifications of accessories like projector or PC



NOTE

Please also be sure to adhere to the user manuals supplied by manufacturers of the treadmill and the accessories when setting the system into operation, while using it, maintaining it and transporting it.

The section Canid Gait specifications and hardware user manual mainly contains information regarding the specifications and operation of the Canid Gait pressure distribution measuring sensors and their safe operation in combination with the treadmill, as a measuring system. Instructions regarding the treadmill are restricted to the main safety and servicing measures.



WARNING

The exact adherence to the instructions in all sections of the operating instructions for the measuring system is a precondition for its intended use.

2.3 Conventions and Symbols Used



The green markings in the margin of the user manual denote new information about the product safety.



“**WARNING**” symbols indicate a potential hazard to the health and safety of the users and/or patients. The warnings describe the risks involved and those that can be avoided.



Note symbols indicate a potential hazard that can result in damage of the device. The notes explain the type of hazard and how it can be prevented.



CE mark according to EC Directives 2014/30/EEC and 2014/35/EEC (Low Voltage Directive and EMC Directive).



Symbol for manufacturer and date of production.



Symbol for the connection of the external power supply unit (DC voltage 15-20V with indicated polarity)



USB-Interface



This symbol shows that pursuant to the Directive on Waste Electrical and Electronic

Devices (2012/19/EU) and national legislation, a product cannot be disposed of via the household waste



Symbol indicates a potential hazard that can cause damage to the eyesight. This warning explains the nature of the hazard and how it can be avoided.

3 Safety

3.1 Environmental conditions

Canid Gait measuring systems are suitable for application in dry interiors with level ground such as those in hospitals, doctors' surgeries and laboratories.

Temperature	10°C to 40°C
Relative humidity	30% to 70%, non condensing
Air pressure	700 to 1100 hPa



Canid Gait systems must NOT be operated in wet zones, wet rooms (swimming pools, saunas) or climatic chambers.

Direct contact with liquids must always be avoided, as the measuring system is not protected against the entry of liquids. Liquids penetrating the device can cause fire, electrical shock or other severe accidents.

The Canid Gait system is NOT specified for the operation in vacuum, hyperbaric or altitude chambers.

The measuring systems are not intended for operation in potentially explosive atmospheres of medically used rooms or oxygen-enriched atmospheres.

The devices must not be operated in proximity to e.g. engines or transformers with a high connected load as well as mains current lines, as electrical or magnetic interference fields can falsify correct measurements resp. turn them impossible. Therefore, the devices have to be protected against humidity. The ventilation slots of the treadmills must be free at all times, so that air can circulate freely.

3.2 Storage and Transport

Storage and transport of the measuring system are only to be effected in the original packaging provided by zebris.

Temperature	-20°C to +70°C
Relative humidity	max. 95%, non condensing
Protect from moisture	



All Canid Gait systems can be stored without power supply for a maximum of 6 to 9 months. After this period, the battery may be totally discharged due to lacking power supply. If the storage of the device exceeds this period, a re-programming of the treadmill control may be necessary.

3.3 User Obligations



- Users are obliged to:
 - ✓ observe all safety guidelines of the user manual.
 - ✓ carry out any inspection and maintenance works on a regular basis as stipulated in the user manual.
 - ✓ only use work equipment that is free of defects.
 - ✓ check the functional safety and the proper condition of the device before operating.
 - ✓ make all user manuals that are included in delivery and part of the measuring system accessible to all users at all times and keep the manuals in close proximity of the measuring system.
 - ✓ protect him-/herself, the patient or third parties against dangers.
 - ✓ avoid a contamination through the product.
- When using the system, national legal regulations must be observed, in particular:
 - ✓ the valid industrial safety regulations.
 - ✓ the valid accident prevention measures.
- For the safety, reliability and performance of the components delivered by zebris, responsibility is assumed, if:
 - ✓ assembly, extensions, re-settings, changes or repairs were carried out through zebris or third parties authorised by zebris, trained technicians or employees of authorised dealers. Storage and transport are only to be effected in the original packaging delivered by the manufacturer.
 - ✓ the device is operated in accordance with the user manual.
 - ✓ the components of information technology provided by the operator correspond to the technical requirements of hard and software included in this user manual and also were installed and set up according to the relevant descriptions in this user manual.
 - ✓ the set-up room corresponds to the given environmental conditions of the measuring system and the valid installation regulations.
 - ✓ the Canid Gait system including accessories is connected to the mains socket with a protective grounding conductor and is operated with the correct mains voltage.
 - ✓ exclusively the software provided by zebris as well as the components and accessory parts listed in this user manual are used together with the system.

3.4 General safety instructions



- The application and operation of the system and also the evaluation of the measuring data and their interpretation may only be carried out by trained qualified personnel. The manufacturer assumes no liability for any injury to persons, damage to property, loss of data or injury of animals, due to improper use of the software, the device or its component parts.
- The patients' data and measuring data may only be copied, moved, or deleted using the database function provided by the zebris application programs. In the case of data being changed intentionally without using the database functions, the user alone bears the full risks involved.
- Measurement and analysis results should always be interpreted in the light of the clinical history of the patient and in the context of other diagnostic tests by a trained person proven and tested for their relevance.
- Should there be any detectable damage to the device or component parts, they should be returned to the manufacturer for a safety check. It is not permissible to continue using the device or its component parts, as severe damage and serious injuries – even lethal injuries - may result. The manufacturer or authorized sales partner must always be contacted in all cases of fault or doubt.
- If any fluids should penetrate the device, it is mandatory for the device to undergo a technical, safety test. Damaged plug connections and leads are to be replaced by an authorized service technician. The device must be put out of operation immediately, marked as "Not working" and prevented from being used by removing the mains cable. Please refer to an authorized technician immediately.
- Be sure that all the mains and connection cables are laid safely and that they are protected against stepping on, so that nobody can trip over them. Check all the cables and the connection plug regularly for any damage. Damaged power supplies and cables have to be replaced before further operation.
- Never insert any objects in the components of the measuring system.

3.5 Safety instructions for the Treadmill



- The treadmill belonging to the CANID GAIT measuring system is a very powerful device. For safe operation of the CANID GAIT system it is mandatory to adhere exactly to the safety regulations described in the following.
- The measuring procedure on the treadmill must never be commenced without a thorough instruction of the patient by trained personnel. No measurements may be taken without a supervisor.
- Do not place the treadmill on an unstable ground.
- Do not set up the system near a source of heating or in direct sunlight in front of a window as a strong rise in temperature can lead to inaccurate measuring results.
- Directly behind the treadmill it is mandatory for a safety zone of 2 m in length and 1 m in width to be kept free, and ought to be padded (with a soft mat). No items may be left in this zone during operation (such as video camera, lighting equipment etc.).
- Dangerous drawing-in gaps are located at the rear end of the running belt and along its sides and (if existing) on the elevating mechanism. Do not wear any loose clothing that could get caught up in the rollers. Make absolutely sure that if a person trips over, their long hair, loose clothing, jewellery, etc., do not come into contact with the rear part of the treadmill belt (e.g. wear a hair net). Due to danger of stumbling, do not place any clothing or jewellery on or within close proximity of the treadmill.
- During operation, the Emergency STOP facilities must always be within easy reach for the user and the operating personnel.
- Pull out the power plug before transporting the treadmill.

3.6 Prohibited Use



- Improper and/or prohibited use of the measuring system is impermissible and zebris warn explicitly against all prohibitions included in this section.
- Do not try to service the treadmill in any manner other than that described in this user manual. By the removal of the protective covers it is possible that you could expose yourself to lethal high voltages or other hazards.
- We also point out that if any changes are made to this certified device or its accessories without the prior written consent of zebris, your legal right to operate the device will be void. If changes are made to the device without obtaining approval, the operator is obligated to carry out suitable investigations and tests in order to guarantee safe use.
- The use of the measuring system under the influence of alcohol, drugs or narcotics is strictly prohibited.
- zebris measuring systems may not be operated in any other environmental conditions than those listed in the section "Specifications", (e.g. in wet zones, moisture-prone areas, or in climatic, vacuum, hyperbaric or decompression chambers, etc.). Direct contact with liquids must always be avoided, as the measuring system is not protected against entering liquids. Liquids entering the device can cause fire, electric shock or other severe accidents.

4 Product description

4.1 System Components

In its basic configuration the measuring system consists of the following components:

- Treadmill with integrated sensor equipment for measuring the pressure distribution
- Mains cable for connecting the treadmill
- External power supply unit for the Canid Gait pressure plate
- USB cable (Type A-B, 3 m long)
- zebris application software Animal Analysis Suite
- Windows-compatible computer or notebook
- Silicone oil for lubricating the belt
- Cable guard with screws
- User manual for Canid Gait system, treadmill, Animal Analysis Suite software

4.2 Specifications Canid Gait Sensor

The sensors of the different Canid Gait systems only vary in size of the measuring area, the number of single sensors included in the sensor module and the supported sampling frequency. All other technical specifications are identical.

Interfaces	USB synchronization input/output video synchronization infrared synchronization (optional)
Connectors	interface box on the treadmill housing frame
Measuring principle	capacitive pressure measurement
Operating voltage	16-18 V DC
Power consumption	maximum 60 W (depending on the type)
Power supply via external power supply unit	100 – 240 V AC / 50/60 Hz
Accuracy of the calibrated measuring range	(1 – 120 N/cm ²) ±5 % of maximum range
Mechanical cross talk	-25 dB
Pressure threshold	1 N/cm ²

4.3 Technical specifications Canid Gait measuring systems

Type FDM-TPROF CanidGait Laufbandsystem



Treadmill FFL Fit Fur Life Laufband

Speed	0.4 – 20 km/h in 0.1 km/h intervals
Running surface	190 x 46 cm
Engine Power	1,5 kW
Power Supply	220 V – 230 V, 50 Hz / 60 Hz
Weight	93 kg
Dimensions (L x W x H)	214 x 88 x 116 cm
Track access height	26 cm
Elevation	-5 to +10 %
Max. user weight	130 kg

Version Canid Gait

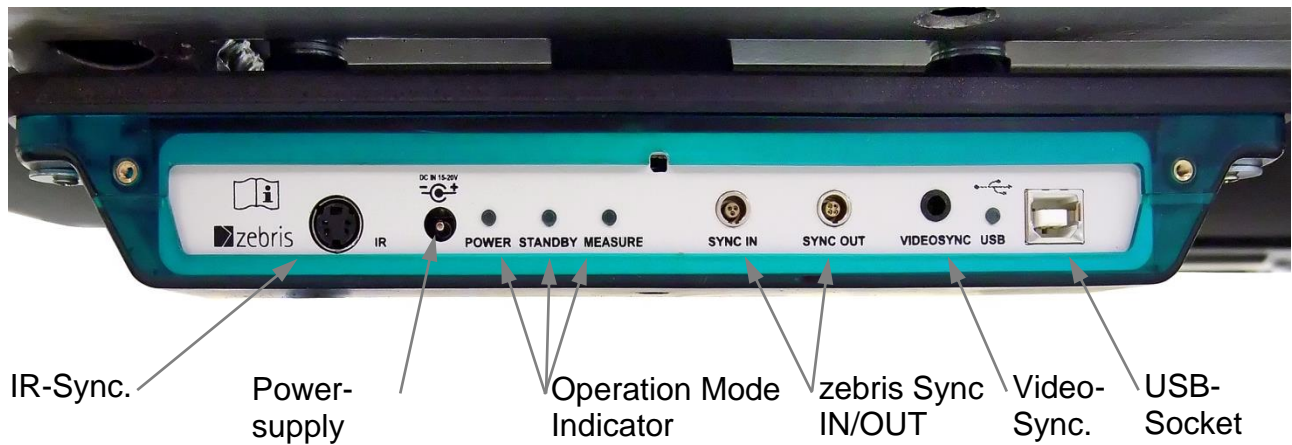
REF-No. 01543191

Platform

REF-No.	01244230
Sensor Area / cm	163 x 41
Number of Sensors	48 x 192 / 9216
Resolution	1,38 Sensors / cm ²
Sampling Frequency	100 / 200 Hz

4.4 Controls and Connectors

All the cable connections are carried out via the interface box which is located on the underneath of the treadmill frame on the back.



4.5 LED indicator lights of the interface box

POWER lights up as soon as the power supply unit is plugged to the interface box and connected to mains.

STANDBY lights up if the power supply unit is connected to mains, the USB socket is connected to the PC and the hardware driver of the platform is installed properly.

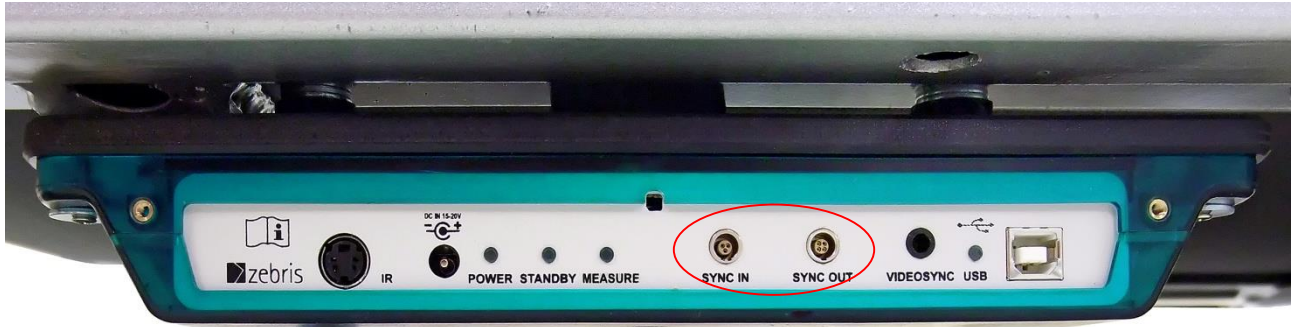
MEASURE lights up during the measurement.

USB lights up when the USB socket is connected to the PC and the hardware driver of the platform is installed properly.

4.6 zebris SYNC

The **zebris SYNC** is the standard solution for synchronization of the Canid Gait system with third party measuring devices.

The **SYNC-IN** and **SYNC-OUT** sockets provide input and output for support of „sample by sample“ In- and Out synchronization. Both sockets provide galvanic protection between third party systems and Canid Gait sensor.



WARNING

The user is completely responsible for the safety of all third party devices used in combination with the Canid Gait system.

The correct synchronisation of all measurement data has to be verified in case devices are connected to zebris SYNC which have not been manufactured by zebris Medical GmbH.

zebris does not accept any liability for correct function and reliability of the system if the clock signal of external devices does not comply with the signal specifications provided with in this user manual.

4.6.1 Synchronization Input (SYNC-IN)

If a third party device is connected to the synchronization input SYNC-IN then depending on the setting of the configuration window from the application software the measurement will start/stop or "sample by sample" synchronized by a signal from the third party device.

Input is protected against faulty polarisation and pin 1 is set to +5V ("1") by an internal pull-up-resistor (2.7 kΩ). If this input is set to 0 V ("0") i.e. by a switch or break contact than the SYNC-IN is triggered.

Electrical Specifications

Input Resistance (Pull-Up 5V)	2.7 kΩ
V _{IH} (High-Level Input Voltage)	≥ 2.0 V
V _{IL} (Low-Level Input Voltage)	≤ 0.8 V
Required min. pulse time for triggering	1ms

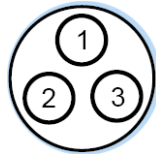
Integrated LEMO socket in the interspace box

Series "00", three pole, coding 30°

LEMO-Part-No.: EPA.00.303.NLN



View
Socket, Front Side

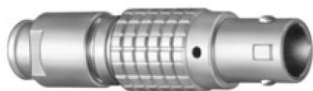


Socket Coding: 30°



Suitable Plug for SYNC-IN:

LEMO-Part-No.: FGA.00 303.CLADxxxx



View
Plug, Solder Side



Plug Coding: 30°



Pin Assignment

Pin 1	Clk_IN
Pin 2	Activ_IN
Pin 3	GND

4.6.2 Synchronization Output (SYNC-OUT)

If a third party device is connected to the synchronization output SYNC-OUT then depending on the setting of the configuration window of the application software, a CANID GAIT system controlled, will trigger a synchronized measurement of the third party device either via start/ stop or “sample by sample” mode.

Electrical Specifications

Output Resistance	100 Ω
VOH (High-Level Output Voltage)	≥ 2.0 V
VOL (Low-Level Output Voltage)	≤ 0.8 V

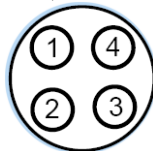
Integrated LEMO socket in the interspace box

Series "00", four pole, Coding 0°

LEMO-Part-No.: EPG.00.304.NLN



View
Socket, Front Side



Socket Coding: 0°



Suitable Plug for SYNC-OUT

LEMO-Part-No.: FGG.00 304.CLADxxxx



View
Plug, Solder Side







Plug Coding: 0°







Pin-Assignment

Pin 1	+5 V
Pin 2	GND
Pin 3	Activ_OUT
Pin 4	Clk_OUT

4.7 Spare Parts Canid Gait System

REF-No.	Description	Illustrations
01832035	Interface Box2 incl. fixation screws	
33102024	PS Mascot 2420 Power supply unit 60 W / 16V DC for CANID GAIT sensors equiv. to EN 60601-1 & UL	
21030071	USB cable A-B, 3 m long Data connection between interface box and PC	
07200012	Animal Analysis Suite Software Treadmill for operating system Windows 10 64-Bit	

4.8 Accessories Canid Gait Measuring System

REF-No.	Description	Illustrations
01540191	SYNCCam Camera with USB-Cable, synchronization cable, tripod, inclusive software extension	
01540194	SYNCLightCam Combined solution with Camera and illumination, USB-Cable, synchronization cable, tripod, inclusive software extension	
21030321	SYNCCam USB-Cable A-B USB-Cable for HD-video signal with high quality plugs, EMC-shielding and ferrites length 5 m	
21030315	Video Sync-Control Cable 0.9 Length 0.9 m, both sides phone jack 3.5 mm for direct connection of the SYNCLight to the zebris SYNCCam	

01830041 **Video Sync-Control Cable 2.5**
Length 2.5 m, both sides phone jack
3.5 mm, without amplifier for zebris
SYNCCam



21030312 **Video Sync-Control Extension Cable**
Length 5 m, phone jack & socket 3.5 mm



01831105 **SYNCLight Power Supply Unit**
Mains adapter 40 W / 24 V DC



5 Video-Module

5.1 Connection to the Canid Gait System

The Canid Gait system can capture data simultaneously with up to 2 video cameras. For this purpose the **zebris SYNC**Cam is available as an accessory. Alternatively high-quality DV-camcorders with an external microphone socket can be used for video capture.

In order to capture video data synchronized with pressure data the camera has to be connected to the galvanically isolated **VIDEOSYNC socket** on the interface box.



5.1.1 Connection to the zebris SYNC

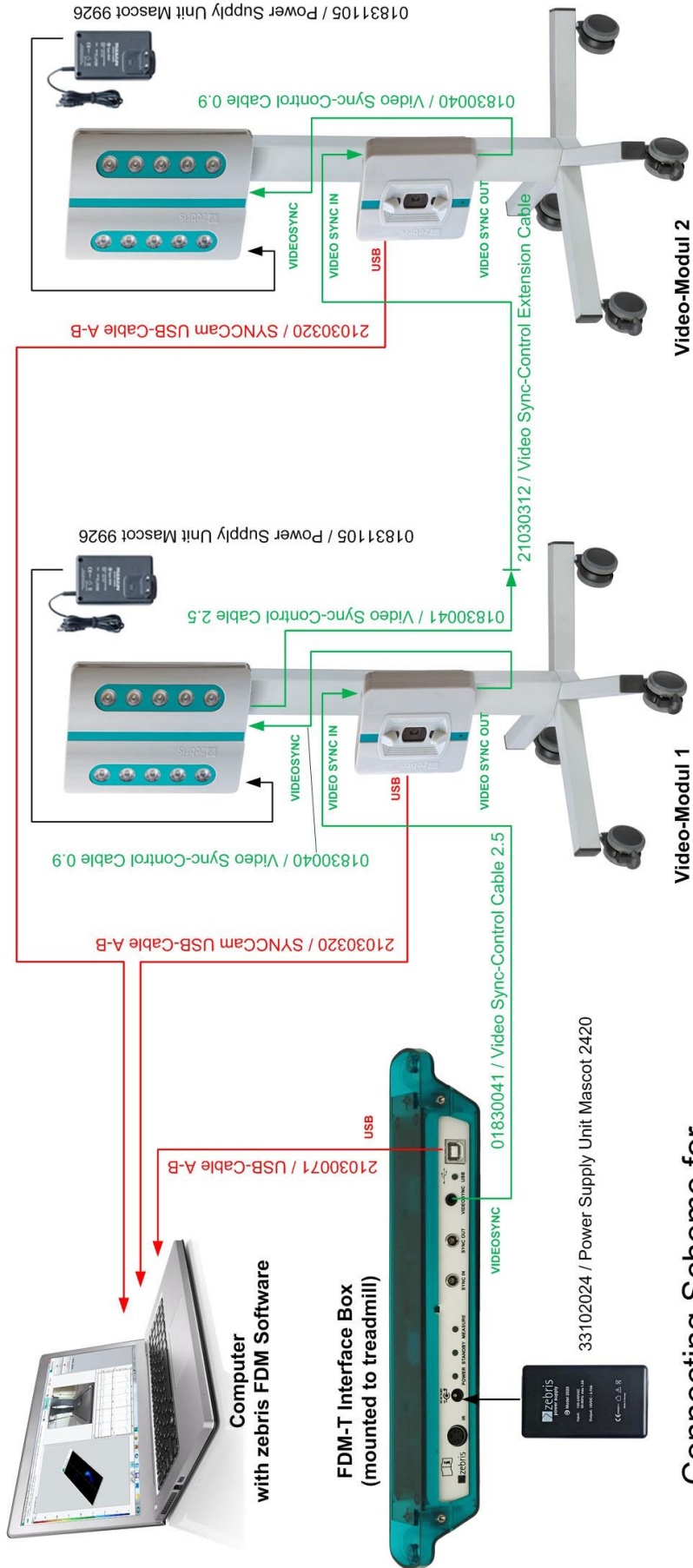
The zebris **SYNC**Cam uses its integrated synchronization flash to synchronize video data with pressure data.

For connecting the SYNC

REF-No. 1801830041 Video Sync-Control Cable 2.5
Length 2.5 m, without amplifier



5.1.3 Connection scheme SYNCCam und SYNCLight



Connecting Scheme for SYNCCam and SYNCLight controlled by VIDEOSYNC



NOTE

The **VIDEOSYNC** sockets of the **SYNCLights** do not support a designated direction for IN and OUT of the synchronization signal. Therefore it does not matter which socket is selected for the connection of SYNCLight and interfacebox.

5.2 SYNCCam

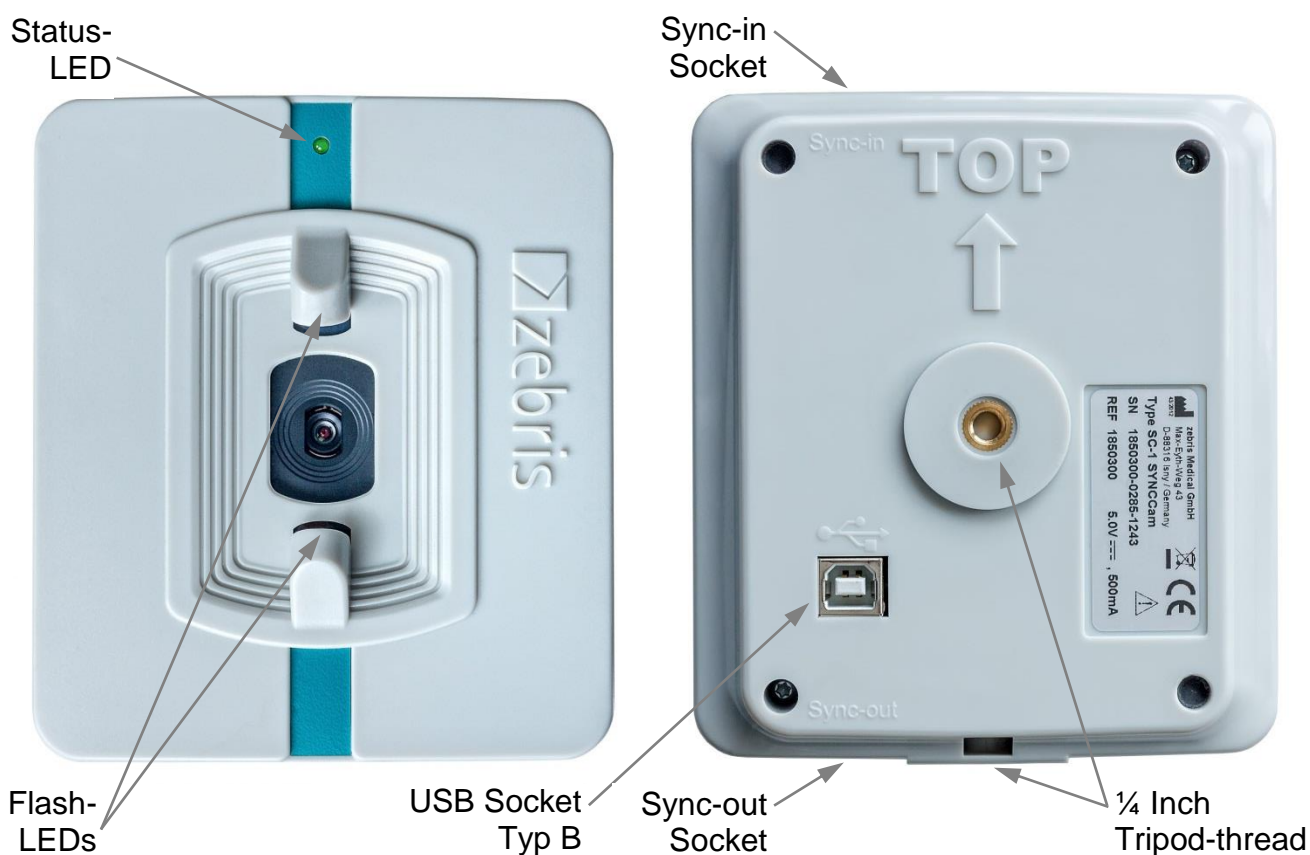
The **SYNCCam** is an accessory of the Canid Gait system and perfectly adapted to be used in combination with the pressure distribution measurement. All adjustments of the camera are carried out via hardware setup integrated to the Animal Analysis Suite Software. The camera is connected to the PC by a USB cable of type A-B included within the shipment.

The camera is equipped with ¼ inch tripod threads and can be adapted to zebris tripods as well as commercially available camera tripods.



WARNING

The Sync-LEDs are flashing when the camera is disconnected from the USB port. Therefore it is strongly advised not to look directly into the camera when it is disconnected in order to avoid dazzling.



Technical Specifications

REF-No.	01540190
Dimensions	110 x 125 x 15 mm (L x W x H)
Weight	approx. 190 g
Power Supply	USB (5 V DC / 500 mA)
Resolution	1920 x 1080 Pixel (Full-HD) / Autofocus
Frame Rate	30 Hz
Synchronization	LED-Flash triggered by Sync-IN socket
Mounting	¼ Inch tripod-thread at bottom and back side



NOTE


In order to maintain undisturbed transmission of the video signal it is mandatory to use high quality USB cables.

Please, only use cables supplied or recommended by zebris for connecting SYNCCam and PC.

5.3 SYNCLightCam

The **SYNCLightCam** is an accessory of the Canid Gait system and perfectly adapted to be used in combination with the pressure distribution measurement. All adjustments of the camera are carried out via hardware setup integrated to the Animal Analysis Suite Software. The camera is connected to the PC by a USB cable of type A-B included within the shipment.

The **SYNCLightCam** is equipped with ¼ inch tripod threads and can be adapted to zebris tripods as well as commercially available camera tripods.



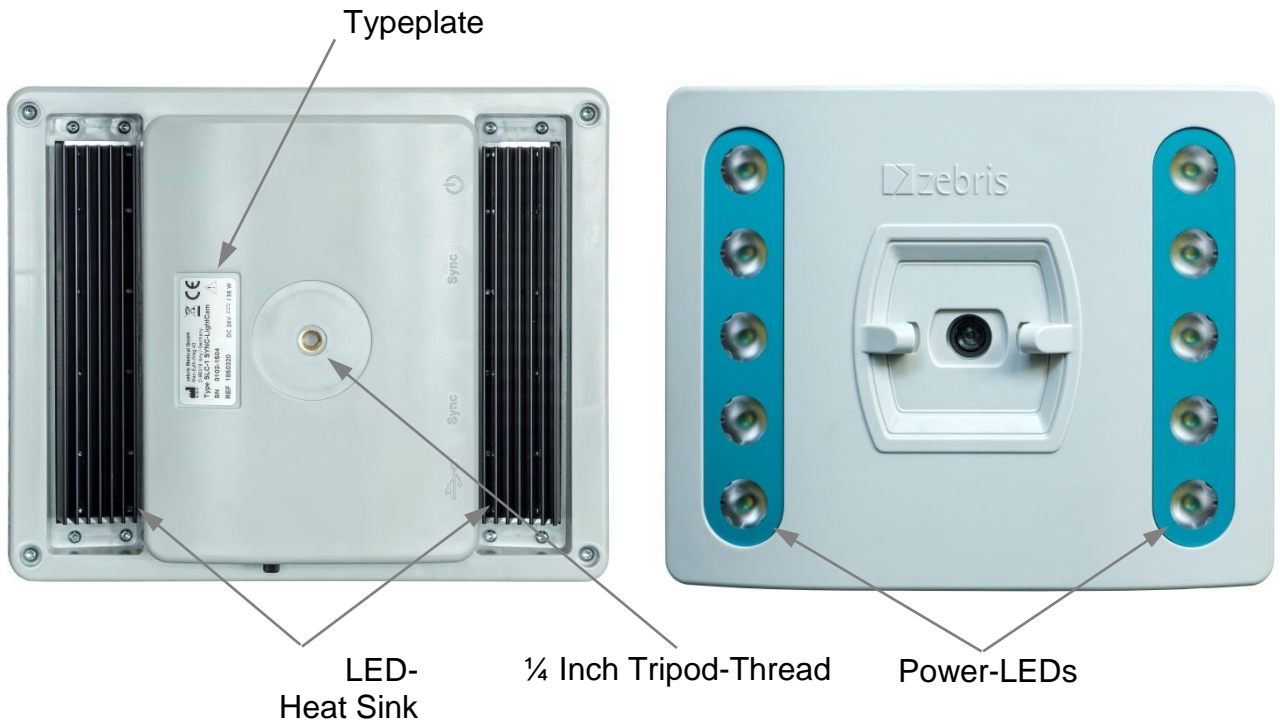
The Sync-LEDs are flashing when the camera is disconnected from the USB port. Therefore it is strongly advised not to look directly into the camera when it is disconnected in order to avoid dazzling.


WARNING

Furthermore contains the SYNCLightCam as an integral solution, the LED video illumination. In order to produce well lighted and tack sharp video captures it is essential to maintain perfect lighting conditions at the patient's side. Only with adequate lighting conditions video cameras can work with shutter times short enough to freeze fast movements and capture sharp images.

This solution is perfectly matched on the interaction with the Canid Gait system and can be regulated infinitely in its brightness.

The integrated synchronization unit automatically switches the lights on at the start of a measurement and turns them off again after stopping it.



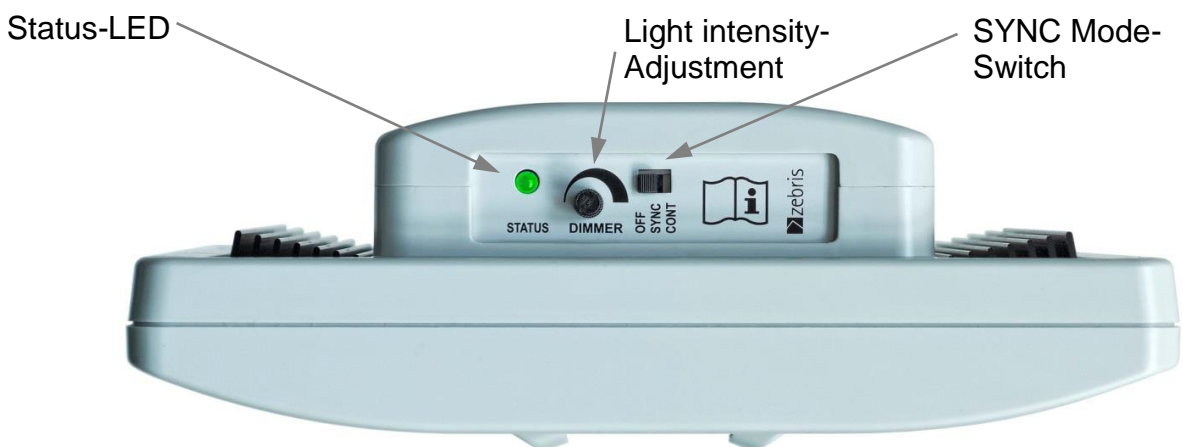


In order to ensure failure-free operation of the SYNCLights it is mandatory to keep the black heat sinks at their back side uncovered and well air circulated at all times.

NOTE

Technical Specifications

REF-No.	01540194
Dimensions	220 x 183 x 80 mm (B x H x T)
Weight	ca. 790 g
Power Supply	24 V / 36 W
Resolution	1920 x 1080 Pixel (Full-HD) / Autofokus
Frame Rate	30 Hz
Light Colour / Light Synchronization	Current 6200 K / 1550 Lumen VIDEOSYNC (Ein-/Aus schalten mit der Messung) SYNC IN Standard zebris Synchronisation (kompatibel mit SYNC IN/OUT Plattform)
Mounting	¼ Zoll Stativgewinde an der Rückseite



NOTE

In order to maintain undisturbed transmission of the video signal it is mandatory to use high quality USB cables.

Please, only use cables supplied or recommended by zebris for connecting SYNCCam and PC.

Interpretation of the STATUS-LED

- Green** Device is ready for use or in operation.
- Orange** The orange colour indicates when the maximum operation temperature has been reached. At this point the operation current is reduced automatically (which results in reduced brightness) in order to prevent the SYNCLight plus from being damaged by excessive heat.

Power Supply Unit

For operation of the SYNCLight plus a power supply unit needs to be connected.

REF-No. 33102220

Input	Output	Cable	Length
100 – 240 V AC	24 V DC	DC-Lead	1.7 m
50 – 60 Hz	40 W	Mains Lead	Plug Adapter

SYNC-Modus

Modes **Characteristics**

**VIDEO
SYNC IN**

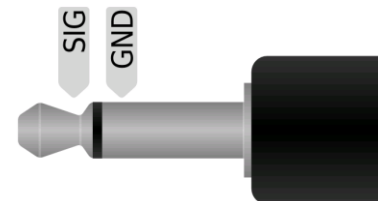
ESD - protected, voltage reversal proof input

Input resistance: 38 k Ω (AC)

Signal-Level: AC

Trigger Level: 15 mV

Pin Assignment



6 Setup and Operation of the Canid Gait System

6.1 Positioning of the measuring system



NOTE

For setup, installation and safety related instructions of the treadmill please refer to the user manual of the treadmill manufacturer.



WARNING

A safety zone of at least 2 m in length and 1 m in width must be kept free directly behind the treadmill. No items may be left in this zone (video camera, etc.).



NOTE

When using SYNCCam or SYNCLightCam, a distance of approximately 1.5 m between the camera and the treadmill is recommended on the side of the treadmill to achieve optimum video recordings.

- Preferably place a gym mat or other padding in the safety zone behind the treadmill in order to soften falls.
- The floor where the device is installed must be absolutely even and horizontal.
- The belt of the treadmill must be checked after installation, or if the treadmill is moved to another place, and adjusted if required. (Please refer to the user manual of the treadmill manufacturer for this purpose.)
- Set up the measuring system such that the socket for the mains connection is easily accessible at all times and the device can be disconnected from the power supply.
- Once the treadmill has been installed securely and is horizontally leveled, it can be connected to a suitable mains socket and set into operation.

For the commissioning of the Canid Gait system for the stance and gait analysis, the associated power supply, a USB cable type A-B as well as the installation CD with the Animal Analysis Suite application software are necessary. All components are included in the scope of delivery of the Canid Gait measuring system.

All cable connections of the Canid Gait sensor are integrated in the interface box, which is positioned on the underside of the treadmill frame.

6.2 Connection of the measuring system to mains supply

6.2.1 Power supply of the Canid Gait Sensors



NOTE

The FDM-T CanidGait treadmill system with the Dog-Tread Pro Large treadmill has an integrated power supply, which is powered by the treadmill power supply.

For connecting the Canid Gait sensor to the power supply, connect the power supply unit to the mains socket and the power socket on the interface box.



WARNING

For operating the Canid Gait sensor, exclusively use the power adapter approved by zebris, which is suitable for the power supply of all Canid Gait systems.

REF.-No. 33102024 / Mascot type 2420

Input	Output	Cable	Length
100 - 240 V AC	16 V DC	Mains lead	1.7 m
50 - 60 Hz	60 W	DC lead	5 m

Pin arrangement / polarity





NOTE

Before connecting the measuring system to the power supply, compare the nameplate specifications on the power supply unit and on the treadmill regarding the mains voltage and mains frequency, with the local characteristics. Connect only if they are compatible.



WARNING

Before connecting or using the measuring system, carry out a visual check of the power supply unit, power supply cable and socket, as well as the earthing contacts. Damaged power supply units, cables or plug and socket devices are to be replaced immediately by an authorized person.

6.2.2 Connection of the System

For connecting the treadmill to the power supply, please additionally observe the respective instructions in the user manual provided by the treadmill manufacturer.



WARNING

The connection of the treadmill and the Canid Gait power supply unit must be done at a separate wall socket. It is not permissible to use extension cables and/or multiple sockets.



WARNING

Set all connection cables in a way that prevents patients, or persons taking part in the measuring procedure from tripping over them or damaging them mechanically. For this purpose, run the cables using cable protections or if necessary fasten the cables with adhesive tape to the floor.

6.3 Computer Requirements

If the Canid Gait system is not delivered with a computer that includes pre-installed Animal Analysis Suite software, the user must then inquire whether the intended coupling guarantees the necessary safety for the test person, the operator and the surroundings by consulting the manufacturer, the authorized zebris sales partner or by asking a specialist.

The requirements for the PC are specified in the user manual of the Animal Analysis Suite software.



WARNING

If the computer is not supplied with the measuring system, the manufacturer shall not be held liable for any damage or malfunctions that result from defective software installation or incompatible hardware. Should additional hardware be built into the computer or third party software be installed, the manufacturer shall not be liable for any malfunctions or damage occurring thereof.



WARNING

The Canid Gait measuring system is not intended for operation in a network/data network. Connecting the system to a network/data network can cause unforeseen risks for the patient or third persons. If the database of the zebris Animal Analysis Suite software is to be installed in a network/data network, the operator is then obligated to determine, analyse, assess and overcome any risks in this connection. Of particular importance are aspects concerning data protection, virus security, updates of the operating system and regular backups. The risk considerations must also include any changes made to the network/data network, e.g. update/upgrade of devices and components that are connected to the network.

6.4 Installing the zebris Animal Analysis Suite

If your measuring system is delivered without PC/laptop, please install the application software before connecting the measuring system to the computer. Please find information on the installation in the user manual of the Animal Analysis Suite software.



Note

Please make absolutely sure that you have installed the zebris software before connecting the Canid Gait sensor to the computer using the USB cable.

If the Canid Gait sensor is connected without installing the software first, problems when installing the device driver may occur and the system does not work.



Note

Should problems with the hardware driver of the Canid Gait platform occur then disconnect the platform from the PC and restart it. Now proceed with installing the Animal Analysis Suite again and reestablish the USB connection.

Finally connect the Interface box and a free USB interface of your computer by using the provided USB cable. Your measuring system is now ready for use. The control of a measurement exclusively is carried out via the Animal Analysis Suite software. Therefore, please carefully read the Animal Analysis Suite user manual.

6.5 How to switch the Canid Gait sensor On/Off

The Canid Gait sensor is switched on and off by software control as soon as the Animal Analysis Suite software on the PC is started or shut down.

If the device has been connected correctly, the green power LED lights up on the interface box. For further details on preparing a measurement platform, please see the section "Recommendations for recording data".

6.6 Setting the system out of operation

In order to set the system out of operation, please close the Animal Analysis Suite software first, then exit the Windows operating system and shut down the PC. In the next step disconnect the power supply unit of the Canid Gait sensor and the treadmill from mains supply.

7 Maintenance and Safety Inspections



- Scheduled maintenance of the system is essential in order to prevent damage and guarantees the safety of the device. All processes concerning maintenance and disinfection of the device should be carried out regularly.
- Should any malfunctions and/or defects be determined or suspected, the device must be put out of operation immediately, marked as "Out Of Service" and prevented from being used by removing the mains cable. In such case be sure to contact the manufacturer or an authorized sales partner.
- All maintenance and repair work of the measuring system or of single components that goes beyond the activities described in this user manual must exclusively be carried out by zebris Medical GmbH or a person who has been explicitly authorized by zebris to do so.
- Be sure to switch off the measuring system and disconnect it from mains supply before starting any maintenance work.

7.1 General Maintenance Procedures

- Immediate maintenance procedures are to be carried out if:



- a) fluid enters the device.
 - b) cable or cable connections have been damaged.
 - c) covers have been damaged or have fallen off.
 - d) the running belt shows any signs of wear or cracks.
 - e) the running belt no longer runs centrally.
 - f) the sliding surface underneath the treadmill belt is no longer sufficiently lubricated.
 - g) a malfunction or a defect is suspected or has been detected.
- Check regularly (approx. every 25 operating hours) whether all the screws are tight, the belt tension is sufficient and the running belt is correctly centered. For the exact sequence of these maintenance procedures, please refer to the user manual supplied by the treadmill manufacturer.
 - In order to keep the friction between the running belt and the Canid Gait sensor as low as possible, the system must be lubricated at regular intervals with silicone oil. zebris recommends lubricating at least every 6 months. For detailed information concerning the lubrication procedure please refer to the user manual of the treadmill manufacturer.
 - Should the treadmill be relocated to another place, it is necessary to check that the belt is running correctly. The belt should always run centrally on the rear guide pulley.
 - After a longer period of use, or if the adjustment is suboptimal, the belt can loosen and with every step, a jolt can occur between the drive shaft and the belt. This can possibly influence the measuring result of the system. Therefore control the belt tension regularly in accordance with the instructions supplied by the treadmill manufacturer.
 - Should you hear "mechanical knocking sounds" during operation, check whether the device is standing level on the ground as incorrectly adjusted feet may often cause knocking noises.

7.2 Maintenance of the Canid Gait Sensor

7.2.1 Control Procedures



WARNING

The measuring system must be checked at regular intervals to ensure its correct function and patient safety.

In case the running belt has been exposed to hard knocks or heavy items have fallen onto it, the surface of the Canid Gait sensor has to be checked for damaging (cracks, dents, and scratches on the surface). If visible damages are detected, no further measurements must be carried out.

After carrying out a zero measurement, no measuring values may be shown for a condition without any load. In addition, the pressure distribution images are to be checked regularly for untypical measuring patterns. These include above all, line or column-shaped measuring patterns deviating from the surrounding values.



NOTE

In order to guarantee the correct functioning of the speedometer in the long term, the central position of the belt must be checked monthly according to the instructions supplied by the treadmill manufacturer, and readjusted, if required.

Whenever faults occur or in case of doubt, the manufacturer or sales partner authorized by zebris must always be contacted.

7.3 Troubleshooting

In the case of faults, please check the following points first:

- ✓ Are the Candi Gait sensor and treadmill connected correctly to the mains? (Green Power LED on the interface box and power switch on the treadmill lights up.)
- ✓ Is the USB connection between the interface box and the measuring PC correct? (Green USB LED lights up when the USB is connected to the PC and the device driver is correctly installed.)
- ✓ Are all the other components of the measuring system (infrared synchronization with zebris DAB Bluetooth, video camera) connected correctly?



NOTE

For additional information on error messages and their troubleshooting, please refer to the user manual for the Animal Analysis Suite software.

Check list for noting down error messages



NOTE

In order to provide best possible support in the event of system malfunctions our service personnel will need the following information:

- ✓ Device type + serial no. of the Canid Gait sensor and treadmill
The serial no. can be found on the type plates on the frame of the treadmill or on the back of the interface box.
- ✓ Version of the Animal Analysis Suite Software
- ✓ Operating system version of your measuring PC
e.g. Windows 10 Professional
(can be found under Start → Settings → System → Info)
- ✓ Further components connected to the measuring system
e.g. with video camera
- ✓ List of all the USB devices connected to the measuring PC
e.g. mouse, printer, other measuring systems, etc.
- ✓ Screenshot of the error message or exact wording
e.g. "COM error 80070003"
- ✓ User's procedure leading to the error message
e.g. measurement "Type A" started, then clicked on button "B", then movement "C" carried out, switch-over to function "D", when switching back the described error message occurred.

7.4 Cleaning and disinfection

7.4.1 Cleaning Procedure

The treadmill and accessories are cleaned with a moist cloth while the device is switched off and the mains plug taken out.



NOTE

Do not use any aggressive agents to clean the measuring system..



WARNING

Please make absolutely sure to switch off the device and pull the mains plug out of the socket before you commence disinfecting and cleaning.

7.5 Disposal

7.5.1 Packaging

All the transport packaging supplied by zebris can be recycled within Germany via the local recycling depots. In order to guarantee the re-use of the recyclables contained in the packaging, zebris Medical GmbH participates in the Dual System ZENTEK which takes over the proper disposal of the packaging.



Please find information concerning the disposal of the treadmill in the Operating Instructions supplied by the treadmill manufacturer.

7.5.2 WEEE-Directive

This symbol indicates that according to the directive on waste electrical and electronic equipment (2012/19/EEC) the product must not be disposed by means of the domestic waste system. Within Europe this device must be forwarded to a specific waste disposal system.

For this purpose the measuring system can be returned to zebris Medical GmbH at the end of its service life at the customer's own expense and will be forwarded to special recycling companies without any further costs and refund.

The improper use of old devices (measuring systems) could lead to negative effects for the environment and the public health because of potential hazardous materials which are frequently contained within electric and electronic devices. Additionally with the proper disposal of this product you will contribute to the effective use of natural resources.

