

Art.-no. 14500

iBike Miniped



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WARNING



Read through all operating instructions carefully before operating and observe all safety information!

Non-compliance can lead to personal injury, damage to the device or to your property! Keep the original packaging, the purchase receipt as well as these instructions for future reference! When transferring this product pass on these instructions as well. Before operating, check that the content of the package is intact and complete!

Subject to technical changes!

1. Intended usage

The Miniped is designed for short trips on paved roads in urban areas. It is not suitable for usage where road and weather conditions are bad (e.g. rain, snow or icy roads). It cannot be used for extreme sports and demonstrations.

The range of the Miniped is measured at an outdoor temperature of about 25 °C with a load of approx. 70 kg on a smooth road. This can deviate depending on the weight of the driver, driving performance, outdoor temperature and road condition.

This device is not suitable to be used by children and people with reduced mental capacity or without the necessary specialised knowledge. Children should keep away from the device.

This device is not intended for commercial usage.

Proper usage also includes observing all the information in these instructions, especially observance of the safety notes. Any other usage is considered improper and can lead to property damage and personal injury. EAL GmbH is not liable for damages that occur due to improper usage.

2. Scope of supply

1 x Miniped	1 x connectible front light
2 x keys	1 x back mudguard
2 x remote control	1 x wrench set
1 x charging unit	1 x operating instructions
1 x battery	1 x service booklet
2 x pedals	1 x warranty form

3. Specifications

3.1 Miniped

Wheelbase:	825 mm
L x W x H:	1180 x 1100 x 550 [mm]
L x W x H (folded together):	1130 x 680 x 380 [mm]
Maximum speed:	25 km/h
Max. range:	40 km
Max. load:	120 kg
Noise level:	< 60 dB
Weight:	21 kg

3.2 Motor

Nominal voltage:	36 V
Rated power:	250 W
Rotor rated speed:	450 U / min
Max. torque:	28 Nm
Max. efficiency:	80 %
Type:	brushless and gearless

3.3 Battery

Voltage:	36V
Capacity:	8.7 Ah
Model:	Panasonic 18650 – 2900PF
Service life:	over 1,000 loading cycles
Discharge rate:	3 C

Charging time: 4 hours

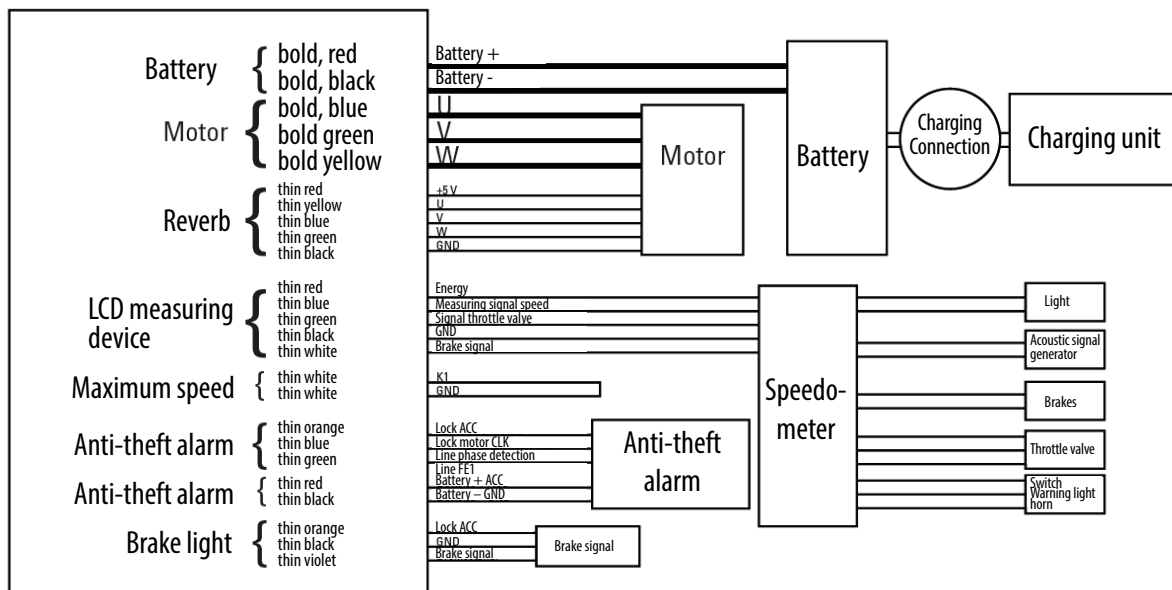
3.4 Charging unit

Input voltage: 230 V
 Output voltage: 42 V
 Output current: 2 A

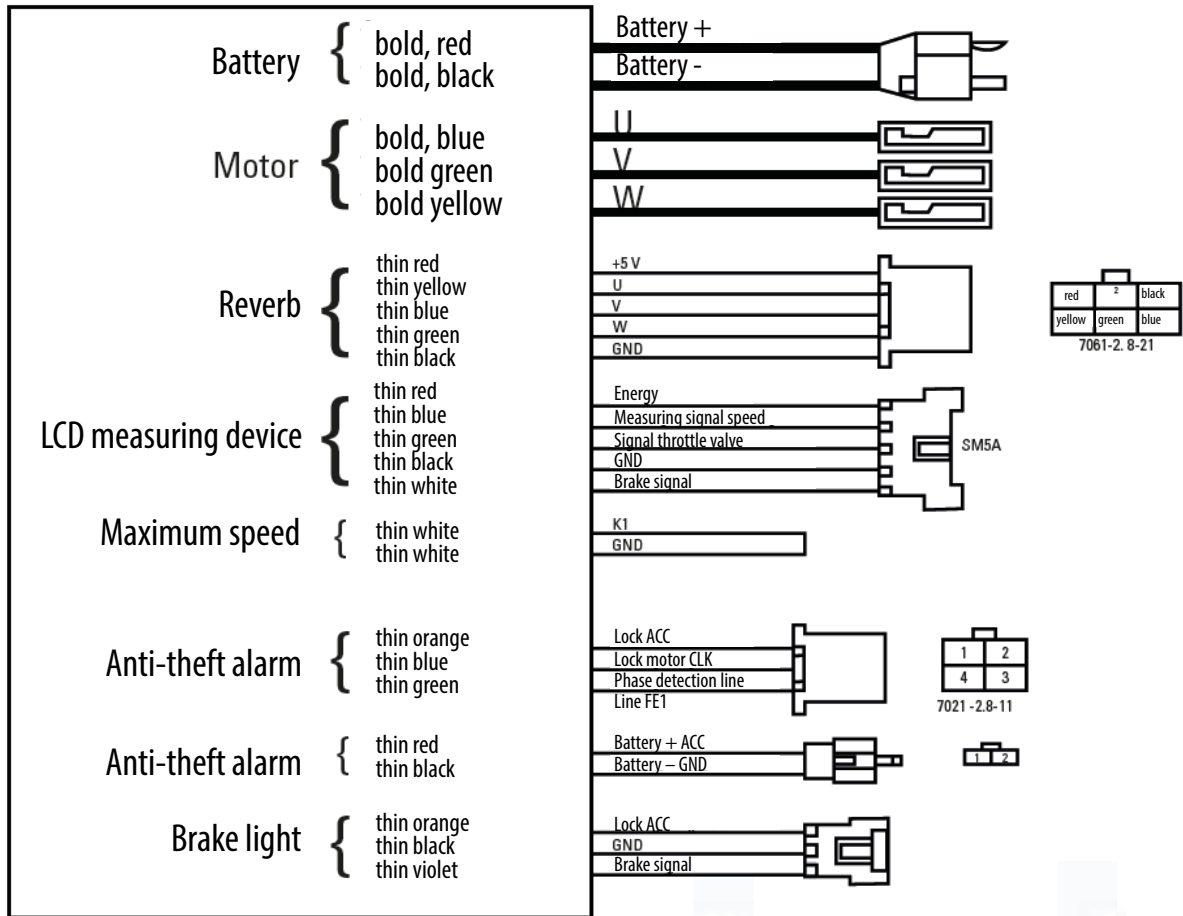
3.5 Controls

Model: Sine wave
 Maximum current: 14 A
 Minimum voltage: 29 V

3.6 Electrical wiring diagram, general



3.7 Electrical wiring diagram, controls



4. Safety information

4.1 General information



- The warning triangle identifies all instructions that are important for safety. Be sure to always follow these, otherwise you could injure yourself or damage the device.
- Children are not allowed to play with the device.
- Cleaning and user maintenance cannot be performed by children without supervision.
- Do not leave the packaging material lying around. It can be a dangerous toy for children!
- Only use this product for its intended purpose!
- Do not tamper with or disassemble the device!
- For your own safety, only use accessories or replacement parts that are listed in the instructions or the usage of which is recommended by the manufacturer!
- Adjust the seat height so that you can ride safely and comfortably and are able to place feet on the ground quickly.
- Before each ride, ensure that the brakes function, the tire pressure is ok, and that all fixtures are in faultless condition.
- Ensure that accessory parts are mounted at the right positions and familiarise yourself with the functions.
- When using the Miniped for the first time, first try it out on a short, safe section of road. Only drive in road traffic when you have good control riding the Miniped.
- A quick-release lever that isn't completely closed can re-open. This can lead to serious falls. Turning the quick-release lever must be so difficult that the heel of the hand is required to do so. Only then is the tension strong enough.
- Always wear a helmet.
- Wear bright and noticeable clothing. Be sure not to wear loose clothing that could get stuck in the chain, handlebars, pedals or wheels.

4.2 Charging unit

- Do not use the charging unit in a moist or wet environment.
- Be sure to prevent water from penetrating the device. If liquid should get inside, immediately separate the charging unit from the power supply and have it checked by an authorised dealer.
- Place the charging unit on an even surface only so that it stands firmly.
- Do not operate the charging unit with damaged cable or plug.
- Do not operate the charging unit after it has received a strong hit, has fallen or been damaged in any other way.
- Do not attempt to repair the device yourself. Do not open or disassemble the device. Have the charging unit checked by your authorised dealer.
- Before cleaning, separate the charging unit from the power supply and from the battery.

4.3 Battery

- The Miniped's charging unit and battery are mutually compatible. Never charge the battery using a different charging unit.
- Protect the battery from moisture and hard impacts.
- Do not use the battery after it has received a strong hit, has fallen or been damaged in any other way.
- Do not attempt to repair the device yourself. Do not open or disassemble the casing of the battery. Have the battery checked by your authorised dealer.
- Do not touch the battery contacts with metal objects.
- Never leave the battery permanently connected to the charging device when not in use for a long period of time.
- Do not leave the battery unattended during the charging procedure.

5. Operating Instructions

5.1 Assembly

5.1.1 Handlebar assembly

The handlebars of the Miniped are pre-assembled and just need to be attached to the head tube. Do to so, loosen the screw (A) and remove the protective cap (C), see *Image 1*. Place the handlebars onto the head tube.



ATTENTION: The electrical cables and brake lines cannot be twisted, kinked or clamped.

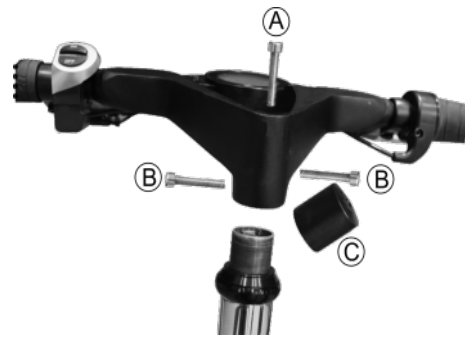


Image 1: Assembling the handlebars

Straighten the handlebars and tighten both screws (B). Place the screw (A) back in the control head and tighten it.

5.1.2 Pedal assembly

The pedals are marked with the letter "R" for the right and "L" for the left side, see *Image 2*. The right pedal has a right-hand thread, the left one has a left-hand thread. Screw the right pedal clockwise into the threaded hole of the right pedal crank. Screw the left pedal counter-clockwise into the threaded hole of the left pedal crank.



Image 2: Labelling on the pedals

5.1.3 Rear mudguard assembly

Place the mudguard on the frame of the back wheel. Align it with the mounting holes and screw it tight with both screws, *Image 3*.



Image 3: Back mudguard

5.1.4 Battery assembly

Insert the key into the lock on the right side of the battery and turn in a counter-clockwise motion as far as it will go, *Image 4*. The battery locking mechanism is now completely open.



Image 4: Opening the locking mechanism

Now put the battery into the mount as depicted in the following images, *Image 5 to 7*.



Image 5: Inserting the battery



Image 6: Pressing the battery



Image 7: Battery assembled

Press the battery firmly into the mount at the top end. When the battery makes contact with the Miniped's electrical system, an acoustic signal will sound. Hold the battery there firmly. Turn the key clockwise as far as it will go, *Image 8*. Remove the key. The battery is now firmly locked.



Ensure that the battery connections do not come into contact with metal objects during assembly. It may cause a fire and explosion hazard.



Image 8: Closing the locking mechanism

5.1.4 Front light assembly

Insert the front light into the mount on the front of the Miniped's head tube using the sheet metal tabs. Switch the front light on and adjust it so that the light beam shines onto the street approx. 10 m in front of the Miniped. Turn the front light off again.

5.2 Overview

5.2.1 General Information

- 1 Front wheel
- 2 Front brakes
- 3 Suspension fork
- 4 Mount for front light
- 5 Handlebars
- 6 Seat
- 7 Quick-lock seat fastener
- 8 Locking lever, folding mechanism
- 9 Battery
- 10 Rear light
- 11 Back mudguard
- 12 Back brake
- 13 Back wheel with hub motor
- 14 Pedals



Image 9: Overview, general

5.2.2 Handlebars

- 15 Brake handle, back wheel
- 16 Adjusting screw, back wheel brake
- 17 Adjusting screw, front wheel brake
- 18 Brake handle right, front wheel
- 19 Bell
- 20 Light switch
- 21 Digital instrument



Image 10: Handlebars overview

5.2.3 Digital instrument

- 22 Speed display
- 23 Mileage
- 24 Battery display
- 25 Travel time
- 26 Outside temperature



Image 11: Digital instrument overview

5.2.4 Remote control

- 27 Control light
- 28 Anti-theft alarm on switch
- 29 Anti-theft alarm off switch
- 30 Vehicle search button
- 31 Start button
- 32 Eyelet for keyring



Image 12: Remote control overview

5.2.5 Charging unit

- 33 Power plug
- 34 Charging plug
- 35 Charging unit
- 36 Control light

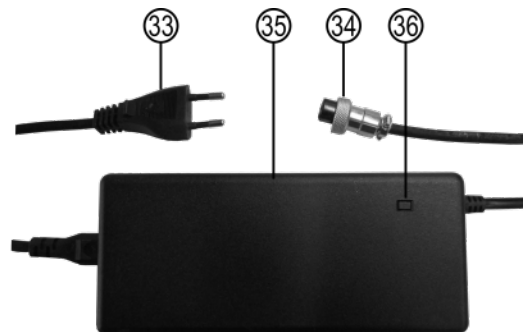


Image 13: Charging unit overview

5.2.6 Battery

- 37 Lock
- 38 Charging socket with protective cap
- 39 Rear light
- 40 Connections
- 41 Locking mechanism



Image 14: Battery overview

5.3 Operation

5.3.1 Charging the battery

The battery can be charged in an installed and uninstalled state. Switch the Miniped off (see Section 5.3.2) when charging the battery that is not installed.

Connecting the charging unit:

First remove the protective cap from the charging socket (Position 38 in the overview) on the left side of the battery. Plug the charging plug (Position 34 in the overview) into the charging socket and tighten the plug's cap nut. Lastly, plug the power plug (Position 33 in the overview) of the charging unit into the socket.

The control light (Position 36 in the overview) of the charging unit lights up while the battery is charging. When the battery is full, the control light turns green.

Removing the charging unit:

First pull the power plug out of the socket. Then loosen the cap nut of the charging plug and pull it out of the battery's charging socket. Reattach the protective cap. Always observe this sequence.

5.3.2 Remote control functions, switching the Miniped on and off

The control light (Position 27 in the overview) lights up each time a remote control button is pressed.

Remote control functions

On switch (Position 28 in the overview)	Activating the anti-theft alarm system	press once
	Switching on the acoustic alarm	press for 2 seconds
Off switch (Position 29 in the overview)	Deactivating the anti-theft alarm system	press once
	Switching off the acoustic alarm	press for 2 seconds
Search button (Position 30 in the overview)	Acoustic signal to find the vehicle	press once
	Set the sensitivity of the sensor that triggers the anti-theft alarm (high/low)	press for 2 seconds
Start button (Position 31 in the overview)	Turn on the Miniped	press 2 times in 3 seconds

Chart 1: Remote control functions

Switching the Miniped on/off

In order to switch on the Miniped, first switch the anti-theft alarm system off (press the off switch once). Then press the start button twice within 3 seconds. An acoustic signal is heard and the digital instrument

is activated. The Miniped is now ready to be ridden.

Turn the Miniped off by pressing the off switch once.

Activating/Deactivating the anti-theft alarm system

First, switch the Miniped off. Press the on switch once to activate the anti-theft alarm system. An acoustic signal will sound.

You can set the sensitivity of the triggering sensor for the anti-theft alarm system to two levels: High, very sensitive, triggered at the slightest movement of the Miniped. Low, in order to be triggered the Miniped must be moved away from its spot. These settings are selected by pressing the search button for 2 seconds.

Press the off switch once to deactivate the anti-theft alarm system.

5.3.3 Folding mechanism

Folding the Miniped



First switch the Miniped off before actuating the folding mechanism.

Loosen the quick-release mechanism of the seat post (Position 6 in the overview) and turn the seat tip to the side (*Image 15 to 18*). Then lock the quick-lock again.



Image 15: Quick-lock closed



Image 16: Quick-lock open



Image 17: Seat straight



Image 18: Seat turned

Hold the Miniped firmly with one hand on the handlebars. Use the other hand to push the locking lever (*Image 19*) (Position 8 in the overview) upwards on the frame. Now pull the frame upwards and release the lever. Lift the frame with the seat post until the locking mechanism audibly clicks into place.

The Miniped has now been folded (*Image 20*) and can be stowed away to save space or be transported.



Image 19: Releasing the locking mechanism



Image 20: Folded Miniped

Folding the pedals

You can still fold the Miniped's pedals. This can be helpful when you want to take the Miniped onto public transportation. Proceed as depicted in *Images 21 and 22*.

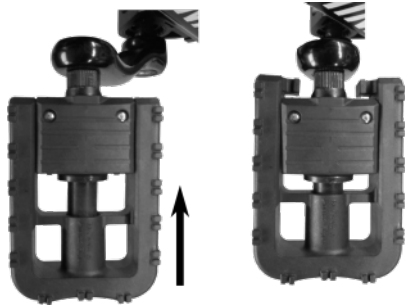


Image 21: Releasing the locking mechanism

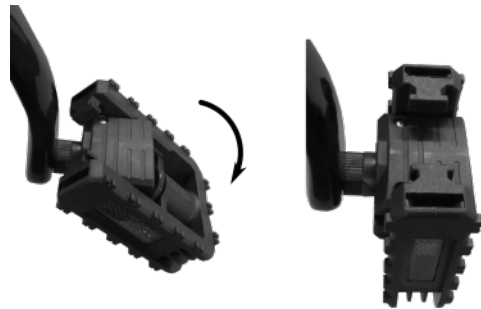


Image 22: Folding the pedal

Put the pedal back into riding position by lifting the outer end until the pedal clicks into place.



Always take hold of the pedal from the outside, never close to the pedal crank. There is a risk of fingers getting crushed.

Unfolding the Miniped

Hold the Miniped firmly with one hand on the handlebars. Use the other hand to push the locking lever (*Image 19*) upwards on the frame. Hold the lever firmly and press the frame with the seat post downward. Let go of the lever halfway down and press the frame into riding position until the locking mechanism clicks back into place. Straighten the seat again.



Ensure that the seat post quick-lock sits firmly and the tension lever is flat against the seat tube.

5.3.4 Adjusting the seat height

To ride comfortably and safely, the seat must be set to fit your body size.

To adjust the height, open the quick-lock on the seat post (*Image 15*). Set the seat at a height where the foot rests on the pedal on the lowest position while sitting with the leg not fully straight. You should be able to comfortably touch the floor with the tips of your feet. Press the quick-lock lever until tight again.



Only pull the seat post out up to the marking, lines, *Image 23*. The marking cannot be visible!

Marking for maximum seat height



Image 23: Markings on the seat post



Ensure that the seat post quick-lock sits firmly and the tension lever is flat against the seat tube.

5.3.5 Parking the Miniped



First switch the Miniped off before parking it.

Only park the Miniped on a firm surface (no sand, gravel or other loose surfaces). Fold out the stand (*Image 24*) and lean the Miniped until the stand touches the ground. Check that the Miniped stands securely before letting go of it.



Image 24: Folding down the stand



Ensure that the stand is completely folded up and clicked in place before riding away in the Miniped. A folded-down stand can lead to serious falls while riding.

6. Maintenance and care

Do not park the Miniped outdoors unprotected. Avoid direct sunlight or rain. Rainwater permeating the interior of the Miniped can lead to short circuits thereby destroying the electronics.



Perform a brake test after cleaning and/or before starting a trip.

6.1 Maintenance

6.1.1 Tyre Pressure

The wheels of the Miniped are outfitted with Schrader valves (car tyre valves). The tyres can be inflated using a conventional air pump for this type of valve, or with compressors.



When using compressors (e.g. at a gas station) the maximum filling pressure is quickly attained due to the small volume.

Tyre pressure front and back: max. 2.8 bar

If you aren't using the Miniped for a longer period of time, park it in such a way that the tyres are unencumbered.

6.1.2 Battery

Control the charge level of the battery regularly by reading the battery display in the digital instrument. If only one charging bar is visible re-charge the battery. In the event of longer periods of non-use, e.g. winter break, charge the battery every three months. When starting to use the Miniped after a long break, connect the battery to the charging device for approx. one day.

6.1.3 Chain

Lubricate the chain every 500 km or after each cleaning and after every ride in the rain with a chain lubricant from a specialised bike shop. Check the chain tension every 500 km. To do this, lift the returning part of the chain in the middle. If the chain can be lifted more than the height of five chain links, the chain tension is too low and the chain must be tightened or replaced.

6.1.4 Brakes

If the performance of the brakes decreases and you have to pull the brake handle very far, readjust the brake cables by untwisting the adjusting screw on the brake lever. When this is no longer enough to guarantee safe braking performance, find a specialised bike workshop to repair the brakes.

6.1.5 Changing remote control batteries

Two button batteries, Type CR2025, 3V, lithium, are needed for replacement. Open the remote control and switch the batteries as depicted in *Images 25 to 28*.

When inserting the battery ensure that the positive terminal of the button batteries is on top.



Image 25:
Remove casing screws

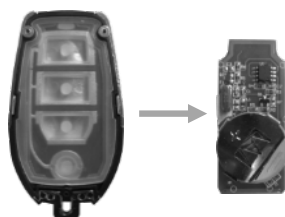


Image 26:
Carefully remove circuit board from the casing



Image 27:
Remove battery holder

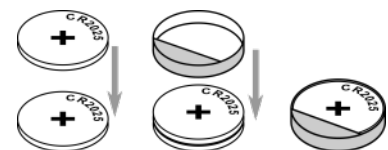


Image 28:
Place batteries into the battery holder

Assembly is performed in reverse sequence.

6.2 Inspection and service plan

Inspection and service intervals

Runtime in km	300	2000	4000	6000
electr. system, lighting	C	C	C	C
Tyre pressure, tread depth at least 1 mm	C	C	C	C
Suspension fork, shock absorption / impermeability	C	C	C	C
Battery charging voltage	C	C	C	C
Check battery for impermeability	C	C	C	C
Check brake cables for damage	C	C	C	C
Brake disk, brake pad front	C	C	C	C/R
Brake disk, brake pad back	C	C	C	C/R
Bell	C	C	C	C
Check main motor cable for damage	C	C	C	C
Pedal / bearing play	C	C	C	C
Check that the electric motor is centrally mounted	C	C	C/R	C/R
Tightness of all screws relevant for safety	C	C	C	C
Brake light switch	C	C	C	C
Headlight settings	C	C	C	C
Wheels: Bearing play, smooth operation	C	C	C	C
Check tyres for damage and foreign objects	C	C	C	C/R
Steering head bearing play, handlebar screws	C	C	C	C
Speedometer	C	C	C	C
Lubrication areas: Lines, levers, brake cams, side stands, locking mechanisms, chain *)	C	C	C	C

C = Check, R = Replace

*) see Chapter 6.1.3

6.3 Care



Never clean the Miniped with a high-pressure cleaner. This can damage the tyres and destroy seals. Water can permeate the bearings and the electric system.

Use conventional cleaning and care products for bikes when cleaning. Prevent penetration of liquid into the interior of the electrical system and into the digital instrument. Do not use a polishing product for the plastic surfaces.

7. Notes about environmental protection



Never dispose of electrical devices in household waste! Electrical and electronic devices must be collected and brought in for environmentally compatible recycling. Ask your municipality or city administration for disposal options for electrical and electronic devices.



At the end of their service lives, old batteries cannot be disposed of in household waste - or carelessly in the environment. Hand in old batteries at distributor (dealer) collection points. By doing so you are making a valuable contribution to protecting the environment. Municipalities partially take back old batteries, for instance through waste collection vehicles or at recycling yards.

8. Contact information

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