SCOTT TQ HPR50 Display V01 and Remote V01 User Manual

Contents

SCOTT TQ HPR50 Display V01 and Remote V01

Safety

This instruction contains information that you must observe for your personal safety and to prevent personal injury and damage to property. They are highlighted by warning triangles and shown below according to the degree of danger.

- Read the instructions completely before start-up and use. This will help you to avoid hazards and errors.
- Keep the manual for future reference. This user manual is an integral part of the product and must be handed over to third parties in case of resale.

NOTE Also observe the additional documentation for the other components of the HPR50 drive system as well as the documentation enclosed with the e-bike.

Hazard classification

- **HAZARD** The signal word indicates a hazard with a high degree of risk which will result in death or serious injury if not avoided.
- **WARNING** The signal word indicates a hazard with a medium level of risk which will result in death or serious injury if not avoided.
- **CAUTION** The signal word indicates a hazard with a low level of risk which could result in a minor or moderate injury if not avoided.
- **NOTE** A note in the sense of this instruction is important information about the product or the respective part of the instruction to which special attention is to be drawn.

Intended Use

The Display V01 and the Remote V01 of the drive system are intended exclusively for Displaying information and operating your e-bike and must not be used for other purposes. Any other use or use that goes beyond this is considered improper and will result in the loss of the warranty. In case of non-intended use, TQ-Systems GmbH assumes no liability for any damage that may occur and no warranty for proper and functional operation of the product. Intended use also includes observing these instructions and all information contained therein as well as the information on intended use in the supplementary documents enclosed with the e-bike. Faultless and safe operation of the product requires proper transport, storage, installation and operation.

Safety instructions for working on the e-bike
Make sure that the HPR50 drive system is no longer supplied with power before doing any work (e.g. cleaing, chain maintenance, etc.) on the e-bike:

- Switch off the drive system at the Display and wait until the Display has disappeared.

Otherwise, there is a risk that the drive unit may start in an uncontrolled way and cause serious injuries, e.g. crushing, pinching or shearing of the hands.
All work such as repair, assembly, service and maintenance be carried out exclusively by a bicycle dealer authorized by TQ.

Safety instructions for the Display und Remote

- Do not be distracted by the information shown on the Display while riding, concentrate exclusively on the traffic. Otherwise there is a risk of an acci-dent.
- Stop your e-bike when you want to perform actions other than changing the assistance level.
- The walk assist that can be activated via the Remote must only be used to push the e-bike. Make sure that both wheels of the e-bike are in contact with the ground. Otherwise there is a risk of injury.
- When the walk assist is activated, make sure that your legs are at a safe distance from the pedals. Otherwise there is a risk of injury from the rotating pedals.

Riding safety instructions
Observe the following points to avoid injuries due to a fall when starting with high torque:

- We recommend that you wear a suitable helmet and protective clothing every time you ride. Please observe the regulations of your country.
- The assistance provided by the drive system depends firstly on the selected assistance mode and secondly on the force exerted by the rider on the pedals. The higher the force applied to the pedals, the greater the Drive Unit assistance. The drive support stops as soon as you stop pedaling.
- Adjust the riding speed, the assistance level and the selected gear to the respective riding situation.

CAUTION Risk of injury
Practice the handling of the e-bike and its functions without assistance from the drive unit at first. Then gradually increase the assistance mode.

Safety instructions for using Bluetooth® and ANT+

- Do not use Bluetooth® and ANT+ technology in areas where the use of electronic devices with radio technologies is prohibited, such as hospitals or medical facilities. Otherwise, medical devices such as pacemakers may be disturbed by the radio waves and patients may be endangered.
- People with medical devices such as pacemakers or defibrillators should check with the respective manufacturers in advance that the function of the medical devices is not affected by the Bluetooth® and ANT+ technology.
- Do not use Bluetooth® and ANT+ technology near devices with automatic control, such as automatic doors or fire alarms. Otherwise, the radio waves may affect the devices and cause an accident due to possible malfunction or accidental operation.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

No changes shall be made to the equipment without the manufacturer's permission as this may void the user's authority to operate the equipment.
This equipment complies with the RF exposure limits in FCC § 1.1310.

ISED
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-ex-empt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with the RF exposure evaluation requirements of RSS-102.

Technical data

Display

Screen diagonal	2 inch
State of charge indication	Seperate for Battery and range extender
Connectivity	Bluetooth, ANT+ (Radio network standard with low power consumption)
Protection class	IP66
Dimension	74 mm x 32 mm x 12,5 mm / 2,91" x 1,26" x 0,49"
Weight	35 g / 1,23 oz
Operating temperature Storage temperature	-5 °C to +40 °C / 23 °F to 104 °F 0 °C to +40 °C / 32 °F to 140 °F

Tab. 1: Technical data – Display V01

Remote

Protection class	IP66
Weight with cable	25 g / 0,88 oz
Operating temperature Storage temperature	-5 °C to +40 °C / 23 °F to 104 °F 0 °C to +40 °C / 32 °F to 104 °F

Tab. 2: Technical data – Remote

Operation and indication components

Overview Display

Pos. in Fig. 1	Description
1	State of charge Battery (max. 10 bars, 1 bar corresponds 10 %)
2	State of charge range extender (max. 5 bars, 1 bar corresponds 20 %)
3	Display panel for different screen views with riding information (see section 6 auf Seite 9)
4	Assist mode (OFF, ● ◉ ◉)
5	Button

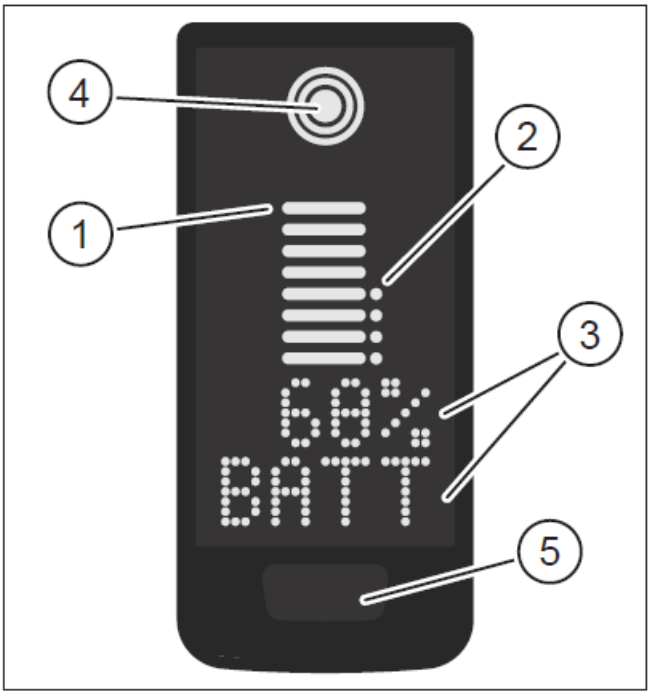


Fig. 1: Operation and indicaton components on Display

Overview Remote

Pos. in Fig. 2	Description
1	UP Button
2	DOWN Button

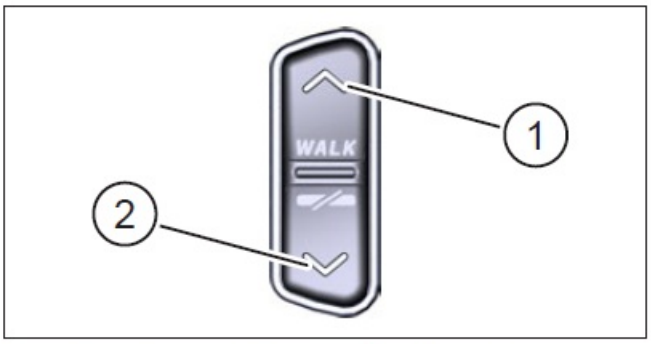


Fig. 2: Operation on the Remote

Operation

- Make sure that the Battery is sufficiently charged before operation.

Switch on drive system:

Fig. 3: Button on Display

- Switch on the drive unit by shortly pressing the button (see Fig. 3) on the Display.

Switch off drive system:

- Switch off the drive unit by long pressing the button (see Fig. 4) on the Display.

Setup-Mode

Setup-Mode activate

- Switch off the drive system.
- Press and hold the button on the Display (pos. 5 in Fig. 1) and the DOWN button on the Remote (pos. 2 in Fig. 2) for at least 5 seconds.

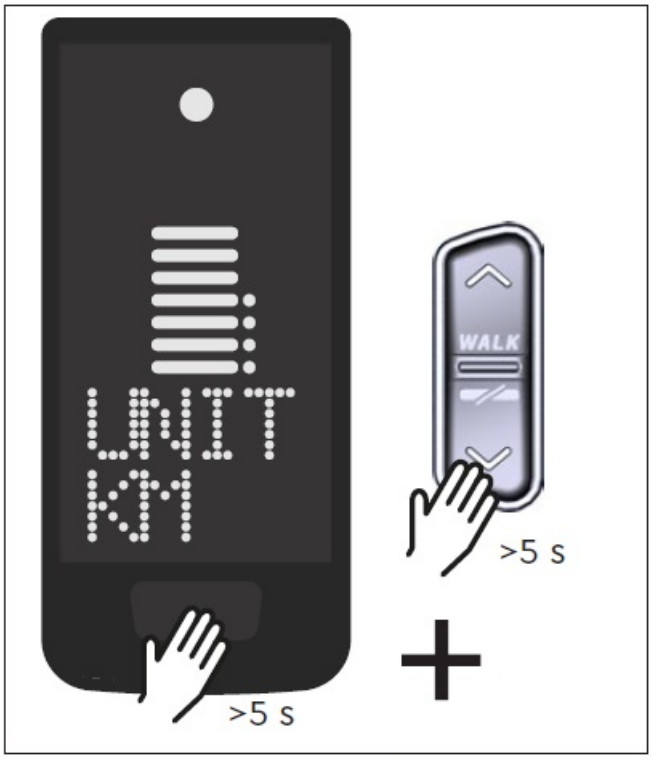


Fig. 4: Setup-Mode activate

- Dealer Service Tool necessary if no Rmote installed.

Settings
The following settings can be made in the setup mode:

Setting	Default value	Possible values
Measure	metric (km)	metric (km) or angloamerican (mi)
Acoustic acknowledge signal	ON (sounds with each buttonpress)	ON, OFF
Walk assist	ON	ON, OFF

Tab. 3: Settings in Setup-Mode

- Use the buttons on the Remote to scroll through the respective menu.
- Confirm the selection made with the button on the Display. The next selection is then Displayed or the setup mode is terminated.
- The Display screen can be changed by pressing the Remote button (> 3s) if the walk assist function is deactivated due to country-specific laws and regulations.

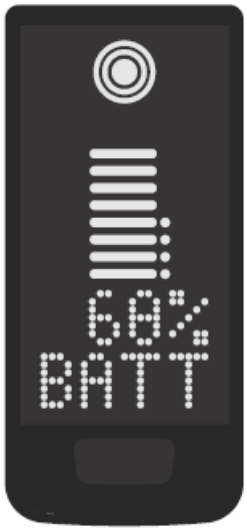
Riding information

At the bottom of the display, driving information can be shown in 4 different views. Regardless of the currently selected view, the charging status of the battery and optional range extender is displayed in the center and the selected assistance level is shown at the top.

- With a double click press on the button on the Display (pos. 5 in Fig. 1) you switch to the next screen view.

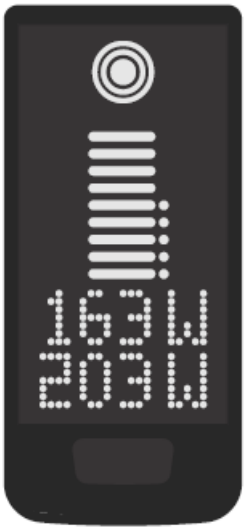
Riding information

- Battery state of charge in percent (68 % in this example).

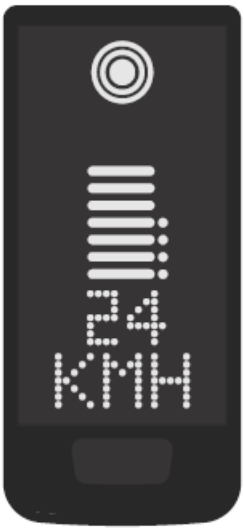


- Riding range in kilometers or miles (37 km in this example), the range calculation is an estimate that depends on many parameters (see section 11.3 auf Seite 17).

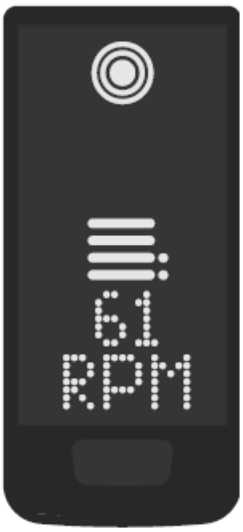
- Current rider power in watt (163 W in this example). Current drive unit power in watts (203 W in this example).



- Current speed (24 km/h in this example) in kilometers per hour (KPH) or miles per hour (MPH).



- Current rider cadence in revolutions per minute (61 RPM in this example).



- Activated light (LIGHT ON)

    - Switch on the light by pressing the UP button and DOWN button at the same time.
    - Depending on wheter the e-bike is equipped with light and TQ smartbox (please see the smartbox manual for more information).
- Deactivated light (LIGHT OFF)

- Switch off the light by pressing the UP button and DOWN button at the same time.

Select assist mode

You can choose between 3 assist modes or switch off the assist from the drive unit. The selected assist mode I, II or III is shown on the Display with the corresponding number of bars (see pos. 1 in Fig. 5).

Fig. 5: Visualization of the selected assist mode

- With a short press on the button UP of the Remote (see Fig. 6) you increase the assist mode.
- With a short press on the button DOWN of the Remote (see Fig. 6) you decrease the assist mode.

Fig. 6: Select assist mode on the Remote

- With a long press (>3 s) on the DOWN button of the Remote (see Fig. 6), you switch off the assist from the drive system.

Set connections

Connection e-bike to smartphone
NOTE You can download the TQ E-Bike app from the Appstore for IOS and the Google Play Store for Android.

Fig. 7: Connection E-Bike to Smartphone

- Download the TQ E-Bike app.
- Select your bike (you only need to pair your smartphone the first time).
- Enter the numbers shown on the Display in your phone and confirm the connection.

Connection e-bike to bicycle computers

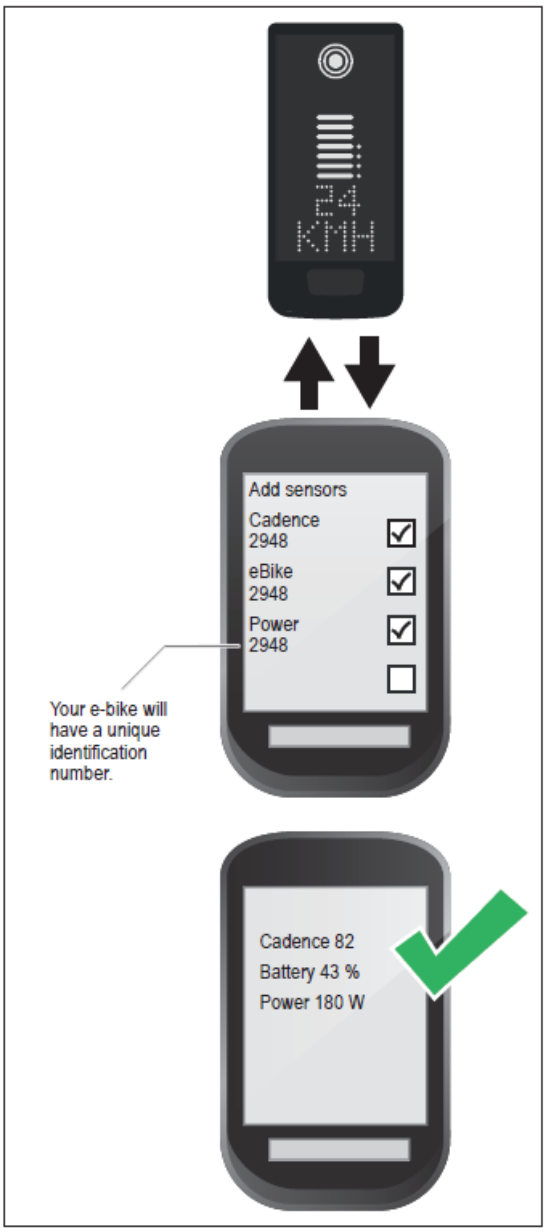


Fig. 8: Connection e-bike to bicycle computer

NOTE To make a connection with the bicycle computer, the e-bike and bicycle computer must be within radio range (maximum distance approx. 10 meters).

- Pair your bicycle computer (Bluetooth or ANT+).
- Select at least one of the three shown sensors (see Fig. 8).
- Your e-bike is now connected.

Walk assist

The walk assist makes it easier to push the e-bike, e.g. off-road.

NOTE

- The availability and characteristics of the walk assist are subject to country-specific laws and regulations. For example, the assistance provided by the push assist is limited to a speed of max. 6 km/h in Europe.
- If you have locked the use of the walk assist in setup mode (see section “„5.2 Settings“”), the next screen with riding information is Displayed instead of activating the walk assist (see chapter “„6 Riding informa-tion“”).

Activate walk assist

CAUTION Risk of injury

- Make sure that both wheels of the e-bike are in contact with the ground.
- When the walk assist is activated, make sure that your legs are a sufficient safety distance from the pedals.
- When the e-bike is at standstill, press the UP button on the Remote for longer than 0,5 s (see Fig. 9) to activate the walk assist.
- Press the UP button again and keep it pressed to move the e-bike with the walk assist.

Deactivate walk assist
The walk assist is deactivated in the following situations:

- Press the DOWN button on the Remote control (pos. 2 in Fig. 2).

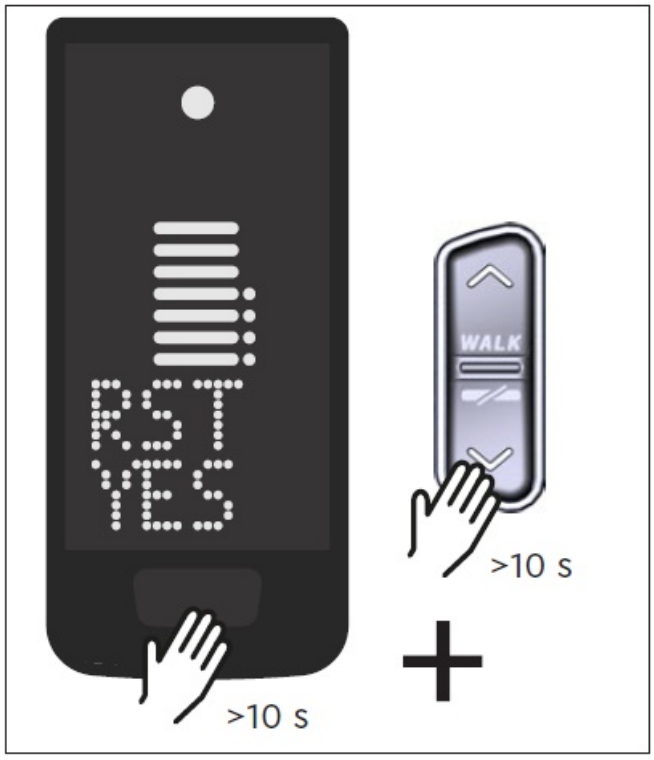


Fig. 10: Reset to factory settings

- Press the button on the Display (pos. 5 in Fig. 1).
- After 30 s without actuation of the walk assist.
- By pedaling.

Reset to factory settings

- Switch on the drive system.
- Press and hold the button on the Display and the DOWN button on the Remote for at least 10 s, the Setup-Mode is indicated first and RESET is followed (see Fig. 10).
- Make your choice with the buttons on the Remote and confirm it by pressing the button on the Display.
- Dealer Service Tool necessary if no Rmote installed.

When resetting to factory settings, the following parameters are reset to the factory settings:

- Drive Unit tuning
- Walk assist
- Bluetooth
- Acoustic acknowledge sounds

General riding notes

Functionality of the drive system
The drive system supports you when riding up to a speed limit permitted by law which may vary depending on your country. The precondition for Drive Unit assistance is that the rider pedals. At speeds above the permitted speed limit, the drive system turns off the assistance until the speed is back within the permitted range.
The assistance provided by the drive system depends firstly on the selected assistance mode and secondly on the force exerted by the rider on the pedals. The higher the force applied to the pedals the greater the Drive Unit assistance.
You can also ride the e-bike without Drive Unit assistance, e.g. when the drive system is switched off or the Battery is empty.

Gear shift
The same specifications and recommendations apply for shifting gears on an e-bike as for shifting gears on a bicycle without Drive Unit assistance.

Riding range
The possible range with one Battery charge is influenced by various factors, for example:

- Weight of e-bike, rider and baggage
- Selected assist mode
- Speed
- Route profile
- Selected gear
- Age and state of charge of the Battery
- Tire pressure
- Wind
- Outside temperature

The range of the e-bike can be extended with the optional range extender.

Cleaning

- The components of the drive system must not be cleaned with a high-pressure cleaner.

- Clean the Display and the Remote only with a soft, damp cloth.

Maintenance and Service
All service, repair or maintenance work performed by a TQ authorized bicycle dealer. Your bicycle dealer can also help you with questions about bicycle use, service, repair or maintenance.

Environmentally friendly disposal

The components of the drive system and the batteries must not be disposed of in the residual waste garbage can.

- Dispose of metal and plastic components in accordance with- country-specific regulations.
- Dispose of electrical components in accordance with country-specific regulations. In EU countries, for example, observe the national implementations of the Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE).
- Dispose of batteries and rechargeable batteries in accordance with the country-specific regulations. In EU countries, for example, observe the national implementations of the Waste Battery Directive 2006/66/EC in conjunction with Directives 2008/68/EC and (EU) 2020/1833.
- Observe addtitonally the regulations and laws of your country for disposal. In addition you can return components of the drive system that are no longer required to a bicycle dealer authorized by TQ.

Error codes

The drive system is continuously monitored. In the event of an error, a corresponding error code is shown on the Display.

Error code	Cause	Corrective measures
ERR 401 DRV SW	General software error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 403 DRV COMM	Peripheral communication error	
ERR 405 DISP COMM	Walk assist communication error	
ERR 407 DRV SW	Drive Unit electronic error	
ERR 408 DRV HW	Drive Unit overcurrent error	Restart the system and avoid unintended use. Contact your TQ dealer if the error still occurs.
ERR 40B DRV SW	General software error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 40C DRV SW		
ERR 40D DRV SW		
ERR 40E DRV SW		
ERR 40F DRV SW		
ERR 415 DRV SW	Configuration error	Contact your TQ dealer.
ERR 416 BATT COMM	General software error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 418 DISP COMM	Display initalization error	
ERR 41D DRV HW	Drive Unit memory error	
ERR 41D DRV SW		
ERR 42B DRV SW	General software error	
ERR 42E DRV SW		
ERR 440 DRV HW	Drive Unit electronic error	
ERR 445 DRV HW	Drive Unit overcurrent error	Restart the system and avoid unintended use. Contact your TQ dealer if the error still occurs.
ERR 451 DRV HOT	Drive Unit over temperature error	Permissible operating temperature exceeded or fall below. Switch off the drive unit to allow it to cool down if necessary. Start the system again. Contact your TQ dealer if the error still occurs.
ERR 452 DRV HOT		

Error code	Cause	Corrective measures
ERR 453 DRV SW	Drive Unit initalization error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 457 BATT CONN	Drive Unit voltage error	
ERR 458 BATT CONN	Drive Unit overvoltage error	Replace the Charger and use only original Charger. Contact your TQ dealer if the error still occurs.
ERR 45D BATT GEN	General Battery error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 465 BATT COMM	Battery communication error timeout	
ERR 469 BATT GEN	Critical Battery error	
ERR 475 BATT COMM	Battery initalization error	
ERR 479 DRV SW	General software error	
ERR 47A DRV SW		
ERR 47B DRV SW		
ERR 47D DRV HW	Drive Unit overcurrent error	Restart the system and avoid unintended use. Contact your TQ dealer if the error still occurs.
ERR 47F DRV HOT	Drive Unit overtemperature error	Permissible operating temperature exceeded or fall below. Switch off the drive unit to allow it to cool down if necessary. Start the system again. Contact your TQ dealer if the error still occurs.
ERR 480 DRV SENS	Drive Unit assist error	Restart the system and avoid unintended use. Contact your TQ dealer if the error still occurs.

Error code	Cause	Corrective measures
ERR 481 BATT COMM	Battery communication error	
ERR 482 DRV SW	Drive Unit configuration error	
ERR 483 DRV SW	Software runtime error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 484 DRV SW		
ERR 485 DRV SW		
ERR 486 DRV SW		
ERR 487 DRV SW		
ERR 488 DRV SW		
ERR 489 DRV SW		
ERR 48A DRV SW		
ERR 48B DRV SW		
ERR 48C DRV SW		
ERR 48D DRV SW		
ERR 48E DRV SW		
ERR 48F DRV SW		
ERR 490 DRV SW		
ERR 491 DRV SW		
ERR 492 DRV SW		
ERR 493 DRV HW	Drive Unit voltage error	
ERR 494 DRV HW	Supply voltage problem	
ERR 495 DRV HW	Drive Unit voltage error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 496 DRV HW	Drive Unit phase breakage	
ERR 497 DRV HW	Drive Unit calibration error	
ERR 4C8 DRV SW	General software error	
ERR 498 DRV COMM	Peripheral communication error	
ERR 499 DRV COMM		
ERR 49A DRV COMM		
ERR 49B DRV SENS	Cadence-sensor error	

Error code	Cause	Corrective measures
ERR 49C DRV SENS	Torquesensor error	Restart the system and avoid unintended use. Contact your TQ dealer if the error still occurs.
ERR 49D DRV SENS		
ERR 49E DRV SENS		
ERR 49F DRV SENS		
ERR 4A0 DRV COMM	CAN-Bus communication error	Check the charging port for dirt. Restart the system. Contact your TQ dealer if the error still occurs.
ERR 4A1 DRV COMM		
ERR 4A2 DRV COMM	Microcontroller electronics error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 4A3 DRV SW	Cadence-sensor error	
ERR 4A4 DRV HW		
ERR 4A5 DRV SW	Torquesensor error	
ERR 4A6 BATT COMM	Battery communication error	
ERR 4A7 DRV SW	General software error	
ERR 4A8 SPD SENS	Speedsensor error	Check the distance between magnet and Speedsensor or check for tampering.
ERR 4A9 DRV SW	General software error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 4AA DRV SW		
WRN 4AB DRV SENS	Cadence-sensor error	
ERR 4AD DRV SW	Drive Unit control error	
ERR 4AE DRV SW	Cadence-sensor error	
ERR 4AF DRV SW		
ERR 4B0 DRV HW	Drive Unit mechanical error	Check if anything is stuck or wedged in the chainring. Contact your TQ dealer if the error still occurs.
ERR 4C8 DRV SW	General software error	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 4C9 DRV SW		
ERR 4CA DRV SW		
ERR 4CB DRV SW		

Error code	Cause	Corrective measures
WRN 601 SPD SENS	Speedsensor problem	Check the distance between magnet and Speedsensor. Restart the system. Contact your TQ dealer if the error still occurs.
WRN 602 DRV HOT	Drive Unit overtemperature	Permissible operating temperature exceeded. Switch off the drive unit to allow it to cool down. Start the system again. Contact your TQ dealer if the error still occurs.
WRN 603 DRV COMM	CAN-Bus communication problem	Check the charging port for dirt. Restart the system. Contact your TQ dealer if the error still occurs.
ERR 5401 DRV CONN	Communication error between Drive Unit and Display	Restart the system. Contact your TQ dealer if the error still occurs.
ERR 5402 DISP BTN ERR 5403 DISP BTN	Remote button pressed when switching on	Don't press the Remote button during start-up. Check whether buttons are stuck due to dirt and clean them if necessary. .
WRN 5404 DISP BTN	Walk assist user error	Activate walk assist by pressing the UP button (Walk) on the Remote until Walk appears on the Display. Release the button directly and press it again to use the walk assist. Contact your TQ dealer if the error still occurs.

NOTE For more information and TQ product manuals in various language, please visit **www.tq-group.com/ebike/downloads** or scan this QR-Code.

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The information contained in this manual is in various languages but only the English version will be relevant in

case of conflict.
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Documents / Resources

	**SCOTT TQ HPR50 Display V01 and Remote V01** [pdf] User Manual TQ HPR50 Display V01 and Remote V01, TQ HPR50, Display V01 and Remote V01, V01 and Remote V01, Remote V01

References

- sports.com
- scott-sports.com
- TQ | Innovative E-Bike Antriebssysteme
- TQ | Elektronikprodukte und Elektronikdienstleistungen