

Operating Instructions

AquaTest T10



AquaTest T10

Operating Instructions



Measurable success by Sewerin equipment

Congratulations. You have chosen a quality instrument manufactured by Hermann Sewerin GmbH.

Our equipment will provide you with the highest standards of performance, safety and efficiency. They correspond with the national and international guide-lines.

Please read and understand the following operating instructions before using the equipment; they will help you to use the instrument quickly and competently. If you have any queries we are available to offer advice and assistance at any time.

Yours

Hermann Sewerin GmbH

Robert-Bosch-Straße 3
33334 Gütersloh, Germany
Tel.: +49 5241 934-0
Fax: +49 5241 934-444
www.sewerin.com
info@sewerin.com

SEWERIN SARL

17, rue Ampère – BP 211
67727 Hoerdt Cedex, France
Tél. : +33 3 88 68 15 15
Fax : +33 3 88 68 11 77
www.sewerin.fr
sewerin@sewerin.fr

Sewerin Ltd

Hertfordshire
UK
Phone: +44 1462-634363
www.sewerin.co.uk
info@sewerin.co.uk

SEWERIN IBERIA S.L.

Centro de Negocios "Eisenhower"
Avenida Sur del Aeropuerto
de Barajas 28, Of. 2.1 y 2.2
28042 Madrid, España
Tel.: +34 91 74807-57
Fax: +34 91 74807-58
www.sewerin.es
info@sewerin.es

Sewerin Sp.z o.o.

ul. Twórcza 79L/1
03-289 Warszawa, Polska
Tel.: +48 22 675 09 69
Faks: +48 22 486 93 44
Tel. kom.: +48 501 879 444
www.sewerin.pl
info@sewerin.pl

Overview AquaTest T10 – Setup

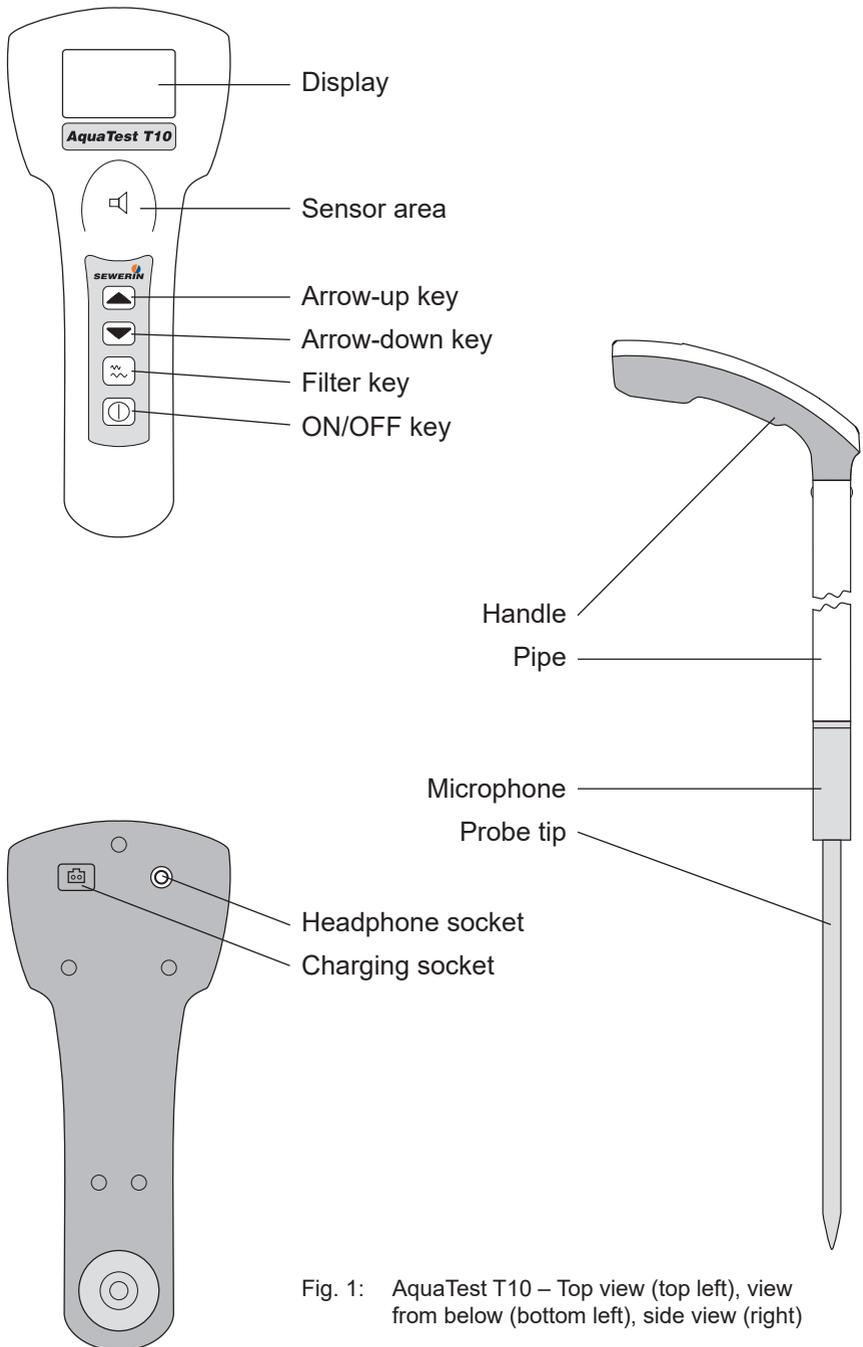


Fig. 1: AquaTest T10 – Top view (top left), view from below (bottom left), side view (right)

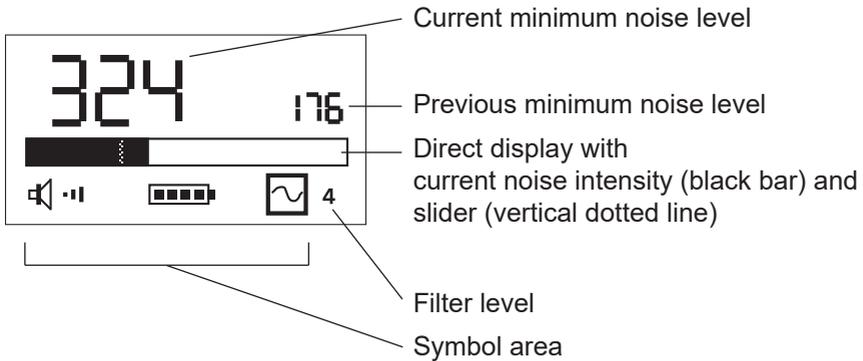


Fig. 2: AquaTest T10 – Display in **Operation** range of functions

Symbols in the symbol area

Symbol		Significance
Loudspeaker symbol		Loudspeaker on
		Loudspeaker off
Headphones symbol		Hearing protection activated
Volume symbol	.	Volume very low
		Volume very high
Battery symbol		Battery full
		Battery empty
Filter symbol		Filter key not locked
		Filter key locked
Filter band display		Shows the width and position of the selected filter band

Operating instructions

AquaTest T10

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Explanation of symbols



NOTICE!

The preferred signal word to address practices not related to personal injury.



CAUTION!

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



WARNING!

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Note:

Indicates tips and useful information.

1	Introduction	1
2	Notes on handling the product	2
2.1	Warranty	2
2.2	Intended use	2
2.3	General safety information	3
3	Product description	5
3.1	Product variants	5
3.2	Setup	6
3.3	Power supply	6
3.4	Ranges of function	6
3.5	Modes of operation	7
3.6	Displaying the noises	8
3.7	Filter levels	9
3.8	Hearing protection	10
3.9	Automatic power off	12
3.10	Display illumination	12
4	Operation	13
4.1	Preparing the test rod	13
4.2	Operation range of functions	14
4.2.1	Switching the test rod on/off	14
4.2.2	Establish connection between the test rod and the headphones	15
4.2.2.1	For test rod and F5 headphones	15
4.2.2.2	For test rod and K3 headphones	16
4.2.3	Picking up noises	17
4.2.3.1	In hold mode	17
4.2.3.2	In toggle mode	18
4.2.4	Changing the filter level	19
4.2.5	Changing the volume	20
4.3	Normal settings range of functions	22
4.3.1	Explanation of menu items and adjustable values	22
4.3.2	Changing settings	23

5	Servicing	25
5.1	Charging the batteries	25
5.2	Servicing	26
5.3	Maintenance.....	26
5.4	Solving problems.....	26
5.4.1	Troubleshooting.....	27
5.4.2	Error messages.....	28
6	Appendix	29
6.1	Technical data	29
6.2	Factory settings.....	30
6.3	Accessories	30
6.4	EU declaration of conformity	31
6.5	FCC Compliance Statements.....	31
6.6	Advice on disposal	31
7	Index.....	32

1 Introduction

The **AquaTest T10** is a test rod used to electroacoustically locate leaks in water pipe networks.

During electroacoustic locating, the natural vibrations of the object being examined are picked up by the probe tip on the test rod. After the vibrations have been electronically amplified, they can be heard as noise through headphones.

With the **AquaTest T10** the noises are also shown on the display. There is thus no need for a separate receiver when working with the **AquaTest T10**.

Principal application

- Preliminary detection

The test rod is particularly suited to the preliminary detection of leaks outdoors. Fittings on underground water pipelines can be easily inspected using the **AquaTest T10**.

Other application options

- Pinpointing leaks

To pinpoint a leak that has been previously detected, the probe tip is replaced by a tripod. The tripod is an optional accessory.

- Acoustic pipeline location

To locate pipelines acoustically, the pipes must be caused to vibrate. Knockers or stoppers are well suited to causing such vibration (e. g. from the **COMBIPHON® system**)

2 Notes on handling the product

2.1 Warranty

The following instructions must be complied with in order for any warranty to be applicable regarding the functionality and safe operation of this product.

- Read these operating instructions prior to operating the product.
- Use the product only as intended.
- Repairs and maintenance must only be carried out by specialist technicians or other suitably trained personnel. Only spare parts approved by Hermann Sewerin GmbH may be used when performing repairs.
- Changes or modifications to this product may only be carried out with the approval of Hermann Sewerin GmbH.
- Use only Hermann Sewerin GmbH accessories for the product.

Hermann Sewerin GmbH shall not be liable for damages resulting from the non-observance of this information. The warranty conditions of the General Terms and Conditions (AGB) of Hermann Sewerin GmbH are not broadened by this information.

In addition to the warnings and other information in these operating instructions, always observe the generally applicable safety and accident prevention regulations.

The manufacturer reserves the right to make technical changes.

2.2 Intended use

The **AquaTest T10** is used to locate leaks and pipelines in water pipe networks. The test rod can be used both outdoors and inside buildings. However, due to its size, use of the test rod in buildings can be limited.

The test rod can be used in moist environments. The pipe and microphone are protected from water in the event of temporary flooding but the handle and the screwed connection between the handle and the pipe are not.

For precise information regarding the conditions in which the test rod may be used, see Section 6.1, page 29.

2.3 General safety information

This product was manufactured in keeping with all binding legal and safety regulations. It corresponds to the state-of-the-art and conforms to EC requirements. The product is safe to operate when used in accordance with the instructions provided.

However, if you handle the product improperly or not as intended, the product may present a risk to persons and property. For this reason, observe the following safety information without fail.

Risk of personal injury (health risk)

- Handle the test rod carefully and safely during both transport and when working. The test rod is long and heavy. The pipe and probe tip in particular could cause harm to yourself or others.
- Proceed with extreme caution in the vicinity of electrical lines. Accidentally touching electrical lines could be life-threatening.
- Make sure that you do not put yourself or others at risk, in particular when setting the probe tip on the ground.
- The test rod features an automatic hearing protection function. However, only set the volume as loud as is necessary to analyse the noise. Excessive noise can cause permanent damage to hearing.

Hazards for the product and other property

- Always handle the test rod carefully. Never use the test rod to open covers, operate fittings or as an aid for manual activities.
- Do not drop the test rod. Always set the test rod down carefully.
- Do not lean on the test rod.
- Take extra care when handling the rod when using a probe tip extension. The elongated probe tip creates a longer mechanical lever.
- Set the test rod down so that it will not tip over when you are using the tripod instead of the probe tip.
- Do not immerse the test rod more than 550 mm deep in liquids. (This value applies to a test rod without screwed on probe tip or extension and is measured from the bottom edge of the microphone.)

2 Notes on handling the product

- Pay special attention when using the product inside buildings so as not to cause damage with the test rod (e. g scratches on floors and walls).
- Never open the housing. Do not try to screw the microphone off the pipe. Otherwise compliance with the protection class can no longer be guaranteed.

3 Product description

3.1 Product variants

The **AquaTest T10** comes in two versions:

- with SDR radio module
- without SDR radio module

SDR stands for Sewerin Digital Radio.

In the case of the **AquaTest T10** with SDR radio module, the noises are transmitted from the test rod to the headphones via radio.

When using the **AquaTest T10** without the SDR radio module, wired headphones must be connected to the test rod to transmit the noises.

AquaTest T10	with SDR radio module	without SDR radio module
Noise transmission	Radio transmission between the test rod and the headphones	Wired headphones connected to the test rod
Product identification	SDR label on the handle 	—
Suitable types of headphones	Wireless headphones Also possible: wired headphones	Wired headphones
Available SEWERIN headphones	F5, K3	K3

3.2 Setup

For overviews including all part names for the **AquaTest T10**, see the front cover flap (Fig. 1).

A probe tip is included in delivery. Extensions for the probe tip and a tripod are available as optional accessories.

3.3 Power supply

The product is powered by special, permanently built-in NiMH rechargeable batteries.

Only SEWERIN service personnel or other authorised specialists may replace the rechargeable batteries.

For information on charging the batteries, see Section 5.1, page 25.

3.4 Ranges of function

The product features two ranges of function:

- Operation
- Normal settings

The two ranges of function differ in terms of function and in the way they are switched on.

Operation

In the Operation range of function, noises are picked up and amplified. The noises can be heard through the headphones and are shown on the display as relative values.

Normal settings

Settings essential to the operation of the product can be changed in the normal settings. Noises may not be picked up in the normal settings.

Note:

The product must always be switched off when changing from one range of function to the other.

3.5 Modes of operation

In **Operation** you can work in two different modes:

- Hold mode
- Toggle mode

The two modes differ in the way the sensor area is operated.

Hold mode

Hold the thumb on the sensor area as long as noises are to be picked up. Once the thumb is removed from the sensor area, noise pickup ends.

Toggle mode

Press the thumb down briefly on the sensor area to start picking up noise. Press down again on the sensor area to stop picking up noise.

To set the mode, go to **Normal settings** under **LDS**. For more information see Section 4.3, page 22.

3.6 Displaying the noises

For the **Operation** range of functions, the elements visible in the display are explained on the front cover flap (Fig. 2). Some elements are always visible, others only in certain operating situations.

The noises are shown on the display in two ways:

- as a number above the direct display (**minimum noise level**)
- graphically in the **direct display**

Minimum noise level

The large number represents the minimum noise level during the current noise pickup. The minimum noise level counts backwards until it has reached a constant (minimum) value. The noise pickup can now stop.

When a subsequent noise pickup starts, a ``new`` minimum noise level appears, which then counts backwards. As a comparison, the previous minimum noise level is displayed next to the current minimum noise level.

Direct display

As soon as the test rod is switched on, the current noise intensity is displayed via the changing black bar within the direct display.

The direct display also contains a slider (vertical dotted line). The slider corresponds to the current minimum noise level during noise pickup. If the current minimum noise level sinks, the slider moves from right to left. If the current minimum noise level has reached a constant value, the slider ceases to move.

3.7 Filter levels

There are eight different filter levels available for hearing. Each filter level allows a certain frequency band through. A frequency band comprises a certain range of frequencies that go together.

Position and width of the frequency bands

The active filter band is shown using black bars in the filter band display. White segments symbolise the position and width of the locked frequency ranges.

Filter level	Filter band display [low ← frequency → high]
1	
2	
3	
4	
5	
6	
7	
8	

The selected filter level affects individual perception of the noise.

The filter levels are set in **Operation**. For further information see Section 4.2.4, page 19.

3.8 Hearing protection

The test rod is equipped with an automatic hearing protection function. If the noise picked up exceeds a certain threshold value, the headphones are switched off to protect the user.



CAUTION Risk of hearing damage!

Correct recognition of the limit for the automatic hearing protection function is only guaranteed if SEWERIN's **F5** or **K3** headphones are used.

There are three levels of automatic hearing protection. One of the three levels deactivates hearing protection.



CAUTION Risk of hearing damage!

The automatic hearing protection function protects the user from very loud noises.

- Deactivate the hearing protection only when absolutely necessary.
-

The protection level for the automatic hearing protection is set in **Normal settings** under **PRO**. For further information see Section 4.3, page 22.

Operating principle

- In **Normal settings** under **PRO** the value **1** or **2** is set.
- The test rod is switched on (**Operation** range of functions).
- They pick up noises and hear them over the headphones.
- The noise exceeds the threshold value of the set protection level. Hearing protection is automatically activated, i. e. the headphones switch off. The headphones symbol appears on the display instead of the loudspeaker symbol.

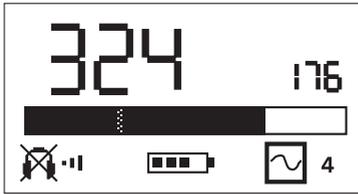


Fig. 3: Hearing protection activated (headphones symbol visible)

The following two options are available to hear noises following automatic activation of the hearing protection:

- Continue working without interruption. As soon as the noise drops below the threshold value again, the noise can be heard again.

OR

- Interrupt noise pickup. Reduce the volume.

3.9 Automatic power off

The test rod is equipped with an automatic power off function. This reduces the power consumption of the built-in rechargeable batteries and protects the batteries from being destroyed by low voltage.

The test rod switches off in the following situations:

- The test rod has not been used for twenty minutes, i. e. no keys have been pressed and the sensor area has not been touched. When switching off, **AUTO POWER OFF** is briefly shown on the display.
- Remaining battery capacity insufficient. When switching off, **BAT LOW** is briefly shown on the display.

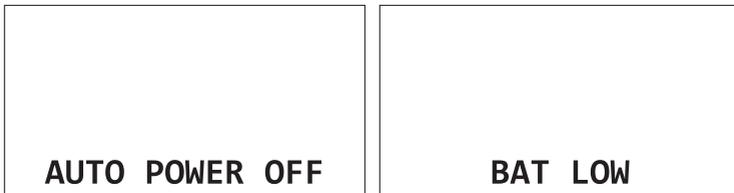


Fig. 4: Auto power off:
Test rod has not been used for twenty minutes (left)
Remaining battery capacity is insufficient (right)

3.10 Display illumination

The test rod features an illuminated display. The display automatically lights up when a key is pressed or the sensor area is touched. The display remains illuminated for 20 seconds

Display illumination can be deactivated. When display illumination is deactivated, operating time is extended.

Display illumination is deactivated and activated in **Normal settings** under **LED**. Further information can be found in Section 4.3, page 22.

4 Operation

4.1 Preparing the test rod

The test rod must be prepared for noise pickup in accordance with the type of use.

To hear noises effectively, one of the following parts must be screwed on to the test rod:

- Probe tip
- Tripod

Note:

Screw the probe tip or tripod firmly on to the microphone thread. Use a pipe wrench to help screw on the probe tip if necessary.

If the test rod is to be set on objects lying deeper under the surface, extensions can easily be screwed on between the probe tip and the microphone. They must also be firmly tightened.

**NOTICE! Risk of damage!**

If an extension is screwed on between the test rod and the tripod, a test rod standing freely on the tripod can tip over easily.

- Do not use extensions with the tripod.
-

Extensions and tripods are optionally available accessories.

4.2 Operation range of functions

4.2.1 Switching the test rod on/off

The ON/OFF key switches the test rod on and off.

Switching on



NOTICE!

Do not touch the sensor area while switching on the rod.

If the sensor area is touched while switching on the rod, the test rod is not put into operation properly.

- When switching it on, hold the test rod firmly, keeping your fingers away from the sensor area.
-

1. Hold the ON/OFF key down for approx. two seconds. A start screen appears briefly on the display.

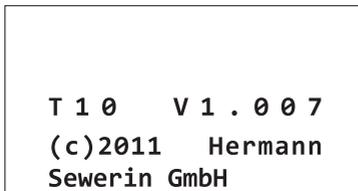


Fig. 5: Start screen

The display view for the **Operation** range of functions then appears. In the top right corner of the display, the message **DON'T TOUCH** appears.

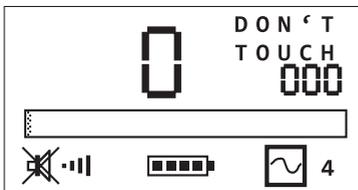


Fig. 6: **DON'T TOUCH** reminds the user not to touch the sensor area while switching on the test rod.

2. Wait until the **DON'T TOUCH** message disappears. The test rod is then ready for use.

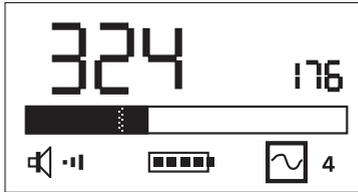


Fig. 7: Typical display view in **Operation**
In the featured example at least two noise pickups were carried out.

For information about how the noises are indicated on the display, see Section 3.6, page 8.

Switching off

- Hold the ON/OFF key down again for approx. two seconds. The test rod switches off.

4.2.2 Establish connection between the test rod and the headphones

In order to transmit the noises picked up by the test rod to the headphones, a connection between the rod and the headphones must be established.



WARNING! Risk of accident

Wearing headphones while working impairs your perception of ambient noise.

- Take special care when working in dangerous environments (e. g. traffic).

4.2.2.1 For test rod and F5 headphones

Observe the work step sequence.

1. Switch on the **F5 headphones**.
2. Switch on the test rod.

The connection has been established.

Note:

If a second test rod is to be used in close proximity to the first one, the connections between the test rods and the relevant wireless headphones must always be established in pairs. Thus, the wireless headphones for the second test rod may only be switched on after the connection between the first wireless headphones and the test rod has been established.

Note:

When working, ensure that the distance between the headphones and the test rod is not too great. If you are out of radio range, the radio connection will break off.

4.2.2.2 For test rod and K3 headphones

Work step sequence is irrelevant here.

- Connect the **K3 headphones** to the test rod. To do so, plug the headphone wire into the headphone jack on the test rod.
- Switch on the test rod.

The connection has been established.

4.2.3 Picking up noises

The noises can be picked up in two different modes of operation (see Section 3.5, page 7).

Note:

When picking up noises, you always hear all noises present, including undesired ambient noise.

Note:

When the test rod is operated using gloves, the sensor area may react sluggishly.

4.2.3.1 In hold mode

Requirements

- In **Normal settings** under **LDS** the value **1** is set.
- The test rod is switched on (**Operation** range of functions).
- There is a connection between the test rod and the headphones.

Procedure

1. Place the test rod on the contact point.
-

Note:

Ensure that there is firm contact between the probe tip and the contact point. Keep the test rod still when picking up noise.

2. Place your thumb on the sensor area. The test rod picks up the noises.

The current minimum noise level and noise intensity are shown on the display. The current minimum noise level counts backwards.

3. Wait until the minimum noise level rests at a constant value
-

4. Remove thumb from sensor area. Noise pickup stops.

Note:

Lift your thumb clearly off to finish picking up noise (at least 1 cm). It is best to position your thumb beside the sensor area. When the area above the sensor area is not free, noise pickup is not clearly ended and the next has not been started.

4.2.3.2 In toggle mode

Requirements

- In **Normal settings** under **LDS** the value **0** is set.
- The test rod is switched on (**Operation** range of functions).
- There is a connection between the test rod and the headphones.

Procedure

1. Place the test rod on the contact point.

Note:

Ensure that there is firm contact between the probe tip and the contact point. Keep the test rod still when picking up noise.

2. Press your thumb briefly on the sensor area. The test rod picks up the noises.

The current minimum noise level and noise intensity are shown on the display. The current minimum noise level counts backwards.

Note:

Always lift the thumb clearly off after pressing the sensor area (minimum 1 cm). It is best to position your thumb beside the sensor area. If the area above the sensor area is not free, noise pickup may end prematurely.

3. Wait until the minimum noise level rests at a constant value
4. Press your thumb briefly on the sensor area again. Noise pickup stops.

4.2.4 Changing the filter level

The selected filter level affects individual perception of the noise. Further information about the filter levels can be found in Section 3.7, page 9.

Note:

Results of different noise recordings may only be compared with one another if the noises have been picked up using the same filter level.

The filter level is shown as a number to the right of the filter symbol.

Noise pickup must be interrupted to change the filter level.

Note:

When the filter key is locked the filter level cannot be changed.

Requirement

- The test rod is switched on (**Operation** range of functions).

Procedure

1. Press the filter key. The filter band indicator appears on the display instead of the battery symbol. The filter symbol flashes.
-

Note:

If the sensor area is touched the filter level cannot be changed.

2. Press one of the arrow keys. Each press of the key either increases or decreases the filter level in increments. The available filter levels are run through in a loop.
3. Once the desired filter level is shown, press the filter key again. The selected filter level is saved. The battery symbol can be seen again.

4.2.5 Changing the volume

The volume symbol indicates the selected volume. The more vertical bars visible in the symbol, the higher the volume.

To guard against hearing damage, the headphones are automatically switched off when excessively loud noises are picked up (see Section 3.8, page 10). This is provided that the hearing protection is not deactivated.



CAUTION! Risk of hearing damage!

Excessive volume can permanently damage hearing.

- Set the volume only as loud as absolutely necessary to hear.
-

In **Hold mode** noise pickup must be interrupted to change the volume.

In **Toggle mode** the volume can be changed while picking up noise.

Requirements

- The test rod is switched on (**Operation** range of functions).
- There is a connection between the test rod and the headphones.

Procedure

Increase the volume using the arrow-up key. Decrease the volume using the arrow-down key.

- To continuously change the volume hold down one of the arrow keys. The number of bars visible will increase or decrease continuously.

- To change the volume in increments, briefly press one of the arrow keys repeatedly. The number of bars visible will increase or decrease in increments.

When the arrow key is released, the set volume is saved.

4.3 Normal settings range of functions

4.3.1 Explanation of menu items and adjustable values

The **Normal settings** range of functions stores the **SETUP** menu. The following table explains the menu items and the adjustable values for each.

Menu item	Significance	Values
LDS	Mode of operation	0 Toggle mode
		1 Hold mode
PRO	Hearing protection	0 No hearing protection ● Hearing protection deactivated
		1 Average hearing protection ● Threshold value: 95 dB
		2 Good hearing protection ● Threshold value: 85 dB
LOC	Locks the filter key	0 Filter key not locked ● Filter level can be changed
		1 Filter key locked ● Filter level cannot be changed
LED	Display illumination	0 Display illumination deactivated ● Energy-saving mode
		1 Display illumination activated
RES	Reset	0 Values in the menu items LDS , PRO , LOC and LED can be set individually
		1 Values for all menu items as well as the filter level are reset to factory settings ● For information on factory settings see Section 6.2, page 30
END	Exit SETUP menu and save settings	

4.3.2 Changing settings

The values in the **Normal settings** can be set individually.

Information about the individual menu items and the adjustable values can be found in Section 4.3.1, page 22.

Requirement

- The test rod is off.

Procedure

1. Hold down the arrow-up key while simultaneously pressing the ON/OFF key. The **SETUP** menu appears.

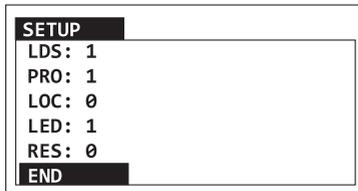


Fig. 8: Menu SETUP (**Normal settings** range of functions)

2. Change the desired settings. Proceed as follows for each setting:
 - Select the desired menu item using the arrow keys. The selected menu item is highlighted in black.
 - Briefly press the ON/OFF key until the desired value appears.
3. Select **END** with the arrow keys.
4. Briefly press the ON/OFF key. The set values are accepted. The **SETUP** menu closes. The test rod is switched off.

The set values are permanently saved until the next change.

Cancel

Proceed as follows to exit the **SETUP** menu without accepting any changes:

1. Choose any menu item using the arrow keys except the menu item **END**.
2. Hold down the ON/OFF key. The value of the selected menu item is only apparently changed. Previously executed changes are not accepted. The **SETUP** menu closes. The test rod is switched off.

5 Servicing

5.1 Charging the batteries

When there are no more bars visible in the battery symbol, it is time to charge the batteries. They can also be charged sooner, i. e. even when the battery symbol displays sufficient remaining capacity.



NOTICE!

Risk of shortening battery life!

The built-in NiMH batteries may not be exposed to high temperatures during the charging process. Otherwise full charging capacity will not be reached.

- Maintain the maximum permissible operating temperature when charging the batteries.
-

When the batteries are completely empty, the charging process lasts approx. four hours.

The **M4 AC/DC adapter** is required to charge the batteries. Alternatively, an **M4 vehicle cable** can be used. The AC/DC adapter is included in delivery. The vehicle cable is an optionally available accessory.

The test rod can be switched on or off when charging the batteries. SEWERIN recommends that the test rod be switched off when charging the batteries.

1. Plug the AC/DC adapter plug into the charging socket of the test rod.
 2. Plug the AC/DC adapter into a socket.
The start screen appears. Charging starts automatically. The battery symbol bars are displayed in motion.
 3. Wait until all of the bars are visible again in the battery symbol. (The bars are no longer moving.)
 4. Disconnect the AC/DC adapter from both the test rod and the mains socket. Battery charging is complete.
-

5.2 Servicing

All that is necessary to service the test rod is to wipe it down with a moist towel. SEWERIN recommends removing significant contamination immediately.



NOTICE! Risk of scratching!

The display surface is plastic.

- Do not use any mechanical or aggressive chemical agents for servicing.
-

5.3 Maintenance

SEWERIN recommends having the test rod serviced regularly by SEWERIN Service or an authorised professional. Only regular maintenance can ensure that the test rod is always ready for use.

5.4 Solving problems

The occurrence of an error when working with the test rod does not always indicate a serious problem. In some cases it may simply be an operating error. SEWERIN recommends first looking for the cause of the problem yourself. If the cause of the problem cannot be found, SEWERIN Service will be pleased to help.

Suggestions for troubleshooting can be found in Section 5.4.1. Section 5.4.2 explains the error messages produced by the product when product-specific errors occur.

5.4.1 Troubleshooting

Problem	Possible cause	Corrective action
No noise heard	<ul style="list-style-type: none"> Headphones automatically switched off 	<ul style="list-style-type: none"> Switch headphones on again
	<ul style="list-style-type: none"> Problem with the audio output 	<ul style="list-style-type: none"> Switch off the test rod and switch it on again
	<p>When using the F5 wireless headphones:</p> <ul style="list-style-type: none"> Radio connection interrupted, out of range Remaining battery capacity in wireless headphones insufficient 	<ul style="list-style-type: none"> Go back into range Replace or charge batteries
	<p>When using the K3 wireless headphones:</p> <ul style="list-style-type: none"> Connection between the test rod and the headphones is loose 	<ul style="list-style-type: none"> Check connection
Sensor area does not react	<ul style="list-style-type: none"> A finger touched the sensor area while the rod was being switched on 	<ul style="list-style-type: none"> Switch off the test rod and switch it on again
Probe tip comes loose repeatedly	<ul style="list-style-type: none"> Probe tip too firmly on the contact point 	<ul style="list-style-type: none"> Tighten the probe tip with the pipe wrench
Typical operating time not attained	<ul style="list-style-type: none"> End of the battery life has been reached 	<ul style="list-style-type: none"> Change of battery necessary: Send test rod to SEWERIN Service or an authorised professional

5.4.2 Error messages

The test rod shows errors in the display using an error message.

Error code	Significance	Corrective action
ERR001	<ul style="list-style-type: none">● Internal error● Settings are reset to factory settings	
ERR003	<ul style="list-style-type: none">● Error during the charging process● Battery charging interrupted because AC/DC adapter is faulty or the allowable operating temperature has been exceeded	<ul style="list-style-type: none">● Replace AC/DC adapter● Let test rod cool down● Look for a cooler environment

The error code **ERR001** is visible for approx. two seconds in the top right-hand corner of the display.

In the case of **ERR003**, the error code is displayed until corrective action has been taken.

If the errors continue to occur, the test rod must be sent to SEWERIN Service.

6 Appendix

6.1 Technical data

Device data

Dimensions (W × D × H):	89 × 211 × 705 mm
Weight:	1250 g

Certificates

Certificates:	FCC, CE
Marking:	FCC ID WSP-EZ1300102 IC 7994A-EZ1300102

Permitted operating conditions

Operating temperature:	-10 °C – +50 °C
Storage temperature:	-25 °C – +60 °C
Humidity:	15 % – 90 % non-condensing
Air pressure:	950 – 1100 hPa
Protection rating:	IP65
Non-permitted operating environments:	Operating position: not to be immersed more than 550 mm (measured from the bottom edge of the microphone)
Operating position:	Vertical

Power supply

Operated with:	NiMH rechargeable batteries, built-in
Operating time, typical:	16 hrs
Charging time:	4 hrs

Data logging

Filter:	8 filter bands, selectable
Sampling rate:	32 kHz, 16 Bit

Data transmission

Transmission frequencies:	2.408 – 2.476 GHz, 38 channels
Radio range:	10 m
Transmission bandwidth:	0 – 8 kHz
Communication:	SDR, cable
Power output:	10 mW

6.2 Factory settings

The test rod is delivered with the following default settings.

Operation range of functions

Filter level: 4

Normal settings range of functions

Menu item	Value in factory settings
LDS	1
PRO	1
LOC	0
LED	1
RES	0

The test rod can be reset to the factory settings in the **Normal settings** under **RES** at any time.

6.3 Accessories

Part	Order number
M10 tripod	4000-0966
Extension M10 / 300 mm	EM55-80100
Extension M10 / 600 mm	EM55-80000

Other accessories are available for the product. Please contact our SEWERIN sales department for further information.

6.4 EU declaration of conformity

Hermann Sewerin GmbH hereby declares that the **AquaTest T10** fulfils the requirements of the following guideline:

- **2014/30/EU**

Hermann Sewerin GmbH hereby declares that the **Aqua-Test T10 SDR** fulfils the requirements of the following guideline:

- **1999/5/EC**

The product belongs to radio equipment device class 1.

The complete declaration of conformity can be found online.

6.5 FCC Compliance Statements

The device has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the device is operated in a commercial environment. The device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

6.6 Advice on disposal

The European Waste Catalogue (EWC) governs the disposal of appliances and accessories.

Description of waste	Allocated EWC waste code
Device	16 02 13
Rechargeable battery	16 06 05

End-of-life equipment

Used equipment can be returned to Hermann Sewerin GmbH. We will arrange for the equipment to be disposed of appropriately by certified specialist contractors free of charge.

7 Index

A

- Acoustic pipeline location 1
- Application options 1
- Automatic hearing protection function
 - see* Hearing protection
- Automatic power off
 - see* Power off
- AUTO POWER OFF 12

B

- BAT LOW 12

C

- Cable connector
 - see* Connection between test rod and headphones
- Connection between test rod and headphones 15
 - Several test rods and headphones 16
 - wired 16
 - wireless 15

D

- Direct display 8
- Display illumination 12, 22
- DON'T TOUCH 14

E

- END 22
- Error messages 28

F

- Factory settings 30
- Filter band display 9
- Filter key 22
- Filter level 9
 - Changing 19
- Frequency band 9

H

- Hearing protection 10, 22
 - Hearing noises again 11
 - Operating principle 10
- Hold mode 7
 - Picking up noises 17

L

- LDS 22
- LED 22
- LOC 22

M

- Maintenance 26
- Minimum noise level 8
- Mode of operation 7, 22
 - see also* Toggle mode, hold mode

N

- Noise intensity, display of 8
- Normal settings 6, 22
 - Changing 23

O

- Operation 6, 14

P

Picking up noises 17
Pinpointing leaks 1
Power off 12
Power supply 6
Preliminary detection 1
PRO 22

R

Radio connection
 see Connection between test rod
 and headphones
Range of functions 6
 see also Operation, normal set-
 tings
Rechargeable batteries
 Charging 25
 Replacing 6
RES 22
Reset 22

S

Screw on probe tip 13
Screw on tripod 13
SDR 5
Sensor area 7
Servicing 26
Settings
 see Normal settings
SETUP 23
Sewerin Digital Radio
 see SDR
Slider 8
Start screen 14

T

Test rod
 Preparing 13
 Switching off 15
 Switching on 14
Toggle mode 7
 Picking up noises 18
Troubleshooting 27

V

Volume
 see also Hearing protection
 Changing 20

Hermann Sewerin GmbH
Robert-Bosch-Straße 3 · 33334 Gütersloh · Germany
Telefon +49 5241 934-0 · Telefax +49 5241 934-444
www.sewerin.com · info@sewerin.com