

## Pin-pointing system protrac®



# Table of contents

<b>About this manual</b> .....	<b>5</b>
Application and validity	5
Applicable documents	5
Note on screenshots and graphics	5
Structure of safety instructions	5
Signal words	5
<b>For your safety</b> .....	<b>6</b>
Avoiding dangers, taking safety measures	6
Dangers when working with batteries	6
Danger symbols	6
View settings	6
Dangers when working with electric voltage	7
<b>Intended use</b> .....	<b>8</b>
Instructions for the operator	8
Warranty	8
After Sales Service	9
<b>Product information</b> .....	<b>10</b>
System overview	10
CU control unit	11
CU operating state indicator	12
AGP acoustic ground probe	12
AGP operating state indicator	13
SVP step voltage probes	13
Power supply	13
<b>Before commissioning</b> .....	<b>14</b>
Pairing protrac® system components	14
Pairing the AGP	14
Pairing headphones (AGP must be switched on)	14
Before commissioning	15
<b>Acoustic pin-pointing – general</b> .....	<b>16</b>
Basic principle	16
Required equipment	16
User interface	17

# Table of contents

<b>Performing acoustic pin-pointing .....</b>	<b>18</b>
Procedure .....	18
<b>Acoustic pin-pointing – tips, settings .....</b>	<b>20</b>
Evaluation of the acoustic and electromagnetic signals .....	20
Cable break – connecting the SSG .....	20
Changing faults .....	20
Pin-pointing in strong wind .....	20
Display of directional arrow .....	20
Method settings .....	21
<b>Sheath fault location – general .....</b>	<b>22</b>
Basic principle .....	22
Required equipment .....	22
User interface .....	22
<b>Performing sheath fault location .....</b>	<b>23</b>
Procedure .....	23
<b>Sheath fault location – tips, settings .....</b>	<b>25</b>
Detecting multiple cable sheath faults .....	25
Pre-locating cable sheath faults more precisely .....	25
Method settings .....	26
<b>Tracing – general .....</b>	<b>27</b>
Basic principle .....	27
Required equipment .....	27
User interface .....	27
<b>Performing tracing .....</b>	<b>28</b>
Procedure .....	28
<b>Tracing – tips, settings .....</b>	<b>30</b>
Abrupt signal change during measurement .....	30
Signal sequences .....	30
Method settings .....	31
<b>Basic settings .....</b>	<b>32</b>

# Table of contents

<b>Questions and answers .....</b>	<b>34</b>
Why won't the AGP or CU switch on?	34
How do I see that a device is connected to the CU?	34
Why are the date and time suddenly wrong?	34
Software messages	35
<b>Transportation, storage, disposal.....</b>	<b>36</b>
Transportation	36
Storage	36
Disposal	36
<b>protrac® sets .....</b>	<b>37</b>

## Application and validity

This user manual contains all information needed for the commissioning and operation of protrac®.

- » Read the entire user manual before operating the product for the first time.
- » Consider this user manual as part of the product and store it at an easily accessible location.

This user manual applies to the device software for the CU control unit from version 1.2 onwards.

## Applicable documents

This user manual applies in conjunction with the following documents:

- Data sheet of the protrac® pin-pointing system
- User manuals for the cable fault location system used and for all other devices used

## Note on screenshots and graphics

The screenshots and graphics used are intended for illustration and may differ from the actual state.

## Structure of safety instructions

The safety instructions are structured as follows:

Danger symbol	SIGNAL WORD
	<b>Type of danger and its source</b> Possible consequences of violation » Measure to prevent the danger

### Signal words

<b>DANGER</b>	Will lead to severe injuries or death.
<b>CAUTION</b>	May lead to light to moderate injuries.
<b>NOTICE</b>	May lead to material damage.

## Danger symbols

	General danger
	Risk of electric shock
	Danger of explosion

## View settings

Symbol	Meaning
	Indicates information on the topic in the corresponding user manuals.
	Indicates required tools.
	Indicates required spare parts.

## Avoiding dangers, taking safety measures

- » When using protrac®, you must comply with the following regulations and guidelines:
  - Local safety and accident prevention regulations
  - National safety instructions and regulations
  - Relevant national and international regulations, standards and guidelines
  - EN 50110 (EU/EFTA countries) or applicable standards in your country.
- » Operate the system only in a technical perfect condition.
- » Only use accessories and original spare parts recommended by BAUR.
- » If you are not going to use the control unit or the acoustic ground probe for an extended period, remove the rechargeable or non-rechargeable batteries from the battery compartment.

## Dangers when working with batteries

The charger for the control unit and the acoustic ground probe may only be used for charging the rechargeable batteries.

- » Never use the charger to charge non-rechargeable batteries. This can lead to fire or cause an explosion.

## Dangers when working with electric voltage

During measurements with protrac® in combination with a cable fault location system or a surge voltage generator, a dangerous – and sometimes very high – voltage is generated that is fed into the test object via an HV connection cable and can produce a fatal voltage gradient near the fault location. The responsible body and operator need to pay special attention and must be very careful while working with high voltage.



### **DANGER**

#### **Dangerous electric voltage**

Danger to life or risk of injury due to electric shock.  
Risk of burn injuries and electro-ophthalmia due to arcing faults.

- » Follow the safety instructions in the user manual for the cable fault location system used.
- » Before starting work, ensure there is no voltage at the workplace.

# Intended use

The protrac® pin-pointing system is used for

- Acoustic pin-pointing of cable faults
- Pin-pointing of cable sheath faults and faults due to earth contact using the step voltage method
- Tracing

If the protrac® system and its components are not used in accordance with this stipulation, safe operation cannot be guaranteed. The responsible body or operator is liable for any personal injury and damage to property resulting from incorrect operation.

Proper use also includes

- compliance with all instructions in this manual, and all other applicable documents,
- compliance with the technical data and connection requirements given on the rating plate and in this manual and any other applicable documents,
- compliance with the maintenance instructions for the system and its components.

## Instructions for the operator

protrac® may be operated only by authorised and trained electrical engineers. An electrical engineer is a person who, owing to his professional education (electrical engineering), knowledge, experience and familiarity with the applicable standards and regulations, can assess the tasks assigned to him and detect possible dangers.

The operator must also be familiar with the operation of protrac® and the devices used, as well as with the pin-pointing process.

## Warranty

For warranty claims, please contact BAUR GmbH or your local BAUR representative (<http://www.baur.eu/baur-worldwide>). The warranty is void in case of improper use.

Wear parts are excluded from the warranty.

## After Sales Service

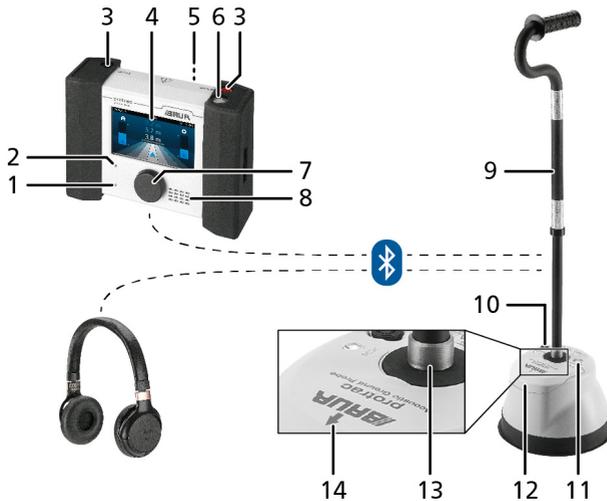
If you have any queries, please contact BAUR GmbH or your BAUR representative (<http://www.baur.eu/baur-worldwide>).



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## System overview

The protrac® system components CU control unit, AGP acoustic ground probe and headphones are wirelessly connected together via Bluetooth®.



### CU control unit

- 1 Brightness sensor for the automatic adjustment of the touchscreen brightness
- 2 LED for the operating state indicator  
[↔ "CU operating state indicator"]
- 3 Connections for SVP step voltage probes
- 4 Touchscreen
- 5 Rechargeable battery compartment and charger socket (back)
- 6 On/off button
- 7 Rotary switch  
» To mute the volume, or to switch it back on, press the rotary switch.
- 8 Loudspeaker

## AGP acoustic ground probe

- 9 Height-adjustable handle
- 10 Charger socket
- 11 On/Off button and LED for the operating state indicator  
[↔ “AGP Operating state indicator”]
- 12 Rechargeable battery compartment
- 13 Quick-release fastener for simple fitting or removal of the handle
- 14 Directional arrow

## CU control unit



The home screen of the CU gives you access to the following information and functions:

**Header**      Date and time, devices connected and linked via Bluetooth®, rechargeable and non-rechargeable battery status of the control unit



Acoustic pin-pointing



Sheath fault location



Tracing



Basic settings

The CU is switched off automatically if there is no connection to an AGP or to the SVPs for 5 minutes.

## CU operating state indicator

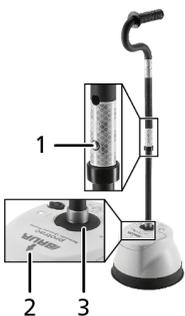


The LED on the CU indicates the following operating states:

-  (flashing): The CU is in pairing mode.  
[↔ “Pairing protrac® system components”]
-  (permanently on): The CU is switched on and paired to the Bluetooth® devices.
-  (permanently on): The AGP is muted (prevention of hearing damage).
-  (permanently on): The switching off process is underway.

## AGP acoustic ground probe

The AGP is used for acoustic pin-pointing and tracing and detects acoustic and electro-magnetic signals. The AGP has a resonantly mounted sensor for the detection of structure-borne noise. Ambient noise is automatically suppressed thanks to multi-level signal processing.



To adjust the height of the handle:

- » Press the button (1) in the recess on the handle and set the desired height.

To fit the handle to the AGP:

- » Place the handle in the quick-release fastener (3) on the AGP and rotate to the right until it engages.

When the handle is fitted, it is aligned parallel to the directional arrow (2).

To remove the handle from the AGP:

- » Rotate the handle to the left and remove from the AGP.

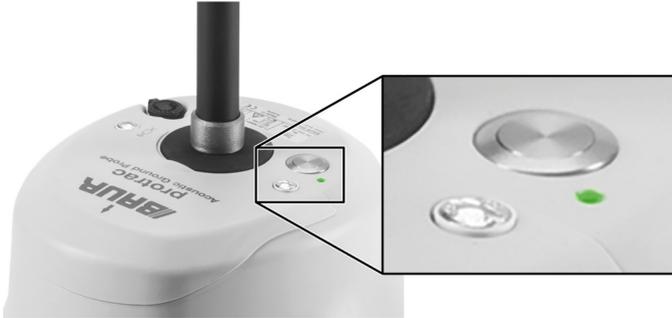
For reliable contact with the ground on solid surfaces, a tripod is fitted to the underside of the AGP. A contact tip can be screwed in for cable fault pin-pointing on loose surfaces, e.g. sand, or on meadows.

Available contact tips: 50, 100 and 150 mm (optional: 300 mm).

# Product information

The AGP is automatically switched off if there is no Bluetooth® connection to a CU for 5 minutes.

## AGP operating state indicator

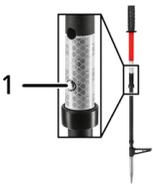


The LED on the AGP indicates the following operating states:

- (permanently on): The switching on process is underway.
- (flashing): The AGP is in pairing mode.  
[↪ ["Pairing protrac® system components"](#)]
- (permanently on): The AGP is switched on and paired to the CU.
- (permanently on): The AGP is muted (prevention of hearing damage).
- (permanently on): The switching off process is underway.

## SVP step voltage probes

The SVPs are used for sheath fault location.



To adjust the height of the SVPs:

- » Press the button (1) in the recess on the handle and set the desired height.

## Power supply

protrac® is supplied with power from rechargeable or non-rechargeable batteries:

- Rechargeable battery type: NiMH Mignon 1.2 V IEC LR6
- Non-rechargeable battery type: Alkaline batteries 1.5 V IEC LR6

Charging the rechargeable batteries:

↪ [Update and maintenance manual](#)

## Pairing protrac® system components

If an AGP or headphones are subsequently integrated into a protrac® system, so-called pairing must be performed. To do this, the devices are paired with the CU via Bluetooth® the first time they are used. This procedure need only be performed once, after which the connection is established automatically.

**Note:** The procedure will be described for the headphones included in the standard delivery and may vary for other headphones.



» Follow the instructions in the user manual for the headphones used.

1. Switch on the CU.

### Pairing the AGP

2. Switch on the AGP.
3. On the home screen of the CU select: **Settings > Bluetooth® connections > AGP**.
4. Wait until the identification of the AGP is displayed and then tap this identification.

It can take up to 1 minute for the identification to be displayed. During this time the LEDs on the CU and on the AGP flash blue.

If the pairing was successful, a tick is displayed next to the identification in the CU and the **AGP** symbol appears in the header.

### Pairing headphones (AGP must be switched on)

5. Hold down the On/Off button on the headphones until the LED on the headphones flashes alternately blue and red.
6. On the home screen of the CU select: **Settings > Bluetooth® connections > Headphones**.
7. Wait until the full identification of the headphones (e.g. **HD 4.40BT**) has been displayed and then tap this identification.

It can take up to 1 minute for the identification to be displayed. During this time the LED on the CU flashes blue.

If the pairing was successful, a tick is displayed next to the identification in the CU and the  symbol appears in the header.

If the  symbol is not displayed, select **Settings > Sound > Output > Headphones** on the home screen of the CU and restart the pairing process for the headphones.

## Before commissioning



### **DANGER**

#### **Dangerous electric voltage**

Danger to life or risk of injury due to electric shock.  
Risk of burn injuries and electro-ophthalmia due to arcing faults.

- » Before commissioning ensure there is no voltage at the workplace.
- » Use suitable personal protective equipment against electric shocks and arcing faults.

- » Comply with the following safety rules before beginning work:
  1. Disconnect the test object.
  2. Secure against re-connection.
  3. Verify absence of operating voltage.
  4. Earth and short all phases.
  5. Provide protection against adjacent live parts.
  6. Shield all metal parts near the cable route.



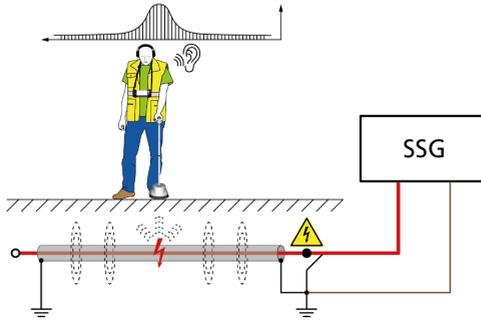
- » Follow the user manuals for all devices used.

# Acoustic pin-pointing – general

Acoustic pin-pointing is suitable for:

- High-resistive cable faults
- Cable and phase breaks

Basic principle



Surge voltage pulses are fed into the faulty phases of the cable, which lead to breakdowns at the fault. The breakdowns result in an acoustic and magnetic signal. The different propagation times of the signals are compared: The magnetic signal propagates almost at the speed of light and triggers a time measurement in the receiver. The acoustic signal, which propagates only at the speed of sound, is detected by the acoustic ground probe after a delay, whereupon the time measurement is stopped. The difference in propagation time between the signals is determined and displayed as a distance from the fault location. The shorter the measured time, the closer is the acoustic ground probe to the fault.

Required equipment

- Surge voltage generator (e.g. BAUR SSG)
- CU control unit, AGP acoustic ground probe, Bluetooth® headphones

# Acoustic pin-pointing – general

## User interface



No.	Function
1	Indicates the strength of the magnetic signal (incl. last measured peak level) » To change the gain, tap on the bar.
2	Calls up the home screen
3	Shows the last measured distances from the fault (latest distance: white)
4	Indicates whether limiting to 85 dB(A) is active
5	Calls up the method settings
6	Indicates the strength of the acoustic signal (incl. last measured peak level)
7	Shows the cable route (light stripe in the middle) and neighbouring zones, and where you are located in relation to the cable route (blue directional arrow)

# Performing acoustic pin-pointing

## Procedure



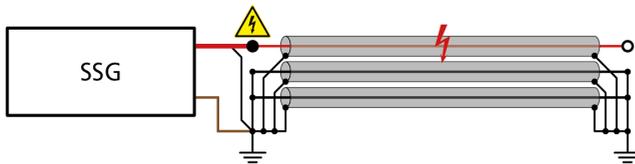
**DANGER**

**Danger to life due to electric shock!**

- » Take all necessary safety measures [↪ "Before commissioning"].
- » Discharge and earth the test object before touching it.

1. Connect the test object properly according to the user manual for the cable fault location system.

Example: Connect the SSG to a 3-phase screened cable



2. Switch on the SSG and select the lowest possible voltage range that is higher than the breakdown voltage of the fault. **Example:** If the breakdown voltage is 6.5 kV, select the 8 kV voltage range.
3. Set the maximum permissible output voltage in the selected voltage range and the surge sequence.
4. Switch on the high voltage on the SSG.
5. Ensure that the tripod is mounted on the underside of the AGP.  
Pin-pointing on meadows or loose surfaces (sand, snow, etc.): Also screw on a suitable contact tip [↪ "Product information"].
6. Position the AGP on the ground with the directional arrow in the direction of the cable route.
7. Make sure that the AGP is in good contact with the surface of the ground.
8. Switch on the AGP, the headphones and the CU.  
The header of the touchscreen shows that the devices are connected.
9. If you wish to limit the volume of the headphones to 85 dB(A), make the following selection on the home screen: **Settings** > **Sound** > **Volume** [↪ "Basic settings"].
10. If you wish to use the loudspeaker of the CU instead of the headphones, make the following selection on the home screen: **Settings** > **Sound** > **Output** [↪ "Basic settings"].

# Performing acoustic pin-pointing

11. On the home screen, select the *Acoustic pin-pointing* method.
12. Note the displayed fault distance and direction, the strength of the electromagnetic signal, your position in relation to the cable route, and the acoustic signal.
13. To change the settings, call up the method settings by tapping .
14. Move along the cable route towards the fault with the AGP.
15. Once you have located the fault, mark the position.
16. Switch the devices off.

## Tips

### Evaluation of the acoustic and electromagnetic signals

For acoustic pin-pointing using protrac®, the propagation times of the acoustic and electromagnetic signals are compared (coincidence method). This is helpful, for example, for cables laid in pipes or under concrete: The acoustic signal is often loudest at the end of a pipe or concrete slab, which can be misleading. Only by comparison with the electromagnetic signal can the distance be precisely and reliably determined.

### Cable break – connecting the SSG

- » Single-phase cable: Short the faulty phase with the screen and with the station earth at the far end.
- » Multi-phase cable: Short all phases with the screen and with the station earth at the far end.

### Changing faults

Faults can disappear temporarily during pin-pointing. This can be due to the fault changing, moisture or the selected output voltage being too low.

- » If permitted, increase the output voltage on the SSG.
- » Note, however, that high and long-lasting surge voltages change the fault and can make fault location more difficult.

### Pin-pointing in strong wind

Strong wind can affect the sensitivity of the AGP.

- » To improve the sensitivity of the AGP in strong wind (noise level), remove the handle.

### Display of directional arrow

Severe temporary faults can lead to incorrect measurements. Measurements are therefore only evaluated if the acoustic and electromagnetic signals lie within a certain time period. protrac® evaluates the signals received and displays the measurement certainty: The darker the directional arrow, the more reliable is the measurement.

## Method settings

Parameters	Meaning
<i>Magnetic signal gain</i>	Used to set how strongly the electromagnetic signal is amplified <b>Note:</b> You can change the gain during pin-pointing by tapping the  bar.
<i>Ambient noise suppression</i>	Is used to activate and deactivate the ambient noise suppression
<i>Basic settings</i>	Calls up the basic settings for protrac®



# Performing sheath fault location

No.	Function
1	Shows whether the voltage indicator is adjusted automatically (AUTO) or manually (MAN). » To switch between automatic and manual, tap on the symbol. » To set the voltage indicator manually, switch to manual (MAN.) and turn the rotary switch.
2	Calls up the home screen
3	Calls up the method settings
4	Displays the selected signal evaluation: <ul style="list-style-type: none"><li>• AC: </li><li>• DC: </li></ul> » To change the type of signal evaluation, tap the symbol.
5	Scale showing the polarity of the voltage and the signal deflection on the time axis The fault lies in the direction of the signal deflection.

## Procedure



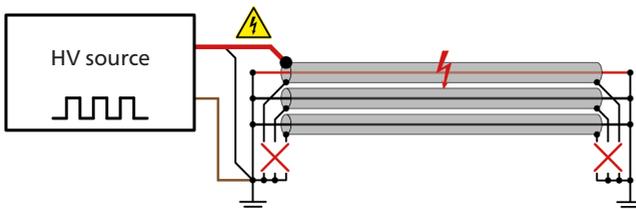
**DANGER**

**Danger to life due to electric shock!**

- » Take all necessary safety measures [↪ "Before commissioning"].
- » Discharge and earth the test object before touching it.

1. Connect the test object properly according to the user manual for the cable fault location system.

Example: Connect HV source to 3-phase cable (no earthing strip laid)



2. Switch on the HV source and set the output voltage.
3. Switch on the high voltage on the HV source.

# Performing sheath fault location

4. If you have already pre-located the fault, go near the pre-located fault location.
5. If necessary, set the height of the SVPs [ "Product information"].
6. Plug in the SVPs to the CU.
7. Make sure that the SVPs are in good contact with the ground.  
Sealed surfaces such as concrete or asphalt can have an insulating effect and impede sheath fault location.
8. To improve the contact of the SVPs with the ground, wet the sponges with salt water and place them on the SVPs.
9. Switch on the CU.  
The header of the touchscreen shows that the SVPs are connected.
10. On the home screen, select the ***Sheath fault location*** method.
11. Note the displayed signal deflection.  
If no signal deflection is visible, insert the SVPs into the ground a greater distance apart.
12. To change the settings, call up the method settings by tapping .
13. Using the SVPs, move along the cable route towards the fault.  
The voltage increases in the direction of the fault, slowly at first and then sharply in the direct vicinity of the fault. Right above the fault, the polarity of the voltage changes. If the SVPs are inserted symmetrically above the fault, the deflection of the bar graph is zero.
14. Once you have located the fault, mark the position.
15. Switch the devices off.

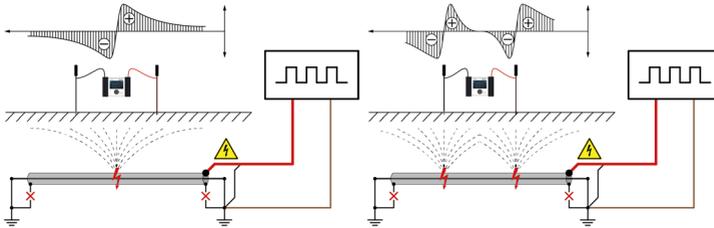
# Sheath fault location – tips, settings

## Tips

### Detecting multiple cable sheath faults

If there are many cable sheath faults in a cable, there is a voltage gradient around each fault. This can result in incorrect measurements: A spot between the actual cable faults similarly shows zero voltage and can be mistaken for a fault.

- » To detect this phenomenon, consider the polarity change of the voltage during fault location.



One cable sheath fault

Two cable sheath faults

### Pre-locating cable sheath faults more precisely

- » To pre-locate the cable sheath faults more precisely, perform a Glaser measuring bridge measurement. Follow the instructions in the user manual for the bridge measuring unit.

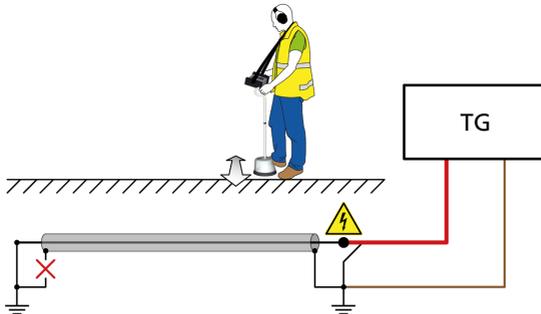
# Sheath fault location – tips, settings

## Method settings

Parameters	Meaning
<i>Signal evaluation</i>	<ul style="list-style-type: none"><li>• <b>AC</b> : only the change to the signal is displayed (capacitive decoupling).</li><li>• <b>DC</b> : the input signal is measured and displayed directly.</li></ul>
<i>Zero point adjustment</i>	<p>Is used to activate and deactivate the zero point adjustment</p> <p>If the function is activated, protrac® compensates for disruptive external signals and automatically adjusts the zero point of the scale.</p>
<i>Voltage indicator</i>	<p>Is used to set whether the voltage indicator is adjusted automatically () or manually (.</p>
<i>Basic settings</i>	<p>Calls up the basic settings for protrac®</p>

# Tracing – general

## Basic principle



There are two tracing methods - active and passive:

- Active method

A defined frequency is generated and fed into the cable using an audio frequency transmitter. This signal generates an electromagnetic field that can be located at the surface of the ground and tracked. This method permits very precise determination of the position and depth of the cable route.

- Passive method

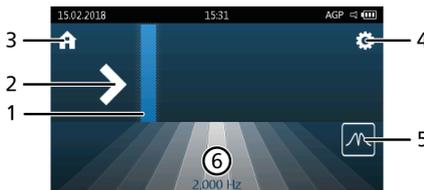
The mains or radio frequency in a cable generates an electromagnetic field that can be located at the surface of the ground and tracked. Disturbances, e.g. from other cables and pipes, must be taken into account if this method is used.

**Tip:** for clear signal detection, use the active tracing method.

## Required equipment

- Audio frequency transmitter (e.g. BAUR TG)
- CU control unit, AGP acoustic ground probe, Bluetooth® headphones
- Markers for the route

## User interface



# Performing tracing

No.	Function
1	Indicates the signal strength and where you are in relation to the cable route (light stripe in the middle)
2	Indicates the direction you need to go in
3	Calls up the home screen
4	Calls up the method settings
5	Indicates whether the maximum (⎓) or the minimum method (⎓) has been selected » To switch methods, tap the symbol.
6	Shows the cable route and neighbouring zones as well as the selected frequency If you are immediately above the cable route, the neighbouring zones are shown in white.

## Procedure



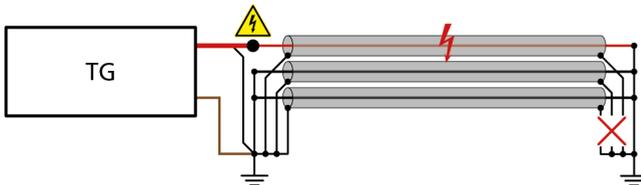
**DANGER**

**Danger to life due to electric shock!**

- » Take all necessary safety measures [↻ "Before commissioning"].
- » Discharge and earth the test object before touching it.

1. Connect the test object properly according to the user manual for the cable fault location system.

Example: Connect the TG to a 3-phase screened cable



2. Connect the TG and make the desired settings.
3. Position the AGP on the ground with the directional arrow in the direction of the cable route.
4. Switch on the AGP, the headphones and the CU.  
The header of the touchscreen shows that the devices are connected.

# Performing tracing

5. If you wish to use the loudspeaker of the CU instead of the headphones, make the following selection on the home screen: **Settings** > **Sound** > **Output** [↻ “Basic settings”].
6. On the home screen, select the **Tracing** method.
7. Set whether you want to perform tracing using the maximum () or minimum () method: Tap the symbol until the desired method is displayed.
8. Note your position in relation to the cable route and the acoustic signal.
9. To change the settings, call up the method settings by tapping .
10. Locate the route by moving the AGP back and to over the surface of the ground and follow the display on the touchscreen.

**Maximum method:** When the AGP is moved towards the cable route, the blue bar gets higher and, depending upon the setting, the acoustic signal either becomes louder or higher pitched.

**Minimum method:** If the AGP is moved towards the cable route, the blue bar gets lower and, depending upon the setting, the acoustic signal either becomes quieter or lower.
11. Mark the course of the cable route with the markers.
12. Switch the devices off.

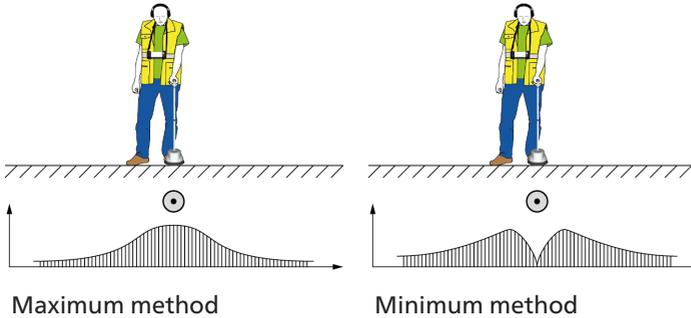
## Tips

### Abrupt signal change during measurement

An abrupt change to the signal during measurement can have the following causes:

- a change to the laying depth of the cable route
- a nodal point at which the signal is distributed in several directions
- a cable or screen break
- a cable loop
- a fault due to earth contact

### Signal sequences



## Method settings

Parameters	Meaning
<b>Frequency selection</b>	Is used to select the frequency used for tracing
<b>Method</b>	Is used to set whether tracing is performed using the maximum (  ) or the minimum (  ) method
<b>Sound modulation</b>	<p>Is used to set how the signal output behaves when the AGP is moved back and to:</p> <ul style="list-style-type: none"><li>• <b>AM:</b> The volume of the signal changes.</li><li>• <b>FM:</b> The pitch of the signal changes.</li></ul> <p>You can also set 500 or 1,000 Hz as the central frequency.</p>
<b>Magnetic signal gain</b>	<ul style="list-style-type: none"><li>• <b>Automatic:</b> The gain is automatically set to the optimal level in accordance with the selected method.</li><li>• <b>Manual:</b> You can enter the gain for each AGP coil yourself.</li></ul>
<b>Basic settings</b>	Calls up the basic settings for protrac®

# Basic settings

» To call up the basic settings, select the **Settings** menu on the home screen.

If you are just about to perform pin-pointing and want to change the basic settings, proceed as follows:

1. Call up the method settings by tapping .
2. Select the **Basic settings** menu item.  
The basic settings can be changed.
3. To accept the changes and return to the user interface, tap the back arrow.

Parameters	Meaning
<b>Power supply</b>	Is used to set whether the CU and the AGP are supplied with power via rechargeable or non-rechargeable batteries  This information is necessary so that the CU can determine and correctly display the charge status of the rechargeable or non-rechargeable batteries.
<b>Charge status</b>	Displays the charge status of the rechargeable or non-rechargeable batteries of the CU and the AGP
<b>Bluetooth® connections</b>	Displays the addresses of the devices connected via Bluetooth®  » To start a new search for devices, tap on <b>headphones</b> or <b>AGP</b> .
<b>Brightness and colour mode</b>	Is used to set the brightness and the colour display of the touchscreen
<b>Sound</b>	Is used to set the volume and whether output is via headphones or loudspeaker  The volume can also be limited to 85 dB(A) (applies only for BAUR headphones from the standard delivery).
<b>AGP mute function</b>	Is used to adjust how sensitive the automatic mute function of the AGP is to ambient and movement noises.

# Basic settings

Parameters	Meaning
<b><i>Language and distance</i></b>	<p>Is used to select the language and the units for distance</p> <p>The following units can be selected:</p> <ul style="list-style-type: none"><li>• <b><i>ms</i></b>: display in milliseconds</li><li>• <b><i>m</i></b>: display in metres</li><li>• <b><i>ft</i></b>: display in feet</li></ul> <p>» To activate the change of language, switch the CU off and then back on again.</p>
<b><i>Date and time</i></b>	<p>Is used to set the date and time displayed on the CU</p>
<b><i>About</i></b>	<p>Displays the current software versions of the CU, the AGP and the <b><i>Sheath fault location</i></b> module.</p>
<b><i>Factory settings</i></b>	<p>Resets the CU back to factory settings</p>

## Why won't the AGP or CU switch on?

The rechargeable or non-rechargeable batteries may be too weak.

- » Rechargeable batteries: charge the rechargeable batteries using the supplied charger.

Batteries: replace the batteries.

## How do I see that a device is connected to the CU?

As soon as a device is connected, this will be displayed in the header, e.g. **AGP** and headphones are connected to the CU.

Possible reasons for the device not being displayed:

- The device is not switched on.
  - » Switch the device on.
- The device has not yet been paired with the CU.
  - » Pair the device with the CU [\[↪ "Pairing protrac® system components"\]](#).
- There is a Bluetooth® connection problem.
  - » Re-establish the Bluetooth® connection [\[↪ "Basic settings"\]](#).

## Why are the date and time suddenly wrong?

The BIOS battery in the CU may be too weak.

- » Replace the BIOS battery [\[↪ Update and maintenance manual\]](#).

## Software messages

Message	Cause / solution
OVR	<p>The electromagnetic or acoustic signal is too high during acoustic pin-pointing. As a result only your approximate position in relation to the cable route can be displayed (left or right of the cable route).</p> <p>The gain or output voltage may be set too high.</p> <p>Manual gain:</p> <ul style="list-style-type: none"><li>» Reduce the signal gain or the volume.</li></ul> <p>If the message still appears or automatic gain is selected:</p> <ul style="list-style-type: none"><li>» Reduce the output voltage on the SSG.</li></ul> <p><b>Note:</b> Another reason the message may be displayed is that the fault is in the immediate vicinity.</p>
No AGP connected	<p>The AGP is not switched on.</p> <ul style="list-style-type: none"><li>» Switch on the AGP.</li></ul> <p>The rechargeable or non-rechargeable batteries of the AGP are too weak.</p> <ul style="list-style-type: none"><li>» Charge or replace the rechargeable batteries, or replace the non-rechargeable batteries.</li></ul>

## Transportation

### **NOTICE**

#### **Damage to devices due to incorrect transportation**

- » When transporting the system components, always use the transport cases provided for this purpose.
  - » Comply with the ambient conditions specified in the technical data for this system.
- » Protect all system components against damage, vibrations, dampness and humidity during transportation.



## Storage

- » Store the system components in the transport cases provided for this purpose with the lids closed.
- » During storage, comply with the ambient conditions specified in the technical data for the pin-pointing system.
- » Protect all system components against dampness and humidity during storage.
- » If you are not going to use the CU or the AGP for an extended period, remove the rechargeable or non-rechargeable batteries from the battery compartment.
- » To prevent deep discharging of the rechargeable batteries, fully charge the rechargeable batteries of the CU and AGP approximately every 2 months.

## Disposal

BAUR devices do not belong in the domestic waste.

- » Dispose of the devices and rechargeable and non-rechargeable batteries in an environmentally friendly manner and in accordance with the applicable national regulations.

Complete set



"Acoustics" set



"Step voltage" set









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