

MAN(BBSS)-034.000

Ground Check Set GC25

USER'S GUIDE

M210329EN-D
September 2005



 **VAISALA**

PUBLISHED BY

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CHAPTER 1

GENERAL INFORMATION

About This Manual

This manual provides instructions on installing, operating and maintaining the Vaisala Ground Check Set GC25.

Contents of This Manual

This manual consists of the following chapters:

- Chapter 1, General Information: provides important safety, revision history and warranty information for the product.
- Chapter 2, Product Overview: introduces the Vaisala Ground Check Set GC25 features, advantages and operating principles.
- Chapter 3, Installation: provides instructions on how to install the Vaisala Ground Check Set GC25.
- Chapter 4, Operation: provides instructions on how to operate the Vaisala Ground Check Set GC25.
- Chapter 5, Maintenance: gives basic maintenance information on the Vaisala Ground Check Set GC25.
- Chapter 6, Troubleshooting: describes problems that may be experienced with the Vaisala Ground Check Set GC25 along with their probable causes and remedies.
- Chapter 7, Technical Data, provides the technical specifications for the Vaisala Ground Check Set GC25.

Safety

General Safety Considerations

Throughout the manual, important safety considerations are highlighted as follows:

WARNING

Alerts you to a serious hazard. If you do not read and follow instructions very carefully at this point, there is a risk of injury or even death.

CAUTION

Warns you of a potential hazard. If you do not read and follow instructions carefully at this point, the product could be damaged or important data could be lost.

NOTE

Highlights important information on using the product.

Product-Related Safety Precautions

The Vaisala Ground Check Set GC25 now in your possession has been safety-tested and approved as shipped from the factory. Note the following precautions:

WARNING

Ground the product, and verify outdoor installation grounding periodically to minimize shock hazard.

CAUTION

Do not modify the unit. Improper modification can damage the product or lead to malfunction.

Related Manuals

Table 1 **Related Manuals**

| Manual Code | Manual Name |
|----------------------|---|
| DOC212956 revision A | Vaisala Ground Check Set GC25 Temperature Reference Unit Uncertainty Technical Note |

Please refer to Vaisala radiosonde and Vaisala ground equipment documentation for more detailed information on the individual system components and software used with the Vaisala Ground Check Set GC25.

Getting Help

Contact Vaisala technical support:

E-mail helpdesk@vaisala.com

Telephone +358 9 8949 2789

Fax +358 9 8949 2790

Warranty

For certain products Vaisala normally provides a limited one-year warranty. Please observe that any such warranty may not be valid in case of damage due to normal wear and tear, exceptional operating conditions, negligent handling or installation, or unauthorized modifications. Please see the applicable supply contract or conditions of sale for details of the warranty each product.

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CHAPTER 2

PRODUCT OVERVIEW

This chapter introduces the Vaisala Ground Check Set GC25 features, advantages and operating principles.

Introduction to the Vaisala Ground Check Set GC25

The Vaisala Ground Check Set GC25 is used to check the functioning of the radiosonde and the radiosonde sensor accuracy and to set the frequency of the radiosonde. The GC25 is designed to be used with the RS92 radiosondes, both digital and analog versions.

The GC25 includes desiccant for 0 % RH humidity reference. A glass jar with supplementary desiccant is also provided.

For optimum performance, the GC25 must be properly calibrated and the calibration must be valid. The desiccant must also be dry. This will ensure that the GC25 provides accurate and reliable readings.



0212-254

Figure 1 Vaisala Ground Check Set GC25

- 1 = Chamber
- 2 = Display
- 3 = Buttons
- 4 = Chamber clasp
- 5 = Radiosonde tray

The GC25 has a power supply and a communication connector for the radiosonde. It is also equipped with a display and buttons used to control the radiosonde.

Operation Modes

The GC25 can be operated in two modes: stand-alone mode and network mode.

In network mode the GC25 is connected to the DigiCORA® sounding system via cable and is operated with the help of DigiCORA® sounding software.

In stand-alone mode the GC25 is operated using the interface buttons.

If you are using a DigiCORA® sounding system with software that supports GC25 communication, the GC25 can be used in both stand-alone and network mode. Older DigiCORA® systems can only be used in stand-alone mode. See Table 2.

Table 2 Operation Mode Compatibility for GC25

| DigiCORA® Sounding System | GC25 Operation Modes |
|-------------------------------------|------------------------|
| MW1x | Stand-alone |
| MW21 software version < 3.12 | Stand-alone |
| MW21, MW31 software version >= 3.12 | Stand-alone or network |

NOTE

With RS92-K/KE/KL/KLE radiosondes the timer can be set in network mode only if the system has DigiCORA® MW21/MW31 sounding software version 3.51 or greater.

NOTE

Only the newest versions of the RS92-K/KE/KL/KLE have a built-in timer function. With older versions of the RS92-K/KE/KL/KLE it is not possible to set the timer.

Ground Check Phases

GC25 ground checking is done before sounding in order to fine-tune the RS92's ability to measure meteorological. The ground check is carried out in the following phases:

Reconditioning

To get optimum performance from the RS92 humidity sensors, the ground check includes a phase for removing possible humidity sensor contamination. If the humidity sensors have become contaminated before radiosonde launch, during storage for example, the humidity sensor reconditioning phase removes the contamination.

Contamination of the humidity sensors may introduce a dry bias into the humidity measurement, which may vary from zero to a few percent of relative humidity, resulting in humidity measurements that are too low. In the reconditioning phase, the radiosonde is attached to the Vaisala Ground Check Set GC25 and reconditioning power is connected to the humidity sensors for 3 minutes. Depending on the

ground equipment in use, the GC25 itself or the ground equipment will prompt you to carry out the reconditioning.

Setting the Transmission Frequency of Digital RS92 Radiosondes

With digital RS92 radiosondes, the radiosonde transmitter frequency can be set with the GC25 by the operator.

NOTE

Transmission frequencies for the RS92-K and RS92-KL analog radiosondes are set with a different procedure. Please refer to the RS92-K and RS92-KL user manuals for instructions.

Setting the Timer

In this phase, the timer can be set to shut down the radiosonde's transmitter at a pre-selected time.

With RS92-SGP, timer count-down starts from launch detect.

With RS92-K/KE/KL/KLE, the timer count-down starts at timer set-up. Add around 30 minutes to the targeted sounding time.

Ground Checking

When the GC25 is in the ground check mode, the radiosonde sensors are compared to references. The temperature readings are displayed on the GC25 display. The chamber of the GC25 contains the desiccant (drying agent) which provides the 0 % humidity reference. For the pressure reading, a separate reference is needed. The user gives the reference values to the ground equipment, which compares them to those given by the radiosonde and makes the necessary corrections. If the GC25 is being used in network mode, the reference values are transferred automatically via cable with the exception of the pressure reference value. Read the pressure value from a reliable reference.

Vaisala recommends that RS92 radiosonde ground checking be done only with properly maintained and calibrated GC25 ground check sets. If a properly maintained and calibrated GC25 is not available, Vaisala recommends that ground check corrections be omitted entirely.

CHAPTER 3

INSTALLATION

This chapter gives you instructions on how to install the Vaisala Ground Check Set GC25.

Getting Started

Connections

Stand-Alone Mode

When setting up the GC25 as a stand-alone ground check set, connect the power supply connector to the connector marked POWER. Then connect the power supply cable.

Press power and the display should read "Connect Cable to Sonde". The GC25 is now ready for use.

Network Mode

When setting up the GC25 as a network mode ground check set, connect the power supply connector to the connector marked POWER. Then connect the power supply cable.

To use the GC25 with the DigiCORA® system in network mode, connect the RS-232 cable to the slanted serial connector (on the back of the GC25) and to the PC's serial port. Secure the cable with screws. The RS-232 cable is delivered with the GC25.

Press power and the display should read "Connect Cable to Sonde".
The GC25 is now ready for use.

Desiccant

When you first install the GC25, please follow the "Filling the Chamber with Desiccant" instructions below carefully.

NOTE

Since the desiccant beads need to be dried, it is convenient to use several desiccant cartridges in rotation with the GC25. This eliminates the need to open and refill the cartridge with dry desiccant beads. Extra cartridges can be ordered from Vaisala.

Filling the Chamber with Desiccant

During first installation:

1. Pull out the desiccant cartridge from the side of the chamber. Refer to Figure 1 on page 8.
2. Hold the base firmly and open the top of the desiccant cartridge. Loosen the screws to release the metal top. See Figure 2 on page 13.

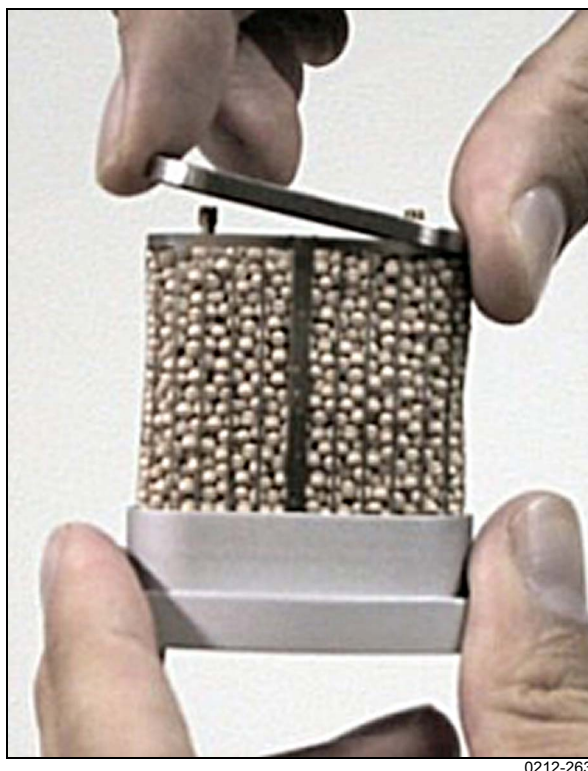


Figure 2 **Open Desiccant Cartridge**

NOTE

Be careful not to deform or damage the metal netting. Always hold the cartridge by the metal base.

3. Fill the metal net enclosure with desiccant beads.
4. Replace the metal top of the desiccant cartridge.
5. Tighten the screws to secure the metal top.
6. Put the desiccant cartridge back into the side of the chamber.

NOTE

Make sure the chamber cover of the GC25 is closed properly.

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CHAPTER 4

OPERATION

This chapter provides instructions on how to operate the Vaisala Ground Check Set GC25.

Operating Instructions

NOTE

When installed in network mode, the GC25 and DigiCORA® sounding system communicate with each other automatically via cable. In this case, do not press the buttons on the GC25 (other than ON/OFF) as doing so will disrupt communications. Pressure reference values need to be read from a separate, reliable pressure reference source.

The GC25 is used to prepare the radiosonde for optimal performance. This is done in four stages:

- Reconditioning: the radiosonde is prepared for ground check.
- Frequency tuning: the frequency is set.
- Timer setting: the radiosonde transmitter operation time is set.
- Ground check: the transmitter is turned on and the PTU values are set against the references.

NOTE

To perform the ground check successfully, you need to have reliable, calibrated, and valid PTU references. If no such references are available, Vaisala recommends that you omit the ground check correction phase.

User Interface

NOTE

When the GC25 is installed in network mode, the GC25 and DigiCORA® sounding system communicate with each other automatically via cable. In this case, do not press the buttons on the GC25 (other than ON/OFF) as this will disrupt communications.

The Vaisala Ground Check Set GC25 has an LCD display and five buttons. Below is a description of each button and its function.

| | | |
|-------------|---|--|
| Back | = | Use this button to return to the previous menu |
| Left arrow | = | Use this button to scroll left |
| Right arrow | = | Use this button to scroll right |
| Select | = | Use this button to confirm your selection |
| Power | = | Switches power on and off |

GC25 Connections

Figure 3 shows the GC25 cable connections. To enable network mode, the serial cable is connected to the PC. For more information on network mode please refer to the Vaisala DigiCORA® Sounding System technical documentation.

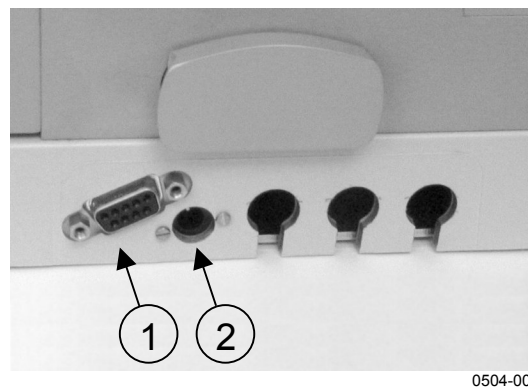


Figure 3 GC25 Cable Connections

- 1 = Serial cable connection to PC for network mode
- 2 = Power cable connection

Radiosonde Placement

The radiosonde is placed in the Vaisala Ground Check Set GC25 as follows:

1. Push back the clasp of the chamber and open the cover.
2. Place the radiosonde carefully (with its dummy battery cover) onto its tray, gently setting the sensor boom into the chamber.

CAUTION

Rough handling of the chamber cover can damage the sensor boom.

3. Gently close the chamber cover and close the clasp carefully.

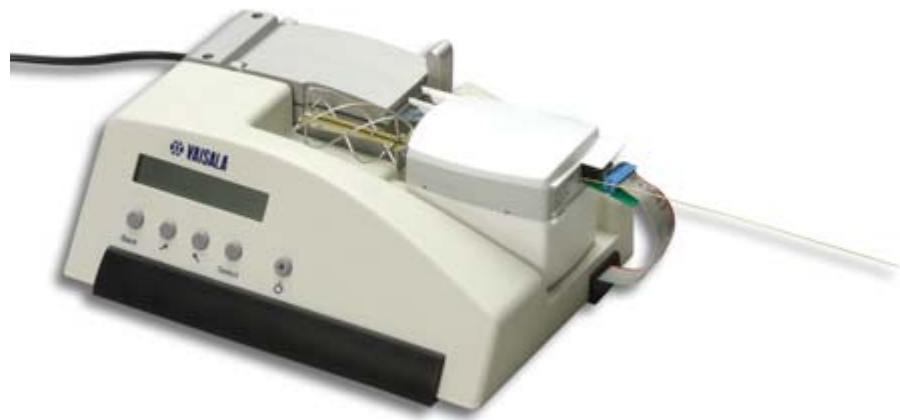
CAUTION

Be careful with the fragile RS92 sensors.

4. Lift the flap at the back of the radiosonde and carefully connect the radiosonde connector to the radiosonde. Be careful not to move the radiosonde which may damage the sensor boom in the chamber. Figure 4 on page 18 illustrates the correct placement of the radiosonde in the GC25.

CAUTION

Make sure the radiosonde connector is connected to the radiosonde with the UP text facing up, without turning the flatwire.



0212-244

Figure 4 Correct placement of the RS92 Radiosonde in the Vaisala Ground Check Set GC25

CAUTION

Be careful with the sensors. The temperature sensor in particular is very fragile.

Radiosonde Preparation

Use the GC25 front pane buttons to carry out the ground check.

The button functions are explained in the User Interface section on page 16. Switch on the GC25 by pressing the power button. The green LED light is lit. The following text will appear:

Connect Cable to Sonde.

The ground check begins automatically when an RS92 radiosonde is connected.

Reconditioning

NOTE

The following steps are needed only if you are using the GC25 in stand-alone mode. Otherwise, the DigiCORA® sounding software will complete the following steps automatically.

1. The GC25 will ask if you wish to start reconditioning. The following text will appear:

Recond. U-sensor?
YES

Enter **YES** or **NO** using the arrow buttons and press **Select** to confirm your choice. If you choose to start reconditioning, it will take approximately three minutes.

Reconditioning...
Remaining: 1:41

During reconditioning the remaining reconditioning time is displayed. Note that if the time is not shown or an error message is given ("Communication Error", for example), the radiosonde connection cable needs to be checked: disconnect and then reconnect the radiosonde and restart the ground check procedure.

Frequency Setting

NOTE

When using RS92-K and RS92-KL radiosondes, the GC25 will automatically skip the frequency setting phase and go to the Ground Check stage described on page 20.

NOTE

Analog RS92-K and RS92-KL transmitter frequencies are set differently than with digital radiosondes. Please refer to the RS92-K and RS92-KL user manuals.

2. The display shows the radiosonde's factory default frequency value. You are asked whether you want to adjust it. The following text appears:

Frequency: 405.35 MHz
Tune freq.? NO

If you do not want to adjust the frequency, press **Select**. If you want to adjust it, use the arrow key to select **YES** and then press **Select**. Then use the arrow buttons to scroll to the desired frequency and press **Select** to confirm your choice.

Note that if the display remains blank during frequency setting or an error message is given ("Communication Error", for example), the radiosonde connection needs to be checked:

disconnect and reconnect the radiosonde and restart the ground check procedure.

3. Press **Select** to continue to the timer setting phase.

Setting the Timer

NOTE

The following steps are only required if you are using the GC25 in stand-alone mode. In network mode, the DigiCORA® sounding software will do the following steps automatically.

4. The timer is used to shut down the transmitter at a pre-selected time. The following text appears on the display:

```
Timer: disabled  
Set Timer? NO
```

Select either **YES** or **NO** using the scroll buttons and press **Select** to confirm your choice.

If you want to set the timer, press the arrow buttons to scroll the timer either **UP** or **DOWN**. Note that it is not possible to select a time of less than 15 minutes. If you choose a time of less than 15 minutes, the timer will be disabled. Press **Select** to confirm your choice. To re-set the timer, press **Back**.

5. Proceed to the ground check phase.

Ground Checking in Stand-alone Mode

NOTE

The following steps are needed only if you are using the GC25 in stand-alone mode. The DigiCORA® sounding software will otherwise complete the following steps automatically.

At this stage, please wait until the GC25 reports that the conditions have been stabilized.

6. The radiosonde transmitter is enabled.
7. The temperature is shown on the GC25 display as follows:

```
Reference:  
T = 23.45 °C
```

Enter the temperature value into the ground equipment when the ground equipment asks for it.

8. At this stage, humidity is 0 %. Make sure that the desiccant beads are completely dry. Enter "0" into the humidity field in the ground equipment. This value is achieved after the chamber has been stabilized.

NOTE

If humidity levels begin to rise and changing the desiccant beads does not help, check that the fan is working. There should be an audible humming noise.

9. Read the pressure value from an external source and add the value to the field specified for it in the DigiCORA®.
10. When the PTU values are entered into the ground equipment, the ground check is complete.

Carefully remove the radiosonde (do not damage the sensors) from the GC25 and prepare it for launch. For more information on how to do so, please refer to the appropriate RS92 radiosonde user's manual.

This page intentionally left blank.

CHAPTER 5

MAINTENANCE

This chapter gives basic maintenance information on the Vaisala Ground Check Set GC25.

Desiccant Drying

The desiccant granules absorb humidity and, thus maintain a relative humidity of 0 % in the chamber.

Used desiccant is kept in a glass container. The GC25 is delivered with one glass jar including fresh desiccant and one glass jar for used desiccant. When enough used desiccant has been collected (about half a jar) it can be regenerated (dried). An alternative way to use and maintain desiccant beads is to employ more than one desiccant cartridge and several glass jars. Do not open the desiccant cartridge until absolutely necessary.

NOTE

Direct exposure to the sun or other source of heat (i.e. keeping a hand on the cup for a long time) will cause incorrect temperature and humidity readings.

NOTE

The desiccant beads can also be dried by placing the cartridge including wet desiccant into the glass jar and then placing the glass jar into an oven for drying. This way you do not have to open the cartridge.

NOTE

Using more than one desiccant cartridge makes the ground check procedure easier. Extra cartridges can be ordered from Vaisala.

Proceed as follows:

1. Put the glass jar with the used desiccant or cartridge into an oven. Remove the cover of the jar.
2. Raise the oven temperature to +250 °C (or more) and maintain this temperature for three hours.
3. Let the oven cool down.
4. Remove the jar from the oven when the temperature is below +70 °C and close the cover.
5. The drying agent is now ready for re-use.

The desiccant beads need to be changed every month or so, depending on local humidity levels and the number of soundings done. However, they must be changed when the humidity reading is 2 % RH or more.

Calibration of Temperature Reference

The recommended calibration interval for the temperature reference is one year. Please contact Vaisala Technical Support (helpdesk@vaisala.com) to order temperature reference calibration.

In practice, temperature reference calibration is done by replacing your current temperature reference unit with a new unit. Upon receiving the new temperature reference unit, install it as explained in the section "Replacement of Temperature Reference Unit" below.

The calibration date can be checked as explained in the section "Software Version and Calibration Information" on page 32.

Replacement of Temperature Reference Unit

Detailed information on how to replace the temperature reference unit is explained in below:

CAUTION

Turn off the GC25 and unplug the power cable from the wall before replacing the sensor unit.

CAUTION

Always follow ESD protection guidelines when making adjustments to the Vaisala Ground Check Set GC25.

Refer to the detailed board connections illustration, Figure 15 on page 34.

To replace the temperature reference unit, you need a flathead screwdriver and a 2.5 mm hex-key.

1. After the GC25 has been switched off, turn it around and open the back panel by removing the four large screws located in each corner with the flathead screwdriver. Remove the panel.



Figure 5 **Unscrew Back Panel**

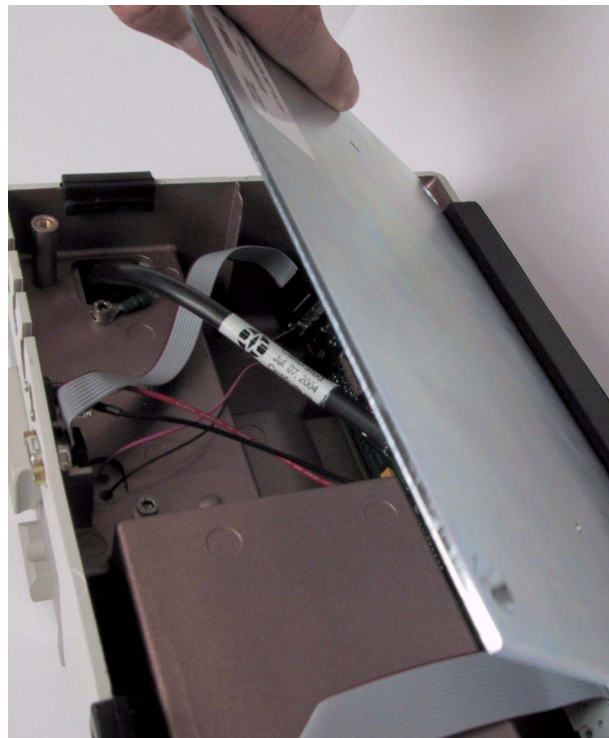


Figure 6 Remove Back Panel

2. Release the sensor cord from its connector by pressing the hinges on both sides of the connector as shown below.

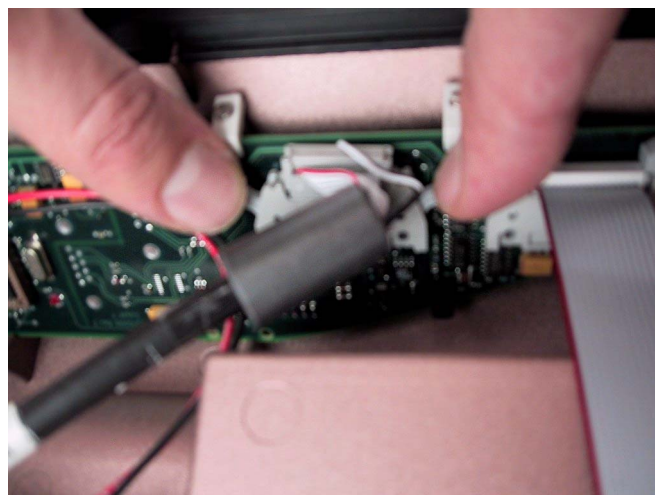


Figure 7 Release the Sensor Cord

3. Turn the unit over. Remove the two screws on the top of the chamber using the 2.5 mm hex-key as shown in Figure 8.

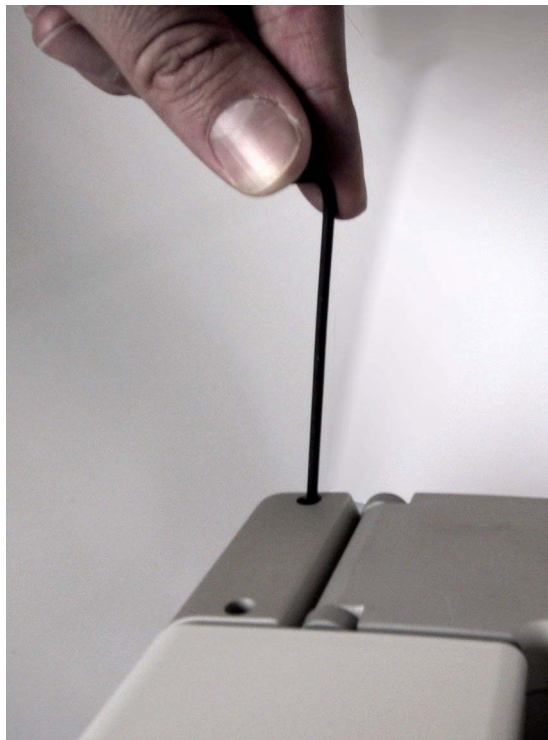


Figure 8 Remove Chamber Screws

4. Turn the GC25 around. You can see a thick sensor cord from which a small wire (black fan wire) is connected to the PCB and a second ground wire, which is attached to a chamber screw.
 - First, disconnect the black fan wire (indicated by a white arrow below) from the PCB.

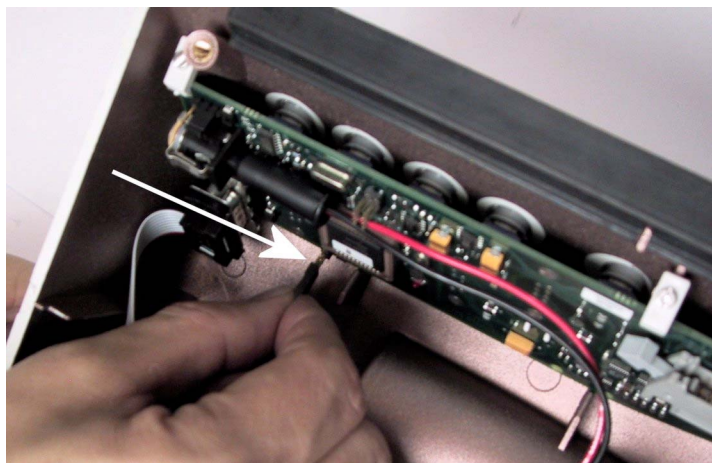


Figure 9 Disconnect the Black Fan Wire

- Then unscrew the two silver screws which hold the chamber in place. See Figure 10.

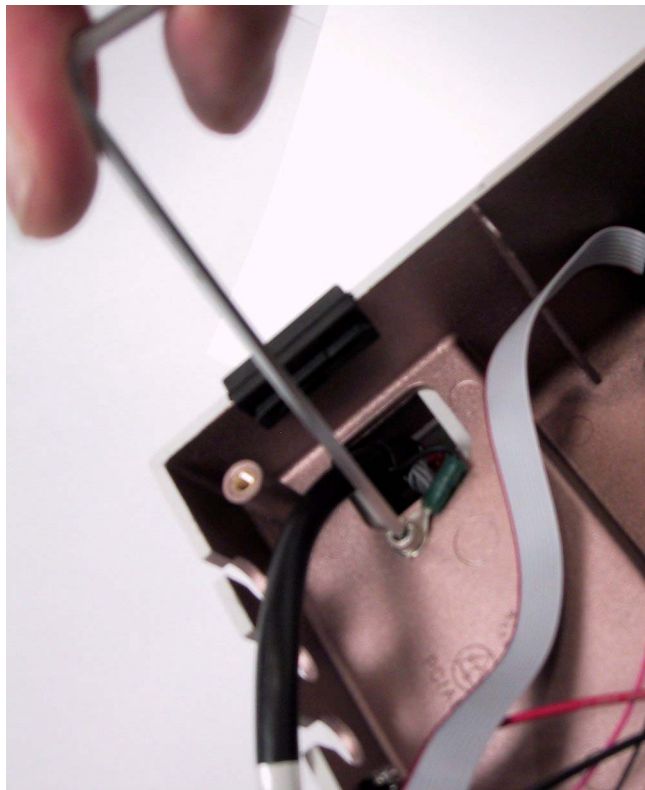


Figure 10 **Unscrew the Chamber Screws**

5. Turn the unit over and carefully lift the chamber out. Put the GC25 down. Remove the sensor unit from the chamber, see the note and Figure 11 below.

NOTE

When removing the sensor unit, be careful not to damage the sensors by striking them against the walls of the chamber.

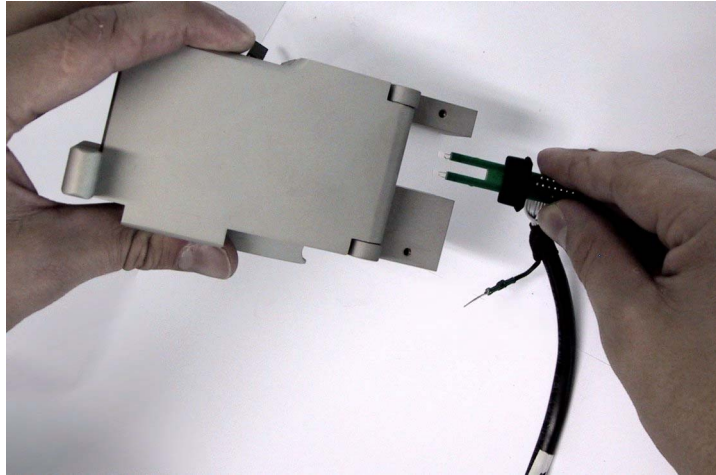


Figure 11 Remove Sensor from Chamber

6. Carefully remove the protective cap of the new sensor.



Figure 12 New Sensor Cord with Protective Cap

7. Place the new sensor into the chamber firmly but carefully. Pay attention to the rubber seal, making sure it is set properly into place so as to make the hole airtight. See Figure 13.

NOTE

When installing the new sensor, be careful not to damage it by striking it against the walls of the chamber.



Figure 13 Press Sensor into Place

8. Thread the cable of the new sensor unit through the hole in the GC25 and place the chamber back into position.
 - When replacing the two silver screws, make sure that the ground wire from the new sensor cable is connected beneath the second screw.

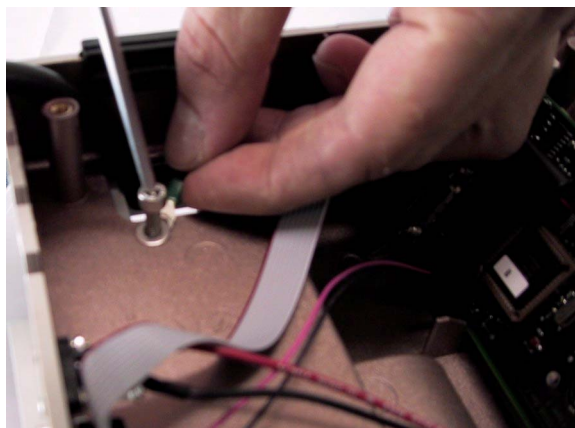


Figure 14 Secure Ground Wire and Chamber Screws

- Connect the black fan wire back to the printed circuit board (PCB).

NOTE

Make sure the black fan wire is reconnected properly: three pins should be secured in the cap.

9. Tighten the two screws of the chamber back panel. Refer to Figure 8 on page 27.
10. Connect the sensor cord connector head to the clip by fastening the clip hinges. See Figure 7 on page 26.
11. Finally replace the back panel of the GC25 and tighten its four screws.

Replacing the Ventilation Motor

To determine if the ventilation motor is functioning properly open the GC25 chamber cover in ground check mode. If the motor is not buzzing and air is not circulating, the ventilation motor needs to be replaced. Follow the steps below to replace it.

CAUTION

Turn the GC25 off and unplug the power cable from the wall before replacing the chamber unit.

CAUTION

Always follow the ESD protection guidelines when making adjustments to the Vaisala Ground Check Set GC25.

Refer to the detailed board connections illustration Figure 15 on page 34.

1. Remove the back panel of the GC25 by unscrewing the four large screws.
2. Remove the motor connector by opening the connector clip hinges of the connector clip located at left.
3. Open the chamber cover and remove the ventilation plate.
4. Gently lift the ventilation motor from its place by pulling out the flat wire from the unit.
5. Put the new ventilation motor into place.
6. Connect the wire to the connector clip and make sure the hinges are properly fastened.
7. Close the back panel.

Replacement of Spare Radiosonde Cable

The radiosonde cable may need to be replaced if error messages are generated frequently or if the connector cannot be attached easily to the radiosonde.

CAUTION

Turn the GC25 off and unplug the power cable from the wall before replacing the chamber unit.

CAUTION

Always follow the ESD protection guidelines when making adjustments to the Vaisala Ground Check Set GC25.

1. Open the back panel by removing the four large screws.
2. Disconnect the radiosonde cable (see Figure 15 on page 34 for details) by opening the connector clip hinges of the connector clip located at left.
3. Disconnect the rubber bushing from the old radiosonde cable.
4. Connect the rubber bushing to the new radiosonde cable.
5. Connect the new cable to the connector clip at left. The cable is marked **Sonde cable** in Figure 15 on page 34.
6. After the clip has been secured, twist the wire slightly to ensure that the UP text faces up.

NOTE

Make sure that the UP text on the new radiosonde cable faces upwards.

Software Version and Calibration Information

With no radiosonde connected and the GC25 power on, press the right down arrow to view the calibration date on the LCD display. If a year has passed since the date displayed, the calibration is no longer valid. In this case refer to section "Calibration of Temperature Reference" on page 24.

With no radiosonde connected, and the GC25 power on, press the left down arrow to view the calibration number (topmost line) and the

software version (bottom line) on the LCD display. Turn the power off and then on to continue.

Software Updates

The Vaisala Ground Check Set GC25 software can be updated when the DigiCORA® sounding software is updated. If necessary, it can also be updated independently.

To update the GC25 software, the GC25 must be connected to a DigiCORA® sounding workstation or to an independent PC with the RS-232 cable provided along with the GC25.

The GC25 software is updated with the help of the GC25 Flash Programmer:

1. Start the GC25 Flash Programmer and press the **Update** button.
2. Turn off the GC25 (if it isn't already).
3. Press and hold down the **Back** button.
4. Turn on the power without releasing the **Back** button.

The upper line on the display should be a row of dark squares, indicating that the unit is in software update mode. At this stage, do not press other buttons or turn off the GC25. When complete, the PC will display a window indicating that the update is complete.

Parts List

Table 3 lists spare parts available for the GC25.

Table 3 Available Spare Parts

| Spare Part | Order Code |
|---|------------|
| Ventilation motor fan | 212196 |
| Spare radiosonde cable | DRW214987 |
| 5 m extension cable for GC25 | 216069 |
| Temperature Reference Unit | DRW215049 |
| Desiccant cartridge | DRW214686 |
| Jar with desiccant | 4161GC |
| Empty glass jar for desiccant/cartridge | 4162GC |

NOTE

When ordering a new desiccant cartridge, it is a good idea to order a glass jar as well for drying purposes.

PCB Connections

Figure 15 illustrates the board connections inside the GC25.

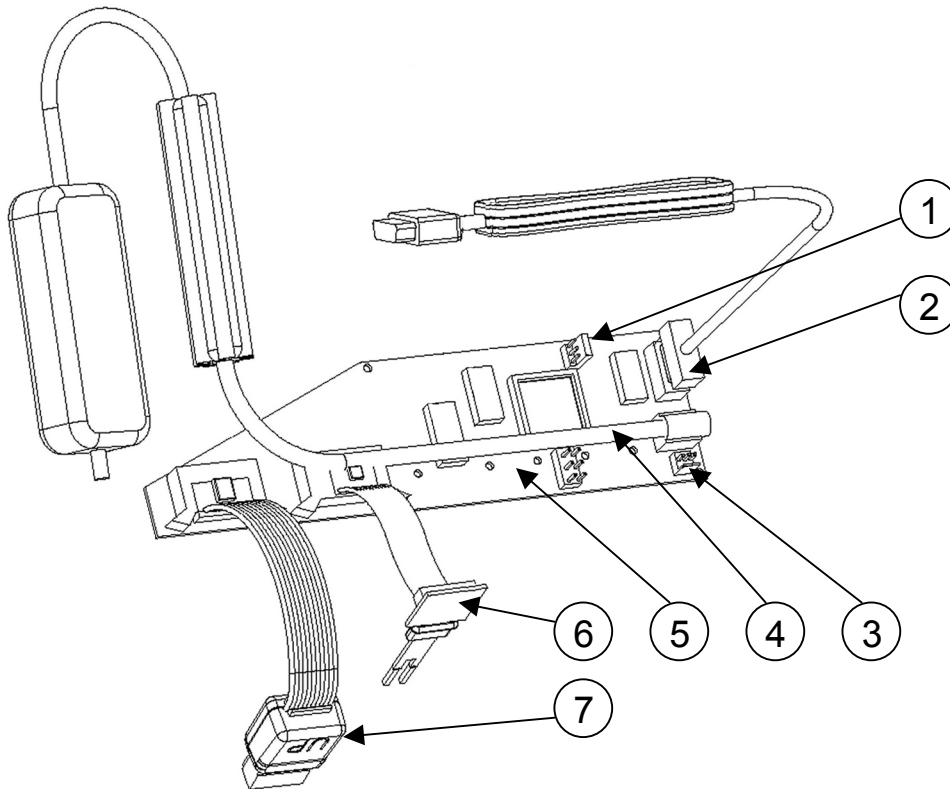


Figure 15 Board Connections

The following numbers refer to Figure 15 above:

1. Fan connector
2. Ground equipment cable: connect to PC for network mode, do not use in stand-alone mode.
3. Optional AUTOSONDE -reset
4. Power
5. Printed circuit board (PCB)
6. Temperature Reference Unit PT-100 (Part no. DRW215049)
7. Sonde cable (Part no. DRW214987)

CHAPTER 6

TROUBLESHOOTING

This chapter describes problems that may be experienced with the Vaisala Ground Check Set GC25 along with their probable causes and remedies.

Common Problems

Table 4 Some Common Problems and their Remedies

| Problem | Probable Cause | Remedy |
|---|--|---|
| Frequency is not shown or displayed | Radiosonde connection cable is loose | Check cable, reconnect if necessary |
| Remaining time is not shown for ground checking | Radiosonde connection cable is loose | Check cable, reconnect if necessary |
| Error message: "Communication Error" | Radiosonde connection cable is loose | Check cable, reconnect if necessary |
| Error message "Check Desiccant! Press Select" | Desiccant beads are wet | Recondition desiccant beads. |
| Error message "Check Temp Sensor" | The sensor is bent | See Figure 16 on page 36 for correct positioning of the chamber sensor. |
| Humidity levels begin to rise | The fan is not working | Check if the fan is spinning, replace if needed. |
| Temperature unit error | Temperature Reference Unit malfunctioning or loose | Check Temperature Reference Unit connection |
| Invalid calibration info | There is a discrepancy between calibration values, failed temperature calculations | Check Temperature Reference Unit cable. Contact HelpDesk. |

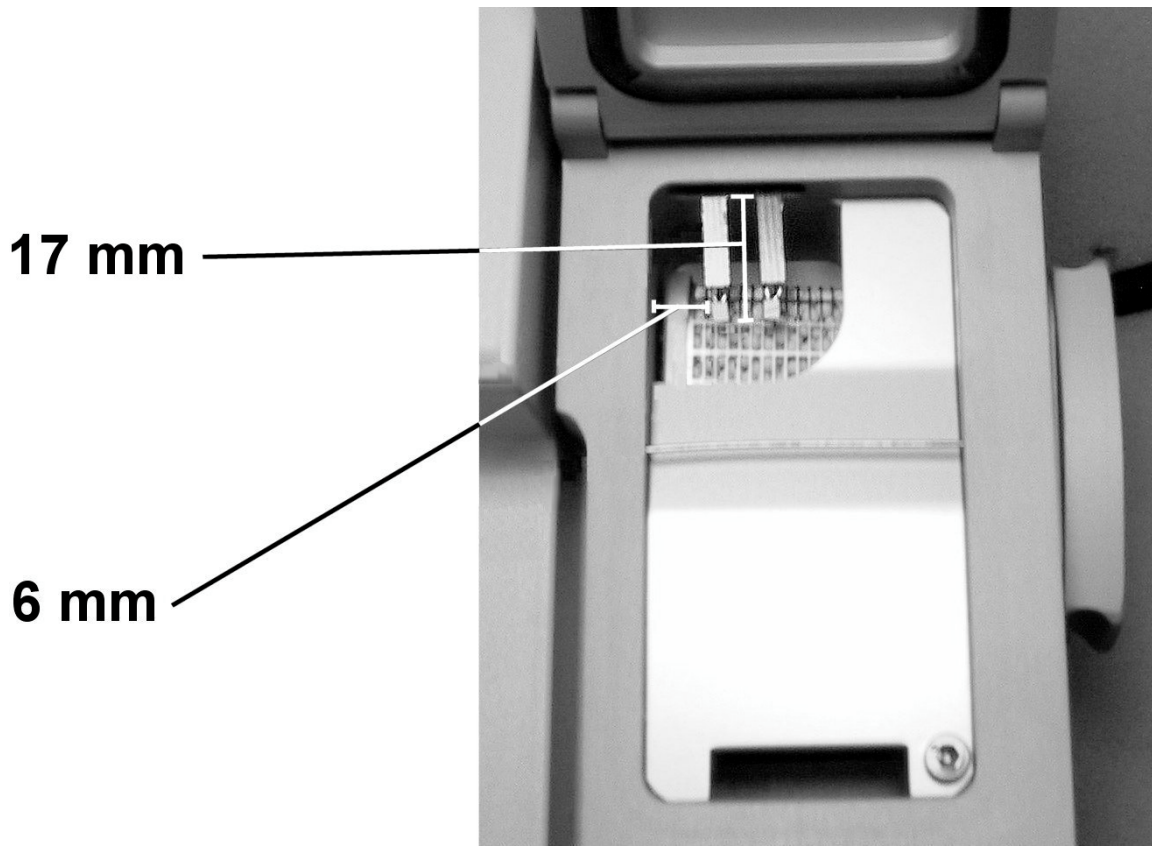


Figure 16 The Chamber Sensor, Positioned Correctly

CHAPTER 7

TECHNICAL DATA

The technical specifications of the Vaisala GC25 Ground Check Set GC25 are given below.

Specifications

Table 5 GC25 Ground Check Set Specifications

| Property | Description / Value |
|-----------------------------|--|
| Operating conditions | |
| Humidity | 0 ... 85% RH |
| Temperature | +5 ... +45 °C |
| Temperature sensor | PT-100 IEC 751 |
| - Uncertainty ¹⁾ | 0.1 °C |
| - Resolution | 0.01 °C |
| Storage temperature | -40 ... +70 °C |
| Dimensions | 25 cm (w) x 18 cm (d) x 9 cm (h) ²⁾ |
| Weight | 2.1 kg |
| Power supply | |
| Input | 100 - 240V (47 - 63 MHz) |
| Output | 16V DC |
| Power consumption | 6 W |
| Connectors | DigiCORA MW31/MW21 Power supply |
| Drying agent | Molecular sieve pellets, regenerable |

1) One-year calibration intervals ensure the validity of uncertainty values (+5 to +45 °C).

2) Dimensions: weight x depth x height