



blueMaster check

Documentation EN

Documentation blueMaster check EN

- 1 Introduction
 - 1.1 Safety instructions
 - 1.2 Environmental and disposal information
 - 1.3 Technical data
- 2 Description of the device
- 3 Description of the app
 - 3.1 Required authorisations
 - 3.2 Main menu
 - 3.3 Connect
 - 3.3.1 Start measurement
 - 3.3.2 Views
 - 3.3.2.1 Graphical view
 - 3.3.2.2 Tabular view
 - 3.3.2.3 View *Compare schemas*
 - 3.3.3 Export of measurement results and saving measurement results as a schema
 - 3.4 Settings
 - 3.4.1 Language
 - 3.4.2 About
 - 3.4.3 Connection settings
 - 3.4.4 Other settings
 - 3.5 Firmware update
 - 3.6 Help

1 Introduction

The *blueMaster check* is a test device for detecting the assignment or wiring of injection moulds.

The *blueMaster check* consists of a battery-operated test plug and an app with which the device is operated. The app can be used to manage multiple *blueMaster check*. The app is used, for example, to start the measurement or check or to update the firmware of the *blueMaster check*.

Any smart device (smartphone, tablet) that fulfils the following system requirements can be used to operate the *blueMaster check* via app:

Requirement	Criterion
Operating system Android	Android 10 or newer
Operating system iOS	iOS 13 or newer
Screen resolution	min. 720 x 1560 px
Bluetooth version	4.0 or newer

On request, you can receive a suitable smartphone or tablet for the *blueMaster check*.

1.1 Safety instructions

- Read these safety instructions and the entire manual carefully before using the device for the first time and keep it for future reference.
- Before switching on the appliance, check whether there is any visible damage
- Make sure that the *blueMaster check* matches the plug on your tool
- The device is used exclusively to detect the assignment or wiring of injection moulds. Never connect the device to a hot runner controller or any other voltage source!
- Observe the relevant safety regulations when connecting and operating the appliance.
- Do not open the device for maintenance purposes without first contacting us.
- The charging cable must be removed before cleaning and maintenance work on the device
- Foreign bodies, liquids, dust or vapours must be prevented from entering the appliance. There is a risk of short circuit, fire or electric shock.
- The appliance must be protected against the effects of heat from hot machine parts and heat radiation.
- Repair work should generally be carried out by the manufacturer. Please send in the device for this, if necessary you will receive a loan device for the duration of the repair.
- If you want to carry out a repair yourself, please contact us beforehand. We will be happy to supply the right spare parts and help you with any questions.

1.2 Environmental and disposal information

- This appliance complies with EU Directive 2011/65/EU on the restriction of the use of hazardous substances in electrical and electronic equipment (Restriction of Hazardous Substances RoHS).
- This device must be disposed of properly at the end of its service life. It can be returned to the manufacturer, who will dispose of the unusable components properly.
- Observe the permissible temperature range for operating the appliance.
- This appliance must not be used in potentially explosive atmospheres.

1.3 Technical data

Feature	Value
Operating voltage	3,6 V
Battery capacity	5,2 Ah

Feature	Value
Thermocouple types	any
Measurement voltage	max. 3,3 V
Operating temperature	0..45 °C
Storing conditions	-20..60 °C
Housing	Plastic housing without bolts, black, suitable for bulkhead-mounted housings with longitudinal or transverse levers
Dimensions	120 x 90 x 60 mm (WxHxD)
Weight	approx. 400 g

2 Description of the device

The *blueMaster check* consists of an plastic housing and a contact insert, which is designed as a pin or socket insert depending on the device variant. Battery-powered measuring electronics are located inside the housing.



Fig. 1: blueMaster check

There is a button on the left-hand side of the appliance for switching it on and off. This button also contains an LED light that indicates the various operating statuses of the appliance:

LED status	Meaning
flashing blue	waiting for Bluetooth connection
blue permanent	Bluetooth connection active
flashing red	Battery empty
flashing green	device is charging
green permanent	charging completed

The socket for charging the battery is located on the right-hand side of the device. It is designed according to the USB-C standard.

3 Description of the app

The app is required to operate the blueMaster check. It is available for Android in the PlayStore and for iOS in the AppStore.

3.1 Required authorisations

The *blueMaster check* app requires the following authorisations:

- Location
- Location service
- Bluetooth

The *blueMaster check* app does not require internet access to check the tool assignment. However, functions such as the automatic search for updates can only be used with internet access. It is up to you as the user whether the smartphone or tablet is connected to the internet or not.

3.2 Main menu

From the main menu you can

- Connect with already known *blueMaster check* devices
- Manage the app settings
- Perform updates
- Call up help

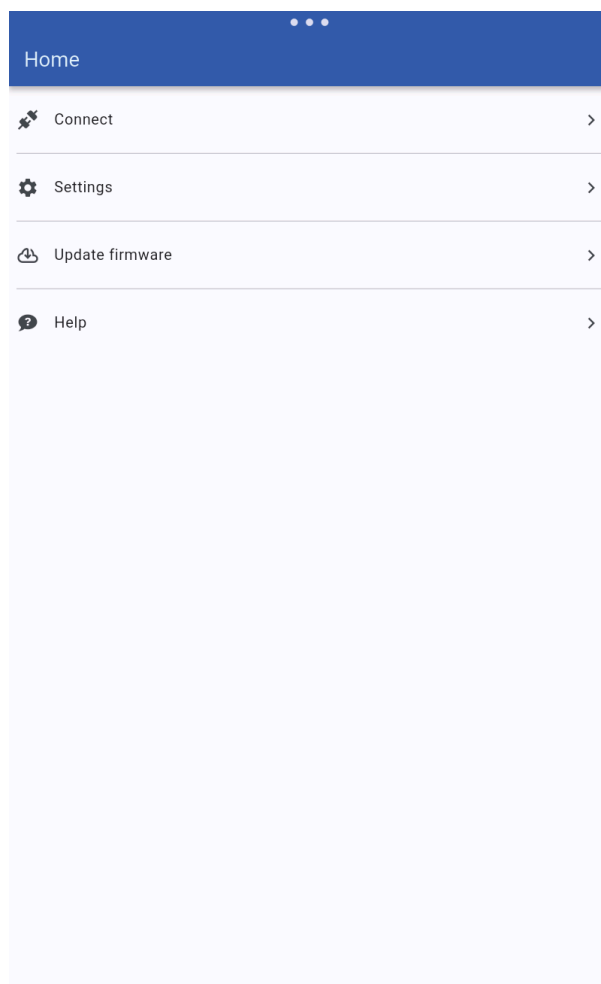


Fig. 2: Home

3.3 Connect

If you press the *Connect* button in the main menu, a list of all switched-on *blueMaster check devices in the vicinity* appears. Selecting the desired device takes you to the basic screen of the *blueMaster check*. The serial number of the *blueMaster check*, which is also printed on the type plate (CHKxyyyyyy) and the identification of the contact insert installed in it (CSHM24: 24-pin male, CSHF24: 24-pin female / CSHM16: 16-pin male, CSHF16: 16 pin female) are displayed. The number inside the blue circle indicates the reception field strength in dBm (decibels milliwatts). The closer the value is to 0, the better the signal. The smaller or more negative the value, the weaker the signal.

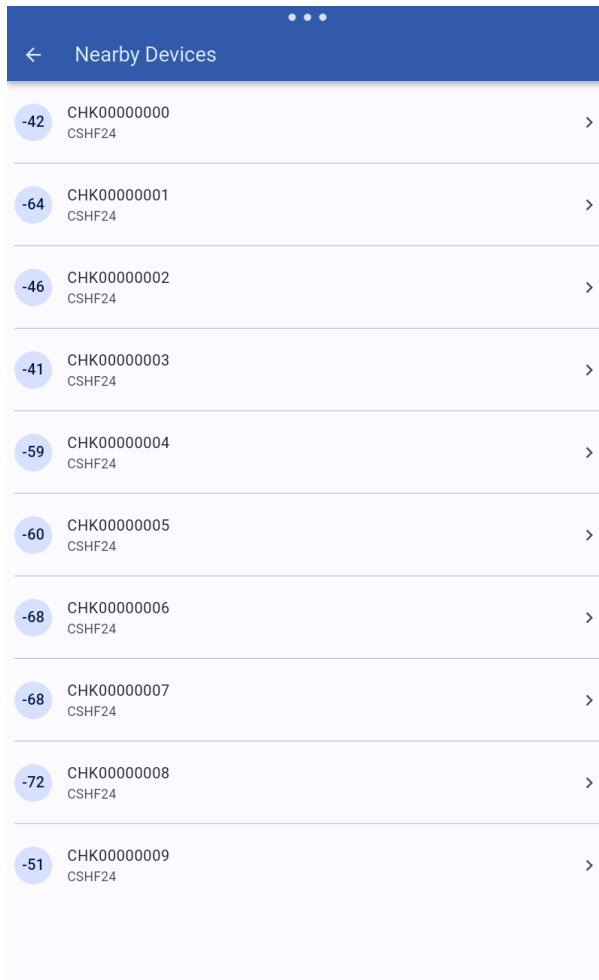


Fig. 3: Nearby Devices

3.3.1 Start measurement

Tap the clock icon in the centre of the screen or in the top right-hand corner to start or repeat a measurement.

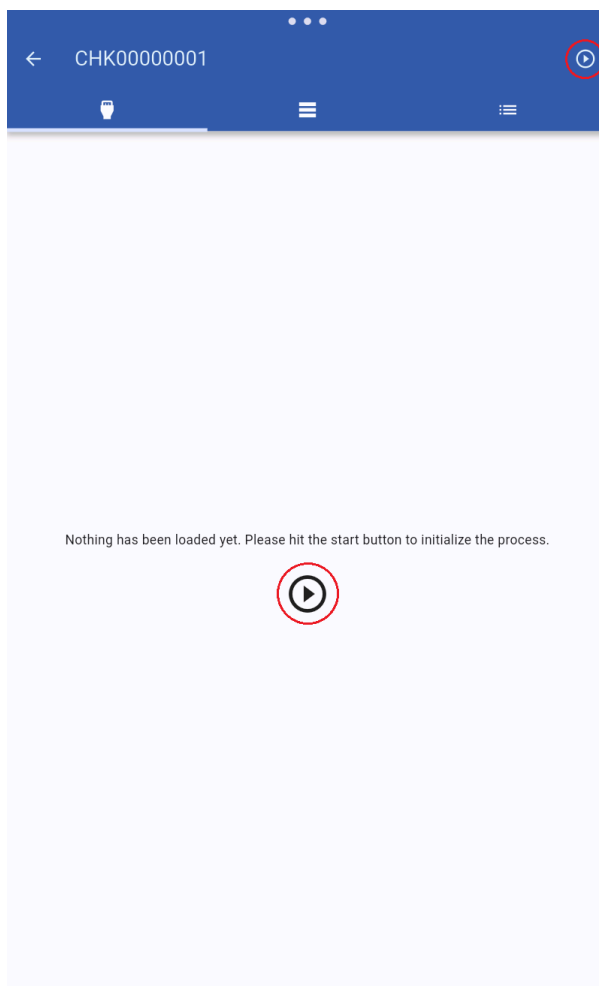


Fig. 4: Start Measurement

3.3.2 Views

The *blueMaster check* app offers three views to display the recognised tool assignment:

- the **graphical view**
- the **tabular view**
- the **compare schemas view** (must be enabled in *Other settings*)

You can switch between the views by tapping the plug, list, or checklist icon in the app header.

3.3.2.1 Graphical view

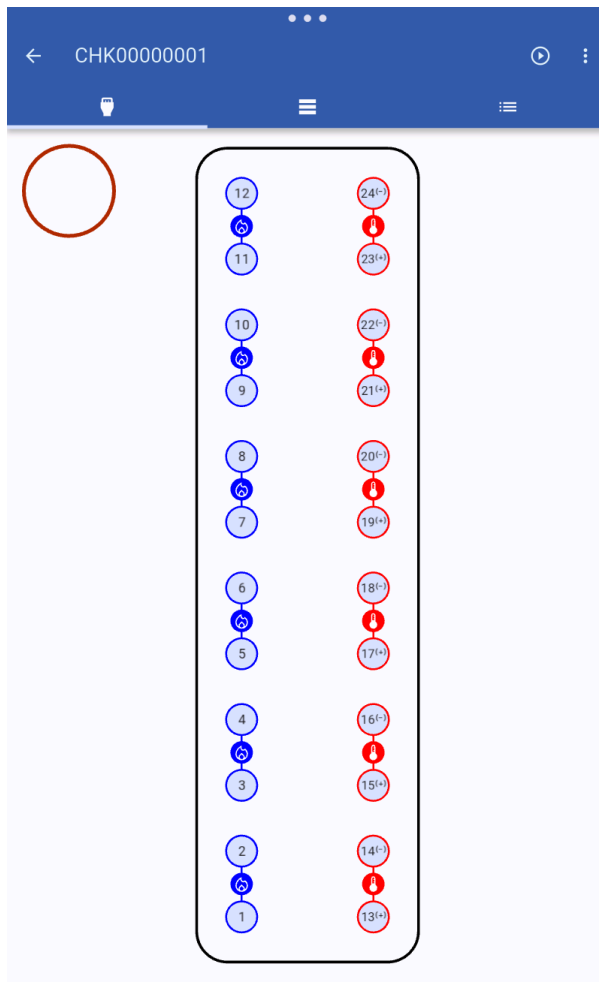


Fig. 5: Graphical View

In this view, all detected connections are displayed graphically. A connection recognised as a **heater** is marked with a flame, a connection recognised as a **thermocouple** with a thermometer. The **polarity** (+/-) is also displayed for detected thermocouples.

Tapping a contact displays its connections as animated, dashed lines. This can be particularly helpful when tool assignments are confusing.

The circle in the top right-hand corner of the screen has the function of a **magnifying glass**. It can be moved freely across the screen. Its content is then displayed enlarged.

The colour of the detected connections can be changed in the Settings menu under Connection settings.

3.3.2.3 View *Compare schemas*

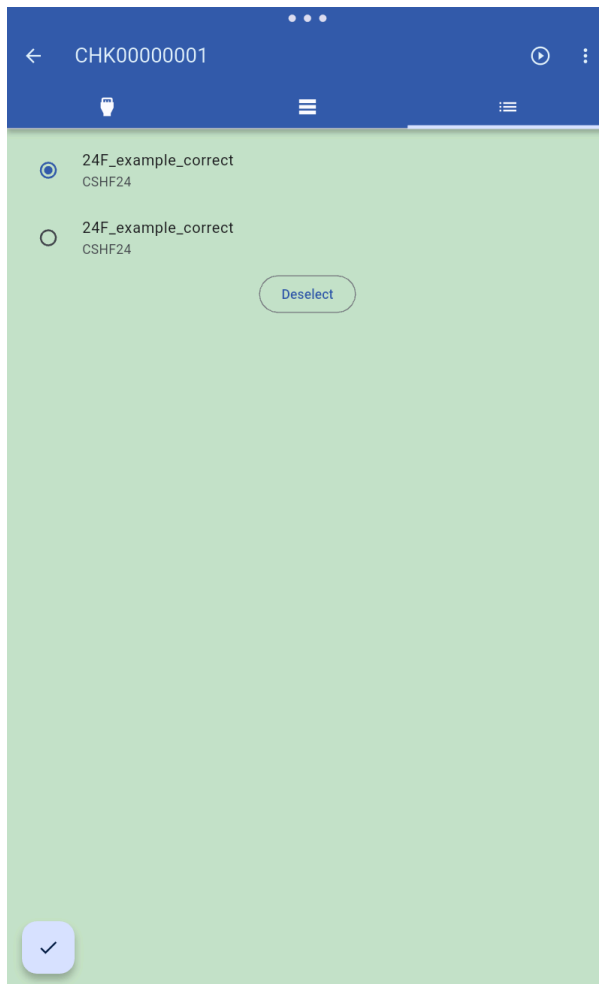


Fig. 7: View Compare schemas

In this view, the detected tool assignment can be compared with a saved **schema**. This allows you to identify possible wiring errors or defective components. To do this, select the schema from the list that you want to compare your measurement result with. If no deviations are found, the background turns green. The button at the bottom left takes you to a table in which your measurement result is compared with the measured values of the saved schema. If deviations are detected, the background turns red. The detected deviations are then also marked in red in the table.

Type	From	To	Resistance [ohm]
🔗	1	2	12.0
🔗	1	2	12.0
🔗	3	4	12.0
🔗	3	4	12.0
🔗	5	6	12.0
🔗	5	6	12.0
🔗	7	8	12.0
🔗	7	8	12.0
🔗	9	10	12.0
🔗	9	10	12.0
🔗	11	12	12.0
🔗	11	12	12.0
👤	13(+)	14(-)	12.0
👤	13(+)	14(-)	12.0
👤	15(+)	16(-)	12.0
👤	15(+)	16(-)	12.0
👤	17(+)	18(-)	12.0

1-17 of 24

Fig. 8: Deviation from target scheme

The [next chapter](#) explains how to save a measurement result as a schema.

3.3.3 Export of measurement results and saving measurement results as a schema

The app offers the option of exporting recognized tool assignments as a file or saving them as a schema against which measurement results can be checked for possible deviations. By tapping the three dots on the right side of the header, you can choose whether to generate a CSV file or a PDF file. You can optionally add a comment to the file name. You can also individually name a tool assignment saved as a schema.

You can save the exported file on your mobile device or transfer it directly to online storage.

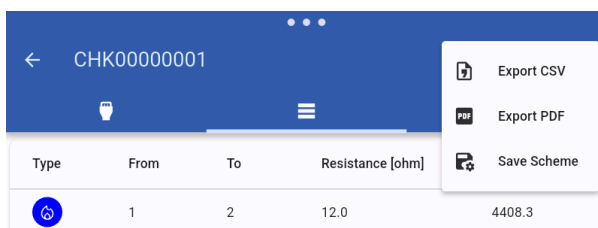


Fig. 9: Export of measurement results

3.4 Settings

If you tap on Settings in the [main menu](#), you can make various settings for the app.

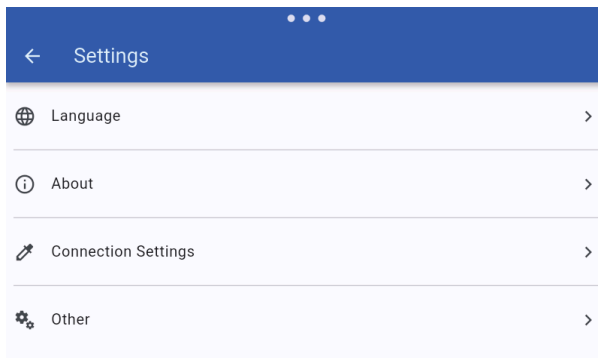


Fig. 10: Settings Menu

3.4.1 Language

You can switch the language of the app here. If your local language is not available and you think it should be, please [contact](#) us.

3.4.2 About

Here you can view the version and build number of the app.

3.4.3 Connection settings

Here you can specify the colour in which detected connections are to be displayed. Different colours can be selected for **heaters**, **thermocouples**, **grounded thermocouples** and **connections of unknown category**.

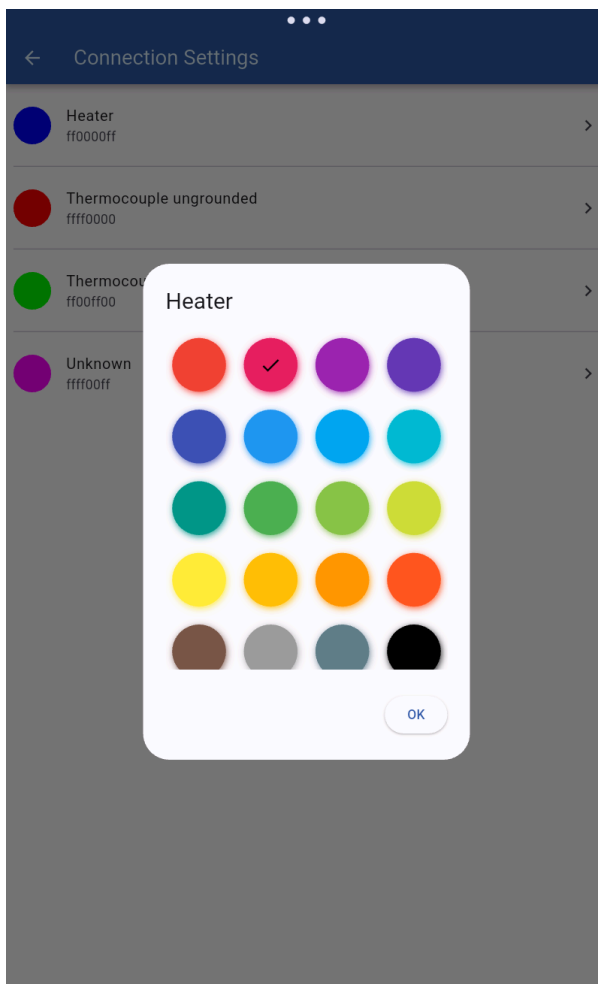


Fig. 11: Connection Settings

Technical background: If thermocouples have a conductive connection to the protective conductor, they are referred to as earthed thermocouples. If this is not the case, they are not earthed thermocouples.

3.4.4 Other settings

You can switch simulation mode on or off here. In simulation mode, no real connection to a blueMaster check is established; all measurement results are merely simulated. This mode is used exclusively for demonstrating the device and for training purposes.

Attention: The connections and values displayed in simulation mode do not correspond to the real tool assignment! Simulation mode is switched off by default.

Furthermore, in these settings you can activate and deactivate the *Compare schemas* function or view, as well as delete previously saved schemas from the selection list.

3.5 Firmware update

If you want to carry out a firmware update, first make sure that your smartphone or tablet has an active internet connection and that the *blueMaster check* is switched on and within range. Then select the device you want to update from the list.

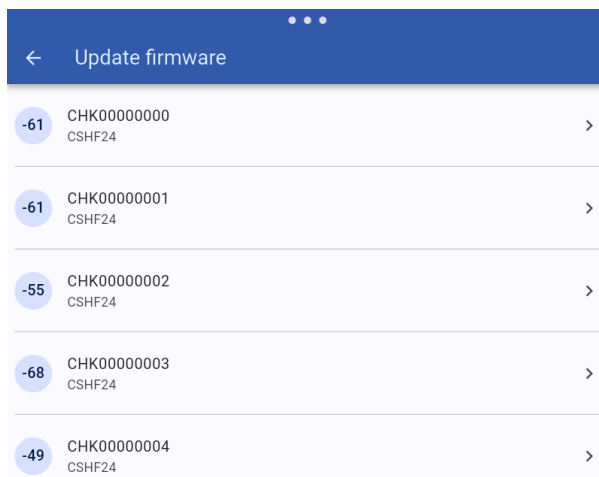


Fig. 12: Select Device for Update

If a firmware update is available for your device, it will be displayed in a list.

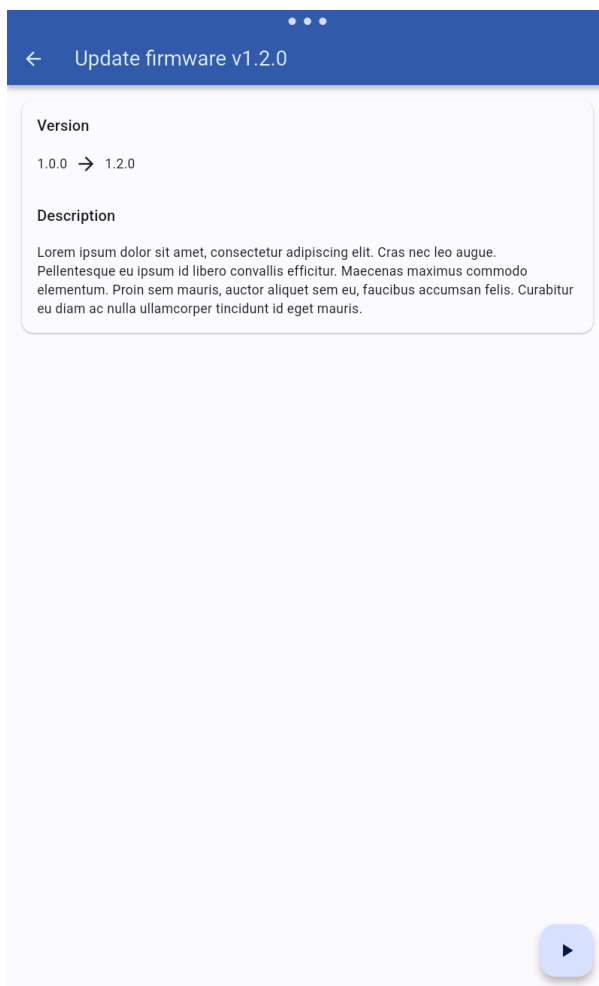


Fig. 13: Select Update

Then select the update you want to install from the list by tapping on it. A window will appear with information on the version number and a detailed description of the update. Start the update by tapping on the arrow in the bottom right-hand corner of the screen.

The download of the update and the transfer to the *blueMaster check* take place automatically and are indicated by a progress bar. Once the update has been successfully completed, a message appears which you must confirm with OK. You will then automatically return to the main menu.

3.6 Help

You can access these instructions via the Help menu item. For questions that this manual does not cover, please contact us

bluemaster@guenther-heisskanal.de
+49 6451 5008 0