Instruction manual

Reference: Menu v1.6

ISOBUS-Terminal CCI 100/200

17510396-EN

1 Introduction

These Operating Instructions are intended as an introduction to the operation and configuration of the ISOBUS CCI 100 / 200 Terminal. It is only with knowledge of these Operating Instructions that accidental misuse of the terminal can be avoided and fault-free operation ensured.

These Operating Instructions must be read and understood prior to assembly and commissioning to prevent problems during operation. The company <company name> accepts no liability for damage resulting from the failure to observe these Operating Instructions.

2 Safety

These Operating Instructions contain basic indications which must be observed during configuration, operation and maintenance procedures. As such, it is absolutely essential to read these instructions prior to configuration and operation.

Not only do the general safety indications listed in this "Safety" chapter have to be observed but also the special safety instructions appearing in other chapters as well.

2.1 Identification of indications in the Operating Instructions

The safety indications in these Operating Instructions are specially identified:

Caution - General Hazards!

This occupational safety symbol identifies general safety indications the non-observance of which poses a danger for life and limb. Carefully observe the indications regarding occupational safety and exert particular caution in these cases.

Attention!

This attention symbol identifies all safety indications which refer to regulations, directives or working procedures which it is essential to observe. Non-observance can entail damage to, or the destruction of, the terminal as well as malfunctions.

Note

The note symbol highlights operation tips and other particularly useful information.

2.2 Intended use

The terminal is exclusively intended for use on approved ISOBUS-compatible machines and devices in agriculture. Any other installation or use of the terminal is not included within the manufacturer's area of responsibility.

The manufacturer accepts no liability for any resulting personal injury or material damage. Any risks for unintended use are borne solely by the user.

Observance of the operation and maintenance conditions stipulated by the manufacturer also form part of intended use.

The accident prevention regulations in force, as well as other generally recognised safety, industrial, medical and traffic laws must be observed. Unauthorised modifications to the device exclude the manufacturer's liability.

2.3 Safety indications for the operator / user

- Do not remove any safety mechanisms or signs.
- Disconnect the power supply to the terminal during maintenance work or when using a charging device on the battery of the towing/production machine.
- Never perform maintenance work or repairs when the device is switched on.
- Disconnect the power supply to the terminal beforehand when welding to the tractor or to an attached machine.
- Only use a soft cloth moistened with clean water or a small amount of glass cleaning agent to clean the terminal.
- Use your fingertip to operate the keys. Avoid using your finger nails.
- If, after having read these Operating Instructions, there are sections which you do not understand contact your dealer for clarification before using the terminal.
- Carefully read and observe all safety instructions in the manual and the safety labels on the device. Safety labels must always be in a proper legible condition. Replace missing or damaged labels. Ensure that new device parts are provided with the current safety labels. Spare labels can be obtained from your authorised dealer.
- Learn how to use the terminal in accordance with regulations.
- Keep the terminal and accessories in good condition.

2.4 Safety indications for the installation of electrical devices

Modern farming machines use electronic components and parts the operation of which can be compromised by electro-magnetic interference from other devices. Such effects can endanger people if the following safety indications are not observed.

In the event of retrofitting electric and electronic devices, and/or components, in a machine with connection to the onboard network, the user must independently verify whether the installation interferes with vehicle electronics or other components. This is, in particular, applicable to the electronic interference of:

- Electronic hoisting gear control
- Front hoisting gear
- Power take-off
- Engine and gears

It must be ensured in particular that the retrofitted electric and electronic components comply with the EMC Directive 89/336/EC in its respectively valid version and that they bear the CE marking.

In order to retrofit mobile communication systems (e.g. radio, telephone), it is important to meet the following requirements:

- Only devices may be installed which are approved in accordance with valid farming regulations (e.g. BZT (Federal Office for Approval in Telecommunications) approval in Germany).
- The device must be properly installed.
- The operation of portable or mobile devices inside the vehicle is only permitted using a connection to a properly installed external aerial.
- The transmitting part must be installed physically and separately from the vehicle electronics.
- When fitting the aerial it must be ensured that the installation is correctly executed with a good earth connection between the aerial and vehicle earth.

The machine manufacturer's Installation Instructions must also be used for the wiring and installation as well as for the maximum permitted power consumption.

2.5 Safety indications for the "Stop" switch

A safe condition for the connected machine can be established by pressing the Stop switch. In order to do so, the machine must support the Stop function.

Note

Under no circumstances does the Stop switch intervene in tractor functions, i.e. neither PTO nor hydraulic functions are compromised.

Further information on this point can be obtained from the machine Operating Instructions.

3 Structure and function

3.1 Overview

1 Front view with operating elements
2 Support
3 USB connection (under the flap)
4 Interface bar
5 Nameplate
6 Softkey swap

3.2 Nameplate

The nameplate features all important terminal information.

<Nameplate>

1 Serial number
2 Manufacturer item number or material number
3 Terminal type (CCI 100 or 200)
4 Manufacturer information
5 Production date (week and year)
6 Hardware version

Note

The nameplates vary from manufacturer to manufacturer. As such, not all information is featured on all nameplates.

3.3 Operating elements

The following operating elements are available on the terminal:

1 "Stop" switch
2 Daylight sensor
3 ESC button
4 Scroll wheel
5 Function buttons
6 Acknowledgement button
7 Freely assignable button
8 WorkingSet button
9 Main menu
10 ON/OFF
11 Touchscreen with operating screen

3.3.1 Stop switch

When pressing the Stop switch (designed as an emergency button on the terminal), a stop command (ISO stop) is sent to the ISOBUS. This command can be assessed by a connected ISOBUS machine in order to adopt the necessary automatic measures in a dangerous situation.

Warning – Danger of injury from the machine whilst in operation!

Not all ISOBUS machines support the Stop function. As a result, a machine may continue to operate after the Stop switch has been pressed. This can lead to injuries.

- Please refer to the Operating Instructions of the machine to verify whether the function is supported or not.

3.3.2 ESC Button

The ESC button is pressed to abort inputs and functions. The modifications made are not accepted and the previous valid value is maintained.

Note

The ESC button can only be used if, on the display on the operating screen, there is an ESC button operable via the touchscreen. The function of button and push button is identical.

3.3.3 Scroll Wheel

The scroll wheel is used for the direct, quick input of target values, as well as for browsing through the elements in the lists:

Turn the scroll wheel to the right	• This increases the value in an input dialogue for numerical values. • This changes to the next element in a list.
Turn the scroll wheel to the left	• This decreases the value in an input dialogue for numerical values. • This changes to the previous element in a list.
Pressing the scroll wheel	• This accepts the modified value in an input dialogue. • This selects a highlighted element in the list.

3.3.4 Function Buttons

Six function buttons (F1-F12) are arranged to the right and left of the display. By actuating a function button the function displayed next to the function button is performed.

3.3.5 Softkey Swap

The softkey-swap is a button on the rear. The positions of both softkey bars on the left-hand and right-hand screen edge are changed by pressing the softkey-swap. This enables operating the device using one hand.

Note

A swap of the softkey bar positions is only available in the area of the machine operation.

3.3.6 Acknowledgement Button

The acknowledgement button (ACK) is used to confirm error messages.

3.3.7 WorkingSet Button

By pressing briefly and repeatedly on the "WorkingSet" button it is possible to sequentially change between the applications which are currently active, e.g. from the machine operation to the TECU (Tractor ECU).

Note

When changing from an active machine function in some machines operations being performed will automatically switch off. For further information on this point consult the machine Operating Instructions.

3.3.8 Main Menu

By pressing the button you change directly to the main menu. The applications which are active when making the change remain active in the background.

Note

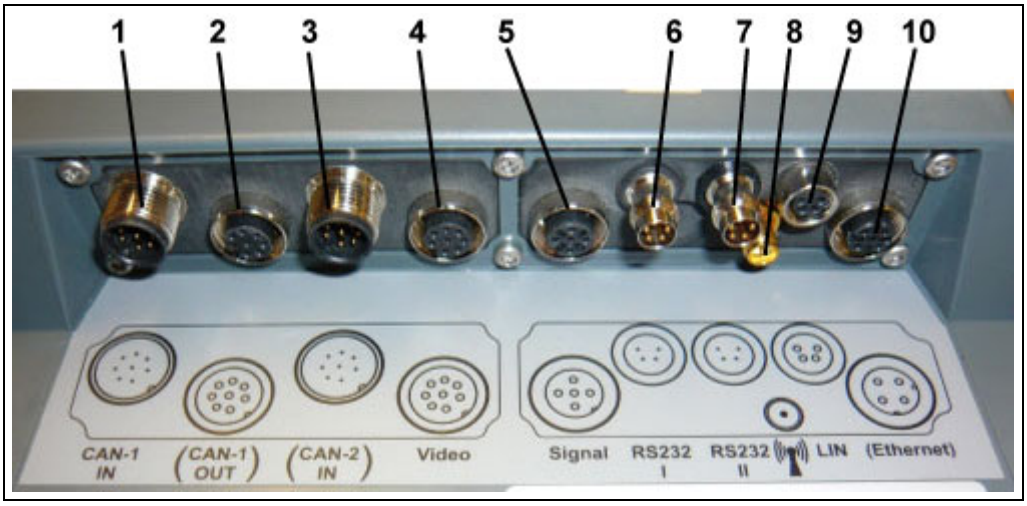
When changing from an active machine function in some machines operations being performed will automatically switch off. For further information on this point consult the machine Operating Instructions.

3.3.9 Touchscreen

The terminal is equipped with a top-quality touchscreen for menu navigation and the easy input of values and texts. By touching the screen functions can be requested directly and values modified.

3.4 Interfaces

The interface bar is on the rear of the terminal. The rear is also the location for the terminal USB connection under a flap. A detailed description of the USB connection can be seen under "Creating Screenshots".



1 CAN1-IN
2 CAN1-OUT
3 CAN2-IN (only CCI 200)
4 Video-IN
5 Signal (ISO 11786)
6 RS232-1
7 RS232-2
8 WLAN (only CCI 200)
9 LIN
10 ETHERNET (only CCI 200)

4 Commissioning

4.1 Mounting the terminal

The device support for fixing the terminal to the tractor cab is included in the scope of delivery.

Proceed as follows to mount the terminal in the cab:

1. 

2. 

3. 

4. 

5. 

6. 

a. Assemble the device support (Fig. 1 and Fig. 2).
b. Mount the device support to the frame and to the terminal (Fig. 3 and 4).
c. Select a suitable location in the tractor cab (in the field of view of the driver), where you want to attach the terminal (Fig. 5 and 6).
d. Secure the terminal with the device support in the tractor cab.

Note

Ensure that the screws are tightened firmly.

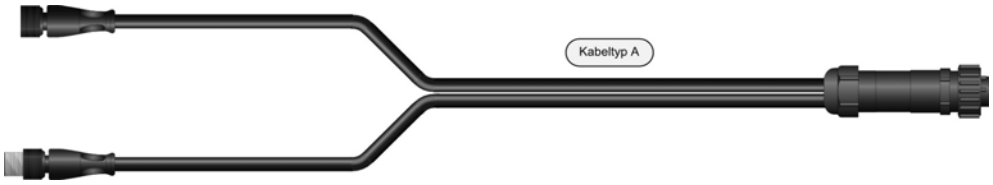
Note

Secure the terminal so that it can be read and operated easily and so that it does not hinder access to the operating elements of the tractor or block the view outside.

4.2 Connecting the Terminal

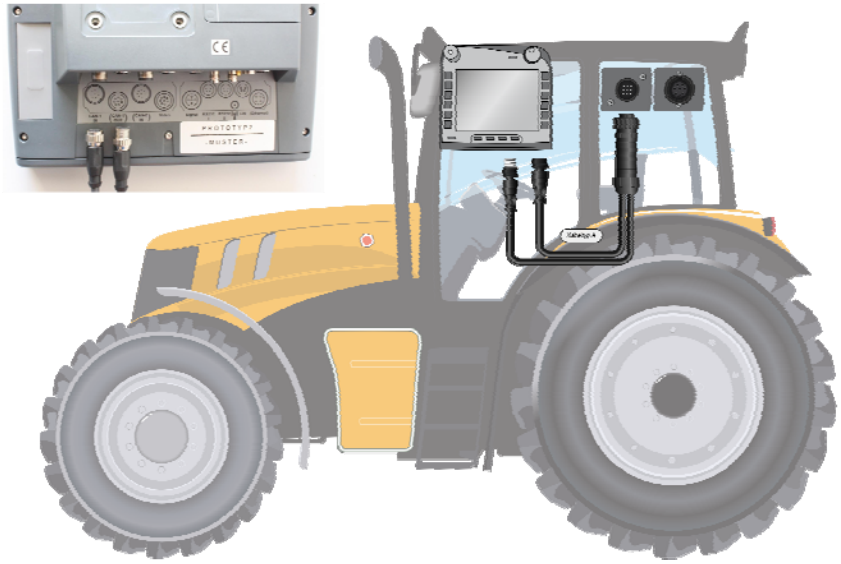
4.2.1 Connecting with ISOBUS/voltage supply

For the connection to ISOBUS and voltage supply, a type A cable is necessary, which can be ordered using article number <ArtNummer InC>.



Proceed as follows to connect the terminal to the ISOBUS and the voltage supply:

1. Connect the "CAN1-IN" and "CAN1-OUT" on the terminal using the type A cable to the In-cab socket of the tractor.



5 Operation

5.1 Switching on the terminal

Note

Before switching on the terminal for the first time, check that the connections on the device are properly and correctly positioned.

- Switch on the terminal using the "ON/OFF" button on the casing at the bottom left. Press the button for approx. 2 seconds.

5.2 Entering values

Values must be entered, modified or selected for the configuration and use of both the terminal and the connected ISOBUS machines.

The values are modified by using the so-called input dialogues. These dialogues are shown above the current active operating screen. After modification the input dialogue is closed and the user returns to the operating screen.

5.2.1 Buttons in Input Dialogues

By using the "OK" button, the newly set target value is accepted in all input dialogues. The previous value is overwritten.

Alternatively, the scroll wheel can be pressed to accept the new value.

By using the "ESC" button, the input is aborted in all input dialogues. The previous value is maintained.

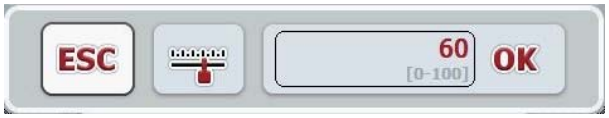
Alternatively, the "ESC" button can be pressed on the scroll wheel to abort the action.

5.2.2 Entering Numerical Values

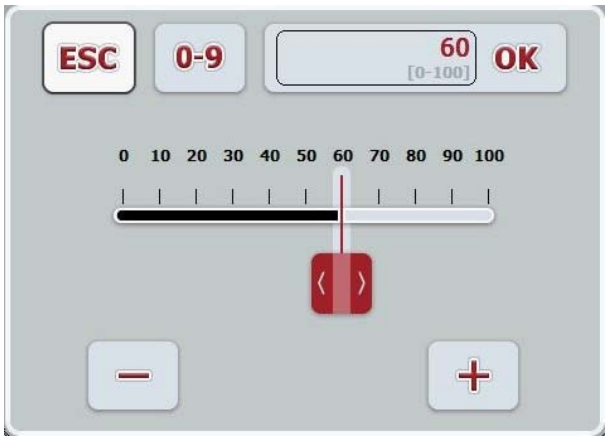
If a parameter is selected from an operating screen which has a numerical value, the input dialogue for numerical values appears. There are three different dialogue formats:

- Number Block

- Scroll wheel



- Slider



The following buttons can be used to change between the various formats of the input dialogue for numerical values:

Change to scroll wheel format.

Change to slider format.

Change to number block format.

Proceed as follows to enter a numerical value:

1. From the operating mask select the parameter whose value has to be changed. Press on the parameter on the touchscreen or turn the scroll wheel until the parameter is highlighted in white and then press on the scroll wheel.

   Once the parameter is highlighted you can, alternatively, also press the "OK" button.

   The input dialogue is opened.

2. Enter the new value. The input method depends on the format of the input dialogue:

Number Block	Enter the value using the buttons in the input dialogue or by turning the scroll wheel.
Scroll wheel	Enter the value by turning the scroll wheel.
Slider	Drag the slider or press the + and - buttons until the desired value is set. Alternatively, you can enter the value by turning the scroll wheel.

3. Confirm your input with "OK" or by pressing the scroll wheel.

Note

The terminal takes note of the last format to be selected. The next time the input dialog for numerical values is requested this format is immediately selected.

Note

The input field is highlighted in red if a value is entered outside the valid value range. In this case enter another value.

5.2.3 Entering Boolean Values

A Boolean value is a value whereby it is only possible to choose between true/false, on/off, yes/no etc. If a parameter is selected on an operating screen which has a Boolean value, the corresponding input dialogue appears.

Displays for false, off, no:

Displays for true, on, yes:

Proceed as follows to enter a Boolean value:

1. From the operating mask select the parameter whose value has to be changed. Press on the parameter on the touchscreen or turn the scroll wheel until the parameter is highlighted in white and then press on the scroll wheel.

   Once the parameter is highlighted you can, alternatively, also press the "OK" button.

   The input dialogue is opened.
2. Enter the new value. Press the square with the black border in the input field.

   Alternatively you can enter the value by turning the scroll wheel.
3. Confirm your input with "OK" or by pressing the scroll wheel.

5.2.4 Selecting Values from a List

For specific parameters there are lists of default values, e.g. the language setting. If such a parameter is selected from an operating screen the input dialogue for the list selection appears.

Note

You can minimise the lists displayed by pressing the input field (between **ESC** and **OK**). The input dialogue for the list selection is then shown with a minimised list.

Proceed as follows to enter a value from a list:

1. From the operating mask select the parameter whose value has to be changed. Press on the parameter on the touchscreen or turn the scroll wheel until the parameter is highlighted in white and then press on the scroll wheel.

   Once the parameter is highlighted you can, alternatively, also press the "OK" button.

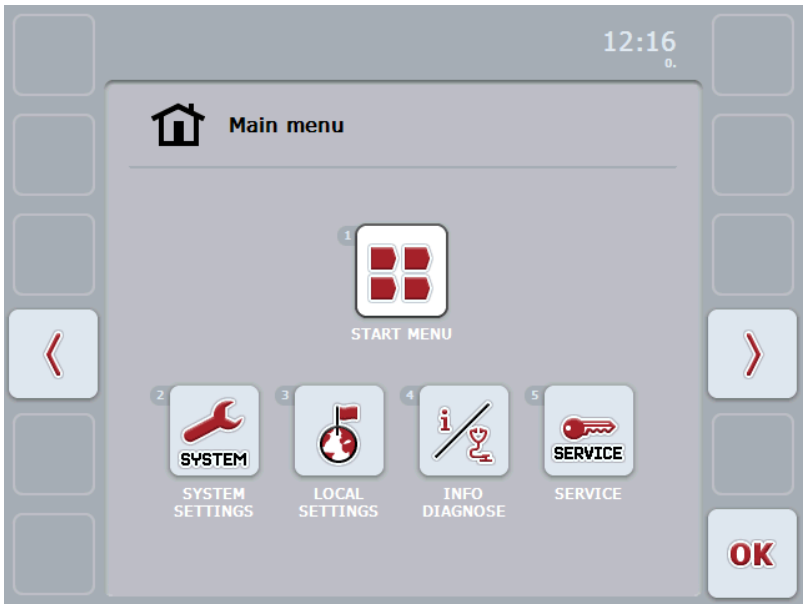
   The list selection input dialogue is opened.
2. Select the new value. Drag the scroll bar or turn the scroll wheel until the desired value appears.

   Proceed to press on the list value field on the touchscreen or the scroll wheel to select the value.
3. Confirm your input with "OK" or by pressing the scroll wheel.

5.3 Setting the terminal

5.3.1 Main Menu

Open the main menu:



From the **Main Menu** there is direct access to five submenus:

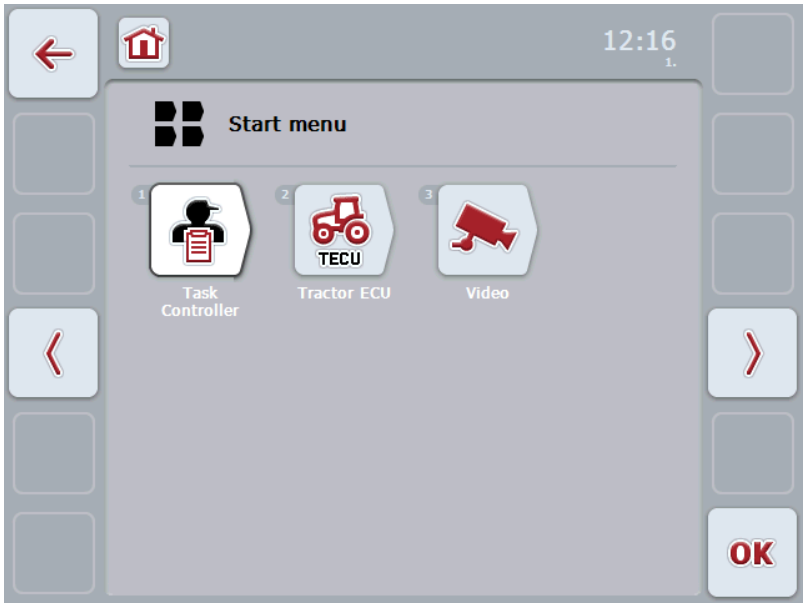
- **Start menu**
- **System settings**
- **Country settings**
- **Info and diagnosis**
- **Service**

From each submenu (and their menu items) you can return to the **Main Menu** directly by pressing the button.

In the following sections the submenus are described in detail. A graphic depiction of the complete menu structure can be referred to in the chapter "Menu Structure".

5.3.2 Start Menu

In the **Start Menu** all active applications are shown. On the one hand, these are the applications installed on the terminal, e.g. tractor ECU and camera and, on the other, the operating images of the connected machines.



- In order to request an application press on the operating image of the machine or the software application on the touchscreen.

Note

A detailed description of the settings of a connected ISOBUS machine can be referred to in the Operating Instructions of the relevant machine.

5.4 System settings

In the menu **System Settings** it is possible to adjust the terminal to your personal requirements.

From each submenu you can return to the menu **System Settings** directly by pressing the button.

5.4.1 Display

In the menu item **Display** adjust the following settings:

Display Brightness/Day	Set the desired display brightness in the day mode. The value is given as a percentage and can be adjusted in steps of 10%. The modifications become effective after confirming and exiting the input dialogue.
Display Brightness/Night	Set the desired display brightness in the night mode. The value is given as a percentage and can be adjusted in steps of 10%. The modifications become effective after confirming and exiting the input dialogue.
Keyboard Illumination	Set the ON/OFF activation point for the membrane keyboard illumination. The value provided by the daylight sensor is the reference variable. The illumination is activated when exceeding the ON activation point and deactivated when undershooting the OFF activation point. The values are given as a percentage and can be adjusted in steps of 10%.

5.4.2 Touchscreen

In the menu item **Touchscreen** adjust the following settings:

Signal Generator	Switch the signal generator ON or OFF. With the signal generator switched off the acoustic acknowledgement is also suppressed when pressing a button on the keypad or a button on the operating screen.
Volume	Set the volume of the signal generator. The value can be adjusted over the range of 30% to 100%.
Touchscreen Calibration	In order to calibrate the touchscreen, five crosses are displayed on the screen one after the other. Press as near to the centre as possible on these crosses. To finalise the calibration, and to accept the values calculated, touch any part of the screen. If you do not touch the screen within 30 seconds the calibration is aborted and the previous values will be maintained.

5.4.3 Date/Time

In the menu item **Date/Time** adjust the following settings:

Year	Set the current year with four digits, e.g. "2010".
Month	Set the current month.
Day	Set the current day.
Hour	Set the current hour. The time is displayed in 24-hour format.
Minutes	Set the current minute.

5.4.4 Connection settings

You can configure the physical interfaces of the terminal in the **Connection Settings** menu item.

5.4.4.1 LAN settings

Note

The settings described below are used exclusively for the operation of the terminal in the network.
Consult your network administrator for the settings.

In the menu item **LAN Settings** adjust the following settings:

DHCP	Activate or deactivate DHCP.
IP Address	Set the IP address.
Subnetwork Screen	Set the subnet mask.
Gateway	Set the Gateway.
DNS Server	Provide the DNS server.

Note

When DHCP is activated all other values are set automatically.
When DHCP is deactivated you must adjust the values. Consult your network administrator in this regard.

5.4.4.2 WLAN settings

Adjust the following settings in the **WLAN settings** menu item:

WLAN networks	Select the WLAN network.
DHCP	Activate or deactivate DHCP.
IP Address	Set the IP address.
Subnetwork Screen	Set the subnetwork screen.
Gateway	Set the Gateway.
DNS Server	Provide the DNS server.

Note

When DHCP is activated all other values are set automatically.
When DHCP is deactivated you must adjust the values. Consult your network administrator in this regard.

Note
The settings can only be performed with the CCI 200.

5.4.5 ISOBUS settings

Perform the following settings in the **ISOBUS Settings** menu item:

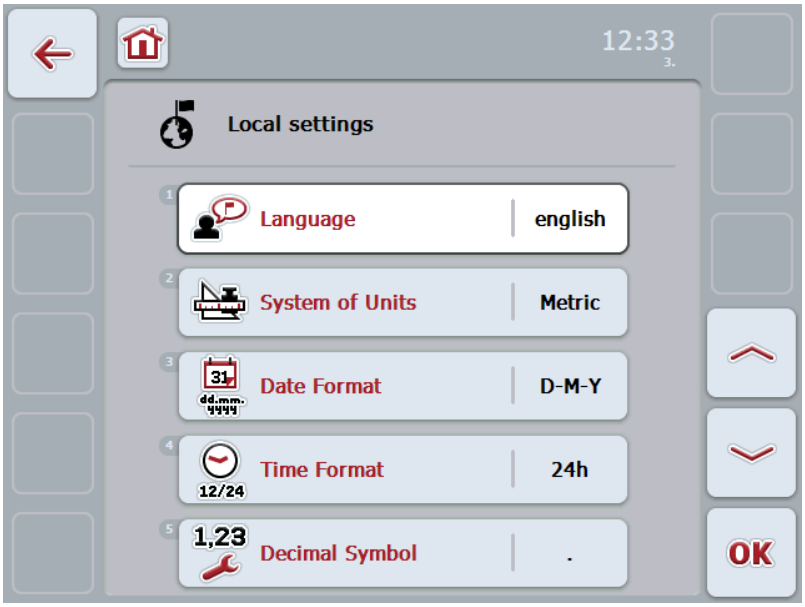
Primary Terminal Activate or deactivate the primary terminal.

Note
The settings for "Primary Terminal" only has an effect when operating two or more terminals on a bus system. The object pool of the machine is displayed on the primary terminal by default.

Note
Always only one primary terminal may be located on the bus. If an additional primary terminal on the bus is detected by the CCI 100/200, you will receive an error message.

6 Country Settings

In the menu item **Country Settings** all country and language-specific settings of the terminal can be established.



Language	All installed languages are shown on the selection list. Select the desired language.
System of units	The terminal supports the following system of units: • Metric • Imperial • US

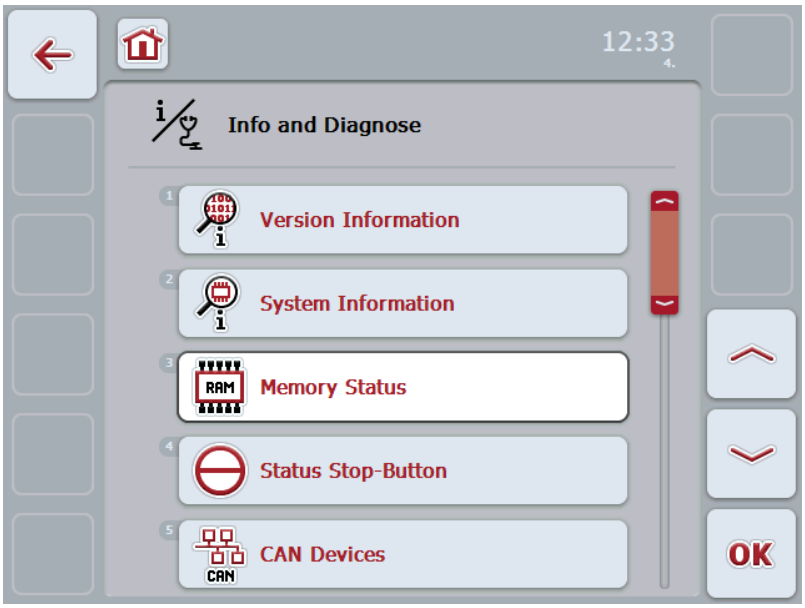
Note

When DHCP is activated all other values are set automatically.
When DHCP is deactivated you must adjust the values. Consult your network administrator in this regard.

Date format	Set the desired date format: • mmddyyyy • ddmmyyyy • yyyymmdd
Time format	Set whether the time is to be managed and featured as 12 or 24-hour format.
Number format	Select the desired decimal point format.

6.1 Info and diagnosis

In the menu item **Info and Diagnosis** the function and status of the hardware components in the terminal can be checked. You receive the version information for installed applications. Basic information on the machines connected to the ISOBUS can be called up. Object pools can be deleted.



The following information will be shown for the individual subitems:

Version Data
- Version of the terminal firmware (ANEDO System)
- Operating system
- Version of all installed applications (Software)

System Data
- Device type (CCI 100 or 200)
- Serial number
- Terminal manufacturing date
- General hardware information

Memory Status
- Available memory capacity
- Memory capacity used
- Free memory capacity

Stop switch status
- Function On
  The Stop switch is pressed.
  A "stop" command is sent to the ISOBUS and can be evaluated by a connected machine.
- Function OFF
  The "Stop switch" is not pressed.

A detailed description to test the switch can be referred to in the chapter "Troubleshooting".

ISOBUS machine
- All the machines connected to the terminal and all other active bus participants

One of the pieces of information described above is acknowledged with "OK" and you return to the **Info and Diagnosis** menu item.

The following operating options are available:

Delete object pools
- If the memory for object pools is selected, all

	cached pool data can be deleted here. Confirm the procedure with "OK".
Hardware test	A detailed description can be referred to in the chapter "Troubleshooting".

6.2 Service menu

Attention!

Settings in the service menu can only be adjusted by the manufacturer or their sales and services partners.
Access to the service menu is therefore password protected.

6.3 Creating screenshots

The terminal offers the possibility of creating a screenshot of the currently visible operating screen. This can be used to clarify a specific behaviour of the application which is otherwise difficult to describe in words to a service employee.

Note

Screenshots can only be created with a USB stick inserted.

- To open the flap press on the grooved area and pull the notch at the same time.
- To create a screenshot press "Freely assignable button" and "WorkingSet button" at the same time.
  The screenshot is automatically saved as a Bitmap file on the USB stick.

7 Troubleshooting

7.1 Terminal errors

The following overview shows possible terminal errors and how to solve them:

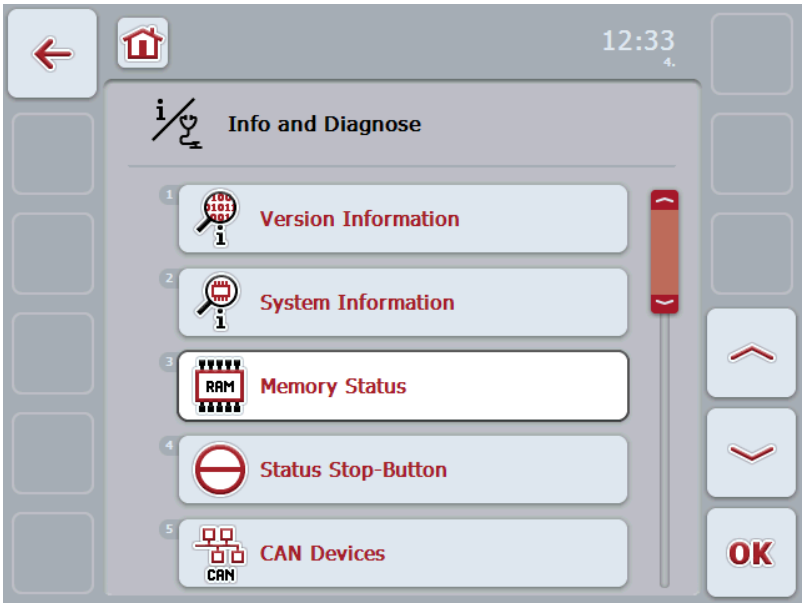
Error	Possible cause	Solution
The terminal does not switch on	Terminal is not correctly connected	Check ISOBUS connection
Connected machine software is not displayed	• Bus terminator missing • Software is loaded, however is not displayed • Connection error when uploading the software	• Check resistance • Check whether the software can be manually started from the terminal start menu • Check physical connection • Contact the machine manufacturer's customer service

7.2 Diagnosis

7.2.1 Checking the Stop switch status

In order to check the function status proceed as follows:

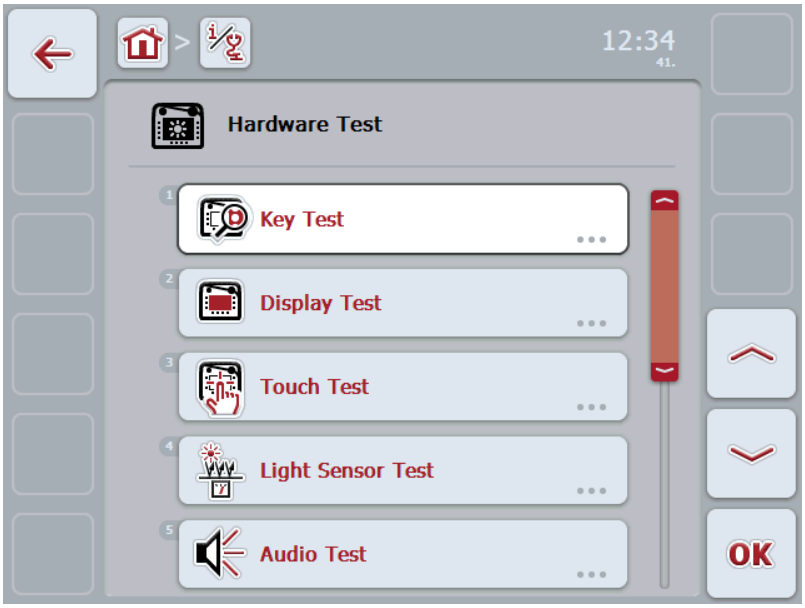
1. Under the **Info and Diagnosis** menu item, select the **Stop Switch** item.



2. Press the Stop switch until it locks.
   On the screen, the display "pressed (on)" must appear.
3. Release the Stop switch.
   On the screen, the display "released (off)" must appear.
4. End the test with "OK".

7.2.2 Hardware Test

The functionality of the display and operating elements can be tested in the **Info and Diagnosis - Hardware Test** menu item.



From the **Hardware Test** menu item, you can return directly to the **Info and Diagnosis** menu by pressing the button.

From each of the tests, you can return directly to the **Hardware Test** menu item by pressing the button.

7.2.2.1 Key Test

You can check the correct functionality of the following buttons on the terminal:

- F1-F12
- ESC
- Scroll wheel
- ACK
- Return button

In order to check the functionality of the buttons proceed as follows:

1. Under the **Hardware Test** menu item, select the **Key Test** item.
2. Press a button.
   The button pressed is shown in the screen.
3. Return to the menu using the arrow button (**F7**).

Examples:

If you push the **F8** button the screen displays "Left Softkey 2".

If you push the scroll wheel the screen displays "Return Button".

7.2.2.2 Display Test

Proceed as follows to test the display:

1. Under the **Hardware Test** menu item, select the **Display Test** item.
   A coloured circle is shown.
2. Return to the menu using the arrow button (**F7**).

7.2.2.3 Touch Test

Proceed as follows to test the touchscreen:

1. Under the **Hardware Test** menu item, select the **TouchTest** item.
   Five empty checkboxes are shown on the screen.
2. By pressing the individual buttons activate a tick mark.
3. Return to the menu using the arrow button (**F7**).

7.2.2.4 Light Sensor Test

Proceed as follows to test the the light sensor:

1. Under the **Hardware Test** menu item, select the **Light Sensor Test** item.
   The screen displays the value in the range 0...100%.
2. Cover the light sensor using your hand.
   The screen shows a change in the value.
3. Return to the menu using the arrow button (**F7**).

7.2.2.5 Audio Test

Proceed as follows to test the signal generator:

1. Under the **Hardware Test** menu item, select the **Audio Test** item.
2. Press the "Test" button (**F12**).
   A test of the beeper is performed automatically. During this test the frequency spectrum is run through within 3 seconds.
3. Return to the menu using the arrow button (**F7**).

7.2.2.6 Interface Test

The following tests are available in order to check the correct connections to other devices or the correct connections to terminal interfaces:

- CAN interface test
- Serial interface test
- Bluetooth test
- RS485 test
- LAN interface test

Note

Testing should only be performed by trained service personnel.

7.3 Error messages

Note

The error messages shown on the terminal depend on the connected machine.

A detailed description of the possible error messages and troubleshooting can be referred to in the machine Operating Instructions.

Note

If the machine cannot be operated, check whether the stop switch is pressed. The machine cannot be operated until the switch has been released.

8 Technical Information

8.1 Mechanical Values

Dimensions (WxHxD) [mm]	250 x 240 x 75
Casing Type	PC-ABS multi-shell plastic casing
Fastening	80mm x 80mm flange plate with 4 x M5-threaded bush
Operating Temperature [°C]	-20 to +70
Humidity Resistance [%]	95, (+25°C...50°C)

8.2 Electronics

Rated Voltage [V] **Permitted Range [V]**	12 and 24 9...30
Electricity Consumption (at 13.5 V)	1.1 A – 1.5 A
Polarity Protection	Present
Display	8.4'' TFT
Display Resolution [px]	640 x 480

8.3 CCI 100 Interfaces

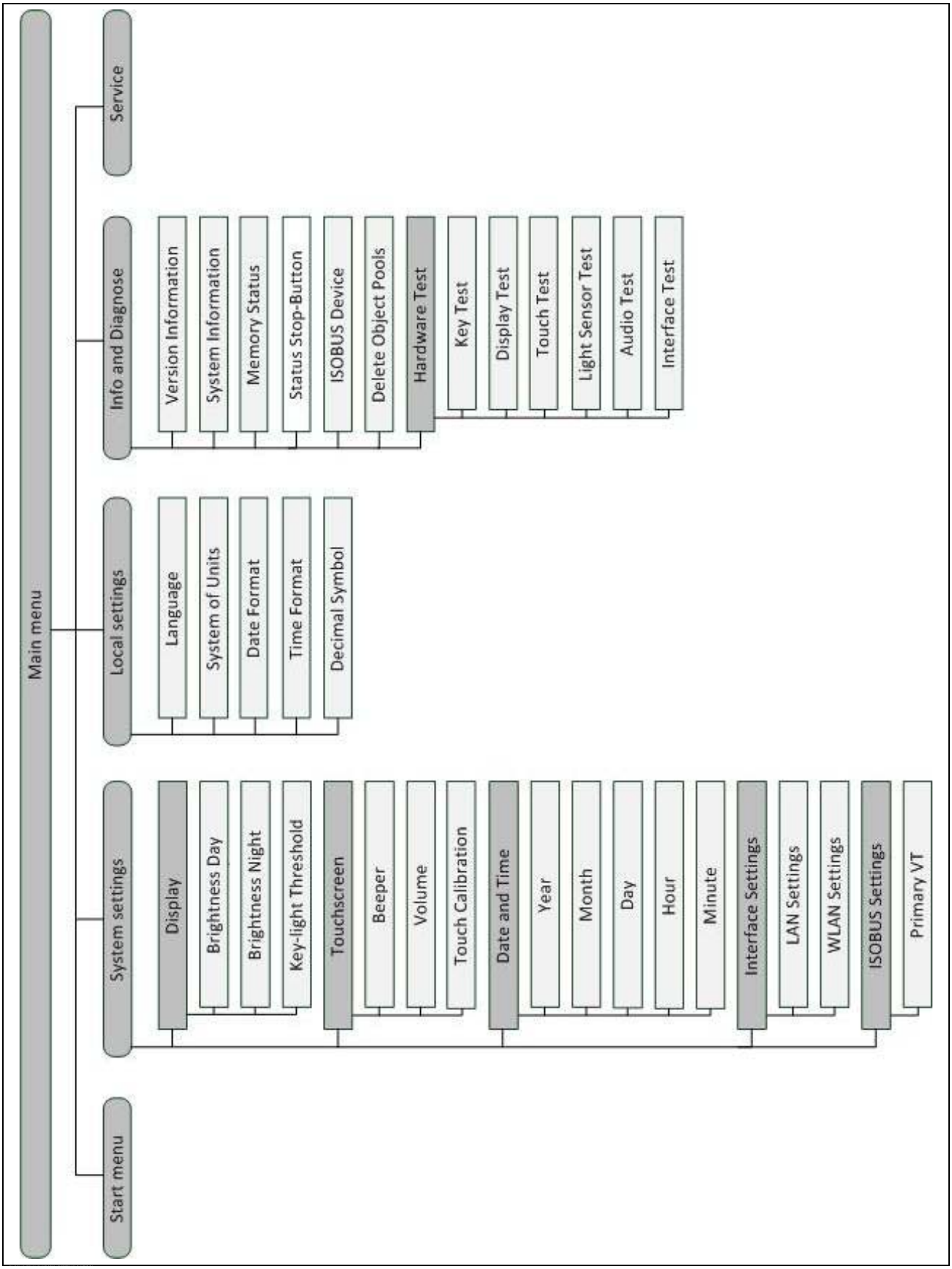
CAN1-IN	CAN 2.0B, ISO 11898-1 M12x1; 8-pin connector
CAN1-OUT	CAN 2.0B, ISO 11898-1 M12x1; 8-pin connector
LIN-OUT	LIN-BUS Master M8x1; 4-pin socket
RS232-1	Async. Up to 115 Kbps M8x1; 4-pin connector
RS232-2	Async. Up to 115 Kbps M8x1; 4-pin connector
Signal	Signal socket ISO 11786 M12x1;5-pin socket
Video	NTSC, SECAM, Signal 1Vpp/50
USB	USB Host 2.0

8.4 CCI 200 Interfaces

The CCI 200 terminal, in addition to the interfaces of the CCI 100, also has the following interfaces:

Ethernet	10/100 Base-T, IEC 61076-2-101
CAN2-IN	CAN 2.0B, ISO 11898-1 M12x1; 8-pin connector
Bluetooth	Bluetooth Spec. V2.0 + DER Compliant Class 2 Output Power, internal antenna
WLAN	54 Mbps, 2.4 GHz, IEEE 802.11b and 802.11g, WPA, WPA2, 802.1x and 802.11i, function only at 0°C – 65°C

9 Menu structure



10 Warranty and guarantee

<Company name> devices are manufactured with the utmost care and using modern production methods and are subject to numerous checks. As such <company name> provides a 12-month warranty provided the following conditions are satisfied:

- The warranty begins on the data of purchase.
- The warranty covers material or manufacturing defects. For external products (hydraulics, electronics) we only accept liability within the framework of the respective manufacturer's warranty. During the warranty period, manufacturing and material defects will be resolved free of charge by replacing or improving the affected parts. Other, further rights, such as claims for the conversion, reduction or replacement of damage which have not occurred to the contract item, are expressly excluded. The warranty reimbursement is performed by authorised workshops by <company name> factory representation or the factory.
- Exclusions from the warranty agreement are the consequences of natural wear, dirt, corrosion and any defects which have arisen due to improper use as well as external effects. The warranty remains void in the event of undertaking unauthorised repairs or modifications to the original condition. The claim for replacement is made void if no <company name> original spare parts were used. Please refer to the Operating Instructions for information. In the event of any queries contact our factory representative or the factory directly. To be valid warranty claims must be submitted to the factory at the latest 30 days after the damage has been detected. When doing so, please provide the purchase date and the machine number. Repairs to be performed as part of the warranty may only be carried out by the authorised workshop after consultation with <company name> or their official representative. The warranty period is not extended by warranty work. Transport defects are not factory defects and are not, therefore, included as part of the manufacturer's warranty conditions.
- A claim for the repair of damage which has not arisen on <company name> devices themselves is excluded. Within this context, liability for consequential damage as the result of random imperfections is also excluded. Unauthorised modifications to <company name> devices can lead to consequential damage and the supplier accepts no liability for such damage. In the event of intent or gross negligence by the owner or an executive employee, and in cases in which in accordance with product liability legislation there is liability for personal injury or material damage for privately used objects in the case of defects in the contract item, the supplier's liability exclusion is not applicable. This liability exclusion shall not apply either in cases where properties, which were explicitly warranted, are lacking, especially when this commitment was made in order to protect the customer against damage which did not occur on the subject of the delivery itself.

11 Conformity

The ISOBUS conformity of the CCI terminals is DLG-certified:

12 Contact Addresses

Amazonen-Werke H. Dreyer GmbH & Co. KG
Am Amazonenwerk 9-13
D-49205 Hasbergen
Tel: + 49 (0)5405 501 0
www.amazone.de

Maschinenfabrik Bernard KRONE GmbH
Heinrich-Krone-Straße 10
D-48480 Spelle
Tel: +49 (0)5977 935 0
www.krone.de/de/ldm/

Grimme Landmaschinenfabrikg GmbH & Co. KG
Hunteburger Str. 32
D-49401 Damme
Tel: +49 (0)5491 666 0
www.grimme.de

RAUCH Landmaschinenfabrik GmbH
Landstraße 14
D-76547 Sinzheim
Tel: +49 (0)7221 985 200
www.rauch.de

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F-67706 Saverne CEDEX
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LEMKEN GmbH & Co. KG
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Tel: +49 (0)2801 81 0
www.lemken.com

Ludwig Bergmann GmbH
Hauptstraße 64-66
D-49424 Goldenstedt
+49 (0)4444 2008 0
www.bergmann-goldenstedt.de

13 Glossary

ACK	Acknowledge
Operating mask	The operating mask is comprised of the values and operating elements shown on the screen. The touchscreen can be used to directly select the elements shown.
Bluetooth	
Boolean value	A Boolean value is a value whereby it is only possible to choose between true/false, on/off, yes/no etc.
Bus system	Electronic system for communication between control devices.
CAN	**C**ontroller **A**rea **N**etwork
CCI	**C**ompetence **C**enter **I**SOBUS e.V.
DHCP	**D**ynamic **H**ost **C**onfiguration **P**rotocol: This enables assigning the network configuration to Clients using a server.
DNS Server	
ESC	Escape: in this case it refers to aborting a function
Ethernet	
Failed	
Gateway	
In-cab	Term from the ISO 11783 standard. Describes the nine-pole ISOBUS connector in the tractor cab.
ISO 11783	International standard Specifies interfaces and data formats for tractors and machines.
ISOBUS	ISO11783 International standard for data transfer between farming machines and devices.
IP address	
Cable (type A)	Connects the "CAN1-IN" and "CAN1-OUT" on the terminal to the In-cab socket of the tractor.
LAN	**L**ocal **A**rea **N**etwork, local network
Object pools	Data record that is transferred from the ISOBUS machine to the terminal and contains the individual operating masks.
Interface	Part of the terminal which is used to communicate with other devices
RS485 interface	
Signal Socket	7-pin outlet based on the ISO 11786 standard, at which signals for speed, PTO speed and 3-point position can be read.
Subnetwork Screen	
Succeeded	
Terminal	CCI 100 or CCI 200 ISOBUS Terminal
Touchscreen	Touch-sensitive screen which is used to operate the terminal.
Tractor ECU	Also TECU. On an ISOBUS tractor, the TECU establishes the connection between the tractor bus system and the ISOBUS and thus provides the machine with the tractor information such as the driving speed or the PTO speed.

USB	**U**niversal **S**erial **B**us: Serial bus system to connect the terminal to a storage medium.

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