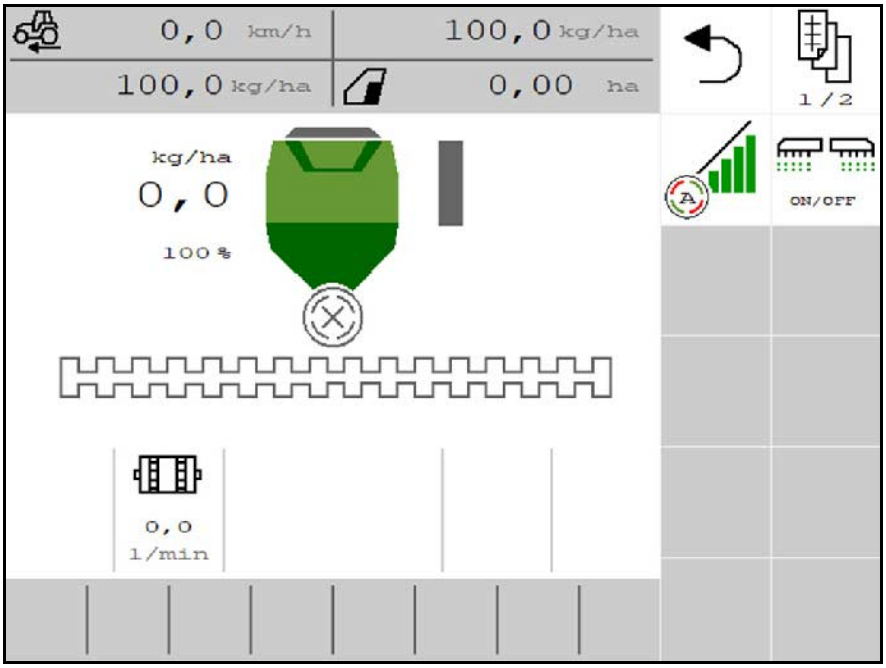
Operating manual

AMAZONE

ISOBUS software

GreenDrill

FTender



MG6757
BAG0218.5 07.21
Printed in Germany

SmartLearning

Please read this operating manual before initial operation. Keep it in a safe place for future use!

en

READING THE INSTRUCTION

manual and to adhere to it should not appear to be inconvenient and superfluous as it is not enough to hear from others and to realise that a machine is good, to buy it and to believe that now everything would work by itself. The person concerned would not only harm himself but also make the mistake of blaming the machine for the reason of a possible failure instead of himself. In order to ensure a good success one should go into the mind of a thing or make himself familiar with every part of the machine and to get acquainted with its handling. Only this way, you would be satisfied both with the machine as also with yourself. To achieve this is the purpose of this instruction manual.

Leipzig-Plagwitz 1872. Rud. Sark.

Manufacturer's address

AMAZONEN-WERKE
H. DREYER SE & Co. KG
Postfach 51
D-49202 Hasbergen, Germany
Tel.: + 49 (0) 5405 50 1-0
E-mail: amazone@amazone.de

Spare part orders

Spare parts lists are freely accessible in the spare parts portal at www.amazone.de.

Please send orders to your AMAZONE dealer.

Formalities of the operating manual

Document number: MG6757
Compilation date: 07.21

© Copyright AMAZONEN-WERKE H. DREYER SE & Co. KG, 2021

All rights reserved.

Reprinting, even of sections, only possible with the approval of AMAZONEN-WERKE H. DREYER SE & Co. KG.

Foreword

Dear Customer,

You have chosen one of the quality products from the wide product range of AMAZONEN-WERKE, H. DREYER SE & Co. KG. We thank you for your trust in our products

On receiving the implement, check to see if it has been damaged during transport or if parts are missing. Using the delivery note, check that the implement has been delivered in full, including any special equipment ordered. Damage can only be rectified if problems are signalled immediately.

Before initial operation, read and observe this operating manual, and particularly the safety information. Only after careful reading will you be able to benefit from the full scope of your newly purchased implement.

Please ensure that all the implement operators have read this operating manual before they put the implement into operation.

Should you have any questions or problems, please consult this operating manual or contact your local service partner.

Regular maintenance and timely replacement of worn or damaged parts increases the lifespan of your implement.

User evaluation

Dear Reader

We update our operating manuals regularly. Your suggestions for improvement help us to create ever more user-friendly operating manuals.

AMAZONEN-WERKE

H. DREYER SE & Co. KG

Postfach 51

D-49202 Hasbergen, Germany

Tel.: + 49 (0) 5405 50 1-0

E-mail: amazone@amazone.de

1 User information 6
1.1 Purpose of the document 6
1.2 Locations in the operating manual 6
1.3 Diagrams 6

2 General safety instructions 7
2.1 Representation of safety symbols 7

3 Product description 8
3.1 Software version 8
3.2 Hierarchy of the ISOBUS software 9
3.3 Field / settings menu 10

4 Field menu 11
4.1 Work menu 11
4.1.1 Displays on the terminal 12
4.1.2 Deviations from the nominal state 13
4.1.3 Driving on the road 13
4.1.4 Mini-view in Section Control 13
4.1.5 Switching the implement on and off 14
4.1.6 Pre-metering 15
4.1.7 Pre-stopping 15
4.1.8 Section control 16
4.1.9 Changing the target quantity 17
4.1.10 Work lights 17
4.1.11 GPS recording mode for recording a field boundary 18
4.1.12 Procedure during operation 19
4.2 Calibration menu 20
4.3 Call menu 22
4.4 Emptying menu 22
4.5 Documentation menu 23

5 AUX-N multi-function sticks 24

6 AmaPilot+ multi-function stick 25

7 Settings 27
7.1 Machine 28
7.1.1 Metering unit 29
7.1.2 Working position sensor 30
7.1.3 Blower fan 31
7.1.4 Speed 32
7.1.5 Geometry 34
7.1.6 Hopper selection 35
7.1.7 Pairing the Bluetooth device 35
7.2 Profile 36
7.2.1 Configuring ISOBUS 37
7.2.2 Configuring the multi-function display 38
7.2.3 Configuring the free key assignment 38
7.2.4 Configuring the start-up ramp 39
7.3 Info 40
7.4 Product 41
7.4.1 Entering the switch-on time, switch-off time for Section Control 42
7.4.2 Optimising the switching times for Section Control 44

8 Fault 45
8.1 Alarm / warning and notification 45
8.2 Failure of the speed signal from ISOBUS 45
8.3 Fault table 46

1 User information

The User Information section provides information on use of the operating manual.

1.1 Purpose of the document

This operating manual

- describes the operation and maintenance of the implement.
- provides important information on safe and efficient handling of the implement.
- is a component part of the implement and should always be kept with the implement or the towing vehicle.
- must be kept in a safe place for future use.

1.2 Locations in the operating manual

All the directions specified in the operating manual are always seen in the direction of travel.

1.3 Diagrams

Instructions and responses

Activities to be carried out by the user are given as numbered instructions. Always keep to the order of the instructions. The reaction to the handling instructions is given by an arrow.

Example:

1. Instruction 1

→ Implement response to instruction 1

2. Instruction 2

Lists

Lists without an essential order are shown as a list with bullets.

Example:

- Point 1
- Point 2

Item numbers in diagrams

Numbers in round brackets refer to the item numbers in the diagrams.
Example:

(1) Position 1

2 General safety instructions

Knowledge of the basic safety information and safety regulations is a basic requirement for safe handling and fault-free implement operation.

The operating manual

- must always be kept at the place at which the implement is operated.
- must always be easily accessible for the user and maintenance personnel.

2.1 Representation of safety symbols

Safety instructions are indicated by the triangular safety symbol and the highlighted signal word. The signal word (DANGER, WARNING, CAUTION) describes the severity of the risk, and carries the following meaning:

DANGER

Indicates a direct threat at high risk which will result in death or most serious bodily harm (loss of limbs or long-term harm), should it not be prevented.

If the instructions are not followed, then this will result in immediate death or serious physical injury.

WARNING

Indicates a medium risk, which could result in death or (serious) physical injury if not avoided.

If the instructions are not followed, then this may result in death or serious physical injury.

CAUTION

Indicates a low risk which could cause minor or medium level physical injury or damage to property if not avoided.

IMPORTANT

Indicates an obligation to special behaviour or an activity required for proper implement handling.

Non-compliance with these instructions can cause faults on the implement or disturbance to the environment.

NOTE

Indicates handling tips and particularly useful information.

These instructions will help you to use all the functions of your implement in the best way possible.

3 Product description

The ISOBUS software and an ISOBUS terminal make it easy to control, operate and monitor the AMAZONE implements.

The ISOBUS software works with the following AMAZONE seed drills:

- **GreenDrill**
- **FTender**

During operation

- the work menu shows all work data,
- the implement is operated through the work menu,
- the ISOBUS software controls the spread rate according to forward speed.

3.1 Software version

This operating manual is valid from software version:

NW257-F

Every piece of software installed must be up-to-date.

Otherwise:

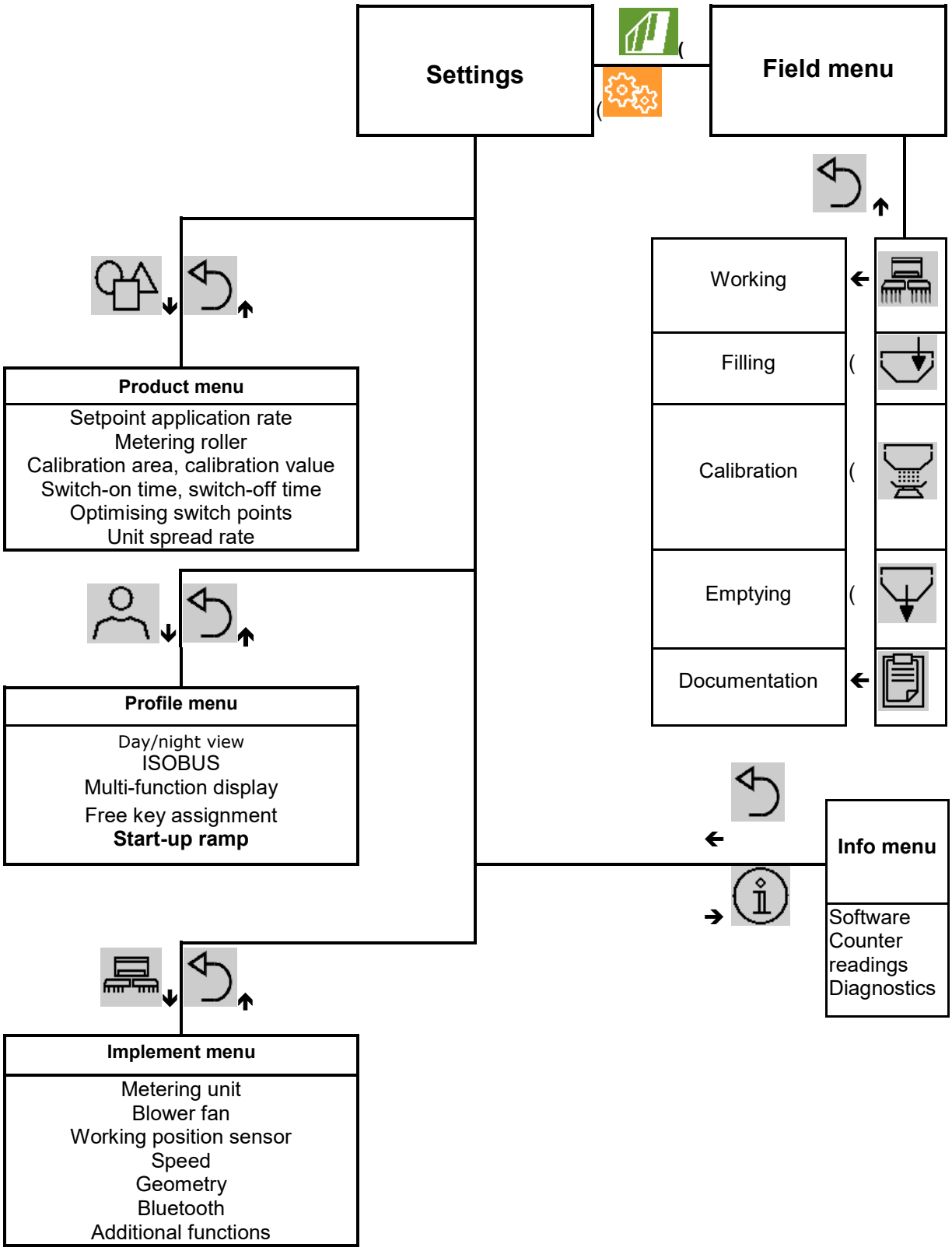
- Operation is not possible
- Contact the dealer

The following software version is not compatible:

xxx

F45064

3.2 Hierarchy of the ISOBUS software



·Back to the previous menu

Scroll through the pages in the menu

3.3 Field / settings menu

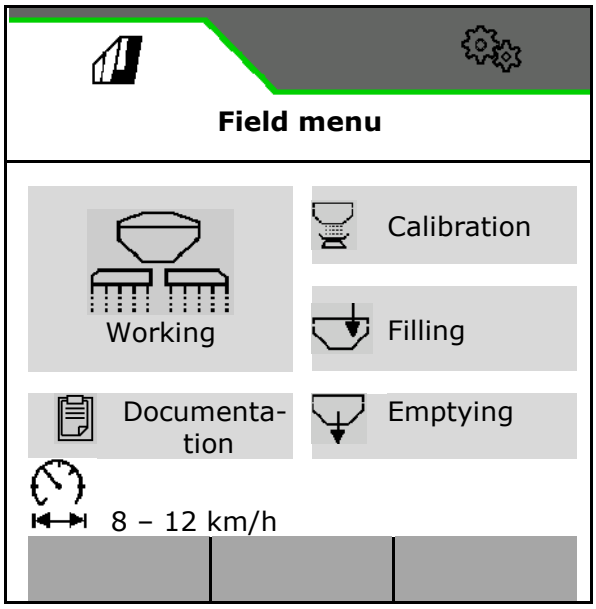
The field menu is active after switching on the terminal

Switch to the field menu

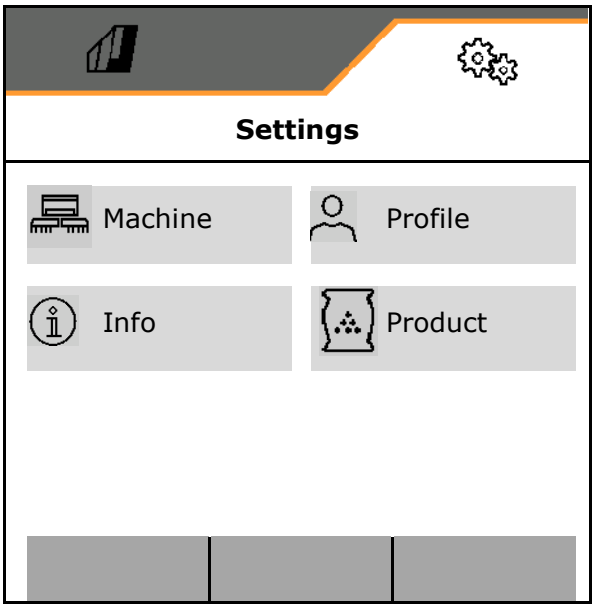
Switch to the settings menu

→ The selected symbol is displayed in colour.

Field menu for operating the implement:



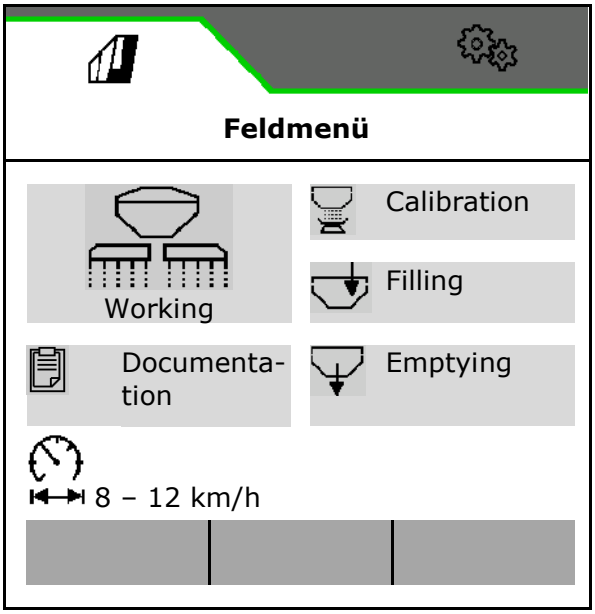
Setting menu for settings and management:



4 Field menu

- Work menu
  Operating the implement on the field
- Filling menu
- Calibration menu

  To check the target rate before seeding
- Emptying menu
- Documentation of menu



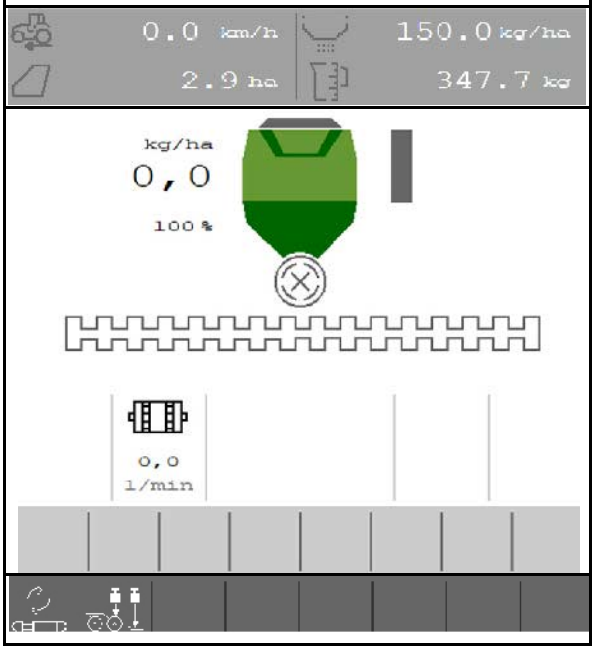
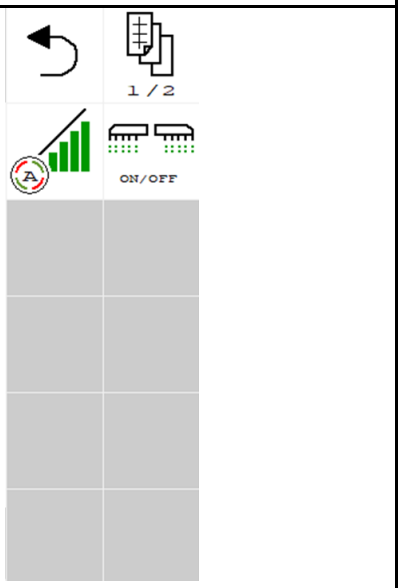
Possible range for the forward speed for the current settings

Switch the display from day to night view or vice versa.

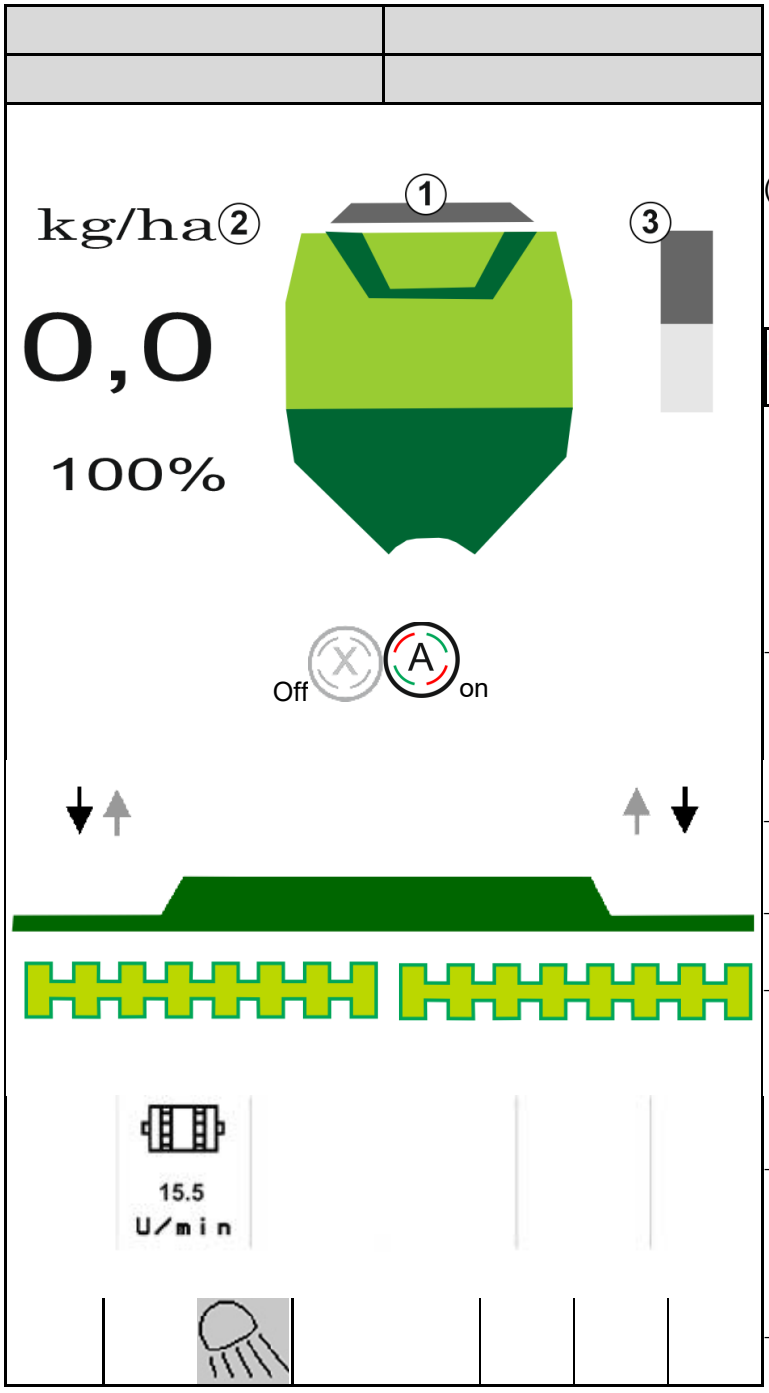
4.1 Work menu

Before beginning seeding

- Enter the product data,
- Perform calibration.

Display area	Operating areas
	

4.1.1 Displays on the terminal



4 fields for the multi-function display

(1) Hopper. Multiple hoppers can be managed.

Inactive hoppers are shown in grey

(2) Current spread rate in kg/ha and %

(3) Fill level

→ Switch Section Control on / off

→ Implement lifted/lowered

→ Operational readiness display

→ Seeding display

→ Metering unit

→ Work lights on

Scrolling through the operating areas in the work menu.

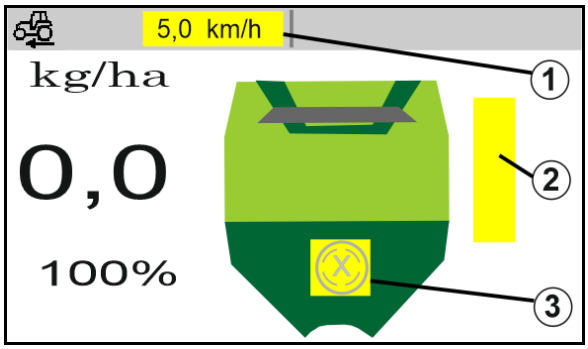
4.1.2 Deviations from the nominal state

Displays marked in yellow are indications for deviating from the nominal state.

(1) Simulated speed active/information source not available

(2) All conditions for Section Control have been met.

(3) Seed hopper is empty

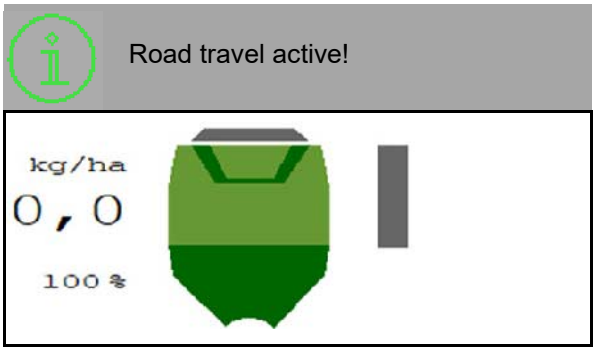


4.1.3 Driving on the road

At a forward speed greater than 20 km/h, the implement is set to road travel mode.

The metering unit cannot be started.

Road travel mode is deactivated when the implement is switched on at a standstill.



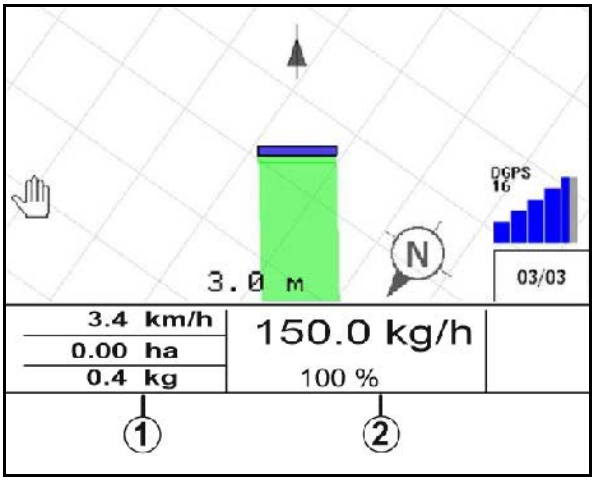
4.1.4 Mini-view in Section Control

Mini-view is a section of the work menu that is shown in the Section Control menu.

(1) Multi-function display

(2) Target quantity

Notes are also shown in the miniviews.



Mini-view cannot be displayed on all control terminals.

4.1.5 Switching the implement on and off

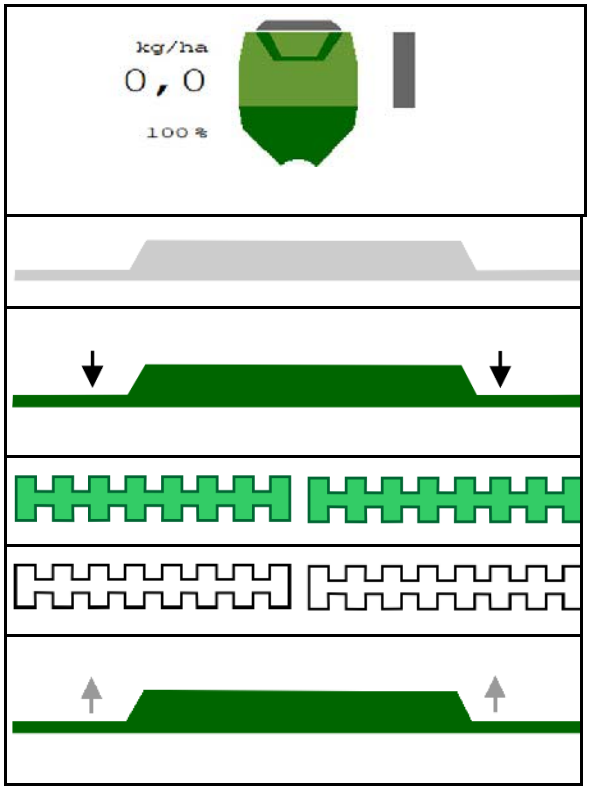
	**Switching the implement on / off**

Switch on the implement before beginning seeding.

→ Seeding starts when driving off, if the implement is in working position.

→ Seeding can be interrupted while driving in working position.

→ Seeding can be resumed while driving.



- Implement is switched off

- Implement is switched on
- Working position

→ Ready for seeding

→ Seeding at forward speed

→ No seeding

- Implement is switched on
- Not in working position

→ Headlands

When engaging the implement after the headland, the metering unit starts automatically.

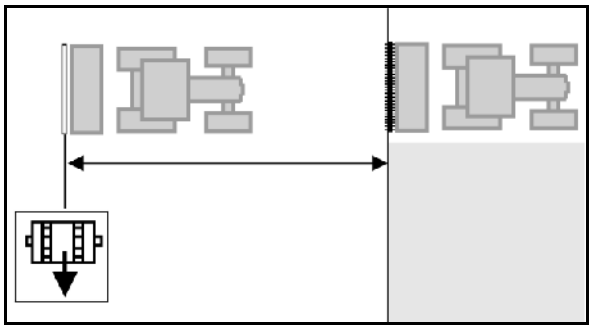
Switching off the metering unit can be useful, since even small movements in front of the radar sensor can cause the metering unit to start running
(e.g. when manoeuvring on the field in working position).

4.1.6 Pre-metering

Pre-metering at the beginning of the field

Pre-metering enables punctual supply of seed at the beginning of the field. This prevents areas without seed at the beginning of the field.


Start the pre-metering when the field is reached after the pre-metering time has expired.



The time must be known.

See Implement/metering unit menu

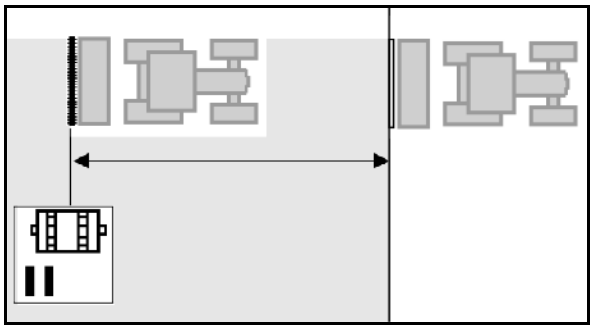
The implement must be switched on.

4.1.7 Pre-stopping

Pre-stopping at the end of the field

Pre-stopping enables punctual stopping of the seeding at the end of the field.


Start the pre-stopping when the end of the field is reached after the pre-stopping time has expired.



The time must be known.

See Implement/metering unit menu

4.1.8 Section control

	**Switching Section Control on and off on the implement**

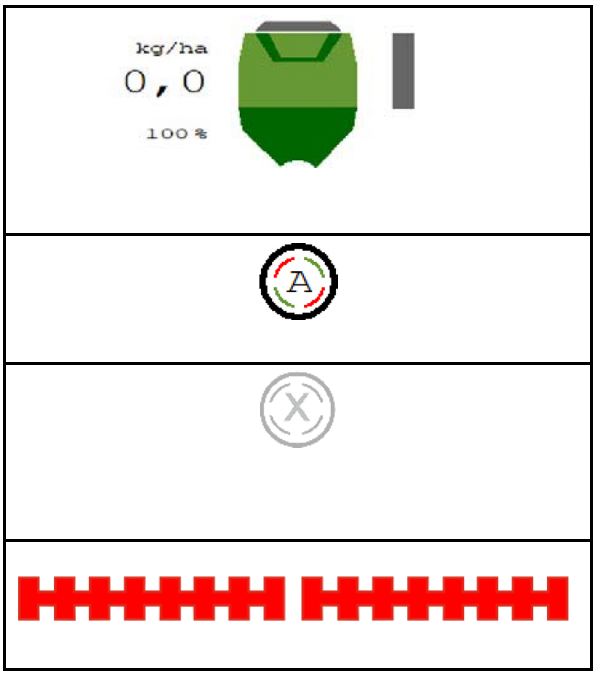
	Conditions for Section Control: • The terminal must be equipped with Section Control. • Section Control switched on through the terminal (not necessary with AmaTron 4). • Implement is error-free.

→ Seeding starts when driving off, if the implement is in working position and is switched on.

1.  Switch on Section Control.
2. 

Switch on the implement.

→ Seeding starts when driving off, if the implement is in working position and is switched on.



Section Control is switched on.

→ All of the conditions for Section Control are met.

Section Control is switched off.

→ Section Control is signed onto the terminal.

→ The conditions for Section Control have not been met.

Section Control manually overridden:

→ Seeding bar is red; seeding has been interrupted.

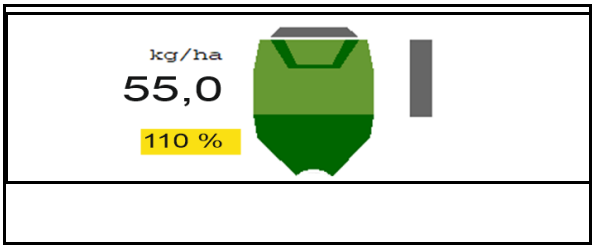
4.1.9 Changing the target quantity

Increase / reduce the target quantity

The target quantity can be changed as required during operation.

The changed target quantity is shown in the work menu:

- in kg/ha
- in percent (marked in yellow)



-  Each time the key is pressed, the seeding rate is increased by the quantity increment (e.g.:+10%).
-  Reset the seeding rate to 100%.
-  Each time the key is pressed, the seeding rate is reduced by the quantity increment (e.g.:-10%).

4.1.10 Work lights

Switching the work lights on / off

Display when work lights are switched on →

4.1.11 GPS recording mode for recording a field boundary

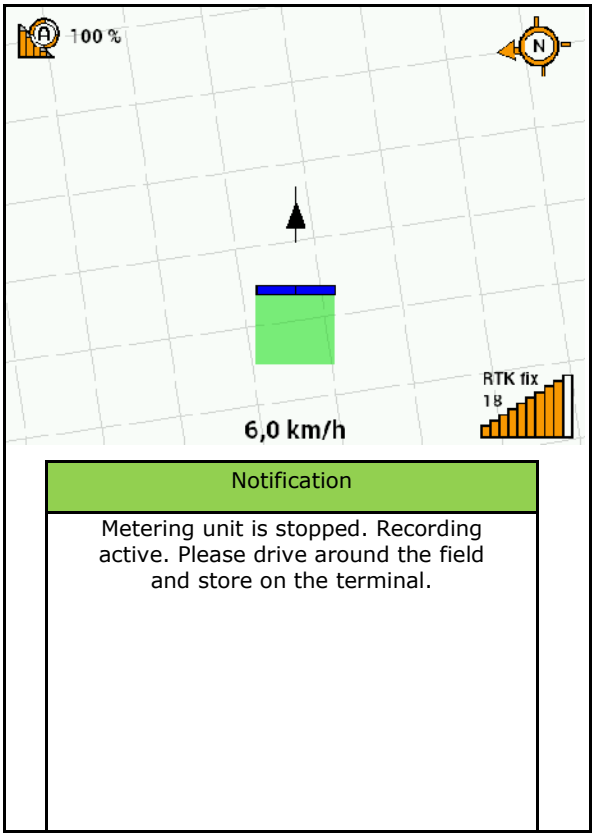
	**Switching the GPS recording mode on / off**

When recording mode is switched on, a field boundary can be recorded without having the implement in working position (metering is interrupted, no advancing of the tramlines).

1.  Switch on recording - Drive around the field boundary.

A message will be shown →

2.  Switch off recording - When manoeuvring on the field.
3. After driving around the field, create the field boundary through the GPS menu.
4. Delete the worked area again (depending on the terminal), since the perimeter is marked as the worked area.



4.1.12 Procedure during operation

To maintain the set spread rate, the calibration factor must be determined before starting work.

1. Move the implement into working position.
2. Switch on the fan.
3. In the field menu on the control terminal: Select operation.
4.  Switch on Section Control if necessary.
5. 

Switch on the implement.
6. Drive off and start seeding.
7. After approx. 30 m, come to a stop and check the seeding.

- In the headland position, the metering unit stops automatically.
- After the headland, the metering unit starts as soon as the working position is reached.
- When stopping, the metering unit stops automatically.
- 

If necessary, switch off the metering unit (e.g. when manoeuvring on the field in working position).

4.2 Calibration menu

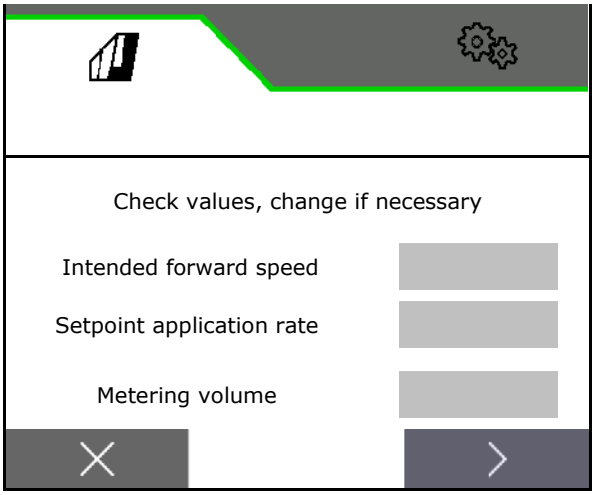
The calibration checks whether the required seed quantity is spread during subsequent seeding.

Calibration must always be performed

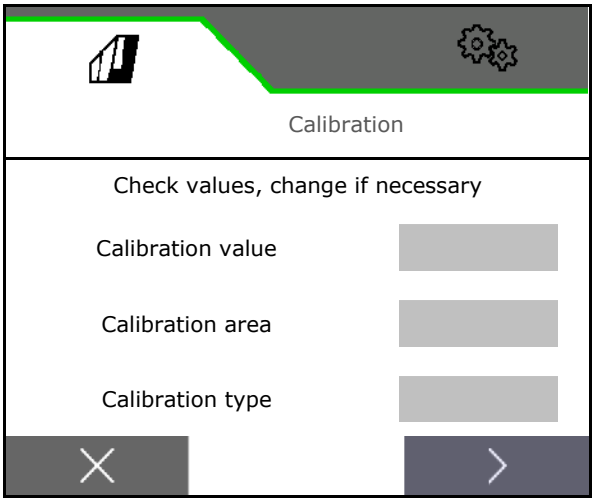
- when the seed type is changed,
- if the seed type is identical, but the grain size, grain shape, specific weight and dressing are different,
- when changing the metering roller.

Refer to the seed drill operating manual to prepare the implement for calibration.

1. Enter the intended speed.
2. Enter the target spread rate.
3. Enter the volume of the metering roller in ccm, refer to the implement operating manual.
4. > continue.



5. Enter 1 as the calibration value or an empirical value.
6. Enter the calibration area (area for which an appropriate quantity is metered during the calibration procedure).
7. Select the calibration type
   - o ISOBUS terminal
   - o Calibration button
   - o TwinTerminal
8. > continue.



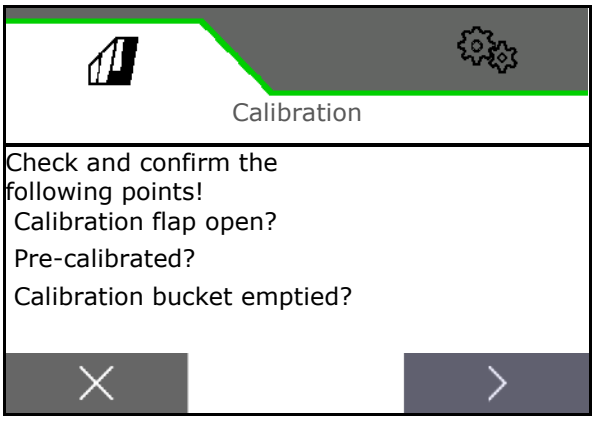
9. Move the calibration flap and collection bucket into the calibration position.

→ Refer to the implement operating manual.

10.  Perform the pre-metering (for constant seed flow during calibration).

11. Empty the calibration bucket again.

12. **>** continue.



13.

On the control terminal: ✓ Start the calibration procedure.

→ The calibration stops automatically.

→ The bar diagram shows the progress of the calibration.

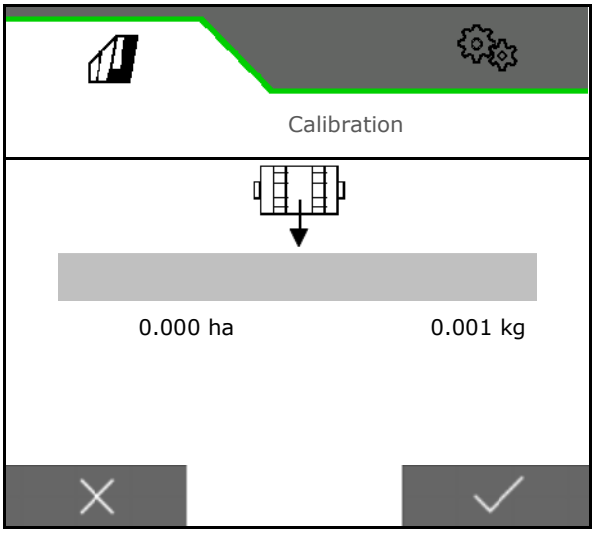
Calibration button on the implement:

Press and hold the button until a sufficient quantity of seed has been metered.

→ By releasing the button, the calibration can be interrupted.

WARNING
Risk of injury from the driven metering shaft.

Direct people out of the danger area.



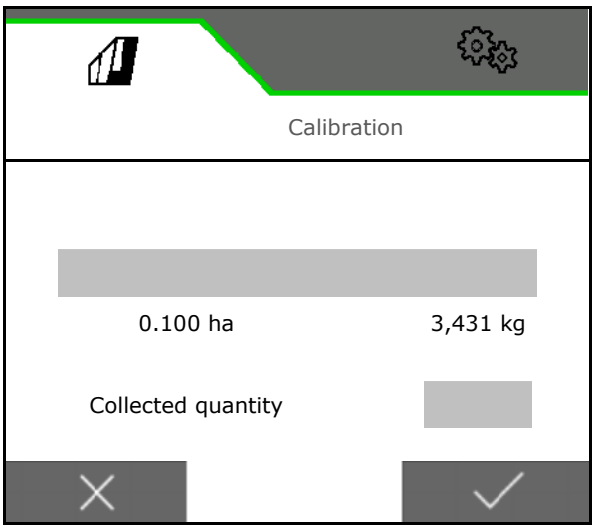
→ The calibration procedure is stopped automatically when the pre-selected area has been reached, or it can be stopped early.

14. Weigh the collected quantity.

→ Take account of the weight of the bucket.

15. Enter the value for the collected quantity in kg.

16. **>** continue.

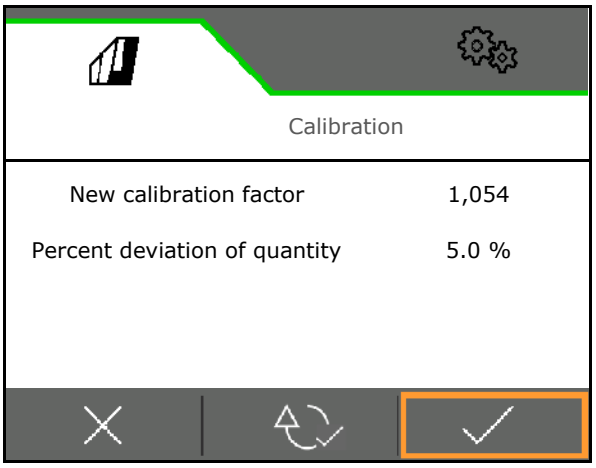


→ The new calibration value and the percent deviation compared to the target quantity are shown.

17. ✓ Save the calculated values.

X If there were errors during calibration (e.g., uneven flow), repeat the calibration.

Save the determined values and repeat the calibration procedure for further optimisation.



After calibration, put the calibration flap and collection bucket into working position.

4.3 Call menu

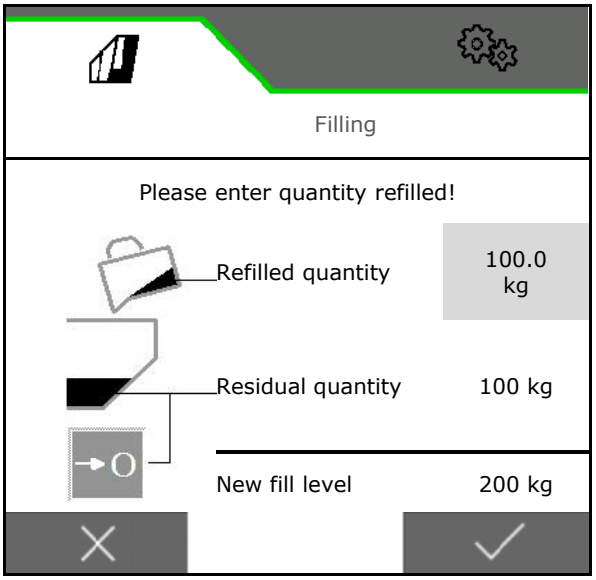
1. →0 If necessary, set the residual quantity to 0.

→ The theoretical residual quantity will be displayed.

2. Enter the refilled quantity.

→ The new fill level will be displayed.

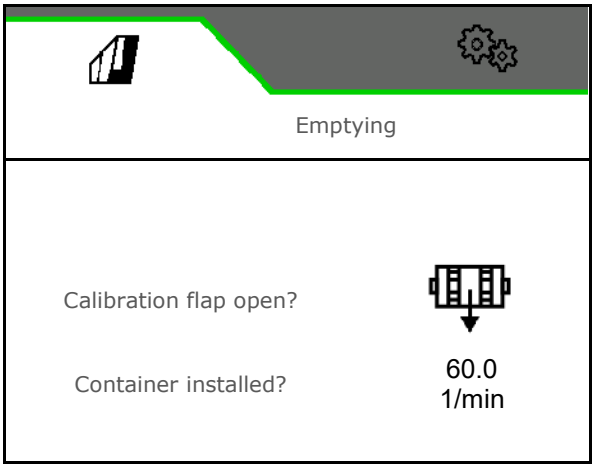
3. ✓ Confirm the correct fill level.



4.4 Emptying menu

1. Stop the implement.
2. Secure the tractor and implement against unintentional rolling.
3. Open the calibration flap.
4. Put the calibration bucket into collection position.
5. Start residual emptying, keep the softkey pressed.

   Or press and hold the calibration button
6. Close the calibration flap after emptying.

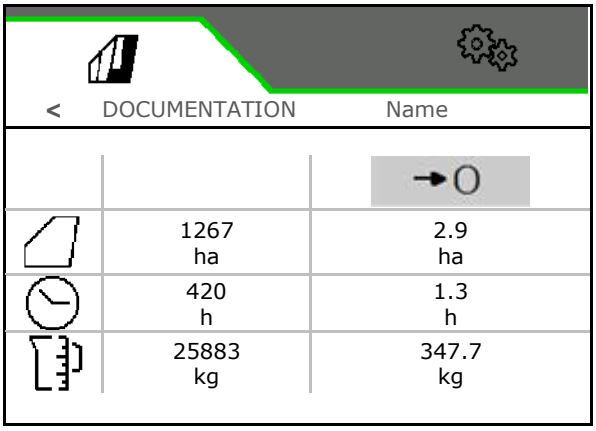


4.5 Documentation menu

In the documentation menu, the current job is displayed.

Data in the job:

- Worked area (total / day)
- Working time (total / day)
- Spread quantity (total / day)



Delete day data

Call up the job list.

Job list:

The active documentation is marked.

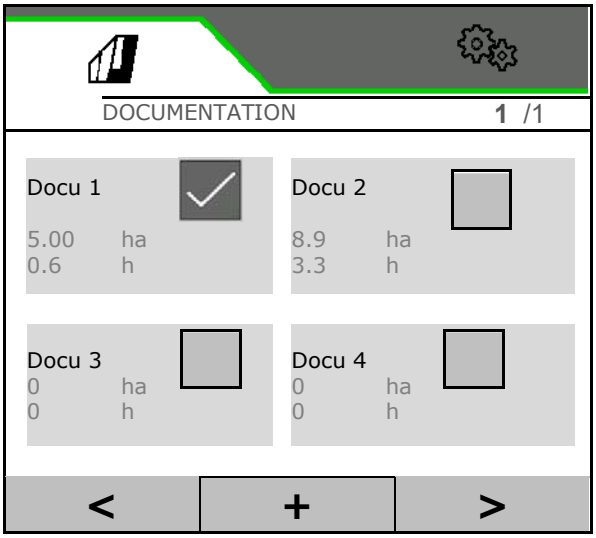
The active documentation is marked:

A maximum of 5 documentations can be created.

Select documentation.

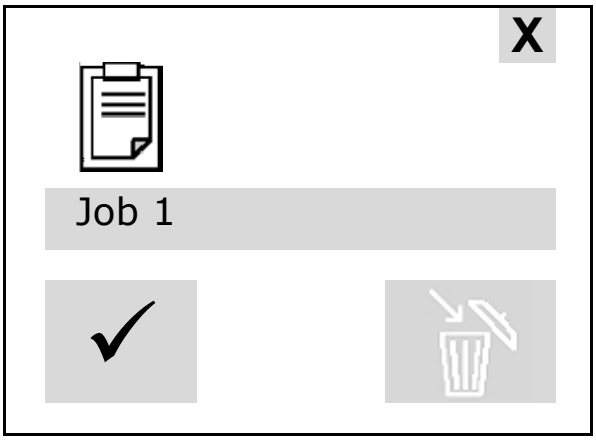
+ Create new documentations

< / > Scroll through the list



Editing documentations:

- Changing the name of the documentation
- ✓ Activate the documentation.
- Inactive documentations can be deleted
- **X** Exit the editing menu



5 AUX-N multi-function sticks

AUX-N - Auxiliary Control

The implement computer supports the AUX-N standard. Therefore, the functions of the implement can be assigned to an AUX-N-compliant multi-function stick.

The AmaPilot+, WTK and Fendt multi-function sticks are pre-assigned as a standard.

6 AmaPilot+ multi-function stick

The implement functions can be executed using the AmaPilot+.

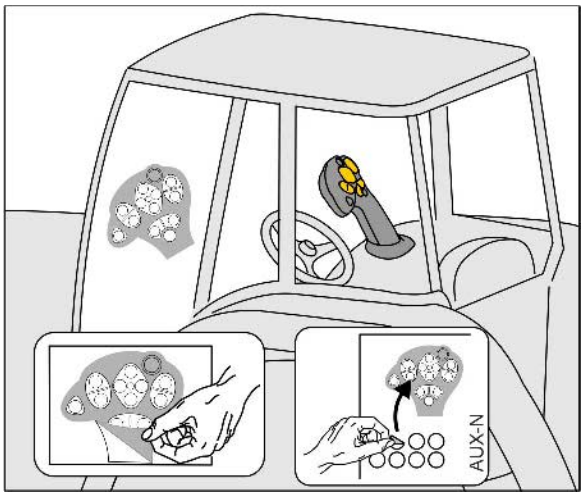
AmaPilot+ is an AUX-N control element with freely selectable button assignment.

A default button assignment is pre-configured for every Amazone ISOBUS implement.

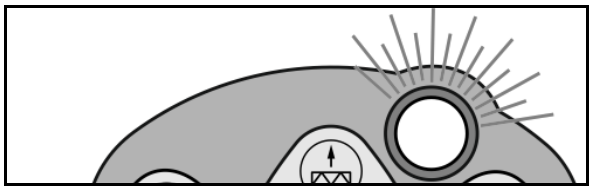
The functions are spread over 3 levels and can be selected by pressing with your thumb.

In addition to the standard level, two other control levels can be switched.

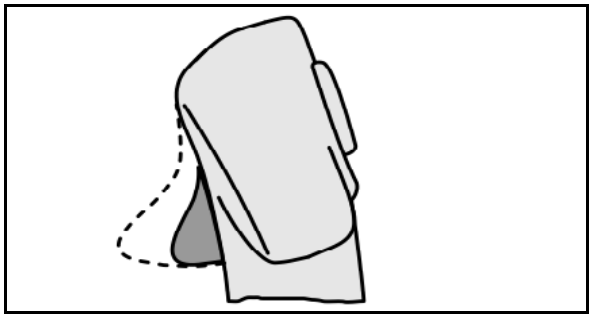
A sticker with the default assignment can be stuck in the cab. For a freely assigned key assignment, a new sticker can be applied over the default assignment.



- Standard level,
  Illuminated button is green.



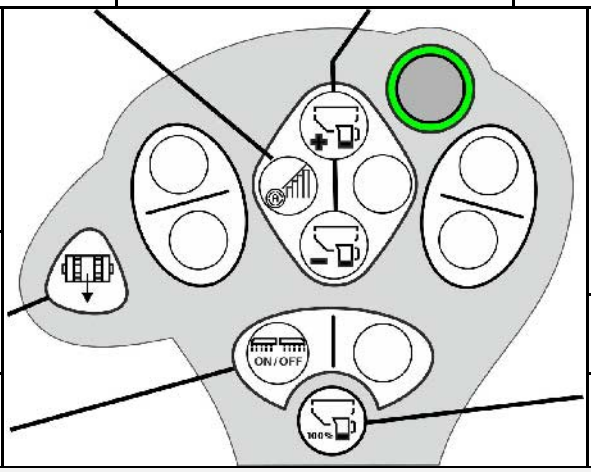
- Level 2 when trigger on the back is held,
  Illuminated button is yellow.



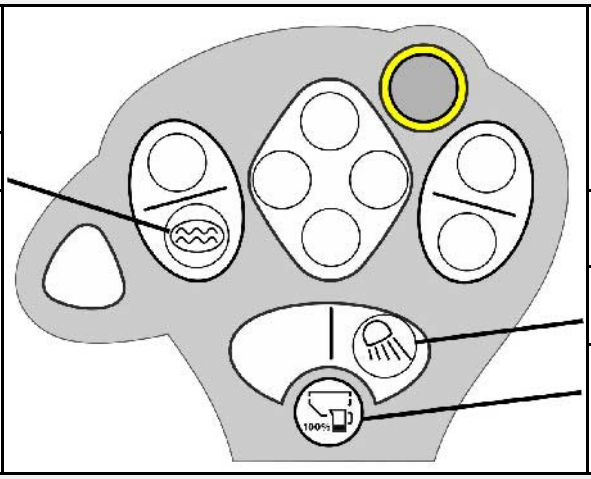
- Level 3 after pressing the illuminated button,
  Illuminated button is red.

AmaPilot+ with fixed assignment / default assignment

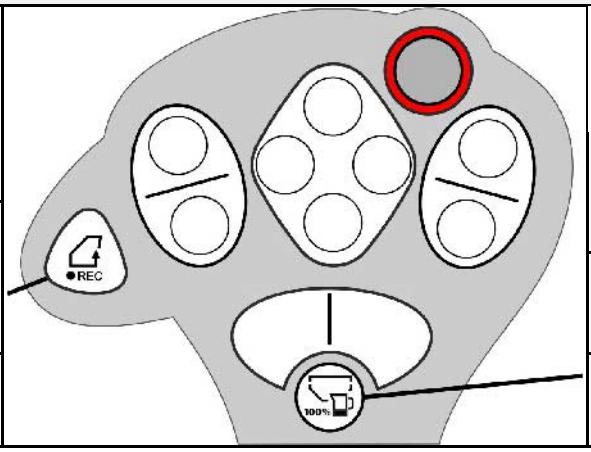
Standard level, green

Switching Section Control	Increase / reduce the target quantity	
		
Pre-metering		
Metering unit start / stop		Target quantity 100%

Level 2, yellow

		
Water hole function		
		Lighting
		Target quantity 100%

Level 3, red

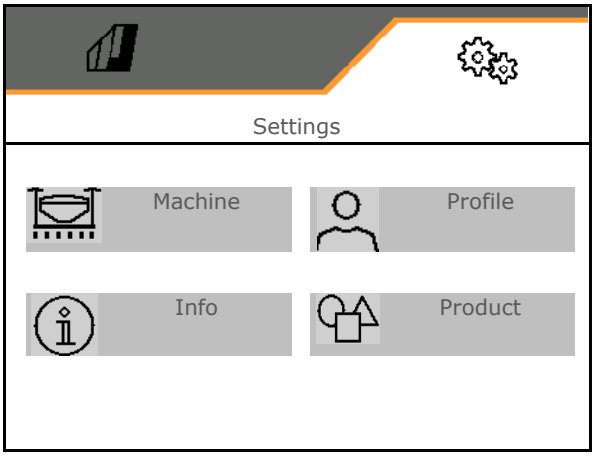
		
Field boundary recording		
		Target quantity 100%

7 Settings

- Implement menu
  Entry of implement-specific or individual data.
- Profile menu

  Each user can save a personal profile with settings for the terminal and the implement.
- Product menu

  Entries for the seed
- Info menu
  Software version, total area output and diagnosis.



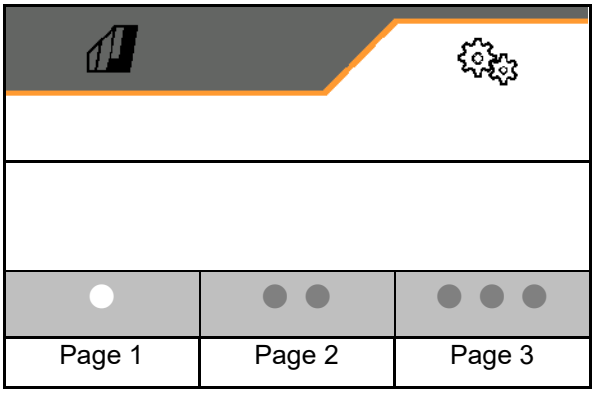
Selection of the pages in the sub-menus

Some sub-menus consist of several pages.

The pages are shown with point at the bottom edge of the screen.

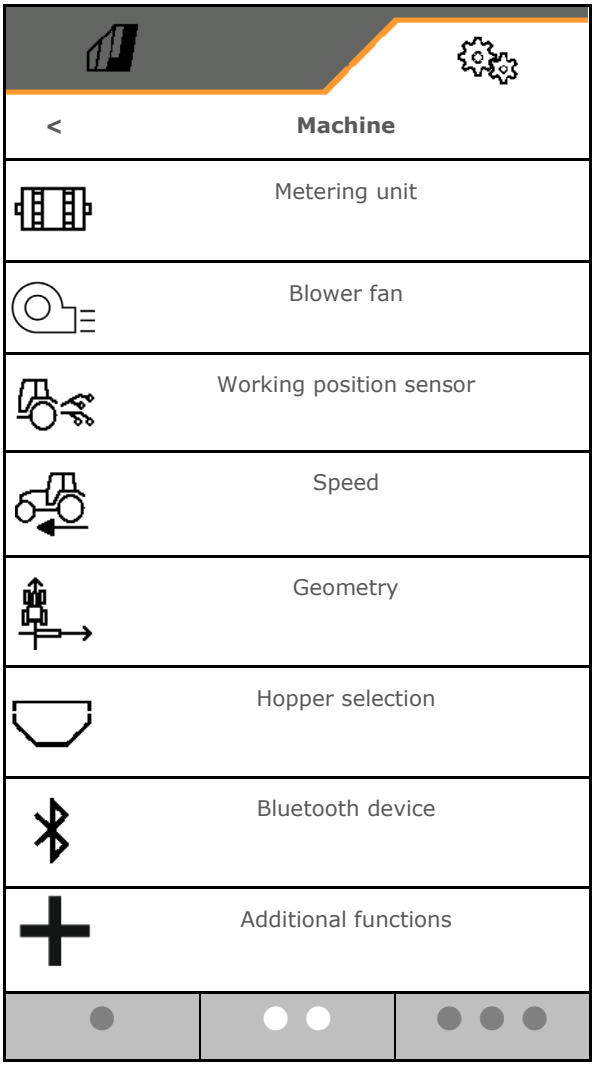
Active page – white.

 Scroll through the pages in the menu.



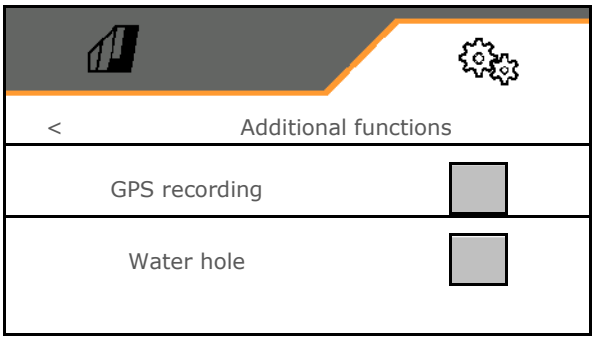
7.1 Machine

- Entries for the metering unit, see page 29
- Blower fan (Centaya), see page 31
- Entries for the working position sensor, see page 30
- Working speed, see page **32**
- Entering the implement geometry, see page 34
- Selecting and deselecting hoppers, see page 35
- Pairing the Bluetooth device
- Additional functions

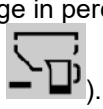


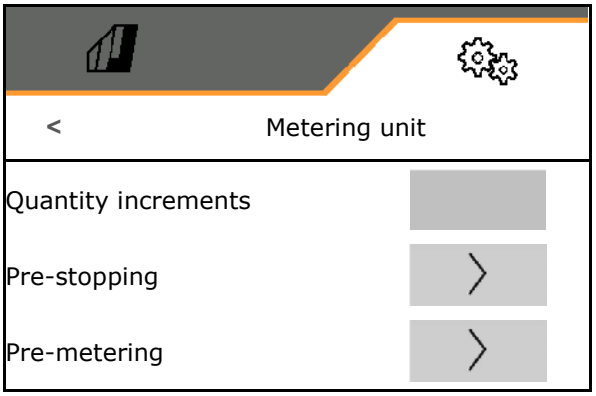
Additional functions

- Select GPS recording mode on / off in the work menu for recording a field boundary
  - o ☑ yes
- On / off selection for water hole function in the work menu
  - o ☑ ja
  - o ☐ No (default)



7.1.1 Metering unit

- Enter the quantity increment in % (value for seeding rate change in percent during operation with  , ).
- Pre-stopping (not for Section Control)
- Pre-metering (not for Section Control)

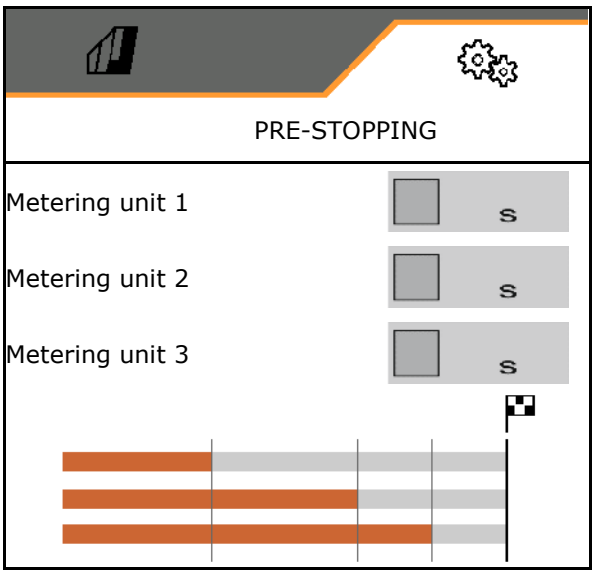


Pre-stopping

The pre-stopping time can be entered to prevent the seed from still running at the end of the field.

The time can be entered separately for each metering unit.

- Activate pre-stopping
  - o ☑ ja
  - o ☐ No (default)
- Enter the time for pre-stopping

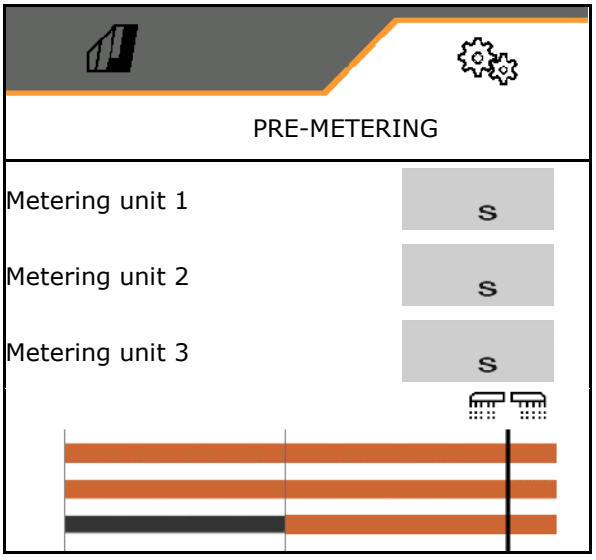


Pre-metering

The pre-metering time can be entered to ensure that seed is available right away at the beginning of the field.

The time can be entered separately for each metering unit.

- Enter the time for pre-metering

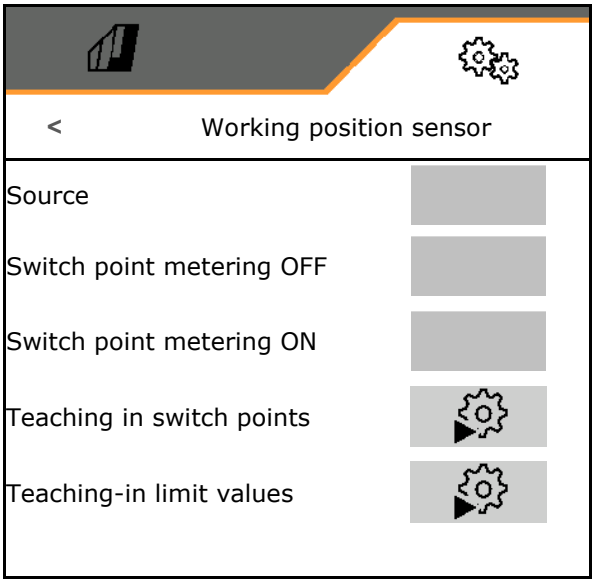


7.1.2 Working position sensor

- Source
  - o Implement sensor
  - o Lifting height ISOBUS in %
  - o Lifting height ISOBUS digital

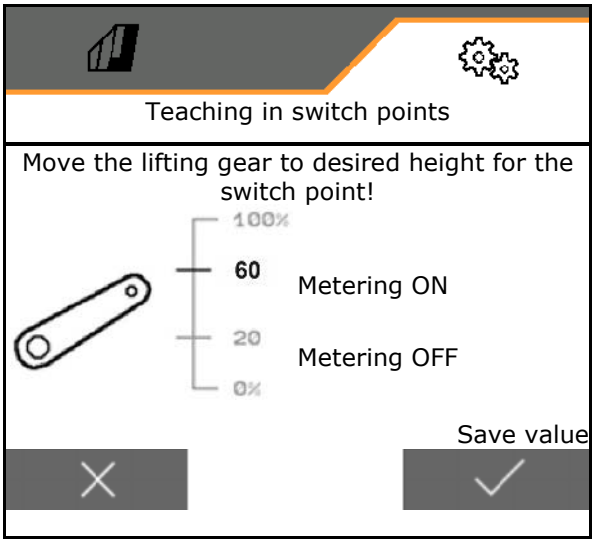
Analogue sensor:

- Switch point metering off
- Switch point metering on
- Teach-in switch points
- Teaching-in limit values



Teach-in switch points

1. Move the lifting gear to desired height for the ON switch point.
2. ✓ Save value.
3. Move the lifting gear to desired height for the OFF switch point.
4. ✓ Save value.



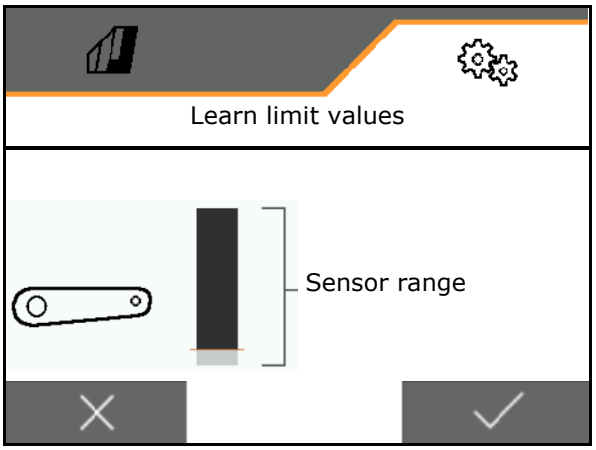
The correct setting of the switch points is important for precise switching of the implement on the field.

The ON and OFF values should be as far apart as possible.

Teaching-in limit values

Before initial operation and when changing tractors, the limit values of the lifting gear must be taught in.

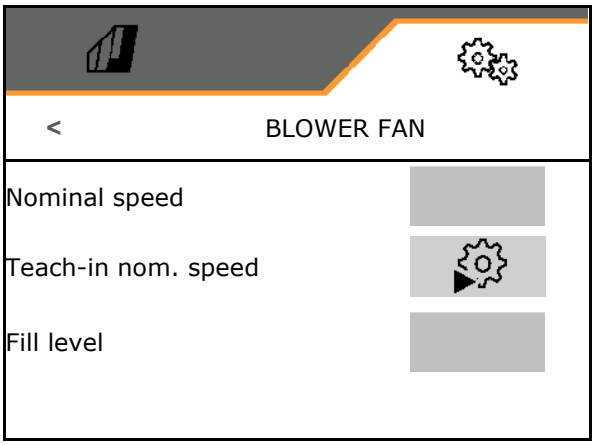
1. Lower the lifting gear / move the implement into working position.
2. > Save the value and continue.
3. Raise the lifting gear as far as it goes.
4. ✓ Save value.



7.1.3 Blower fan

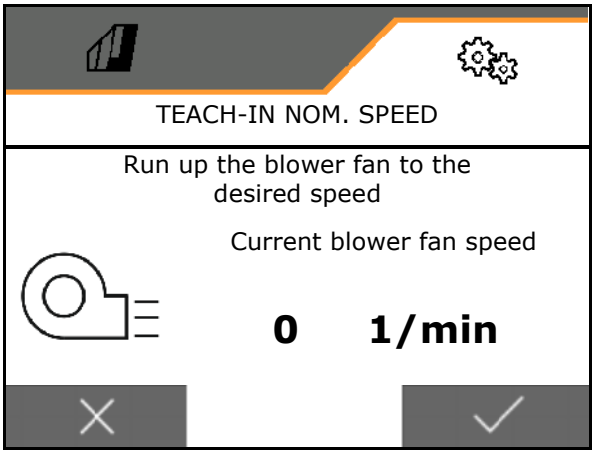
Set the fan speed according to the implement operating manual.

- Enter the nominal speed
- Teach-in nominal speed
- Enter alarm limit in %



Teaching-in the nominal speed

1. Run up the blower fan to the desired speed.
2. ✓ Save value.



7.1.4 Speed

The implement computer needs a speed signal for a correct rate control.

There are different sources for the forward speed signal input.

- The speed signal can be provided via the ISOBUS.
- The speed signal can be calculated using the pulses per 100 m.
- The speed signal is simulated by entering a speed (e.g., when a speed signal from the tractor fails).

  Entering a simulated speed allows you to continue operation even if the speed signal fails.

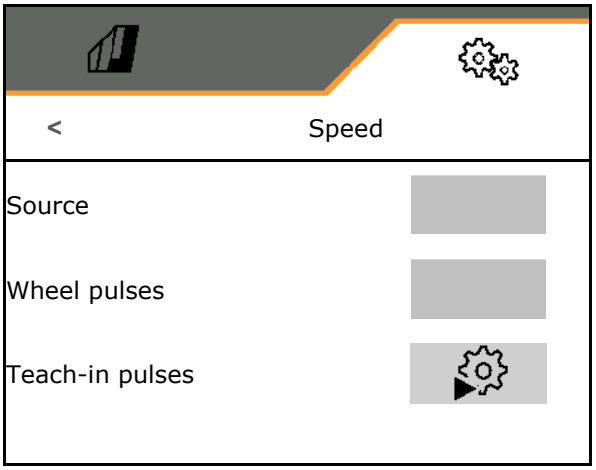
Select the source for the speed signal.

- Radar (ISOBUS)
- Wheel (ISOBUS)
- Satellite (ISOBUS)
- J1939
- Wheel (implement sensor)
  - o Enter value for pulses per 100 m, or
  - o Teach-in pulses per 100 m
- Simulated

  Enter simulated speed.

→ The entered speed must be maintained later in all cases.

→ If another speed source is detected, the simulated speed is automatically deactivated.



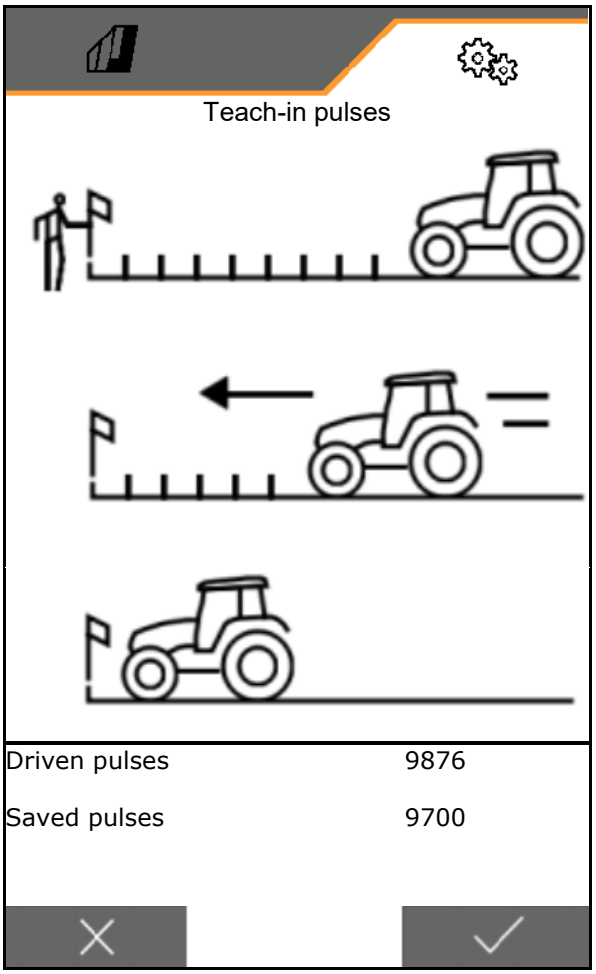
Teaching-in the pulses per 100 m

You must determine the wheel pulses per 100 m in working position under the prevailing operating conditions.

1. Measure a distance of 100 m, drive tractor to the start position and move implement into working position!
2. > continue.
3. Drive the measured distance.
4. > continue.

→ The pulses are detected continuously and shown on the display.

5. Stop exactly at the end point.
6. ✓ Save value or X cancel measurement.



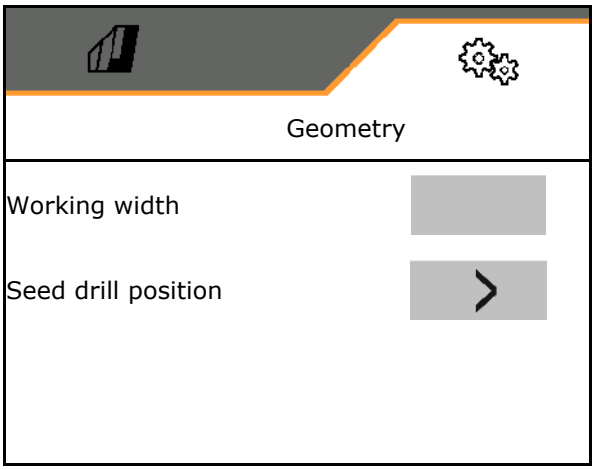
Check the number of pulses by comparing the speed display of the tractor and the control terminal.

7.1.5 Geometry

- The data are pre-configured depending on the type of the implement and must normally not be changed.
- The geometry data must correspond to the real length dimensions of the implement.

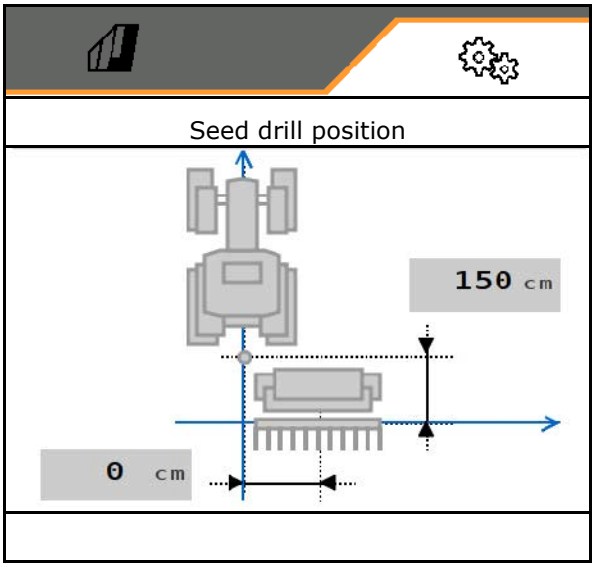
Lateral offset - implement to the left: Enter negative value

- Enter the working width
- Enter the seed drill position



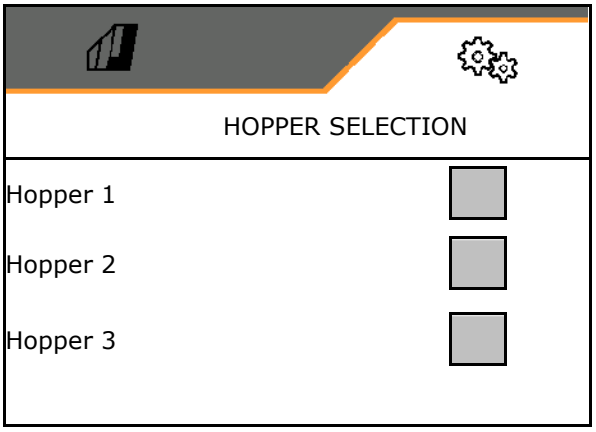
Seed drill position

- Distance from the tractor connection device to the seeding rail.
- Enter the lateral offset.
(Default value: 0 cm)



7.1.6 Hopper selection

- Hopper selection
  - o ☑ Hopper selected, metering unit active
  - o ☐ Hopper is currently not being used

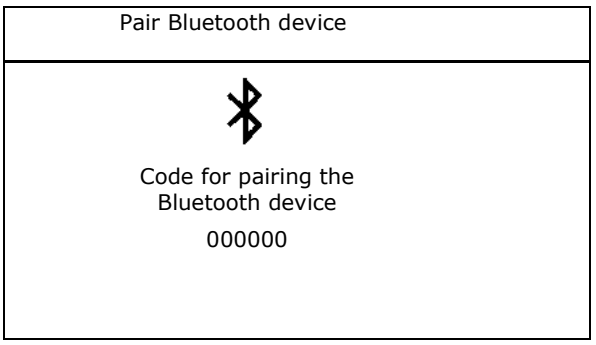


7.1.7 Pairing the Bluetooth device

The implement can be connected to a mobile end device via Bluetooth.

To do so, enter the 6-digit code shown on the mobile end device.

The seed drill can exchange data with the mySeeder app via Bluetooth.



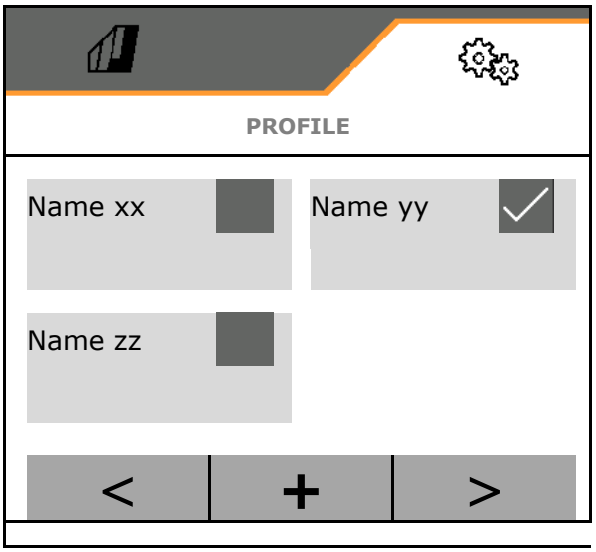
7.2 Profile

Managing profiles*

As a standard, one profile is configured.

You can save 5 profiles with different settings.

Create new profile



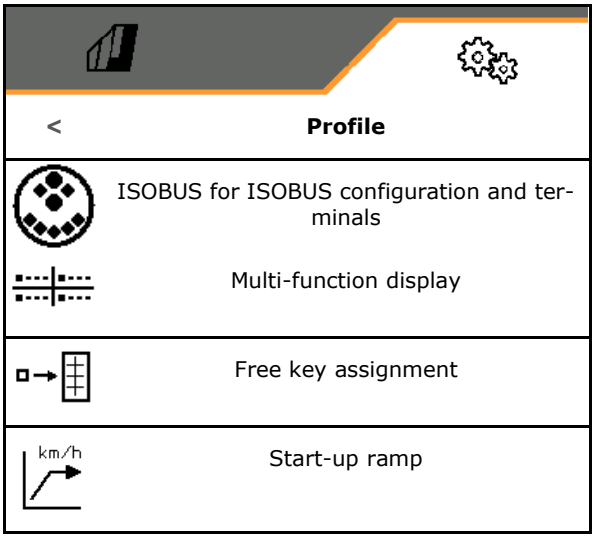
A profile:

- can be activated
- can be given a name
- can be copied
- can be deleted

Follow the sequence below to set

Mark the profile and confirm.

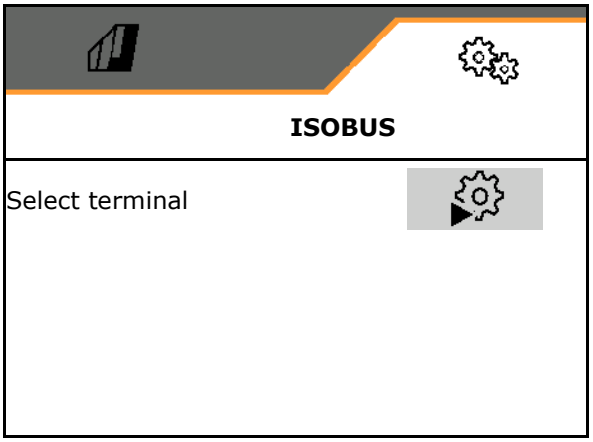
Active profile



- Configure ISOBUS, see page 37.
- Configure the multi-function display, see page 38.
- Configure the free key assignment, see page 38.
- Configure the start-up ramp, see page 39.

7.2.1 Configuring ISOBUS

- Select the terminal, see page 37.

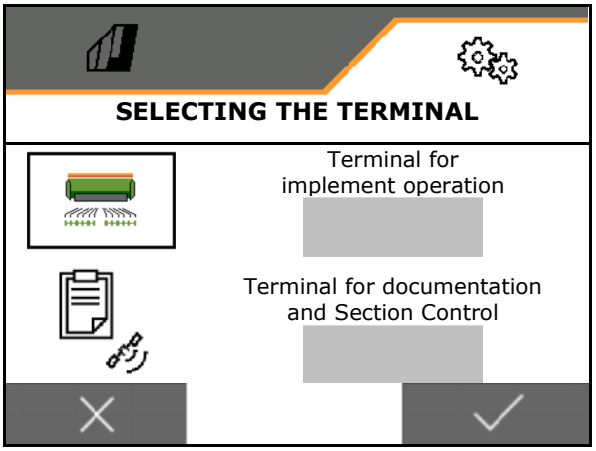


Selecting the terminal

If several control terminals are connected to the ISOBUS:

- Select the terminal for displaying the implement operation software
- Select the terminal for displaying the documentation and Section Control

The terminals are numbered in the sequence in which they were switched on (1, 2, …)



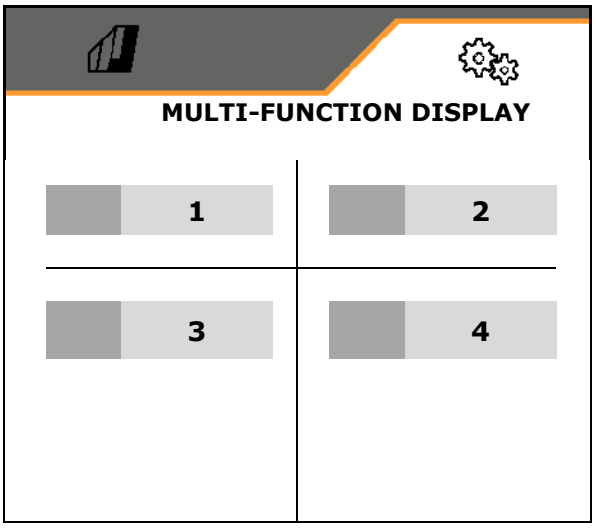
7.2.2 Configuring the multi-function display

Multi-function display in the work menu

The 4 fields of the multi-function display can each be assigned with different displays.

List of the assignable displays

- Speed
- Remaining area
- Remaining distance
- Area
- Setpoint application rate
- Quantity
- Fan speed
- Hopper fill level



7.2.3 Configuring the free key assignment

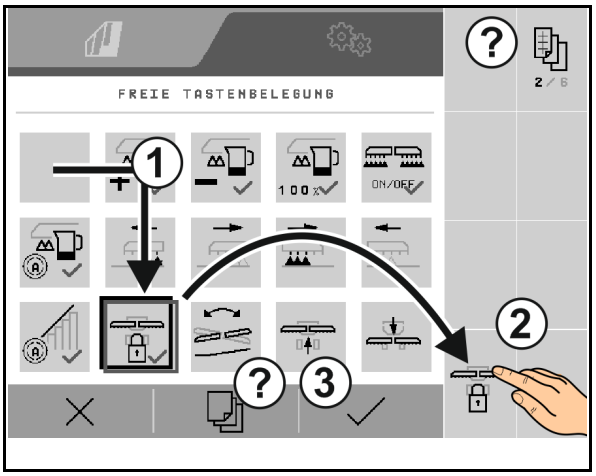
The assignment of functions from the work menu to the keys of the control terminal can be freely selected.

Here the function fields of the work menu can be freely assigned.

1. Select function on the display.
   Scroll first if necessary.
2. Assign the function to the freely selectable function field.
   
   Select the page first if necessary.

→ Function appears on the function field.

3. ✔ Confirm.



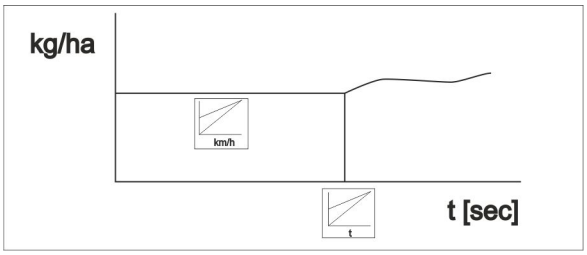
Functions can be assigned several times. The assignment of keys on the control terminal to functions from the work menu can be freely selected.

7.2.4 Configuring the start-up ramp

The start-up ramp prevents under metering when starting up.

When beginning work, the metering is applied according to the simulated start-up speed until the specified time expires. After that, the speed-dependent rate control is regulated.

Once the speed entered has been reached or exceeds the simulated speed, the quantity regulation starts.

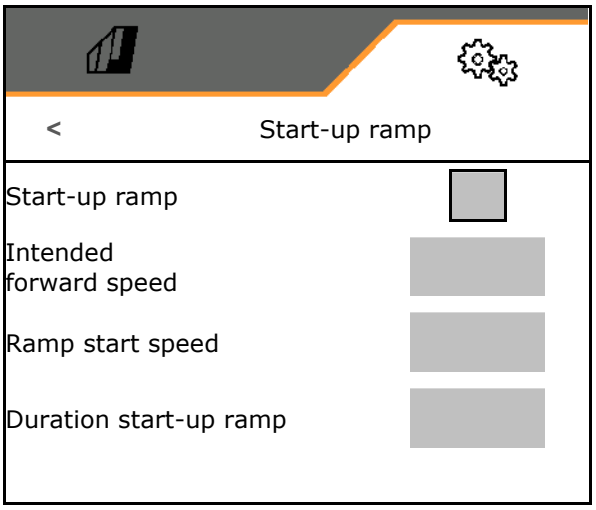


- Start-up ramp on /off
  - o ☑ on
  - o ☐ off
- Intended forward speed, working speed in km/h.

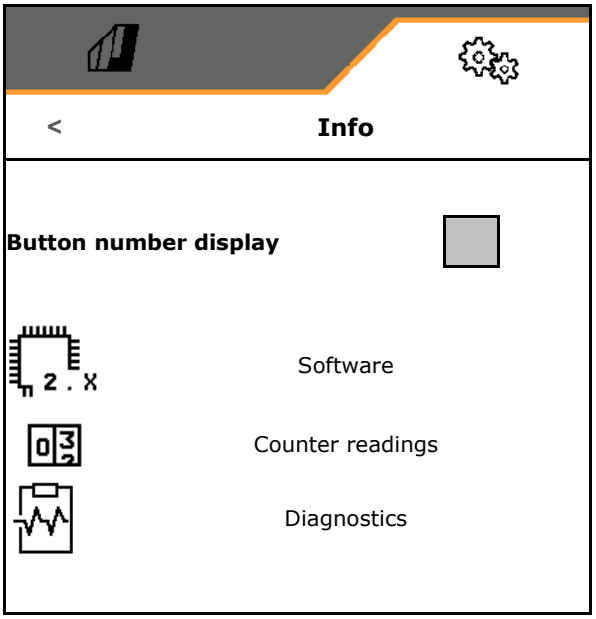
  Default value: 12 km/h
- Ramp start up speed as a %-value of the intended speed at which the metering starts.

  Default value: 50%
- Time that passes until the simulated speed is actually reached in seconds.

  Default value: 5 s



7.3 Info



- Display the softkey number in the menus (info for Customer Service).
  - o ☑ (yes)
  - o ☐ (no)
- Show the software versions on the implement computer
- Show the counter statuses
  - o Total time (seeding operation)
  - o Total worked area
    - Spread quantity for the individual hoppers
  - o Distance in transport position
  - o Distance in working position
- Show diagnostic data (info for Customer Service)

7.4 Product

Managing products

As a standard, one product is configured.

You can save 20 products with different settings.

Create new product

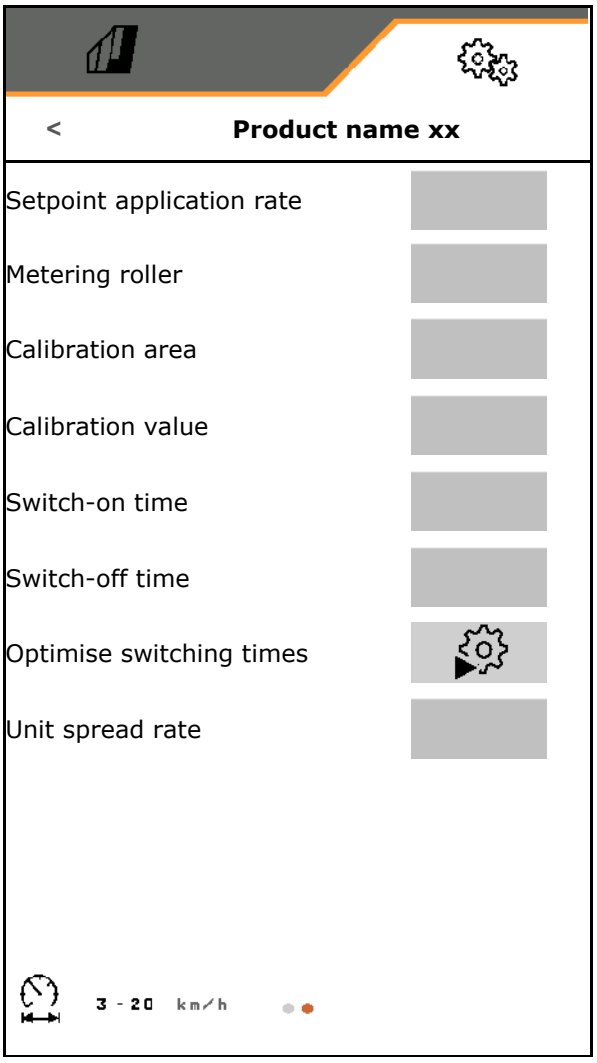
A product:

- can be activated
- can be given a name
- can be copied
- can be deleted

Follow the sequence below to set

Mark the product and confirm.

Active product:



- Enter the target spread rate in the selected unit
- Enter the size of the metering roller in ccm:
- Enter the calibration area in ha.

  (Area for which an appropriate quantity is metered for the calibration procedure, 0.1 ha - 1.0 ha)
- Enter a calibration value of 1 or empirical value.
- Enter the switch-on time for Section Control, see page 42
- Enter the switch-off time for Section Control, see page 42
- Optimise the switch-on and switch-off time, see page 44
- Units for the spread rate.
  - kg/ha
  - grains /m²

The data entered will be adopted in the Calibration menu.

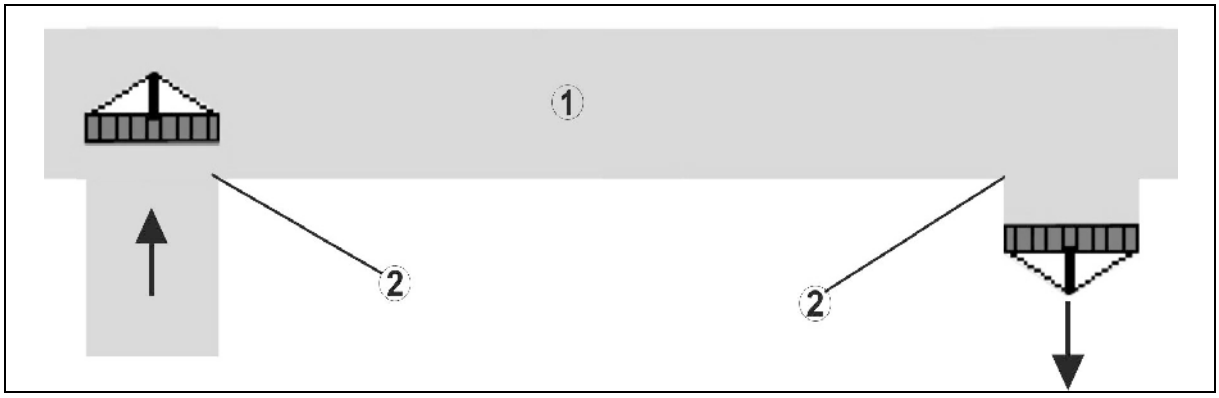
Possible range for the forward speed for the selected product

7.4.1 Entering the switch-on time, switch-off time for Section Control

Section Control requires the switch times to take account of the travel time for the seed from the metering unit to the seeding coulter.

- The switch time serves to seamlessly work the field
  - o During the transition from non-worked to worked areas.
  - → The implement must be switched off before the spreading units have reached the worked area (switch-off time).
  - o During the transition from worked to non-worked areas.
  - → The implement must be switched on before the spreading units have reached the unworked area (switch-on time)
- The size of the overlapping/underlapping depends, amongst other things, on the forward speed.
- The switch time is a time entry in milliseconds.
- Long switch times and high speed may lead to undesired switching behaviour.

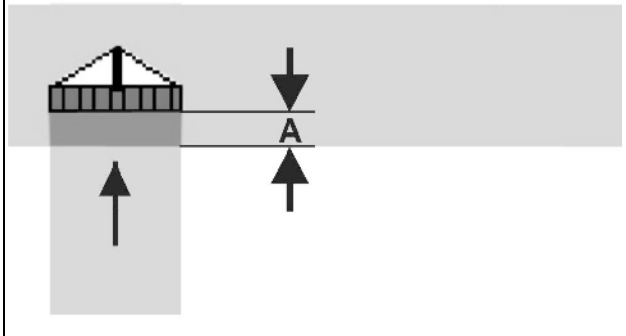
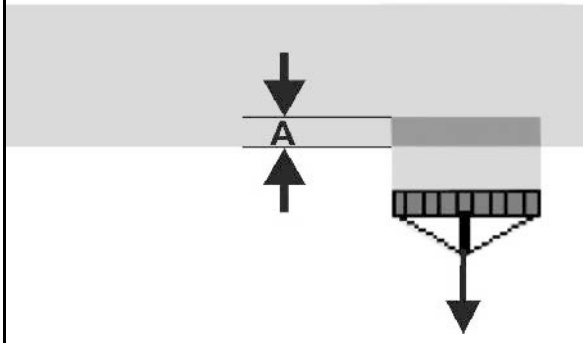
Optimal working of the field



(1) Headlands/worked field

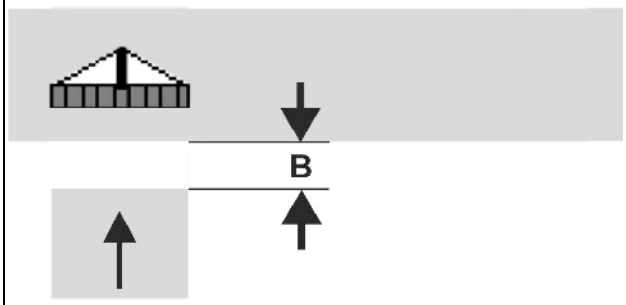
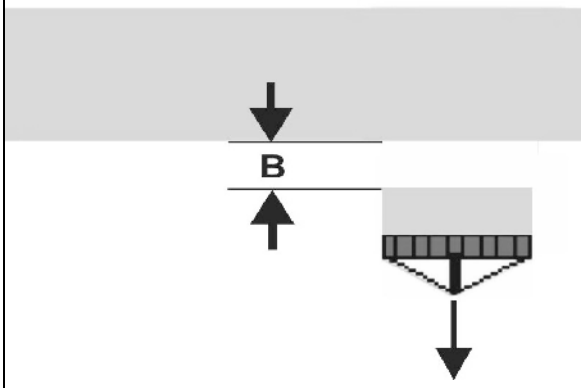
(2) Seamless working of the field without overlapping

Overlapping of worked areas

Switch-off time too low	Switch-on time too high
	
→ Increase the switch-off time.	→ Reduce the switch-on time.

(A) Length of the overlap

Unworked areas

Switch-off time too high	Switch-on time too low
	
(B) Length of the unworked area	
→ Reduce the switch-off time.	→ Increase the switch-on time.

For precise switching at the headlands – especially for seed drills – the following points are absolutely necessary:

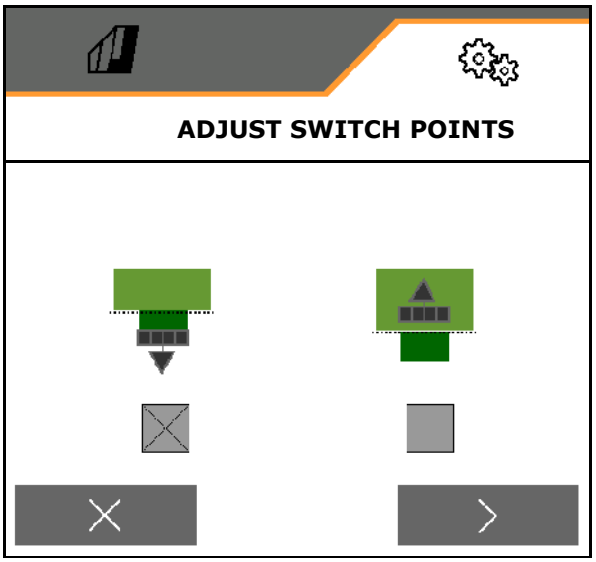
- RTK accuracy of the GPS receiver (update rate min. 5 Hz)
- Constant speed when driving in or out of the headlands

7.4.2 Optimising the switching times for Section Control

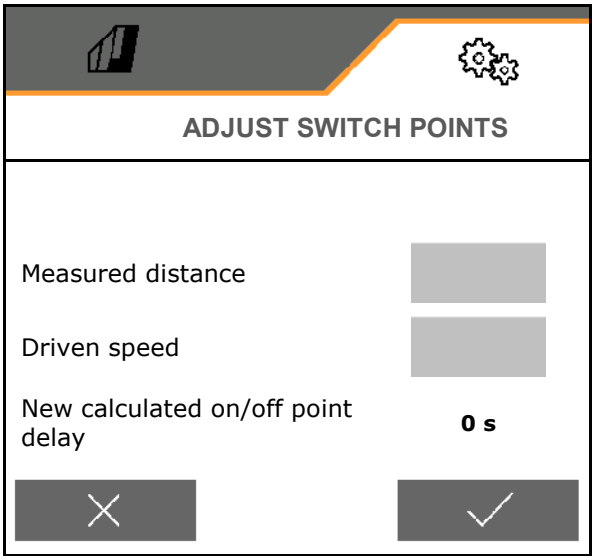
The entered/calculated switching times can be optimised.

To do so, the unseeded distance/overlap must be known.

1. Select the switch-on point or the switch-off point.
2. > Continue
3. Select too early or too late switching of the implement.
4. > Continue



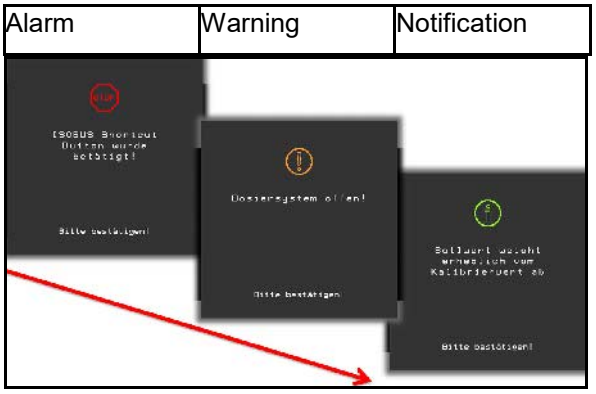
5. Enter the measured distance.
   - o Overlap: enter a positive value
   - o Unseeded distance: enter a negative value
6. Enter the driven speed.
7. ✓ Save the determined value or
   X Discard calculation.



8 Fault

8.1 Alarm / warning and notification

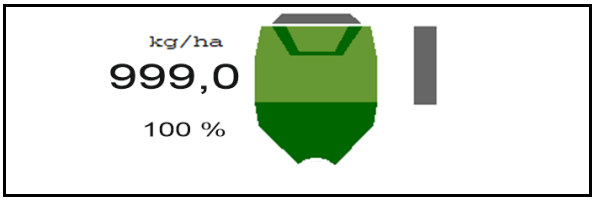
- Full-screen messages must always be acknowledged!



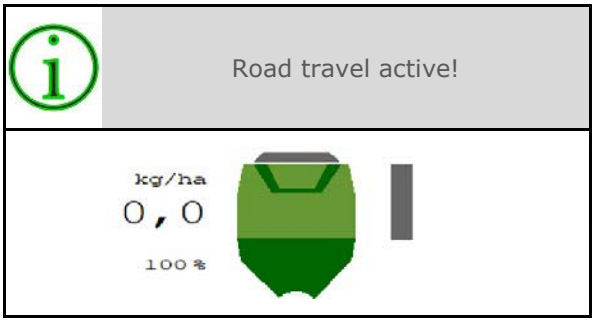
After confirming a message, the work menu appears with the values 999.9.

This indicates that there is a fault.

Further operation is not possible.



- Messages in the work menu (top) do not need to be acknowledged.



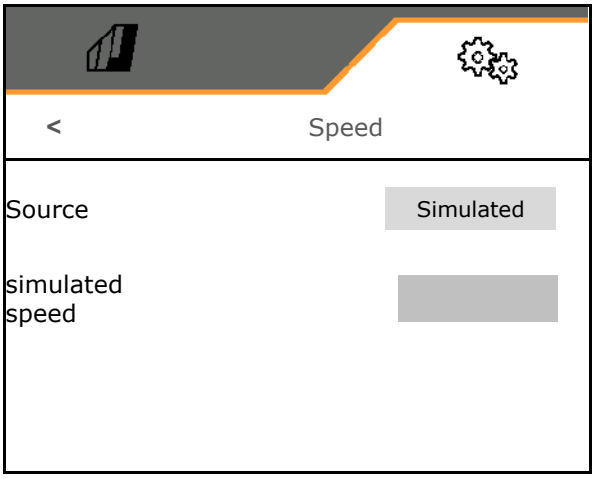
8.2 Failure of the speed signal from ISOBUS

A simulated speed can be entered in the Implement Data menu as a source for the speed signal.

This allows the use of the implement without a speed signal.

See:

1. Enter simulated speed.
2. Maintain the simulated speed as you continue operation.



8.3 Fault table

Number	Type	Cause	Remedy
F45001	Warning	Metering unit cannot turn slower	Drive faster, Calibrate again Adjust spread rate
F45002	Warning	Metering unit cannot turn faster	Drive slower Repeat calibration Adjust spread rate
F45003	Warning	The regulation of the metering system is fluctuating too much	Repeat calibration Adjust spread rate and check
F45004	Warning	No communication possible with motor 1 (left)	Check the connection of the metering motor to the wiring harness.
F45005	Warning	No communication possible with motor 2 (right)	Check the connection of the metering motor to the wiring harness.
F45006	Warning	No valid signal found at the sensor input for the steps.	Sensor defective or cable break on the wiring harness
F45007	Warning	Mechanical defect on the rotary cultivator or defective sensor	Check the mechanics of the rotary cultivator or check the current value of the sensor
F45008	Warning	The tramline control cannot be actuated	Check the connection of the tramline control to the wiring harness.
F45009	Warning	Blockage in the tramline control	Check the tramline control and the metering system
F45014	Warning	Voltage of the implement voltage supply is too low	Check the voltage supply of the implement (tractor battery), Check the cable connection of the implement voltage supply
F45032	Alarm	No valid signal found at the sensor input for the working position.	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45033	Note	The blockage sensor on the coulter is reporting an error	Remove the blockage on the coulter, check the sensors and cabling if applicable.
F45034	Notification	Blower fan operates outside the tolerance range set	Change tolerance range, check the sensor, check the hydraulics
F45037	Alarm	No valid signal found at the sensor input for the rotary cultivator.	Sensor defective or cable break on the wiring harness
F45039	Alarm	No valid signal found at the sensor input for the track marker.	Sensor defective or cable break on the wiring harness
F45040	Alarm	No valid signal found at the sensor input for the coulter pressure.	Sensor defective or cable break on the wiring harness
F45042	Alarm	No valid signal found at the sensor input of the calibration button.	Calibration button defective or cable break on the wiring harness
F45046	Note	The user wants to activate Section Control and one of the specified prerequisites is not met.	All of the listed conditions must be fulfilled to be able to activate Section Control mode.
F45047	Note	Section Control has been deactivated on the terminal by the user	The user selects the other operating modes for the implement. If the deactivation was unintentional, the user must check for the cause on the terminal, e.g. poor GPS signal

F45048	Note	The implement is in working position and a speed is detected. The steps are folded down and therefore the metering units are disabled.	Fold up the steps.
F45049	Message	The residual quantity in the hopper set by the user has been reached	Refilling the hopper
F45050	Alarm	The input for the working position sensor is outside of the measuring range.	Check the working position sensor and wiring harness.
F45051	Warning	Centaya with segment distributor head: When one-sided switching is activated, the implement is in "seeding mode" and the one-sided switching motor 1 is actuated for 3 seconds and the OSS sensor 1 on the second one-sided switching motor is not damped.	Centaya with segment distributor head: Check the wiring harness, half width motor 1 and the CAN-IO module for one-sided switching.
F45052	Warning	Centaya with segment distributor head: When the one-sided switching is activated, the implement is in "seeding mode" and the one-sided switching motor 2 is actuated for 3 seconds and the one-sided switching sensor 2 on the second one-sided switching motor is not damped.	Centaya with segment distributor head: Check the wiring harness, half width motor 2 and the CAN-IO module for one-sided switching.
F45053	Warning	Centaya with segment distributor head: One-sided switching is activated.Motor 1 of the one-sided switching cannot be controlled.	Centaya with segment distributor head: Check the wiring harness, half width motor 1 and the CAN-IO module for one-sided switching.
F45054	Warning	Centaya with segment distributor head: One-sided switching is activated.Motor 2 of the one-sided switching cannot be controlled.	Centaya with segment distributor head: Check the wiring harness, half width motor 2 and the CAN-IO module for one-sided switching.
F45055	Warning	Centaya with segment distributor head: Communication with the CAN-IO module is not possible.	Centaya with segment distributor head: Check the wiring harness, half width motor 2 and the CAN-IO module for one-sided switching.
F45056	Note	Seeding operation not possible because metering unit or fan is not switched on	Switch on the metering unit, switch on or check the fan
F45057	Warning	Speed below 200 rpm, defective sensor, cable break	Check speed, check sensor in the Diagnostics menu, check the wiring harness
F45058	Note	The speed source from ISOBUS is currently no longer available.	The user must check the TECU (tractor control unit) settings for the tractor.
F45059	Note	The speed source from ISOBUS is currently no longer available.	The user must check the TECU (tractor control unit) settings for the tractor.
F45060	Note	The user has switched to simulated speed and the sensor (implement) has detected a speed	Rectify defect in the sensor (implement) or continue work with simulated speed. The defective sensor (implement) must be removed from the wiring harness.

F45064	Warning	The named metering unit/hopper electronics is not installed or defective	The named metering unit/hopper electronics is not installed or defective, check cable connections, electronics fuse and coding plug.
F45065	Note	The user cannot activate the GPS recording function, because the named conditions have not been met.	Put the implement into the named state to activate the function.
F45066	Warning	Error in the motor for the one-sided switching, the position sensor is providing faulty values - one-sided switching was deactivated	Check the motor and wiring harness of the one-sided switching, then restart the implement
F45067	Warning	The one-sided switching under the FTender metering unit cannot reach the specified target position - OSS has been deactivated	Check the mechanics of the one-sided switching for ease of movement, then restart the implement
F45068	Warning	The left one-sided switching in the segment distributor head cannot reach the specified target position - OSS has been deactivated	Check the mechanics of the one-sided switching for ease of movement, then restart the implement
F45069	Warning	The right one-sided switching in the segment distributor head cannot reach the specified target position - OSS has been deactivated	Check the mechanics of the OSS for ease of movement, then restart the implement
F45070	Warning	The absolute low level alarm in the metering unit is not detecting any seed.	Refill the implement or check the sensor.
F45071	Note	The implement has detected road travel, speed is >20 km/h and the implement is not in seeding mode	Activate the main part-width section switch to terminate road travel
F45073	Note	Failure of the GPS tramline function on the terminal	Check the GPS reception and function of the GPS tramline on the terminal, observe the manufacturer operating manual to do so
F45074	Note	The working position of the implement has exited the valid working range	Check the wiring harness and sensor for damage
F45075	Note	The implement detected an incorrect direction of travel, only possible when using GPS tramline	Check the direction of travel in the current track, check the settings in the TL Wizard check the GPS tramline settings on the terminal, use the manufacturer handbook to do so
F45076	Note	The maximum switch point was changed in the Comfort hydraulic system	Not necessary, check the changed value for the seed rate increase
F45077	Warning	No communication with the motor	Check the connection of the metering motor to the wiring harness.
F45078	Warning	No valid signal found at the sensor input of the calibration button	Check the current value of the calibration button. Calibration button defective or cable break on the wiring harness
F45079	Warning	Speed below 200 rpm, defective sensor, cable break	Check speed, check sensor in the Diagnostics menu, check the wiring harness

F45080	Note	Blower fan operates outside the tolerance range set	Change tolerance range, check the sensor, check the hydraulic system
F45081	Note	Metering unit cannot turn slower	Drive faster, Calibrate again Adjust spread rate
F45082	Note	Metering unit cannot turn faster	Drive slower Repeat calibration Adjust application rate
F45083	Warning	The absolute low level alarm in the metering unit is not detecting any seed	Refill the implement or check the sensor
F45084	Note	The residual quantity in the hopper set by the user has been reached	Refilling the hopper
F45085	Alarm	No valid signal at the sensor input for the working position	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45086	Note	No valid signal at the sensor input for the working position	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45087	Note	Rotary cultivator not switched on during seeding operation, incorrect installation of the sensor on the PTO shaft,	switch on the rotary cultivator, check the PTO shaft sensor,
F45088	Note	No valid signal at the sensor input for the rotary cultivator monitoring 1	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45089	Note	No valid signal at the sensor input for the rotary cultivator monitoring 2	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45090	Warning	Mechanical defect on the rotary cultivator or defective sensor	Check the mechanics of the rotary cultivator or check the current value of the sensor
F45091	Warning	Mechanical defect on the rotary cultivator or defective sensor	Check the mechanics of the rotary cultivator or check the current value of the sensor
F45092	Note	The terminal's TaskController supports a lower target rate than that offered by the implement	Only assign specific target rates to the terminal, the target rates that are not assigned must be used as static target rates; Use of a terminal with more options for target rate control
F45093	Alarm	No valid signal found at the sensor input	Check the current value of the sensor. Sensor defective or cable break on the wiring harness
F45094	Alarm	No valid signal found at the sensor input	Check the current value of the sensor. Sensor defective or cable break on the wiring harness

F45095	Warning	No communication with the motor	Check the connection of the metering motor to the wiring harness.
F45096	Warning	No valid signal found at the sensor input	Calibration button defective or cable break on the wiring harness
F45097	Warning	Speed below 200 rpm, defective sensor, cable break	Check speed, check sensor in the Diagnostics menu, check the wiring harness
F45098	Note	Blower fan operates outside the tolerance range set	Change tolerance range, check the sensor, check the hydraulic system
F45099	Note	Metering unit cannot turn slower	Drive faster, Calibrate again Adjust spread rate
F45100	Note	Metering unit cannot turn faster	Drive slower Repeat calibration Adjust application rate
F45101	Warning	The absolute low level alarm in the metering unit is not detecting any seed	Refill the implement or check the sensor
F45102	Note	The residual quantity in the hopper set by the user has been reached	Refilling the hopper
F45103	Alarm	No valid signal at the sensor input for the working position	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45104	Note	No valid signal at the sensor input for the working position	Check the position and the current value of the sensor. Sensor defective or cable break on the wiring harness
F45105	Warning	Wrong software version on the named system	The components must be updated to a compatible software version
F45106	Warning	An equipment option is configured, but it is not found on the bus	Check the wiring harness and installation site of the participant
F45107	Warning	An equipment option is configured, but it is not found on the bus	Check the wiring harness and installation site of the participant
F45108	Warning	Error in the left motor of the one-sided switching, the position sensor is providing faulty values - one-sided switching was deactivated	Check the motor and wiring harness of the one-sided switching, then restart the implement
F45109	Warning	Error in the right motor of the one-sided switching, the position sensor is providing faulty values - one-sided switching was deactivated	Check the motor and wiring harness of the one-sided switching, then restart the implement
F45110	Warning	The part-width section control equipment option is configured, but it cannot be found on the bus	Check the wiring harness and installation site of the participant

F45111	Warning	The left tramline control cannot be actuated	Check the connection of the tramline control to the wiring harness
F45112	Warning	The right tramline control cannot be actuated	Check the connection of the tramline control to the wiring harness
F45113	Warning	Blockage in the left tramline control	Check the tramline control and the metering system
F45114	Warning	Blockage in the right tramline control	Check the tramline control and the metering system
F45115	Warning	No valid signal found at the calibration button sensor input	Sensor defective or cable break on the wiring harness
F45117	Note	Metering unit cannot turn slower	Drive faster, or repeat the calibration using a metering roller with a smaller volume
F45118	Note	Metering unit cannot turn faster	Drive slower, or repeat the calibration using a metering roller with a greater volume
F45119	Warning	The absolute low level alarm in the metering unit is not detecting any seed	Refill the implement or check the sensor
F45120	Note	The residual quantity in the hopper set by the user has been reached	Refilling the hopper
F45123	Warning	An overcurrent flows when the left tramline is switched.	Check the actuator of the left tramline and the corresponding cable connection
F45124	Warning	An overcurrent flows when the right tramline is switched.	Check the actuator of the right tramline and the corresponding cable connection
F45126	Warning	No valid signal found at the sensor input for the (1st) hopper low level in the main hopper	Sensor defective or cable break on the wiring harness
F45127	Warning	No valid signal found at the sensor input for the (1st) hopper low level in the GreenDrill/micropellet spreader	Sensor defective or cable break on the wiring harness
F45128	Warning	No valid signal found at the sensor input for the (1st) hopper low level in the front hopper (1)	Sensor defective or cable break on the wiring harness
F45129	Warning	No valid signal found at the sensor input for the (1st) hopper low level in the front hopper 2	Sensor defective or cable break on the wiring harness
F45130	Warning	No valid signal found at the sensor input for the 2nd hopper low level in the main hopper	Sensor defective or cable break on the wiring harness
F45131	Warning	No valid signal found at the sensor input for the 2nd hopper low level in the GreenDrill/micropellet spreader	Sensor defective or cable break on the wiring harness
F45132	Warning	No valid signal found at the sensor input for the 2nd hopper low level in the front hopper (1)	Sensor defective or cable break on the wiring harness

F45133	Warning	No valid signal found at the sensor input for the 2nd hopper low level in the front hopper 2	Sensor defective or cable break on the wiring harness
F45134	Warning	No valid signal found at the sensor input for the metering unit low level in the main hopper	Sensor defective or cable break on the wiring harness
F45135	Warning	No valid signal found at the sensor input for the metering unit low level in the GreenDrill/micropellet spreader	Sensor defective or cable break on the wiring harness
F45136	Warning	No valid signal found at the sensor input for the metering unit low level in the front hopper (1)	Sensor defective or cable break on the wiring harness
F45137	Warning	No valid signal found at the sensor input for the metering unit low level in the front hopper 2	Sensor defective or cable break on the wiring harness
F45138	Warning	No valid signal found at the sensor input for the specified fan	Sensor defective or cable break on the wiring harness
F45142	Note	No valid signal found at the sensor input for the track marker.	Sensor defective or cable break on the wiring harness
F45155	Note	The implement has detected that not all of the control units were properly switched off since the last shutting down of the system.	• The ISOBUS load voltage from the tractor is not being switched off, check the tractor • If necessary, retrofit the AMAZONE isolating relay (NL1084)

AMAZONEN-WERKE
H. DREYER SE & Co. KG

Postfach 51
D-49202 Hasbergen-Gaste
Germany

Tel.:+ 49 (0) 5405 501-0
e-mail:amazone@amazone.de
http://www.amazone.de