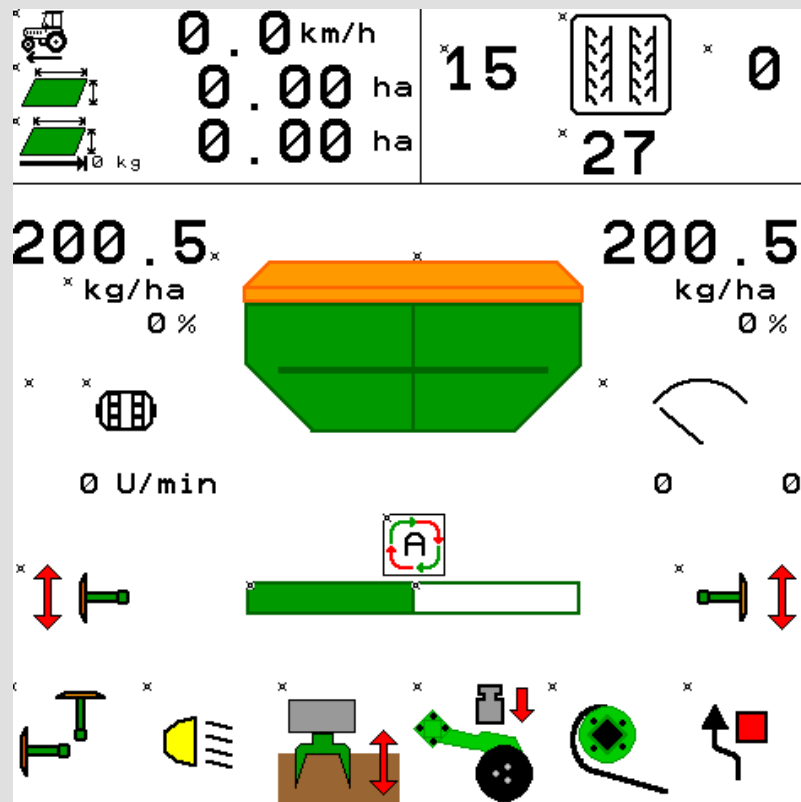


# Operating Manual

## AMAZONE

### ISOBUS software for seed drills



MG5265  
BAG0143.16 03.22  
Printed in Germany

SmartLearning



Please read this operating manual before commissioning. 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. Sack.*

**Manufacturer's address**

---

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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](http://www.amazone.de).  
Please send orders to your AMAZONE dealer.

**Formalities of the operating manual**

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## Foreword

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## Foreword

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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 confidence 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 commissioning, read and understand 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 manuals.

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---

# 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 an immediate high risk which will result in death or serious physical injury (loss of body parts or long term damage) if not avoided.

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 implement control software

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:

- Cirrus 03
- Cayena
- Condor
- Citan
- XTender
- AD-P
- Primera DMC

The Main menu is shown after switching on the ISOBUS terminal when the implement computer is connected.

#### Settings

The settings can be adjusted through the sub-menus in the Main menu.

#### Use

The ISOBUS software controls the application rate according to forward speed.

The Work menu shows all of the work data during operation and, depending on the equipment, the implement can be operated through the Work menu.

#### 3.1 Software version

This operating manual is valid from software version:

Base computer          NW262-C



A message is displayed if a component (computer / control unit) does not have the current software.

It is still possible to work with the implement temporarily.

→ Perform an update of the respective software in the near future.

#### 3.2 Menu navigation layout



**Function fields with white background**


→ For executing functions



**Function fields with coloured background**

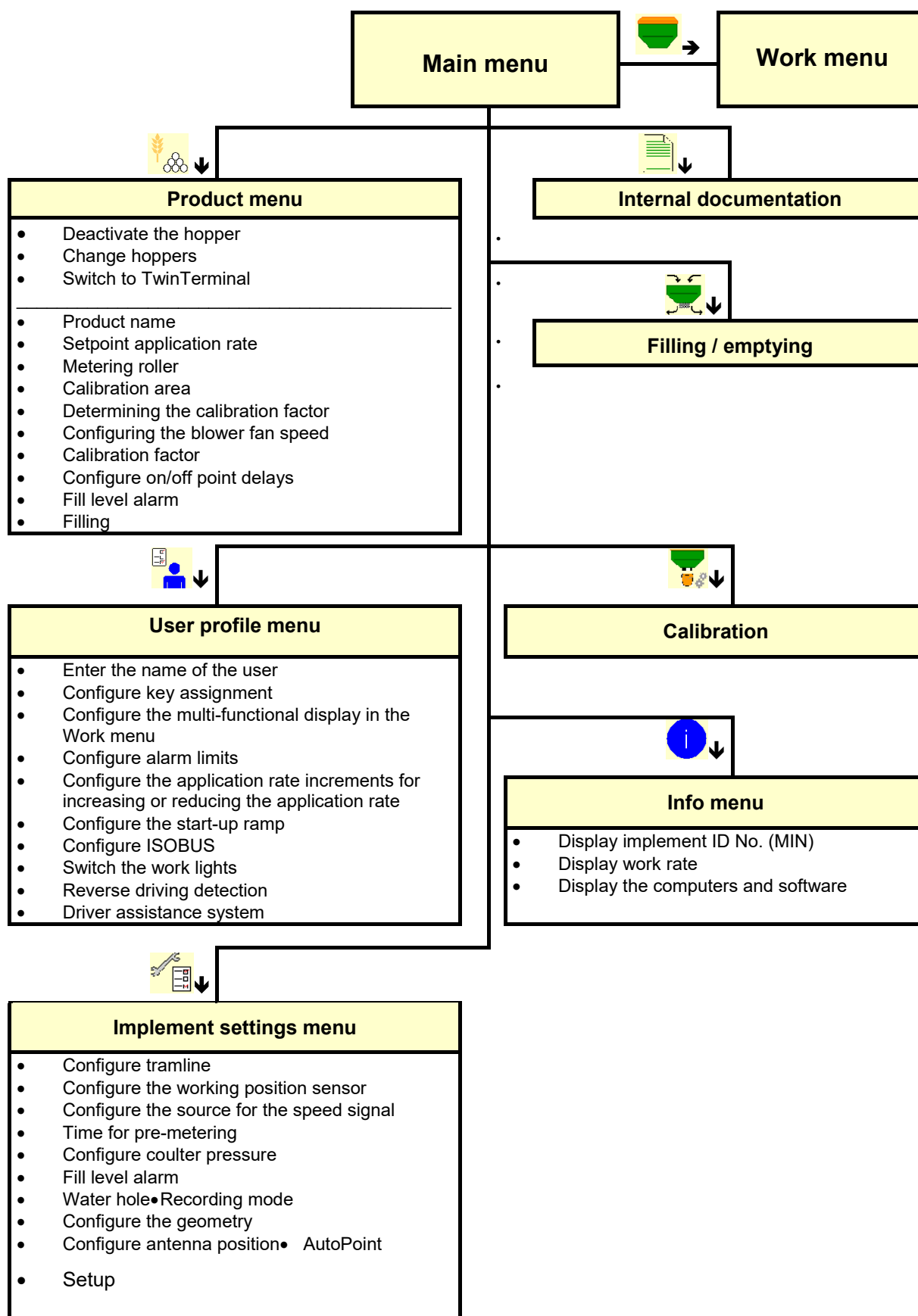
→ For menu navigation



-  Back to the previous menu

-  Scrolling in the menu


### 3.3 Hierarchy of the ISOBUS software


















## 4 Main menu

### 4.1 Display of the Main menu




- (1) Display and settings
  - (2) Function fields for sub-menus
  - Adjusted implement
  - Minimum and maximum working speed
  - Application rate for
    - Hopper 1
    - Other hoppers (optional)
- Changes are also possible here. Values will be adopted in the product menu

|                                                                                   |                                              |
|-----------------------------------------------------------------------------------|----------------------------------------------|
|  | Shows that an external job has been started. |
| <b>Deactivated</b>                                                                | Shows deactivated hopper(s).                 |

| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2                                                                                   |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------|-------|----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|
|  Cirrus                                                                                                                                                                                                                                                                                                                                                                             |  |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
| Speed band<br>min 8.0km/h max 13.0km/h                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
| <table border="1"> <tr> <td>Hopper 1</td><td><b>Deactivated</b></td></tr> <tr> <td> Cereals I</td><td>kg/ha</td></tr> <tr> <td>Hopper 2</td><td>Cereals 2</td></tr> <tr> <td> </td><td>kg/ha</td></tr> </table> | Hopper 1                                                                            | <b>Deactivated</b> |  Cereals I | kg/ha | Hopper 2 | Cereals 2 |   | kg/ha |  |
| Hopper 1                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Deactivated</b>                                                                  |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
|  Cereals I                                                                                                                                                                                                                                                                                                                                                                          | kg/ha                                                                               |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
| Hopper 2                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Cereals 2                                                                           |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
|                                                                                                                                                                                                                                                                                                  | kg/ha                                                                               |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                    |                                                                                             |       |          |           |                                                                                                                                                                       |       |                                                                                     |






### 4.2 Sub-menus of the Main menu

#### Menus for working with the implement

-  Work menu
  - Display and controls during operation.
-  Hopper management
  - Filling / emptying the hopper
-  Determining the calibration factor (also in the Products menu)

Menus for settings, information about the implement and seed

---

-  Product menu
    - o Settings for the seed
  -  User profile menu
    - o Each user can save a personal profile with settings for the terminal and the implement.
  -  Implement settings menu
    - o Entry of implement-specific or individual data.
    - o Change the setup of the implement (password required)
  -  Documentation menu (as a simple alternative to the Task Controller)
    - o Saving of areas, times, quantity.
    - o The calculated data can be stored for up to 20 documented jobs.
  -  Info menu
    - o Software version and total ground coverage
-


## 5 User profile




Select **User profile** in the main menu!


- Enter the name of the user
- Configure the multi-function display in the Work menu (see page 15)
- Configure key assignment (see page 16)
- Configure ISOBUS (see page 17)
- Configure alarm limits (see page 15)
- Enter the application rate increments for increasing or reducing the application rate
- Configure the start-up ramp (see page 19)
- Switching of the work lights can be controlled manually or by the TECU.
  - ☒ The TECU switches the work lights on as soon as the work lights are switched on in the tractor.
  - ☐ Switch the work lights manually.
- Reverse driving detection
  - ☒ (yes) When driving in reverse, the metering unit and the advancing of the tramline is interrupted (ISOBUS signal must be present).
  - ☐ (no)
- Driver assistance system
  - ☒ (yes) Show notification when the forward speed was strongly changed on the headland, so that a seeding error is produced.
  - ☐ (no) No notification

### User profile







Configure multi-function display




Configure key assignment



Configure ISOBUS




Configure alarm limit




Quantity increment


%




Configuring the start-up ramp



Work lights via TECU



Reverse driving detection



Driver assistance system

## User profile



User: change, new, delete

### Change user:

1. Mark user.
2. Confirm marking.

### Create new user:



1. Create new user.
2. Mark user.
3. Confirm marking.
4. Enter name.








The terminal must be restarted after changing users

### Delete user:



Mark symbol and confirm.


Profile list

|     |                                                                                                                                                                                                                                               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pit |   |
| Tom |                                                                                                                         |
|     |                                                                                                                         |



When using an AUX-N multi-function stick, the freely selected key assignment of the multi-function stick are saved with the respective user.

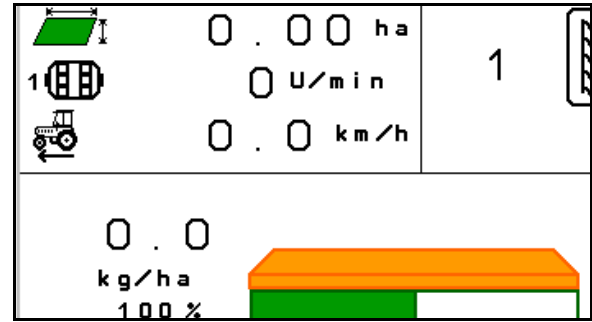
Each user profile needs a key assignment.


Perform the key assignment on the VT.

## 5.1 Configure multi-function display

Different data sets can be shown in the three data lines in the Work menu.

- (1) Current speed
- (2) Worked area per day
- (3) Quantity per day
- (4) Remaining area
- (5) Distance remaining
- (6) Distance counter
- (7) Speed of metering unit 1
- (8) Speed of metering unit 2
- (9) Speed of metering unit 3
- (10) Speed of metering unit 4
- (11) Setpoint for metering unit 1
- (12) Setpoint for metering unit 2
- (13) Setpoint for metering unit 3
- (14) Setpoint for metering unit 4
- (15) Pressure in hopper 1
- (16) Pressure in hopper 2
- (17) Distance remaining
- (18) Blower fan actual speed 1
- (19) Blower fan actual speed 4
- (20) Residual quantity in hopper 1
- (21) Residual quantity in hopper 2
- (22) Residual quantity in hopper 3
- (23) Residual quantity in hopper 4




Configure multi-function display

Line 1

Speed

Line 2

Area / Day

Line 3

Distance remain.

## 5.2 Configure key assignment


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


- Free key assignment
  - ☒ Freely assignable key assignment
  - ☐ Standard assignment of the keys


s

- Load standard joystick button assignment
- Freely assign the buttons

→ Call up list of the function



 Configure key assignment


Free key assignment
 


 Load standard joystick button assignment




Select the desired function from the list and press the desired button.

Empty / delete function







 Cancel



 Save

Perform key assignment:

1. Call up list of the functions.
2. Select function.
3. If applicable, select the  screen where the function should be saved in the work menu.
4. Press the key / function field in order to place the function to the key / function field.
5. In this manner, all functions can be assigned any way you like.
6.  Save the settings or  cancel.

List of the functions:

|            |                                                                                       |
|------------|---------------------------------------------------------------------------------------|
| Function 1 |  |
| Function 2 |  |
| Function 3 |  |
| Function 4 |  |
| Function 5 |  |
| ...        |                                                                                       |

-  Function field without function.




## 5.3 Configure ISOBUS

- Select the terminal (see page 17)
- Documentation
  - TaskController, task management active
    - Implement computers communicate with the Task Controller of the terminal
  - implement-internal documentation

Seed drill implement description

- Seed drill implement description
  - Multi bin (multiple hoppers)
  - Multi boom (multiple seeding rails)
- Switching Section Control between manual / automatic
  - In the GPS menu
    - Section Control is switched in the GPS menu.
  - In the work menu (recommended setting)
    - Section Control is switched in the work menu of the implement software.




**ISO** Configure ISOBUS


1

2


Select terminal



Documentation



Seed drill implement description



Section Control Switching Manual/Automatic

### 5.3.1 Selecting the terminal

If several terminals are connected to the ISOBUS:


- Select the terminal for implement operation from the list of terminals.
  - 01 Amazone
  - 02 Third-party supplier
- Select the terminal for documentation from the list of terminals.
  - 01 Amazone
  - 02 Third-party supplier




Logging onto the UT terminal can take up to 40 seconds.

If the specified terminal is not found after this time, the implement logs onto another terminal.


Select terminal




Terminal for implement operation



Terminal for documentation and Section Control







Cancel



Change

## 5.4 Configure alarm limits

- Enter the alarm limit for the blower fan speed in %.
- A signal sounds when exceeding the alarm limit during operation.
- Default value: 15%
- Enter the minimum air pressure in the hopper.
- Enter the maximum air pressure in the hopper.
- A warning message appears when outside the entered pressure range.
- Pressurised hopper monitoring must be active.

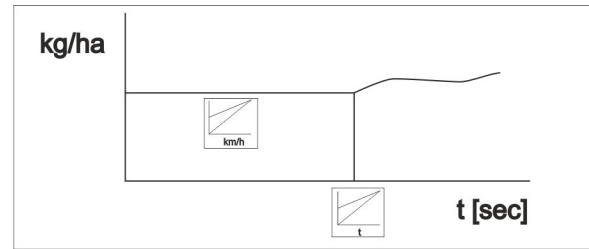
|  Configure alarm limits |                                               |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------|
|                         | Blower fan alarm limit <input type="text"/> % |
|                         | Minimum press <input type="text"/> Bar        |
|                         | Maximum press <input type="text"/> Bar        |

## 5.5 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.



- Intended speed, working speed in km/h.  
Default value: 12 km/h
- Start-up ramp on /off
  - ☒ on
  - ☐ off
- Ramp start 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

|                                                                                                            |                      |      |  |
|------------------------------------------------------------------------------------------------------------|----------------------|------|--|
|  Configure start-up ramp  |                      |      |  |
|  Intended speed           | <input type="text"/> | km/h |  |
|  Start-up ramp            | <input type="text"/> |      |  |
|  Ramp start speed        | <input type="text"/> | %    |  |
|  Duration start-up ramp | <input type="text"/> | s    |  |

## 6 Enter implement data



In the main menu, select **Implement data**!

- Configure the tramline (see page 21)
- Configure the working position sensor (see page 28)
- Configure source for the speed signal (see page 29)
- Time for pre-metering  
→ Default value: 3 s
- Configure coulter pressure (see page 53)
- Display the residual quantity in the work menu
  - ☒ on
  - ☐ off
- On / off selection for water hole function in the work menu
  - ☒ on
  - ☐ off
- Recording mode for recording the field boundary on / off
  - ☒ on (Function field for recording shown in the work menu)
  - ☐ off
- Configure the geometry (see page 31)
- Configure the antenna position (see page 36)
- Configure AutoPoint (see page 21)
- Call up the setup menu (only for customer service)
- Pairing the Bluetooth device, see page 38



Maschineneinstellungen



Configure tramline



Configuring the working position sensor



Configuring the speed source



Time for pre-metering



S



Configure coulter pressure



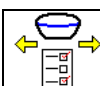
Display the residual quantity in the work menu



%



Configure the geometry



Configure antenna position



AutoPoint











Setup



Pair Bluetooth device

## 6.1 Configuring the tramline

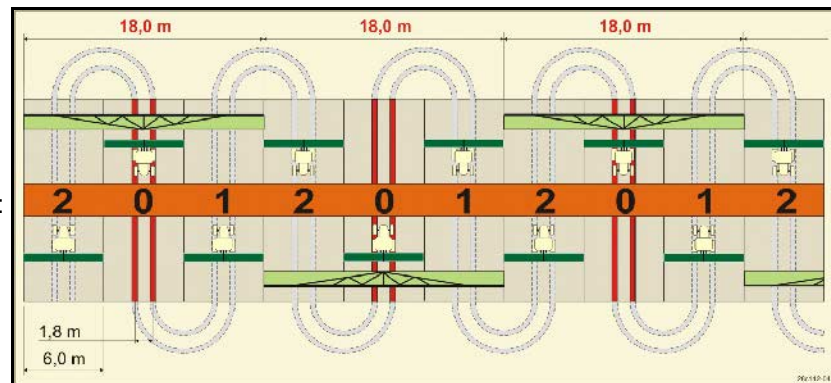
- Enter the tramline rhythm see page 22
- Enter the seed rate reduction for creating tramlines
- Interval tramline
  - o ☒ (yes)
  - o ☐ (no)
- For interval tramline: Enter the length of the seeded distance
- For interval tramline: Enter the length of the non-seeded distance
- The tramlines are advanced by means of the:
  - o Working position
  - o Track marker
 Switch the tramlines automatically (see page 66).
  - o Terminal CCI
  - o ISOBUS
- Enter time until tramline is advanced

|                                                                                     |                                     |                        |
|-------------------------------------------------------------------------------------|-------------------------------------|------------------------|
|    | Configure tramline                  |                        |
|    | Tramline rhythm                     |                        |
|    | Seed rate reduction at tramline     |                        |
|    | Interval tramline                   |                        |
|    | Seeded distance                     |                        |
|    | Non-seeded distance                 |                        |
|  | Source for advancing the tramline   | <input type="text"/>   |
|  | Time until the tramline is advanced | <input type="text"/> s |

## 6.1.1 Tramline rhythm

Example of simple tramline control, standard tramline

Tramline counter:



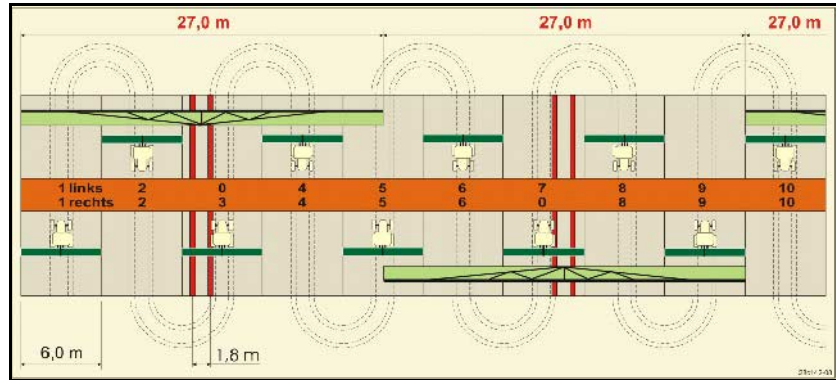
Special tramline rhythms:

- 0 – Permanent tramline
- 1 - Alternating tramline
- 15 – No tramline

| Simple - Tramline control |   |   |   |   |   |   |   |   |   |    |    |    |    |    |                                      |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|--------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15                                   | 16 | 17 | 20 | 21 | 22 | 23 | 26 | 32 | 35 |    |    |    |    |
| Tramline counter          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 0  | 0  | 0  | 1                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |    |    |    |
|                           | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2  | 0  | 1  | 1  | 1  | Circuit 15 does not create channels. | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 1  |    |    |    |    |
|                           |   | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3  | 3  | 2  | 2  | 2  |                                      | 2  | 2  | 2  | 1  | 1  | 1  | 2  | 1  | 2  |    |    |    |    |
|                           |   | 2 |   | 3 | 3 | 3 | 3 | 3 | 3 | 0  | 4  | 3  | 3  | 3  |                                      | 3  | 3  | 3  | 2  | 2  | 2  | 3  | 2  | 3  |    |    |    |    |
|                           |   |   |   |   | 4 | 4 | 4 | 4 | 4 | 5  | 5  | 4  | 4  | 4  |                                      | 4  | 4  | 4  | 3  | 3  | 3  | 4  | 3  | 4  |    |    |    |    |
|                           |   |   |   |   |   | 5 | 5 | 5 | 5 | 6  | 6  | 5  | 5  | 5  |                                      | 5  | 5  | 5  | 4  | 4  | 4  | 5  | 4  | 5  |    |    |    |    |
|                           |   |   |   |   |   |   | 6 | 6 | 6 | 0  | 7  | 6  | 6  | 6  |                                      | 6  | 6  | 6  |    | 5  | 5  | 6  | 5  | 6  |    |    |    |    |
|                           |   |   |   |   |   |   |   | 7 | 7 | 8  | 8  | 7  | 7  | 7  |                                      | 7  | 7  | 7  | 7  |    | 6  | 6  | 7  | 6  | 7  |    |    |    |
|                           |   |   |   |   |   |   |   |   | 8 | 9  | 0  | 8  | 8  | 8  |                                      | 8  | 8  | 8  | 8  | 8  |    | 7  | 8  | 7  | 8  |    |    |    |
|                           |   |   |   |   |   |   |   |   |   | 10 | 10 | 9  | 9  | 9  |                                      | 9  | 9  | 9  | 9  | 9  |    | 8  | 9  | 8  | 9  |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    | 10 | 10 | 10 |                                      | 10 | 10 | 10 | 10 |    |    |    | 10 | 9  | 10 |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    | 11 | 11 |                                      | 11 | 11 | 11 | 11 | 11 |    |    |    | 10 | 11 |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    |    | 12 |                                      | 12 | 12 | 12 | 12 | 12 | 12 |    |    |    | 12 |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |                                      | 13 | 13 | 13 | 13 | 13 | 13 | 13 |    |    | 13 |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |                                      |    | 14 | 14 | 14 | 14 | 14 | 14 | 14 |    |    | 14 |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |                                      |    |    | 15 | 15 | 15 | 15 | 15 | 15 | 15 |    |    |    |    |
|                           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |                                      |    |    |    | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |

Example of double tramline control, requires 2 seed distributors

Tramline counter, left side:  
Tramline counter, right side:



| Double - Tramline control |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |    |
|---------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|----|
| Tramline counter          | 18 left side | 18 right side | 19 left side | 19 right side | 24 left side | 24 right side | 25 left side | 25 right side | 27 left side | 27 right side | 28 left side | 28 right side | 29 left side | 29 right side | 30 left side | 30 right side | 31 left side | 31 right side | 33 left side | 33 right side | 34 left side | 34 right side | 36 left side | 36 right side |    |
|                           | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 0             | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 1             | 1            | 1             |    |
|                           | 2            | 2             | 2            | 2             | 2            | 0             | 2            | 0             | 2            | 0             | 2            | 2             | 2            | 0             | 0            | 2             | 2            | 2             | 2            | 2             | 2            | 2             | 2            | 2             |    |
|                           | 0            | 3             | 3            | 0             | 3            | 3             | 3            | 3             | 3            | 3             | 0            | 3             |              |               | 3            | 3             | 0            | 3             | 3            | 3             | 3            | 3             | 3            | 0             |    |
|                           | 4            | 4             | 4            | 4             | 0            | 4             | 4            | 4             | 4            | 4             | 0            | 4             |              |               | 4            | 4             | 4            | 4             | 4            | 4             | 4            | 4             | 4            | 4             |    |
|                           | 5            | 5             | 5            | 5             | 5            | 5             | 5            | 5             | 0            | 5             | 5            | 5             |              |               | 5            | 0             |              |               | 0            | 5             | 5            | 5             | 5            | 5             |    |
|                           | 6            | 6             | 6            | 6             | 6            | 6             | 0            | 6             | 0            | 6             | 6            | 0             |              |               | 6            | 6             |              |               | 6            | 6             | 0            | 6             | 6            | 6             |    |
|                           | 7            | 0             | 0            | 7             | 0            | 7             | 7            | 7             | 7            | 7             |              |               |              |               |              |               |              |               | 7            | 7             | 7            | 7             | 0            | 7             |    |
|                           | 8            | 8             | 8            | 8             | 8            | 8             | 8            | 8             | 8            | 8             | 8            | 8             |              |               |              |               |              |               | 8            | 8             | 8            | 8             | 0            | 8             |    |
|                           | 9            | 9             | 9            | 9             | 9            | 0             | 0            | 9             | 9            | 0             |              |               |              |               |              |               |              |               | 9            | 9             | 9            | 9             | 9            | 9             |    |
|                           | 10           | 10            | 10           | 10            | 10           | 10            | 10           | 10            | 10           | 10            |              |               |              |               |              |               |              |               |              | 10            | 0            | 10            | 10           | 10            | 10 |
|                           | 11           | 11            | 11           | 11            |              |               | 11           | 11            |              |               |              |               |              |               |              |               |              |               |              |               |              | 0             | 11           | 11            | 11 |
|                           | 12           | 0             | 0            | 12            |              |               | 12           | 12            |              |               |              |               |              |               |              |               |              |               |              |               |              | 12            | 12           | 12            | 0  |
|                           | 13           | 13            | 13           | 13            |              |               | 13           | 0             |              |               |              |               |              |               |              |               |              |               |              |               |              | 13            | 13           | 13            | 13 |
|                           | 14           | 14            | 14           | 14            |              |               | 14           | 14            |              |               |              |               |              |               |              |               |              |               |              |               |              | 14            | 14           | 14            | 14 |
|                           | 15           | 15            | 15           | 15            |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 15            | 15           |               |    |
|                           | 0            | 16            | 16           | 0             |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 16            | 16           |               |    |
|                           | 17           | 17            | 17           | 17            |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 17            | 0            |               |    |
|                           | 18           | 18            | 18           | 18            |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 18            | 18           |               |    |
|                           |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 19            | 19           |               |    |
|                           |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 20            | 20           |               |    |
|                           |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 21            | 21           |               |    |
|                           |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              |               |              | 22            | 0            |               |    |

# Enter implement data


|                  | Double - Tramline control |          |         |          |         |          |        |          |         |          |         |          |         |          |         |          |         |          |        |          |         |           |
|------------------|---------------------------|----------|---------|----------|---------|----------|--------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|--------|----------|---------|-----------|
|                  | 37 left                   | 37 right | 38 left | 38 right | 39 left | 39 right | 40left | 40 right | 41 left | 41 right | 42 left | 42 right | 43 left | 43 right | 44 left | 44 right | 45 left | 45 right | 46left | 46 right | 47aleft | 47b right |
| Tramline counter | 1                         | 0        | 1       | 1        | 1       | 1        | 1      | 1        | 1       | 1        | 1       | 1        | 1       | 1        | 0       | 1        | 1       | 1        | 1      | 1        | 1       | 1         |
|                  | 2                         | 2        | 2       | 0        | 0       | 2        | 2      | 2        | 2       | 2        | 2       | 2        | 2       | 0        | 0       | 2        | 2       | 2        | 2      | 2        | 2       | 2         |
|                  | 0                         | 3        | 3       | 3        | 0       | 3        | 3      | 3        | 3       | 0        | 3       | 3        | 3       | 3        | 3       | 3        | 3       | 3        | 3      | 3        | 3       | 0         |
|                  | 0                         | 4        | 0       | 4        | 4       | 4        | 4      | 0        | 4       | 4        | 4       | 0        | 4       | 4        | 4       | 4        | 0       | 4        | 4      | 0        | 4       | 4         |
|                  | 5                         | 5        | 0       | 5        |         |          | 5      | 5        | 5       | 5        | 5       | 5        | 5       | 5        | 5       | 5        | 5       | 5        | 5      | 5        | 5       | 5         |
|                  | 6                         | 0        | 6       | 6        |         |          | 6      | 6        | 6       | 6        | 6       | 6        | 0       | 6        | 6       | 0        | 6       | 6        | 6      | 6        | 0       | 6         |
|                  |                           |          | 7       | 0        |         |          | 7      | 7        | 7       | 7        | 7       | 7        | 7       | 7        | 7       | 0        | 7       | 7        | 7      | 7        | 7       | 7         |
|                  |                           |          | 8       | 8        |         |          | 8      | 8        | 8       | 8        | 8       | 8        | 8       | 8        | 8       | 8        | 8       | 8        | 8      | 8        | 0       | 8         |
|                  |                           |          |         |          |         |          | 9      | 9        | 0       | 9        | 9       | 9        | 0       | 9        | 9       | 9        | 9       | 9        | 9      | 9        | 0       | 9         |
|                  |                           |          |         |          |         |          | 0      | 10       | 10      | 10       | 0       | 10       | 10      | 10       | 10      | 10       | 10      | 10       | 10     | 10       | 10      | 10        |
|                  |                           |          |         |          |         |          | 0      | 11       | 11      | 11       | 11      | 11       | 11      | 11       |         |          | 11      | 11       | 11     | 11       | 11      | 11        |
|                  |                           |          |         |          |         |          | 12     | 12       | 12      | 12       | 12      | 12       | 12      | 12       |         |          | 12      | 0        | 0      | 12       | 12      | 12        |
|                  |                           |          |         |          |         |          | 13     | 13       | 13      | 13       | 13      | 13       | 13      | 0        |         |          | 13      | 13       | 13     | 13       | 13      | 13        |
|                  |                           |          |         |          |         |          | 14     | 14       | 14      | 0        | 14      | 14       | 14      | 14       |         |          | 14      | 14       | 14     | 14       | 14      | 0         |
|                  |                           |          |         |          |         |          | 15     | 15       | 15      | 15       | 15      | 15       |         |          |         |          | 15      | 15       | 15     | 15       | 15      | 15        |
|                  |                           |          |         |          |         |          | 16     | 16       | 16      | 16       | 16      | 16       |         |          |         |          | 16      | 16       | 16     | 16       | 16      | 16        |
|                  |                           |          |         |          |         |          | 17     | 0        | 17      | 17       | 0       | 17       |         |          |         |          | 17      | 17       | 17     | 17       |         |           |
|                  |                           |          |         |          |         |          | 18     | 18       | 18      | 18       | 18      | 18       |         |          |         |          | 18      | 18       | 18     | 18       |         |           |
|                  |                           |          |         |          |         |          | 19     | 19       | 19      | 19       | 19      | 19       |         |          |         |          | 19      | 0        | 19     | 0        |         |           |
|                  |                           |          |         |          |         |          | 20     | 20       | 0       | 20       | 20      | 20       |         |          |         |          | 20      | 20       | 20     | 20       |         |           |
|                  |                           |          |         |          |         |          |        |          | 21      | 21       | 21      | 21       |         |          |         |          | 21      | 21       | 21     | 21       |         |           |
|                  |                           |          |         |          |         |          |        |          | 22      | 22       | 22      | 22       |         |          |         |          | 22      | 22       | 22     | 22       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          | 23      | 23       |         |          |         |          | 23      | 23       | 23     | 23       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          | 24      | 24       |         |          |         |          | 24      | 24       | 24     | 24       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          | 25      | 25       |         |          |         |          | 25      | 25       | 25     | 25       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          | 26      | 26       |         |          |         |          | 26      | 26       | 26     | 26       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          |         |          |         |          |         |          | 0       | 27       | 0      | 27       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          |         |          |         |          |         |          | 28      | 28       | 28     | 28       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          |         |          |         |          |         |          | 29      | 29       | 29     | 29       |         |           |
|                  |                           |          |         |          |         |          |        |          |         |          |         |          |         |          |         |          | 30      | 30       | 30     | 30       |         |           |




### 6.1.1 Table for seed rate reduction while creating tramlines


Calculation of the seed rate reduction as follows:

$$\frac{\text{100 x number of tramline hoses}}{\text{Number of seeding coulters}} = \text{Recommended percent seed rate reduction while creating tramlines}$$

| Working width  | Number of seeding coulters | Number of tramline hoses | <br>Recommended percent seed rate reduction while creating tramlines |
|----------------|----------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3,0 m          | 18                         | 4                        | 22%                                                                                                                                                     |
|                | 18                         | 6                        | 33%                                                                                                                                                     |
|                | 18                         | 8                        | 44%                                                                                                                                                     |
|                | 20                         | 4                        | 20%                                                                                                                                                     |
|                | 20                         | 6                        | 30%                                                                                                                                                     |
|                | 20                         | 8                        | 40%                                                                                                                                                     |
|                | 20                         | 10                       | 50%                                                                                                                                                     |
|                | 24                         | 4                        | 17%                                                                                                                                                     |
|                | 24                         | 6                        | 25%                                                                                                                                                     |
|                | 24                         | 8                        | 33%                                                                                                                                                     |
|                | 24                         | 10                       | 42%                                                                                                                                                     |
|                | 24                         | 12                       | 50%                                                                                                                                                     |
| 3,43 m / 3,5 m | 21                         | 4                        | 19%                                                                                                                                                     |
|                | 21                         | 6                        | 29%                                                                                                                                                     |
|                | 21                         | 8                        | 38%                                                                                                                                                     |
|                | 21                         | 10                       | 48%                                                                                                                                                     |
|                | 24                         | 4                        | 17%                                                                                                                                                     |
|                | 24                         | 6                        | 25%                                                                                                                                                     |
|                | 24                         | 8                        | 33%                                                                                                                                                     |
|                | 24                         | 10                       | 42%                                                                                                                                                     |
|                | 24                         | 12                       | 50%                                                                                                                                                     |
|                | 28                         | 4                        | 14%                                                                                                                                                     |
|                | 28                         | 6                        | 21%                                                                                                                                                     |
|                | 28                         | 8                        | 29%                                                                                                                                                     |
|                | 28                         | 10                       | 36%                                                                                                                                                     |
|                | 28                         | 12                       | 43%                                                                                                                                                     |

# Enter implement data

| Working width | Number of seeding coulters | Number of tramline hoses | <br>Recommended percent-<br>age seed rate reduction<br>while creating<br>tramlines |
|---------------|----------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4,0 m         | 24                         | 4                        | 17%                                                                                                                                                                   |
|               | 24                         | 6                        | 25%                                                                                                                                                                   |
|               | 24                         | 8                        | 33%                                                                                                                                                                   |
|               | 24                         | 10                       | 42%                                                                                                                                                                   |
|               | 24                         | 12                       | 50%                                                                                                                                                                   |
|               | 26                         | 4                        | 15%                                                                                                                                                                   |
|               | 26                         | 6                        | 23%                                                                                                                                                                   |
|               | 26                         | 8                        | 31%                                                                                                                                                                   |
|               | 26                         | 10                       | 38%                                                                                                                                                                   |
|               | 26                         | 12                       | 46%                                                                                                                                                                   |
|               | 32                         | 4                        | 13%                                                                                                                                                                   |
|               | 32                         | 6                        | 19%                                                                                                                                                                   |
|               | 32                         | 8                        | 25%                                                                                                                                                                   |
| 4,5           | 27                         | 4                        | 15%                                                                                                                                                                   |
|               | 27                         | 6                        | 22%                                                                                                                                                                   |
|               | 27                         | 8                        | 30%                                                                                                                                                                   |
|               | 36                         | 4                        | 11%                                                                                                                                                                   |
|               | 36                         | 6                        | 17%                                                                                                                                                                   |
|               | 36                         | 8                        | 22%                                                                                                                                                                   |
| 5,0 m         | 40                         | 4                        | 10%                                                                                                                                                                   |
|               | 40                         | 6                        | 15%                                                                                                                                                                   |
|               | 40                         | 8                        | 20%                                                                                                                                                                   |
| 6,0 m         | 36                         | 4                        | 11%                                                                                                                                                                   |
|               | 36                         | 6                        | 16%                                                                                                                                                                   |
|               | 36                         | 8                        | 22%                                                                                                                                                                   |
|               | 36                         | 10                       | 28%                                                                                                                                                                   |
|               | 36                         | 12                       | 33%                                                                                                                                                                   |
|               | 48                         | 4                        | 8%                                                                                                                                                                    |
|               | 48                         | 6                        | 12%                                                                                                                                                                   |
|               | 48                         | 8                        | 17%                                                                                                                                                                   |
|               | 48                         | 10                       | 21%                                                                                                                                                                   |
|               | 48                         | 12                       | 25%                                                                                                                                                                   |





| Working width | Number of seeding coulters | Number of tramline hoses | <br>Recommended percentage seed rate reduction while creating tramlines |
|---------------|----------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8,0 m         | 64                         | 4                        | 6%                                                                                                                                                         |
|               | 64                         | 6                        | 9%                                                                                                                                                         |
|               | 64                         | 8                        | 12%                                                                                                                                                        |
| 9,0 m         | 72                         | 4                        | 6%                                                                                                                                                         |
|               | 72                         | 6                        | 8%                                                                                                                                                         |
|               | 72                         | 8                        | 11%                                                                                                                                                        |
| 12,0 m        | 36                         | 4                        | 11%                                                                                                                                                        |
|               | 36                         | 6                        | 17%                                                                                                                                                        |
|               | 48                         | 4                        | 8%                                                                                                                                                         |
|               | 48                         | 6                        | 13%                                                                                                                                                        |
|               | 72                         | 4                        | 6%                                                                                                                                                         |
|               | 72                         | 6                        | 8%                                                                                                                                                         |
|               | 72                         | 8                        | 11%                                                                                                                                                        |
|               | 72                         | 10                       | 14%                                                                                                                                                        |
|               | 96                         | 4                        | 4%                                                                                                                                                         |
|               | 96                         | 6                        | 6%                                                                                                                                                         |
|               | 96                         | 8                        | 8%                                                                                                                                                         |
|               | 96                         | 10                       | 10%                                                                                                                                                        |
|               | 96                         | 12                       | 13%                                                                                                                                                        |
| 15,0 m        | 48                         | 4                        | 8%                                                                                                                                                         |
|               | 48                         | 6                        | 13%                                                                                                                                                        |
|               | 60                         | 4                        | 7%                                                                                                                                                         |
|               | 60                         | 6                        | 10%                                                                                                                                                        |
|               | 90                         | 4                        | 4%                                                                                                                                                         |
|               | 90                         | 6                        | 7%                                                                                                                                                         |
|               | 90                         | 8                        | 9%                                                                                                                                                         |
|               | 90                         | 10                       | 11%                                                                                                                                                        |



On implements with seed quantity return flow: set seed quantity reduction at 0 %.


## 6.2 Configuring the working position

- Source
  - Sensor (implement) in volts
  - Lifting height ISOBUS in %
  - Lifting height ISOBUS digital
- Teaching in switch points (see page 28)
- Changing switch points (see page 28)

|                                                                                   |                                         |              |
|-----------------------------------------------------------------------------------|-----------------------------------------|--------------|
|  | Configuring the working position sensor |              |
|  | Source working position sensor          |              |
|                                                                                   | Stored range of values                  | 0.50 -4.50 V |
|  | Learn limit values                      |              |
|  | Change switch points                    |              |





### Learn limit values

When teaching in the switch points, a lifting height of the implement is assigned to a switch point using the working position sensor.

1. Completely lower the implement.
2. > Continue
3. Completely raise the implement.
4.  Save the calculated values.








Cirrus with TwinTec: Perform after each adjustment of the working depth

|                                                                                     |                                                                                       |        |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------|
|    | Learn limit values                                                                    | 1/6    |
|   | Please lower the implement completely.                                                |        |
|                                                                                     | Current value                                                                         | 0.00 V |
|  |  |        |

### Change switch points

- Metering unit off switch point
- Metering unit on switch point
- Headlands position switch point (optional)
- Folding position switch point (optional)

|                                                                                     |                                 |  |   |
|-------------------------------------------------------------------------------------|---------------------------------|--|---|
|  | Change switch points            |  |   |
|  | Switch point metering off       |  | % |
|  | Switch point metering on        |  | % |
|  | Switch point headlands position |  | % |
|  | Switch point folding position   |  | % |

## 6.3 Configuring the speed source




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 of the speed signal.
  - o Radar (ISOBUS)
  - o Wheel (ISOBUS)
  - o Satellite (NMEA 2000)
  - o Satellite (J1939)
  - o Radar (implement)
  - o Simulated
    - Speed entered must be observed later in all cases
    - If another speed source is detected, the simulated speed is deactivated automatically.


Configure speed source


Speed source


Wheel imp.


Find impulses



Check the accuracy of the utilised speed source

→ Inaccurate speed sources can cause seeding errors.

- Enter value for pulses per 100 m,  
Default value: 9700 (for wheel sensor)

or

- Determine pulses per 100 m





## Enter implement data

### Determine the speed on the implement via the wheel pulse per 100 m



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





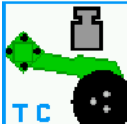

1. On the field, measure out a calibration distance of exactly 100 m.
  2. Mark the start and end points.
  3.
  4. Move the tractor to the start position.
  5.
  6. Accurately travel along the measurement section from start to finish.
- The pulses are detected continuously and shown on the display.
7. Stop exactly at the end point.
  8.

|                                                                                        |                                  |       |
|----------------------------------------------------------------------------------------|----------------------------------|-------|
|       | Find impulses                    | 1/4   |
|       | Measure out the distance exactly | 100 m |
|       | Driven impulses                  | 0     |
|       |                                  | 500   |
| <input type="button" value=" X Cancel"/> <input type="button" value=" &gt; Continue"/> |                                  |       |

## 6.4 Configure coulter pressure

The coulter pressure is gradually configured. A seed rate increase can be selected accordingly if a coulter pressure is present.

- Increase of the seed rate with coulter pressure from stage 0 to 10. (default value 5)
- Increase of the seed rate per coulter pressure stage in %. (default value 10%)
- Minimum coulter pressure (standard value 0)
- Maximum coulter pressure (standard value 10)
- Control the setting of the coulter pressure via the Task Controller.
  - o ☒ yes
  - o ☐ no
- Assign the output value 100% from the Task Controller to a coulter pressure level. (default value 5)

| Configure coulter pressure                                                          |                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|
|  | Increase of the seed rate starting at stage <input type="text"/> |
|  | Increase of the seed rate per stage <input type="text"/> %       |
|  | Minimum coulter pressure <input type="text"/>                    |
|  | Maximum coulter pressure <input type="text"/>                    |
|  | Coulter pressure via Task Controller <input type="text"/>        |
|  | Output value equals the level 100% <input type="text"/>          |

## 6.5 Configuring the geometry

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



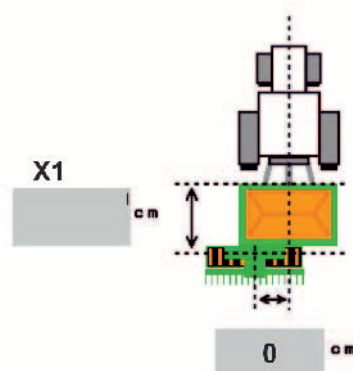
Lateral offset - implement to the left: Enter negative value

### Geometry data for mounted implements

| Machine |                   | X1 [cm] |     |
|---------|-------------------|---------|-----|
|         |                   | min     | max |
| AD-P    | 303 Special WS    | 224     | 236 |
|         | 303 Special RoteC | 210     | 221 |
|         | 353 Special       | 224     | 236 |
|         | 403 Special       | 210     | 221 |
|         | 303 Super RoteC   | 205     | 209 |
|         | 303 Super RoteC+  | 217     | 221 |
|         | 403 Super RoteC   | 205     | 209 |
|         | 403 Super RoteC+  | 217     | 221 |



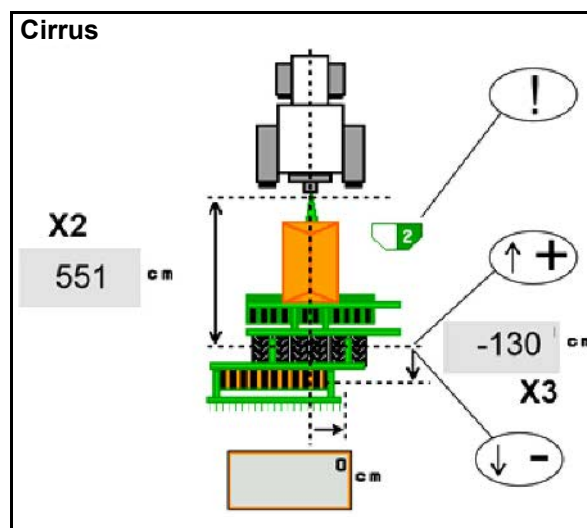
Configure geometry





## Enter implement data

### Geometry data for towed implements

| Machine |                                | X2 [cm] |     | X3 [cm] |
|---------|--------------------------------|---------|-----|---------|
|         |                                | min     | max |         |
| Cirrus  | 3003                           | 442     | 552 | -130    |
|         | 3003 compact                   | 442     | 552 |         |
|         | 3503                           | 442     | 552 |         |
|         | 4003                           | 529     | 629 |         |
|         | 4003-2                         | 551     | 611 |         |
|         | 6003 -2                        | 551     | 611 |         |
|         | 4003-3 / 6003-2<br>+ T-Pack In | 591     | 611 |         |

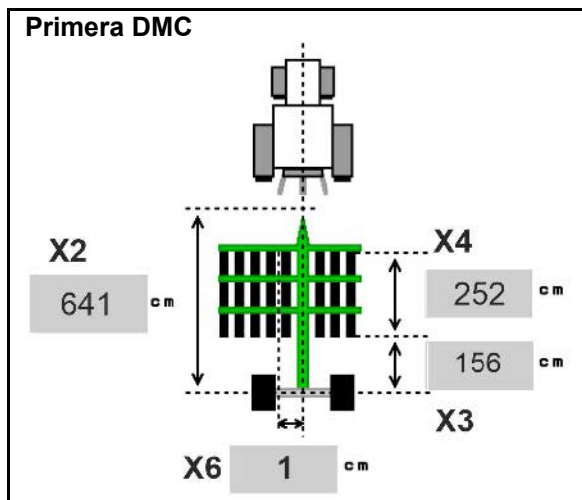


- Multiboom: The values can be entered separately for each hopper

→ First select the hopper:  ,  ,  
...

- Value X3 is positive in front of the axle and negative behind the axle.





| Maschine                                      | Row spacing<br>[cm] | X2<br>[cm] | X3<br>[cm] | X4<br>[cm] | X6<br>[cm] |
|-----------------------------------------------|---------------------|------------|------------|------------|------------|
| DMC 3000 / DMC 4500 / DMC 6000-2 / DMC 9000-2 | 18,75               | 641        | 156        | 252        | 1          |
| DMC 6000-2 / DMC 9000-2                       | 25                  |            |            | 224        | -8         |
| GD501 (DMC 3000 - DMC 9000-2)                 | 18,75 / 25          |            | -155       | 0          | 0          |
| DMC 9000-2C Super                             | 18,75               | 729        | 194        | 252        | 1          |
|                                               | 25                  |            |            | 224        | -8         |
| DMC 9001-2C                                   | 18,75               | 805        | 270        | 252        | 1          |
|                                               | 25                  |            |            | 224        | -8         |
| DMC 12000-2C                                  | 18,75               | 806        | 194        | 252        | 1          |
|                                               | 25                  |            |            | 224        | -8         |
| DMC 12001-2C                                  | 18,75               | 885        | 270        | 252        | 1          |
|                                               | 25                  |            |            | 224        | -8         |

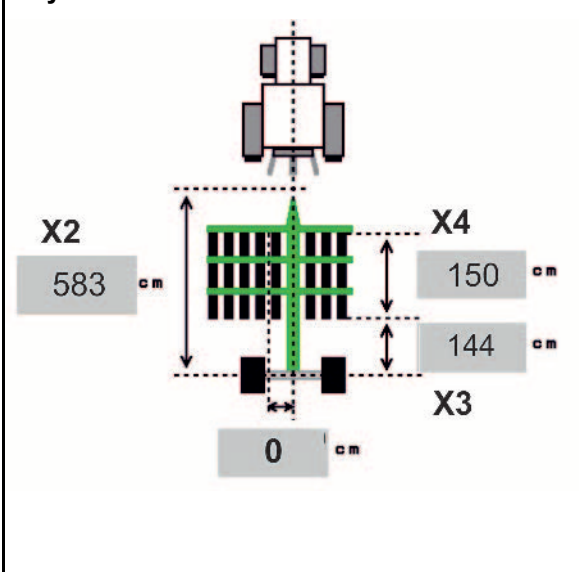
## Enter implement data

| Machine                       | X2 [cm] | X3 [cm] | X4 [cm] |
|-------------------------------|---------|---------|---------|
| <b>Cayena</b><br>6001 /6001-C | 583     | 144     | 150     |



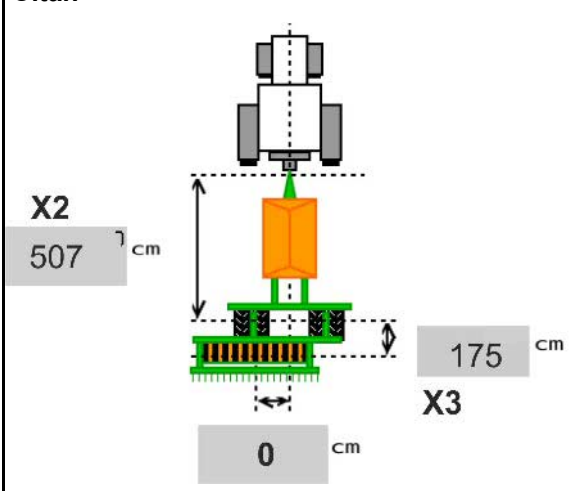
On implements with telescopic drawbars, the values must be changed according to the actual position of the drawbar.

### Cayena



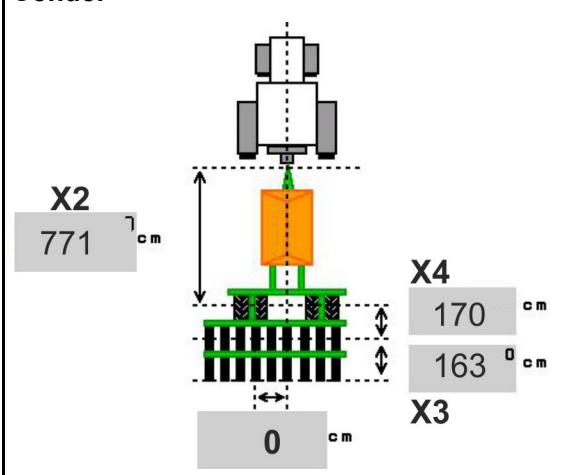
| Machine      | X2 [cm] | X3 [cm] |
|--------------|---------|---------|
| <b>Citan</b> | 507     | 175     |

### Citan







| Machine       | X2 [cm] | X3 [cm] |
|---------------|---------|---------|
| <b>Condor</b> | 771     | 248     |

### Condor

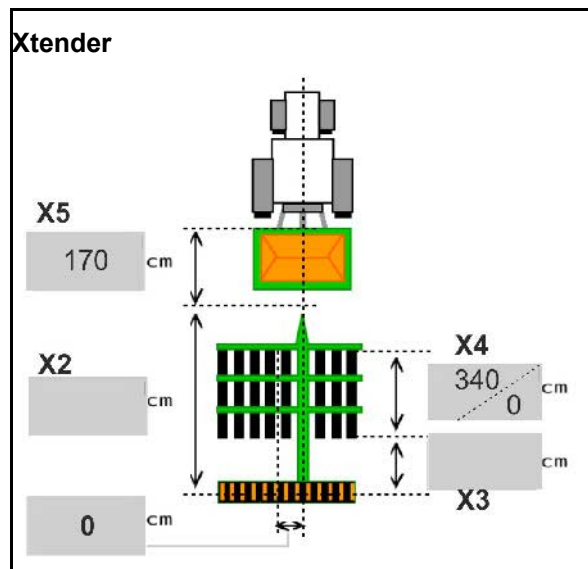


## Geometry data Xtender (HB)

- Select the soil tillage implement:
  - Cenius
  - Catros (TS)
  - Catros (TX)
  - Certos
  - Other

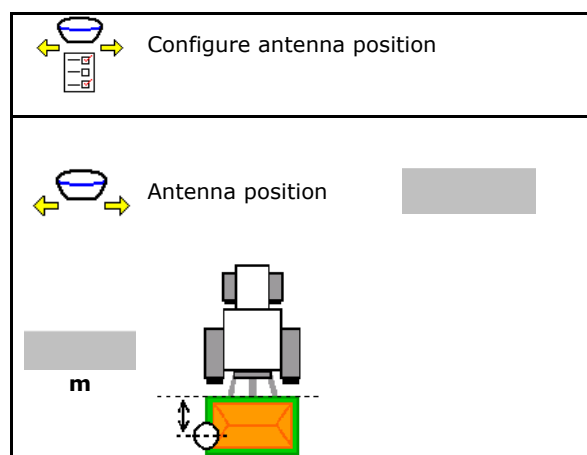
|                                                                                   |                        |                                                                                                  |
|-----------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------|
|  | Configure geometry     |                                                                                                  |
|  | Soil tillage implement | <div style="background-color: #ccc; width: 80px; height: 20px; border: 1px solid #000;"></div>   |
|  | Working width          | <div style="background-color: #ccc; width: 60px; height: 20px; border: 1px solid #000;"></div> m |
|  | Detailed dimensions    |                                                                                                  |

| Machine             | X5[cm]  |         |         |
|---------------------|---------|---------|---------|
| HB                  | 170     |         |         |
|                     | X2 [cm] | X3 [cm] | X4 [cm] |
| Cenius (Fertiliser) | 890     | 150     | 340     |
| Cenius (Seed)       | 890     | 45      | 0       |
| Catros (TS)         | 400     | 20      | 0       |
| Catros (TX)         | 660     | 60      | 0       |
| Certos              | 750     | 70      | 0       |
| Miscellaneous       | 400     | 50      | 0       |



## 6.6 Configuring the antenna position

- Enter the GPS antenna installation site
  - Tractor
  - Implement
- Enter the distance from the GPS antenna to the coupling point (when installed on the implement)



## 6.7 AutoPoint

AutoPoint uses a sensor on the coulter to determine the time required by the seed to reach the coulter after the metering unit is switched.

This enables the calculation of the optimal on/off point delays for switching the metering unit on and off at the headlands (see page 49).

The functioning of the system requires that the tractor drives on and off the headlands at a constant speed.



### Before seeding

- Enter the default values for the on/off point delays in the product menu (see page 49).
- Set the geometry correctly.
- Activate Section Control on the terminal.



### During seeding


- Check the on/off point delays for plausibility.
- Check the seeding results at the headlands (3 times respectively when driving on and off)!
- Maintain a constant forward speed on the headlands.
- Maintain a constant blower fan speed.


- Activate / deactivate AutoPoint
  - ☒ ☒ Automatically transfer times to the Product menu and Section Control
  - ☐ Times are not transferred.  
Possible to enter the switch-on or switch-off times in the product menu manually.
- Activate / deactivate message boxes (MiniView)
  - ☒ yes  
Message appears with the new switch-on/off time for every new measured value that is outside the tolerance limit of the old value.  
→ A new switch-on or switch-off time can be manually entered.
  - ☐ no  
Do not display message

Display of the switch-on / switch-off optimisation →

Display of the number of measurements →

Display of the last sent values →

-  The switch-on optimisation and switch-off optimisation values are determined when optimising the switch points (Product menu, delay times).  
They are used to optimise the switching times to prevent seeding errors.


-  Reset the value for switch-on optimisation and switch-off optimisation to 0 ms.


- Performing a compatibility test (see below)  
Checking the terminal

- For divided hoppers: Assign the respective hopper to the Auto-Point sensor.


- ☒ (yes, sensor assigned)
- ☐ (no, no sensor assigned)

→ Only possible with Multiboom setting.


AutoPoint




Transfer times automatic-ly



Message activated

|                         |      |
|-------------------------|------|
| Switch-on optimisation  | 0 ms |
| Switch-off optimisation | 0 ms |
| <u>Measured values:</u> | 0    |
| Counter                 | 0    |
| Switch-on time          | 0 ms |
| Switch-off time         | 0 ms |


Compatibility test

Sensor is assigned to the following hoppers:

|                                                                                                   |                                                                                                   |                                                                                                   |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> |
| <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> | <div style="border: 1px solid gray; width: 40px; height: 20px; background-color: #cccccc;"></div> |

## Enter implement data

### Compatibility test



The compatibility test serves to check if a control terminal is compatible with the AutoPoint system.

The compatibility test sends 2 randomly generated times to the control terminal.

The transmitted values are displayed and must be verified in the Section Control menu of the respective terminal.

Display of the compatibility test→



Confirm verification.



#### Compatibility test

New times have been transmitted to the terminal. If the values shown below do not match, there is no automatic transmission of the switch-on/-off times. Please verify the times.

|                 |         |
|-----------------|---------|
| Switch-on time  | 1111 ms |
| Switch-off time | 2222 ms |



Finished

Example of a verification after a compatibility test on AMATRON3 → GPS switch → Settings.

Switch-on time→

Switch-off time→



If the times are automatically determined, they are sent to the terminal and managed there.

The Section Control behaviour should be observed here.

→ Some terminals switch the implement off for a short period of time!

## 6.8 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.



#### Pair Bluetooth device

The code for pairing the Bluetooth device is:

000000

## 7 Internal documentation





Select **Documentation** in the main menu!



The **Documentation** menu is an internal, non-readable job memory.

When the documentation menu is opened, the documentation which has been started is shown.

-  Overall data display
-  Daily data display


To end a documentation process, another must be started.

Up to a maximum 20 documented jobs can be stored.


Before further documented jobs can be created, existing ones must be deleted.


-  Create new documentation.

→ Enter the name.


-  Start documentation.




-  Delete day data.

-  Start previously created documentation.

-  Start later created documentation.

-  Delete documentation.

-  Display data for hopper 3 and hopper 4.

| Documentation     |                                                                                     |                                                                                     |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Name              |                                                                                     |                                                                                     |  |
|                   |  |  |                                                                                     |
| Worked area       | 0.00                                                                                | 0.00                                                                                | ha                                                                                  |
| Required time     | 0.00                                                                                | 0.00                                                                                | h                                                                                   |
| Quantity hopper 1 | 0,00                                                                                | 0,00                                                                                | kg                                                                                  |
| Quantity hopper 2 | 0,00                                                                                | 0,00                                                                                | kg                                                                                  |



- One documentation is always started.
- Documentation which has already been stored can be selected and restarted.

## 8 Info menu



Select **Info** in the main menu!



- Display implement ID no. (MIN)→
  - o ☒ (yes)
  - o ☐ (no)

- General display

- Display the computers and software

Software version→

Computer/control unit serial number→

|  Info                       |                   |
|--------------------------------------------------------------------------------------------------------------|-------------------|
| MIN: CIR00000000                                                                                             |                   |
| Display Soft key numbers  |                   |
| Total area                                                                                                   | 0 ha              |
| Total quantity                                                                                               | 0 l               |
| Total work time                                                                                              | 0 h               |
| Last installation                                                                                            |                   |
| Last reset                                                                                                   |                   |
| AEF-certified:                                                                                               |                   |
| <div><div>UT</div><div>AUX-N</div><div>ISB</div><div>TC-BAS</div><div>TC-SC</div><div>TC-GEO</div></div>     |                   |
| Base computer                                                                                                | xx.xx.xx          |
|                                                                                                              | 0000000000_x00000 |
| ...                                                                                                          | ...               |
| ...                                                                                                          | ...               |



## 9 Calibration menu



Select **Calibration** in the main menu!



As an alternative, the calibration can also be performed using the TwinTerminal.

### Determining the calibration factor

1. Put the manual one-sided switching in calibration position



2. Open the (left) calibration flap.



3. Pre-meter to obtain a constant flow during calibration.
4. Empty the calibration bucket again.



Determining the calibration factor

1/6

1. Put the one-sided switching in calibration position

2. Pre-turned?
3. Calibration bucket emptied?
4. Calibration flap open?



Cancel



Continue

5. Check / correct the settings.



Preselected speed



km/h



Setpoint application rate



kg/ha



Metering roller



cm<sup>3</sup>



Calibration area



ha







Cancel






Continue

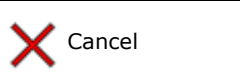
## Calibration menu


6.  Start calibration.
- The calibration stops automatically.
-  The calibration can be stopped and started again.
7. Weigh the collected quantity.
- Take account of the weight of the bucket.
8. Enter the value for the collected quantity in kg.
9. The new calibration value and the percent deviation compared to the target quantity are shown.
- > If there were errors during calibration (e.g., uneven flow), repeat the calibration.
10.  Save the calculated values.
11. Put the one-sided switching back to the middle position.
12. Close the calibration flap.
13. ✓ Terminate the calibration.


 When calibrating, ensure no person is in the danger zone.


0.000 ha 0.000 kg

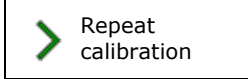
  


 Cancel

 Enter collected quantity kg

 New calibration factor

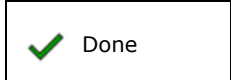
 The percent deviation of the amount is %

 Repeat calibration

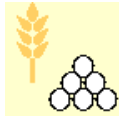
 Save

1. One-sided switching in middle position

2. Calibration flap closed



 Done

## 10 Product menu




Select **Product menu** in the main menu!  
(The product menu and the calibration menu are identical)

- Switch to the TwinTerminal
- Configure hopper 1
- Hopper 2,3,4 - rear (optional)


|                                                                                                               |          |       |
|---------------------------------------------------------------------------------------------------------------|----------|-------|
|  Product menu                |          |       |
|  Activate external operation |          |       |
| <b>Hopper 1</b> Cereals                                                                                       |          |       |
| Setpoint application rate                                                                                     | 80.00    | kg/ha |
| Calibration factor                                                                                            | 1.00     | ✓     |
| Speed band                                                                                                    | 3.0-20.0 | Km/h  |
| <b>Hopper 2</b> Fertiliser                                                                                    |          |       |
| Setpoint application rate                                                                                     | 85.00    | kg/ha |
| Calibration factor                                                                                            | 1.00     | ✗     |
| Speed band                                                                                                    | 3.0-20.0 | Km/h  |


### Display in the Product menu

- Setpoint application rate
- Calibration factor
- Calibration status
  - ✗ - The calibration factor was not determined yet
  - ✓ - The calibration factor was determined with a calibration test
- Calculated possible speed range for the specifications on the product.
-  Deactivate the hopper. Serves for temporarily deactivating a hopper (all settings are maintained).

|                           |                      |       |
|---------------------------|----------------------|-------|
| <b>Hopper 1</b>           | <b>- deactivated</b> |       |
| Setpoint application rate | 80.00                | kg/ha |
| Calibration factor        | 1.00                 | ✓     |
| Speed band                | 3.0-20.0             | km/h  |


## Product menu

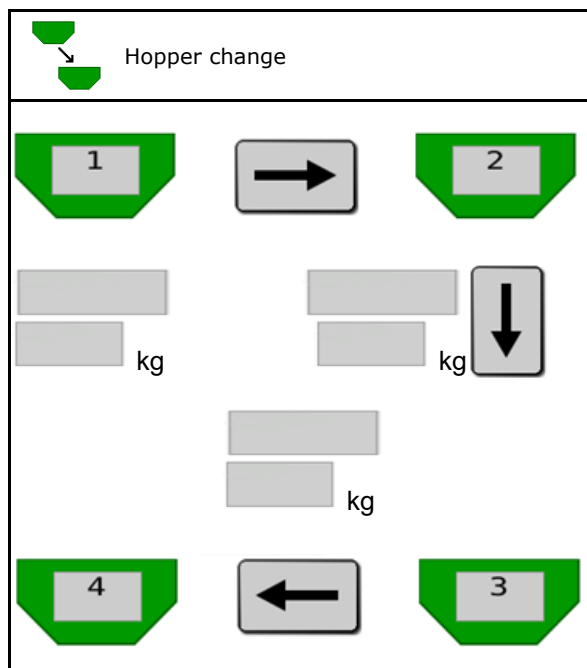
-  Hopper change: Enter the sequence for several hoppers when seeding.

 Calibrate the hopper separately.

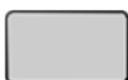
### Hopper change

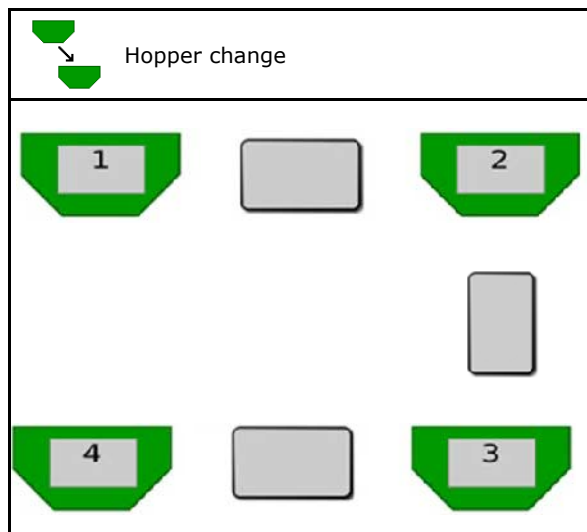
Configure the sequence by identifying the hoppers.

-  Use hoppers consecutively  
 Activating the change to the next hopper based on the
  - Theoretical residual quantity  
 (To do this, filling must be performed through the hopper management)  
 Enter the theoretical remaining quantity of the active hopper. If this value is reached, the hopper change takes place.
  - Low level sensor




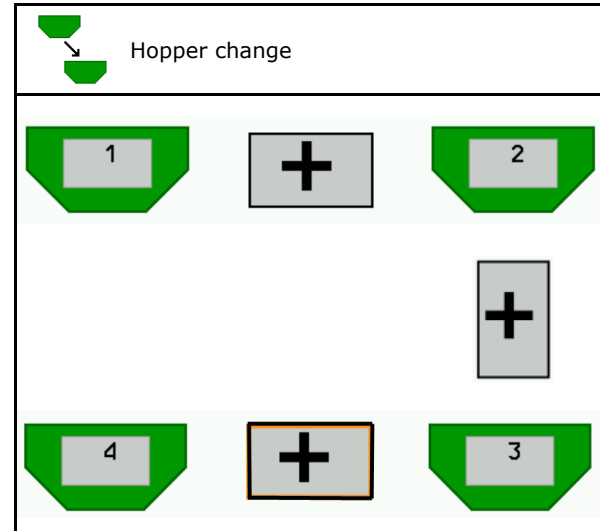
### No hopper change

-  Use the hoppers simultaneously.  
 For spreading different seeds or fertilisers

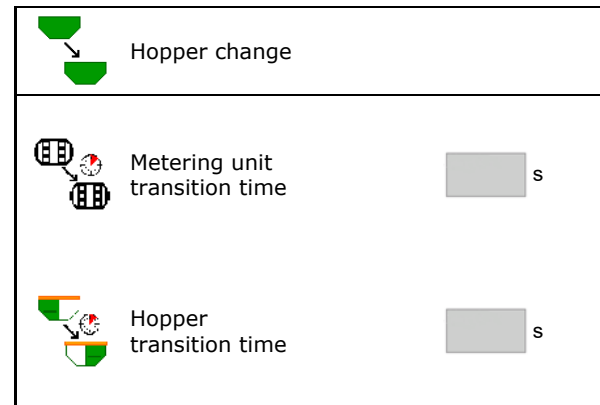


## No hopper change

-  Divide target quantity onto hoppers.  
 Only if the target quantity is transferred from the task controller to the machine.  
 The target quantity is divided onto the hoppers summarized with +.














- Metering unit transition time**  
 Indicates the time that both metering units rotate simultaneously when changing hoppers.
- Hopper transition time**  
 When the specified fill level is reached this is the time delay until the hopper is changed.





## Entries in the product menu



1. Select hopper.
  2. Confirm selection.
- Enter product name
  - Enter setpoint application rate (see page 48)
  - Enter the size of the metering roller in  $\text{cm}^3$
  - Select the calibration area  
(Area for which an appropriate quantity is metered for the calibration procedure).  
→ A suitable value will be suggested.
  - Determine the calibration factor (see page 41)
  - Configure the blower fan speed (see page 48)
  - Enter a suitable calibration factor before determining the correct calibration factor (otherwise enter 1.00)
  - Display of the possible speed range→
  - Configure the delay times (see page 49)
  - Configuring the fill level alarm source (see page 53)
  - Refill (see page 55)

|                                                                                                                       |                                                      |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|  Configure hopper 1                  |                                                      |
|                                      | Product name <input type="text"/>                    |
|                                      | Enter setpoint application rate <input type="text"/> |
|                                      | Metering roller <input type="text"/> $\text{cm}^3$   |
|                                      | Calibration area <input type="text"/> ha             |
|  Determining the calibration factor |                                                      |
|  Configure the blower fan speed    |                                                      |
|                                    | Calibration factor <input type="text"/>              |
| Speed interval<br>min 3.0 km/h max 20.0 km/h                                                                          |                                                      |
|                                    |                                                      |
|                                    | Configuring the fill level alarm source              |
|  Refill                            |                                                      |





## List of products


- 
 Add a new product to the list
- 
 Delete the adjacent product from the list

|                 |        |                 |
|-----------------|--------|-----------------|
| Cereals         |        |                 |
| Target quantity | 80.00  | kg/ha           |
| Metering roller | 600.00 | cm <sup>3</sup> |

|                 |        |                 |                                                                                     |
|-----------------|--------|-----------------|-------------------------------------------------------------------------------------|
| Product 2       |        |                 |  |
| Target quantity | 80.00  | kg/ha           |                                                                                     |
| Metering roller | 600.00 | cm <sup>3</sup> |                                                                                     |

|                 |        |                 |                                                                                     |
|-----------------|--------|-----------------|-------------------------------------------------------------------------------------|
| Product 3       |        |                 |  |
| Target quantity | 80.00  | kg/ha           |                                                                                     |
| Metering roller | 600.00 | cm <sup>3</sup> |                                                                                     |






|                 |        |                 |                                                                                     |
|-----------------|--------|-----------------|-------------------------------------------------------------------------------------|
| Product 4       |        |                 |  |
| Target quantity | 80.00  | kg/ha           |                                                                                     |
| Metering roller | 600.00 | cm <sup>3</sup> |                                                                                     |

## 10.1 Entering the setpoint application rate

- Enter units for setpoint application rate
  - kg/ha
  - G (grains) / m<sup>2</sup>
- Enter value for the setpoint application rate  
If necessary, evenly divide the target value of a product onto several hoppers.




For unit G/m<sup>2</sup>:

- Enter 1000 grain weight
- Enter germination capacity

|                                                                                   |                                 |                                       |
|-----------------------------------------------------------------------------------|---------------------------------|---------------------------------------|
|  | Enter setpoint application rate |                                       |
|  | Select units                    | <input type="text"/>                  |
|  | Setpoint application rate       | <input type="text"/> G/m <sup>2</sup> |
|  | 1000 grain weight               | <input type="text"/> g                |
|  | Germination capacity            | <input type="text"/> %                |

## 10.2 Configuring the blower fan speed

- Enter the blower fan nominal speed
- Adopt the current blower fan speed as the nominal speed
- Display of the current blower fan speed

|                                                                                                                                                                            |                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
|                                                                                           | Configure the blower fan speed                                  |
|                                                                                          | Blower fan nominal speed <input type="text"/> min <sup>-1</sup> |
| <div>         Adopt the current blower fan speed as the nominal speed          </div> |                                                                 |
| Current blower fan speed 2000 min <sup>-1</sup>                                                                                                                            |                                                                 |

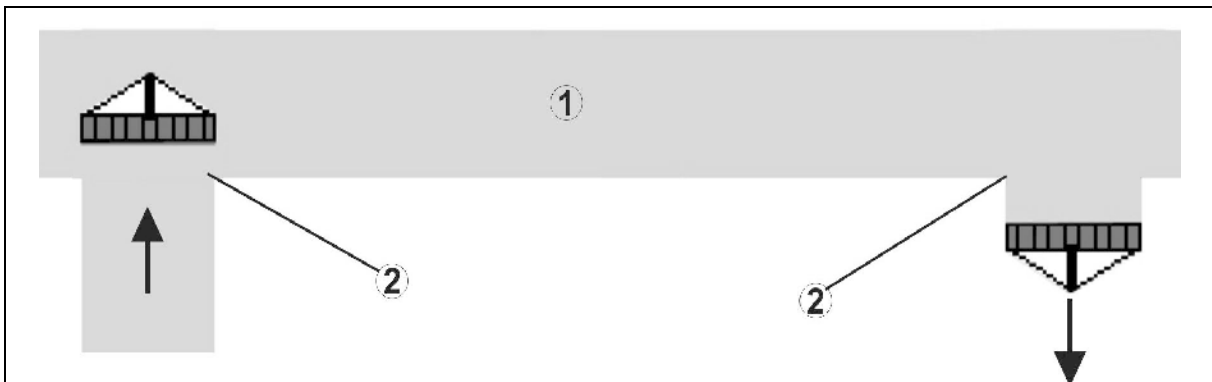


## 10.3 Configuring the delay time



- The delay time serves to seamlessly work the field
  - 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 delay).
  - 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 delay).
- The size of the overlapping/underlapping depends, amongst other things, on the forward speed.
- The delay time is a time entry in milliseconds.
- Long delay times and high speed may lead to undesired switching behaviour.

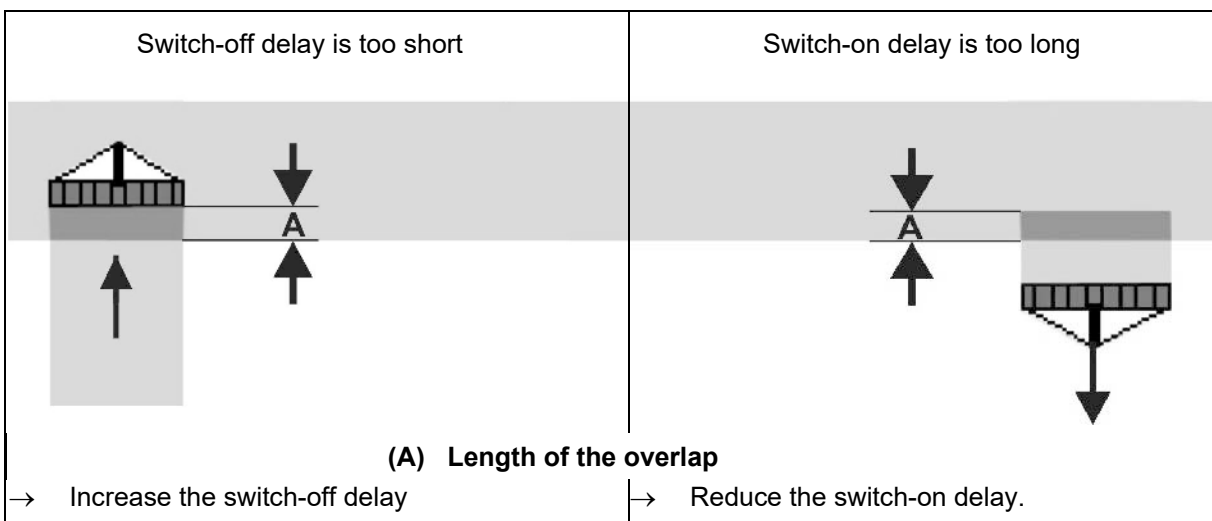
### Optimal working of the field



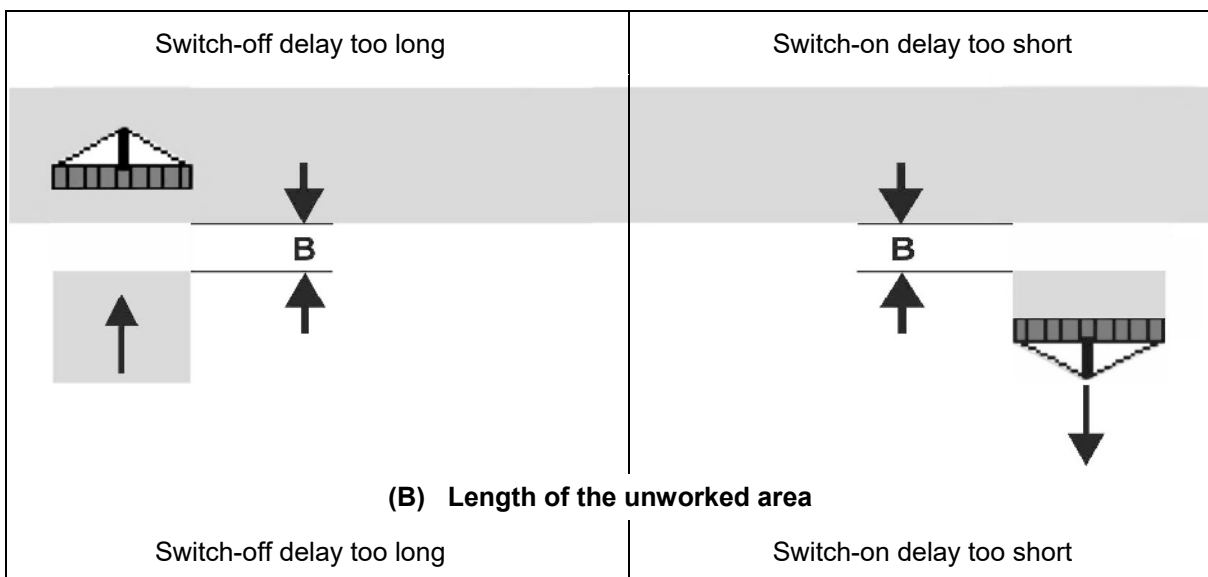
(1) Headlands/worked field

(2) Seamless working of the field without overlapping

### Overlapping of worked areas



## Unworked area




## Recommended on / off point delay time sowing technology

|                                   | Delay time for<br>[ms] | Grain kg / ha |      | Rapeseed kg / ha |      | Fertiliser kg / ha |      |
|-----------------------------------|------------------------|---------------|------|------------------|------|--------------------|------|
|                                   |                        | 100           | 200  | 2                | 8    | 40                 | 120  |
| AD-P<br>3 m                       | Switch on              | 2500          | 2400 | 2800             | 2600 | —                  | —    |
|                                   | Switch off             | 2600          | 2800 | 2400             | 3000 | —                  | —    |
| Cirrus 3003-C                     | Switch on              | 2400          | 2200 | 2200             | 2400 | 2500               | 2300 |
|                                   | Switch off             | 2600          | 2800 | 1900             | 2200 | 3000               | 3300 |
| Cirrus 6003-2                     | Switch on              | 3800          | 3500 | 3800             | 3400 | —                  | —    |
|                                   | Switch off             | 3800          | 3700 | 3600             | 3700 | —                  | —    |
| Cirrus 6003-2C<br>Cirrus 6003-2CC | Switch on              | 2500          | 2300 | 3000             | 2700 | 2700               | 2700 |
|                                   | Switch off             | 2800          | 2900 | 3100             | 3600 | 3400               | 3500 |





The stated values are recommendations, they should be checked in every case.

Correction times for **delay times** when overlapping / unworked areas

|                                                                                   |                                                               |                          |                          |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------|--------------------------|
|  | Subtract or add the correction times from the set delay time. |                          |                          |
|                                                                                   |                                                               | Switch-on delay          | Switch-off delay         |
|                                                                                   | Overlap                                                       | Negative correction time | Positive correction time |
|                                                                                   | Unworked area                                                 | Positive correction time | Negative correction time |

|                         |    | Length of the overlapping (A)/Length of the unworked area (B) |        |         |         |         |         |
|-------------------------|----|---------------------------------------------------------------|--------|---------|---------|---------|---------|
|                         |    | 0.5 m                                                         | 1.0 m  | 1.5 m   | 2.0 m   | 2.5 m   | 3.0 m   |
| Forward speed<br>[km/h] | 5  | 360 ms                                                        | 720 ms | 1080 ms | 1440 ms | 1800 ms | 2160 ms |
|                         | 6  | 300 ms                                                        | 600 ms | 900 ms  | 1200 ms | 1500 ms | 1800 ms |
|                         | 7  | 257 ms                                                        | 514 ms | 771 ms  | 1029 ms | 1286 ms | 1543 ms |
|                         | 8  | 225 ms                                                        | 450 ms | 675 ms  | 900 ms  | 1125 ms | 1350 ms |
|                         | 9  | 200 ms                                                        | 400 ms | 600 ms  | 800 ms  | 1000 ms | 1200 ms |
|                         | 10 | 180 ms                                                        | 360 ms | 540 ms  | 720 ms  | 900 ms  | 1080 ms |
|                         | 11 | 164 ms                                                        | 327 ms | 491 ms  | 655 ms  | 818 ms  | 982 ms  |
|                         | 12 | 150 ms                                                        | 300 ms | 450 ms  | 600 ms  | 750 ms  | 900 ms  |
|                         | 13 | 138 ms                                                        | 277 ms | 415 ms  | 554 ms  | 692 ms  | 831 ms  |
|                         | 14 | 129 ms                                                        | 257 ms | 386 ms  | 514 ms  | 643 ms  | 771 ms  |
|                         | 15 | 120 ms                                                        | 240 ms | 360 ms  | 480 ms  | 600 ms  | 720 ms  |

|                                                                                     |                                                                                                                                                   |  |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | Correction times for speeds and distances (A, B) which are not listed can be interpolated/extrapolated or calculated using the following formula: |  |
|                                                                                     | $\text{Correction times for switch on / off delay times [ms]} = \frac{\text{Length [m]}}{\text{Tractor speed [km/h]}} \times 3600$                |  |

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | The delay times for seeding technology for switching on and off is influenced by the following factors:                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|                                                                                     | <ul style="list-style-type: none"> <li>• Delivery times depending on the <ul style="list-style-type: none"> <li>◦ Seed type</li> <li>◦ Delivery path</li> <li>◦ Blower fan speed</li> </ul> </li> <li>• Driving behaviour depending on the <ul style="list-style-type: none"> <li>◦ Speed</li> <li>◦ Acceleration</li> <li>◦ Braking</li> </ul> </li> <li>• GPS accuracy depending on the <ul style="list-style-type: none"> <li>◦ Correction signal</li> <li>◦ Update rate of the GPS receiver</li> </ul> </li> </ul> |  |



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

- Enter the switch-on delay in milliseconds for driving onto the field:

High value:

→ Switch-on early (avoid unworked areas)

Small value:

→ Switch-on late (avoid overlap)

- Enter the switch-off delay in milliseconds for driving onto the headlands:

High value:


→ Switch-off late (avoid overlap).

Small value:


→ Switch-off early (avoid unworked areas)

- Optimising switch points

Optimisation of the switch points can also be used when using AutoPoint.




Configure on/off point delays




Switch-on delay

 ms



Switch-off delay

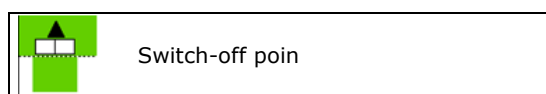
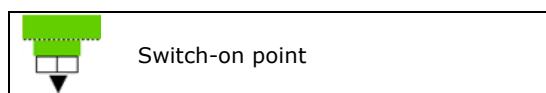
 ms



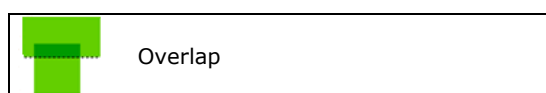
Optimising switch points

## Optimising switch points


1. Select the set-up assistance for the switch-on point or the switch-off point.




2. Select setup assistance for switching too early or too late.



- o Enter the length of the overlap / un-worked area.
  - o Enter the driven speed.
- It is displayed.



Set-up assistance



The implement is switched too early / too late by

m


Driven speed

km/h

New calculated on/off point delay


ms

✕ Cancel


 Save

## 10.4 Configuring the fill level alarm


- Fill level alarm source
  - o Fill level sensor in the hopper
  - o Theoretical calculated residual quantity (To do this, filling must be performed through the hopper management)
  - o Both (The limit value that is reached first triggers the fill level alarm)
- Enter alarm limit for theoretical residual quantity in the hopper.



Configuring the fill level alarm



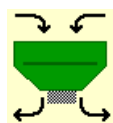
Fill level alarm source



Residual quantity alarm limit

kg

## 11 Hopper management



In the main menu, select **Hopper management menu** for filling and emptying!

- Perform residual emptying
- Fill hopper

Hopper management



Emptying



Filling



- As an alternative, emptying can also be performed using the TwinTerminal.
- With divided hoppers, select the hopper before filling and emptying.

- Switch to the TwinTerminal
- Hopper 1
- Hopper 2
- Hopper 3
- Hopper 4



Activate external operation



Hopper 1



Hopper 2





Hopper 3



Hopper 4


## 11.1 Performing residual emptying

→ The metering rollers remain mounted!

1. Stop the implement.
2. Switch off the blower fan.
3. For partitioned hopper: select hopper.
  -  Front half of the hopper.
  -  Rear half of the hopper.
4. Secure the tractor and implement against unintentional rolling.
5. Open the calibration flap.
6. Fasten collection bag or trough under the hopper opening.
7. > Continue








8. Start residual emptying, keep the key pressed.
9. Close the calibration flap after emptying.

|                                                                                   |                           |                                         |
|-----------------------------------------------------------------------------------|---------------------------|-----------------------------------------|
|  | Perform residual emptying | 1/3                                     |
| 1. Calibration flap open?<br><br>2. Container installed?                          |                           |                                         |
| <input type="button" value="Cancel"/>                                             |                           | <input type="button" value="Continue"/> |

## 11.2 Refilling the hopper

- Display of the current fill level
- Reset the fill level to 0 kg
- Enter the refilled quantity
- Display new fill level

|                                                                                     |                    |                         |
|-------------------------------------------------------------------------------------|--------------------|-------------------------|
|  | Refill hopper      |                         |
|  | Current fill level | kg                      |
|  | Reset fill level   |                         |
|  | Quantity refilled  | <input type="text"/> kg |
|  | New fill level     | kg                      |
| <input type="button" value="Cancel"/> <input type="button" value="Save"/>           |                    |                         |



The displayed hopper fill level is a theoretical value that is calculated using the refilled quantity and the target application rate.

## 12 Use on the field – Work menu



Select **Work menu** in the main menu!



If the Work menu is exited while working, it automatically changes back to the work menu after 10 seconds.

The following entries must be made before starting with seeding:

- Create user profile
- Enter the implement data
- Enter the product data and perform calibration



The implement is operated in the Work menu using the sub-menus.



The arrangement of the function fields can vary depending on the terminal used.



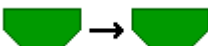












Functions that

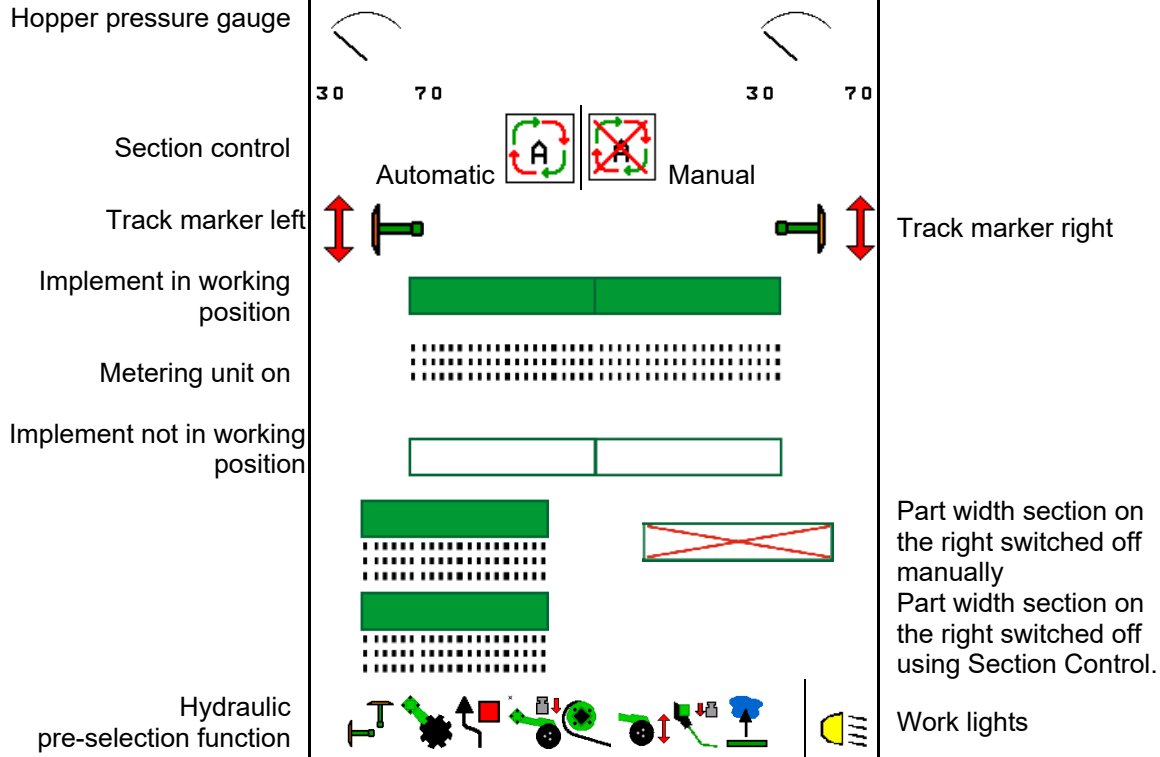
- are switched off in the Setup menu,
  - do not belong to the implement equipment
- are not shown in the Work menu (function fields are not assigned).



## 12.1 Display in the Work menu

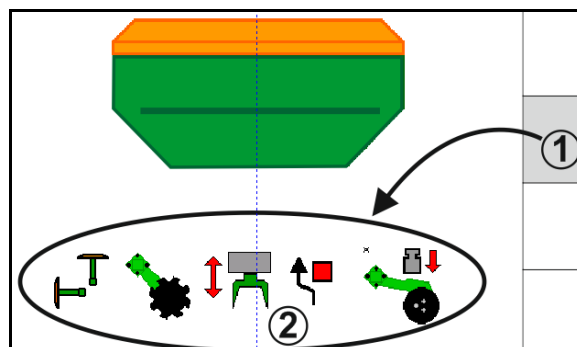
|                                                                                     |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Multi-functional display                                                            | <div><div></div><div>0 . 00 ha</div><div>0 U/min</div><div>0 . 0 km/h</div></div> <div><div>1</div><div></div><div>1</div></div> | Tramline control                                                                                                                                                               |
| Hopper change active                                                                |                                                                                                                                                                                                                   |                                                                                                                                                                                |
|                                                                                     | Implement with 1, 2 or 3 hoppers:                                                                                                                                                                                                                                                                  |                                                                                                                                                                                |
| Application rate Hopper 1                                                           | <div><div>0 . 0</div><div>kg/ha</div><div>100 %</div></div>                                                                                                                                                                                                                                        | <div><div>0 . 0</div><div>kg/ha</div><div>100 %</div></div> <div>Spread rate Hopper 2 (with divided hopper)</div>                                                              |
| Hopper 1                                                                            |                                                                                                                                                                                                                  | Hopper 2 (with partitioned hopper)                                                                                                                                             |
| Filling level hopper 1                                                              |                                                                                                                                                                                                                                                                                                    | Filling level hopper 2                                                                                                                                                         |
| Metering unit speed Hopper 1                                                        | <div><div></div><div>0 U/min</div></div>                                                                                                                                                                         | <div><div></div><div>0 U/min</div></div> <div>Metering unit speed Hopper 2</div>            |
|                                                                                     | Implement with 4 hoppers:                                                                                                                                                                                                                                                                          |                                                                                                                                                                                |
| Display for each hopper:<br>Spread rate<br>Spread rate in %<br>Metering unit speed  | <div><div>0 , 0</div><div>kg/ha</div><div>100 %</div><div>0 U/min</div></div>                                                                                                                                                                                                                      |                                                                                                                                                                                |
| Hopper 1 with fill level                                                            | <div><div>1</div><div></div><div>0 , 00 kg</div></div>                                                                                                                                                          | <div><div>2</div><div></div></div> <div>Hopper 2 with fill level</div>                     |
| Hopper 3 with fill level                                                            | <div><div>3</div><div></div><div>0 , 00 kg</div></div>                                                                                                                                                          | <div><div>4</div><div></div><div>0 , 00 kg</div></div> <div>Hopper 4 with fill level</div> |
| Hopper with fill level display                                                      | Hopper empty                                                                                                                                                                                                                                                                                       | Hopper deactivated                                                                                                                                                             |
|  |                                                                                                                                                                                                                 |                                                                                           |

Hopper pressure gauge













## 12.2 Pre-selection for hydraulic functions

1. Pre-select a hydraulic function (1) using a function key.
- The pre-selected hydraulic function (2) is shown at the bottom of the Work menu.
2. Operate the tractor control unit.
- The pre-selected hydraulic function is being executed.
3. Press the function key again to cancel the pre-selection again.









### Pre-selection hydraulic functions (depending on the implement and equipment

#### Cirrus

| Symbol for hydraulic pre-selection                                                  | Function                                                            | Coloured hose marking (tractor control unit)                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| No symbol                                                                           | Running gear / coulter - standard (without hydraulic pre-selection) |  <i>yellow</i>  |
|    | Track markers                                                       |                                                                                                    |
|   | Track marker obstacle function                                      |                                                                                                    |
|  | Water hole function                                                 |                                                                                                    |
|  | Fold boom                                                           |  <i>green</i> |
|  | Disc array                                                          |                                                                                                    |
|  | Coulter pressure                                                    |                                                                                                    |
|  | Crushboard intensity                                                |  <i>blue</i>  |

#### Cayena

| Symbol for hydraulic pre-selection                                                  | Function                                                | Coloured hose marking (tractor control unit)                                                      |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| -                                                                                   | Standard running gear (without hydraulic pre-selection) |  <i>gelb</i> |
|  | Track markers                                           |                                                                                                   |
|  | Track marker obstacle function                          |                                                                                                   |
|  | Water hole function                                     |                                                                                                   |
|  | Fold boom                                               |  <i>grün</i> |

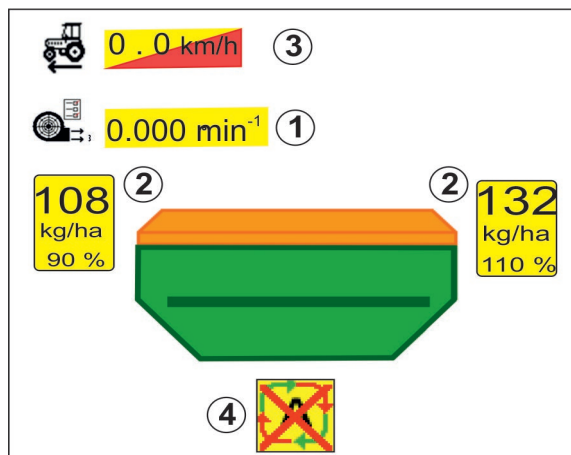
## 12.3 Deviations from the nominal state



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

Displays marked in red indicates a missing information source.

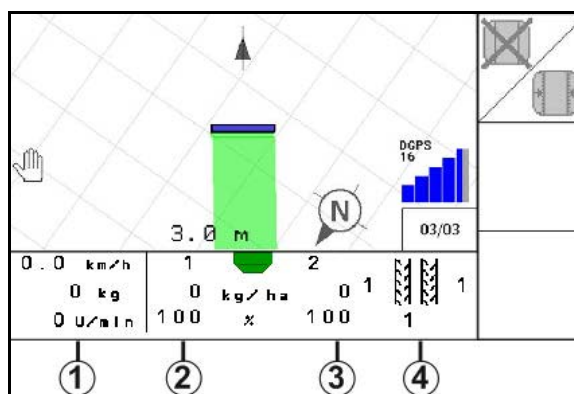
- (1) Blower fan speed deviates from the nominal value
- (2) The nominal value was changed manually using the quantity increment
- (3) Simulated speed active/information source not available
- (4) All conditions for Section Control have been met.



## 12.4 Mini-view in Section Control

Mini-view is a section from the work menu which is shown in the Section Control menu

- (1) Multi-function display
- (2) Hopper 1 with target quantity
- (3) Hopper 2 with target quantity
- (4) Tramline control



Messages are also shown in the miniviews.



Mini-view cannot be displayed on all operating terminals.

## 12.5 Switching Section Control (GPS control)



Switching Section Control on and off



Information for Section Control:



- Section Control can always be overridden by:
  - manual part width section control.
- Switch the Section Control on at the terminal first.



→ Then switch on Section Control on the implement control unit!





Display in the work menu (can be set in the Configure ISOBUS menu):

If automatic part width section control is not possible, a message appears with the necessary requirements.

-  Requirement not met
-  Requirement met

### Note

Automatic part width section control not possible. The following requirements must be met.

-  Section Control of the terminal (Task Controller) activated
-  Switch on blower fan (>200 rpm)
-  Implement error free
-  Implement unfolded

Please acknowledge this message

## 12.6 Track markers





Cirrus03: When raising / lowering the implement, the pre-selected track marker is automatically actuated.





### Manual track marker pre-selection


(1) Display active track marker

-  Manual track marker pre-selection

(2) Always left track marker 

(3) Always right track marker 


(4) Always both track markers 

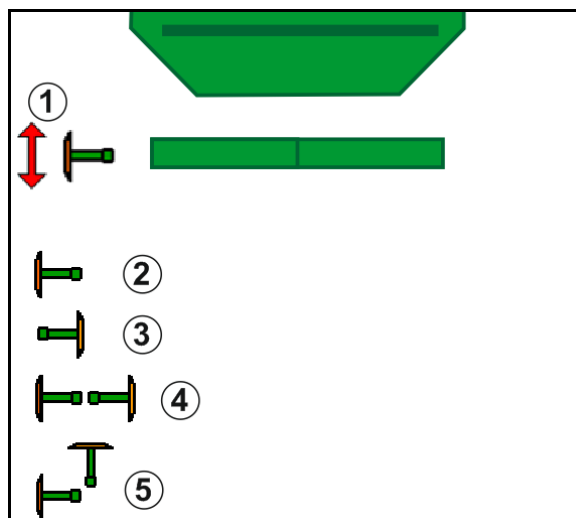
(5) Alternating mode 

(Active track marker automatically changes at headlands)

– No track marker

→ AD-P: Actuate *yellow* tractor control unit.

-  In alternating mode, change track marker left / right



### Track marker shifting in alternating mode

Track marker shifting enables changing the active track marker from left to right and vice-versa.


→ Actuate *yellow* tractor control unit.

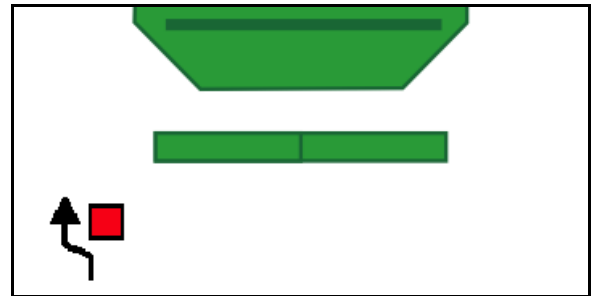


### Track marker obstacle switching

For passing obstacles on the field.



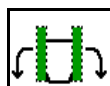
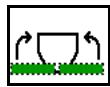
1. Pre-select obstacle switching.
2. Actuate *yellow* tractor control unit.
- Raise the track marker.
3. Pass by the obstacle.
4. Actuate *yellow* tractor control unit.
- Lower the track marker.
5.  Cancel the pre-selection.



## 12.7 Folding the implement



### Fold/unfold the implement

-  Unfold the implement into working position
-  Fold the implement into transport position

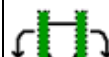


Fold menu

1/3



Folding



Folding out



Cancel

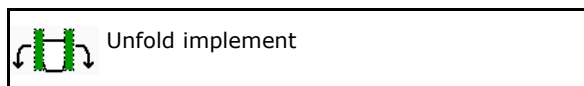
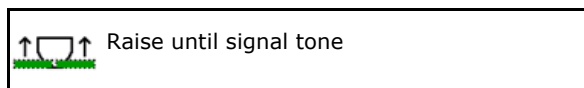


### WARNING

To move the implement from transport position to working position and vice-versa, be sure to observe the implement operating manual!

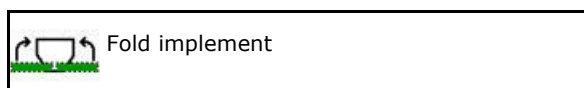
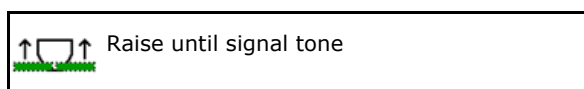
## Unfolding the Cirrus 6003-2

1. Actuate *yellow* control unit until the signal sounds.
- Raise the implement.
2. ✓ Confirm.
3. Actuate *green* tractor control unit.
- The booms unfold.
4. ✓ Confirm.





## Folding the Cirrus 6003-2

1. Actuate *yellow* control unit until the signal sounds.
- Raise the implement.
2. ✓ Confirm.
3. Actuate *green* tractor control unit.
- The booms are folded.
4. ✓ Confirm.



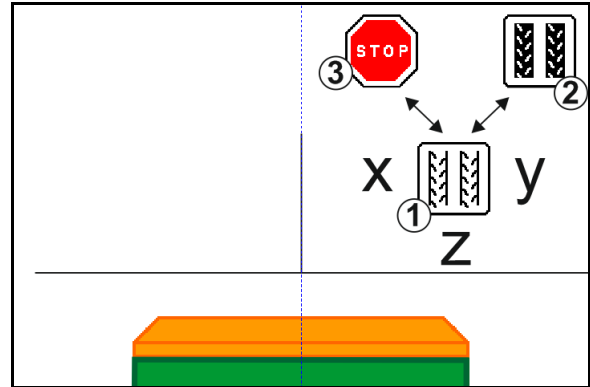




## 12.8 Tramline control

|                                                                                   |                                                                                   |                                                                        |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|
|  |  | <b>Reset channel counter</b><br><b>Switch forward tramline counter</b> |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|



The tramline counter shifts when the implement is raised.

- (1) Display tramline is not being created
- (2) Display tramline is being created
- Tramline counter at 0.
- (3) Display shifting of the tramline counter is suppressed
- (x) Only for double tramline: Current tramline number on the left
- (y) Current tramline number (on the right for double tramline)
- (z) Tramline rhythm



-  ,  The tramline number can be corrected at any time, if it has unintentionally shifted forward by one number when raising the implement out of the ground or due to the automatic operation.

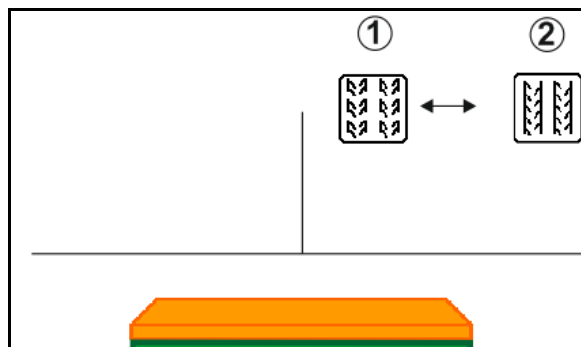
|                                                                                     |                                                  |
|-------------------------------------------------------------------------------------|--------------------------------------------------|
|  | <b>Suppress shifting of the tramline counter</b> |
|-------------------------------------------------------------------------------------|--------------------------------------------------|

1.  Stop tramline counter.  
→ When raising the implement, the tramline counter is not shifted.
2.  Cancel tramline counter stop.  
→ When the implement is raised, the tramline counter is shifted.



Select interval tramline / standard tramline

- (1) Interval tramline display
- (2) Standard tramline display



### 12.8.1 Automatic tramline control

Automatic tramline control display

The automatic tramline control is regulated via GPS using the parallel guidance module of the CCI terminal or ISOBUS.

Here, regardless of the sequence in which the guidance lines are followed, the tramlines are properly created.


This requires the following:

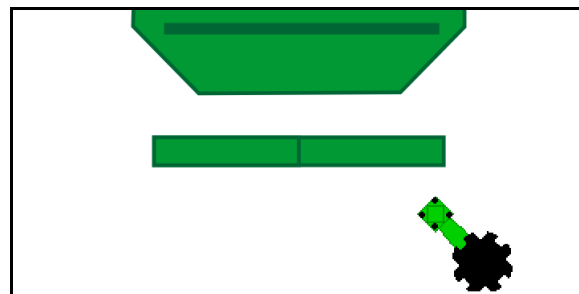
- A reference track must be recorded during the first field pass.
- Parallel Tracking must be switched on.



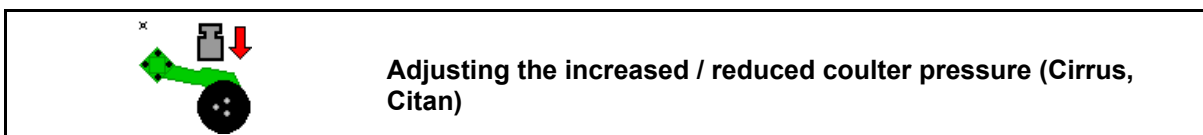
## 12.9 Disc array working depth




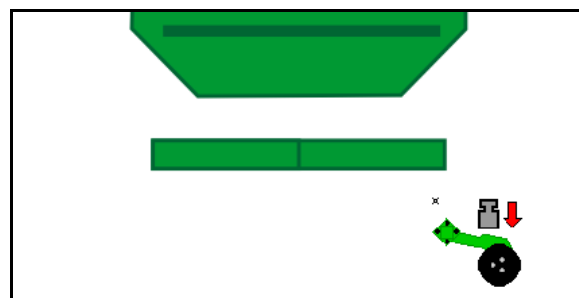
1.  Pre-select disc array.
  2. Actuate *green* tractor control unit.
- Increase / reduce working depth:
- The depth can be checked on the scale on the disc array



## 12.10 Coulter pressure via tractor control unit





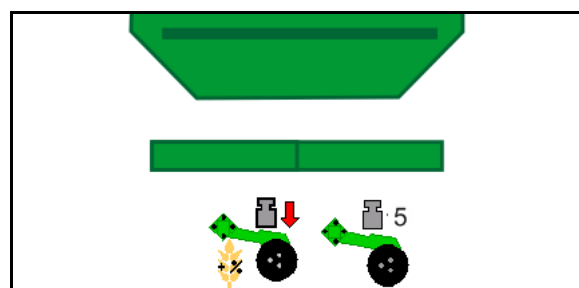
1.  Pre-select coulter pressure.
  2. Actuate *green* tractor control unit.
- Set increased pressure.
- Set reduced pressure.



## 12.11 Coulter pressure in stages



1.   Set the coulter pressure in stages from 0-10.
- The selected stage for the coulter pressure will be displayed.
  - The increase in the seed rate will be displayed.



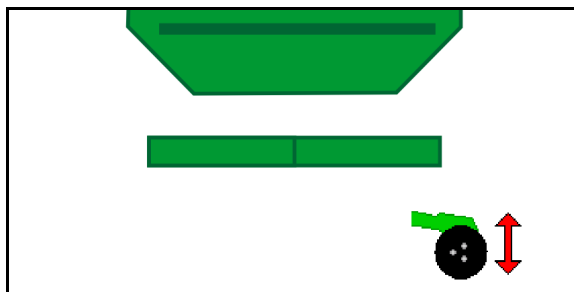
## 12.12 Coulter lift



Raising / lowering the coulters (mounted implements)



1. Pre-select the coulter lift.
  2. Actuate *green* tractor control unit.
- Only perform soil tillage.
  - For grass seeding
  - The metering unit continues to run, switch off separately if necessary.



## 12.13 Electrical full metering



Start / stop pre-metering

- When starting seeding: when starting from standstill, activate the pre-metering in order to ensure that sufficient seed is spread over the first metres.
- To fill the seed metering wheel before calibration.



1. Start the pre-metering.
- The pre-metering supplies the coulters with seed for a set running time.



Electrical full metering: keep the metering unit switched off

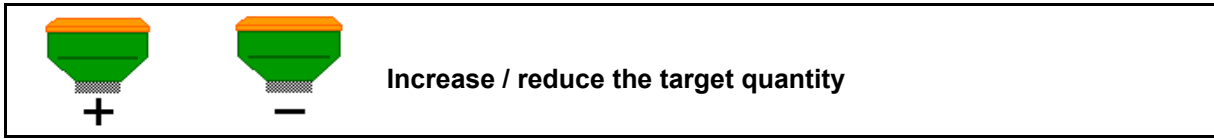
To prevent unintentional start-up of the metering unit, it can be switched off.

This can be useful, since even small movements in front of the radar sensor can cause the metering unit to start running.

→ Display metering unit switched off

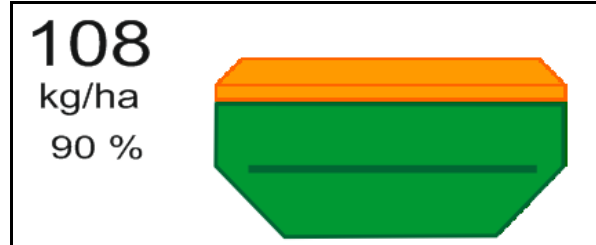





## 12.14 Change in target quantity



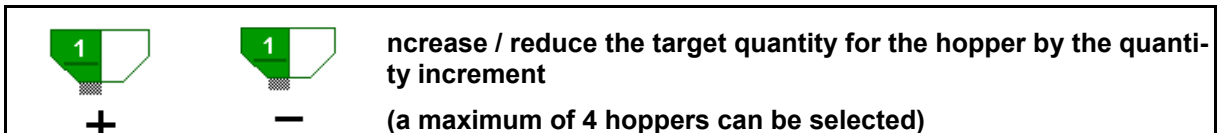
The target quantity can be changed as required during operation.

The changed target quantity is shown in kg/ha and percent in the Work menu.



-  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%).

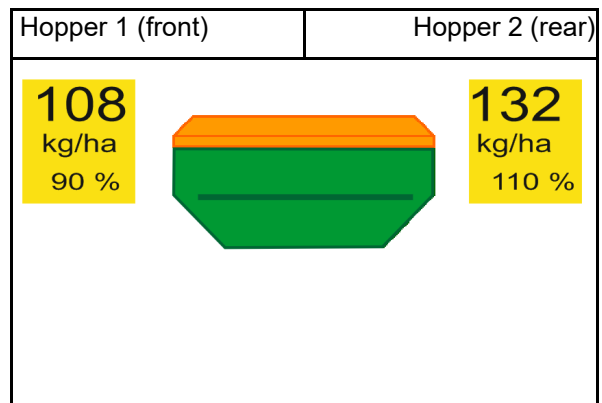
## 12.15 Change in the target quantity with divided hopper



Each time the key is pressed, the target quantity is increased by the application rate (e.g.: +10%).

- Hopper 1
- Hopper 2
- Hopper 3
- Hopper 4

The changed target quantity is shown in kg/ha and percent in the Work menu.



## 12.16 Water hole function



### Switching the water hole function on / off

The water hole function allows driving through wet areas with the implement lifted without interrupting seeding.



1. Pre-select the water hole function.

2. Actuate the *yellow* tractor control unit.

→ Lift the tools.

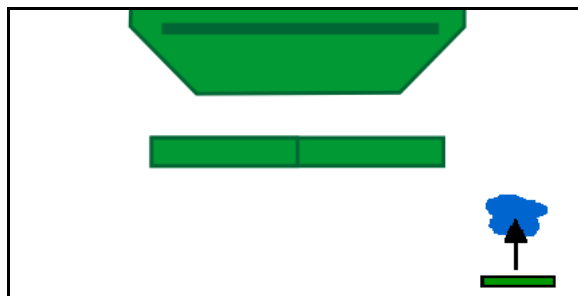
3. Drive through the area.

4. Actuate the *yellow* tractor control unit.

→ Lower the tools.



5. Cancel the pre-selection.



## 12.17 Alternative view hopper pressure



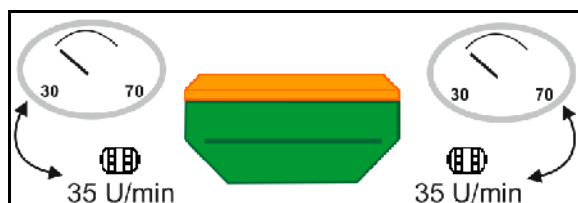
Only for seed hopper with positive pressure:  
Display of positive pressure in seed hopper



1. Display showing positive pressure in seed hopper.



2. Back to display speed dosing motor.




## 12.18 Recording mode for recording a field boundary




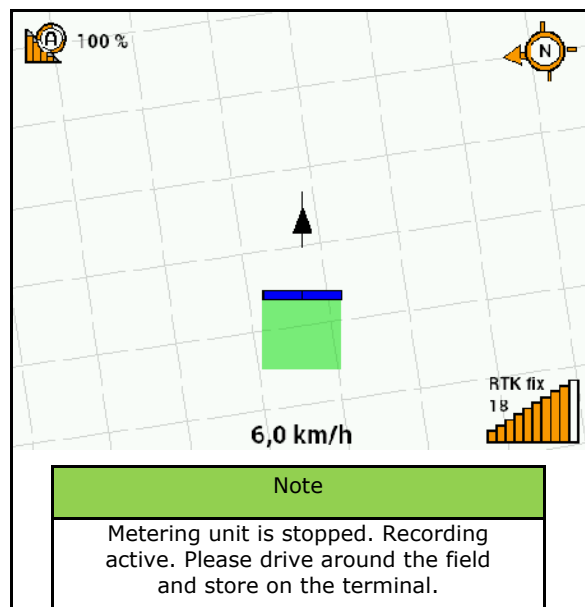
Switching the recording mode on / off

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.



## 12.19 Boom part width sections





0 / 1



0 / 1

Half-sided part width section control

-  Switch left part width section on / off
-  Switch right part width section on / off

→ Display part width section left switched off.

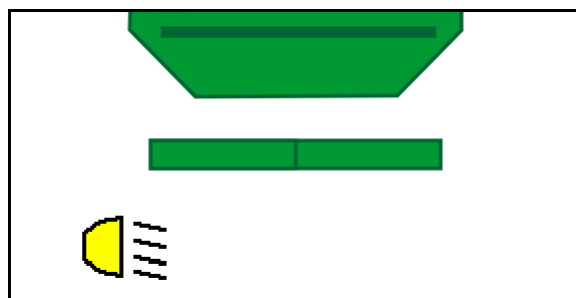


## 12.20 Work lights

|                                                                                   |                                  |
|-----------------------------------------------------------------------------------|----------------------------------|
|  | <p>Work floodlights on / off</p> |
|-----------------------------------------------------------------------------------|----------------------------------|


|                                                                                   |                                                                                                                                                              |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>WARNING</b></p> <p><b>Risk of accident by dazzling other road users!</b></p> <p>When driving on the roads, keep the work floodlights switched off.</p> |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|

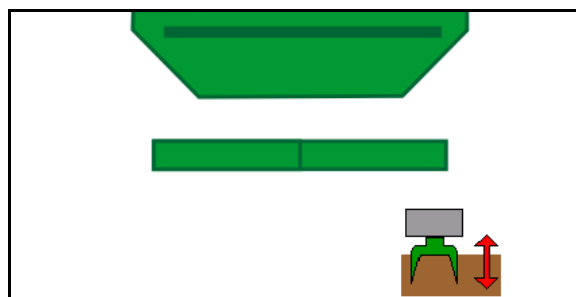
→ Display work floodlights switched on.



## 12.21 KG depth adjustment

|                                                                                     |                                    |
|-------------------------------------------------------------------------------------|------------------------------------|
|  | <p>Adjust the KG working depth</p> |
|-------------------------------------------------------------------------------------|------------------------------------|


1.  Pre-select KG depth adjustment.
2. Actuate the *beige* tractor control unit.




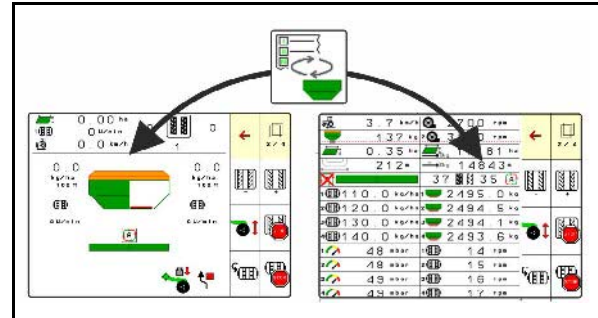


## 12.22 Overview Multi-functional display

|                                                                                   |                                                   |
|-----------------------------------------------------------------------------------|---------------------------------------------------|
|  | Change the work view/multi-function view displays |
|-----------------------------------------------------------------------------------|---------------------------------------------------|

1.  Switch to multi-function display overview.


2.  Back to work view.




## 12.23 Procedure for use

1. TaskController: task or start internal documentation.
2. If necessary, switch on Section Control on the control terminal.
3. Check the data in the Product menu and determine the calibration factor.



4.  Unfold the implement if necessary
5. Towed implements: Lower the coulters into working position.
6. Select the track marker shifting and lower the desired track marker.
7. Select the tramline rhythm and enter the correct tramline number.



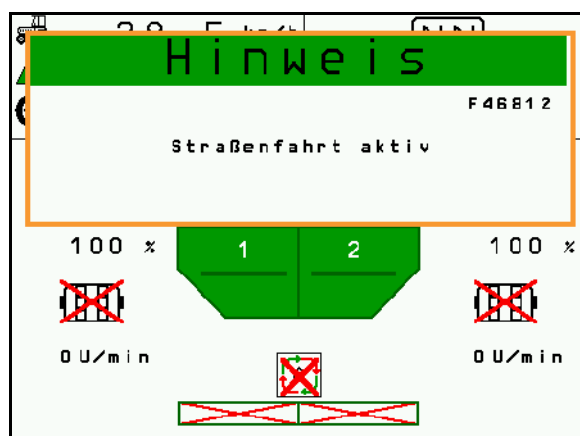
8.  Switch on Section Control if necessary.
9. Start seeding.
10. After approx. 30 m, come to a stop and check the seeding.

## 12.24 Driving on public roads

When driving at more than 20 km/h and with the blower fan turned off, the control terminal switches to road travel mode.

In road travel mode, it is not possible to operate the implement using the control terminal.

For subsequent seeding on the field, the seed metering unit must be unlocked again, see page 68.



## 13 TwinTerminal 3

### 13.1 Product description

The TwinTerminal 3 is located directly on the implement and is used

- for convenient calibration of the seed.
- for convenient residual emptying.

The TwinTerminal 3 is switched on using the control terminal.

**Alternating display:**



**4 Softkeys:**



The TwinTerminal is operated using 4 softkeys.  
The function fields show the current function of the softkeys.



Back to the start screen.





On the control terminal, errors or warnings are displayed with a text message. The TwinTerminal then shows the following notice:




## TwinTerminal 3



### On the control terminal:



-  Switch on the TwinTerminal through the *Product* menu.
- Performing the calibration with the TwinTerminal
-  Switch on the TwinTerminal through the *Residual emptying* menu.
- Residual emptying via the TwinTerminal

Display on the control terminal when TwinTerminal is active.

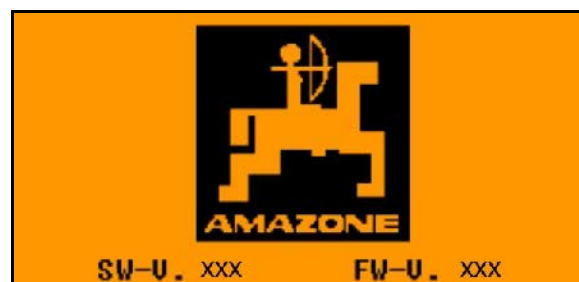
 Cancel the work on the TwinTerminal.

→ Control terminal active again.

|                                                                                                               |         |
|---------------------------------------------------------------------------------------------------------------|---------|
|  Product menu                |         |
|  Activate external operation |         |
| Hopper 1                                                                                                      | cereals |
| Setpoint application rate                                                                                     | kg/ha   |
| Calibration factor                                                                                            | ✓       |
| Speed band                                                                                                    | km/h    |




|                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Cirrus                                                                                              |
| Note                                                                                                                                                                                  |
| External operation active                                                                                                                                                             |
| <div style="border: 1px solid black; padding: 5px; display: inline-block;">  Cancel         </div> |

Start screen with software version:



## 13.2 Performing a calibration

Partitioned hopper:

1.   Divided hopper: select hopper 01, 02 or other for the calibration.
2.  Confirm selection.



Partitioned hopper, identical seed, simultaneous metering adjustment.


- The target quantity must be divided to the metering units.
- The calibration test must be carried out for the appropriate proportion of the target quantity per metering unit.

3. Check the following entries before calibrating.
  - o Hopper 1, 2 (for partitioned hopper → 2 rear)
  - o Target quantity
  - o Size of the metering roller in ccm
  - o Calibration factor
  - o Relative area for which the implement will be calibrated
  - o Intended forward speed




4.  Confirm entries.

5.  Pre-metering (keep key pressed)


6.  Confirm that pre-metering is concluded.


→ After pre-metering, empty the collection hopper again.

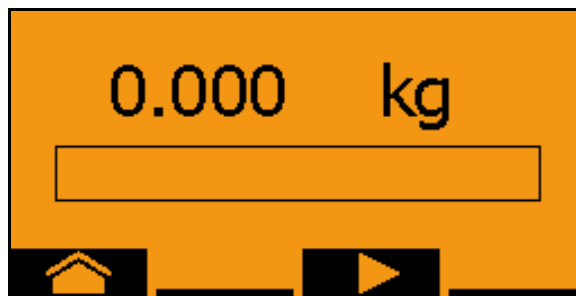


7.  Confirm that the flap under the metering unit is opened and that a collection container is placed underneath.





8.  Start with the calibration procedure (keep key pressed during calibration).

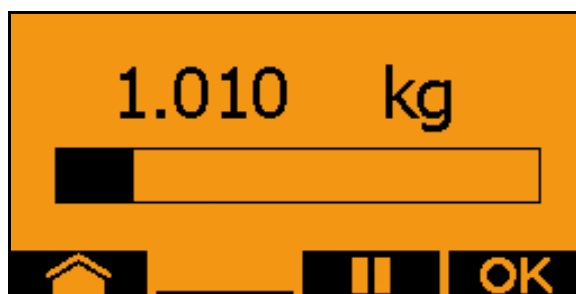
 The calibration procedure can be interrupted and started again.



→ During the calibration procedure the theoretic spread quantity will be displayed.


 As soon as OK appears, the calibration test can be ended prematurely:

 End the calibration test.



Display green: The calibration procedure is finished, the motor stops automatically.

9. Release key.

10.  Go to the entry menu for the calibration quantity.



11. Weigh the collected quantity.



12. Enter the value for the collected quantity.


→ To enter the collected quantity in kg, a decimal number with 2 places before and 3 places after the point is available.

→ Each decimal place is entered separately.

- 12.1   Select decimal place.



  The selected decimal place is indicated by an arrow.

- 12.2  Go to the menu for numeric entry.





→ The underscore indicates the possible numeric entry.

- 12.3   Enter the decimal value.

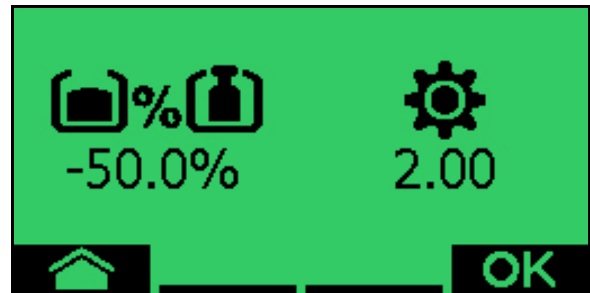
- 12.4  Confirm decimal value.

- 12.5 Enter additional decimal values.



13.  Exit entry menu (activate several times if necessary)
- until the following display appears: 
14.  Confirm value for collected quantity.
- New calibration factor will be displayed.
- Difference between the calibration quantity and the theoretic quantity is displayed in %.
15.  Exit Calibration menu, Start menu is displayed.



The calibration procedure is finished.




### 13.3 Residual emptying

1. Stop the implement.
2. Switch off the blower fan.
3. Secure the tractor and implement against unintentional rolling.
4. Open the flap of the injector.
5. Fasten collection bag or trough under the hopper opening.



6.   Divided hopper: select hopper 01, 02 or other for the calibration.

7.  Confirm selection.

8.  Confirm that the flap under the metering unit is opened and that a collection container is placed underneath.



9.  Emptying (press and hold the button)





## 14 AUX-N multi-function sticks

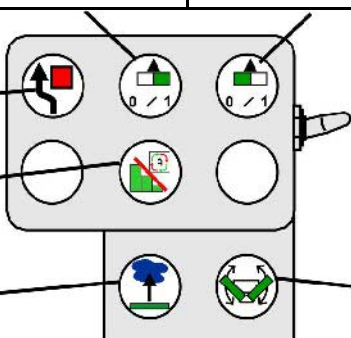


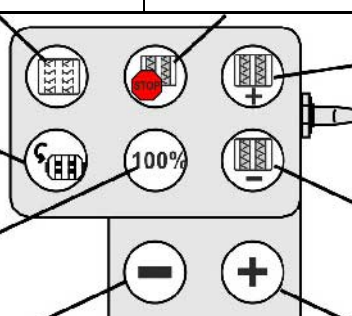
### AUX-N - Auxiliary Control

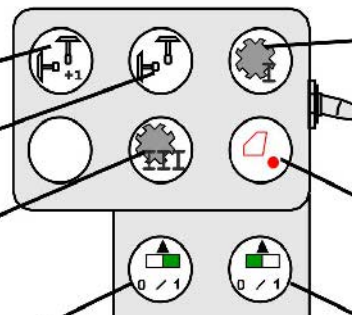
The implement computer supports the AUX-N standard. Therefore, the functions of the implement can be assigned to an AUX-N-compliant multi-function stick.

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

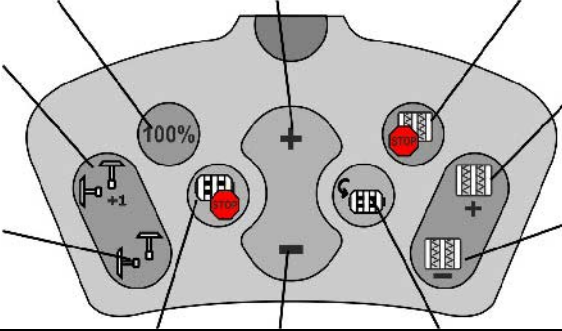
### Assignment of WTK multi-function stick

| Boom part width sections on the left on / off |                                                                                    | Boom part width sections on the right on / off |           |
|-----------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------|-----------|
| Track marker obstacle switching               |  |                                                |           |
| Switching Section Control on / off            |                                                                                    |                                                |           |
| Switching the water hole function on / off    |                                                                                    |                                                | Fold boom |

| Interval tramline          |                                                                                     | Tramline stop |                               |
|----------------------------|-------------------------------------------------------------------------------------|---------------|-------------------------------|
| Pre-metering               |  |               | Shift on the tramline counter |
| Target quantity 100%       |                                                                                     |               | Reset channel counter         |
| Reduce the target quantity |                                                                                     |               | Increase the target quantity  |

|                                                             |                                                                                     |                                                |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------|
| In alternating mode,<br>change track marker left<br>/ right |  | Pre-selection tool 1                           |
| Track marker pre-<br>selection                              |                                                                                     | Switching the recording<br>mode on / off       |
| Pre-selection tool 3                                        |                                                                                     |                                                |
| Boom part width sections on the left on / off               |                                                                                     | Boom part width sections on the right on / off |

## Assignment of the Fendt multi-function stick

|                                                             |                                                                                    |                              |                                  |
|-------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------|----------------------------------|
| Target quantity at 100%                                     |                                                                                    | Increase the target quantity | Tramlines STOP                   |
| In alternating mode,<br>change track marker left<br>/ right |  |                              | Shift on<br>the tramline counter |
| Track marker pre-<br>selection                              |                                                                                    |                              | Reset the<br>tramline counter    |
| Stop / start the metering unit                              | Reduce the target<br>quantity                                                      | Premetering                  |                                  |

## 15 AmaPilot/AmaPilot+ multi-function stick

The implement functions can be executed using the AmaPilot+.

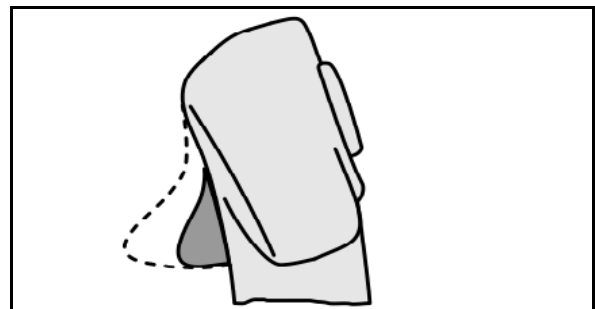
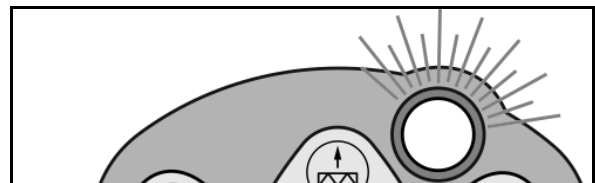
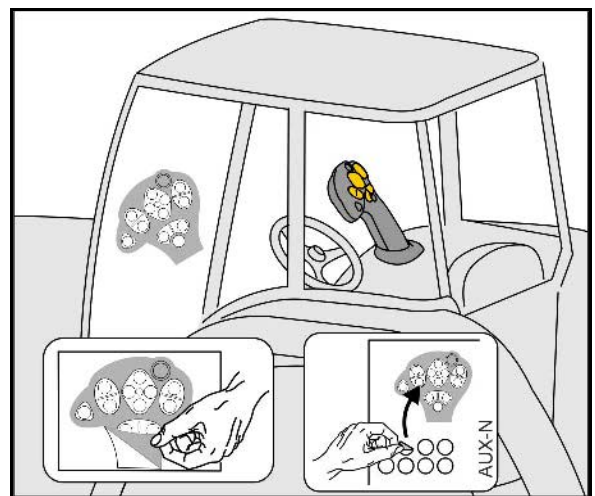
AmaPilot+ is an AUX-N control element with freely selectable button assignment.

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.

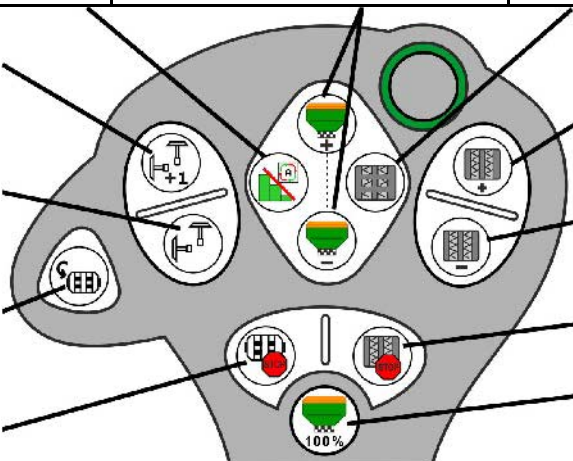
In addition to the standard level, two other control levels can be switched.

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.

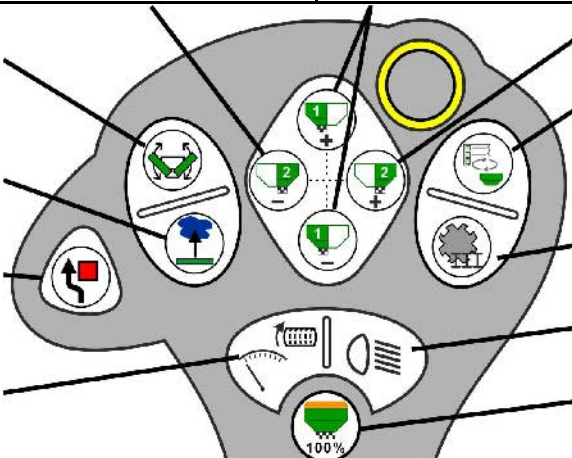


- Standard level,  
Illuminated button is green.
- Level 2 when trigger on the back is held,  
Illuminated button is yellow.
- Level 3 after pressing the illuminated button,  
Illuminated button is red.

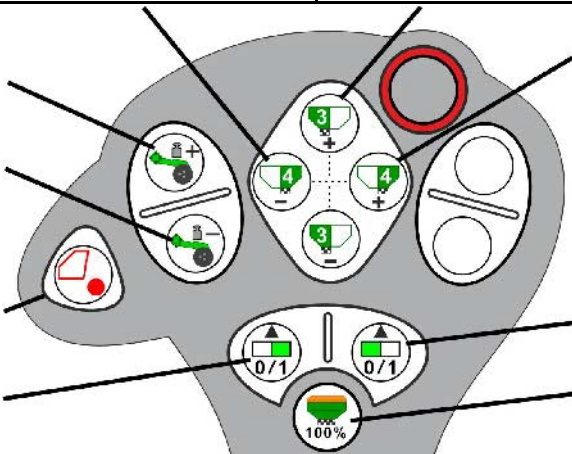
**AmaPilot+ with fixed assignment / default assignment**
**Standard level, green**

| Switching Section Contro                              | Increase / reduce the target quantity                                              | Interval tramline                  |
|-------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------|
| In alternating mode, change track marker left / right |  | Shift forward the tramline counter |
| Track marker pre-selection                            |                                                                                    | Reset the tramline counter         |
| Pre-metering                                          |                                                                                    | Tramlines STOP                     |
| Stop / start the metering unit                        |                                                                                    | Target quantity 100%               |

**Level 2, yellow**

| Reduce target quantity for hopper 2 |                                                                                     | Increase / reduce target quantity for hopper 1 |                                  |
|-------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| Fold boom                           |  | Increase target quantity for hopper 2          | Overview multi-function displays |
| Water hole function                 |                                                                                     | Pre-selection tool 3                           | Lighting                         |
| Track marker obstacle switching     |                                                                                     | Target quantity 100%                           |                                  |
| Display pressure / speed            |                                                                                     |                                                |                                  |
|                                     |                                                                                     |                                                |                                  |

**Level 3, red**

| Reduce target quantity for hopper 4           |                                                                                      | Increase / reduce target quantity for hopper 3 |  |
|-----------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------|--|
| Increasing the coulter pressure               |  | Increase target quantity for hopper 4          |  |
| Decreasing the coulter pressure               |                                                                                      |                                                |  |
| Recording mode for field boundary             |                                                                                      | Boom part width sections on the right on / off |  |
| Boom part width sections on the left on / off |                                                                                      | Target quantity 100%                           |  |

## 16 Fault

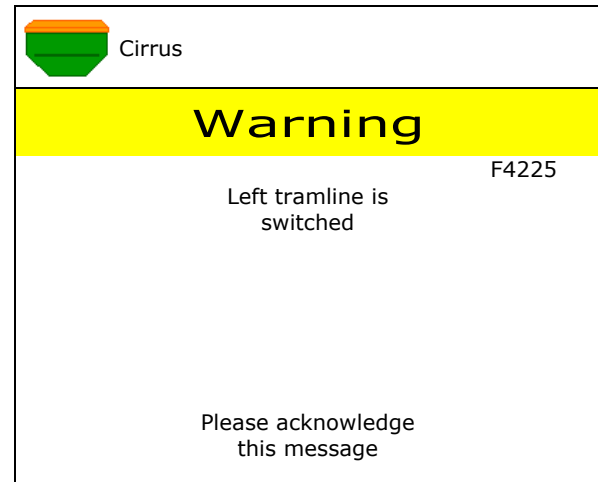
### 16.1 Display on the control terminal

A message appears as:

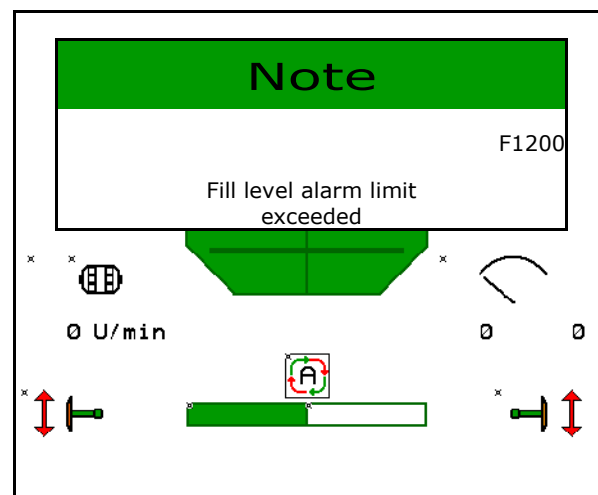
- Note
- Warning
- Alarm

The following are displayed:

- The number of the fault
- A text message
- If applicable, the symbol of the respective menu



**Note:**



## 16.2 Fault table

| Number | Species | Cause                                                                                                                   | Remedy                                                                                                                                                                  |
|--------|---------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F45000 | Warning | Motor of the one-sided switching cannot be controlled                                                                   | Check the system for blockages and remove them<br>Move the motor via the Diagnostics menu or replace the motor                                                          |
| F45001 | Warning | Motor of the one-sided switching cannot be controlled                                                                   | Check the system for blockages and remove them<br>Move the motor via the Diagnostics menu or replace the motor                                                          |
| F45002 | Warning | Defective or incorrectly set sensor on the electric one-sided switching or cable break                                  | Check the sensor in the diagnosis menu by moving the one-sided switching, if necessary, realign or replace                                                              |
| F45003 | Warning | Defective or incorrectly set sensor on the electric one-sided switching or cable break                                  | Check the sensor in the diagnosis menu by moving the one-sided switching, if necessary, realign or replace                                                              |
| F45004 | Warning | Defective sensor or cable break                                                                                         | Check the voltage of the pressure sensor in the diagnosis menu. The value should be greater than 0.5 V. Check the wiring and, if necessary, replace the pressure sensor |
| F45005 | Warning | Defective sensor or cable break                                                                                         | Check the voltage of the pressure sensor in the diagnosis menu. The value should be greater than 0.5 V. Check the wiring and, if necessary, replace the pressure sensor |
| F45007 | Note    | Low filling level or defective sensor or cable break                                                                    | Check fill level, check sensor in the Diagnosis menu, check the wiring harness                                                                                          |
| F45008 | Note    | Metering unit cannot turn slower                                                                                        | Drive faster,<br>calibrate again<br>adjust application rate                                                                                                             |
| F45009 | Note    | Metering unit cannot turn faster                                                                                        | Drive slower<br>Repeat calibration<br>Adjust application rate                                                                                                           |
| F45010 | Note    | Stop button has been selected                                                                                           | Deactivate stop button                                                                                                                                                  |
| F45011 | Note    | Metering unit stop has been selected                                                                                    | Deactivate stop metering unit                                                                                                                                           |
| F45012 | Warning | The folding process has taken longer than 3 minutes                                                                     | Restart folding procedure                                                                                                                                               |
| F45013 | Note    | Pulse per 100 m is set to zero in the implement setup                                                                   | Enter the pulses per 100 m or run in                                                                                                                                    |
| F45014 | Note    | The user has entered an invalid value                                                                                   | The user must enter a larger value                                                                                                                                      |
| F45015 | Warning | Speed below 200 rpm, defective sensor, cable break                                                                      | Check speed, check sensor in the Diagnostics menu, check the wiring harness                                                                                             |
| F45016 | Warning | Incorrect configuration, cable break between the base computer and OSS computer, defective one-sided switching computer | Check the configuration, check the wiring harness, replace one-sided switching computer                                                                                 |
| F45017 | Note    | The specified minimum pressure is dropped below                                                                         | Increase blower fan speed of the singling blower fan<br>If necessary, reduce the min. value<br>Call up the diagnosis menu (e.g. defective sensor)                       |
| F45018 | Note    | The maximum specified pressure is exceeded                                                                              | Minimize blower fan speed<br>if necessary, increase pressure<br>call-up diagnosis menu (e.g. sensor defective)                                                          |

|        |         |                                                                                                                    |                                                                                                                                                                                        |
|--------|---------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F45019 | Warning | The working position sensor on the implement has failed                                                            | Break in the wiring harness or defective working position sensor                                                                                                                       |
| F45020 | Warning | The user has selected a tramline rhythm that is not supported                                                      | Adjust the implement configuration or select a valid rhythm for this implement                                                                                                         |
| F45021 | Note    | Deviation between target quantity in the calibration menu and in the job menu                                      | Call up the Calibration menu in order to determine a new calibration factor or ignore the error message by confirming with the input key (caution, incorrect spread rate is possible!) |
| F45022 | Note    | Export of the settings is not possible as no ISOBUS file server has been started.                                  | Start the ISOBUS file server and try exporting again.                                                                                                                                  |
| F45023 | Note    | Import of the settings is not possible as no ISOBUS file server has been started.                                  | Start the ISOBUS file server and try exporting again.                                                                                                                                  |
| F45024 | 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           |
| F45025 | ALARM   | The working position from ISOBUS is currently no longer available.                                                 | The user must check the TECU (tractor control unit) settings for the tractor.                                                                                                          |
| F45026 | 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.                                                                                                 |
| F45027 | Note    | The user has changed the setpoint spread rate considerably and might have to change to a different metering roller | Confirm or change the metering roller to achieve a sufficient speed band                                                                                                               |
| F45028 | Note    | The user has set a residual quantity for the hopper and the current residual quantity is 0.0 kg.                   | Fill the hopper using the filling management or the product menu. Alternatively, switch over to fill level sensors                                                                     |
| F45029 | Warning | A major hardware error has occurred in the control unit.                                                           | If this warning reoccurs, contact your dealer                                                                                                                                          |
| F45030 | Warning | Mechanical defect or defective sensor or cable break                                                               | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45031 | Warning | Mechanical defect or defective sensor or cable break                                                               | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45032 | Note    | Road travel was detected and the blower fan is not switched off.                                                   | Please switch off the blower fan.                                                                                                                                                      |
| F45033 | Warning | Mechanical defect or defective sensor or cable break                                                               | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45034 | Warning | Mechanical defect on the tramline motor or cable break                                                             | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45035 | Warning | Mechanical defect on the tramline motor or cable break                                                             | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45036 | Warning | Mechanical defect on the tramline motor or cable break                                                             | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45037 | Note    | Low filling level or defective sensor or cable break                                                               | Check fill level, check sensor in the Diagnosis menu, check the wiring harness                                                                                                         |
| F45038 | Warning | Mechanical defect or defective sensor or cable break                                                               | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                                               |
| F45039 | Note    | The residual quantity in the hopper set by the user has been reached.                                              | Refilling the hopper                                                                                                                                                                   |
| F45040 | Note    | The speed source from ISOBUS is currently no longer available.                                                     | The user must check the TECU (tractor control unit) settings for the tractor.                                                                                                          |



## Fault

|        |         |                                                                                                                                                    |                                                                                                                                                                   |
|--------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F45041 | Alarm   | The user has actuated the ISOBUS shortcut button and the implement is being put into safe mode                                                     | Deactivate the ISOBUS shortcut again to operate the implement                                                                                                     |
| F45042 | Alarm   | The user has enabled the ISOBUS shortcut button                                                                                                    | The user must confirm that the implement is activated again                                                                                                       |
| F45043 | Warning | Mechanical defect or defective sensor or cable break                                                                                               | Checking the mechanism of the tramline gap or call up the diagnosis menu                                                                                          |
| F45044 | Alarm   | The residual quantity in the hopper set by the user in the sequence menu has been reached and the hopper will be changed.                          | Deactivate the sequence menu                                                                                                                                      |
| F45045 | Note    | Blower fan operates outside the tolerance range set                                                                                                | Change tolerance range, check the sensor, check the hydraulics                                                                                                    |
| F45046 | 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. If a sensor (implement) is defective, it must be removed from the wiring harness. |
| F45047 | Warning | Mechanical defect on the metering motor or cable break                                                                                             | Call up the diagnosis menu, control the motor and check the rotary impulse                                                                                        |
| F45048 | Warning | Mechanical defect on the metering motor or cable break                                                                                             | Call up the diagnosis menu, control the motor and check the rotary impulse                                                                                        |
| F45049 | Warning | Open metering flap, defective sensor, cable break                                                                                                  | Close metering flap, replace sensor, check wiring harness (only with older metering units made from VA)                                                           |
| F45050 | Note    | The residual quantity in the hopper set by the user has been reached.                                                                              | Refilling the hopper                                                                                                                                              |
| F45051 | Note    | The residual quantity in the hopper set by the user has been reached.                                                                              | Refilling the hopper                                                                                                                                              |
| F45052 | Warning | Calibration flap sensor installed and implement should meter with the calibration flap open.                                                       | Close calibration flap                                                                                                                                            |
| F45053 | Note    | Calibration flap sensor installed and implement should be calibrated when the calibration flap is closed                                           | Open calibration flap                                                                                                                                             |
| F45054 | Note    | A speed and a blower fan speed are at hand on the job computer. To continue, the implement must be stopped and the blower fan must be switched off | Stop implement and blower fan                                                                                                                                     |
| F45055 | Note    | Export of the settings is not possible                                                                                                             | Adjust the target / source for the export                                                                                                                         |
| F45056 | Note    | Import of the settings is not possible                                                                                                             | Adjust the target / source for the import                                                                                                                         |
| F45057 | Note    | The currently selected settings are not correct and have not been saved.                                                                           | Check the settings                                                                                                                                                |
| F45058 | Note    | The implement has detected an outdated software version in one of the sub-systems.                                                                 | Check the software for the sub-systems and perform an update if necessary                                                                                         |
| F45064 | Note    | Section Control has been deactivated by the terminal                                                                                               | Activate Section Control on the terminal or check the settings for the terminal                                                                                   |
| F45066 | Note    | Metering system reaches its performance limit                                                                                                      | Increase / reduce speed and/or adjust target quantity.<br>Faulty speed calculation (check pulses per 100 m)                                                       |
| F45068 | Note    | The user has selected the export of the settings                                                                                                   |                                                                                                                                                                   |



|        |         |                                                                                                                                                                    |                                                                                                                                  |
|--------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| F45069 | Note    | The user has selected the import of the settings                                                                                                                   |                                                                                                                                  |
| F45070 | Note    | The user has allocated a changed product to a hopper. The product settings must be checked.                                                                        |                                                                                                                                  |
| F45072 | Note    | The user has made a change on the implement that requires a restart.                                                                                               |                                                                                                                                  |
| F45073 | Warning | The job computer has determined undervoltage on the 12V electronics or 12V load                                                                                    | Check the connection of the basic equipment on the battery, possible cable break / crushing, check voltages via Diagnostics menu |
| F45074 | Note    | The calibration flap option has been activated in the setup and the current status of the implement requires that the calibration flap be closed                   | Close the calibration flap                                                                                                       |
| F45075 | Note    | The roller and spread rate entered by the user is not optimal, the calibration factor may have been shifted. The metering motor cannot maintain the required speed | Use a different metering roller or adjust the spread rate, or reset the calibration factor to 1.00                               |
| F45076 | Warning | Incorrect configuration, cable break between the basis and hydraulic computer, defective hydraulic computer                                                        | Check the configuration, check the wiring harness, replace hydraulics computer                                                   |
| F45077 | Note    | Metering unit cannot turn slower                                                                                                                                   | Drive faster<br>Repeat calibration<br>Adapt application rate                                                                     |
| F45078 | Note    | Metering unit cannot turn faster                                                                                                                                   | Drive slower<br>Repeat calibration<br>Adapt application rate                                                                     |
| F45079 | Note    | The metering system with the mentioned number is reaching its performance limit                                                                                    | Increase / reduce speed and/or adjust target quantity.<br>Speed calculation is wrong (check impulse per 100 m)                   |
| F45080 | Note    | The mentioned fan is operating outside the set tolerance range                                                                                                     | Change tolerance range, check the sensor, check the hydraulics                                                                   |
| F45081 | Note    | The hopper change set by the user is invalid                                                                                                                       | Select a valid hopper                                                                                                            |
| F45082 | Note    | The residual quantity in the hopper set by the user has been reached.                                                                                              | Refilling the hopper                                                                                                             |
| F45083 | Note    | The residual quantity in the hopper set by the user has been reached.                                                                                              | Refilling the hopper                                                                                                             |
| F45084 | Warning | Incorrect configuration, cable break between the two base computers, defective base computer                                                                       | Check the configuration, check the wiring harness, replace base computer                                                         |
| F45085 | Note    | Effective immediately, the switch-on and -off times that were manually optimised by the user will be added to / subtracted from the times determined by AutoPoint  | --                                                                                                                               |

## Fault

|        |         |                                                                                                                                   |                                                                                                                                                   |
|--------|---------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| F45086 | Warning | Mechanical defect on the metering motor or cable break                                                                            | Call up the diagnosis menu, control the motor and check the rotary impulse                                                                        |
| F45087 | Warning | Mechanical defect on the metering motor or cable break                                                                            | Call up the diagnosis menu, control the motor and check the rotary impulse                                                                        |
| F45088 | Warning | An error has occurred while importing several parameters.                                                                         | After the import, check all of the settings for the implement in the Setup / Product menu / User menu                                             |
| F45089 | Warning | When moving the one-sided switching, the current was too high and a forced shut-off was triggered for self-protection             | Check the system for blockages and remove them, adjust the motor if necessary. Move the motor via the Diagnostics menu or replace the motor       |
| F45090 | Warning | When moving the one-sided switching, the current was too high and a forced shut-off was triggered for self-protection             | Check the system for blockages and remove them, adjust the motor if necessary. Move the motor via the Diagnostics menu or replace the motor       |
| F46800 | Note    | Metering unit cannot turn faster                                                                                                  | Drive slower<br>Repeat calibration<br>Adjust application rate                                                                                     |
| F46801 | Note    | The specified minimum pressure is dropped below                                                                                   | Increase blower fan speed of the singling blower fan<br>If necessary, reduce the min. value<br>Call up the diagnosis menu (e.g. defective sensor) |
| F46802 | Note    | The maximum specified pressure is exceeded                                                                                        | Minimize blower fan speed<br>if necessary, increase pressure<br>call-up diagnosis menu (e.g. sensor defective)                                    |
| F46803 | Note    | Stop button has been selected                                                                                                     | Deactivate stop button                                                                                                                            |
| F46804 | Note    | Metering unit stop has been selected                                                                                              | Deactivate stop metering unit                                                                                                                     |
| F46806 | Note    | Metering system reaches its performance limit                                                                                     | Increase / reduce speed and/or adjust target quantity.<br>Faulty speed calculation<br>(check pulses per 100 m)                                    |
| F46807 | Note    | Metering unit cannot turn slower                                                                                                  | Drive faster,<br>calibrate again<br>adjust application rate                                                                                       |
| F46808 | Note    | Blower fan operates outside the tolerance range set                                                                               | Change tolerance range, check the sensor, check the hydraulics                                                                                    |
| F46809 | Note    | The residual quantity in the hopper set by the user has been reached.                                                             | Refilling the hopper                                                                                                                              |
| F46810 | Note    | The residual quantity in the hopper set by the user in the sequence menu has been reached and the hopper will be changed.         | Deactivate the sequence menu                                                                                                                      |
| F46811 | Note    | The speed source selected by the user is no longer available and the system automatically switched to a valid alternative source. | Check the cause of failure for the primary source                                                                                                 |
| F46812 | Note    | The implement has detected road travel and is being put into safe mode.                                                           | As soon as seeding operation should begin, the implement must be unlocked.                                                                        |
| F46813 | Note    | The residual quantity in the hopper set by the user has been reached.                                                             | Refilling the hopper                                                                                                                              |
| F46814 | Note    | The residual quantity in the hopper set by the user has been reached.                                                             | Refilling the hopper                                                                                                                              |

|        |      |                                                                                                                 |                                                                                         |
|--------|------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| F46815 | Note | GPS recording mode has been activated by the user.                                                              | Terminate GPS recording mode by pressing again                                          |
| F46816 | Note | Section Control has been deactivated by the terminal                                                            | Activate Section Control on the terminal or check the settings for the terminal         |
| F46817 | Note | The AutoPoint system has determined new switch-on times and AutoPoint messages have been activated by the user  | Deactivate AutoPoint messages, or change the new times manually on the ISOBUS terminal. |
| F46818 | Note | The AutoPoint system has determined new switch-off times and AutoPoint messages have been activated by the user | Deactivate AutoPoint messages, or change the new times manually on the ISOBUS terminal. |

### 16.3 Failure of functions without alarm message on the terminal

If function failures occur that are not displayed on the control terminal, check the fuse of the ISOBUS socket on the tractor.

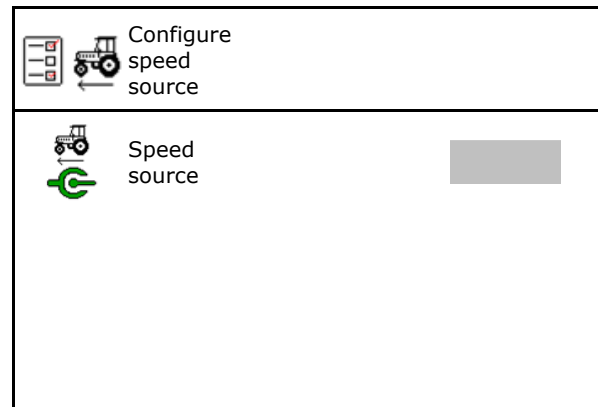
### 16.4 Failure of the speed signal from the ISOBUS

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.





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