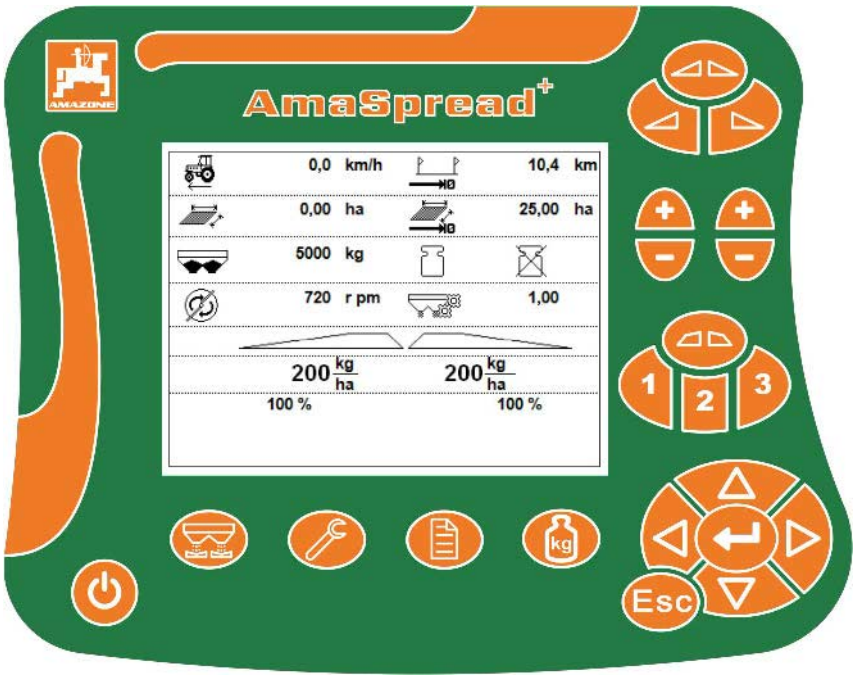
Operating Manual

AMAZONE

AmaSpread +

Control computer



MG5274
BAG0126.4 09.17
Printed in Germany

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.

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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 items in diagrams.

Example (6) → Item 6

2 General Safety Instructions

This section contains important information on safe operation of the implement.

2.1 Obligations and liability

Comply with the instructions in the operating manual

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

2.2 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

3.1 Intended use

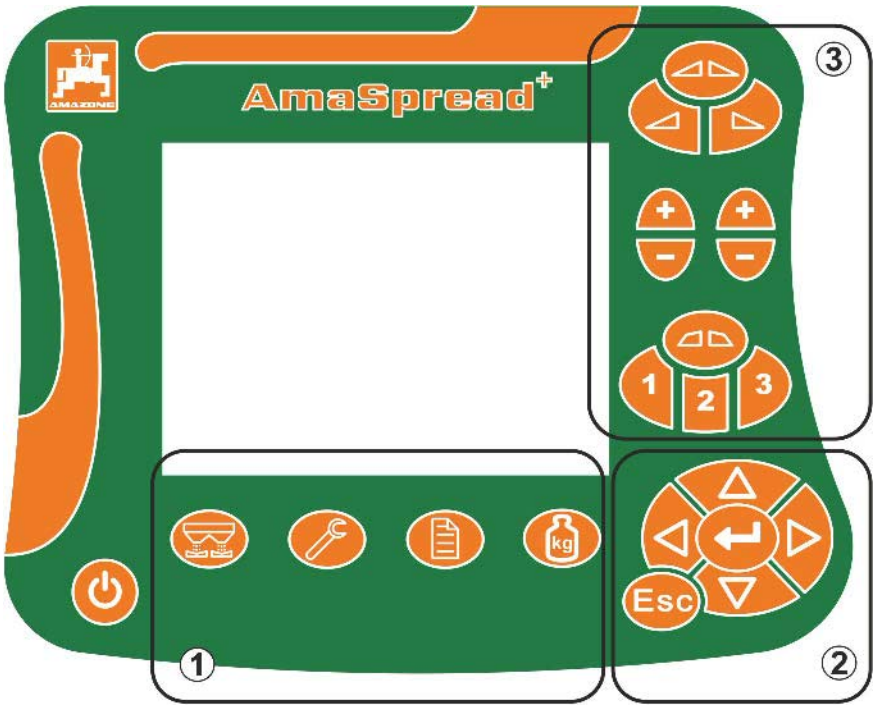
The AmaSpread+ is intended as a display, monitoring and control unit for AMAZONE fertiliser spreaders.

3.2 Function

The AmaSpread+ has the following functions:

- Control and display terminal during operation
- Regulation of the speed-dependant spread rate
- Spread rate check either manually or using weighing technology
- Task management

3.3 Control terminal with buttons



Buttons

Switch on/off button

(1) Submenu buttons

(2) Button to navigate and select

(3) Buttons in the Work menu

The Work menu appears after switching on the control terminal.

3.4 Menus

The AmaSpread+

is divided into the following menus:

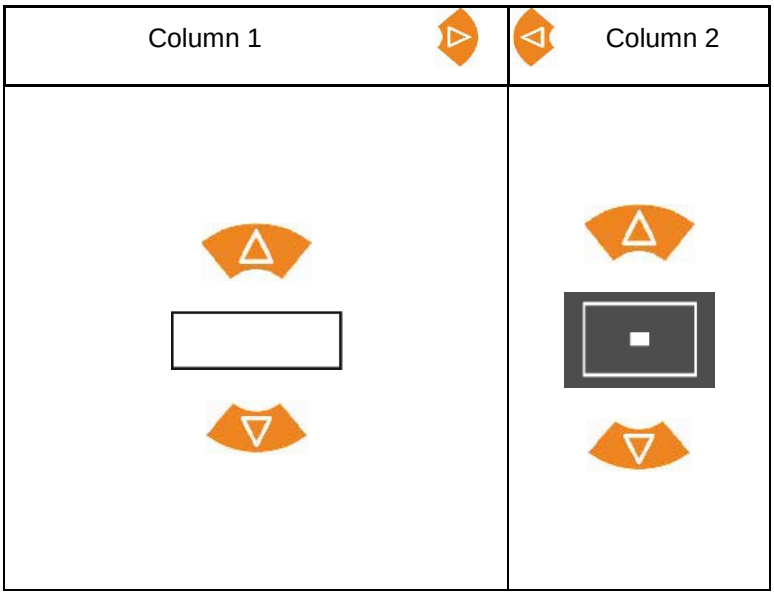
- Work menu
- Settings menu
- Operating data menu
- Weighing, refilling menu

3.5 Navigating in the menu

Buttons for finding and marking menu items.

Marked menu items are:

shown in a box / shown inverted



Select marked menu item

Back to the Main menu

3.6 Entering numbers

24, 0 m Numbers marked with a box can be changed.

Entering numbers

1. , Select the decimal places.

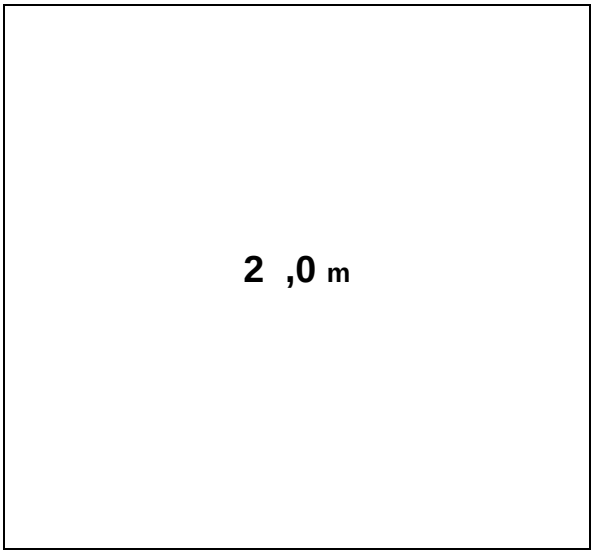
→ Selected decimal place is shown inverted.

2. , Enter the value for decimal places.

3. Confirm the entry and go back.

or

Esc Cancel entry.



3.7 Entering text

Trak 5 Text marked with a box can be changed.

Entering text

1. , , , , Select text element.

→ Selected text element is shown inverted.

2. Acknowledge entry.

3. Complete the text in this manner.

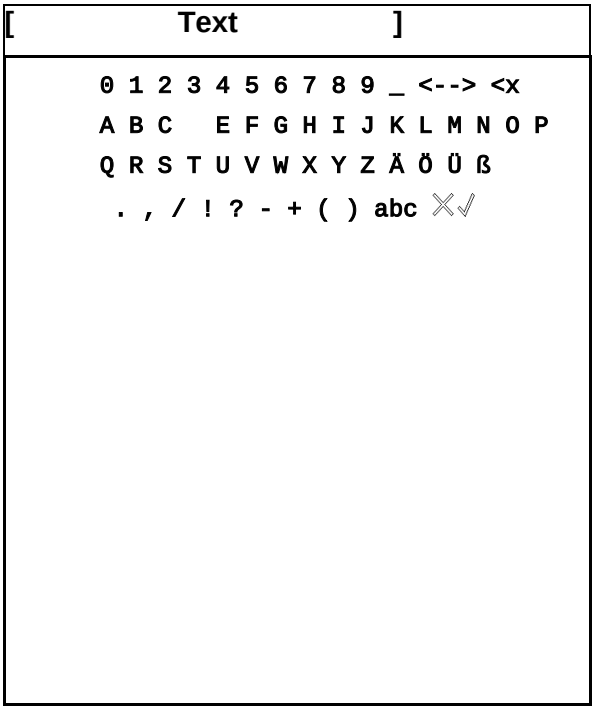
4. Hold for 3 seconds

(or enter ✓).

→ Confirm the entry and go back.

or

Esc Cancel entry (or enter ✗).



3.8 Power supply

12 V tractor socket

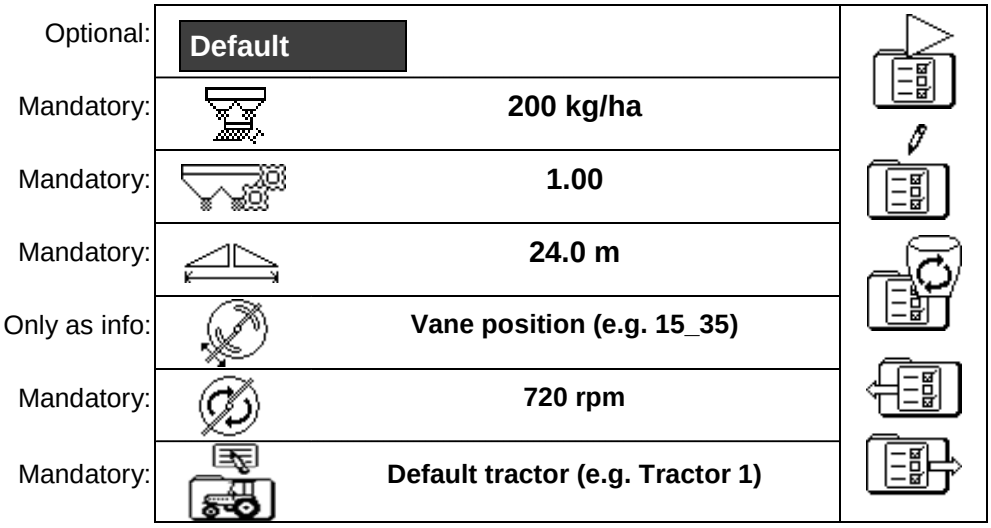
4 Settings

- The settings can be saved under a given name and be called up again.
- Extended settings can also be made.

Name of the Settings	**Default**	**Fertiliser1**	**Fertiliser2**	**Fertiliser3**
Spread rate		1	2	3
Calibration factor		1	2	3
Working width		1	2	3
Blade position		1	2	3
Spreading disc speed		1	2	3
Tractor data		1	2	3
Perform extended settings				
Ditch spreading	1	1 1	2 1	3 1
Boundary spreading	2	1 2	2 2	3 2
Border spreading	3	1 3	2 3	3 3
Empty		1	2	3
Details		1	2	3

The extended settings are set to default values and do not necessarily need to be entered.

4.1 Settings menu



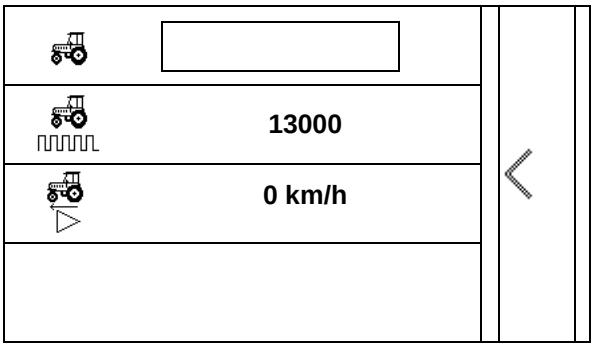
The mandatory settings must be correctly entered. Otherwise, there may be spreading errors.

4.1.1 Tractor data

- Tractor name
- Enter value for pulses per 100 m
- Speed simulator

→ Entry of 0 km/h speed simulator not active

→ Entry >of 0 km/h No speed-proportional spread rate



The pulses per 100 m must be entered for the tractor to ensure the correct spread rate.

Determine the pulses per 100 m, see extended settings, page 23.

4.2 Managing the settings

to Manage settings

back to Settings

Settings	Manage settings
Default	
200 kg/ha	
1.00	
24.0 m	
15_35	
720 rpm	
Tractor 1	

Select function		**Before spreading, always actively control the desired settings!** Setting activated: **Name** Setting not activated: **Name**
		Perform extended out the settings.
		Delete the settings. Must not be activated!
		Scroll back in the saved settings.
		Scroll ahead in the saved settings.

The active function is shown inverted.

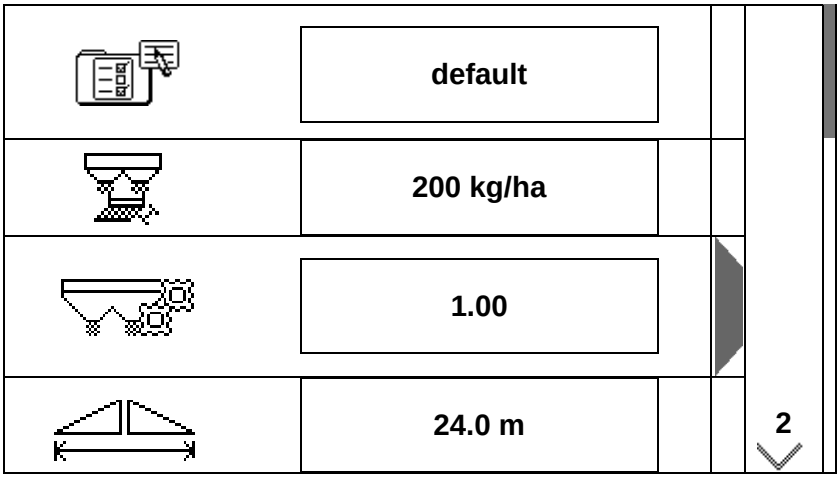
4.3 Extended settings menu

Calling up the Extended settings menu

Page 1:

- Change name
- Enter desired quantity
- Determine / enter the calibration factor

  (see page 15)
- Enter the working width



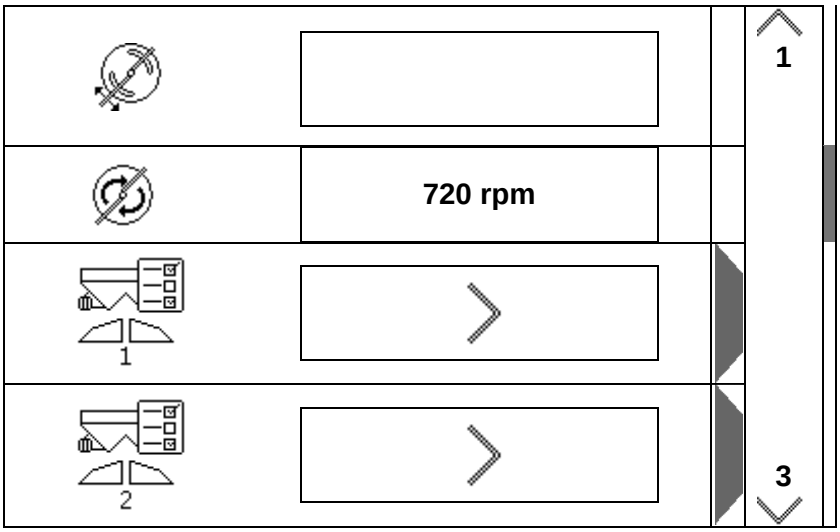
Page 2:

- Vane position: Enter value from the setting chart.
- Enter the spreader disc speed.
- Set the limiter

  Ditch spreading
  (see page 15)
- Set the limiter

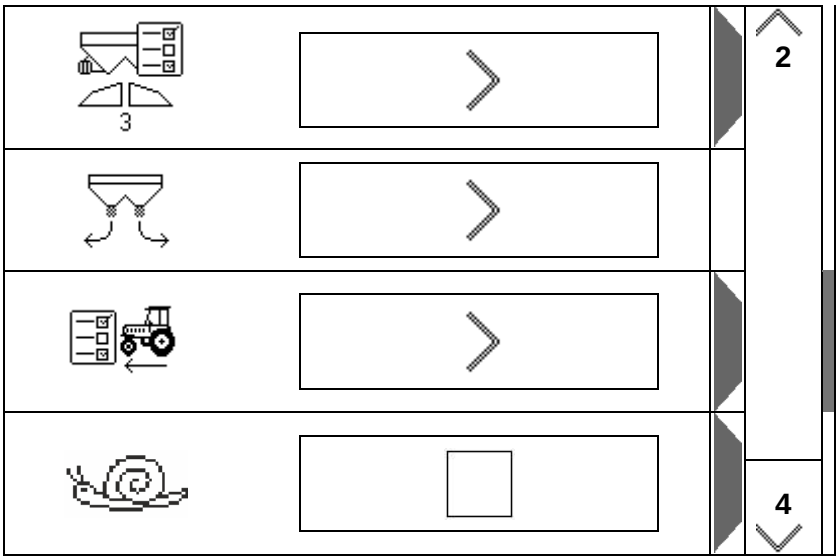
  Boundary spreading

  (see page 15)



Page 3:

- Set the limiter
  Border spreading
  (see page 15)
- Empty hopper
  (see page 15)
- Tractor data menu
  (see page 16)
- Slug pellets, fine seeds on / off



When selecting "Slug pellets, fine seeds", the system switches directly to the Tractor data menu. Enter the simulated speed here.

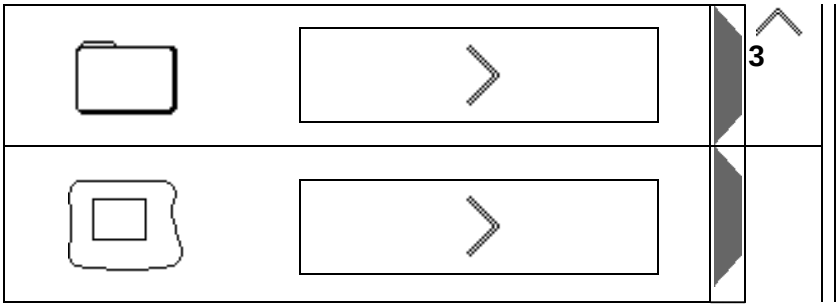
To check the spread rate, enter 0 km/h.

Enter the speed intended for operation.

Page 4:

- Detailed settings
  (see page 17)
- Terminal

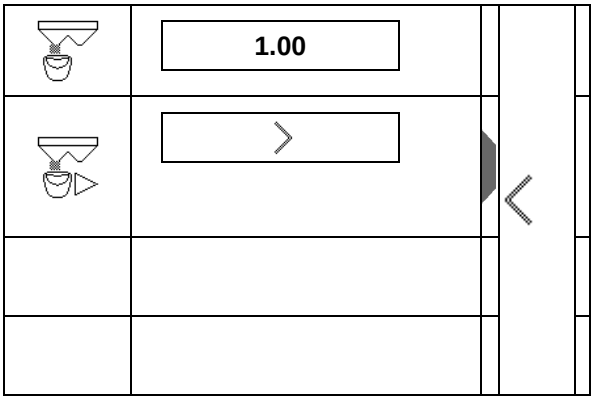
→ (see page 18)



4.3.1 Determining / entering the calibration factor

- Enter the calibration factor
- Determine the calibration factor

(see page 24)



4.3.2 Adjusting the limiter

Perform the settings for:

1 - Ditch spreading

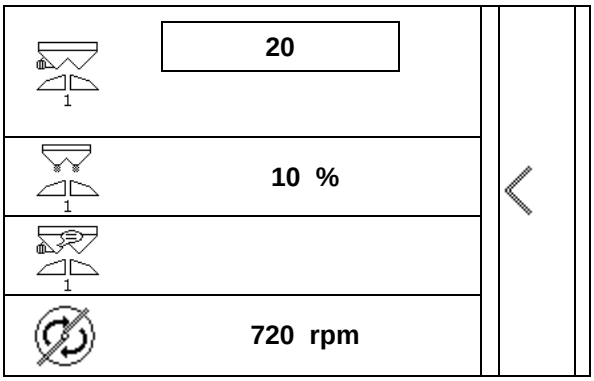
2 - Boundary spreading

3 - Border spreading

- Limiter position

→ 0 Limiter raised to its maximum position
→ 100 Limiter lowered to its maximum position

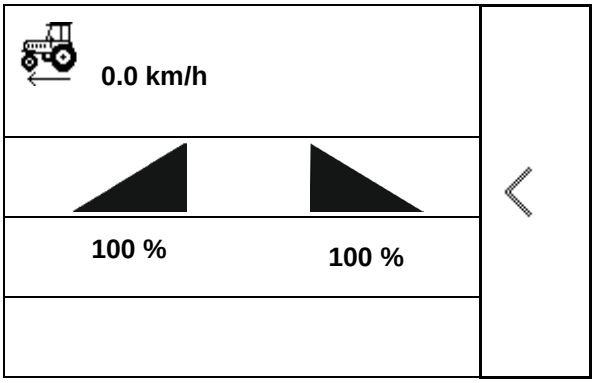
- Quantity reduction
- Note
- Spreading disc speed for boundary spreading



4.3.3 Empty hopper

For residual emptying, open the two shutters and then close them again later.

- Display shutter open / closed
- Display shutter in %



4.3.4 Tractor data

Tractor data	Manage tractor data
Tractor_5	
13000	
0.0 km/h	

Select function		**Before spreading, always actively control the correct tractor!** Tractor active: **Name** Tractor not active: **Name**
		Enter tractor data.
		Delete tractor. Must not be activated!
		Scroll back in the tractor list.
		Scroll ahead in the tractor list.

The active function is shown inverted.

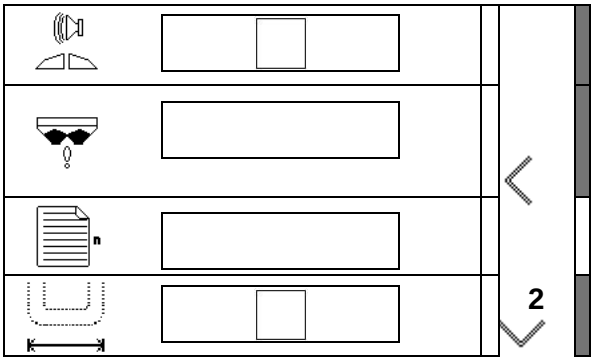
Entering the tractor data

- Tractor name
- Enter value for pulses per 100 m
- Determine pulses per 100 m
  see page 23
- Speed simulator

13000	
0 km/h	

4.3.5 Detailed settings

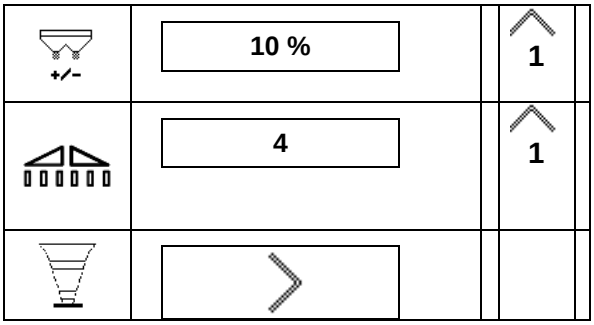
- Signal tone when opening the shutter with active limiter on / off
- Fill level alarm calculated with weighing technology (Profis) / spread rate application (Control)
- Desired number of tasks
- Distance counter to find tramlines on / off



- Quantity increment

  Percent quantity change during operation.
- Part width sections

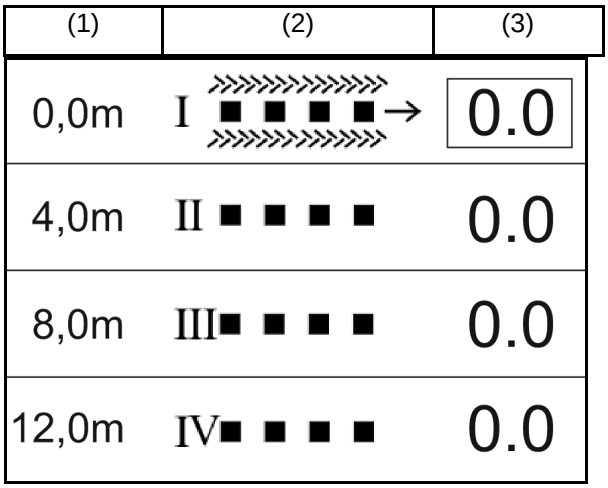
  Select the number of part width sections (2, 4, 6
- Checking the lateral distribution with the mobile test rig



Checking the lateral distribution with the mobile test rig

Select "Mobile test rig".

- 2 measuring points (8 trays)
- 4 measuring points (16 trays)



(1) The position of the measuring points is displayed in metres beginning from the tramline.

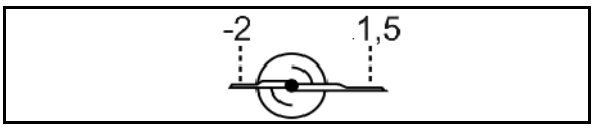
Example:

4 measuring points / working width: 24 m /

Measuring points: 0 m (tramline), 4 m, 8 m, 12 m

(2) Measuring points 1, 2 or 1, 2, 3, 4

(3) Entry of the fertiliser fill level of the corresponding measuring cup in graduation marks on the measuring cup.



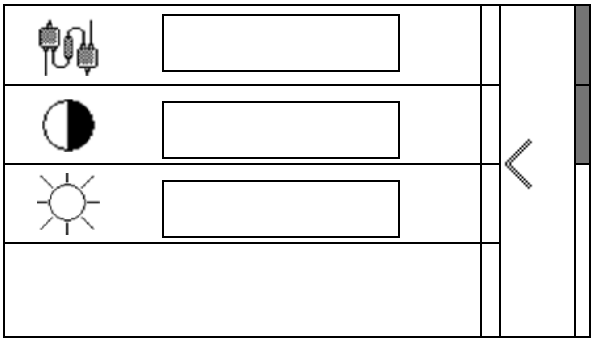
After entering the measuring cup fill levels, the required correction of the spreading vane position for the long and short spreading vanes is shown.

Positive value: set the vane to a bigger value on the scale.

Negative value: set the vane to a smaller value on the scale.

4.3.6 Terminal

- Baud rate for data transmission (19200 / 57600 Baud)
- Contrast (0-100)
- Brightness (0-100)



5 Operating data

- The operating data can be saved under any name and then be called up again.
- The operating data can be managed.

5.1 Operating data menu

The following operating data are recorded:

- Worked area
- Working time
- Spread quantity

Σ - Total data / ΣΣ - daily data

The operating data overview can be saved under a given name and be called up again.

The spread rate can also be changed here.

The calibration value can also be changed here.

> Changed values overwrite the active settings

Given name:
Entered note:
Spread rate:
Calibration factor:
Worked area:
Working time:
Spread quantity:

	Name	
	Note	
	200 kg / ha	
	1.00	
	Σ	ΣΣ
	0.00 ha	**0.00 ha**
	0h 00 min	**0h 00 min**
	0 kg	**0 kg**

5.2 Managing the operating data

to Manage operating data

·back to Operating data

Operating data		Manage operating data
	Name	
	Note	
	200 kg / ha	
	1.00	
	Σ Σ	
	0.00 ha **0.00 ha**	
	0h 00 min **0h 00 min**	
	0 kg **0 kg**	

Select function

	Before spreading, always actively control the desired operating data overview! active: **Name** not active: **Name**
	Delete operating data overview. Must not be activated!
	Reset daily data
	Scroll back in the operating data overview.
	Scroll ahead in the operating data overview.

Name The active operating data overview is shown inverted.

5.2.1 ASD interface (Automatisierte Schlagbezogene Dokumentation = automated field-related documentation)

The ASD interface can be used to transmit set-points for the application rate from a sensor
The setpoints overwrite the setpoint of the active documentation.

To set up the ASD interface, the baud rate for the data transfer rate must be selected for the connect-ed implement. The correct baud rate is written in the implement operating manual.

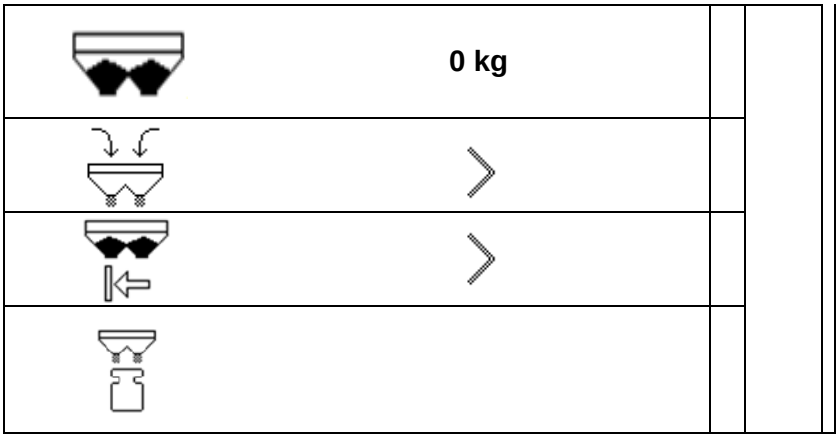
6 Weighing and refilling fertiliser

Page 1:

- Hopper capacity display
- Enter refilled quantity of fertiliser in kg, see below.
- Set the hopper capacity to 0 kg
- Select the type of calibration:

  Offline / Online

  See page 28



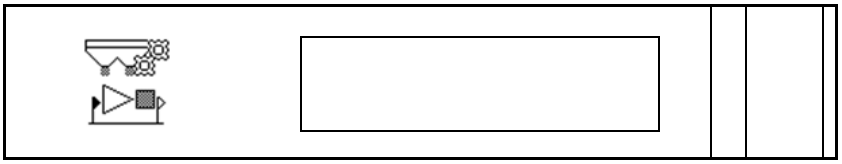
Page 2:

- Offline calibration

  Start

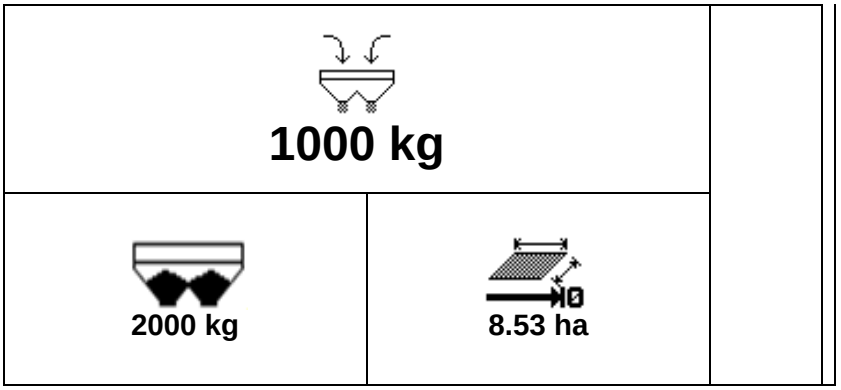
  Stop

  See page 29



6.1 Refilling the hopper

- Display of the refilled quantity in kg
- Display of the total quantity in kg
- Display of the area that can be worked with the current spread rate.



Confirm the new values.

7 Determining the pulses per 100 m

The AMASPREAD+ needs the "Pulses per 100 m" calibration value to determine

- the actual forward speed [km/h].
- the worked area.

If the calibration value is not known, it must be determined by means of a "Pulses per 100 m" calibration run.

You can enter the "Pulses per 100m" calibration value manually in the AMASPREAD+, if the precise calibration value is known.

Always determine the precise calibration value for "Pulses per 100 m" by means of a calibration run:

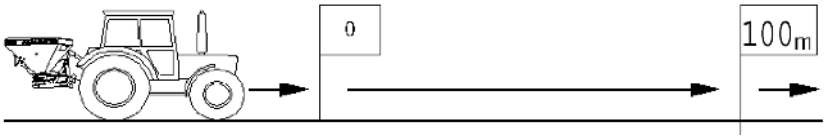
- before initial operation.
- when using a different tractor or after changing the tractor tyre size.
- if there are differences between the measured and actual forward speed / distance travelled.
- if there are differences between the measured and actual worked area.
- if there are different soil conditions.

The "Pulses per 100 m" calibration value must be determined under the prevailing operating conditions. If operation is carried out with all-wheel drive switched on, you must also switch on the all-wheel drive when determining the calibration value.

Determining the pulses per 100m:

See Settings menu → Extended settings:

1. Measure a calibration distance of exactly 100 m.
2. Mark the start and end points. →continue



3. Drive up to the starting point. →continue

4. Drive the calibration distance of exactly 100 m. →continue

5. Stop. →continue
6. Save measured value or discard.

The required minimum value for the pulses per 100 m is of 200.

8 Spread rate check (determining the calibration factor)

DANGER

Secure the tractor and implement against unintentional rolling and unintentional lowering of the tractor three-point hydraulic system.

The calibration factor for the spread material determines the regulating behaviour of the AMASPREAD+ and is dependent on

- the flow characteristics of the material to be spread.
- the entered spread rate.
- the entered working width.

- The flow characteristics of the spread material may change even after a brief storage period.
- For this reason, determine the calibration factor for the spread material before each use.
- Always redetermine the calibration factor for the spread material
  - o if the spread rate has been changed.
  - o if deviations occur between the theoretical and actual spread rates.

Enter the calibration factor according to the setting chart in the Settings menu before determining the precise calibration factor.

The determined calibration factor is adopted in the active settings.

The desired method for checking the spread rate can be set in the Setup menu.

Slug pellets, fine seeds:

- Before operation, a simulated speed must be entered. To check the spread rate, however, the speed must be 0.
- For the spread rate check, spread at least 10 kg of spreading material.
- Offline calibration and online calibration with weighing technology is not possible for slug pellets and fine seeds.

Spread rate check while standing still:

→ : Extended settings / Determine calibration factor menu.

Spread rate check while driving (online / offline):

→ : Weighing / Determine calibration factor menu.

8.1 Performing a spread rate check with the fertiliser chute

- For the spread rate check, the calibration factor for the spread material is determined for
  - the implement coupled to the tractor,
  - dismounted spreading discs,
  - driven universal joint shaft,
  - stationary tractor.

DANGER

Risk of injury from rotating spreading discs!

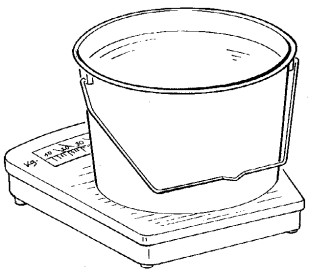
Dismount both spreading discs before determining the calibration factor.

1. See operating manual for the implement. → continue.

→ The spreading quantity applied during the rate check must be completely collected.

2. Add a sufficient quantity of spreading material to the hopper.
3. Remove both spreading discs.
4. Check the calibration factor from the setting chart in the Settings menu and correct if necessary. → continue.
5. Switch on spreading disc drive. → continue.
6. Open the left shutter. → continue.
7. When the bucket is full, close the left shutter. → continue.
8. Switch off the spreading discs.
9. Weigh the collected fertiliser quantity.

- The scale used must have the corresponding weighing accuracy. Large inaccuracies may cause deviations in the actually applied spread rate.
- Take account of the weight of the bucket.



10. Enter the value for the collected fertiliser quantity in kg.

The calculated applied fertiliser quantity will be displayed.

→ continue.

11. The calibration factor will be calculated and displayed.
12. Save calibration factor, or

Esc discard calibration factor.

8.2 Performing a spread rate check with a calibration device on the side

1. See operating manual for the implement. →continue.

→ The spreading quantity applied during the rate check must be completely collected.

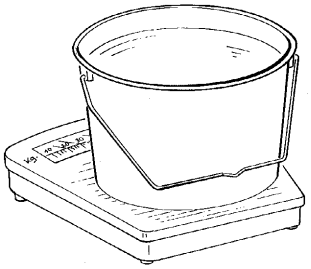
2. Add a sufficient quantity of spreading material to the hopper.

3. Open the hopper opening on the side.

4. When the bucket is full, close the hopper opening on the side.
→continue.

5. Weigh the collected fertiliser quantity.

- The scale used must have the corresponding weighing accuracy. Large inaccuracies may cause deviations in the actually applied spread rate.
- Take account of the weight of the bucket.



6. Enter the value for the collected fertiliser quantity in kg.
The calculated applied fertiliser quantity will be displayed.
→continue.

7. The calibration factor will be calculated and displayed.

8. Store the calibration factor or
Esc discard calibration factor.

8.3 Online calibration

The calibration value is continuously recalculated via online weighing and the theoretically applied quantity. The required shutter position is adjusted online.

→ : Select the Weighing / Online calibration menu.

Display in the Work menu: Online calibration active

Online calibration can only be started when the scale is at rest and with hopper content greater than 200 kg.

If the symbol appears on the display, the spreader is not at rest.

During the spreading work, online calibration will be switched off automatically when the hopper content drops below 200 kg!

→ Spreading will continue with the displayed calibration factor.

After filling (hopper volume greater than 200 kg), online calibration will be restarted automatically!

When working on hilly terrain or if the ground conditions are not level, system-induced fluctuations in determination of weight can occur

In this case switch off online calibration during the run.

→ Spreading will continue with the displayed calibration factor.

8.4 Offline calibration

Offline calibration is carried out at the start of work during spreading, whereby at least 200 kg of fertiliser needs to be spread.

→ : Select the Weighing / Offline calibration menu.

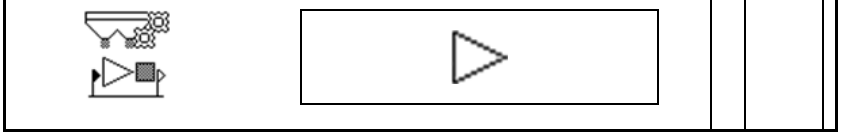
Display in the Work menu:

Spread quantity of fertiliser during the calibration run	**138 kg**

- Tractor with spreader must stand in a horizontal position at the start and end of calibration.
- The calibration factor can only be started and ended when the scale is at rest.

→ If the symbol appears in the display, the spreader is not in resting position.

1. In the Weighing menu, start the calibration .



2. Start spreading the fertiliser and observe the spread rate in the Work menu during the calibration procedure.
3. After 200 kg, interrupt the fertiliser spreading and come to a stop.
4. In the Weighing menu, terminate the calibration .
5. The calibration factor will be shown in the Work menu.
6. To optimise the calibration factor, perform additional calibration runs with larger quantities of fertiliser.

Online calibration can only be started when the scale is at rest.

If the symbol appears on the display, the spreader is not at rest.

After the first fertiliser calibration, additional calibrations should be performed with higher application rates (e.g. 1000 kg) to further optimise the calibration factor.

9 Operation

The Work menu is displayed during operation.

It is also possible to switch to other submenus.

9.1 Work menu

	Speed		Distance until quantity 0 kg
	Worked area		Area until quantity 0 kg
	Fill level		Scale (Scale is not at rest)
	Disc speed		Calibration factor

Slider, left side Shutter right

Spread rate, left side	Spread rate, right side
200 kg/ha	200 kg/ha

Limiter left	100 % Spread rate left in %	100 % Spread rate right in %	Limiter right

The slug pellets special display is shown when slug pellets / fine seeds is selected as a spreading material.

	Slug pellets, fine seeds

The distance counter special display is shown when the distance counter is selected.

The distance counter is used to help finding the tramlines.

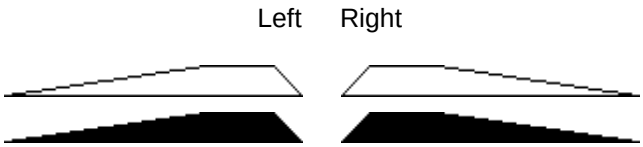
The distance counter starts measuring the distance as soon as the shutters are closed.

	12 m	

Scale

	Scale is not in rest position	
Offline calibration:	Spread quantity of fertiliser during the calibration run	138 kg
Online calibration:	Online calibration active	A
	Online calibration not active (hopper content less than 200 kg)	A

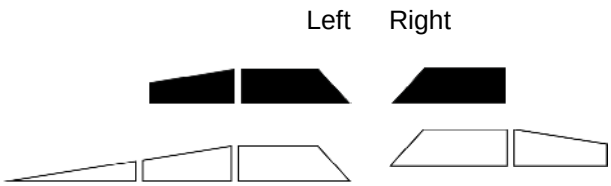
Shutter position



Shutter closed:

Shutter open:

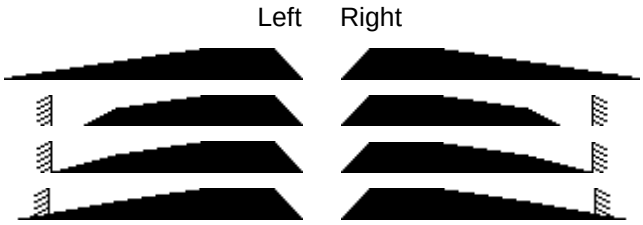
Part width sections



Part width sections switched

Part width sections pre-selected

Spreading method



Normal spreading

Ditch spreading (1)

Boundary spreading (2)

Border spreading (3)

9.2 Buttons in the Work menu

- Increase the spread rate on both sides by quantity increment

- Decrease the spread rate on both sides by quantity increment

- Set spread rate at 100%

- Open / close both shutters
- Quick access for Empty hopper (press and hold for 3 seconds)

- Open / close the left / right shutter

- Switch on left / right part width section
- Increase the spread rate on the left / right side by quantity increment (Press and hold the button)

- Switch off left / right part width section
- Decrease the spread rate on the left / right side by quantity increment (Press and hold the button)

- Go back to normal spreading after boundary spreading method

- Select boundary spreading method (limiter position)
  (1) Ditch spreading
  (2) Boundary spreading
  (3) Border spreading

- For boundary spreading:

Reduce spreading width on the boundary side

Increase spreading width on the boundary side

Cancel / Back

9.3 Procedure for use

CAUTION

Risk of injury to persons standing beside or behind the implement due to thrown fertiliser grains.

Observe the throwing distance of the fertiliser spreader when opening the shutter and instruct persons to exit the danger area.

1. Switch on the AmaSpread+.
   - o Enter the data according to the setting chart.
   - o No weighing spreader: Perform the spread rate check before starting work.
2. Starting driving the tractor and set the required PTO shaft speed.
3. Weighing spreader: Perform online calibration, or start calibration run for offline calibration.
4. When the switch-on point is reached: Open both shutters.
5. At the headland when the switch-off point is reached: Close both shutters.

→ If necessary, select boundary spreading method with opened or closed shutters.

6. Offline calibration: Spread at least 200 kg of fertiliser, and then terminate the calibration run. If possible, perform additional calibration runs with larger quantities of fertiliser.
7. After operation:
   Close shutters.
   Switch off AMASPREAD+.

- The spread rate is regulated automatically.
- The shutter closes at speeds below 1 km/h.
- The shutter opens at start-up.

Slug pellets, fine seeds:

Before operation:

1. Select the "Slug pellets, fine seeds" mode (advanced settings menu).
2. Perform a spread rate check.
3. Enter the intended forward speed as the simulated speed.

During operation:

- Drive at a constant speed, since the speed-proportional rate control is switched off.

After use:

- Simulated speed = set to 0 (no simulated speed).

A flashing display of the shutter indicates that the setting motor and AmaSpread^{+} are not synchronised.

In this case, close the shutter and open again.

Switching boom part width sections

Switching part width sections from the right or from the left:

Switch part width section on or off.

→ The part width sections are shown on the work display.

When the button is pressed several times, several part width sections are switched off.

- Part width sections can be switched during spreading.
- Part width sections can be pre-selected before spreading.

Display:

2 part width sections switched off from the left.

4 part width sections switched off from the right.

1 part width section pre-selected on the right

Example:

Driving into a wedge on the right side

(1) All part width sections on.

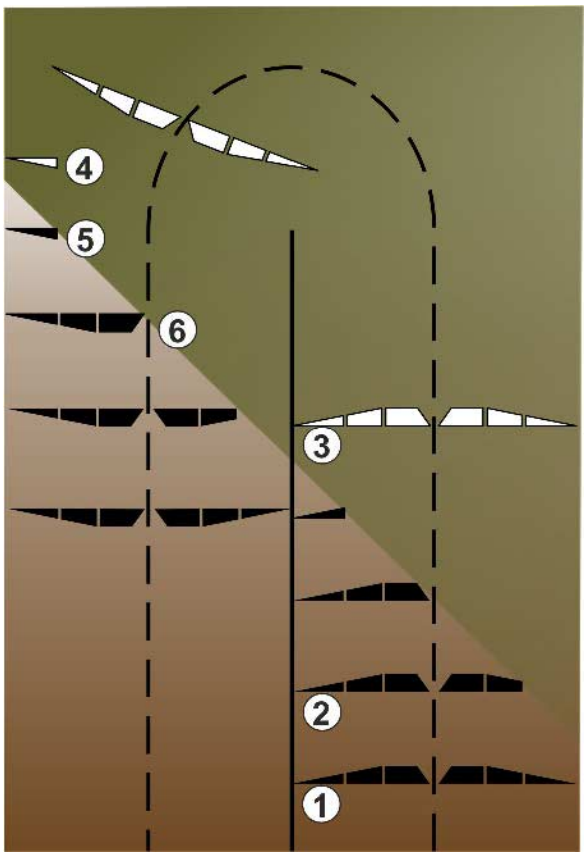
(2) In the wedge, start switching off the part width sections from the right.

(3) All part width sections switched off, all part width sections pre-selected.

(4) Switch off the pre-selected part width section from the left until only one part width section is pre-selected on the right.

(5) Open the shutter when driving onto the field.

(6) Switch on additional part width sections from the left.



Changing the spread rate during spreading

Setpoint rate adjustment for both shutters:

Increase or decrease the setpoint rate.

Setpoint rate adjustment on one side for the left or the right shutter:

Increase or decrease the setpoint rate.

→ The changed setpoint rate will be shown on the work screen.

→ Setpoint rate back to 100%.

By pressing the button several times, the spread rate will be changed several times.

9.4 Empty hopper

A quick access for Empty hopper can be found in the Extended settings menu.

Press and hold for 3 seconds, see page 15

10 Setup menu

The Setup menu serves to perform basic settings.

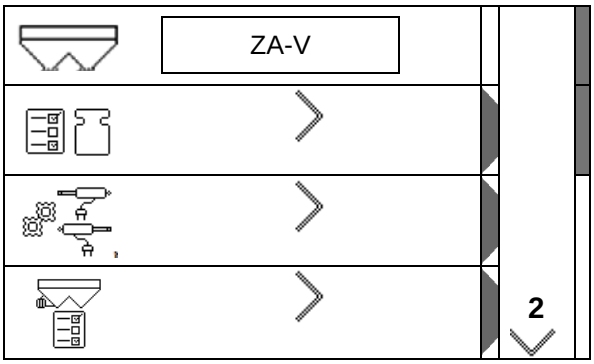
Open the Setup menu:

1. Hold and press .
2. Enter password 1883.
3. Confirm setup.

In the setup, you can change the implement's basic settings. Incorrect settings can lead to implement failure.

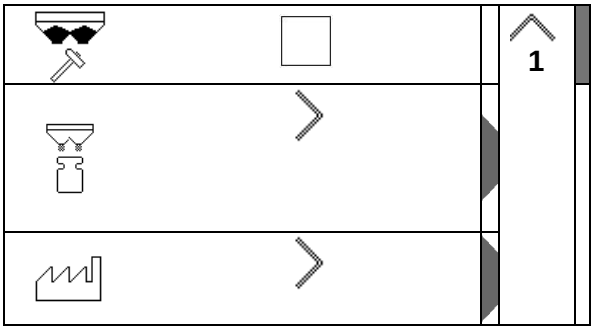
Page 1:

- Configure scale (see page 38)
- Calibrate shutter (see page 40)
- Configure the limiter, electric limiter / no limiter, installed on the left / right



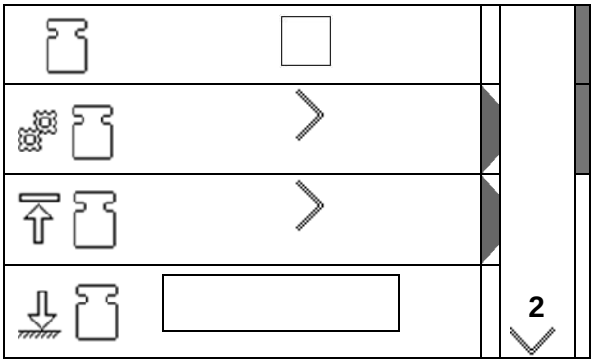
Page 2:

- Low level sensor
- Spread rate check via
  - Fertiliser chute on the left shutter
  - Calibration device on the side (hole)
- Factory settings menu



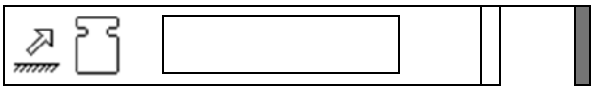
10.1 Configuring the scale

- Scale on / off
- Calibrate scale
- Adjust scale
- Scale parameter 1



Page 2:

- Scale parameter 2



Calibrate scale

The calibration comprises:

- The taring of the empty fertiliser spreader at a content of 0 kg.
- The adjustment of the filled hopper to the filled fertiliser quantity.

1. The fertliiser spreader must be completely emptied (see Machine Data menu).

Fertiliser spreader is not empty:

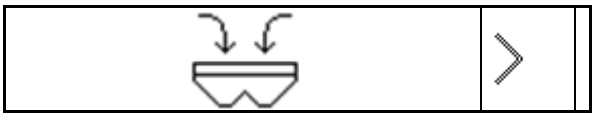
→ Abort configuration.

→ Empty the fertiliser spreader, see Extended settings.

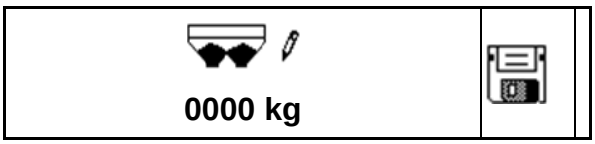
Fertiliser spreader is empty:

2. Park the tractor and the attached fertiliser spreader on a level surface and wait until it has come to a complete rest.
3. Parameter 1 will be set.

4. Fill at least 500 kg of fertiliser into the hopper.
5. Park the tractor and the attached spreader on a horizontal surface and wait until it has come to a complete rest.
6. Confirm.



7. Enter the precise quantity of fertiliser just added.
8. Confirm.



9. Parameter 2 will be set.

Display: the basic setting is being changed.

10. Save calibration.

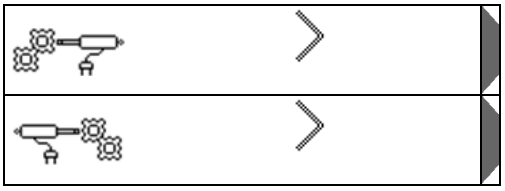
Adjusting the scale

If the filled and displayed fertiliser quantities do not match, the scale has to be adjusted.

1. Fill at least 500 kg of fertiliser into the hopper.
2. Park the tractor and the attached spreader on a horizontal surface and wait until it has come to a complete rest.
3. Confirm.
4. Enter the precise quantity of fertiliser just added.
5. Confirm.

10.2 Calibrating the shutters

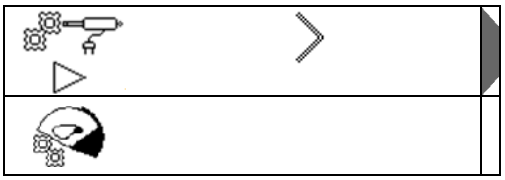
- Calibrate the shutter on the left
- Calibrate the shutter on the right



Shutter calibration menu

- Calibrate the shutters
- Voltage in V for shutter calibration

  After updating the software, the values can be entered manually.

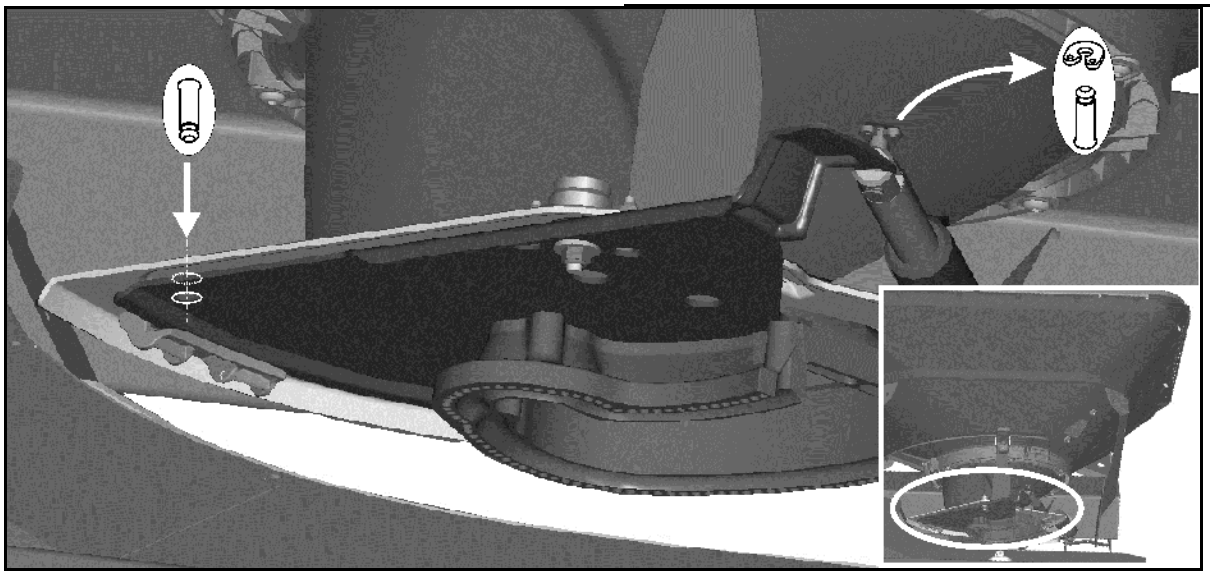


Performing the calibration on the left / right

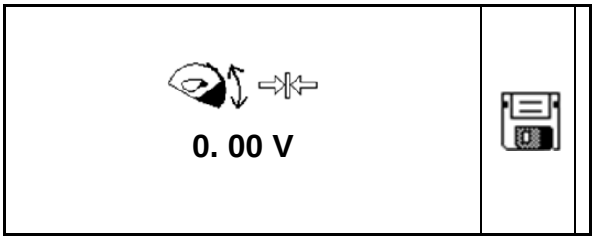
After updating the software, the values can be entered manually.

The shutters on the left and right can be configured consecutively.

1. Disengage motor.
2. Put the shutter into the calibration position.
3. Mark calibration position with pins.



4. / : Perform and save the calibration.

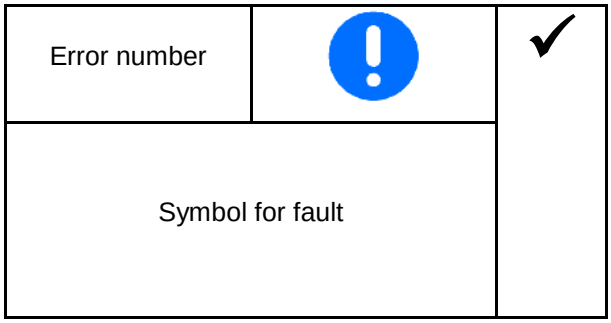


5. Attach motor to shutter again before leaving the menu.

10.3 Factory settings menu

- Restoring the implement to the production status

11 Faults



11.1 Alarms

An alarm appears if an error can lead to a hazard to the operator's health.

Acoustic signal: 3 x tone signal for a duration of 3 seconds.

Error number: 005	**Internal output error**

The power supply is switched off immediately when the error is detected.

11.2 Warnings

A warning appears when the implement cannot work properly or an error poses a risk to the implement.

Acoustic signal: 1 x tone signal for a duration of 3 seconds.

Error number: 1	**No SD card inserted**
Error number: 2	**Faulty communication with the internal storage**
Error number: 3	**Faulty data in the internal storage**
Error number: 4	**Temperature is too high**
Error number: 5	**Output overcurrent**
Error number: 6	**Setting motor left does not respond**
Error number: 7	**Setting motor right does not respond**
Error number: 8	**Hopper filling level too low, minimum hopper content 500 k g**
Error number: 9	**Scales failed**
Error number: 32	**Limiter setting motor does not respond**
Error number: 39	**Shutter sensor left has failed**
Error number: 40	**Shutter sensor right has failed**
Error number: 41	**Limiter sensor failure**

11.3 Notes

A notification appears when the operator must react to an error.
Acoustic signal: 3 x tone signal for a duration of 1 second

Error number: 11	**Setpoint value cannot be maintained**
Error number: 12	**Fill level too low**
Error number: 13	**Spreading disc speed too low**
Error number: 14	**Value on scales fluctuates**
Error number: 15	**The required quantity has not yet been spread. Abort calibration?**
Error number: 16	**Error in calibration of scales (parameter 2 below 1.0), please repeat**
Error number: 17	**Calibration not possible, left-hand shutter open**
Error number: 18	**Calibration not possible, disc speed cannot be maintained**
Error number: 20	**This value lies outside the set limits, accept anyway?**
Error number: 21	**Calibration on the move not possible.**
Error number: 22	**Calibration not possible due to setpoint, please check calibration factor and intended forward speed**
Error number: 23	**You are changing the basic setting of the scales**
Error number: 24	**Hopper fill level too low, minimum hopper content 200 kg**
Error number: 25	**Online calibration factor 5x outside realistic values**
Error number: 26	**Do you want to delete this job?**
Error number: 27	**Caution, you are changing the basic settings of the implement**
Error number: 28	**Do you really want to restore all data to the factory settings?**
Error number: 30	**Calibration factor is outside the realistic limits**
Error number: 31	**Calibration cancelled**
Error number: 33	**Do you want to delete this dataset of the settings?**
Error number: 34	**Do you want to delete this tractor?**
Error number: 35	**Do you really want to restore all data to the production settings?**
Error number: 36	**CAUTION, reduction of the tasks leads to data loss?**
Error number: 37	**CAUTION, observe the instructions in the operating manual before calibration**
Error number: 38	**CAUTION, observe the instructions in the operating manual before diagnosis**
Error number: 42	**Left hopper is empty**
Error number: 43	**Right hopper is empty**

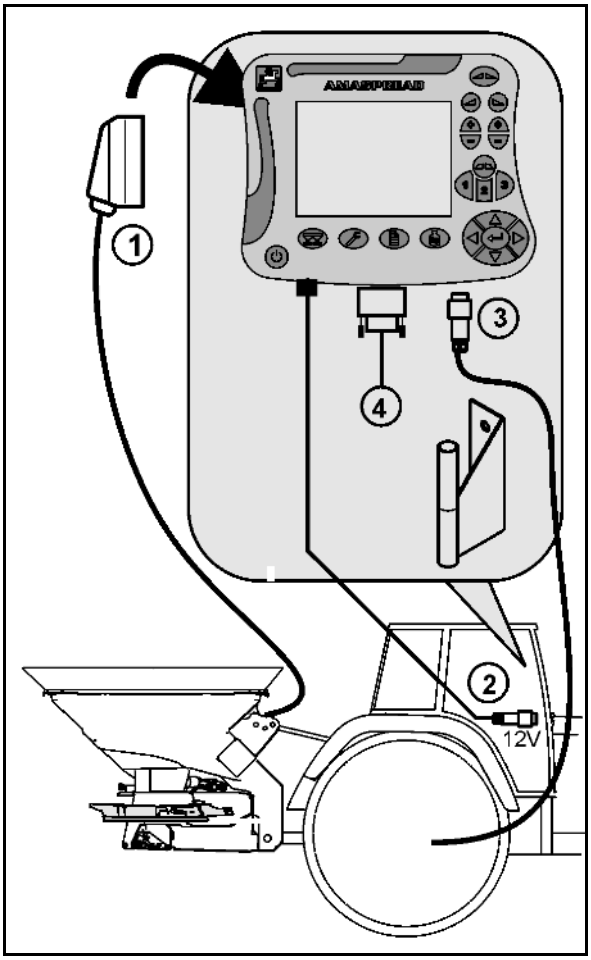
12 Mounted

(1) Implement connection

(2) Connection to 12 V

(3) Signal cable or sensor X connection

(4) PC connection for field data record



13 Cleaning, maintenance and repair

13.1 Cleaning

CAUTION

Never clean the setting motor with a high-pressure cleaner because it may cause damage!

13.2 Storage

Store the on-board computer in a dry place when you remove it from the tractor cab.

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