Operating Manual

AMAZONE

EasySet 2

Control computer
for ZG-TX

SmartLearning

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

MG7806
BAG0255.1 12.23
Printed in Germany

en

1 Product description

1.1 overview

(1) Switch On and Off button

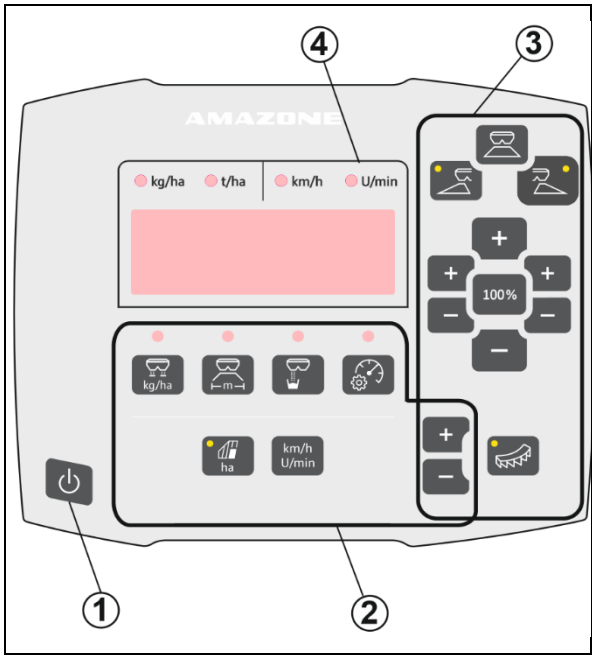
(2) Adjustment buttons

Some with LED for showing the activated function

(3) Buttons for control during operation

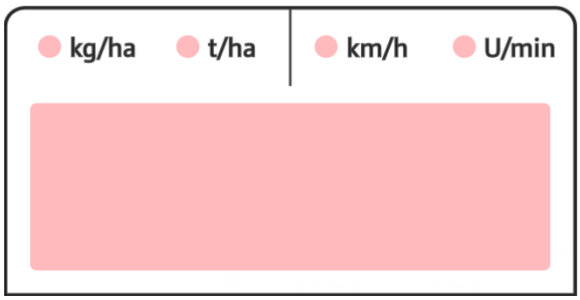
Some with LED for showing the activated function

(4) Display with LED

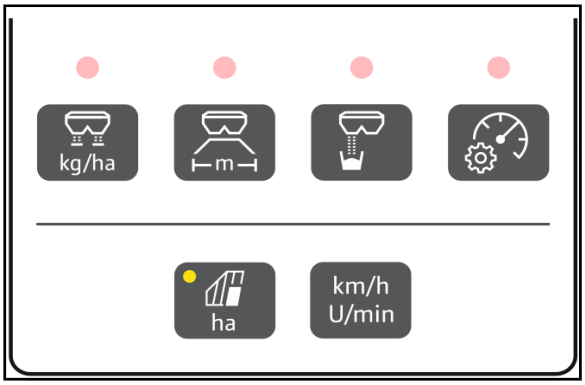


1.2 Display

- Display to show values with a maximum of 6 digits
- LEDs above the display show the units of the displayed value.



1.3 Adjustment buttons



- kg/ha Adjust the spread rate
- m Adjust the working width, according to the setting chart and spreading disc
- Determine / set the calibration factor
- Select the simulated speed. Calibrate the distance sensor, enter the pulses per 100 m.
- ha Display of the daily output in ha

→ Press and hold the button (6 seconds) to reset the daily output

- km/h U/min Change the display between spreading disc speed and forward speed

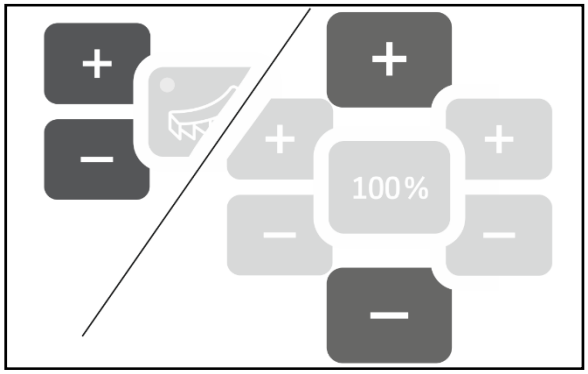
The LEDs show the selected setting.

Changing the setting values

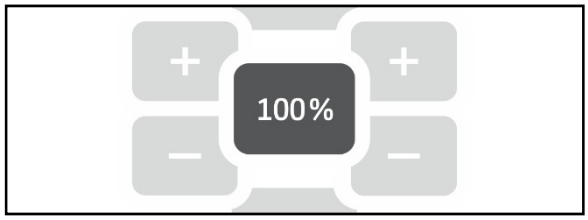
In the active Setting menu, the setting values can be changed using the marked +/- buttons.

By pressing and holding the +/- buttons, the value changes rapidly.

Set values are automatically saved.



100% Switch back from the Setting menu to the work display using the 100% button.



1.4 Buttons for operation

Start / stop spreading

Start / stop spreading on the left
(ZG-TX with double shutter)

LED for spreading on

Start / stop spreading on the right
(ZG-TX with double shutter)

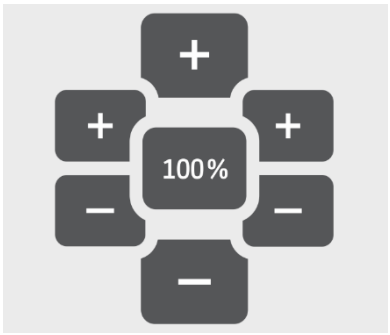
LED for spreading on

Higher rate

Higher rate on the left
(only for ZG-TX with double shutter)

Reset rate to 100%

Lower rate on the left
(only for ZG-TX with double shutter)



Higher rate on the right
(only for ZG-TX with double shutter)

Lower rate on the right
(only for ZG-TX with double shutter)

Lower rate

Increase / reduce the speed for boundary spreading

AutoTS boundary spreading system
on / off
(ZG-TX with double shutter)

LED for AutoTS on or boundary spread deflector on

- LEDs (if equipped) show the selected function.
- By pressing and holding the +/- buttons, the value changes rapidly.
- Set values are automatically saved.

2 Preparing the EasySet2

2.1 Switching the EasySet2 on and off

Switch on the EasySet 2.

→ The current software version is shown for 2 seconds.

→ The set mode is shown for one second.

→ The Work display appears.

Switch off the EasySet2.

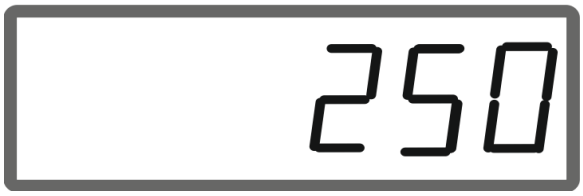
→ STOP is shown for 2 seconds.

→ The total area efficiency is shown for 2 seconds.

2.2 Enter application rate

1. kg/ha Select the spread rate setting.

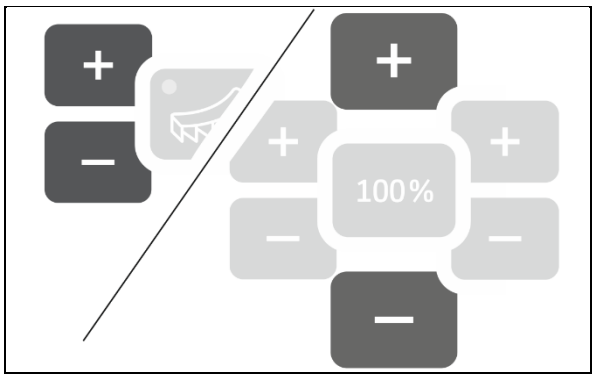
→ The spread rate is shown in kg/ha.



Spread rates greater than 999 kg are shown in tons (1000 kg).

2. + , − Enter the application rate.

The value is automatically saved



3. 100% Switch back to the work display.

2.3 Entering working width

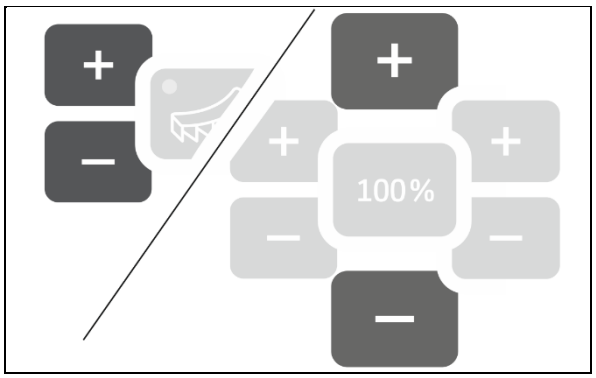
1.  Select the working width setting.

→ The working width is shown in m.

2.  ,  Enter the working width.

The value is automatically saved

3.  Switch back to the work display.



2.4 Determining/entering the calibration factor for fertiliser or lime

The calibration factor determines the regulating behaviour of the implement computer and depends on the flow characteristics of the material to be spread.

The calibration factor is determined using the spread rate that was spread and weighed during calibration.

- During calibration, a small quantity can be spread and collected using two collection buckets.

→ Less precise method

- During calibration, a large quantity can be spread in a warehouse.

→ Precise method

→ Vehicle scale required

→ Automatic termination of the calibration after 999 seconds.

Fertiliser

- The calibration factor can be found in the setting chart for each fertiliser.
- Use the fertiliser calibration factor from the setting chart as a base value before calibration.
- The value of the setting chart is optimised during calibration.
- The determined calibration factor overwrites the value from the setting chart.

Realistic calibration factors for fertiliser (0.7 to 1.4):

- 0.7 for urea
- 1.0 for calcium ammonium nitrate (CAN)
- 1.4 for heavy PK fertilisers

Lime

- The calibration factor for lime approximately corresponds to the specific weight in kg/litre, about 1.6 kg/litre
- Use the specific weight in kg/litre as a basic value before calibration.
- The basic value is optimised through calibration.
- The determined calibration factor overwrites the basic value.

The value for the last utilised spread rate for fertiliser and lime and the calibration value are saved and automatically set after a conversion.

Enter the calibration factor

If the calibration value is known, it can be entered directly.

1.  Select calibration.

→ The mode is displayed.

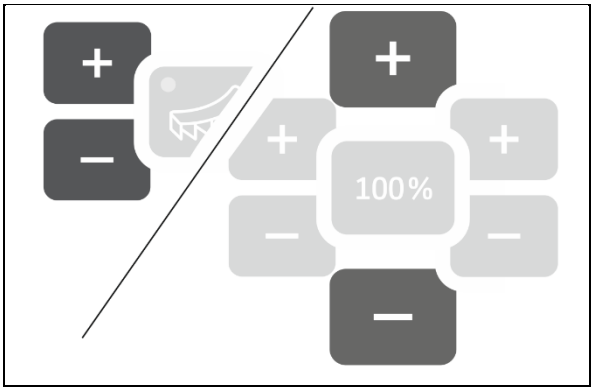
- TS - double shutter
- C1-C2 – lime
- F1-F3 fertiliser with mono shutter

→ The calibration factor will be displayed.

2.  Set the calibration factor.

The value is automatically saved

3.  Switch back to the work display.



Determine the calibration factor

The calibration is performed when the implement is at a standstill and without the spreading disc drive!

1. Prepare for fertiliser calibration, refer to the implement operating manual.
2. When calibrating with large quantities, weigh the implement with enough spreading material.
3. Enter the working width and spread rate.
4.  Select calibration.
5. Enter the calibration value as a basic value.
   - o For lime: bulk density in kg/litre
   - o For fertiliser: value from the setting chart
6.  Press and hold the button for 6 seconds.

→ The calibration routine starts.

→ The LED flashes rapidly.

For constant flow of the spreading material, perform a test run:

7.  Start spreading.

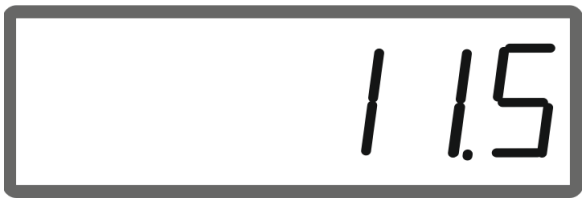
→ The calibration time is shown.

8.  Stop spreading after 10 seconds.

→ Do not use the spread quantity for the calibration.

9.  Confirm.

Carry out calibration:



10.  Start spreading.

→ The calibration time is shown.

- The calibration can be stopped at any time.
- Large quantities produce a more precise calibration value.

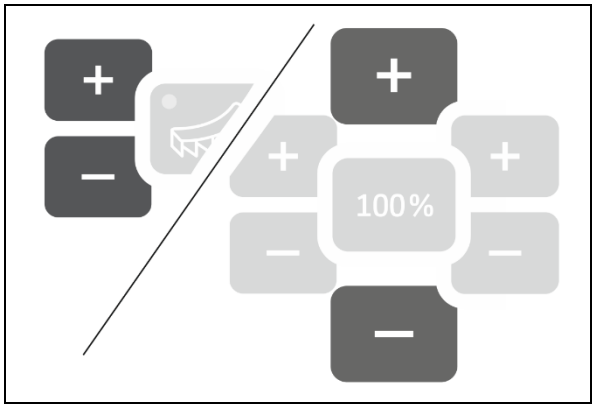
11.  Stop spreading as soon as enough spreading material was collected.

Small quantities: fill the collection bucket completely.

or

Large quantities: If necessary, you can wait until the automatic end of the calibration after 999 seconds.

→ The theoretically spread fertiliser quantity is shown in **kg**.



12. Small quantities: weight the collected quantity of fertiliser,

or

Large quantities: weight the implement and calculate the weight difference.

13.  ,  Overwrite the theoretical fertiliser quantity with the spread fertiliser quantity.

14.  Terminate the calibration.

→ The new calibration factor will be displayed.

15.  Back to the work display.

  By switching off the device, the calibration will be discarded.

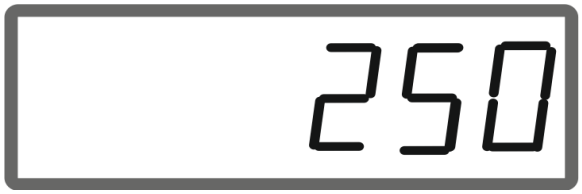
2.5 Simulated speed / distance sensor

Select  .

→ Depending on the last entered setting, the value for the pulses per 100 m or the value for the simulated speed will be displayed.

Pulses per 100 m display:

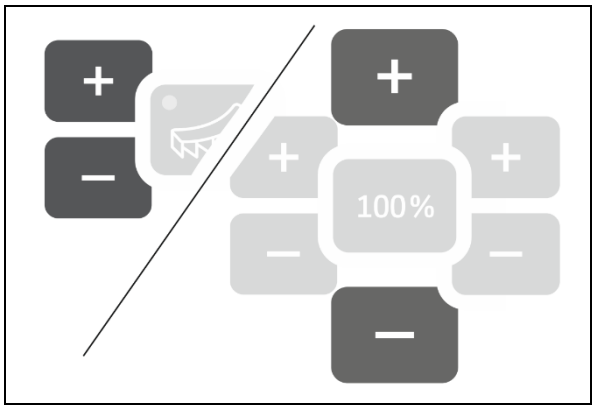
→ Possible values from 250 to 35000.



Display of the simulated speed:

→ Possible values from 2 to 30 km/h.

Switching from the distance sensor to the speed simulator



The shutter must be closed.

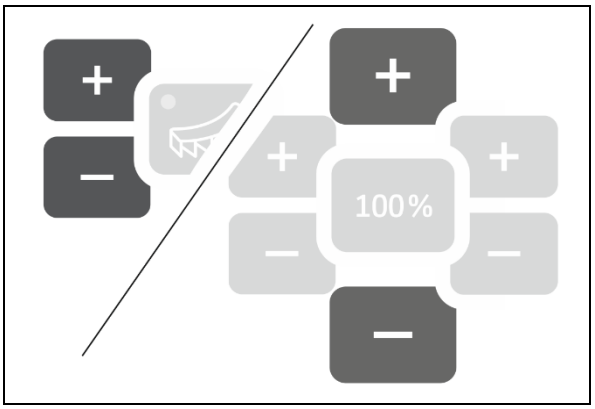
1.  Press until the distance sensor display reaches 250 (pulses).
2.  Press until the display changes from 250 (pulses) to 12 (km/h).

→ The desired speed can now be entered.

→ Speed simulator active

→ Speed-proportional spread rate not active

Switching from the speed simulator to the distance sensor



The shutter must be closed.

1. [+] Press until the speed simulator display reaches 30 (km/h).
2. [+] Press until the display changes from 30 (km/h) to 250 (pulses).

→ The pulses per 100 m can now be entered.

→ Speed-proportional spread rate active

→ Speed simulator not active

2.5.1 Calibrating the distance sensor (pulses per 100 m)

The on-board computer needs the "Pulses per 100 m" calibration value to

- determine the actual forward speed [km/h].
- determine 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 100 m" calibration value manually in the 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.
- if there are differences between the measured and actual forward speed / distance travelled.

The "Pulses per 100 m" calibration value must be determined under the prevailing operating conditions.

Entering the pulses per 100 m

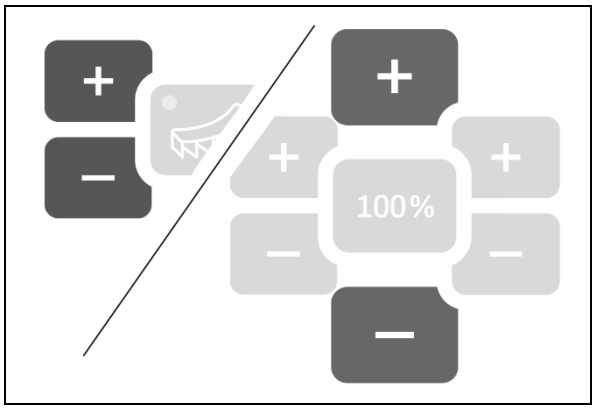
1.  Select the distance sensor.

→ The pulses per 100 m will be displayed.

2.  Enter the pulses per 100 m, if known.

   The value is automatically saved

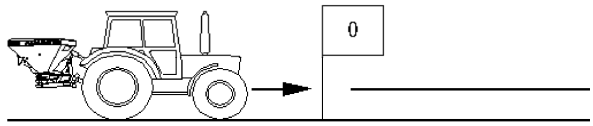
3.  Switch back to the work display.

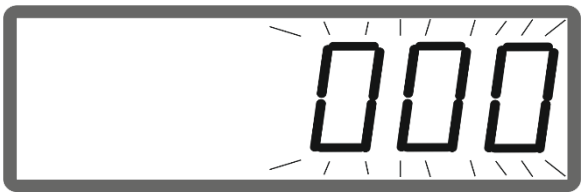


Determining the pulses per 100 m

1. Measure a calibration distance of exactly 100 m.
2. Mark the start and end points.
3. Drive up to the starting point.
4.  Press and hold the button for 6 seconds.

→ The display is flashing.





5. Drive the calibration distance of exactly 100 m.

→ The pulses are being counted.

6. Stop.

→ The determined value for the pulses per 100 m is displayed.

→ The display is flashing.

7.  Confirm the value and go back to the work display.

2.5.2 Setting the simulated speed.

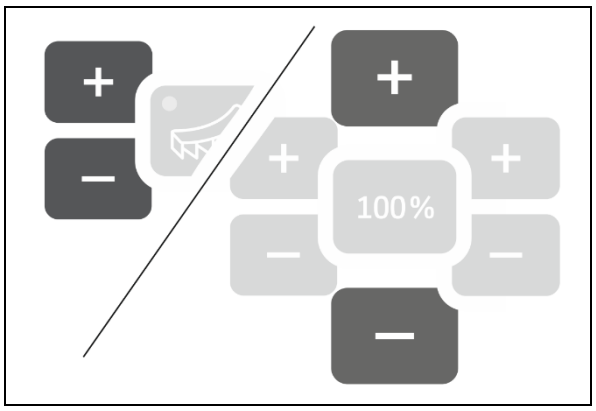
Selecting a simulated speed enables working with the implement without a speed signal (distance sensor / pulses per 100 m).

The forward speed must correspond to the simulated speed during operation. Otherwise, the correct spread rate will not be achieved.

1.  Select the simulated speed.

If the distance sensor display (values greater than 250) first switches to simulated speed, see page 12.

2.  ,  Enter the value for the simulated speed.
3.  Switch back to the work display.

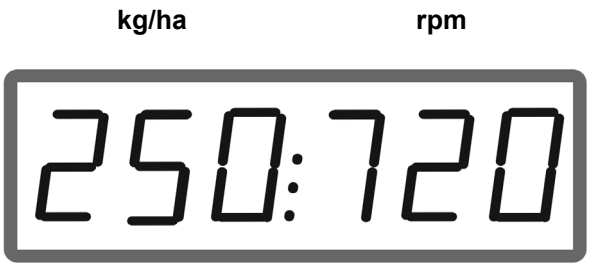


2.6 Switching the spreading disc speed monitoring on/off

Switching on the speed monitoring for normal spreading

1. Read the spreading disc speed to be monitored from the setting chart.
2. km/h U/min Switch the right side of the work display to the spreading disc speed.
3. Switch on the tractor PTO shaft and run the spreading discs at the nominal speed.
4. km/h U/min Press and hold the button for six seconds.

→ The current spreading disc speed is saved as the nominal speed for normal spreading.



Switching off the speed monitoring for normal spreading

1. km/h U/min Switch the right side of the work display to the spreading disc speed.
2. Do not run the spreading discs.

→ The display for the spreading disc speed must be 0.

3. km/h U/min Press and hold the button for six seconds.

→ Speed monitoring is switched off.

Switching on the speed monitoring for boundary spreading

1. Read the spreading disc speed to be monitored from the setting chart.
2.  Switch on boundary spreading.

When spreading lime, only the LED shows the status.

3. km/h U/min Switch the right side of the work display to the spreading disc speed.
4. Switch on the tractor PTO shaft and run the spreading discs at the nominal speed.
5. km/h U/min Press and hold the button for six seconds.

→ The current spreading disc speed is saved as the nominal speed for boundary spreading.

Switching off the speed monitoring for boundary spreading

1.  Switch on boundary spreading.
2. km/h U/min Switch the right side of the work display to the spreading disc speed.
3. Do not run the spreading discs.

→ The display for the spreading disc speed must be 0.

4. km/h U/min Press and hold the button for six seconds.

→ Speed monitoring is switched off.

3 Using the EasySet2

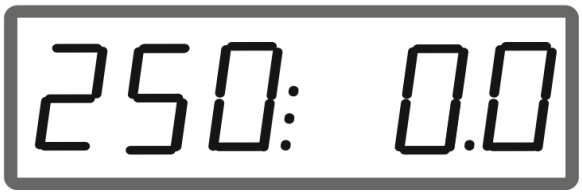
3.1 Spreading

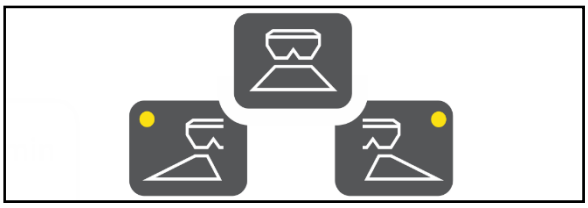
- Enter the values for the spread rate in kg/ha and the working width before operation.
- Determine the calibration factor.

1. Read the switch-on point and switch-off point from the setting chart.
2.  Switch on the implement and the work display will be shown.
3. Start driving with the spreading discs running.
4.  Start spreading.

     Double shutter: for one-sided spreading, select the corresponding side.

   The LED shows the selected side.





Work display while driving:

- Spread rate on both sides
- Forward speed

kg/ha **km/h**

Switch the work display

- Spread rate on both sides
- Spreading disc speed

kg/ha **rpm**

3.1.1 Setting the spreading disc speed monitoring

1. km/h U/min Show the spreading disc speed on the work display.
2. km/h U/min Press and hold the button to save the current spreading disc speed as the nominal speed.

→ The nominal speed is monitored at +/- 50 rpm.

3. km/h U/min Press and hold the button without spreading disc drive to stop the monitoring.

3.1.2 Changing the spread rate

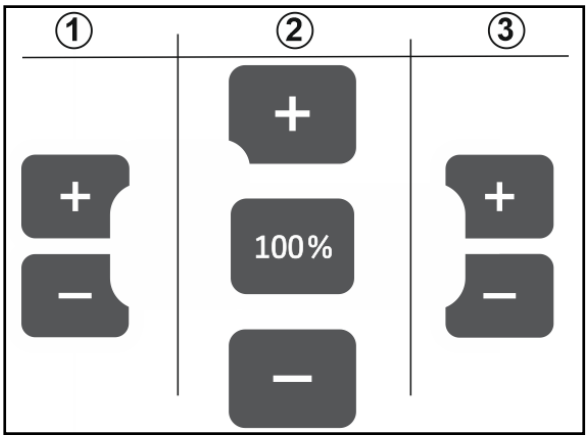
During operation, the spread rate can be changed by 10% each time the button is pressed.

Moreover, the originally set spread rate (100%) can be restored.

(1) Change the spread rate on the left (only with double shutter)

(2) Change the spread rate on both sides

(3) Change the spread rate on the right (only with double shutter)



Work display while driving when the spread rate is changed on one side or both sides:

→ The spread rate in kg/ha is shown separately for both shutters.

If the deviation from the setpoint is greater than 5%, the work display alternately shows the current value and error message E11.

3.1.3 Wedge-shaped spreading

The multi-stage, one-sided rate change can also be used as manual part-width section control when driving into a wedge and when driving out of a wedge.

This improves the overlap and therefore the fertiliser distribution between the area inside the field and the headland area.

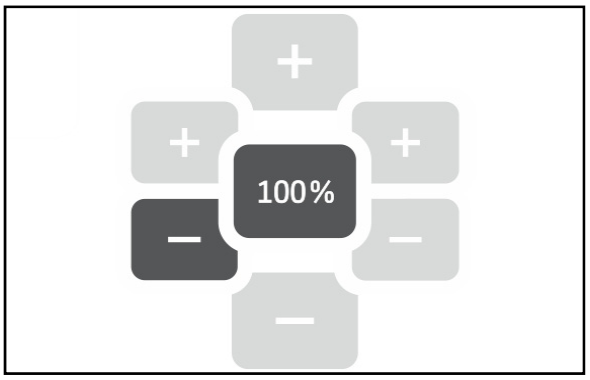
3.2 Boundary spreading

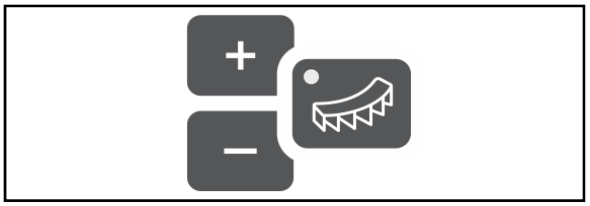
3.2.1 Boundary spreading with AutoTS for fertiliser

Depending on the boundary spreading method, the spread rate must be reduced on the boundary side.

1. Read the percent rate reduction from the setting chart.
2.  Before boundary spreading / ditch spreading, reduce the rate on the boundary side.
3.  Switch on AutoTS.

The LED indicates that boundary spreading is active.





→ Display ON and nominal speed for boundary spreading appears for 5 seconds when the speed monitoring is activated.

If spreading is started with the boundary spreading system switched on, a signal tone is emitted.

After boundary spreading:

1.  Switch off AutoTS.

→ The LED is turned off.

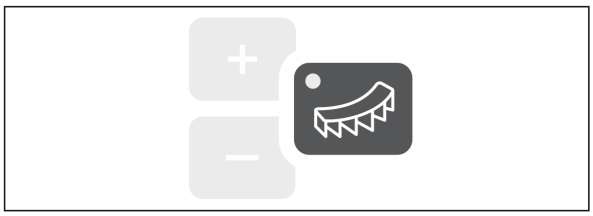
2.  If necessary, increase the spread rate on the boundary side back to 100%.

3.2.2 Boundary spreading with boundary spreading device for lime

1. Actuate the tractor control unit.

→ Activate the boundary spreading device.

The LED indicates that boundary spreading is active.



→ Display ON appears for 5 seconds.

If spreading is started with the boundary spreading system switched on, a signal tone is emitted.

After boundary spreading:

1. Actuate the tractor control unit.

→ Activate the boundary spreading device for boundary spreading.

The LED is turned off.

3.3 Displaying the area efficiency

Daily counter:

Display the worked area in ha since the last reset.

Press and hold the button for 6 seconds to reset the daily counter.

Total area efficiency:

The total area efficiency in ha is shown for 2 seconds after switching off and cannot be reset.

3.4 Performing residual emptying

1.  Press and hold the button for 6 seconds.

→ Emptying function active, display flashing

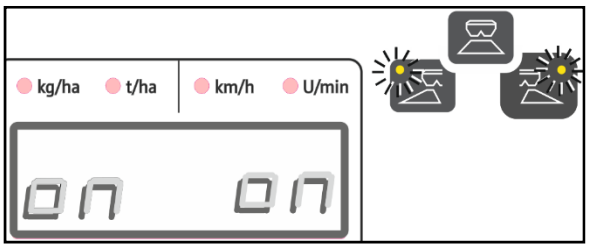
2.  Start spreading.

→ The display is continuously illuminated.

3.  Stop spreading after residual emptying.

→ The display is flashing.

4.  Switching off the device terminates the emptying function.

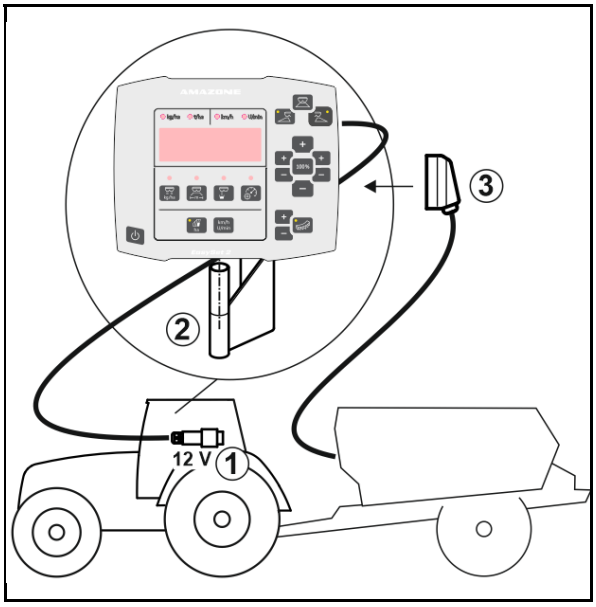


4 Connection

(1) Connection cable 12 V

(2) Equipment for installing the EasySet 2 in the tractor cab

(3) Implement plug to connect the implement to the EasySet 2.



Store the control computer in a dry place when you remove it from the tractor cab.

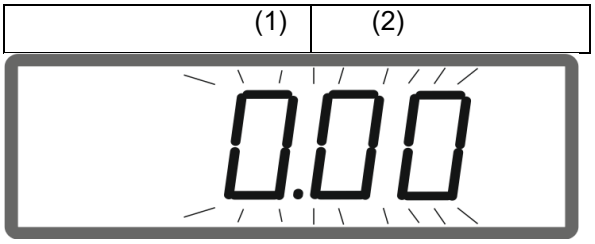
5 EasySet 2 configuration

5.1 Setting the modes

When the on-board computer is replaced, it must be configured.

Configuration is performed by setting the modes.

EasySet 2 is switched off!



1. Press and hold  , and press  at the same time and hold until the display briefly shows ConfF.

→ Modes are shown flashing, LED flashes.

2.  ,  Select implement mode (1).

- 0 - Delivery status spare part
- 4 – ZG-TX with belt overrun (standard)
- 6 - ZG-TX without belt overrun
- 3 – not for use

3.  Save implement mode.

4.  ,  Select boundary spreading device mode (2).

- 00 – No boundary spreading
- 01 – Lime boundary spreading device hydraulically actuated with position sensor
- 03 – AutoTS boundary spreading
- 04 - Lime boundary spreading device hydraulically actuated with position sensor and AutoTS boundary spreading

  Automatic switching for conversion to lime and fertiliser

5.  Save boundary spreading device mode.

→ EasySet 2 is automatically switched off.

5.2 Calibrating the double shutter

The double shutter must be calibrated in the following situations:

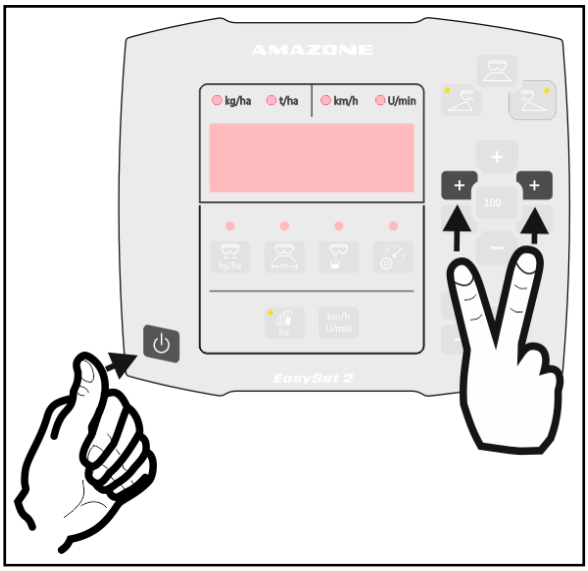
- If the desired and actual spread rate do not concur.
- After installing the double shutter.

EasySet 2 is switched off!

1. Press the Power on, rate left + and right + buttons simultaneously and hold for 3 seconds.

→ "ConF" and the current calibration value appear briefly consecutively.

→ The shutter LEDs are flashing.



2. Start spreading.

→ Double shutter is opened.

→ The voltage values in volts for the left and right shutters are shown flashing.

The floor belt must be free of deposits.

Clean the floor belt in the area of the double shutter if necessary → **Workshop work**.

3. Close the right shutter for calibration.

→ The new calibration value appears non-flashing.

4. Close the left shutter for calibration.

→ The new calibration value appears non-flashing.

5. Switch off the EasySet 2.

5.3 AutoTS calibrate

EasySet is switched off!

1. Press  ,  simultaneously until "ConF" appears.

→ The current calibration values are flashing.

2.  Calibrate the normal spreading position.

→ The new calibration value appears non-flashing.

3.  Calibrate the boundary spreading position.

→ The new calibration value appears non-flashing.

4.  Switch off the EasySet 2.

5.4 Diagnosis menu

1. Press the Power on, rate left + and right + buttons simultaneously and hold for 3 seconds.

→ "ConF" and the current calibration value appear briefly consecutively.

→ The shutter LEDs are flashing rapidly

2. The shutters can be adjusted with the +/- buttons

   The current voltage of the motors is displayed.

3. 

Start the floor belt.

   The pulses from the distance sensor are displayed.

4.  Display AutoTS diagnosis.

5. The AutoTS motor can be adjusted with the +/- buttons.

   The current voltage is displayed.

6. 

Press and hold the button for 15 seconds.

   The current value is displayed.

7.  Switch off the EasySet 2 to exit the diagnosis.

In the Diagnosis menu, the setting motors are directly actuated with full power.

After a diagnosis was performed, it might be necessary to recalibrate AutoTS.

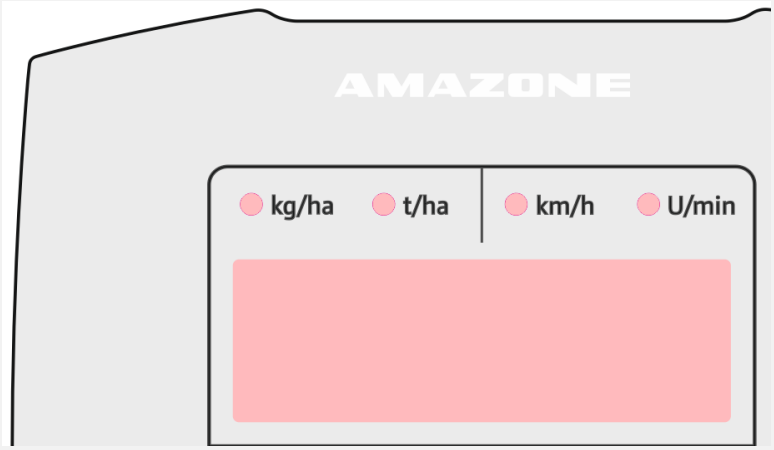
6 Error messages

Message	Type	Description / trigger condition	Time until trigger	Effects	Remedy
E1	Warning	Mode 0 active.	0 s	Operation not possible.	Set the mode, see page 30
E2	Warning	Implement plug not connected.	0 s	Operation not possible.	Insert the implement plug on the EasySet 2
E6	Warning	The left shutter is not responding; the actuated setpoint position cannot be reached.	2 s	Drive deactivated. Restart required.	Check motor Eliminate the blockage, refer to the implement operating manual.
E7	Warning	The right shutter is not responding.	2 s	Drive deactivated. Restart required.	Check motor Eliminate the blockage, refer to the implement operating manual.
E11	Warning	Setpoint cannot be maintained.	10 s	Alternating display: 1 s / E11, then 5 s ACTUAL value.	Adjust the forward speed. Adjust the oil quantity.
E13	Warning	The setpoint spreading disc speed cannot be maintained.	10 s	Alternating display: 1 s / E13, then 5 s ACTUAL value	Adjust PTO speed
E20	Warning	The calibration value is outside of the prescribed limits.	0 s	Display on the left: E20 Right: calculated value	Repeat calibration
E32	Warning	Boundary spreading setting motor is not responding.	2 s	Drive deactivated. Restart required.	Check motor
E39	Warning	Angle sensor of the left shutter has failed.	0 s	E39 and ACTUAL value alternating.	Check the sensor. Check the motor plug connection.
E40	Warning	Angle sensor of the right shutter has failed.	0 s	E40 and ACTUAL value alternating.	Check the sensor. Check the motor plug connection.
E41	Warning	Boundary spreading sensor has failed.	0 s	E41 and ACTUAL value alternating.	Check the sensor. Check the motor plug connection.
E42	Warning	Fertiliser sluice sensor has failed.	0 s	E42 and ACTUAL value alternating.	Check the sensor. Check the motor plug connection.
E43	Warning	Fertiliser sluice sensor has failed.	0 s	E43 and ACTUAL value alternating.	12 V electronics or earth electronics has failed.
E44	Warning	Position for normal spreading cannot be reached.	5 s	The value has deviated from the calibration factor.	Recalibrate. Check the positions and freewheel of the spreading vanes.

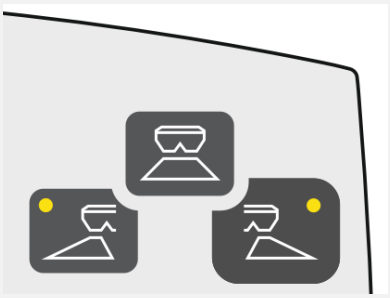
E45	Warning	The position for boundary spreading cannot be reached.	5 s	The value has deviated from the calibration factor.	Recalibrate. Check the positions and freewheel of the spreading vanes.
E46	Warning	Calibration factor for boundary spreading outside of the prescribed limits for normal spreading cannot be reached.	5 s	The motor cannot reach the tolerance range intended for the function.	Check the spreading vanes / motor. Check the positions and freewheel of the spreading vanes.
E47	Warning	Position for normal spreading cannot be reached.	5 s	The motor cannot reach the tolerance range intended for the function.	Check the spreading vanes / motor. Check the positions and freewheel of the spreading vanes.
E48	Warning	Timeout when setting the boundary spreading modes.	10 s	The motor does not reach the target position within 10 seconds.	Check the spreading vanes / motor. Check the positions and freewheel of the spreading vanes.
E49	Warning	Floor belt is not responding.	5 s	Actuation will be stopped. E49 and oil alternating.	Switch on oil circulation. Check the floor belt sensor. With LS operation: ensure oil flow.
E50	Warning	No spreading disc speed.	0 s	5 s continuous tone. "PTO off" and E50 alternating.	Switch on the PTO shaft.

7 Overview

MI20

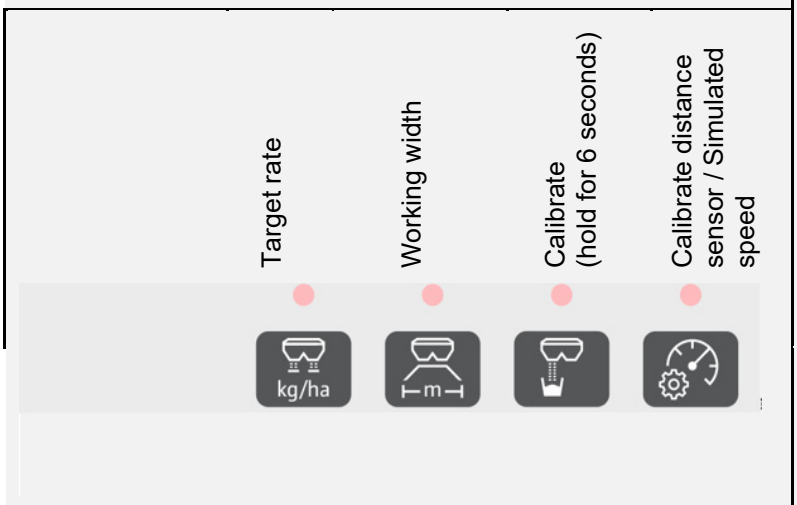


1. Spreading on / off
2. **6** seconds
   → residual emptying

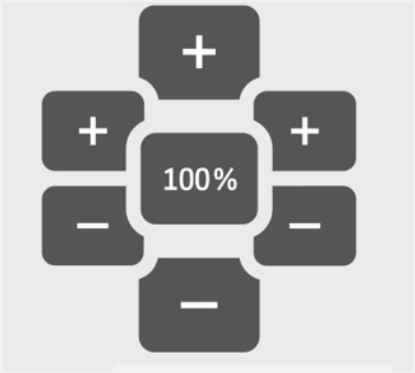


Spreading on the left on / off (ZG with double shutter)

Spreading on the right on / off (ZG with double shutter)



Target rate on both sides higher / lower / 100%



Spreading on the left higher / lower (ZG with double shutter)

Spreading on the right higher / lower (ZG with double shutter)

On / Off

1. Area efficiency
2. **6** seconds → area 0

1. Spreading disc speed / forward speed
2. **6** seconds → speed monitoring on

Boundary spreading on/off

+/- not used

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