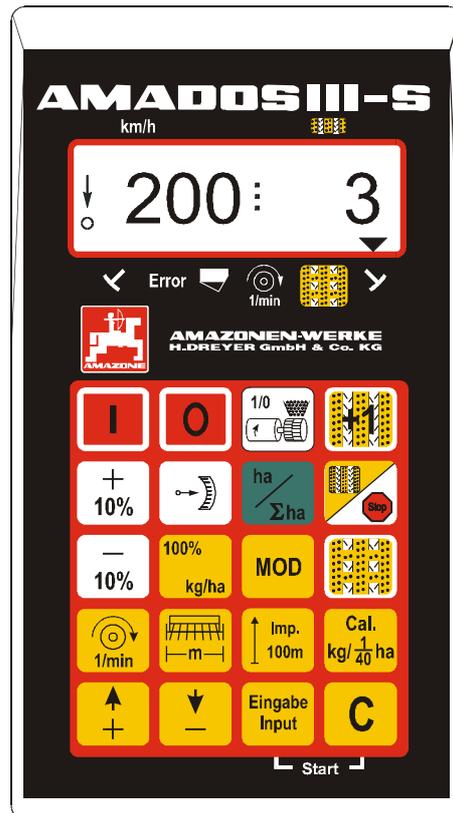


# Operating Instructions

## On-Board Computer

### AMADOS III-S



MG 714  
DB 549 GB 08.01  
Printed in Germany



Before starting to operate, please carefully read and adhere to this operation manual and safety advice!



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Germany  
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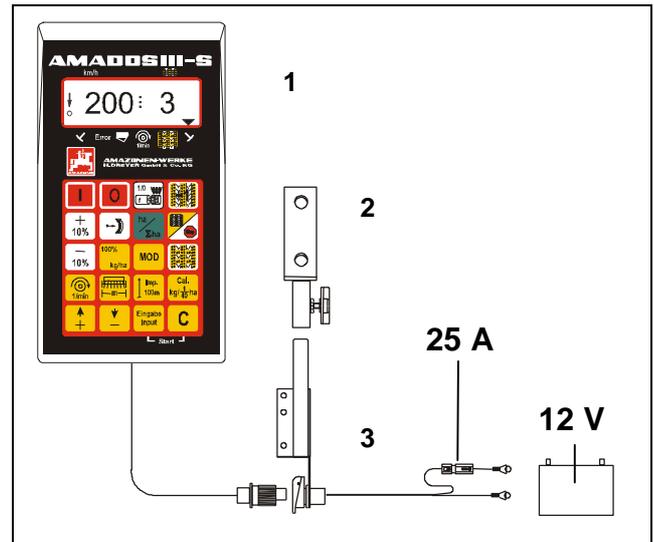
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## 1. On receipt of the computer

On receipt of the computer, please check whether transport damage has occurred or whether any parts are emitting. Only immediate claims to be filed with the forwarding agency may lead to replacement. Please check whether all parts mentioned in the following are provided.

**AMADOS III-S the electronic monitoring-, controlling and regulating system consisting of:**

1. Computer.
2. Console.
3. Battery connecting cable with plug and fuse (16A).





## 2. Information about the computer

### 2.1 Range of application

**AMADOS III-S** can be coupled with the AMAZONE seeddrills and can be used as a display-, monitoring- and controlling device.

### 2.2 Manufacturer

AMAZONEN-WERKE, H. Dreyer GmbH & Co. KG,  
Postfach 51, D-49202 Hasbergen-Gaste / Germany.

### 2.3 Conformity declaration

**AMADOS III-S** fulfils the EMV-guide line 89/336/EC.

### 2.4 Details when making enquiries and ordering

When ordering spare parts indicate the serial-number of the **AMADOS III-S**.



**The safety requirements are only fulfilled when in the event of repair original AMAZONE spare parts are used. Using other parts may rule out the liability for resulting damage!**

### 2.5 Identification

Type plate on the on-board computer.



**The type plate is of documentary value and may not be changed or disguised!**

## 2.6 Declined use

**AMADOS III-S** has exclusively designed for the usual operation as a display-, monitoring- and controlling device for agricultural machinery.

Any use other than that stipulated above is no longer regarded as designed use. The manufacturer does not accept any responsibility for damage resulting from this. Therefore, the operator himself will carry the full risk.

Under "designed use" the operator must adhere to the manufacturer's prescribed operation, maintenance and repair conditions, and exclusively use **original AMAZONE spare parts**.

**AMADOS III-S** may only be operated, maintained and repaired by such persons who have been made acquainted with it and who have been advised about the dangers.

All applicable accident prevention advice as well as any further generally accepted safety-, working-, medical- and road traffic rules should be adhered to.

AMAZONE machines have been manufactured with great care, however, certain deviations from the application rate cannot totally be excluded. These deviations may be caused, e. g. by:

- Varying composition of the seed (e. g. grain size, specific density, grain shape, dressing, sealing).
- Drifting.
- Blockage or bridging (e.g. by foreign particles, bag residue, etc.).
- Undulated terrain.
- Wear of wearing parts (e.g. Dosierorgane, . . .).
- 
- Wrong drive-R.P.M. and travelling speed.
- 
- Wrong setting of the machine (incorrect mounting, not adhering to the setting chart).

Before every operation and also during the operation check your device for proper function and for sufficient application accuracy of the machine.

Claims regarding damage not having occurred on the **AMADOS III-S** itself will be rejected. This also applies to damage due to application errors. Arbitrary modifications to the **AMADOS III-S** may result in damage and therefore, the manufacturer does not accept liability for such damage.



### 3. Safety

This instruction manual contains basic advice which must be adhered to when mounting, operating and maintaining the machine. Ensure that this instruction manual has been read by the user/operator before starting to operate the device and that it is made readily available at all times to the user.

Please strictly observe and adhere to all safety advice given in this instruction manual.

#### 3.1 Dangers when not adhering to safety advice

Not adhering to the safety advice given

- may result in endangering the user or other persons, the environment and/or the machine itself.
- may result in the loss of any claim for damages.

Not paying attention to the safety advice may cause the following risks:

- Danger for persons by not secured operational range.
- Failure of important functions of the machine.
- Failures of prescribed measures for maintenance and repair.
- Danger for persons by mechanical or chemical affects.
- Dangers to persons or to the environment by leaking hydraulic oil.

#### 3.2 Qualification of operator

The implement may only be operated, maintained and repaired by persons, who are acquainted with it and have been informed of the relevant dangers.

### 3.3 Symbols in this instruction manual

#### 3.3.1 General danger symbol



Not adhering to the safety advice in this instruction manual may cause danger to health and life of persons. They are identified by the general danger symbol (Safety symbol according to DIN 4844-W9)

#### 3.3.2 Attention symbol



Attention symbols which may cause dangers for the machine and it's function when not being adhered to, are identified with the Attention symbol:

#### 3.3.3 Hint symbol



**Hints regarding machine's specific particularities, which have to be adhered to for a faultless function of the machine are identified with the hint symbol:**

### 3.4 Safety advice for retrofitting electric and electronic devices and /or components

The function of the implements' electronic components and parts may be affected by the electric-magnetic transmittance of other devices. Such affects may endanger people when the following safety advice will not be adhered to:

When retrofitting electric and electronic devices and / or components to the implement with connection to the on-board electric circuit, the user must ensure by himself that the installation will not cause any disturbance to the tractor electronic or other components.

Special attention must be paid that the retrofitted electric and electronic parts correspond to the EMV-guide 89/336/EC in the relevant valid edition and that they bear the EC-sign.

For retrofitting mobile communication systems (e. g. radio, telephone) the following requirements must be fulfilled:

Only install devices which have officially been authorised in your country.

Firmly install the device.

The use of portable or mobile devices inside the tractor cab is only permissible with a connection to a firmly installed external antenna.

Install the transmitter spaced apart from the tractor's electronic.

When installing the antenna ensure an appropriate installation with proper earth connection between antenna and tractor earth.

For cabling and installation as well as for the maximum permissible current supply in addition adhere to the fitting instructions of the implement manufacturer.

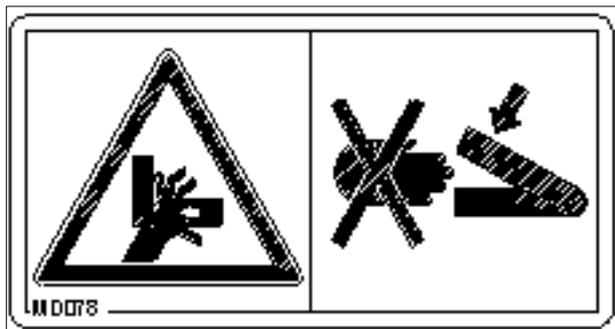
### 3.5 Safety advice for repair work



**Before carrying out any repair work on the electric system or arc welding on the tractor or the mounted implement, disconnect all connections of AMADOS III-S.**

### 3.6 Warning signs on machines with electronic seed rate adjustment

The warning sign MD078 is fixed within the area of moving parts of the electric motor of the electronic seed rate adjustment. The warning sign marks points of danger on the machine. Observing the warning signs serves the safety of all persons who operate the machine.



#### Explanation for picture No. MD078

Never reach into the zone of danger of bruising as long as parts can still move there!

Advise people to leave the danger area!



## 4. Description of product

### 4.1 AMADOS III-S with seed drills D8, MD8, D9, AD and RP-AD

#### AMADOS-III-S

- Automatically calculates the required calibration rate for the actual calibration area (at least 1/40 ha) (only possible if the machine is equipped with a seed rate adjustment).
- Controls the tramlining kit and the pre-emergence marker (tramline rhythm programmable at random, interval control for tramlines possible).
- Indicates the position of the hydraulically actuated track marker.
- Determines the current forward speed in [km/h].
- Monitors the drive of the seed shaft.
- Monitors the drive of the tramline control.
- Monitors the seed level inside the seed box.
- Serves as a hectare counter and
  - determines the finished part area in [ha].
  - stores the finished total area in [ha].
- Serves for seed rate setting and adjustment ( $\pm$  control) in changing soil conditions (step size for seed rate adjustment can be chosen in 1%, 10%, 20% and 30%) (only possible if the machine is equipped with a seed rate adjustment).

### 4.2 AMADOS III-S with seed drills AD-P, AD-PL, RP-AD-P and soil tillage combinations FRS/FPS

#### AMADOS-III-S

- Automatically calculates the required calibration rate for the actual calibration area (at least 1/40 ha) (only possible if the machine is equipped with a seed rate adjustment).
- Controls the tramlining kit and the pre-emergence marker (tramline rhythm programmable at random).
- Reduces the seed rate when creating tramlines according to the number of tramline sowing coulters (only possible if the seed drill is equipped with a seed rate adjustment).
- Determines the current forward speed in [km/h].
- Monitors the metering shaft drive.
- Monitors the tramlining control.
- Monitors the seed level inside the seed box.
- Monitors the blower fan rev. speed. If the pre-set nominal rev. speed is exceeded or undercut by more than 10 %, an audible alarm sounds and simultaneously the "operational display" changes to a "fault display" (please also refer to para. 3.2.4.6.3).
- Serves as a hectare meter and
  - determines the finished part area [ha].
  - stores the finished total area [ha].
- Serves for seed rate setting and adjustment ( $\pm$  control) in changing soil conditions (step size for seed rate adjustment can be chosen in 1%, 10%, 20% and 30%) (only possible if the machine is equipped with a seed rate adjustment).
- Serves for switching on and off the additional drive of the metering shafts.

The micro computer has been equipped with a memory and a lithium-battery. All entered and determined values are stored for about 10 years even if the on-board power supply is switched off. At the next switching on all data are available again.

### 4.3 Functions

**AMADOS III-S** has been equipped with a 6-digit display. (Fig. 1/1) In operation position of the implement the display shows:

- the current seed rate (Fig. 1/2) in [kg/ha] (on seed drills **with** seed rate adjustment) or the current forward speed in [km/h] (on seed drills **without** seed rate adjustment),
- the current position of the tramline counter (Fig. 1/3) and
- function control elements (Fig. 1/4), as e.g. track marker "right hand" or "left hand" in operation position, interval tramline control has been switched on, current rev. speed of a drive shaft to be monitored, seed box is empty as well as various error-messages.

The arrow (Fig. 1/5) appears on the display as soon as AMADOS receives impulses from the sensor "Ha". The circle (Fig. 1/6) under the arrow must flick during travel. The flicking indicates that the sensor "ha" transfers impulses to **AMADOS III-S**.

On seed drills with seed rate adjustment the seed rate can be changed at varying soil conditions during the sowing operation in +/- 1%, 10%, 20% or 30% steps via the keys (Fig. 1/7). The step size of the percentage of the seed rate adjustment is determined by the chosen coding "implement type seed drill".

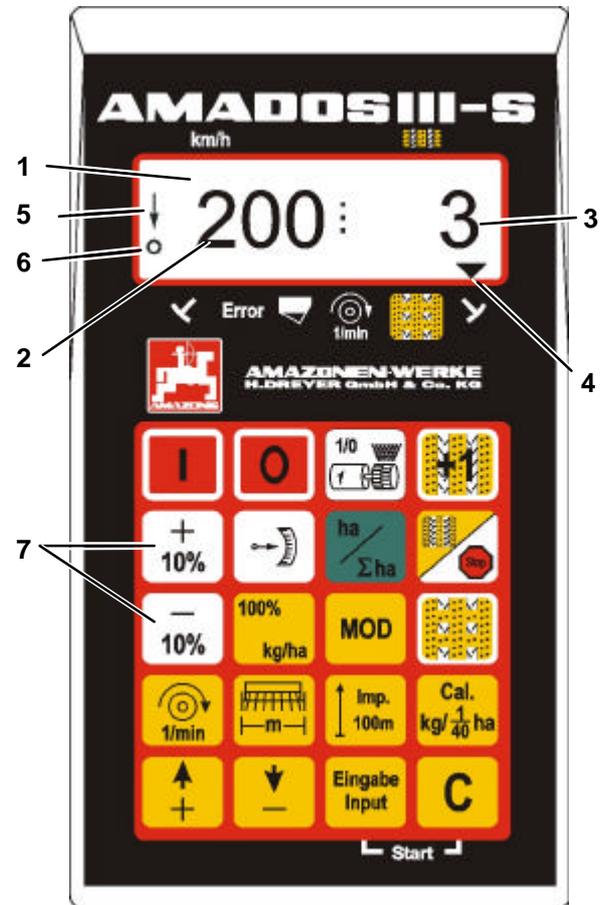
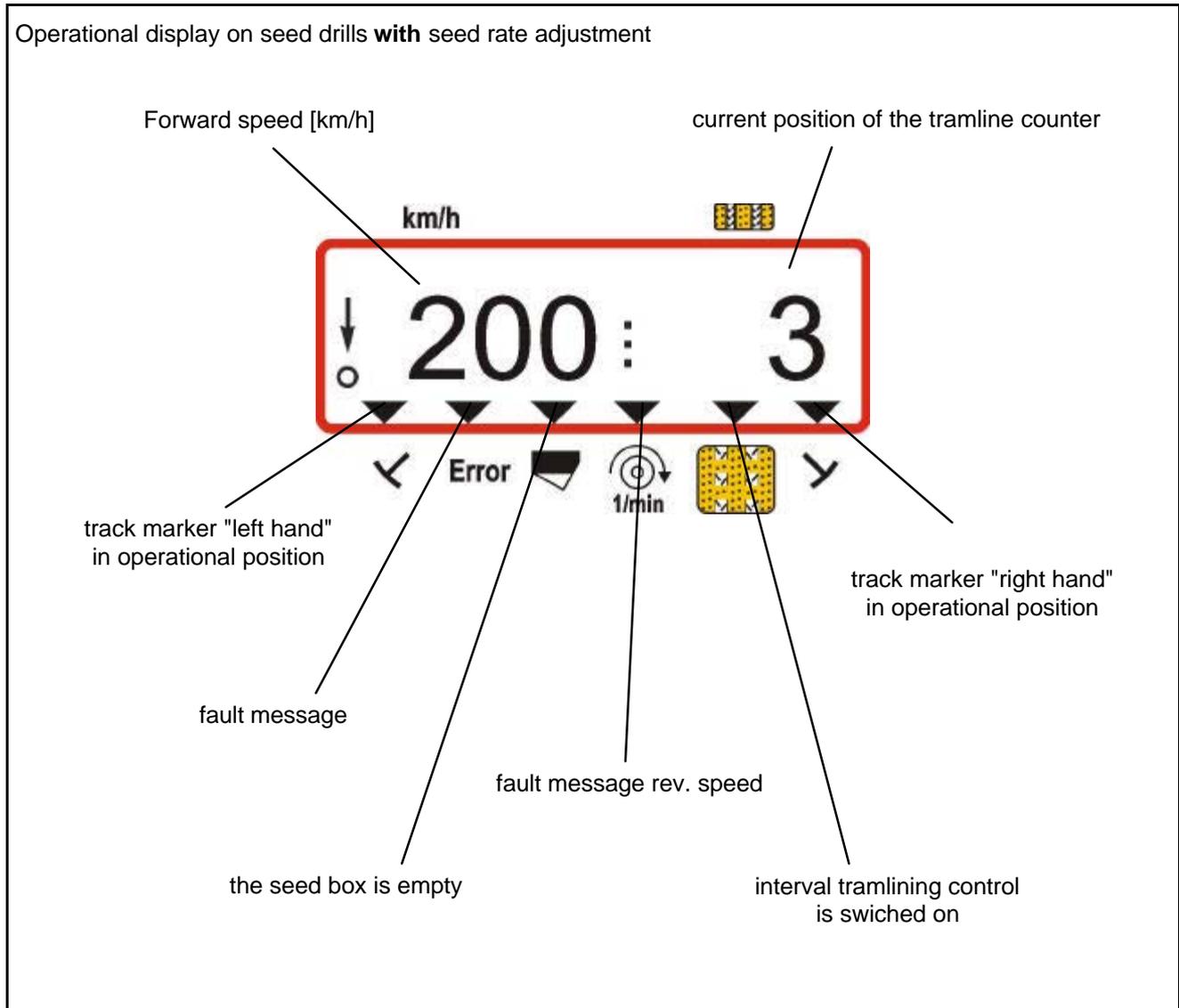


Fig. 1

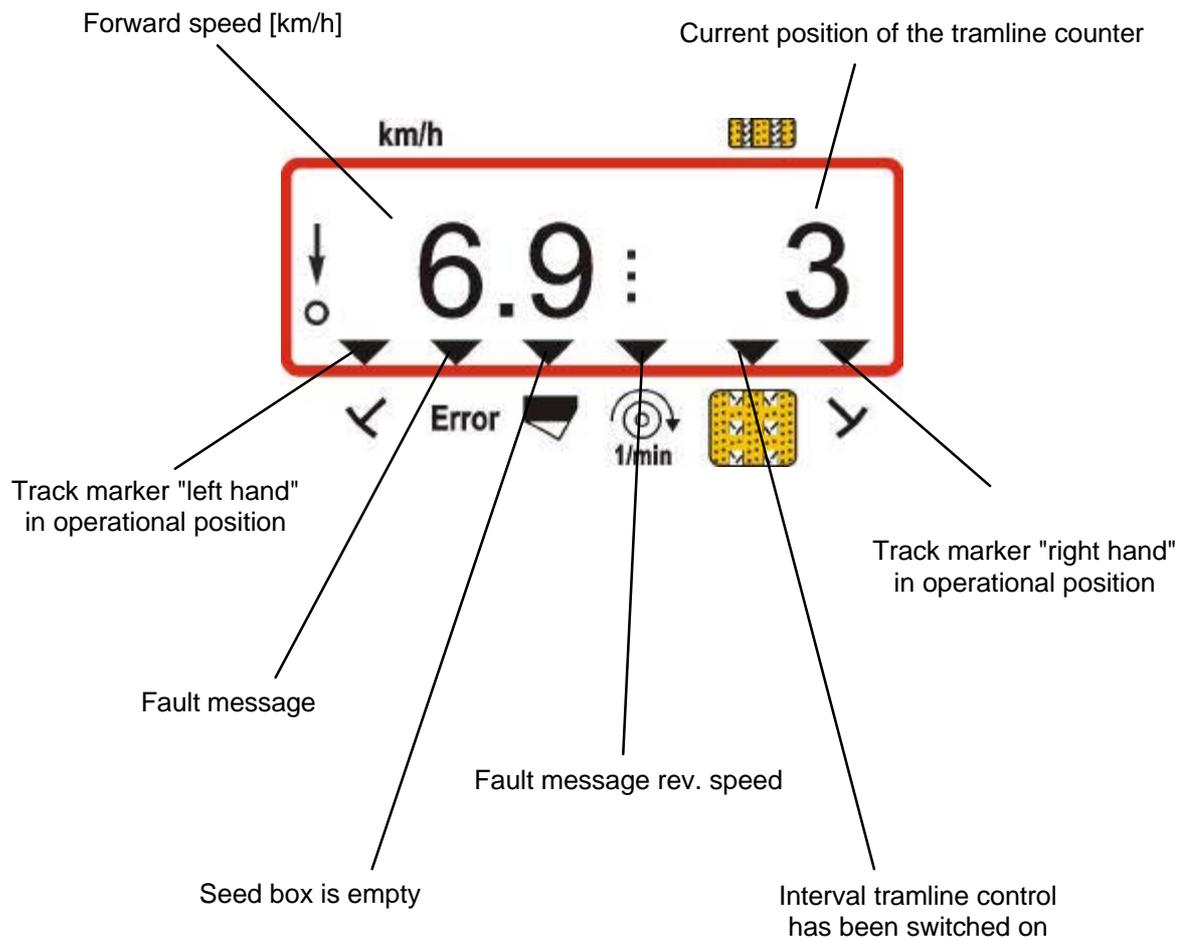


### 4.3.1 Operatingn display

As soon as the first impulsed are received from the hectare sensor, **AMADOS III-S** changes into the "operational display".



Operational display on seed drills **without** seed rate adjustment forward speed [km/h]





#### 4.4 Keypad layout

Tabel 1: Keypad layout

Key	Function - seed drill	Key	Function – seed drill
	Switch on AMADOS		Mode entering
	Switch off AMADOS		Switch on and off interval tramline or enter
	Start / Stop function for the additional drive of the metering shafts		Entering the rev. speed to be monitored and display of the current rev. speed [ $\text{min}^{-1}$ ] of a drive shaft
	Advance the tramline counter		Display of working width or entering [m]
	Increase the seed rate		Display of a soil dependent impulse figure of the distance sensor for a distance of 100 m or entering
	Display of the current gearbox setting lever position		Start the calibration test
	Display of the finished area or part area		Input key for increasing the displayed value
	Display of the current switching rhythm and after pressing this key an automatic advance of the tramline counter is prevented		Input key for decreasing the displayed value
	Reducing the seed rate		Key used to confirm all entries
	Entering of the rated value for the seed rate and return seed rate to rated value previously entered		Correction key

## 5. Operation



Already entered implement specific data remain stored.

### 5.1 Implement on- / off switching

By pressing key switch on "AMADOS III-S"

and switch off by pressing key .



When switching on, the display shows the creation date of the computer program for some seconds.



Always ensure that the setting lever has been set by the setting motor to scale position "0", if the setting motor has been registered with mode "6"



Whenever the supply voltage drops to below 10 volts, e. g. when starting the tractor, the computer automatically switches off. It has to be switched on again as described above.

### 5.2 Entering the implement specific data

The implement specific entering values required by AMADOS III-S are dialled directly

via the keys or or

determined by a calibration procedure.



When dialling the entering values the display jumps into the desired direction by one step forward or backward by the first pressure onto key or .

By repeated pressure onto the key the display continues to run until the key is released.



All via the keys or dialled or determined by a calibration procedure entering values must always be confirmed by pressing key and be stored this way.



Before starting to operate enter the implement specific data by pressing the corresponding keys in the mentioned order newly or check or determine by carrying out a calibration procedure

### 5.2.1 Implement type and implement equipment

#### 1. Mode "1", choosing the implement type

Press Mode "1" and dial the code **machine type** for the relevant implement type. The **coding depends on the type of seed drill** (cam wheel- or pneumatic seed drill) **and on whether the seed drill is equipped with or without track markers.**

If the seed drill is equipped with an **electric seed rate adjustment**, the seed rate can be adjusted during the sowing operation via **AMADOS III-S**. The desired **seed rate adjustment steps** (increments) (1%, 10%, 20% or 30%) with which the seed rate should be adjusted when actuating the keys or is also pre-selected via the Mode "machine type".

The relevant coding can be taken from Tabel 2.

**Tabel 2: Coding "Implement type seed drill"**

increment steps for electric seed rate control <b>AMADOS</b>	Coding "Implement type seed drill"			
	Cam wheel		Pneumatic	
	Marker			
	with	without	with	without
1%	00	10	20	30
10%	01	11	21	31
20%	02	12	22	32
30%	03	13	23	33



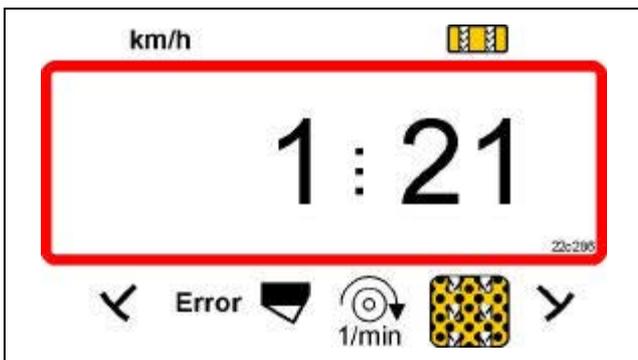
**Example:** Pneumatic seed drill with marker and seed rate adjustment

Due to frequently changing soil conditions the seed rate should be changeable by the keys  or  by  $\pm 20\%$ .

For the given example the Mode "implement type" according table 1 is: **22**

- Press key  hold and simultaneously press key  and thus release the entering "Mode 1".
- Press key  (if necessary repeatedly) and select Mode "1".

Display after selecting Mode "1"



The first figure shows the dialled Mode "1", the second the coding for the selected implement type and the third figure shows the increment steps of the +10% or -10% key for the seed rate adjustment (22 for pneumatic seed drills with track marker and seed rate adjustment).

- Via the keys  or  select Mode "22" on the display.
- By pressing key  store the dialled value "22" and secure against unintended change.

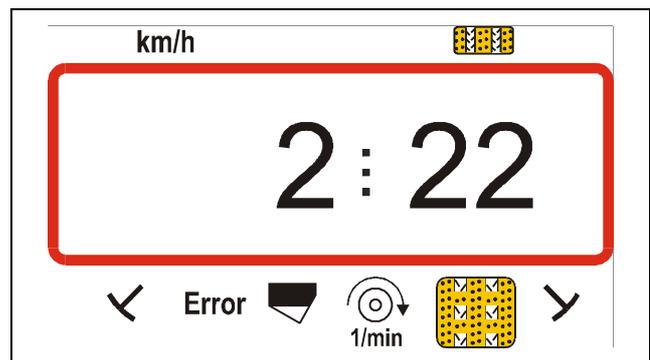


**For mechanical seed drills the data under Mode 2 to 4 for the specific second figure have been by the factory on to "22". When operating with pneumatic seed drills select for these figures the value "10"..**

**2. Mode "2", select the expiring time which passed before an alarm is released in case of a inherent fault on the seed shaft.**

- Press key  hold and simultaneously press key  and thus unblock the entering "Mode 2"..
- Press key  (if necessary press repeatedly) and select Mode "2".

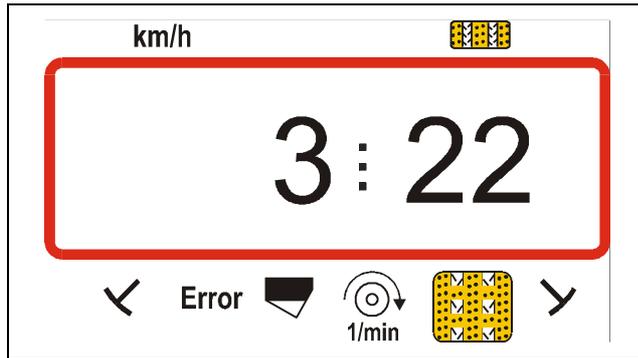
Display after selecting Mode "2"



The first figure shows the dialled Mode "2", the "22" means that in case of an inherent fault on the seed shaft a factory-set time of 22 seconds (cam wheel seed drills) expires before an alarm will be released.

- Change the preset time via the keys  or  e.g. on to "10" for pneumatic seed drills.
  - By pressing key  store the selected value and secure against unintended change.
- 3. Mode "3", select the expiring time that passes before an alarm is released in case of an inherent fault on the counter shaft or the tramlining control**
- Press key  hold and simultaneously press key  and thus unblock the entering "mode 3".
  - Press key  (if necessary repeatedly) and select Mode "3".

Display after selecting mode "3"



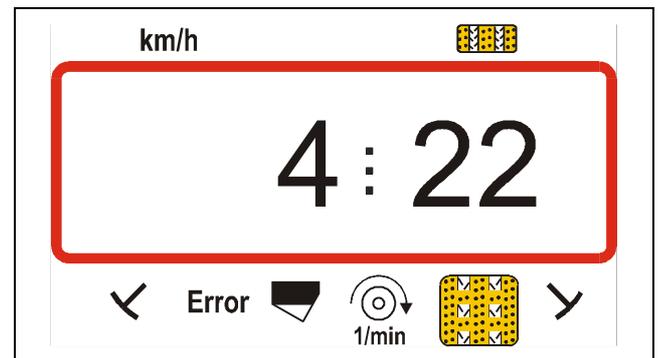
The first figure shows the dialled Mode "3", the "22" means that in case of an inherent fault on the counter shaft or the tramline control a factory-set time of 22 seconds (cam wheel seed drills) expires before an alarm will be released.

- Via the keys  or  change the preset time, e. g. on to "10" for pneumatic seed drills.
- By pressing key  and store the dialled value and secure against unintended change.

4. **Mode "4", select expiring time, during which – when creating tramlines – the impulses sent by the counter shaft sensor or the tramline control should be ignored before they will release an alarm.**

- Press key  hold and simultaneously press key  to unblock the entering "Mode 4".
- Press key  (if necessary press repeatedly) and select Mode "4".

Display after selecting Mode "4"



The first figure shows the dialled Mode "4", the "22" means that in case of an inherent fault on the counter shaft or the tramline control a factory-set time of 22 seconds (cam wheel seed drills) expires before an alarm will be released.

- Via the keys  or  change the pre-set time, e. g. on to "10" for pneumatic seed drills.
- By pressing key  store the selected value and secure against unintended change.

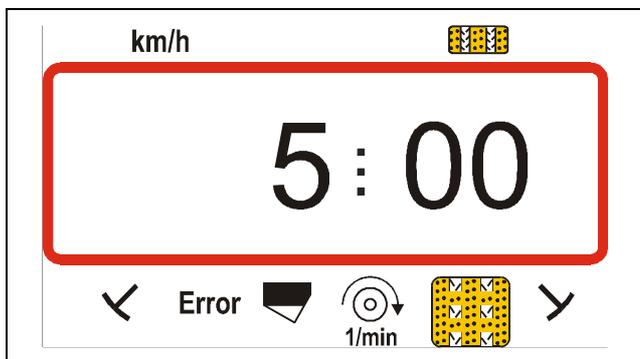


## 5. Mode "5"

When creating tramlines, select via **Mode "5"** whether the seed rate should be reduced via the seed rate adjustment or not.

- Procedure with seed drills without seed rate reduction when creating tramlines. These are
  - **pneumatic** seed drills **without** seed rate adjustment,
  - **pneumatic** seed drills **with** seed rate adjustment **and** seed rate reduction.
  - **mechanic** seed drills.
- Press key **C** hold and simultaneously press key **MOD** and thus unblock the entering "Mode 5".
- Press key **MOD** (if necessary press repeatedly) and select Mode "5".
- Via the keys **↑** or **↓** select on the display **the second figure for the value "00"** (pre-set by the factory).

Display on seed drills **without** seed rate reduction when creating tramlines.



The first figure shows the dialled Mode "5". The second figure "00" means that when creating tramlines the seed rate will not be reduced.

- By pressing key **Eingabe Input** store the dialled value and secure against unintended change.

- Procedure with seed drills with seed rate reduction when creating tramlines. These are
  - **pneumatic** seed drills **with** seed rate adjustment **without** seed rate reduction.

- **When creating tramlines**, pre-select via the **second figure** the recommended **seed rate reduction** in [%]. The seed rate reduction depends on
  - the seed drills working width.
  - the number of sowing coulters.
  - the number of tramline hoses.

Take the value for the second figure from column **"recommended seed rate reduction"** in Tabel 3.

**Tabel 3: Seed rate reduction when creating tramlines for pneumatic seed drills with seed rate adjustment**

Working width [m]	Number of sowing coulters	Number of tramline hoses	Recommended seed rate reduction [%]
6	48	4	8
	48	6	12
4,5	36	4	11
	44	4	9
	36	6	17
4	44	6	14
	32	4	12
	40	4	10
3	32	6	19
	40	6	15
	24	4	17
3	30	4	13
	24	6	25
	30	6	20

### Example:

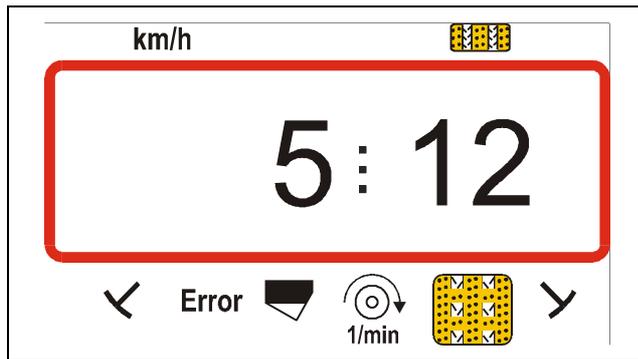
Type of machine:	Pneumatic seed drill with seed rate adjustment
Working width:	4 m
Number of sowing coulters:	32
Number of tramline hoses:	4

For the above example the recommended seed rate reduction is **12%**.

- Press key **C** hold and simultaneously press key **MOD** to unblock the entering "Mode 5".

- Press key **MOD** (if necessary repeatedly) and select Mode "5".
- When creating tramlines select via the keys  or  for the second figure the value "12" for the recommended seed rate reduction

Display on pneumatic seed drills with seed rate reduction when creating tramlines at a 12 % seed rate reduction



The first figure shows the dialled Mode "5". The second figure "12" means that when creating tramlines the seed rate is reduced by 12 %.

- Press key **Eingabe Input** to store the dialled value and to secure against unintended change.

## 6. Mode "6", Seed rate adjustment yes=01 / no=00

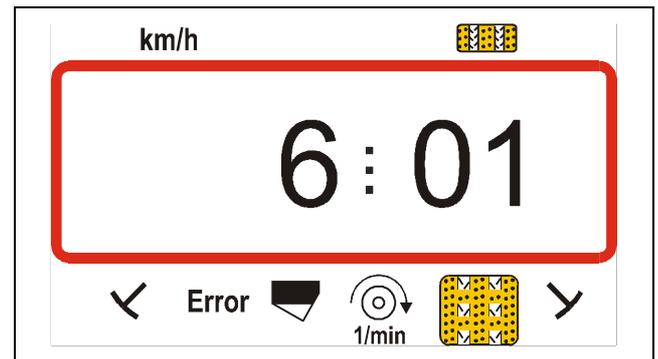
Select via Mode "6" whether the seed drill is equipped with (01) or without (00) a seed rate adjustment.



**When logging off the seed rate adjustment simultaneously all implement specific data stored in AMADOS III-S will be erased (Imp./100m, working width, seed rate, tramline rhythm). Prior to this logging off definitely note these data.**

- Press key **C** hold and simultaneously press key **MOD** to unblock the entering "Mode 6".
- Press key **MOD** (if necessary repeatedly) and select Mode "6".

Display after selecting Mode "6"



The first figure shows the dialled Mode "6", The second figure "01" means that the seed drill is equipped with a seed rate adjustment.

- Via the keys  or  select the coding "00" or "01" on the display.
- Press key **Eingabe Input** to store the dialled value, e. g. "01" and to secure against unintended change.



**After logging off the seed rate adjustment the setting motor moves the gearbox setting lever to position "0" on the scale of the setting gearbox. On the display now appears the program creating date for some seconds.**

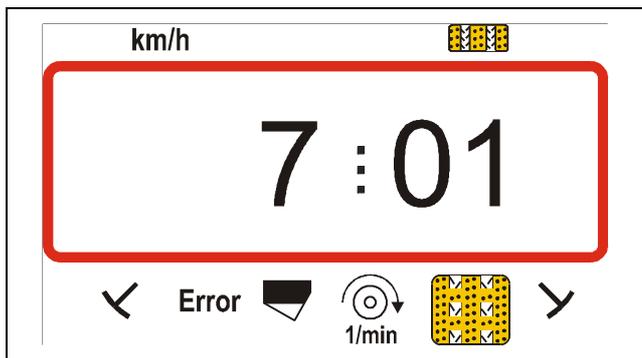


### 7. Mode "7", Rotary cultivator monitoring yes=01 / no=00

Via **Mode "7"** select whether the KG-2 is equipped with a rev-monitoring (01) or not (00).

- Press key **C** hold and simultaneously press key **MOD** to unblock the entering "Mode 7".
- Press key **MOD** (if necessary repeatedly) and select Mode "7".

Display after selecting Mode "7"



The first figure shows the dialled "7", the second figure "01" means that the rotary cultivator is equipped with a rev-monitoring.

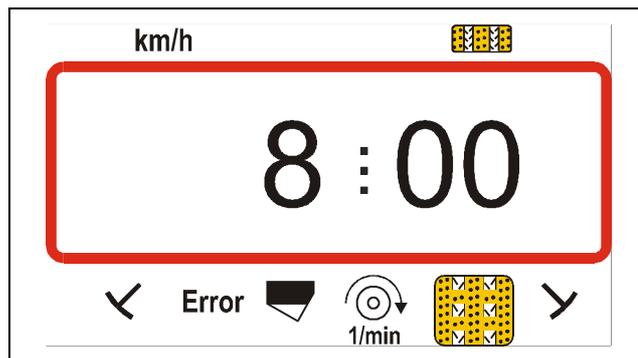
- Via the keys **+** or **-** select coding "00" or "01" on the display.
- Press key **Eingabe Input** to store the selected value, e. g. "01" and to secure against unintended change.

### 8. Mode "8", free function

Via **Mode "8"** always select (00).

- Press key **C** hold and simultaneously press key to unblock the entering "Mode 8".
- Press key **MOD** (if necessary repeatedly) and select Mode "8".

Display after selecting Mode "8"



The first figure shows the dialled Mode "8", for the second figure select "00".

- Via the keys **+** or **-** select the coding "00" on the display.
- Press key **Eingabe Input** to store the dialled value "00" and to secure against unintended change.

**9. Mode "9", Start / Stop function for the additional metering shaft drive**

Dial via **Mode "9"**, whether for seed pre-metering (e. g. on the headlands) the seed drill is equipped with an additional drive for the metering shafts (XX) or not (00). If an additional drive is available, here the time in seconds (XX) for the pre-metering is selected.

- Press key hold and simultaneously press key to unblock the entering "Mode 9".
- Press key (if necessary repeatedly) and select Mode "9".

Display after selecting Mode "9" on a seed drill **without** an additional metering shaft drive



The first figure shows the dialed mode "9", the second figure "00" means that the seed drill is not equipped with an additional drive.

Display after selecting Mode "9" on a seed drill **with** an additional metering shaft drive



The first figure shows the dialed Mode "9", the second figure "05" means that after having pressed key the additional drive switches on for a period of 5 seconds and thus already provides a seed pre-metering before the seed drill starts to travel. The period to be seed depends on the driving behaviour of the tractor operator in the headlands and can be set between 0 and 98 seconds (please also refer to

para.: 5.2.2.3). The setting to 99 results in the continuous operation of the additional drive.

- Via the keys or select the additional drive operating time, e. g. "05" for 5 seconds.
- Press key to store the dialled value, e.g. "05" and to secure against unintended change.

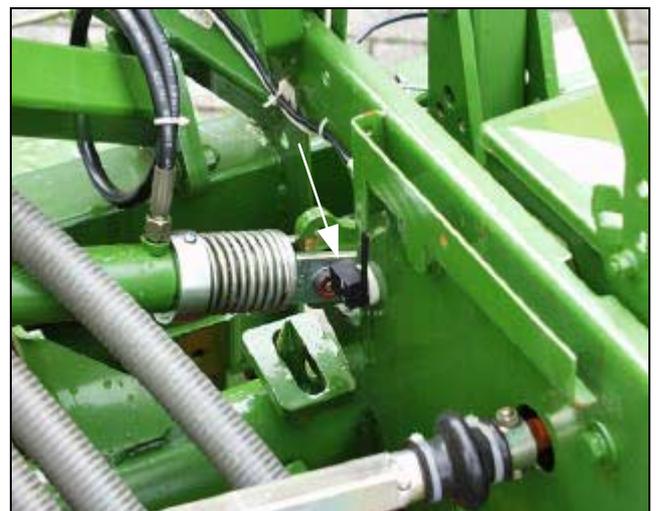
**10. Mode"10", selecting number of track marker sensors**

Via **Mode "10"** select with how many marker sensors the seed drill is equipped. "00" = 2 sensors and "01" = 1 sensor

Seed drill with one track marker sensor



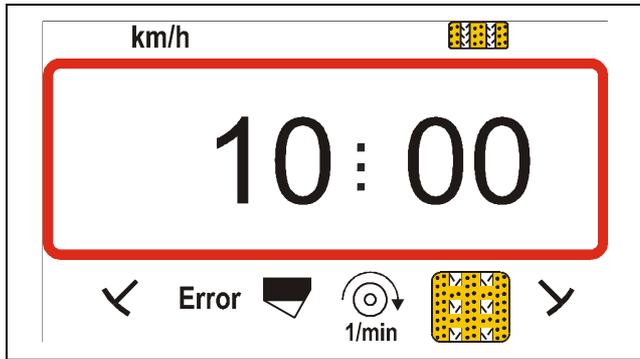
Seed drill with two track marker sensors





- Press key **C** hold and simultaneously press key **MOD** to unblock the entering "Mode 10".
- Press key **MOD** (if necessary repeatedly) and select Mode "10".

Display after selecting Mode "10"



The first figure shows the selected Mode "10", the second figure "00" means that the seed drill is equipped with two track marker sensors.

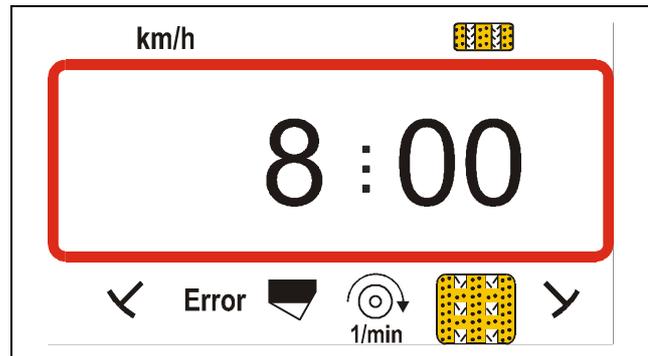
- Via the key **+** or **-** select the coding "00" or "01" on the display.
- Press key **Eingabe Input** to store the selected value, e.g. "00" and to secure against unintended change.

### 11. Mode "11", seed shaft sensor equipped yes=01 / no=00

Via **Mode "11"** select whether a seed shaft sensor is available "01" or not "00".

- Press key **C** hold and simultaneously press **MOD** to unblock the entering "Mode 11"
- Press key **MOD** (if necessary repeatedly) and select Mode "11".

Display after selecting Mode "11"



The first figure shows the selected Mode "11", the second figure "01" means that the seed drill is equipped with one seed shaft sensor.

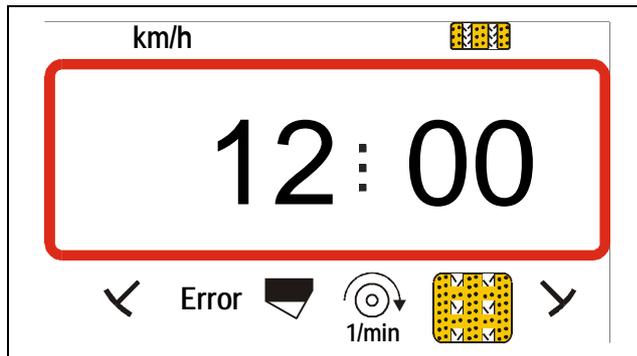
- Via the key **+** or **-** select the coding "00" or "01" on the display.
- Press key **Eingabe Input** to store the selected value, e. g. "01" and to secure against unintended change.

### 12. Mode "12", Filling level sensor equipped yes=01 / no=00

Via **Mode "12"** select whether a filling level sensor is available "01" or not "00".

- Press key  hold and simultaneously press key  to unblock the entering "Mode 12".
- Press key  (if necessary repeatedly) and select Mode "12".

Display after selecting Mode "12"



The first figure shows the selected Mode "12", the second figure "00" means that the seed drill is not equipped with a filling level sensor.

- Via the key  or  select the coding "00" or "01" on the display.
- Press key  to store the selected value, e. g. "00" and to secure against unintended change.

### 13. Calibrate the setting motor for the seed rate adjustment prior to entering additional implement specific data.



### 5.2.1.1 Calibrating the setting motor (only for seed drills with seed rate adjustment)



**Danger of bruising!**  
During the calibration procedure never reach on to the seed shaft or metering shaft or the setting gearbox!



For the calibration procedure, AMADOS III S and the implement plug must be connected.



Carry out the calibration procedure whilst the implement is not moving.

#### How to carry out the calibration procedure:

Switch on **AMADOS III**, so that the setting motor moves the gearbox setting lever onto position "0" on the scale.

Press key  hold and simultaneously press key

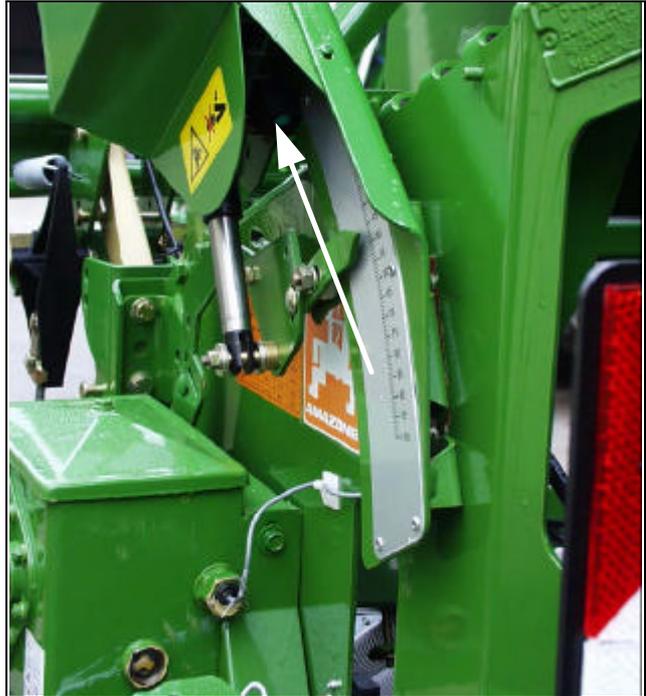
 to start the calibration procedure .

- Press key  until the value "0" is shown on the display, the gearbox setting lever has moved to position "0" on the scale of the setting gearbox and the luminous diode on the home position sensor lights up.



In position "0" of the gearbox setting lever the luminous diode (LED) must light up on the home position sensor.

Arrangement of the home position sensor on the two range gearbox



Arrangement of the home position sensor on the vario gearbox



- Press key  until the gearbox setting lever has moved to position "98" on the scale of the setting gearbox.
- Press key  to finish the calibration procedure.
- Compare the gearbox setting lever position shown on the display and the actual gearbox setting lever position read off the scale of the setting gearbox (please refer to para. 5.2.1.1.1).

#### 5.2.1.1.1 Compare displayed and actual gearbox setting lever position (only on seed drills with seed rate adjustment)

- Press key  to show the current gearbox setting lever position on the display.
- Via the keys  or  pre-select on the display the gearbox setting lever position "50".
- Press key  to store the pre-selected value "50". Simultaneously the setting motor moves the gearbox setting lever to this pre-selected position.
- Compare the gearbox setting lever position "50" shown on the display and the actual gearbox setting lever position read off the scale of the setting gearbox.

**In case of deviations between the displayed and the actual gearbox setting lever position carry out a new calibration of the setting motor. Please refer to para. 5.2.1.1.2.**

#### 5.2.1.1.2 Deviations between displayed and actual gearbox setting lever position.

**Example 1: The value for the actual gearbox setting lever position is larger than the value shown on the display**

displayed gearbox setting lever position: "50"  
actual gearbox setting lever position: "51"

#### How to carry out a fresh calibration procedure:

- Switch off and on AMADOS III-S. The setting motor moves the gearbox setting lever to position "0" on the scale of the setting gearbox.
- Press key  hold and simultaneously press key  to start the calibration procedure.
- Press key  until the value "0" appears on the display, the gearbox setting lever has been moved to position "0" on the scale of the setting gearbox and the luminous diode on the home position sensor lights up.
- Press key  until the gearbox setting lever has been moved to position "97" on the scale of the setting gearbox.
- Press key  to finish the calibration procedure.
- Compare the gearbox setting lever position shown on the display and the actual gearbox setting lever position.

**If the shown and the actual gearbox setting lever position still do not coincide, repeat the calibration procedure**



**Example 2: The value of the actual gearbox setting lever position is smaller than that shown on the display.**

displayed gearbox setting lever position: "50"  
actual gearbox setting lever position: "49"

**How to carry out a new calibration procedure:**

- Switch on and off AMADOS III-S. The setting motor moves the gearbox setting lever on the scale of the setting gearbox to "0".
- Press key  hold and simultaneously press key  to start the calibration procedure.
- Press key  until the value "0" will appear on the display, the gearbox setting lever has been moved to position "0" on the scale of the setting gearbox and the luminous diode on the home position sensor lights up.
- Press key  until the gearbox setting lever has been moved to position "99" on the scale of the setting gearbox.
- Press key  to finish the calibration procedure.
- Compare the gearbox setting lever position shown on the display and the actual setting lever position read off the scale.

**If the displayed and the actual gearbox setting lever position still do not coincide, repeat the calibration procedure.**

### 5.2.1.2 Entering implement specific data

#### 5.2.1.2.1 Calibrating the distance sensor

For determining the actual forward speed or area measurement **AMADOS III S** requires the calibration value "Imp./100m" which sensor "X" releases to **AMADOS III S** when driving down a calibration distance of 100 m.



The calibration figure "Imp./100m" may never be smaller than "250" sein, as otherwise **AMADOS III-S** does not operate properly.

For entering the calibration value "Imp./100m" two possibilities are given:

- the calibration value "Imp./100m" is known and is dialled via the key board.
- the calibration value "Imp./100m" is not known and will be determined by driving down a pre-measured distance.



As the calibration figure "Imp./100m" is ground related, it is, in case of soil types heavily deviating from one another, recommended to determine always newly the calibration figure by driving down a pre-measured distance.

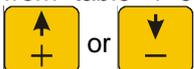
#### 1. The calibration value "Imp./100m" is known



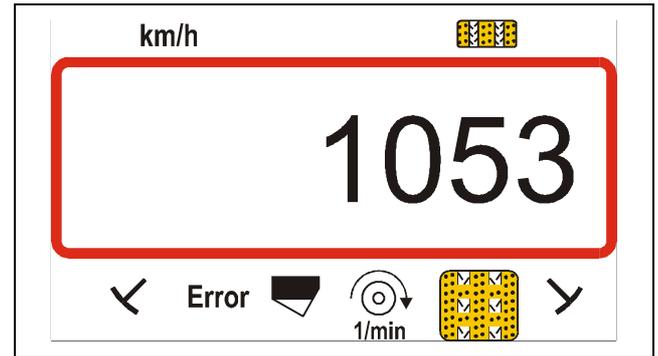
The calibration value "Imp./100m" depends on

- the type of seed drill.
- the way of sensor fixing.
- the prevailing soil conditions.

- Press key  when tractor is stopped.
- Take the known calibration value "Imp./100m" from table 4 entnehmen and dial via the keys



Display of the dialled calibration value



- Press key  to store the dialled calibration value.

- Once again press key  to check the stored calibration value. On the display now the chosen calibration value should appear.



The calibration values stated in table 4 are mean values determined in practice.



In case of deviations between

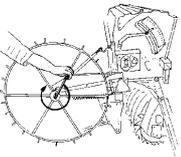
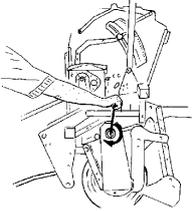
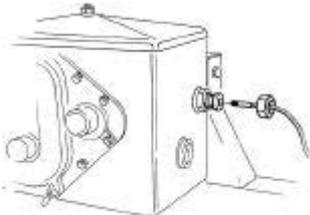
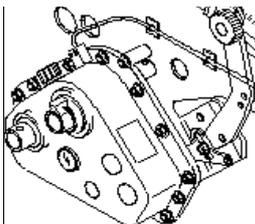
- the sown seed rate and the actually worked area
- the worked area determined and displayed by **AMADOS III-S** and the actual worked

newly determine the calibration value by driving down a calibration distance of 100 m (please refer to para. 5.2.1.2.1 item. 2).

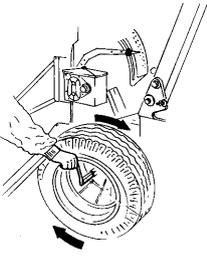


**Tabel 4: Calibration values "Imp./100m", for seed drills (RP)AD02/03, (RP)AD-P(L)02 and FRS/FPS.**

The mean values determined in practice depend on the type of seed drill, the sensor fixing and the crank turns for the calibration test.

											
	<b>Pack Top-seed drills</b> AD02 AD-P02    AD-PL02		<b>Tyre packer Pack Top-seed drills</b> RP-AD02 RP-AD-P02    RP-AD-PL02		<b>Front-packer-seed tank</b> FPS 103/203    FRS 103/203		<b>Pack Top-seed drills</b> AD03		<b>Reifenpacker Aufbau-Drillmaschinen</b> RP-AD03		
<b>Working-width</b>	Crank turns for 1/40 ha										
		on star wheel Ø 1,18	on star wheel Ø 0,65	on the intermediate drive		on the star wheel		on the star wheel		on the intermediate drive	
	2,5 m	27,0	-	59,0	-	-	27,0	59,0			
	3,0 m	22,5	38,5	49,0	49,0	38,5	22,5	49,0			
	4,0 m	17,0	-	37,0	-	29,0	17,0	37,0			
	4,5 m	15,0	-	33,0	-	26,0	15,0	33,0			
6,0 m	-	-	24,5	-	19,5	-	-				
<b>AMADOS-Impulses / 100m</b>	1053	1331	1175	1410	1502	1557	617	672			
<b>Sensor-fixing on the gearbox</b>											

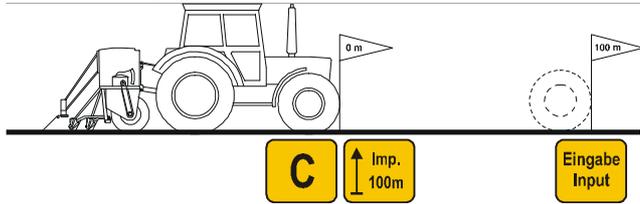
- Calibration values "Imp./100m"  
for seed drills D8/D9 Special/Super and MD 8

  Tyres	Working width	 D8 Special, D8 Super and MD 8		 D9 Super, D9 Special	AMADOS Impuls / 100 m (mean value)
		Crank turns on the wheel			
		1/40 ha	1/10 ha	1/40 ha	
5.00 - 16	2,5 m	49,5	197,0	-	1733
	3,0 m	41,0	164,0	-	1723
6.00 - 16	2,5 m	46,0	185,0	-	1610
		-	-	46,0	740
	3,0 m	38,5	154,0	-	1618
		-	-	38,5	740
10.0/75 - 15	3,0 m	37,0	149,0	-	1555
		-	-	37,0	711
	4,0 m	28,0	112,0	-	1568
		-	-	28,0	711
31x15.5 - 15	3,0 m	36,0	144,0	-	1513
	4,0 m	27,0	108,0	-	1512
	6,0 m	18,0	72,0	-	1512
31x15.5 – 15 Mitas	3,0 m	-	-	37,0	711
	4,0 m	-	-	28,0	
11.5/80 - 15	4,5 m	22,0	88,0	-	1366
	6,0 m	16,5	66,0	-	1386



**2. The value "Imp./100m" is unknown**

- Accurately measure out in the field a calibration distance of 100 m. Mark the starting- and ending point of the calibration distance.
- Bring tractor in start position and seed drill in operating position (if necessary stop seed metering).

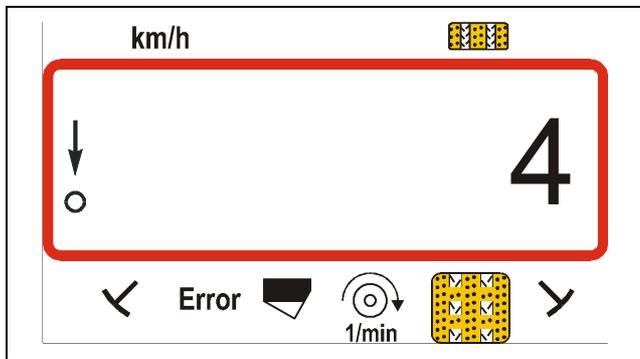


- Press key **C** hold and simultaneously press key **Imp. 100m**.
- Travel accurately along the calibration distance from the starting- till the ending point (when starting to move, the counter returns to "0"). On the display the continuously determined impulses are shown.



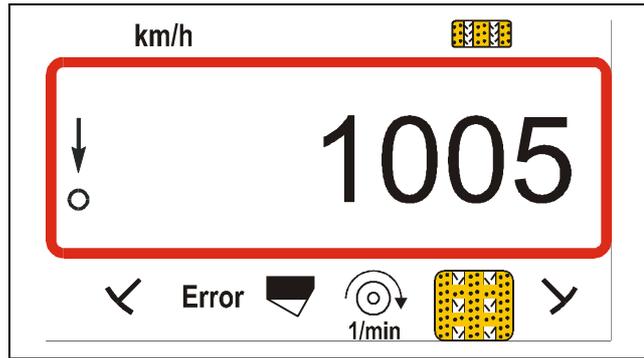
**Do not press any key while travelling along the calibration distance.**

Display during the calibration test



- Stop after 100 m. On the display now the number of the determined impulses (e.g. 1005) appear which have been determined when travelling down the calibration distance (100 m).
- Press key **Eingabe Input** to store the displayed determined calibration value (Imp./100m).
- Once again press key **Imp. 100m** to check the stored calibration value. The display now should show the determined calibration value, e. g. 1005 Imp./100 m.

Display of the determined calibration value



- Insert the determined calibration value in Table 5.

**Table 5: Ground related calibration value "Imp./100m"**

Type of soil	Impulses/100m	Crank turns
soft soil		
medium soil		
hard soil		



**If the calibration value is determined by travelling down a calibration distance, implicitly convert the necessary crank turns for the calibration test stated in Table 4 (only for machines without seed rate adjustment).**

**3. Conversion of the crank turns (only for machines without seed rate adjustment)**

**Example:**

Type of seed drill: AD 2 / AD-P 2  
 Working width: 3 m  
 Imp./100m (actual): 1005  
 Imp./100m (Tabel 4): 1053  
 Crank turns (Tabel 4): 22,5  
 Crank turns (actual): ?

$$\text{Crank turns (actual)} = \text{Crank turns (Tabel 4)} \times \text{conversion factor}$$

$$\text{Conversion factor} = \frac{\text{Imp./100m (actual)}}{\text{Imp./100m (Table 4)}}$$

$$\text{Conversion factor} = \frac{1005}{1053} = 0,95$$

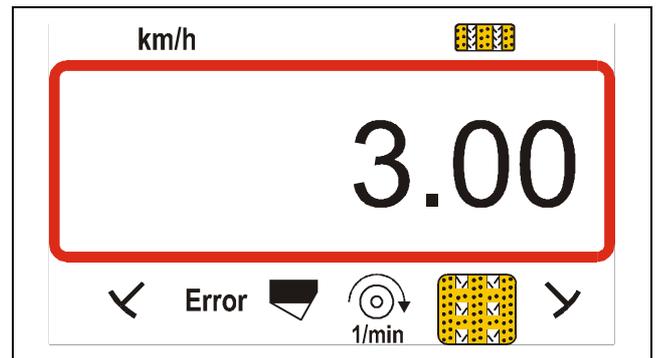
$$\text{Crank turns (actual)} = 22,5 \times 0,95 = 21,4$$

**5.2.1.2.2 Working width**

To determine the worked area **AMADOS III-S** requires information about the working width. For this enter the working width as follows:

- Press key .
- Via the keys  or  dial the wanted working width [m] on the display, e. g. "3.00" for 3 m working width.

Display working width



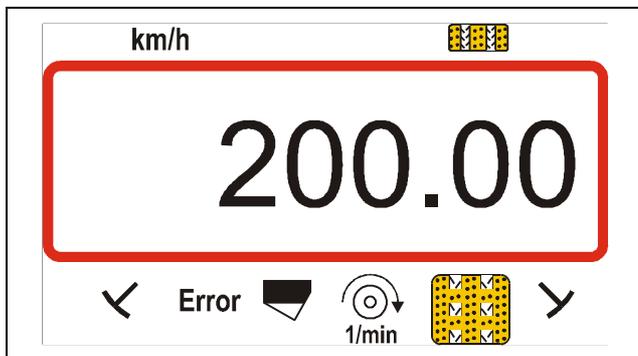
- Press key  to store the dialled value.
- Once again press key  to check the stored value. On the display now the dialled value should appear, e. g. "3.00".



### 5.2.1.2.3 Enter the sowing quantity (seed rate) (only for seed drills with seed rate adjustment)

- Press key .
- Via the keys  or  dial on the display the wanted seed rate [kg/ha] (e.g. 200.00 for 200 kg/ha).
- Press key  to store the dialled value (200).
- Once again press key  to check the stored value. On the display now the figure "200.0" should appear.

Display of the wanted seed rate



- Carrying out the calibration test.



**When changing the type of seed, carry out a new calibration test.**



**In case the seed rate is changed by more than 50 % carry out a new calibration test.**



**On seed drills with a seed rate adjustment the seed rate can be changed during the sowing procedure**

via the keys  or  (please refer to para. 5.2.1 item. 1).

5.2.1.2.4 Procedure of calibration test



Ensure that the tramline counter is not on position "0" (creating tramlines) before you carry out the calibration test.

1. How to carry out the calibration test for seed drills without seed rate adjustment

- Converting the required calibration weight [kg] for the desired seed rate [kg/ha].

$$\frac{\text{desired seed rate [kg/ha]}}{40} = \text{required calibration weight [kg]}$$

**Example:**

Desired seed rate: 200 kg/ha

Required calibrating weight: 5 kg

Determine the required gearbox setting figure (gearbox setting lever position) for the desired seed rate as usual.

Calibrate the seed drill as usual on 1/40 ha.

2. How to carry out the calibration test for seed drills with seed rate adjustment

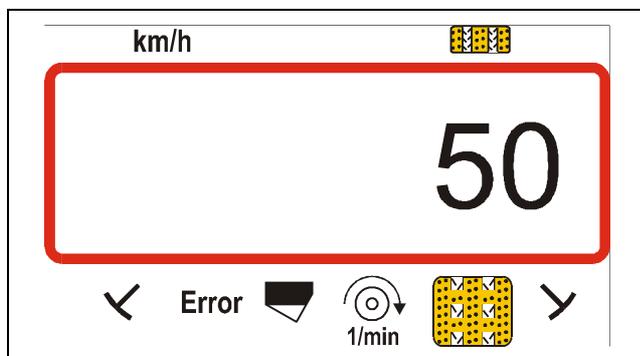
**Example:**

entered seed rate: e.g. 200 kg/ha

Press key

Via the keys or pre-select on the display a gearbox setting lever position (e. g. "50") which is usual for the type of seed to be sown (favourably "50" for grain and "10" for rape) .

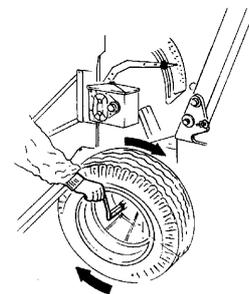
Display of the gearbox setting lever position



- Press key to store the dialled value e.g. "50". The setting motor moves the gearbox setting

lever on the scale of the setting gearbox to position "50".

- Newly start order.
- Press key hold and simultaneously press key . This way the hectare meter for the part area will be set to "0".
- Start the first calibration test. by pressing
- key hold and simultaneously press key .
- Calibrate seed drill as usual on at least 1/40 ha.

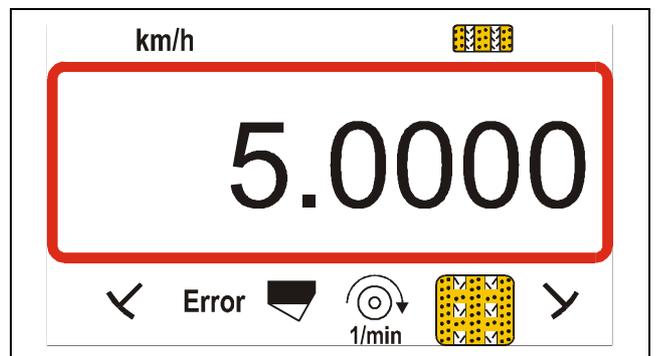


Whilst calibrating the calibration area is determined. For this calibration area the required calibration rate is automatically calculated and repeatedly shown on the display. Also beyond 1/40 ha.

When the calibration area of 1/40 ha has been reached, a honk signals sound.

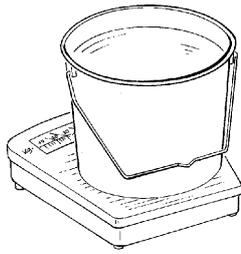
- Finish the calibration test earliest after the honk signal.

Display after having finished the calibration test



On the display appears the automatically calculated required calibration weight [kg] for the calibration area and the entered seed rate.

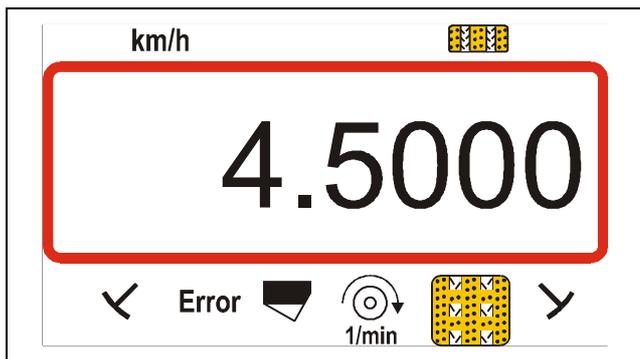
- Weight the collected actual calibrated seed (e.g. 4.5 kg) (consider the net weight of the bucket).



The balance used must weight the collected calibration amount accurately. Larger inaccuracies may cause deviations of the actual seed rate.

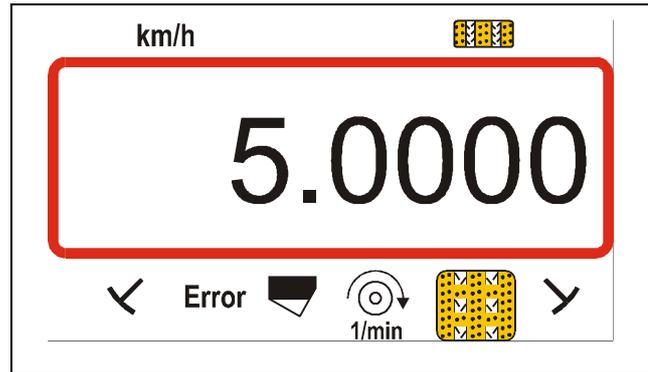
- Deriving from the displayed, required calibration amount dial the weight of the collected actual calibration amount via the keys  or  n.
- For example deriving from the value "5.0000" for 5 kg (for a seed rate of 200 kg/ha), dial on the display the value "4.5000" for 4,5 kg actual calibration amount.

Display of the actual, dialled calibration amount



- Press key  to store the value. With this value **AMADOS III-S** calculates automatically the new gearbox setting lever position. The setting motor moves the gearbox setting lever to this position.
- Check this new gearbox setting lever position by a new calibration test (see first calibration test). Repeat until the actual and the required calibration amount coincide.

Display after finishing the calibration test



- If the actual and the required calibration amount coincide, wait at least for 5 seconds and then press key  to store this value.



For checking the calibration test repeat this test after 2 – 3 seed box fillings. In case of deviations of this calibration test, repeat until the collected and the required calibration amount coincide.

**5.2.1.2.5 Programming tramline rhythm**

The spacing of the tramlines depends on the working width of the seed drill and the later used machinery such as, e. g.:

- fertiliser spreader and/or
- field sprayer.

Depending on the working widths of these machinery it is necessary to be able to create tramlines in varying spacings to one another.

The different tramline systems are explained in the instruction manual "seed drill".

**Example:**

Seed drill: **3 m** working width  
 Fertiliser spreader/ field sprayer: **24 m** working width = **24 m** tramline spacing

- Please look up chapter "metering wheel tramlining control" of the seed drill's instruction book.

**Table 6: Excerpt from the instruction book "seed drill"**

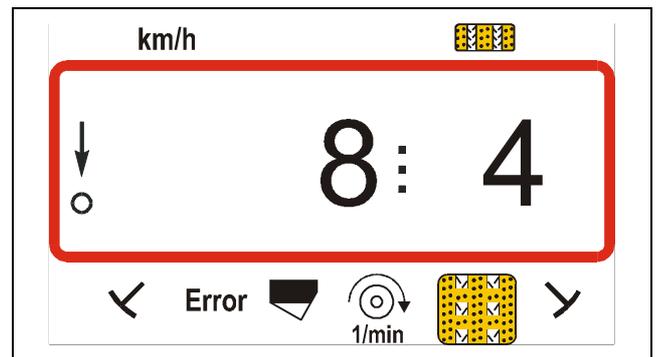
A	B	C	D
			START
2,5 m	20 m	<b>8</b>	
3,0 m	24 m		
4,0 m	32 m		
A	B	C	D
Working width of the seed drill	Tramline spacing	Switching rhythm	Tramline counter, controlled and displayed by AMADOS III-S

- Find in the mentioned tables the line in which the seed drill working width (3 m) and the tramline spacing (24 m) are mentioned side by side.

- Read off the switching rhythm "8" .

- Press key and the display shows the current switching rhythm.

Display current switching rhythm and tramline counter



The first figure (8) shows the dialled switching rhythm. The second, flashing figure (4) shows the current position of the tramline counter.

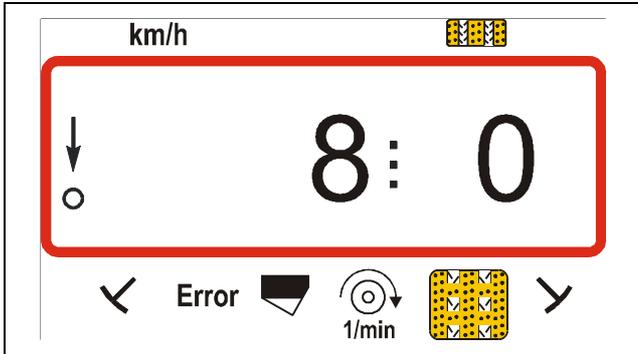
- Pre-select the required switching rhythm (e.g. 8)

via the keys or



- Press key  to store the pre-selected value (e. g. "8"). Then the following display will appear:

Display of the newly entered tramlining rhythm



- Once again press key  so that the second figure (0) does not flash any longer.



**Tabel 7 shows the switching rhythms possible with AMADOS III-S.**

**Tabel 7: Possible tramline rhythms**

Switching rhythm	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Tramline counter, controlled and displayed by the on-board computer	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	1	0	1	1	1	1	1	1	1	2	0	1	1	1
		1	2	2	2	2	2	2	2	3	3	2	2	2
		2		3	3	3	3	3	3	0	4	3	3	3
					4	4	4	4	4	5	5	4	4	4
						5	5	5	5	6	6	5	5	5
							6	6	6	0	7	6	6	6
								7	7	8	8	7	7	7
									8	9	0	8	8	8
										10	10	9	9	9
												10	10	10
													11	11
														12

	Double tramline system													
Switching rhythm	15*	16	18 r.h.	18 l.h.	19 r.h.	19 l.h.	24 r.h.	24 l.h.	25 r.h.	25 l.h.	27 r.h.	27 l.h.	28 r.h.	28 l.h.
Tramline counter, controlled and displayed by the on-board computer	1	0	1	1	1	1	1	1	1	1	1	1	0	1
	2	1	2	2	2	2	0	2	0	2	0	2	2	2
	3	2	3	0	0	3	3	3	3	3	3	3	3	0
	4	3	4	4	4	4	4	0	4	4	4	4	4	0
	5	4	5	5	5	5	5	5	5	5	5	0	5	5
	6	5	6	6	6	6	6	6	6	0	6	0	0	6
	7	6	0	7	7	0	7	0	7	7	7	7		
	8	7	8	8	8	8	8	8	8	8	8	8		
	9	8	9	9	9	9	0	9	9	0	0	9		
	10	9	10	10	10	10	10	10	10	10	10	10		
	11	10	11	11	11	11			11	11				
	12	11	0	12	12	0			12	12				
	13	12	13	13	13	13			0	13				
	14	13	14	14	14	14			14	14				
	15	14	15	15	15	15								
			15	16	0	0	16							
				17	17	17	17							
				18	18	18	18							

\* No tramlines are created



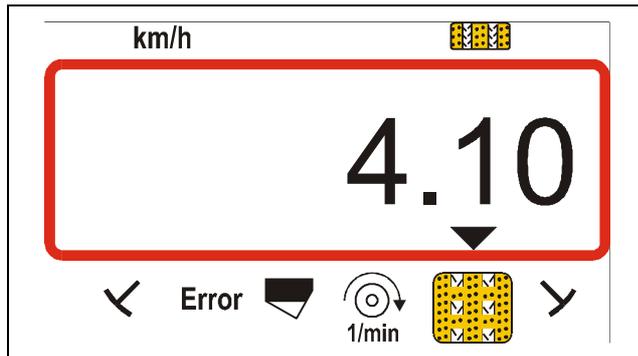
Switching rhythm	17	20	21	22	23	26								
Tramline counter, controlled and displayed by the on-board computer	0	0	0	0	0	0								
	1	1	0	0	0	1								
	2	2	1	1	1	2								
	3	3	2	2	2	3								
	4	4	3	3	3	4								
	5	5	4	4	4	5								
	6	6		5	5	6								
	7	7		6	6	7								
	8	8			7	8								
	9	9			8	9								
	10					10								
	11													
	12													
	13													
	14													
	15													
	16													

### 5.2.1.2.6 Creating intermittent tramlines

Intermittent tramlines are tramlines in which sown and seed-free areas within the to be created tramlines are alternating. Dial on the display the length of the sown and not sown areas in [m] .

- Switching on and off the intermittent tramlines is done by pressing key  .

Display after pressing key intermittent tramline



At switched on intermittent tramline the triangle symbol above the intermittent tramline symbol appears as well as a display of two blocks of figures, separated by a dot, e. g. **4.10**. These figures mean that when creating tramlines **4 m** sown and **10 m** not sown areas are alternating.

- Dial the lengths of the sown and not sown areas via the keys  or  .
- Press key  to store the dialled values.



**At an engaged intermittent tramline control the monitoring of the counter shaft is switched off.**



## 5.2.2 Putting to operation in the field



Carry out all entries as described above.

### 5.2.2.1 Carrying out the start function

Prior to operation release the "start function and the machine is ready to work. For this

- Press key  hold and simultaneously press key .



The memory for the part area hectare counter is set to "0".



As soon as the seed drill receives impulses from the sensor "Ha", the display changes into the operating display. On the display now appears the current seed rate [kg/ha] or the current forward speed [km/h] and the current position of the tramline counter.



Check the position of the tramline counter before starting the sowing operation (please refer to para. 5.2.2.2).

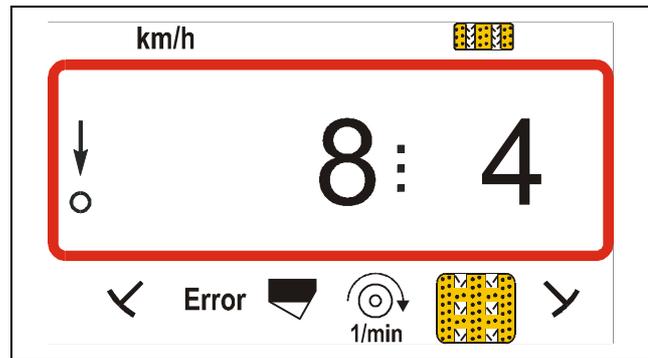


At every track marker change a honking signal is released.

### 5.2.2.2 Shifting on tramline counter

- For the correct creation of tramlines the tramline counter should be advanced prior to beginning the operation via key  and select this way the figure which is shown under the word "START" (for this, please refer to para. 0), e.g., "4".

Display when advancing the tramline counter stationary



Ensure that the desired track marker disc is lowered when the tramline counter is set to the correct figure.

Shifting on the tramline counter is carried out on seed drills

- **with** track markers via the hydraulically actuated marker change over for the markers. **AMADOS III-S** receives the necessary information to shift on the tramline counter from the sensoric which operates in conjunction with the marker change over.
- **without** track markers, as soon as the forward speed sensor (gearbox sensor) does not send impulses any more. This is the case when the seed drill is lifted at the headlands, however also when stopping in the field (for this please refer to para. 5.2.2.5).

### 5.2.2.3 Switching on and off the additional metering shaft drive (possible only on pneumatic seed drills)

Due to the sometimes long seed delivery ways between metering and sowing coulter (e. g. Airstar Avant) "sowing windows" may result, e. g. on the headlands. These "sowing windows" can be avoided by a brief engaging of the additional metering shaft drive.

Press key  and for a pre-selected time between 1 and 98 seconds and permanent drive the additional metering shaft drive drives the metering shafts. (see para. 5.2.1, Modus „9“.

After the pre-selected time the metering shaft additional drive automatically switches off and the mechanic metering drive starts the seed metering.

To stop the metering shaft additional drive before the end of the pre-selected time, once again press key



The pre-selected time depends on the driving behaviour of the tractor driver on the headlands and is pre-selected under mode "9".

#### Example:

Bring the seed drill into operation position at the headlands.

- Start metering via key .
- As soon as the seed has reached the distributor head (after approx. 3 seconds), start driving with the seed drill.

### 5.2.2.4 Changing the seed rate during sowing operation

On seed drills with seed rate adjustment this seed rate can be changed at varying soil conditions during the sowing operation in +/- 1%, 10%, 20% or 30 %

steps via the keys  or  on **AMADOS III-S**

Hereby **AMADOS III-S** triggers the setting motor on the setting gearbox for setting and adjusting the seed rate.

The desired step size with which the seed rate should be changed when pressing key  or  is determined via the chosen coding "implement type" dialled under mode "1" (for this, please refer to para. 5.2.1 item 1).

On the display always the currently dialled seed rate (rated value plus counted plus- or minus-amount) appears.

Display at changed seed rate, e. g. 200 kg/ha plus +10%



- By pressing key  the changed seed rate is returned to the earlier dialled desired seed rate.



### 5.2.2.5 Avoid unintended shifting on the tramline counter, e. g. when stopping sowing operation or folding the track marker arms

If it is necessary to **stop** the **sowing operation** with seed drills **without** track markers:

- due to a stop in the field,
- due to lifting the seed drill (e. g. when giving way obstacles)

or

in case it is necessary to fold in the track markers of seed drills **with track markers** (e. g. to give way obstacles)

the unintended shifting on the tramline counter must be avoided at any case.

For this press key  **before stopping the sowing operation or before folding in the track marker** and thus avoid the shifting on of the tramline counter.

Display after having pressed the stop key



 After having pressed key  the tramline counter (3) flicks in operating position and thus indicates that the shifting on the tramline counter is blocked.

Immediately after continuing the sowing operation or after folding down the track marker arms again

press key  so that the tramline counter does not flick any more in operating position.

### 5.2.2.6 Function keys and their use during sowing operation

By pressing one of the following function keys the desired value is displayed for about 10 seconds. Thereafter the computer automatically switches back to the "operational display".

#### 5.2.2.6.1 Hectare meter

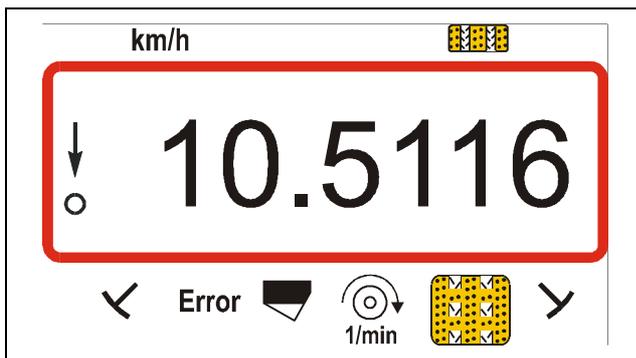
##### 1. Hectare meter – part area

After **one time** pressing key  the finished part area in [ha] will be displayed after having pressed key "start function".



**Only the operated area is determined in which the seed drill has been in operational position.**

Display after **one time** pressing the key

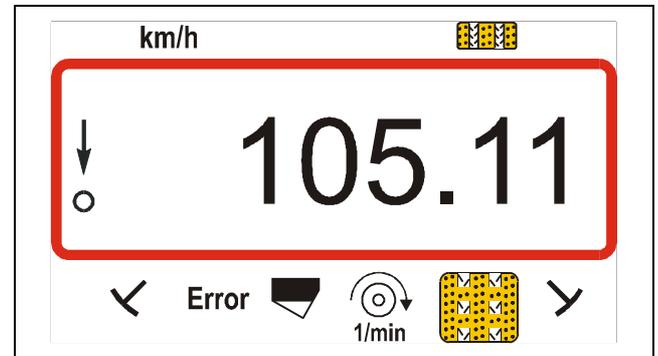


##### 2. Hectare meter – total area

After pressing key  **twice** the operated total area in [ha] will be displayed.

This counter cannot be erased.

Display after having pressed the key twice

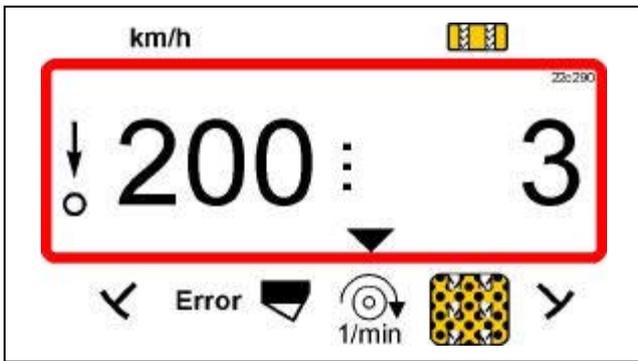




### 5.2.2.6.2 Rev.-speed monitoring for blower fan

AMADOS III-S monitors the pre-selected blower fan rev. speed in dependence of the rated rev. speed. If the **rated rev. speed is undercut or exceeded by more than 10%**, an audible signal is released and in the display the black triangle above the speed symbol flicks.

Display when exceeding or undercutting the rated rev. speed



For dialling the rated rev. speed for the rev. speed monitoring two possibilities are provided:

- the current rev. speed becomes the rated rev. speed
- The rated rev. speed is directly dialled via the key pad.



**The speed monitoring is only active in operational position.**



**For ending the rev. speed monitoring switch off the speed monitoring.**

#### 1. The current rev. speed will become the rated speed

##### Dial the rated speed

- Drive the blower fan with the desired rated speed (e. g. 3600 min<sup>-1</sup>).
- Press key  and the current rev. speed appears on the display. If the displayed speed corresponds to the rated speed, press key  and store this speed as rated rev. speed.

### Switching off rev. speed monitoring

When the blower fan stops switch off the rev. speed monitoring as follows:

- First press key  and then press key . On the display appears "0" for the current speed which should be stored as new rated rev. speed.

#### 2. Dialling the rated rev. speed directly via the key pad

##### Dial the rated rev. speed.

Press key  hold and simultaneously press key . The entered rated rev. speed is shown on the display.

Alter the rated rev. speeds via the keys  or .

Press key  and store the dialled rated rev. speed.

##### Switching off the rev. speed monitoring

Press key  hold and simultaneously press key . On the display appears the pre-selected rated rev. speed.

Via the keys  dial the rated rev. speed "0".

Press key  and store "0" as new rated rev. speed..

### 5.3 Reset-AMADOS III-S



By a reset all stored data are erased from the AMADOS III-S. Before a reset you do have to write down all important data (see para. 8).

A reset might become necessary to erase wrong data and to prepare the **AMADOS III-S** for a new programming.

- Press key  hold and simultaneously press key , release the keys.



## 5.4 Error-messages

The following error messages might occur when using **AMADOS III-S**:

**Tabel 8: Error-messages on the seed drill**

Error	Cause	Remedy
1	Incorrect gearbox position / rated value too high	<ul style="list-style-type: none"> <li>- On the two range gearbox this fault may possibly be remedied by exchanging the gear wheels.</li> <li>- For a vario gearbox please call our technical service department.</li> <li>- Reduce the rated value (for this, please refer to para. 5.2.1.2.3).</li> <li>- Newly calibrate the setting motor (for this, please refer to para. 5.2.1.1).</li> </ul>
2	Fault on seed shaft	<ul style="list-style-type: none"> <li>- Check whether the seed shaft is rotating.</li> </ul>
3	Fault on counter shaft right hand or tramline control (pneumatic seed drill) right hand (only with double tramline control)	<ul style="list-style-type: none"> <li>- Check whether the counter shaft (right hand) is rotating or whether the setting motor for the tramline control is moving.</li> </ul>
4	Fault counter shaft left hand or tramline control (pneumatic seed drill) left hand (only with double tramline control)	<ul style="list-style-type: none"> <li>- Check whether the counter shaft (left hand) is rotating or whether the setting motor for the tramline control is moving.</li> </ul>
5	Fault rotary cultivator left hand is not rotating.	<ul style="list-style-type: none"> <li>- A stone has been caught among the KG-rotors.</li> <li>- cam clutch defect.</li> <li>- Check rotary cultivator for function.</li> </ul>
6	Fault rotary cultivator right hand is not rotating.	<ul style="list-style-type: none"> <li>- A stone has been caught among the KG-rotors.</li> <li>- cam clutch defect.</li> <li>- Check rotary cultivator for function.</li> </ul>

6. Fault table seed drills

Fault	Cause	Remedy
On-board computer failure.	Inadequate power supply	<ul style="list-style-type: none"> <li>- Plug on battery connection cable is not inserted far enough.</li> <li>- Check plug or fuse for signs of corrosion.               <ul style="list-style-type: none"> <li>- Remove corrosion.</li> </ul> </li> <li>- Check tractor battery leads:               <ul style="list-style-type: none"> <li>Remove signs of corrosion.</li> <li>Use terminal grease.</li> </ul> </li> <li>- Check battery lead for secure fit.</li> <li>- Repair or replace damaged cables.</li> <li>- Voltage drop of tractor battery whilst under load.               <ul style="list-style-type: none"> <li>- Ensure computer has a constant supply of 12 V d.c. even whilst under load.</li> </ul> </li> </ul>
AMFÜME (special option) gives no warning for insufficient seed material.	Sensor is incorrectly fitted.	<ul style="list-style-type: none"> <li>- Sensor has been fitted too close to a metal surface.               <ul style="list-style-type: none"> <li>- Reset sensor. The diode of the sensor lights up when the sensor gets into contact with the seed.</li> </ul> </li> </ul>
	Sensor is without power.	<ul style="list-style-type: none"> <li>- The sensor does not light up when it is getting into contact with the seed.               <ul style="list-style-type: none"> <li>- Repair damaged sensor cable or replace sensor.</li> <li>- Check cable in distributor box for secure fit.</li> <li>- Clean corroded cable connections.</li> <li>- Check supply cables with test lamp (see cable diagram)</li> </ul> </li> </ul>
Sensor LED on the AMFÜME (special option) goes out when insufficient seed is available. The computer fails to give a warning.	The AMADOS supplies fault messages only during travel. Check "gearbox" sensor for possible malfunction.	<ul style="list-style-type: none"> <li>- Check supply cables with test lamp (see cable diagram)</li> <li>- Repair damaged sensor cable or replace the sensor.</li> <li>- -Using the cable diagram check whether "bridges" in AMFÜME distributor box are correctly connected.               <ul style="list-style-type: none"> <li>- Check whether the signal wire in the distributor box is correctly connected</li> <li>- Remove signs of corrosion from connections.</li> </ul> </li> </ul>



Fault	Cause	Remedy
With tramline counter = [0] (create tramlines) no tramlines are being created. Error "3" flashes.	Coupling hook is not drawn towards the solenoid switch.	<ul style="list-style-type: none"> <li>- Check whether cable plug-in connections are correctly plugged into the solenoid.</li> <li>- Fig plug-in connections. Choice of connections at random.</li> <li>- Remove corrosion from plugs.</li> <li>- Release jammed solenoids by hand or, if necessary, replace.</li> <li>- Check connection leads with test lamp (see cable diagram).</li> <li>- Replace damaged cables.</li> </ul>
	The coupling hook is drawn towards the solenoid but does not click into the ratchet of the wrap spring clutch.	<ul style="list-style-type: none"> <li>- Remove dirt or corrosion from the solenoid until the solenoid makes an audible connection.</li> <li>- Move solenoid within the slots of the cartridge.</li> <li>- Straighten out bent coupling.</li> </ul>
With tramline counter = [1] - [2] - [3] etc. tramlines are being created. Error "3" flashes.	Solenoid is drawn but does not move.	<ul style="list-style-type: none"> <li>- Remove dirt and corrosion. Release solenoid.</li> <li>- Check power connecting cable on the solenoid with the aid of the test lamp.</li> <li>- Cables must be without current.</li> <li>- Straighten out bent coupling hook.</li> <li>- Readjust solenoid.</li> </ul>
Error "3" flashes without apparent reason. During fast travel, this fault message occurs more frequently.	The sensor for the countershaft is too far from or too close to the gear wheel. Another reason may also be the gear wheel running out of true.	<ul style="list-style-type: none"> <li>- Sensor LED does not light up during work process.</li> <li>- Readjust distance between chain wheel and sensor (approx. 2 mm).</li> <li>- Repair damaged sensor leads or replace sensor.</li> <li>- Check cable in the distributor box for secure fit.</li> </ul>



Fault	Cause	Remedy
Control rhythm is not automatically advanced	Malfunctioning sensor on marker unit. Check "Coding" under Mode "1": "01" means "marker unit exists" and 10 % increment when changing the seed rate "11" means "without marker unit" and 10% increment when changing the seed rate	<ul style="list-style-type: none"><li>- Check for correct fitting of sensor and magnets.</li><li>- Repair damaged cables or replace sensor.</li></ul>
Actual and displayed gearbox setting lever position do not coincide.	The zero-sensor for identifying the zero-point of the seed rate adjustment is out of position.	<ul style="list-style-type: none"><li>- Sensor must be adjusted so that the tip of the gearbox setting lever points to "0" (scale on the machine) and the LED of the zero-sensor just lights up.</li><li>- After having switched on the computer the gearbox setting lever must move exactly to "0".</li></ul>
The motor for seed rate adjustment automatically drifts from the value set for the calibration test. This happens at the precise moment when first starting to turn the crank handle for the calibration test.	At the start of the calibration test, set the motor at a position suitable for the seed used. Then immediately commence the physical test without starting the calibration process.	<ul style="list-style-type: none"><li>- For the calibration test set the motor on a suitable position. Then press "input" key and key C simultaneously (fresh start). Then press key "Cal." (kg per 1/40 ha) and key "C" simultaneously. Now commence the calibration test.</li></ul>
AMADOS fails to calculate the seed rate of 1/40 ha per kg/ha.	This calculation is done by AMADOS only for the first time after starting a fresh job.	<ul style="list-style-type: none"><li>- Start a fresh job. Press the "input" key and key "C".</li></ul>
The rev. speed monitoring fails to give a warning if the pre-set rev. speed falls short by 10 %.	Warnings are given only when movement can be identified (more than 1.1 km/h).	<ul style="list-style-type: none"><li>- Check fault message once more whilst travelling.</li></ul>
AMADOS fails to accept distance impulses despite incoming signals on AMADOS.	Following a reset the computer displays the value "1800" for Imp./100m. Reset: Press key "C" hold and simultaneously press "0", release.	<ul style="list-style-type: none"><li>- Confirm this value (1800) with the "input" key.</li><li>- The number of impulses are best determined in a calibration drive.</li></ul>



## 7. Fitting instructions

### 7.1 Console and AMADOS III-S

Fit console (Fig. 2/1) within reach and sight to the right hand of the operator; it must be free of vibrations and electrically conductive (scratch off paint in the area of contact) inside the tractor cab.



The distance of the AMADOS III-S from a radio transmitter and an antenna should at least be 1 m.



For fitting the console, please ensure that the optimum viewing angle to the display lies between 45° and 90°



Make sure that the AMADOS III-S housing (Fig. 2/2) receives via the console an electrically conductive connection to the tractor chassis. Scratch off all paint from the fitting surfaces

- Fit the bracket (Fig. 2/3) fitted to the AMADOS III-S onto the tube of the console, bring it to the desired position and fix by the thumb bolt there.

### 7.2 Battery connection lead

- Connect the battery connection lead (Fig. 2/4) for the power supply directly with the tractor battery (12 V) and lay cable.
  - Connect cable connector (Fig. 2/5) with fuse (5A) to brown cable and connect with the plus pole of the tractor battery.
  - Connect blue cable with the minus pole (earth).



When connecting to the battery first connect plus cable to plus pole. Then connect earth cable to minus pole. When disconnecting battery, proceed in vice versa order.



Connect minus pole of the battery (earth) with frame or chassis of the tractor which is especially important with older American, Canadian or British tractor types. Tractors with a switch in the mass cable of the battery (e.g. Zetor 8011, 8045) connect blue mass cable directly with mass (earth) (frame or chassis).

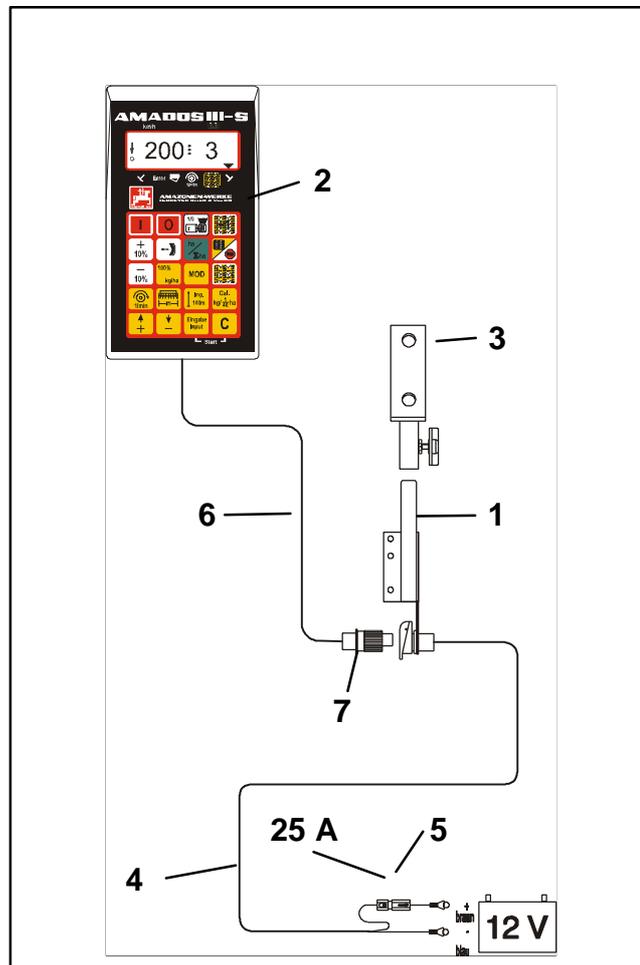


Fig. 2

- Connect power supply cable (Fig. 2/6) of the **AMADOS III-S** with the socket (Fig. 2/7).

**On pneumatic seed drills do observe the correct lead of the mass cable for the conductive discharge of the static charge, see Fig. 3 and Fig. 4.**

#### Connecting example:

Tractor equipment for AMADOS III-S  
Distributor G-II and K-II

Fig. 3/...

1. Battery connecting cable.
2. Implement socket DIN 9680.
3. Mass cable for conductive discharge of the static charge.
4. Connector.
5. Plug, 39 pole
6. Cable leads to the distributor.

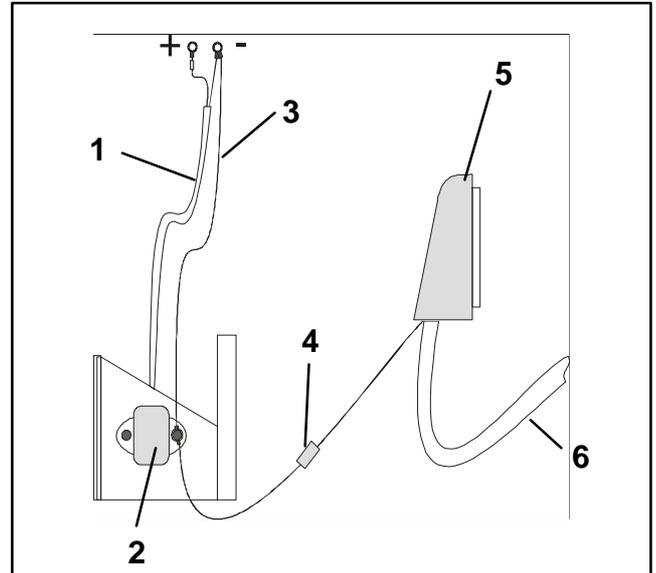


Fig. 3

#### Connecting example:

Tractor equipment for AMADOS III-S  
for Airstar Avant

Fig. 4/...

1. Battery connecting cable.
2. Distributor for power supply **AMADOS III-S** with two sockets DIN 9680 for **AMADOS III-S** and light with switch.
3. Switch for light. Position "O" = AUS (out) and "I" = AN (on).
4. Console.
5. Mass cable for conductive discharge of the static charge.
6. Connector.
7. Plug, 39 pole.

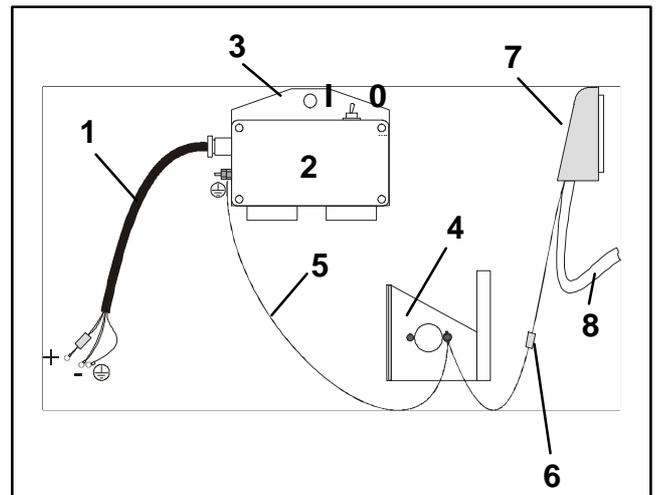


Fig. 4



## 8. Implement data

<b>Seed drill</b>		
Mode "1"	Coding – depending on machine type	
Mode "2"	do not change (set in the factory on 22 seconds)	
Mode "3"	do not change (set in the factory on 22 seconds)	
Mode "4"	do not change (set in the factory on 22 seconds)	
Mode "5"	Seed rate reduction when creating tramlines [%] for pneumatic seed drills without seed flow return	
	For pneumatic seed drills with seed flow return or for mechanic seed drills dial "00" for the second figure.	
Mode "6"	Seed rate control; yes = 01 / no = 00	
Mode "7"	Rev. speed monitoring; yes = 01 / no = 00	
Mode "8"	Free function = 00	
Mode "9"	<b>No electric metering drive for the headlands = 00</b>	
	Electric metering drive for the headlands = XX ; dial here the time in seconds (XX) for the pre-metering.	
Mode "10"	Number of track markers 2 sensors = 00 1 sensor = 01	
Mode "11"	Seed shaft sensor no = 00 yes = 01	
Mode "12"	Seed level sensor no = 00 yes = 01	
Imp./100m		
Working width [m]		
Seed rate [kg/ha]		
Switching rhythm		





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