Junkkari

# JUNKKARI ISOBUS CONTROLLER

# SEED DRILLS

# MANUAL

# TRANSLATED FROM FINISH

# INDEX

# 1 DEAR CUSTOMER

We thank you for choosing Junkkari product. Study carefully for this manual to ensure safe use and prevent incorrect use

If you have any questions of our product, please contact the dealer.  The warranty becomes valid when deales has given us sales date and customer contact information.

Best Regards,

Junkkari Oy

# 2 JUNKKARI ISOBUS ECU TECHNICAL INFORMATION

**Junkkari ISOBUS ECU is programmed for EPEC OY 3724 control unit. ISOBUS level is TC-GEO.**

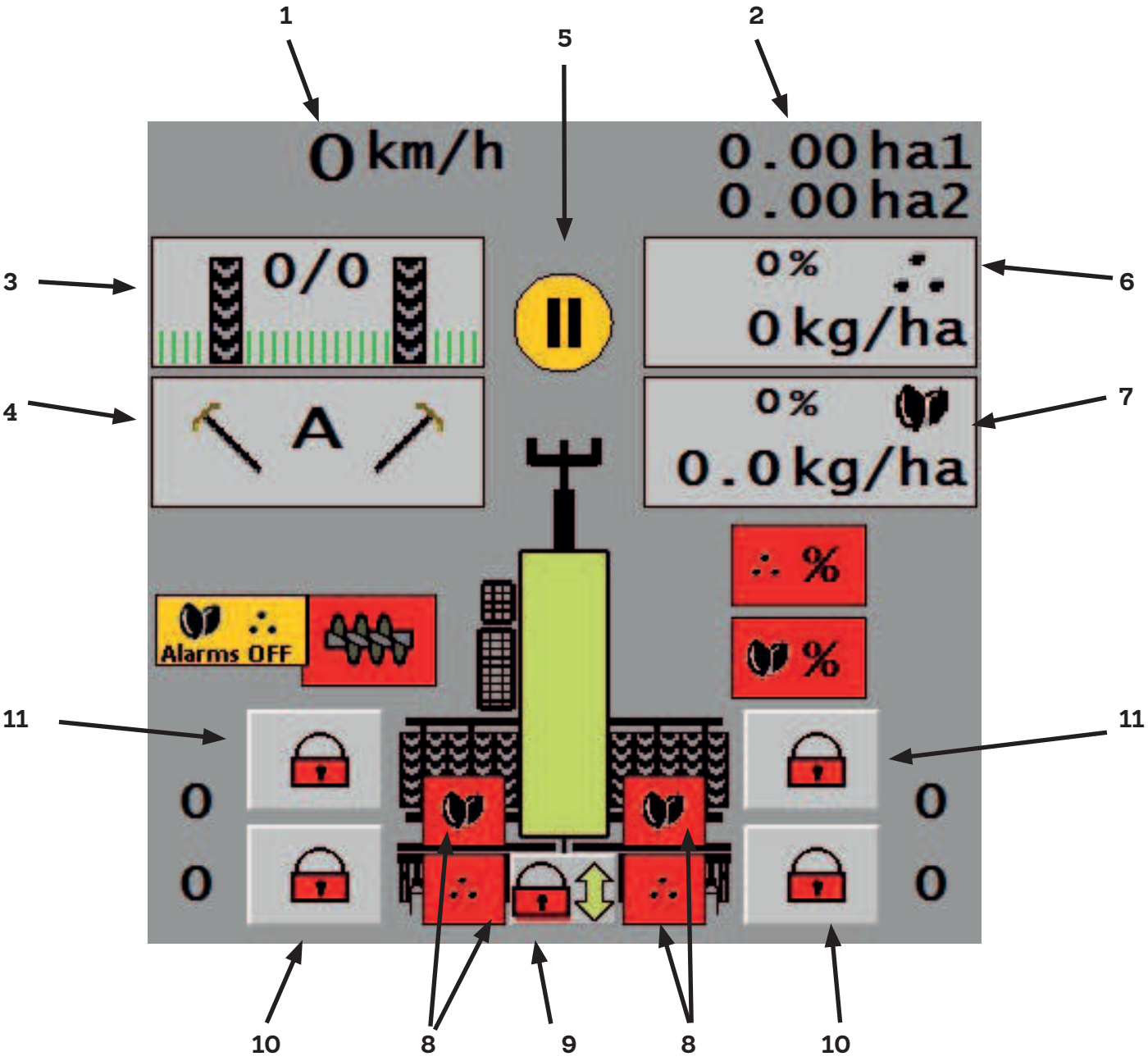
## 2.1 FUNCTIONS JUNKKARI W700

1. **Speed km/h**
2. **Areameter**
   - **On controller there is two resetable areameters which are shown on main page. In addition to that there is one total areameter behind PIN code, which can not be resetted.**
3. **Tramline marker**
   - **Both symmetric and asymmetric tramlines can be made.**
4. **Rowmarker**
   - **Can be used with AUTO mode when marker change its marking side after each lift.**
   - **On manual mode the chosen side marks centerline allways when coulters are lifted down.**
5. **Pause function**
   - **When Pause function is activated, lift sensor does not count lifts.**
   - **This function is handy if you have to make an extra lift and tramline count is not wanted to be changed.**
   - **Activate Pause function before extra coulter lift and deactivate it when mascine is back in seeding position, meaning coulters down.**
6. **Fertilize rate control**
   - **Fertilize rate kg/ha can be adjusted from display. Adjusting step can be chosen between 1-99%. Factory setting for step is 10%.**
7. **Seed rate control**
   - **Seed rate kg/ha can be adjusted from display. Adjusting step can be chosen between 1-99%. Factory setting for step is 10%.**
8. **Wing hopper level sensors ON/OFF**
   - **If small seeds are seeded from just wing hoppers, level sensors can be deactivated.**
9. **Obstacle lift**
   - **If you want just rowmarker lift, but not coulters, Obstacle lift can be activated.**
10. **Half width seeding.**
    - **When coulters are up, either left or right hand side coulters can be locked to not go down.**
    - **When coulters are down, either left or right hand side coulters can be locked to not go up.**
11. **Wing locking**
    - **When wings are on transport position, either left or right hand side wing can be locked to not go down**
    - **When wings are on down either left or right hand side wing can be locked to not go up to transport position.**
12. **Precision farming**
    - **Controller is equipped with ISOBUS TC-GEO functionality**
    - **Fertilize and seed rate can be adjusted according GPS positioning based to rate map. (TASK)**

## 2.2 ALARMS, WARNINGS, INDICATOR LIGHTS AND BUTTONS

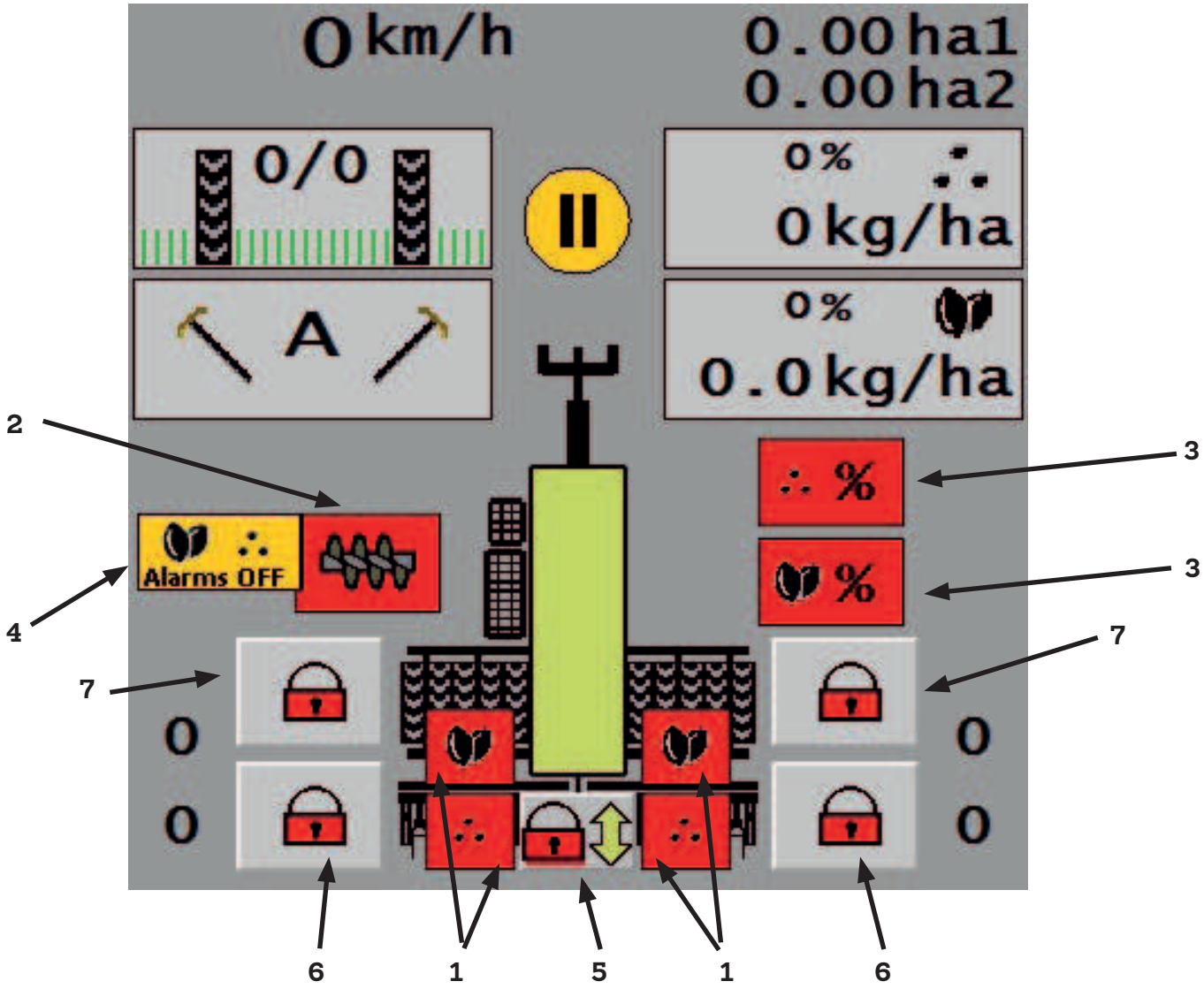
1. **Wing hopper level sensors indicator lights**
   - **On the main display there are indicator lights for all four side wings hoppers. If material is not reaching sensor, red indicator light is on. Level sensors are placed on far ends of wing hoppers, this ensures that all feeding rollers have enough material to feed.**
   - **When side wings are folded down, normally all four red indicator lights are on. Rotate wing augers by hydraulics (normally 10-20s) until all red lights turns off. After that seeding can be started normally.**
2. **Main hopper auger indicaror light**
   - **If main hopper auger is not rotating, red indicator light is on.**
3. **Feeding axles speed difference indicator light**
   - **If difference between left and right fertilize/seed axles is more than 12%, red indicator light will turn on. There are separate indicator lights for fertilize and seed.**
4. **Wing hopper level sensors ON/OFF**
   - **Wing hopper level sensors can be turned OFF, then on display is shown yellow indicator light Alarms OFF.**
5. **Obstacle lift button**
   - **When obstacle lift is activated lock symbol will turn red.**
6. **Half width seeding**
   - **When half width seeding is activated, lock symbol will turn red. There is saparate symbols and buttons for left and right hand side.**
7. **Wing locking buttons**
   - **When wing locking activated, lock symbol will turn red. There is saparate symbols and buttons for left and right hand side.**

## 2.3 FUNCTIONS ON MAIN DISPLAY



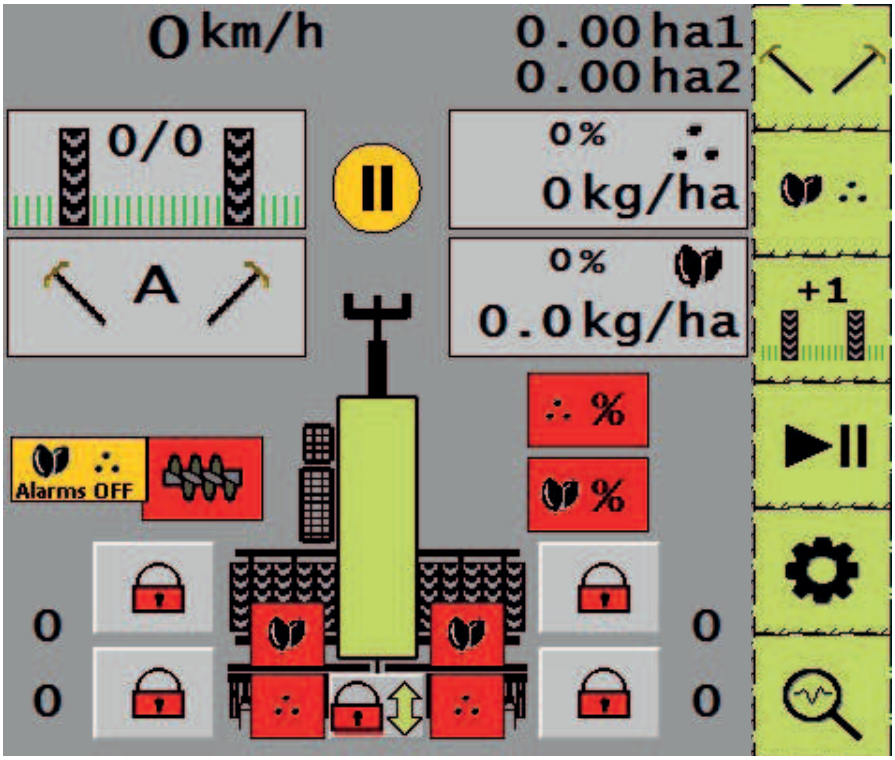

1. Speed
2. Area meters
3. Tramlines
4. Rowmarkers
5. Pause
6. Fertilize rate control
7. Seed rate control
8. Wing hopper level sensors indicator lights
9. Obstacle lift button
10. Half width seeding buttons
11. Wing locking buttons

## 2.4 HALARMS, WARNINGS, INDICATOR LIGHTS AND BUTTONS ON MAIN DISPLAY




1. Wing hopper level sensors indicator lights
2. Main hopper auger
3. Feeding axles speed difference indicator light
4. Wing hopper level sensors ON/OFF
5. Obstacle lift
6. Half width seeding
7. Wing locking

## 2.5 MAIN PAGE BUTTONS







Rowmarkers menu 2.5.1

Fertilize/seed menu 2.5.2

Tramline count change 2.5.3

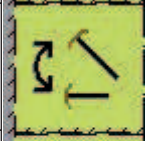
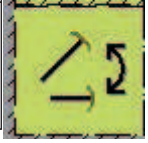
Pause ON/OFF 2.5.4

Settings2.5.5

Diagnostics display 2.5.6

### 2.5.1 ROWMARKERS MENU

Button 2.5.1 is shown only if there are rowmarkers in the machine.

| | |
|---|---|
| Back to main display |  |
| Rowmarkers OFF |   |
| AUTO function of rowmarkers |   |
| Manual function for left rowmarker |  |
| Manual function for right rowmarker |  |

When you choose AUTO function, letter A is shown on rowmarker display. After that you can choose left or right rowmarker, which is folding first down. AUTO function is taken OFF by pressin AUTO button again. If you want to use manual mode, just choose by left or right button which side is folding down all the time.

## 2.5.2 FERTILIZE/SEED MANU

**Button 2.5.2 is shown only if there are fertilize/ seed rate control in the machine.**

| | | |
|---|---|---|
| Seed rate back to base level | 0% | Back to main display |
| Tasc Controller reactivating | TC | Increasing fert rate |
| | | Decreasing fert rate |
| | | Increasing seed rate |
| | | Decreasing seed rate |
| | | Fert rate back to base level |

## 2.5.3 TRAMLINE BOUT CHANGE

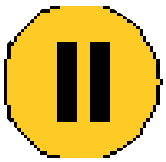
**Button 2.5.3 is shown only if there are tramline option in the machine.**

| | |
|---|---|
| +1 | Tramline count change |

**+1 increases count by one. When there is two same numbers like 3/3 symmetrical tramlines are made**

### 2.5.4 PAUSE ON/OFF

**When Pause button is pressed, coulters lift sensors are deactivated and yellow Pause indicator is shown.**



### 2.5.5 SETTINGS

**Settings button opens menu with following functions**

| | | | |
|---|---|---|---|
| **Wing hopper sensors ON/OFF 2.5.5.1** | Alarms ON/OFF | | **Back to main display** |
| | | | **Fert calibration test and adjusting step % 2.5.5.2** |
| | | | **Seed calibration test and adjusting step % 2.5.5.3** |
| | | | **Tramline settins 2.5.5.4** |
| | | ha→0 | **Resetting area meters 2.5.5.5** |
| | | | **Factory settings, needs PIN kode.** |

### 2.5.5.1 WING HOPPER SENSORS ON/OFF


**When button is pressed, hoppersensors are deactivated and yellow Alarms OFF indicator is shown on main display**

**This function is useful if small seeds is seeded just from side wings. Volume for one wing hopper is 21 liters / meter**


### 2.5.5.2 FERT CALIBRATION AND ADJUSTING STEP %

**Buttons 2.5.5.2 and 2.5.5.3 are shown only if there are fert and/or seed rate control**

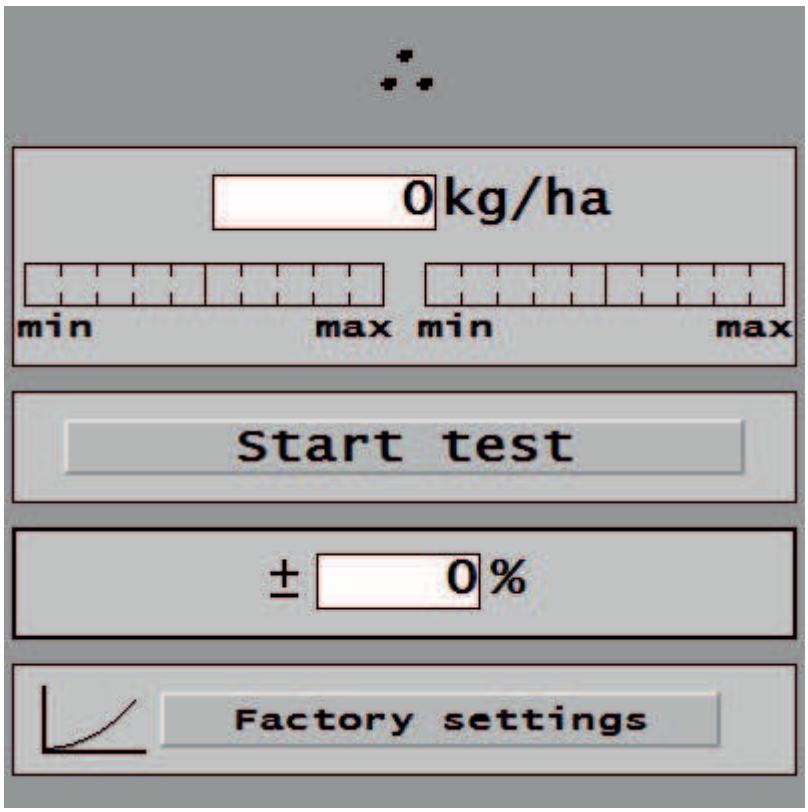
**Fert calibration test:**

**1. Give fert rate kg/ha**

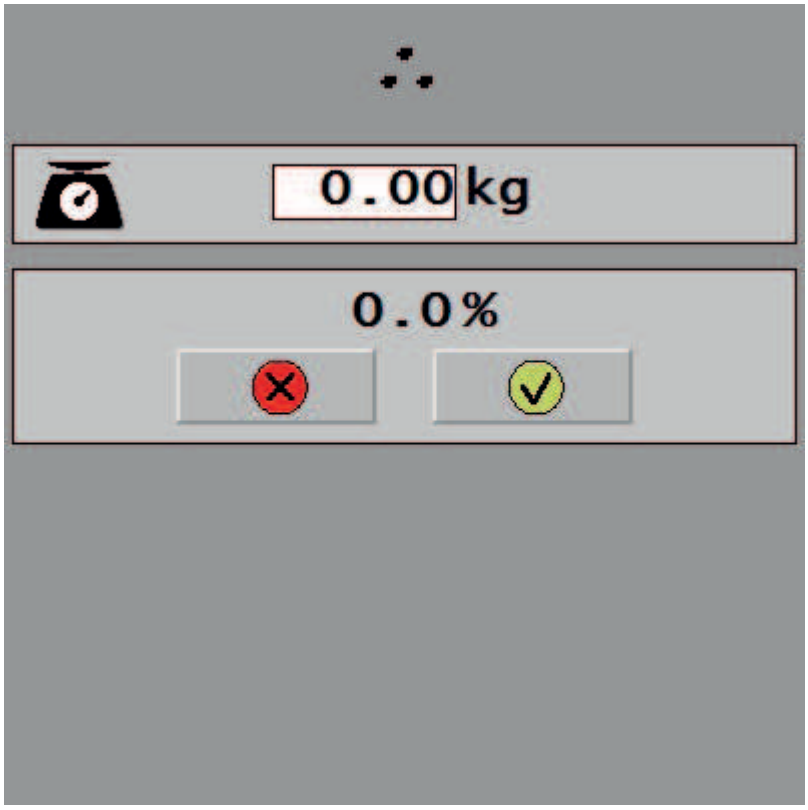
**3. Start test button is adjusting Linak actuators to supposed position.**

**2. Adjusting step 1-99%**

**Linak actuators to factory setting**



**When Start test button has been pressed, page on right hand side opens. There you can give the weighing result. Calibration test is made by rotating left and right hand side fert gearboxes 10 r, which equals 100 square meters. Count left and right side weight together and give that result to kg line. Confirm result with green V button**



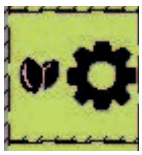

**4. Give the weight**

**5. Confirm with green V button**

**After confirming result Linak actuators are moving to place software thinks they have to be. Correction is shown as % on display. Make calibration test one or two more times so that correction % is between 0-4%.**

### 2.5.5.3 SEED CALIBRATION AND ADJUSTING STEP %

**Seed side calibration test is equal to fert side but it is made with seed side gear boxes.**



## 2.5.5.4 TRAMLINE SETTINGS

**Button 2.5.5.4 is shown only if there are tramline clutches in the machine.**

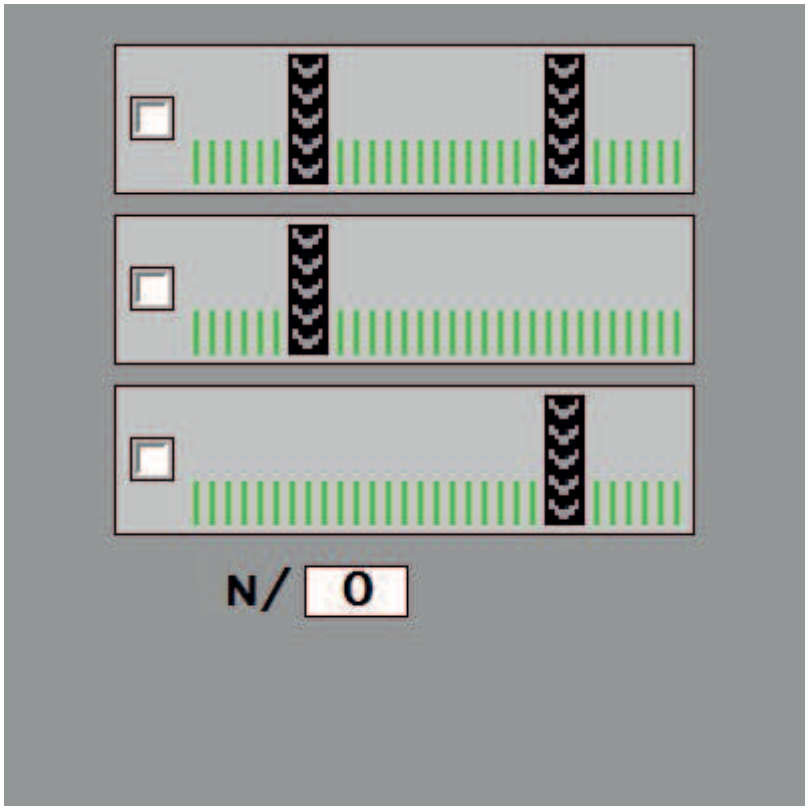
**Tramline button opens tramline menu, where you can choose symmertic or asymmetric tramlines. You can also choose tramline bout**

**Symmetric**

**Asymmetric left**

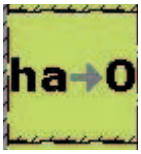
**Asymmetric right**

**Tramline bout**



### 2.5.5.5 RESETTING AREAMETERS

**With this button you go to menu where you can reset ha1 or ha2 or both.**



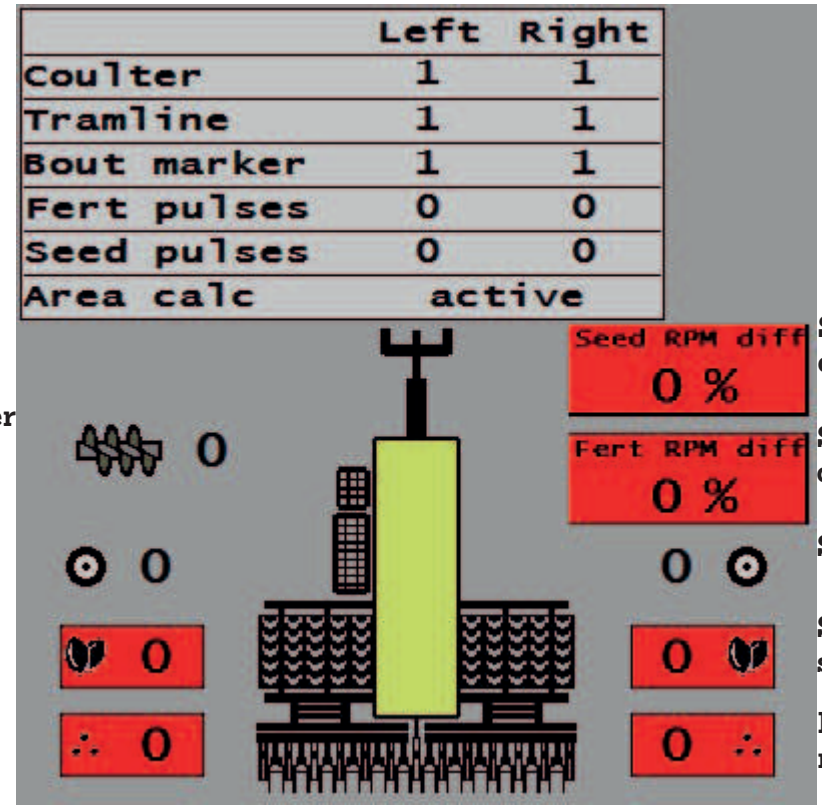

**Back to main menu**

**ha1 reset**

**ha2 reset**

## 2.5.6 DIAGNOSTICS DISPLAY

**Diagnostics display button opens page where you can monitor sensors and functions more detailed**




**Main hopper auger speed rpm**

**Speed pulses left**

**Seed axle speed pulses left**

**Fertaxle speed pulses left**

**Speed differense seed axles left/right**

**Speed differense fert axles left/right**

**Speed pulses right**

**Seed axle speed pulses right**

**Fert axle speed pulses right**

**Coulter: when 1, coulters up**

**Tramline: when 1, tramlines are made**

**Bout marker: when 1, rowmarker down**

**Fert pulses: when 1, fert axle is rotating**

**Seed pulses: when 1, seed axle is rotating**

**Area calc: Active, when coulters are down and speed pulsed are resieved**