BigFarmNet manager

# TriSortpro
# MC505 basic computer

Code No. 99-97-2834 GB

Edition: 12/2016

**1 General information on the MC505 basic computer . . . . . 1**

**1.1 Technical data . . . . . 2**

**2 TriSort system description . . . . . 3**

**2.1 Operating mode . . . . . 4**
**2.2 MC505 basic computer installation example . . . . . 5**
**2.3 Operating keys . . . . . 6**
**2.4 Display . . . . . 7**
**2.5 Navigation . . . . . 8**

**3 Main screen . . . . . 10**

**3.1 Animal scale . . . . . 10**
**3.2 Animal . . . . . 10**
**3.3 Station mode . . . . . 11**
**3.4 System status . . . . . 12**
**3.5 Average weight/weighings . . . . . 12**

**4 Sorting info . . . . . 13**

**4.1 Threshold weight . . . . . 13**
**4.2 Average weight/weighings . . . . . 13**

**5 Sort out info . . . . . 14**

**5.1 Sort out animals . . . . . 14**
**5.2 Average weight . . . . . 14**
**5.3 Selection gate . . . . . 14**
**5.4 Weight . . . . . 14**
5.4.1 Start weight / end weight . . . . . 15
5.4.2 Actual weight . . . . . 15

**6 Settings . . . . . 16**

**6.1 Alarm . . . . . 17**
**6.2 Equipment . . . . . 18**
6.2.1 Sprayer . . . . . 18
6.2.2 Driving out . . . . . 19
6.2.3 Weight scale . . . . . 20
6.2.3.1 Scale value . . . . . 20
6.2.3.2 Scale settings . . . . . 21
6.2.3.3 Taring the scale . . . . . 22
6.2.3.4 Calibrating scales . . . . . 23
6.2.4 Gates . . . . . 25
6.2.4.1 Entrance door . . . . . 25

6.2.4.2 Exit door . . . . . 25
6.2.4.3 Selection gate left/right . . . . . 26
**6.3 Modes of operation . . . . . 26**
6.3.1 Learning . . . . . 26
6.3.1.1 Sorter switch time . . . . . 26
6.3.1.2 Blocked gate . . . . . 27
6.3.2 Sorting. . . . . 27
6.3.2.1 Sorting (fixed) . . . . . 27
6.3.2.2 Sorting (dynamic) . . . . . 28
6.3.3 Sort out . . . . . 28
6.3.3.1 Max. number of animals . . . . . 28
6.3.3.2 Start weight . . . . . 28
6.3.3.3 End weight . . . . . 29
6.3.3.4 Selection gate . . . . . 29
6.3.3.5 Reduction time . . . . . 29
6.3.4 Sort out by colour . . . . . 29
6.3.5 Pause . . . . . 29
**6.4 Service . . . . . 30**
6.4.1 Date and time . . . . . 30

**7 Input example. . . . . 31**

**7.1 Example of a sorting system with 2 selection exits (fixed sorting threshold) . . . . . 31**
**7.2 Example of a sorting system with 2 selection exits (Auto threshold) . . . . . 32**
**7.3 Example of sorting ready-to-slaughter animals . . . . . 34**
7.3.1 Sorting system with 3 selection exits . . . . . 34

## Copyright



## Liability

The manufacturer or distributor of the hardware and software described herein shall not be liable for any damage (such as the loss or disease of animals or the loss of other opportunities for profit) caused by failure of the system or incorrect use or operation.

We are constantly working on further developing the computer and the software and also consider user preferences. Please let us know if you have ideas or suggestions for improvement and modification!

**Big Dutchman International GmbH**

**BU Pig**

**P.O. Box 1163**

**49360 Vechta**

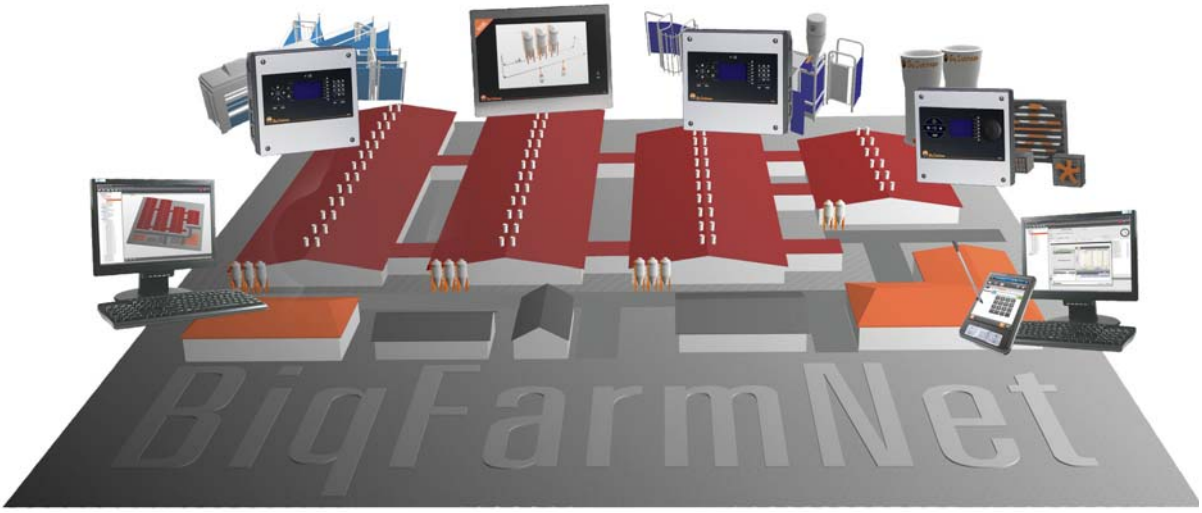
**Germany**

**Phone: +49(0)4447-801-0 Fax: +49(0)4447-801-237 Email: big@bigdutchman.de**

# 1 General information on the MC505 basic computer

Figure 1-1: Basic computer MC505

The MC505 basic computer is used by Big Dutchman for diverse applications. Different software can be used for each individual task.




When used for the TriSort automatic sorting scale, the device exhibits the following characteristics:

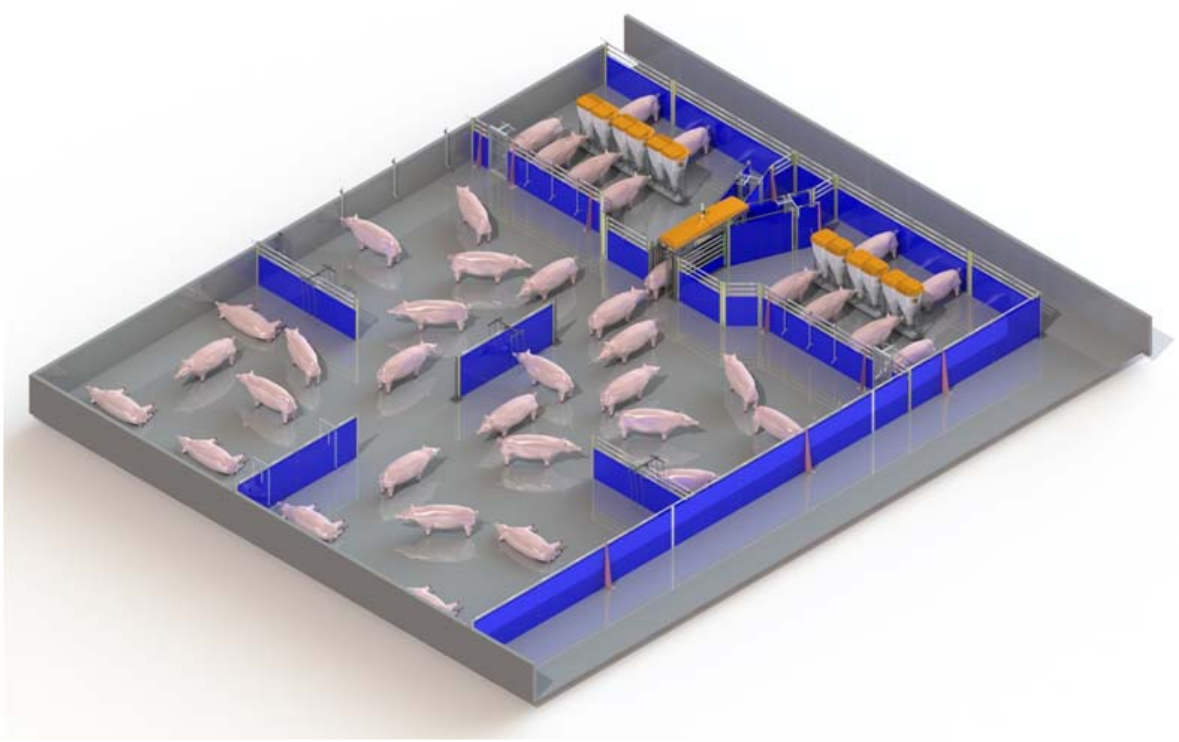
- The MC505 basic computer is a fully-fledged computer suitable for use in stalls to control the Big Dutchman TriSort sorting scale.
- It is also capable of controlling the system without being connected to a central PC.
- If a connection exists, it automatically synchronises the data with the other BigFarmNet controllers or PCs.
- The display provides the operator with comprehensive information on the status of the system and/or the animal currently located on the sorting scale.

- The convenient user interface can be used to enter changes to the configuration directly into the MC505 basic computer. It is also possible to do this using the central PC.
- The MC505 basic computer can be installed in the station itself or in the walkway.
- The animals are managed by BigFarmNet Manager.

## 1.1 Technical data

| | |
|---|---|
| Dimensions (W x L x H) | 240 mm x 190 mm x 160 mm |
| Protection class per EN60529 | IP56 |
| Supply voltage | 24V DC |
| Max. current consumption | 4 A |
| Ambient temperature | 0 - 40 °C |
| Housing material | ABS |
| Code no. | 91-02-3918 |

# 2 TriSort system description



The TriSort automatic sorting scale is capable of sorting finishing pigs in large-group management based on their individual weights – with an optimum number of 250 to 400 animals per group. Among other things, this helps to determine the exact number and weight of ready-to-slaughter pigs, which in turn assists with the planning of the slaughtering date. The pigs delivered to the slaughterhouse precisely match the slaughtering criteria.

Another area of application is weight-dependent feeding of pigs with changes of the feed type. The pigs' weight is also constantly monitored. This allows for the feeding to be adapted to the pigs' requirements and for the house to be utilised better.

Over- or underweight pigs can be marked with two different colours.

Characteristics:

- Permanent weight monitoring
  - Information about daily weight gains and thus the health of the pigs is available at any time.
- Selection or identification of under- and/or overweight pigs by means of colour marking

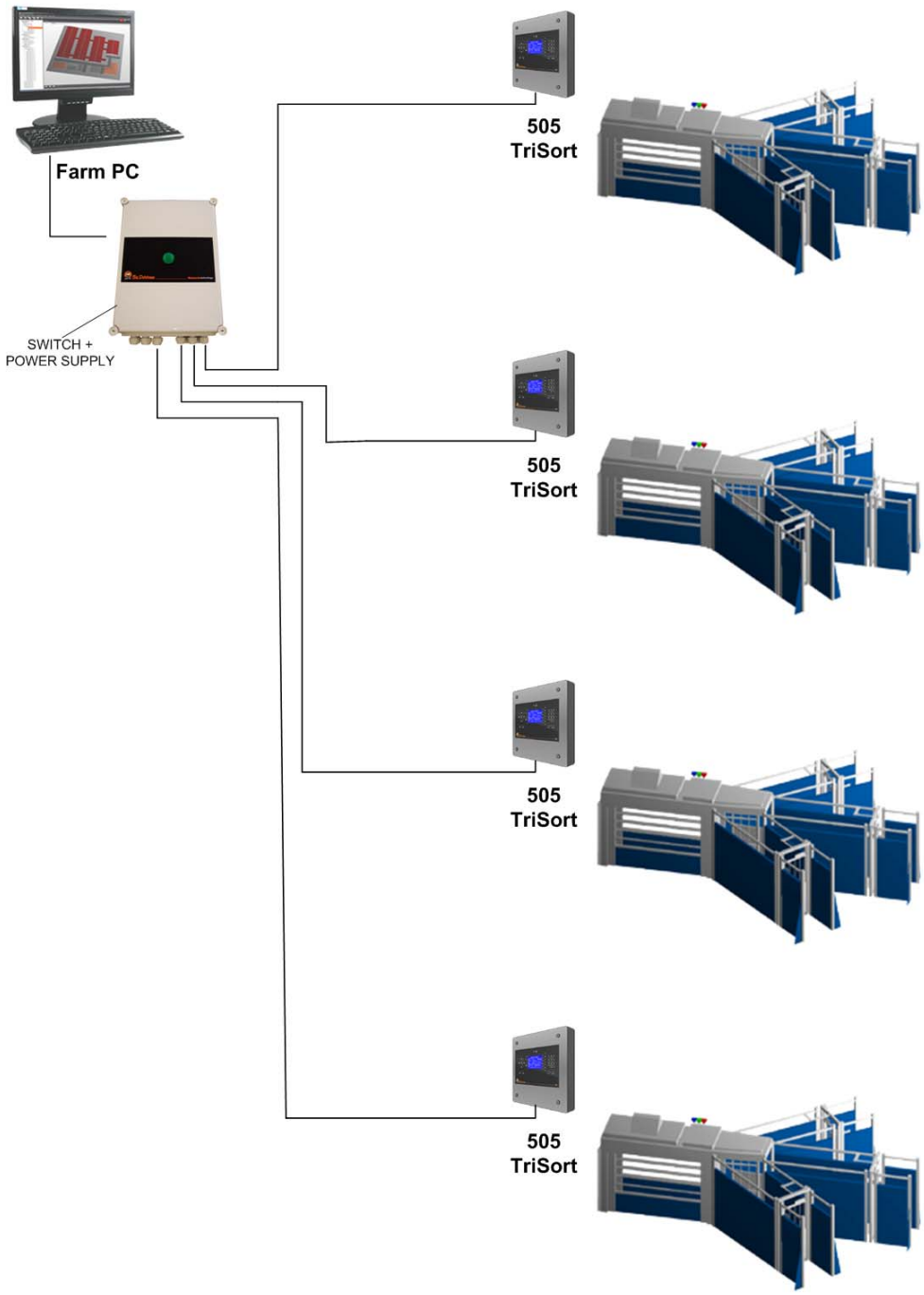
- Easy and stress-free selection of ready-to-slaughter pigs before they are taken to the slaughterhouse
  - Precise information about the number of pigs to be slaughtered and their weight is easily available.
  - Less time is required for the loading of pigs.
  - Dry as well as liquid feeding systems are possible.
- Optional addition of a colour sensor for the sorting station
  - Pigs marked manually can be selected via the station.

## 2.1 Operating mode

The entrance door remains open while the TriSort is empty. If a pig enters the scale, the entrance door closes automatically due to the weight change on the scale. This way, only one pig at a time can enter the scale.

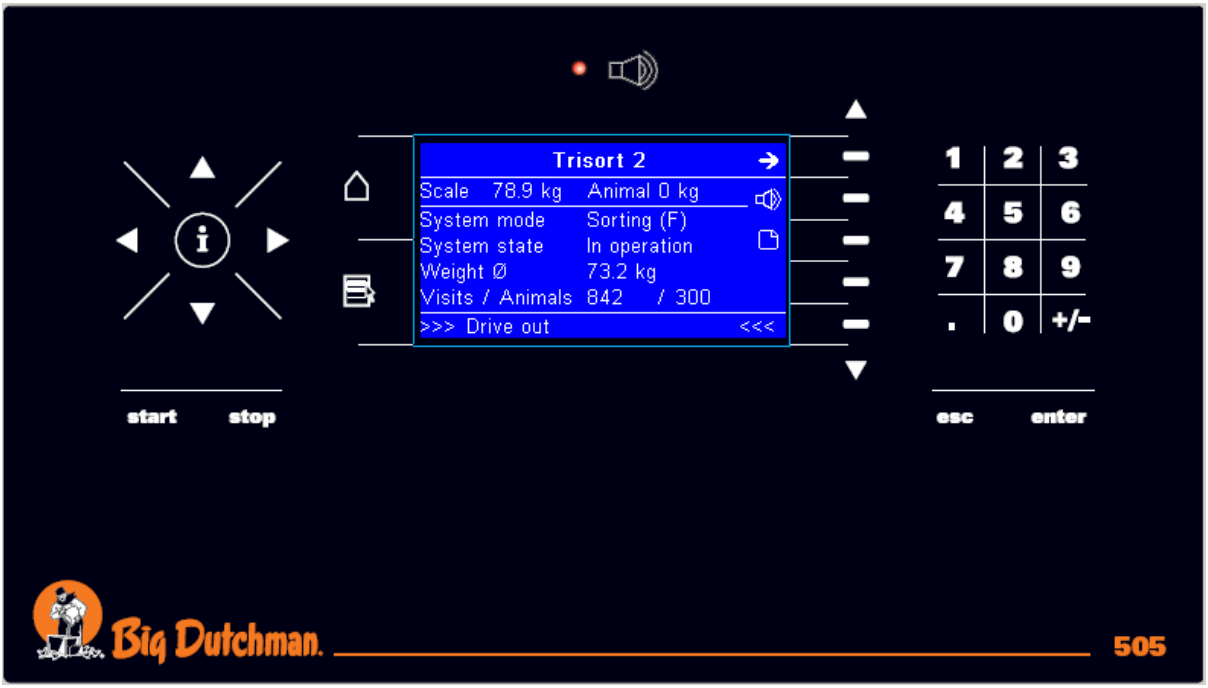
After the weighing, which takes only two to three seconds, the exit door opens automatically and the pig is guided into a specific area of the house according to the criteria.

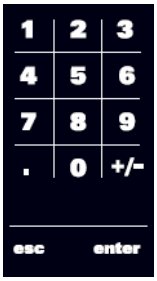
## 2.2 MC505 basic computer installation example




| | |
|---|---|
| ⚠ | Installations and work on the electric components/structural groups may only be carried out by qualified personnel according to electro-technical regulations (e.g. EN 60204, DIN VDE 0100/0113/0160). |
| ⚠ | Dangerous electric tensions are bare in case of open control equipment. Please be aware of the danger and keep workers of other professions away from the danger zone ! |

## 2.3 Operating keys




| | |
|---|---|
|  | **Numeric keypad, Escape and Enter**<br>• Use the number keys, the point and the +/- keys to enter values (the point separates the decimal spaces; the +/- key can be used to reverse the sign before a number).<br>• Once a value has been changed, you can decide whether you want to accept the changes or not. Press the “Enter” key to save the new value. Press the “Escape” key if you do not want to accept the changes and to leave the displayed dialogue. |
|  | **Home key**<br>• Press the home key to return to the start screen. |
|  | **Menu key**<br>• Press the menu key to display the configuration menu. |

| | |
|---|---|
|  | **Display keys**<br>• The display keys are a special feature of the MC505 basic computer: they are there to help you navigate easily through the configuration menu. Simply press the key next to the menu item you want to select to open the associated context menu.<br>The two arrow keys are used to scroll or move backwards and forwards through long lists. |
|  | **Start and Stop keys**<br>The “Start” and “Stop” keys are used to switch the MC505 basic computer from the “active” operating status to the “not active” idle status and back.<br>The “Left” arrow key can be used to delete entries. |

## 2.4 Display

The top line of the display usually contains a heading which describes the current content and always gives the operator a point of orientation.

The individually displayed screens can be divided into several groups:


Figure 2-1: Main screen (information on the station status/animal weight)


Figure 2-2: Sorting info (threshold weight, average weight, number of weighings)

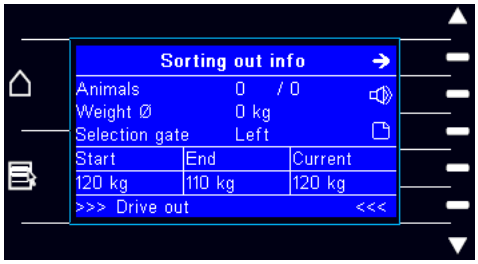



Figure 2-3: Sort out info (information on the sorting of the animals)

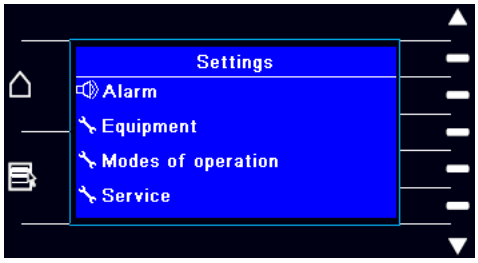



Figure 2-4: The “Settings” menu

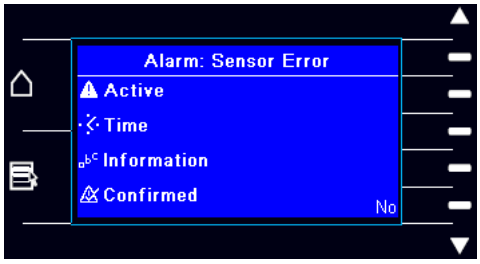



Figure 2-5: The “Alarm” menu

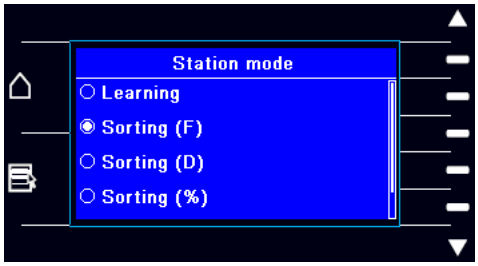



Figure 2-6: The “Station mode” menu

## 2.5 Navigation

In the MC505 basic computer, navigation is made particularly easy by using the display keys. Simply press the home, menu or one of the display keys next to the selected entry to open a submenu or the value to be processed. You can use the “Escape” key at any time to cancel the entry and return to the previous level.


Figure 2-7: You can always use the home key to return to the main screen


Figure 2-8: Switching between the main screen >Sorting info > Sort out info ...

If you press the display key again in the “Sort out info” screen, the main screen will reappear.

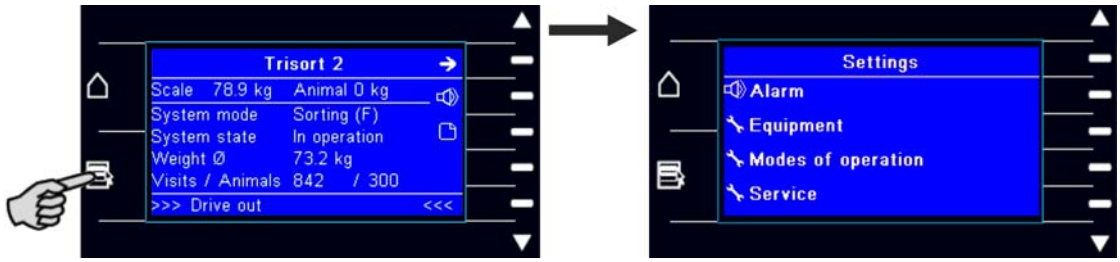



Figure 2-9: Switching from the main screen to the “Settings” menu

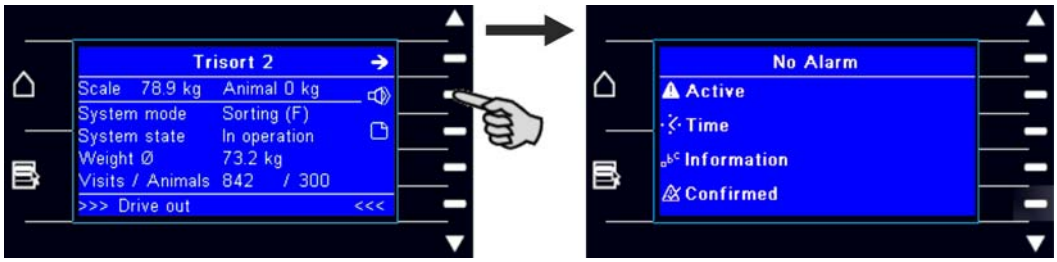



Figure 2-10: Switching from the main screen to the “Alarm” menu

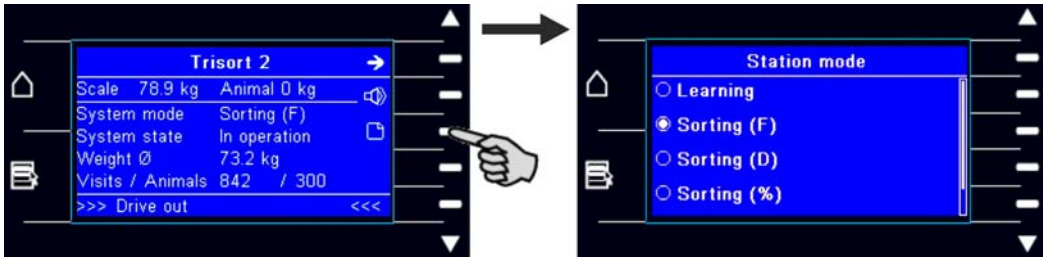



Figure 2-11: Switching from the main screen to the "Station mode" menu

# 3 Main screen

The main screen displays information on the station and the weighings which have taken place.


## 3.1 Animal scale

This displays the current weight of the weighing unit. If an animal is on the scale, this will be the weight of that animal. As soon as the animal vacates the scale, the scale should display approx. 0 kg.

During operation an opening of the sorting scale doors may cause slight deviations in weight which means that the scale displays a different weight than 0 kg. These slight deviations are considered normal. Once the doors of the sorting scale are closed again, the displayed weight should once again be approx. 0 kg.

## 3.2 Animal

This displays the weight of the last animal to be weighed. The weight of the animal is reset to zero when the “Tare scale” display stops and the software returns to the “Waiting for animal” status.

## 3.3 Station mode

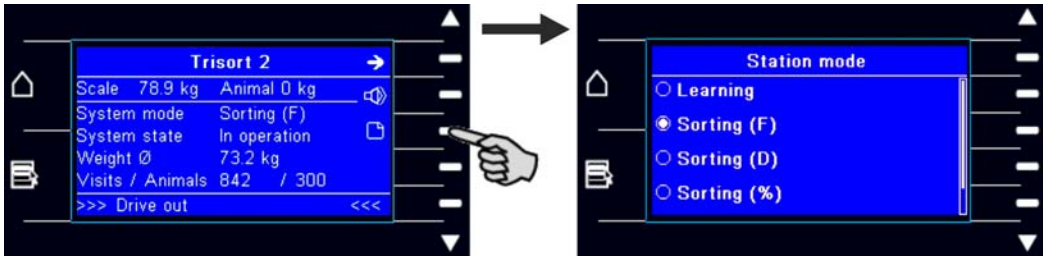



Figure 3-1: Switching from the main screen to the "Station mode" menu

The stations have the following modes of operation:

– Learning (see chapter ”Learning”, page 26)
– Sorting (F) (see chapter ”Sorting (fixed)”, page 27)
– Sorting (D) (see chapter ”Sorting (dynamic)”, page 28)
– Sorting (%) = (Sorting percentage)
– Sorting out (W) (see chapter ”Sort out”, page 28)

Select the desired station mode using the display keys.

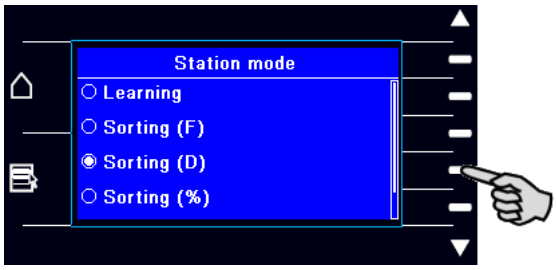
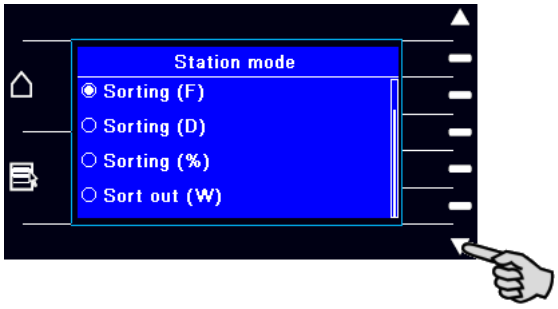



Figure 3-2: Selecting the "Sorting (D)" station mode




As the station mode menu has more than 4 entries, use the arrow keys to select the "Sort out (W)" mode.

## 3.4 System status

The following system status are possible:

- In operation
- Stop
- Pause
- Error
- Initializing

## 3.5 Average weight/weighings

The average weight is the sum of all weighings per day divided by the number of weighings. These values are reset to zero each day.

# 4 Sorting info


## 4.1 Threshold weight

The animals which fall below or exceed the threshold weight are guided either to the left hand or right hand exits, or in a sorting system with 3 selection exits, to the central exit, according to the criteria. The sorting direction is specified in BigFarmNet Manager. The threshold weight can be changed in the “Settings” menu.

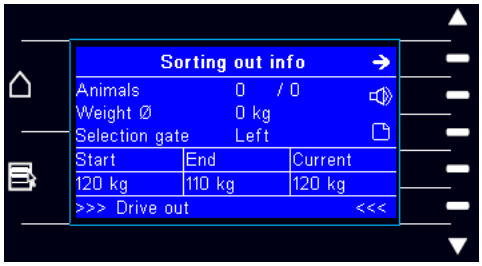
Settings -- Modes of operation -- Sorting

## 4.2 Average weight/weighings


1. Average weight of the underweight animals which have been sorted into the left hand exit that day.
2. Average weight of the overweight animals which have been sorted into the right hand exit that day.
3. Number of weighings (visits) that day where the weight of the animal was under the threshold weight and was therefore sorted into the left hand exit.
4. Number of weighings (visits) that day where the weight of the animal was above the threshold weight and was therefore sorted into the right hand exit.

# 5 Sort out info

This screen contains information on the sorted animals.




## 5.1 Sort out animals

This displays how many animals should be sorted that day or how many have been sorted out.

Example:

**0 / 50 means:** 0 of a total 50 animals have already been sorted out

**20 / 50 means:** 20 of a total 50 animals have already been sorted out

## 5.2 Average weight

The average weight of those animals already sorted out.

## 5.3 Selection gate

This displays where the overweight animals will be guided to. In a system with 3 selection exits, this is normally the central exit, in a system with 2 selection exits, this is either right or left. The criteria for sorting out to where the overweight animals will be sorted are set in BigFarmNet Manager.

Settings -- Modes of operation -- Sort out

## 5.4 Weight

In the “Sort out info” screen, the display indicates the start weight, end weight and the current threshold weight.

### 5.4.1 Start weight / end weight

If the start weight is greater than the end weight, the sorting weight will be reduced by 1 kg once the reduction time has elapsed. If the start weight is less than the end weight, the sorting weight will be raised by 1 kg once the reduction time has elapsed. “Current” displays by how much the sorting weight has already been raised or decreased.

| **Start weight > End weight** | **Start weight < End weight** |
|---|---|
| – The sorting weight is reduced by 1 kg once the reduction time has elapsed. | – The sorting weight is raised by 1 kg once the reduction time has elapsed. |
| – Enter a start weight which is greater than the end weight in order to sort out the heaviest animals first | – Enter a start weight which is lower than the end weight in order to sort out the lightest animals first |

Settings -- Modes of operation -- Sort out -- Start weight

Settings -- Modes of operation -- Sort out -- End weight

Settings -- Modes of operation -- Sort out -- Reduction time

The sorter starts sorting the animals according to the start weight.

### 5.4.2 Actual weight

The actual weight corresponds to the actual threshold weight.

# 6 Settings

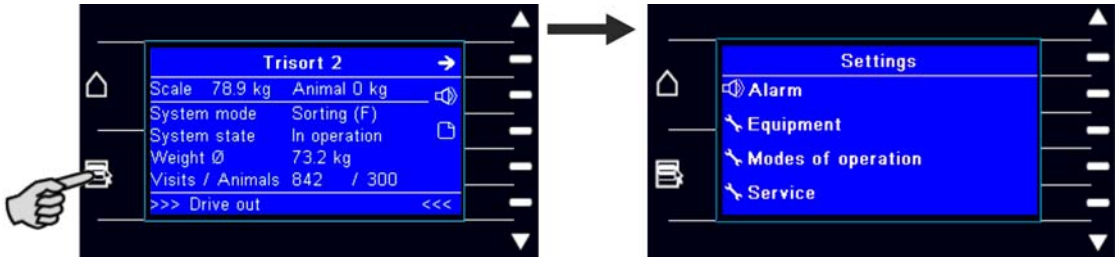



Figure 6-1: Switching from the main screen to the “Settings” menu

In the MC505 basic computer, navigation is made particularly easy by using the display keys. Simply press the display key next to the entry you want to select to open the submenu or the value you want to process.

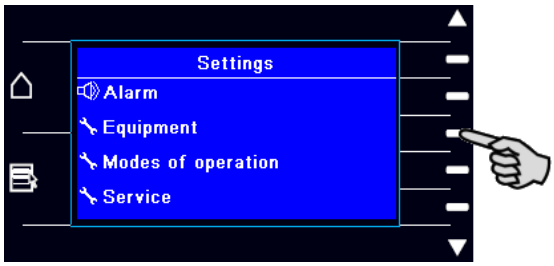
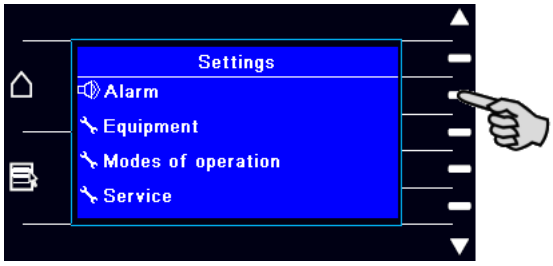



Figure 6-2: Selecting an item in the “Settings” menu

## 6.1 Alarm

Settings -- Alarm

Access the Alarm menu by selecting the “Alarm” option in the “Settings” menu.




Alternatively, you can select the Alarm menu using the corresponding symbol in the main screen.

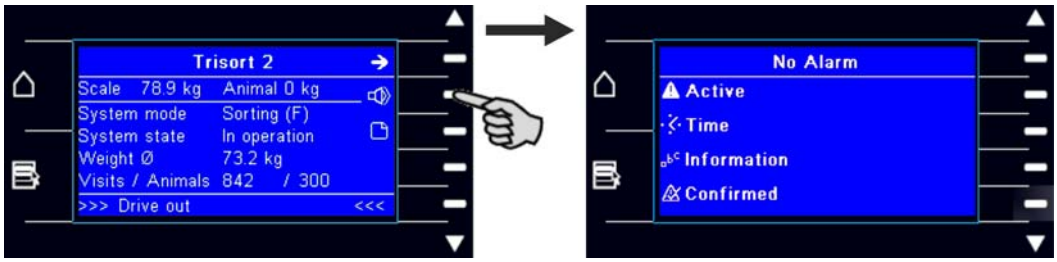
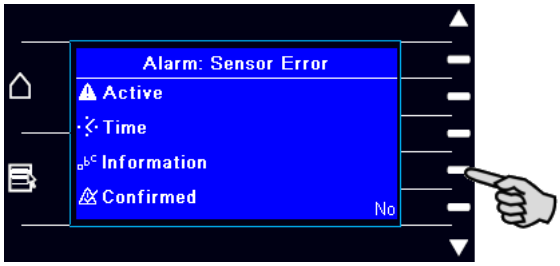



Figure 6-3: Switching from the main screen to the “Alarm” menu

The Alarm menu contains detailed information regarding the last alarm message to have occurred. The header of the alarm menu indicates which alarm message has been triggered.


The date and time at which the alarm message occurred are displayed next to “Time”.




Press the key next to “Info” to display a detailed description of the cause of the alarm.


Resolve the cause of the alarm.

Acknowledge the alarm by pressing the “Confirm” key in the Alarm menu. This will open the “Confirmed" window.


Then press the key next to “Yes” and then the “Enter” key to acknowledge the alarm.

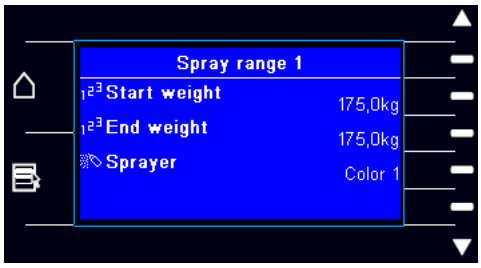
## 6.2 Equipment

### 6.2.1 Sprayer

If the sorter is fitted with a dye marking device, you can mark animals with coloured dye. You can select two weight categories and mark the animals with two different colours.

Example:

All animals weighing between 20 to 30 kg will be marked with colour 1.

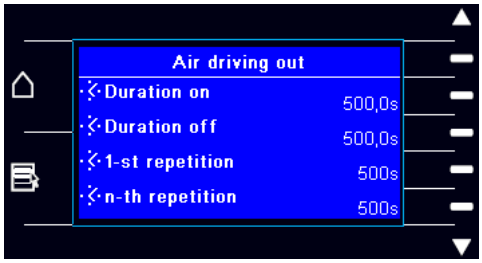



Settings -- Equipment -- Sprayer -- Spray range 1

Open the input windows for the start and end weight by pressing the respective keys and enter the values using the numeric keypad. Select “Colour 1” in the same manner.

Under “Spray duration” you can alter the spray duration of the individual sprayers (colours). This allows you chose the quantity of colour applied.

### 6.2.2 Driving out




Animals which are reluctant to vacate the animal scale can be driven out of the sorter using air. The animal is sprayed with air at set intervals. Once the weighing is complete, each animal is given a pulse of air to encourage it to vacate the sorter quickly. If the animal still does not want to vacate the sorter within the “Repetition time”, the drive out mechanism is reactivated.

**Duration on**

Use this to set the duration of the pulse of air used to encourage the animal to vacate the scale.

**Duration off**

Of the animal does not vacate the scale following the first pulse, the pulse of air is repeated three times at short intervals. Use “Duration off” to set the length of time between the three pulses of air.

**First repetition**

Use this to set the duration after which 3 further pulses of air are triggered if the animal has not vacated the scale following the first pulse of air.

**nth repetition**

Following the first repetition of the pulse of air, you can use this to set a short period after which further pulses of air are triggered.

**Example:**

Duration on = 1 second

Duration off = 2 seconds

First repetition = 60 seconds

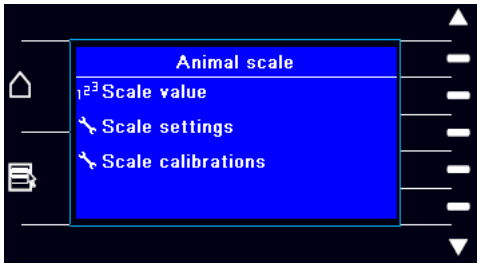
nth repetition = 15 seconds

Fifty repetitions are set in BigFarmNet Manager.

Procedure:

1. Following a successful weighing, the pressure valve is opened for 1 second (Duration on) in order to encourage the animal to vacate the scale.
2. If the animal does not vacate the scale, the pressure valve opens after 60 seconds at intervals of 2 seconds another 3 times, for a period of 1 second each.
3. If the animal fails to vacate the scale, the next three pulses are triggered after a pause of 15 seconds.
4. If the animal fails to vacate the scale after 25 repetitions, a message is triggered. If the animal fails to vacate the scale after 50 repetitions, an alarm is triggered.

### 6.2.3 Weight scale

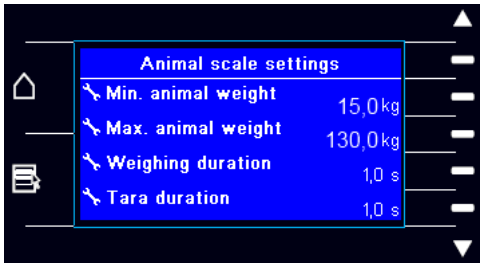



This screen is used to adjust all the scale settings.

#### 6.2.3.1 Scale value

"Scale value" is used to display the weight currently on the scale.

### 6.2.3.2 Scale settings




**Min. animal weight**

Enter a limit weight from which an animal will be recognised on the scale. The change in weight given here must therefore occur as a minimum in order for the system to react.

**Max. animal weight**

Use this to set the measurement range of the scale. Measurements which lie above the value entered here are not saved.

**Weighing duration**

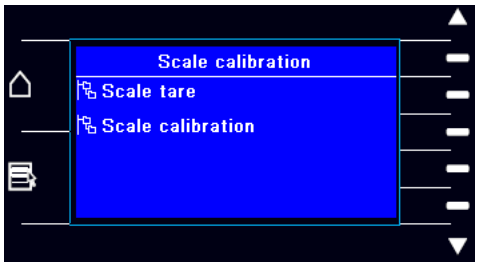
The scale performs measurements in short intervals. The subsequently displayed value is the mean value of all the measurements which the scale has performed during the weighing duration. The weighing duration should last for a minimum of 1 second.

**Tare duration**

Once the animal has vacated the scale, the scale automatically resets itself to zero. This process occurs during the tare duration. A tare duration of 1 second is sufficient.

### 6.2.3.3 Taring the scale

Settings -- Equipment -- Scale -- Scale calibrations -- Scale tare

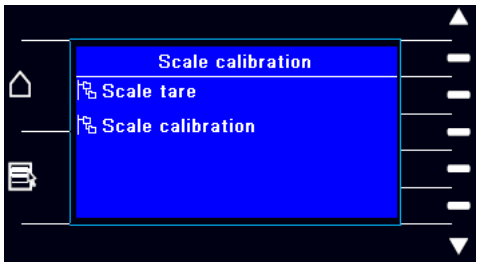



**Scale tare**

The scale is set to zero using the “Scale tare" function. The sorter automatically tares itself during operation as soon as an animal vacates the weighing unit. Any dirt on the weighing unit will therefore not affect the weighing process. The “Scale tare” menu item can be used to perform a manual taring.

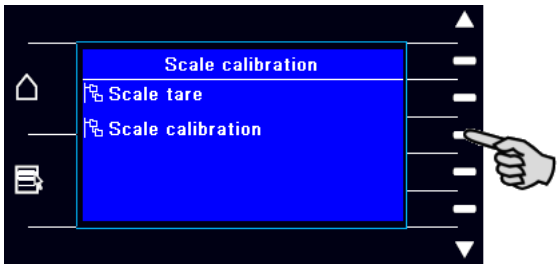
### 6.2.3.4 Calibrating scales

Settings -- Equipment -- Scale -- Scale calibration -- Calibrate scale

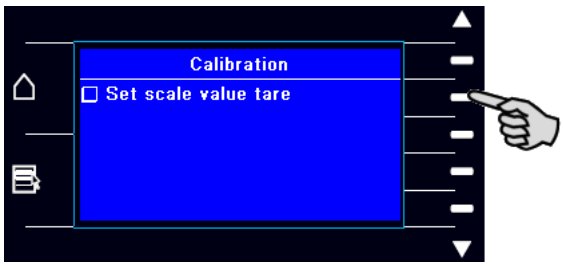



1. Carry out the following steps:
2. Tare the scale.

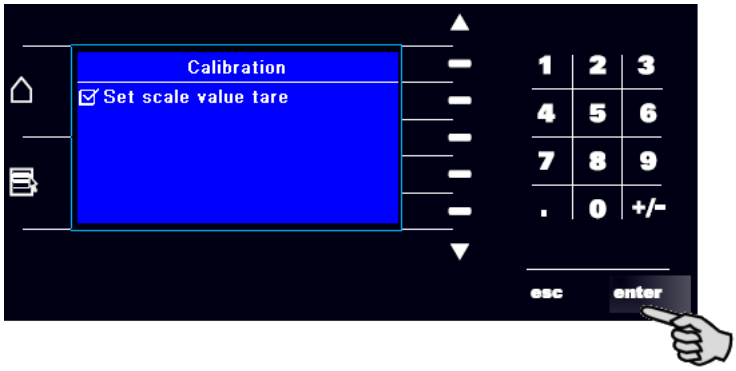
   see chapter ”Taring the scale”, page 22
3. Press the "Scale calibration" button.



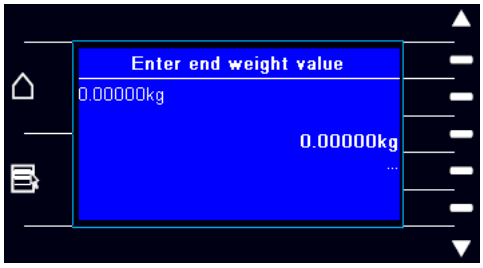

4. Press the "Set scale value tare" to check the box.




5. Press the "Enter" button.




6. The entry field "Enter end weight value" is displayed.



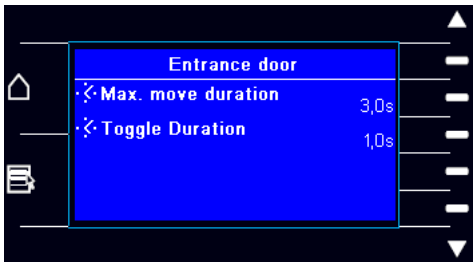

7. Place a known weight centrally on the weighing unit.
8. Enter the value of the tare weight using the numeric keypad.
9. Press the "Enter" button.
10. The scale is now calibrated.
11. Remove the tare weight from the scale.

### 6.2.4 Gates


Use this menu to set the closing behaviour of the doors.

Settings -- Equipment -- Doors

#### 6.2.4.1 Entrance door

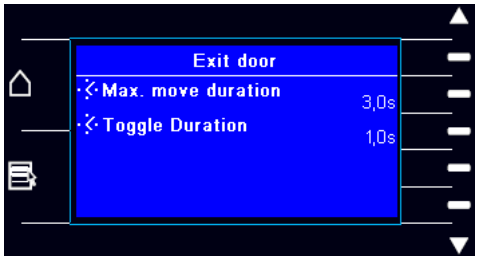



**Max. move duration / Toggle duration**

The final door position (fully opened/closed) must be reached within this period once the entrance door has been activated. The final door positions are controlled by sensors. If the final door position is not reached in the max. move duration, the door is swung backwards again for the toggle duration.

If the TriSort sorting scale is not fitted with sensors, the time set here will be ignored.

#### 6.2.4.2 Exit door

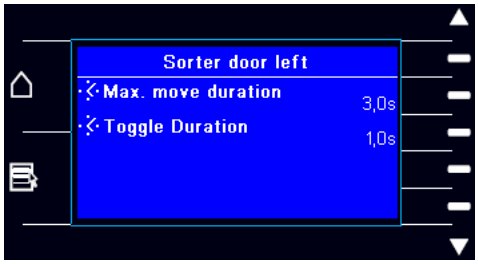



**Max. move duration / Toggle duration**

The final door position (fully opened/closed) must be reached within this period once the exit door has been activated. The final door positions are controlled by sensors. If the final door position is not reached in the max. move duration, the door is swung backwards again for the toggle duration.

If the TriSort sorting scale is not fitted with sensors, the time set here will be ignored.

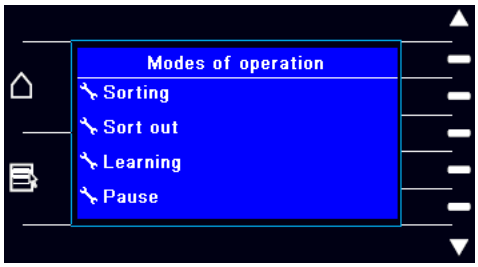
#### 6.2.4.3 Selection gate left/right



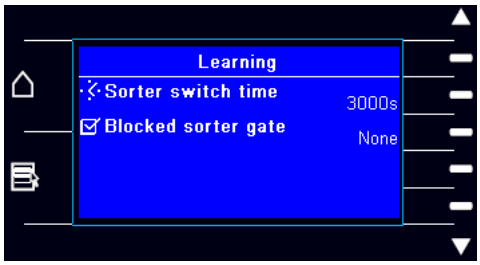

**Max. move duration / Toggle duration**

The final door position must be reached within this period once the selection gate has been activated. If not, the door will be swung backwards again for the period of time set under “Toggle duration”.

## 6.3 Modes of operation




### 6.3.1 Learning




Learning mode is used to get the animials accustomed to the station. In learning mode, the entrance and exit doors are opened, and the selection gates are activated at specific intervals. Learning mode either occurs within the pauses, or the sorter is operated in “Learning” station mode.

#### 6.3.1.1 Sorter switch time

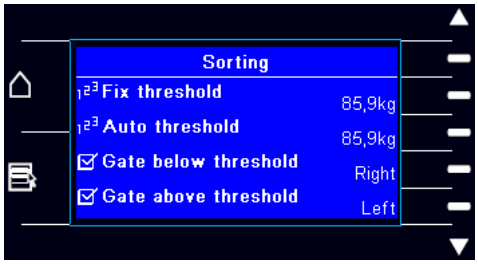
In learning mode, the selection gate switches from one position to the next once the set time has elapsed, irrespective of whether an animal has stepped onto the platform or not.

### 6.3.1.2 Blocked gate

Use this option to block a specific exit when in learning mode. In a TriSort sorting system with 3 selection exits, this would normally be the central selection exit.

Settings -- Modes of operation -- Learning -- Blocked gate

## 6.3.2 Sorting




Settings -- Modes of operation -- Sorting

### 6.3.2.1 Sorting (fixed)

Settings -- Modes of operation -- Sorting -- Fix threshold

The "Sorting (fixed)" mode of operation can be used to enter a fixed threshold weight to sort the animals. Animals which fall below or exceed this weight are sorted towards the set direction. Depending on the system type, you can determine whether the under- or overweight animals are sorted to the left, to the right, or into the central selection area in case of a system with three selection exits.

The sorting direction is selected in the BigFarmNet Manager.

The "Sorting (Fixed)" station mode can be started by opening the "Station mode" menu in the main screen and then selecting the "Sorting (F)" entry.

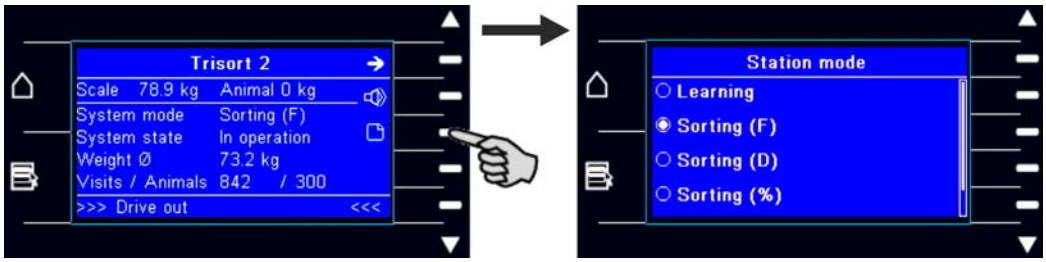
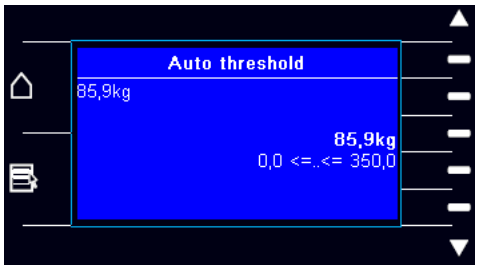



Figure 6-4: Switching from the main screen to the "Station mode" menu

### 6.3.2.2 Sorting (dynamic)

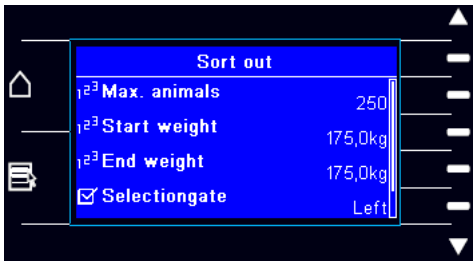
Settings -- Modes of operation -- Sorting -- Auto threshold




The "Sorting (dynamic)" station mode can be started by opening the "Station mode" menu in the main screen and the selecting the "Sorting (D)" entry.

## 6.3.3 Sort out

Settings -- Modes of operation -- Sort out




### 6.3.3.1 Max. number of animals

Specify the maximum number of animals you want to sort out.

### 6.3.3.2 Start weight

The sorter starts sorting the animals according to this weight. The heaviest animals will thus be sorted out first. The start weight is reduced by 1 kg after each reduction time until the end weight is reached or the desired number of animals have been sorted out.

#### 6.3.3.3 End weight

The sorter will not sort out any animals below this weight. The start weight is always reduced by 1 kg after each reduction time until the end weight is reached.

#### 6.3.3.4 Selection gate

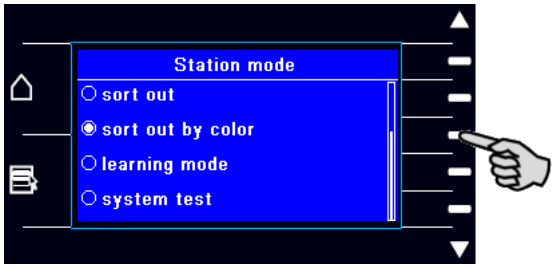
The selected selection gate is displayed. It is only possible to change this setting in BigFarmNet Manager. In a system with 2 selection exits, select either right or left. In a system with 3 selection exits, the central gate is normally intended for sorting.

#### 6.3.3.5 Reduction time

The start weight is reduced by 1 kg after each reduction time until the end weight is reached or the desired number of animals have been sorted out.

### 6.3.4 Sort out by colour

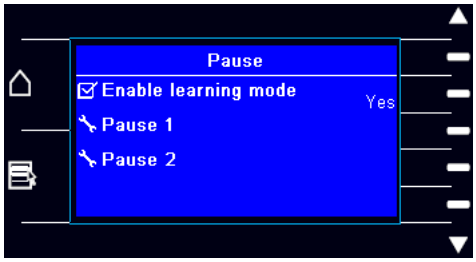
Start the station mode "Sort out by colour" by selecting the station mode in the main screen, followed by “Sort out by colour”.




In this mode, pigs which were marked manually with blue marking spray are sorted out. TriSort recognizes the colour marking with a sensor.

This function can only be used if the optional colour sensor is installed.

### 6.3.5 Pause

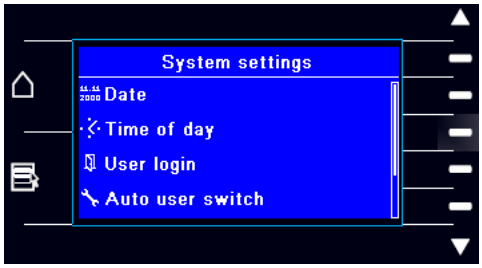



Use this menu to specify and set the pause times, and whether learning mode should be activated during the pauses.

Settings -- Modes of operation -- Pause

## 6.4 Service

### 6.4.1 Date and time

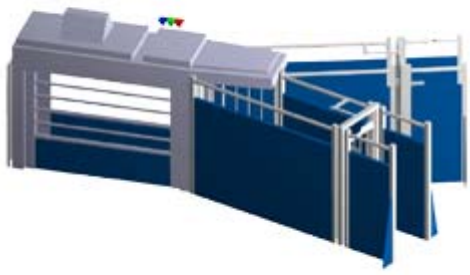



The date and time are transferred from the BigFarmNet Sow Management computer.

# 7 Input example

## 7.1 Example of a sorting system with 2 selection exits (fixed sorting threshold)

The following section illustrates the data which must be entered for a sorting system with 2 selection exits and fixed sorting threshold. It has been assumed that the sorter is ready for operation and the weighing platform has been balanced and data match the default settings.



### Determining the fixed threshold

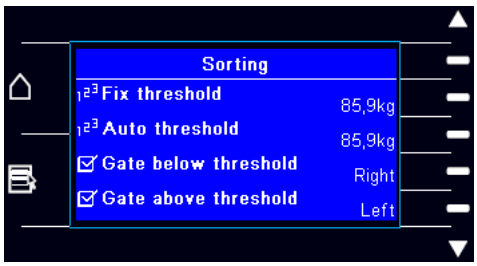
Determine the fixed threshold for both sorting directions first.

To do so, enter the “Sorting” menu.

Settings -- Modes of operation -- Sorting

Example:

- all animals weighing less than 85.9 kg shall be sorted to the right
- all animals weighing more than 85.9 kg shall be sorted to the left




1. In the BigFarmNet Manager select the sorting direction for underweight animals.
2. In the BigFarmNet Manager select the sorting direction for overweight animals.
3. Press the display key next to "Fix threshold" and enter the threshold weight using the keys on the numeric keypad. Confirm using the "Enter" button.

The "Fix threshold" station mode can be started by opening the "Station mode" menu in the main screen and then selecting the "Sorting (F)" entry.

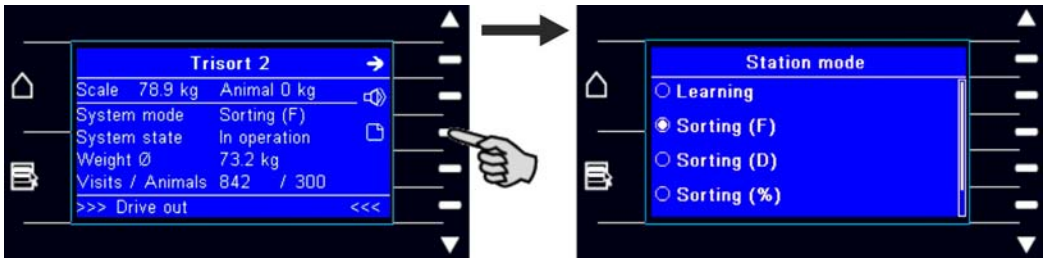
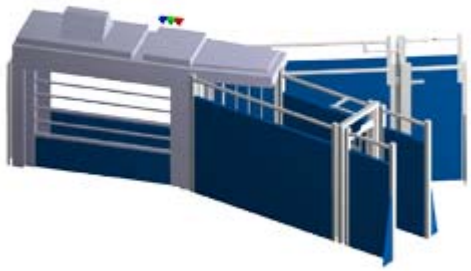



Figure 7-1: Switching from the main screen to the "Station mode" menu

4. Now all the data for the sorting process have been entered. The sorter should now sort the animals based on the sample values.

## 7.2 Example of a sorting system with 2 selection exits (Auto threshold)

The following section illustrates the data which must be entered for a sorting system with 2 selection exits and auto sorting threshold. It has been assumed that the sorter is ready for operation and the weighing platform has been balanced and data match the default settings.



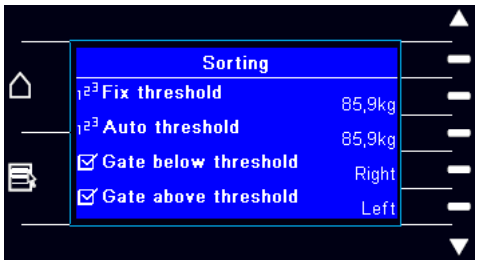
The "Auto threshold" menu displays the calculated threshold weight for the current day.

Settings -- Modes of operation -- Sorting -- Auto threshold

A start weight can be set in the "Auto threshold" menu.

**Examples for sorting with dynamic weight threshold**

- all pigs which weigh less than the calculated threshold shall be sorted to the left
- all pigs which weigh more than the calculated threshold shall be sorted to the right




1. In the BigFarmNet Manager select the sorting direction for underweight animals.
2. In the BigFarmNet Manager select the sorting direction for overweight animals.
3. Press the display key next to "Auto threshold" and enter the start threshold weight. This is only necessary if a calculated average weight is not already available.
4. Activate the "Auto threshold" station mode by opening the "Station mode" menu in the main screen and then selecting the "Sorting (D)" entry.

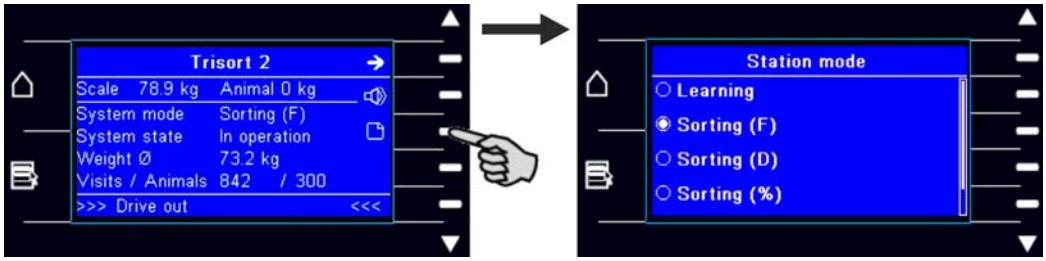


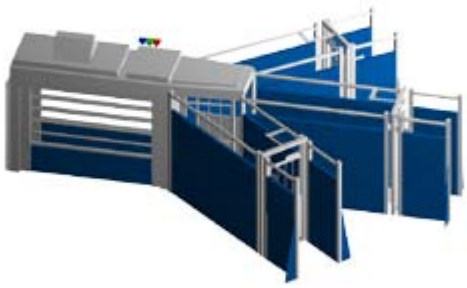

Figure 7-2: Switching from the main screen to the "Station mode" menu

5. Now all the data for the sorting process have been entered. The sorter should now sort the animals based on the sample values.

## 7.3 Example of sorting ready-to-slaughter animals

### 7.3.1 Sorting system with 3 selection exits

The following section describes which data must be entered for a sorting system with 3 selection exits. The heaviest animals in the group should be sorted via the central exit. It has been assumed that the sorter is ready for operation and the weighing platform has been balanced and data match the default settings.



**Sorting ready-to-slaughter animals**

Animals weighing more than 100 kg are to be sorted out. The area into which they are to be sorted has enough space for 20 animals. The animals should be sorted via the “central” selection gate.

If the system were to simply sort out all animals weighing more than 100 kg until the desired number of 20 animals had been reached, there could still be animals weighing more than 100 kg remaining in the group. If the group contained a total of 40 animal weighing more than 100 kg, it could even be the case that the lightest of these 40 animals have been sorted out.

To avoid this problem, proceed as follows:

1. In BigFarmNet Manager select the “central” selection gate.
2. Enter the number of animals which are to be sorted out (e. g. 20)

Settings -- Modes of operation -- Sort out -- Max. no. of animals

3. Enter a start weight of 120 kg.

Settings -- Modes of operation -- Sort out -- Start weight

4. Enter an end weight of 100 kg.

Settings -- Modes of operation -- Sort out -- End weight

5. Enter a reduction time of 30 minutes.

Settings -- Modes of operation -- Sort out -- Reduction time

6. Select the "Sort out (weight)" mode.

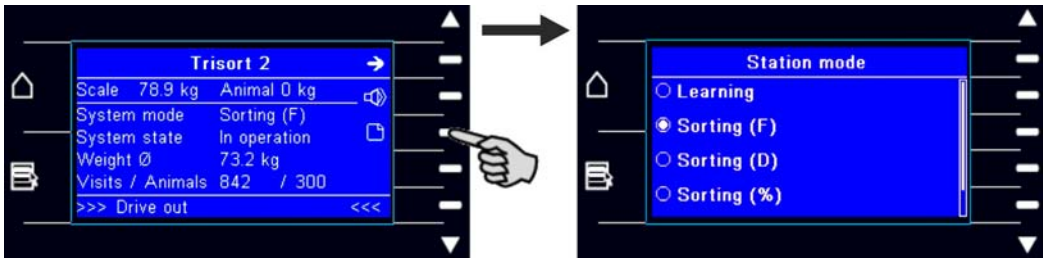



Figure 7-3: Switching from the main screen to the "Station mode" menu

The sorter will now attempt to sort out all animals which weigh more than 120 kg. Once the 30 minute reduction time has elapsed, the start weight will be reduced by 1 kg. In the following 30 minutes, all animals weighing more than 119 kg will be sorted out.

The start weight is reduced by 1 kg every 30 minutes until the end weight for the sorting process is reached, or the maximum number of animals has been exceeded.

The sorting process stops once the maximum number of animals has been reached. Using this process it is actually possible to sort out the heaviest animals weighing more than 100 kg first.

If the sorting process must stop within a specific time, ensure that a suitable reduction time has been selected. In our example, the lower threshold of 100 kg (end weight) is reached after 600 minutes (30 minutes x 20 kg).

Care must be taken to ensure that during the sorting process none of the animals are able to enter the area as part of the normal sorting operation. Please set the system gates accordingly.

7. Now all the data for the sorting process have been entered. The sorter should now sort the animals based on the sample values.

**A**
Actual weight 15
Alarms 17
Animal 10
Animal scale 10, 20
Auto threshold 28
Average weight 12, 13, 14

**B**
Blocked exit 27

**C**
Compare tare value 22

**D**
Display 7
Display key 6
Door settings 25
Driving out mechanism 19
Dye marking 18

**E**
End weight 15, 29
Entrance door 25
Exit door 25

**H**
Home key 6

**I**
Input example 31
Installation example 5

**L**
Learning 26
Limit weight 21

**M**
Main screen 10
Max. move duration 25
Menu key 6
Menu screen 16
Mode settings 27

**N**
Navigation 8
Number of animals 28

**O**
Operating keys 6
Operating mode 4, 9, 11, 27, 32, 33, 35

**P**
Pulse duration 19

**R**
Reduction time 29
Repetition time 19

**S**
Selection exit 14, 29
Selection gate left/right 26
Settings 16
Sort out 28
Sort out animals 14
Sort out info 14
Sorter switch time 26
Sorting (fixed) 27
Sorting info 13
Sorting out (colour) 29
Sorting ready-to-slaughter animals 34
Sorting system with 2 selection exits 31
Sorting system with 3 selection exits 34
Spray pause 19
Start weight 15, 28
System description 3
System settings 30
System status 12

**T**
Technical data 2
Threshold weight 13
Time between the drive out intervals. 19

**W**
Weight 14