

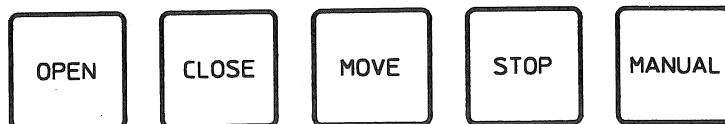
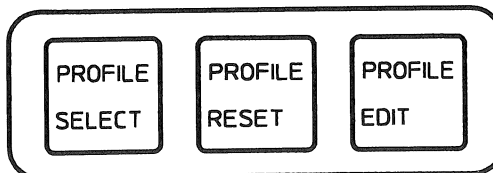
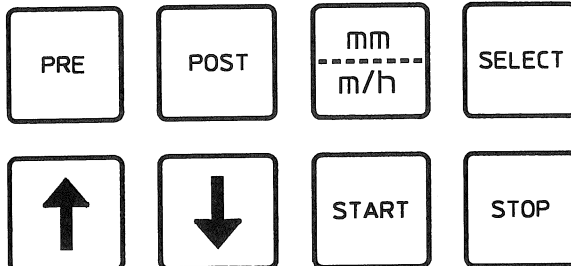
# Best One

## Bording Electronic Control Unit

FASTERHOLT™

PRE-IRRIGATION  
POST-IRRIGATION

ON 30 m/h P:1  
OFF Thu 14:35

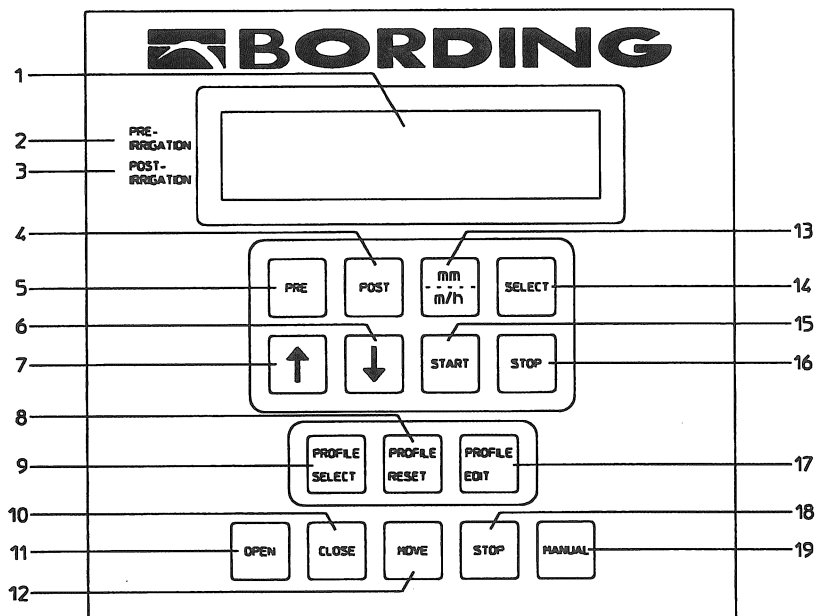


## Technical instruction



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**Pos. No. Description**

- 1 Display
- 2 Indicator for pre-irrigation
- 3 Indicator for post-irrigation
- 4 Select post-irrigation ON/OFF
- 5 Select pre-irrigation ON/OFF
- 6 Alteration/adjustment of parameters on display (reduction)
- 7 Alteration/adjustment of parameters on display (increase)
- 8 Resetting (zero) of actual profile
- 9 Selection of profile No. (1-50)
- 10 Closing of butterfly valve (manual)
- 11 Opening of butterfly valve (manual)
- 12 Opening of 3-way valve (manual)
- 13 Choose "mm" or "m/h"
- 14 Choose actual functions
- 15 Start for operation of irrigation program
- 16 Stop for operation of irrigation program
- 17 Establishment of profile with actual data
- 18 Closing of 3-way valve (manual)
- 19 Manual (Chosen for operation of actuators)

### **Best One, Bording Electronic Control Unit**

Best One is a computer for the control of irrigation machines to ensure that the fields gain the desired amounts of water.

**NOTE! The solar panel cannot charge the battery, it merely maintains the battery power.**

### **General description**

All the primary functions are within the green area. The keys for the programming of profiles are within the blue area. The remainder are for manual functions only.

When a key is touched, a light on the display will remain lit for approx. 2 minutes following the latest key operation.

It is not possible to apply the keyboard when the control is running with the actuators as this is monitored. A star will be shown on the display which indicates that the computer is engaged in a regulation and that the actuators are thereby activated.

### **Extra equipment**

- A pressure switch for automatic start when there is pressure within the system.
- A pressure switch for automatic start and stop (pressure control).
- An alarm device that produces a signal if the hose is extended too far when the irrigation is stopped or if the machine stops due to a fault.

### **Variable pull-in/drive speed (Profiles)**

In cases where the fields have both dry and wet areas, it can be an advantage to be able to regulate speed, i.e., irrigation, so that the field receives appropriate amounts of water on the various areas. The computer can memorize up to 50 profiles (varied pull-in/drive speeds). A profile corresponds to a particular pull-in/drive speed and can contain up to 10 different variations of the nominal irrigation calculated in percentage + 100% / -33%.

The set pull-in speed/irrigation can always be adjusted. The computer will - for any given profile - always calculate the variations in irrigation in % on a basis of the nominal irrigation which is recorded in the computer.

## Computer operation (function keys)

A choice can be made if the required data is recorded in the computer before or after the hose is laid out.

There is also a free choice regarding the order in which the data is required to be recorded in the computer.

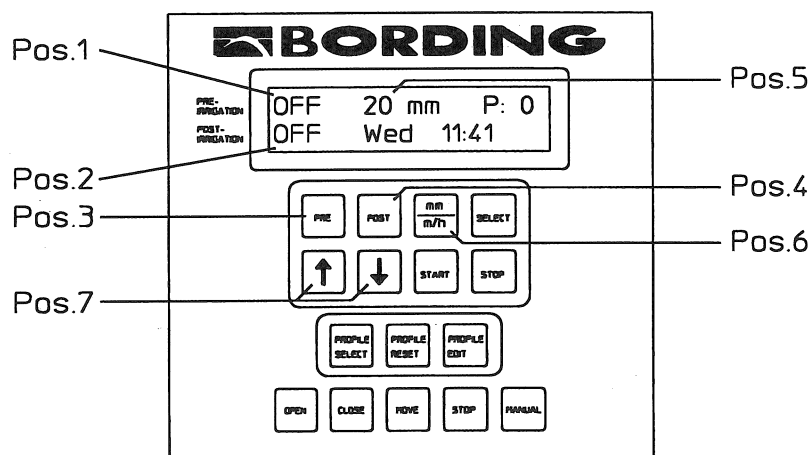
An example is shown below (page 4 to page 10 incl.) of a logical sequence in which the data can be recorded in the computer.

### Pre-irrigation

Pre-irrigation is selected on/off with the "PRE-IRRIGATION" key (Pos. 3). The display indicates if pre-irrigation is **On** or **Off** (see Pos. 1). The current status is changed by pressing the "PRE-IRRIGATION" key (Pos. 3). If the irrigation machine is coded for pre-irrigation, then it will first apply 0.5 metre pull-in/drive prior to commencing irrigation.

### Post-irrigation

Post-irrigation is selected on/off with the "POST-IRRIGATION" key (Pos. 4). The display indicates if post-irrigation is **On** or **Off** (see Pos. 2). The status is changed by pressing the "POST-IRRIGATION" key (Pos. 4).



### Select "mm" or "m/h".

A choice can always be made between a display in which the irrigation is shown in "mm" or pull-in speed (Pos. 5) shown as "m/h".

This can be changed by pressing the key "mm / m/h" (Pos. 6).

### **N.B!**

The presentation of irrigation in "mm" is for guidance only, as there are a number of practical factors which can cause fluctuations.

The values for "mm" or "m/h" can be adjusted to the required values by applying the arrow keys (Pos. 7).

### Use of "Select" key.

The basic data for control of irrigation is recorded by choosing the various menus with the "SELECT" key (Pos. 9).

The first operation of the "SELECT" key shows "Remaining time" for pull-in (see further information).

The second operation of the "SELECT" key shows "Distance". If the hose is drawn out, the display will indicate the extended length (see further information).

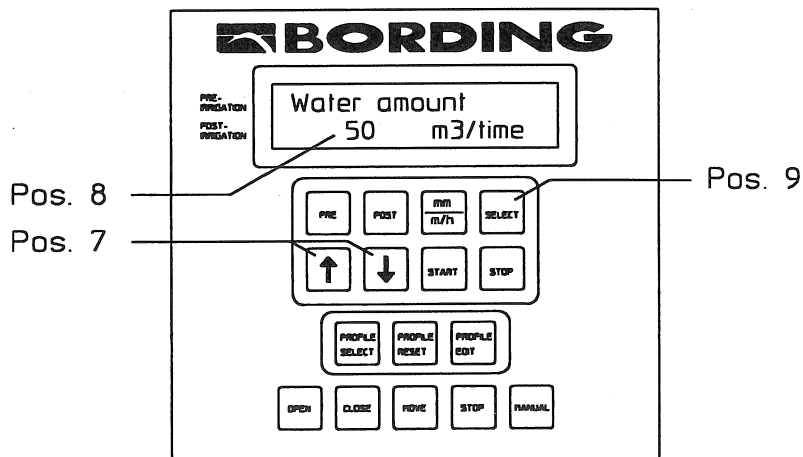
The third operation of the "SELECT" key shows "Finish time" - based on the actual data currently recorded (see further information).

The fourth operation of the "SELECT" key shows "Start time". It is possible to record a later irrigation start time (see further information).

The fifth operation of the "SELECT" key shows "Actual time" (see further information). The above settings are referred to again under further information (see pages 9 & 10).

### Water amount and Spreading width.

The sixth operation of the "SELECT" key provides an important illustration on the display, i.e: Water amount indicated as m<sup>3</sup>/hour (see illustration below - Pos. 8). It is important that the correct value is recorded here. The value can be altered by applying the arrow keys (Pos. 7). The more accurate this value is, the more correct the "mm" reference will be (Pos. 5, page 4).

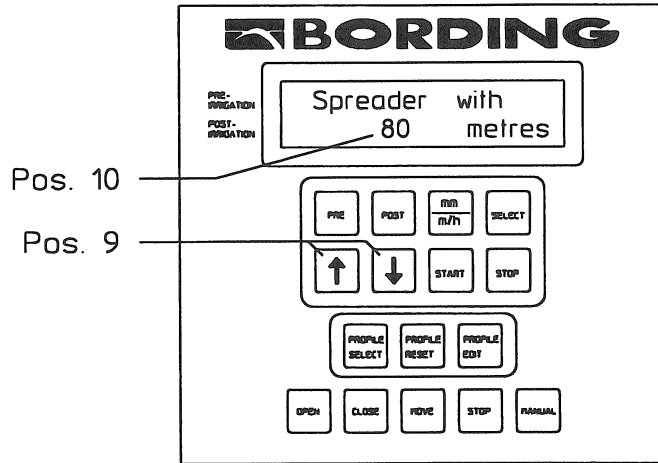


The seventh operation of the "SELECT" key shows "Spreading width" (see illustration on the next page, Pos. 10) on the display and, as is the case with "Water amount", this is very important for the calculation of the "mm" reference (Pos. 5, page 4). This value can be altered by applying the arrow keys (Pos. 7).

#### **N.B!**

If there is any doubt regarding the effective spreading width, then it is possible to read off the spreading width (**Max. effective spreading width**) on the jet table which is positioned on the machine. In order to read the spreading width from the jet table it is necessary to know which type/size of nozzles are being applied.

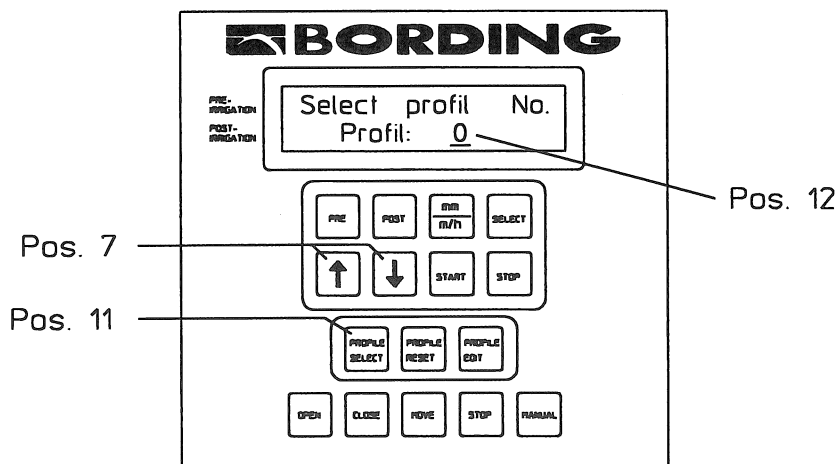
The eighth operation of the "SELECT" key shows the standard illustration on the display (see page 4). This is the illustration to which the computer always returns after operations.



**Selection of profile irrigation.**

If there are fields in which the irrigation requirement varies from point to point, it is an advantage to apply profile irrigation. This means that the irrigation dosage can be varied in accordance with the actual field requirements. This is effectuated as follows:

By operating the "Profile selection" key (Pos. 11) the display shows that it is possible to select a profile number (Pos. 12). It is thus possible to select/code in up to 50 profiles. Select a profile number by operating the arrow keys (Pos. 7).





When the required profile has been selected, the "Profile Edit" key is operated (Pos. 16). The following display is then shown. In one profile (equal to one field operation) it is possible to code in up to 10 variations of irrigation dosage.

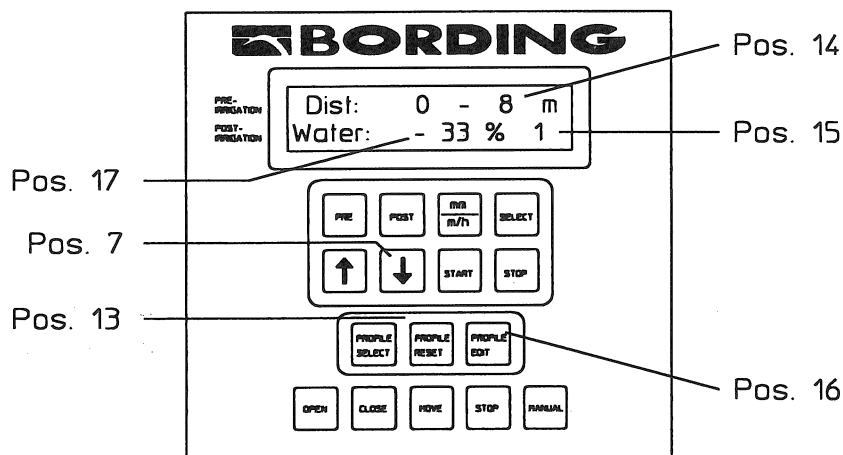
Using the arrow keys (Pos. 7) a given irrigation can be applied over a given distance - using the hydrant as the starting point.

By operating the "Profile Edit" key (Pos. 16) it is possible to make alterations in the next line (Pos. 17). With the aid of the arrow keys (Pos. 7) the desired alteration in irrigation (percentage) is selected as compared to the nominal irrigation (see page 4, Pos. 5).

At the right-hand side of the display (Pos. 15) the number of coded variations in the current profile is indicated.

By again operating the "Profile Edit" key (Pos. 16), the display illustration will change indicating that the next variation in irrigation can be coded in. At the right-hand side of the display (Pos. 15) one can see that the figure has changed, e.g., from 1 to 2.

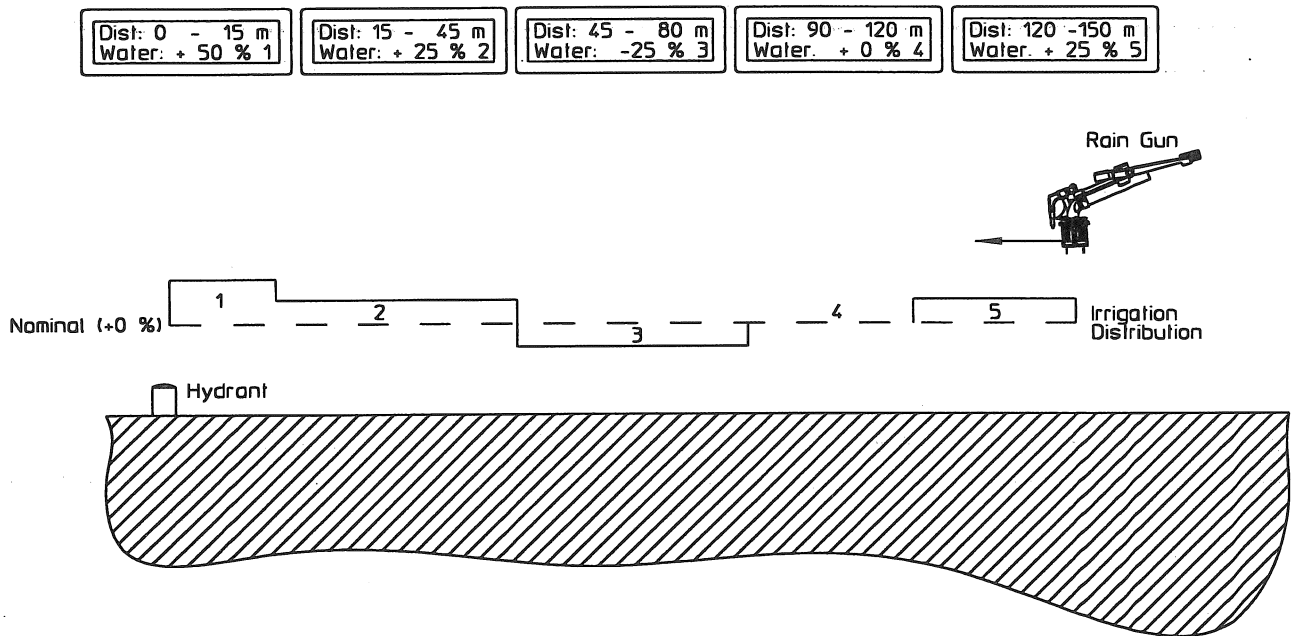
The above key operations are then repeated until the entire field length, which has or will be laid out, has been defined in the program.



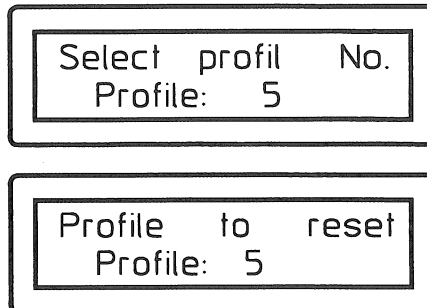
On the next page there is an illustration that indicates an example of the necessary key operations. Please note that each variation in irrigation amount is numbered at the lower right-hand corner of the display and that all distances are calculated from the hydrant to the Rain gun.

If one or more profiles are required to be reset to zero, then the "Profile Selection" key is to be operated (see page 6, Pos. 11). Using the arrow keys (Pos. 7) the profile which is to be cancelled is chosen. The "Profile Reset" key is then to be operated (page 7, Pos. 13).

After having zero reset a profile, the computer will automatically return to the standard illustration (see page 4). The computer display will then show the profile that has been reset to zero (see illustration on next page) and, for the ensuing irrigation, this profile will receive a constant dosage - unless a new profile, other than zero, is selected.



If there is no requirement to delete a profile - but merely a requirement for ensuring a constant irrigation dosage - then the "Profile Selection" key should be operated (page 6, Pos. 11). The arrow keys are then operated until 0 is indicated on the display (page 6, Pos. 12). After a pause the computer will automatically return to the standard illustration.



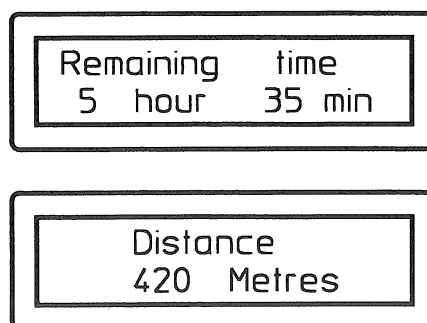
### Adjustment of secondary parameters.

After having entered the above data into the computer, it can be an advantage to carry out the final adjustments prior to starting irrigation.

A number of secondary functions are presented on page 5. These are described in brief due to them being placed prior to the basic data (water amount and spreading width) which should be keyed in as the first data.

By operating the "Select" key the display first indicates the actual remaining time of irrigation (see illustration below).

The second operation of the "Select" key displays "Distance". If the hose is drawn out, the display will present the actual length extended (see illustration below).

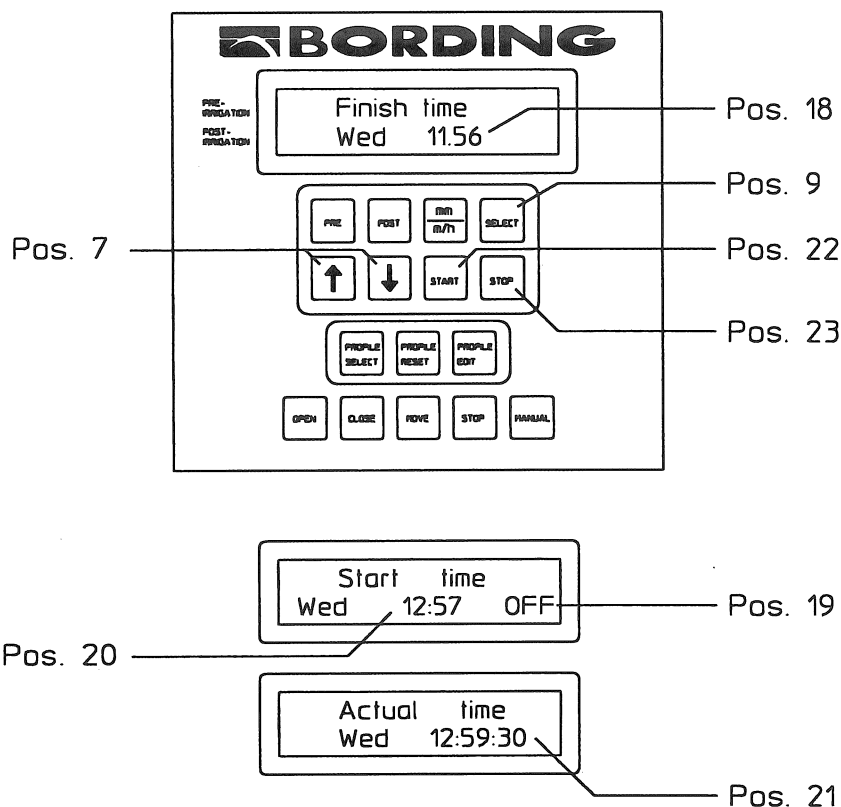


The third operation of the "Select" key (page 10, Pos. 9) indicates the Finish time on the display.

### **N.B!**

"Finish time" is calculated on the basis of "Actual time" + "Remaining time". This means that if "Start" is first operated at a later point, then the "Finish time" will have changed for exactly the intervening period of time.

It is possible to make fine adjustments to the Finish time (Pos. 18) by operating the arrow keys (Pos. 7) to a time that is more appropriate with operational planning.



**N.B!**

By fine adjustment of the "Finish time" (Pos. 18) the pull-in speed / mm on the display (page 4, Pos. 5) will also change. It is a good idea to check the extent of this change.

Attention should be paid to the fact that (if a pressure switch is installed) fine adjustment of the "Finish time" will not lock the "Finish time". If, for example, 10 minutes elapse before irrigation is started, then 10 minutes will be added to the "Finish time".

The next operation of the "Select" key (Pos. 9) shows that it is possible to record an automatic starting time for irrigation (Pos. 21) with the aid of the arrow keys (Pos. 7).

**N.B!**

This function can only be applied if there is constant pressure on the water supply.

The automatic starting time is activated by operating the "Start" key (Pos. 22). The display will indicate that there moves to the "On" status (Pos. 19). If automatic starting time is not required, then the "Stop" key (Pos. 23) must be operated. This will then move to the "Off" status (Pos. 19).

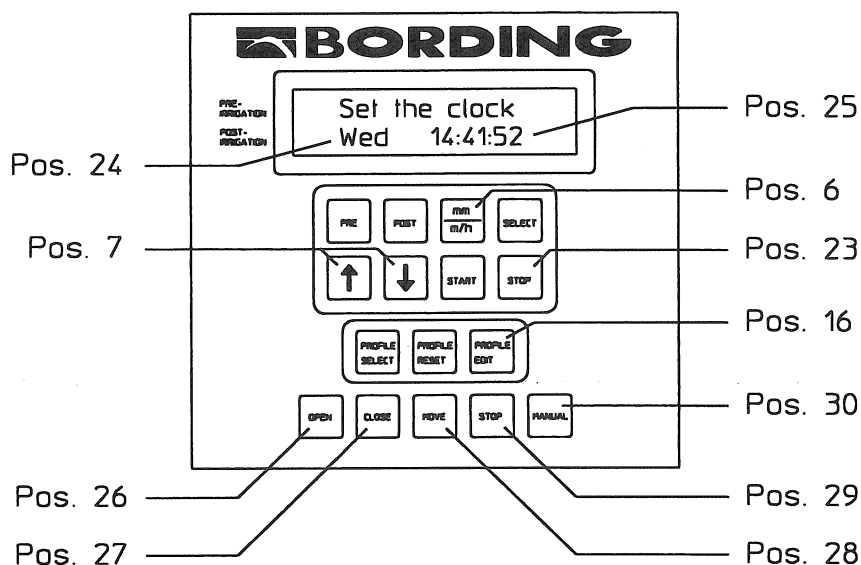
If an automatic starting time is coded in and the finish time is subjected to fine adjustment, the irrigation (mm / m/h) will be locked on. It is also a good idea to check the calculated irrigation (mm / m/h).

The next operation of the "Select" key results in the display indicating the actual time (Pos. 21). In this status it is not possible to adjust the timer.

The next operation of the "Select" key (Pos. 9) will return the display to its standard illustration.

After having gone through the possibilities for incoding the necessary data into the computer (page 4 to page 10 incl.), the computer is ready to proceed with irrigation. Operate the "Start" key (page 10, Pos. 22) - provided that an automatic starting time has not been already applied.

### Timer adjustment.



By operating the "Profile edit" key (Pos. 16) and "mm / m/h" (Pos. 6) simultaneously, the above display illustration will be indicated.

By operating the arrow keys (Pos. 7), it is now possible to set the computer for the right day (Pos. 24). By operating the "Stop" key (Pos. 23) the cursor is moved. Each figure is adjusted with the aid of the arrow keys (Pos. 7) and, in order to advance to the next figure, the "Stop" key must be operated. When the last figure is adjusted and the "Stop" key has again been operated, the computer will return to the standard illustration (see page 4).

### Manual control

#### **Manual keys**

There are manual keys for operating with the actuators.

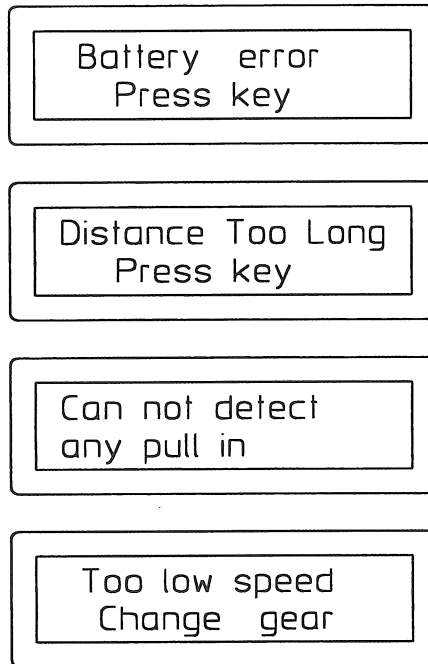
"The "Open" key (Pos. 26) opens the butterfly valve. The "Close" key (Pos. 27) closes the butterfly valve. (This applies to both high pressure and low pressure control.)

The "Move" key (Pos. 28) increases the drive speed of the Rain gun. The "Stop" key (Pos. 29) reduces the drive speed of the Rain gun and will finally stop the machine. Both actuators can be applied by operating the manual keys without having first to operate the actual "Manual" key (Pos. 30), but if there are **NOT** faults in the computer, then this will immediately take control.

#### **Manual function**

If the "Manual" key (Pos. 30) is operated then it will normally take 30 seconds before the control can effect the actuators. This facilitates interruption of the current to the control if a fault has arisen, for example, that the actuators move into the outer positions each time they are manually adjusted.

## Special information on the display



The computer can indicate certain error information, for example:

### **Battery error:**

The battery power is too low and must, therefore, be recharged or replaced.  
Press any key to remove information on the display.

### **Distance too long alarm:**

The coded alarm limit for the hose length is exceeded.  
Press any key to remove information on the display.

### **Cannot detect any pull in:**

A fault has arisen. The pull-in/drive is stopped, monitoring time is exceeded and the control is in the stop status.

1. Localize and correct the fault or contact your **Bording** dealer.
2. Restart the machine and the irrigation will continue unchanged.

**N.B!** New stopping time.

Press any key to remove information from the display.

### Too low speed:

The machine **cannot** attain the desired speed in the selected gear.  
Press any key to remove information on the display.  
Change gear in accordance with the current gear table / pull-in speed.

### Special functions

There are various parameters which are set ex-works. If these are required to be changed, then this must be carried out by authorised personnel. Contact your **Bording** dealer.

Pre- and post-irrigation times are set corresponding to 8 meters pull-in/drive speed.

The monitoring time is set at 20 minutes. **Note!** The pump **must** be started within the monitoring time.

The alarm signal is set to give an alarm of 20 seconds. (The alarm unit is extra equipment.)

If the machine is equipped with an alarm unit, the alarm limit will be set at the entire hose length minus approx. 20 meters of the nominal hose length.

## **Installation**

At the rear of the computer there is a long row of clamps for input and output signals:

1 & 2: Cover switch (gate)  
3 & 4: Measuring roller A (Sensor)  
5 & 6: Measuring roller B (Sensor)  
7 & 8: Stop sensor  
9 & 10: Pressure switch

11: 0 V (- solar cell)  
12: 12 V (+ solar cell)  
13: 0 V (- battery)  
14: 12 V (+ battery)  
15: Actuator for 3-way valve  
16: Actuator for 3-way valve  
17: Actuator for butterfly valve  
18: Actuator for butterfly valve

19 (-) & 20 (+): Breaker switch - alarm relay (12 V)

20 (-) & 21 (+): Close switch - alarm relay (12 V)

If the machine is **not** fitted with a pressure switch, then clamps 9 and 10 are to be short-circuited.

If the machine is **not** fitted with a cover switch, then clamps 1 and 2 are to be short-circuited.

## **Technical specifications**

Power: 12V +/- 10% (battery and solar cell).

The computer has an average power consumption of 3.0 mA +/-0.3 mA in the stop status. This is, however, very dependent on whether or not the light is lit due to the light using approx. 75 mA. In the start status the power consumption is very dependent on how often the actuators are applied.

### **Temperature:**

Storage temperature: -20 degrees C to +70 degrees C.

Operational temperature: 0 degrees C to +50 degrees C.

Humidity: 30 to 100% RH condensation.

The computer maintains the following 2 environmental standards:

EN50081-2 Generic emission standard - Industrial environment

EN50082-2 Generic immunity standard - Industrial environment

Dimensions: 175 x 165 x 70 mm

Weight: 0-8 kg



## Technical instruction

In addition to the "User instruction", this more advanced technical supplement has been prepared for dealers, service fitters, etc. This is particularly concerned with basic settings and the possibilities for making adjustments for the actual user. See below.

### Start function.

In the following there is an addition to the "start function" (see page 10, Pos. 22) and the "stop function" (see page 10, Pos. 23).

The **Start** key changes the status from stop to start. The **Start** key is pressed when the desired speed/stopping time and status for pre- and post-irrigation have been set.

When the **Start** key is pressed (thus starting the computer) the following occurs:

1. The butterfly valve is opened (high pressure) and the butterfly valve closes (low pressure) when the pressostat opening is short-circuited.
2. The 3-way valve is opened via a basic start impulse so that a minimum 0.5 meter pull-in/drive is operated. If there is no pull-in/drive, the control will increase the opening of the actuator (3-way valve) after an interval of approx. 5 minutes.
3. If pre-irrigation has been selected, the 3-way valve will remain closed until the pre-irrigation is completed. The 3-way valve will then open with a basic start impulse and the pull-in/drive will be initiated.
4. The speed is regulated by operating the actuator (3-way valve). A recalculation of speed is effectuated for every half revolution of the measuring roller. If there is a fault in the pull-in/drive speed, the actuator (3-way valve) will receive an impulse that is proportional to the speed fault.

The monitor ensures that the pull-in/drive has the correct speed. If there has been a fault in the pull-in/drive speed, so that the stopping time cannot be maintained with the selected pull-in/drive speed, then the speed will be altered so that the required stopping time will be attained.

**NOTE!** The desired irrigation can be altered up to +100% (maximum) and down to -33% (minimum).

### Stop function.

The **Stop** key operates the status from start to stop. The **Stop** key is to be pressed if irrigation is required to stop momentarily during irrigation operations.

1. When the stop sensor is effected or if the **Stop** key is pressed, the control will close the actuator (3-way valve) and this will stop pull-in/drive.
2. The butterfly valve will then close slowly to avoid water hammering the supply line (opens when stop by low pressure).

3. The alarm will be given and the computer will then be in the stop status.

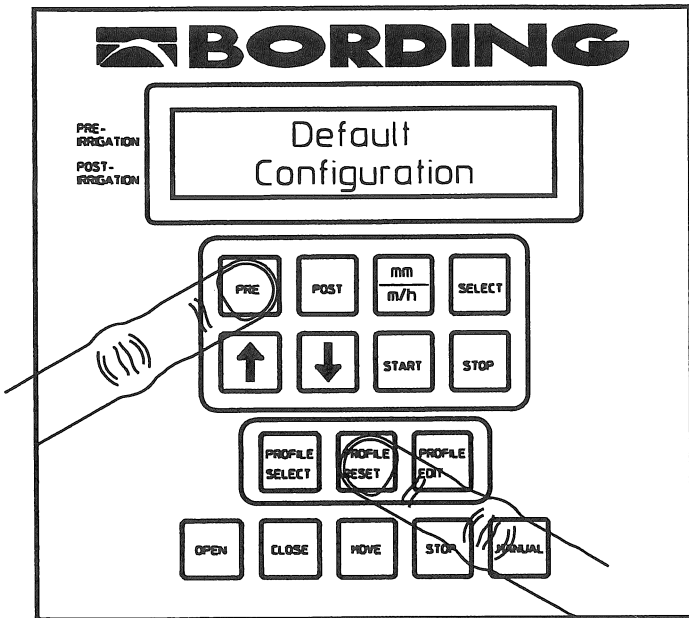
In the stop status, the computer will monitor the battery, measurement of distance - if pull-in/drive has been in operation - and update the parameter inputs indicated on the display.

### **End stop (Stop sensor)**

The stop sensor **must** always have contact with the magnet to ensure computer operation. If the stop sensor lacks contact with the magnet, the computer will be set at zero. In other words, the measured hose length will be zeroed and the computer cannot, therefore, calculate a new stopping time. However, it is still possible to adjust the pull-in/drive speed when the stop sensor again contacts the magnet.

**NOTE!** Each time an irrigation operation is completed, the computer is zeroed and is in the stop status.

When an eventual post-irrigation time is completed, the butterfly valve will close slowly to avoid bursting the supply line (opens when the low pressure stops).

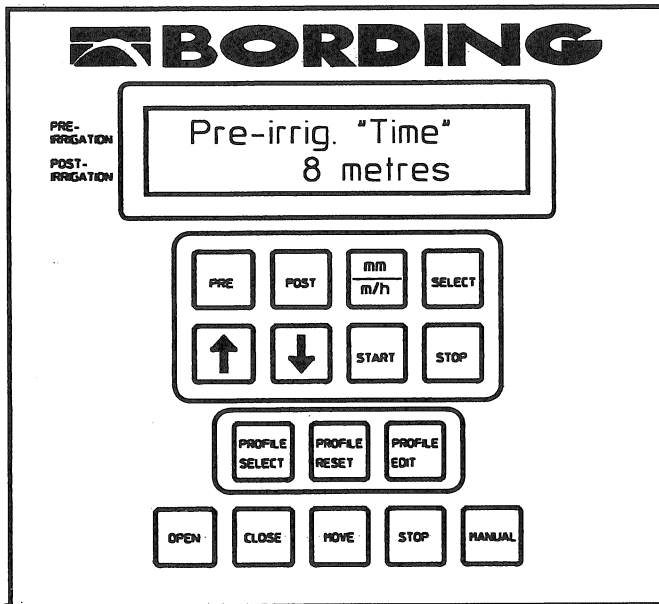


### Standard configuration

Various parameters are to be set up. This should only be carried out by **authorized personnel** and is pre-set on all computers installed ex.-works.

By simultaneously pressing the **Pre-irrigation** key and the **Profile reset** key the computer establishes the configuration illustration on the display and briefly presents "Default Configuration".

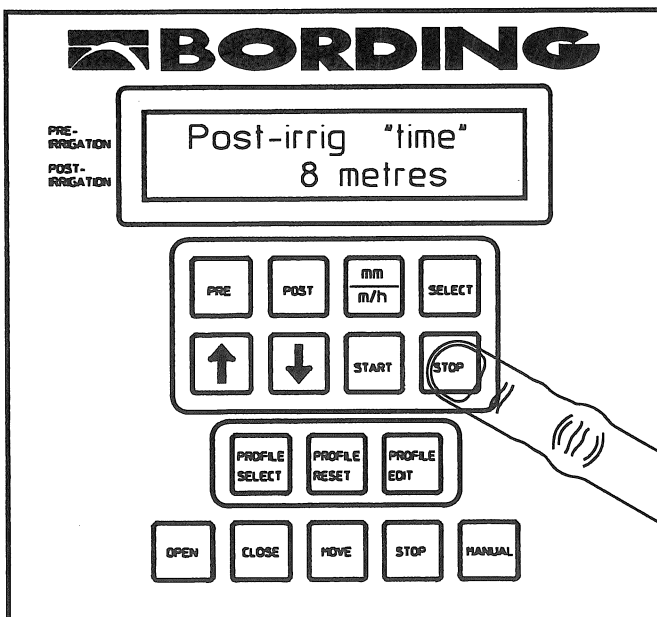
This is followed by this display illustration:



### Pre-irrigation time:

By pressing the **Stop** key, this illustration will appear on the display:

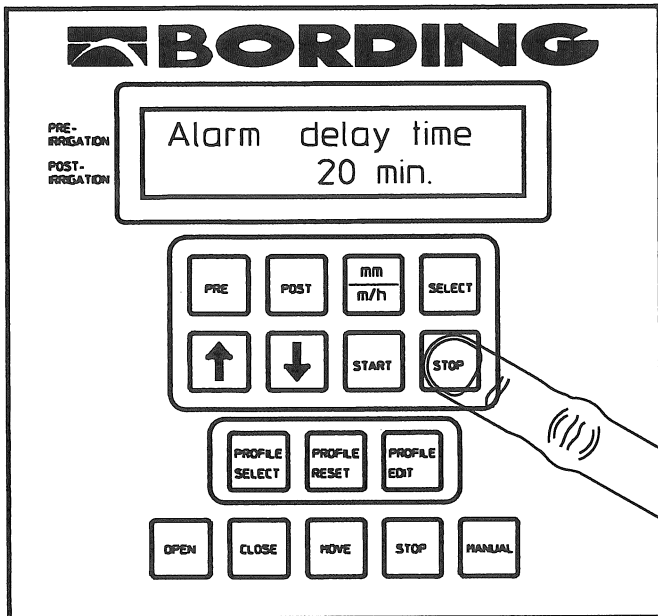
It is now possible to alter the number of pre-irrigation meters with the arrow keys (the length is recalculated to a time in the computer corresponding to pull-in/drive speed) for the indicated distance.



### Post-irrigation time:

By pressing the **Stop** key, this illustration will appear on the display:

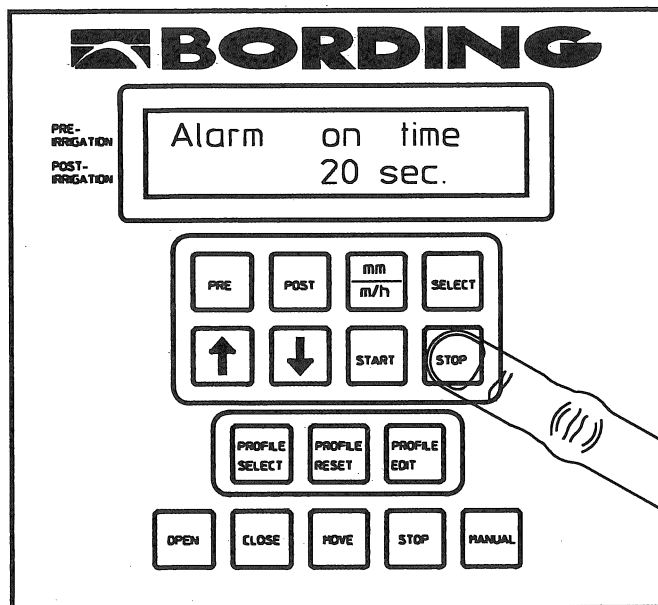
It is now possible to alter the number of post-irrigation meters with the arrow keys (the length is recalculated to a time in the computer corresponding to pull-in/drive speed) for the indicated distance.



### Monitoring time:

By pressing the **Stop** key, this illustration will appear on the display:

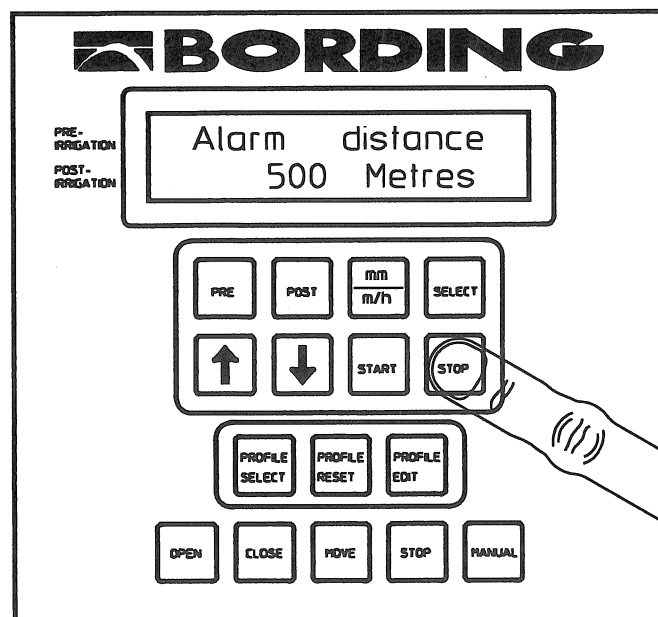
It is now possible to alter the alarm signal delay time with the arrow keys.  
**Note!** The pump must be started within the monitoring time period.



### Length of alarm signal:

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to alter the alarm ON time with the arrow keys.

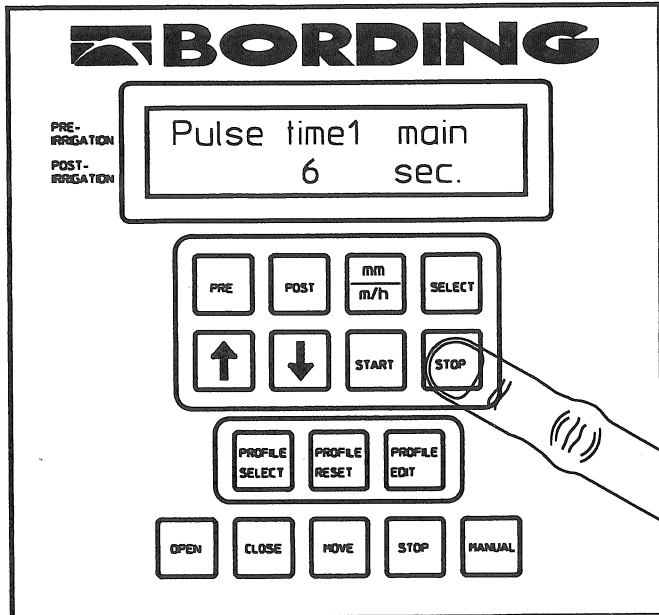


### Alarm during hose laying:

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to alter the alarm limits for hose laying (the hose length that may be drawn/laid out prior to the alarm being given). Alarm limits are attained as follows:

1. Draw the hose out so that only 2 or 3 revolutions (corresponding to 20 meters) remain.
2. Read off the applied hose distance on the display by pressing the **Stop** key (see page 9).
3. Key in the applied hose distance with the arrow keys (see adjacent illustration).



**Duration of first close impulse:**

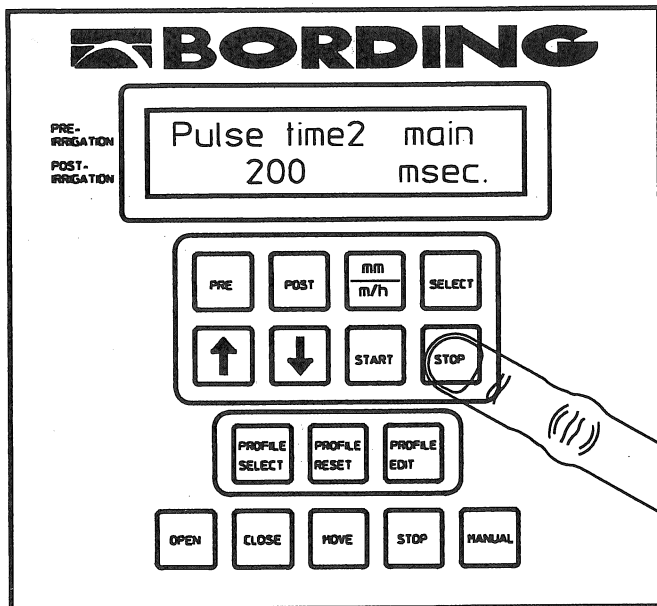
By pressing the **Stop** key, this illustration will appear on the display:

This applies to "Stop for high pressure" or "Stop for low pressure". It is now possible to alter the duration of the first close impulse to the butterfly valve with the arrow keys.

Recommended settings:

High pressure: 6

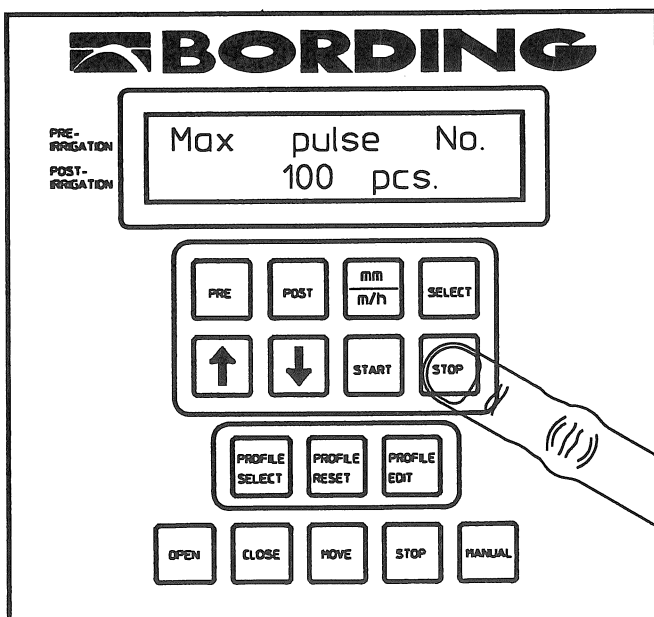
Low pressure: 15



**Duration of ensuing close impulses:**

By pressing the **Stop** key, this illustration will appear on the display:

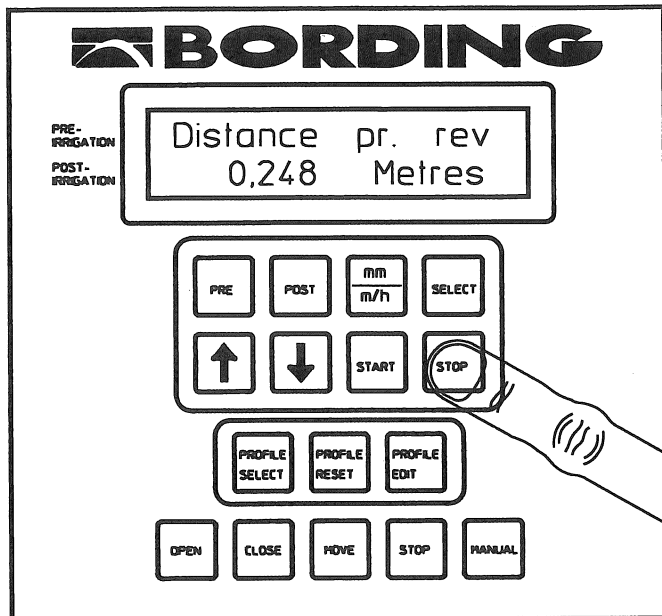
It is now possible to alter the duration of the ensuing close impulses to the butterfly valve with the arrow keys.



**Maximum number of close impulses:**

By pressing the **Stop** key, this illustration will appear on the display:

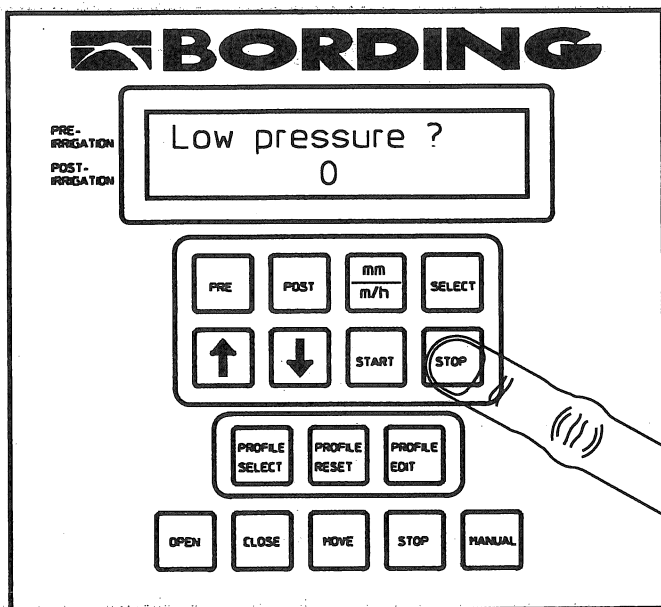
It is now possible to alter the maximum number of close impulses to the butterfly valve with the arrow keys.



### Diameter of measuring roller:

By pressing the **Stop** key, this illustration will appear on the display:

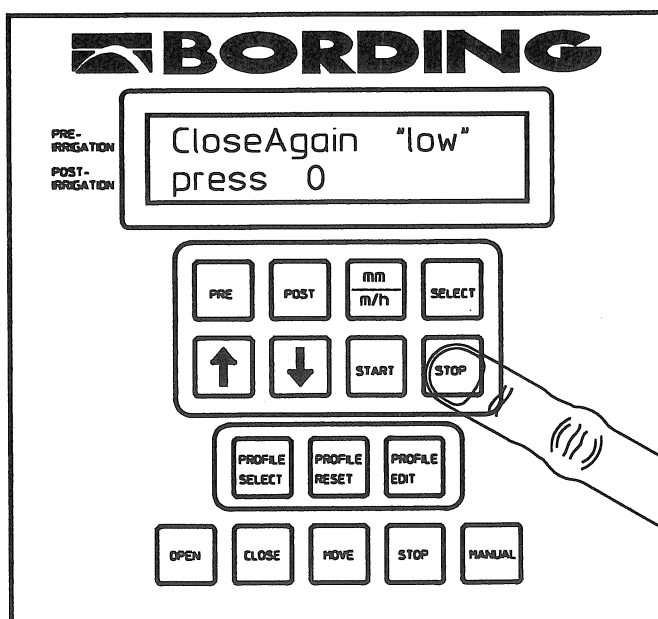
It is now possible to alter the diameter of the measuring roller with the arrow keys.



### Automatic start with the aid of the pressostat:

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to decide if the machine is to be coded to stop for low pressure or to stop for high pressure. However, this alteration is only necessary if the machine is equipped with a pressostat. Using the arrow keys: 0 = NO (high pressure) and 1 = YES (low pressure).

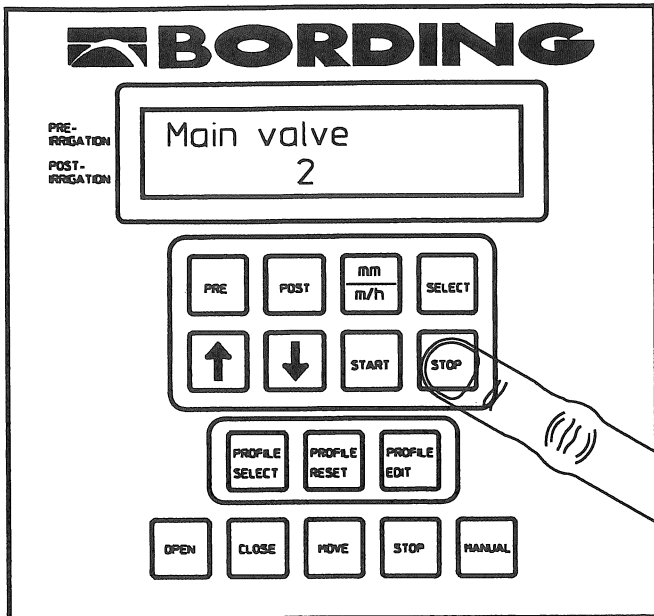


### Avoid emptying the supply line via stop for low pressure:

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to code the machine to close the valve again when the irrigation is completed for low pressure machines. This means that the irrigation machine will not empty the supply line if this is positioned on a higher level than the irrigation machine.

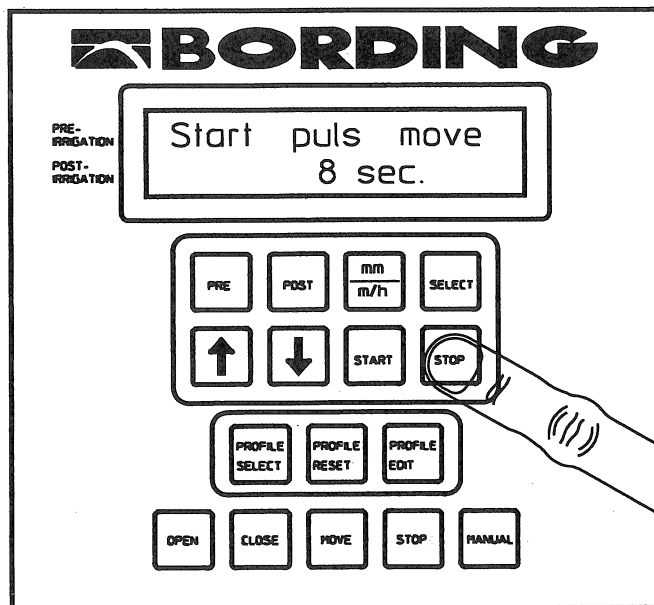
This function is not active at: "0"  
This function is active at: "1"



**Selection of high pressure or low pressure or Manual stop:**

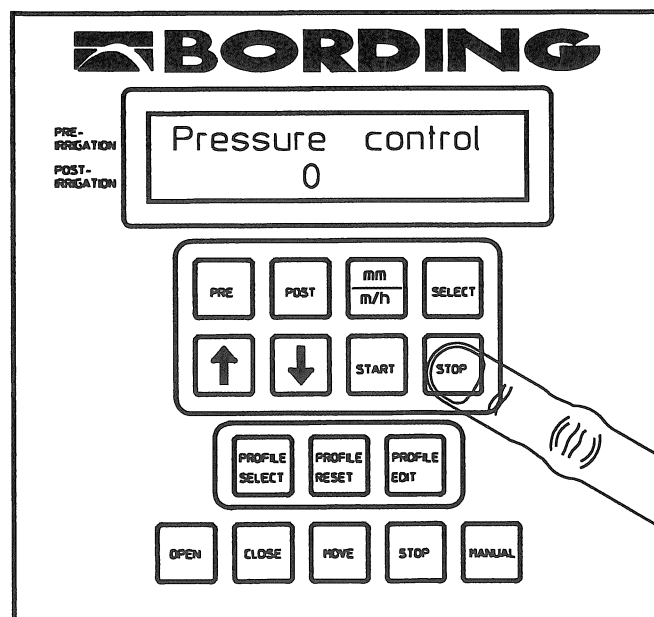
By pressing the Stop key, this illustration will appear on the display:  
 It is now possible to set the computer so that - when irrigation is to be closed - it can be controlled at high pressure, low pressure or Manual stop. Manual stop means that the machine will continue to operate from the stop position until the pump is stopped via manual operation.

- 0: Manual stop of the pump
- 1: Low pressure
- 2: High pressure



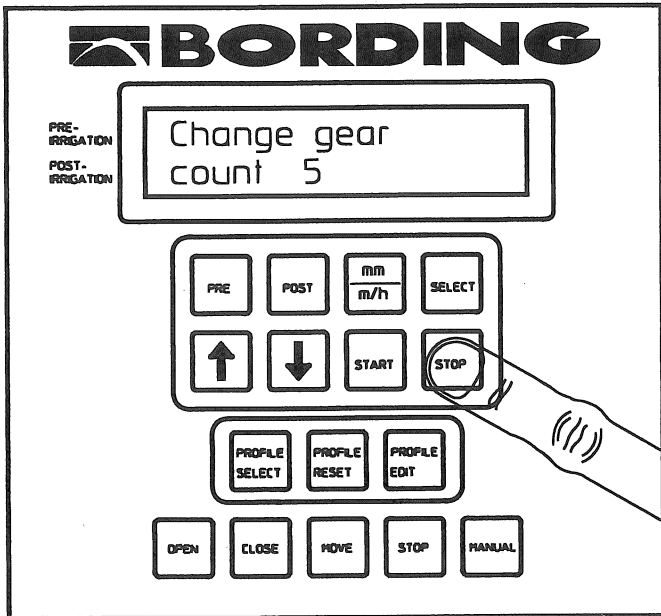
**Start speed:**

By pressing the Stop key, this illustration will appear on the display:  
 It is now possible to code how long a start pulse is to be given to the actuator that controls the 3-way valve. It can thus be decided how high a speed the control is to start with. The computer has an integrated function which means that every second minute there will be a 1/2 second regulation if there is no movement registered from the hose. This is an advantage in cases where the water supply from an underground line is temporarily increased or reduced.



**Start and Stop with pressure switch:**

By pressing the Stop key, this illustration will appear on the display:  
 It is now possible to code the control to start and stop automatically via a pressure switch. With the application of an ordinary pressure switch, the computer must be set at 0. When applying a pressure switch with integrated hysteresis (differential pressure), the computer must be set at 1. If "1" is selected, the control will automatically close for water if the pressure falls below a certain level and then reopen when the pressure is sufficiently high. Note that this requires a pressure switch with integrated hysteresis (differential pressure).

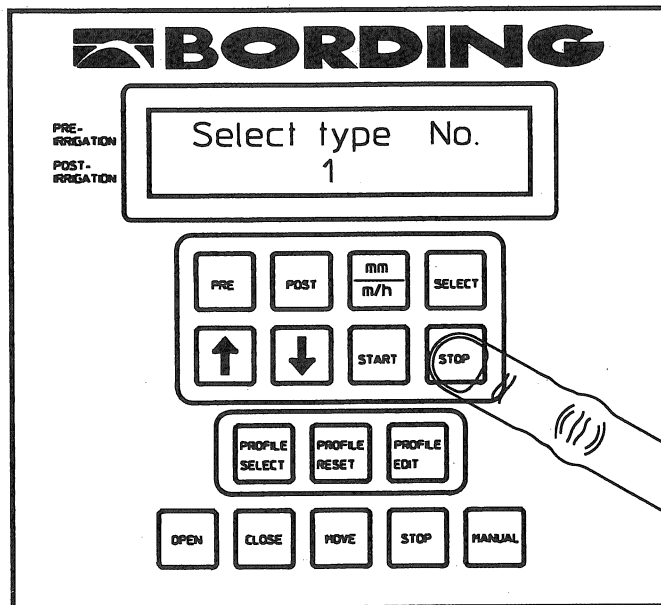


**Control of correct gear:**

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to code the number of times the control will attempt to open the 3-way valve - even although it is in fact fully open - before fault information is printed out.

This is an alarm which indicates that the control cannot attain the desired speed in the selected gear and with the current amount of water.



**Limitation of functions:**

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to code the computer for 3 different versions:

0-1:

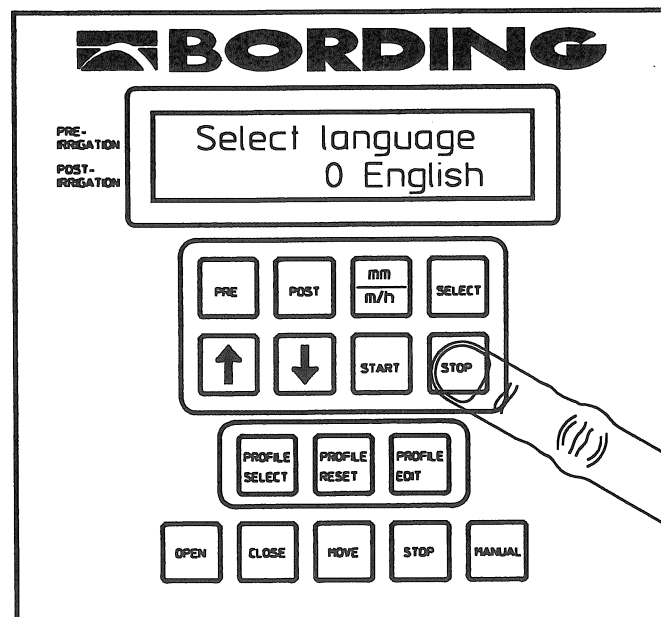
All functions are accessible.

2:

All functions regarding selection of profile irrigation are not accessible.

3:

All functions regarding selection of profile irrigation plus pre-irrigation and post-irrigation are not accessible.



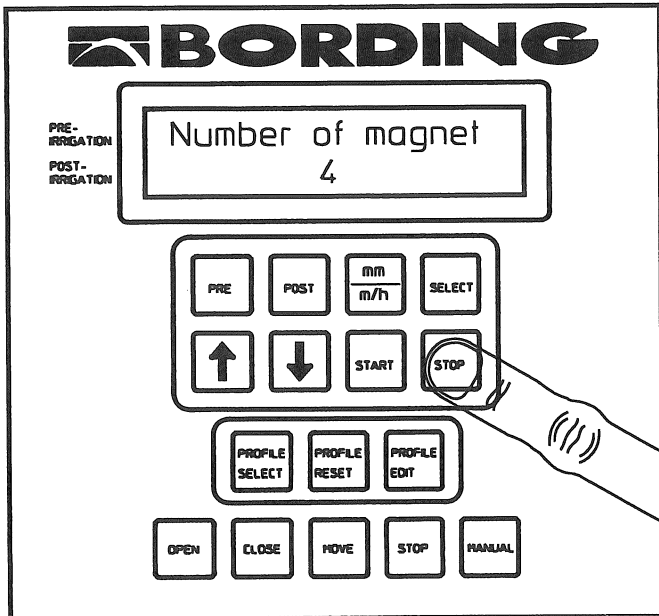
**Selection of language:**

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to code the computer to 4 other languages:

- English: 0
- German: 1
- French: 2
- Spanish: 3
- Danish: 4

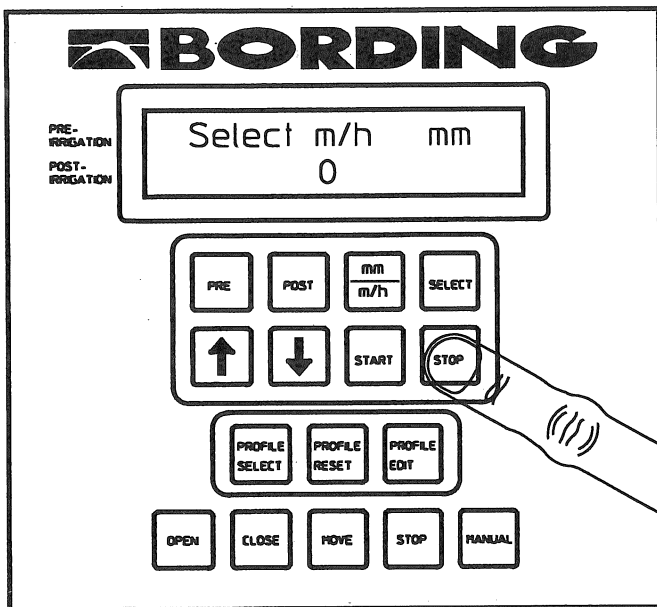




**Measuring roller:**

By pressing the **Stop** key, this illustration will appear on the display:

It is now possible to adjust the number of magnets in the measuring roller:

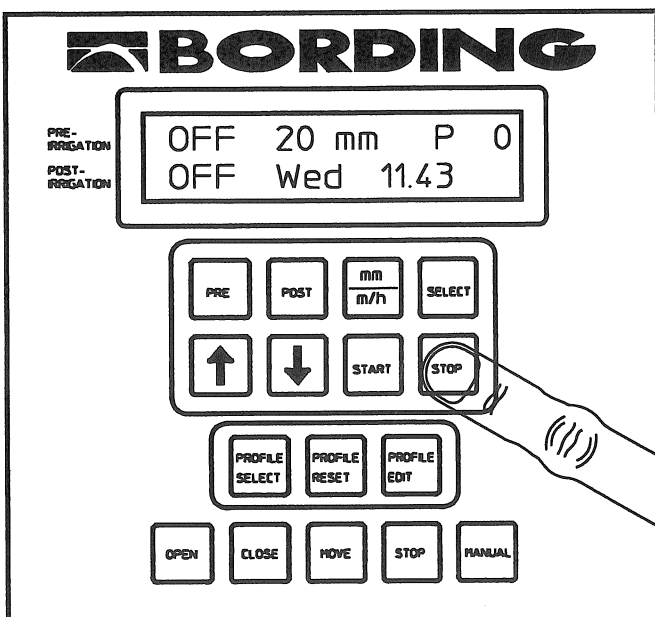


**Indicate "mm" and/or "m/h":**

By pressing the **Stop** key, this illustration will appear on the display:

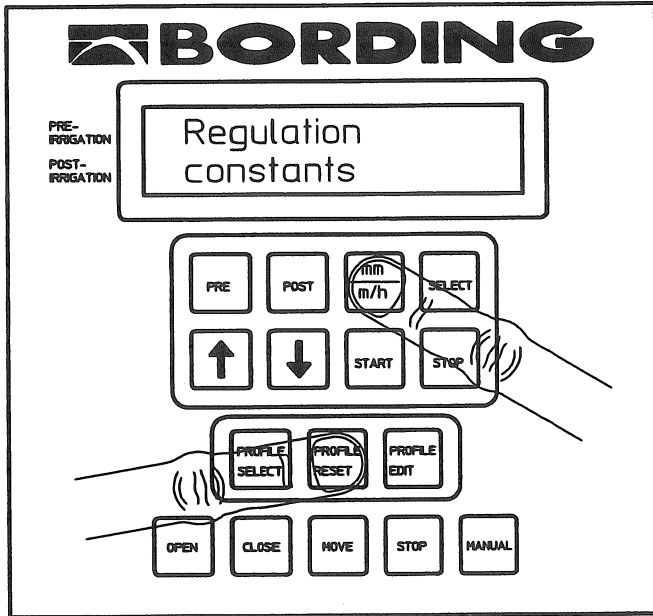
It is now possible to choose between a fixed "mm" and/or "m/h" (see also page 4, Pos. 6).

"mm" + "m/h"	0
"m/h"	1
"mm"	2



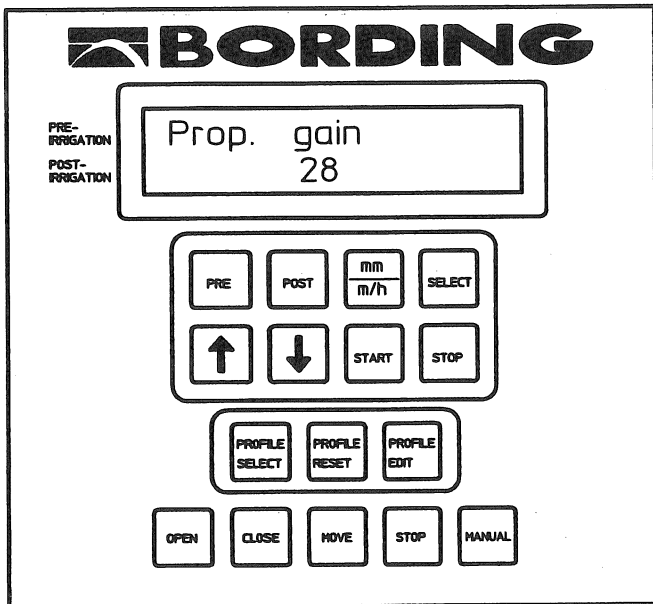
By pressing the **Stop** key, the standard illustration will again appear on the display.

(See also page 4).

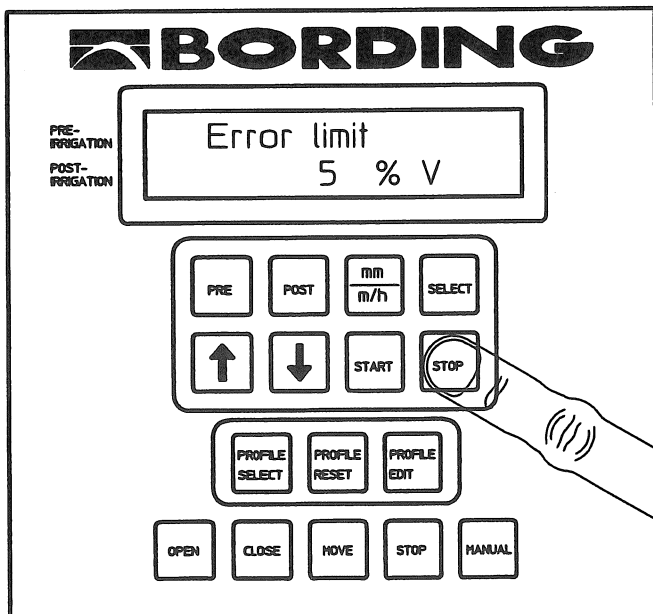


### Adjustment of regulation constants:

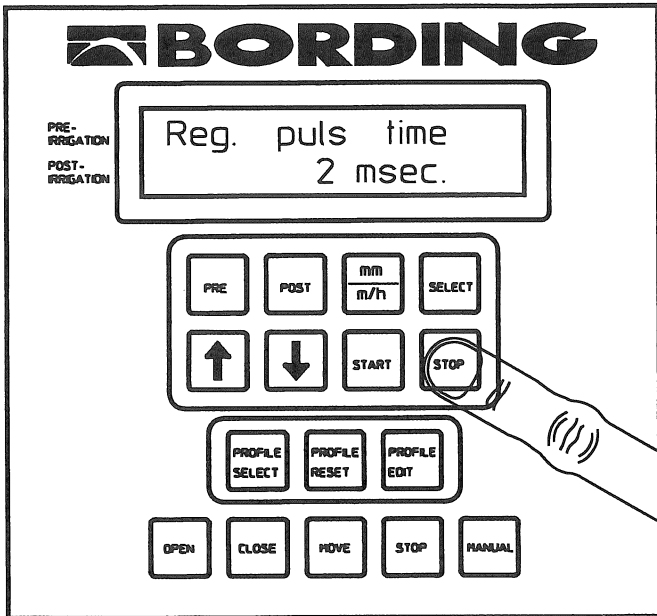
The regulation constants can be adjusted. This can **only** be carried out in cooperation with a technician from A/S Bording Maskinfabrik. By simultaneously pressing the "mm/m/h" key and the "Profile reset" key the computer will display an illustration that briefly presents "Regulation constants" (set ex.-works). The accompanying illustration will then appear on the display.



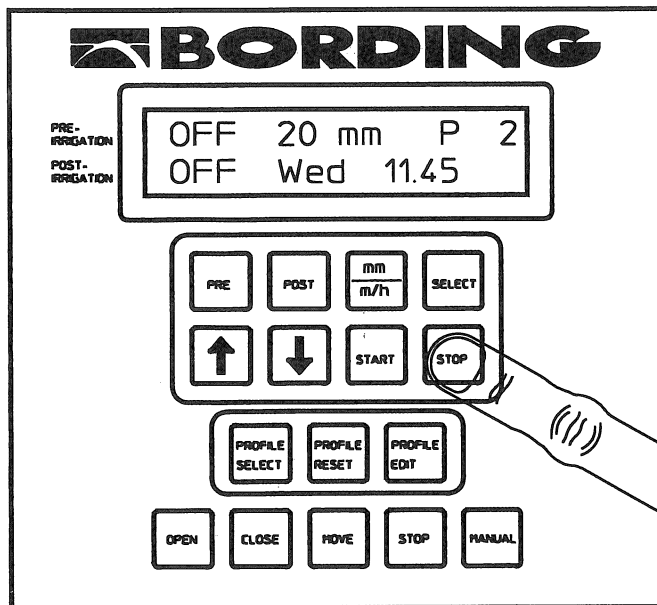
By pressing the **Stop** key, this illustration will appear on the display.



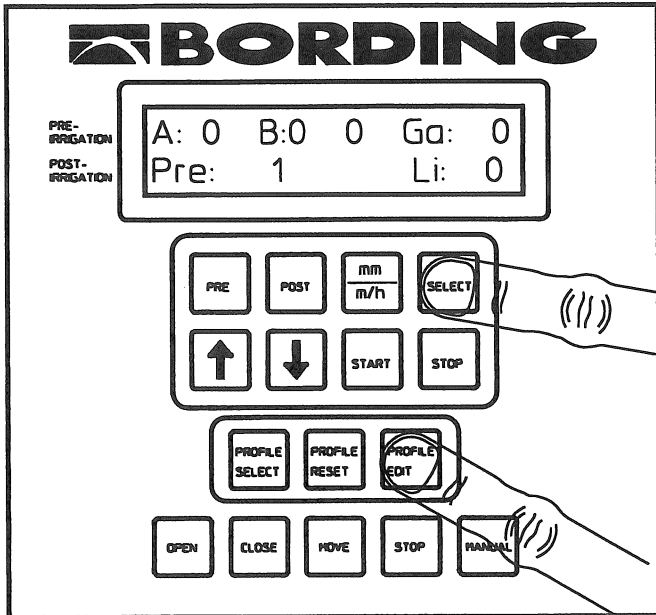
By pressing the **Stop** key, this illustration will appear on the display.



By pressing the **Stop** key, this illustration will appear on the display.



By pressing the **Stop** key, the standard illustration will again appear on the display.  
(See also page 4).



**Service illustration:**

By simultaneously pressing the **Select** and **Profile Edit** keys, this service illustration will appear on the display:

The service illustration shows the status of the sensors for the measuring roller (A and B), the status for the cover switch (Ga), plus the status for the pressostat (Pre) and the stop sensor (Li).

Sensors for:

Measuring roller (A and B):

- 0 = No contact
- 1 = Contact

Cover switch (Ga):

- 0 = No contact
- 1 = Contact

Pressure switch (Pre):

- 0 = No contact
- 1 = Contact

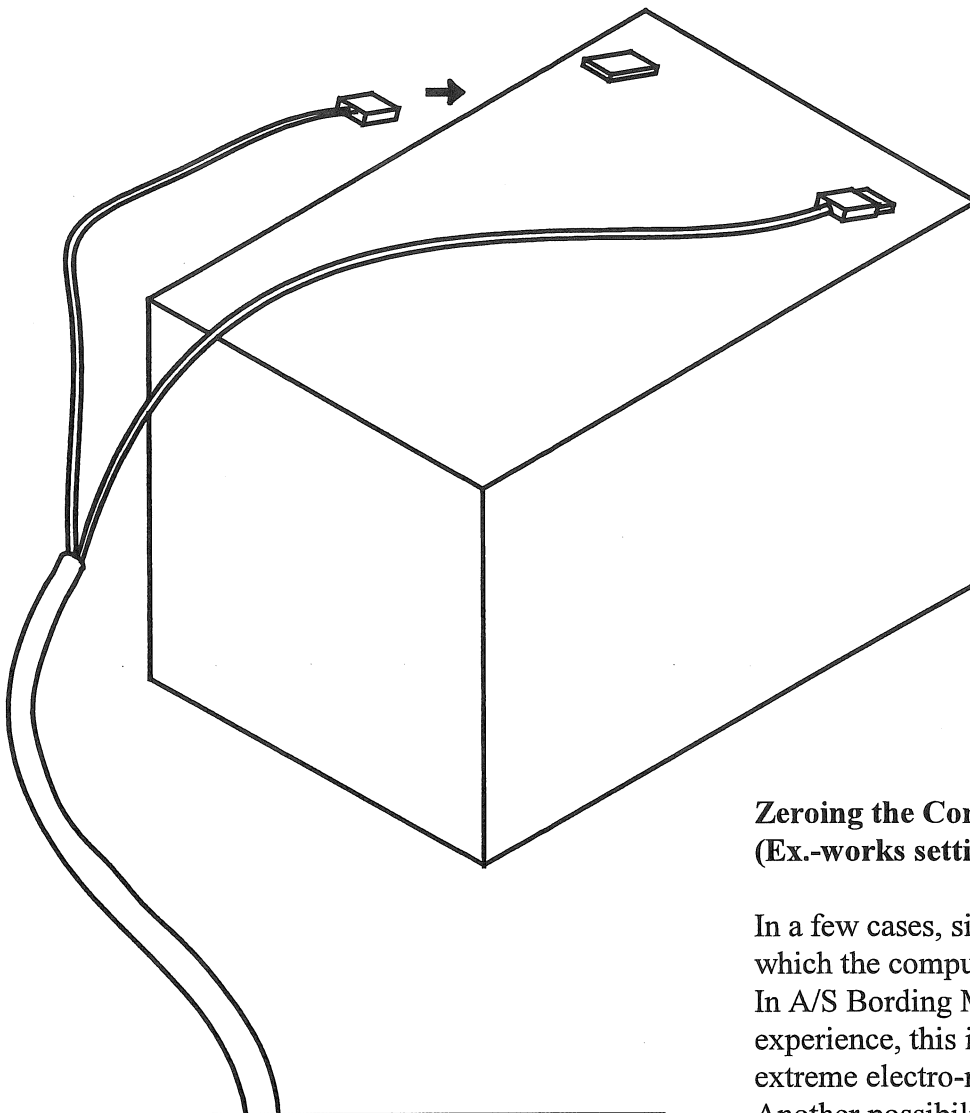
Stop sensor (Li):

- 0 = Contact
- 1 = No contact

As a control that the measuring roller and the sensors are functioning correctly, the display must change in the right order:

- A: 0 B: 0 0
- A: 0 B: 1 1
- A: 1 B: 1 2
- A: 1 B: 0 3

After a brief period the computer will return to its standard illustration. It is also possible to press the "Stop" key in order to return to the standard illustration.



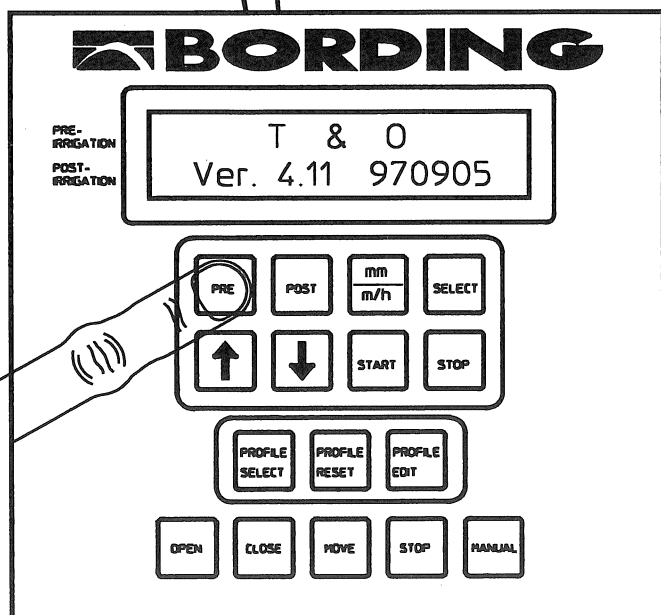
**Zeroing the Computer  
(Ex.-works setting).**

In a few cases, situations can arise in which the computer acts strangely. In A/S Bording Maskinfabrik's experience, this is usually caused by extreme electro-magnetic disturbance. Another possibility is that the user has carried out welding work on the machine. This should **not** be done at any time. Such work should be carried out by a Bording dealer.

The above two possibilities can cause interference to the entire basic program within the computer. This can (as a rule) be helped by zeroing the computer.

As indicated on the adjacent illustration, zeroing is attained by disconnecting the power supply. Then one must press the **Pre-irrigation** key whilst reconnecting the power supply.

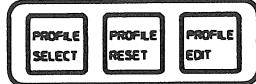
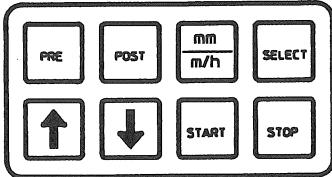
This will result in this illustration appearing on the display.



# BORDING

PRE-IRRIGATION  
POST-IRRIGATION

Bording  
Best one



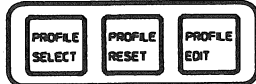
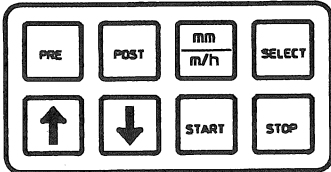
On the following illustrations, one can see the various texts which will appear on the display. The computer will finally display "Vbatt 10.2 V" and "Vbatt 11.2 V".

(See continuance on the next page).

# BORDING

PRE-IRRIGATION  
POST-IRRIGATION

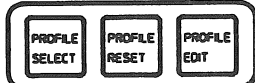
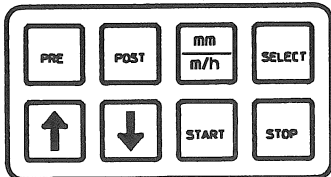
PRODUKTIONS  
Testmode ver 1.1

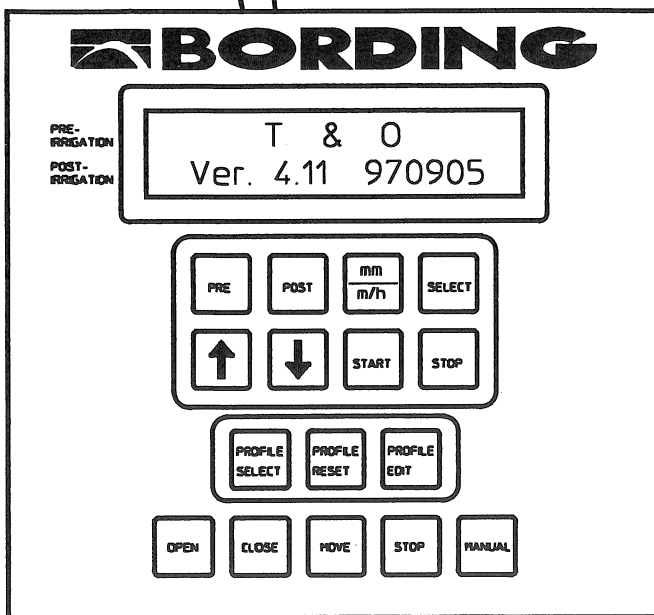
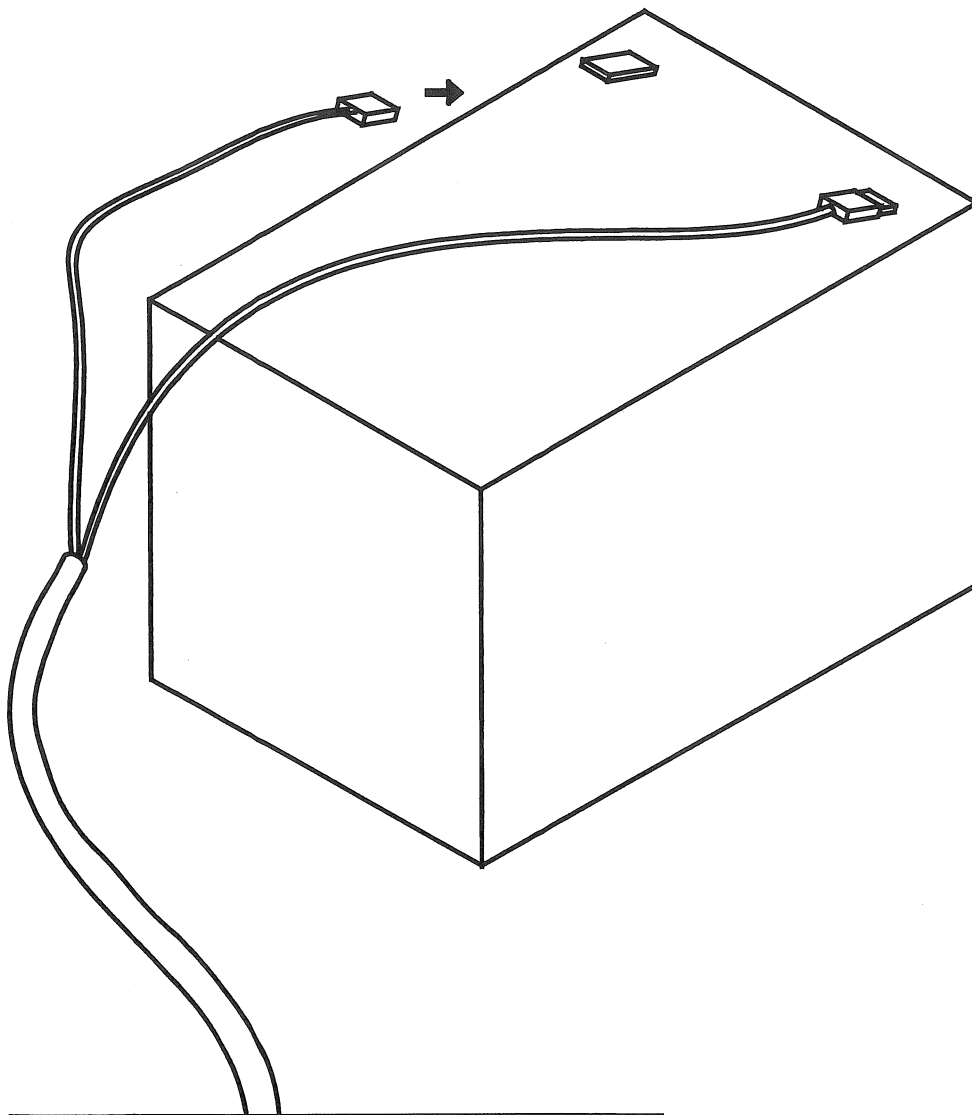


# BORDING

PRE-IRRIGATION  
POST-IRRIGATION

Vbatt 10.2 V  
Vbatt 11.2 V



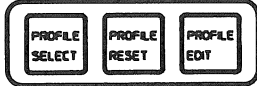
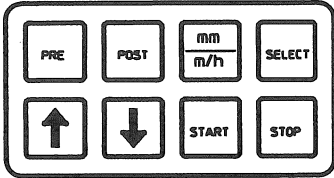


It is now necessary to again disconnect the power supply to the computer. The power supply should then be reconnected to the computer (**without** touching any of the keys). The accompanying illustration shows what will then appear on the display.

# BORDING

PRE-IRRIGATION  
POST-IRRIGATION

Bording  
Best one



On the following illustrations, the texts which will appear on the display are shown.

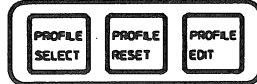
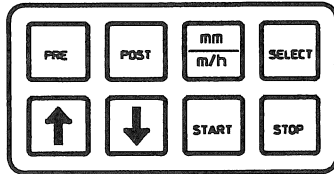
The computer will finally show the **English** standard display illustration.

From this point it is possible to enter and adjust the computer to show **other languages** texts on the display (see pages 17 and 22).

# BORDING

PRE-IRRIGATION  
POST-IRRIGATION

OFF 20 mm P:0  
OFF Thue 15:38

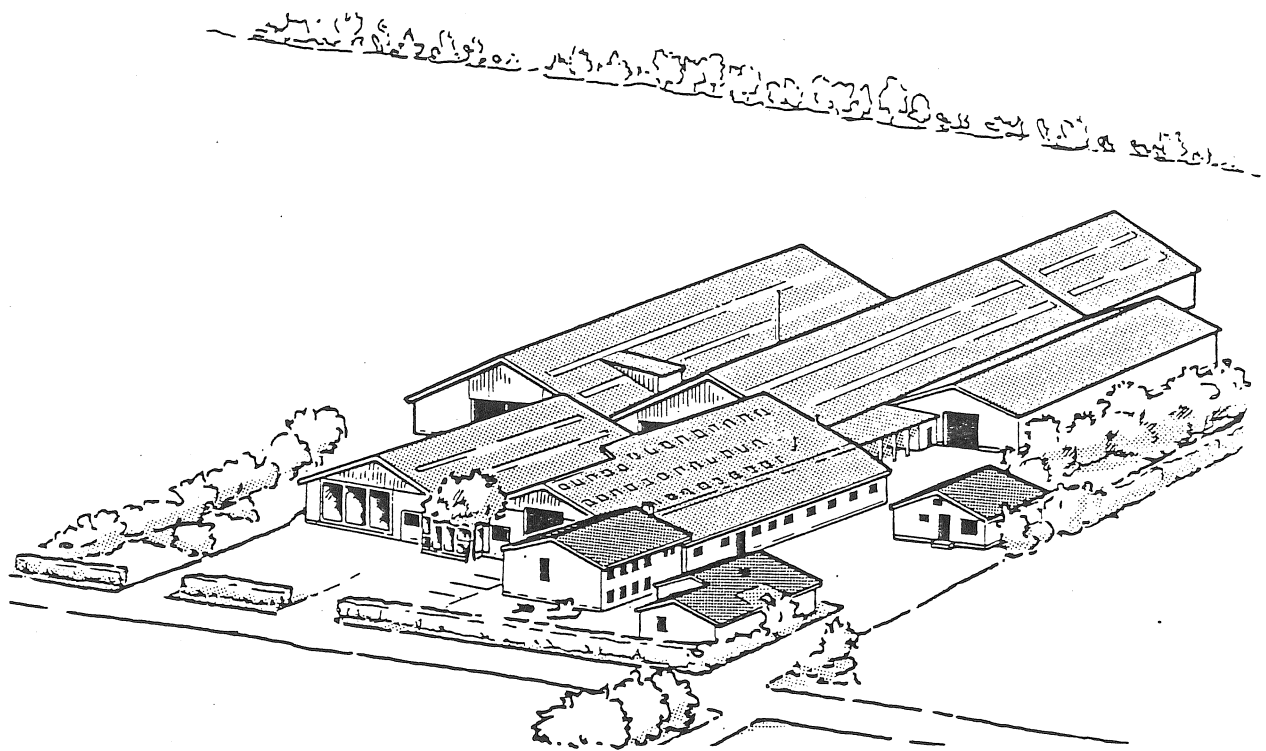












TM

**FASTERHOLT**

**A/S FASTERHOLT MASKINFABRIK**

EJSTRUPVEJ 22, DK 7330, BRANDE, DENMARK TLF+45 97188066 FAX +45 97188040  
E-MAIL: MAIL@FASTERHOLT.DK WWW.FASTERHOLT.DK