Platinum plus

User's
Manual

Warning: ROTEM products are designed and manufactured to provide reliable operation. Strict tests and quality control procedures are applied to every product. However, the possibility that something may fail beyond our control exists. Since these products are designed to operate climate control and other systems in confined livestock environments, where failure may cause severe damage, the user should provide adequate back up and alarm systems. These are to operate critical systems even in case of a ROTEM system failure. Neglecting to provide such a back up will be regarded as the user's willingness to accept the risk of loss, injury and financial damage.

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Features

Platinum Plus's features:

- User Friendly
- Large 20 line X 40 Character Lighted Graphic Display
- 20 Key Keypad
- Extensive Historical and Management Information Collection
- Communications
- Programming Plug (Data Shuttle)
- Exceptional Lightning Protection
- Up to 40 Heavy Duty Relays
  - Recommended for 1 HP, 220 Volt Devices
  - UL Safety Rated for 2HP, 220Volt Devices
- Intelligent On/Off/Auto Switches
  - Detect Operator Switch Changes
  - Guard Against Unauthorized Switch Changes
- Integrated Static Pressure
- Accurate Temperature Sensors
- Modular Construction
- Dedicated Alarm Relay
- Optional Integrated Emergency System
  - Automatic Temperature Setting
  - Independent Battery Power
- Further Options
  - Light Dimmer
  - Bird Scales
  - Feed Silo Scales
  - Water Meter
  - Water Pressure
  - Additional Temperature Sensors
  - Humidity Sensors

1) User's Profile

This manual is meant to be used by either a poultry farmer or its' authorized personnel who own a poultry pen.

2) Abbreviations

Abbreviation	Meaning Description
Natural	Each curtain operates independently. Go to table **1.5** (see **Table 1**). If all conditions are fulfilled, it turns to Natural mode. Go to tables **1.7** and **2.7** for further clarifications (see **Table 1**).
Levels mode	Can be one of the following possibilities: Minimum, Natural and Tunnel.

3) User Interface

3.1. Basic Operating Instructions

3.1.1 Display

- The resolution is according to what is set in the setup section.
- By default the controller is defined as operating in the following measurements:
  - ■ Distance - Meter
  - ■ Temperature - Celsius degrees
  - ■ Weight - Kg
- Press the 'MENU' key to bring up the control menu. If you press 'MENU' again, the standard display will reappear. The Standard menu display is shown in **Fig. 1**. In order to select an option from the main menu, the user can either use the cursor keys or click the number seen near the selection using the Number keys.
- The Main Menu screen can be reached by pressing the 'Menu' key and is shown in **Fig. 2**. All the menu structure options are seen in **Table 1**.

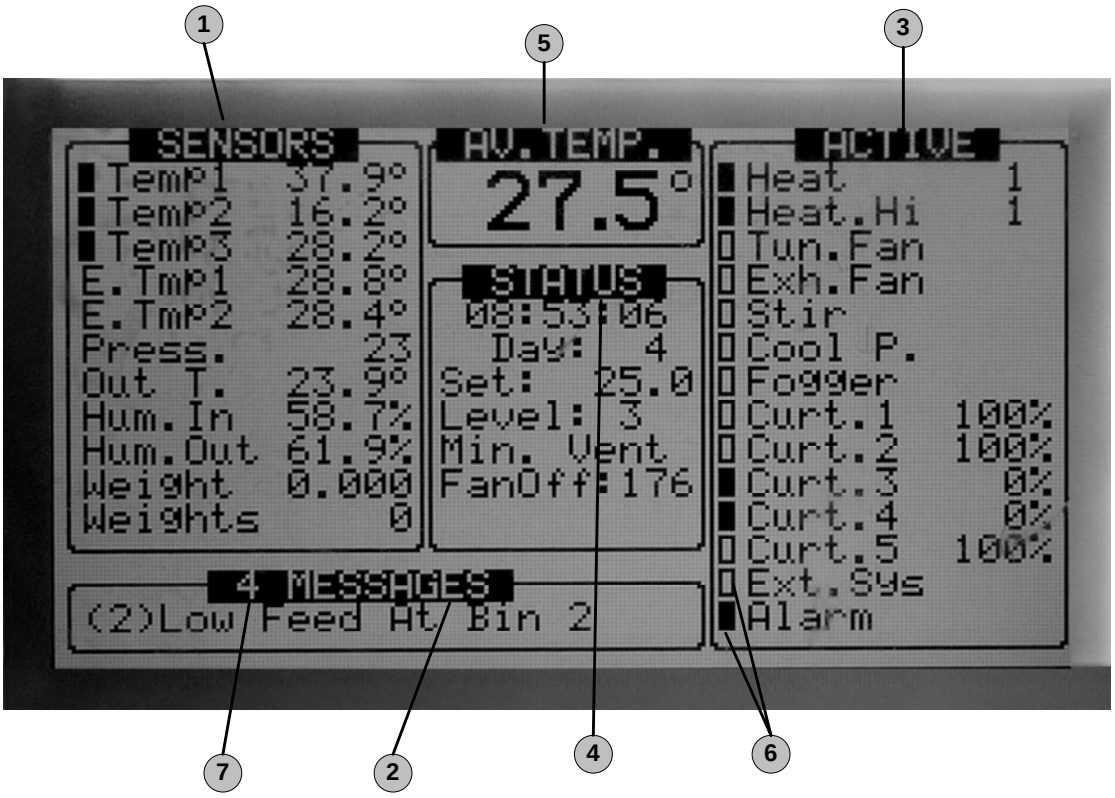

Fig. 1: Standard display sample

The main screen consists of seven main parts (see explanations for **Fig. 1** below according to the numbers mentioned). Every message that appears in this screen is connected. Otherwise, it won't appear.

1. Shows the individual sensor readings. Those marked with dark squares form the current average temperature. Full square – indicates the variable participates in the average calculation, whereas empty square - indicates the variable does not participate in the average calculation
   Available sensor readings:
   - Temp – Displayed with the specific sensor number
   - Out T. – Outside temperature
   - Press. - Pressure
   - Hum. In – In side humidity
   - Hum. Out – Outside humidity
   - Weight – Average weight
   - Weights – Number of weights
   - E. Tmp1 – Temperature related to emergency card 1
   - E. Tmp2 – Temperature related to emergency card 2
   - Breaker – Circuit breaker
   - W. speed – Wind speed
   - W. dir. – Wind direction
   - Rain – Yes / No
   - 2. Shows important messages. The title bar shows the number of important messages, and if there are several messages they each appear in turn.

3. Shows the output list. The filled black boxes indicate active outputs. The Platinum Plus also informs the position of inlets and curtains, as well as the number of operating heaters or fans. Available output list:
   - Alarm: Can be either active or not. Note that this always appears last.
   - Heat: Indicates operating heat number.
   - Heat. Hi: Indicates operating heat high number.
   - Tun. Fan: Indicates operating tunnel fan number.
   - Exh. Fan: Indicates operating exhaust fan number.
   - Stir: Indicates operating stir fan number.
   - Cool P.: Indicates operating cool pad number.
   - Fogger: Indicates operating fogger number.
   - Curt. 1-12: Mentions opening percentage
   - Ext. Sys: Indicates operating external system number.
   - Light 1-2: Note that these mention output percentage
   - Water: Indicates operating water number.
   - Feed: Indicates operating feed number.
   - Auger: Indicates operating auger number.
   - Rad. Lo: Indicates operating radiant heat low number.
   - Rad. Hi: Indicates operating radiant heat high number.
4. Gives important general information such as the time and ventilation mode. Available status readings:
   - Time – specific time
   - Day – growth day
   - Set – target temperature
   - Offset – see table **1.1**, 'Help'>'Set': 'Temperature curve offset' parameter.
   - House mode – see table **1.8**.
   - Level – level number
   - Tunnel, Natural, Min. vent, Levels Nat – the controller's state (see **Abbreviations** section).
   - Fan Off: how long the cycle ends its' operation.
   - Fan On: How long the cycle begins its' operation.
   - Curve off – Occurs when located in low curve temperature and control mode temperature curve.
   - Hum. Treat - indicates when occurs.
   - Cool flush - indicates when occurs.
   - Nip. Flush – indicates when occurs.
5. Reports the current average temperature.
6. The Active screen consists of either full or empty squares. These squares define whether it operates – full square, or does not operate – empty square.
7. The number of active alarms.

1. Control	2. Manage	3. Eggs	4. Scale	5. History	6. Test	7. Service	8. Install
1.1 Temperature Curve	2.1 Bird Inventory	3.1 Egg from Control	4.1 Scale Layout	5.1 Temperature	6.1 Switches & Relays	7.1 Temperature Calibration	8.1 Setup
1.2 Min/Max Level	2.2 Feed Inventory	3.2 Egg Collection	4.2 Scale Setting	5.2 Humidity	6.2 Alarm	7.2 Humidity Calibration	8.2 Relay Layout
1.3 Humidity	2.3 Time & Date	3.3 Egg Collection History	4.3 Bird Scale Setting	5.3 Mortality	6.3 Analog Sensors	7.3 Static Press. Calibration	8.3 Analog Sensors
1.4 Cool Pad	2.4 Growth Day & flock	3.4 Eggs Inventory	4.4 Bird Curve	5.4 Heaters	6.4 Digital Sensors	7.4 Water & Feed Calib.	8.4 Digital Sensors
1.5 Foggers	2.5 Alarm Setting	3.5 History – Egg from Temp.	4.5 History	5.5 Radiant Heaters	6.5 Analog Output	7.5 Save to Plug	8.5 Analog Output
1.6 Stir Fan	2.6 Alarm Reset	3.6 History – Egg from Hum.	4.6 Test	5.6 Water	6.6 Static Pressure	7.6 Read from Plug	8.6 Curtain Setup
1.7 Light	2.7 Password		4.7 Calibration	5.7 Feed	6.7 Communication		8.7 Temp Definition
1.8 Water & Feed	2.8 Emergency Setting			5.8 Alarms	6.8 Hardware Checklist		8.8 Vent Levels
1.9 Feed Line Up/Down				5.9 Table of Events	6.9 Emergency Status		8.9 Curtain Level
1.10 Extra Systems				5.10 History View			8.10 System Parameters
1.11 Static Pressure							
1.12 Control Mode							

Table 1: Menu Precision Table

3.2 Keypad

Fig. 2: Platinum Plus's front panel

- **Available Keys**

Note that every item is explained according to its' number seen in **Fig. 2**.

- **Main screen**

1 – 5) see explanations attached to **Fig. 1**.

- **Keys below Main screen monitor**

6) The Number keys are selected when a numeric choice is to be done and when numbers should be selected. Moreover, those keys are dedicated to Hot Keys (see **Table 2**).

7) The '+/-' key changes values from positive to negative and vice versa. Moreover, it enables the user to mark selections by clicking on it ('√').

8) The '.' key enables the user to insert decimal point for tenth of a degree in the temperature settings.

9) The Cursor keys move you around the menus, and help you make selections. In some cases you can also use them to change values.

10) The 'Enter' key completes the either the entry or the menu selection. Only after selecting this key does the Platinum Plus recognize the numeric values.

11) The 'Menu' key displays the main menu from the standard screen and exits the menu whenever this LED is selected once again in the main menu screen.

12) The 'Help' key serves as information key; press it at any time to receive a short helpful explanation concerning the screen you are currently viewing. In order to exit help screen at any time, press the 'MENU' key.

13) The 'Delete' key erases typing mistakes. Moreover, it enables 'Cold Start' function (see **Table 2**).

- **Manual / Auto Switches**

14) This section consists of up to 40 switches. Each switch usually controls one relay to turn one device on or off. Initially none of the switches have a programmed function. An indicator light by each switch indicates when that device is on.

The moment a switch is turned on the monitor displays a matching message (see **Fig. 3**). The controller checks the position of each switch. After every switch moved, the controller asks the user to confirm the new position by displaying a visual site of the switch's location whereas the turned on switch is highlighted. The confirmation message is displayed in the bottom and the actual confirmation is done by pressing 'ENTER'. The confirmation helps in reducing errors and helps returns switches to their correct position in case the user did it accidentally. If no confirmation is done by the user, the alarm will begin. A list of all confirmed switch changes can be found in option **3.9** (see **Table 1**). For example, in **Fig. 3** switch number 37 has been moved.

Fig. 3: Monitor switch display example screenshot

3.3 Hot Keys

All available hot keys are summarized in **Table 2.**

Action	Keys to press	Explanation
Software version	Press 'Help'	Shows the controller's software version (see **Fig. 4**). The second row shows the communication version.
Egg Collection	Press '+/-'	Shows egg collection summary; the information is being displayed according to different egg parameters (see **Fig. 5**).
Curve Status	Press '2'	Displays the current target temperatures, pressures, etc. These values usually change according to the bird's age. This way checking the present targets is faster (see **Fig. 6**).
Curtain Position	Press '3'	Display the current position of each side of the curtain, the tunnel inlet and the side vent inlets (see **Fig. 7**).
Temperature & humidity Status	Press '4'	Shows the current temperature and humidity status for the operating modes (see **Fig. 8**).
Egg room status	Press '5'	Shows current scale information for both bird scales and feed bin scales.

Action	Keys to press	Explanation
		The current weights, including the weight of the last bird measured, are displayed (see **Fig. 9**).
Bird Scales	Press '6'	Shows the current light status. Moreover, it specifies the light according to the relay; target and current intensity (see **Fig. 10**).
Light Status	Press '7'	Displays the current output status of each analog (see **Fig. 11 - 13**).
Feed Line Screen	Press '8'	Shows current natural ventilation status. It shows the following parameters: percentage minimum curtain, percentage maximum curtain, after many seconds to open the curtain, after how many minutes to close the curtain and the exit level (see **Fig. 14 – 16**).
System Lock	Press '9'	Functions only if turning on password protection for the controller is done. If turning on was done the Platinum Plus locks itself immediately, so the next user must insert a password in order to gain access (see **Fig. 17**).

Table 2: Available hot keys

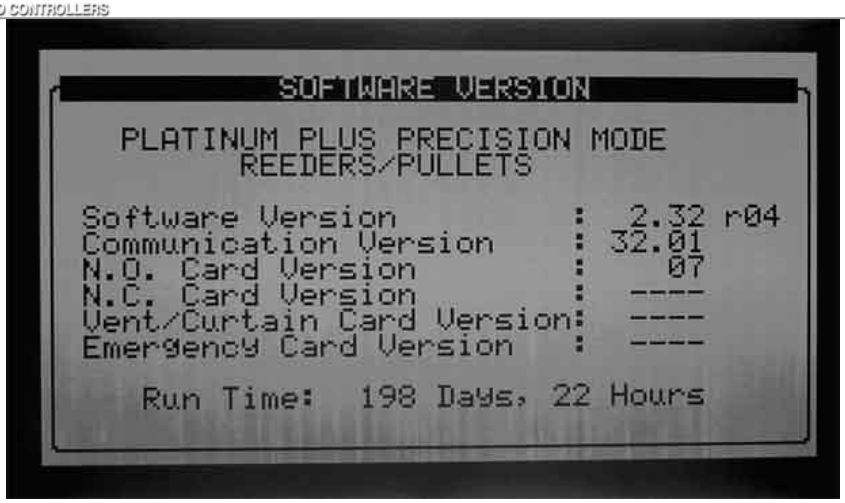

Fig. 4: Software version screenshot

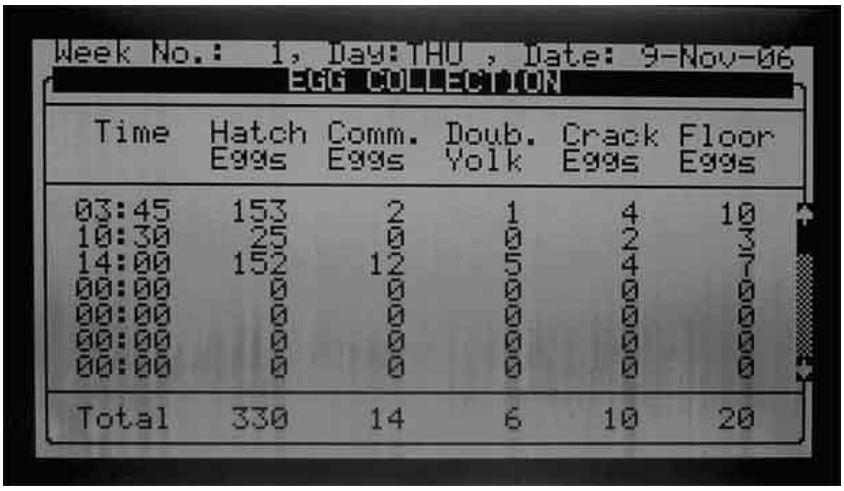

Fig. 5: Egg Collection screenshot

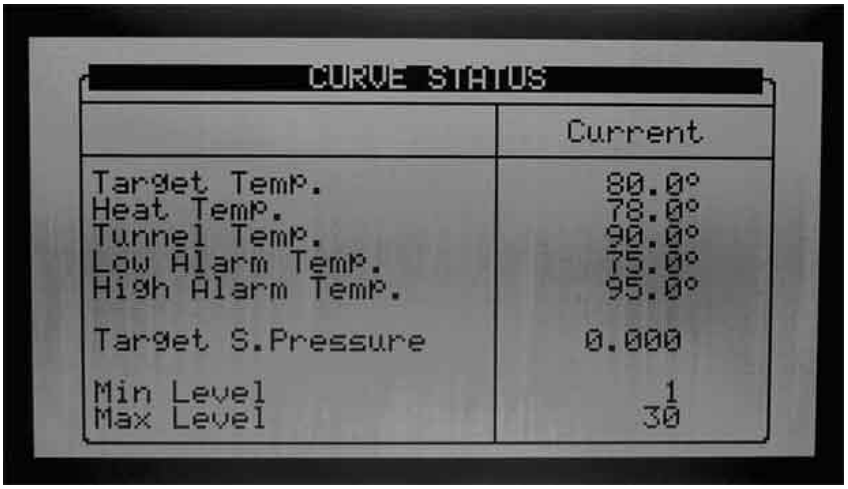

Fig. 6: Curve Status screenshot

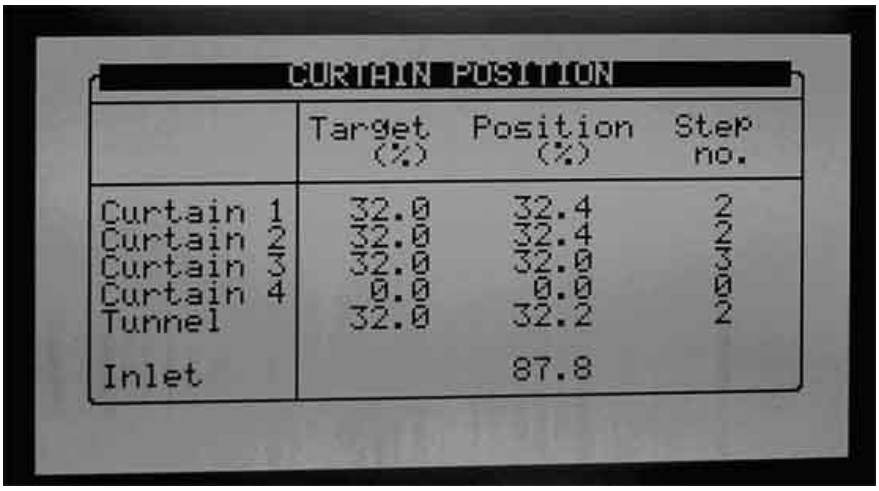

Fig. 7: Curtain Position screenshot

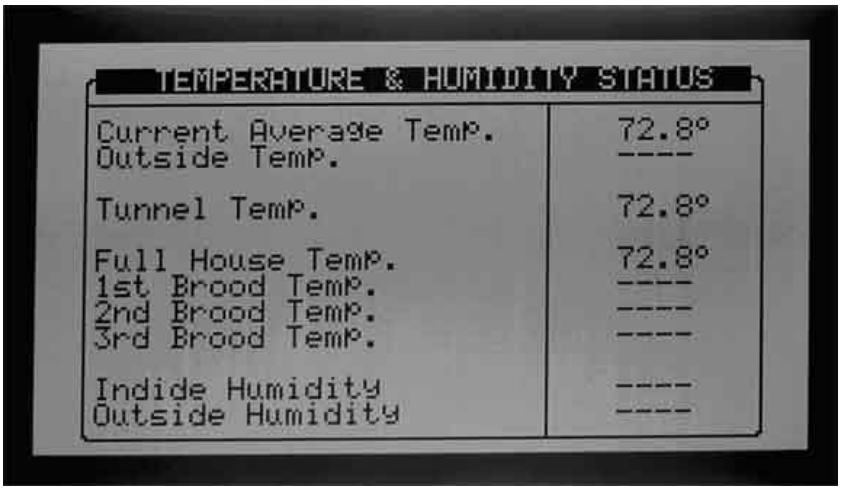

Fig. 8: Temperature & humidity status screenshot

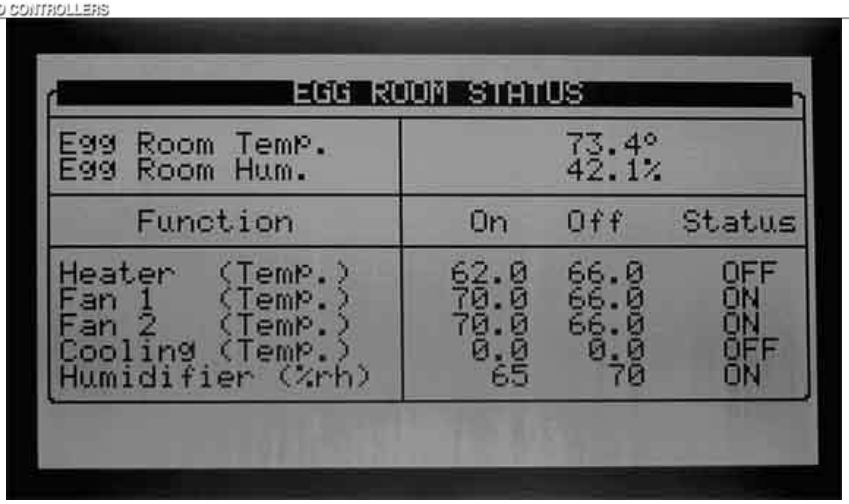

Fig. 9: Egg Room Status screenshot

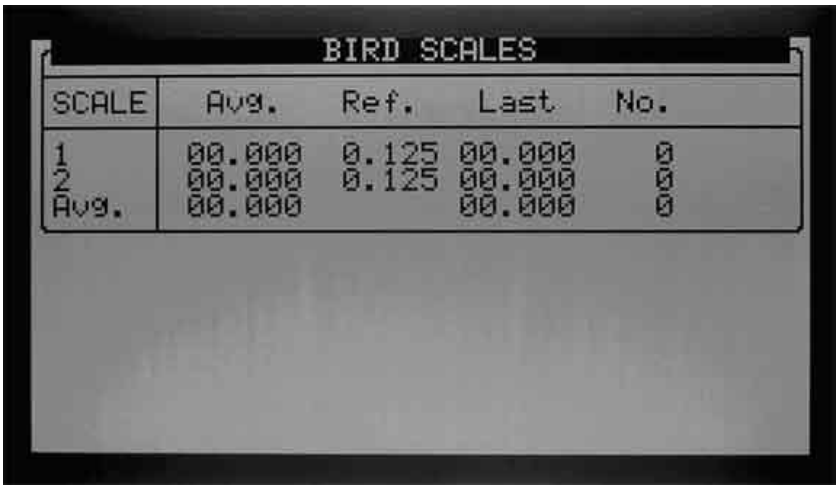

Fig. 10: Scales update screenshot

Fig. 11: Light Status screenshot – part 1

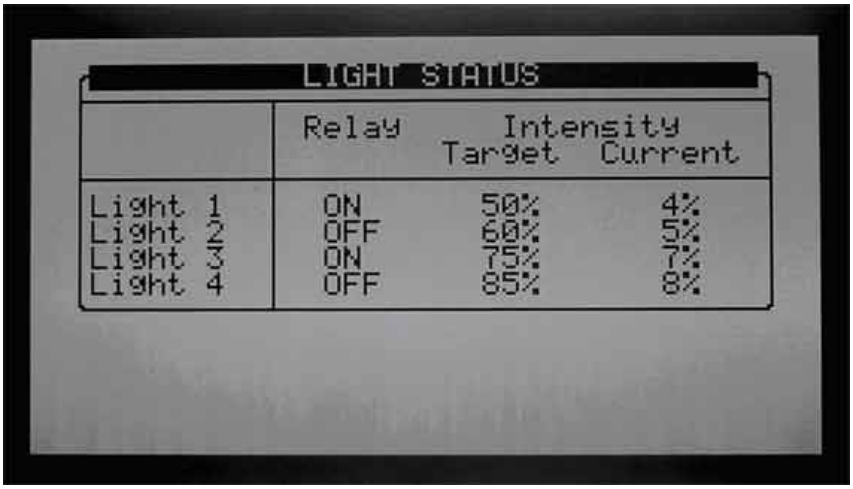

Fig. 12: Light Status screenshot – part 2

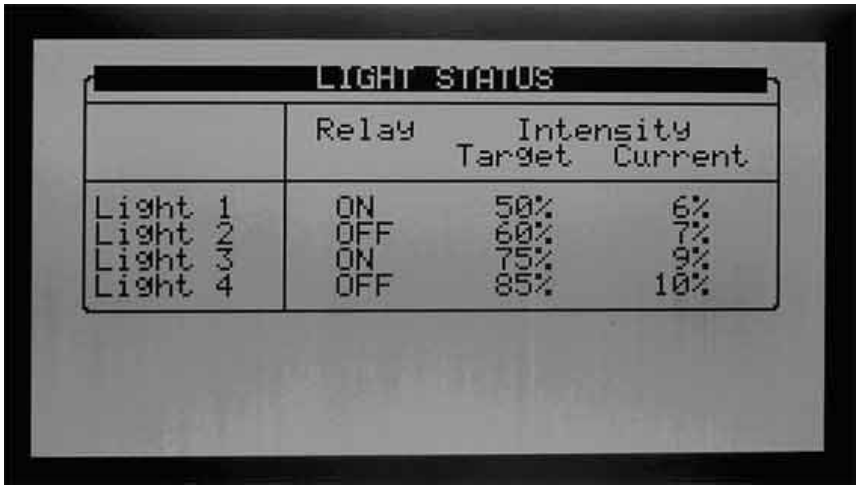

Fig. 13: Light Status screenshot – part 3

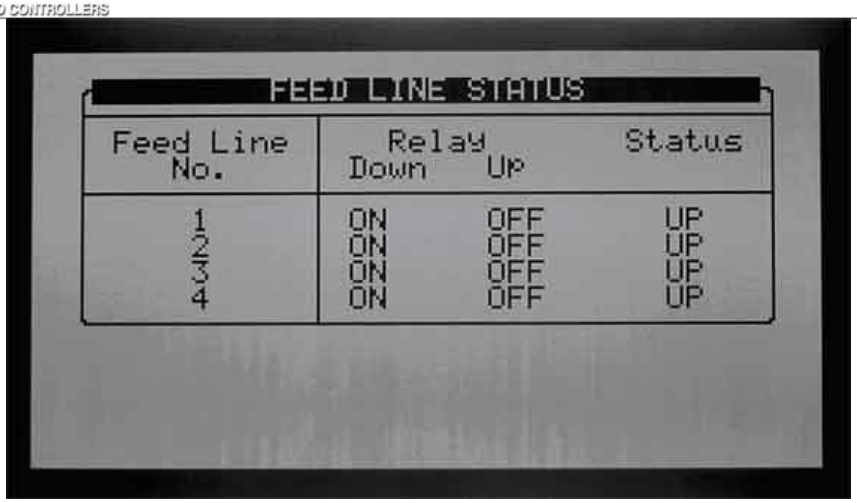

Fig. 14: Feed Line Status screenshot – part 1

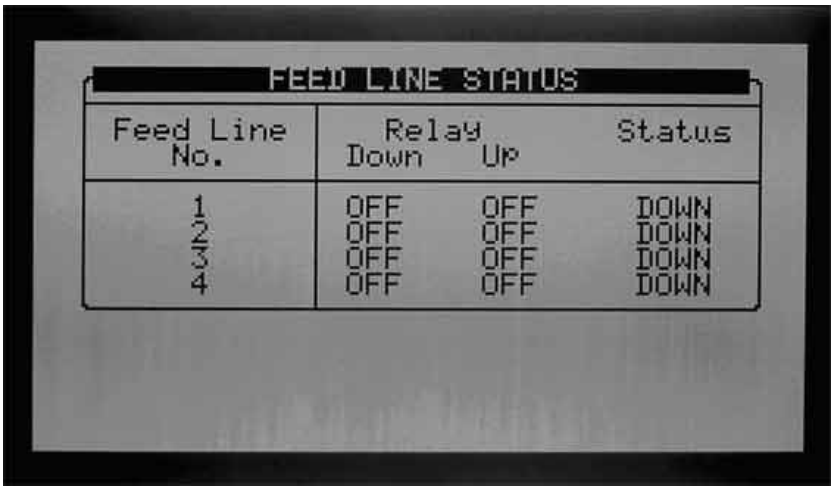

Fig. 15: Feed Line Status screenshot – part 2

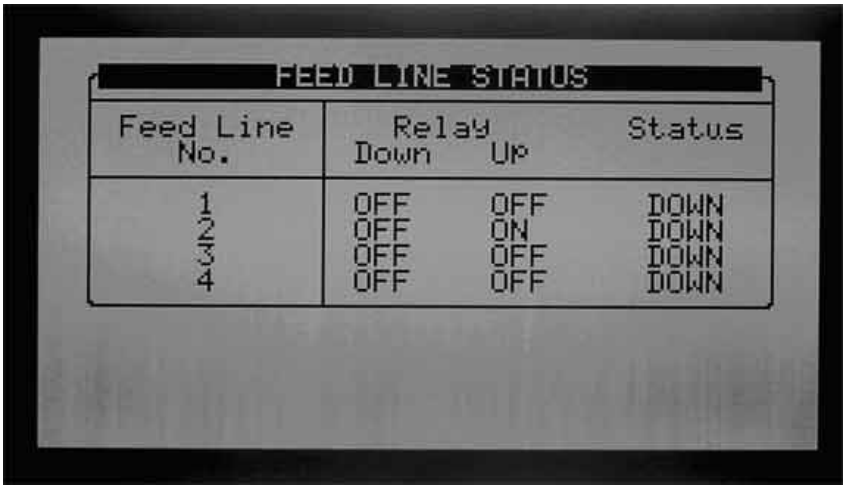

Fig. 16: Feed Line Status screenshot – part 3

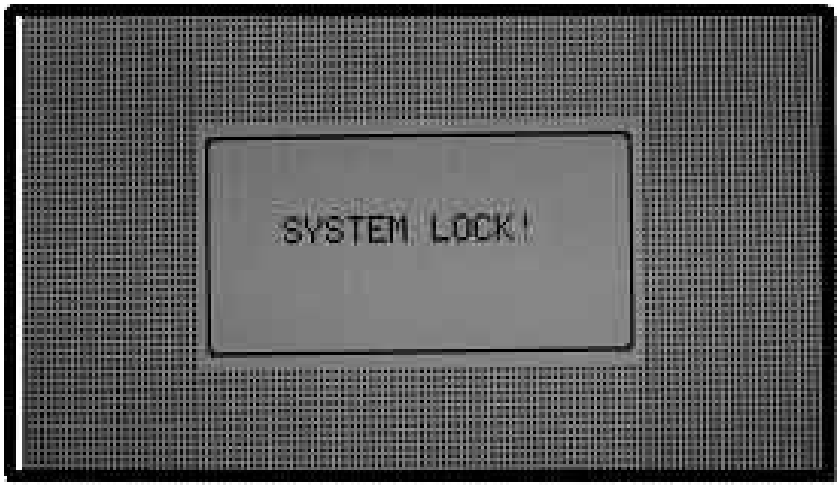

Fig. 17: System Lock screenshot

4) Using the Controller

Note the following before beginning:

a. Don't forget to press 'ENTER' after every button you click. Otherwise, the information will not be saved in the system.
b. Every time you have to provide information consisting of moving the cursor to another column, use the 'ENTER' button.
c. Every time you have to provide information consisting of selecting a choice from a menu list, move the cursor to the desired choice and use the 'ENTER' button.
d. If the buttons are not in use for a few seconds, the screen returns to its main appearance.

I) Control

This choice serves as a Control data diary.
Press the 'MENU' key on board, and select 'CONTROL' using Cursor keys (see **Fig. 18**)

Fig. 18: Control setting menu screenshot

1.1 Temperature curve

This option provides heat and tunnel temperature curves as well as a target curve (see **Fig. 19**). Those parameters are explained below.

- Target: perfect bird's temperature, is set according to its' age.
- Heat: Heater set temperature, is set according to the birds' age.
- Tunnel: Tunnel entry temperature.
- Low Alarm: Low alarm temperature.
- High Alarm: High alarm temperature.

Go to 'Help'>'Set' (see **Fig. 20**) and set the following parameters (for graph emphasis example see **Fig. 21**):

- Temperature curve offset: Adjustment of all curves either by warmer or cooler temperatures than the one programmed in the curve. This enables the user to set only this parameter instead of defining all the other parameters once again.
- Set Temp. Change Remainder (Diff): The parameter sets the change in set temperature that triggers a remainder to set backup thermostats. Note that '0' is meant to disable this parameter. Moreover, if this value changes an appropriate message is displayed (see **Fig. 22**).
- Target Temp. Band: The size of the target temperature zone. Note that it is referred to as the happy zone.
- Heater Temp. Band: Heater happy zone, that is below heat temperature.
- Cool Down Factor (%): The minimum percentage correction towards target happy zone during each increase ventilations delay. If the temperature does not improve by this amount, the Platinum Plus will increase it in one level.
- Cool Down fast response (Deg.): The temperature is high but moves faster towards the happy zone, the Platinum Plus decreases one ventilation level to avoid overshooting.
- Min Vent if Heater On (N-0/Y-1): If the average temperature reaches the heat temperature, the Platinum Plus goes immediately to minimum ventilation mode. This options allows to choose minimum ventilation if any heat zone turns on.
- Non Brood areas Diff. from heat: Set point to non-brood heaters.

Radiant Heaters

- Rad. Low – diff from heat set: In order to activate radiant heating, this is the difference below radiant heat temperature.
- Rad. High – diff (below low set): In order to activate radiant heating, this is the difference above radiant heat temperature.
- Radiant ignition time (sec): Set then to begin ignition to radiant heater.

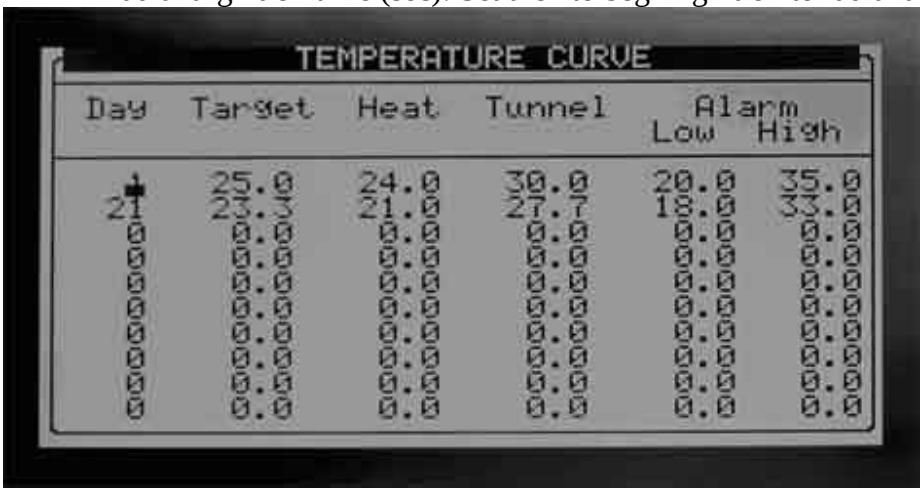

Fig. 19: Temperature Curve screenshot

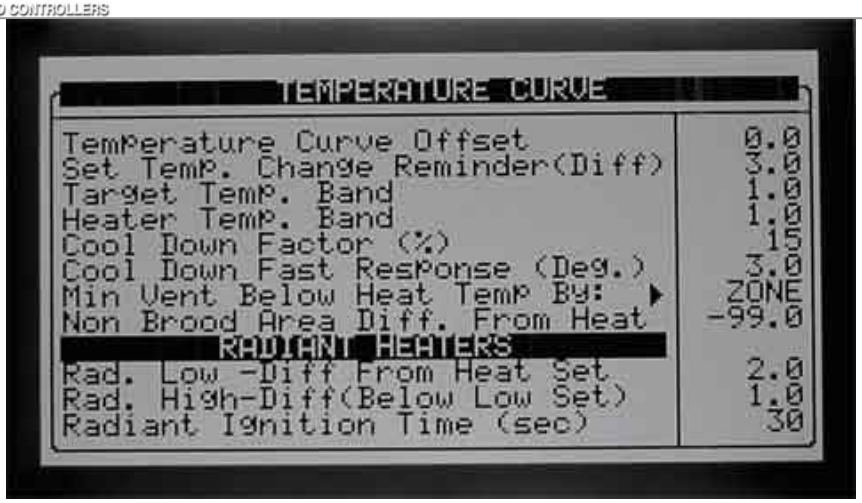

Fig. 20: Temperature Curve Set - Precision screenshot

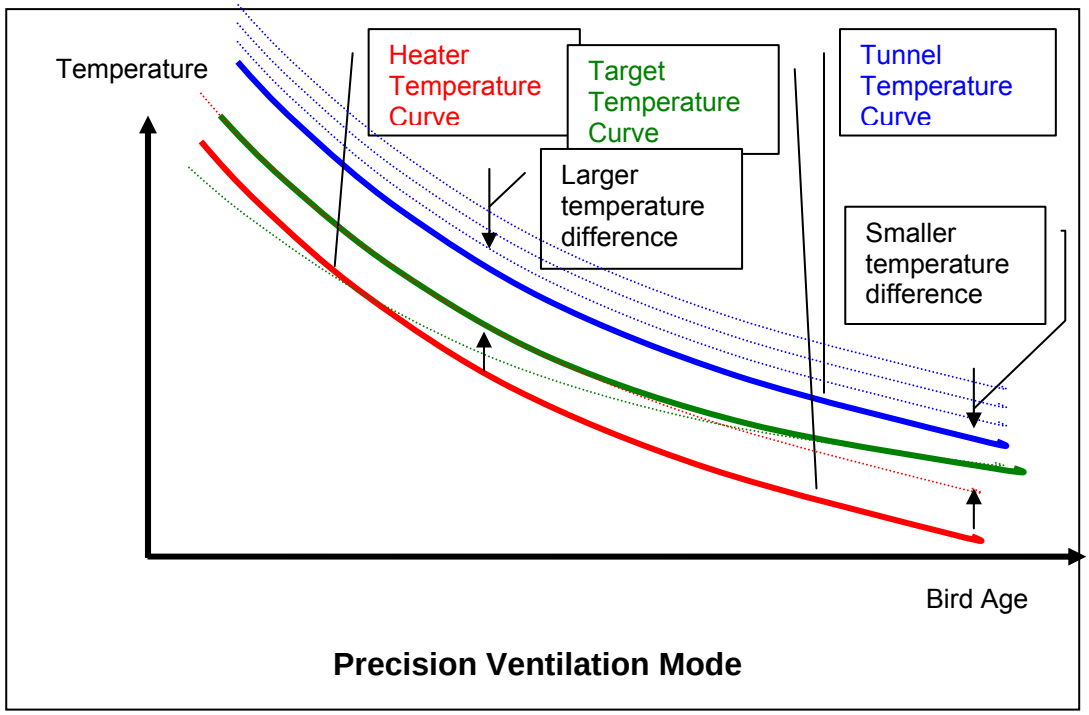

Fig. 21: Graphic example using Set parameters

Fig. 22: Reminder screenshot

1.2 Min/Max Level

This selection enables to define parameters according to their setting based on definitions done in table **1.8** (see **Table 1**). Note that table **1.8** consists of the following parameters that effect table **1.3** (see **Table 1**):

- 'Min/Max Table Curve' parameter that can be one of the following choices:

'Off'	in midnight begins the cycle defined in the next row (if the second row does not exist, will not operate in a cycle)
'On'	it changes itself according to the growth day

- 'Min. Max. Level Control' parameters consist of the following possibilities:

'By Days' (see **Fig. 23**)	Set it according to specific days ('Day' column), minimum and maximum values ('Min' and 'Max' columns accordingly).
'By Time' (see **Fig. 24**)	Set it according to specific time ('From' column), minimum and maximum values ('Min' and 'Max' columns accordingly).

Fig. 23: Min/Max Level - by Days screenshot

Fig. 24: Min/Max level – by Time screenshot

1.3 Humidity

This option enables the user to set the desired target value to humidity (see **Fig. 25**).

Fig. 25: Humidity Treatment screenshot

1.4 Cool Pad

This selection provides a cooling table to set up the cooling pads (see **Fig. 26**). Setting different amounts of water by bird age is possible. Note that this option operates on tunnel mode only. Note that the chosen row is the one that consists of the most intensive operation that can be worked. The columns are explained below:

- Day: day number can be also growth day.
- Start time[1]: Earliest operation time.
- End time[1]: Latest operation time.
- Tunnel Diff: Differential temperature from tunnel entry temp.
- To Hum: Maximum inside humidity.
- On sec: Cycle timer on time.
- Off sec: Cycle timer off time.

[1] - If both Start and End time are set to '00:00' it operates all the time.

If the humidity should not become visible, either set it to 100 (if no humidity sensor exists, this column won't appear) or set it to 0.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 27**):

- Temperature band: On/off temperature differential (happy zone). Default: 1.0.
- Humidity band (%): On/off humidity differential (happy zone). Default: 2.0.
- Flush cool pad at: Select time to begin flushing. Default: 00:00.
- Cool pad flush duration (minutes): Flush time duration. Default: 0.
- Min level to enable operation: Lowest ventilation level at which using cool system is needed. Default: 0.

Fig. 26: Cool Pad screenshot

Fig. 27: Cool Pad Set screenshot

1.5 Foggers

This option enables to set foggers according to birds' age (see **Fig. 28**). Note that this option has no limit regarding operating in Tunnel mode. Moreover, the chosen row is the one that consists of the most intensive operation that can be worked. The columns are explained below.

- Day: Day number.
- Start time[1]: Earliest operation time.
- End time[1]: Latest operation time.
- Target Diff: Differential above the target to operate.
- To Hum: Maximum inside humidity.
- On sec: Cycle timer on time.
- Off sec: Cycle timer off time.

[1] - If both Start and End time are set to '00:00' it operates all the time.

If the humidity should not become visible, either set it to 100 (if no humidity sensor exists, this column won't appear) or set it to 0.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 29**):

- Temperature band: On/off temperature differential (happy zone). Default: 1.0.
- Humidity band (%): On/off humidity differential (happy zone). Default: 2.0.
- Min level to enable operation: Ventilation minimum level the fogger should start run. Default: 0.
- Max level to enable operation: Ventilation maximum level the fogger should stop running. Default: 0.

Fig. 28: Foggers screenshot

Fig. 29: Foggers Set screenshot

1.6 Stir Fan

This selection contains 5 different programs for each stir fan (see **Fig. 30**). Check the programs applying to each fan by using the '+/-' key. The programs are explained below.

- Program A (minimum ventilation): This program helps mixing minimum ventilation air for buildings containing minimum vents which do not mix the air properly.
- Program B (sensors diff temp): This program corrects temperature variations lengthwise in the building. Insert diff and sensor numbers.
- Program C (for heaters): This program moves warm ceiling air down towards the birds.
- Program D (Independent): Same program as 'E'.
- Program E (Independent): Both programs D and E are connected to ventilation levels for general purposes.

Go to 'Help'>'Set' (see **Fig. 31**) and set the following parameters (note that the program letter is assigned to each parameter):

Program A (for min vent)

- Operate after end of cycle: Select reference point to either begin or end the minimum ventilation. Default: ON.
- Delay for operation (sec +/-): Delay from reference point. Default: 0.
- From level: From this vent level. Default: 0.
- To level: To this vent level. Default: 0.
- From time[1]: From this time period. Default: 30.
- To time[1]: To this time period. Default: 00:00.

Program B (sensors diff temp)

- Temp diff to operate: Insert the diff temperature to both sensors. Default: 00:00.
- Diff between sensor number: Related to the first sensor. Default: 1.0.
- Diff between sensor number: Related to the second sensor. Default: 0.
- Cycle on time: Begin cycle time in seconds. Default: 0.
- Cycle off time: End cycle time in seconds. Default: 0.
- From level: From this vent level. Default: 0.
- To level: To this vent level. Default: 30.
- From time[1]: From this time period. Default: 00:00.
- To time[1]: To this time period. Default: 00:00.

Program C (for heaters)

- Diff below target to operate: Operate on diff below target. Default: 0.5.
- Cycle on time: Begin cycle time in seconds. Default: 0.
- Cycle off time: End cycle time in seconds. Default: 0.
- From level: From this vent level. Default: 0.
- To level: To this vent level. Default: 30.
- From time[1]: From this time period. Default: 00:00.
- To time[1]: To this time period. Default: 00:00.

Program D, E (Independent)

- Cycle on time: Begin cycle time in seconds. Default: 0.
- Cycle off time: End cycle time in seconds. Default: 0.
- From level: From this vent level. Default: 0.
- To level: To this end level. Default: 30.
- From time[1]: From this time period. Default: 00:00.
- To time[1]: To this time period. Default: 00:00.

[1] - Note that if both From and To are set to '00:00' it operates all the time.

When the user wants to operate in stages and not in natural, note the following values to be set:

- 1 – 30: operates in all stages
- 0 – 0: operates in natural only
- 0 – 30 – operates in all cases

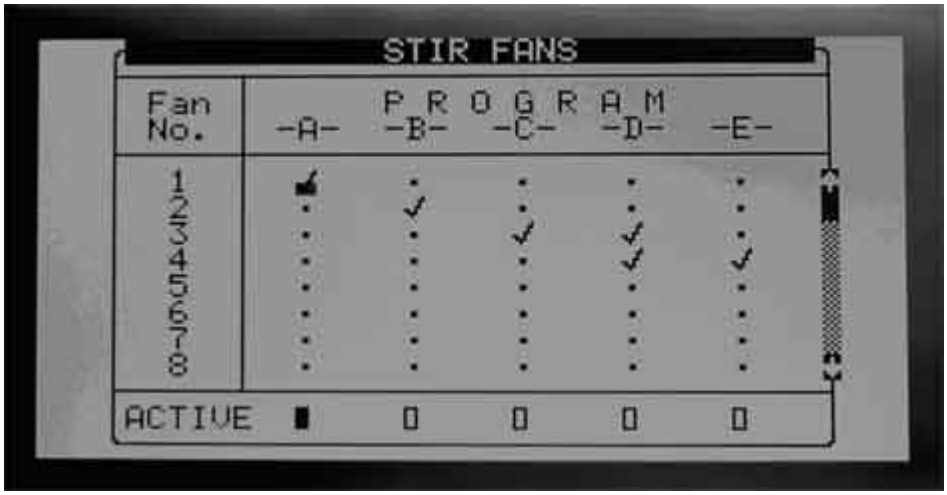

Fig. 30: Stir Fans screenshot

Fig. 31: Stir Fans Program Set screenshot

1.7 Light

This option allows the user to set the desired light in the poultry pen (see **Fig. 32**). The following columns are displayed:

- Day: day number. Note that there are up to 50 days.
- Time: set time for lighting
- Light: there are 4 light options, set these light options by using the '+/-' key.
- Intensity (%): the percentage of intensity every light option has.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 33**):

- Sunrise time (minutes): Length of time to ramp to new settings.
- Sunset time (minutes): Length of time to ramp back at end.
- Min Analog voltage:
- Max analog voltage:
- Skip light on day: set on which days to skip lighting. Can be one of the following:

None
Even
Odd

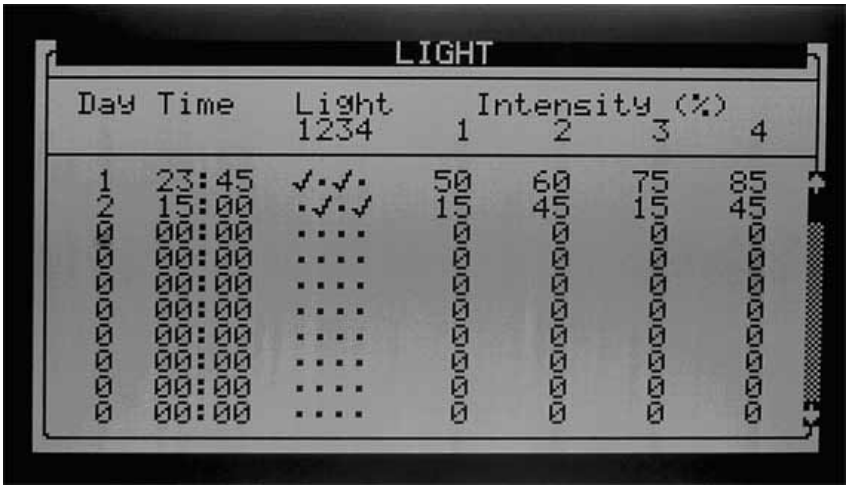

Fig. 32: Light screenshot

Fig. 33: Light Set screenshot

1.8 Water & Feed

This option enables to program up to 50 start and end times for feeding. Note that setting time for operation and break by setting the day ('Day' column) and time ('Time' column). If the day is set twice, it means the light will last from the first time stated to the last one. It is possible to set many time intervals for that. Moreover, if the end time defining light is not set, it will continue to operate until someone else turns it on. The columns are explained below (see **Fig. 34**).

- Day: day number. Growth day can be set as well.
- Time: set time to begin the feeding process.
- Water: is set automatically.
- Feeder: is set automatically.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 36**):

- Water & feed cycle: can be one of the following options:

Every day
2 days cycle
3 days cycle
4 days cycle
5 days cycle
6 days cycle
1 week cycle

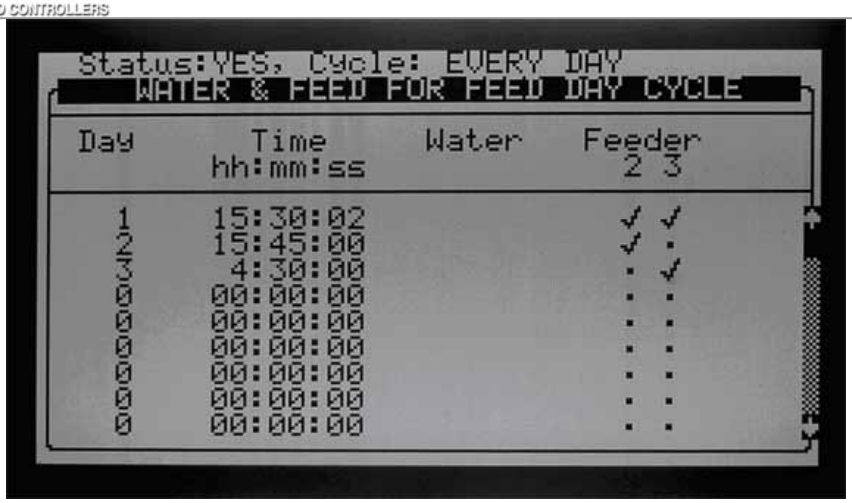

Fig. 34: Water & Feed screenshot – when 'Every Day' is chosen

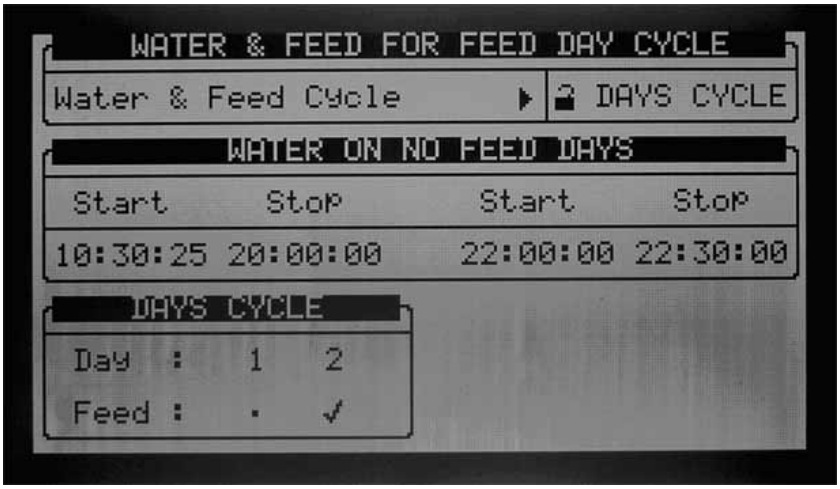

Fig. 35: Water & Feed screenshot – when '2 Days Cycle' is chosen

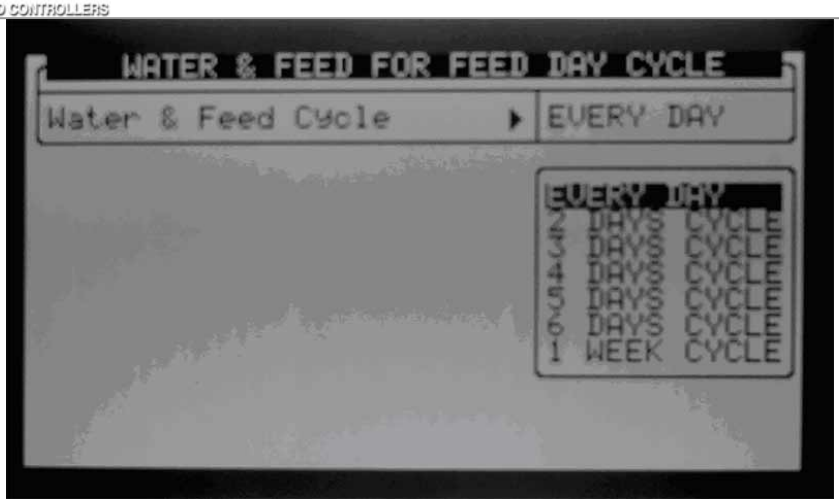

Fig. 36: Water & Feed Set screenshot

1.9 Feeder line up/down

This selection enables the user to set two feeder lines either up or down according to specific times defined by the user.
Go to 'Help'>'Set' and set the following parameters (see **Fig. 37, 39**):

- Relative to feed table: can be either 'yes' or 'no'.

If 'No' is chosen: the columns are explained below (see **Fig. 38**):

- Down time: Set exact time when the line is down.
- Operation (sec): Set how long this process lasts, in seconds
- Up time: Set exact time when the line is up.
- Operation (sec): Set how long this process lasts, in seconds
- Line: Define which line to refer to – the first line, the second one or maybe both lines.

If 'Yes' is chosen: the columns are explained below (see **Fig. 40**):

- Operation down delay (minute): Set how long the delay time when the line is down, in minutes
- Down time operation (sec): Set how long this process lasts, in seconds
- Operation up delay (minute): Set how long the delay time when the line is up, in minutes
- Up time operation (sec): Set how long this process lasts, in seconds

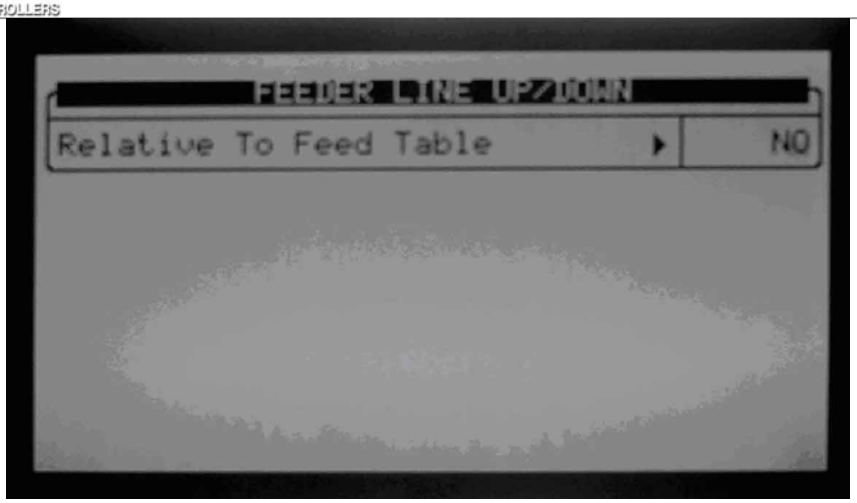

Fig. 37: Feeder Line Up/Down Set – 'No' chosen screenshot

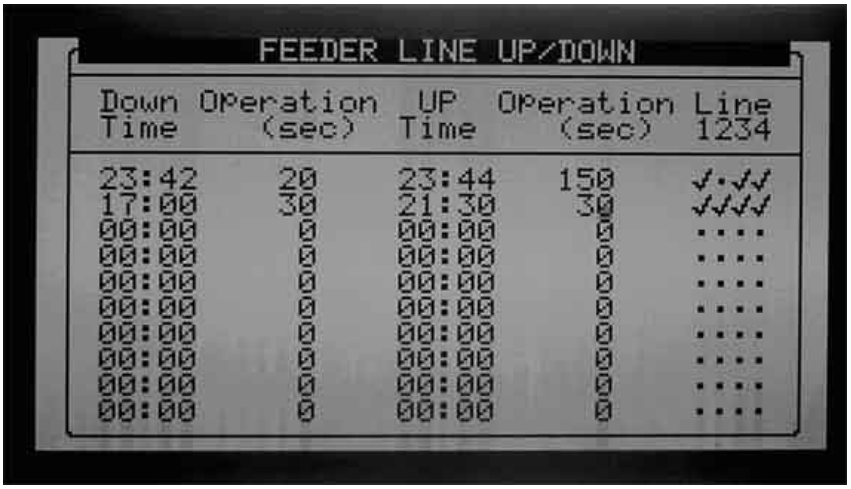

Fig. 38: Feeder Line Up/Down – 'No' chosen screenshot

Fig. 39: Feeder Line Up/Down Set – 'Yes' chosen screenshot

Fig. 40: Feeder Line Up/Down – 'Yes' chosen screenshot

1.10 Extra Systems

This selection serves as a set of 4 independent supplementary controls (see **Fig. 41**). For example, setting System 1 to Fail Safe is possible. The system parameters are explained below.

- Start time: Time at which the system can start operating.
- End time: Time at which the system can stop operating.
- From temp: Temperature below which the system begins operating.
- To temp: Temperature above which the system stops operating.
- From Hum.: Humidity below which the system begins operating.
- To Hum.: Humidity above which the system stops operating.
- On (sec): Number of seconds to run at a time (cycle timer).
- Off (sec): Number of seconds to stop running at a time (cycle timer).

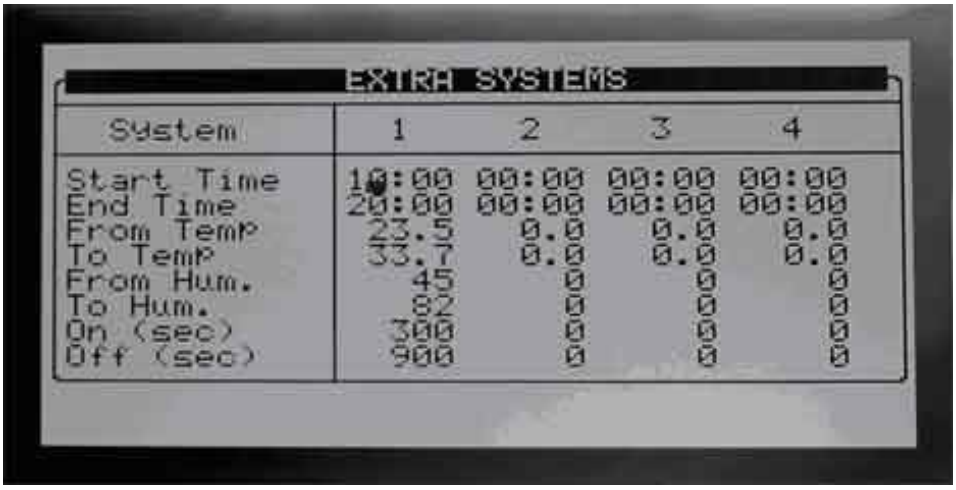

Fig. 41: Extra Systems screenshot

1.11 Static Pressure

- This selection (see **Fig. 42**) controls air pressure in both minimum ventilation and in tunnel ventilation. The screen is divided to two main parts; Min. Vent and Tunnel. Note that the pressure can ramp according to outside temperature in side ventilation mode. Set target static pressure and band (- happy zone) and the low/high pressure alarm for both minimum ventilation and tunnel ventilation separately.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 43**):

- Wind gust delay time (sec): Length of time to delay before making pressure adjustments to unexpected pressure changes. Note that the Platinum Plus uses zero delay when its actions result in pressure changes.
- S. Press. During tunnel (N-0/Y-1): Select whether to use pressure settings in tunnel.
- Transitional Tunnel (No-0/Yes-1): Select whether to supplement minimum ventilation pressure control with tunnel inlet curtain in the event target pressure can't be reached with the minimum vents already at 100% open. In order to decrease the pressure and the curtains are currently open at 100%, the curtains defined as tunnel will open.
- Incoming air low temp. (Deg.): Set low temperature relative to the outside temperature for creating static pressure for the curve related to the pressure.
- Incoming air high temp. (Deg.): Set high temperature relative to the outside temperature for creating static pressure.
- Emergency S. Press. Delay (sec.): Length of time the Platinum Plus waits before taking emergency action when static pressure remains above the high pressure alarm setting. Note that chronologically it is important to open and go to the next setting.
- Curt. Pos. in Emerg. S. Press.%: Set how much percent of opening all curtains is needed in order to reach emergency pressure. Note that minimum inlets always open 100%. Note that it is essential to open it first.
- Low S.P. alarm min. level (minV): Ignore low static pressure alarms below this set vent level.
- Low S.P. alarm min. level (Tun.): Ignore low static pressure alarms below this set vent level in tunnel mode.
- Time to produce S. Pressure (sec): How many seconds are needed to static pressure to stabilize when fans cycle on. Correction of the first pressure value will be done according to this value.

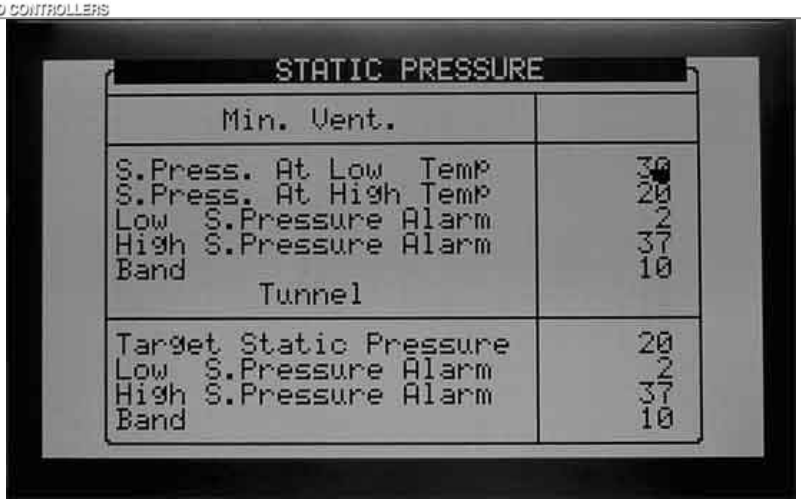

Fig. 42: Static Pressure screenshot

Fig. 43: Static Pressure Set screenshot

1.12 Control Mode

This selection enables to define general modes (see **Fig. 44**). Moreover, it allows setting a curve of the days (see table **1.6**). Every column is explained below.

- House mode: select the requested mode. Can be one of the following: 'full house', '1st brood', '2nd brood', '3rd brood' and so on. Note that the number of choices is according to the number set in the setup. For instance, if '4' is set as a number of growing areas there will be 5 options – 'full house' and the 4 options defined by the user. Default: 'full house'.
- Empty house mode: this mode allows no alarms and a blinking message will constantly appear. This mode fits when defining a new flock before it enters its' empty house. Note that exiting automatically is done in the following cases:
  1) Changing growth day
  2) New flock
  3) While switching from day '0' to day number '1'.

  Default: 'off'.

- Temperature curve: select automatic temperature ramping – can be either 'on' or 'off'. Default: 'on'.
- Min. Max. Level control: Select whether Min/Max Level menu (table **1.2**) is either by day or by time (see explanations in menu **1.2**).

Fig. 44: Control Mode screenshot

II) Management

This menu serves as a daily data management diary. Press the 'MENU' key on board, and select 'MANAGE' using Cursor keys (see **Fig. 45**).

Fig. 45: Management menu screenshot

2.1 Bird Inventory

This option serves as a bird inventory management diary (see **Fig. 46**). The screen is divided to three main columns; the first one enables the user to decide which row suits him. The middle column is meant to insert the desired amounts of bird counts whereas the last column sums the total amount per row. Note that the middle column is divided to both male and female birds. Note that in order to insert a negative number using the '+/-' key is needed.

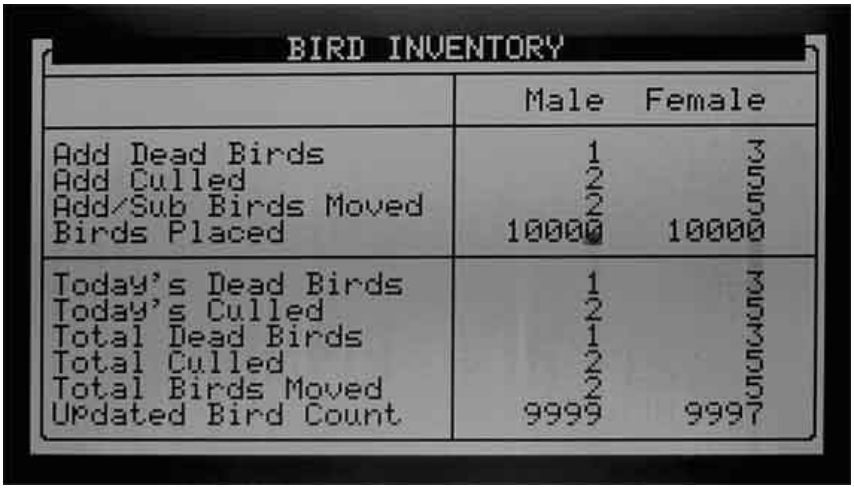

Fig. 46: Bird Inventory screenshot

2.2 Feed Inventory

This selection enables to manage the food inventory (see **Fig. 47**). Note that the total feed is calculated and displayed in the bottom of the screen. The columns are explained below:

- Date: Insert the date; note that if this column is not filled the system will automatically set the current date.
- F. Bin-1: Insert amount of feed in Bin – 1.
- F. Bin-2: Insert amount of feed in Bin – 2.

Go to 'Help'>'Set' and set the following parameters (see **Fig. 48**):

- Active feed bin: Choose the active feed bin being used. Can be one of the following possibilities: both, F. bin1 or F. bin2.
- Total feed in bin-1: Is set automatically from the main screen. Corrections can be made here if needed.
- Total feed in bin-2: Is set automatically from the main screen. Corrections can be made here if needed.

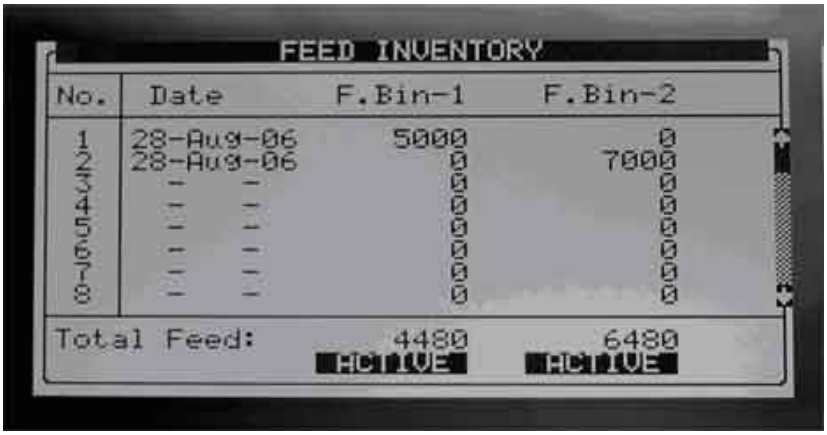

Fig. 47: Feed Inventory screenshot

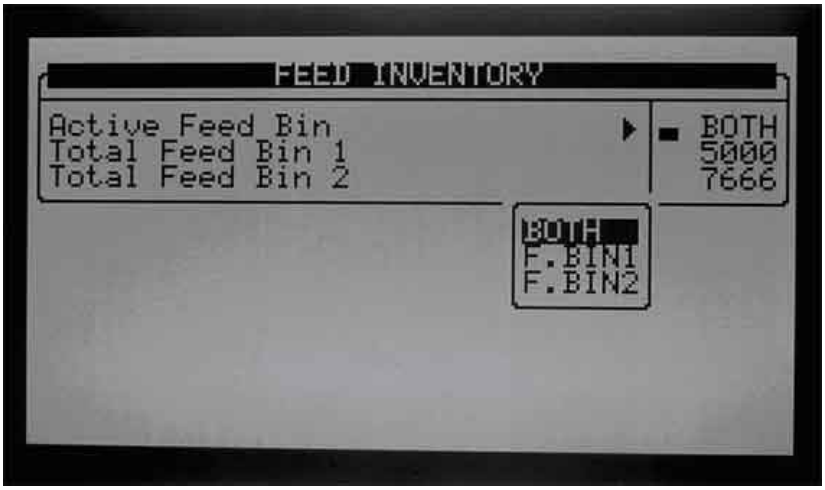

Fig. 48: Feed Inventory Set screenshot

2.3 Time & Date

This option (see **Fig. 49**) enables the user to change the current time ('Current Time' column), current date ('Date' column) and the day of the week ('Day of the week' column) if needed.

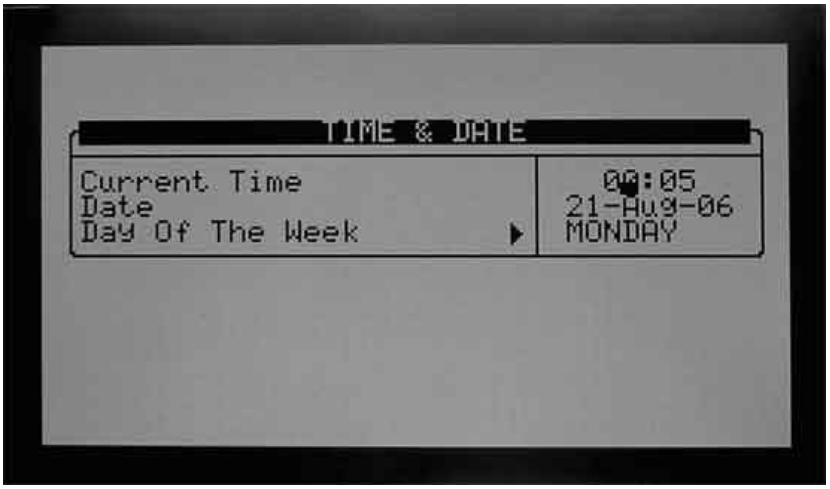

Fig. 49: Time & Date screenshot

2.4 Growth Day & Flock

This option allows the user to manage the date related to the flock (see **Fig. 50**); can be either an existing one or a new one. The rows are explained below.

- Current growth day: Insert current bird's age if necessary.
- Flock no.: The controller automatically increments the flock number every time 'New flock' option is chosen. Note that there is a place for 6 digit number. Moreover, editing the number as a combination of a date and number is possible as well.
- New flock: Note that using this parameter deletes old history data so saving the information before using that is required.

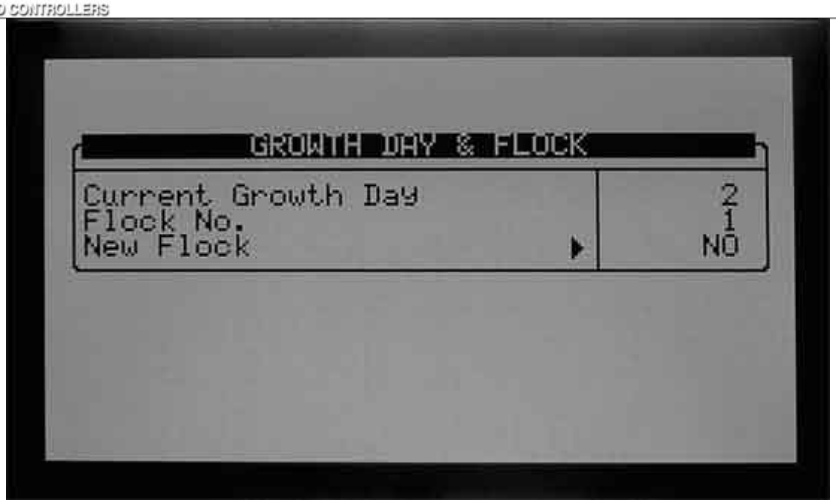

Fig. 50: Growth Day & Flock screenshot

2.5 Alarm Setting

This selection (see **Fig, 51-52**) enables the user to set the alarms according to the following;

Go to 'Help'>'Set' and set the following parameters (see **Fig. 53**):

- Advanced alarms (N-0/Y-1): Enable / disable advanced alarms.

If disabling the advance alarm is chosen, the following alarm types are shown, explanation is provided near every one of them:

- Global alarm delay: Set a delay that relates for most alarms.
- Alarm snooze (minutes, 0-disable): Set for how long to disable the alarm snooze.
- **Sensor alarms**: Set limits to sensor alarms.
- **Alarm Test**: Set limits to the alarms.
- **Feeder overtime alarms**: Set limits to feeder alarms.

If enabling the advance alarm is chosen, the following alarm types are shown in addition to the parameters explained above:

- **Feed alarms**: Set limits to feed alarm.
- **Water overflow alarms**: Set the limits for water overrun with an option to stop the water system.
- **Water shortage alarms**: Set Minimum amount in the delay period.
- **Bird scales alarm**: Set limits of time for bird scales.
- **Aux**. **alarms:** Assign auxiliary alarms in Install menu. Note that digital sensors, aux. alarm input with related relay must always match their relay status.
- **Circuit breaker alarm**: Set circuit breaker alarm temperature.

Fig. 51: Alarm setting screenshot – part 1

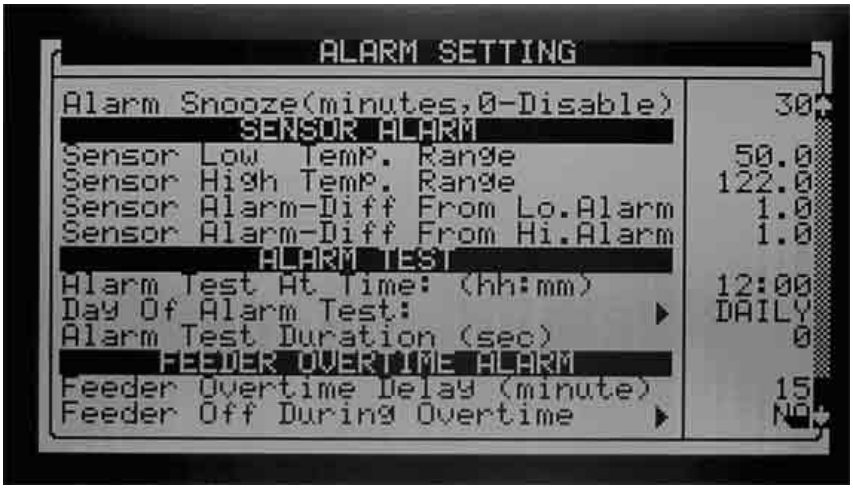

Fig. 52: Alarm setting screenshot – part 2

Fig. 53: Alarm setting set screenshot

2.6 Alarm Reset

The screen is divided to two main parts; Alarm reset part and Active alarms part. This option is used in the following cases (see **Fig. 54**):

- 'No': Nothing is done.
- 'Siren Only': Turning off the relay, alarm and the automatic dialer.
- 'Yes': Doing reset to the alarm.

The second part summarizes all active alarms where the message itself is stated together with its' matching day and exact time.

The following special alarms stop operating over time and after the reset continue;

- Feed overtime
- Emergency Pressure – as soon as cancelling all curtains go to their previous place
- Hardware alarms – by doing reset

If the problem has been fixed and the user wants the controller to find them once again, use 'Power cycle' by using the up/down cursor keys. The controller re-checks hardware accessories.

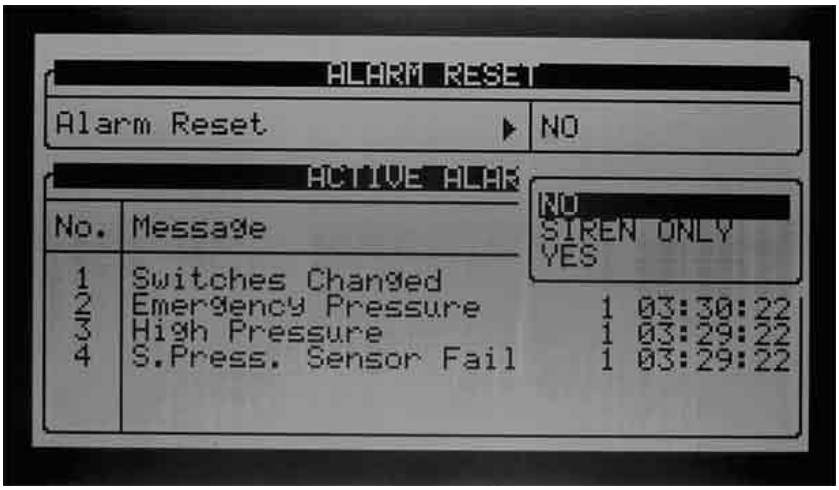

Fig. 54: Alarm Reset screenshot

2.7 Password

This selection enables the owner to set a 4 digit password (see **Fig. 55**) either for reading or for both reading and writing purposes.

Fig. 55: Password screenshot

2.8 Emergency Setting

This selection applies to optional emergency cards (see **Fig. 56**). Those cards are battery backed, and operate as standard switch and relay cards during normal operation. If an emergency occurs, the cards continue to operate according to their settings.

Fig. 57 shows the lack of an emergency card.

Go to 'Help'>'Set (see **Fig. 58**) and set the following parameters:

- Diff above target for emergency: Set a value above temperature target, at which the emergency card takes over operation.
- Diff below target for emergency: Set a value below temperature target, at which the emergency card takes over operation.
- Min. vent on time day 1 (sec): Set the run time for 1 day old birds in this parameter. The card calculates run times between days 1 to 21.
- Min. vent off time day 1 (sec): Set the off time for minimum ventilation cycle timer during emergency for growth day 1.
- Min. vent on time day 21 (sec): Set the on time for minimum ventilation for three week birds.
- Min. vent off time day 21 (sec): Set the off time for minimum ventilation cycle timer during emergency for growth day 21.
- Delay time to start fans (sec): Set a delay time for the card to wait. That occurs when the emergency takes over the operation. This delay gives air inlet devices time to preposition.

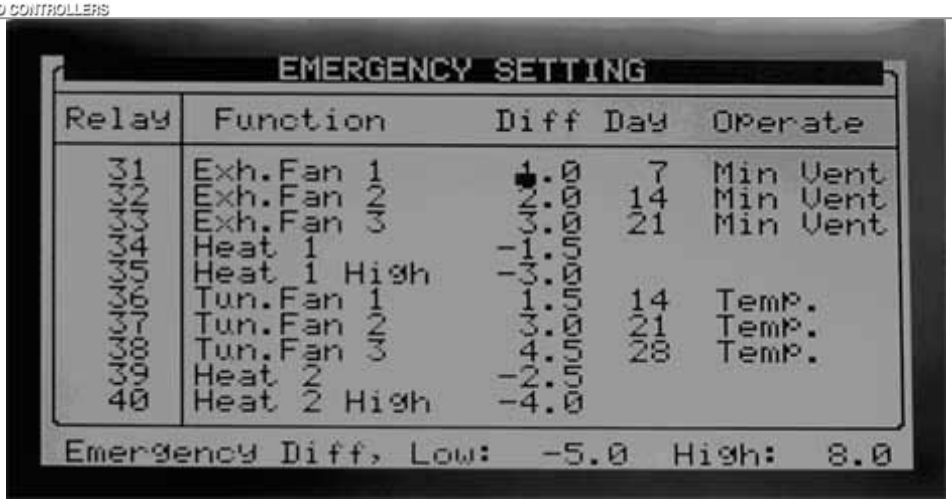

Fig. 56: Emergency setting screenshot

Fig. 57: Lack of Emergency card screenshot

Fig. 58: Emergency Setting Set screenshot

III) Eggs

This choice serves as an Egg data diary.
Press the 'MENU' key on board, and select 'EGGS' using Cursor keys (see **Fig. 59**).

Fig. 59: Eggs menu screenshot

3.1 Egg Room Control

This selection enables the user to control the limits of both 'on' and 'off' egg room (see **Fig. 60**) according to the following functions: Heating ('Heater' row), Fan no. 1 ('Fan 1' row), Fan no. 2 ('Fan 2' row), cooling ('Cooling' row) and humidity ('Humidifier' row).
Go to 'Help'>'Set (see **Fig. 61**) and set the following parameters:

- Egg room low temp. alarm: Set low limit to temperature alarm.
- Egg room high temp. alarm: Set high limit to temperature alarm.
- Egg room low humidity alarm: Set low limit to humidity alarm.
- Egg room high humidity alarm: Set high limit to humidity alarm.
- Egg room alarm delay: Set the delay to the alarm, measured in minutes.

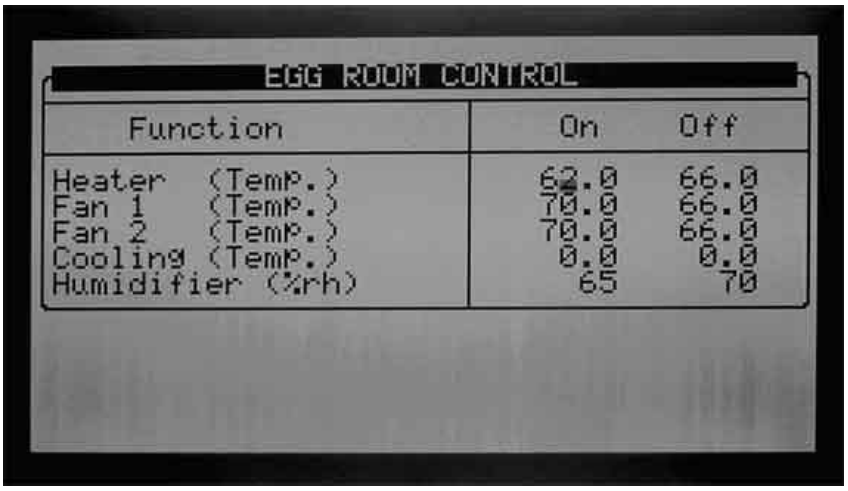

Fig. 60: Egg Control Room screenshot

Fig. 61: Egg Room Control Set screenshot

3.2 Egg Collection

This option allows the user to define a collection diary (see **Fig. 62**). The screen is divided to two main columns; 'Last week' and 'Current week'. Set the dated of the current week according to their matching day of the week. Note that only the 'Current week' column can be changed. Moreover, clicking the specific day in the 'Current week' column, results the actual diary (see **Fig. 63**) were the user defines exactly the time ('Time' column), no. of hatched eggs ('Hatch eggs' column) , no. of common eggs ('Conmm. Eggs' column), number of eggs containing double yolk ('Doub. Yolk' column), number of cracked eggs ('Crack eggs' column) and the number of eggs found on the floor ('Floor eggs' column).

Go to 'Help'>'Set (see **Fig. 64**) and set the following parameters:

- Week start day: Choose the day of the week from the list. Note that this day will be shown as the first day when **3.2** option is chosen.

- Start date: Define the date to begin with the 'Current week' column. Note that this day will be shown as the first day when **3.2** option is chosen.

Fig. 62: Egg Collection screenshot

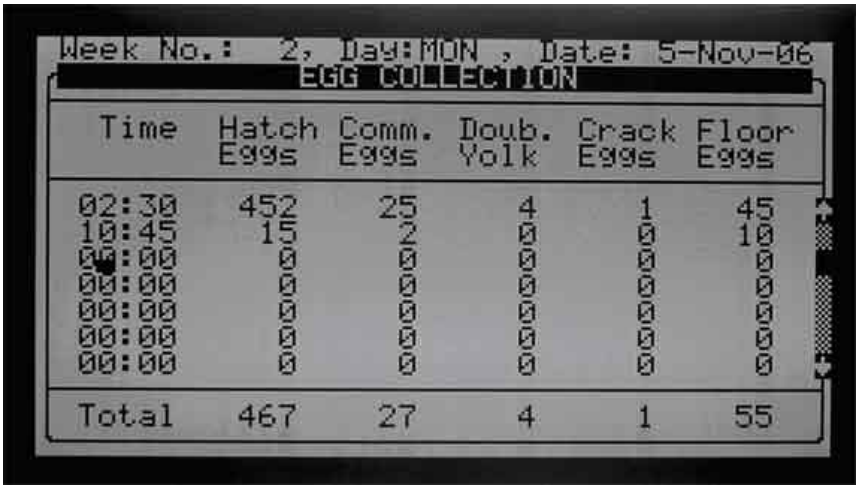

Fig. 63: Egg Collection sample day screenshot

Fig. 64: Egg Collection Set screenshot

3.3 Egg Collection History

This selection enables the user to look at the history summary of all the egg collections (see **Fig. 65 - 67**). Note that the data in this screen can not be changed and is based on 'Egg Collection' menu (table **3.2**). The information is summarized according to the following column parameters:

- Hatch eggs: number of hatched eggs
- Commer. Eggs
- Double yolk: number of eggs consisting of double yolks
- Cracked eggs: number of cracked eggs
- Floor eggs: number of eggs found on the floor
- Daily total: number of total daily amount of eggs. Note that this column is calculated automatically.
- Female update: number of female hens. By default value is 10000.
- Daily (%) Prod: percentage of the daily eggs production. Note that this column is calculated automatically.
- Ha/Te (%): percentage of the ration of the hatched eggs. Note that this column is calculated automatically.

Go to 'Help'>'Set (see **Fig. 68**) and set the following parameters:

- Week Start Day: the week day can be any day defined by the user
- Start Date: set the desired date

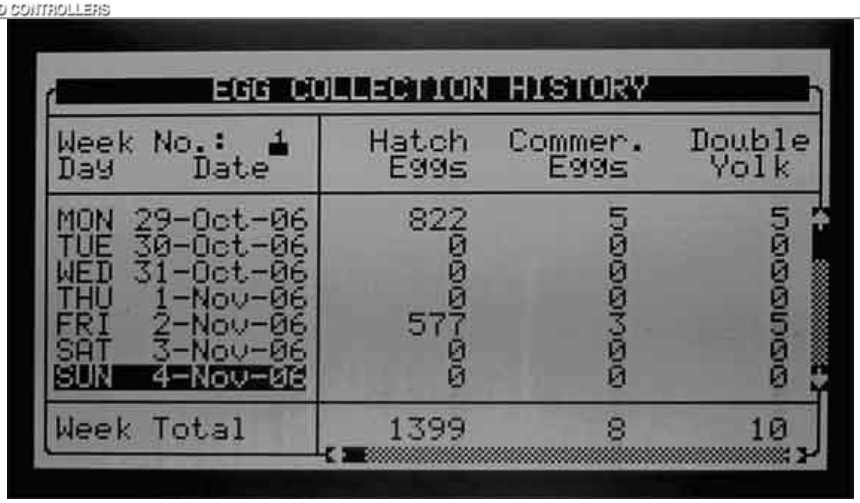

Fig. 65: Egg Collection History screenshot – part 1

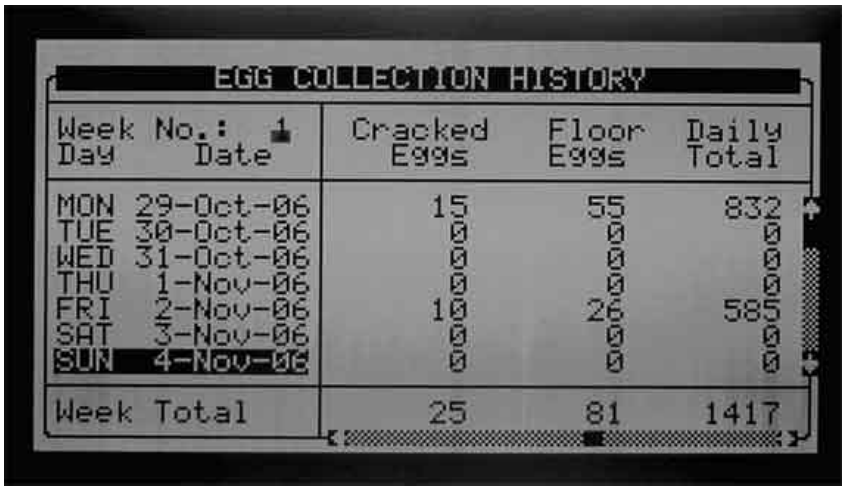

Fig. 66: Egg Collection History screenshot – part 2

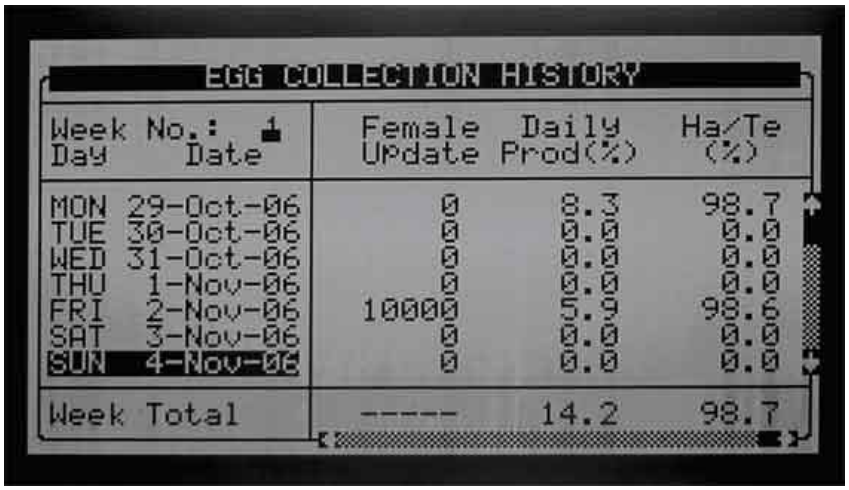

Fig. 67: Egg Collection History screenshot – part 3

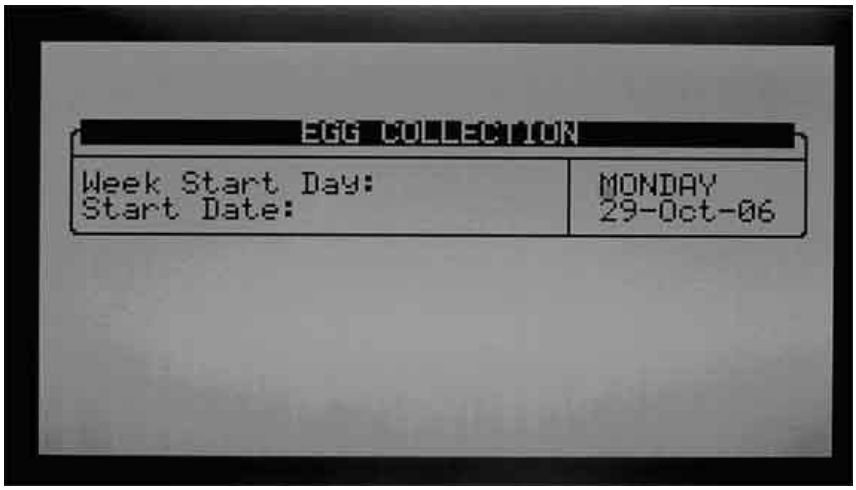

Fig. 68: Egg Collection History Set screenshot

3.4 Eggs Inventory

This selection serves as an inventory diary (see **Fig. 69**). The information in this menu serves as a summary and therefore can not be changed. The screen is divided to two main parts; the upper part consists of the following columns; week day ('Week no. 1') where the current one is highlighted, number of shipped eggs – divided to 'Hatch' and 'Comm' columns, and the number of eggs – divided to 'Hatch' and 'Comm' columns. The second part of the screen serves as total summaries to both the 'Inventory' column and to the 'Shipped' column.
Note that only the 'Shipped' column can be updated whereas the 'Inventory' one is being updated automatically.

Fig. 69: Eggs Inventory screenshot

3.5 History – Egg from Temp.

This option serves as a diary of the egg room control temperature (see **Fig. 70**). Since it is important the eggs will be kept in the right temperature, the screen displays the following columns: day number ('Day' column), minimum measured temperature ('Minimum'), average calculated temperature ('Average') and maximum measured temperature ('Maximum').

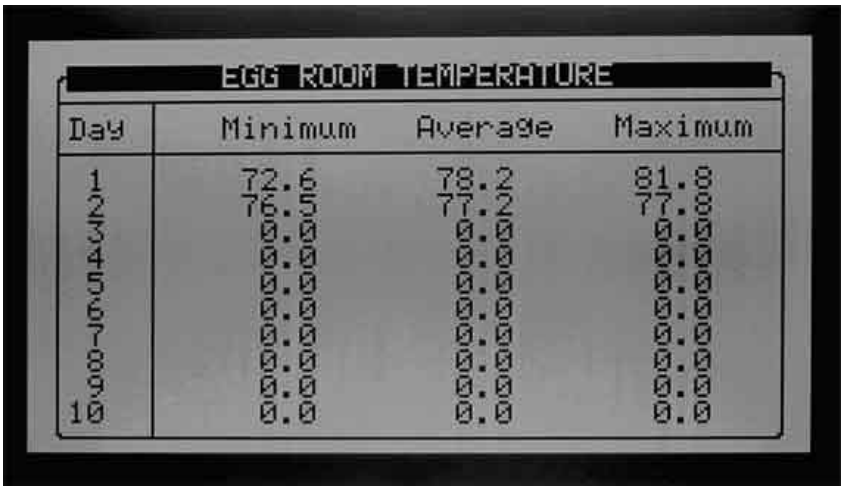

Fig. 70: History – Egg from Temp screenshot

3.6 History – Egg from Hum.

This option serves as a diary of the egg room control humidity (see **Fig. 71**). Since it is important the eggs will be kept in the right humidity levels, the screen displays the following columns: day number ('Day' column), minimum measured humidity ('Minimum'), average calculated humidity ('Average') and maximum measured humidity ('Maximum').

Fig. 71: History – Egg from Humidity screenshot

IV) Scale

This menu serves as a scale diary. Press the 'MENU' key on board, and select 'SCALE' using Cursor keys (see **Fig. 72**).

Fig. 72: Scale menu screenshot

4.1 Scale Layout

This option enables to program bird scale attached (see **Fig. 73**). Select the weighting device attached to each channel of the scale option card. Note that this selection is done by using the 'ENTER' key and the scale can be one of the following choices:

- None
- Scale-1
- Scale-2

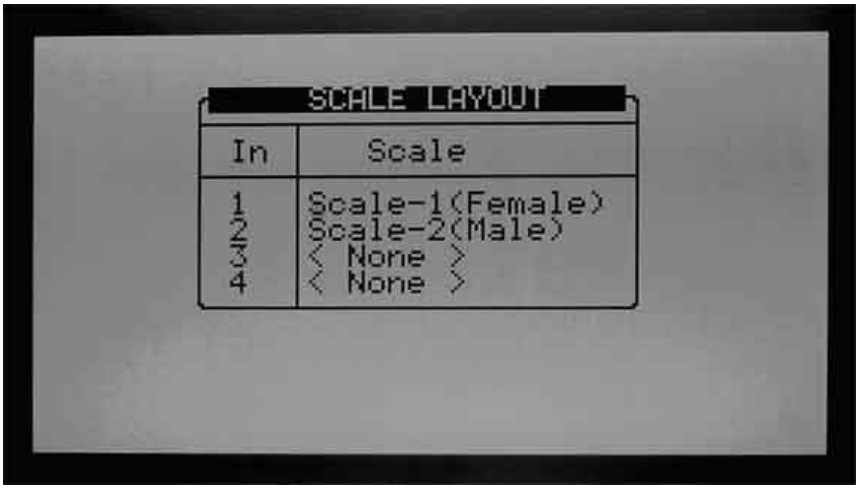

Fig. 73: Scale Layout screenshot

4.2 Global Setting

This option enables the user to set the following parameters (see **Fig. 74**):

- Bird scale mode: can be one of the following choices:

Sexed	can be either unisex or no sexing definition
Mixed	use scale curve in order to separate weights of male and female sets

- Tare sensitivity (0-99): Maximum A/D readings difference allowed during tare tracking.
- Weighting sensitivity (%): Maximum percent of A/D readings difference allowed during weighting process.
- Uniformity range (5-30%): The percentage of all weightings that is +/- a value from the average.
- Curve selector (mixed – 0, 1, 2):
- Weighing on feed days: can be one of the following:

Yes
No

- Weighing on feed days: can be on of the following:

Yes
No

Go to 'Help'>'Set' (see **Fig. 75**) and set the following parameters:

- Factory default curve (N-0 / Y-1): Choosing 'Yes' will result restoring the factory default bird curves for 'Mixed' option.

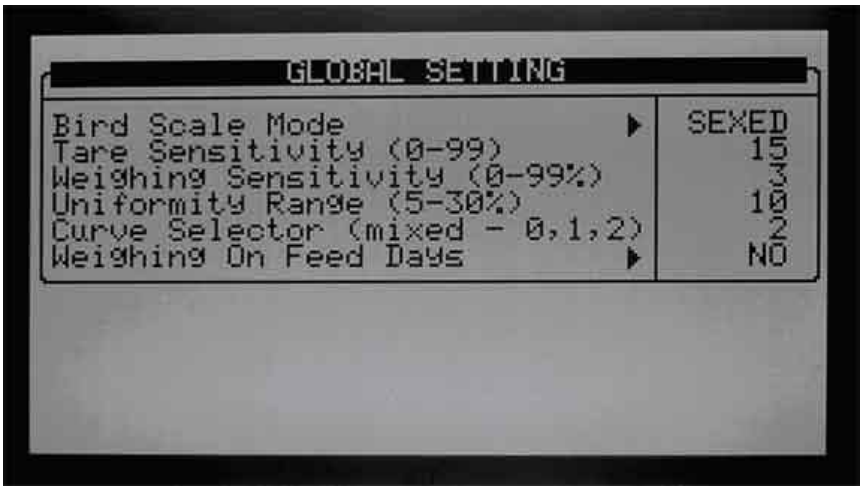

Fig. 74: Global Setting screenshot

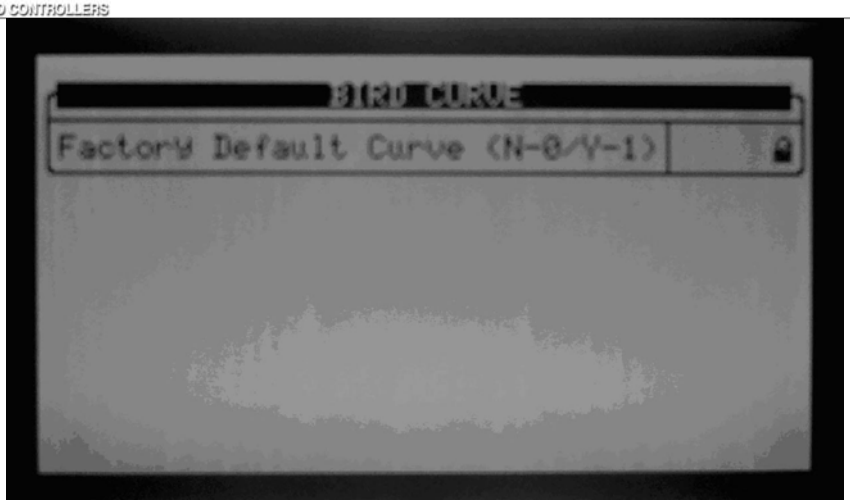

Fig. 75: Global Setting Set screenshot

4.3 Bird Scale Setting

This selection enables the user to set information regarding the bird scale. It is dependant on the choice done in menu **4.2** (see **Table 1**) in 'Bird scale mode' parameter;

If '**Sexed**' mode is chosen the following parameters are seen (see **Fig. 76**):

- Start time: when to begin
- End time: when to end
- Upper range – (0-100%): Accept weights as maximum to current average limit.
- Lower range – (0-100%): Accept weights as minimum to current average limit.
- Reference weight:

If '**Mixed**' mode is chosen the following parameters are seen (see **Fig. 77**):

- Start time
- End time
- Upper female – (0-100%): Insert maximum limit for female. Note that in case of overlapping, splitting the difference is needed.
- Lower female – (0-100%): Insert minimum limit for female. Note that in case of overlapping, splitting the difference is needed.
- Upper male – (0-100%): Insert maximum limit for male. Note that in case of overlapping, splitting the difference is needed.
- Lower male – (0-100%): Insert minimum limit for male. Note that in case of overlapping, splitting the difference is needed.

Go to 'Help'>'Set' (see **Fig. 78**) and set the following parameters:

- Factory default curve (N-0 / Y-1): Choosing 'Yes' will result restoring the factory default bird curves for 'Mixed' option.

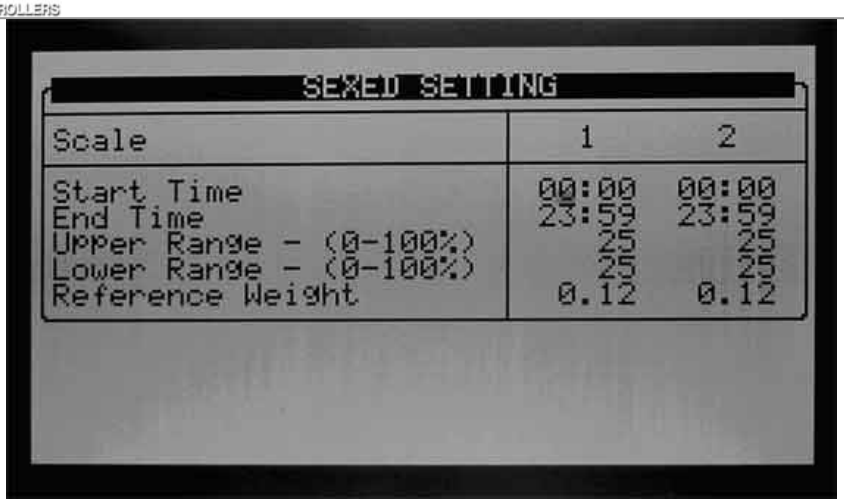

Fig. 76: Bird Scale Setting – 'Sexed' choice screenshot

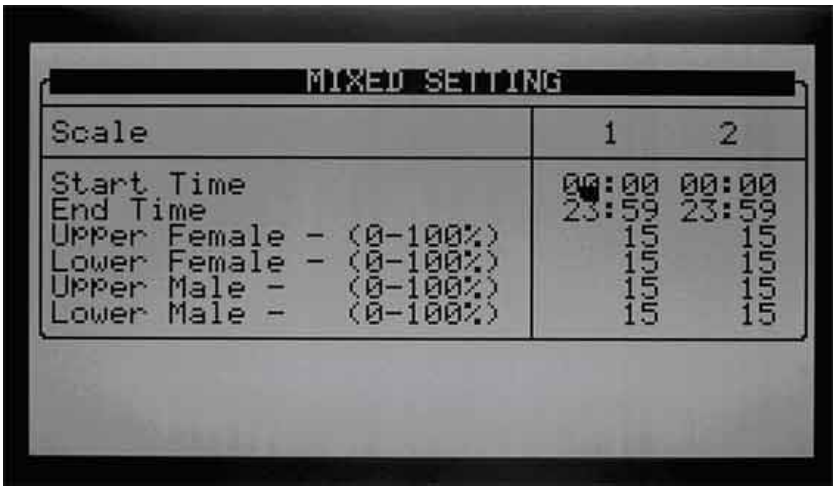

Fig. 77: Bird Scale Setting – 'Mixed' choice screenshot

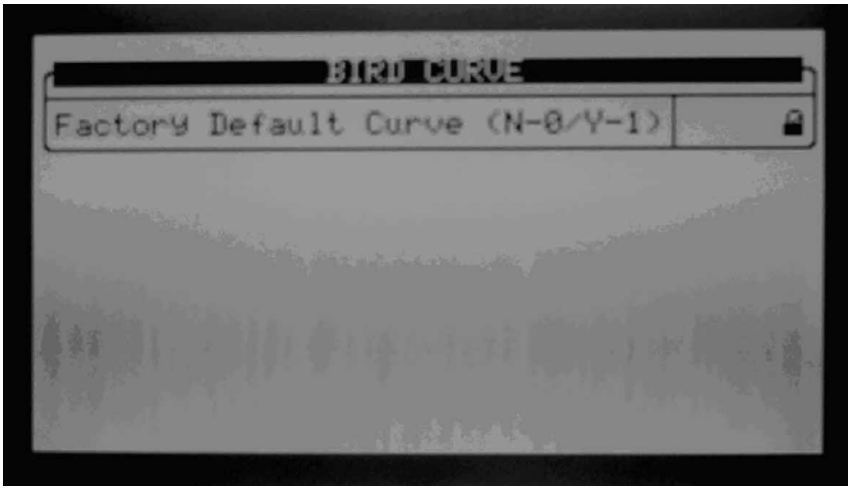

Fig. 78: Bird Scale Setting Set screenshot

4.4 Bird Curve

This option calculates today's expected weight (see **Fig. 79**). The Platinum Plus has up to 3 curves of anticipated weight of pullet and breeder flocks by bird age. In order to use this operation, insert expected weights in bird curve for male/female birds. Each curve can contain up to 30 points.

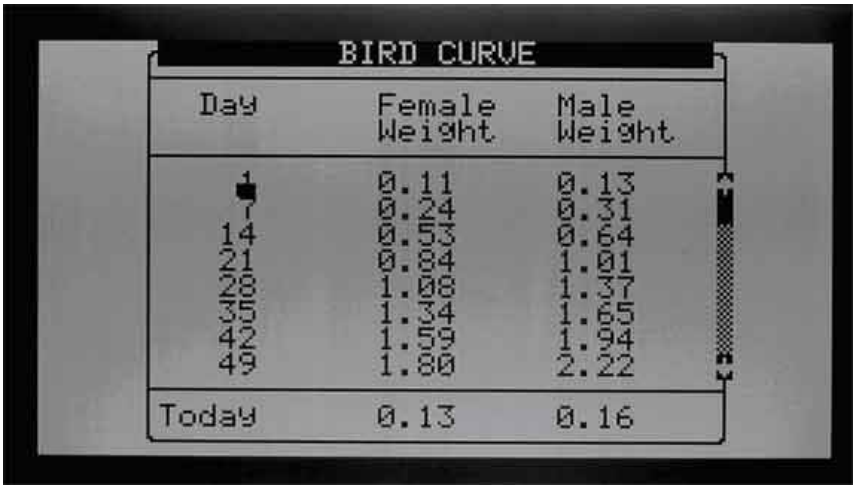

Fig. 79: Bird Curve screenshot

4.5 History

This choice enables the user to view a summary of bird scale regarding the flock (see **Fig. 80** - **81**); this screen is based on table **4.2** (see **Table 1**):
If **'Sexed'** is chosen the following columns are displayed (see **Fig. 80**):

- Female / Male – average weight divided to 'Female' and 'Male' columns
- No. - Number of weights ('No.' column)
- S.D. - standard deviation ('S.D.' column)
- Unif. - uniformity ('Unif.' column)
- C.V - coefficient of variation ('C.V.' column)

If **'Mixed'** is chosen the following columns are displayed (see **Fig. 81**):

- Female 1-2 / Male 1-2 - average weight divided to 'Female' (two separate columns each) and 'Male' (two separate columns each) columns
- No. - Number of weights ('No.' column)
- S.D. - standard deviation ('S.D.' column)
- Unif. - uniformity ('Unif.' column)
- C.V - coefficient of variation ('C.V.' column)

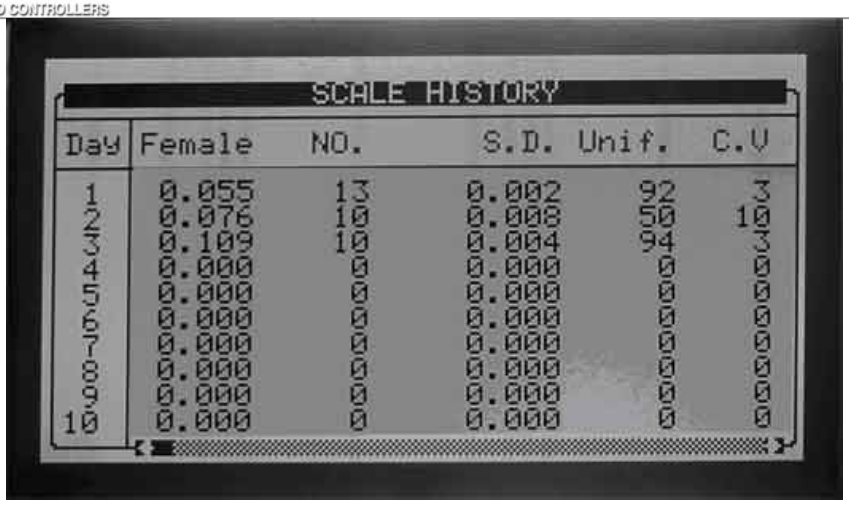

Fig. 80: Scale History screenshot – when 'Sexed' is chosen

Fig. 81: Scale History screenshot – when 'Mixed' is chosen

4.6 Test

This choice shows the machine's count for each attached scale (see **Fig. 82**). This test is done while placing a weight. Main parameters are explained below.

- Status: The status line indicates whether Load cell connection is GOOD or BAD.
- N/A: reading is either too low or too high.
- O.K.: A/D reading is in a good range - 250 to 65535. If out of range (of 1000 to 3000) is displayed with no load, changing the offset in menu **4.7** (see **Table 1**) is required.

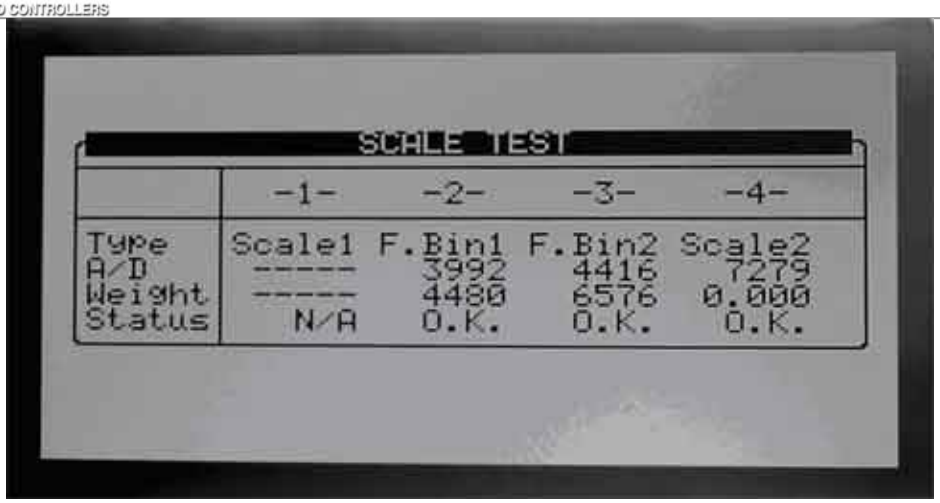

Fig. 82: Scale Test screenshot

4.7 Calibration

This selection allows calibrating scales. Follow the instructions displayed on the screen (see **Fig. 83**).

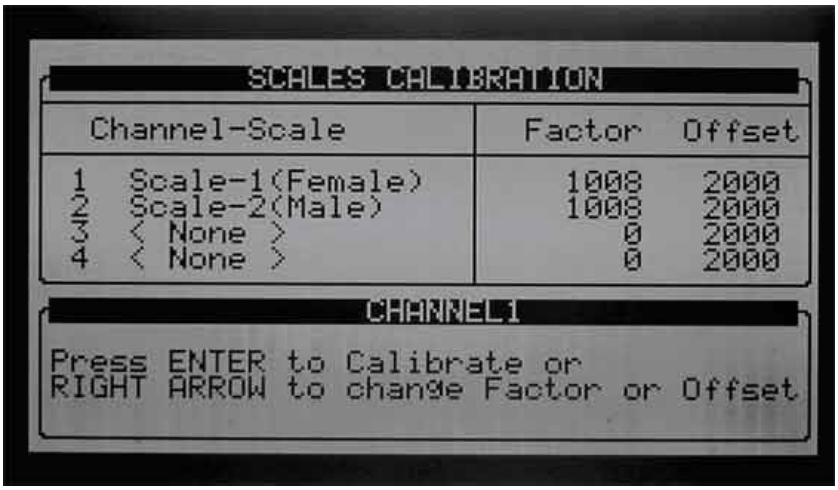

Fig. 83: Scale Calibration screenshot

V) History

This menu serves as a history diary of the main operations. Press the 'MENU' key on board, and select 'HISTORY' using Cursor keys (see **Fig. 84**).Note that the information in this menu can only be reviewed but not edited.

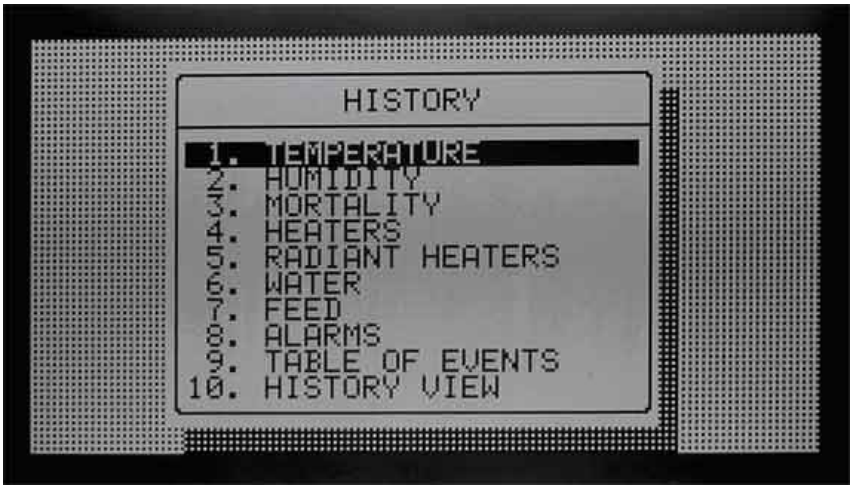

Fig. 84: History menu screenshot

5.1 Temperature

This option serves as a summary of measured temperatures (see **Fig, 85**); minimum ('Minimum' column), average ('Average' column) and maximum ('Maximum' column) temperatures by growth day ('Day' column). Since the average is weighted, if most of the day has been warm, the average will likely be closer to the maximum.

Fig. 85: Temperature screenshot

5.2 Humidity

This option serves as a summary of measured humidity (see **Fig. 86**); minimum ('Minimum' column), average ('Average' column) and maximum ('Maximum' column) temperatures by growth day ('Day' column). Since the average is weighted, if most of the day has been humid, the average will likely be closer to the maximum.

Fig. 86: Humidity screenshot

5.3 Mortality

This option serves as a history menu to maintain daily summaries of mortality cull and total dead (see **Fig. 87 - 88**). The percentage of dead birds shows an update count of bird inventory. Note that information is shown separately according to Total, Male and Female by using the left/right cursor keys.

Fig. 87: Mortality screenshot – part 1

Fig. 88: Mortality screenshot – part 2

5.4 Heaters

This selection shows the Platinum Plus's sum calculations regarding the daily total run times of each standard heater (see **Fig. 89**). Note that each heater (up to 8) consists of a low and high column.

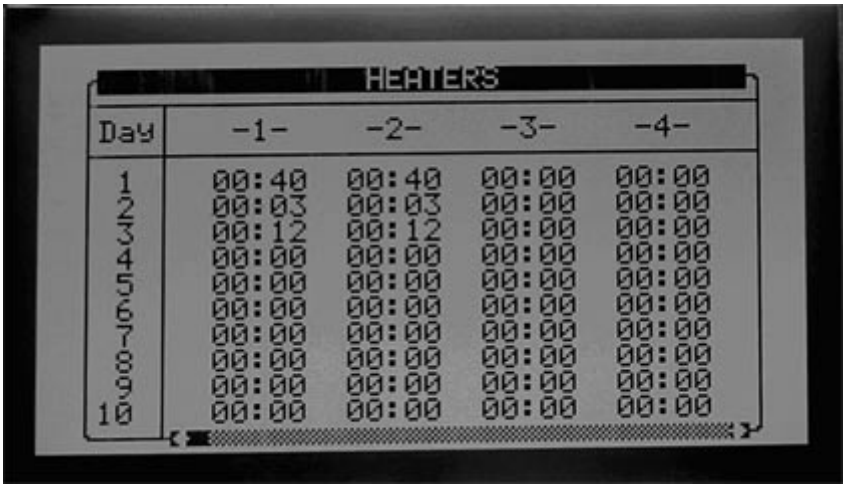

Fig. 89: Heaters screenshot

5.5 Radiant Heaters

This selection displays the Platinum Plus's sum calculations related to the daily total run times of each radiant heater (see **Fig. 90**). Note that each heater (up to 8) consists of a low and high column.

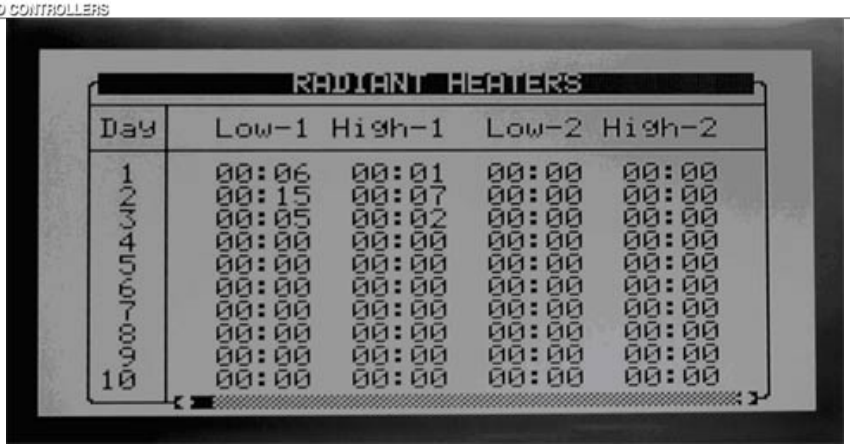

Fig. 90: Radiant Heaters screenshot

5.6 Water

This menu (see **Fig. 91**) records daily water consumption ('Total Daily (%)' column) , daily differential change from the previous day ('Water-1 Daily (%)' column) and the daily differential change from 2 days ago ('Water-2 Daily (%)' column). Moreover, it displays the amount of water used for the Cool Pad ('Cool Pad' column). Note that for that reason, the water monitor digital inputs should be connected.

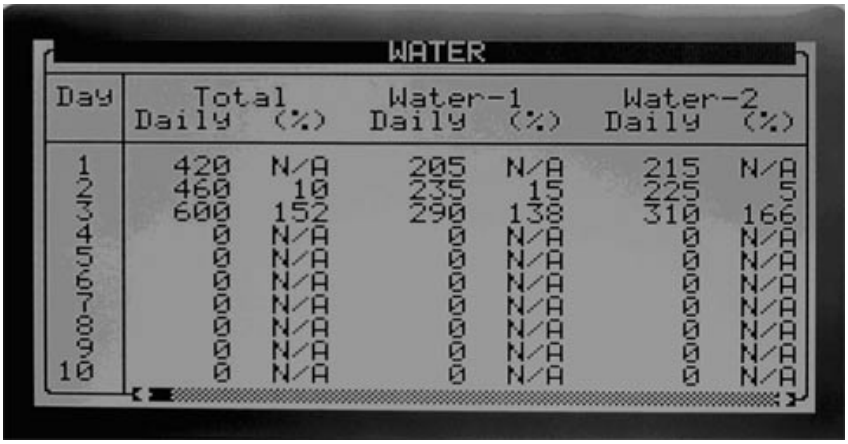

Fig. 91: Water screenshot

5.7 Feed

This menu (see **Fig. 92**) records daily feed consumption ('Total Daily (%)' column) and shows the daily differential change from the previous day ('Feed-1 daily (%)' column), and the daily differential from 2 days ago ('Feed-2 daily (%)' column). Either a feed monitor digital inputs or a feed silo weighting system installed for the feed system should be connected.

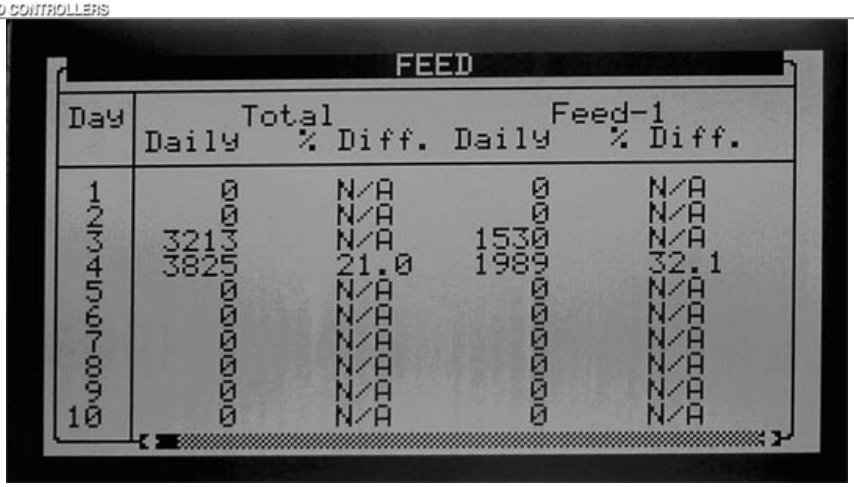

Fig. 92: Feed screenshot

5.8 Alarms

This selection records the growth day and time of each alarm (see **Fig. 93 - 94**). Current alarms are displayed as flushing.

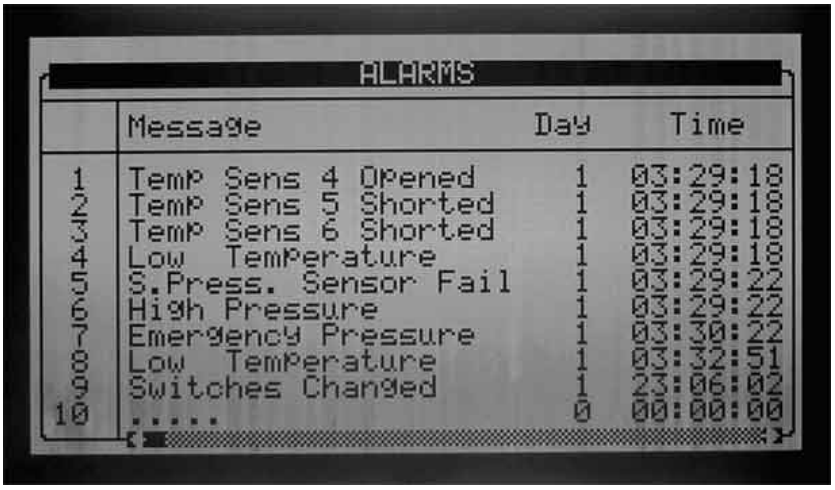

Fig. 93: Alarms screenshot - part 1

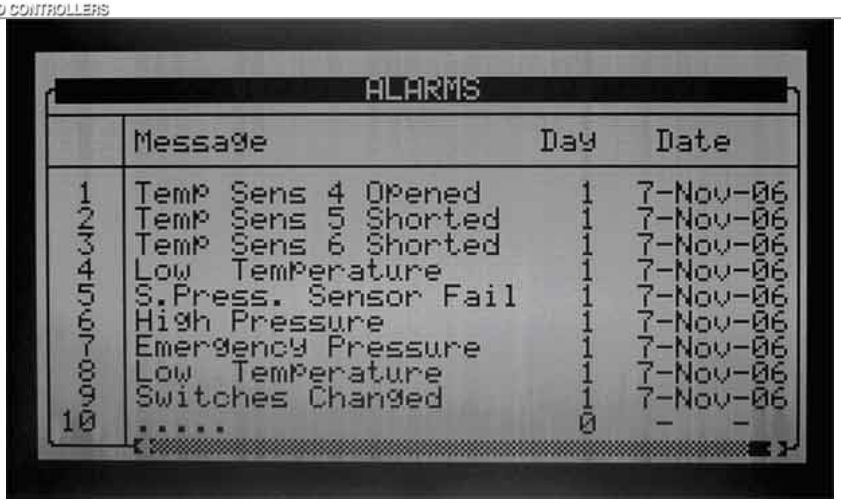

Fig. 94: Alarm screenshot – part 2

All available alarms are summarized below;

- Temp sens 1-9 Shorted
- Temp sens 1-9 opened
- Sensor 1-9 defined err
- Temp sens not defined
- High temperature
- Low temperature
- Low static pressure
- High static pressure
- Water overflow
- Water shortage
- S. press. Sensor fail
- Bus failure
- Check all setting
- Switches changed
- Emergency temp. set.
- Auger – 1-2 overtime
- Switches # 1-8 err – switches card
- Relay card No. 1-8 fail
- Digital In (#1-2) fail
- Analog input fail
- Analog output fail
- Scale card fail
- Emergency S. Pressure
- Clock failure
- No vent mode define
- Bird scale 1-2 failures
- Feed bin 1-2 failure

- Low feed at bin 1-2
- Aux. alarm 1-4
- Emerg 1-2 sens shortage
- Emerg 1-2 sens opened
- Emerg 1-2 temp fail
- Emergency 1-2 active
- Emerg 1-2 battery fail
- Emerg 1-2 low battery
- Sensor 1-9 low temp
- Sensor 1-9 high temp
- Sensor 1-9 fail
- Circuit breaker hi. T
- Circuit breaker fail
- Sens. 1-9 out of range
- Weather station lost
- Alarm test
- Average sensor fail
- Curtain 1-6 fail

5.9 Table of Events

- This menu lists up to 999 significant events according to bird age and time (see **Fig. 95**). Note that system messages that tend to reoccur should be handled by Rotem's technical support.

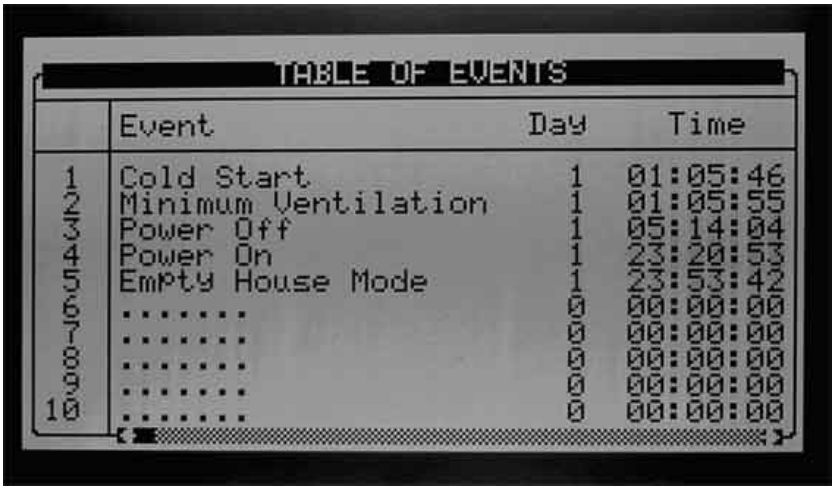

Fig. 95: Table of Events screenshot

Available events:

- Power Off: Appears when power is off.
- Power On: Appears when power is on.
- Cold Start: Appears when cold start is done.

- Vent Level #: Changes according to a specific stage
- Backup set reminder: see table **1.1**, 'Help'>'Set': 'Set Temp. Change remainder (diff)' parameter.
- Alarm off: Appears when the alarm is off.
- Alarm on: Appears when the alarm is on.
- Reset alarm: Appears when reset alarm is done.
- Alarm test: Appears when alarm test is done.
- Heater # off: Appears when one of the 12 heaters exits.
- Heater # on: Appears when one of the 12 heaters enters.
- New flock: Appears when new flock is being updated.
- System message #: For Rotem's technicians only.
- Alarm card fail: Appears when the alarm card fails
- Digital card fail: Appears when the digital card fails
- Memory restore: Appears when the system does restore cause by noises.
- Minimum ventilation: Appears when minimum ventilation occurs.
- Levels natural ven.: Appears when entering to levels natural ventilation.
- Tunnel ventilation: Appears when entering tunnel ventilation.
- Natural ventilation: Appears when entering natural ventilation.
- Changed growth day: Appears when changing the growth day occurs.
- MinV L.P Alarm Dis.: Appears when minimum low pressure alarm is being disabled.
- MinV L.P Alarm Ena: Appears when minimum low pressure alarm is being enabled.
- Tun. L.P Alarm Dis.: Appears when tunnel low pressure alarm is being disabled.
- Tun L.P Alarm Ena.: Appears when tunnel low pressure alarm is being enabled.
- Visitor Log in: Appears when the visitor logs in with his password.
- User # log in: Appears when the user logs in with his password.
- Owner log in: Appears when the owner logs in with his password.
- Visitor change pass: Appears when the visitor changed his password.
- User # change pass: Appears when the user changed his password.
- Owner change pass: Appears when the owner changed his password.
- Data read from plug: Appears when data is being read from plug.
- System recover: Appears when the system tries to recover itself, in cases such as noises.
- System lock: Appears when either using the correct password, or when using hot key '9' (see **Table 2**), or automatically after 5 minutes.
- Sw. # off -> on: Appears when the switch changes from off to on.
- Sw. # off -> Auto: Appears when the switch changes from off to Auto.
- Sw. # on -> off: Appears when the switch changes from on to off.
- Sw. # on -> Auto: Appears when the switch changes from on to Auto.
- Sw. # Auto -> off: Appears when the switch changes from Auto to off.
- Sw. # Auto -> on: Appears when the switch changes from Auto to on.

- Table # change: Appears when a specific table number has been changed.
- Table # PC Change: Appears when the PC changes a specific table number.
- Offset change: see table **1.1**, 'Help'>'Set': 'Temperature curve offset' parameter.
- Natural mode: Appears when natural mode begins.
- Levels mode: Appears when levels mode begins.
- High heater # on: Appears when high heater number is on.
- Low rad # on: Appears when low radiant heater number is on.
- High rad # off: Appears when high radiant heater number is off.
- High rad # on: Appears when high radiant heater number is on.
- Normal house mode: Appears when setting at exiting (see table **1.8**).
- Empty house mode**:** Appears when setting at a specific time (see table **1.8**).

5.10 History View

This option consists of a variety of sensors and data information (see **Fig. 96 - 99**). The resolution is according to the one defined in Setup.
Go to 'Help'>'Set' and set the desired choice by using the '+/-' .Note that changing choices erases old data. The options are as follows:

- Vent Level
- Target Temp.
- House Temp. Min
- House Temp. Average
- House Temp. Max
- Temp – 1-9 Min
- Temp – 1-9 Average
- Temp – 1-9 Max
- Out-t° Min
- Out-t° Average
- Out-t° Max
- Humidity In/Out Min
- Humidity In/Out Average
- Humidity In/Out Max
- W. Speed Average
- W. Speed Max
- W. Dir Average
- Water
- Feed

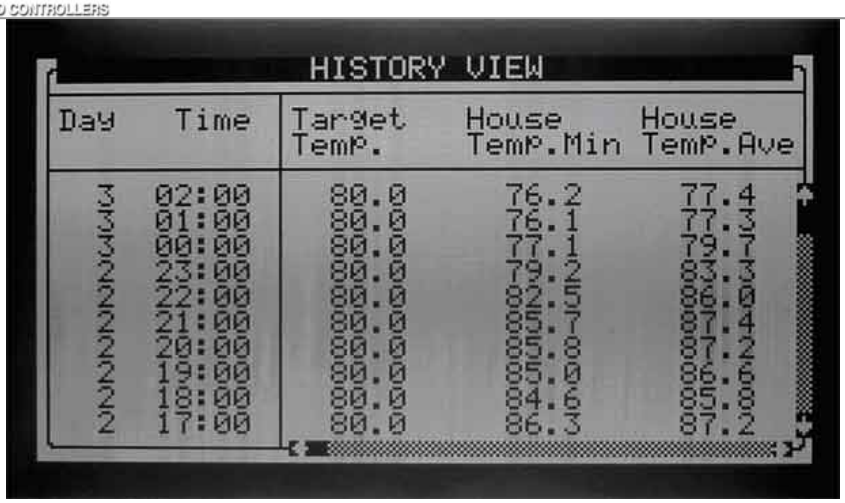

Fig. 96: History View screenshot – part 1

Fig. 97: History View screenshot – part 2

Fig. 98: History View screenshot – part 3

Fig. 99: History View screenshot – part 4