GE-OPTIGAIN7 Configuration Guide

1E_GE_OPTIGAIN7_Configuration_Guide_C2V28V3

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GE-OPTIGAIN7 Configuration Guide

IMPORTANT NOTICE

The manufacturer reserves the right to make changes without notice in product design and specifications as warranted by evolution in user needs, progress in engineering or manufacturing technology.

FarmQuest^{TM} Livestock Management is an online cloud-based management software offering livestock producers and their stakeholders a fully integrated and powerful set of management tools. With this purchase, you have worldwide, 24/7 access to a FarmQuest account. To access/open your FarmQuest account, visit www.farmquest.com

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GE-OPTIGAIN7 Configuration Guide

TABLE OF CONTENTS

GE-OPTIGAIN7 Configuration Guide

Configuration Versions			
Version	Date	Min. Proc. Version	Modification
C2V28V0	2018/02/23	9	- New configuration made from C2V19V2 - Add animal inventory for each scale. - Add mortalities and actual quantities history. - Add target weight evaluation option between per day or per period. - Add OPTI-GAIN 1 version 50 module compatibility. - Add low and high limits on uniformity.
C2V28V1	2018/04/03	9	- Add an option to follow the chart for a number of days during the beginning of a flock in the evolution mode. - Correction of the target weight period evaluation.
C2V28V2	2018/06/20	9	- Add a cull mortality inventory. - Add a scale age acquisition. - Add sections to the different elements of the configuration. - Add a weight and gain acquisition off the last evaluation period. - Remove the selection display of the temperature probes for the calculation of the average temperature. - Correction of the Target Weight display Method when the corresponding scale is in Chart method. - Correction on standard deviation calculation. - Send tolerance, last weighed time and correction factor values to be used by FarmQuest reports.
C2V28V3	2019/10/07	9	- Application of the average weight correction factor even when the target weight evaluation method is per period. - Correction of the period average weight reinitialization. - Add Precision+ mode.

GE-OPTIGAIN7 Configuration Guide

PRE-INITIALIZATION

```
 PRE-INITIALIZATION
Weight Unit: lb  ←         ①
 T° Unit: Fahrenheit ←       ②
  Date  : 31/08/12 ←      ③
  Time  :  1:00P ←        ④
  Format: AM/PM ←         ⑤
Language: English ←        ⑥
         Apply ←          ⑦
```

This screen appears only the first time the control is powered up and is used to set the measuring unit, temperature unit, date, time and their respective formats. These options may be changed after the initialization.

1. This parameter is used to choose the weight-measuring unit that will be used by the GE-OPTIGAIN7. This unit may be either the gram or the pound.

2. This parameter is used to choose the temperature unit that will be used by the control. This unit may be either Fahrenheit or Celsius.

3. This parameter is used to adjust the actual date. To change the date, position the cursor on this parameter and use the $\boxed{+}$ and $\boxed{-}$ buttons to change the value.

4. This parameter is used to adjust the actual time of day. To change the time of day, position the cursor on this parameter and use the $\boxed{+}$ and $\boxed{-}$ buttons to change the value.

5. This parameter is used to choose the time format that all clock-type parameters will use. The time format may be 24HR or AM/PM.

6. This parameter is used to choose the language used by the controller. The language may be English or French.

7. This parameter is used to proceed with the initialization of the configuration using the above adjustments. The initialization screen will appear once the $\boxed{\text{SELECT}}$ button has been pressed while the cursor is positioned on this parameter.

Note on the weight-measuring unit:
The weight-measuring unit may change according to user preferences and the type of poultry weighed by the scale. The user may select the metric measuring unit (g or kg) or the imperial measuring unit (lb). The maximum value depends on the type of poultry.

Type of poultry	Metric Measuring Unit (1g or 0.01kg)	Imperial Measuring Unit (0.001lb or 0.01lb)

GE-OPTIGAIN7 Configuration Guide

Chicken	1 unit = 1g **Display format** Weight: 0000g Standard Deviation: 0000.0g	1 unit = 0.001lb **Display format** Weight: 0.000lb Standard Deviation: 0.0000lb
Turkey	1 unit = 0.01kg **Display format** Weight: 00.00kg Standard Deviation: 00.000kg	1 unit = 0.001lb **Display format** Weight: 00.00lb Standard Deviation: 00.000lb

GE-OPTIGAIN7 Configuration Guide

SUMMARY
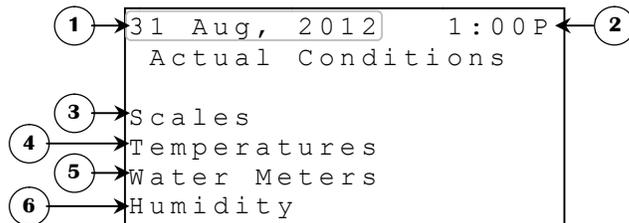
```
1 → 31 Aug, 2012    1:00P ← 2
      Actual Conditions
3 → Scales
4 → Temperatures
5 → Water Meters
6 → Humidity
```

1.   This parameter displays the actual date.

2.   This parameter displays the actual time of day using the chosen format.

3.   This parameter gives access to the **ACTUAL CONDITIONS - SCALES** screen.

4.   This parameter gives access to the **ACTUAL CONDITIONS - TEMPERATURES** screen.

5.   This parameter gives access to the **ACTUAL CONDITIONS - WATER METER** screen.

6.   This parameter gives access to the **ACTUAL CONDITIONS - HUMIDITY** screen.

ACTUAL CONDITIONS - SCALES

1.   This parameter displays the actual date.

2.   This parameter displays the time of day using the chosen format.

3.   These parameters are reference numbers that are used to associate the data to the scale number on the same line. They may also be used to access the **ACTUAL INFORMATION** screen of the respective scale by pressing the SELECT button when the cursor is positioned on one of these parameters.

4.   These parameters display the actual age of the respective flock. If a flock has not been started, the corresponding parameter will display "--". These values are incremented each time the time of day goes from 23:59 to 0:00 (11:59P to 12:00A).

5.   These parameters display the weight **GAIN** [1] during the actual day. The weight **GAIN** [1] is the difference between today's **AVERAGE WEIGHT** [1] and yesterday's **AVERAGE WEIGHT** [1]. If a scale has not recorded a weight during the actual day or the preceding one, the **GAIN** [1] cannot be calculated and the respective parameter will display "----". These values are displayed to the nearest unit from -9998 to 9999 units (see **Note on the weight-measuring unit**).

6.   These parameters display the **AVERAGE WEIGHT** [1] of the respective scale recorded for the actual day. If a scale has not recorded a weight during the actual day, the respective parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

---

[1] Refer to the **DETAILS** screen for more information on this parameter.

7. These parameters appear to indicate the current state of the respective scale. When a scale has not communicated with the GE-OPTIGAIN7 for five minutes, a star will blink next to the corresponding reference number. At this moment, it will be possible to access the **ALARM HISTORY** screen by pressing the $\boxed{\text{SELECT}}$ button while the cursor is positioned on one of these parameters. If flock is stopped, the letter "S" will blink next to the corresponding reference number. At this moment, it will be possible to access the **NEW FLOCK** screen by pressing the $\boxed{\text{SELECT}}$ button while the cursor is positioned on one of these parameters.

8. These parameters are used to access the **YESTERDAY'S RESULTS** screen.

9. This parameter is used to access the **CHICKEN AVERAGE WEIGHT HISTORY** screen. If only chicken scales are used, this parameter will display "Avg :".

10. This parameter displays the average weight calculated by all active chicken scales whose flock has been started for the actual day. If no scale has recorded a weight during the actual day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

11. This parameter is used to access the **TURKEY AVERAGE WEIGHT HISTORY** screen. If only turkey scales are used, this parameter will display "Avg :"

12. This parameter displays the average weight calculated by all active turkey scales whose flock has been started for the actual day. If no scale has recorded a weight during the actual day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

GE-OPTIGAIN7 Configuration Guide

YESTERDAY'S RESULTS

1. This parameter displays the actual date.

2. This parameter displays the time of day using the chosen format.

3. These parameters are reference numbers that are used to associate the data to the scale number on the same line. They may also be used to access the **ACTUAL INFORMATION** screen of the respective scale by pressing the SELECT button when the cursor is positioned on one of these parameters.

4. These parameters display the age the respective flock had yesterday. If a flock has not been started, the corresponding parameter will display "--". These values are incremented each time the time of day goes from 23:59 to 0:00 (11:59P to 12:00A).

5. These parameters display the weight **GAIN** [2] yesterday. The weight **GAIN** [2] is the difference between yesterday's **AVERAGE WEIGHT** [2] and the **AVERAGE WEIGHT** [2] of the day before that. If a scale has not recorded a weight during the yesterday or the day before that, the **GAIN** [2] cannot be calculated and the respective parameter will display "----".These values are displayed to the nearest unit (see **Note on the weight-measuring unit**).

6. These parameters display the **AVERAGE WEIGHT** [2] of the respective scale recorded yesterday. If a scale has not recorded a weight yesterday, the respective parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

---

[2] Refer to the **DETAILS** screen for more information on this parameter.

7. These parameters appear to indicate the current state of the respective scale. When a scale has not communicated with the GE-OPTIGAIN7 for five minutes, a star will blink next to the corresponding reference number. At this moment, it will be possible to access the **ALARM HISTORY** screen by pressing the SELECT button while the cursor is positioned on one of these parameters. If flock is stopped, the letter "S" will blink next to the corresponding reference number. At this moment, it will be possible to access the **NEW FLOCK** screen by pressing the SELECT button while the cursor is positioned on one of these parameters.

8. This parameter gives access to the **ACTUAL CONDITIONS - SCALES** screen.

9. These parameters are used to access the **CHICKEN AVERAGE WEIGHT HISTORY** screen. If only chicken scales are used, this parameter will display "Avg :"

10. This parameter displays the average weight calculated by all active chicken scales whose flock has been started for the preceding day. If no scale has recorded a weight during the preceding day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

11. These parameters are used to access the **TURKEY AVERAGE WEIGHT HISTORY (S.1.3)** screen. If only turkey scales are used, this parameter will display "Avg :"

12. This parameter displays the average weight calculated by all active turkey scales whose flock has been started for the preceding day. If no scale has recorded a weight during the preceding day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

CHICKEN AVERAGE WEIGHT HISTORY

The average weight history can record up to 250 days. Once 250 have been recorded, the average weight history will not be updated.

1.   These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN** [3].

2.   This parameter is used to clear the average weight history. When the SELECT button is pressed while the cursor is positioned on this parameter, a confirmation demand will appear. If the confirmation is positive, the average weight history will be erased.

3.   This parameter indicates the weight unit used by chicken scales. This unit may be "g" or "lb".

4.   These parameters display the date at which the data of the same line was recorded.

5.   These parameters indicate the amount of units (gram or pound) calculated by all active scales using chicken flock type during the corresponding day. If no scale has recorded a weight during the preceding day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

---

[3] Refer to the **SCALE CONFIGURATION** screen for more information on this parameter

TURKEY AVERAGE WEIGHT HISTORY

The average weight history can record up to 250 days. Once 250 have been recorded, the respective scale's history will not be updated.

1. These parameters are used to navigate through the different pages of the history. When the [SELECT] button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN** [4].

2. This parameter is used to clear the average weight history. When the [SELECT] button is pressed while the cursor is positioned on this parameter, a confirmation demand will appear. If the confirmation is positive, the average weight history will be erased.

3. This parameter indicates the weight unit used by turkey scales. This unit may be "kg" or "lb".

4. These parameters display the date at which the data of the same line was recorded.

5. These parameters indicate the amount of units (gram or pound) calculated by all active scales using turkey flock type during the corresponding day. If no scale has recorded a weight during the preceding day, this parameter will display "----". These values are displayed from 1 to 9999 units (see **Note on the weight-measuring unit**).

---

[4] Refer to the **SCALE CONFIGURATION** screen for more information on this parameter

GE-OPTIGAIN7 Configuration Guide

ACTUAL CONDITIONS - TEMPERATURES

```
┌─────────────────────────────────────┐
│ 31 Aug, 2012      1:00P              │
│         Temperatures                 │
│ Temperature 1   *    28.0           │
│ Temperature 2   *    29.8           │
│ Temperature 3        26.5           │
│ Temperature 4        28.0           │
│ Temperature 5        29.5           │
│ Average Temp.        28.3           │
└─────────────────────────────────────┘
```

1. This parameter displays the actual date.

2. This parameter displays the actual time of day using the chosen format.

3. These parameters display the temperature probes used and are associated to the temperature reading to the right. It's also possible to access the respective **TEMPERATURE {1-5} / AVERAGE TEMP. HISTORY** screen by pressing SELECT when the cursor is on the parameter to be viewed.

4. These parameters display if there is a problem with the probes. When there is an alarm with a probe (temperature low, high or defective), a star will blink to the right of the corresponding probe. These parameters also open the **ALARM HISTORY** screen when the cursor is on one of the stars and SELECT is pressed.

5. These parameters display the temperature reading of the respective probe and average.

GE-OPTIGAIN7 Configuration Guide

ACTUAL CONDITIONS – WATER METER

```
┌─────────────────────────────┐
① →│31 Aug, 2012      1:00P│← ②
   │      Water  Meters       │
   │Meter  1    *    9 9 9 9 │← ④
   │Meter  2    *    9 9 9 9 │
③ →│Meter  3         9 9 9 9 │← ⑤
   │Meter  4         9 9 9 9 │
   │Total           9 9 9 9 9│
   └─────────────────────────────┘
```

1. This parameter displays the actual date.

2. This parameter displays the actual time of day using the chosen format.

3. These parameters display the water meters used and are associated to the reading to the right. It's also possible to access the respective **WATER METER {1-4} HISTORY** screen by pressing SELECT when the cursor is on the parameter to be viewed.

4. These parameters display the number of pulses read by the respective water meter and total. These readings are displayed to the nearest 1 unit (litres or gallons) from 0 units to 20 000 units and 0 units to 80 000 units for the total.

5. These parameters display if there is a problem with the probes. When there is a water meter alarm, a star will blink to the right of the corresponding water meter. These parameters also open the **ALARM HISTORY** screen when the cursor is on one of the stars and SELECT is pressed.

GE-OPTIGAIN7 Configuration Guide

ACTUAL CONDITIONS - HUMIDITY

1.   This parameter displays the actual date.

2.   These parameters display the humidity probes used and are associated to the humidity reading to the right. It's also possible to access the respective **HUMIDITY {1-4}** screen by pressing SELECT when the cursor is on the parameter to be viewed.

3.   This parameter displays the actual time of day using the chosen format.

4.   These parameters display the humidity reading of the respective probe.

5.   These parameters display if there is a problem with the probes. When there is an alarm with a humidity probe, a star will blink to the right of the corresponding probe. These parameters also open the **ALARM HISTORY** screen when the cursor is on one of the stars and SELECT is pressed.

GE-OPTIGAIN7 Configuration Guide

SCALES

```
                Scales
    Scale 1
 ①→ Scale 2
    Scale 3
    Scale 4
  ②→ Scale Config.
 ③→ Scale Calibration
 ④→ Growth Curve
```
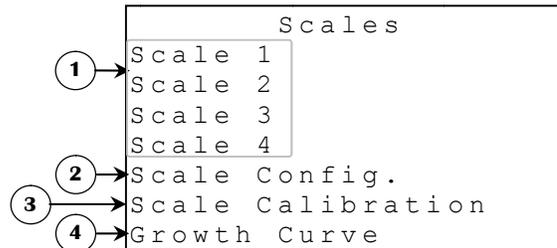
1.   These parameters give access to the respective **SCALE {1-4}** screen.

2.   These parameters give access to the **SCALE CONFIGURATION** screen.

3.   These parameters give access to the **SCALE CALIBRATION** screen.

4.   These parameters give access to the **GROWTH CURVE** screen.

GE-OPTIGAIN7 Configuration Guide

<u>SCALE {1-4}</u>

```
              Scale X

  1  → Actual Information
  2  → Animal Inventory
  3  → Scale History

  4  → New Flock
```
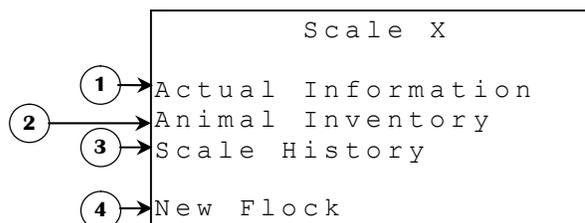
1.   This parameter gives access to the respective scale **ACTUAL INFORMATION** screen.

2.   This parameter is used to access the **ANIMAL INVENTORY** screen of the respective scale.

3.   This parameter gives access to the respective **SCALE {1-4} HISTORY** screen.

4.   This parameter gives access to the respective scale **NEW FLOCK** screen.

GE-OPTIGAIN7 Configuration Guide

<u>ACTUAL INFORMATION</u>
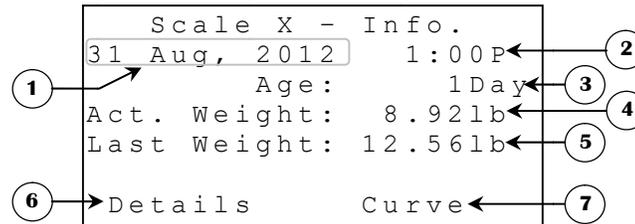
```
     Scale X - Info.
31 Aug, 2012    1:00P
            Age:      1Day
Act. Weight:    8.92lb
Last Weight:   12.56lb

Details         Curve
```

1. This parameter displays the actual date.

2. This parameter displays the actual time of day using the chosen format.

3. This parameter displays the flock's actual age. The age is incremented each time the date changes. The actual age is displayed from day 0 to 500.

4. This parameter displays the actual weight read by the GE-OPTIGAIN1 module. The scale must have been calibrated to obtain a significant value.

5. This parameter displays the last weight recorded by the GE-OPTIGAIN1 module. For a weight to be recorded, it must be within the respective **TARGET WEIGHT** [5] +/- the corresponding **TOLERANCE HIGH/LOW** [6]. The weight recorded by the GE-OPTIGAIN1 module is the difference between the last stable weight and the new actual weight. Ex: If two birds weighing 500 grams each are already on the scale and a third bird weighing 630 grams is added, the GE-OPTIGAIN1 module will record a weight of 630 grams, but the actual weight displayed will be 1630 grams. If no correct weight has been recorded, this parameter will display « --- ». Otherwise, the last weight will be displayed to the nearest unit from 1 to 9999 units (see **Note on the weight-measuring unit**).

6. This parameter gives access to the **DETAILS** screen.

7. This parameter is used to access the **GROWTH CURVE SCALE {1-4}** screen.

---

[5] Refer to the **DETAILS** screen for more information on this parameter.
[6] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.

DETAILS

```
 Scale X - Details

Tgt. Weight:    0.47lb
Avg. Weight:    0.47lb
Tot Weighed:        5
        Gain:    0.07lb
   Std. Dev.:  0.005lb
  Uniformity:      10%
Per. Weight:      47g
```
①
②
③
④
⑤
⑥
⑦

1.   This parameter displays the target weight of the actual day. The target weight is determined by the growth curve if the **WEIGHT METHOD** [7] is set to "Chart". If the **WEIGHT METHOD** [7] is set to "Evolution", the target weight will be equal to **AVERAGE WEIGHT** [8] (or the **START WEIGHT** [9] adjusted by the user when flock is started) increased according to the respective **ADD WEIGHT** [10] parameter. This value will be evaluated at a frequency determined by **EVALUATION FREQUENCY** [11]. If the flock of the respective scale has not been started, this parameter will display "----". Otherwise, the target weight is displayed to the nearest unit from 1 to 9999 units (see **Note on the weight-measuring unit**).

2.   This parameter displays the average weight of the current day. If there has not been any bird weights recorded today, this parameter displays "----". Otherwise, the average weight is displayed to the nearest unit from 1 to 9999 units (see **Note on the weight-measuring unit**).

3.   This parameter displays the amount of bird weights recorded by the GE-OPTIGAIN7 during the current day. For a weight to be recorded, it must be within the respective target weight +/- the corresponding **TOLERANCE HIGH/LOW** [7]. The GE-OPTIGAIN7 can record up to 9999 birds weighed in one day.

4.   This parameter displays the gain calculated for the respective scale. The gained weight is the difference between today's **AVERAGE WEIGHT** [8] and yesterday's **AVERAGE WEIGHT** [8]. If a scale has not recorded a weight during the actual day or the preceding one, the gain cannot be calculated and the respective parameter will display "----". The gain value is displayed to the nearest unit from -9998 to 9999 units (see **Note on the weight-measuring unit**).

---

[7] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.

[8] Refer to the **DETAILS** screen for more information on this parameter.

[9] Refer to the **NEW FLOCK** screen for more information on this parameter.

[10] Refer to the **GROWTH CURVE SCALE {1-4}** screen for more information on this parameter.

[11] Refer to the **TARGET EVALUATION** screen for more information on this parameter.

5. This parameter displays the standard deviation calculated by the respective scale. The standard deviation is a measure of the uniformity of a group of birds. For example, if a standard deviation of 30.0 grams is calculated, this indicates that 68% of the birds have a weight within 30.0 grams of the **AVERAGE WEIGHT**. This value also indicates that 95% have a weight within 60.0 grams (standard deviation x2) of the **AVERAGE WEIGHT**. If less than two birds have been weighed during the current day, this parameter displays "–––––". Otherwise, the standard deviation is displayed to the nearest 0.1 unit from 0.0 to 3300.0 units (see **Note on the weight-measuring unit**).

6. This parameter displays the uniformity calculated by the respective GE-OPTIGAIN1 module for the current day. The uniformity represents the percentage of the birds that are within **HIGH/LOW UNIFORMITY**[12] % of the **TARGET WEIGHT**. If no birds have been weighed during the current day, this parameter displays "–––". Otherwise, the uniformity is displayed to the nearest 1% from 0% to 100%.

7. This parameter displays the average weight of the actual period. If there has not been any bird weights recorded during the period, this parameter displays "––––". Otherwise, the average weight is displayed to the nearest gram (0.001 pound) from 1 to 9999 grams (0.001 to 9.999 pounds).

---

[12] Refer to the **SCALE 1-4 ADJUSTMENT** screen for more information on this parameter.

SCALE {1-4} HISTORY

```
        Scale X - History

 ①→ Average/Gain:Day.Avg
 ②→ Unif./Std.Dev.
 ③→ Growth Curve
 ④→ Day Mortality
 ⑤→ Cull Mortality
```
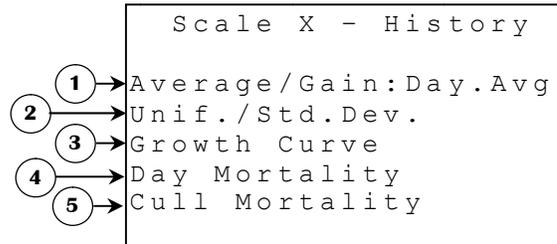
1.   This parameter gives access to the **AVERAGE/GAIN HISTORY**. The display in the history screen depends on the selection made in this parameter. When this parameter is set to `Day.Avg`, the history displays the average weight and the gain of the day, however if it is set to `Per.Eval`, the display of the history concerns the average weight and the gain of the last period of the day.

2.   This parameter gives access to the **UNIFORMITY/STANDARD DEVIATION HISTORY** screen.

3.   This parameter gives access to the **SCALE {1-4} GROWTH CURVE** screen.

4.   This parameter is used to access the **DAY MORTALITY HISTORY** screen.

5.   This parameter is used to access the **CULL MORTALITY HISTORY** screen.

AVERAGE/GAIN HISTORY

```
        ←        Scale X        →
   Start: Jun 21, 2012
   Age Tot.   Avg.      Gain
    10  1000  99.00    1.00
     9  1000  99.00    1.00
     8  1000  99.00    1.00
     7  1000  99.00    1.00
     6  1000  99.00    1.00
     5  1000  99.00    1.00
     4  1000  99.00    1.00
     3  1000  99.00    1.00
     2  1000  99.00    1.00
```

Each history may record up to 250 days. Once the 250 have been recorded, the respective scale's history will no longer be updated. To reset the history, a new flock must be started.

1. These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN** [13].

2. These parameters display the age the birds had when the data of the same line was recorded. The data is displayed according to the age in descending order.

3. These parameters display the amount of birds weighed by the GE-OPTIGAIN1 module for the corresponding age, indicated immediately to the left of the corresponding parameter.

4. This parameter displays the date at which the displayed flock was started. If the flock of the respective scale has not been started, the message "Not Started" will appear instead of this date.

5. These parameters display the **GAIN** [14] calculated at the corresponding age. If a scale has not recorded an average weight during the respective day or the preceding one, the **GAIN** [14] cannot be calculated and the respective parameter will display "----". The gain value is displayed the nearest unit from -9998 to 9999 units (see **Note on the weight-measuring unit**).

---

[13] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.
[14] Refer to the **DETAILS** screen for more information on this parameter.

6.   These parameters display the **AVERAGE WEIGHT** [14] at the corresponding age. If there has not been any bird weights recorded during the respective day, the respective parameter will display "----". Otherwise, the average weight is displayed to the nearest unit from 0 to 9999 units (see **Note on the weight-measuring unit**).

GE-OPTIGAIN7 Configuration Guide

UNIFORMITY/STANDARD DEVIATION HISTORY

Each history may record up to 250 days. Once the 250 have been recorded, the respective scale's history will no longer be updated. To reset the history, a new flock must be started.

1. These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN [15]**.

2. This parameter displays the date at which the displayed flock was started. If the flock of the respective scale has not been started, the message "Not Started" will appear instead of this date.

3. These parameters display the age the birds had when the data of the same line was recorded. The data is displayed according to the age in descending order.

4. These parameters display the amount of birds weighed by the GE-OPTIGAIN1 module for the corresponding age, indicated immediately to the left of the corresponding parameter.

---

[15] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.

5.   These parameters display the standard deviation calculated at the corresponding age. The standard deviation is a measure of the uniformity of a group of birds. For example, if a standard deviation of 0.300 kilograms is calculated, this indicates that 68% of the birds have a weight within 0.300 kilograms of the average weight. This value also indicates that 95% have a weight within 0.600 kilograms (standard deviation x2) of the average weight. If no birds have been weighed during the corresponding day, the respective parameter will display "----".

6.   These parameters display the uniformity calculated at the corresponding age. The uniformity represents the percentage of the birds that are within 10% of the target weight. If no birds have been weighed during the corresponding day, the respective parameter will display "----".

DAY MORTALITY HISTORY

```
 ←        Scale   X          →
Start:  23 Nov. 2011
   Date      Qty      DayMort
10  Nov    1000          0
 9  Nov    1000          0
 8  Nov    1000          0
 7  Nov    1000          0
 6  Nov    1000          0
 5  Nov    1000          0
 4  Nov    1000          0
 3  Nov    1000          0
 2  Nov    1000          0
```

Each history may record up to 50 days. Once 50 have been recorded, the respective scale's history will not be updated.

1.   These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to the **#HISTORY DAYS/SCREEN** [16].

2.   These parameters display the age the birds had when the data of the same line was recorded. The data is displayed according to the age in descending order. These values are displayed to the nearest day from 0 days to 99 days.

3.   These parameters display the date when the data of the same line was recorded. The dates are ordered from the most recent to the oldest.

4.   These parameters display the total amount of animals counted at the end of the corresponding day.

5.   These parameters display the natural or accidental mortality counted at the end of the corresponding day.

---

[16] Refer to the **CALIBRATION** screen for more information on this parameter.

GE-OPTIGAIN7 Configuration Guide

CULL MORTALITY HISTORY

```
 ←       Scale   X        →
Start:  23 Nov. 2011
   Date     Qty    CullMort
10  Nov    1000          0
 9  Nov    1000          0
 8  Nov    1000          0
 7  Nov    1000          0
 6  Nov    1000          0
 5  Nov    1000          0
 4  Nov    1000          0
 3  Nov    1000          0
 2  Nov    1000          0
```

Each history may record up to 50 days. Once 50 have been recorded, the respective scale's history will not be updated.

1. These parameters are used to navigate through the different pages of the history. When the ⌜SELECT⌟ button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to the **#HISTORY DAYS/SCREEN** [17].

2. These parameters display the age the birds had when the data of the same line was recorded. The data is displayed according to the age in descending order. These values are displayed to the nearest day from 0 days to 99 days.

3. These parameters display the date when the data of the same line was recorded. The dates are ordered from the most recent to the oldest.

4. These parameters display the total amount of animals counted at the end of the corresponding day.

5. These parameters display the intentional mortality (animals selected to be slaughtered) counted at the end of the corresponding day.

[17] Refer to the **CALIBRATION** screen for more information on this parameter.

SCALE {1-4} NEW FLOCK

```
              Scale X
             New Flock

Starting Age:     0day   ←——( 1 )
Start Weight: 0.50lb   ←——( 2 )

( 3 )——→ Start Flock
         Flock Stopped  ←——( 4 )
```

1. This parameter allows the user to set the birds' age when the flock is started. When a flock is started, its actual age will be set to this value. This parameter is adjusted in 1-day increments from day 0 to day 249.

2. This parameter allows the user to set the birds' **TARGET WEIGHT** [18] when the flock is started. When a flock is started, its **TARGET WEIGHT** [18] will be set to this value if the "Evolution" **WEIGHT METHOD** [19] is used. When the "Chart" method is used, this parameter will not appear. The start weight is adjusted in 1-unit increments from 10 to 9999 units (see **Note on the weight-measuring unit**).

3. This parameter is used to start or stop a flock for the respective scale. When the SELECT button is pressed while the cursor is positioned on this parameter and "Start Flock" is displayed, a confirmation screen will appear, warning the user that all data and histories will be reinitialised. When the SELECT button is pressed while the cursor is positioned on this parameter and "Stop Flock" is displayed, the flock will be stopped, which means all histories will cease to record data.

4. This parameter displays the actual state of the respective scale's flock or the result of the flock starting operation. When a confirmation question is satisfied, the GE-OPTIGAIN7 will display this screen once again with the result of the flock starting operation instead of the flock status. The possible results of the operation are: "Initializing", "Scale Busy" or "Scale Not Resp.". The last two messages indicate a problem occurred during the initialization. At this point, the user must attempt to start the flock once again. The message "Initializing" indicates that the flock starting operation was successful. If communication is maintained throughout the initialization process, the message "Flock Running" will be displayed to indicate the operation was completed. If no flock starting operation has been performed lately, this parameter will display the flock status; either "Flock Running" or "Flock Stopped".

---

[18] Refer to the **DETAILS** screen for more information on this parameter.
[19] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.

GE-OPTIGAIN7 Configuration Guide

See flock status message table on the next page.

Flock status message list	
Message	**Description**
"Flock Stopped"	The flock has never been started. A problem occurred during the flock starting operation and the flock was not started.
"Initializing"	The initilization of the GE-OPTIGAIN 1 module's data is in progress.
"Scale Busy"	The module was performing an operation and could not initialize its data.
"Scale Not Resp."	The communication with the GE-OPTIGAIN 1 module could not be obtained. The communication with the GE-OPTIGAIN 1 module was lost after the initialization was started.
"Flock Running"	The flock is activated and data is presently recorded.

GE-OPTIGAIN7 Configuration Guide

ANIMAL INVENTORY
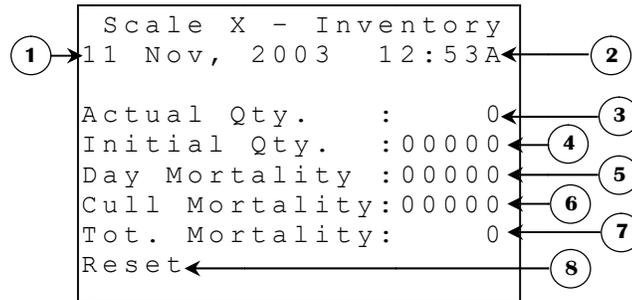
```
     Scale X - Inventory
 1 →│11 Nov, 2003  12:53A│← 2

     Actual Qty.    :     0 ← 3
     Initial Qty.  :00000 ← 4
     Day Mortality :00000 ← 5
     Cull Mortality:00000 ← 6
     Tot. Mortality:     0 ← 7
     Reset ← 8
```

1.   This parameter displays the actual date.

2.   This parameter displays the time of day using the chosen format.

3.   This parameter displays the number of remaining animals according to **INITIAL AMOUNT** and **TOTAL MORTALITY**.

4.   This parameter is used to adjust the number of animals present when a batch is started. When a batch is started or when **RESET** is pressed, the **ACTUAL AMOUNT** will take the value adjusted here.

5.   This parameter is used to adjust the number of the natural or accidental mortalities for the current day. The value adjusted here will reduce the **ACTUAL AMOUNT**. This value will be automatically reset at each day change.

6.   This parameter is used to adjust the number of the intentional mortalities (animals selected to be slaughtered) for the current day. The value adjusted here will reduce the **ACTUAL AMOUNT**. This value will be automatically reset at each day change.

7.   This parameter displays the total amount of mortalities since the batch has started. This value can be reset with the **RESET** parameter.

8.   This parameter is used to reset the animals' livestock. When this parameter is pressed, all relative livestock parameters for the scale will be reset.

SCALE CONFIGURATION

```
         Scale Config.
Status              Section
1: OFF   ADJUST.    None
2: OFF   ADJUST.    1
3: OFF   ADJUST.    3
4: OFF   ADJUST.    4

Change Weight Unit
```
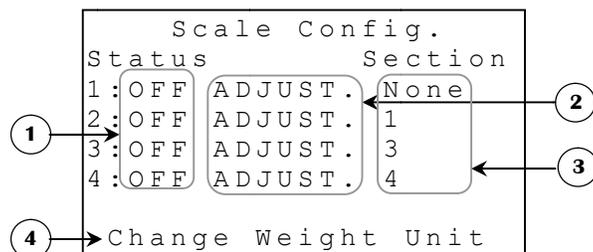
1.   These parameters are used to activate or deactivate the respective GE-OPTIGAIN 1 module. If this parameter is set to OFF, the system will not check communication for that module, its flock will be stopped and all parameters relative to that scale will disappear. It is important to note that setting one of these parameters to ON will not start the flock. For more information, see screens **SCALE {1-4} NEW FLOCK**.

2.   These parameters are used to access the respective **SCALE {1-4} ADJUSTMENT** screen. A warning screen will appear for 5 seconds before the adjustment screen is displayed.

3.   This parameter is used to assign a section to the scale, it is modifiable only if the corresponding scale is active; in this case, it can take the following values : None, 1, 2, 3 and 4. If the scale is inactive, this parameter will be at None.

4.   This parameter opens a confirmation screen that will ask the user if he wishes to proceed with the unit change. A second confirmation question will be asked to prevent all accidental changes. The scales will have to be calibrated once again when the measuring unit is changed. The weight can be measured in kilograms or in pounds. This parameter will not appear if a flock is already running.

SCALE 1-4 ADJUSTMENT

```
 Scale X Adjustment
     Flock Running      ←  ①
  Cancel   Validate  ←  ③
② → Poultry Type:Chicken ←  ④
  Bird Gender : Female ←  ⑤
  Weight Method:Evolu. ←  ⑥
  Start Chart : 7day   ←  ⑦
  Low Tolerance : 25%
  High Tolerance: 25%  ←  ⑧
  Low Uniformity : 25% ←  ⑨
  High Uniformity: 25%
  Module Speed :   2400 ←  ⑩
```

IMPORTANT NOTE:
The adjustments made in this screen must be validated. All adjustments made in this screen will not be effective until the user presses the `SELECT` **button when the cursor is on VALIDATE.**

1. This parameter will flash when a scale's flock is running. flock When a is running, the **POULTRY TYPE**, **BIRD GENDER** and **WEIGHT METHOD** cannot be changed.

2. This parameter is used to cancel the changes made in this screen. If the `SELECT` button is pressed while still positioned on this parameter, changes will **not** be applied.

3. This parameter is used to validate the changes made in this screen. If the `SELECT` button is pressed while still positioned on this parameter, changes will be applied.

4. This parameter is used to modify the type of poultry associated to the scale.

5. This parameter allows the user to choose the target weight chart that will be used. There are two pre-programmed charts with typical weights for male and female birds.

6.   This parameter is used to select the method used to determine the target weight. If the "Evolution" method is used, the target weight will be equal to yesterday's average weight (or the target weight adjusted by the user when flock is started) plus the respective **ADD WEIGHT** [20]. If the "Chart" method is used, the target weight for a given age will be determined by the corresponding weight adjusted in the growth curve of the respective scale. This parameter may only be adjusted when all scales are deactivated.

7.   This parameter is used to combine the "Chart" method and the "Evolution" one. It is active when its value is different from "OFF". When this parameter is active, the "Chart" method is followed for a number of days equivalent to the value assigned to this parameter. After this period, the "Evolution" method takes over. It is visible when the **Weight Method** is set to "Evolution". This parameter is adjustable in increments of 1day, from OFF to 250days.

8.   These parameters are used to set the valid weight limits for each scale. To make sure all weights recorded are valid, the scale will only record weights that are within the actual target weight - **TOLERANCE LOW** and the actual target weight + **TOLERANCE HIGH**. This parameter is adjusted in 1% increments from 20% to 40%.

9.   These parameters are used to set the uniformity limits for each scale. The scale will only consider the weight of a bird uniform only if it is within **HIGH/LOW UNIFORMITY** % of the actual target. This parameter is only visible if the module version is equal or superior to 7. This parameter is adjusted in 1% increments from 0% to 40%.

10.   This parameter is used to adjust the communication speed between the control and GE-OPTIGAIN 1 module. If the version of the module is inferior to 50, the selected speed must be 2400 bauds. This parameter can be adjusted to 2400 or 19200 bauds.

---

[20] Refer to the **SCALE {1-4} GROWTH CURVE** screen for more information on this parameter.

SCALE CALIBRATION

```
Scale Calibration

Scale 1 Calibration
Scale 2 Calibration
Scale 3 Calibration
Scale 4 Calibration
```
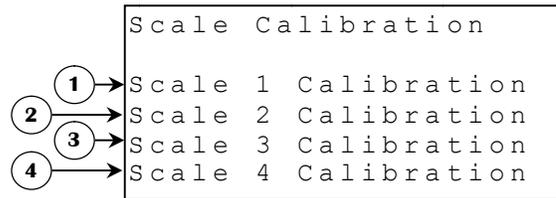
1.   This parameter is used to access the **SCALE 1 CALIBRATION** screen.

2.   This parameter is used to access the **SCALE 2 CALIBRATION** screen.

3.   This parameter is used to access the **SCALE 3 CALIBRATION** screen.

4.   This parameter is used to access the **SCALE 4 CALIBRATION** screen.

SCALE {1-4} CALIBRATION

```
Scale X Calibration
   Scale Available
Calib. Wgt:   10.00lb
Zero Calibration
   Scale Unstable
Gain Calibration
   Gain Calib. OK
   Restart Calib.
```
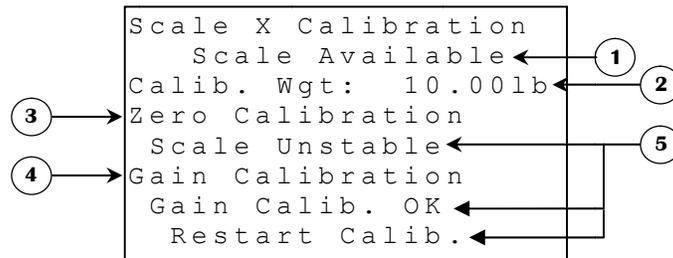
1.   This parameter displays the actual state of the GE-OPTIGAIN 1 module. A scale can only be calibrated when this parameter displays "Scale Available". If this parameter displays "Scale Busy" or "Scale Not Responding", the scale cannot be calibrated.

2.   This parameter allows the user to set the weight used for the calibration process. When calibrating the gain, the weight on the scale must be exactly the same as the one set here. The heavier the weight is, the better the precision will be. This parameter is adjusted in 1-unit increments from 1 to 10000 units.

3.   This parameter allows the user to start a calibration process that will determine the weight at which the scale will consider the weight to be zero (grams or pounds). To correctly evaluate the weight on the scale, the exact weight read when nothing is on the scale must be known. The scale must be emptied of all matter and press the SELECT button when the cursor is positioned on this parameter. At this moment, the message located immediately below this parameter will appear to indicate the status of the zero calibration sequence. Once the zero calibration has been completed, the **GAIN CALIBRATION** parameter will appear.

4.   This parameter allows the user to start a calibration process that will determine the gain of the scale. To correctly evaluate the gain of the scale, the variation of the electrical signal according to two known weights must be known; i.e. weight when the scale is empty and the **CALIBRATION WEIGHT** [21]. A weight precisely equal to the **CALIBRATION WEIGHT** [21] must be placed on the scale and the SELECT button pressed to start a gain calibration sequence. At this moment, the message located immediately beneath this parameter will appear to indicate the status of the gain calibration.

---

[21] Refer to the **SCALE CALIBRATION** screen for more information on this parameter.

5. These parameters display the actual calibration status. When the ⌐SELECT¬ button is pressed to start a calibration sequence, the message located beneath this parameter will appear immediately. The first message to appear normally should be "`Calibrating`", indicating that the operation has been started. If the GE-OPTIGAIN7 could not communicate with the GE-OPTIGAIN1 module, the message "`Scale Not Resp.`" will be displayed. If another operation is already in progress, the message that will appear will be "`Scale Busy`". If the calibration sequence has been started, but the signal is unstable for more than two minutes, the message "`Scale Unstable`" will be the one shown. All error situations will ask the user to repeat the process by displaying the "`Restart Calib.`" beneath the appropriate error message. When the GE-OPTIGAIN1 receives a stable signal for a certain period of time, the calibration will be successful and the message "`Zero Calib. OK`" or "`Gain Calib. OK`" will appear.

Calibration status message list	
Message	**Description**
"`Calibrating`"	The GE-OPTIGAIN1 module is trying to determine its zero/gain.
"`Scale Unstable`"	The scale could not obtain a stable signal after two minutes.
"`Scale Busy`"	The module is already doing an operation and can not calibrate at this moment.
"`Scale Not Resp.`"	The communication between GE-OPTIGAIN1 module and the GE-OPTIGAIN7 could not be established.
"`Zero Calib. OK`" "`Gain Calib. OK`"	The corresponding calibration has been successfully performed.

Scale calibration procedure:

Zero Calibration

➢ The scale must be completely empty to record the weight of the platter of that scale.

➢ The scale must be stable. If the scale moves, the electrical signal will be unstable.

➢ Start the zero calibration by pressing the ⌐SELECT¬ button while positioned on the "Zero Calibration" parameter of the scale that must be calibrated.

➢ Check the status message and make sure the latter indicates a successful calibration. If the calibration was successful, the "Gain Calibration" parameter will appear. If this is not the case, the zero calibration procedure must be repeated.

Gain Calibration

➢ A calibration weight of exactly the same value as the parameter of the same name adjusted in the **SCALE {1-4} CALIBRATION** screen must be placed on

the scale to calculate the variation of the electrical signal according to the variation weight. The heavier the weight is, the better the precision will be. It is recommended to use a weight of 10 kg (or 10 pounds) for the gain calibration.

- ➢ The scale must be stable. If the scale moves, the electrical signal will be unstable.

- ➢ Start the gain calibration by pressing the SELECT button while positioned on the "Gain Calibration" parameter of the scale that must be calibrated.

- ➢ Check the status message and make sure the latter indicates a successful calibration. If this is not the case, the gain calibration procedure must be repeated.

GROWTH CURVE

```
┌─────────────────────────────────┐
│         Growth Curve            │
│                                 │
│  ①────────→ Scale 1            │
│ ②──────────→ Scale 2           │
│  ③─────────→ Scale 3           │
│ ④──────────→ Scale 4           │
│   ⑤──────→ Precision+: ON      │
│   ⑥──────→ Correction Factor   │
│   ⑦──────→ Target Evaluation   │
└─────────────────────────────────┘
```
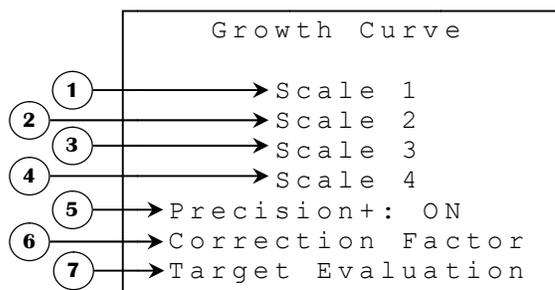
1.   This parameter is used to access the **SCALE 1 GROWTH CURVE** screen.

2.   This parameter is used to access the **SCALE 2 GROWTH CURVE** screen.

3.   This parameter is used to access the **SCALE 3 GROWTH CURVE** screen.

4.   This parameter is used to access the **SCALE 4 GROWTH CURVE** screen.

5.   This parameter is used to activate or deactivate Precision+ mode, this mode allows to automatically adjust the poultry average weight. If it is activated, Correction Factor will not be visible and therefore the average weight correction using Correction Factor will not be available. This parameter can be set to « ON » or « OFF ».

6.   This parameter is used to access the **CORRECTION FACTOR** screen.

7.   This parameter is used to access the **TARGET EVALUATION** screen.

SCALE {1-4} GROWTH CURVE

```
 1 →  ←    C u r v e   S c a l e   X   →    ← 1
            H i s t .   A d d
        A g e   A v g     W g t   T a r g e t
            0     0 . 5 0   0 . 0 0     0 . 5 0
            1     0 . 6 3   0 . 0 0     0 . 6 2
 2 →        2     0 . 7 8   0 . 0 0     0 . 7 7    ← 4
            3     0 . 9 7   0 . 0 0     0 . 9 4
            4     1 . 1 8   0 . 0 0     1 . 1 4
 3 →        5     1 . 4 1   0 . 0 0     1 . 3 6    ← 5
            6     1 . 6 8   0 . 0 0     1 . 6 0
          . . .
          4 9     - - - -   0 . 0 0   2 1 . 7 2
                C o p y   C u r v e  ← 6
```

1.   These parameters are used to navigate through the different pages of the growth curve. When the ⌐SELECT⌐ button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The growth curve is divided in pages of 50 days.

2.   These parameters display the age at which the data of the same line was recorded. The ages displayed in this screen are always 0 days to 249 days in ascending order.

3.   These parameters display the **AVERAGE WEIGHT** [22] of the corresponding age, indicated on the left of these parameters. If no birds have been weighed for the corresponding day, these parameters will display "----". Otherwise, these values are displayed to the nearest unit from 1 to 9999 units (see **Note on the weight-measuring unit**).

4.   These parameters allow the user to adjust the **TARGET WEIGHT** [22] of a flock for a given age. Each weight can be individually adjusted to allow the user to create his customized target weight chart. If the **WEIGHT METHOD** [23] is set to "Evolution", this chart will only be used as a reference if the user desires so. However, if the **WEIGHT METHOD** [23] is set to "Chart", the **TARGET WEIGHT** [24] of a given age will be determined by this chart. Each target weight is adjusted in 1-unit increments from 0 to 9999 units (see **Note on the weight-measuring unit**).

---

[22] Refer to the **DETAILS** screen for more information on this parameter.
[23] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.

5.   These parameters are used to calculate the **TARGET WEIGHT** [24] when the **WEIGHT METHOD** [25] is set to "Evolution". These values will be added to the **AVERAGE WEIGHT** [24] of the last evaluation period to define the new **TARGET WEIGHT** [24] for the actual day. If **EVALUATION FREQUENCY** [26] is set to a value other than "24h", the added weight will be divided by the number of evaluations per day. Each value should represent the anticipated weight increase for the respective day. Each parameter is adjusted in 1-unit increments from 0 to 999 units (see **Note on the weight-measuring unit**).

6.   This parameter is used to access the **COPY CURVE SCALE {1-4}**. It will appear only on the first page and only if another scale uses the same poultry type as the one actually viewed.

---

[24] Refer to the **DETAILS** screen for more information on this parameter.
[25] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.
[26] Refer to the **TARGET EVALUATION** screen for more information on this parameter.

COPY CURVE

```
          Copy Curve
  1  ────►Turkey

  Scale 1:Male Female
  Scale 3:Male Female ◄──── 2
  Scale 4:Male Female
```
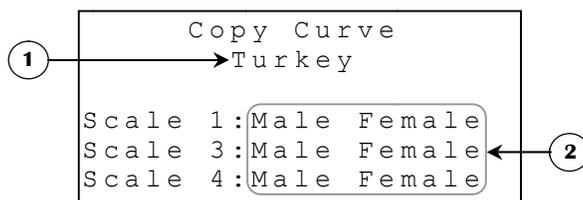
1.   This parameter displays the type of poultry used by the scale. Only scales using the same type of poultry as the scale actually viewed will be available for copy.

2.   This parameter opens the screen in which the chosen copy must be confirmed. If the SELECT button has been pressed while the cursor is positioned on one of these parameters and the copy is confirmed, all values of the selected scale's chart will be copied in the chart of the scale actually viewed. Please note that copying a curve does not copy **POULTRY TYPE** [27], **BIRD GENDER** [27] or **WEIGHT METHOD** [27].

---

[27] Refer to the **SCALE {1-4} ADJUSTMENT** screen for more information on this parameter.

CORRECTION FACTOR

```
   Correction   Factor

               Factor      Age
   Scale  1      0 %         27
   Scale  2      0 %         27
   Scale  3      0 %         27
   Scale  4      0 %         27
```

1. These parameters are used to set the percentage that will be added to the average weight calculated by the respective scale when the age of the flock has reached the correction factor **AGE**. These parameters are adjusted in 1% increments from 0% to 99%.

2. These parameters are used to set the age at which the correction **FACTOR** will be applied to the average weight calculated by the respective scale. When the flock has reached this age, the recorded average weight will be average weight calculated by the respective scale increased by this percentage. These parameters are adjusted in 1-day increments from day 0 to day 500.

TARGET EVALUATION

```
   Target Evaluation
      Evaluation  Min #
      Frequency  Weighed
Scale1 24h          100
Scale2 12h          100
Scale3  6h           20
Scale4  1h            5
Target  Weight  Method
Scale1  : Day
Scale2  : Period
Scale3  : Day
Scale4  : Day
```

1. These parameters are used to set the time rate at which the Target Weight of the respective scale will be evaluated during the day. The day will be divided into periods defined by the respective parameter. If the **TOT WEIGHED** [28] has reached the **MIN # WEIGHED**, the **TARGET WEIGHT** [28] will be evaluated according to the actual **AVERAGE WEIGHT** [28] and the **ADD WEIGHT** [29] of the preceding day. Each time a new period of the day is entered, the evaluation will be performed once again. These parameters can be set to « 1h », « 2h », « 4h », « 6h », « 12h » or « 24h ».

2. These parameters are used to set the minimum number of weights required to evaluate the **TARGET WEIGHT** [28] during the day. It the **TOT WEIGHED** [28] has not reached this amount, the **TARGET WEIGHT** [28] will not be evaluated when a new time period, defined by **EVALUATION FREQUENCY**, is reached. These parameters are adjusted in 1-weighed bird increments from 5 weighed birds to 100 weighed birds.

3. This parameter is used to determine how the **TARGET WEIGHT** [28] will be assigned. If this parameter is set to Day, the target weight will be **AVERAGE WEIGHT** [28], increased according to the respective **ADD WEIGHT** [30]. This value will be evaluated at a frequency determined by **EVALUATION FREQUENCY**. If this parameter is set to Period, the target weight will be the average weight calculated during the period. . In both cases, there must have been a number of birds weighed equal to or above **MIN # WEIGHED** in order to change the target weight.

---

[28] Refer to the **DETAILS** screen for more information on this parameter.

[29] Refer to the **GROWTH CURVE SCALE X** screen for more information on this parameter.

[30] Refer to the **GROWTH CURVE SCALE {1-4}** screen for more information on this parameter.

GE-OPTIGAIN7 Configuration Guide

<u>TEMPERATURES/HUMIDITY</u>

```
      Temperatures/Humidity
 1 → Actual Conditions

 2 → Temperature Hist.
 3 → Temperature Config.

 4 → Humidity Hist.
 5 → Humidity Config.
```
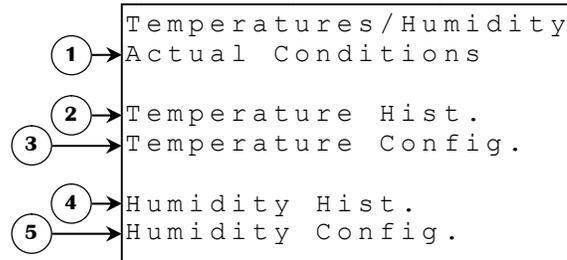
1. This parameter is used to access the **ACTUAL CONDITIONS (S)** screen.

2. These parameters give access to the **TEMPRATURE HISTORY MENU** screen.

3. This parameter is used to access the **TEMPERATURE CONFIGURATION** screen.

4. These parameters give access to the **HUMIDITY HISTORY MENU** screen.

5. This parameter is used to access the **HUMIDITY CONFIGURATION** screen.
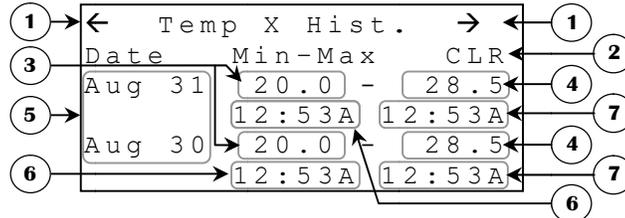
TEMP {1-4} / AVERAGE HISTORY

Each history may record up to 250 days. Unlike the scale histories, once the 250 days have been recorded, the history will continue recording data replacing the oldest history days by the new ones.

1. These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN** [31].

2. This parameter is used to clear the history of the respective probe (or average). When the cursor is positioned on this parameter and SELECT is pressed, the user will be asked to confirm the reset. If the confirmation is affirmative, the corresponding history will be reset.

3. These parameters display the lowest temperature (or average) value reached for the respective day.

4. These parameters display the highest temperature (or average) value reached for the respective day.

5. These parameters display the date at which the corresponding values have been recorded.

6. These parameters display the time at which the lowest temperature (or average) value has been reached for the respective day.

7. These parameters display the time at which the highest temperature (or average) value has been reached for the respective day.

---

[31] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.

TEMPERATURE CONFIGURATION
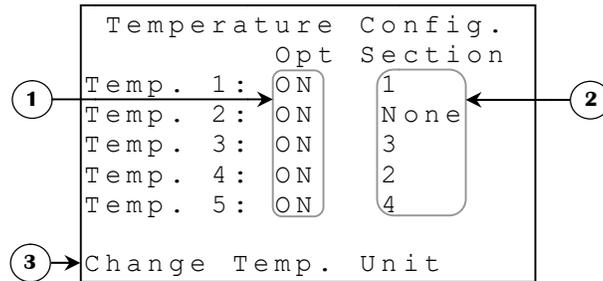
1. These parameters are used to activate or deactivate the respective temperature probe. These parameters can be set to "ON" or "OFF".

2. This parameter is used to assign a section to the temperature probe, it is modifiable only if the corresponding probe is active; in this case, it can take the following values : None, 1, 2, 3 and 4. If the probe is inactive, this parameter will be at None.

3. This parameter opens a confirmation screen that will ask the user if he wishes to proceed with the unit change. A second confirmation question will be asked to prevent all accidental changes. The temperature unit can be either Celsius or Fahrenheit.
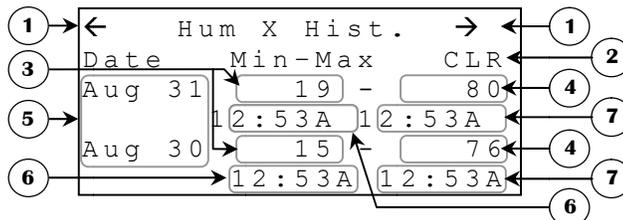
HUMIDITY {1-4} HISTORY

Each history may record up to 250 days. Unlike the scale histories, once the 250 days have been recorded, the history will continue recording data replacing the oldest history days by the new ones.

1.	These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN [32]**.

2.	This parameter is used to clear the history of the respective probe. When the cursor is positioned on this parameter and SELECT is pressed, the user will be asked to confirm the reset. If the confirmation is affirmative, the corresponding history will be reset.

3.	These parameters display the lowest humidity value reached for the respective day.

4.	These parameters display the highest humidity value reached for the respective day.

5.	These parameters display the date at which the corresponding values have been recorded.

6.	These parameters display the time at which the lowest humidity value has been reached for the respective day.

7.	These parameters display the time at which the highest humidity value has been reached for the respective day.

---

[32] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.

GE-OPTIGAIN7 Configuration Guide

HUMIDITY CONFIGURATION

```
   Humidity Config.
              Opt  Section
Humidity 1:ON    1
Humidity 2:ON    3
Humidity 3:ON    None
Humidity 4:ON    1
```

1.   These parameters are used to activate or deactivate the respective humidity probe. These parameters can be set to "ON" or "OFF".

2.   This parameter is used to assign a section to the humidity probe, it is modifiable only if the corresponding probe is active; in this case, it can take the following values : None, 1, 2, 3 and 4. If the probe is inactive, this parameter will be at None.

GE-OPTIGAIN7 Configuration Guide

WATER METER

```
      Water  Meters
 1 ▸Actual  Conditions
   ┌─────────────────────┐
   │Water  1  History    │
   │Water  2  History    │
 2 │Water  3  History    │
   │Water  4  History    │
   │Total  Water  History│
   └─────────────────────┘
 3 ▸Water  Configuration
```

1.   This parameter is used to access the **ACTUAL CONDITIONS** screen.

2.   These parameters give access to the respective **WATER METER {1-4} HISTORY**.

3.   This parameter is used to access the **WATER CONFIGURATION**.

WATER METER {1-4} HISTORY

Each history may record up to 250 days. Unlike the scale histories, once the 250 days have been recorded, the history will continue recording data replacing the oldest history days by the new ones.

1. These parameters are used to navigate through the different pages of the history. When the SELECT button is pressed while the cursor is positioned on this parameter, the preceding page (or the following one) will be displayed. The history is divided in pages according to **#HISTORY DAYS/SCREEN** [33].

2. This parameter is used to clear the history of the respective probe (or average). When the cursor is positioned on this parameter and SELECT is pressed, the user will be asked to confirm the reset. If the confirmation is affirmative, the corresponding history will be reset.

3. This parameter displays the actual water unit used by the water meters. This unit can be either "litres" or "gallons".

4. These parameters display the date at which the corresponding values have been recorded.

5. These parameters indicate the amount of units (litres or gallons) counted by the water meter during the corresponding day. The quantity is displayed to the nearest unit (litres or gallons) from 0 to 20000 for the water meters and from 0 to 80000 for the total water history.

---

[33] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.

WATER METER CONFIGURATION

```
Water  Configuration
            Opt  Section
Water  1:   ON    None
Water  2:   ON    1
Water  3:   ON    2
Water  4:   ON    4

Units/pulse:      1
Change  Water  Unit
```
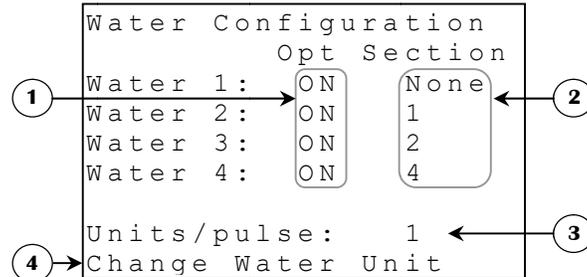
1. These parameters are used to activate or deactivate the respective water meter. These parameters can be set to either "ON" or "OFF".

2. This parameter is used to assign a section to the water meter, it is modifiable only if the corresponding water meter is active; in this case, it can take the following values : None, 1, 2, 3 and 4. If the water meter is inactive, this parameter will be at None.

3. This parameter is used to set the amount of units (litres or gallons) that will be added to the water count each time a pulse is read at the water meter input. The number of units per pulse is adjusted in 1-unit increments from 1 to 999 units.

4. This parameter opens a confirmation screen that will ask the user if he wishes to proceed with the unit change. A second confirmation question will be asked to prevent all accidental changes. The water unit can be either litres or gallons.

HISTORIES

```
                 Histories

  1          ──────►Scales
  2          ───►Temperatures
  3          ───►Water  Meters
  4          ──────►Humidity
```
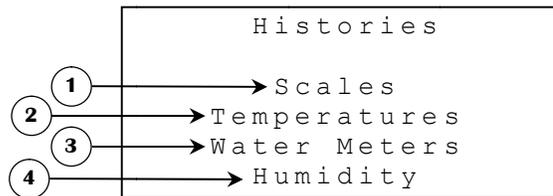
1.   This parameter is used to access the **SCALE HISTORY MENU** screen.

2.   This parameter is used to access the **TEMPRATURE HISTORY MENU** screen.

3.   This parameter is used to access the **WATER METER HISTORY MENU** screen.

4.   This parameter is used to access the **HUMIDITY HISTORY MENU** screen.

GE-OPTIGAIN7 Configuration Guide

<u>SCALE HISTORY MENU</u>

```
        Scale  History

        ┌─────────────┐
        │ Scale  1    │
 ①─────►│ Scale  2    │
        │ Scale  3    │
        │ Scale  4    │
        └─────────────┘
```
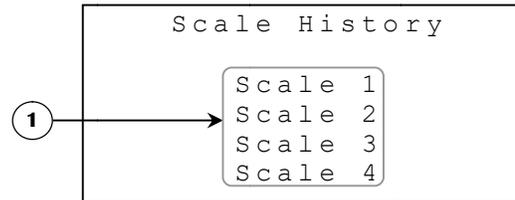
1.   These parameters are used to access the respective scale's **HISTORY** screen.

TEMPERATURE HISTORY MENU

```
Temperature  Hist.

   Temperature  1
   Temperature  2
   Temperature  3
   Temperature  4
   Temperature  5
Average  Temperature
```
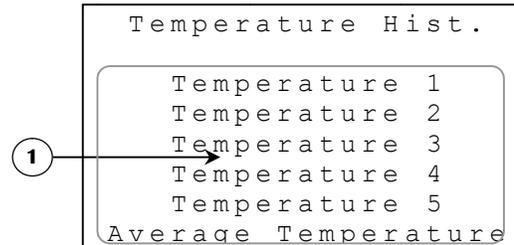

1.   These parameters are used to access the respective probe or the average temperature's **TEMPERATURE {1-5} / AVERAGE HISTORY** screen.

GE-OPTIGAIN7 Configuration Guide

WATER METER HISTORY MENU

```
Water  Meter  Hist.

      Meter  1
      Meter  2
 1 →  Meter  3
      Meter  4
        Total
```
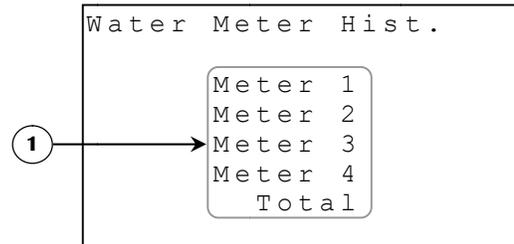
1.   These parameters give access to the respective **WATER METER {1-4}/TOTAL HISTORY**.

GE-OPTIGAIN7 Configuration Guide

HUMIDITY HISTORY MENU

```
   Humidity  Hist.

  Humidity  1
  Humidity  2
  Humidity  3
  Humidity  4
```
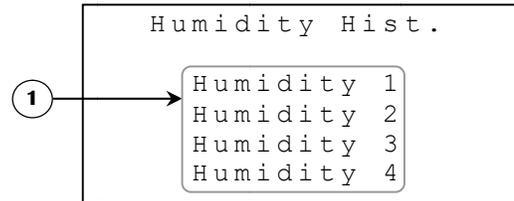
1. These parameters give access to the respective **HUMIDITY {1-4} HISTORY**.

GE-OPTIGAIN7 Configuration Guide

ALARMS & INSTALLATION

```
     Alarms  &  Instal.
  Alarm  History
  Alarm  Adjustments
  Date/Clock/Code
  System  Menu
   Scales:          ON
    Temperature:    ON
    Water  Meter:   ON
    Humidity:       ON
  Hist  days/screen: 10
  Disp  Avg  Scales: Yes
  Probes  Calibration
     Unit  ID:      1
  RF  Channel:    OFF
  RF  Network:32767
  RF  Address:32767
     Version:  C2V28V3
   Processor:  9
```
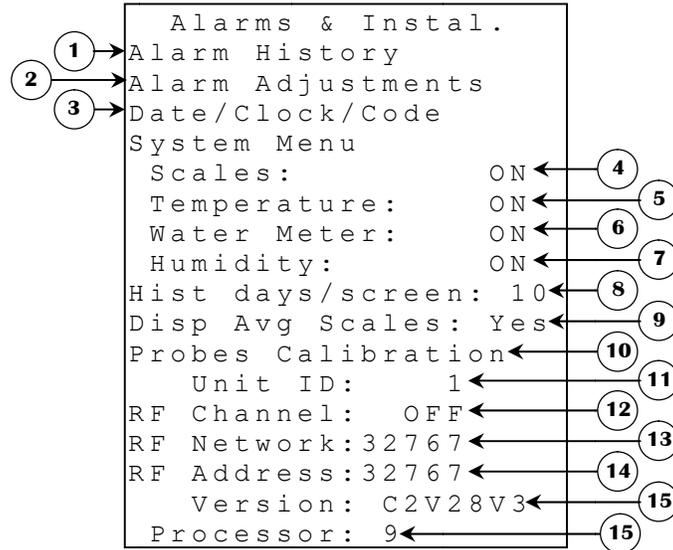
1. This parameter is used to access the **ALARM HISTORY**.

2. This parameter is used to access the **ALARM ADJUSTMENTS**.

3. This parameter is used to access the **DATE/TIME/CODE**.

4. This parameter is used to activate or deactivate the scales. If the scales are deactivated, all the related parameters and histories will no longer be displayed.

5. This parameter is used to activate or deactivate the temperature probes. If the temperature probes are deactivated, all the related parameters and histories will no longer be displayed.

6. This parameter is used to activate or deactivate the water meters. If the water meters are deactivated, all the related parameters and histories will no longer be displayed.

7. This parameter is used to activate or deactivate the humidity probes. If the humidity probes are deactivated, all the related parameters and histories will no longer be displayed.

8. This parameter is used to set the number of days that will be displayed in a history screen (page). The total number of recorded days will be separated in pages according to the amount of data selected here. The number of history days per screen is adjusted in 10-day increments from 10 to 50 days per screen.

9. This parameter is used to set if the average weight calculated by all active scales of a given type and its history will be displayed. If set to "Yes", the average weight for the current and past day and its history will be displayed, otherwise they will not be displayed.

10. This parameter is used to access the **PROBES CALIBRATION**.

11. This parameter is used to select the identification number that will be used when communicating with the remote access software. Each controller must have a unique identification number. When **RF CHANNEL** is set to any value other than "OFF", this parameter will disappear. This parameter may be adjusted to any value from 1 to 250.

12. This parameter is used to select one of the 16 frequencies of the WiFarm network or deactivates wireless communication mode. If this parameter is set to "OFF", other wireless communication parameters will disappear. This parameter can be adjusted to "OFF", 1 to 16.

13. This parameter is used to identify a WiFarm network. A WiFarm network is formed when the **RF NETWORK** is set to the same value as the **RF ADDRESS** of the RF communication card of the controller designated as the network master (ex. WebGate in most installations). Other controllers can join the existing network by adjusting **RF NETWORK** to the **RF ADDRESS** of that same network. To adjust this parameter, place the cursor on the digit you wish to change and use the $\boxed{+}$ and $\boxed{-}$ buttons to change the value. This parameter can be adjusted to any value from 00000 to 39999.

14. This parameter displays the number (address) associated to the RF communication card inserted in the controller. A unique number is given to each RF communication card of the WiFarm network. There is a unique **RF ADDRESS** associated to each RF communication card. The **RF ADDRESS** also appears on the sticker present on the RF communication card. The address can be any value from 0 to 32767.

15. This parameter displays the configuration version actually used.

16. This parameter displays the actual micro-processor version.

GE-OPTIGAIN7 Configuration Guide

ALARM HISTORY

```
        Alarm  History    CLR
1 →  11  Nov  ->  22:08 ←          3
        Comm.  Prob.  Bal.  1 ←    4
1 →  11  Nov  ->  20:38 ←          3
        Temp.  1  Defect ←         4
1 →  10  Nov  ->   1:12 ←          3
        Temp.  3  Defect ←         4
```

(2 points to "CLR", 3 points to the times, 4 points to the alarm messages)

This screen can contain up to 100 alarms. Communication errors, system errors, temperature alarms and water alarms will be recorded in this history. Unlike the scale histories, once the 100 alarms have been recorded, the history will continue recording data replacing the oldest history alarms by the new ones.

1. This parameter is used to clear the alarm history. If the SELECT is pressed while the cursor is positioned on this parameter, a confirmation question will appear. If the confirmation is positive, the alarm history will be cleared.

2. These parameters indicate the date at which the alarm (mentioned immediately below these parameters) was triggered.

3. These parameters indicate the time at which the alarm (mentioned immediately below these parameters) was triggered.

4. These parameters indicate the alarm that was triggered at the date and time displayed immediately above these parameters. Refer to the Alarm Message List at page 66 for a description of all possible alarm messages.

ALARM ADJUSTMENTS

```
    Alarm Adjustments
Alarm Activated: ON          1
Temp. Alarms :   ON          2
 Low Limit   :  15.0         3
 High Limit  :  30.0         4
Affects: 12345  AVG          6
Water Met Alarm: ON          7
 Water Alarm:  1lit.         8
 Affects: 1234               9
```
5
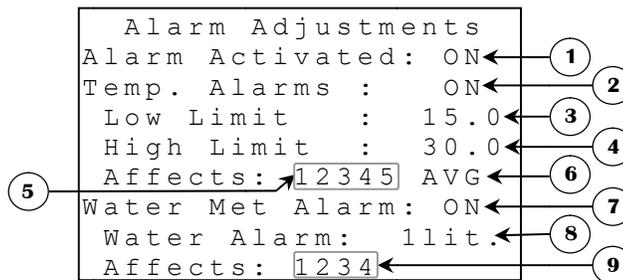
1. This parameter allows the activation of the alarm relay when there's an alarm. This parameter can be set to "ON" or "OFF". **Deactivating the alarm relay is not recommended.**

2. This parameter is used to activate or deactivate the alarm check on the temperature probes and average temperature. When this parameter is set to OFF, the alarm message will still appear in the alarm history but the alarm relay will not activate. This parameter can be set to ON or OFF. **Deactivating the alarm relay is not recommended.**

3. This parameter is used to adjust the temperature's low alarm limit. An alarm is activated when a temperature probe (or average temperature) is below this parameter and is affected by the alarm. This parameter is adjusted in 0.1° increments from 0.0°C to 40.0°C (0.0°F to 90.0°F).

4. This parameter is used to adjust the temperature's high alarm limit. An alarm is activated when a temperature probe (or average temperature) is above this parameter and is affected by the alarm. This parameter is adjusted in 0.1° increments from 15.0°C to 70.0°C (20.0°F to 120.0°F).

5. This parameter is used to choose which probe will be checked for alarms. If a probe is not selected, the corresponding probe will not activate the alarm relay and no alarm messages will be recorded in the alarm history. When a probe is deactivated, an "X" will appear instead of its number.

6. This parameter is used to activate or deactivate the alarm check on the average temperature. This parameter can be adjusted to "AVG", which activates alarm checks on the average temperature. If this parameter is set to "---", no alarm checks will be made on the average temperature.

7. This parameter is used to activate or deactivate the alarm check on the water meters. When this parameter is set to "OFF", the alarm message will still appear in the alarm history but the alarm relay will not activate. This parameter can be set to "ON" or "OFF". **Deactivating the alarm relay is not recommended.**

GE-OPTIGAIN7 Configuration Guide

8. This parameter is used to adjust the maximum number of units (gallons or litres) an activated water meter may count within one minute without activating an alarm. If a water meter, which is affected by the alarm, counts more units than this limit within one minute, the alarm will activate. This parameter is adjusted in 1-unit increments from 1 unit to 999 units.

9. This parameter is used to choose which water meter will be checked for alarms. If a water meter is not selected, the corresponding water meter will not activate the alarm relay and no alarm messages will be recorded in the alarm history. When a water meter is deactivated, an "X" will appear instead of its number.

GE-OPTIGAIN7 Configuration Guide

DATE/TIME/CODE

```
Time  Format:      AM/PM ◄────( 1 )
Adjust  Time:       5:08A ◄────( 2 )

Adj.  Date:   11/19/12 ◄────( 3 )


Parameters       Locked ◄────( 4 )
Change  Code ◄────
Tech  Param       Code ◄────( 5 )
```

1. This parameter is used to change the time format for all clock-type parameters. The format may be either 24-hour or AM/PM. When this value is changed, all clock type parameters will be modified to reflect the new time format.

2. This parameter is used to adjust the actual time of day. To change the time of day, position the cursor on this parameter and use the $\boxed{+}$ and $\boxed{-}$ buttons to change the value.

3. This parameter is used to adjust the actual date. To change the date, position the cursor on this parameter and use the $\boxed{+}$ and $\boxed{-}$ buttons to change the value. If a flock is running, the date will not be adjustable and the message "`The date cannot be modified when a flock is running`" will appear instead of the actual date.

4. These parameters allow the user to lock or unlock access to parameters. They also indicate the parameter status ("`Locked`" or "`Unlocked`"). To modify the parameter status, press the $\boxed{\text{SELECT}}$ when the cursor is positioned on "`Locked/Unlocked`" and then enter the first alphanumerical value. When the first value of the code is entered, press $\boxed{\text{SELECT}}$ once again to access the next value. Repeat these steps for each value that must be entered. It is possible to change the code by pressing the $\boxed{\text{SELECT}}$ button while the cursor is positioned on **CHANGE CODE**. The new code may now be entered following the same procedure as mentioned above.

5. This parameter is used by the manufacturer's technical support personnel.

PROBES CALIBRATION

```
 Probes  Calibration
Probe     Adjust  Actual
 Temp  1(   0.0)    71.0       (1)
 Temp  2(   0.0)    71.0
 Temp  3(   0.0)    71.0       (2)
 Temp  4(   0.0)    71.0
 Temp  5(   0.0)    71.0
 Hum  1   (    0)      48       (3)
 Hum  2   (    0)      48
 Hum  3   (    0)      48       (4)
 Hum  4   (    0)      48
```

1.   These parameters are used to adjust the respective probe reading. These values are adjusted in 0.1° increments from -20.0° to 20.0°.

2.   These parameters display the respective probe reading calculated with the respective **ADJUSTMENT**. These temperatures are displayed to the nearest 0.1° from -58.0°F to 140.0°F (-50.0°C to 60.0°C).

3.   These parameters are used to adjust the respective humidity reading. These values are adjusted in 1RH% increments from -20RH% to 20RH%.

4.   These parameters display the respective probe reading calculated with the respective **ADJUSTMENT**. These humidity readouts are displayed to the nearest 1RH% from 0RH% to 100RH%. The parameter may also display "ERR" if the humidity probe has not responded for five minutes.

MCHIP DETECTED

```
-  Upload/Download   -
** MCHIP Detected **
DNLD Config. Sure?Y
UPLD Config. Sure?N
UPLOAD STATUS:OK

  Remove the MCHIP
   when finished.
```
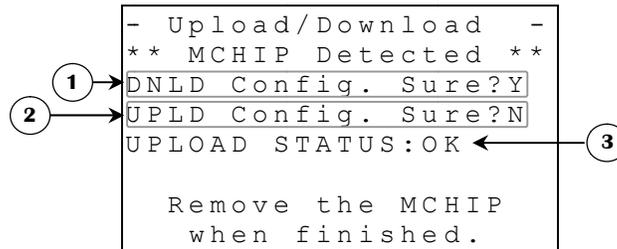
This screen will be shown when a MCHIP is inserted in the socket for this purpose. The **RF CHANNEL** [34] must be set to "OFF" to allow this screen to appear. The compatible MCHIP for this configuration is: CM-512.

1. This parameter is used to trigger a download of the configuration from the MCHIP to the controller. When the SELECT button is pressed while the cursor is positioned on this parameter, a confirmation question will appear and, if the confirmation is positive, the download will begin.

2. This parameter is used to trigger an upload of the configuration from the controller to the MCHIP. When the SELECT button is pressed while the cursor is positioned on this parameter, a confirmation question will appear and, if the confirmation is positive, the upload will begin.

3. This parameter appears only after an upload has been performed. It indicates the upload status. If the upload was successful, the message "UPLOAD STATUS: OK" will appear. If an error occurred during the upload, the message "UPLOAD STATUS: ERROR" will appear indicating that the configuration was not successfully uploaded in the MCHIP.

> If the configuration chip (CM-512) is not removed after the downloading procedure, the controller will reload the factory set values each time it is reset or each time the power is turned off and back on, erasing the values entered by the customer. At this point, the control awaits an intervention of the user to activate the configuration. An alarm message will be logged if the chip remains in the socket for 5 minutes or more.

---

[34] Refer to the **ALARMS & INSTALLATION** screen for more information on this parameter.

Alarm Message List

Messages	Probable Causes
"Scale # (P#) Not Responding"	- An activated GE-OPTIGAIN1 module has not communicated with the GE-OPTIGAIN7 controller for a 5-minute period.
"Humidity # (P#) Not Responding"	- An activated RH-3 module on the mentioned port has not communicated with the GE-OPTIGAIN7 controller for a 5-minute period.
"Water # defect."	- A water meter affected by the alarm has exceeded the maximum limit for a 1-minute period.
"Temperature (Average, #) too High"	- The temperature probe or average, affected by the alarm is above the high temperature limit.
"Temperature (Average, #) too Low"	- The temperature probe or average, affected by the alarm is below the low temperature limit.
"No Average Probe Assigned"	- The average temperature has no associated probe.
"Temperature # defect."	- The temperature probe is absent, not connected properly or defective (short-circuit or open circuit).
"Error code 1"	- The system has rebooted 5 times within a 3-minute period or 10 times within a 15-minute period. This situation will be considered resolved if system does not reboot for 15 minutes. If this situation persists, contact your distributor.
"Error code 2 to 5"	- If one or more errors of these types occur, contact your distributor.
"Error code 6"	- The MCHIP has remained in the socket for five or more minutes.

Flock Status Message List

Message	Description
"Flock Stopped"	The flock has never been started. A problem occurred during the flock starting operation and the flock was not started.
"Initializing"	The initilization of the GE-OPTIGAIN1 module's data is in progress.
"Scale Busy"	The module was performing an operation and could not initialize its data.
"Scale Not Resp."	The communication with the GE-OPTIGAIN1 module could not be obtained. The communication with the GE-OPTIGAIN1 module was lost after the initilization was started.
"Flock Running"	The flock is activated and data is presently recorded.

Calibration Status Message List	
Message	**Description**
"Calibrating"	The GE-OPTIGAIN1 module is trying to determine its zero/gain.
"Scale Unstable"	The scale could not obtain a stable signal after two minutes.
"Scale Busy"	The module is already doing an operation and can not calibrate at this moment.
"Scale Not Resp."	The communication between GE-OPTIGAIN1 module and the GE-OPTIGAIN7 could not be established.
"Zero Calib. OK" "Gain Calib. OK"	The corresponding calibration has been successfully performed.