

Your Vision Our Mission

TT12



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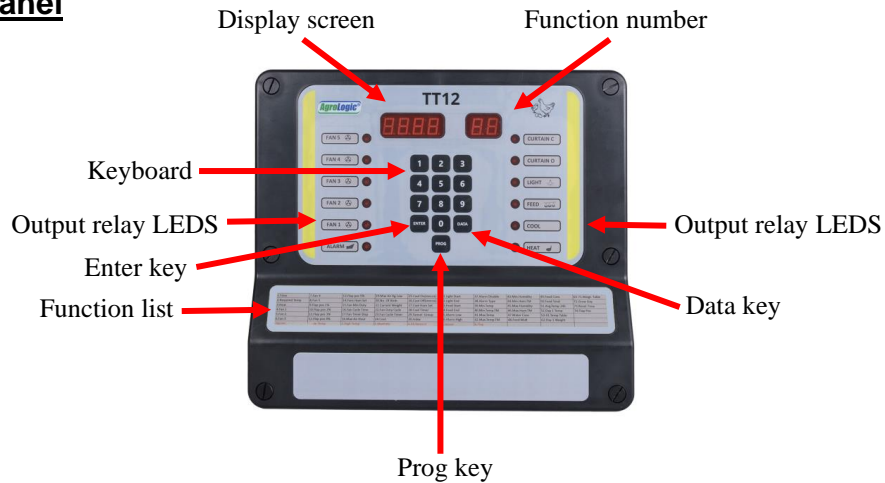
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This manual may contain mistakes and or printing errors. We accept no liability for technical mistakes, printing errors or their consequences.

This control unit is supplied with default settings. These setting are only general settings and should not be seen as final settings. We accept no liability for any consequences that may occur because of these settings.

Front Panel



- *Display Screen*; displays the set parameters for the current function.
- *Function Number*; displays the current function number.
- *Function List*; this is the control units function list.
- *Keyboard*; use the numerical keyboard to enter function values.
- *Enter Key*; use the Enter key to store parameters into the unit's memory.
- *Prog Key*; use the Program key to enter the programing mode.
- *Data Key*; use the Data key to scroll through the function list.
- *Output Relay LED*; when a relay is in use its corresponding light will be on.

Operation

Power Up

- When the units power is turned on, the program version will appear on the display. After 20 Seconds the average temperature will appear.
- To see the current temperature reading for sensor 1, press on keyboard number 1.
- To see the current temperature reading for sensor 2, press on keyboard number 2.
- If a humidity sensor is connected, press on keyboard number 6 to see current humidity reading.

Reading Set Points

The right display indicates the current function number. The left display shows the parameters for the current function.

There are two ways to call up a function:

- By pressing on the *Data* key, the function number display on the right side of the panel will increase by one each time you press on it. The preset information will appear on the data display on the left side of the panel.
- Press once on the "0" key, two lines will appear on the function display and *FUNC* on the data display. Next enter the desired function number using the keyboard.

Example:

To call up function number "8" press once on the "0" key. Two lines will appear on the function display. Press again on "0" key and then on the "8" key; on the function display will be "08" and on the Data display will be the parameters for that function.

To bring up function number "12";

Press the "0" key. Two lines will appear on the function display. Press on the "1" key and then the "2" key. On the function display will appear "12" and on Data display will be the parameters for that function.

To go to function "13" from function "12", press once on the *DATA* button.

To return to the average temperature display, press two times on the "0" key.

If no programming is done, the unit will return to the average temperature display.

Changing Function Parameters

- Call up the desired function as explained earlier.
- Press on the *Prog* key. The function number display will start to flash. Use the numerical keyboard to make the changes.
- Check the display to see that the parameter is correct. If the parameter is correct, press the on the *Enter* key. The function display will stop flashing to indicate that the new information has been stored into the unit's memory.

Function List

1.0 Current Time (not shown in function list)

The current time is shown here. From here it is possible to change the time setting.

02. Required Temperature

The required temperature is the required average temperature for the house. All set points (except the cooling system) are set as an *offset above* or *below* the required temperature. The required temperature will be reduced daily according to the temperature reduction table. See functions 52-61.

Heating system

*There is a hysteresis of approx. 0.2 degrees above and below the offset setting.

03. Heat

Heat set point is the temperature offset below the required temperature that the heating system will turn on.

Example; heat set point = 1.0

If the room temperature should drop 1.0° below the required temperature (function 02) the heating system will start to run.

Note: the program has

Ventilation system

The ventilation system runs in two modes; minimum ventilation or continuous ventilation.

Minimum ventilation runs fan groups in a cycle mode. See function 81 for setup of fans running in minimum ventilation.

Minimum ventilation is used when the house average temperature is less than the house required temperature (function "02") pulse the set point for fan 1.

The minimum ventilation cycle is calculated using functions 15-22.

Once the set point for fan 1 is reached in the house the unit goes over to continuous ventilation mode; at least fan 1 will be running nonstop.

Fan Set points

*There is a hysteresis of approx. 0.2 degrees above and below the offset setting.

04. Fan 1

Fan 1 set point is the temperature offset above the required temperature at which time fan 1 will turn on. The flap will open to the set percentage according to function 09, Flap Position 1%.

Example;

Average temperature = 28°

Function "02", required temperature = 27°

Function "04", fan 1 = 1.0

As long as the average house temperature is less than 28°, fan 1 will run in a cycle mode. Once the house temperature is equal to or more than 28° (required pulse fan 1 set point) fan 1 will run continuously.

When fan 1 is running, or in cycle mode or continuously, the flap will be open the setting as programmed in function "09", Flap Position 1.

05. Fan 2

Fan 2 set point is the temperature offset above the required temperature at which time fan 2 will turn on. The flap will open to the set percentage according to function 10, Flap Position 2%.

06. Fan 3

Fan 3 set point is the temperature offset above the required temperature at which time fan 3 will turn on. The flap will open to the set percentage according to function 11, Flap Position 3%.

07. Fan 4

Fan 4 set point is the temperature offset above the required temperature at which time fan 4 will turn on. The flap will open to the set percentage according to function 12, Flap Position 4%.

08. Fan 5

Fan 5 set point is the temperature offset above the required temperature at which time fan 5 will turn on. The flap will open to the set percentage according to function 13, Flap Position 5%.

09. Flap Position 1

Enter here the percentage that the flap will open each time the corresponding fan group comes into operation. The flap will open to this percentage in both cycle mode and continuous mode.

Fan group 1 = Position 1

10 Flap Position 2

Enter here the percentage that the flap will open each time the corresponding fan group comes into operation.

Fan group 2 = Position 2

11 Flap Position 3

Enter here the percentage that the flap will open each time the corresponding fan group comes into operation.

Fan group 3 = Position 3

12 Flap Position 4

Enter here the percentage that the flap will open each time the corresponding fan group comes into operation.

Fan group 4 = Position 4

13 Flap Position 5

Enter here the percentage that the flap will open each time the corresponding fan group comes into operation.

Fan group 5 = Position 5

14. Fan Humidity Set

Enter here the maximum desired humidity for the house. If the house humidity rises to this level, the unit will bring the next fan group into operation. This is done in an attempt to bring down the humidity.

15.Fan Minimum Duty

A value set in percent. This is the minimum amount of time fan group 1 will run out of the Fan cycle time (see next function) during minimum ventilation. If the calculated Fan Duty Cycle is larger than the Minimum Duty, the cycle time will be according to the Fan Duty Cycle.

16. Fan Cycle Time

This is a time period set in minutes and seconds. This is the time frame that the minimum ventilation cycle will use.

Example;

Function 15, Fan minimum duty = 10

Function 16, Fan cycle time = 10:00

During minimum ventilation fan group 1 will run a minimum of 10 percent out of 10 minutes. This means that the fans will run at least 1 minute every 9 minutes.

17. Fan Timer Display

This is a countdown timer in seconds showing the remain cycle time.

18. Maximum Air Per Hour

Enter here the total amount of cubic air per hour that fan group 1 can supply. Take the total amount and divide it by 1000. Example: If fan group 1 can supply 20,000 cubic meters of air per minute, then enter the value 20. This is used to help calculate the minimum ventilation.

19. Minimum Air Per Hour

Enter here the minimum amount of cubic air per kg needed in the house. The minimum ventilation calculation will use this parameter to calculate the minimum ventilation.

20. Number Of Birds

Enter here the total number of birds in the house.

Example: 20,000 birds will appear as 20.00

21. Current Weight

This is the current weight of one bird as calculated in the automatic weight increase table (function 57-66).

This weight can be changed if needed.

22. Fan Duty Cycle

This is the calculated duty cycle (percent) of the Fan Cycle Time according to the minimum ventilation mode as explained later. If this number is larger than the minimum duty cycle time then the fan 1 group will run this amount out of the fan cycle time. If the minimum duty cycle time is larger then the calculated duty cycle time the fans will run according to the minimum.

23. Fan Cycle Timer

This is a display in seconds of the minimum ventilation timer.

The timer shows the time left of the Fan Cycle Time (function 19).

Example of minimum ventilation

Minimum ventilation is achieved by the on/off duty cycle calculated by the unit according to the fan/fans set point, cycle time, min duty, number of birds, minimum air per kilo and the weight curve to give the minimum ventilation in the house.

Minimum ventilation is functioning as minimum ventilation in the cycle mode as long as the measured average temperature is less than the required room temperature plus the set point for fan 1. If the room temperature rises to or above the set point then the cycle mode will stop and the fans will run constantly.

The calculation is done as follows.

Number of birds times current weight = total amount of kilograms in house.

Total amount of kilograms times' Minimum air per kilo returns the amount of cubic air per hour needed for the house.

Using the Maximum Air per hour of fan group 1 the unit can now calculate how long the fan group must run out of the Fan cycle time to supply the minimum ventilation.

Function #	Setting
02. Requested temperature	25°
04. Fan 1	1.0
05. Fan 2	2.0
09. Flap Position 1%	15
10. Flap Position 2%	25
15. Fan Minimum Duty	10
16. Fan Cycle Time	10:00
18. Maximum Air Hour	36 (36000)
19. Minimum Air Kg Hour	1.0
20. Number Of Birds	25.00 (25000)
21. Current Weight	0.500 (500 grams)

If the calculated Fan Duty Cycle (function 22) is larger than the Minimum Fan Duty (function 15), the cycle time will be according to the Fan Duty Cycle.

Using the above figures, the Fan Duty cycle will be 34%. This means the fans will run 34% out of 10:00 or about 3 minutes on and around 7 minutes off.

When the weight of one bird is 1.000 the On time will be about 7 minutes on and 3 off.

Cooling Sytem

24. Cool Temp. ABS

This temperature setting is an actual temperature inside the house and **not** a offset above the required temperature. At this temperature the cooling system will start to run in the cycle mode as setup in functions 25-26.

25. Cool On Time: mm:ss


This is the ON-time period, set in minutes and seconds, which the cooling system will run during the cooling cycle.

26. Cool Off Time: mm:ss

This is the OFF-time period, set in minutes and seconds, which the cooling system is off during the cooling cycle.

27. Cool Humidity setting

If there is a humidity sensor connected to the unit (optional) then it is possible to measure the humidity in the house. Enter here the maximum allowed humidity allowed in the house. If the humidity reading goes above this set level then the unit will automatically shut down the cooling system.

 If no humidity sensor is connected, enter here 100.

28. Cool timer display

A countdown displays in seconds of the cool cycle timer while it is running.

29. Tunnel On Group

Enter here a fan group number. When this fan group starts to run, all fan groups below this group will turn off.

Example: Tunnel On Group = 4

Once fan group 4 starts to run, fan groups 1, 2, 3 will stop running.

Light and Feed

30. Ligh and Feed Index

It is possible to program up to 8 on off programs for the light and feed systems over a 24-hour period.

Enter here the number of the program (from 1-8) that is to be programmed. Always start with the number 1 program.

Enter 1 and then continue to program the on and off times in functions 31-34.

Be sure to clear all unused indexes by entering zero (0) as the values in the used indexes.

31. Light Start

Enter here the time of day the lighting system will turn on.

32. Light Off

Enter here the time of day the lighting system will turn off.

33. Feed Start

Enter here the time of day the feeding system will turn on.

34. Feed Off

Enter here the time of day the feeding system will turn off.

Example for Light and Feed systems

Index (function 30) = 1

Light On Time (function 31) = 0600

Light Off Time (function 32) = 2000

In this example the lights will go on at 06:00 and off at 20:00.

If more than one lighting program is needed, continue to program the indexes.

Index (function 30) = 2

Light On Time (function 31) = 2200

Light Off Time (function 32) = 0100

In this example the lights will go on at 06:00 and off at 20:00 (index 1).

At 22:00 the lights will come back on and then go off at 01:00 (index 2).

In order to erase all indexed programs, enter in the Index (function 30) the value 0 (zero). After the value 0 is entered the index number will return automatically to 1.

Alarms

35. Alarm Low

Alarm Low set point is a offset set point set below the required that will active the alarm relay.

Example: required temperature, function 02= 28°, Alarm Low= 5.0°

If 5.0° is entered in the alarm low function, once the temperature falls 5.0° below the required room temperature (function 02), the alarm relay will be activated.

36. Alarm High

Alarm high set point is the temperature offset above the requested room Temperature that when reached will activate the alarm relay.

Example: If 5.0° is entered in the alarm high function, then if the temperature rises 5.0° above the required room temperature (function 02), then the alarm relay will be activated.

37. Alarm Disable

When the alarm goes off, it is possible to see the alarm according to its number in function 28. The number, which is displayed, corresponds to the above list.

Here it is possible to disable some of the alarms. Enter the corresponding alarm number in order to disable it. Once an alarm has been disabled, the unit will not activate the alarm relay if the particular alarm should happen again. The alarm number must be removed from the "Alarm disable" function in order to make it functional again.



Alarms 1-4 cannot be disabled.

38. Alarm Type

Shown here is the alarm type in numerical form. There are 7 alarm types built in to this unit.

Alarm 1= Low alarm (low house temperature).

Alarm 2= High alarm (high house temperature).

Alarm 3= Memory alarm (fault with the control units memory).

Alarm 4= All temperature sensors are faulty.

Alarm 5= One temperature sensor is faulty.

Alarm 6= Fault with the flap.

Temperature and Humidity recall

39. Minimum Temperature

Displays minimum temperature in the house over the last 24 hours (updated at reset time). See function 63.

40. Minimum Temperature Time

Displays time of the minimum temperature.

41. Maximum Temperature

Displays maximum temperature in the house over the last 24 hours (updated at reset time).

42. Maximum Temperature Time

Displays time of the maximum temperature.

43. Minimum Humidity

Displays minimum humidity in the house over the last 24 hours (updated at reset time).

44. Minimum Humidity Time

Displays time of the minimum humidity in the house.

45. Maximum Humidity

Displays maximum humidity in the house over the last 24 hours (updated at reset time).

46. Maximum Humidity Time

Displays time of the maximum humidity in the house (reset to reset).

47. Water Consumption

Displays water consumption over the last 24 hours (reset to reset).

Feed and Water Consumption

48. Feed Multiply

Feed multiply is the total amount for feed in kilograms that is duped from the feed auger over a one-minute time period. If a dry contact has been connected to the unit from the feed auger contactor and a Feed multiply is entered, the unit will convert the feed auger motors running time into kilogram and display this amount here.

Example:

Over a one-minute time period 25 kilogram comes out of the feed auger.

If the feed auger runs for 10 minutes, the unit will calculate 250 kilogram of feed was consumed. Since different types of feed will cause a change in the amount of feed, this is only an approximant calculation of consumed feed.

49. Daily Feed Consumption

Displays daily feed consumption (updated at reset time).

50. Total Feed Consumption

Displays total feed consumption for the entire flock.

Temperature and Weight Tables

51. Average Temperature 24 hours

Displays average temperature over the last 24 hours. This is updated at reset time.

Use the temperature reduction table to automatically reduce the required temperature according to flock age.

Use the weight increase table to automatically increase the expected average weight according to flock age.

52. Day 1 Temperature

Day 1 temperature is the starting temperature for the first day grow day. It is the temperature that will appear as required temperature (function 02) when 1 is entered here. The room temp will be reduced according to the following table.

Important: When Day is equal to 1 it is not possible to change Required Temper (function 02).

53-61. Temperature Reduction Table

It is possible to set a temperature graph to reduce automatically the room temperature each day during the raising period. It is possible to set up to 9 Groups. Length of each Group can be up to 9 days. Each Group can be reduced up to 9.9° C.

Example:

Day 1 temperature 31°C (function 52).

Growth day 1 (function 72)

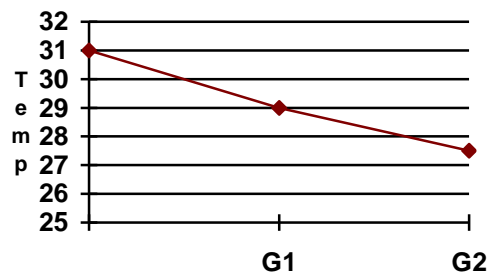
Room temperature will be 31°C.

Group 1 - 7 days reducing of 2.1°C.

Each day the room temperature will be reduced by 0.3°C. At day 7 - the room temperature will be 29°C.

Group 2-3 days reducing of 1.5°C. Each day the room temperature will be reduced by 0.5°C. At day 10 the room temperature will be 27.5°C. and so on.


Example:



To Enter temperature reduction of 2°C in 7 days, press on 7 and then on 2 then on 0 and then on enter. On the display will appear : 7 2.0 G1

Press on data key, next group will appear.

To enter temperature reduction of 1.5°C in 3 days, press on 3 then on 1 then on 5 then on enter. On the display will appear: 3 1.5 G2.

 It is important to enter data in all 9 groups. If a group is not in use then put 1 day and 0°C. as a reduction temperature

Weight Increase Table

62. Day 1 Weight

It is possible to enter an automatic weight increase table to be used by the minimum ventilation system.

Enter here the weight of one bird at one day old.

Each time day one is entered at Grow day, the current weight will be updated to this weight

Important: When Day is equal to 1 it is not possible to change current weight.

63-71. Weight Increase Graph

The weight increase graph (table) works as follows:

The table has 9 groups. Each group contains two settings.

The first setting represents the number of days that the weight increase will take place over. The maximum number of days is 9.

The second setting is the actual weight increase over the set number of days. The maximum weight increase is 990 grams

Example 1

Enter the first table of the weight increase graph.

To enter a weight increase of 80 grams over 7 days, press on number 7, number 0 and number 8. Next press on enter.

On the display will appear: 7 08 G1

Example 2

Press on the data button to go to the next table in the weight increase graph.
To enter a weight increase of 200 grams over the next 9 days, press on number 9, number 2 and number 0. Next press on enter.
On the display will appear: 9 20 G2.

It is **important** to enter data in all 9 groups. If a group is not in use, than put one day and 0 as weight increase.

72. Grow Day

This is the current grow day of the flock. At the beginning of the flock enter here
The room temperature (02) will automatically receive the value as entered in
Grow day1 temp. (52).

73. Reset Time

The **Temptron W-607** collects all its information on a 24 hours basis. It is possible to set the reset time. The grow day also changes after this time is passed. All information, temperature, humidity, water count and feed consumption will reset at this time.

74. Flap Position %

Displays the current flap position in percentage.

HIDDEN FUNCTIONS 75-83

In order to reach the hidden functions you must first unlock them.
To unlock the hidden functions follow these steps.

A. Enter the time function (01).

B. Push on "PROG"

C. Enter 3331 and press enter.

The hidden functions are now unlocked and it is possible to program them.

To relock the hidden functions manually enter function 01 and enter 3330 and enter.
If no information is enter for a period of 10 minutes the unit will automatically relock the hidden functions.

75. Flap current state.

The flaps have 14 different states.

State 0= the flap is not moving.

State 1= the flap is opening.

State 2= the flap is closing.

State 3= the flap is at zero percent and there is no feedback.

State 4= the flap is a 100 percent and there is no feedback.

State 5-10= the flap is in a state other than opening or closing.

State 11= No flap was detected during the calibration process (see flap calibration below).

State 12= the unit has closed the flap open relay but no flap is connected. The relay will remain closed for 10 seconds. No alarm will be activated.

State 13= the unit has closed the flap open relay but no flap is connected. The relay will remain closed for 10 seconds. No alarm will be activated.

76. Lock Code

Enter here the 4-digit function for locking/unlocking the unit.
If no lock code is desired, enter 0000 for the lock code.

77. Number of sensors for average

Use this function to define which temperature sensors make up the average house temperature .

Example; if sensors 1&2 are used for the average house temperature, enter here 2.
If sensors 1,2&3 are to be used enter here 3.

78. Net Name

It is possible to connect the **Temptron-610** to a PC computer with the help of the "ChickPro" software package.

Enter here a number from 1-99 that represents the communication number of the unit.

It is possible to manage up 99 Temptron 607 units. Each unit needs a net name.

79. Digital inputs

Shown here is the current digital input that is in use. For AgroLogic personnel.

80. Feed Mode

The feed consumption can be calculated by auger run time or by a pulse received from some type of external feed weighing unit.

Enter "0" if the feed consumption is calculated by auger run time (see function 48, [Feed Multiply](#) on page 13.

Enter "1" if the feed is calculated by pulses received from an external feed weighing unit.

81. Minimum Ventilation Fan Mode

There are two modes for Minimum Ventilation.

- ◆ Using the same fan group for each minimum ventilation cycle.
- ◆ Use a different fan group for each minimum ventilation cycle.

Use the table below to setup the minimum ventilation mode as you would like it to run.

Value entered in function 76	Fan Group running in Cycle 1	Fan Group running in Cycle 2	Fan Group running in Cycle 3	Fan Group running in Cycle 4	Fan Group running in Cycle 5	Fan Group running in Cycle 6
1	Fan 1	Fan 1	Fan 1	Fan 1	Fan 1	Fan 1
2	Fan 1	Fan 2	Fan 1	Fan 2	Fan 1	Fan 2
3	Fan 1	Fan 2	Fan 3	Fan 1	Fan 2	Fan 3
4	Fan 1	Fan 2	Fan 3	Fan 4	Fan 1	Fan 2
5	Fan 1	Fan 2	Fan 3	Fan 4	Fan 5	Fan 1

82. Communication Protocol

Enter 0 for text 2400 bps

Enter 1 for text 9600 bps

Enter 2 for binary 2400 bps

Enter 3 for binary 96000 bps

Factory default is "0"

83. Program Version

This is the program version.

The program version can also be seen on the controller display when the controller is powered on.

Flap Calibration

It will be necessary to calibrate the air inlet curtain before the start of each flock.

A. Go to the time function (function01)

B. Push on "PROG"

C. Enter "4441" and press "Enter".

This will start the calibration process. The flap will first close to 0 percent and then open to 100 percent. The flap will then go to its required position.

TROUBLE-SHOOTING

1. If a temperature sensor or its cable is disconnected, the sensor reading will show **Open**.
2. If a temperature sensor or its cable is shorted, the sensor reading will show **Short**.
3. If all sensors are disconnected, the unit will show open as average and activate the alarm.

If one sensor is disconnected, the system will automatically work on the remaining sensor.