TEMPTRON 607A-C

Version: B202

Reversion	Date	Change
B200	7/7/2011	Written for new board
B201	7/10/2011	Update for WebChick
B202	06/05/2012	Add fast communication protocol
B202	31/12/2015	Add title page

Attention!!
1. This manual may contain mistakes and or printing errors. We accept no liability for technical mistakes or printing errors, or their consequences.
2. 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.

1. Installation

Open the two screws on the front panel

1. Connect the **Temptron-607** to the wall in a dry place approximately 1 meter away from the electrical cabinet.
2. Connect the inside temperature sensors the to analog inputs 1-5 and GND connectors (see wiring diagram on page 12). Sensor 1 to analog input 1, sensor 2 to analog input 2, sensor 3 to analog input 3, sensor 4 to analog input 4, connect the outside temperature sensor to analog input 5. The sensors can be placed up to 100 meter from the main unit with an ordinary two-wire cable. The sensor has no polarity. Up to 5 sensors may be connected (optional).
4. Connect the humidity sensor (optional). Brown wire to +, blue wire to GND and the yellow wire to the analog input 6 (see wiring diagram on page 12).
5. Connect the water meter to analog inputs 1 and GND.
6. Connect a dry contact coming from the feed auger relay to analog input 2 and GND. The contact should be closed when the feed auger is running (see wiring diagram on page 12).
7. Connect the relay's outputs to the various systems. All outputs are dry contacts 2 Amp/220V NO/NC (see wiring diagram on page 12).
8. Connect a 220V cable to the unit.

Close the panel with the two screws.

2. Operation

The **Temptron-607** will display the average temperature of the connected temperature Sensors. It is possible to display each sensor separately.

Turn on power.

1. Each time power is connected to the unit the program version number will appear on the display.
2. After 20 Seconds the average temperature will appear on the left display.
3. To display sensor 1, press on keyboard number 1.
The temperature of Sensor 1 will be displayed.
4. To display Sensor 2, press on keyboard number 2.
The temperature of sensor 2 will be displayed.
5. To display the humidity, press on keyboard number 5. (Only if a Humidity Sensor is connected).

3. Reading Set Point

It is possible to read all the information on the **Temptron-607** display.
The right display indicates the function number. The left display shows the set point for each function.
Each set point has a function number (see menu on the front panel). It is possible to go into the function in two ways:
1. By pressing on the "DATA" button, the function number display on the right side of the panel will increase. The preset information will appear on the data display on the left side of the panel.
2. By pressing on the "0" button, two lines will appear on the function display and "FUNC" on the data display.

Example:
If you would like to see function no.8;
a) Push on the "0" button.
b) Push on "0" and then on "8" button.
On the function display will appear 08 and on the data display the information.
If a function number is higher than 10, push on "0" and then the function number.

Example:
If you would like to see function no.12;
a) Push on the "0" button.
b) Push on 1 and 2 button.
On the function display will appear 12 and on the data display the information.
It is possible to continue from function "12" by pushing on the "DATA" button to the next function.

4. Programing

It is possible to change each set point.
1. Go into the desired function as explained above.
2. Push on "PROG" button. The function display will start to flash.
3. Use the keyboard to enter the desired data. The new data will appear on the data display.
4. Check the display to see if the information is correct. If yes, push on the "Enter" button. The function display will stop flashing to indicate that the new information has been stored into the unit's memory.

5. Set Points

Function

01. Current Time

Displays the current time.

02. Required Temperature

The required temperature is the requested temperature for the house. All set points (except the cool temperature set point) are set as a differential above or below the required temperature.

03 Heat

Heat set point is the temperature differential below the requested room temperature that the heating system will turn on.
Example: **Heat** set point = 1.0
If the room temperature should drop 1.0° below the **Room temperature** (function 02) setting, the heating system will start to run.

04. Fan 1

Fan 1 set point is the temperature differential above the required temperature at which time fan 1 will operate nonstop. Fan group 1 alone may be used as a minimum ventilation fan group or it may be used together in a rotating manner together with the other 4 fan groups (see hidden function #38 Fan mode).

05. Fan 2

Fan 2 set point is the temperature differential above the required temperature at which time fan 2 will operate nonstop. Fan group 2 may be programmed to work as a minimum ventilation fan group (see hidden function #38 Fan mode).

06. Fan 3

Fan 3 set point is the temperature differential above the required temperature at which time fan 3 will operate nonstop. Fan group 3 may be programmed to work as a minimum ventilation fan group (see hidden function #38 Fan mode).

07. Fan 4

Fan 4 set point is the temperature differential above the required temperature at which time fan 4 will operate nonstop. Fan group 4 may be programmed to work as a minimum ventilation fan group (see hidden function #38 Fan mode).

08. Fan 5
Fan 5 set point is the temperature differential above the required temperature at which time fan 3 will operate nonstop. Fan group 5 may be programmed to work as a minimum ventilation fan group (see hidden function #38 Fan mode).

09. Fan On Time
Fan on time is set in minutes. This is the length of time the minimum ventilation fans will run during minimum ventilation cycle.

10. Fan Off Time
Fan off time is set in minutes. This is the length of time the minimum ventilation fans will be off during minimum ventilation cycle.

11. Humidity Set Point
Humidity set is set in percentage. If the humidity reading in the house rises to this level, the unit will automatically bring into operation the next fan group.

! This setting is also used for the cooling system. If the cooling system is running and the humidity reading in the house rises to this level, the cooling system will turn off.

Example:

Function #	Setting
02. Requested temperature	25°
04. Fan 1	1.0
05. Fan 2	2.0
06. Fan 3	3.0
07. Fan 4	4.0
08. Fan 5	5.0
09. Fan on time (minutes)	1
10. Fan off time (minutes)	2

If the current average temperature in the house is 25° then the unit will be working in the minimum ventilation mode.
Fan 1 will be working in minimum ventilation cycle. Fan one will run 1 minute and be off 2 minutes (function 09 and 10)
Once the temperature reaches 26. ° (function 02 + function 04), fan 1 will run continuously. The unit will no longer be in the minimum ventilation cycle.
When the temperature reaches 27.0° (function 02 + function 05), fan 2 will start. Now both fans 1 and 2 will be operating nonstop.
This procedure will continue with fan 3, 4 and 5 as the temperature raises.
The reverse procedure will apply when the temperature starts to drop.

12. Cool Temperature
Enter here the average house temperature that when reached will turn on the cooling
system. Once on, the system will run in its cycle mode.

13.Cool On Time: mm:ss
This is the ON time period, set in minutes and seconds, which the cooling system will run.

14.Cool Off Time: mm:ss
This is the OFFtime period, set in minutes and seconds, which the cooling system will be off during the cooling system cycle.

Example:

Function:	Value:
12. Cool Temperature	27.0°
13. Cool On Time mm:ss	02:00
14. Cool Off Time mm:ss	05:00

If the average house temperature reaches 27°, the cooling system will start to operate.
The cooling system will run for 2 minutes (function 13), and be off for 5 minutes (function 14).

! Humidity Set (function 11) is also used for the cooling system. If the cooling system is running and the humidity reading in the house rises to this level, the cooling system will turn off.

15. Low alarm
Low alarm set point is the temperature differential below the requested room temperature. This alarm is represented by the number 1 in function 39, Alarm type (see page 10).
Example: If 5.0° is entered in the alarm low function, if the average house temperature
falls 5.0° below the required room temperature (function 01), the alarm relay will be
activated.

16. High alarm
High alarm set point is the temperature differential above the requested room temperature. This alarm is represented by the number 2 in function 39, Alarm type (see page 10).
Example: If 5.0° is entered in the alarm high function, if the average house temperature raises 5.0° above the required room temperature (function 01), the alarm relay will be activated.

17. Water Clock
If a water meter is attached to the unit, it is possible to see here the amount of water consumed in liters.

18. Feed Multiply

The feed multiply is the total feed in Kg. that is brought into the house over one minute when the auger motor is on. This is needed in order to calculate the amount of feed being used. Example: Enter 25. The unit will assume that 25 kilos of feed pass through the auger each minute. After 10 minutes the feed consumption will be 250 kilos.

19. Daily Feed Consumption

A display of the current total feed consumption over the last 24 hours (from reset time to reset time).

20. Total Feed Consumption

A display of the total feed consumption since the start of the flock.

21. Temperature Day 1.

Temperature day 1 is the required room temperature (code 02) for the first day of the flock. It is the temperature that will appear as the required room temperature (code 02) when grow day (code 31) is equal to 1. The room temperature will be reduced according to the temperature table as explained below.

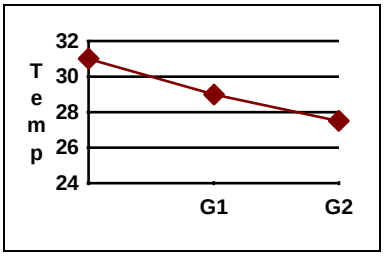
22 – 30 automatic reduction table

It is possible to set a temperature table 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. (code 21)
Grow day = 1 (code 31)
Required house temperature = 31°C. (code 02)
Group 1- 7 days reducing of 2°C.

Each day the room temperature will be reduced by 0.3°C. At day 7 - the room temp. 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. This will continue for the 9 possible settings.

Example:
To Enter temperature reduction of 2°C over 7 days, enter code 22, press on the program button, press on 7, then 2, then 0, then on Enter. On the display will appear:
7 2.0 G1
Push on data key, next group will appear.
To enter temperature reduction of 1.5°C in 3 days, push 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 than put one day and 0°C. as a reduction temp.

31. Grow Day

This is the current grow day of the flock. At the beginning of the flock enter here 1. The room temperature (code 02) will automatically receive the value as entered in Grow day1 temp. (code 21).

32. Reset Time

The **Temptron T-607** collects all its information on a 24-hour 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.

6. Hidden Set up functions

Functions 33-40 are hidden functions and cannot be accessed unless the hidden function code is entered:

A. Go to the time function (function 01)

B. Push on "PROG"

C. Enter "3331", then press "Enter".

Now the hidden functions may be accessed.

33. Lock Code

It is possible to enter a 4-digit function, which will lock the **Temptron T-607.**
Enter a 4-digit function and press enter. This will be the code necessary in order to enter information into the Temptron T-607.
Once the code has been entered, after a ten-minute period, if no information has been entered the unit will lock. It is possible to see all the information in the unit, but not possible to make any changes.
In order to unlock the unit, first enter the 4-digit code, then continue in the usual manner to enter information.
Example:

A. Enter 4-digit function
B. Push the Prog.
C. Enter function number and press enter.
D. Enter desired value and press enter.

If no lock code is desired enter in 0000 as the lock code.

34. Sensor Average

It is necessary to define the number of temperature sensors that will be used for the average temperature reading.
Enter the number of sensors. If two sensors are used enter the value 2.
It is possible to enter up to 4 sensors for the average temperature

35. Net Name

It is possible to connect the **Temptron-607** to a PC computer with the help of the "WebChick" software package (optional).
Each unit needs a net name.
Set the net name 1 for house one, 2 for house 2 and so on.

36. Digital Input Readout
This is a display of the current digital inputs being used in a bin format

37. Feed Mode
The unit can measure feed consumption in two ways. One is as explained in function 18, by converting time into kilos.
The second way is for the unit to receive a dry contact pulse from a weighing machine. Each pulse represents a preset amount of feed.
Enter 0(zero) to measure by time.
Enter 1(one) to measure by pulse.

38. Fan Mode
Set the required fan order for minimum ventilation as explained below.
It is possible to program which group or groups will run in the minimum ventilation mode. It is possible to choose fan group 1 only or fan group 1 alternating with other fan groups. Example: If you enter here the value 1 then only fan group 1 will run in the minimum ventilation cycle. If you enter 2 then in the first minimum ventilation cycle fan group 1 will run. In the second cycle fan group 2 will run. The two fans groups will run alternately during the minimum ventilation cycle.
If you enter 3 then fan groups 1, 2 and 3 will run alternately during the minimum ventilation cycle.
If you enter 4 then fan groups 1, 2, 3 and 4 will run alternately during the minimum ventilation cycle.
If you enter 5 then fan groups 1, 2, 3, 4 and 5 will run alternately during the minimum ventilation cycle.

39. Alarm Type
Displays the current alarm number. This program has five types of alarms.
1= Cold alarm (see function 15).
2= Hot alarm (see function 16).
3= Memory; one or more parameters has been changed and Enter was not used.
4= All sensors; all temperature sensors are faulty. The unit needs a minimum of one temperature sensor to operate.
5= One sensor; one or more of the temperature sensors are faulty.

40. 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”

40. Version
The number shown is the program version number for your unit.

7. 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 both 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.

8. Wiring Diagram