



Ecomaster Clima user manual

Reference: MH-012



Redacted by: Pablo Garcia Piosa
Date: 10-10-18
Category: Manual

| Document privacy | | |
|------------------|--------------|---|
| PU | Public | X |
| RE | Restricted | |
| CO | Confidential | |

| Revision control | | | |
|------------------|----------|--------------|--|
| Version | Date | Change | Comments |
| V1 | 09-23-05 | Juan Bernal | <p>The new features corresponding to software version 1.0 are added to the manual</p> <ul style="list-style-type: none">• From this version on it will be possible to control a motorized valve for the roof and floor heating circuit.• It now includes the possibility of programming the strictness of the filter applied to the reading from the temperature sensors. |
| V2 | 10-21-05 | Juan Bernal | Comments added |
| V3 | 10-10-18 | Pablo García | New format |

Contents index

| | |
|---|----------|
| Contents index | 3 |
| 1. Functional description | 4 |
| 1.1. Temperature set | 4 |
| 1.2. Varying the speed of the Evaporator Ventilators..... | 4 |
| 1.3. Changing the flap position | 5 |
| 1.4. Activation of ECO. | 5 |
| 1.5. Activation of De-humidification (Reheat)..... | 5 |
| 1.6. Check Temperatures | 5 |
| 1.7. Variation of Contrast and Brightness | 6 |
| 2. Autochecking - error codes. | 7 |

1. Functional description



In Air Conditioning Operation, the variables are:P

- Temperature set.
- Evaporators speed
- Flaps
- De-humidification
- Ecologic mode - Block compressor.

Any variation in the speed, position of the flaps, De-humidification or Compressor blocking places the air conditioning system in semi-automatic mode and it can be switched to fully automatic mode by pressing the AUTO button.

1.1. Temperature set


The Temperature can be set between 17°C and 27°C (63-82°F) using the  (8) and  (7) keys.


When the temperature level is set below 17°C (63°F), the system engages forced chill mode (LO) and activates its maximum cooling power. (the screen displays LO)

When the temperature is set above 27°C (82°F), the system engages forced heat mode (HI) and activates its maximum heating power (the screen displays HI).

1.2. Varying the speed of the Evaporator Ventilators

The speed of the evaporators can be varied from levels 1 to 3. When the speed is altered, the system goes into manual mode and the led located next to key  (1) will be switched off.

If the key  (1) is pressed, the system automatically recovers the corresponding speed and the led will shine again to indicate manual operation.

To alter the speed, press key  (2). Pressing it once will display the current speed on the screen; if it is pressed again, the value of the speed will be increased in a closed loop (from 3 it will change to 1).

Note:


If the bus is not equipped with roof-mounted heaters and the interior temperature is less than 12°C, speed 0 may be selected while the system is heating, the automatic speed will be 0

If speed 0 is selected manually as in the preceding example then, once the interior temperature increases to 12.5°C, the system will automatically take on the corresponding speed and will set itself to Automatic.

1.3. Changing the flap position


The position of the flap can be changed from external air to internal air. When the position is changed, the system switches to manual mode.

If the key  (1) is pressed, the system automatically recovers the corresponding position.

To alter the flap, press key  (3). Pressing it once will indicate the current position; pressing it again will change the position.

If the Ecomaster Clima is operating in air-conditioning mode and the interior temperature is 2°C higher than that selected (Set), the flaps will switch to Automatic mode and will close.




1.4. Activation of ECO.

If the  (4) key is pressed, the letters ECO will appear on screen and the compressor will be disconnected. The system switches into Semi-automatic mode.

Pressing the  (4) key will have no effect if the system is not working in De-humidification mode.

If the  (1) or  (4) key is pressed, the ECO option will be switched off.


1.5. Activation of De-humidification (Reheat).

If the  (6) key is pressed, De-humidification will be activated. This will remain in operation for 15 minutes or until the  (6) or  (1) key is pressed again.

“Reheat” cannot be activated if there are no heaters installed on the roof unit.

Selecting the de-humidification option cancels out the ECO option.











1.6. Check Temperatures

The internal and external temperatures can be checked by pressing the  (5) key. The interior temperature is displayed first, then the exterior temperature when the key is pressed again, and so on in a loop.

1.7. Variation of Contrast and Brightness

The values for the Contrast and Brightness can be varied and the new values will be remembered the next time the air-conditioning unit is switched on.

For this purpose, it is necessary to use the following key combination in which the first key pressed must be held down while the second key is pressed several times in succession to raise or lower the parameter in question.

-  +  (2+8) Greater brightness
-  +  (2+7) Less brightness
-  +  (3+8) Greater contrast
-  +  (3+7) Less contrast
-  +  (2+3) Factory settings for brightness and contrast

2. Autochecking - error codes.



When the system receives the signal from the battery disconnecter (+30), it first checks the outlets to check what charges are applied and to make sure there is no short-circuit.

It also checks the status of the probes.

If any anomaly is detected, it will indicate the error(s) on the Display using the following codes:

| CODE | ERROR |
|----------|--|
| INT | Internal Temperature Sensor Shorted or Open |
| ICE | Ice Temperature Sensor Shorted or Open |
| CHN | Channel Shorted or Open |
| EXT. | External Shorted or Open |
| MP | Main Outlet Pump Shorted |
| FP | Recirculation Pump Shorted |
| CMP | Compressor Outlet Shorted |
| RV | Roof Valve Outlet Shorted |
| FV | Floor Valve Outlet Shorted |
| S1 | Heater Outlet Shorted Speed 1 |
| S2 | Heater Outlet Shorted Speed 2 |
| PRF | Recirculation Flaps Outlet Shorted |
| DRF | Defroster Recirculation Flap Outlet Shorted |
| RB | Right Adjustable Evaporator Ventilator Outlet Shorted |
| LB | Left Adjustable Evaporator Ventilator Outlet Shorted |
| CNDB | Adjustable Condenser Ventilator Outlet Shorted |
| EVAP1 | Evaporator Ventilator Outlet Shorted Speed 1 |
| EVAP2 | Evaporator Ventilator Outlet Shorted Speed 2 |
| EVAP3 | Evaporator Ventilator Outlet Shorted Speed 3 |
| CND | Condenser Blower Outlet Shorted |
| C1 | Underfloor Heater Outlet Shorted Speed 1 |
| C2 | Underfloor Heater Outlet Shorted Speed 2 |
| POT. | Error in the automatic setting of the POT |
| VT MOT | No return or the motorized roof valve is not connected. |
| VS MOT | No return or the motorized floor valve is not connected. |
| NO ERROR | No errors during checking process |

If any of the above errors appears, the Ecomaster Clima will start to operate in accordance with the default operating programme. It is possible that the vehicle's interior temperature may not be regulated correctly under these conditions so it is recommended that the system should be reviewed by technical service personnel.

Error detected by control once the initial system checking is performed may be consulted by entering Viewing or Diagnosis modes and then simultaneously pressing the  (6) and  (4) keys.