

Operating Instructions

for your Ford & Doonan Ducted System



Congratulations!

Congratulations on your new Ford & Doonan Air Conditioning System. You can rest assured you have received a system of the highest quality, backed by the very best customer service. Before operating the air conditioner, please read this operating manual carefully. It will advise you on how to operate the unit correctly, understand the air conditioner's advanced features and help you in the unlikely event that a problem should occur.

Please keep this manual in a safe place for future reference.









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1800 247 266 info@fordanddoonan.com.au fordanddoonan.com.au

1. Important Safety Instructions

Never remove any fixed covers on the indoor or outdoor unit. Removal of the covers may expose fast moving fan blades or electrical components operating at a hazardous voltage. Contact with the blades or high voltage components may result in injury or electric shock.

Never insert any objects into the openings of the indoor or outdoor unit. This may damage the product or result in injury to the person inserting the object.

Do not expose the indoor unit or remote controller to rain or moisture. Water or other fluids on the electrical components may result in fire or electric shock.

Always replace any blown fuse with a fuse of the same specification. The use of the

wrong fuse may allow the electrical wiring to overheat and catch on fire. If the correct type of fuse continues to blow, or the circuit breaker continues to trip, contact Ford & Doonan Service Department.

Never operate the air conditioner without the return air filter(s) in place. Operating the unit without the filter(s) will allow dust to enter the indoor unit and build up on the heat exchanger coil and fan motor. This will cause a malfunction of the unit, which will not be covered by warranty.

This electrical appliance is not intended for use by young children. Young children should be supervised to ensure that they do not play with the outdoor unit.



Main switch

Ensure you are familiar with the location of the main switches for the air conditioning system. These switches are normally located adjacent to the outdoor unit and in the fuse box/switchboard.

If the air conditioner is not going to be used for an extended period of time or you are going away on holidays, the main

switch should be turned off to prevent accidental operation of the air conditioner. When turning the system back on, the main switch must be turned on at least 6 hours before the air conditioner is operated to warm up the compressor. Failure to do so may result in damage to the compressor, which will not be covered by warranty.



2. Zone Operation

Applicable when your new system has zones fitted

- For operational instructions please refer to the attached sub manual (if applicable).
- It is possible to run all zones at the same time, however, the system will not be running very efficiently.
- You may operate two or more zones at once, depending on the capacity of your unit, design and heat load. For example, under maximum heat load (a hot day) it is better to have fewer zones on than under a low heat load (at night) when an extra zone may be turned on.
- We recommend turning on the living areas during the day and closing any bedrooms and other zones that are not needed. At night it is best to turn off any living areas and keep the bedroom zones open. This will allow the best efficiency of the system.
- The zones can take up to 2 minutes to open or close.
- If some zones do not have enough air flow check how many zones are open. Close off any zones that are not needed and see if air flow increases.



3. Outlets

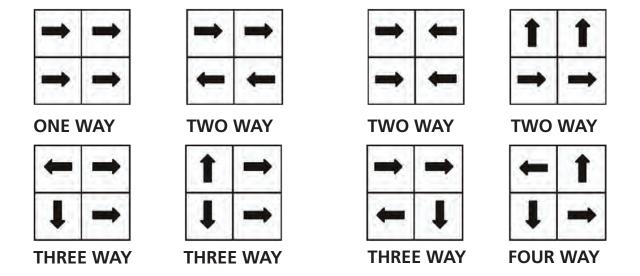
Multi-Directional outlets

Multi-Directional outlets (if applicable) are designed to give maximum adjustment to airflow. Each of the four cores (called louvre panels) is adjustable by lifting and turning to direct air from one direction to another. For the distribution of cool air, the louvre panels are set to deflect air horizontally across the ceiling. For high ceilings and heating systems the louvre panels are adjusted to achieve 40% downward flow. For spot cooling and heating, the louvre panels oppose each other for a vertical down airflow. The outlets can be manually closed during winter if the

system is not used for heating, although this is not a necessity.

Sidewall registers

Sidewall registers (if applicable) have vertical and horizontal blades that are adjustable. The blades are manufactured not to rattle. Any adjustments are required to be done with the assistance of long nose pliers with insulation tape wrapped around the ends so the paint of the register is not damaged. Gently move the blades to the desired position.







4. Maintenance

1. Cleaning the air filter

If you have a clean air filter pack, please call your Ford & Doonan store to purchase a replacement filter. We recommend replacing the filter every 12 months, if you have allergies or pets, we recommend replacing the filter every 6 months.

To clean your filter, remove the filter, hose it down and leave it a couple of hours to dry. Once this is done do not forget to press the filter reset button on your air conditioning controller.

2. Cleaning the outside panel

Cleaning of the outside panel is easy, by using a soft cloth or a cloth dampened by a neutral detergent solution. Never use paint thinner, other chemical products, or polishing powder when cleaning the outside panel. A good quality car polish can be applied to the painted surfaces to increase the paint's durability.

3. When the unit is not being used for an extended period

• Switch off the main power switch.

- Rust preventative coating has been applied to the outside cover. If corroded, repair by painting.
- Clean the condenser to remove dust and excess waste (leaves, paper, etc.).

4. Maintenance service contract recommended

To ensure your system delivers cool, fresh air throughout the year and that your warranty is valid, it's essential you maintain it regularly. Preventative maintenance by qualified technicians has been proven to reduce the risk of failure of plant and equipment and maintain the efficiency of the overall installation.

Servicing by a qualified Ford & Doonan technician is recommended. For domestic operation of the air conditioning system we recommend an annual service. If equipment is subjected to heavy use a bi-annual service frequency is desirable.

Contact your Service Department (9331 8800) to set up automatic service reminders and ask about our three year service packages at a reduced cost.



We recommend replacing your disposable filter every 12 months



DISPOSABLE filter



WASHABLE filter

5. Common Queries

If the air conditioning is not running or the cooling effect cannot be achieved as desired, check the following points before requesting repair or service.

If the air conditioner does not function please check the following:

Is the power switched ON? Has the power fuse failed? Is power supplied?

Has the circuit breaker tripped?

Is the temperature indicator set in the correct operating position, or to a position which is too high for the cooling operation?

How to perform a reboot of your air conditioning system

Before calling the Service Department please perform a reset of your air conditioning system. As any electrical appliance, power dropouts or surges can interrupt the operation of the system. In most cases a reboot is all that is required. In case the system has never been used before, make sure that the main switch has been turned on for at least 6 hours before using the air conditioning unit.

Locate the isolator switch at the outdoor unit. It is a big white switch at the outdoor unit. Turn it off and wait 3 minutes before turning it back on.

If the system does not reboot, or the fault still appears please call the Ford & Doonan Service Department.

Not cooling or heating as desired please check the following:

Is the thermostat set to the proper position to heating or cooling?

Is there an obstruction near the air intake or outlet port?

Is the air filter free from clogging by dust, dirt, etc.?

Are doors and windows completely closed?

Smoke coming from outdoor unit?

In cold weather you may see what appears to be smoke coming from the unit. This is just steam being released when the unit is in de-ice mode. Further you may notice the unit icing up and appearing frozen. This is normal as long as the system completes a de-ice cycle.

"Filter clean" displays

If a small tap or spanner symbol appears, this indicates it is time to clean or replace the filter. Press this switch to reset and clear the symbol once you have cleaned or replaced the filter. Please see Maintenance for more information on how to clean your filter. If the spanner symbol appears with a fault code, it is advising you of a problem and you will need to contact your Service Department.

Faults:

If the **"CHECK"** indicator starts flashing, this means there is a fault at hand.

In this case, or if fault codes appear, please call your Service Department with the fault code, explain the problem and they will be able to assist with the issue.



6. Performance Expectations

Hot weather

Heat load calculations and manufacturers capacity ratings are based on an outside temperature of 36°C. When the temperature exceeds this, the performance of your air conditioner will fall away the hotter it gets and room temperatures will increase accordingly.

Cold weather

Heat load calculations and manufacturers capacity ratings are based on an outside temperature of 7°C. When the temperature is lower than this, the performance of your air conditioner will fall away the colder it gets and room temperatures will decrease accordingly. The above conditions do occur in Perth and there will be nothing wrong with your air conditioning unit when it happens.

Heating performance

Hot air rises and the room temperatures at different levels will be different. It is normal that some parts of the room will be warmer than others. The same applies on cooling mode but to a lesser degree.

Return air

Your system will usually be designed with one only return air grille. The area around the return air grille will always be drafty, and in Winter, always much cooler than the rooms. This is why we select hallways or other "non occupied rooms". You will have to leave any room's entry door ajar to allow the conditioned air to come back to the grille. You cannot close the door as performance will be affected. We have options to overcome these situations, so please discuss this with your consultant.

Zones

If we have installed zones, then they cannot all be turned on together without effecting performance. On low load days or nights your air conditioner can handle a larger area at one time. Your air conditioner can only handle the percentage of the home we mention in our letter at typical design temperatures. Turning on less zones will effectively increase the available capacity you have.



7. Performance Tips

1. Temperature setting on your air conditioning unit

We recommend that in summer you set the cooling cycle at 24 degrees and in Winter the heating at 21 degrees. On very hot days (above 36 degrees) or cold days (below 7 degrees) one can increase the temperature in Summer and decrease in Winter, to keep the efficiency of the air conditioning.

2. To keep the comfortable temperature without extra heat loading

The easiest solution to start your air conditioner earlier in the day by using your timer setting. On hot days start the air conditioner before your heat load increases so the air conditioner can get a head start. On cold days start the air conditioner whilst it is still warm outside (above 12-15°C). This will let the air conditioner deliver maximum capacity before performance falls away. If your system has zones (residential only) reduce the number of zones turned

on when the external conditions are extreme. The smaller the area being air conditioned, the better it can cope.

3. Close doors of rooms that are not being air conditioned

When operating an air conditioning system that utilises the zoning technique, remember the system has only a certain capacity, therefore the idea is to air condition the areas you are occupying at the time. With this in mind, it becomes prudent to habitually close the doors that lead to a non air conditioned area, thereby reducing the total area being subjected to air conditioning. This will enhance the effectiveness of the machine.

4. Allow air flow to return air grille

You will notice that the larger return air grill is normally located in a central position in the building. It is important to encourage the airflow towards this grille. This grille is drawing the total air capacity of the system through it and therefore





requires unrestricted airflow. Depending upon the building, you may need to open or close doors around this area to keep the air flowing to this grille.

5. Regular cleaning of the filter is important

The return air grille in most cases also contains an air filter. This air filter, depending on the system usage and other air quality factors, will need to be cleaned regularly. To do this, simply open the grille and slide out the filter. In most cases it is best to hose the filter clean, although some people prefer to vacuum the filter. Remember, regular cleaning of the filter will improve the system efficiency.

6. Clean outdoor unit and surroundings

The condensing or outdoor unit is located in a position to best suit the building and the occupants. It is important to maintain cleanliness around the unit, for example sweeping away any build-up of leaves or general flotsam. It is critical to not inhibit the airflow coming from the condenser, therefore general garden paraphernalia or other equipment should never be

stacked on or lent against the condenser. Similarly if a garden is developing around the condenser, this can be an advantage as some of the sound from the condensing unit will be absorbed, although a robust bush can block the air flow so consideration should be given to this. It is also imperative to keep the condensing unit accessible for servicing purposes.

7. Sizing of equipment

When we recommend a unit we have completed a heat load calculation on the area. We have assumed the following:

- Curtains will be drawn closed in both sunny Summer days and at night in Winter.
- Ceiling insulation has been installed directly above your ceiling (not just anti-con or sisalation)
- Doors and windows will be left closed.

If any of the above changes, your air conditioner may not be large enough to maintain acceptable room temperatures.





ZoneTouch V2 Zone Control System

User Manual



www.polyaire.com.au

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Liability

Please read the instructions before installing this Zonemaster Zoning Control System.

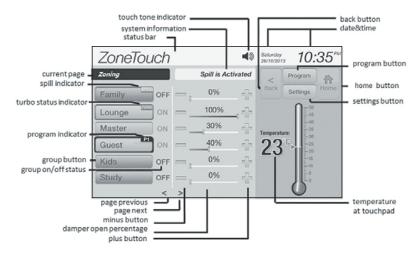
Polyaire Pty Ltd does not accept any responsibility for loss or damage that may occur as a result of the incorrect installation of this Zonemaster Control System.

1) Features

- · User friendly large touch screen interface
- · Intuitive user interface
- Control airflow to individual zones¹ and groups²
- Colour LCD for clearer display
- Personalized system settings and labelling
- · Wall mounted with up to two touch screens available in a system
- 5-1-1 Programmable On/Off time programs
- One selectable turbo³ group to cool/heat a particular area quicker
- Half year, One year and Two year service reminders to call technician for cleaning and servicing AC system⁴.
- All zones automatically resume their original on/off state once power is restored after power outage.
- 1. A zone is the area where air supply is controlled by one motorized damper
- A group is a few zones grouped together which have the group name and are controlled (turning on and
 off, or adjusting opening percentage) at the same time. A group will have at least one zone and no more
 than four zones.
- 3. Turbo function will give the selected group a full-opening while all other groups' (dampers) opening positions are reduced by 50% of their open percentage value. This will bring a large volume of extra air into the designated area and cool or heat the area quicker.
- 4. AC system is the ducted air conditioner which has ZoneTouch V2 as its zone control system.

2) Wall Controller Layout (Touch Screen)

The home screen of the system will normally display groups' status, dampers' open percentage with adjusting buttons, date, time, room temperature, touch tone status and ZoneTouch logo as shown in Figure 1.



Home Screen (Figure 1)

NOTE:

- The touch screen will go to the sleep mode after 90 seconds of inactivity.
 In sleep mode, the screen is blank. Touching any area of the screen will activate the system.
- To clean the touch screen, use a dry, soft cloth and very gently wipe the screen. If necessary, dampen the cloth with distilled water or with an equal ratio of distilled water to white vinegar.

3) Manual Group control

3.1 Group On/Off/Turbo

 a) On the home screen, touch a group button (Figure 2) to change the on/off group status and the dampers of the group will open or close accordingly.

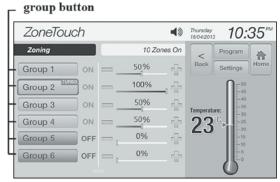


Figure 2

b) The group status can be set to 'TURBO' active when the group is specified as a turbo group (refer to 5.3) and the grey turbo indicator will turn blue to indicate the TURBO function is active. Figure 3 shows the group status sequence alternated by touching the group button.

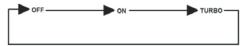


Figure 3

c) Up to 6 group buttons are shown in one screen and touch < or > to bring up previous or next page. NOTE: A group can have up to a maximum of 4 zones. Your installer would have already set up your zones and groups.

3.2 Adjusting airflow for a group

- The damper opening percentage for every group can be adjusted to control
 the amount of airflow at every outlet between 10% and 100% of the balanced
 value (setup by Installer) at 10% increments.
- Touch or buttons on the home screen to increase or decrease the
 percentage opening for the corresponding group.
- The airflow will be unadjustable if the Turbo function is active. Pressing (and will not change the opening percentage.



4) Automated Group Control

Automated on/off control for each group is an important feature of the ZoneTouch V2 system. This system has three program scenarios, one for weekdays (Monday to Friday), one for Saturday and one for Sunday respectively.

Each program scenario has 4 programmable events per day: on time 1, off time 1, on time 2 and off time 2. Each program event can be enabled and disabled and the time can be adjusted as desired. All four events are disabled in the factory default with settings as listed in the table below. Users can create up to 4 programs using the scenarios and different event time slots.

	On time 1	Off time 1	On time 2	Off time 2
Monday to Friday	6.30AM	8.00AM	5.30PM	10.00PM
Saturday	7.30AM	12.30PM	6.00PM	11.30PM
Sunday	7.30AM	12.30PM	6.00PM	11.30PM

NOTE: The Turbo function cannot be programmed. It is activated manually from the touch screen as needed.

Touch the Program button on the home screen to enter 'Programming' screen (Figure 4).

4.1 Set Program

Up to four programs can be created.

Touching button will go back to the home screen from programming setting pages.



Figure 4.

a) Touch Program buttons (e.g. Program 1) on 'programming' screen (Figure 4) to enter the screen (Figure 5) to select scenarios and adjust the event times.

day option radio button time switch radio button

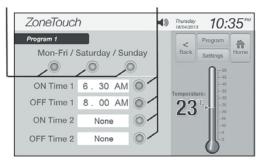


Figure 5

b) Touch a day option radio button to select Monday-Friday, Saturday or Sunday program to modify. Touch the time switch radio button on the right to enable/disable ON/OFF time.

c) Touch the hour, minute or AM/PM field on the screen to highlight it, and then the and buttons will appear on the screen (Figure 6).

Touch or buttons to adjust the time

NOTE: After an edit field is highlighted, touching that field again will quit from the editable status and the and will disappear.



Figure 6.

4.2 Select Program for a Group

Enter the 'Assignment' screen (Figure 7) by touching Assignment on programming screen (Figure 4).

Assignment screen shows the list of the current program of each group.

Touching button will go back to the home screen from Assignment page.

Touch the program field of a group to show all program options (Figure 8). Touching a program option will assign the program to the group (Figure 9).

Each group can be assigned with one program from program1 to program4 ('P1' to 'P4'), and the group will not have a program if 'No' is selected. If a program has been assigned to a group, the program indicator will appear on the group (Figure 10) if any of the four events in the program is enabled.

NOTE: Programs cannot be assigned to a group with turbo status. Record programs and groups to 'Table 5: Programs' on Page 13

program field

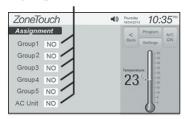


Figure 7.

touch to select the program



Figure 8.

after selection

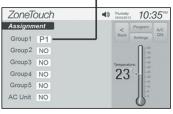


Figure 9.

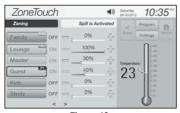


Figure 10.

5) User Settings

- a) Touch Settings on the home screen (Figure 1) enter "Settings" screen (Figure 11)
- b) Touch User to enter 'user settings' screen (Figure 12)

In User Setting, you can set up date and time, owner's name, Turbo group, temperature display and touch tone.

Touching ____ button will go back to the home screen from User setting pages.



Figure 11.



Figure 12.

5.1 Time/Date setup

- a) Touch Set TreeDate on the 'User Settings' screen (Figure 12) to enter the time/date setup screen (Figure 13).
- b) Hour, Minute, AM/PM, day, month and year fields will be shown on the screen. Touch the field which need to be modified, then touch or button to change the value (Figure 14).
- c) Touch button to save the changes and go back to User Setting page.



Figure 13.



Figure 14.

5.2 Owner's Name

The maximum length of the name is 16 letters.

Go to 'User Settings' screen (Figure 12).

Touch 'Owners Name' to change the owner's name by using the keyboard shown on the screen(Figure 15). Touch switch between lower case and upper case and touch for to confirm the name or touch for to cancel the change.



Figure 15.

5.3 Turbo Group

Touch 'Turbo Group' to specify a group as a Turbo Group. Turbo function will give the selected group a full-opening while all other groups' (dampers) opening positions are reduced by 50% of their open percentage value. This will bring a large volume of extra air into the designated area and cool or heat the area quicker. Typically this may be a family room, dining room or home theatre (or in commercial application a meeting, lunch or board room).

Touch the 'Turbo Group' field on the 'User Settings' screen (Figure 12), to display the list of available group name (Figure 16). Choose the desired group name as the turbo group. The grey turbo indicator will appear on the group button after it's chosen as Turbo group.

NOTE: To make the specified group start to work in turbo mode, the group status needs to be turned to 'turbo' on the home screen (3.1).



Figure 16.

5.4 Temperature Display

Touch the radio button of Display Temperature of to enable or disable the temperature display on the touch screen. Below images show the enabled status (Figure 17) and disabled status (Figure 18) of temperature display.





Figure 17.

Figure 18.

5.5 Touch Tone

The touch tone feature allows to either enable or disable the tone when the screen is touched. It is disabled as default and will display a mute logo X on the screen.

Touch the radio button of Touch to switch the touch tone on or off.

6) Information Sheets

These should be filled out by the installer

Table 1: System Configuration

Total Groups	Bypass Damper Installed	Supply Air Sensor Installed	
	Yes/No	Yes/No	

Table 2: Grouping

Group	Group Name	Zones Included	Turbo Function
1			
2			
3			
4			
5			
6			
7			
8			
9			
Α			
В			
С			
D			
Е			
F			
G			

Table 3: Balance

Zone	Balance Percentage
Zone 1	
Zone 2	
Zone 3	
Zone 4	
Zone 5	
Zone 6	
Zone 7	
Zone 8	
Zone 9	
Zone A	
Zone B	
Zone C	
Zone D	
Zone E	
Zone F	
Zone G	

Table 4: Installer Details

Installer	Contact Number	Date

Table 5: Programs

PROGRAM 1	On time 1	Off time 1	On time 2	Off time 2
Monday-Friday				
Saturday				
Sunday				
Groups				

PROGRAM 2	On time 1	Off time 1	On time 2	Off time 2
Monday-Friday				
Saturday				
Sunday				
Groups				

PROGRAM 3	On time 1	Off time 1	On time 2	Off time 2
Monday-Friday				
Saturday				
Sunday				
Groups				

PROGRAM 4	On time 1	Off time 1	On time 2	Off time 2
Monday-Friday				
Saturday				
Sunday				
Groups				

7) Troubleshooting Guide

PROBLEM	SUGGESTED ACTION
Dampers have no response when turned on or off	Check if the 'Safety is Activated' error is displayed. High limit (Heating) or Low limit (Cooling) may have reached. Check the air-conditioner to see if it is operating normally. ZoneTouch V2 system will resume to operational after the supply air temperature is within safety range. 'Check if Supply air sensor is plugged in the mainboard and High Limit & Low Limit is enabled. If the sensor is not plugged in, plug the sensor and the system will be operational after a minute. If the sensor is not required, disable High limit and Low limit from touchpad and system will return to operational in a minute. 'Check if LEDs on the main module light up for relevant zones when the zone dampers are being turned On/Off. If Green/Red LEDs are not activated for the respective zone, the main module may be faulty, replace it. 'Check if the cable from touchpad to the main control module is faulty. If it is a faulty cable, then the cable might have to be replaced.
Some zones cannot be turned off	Check if 'Spill is activated' is displayed on the LCD screen. Check if 'Spill' status is displayed for the Group status in the home screen. Opening other zones will rectify the error If all zones are turned on but the total opening percentage doesn't meet the required spill percentage, then the SPILL warning message will be displayed. Increasing the opening percentage of a few zones will resolve the issue. Check spill set-point.
No display on the LCD	*Check if the cable is plugged in properly. Unplug the cable and reconnect it. *Check if there is power to the unit.
LCD Display Corrupted	Reset LCD by holding RESET button at the bottom of the Touchpad for 2s. If error is still not resolved, reset touchpad by unplugging the cable from behind and then reconnect it after a couple minutes. If the corrupted display remains, power off/on the mainboard. Otherwise, replace the touchpad.
Some zones are not operational	*Check Grouping and find out if the right zones have been assigned to the right groups and have been turned ON/OFF in Zoning section. *Check if the total group number and zone number are correct. *Check if the LEDs on the main module light up for the relevant zones when the zone dampers are turned On/Off. If there is no response, there might be a faulty cable and the cable would have to be replaced. If the zone is still non-functional then there might be a faulty damper motor.

^{*:} These checks in the guide should be carried out by qualified personnel. If you have any doubt regarding the above please contact your installer.

8) Specifications

Electrical Requirements

Power supply: 24V AC ±10%

Line frequency: 50 Hz

Components Power Consumption

Touchpad: 0.5 VA
Main Control Module: 5 VA

Environmental Requirements

Operating temperature: 0°C to 60°C

Altitude: 0 to 2000 meters

Operating relative humidity: 10% to 80%

Operating relative humidity:
Avoid static electricity hazards

Avoid electromagnetic radiation sources

Avoid dust contamination

Avoid highly corrosive environments

Zone Output

Output voltage: 24VAC, 50Hz

Current: 200mA (1 damper motor)

Transformer

Input Voltage: 240V AC, 50Hz
Output Voltage: 24VAC, 50Hz

Wattage: 40W

Supply Air Sensor: NTC type, $10 \text{ k}\Omega$ at 25°C

Battery: 3.6V, 3xAAAM

Rechargeable for Main Module

Fuse: Dimension 5x20 mm,

Fast-Acting 2A, 250V



POLYAIRE PTY LTD

11-13 WHITE ROAD GEPPS CROSS SOUTH AUSTRALIA, 5094

> TEL: (08) 8349 8466 FAX: (08) 8349 8446

www.polyaire.com.au