



AirTouch 3 Zone Control System *User Manual*



airtouch.net.au

Liability

Please read the instructions before installing this Zone 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 AirTouch Control System.

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1) Features

- User friendly large touch screen interface
- Wireless remote control using smart WiFi enabled devices (iPhone, Androids and tablets)
- Control from anywhere via internet*
- Intuitive user interface
- Control AC unit¹ in different levels (optional, works with certain brands and models only)
- Control up to two ACs
- Control temperature and airflow to individual zones² and groups³
- Favorites (up to 4) to quickly set scenarios for different air conditioning requirements
- Receive alerts via mobile (requires setup) when home temperature is very high
- Child lock to protect air conditioning system
- 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 and AC Timer
- One selectable turbo⁴ group to cool/heat a particular area quicker for each ducted system
- Half Year, One Year and Two Year service reminders to call technician for cleaning and servicing AC system.
- All zones automatically resume their original on/off state once power is restored after power outage.

*** Internet access will depend on the home router and may result in some data usage (about 25MB per month)**

1. AC unit is the ducted air conditioner which is connected to AirTouch 3.
2. A zone is the area where air supply is controlled by one motorized damper.
3. A group is a few zones grouped together and 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.
4. 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.

2) Wall Controller Layout (Touch Screen)

The home screen of the AirTouch 3's touchpad normally displays groups' status, temperature and set point, dampers' open percentage with adjusting buttons, date/time (optional), room temperature, WiFi (if available) logo, AC status, AC control (details depending on the installation) and AirTouch 3 logo as shown below.



Home screen (Full Control)

NOTE:

- *The touch screen will go to 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 Control



3.1 AC Unit On/Off

On/Off Control

In AC on/off control mode, the AC can be turned on/off on the home screen. The AC name is given in the AC setup section. The power button shows the AC status. Touching the button will switch the AC unit on or off.

If AC is not set up, there will be no AC name nor power button on the home screen. If two ACs are installed, the “>” on the right side of the AC name will bring up the next AC.

3.2 AC Unit Full Control

In full control mode, AC on/off, operation mode, fan speed and set point can be controlled from AirTouch 3 touch screen.

Supported brands are Daikin, Panasonic, Fujitsu, Mitsubishi Electric, Mitsubishi Heavy Industries, Toshiba, LG, Hitachi, Carrier and Midea.

AC On/Off Control is the same as the On/Off only AC control.

AC Mode Control: Cool, Heat, Dry, Fan and Auto mode can be controlled from AirTouch 3 by touching the mode box and select the mode required.

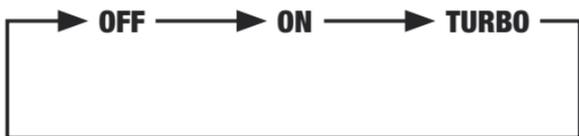
Fan speed: It can have up to five choices: Quite, Low, Medium, High and Auto. The number of fan speed will depend on the AC models. AirTouch 3 can automatically pick up the fan speed number and display them adaptively. Touching the fan speed pull down box will bring up available fan speeds and select the desired one by touching it.

Set Point can be set to desired value from AirTouch 3 screen by touching Up and Down buttons near the set point box. For heat mode the range is 16 to 30°C. For cool mode the range is 18 to 30°C.

NOTE: If AC Error is displayed, it means AC has some problems. If the system has full AC control, the error number will be in the message box and can be used to trace the problem.

3.3 Group On/Off/Turbo

- a) On the home screen, touch the group On/Off button to change the group status and the dampers of the group will open or close accordingly.
- b) The group status can be set to 'TURBO' active when the group is specified as a turbo group (refer to 5.4) and the grey turbo indicator will turn blue to indicate the TURBO function is active. Figure below shows the group status sequence alternated by touching the group On/Off button.



- c) Up to 6 group buttons are shown in one screen and touch > or < to bring up next or previous page of groups.
If two ACs installed with two ducted systems, the groups are AC related. If AC unit 1's status and control are shown on the left, the groups on the right are all connected to AC unit 1. Touch the ">" button on the right side of the AC unit name will bring up AC unit 2's status and control on the left, and the groups shown on the right are all connected to AC unit 2.

NOTE: A group can have up to a maximum of 4 zones. Your installer would have already set up your zones and groups.

3.4 Controlling group temperature

If a group has temperature sensors, it can be controlled by temperature or airflow. The group will initially have percentage displayed on a button and it's controlled by damper opening percentage. Touching the percentage button, the percentage will turn to temperature display which is the set point for the group. The group will be in temperature control mode.

Touching < and > will decrease or increase the set point respectively.

Touching the group name will show the current temperature of the group.

Touching the name again will hide the group current temperature.

Otherwise the temperature display will disappear when the screen is waking up from sleep mode.

3.5 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 5% and 100% of the balanced value (setup by Installer) at 5% increments.

Touch > or < buttons next to group names to increase or decrease the percentage opening for the corresponding group. The airflow will be non-adjustable if the Turbo function is active.

3.6 Favourite

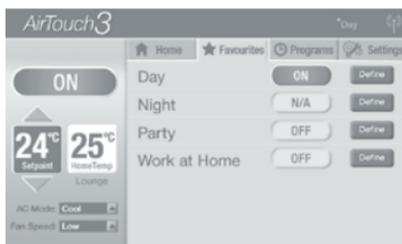
Four favourite scenarios can be defined and turned on and off in a system.

A favourite scenario is a snap shot of the status of all groups. Some of them are in close position and the others are in open position.

This can be defined for a particular occasion such as daytime when the bedrooms don't need air conditioning but living or family areas may need.

When a favourite is defined and turned on, the chosen groups will open and close at the same time accordingly, which simplifies the operation.

Touching Favourite tab will bring up Favourite page.



Touching the On/Off button will turn on or off the favourite. There will be only one Favourite On at the same time.

Touching Define button will bring up the page for choosing On groups and Off groups in the Favourite. The Favourite name can also be defined as well.



4) Automated Control

Automated on/off control for each group and the AC unit is an important feature of the AirTouch 3 system. This system has a program capability with three possible program settings, one for weekdays (Monday to Friday), one for Saturday and one for Sunday respectively.

Each program 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/disabled and their time can be adjusted as desired. All four sets of program are disabled in the factory default.

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

Touch the Program Tab to enter 'Programming'.



4.1 Set Program

Up to 4 programs and one AC timer can be set up for each ducted system.

- Touch the button of the program (e.g. Program1) on 'programming' screen to enter the program time screen
- Touch the relevant area to select Monday-Friday, Saturday or Sunday program and the ON or OFF operation to modify.
- Use the time wheel to choose the time for each operation.

4.2 Select Program for a Group or AC

Enter the 'Assignment' screen by touching Assignment on programming screen. Assignment screen shows the list of the current program of each group and the AC Unit which will be the last item in the list if AC is set up. Touch the program field of a group or the AC unit to show all program options. Touching a program option will assign the program to the group or the AC unit. Each group and the AC unit 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 or AC unit, the program indicator will appear next to the group or AC button if any of the four events in the program is enabled.

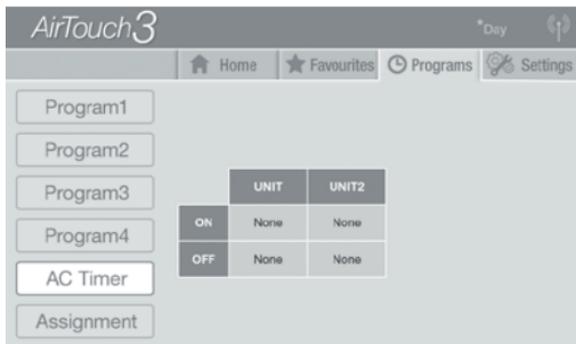


NOTE: Programs cannot be assigned to a group with turbo status. Record programs and groups to 'Table 5: Programs' on Page 20

4.3 Set AC Timer

AC timer function is useful for automatically switching the AC unit on or off at given time if AC is set up in AirTouch 3. You can use OFF Timer and On Timer in combination or separately. Each AC can have a timer if two AC's are installed.

- a) Touch AC Timer on 'Program' screen to enter 'AC Timer ' setup screen.



- b) Touch the relevant area to enable or disable the relevant timer, use the time wheel to set the time for the operation. The AC timer icon  will be on the status bar if the AC timer is set.



NOTE: If AC is not set up, AC timer will not be available. AC timer function is different from the program function, the enabled timer will act once and will not repeat. If you want the action repeated at the same time, you may look at programs.

5) User Settings

Touch Settings tab to enter settings screen.



In the list of Settings, you can set up date and time, group names, WiFi connection, Turbo group, and other preferences such as owner's name, temperature display, touch tone, child lock and alert message.

5.1 Date/Time setup

- Touch Date/Time button in the list to enter the time/date setup screen.
- The unit Run Hours tells how many hours the AC has been on in total since last reset. It helps the owner to manage their electricity usage and scheduled service. Pressing the Reset button will reset the value 0 and the system will restart counting the on hours.
- Hour, Minute, AM/PM, day, month and year fields will be shown on the screen. Touch the field which need to be modified, then turn the wheels to change the value.



The date and time display can be turned off by unchecking the display above the date and time wheels.

5.2 Naming Groups

The name of a group is set as 'Group-address' (e.g. Group-1) in factory default. The names can be customized as follows:

- a) In 'Settings' screen, touch Naming to enter 'Naming' screen.



- b) Touch the edit field of a group to rename it. A name list will appear for selection.
- c) Touch a name in the list to specify the name to the group, and also you can touch Keyboard to enter or edit a name manually.
- d) Touch Enter to confirm or touch any tabs to cancel and exit.

5.3 WiFi Setup

The instructions in this section demonstrate how to connect AirTouch 3 to a home router, which will enable the control/operation of AC unit and zoning via local WiFi and internet. When selecting a position for the AirTouch 3 main module to be installed, please make sure it is within the effective cover range of the home WiFi router which the AirTouch 3 will be connected to. This will ensure reasonable WiFi signal strength and provide a reliable connection between AirTouch 3 and the home router after they are connected and the main module is installed. It is highly recommended to undertake this setup by placing the AirTouch 3 main module as close as practical to the router, ideally about 1.5 to 2 meters, before installing the main module.

The connection can be carried out by scanning or manual input.

- a) Touch Settings tab and then WiFi to enter the 'WiFi Setup' screen. If AirTouch 3 is currently connected to a WiFi network, its SSID name will be ticked.
- b) If the wireless network SSID is known, touch SSID field to display the keyboard on screen and then input first few characters of the SSID. Touch Enter to confirm the SSID input.



- c) Touch Scan to start scanning for available WiFi networks/routers. Or Touch Other... to bring up the manual input (go to step e)

Note: The system will scan and display two WiFi network SSIDs each time, so it will be more efficient if the correct SSID is input before scanning. Please make sure the SSID & password are all less than 20 characters in length.

- d) On completion of the scan, up to two found routers with their SSIDs starting with the input characters will be displayed. Touch the desired router's name and then go to next step. If the desired router is not in the list, go back to b) or touch Other... to go to manual input.



- e) Touch the password field to enter the password of the WiFi network. Touch Enter to confirm. In manual input, after inputting correct SSID and password, Security has to be chosen before connecting



Choosing found ones



Manual input

- f) Touch Connect button to connect the desired WiFi network. 'Connecting' will appear on the screen



- g) The AirTouch 3's screen will display 'Connected' if the connection was successful. If Wi-Fi connection failed go back to a) to restart the process.



- h) The Wi-Fi logo (📶) will appear on the status bar after connecting to the WiFi network. The connection will stay permanent till the setting changes on the home router such as SSID and password. The connection will automatically resume after power off and on cycle.

Now you can run AirTouch 3 applications on your smart devices to control AC or zoning.



5.4 Turbo Group

Touch 'Turbo Group' in the Settings 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 to display the list of available group name. Choose the desired group name as the turbo group. The turbo indicator will appear between the group name and its On/Off button.

If two ducted systems installed, two Turbo groups can be set, one for each system.

Note: To make the specified group start to work in turbo mode, the group status need to be turn to 'turbo' on the home screen (3.2).

5.5 Preferences



a. Owner's Name

Owner's name is used by mobile apps to distinguish different AirTouch 3 if more than one system installed in different locations for the same owner. The maximum length of the name is 16 letters.

Go to Owner Name menu and touch the box next to Owner Name to change the owner's name by using the keyboard. Touch Shift to switch between lower case and upper case and touch Enter to confirm the name change.

b. Child Lock

Child Lock is to protect the AC and control system from potential damage caused by children playing with the system. It uses a password. When the touch screen goes to sleep mode and turns blank, the password will be required to wake it up to operational mode. The Child Lock is unlocked in default setting.





c. Touch Tone

The touch tone feature allows to either enable or disable the tone when the screen is touched. It is disabled as default. Touch the radio button to switch the touch tone on or off.

d. Temperature Show

Home temperature can be displayed on the touch screen or not by ticking or unticking the item.

The temperature displayed on the touch screen is either from the AC unit or one of the groups with temperature sensors depending on the AC setup.

e. High Temperature Alert Setting

In extreme hot days, AirTouch 3 can send an alert message to mobiles to notify the home temperature. Users can allow the mobile to receive the alert notification and also set the temperature threshold at which the alert will be sent.

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	Sensors	Turbo Function
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				
G				

Table 3: Balance

Zone	Balance Percentage	AC Unit
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/ACs				

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

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

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

7) Troubleshooting Guide for Touch Screen

PROBLEM	SUGGESTED ACTION
Dampers have no response when turned on or off	<ul style="list-style-type: none"> *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 replace the cable.
Some zones cannot be turned off	<ul style="list-style-type: none"> • Check if 'Spill' status is displayed for the Group status. Opening other zones will rectify the error • *Check spill groups.
No display on the LCD	<ul style="list-style-type: none"> • *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	<ul style="list-style-type: none"> • 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 about 15 seconds. If the corrupted display remains, power off/on the mainboard. Otherwise, replace the touchpad.
Some zones are not operational	<ul style="list-style-type: none"> • *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.
WiFi symbol (📶) has disappeared from the touchpad.	<ul style="list-style-type: none"> • After a power failure, AirTouch 3 will re-connect to home router and WiFi icon (📶) will be back on in 3 minutes from Power ON. • Turn the wireless router OFF and turn it back ON. Wait for 3 minutes for the AirTouch 3 system to initialise. • If WiFi icon does not appear, follow WiFi setup process to re-establish connection between your home router and AirTouch 3.
"AC ERRORxx" is displayed on touchpad	<ul style="list-style-type: none"> • *This error is displayed due to a fault with the AC unit. The AC ON/OFF function will be disabled when this error is displayed. The xx is the error code. Please call AC technician quoting the error code.

*: These checks should be carried out by qualified personnel.

If you have any doubt regarding the above please contact your installer.

8) AirTouch 3 Apps

1. Downloading and Installing the AirTouch 3 Apps

AirTouch 3 application can be downloaded from the following locations. The application is available for free of charge.



For Android Phone and Tablet:

Go to Market / Google Play store from your Android phone and search for AirTouch 3 application developed by Polyaire. After downloading the application, open the file and follow the prompts to install the application on your phone. The lowest Android version the AirTouch 3 app supports is Android 3.0.

For iPhones:

Go to the App store and search for AirTouch 3 application developed by Polyaire. Tap on the AirTouch 3 app and press Install. Enter your iTunes password and the AirTouch 3 app will be automatically downloaded and installed on your iPhone. The lowest iOS system the AirTouch 3 app supports is iOS 8.0.

2. Using AirTouch 3 Apps.

When mobiles and AirTouch 3 are all connected to the same WiFi network, the AirTouch 3 app will run straight away and the control interface will come up. Otherwise, you'll need internet connection (via other WiFi networks or 3G/4G network) and password to run the app. If it's the first time to run the app via internet and the app has not successfully run on the same WiFi network as the AirTouch 3 before, you will need the device ID and password to run the app successfully. The device ID can be found on the touch screen when you get to the Installer's setting page. The default password is 'Polyaire'.

Figure below shows the home page of the app. The operations are explicit and straight forward.



NOTE:

- Turbo zone can be activated by tapping the respective chosen zone until active Turbo icon appears on that particular zone.
- Touch highlighted percentage will toggle between temperature control and percentage control.
- Temperature display can be turned off from System.
- To change names of group/zone, go to System, then Naming page and follow the prompts.
- Password for Internet access can be changed in System when the mobile is on the same WiFi network as the AirTouch 3.
- To program groups and AC unit, or set timer for AC unit, go to Program and follow the prompts. The time set in the programs and Timer will be time of the AirTouch 3 system.

3. Troubleshooting Guide for AirTouch 3 App

NO	PROBLEM	SUGGESTED ACTION
1	AirTouch 3 app displays “No networks detected restart”	<p>a) Close the AirTouch 3 app and restart again.</p> <p>b) Check if the phone WiFi is turned ON and is connected to the same router which the AirTouch 3 is connected.</p> <p>c) Check if there was a power failure. If so, wait for AirTouch 3 to re-establish connection with the home router (3 minutes from Power ON). Now check if the WiFi icon (📶) is back on the screen and then try re-opening the app. If WiFi icon does not appear refer to point 2.</p>
2	AirTouch 3 app does not respond even if the app is in operation	<p>WiFi connection may have dropped due to no action from the mobile for a period of time.</p> <p>a) Close the AirTouch 3 app and restart it.</p> <p>b) Or turn the phone off and restart it.</p>
3	‘SPILL’ warning message is displayed	This means that the spill function has been activated as a safety measure because too many zones have been turned OFF. Turning ON more zones will resolve the issue.
4	‘HALF/ONE/TWO YEAR SERVICE DUE...’ message is displayed	<p>This is the message set-up by your installer to alert you to clean your filters or service your air-conditioner every 6 months, 1 year and 2 years respectively.</p> <p>This message can be removed by touching the message area on the touchpad.</p>
5	‘AC ERRORxx’, warning message is displayed	This error is triggered due to a fault with the AC unit connected to. The xx is the error code. Please call AC technician quoting the error code.

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

7) Specifications

Electrical Requirements

Power supply:	24V AC \pm 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%
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:	240VAC, 50Hz
Output Voltage:	24VAC, 50Hz
Wattage:	40W

Supply Air Sensor:	NTC type, 10 k Ω at 25°C
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Fuse:	Dimension 5x20 mm, Fast-Acting 2A, 250V
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