

SERVICE MANUAL

Server Room Dual Hose Portable Air
Conditioner for Larger Rooms

MODEL:
AP14009COM-1



CAUTION: READ ALL SAFETY PRECAUTIONS IN THIS
MANUAL BEFORE SERVICING THE UNIT

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SAFETY PRECAUTIONS

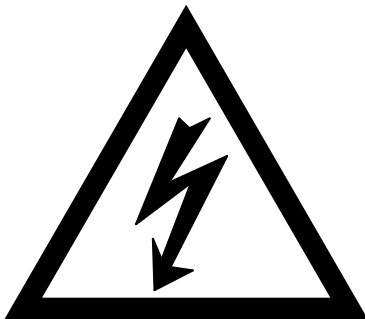
WARNING: This manual and the information contained herein is intended for use by certified technicians. The manufacturer or seller is not responsible for the interpretation or misuse of the information provided, nor does it assume any liability in connection with its use.

The safeguards and warnings indicated in this manual do not cover all possible conditions which may occur. Common sense, caution, and care must be exercised.

- To prevent electric shock, always unplug an appliance from the power supply before attempting any service.
- Disconnect the power cord by grasping the plug, not the cord.
- Do not bypass, cut, or remove the grounding plug.
- Prevent water from spilling onto electric elements or the machine parts.
- Always refer to the rating label on the appliance for rated current and voltage.
- Always check line voltage and amperage.
- Always use exact replacement parts.
- Any attempt to repair a major appliance may result in personal injury and property damage.

Electrical Safety

- Do not exceed the power outlet ratings.
- It is recommended that the unit be connected to its own circuit.
- A standard electrical supply that is properly grounded in accordance with the National Electrical Code and all state and local codes and ordinances is required.
- Do not use outlets that can be turned off by a switch or pull chain.
- Always turn the unit off and unplug it from the outlet when cleaning.
- Unplug the unit if it is not going to be used for an extended period of time.
- Do not operate the unit with a power plug missing the ground plug, a damaged cord, or a loose socket.
- Be sure the appliance is properly grounded.
- Do not bypass, cut, or remove the grounding plug.
- If the power cord is damaged, it must be replaced by the manufacturer or a qualified technician.
- Do not use extension cords or power strips with this unit. You may need to contact an electrician if it is necessary to use a longer cord or if you do not have a properly grounded outlet. Do not modify the power cord's length or share the outlet with other appliances.
- Do not start or stop the unit by switching the electrical circuit's power on and off.
- Immediately unplug the unit if it makes strange sounds, emits an odor or smoke and contact customer service.
- Do not remove any part of the casing unless instructed by an authorized technician.
- Before the appliance is removed from service or discarded, remove any doors and cut off the power cord.



General Safety

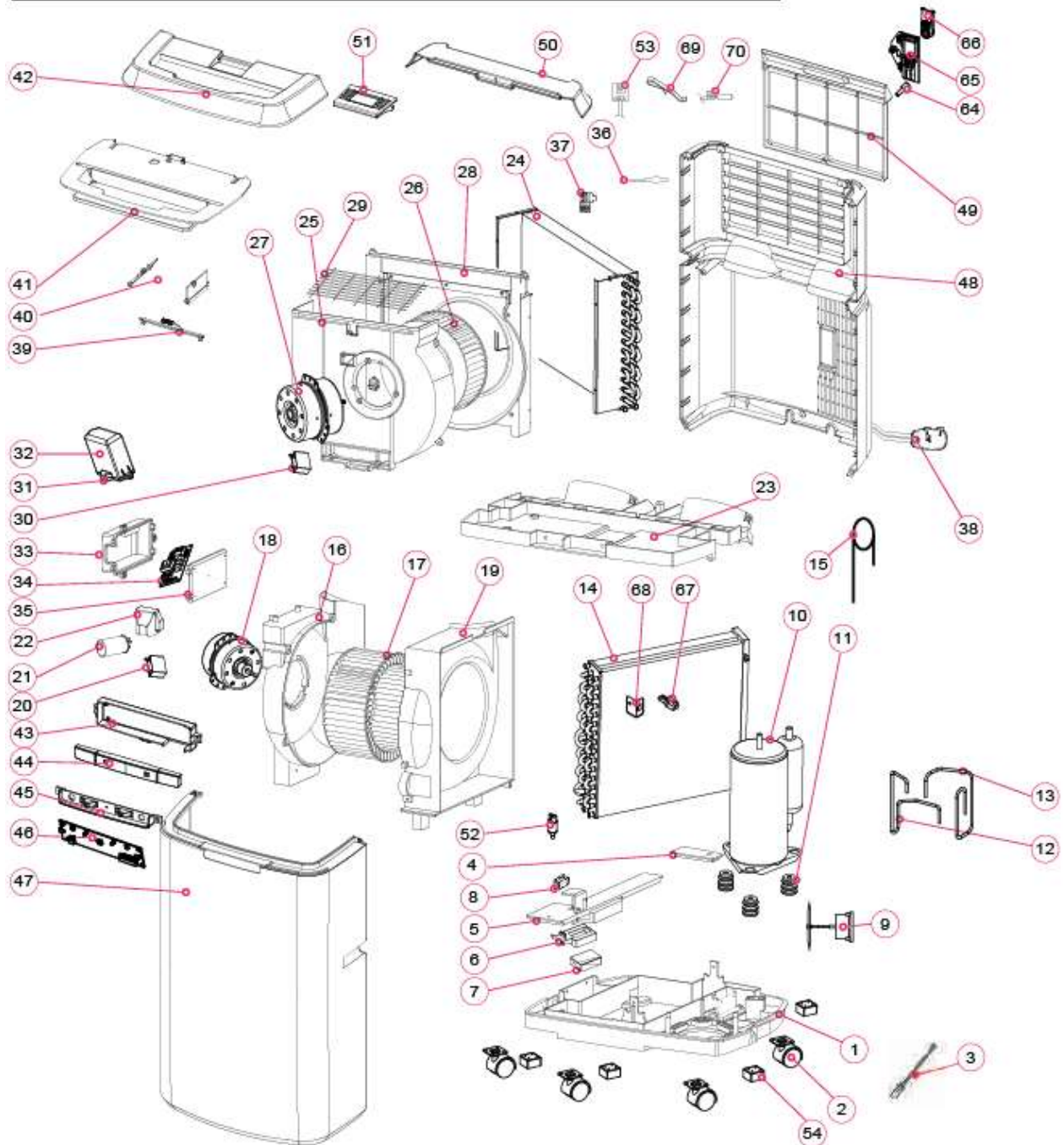
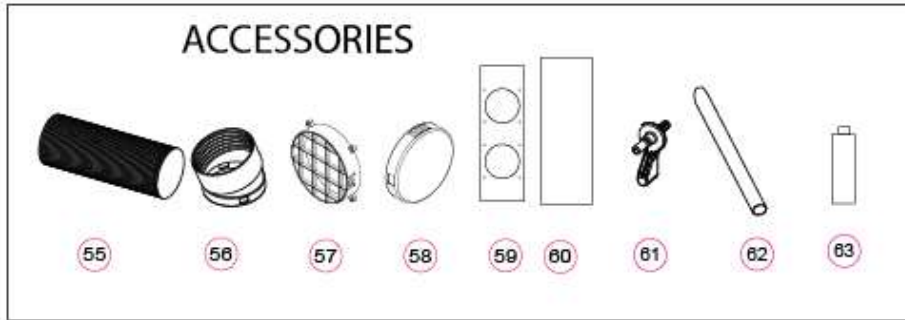
- Always unplug an appliance from the power supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
- Do not allow children or pets to play on or in the appliance.
- This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety.
- Do not install or store this appliance where it will be exposed to the weather.
- Disconnect from the power socket before cleaning or maintenance.
- If the plug (power cord) is damaged, it must be replaced by the manufacturer or an authorized service representative.
- This machine shall be repaired only by an authorized service representative. Only genuine replacement parts should be used.
- If connected to a circuit protected by fuses, use time-delay fuses with this appliance.
- Do not lean items against the glass door.
- Please do not close the door with excessive force. If it is found difficult to close the door, please check for obstruction.
- When you plan to dispose of this unit in the future, please comply with the local waste disposal regulations. Remove any doors so that children and pets will not be trapped in the unit.

1 Specifications

Description of product	Portable Air Conditioner
Model	AP14009COM-1
Voltage / Frequency	115 V / 60 Hz
Input Power	1250 W
Current	10.8 A
Cooling Capacity (SACC)	8500 BTU
Cooling Capacity (ASHRAE)	14000 BTU
Color	Silver
Coolant	R-410A
Timer	24 Hour
Dimensions (H x W x D)	33 3/4" x 19 1/2" x 15 3/4"
Weight	73 lbs.

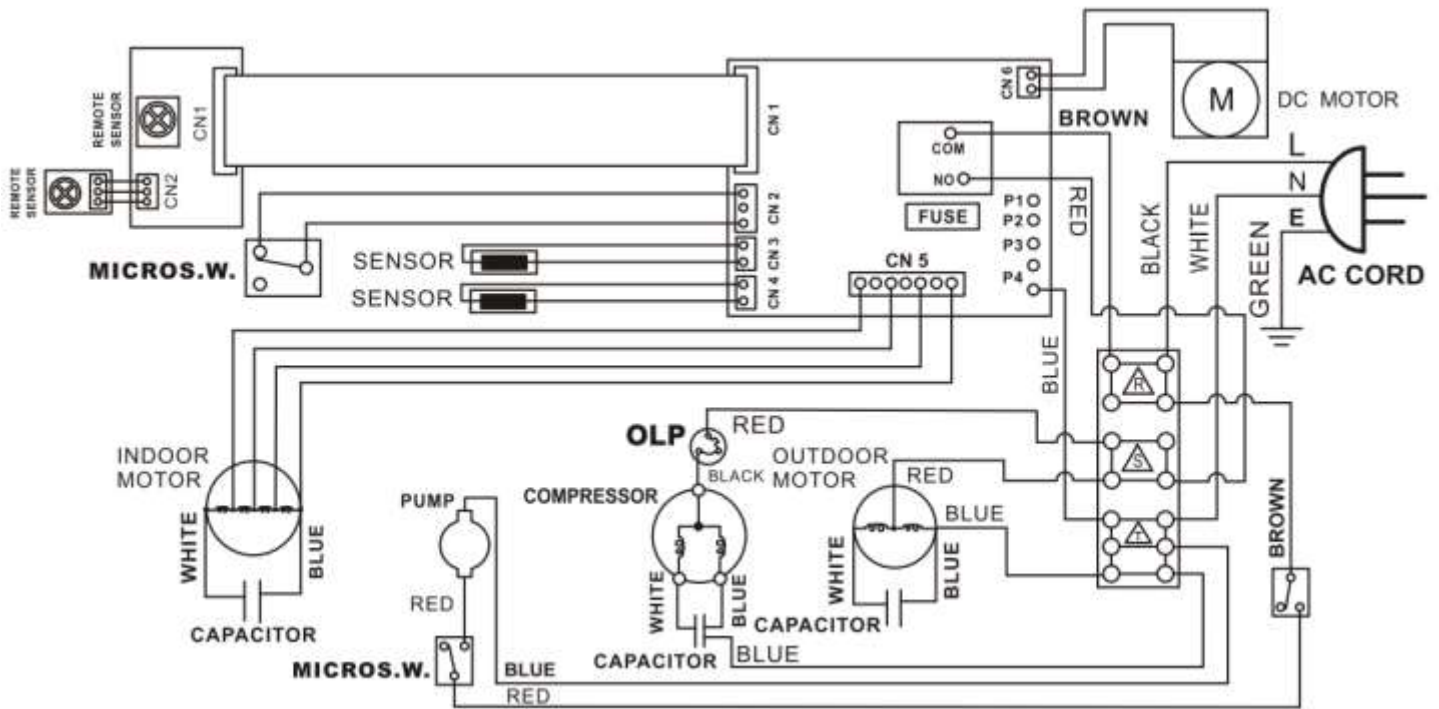
The above data is subject to change without notice. Please refer to the rating label on the unit.

2 Exploded View and Parts List

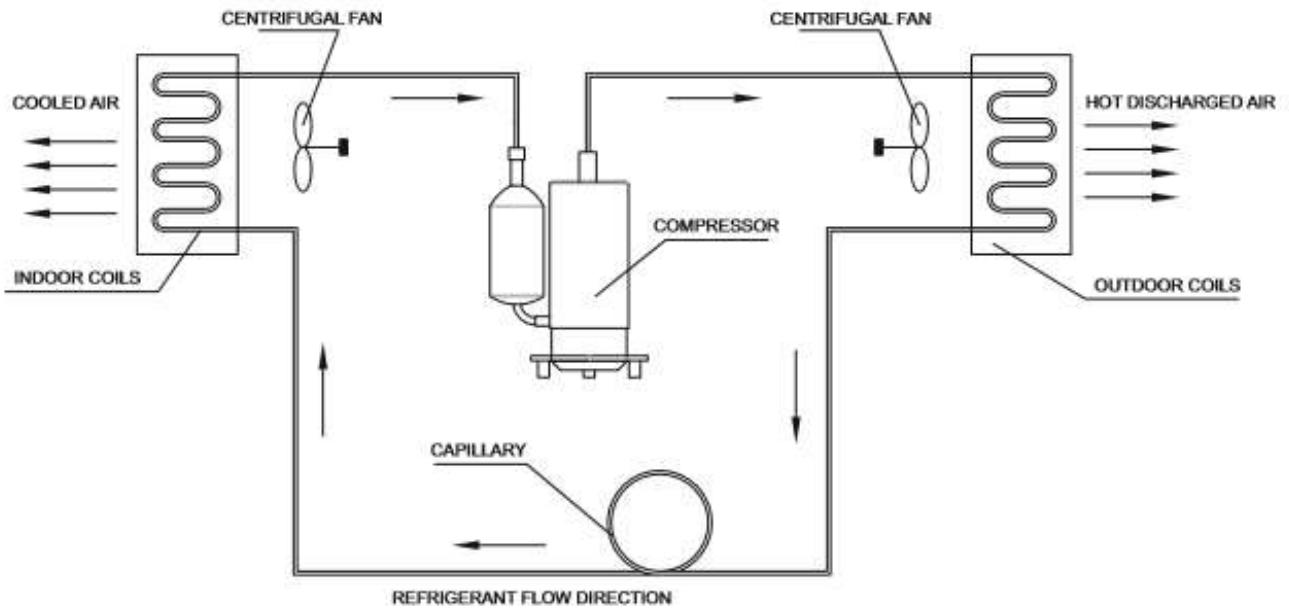


NO.	PART NAME	NO.	PART NAME
1	BASE PLATE	36	INDOOR TEMPERATURE SENSOR
2	CASTOR	37	BRACKET
3	DRAIN PLUG	38	POWER SUPPLY CORD
4	DRAIN BUCKET COVER-B	39	BAR
5	DRAIN BUCKET COVER-A	40	AIR DEFLECTOR
6	FLOAT BRACKET	41	DISCHARGE GRILLE
7	FLOAT	42	TOP COVER PLATE
8	FLOAT SWITCH	43	BRACKET
9	WATER FLINGER MOTOR	44	PUSH BUTTONS
10	COMPRESSOR	45	LIGHT BOARD
11	RUBBER FOOT	46	CONTROL PCB
12	DISCHARGE PIPE	47	FRONT PANEL
13	SUCTION PIPE	48	REAR PANEL
14	CONDENSER	49	AIR FILTER
15	CAPILLARY TUBE	50	TOP COVER PLATE
16	FAN HOUSING	51	REMOTE CONTROL
17	BLOWER WHEEL	52	Y TUBE
18	FAN MOTOR	53	SENSOR FOR REMOTE CONTROL
19	FAN HOUSING	54	BRACKET
20	CAPACITOR FOR FAN MOTOR	55	EXHAUST HOSE
21	CAPACITOR FOR COMPRESSOR	56	EXHAUST HOSE CONNECTOR
22	CAPACITOR COVER	57	GRATED CONNECTOR
23	MIDDLE PLATE	58	EXHAUST CAP
24	EVAPORATOR	59	WINDOW PLATE WITH HOLES
25	FAN HOUSING	60	WINDOW PLATE
26	BLOWER WHEEL	61	DRAIN PIPE CONNECTOR
27	FAN MOTOR	62	DRAINAGE PIPE
28	FAN HOUSING	63	REMOTE CONTROL BATTERY
29	SCREEN	64	QUICK CONNECTOR
30	CAPACITOR FOR FAN MOTOR	65	BRACKET
31	BRACKET	66	PUSH BUTTON SWITCH
32	CAPACITOR COVER	67	RUBBER
33	MAIN PCB COVER	68	METAL BRACKET
34	MAIN PCB	69	FIX CLIP
35	PCB BRACKET	70	EVAPORATOR SENSOR

3 Wiring Diagram



4 Refrigerant System Diagram



5 Modes and Operating Conditions

5.1 Terms and Definitions

TA: Ambient indoor temperature.

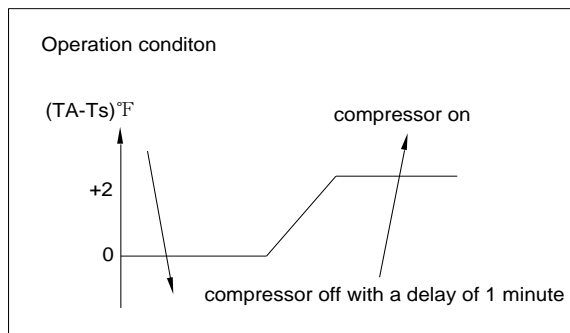
TS: Set temperature.

5.2 Cooling Mode (Blue Light)

The cooling temperature can be set from 64 to 90°F.

The timer function works in cooling mode.

The compressor will run when the difference between the set temperature and the actual ambient room temperature conforms to the chart below:



When $TA \leq TS$ (for 1 minute) the compressor turns off.

When $TA > TS + 2^\circ\text{F}$ the compressor turns on.

5.3 Fan Only Mode (Green Light)

If the temperature can't be controlled by the selected mode and the room ambient temperature is shown on the display the unit will default to fan only mode.

The readout can only display a temperature of 32 to 99 °F (0 to 37°C.) If the temperature is out of that range the display will show LO or HI.

The Timer function works in fan only mode.

5.4 Dehumidify Mode (Yellow Light)

In this mode, the air conditioner will operate as a dehumidifier. Because the conditioned space is closed or sealed, some degree of cooling will continue to occur.

If the room temperature is below 77°F, the fan will always run on low speed while in dehumidify mode.

If you do not use the exhaust hose in Dehumidifying mode, you must manually drain the water from the unit. Additionally, the ambient temperature in the room will probably rise by a few degrees if you do not use the exhaust hose.

You will be not be able to change the thermostat temperature or fan speed while in dehumidify mode.

5.5 Automatic Mode

In Automatic mode, the unit will cool or dehumidify depending on the ambient temperature.

As the temperature in the room changes, the mode and fan speed will change automatically.

The front panel lights will change depending on the mode.

5.6 Overflow Prevention

When water is detected in the reservoir for 3 seconds overflow prevention will occur.

The water light turns on.

5.7 Compressor Protection

If power is interrupted, the compressor will only restart after a 3 minute delay.

6 Troubleshooting

Problem	Possible Cause	Solution
Unit does not turn on.	Wall plug is disconnected.	Insert plug firmly into proper wall outlet.
	House fuse blown or circuit breaker tripped.	Replace fuse with time delay type or reset circuit breaker.
	Power cord is tripped.	Press the RESET button on the power cord. If power cord is damaged replace power cord.
	Unit is turned OFF.	Turn unit ON and set to desired setting.
	Ribbon cable to control panel is disconnected.	Remove outer shell and reconnect cable.
	Loose or disconnected wiring on main PCB.	Remove outer shell. Check all connections to the PCB and reconnect any loose or disconnected leads.
	Condensate water tray is full and/or water light is on.	Drain condensate water. Make sure water level switch is operating correctly and not stuck in "full" position or being interfered with.
Unit does not blow cold air.	Room temperature is below 61°F(16°C.)	Cooling will not occur until room temperature rises above 61°F(16°C.)
	Unit is not in cooling mode.	Set the unit to cooling mode – blue light is on.
	Set temperature is too high.	Set to a Lower temperature.
	Air filter is dirty.	Clean filter.
	Exhaust air duct is installed incorrectly or blocked.	Connect exhaust duct so it functions correctly. Clear blockage.
	Refrigerant leak.	Find leak and repair. Recharge with refrigerant.
	Evaporator is frosted.	The unit needs to defrost and will resume normal operation after it is finished.
Unit blows cold air but does not lower room temperature.	Fan speed is set too low.	Increase fan speed to improve air flow.
	Exhaust air duct is not installed, is installed incorrectly or blocked.	Connect exhaust duct so it functions correctly. Clear blockage.
	Room area is too large.	Reduce room size, add another unit or larger unit.
	Open windows or doors.	Close all open windows and doors.
	Ambient temperature is too high.	The unit may not work if the room temperature is above 90°F.
	Room has too many heat sources.	Remove or shut off additional heat sources. Close curtains or blinds to minimize the amount of direct sunlight entering the room.
	Filter is dirty.	Clean filter.
	The condenser coils are dirty.	Carefully vacuum the coils clean.
Unit continues to operate after water tray is full or water full protection occurs frequently.	Water level switch is open or short circuited.	Check water level switch connections or replace water level switch if defective.
	Water level switch is stuck in "empty" position.	Make sure water level switch is operating correctly and not stuck or being interfered with.
Unit leaks.	Drain plug is removed.	Attach the drain plug.

	Base plate is cracked.	Replace base plate.
Sounds or vibration.	When unit is turned on or off the outer shell "pops" or "clicks."	Normal sound. Outer shell is contracting or expanding and will stop after a few minutes.
	When unit is turned on or off "boiling" or "running water" is heard.	Normal sound. The cause is refrigerant flowing inside the system and will stop after a few minutes.
	Foreign objects inside the unit are interfering with fans or other moving parts.	Remove foreign objects.
	Unit is not level.	Make sure unit is on a level surface.
	Compressor vibration.	Tighten bolts holding compressor to chassis.
Room too cold.	Set temperature is too low.	Adjust the set temperature.

DATE	REVISION NOTES
04/13/2018	INITIAL DOCUMENT