

# **AMANA**

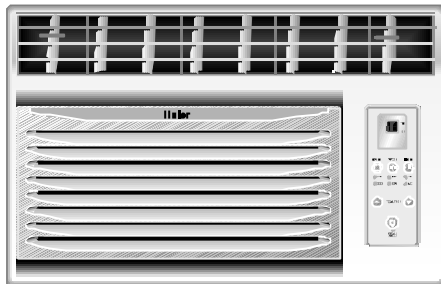
## **WINDOW TYPE AIR CONDITIONER**

### **Service Manual**

#### **Part # AC-8888-115**

# **SERVICE MANUAL**

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## **Models**

**ACB065R & ACB055E**

### **● Features**

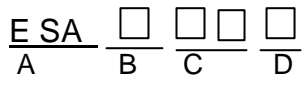
- **Top-Discharge Air Flow**
  - **Ultra Quiet Operation**
  - **Safety Power Cord**
  - **EnvicoClean™ Coil**
  - **Easy-Access Washable Filter**
  - **Digital Display&Timer**
  - **Energy Star(ACB055E)**
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- E: The type of power supply
  - X: 115V/50HZ
  - V:208/220V/50HZ
- F: Function code
  - C-Cooling only
  - H-Heating pump
  - E-Electric aided heating
- G: Design code



- A: Abbreviation of Energy Star
- B: The type of power supply
  - 3: 115V/50HZ
- C: Nominal cooling capacity(BTU/h) with the first two numbers based on one thousand unit
- D: Design code

**Examples:**

ACB065R

It represents remote contrl window air conditioner.Cooling capacity is 6000BTU/h and the power supply is 115V /60Hz.

ESA3055

It represents remote contrl window air conditioner.Cooling capacity is 6000BTU/h and the power supply is 115V /60Hz.

**2.Standard situation/conditions**

No.	Operating condition	Indoor air state		outdoor air state	
		D.B.	W.B.	D.B.	W.B.
1	Nominal cooling	27	19	35	24
2	Nominal heating	/	/	/	/
3	Nominal electrical heating	/	/	/	/

# Specifications:

Item		UNIT	ACB055E	ACB065R	
Cooling capacity		BTU/h	5000	6000	
Heating capacity		BTU/h	/	/	
Power supply			1PH/115V/60Hz	1PH/115V/60Hz	
Cooling	Power input	W	485	620	
	Running current	A	4.5	5.4	
	EER	BTU/(hW)	10.7	9.7	
Heating	Power input	W	/	/	
	Running current	A	/	/	
	COP	BTU/(hW)	/	/	
Sound Level	Indoor side	dB(A)	53/52/50	53/52/50	
	Outdoor side	dB(A)	/	57/55/53	
Case	Height	mm	315	472	
	Width	mm	471	340	
	Depth	mm	340	326	
Packaging dimensions	Height	mm	373	535	
	Width	mm	535	416	
	Depth	mm	416	373	
Weight	Net	kg	21	21	
	Gross	kg	24	24	
Compressor	Type		Rotate	Rotate	
	Model		SD074UW	SD086SW-H3BX	
	Running cap. for comp.	$\mu$ F	35uf/200VAC	35uf/250VAC	
	Starting method		PSC	PSC	
Pressure	Heating side	MPa	380	380	
	Cooling side	MPa	170	170	
Refrigerant	Model		R22	R22	
	Charge	kg	0.32	0.36	
Fan	Type	indoor unit		Acentric fan	
		outdoorunit		Axial fan	
	Fan speed	indoor unit	r/min	1040 $\pm$ 30/950 $\pm$ 40/800 $\pm$ 50	1040 $\pm$ 30/950 $\pm$ 40/850 $\pm$ 50
		outdoorunit	r/min	1040 $\pm$ 30/950 $\pm$ 40/800 $\pm$ 50	1040 $\pm$ 30/950 $\pm$ 40/850 $\pm$ 50
Air volume		m <sup>3</sup> /hr	280	280	
Moisture removal		Pints/hr	1.8 10 <sup>-3</sup>	2.0 10 <sup>-3</sup>	
Exchanging pipe type/ diameter		mm	Evaporator: 7condenser: 7	Evaporator: 7 condenser: 7	
Fin material			Hydrophile aluminum foil	Hydrophile aluminum foil	

## Safety and Precaution

# ***SAFETY PRECAUTIONS***

**WARNING:** *Following these basic precautions will reduce the risk of fire, electrical shock, injury or death when using your air conditioner.*



- 1) Air conditioner must be connected to proper electrical outlet with the correct electrical supply. (see table)
- ⚠ 2) Proper grounding must be ensured to reduce the risk of shock and fire. **DO NOT CUT OR REMOVE THE GROUNDING PRONG.** If you do not have a three-prong electric receptacle outlet in the wall, have a certified electrician install the proper receptacle. The wall receptacle **MUST** be properly grounded.
- ⚠ 3) Do not use if power cord is frayed or otherwise damaged. Also avoid using it if there are cracks or abrasion damage along the length, plug or connector.
- ⚠ 4) **DO NOT USE AN ADAPTER OR AN EXTENSION CORD.**
- ⚠ 5) When installing your air conditioner in a window, make sure the window is strong enough to hold the weight of the air conditioner. You also want to secure and correctly install your air conditioner properly to prevent it from falling. Extra brackets and or support may be required depending on your window.
- 6) Do not block airflow inside or outside the air conditioner with blinds, drapes, protective covers, shrubs or bushes.
- 7) Be careful of sharp edges on the front and rear fins of the unit that could cut and cause serious injury.
- 8) Be careful when lifting the air conditioner to install or remove the unit. Always use two or more people for this.
- 9) Always unplug the air conditioner before servicing it or moving it.

## Warning and Cautions

# WARNINGS



Following the safety messages is very important.

These messages can save you from being injured or killed.

**Warning** symbols alert you to be careful and means **Danger**. Always follow instructions to be safe and reduce chances of injury or death.

**Warning** and **Danger** signs will precede safety messages.

## Electrical Safety



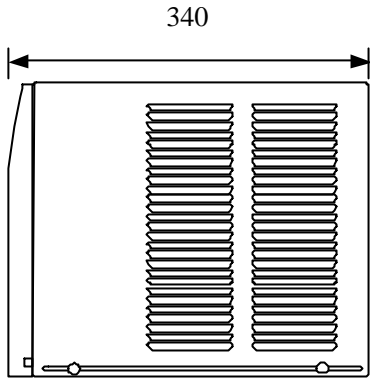
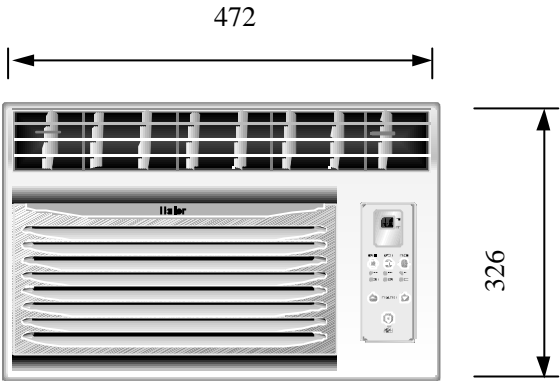
**Grounding:** This room air conditioner must be grounded. Grounding reduces the risk of electric shock by providing an escape wire for the electric current. The power cord has a grounding wire with a grounding plug. Plug it into an outlet that is properly installed and grounded.

**WARNING:** Improper use of the grounding plug can result in a risk of electric shock. Call a qualified electrician if you don't understand the grounding instructions or if you are not sure if the air conditioner is properly grounded. If the wall outlet is not grounded, please contact an electrician to have it replaced with a properly grounded outlet.

**Do not, under any circumstances, cut or remove the third (ground) prong from the power cord.**

**Adapter Plug:** We strongly advise against using an adapter plug.

# Net Dimention





# Installation and Accessory Parts

Before you install your air conditioner check the following:

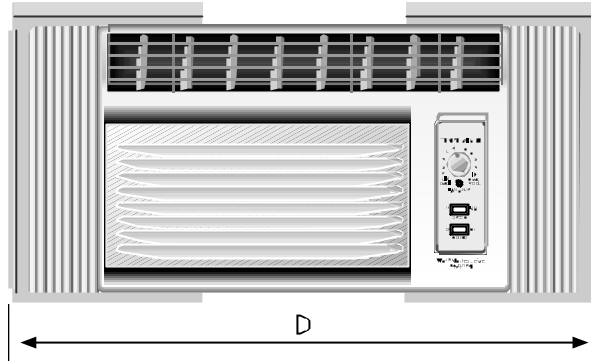
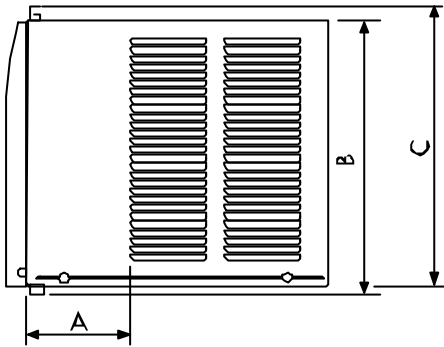
- 1) The unit is free of all obstructions inside and outside the room e.g. drapes, curtains, furniture, plants, shrubs, bushes, trees, other structures like building, garage etc. Air conditioner must have clear unobstructed airflow through the condenser to remove the heat.
- 2) The window is strong enough to hold the weight of the air conditioner. Extra brackets or supports may be needed depending on your windows. (Brackets or Supports not provided in all models)
- 3) The window sill and track are strong enough to hold the weight of the air conditioner.
- 4) The wall is strong enough to hold the unit. Extra brackets or supports may be needed depending on the wall. (Brackets or Supports not provided in all models)
- 5) There is adequate and proper power supply near the air conditioner.
- ⚠ 6) DO NOT use adapter plugs.
- ⚠ 7) DO NOT use extension cords.
- ⚠ 8) DO NOT cut or remove the ground prong.
- ⚠ 9) DO NOT modify the plug or the electrical wall outlet in any way. If plug does not fit the electrical outlet have a certified electrician do the necessary change.
- ⚠ 10) DO NOT connect electrical power to the unit before installation.
- ⚠ 11) DO NOT use if power cord is worn out, frayed or otherwise damaged. Avoid using if there are cracks or abrasion damage along the length, plug or connection.
- ⚠ 12) DO NOT install into any existing cabinet or sleeve which does not have side and top air vents.
- ⚠ 13) Be careful of exposed sharp edges of the cabinet and sharp coils (fins) on the back of the unit that could cut and cause serious injury.

# Installation and Accessory Parts

## Installing Unit into A Window

### Window Opening Requirements

The air conditioner is designed to fit into double or single hung sash type windows. Each of the units comes with an installation kit that provides adjustable mounting louvers, to fill the gaps between the sides of the unit, and the window frame. The chart below reflects the dimensions of the units with, and without installation kits. Measure your window opening width and compare it to the chart below to ensure that it meets the minimum and maximum window width requirements.



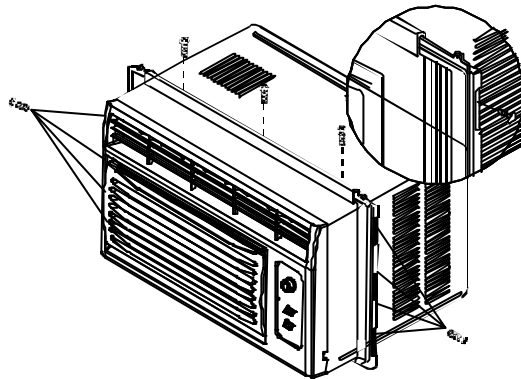
Model	ACB065R,ACB055E
Dimension	
A(inch)	5 $\frac{3}{25}$ "
B(inch)	12 $\frac{3}{5}$ "
C(inch)	13 $\frac{2}{5}$ "
D(inch) Max	33 $\frac{1}{5}$ "
D(inch) Min	22 $\frac{1}{2}$ "
Case High	12 $\frac{7}{16}$ "
Case Width	18 $\frac{9}{16}$ "
Case Depth	13 $\frac{3}{8}$ "

### 1 ASSEMBLE CURTAINS/TOP RAIL

Install top rail with 3 short screws 1 3/32".

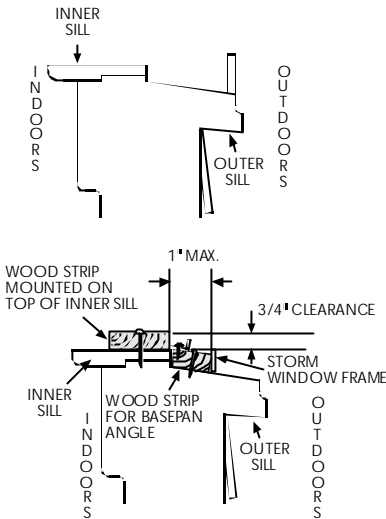
Insert the side curtains into the top and bottom rails of the air conditioner. Fasten the curtains to the unit with 8 short screws 1 3/32".

**Caution:** Never expose plastic front or grille to extreme temperatures.



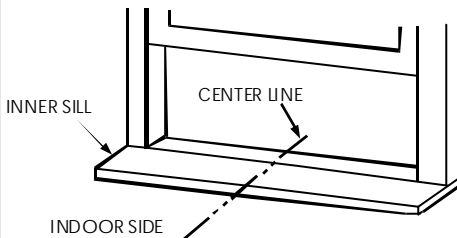
## 2 PREPARE WINDOW FOR INSTALLATION

1. This unit is designed for installation in standard double hung windows with actual opening widths of 22" to 36". The upper and lower sash must open sufficiently to allow a clear vertical opening of 14" from the bottom of the sash to the window stool.
2. If storm window presents interference, fasten a 2" wide wood strip (not included) (OUTER SILL) to the inner window sill across the full width of the sill. The wood strip should be thick enough to raise the height of the window sill so that the unit can be installed without interference by the storm window frame (STORM WINDOW FRAME) or wood strip (OUTDOORS) to help condensation to drain properly to the outside.
3. Install a second wood strip (approximately 6" long by 3/2" wide and same thickness as first strip) in the center of the outer sill flush against the back off the inner sill. This will raise basepan angle.
4. If the distance between STORM WINDOW FRAME and WOOD STRIP MOUNTED ON TOP OF INNER SILL is more than 1", two of wood strip are not necessary.



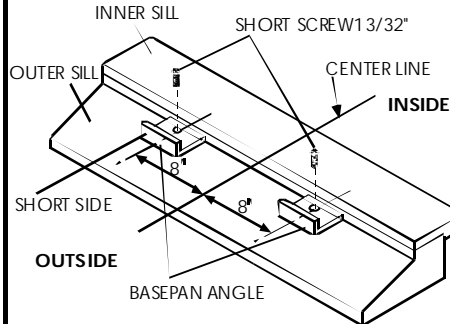
## 3 LOCATING UNIT IN WINDOW

Open the window and mark center line on the center of the inner sill.



## 4 ATTACH BASEPAN ANGLE

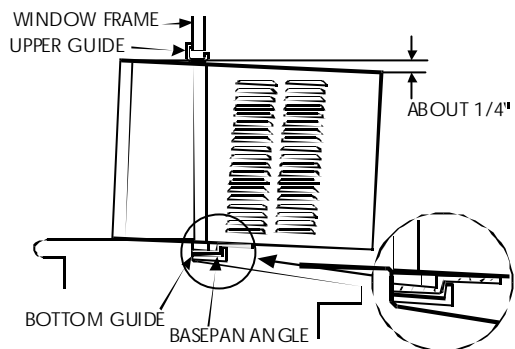
Install the basepan angle behind the inner window sill, with the short side of basepan angle as shown. Use the 2 short screws 13/32" provided. The basepan angle helps to hold unit securely in place. Be sure to place basepan angle edge flush against back of inner sill.



# Installation and Accessory Parts

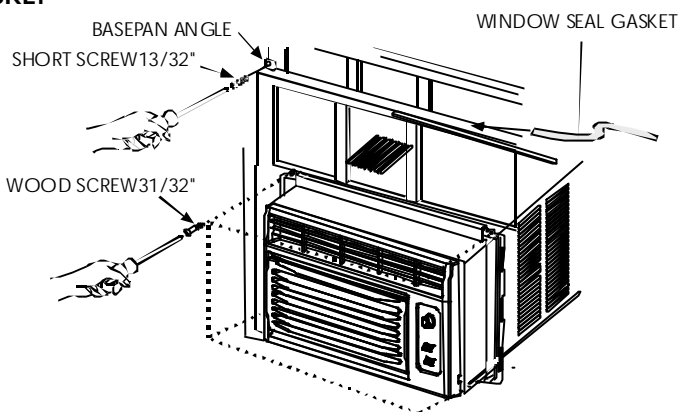
## 5 INSTALL THE AIR CONDITIONER IN THE WINDOW

Carefully lift the air conditioner and slide it into the open window. Make sure the bottom guide of the air conditioner drops into the notches of the basepan angle. While steadying the air conditioner, carefully bring the window sash down behind the upper guide of the air conditioner.



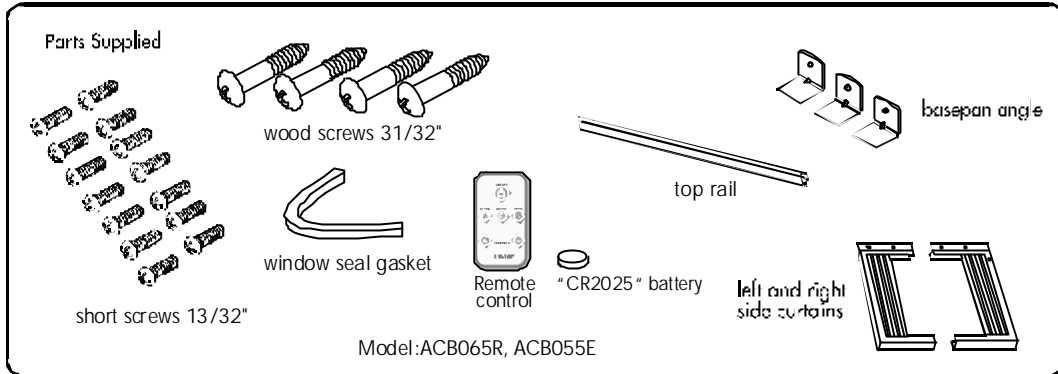
## 6 INSTALL THE SEAL GASKET AND SASH LOCK

Extend the side curtains to fill the window opening using 4 wood screws 31/32\" to secure them. Cut the seal gasket to the window width. Stuff the sash seal between the glass and the window to prevent air and insects from getting into the room. Fasten the basepan angle, using a short screw 13/32\".



# Installation and Accessory Parts

## Parts

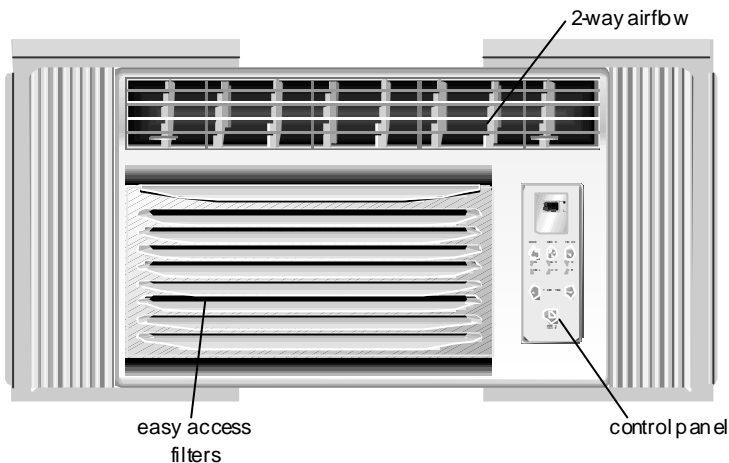


## Tools

You will need to have the following tools to help you in the installation of your air conditioner.

- Scissors
- Phillips Screwdriver
- Standard Screwdriver
- Pliers
- Wrench
- Drill and Drill Bits
- Tape Measure
- Gloves
- Level
- Sockets

# Parts and Functions



## MODEL: ACB065R, ACB055E

### 1. Thermostat

This allows you to adjust the temperature of the air. The lower the setting the cooler the air temperature. With this you can set the temperature to your desired comfort level. You can set the temperature between 61°F and 86°F.

### 2. Fan Speed

You have 2 levels of Fan speed to set at your desired comfort level.

### 3. Function.

Your air conditioner has 2 Functions.

#### a) COOL

Here the air conditioner will operate the compressor and the desired fan speed set to give you chilled cold air for your comfort.

#### b) Fan

You can run the fan only on not so hot days. The fan can be set to run at 2 speeds as desired by you.

### 4. Timer

Your air conditioner can be set to go on or off at your desire. This can be done up to 24 hours in advance.

### 5. 2 Way Air Flow

These air directional buvers let you control the direction of the airflow in your required direction.

The airflow can be directed right side -- left side.

### 6. Window Install Kit

Enables you to install the air conditioner in a double hung window. Extra brackets or support may be needed depending on your window.

### 7. Remote Control

This full functional wireless remote allows you to operate your air conditioner from a distance. You need not have to get up to change the settings, the functions or to turn the unit on or off.

### 8. LED Display Electronic Control Panel

The 4 function LED displays Room Temperature, Temperature Setting, Timer Setting and Time Remaining to Stop / Start the unit. Electronic Control Panel lets you set the temperature to the Exact Temperature you desire.

### 9. Electrostatic Filter

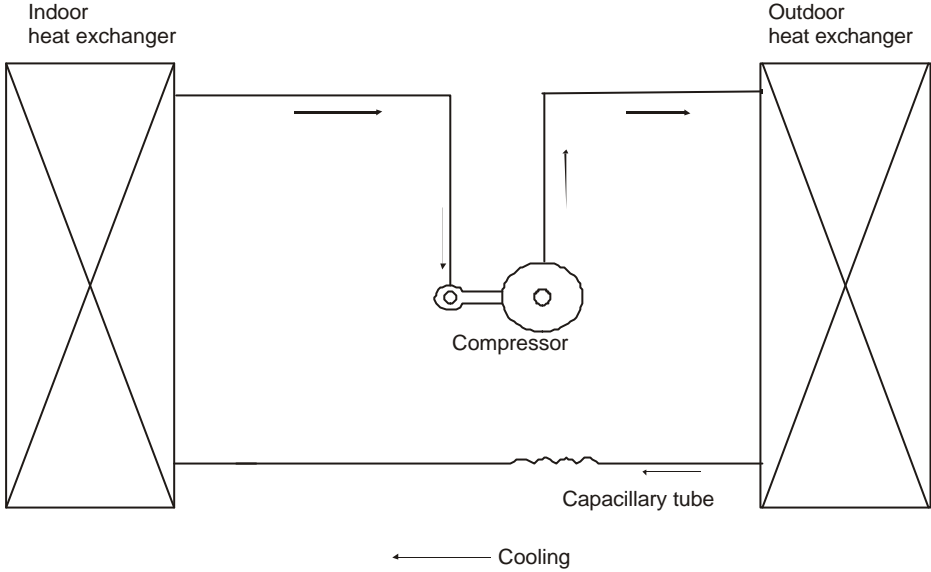
Being constructed of high efficiency purifying substance, active carbon fabric, electrostatic fabric, electrostatic active carbon net and other materials it purifies the air effectively. Its wavy structure increases the capability to filter dust and smoke effectively. Due to the retention of the active carbon it has a high purifying speed capable of strong airflow.

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## Abnormity Diagnose

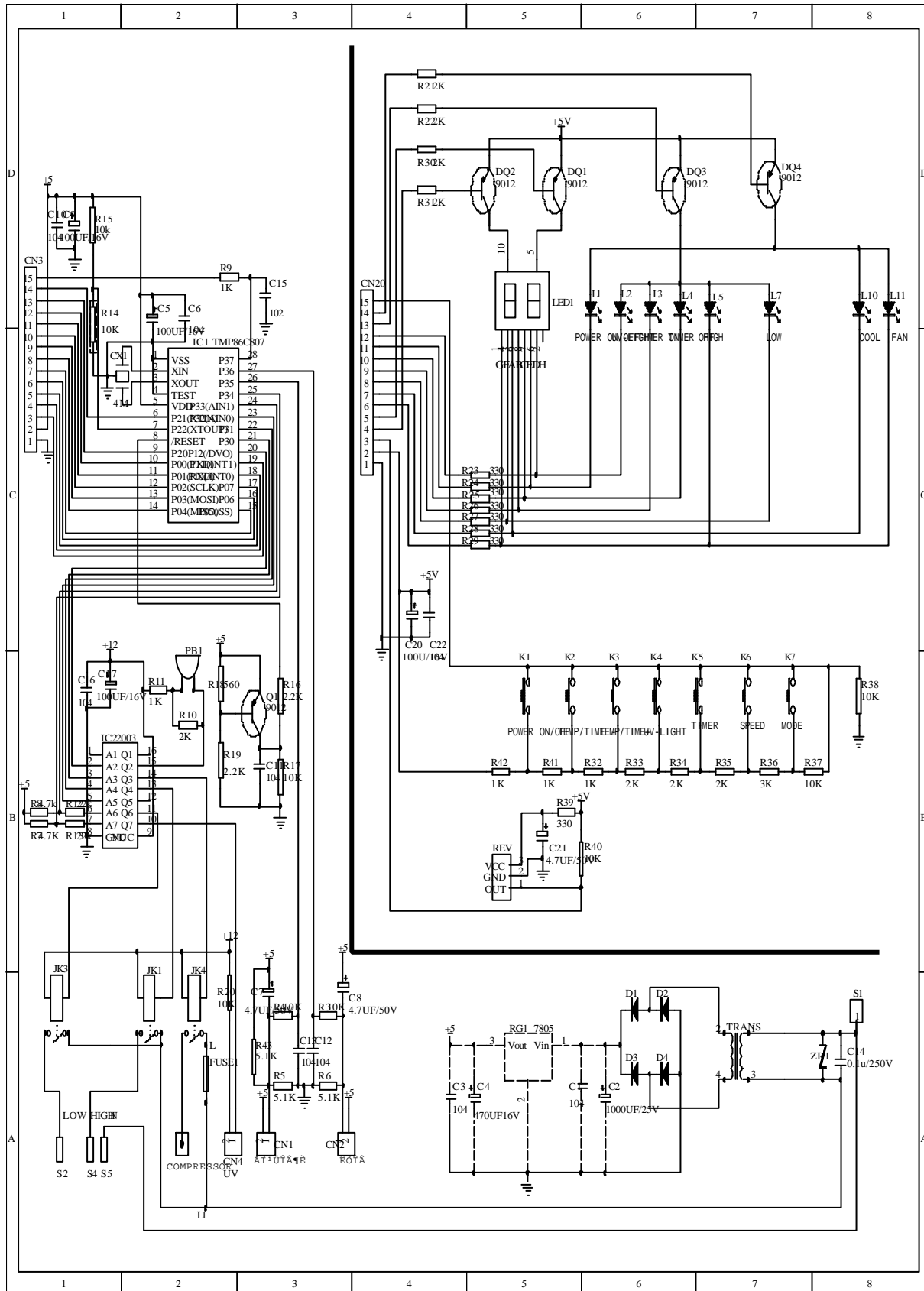
1. Sensor diagnose: 2 seconds after the sensors open circuit or short circuit, the unit will turn off automatically and the LED will show E0 until the sensors resume.
2. Keystroke circuit error diagnose: When power on for the first time, the PCB will check the keystroke circuit, if the sampling value is different with the theory value, the LED will show E1, which means failed keystroke circuit. The keyboard is locked and so invalid, but the remote control is working normally.

# System Flow Chart

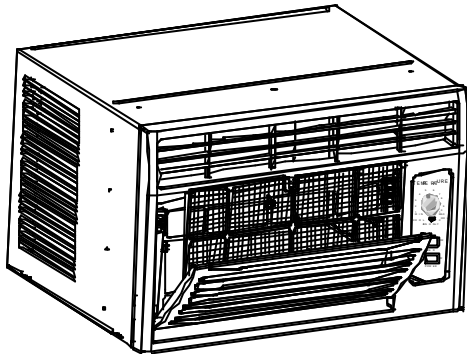




# Circuit Diagram



# Maintenance Service and Trouble Shooting



- **Always unplug your air conditioner before cleaning.**
- **The air filter behind the front grille should be checked and cleaned at least once every 2 weeks or more often if necessary.**

To remove:

1. Open the inlet grille downward by pulling out the top of the inlet grille.
2. Remove the air filter from the front grille assembly by pulling the air filter up slightly.
3. Clean the filter with warm, soapy water below 40°C(104°F).
4. Rinse and gently shake the water from the filter and let it dry before replacing it.

**DO NOT use your air conditioner without the air filter in place.**

- **To clean the front panels or the cabinet DO NOT use harsh chemicals, abrasives, ammonia, chlorine, bleach, concentrated detergents, solvents or metal scouring pads.**

Some of these chemicals may dissolve, damage and/or discolor your air conditioner.

- **Always use a soft cloth dampened with water or mild soap and water solution to wipe the front of the cabinet.**

Wipe dry with a soft cloth.

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# Maintenance Service and Trouble Shooting

## Trouble Shooting

### If air conditioner does not operate:

- Check if unit is plugged in. The plug may have come loose.
- Check if the unit is in "off" mode.
- The fan control may be in "off" position.

### Air from air conditioner is warm:

- The A/C setting may need to be raised.
- The temperature outside the room is below 65 ° F. The compressor will not cycle on if the temperature outside is below 65 ° F.

### Ice formation on cooling coils:

- Outside temperature too cold. Set the unit on fan only setting to defrost ice.
- Lower temperature setting. Temperature setting may be too cold.
- Unit BTU may be too high for the room.

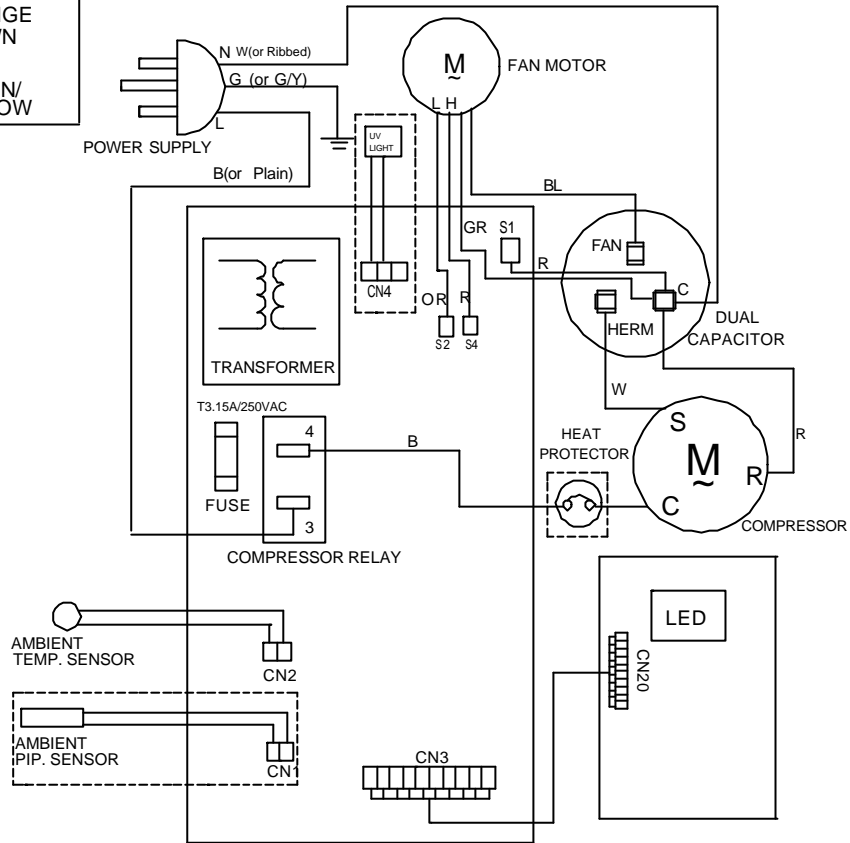
- To store your air conditioner, after the season, remove the unit from the window as per the installation guide. Repack the unit in its original box and store away. If you do not intend to remove it from the window then cover the outside with a winter cover. This can be purchased from the retailer where you purchased your air conditioner or from your local hardware store.
- Before putting away your unit make sure any water left in the pan is removed and drained away. Water left in the pan could lead to rusting or damage to the electrical connections.

# Wiring Diagram

0010552088

## WIRING DIAGRAM

B: BLACK  
 BL: BLUE  
 GR: GRAY  
 R: RED  
 W: WHITE  
 OR: ORANGE  
 BR: BROWN  
 G: GREEN  
 G/Y: GREEN/  
 YELLOW



**NOTE:**

BECAUSE OF DIFFERENT COMPRESSOR,  
 THE DOTTED PART MAY NOT BE USED.