



Recreational Vehicle Air Conditioner

Owner's Manual

Operation & Installation

Models: RVA-135R
RVA-135RHP
RVA-150R
RVA-150RHP

Thank you for choosing Recreational Vehicle Air Conditioner, Please read this owner's manual carefully before operation and keep it for future reference.

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A FEW WORDS ABOUT YOUR NEW AIR CONDITIONING UNIT

Thank you for choosing the GREE Recreational Vehicle Air Conditioner.

This manual will supply you with all the information for installation, operation and maintenance. Take a few minutes to discover how to get the most in cooling comfort and economic operation from your new air conditioner.

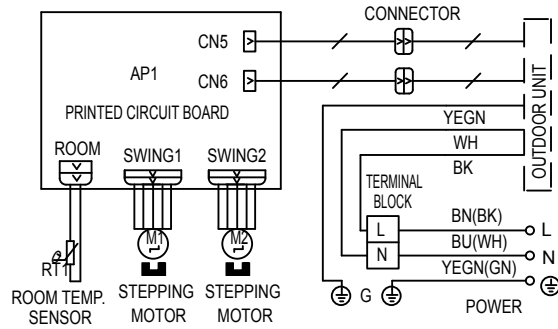
Please keep this manual well for future reference.

ELECTRICAL DATA

1. All wiring must be complied with local and national electrical codes. All wiring must be installed by qualified electricians. If you have any questions about the following instructions, contact a qualified electrician.
2. Check the available power supply and resolve any wiring problems BEFORE installing and operating this unit.
3. This air conditioner is designed to operate from a 115V AC, 60Hz, 1 Phase power supply.
4. The wiring diagrams are located on the cover of the control box. The assembly unit wire diagrams are located on the ceiling panel.

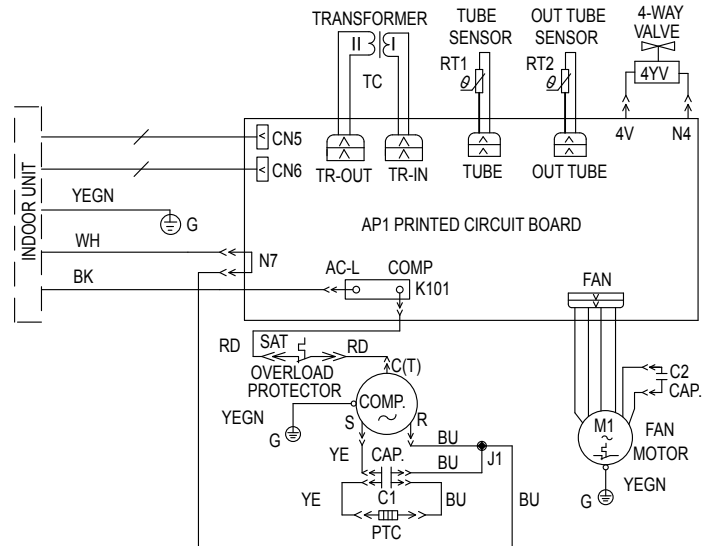
ELECTRIC DIAGRAM

Ceiling Assembly

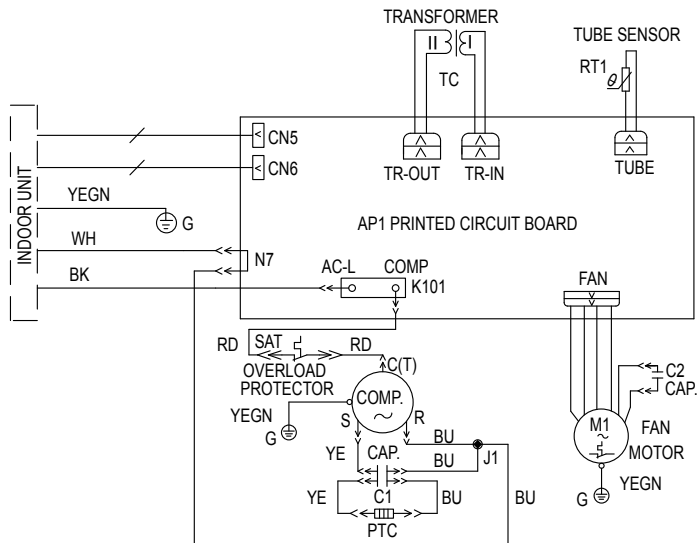


Notice: Use Copper Conductors Only.

Roof Top Air Conditioner(heat pump)



Roof Top Air Conditioner(cooling only)



PACKING LIST

Packing List of Indoor Unit

No.	Name	Quantity	Remark
1	Owner's Manual	1	
2	Bolt sub-assy M8X190	4	
3	Sponge(air duct)	1	
4	Plate of air vent	2	
5	Remote control YS1FAF	1	
6	Double-sided gummed paper	1	
7	Remote control holder	1	
8	AAA1.5V batteries	2	
9	Tapping screw ST4.2X9.5 TA	8	
10	Sunk screw (remote control holder)	2	

Packing List of Outdoor Unit

No.	Name	Quantity	Remark
1	Sponge 1	1	Gasket
2	Rubber gasket	4	

SPECIFICATIONS

- These specifications are for reference only. For actual data, please refer to the nameplate on the back of the unit.

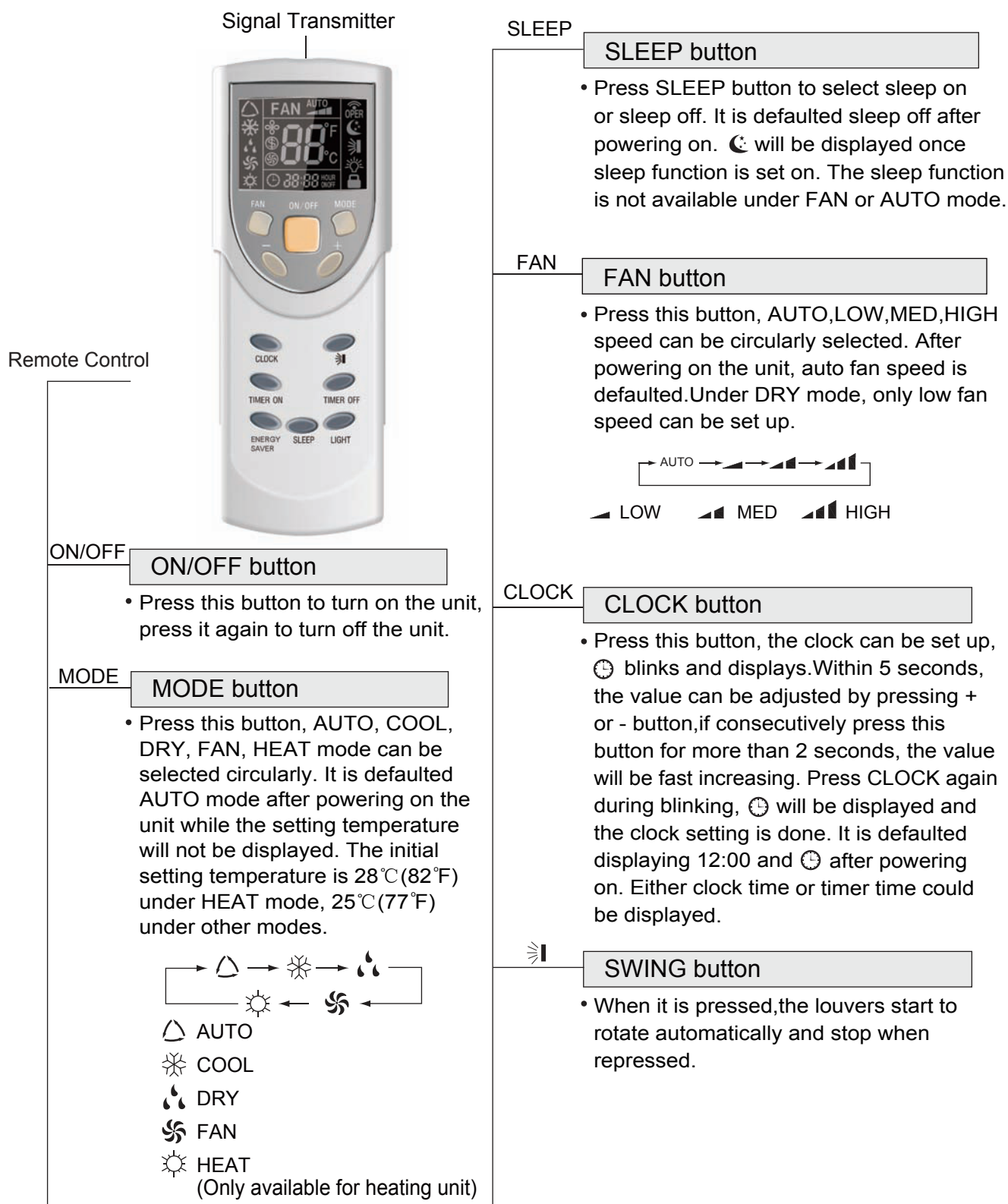
Model	RVA-135R	RVA-150R
Power Supply (Ph/V/Hz)	1/115/60	
Rated Cooling Capacity (BTU/h)	13500	15000
Cooling Power Input (Watts)	1350	1530
Rated Current Cooling (Amperage)	12	13.6
EER	10 (Btu/h)/W	9.8 (Btu/h)/W
Noise Level dB(A) (H/M/L)	/	
CFM H/M/L	353/306/259	
Product Dimensions (W" x H" x D") (Indoor)	26.26x19.57x3.78	
Package Dimensions (W" x H" x D") (Indoor)	28.94x22.64x5.91	
Product Dimensions (W" x H" x D") (Outdoor)	40.79x22.56x14.72	
Package Dimensions (W" x H" x D") (Outdoor)	45.39x27.87x18.31	
Net/Gross Weight (Lbs) (Indoor)	11/14.3	
Net/Gross Weight (Lbs) (Outdoor)	95/122	
Refrigerant Type	R410A	

Model	RVA-135RHP	RVA-150RHP
Power Supply (Ph/V/Hz)	1/115/60	
Rated Cooling Capacity (BTU/h)	13500	15000
Cooling Power Input (Watts)	1350	1530
Rated Current Cooling (Amperage)	12	13.6
EER	10 (Btu/h)/W	9.8 (Btu/h)/W
Rated Heating Capacity (BTU/h)	13500	15000
Heating Power Input (Watts)	1200	1380
Rated Current Heating (Amperage)	10.6	12.2
COP	11.2 (Btu/h)/W	10.9 (Btu/h)/W
Noise Level dB(A) (H/M/L)	/	
CFM H/M/L	353/306/259	
Product Dimensions (W" x H" x D") (Indoor)	26.26x19.57x3.78	
Package Dimensions (W" x H" x D") (Indoor)	28.94x22.64x5.91	
Product Dimensions (W" x H" x D") (Outdoor)	40.79x22.56x14.72	
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OPERATION OF WIRELESS REMOTE CONTROL

■ Name and Function of Wireless Remote Control

Note: This wireless remote control is universal, and it could be used for many other models. The buttons that are not relevant to this unit will not be described below.



Note: This wireless remote control is universal, and it could be used for many other models. The buttons that are not relevant to this unit will not be described below.



Remote Control

ENERGY SAVER

ENERGY SAVER button

- Under the COOL and DRY mode, press this button once, the unit will enter ENERGY SAVER mode. Press this button again, the unit will exit ENERGY SAVER mode.

LIGHT

LIGHT button

- Press this button to turn ON or OFF the light or display on the unit. The light or display is defaulted on after powering on the unit.

+

+ button

- Press this button to increase setting temperature, hold for more than 2 seconds to rapidly increase setting temperature. In AUTO mode, setting temperature is not adjustable. Setting temperature Range of Celsius degree: 16-30 °C, Fahrenheit degree: 61-86°F.

-

- button

- Press this button to decrease setting temperature, hold for more than 2 seconds to rapidly decrease setting temperature. In AUTO mode, setting temperature is not adjustable.

TIMER ON

TIMER ON button


- At unit off, press TIMER ON button, HOUR ON will blink and display, ⌚ will be concealed in the TIMER ON setting. During 5 seconds blinking, the value can be adjusted by pressing + or - button, every press of this button, 0.5 hour will be increased or decreased, by continuous pressing the + or - button, 2 seconds later, the value will be changed quickly, 0.5 hour will be changed in every 0.25 second automatically by the remote control. During blinking, press the TIMER ON button to confirm the time. After TIMER ON set up, with repressing the TIMER ON button, the TIMER ON setting will be canceled. After powered on, no timer is defaulted, HOUR ON(OFF) will not display, and only the clock is displayed. After the timer reached the setting time, HOUR ON(OFF) will conceal. Before setting the timer, please adjust the clock to the current actual time.

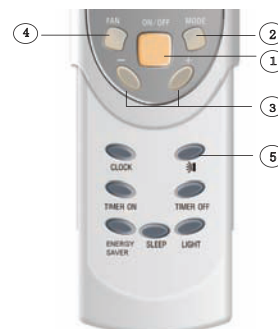
TIMER OFF

TIMER OFF button

- At unit on, press TIMER OFF button to enter into TIMER OFF setting. The method of setting up is the same as TIMER ON.

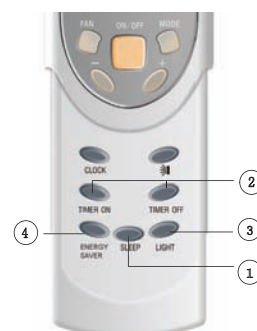
■ Guide for Operation - General Operation

1. After powering on,press ON/OFF button,the unit will start to run.(Note:When it is powered on,the guide louver of indoor unit will close automatically.)
2. Press MODE button to select desired running mode.
3. Pressing + or - button, to set the desired temperature.
4. Press FAN button to set AUTO,LOW,MED or HIGH fan speed.
5. Pressing  button, to select the swing.



■ Guide for Operation - Optional Operation

1. Press SLEEP button, to set sleep.
2. Press TIMER ON and TIMER OFF button,to set the scheduled timer on or timer off.
3. Press LIGHT button, to control the on and off of the light or display on the unit.
4. Press ENERGY SAVER button to activate the function.






■ Introduction for Special Function

★ About AUTO mode

When AUTO mode is selected,the setting temperature will not be displayed on the remote control,the unit will be in accordance with the room temperature,and automatically select the suitable running method to make ambient comfortable.


★ About Lock

Press + and - buttons simultaneously to lock or unlock the keyboard of the remote control. If the keyboard is locked,  will be displayed on it,press any button,  will blink three times. If the keyboard is unlocked, the  will not display.

★ About Switch Between Fahrenheit and Centigrade

At unit off,press MODE and - button simultaneously to switch between °C and °F.

■ Changing Batteries

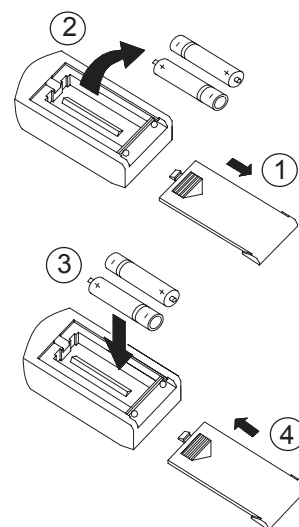
1. Slightly press the place with , and push the cover along the arrow.
2. Take out the used batteries. (As show in figure)
3. Insert two new AAA1.5V batteries, and pay attention to the polarity. (As show in figure)
4. Push the back cover of remote control. (As show inf figure)

NOTE:

When changing the batteries, do not mix used and new batteries, do not mix different batteries, otherwise, it can cause the malfunction of the remote control.

■ Notices

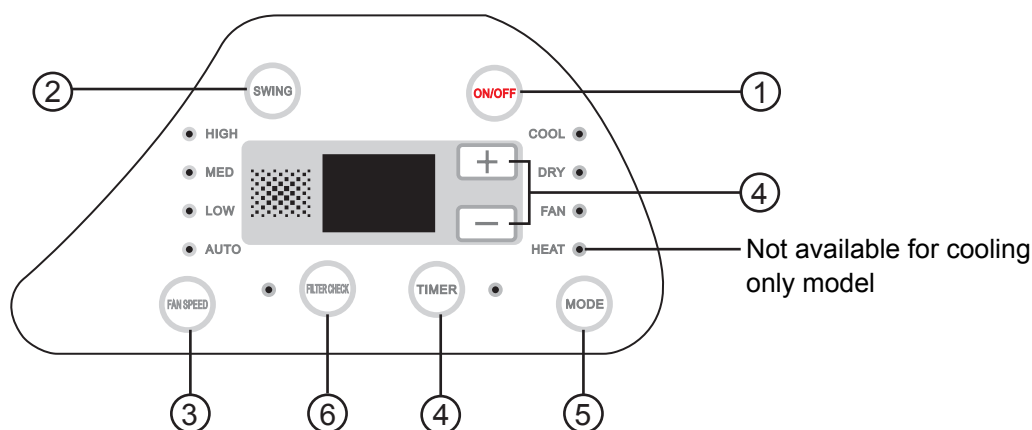
- If the remote control will not be used for a long time, please take out batteries to prevent any damage from liquid leakage.
- The operation should be in its receiving range.
- It should be placed 1m away from the TV or stereo sound sets.
- If the remote control can not work normally, please take out the batteries, then reinsert 30S after, if it does not run normally, change the batteries.
- Be sure that there are no obstructions between receiver and remote control, Don't drop or throw the remote control, Don't let any liquid get into the remote control or put the remote control directly under the sunlight or any place where is very hot.



Sketch map for
changing batteries

CONTROL PANEL

Note: If the remote control is missing , operate on the control panel.



1 ON/OFF button

Operation starts when pressing this button, and stops when pressing this button again.

2 SWING button

Activate the automatic air swing function.

3 FAN SPEED button

Select the fan speed AUTO, LOW, MED and HIGH in sequence.

4 (+/-) / TIMER button

Press the + button to increase the set(operating) temperature of the unit, and press the - button to decrease the set(operating) temperature of the unit. the temperature setting range is from 16~30°C (61~86°F).

Press TIMER button, then press +/- to increase and decrease the time setting. If the time setting is no more than 10 hours, the increment/decrement is 0.5 hour by each press, if more than 10 hours, the increment/decrement is 1 hour by each press. The time setting range is 0.5~24 hours.

5 MODE button

Select the operation mode, AUTO, COOL, DRY, FAN, HEAT(for heating model) or AUTO, COOL, DRY, FAN(for cooling only model).

6 FILTER CHECK button

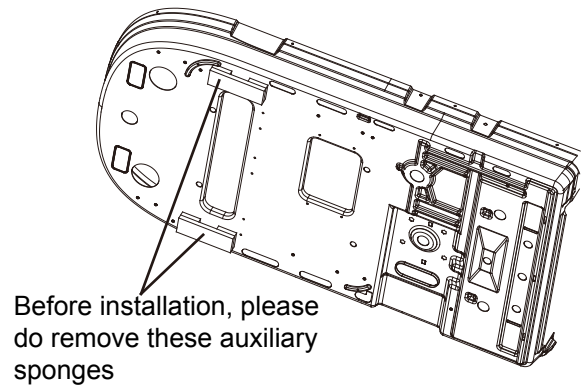
This feature is a reminder of cleaning the air filter(normal maintenance) for more efficient operation. The light will turn on automatically after the fan works more than 250 hours. If the light is on, turn off and power off the unit, take the air filter out and clean it, then re-install the air filter, power on and turn on the unit, the light will still be on, press FILTER CHECK button, the light will turn off.

INSTALLATION INSTRUCTION

BEFORE INSTALLATION

Testrun the unit with proper power supply. Refer to the operation instruction section in the Owner's Manual Operation & Installation. Make sure all the controls operate correctly then disconnect the power supply of the unit.

- Before installation, please do remove the auxiliary sponge.



Before installation, please do remove these auxiliary sponges

WARNING

Moving parts may cause personal injury. Be careful when test the unit. Do not operate the unit with exterior cover removed.

STEP 1-SELECTING AN INSTALLATION LOCATION & INSTALLING THE ROOF TOP AIR CONDITIONER

Your air conditioner has been designed for use in recreational vehicles.

Check the roof of the vehicle to determine if it can support both the roof top unit and the ceiling assembly without additional support. Make sure the interior ceiling mounting area will not interfere with existing structures.

Once the location for your air conditioner has been determined. A reinforced and framed roof hole opening must be cut (if there is no hole) or you may use existing vent holes.

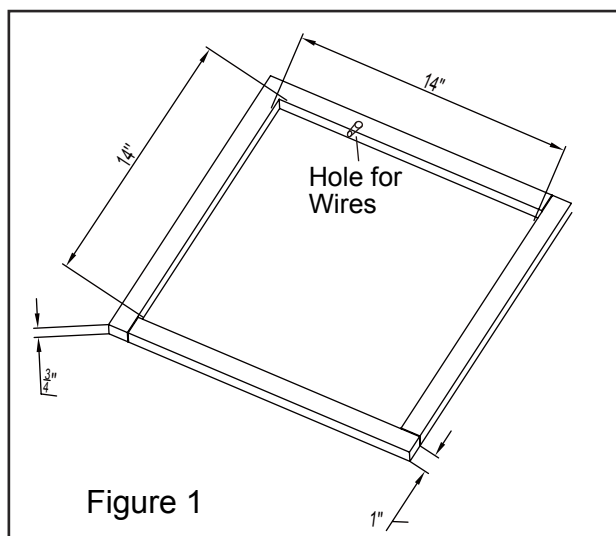
CASE A.

If a roof vent is already present in the desired mounting location for the air conditioner, the following steps must be performed:

1. Remove all screws which secure the roof vent to the vehicle. Remove the vent and any additional trim. Carefully remove all chalking from around the opening so the surface is clear.
2. It may be necessary to seal some of the old roof vent mounting screw holes which may fall outside of the air conditioner basepan gasket.
3. Examine the roof opening size, if the opening is small than 14"x14", the opening must be enlarged. If the opening exceeds 14"x14", a mounting plate (frame) must be fabricated to reduce the opening size (See Figure 1).

CASE B.

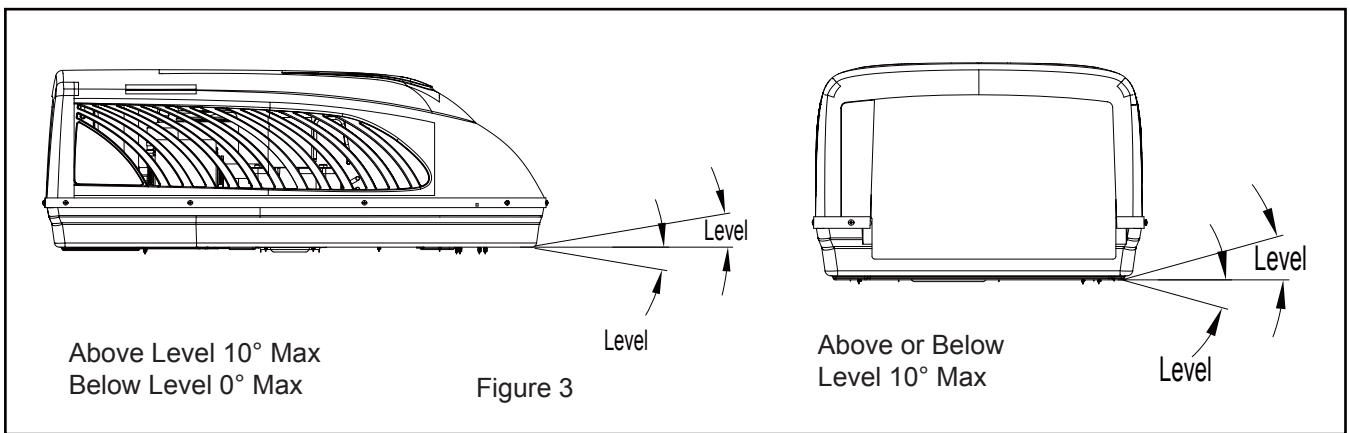
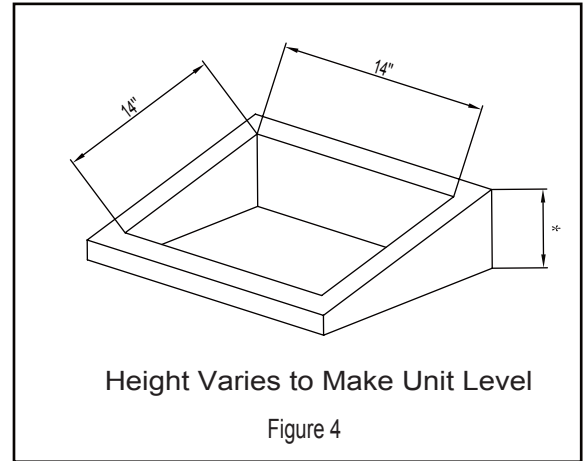
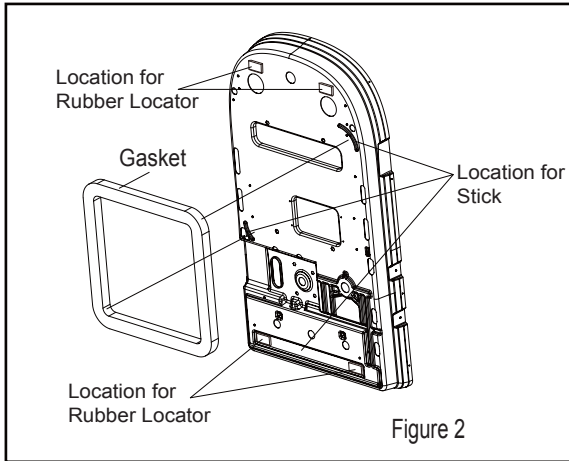
If a roof vent opening is not used, a new opening (see figure 1) will be cut into the vehicle roof. A matching opening will also have to be cut into the interior vehicle ceiling, be careful when cutting the ceiling opening because if the ceiling opening is carpeted, snagging could occur. After the opening in the roof and interior ceiling are the correct size, a framed support structure must be placed between the exterior roof top and interior ceiling. The reinforced framed structure must follow the following guidelines:



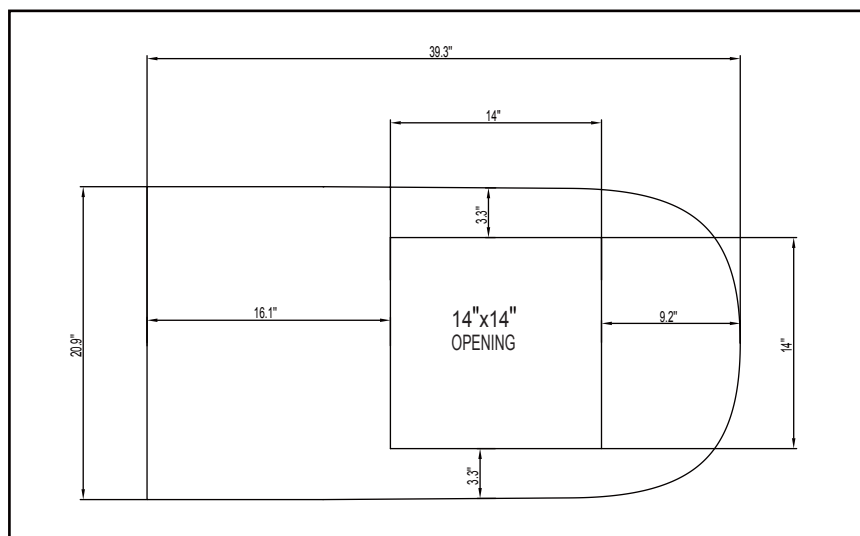
1. It must be capable of supporting both the weight of the roof top air conditioner and the interior ceiling assembly.
2. It must be capable of holding the roof outer surface and interior ceiling apart and supporting them, so that when the roof top air conditioner and ceiling assembly are bolted together, no collapsing occurs. A typical support frame is shown in Figure 1.
3. There must be an opening through the frame for the power supply wiring. Route the supply wiring through the frame at the same time the support frame is being installed.

CAUTION

1. Gasket is standard accessory which should be properly stuck before installation of the roof top air conditioner (See Figure 2).
2. The roof top air conditioner must be mounted on a level plane from front to rear and side to side when the vehicle is parked on a level plane. Figure 3 shows maximum allowable degrees that the unit can be mounted above or below level.
3. If the roof of the vehicle is sloped (not level) such that the roof top air conditioner cannot be mounted within the maximum allowable degree specifications, an exterior leveling shim will need to be added to make the unit level. A typical leveling shim is shown in Figure 4.
4. Once the roof top air conditioner has been leveled, some additional shimming may be required above the interior ceiling assembly. The roof top air conditioner and the interior ceiling assembly must be square with each other before they are secured together.
5. After the mounting hole area is properly prepared, remove the carton and shipping pads from around the roof top air conditioner. Carefully lift the unit on top of the vehicle. Do not use the outer plastic shroud for lifting. Place the roof top air conditioner over the prepared mounting hole.
6. The point end (nose) of the shroud must face toward the front of the vehicle.



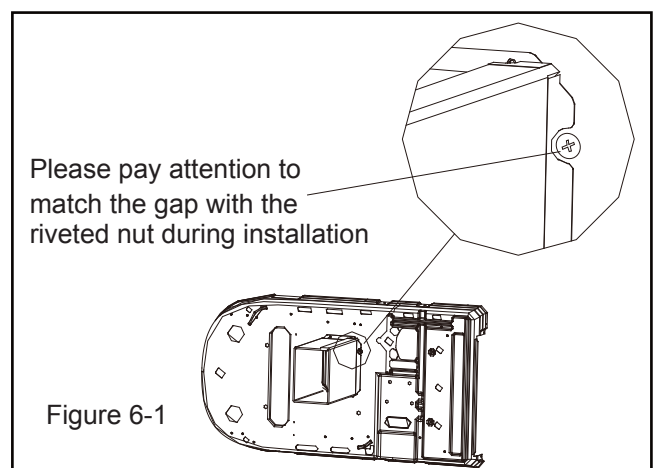
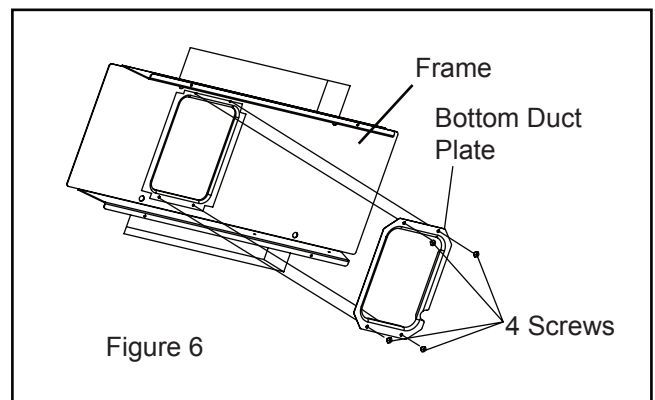
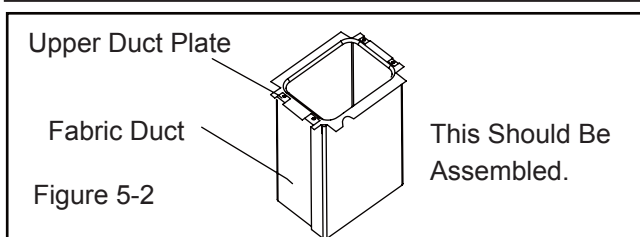
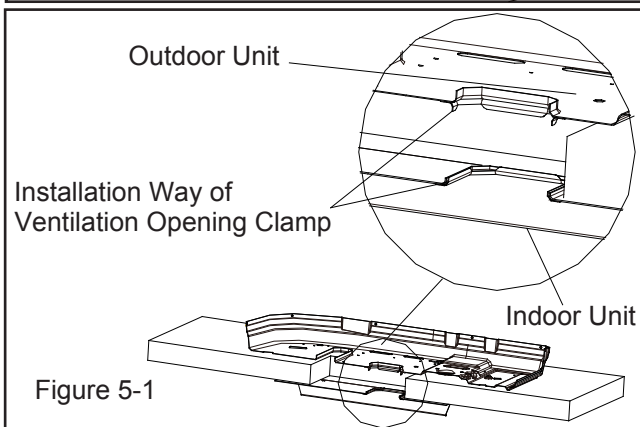
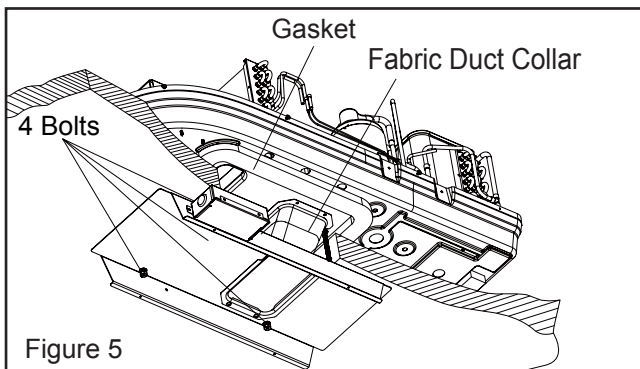
NOTE AIR CONDITIONER DIMENSIONS (ROOF OF UNIT)



STEP 2-INSTALLING THE CEILING ASSEMBLY

Make sure that you have properly matched the roof top air conditioner and interior ceiling assembly. The following step by step instructions must be performed in the following sequence to ensure proper installation.

1. Carefully take the ceiling assembly out of the carton (The remote control packed with the ceiling assembly).
2. Remove the ceiling grille from the ceiling assembly.
3. Before the ceiling assembly can be mounted to the roof top air conditioner, the fabric duct collar must be fastened to the basepan of the roof top air conditioner with 4 screws by upper duct plate (see Figure 5 and Figure 5-1 and Figure 5-2).
4. Before lifting the ceiling assembly, pull the fabric duct collar so it hangs out of the way and does not get caught under the ceiling assembly frame.
5. Secure the ceiling assembly frame to the roof top air conditioner with the mounting bolts (see Figure 5). You must start (thread) the mounting bolts by hand to avoid cross-threading. **DO NOT START THE MOUNTING BOLTS WITH AN AIR GUN.** The mounting bolts should be tightened, process is completed when the basepan gasket has been evenly compressed.
6. Pull the fabric duct collar through the ceiling assembly frame opening and pull the four corners to extend below the duct opening (see Figure 5 and Figure 5-1).
7. Fasten each side of the fabric duct with fitting the bottom duct plate to the ceiling assembly frame with 4 screws (see Figure 6). Trim any excess fabric that may extend beyond edge of bottom duct plate.

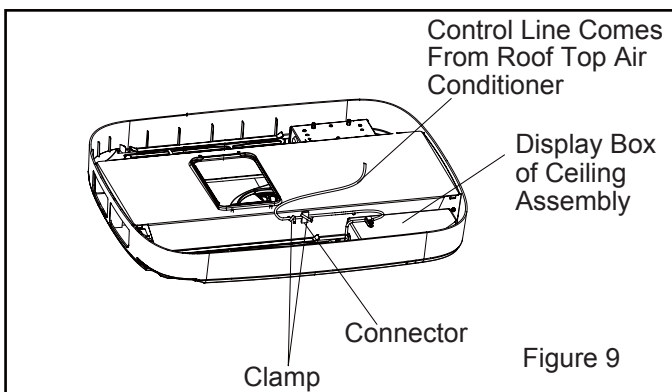
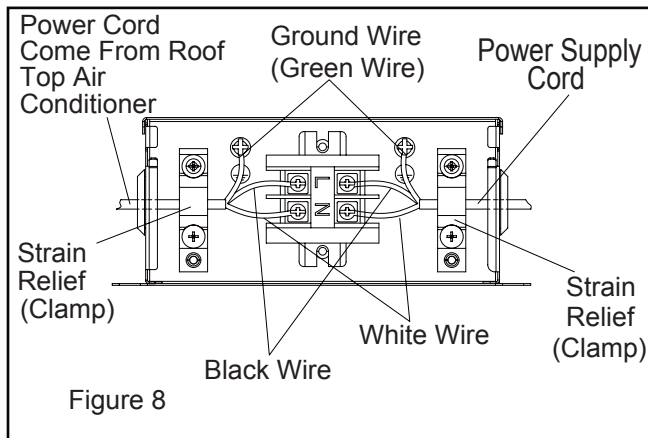
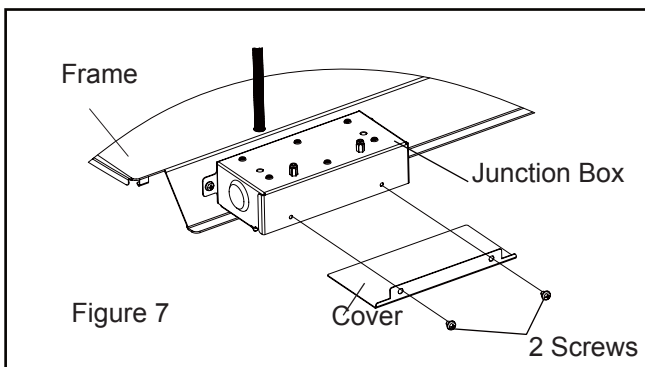


STEP 3-ELECTRICAL WIRING

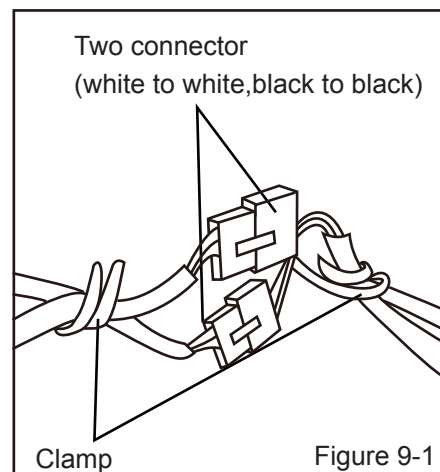
ROUTING 115V AC WIRING

WARNING

Make sure that all power supply to the unit is disconnected before performing any work on the unit to avoid the possibility of shock or injury and/or damage to the equipment. After the interior ceiling assembly frame is properly secured to the roof top air conditioner, the following electrical connections must be performed.



1. Route a copper ,with ground, supply wiring with minimum #12AWG for both 13.5KBtu/h and 15KBtu/h unit, the wiring from its power source to the junction box. Do not attach them at this time.
2. Take the roof top air conditioner power cord to connect to the side of the junction box.
3. Remove the junction box cover (2 screws). Take the power cord and make it get into the box through the strain relief that is provided (see Figure 7).
4. Connect the power cord to the black,white and ground wires found in the junction box with a terminal board. CAUTION Connect black wire to black wire,white wire to white wire and the ground wire to earth.(see Figure 8).
5. Tighten the strain relief clamp to secure the supply power cord.DO NOT OVERTIGHTEN. Reinstall the junction box cover.
6. Connect the two connector and secure the clamp (see Figure 9 and Figure 9-1).



STEP 4-COMPLETING THE INSTALLATION

To complete the installation and system checkout requirements, the following steps must be performed.

1. Check the thermostat position. Make sure the thermostat is routed through the holding guide and is not touching any metal surface.
2. Make sure the guide louver and the filters are properly positioned in the ceiling grille.
3. Secure the ceiling grille to the ceiling assembly frame with 4 screws.(see Figure 10).
4. Switch on the power supply and check the unit work or not.

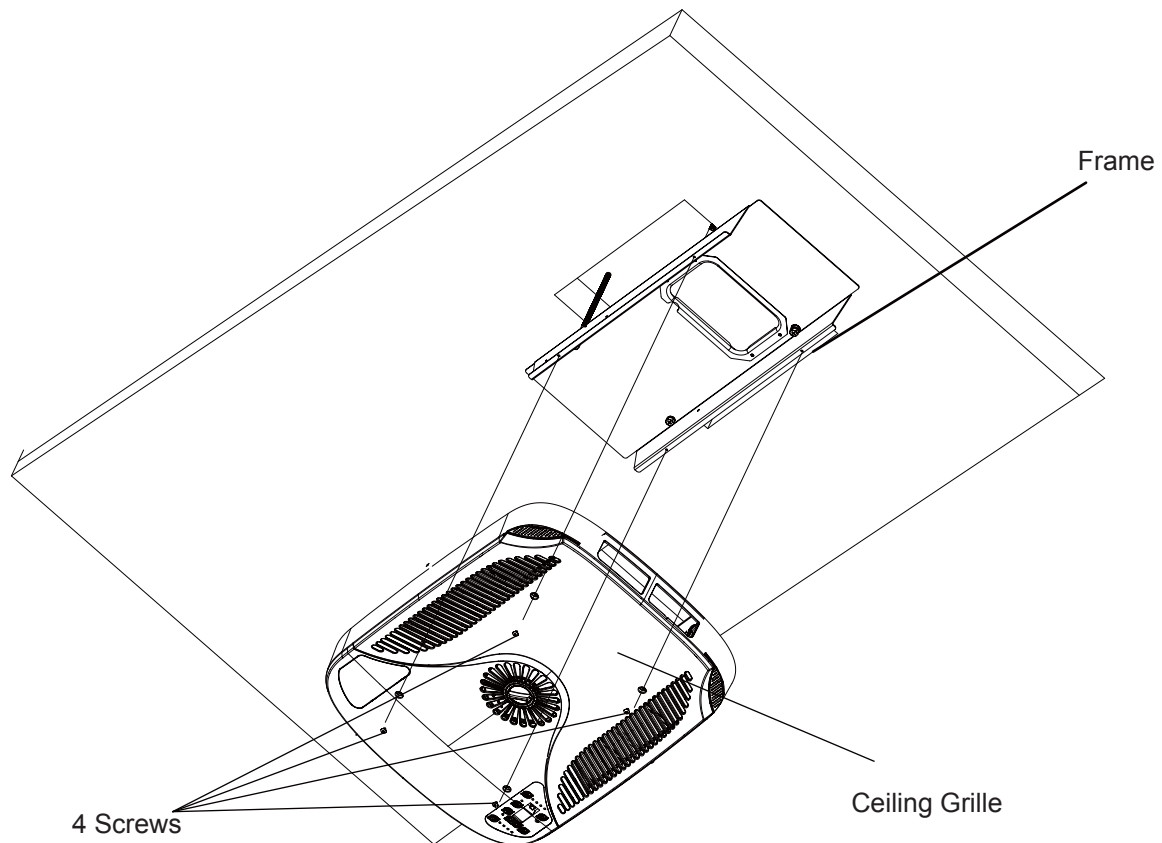


Figure 10

TROUBLESHOOTING GUIDE

If you have problems with your recreational vehicle air conditioner, check this guide before contacting your service representative.

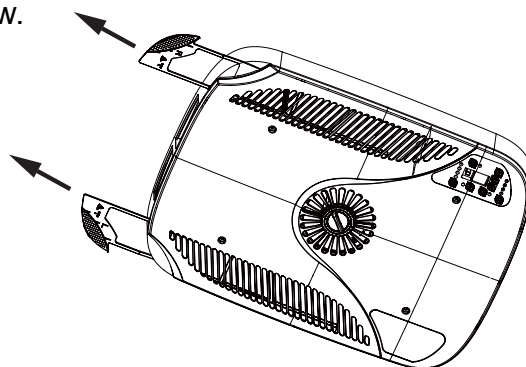
TROUBLE	POSSIBLE CAUSE	SOLUTION
The unit can not start	The unit may not be connected to the power supply correctly.	Check the power supply of the vehicle and make sure it is provided correctly.
The unit can not cool the room	The roof top air conditioner is not level.	Mount the roof top air conditioner as level as possible from front to rear and side to side when the vehicle is parked. Make sure that the mounting of the air conditioner is correct and level.
	The temperature setting is too high.	Reset the remote control to a lower temperature setting.
	The air filter is dirty.	Remove and clean the filter.
	The room was already very hot before the unit was turned on.	Allow a sufficient amount of time for unit to cool the room.
The unit is making noise	The unit is click and gurgle.	These noise are normal during the operation of the unit.
The unit has water dripping inside	The basepan gasket has not been evenly compressed.	Mounting bolts should be tightened evenly by compressing the basepan gasket.
The unit has ice or frost on the coils	The temperature is low inside.	Select FAN mode at HIGH fan speed.
	The filter is dirty.	Remove and clean the filter.

NORMAL MAINTENANCE PROCEDURES

ACTIVITY	FREQUENCY
Remove the cover and wash the condenser coil	Twice a year.
Clean the filter (More frequent cleaning may be necessary depending on the air quality)	When the air conditioner FILTER CHECK light on.

HOW TO REMOVE THE AIR FILTER

Remove the air filters by pulling them as illustrated below.



HOW TO CLEAN THE AIR FILTER

Wash away dust from the air filters with clean water or vacuum the filter with an electric household vacuum cleaner.

WARNING

FAILURE TO FOLLOWING INSTRUCTIONS COULD RESULT IN SERIOUS PERSONAL INJURY

1. Don't touch the capacitor terminals without the electric discharge ,the capacitor still may have the high voltage even though the power supply is turned off.
2. Be careful when you maintain the refrigeration system, which has the high internal pressure.

