Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described.

Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury andlor property damage! Retain instructions for future reference.

G KOLDWAVE Portable Air Conditioners

Description

Koldwave Portable Air Conditioners feature spot cooling for large areas where cooling of the entire area is not practical. A dedicated spot cooling thermostat controls the unit in this application. These air conditioners can also be used in smaller areas for room cooling.

A control panel provides ease of use and contains a self-diagnostic function and display, showing



5KK14BEA2AA00 / 5KK21BGA2AA00 / 5KK30BGA2AA00

operating modes, room and set temperatures, and faults. If an abnormal operation occurs, a visual display of the fault is shown. Caster wheels are included for easy portability. Suitable applications include: a factory or work place, industrial kitchen, computer room, emergency cooling, outdoor event, etc.

Unpacking

After unpacking the unit, carefully inspect unit for any damage that may have occurred during transit. Check for any loose, missing, or damaged parts.



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Thank you for selecting this Koldwave Portable Air Conditioner. It provides you with spot cooling for large areas where cooling of an entire area is not practical or possible. **Please read this manual** before installing the 5KK14-BEA2AA00, 5KK21BGA2AA00 or 5KK30BGA2AA00 as it provides important information that should be followed during installation and maintenance of the Portable Air Conditioner, allowing you to correctly set up your system for the maximum safety and performance. Included is information on customer support and service, if it is required. If you experience a problem with the unit, please refer to the Troubleshooting section in this manual to correct the problem. If the problem is not corrected, please collect information so that the Technical Support personnel can more effectively assist you.



IMPORTANT SAFETY INSTRUCTIONS:

(SAVE THESE INSTRUCTIONS)

Please read this manual carefully for instructions on correct installation and usage. Please read all safety instructions.

- 1. Transport and store the unit in an upright position only. Leave the unit in an upright position for at least 3 hours before use.
- 2. Always place the unit on an even, level surface.
- 3. Ensure the unit is connected to a grounded utility of the correct rating / capacity.
- 4. The unit will cool when the room temperature is between 64.4°F 113°F (18°C 45°C) depending on the thermostat setting.
- 5. DO NOT use this unit for functions other than those described in this User's Manual.
- 6. DO NOT tilt the unit.
- 7. DO NOT cover or obstruct the unit's inlet and/or outlet grilles.
- 8. DO NOT use the unit in areas where it will be exposed to rain or water.
- 9. NEVER unplug the unit while it is operating



DO NOT use the unit in wet environments, such as a laundry room, to avoid risk of electrical shock

- 10. DO NOT place any foreign objects on the unit.
- 11. DO NOT operate the unit with wet or damp hands.
- 12. DO NOT allow chemical substances to come in contact with the unit.
- 13. DO NOT operate the unit in the presence of flammable substances or vapors such as alcohols, pesticides, gasoline, etc.



DO NOT operate the unit in explosive or flammable environments

- 14. DO NOT use the plug to start or to stop the unit. Always use the control panel to start and to stop the unit.
- 15. Always turn off the unit when it is not in use, and unplug the power plug from the electrical outlet.



- 16. Always turn the unit off and unplug the main power plug from the electrical outlet before cleaning, moving, or performing maintenance.
- 17. AVOID the use of adapter plugs or extension cords. If it is necessary to use an extension cord or an adapter plug to operate the unit, ensure that they are correctly rated for the application. Consult a local qualified electrician and all local electrical codes to ensure proper setup. Any extension cord used with the device must be rated for a minimum of 15A.
- 18. DO NOT unplug the unit by pulling on the electrical cord. Keep the electrical cord away from heat sources and always completely unroll the cord to avoid overheating. If the power cord becomes damaged, a qualified service agent, qualified electrician, or similarly qualified person must replace it, in order to avoid a hazard or shock.



- 19. The filters must be used with the product at all times. When the filters are removed for cleaning, always ensure that the unit has been turned off and unplugged from the electrical outlet.
- 20. Regularly clean the filters to maintain efficiency. If the filters are not cleaned regularly, the units output performance and efficiency will decline and energy consumption will increase.
- 21. DO NOT operate the unit with a damaged power cord or plug, after it malfunctions, or if the unit has been dropped or damaged.
- 22. Only use the unit in the upright position on a even, flat surface. Unit must be positioned at least 24 inches (60 cm) from the nearest object in any direction.
- 23. Stop operation immediately if abnormal noise or odor is noticed. Contact local service center.



INTRODUCTION

The information provided in this manual covers 13,200 – 29,000 BTU/ HR Koldwave Portable Air Conditioners, their basic functions, operating procedures, options available and emergency situations. It also includes information on how to ship, store, handle, and install the equipment. Only detailed requirements of the Koldwave Portable Air Conditioners are described herein, and installation must be carried out in accordance with this manual. Electrical installation must also carefully follow local legislation and regulations. Only qualified personnel should conduct these installations as failure to acknowledge electrical hazards could prove to be fatal.

PRODUCT DESCRIPTION

Koldwave Portable Air Conditioners feature spot cooling for large areas where cooling of the entire area is not practical or possible. A dedicated spot cooling thermostat controls the unit in this application. These air conditioners can also be used in smaller areas for room cooling.

A control panel provides ease of use and contains self-diagnostic functions and displays, showing operating modes, room and set temperatures, and faults. If an abnormal operation occurs, a visual display of the fault is shown.

Caster wheels are included for ease of portability.

Suitable applications include: factory or work place, industrial kitchen, computer room, emergency cooling, outdoor event, etc.

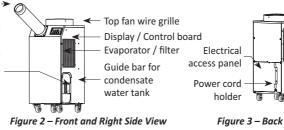


ASSEMBLY(5KK14BEA2AA00)

Component Parts

Cool air outlet hose →

Condensate water tank (Water level is sensed. and the unit operation is stopped when tank is full. An alarm will be displayed. Empty the tank and replace to resume operation)



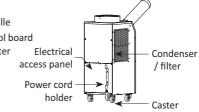


Figure 3 - Back and Left Side View



Power Cord Holder

- 1. Remove the power cord holder from the accessory pack.
- 2. Place the power cord holder on the rear of the unit as shown in Figure 4.
- 3. Use screws to install the power cord holder to the rear of the unit. (screws inside the accessory pack)

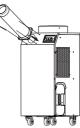
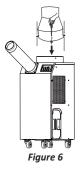


Figure 5

Discharge Ducts /Supply Air Duct

- 1. Remove the cool air outlet hose from the box.
- 2. Place the cool air outlet hose on the front top of the unit as shown in Figure 5.
- 3. Use screws to install the cool air outlet hose to the front of the unit. (screws attached to the cool air outlet hose)



EXHAUST FLANGE

(Optional)

An exhaust flange can be purchased separately. Exhaust flange fits over the top exhaust fan duct improving cooling efficiency, allowing hot air to be exhausted to another location.

- 1. Remove exhaust flange from carton.
- 2. Place exhaust flange on the top of air conditioner.
- 3. Use screws (enclosed inside of box with exhaust flange) to install exhaust flange on air conditioner as shown in Figure 6.





Fiaure 7

Ambient Air Adapter (Optional)

An ambient air adapter can be purchased separately. Air adapter fits over the condenser to duct condenser air to the unit to improve cooling efficiency.

- 1. Remove air adapter from carton.
- 2. Place air adapter on the side of air conditioner.
- 3. Use screws (enclosed inside of box with air adapter) to install the adapter on the air conditioner as shown in Figure 7.



ASSEMBLY(5KK21BGA2AA00)

Component Parts

Cool air outlet hose -> Condensate water tank (Water level is sensed. and the unit operation is stopped when tank is full. An alarm will be displayed. Empty the tank and replace to resume operation)

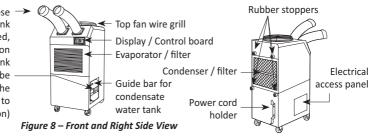


Figure 9 - Rear and Left Side View



Figure 10 - Power Cord Holder attachment

Power Cord Holder

- 1. Remove the power cord holder from the accessory pack.
- 2. Place the power cord holder on the rear of the unit as shown in Figure 10.
- 3. Use screws to install the power cord holder to the rear of the unit (screws inside the accessory pack)



Fiaure 11 - Rubber Stopper attachment

Rubber Stoppers

- 1. Remove the rubber stoppers from the accessory pack.
- 2. Place the rubber stoppers on the rear of the unit as shown in Figure 11.
- 3. Use screws to install the rubber stoppers to the rear of the unit (screws inside the accessory pack)



Figure 12 - Cool Air Outlet attachment

Discharge Ducts /Supply Air Duct

- 1. Remove the cool air outlet hose(s) from the box.
- 2. Place the cool air outlet hose(s) on the front top of the unit as shown in Figure 12.
- 3. Use screws to install the cool air outlet hose(s) to the front of the unit (screws attached to the cool air outlet hose)



Fiaure 13

Exhaust Flange (Optional)

An exhaust flange can be purchased separately. Exhaust flange fits over the top exhaust fan duct improving cooling efficiency, allowing hot air to be exhausted to another location.

- 1. Remove exhaust flange from carton.
- 2. Place exhaust flange on the top of air conditioner.
- 3. Use screws (enclosed inside of box with exhaust flange) to install exhaust flange on air conditioner as shown in Figure 13.





Figure 14

Ambient Air Adapter (Optional)

An ambient air adapter can be purchased separately. Air adapter fits over the condenser to duct condenser air to the unit to improve cooling efficiency.

- 1. Remove air adapter from carton.
- 2. Place air adapter on the rear of air conditioner.
- 3. Use screws (enclosed inside of box with air adapter) to install the adapter on the air conditioner as shown in Figure 14.

ASSEMBLY(5KK30BGA2AA00)

Component Parts

Cool air outlet hose Condensate water tank (Water level is sensed, and the unit operation is stopped when tank is full. An alarm will be displayed. Empty the tank and replace to resume operation)

Figure 15 - Front and Right Side View

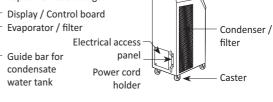


Figure 16 – Back and Left Side View

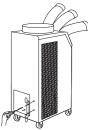


Figure 17

Power Cord Holder

- 1. Take out the cord holder from the accessory box.
- 2. Place the cord holder on the back side of air conditioner.
- Use screws (enclosed inside of accessory box with cord holder) to install the cord holder on the air conditioner as shown in Figure 17.



Top Fan Exhaust Flange

- 1. Remove the top fan exhaust flange from carton.
- Place the top fan exhaust flange on the top of air conditioner.
- Use screws (enclosed inside of box with the top fan exhaust flange) to install the top fan exhaust flange on air conditioner as shown in Figure 18.





Figure 19

Discharge Ducts /Supply Air Duct

- 1. Remove cool air outlet hose(s) from carton.
- 2. Place the cool air outlet hose(s) on the front top of air conditioner.
- 3. Use screws (enclosed inside of box with cool air outlet hose(s) to install the cool air outlet hose(s) on the air conditioner as shown in Figure 19.



Figure 20

Ambient Air Adapter (Optional)

An ambient air adapter can be purchased separately. Air adapter fits over the condenser to duct condenser air to the unit to improve cooling efficiency.

- 1. Remove air adapter from carton.
- 2. Place air adapter on the side of air conditioner.
- 3. Use screws (enclosed inside of box with air adapter) to install the adapter on the air conditioner as shown in Figure 20.

INSTALLATION GUIDE

WARNINGS REGARDING PROPER LOCATION FOR INSTALLATION

DO NOT use the unit in explosive environments or in areas where flammable gas leakage may occur
DO NOT use the unit in areas where it will be exposed to rain or water
DO NOT use the unit in a corrosive atmosphere
DO NOT use the unit above 113° F (45° C)
DO NOT install the unit on uneven or sloping sur- face. The unit may roll or topple over even if casters are set in the locked position



Moving the Unit

Unlock the casters and push the unit using the side handles to a flat, level surface and set the caster brakes to the locked position.

Plugging in the Unit

Check the prongs and surface of the power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.

Check the power cord, plug, and prongs for damage or excess play.

If any damage or excess play is found, contact a qualified repair technician or a qualified electrician to perform replacement of repair of the power cord, plug, or prongs.

If the power cord or plug are damaged, repair should only be performed by a qualified electrician.
DO NOT connect / disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.

NOTE: Make sure the AC outlet is free of dirt, dust, oil, water, or any other foreign material.

The unit is equipped with an approved NEMA plug configuration (5KK14BEA2AA00 = 5-15P; 5KK21BGA2AA00 = 6-15P; 5KK30BGA2AA00 = 6-20P). The appropriate outlet must be used for each plug type.



OPERATION

Control Panel

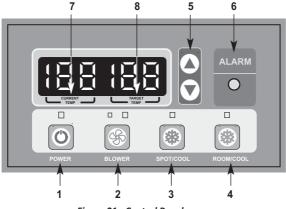


Figure 21 - Control Panel

1. POWER BUTTON

- Activates unit when POWER BUTTON is pressed.
- Fan starts on low speed.
- If POWER BUTTON is pressed during operation, unit stops.

2. BLOWER BUTTON

• Changes fan speed from LOW to HIGH when pressed.

3. SPOT / COOL BUTTON

- Activates compressor and begins producing cool air 5 seconds after button is pressed.
- Regulates temperature based on outlet cool air temperature.

4. ROOM / COOL BUTTON

- Activates compressor and produces cool air 5 seconds after button is pressed.
- Regulates temperature based on inlet ambient air temperature.

5. SET TEMP BUTTON

- Change target temperature / data value by ± 1.
- Change data value by ± 10 by pressing continually.
- Press the SET TEMP BUTTONS to set temperature.
- Upper button is to raise temperature and lower button is to lower temperature.



6. ALARM

- Alarm indicator light blinks and indicates abnormal system operation.
- If Alarm occurs, compressor stops.
- System operation stops when ALARM light is activated /blinking longer than 3 minutes.

7. CURRENT TEMP

- Room cool mode displays current room temperature in display in degrees Fahrenheit
- SPOT / COOL Mode displays outlet (cool air) temperature during normal operations.
- In order to change °F to °C, press SPOT / COOL and ROOM / COOL buttons together for 2 seconds.
- C will blink 2 times and the figure will change to °C
- ALARM codes blink and are displayed when abnormal operation occurs.

8. TARGET TEMP

• Displays the unit set temperature for ROOM COOL mode only

OFF-TIMER: Enter to Timer Setting Mode if you press BLOWER Button and SPOT/ COOL Button together for 1 second. Press UP/DOWN Button to set the timer until it shows the number you want to set. After 5 seconds, the number will be memorized and the compressor will stop after the time set.

AUTO RESTART: If the unit goes off due to an electrical interruption, the unit will automatically restart when the power resumes.

MAINTENANCE

Filter Cleaning

- 1. To clean the evaporator filter, pull the front filter guard forward from the top until the guard is open (in an angled position) and resting on the supporting cables.
- 2. Slide the filter up and use a vacuum cleaner to remove the dust from the filter.



Figure 22 – Removing Filters



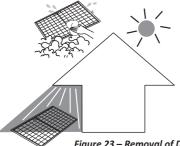
- Lift up on the side filters from the middle bar slightly and then angle the filter outwards from the bottom and remove.

5KK21BGA2AA00 11

- Pull the filter frame forward to remove the front filter.
- Slide filter up and use a vacuum cleaner to remove the dust from the filter.
- Lift up on the rear filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.



- 5KK30BGA2AA00
- Loosen up 2 bolts on the front filter guard.
- Slide filter up and use a vacuum cleaner to remove the dust from the filter.
- Lift up on the side filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.

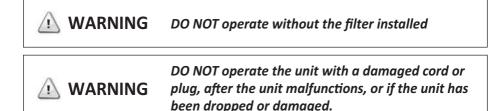


- Remove dust from the filter using a vacuum cleaner hose attachment.
- If required, wash the filter in lukewarm water with a mild detergent. Leave to dry in a shaded area before reinstalling.

Figure 23 - Removal of Dust

- 3. If the filter is heavily covered with dust and dirt, warm water and mild soap or neutral detergent may be used to wash the filter. Do not use any other chemicals to clean the filter, as they will likely damage the filter.
- 4. Dry the filter in a shaded area before replacing it. Do not operate the unit without the filter installed and the filter guard in the closed position.
- 5. Replace the clean filter and close the filter guard.
- 6. To clean the condenser filter, lift up on the rear or side filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.
- 7. Use the same cleaning procedure as in steps 3-5 above.
- 8. To replace the condenser filter, place the top of the filter in the guide and slide the filter up until the bottom of the filter clears the frame. Then push the bottom of the filter into the guide and let the filter gently fall inside the guide.

NOTE: For effective cooling, clean the filter at least every 2 weeks.



Owner's Manual



🤇 Γ΄ ΚΟΙ ΟΨΑνε

Owner's Manual

There are two springs on the rear of the condenser water tank guide.

- 1. Release the screw on the spring hook.
- 2. Take off the spring hook, and then pull out the opposite spring hook from the hole in the condenser water tank guide.
- 3. Replace with a new spring in reverse order.
- 4. Repeat these steps for the other spring.

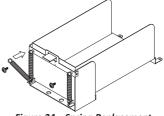


Figure 24 – Spring Replacement

TROUBLESHOOTING

The alarm light is activated if abnormal operation occurs, and a code is displayed on the control panel. The compressor and condenser fan motor will stop operating. The evaporator fan will continue to run for 3 minutes. If the fault is rectified within 3 minutes, the unit will resume operation. If the fault persists for more than 3 minutes, the evaporator fan also stops. The fault must be rectified before the unit can resume normal operation.



Alarm Codes

SELF-DIAGNOSTIC ALARM CODES			
Alarm Display	Problem	Cause	Corrective Action
	Frost prevention sensor and Abnormal temperature sensor value	 Indoor heat exchanger temperature too low TH3 temperature sensor has a loose or broken connection 	 Do not use the air conditioner if ambient temperature is lower than 18°C (64°F) Contact a qualified service agent
	Refrigerant high pressure switch	 Blocked air filter Blocked /kinked exhaust duct Ambient temperature is too high 	 Clean air filter Ensure exhaust duct is not blocked / kinked Do not use the air condi- tioner if ambient tempera- ture is higher than 45°C (113°F)
	Abnormal tempera- ture sensor value	TH1(Outlet) tempera- ture sensor has a loose or broken connection	Contact a qualified service agent
	Abnormal tempera- ture sensor value	TH2(Inlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Compressor over- loaded	 Ambient temperature is too high Unstable voltage supply Defective compressor 	 Do not use the air conditioner if ambient temperature is higher than 45°C (113°F) Contact a qualified service agent Replace compressor
FE	Condensate water level alarm	Condensate tank is full	 Empty the water tank After installation of the water tank, press the SPOT/COOL or ROOM/ COOL button to resume operation
	Drain pump alarm	Drain pump defective or improper hose con- nection (including kink or blockage)	 Check the hose connection and hose Replace drain pump



Troubleshooting Chart

Symptom	Possible Causes	Corrective Action	
Water leakage	High water level in conden- sate tank	 Remove blockage from drain hose Remove any object stuck un- derneath of the black panel under the water tank 	
The unit doesn't work	 Check the utility to verify that power is available to the unit Verify that the power cord is connected 	 Reset the circuit breaker and restart the unit Connect the power cord 	
No cold air flows from the cold air outlet No cold air flows from the cold air outlet No cold air outlet No cold air outlet No cold air flows from the compressor restart in 2 minutes after turning off t protect the compressor The ambient air tempera- ture may be too high		 Clean air filter Verify that 2 minutes have-passed since the compressor off The temperature of the compressor can be higher when the ambient temperature is too high. The compressor will not work unless the ambient air temperature is within the acceptable operating range of the unit 	
Water flow can be heard after compressor shuts off	No cause	Common to hear coolant flow- ing after unit shuts off	
Alarm displays "FT" with less than half of the condensate water in the tank	Spring is possibly broken	Replace the spring (see Maintenance section)	



Specifications

Specifications	Unit	5KK14BEA2AA00	5KK21BGA2AA00	5KK30BGA2AA00	
Cooling Capacity	BTU/HR	13,200	21,000	29,000	
	PHASE	Single	Single	Single	
Power Supply	VOLTS	115	208 / 230	208 / 230	
	HERTZ	60	60	60	
Size (W x D x H)	INCHES	17.5 x 19.9 x 43.3	22.0 x 24.4 x 50.4	22.0 x 29.4 x 47.3	
Weight	LBS	132	198	216	
Current Consumption	AMPS	10.9	11.0 / 10.0	15.1 / 14.8	
Circuit Breaker Size	AMPS	15	15	20	
Power Consumption	KW	1.3	2.3	3.3	
Compressor Input	KW	1.2	2.0	2.4	
Air Flow (High/Low) Evaporator	CFM	357 / 285	464 / 393	741 / 635	
Air Flow Condenser	CFM	610	857	1560	
Motor Input (High/Low) Evaporator	KW	0.091 / 0.089	0.24 / 0.20	0.9/0.8	
Motor Input Condenser	KW	0.08	0.26		
Air Filter		Aluminum	Aluminum / Vinyl chloride	Aluminum / Vinyl chloride	
NEMA Plug	TYPE	5-15P	6-15P	6-20P	
Power Cord Gauge	AWG	14	14	12AWG	
Power Cord Length	FT	10	10	10	
Pofrigorant	TYPE	R410A	R410A	R-410a	
Refrigerant	OZ	15.5	42.3	44.4	
Operating Conditions	°F	64-113	64-113	64-113	
Hot Air Duct Diameter	INCHES	12	16	16	
Maximum Duct Length	FT	30	30	60	
Safety Devices	Compressor overload protector, Anti-freezing thermister, Full drain tank switch, Automatic restart (Power interruption), Compressor time delay program, High pressure switch				
Features	Temperature control, Self-diagnostic function, Two speed fan, Op- tional drain pump kit, Washable filters, °F(°C)display, off-timer.				



Wiring Diagram

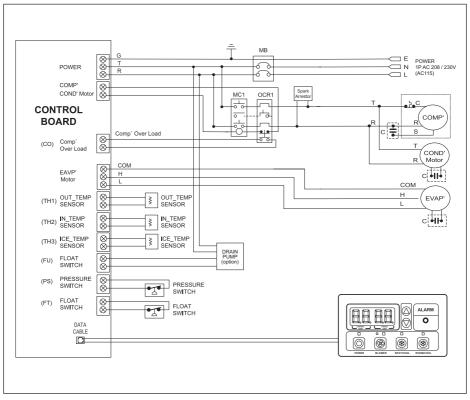


Figure 25 - Circuit Wiring Diagram (5KK14BEA2AA00, 5KK21BGA2AA00)



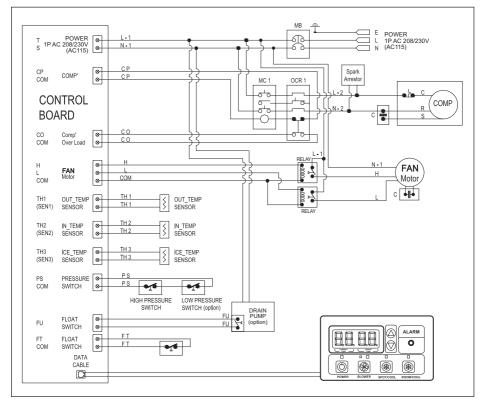


Figure 26 - Circuit Wiring Diagram (5KK30BGA2AA00)



SHIPPING LIST

- (1) PORTABLE AIR CONDITIONER
- (1) Owner's Manual
- (1) POWER CORD HOLDER
- (4) RUBBER STOPPERS (for 5KK21BGA2AA00)
- DISCHARGE / SUPPLY AIR DUCTS
 - (1) 5KK14BEA2AA00
 - (2) 5KK21BGA2AA00
 - (3) 5KK30BGA2AA00
- (1) EXHAUST FLANGE (for 5KK30BGA2AA00)

OBTAINING SERVICE

If the Koldwave Portable Air Conditioner requires Service:

- 1. Use the TROUBLESHOOTING section in this manual to eliminate obvious causes.
- 2. Verify there are no circuit breakers tripped.
- 3. Call your dealer for assistance. If you cannot reach your dealer, or if they cannot resolve the problem, call Koldwave Portable Air Conditioner Technical Support at 214-638-6010. Please have the following information available BE-FORE calling the Technical Support Department:
 - a. Your name and address.
 - b. The serial number of the unit.
 - c. Where and when the unit was purchased.
 - d. All of the model information about your Koldwave Portable Air Conditioner.
 - e. Any information on the failure, including LED's that may or may not be illuminated.
 - f. A description of the protected equipment, including model numbers if possible.



For Koldwave warranty please visit http://koldwave.com/html/literature.asp



KOLDWAVE

4830 Transport Drive Dallas, TX 75247 PH : 214-638-6010 FX : 214-905-0806 www.koldwave.com

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