

# **DC-Powered Portable Refrigeration**

# SD-68L and SD-90L User's Guide



SunDanzer

420 East Aviation Dr #120 Tucson, AZ 85714 USA

# **INTRODUCTION**

Congratulations! You have purchased one of the most efficient refrigeration products available on the market today. The **SunDanzer**<sup>TM</sup> chest coolers are designed to provide years of efficient trouble-free operation. This unit is designed for optimized energy savings with an efficient DC compressor, thick insulation, and a chest style configuration.

Before using the appliance, read through this manual carefully including all the information on safety, installation, operation, and cleaning. These guidelines do not cover every possible condition or situation that may occur. Be safe by using common sense and caution when installing, operating and cleaning this appliance. If you are unsure about any of these instructions or warnings, contact SunDanzer or your local product dealer for assistance.

# **IMPORTANT NOTES**

- ♦ THIS APPLIANCE SHOULD BE LEFT OFF IN ITS NORMAL OPERATING POSITION FOR 2 HOURS PRIOR TO TURNING IT ON TO ALLOW THE COMPRESSOR OIL TO SETTLE.
- ♦ IF THE APPLIANCE HAS BEEN HANDLED ON ITS SIDE OR STANDING ON END, IT SHOULD BE SET IN THE NORMAL OPERATING POSITION FOR 12 HOURS BEFORE TURNING IT ON.
- ♦ PRIOR TO ADDING FOODSTUFF, THIS APPLIANCE SHOULD BE RUN FOR AT LEAST 2 HOURS ALLOWING THE INTERIOR OF THE UNIT TO COOL.
- ♦ THIS APPLIANCE OPERATES ON <u>12 OR 24 VOLTS DC</u> (DIRECT CURRENT) ONLY! DO NOT CONNECT DIRECTLY TO AN AC (ALTERNATING CURRENT) POWER SOURCE. ONLY USE THE INVERTER AND POWER CORDS PROVIDED!
- ♦ THIS APPLIANCE IS DESIGNED FOR DOMESTIC USE ONLY! Specifically for the storage of edible/consumable food and drinks (foodstuff). It is not intended for commercial or industrial use.
- ♦ If the room/ambient temperature approaches the appliance operating temperature, the appliance will not function as it should. If the room/ambient temperature exceeds 109°F (43°C), the appliance will not function as it should.

# **Upon Delivery**

• Please check that the appliance is complete and has not been damaged during transport. It is not advised to power up an appliance that has been damaged, especially damage to the electrical supply cable or refrigerant circuit. In the event of damage please contact SunDanzer or your local product dealer for assistance.

# IMPORTANT SAFETY INSTRUCTIONS

These warnings are provided in the interest of your safety. Please ensure that you understand them all before installing or using this appliance. Your safety is of paramount importance. If you are unsure about any of these meanings or warnings, contact SunDanzer or your local product dealer for assistance.

#### **General Safety**

- Before cleaning or repositioning the appliance, always disconnect from the electrical power supply.
- Service the appliance only if you are a trained or authorized refrigeration technician.
- This appliance contains refrigerant R-134a and a polyol-ester compressor oil in its refrigerant circuit. Take utmost care when handling your appliance so as to not cause damage to the refrigerant circuit with consequent possible leakage.
- Do not use other electrical appliances (such as ice cream makers) inside of the appliance.

# **Child Safety**

- There is a DANGER OF SUFFOCATION if a child becomes trapped inside!
- Keep children from playing in, on, or around this appliance.
- When the unit is not in use, please secure or remove the lid to prevent children from playing inside the cabinet.
- Keep children away from the packaging material. <u>DANGER OF SUFFOCATION!</u>

#### **Installation**

- This appliance is heavy. Care should be taken when moving it.
- This appliance operates on 12 or 24 Volts DC only!
- Under no circumstances should this appliance be DIRECTLY connected to an AC power source.
- Be sure that the appliance does not stand on the electrical supply cable. Also, be sure the electrical cable is not squeezed or bent when the appliance is being installed or moved.
- It is dangerous to make alterations or attempt to modify this unit in any way. Further, product alterations will void the warranty.

# **During Use**

- This appliance is designed for domestic use only! Specifically, for the storage of food and drinks (foodstuff). This appliance is not designed for commercial or industrial use.
- Do not store any containers with flammable vapors or liquids in or around the appliance, such as organic solvents, spray cans, gas cans, etc. **Danger of explosion!**

### Cleaning

• Before cleaning always disconnect from the electrical power supply.

# Servicing

- This product should be serviced by an authorized technician and only genuine spare parts should be used.
- Under no circumstances should you attempt to repair the appliance yourself. Repairs carried out by inexperienced persons may cause injury or serious malfunctioning of the appliance. Unauthorized work may void the warranty.
- Installation work and adjustments on the appliance must be carried out by qualified personnel only. Work
  performed by persons with inadequate technical knowledge may adversely affect the performance of the
  appliance, causing damage to the equipment, and void the warranty.

# **INSTALLATION**

# **Unpacking and Cleaning**

Remove all packaging and securing tape from the appliance. To avoid injury and damage to the appliance, be extremely cautious when using sharp or pointed tools to complete this task. Wash the inside and outside of the appliance with luke warm water and a mild soap or detergent. Abrasive or corrosive cleaning agents, steel wool, scouring sponges, or chemical cleaning agents should not be used under any circumstances. A sponge, soft brush or towel is recommended. The two gaskets sealing both lids to the unit can easily be removed, and installed again, for easy cleaning. After cleaning, thoroughly rinse and dry. You may want to leave the lids open allowing the compartments to ventilate for 20-30 minutes to get rid of residual odors. Check with your local Environmental Agency for recommendations on recycling packaging materials in your area.

# **Positioning**

- IMPORTANT: The condenser of the unit will become warm when the compressor is running. There should be adequate ventilation space between the refrigerator and air ventilation. At least 4 inches (10.0 cm) is recommended.
- For best efficiency, place the chest unit in a cool location and avoid prolonged direct sunlight on the appliance.
- Always keep the air vent openings of the compressor housing (Lower front, right, and rear side) free from dust and obstructions.
- The compressor can run safely when the fridge is tilted up to a 25° angle. Exceeding 25° for long periods of time will damage the compressor.

# Unpacking

Package includes: 1- Portable Cooler
 1- 6" DC Power Cord
 3- Baskets
 1- AC/DC Inverter
 1- 6" AC Power Cord

1- Unit 15A Replacement Fuse 1- DC Plug 15A Replacement Fuse.

### BEFORE SWITCHING ON, LET COMPRESSOR OIL SETTLE

- The appliance should be left off for 2 hours after positioning before it is turned on, in order to allow the refrigerant oil to settle.
- If the appliance has been handled standing on its side or on end, it should be allowed to stand in the normal operating position for 12 hours before turning it on.

# **ELECTRICAL DC CONNECTION**

- The positive wire is colored black with a red stripe. The negative wire is black.
- The appliance must only be connected DIRECTLY to 12V or 24 VDC power source, such as a battery, cigarette socket in a car, or charge controller. The unit will automatically distinguish the 12 or 24 VDC. The user does not need to make any adjustment.
- This unit will not operate directly from a PV solar module. Contact SunDanzer if you prefer this option.
- This appliance must never be connected DIRECTLY to any AC power source. When connecting to AC power always use the inverter provided.
- When plugged into an AC power supply, the inverter will be warm. However, the electrical connections should not become hot when the unit is running. If they do, rework the connection to ensure better conductivity.

# **Electronic Digital Control Panel Display**

- 1. Turn the unit on by connecting it either directly to DC power or into AC power using our inverter. The digital screen will automatically power on when connected to power.
- 2. The display panel shows the temperature in yellow of both the left compartment and right compartment.
  - Live voltage value is displayed in red. The selected operating mode and voltage protection stage are both indicated by a green light. The battery symbol is displayed in orange and indicates the battery life. (Battery symbol is only applicable if unit is being powered by a battery source)
- 3. The temperature control limit for both zones is -7°F to +59°F (-22°C to +15°C). These can be set independently.
- 4. Operating modes are Max, and Eco. Max mode is for maximum cooling and cools fastest. Eco is for efficient cooling; it does not cool as fast as Max. Selected operating mode is indicated by a green light under the selected mode.
- **5.** The UVP (Under Voltage Protection) displays which stage is selected with a green light under H, M or L.
- **6.** Voltage display automated error detection system. See Automatic Error Code Detection, page 9.



# **Digital Control Panel Operation**

- 1. When the fridge is first connected to power the screen will power on automatically. <u>To turn off the unit completely</u>, press and hold the power button for 8 seconds then release. To turn back on simply press the power button again.
- 2. To change the temperature, press the SET button. The temperature that is flashing corresponds to the zone that is being controlled. The flashing numbers are the set temperature for that zone. Whenever the fridge is reconnected to power, the last temperature setting will resume, so you will not need to readjust the temperature every time its disconnected from power.
- 3. <u>To change between Fahrenheit or Celsius</u> press the UVP button and hold for 8 seconds, release the UVP button, and then press UVP to change between Fahrenheit or Celsius. Control panel will display both zone temperatures in either Fahrenheit or Celsius, not both simultaneously.
- **4.** The UVP stage can be set by switching from H to M to L simply by pressing the UVP button.
- **5.** To change the operating mode, press the Snowflake button. The Operating Mode will be indicated by a green light underneath either Max or Eco.
- **6.** Any settings changes done on the control panel, that causes flashing numbers, will stop flashing after 4 seconds, the new setting will be in effect, and the screen will revert back to displaying the current temperature.

#### **Automatic Protection Systems**

- 1. A built-in delay protection system is designed to delay the start of the unit's compressor for 60 seconds after connecting to a power supply. This system is in place to avoid overloading a vehicle at start up, with a unit already plugged in to vehicles power supply. This delay protection system cannot be adjusted, modified, or removed.
- 2. The UVP (Under Voltage Protection) system exists to ensure that the unit will not hurt, or drain a vehicle battery, or any battery source from which the unit is drawing power, automatically recognizing when the battery is at a safe voltage to power on again. This system can be set to either L, M or H. When connected to AC power, we recommend running on stage L or M, our inverter puts out ~24.0V, and will probably not start the compressor on H. For vehicle batteries we recommend running the unit on stage M or H. This feature is designed to protect the system battery from too low a depth of discharge.

**Under Voltage Protection (UVP) System Voltage Parameters** 

Stage	12V Shutoff Voltage	12V Input Voltage	24V Shutoff Voltage	24V Input Voltage
L	10.1V	11.0V-16.5V	21.6V	23.0V-30.3V
M	10.7V	11.5V-16.5V	22.6V	23.9V-30.3V
Н	11.4V	12.3V-16.5V	24.1V	25.5V-30.3V

Note: Voltage error (Er) displayed on the red voltage display readout indicates improper voltage to operate. When connected to AC, make sure UVP is set to L or M.

- On UVP Stage L, if the input of the 12V battery drops below 10.1V, then the compressor will shut off. The compressor will resume running 60 seconds after the input voltage of the 12V battery reaches 11.0V.
- On UVP Stage **M**, if the input of the 12V battery drops below 10.7V, then the compressor will shut off. The compressor will resume running 60 seconds after the input voltage of the 12V battery reaches 11.5V.

#### **Fuses**

A fuse is required in order to protect the wiring. A 15Amp fuse is recommended and the fuse should be installed in the side of the unit close to the DC plug insert. We supply an extra unit 15A fuse. For 12V operation, use a 15A fuse, and for 24V operation use a 7.5A fuse can be used. Our AC/DC inverter puts out 24V, so we always recommend using a 15A fuse.

Operating Voltage	Fuse	
12V	15A	
24V	7.5A	

**Note:** Unless you know you will only be using a 24V power source, we always recommend a 15A fuse

#### **Fuse Installation**

- A standard extra 15A blade fuse is included in delivery. This installed fuse is currently located on the compressor side of the cooler. If the fuse needs to be replaced, pull out the old fuse using needle nose pliers or a flat head screw driver, and install the new fuse back into the unit. Fuse orientation is not important.
- An extra 15A glass fuse is included in delivery. This fuse is located inside the DC cigarette plug. To replace this fuse, remove the top of the plug by unscrewing the toothed gear with pliers, remove the contact point, and cover, to reveal the glass fuse. Remove the old fuse and install the new glass fuse. Orientation of the fuse is not important. Put back the cover, place the contact point within the toothed gear, and tighten down the tooth gear into the plug until it is tight.

# **Specifications**

Unit	SD-68L	SD-90L
Total Volume	2.4ft <sup>3</sup> [68 L] 71.85Q	3.2ft <sup>3</sup> [90 L] 95.10Q
Zone Capacities	L: 40L/ R: 28L	L: 52L/ R: 38L
Temperature Range	-7°F to 59° F	-7°F to 59° F
Ambient Range	50°F to 109° F	50°F to 109° F
Climate Class	SN, N, ST, T	SN, N, ST, T
Power Consumption	52W	54W
Energy Consumption	4.3A (12V)	4.7A (12V)
Input Voltage	12 or 24 VDC	12 or 24 VDC
Refrigerant	R134a	R134a
Net Weight	69.44lb [31.5 kg]	72.75lb [33.0 kg]
Dimensions (LWH)	33.2 x 19.5 x 21.4 in	37.4 x 21.4 x 18.6 in

### **OPERATION**

#### **Starting the Appliance**

After the appliance has been properly connected to a power source, the screen will automatically turn on and will beep 5 times. The compressor will begin one minute after the unit is connected to power.

#### **Initial Cooldown**

Once on, the refrigerator will reach operating temperature in about 60 minutes. We recommend letting the fridge run at least 90 minutes before placing food or beverage inside. Large warm loads can take hours to cool. Allow the cabinet to cool for at least 1 hour prior to adding foodstuff.

### **Ambient Temperature/Climate**

This refrigerator is designed to operate in a wide ambient temperature range. The certified range is 41F (5C) to 110F (43C).

#### **Baskets**

These units include three organizing baskets. These baskets are all different sizes and configured to hang from the top lip of the refrigerator keeping the bottom of the baskets ~1cm above the floor.

#### **Temperature Control Adjustments**

The left zone should always be set just as cold, or colder than the right zone for efficiency. As the ambient temperature changes from summer to winter, it may be necessary to adjust the thermostat to achieve the proper internal temperature setting. If the room/ambient temperature approaches the appliance's internal operating temperature, the appliance will not function as it should. The unit will run a little colder at higher elevations.

### **Opening and Closing the Lid**

The lid is fitted with a uniform removable gasket strip lining the lids to prevent warm air and moisture from entering the appliance compartment. Be sure that the lids and the lid seals are free from obstructions and form complete seals around the rims of the cabinet. Overfilling and/or unlevel installation of the appliance will prevent a good seal. It might be hard to open the lid immediately after the lid is closed. This is due to air contraction in the cabinet. This pressure difference will equalize in a few seconds.

#### Loading

Do not over fill! Leave some space at the top so the door can always fully close. To assist the cabinet in cooling large loads quicker, keep the cabinet full of product (or containers of water). It will also help to cool your food quicker if your food is packaged in smaller containers rather than large ones. Food packages more than 2 inches (5cm) thick will cool slowly. Leave air spaces between food items for quick cooling. Items in contact with the interior walls will cool much faster and can freeze easily. The short basket in the right compartment is for items you would like to keep warmer (milk, eggs, cheese) and will be the warmest part of the compartment.

#### Shutting down or taking unit Out of Service

Hold the power button for 6-7 seconds then release, and the unit will turn off even while connected to power. If the unit is to be off for an extended period (more than 6 hours), the interior should be thoroughly cleaned and dried. It is recommended to leave the lid slightly open to provide ventilation.

#### **DEFROSTING**

The appliance compartment will become progressively covered with frost. This should be removed periodically, however when the ice becomes very thick on the interior walls, complete defrosting should be carried out. Perform this operation when the appliance is empty and disconnected from the power supply.

• Before any cleaning or repositioning is carried out, you must **DISCONNECT** the appliance from the electrical power supply.

Never use sharp metal tools to scrape or chip off frost from the interior compartment as this could damage the appliance beyond repair. Do not use heat sources, such as electric or gas heaters to complete the defrost process.

### To carry out complete defrosting:

- 1. Disconnect the appliance from the electrical supply.
- 2. Remove any stored food and store in a cool dry place.
- 3. Leave the lid open.
- 4. Remove the plugs from the defrost water drains located in the bottom interior of the cabinet.
- 5. To accelerate the process, place a bowl of hot non-boiling water inside of the appliance and close the lid.
- 6. The defrost water can easily be collected by pans under the defrost drains located on the back of the unit.
- 7. Wash and dry the interior thoroughly. Be sure to replace the plugs on the defrost water drain.
- 8. Reconnect the appliance to the electrical supply and leave running (while empty) for at least 2 hours allowing the interior to cool sufficiently.
- 9. Replace the previously removed foodstuff.

ATTENTION: A rise in temperature of frozen food products during defrosting may shorten their safe storage life.

# **CLEANING AND MAINTENANCE**

### **Internal Cleaning**

Wash the inside of the appliance with lukewarm water and a mild soap. Never use abrasive or corrosive cleaning agents, steel wool, scouring sponges, chemical cleaning agents, or highly perfumed cleaning products to clean the interior as these will damage the surface and leave behind a strong odor. A sponge, towel, or soft brush is recommended. Wash with a mixture of two tablespoons of baking soda to 1 quart (1.14L) warm water. After cleaning, thoroughly rinse and dry.

#### **External Cleaning**

Wash the outside of the cabinet with warm water and a mild soap or detergent. Do not use abrasive or corrosive cleaning agents, chemical cleaning agents, steel wool or scouring sponges to complete this task as it may cause damage to the surfaces.

### **HINTS & TIPS**

### **Normal Operating Sounds**

- You may hear faint gurgling or bubbling sounds when the refrigerant is pumped through the refrigerant coils.
- When the compressor is on, the refrigerant is being pumped around and you will hear a whirring sound or pulsating noise from the compressor.
- A thermostat controls the compressor and you may hear a 'click' when the thermostat cuts in and out.

### **Energy Saving Advice**

- Do not install the appliance close to sources of heat, such as a stove, boiler, heater, chimney, etc, and avoid exposure of the appliance to direct sunlight.
- Locate the appliance in a cool well-ventilated room and make sure that the air vents of the compressor housing cover are not obstructed. Also allow adequate spacing around the cabinet for air circulation (4in. or 10cm)
- Avoid unnecessary frosting in the cabinet by packing all food and liquids in airtight packages or containers.
- Always keep foodstuff stored in tightly sealed packaging or containers and allow some space for air to circulate around each item.
- Avoid keeping the lid open for extended periods of time or opening the lid too frequently as warm air will enter the cabinet and cause the compressor run unnecessarily often.
- Ensure there are no obstructions preventing the lid from closing properly and forming a tight seal.

### **END OF LIFE**

While this refrigerator should last many years, at some point it will be time to dispose of the unit. Be sure to use normal and proper disposal methods based on your local Environmental Agency standards. When disposing of your appliance, use an authorized disposal site. The refrigerant must be completely drained and collected by an authorized technician for recycling prior to disposal. Check with your local Environmental Agency for recommendations on recycling this appliance in your area. Remove the electrical connection wiring and also ensure that the lid is removed to prevent young children from being trapped inside. **DANGER OF SUFFOCATION!** 

# **TROUBLE SHOOTING**

Before contacting a service technician, SunDanzer or your local product dealer, check the following points. If you call out a technician to a fault listed below, or to repair a fault caused by misuse, abuse, or faulty installation, a charge could be made even if the appliance is under warranty.

SYMPTOM	SOLUTION
Appliance connected to power, but does not operate	<ul> <li>Verify power is present at the appliance. If not check all connections and verify cord is firmly in socket.</li> <li>Check the fuses. If blown, replace with a new one.</li> <li>The main common problem with installations is voltage drop to the compressor which causes the unit to fail to start due to "Low Voltage." Typically, a connection is not as tight as it should be, or the wire size to the compressor is too small. The low voltage problem occurs at the instant of start-up and is sometimes difficult to detect with a volt meter because the event is very quick</li> </ul>
Appliance is operating, but the interior is not cold.	<ul> <li>(&lt;100 ms)</li> <li>Allow the appliance at least 4 hrs from initial turn-on to become cold.</li> <li>Check that the digital control panel is set to the desired temperature setting.</li> <li>Check that the room/ambient temperature is not approaching the internal operating temperature and does not exceed to 109°F (43°C).</li> <li>Has too much warm foodstuff recently been placed in the cabinet? If so, it is normal to not be cold and it will take time to return to temperature.</li> <li>Does the cabinet have adequate ventilation around the side walls allowing it to transfer heat properly? (See Installation Section).</li> </ul>
The lid will not open.	Has the lid just been opened? If so leave for a few minutes to allow the air pressure to equalize and try again.
Excessive frost and ice has built up.	<ul> <li>Is the weather hot and humid? If so, this will increase the rate of frost build up in the cabinet. Always ensure that foodstuff is properly packaged.</li> <li>Check that the lid is closed and has a good seal, and that nothing is preventing the lid from closing properly.</li> <li>Large quantities of food have recently been placed in the cabinet/and or the lid is frequently opened.</li> <li>Ensure that advised periodic cleaning has been carried out.</li> </ul>
Noise	Refer to 'Normal Operating Sounds'

# **Automatic Error Detection Codes**

<b>Er Codes:</b> Caused by rapid temperature changes	<b>Solution:</b> Shut Down and Restart Unit
and other external factors	
Er1 Code: Heat line short circuit	Verify ambient air temperature is acceptable
Ero Code: Heat line break	Verify ambient air temperature is acceptable

Failure Hint	Potential Diagnostic Method	
E1 Code: Module input voltage protection	out voltage protection Verify whether input voltage is sufficient and in the	
	UVP voltage stage stated range	
<b>E2 Code:</b> DC fan over-current protection	Verify condenser fan is spinning, check air vents	
	for obstructions, verify plugs aren't loose	
<b>E3 Code:</b> Compressor start abnormal protection	Check air vents for obstructions, verify ambient air	
	temperature isn't too high, verify plugs aren't loose	
<b>E4 Code:</b> Compressor speed anomalies or over	Check air vents for obstructions, verify ambient air	
power protection	temperature isn't too high or too low	
<b>E5 Code:</b> Module abnormal temperature protection	Check air vents for obstructions, verify ambient air	
	temperature isn't too high, at units operating	
	temperature, or too low	
<b>Er Code:</b> Improper or insufficient voltage input	Change the UVP stage	

#### **CUSTOMER RESPONSIBILITIES**

The following items are the responsibility of the customer and are not covered in the warranty:

- Proper care and use of the appliance as described in this manual.
- Damage to the interior or exterior finish or components after delivery.
- Proper power supply, fuse, wiring, and connections.
- Service required as a result of alteration, misuse, abuse, flooding, fire, lightning, or acts of God.
- Replacement of light bulbs.

#### **SPARE PARTS**

Please contact SunDanzer with the part description for replacement parts.

- Compressor, PN 101Z1220
- ECU, PN 101N0212

# **WARRANTY**

SUNDANZER WARRANTS, TO THE ORIGINAL OWNER, THAT THIS PRODUCT IS FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF TWO YEAR FROM THE PURCHASE DATE. THIS WARRANTY SHALL BE LIMITED TO REPAIRING OR REPLACING, AT SUNDANZER'S DISCRETION AND WITHOUT CHARGE TO THE PURCHASER, DEFECTIVE COMPONENTS. ALL WARRANTY WORK SHALL BE PERFORMED AT A SUNDANZER APPROVED FACILITY. SHIPPING CHARGES RELATED TO RETURNING THE PRODUCT TO THE SUNDANZER FACILITY ARE NOT COVERED UNDER THIS WARRANTY. HOWEVER, THIS WARRANTY COVERS SHIPPING CHARGES RELATED TO RETURNING THE REPAIRED PRODUCT TO THE CUSTOMER WITHIN THE CONTINENTAL UNITED STATES. OUTSIDE THE CONTINENTAL UNITED STATES, ALL SHIPPING CHARGES ARE THE RESPONSIBILITY OF THE CUSTOMER AND ARE NOT COVERED BY THIS WARRANTY. THIS WARRANTY DOES NOT APPLY TO DAMAGE OR WEAR TO THE PRODUCT CAUSED BY ACCIDENT, ABUSE, MISUSE, NEGLECT, UNAUTHORIZED ALTERATION OR REPAIR, OR IF THE PRODUCT WAS NOT INSTALLED IN ACCORDANCE WITH SUNDANZER PRINTED INSTALLATION AND OPERATING INSTRUCTIONS. TO OBTAIN SERVICE UNDER THIS WARRANTY, THE DEFECTIVE PRODUCT MUST BE RETURNED TO SUNDANZER TOGETHER WITH A RETURN MATERIAL AUTHORIZATION (RMA) NUMBER. ANY PRODUCT REPAIRED OR REPLACED UNDER THIS WARRANTY WILL BE WARRANTED FOR THE BALANCE OF THE WARRANTY PERIOD WITH RESPECT TO THE ORIGINAL PURCHASED PRODUCT. SUNDANZER WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, OR EXPENSES ARISING FROM INSTALLATION, USE OR ANY OTHER CAUSES. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THOSE WARRANTIES DESCRIBED OR REFERRED TO ABOVE.

For warranty claims or additional information, contact:

#### SunDanzer

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Record Product Information:		
Model Number:		
Serial Number:		
Purchase Date:		