



**Model ST-16RF**



**Owner's Manual**

## Troubleshooting

When using this appliance, you may come across some problems that in many cases result from improper handling and can easily be eliminated.

### TROUBLESHOOTING GUIDE

*The appliance fails to operate after being connected to the power source.*

- Check whether the power supply is active and that the thermostat is not set to the **STOP (0)** position.

*The compressor is running continuously.*

- The doors were opened frequently or were left open too long.
- The doors are not properly closed (the doors may sag, the gaskets may be dirty or damaged).
- The power supply has been interrupted for a long period of time.
- The appliance may have been overloaded with items above room temperature.
- There may be inadequate ventilation of the compressor and condenser. (Assure there is adequate air circulation behind the appliance and wipe the dust from the condenser.)

### Noise

Cooling in refrigeration appliances is enabled by the refrigerating system with compressor, which produces noise. How noisy the appliance is depends on where it is placed, how it is used and how old the appliance is.

- During the operation of the compressor, the noise of liquid is heard and when the compressor is not operating, the refrigerant flow is heard. This is a normal condition and has no influence whatsoever on the lifetime of the appliance.
- After starting the appliance, the operation of the compressor and the refrigerant flow may be louder. This does not mean that something is wrong. Gradually the noise is reduced.
- Sometimes a louder noise is heard, which is unusual for the appliance. This noise is often a consequence of improper placement of the unit. (The unit should be placed and leveled firmly on a solid base and it should not touch the wall or cabinets standing next to it.)

**SUNSTAR TECH SUPPORT: 260-214-0949**

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## WARNING

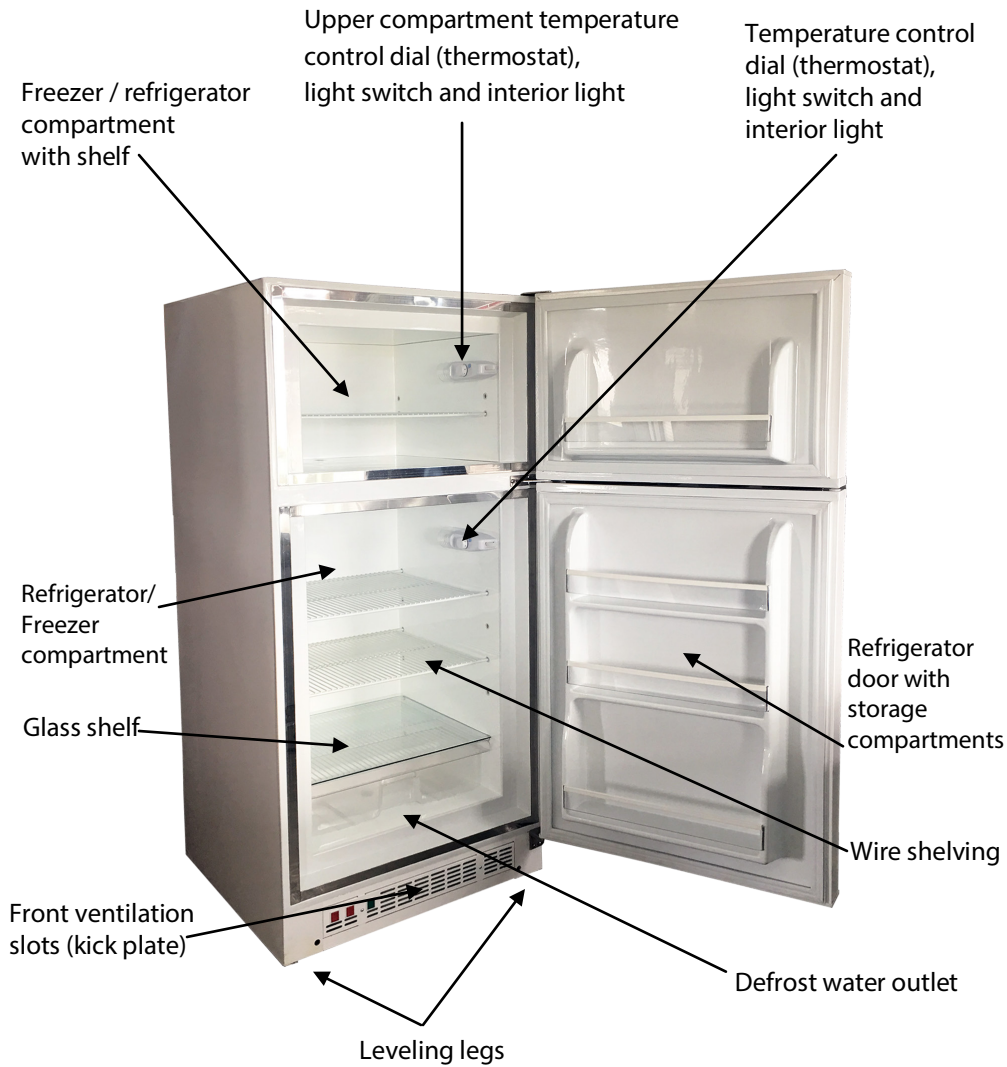
- Use 2 or more people to move and install the appliance. Failure to do so can result in back or other injury
- To ensure proper ventilation for your appliance, the front of the unit must be completely unobstructed. Choose a well-ventilated area with temperatures below 100°F (32°C). This unit must be installed in an area protected from the elements, such as wind, rain, water spray, or drips.
- The appliance should not be located next to ovens, radiators, or sources of high heat.
- Do not kink or pinch the power supply cord of the appliance.
- The fuse (or circuit breaker) size should be 20 amp.
- It is important for the appliance to be leveled in order to work properly. You may need to make several adjustments to level it.
- Never allow children to operate, play with, or crawl inside the appliance.
- Do not use solvent-based cleaning agents or abrasives on the interior. These cleaners may damage or discolor the interior.
- Do not use this apparatus for other than its intended purpose.

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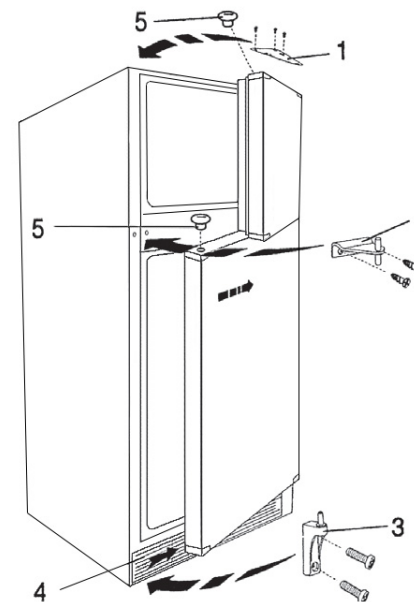
**Dear Customer:** Please follow the user manual to achieve the best service performance and the longest service of life for your machine.

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## Location of Parts



3. Lift the top hinge straight up to free the in from the socket on the top of the door.
4. Lift the freezer door and place it on a padded surface to prevent scratching it.
5. Remove the plug buttons from the upper left holes as illustrated and transfer them to the uncovered holes at the right side. Be sure to press the plug buttons firmly into the holes.
6. Unscrew the middle hinge. Keep these for later use.
7. Take off the refrigerator door and place it on a padded surface to prevent scratching.
8. Unscrew the lower hinge.
9. Lay the appliance on its back on the floor. Remove, change and replace the bottom hinge and plugs to the opposite side.
10. Stand the unit upright and replace the refrigerator door.
11. Insert the bottom of the middle hinge into the top of the refrigerator door. With the door open, screw the middle hinge into the uncovered holes.
12. Place the bottom of the freezer door into the top of the middle hinge.
13. Replace the top hinge in the uncovered holes on the top left side of the freezer. Do not tighten.
14. Should the gasket seals not adhere to the casing of the appliance perfectly, they will have to be heated from a suitable distance (by means of a hair drier, for example) and lightly stretched to the required height.



1. Upper hinge
2. Middle hinge
3. Lower hinge
4. Kick plate
5. Door hinge plug

### **Vacation Time:**

During long absences, remove all contents. Unplug the appliance, clean it, and leave the doors open slightly to avoid possible formation of condensation, mold, or odors.

### **Moving Your Appliance:**

1. Remove the contents.
2. Securely tape down all loose items inside your unit.
3. Turn the leveling legs up to the base to avoid damage.
4. Tape the doors shut.
5. Be sure the appliance stays secure in the upright position during transportation.

### **Energy Saving Tips:**

- The unit should be located in the coolest area of the room, away from heat-producing appliances or heating ducts and out of direct sunlight.
- Try not to open the doors too often, especially when the weather is damp and hot. Once you open a door, close it as soon as possible.
- Occasionally check if the appliance is sufficiently ventilated (adequate air circulation behind the appliance).
- Set the thermostat from higher to lower settings as soon as (depends on how loaded the appliance is, ambient temperature, etc.).
- Before loading items into the unit, be sure they have cooled to ambient temperature.
- A layer of frost and ice increases energy consumption, so defrost the freezer as soon as the layer is ½" thick.

## **Reversing the Door Swing:**

If you find the direction of opening the doors of the appliance inconvenient, you can change it. Holes on the opposite side have already been prepared at the factory.

This appliance can be opened from either the right side or the left. By default, the door hinges are on the right side. If you prefer them on the left, please follow these instructions and refer to the illustration on the following page.

NOTE: All parts removed must be saved to do the re-installation of the doors.

1. Remove the hinge on the right top of the cabinet.
2. Remove the four bolts and washers (using a ratchet tool with a phillips head/tip) that holds the top hinge to the cabinet. Keep these for later use.

## **Technical Information**

<b>Model Number</b>	ST-16RF
<b>Color</b>	White / Gray
<b>Capacity</b>	16 cu. ft.
<b>Electrical Input</b>	12/24 V DC
<b>Rated Current</b>	5 amp
<b>Energy Consumption</b>	0.6 kw @ 24 hrs.
<b>Refrigerant</b>	R134a
<b>Installation</b>	Free-standing
<b>Ship Weight</b>	270 lbs.
<b>Unit Dimensions (w x d x h)</b>	31" x 34.0" x 68"

Flash number

- 1
- 2
- 3
- 4
- 5

Fault Occurring

- Battery protection cut out
- Fan over-current cut out
- Motor start error
- Minimum motor speed error
- Thermal cut out of module

## **Installation Instructions**

### **Before Using Your Appliance:**

- Remove the exterior and interior packing.
- Before connecting the unit to a power source, let it stand for approximately 2 hours. This will reduce the possibility of a malfunction in the cooling system from handling during transportation.
- Remove the shelves and clean them and the interior surfaces of the unit with lukewarm water using a soft cloth.

### **Installing the Refrigerator/Freezer:**

- Place the unit on a floor that is strong enough to support the appliance when it is fully loaded. To level the unit, adjust the two leveling legs at the front
- Model ST-16RF is designed to be free-standing only, and should not be recessed or built in. When installing, allow at least 3 inches of space at the top, sides, and rear of the unit, which will allow the proper air circulation to cool the compressor and condenser.
- Locate the unit away from direct sunlight and sources of heat (oven, heater, radiator, etc.). Direct sunlight may affect the acrylic coating and heat sources may increase electrical consumption.
- Avoid locating the unit in moist areas. Too much moisture in the air will cause frost to form quickly on the evaporator, requiring more frequent defrosting of the unit.

## Cable Requirements

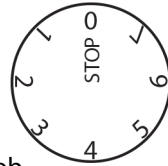
To ensure the correct start and operating conditions for the unit, the following cable dimensions must be observed:

Wire Sizing Chart (Gauge)	Max . length between battery and compressor module (ft.)	
	12V/DC	24V/DC
# 8	15 ft	30 ft
# 6	25 ft	50 ft
# 4	35 ft	70 ft

## Operating Your Refrigerator/Freezer

### Temperature Control

- The temperature in each compartment is controlled with a thermostat knob located towards the upper right-hand corner. Turn the knob clockwise from the **STOP (0)** position toward the higher numbers for colder temperatures. Higher settings on the knob (higher numbers) mean lower temperatures (colder) in the refrigerator.
- On the coldest settings, temperatures will go to approx -5°F. Use higher thermostat settings when using unit as a refrigerator.
- Changes in the ambient temperature affect temperature in the refrigerator compartment so choose an appropriate setting of the thermostat knob, depending on ambient conditions.
- The temperature in the upper compartment is also controlled by its own thermostat.
- When the temperature dial is in the **STOP (0)** position, the appliance does not operate (the cooling system is switched off), yet the power supply is not interrupted (the light goes on when you open the refrigerator door).
- The internal temperatures also depend on how often you open the doors.
- In all small refrigerators and freezers without interior fans, temperatures are coldest near the bottom, and occasionally near the rear. Place contents accordingly. It is best not to operate these units mostly empty. If temperatures are erratic, try putting some water bottles or freezer packs inside to create a load for the compressor.



### NOTES:

- For best storage, do not over-pack. Be sure the doors close fully.
- The interior light comes on automatically when the refrigerator door is opened.
- If the unit is unplugged, has lost power, or is turned off, you must wait 3 to 5 minutes before restarting. If you attempt to restart the unit before this time delay, it will not start.

### Defrosting Your Appliance:

This appliance is a manual defrost unit. In each compartment, when frost builds to ½ inch, defrost carefully according to this procedure:

- Remove contents from the entire unit, taking care that frozen items do not begin to thaw. Set the thermostat to **STOP (0)**.
- Unplug the appliance. Defrosting is accelerated if the freezer door is left open.
- Use a sponge or toweling to remove water and melting ice from the freezer floor. After the frost or ice has melted, dry the interior of the freezer compartment thoroughly.
- Restart the appliance by plugging it in and turning the thermostat to the desired position. Once it is cold, return contents to the freezer and refrigerator sections.

**CAUTION:** Do not use boiling water or an electric device such as a hair dryer to help up the defrosting process because this could damage the plastic parts of the unit. In addition, *never use a sharp or metallic instrument to remove frost* as it may damage the cooling coils and will void the warranty. We recommend using a plastic scraper.

## Care and Maintenance

### Cleaning Your Appliance

- Unplug the appliance, turn the thermostat to **STOP (0)** and remove all contents, including shelves.
- Wash the inside surfaces with a solution of lukewarm water and vinegar. Wipe dry with a clean, soft cloth.
- Wash the shelves with a mild detergent solution, then rinse and dry thoroughly.
- Wash the outside cabinet with warm water and mild liquid detergent. Rinse well and wipe dry with a clean soft cloth.
- Wring excess water out of the sponge or cloth before cleaning the area of the temperature control or any electrical parts.
- After you have cleaned the appliance, reconnect it to the power supply, reset the thermostat and return all contents to their place.

**CAUTION:** Failure to unplug the unit could result in electrical shock or personal injury.

### Power Failure:

Most power failures are corrected within a few hours and should not affect the temperature of your appliance if you minimize the number of times the door is opened. If the power is going to be off for a longer period of time, take the proper steps to protect your frozen and chilled items.