

**Howard McCray** **USER MANUAL**  
**Closed Service Display case**



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### *Warnings*

**DANGER** – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.

**PELIGRO** – RIESGO DE INCENDIO O EXPLOSION. REFRIGERANTE INFLAMABLE UTILIZADO. PARA SER REPARADO SOLAMENTE POR PERSONAL DE SERVICIO CALIFICADO. NO PINCHAR LA TUBERÍA REFRIGERANTE.

**DANGER** – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONFIER LES RÉPARATIONS À UN TECHNICIEN SPÉCIALISÉ. NE PAS PERFORER LA TUBULURE CONTENANT LE FRIGORIGÈNE.

**CAUTION** – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. CONSULT REPAIR MANUAL/OWNER'S GUIDE BEFORE ATTEMPTING TO SERVICE THIS PRODUCT. ALL SAFETY PRECAUTIONS MUST BE FOLLOWED.

**ATENCION** – RIESGO DE INCENDIO O EXPLOSIÓN. REFRIGERANTE INFLAMABLE UTILIZADO. CONSULTE EL MANUAL DE REPARACIÓN / GUÍA DEL PROPIETARIO ANTES DE INTENTAR DAR SERVICIO A ESTE PRODUCTO. DEBEN CUMPLIR CON TODAS LAS PRECAUCIONES DE SEGURIDAD.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONSULTER LE MANUEL DU PROPRIÉTAIRE/GUIDE DE RÉPARATION AVANT DE TENTER UNE RÉPARATION. TOUTES LE MESURES DE SÉCURITÉ DOIVENT ÊTRE RESPECTÉES.

**CAUTION** – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOW HANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

**ATENCION** – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A LA PERFORACION DE LA TUBERÍA REFRIGERANTE; SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO. REFRIGERANTE INFLAMABLE UTILIZADO.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION SI LA TUBULURE CONTENANT LE FRIGORIGÈNE EST PERFORÉE; SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN. LE FRIGORIGÈNE EST INFLAMMABLE.

**CAUTION** – RISK OF FIRE OR EXPLOSION DUE TO FLAMMABLE REFRIGERANT USED. FOLLOW HANDLING INSTRUCTIONS CAREFULLY IN COMPLIANCE WITH LOCAL GOVERNMENT REGULATIONS.

**ATENCION** – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A REFRIGERANTE INFLAMABLE UTILIZADO. SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO CONFORME A LAS REGLAS DE LA MUNICIPALIDAD.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION SI LE FRIGORIGÈNE EST INFLAMMABLE. SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN CONFORMÉMENT AUX RÈGLEMENTATION GOUVERNEMENTALE LOCAUX.

### **Installation**

***This unit is intended for use in a temperature-controlled environment with less than 75°F and 55% relative humidity.***

### **IMPORTANT** – Read before installation:

- If the shelf has a raised lip, the lip needs to be installed facing up towards the rear of the cabinet to promote proper airflow. Failure to install the shelves properly is considered a user error and is not covered by warranty.
- If the unit has recently been transported on its side, please let the unit stand upright for a minimum of 24 hours before plugging in.
- Make sure that the unit has reached the desired temperature before loading the unit with products. This unit is meant for keeping cold products cold, not chilling warm products.
- Make sure that there is proper ventilation around the unit in the area where it will operate.
- Make sure all accessories are installed (i.e., shelves, shelf clips, casters) before plugging in the unit.
- Do not attempt to remove or repair any component of the unit. Consult an authorized service technician for servicing/repair.
- Do not stand inside units.
- Read through the manual in its entirety.
- This unit is designed to perform in a temperature-controlled environment at 55% relative humidity. The unit should be located at least 20ft away from doors, air ducts, and fans that could disrupt airflow and negatively impact performance.

### **Cabinet Location Guidelines**

- Install the unit on a strong and level surface. - If the surface is uneven, the unit may be noisy. - The unit may malfunction if the surface is uneven. - Uneven floors may cause leakage.
- Install the unit in an indoor, well-ventilated area. - For the best performance, please maintain a clearance of 6" on the back of the unit. - Brackets should be attached to the back of the unit. - Do not use outdoors. For use only indoor use. - Avoid direct sunlight.
- Avoid installation in a high humidity and/or dusty area. - Humidity above 55% can cause the unit to rust, collect condensation, and may decrease efficiency. - Dust collected on the condenser coil will cause the unit to malfunction. - Malfunctions due to temperatures above 75°F, humidity above 55%, or improperly maintained condenser coil will void the warranty.
- Select a location away from heat and moisture-generating equipment. - Ambient temperatures above 75°F may cause the compressor to malfunction. - The unit should not be used in areas over 90°F. - Malfunctions due to ambient temperatures above 75°F will void the warranty. - Do not install the unit inside a closet or alcove.

### Electrical

- Please ensure that the required voltage is being always supplied.
- The unit should be plugged into a grounded and properly sized electrical circuit with appropriate over-current protection. NEVER USE AN ADAPTER PLUG! Please refer to the electrical requirements on the unit's nameplate.
- This equipment must be run on a dedicated circuit. Not doing so may damage the equipment.
- Do not unplug your cooler by pulling on the power cord. Grip the plug firmly and pull straight out from the outlet.
- Ensure the unit is not resting on or against the electrical cord.
- If the unit is not in use for a long period of time, please unplug the unit from the outlet.
- To avoid shock and fire hazards, do not plug in or unplug the unit with wet hands.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

### Adjusting Temperature

Your new refrigerator is already factory set to run at optimum temperatures for food safety and should require no adjustments. Refrigerators are set to cycle between a minimum temperature of 32°F and a maximum temperature of 38°F. Adjusting the temperature changes the minimum temperature at which your unit will run. Your unit will not run constantly at this setting. To change it, follow these instructions:

### Temperature Controller Operation

NOTE: The temperature controller is located behind the front panel. To access, carefully pop off the front panel. After making temperature adjustments, carefully put the front panel back on the unit.

1. Set temperature: Press and hold **SET** button until [F] flashes; now the set temperature is displayed.  
Press **▲** or **▼** modify the displayed value.  
Press **SET** button to exit the adjustment and display the unit's current temperature.
2. If no additional buttons are pressed within 10 seconds, the unit's current temperature will be displayed.
3. During the refrigeration cycle, the GREEN SNOWFLAKE will be illuminated until the cabinet hits set point.
4. During the Defrost cycle, the AMBER MELTING SNOWFLAKE will be illuminated until the cabinet completes defrost.



### **Defrost System**

Refrigerator coils are kept below the freezing point (32°F). During compressor downtime, the evaporator will slowly warm up as warm air rises. This circulation effect raises the coil temperature above the freezing point, melting any accumulated frost. Run-off water is drained into the evaporator drain baffle then down to the cope evap located under the compressor. Automatic defrost timers automatically initiate at preset intervals and for a predetermined temperature term.

**WARNING:** High humidity environments can cause increased amounts of condensation that can overflow the evaporator pan.

### **Safety / Warning**

Please pay close attention to the safety notices in this section. Disregarding these notices may lead to serious injury and/or damage to the unit.

### **ATTENTION**

- This equipment must be run on a dedicated circuit. Not doing so may damage the equipment.
- Do not use extension cords.
- Do not put your hands under the unit while it is being moved.
- When the unit is not in use for a long period of time, please unplug the unit from the outlet.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

### **UNPLUG CORD**

- To minimize shock and fire hazards, please do not plug in or unplug the cord with wet hands.
- During maintenance and cleaning, please unplug the unit.

### **PROPER GROUNDING REQUIRED**

- To minimize shock and fire hazards, make sure that the unit is properly grounded.

### **WARNING**

- Do not attempt to remove or repair any component unless instructed by the factory.
- Make sure that the unit is not resting on or against the electrical cord or plug.
- To minimize personal injury, do not hang on the doors.
- Do not store any flammable and explosive gas or liquids inside the unit.
- Do not attempt to alter or tamper with the electrical cord.



### **Operation / Maintenance**

**WARNING:** DISCONNECT THE POWER CORD BEFORE CLEANING ANY PARTS OF THE UNIT.

**NOTE:** We strongly recommend that any service be performed by an authorized service technician.

### **Loading Product**

- Do not block the air duct/fan at the top of the unit. Always maintain a minimum of 4" of clearance between products and the fan.
- Ensure all shelves are sitting at a level and properly secured before loading products.
- Do not store flammable and explosive gas or liquids inside the unit.

### **Cleaning the Condenser Coil**

- For efficient operation, keep the condenser surface free of dust, dirt, and lint.
- We recommend cleaning the condenser coil at least once per month.

### **Cleaning the Fan Blades and Motor**

- If necessary, clean the fan blades and motor with a soft cloth.
- If it is necessary to wash the fan blades, cover the fan motor to prevent moisture damage.

### **Cleaning the Interior of the Unit**

- When cleaning the cabinet interior, use a solvent of warm water and mild soap.
- Do not use steel wool, caustic soap, abrasive cleaners, or bleach that may damage the interior finish.
- Periodically remove the shelves and pilasters from the unit and clean them with mild soap and warm water. To remove the pilasters, first remove the shelves and shelf brackets. Then, simply lift the pilaster up and out.

### **Condenser Coil Cleaning Instructions**

A dusty condenser may lead to high energy consumption, less cooling effectiveness, and compressor damage.

The condenser coil is located at the bottom behind the panel.

1. Disconnect the electrical power from the unit.
2. Remove the front cover and base cover with a screwdriver.
3. Using a soft brush and/or vacuum, remove the dirt, lint etc., from the finned condenser coil in a vertical direction.
4. Clean the condenser with a commercial condenser coil cleaner, available from any kitchen equipment retailer. Ex. Noble Chemical Tech Line.
5. After cleaning, straighten any bent condenser fins with a fin comb.
6. When finished, be sure to reinstall the front cover and base cover.
7. Reconnect the electrical power to the unit

## Troubleshooting Information

Problem	Possible Cause	Possible Solution
Open air case not turning on	Circuit breaker tripped	Reset circuit breaker
	Power cord unplugged	Plug in power cord
	No power to outlet	Call electrician
	Power switch not turned on	Turn power switch on
Compressor not running	Circuit breaker tripped	Reset circuit breaker
	Power cord unplugged	Plug power cord in
	Thermostat set to high	Set thermostat lower
	Cabinet in defrost cycle	Wait for the defrost cycle to end
Unit is leaking water	High relative humidity at location	This cabinet is designed to perform in temperature-controlled environments up to 75F and 55% R/H
	Drainage tube is clogged	Verify drain is clear of debris or blockage
	Temperature controller failed	Contact licensed service technician
	Condensate evaporator failed or not installed	Contact licensed service technician
	Unit is not leveled	Adjust unit to make sure condensation flows to drain tube
Unit is making noise	Fan blade or motor is broken	Replace fan blade or motor
	Unit is not screwed down tightly	Make sure the unit is secured properly
	Discharge loop is vibrating	Resecure or shim discharge line
Unit not cooling	Unit is turned off	Turn unit on
	Defrost cycle is running	End defrost cycle by power cycling
	Controller has failed	Contact licensed service technician
	Refrigerant leaking from unit	Contact licensed service technician
	Probes failed	Contact licensed service technician
P1 error code	The ambient air sensor failed or came loose	Replace the ambient air sensor or check connection
P2 error code	The defrost coil sensor failed or came loose	Replace the defrost coil sensor or check connection
HA error code	Unit has been above 45F for at least 15 minutes	Contact licensed service technician



### Troubleshooting information continued

Problem	Possible Cause	Possible Solution
High cabinet temperature	Refrigerant is leaking	Contact licensed service technician
	The set point on the controller is too high	Set temp back to factory set, this is the temperature the cabinet will run to
	Expansion valve failure	Contact licensed service technician
	The doors are being left open	Shut the doors, this will stop outside air from intruding into the case
	High ambient temperature or humidity	This refrigerator is designed to perform in temperature-controlled environments of 75F and 55% R/H
	Condensing unit has a failure	Contact licensed service technician
Cabinet temperature is fluctuating more than normal	Condenser coil is dirty	Clean the condenser coil
	Unit has improper air flow	Make sure this unit has at least 6" of clearance on the back and the front vent is free of obstructions.
	Expansion valve failed	Contact licensed service technician
	Temperature controller failed	Contact licensed service technician
	Refrigerant leak in system	Contact licensed service technician
	Relative humidity is above 55%	Move unit to area with at or below 55% R/H
	Ambient temperature is above 75F	Move unit to area with ambient temperature at or below 75F