Preferred Service

# Service Manual

This manual is to be used by qualified appliance technicians only. Viking does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

## Built-In
## All Refrigerators
## All Freezers

This Base Manual covers general and specific information including, but not limited to the following models:

**VCFB530**
**VCRB530**
**VCFB536**
**VCRB536**
**VIFB530**
**VIRB530**
**VIFB536**
**VIRB536**
**DDFB530**
**DDRB530**
**DDFB536**
**DDRB536**
**DFFB530**
**DFRB530**
**DFFB536**
**DFRB536**

SMR-0009
September 2009

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# SAVE THESE INSTRUCTIONS

**REVIEW ALL SERVICE INFORMATION IN THE APPROPRIATE SERVICE MANUAL AND TECHNICAL SHEETS BEFORE BEGINNING REPAIRS.**

Pride and workmanship go into every product to provide our customers with quality appliances. It is possible, however, that during the lifetime of a product, service may be required. Products should be serviced only by a qualified authorized service technician who is familiar with the safety procedures required to perform the repair and is equipped with the proper tools, parts, testing instruments, and the appropriate service manual.

## Safety Information

We have provided many important safety messages throughout this manual and on the appliance. **ALWAYS** read and obey all safety messages. This is a safety alert symbol.

This symbol alerts personnel to hazards that can kill or hurt you and others. All safety messages will be preceded by a safety alert symbol and the word "DANGER", "WARNING" or "CAUTION". These words mean:

**DANGER**

**Immediate hazards which WILL result in severe personal injury or death.**

**WARNING**

**Hazards or unsafe practices which COULD result in severe personal injury or death.**

**CAUTION**

**Hazards or unsafe practices which COULD result in minor personal injury, product or property damage.**

All safety messages will identify the hazard, tell you how to reduce the chance of injury, and inform you what can happen if the instructions are not followed.

**WARNING**

**To avoid risk of serious injury or death, repairs should not be attempted by unauthorized personnel.**

**CAUTION**

**VIKING will not be responsible for any injury or property damage from improper service procedures. If performing service on your own product, you must assume responsibility for any personal injury or property damage which may result.**

To locate an authorized service agent, call:
Viking Customer Service
Phone No. 1-888-845-4641

Address your written correspondence to:
Viking Preferred Service
1803 HWY 82 West
Greenwood, MS 38930

# All Refrigerator/All Freezer

## Two Year Full Warranty

All Refrigerators, All Freezers and all of their components and accessories, except as detailed below*, are warranted to be free from defects in material or workmanship under normal household use for a period of two (2) years from the date of original retail purchase. Viking Range Corporation, warrantor, agrees to repair or replace, at its option, any part which fails or is found to be defective during the warranty period.

*Glass (including light bulbs), painted and decorative items are warranted to be free from defective materials or workmanship for a period of ninety (90) days from the date of original retail purchase. ANY DEFECTS MUST BE REPORTED TO THE SELLING DEALER WITHIN NINETY (90) DAYS FROM DATE OF ORIGINAL RETAIL PURCHASE.

Viking Range Corporation uses the most up-to-date processes and best materials available to produce all color finishes. However, slight color variation may be noticed because of the inherent differences in painted parts and porcelain parts as well as differences in kitchen lighting, product locations, and other factors.

## Six Year Full Warranty

Any sealed refrigeration system component, as listed below, or any automatic ice maker is warranted to be free from defective materials or workmanship in normal household use during the third through the sixth year from the date of original retail purchase. Viking Range Corporation, warrantor, agrees to repair or replace, at its option, any part which fails or is found to be defective during the warranty period.

Sealed Refrigeration System Components:
Compressor, Evaporator,
Condenser, Connecting Tubing, Dryer/Strainer

## Twelve Year Limited Warranty

Any sealed refrigeration system component, as listed above, which fails due to defective materials or workmanship in normal household use during the seventh through the twelfth year from the date of original retail purchase will be repaired or replaced, free of charge for the part itself, with the owner paying all other costs, including labor.

## Ninety (90) Day Residential Plus Warranty

This warranty applies to applications where use of the product extends beyond normal residential use. Examples are, but not limited to, bed and breakfasts, fire stations, private clubs, churches, etc. This warranty excludes all commercial locations such as restaurants, food service locations and institutional food service locations.

This warranty extends to the original purchaser of the product warranted hereunder and to each transferee owner of the product during the term of the warranty.

This warranty shall apply to products purchased and located in the United States and Canada. Products must be purchased in the country where service is requested. Warranty labor shall be performed by an authorized Viking Range Corporation service agency or representative. Warranty shall not apply to damage resulting from abuse, accident, natural disaster, loss of electrical power to the product for any reason, alteration, improper installation, improper operation or repair or service to the product by anyone other than an authorized Viking Range Corporation service agency or representative. Warranty shall not apply to damage resulting from indoor units being used in outdoor situations. This warranty does not apply to commercial usage. This warranty does not cover any food or medicine loss due to product failure. Warrantor is not responsible for consequential or incidental damage whether arising out of breach of warranty, breach of contract, or otherwise. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Owner shall be responsible for proper installation, providing normal care and maintenance, providing proof of purchase upon request, and making the appliance reasonably accessible for service. If the product or one of its component parts contains a defect or malfunction during the warranty period, after a reasonable number of attempts by the warrantor to remedy the defects or malfunctions, the owner is entitled to either a refund or replacement of the product or its component part or parts. Replacement of a component part includes its free installation. Warrantor's liability on any claim of any kind, with respect to the goods or services covered hereunder, shall in no case exceed the price of the goods or service or part there of which gives rise to the claim.

**VIKING RANGE CORPORATION**
111 Front Street, Greenwood, Mississippi (MS) 38930 USA
662-455-1200

For more product information, call 1-888-VIKING1 (845-4641), or visit our web site at http://www.vikingrange.com

## WARRANTY SERVICE

Under the terms of this warranty, service must be performed by a factory authorized Viking Range Corporation service agent or representative. Service will be provided during normal business hours, and labor performed at overtime or premium rates shall not be covered by this warranty. To obtain warranty service, contact the dealer from whom the product was purchased, an authorized Viking Range Corporation service agent, or Viking Range Corporation. Provide model and serial number and date of original purchase. For the name of your nearest authorized Viking Range Corporation service agency, call the dealer from whom the product was purchased or Viking Range Corporation. **IMPORTANT:** Retain proof of original purchase to establish warranty period.

The return of the Owner Registration Card is not a condition of warranty coverage. You should, however, return the Owner Registration Card so that Viking Range Corporation can contact you should any question of safety arise which could affect you.

Any implied warranties of merchantability and fitness applicable to the described halogen elements are limited in duration to the period of coverage of the applicable express written limited warranties set forth above. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which may vary from jurisdiction to jurisdiction.

**VIKING RANGE CORPORATION**
111 Front Street • Greenwood, Mississippi 38930 USA
(662) 455-1200
www.vikingrange.com

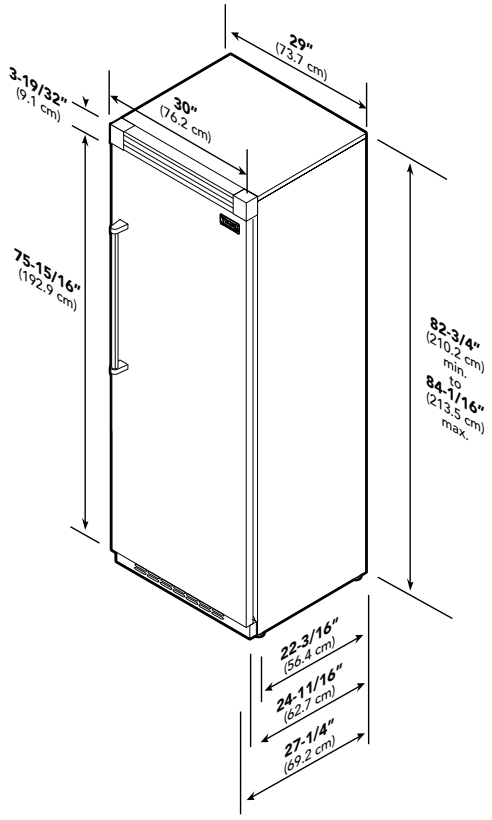
**Specification subject to change without notice.**

## Specifications*

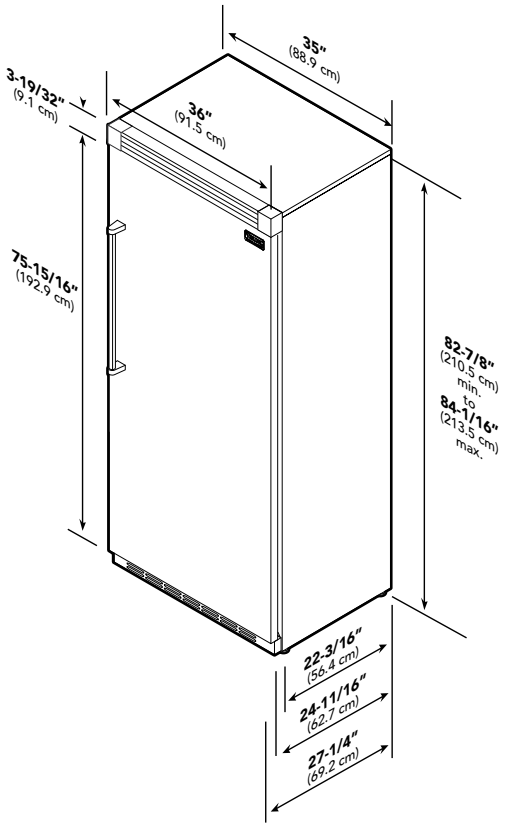
| 30" & 36" Professional | | | | |
|---|---|---|---|---|
| **Description** | **VCFB530** | **VCRB530** | **VCRB536** | **VCFB536** |
| Overall Width | 30" (76.2 cm) | | 36" (91.5 cm) | |
| Overall height from bottom | (82-3/4" (210.2 cm) min. to 84-1/16" (213.5 cm) max. | | | |
| Overall depth from rear<br>To front edge of side trim:<br>To front of top grille:<br>To front of handle end-cap | 22-3/16" (56.4 cm)<br>24-11/16" (62.7 cm)<br>27-1/4" (69.2 cm) | | | |
| Electrical requirements | 115 volt, 60 Hz, 15 amp dedicated circuit; 3-wire cord with grounded 3-prong plug attached to product | | | |
| Maximum amp usage | 9.1 amps | 5.7 amps | 9.5 amps | 6.5 amps |
| Refrigerant Type | HFC-134a | | | |
| Refrigerant Charge | See Rating Label | | | |
| Approximate shipping weight | 530 lbs. (238.5 kg) | 505 lbs. (227.3 kg) | 585 lbs. (263.3 kg) | 570 lbs. (256.5 kg) |

**Go to vikingrange.com for latest specifications*

**VCFB530/VCRB530**




**VCRB536/VCFB536**

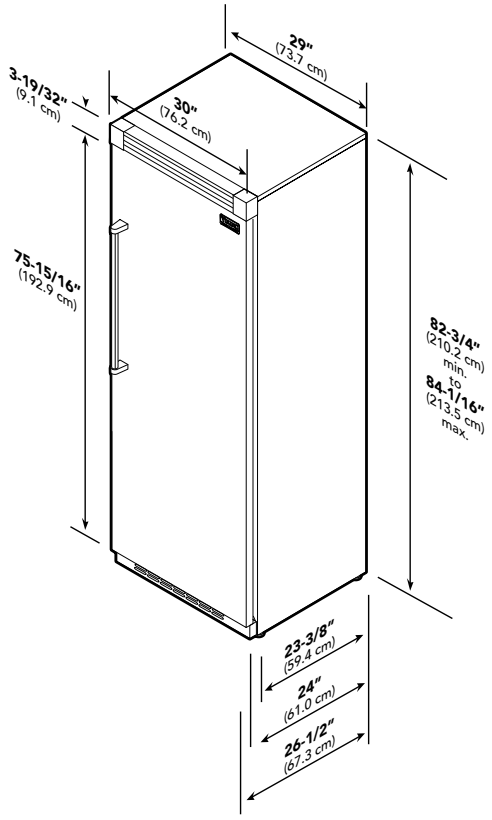


## Specifications*

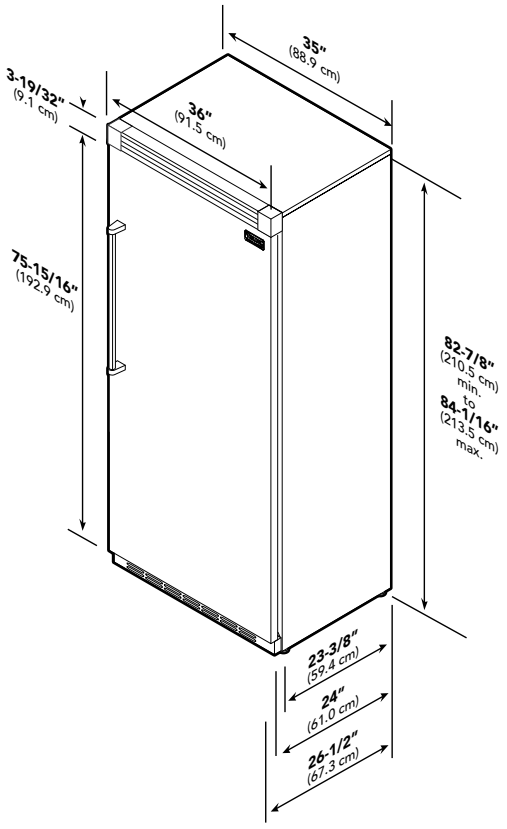
| 30" & 36" Professional Integrated | | | | |
|---|---|---|---|---|
| **Description** | **VIFB530** | **VIRB530** | **VIFB536** | **VIRB536** |
| Overall Width | 30" (76.2 cm) | | 36" (91.5 cm) | |
| Overall height from bottom | (82-3/4" (210.2 cm) min. to 84-1/16" (213.5 cm) max. | | | |
| Overall depth from rear<br>To front edge of side trim:<br>To front of top grille:<br>To front of handle end-cap | 23-3/8" (59.4 cm)<br>24" (61.0 cm)<br>26-1/2" (67.3 cm) | | | |
| Electrical requirements | 115 volt, 60 Hz, 15 amp dedicated circuit; 3-wire cord with grounded 3-prong plug attached to product | | | |
| Maximum amp usage | 9.1 amps | 5.7 amps | 9.5 amps | 6.5 amps |
| Refrigerant Type | HFC-134a | | | |
| Refrigerant Charge | See Rating Label | | | |
| Approximate shipping weight | 530 lbs. (238.5 kg) | 505 lbs. (227.3 kg) | 585 lbs. (263.3 kg) | 570 lbs. (256.5 kg) |

**Go to vikingrange.com for latest specifications*

**VIFB530/VIRB530**




**VIRB536/VIFB536**

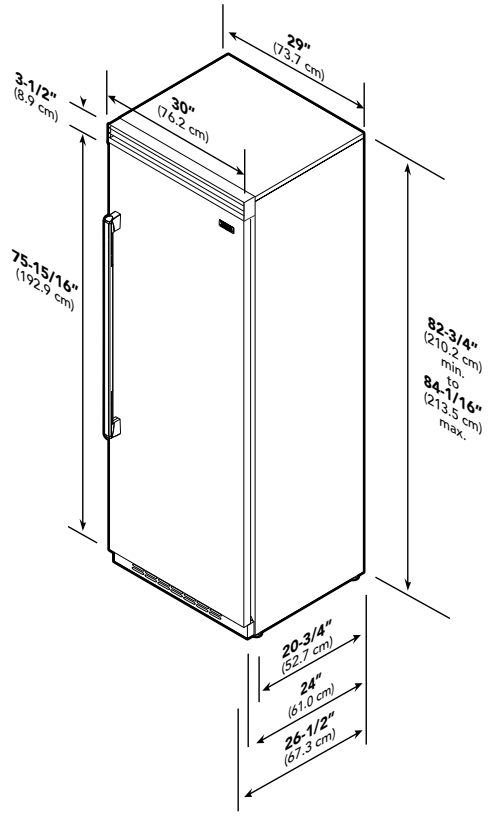


## Specifications*

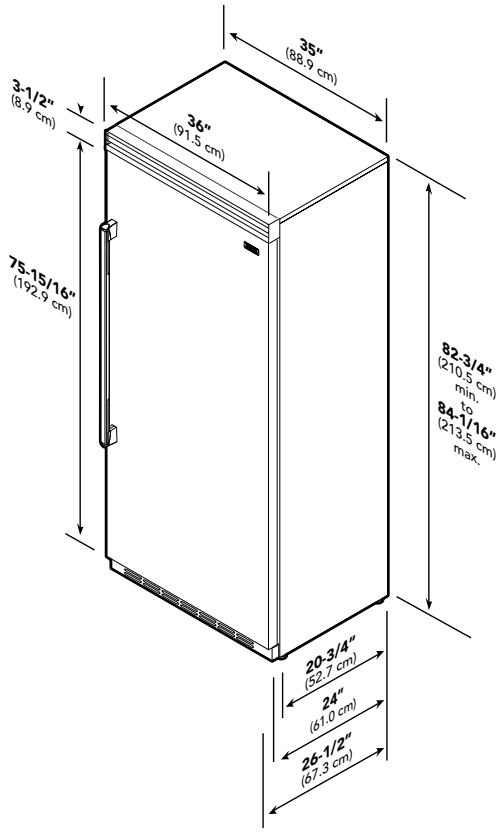
| 30" & 36" Designer | | | | |
|---|---|---|---|---|
| **Description** | **DDFB530** | **DDRB530** | **DDFB536** | **DDRB536** |
| Overall Width | 30" (76.2 cm) | | 36" (91.5 cm) | |
| Overall height from bottom | (82-3/4" (210.2 cm) min. to 84-1/16" (213.5 cm) max. | | | |
| Overall depth from rear<br>To front edge of side trim:<br>To front of top grille:<br>To front of handle end-cap | 23-3/8" (59.4 cm)<br>24" (61.0 cm)<br>26-1/2 (67.3 cm) | | | |
| Electrical requirements | 115 volt, 60 Hz, 15 amp dedicated circuit; 3-wire cord with grounded 3-prong plug attached to product | | | |
| Maximum amp usage | 9.1 amps | 5.7 amps | 9.5 amps | 6.5 amps |
| Refrigerant Type | HFC-134a | | | |
| Refrigerant Charge | See Rating Label | | | |
| Approximate shipping weight | 525 lbs. (238.5 kg) | 495 lbs. (227.3 kg) | 580 lbs. (263.3 kg) | 555 lbs. (256.5 kg) |

**Go to vikingrange.com for latest specifications*

**DDFB530/DDRB530**




**DDFB536/DDRB536**

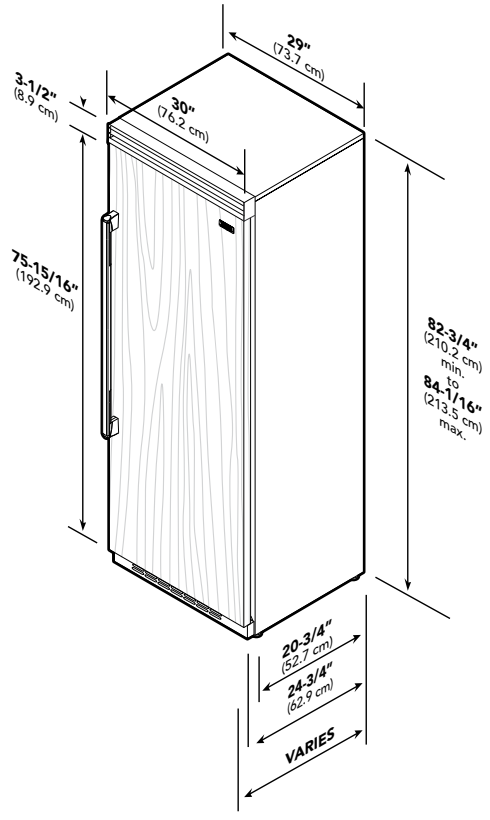


## Specifications*

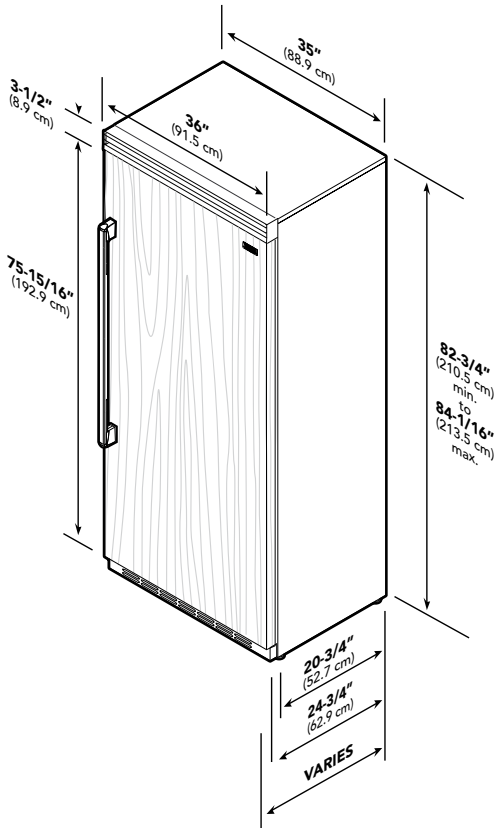
| 30" & 36" Designer | | | | |
|---|---|---|---|---|
| **Description** | **DFFB530** | **DFRB530** | **DFFB536** | **DFRB536** |
| Overall Width | 30" (76.2 cm) | | 36" (91.5 cm) | |
| Overall height from bottom | (82-3/4" (210.2 cm) min. to 84-1/16" (213.5 cm) max. | | | |
| Overall depth from rear<br>To front edge of side trim:<br>To front of top grille:<br>To front of handle end-cap | 20-3/4" (52.7 cm)<br>24-3/4" (62.9 cm)<br>varies | | | |
| Electrical requirements | 115 volt, 60 Hz, 15 amp dedicated circuit; 3-wire cord with grounded 3-prong plug attached to product | | | |
| Maximum amp usage | 9.1 amps | 5.7 amps | 9.5 amps | 6.5 amps |
| Refrigerant Type | HFC-134a | | | |
| Refrigerant Charge | See Rating Label | | | |
| Approximate shipping weight | 490 lbs. (181.4 kg) | 425 lbs. (192.8 kg) | 500 lbs. (226.8 kg) | 500 lbs. (226.8 kg) |

**Go to vikingrange.com for latest specifications*

**DDFB530/DDRB530**




**DDFB536/DDRB536**



## Warnings

Read and follow all instructions before using this appliance to prevent the potential risk of fire, electric shock, personal injury, or damage to the appliance as a result of improper usage of the appliance. Use appliance only for its intended purpose as described in this manual.

To ensure proper and safe operation: appliance must be properly installed and grounded by a qualified technician. **DO NOT** attempt to adjust, repair, service, or replace any part of your appliance unless it is specifically recommended in this manual. All other servicing should be referred to a qualified servicer.

Make sure that incoming voltage is the same as unit rating. An electric rating plate specifying voltage, frequency, wattage, amperage, and phase is attached to the product.

**Electrical Requirements**
Assure that the electrical installation is adequate and in conformance with the National Electrical Code, ANSI/NFPA 70-latest edition or Canadian Electrical Code C22.1-1998 and C22.2 No. 0-M91 (or latest edition), and all local codes and ordinances. A 115 volt, 60-Hz, 15 amp, fused, electrical supply is required. It is required that a separate circuit serving only this appliance be provided. This appliance is equipped with a power supply cord having a 3-prong grounding plug. To minimize possible shock hazard, the cord must be plugged into a mating 3-prong, grounding-type wall receptacle. **DO NOT use an extension cord.**

**Tip Over Hazard**
Most of the unit's weight is at the top. Extra care is needed when moving the unit to prevent tipping. Keep doors closed until appliance is completely installed and secured per installation instructions. Use two or more people to move and install appliance. Failure to do so can result in death or serious injury.

**⚠ WARNING**

**TIP OVER HAZARD**
Appliance is top heavy and tips easily when not completely installed. Keep doors closed until appliance is completely installed and secured per installation instructions.

Use two or more people to move and install appliance. Failure to do so can result in death or serious injury.

**⚠ WARNING**

**ELECTRICAL SHOCK HAZARD**
Disconnect power or turn power disconnect switch to "OFF" position before removing top grille. Failure to do so can result in death or electrical shock.

**⚠ WARNING**

**ELECTRICAL SHOCK HAZARD**
Plug into a grounded 3-prong outlet. If a 2-prong wall receptacle is encountered, contact a qualified electrician.
**DO NOT** remove ground prong.
Unit must be grounded at all times.
**DO NOT** use an adapter.
**DO NOT** use an extension cord.
Failure to follow these instructions can result in death, fire, or electrical shock.

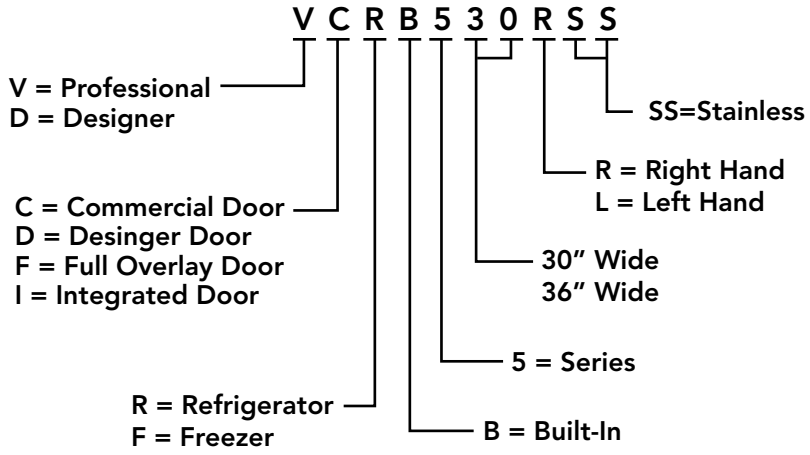
**⚠ WARNING**

**BURN HAZARD**
**DO NOT** touch condenser coils near defrost pan. Doing so can result in burns.

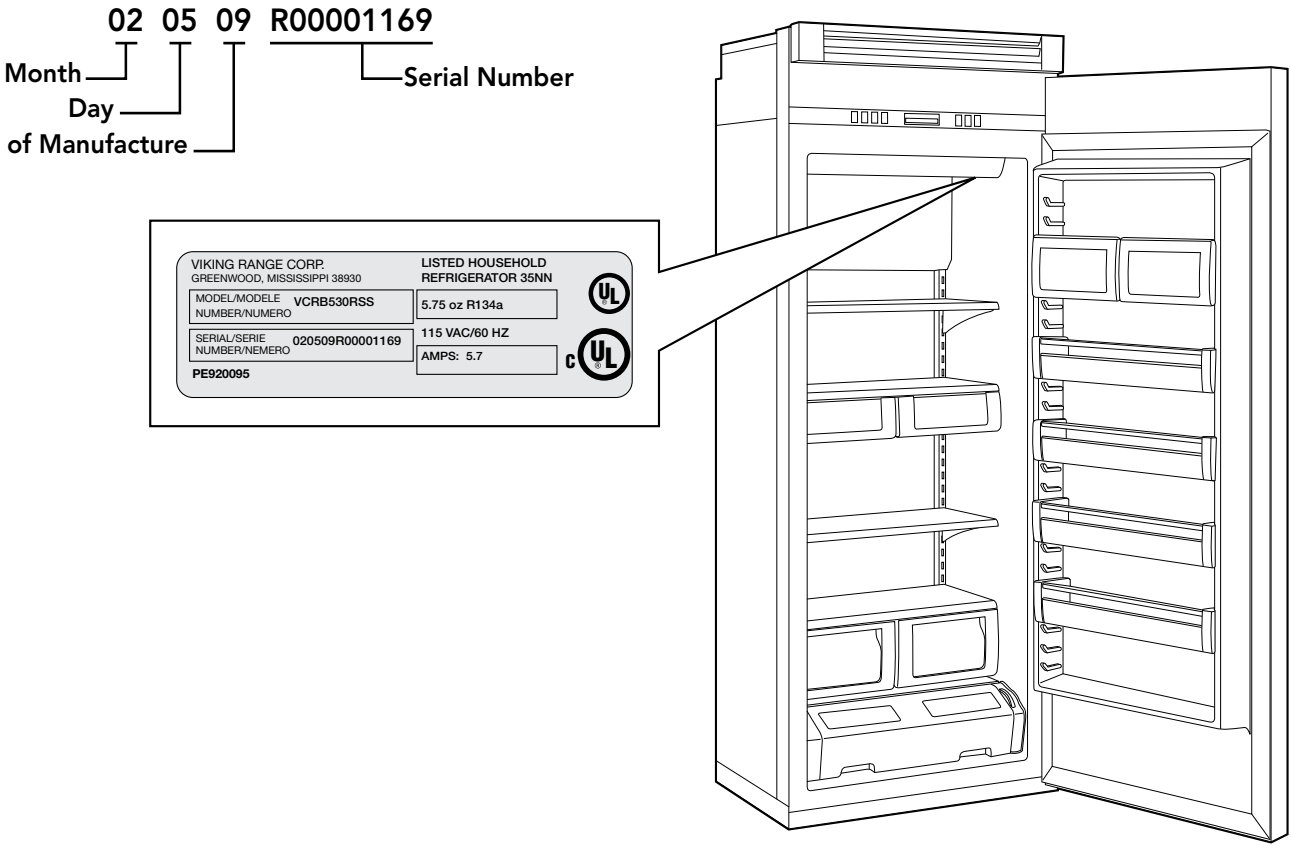
## Model – Serial Number Matrix

The serial number and model number for your appliance are located on the identification plate mounted on the upper right of the interior compartment.

### Model Numbers




### Serial Numbers



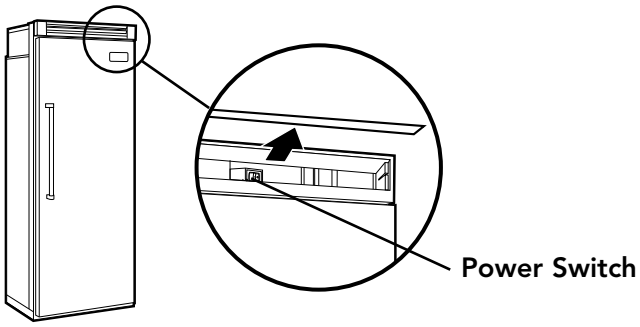
## Settings and Functions

In order for your new refrigerator to work properly, it is important that you understand its various features, controls, and how to use them.

**Power On/Off Switch (Power Interruption Switch)**
The power on/off switch is located behind your refrigerator's top grille. It is used to turn the power "OFF" when cleaning the refrigerator or changing the light bulbs. Your refrigerator arrives from the factory with the power interruption switch "ON".

To turn power "OFF", remove the center grille blade. Press the power on/off switch to the "OFF" position.

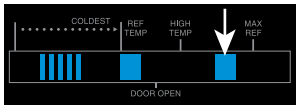
To turn power "ON", press power on/off switch to the "ON" position. Replace the center grille blade.




**IMPORTANT:** Be sure the power on/off switch is in the "ON" position after cleaning or changing light bulbs.

**Showroom Mode Initiation**
Showroom mode allows electronic controls and interior lights to function independently of the refrigeration system.


To enter Showroom mode: Press and hold the "ACTIVATE CONTROLS" pad. While holding, press and hold the "HIGHER" and "ALARM OFF" pad simultaneously. One beep will be heard indicating that sequence was entered properly. Continue holding until three beeps are heard and then the Blue LED two steps to the right of the "HIGH TEMP" indicator will illuminate. Showroom mode is entered.

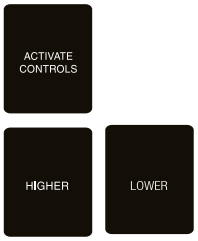



To exit Showroom mode: Press and hold the "ACTIVATE CONTROLS" pad. While holding, press and hold the "HIGHER" and "ALARM OFF" pad simultaneously. One beep will be heard indicating that sequence was entered properly. Continue holding until three beeps are heard. The display will revert to normal operation

**Electronic Temperature Settings**


Your refrigerator's electronic controls are located behind the door above the cabinet interior. To activate the electronic control panel, press "ACTIVATE CONTROLS" pad. All other pads, except the "Alarm Off" pad, will remain inactive until the "ACTIVATE CONTROLS" pad is pressed. Once activated, pad remains programmable for at least ten minutes.

When you first plug your new refrigerator in, you will find that five bars of nine are displayed. This means that all unit controls are pre-set at the mid-range setting. Wait 24 hours after plug-in for the cabinets to reach this setting. After 24 hours, you may adjust controls as desired. The warmest setting displays one bar, while the coldest setting shows nine bars.




To adjust the refrigerator or freezer temperature, simply press the "REF TEMP" (AR model) or "FRZ TEMP" (AF model). Press the "HIGHER" or "LOWER" pad to adjust temperature setting one level at a time. Holding down the "HIGHER" or "LOWER" pad adjusts temperature more than one level at a time.

**Key Press Confirmation**
The key press confirmation is the "beep" heard when a control pad is pressed. The confirmation can be active or inactive.


To activate the key press confirmation, press and hold the "ACTIVATE CONTROLS" pad for three to five seconds. Three beeps will be heard confirming the key press confirmation has been deactivated.

To activate the key press confirmation, press and hold the "ACTIVATE CONTROLS" pad until confirmation beep is heard.

## Settings and Functions (continued)

### Max Refrigerator Mode – AR Model


Max refrigerator mode adjusts the refrigerator temperature to the coldest setting for four hours, at the end of which the refrigerator's temperature automatically returns to its previous setting.


To activate the max refrigerator mode, simply press the "ACTIVATE CONTROLS" pad, followed by the "MAX REF" pad. The indicator light will glow to let you know you've turned on the max refrigerator mode.

To deactivate the max refrigerator mode before the end of the four hour cycle, press the "ACTIVATE CONTROLS" pad, followed by the "MAX REF" pad.

### Max Freezer Mode – AF Model


Max freezer mode adjusts the freezer temperature to the coldest setting for 4 hours, at the end of which, the freezer temperature automatically returns to its previous setting.

To activate the max freezer mode, press the "ACTIVATE CONTROLS" pad, followed by the "MAX FRZ" pad. The indicator light will glow to let you know you have turned on the max freezer mode.

To deactivate the max freezer mode before the end of the 4 hours cycle, simply press the "ACTIVATE CONTROLS" pad, followed by the "MAX FRZ" pad.

### Door Open Alarm

The door open alarm sounds and an indicator light blinks if the door is left open for more than three minutes.


To deactivate the door open alarm, press the "ALARM OFF" pad or close the door.

### High Temperature Alarm

The high temperature alarm sounds and an indicator light glows if the refrigerator or the freezer temperature is too high for two hours. The alarm will end when the temperature is brought back to a proper setting.

To deactivate the high temperature alarm, press the "ALARM OFF" pad.


### Thermistor Alarm

The thermistor alarm is a special feature that electronically senses temperature problems. The thermistor alarm will sound and indicator lights 4-7 will scroll if the thermistor is not operating properly. The alarm can be deactivated by pressing the "ALARM OFF" pad on your refrigerator's control panel. **If the alarm continues to sound, contact an authorized Viking Range Corporation technician immediately.**

### Display Panel

To activate Control panel and display, press the "ACTIVATE CONTROLS" pad.

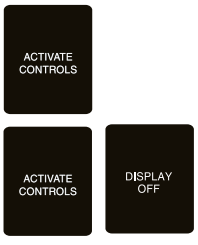

To deactivate Control panel and display, press the "ACTIVATE CONTROLS" or "DISPLAY OFF pad.


### Sabbath Mode

Sabbath mode is used to disable interior lights and alarms for observance of the Sabbath.

Before the Sabbath mode is engaged, the bale arm of the ice maker needs to be raised until it clicks into the detent. This turns off the power to the ice maker.

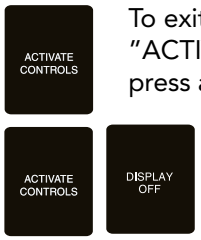
To enter Sabbath mode, press the "ACTIVATE CONTROLS" pad to activate the control panel. Then, press and hold "ACTIVATE CONTROLS" and "DISPLAY OFF" pads simultaneously for three seconds. It will beep three times and light the three right blue squares so you will know that you have activated Sabbath mode.




When your refrigerator is in Sabbath mode, interior lights, display (excluding the three right hand side lit blue squares), and alarms are disabled.

## Settings and Functions (continued)

If your refrigerator loses power while in Sabbath mode, it will return to the Sabbath mode when power is reestablished.




To exit the Sabbath mode, press the "ACTIVATE CONTROLS" pad. Then, press and hold "ACTIVATE CONTROLS" and "DISPLAY OFF" pads simultaneously for three seconds. You will then hear three beeps letting you know that you have turned the Sabbath mode "OFF".

Once your refrigerator has left the Sabbath mode, the bale arm of the ice maker needs to be pushed downward until it is no longer in the detent. This will restore power to the ice maker.

**Setting the Controls**
Adjust control setting by using a high quality household temperature thermostat that can read temperatures between -5° to -50°F (-21° to 10°C).

**Checking the Temperature – AF Model**
Place the thermometer snugly between frozen packages in freezer section. Wait five to eight hours, then check the temperature. If the freezer temperature is not 0° to 2°F (-17° to -16°C), adjust the temperature control one number at a time. Then, check the temperature again in five to eight hours.

**Checking the Temperature – AR Model**
Place the thermometer in a glass of water in the middle of the refrigerator. Wait five to eight hours, and then check the temperature. If the refrigerator temperature is not 38° to 40°F (3° to 4°C), adjust the control one number at a time. Check again after five to eight hours.

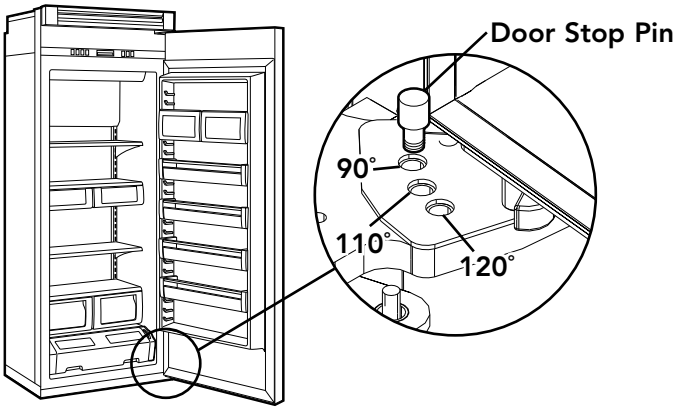
## Automatic Ice Maker

After the refrigerator reaches normal temperature, the ice maker fills with water and begins operating. Under normal conditions, the ice maker will produce seven to nine batches of ice per 24 hour period.

***Note:*** *Allow 24 to 48 hours after installation before looking for ice in your ice drawer. You should discard the first three full drawers of ice produced by your refrigerator, and also throw out the first drawer full of ice your refrigerator produces after extended periods of non-use.*

## Door Stop Adjustment

Your refrigerator is factory set at 110° door stop position. To change to either the 90° or 120° position, remove the door stop pin located in the bottom hinge using a 3/16" allen wrench. For 120° swing, move the pin to stop hole closest to the unit. For 90° swing, move pin to stop hole farthest from the unit.




## Light Bulb

Disconnect power at breaker or turn power disconnect switch to the off position. Lightly grasp light cover with both hands and pull down. Replace bulb with an incandescent, medium base tubular bulb with a maximum of 40 watts. Replace cover by engaging light bracket with the back fingers on the light cover. Once engaged, snap the front fingers on the light cover.

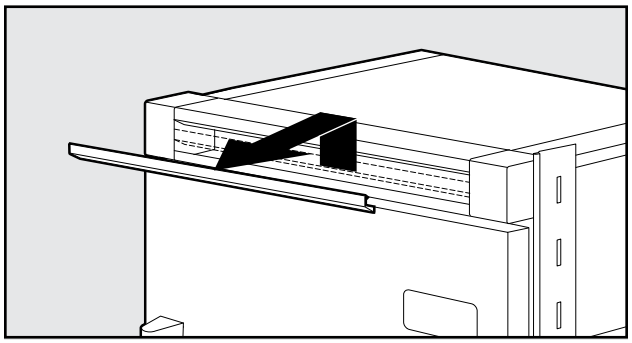
***Note:*** *The clear section of the light cover is considered the back section. Reconnect power or turn power disconnect switch to the "ON" position.*

## Door Hinge Adjustment

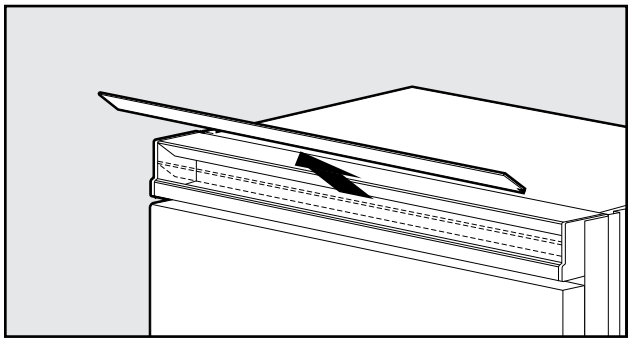
Removal of the upper grille assembly allows access to door hinge for adjustment.

**To remove upper grille:**

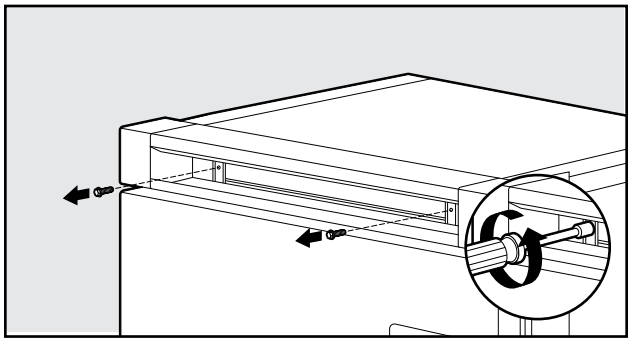
1a. (Professional) Lift center grille louver up and pull out.



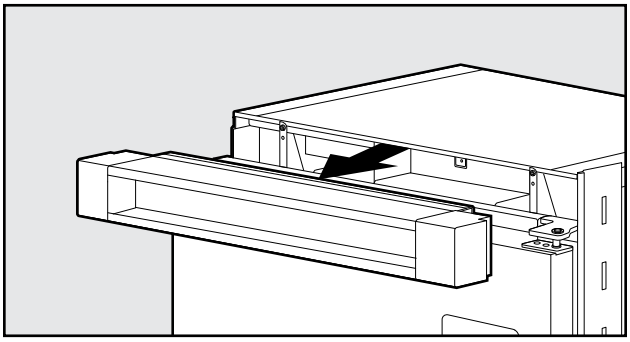
1b. (Designer) Pull the center grille louver up at an angle and pull out.



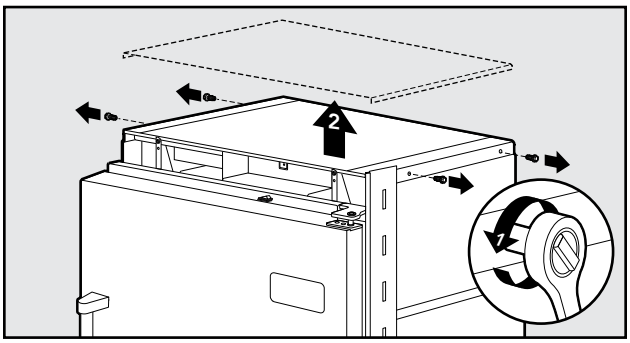
2. Using an 8" magnetic nut driver, remove the two 1/4" screws.



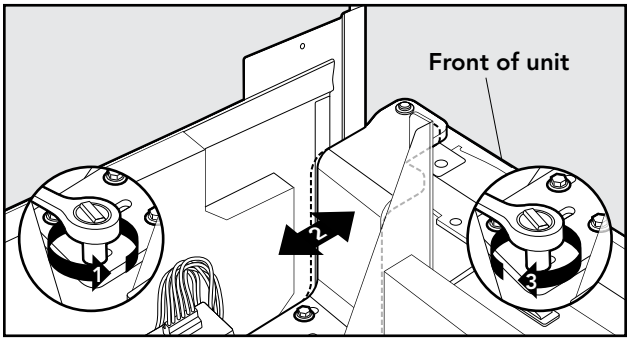
3. Remove grille assembly.



4. Remove four side screws and remove unit top.




5. Loosen the four hinge screws. Adjust door.

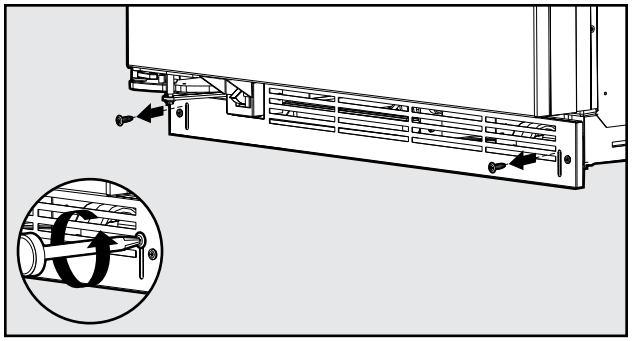



6. Reverse procedure for reinstallation.

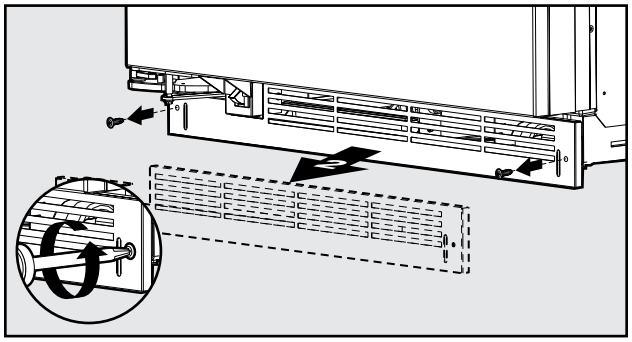
## Height Adjustment

Removal of the kickplate allows access to rollers and stablizing legs for height adjustment.

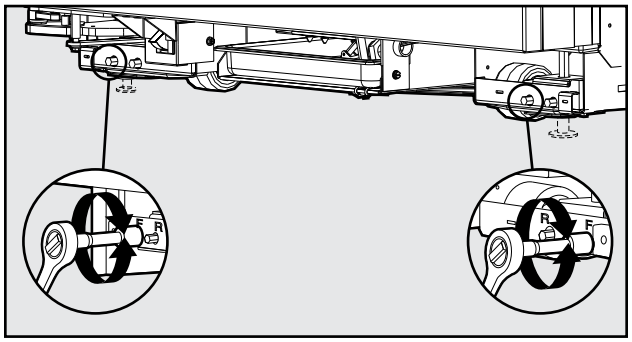
1. Remove lower kickplate screws  using a phillips screwdriver.



2. Remove upper kickplate screws using a phillips screwdriver. Remove kickplate assembly.

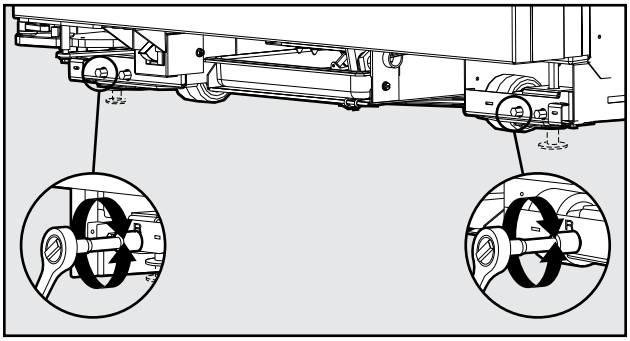


3. Using a 5/16” head wrench, turn the front (F) adjustment screws to raise or lower the front of the refrigerator.




***Note: DO NOT** use an electric device. Overtightening can cause damage.*

4. Using a 5/16” head wrench, turn the rear (R) adjustment screws to raise or lower the rear of the refrigerator.




***Note: DO NOT** use an electric device. Overtightening can cause damage.*

5. Reinstall kickplate.

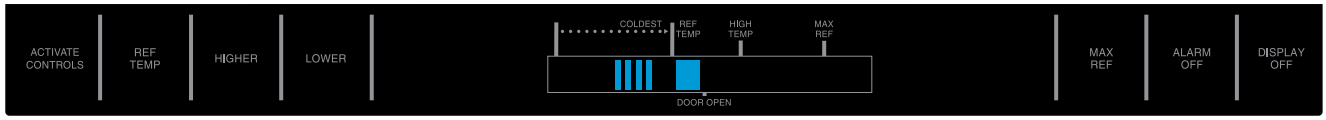
## Display Panel Operation

The unit being serviced has a control panel that allows operation of the unit as well as diagnostic abilities. See the information below for details.

| Operation | Description | How to Access Function |
|---|---|---|
| Keyboard Entry Tone | Indicates a pad was pressed, command was read, and accepted | To turn off entry tone, press and hold "ACTIVATE CONTROLS" pad for 3 to 5 seconds |
| Command Accepted Tone | Three short tones sound indicating a command has been accepted | |
| Activate Controls Pad | If the pad is activated, the display panel remains active at least 10 minutes after the door is closed | Press the "ACTIVATE CONTROLS" pad |
| Freezer Temperature Pad (AF Model) | Freezer indicator light will glow and freezer temperature will be displayed. Factory setting is 5 | Press "HIGHER TEMP" or "LOWER TEMP" pad |
| Refrigerator Temperature Pad (AR Model) | Refrigerator indicator light will glow and refrigerator temperature will be displayed. Factory setting is 5 | Press "HIGHER TEMP" or "LOWER TEMP" pad |
| Higher Temp Pad | Raises temperature settings one bar at a time | Press "HIGHER TEMP" pad. To raise temperature at a faster rate, hold the pad down |
| Lower Temp Pad | Lowers temperature settings one bar at a time | Press "LOWER TEMP" pad. To lower temperature at a faster rate hold, the pad down |
| Max Frz Pad (AF Model) | Sets freezer temperature to coldest setting. Factory setting is 4 hours | Press "MAX FRZ" Pad to engage. A second press will disengage feature |
| Max Ref Pad (AR Model) | Sets refrigerator temperature to coldest setting. Factory setting is 4 hours | Press "MAX REF" pad to engage. A second press will disengage feature |
| Alarm Off Pad | Turns alarm signal off | Press "ALARM OFF" to terminate audible alarm, visual indicator light will continue to blink until alarm condition is cleared or permanently disabledTo reactivate, press and hold "ALARM OFF" pad for 3 seconds |
| Hidden Button | Puts unit in program mode | Open refrigerator or freezer door. Press "ACTIVATE CONTROLS" pad. Press hidden button *(refer to control panel for unit being serviced).* Within 6 seconds of pressing the hidden button, press "MAX REF", "MAX FRZ", "MAX REF", "MAX FRZ". Tone will sound 3 times and control will be in program mode A. *Refer to Program Mode section.* |
| Display Off Pad | Deactivates control panel | Press "DISPLAY OFF" pad to deactivate display. Press "ACTIVATE CONTROLS" pad to reactivate |

## All Refrigerator (AR) Programing

### All Refrigerator Control Panel

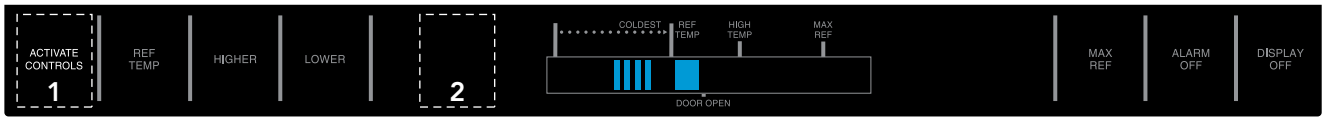



Mode A allows the reading of the Fresh Food Thermistor. It is also used to program the following:

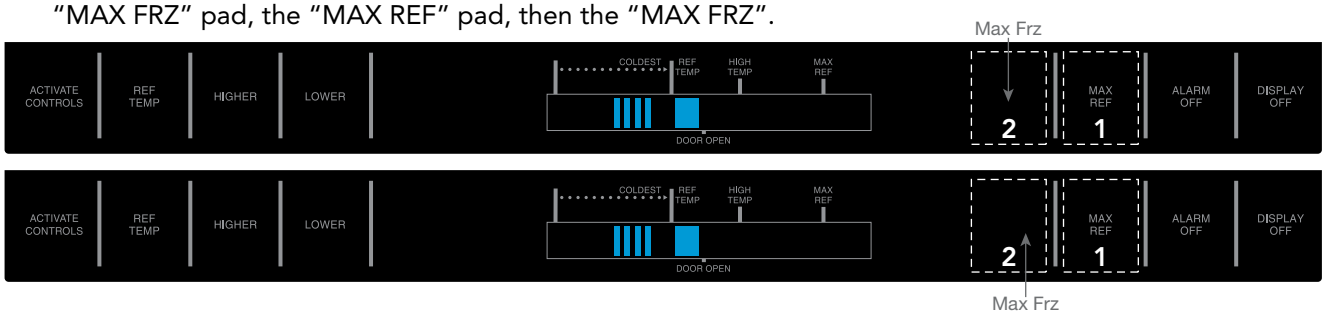
- Defrost Duration (When set to conventional defrost in Service Mode B).
- VCC Speed (speed in which compressor will operate).
- Freezer and Fresh Food Cut-In/Cut-Out Differential (Temperature difference between "Cycle off" and cycle "ON" temperatures). Mode B is used for all other programmable functions. To access the program modes follow the steps below.

1. Open the refrigerator door.

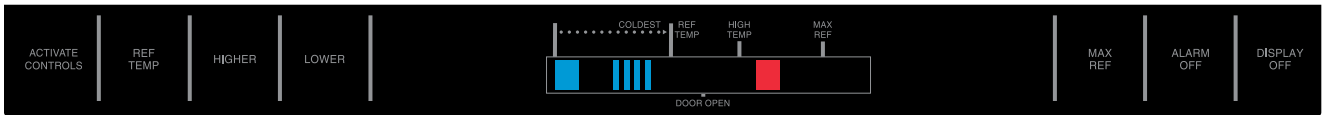
2. Press "ACTIVATE CONTROLS" pad (far left pad). Then press "HIDDEN BUTTON" pad (located between Lower pad and display window).




3. Within 6 seconds of pressing the Hidden Button pad, press the "MAX REF" pad, then press the "MAX FRZ" pad, the "MAX REF" pad, then the "MAX FRZ".



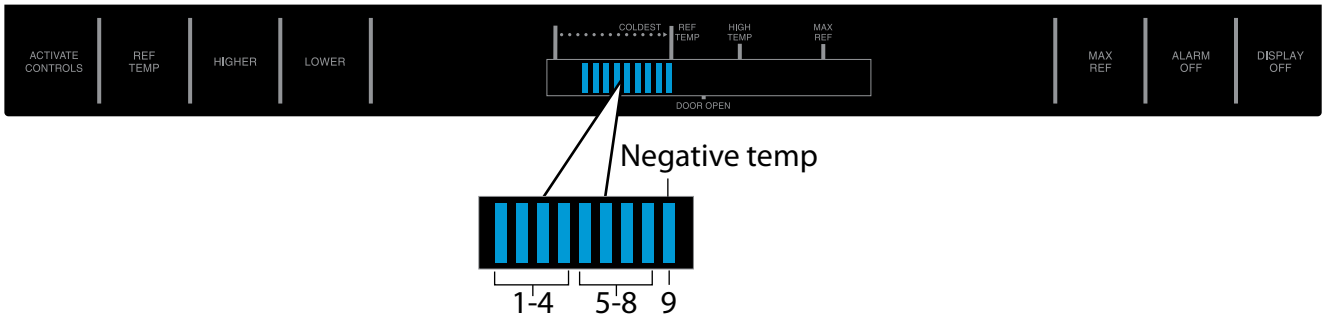

4. An audible tone will sound three times confirming the unit is in Program Mode A and the orange LED to the right of the HIGH TEMP indicator will illuminate.



## All Refrigerator (AR) Programing – Mode A Functions

**Reading Temperature Display**

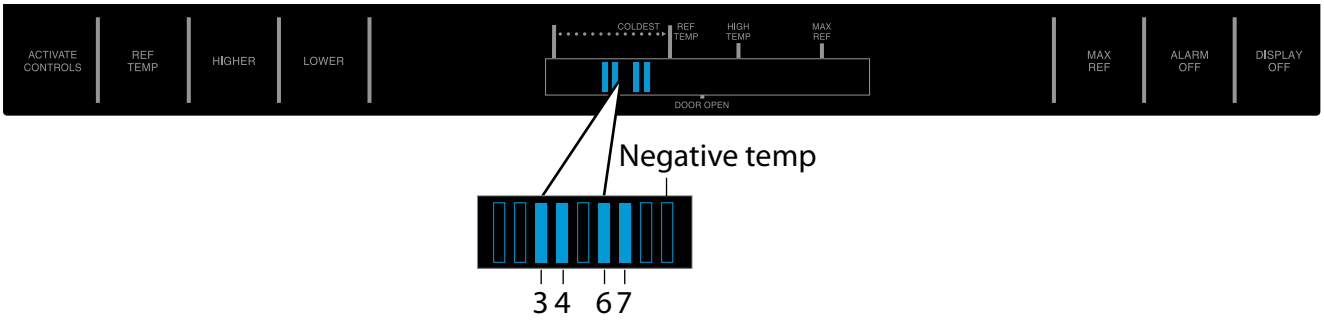
The temperature display will show thermistor temperature in binary code. The display has nine indicator lights that will light up to display the temperature. Lights 1 – 4 indicate the first digit of the compartment temperature and lights 5 – 8 indicate the second digit of the compartment temperature. The ninth light will light up for a negative temperature.




To read the temperature of the unit from the display, refer to the code chart below

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Not Illuminated | 9<br>Illuminated |
|---|---|---|---|---|---|---|---|---|---|---|
| Value | 8 | 4 | 2 | 1 | 8 | 4 | 2 | 1 | + Temperature | - Temperature |

Below is an example of the Fresh Food thermistor of an AR Model. In the first group of 4 indicators (10's column) indicator 3 and 4 are lit. In the second group of 4 indicators (0's column) indicator 6 and seven are lit. Add al the values to calculate the compartment temperature.




Indicator 3 is illuminated this is a value of 2 or 20 degrees
Indicator 4 is illuminated this is a value of 1 or 10 degrees
Add Indicator 3 and 4 together to get a total temp of 30 degrees for the 10's column.

Indicator 6 is illuminated this is a value of 4 or 4 degrees
Indicator 7 is illuminated this is a value of 2 or 2 degrees
Add Indicator 6 and 7 together to get a total temp of 6 degrees for the 1's column.

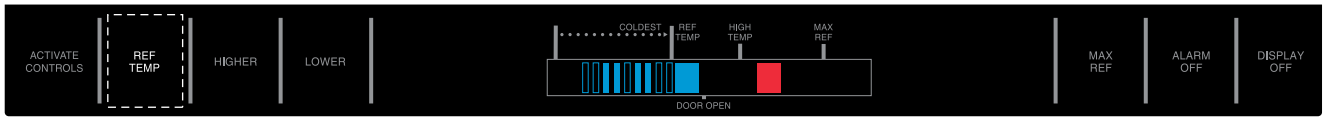
Indicator 9 is not illuminated so the temperature is positive.

The compartment temperature for this example would be 36 degrees.

## All Refrigerator (AR) Programing– Mode A Functions

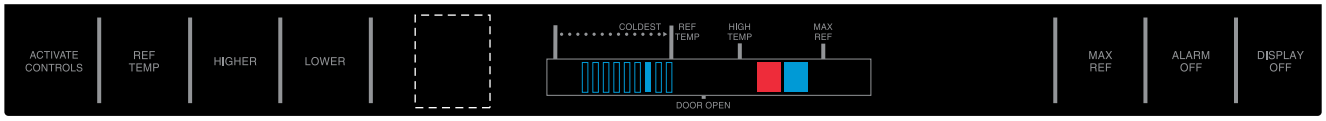
### Thermistor Temperature

When Service Mode A is entered, press the "REF TEMP" pad. Using the Code on page 19, add up the value of the illuminated bars to get the current Fresh Food temp. The example below shows a Fresh Food temp of 36 degrees F.



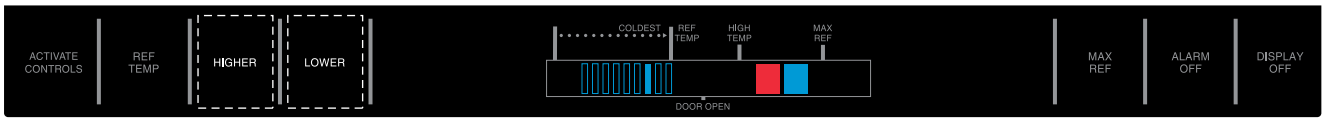

### VCC Compressor Frequency

This allows adjustment of the compressor frequency used when the compressor is running at low speed. (A new LV board comes at a default setting of 7). To verify the proper setting using the chart below, place the unit in Program Mode A (*see All Refrigerator Programing on page 19).* Press the "HIDDEN BUTTON" pad. An audio confirmation beep will be heard. The Blue LED to the right of the Orange LED will be lit. The Compressor Frequency will be displayed by having one of the nine segment indicators being lit.




**30" All Refrigerator shown*

The low speed frequency value is changed by using the Higher Temp and Lower Temp keys. Pressing the "HIGHER TEMP" key once will lower the frequency by one level; pressing the "LOWER TEMP" key once will increase the frequency.




**30" All Refrigerator shown*

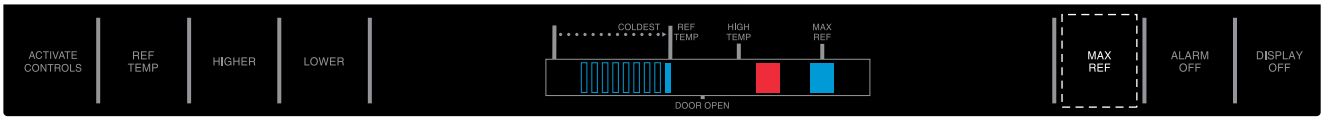
The indicator light and corresponding Compressor Frequencies are listed below.

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | **7** | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| VCC Compressor Frequency | 55 Hz | 57 Hz | 62 Hz | **65 Hz*** | 67 Hz | 70 Hz | **75 Hz**** | 80 Hz | 85 Hz |

*36 All Refrigerator proper setting **30" All Refrigerator proper setting

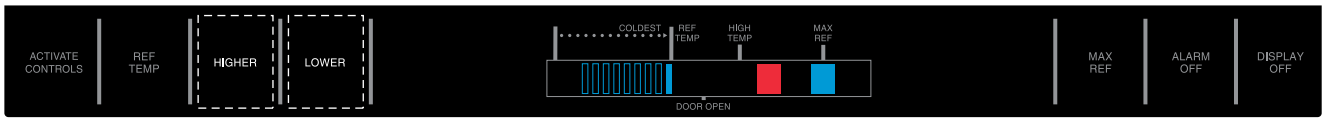
### Cut-In/Out Temperature Differential– AR

The parameter defines the temperature separation between the refrigerator cut-in and cut-out temperatures. Place the unit in Program Mode A (*see All Refrigerator Programing on page 19).* Press the "MAX REF" pad. An audio confirmation beep will be heard. The MAX REF indicator will be illuminated. The differential temperature will be displayed by use of one of the nine temperature indicator bars. The 9th bar is the default setting for the AR models.



## All Refrigerator (AR) Programing– Mode A Functions

**Cut-In/Out Temperature Differential– AR (continued)**
The differential temperature is changed by using the Higher Temp and Lower Temp keys. Pressing the "HIGHER" key once will change the differential temperature by one level; pressing the "LOWER" key once will change the differential temperature by one level in the opposite direction.



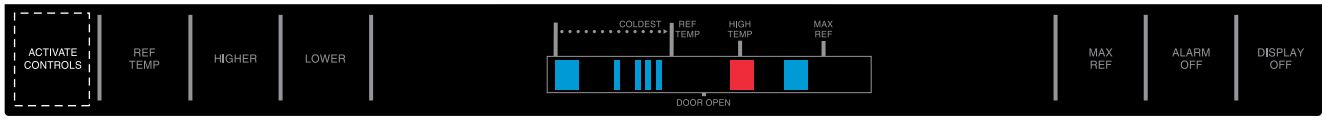

The indicator light and corresponding differential temperatures are listed below.

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Cut-In/Out Temperature Differential | 3 | 5 | 5 | 6 | 7 | 8 | 9 | 10 | **12*** |

**Example shown*

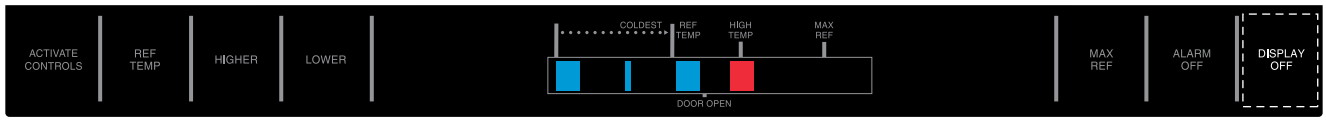
## All Refrigerator (AR) Programing – Mode B Functions

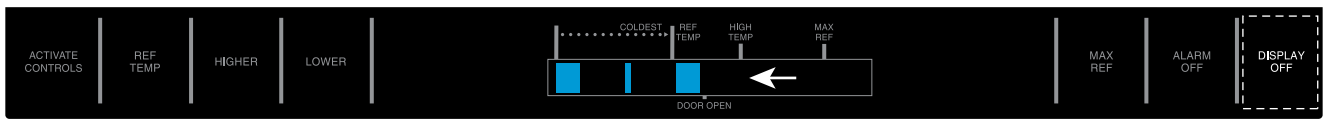
Once in Program Mode A (*see All Refrigerator Programing on page 19*), press "ACTIVATE CONTROLS" pad to enter Program Mode B. The orange LED to the right of the HIGH TEMP indicator will turn off and the High Temp light will turn on. This indicates the controller is in Service Mode B. The blue LED 2 steps to the right of the High Temp LED indicates the controller is set to Adaptive defrost.




Once in Program Mode B, the following programmable functions can be achieved:

**AUTOMATIC KEYBOARD DISABLE**
Pressing "DISPLAY OFF" pad toggles between active and inactive keyboard. If high temperature indicator glows, all pads (keys) except "ALARM OFF" and "ACTIVATE CONTROLS" will be disabled after 10 minutes. If high temperature indicator is off, all pads (keys) on the keyboard are always enabled. **DO NOT LEAVE KEYBOARD IN ENABLED MODE AFTER PROGRAMMING IS COMPLETE.**

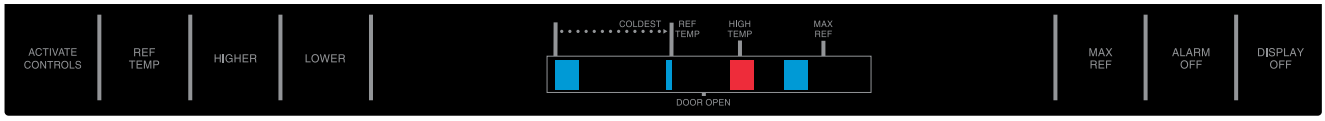


## All Refrigerator (AR) Programing – Mode B Functions

### Refrigerator Temperature Offset Calibration

When you enter Service Mode B, the orange LED marked "HIGH TEMP" will be lit. The blue LED 2 steps to the right of the High Temp LED indicates the controller is set to Adaptive defrost.

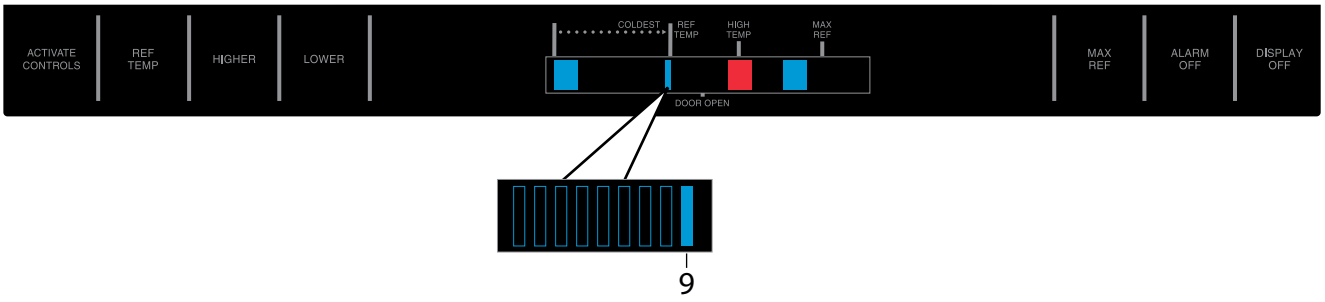



The chart below shows the amount of temperature offset from the factory default temperature setting per indicator setting.

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | **9*** |
|---|---|---|---|---|---|---|---|---|---|
| Offset | +8 | +6 | +4 | +2 | 0 | -2 | -4 | -6 | **-8** |

**30" and 36" All Refrigerator*

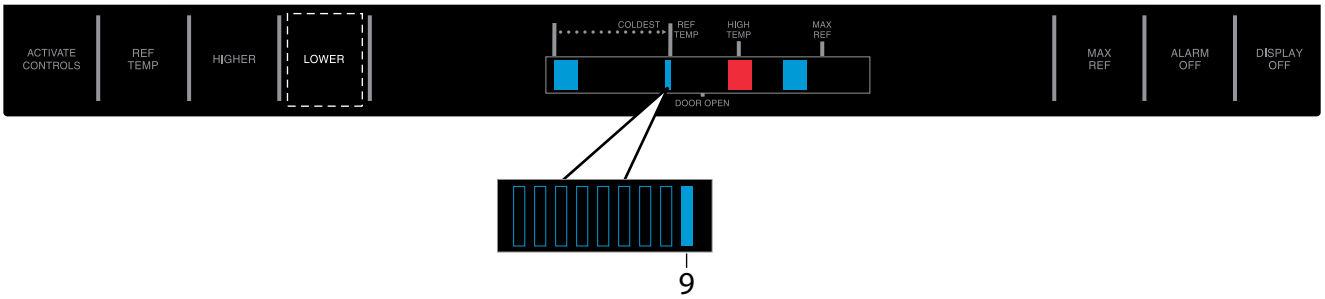
Because the All Refrigerator model does not have a freezer compartment, the LV board must be adjusted to the maximum freezer setting (9th bar) for proper operation. The display below shows the default freezer offset setting when Service mode B was entered. The Freezer temp (Left most Blue LED) is illuminated as well as the 9th temp bar.




***Note:*** *a new refrigerator SHOULD come from the factory set to the 9th bar. Only when replacing the LV board should this setting be checked and adjusted if required.*

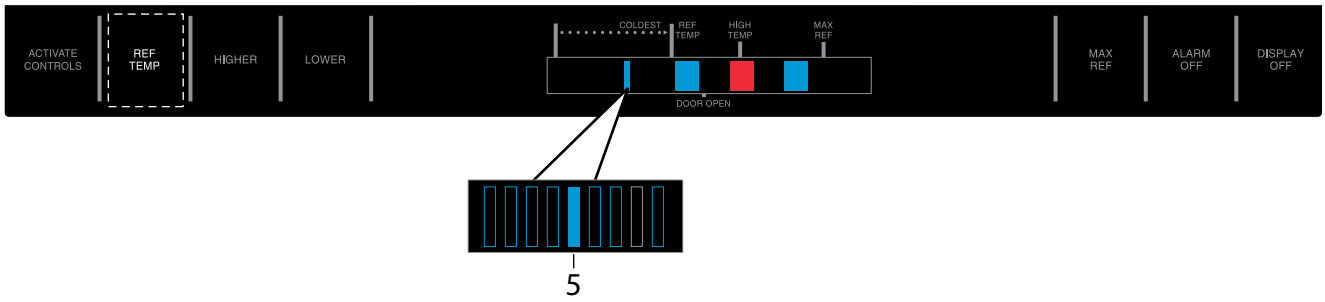
***Note:*** *Failure to adjust the freezer offset to the 9th bar will cause improper operation. If 9th bar is not selected, follow the instruction below to correct.*

Press the lower pad until the 9th temp bar is illuminated.

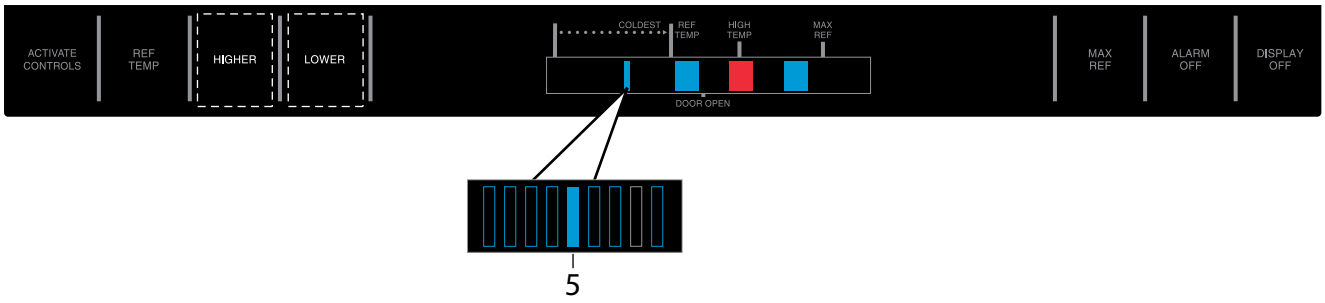


## All Refrigerator (AR) Programing – Mode B Functions

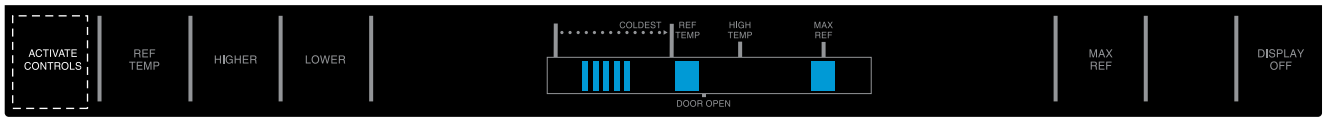
**Refrigerator Temperature Offset Calibration (continued)**
Press the "REF TEMP" Pad. The REF TEMP LED will illuminate along with one of the 9 temperature indicator bars. The 5th bar should be illuminated for both the 30 and 36 inch AR models.




If the 5th bar is NOT illuminated, use the HIGHER /LOWER pad to adjust for the proper setting.




Press and hold the "ACTIVATE CONTROLS" pad until you here 3 confirmation tones and will see a display as shown below.




***Note:*** *MAX REF light will only be illuminted if MAX REF function was active prior to entering program mode.*

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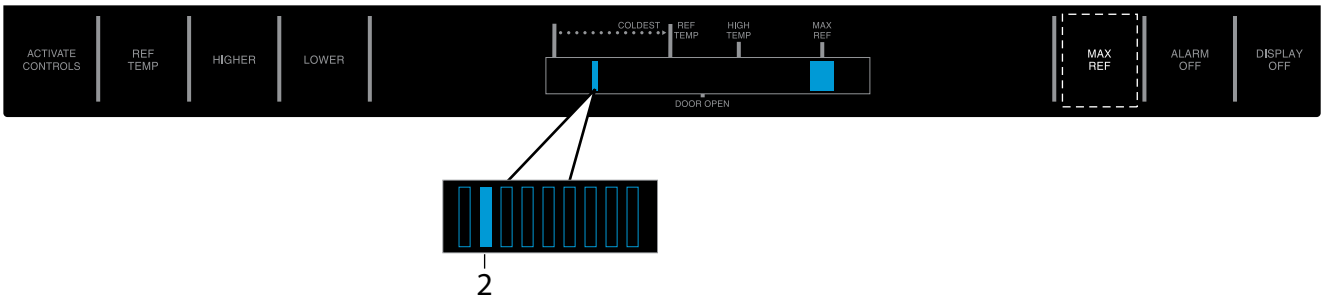
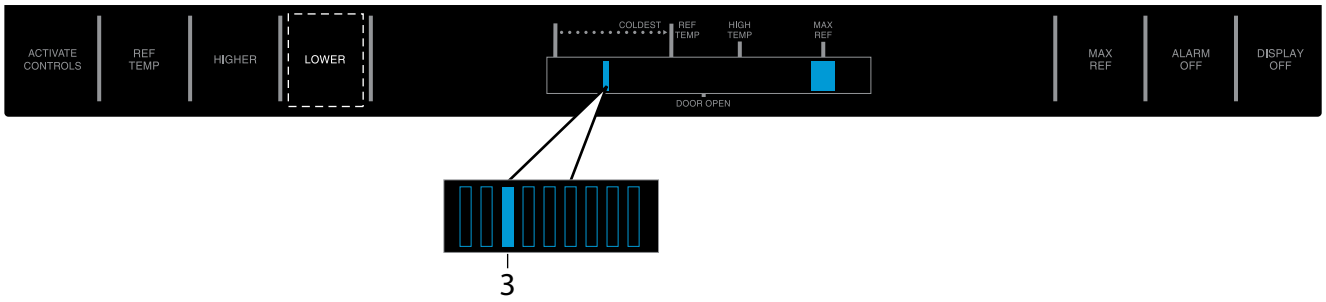
## All Refrigerator (AR) Programing – Mode B Functions

**MAX REF Run Time Duration**

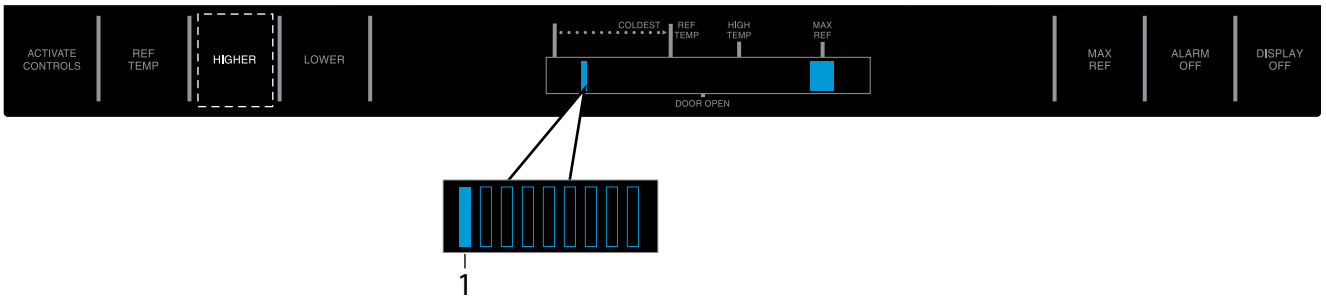
Press "MAX REF" pad. MAX REF" light will glow. One temperature indicator should glow indicating present Max Ref run time duration in two hour increments. Indicator light one glowing means 4 hours, indicator light 2 glowing means 6 hours, etc. The default duration is 4 hours




To increase the default MAX REF duration, press "LOWER" pad to increase duration by two hours.




To decrease the default MAX REF duration, press "HIGHER" pad to decrease duration by two hours.




The indicator light and corresponding MAX REF run time duration are listed below.

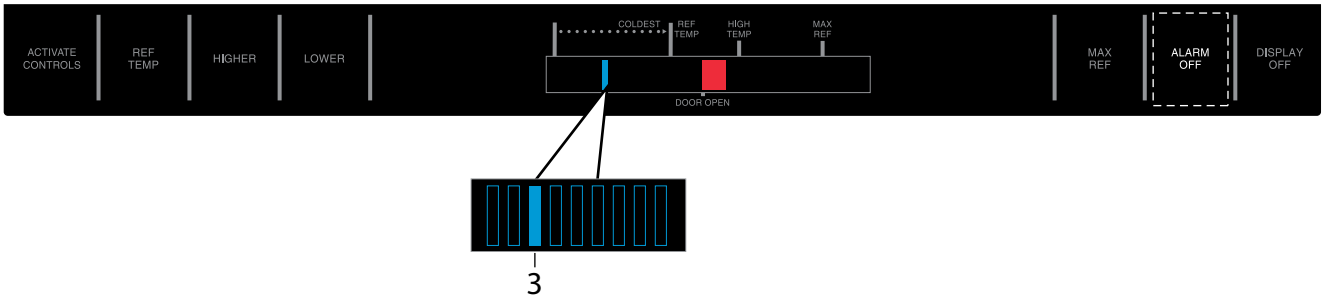
| Indicator | **1*** | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| MAX REF Run Time Duration | **4 hrs** | 6 hrs | 8 hrs | 10 hrs | 12 hrs | 14 hrs | 16 hrs | 18 frs | 20 hrs |

** Default setting*

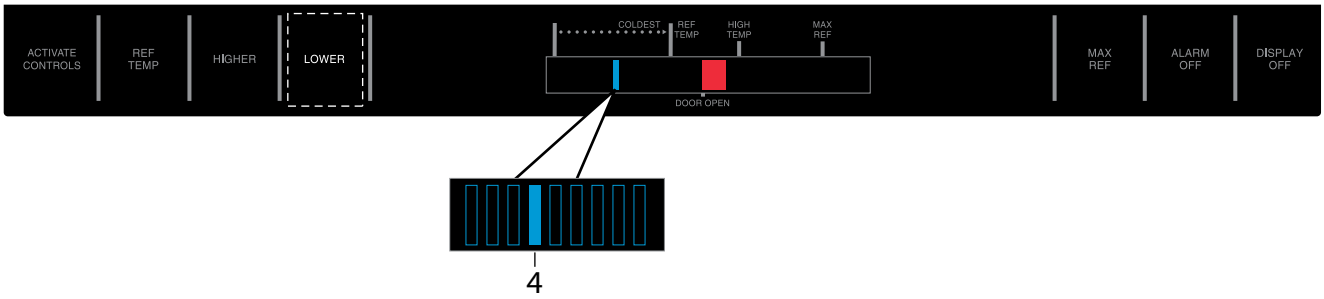
## All Refrigerator (AR) Programing – Mode B Functions

### Door Alarm Delay

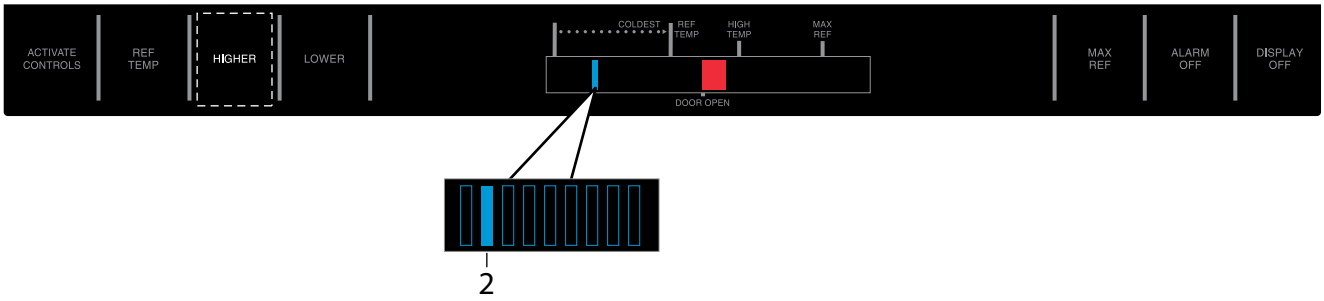
Press "ALARM OFF" pad. Door open indicator will glow. One temperature indicator should glow indicating present delay setting. Indicator light one glowing means one minute, indicator light two glowing means two minutes, etc. The default setting is 3 minutes.




To increase the default delay time, press "LOWER" pad to increase by one minute.




To decrease the default delay time press "HIGHER" pad to decrease by one minute.




The indicator light and corresponding default times are listed below.

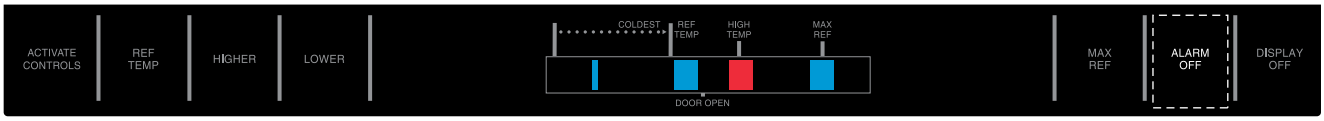
| Indicator | 1 | 2 | **3*** | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Default Delay Time | 1 min | 2 min | **3 min** | 4 min | 5 min | 6 min | 7 min | 8 min | 9 min |

** Default setting*

## All Refrigerator (AR) Programing – Mode B Functions

### Forced Defrost

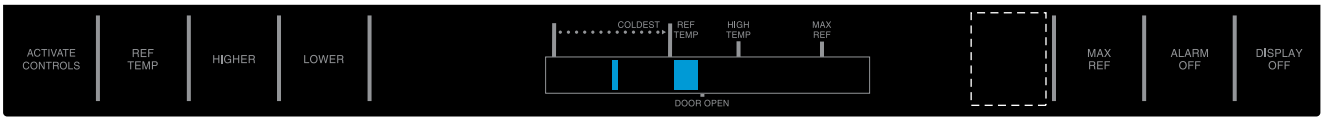
Defrost can be forced to start by pressing and holding the "ALARM OFF" pad for 3 seconds. Program will be saved permanently in EEPROM and program mode will exit to Run Mode.




***Note:*** *there is no electrical heater, only an off cycle defrost which shuts off the compressor.*

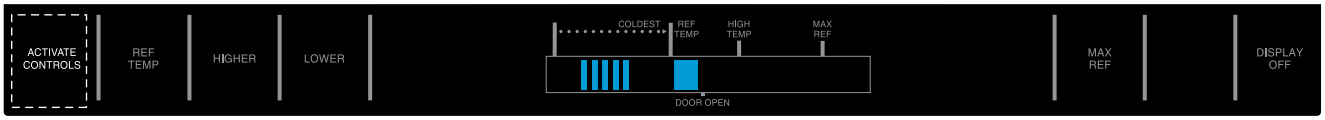
### Forced Compressor Start

Compressor start can be forced by pressing and holding "MAX FRZ" pad for 3 seconds. Program changes will be saved permanently in EEPROM. Compressor, evaporator fan, and condenser fan will come on.




### Exiting Program Mode

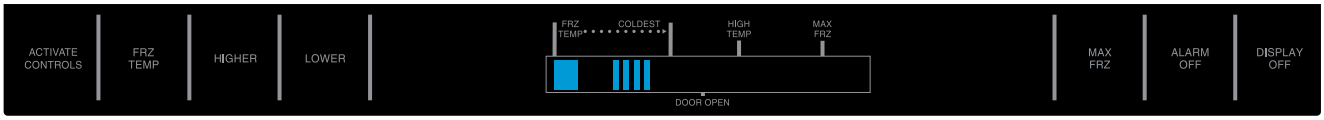
Press "ACTIVATE CONTROLS" for 3 seconds to exit Program Mode. An audible tone will sound three times indicating Program Mode has been exited. Changes made in Program Mode will be permanently saved in EEPROM.




***Note:*** *If no pad is pressed for 10 minutes, Program Mode will automatically exit. However, no changes will be saved if Program Mode exits automatically.*

## All Freezer (AF) Programing

### All Freezer Control Panel

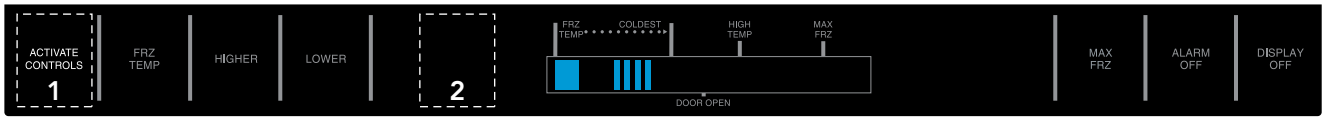



Mode A allows the reading of the Freezer Thermistor. It is also used to program the following:

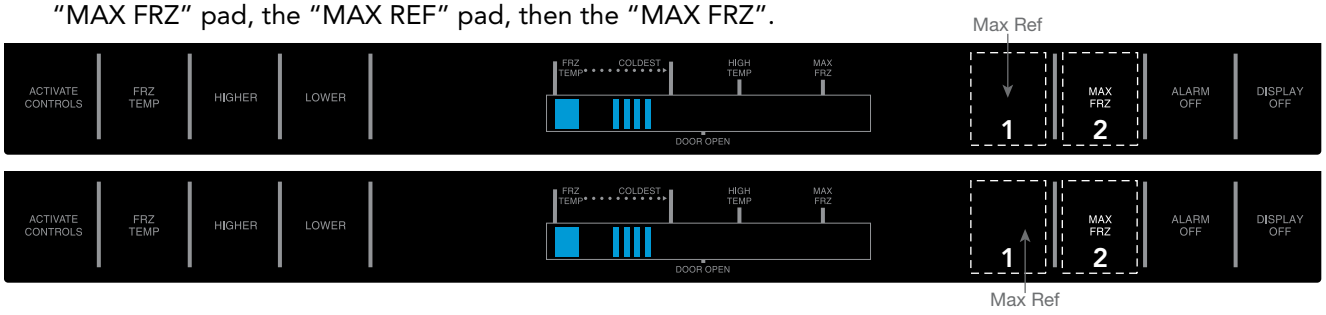
- Defrost Duration (When set to conventional defrost in Service Mode B).
- VCC Speed (speed in which compressor will operate).
- Freezer and Fresh Food Cut-In/Cut-Out Differential (Temperature difference between "Cycle off" and cycle "ON" temperatures). Mode B is used for all other programmable functions. To access the program modes follow the steps below.

1. Open the Freezer door.

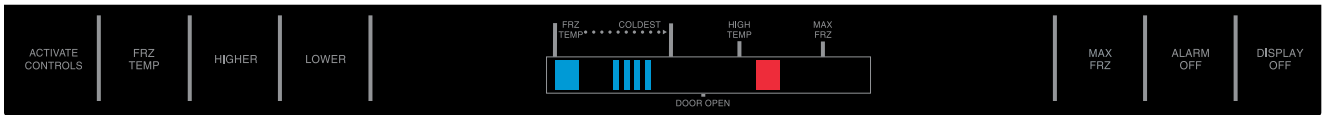
2. Press "ACTIVATE CONTROLS" pad (far left pad). Then press "HIDDEN BUTTON" pad (located between the Lower pad and display window).




3. Within 6 seconds of pressing the Hidden Button pad, press the "MAX REF" pad, then press the "MAX FRZ" pad, the "MAX REF" pad, then the "MAX FRZ".



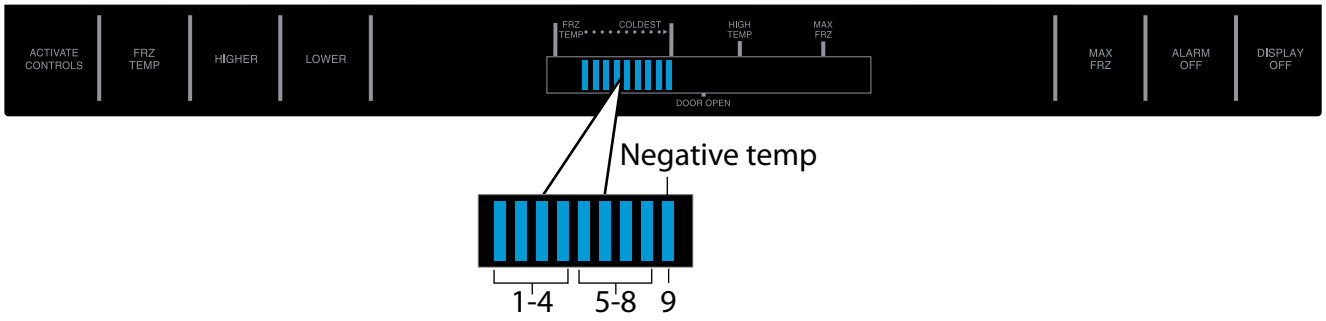

4. An audible tone will sound three times confirming the unit is in Program Mode A and the orange LED to the right of the HIGH TEMP indicator will illuminate.



## All Freezer (AF) Programing – Mode A Functions

**Reading Temperature Display**

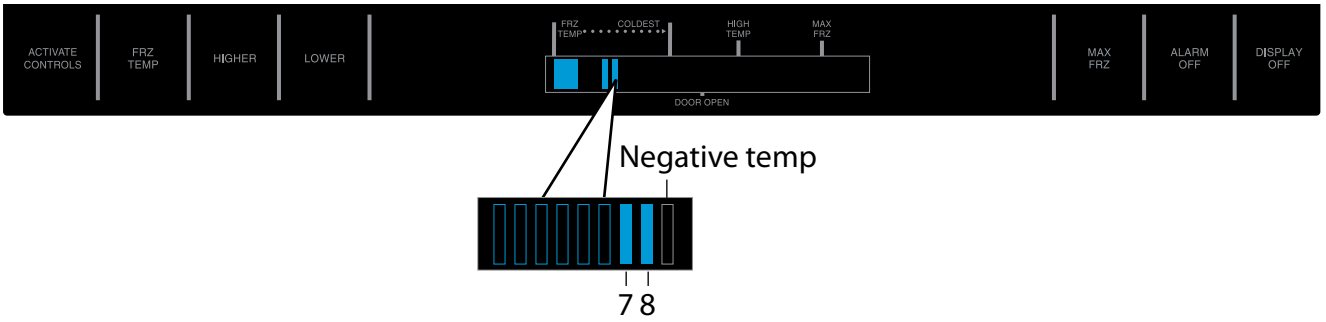
The temperature display will show thermistor temperature in binary code. The display has nine indicator lights that will light up to display the temperature. Lights 1 – 4 indicate the first digit of the compartment temperature and lights 5 – 8 indicate the second digit of the compartment temperature. The ninth light will light up for a negative temperature.




To read the temperature of the unit from the display, refer to the code chart below

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9<br>Not Illuminated | 9<br>Illuminated |
|---|---|---|---|---|---|---|---|---|---|---|
| Value | 8 | 4 | 2 | 1 | 8 | 4 | 2 | 1 | + Temperature | - Temperature |

Below is an example of the thermistor of an AF Model. In the first group of 4 indicators (10's column) no indicators are lit. In the second group of indicators (0's column) 7 and 8 are lit. Add al the values to calculate the compartment temperature.



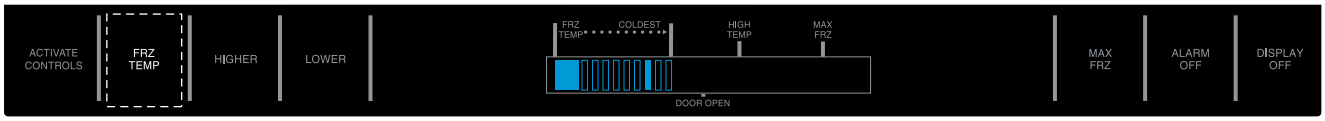

Indicator 7 is illuminated this is a value of 2 or 2 degrees
Indicator 8 is illuminated this is a value of 1 or 1 degree
Add Indicator 7 and 8 together to get a total temp of 3 degrees for the 0's column.

Indicator 9 is not illuminated so the temperature is positive.

The compartment temperature for this example would be 3 degrees.

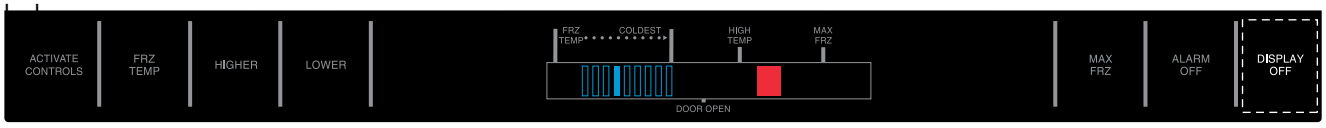
## All Freezer (AF) Programing – Mode A Functions

**Thermistor Temperature**
When Service Mode A is entered, press the "FRZ TEMP" pad. Using the Code on page 28, add up the value of the illuminated bars to get the current Freezer temp. The example below shows a Freezer Temp of 2˚ F.




**Optional Conventional Defrost**
The unit comes set from the factory for Adaptive Defrost. In the event that more or less defrost intervals are required, the unit can be set for a conventional defrost cycle. In this mode the defrost program can be set to predetermined defrost times. Note: The defrost intervals are set in SERVICE MODE A. In order to activate the conventional defrost system, it must be initiated in SERVICE MODE B. See Defrost Mode Selection –Service Mode B on Page 31.

To change the defrost time, place the unit in Program Mode A (*see All Freezer Programing on page 27)*. When you have entered SERVICE MODE A, Press and hold the "DISPLAY OFF" pad for 3 seconds. 1 audio confirmation beep will be heard. Both the FRZ temp and REF temp LED will extinguish. The Orange LED to the right of the High Temp LED and (1) bar will be lit. The default conventional defrost setting is the 4th bar (8 hours) shown




The Conventional Defrost time will be displayed by use of one of the temperature indicators. The times can be set to 4, 5, 6, 8, 12, 16, 18, 20, and 24 hours of Compressor Run Time (CRT).

The intervals are changed by using the "HIGHER" and "LOWER" Temp key pads. Each press of the "HIGHER" pad will decrease the defrost time by one level while each press of the "LOWER" pad once will increase the defrost time by one level in the other direction. Once Conventional defrost is initiated in SERVICE MODE B, the first defrost will always be 4 hours of CRT regardless of the level it has been changed to.

The indicator light and corresponding Defrost Times are listed below.

| Indicator | 1 | 2 | 3 | **4*** | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Defrost Time | 4 hours | 5 hours | 6 hours | **8 hours** | 12 hours | 16 hours | 18hours | 20 hours | 24 hours |

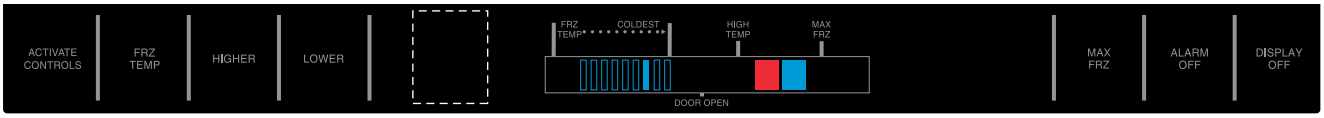
**Default setting*

To exit Adjustable Conventional Defrost, press the "ACTIVATE CONTROLS" key.

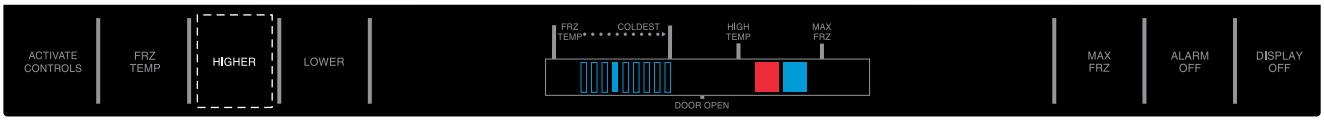
## All Freezer (AF) Programing – Mode A Functions

### VCC Compressor Frequency

This allows adjustment of the compressor frequency used when the compressor is running at low speed. (A new LV board comes at a default setting of 7). To verify the proper setting using the chart below, place the unit in Program Mode A (*see All Freezer Programing on page 27)*. Press the "HIDDEN BUTTON" pad. An audio confirmation beep will be heard. The Blue LED to the right of the Orange LED will be lit. The Compressor Frequency will be displayed by having one of the nine segment indicators being lit.




The low speed frequency value is changed by using the Higher Temp and Lower Temp keys. Pressing the "HIGHER TEMP" key once will lower the frequency by one level. Press the "HIGHER TEMP" key until the 4th bar is illuminated.



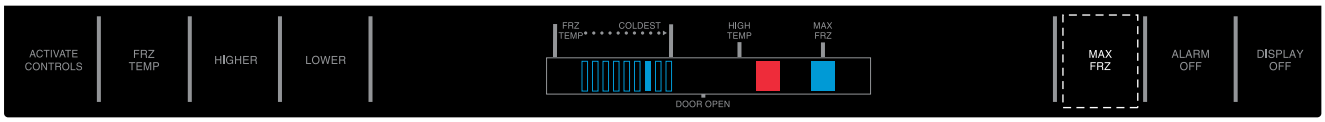

The indicator light and corresponding Compressor Frequencies are listed below.

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | **7*** | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| VCC Compressor Frequency | 55 Hz | 57 Hz | 62 Hz | 65 Hz | 67 Hz | 70 Hz | **75 Hz** | 80 Hz | 85 Hz |

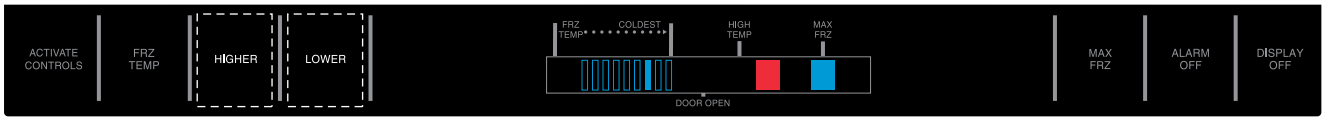
*30" and 36" All Freezer proper setting

### Cut-In/Out Temperature Differential

The parameter defines the temperature separation between the freezer cut-in and cut-out temperatures. Place the unit in Program Mode A (*see All Freezer Programing on page 27)*. Press the "MAX FRZ" pad. An audio confirmation beep will be heard. The MAX FRZ indicator will be illuminated. The differential temperature willbe displayed by use of one of the nine temperature indicator bars. The 7th bar is the default setting for the AF models.




The differential temperature is changed by using the HIGHER and LOWER Temp keys. Pressing the "HIGHER" key once will change the temperature by one level; pressing the "LOWER" key once will change the temperature by one level in the opposite direction.



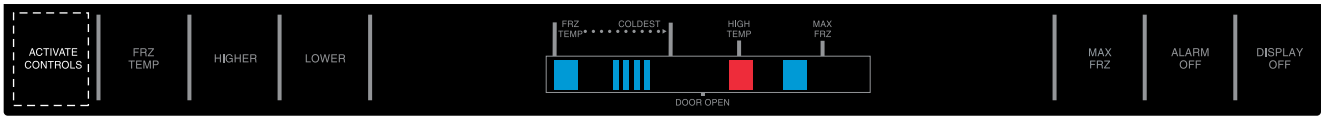

The indicator light and corresponding differential temperatures are listed below.

| Indicator | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Cut-In/Out Temperature Differential | 3 | 4 | 5 | 6 | 7 | 9 | **11*** | 13 | 15 |

**Example shown on above*

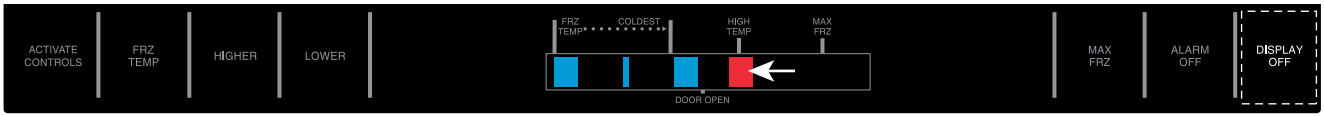
## All Freezer (AF) Programing – Mode B Functions

Once in Program Mode A (*see All Freezer Programing on page 27)*, press "ACTIVATE CONTROLS" pad to enter Program Mode B. The orange LED to the right of the HIGH TEMP indicator will turn off and the High Temp light will turn on. This indicates the controller is in Service Mode B.

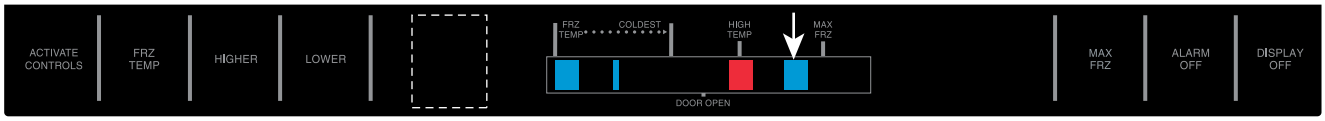



Once in Program Mode B, the following programmable functions can be achieved:

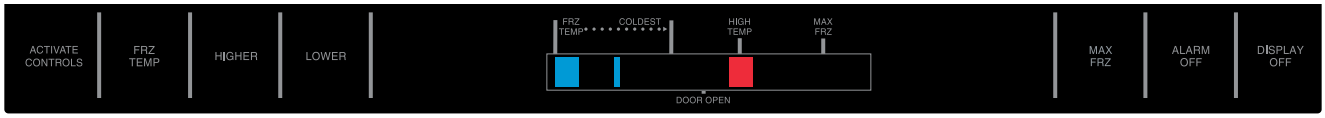
**Automatic Keyboard Disable**
Pressing "DISPLAY OFF" pad toggles between active and inactive keyboard. If high temperature indicator glows, all pads (keys) except "ALARM OFF" and "ACTIVATE CONTROLS" will be disabled after 10 minutes. If high temperature indicator is off, all pads (keys) on the keyboard are always enabled. **DO NOT LEAVE KEYBOARD IN ENABLED MODE AFTER PROGRAMMING IS COMPLETE.**




**Defrost Mode Selection**
Toggle between adaptive and convectional defrost mode by pressing "HIDDEN BUTTON" pad. If the BLUE LED to the Left of the MAX FRZ Indicator is "ON", then the Adaptive Defrost is activated (Factory Default Setting).



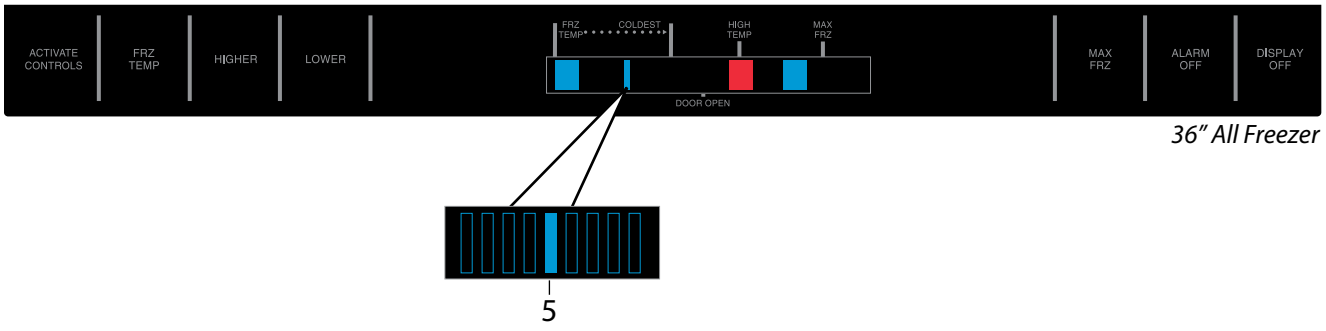

If the BLUE LED to the Left of the MAX FRZ Indicator is "OFF", conventional defrost is selected. Conventional Defrost time is adjusted in SERVICE MODE A. Refer to page 29 for settings. The factory default is 8 hours



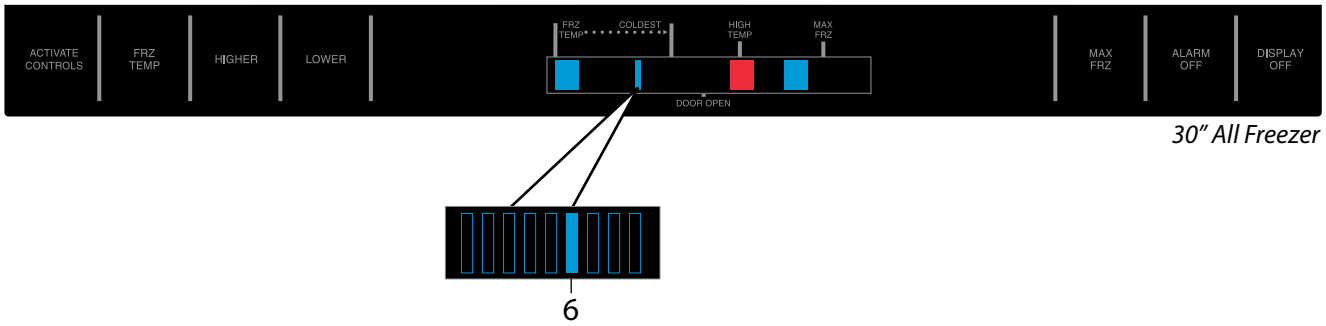
## All Freezer (AF) Programing – Mode B Functions

### Freezer Temperature Offset Calibration

When you have entered Service Mode B, the orange (High Temp) LED should be illuminated as well as the Blue LED two spaces to the left of the MAX FRZ Indicator (indicating Adaptive Defrost) as shown below.




*36" All Freezer*




*30" All Freezer*

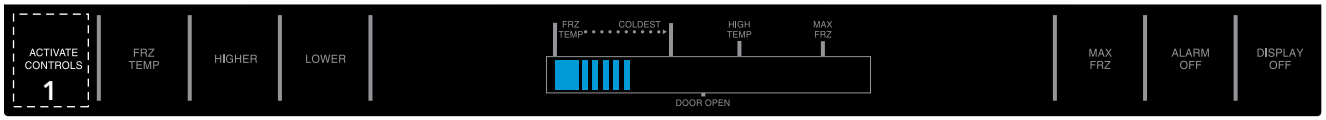
The chart below shows the amount of temperature offset from the factory default temperature setting per indicator setting.

| Indicator | 1 | 2 | 3 | 4 | **5*** | **6**** | 7 | 8 | 9 Coldest |
|---|---|---|---|---|---|---|---|---|---|
| Offset | +8 | +6 | +4 | +2 | **0** | **-2** | -4 | -6 | -8 |

**36" All Freezer factory default*
***30" All Freezer factory default*

The display above is the default when Service mode B is entered. You will notice that the Freezer temp (Left most Blue LED) is illuminated as well as the 5th temp bar. The setting for the 36"model is the 5th bar and the setting for the 30"model is the 6th bar. Use the Lower or Higher pad to adjust for the proper setting.

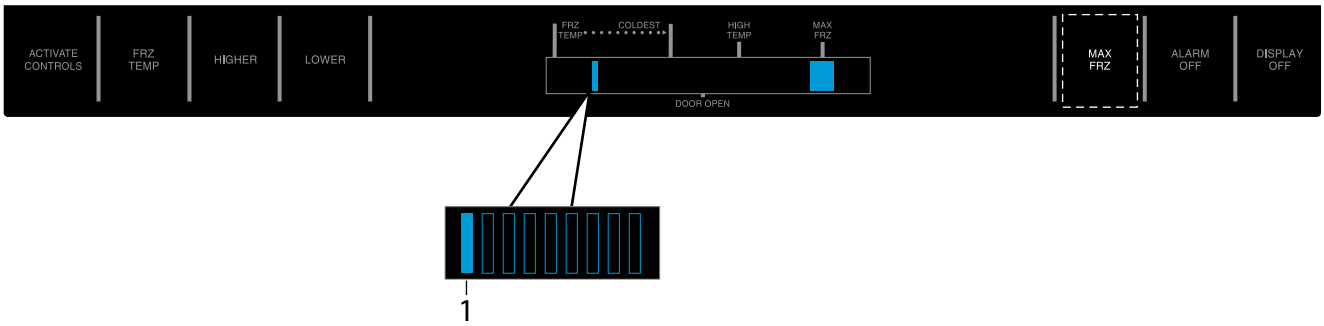

Press and Hold the "ACTIVATE CONTROLS" pad until you here 3 confirmation tones and will see a display as shown below.



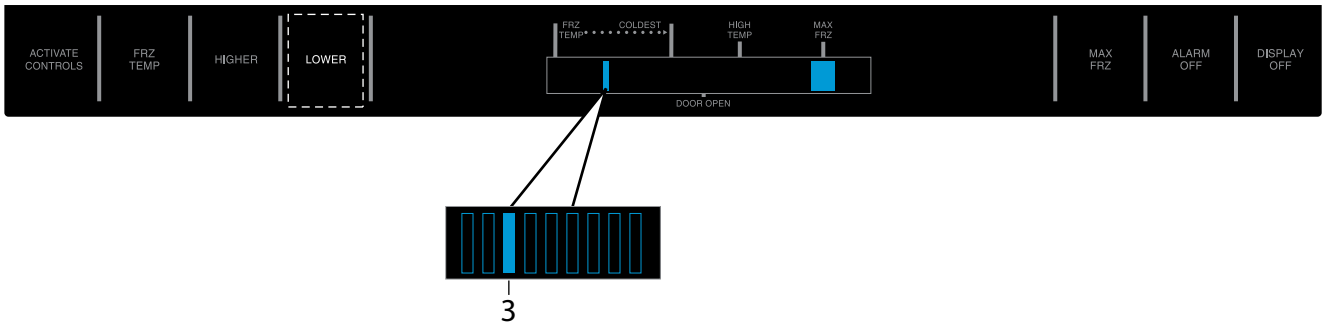
## All Freezer (AF) Programing – Mode B Functions

**MAX FRZ Run Time Duration**

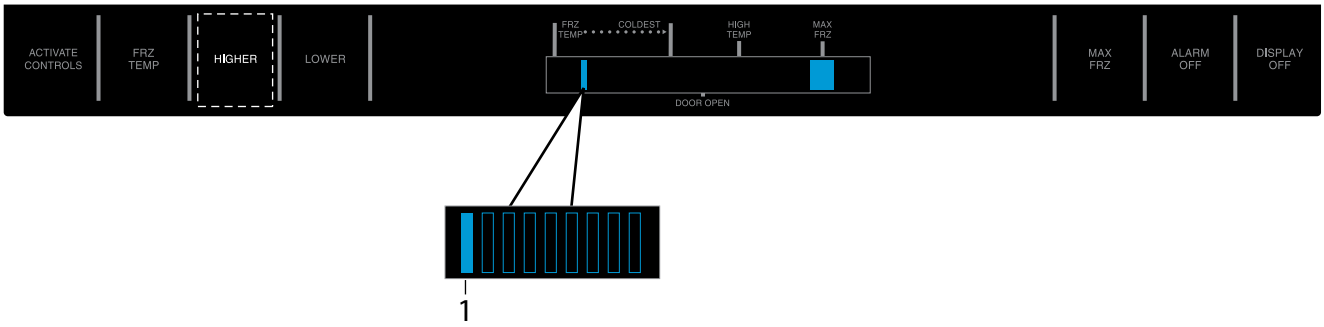
Press "MAX FRZ" pad. MAX FRZ light will glow. One temperature indicator should glow indicating present MAX FRZ run time duration in two hour increments. Indicator light one glowing means 4 hours, indicator light 2 glowing means 6 hours, etc. The default duration is 4 hours.




To increase the default MAX FRZ duration, press "LOWER" pad to increase duration by two hours.




To decrease the default MAX FRZ duration, press "HIGHER" pad to decrease duration by two hours.




The indicator light and corresponding MAX FRZ run time duration are listed below.

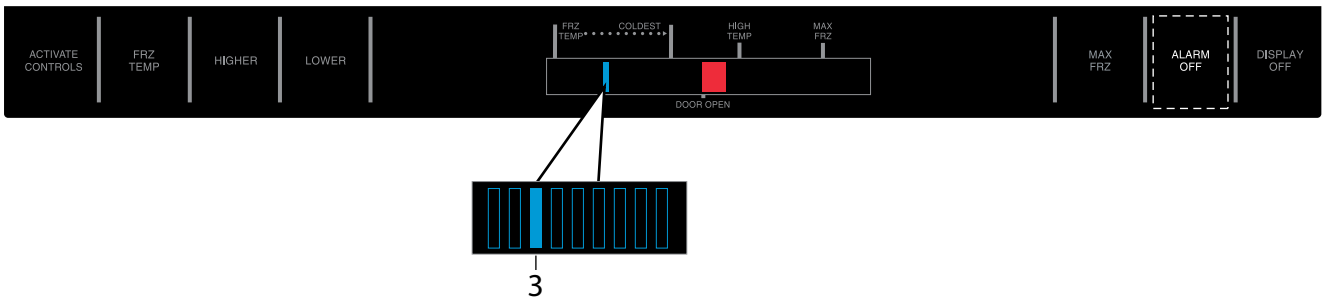
| Indicator | **1*** | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| MAX FRZ Run Time Duration | **4 hrs** | 6 hrs | 8 hrs | 10 hrs | 12 hrs | 14 hrs | 16 hrs | 18 frs | 20 hrs |

** Default setting*

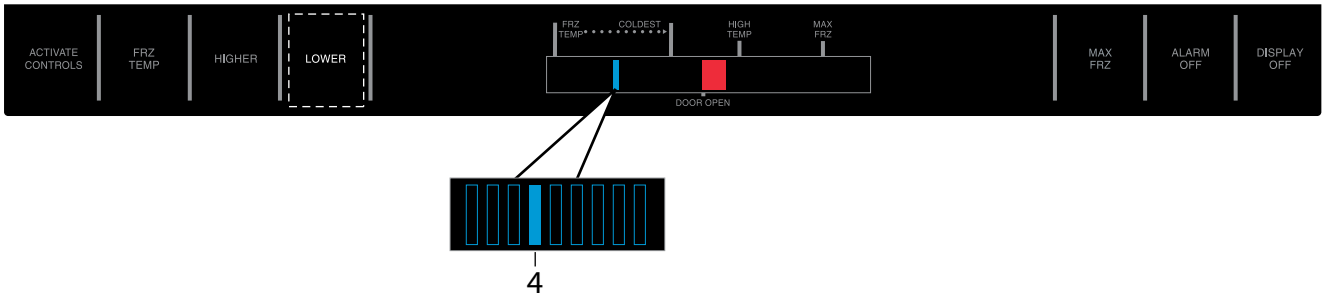
## All Freezer (AF) Programing – Mode B Functions

### Door Alarm Delay

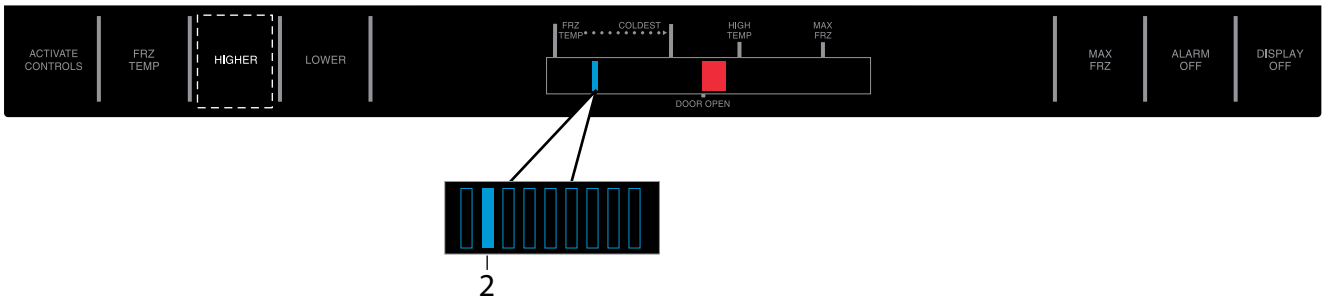
Press "ALARM OFF" pad. Door open indicator will glow. One temperature indicator should glow indicating present delay setting. Indicator light one glowing means one minute, indicator light two glowing means two minutes, etc. The default setting is 3 minutes.




To increase the default delay time, press "LOWER" pad to increase by one minute.




To decrease the default delay time press "HIGHER" pad to decrease by one minute.




The indicator light and corresponding default times are listed below.

| Indicator | 1 | 2 | **3*** | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Default Delay Time | 1 min | 2 min | **3 min** | 4 min | 5 min | 6 min | 7 min | 8 min | 9 min |

** Default setting*

## All Freezer (AF) Programing – Mode B Functions

### Forced Defrost

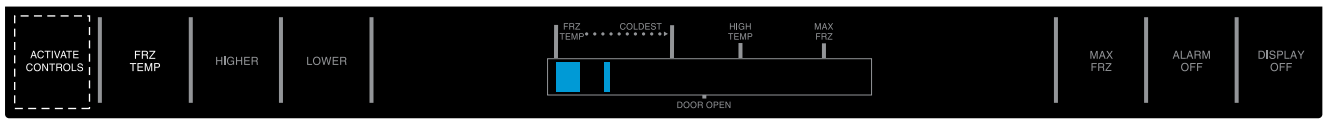
Defrost can be forced to start by pressing and holding the "ALARM OFF" pad for 3 seconds. Program will be saved permanently in EEPROM and unit will exit Service Mode and defrost cycle will begin.


### Forced Compressor Start

Compressor start can be forced by pressing and holding "MAX FRZ" pad for 3 seconds. Program changes will be saved permanently in EEPROM. Unit will exit service mode and compressor, evaporator fan, and condenser fan will come on.


### Exiting Program Mode

Press "ACTIVATE CONTROLS" for 3 seconds to exit Program Mode. An audible tone will sound three times indicating Program Mode has been exited. Changes made in Program Mode will be permanently saved in EEPROM.

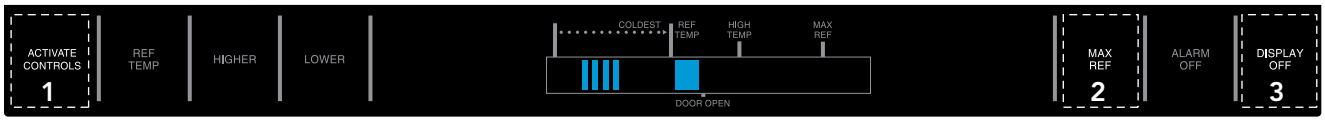



***Note:*** *If no pad is pressed for 10 minutes, Program Mode will automatically exit. However, no changes will be saved if Program Mode exits automatically.*

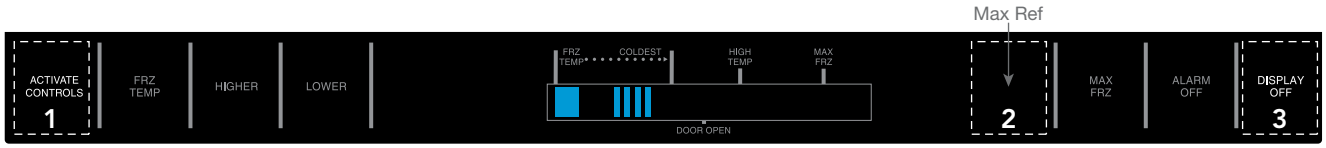
**The following features don not require entry into the service mode and can be performed by the consumer.**

### Forced Defrost Start

Press "ACTIVATE CONTROLS" pad. While holding Activate Controls pad, press and hold "MAX REF" and "DISPLAY OFF" for 3 seconds.



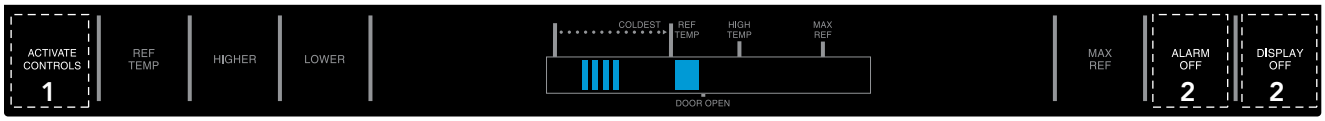

*All Refrigerator*



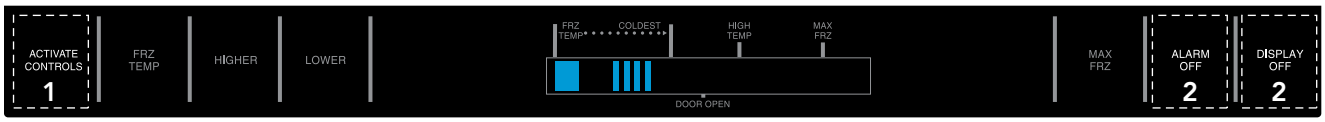

*All Freezer*

### Forced Compressor Start

Press "ACTIVATE CONTROLS" pad. Press and hold "ALARM OFF" pad and "DISPLAY OFF" pad for 3 seconds.



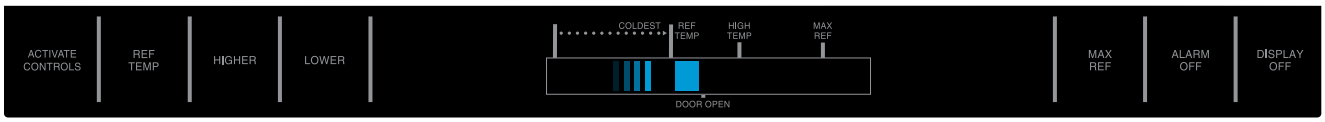

*All Refrigerator*




*All Freezer*

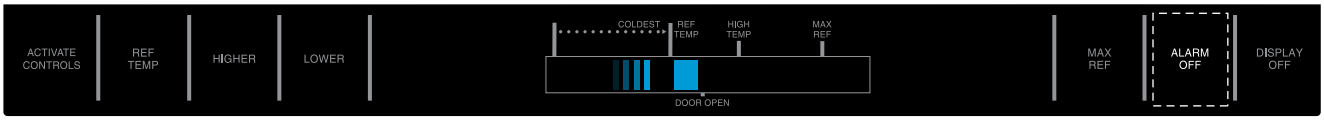
### Open Thermistor Detect

Alarm sounds and freezer or refrigerator indicator light illuminates and temperature indicators 4 through 7 will turn on in sequence if compartment thermistor circuit opens. *Refer to Temperature Control Section and Electronic Testing section.*



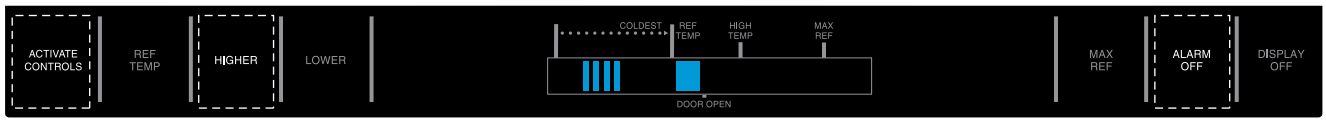

**All Refrigerator shown*

Press "ALARM OFF" pad to turn off alarm. Alarm will reset for normal operation. If condition has not been corrected, alarm will sound again.



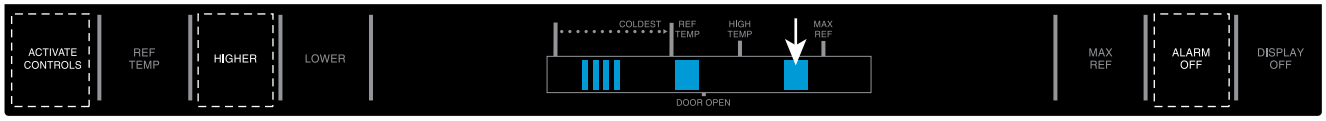

**All Refrigerator shown*

**Showroom Mode**
To enter Showroom mode: Press and hold the "ACTIVATE CONTROLS" pad. While holding, press and hold the "HIGHER" and "ALARM OFF" pad simultaneously. One beep will be heard indicating that sequence was entered properly.




**All Refrigerator shown*

Continue holding until three beeps are heard and then the Blue LED two steps to the right of the HIGH TEMP indicator will illuminate. Showroom mode activated. Showroom mode is entered.

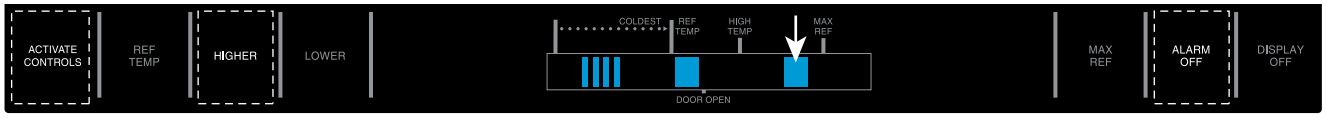



**All Refrigerator shown*

When the control is in Showroom Mode, the compressor, condenser fan motor, evaporator fan(s), service fan, defrost heater system (AF models), High Temperature and Open Thermistor alarms are all disabled. The keyboard, display, interior lights and door open alarm all operate normally.

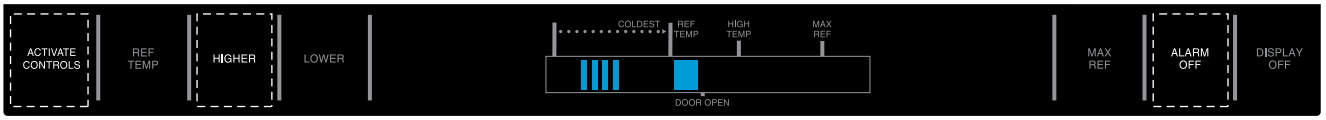
**Note:** *If door is left open for longer than 10 minutes, interior lights will switch off. Closing the door will reset interior light operation.*

**Exit Showroom Mode**
To exit Showroom mode: Press and hold the "ACTIVATE CONTROLS" pad. While holding, press and hold the "HIGHER" and "ALARM OFF" pad simultaneously. One beep will be heard indicating that sequence was entered properly.

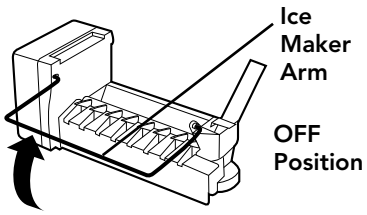



**All Refrigerator shown*

Continue holding until three beeps are heard. The display will revert to normal operation.

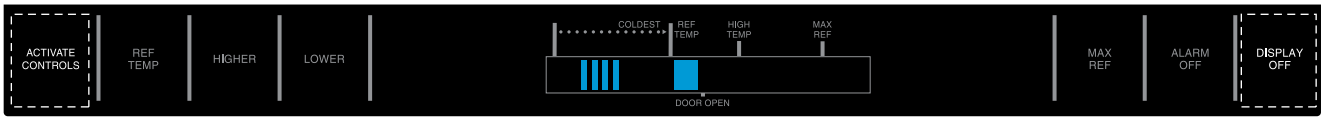



**All Refrigerator shown*



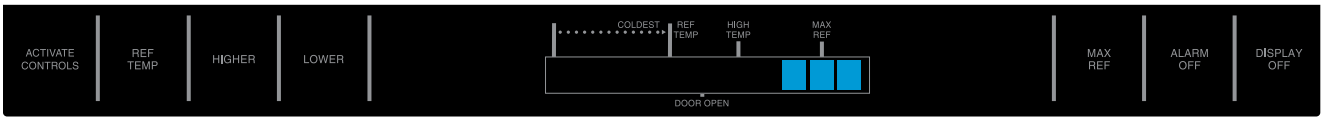

**Sabbath Mode Feature for Sabbath Observance**
Before the Sabbath mode is engaged, the bale arm of the ice maker needs to be raised until it clicks into the detent. This turns off the power to the ice maker.

**Enter Sabbath Mode**
To enter Sabbath mode, press the "ACTIVATE CONTROLS" pad to activate the control panel. Then, press and hold "ACTIVATE CONTROLS" and "DISPLAY OFF" pads simultaneously for three seconds.




**All Refrigerator shown*

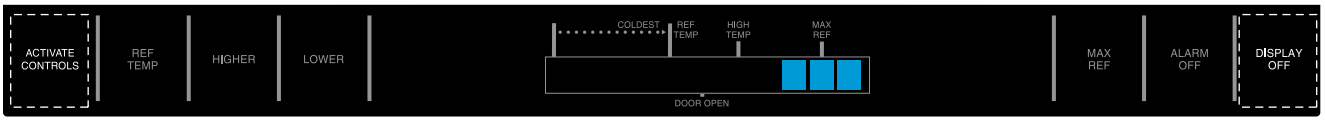
The control will beep three times and illuminate the 3 right blue squares to alert the user that Sabbath Mode has been entered. When the control enters Sabbath Mode, it will disable the interior lights, display (excluding the 3 right hand blue squares), and alarm enunciators.




**All Refrigerator shown*

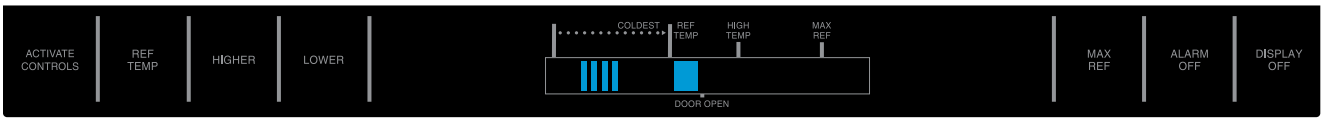
**Power Loss**
If power loss occurs in Sabbath Mode and the control experiences a long power loss, it will return to Sabbath Mode when power is regained.

**Exit Sabbath Mode**
To exit Sabbath Mode the user must press and hold "ACTIVATE CONTROLS" and "DISPLAY OFF" for 3 seconds.



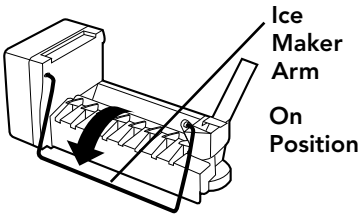

**All Refrigerator shown*

The control will beep three times alerting the user that Sabbath Mode has been exited. The control will return to normal mode.

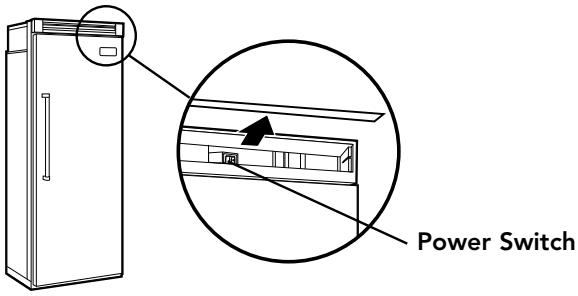



**All Refrigerator shown*

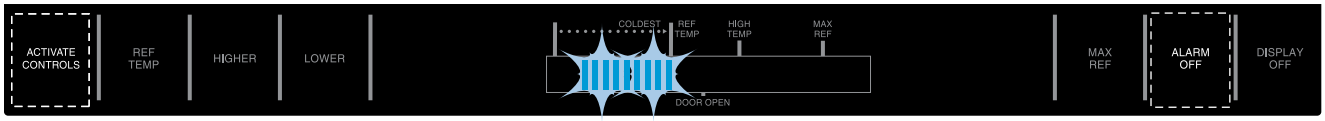
Once the unit is back in normal mode, the bale arm of the ice maker needs to be pushed down until it is no longer in the detent position. This will restore power to the ice maker.



### Power Disconnect Switch
Use power disconnect switch to disconnect power without unplugging unit. Switch is located behind air grille in top right corner.

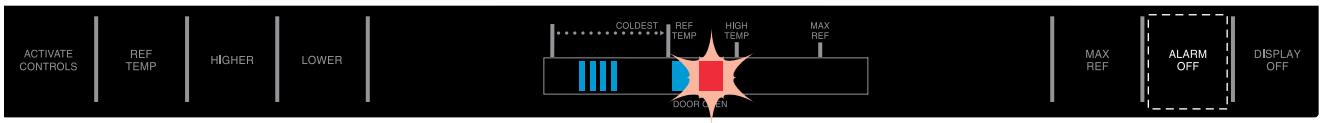



### Power Up Alarm
After Power is initially plugged in, after a power loss, or if power disconnect switch is turned "OFF", all temperature indicator lights will flash until "ALARM OFF" or "ACTIVATE CONTROLS" is pressed.



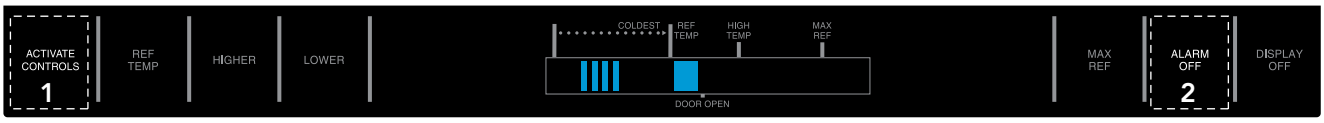

**All Refrigerator shown*

### Door Open Alarm
Alarm tone sounds and indicator lights blink if door is open for more than 3 minutes. To turn off Door Open Alarm, press "ALARM OFF" pad or close door.




**All Refrigerator shown*

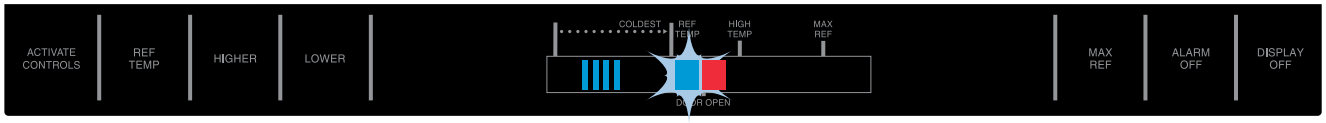
To disable the Door Open Alarm press "ACTIVATE CONTROLS", then press and hold the "ALARM OFF" pad for three seconds. A three tone confirmation will sound indicating the alarm has been disabled.
To Re-enable the Door Open Alarm, repeat the procedure.




**All Refrigerator shown*

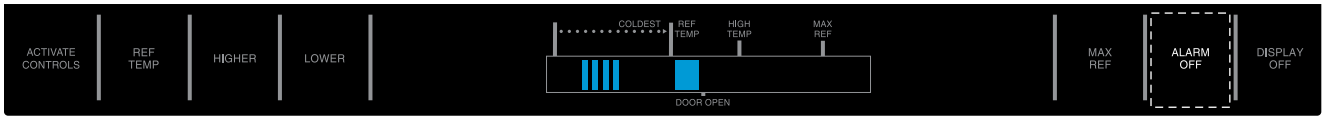
Door alarm delay can be adjusted in Program Mode B.

### High Temperature Alarm
When the controller detects critical temperature in the unit for a duration of 2 hours, an alarm will sound. The HIGH TEMP red LED will illuminate and a flashing freezer or refrigerator indicator light will accompany the audible alarm. Alarm tone stops if temperature falls again.




**All Refrigerator shown*

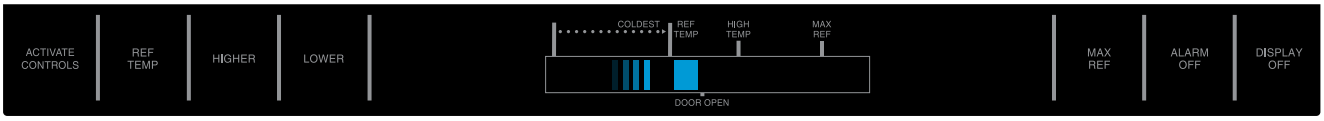
Press "ALARM OFF" pad to turn alarm off.




**All Refrigerator shown*

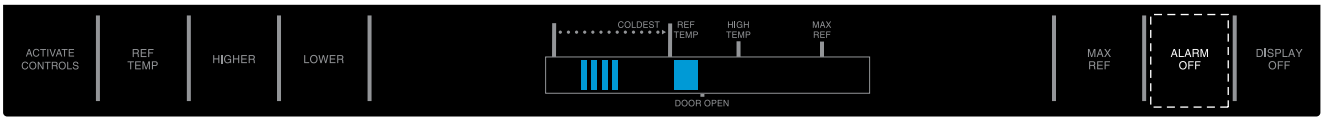
### Thermistor Alarm

When the controller detects an open thermistor circuit, the alarm sounds, freezer or refrigerator indicator light will be displayed, and temperature indicators 4 through 7 will turn on in sequence.




**All Refrigerator shown*

To turn alarm off, press "ALARM OFF" pad, alarm will reset for normal operation. If condition has not been corrected, alarm will sound again. *Refer to Temperature Control Operation section and Electronic Testing section.*




**All Refrigerator shown*

## Temperature Control Operation

For any temperature setting, outputs will be turned off/on based on cut-in/cut-out temperature determined by resistance levels of freezer or refrigerator thermistors.

### Refrigerator and Freezer Thermistor (NTC)

As temperature decreases, resistance increases. As temperature increases, resistance decreases.

***Note:*** *Open thermistor or thermistor circuit will result in failure of refrigerator to cool. Shorted thermistor will cause refrigerator to run 100 percent of time except during defrost cycle.*

| Deg F | Deg C | K-Ohms |
|---|---|---|
| -24 | -31 | 565 |
| -22 | -30 | 531 |
| -20 | -29 | 499 |
| -18 | -28 | 469 |
| -16 | -27 | 441 |
| -15 | -26 | 415 |
| -13 | -26 | 391 |
| -11 | -24 | 368 |
| -9 | -23 | 347 |
| -8 | -22 | 327 |
| -6 | -21 | 308 |
| -4 | -20 | 291 |
| -2 | -19 | 274 |
| 0 | -18 | 259 |
| 1 | -17 | 245 |
| 3 | -16 | 231 |
| 5 | -15 | 218 |
| 7 | -14 | 206 |
| 9 | -13 | 195 |

| Deg F | Deg C | K-Ohms |
|---|---|---|
| 10 | -12 | 185 |
| 12 | -11 | 175 |
| 14 | -10 | 165 |
| 16 | -9 | 157 |
| 18 | -8 | 148 |
| 19 | -7 | 141 |
| 21 | -6 | 133 |
| 23 | -5 | 126 |
| 25 | -4 | 120 |
| 27 | -3 | 114 |
| 28 | -2 | 108 |
| 30 | -1 | 103 |
| 32 | 0 | 97 |
| 34 | 1 | 93 |
| 36 | 2 | 88 |
| 37 | 3 | 84 |
| 39 | 4 | 80 |
| 41 | 5 | 76 |
| 43 | 6 | 72 |

| Deg F | Deg C | K-Ohms |
|---|---|---|
| 45 | 7 | 69 |
| 46 | 8 | 65 |
| 48 | 9 | 62 |
| 50 | 10 | 59 |
| 52 | 11 | 56 |
| 54 | 12 | 54 |
| 55 | 13 | 51 |
| 57 | 14 | 49 |
| 59 | 15 | 47 |
| 61 | 16 | 44 |
| 63 | 17 | 42 |
| 64 | 18 | 41 |
| 66 | 19 | 39 |
| 68 | 20 | 37 |
| 70 | 21 | 35 |
| 72 | 22 | 34 |
| 73 | 23 | 32 |
| 77 | 24 | 31 |
| 77 | 25 | 30 |

## Temperature Control Operation (continued)

Open thermistor or thermistor circuit will result in failure to cool. Shorted thermistor will cause refrigerator to run 100 percent of time except for defrost cycle. Freezer temperature setting and thermistor value will determine if compressor/condenser fan and evaporator fan switches are open or closed. Compressor/ condenser fan switch must be open for 6 minutes before switch can close again (compressor dwell time). Refrigerator temperature setting and thermistor value will determine if fresh food switch is open or closed. Cut-out and cut-in temperature values must be reached and maintained for 15 seconds before output state will change (digital delay). Refrigerator and freezer control calibration can be adjusted in Program Mode B.

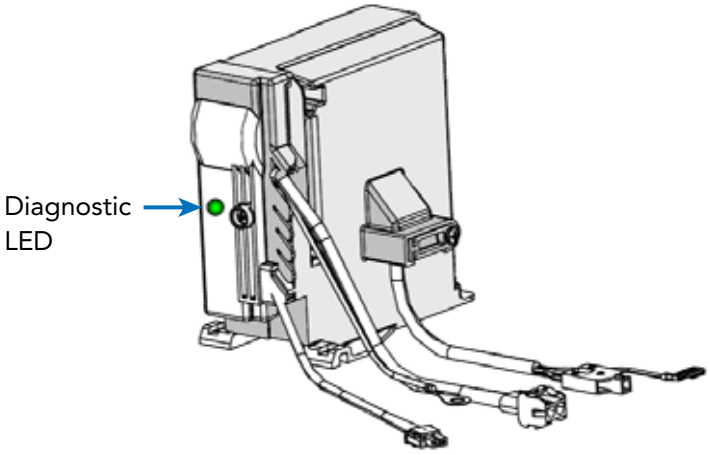
| All Freezer | | All Refrigerator | | |
|---|---|---|---|---|
| **Cut-Out ˚F (˚C) +/- 1.5˚** | **Cut-Out ˚F (˚C) +/- 1.5˚** | **Cut-Out ˚F (˚C) +/- 1.5˚** | **Cut-Out ˚F (˚C) +/- 1.5˚** | **Level** |
| -12 (-24) | 3 (-16) | 25 (-3.9) | 37 (2.8) | 9 |
| -10 (-23) | 5 (-15) | 27 (-2.8) | 39 (3.9) | 8 |
| -8 (-22) | 7 (-14) | 29 (-1.7) | 41 (5.0) | 7 |
| -7 (-22) | 8 (-13) | 30 (-1.1) | 42 (5.4) | 6 |
| -6 (-21) | 9 (-13) | 31 (-0.6) | 43 (6.1) | 5 |
| -5 (-21) | 10 (-12) | 32 (-0) | 44 (6.6) | 4 |
| -4 (-20) | 11 (-12) | 33 (-0) | 45 (7.2) | 3 |
| -2 (-19) | 13 (-11) | 35 (1.7) | 47 (8.3) | 2 |
| 0 (-18) | 15 (-9) | 37 (2.8) | 49 (9.4) | 1 |
| -12 (-24) | 3 (-16) | | | Max Frz |
| | | 25 (-3.9) | 37 (2.8) | Max Ref |

## VCC3 Diagnostic Codes

| | |
|---|---|
| 1 Flash | No failure detected |
| 2 Flashes | No signal from the control board |
| 3 Flashes | Inverter failure |
| 4 Flashes | Compressor failure |

## Flashing cycles

| | |
|---|---|
| 1-flash code: | 1 flash every 15 seconds |
| 2-flash code: | 2 flashes every 5 seconds |
| 3-flash code: | 3 flashes every 5 seconds |
| 4-flash code | 4 flashes every 5 seconds |



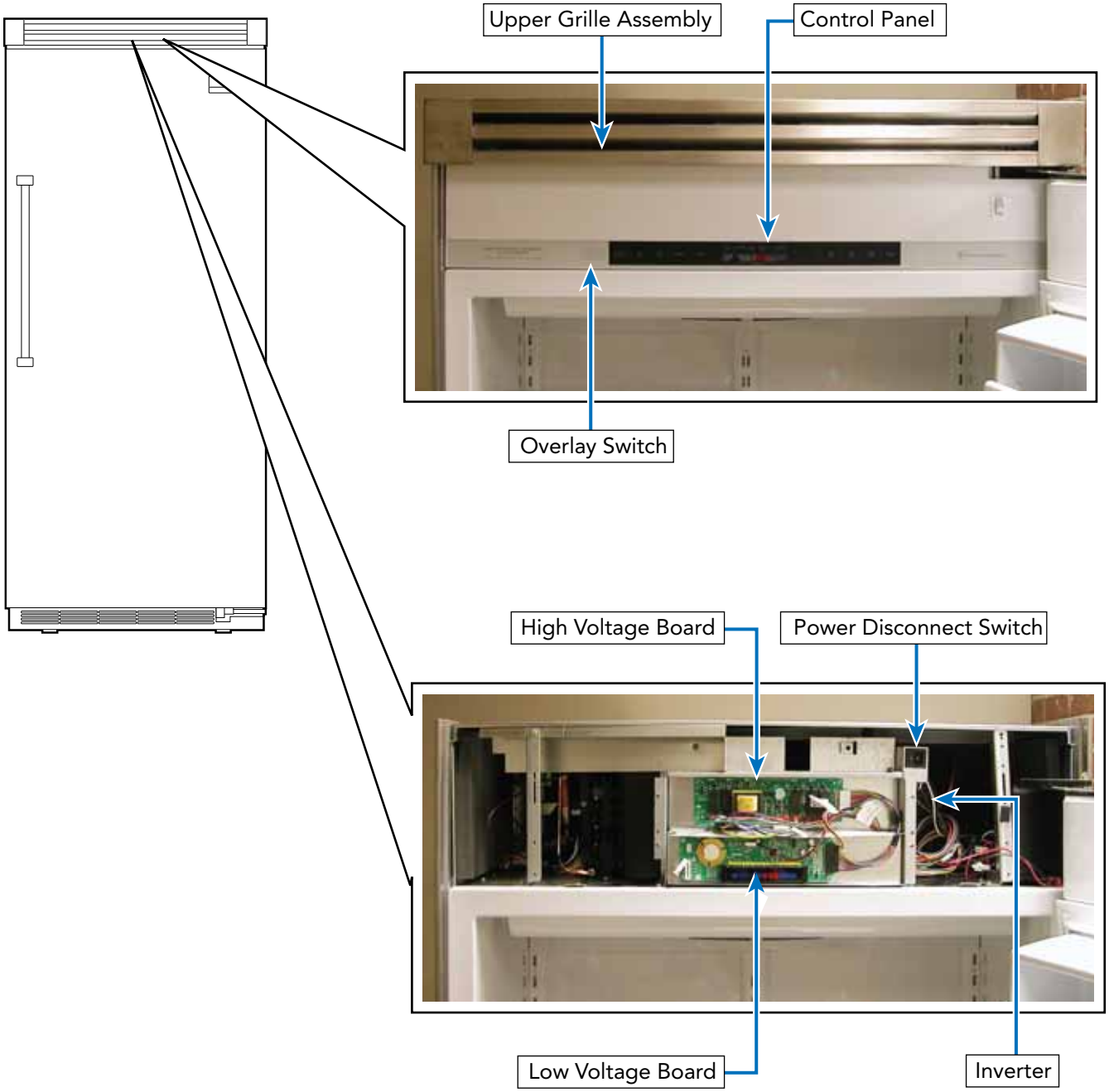

## Diagnostic Procedures

| Code | Compressor Status | Probable Root Causes | Service Action |
|---|---|---|---|
| 1 Flash–every 15 seconds | ON | • No failure detected | If system is not working properly, check other refrigerator components |
| | OFF | • No signal from Control Board<br>• Open thermistor | If refrigerator settings (thermistor conditions) are at levels in which compressor status should be "ON":<br>* *Unplug inverter from power supply and wait for 2 minutes, reconnect the inverter to the power supply and wait for 12 minutes*<br>• If inverter still shows 1 flash code and compressor is "OFF", then check the control board |
| 2 Flashes–every 5 seconds | OFF | • No signal from Control Board | • Check frequency cable connection<br>• If frequency cable connection is OK, replace inverter |
| 3 Flashes–every 5 seconds | OFF | • Compressor/inverter cable interrupted (open circuit)<br>• Inverter damaged<br>• Compressor winding open circuit | • Check inverter/compressor cable connection<br>• Check compressor winding resistances (among 3 terminal hermetic pins)<br>• If resistance is within specification and inverter/compressor cable is OK, replace inverter |

## Diagnostic Procedures (continued)

| Code | Compressor Status | Probable Root Causes | Service Action |
|---|---|---|---|
| 4 Flashes–every 5 seconds | OFF | • Compressor damaged/ system damaged | • Check compressor input power<br>• Check compressor windings resistances<br>• Check leakage current between hermetic terminal pins and compressor shell<br>• If resistance or leakage current is out of spec, replace the compressor<br>• If resistance and leakage current are within the spec:<br>** Check inverter/compressor cable is interrupted*<br>** Unplug inverter from power supply and wait for 2 minutes*<br>** Reconnect the inverter to the power supply and wait for 12 minutes*<br>• If inverter still shows 4 flash code and compressor is "OFF", replace the compressor |
| LED OFF | OFF | • No input power signal– Inverter damaged | • Check the input power signal (115V)<br>• If there is no signal, check the input power connections<br>• If voltage is within specifications, unplug the inverter from the power supply and wait 2 minutes. Reconnect the inverter to the power supply and wait for 12 minutes<br>• If inverter shows no flash code and compressor is "OFF", change the inverter<br>• If the inverter shows no flash code and the compressor is "ON", diagnostic function is not working properly |

## Parts Location–Control Panel



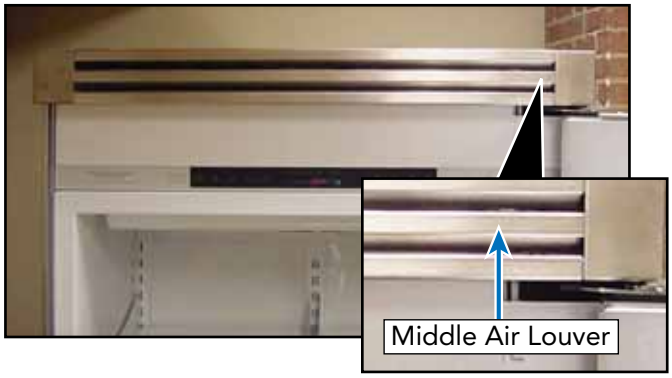
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

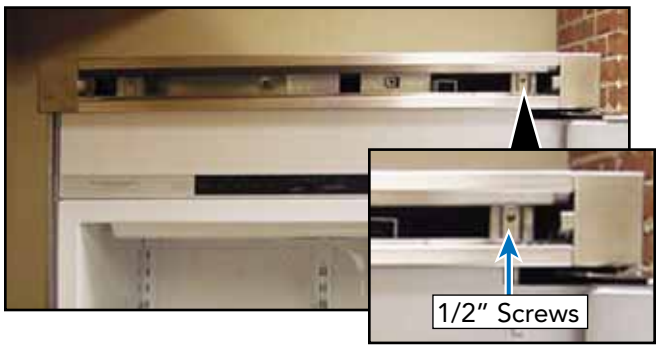
## Upper Grille Assembly

Removal of the upper grille assembly allows access to the control assembly.

1. To remove the upper grille assembly, slide out the middle air louver.




2. With the middle grille louver removed, remove (2) 1/2" screws securing the grille assembly.

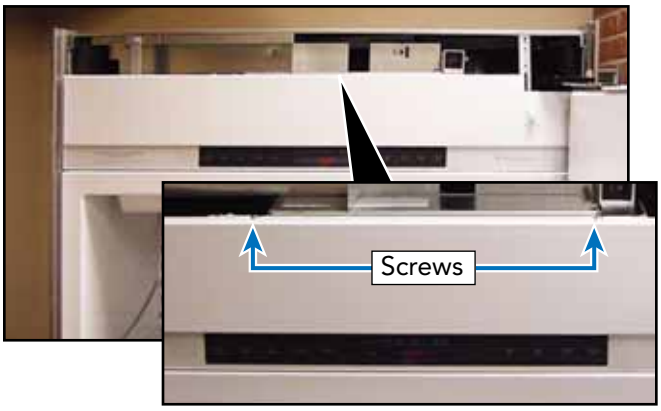



3. Remove the grille assembly.

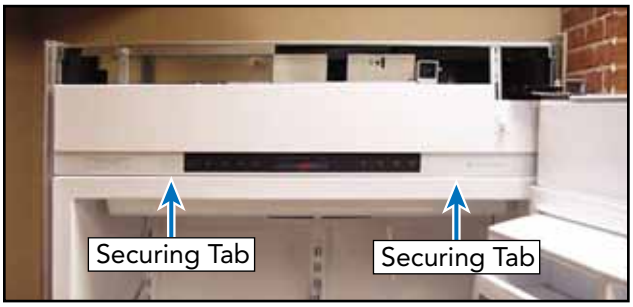
## Control Panel

The control panel has an overlay switch attached to it that allows user input to the control boards.

1. To access the control panel, remove the upper air grille assembly *(see Upper Grille Removal section)*, remove (2) screws securing the control panel.




2. Depress the securing tabs.




3. Lower the control panel. **Take caution with the ribbon cable to prevent damage.**





***Note:** photos shown are All Refrigerator.*

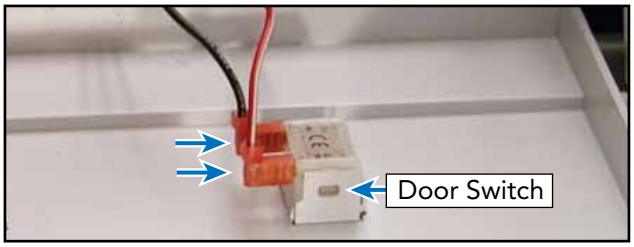
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

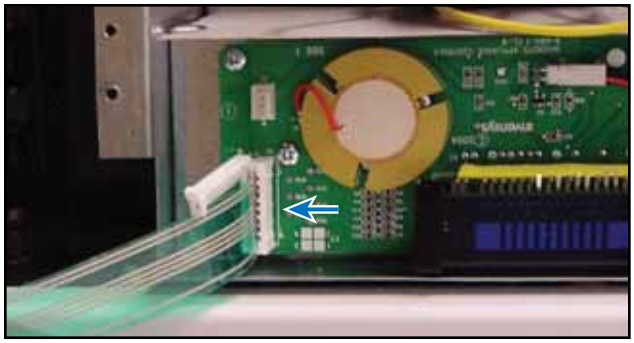
## Control Panel (continued)

4. Remove the four screws securing the control board cover. Remove control board cover.

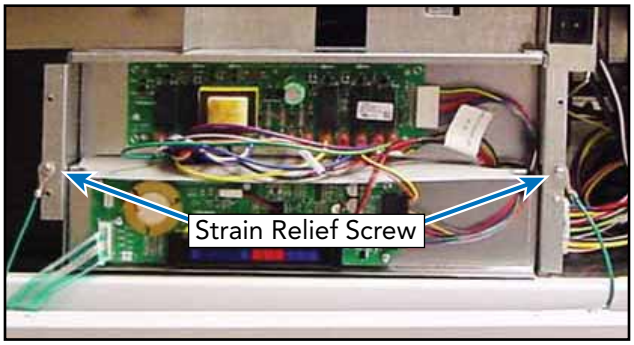

5. On the AR models, the evaporator fans are controlled by a N.O. fan switch mounted in the upper control panel. On AR models, disconnect the door switch from the back of the control panel.




6. Disconnect the ribbon from the control board. **Take caution with the ribbon cable to prevent damage.**



7. Remove the two strain relief screws.




8. The control panel can now be removed and the power boards are accessible.

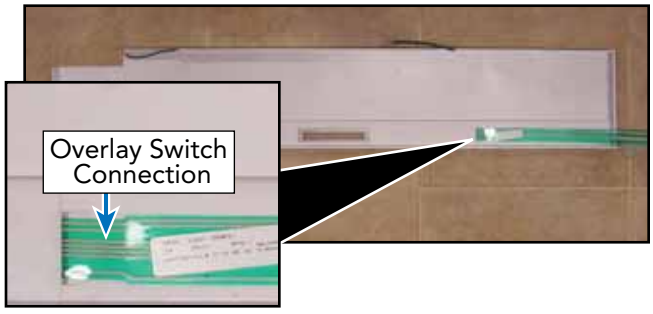
9. Reverse procedure to reinstall.

## Overlay Switch

The unit uses an overlay switch to communicate user input to the control boards. The overlay connects to the control board via a ribbon cable.

1. To access the overlay switch, remove the upper air grille assembly, remove the control panel *(see Air Grille and Control Panel Removal sections).*

2. From backside of control panel, disconnect overlay switch (remove excess adhesive).




3. Reverse procedure to reinstall.





***Note:** photos shown are All Refrigerator.*

**WARNING**

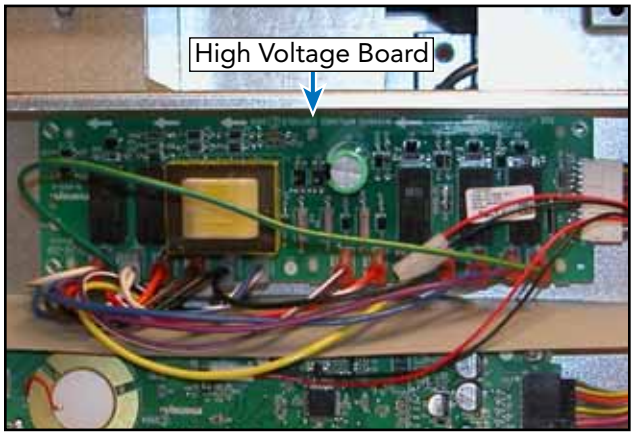
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## High Voltage Board

A control board is used to operate functions of the unit. Once an input is received from the low voltage board, the high voltage board sends an output to activate the components.

1. To access the high voltage board, remove the upper air grille assembly, and control panel (*see Air Grille and Control Panel Removal sections).*

2. Remove screws securing low voltage board, disconnect wiring and remove.




High voltage board is now accessible. To check high voltage board, refer to chart on page 48.

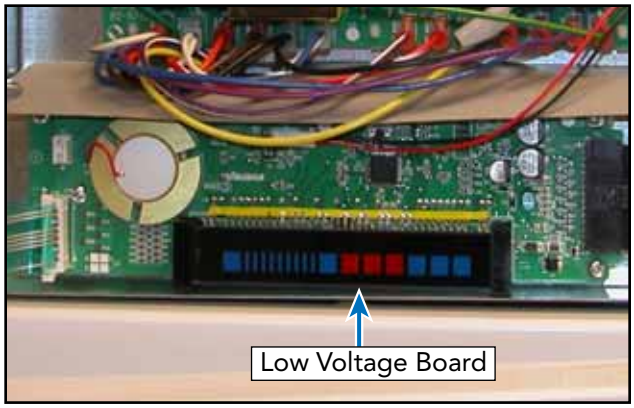
3. Reverse procedure to reinstall.

## Low Voltage Board

The unit uses a control board in conjunction with an overlay switch to operate functions of the refrigerator/freezer. Input comes to the low voltage board via the ribbon cable attached to the overlay switch.

1. To access the low voltage board, remove the upper air grille assembly, control panel (*see Air Grille and Control Panel Removal sections).*

2. Remove screws securing low voltage board disconnect wiring and remove.




To check low voltage board, refer to chart on page 49.

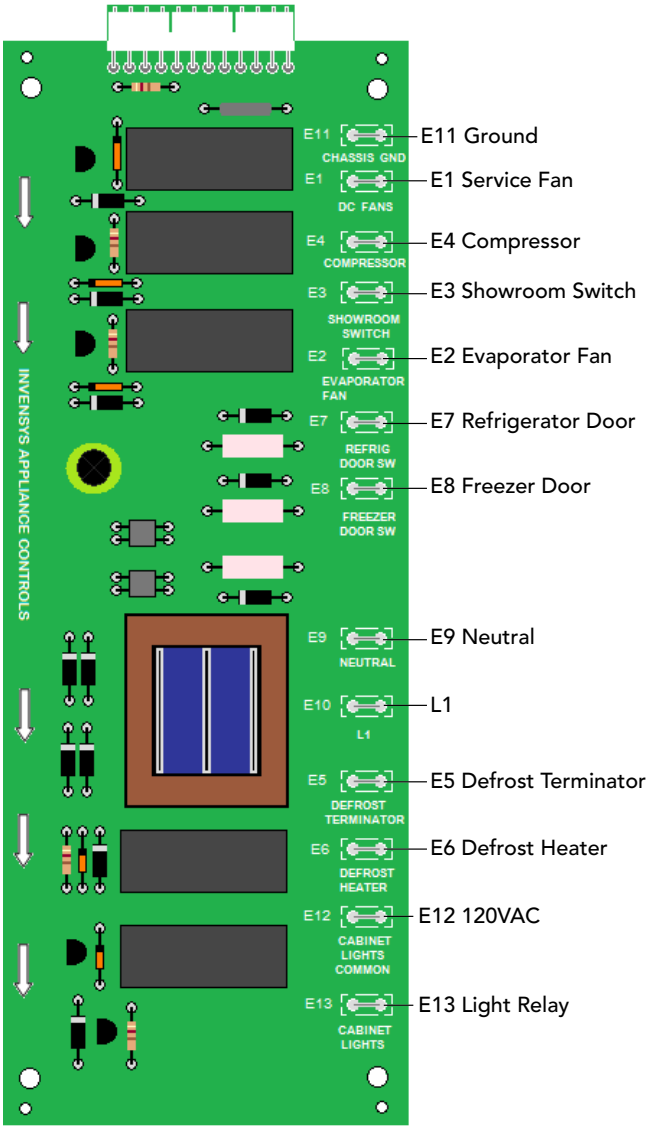
3. Reverse procedure to reinstall

**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Component Testing–High Voltage Board

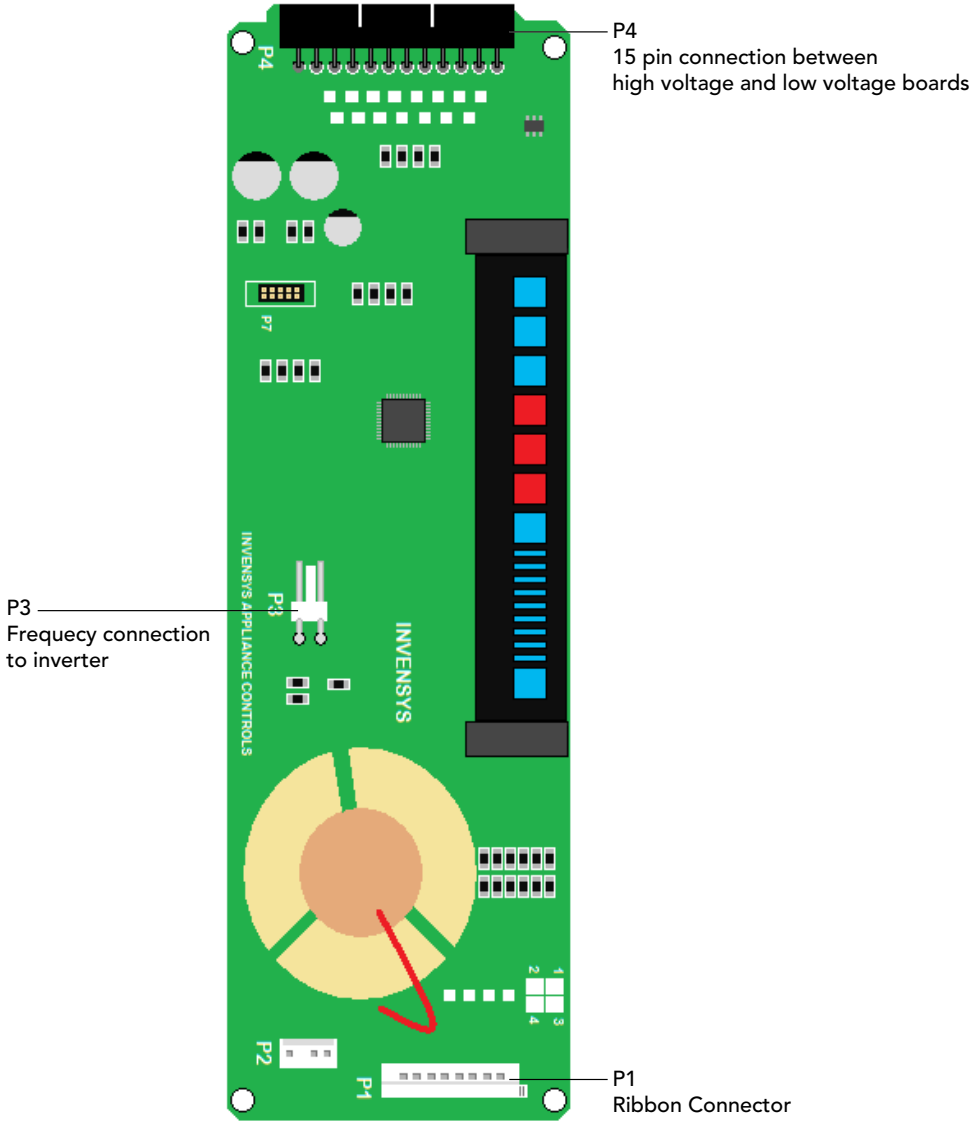
| High Voltage Board | | |
|---|---|---|
| **Component** | **Test Point** | **Reading** |
| Service Fan | E1-E11 | 24VDC |
| Evaporator Fans | E2-E11 | 115VAC |
| L1 | E3-E11 | 115VAC |
| Compressor | E4-E11 | 115VAC |
| Defrost Terminator (Open) | E5-E11 | 0VAC |
| Defrost Terminator (Closed) | E5-E11 | 115VAC |
| Defrost Heater | E6-E11 | 115VAC |
| Fresh Food Lights | E7-E11 | 115VAC |
| Freezer Lights | E8-E11 | 115VAC |
| Neutral In | E9-E10 | 115VAC |
| Line In | E10-E11 | 115VAC |
| Ground | E11 | N/A |
| Neutral In-Lights | E12-E10 | 115VAC |
| Neutral Out-Lights | E13-E10 | 115VAC |



**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Component Testing–Low Voltage Board



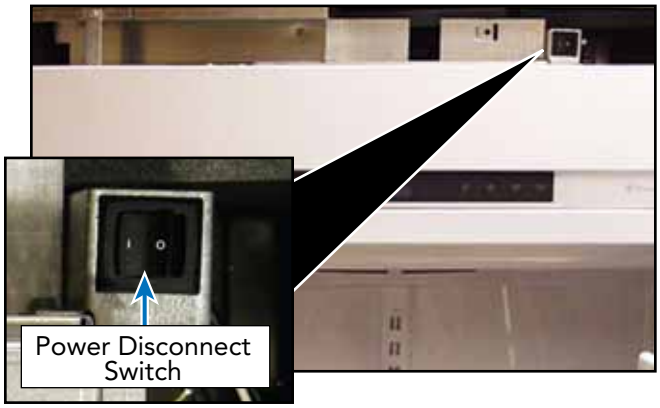
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Power Disconnect Switch

The unit has a rocker switch, located in the upper right corner of the unit, that allows power to the unit to be turned "OFF" without removal of the unit.

1. To access the power disconnect switch, remove the upper air grille assembly *(see Air Grille Removal section)*. The power disconnect is now accessible on the right side.




   Verify contacts 4-5 open when the switch is in the "0" position and contacts 4-5 close when in the "I" position. 120VAC should be measured when in the "0" position and 0VAC should be measured when in the "I" position.

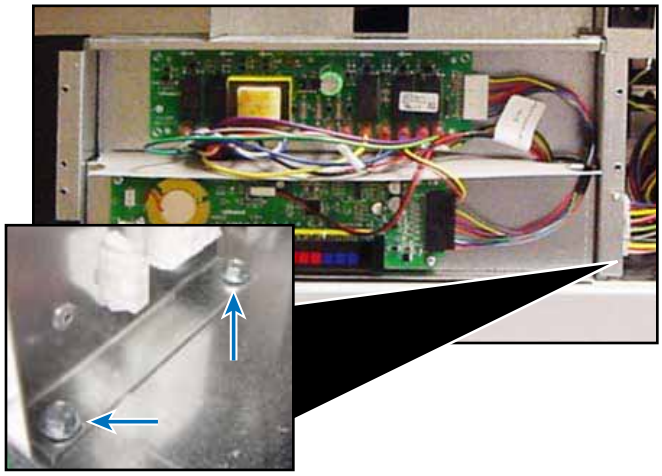
2. Reverse procedure to reinstall.

## Inverter

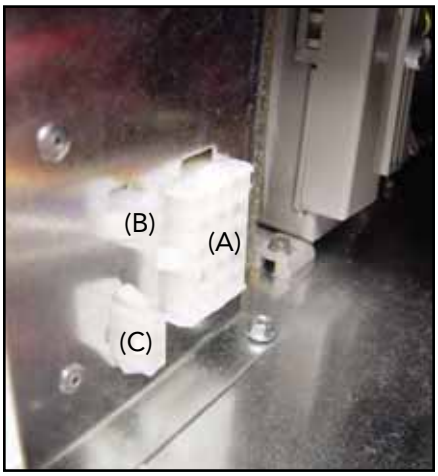
The Compressor is operated by an Inverter that varies the voltage to the compressor. This is determined by the frequency input from the low voltage board

1. To access the inverter, remove upper air grille assembly, remove control panel assembly *(see Air Grille and Control Panel Removal sections)*.

2. Remove the control box in order to gain easy access to the door hinge area for service. There are 4 ¼" hex screws (2 on each side) holding the control box to the refrigerator housing. Remove these screws.



3. Unplug the 15-pin Molex power plug (A), as well as the 2-wire converter frequency cable (B) and the 3-wire thermistor plug (C).

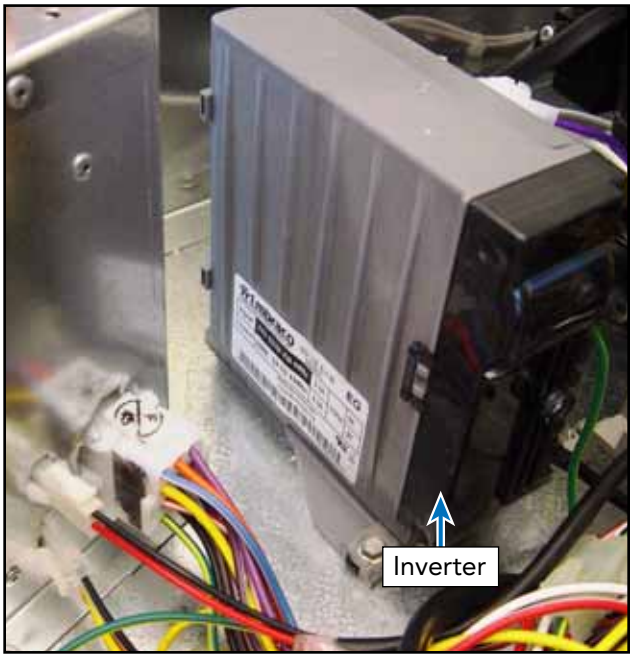


**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Inverter (continued)

4. The inverter is now accessible on the right side.

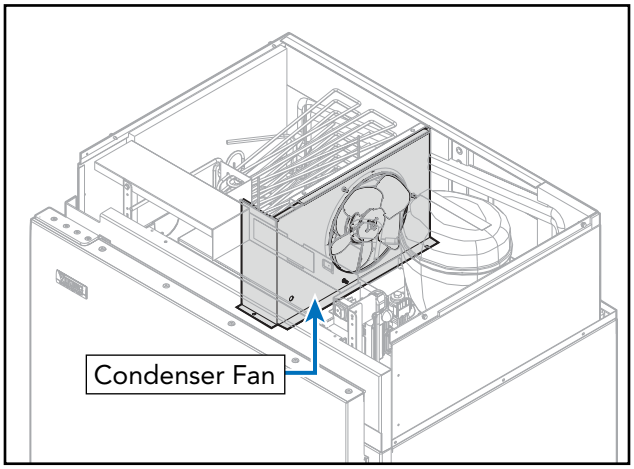



115 VAC is supplied to the inverter from E4 on the High Voltage Board. The LV board sends 5 VDC to the inverter to operate the compressor.

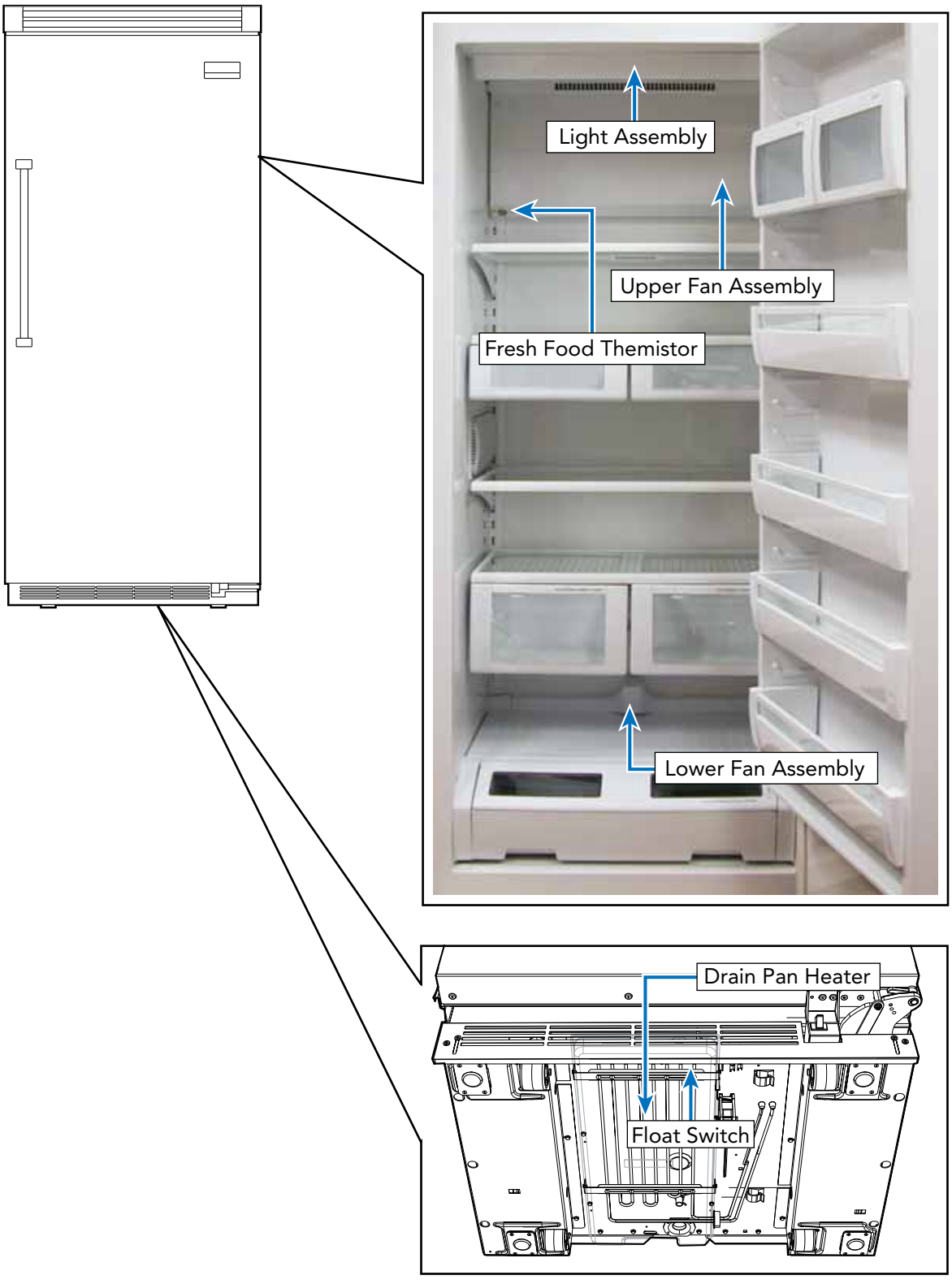
5. Reverse procedure to reinstall.

## Condenser Fan

The condenser fan is located in the upper machine compartment of the unit. 115 VDC is supplied to the fan when the Compressor / Condenser Fan relay closes to E4 on the High Voltage Board.



## Parts Location–All Refrigerator



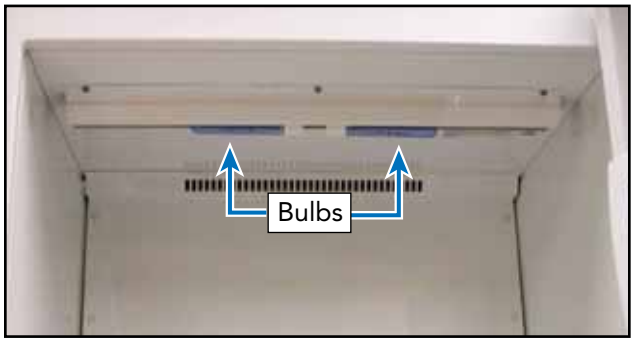
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Light Assembly

The unit uses 40 watt bulbs to light the unit. The bulbs are located at the top of unit.

To access bulbs, remove light cover and bulb is accessible.

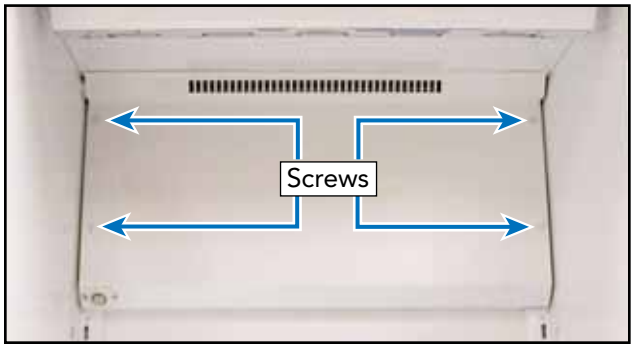



To check bulb, verify filament is not broken, resistance in the bulb, and voltage is supplied to the socket.

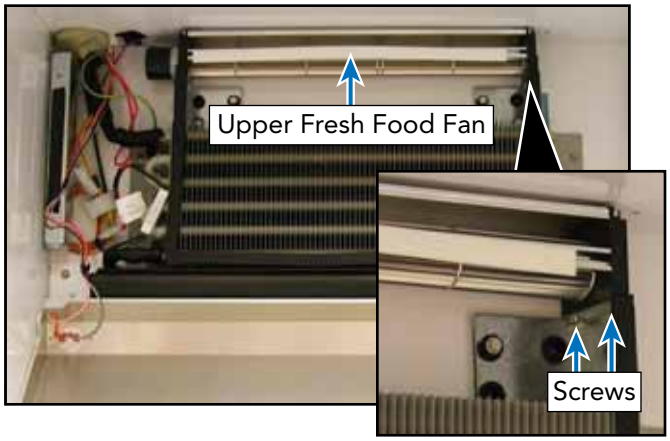
## Upper Fresh Food Fan

The all refrigerator unit uses two fans to circulate air through the refrigerator compartment.

1. To access the upper fan, open the refrigerator door, remove the upper shelf. Remove four screws securing the evaporator cover, and remove evaporator cover.




2. Remove four screws securing upper fresh food fan, disconnect wiring, and remove upper fresh food fan.




Fan measures approximately 100M Ω, 3.2 W.

3. Reverse procedure to reinstall.

## Interior Lights

The unit uses two lights, one on the left side and one on the right side to provide lighting for the cabinet.

To access the light bulb, remove the upper shelf, upper drawer, light cover and unscrew the bulb from the socket. To access the socket, remove the three securing screws, remove the light assembly, and replace/repair the socket.

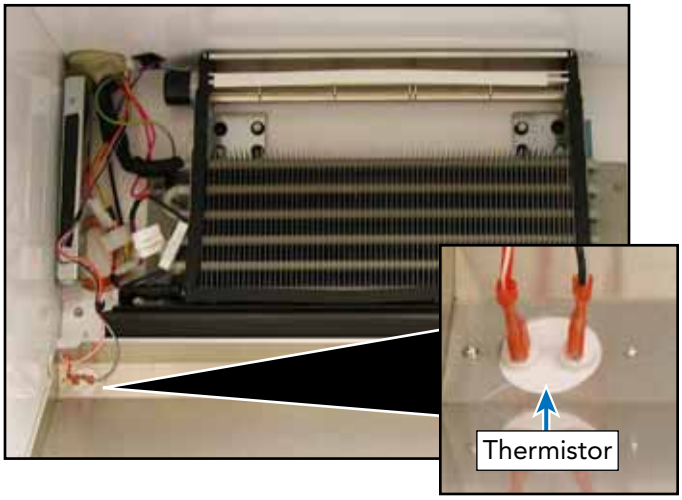
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Fresh Food Thermistor

The unit uses a thermistor (type of resistor whose resistance varies with temperature) to control temperature. The temperature of the thermistor equates to a resistance that is fed back to the low voltage control board. Refer to resistance vs. temperature chart on page 40 and Cut-in and Cutout temperature chart on page 41.

To access the thermistor, open the refrigerator door, remove the upper shelf, remove the screws securing it, and disconnect the wiring.



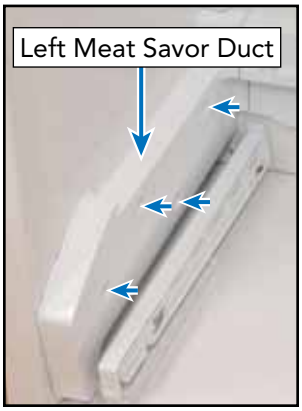

In order to check the Thermistor, refer to All Refrigerator Programing on page 19 and page 20 on reading the Binary Code to check the thermistor. If you are experiencing the scrolling temp bars described on page 40 then the Thermistor needs to be removed and tested.

## Lower Fan Assembly

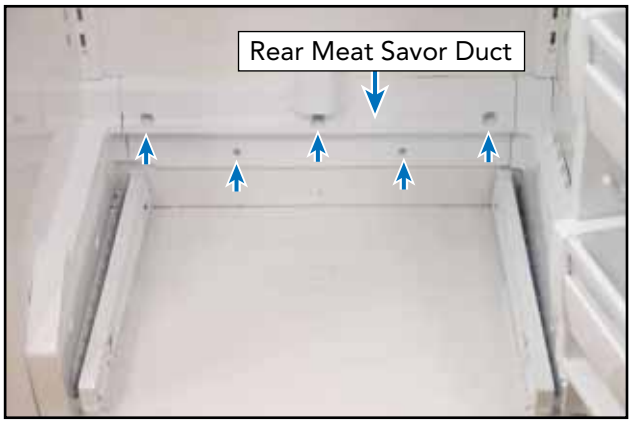
The all refrigerator unit uses two fans to circulate air through the refrigerator.

1. To access the lower fresh food fan, remove all shelves and drawers.

2. Remove screws securing left and right side meat saver ducts, remove screws securing rear meat saver duct.





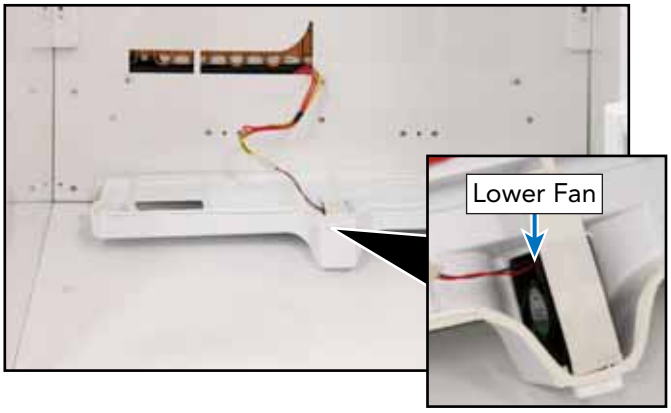


**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Lower Fan Assembly (continued)

3. Remove rear, left and right side meat saver ducts and disconnect wiring. Lower fan is now accessible.




Fan measures approximately 3.2 Ω.

4. Reverse procedure to reinstall.

## Drain Pan Heater

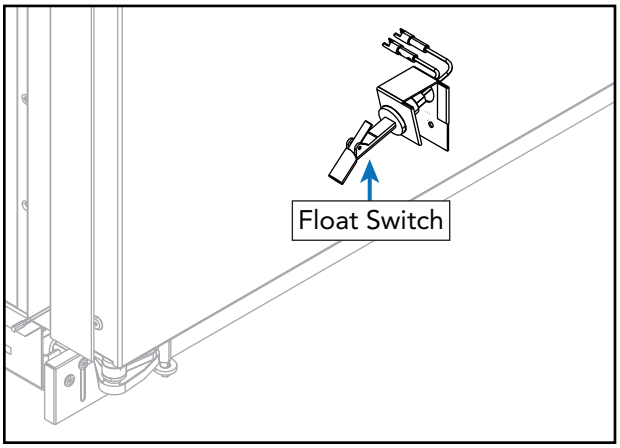
The unit uses a drain pan heater to vaporize condensate created by the refrigerator cooling process. The pan heater is energized once the float switch closes supplying 120VAC.

To access the drain pan heater, remove the lower access panel and the drain pan heater is accessible. Verify the resistance is approximately 790 Ω. Verify 120VAC to the heater and the float switch is closed. If the switch is closed and no voltage is supplied, verify wiring, power disconnect switch has not been turned "ON", and supply voltage. If voltage is supplied, the float switch is closed, and the heater does not energize, replace the heater.

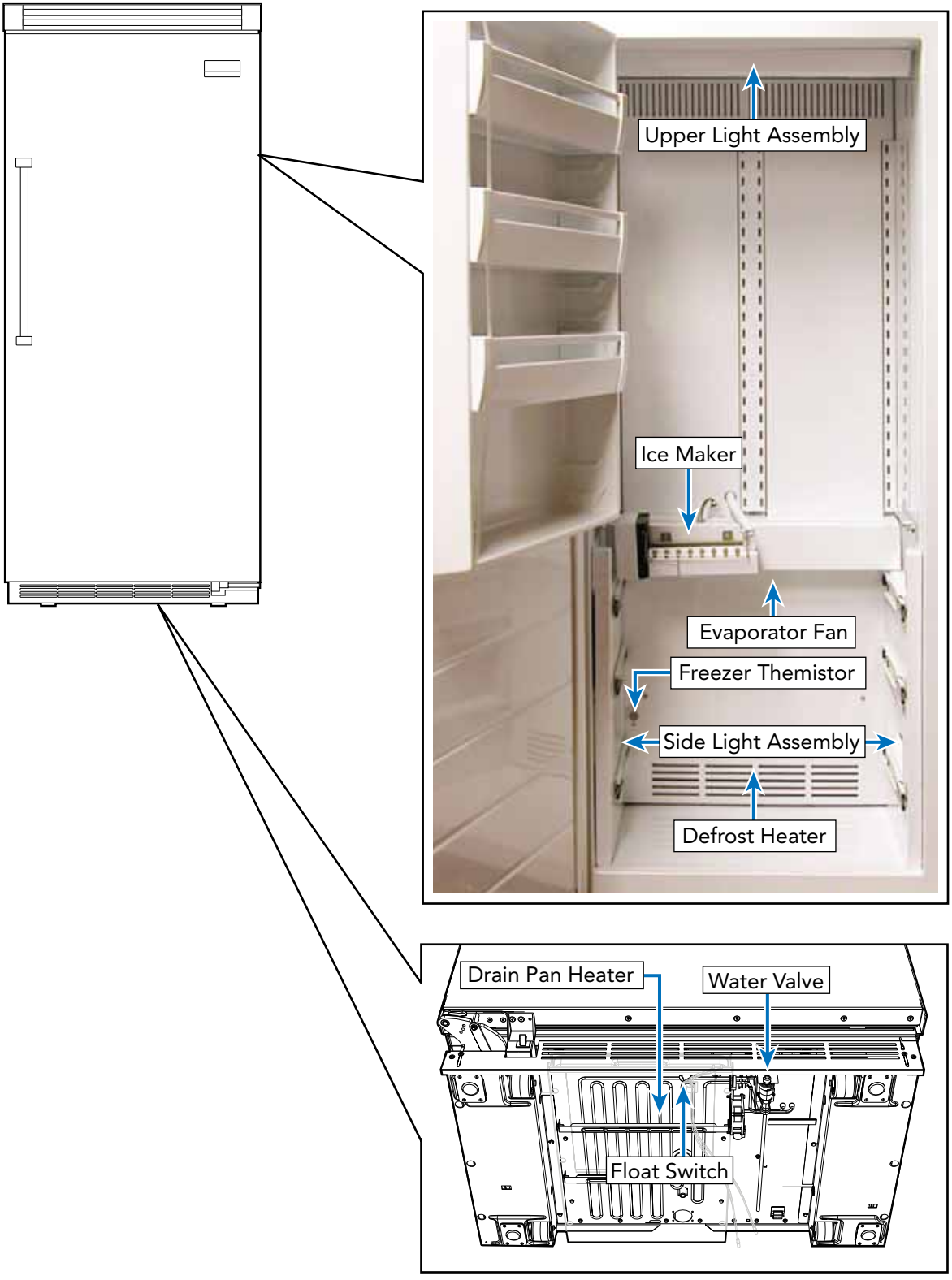
## Float Switch

The unit uses a float switch in conjunction with the drain pan heater to vaporize condensate created from the refrigerator cooling process. The switch is normally open and closes as the water level in the pan rises thus energizing the drain pan heater. When the water is vaporized the switch opens removing power from the drain pan heater.

To access the float switch, remove the lower access panel and the float switch is accessible. Verify the switch reads open when in the down position and continuity in the up position. If the switch does not open or close properly, replace the float switch.



## Parts Location–All Freezer



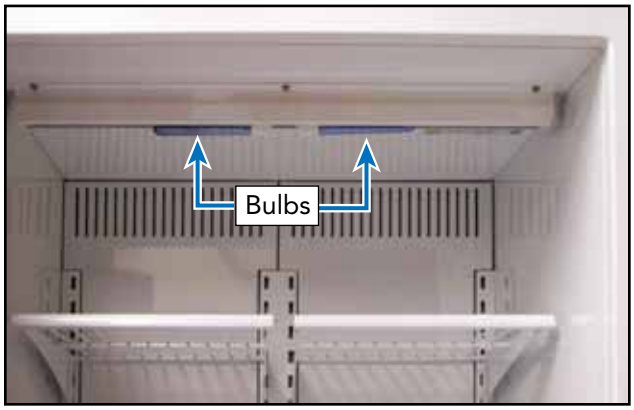
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Upper Light Assembly

The unit uses 40 watt bulbs to light the unit. The bulbs are located at the top of unit.

To access bulbs, remove light cover and bulb is accessible.




To check bulb, verify filament is not broken, resistance in the bulb, and voltage is supplied to the socket.

## Lower Lights

The unit uses two lights, one on the left side and one on the right side to provide lighting for the cabinet.

To access the light bulb, remove the lower drawers, light cover and unscrew the bulb from the socket. To access the socket, remove the three securing screws, remove the light assembly, and replace/repair the socket.

## Ice Maker

The unit uses an ice maker that consists of a mold heater, thermostat, motor, and wire harness. The ice maker always starts from and stops at the "park" position. In the park position (the ejector blades are pointing horizontally towards the back of the ice maker). Just before reaching the park, position the mold is filled with water. At the park, position all electrical components are de-energized, even though the shut-off arm is down, and the ice maker is ready for the next freeze cycle. The ice maker takes from 30 minutes to one hour to freeze the water. The primary time factors are the temperature in the freezer and the amount of airflow around the ice maker. Colder freezer settings and free air space around the ice maker to let air circulate will help make ice faster. After the ice forms, the ice maker continues to wait until it reaches 15˚F before it starts the harvest cycle. This ensures that the ice is solid in all the cavities. At 15°F the thermostat closes, the mold heater turns on, and the ejector blades rotate up and forward until they stall out against the ice. The motor is designed to stall out and is geared to generate a lot of pressure. This minimizes the amount of melting needed to extract the ice. As soon as the ice is loose enough to move, the ejector pushes the ice out of the mold during the second half of the first revolution. During the second revolution, the ejector pushes the ice into the bucket.

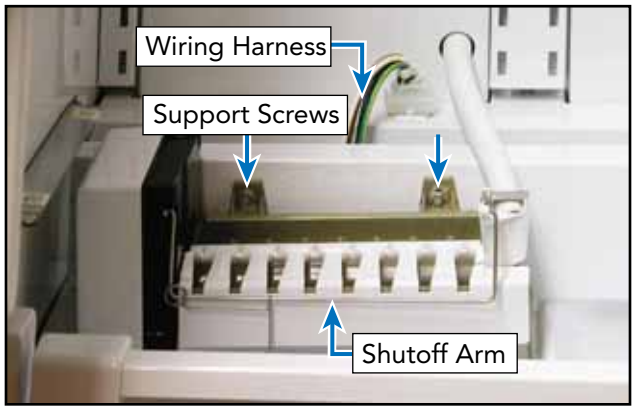
Just before the ejector completes the second revolution, the ice maker turns the water valve on for approximately 7.5 seconds and refills the mold with approximately 4.75 ounces of water and the freezing cycle is ready to begin again.

**WARNING**

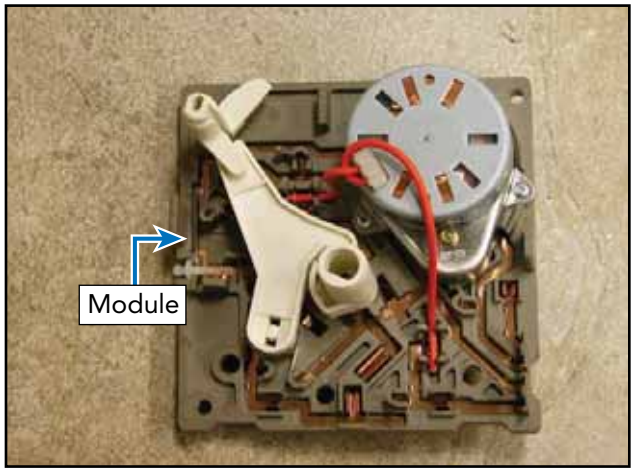
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Ice Maker (continued)

To access, remove all shelves, drawers, ice maker mount, loosen screws securing ice maker, disconnect wire harness, repair/replace ice maker.



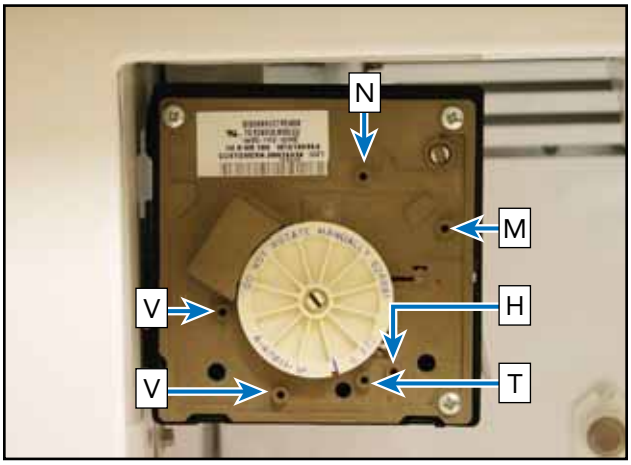

To access module and heater assembly, remove three screws on front of module and remove support assembly.




To make ice, an ice maker needs power, water, and sub-freezing temperatures.

***Note:*** *The freezer door switch turns off power to the ice maker when the freezer door is open. It will be necessary to manually close the freezer door switch for some troubleshooting steps. Ensure that the shut-off arm is down and instruct customer on its use if necessary.*

To ensure power to the ice maker without a meter, remove the module cover and take note of the test points.




| Test Point | Component |
|---|---|
| N | Neutral side of line |
| M | Motor connection |
| H | Heater connection |
| T | Thermostat connection |
| L | L1 side of line |
| V | Water valve connection |

Place a 14 gauge jumper wire across test points T and H. With hands clear of the ice maker, manually close the freezer door switch. This will put the ice maker in a manual cycle. If the ejector does not rotate, this indicates no power to the ice maker. Trace power from the wall socket to the door switch and to the connector. Repair circuit and connections or replace door switch as needed. If the ejector

**⚠ WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Ice Maker (continued)

begins to rotate (very slowly) there is power. With power present, verify 0VAC between test points T and H (this verifies the thermostat has closed). Verify heater resistance is approximately 264 Ω. With motor running, verify heater is heating. If no heat is detected, replace mold assembly. Next ensure water is supplied to the ice maker. When the ejector blade gets to the 11:00 position, the water valve is energized for 7.5 seconds.

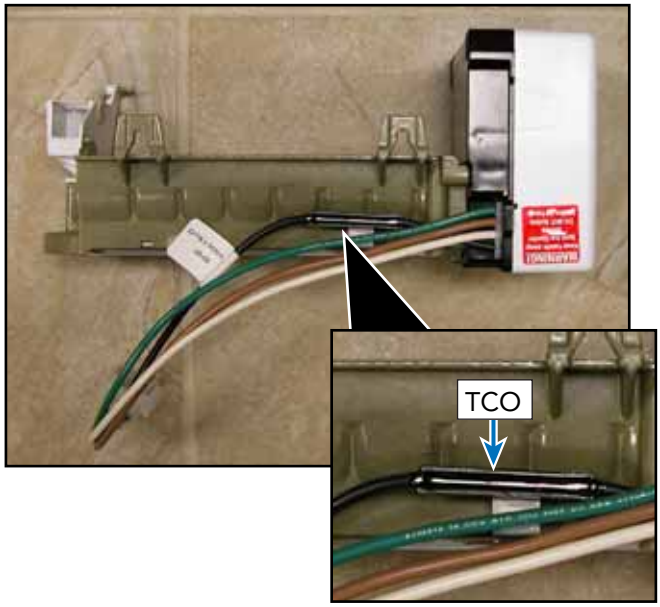
Verify the water valve has 120VAC between test points V and N and approximately 4.75 ounces of water is dispensed. If voltage is present and water is not dispensed verify water supply and fill rate. **CAUTION: DO NOT** use a Reverse Osmosis Water Filtration System. It reduces the water pressure below 20 psi and the ice maker will not fill. Use of a Reverse Osmosis system will void the warranty. Poor water quality can cause ice maker to fail or produce unacceptable cubes. Install a water filter to eliminate bad taste, odor, and visible contaminates. Mineral content or sand can restrict screen in water fill valve or particles of sand can keep valve from seating properly.

If water valve does not operate properly, the following could occur: no ice production, small or hollow ice cubes, flooding of ice container. Mineral content can cause lime build up in the mold, wicking of water over the mold and poor cube release. Mineral content can also restrict saddle valves. Verify water supply line is "ON", water pressure is not below 20 psi, saddle valve is fully open. Clear restrictions by fully closing and opening valve to dislodge sediment (if necessary, remove valve and enlarge pierced hole to 3/16" diameter with a drill and reinstall saddle valve). Ensure water line to unit is not pinched/kinked/clogged, ice is not present in inlet tube blocking water flow, water pressure is not above 120 psi.

Water fill can be increased by turning the adjustment screw counterclockwise and decreased by turning the screw clockwise. One half turn will adjust the fill by approximately two thirds of an ounce. If supply is OK replace water valve. If no voltage is present, verify harness. If OK, replace module.

## Thermal Cut Out (TCO)

The TCO is a safety device and must NOT be bypassed. If the TCO is found to be electrically open, this indicates an overheat in the ice maker and the ice maker must be replaced.



**⚠ WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Component Testing–Ice maker

| Module Ohmmeter Checks with No Power to Ice maker and Ejector Blades in End of Cycle | | | |
|---|---|---|---|
| **Test Points** | **Component** | **Module Position** | **Ohms** |
| L-H | Mold & Heater | Attached to Support | 264 |
| L-M | Motor | Separate from Heater | 16,100 |

| Module Voltage Checks with Motor or Test Light Power to Ice maker | | | |
|---|---|---|---|
| **Test Points** | **Component** | **Line Voltage** | **0 Volts** |
| T-Module | Power On | Power Off | Power Off |
| T-H | Bimetal | Open | Closed |
| L-H | Heater | On | Off |
| L-M | Motor | On | Off |
| N-V | Water Valve | On | Off |

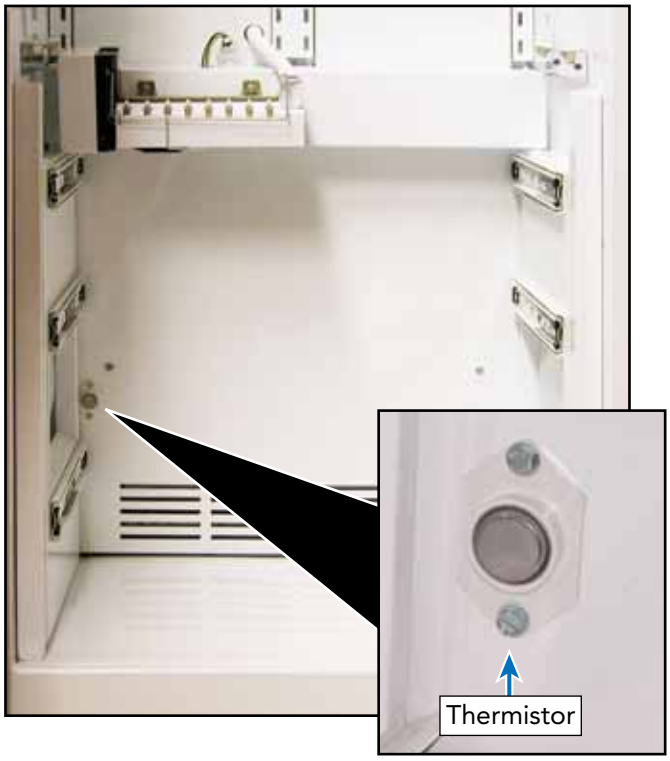
**⚠ WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Freezer Thermistor

The freezer thermistor is a device that reads freezer temperatures. The temperature of the freezer is measured and the thermistor cycles the compressor on and off to achieve the freezer setting selected by the end user. Readings can be checked in Service mode A or continuity at the LV board

To access the freezer thermistor, remove all shelves, drawers. Remove screws securing the thermistor, disconnect wiring, and repair/replace thermistor.



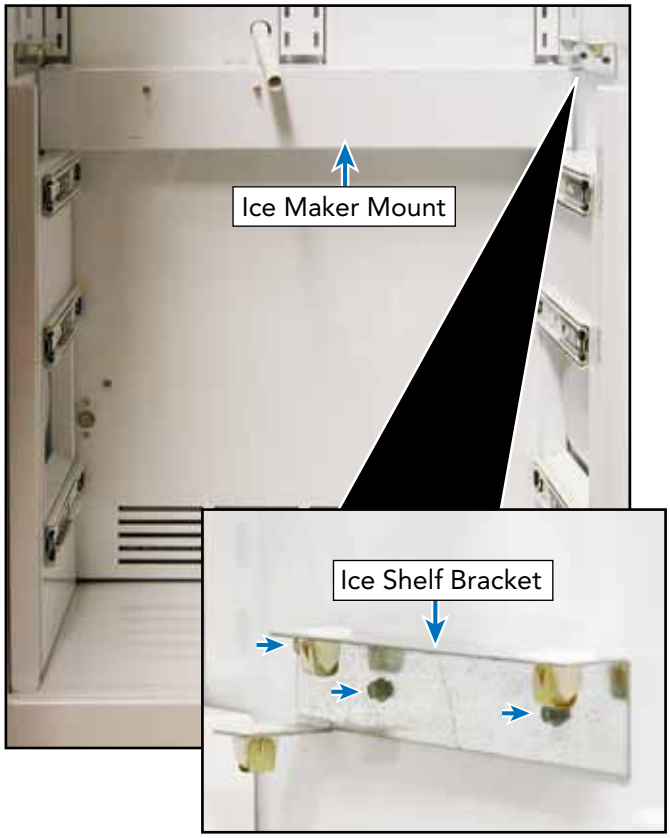

In order to check the Thermistor, refer to All Freezer Programing on page 27 and page 28 on reading the Binary Code to check the thermistor.
If you are experiencing the scrolling temp bars described on page 40 then the Thermistor needs to be removed and tested.

## Freezer Fan

The 30" unit uses a fan motor to pull air over the evaporator coil and circulate it throughout the unit.

The 36" unit uses two fan motors to pull air over the evaporator coil and circulate it throughout the unit.

1. To access the freezer fan, remove all shelves, drawers, ice maker *(see Ice Maker section)*



**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Freezer Fan (continued)

3. Remove lower light covers *(see lower light section)* and left and right trim pieces.

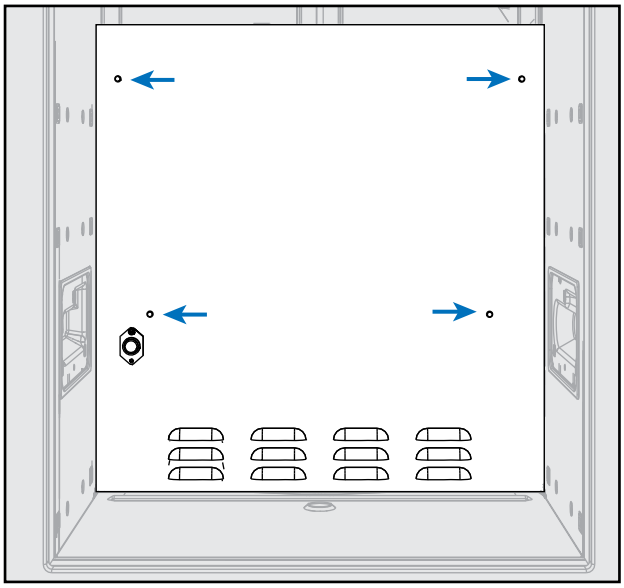
   ***Note**: The trim pieces and slide mounts have a clip attached that engages in a catch. To remove assembly, disengage clip from catch.*


4. Remove left and right slide mounts.

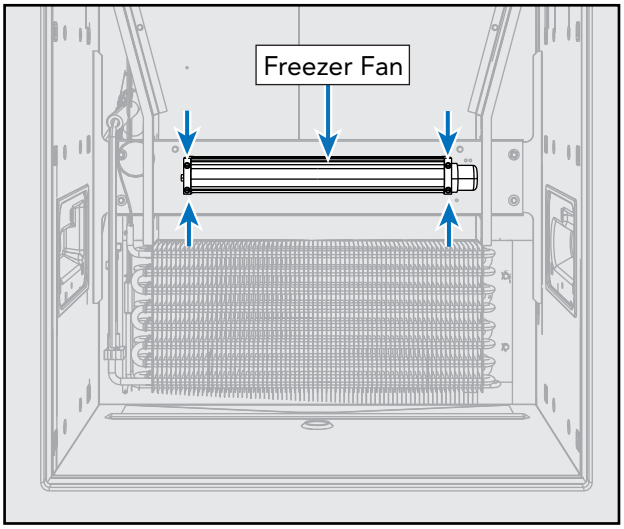


**30" Unit**

5a. Remove screws, remove rear cover, and disconnect wiring.



6a. Remove screws securing freezer fan, disconnect wiring, and repair/replace fan.




7. Reverse procedure to reinstall.

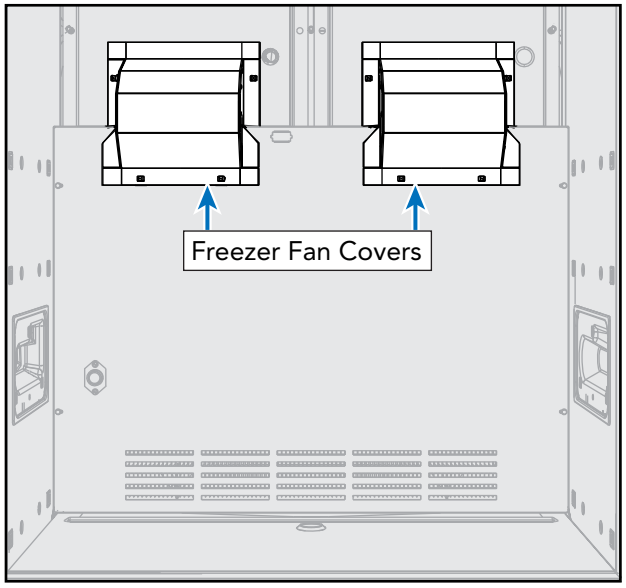
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

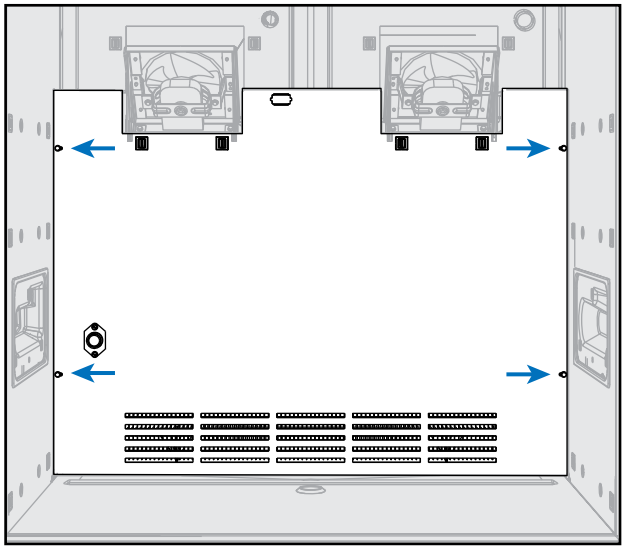
## Freezer Fan (continued)

### 36" Unit

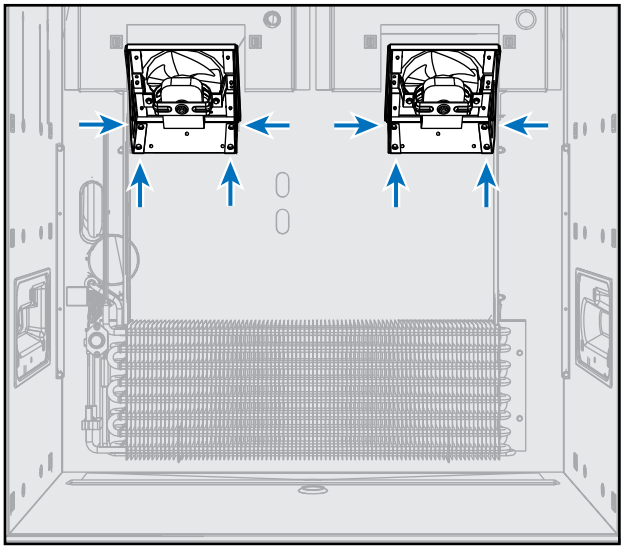
5b. Remove fan covers.




6b. Remove screws, remove rear cover, and disconnect wiring.



7b. Remove screws securing freezer fans, disconnect wiring, and repair/replace fans.



8b. Reverse procedure to reinstall.

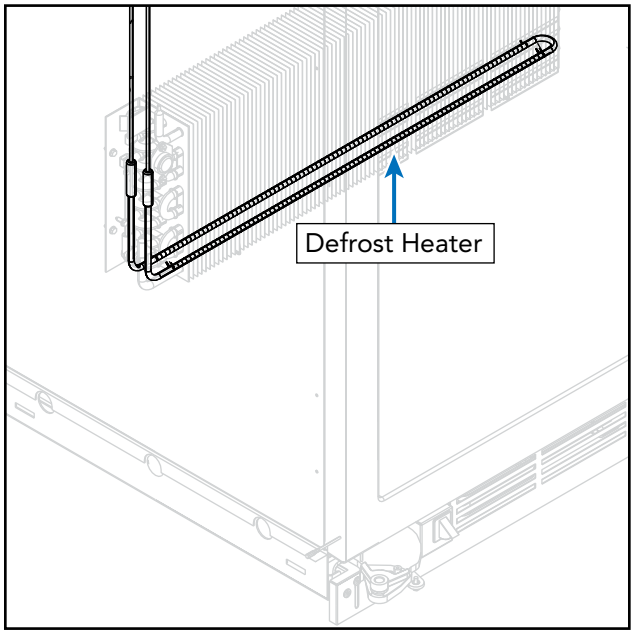
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Defrost Heater

The unit uses a heater to help remove ice build-up during the defrost cycle. When the defrost terminator closes, voltage is supplied to the heater via the control board.

To access the defrost heater, (see freezer fan access section). With back cover removed, the defrost heater is clipped to the bottom of the evaporator. Remove the clips, remove the heater, disconnect the wiring, and replace/repair as needed.

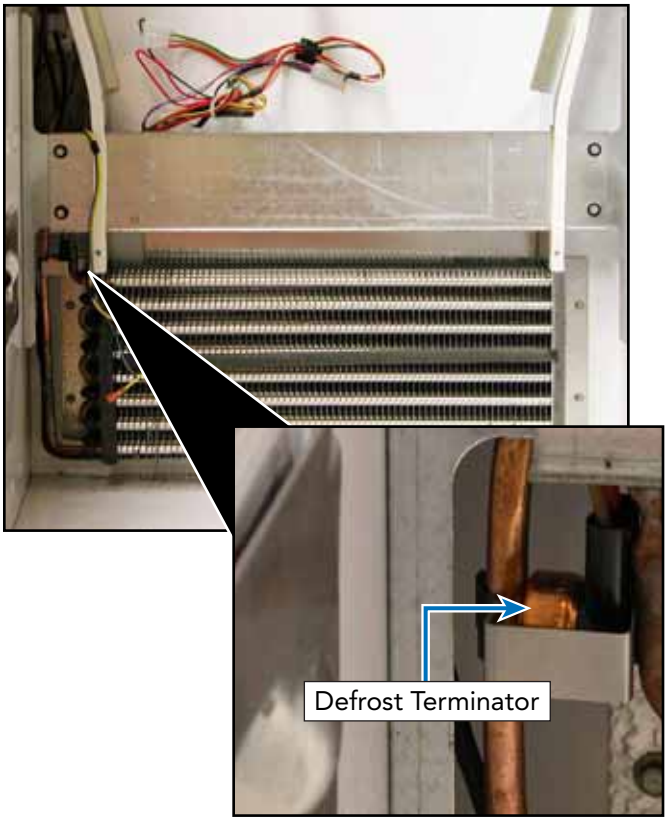



With the main power switch OFF, the defrost Heater can be tested by removing the orange wire off of terminal E6 on the HV board. Using an ohm meter, check the brown wire and Neutral and you should read approximately 30 Ω. During the defrost cycle line voltage passes through the Defrost Terminator the into terminal E5 (orange wire). With the defrost heater relay activated, the voltage exits the HV board from Terminal E6 (orange) to the heating element. If voltage is present at E5 but not at E6, then the Defrost relay is open. If there is 0 volts At E5, then the terminator is open.

## Defrost Terminator

The defrost terminator is a bimetal switch that is normally open. Below 20+/-8.5 ˚F, the terminator is closed. In order to test, first switch the main power switch to OFF, then locate the brown wire on E5 of the HV board. Unplug the wire and check for continuity between the brown wire and the black wire at E10. In the defrost cycle, this circuit will supply line voltage to the defrost relay.

To access the defrost terminator (see freezer fan access section). With rear cover off, defrost thermostat is located on the left side of the evaporator. Un-clip the terminator, disconnect wiring, repair/replace terminator.



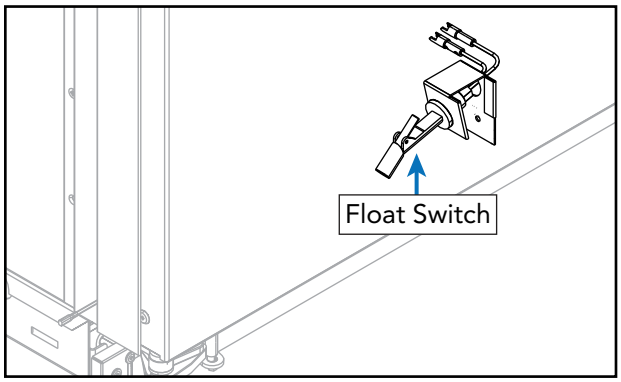
**WARNING**

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power to unit using power switch before servicing. Wires removed during disassembly must be replaced on proper terminals to insure correct earth ground and polarization. After servicing, reconnect power using power switch.

## Float Switch

The unit uses a float switch to activate the pan heater which in turn dissipates water from the defrost cycle. When the switch is in the down position, the switch reads open and when the switch is in the up position it reads continuity.

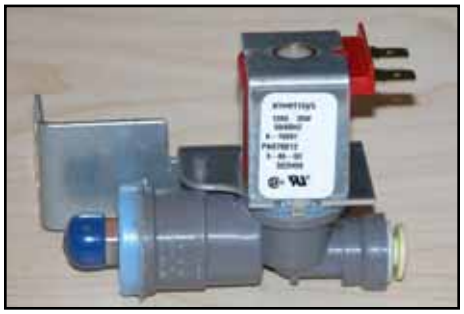
To access the float switch, remove the lower access panel and the switch is accessible on the left hand side. Loosen the securing nut, disconnect wiring, and repair/replace as necessary.




## Water Valve

The All Freezer uses a 120VAC 35 watt valve to supply water to the ice maker.

To access, remove the lower access panel and the valve is accessible on the left-hand side. To check the valve, ensure water supply, verify coil resistance approximately 192.2 Ω, and 120VAC.



## Drain Pan Heater

The unit uses a drain pan heater to vaporize condensate created by the refrigerator cooling process. The pan heater is energized once the float switch closes supplying 120VAC.

To access the drain pan heater, remove the lower access panel and the drain pan heater is accessible. Verify the resistance is approximately 790 Ω. Verify 120VAC to the heater and the float switch is closed. If the switch is closed and no voltage is supplied, verify wiring, power disconnect switch has not been turned "ON", and supply voltage. If voltage is supplied, the float switch is closed, and the heater does not energize, replace the heater.

## Troubleshooting Guide

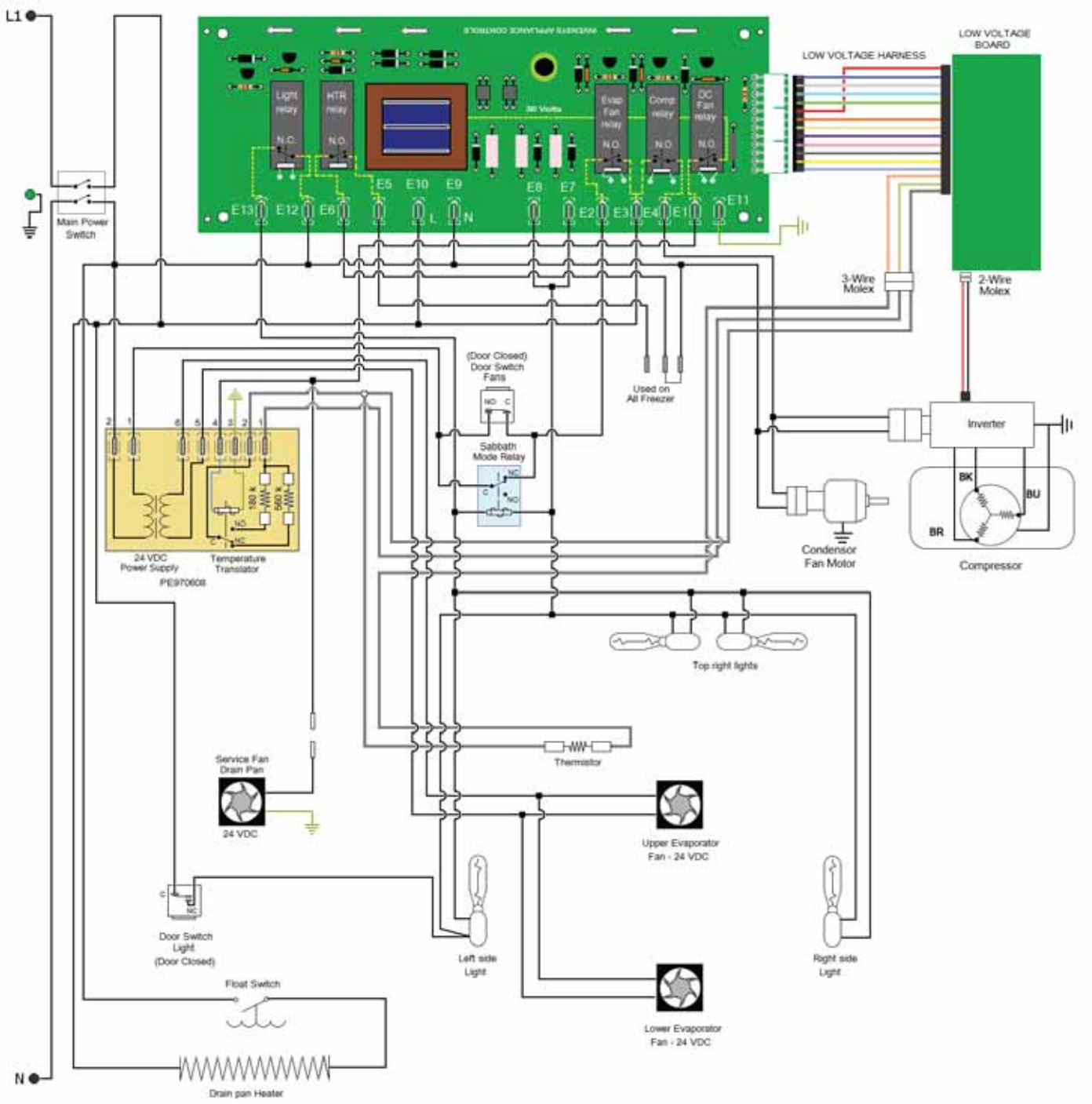
Below and on the following page are some general guides should a problem be detected. Please refer to the test procedures in this manual to determine the defective component.

| Problem | Probable Cause | Correction |
|---|---|---|
| Unit will not operate | Power supply<br>Circuit breaker<br>Power switch | Verify voltage<br>Reset breaker<br>Turn to the "ON" position |
| Water overflows defrost pan | Unit not level<br>Float switch<br>Pan heater | Ensure unit is level<br>Verify operation of float switch<br>Verify heater is working |
| Ice maker will not operate | Freezer too warm<br>Shut off arm<br>Open TCO or defective ice maker<br>Water valve<br>Water supply | Verify freezer temperature<br>Verify the arm is in the "ON" position<br>Replace Ice Maker<br>Verify valve operation<br>Verify water supply |
| Refrigerator too warm (AR Model) | Door opening<br>Warm food placed in unit<br>Control setting<br>Door seal<br>Airflow<br>Defective thermistor<br>Condenser/evaporator fan | Minimize door openings<br>Allow temperatures to stabilize<br>Move control to medium setting<br>Verify closure, replace if needed<br>Ensure airflow is not obstructed<br>Replace thermistor<br>Verify movement/operation of fan |
| Refrigerator too cold (AR Model) | Control setting<br>Control board<br>Defective thermistor<br>Airflow | Move control to medium setting<br>Verify proper operation<br>Replace thermistor<br>Verify airflow is not obstucted |
| Freezer too warm (AF Model) | Control setting<br>Door seal<br>Dirty condenser<br>Defective thermistor<br>Control board | Move control to medium setting<br>Verify closure, replace if needed<br>Clean condenser coil<br>Replace thermistor<br>Verify operation |
| Freezer too cold (AF Model) | Temperature setting<br>Defrost thermostat<br>Defective thermistor<br>Control board | Move to medium setting<br>Verify thermostat is closing<br>Replace thermistor<br>Verify operation |
| Unit runs continually | Control setting<br>Door seal<br>Dirty condenser<br>Condenser/evaporator fan<br>Defective thermistor<br>Control board | Move to medium setting<br>Verify closure, replace if needed<br>Clean condenser coil<br>Verify movement/operation of fan<br>Replace thermistor<br>Verify operation |
| Frost on evaporator | Defrost thermostat<br>Evaporator fan<br>Defrost heater<br>Door not sealing properly | Check indicator<br>Check connection and possible short open condition<br>Check connection and possible short open condition<br>Adjust door seal or replace. |
| Unit running and no lights | Sabbath Mode<br>Open circuit | Take out of Sabbath Mode<br>Repair/replace wiring |

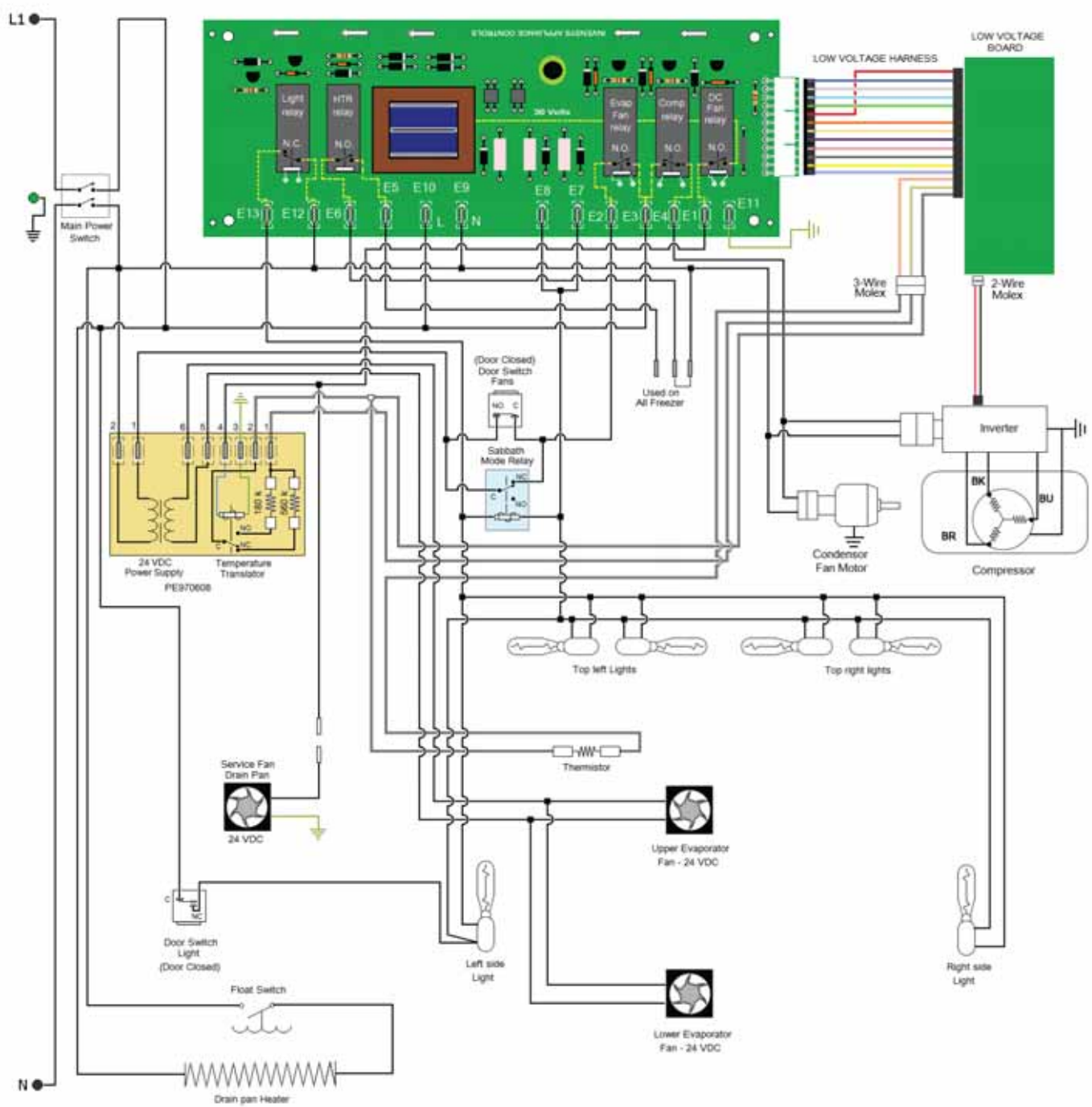
| Ice Production Issues | Action |
|---|---|
| Jammed cubes (small or oversized cubes) | Adjust fill level or level ice maker or refrigerator |
| Hollow cubes | Adjust low fill or remove restrictions in supply line<br>Level ice maker or refrigerator<br>Remove obstructions to air flow at fill end so it freezes before thermostat end |
| Ice build-up on ejector blades | Usually caused by hollow cubes<br>See hollow cubes above<br>Remove ice maker, thaw out |
| Cubes falling back into mold during ejection | If some cubes are small, check fill level<br>Check if fill cup is displaced and blocking ice<br>Fix fill cup or replace ice maker |
| Cubes falling over back of ice maker | Check if fill cup is displaced and blocking ice<br>Fix fill cup or replace ice maker |
| **Power Problems** | **Action** |
| No power to ice maker at connector socket | Determine discontinuity by tracing power |
| No power to water valve | Determine discontinuity by tracing power |
| **Ice Maker – No Water (AF Models)** | **Action** |
| No water to refrigerator | Turn on supply<br>Look for obstructions in supply line or valve |
| No water to ice maker | Look for obstructions in water valve or fill tube |
| Clogged water valve | Clean or replace water valve depending on type |
| Insufficient water to ice maker (with correct fill time) | Check for restrictions in supply line and valve, especially saddle valves |
| Low water pressure at supply | Increase water pressure to 20 – 120 PSI |
| Low water pressure at water valve | Look for restrictions in line |
| Excessive water pressure | Install pressure regulator and set to 60 PSI |
| Low water fill volume | Adjust water fill screw, clear obstructions in supply line or supply valve, or replace water valve |
| Excessive water fill volume | Adjust water fill screw, reduce water pressure, or replace water valve |
| Water overflows fill cup | Reposition fill-tube in fill cup or remove obstruction in fill cup |
| Water overflows mold | Adjust water fill screw, level ice maker or refrigerator, reduce water pressure, or replace water valve or ice maker |
| Leaky water valve | Tighten connections or replace water valve |
| **Temperature Problems** | **Action** |
| Freezer too warm (AF Model) | Adjust freezer setting or repair refrigerator |

| Ice maker Problems | Action |
|---|---|
| Raised shut-off arm | Lower shut-off arm to "ON" position |
| Broken  or bent shut-off arm | Repair arm or replace ice maker |
| Shut-off arm stuck or obstructed | Remove obstruction |
| Ice maker not level | Check level of refrigerator first, then level ice maker |
| Can't level ice maker | Level refrigerator first, then try again |
| Open thermostat (won't close below 17˚F) | Replace ice maker |
| Closed thermostat (won't open above 32˚F) | Replace ice maker |
| Heater not staked in mold | Replace ice maker |
| Won't cycle test with power available | Replace ice maker |
| Won't eject ice with power available | Replace ice maker |

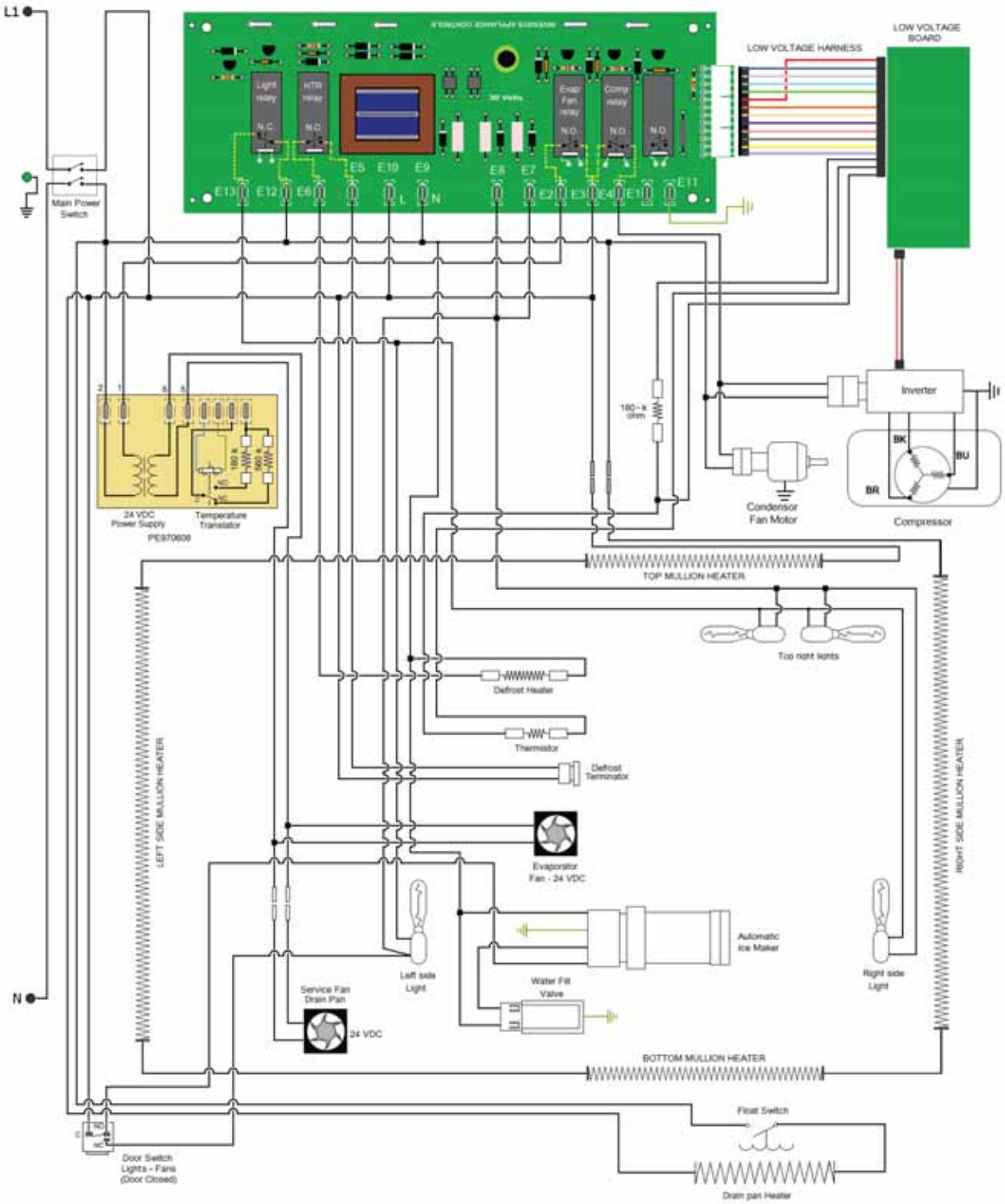
## 30" AR Schematic



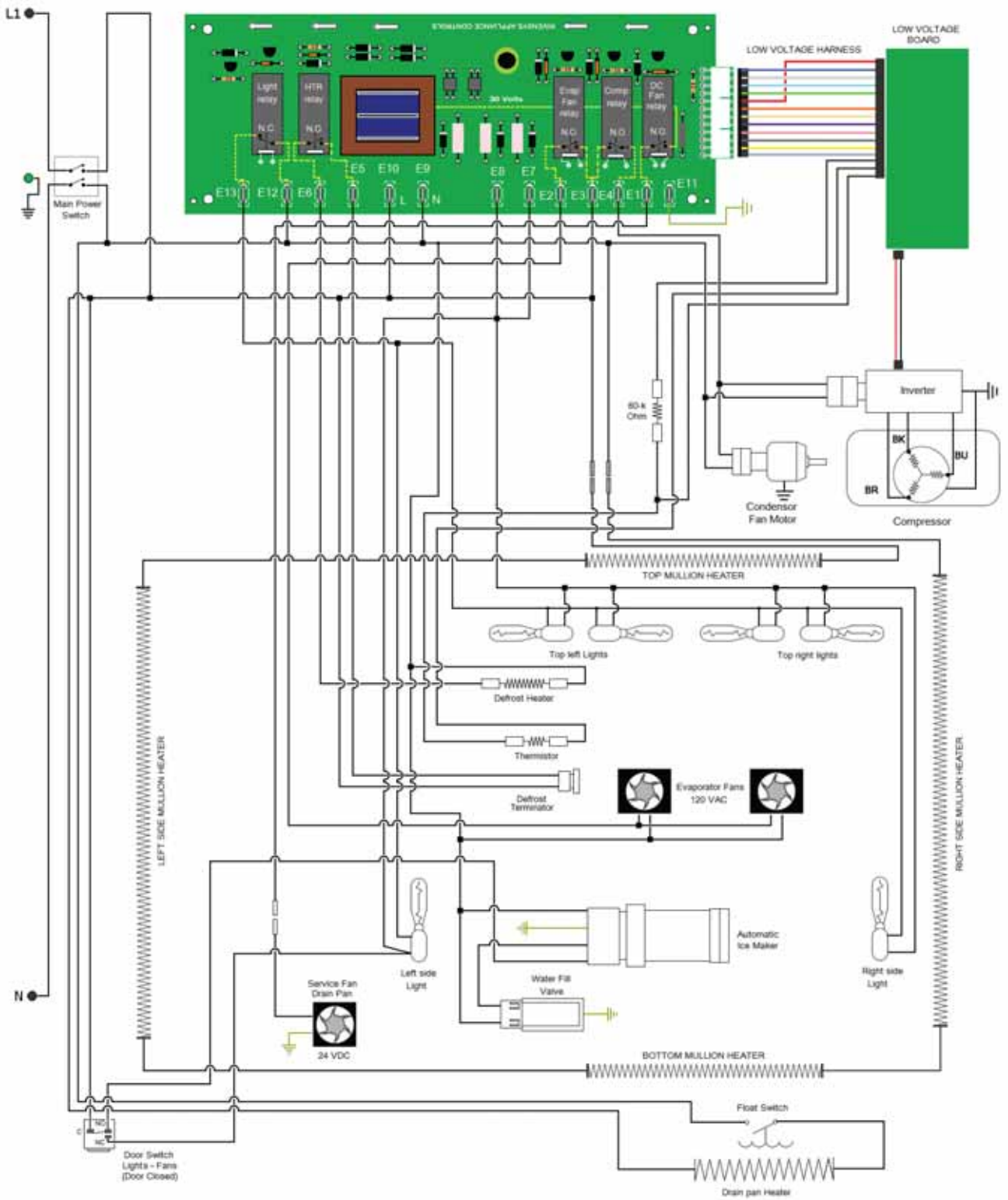
## 36" AR schematic



## 30" AF Schematic



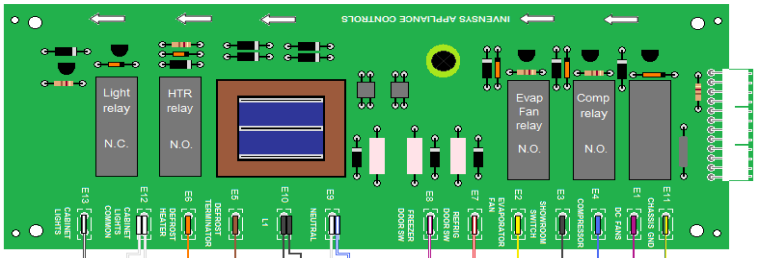
## 36 AF Schematic



## Wiring and Component Testing–High Voltage Board 30" and 36" AR

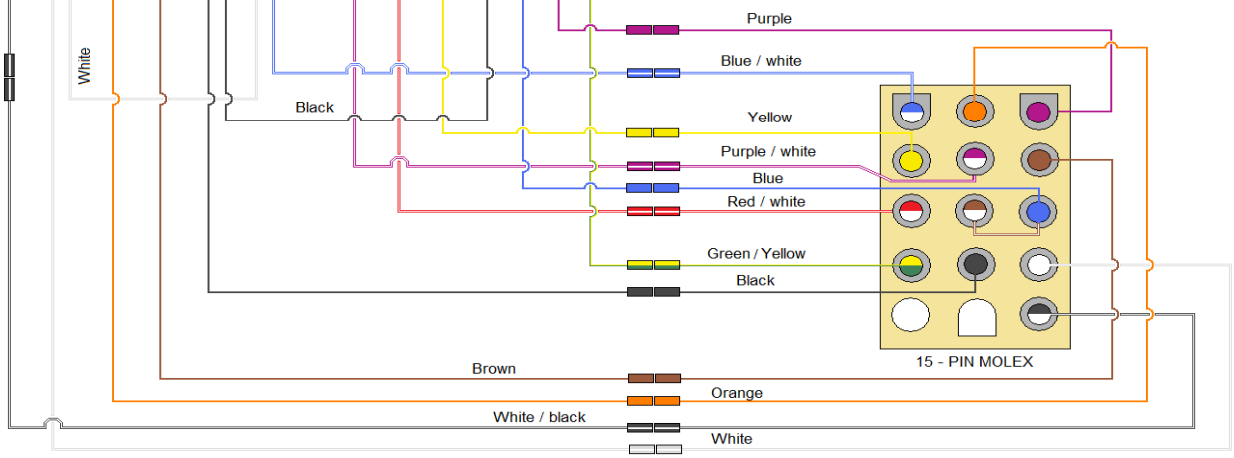
| Terminal | Terminal | Description | Wire Colors | Ω - V | Volts | Notes |
|---|---|---|---|---|---|---|
| 1 | 12 | Relay - Temperature Translator | Purple to Green w/Yellow | 1.63k Ω | 24 VDC | |
| 1 | 12 | Relay - Temperature Translator w/Service Fan | Purple to Green w/Yelllow | 1.6m Ω | 24 VDC | |
| 2 | 3 | Closed loop on AR | Orange to Blue w/White | ∞ or Ω | 120 VAC | |
| 4 | ★ | Capped off on AR models ***Heater on AF*** | Brown | 0 Ω | 0 or 120 V | |
| 5 | 11 | Line in from left door switch | Purple w/White to Black | 0 or Ω | 0 or 120 V | **NOTE 1** |
| 6 | 10 | Line out to Primary of Power supply | Yellow to White | 17m Ω | 120 V | **NOTE 2** |
| 7 | 10 | Line out to Inverter board | Blue to White | 2m Ω | 120 VAC | |
| 8 | 10 | Line out to Condenser fan motor | Brown w/White to White | 550 Ω | 120 VAC | |
| 9 | 11 | Line in from right door switch | Red w/White to Black | 0 or ∞ | 120 VAC | **NOTE 1** |
| 11 | 10 | Main in to HV Board | Black to White | N/A | 0 or 120 V | |
| 13 | ★ | Neutral OUT to cavity light | White w/Black | N/A | N/A | |

Chart for cable view layout




***Note 1:***
*Both terminal 5 (VT/WH) wire and terminal 9 (RD/WH) wire are connected in the main harness. Depending on the model, both will register line voltage when door is closed and main switch is on.*

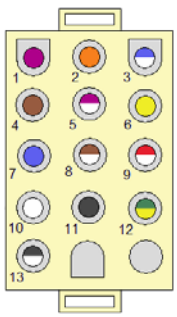
***Note 2:***
*If 0 Ω are read, Primary on Power Supply is defective. If 17m Ω is read with door closed but 0 Ω with door open, then Sabbath Mode relay contacts are defective.*




| Molex Connection | Wire Colors | HV Board connection |
|---|---|---|
| 1 | Purple | E1 |
| 2 | Orange | E6 |
| 3 | Blue w/White tracer | E9 |
| 4 | Brown | E5 |
| 5 | Purple w/White tracer | E8 |
| 6 | Yellow | E2 |
| 7 | Blue | E4 |
| 8 | Brown w/White tracer | E4 |
| 9 | Red w/White tracer | E1 |
| 10 | White | E12 |
| 11 | Black | E10 |
| 12 | Green w/Yellow tracer | E11 |
| 13 | White w/Black tracer | E13 |

Chart above for Cable view below

Housing View

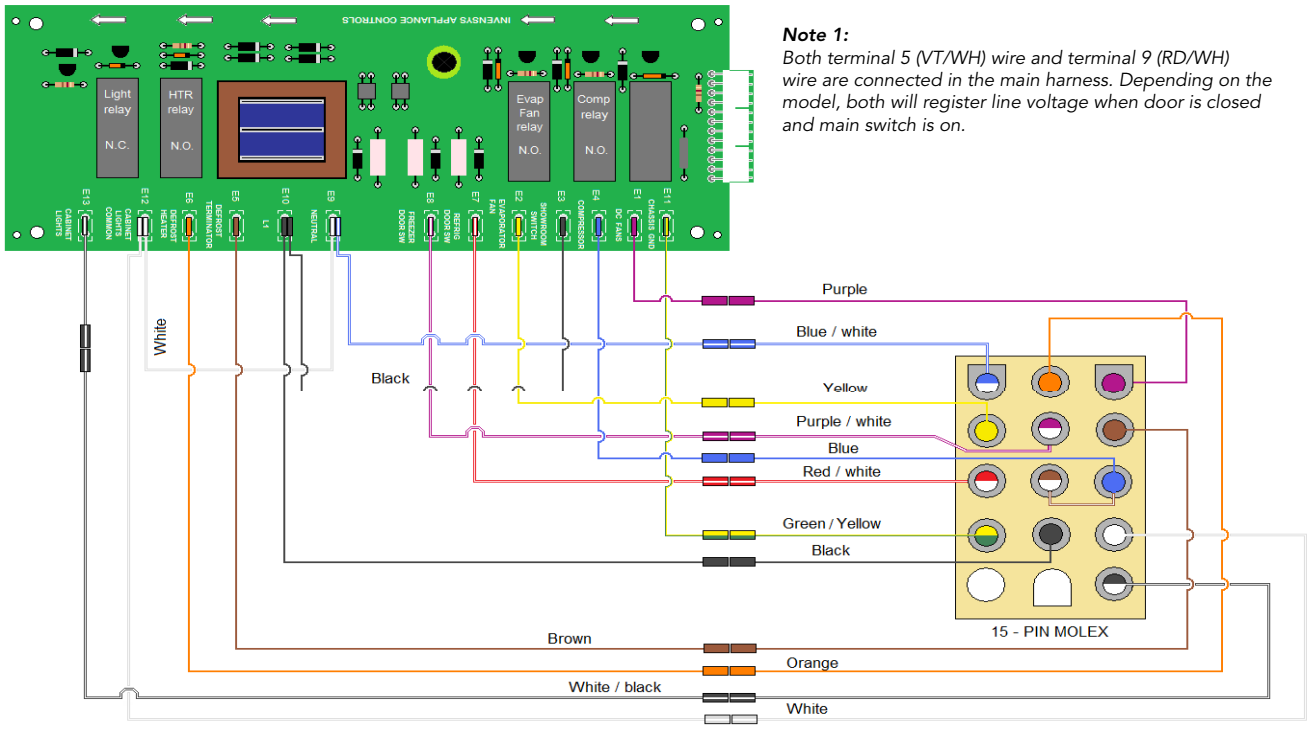


Cable View

## Wiring and Component Testing–High Voltage Board 30" AF

| Terminal | Terminal | Description | Wire Colors | Ω - V | Volts | Notes |
|---|---|---|---|---|---|---|
| 1 | * | Capped off on AF30 models | Purple | | | |
| 2 | 3 | Defrost Heater | Orange to Blue w/White | 30.3 Ω | 120 VAC | |
| 4 | 11 | Defrost Bimetal | Brown to Black | 0 or ∞ | 0 *or* 120 V | |
| 5 | 11 | Line in from left door switch | Purple w/White to Black | 0 or ∞ | 0 *or* 120 V | **NOTE 1** |
| 6 | 10 | Line out to Primary of Power supply | Yellow to White | 17m Ω | 120 V | |
| 7 | 10 | Line out to Inverter board | Blue to White | 2m Ω | 120 VAC | |
| 8 | 10 | Line out to Condenser fan motor | Brown w/White to White | 550 Ω | 120 VAC | |
| 9 | 11 | Line in from right door switch | Red w/White to Black | 0 or ∞ | 120 VAC | **NOTE 1** |
| 11 | 10 | Main in to HV Board | Black to White | N/A | 0 *or* 120 V | |
| 12 | * | Ground | Green w/Yellow | | | |
| 13 | * | Neutral OUT to cavity lights | White w/Black | N/A | N/A | |

*Chart for cable view layout below*




***Note 1:***
*Both terminal 5 (VT/WH) wire and terminal 9 (RD/WH) wire are connected in the main harness. Depending on the model, both will register line voltage when door is closed and main switch is on.*

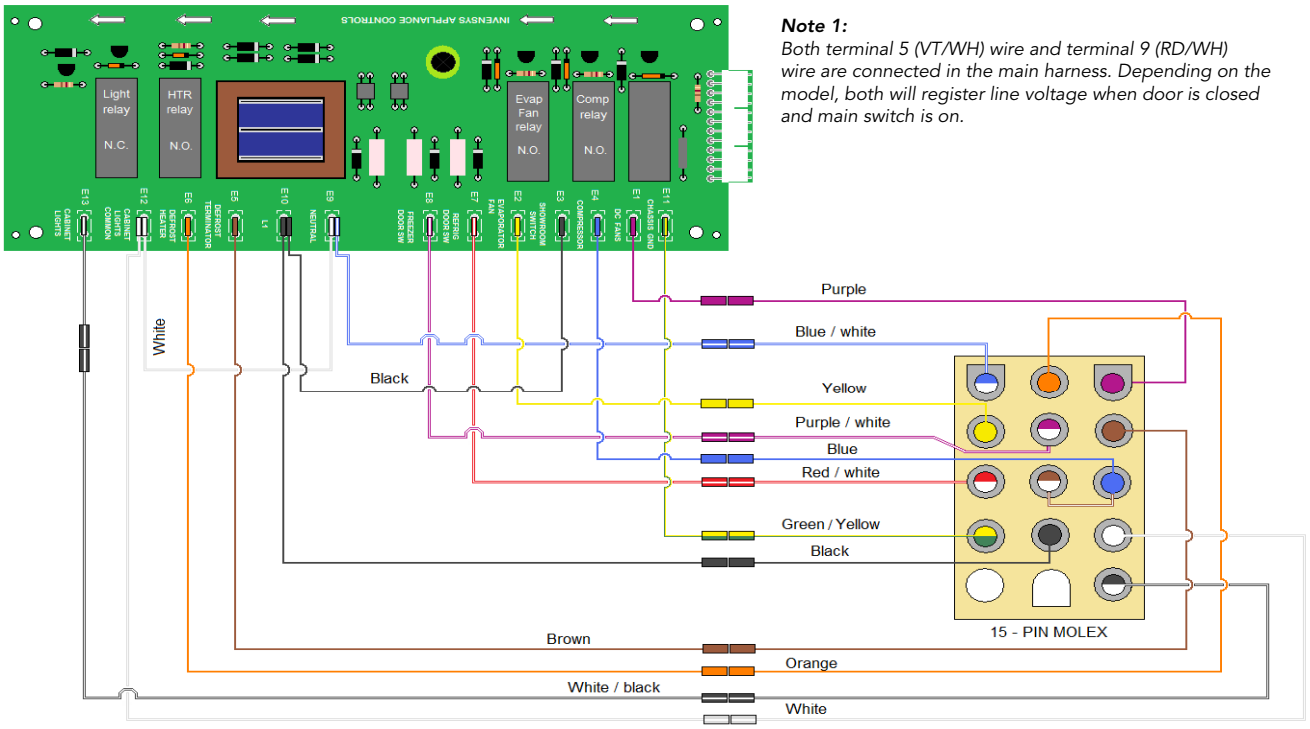
| Molex Connection | Wire Colors | HV Board connection |
|---|---|---|
| 1 | Purple | E1 |
| 2 | Orange | E6 |
| 3 | Blue w/White tracer | E9 |
| 4 | Brown | E5 |
| 5 | Purple w/White tracer | E8 |
| 6 | Yellow | E2 |
| 7 | Blue | E4 |
| 8 | Brown w/White tracer | E4 |
| 9 | Red w/White tracer | E1 |
| 10 | White | E12 |
| 11 | Black | E10 |
| 12 | Green w/Yellow tracer | E11 |
| 13 | White w/Black tracer | E13 |

*Chart above for Cable view below*


## Wiring and Component Testing–High Voltage Board 36" AF

| Terminal | Terminal | Description | Wire Colors | Ω - V | Volts | Notes |
|---|---|---|---|---|---|---|
| 1 | Ground | Service fan | Purple | 0 or 3.23 mΩ | 24 VDC | |
| 2 | 3 | Defrost Heater | Orange to Blue w/White | 30.3 Ω | 120 VAC | |
| 4 | 11 | Defrost Bimetal | Brown to Black | 0 or ∞ | 0 *or* 120 V | |
| 5 | 11 | Line in from left door switch | Purple w/White to Black | 0 or ∞ | 0 *or* 120 V | **NOTE 1** |
| 6 | 10 | Evaporator Fan Motors (2) | Yellow to White | | 120 V | |
| 7 | 10 | Line out to Inverter board | Blue to White | 2m Ω | 120 VAC | |
| 8 | 10 | Line out to Condenser fan motor | Brown w/White to White | 550 Ω | 120 VAC | |
| 9 | 11 | Line in from right door switch | Red w/White to Black | 0 or ∞ | 120 VAC | **NOTE 1** |
| 11 | 10 | Main in to HV Board | Black to White | N/A | 0 *or*120 V | |
| 12 | ★ | Ground | Green w/Yellow | | | |
| 13 | ★ | Neutral OUT to cavity lights | White w/Black | N/A | N/A | |

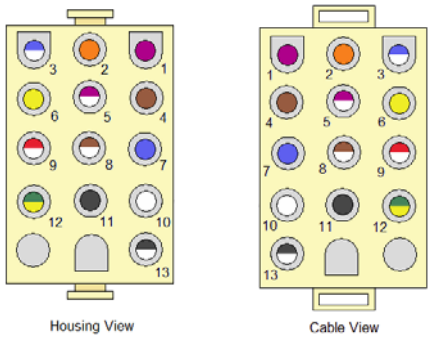
*Chart for cable view layout*



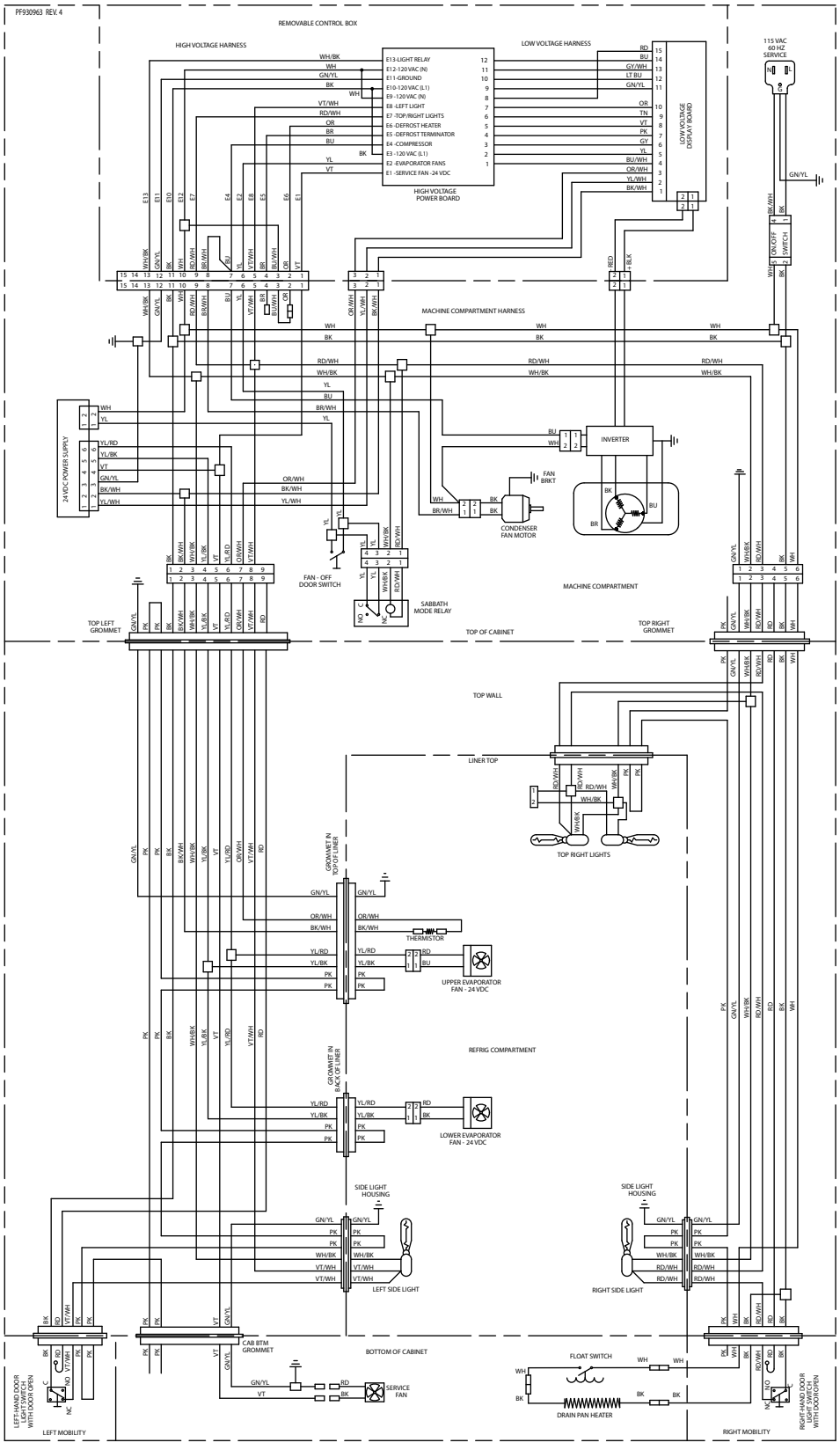

***Note 1:***
*Both terminal 5 (VT/WH) wire and terminal 9 (RD/WH) wire are connected in the main harness. Depending on the model, both will register line voltage when door is closed and main switch is on.*

| Molex Connection | Wire Colors | HV Board connection |
|---|---|---|
| 1 | Purple | E1 |
| 2 | Orange | E6 |
| 3 | Blue w/White tracer | E9 |
| 4 | Brown | E5 |
| 5 | Purple w/White tracer | E8 |
| 6 | Yellow | E2 |
| 7 | Blue | E4 |
| 8 | Brown w/White tracer | E4 |
| 9 | Red w/White tracer | E1 |
| 10 | White | E12 |
| 11 | Black | E10 |
| 12 | Green w/Yellow tracer | E11 |
| 13 | White w/Black tracer | E13 |

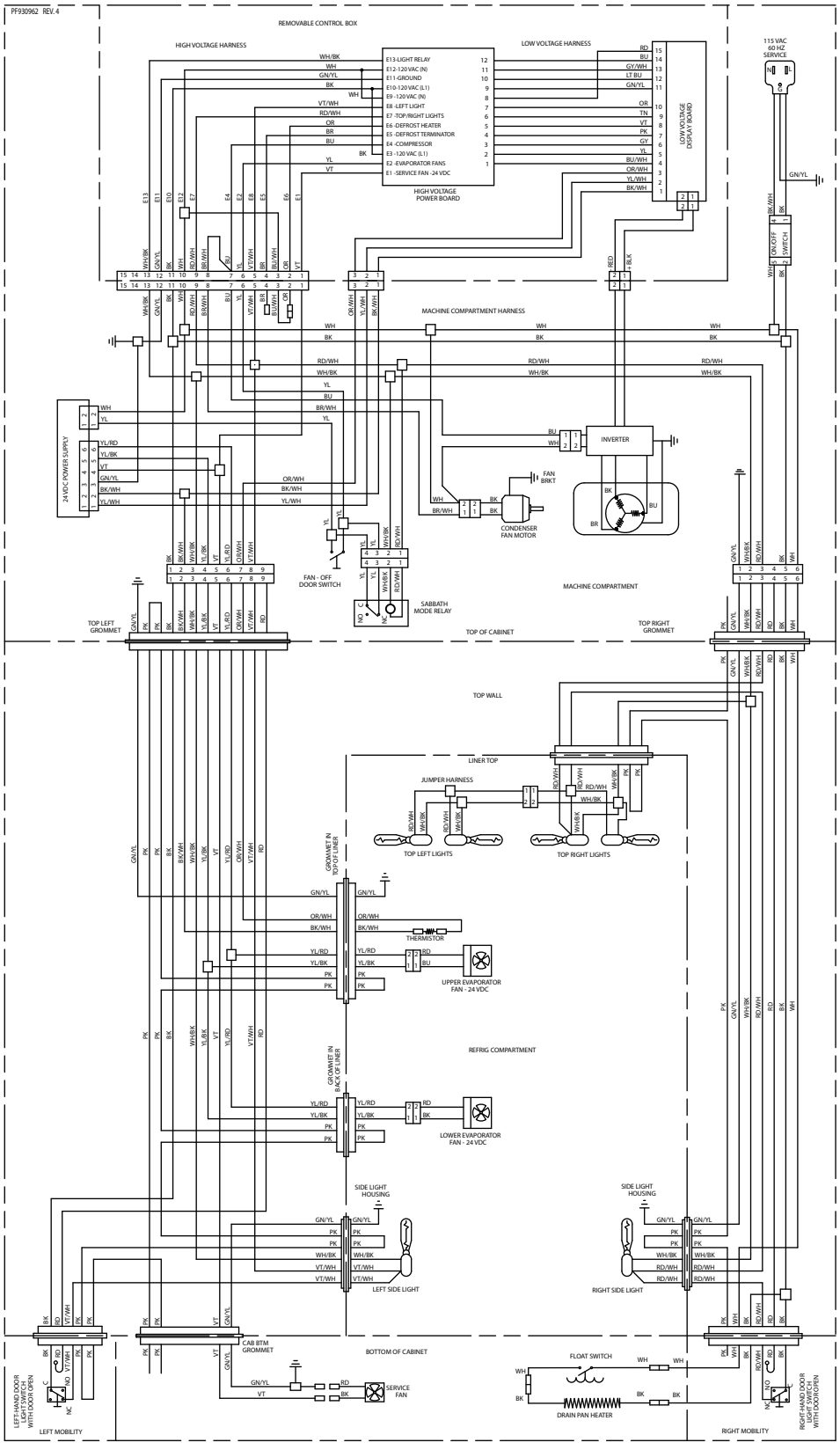
*Chart above for Cable view below*



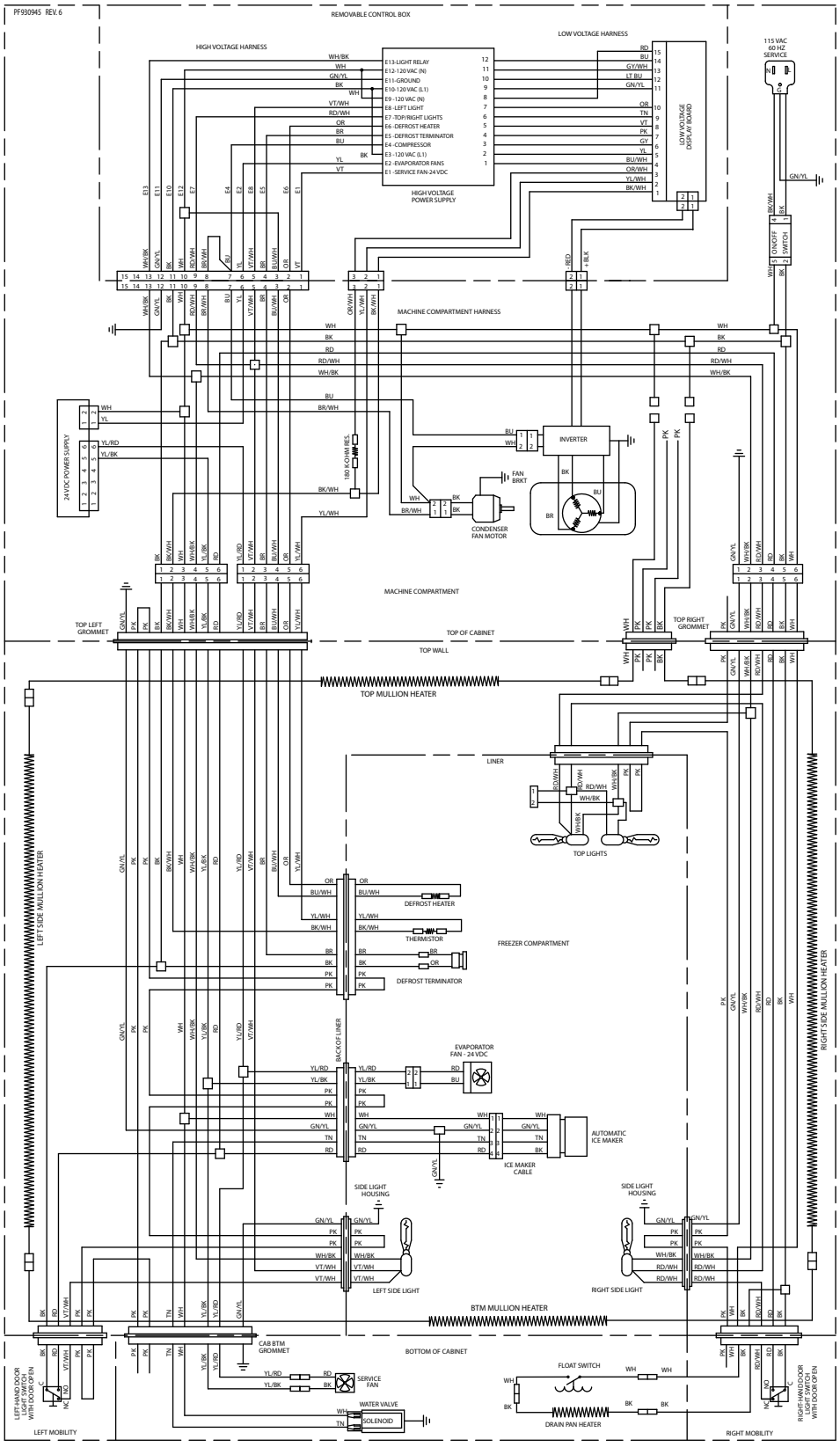
## Wiring Diagram–30” All Refrigerator



## Wiring Diagram–36” All Refrigerator



## Wiring Diagram–30” All Freezer



## Wiring Diagram–36” All Freezer