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## **Operating & Maintenance Manual for Islandaire Packaged Terminal Thru-Wall Air Conditioners & Heat Pumps**

**\*THIS BOOK CONTAINS INFORMATION ON THE OPERATION OF YOUR UNIT. KEEP IN A SAFE PLACE FOR READY REFERENCE. SHOULD YOU REQUIRE ANY FURTHER INFORMATION, CONTACT YOUR DEALER OR OUR TECHNICAL SUPPORT DEPARTMENT AT 1-800-886-2759.**

THE INFORMATION IN THIS MANUAL MUST BE FOLLOWED. IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN VOID WARRANTY, CAUSE PROPERTY DAMAGE, PERSONAL INJURY, OR LOSS OF LIFE. A QUALIFIED INSTALLER OR SERVICE AGENCY MUST PERFORM INSTALLATION OR SERVICE. ALL LOCAL AND NATIONAL CODES MUST BE ADHERED TO WHEN INSTALLING THIS PRODUCT!

TO MAINTAIN WARRANTY COVERAGE THE CONDENSER COIL SURFACE MUST BE CLEANED REGULARLY, AND THE ROOM AIR FILTER MUST BE CLEANED REGULARLY. **USE OF EXTENSION CORDS IS NOT RECOMMENDED AND WILL VOID WARRANTY COVERAGE. CAUTION:** HAZARDOUS MOVING PARTS. DO NOT OPERATE WITH FRONT PANEL REMOVED. ELECTRIC SHOCK HAZARD. DISCONNECT POWER BEFORE SERVICING THE UNIT.

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# 1

## **RECEIVING UNITS**

Upon receipt of equipment, check carton for visible damage. Make a notation on the shipper's delivery ticket of any damages before signing. If there is any evidence of rough handling, the cartons should be opened at once to check for concealed damage. If any damage is found, notify the carrier within 48 hours to establish your claim, and request an inspection report from the carrier. The warranty claims department should then be contacted.

Do not store or transport the unit on end. For proper storing, each carton is marked with "up" arrows. Upon receipt of this equipment, if you notice that the units were not stacked properly during transportation, make a notation on the shipper's delivery ticket, and be sure the unit is in normal upright position 24 hours before operating.

In the event that elevator transfer makes up-ended positioning unavoidable, absolutely insure that the unit is in the normal upright position for at least 24 hours before operating. **IGNORING THIS INSTRUCTION MAY VOID THE WARRANTY.**

The units must be handled with care at all times. Rough handling can damage internal electrical and refrigeration components.

# 2

## **INSTALLATION CHECKLIST**

The following instructions cover the installation of replacement PTAC units where existing wall sleeves are utilized. Instructions for the installation of a new wall sleeve are not covered in this manual. Installation and maintenance should be performed by qualified personnel who are familiar with local codes and regulations, and are experienced with this type of equipment.

- All electrical connections and circuits must be installed in compliance with and conform to the National Electrical Code (USA), Canadian Electrical Code (Canada), and local codes that have jurisdiction.
- Inspect existing wall sleeve. (*Refer to installation note 1; pg.4*)
- Ensure that supply air outlet is properly sealed to discharge of enclosure. (*Refer to installation note 2; pg.4*)
- Electrical power is disconnected during installation or service.
- Condenser air inlet and outlet **MUST** be clear and free of obstructions. (*Refer to installation note 3; pg.4*)
- Condenser seals and baffles, where applicable, must be installed. (*Refer to installation notes 4 & 5; pg.4*)
- Ensure that drapes, bed, bedspread, furniture, etc. **DO NOT** block either return or discharge air openings. (*Refer to installation note 6; pg.5*)







# INSTALLATION NOTES

- 1- Inspect the existing wall sleeve to insure it is not damaged and that it is securely mounted in the wall. Use a level gauge to insure the sleeve is pitched properly. Be sure that any gaskets originally mounted on the wall sleeve that are missing or worn be replaced.
- 2- Any gaps between the discharge and the enclosure outlet will cause the unit to short cycle. This condition will shorten compressor life. Small gaps should be sealed with foam rubber gaskets. Larger gaps may require a sheet metal collar (*consult installing contractor*).
- 3- A Packaged Thru-Wall Air Conditioner must reject its heat to the outside air in the cooling mode. As a result, any obstruction that impedes this heat transfer will shorten compressor life. Warranty issues related to compressor failure as a result of these conditions will not be covered under warranty.
- 4- Some Thru-Wall units may be shipped from the factory with foam rubber seals applied to the plate flanges of the condenser coil. The purpose of these seals is to fill the gap between the condenser coil and the outdoor louver. The unit must be slid completely into the wall sleeve to insure proper seating of these seals. It is **important** that these seals remain intact during installation. Without these seals, compressor life may be shortened. Warranty issues related to compressor failure due to missing condenser coil seals will not be covered under warranty.
- 5- Certain installations with extended sleeves will require the use of baffles. These sheet metal baffles are attached to the condenser coil flange and have seals on their outer surface. These seals will seat against the outdoor grill when the unit is slid into an extended wall sleeve. It is **important** that units installed in extended wall sleeves have these baffles installed. Without these baffles, compressor life may be shortened. Warranty issues related to compressor failure due to missing condenser coil baffles will not be covered under warranty.

*(Installation Notes, cont'd)*

- 6- Ensure that there is adequate clearance for servicing and proper operation. A minimum of 18 inches in front of the chassis is required. Provide additional space for service technician to work on the unit.
- 7- Units must be installed in accordance with all applicable codes.
- 8- To prevent damage, this unit should **NOT** be operated to provide supplementary heating & cooling during the construction period. The unit is designed for operation in a normal indoor environment. Operating this unit in unenclosed space and exposure to construction environment may result in permanent damage.
- 9- Inspect the unit specification label in order to identify the model number. At this time voltage, capacity, and other special features should be noted.
- 10- Be sure that the amperage of the dedicated electrical service to the unit is correct. **Use of extension cord is NOT recommended and will void warranty.** (*Refer to Table 1*)
- 11- After the unit is installed in the sleeve, the shipping carton can be cut down and secured to the unit to protect it during the construction phase.

## Electrical Circuit Ratings

Line Voltage	Rated Amperage	Receptacle Configuration	Receptacle Number	Maximum Amperage
115	15		NEMA 5-15P	12
115	20		NEMA 5-20R	16
208/230	15		NEMA 6-15R	12
208/230	20		NEMA 6-20R	16
208/230	30		NEMA 6-30R	24
277	20		NEMA 7-20R	16

*Note: Use HACR circuit breaker or time delay fuse.*

**Table 1**

# 3

## OPERATING INSTRUCTIONS

This manual will describe the three types of control systems found on most Islandaire units:

1. Mechanical Pushbutton Switch (5 button)
2. Base Electronic Controls (keypad switch)
3. Intellitemp Electronic Controls (keypad switch)

*Note: For operation of systems other than those referenced above consult installing contractor.*

### **1– Mechanical Pushbutton Switch Operation (5 button) (Refer to Fig. 1)**

**Overview:** Mode selection is determined by pushbutton switch. In heating and cooling modes, desired room temperature is maintained by the thermostat setting. Set thermostat to desirable comfort level.

#### **Mechanical Pushbutton Switch Modes (5 button):**

**OFF**– All modes are off. If you turn the unit off in cooling or heat pump mode, wait 2 minutes before restarting.

**HI COOL**– Enables cooling mode. Compressor will cycle based on thermostat setting. Fan will be on constant high speed.

**LO COOL**– Enables cooling mode. Compressor will cycle based on thermostat setting. Fan will be on constant low speed.

**HEAT**– Enables heating mode. Heating and low fan speed will cycle based on thermostat setting.\*

**FAN**– Enables high fan speed operation only.

\* Note: On certain models, fan is constant in heating mode. Consult factory.



## 5 button switch

Setting Room Temperature

1-Set desired mode at Pushbutton Switch (heat or cool).

2-Turn thermostat knob to warmer (red) or cooler (blue) setting.

3-When desired temperature is reached, slowly turn knob back to the center position. When you hear a click, stop turning the knob.

4-Leave knob in this position; unit will maintain set point.

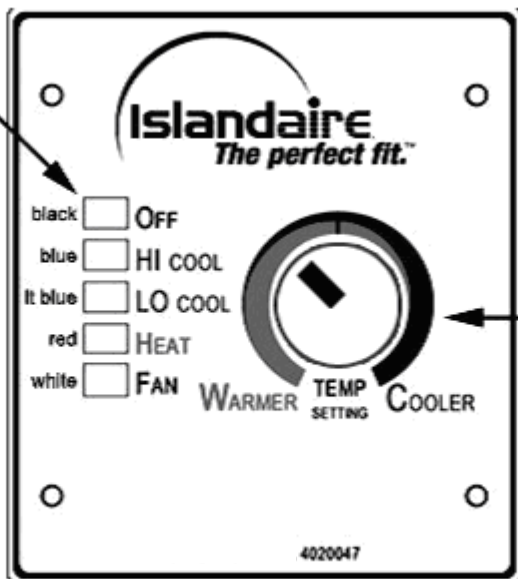


Fig. 1

Typical configuration layout may vary

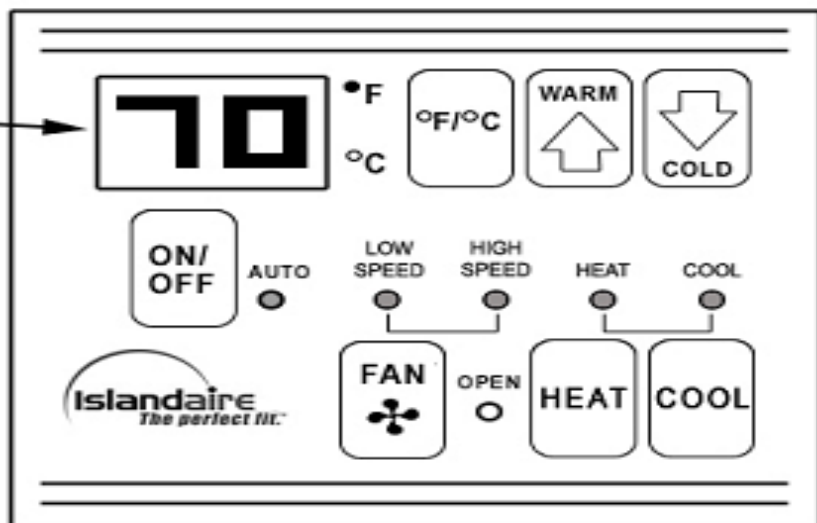
## 2- Base Electronic Control Operation (*Refer to Fig. 2*)

### Turning Unit ON for Heating and Cooling:

- 1- Press **POWER** button.
- 2- Press the **MODE** button, select the operation mode: heat/cool/fan.
- 3- Press **WARM** or **COLD** button, to set your desired temperature. The setting temperature range is 60-90°F(16-32°C).
- 4- Press the **FAN SPEED** button, to set your desired air flow rate: high/low/auto.

*NOTE: When unit is shut off, current settings are saved in memory. When unit is turned back on, these settings are restored.*

**Temperature  
Display**



**Fig. 2**

**Base Electronic Control Keypad**

### 3. Intellitemp Electronic Control Operation (Refer to Fig. 3)

#### **Turning Unit ON for Heating and Cooling:**

- 1- Press **ON/OFF** key (*room temperature will appear in display*)
- 2- Adjust set point by pressing WARM (up arrow) or COLD (down arrow) key. (*While adjusting, temperature set point will appear in display.*)
- 3- Mode operation (*HEAT or COOL*) will automatically be selected based on room temperature and set point temperature.
- 4- Select fan mode by pressing FAN key. Select constant fan operation (*1 of 4 speeds LOW to HIGH speed*). Selecting **AUTO** will turn fan off.

#### **Turning Unit OFF:**

- 1- Press **ON/OFF** key (*temperature display disappears*).
- 2- To turn fan off, press **FAN** key until fan is in **AUTO**.

#### **Fan Only Operation:**

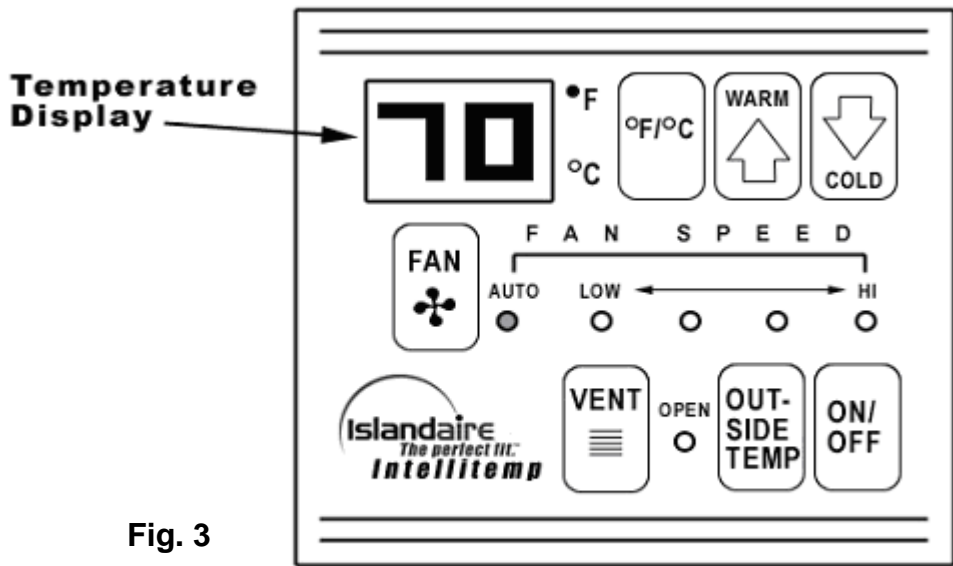
- 1- Turn unit off by pressing ON/OFF key (*temperature display disappears*).
- 2- Select fan mode by pressing FAN key. Select constant fan operation (*1 of 4 speeds LOW to HIGH speed*). Selecting **AUTO** will turn fan off.

#### **Accessing Outside Air Temperature:**

Hold OUTSIDE TEMP key. Outside air temperature will appear in display whenever this key is held down and unit is on.

#### **Opening Outside Air Vent:**

Pushing the VENT key while the unit is in the cooling mode will open the outside air vent.



**Fig. 3**

**Intellitemp Electronic Control Keypad**

*NOTE: When unit is shut off, current settings are saved in memory. When unit is turned back on, these settings are restored.*

### Intellitemp Mode Selection (Refer to Fig. 4)

On the Intellitemp control, the mode of operation (cool, heat, or auto) may be selected by the user by pressing and holding the VENT and ON/OFF keys simultaneously. The display will scroll through the modes described below. When the desired mode is in the display, release the keys and that mode will be locked in. In AU (auto) the control will automatically cycle between either heating or cooling to maintain set point temperature.

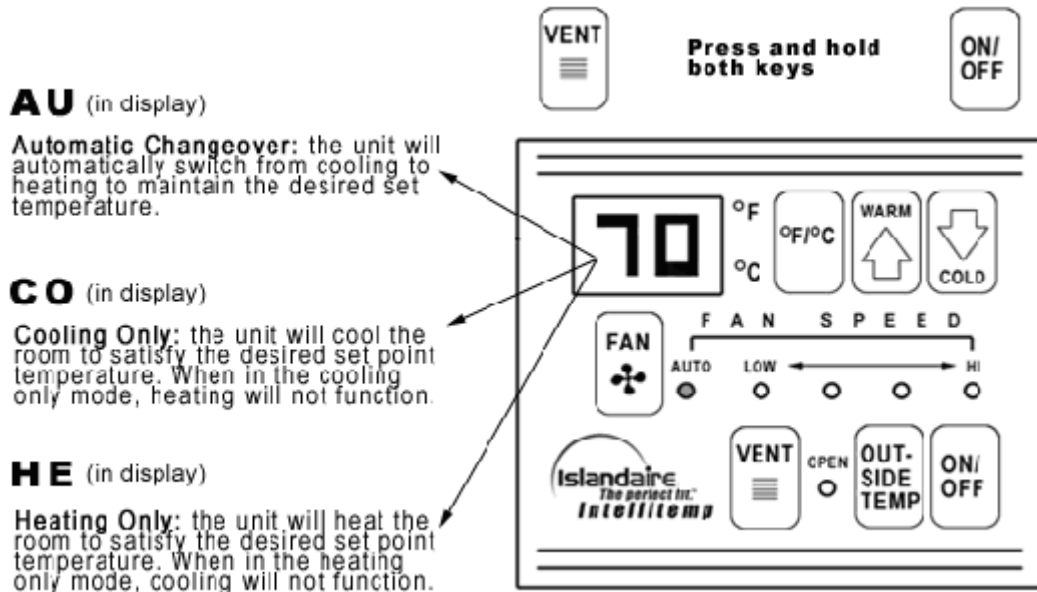
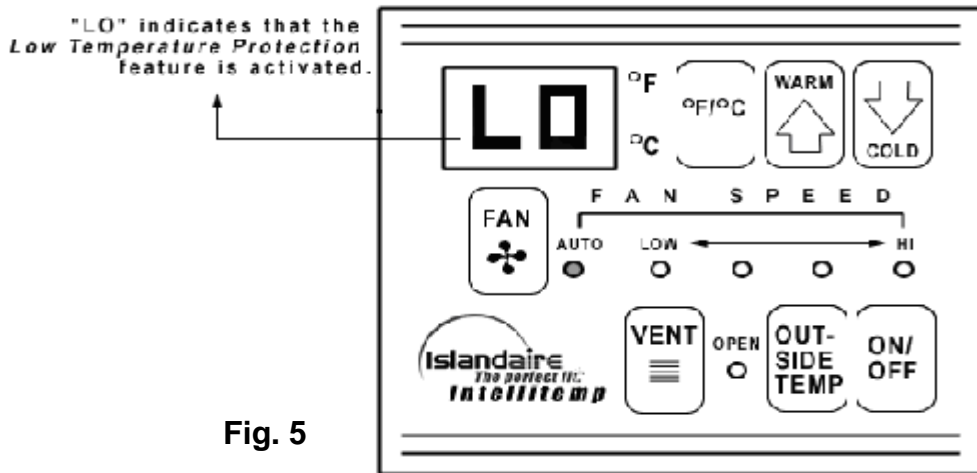


Fig. 4

**For all units equipped with electronic controls - Low Temperature Protection** (Refer to Fig. 5)

A standard feature of the Islandaire electronic control system is the 'Low Temperature Protection' option. If an indoor temperature of **50 degrees** Fahrenheit (or lower) is detected then the heat cycle will automatically activate (even if the unit is in the **OFF** position). While the 'Low Temperature Protection' feature is activated, the letters '**LO**' will be displayed. The heat cycle will continue until the room temperature reaches **50 degrees** Fahrenheit, at which time the unit will satisfy and shut down. All control functions will be locked-out while '**LO**' is displayed.



**Fig. 5**

**Note:** Cutting power to the unit is the only way to interrupt unit function while the 'Low Temperature Protection' feature is activated. If desired, this feature may be disabled by your qualified service provider.

## PROGRAMMABLE CAPABILITIES

- 1) **Temperature shift key:** Press + and - button at the same time for 3 seconds, the temperature is shifted between Fahrenheit and centigrade.
- 2) **Temperature setting limiting:** Press + and SPEED button at the same time to enter the maximum and minimum temperature setting. R1~R8 will be display every 3 seconds. Relieve the two keys to ensure the setting effective and the figures will last for 5 seconds. The temperature setting range is between 60°F~90°F as factory default.

### **Chart .Temperature setting limiting**

R1	R2	R3	R4	R5	R6	R7	R8
Heating Temperature Limits(°F)							
86	86	90	74	92	90	72	90
Cooling Temperature Limits(°F)							
63	65	72	72	67	69	68	60

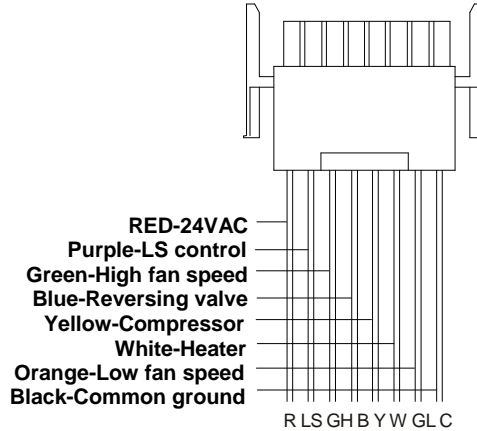
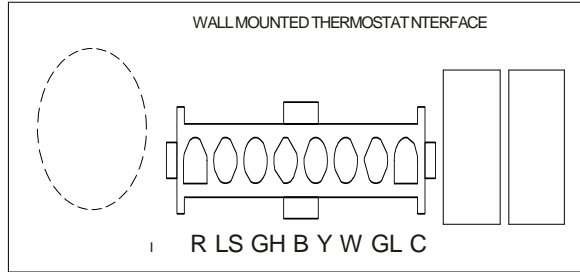


## Remote Thermostat Change:

On standby off mode, press MODE and + button, for 3 seconds, the buzzer will chime and LED display will read “ P ” or “ r ”.

P: Unit control has control of unit

r: Wall thermostat has control of unit



# 4

## **ELECTRONIC BOARD DIAGNOSIS/TEST**

Each unit has two 'built-in' tools to assist the technician in the troubleshooting of the entire system. The first tool is the 'Continuous System Diagnostics', and the second tool is the 'Automatic System Component Test'.

### **1- Continuous System Diagnostics:** *(Base or Intellitemp)*

The control incorporates continuous self-diagnostic checking of several system parameters and reports the status by an LED blink code on the main board.

- 1- Un-plug or disconnect the power to the unit.
- 2- Gain access into the electric box on the chassis and locate the main board within.
- 3- Locate the LED labeled 'DIAGNOSTIC STATUS' on the main board, near the center of the board.
- 4- Reapply power to the unit, wait approximately 10 seconds, and the unit will enter its normal operating mode. At this time the diagnostic indicator LED will blink repeatedly. These 'blink codes' will repeat approximately every 5 seconds with a delay between bursts and are readable as follows:
  - a. 0 blinks = no power
  - b. 1 blink = normal
  - c. 2 blinks = IAT (indoor air temperature) probe failure (check connection – replace)
  - d. 3 blinks = OAT (outdoor air temperature) probe failure (check connection – replace)
  - e. 4 blinks = Between board communications failure
  - f. 5 blinks = Keypad failure (stuck key) or interconnect & ribbon cable failure
  - g. 6 blinks = Remote thermostat input failure (bad input combination) check thermostat wiring
  - h. 7 blinks = Inadequate ground
  - i. 8 blinks = Outdoor coil low temperature switch open (only if Heat Pump configured by DIP switch)  
– Disables compressor operation

(Cont'd...)

- j. 9 blinks = Fan-limit switch open (only if Hydronic heat or gas heat configured by DIP switch)
  - Disables fan in gas heat mode and Hydronic heat mode
- k. 10 blinks = Configuration read failure (check setting on configuration switch)
- l. 11 blinks = Module mismatch error (happens if boards are mismatched)

## **2- Standard Electronic Controls**

The Diagnostic Maintenance provides detailed information on PTAC control operation and operational status including present modes, failures, airflow restriction warnings, operating temperatures, and past failures.

To enter Diagnostic Status Report mode, press and hold the down arrows and, while hold press the FAN SPEED key for a period of five (5) seconds.

The meaning of figure on display pad is as below: X.X----(0~4: time of protection)

L□ is protection mode(1: anti-frost; 2: overheat; 3: high pressure; 4:anti-freezing)

<b>Failure code</b>	<b>Content of defect</b>
<b>E2</b>	<b>Indoor coil temperature sensor</b>
<b>E3</b>	<b>Indoor temperature sensor failure</b>
<b>E5</b>	<b>Outdoor coil temperature sensor</b>
<b>E8</b>	<b>Overheating potection/defrosting</b>
<b>E9</b>	<b>High pressure protection</b>

3- **Automatic System Component Test:** Intellitemp Control *(to be performed only by a qualified service technician)*

1- Un-plug or disconnect power to the unit.

2- Gain access to the electric box with the main board mounted within.

Locate the 9-pin connector labeled **EXPANSION** on the main board. Pin #1 is located closest to the smaller connector labeled **IAT**. (Refer to Fig. 6)

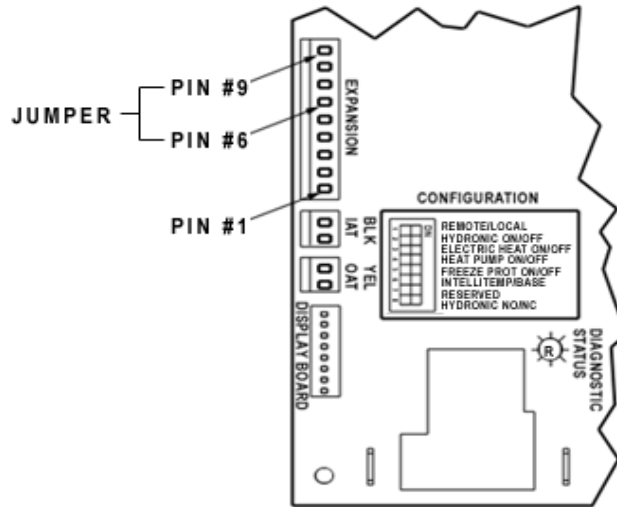


Fig. 6

- 3- Place a jumper between pin #6 and pin #9 of the EXPANSION connector.
- 4- Be sure any wires or parts moved during installation of jumper will not cause an electrical short.
- 5- Reapply power to the unit and wait approximately 20 seconds, and the unit will enter an automatic system component test sequence. The system automatically runs through the operational functions of each component within the unit. If the unit is equipped with a display, an abbreviated description of each function will be displayed (display is where temperature and set points are viewed) as each function is tested. Table 2 describes the abbreviated descriptions that are displayed and unit operation. Only functions available to the unit will be tested. Others will simply be ignored. This allows the technician to get a quick glimpse of whether the compressor, motor speed, or heating components function properly during the automatic test function. Service efforts can be directed to the various controls that operate the system.
- 6- Un-plug or disconnect power to the unit.
- 7- Remove the jumper that was installed on pins #6 and #9 of the expansion connector.
- 8- Reapply power to the unit to resume normal operation.

**Table 2**

<b>Phase</b>	<b>Display</b>	<b>LEDs</b>	<b>Unit Operation</b>	<b>Time (seconds)</b>	<b>Notes</b>
1	'F1'	Low Fan	LO FAN	5	
2	-	-	OFF	1	
3	'F2'	Med-Low Fan	MED-LO FAN	5	Will skip if base
4	-	-	OFF	1	Will skip if base
5	'F3'	Med-High Fan	MED-HI FAN	5	Will skip if base
6		-	OFF	1	Will skip if base
7	'F4'	High Fan	HI FAN	5	
8	-	-	OFF	1	
9	'HP'	Low Fan, F, C, Auto	RV, COMP, LO FAN	10	Skip if not Heat Pump
10	'C'	Low Fan, F, C, Auto	COMP, LO FAN	10	Skip if Heat Pump
11	-	-	OFF	1	
12	'EH'	Low Fan, F, C, Auto	ELEC HEATER, LO FAN	10	Skip if no Elec Heat
13	-	-	OFF	1	Skip if no Elec Heat
14	'HD'	Low Fan, F, C, Auto	HYDRONIC, LO FAN	5	Skip if no Hydronic
15	-	-	OFF	DONE	Skip if no Hydronic

# 5

## **HEAT PUMP UNITS**

A heat pump operates by reversing the refrigeration cycle, absorbing heat from the outside air, and transferring this heat to the indoor air. The heat output of the heat pump reduces as outdoor temperature drops. As a result, the discharge air temperature may not be sufficiently warm to provide heating comfort in certain locations. In these locations, an optional backup heater may be required. If the outdoor temperature drops low enough, the compressor (heat pump) will lock out entirely.

### **Activating Emergency or Backup Heat Operation (Heat Pump Units with mechanical pushbutton)**

On units with mechanical pushbutton controls, the backup unit mounted heater (if available) may be enabled manually through the backup heat switch. Turn off power to the unit. Depending on the model, it may be necessary to remove the front panel to gain access to the emergency heat switch. To activate backup heater, push the switch to the **ON** position. Re-power the unit and select the heat mode. When backup heater function is no longer required, be sure to reset switch to enable cooling.

# 6

## **START UP CHECKLIST**

**Note:** Units are to be installed and checked for proper function by qualified service personnel ONLY.

Check the following:

- Unit is installed in compliance with all codes and ordinances.
- Circuit breakers and receptacles are correct.
- Filter clean and in place.
- All panels in place.
- Condenser coil inlet and outlet free of obstructions, and is sealed to louver.
- Unit is properly sealed in sleeve.
- Evaporator air inlet and outlet is free from obstructions and properly sealed.
- Smoke and odor can occur on initial use of the heating element due to processing residue and/or oil on the element. Leave the area serviced by the unit until it is ventilated of the smoke and odor by opening doors and windows.
- Control operation OK.
- Owner or operator instructed on control operation and routine maintenance.
- Work area clean and free of debris.
- Operate unit 20 minutes.



# 7

## **ROUTINE MAINTENANCE**

- Keep air intake filter clean. A dirty filter reduces the efficiency of the system and can cause erratic performance of controls. It can also result in damage to the heating element and compressor. The unit is provided with a washable filter that can be cleaned with soap and water. Inspect and clean the filter at least once a month or more often as conditions dictate. Replace as necessary with a factory approved filter.
- Coils should be inspected periodically for build-up of lint, dirt, leaves, other debris, and bent fins. Clean coils with a soft brush and compressed air or vacuum. Do NOT use sharp objects to clean coils.
- The fan motors are permanently lubricated and do not require re-oiling.
- In areas of heavy snow and ice accumulation, snow and ice should not be permitted to accumulate against the unit. As soon as practical after such inclement weather, clean snow and ice from around the unit as much as possible from the filters of the unit.
- If unit is installed over the winter, be sure that the fan turns freely before turning it on.

# 8

## **OPERATIONAL PRACTICES**

- Do not block airflow. Efficient operation of the unit depends on free circulation of air over the coils. Paper, leaves, and other debris can reduce efficiency and cause serious damage to the compressor.
- Ensure that objects such as drapes, furniture, or plants are not blocking supply and return airflow.
- Do NOT operate unit with front panel removed or without filter, as this will void any warranties.
- Keep doors and windows closed. Leaving them open will increase the workload on the unit and will result in higher operating cost and excessive condensate.
- Do NOT operate unit during construction. Construction dust can clog filter and cause permanent damage to other components.
- On the mechanical pushbutton units with unit in cooling mode, if the unit is switched off wait at least three minutes before switching the unit back on to avoid cycling the compressor.

**9****TROUBLESHOOTING GUIDE**

<b>SYMPTOM</b>	<b>CAUSE</b>	<b>CHECK/CORRECTION</b>
Unit does not properly control room temperature, runs continuously, or causes abnormal cycles in heating or cooling mode.	Sleeve seals worn or missing allowing outdoor air to be passed over the thermostat-sensing bulb.	Inspect and replace if necessary.
	Defective thermostat.	Test and replace if necessary.
	Thermostat bulb not properly located.	Ensure bulb is placed in return air stream.
Compressor short cycles.	Low voltage.	Check voltage with unit running and ensure it is within nameplate limits.
	Restricted condenser air.	Check for dirt or other condenser coil restriction. Clean as necessary.
	Recycling of condenser air.	Check for inadequate discharge air installation clearances. Coil not sealed against grill. Unit may not be completely pushed into sleeve.
	Condenser fan motor operating intermittently, rotating slowly or not at all.	Check free rotation of motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing internally. Motor may have open windings, if so, replace motor.

*(Cont'd on next page)*

## TROUBLESHOOTING GUIDE (CONTINUED)

SYMPTOM	CAUSE	CHECK/CORRECTION
Compressor short cycles <i>(continued)</i> .	Thermostat bulb or thermister is not properly located.	Ensure bulb is located at original factory specified location. <i>(In return air)</i>
	Faulty or incorrect compressor overload.	Check for correct overload model number and replace if incorrect. Otherwise, if running amps seem normal, replace overload.
	Indoor coil freezing.	See "Evaporator Coil Frosts".
	Recycling of indoor air.	Ensure that curtains or other obstructions are not short circuiting air between the outlet grill and return air intake.
	Compressor running too slow and drawing high amps.	Compressor may be miswired. Check capacitor. Compressor may be seizing – if so, replace compressor.
Compressor will not run.	Fuse or circuit breaker tripped.	Replace or re-test as necessary.
	Defective switch.	Test and replace if necessary.
	Defective thermostat.	Test and replace if necessary.
	Indoor room temperature below thermostat set point.	Lower thermostat setting if comfort not yet achieved.
	Indoor room temperature below 65 degrees F.	Cooling will not operate if the room temperature is below 65 degrees F.
	Outdoor temperature too cold.	Compressor is not intended to operate at cold outdoor temperatures <i>(below 35 degrees F)</i> .

*(Cont'd on next page)*

# TROUBLESHOOTING GUIDE (CONTINUED)

SYMPTOM	CAUSE	CHECK/CORRECTION
Compressor will not run <i>(continued)</i> .	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
	Defective compressor capacitor.	Test and replace if necessary.
	Defective compressor overload.	Test and replace if necessary.
	Low voltage or no voltage to compressor.	Check voltage and ensure that it is within nameplate limits.
	Compressor windings open.	Disconnect overload from compressor terminals. Check for winding resistance across all winding pairs C-S, C-R, S-R and check each terminal to the compressor shell for ground faults. Replace compressor if any windings are open-circuited or short circuited to the shell.
	Seized compressor.	If all of the above check out OK and if pressures are equalized and compressor draws high amps and will not start, compressor is seized and needs to be replaced.
Unit trips fuse/circuit breaker.	Shorted or incorrect wiring.	Check all connections. Also, check for shorts within devices such as motors, switches, heater, etc...
	Shorted capacitor.	Test and replace if necessary.
	Compressor short cycling.	See "Compressor Short Cycles".
	Power was interrupted to the unit.	Wait three minutes before restarting.

*(Cont'd on next page)*

# TROUBLESHOOTING GUIDE (CONTINUED)

SYMPTOM	CAUSE	CHECK/CORRECTION
Unit trips fuse/circuit breaker <i>(continued)</i> .	Fuse or breaker setting too low.	Check nameplate fuse size.
	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
	Low voltage or no voltage.	Check voltage with unit running and ensure it is within specifications.
	Seized or slow running compressor.	See above.
Evaporator coil frosts.	Dirty air filter.	Clean or replace.
	Dirty evaporator coil.	Clean as necessary.
	Blower motor operating intermittently, rotating slowly, or not at all.	Check free rotation of the motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing. Motor may have open windings or internal overload is defective – if so, replace motor.
	Low refrigerant charge.	Look for telltale signs of low charge. For example, check the frosting pattern starting from a defrosted condition. If the whole evaporator face frosts uniformly at the same time, it indicates that the unit has insufficient indoor airflow. If the frost works its way up the face of the evaporator during operation over time, it indicates low charge. Low running amps, low or no sub cooling and excessive superheat are other signs of undercharge. Find and fix the leak and recharge R22 to the refrigerant charge on nameplate.

*(Cont'd on next page)*

# TROUBLESHOOTING GUIDE (CONTINUED)

SYMPTOM	CAUSE	CHECK/CORRECTION
Evaporator coil frosts <i>(continued)</i> .	Faulty thermostat.	Test and replace if necessary.
Unit rattles or is noisy.	Defective compressor.	Check and replace if necessary.
	Refrigerant line hitting.	Bend tube slightly to obtain clearance.
	Loose fan, blower, or motor mounts.	Check and tighten if necessary.
	Rubbing of fan or blower on housing.	Ascertain cause and correct. Check during operation.
No heating.	Indoor room temperature above thermostat set point.	Raise thermostat setting if comfort not yet achieved.
	Faulty thermostat.	Test and replace if necessary.
	Faulty fuse or circuit breaker.	Replace as necessary.
	Defective switch.	Test and replace if necessary.
	Defective heater.	Inspect and replace if necessary.
	Automatic limit reset control will not reset.	Check high limit for open circuit and replace if necessary.
	Broken, shorted, loose, or miswired wiring.	Inspect and correct.
If fuse or circuit breaker is tripped.	Reset breaker and inspect unit to find cause of trip.	

*(Cont'd on next page)*

# TROUBLESHOOTING GUIDE (CONTINUED)

SYMPTOM	CAUSE	CHECK/CORRECTION
Heater output intermittent or insufficient.	Faulty thermostat.	Test and replace if necessary.
	Automatic reset high limit control calibration defective.	Replace high limit.
	Dirty air filter.	Clean or replace.
	Dirty evaporator coil.	Clean as necessary.
	Blower motor operating intermittently, rotating slowly, or not at all.	Check free rotation of the motor shaft. Check voltage to the motor. Check motor capacitor. Check for miswiring. Motor may be seizing internally – if so, replace motor.
Water drips from unit.	Sleeve not properly pitched.	Check sleeve for the required pitch down from indoor to outdoor side and level side-to-side. Readjust as required.
	Condensate drain clogged.	Clean condensate drain tube.
	Evaporator drain pan damaged or improperly mounted.	Inspect, realign, or replace drain pan as required.
	Unusually high moisture content in the indoor/or outdoor air.	Under certain ambient conditions, excessive condensate can be generated, beyond the capacity for the unit to reject via evaporation to the outdoor air stream. If objectionable or frequent, connect to an internal drain system with available optional drain kit.
	Drain holes plugged in bottom edge of base pan on outdoor side (heat pump only).	Inspect and clear blockage.



# Return Material Authorization Procedure

*The following guidelines must be adhered to when returning units, parts, and warranty parts to Islandaire*

- 1- Before returning parts, contact our Customer Service Department at 631-471-2900 to request a Return Material Authorization (R.M.A.). When returning units, the model number and the serial number of the item(s) being returned is required along with a brief explanation of the reason for return.
- 2- For the return of parts, the R.M.A. is processed when replacement parts are ordered and is shipped with the replacement parts.
- 3- For Warranty parts, a UPS return label will be processed and sent with replacement parts order. This label must be affixed to the outside of the packaging. Contact UPS at 1-800-PICK-UPS (742-5877) to schedule the pickup or bring parts to any local UPS counter or pickup location. The Return Label provided must be used to return the parts it was intended for and cannot be used for any other return.
- 4- **The defective parts must be returned to us within 30 days of the invoice date or credit will not be issued, and the warranty invoice will become due and payable.**
- 5- The R.M.A. paperwork must be included when the merchandise is returned, and the yellow label provided must be affixed to the outside of the packaging. Should the R.M.A. paperwork be misplaced, please contact our Customer Service Department to generate a new copy, which can be faxed to you. **Please be advised, any merchandise returned to Islandaire without R.M.A. paperwork will be refused and returned at the customer's expense.**

Questions regarding return procedure should be directed to the Customer Service Department.

## **Fill in information below**

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

Part # \_\_\_\_\_

Date of Start Up \_\_\_\_\_

Installing Company \_\_\_\_\_

Telephone # \_\_\_\_\_



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