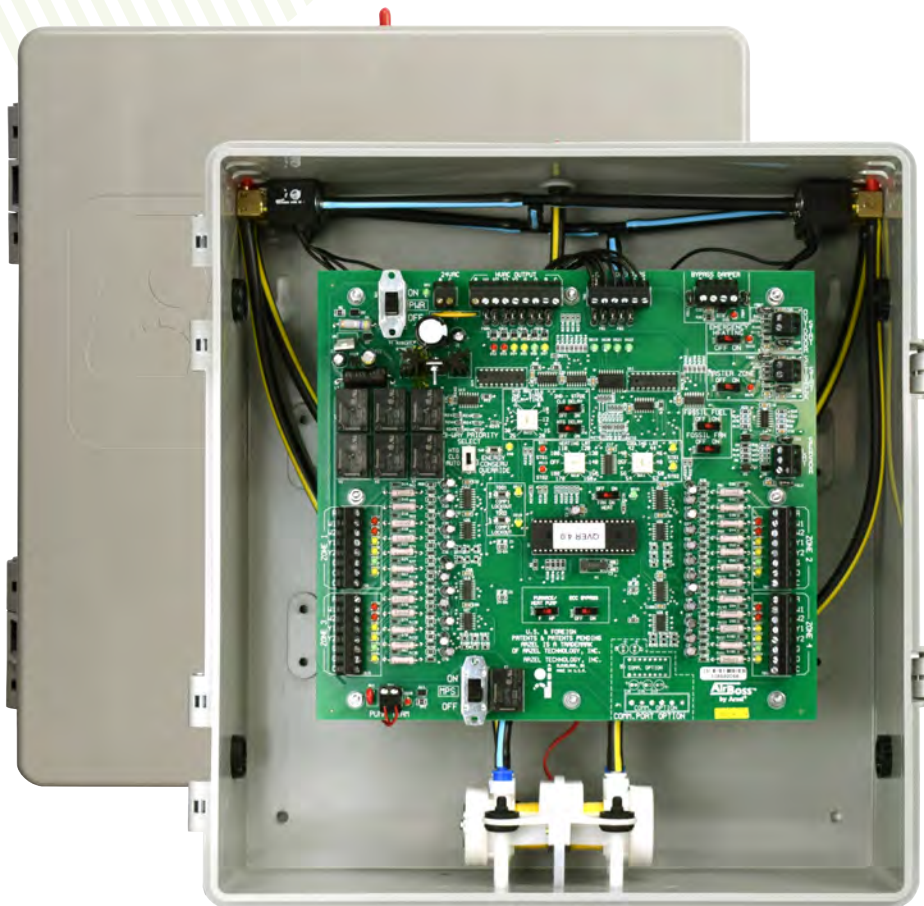


# Installation & Operation Instructions

**Panel: AirBoss®**



 **Arzel® Zoning**  
TECHNOLOGY

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**Resources for Homeowners**  
[www.arzelcomfort.com](http://www.arzelcomfort.com)

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**Thank you for choosing Arzel®!**

*Thank you for choosing the Arzel® Airboss® zoning system for your comfort and energy efficiency needs. The Airboss® is designed to both enhance your system's performance and deliver just the right amount of heating and cooling to every area of your home.*

*Please be assured that in addition to having the highest product quality, we are committed to unparalleled product performance and complete customer satisfaction.*

 **Arzel® Zoning**  
TECHNOLOGY

# Operating your new zoning system

**Your zoning system is simple to operate and requires no maintenance.**

The system will allow you to increase your comfort by directing conditioned air to separate areas (zones) based upon each zone's thermostat setting. It provides the opportunity to conserve energy by adjusting the thermostat set-point in unoccupied areas to energy-saving levels.

To operate the system, just set or program each zone thermostat to your desired comfort and/or set-back settings. When there is a heating or cooling call from any zone, the appropriate heating or cooling equipment will be turned on. The dampers in zones not requiring heating or cooling will close and the conditioned air will be directed to the calling zone until the thermostat is satisfied.

When using auto-changeover thermostats, the system responds to each thermostat on a first-call/first-serve basis as a default setting of the system. Your contractor may have programmed an alternate priority approach to meet the requirements of your application.

When there is not an active call for heating or cooling, you may circulate air in each zone by selecting the "Fan ON" function on each individual thermostat. The dampers in zones with the fan set to "Auto" will close. Please feel free to learn more about the installation and operation of the Arzel® AirBoss® by reviewing this entire manual. Consult your installing contractor with any questions regarding system operation. If questions are still unresolved, you may call Arzel®'s Technical support for homeowners from 8 AM - 5 PM EST from Monday-Friday. Please have your system serial number available when you call. Your installing contractor can reach Arzel® Technical support Monday-Friday 8 AM - 9 PM EST. The Arzel® Technical support phone number is 1-800-611-8312.



# Zoning Glossary

**Air Pump:** The Arzel® Zoning System uses self-contained, low-pressure micro pumps to open and close dampers. They provide noiseless, long-life, and economical service.

**Automatic Bypass Control:** Pressure-switching operated bypass control is available. (Must be ordered separately.)

**Compressor Lockout “Timed Off Delay”:** When the compressor is turned off, it cannot restart for 4 minutes. This feature allows the refrigerant pressure to balance before restarting.

**Damper Positioning Delay:** On a call for Heat, the damper closure in non-calling zones will delay 1 minute to allow the air handler to start before any dampers are positioned. This provides for a SoftStart™.

**Damper Position Indicator:** External indicator of the damper position. Makes troubleshooting and system check-out easy.

**Emergency Heat:** A changeover switch (manual or remote) is located on the PC board for heat pump operation only.

**Energy Conservation Cycle (ECC™):** Dampers remain open for 2 minutes, in the last zone that called for heating or cooling, to take advantage of additional energy savings from residual heating and cooling in the HVAC system.

**EzySlid® Damper Installation:** Round and rectangular dampers are available from 4” to 40”.

**Fan-On-Heat:** In the “ON” position, the fan starts immediately with any call for heating at the HVAC Output terminals.

**Fossil Fuel Back-up Switch:** The Airboss® panel can operate as a fossil fuel kit by adding a field-supplied outdoor thermostat IE: White Rogers 1609-101 or similar. This eliminates the need for separate fossil fuel controls when using a heat pump with a fossil fuel furnace.

**Fossil Fan Switch:** In the “ON” position, the system will break the “G” connection when running the Fossil Fuel backup heat. In the “OFF” position, the system will keep “G” energized when running the Fossil Fuel backup heat. This switch only has an effect on heat pump systems with Fossil Fuel backup heat. When not using a heat pump with Fossil Fuel backup, this switch should be left in the “OFF” position.

**Leaving Air Temperature Control (LAT):** Easily set with rotary switches; the range is 40°F to 56°F for cooling and 110°F to 180°F for heating. LAT sensor comes with a 15-ft. cable included.

**Manual Pump Switch (MPS™):** Opens all dampers during an emergency or test operations by switching “MPS” to “ON” and “PWR” switch to “OFF”.

**Master Zone Control (MZC™):** Can be set up either by a programmable thermostat, manual switch, or a time clock. It gives control of the entire HVAC system to the Zone 1 thermostat. Use for occupied/unoccupied setback or set-up programs.

**Self-Testing LAT Circuit:** LAT control will indicate, with LED flashes, when the sensor is shorted or open.

**Sensor Verification:** Easy conversion of LAT (DC Voltage) reading to monitor temperatures in the supply duct.

**Smart Zones:** A Smart Zone thermostat controls dampers only. It does not control the HVAC equipment and only opens its dampers when the conditioned air in the ducts matches its requirements. Any number of thermostats (programmable/ non-programmable or auto changeover) can be used.

**Thermostat Selection:** Any standard thermostat, programmable/non-programmable, or auto-changeover can be used. Heat pump thermostats are required on all zones for heat pump installation.

**ThreeWay Priority™ System:** Provides a selection of “Heating,” “Cooling,” or “Automatic” Priority Systems. In Automatic mode, the first call establishes priority. Heating and Cooling calls always override fan-only operation. Under any priority, an opposing call, after waiting 20 minutes, will take control of the system and serve its zone for up to 20 minutes. All zone thermostats have equal, full-function heating, cooling, and fan capability.

**Transformer:** A single 24 Volt AC Transformer (40 or 100 VA) is included to power all Arzel equipment, dampers, and thermostats.

**Two-Stage:** Heating and/or Cooling is available from all zones with either 2-stage or single-stage thermostats. Second-stage time delay can be adjusted from 2 to 30 minutes if a single-stage thermostat is used. Second-stage (both heating and Cooling) is delayed by 30 seconds to prevent starting both stages simultaneously.

# INSTALLATION PRECAUTIONS

Read these instructions carefully.  
Failure to follow them could damage the Arzel® Zoning System  
and/or cause a hazardous condition.

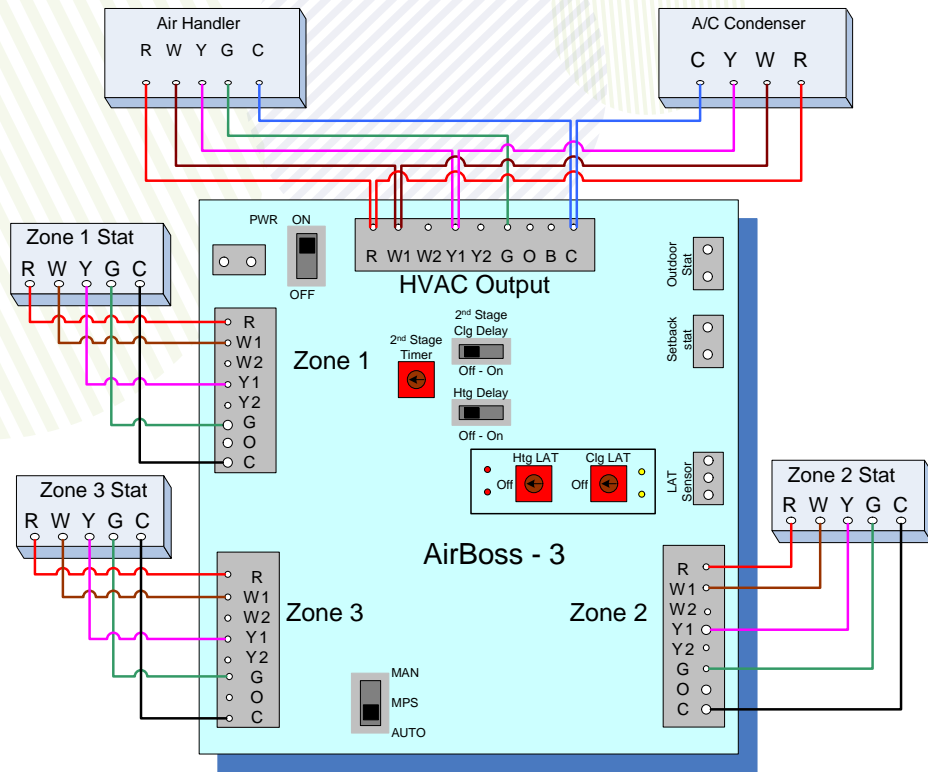
## WARNING

1. Disconnect the power supply to the HVAC system and the zoning system before making any wiring connections to prevent the danger of electrical shock or equipment damage.
2. Be sure the HVAC manufacturer's operating specifications are compatible with the Arzel® zoning system.
3. All wiring must comply with applicable electrical codes, ordinances and regulations.
4. Use properly grounded tools, safety glasses and gloves when drilling or cutting sheet-metal ducts, fiberglass or any hard objects.

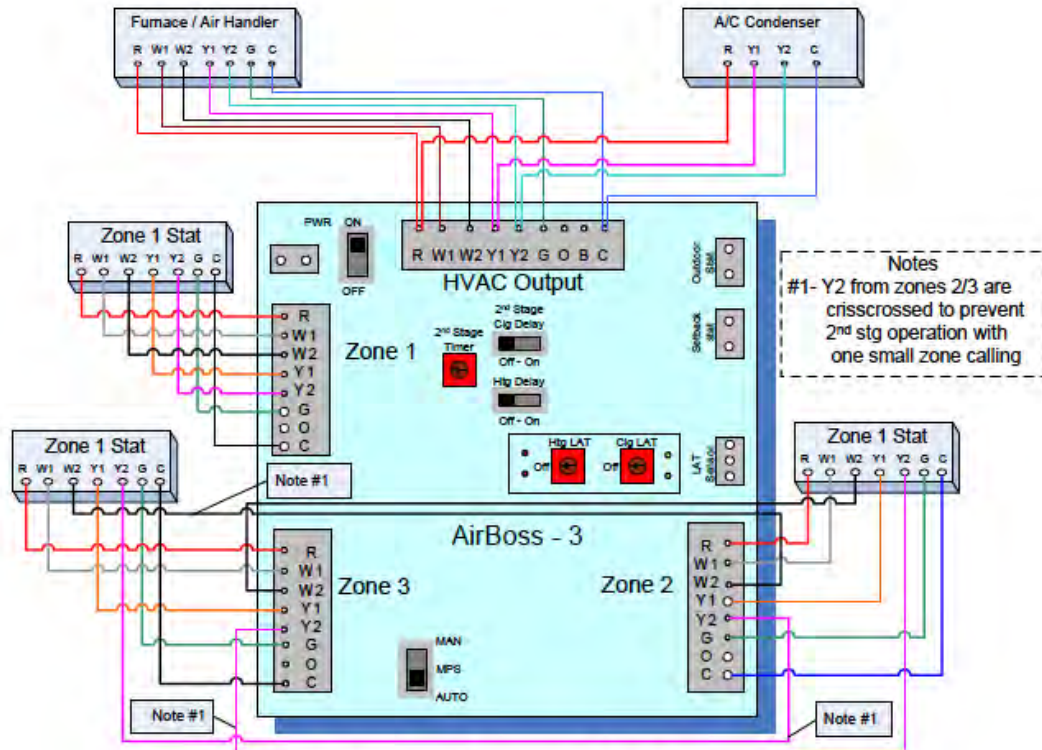
## CAUTION

1. The Arzel® system is designed for indoor use only.
2. You must touch a grounded metal object before handling the Control Panel to avoid potential loss of internal programs due to electrostatic discharge.
3. Install in ambient temperature between 40° F and 120° F in a non-condensing area.
4. Check all system operations after installation is complete.
5. The damper blade gently wipes the inside of the ductwork. Insert a sleeve inside any fiberglass, or abraidable ductwork, so the blade does not abrade the materials into the air.
6. Leave these instructions with the installed system for future use.
7. There are both AC and DC terminals on the circuit board. Do not intermingle wires.
8. The purpose of the LAT (Leaving Air Temperature) control is to function as an "operating limit". When set per the instructions it will add additional capacity control and prevent the equipment from operating outside the OEM's specifications.

# Board Layouts

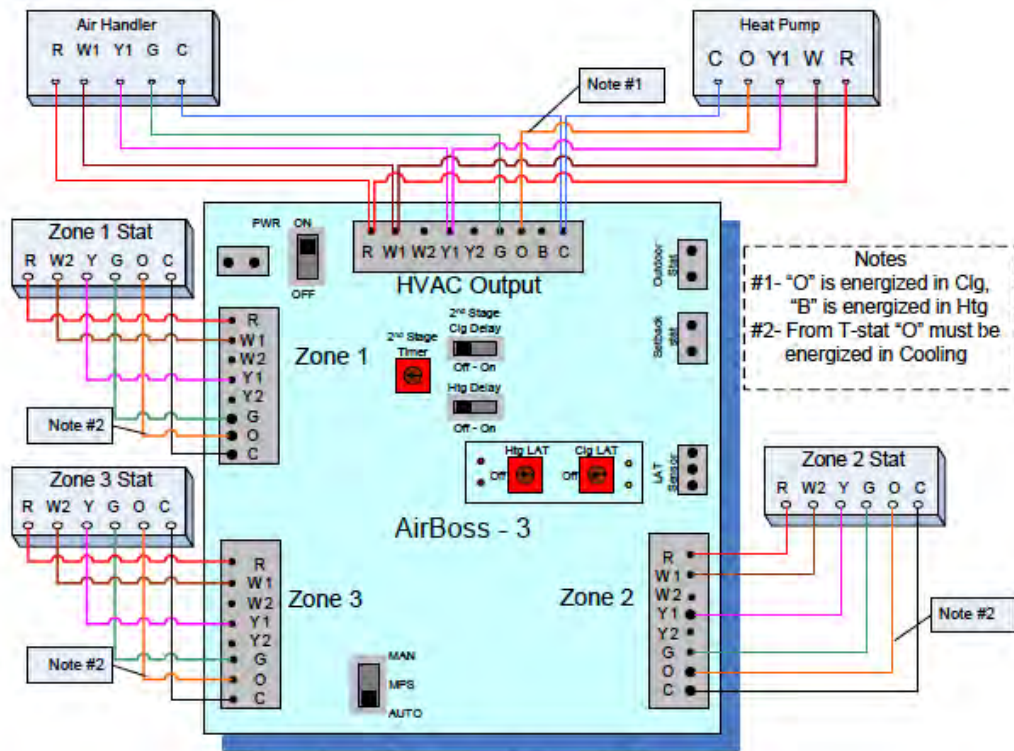


Single Stage Htg/Clg

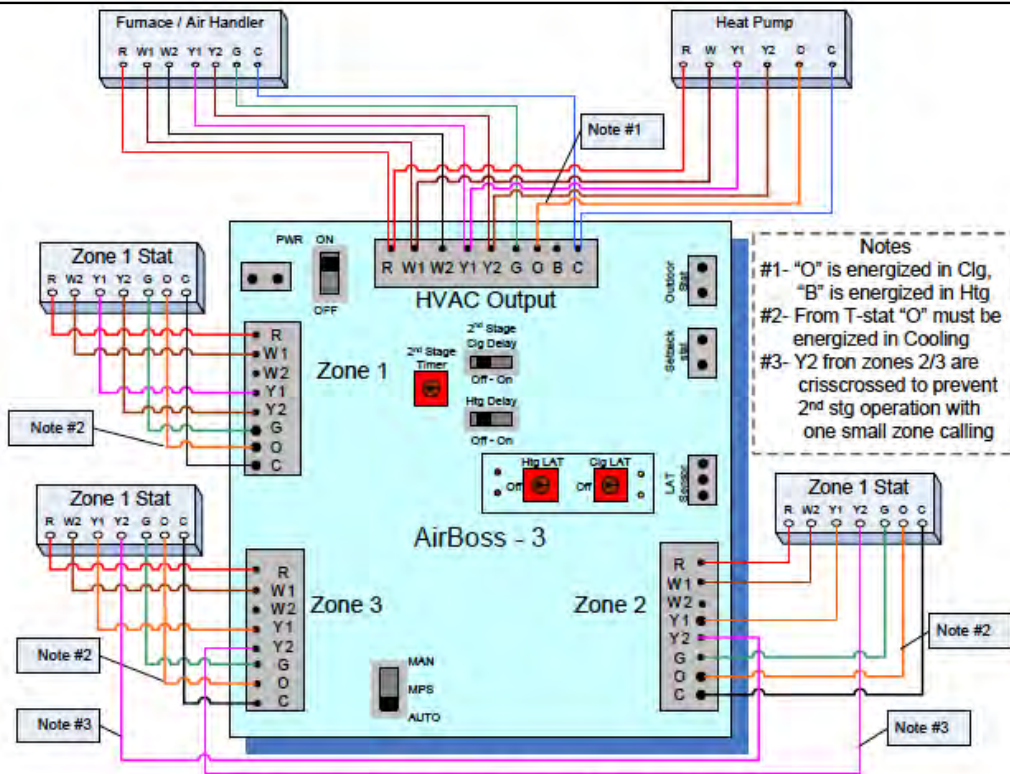


Two Stage Htg/Clg

# Board Layouts



Single Stage Heat Pump



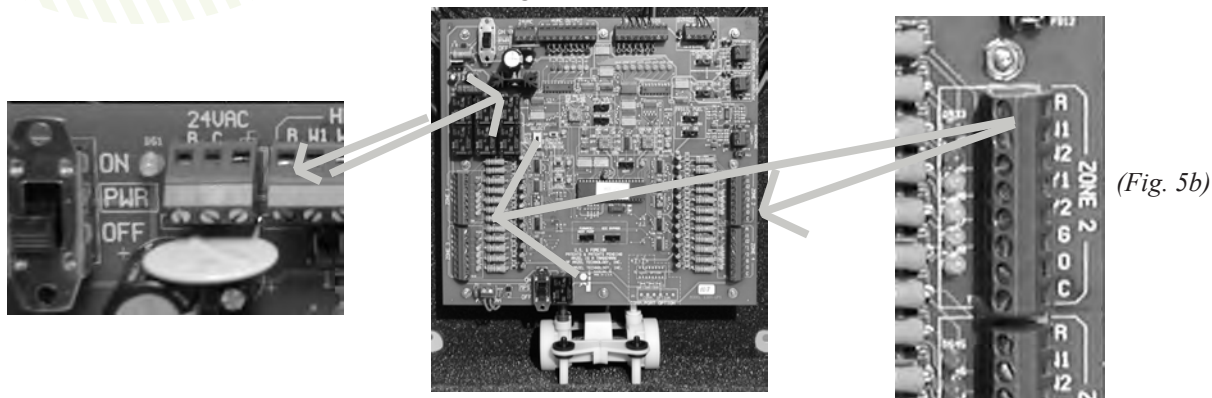
Two Stage Heat Pump

# Product Overview

## 1. Thermostats

Wires coming from the zone thermostats must be connected to the input terminals in the panel for their respective zones (**Fig. 5b**). Use any standard thermostat: “Heat/Cool” and “Fan-Auto-On” sub-base switching, Programmable/Non-programmable or Auto-changeover. “R” and “C” terminals are available for all zones from the 24V AC circuit. Staging can be accomplished with either two-stage thermostats or single-stage thermostats in combination with the built-in Arzel® Delay Timer (ADT™). Be sure to set heating anticipator to the shortest or lowest setting (if adjustable). Heating operation is indicated by red LEDs (W1 and W2). Compressor operation is indicated by yellow LEDs (Y1 and Y2). Fan operation is indicated by green LEDs. Heat pump thermostats are required on all zones for heat pump operation.

Locate the thermostats for each zone in a central area within the zone on an inside wall, five feet from an outside wall and five feet from the floor. Avoid areas near register outlets, lights and other equipment that could cause a false reading.



## 2. Install Dampers/Run Tubing

Dampers install directly into new or existing ductwork. Orient the tube connection port so it is pointing upstream (toward the equipment). Install one main tubing run for each zone. Use connection “T”s for multiple dampers in a zone. Arzel recommends using a different color tube for each zone. *Note: Dampers should not be concealed behind a permanent barrier such as drywall without an access panel.*

## 3. Mount Control Panel

The control panel must be mounted vertically on an exterior wall to reduce noise. The wall must also be located in a non-condensing area where temperatures will not normally exceed 140° F. **DO NOT MOUNT PANEL ON DUCTWORK, HVAC EQUIPMENT, STAIRWELL, or BEDROOM WALLS.** The best method is to attach a piece of ¾" plywood to an exterior stud wall or foundation. Hold the panel level on the wall and mark the positions of the upper mounting holes. Drive two screws into the wall leaving the heads at least ½" out. Set the panel over the screws. Drive two screws into the lower mounting holes. Tighten the upper screws.

**Note: Prior to making electrical connections, touch a mechanical ground to discharge static electricity.**

## 4. Equipment Type Set-Up

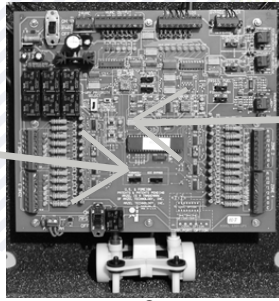
The Arzel® AirBoss® System is factory set for furnace applications. Any time the board PWR switch is turned ON, the system will automatically check itself and flash the appropriate LED to indicate the type of equipment it is set up to handle. For Heat Pump use, you **MUST** turn the PWR switch OFF and move the “Furnace/Heat Pump” switch to the “Heat Pump” position (**Fig. 5c - next page**). Turn the PWR switch back to ON and the panel will respond to Heat Pump demands.

- Furnace mode: TDO-2 (DS18 LED) will flash once on power-up. (See Fig.5d - next page)
- Heat Pump mode: TDO-1 (DS17 LED) will flash once on power-up. (See Fig. 5d - next page)

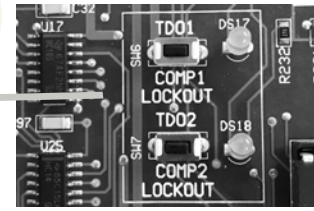




( Fig. 5c )



( Arzel® Panel )



( Fig. 5d )

#### 4. HVAC Output

The AirBoss® controls the HVAC equipment through a set of six “dry contact” output relays. When a thermostat calls for equipment operation, the AirBoss® closes the appropriate output relays, sending the “R” signal from the HVAC equipment transformer back to the appropriate equipment terminals.

There are LEDs directly below the HVAC output terminal strip. When the output relays close, the corresponding LEDs are illuminated (**Fig. 6a**). Bring the Equipment transformer R and C to the corresponding terminals on the HVAC Terminal strip.

| Signal | LED Indication | Service Provided                       |
|--------|----------------|--|
| W1, W2 | Red            | first and second stage heat            |
| Y1, Y2 | Yellow         | first and second stage compressor      |
| G      | Green          | fan                                    |
| O      | Yellow         | reversing valve (energized in cooling) |
| B      | No LED         | reversing valve (energized in heating) |

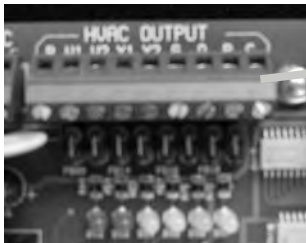


Fig 6a

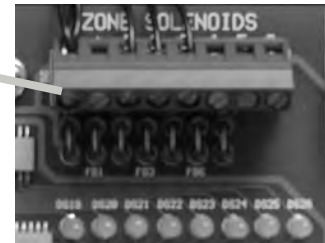
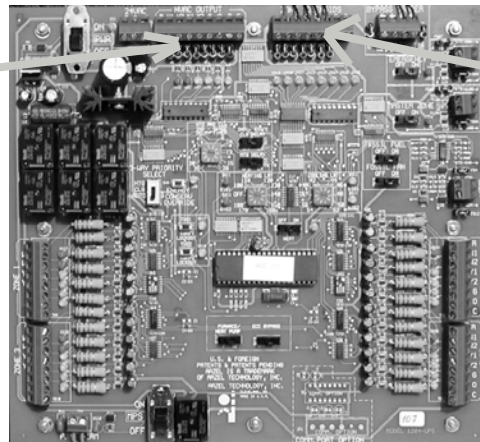


Fig. 6b

#### 5. Zone Solenoids

Damper positioning is controlled by 24V DC solenoids (one per zone) mounted along the top of the box. When a zone is to be served, the solenoid is de-energized and a vacuum passes through the valve, opening all the dampers in that zone. The zones not calling will energize their solenoids allowing pressure to pass through the valves, closing all the dampers in those zones. The zones that are open for service are identified by a green lit LED below the “Zone Solenoid” terminal block (**Fig. 6b**).

#### REMEMBER:

Vacuum Opens the Dampers  
Pressure Closes the Dampers

The solenoids are 24V DC.

Do not connect thermostat or transformer wires to the solenoid terminals. Damage will occur.

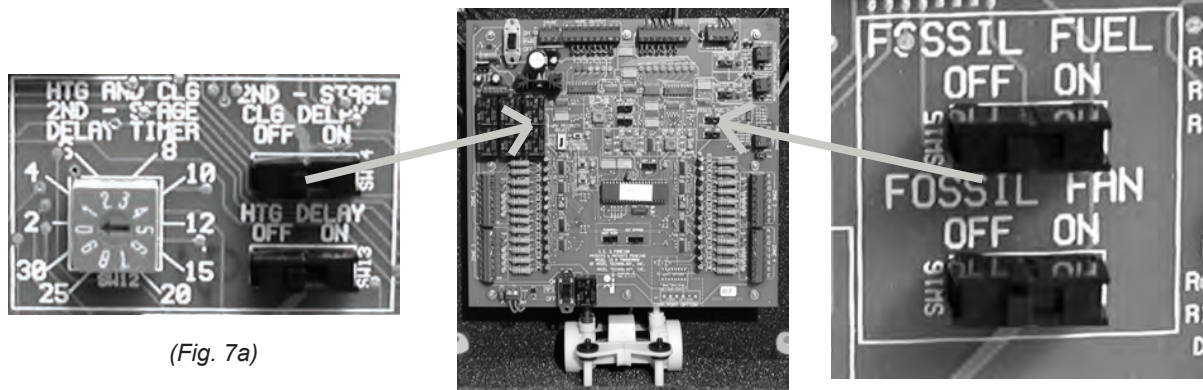
## 6. Staging

Staging can be accomplished with either single-stage or two-stage thermostats.

Single-stage thermostats: W1 and Y1 are controlled by the thermostat. W2 and Y2 are brought on by the Arzel® Heating and Cooling Delay Timer (see paragraph below).

Two-stage thermostats:W1, W2, Y1, and Y2 are all controlled by the thermostat. W2 and Y2 are always delayed by 30 seconds to prevent both stages from coming on simultaneously.

Second-stage heating and second-stage cooling delay can be activated by the ON or OFF switches provided. You may select either or both. If you want to control the second-stage heat and/or cooling with a single-stage thermostat, set the HTG-DELAY and/or CLG-DELAY slide switches to ON and set the rotary Delay Timer for the desired delay time. The delay time will be the same for heating and cooling. The timer is activated by a W1 or Y1 signal at the HVAC Output (**Fig. 7a**).



(Fig. 7a)

(Fig. 7b)

## 7. Heat Pump

All Arzel® AirBoss® system boards have emergency or backup heat capability. When the Emergency heat mode is activated it will convert all “Y” signals to “W” signals, thus bypassing heat pump operation and activating backup heat. Emergency heat mode can be initiated either with the “Emergency Heat” switch on the panel, a remote (outdoor) thermostat or a call for “W1” in the Fossil Fuel mode. The Emergency Heat Mode can also be initiated by using a 24V AC relay energized by a designated thermostat’s “Alarm” terminal. The relay Com-N/O contacts will provide closure on the “Outdoor Stat” terminals engaging the emergency heat mode.

*\*Emergency heat mode is indicated by a red LED located to the right of the manual switch.*

### Heat Pump with Fossil Fuel Back-Up Heat (Dual Fuel Systems)

Fossil Fuel Switch: The Arzel® AirBoss® Series lets you customize the system for fossil fuel backup heat, without the need for a fossil fuel kit. When switched to “Fossil Fuel” and the system is operated in emergency heat mode, the Arzel® board will add 50° F to the “HTG. LAT” set-point (up to a safety maximum of 190° F). \*NOTE\* Arzel controls must be used as secondary controls only. The control setting must be below your primary factory protection level.

This accommodates the higher temperatures required for the fossil fuel backup furnace (Fig. 7b).

Fossil Fan Switch: Will break the “G” circuit, allowing the furnace to control the fan cycle when the system is operated in emergency heat (Fossil Fuel) mode (**Fig. 7b**).

**If you are not using a fossil fuel backup furnace, you must leave these switches in the OFF position!**

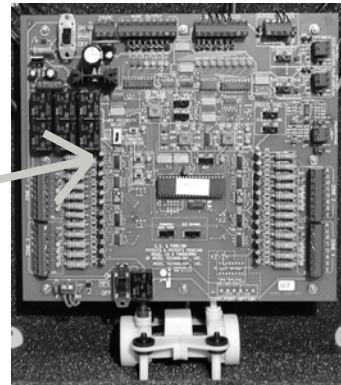
## 8. Three Way Priority System

In Heating Priority: Heating priority allows heating to have priority over cooling and cooling to have priority over constant fan operation. Any zone calling for heating will be served immediately. Any zone calling for cooling will be served immediately if no other zone wants heating. Any zone can have constant fan, if no other zone wants either heating or cooling. Heating operation is indicated by red LEDs (W1 and W2).

In Cooling Priority: Cooling priority allows cooling to have priority over heating and heating to have priority over constant fan operation. Any zone calling for cooling will be served immediately. Any zone calling for heating will be served immediately if no other zone wants cooling. Any zone can have constant fan, if no other zone wants cooling or heating. Compressor operation is indicated by yellow LEDs (Y1 and Y2).

In Automatic Priority: Auto priority will allow the first call (either heating or cooling) to establish the priority sequence for this cycle. A heating or cooling call will always override fan-only operation. Any zone can have constant fan if no other zone wants either heating or cooling.

Fan ON Operation: Constant fan operation is available unless other zones call for heating or cooling. Any thermostat in the Fan ON position will start the fan and open its zone dampers for air circulation. All other zone dampers will be closed automatically. Fan operation is indicated by a green LED (G).



( Fig. 8a )

## 9. Call Waiting

In heating, cooling or automatic priority mode, an opposing call (i.e. a cooling call when in heating mode) after waiting 20 mins. will be served as follows: The waiting call will shut down the existing service, go through the Energy Conservation Cycle (ECC) and serve itself for up to 20 minutes. If after this 20 mins. the earlier call is still there, the service will revert to the original call after completing an Energy Conservation Cycle. This feature eliminates the problem of opposing service calls waiting too long to be served.

## 10. Energy Conservation Cycle (ECC)

After every cycle completion, dampers will be held in place for two minutes and supply residual conditioned air to the last zone served. After two minutes, the micro pumps continue to operate for another minute to open all the zone dampers for a SoftStart™ on the next cycle. The momentary Energy Conservation Override (ECO) switch (**Fig. 9a**) will override the cycle during test or set-up operation.

In some applications, where smaller zones tend to overheat during the third (last) minute of the Energy Conservation cycle, the ECC Bypass can be switched ON, eliminating the third minute and leaving dampers in the last call position (**Fig. 9d**).

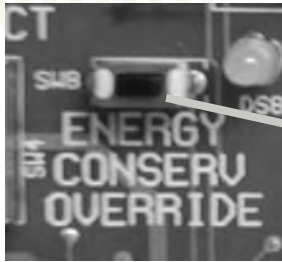


Fig. 9a

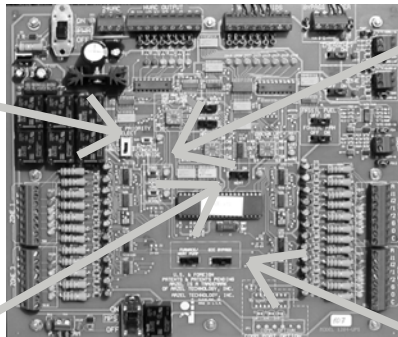


Fig. 9b



Fig. 9c



Fig. 9d

## 11. Compressor Lockout

All Arzel® circuit boards have a 4-minute compressor lockout timer (delay on break) on the compressor circuit. When the compressor is turned off, it will stay locked out for 4 minutes. This allows the refrigerant pressures to equalize. Time delay lockout is indicated by 2 yellow LEDs, TDO 1 (Stage 1) and TDO 2 (Stage 2).

NOTE: Two momentary-contact Time Delay Override (TDO) switches, one for each stage, are provided on the PC board (**Fig. 9b**) to speed the checkout of the HVAC system. Before using the TDO switches you must disconnect the HVAC "R" wire to avoid short-cycling the compressor.

### 11. 1 Fan-on-Heat Operation

Use the Fan-On-Heat switch if immediate fan operation is desired on a call for heating, such as with electric furnaces, hot-water coils, steam coils, etc., (**Fig. 9c**). Fan operation is also indicated by a green LED (G) at the zone calling and at the HVAC Output LED.

## 12. Master Zone Control (MZC)

Moving this switch to the ON position or closing a circuit across the "Stat Setback" terminals engages Zone 1 as the "Master Zone" and allows for occupancy mode. The "Master Zone Control" allows Zone 1 to control the equipment and open all the dampers for night set-back when buildings are unoccupied. This mode can be engaged with a field-supplied manual switch or time-based switching relay (dry contacts only). The Master Zone switch and "Stat Setback" are electrically parallel and either or may be used to engage unoccupied mode.

# Leaving Air Temperature (LAT) Control

During normal operation of zoning equipment, the amount of air passing through the air conditioning coil or over the heat exchanger may be reduced to a point that undesirable air temperatures may develop in the duct system (too cold or too hot). The Leaving Air Temperature (LAT) system is used to cycle the AC compressor or heating system to prevent evaporator coil freeze-up or overheating of the heat exchanger.

**Install the Sensor** into the supply duct just around the corner of the Plenum and connect to the “LAT Sensor” terminals (**Fig. 10b**). The green ground connects at the bottom of the terminal. Add no more than 25' of wire to the LAT sensor.

**NOTE: All LAT limit controls must be used as secondary controls only.**

**The LAT control setting must be above/below your primary factory protection level.**

**LAT System Set-up** Set both rotary switches(Heating LAT and Cooling LAT) to the desired heating and cooling limits (**Fig.10a**).

**Heating LAT** settings range from 100° F to 180° F and OFF.

**Cooling LAT** settings range from 40° F to 56° F and OFF.

If you do not wish to use either or both, place the unused rotary switch pointer to the Off position. *You must install the sensor or place both rotary switches to the Off position.*

**Self Test:** The Arzel® Airboss® panel automatically detects an open or shorted LAT sensor and locks out the equipment accordingly.

- Both Red LED'S at Heating LAT flashing indicates a shorted sensor wire or probe.
- Both Yellow LED'S at Cooling LAT flashing indicates an open sensor wire or probe.

**High LAT:** The temperature setting cycles the first-stage heating at set point temperature. Second-stage heating is automatically cycled 10° lower than high temperature setting. Both stages will reconnect after a 15° temperature drop.

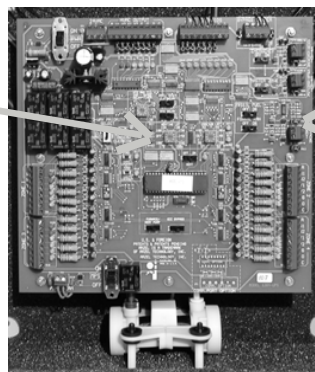
**Low LAT:** The temperature setting cycles the first-stage cooling at set point temperature. Second-stage cooling is automatically cycled 5° higher than set point temperature. Y1 will reconnect after a 4-minute time delay, if the duct temperature is above set point. Y2 will reconnect after a 4-minute time delay, if the duct temperature is 5° above set point.

**NOTE: All LAT limit controls are to be used as secondary controls only.**

**The LAT control setting must be above/below your primary factory protection level.**



(Fig. 10a)



(Fig. 10b)

# Sensor Verification Test

Proceed as follows:

With LAT sensor connected to PC Board:

1. Insert test thermometer into duct as near to LAT sensor as possible.
2. Measure DC voltage across two LAT terminals.
3. Voltage reading should indicate the same temperature as test thermometer reading shown on chart (**Fig. 11a**), plus or minus 3° F.
4. If voltage reading is different than chart voltage, proceed to the following sensor check.

With LAT sensor disconnected from PC Board:

1. Measure resistance across sensor at 100k to 200k Ohm scale. Ohm reading should indicate the same temperature as test thermometer chart below. (**Fig. 11a**)
2. If Ohm reading does not match chart (+ or - 10 %), replace the sensor.
3. If Ohm reading matches the chart, check for 5 volts DC at LAT terminals.
4. If voltage is not 5 Volt DC, replace PC Board.

LAT - Temperature / OHMS / DC Voltage RELATIONSHIP Chart

| Temp | Ohms (k) | DC Volts | Temp | Ohms (k) | DC Volts |
|------|----------|----------|------|----------|----------|
| 40   | 26.1     | 3.82     | 76   | 10.2     | 2.85     |
| 42   | 24.7     | 3.77     | 80   | 9.3      | 2.72     |
| 44   | 23.4     | 3.72     | 90   | 7.3      | 2.42     |
| 46   | 22.1     | 3.69     | 100  | 5.8      | 2.14     |
| 48   | 20.9     | 3.63     | 110  | 4.7      | 1.88     |
| 50   | 19.9     | 3.57     | 120  | 3.8      | 1.63     |
| 52   | 18.8     | 3.52     | 130  | 3.0      | 1.41     |
| 54   | 17.9     | 3.46     | 140  | 2.5      | 1.22     |
| 56   | 16.9     | 3.40     | 150  | 2.0      | 1.05     |
| 58   | 16.1     | 3.35     | 160  | 1.7      | 0.90     |
| 61   | 14.5     | 3.28     | 170  | 1.4      | 0.77     |
| 70   | 11.8     | 2.98     | 180  | 1.2      | 0.66     |

(Fig. 11a)

## Smart Zones

Any number of Smart Zones may be added to all Arzel® panels. The Smart Zone thermostat does not control the HVAC equipment. It will only open its zone dampers if the air temperature in the duct is compatible with the thermostat call. Smart Zone operation is indicated by the LED on its PC board. If the LED is lit, the damper is in the open position. Do not use a Heat Pump thermostat for the Smart Zones.

### SMART ZONE WIRING AND TUBE CONNECTIONS

- Smart Zone thermostats do not need a heating-cooling sub-base to operate but could be used to lock out cooling calls in the heating season or heating calls in the cooling season.
- Connect “R”, “W” and “Y” thermostat wires to “R”, “W” and “Y” terminals on the Smart Zone PC board.
- Connect Smart Zone damper tubing to the Smart Zone solenoid bulkhead fitting on top of the panel.
- Do not use a heat pump thermostat for any Smart Zone, in Heat Pump applications.

# Pump Operation

## AIR PUMP OPERATION

The Pump will start and position up to 30 dampers whenever there is a call for heating, cooling, or fan operation. The Pump will stop three minutes after the last thermostat is satisfied. The Pump will restart for any call for heating, cooling, or fan from any thermostat. Pump operation is indicated by a red LED (Pump). The pump is delayed one minute on a call for heat (fossil fuel) to allow the blower to start before any dampers close. The Pump is designed for continuous duty.

## MANUAL PUMP SWITCH (MPS™)

The Manual Pump Switch (MPS) (**Fig. 12b**) is provided to test the damper system and to bypass the zoning system in case of a board emergency. This switch will start the pump manually and with the “Power” switch in the OFF position, all the zone dampers will open. This will aid in troubleshooting by allowing the operation of the HVAC system independent of the Arzel® panel, if you suspect a PC board failure.

### YOU CAN BYPASS THE ZONING SYSTEM BY FOLLOWING STEPS BELOW:

1. Turn the Arzel® PWR switch off. You must keep this switch in Off position to block ALL zone thermostats from calling for service and placing all the zone dampers in the normally open position.
2. Disconnect the wires from any one zone thermostat terminal and connect them to the HVAC Output terminals.
3. Turn the MPS switch ON.

The HVAC equipment will now be controlled by the one thermostat connected to the Output terminals. The pumps will run continuously, holding ALL the dampers open. Only the pump LED will be on. All other LEDs will be off in this mode of operation.

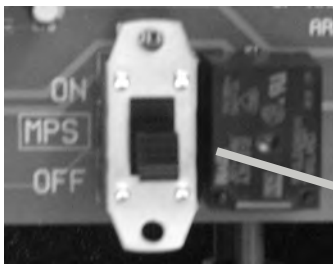
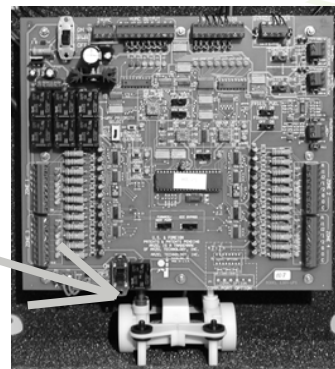


Fig. 12b



Arzel Panel

# System Checkout

1. Set all thermostats to the “Off” position and all fan switches to the “Auto” position before starting the checkout procedure.
2. Turn power ON to the Arzel® panel and the HVAC equipment. The green LED next to the “Power” switch will come on.
3. Turn Zone 1 thermostat to Fan “On”. The following LED’s will light: Zone 1– G, Zone 1 solenoid, Pump & “G” @ HVAC Output.
4. Check airflow at all registers to verify that only zone 1 is open, and all others are closed.
5. Repeat the same procedure for the remaining zones.

## **HEATING CHECKOUT:**

1. Set all thermostats to the “Off” position and all fan switches to “AUTO” before starting heating system checkout.
2. Set Zone 1 thermostat to the HEAT position. Turn thermostat up so that the thermostat is calling for heat.
3. The following LEDs will come on: Zone 1– W1, Solenoid for calling zone, Pump & W1 @ output.
4. Check and set heating LAT and second-stage heating and cooling delay timer settings.
5. The pressure and vacuum pump will automatically position all the dampers.
6. Check to see that the heating valve or relay is energized.
7. If heat pump is installed, check operation of emergency backup heating.
8. Turn the thermostat down until the thermostat is satisfied. The dampers and system will go through its Energy Conservation Cycle (ECC) for 3 minutes. The LED lights will go out and the pump will stop. If you wish to save checkout time, you can push the Energy Conservation Override (ECO) switch to skip this automatic cycle.

## **COOLING CHECKOUT:**

1. Set thermostat for Zone 1 to the Cool position. Turn thermostat down so that the thermostat is calling for cooling. The following LEDs will come on: Zone 1- Y1 and G, Solenoid, Pump, & Y1 & G @ HVAC Output.
2. Check and set cooling LAT and heating and cooling second-stage delay timer settings.
3. The pressure and vacuum pump will automatically position all the dampers.
4. Check to see that the compressor relay or contactor is energized. Rapid cycle Zone 1 to see that the 4-minute lockout takes place. If you wish to save checkout time, you can push TDO 1 and TDO 2 to skip the delay.
5. Place Zone 1 thermostat in the “Off” position. The dampers and system will go through its Energy Conservation Cycle™ (ECC). If you wish to save checkout time, you can push the Energy Conservation Override (ECO) switch to skip this automatic cycle.
6. Follow the above procedure for all other zones.



# Ezy-Slide® Damper Install

A visual aid to installing both the round and rectangular Ezy-Slide® dampers.

## 1. Apply the Template

Apply template with Air Flow Arrow pointed towards register.



## 2. Cut out the Triangle

Drill a 3/4" hole at each of the three corners and connect the holes with your SNIPS.



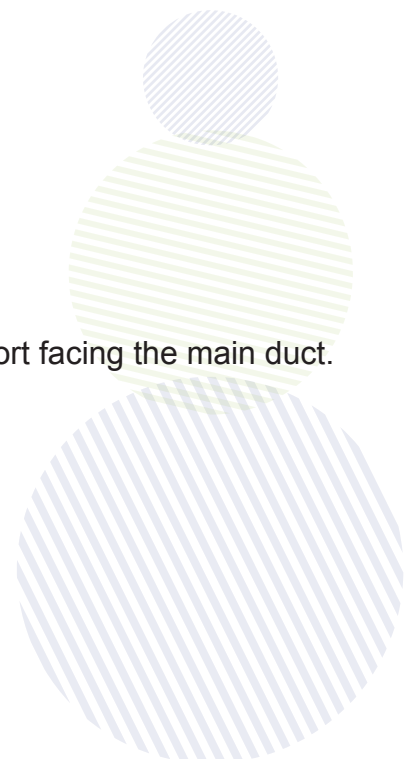
## 3. Insert the Damper

With the damper being held in the "Closed" position, insert with the blade at the wide end of the triangle.



## 4. Twist into Position

Once the blade is inserted, rotate the damper 90 degrees with the tubing port facing the main duct.



# Ezy-Slide® Damper Install cont.

## 5. Fasten with Zip Screws

Secure damper at two opposing corners. Add the two other screws. Tighten all four screws to just seal gasket.



## 6. Attach the Air Line

Cut a 3/4" section out of the "Homerun Tube" for that zone and insert a tee to connect to damper.



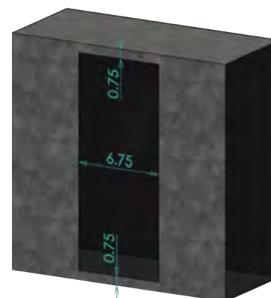
## 7. Finished!

If the tubing looks neat and well organized, the workmanship appears worthy of the investment.



# Rectangular Damper Install

Angle Damper Blade from corner to corner, slide into opening, align it with the duct and screw it in.



# Warranty Information + Procedure

## Warranty Information

Limited Lifetime Warranty on Panel & Dampers if warranty information is submitted to Arzel® Zoning Technology, Inc. for Limited Lifetime Warranty Coverage within 90 days of installation.

Limited Lifetime Warranty Information can be found at [www.arzelzoning.com/warranty](http://www.arzelzoning.com/warranty)

**The Panel serial number is required when entering warranty information. See below for serial number location.**



## Warranty Procedure

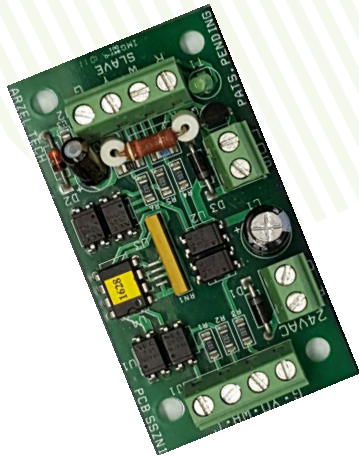
To receive an RMA, technicians must call while on site (no call-no warranty).

Warranties returned to distributors without prior authorization may be denied or subject to 20% processing fee.

1. Call 800-611-8312 while on the jobsite to diagnose failed parts and continue the warranty process.
2. Any diagnosis of failed parts must be verified by Arzel® Technical Support to receive an RMA (Return Material Authorization).
3. All warranty claims must include the serial number of the panel (see image above)
4. Arzel® will ship warranty parts directly to licensed contractors via UPS Ground.  
\*Next day air available at additional cost.
5. Arzel® Technical Support is available 7 days a week from 8am - 9pm EST.

# Did you know?

WE CAN ADD FRESH AIR CONTROL (FACT) TO ANY OF OUR ZONING PANELS!



The Arzel® FACT System brings in fresh air any time you want and lets you decide how much fresh air to bring in and under what conditions.



Contact us & ask us how! Or go to [www.arzelzoning.com/training](http://www.arzelzoning.com/training) to schedule your individual Webinar on the Arzel® FACT System!

## Online Resources



Sign up for our contractor portal to access technical documentation:  
[www.arzelzoning.com/services/contractor-signup](http://www.arzelzoning.com/services/contractor-signup)

View our training videos with no log in necessary, at  
[www.arzelzoning.com/training-videos](http://www.arzelzoning.com/training-videos)

See simple how-to videos at  
[www.arzelzoning.com/how-to-videos](http://www.arzelzoning.com/how-to-videos)

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