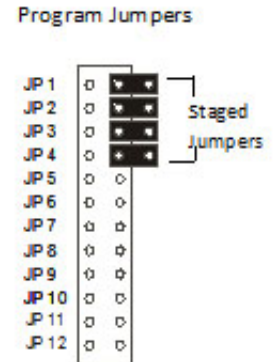


FOR REVISION C PUG MAIN BOARD (2014)

50 Hz ADVENT™ Main PC Board Replacement Instructions for all Utopia Series 2002 – 2008, Paradise Series 2002 – 2009 and Music Series 2002 – 2008

IMPORTANT!

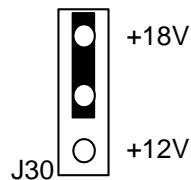
The Program Jumpers and Power Jumpers must be set according to spa model. The program jumpers are in the Main PC Board, “staged” (placed on only one terminal of each jumper location) on terminals JP1- JP3. In effect, the jumper locations (JP1-JP3) are open. Set the jumpers according to the procedure detailed in these instructions.



The Relay Board to Main Board Voltage Selection Jumper must be set according to the combination of Relay Board to Main Board at J30. Both Relay Board and Main Board voltage setting must be set to same relay coil voltage value.

- When using an “old” 3 Relay Heater Relay Board with the Revision C PUG Main Board the Main Board Jumper shall be set to +18V (top pin – center pin). There is no setting on the old relay board
 - Note: Relay Coil voltage is set to +18V
- When using a “new” 2 Relay Heater Relay Board with the Revision C PUG Main Board, the Main Board Jumper shall be set to +12V (center pin - bottom pin). The new Relay Board shall be set to “+12V New”
 - Note: Relay Coil voltage is set to +12V

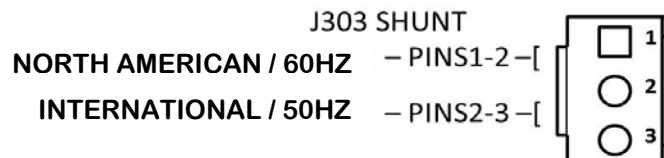
Voltage Select Jumpers



The Export Selection Jumper (J303) must be set according to the Line to Neutral Input voltage that powers the Main PC Board.

- J303 is set to Pins 2-3 for International

Selection Jumper (J303)



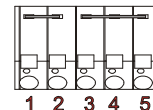
***NOTE: SOME COUNTRIES MAY BE
DIFFERENT DUE TO UNIQUE
ELECTRICAL CONFIGURATION**

WARNING! Before applying power to the control box, complete the entire procedure contained in these instructions.

ALL JUMPER SETTINGS MUST BE VERIFIED BEFORE POWER IS APPLIED.

Failure to properly set the jumpers may result in damages to the control box that are not covered by the warranty.

Power Jumpers



Removing the control box from the spa:

1. Disconnect power to the spa and access the equipment compartment.
2. On the front of the control box, remove the screws and open the control box cover.
3. Disconnect the control and high limit thermistors.
4. Disconnect all components from the flag terminals, remove the strain reliefs and cords. Save the strain reliefs (if undamaged) to be used on the new control box.
5. On the left side of the control box, disconnect the copper bonding wire(s).
6. Inside the control box on the right side, disconnect the ribbon cable.
7. Inside the control box, remove the mounting screws and slide the control box to the right.
8. Lift the control box away from the bracket and remove.

Setting the Program Jumpers on the Main PC Board:

The Program Jumpers 'program' the control box to work in a specific spa model.

1. On the Main PC Board, locate the Program Jumpers.
NOTE: *The Program Jumpers are staged on only one terminal of each jumper location. In effect, the jumper locations (JP1-JP3) are open. You must set the jumpers.*
2. Use a pair of needle nose pliers to set the Program Jumpers (P/N 36021) according to the illustrations on the next page, listed by operating voltage and spa model.
3. Set the Program Jumpers (according to the illustration), using a pair of needle nose pliers to remove or slide a jumper onto the terminals.
4. If your spa model does not use all three Program Jumpers, leave the extras attached to only one terminal, as they were when the Main PC Board box was shipped to you.
5. The program jumper installed at location JP9 will cause the set temperature display to read in °F. Remove the jumper for the display to read in °C.

50 Hz ADVENT™ Main PC Board Replacement Instructions

WARNING! JP5, JP6, JP7, AND JP10 MUST REMAIN OPEN. DO NOT INSTALL JUMPERS AT THESE LOCATIONS!

Program Jumper Configuration

Utopia Series 2002 – 2008

Music Series 2003 – 2008

Paradise 2003 – 2009

230 VAC UTOPIA SERIES GENEVA NIAGARA TAHITIAN HAWAIIAN 2002 - 2003	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC UTOPIA SERIES GENEVA NIAGARA TAHITIAN 2004 - 2008 230 VAC MUSIC SERIES ELATION ASPIRE 2004 230 VAC PARADISE SERIES HAWAIIAN 2007 - 2009 MOOREA 2006 - 2009	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC MUSIC SERIES ELATION 2003	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC MUSIC SERIES ELATION ASPIRE 2005 - 2008	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12
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230 VAC PARADISE SERIES KAUAI (16A) 2003 2005 - 2009 (*) REMOVE JP3 FOR 25A SERVICE	JP1 JP2 JP3(*) JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC PARADISE SERIES KAUAI (16A) 2004	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC PARADISE SERIES MARTINIQUE (16A) 2nd Qtr 2003 (*) REMOVE JP3 FOR 25A SERVICE	JP1 JP2 JP3(*) JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12	230 VAC PARADISE SERIES MARTINIQUE (16A) 3rd Qtr 2003 - 2009	JP1 JP2 JP3 JP4 JP5 JP6 JP7 JP8 JP9 JP10 JP11 JP12
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Removing the Heater Relay Board from the Control Box:

1. Remove the screw holding the horizontal cover bracket then slide it to the right to remove it from the control box.
2. Disconnect the Red, Black and White wires that lead to the Main PC board coming from the heater relay board with needle nose pliers.

Figure 1

Caution: Be careful not to damage the connectors on the Main PC Board.

3. Disconnect remaining heater and ground wires from the heater relay board only.
4. Remove all four screws securing the heater board (2 retaining and 2 grounding screw).
5. Remove the metal guard from the control box.
6. Using the lift points, gently lift the heater relay board straight out of the control box. **Figure 2**

Caution: Board will still be firmly connected to the main control board, lifting heater relay board straight out will disconnect it from the Main PC Board.

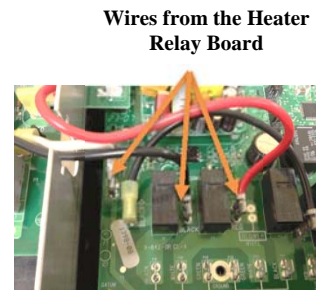


FIGURE 1

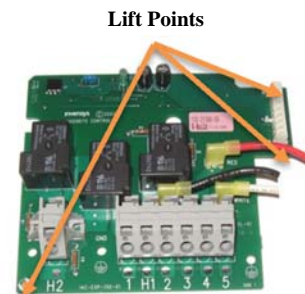


FIGURE 2

Removing the Main PC Board from the Control Box:

1. Disconnect the black wire mounted on the Main PC Board located on terminal P13 and P12 and transfer it to the new Main PC Board. **Figure 3**
 2. Remove all five screws securing the PC Board (3 retaining and 2 grounding screws). **Figure 3**
- Note:** Grounding Screws are longer than the retaining screws.

Mounting the New Main PC Board into the Control Box:

1. Place the Main PC Board in the control box and make sure all screw holes are line-up.
 2. Install the 2 grounding screws making sure they line-up with the grounding plate on the back of the control box.
- Note:** Grounding Screws are longer than the retaining screws.

Caution: Make sure connections are aligned perfectly.

3. Install the 3 retaining screws.

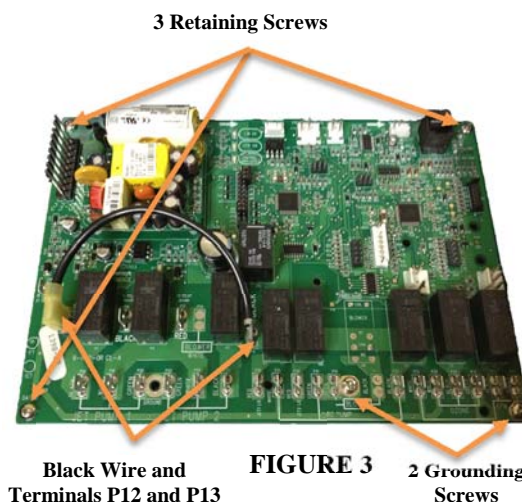


FIGURE 3

Mounting the Heater Relay Board into the Control Box:

1. Line up the connector on the top right of the heater relay board with the connection on the top left of the control board.
2. Making sure all the screw holes are lined up, use the lift points and press down firmly to secure the relay board. **Figure 2**

Caution: Make sure connections are aligned perfectly.

3. Line up metal guard and screw into place.
4. Connect the RED, WHITE, AND BLACK wires from the heater relay board, through the guard slot, to the labeled connections on the Main PC Board. **Figure 1**
5. Line up the horizontal cover bracket and screw into place.

Note: Make sure to slide cover bracket into slot in the metal guard.

Reinstall the control box to the spa:

1. Place the control box on the mounting bracket and slide control box to the left.
2. Inside the control box, attach the mounting screws to the mounting bracket.
3. Reconnect the control and high limit thermistors along with the control panel and pressure switch or pressure switch jumper.
4. Reconnect all components to the flag terminals, strain reliefs and cords.
5. On the left side of the control box, reconnect the copper bonding wire(s).
6. Reconnect power wires to the terminal block TB-1.

Wiring the line voltage conduit to terminal block TB-1:

CAUTION! *If the line voltage is wired incorrectly, damage to the Main PC Board may occur.*

1. Double-check the setting of the Power Jumpers.
2. Locate the wiring instructions for your spa model.
3. Refer to the illustrations on the next page and locate your spa model and operating voltage.
4. Wire the terminal block (TB-1) as shown.

Before supplying power to the control box:

1. Double check the Program Jumper and Power Jumper settings. If the jumpers are incorrectly set, damage may occur when power is applied!
2. Double check all component connections. Be sure the wire colors match the labeling on the terminals.
3. Double check the input connections to TB-1.
- For your reference, a wiring illustration is located on the last page of these instructions.

CAUTION! INCORRECT WIRING TO TB-1 MAY RESULT IN PERMANENT DAMAGE TO THE CONTROL BOX.

ELECTRICAL REQUIREMENTS

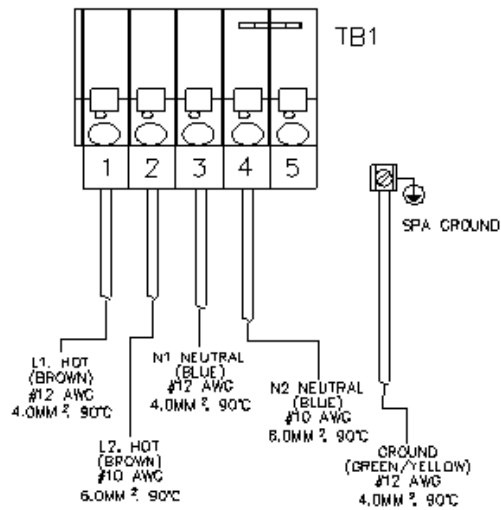
ALL SPAS MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL AND LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN. WE RECOMMEND THE USE OF APPROPRIATE ELECTRICAL CONDUIT, FITTINGS, AND WIRE FOR ALL CIRCUITS.

This product requires a 16 or 20 amp, single phase, 230 volt, three wire service (one line, one neutral, one ground). The grounding conductor must be the same gauge as the line conductors, but no smaller than 2.1 mm² for 16 amp or 4.0 mm² for 20 amp. An 8.4 mm² (#8) solid copper bond wire may also be required. Additionally, one main disconnect switch must be used for all electrical circuits to the spa.

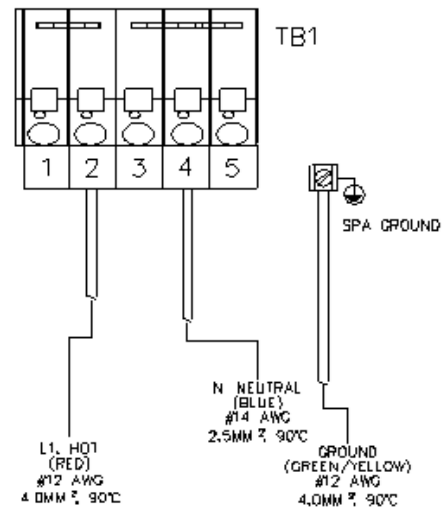
MOUNT THE SUBPANEL ACCORDING TO LOCAL CODES, BUT NOT CLOSER THAN 1.5 METERS TO THE SPA.

WARNING: Removing or bypassing the GFCI breaker at any time will result in an unsafe spa and will void the warranty.

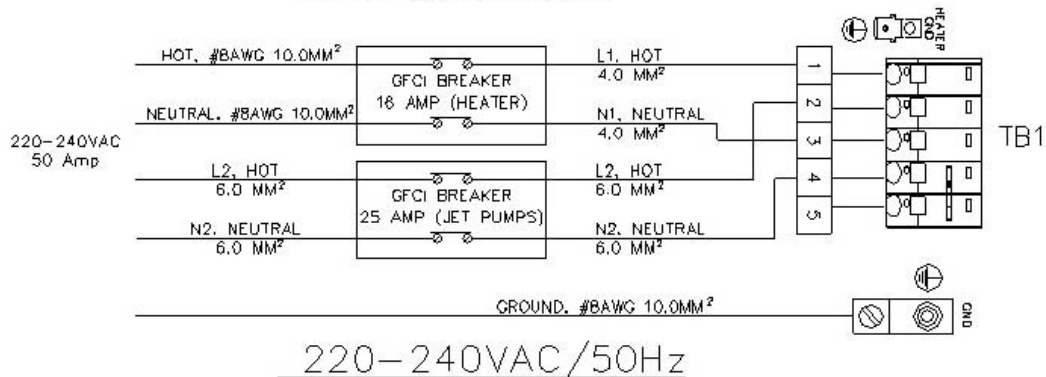
WIRING ILLUSTRATION
230 VAC, 16/20A, 50Hz
DUAL PUMP MODELS



WIRING ILLUSTRATION
230 VAC, 16A, 50Hz,
SINGLE PUMP MODELS

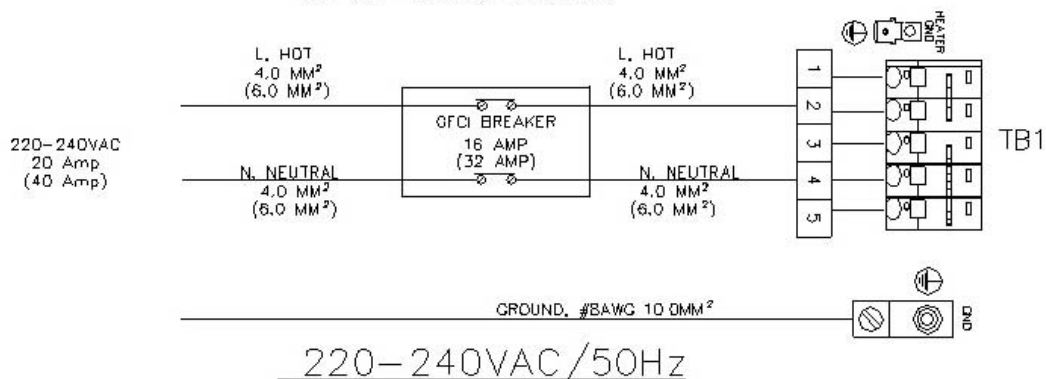


INPUT CONNECTIONS:



GENEVA, NIAGRA, TAHITIAN, ELATION, ASPIRE, MOOREA,
HAWAIIAN AND MARTINIQUE

INPUT CONNECTIONS:



KAUAI AND MARTINIQUE (2nd Qtr 2003)