

JACUZZI HOT TUBS TECHNICAL NEWSLETTER

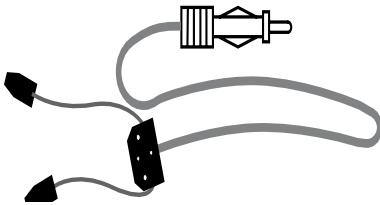
Issue 1

Jacuzzi Hot Tubs Technical Support Department

March 2006

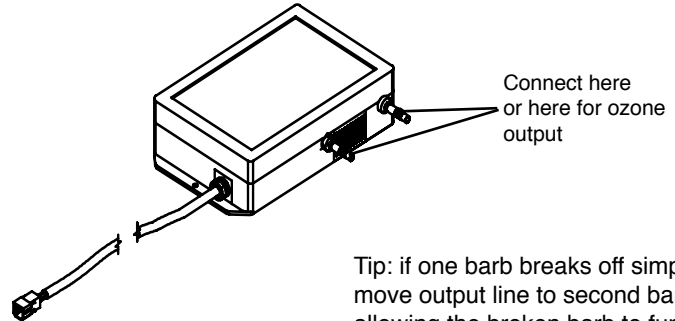
Stereo Reception Problem?

A new 12' antenna extension cable is available to improve stereo reception by moving the antenna away from the equipment pack. You can order part #6473-361 (Antenna: Shielded, Ext 12').



Where To Connect?

A commonly asked question about the ozone generators is where to connect the injector line. The ozones have two barb connections on the side that are interchangeable. You can connect to either one of the barbs.



Tip: if one barb breaks off simply move output line to second barb, allowing the broken barb to function as air intake.

What's This Part Number?

In 2005 we changed parts numbers for some circuit boards and pump assemblies. The part number reflects a change in vendors. Listed below are just a few of the parts numbers that have changed:

Circuit Boards

6600-086 is now the 6600-286
6600-087 is now the 6600-287
6600-089 is now the 6600-289
6600-088 is now the 6600-288

Both parts are interchangeable

Pump assemblies (to list a few)

6500-253 is now the 6500-753
6500-261 is now the 6500-761
6500-258 is now the 6500-758

Both parts are interchangeable.

Dealer Web Site

The Dealer Community web site is loaded with useful information. Please use this web site often and check it for updates. 2006 information is available there, such as new parts listings, 2006 owners manuals and product updates. Access the web site at:

<http://www.jacuzzipremium-dealers.com>.



No More Overriding!

In order to comply with the new UL Standards, we will immediately be making a running-line change on all spas. The override feature that allowed spas to go to 108°F will no longer be available.

According to the UL Standard # UL1563 effective April 2006:

"33.1.1 A unit shall allow no user input that would result in special setting that correspond to set point higher than 40°C (104°F)".

LCD Models

On the LCD boards the pins for the jumper setting at JP9 # 13 will be removed as of April 1, 2006. In the future when any board that currently had that feature is replaced, please make sure that you inform the customer that the highest set temperature will be 104°F.

LED Models

Effective immediately, the override micro-chip used on the LED boards will no longer be available.

Override pins cut off or missing



Testing Transformers

Knowing how to test the transformer is an extremely useful tool. There are three transformer settings and learning the procedure is easy. Please review the diagrams below for details. Remember the transformer must be plugged in to test it.

Diagram A

For any 4 wire, 120/240V LED system:
See diagram A1 for testing transformer voltages.

To Test Transformer:

1. Leave transformer connector J4 plugged into the circuit board.
2. Set your Voltmeter to 500 VAC range.
3. Place Voltmeter directly into backside (wire side) of J4 connector and test as follows:

<p>1 USA/ Canada 60Hz</p> <p>4-wire LED systems (120VAC or 240VAC Power)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Connector J4</td> <td style="width: 50%;">Voltage</td> </tr> <tr> <td>Black to White (Orange)</td> <td>120VAC</td> </tr> <tr> <td>Yellow to Yellow</td> <td>12-14VAC</td> </tr> </table>	Connector J4	Voltage	Black to White (Orange)	120VAC	Yellow to Yellow	12-14VAC	<p>120 VAC/240 VAC Convertible Model (Wire Side View)</p>
Connector J4	Voltage						
Black to White (Orange)	120VAC						
Yellow to Yellow	12-14VAC						
<p>2 USA/ Canada 60Hz</p> <p>3-wire LED systems (240VAC Power)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Connector J4</td> <td style="width: 50%;">Voltage</td> </tr> <tr> <td>Black to Red</td> <td>240VAC</td> </tr> <tr> <td>Yellow to Yellow</td> <td>12-14VAC</td> </tr> </table>	Connector J4	Voltage	Black to Red	240VAC	Yellow to Yellow	12-14VAC	<p>240 VAC Model (Wire Side View)</p>
Connector J4	Voltage						
Black to Red	240VAC						
Yellow to Yellow	12-14VAC						

For any 3 wire, 240V LED system:
See diagram A2 for testing transformer voltages.

Diagram B

For any 3 wire, 240V LCD system:
See diagram B below for testing transformer voltages.

To Test Transformer:

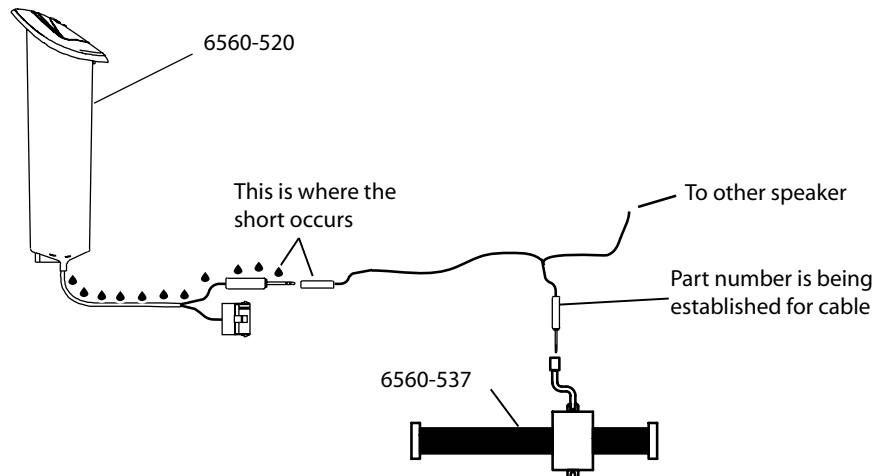
1. Leave transformer primary J3 and secondary J4 connectors plugged into the circuit board.
2. Set your voltmeter to the 500 VAC range.
3. Place voltmeter probes directly into backside (wire side) of the J3 or J4 connector and test as follows:

<p>3-wire LCD systems</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Connector J3</td> <td style="width: 50%;">Voltage</td> </tr> <tr> <td>Black to Red</td> <td>240VAC</td> </tr> </table>	Connector J3	Voltage	Black to Red	240VAC	<p>Transformer Primary (Wire End View)</p>										
Connector J3	Voltage														
Black to Red	240VAC														
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Connector J4</td> <td style="width: 50%;">Voltage</td> </tr> <tr> <td>Blue 1 to Blue 2</td> <td>8-10 VAC</td> </tr> <tr> <td>Yellow 1 to Yellow 2</td> <td>12-14 VAC</td> </tr> <tr> <td>Blue 1 to Yellow 1</td> <td>0-15 VAC</td> </tr> <tr> <td>Blue 1 to Yellow 2</td> <td>0-15 VAC</td> </tr> <tr> <td>Blue 2 to Yellow 1</td> <td>0-15 VAC</td> </tr> <tr> <td>Blue 2 to Yellow 2</td> <td>0-15 VAC</td> </tr> </table>	Connector J4	Voltage	Blue 1 to Blue 2	8-10 VAC	Yellow 1 to Yellow 2	12-14 VAC	Blue 1 to Yellow 1	0-15 VAC	Blue 1 to Yellow 2	0-15 VAC	Blue 2 to Yellow 1	0-15 VAC	Blue 2 to Yellow 2	0-15 VAC	<p>Transformer Secondary (Wire End View)</p>
Connector J4	Voltage														
Blue 1 to Blue 2	8-10 VAC														
Yellow 1 to Yellow 2	12-14 VAC														
Blue 1 to Yellow 1	0-15 VAC														
Blue 1 to Yellow 2	0-15 VAC														
Blue 2 to Yellow 1	0-15 VAC														
Blue 2 to Yellow 2	0-15 VAC														

NOTE: If you experience intermittent operation, check your two yellow wires for a voltage drop when the problem is observed. If there is a problem, the voltage at the two yellow wires will drop to 6 - 8 volts.

Remote Issues?

If you are experiencing some issues with the remote control not operating the speakers, here is one thing to look for. The speakers have a rod that protrudes from the bottom which houses speaker wires. Sometimes when water finds its way into the speaker housing, it travels down the rod and affects the 1/4" stereo plug, shorting it out. That in turn affects the remote operations through the speaker. We are currently working on establishing a part number for the speaker cable and will update the field once this is done. For now, the speaker cable only comes with the wiring harness, part # 6560-538.



Stereo Replacement Parts

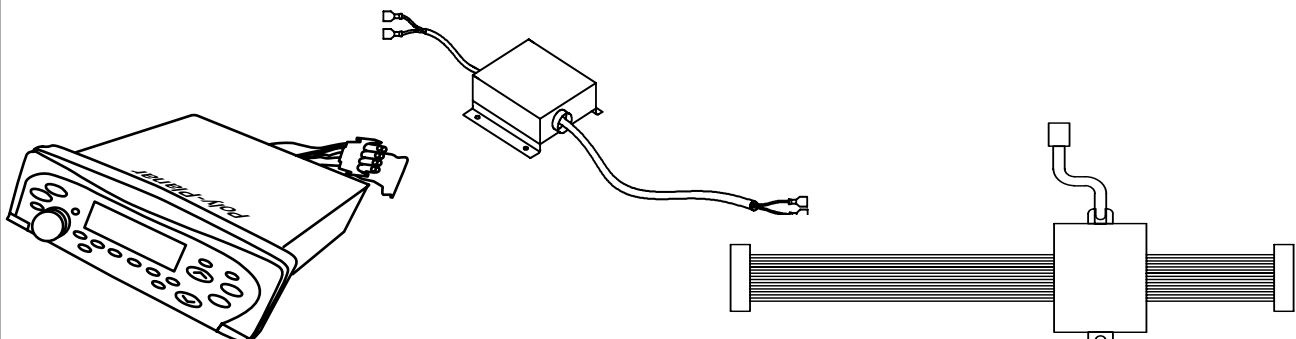
When making stereo repairs, please make sure you have all of the right parts that might be needed to make the repairs. See list below for replacement parts.

Poly-Planar

6500-204 stereo receiver
6560-538 wiring harness
6500-005 power supply
6560-812 antenna
6560-501 speaker 2004 +
6560-517 speaker 2003 only
2570-235 speaker 2002 only
6560-504 crossover/interface
6472-274 remote

Additional Parts for J400 Series (2006)

20198-001 equalizer module 400
20197-001 wiring harness
20229-001 remote w/jets
20230-001 remote interface
20124-001 sub woofer
20169-001 speaker
20100-001 speaker grill



Stereo Showroom Display Without Water

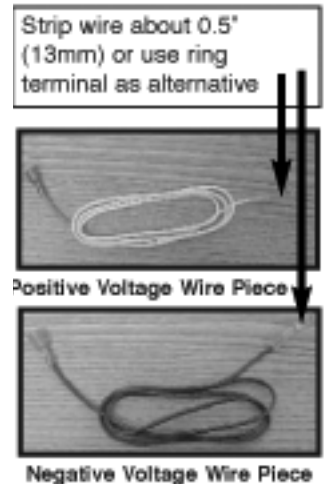
Many dealers in recent months have asked, "Is it possible to connect a Jacuzzi spa equipped with an audio system to a 120 VAC power supply for demonstration purposes?" The answer is yes! Refer to the setup procedure below for details:

Items Required

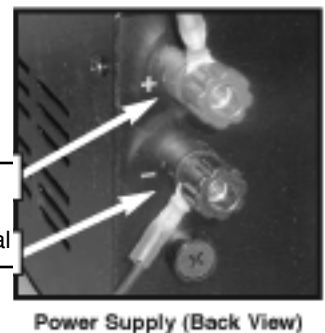
1. Power supply: 12-15 VDC @ 15A continuous
2. 18 AWG stranded wire approximately 6 feet (2m) long
3. 1 female quick-disconnect, 18 AWG
4. 1 male quick-disconnect 18 AWG
5. Wire crimp / cut tools

Installation Procedure

1. Make a pair of wires and attach connectors as follows.
 - A. Cut 2 pieces of 18 AWG stranded wire approximately 3 feet (1m) long (more or less as appropriate). One will be for the positive terminal connection and one for the negative connection.
 - B. For the positive voltage wire: crimp one end of wire with quick disconnect female terminal and strip the other end approximately 0.5" (13mm) as shown (right).
 - C. For the negative voltage wire: crimp one end of wire with a male quick-disconnect terminal and strip the other end approximately 0.5" (13mm) as shown (right).
2. Locate the two wires that connect to the DC voltage to the stereo. Disconnect these wires from the pre-installed factory power supply.
 - A. Locate the positive connector from the stereo. This connector should be a male quick-disconnect on a red wire. Use the piece of wire that was just made (the one with the female quick disconnect) and connect it to the male quick-disconnect terminal of the stereo wire.
 - B. Connect the other end (stripped end) to the positive terminal post of the power supply labeled with a "+" mark (see illustration right).
 - C. Locate the negative connector from the stereo. This connector should be a female quick disconnect on a black wire. Use the piece of wire that was just made (the piece with the male quick-disconnect) and connect it to the female quick-disconnect terminal of the stereo wire.
 - D. Connect the other end (stripped end) to the negative terminal post of the power supply labeled with a "-" mark (see illustration right).
3. Verify that the positive wire connects to the positive post of power supply and to the positive terminal on the stereo. Also verify the negative wire connects to the negative ends before applying power to the power supply and stereo.



Positive Terminal
Negative Terminal



Model # 22-508
Radio Shack Cat No. 22-508

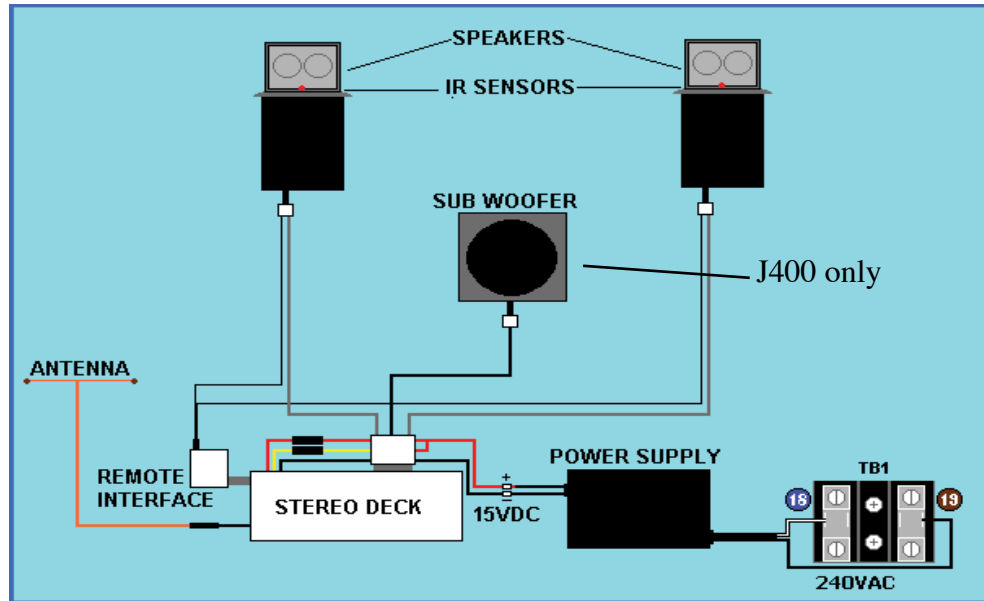


Power Supply, 13 VDC@15A
Radio Shack Web Site:
<http://www.radioshack.com>

Wireless Stereo Remote Troubleshooting

Many dealers ask for help when trying to diagnose a problem with the stereo remote control. In order to troubleshoot the remote control system, you must have spare parts on hand. For a list of parts needed, see article on page 3.

Jacuzzi Hot Tubs Stereo System



- Step 1: Point the remote at the speakers and try to activate. Do the IR lights (LED's) on the speakers flicker? If not, check for unplugged IR interface (IMR-150/200) in equipment area or unplugged black cable connection (1/8 phone jack) at each speaker connection. Next, try another remote as it may be defective or have a dead battery. If LED's flicker and remote is non-functional, then proceed to step 2.
- Step 2: Expose the back of stereo and unplug the IR interface (IMR-150/200) module from it. Now point the remote at the front of the stereo deck and try to activate it. Does it work? If not, the stereo is defective. If it works, that means the stereo deck is good, proceed to step 3.
- Step 3: Replace the IR interface (IMR-150/200), connect the stereo deck and try to activate. Does it work? If so, replace the IR interface (IMR-150/200). If not, proceed to step 4.
- Step 4: Turn off the spa. Locate the wire harness from back of stereo and un-plug it. Temporarily install new wire harness (placing wire harness outside equipment area) with new speakers. Turn on the spa. Test remote by aiming at speakers. Does it work? If so, then the problem is in wire harness or speakers. Remove old speakers and try with new harness. If the remote works with old speakers, then there is a bad harness. If the remote is not working, then a speaker(s) is bad.

NOTE: If a ISC-100 has been added to allow the remote to control jet functions (J400 Series only), try unplugging the ISC-100 and test remote again. If the remote works, then the ISC-100 is the problem.

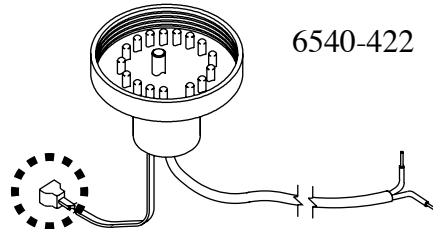
Waterfall and Underwater LED Light Facts

Two connector styles have been used on the light systems in 2005 LED Series spas (J315, J325, J335, and J345). In early 2005, the light system used an amp style connector. About mid-year 2005, manufacturing started using a phone jack style connector. It is important that you pay close attention to the connector style when replacing a defective light, since they are not interchangeable. See diagram below for ordering details.

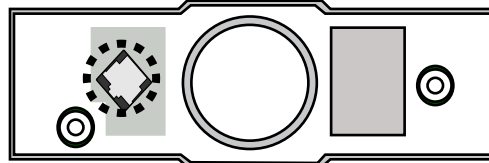
The splitter for the phone jack connector now has a part number. When ordering please use part # 6000-445



Phone Jack Style Connector
Underwater Light

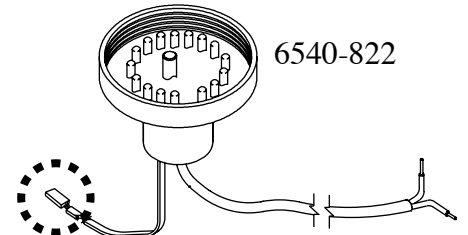


Waterfall Light 6540-420

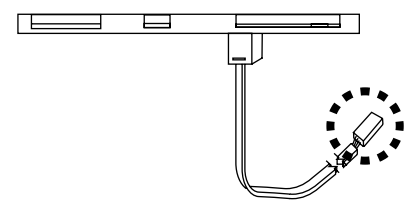


Bottom

Amp Style Connector
Underwater Light



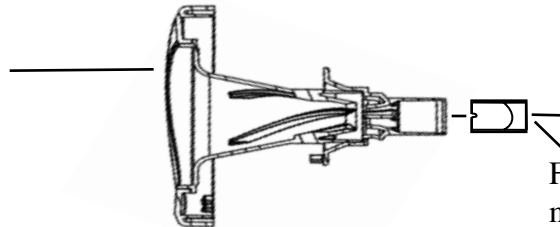
Waterfall Light 6540-820



New FX2 Flow Straightener Details

It was noticed that the new PowerPro FX2 jet flow stream occasional tends to be focused more towards the side walls of the spa rather than the center. To correct this issue when present, we have added a flow straightener to keep the jet stream centered for optimum performance. If you have a jet with a non-centered flow stream, we can supply a limited quantity of straighteners, upon request. A part number will eventually be established for this part. For now, please call the technical department for assistance on getting this part.

6541-185
FX2 Jetface
only



Flow Straightener (no part number yet)

Maxx PowerPro O-Rings

When making field repairs on the Maxx PowerPro jet, it is imperative that you pay close attention to the spas manufacture date. The drilling hole size for this jet was changed on 7-25-05 and was made smaller. Refer to the listing below for the correct o-ring size to service spas manufactured before and after this change:

Spas manufactured **prior** to 7-25-05 use o-ring part # 6541-826

Spas manufactured **after** 7-25-05 use o-ring part # 6541-073

ProPolish Filter Bag

Caring for the new ProPolish filter bag is plain and simple. As stated in the owner's manual, the bag should be emptied weekly and replaced every three months. The cleaning procedures for the bag are to remove the bag, dump out the contents, rinse with low pressure water and reinstall. The bag (depending on the use and water maintenance) may look dirty but it is still good to use. The bag should never be washed with a high pressure nozzle or be machine washed in any way. To order replacement bags, use part # 20076-001.



Additional Placement of Serial Number Stickers

By popular demand, you will be pleased to learn that the serial numbers of our spas are now located in three places for increased accessibility. This will assist you in keeping track of your inventory and record keeping. The three locations that you will find the serial number stickers are:

- On the outside packaging
- Attached to the spa on the lower right-hand corner of the pan of J-300™ and J-400™ models, and on the back right skirt panel on the J-200™ models
- On the load center inside the equipment bay

Upcoming Technical Service Seminars!

Ontario, California Seminar – April 20th and 21st

Each technician should attend a two-day Ontario seminar at least once because of the value-added activities that are only offered at the factory-based seminars. The factory-based seminars are held twice a year, in the Spring and in the Fall.

The cost of this year's event is \$295.00 for the first person (based on double occupancy) and \$245.00 for each additional person from the same dealership. Service centers are also welcome to attend. The registration fee includes:

- 1 ½ days of training
- Hotel accommodations (double occupancy) for 2 nights
- Continental breakfast and lunch both days
- Dinner and a night's entertainment for the first night
- Workbooks
- A complimentary T-shirt
- Certification testing
- Factory tour

Seats are limited for this special factory-based event. Attending this seminar will help technical service personnel to improve their ability to troubleshoot, as well as give them the opportunity to see the factory close-up. Registration forms are available on the dealer community web site.

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