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Conversion of the electronic controller of HUFCOR and SAUNA ADVANTAGE infrared saunas to the SUNETTE system

Some Hufcor infrared saunas employ a Balboa Instruments Inc. controller model SBA50. Support for this product appears to be unavailable from either Hufcor or Balboa.

The Sunette conversion kit is available to replace the existing controller. The installation of this kit will restore your sauna to full functionality. Please be advised that this conversion requires some electrical knowledge and woodworking skills.

Before you proceed: **Disconnect the sauna from the 110/230 AC volt power**

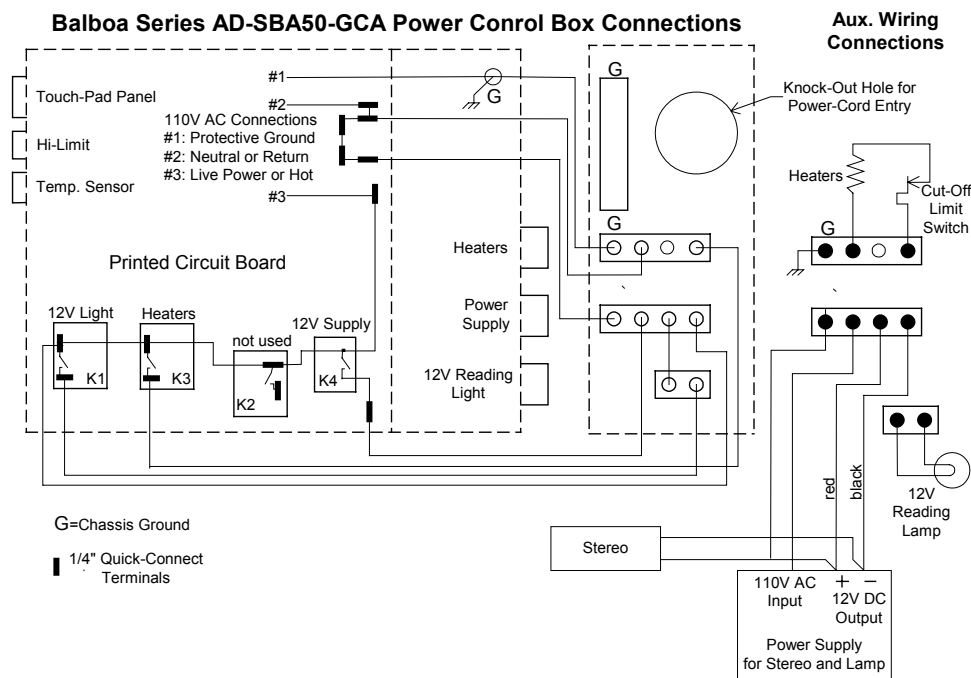
Step 1: Preliminary Preparation

After it is established that the Balboa controller is not serviceable the disassembly is started by labeling every wire, using masking tape and an indelible marker pen. Digital photos should be taken from various angles. Care should be taken that wires, connectors and connection points are clearly identified and photographed.

Step 2: Removal of existing Equipment

The next step is the removal of the electronic components to be replaced:

- The power control box is located on top of the sauna. It is 6 3/4"x5"x2 1/2". Most of the wiring connects to this box and good identification of the wires and connectors is important



- AC power cord. A new cord is supplied with the replacement kit
- The outside and inside touch-pad controllers. The openings will be covered later with a suitable piece of cedar
- The temperature sensor and it's housing (the new main power control box has an integrated temperature sensor)

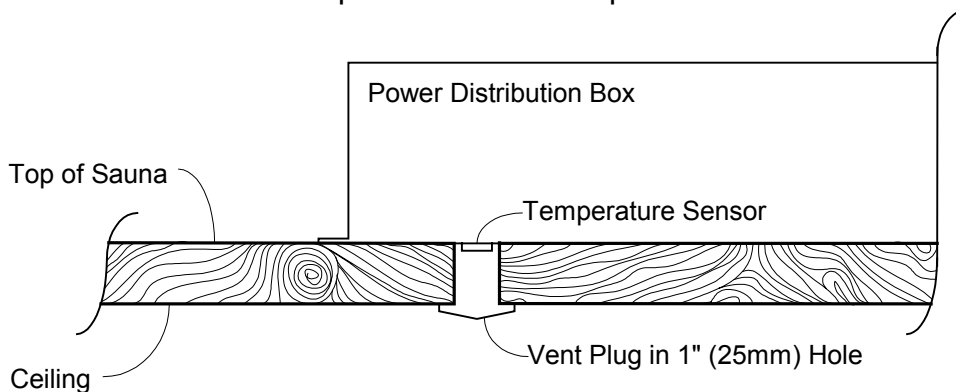
Step 3: Touch-Pad Control Panel Installation

Cut an opening inside and/or outside for the new touch-pad control panel. The opening required is 3¼"x5½". To avoid damage (scratching and tearing) to the wood cover the area around the cut with masking or painters tape prior to cutting. Remove the tape slowly and carefully after the cut. Cedar splinters easily. The touch-pads should be close to the location of the removed panels. Make sure that there is space for the wiring requirements. Connect the wires and feed them to the location of the power control box (see next step). It is important that the green wire is connected securely on both ends. This is the protective ground and it is vital to your personal safety. See attached interconnect diagram.

Step 4: Power Control Box Installation

Locate a suitable place for the power control box on the roof of the sauna. This should be centrally located with at least 1" of airspace between the top of the box and the ceiling of the host room.

A 1" hole in the roof is required for the temperature sensor as shown below



Temperature Sensor Detail, Side-Cut View

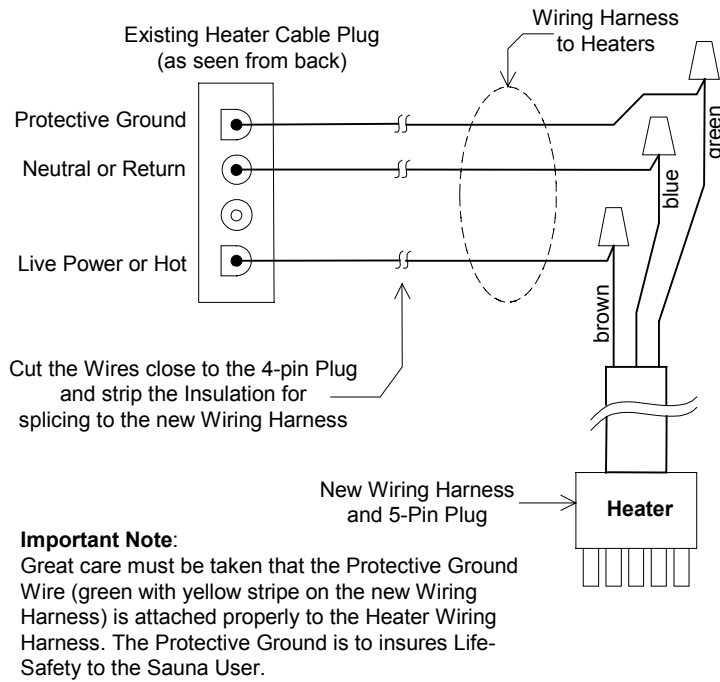
Step 5: Heater Connection

Cut off the three wires to the 4-pin connector (see drawing), this is the heater cable. Connect these as shown below:

The existing wire colors could be the same as that of the replacement harness but may vary.

The replacement harness colors are:

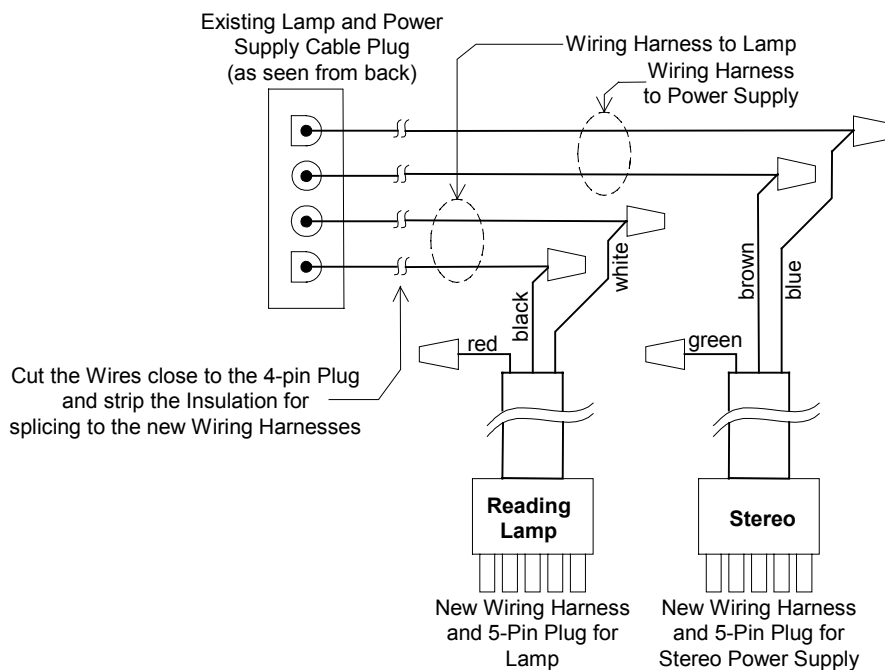
Green (yellow stripe):	Protective Ground
Blue:	Neutral or Return
Brown:	Live Power or Hot



Step 6: Lamp and Stereo Hook-Up

Cut off the two white wires to the two-pin connector (see drawing) for the 12V reading lamp. Splice them to the black and white wires of the supplied gray cable, using the enclosed splice connectors. Cut off the red wire or cap it with a splice connector, it is not required. Plug the 5-pin connector into the socket marked "Reading Lamp".

Cut off the two black wires (see drawing) to the power supply (110V AC input) and splice them to the brown and blue wires of the supplied 5-pin cable assembly labeled "Stereo"



Customized SUNETTE Power Distribution Box, Replacement for HUF COR/BALBOA AD-SBA50-GCA

