

Plexi SE PCB

Customer Notice #1

Dear Valued Customer,

It has recently come to our attention that the Plexi SE PCB version 1.0 circuit board you received may contribute to a potential safety and/or fire hazard due to an electrical discharge, or arcing, from the spade connectors to the board's ground plane.

This event is only associated with version 1.0 of the Plexi SE PCB.

We are sending you this notice to inform you of the potential hazard. Included in this notice is an explanation of the hazard as well as a solution to prevent any type of damage or unsafe use.

Although this event has only been reported in two instances and we have not been able to reproduce such an event in our laboratory, we recognize the potential and recommend implementing the changes described in the attached write-up.

Please feel free to contact us if you have any questions, comments, concerns, or complaints. We apologize for the inconvenience.

Sincerely,
Terry Stinger

Contact Information: Z_Stingray@GuitarAmplifierPCBs.com



Electrical Shock Warning

Building tube amplifiers involves working with, or around, high voltages. Working inside a tube amplifier can be dangerous if you don't know the basic safety practices. Building, modifying, or repairing tube amplifiers should only be performed by trained personnel.



Disclaimer of Liability

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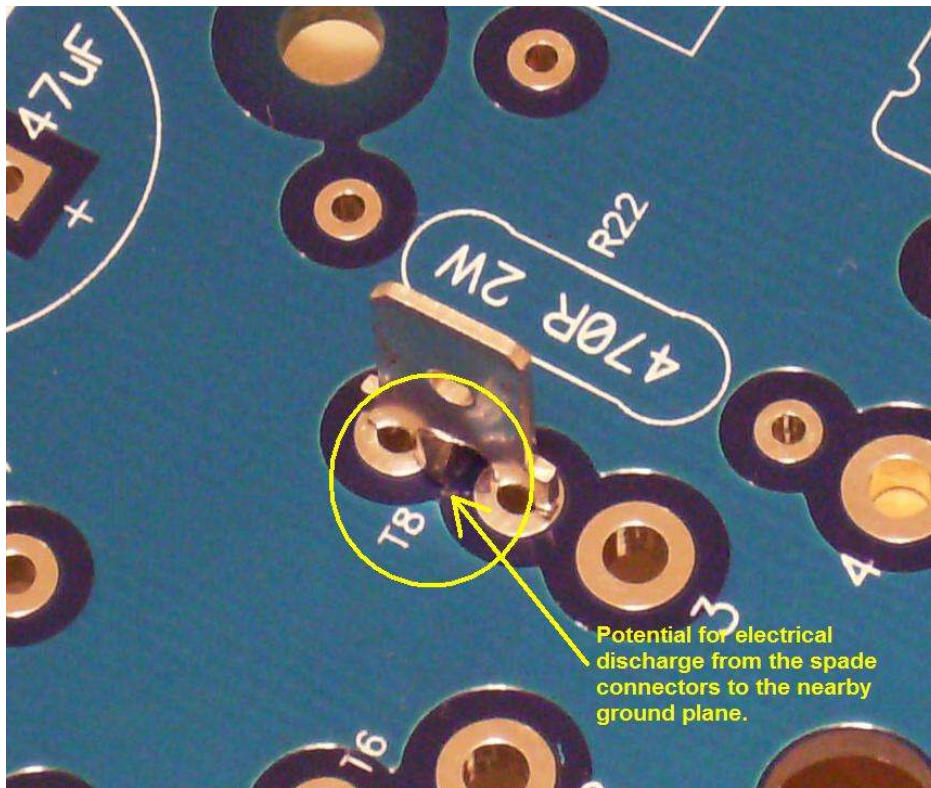
GuitarAmplifierPCBs.com reserves the right to make design changes or improvements without obligation to revise prior versions.

All specifications are subject to change without notice.

Problem Statement

When using version 1.0 of the Plexi SE PCB, electrical discharge in the form of arcing has been observed between the spade connector and the nearby ground plane where the output transformer connects to the plate of the power tube. This connection is labeled as "T8". This has led to poor amplifier performance and charring of the circuit board. Continued use MAY lead to a fire hazard.

We attribute this event to the design of the spade connector and the close proximity of the Plexi SE PCB's ground plane. Below is a picture of how close these two components are positioned.



Proposed Solution

Since the problem is due to the design of the spade connector chosen for use with the circuit board, we recommend the removal of all of the spade connectors from the board. The wire connections should be made directly to the circuit board by soldering each wire lead into its respective solder pad.

Removal of the Spade Connectors

Place the tip of a hot soldering iron on the side of a spade connector. Allow the metal of the connector to heat up and melt the solder. When the tip of the soldering iron can move the connector, remove it from the board with needle nose pliers.

Repeat this process for all of the spade connectors installed in the board.

Hook Up the Wire Leads

All of the wire leads should be soldered into their respective locations, which are now void of the spade connector.

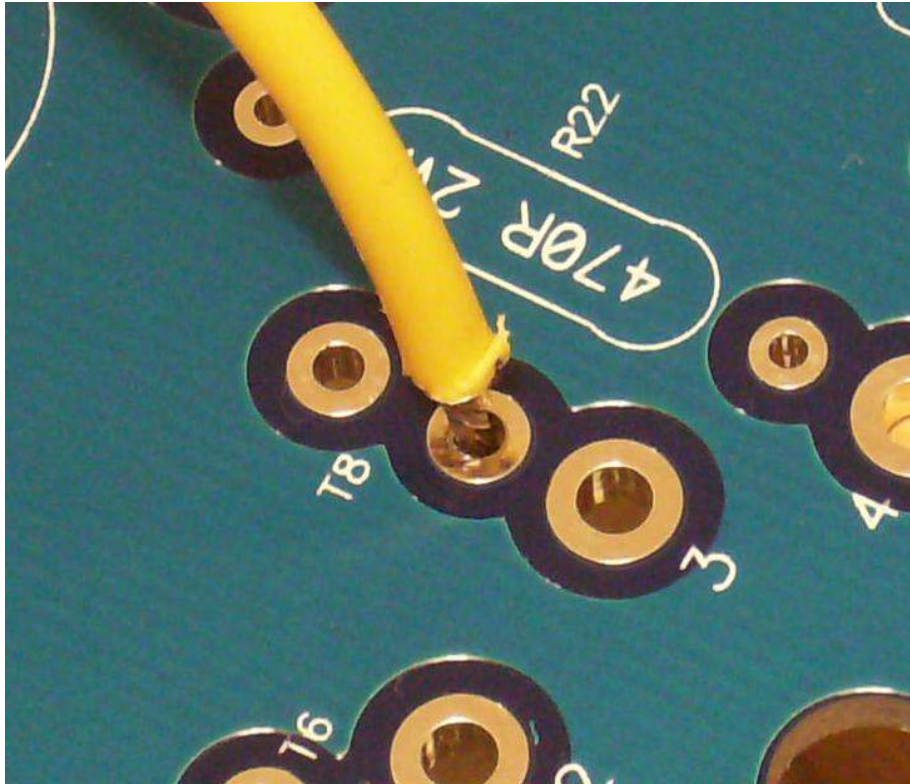
With wire cutters, cut the spade connectors off of the ends of all of the wires.

Strip the wire insulation off of $\frac{1}{4}$ " of the end of the wire. Twist the end of the wire and tin it with a hot soldering iron and a bit of solder.

Place a hot soldering iron in the middle of the solder pad targeted to receive a wire lead. As the solder melts, pull the iron to the side to expose the hole and insert the wire lead.

Be careful not to overheat the solder pad. Also, do not insert the wire lead too far into the board. The wire may make contact the metal chassis underneath.

Here's a representation of how to install the wire lead.



After the wire lead is properly inserted into its respective location, re-flow the solder joint with some fresh solder.

Clean all solder connections with a good quality solder flux remover. Inspect the board for any solder that may have splashed during this procedure.

Restart the Amplifier

Startup and test the amplifier as prescribed in the Plexi SE PCB Build Manual.