

Fender® Twin Reverb (AC568) & Showman Reverb (AA768) Capacitor Kit Installation Guide

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Please review these guidelines thoroughly prior to beginning installation. Becoming familiar with the complete procedure in advance ensures a safe, successful recapping process for your 85W/100W Fender® dual-6L6 power section circuits (Twin Reverb AC568 and Showman Reverb AA768).

Safety Warning

Tube amplifiers contain high voltage stored within the filter capacitors, even after the unit is turned off and unplugged.

- Always disconnect the amplifier from commercial AC power before commencing work.
- Discharge all filter capacitors fully before touching internal circuitry.
- If you are unfamiliar with safe capacitor discharge techniques, leave your amplifier in the care of a professional service technician.

Capacitor Sizes & Values

- **Physical Size:** Modern manufacturing advancements allow replacement capacitors to be 50%–75% smaller than original vintage components.
- **Standard Value Adjustments:** Updated industry standards mean original values have modern equivalent replacements:
 - **Main Filter Capacitors:** The original stacked 70 μ F/350V main filters under the chassis are replaced by **80 μ F/450V** (or 100 μ F/350V) units.
 - **Power Supply Nodes:** Original 20 μ F/500V capacitors are replaced by **22 μ F/500V**.
 - **Bias Filter Capacitor:** The original bias capacitor is superseded by **100 μ F/100V** or **50 μ F/100V** for cleaner bias voltage supply.
 - **Preamp & Vibrato Bypass:** Standard 25 μ F cathode bypass capacitors are replaced by **22 μ F**, while 5 μ F vibrato bypass units are replaced by **4.7 μ F**.

Polarity & Orientation

Electrolytic capacitors are polarized. Installing them backward will damage the components and the amplifier.

- **Identifying Terminals:** Originals feature positive (+) and negative (-) indicators. Replacement components (such as Tube Amp Doctor capacitors) use an arrow pointing toward the negative terminal.
- **Mark the Chassis:** After safely discharging the old capacitors, clearly mark their polarity orientation inside the amplifier using a marker, masking tape, or reference photos before removing anything.
- **Opposing Orientations in the "Dog House":** The main 70 μ F/350V (replaced by 80 μ F/450V) filter capacitors in high-power circuits like the AC568 and AA768 are wired in series inside the capacitor housing and must be installed facing in opposite directions from each other.
- **Bias Circuit Polarity:** The positive (+) lead of the bias capacitor always connects to ground, and the negative (-) lead connects to the active circuit.

Installation Procedure

1. **Work One at a Time:** Replace components strictly one at a time to prevent layout and polarity errors.
2. **Desoldering:** Snip original leads close to the eyelet, then clear the hole using solder wick or a solder sucker (leave any lead wire under the board intact).
3. **Clean Workmanship:** Trim new leads to leave roughly ½ inch of excess length for proper insertion. Never twist new leads around old cut leads—splicing reduces reliability, safety, and resale value.
4. **Complete Replacement:** Replace every capacitor included in the kit before powering up the amplifier.

Mechanical Mounting Because modern capacitors are smaller and lighter, secure large filter capacitors in the "dog house" with a bead of silicone caulk (RTV) or non-conductive hot melt adhesive underneath them. Relying solely on lead wires allows speaker vibrations to eventually crack the leads. Small preamp capacitors on the eyelet board do not require adhesive.

Resistor Replacement If your kit includes balancing or power supply dropping resistors for the main capacitor housing:

- Replace them one at a time, matching color codes with existing components.
- Ignore the gold or silver tolerance stripe on new replacement resistors when matching.
- Due to production variances across different manufacturing runs, some kits include extra resistors. Not all supplied resistors will be needed—replace only like-for-like resistors in your specific Twin Reverb AC568 or Showman Reverb AA768 circuit.

AC568 & AA768 Model-Specific Circuit Notes

- **Late 1960s Circuit Variations:** The AC568 and AA768 circuits represent Silverface transitional designs featuring specific 2000pF suppression caps on the power tube sockets and unique cathode bias/fixed bias combination wiring on the 6L6 output stage. Pay close attention to these areas when tracing lead dress near the main board.
- **Vibrato Cathode Bypass:** Locate the vibrato circuit cathode bypass capacitor (4.7μF or 5μF). Replace this unit first to prevent mix-ups. It spans a 100kΩ resistor, with one side wired to Pin 8 of the 5th 12AX7 tube.
- **RCA Jack Grounds:** On Silverface models like the AC568 and AA768, some cathode bypass capacitors ground directly to the rear panel RCA jacks rather than the main eyelet board.
- **Early Production Variations:** If working on a transitional chassis with 3-leg dual 25μF preamp capacitors, replace them with two single 22μF or 25μF capacitors. Connect both negative leads to the single original ground eyelet, and route each positive lead to its respective eyelet.

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