

# Rock-it Socket for Audio Upgrades

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The Rock-it Socket (™) is ready to plug and play as a dual op amp through-hole DIP socket, or as an adapter for a surface mount dual op amp, AS-IS. However, it has several features, including built-in power supply decoupling capacitors, to fine tune circuit performance; and can also be reconfigured to work with a single channel mono Op Amp.

## TOP:

- A. If pin 3 happens to be connected to ground on the module, add a solder dot at J1 to ground the decoupling caps.
- B. If pin 5 happens to be connected to ground on the module, add a solder dot at J2 to ground the decoupling caps.
- C. Do not connect J1 or J2 if neither pin 3 nor pin 5 is connected to ground on the module. Instead, you may add a jumper wire from the "com" wirepoint to a ground on the module.

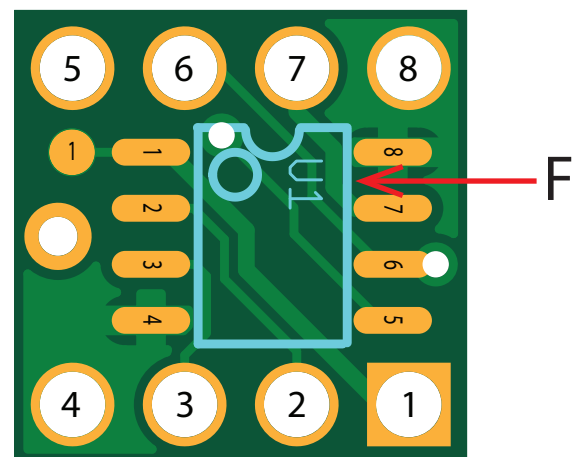
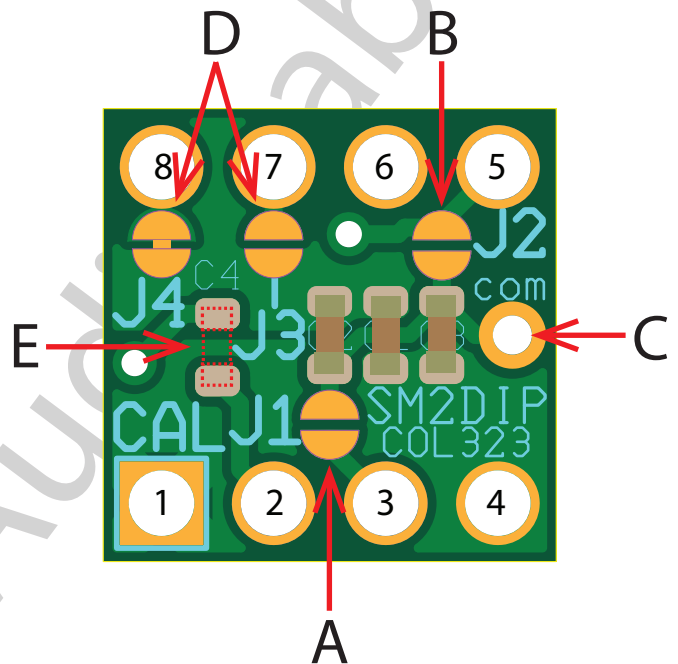
NOTE: About grounding the decoupling capacitors. If ground is not convenient, the capacitors are still connecting between +V and -V, so a connection to ground is not always necessary. If testing reveals that a chip is oscillating, then grounding is necessary.

- D. If a single channel mono op amp is to be fitted, add a solder dot at J3 to apply +V to the decoupling caps. Pin 8 should have no connection to the module. To be certain, carefully cut the link at J4 with a craft knife. If you are confident that pin 8 has no contact to the module circuitry, then J4 may be left in place.

- E. If a single channel mono op amp is to be fitted, an empty footprint for "C4" has been provided as a convenience for mounting a frequency compensation\* capacitor if needed. NOTE: Do not fit "C4" if a dual op amp will be used.

## BOTTOM:

- F. An empty footprint for "U1" has been provided to adapt a surface mount op amp for use in place of a through-hole op amp. It is recommended that when a surface mount device is installed at least one of the DIP pins should be blocked top-side to prevent accidentally fitting a through-hole op amp at the same time.



\*Frequency compensation capacitors are used to limit the bandwidth and the effective slew rate of an op amp. When upgrading op amps with faster versions, it may be necessary to add these compensation capacitors to prevent RF oscillations. The smallest value capacitor to do the job should be used, typically 15pF to 47pF. Larger values could begin to smear the high frequency phase response of the circuit. With dual op amps it is already convenient to add these capacitors between pin 1 and 2, or pin 6 and 7 if needed. Mono op amps use pin 6 and pin 2, therefore, "C4" connects pin 6 and 2 for this purpose.