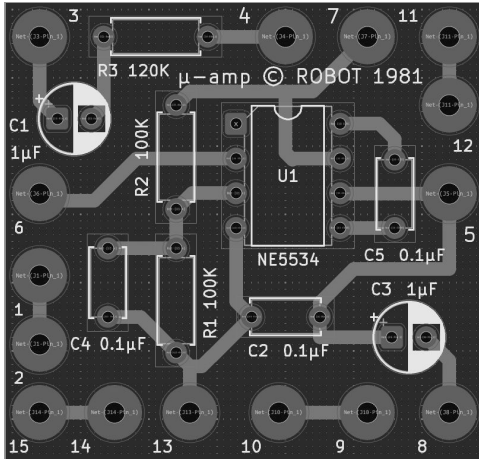


**ROBOT —** preassembled onboard guitar preamplifier

## FRONT — WIRING REFERENCE

**Before wiring:** Disconnect the 9 V battery. The PCB is supplied fully stuffed; do not remove or replace onboard parts. Insulate the underside of the board from shielding foil, conductive paint, pot bodies, and other metal parts.



Board wire pads 1–15.

## Two wiring choices

**A — Use the PCB link traces.** Wire the off-board parts to all numbered pads shown in the schematic. The board already joins:

**1 ↔ 2** Input / SW1A common

**9 ↔ 10** SW1B common / Tip

### 11 ↔ 12 Ring / battery –

**14 ↔ 15 Bypass path**

**No jumper wires are required** between these pad pairs; they are copper traces on the PCB.

**B — Direct point-to-point wiring.** Make the four connections above directly between the off-board parts. Only these seven wires then terminate on the PCB:

**3 · 4 · 5 · 6 · 7 · 8 · 13**

**3** SW1A effect contact   **4** pot upper   **5** pot wiper   **6** pot lower

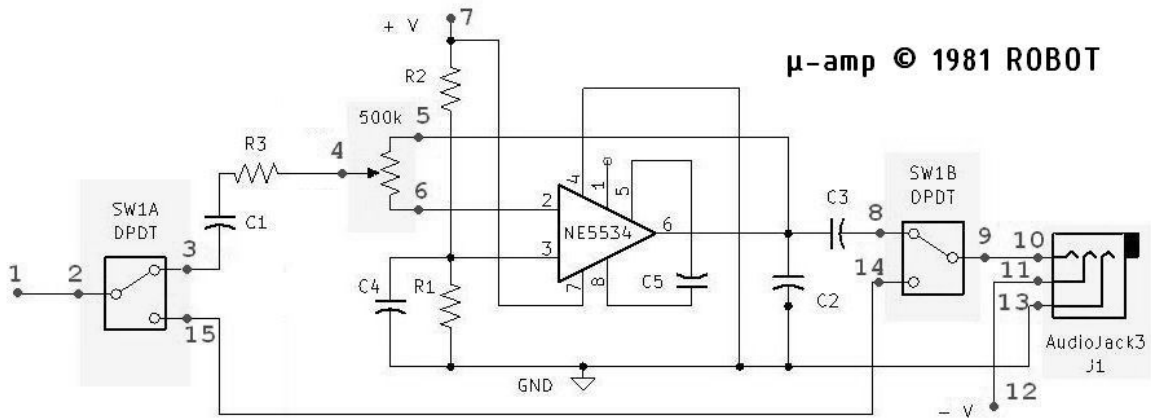
**7** +9 V   **8** SW1B effect contact   **13** Sleeve / ground

## Battery switching

Battery + goes to **Pad 7**. Battery – goes to the stereo jack **Ring**, either through Pads **12/11** or directly. Jack **Sleeve** is ground and connects to **Pad 13**.

Unplug the guitar cable when the instrument is not in use so the battery is disconnected.

## Wiring Diagram



| TERMINAL LEGEND (Board Wire Pads) |                                 |    |                       |    |                                   |
|-----------------------------------|---------------------------------|----|-----------------------|----|-----------------------------------|
| 1                                 | Input (guitar hot)              | 6  | Pot 500k – lower      | 11 | Output jack – Ring (R)            |
| 2                                 | SW1A common (input)             | 7  | Battery positive (+V) | 12 | Battery negative (–V)             |
| 3                                 | SW1A NC (to circuit via C1, R3) | 8  | Effect output (to C3) | 13 | Output jack – Sleeve (S) / Ground |
| 4                                 | Effect input (from SW1A NC)     | 9  | SW1B common (output)  | 14 | SW1B NO (bypass to output)        |
| 5                                 | Pot 500k – wiper                | 10 | Output jack – Tip (T) | 15 | SW1A NO (bypass from input)       |

Note:  
Direct board links (copper traces)  
to be implemented on PCB:

1-2, 9-10, 11-12, 14-15

**500 k $\Omega$  control**

Pad 4 — upper terminal

Pad 5 — wiper

Pad 6 — lower terminal

### Effect path

SW1A → Pad 3

Pad 8 → SW1B

### Output jack

Tip — audio out

Ring — battery — switch

Sleeve — ground

# μ-Amp Installation Guide

Installation, test & troubleshooting

[BACK](#)

## Pad Legend

|   |                     |    |                       |    |                      |
|---|---------------------|----|-----------------------|----|----------------------|
| 1 | Guitar input — hot  | 6  | 500 kΩ pot — lower    | 11 | Output jack — Ring   |
| 2 | SW1A common — input | 7  | Battery positive +9 V | 12 | Battery negative     |
| 3 | SW1A effect contact | 8  | Effect output to SW1B | 13 | Jack Sleeve / ground |
| 4 | 500 kΩ pot — upper  | 9  | SW1B common — output  | 14 | SW1B bypass contact  |
| 5 | 500 kΩ pot — wiper  | 10 | Output jack — Tip     | 15 | SW1A bypass contact  |

## Installation Sequence

1. **Plan the layout.** Choose locations for the PCB, 500 kΩ control, DPDT switch, stereo jack and 9 V battery.
2. **Mount the PCB securely.** Insulate the copper side from conductive shielding and metal hardware. Do not support the board by its wires.
3. **Choose one wiring method.** Use the PCB link traces or direct point-to-point wiring shown on the front.
4. **Wire the 500 kΩ control:** Pads 4, 5 and 6.
5. **Wire SW1A and SW1B.** SW1A selects effect/bypass at the input; SW1B selects effect/bypass at the output.
6. **Wire the stereo output jack.** Tip = audio, Ring = battery-negative switching contact, Sleeve = ground.
7. **Wire power.** +9 V to Pad 7. Battery – to Pad 12 with PCB-link wiring, or directly to jack Ring with point-to-point wiring.
8. **Connect Pad 13** to jack Sleeve / instrument ground.
9. **Inspect all soldering.** Check for bridges, loose strands, reversed battery leads and wires touching adjacent pads.
10. **Connect the battery only after inspection.**

## DPDT Switch Check

DPDT lug arrangements vary. Before soldering, use a continuity meter to identify the two **common** contacts and which throws connect in each position.

**Effect:** SW1A sends the guitar signal to **Pad 3**; SW1B connects **Pad 8** to the output path.

**Bypass:** SW1A and SW1B connect through Pads **15/14**, or through the equivalent direct wire.

## First Power-Up

- ☐ +9 V polarity checked at Pad 7.
  - ☐ Battery – goes to jack Ring.
  - ☐ Pad 13 goes to Sleeve / ground.
  - ☐ Pot is wired to Pads 4/5/6.
  - ☐ Switch commons/throws verified.
  - ☐ No solder bridges or loose strands.
  - ☐ PCB is insulated from metal/shielding.
1. Set the amplifier volume low.
  2. Connect a fresh 9 V battery and plug in the guitar cable.
  3. Test bypass first, then switch to μ-Amp.
  4. Operate the 500 kΩ control through its range.
  5. Gently move the wiring to check for intermittent joints before closing the cavity.

## Troubleshooting

| Symptom                      | Check first                                                                         |
|------------------------------|-------------------------------------------------------------------------------------|
| No sound in either position  | Jack Tip/Sleeve, guitar hot, SW1A/SW1B commons, ground.                             |
| Bypass works; μ-Amp does not | Pads 3 and 8; Pads 4/5/6; +9 V on Pad 7; effect switch contacts.                    |
| μ-Amp works; bypass does not | Bypass connection between SW1A and SW1B — Pads 15/14 or direct wire.                |
| Battery drains unplugged     | Jack Ring/Sleeve wiring. Ring must not remain permanently grounded.                 |
| Hum / intermittent noise     | Pad 13 ground, solder joints, long unshielded signal wires, PCB touching shielding. |
| No power with cable inserted | Stereo jack Ring contact and battery-negative wiring.                               |

**Battery reminder:** The stereo jack disconnects the battery when the guitar cable is removed. Unplug the instrument when it is not being used.

### Quick Reference

**Always-used PCB pads:** 3, 4, 5, 6, 7, 8, 13

**PCB link pairs:** 1–2 · 9–10 · 11–12 · 14–15

**Power:** Pad 7 = +9 V · Pad 13 = ground · jack Ring = battery – switch