

Pushbutton Switches and Toggle Switches

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping

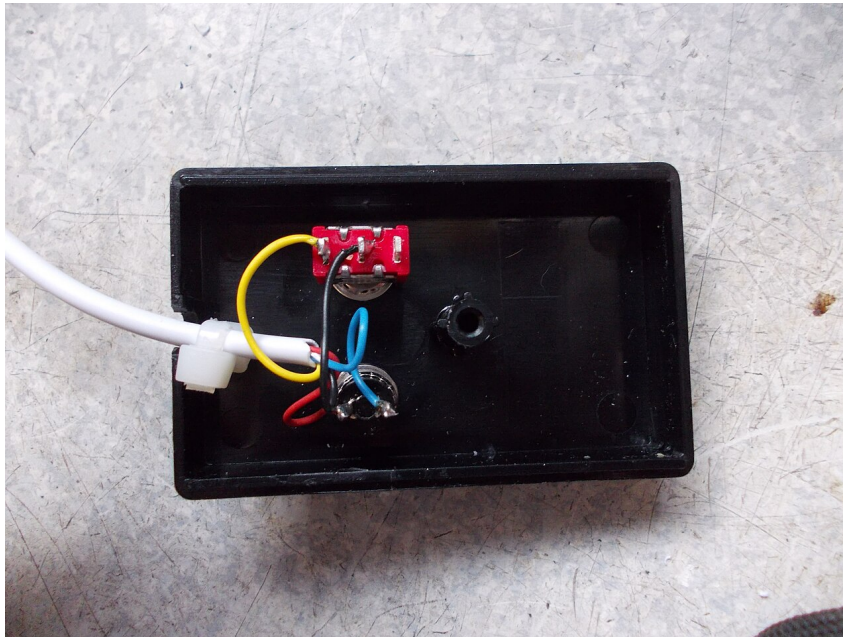


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Pushbuttons and toggle switches are the most basic input devices, closing or opening a circuit to signal the microcontroller or switch power. Available in momentary and latching types, sizes from mini to panel mount, they are the first component students wire.

Key Features

- Momentary pushbuttons and latching toggles
- 6 mm mini to 12 mm panel sizes
- SPST, SPDT and DPDT contact arrangements
- LED illuminated versions
- Threaded bushings for panels

Typical Uses in the Workshop

- Input buttons for games and menus
- On/off power switches for projects
- Mode selection toggles
- Limit and end-stop switches on models

Safe Operation

1. Wire the switch between the pin and ground with pull-up
2. Add debouncing in code or hardware
3. Check the contact arrangement (NO or NC)
4. Mount firmly with the nut and washer
5. Test each switch before assembly

SAFETY NOTES

- Match the switch rating to the load switched
- Do not overload panel switches with motors
- Check wiring polarity for illuminated types
- Keep contacts free of flux and dust
- Store switches in labelled trays

Maintenance & Consumables

- Check contacts for oxidation
- Clean with contact cleaner if needed
- Verify the solder joints hold
- Replace worn-out tactile buttons
- Keep a variety of sizes in stock

Specification & Buying Notes

Buy tactile buttons in packs of 50, mini toggles in packs of 10, and panel-mount pushbuttons for switch boxes. SPDT toggles are the most versatile for teaching on/off and changeover.