# Custom PCB Milling Bits (V-bits and end mills)

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Consumables & Spares

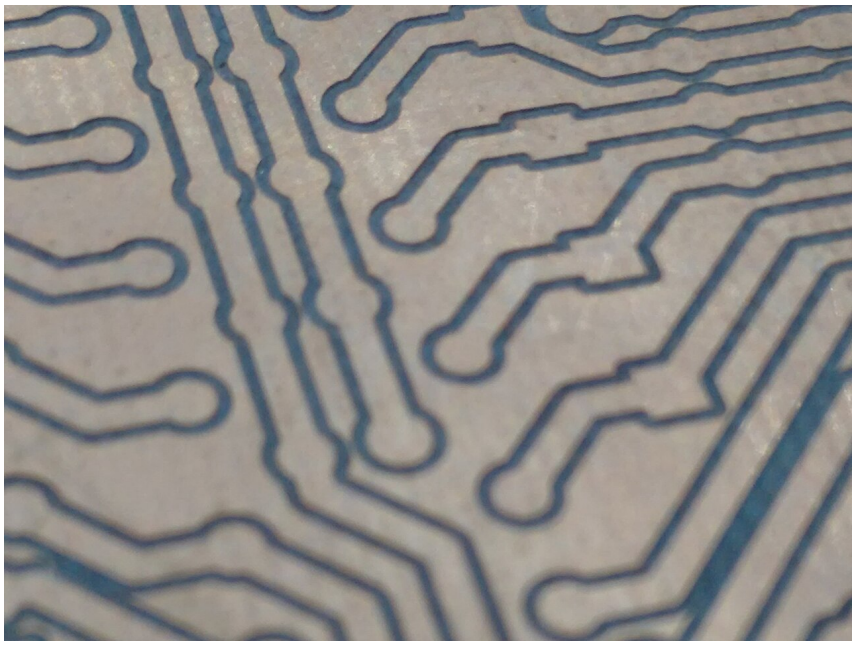

Photo: Nicola Corna — CC BY-SA 4.0 — via Wikimedia Commons (Milled_PCB_-_2018-07-31_-_Nicola_Corna.jpg)

PCB milling bits cut copper-clad boards on a CNC mill: fine end mills route traces and isolate pads while V-bits engrave and cut isolation channels. Small-diameter carbide bits machine the fine detail of prototype PCBs.

## Key Features

- End mills 0.5-2.0 mm
- 60-90 degree V-bits
- M2-M3 shank sizes
- Carbide for copper and fibreglass
- Router table and spindle compatible

## Typical Uses in the Workshop

- Mill PCB traces and pads
- Isolate islands and routes
- Cut board outlines and holes
- Engrave legends on boards

## Safe Operation

1. Set the spindle speed and feed for PCB
2. Level the board surface first
3. Mill traces in fine passes
4. Clear chips with an air blast
5. Inspect with a magnifier

SAFETY NOTES

- Tiny bits snap - wear eye protection
- Keep hands clear of the spindle
- Do not machine without the dust shoe
- Check the collet grip before runs
- Store bits in capped holders

## Maintenance & Consumables

- Clean bits of copper and dust
- Check tips for chips and wear
- Replace dull bits promptly
- Store sorted by size in tubes
- Keep a spare set for classes

## Specification & Buying Notes

PCB milling bits in 0.5-1.5 mm carbide plus a V-bit set cover isolation routing. Quality small bits are fragile - buy spares. Match shanks to the spindle collet.