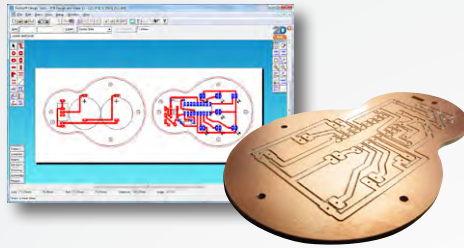


Guillotines, Lightboxes & Drill

CAD/CAM PCB Manufacture



PCB Design and Manufacture

TechSoft 2D PCB software (see pages 14-15) provides a student-friendly means to design circuit boards of almost any complexity. The output side of the package is (in effect) a fully-featured application in its own right and offers three PCB production options.

Printing Artwork

Output to a printer will provide the necessary 1:1 scale artwork needed for UV exposure and photo-etching. Tracks and pads will automatically be solid-filled in black and inverted for the solder layer.

Self-Adhesive PCBs

Stika and CAMM 1 knife-cutting machines (see pages 33-35) will happily cut self-adhesive 'Cutronics' copper foil. Output from 2D PCB will produce an accurate knife-cut track layout that can be peeled and stuck to a suitable substrate.

Engraving PCBs

Isolation engraving is well-proven for commercial PCB prototyping and has many benefits in education. Output from 2D PCB automatically inverts the design and creates a tool path around and between each pad and track. Any of TechSoft's CNC milling machines (see pages 64-71) will quickly engrave copper-clad board to isolate each track, cut the board to profile and drill precisely at pad centres.

UV Exposure Light Boxes



These cost-effective units enable controlled UV exposure of PCB artwork onto pre-sensitised copper-clad board. Both feature a pressure pad in the lid which, when clipped shut, keeps the artwork in close contact with the board for faithful reproduction of intricate designs. Operation could not be simpler. Once the laminate and artwork are in place, exposure time is set on the control panel and exposure is stopped when the time is up.

| Specifications | LV202E | LV204 |
|---------------------|--|----------------------------|
| Maximum Board Size: | 229 x 159mm | 356 x 260mm |
| UV Source: | 2 x 8W | 4 x 15W |
| Timer: | Mechanical 0-6 mins | Digital 0-500 seconds |
| Weight: | 4kg | 14kg |
| Dimensions: | 420(W) x 175(D) x 90(H)mm | 515(W) x 400(D) x 120(H)mm |
| Power Requirements: | 240V, 13A Socket | |
| Warranty: | UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect | |

| Prices £* | | *See Pricing Information on page 2 |
|--------------|------------------------------|------------------------------------|
| AR-LIGHTBOX7 | UV Exposure Light Box LV202E | |
| AR-LIGHTBOX6 | UV Exposure Light Box LV204 | |

Guillotines



These powerful guillotines provide the safest and most accurate means of trimming PCB laminate to size. Cutting with a guillotine avoids harmful dust, rough edges and blunted blades that result from sawing – especially when working with modern epoxy-glass boards. Safety is ensured by heavy Perspex blade shields and a safety latch to prevent inadvertent operation. Both feature a recessed rule on the bed which aids dimensional accuracy and helps secure the workpiece.

| Specifications | DM9001 | DM9018 |
|---------------------|--|----------------------------|
| Cutting Capacity: | 305mm | 457mm |
| Thickness Capacity: | Plastics 2mm, PCB Laminate 2mm, Aluminium 1.5mm | |
| Weight: | 8kg | 14kg |
| Dimensions: | 245(W) x 440(D) x 670(H)mm | 360(W) x 570(D) x 700(H)mm |
| Warranty: | UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect | |

| Prices £* | | *See Pricing Information on page 2 |
|----------------|-----------------------------------|------------------------------------|
| MM-GUILLOTINE6 | 12" 305mm PCB Guillotine (DM9001) | |
| MM-GUILLOTINE9 | 18" 457mm PCB Guillotine (DM9018) | |

Dremel PCB Drilling Station



A complete package for PCB drilling featuring a Dremel DM403 variable speed drill, three carbide bits and a robust stand. The stand adjusts to allow up to 100mm clearance below the collet and has a cam-operated lever to provide smooth control of the drilling action. The operating lever can be swapped for left or right hand operation. A robust nylon case and dependable sleeve bearings will ensure long life and quiet operation.

| Specification | |
|-----------------------------|--|
| Drilling capacity: | 1/8" Collet (0.8, 1.00, 1.2mm TC bits supplied) |
| Spindle Speed: | 10,000-33,000rpm (Variable) |
| Spindle Travel: | 15mm |
| Spindle Height above Table: | 80 - 100mm adjustable |
| Motor: | 125W |
| Weight: | 0.45kg (drill only) |
| Dimensions: | 230 x 150mm (stand baseplate) |
| Power Requirements: | 240V 1A |
| Warranty: | UK Mainland: 1 Year Return to Base Elsewhere: 1 Year Return and Collect |

| Prices £* | | *See Pricing Information on page 2 |
|--------------|---|------------------------------------|
| MM-DRILLPCB3 | Dremel Drilling Station (Includes a DM403 variable speed Dremel Drill, Stand and 3 Tungsten Carbide Drill Bits) | |