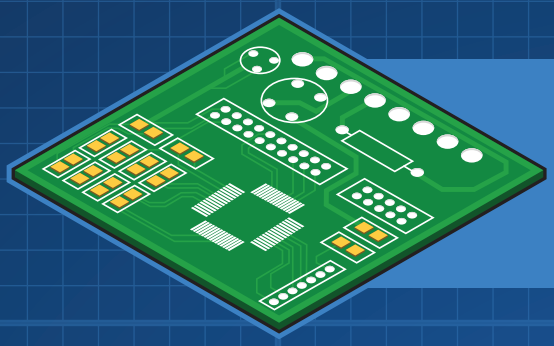
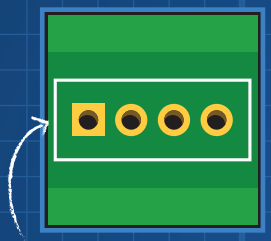
@ttiinc

Understanding PRINTED CIRCUIT BOARDS

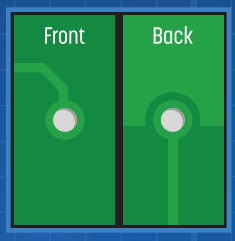


A **PCB**, short for Printed Circuit Board, is a board etched with pathways and pads that join various points together in order to electrically connect components to each other.

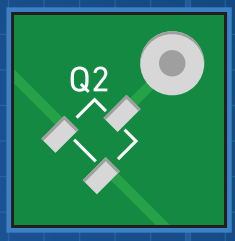


Square Pads indicate pin 1 for an IC or a connector.

Mouse Bites are drilled holes that allow panelized PCBs be easily removed.

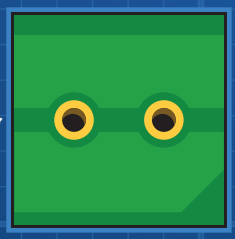


Vias allows traces to connect through to other layers.

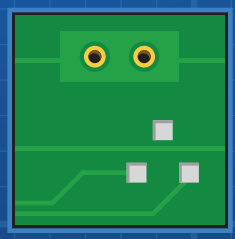


Silkscreen Component IDs let the assembler know where each part is placed.

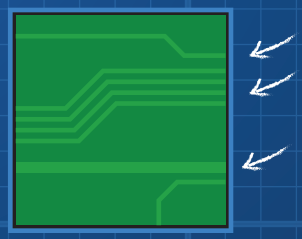
High Voltage Cutouts will keep the PCB from carbonizing and becoming conductive.



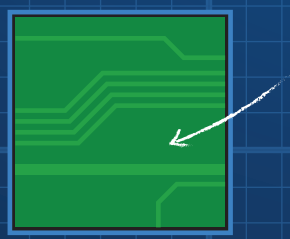
Plated Through Holes allow solder to wick up a part's lead and make a good connection.



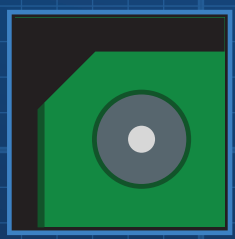
Soldermask is an epoxy coating that resists soldering and only exposes pads and plated through holes.



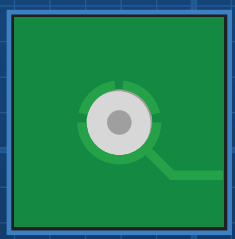
Traces are copper lines that connect components together. Greater widths carry higher voltages.



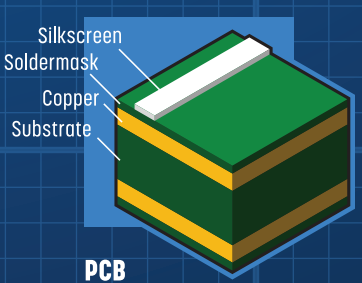
A **Plane** is a continuous area of copper, often used to connect ground together.



Fiducials target registration marks for pick and place machines.



Thermals are small traces used to connect a pad to a plane for heat relief.



PCB Composition