

PCB LAB

ELECTRICAL ENGINEERING DEPARTMENT

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY



INSTRUCTION MANUAL



PCB LAB

ELECTRICAL ENGINEERING DEPARTMENT, IIT BOMBAY



INSTRUCTION MANUAL

(By Mr. Yadnik Sonalkar)

❖ Instructions

- Always check the status or notifications of the PCB fabrication facility by visiting the PCB lab or checking the website before submitting a request.
- Please submit separate forms for each unique design. Ensure that all required information is filled out on the 'job order form', and submit it in person to the PCB lab to initiate the fabrication process.
- Please read '**Minimum Design Requirement Manual**' before submitting your design gerber files and verify/review your design files with the PCB lab.
- After verification, forward the required Gerber-files to pcb@ee.iitb.ac.in. Ensure that the files are organized, renamed as indicated below. When renaming the files, keep the original file extensions generated by the respective CAD software.
 1. Top-Copper
 2. Top-Mask
 3. Top-Silkscreen
 4. Bot-Copper
 5. Bot-Mask
 6. Bot-Silkscreen
 7. Edge cut / Outline / Profile / Border
 8. Drill (Generate separate drill files for PTH, NPTH and Vias.)
- Please include your information in the given format at the end of the Email description along with shared design Gerber files.
 1. Name & Roll No :
 2. Project type / Course Name / Designation / Other (Specify) :
 3. Department :
- **Submission of Photo-Films :**
 - Submission of photo films are mandatory for PCB fabrication.

- After verification of the design file, the PCB lab team will provide a Corel (.cdr) file necessary for printing photo-films.
- Once you have the Corel file, place an order for the required photo-films with external vendors. Vendor addresses are provided below for convenience.
- It's the user's responsibility to order and submit photo-films. The PCB lab will not be involved or responsible for placing any orders.

1. Parkar Studio

Gananath Building, 10, Senapati Bapat Marg, Dadar West, Dadar, Mumbai, Maharashtra 400028.

<https://maps.app.goo.gl/J4dPAknao9iBE7EU6>

2. Graphic Express

A-104, Punit Industrial Society Ltd. Turbhe Naka, Thane Belapur Road, Vashi, Navi Mumbai (Next to BASF Company Opp. to Turbhe Station), Maharashtra 400703.

<https://goo.gl/maps/2EuuYkFRAmGmGaLS6>

- **The PTH process is optimized for FR4 material only. For all other materials, such as Rogers, etc., the final etched PCB will be provided without the PTH process.**
- Every **Tuesday** and **Thursday** of the week is reserved for PCB fabrication. **No PCB design files will be accepted and verified on these days.**
- **Design files will be reviewed only in the morning session (10 am to 1 pm) on non-PCB fabrication days (Monday, Wednesday, Friday).**
- Once the design Gerber files, job order form, and photo films are approved, the PCB job order will be scheduled in the PCB fabrication slot (Tuesday or Thursday). The user will receive the fabricated PCB in **five (5)** working days as per the PCB fabrication slot in which their files are placed.

Note: This time may be extended based on queued PCB job orders or the machine's indirect/unexpected breakdown issues or chemical contamination issues.

- Once the PCB is fabricated, updates will be provided via the same email through which files were submitted.
- Upon receiving fabricated PCB boards, verify the connectivity of tracks/traces and holes/vias before proceeding with component population/soldering.
- If there are any changes in the instructions or design requirement criteria due to alterations in the current setup, they will be updated in the instruction manual.

❖ **PCB LAB Work Schedule :**

Sr. No	Day	Time	Working Hours
1	Monday to Friday	10.0 am to 1.00 pm	Morning Session
		1.00 pm to 2.00 pm	Lunch Break
		2.00 pm to 5.00 pm	Afternoon Session
2	Saturday and Sunday	Institute Holiday	

❖ **Contact :**

For any query contact us.

Email : pcblab@ee.iitb.ac.in

Ph No : +91-22-2159-3599

Website : <https://www.ee.iitb.ac.in/~pcblab/> or scan above QR code.

Address : PCB LAB, Electrical Annex Building (1st Floor, Room No : 116-A),
Electrical Engineering Department, IIT Bombay.



Prof. Laxmeesha Somappa

In-Charge, PCB LAB

Electrical Engineering Department,
Indian Institute of Technology Bombay,
Powai, Mumbai, Maharashtra, 400076.



Head of the Department

PROFESSOR & HEAD

Department of Electrical Engineering
Indian Institute of Technology Bombay,
Electrical Engineering Department,
Powai, Mumbai-400076
Indian Institute of Technology Bombay,
Powai, Mumbai, Maharashtra, 400076.

Note :

1. The PCB fabrication related documents (Manuals, datasheets, Job order form etc.) are available on the PCB labs website (<https://www.ee.iitb.ac.in/~pcblab/>).
2. Users can also submit a printout of a digitally signed job order form.