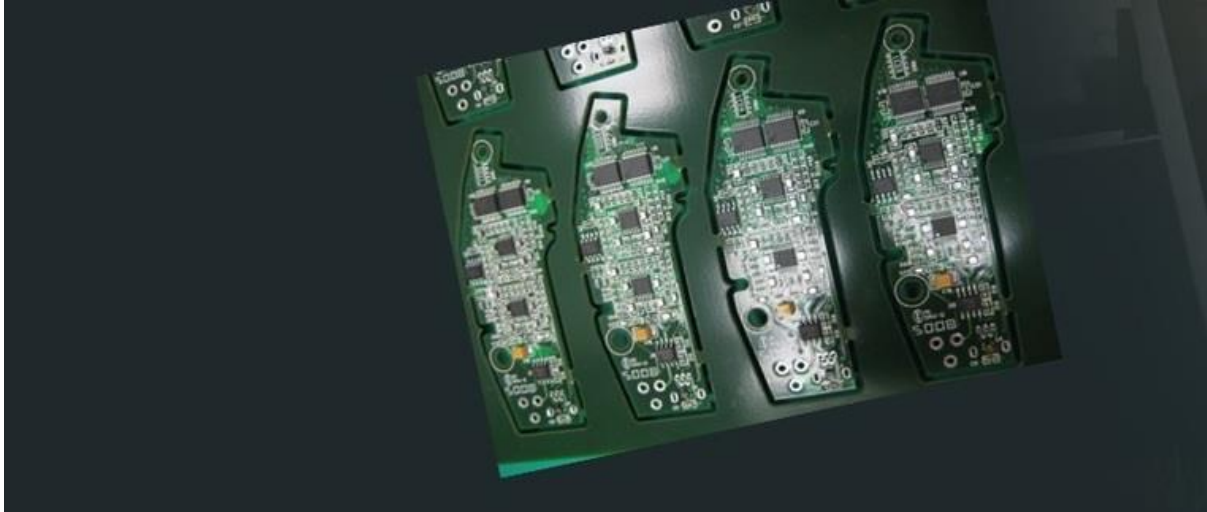


# 6 Common PCB Assembly Issues and How They Can Be Solved



There are plenty of opportunities for PCB failures to arise when not given the proper care. This is why it is crucial to take caution as well as take steps in order to help minimize these common assembly faults before they are given the chance to cause any of these major issues or failures. If possible, we want to prevent these faults altogether. While prevention can be difficult, the need for **[quick turn PCB assembly](#)** can be crucial. With quick turn PCB assembly services, solutions to issues can be fixed at a more rapid pace. In this article, we will be going into detail as to what the most common PCB assembly failures actually are as well as tips on how these can be prevented and even solved. Continue reading below to learn more.

## Common Assembly Issues

### 1. Soldier Bridges

Soldier bridges are among the most common defect found in the PCB assembly. short may occur during assembly if there is an



insufficient solder mask between pins. Designing boards without properly distributing the weight of the components can also contribute to this. It is very important to design the pads to have enough space between them and the solder mask layer. Component alignment issues may also occur if a proper X-Y file is not implemented, as it is very important to the SMT assembly.

## **2. Plating Volts**

Plating Volt problems arise when there is insufficient copper plating on the inside walls of holes on the PCB. These holes may affect the flow of electricity as they have been known to cause the boards to be defective as the electrical current will not be able to pass between the layers. In order to best avoid this difficulty, it is crucial to ensure that the holes are thoroughly and properly cleaned after drilling. This helps to prevent any contamination of the material or air bubbles inside of it. In addition to this, other defects and issues can also be avoided by following the directions that have been carefully provided by the manufacturer.

## **3. Acid Traps**

An acid trap is known to be any sharp corner in your trace pattern that can trap the harsh chemical elements used to strip excess copper from a board during manufacture. Put simply, acid traps offer the risk of solder leakage. In order to best avoid this, the best practices would be to apply the solder mask over the holes or to use some sort of non-conductive epoxy.

## **4. Physical Damage**

This can be one of the most difficult failures as the damages done to physical components are not easily visible, nor are they easy to repair. Due to this fact, there is no other option other than to replace the PCB entirely when physical damages arise.

## 5. Non-wetting

This is most commonly known as dewetting and occurs to allow solder joints. PCB Dewetting is a condition that results when molten solder has coated a surface and then receded, leaving irregularly shaped mounds of solder separated by areas covered with a thin solder film and the base metal is not exposed. The best practices and tips in order to help prevent this PCB issue include paying close attention to the storage environment of PCB components in order to make sure they meet the standards with regards to humidity and temperature. In addition to this, avoid using a PCB that has been stored for a long time without any protective cover or sheet.

## 6. Electromagnetic Issues

The last common issue we will be discussing is known as an electromagnetic interference. This interference refers to the damaging effect of EMC. These issues can come to light when there are possible design flaws. Electromagnetic interference can be reduced by increasing the ground area of the PCB.

To best prevent these issues, [contact us](#). Our company is leading the industry as providers of PCB's and cable assemblies. We are continuously developing and improving manufacturing methods to ensure the highest possible level of Value, Quality and Products to meet our Customer Requirements.

Original Source Link :

<https://www.hrbusinesslive.com/articles/6-common-pcb-assembly-issues-and-how-they-can-be-solved>