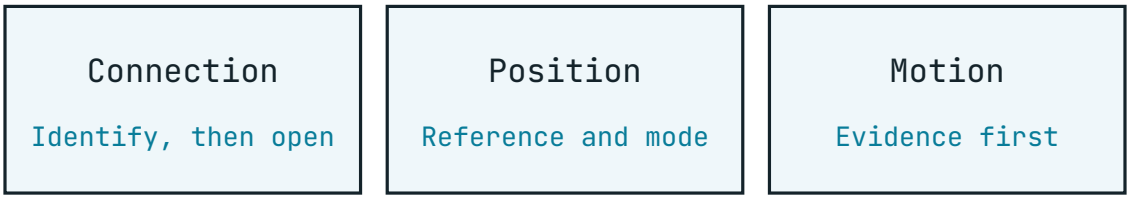
DIAGNOSE FROM EVIDENCE

Troubleshooting: connection, position and motion

Use observed states to choose the next check and repair a misplaced offline project.

Software practice and review

Keep **No Machine** selected and stay **disconnected** for project exercises. Supplied operation values are software examples, not tested material recipes. Keep originals and save your own work separately.



Choose the next check from the evidence before changing artwork or firmware.

1. Record the exact message and the machine/controller identity. USB detection at operating-system level does not establish a usable serial port or account access.

2. For a missing port, check the identified device, matching driver, cable and access, then refresh. Avoid random drivers or unrelated hidden ports.

3. If a known port appears but cannot open, inspect its busy/access error separately from enumeration. Job power does not fix port detection.

4. After an obstruction or reset, stop safely and resolve the cause before a restart decision. A reconnect and coordinate numbers do not re-establish the physical reference.

5. Use the machine's configured homing or no-switch startup procedure. Inspect profile, Start From, any fresh User Origin, Job Origin and remaining work.

6. For distorted results, separate design dimensions from repeated measured evidence. Check mechanics using the stopped/isolated procedure before considering documented calibration.

OFFLINE PLACEMENT TASK

Offline placement task

Open **placement-start.lzrproj**. The 20 x 12 mm compound tag has a 3 mm hole and starts at bottom-left X 60/Y 60. The target is X 20/Y 60 with its geometry unchanged.

1. Read Start From: Absolute Coords ignores Job Origin.

2. Select the whole tag in Design. Choose the bottom-left Properties reference and change X 60 to 20. Keep Y 60 and all dimensions unchanged.

3. For a disconnected Preview, temporarily include the Line operation, inspect the whole tag and hole, then return operation Output off.

4. Save your own copy and compare **placement-answer.lzrproj**. The complete tag shifts 40 mm left.

Why can Job Origin not fix this Absolute Coords placement?

What separate physical placement checks remain before a real run?

THREE DIAGNOSTIC CASES

Three diagnostic cases

The OS identifies the USB device, but no serial port is listed and the maker's driver is unchecked. What comes next?

A controller reconnects after an unresolved obstruction. The file uses User Origin and reports numbers. What must be resolved before restarting?

Design circles 30/50 mm give stated X 33/55 and unchanged Y. A separate wavy line varies between repeats. What pattern and next check do these observations support?

Connection
Check the exact driver/device/access evidence before attempting the identified port.

Reset
Resolve the cause, re-establish the documented reference and inspect remaining work, origin and placement. Do not infer an automatic Resume.

Scale case
33/30 and 55/50 both equal 1.10, a 10% X increase. This is evidence to investigate, not proof of one firmware fault. The varying wavy line needs its own mechanical/setup investigation.

FILES AND COMPARISONS

Files and comparisons

Job starts in wrong place
Folder job-starts-in-wrong-place. **placement-answer.lzrproj**, **placement-start.lzrproj**. Keep this chapter's inputs and comparisons together.

Lost position
Folder lost-position. **restart-preview.lzrproj**. Keep this chapter's inputs and comparisons together.

Use the comparison after your attempt. Check the specified dimensions, settings and object structure.