LESSON GUIDE

Adjusting object Power Scale

Use an object multiplier to vary commanded power without creating extra layers.

Disconnected software practice

Leave **No Machine** selected and stay disconnected. The projects have no machine profile. Output is enabled where needed for software Preview; the example values are not material settings. Keep each lesson pack in its own folder.



Demonstration at a shared layer power of 60%. Commanded power = layer power x object Power Scale / 100.

1. Open **power-scale-start.lzrproj**. The three 20 mm squares share a Line layer at **60%** power and **1200 mm/min**.

2. Select **Middle square** in Outliner. In Properties, set **Power Scale % to 50**, then press Enter or Return.

3. Select **Right square** and set its scale to **25%**. Left square stays at 100%. No object needs moving or resizing.

4. Check Layers: shared Power is still 60%. Power Scale multiplies that value; it does not replace it.

5. Open Preview, hide Show Travel and enable **Shade by Power**. Compare the planned power shades.

6. Close Preview. Try restoring Middle square to 100%, then return it to 50%. Save a separate copy and compare with **power-scale-finished.lzrproj**.

INDEPENDENT PRACTICE

Independent practice

Open **power-scale-practice.lzrproj**. Keep the shared layer at **40%**. Leave Left square at **100%**, set Middle square to **75%**, and Right square to **25%**.

☐ Keep the layer at 1200 mm/min and preserve all three square sizes and positions.

☐ Calculate each commanded percentage before inspecting the Preview shading.

☐ Save your own copy and compare with power-scale-practice-answer.lzrproj.

Left square commanded power:

Middle square commanded power:

Right square commanded power:

Diagnose one unexpectedly weak object

Check that object's Power Scale before changing the shared layer for every object. Copied objects can carry their multiplier with them.

EXPLAINED ANSWER

Explained answer

Practice calculations
40 x 100 / 100 = 40%. 40 x 75 / 100 = 30%. 40 x 25 / 100 = 10%.

Scale and size
Power Scale changes the object multiplier. Geometry stays 20 x 20 mm for every square.

Preview interpretation
Shade by Power displays planned power. It does not predict engraving darkness. Material, speed and focus still matter. Power Scale is separate from machine S-value Max.

power-scale-start.lzrproj
Demo: 60% layer; all scales initially 100%.

power-scale-finished.lzrproj
Demo answer: scales 100%, 50%, 25%.

power-scale-practice.lzrproj
Practice: 40% layer; all scales initially 100%.

power-scale-practice-answer.lzrproj
Practice answer: scales 100%, 75%, 25%.

The demonstrated release accepts Power Scale from 0 to 100%. A scale of 100% restores the full shared layer percentage.

Matches the demonstrated Beam Bench 0.2.37 interface. Panel layout may differ in later versions.