

CALIBRATING YOUR GROUND GLASS TO YOUR INSTAX BACK

The optional Mercury Instax Ground Glass back should be accurate right “out of the box,” but particulars of manufacture and of the camera you use them on can cause slight differences in focal plan between the ground glass back and the actual Instax back. For maximum accuracy (especially at very narrow depth of field), it is advisable to calibrate the ground glass back. The steps to do so follow.

Important Note: When disassembling the Ground Glass back, use a small phillips screwdriver to carefully remove the four screws from the mask. When re-assembling the ground glass back, keep in mind that the top of the back's base piece contains an indented circle. This allows you to properly match the top of this part with the top of the mask. Assembling these parts out of phase will cause serious framing (but not focus) issues. When replacing the screws, do not tighten them all the way, or the mask will bend. Tighten them only until the mask is holding the glass plate firm enough that it doesn't slide or rattle.

The glass plate itself should be inserted into the ground glass back's base so that its ground side is facing down (toward the camera) and its shiny side is facing up (toward you).

Calibration Steps:

1. Choose a target to photograph. It should have a continuously variable focal distance, meaning basically that it forms a diagonal line with many different points of distance from the lens (it isn't flat). A yardstick or similar measuring device will work, as will a fence, etc.
2. Set up your camera on a tripod.
3. Using the ground glass back, focus on a point roughly in the middle of the object. This should also be the dead center of your frame. Expose the photograph.



4. Develop the photo. Be very careful not to move the camera on the tripod at all. Look at the photograph. Determine the point in the photo that is perfectly in focus.

5. Without moving the camera in any way, re-mount the ground glass back.

6. The goal is now to modify the ground glass back until what you see on the glass perfectly matches the photograph you exposed. Typically this means that you'll need to shift the glass plate in the ground glass back either slightly closer to the camera, or slightly farther away. To move the glass farther away, remove the four screws that hold the plastic cover over the glass plate (and thus hold it in place). Remove the glass plate. Place tiny strips of paper or thin tape on the underside of the ground glass (the rough or etched side, which makes contact with the ground glass back's main plastic body). You'll know that you've added enough spacer when the ground glass image has the same focal point as your exposed photo.

If, on the other hand, this moves your focal point in the wrong direction, you need, instead of spacers, to remove some material from the plastic ground glass body. The easiest place to do this is the very bottom of the back (the surface that makes contact with your camera).. You can sand (or file) off a slight bit of material. Once again, as you do this, you'll be able to check to see your focal point moving closer to the camera. When you've matched your photo, you're done!