



Magnifying Station

Installation Instructions

NOTES: Please check for any damage caused by the shipping company and take appropriate steps to file a claim, if needed.

*Please call **Digsafe** and check for any underground utilities before digging anywhere.

Materials needed

Post hole shovel, level, tape measure, screw gun, T25 bit, 50 lb bags of fast-setting Quickcrete concrete mix (not provided). Concrete amounts can be easily calculated at <http://www.quikrete.com/Calculator/Main.asp>. Amount required depends on how deep you can get the holes. Hose or 5 gallon bucket for water to mix concrete.

Instructions

1. Unwrap items or remove from pallet. You should find two (2) 4x4 shiplapped (L-notched) post halves, one (1) magnifying plate, and one (1) package of hardware.
2. Attach the two shiplap post halves together with the screws provided.
3. Move magnifying station post to desired location and lay post on its side.
4. Mark the location of the post bottom and dig post hole using post hole shovel or post hole digger. **See Note below about optimum location.**
5. Set the post hole diameter to 1'-0," and post hole depth to approximately 4'-0" (depending on region). The bottom of hole should "flare" out a little to create a bell shape to prevent frost heaving the post where applicable. Check local codes for the frost line in your area.
6. Using the hand tamp, compact any loose material at the bottom of the hole.
7. Test fit the magnifying post in the post hole and make any adjustments to the hole location and the length of the post so the post is at the appropriate height and surrounded by equal amounts of concrete when poured. Post are left intentionally long for areas that they need to extend below a frost depth.

*Note: If you encounter immovable objects the legs can be trimmed so the grade marks on the legs end up at finished grade.

8. Fill the bottom 6" of hole with drainage stone. Then lift magnifying post and set bottom of post into post hole so grade mark is at grade, and twist post to desired orientation. Again, trim the bottom of the posts if necessary. Again, trim the bottom of the posts if necessary.
9. Using a bubble level, plumb the post in both directions by placing the level on two adjacent sides of the post. It is optional to hold this positioning by using strapping and stakes, but it is not required.
10. Holding the magnifying station post upright by hand or with strapping, fill 1/4 of the hole with fast setting concrete mix and add water per instructions on bag. Recheck to make sure post is plum, and make any adjustments.

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11. Fill the rest of the hole with concrete per instructions on bag, stopping four inches below the grade line marked on the magnifying station post. Recheck to make sure post is plumb periodically while concrete cures. Let cure for 24 hours.
12. After concrete cures, attach magnifying plate to post with the screws provided.
13. Backfill hole and hand tamp good draining soil firmly to 3" below finished grade. Install top soil to finish grade and plant grass to fill in around hole.
14. All wood is treated with kid-friendly preservative, but as is the case with all wood facing the elements, it needs to be cared for, so check it periodically for rough spots, splinters, etc, and sand them out, and treat it with kid-friendly wood preservative (we have it available if you can't find it) once or twice a year to keep the wood from deteriorating.
15. Enjoy your Magnifying Station!

NOTE: As with any type of magnifying lens (binocular, reading glasses, old bottle bottom, raindrop, etc), this magnifying glass has a focal length (this one is 2-7/8") which concentrates light at that point.

Light is made up of photons, or tiny particles of energy, so if the sun's light is concentrated on a small area, it can get get very hot!

We all tried this when we were kids! I remember having this real cheap magnifying glass, and it was great fun concentrating the sun's energy on one point to see what would happen. It felt like a prick on my skin, or you could burn a hole through a leaf, or ... :)

It's also possible that as the Earth turns, and the sun's position changes, vegetation under the magnifying station may suffer from too much intense heat, so you may want to place a piece of cardboard over the lens (that can easily be removed by kids when they want to use the Magnifier), or slide an old sock over the arm to cover the lens, etc.

Or you could try placing the Magnifier in a shady place...

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