

# Freedom Greenhouse Base Preparation Instructions

**Important!!** Use the table on Page 2 for your greenhouse size!!

Freedom Greenhouses are built in a woodworking workshop in Maine using the highest quality Eastern Maine Cedar and other components. Experienced carpenters and woodworkers assemble each greenhouse in modular sections and are then crated and shipped. The on-site assembly cannot begin until an adequate base is prepared for the greenhouse or Greenshed.

**Caution: – Before beginning, make sure there are no overhead power lines that could come in contact with you or the greenhouse nor any underground power, water, or gas lines that you could contact when working on a base.**



## Groundwork



The ground that the Freedom Greenhouse sits on does not have to be level, but the base for the greenhouse does need to be both square and level. The other requirement of the base is that it is anchored against moving. Strong winds or a bump from a lawn tractor can move a greenhouse if not firmly anchored.

Any form of base is acceptable provided it has the three requirements of being square, level, and is anchored. The bottom of each greenhouse has a 1"x 4" plate (cedar board) on all four sides. A very simple base can be made of pressure treated or composite 4x4's forming a perimeter framework. It can be anchored to the ground with steel rods driven thru them or some other means of anchoring. Call for more information about anchoring, also see pg. 2 under anchors.

For most greenhouses larger than 12'x12' some concrete anchoring is usually recommended. The greenhouse plate is attached to the base with structural lag screws (included with the greenhouse). A concrete slab or concrete footings are other ways to anchor a greenhouse. If concrete is going to be used it still is advisable to attach a 2x4 or 4x4 to match the outside greenhouse dimensions. If you prefer to anchor the greenhouse directly to concrete set anchors into the wet concrete leaving them at least 1 1/2" above the concrete. The anchors should be set about 2" in from the outer edge of the plate dimensions. Anchors should be placed 6"-9" away from the outside corners of the greenhouse so they don't interfere with corner studs. For other anchor locations please call our office to get stud locations for your greenhouse so studs and anchors aren't trying to occupy the same spot.



## MAINE GARDEN PRODUCTS, INC.

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## Sloped ground:

On sloped ground, there are a couple options.

1. The rear end of the greenhouse (opposite the door end) can be embedded into an embankment up to about 2 feet. We can provide extra reinforcement inside the greenhouse end wall if it is requested (there may be an additional charge).
2. A level wood deck could be built, and the greenhouse attached to the deck (top photo). Gaps between the deck boards should be kept to a minimum so cold air does not blow up through the floor.

There is no limit to the kind of base you use, provided the greenhouse base is square, level, and anchored.

**Tips:** If this is your first experience with leveling a building, here are some tips:

1. Use any 18" or longer bubble level or laser level.
2. Check the ground along the four sides of the site where the greenhouse is being placed and determine if the highest points can be lowered by removing sod, soil, or rocks. If it can then use a spade and remove the high spots and if it makes sense put that material in the low spots.
3. When the ground is leveled to within ½" or so, the boards or blocks that are to be the base can be placed and squared. To fine tune the leveling tamp down the high spots with a sledge hammer or raise up the low spots with shims or sand or soil under the base.
4. Re-check for squareness by using a tape and measuring from corner to diagonal corner and then the opposite two corners. Adjust for square until the two different diagonal measurements are within ¼" of each other.
5. Anchor the base with any type of anchor that will withstand the expected winds for your area.

## Sizes and dimensions:

### Freedom and Mainstay Greenhouses

| Greenhouse size<br>width x length | Base outside<br>width<br>(gable ends) | Base<br>outside<br>length |  |
|-----------------------------------|---------------------------------------|---------------------------|--|
| 8'x8'                             | 96"                                   | 92½"                      |  |
| 8'x10'                            | 96"                                   | 9' 8"                     |  |
| 8'x12'                            | 96"                                   | 11' 8½"                   |  |
| 8'x16'                            | 96"                                   | 15' 10½"                  |  |
| 10'x10'                           | 118"                                  | 9' 8"                     |  |
| 10'x12'                           | 118"                                  | 11' 8½"                   |  |
| 12'x12'                           | 142"                                  | 11' 8½"                   |  |
| 12'x16'                           | 142"                                  | 15' 10½"                  |  |
| 12'x18'                           | 142"                                  | 17' 9"                    |  |
| 12'x24'                           | 142"                                  | 23' 10½"                  |  |
| 19'x18'                           | 223"                                  | 17' 9"                    |  |
| 19'x24'                           | 223"                                  | 23' 10½"                  |  |
| 19'x30'                           | 223"                                  | 30' 0"                    |  |
| 19'x36'                           | 223"                                  | 36' 11"                   |  |
| 19'x42'                           | 223"                                  | 41' 9"                    |  |
| 19'x48'                           | 223"                                  | 48' 0"                    |  |
| 19'x54'                           | 223"                                  | 54' 0"                    |  |

**For other sizes please call/email our office.**

All base plates are 3½" wide. Inside greenhouse dimensions are 7" less than base outside dimensions. The greenhouse sheathing is ¾" thick (cedar) and the macrolux glazing is 3/8" thick. Sidewalls are 48" high, roof pitch is 12 (45 degrees) for 8' and 12' wide greenhouses and 9 pitch for 19' wide greenhouses.

Lengths – All greenhouses are about 4" longer along the roof line than at the base. The base lengths listed end the base before the sheathing on the gable ends.

Anchors:

Home Depot has steel rods called "Round Steel Stakes"

Lowes has steel rods called "Steel Rebar Pins" They are the same product with different names at different stores.

We can offer "Penetrator" anchors – cast aluminum threaded anchors. Call for details.

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