

False-Floor Instructions

By: Paws4ThePolls

Materials Needed

A. 3' x 4' x 3/4" (W x L x H) Pressure-Treated Pine Plywood Qty: 1

Top of Floor

B. 1-3/8" x 4' Steel Flat Bar Qty: 2

C. 1-3/8" x 3' Steel Flat Bar Qty: 1

D. #12 x 3/4" Pan Head Phillips Screws Qty: 35**

E. Clear RESILIA Vinyl 8" x 8' PVC Strip Qty: 2

Bottom of Floor

F. 0.55" diameter T-nut Qty: 4

G. 0.5" x 1.5" Flat Washer Qty: 4

H. M12-1.75 x 1-1/2" Fully Threaded Stud Qty: 4

I. Compression and Tension Sensor S Beam Load Cell Qty: 4

J. 20mm Nut Qty: 4

K. M12-1.75 x 1-3/4" Thread Bolt Qty: 4

L. Leveling Foot Qty: 4

M. Lock Tight

N. 1/2" Cable Clips Qty: *

Circuit Enclosure

O. Circuit Box Qty: 1

P. ESP 32 (Heltec WiFi LoRa V3) Qty: 1

Q. HX711 Load Cell Amplifier Qty: 1

R. 10000 mAh LiPo Battery Qty: 1

S. Button (Tare) Qty: 1

T. Wire Rails and/or Perfboard Qty: 2

U. Battery Connector Hardware Qty: 1

V. Solder (0.6 mm or smaller) Qty: N/A

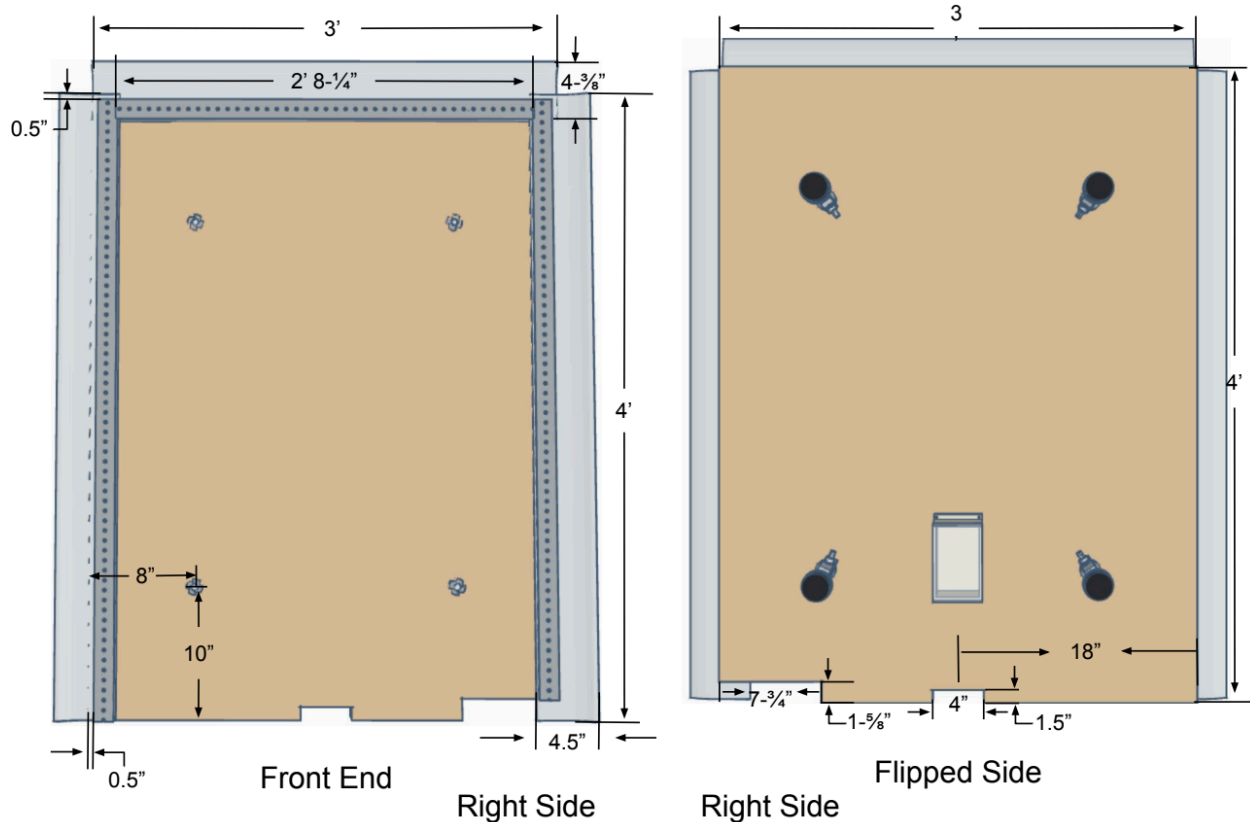
W. Wire (~20 gauge) Qty: N/A

* *As seen fit*

** *More or less may be needed based on preference*

Tools Needed

- a. Safety Goggles
- b. Hammer
- c. Wrench (opt.)
- d. Hacksaw / Bandsaw
- e. Drill
- f. Drill bits
 - i. 9/16 Drill bit
 - ii. Phillips Driver bit
- g. Jigsaw
- h. Industrial Grade Scissors
- i. Phillip ScrewDriver (opt.)
- j. Crescent Wrench
- k. Tape Measurer
- l. Pencil
- m. C-Clamps
- n. Solder Iron



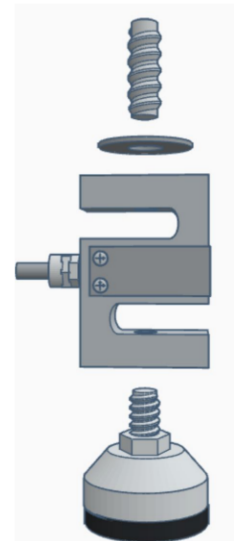
Top of Floor Instructions

1. Use the 9/16 drill bit to drill 4 holes in the plywood. Each hole should be 8" from the long side and 10" from the short side.
2. Insert the T-nuts into the holes. Using a hammer, pound the T-nuts into the plywood until flush. *Note: The hammer may not be enough to make the T-nut flush. Insert a bolt and a nut from the underside of the T-nut. Using a wrench, tighten the bolt to suction the T-nut into the plywood until flush. Remove the bolt and nut when done.*
3. Using the Jigsaw, cut out 1-5/8" x 7-3/4" at the very front right corner of the floor. On the very front middle of the floor, cut out 1-1/2" x 4" to create the handle.
4. Using the Hacksaw or Bandsaw, cut 0.5" from both of the 4' steel flat bars, and cut 3-3/4" from the 3' steel flat bar.

5. Using industrial grade scissors, cut three strips of vinyl. Two strips of 4.5" x 4' and one strips of 4- $\frac{3}{8}$ " x 3'.
6. Mark $\frac{1}{2}$ " from all sides except the front. Using the vinyl that has been cut and the metal bars, clamp them securely to the floor. The long side metal bars should be $\frac{1}{2}$ " off the side edge and the back edge. The short side metal bar should fit in between the two long side metal bars and be $\frac{1}{2}$ " off the floor side. Align the vinyl under the metal bar so only a little bit is peeking out.
7. Using the Pan Head Phillip Screws, drill the vinyl and metal bars into place. Starting from the back side holes, drill in a screw every 4 holes or as seen fit.

Bottom of Floor Instructions

1. Using a Bandsaw, cut the bolts that come with the leveling feet to 1- $\frac{3}{4}$ ".
2. Using a Bandsaw, cut the all thread stud to four 1- $\frac{1}{2}$ " studs.
3. Insert the stud from the bottom of the T-nuts. Ensure the stud is semi-flush with the top of the T-nut. A tiny dip is okay. Using the Lock Tight, secure the stud in this position.
4. Following the diagram, assemble the footing. From bottom up:
Leveling foot → Bolt → Nut → Sensor → Washer tightened on the 1- $\frac{1}{2}$ " stud.
5. Drill a hole or two in the Circuit box to insert sensor wires. Secure the box on the bottom of the floor where it is seen fit.
6. Secure the wiring of the sensors using the cable clips.



ALL DONE!!

