

3D Measurements, Version 1.0

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There are plenty of cases where measuring in 3D does not have to be at high precision. Often, you do not even need to know distances but rather just have a good representation.

A trick I recently used to solve such a problem was to form up the 3D dimensions using soft bailing wire:



I know, it doesn't look like much.

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Here is the 3D volume I needed to capture:



I needed to extend the front door anchor on a trailer.



The existing anchor consists of a bar that swings out which is attached to the trailer wall and



a pocket fastened to the door. This existing anchor holds the door almost flush with the trailer wall.

The problem was that a storage door is blocked. By holding the front door out as shown here, the storage door can be opened and closed without having to detach the front door, swing it out, move the storage door, and then reattach the front door.

It was easy to form this thin bailing wire into a shape that fit around the bar and into the pocket. Needed tools consisted of a wire cutter and two sizes of pliers. Once I was convinced it fit correctly, I carefully removed the 3D measurement object and brought it into my shop.

In my shop I used much heavier steel wire, my MAPP gas torch, hammer, anvil, and a few forms to shape a close copy:



That sleeve on the end (**red arrow**) that fits into the receiver is a correction needed because I cut the wire about 1/8 inch too short.

So how does it fit?



I had to slightly bend the end loop to fit over the arm attached to the trailer wall. Otherwise, it was usable on the first try.

My only concern is if a gust of wind hits the door. It could tear off the plastic bar. If that became an issue, the heavy wire could be cut and some form of mechanical fuse installed. Two options come to mind: use some surgical tubing to form the joint or attach a small steel plate to one side and magnet on the other.

I welcome your comments and questions.

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