



Customer

DOOH display solutions company



Industry

Rail



Destination

Leisure and retail centres



Services

- CAD design
- Laser cutting
- Bending
- Fabrication
- Powder coat
- Assembly



Background

Sometimes a display unit has to be easily moved, portable and cable free, to accommodate the continuous changes of a store or retail layout, making at times the traditional freestanding DOOH displays cumbersome. We were approached by an existing client to redesign their existing mobile display totem, to be easier to move, lighter to move, and constructed with additional features such as being keyless.

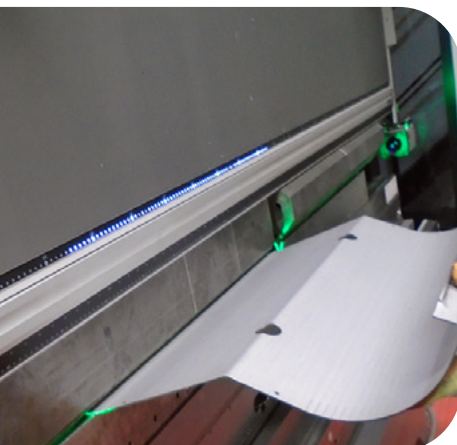


Approach

CAD design

The CAD team got to work on reviewing and engineering the existing display into a reworked model. The new version was to have a better front panel design so it was more discreet, bespoke cable management system, and self-hooking keyless cabinet body for easier installation on-site and better equipment protection when in use.

This item was powered by lead acid batteries so that the unit had flexibility and no reliance on mains power.



Laser cutting

The totem's body is manufactured from entry-level quality stainless steel and cut on our new Bystronic Fibre Laser Cutter. This type of stainless steel delivers better durability, while maintaining tight budgets for the customer. It then made its way to the new press brake machines for the varied bends involved in the unit. First onto the press brakes were the battery compartment's curved body.

Press brake

The CAD team programmed the press brake to do incremental bends in the metal work, to give the illusion of a curved front. A small bend every centimetre creates the desired effect, while keeping production lean (and costs down for the customer) by not involving exceptionally large traditional rollers to create the same radius bend.



Fabrication

The first part of fabrication was using our Pemsertter, which auto-inserts the threaded studs into the metalwork. Once the studs were in place, the welding team got to work. Systematically the welder pieced the mobile totem together using guide castellation marks from the CAD engineer's design and drawings to help align and fit pieces together. The mobile totem was pieced together using a combination of MIG, TIG and spot welding.

Powder coat

The unit was disassembled and put through the powder coating plant. A simple gloss white and grey paint was used. The grey base helps the unit blend into the ground, with many carpets and flooring in high-footfall areas being grey, dark blue or tiled. The body of the unit changed from grey to white, to make it more visually appealing and give a fresh appearance.

Assembly

The large assembly stage involved two members per unit, to fit all the bolts, foam sealing and combine the parts together. The assembly department fit all the monitor screen's hooks and brackets into the inside, which allows for a variety of makes and models of TV screens to be installed into the unit with a large X vesa plate design. Again, making the unit more flexible and future proof for the customer. The back panel was designed with a few hundred vent holes, keeping the hardware inside at the correct temperature.



Final product

The finished mobile battery totem display stands at an impressive 6 foot in height, and 137kg in weight (without the equipment inside). It was tested to make sure it doesn't topple over when the battery, screen and tech inside are installed. The bottom base unit has locking castors, removable plates for access to the battery and technology/wires, and a cubby hole for the charging cable to reel in/out. A clever design by the CAD team allows the cabinet to lock together, without the need for a key.