

In a past issue of QST, (Hints & Kinks, March 2014, Hang your Mike) I showed another way of providing a convenient microphone hook on the dashboard area of some vehicles.

Following the same theme, this suggestion then, could possibly be labeled "Hang Your Radio", as it describes a different way of mounting a mobile radio to the transmission "hump" of some vehicles.

When I received my new-to-me Kia Soul, top-most in my mind was how to mount several of my mobile rigs without drilling holes all over, as I have been known to do before!

The first radio I installed, is an Alinco DR-235 that in my previous vehicle had been mounted on the right side of the transmission "hump" using the standard mobile mounting bracket and self-tapping screws. The problem with this method was of course leaving ugly screw holes, but worse was having the radio protrude into the front seat passenger leg area because of the mounting bracket.

I noticed that in this vehicle, the transmission "hump" is finished with a side panel having a substantial raised ridge, and I thought I could hang the radio from this ridge (thereby taking up most of it's weight) and then use a wide piece of hook and loop adhesive fastener (example: Velcro) on the radio underside to secure it directly to the side panel. (speaker was on top side!)

At first I thought that a straight wire hook, perhaps made from a coat hanger would work. I crimped and soldered a ring terminal to one end of a 2" piece of coat-hanger wire. The ring terminal was secured under the radio side mounting screws, and bent hook on the other end. This did not work well at all, first because the coat hanger wire was not stiff enough, but mainly because the radio did not want to hang flat against the "hump" side panel due to the angle of the hook wire.

What was needed was a small bracket to keep the mounting hooks parallel to the "hump" mounting surface.

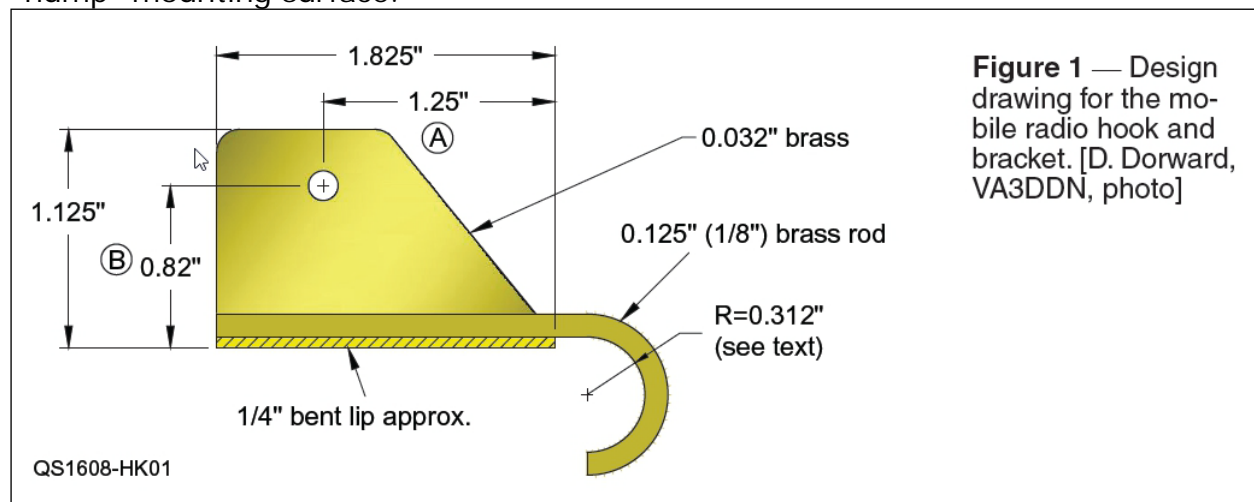


Figure 1 shows the dimensions of the hook/brackets that I ended up with. These were made up from 1/8" brass rod bent in vise around a piece of 5/8" wooden dowel. These hooks I then soldered along the bend crease in the brass plate as shown. Note that this small bent "lip" across the width of the plate, helps to stiffen the plate, and also makes it easier to position and solder the hook to it.

I used brass rod and sheet brass after considering other alternatives, because they are readily available at most hobby stores, the brass takes solder readily and the solid brass rod results in a strong hook.

(Note: steel would work too for both the hook and plate, but would be harder to solder to, although spot welding would work if available. Aluminum was not considered as I had no easy way to fasten the hook/plate parts in that material)

I pre-tinned the solder area on the hooks and the plate using a Hakko 60 watt solder station with a 1/8" wide solder tip. This was marginal in terms of heat, but got the job done. (a 100w chisel-tipped iron might have been a better choice!)

The soldering was done with the plate lying flat on a small stone brick. The solder wire I used was 60/40 rosin core .032" diameter. After soldering, all rosin residues were wiped off using isopropyl alcohol on a paper towel.

You can see that the plate has a 5/32" mounting hole that is positioned to match the location of the first mounting screw on each side of the radio.

Dimension "A" is the horizontal distance from the radio face plate to the first mounting screw.

Dimension "B" is the vertical distance from the radio bottom to the first mounting screw.

If the mounting screws on your radio are located differently, you can adjust the overall length and width of the brass plate according to your measurements for "A" and "B".



Figure 2 -- The completed hook/bracket assemblies

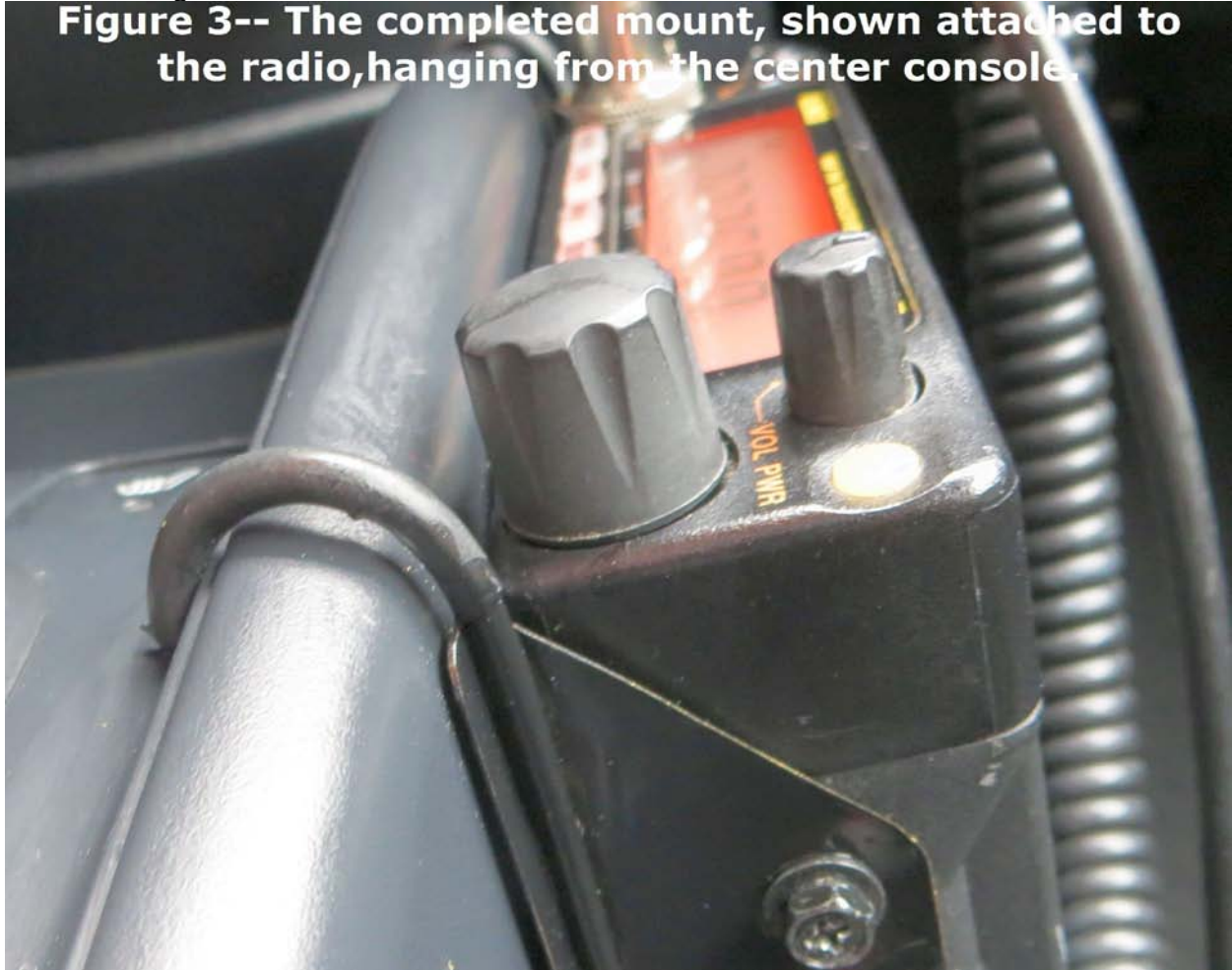
Figure 2 shows the left and right finished mounting hook assemblies before painting them black. The plate was deburred, sharp corners rounded off, and the top right corner trimmed off at approximately 45°, for appearance and as being unnecessary.

Note: Be sure not to make the 2 brass plates with the same bend direction, as the 90 degree bend must be opposite on the other side of the radio!

For the hook and loop mounting tape, I recommend using a 2" wide strip the width of the radio, using an industrial strength hook and loop type that has a high

temperature adhesive if possible. You want to make sure that the radio will stay in place even if your vehicle is in an accident.
I have had good results with Velcro #90593.

Figure 3-- The completed mount, shown attached to the radio, hanging from the center console.



(Note: If you are not comfortable with relying on the hook and loop fastener tapes to secure body of the radio, I suggest you add a simple bent metal clamp and use a self-tapping screw into the mounting area.)

Very Important: Be sure to first clean the areas where the tapes will be applied, with isopropyl alcohol on a cloth, to remove any surface oils that will prevent the tapes sticking. Allow to dry thoroughly and leave in place for at least an hour before mating the tape closures.

Hook & Loop Fastener Considerations

These fasteners have been around since their development in the mid-1950's. Today there are many variants with an astounding number of specification choices, just a few of which are strength of closure, rated number of closures, type of

adhesive used and temperature resistance. They are also used in many, many applications, from clothing, to aerospace.

Although the most commonly known colloquial name is "Velcro", according to the manufacturer, that name relates to the company and not to the product! Velcro offers 8 different adhesive choices alone.

3M Corporation also manufactures competing Hook and Loop fasteners in at least 8 different product groups and also sells product under their trademark name "Scotch™" brand.

To make our choices even more confusing, there are a host of "house" name brands offered, where the product may actually originate from Velcro or 3M but be packed and branded by the Industrial supply houses under their own name and with minimal specifications provided.

For business users the major manufacturers of course sell by specific part number with detailed data sheets describing holding performance, adhesive type and temperature resistance at minimum.

However for consumers, which includes we radio amateurs, I have found it is often hard-to-impossible, to learn specifics of the product lines offered to us through retail suppliers. Sadly, specific information for the consumer products like temperature ratings etc. is simply not provided. Instead, generic descriptions like "superior holding power" or "not recommended for x or y application, etc" are what is provided.

As well, when we go into one of our favorite big-box hardware stores, our choices of what to use are often limited simply because the store only stocks one of 2 variants that they think are popular. Choose carefully when buying these products. Let the buyer beware!