

Mobile Radio Installations

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Quick Reference Guide

- Radio Mounts
 - Lido Radio Products
 - RAM Mount
 - Nite Ize Phone Mounts -- Steelie
- Instructions
 - Crutchfield Master Sheets
- Power
 - Anderson PowerPoles
 - Subwoofer Wiring Harness
 - Crutchfield!
 - 12AWG minimum, 10AWG preferred
 - Monoprice Speaker Wire
- Antenna Mounts
 - Comet
 - Diamond
 - Laird
 - NMO only
 - UHF is a terrible connector

Overview

- Types of Installs
 - VHF/UHF
 - HF -- to be discussed in a future talk
- Radios and Radio Locations
- Power Considerations
- Antenna Mounts
- Coax and Accessories
- Tips and Tricks
 - Firewalls
 - Gaskets



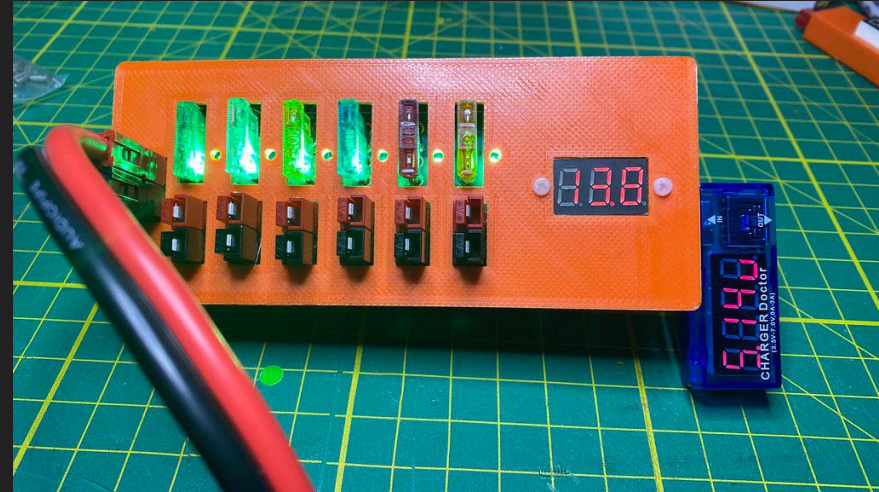
Radios and Radio Locations

- Know what the goal is before you start:
 - Budget?
 - Bands?
 - APRS?
 - Temporary or permanent?
 - Buttons and knobs or touch screens and menus?
- What radios?
 - Handhelds
 - Mobiles
 - Remote head units
- Where to mount?
 - Antennas
 - Control Head
 - Radio Body



Power Considerations

- Where to get power?
 - Battery connections
- Wire routing
 - What to avoid: computers, airbags, things that move (fans, steering, etc.)
 - How to get through firewall?
- Wire gauge
 - What are you powering, voltage drop and temperature rating
- Automatic power off / low voltage
- Fuses
 - Positive AND negative
- Number of devices
 - Do you need a rig runner?

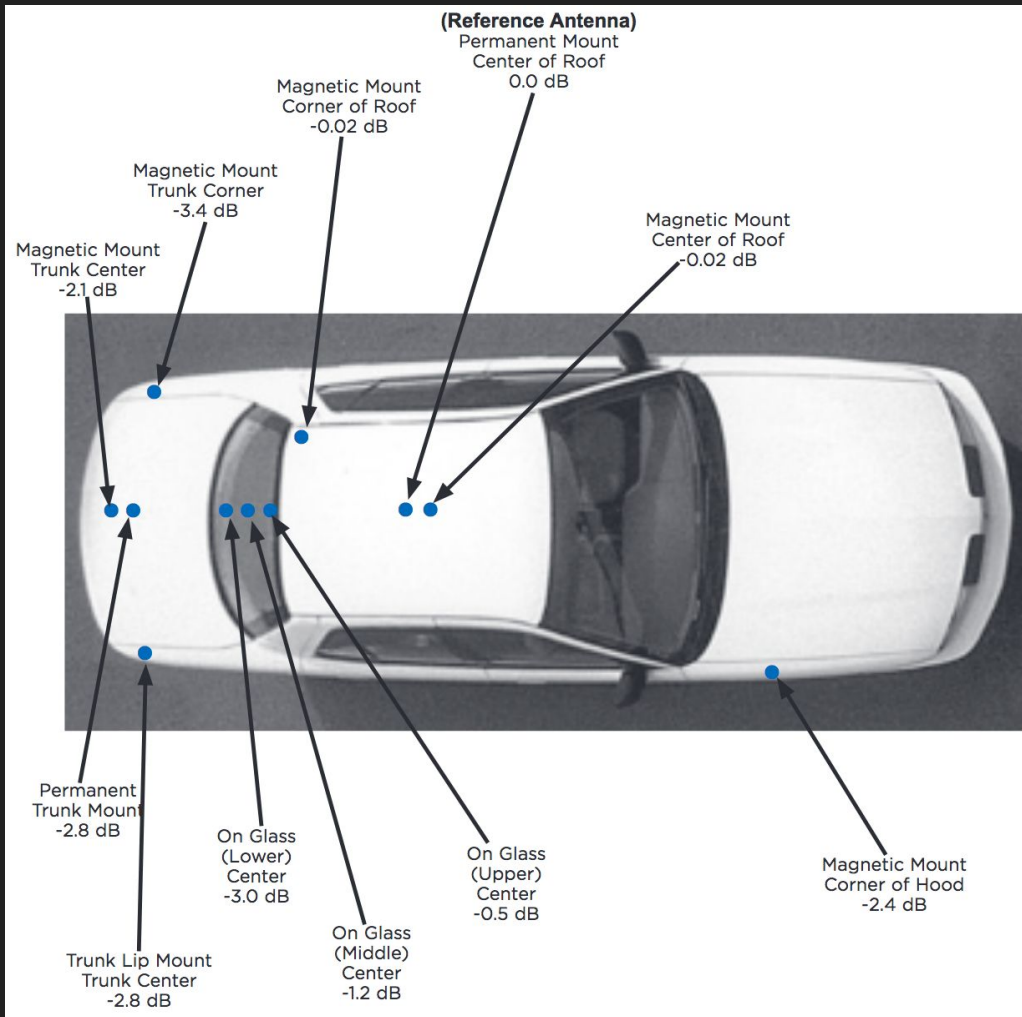


Antenna Mounts

- To drill..
 - Consider car material (aluminum, steel)
 - Using a step bit
- Or not to drill..
 - Lip, fold over

- Antenna connection: NMO (great) / UHF (terrible)
- Additional considerations:
 - Ground plane
 - Weatherproofing
 - Avoid through-glass mounts





Radio Mounting & Coax Considerations

- Radio Body Mounting Considerations
 - Ease of cable routing (first order problem)
 - Ventilation
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- Preferred coax types
 - RG-58 -- General purpose (mobile)
 - RG-316 -- Short jumpers
- Usable, but possibly excessive
 - LMR-400
 - 1/2" Heliax

Tips and Tricks

- Making sure it all works
 - SWR / Return Loss
 - Audio check
 - Alternator whine
- Cars can get hot -- is your radio cool?
- The cup holder is *not* a microphone clip
- Getting fancy:
 - Expanded mesh sleeving
 - Run CAT5e to areas of interest
 - 3D printing your own mounts
 - Speaker audio through car stereo



















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