

## Required Equipment Accessories

Or

## Odd and Ends for Deployment

Steve Pituch, ARES, 9/14/2011

This lesson will go over some details that I have learned over the years to make operating during a public event or emergency easier.

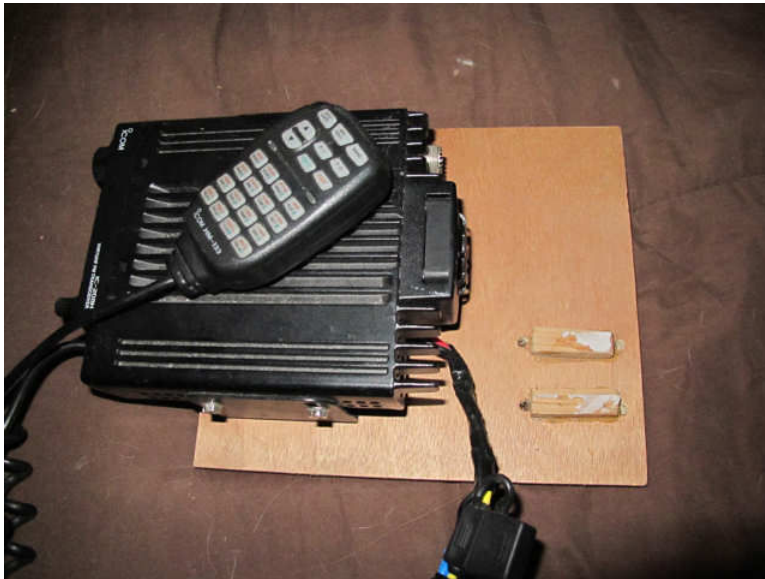


Photo 1 – Radio Mount

1) Photo 1 shows a mobile VHF/UHF ham radio, typically 50 Watts and potentially a very useful tool while deployed. However, certain items will make your operating easier and in some cases possible. In photo 1 you can see that the radio is mounted on a piece of plywood. The plywood is of a size so that it will comfortably fit on the floor of the average vehicle. It also affords mounting of other accessories such as a speaker or a power connection device. If your radio is permanently attached to your vehicle, then think again.

What if you are asked to ride shotgun in a police car, ambulance, race organizer's vehicle, rescue vehicle, or even a boat or helicopter. Can you conveniently remove your radio from your car and install it in less than 5 minutes? You need to. This was a very common way for different agencies to communicate with each other a few years ago: just put a ham in each vehicle. I will show you how. It's all about portability.

The first item is the plywood mount. I have actually built a plywood wedge that tilted the radio display upwards. With a remote head this is not a problem.



Photo 2 – Powerpole Joiner

2) We have all heard of Rig Runners™. They are nice but quite bulky for portable use and expensive. These TeeDee Powerpole joiners do the same thing minus the fuses, and it is more compact and far less expensive. You can mount one on your plywood mount.

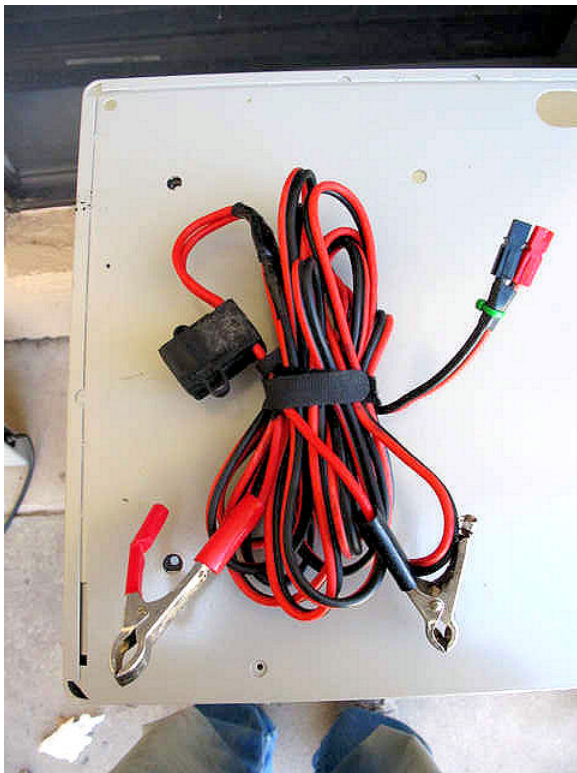


Photo 3 – Power Cable

3) OK, you need a real quick way to connect power to your radio. If you have ever burned out the cigarette lighter connector in a police car you know that these things will only carry a few amps. You need to connect directly to the vehicle's battery. The above cable will let you do that. Just connect the clamps to the terminals and gently close the hood. Route the cable to the door and close the door. Without this simple accessory you are dead in the water.



Photo 4 – Antenna Accessory 1

So you have your radio all set up on the van. You go to mount your mag mount on the roof and discover that for some reason it does not stick. "Holy Crap!" The driver tells you that the roof is either fiberglass or aluminum. So, are you prepared for this very common scenario? If you brought your steel pizza pan and some duct tape you would be in business after only a 5 minute delay. Don't ever leave home without your pizza pan and duct tape. The antenna in the photo is on a glass table and it works. PS: I shouldn't have to say this, but make sure the pizza pan is steel ;o).



Photo 4 – Antenna Accessory 2

OK, look at this kid. He's a very young ham who knows his stuff. Ignore the fact that he is listening into a computer mouse pointing device. He built a speaker and microphone into it, but that's another story.

He is not using a rubber duckie. He is on the other side of a hill from the police repeater. The police have no communications at this check point. But he can communicate because he made a j-pole antenna out of the piece of TV twin lead and connected it to 20 feet of mini RG8 (RG8X). His antenna is up in the tree. He can communicate with the ham repeater all over town and to the net control station at the finish line. The policemen stop their vehicles in front of this kid and ask for information on the next traffic hotspot. The kid calls net control and relays the information to the officer.

So make yourself a j-pole antenna that you can roll up and put in your radio bag. Also bring string and a heavy metal nut so you can get the antenna high into the tree. Also, plan to be comfortable. Put a portable chair in the trunk of your car.



- 1) Extra battery – go to W&W Batteries and get a spare battery. W&W will be cheaper than the OEM and likely more amp-hours. You need at least two batteries to be able to do any good.
- 2) Rapid Charger – this charger will charge a battery attached to the radio or alone and you can operate the radio while it is in the charger. This is a necessary accessory.
- 3) SMA to BNC adapter. You need an adapter to be able to not use the rubber duckie. Make sure you have enough adapters so you can connect to your mag mount and to your j-pole antenna.
- 4) Radio interface cable. You need to be able to attach your radio to a pc in order to program a bunch of frequencies in it. If you manually program your radio at the site with the local frequencies, the disaster would likely be over and you would then be told to go home to finish programming your radio.
- 5) Radio software. Get the RT Systems software for your radio. No buts about it.
- 6) Microphone. I have a very inexpensive speaker mic from Radio Shack. The connectors have never really fit correctly in any of my radios. The PPT switch was crap and frequently broke. You need dependable equipment including your accessories on the field. Don't be cheap with the mic. The speaker mic shown is waterproof, has excellent audio, and is built like a tank. Having a reliable high quality speaker mic for your HT is not optional.
- 7) Manual. This is mandatory. Bring it so you can figure out how to use the radio when you are in the field. I don't know how many times I have hit an obscure button sequence and had my radio go berserk with no way to undo the damage. Bring the manual. You can download and print the PDF from the manufacturer's site.

What I should say here is that if you are on a budget it is better to get a good 2 meter radio with accessories, instead of a dual bander with no accessories. A good example would be the Yaesu FT250.



Photo 6 – Optional

If you want to mount a speaker on your plywood mount, I suggest an old plain vanilla used Motorola mobile speaker. They are about 5 bucks at hamfests. Make sure you get the mounting bracket.