

Upon moving into our new home I had the opportunity to re-build my entire antenna system. The first thing I was concerned about was getting a good Ground. This is most important not only from a safety point of view but also from a listening point of view. A good ground will help by getting rid of static and some noises that pollute the band. I wanted to it right this time so I talked over my situation with two people I know at work that are electrical engineers and Ham radio operators. Both have a strong background in the Telecontrol operations at work. I figured this way I would get the straight goods. They had several recommendations that I would like to share with you:

- Use a ground rod that is ten (10) feet long. Now many of you may think that this is a bit much as many books state you can use one 4 to 6 feet in length. That may well be true but during dry periods the dampness of the soil may fall below the 4 foot level and the rod will be in dry soil which will diminish its capacity to work. The rod must be in damp soil to work well thus the 10 foot model.

- Place the rod where you can keep it moist. This could be near a drain pipe or down spout. You can also go the route that I went because of the situation I am in. Putting the ground rod by a down spout was out of the question for me so I built a pit for the ground rod. I simply dug a hole two (2) feet wide and two (2) feet deep where I wanted to place the rod. I then put in the rod insuring that one (1) foot of it was above ground level. By ground level I don't mean in the hole but one foot above the ground the hole was dug in. I then filled the hole with crushed rock. At this point I must mention that the rock you use should be of the type that will remain loose. Using a rock such as Limestone or other types that break down over time is not recommended. Use a rock such as River rock or some similar hard type that will not pack or break up easily. The reason for this is so that you can water the ground rod during dry periods. If the rock is loose it will allow the water to penetrate down to the ground rod. The same will happen during rain storms.

- When you put in your ground rod you should have to pound it in. With the lovely Manitoba Gumbo clay we have here it took a sledge hammer to put in my ground rod. If the rod goes in easily or you can pull it up a bit after it is in the soil is too sandy or loose for a really good grounding. Now your location may have soil that isn't perfect but try to find a spot that is best. At least with the ten foot rod you have a chance to hit something a bit more solid, than with a 4 or 6 foot model.

- Now that the rod is in what type of wire should you use to run from your receiver to the ground rod. I chose to use 10 gauge solid copper wire that was covered. In grounding the receiver 10 gauge will go onto the receiver easily, as heavier gauges such as 8 or 6 are just too big for the ground lug at the back of the radio. I used covered wire so when I fed it from the receiver to the ground rod outside I did not have to worry as much about it coming into contact with anything that would be of a conductive nature. The ground wire must not touch anything metal on its way to the rod as this will defeat the purpose entirely. The use of covered wire eliminates this problem. Ten gauge is the best all round wire although if you can use a heavier wire go ahead, but don't go lower than 12 gauge and try for solid copper if you can.

- If you are lucky enough to have more than one receiver and don't feel like pounding in several of these 10 foot rods you can use a buss bar. This is a copper bar about one-half inch square. You will need about one to one and a half feet of it. If you are lucky it will come pre-drilled with several holes that you can put screws or bolts into. Mount the bar someplace close to your receivers so as to keep the runs of wire as short and straight as possible. All wire runs to the bar or to the ground rod should be short and straight whenever possible to give you better performance. You can then run one wire from the end of the bar to the rod. You can run other wires to the buss bar and anchor them securely to the bar with screws and/or bolts. Make sure you tighten the bolts or screws down so you get a good solid contact. Loose wires will be of no use to you when you need them the most.

Well I hope this is of some help to you. It may sound like a lot of work but it will pay for itself when you start hauling in all of those new stations. Just be careful with that sledge hammer they hurt if you miss the rod and connect with your foot. Also have somebody hold the rod when you pound it in as it will flap around. Good luck and of course
GOOD DX'ING.