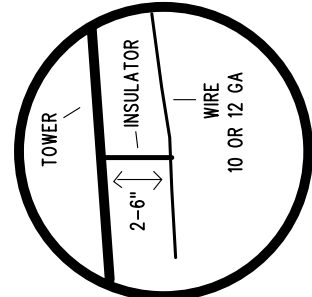
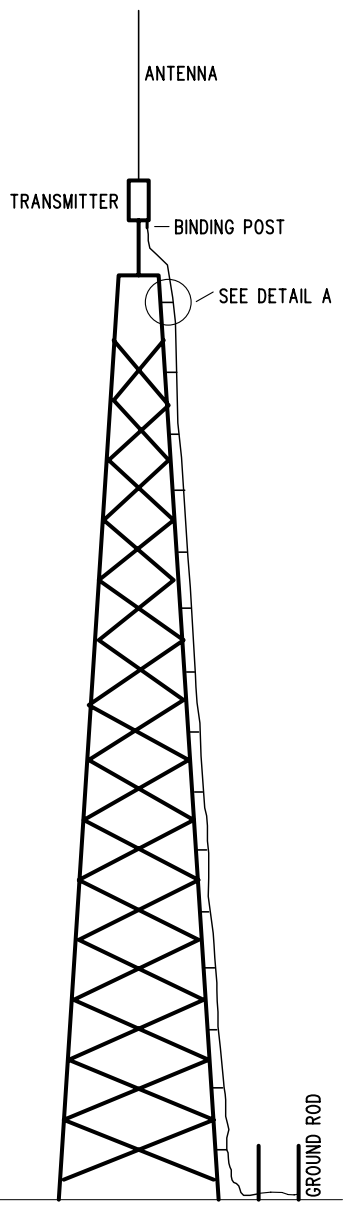


GROUND RADIALS

IF YOU AREN'T USING A TOWER SIMPLY MOUNTING THE TRANSMITTER OVER A GROUNDPLANE OR ELEVATED GROUNDPLANE WILL HELP. THIS CAN BE AS SIMPLE AS INSTALLING THE TRANSMITTER OVER A BUILDING THAT HAS A METAL ROOF. DESIGNING AN GROUNDPLANE IS COVERED ELSEWHERE ON THIS SITE. THE TRANSMITTER DOES REQUIRE A GOOD GROUND TO OPERATE, IT CAN BE AS SIMPLE AS USING THE EXISTING ELECTRICAL GROUND OR VERY COMPLEX AS WHEN USING MULTIPLE GROUND RODS AND BURIED RADIALS.

IF YOU TRY TO USE THE EXISTING ELECTRICAL GROUND OF A BUILDING YOU MAY NEED AN ELECTRICIAN. ANY GROUND YOU USE MUST BE ELECTRICALLY CONDUCTIVE. FOR EXAMPLE, IF YOU USE A METAL ROOF CHECK TO BE SURE IT IS ELECTRICALLY CONDUCTIVE ACROSS IT'S SURFACE.

ISOLATED GROUND LEAD SUGGESTION



DETAIL A

INSULATOR CAN BE CERAMIC OR ANY GOOD STRONG NON-CONDUCTIVE MATERIAL. PLASTIC WOULD BE OK.

ONE OF THE BEST WAYS TO GET MORE RANGE TO TO TAKE ADVANTAGE OF THE AM1000'S ABILITY TO BE MODULATED +130%. THERE ARE MANY AUDIO PROCESSORS ON THE MARKET THAT WILL DO THIS, THE CHEAPEST IS THE INNOVONICS 222. SEE INOVON.COM THE OPTIMOD IS ALSO AN EXCELLENT UNIT. ANOTHER TIP FOR GETTING GOOD RANGE IS TO OVER MODULATE A BIT.

Section 15.219 Operation in the band 510 - 1705 kHz.

- (a) The total input power to the final radio frequency stage (exclusive of filament or heater power) shall not exceed 100 milliwatts.
- (b) The total length of the transmission line, antenna and ground lead (if used) shall not exceed 3 meters.
- (c) All emissions below 510 kHz or above 1705 kHz shall be attenuated at least 20 dB below the level of the unmodulated carrier. Determination of compliance with the 20 dB attenuation specification may be based on measurements at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be demonstrated by measuring the radiated emissions.

Always cooperate with the FCC and follow FCC law.

Note: The FCC may not pass some of the grounds on this page (ex elevated ground).

ANOTHER TRICK IS TO KEEP IN MIND THAT ANY CONDUCTOR IN THE AIR THAT ISN'T GROUNDED WILL CARRY YOUR SIGNAL. HIGH TENSION POWER LINES CAN CARRY YOUR SIGNAL FAR IF YOU CAN INDUCE YOUR SIGNAL INTO THEM. EVEN YOUR BACKYARD CLOTHESLINE CAN ACT AS A RADIATOR IF IT IS METAL WIRE AND HAPPENS TO BE INSULATED AT THE ENDS. YOUR SIGNAL CAN BE BE PICKED UP AND RE-RADIATED. KEEP THIS IN MIND & LOOK FOR CONDUCTORS LIKE THIS WHEN LOOKING FOR A SITE FOR YOUR LOW POWER TRANSMITTER.

ANOTHER HINT IS WATER. YOUR SIGNAL WILL CARRY WELL OVER OPEN WATER.

HEIGHT IS VERY IMPORTANT, BUT DON'T GET THE UNIT SO HIGH THAT YOU CAN'T GET TO IT TO TUNE IT PROPERLY. IT'S IMPORTANT THAT IT BE HIGH, BUT IT'S CRITICAL THAT IT BE TUNED. THE UNIT WON'T WORK AT ALL IF IT'S NOT TUNED PROPERLY. 25-30 FEET IS USALLY GOOD FOR HEIGHT, MORE WILL GET MORE RANGE BUT THE MOST BANG FOR THE BUCK IS 25-30 FEET.

- TO GET GOOD RANGE:**
- 1- ELEVATED GROUDPLANE
 - 2- GET IT HIGH.
 - 3- USE AN AUDIO PROCESSOR.
 - 4- USE ISOLATED GROUND LEAD
 - 5- ELEVATED OR BURIED RADIALS

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| | | RANGEMASTER Transmitters | |
| Drawn | KFH | | |
| Date | 6/04 | | |
| Approv. | | Size | A |
| Scale | 1x | Page 1 of 1 | |