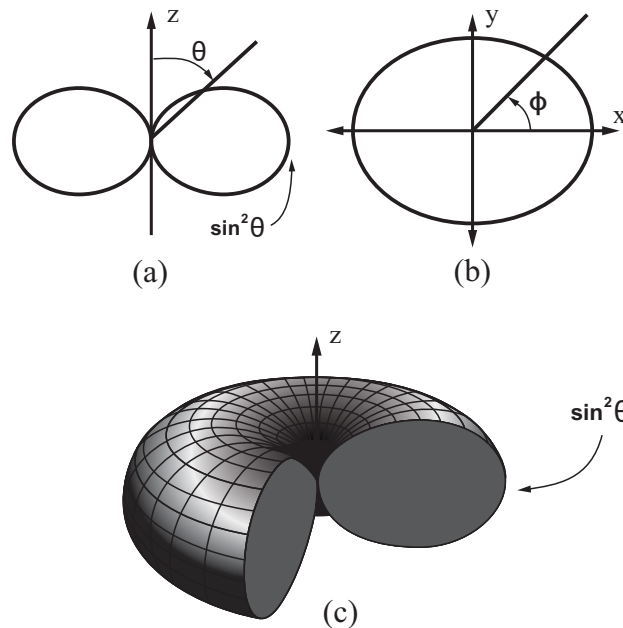


These rules will ensure that you achieve the best possible signal between your transmitting device and receiving device. General antenna installation rules are as follows:

- Always mount the antenna as high as possible, as the earth (ground) absorbs radio signals
- Mount the positive antenna wire in the vertical plane. The antenna radiation pattern is in the vertical axis
- Never mount an antenna in a metal enclosure. Metal blocks the antenna signal.
- Never mount an antenna next to a metal enclosure, the metal will block the signal from penetrating the metal side
- Transmitting and receiving devices should never be located within a 1m radius of one another as the transmission of a transmitting device will swamp the receiver and become unintelligible.
- Never cut or extend an antenna. The antenna length has been tuned for maximum transmission and receiver strength for 868MHz.
- Never expose the bare antenna wire or connect the antenna wire to any earthed object. The antenna is referenced to the mains supply voltage.
- Certain types of equipment may generate interference to radio devices, eg. high voltage DB boxes, transformers. Always mount transmitters and receivers as far away from this equipment as possible.



The above drawing shows the following:

- (a) Antenna radiation shown from side view
- (b) Antenna radiation shown from top view
- (c) Antenna radiation shown as 3D projection

Methods of increasing radio reception:

- Radio signals may be extended with the installation of a repeater. This device will repeat all radio signals within range.
- External antenna may be used to replace the existing antenna when devices need to be mounted into metal enclosures.