

LineIQ Antenna Positioning

Summary: This document describes how to position all devices in a typical LineIQ system.

Devices: LineIQ-60, LineIQ-Gateway

Antenna Emissions: The LineIQ devices utilize Omni-directional antennas to provide communication between each other during operation. The Gateway uses a monopole antenna. The typical radiation pattern for this antenna is given in Figure 1. Note that the maximum radiation is perpendicular to the antenna direction.

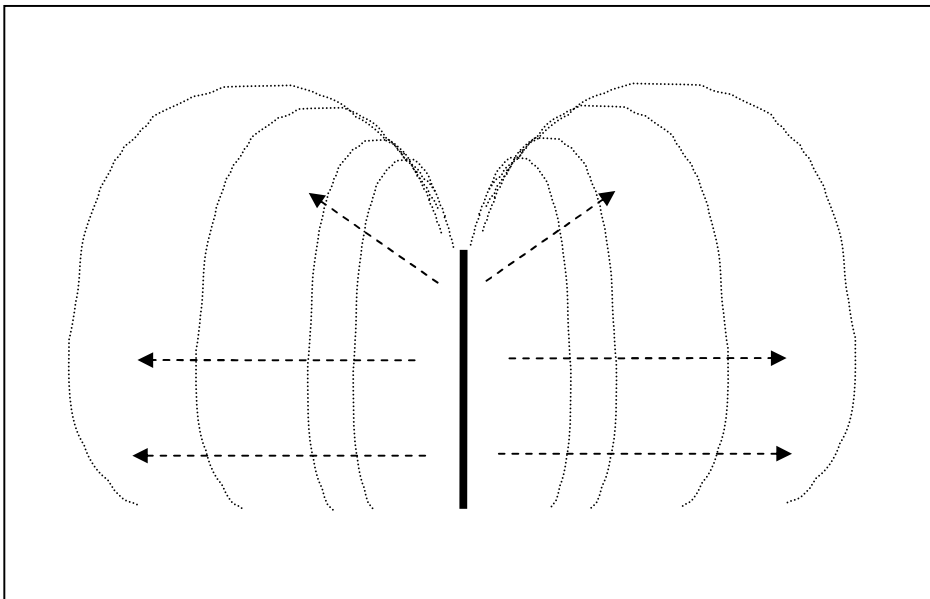


Figure 1: Omni-directional Monopole Antenna Radiation Pattern

LineIQ-60 Antenna: The LIQ-60 Antenna is an Omni directional chip antenna mounted inside the plastic housing. Its radiation pattern is fairly uniform in all directions. Generally, the positioning of the LineIQ-60 does not need to be considered during installation.

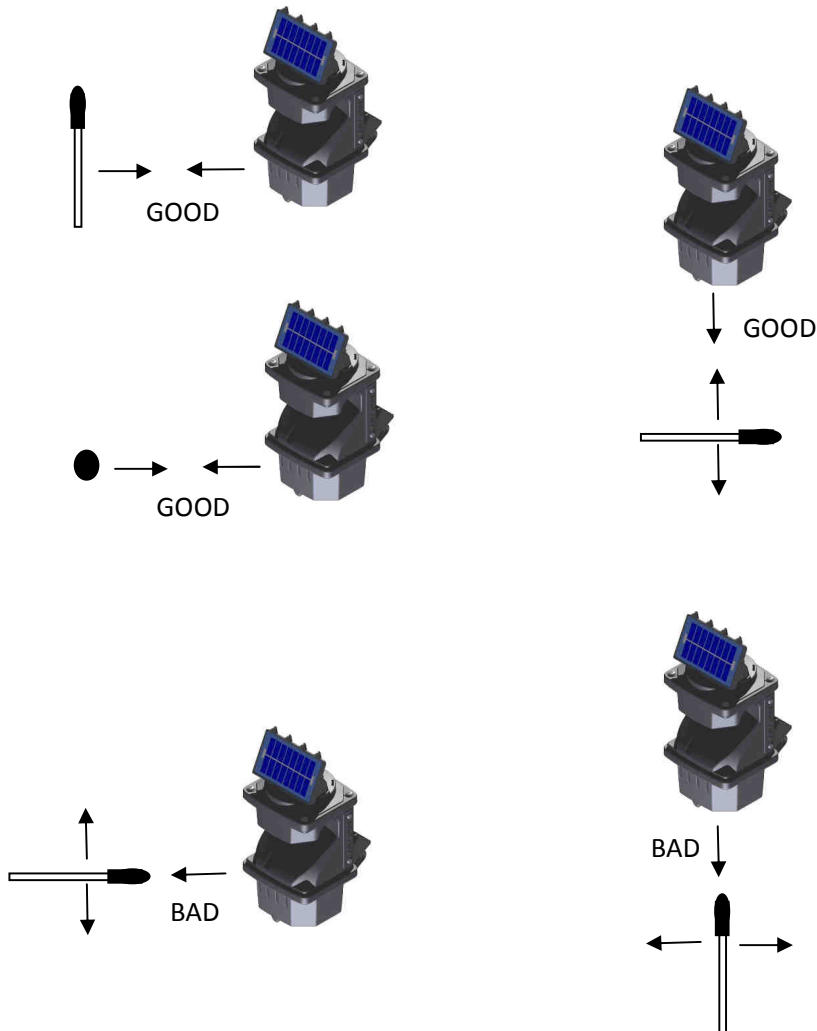
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LineIQ Gateway Antenna: To optimize the performance of the LineIQ communications, the Gateway antenna must be positioned so that it DOES NOT point toward the LineIQ-60 Sensor. The length of the antenna should run parallel to the Sensor unit. See images below.



Distance: The line of sight distance needs to be less than 30m or 100 feet.

Consider Location: The Gateway antenna should have a clear line of sight to the LineIQ-60. Avoid installing where there are obstacles (i.e. Tree branches or buildings) that obscure the line of sight. Large metal structures (buildings, fences, etc) can substantially affect RF performance. These structures may act as a large Ground plane. Avoid installing on or adjacent to such a structure.

Optional Higher Gain Antenna: A high gain antenna is available for the Gateway that may improve difficult locations. Please contact GridSense.