

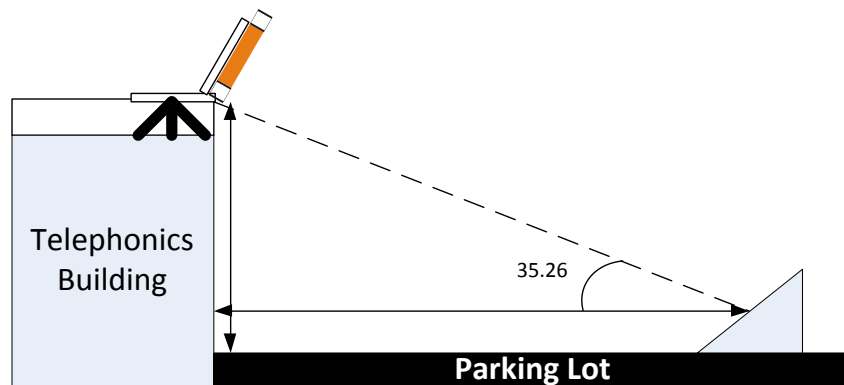
Outdoor Tests Plan

Telephonics plans to verify and validate the system performance of an experimental radar manufactured by Echodyne. The radar uses FMCW, and according to EchoDyne, it is already approved by NTIA and FCC in terms of spurious emissions.

There are three sets of experiments planned for this purpose.

The first set of experiments will be performed at the Telephonics facilities in Long Island, NY. The experiment consists on mounting the radar on top of a building, and pointing its main beam to a calibration target (a trihedral), which is opportunely mounted at the end of a parking lot.

The radar system could potentially scan $\pm 40^\circ$ in elevation and $\pm 60^\circ$ in azimuth. Therefore, we will need an authorization that can cover that scan. The one way, half-power beamwidth is 4° in azimuth and 12° in elevation.



The second type of experiments is to collect Radar Cross Section data of commercial-off-the-shelf drones (DJI Phantom IV, Earchine, and Skywalker 8) using the above mentioned radar. These experiments will be carried out in Huntington, NY and at the three areas close to El Paso, TX.

The selected areas in El Paso are uninhabited and are technically located in New Mexico (see GPS coordinates for an accurate visualization). Proper coordination with the local airport authorities will ensure the safe use of the drones. Telephonics has personnel cleared with a commercial remote pilot license for operating drones.

The third type of experiment is the radar detection of occasional cars traversing a local rail-road crossing.

Should you need additional information feel free to contact me at any time.

Sincerely,

Lo Monte Lorenzo

Lorenzo Lo Monte, PhD
Chief Scientist
773-428-0748
lomonte@telephonics.com