Radar Laser Course

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

L.I.D.A.R. OPERATOR COURSE (1820-23320)

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- I. Scientific principles of L.I.D.A.R. speed measurement
 - A History and theory
 - 1. L.I.D.A.R. / L.A.S.E.R.
 - 2. How L.A.S.E.R. was invented
 - 3. How the device works
 - B L.A.S.E.R. characteristics
 - 1. Signal speed
 - 2. Wavelength
 - 3. Frequency
 - C L.A.S.E.R. properties
 - 1. Infrared spectrum
 - 2. Narrow beam width
 - 3. Range
 - Reflected
 - 2. Refracted
 - 3. Absorbed
- D Cosine angle
 - 1. Define
 - 2. Effect
 - 3. Formula
 - 1. Calculations

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II General operation considerations

- A. Pre-operational considerations
 - 1. Initial considerations
 - 2. Transportational considerations
- A. Accuracy checks
 - 1. Internal checks
 - 2. External checks
- B. Site selection considerations
 - 1. Site safety
 - 2. Site enforcement
 - 3. Traffic considerations
 - 4. Environmental considerations
- C. L.A.S.E.R. effects
 - 1. Radio frequency interference (R.F.I.)
 - 2. Panning
 - Cosine
 - Other interferences
- D. Target selection
 - Clear line-of-sight to the target vehicle
 - 1. Visibility conditions
 - 2. Long range vs. short range
 - 3. Reflective surfaces on target vehicle
 - 4. Aiming
- B. Tracking history
 - 1. Visual speed estimation
 - 2. Target acquisition
 - 3. Digital readout
- C. Care and maintenance
 - 1. Periodic cleaning of external lenses
 - 2. Use in inclement weather
 - 3. Durability
 - 4. Storage

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- D. Safety and health considerations
 - 1. Classified as a class 1 device by the Food and Drug Administration
 - 2. Avoid direct eye exposure
 - 3. Low radiation
- III Operation of specific L.A.S.E.R. devices
 - A. Functional components of L.A.S.E.R. devices
 - B. Field exercise
 - 1. Set-up
 - 2. Testing
 - 3. Operational procedures
 - 4. Hands-on training
- N Legal considerations and testifying in court
 - A. California vehicle code
 - 1. 40802
 - 2. 40803
 - 1. Other related sections
 - A. Case law affecting speed measurement
 - 1. R.A.D.A.R.
 - 2. L.I.D.A.R.
 - C. Courtroom testimony
 - 1. Preparation
 - 2. Considerations
 - 3. Evidence

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V Final examination

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