LIS

Performance tester of laser range finders

Fig.1. Photo of LIS test station

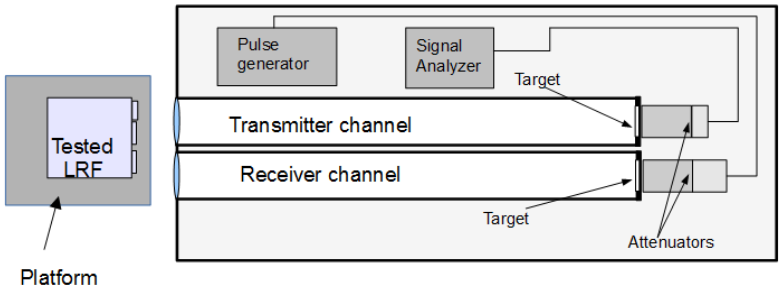

Fig.2. Block diagram of LIS test station

Basic information

Inframet offers a long series of stations for testing LRFs to support R&D work, field tests, production, maintenance and repairing (www.inframet.com/laser_systems.htm). LTE station for expanded tests of laser range finders using electronic distance simulation can be considered as a quasi universal station capable to test virtually all LRFs offered on the market. The station can simulate variable targets of different angular size, at different distances and at different attenuation medium. This universality has been achieved at cost of sophisticated design and high cost.

LIS station can be considered as a highly simplified version of LTE station. The station is optimized to test a specific type of LRF but its buyer can define parameters of LRF to be tested: wavelength, pulse parameters, receiver sensitivity, divergence angle, operational range and optics geometry. The station simulates a target of constant angular size located at three different distances and for medium attenuation that simulate real field condition. User is shooting tested to simulated target and is checking if gets proper distance readout. This ultra simple operation makes LIS a perfect tools for maintenance tests of LRFs. Due to small size and mass LIS station can be also used at field conditions.

Features

1. LIS simulates real field tests conditions. User sees a small bright target on dark background and shoots LRF to the target. .
2. Checking all factors that influence final performance: transmitter performance, receiver performance, transmitter-receiver boresight error, aiming axis-transmitter beam.
3. LIS is simple to operate station to test specific LRFs determined by customer. The station can provide answers to crucial questions on performance of any LRF:
   a) Does transmitter of tested LRF emits pulses over the reference pulse power value?
   b) Can receiver of tested LRF detect pulses at reference peak power level?
   c) Are the alignment errors low enough for LRF to work properly?
   d) Does tested LRF generate accurate distance to the target within its operational range?

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Technical specifications

Parameter	Value
Type of tested LRF	Customer optimized: multipulse or monopulse, dual channel optics or coaxial optics
Wavelength of tested LRF	Customer is to choose from following list: 910nm, 1060nm, 1540nm, 1550nm, 15570 nm
Number of simulated targets	One
Distance to simulated target	Customer can choose up to three distances in range up to 40km
Target angular size	Customer is to choose. Typically target size is equal to receiver angular size.
Test capabilities	• Peak pulse power (Good/Bad) • Receiver sensitivity (Good/Bad) • Boresight accuracy • Distance measurement accuracy (Read out)
Power voltage	DC12V5A
Power supply (power consumption)	< 40 W
Storage temperature	-10ºC to 60ºC
Working temperature	0ºC to 45ºC
Dimensions	580x 250x241
Mass	13 kg

Version 1.2

Contact

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