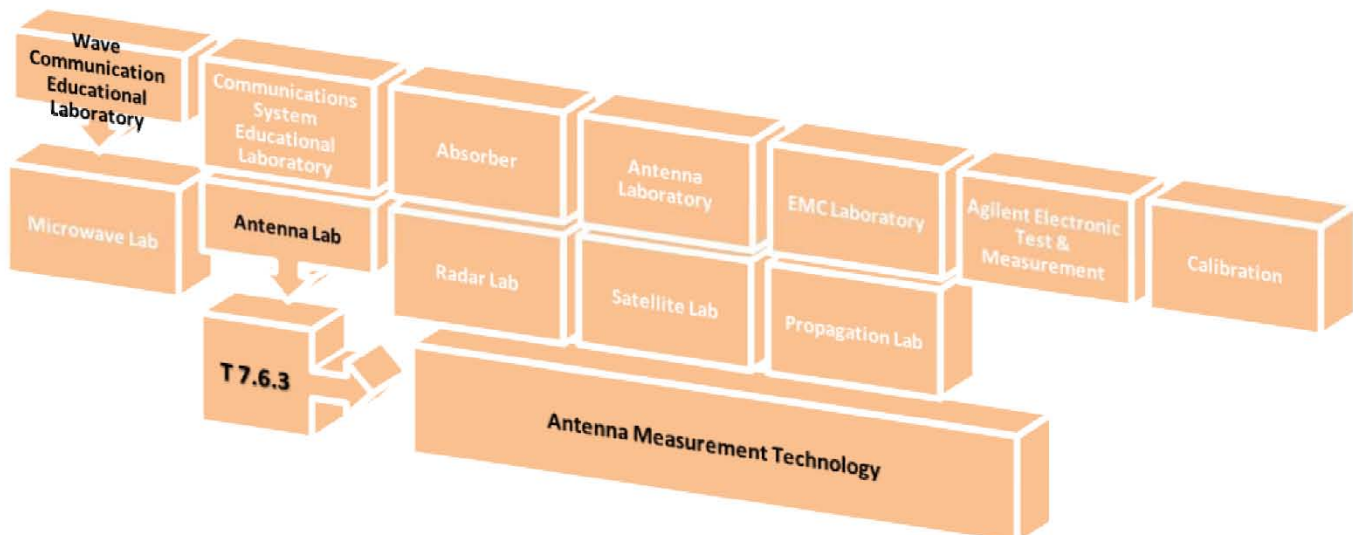
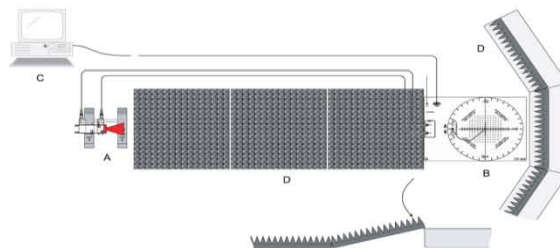


The setup drawings provide an impression of the compact size of the LD antenna measurement site. The professional lab instrumentation with real microwave absorbers, computer support and evaluation, guarantees experiment results that can be interpreted.

Topics

- Triple antenna method
- Radiation characteristics of slot antennas
- Matching of single slots
- Concept of antenna resistance and baluns



Gain assessment: antenna measurements without directional diagrams

Reception measurements for three different receiving antennas are made under the presumption of constant transmitter power, distance and wavelength. The results form a linear equation system from which the unknown gain values G1, G2 and G3 can be calculated. This procedure is known as the triple antenna method. The directional diagrams of test antennas are not used for this - but indeed a few components out of our waveguide „tool-box“ T 7.4.3. Even the matching of antennas (i.e. single slots) is an experiment which is closely associated with waveguide technology. The verification of Babinet’s duality principle is also of interest. It leads to the equivalence of directional diagrams between slots and dipoles.

EQUIPMENT SET LIST

Antenna Measurement Technology

QUANTITY	CAT. NO	DESCRIPTION
1	737 01	Gunn Oscillator
1	737 03	Coax Detector
1	737 033	Coax Transition Male/Male N, 50 Ohm
1	737 035	Transition Waveguide/Coax
1	737 05	PIN Modulator
1	737 06	Isolator
1	737 085	DC-Blocker
1	737 09	Variable Attenuator
1	737 12	Waveguide 200 mm
(1)	737 13	Slide Screw Transformer
1	737 135	3-Screw Transformer
1	737 14	Waveguide Termination
1	737 18	Cross Directional Coupler
1	737 197	E-Bend
1	737 20	Small Horn Antenna
1	737 21	Large Horn Antenna
1	737 22	Set of 4 Slit Diaphragms with Holder
1	737 390	Set Microwave Absorbers
1	737 399	Set of 10 Thumb Screws M4
1	737 405	Rotating Antenna Platform
1	737 420	Reflector for Slit Diaphragms
1	737 424	Slot Antenna
1	737 427	Microstrip Antenna
1	737 440	Helical Antenna Kit
1	568 702	Book: Antenna Technology

(): recommended

