



IEEE Recommended Practice for Antenna Measurements

IEEE Standards Antennas and Propagation Society

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Antennas and Propagation Standards Committee

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Antennas and Propagation Standards Committee
of the
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Abstract: The recommended practices for the measurement of antenna transmitting and receiving properties are presented. Throughout this standard it is assumed that the antenna to be measured can be treated as a passive, linear, and reciprocal device. A fundamental property of any antenna is its radiation pattern. The measurement of radiation patterns in an antenna test facility is discussed. The design of antenna test facilities is described along with instrumentation requirements for the proper operation of the antenna facility, directions for the evaluation of an (existing) range, and the operation of ranges is discussed. References are provided that are illustrative of measurement techniques and in which details may be found.

Keywords: absorbers, accuracy, alignment, anechoic, antenna, antenna gain, antenna measurements, calibration, chamber, compact range, EIRP, electromagnetic compatibility, electromagnetic testing, EMC, equivalent isotropically radiated power, errors, evaluation, facilities, far field, far-field range, gain/temperature, ground bounce, high power, IEEE 149, impedance, instrumentation, inter-range comparison, measurement, near-field, near zone, noise, outdoor range, passive, pattern, phase, polarization, probe, quiet zone, radar, radiation, radio frequency, radome, range, receiver, reflector, safety, scale model, scanner, software, standard gain horn, standard, tapered chamber, target support, techniques, test facility, test range, test zone, three-antenna measurement, tracking, uncertainties, uncertainty analysis, verification

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