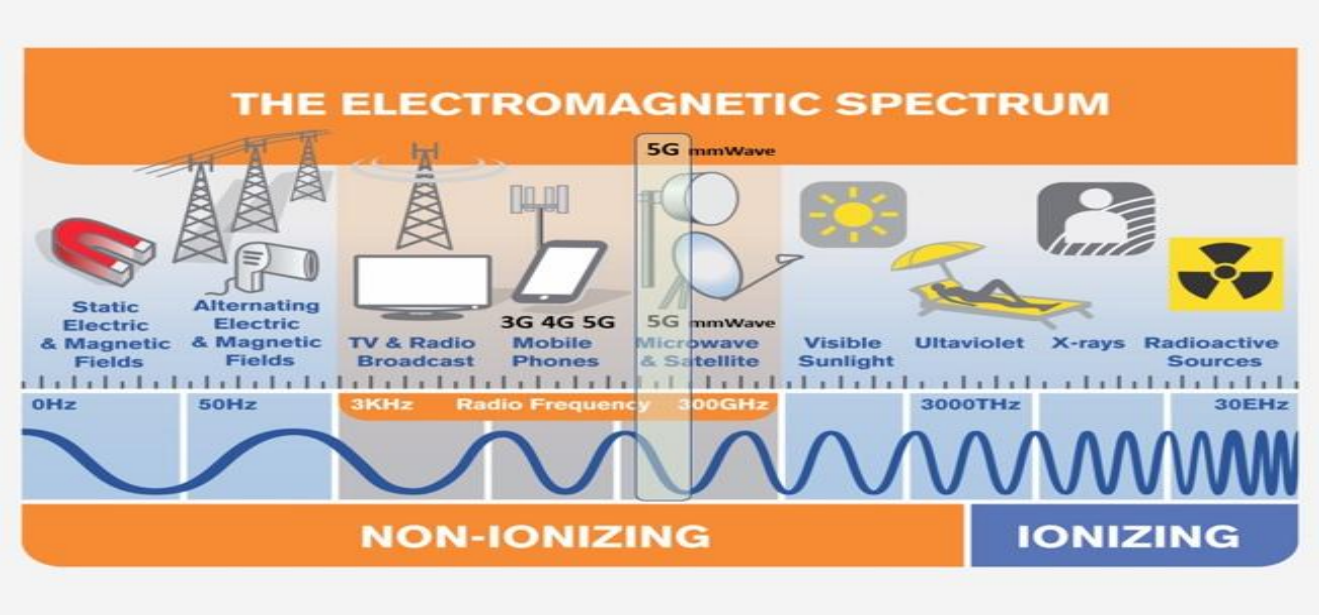
Radio Frequency and Electromagnetic Field Laboratory



The Kenya Bureau of Standards - KEBS, National Metrology Institute, Radio Frequency and Electromagnetic Field Laboratory is the national custodian for the SI unit for absolute RF Power, measured in Watt, w, and derived measurement unit for relative power level dB – also used as the relative measure for Radio Frequency Attenuation, Phase Noise, Return Loss. The laboratory offers traceability to the SI through measurement and calibrations to its national reference Radio Frequency/EMF standards, of Power Sensor, Attenuators, Dividers, Splitters and Terminators.

The laboratory participates in scheduled regional inter-laboratory comparisons for RF and EMF. It operates under ISO/IEC 17025 – General requirements for testing and calibration laboratories and uses both in-house developed and standard calibration methods (Manufacturers, ISO/IEC, OIML, IEEE, RMOS, BIPM, customer-supplied methods) on various measurement equipment.

A pool of qualified metrologists undertakes the calibrations and offers beginner and advanced training courses in radio frequency and electromagnetic field measurements and calibration.

Radio frequency (RF) and electromagnetic field (EMF) measurements are critical in assessing the performance, safety, and compliance of devices that emit or interact with electromagnetic radiation. These measurements are essential in fields such as telecommunications, medical imaging, military applications, and wireless communications. Understanding and properly calibrating RF-EMF measurement equipment is crucial for ensuring accuracy and repeatability.

Calibration Testing and Training Services

Calibration / Service Offered	Measurement Range
Calibration of RF Signal Analysers (Modulation, Spectrum Analysers, Phase Noise, Measurement Receivers)	3 kHz to 300 GHz
Calibration of RF Navigation and Communication Test Sets	3 kHz to 300 GHz
Calibration of RF Attenuators, Loads, Splitters, Detectors, Filters, Divider	3 kHz to 300 GHz
Calibration of RF Power Meters/Sensors, Millivoltmeters, Wattmeters	3 kHz to 300 GHz
Calibration of RF Radar Speed Measuring Guns/Devices	3 kHz to 300 GHz
Calibration of RF Antennas – Loop, Microwave and EMC/EMF	3 kHz to 300 GHz
Calibration of RF High Power Meters/Wattmeters	3 kHz to 300 GHz
Calibration of PFD & Field Strength Probes	3 kHz to 300 GHz
Calibration of RF Power Standards	3 kHz to 300 GHz
Calibration of RF Attenuation Standards	3 kHz to 300 GHz
Calibration of RF Impedance Standards	3 kHz to 300 GHz
Calibration of RF – High Frequency Signal Generators	0.3 GHz to 300 GHz
Calibration of RF Noise Standards	3 kHz to 300 GHz
Calibration of RF Dipole-like Antennas	3 kHz to 300 GHz
Measurements on RF and Electromagnetic Materials	3 kHz to 300 GHz
Calibration of RF Eddy Current Flaw Detectors	3 kHz to 300 GHz
Calibration of RF Vector Network Analysers	3 kHz to 300 GHz
Calibration of RF-High Frequency Signal Counters	0.3 GHz to 300 GHz
Calibration of Power Flux Density/Field Strength Standards	3 kHz to 300 GHz
Testing and Measurement of RF-EMF/EMC Exposure /Emission Levels	3 kHz to 300 GHz
Training on RF- EMF Measurement and Calibration Standards	3 kHz to 300 GHz
Training on RF- EMF Measurement and Calibration Procedures	3 kHz to 300 GHz

Our Measurement and Calibrations are all traceable to reference national/international standards.