

Reference Guide - Standards for EMC & Radio Testing

The following table is a guide to selecting which standard should be applied to a particular product. Where there is no dedicated product standard or family product standard, the generic standard may apply.

R&TTE Standards

Application	Radio Standards	EMC Standards	Safety Standards
Generic Radio	-	EN 301 489-1	EN 60950, EN 60065
Radio paging	EN 300 224-2	EN 301 489-2	
Short Range Devices	EN 300 220-3, EN 300 440-2, EN 300 330-2	EN 301 489-3	EN 50371, EN 50364
Fixed Links	EN 301 751, EN 301 753	EN 301 489-4	EN 60215, EN 50385
PMR	EN 300 086-2, EN 300 113-2, EN 300 296-2, EN 300 390-2, EN 300 219-2, EN 300 341-2, EN 301 166-2	EN 301 489-5	
Wireless Microphones	EN 300 454-2, EN 300 422-2, EN 301 357-2, EN 301 840-2	EN 301 489-9	
Cordless Telephones	EN 301 796, EN 301 797	EN 301 489-10	
AM/FM Broadcast	EN 302 018-2	EN 301 489-11	EN 60215, EN 50385
VSAT	EN 301 428, EN 301 443, EN 301 430, EN 301 459, EN 301 360	EN 301 489-12	
CB	EN 300 135-2, EN 300 433-2	EN 301 489-13	
TV Broadcast	EN 302 296, EN 302 297	EN 301 489-14	EN 60215, EN 50385
Commercial amateur	EN 301 783-2	EN 301 489-15	
Wireless LAN	EN 300 328, EN 301 893	EN 301 489-17	
TETRA	EN 302 035-1, EN 302 035-2	EN 301 489-18	
Receive Only MES	ETS 300 487	EN 301 489-19	
MES	EN 301 426, EN 301 427, EN 301 721, EN 301 441, EN 301 442, EN 301 681, EN 301 444	EN 301 489-20	
VHF aeronautical	-	EN 301 489-22	
Wireless video	EN 302 064-2	EN 301 489-28	
Ground and wall probing radar	EN 302 066-2	EN 301 489-32	

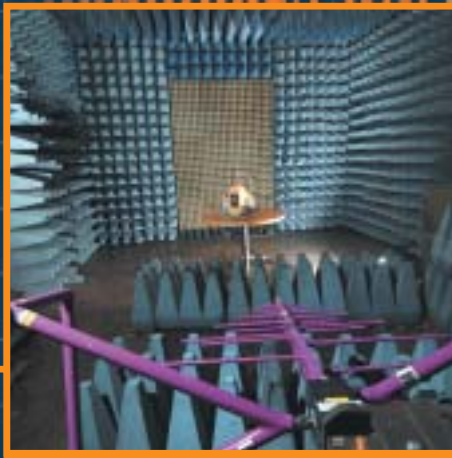
EMC Standards

Generic Standards	Emissions	Immunity
Residential, Light Industrial	EN 61000-6-3	EN 61000-6-1
Heavy Industrial	EN 61000-6-4	EN 61000-6-2
Product Specific Standards		
ISM Equipment	EN 55011	EN 61000-6-2
Sound & TV Receivers, Associated Equipment	EN 55013	EN 55020
Household Appliances, Portable Tools	EN 55014-1	EN 55014-2
Lighting, Luminaires	EN 55015	EN 61547
Alarms - Fire, Intruder & Social	EN 61000-6-3	EN 50130-4
Welding	EN 50240, EN 60974-10	EN 50240, EN 60974-10
Information Technology (ITE)	EN 55022	EN 55024
Medical Equipment	EN 60601-1-2	EN 60601-1-2
Professional Audio / Visual	EN 55103-1	EN 55103-2
Uninterruptible Power Supply (UPS)	EN 50091-2	EN 50091-2
Cable Networks	EN 50083-2	EN 50083-2
Laboratory Equipment	EN 61326	EN 61326
Telecomms Network Equipment	EN 300 386	EN 300 386
Generally Applicable		
Harmonics	EN 61000-3-2	-
Flicker	EN 61000-3-3	-
Test Methodologies		
ESD	-	EN 61000-4-2
Radiated Field	EN 55022	EN 61000-4-3
Fast Transients / Bursts (EFT/B)	-	EN 61000-4-4
Surges	-	EN 61000-4-5
Conducted	EN 55022	EN 61000-4-6
Magnetic Field	-	EN 61000-4-8
Voltage Dips & Interruptions	-	EN 61000-4-11

RN Electronics
EMC & RADIO TEST SERVICES



www.RNelectronics.com



EMC Testing

EMC conformance testing is often the last step executed before a product is placed on the market. We offer a fast and efficient service, testing to the latest harmonised standards. We can guide you through all the requirements for CE marking, FCC, VCCI, C-tick and many other country marking schemes. In our extensively equipped laboratory we test to most commercial and international standards.

Radio Testing

With many years experience in Radio Design and Type Approvals we have built upon that expertise to offer testing and associated certification services to meet the R&TTE Directive for CE marking and similar legislation from North America. Valuable development time can often be saved by a visit to our laboratory, allowing a faster time to market.

Recognition

RN Electronics is a UKAS accredited test laboratory no. 2360 and whether or not you require your product to be tested to traceable standards, you will receive the same high level of service. We are recognised around the world for our EMC testing: by the FCC in America, IC in Canada, OFTA in Hong-Kong and VCCI in Japan. We also operate as a witnessed test house for the VCA automotive EMC tests and test for CAA (Civil Aviation Authority) approvals.

Automotive Products

'e' marking is required for certain aftermarket products fitted into vehicles. We are a Witnessed Test House accepted by the VCA for the applicable Emissions and Immunity tests.

Military and Aerospace

We perform EMC tests to MIL-STD-461D, MIL-STD-461E, DEF STAN 59-41, and RTCA/DO-160.

Full Compliance

Through our experienced staff and strategic partnerships we can offer compliance solutions to match your needs.

- CE marking explained.
- Internal Production Control tests.
- Product Safety (LVD and Medical), Environmental Testing, RF Exposure, Telecommunications Network Interfaces and Equipment in Explosive Atmospheres.



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Commitment to Service

RN Electronics are committed to providing exceptional Electromagnetic Compatibility and Radio Frequency testing services. We offer clear advice on the legal requirements of CE marking and a complete technical solution for your product tests from first design through troubleshooting prototypes and on to final production. Let our experienced engineers work with you to achieve and maintain compliance.

Facilities we Offer

- 3m & 10m Open Area Test Sites; emissions
 - 3m Indoor OATS; emissions & immunity
- Semi-Anechoic Chamber; pre-scans & 18GHz immunity
 - Screened Rooms; Conducted emissions & immunity
- Transient lab; ESD, EFT/B, Surges, Dips, Vehicular transients, Harmonics & Flicker.
- Radio lab; Antenna port tests, Temperature chambers, μ Wave chamber: emissions to 110GHz.

RF Exposure Testing

With the increased use of the radio spectrum by mobile phones, wireless LANs and other technology, we can provide a professional site survey to measure exposure against international guidelines.

Antenna Testing

We test for Response, Isolation, Matching, Azimuth Polar Plots and Antenna Gain. We also offer antenna matching designs for short range devices.

Cable Testing

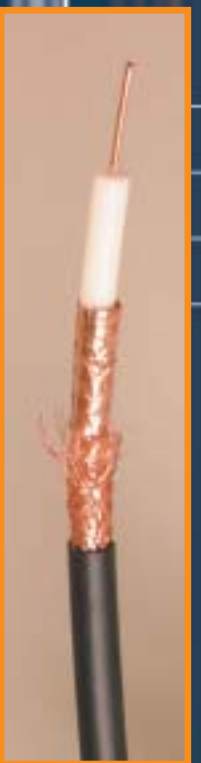
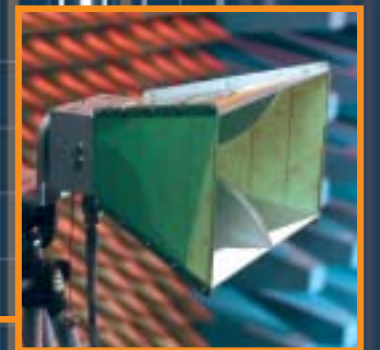
We test coaxial cables suitable for digital TV reception and broadcast use. Tests can be conducted either in situ to verify the installation or in our laboratory to verify the batch quality. We are the only recognised test laboratory for the CAI benchmark.

Convenient Location

RN Electronics is situated near Brentwood, Essex, just off the A12 and M25. This makes RN most convenient for companies in the South East, London, Anglia and the home counties as well as international customers flying into any of the London airports.

Testing at a Glance

- Radio Approval tests to EU and other country standards
- EMC Compliance testing to Harmonised Standards
- UKAS ISO 17025 accredited tests
- VCA approved
- FCC and IC listed
- Hong Kong OFTA RTA
- VCCI registered
- Coaxial cable tests



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