

Test Instrumentation Range Overview



Comparison Noise Emitters
(CNEs) Broadband Noise Signal Source



Comb Generator Emitters
(CGEs) Reference Signal Source



York Reference Sources
(YRSs) Dual Comb and Broadband Noise Emitters



Antennas, Harmonics & Flicker
Active Receive Antenna, Cable Coupling
Clamps, Accessories

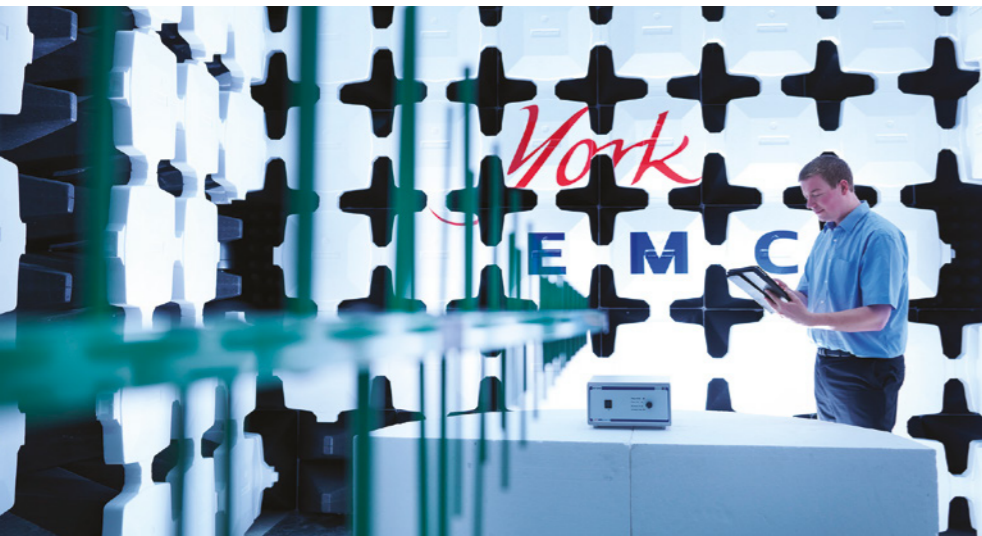
Eurofins York's Test Instrumentation Range

Eurofins York (formerly York EMC Services), based in York, UK, are an established leader in the design and manufacture of reference signal sources and accessories for Electromagnetic Compatibility (EMC) and other Radio Frequency (RF) related applications.

Eurofins York Test Instrumentation have frequency outputs of up to 40 GHz which are highly stable over time. They provide the user with a reliable, known reference output to characterise the performance of systems including: EMC test

and measurement systems, measurement environments, screened rooms, anechoic chambers, open area test sites (OATS), filters, cables, connectors, amplifiers, receivers and spectrum analysers, measuring the shielding effectiveness of enclosures and materials.

The availability of both conducting and radiating output from our Test Instrumentation range further enhances this broad range of uses.



All of our products are available worldwide.

For more detailed information, to find your local Eurofins York Distributor, or to download our full Test Instrumentation Range Brochure, please visit www.yorkemc.com

Reference Noise and Signal Sources

Comparison Noise Emitters

The Comparison Noise Emitter (CNE) series generate stable **continuous** broadband outputs from **30 Hz up to 6 GHz**. With an unrivalled reputation for stable output over both time and temperature, the CNEs are available in three models:

- CNE V – 9 kHz to 1 GHz output
- CNE V+ – 9 kHz to 3.5 GHz output (useable output to 5 GHz)
- CNE VI – 30 Hz to 6 GHz output

When used as a verification reference source, the known output allows unknowns within systems or components to be measured or calculated. Being a continuous emitter across their operating frequency range, they allow for a complete evaluation of the equipment being analysed without any gaps in the spectrum.

Comb Generator Emitters

Our harmonic **Comb** Generator Emitter (CGE) series generate stable broadband outputs from **50 MHz up to 40 GHz**. They are available in three models with both radiated (R) and/or conducted (C) versions available:

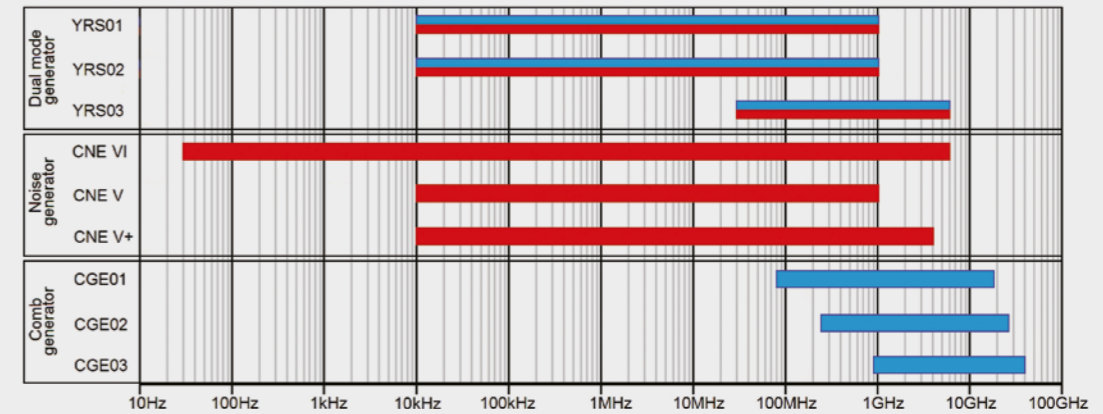
- CGE 01 – 50 MHz to 18 GHz output
- CGE 02 – 250 MHz to 26 GHz output
- CGE 03 – 900 MHz to 40 GHz output

When used as a verification reference source, the known output allows unknowns within systems or components to be measured or calculated.

The CGE reference signal sources are physically small and battery powered, allowing them to be used in a wide range of situations without requiring external power sources or cabling.

Reference Signal Source Frequency Coverage

■ Noise Reference
■ Comb Reference



Harmonics and Flicker Test Signal Sources

The Harmonics & Flicker Generators (HFG01 and HFG02) have been designed for the purpose of verifying harmonic and flicker test equipment by simulating the equipment under test (EUT). They provide an easy and reliable way to externally check the performance of measurement systems used to test the EN / IEC 61000-3-2 harmonics and EN / IEC 61000-3-3 flicker standards.

Compact Emissions Measurement Antenna

The Active Receive Antenna (ARA 01) is a highly compact emissions receive antenna with an antenna factor comparable to a conventional wideband antenna such as the Bilog™ and other commercially available wideband antennas operating between **30 MHz and 1 GHz**. The ARA01's small size makes it particularly suitable for use in anechoic chambers; however it can also be used on an Open Area Test Site (OATS) or at on-site locations. The ARA 01 features two sets of interchangeable Dipole Antenna Elements (DAE). The standard set (DAE01) is optimized for 200 MHz to 1 GHz, with usable sensitivity down to 30 MHz. For improved sensitivity between 30 MHz to 300 MHz, the optional DAE02 set is available.

Cable Shielding Measurement Clamp

The Cable Coupling Clamp (CCC01) is a reusable test jig for the purpose of measuring the shielding properties of cables via their transfer impedance characteristics. The CCC01 is designed to allow easy positioning of the test and injection feed cables in accordance with the layout described in IEC 96-1 Amendment 2 1993-06. This simplifies the process of making repeatable measurements aimed at assessing the coupling and shielding effectiveness properties of a wide range of cables.



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Instrumentation, Consultancy and Research, Training

York Reference Sources

This unique series of instruments, the York Reference Sources (YRSs) have dual capability, as each model is able to generate both **continuous noise and comb** signal outputs. Covering a signal frequency band from **5 kHz up to 6 GHz**, there are three models* available:

- YRS 01 – 9 kHz to 1 GHz Continuous Noise output and 5 kHz to 1 GHz Comb output; all in a compact round housing compatible with a CGE battery pack
- YRS 02 – 9 kHz to 1 GHz Continuous Noise output and 5kHz and 1 GHz Comb output in a compact housing powered by 4 x AA batteries
- YRS 03 – 10 MHz to 6 GHz Continuous Noise and Comb output in a compact housing powered by 4 x AA batteries

The noise generator enables observation of details over the full spectral range, while the comb generator allows for both reference signal output and noise floor to be viewed simultaneously, and the frequency accuracy of the measurement equipment to be checked.





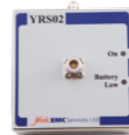










*The YRS combination kit is also available containing the YRS02 and YRS03, giving the full output range without duplication of accessories; see full brochure for details.

Calibration Service

We offer an optional Manufacturer's Calibration service whose fast turnaround minimises your downtime.

Battery Powered Reference Signal Sources

Other

	CNE V Noise source	CNE V+ Noise source	CNE VI Noise source	YRS01 Combined noise and comb source	YRS02 Combined noise and comb source	YRS03 Combined noise and comb source	CGE01C Conducted comb source	CGE01R Radiating comb source	CGE02C Conducted comb source	CGE02R Radiating comb source	CGE03C Conducted comb source	ARA01 Active receive antenna	HFG01 Harmonic and flicker generator	HFG02 Harmonic and flicker generator	CCC01 Cable coupling clamp
What															
Type	Reference Source	Reference Source	Reference Source	Reference Source	Reference Source	Reference Source	Reference Source	Radiating Reference Source	Reference Source	Radiating Reference Source	Reference Source	Antenna	Reference Generator	Reference Generator	Cable Test Jig
Signal Type	Continuous Noise	Continuous Noise	Continuous Noise	Noise & Comb output	Noise & Comb output	Noise & Comb output	Comb output	Comb output	Comb output	Comb output	Comb output	Received E field	Mains disturbance	Mains disturbance	Coupled signal
Frequency Range (conducted)	9 kHz to 1 GHz	9 kHz to 3.5 GHz	30 Hz to 6 GHz	9 kHz to 1 GHz	9 kHz to 1 GHz	30 MHz to 6 GHz	50 MHz to 18 GHz	n/a	250 MHz to 26 GHz	n/a	0.9 GHz to 40 GHz	n/a	50 Hz to 2 kHz	40 th Harmonic	n/a
Frequency Range (radiated)	(see antenna)	(see antenna)	(see antenna)	(see antenna)	(see antenna)	(see antenna)	(see antenna)	1 GHz to 18 GHz	(see antenna)	1 GHz to 26 GHz	(see antenna)	30 MHz to 1 GHz	n/a	n/a	n/a
Specifications															
Output Connector	BNC	N-type	BNC & N-type	N-type	N-type	N-type	SMA	n/a	SMA	n/a	SMA	BNC	CEE 7/7	CEE 7/7	N-type
Temperature Stability (dB) <small>(Typical 15 °C to 30 °C)</small>	< ± 1	< ± 1	< ± 1	< ± 1	< ± 1	< ± 1	< ± 2	< ± 2	< ± 1	< ± 1	< ± 2	< 1	n/a	n/a	n/a
Time Stability (dB) <small>(Typical over 12 months)</small>	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	n/a	n/a	n/a
Auto Power Off	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	n/a	n/a	n/a
Dimensions (mm) <small>(without battery packs, antennas etc.)</small>	120 x 120 x 60	120 x 120 x 60	120 x 120 x 79	56 x 76 dia.	120 x 120 x 79	120 x 120 x 79	28 x 76 dia.	46 x 76 dia.	28 x 76 dia.	46 x 76 dia.	56 x 76 dia.	168 x 34 x 34	330 x 320 x 170	330 x 320 x 170	
Weight (kg)	0.53	0.53	1	0.6	1	1	0.55	0.55	0.55	0.55	0.75	0.39	6.5	8	0
Power Supply	PP3 battery	PP3 battery	4 x AA cells	BP01 battery pack 5 V (mini-USB)	4 x AA cells	4 x AA cells	BP01 battery pack	BP01 battery pack	BP01 battery pack	BP01 battery pack	BP01 battery pack	PP3 battery	230 Vac, 50 Hz	100 – 240 Vac, 50 – 60 Hz	n/a
Operating Time (hours) <small>(Typical, fully charged where applicable)</small>	3	3	6.5 to 14	7.5 to 8.5	7.5 to 8	6.5 to 14	6.5	6.5	6.5	6.5	4	6.5	n/a	n/a	n/a
Indicators	Green: Active Red: Low Battery	Green: Active Red: Low Battery	Green: Active Red: Low Battery	Green: Active Red: Low Battery	Green: Active Red: Low Battery	Green: Active Red: Low Battery	Green: 80 MHz steps Red: 50/100 MHz steps	Green: 80 MHz steps Red: 50/100 MHz steps	Green: 250 MHz steps Red: 256 MHz steps Flashing: Supply error	Green: 250 MHz steps Red: 256 MHz steps Flashing: Supply error	Green: 1 GHz steps Red: 900 MHz steps Flashing: Supply error	Green: Active Red: Low Battery	Thermal shutdown	Supply, Test Supply, Alarms, Running	n/a
Applications															
Pre-test checks	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Long-term performance monitoring	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Measurement environment comparison	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
OATS, FAR, SAC characterisation	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Reverberation chamber characterisation							●	●	●	●	●				
Filter performance analysis	●	●	●	●	●	●	●	●	●	●	●				
Cable/connector loss analysis	●	●	●	●	●	●	●	●	●	●	●				
Shielding effectiveness measurements				●	●	●	●	●	●	●	●				●
Confined space/portable measurements												●			
Low cost, compact, wideband antenna												●			
Inter-laboratory test program	●	●	●	●	●	●	●	●	●	●	●		●	●	
Proficiency test program	●	●	●	●	●	●	●	●	●	●	●		●	●	
Kits															
Recommended Kit	CNEVKIT02	CNEVKIT04	CNEVKIT02	YRS01KIT02	YRS02KIT02	YRS03KIT02	CGE01KIT03	CGE01KIT02	CGE02KIT03	CGE02KIT02	CGE03KIT02	ARA01KIT01	HFG01KIT01	HFG02KIT01	CCC01KIT01

Overview of Accessories for Eurofins York Test Instrumentation

Battery Powered Reference Signal Sources

Other

Key:
 KIT0x - Kit reference containing this accessory.
 Extra - Not a standard kit part, purchased separately.
 X - Unsuitable.
 R/O - Recalibration only.

Antennas & Kit References

	CNE V Noise source	CNE V+ Noise source	CNE VI Noise source	YRS01 Combined noise & comb source	YRS02 Combined noise & comb source	YRS03 Combined noise & comb source	CGE01C Conducted comb source	CGE01R Radiating comb source	CGE02C Conducted comb source	CGE02R Radiating comb source	CGE03C Conducted comb source	ARA01 Active receive antenna	HFG01 Harmonic and flicker generator	HFG02 Harmonic and flicker generator	CCC01 Cable coupling clamp
	9 kHz to 1 GHz	9 kHz to 3.5 GHz	30 Hz to 6 GHz	9 kHz to 1 GHz	9 kHz to 1 GHz	30 MHz to 6 GHz	50 MHz to 18 GHz	1 GHz to 18 GHz	250 MHz to 26 GHz	1 GHz to 26 GHz	0.9 GHz to 40 GHz	30 MHz to 1 GHz	50 Hz to 2 kHz	40 th Harmonic	n/a
	CNEVKIT01 CNEVKIT02	CNEVKIT03 CNEVKIT04	CNEVKIT01 CNEVKIT02	YRS01KIT01 YRS01KIT02	YRS02KIT01 YRS02KIT02 YRS Combo	YRS03KIT01 YRS03KIT02 YRS combo	CGE01KIT01 CGE01KIT03	CGE01KIT02	CGE02KIT01 CGE02KIT03	CGE02KIT02	CGE02KIT02	ARA01KIT01	HFG01KIT01	HFG02KIT01	CCC01KIT01
MCN02	75 mm dia. monopole (1 to 26 GHz optimum)	X	X	X	X	X	KIT03 & KIT06	X	KIT03	X	KIT02	X	X	X	X
MCN03	120 mm dia. monopole (1 to 6 GHz optimum)	X	KIT04	KIT02	X	All kits	X	X	X	X	X	X	X	X	X
MON02	Telescopic rod	Extra	Extra	Extra	Extra	X	X	X	X	X	X	X	X	X	X
MON03	270 mm monopole (200 MHz to 1 GHz optimum)	Extra	Extra	All kits	All kits	KIT02 / Combo	Extra	X	X	X	X	X	X	X	X
TLM01	100 mm top-loaded monopole (200 MHz to 1 GHz optimum)	All kits	All kits	Extra	Extra	Extra	X	X	X	X	X	X	X	X	X
TLM02	270 mm monopole (30 MHz to 300 MHz optimum)	KIT02	KIT04	KIT02	KIT02 / Combo	KIT02 / Combo	X	X	X	X	X	X	X	X	X
DAE01	Pair of 100 mm top-loaded monopole (200 MHz to 1 GHz optimum)	X	X	X	X	X	X	X	X	X	X	All kits	X	X	X
DAE02	Pair of 270 mm monopole (30 MHz to 300 MHz optimum)	X	X	X	X	X	X	X	X	X	X	Extra	X	X	X

Coupling Networks

LSA03	USN adapter with IEC-style connector	KIT02	KIT04	All kits	KIT02	KIT02 / Combo	X	X	X	X	X	X	X	X	X
NIA01	ISN adapter with RJ11- and RJ45-style connectors	Extra	Extra	Extra	Extra	Extra	X	X	X	X	X	X	X	X	X

Batteries

BP01	5V 2AH NiMH rechargeable battery pack and charger	X	X	X	All kits	X	X	All kits	All kits	All kits	All kits	X	X	X	X
AA	Alkaline or NiMH cell	X	X	All kits	X	All kits	All kits	X	X	X	X	X	X	X	X
PP3	Alkaline or NiMH battery	All kits	All kits	X	X	X	X	X	X	X	X	All kits	X	X	X

Other

CMF01	Kit of user-machinable fittings (blank fittings for custom cable apertures (single cable per kit))	X	X	X	X	X	X	X	X	X	X	X	X	X	Extra
Case	Hard plastic case - various	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	X	X	All kits
Manual	Operation manual supplied as PDF on CDROM	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits
Test Certificate	Basic output measurement certificate. Supplied as hardcopy, PDF, XLSX and CSV files on CDROM	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	All kits	X

Conducted (output power)

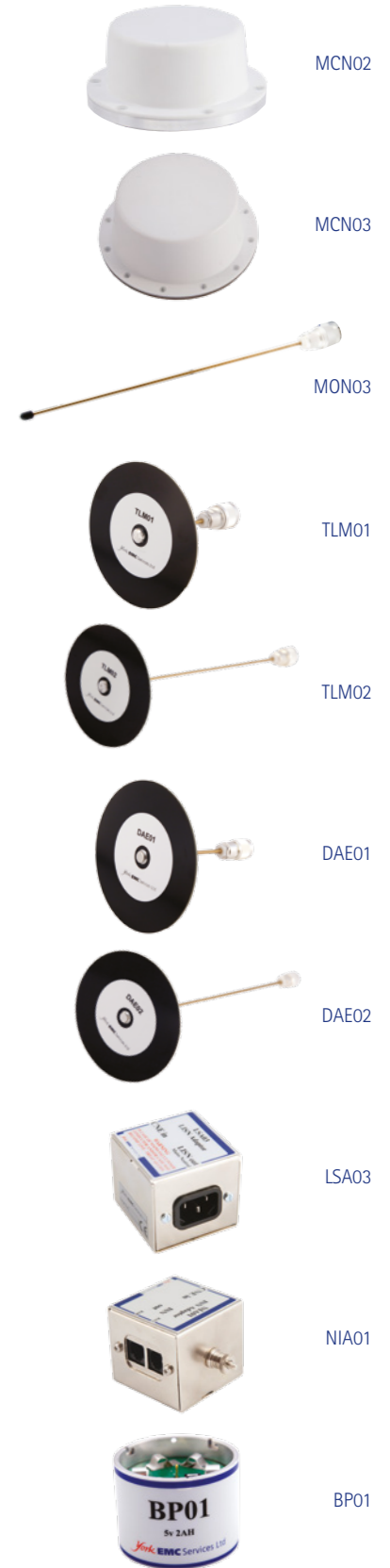
CAL01	9 kHz to 5 GHz using spectrum analyser	X	All kits	X	X	X	X	X	X	X	X	X	X	X	X
CAL03	9 kHz to 1 GHz using spectrum analyser	All kits	X	X	X	X	X	X	X	X	X	X	X	X	X
CAL13	0 GHz to 18 GHz using spectrum analyser	X	X	X	X	X	All kits	X	X	X	X	X	X	X	X
CAL14	0 GHz to 26 GHz using spectrum analyser	X	X	X	X	X	X	X	All kits	X	X	X	X	X	X
CAL15	0 GHz to 40 GHz using spectrum analyser	X	X	X	X	X	X	X	X	X	All kits	X	X	X	X
CAL16	9 kHz to 1 GHz using spectrum analyser, all modes	X	X	X	All kits	All kits	X	X	X	X	X	X	X	X	X
CAL19	30 MHz to 6 GHz using spectrum analyser, all modes	X	X	X	X	X	All kits	X	X	X	X	X	X	X	X
CAL20	0 GHz to 6 GHz using spectrum analyser, all modes	X	X	All kits	X	X	X	X	X	X	X	X	X	X	X

Radiated (field strength)

CAL06	30 MHz to 1 GHz in a FAR, 3 m test distance	Extra	Extra	Extra	X	X	X	X	X	X	X	X	X	X	X
CAL07	1 GHz to 7 GHz in a FAR, 3 m test distance	X	X	Extra	X	X	X	X	X	X	X	X	X	X	X
CAL09	1 GHz to 18 GHz in a FAR, 3 m test distance	X	X	X	X	X	Extra for KIT03 only	All kits	X	X	X	X	X	X	X
CAL10	1 GHz to 26 GHz in a FAR, 3 m test distance	X	X	X	X	X	X	X	Extra for KIT03 only	All kits	Extra for KIT02 only	X	X	X	X
CAL18	30 MHz to 1 GHz in a FAR, 3 m test distance, all modes	X	X	X	Extra	Extra	Extra	X	X	X	X	X	X	X	X
CAL21	1 GHz to 6 GHz in a FAR, 3 m test distance, noise, 20 MHz and 40 MHz comb modes	X	X	X	X	X	Extra	X	X	X	X	X	X	X	X

Other

CAL08	Antenna factors, 30 MHz to 1 GHz	X	X	X	X	X	X	X	X	X	X	All kits	X	X	X
CAL12	Measurement of harmonics and flicker in relevant modes	X	X	X	X	X	X	X	X	X	X	X	All kits	X	X
CAL22	Measurement of harmonics and flicker in relevant modes	X	X	X	X	X	X	X	X	X	X	X	X	All kits	X



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