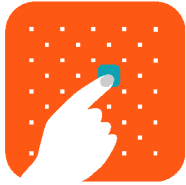


# Automotive RF Infotainment Test in Rolling Roads

**Radio - DAB/DAB+, FM, AM**

**Digital TV - DVB-T/T2, ISDB-T 1/13 Seg**



Easy to use



Cost effective



CellMetric's Automotive RF test systems provide an innovative new testing methodology for infotainment systems using new, or existing, rolling roads as an RF test cell. This provides:

- Better accuracy
- Faster testing
- Full web based remote control and measurement
- Tighter Pass/Fail limits
- Better fault detection
- Reduced susceptibility to interference
- Reduced RF leakage to environment



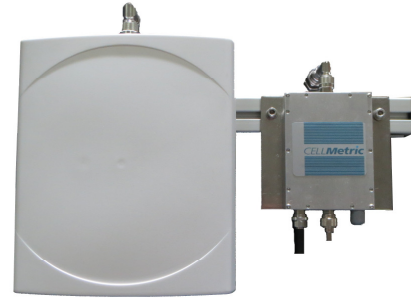
Infotainment Test Rack

CellMetric designs and manufactures innovative digital broadcast equipment.

Its products focus on reliability, ruggedness, modularity, intelligence and flexibility using leading edge digital technology.

CellMetric is based close to the centre of the historic university city of Cambridge, UK.

www.cellmetric.co.uk



FM / DAB / DTV Splitter and Antenna Array



AM Ferrite Antenna

### Transmission Standards supported:

#### Digital Radio Play Out

DAB & DAB+ digital radio signals can be reproduced in bandwidths of 1.7 MHz.

#### Analogue Radio Play Out

FM and AM radio can be reproduced

#### Digital TV Play Out

DVB-T, DVB-T2 & ISDB-T 1 & 13 Seg digital terrestrial signals can be reproduced in the RF domain with up to 8MHz channel bandwidth.

### Features & Benefits

Installation within rolling roads provides a controlled environment with greatly reduced interference. With the vehicle in a fixed position within a shielded environment, tighter test limits can be achieved and faults discriminated more easily.

### Remote One - Remote Control and RF Monitoring

CellMetric's highly intuitive Remote One enables remote control and monitoring of all RF signal sources. Tuning and control is exercised over a web server, which provides access to the measurement parameters derived by the receiver. Alarms can be set for:

- RSSI
- S/N ratio
- BER



AM Antenna System



Remote One

# RF Infotainment Automotive Test

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## Streamlined Planning, Design, Installation, and Test

CellMetric provides a complete turnkey solution, from site survey, planning, installation, commissioning and test.

All antenna arrays are built off-site, which enables efficient installation while minimising impact on production.

CellMetric have extensive experience of integrating systems within existing infrastructure. Consequently, each system is a customised design according to the requirements of the client.

## Calibration Jig Option

Custom built calibration jig for the accurate testing of RF signal within chambers. This permanent in-house solution provides a number of key benefits including:

- Known reference 'gold standard' measurement system to check rolling road and off track areas are transmitting as expected.
- Remote control via Ethernet to enable measurements to be made within rolling road or off track area unaffected by proximity of operator.

## Technical Specification

### Operating Conditions:

Power Supply voltage 100 to 260V 47-400 Hz AC  
Operating Temperature range 0 to +50°C

### RF Outputs:

Frequency Range 100MHz to 2200 MHz in 1KHz steps  
Output frequency accuracy better than  $\pm 3$ ppm over temperature range  
Signal output level +30 dBm nominal to -80dBm  
Output Impedance 50  $\Omega$   
Resolution 0.5 dB  
Repeatability  $\pm 1$ dB

### Modulation:

#### Digital Radio / TV Modulation

DVB-T EN 300 744  
DVB-T2 EN 302 755  
ISDB-T ARIB  
DAB/ DAB+ EN 300 401  
TS102 563

#### Analogue Radio / TV Modulation

FM  
AM  
PAL  
NTSC  
SECAM  
Channel Bandwidth 6, 7 & 8 MHz  
Spectral Polarity Normal or inverted

#### I/Q Samples

Bit depth 8 or 16 bit I/Q samples  
Maximum I/Q play rate >12 Complex Msamples/s  
Maximum sample rate 380Mbit/s  
Maximum play file size 64 GByte

#### Interfaces:

RF Out N Type Connector 50 $\Omega$   
I/Q Out Differential  $\pm I / \pm Q$  Output  
Serial Ethernet  
FLASH Memory 64 GByte Flash Drive option  
Removable Memory Compact Flash Memory Card

#### Installation:

Desk top case 19" Rack System  
Weight 45 Kg



CELLMetric

Intelligent infrastructure