

# ICNIRP Measurement Report

This report presents the results of measurements of electromagnetic field emission levels in the vicinity of mobile base stations. Results are presented as percentages of the power density reference levels for general public exposure in the 1998 edition of the Guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)<sup>1</sup>, with figures provided for individual frequency bands used for base station (downlink) transmissions as well as an overall figure for all other frequency bands between 30 MHz to 6 GHz. The total percentage equals the sum of all individual percentages.

The power density reference levels in the ICNIRP Guidelines are the root mean square (rms) values averaged over six minutes. In this report, we have measured the average E-field strength over a six-minute period in each measurement location.

We have applied a measurement threshold of 3dB above the system noise floor<sup>2</sup> of the measurement equipment, below which any E-field strength levels measured are deemed not sufficiently above the system noise floor to be valid. In the results tables below, measurement results are shown to a precision of four decimal places. Results which are not sufficiently above the system noise floor to record as a valid measurement are shown as a dash (-). Results which are too small to register to four decimal places are shown as 0.0000%.

<b>Date of Survey:</b>	04/11/2025	<b>Time Survey completed:</b>	10:59
<b>Survey address:</b>	London N11		

	Measurement equipment	Serial number	Calibration Date
<b>Meter</b>	Keysight Fieldfox N9915A Spectrum Analyser	MY58311497	28/08/2025
<b>Probe</b>	Agos Aria-6000 Antenna	ARIA-6000-1023	08/07/2025
<b>Cabling</b>	1.7m cable	1407	08/07/2025

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<sup>1</sup> <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

<sup>2</sup> The noise floor of the measurement equipment is the level of background noise that is present before detecting any external signals. In other words, it indicates the absolute minimum level of detectable signals.

## Broadcast bands covered by this report

Frequency Band	Frequency Range	Technology*
	87.5-108 MHz	FM Radio
	174-230 MHz	DAB
	470-694 MHz	Digital TV

## Mobile bands covered by this report

Frequency Band	Frequency Range	Technology*
700 MHz	738-788 MHz	4G, 5G
800 MHz	791-821 MHz	4G
900 MHz	925-960 MHz	2G, 3G, 4G
1400 MHz	1452-1492 MHz	4G (Supplementary downlink)
1800 MHz	1805-1880 MHz	2G, 4G
1900 MHz	1900-1920 MHz	4G
2100 MHz	2110-2170 MHz	3G, 4G
2300 MHz	2350-2390 MHz	4G
2600 MHz TDD	2570-2620 MHz	4G
2600 MHz FDD	2620-2690 MHz	4G
3.4 GHz	3410-3680 MHz	5G, 4G
3.8 GHz	3680-4200 MHz	Various
Others**		

\* This is an indication of the type of technologies typically deployed in these bands; not all frequency bands and technologies may be in use at all locations. \*\* All other frequencies between 30 MHz and 6 GHz.

## Survey locations

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The survey was conducted within the area shown in the map below. Measurements were taken at five locations and are presented in the following pages of this report.



**Location 1**

<b>Measurement time:</b>	<b>10:20</b>
<b>Frequency band</b>	<b>Percentage of the ICNIRP reference levels for general public exposure</b>
87.5-108 MHz	0.00618
174-230 MHz	0.00753
470-694 MHz	0.00555
700 MHz	0.00182
800 MHz	0.02119
900 MHz	0.01403
1400 MHz	0.00026
1800 MHz	0.00930
1900 MHz	0.00012
2100 MHz	0.00713
2300 MHz	0.00277
2600 MHz TDD	0.00027
2600 MHz FDD	0.00531
3.4 GHz	0.00235
3.8 GHz	0.00451
Others	0.09072
<b>Total</b>	<b>0.17904</b>

## Location 2

Measurement time:	10:27
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00629
174-230 MHz	0.00739
470-694 MHz	0.00580
700 MHz	0.00126
800 MHz	0.00549
900 MHz	0.00664
1400 MHz	0.00028
1800 MHz	0.00583
1900 MHz	0.00013
2100 MHz	0.00452
2300 MHz	0.00120
2600 MHz TDD	0.00026
2600 MHz FDD	0.00191
3.4 GHz	0.00247
3.8 GHz	0.00370
Others	0.09596
<b>Total</b>	<b>0.14913</b>

### Location 3

Measurement time:	10:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00652
174-230 MHz	0.00751
470-694 MHz	0.00601
700 MHz	0.00186
800 MHz	0.00479
900 MHz	0.01413
1400 MHz	0.00029
1800 MHz	0.00789
1900 MHz	0.00014
2100 MHz	0.01502
2300 MHz	0.00341
2600 MHz TDD	0.00028
2600 MHz FDD	0.00243
3.4 GHz	0.00334
3.8 GHz	0.00488
Others	0.10052
<b>Total</b>	<b>0.17903</b>

#### Location 4

Measurement time:	10:45
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00680
174-230 MHz	0.00787
470-694 MHz	0.00620
700 MHz	0.00288
800 MHz	0.00658
900 MHz	0.01112
1400 MHz	0.00030
1800 MHz	0.00668
1900 MHz	0.00014
2100 MHz	0.00806
2300 MHz	0.00149
2600 MHz TDD	0.00031
2600 MHz FDD	0.00457
3.4 GHz	0.00257
3.8 GHz	0.00484
Others	0.10476
<b>Total</b>	<b>0.17517</b>

## Location 5

Measurement time:	10:53
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00692
174-230 MHz	0.00798
470-694 MHz	0.00636
700 MHz	0.00204
800 MHz	0.00674
900 MHz	0.01378
1400 MHz	0.00031
1800 MHz	0.00801
1900 MHz	0.00015
2100 MHz	0.00803
2300 MHz	0.00213
2600 MHz TDD	0.00032
2600 MHz FDD	0.00474
3.4 GHz	0.00274
3.8 GHz	0.00510
Others	0.10690
<b>Total</b>	<b>0.18225</b>

*Disclaimer: The results detailed in this report apply only to the tests made at the reported time, using the test equipment detailed. They do not indicate that on another date an identical set of results would be achieved, due to changes in local environmental conditions or other factors which may or may not have an effect on the measurement results obtained at that future time.*