

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)¹, 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 floor² 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%.

Date of Survey:	03/12/2025	Time Survey completed:	10:52
Survey address:	London N21		

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

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

² 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

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



Location 1

Measurement time:	10:17
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00525
174-230 MHz	0.00587
470-694 MHz	0.00485
700 MHz	0.00446
800 MHz	0.00291
900 MHz	0.00040
1400 MHz	0.00023
1800 MHz	0.00276
1900 MHz	0.00010
2100 MHz	0.00275
2300 MHz	0.00024
2600 MHz TDD	0.00019
2600 MHz FDD	0.00010
3.4 GHz	0.00136
3.8 GHz	0.00252
Others	0.07667
Total	0.11066

Location 2

Measurement time:	10:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00554
174-230 MHz	0.00612
470-694 MHz	0.00507
700 MHz	0.01468
800 MHz	0.00435
900 MHz	0.00046
1400 MHz	0.00025
1800 MHz	0.01886
1900 MHz	0.00011
2100 MHz	0.00289
2300 MHz	0.00025
2600 MHz TDD	0.00021
2600 MHz FDD	0.00012
3.4 GHz	0.00188
3.8 GHz	0.00268
Others	0.08066
Total	0.14413

Location 3

Measurement time:	10:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00562
174-230 MHz	0.00640
470-694 MHz	0.00535
700 MHz	0.01535
800 MHz	0.00457
900 MHz	0.00049
1400 MHz	0.00026
1800 MHz	0.00649
1900 MHz	0.00012
2100 MHz	0.00252
2300 MHz	0.00027
2600 MHz TDD	0.00022
2600 MHz FDD	0.00013
3.4 GHz	0.00158
3.8 GHz	0.00284
Others	0.08473
Total	0.13694

Location 4

Measurement time:	10:38
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00583
174-230 MHz	0.00668
470-694 MHz	0.00542
700 MHz	0.00472
800 MHz	0.00088
900 MHz	0.00051
1400 MHz	0.00029
1800 MHz	0.00226
1900 MHz	0.00012
2100 MHz	0.00327
2300 MHz	0.00029
2600 MHz TDD	0.00023
2600 MHz FDD	0.00019
3.4 GHz	0.00213
3.8 GHz	0.00301
Others	0.08851
Total	0.12436

Location 5

Measurement time:	10:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00627
174-230 MHz	0.00706
470-694 MHz	0.00569
700 MHz	0.00453
800 MHz	0.00352
900 MHz	0.00044
1400 MHz	0.00028
1800 MHz	0.00249
1900 MHz	0.00013
2100 MHz	0.00198
2300 MHz	0.00030
2600 MHz TDD	0.00024
2600 MHz FDD	0.00013
3.4 GHz	0.00162
3.8 GHz	0.00319
Others	0.09348
Total	0.13134

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.