

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:	29/12/2025	Time Survey completed:	10:56
Survey address:	Hitchin SG4		

	Measurement equipment	Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072607	27/10/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1111	08/07/2025
Cabling	1.7m cable	1461	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 six locations and are presented in the following pages of this report.



Location 1

Measurement time:	10:00
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00926
174-230 MHz	0.01049
470-694 MHz	0.00973
700 MHz	0.00761
800 MHz	0.01688
900 MHz	0.00533
1400 MHz	0.01173
1800 MHz	0.00889
1900 MHz	0.00020
2100 MHz	0.00346
2300 MHz	0.00056
2600 MHz TDD	0.00036
2600 MHz FDD	0.00020
3.4 GHz	0.00432
3.8 GHz	0.00468
Others	0.13621
Total	0.22989

Location 2

Measurement time:	10:11
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00930
174-230 MHz	0.01041
470-694 MHz	0.00852
700 MHz	0.00777
800 MHz	0.01250
900 MHz	0.02238
1400 MHz	0.00566
1800 MHz	0.00638
1900 MHz	0.00020
2100 MHz	0.00332
2300 MHz	0.00057
2600 MHz TDD	0.00036
2600 MHz FDD	0.00020
3.4 GHz	0.00407
3.8 GHz	0.00551
Others	0.13638
Total	0.23353

Location 3

Measurement time:	10:19
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00938
174-230 MHz	0.01050
470-694 MHz	0.00891
700 MHz	0.00433
800 MHz	0.00472
900 MHz	0.00829
1400 MHz	0.00412
1800 MHz	0.00800
1900 MHz	0.00020
2100 MHz	0.00537
2300 MHz	0.00050
2600 MHz TDD	0.00037
2600 MHz FDD	0.00020
3.4 GHz	0.00385
3.8 GHz	0.00519
Others	0.13735
Total	0.21128

Location 4

Measurement time:	10:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00935
174-230 MHz	0.01056
470-694 MHz	0.00916
700 MHz	0.00746
800 MHz	0.03151
900 MHz	0.01963
1400 MHz	0.00147
1800 MHz	0.00236
1900 MHz	0.00020
2100 MHz	0.00147
2300 MHz	0.00124
2600 MHz TDD	0.00037
2600 MHz FDD	0.00018
3.4 GHz	0.00301
3.8 GHz	0.00528
Others	0.13742
Total	0.24067

Location 5

Measurement time:	10:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00930
174-230 MHz	0.01052
470-694 MHz	0.00860
700 MHz	0.00486
800 MHz	0.00280
900 MHz	0.00187
1400 MHz	0.00318
1800 MHz	0.00527
1900 MHz	0.00020
2100 MHz	0.00300
2300 MHz	0.00043
2600 MHz TDD	0.00037
2600 MHz FDD	0.00019
3.4 GHz	0.00305
3.8 GHz	0.00463
Others	0.13703
Total	0.19527

Location 6

Measurement time:	10:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00933
174-230 MHz	0.01047
470-694 MHz	0.00987
700 MHz	0.00635
800 MHz	0.00969
900 MHz	0.00694
1400 MHz	0.01168
1800 MHz	0.00684
1900 MHz	0.00020
2100 MHz	0.00416
2300 MHz	0.00056
2600 MHz TDD	0.00036
2600 MHz FDD	0.00019
3.4 GHz	0.00435
3.8 GHz	0.00461
Others	0.13612
Total	0.22173

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.