

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:	12/11/2025	Time Survey completed:	16:41
Survey address:	Fulwood PR2		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025
Cabling	1.7m cable	1405	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:	15:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00881
174-230 MHz	0.01005
470-694 MHz	0.00809
700 MHz	0.00744
800 MHz	0.03039
900 MHz	0.01406
1400 MHz	0.00355
1800 MHz	0.00382
1900 MHz	0.00019
2100 MHz	0.00508
2300 MHz	0.00040
2600 MHz TDD	0.00040
2600 MHz FDD	0.00114
3.4 GHz	0.00270
3.8 GHz	0.00431
Others	0.13017
Total	0.23060

Location 2

Measurement time:	15:49
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00921
174-230 MHz	0.01056
470-694 MHz	0.00830
700 MHz	0.00855
800 MHz	0.03413
900 MHz	0.16192
1400 MHz	0.00220
1800 MHz	0.00473
1900 MHz	0.00020
2100 MHz	0.02143
2300 MHz	0.00043
2600 MHz TDD	0.00048
2600 MHz FDD	0.00273
3.4 GHz	0.00341
3.8 GHz	0.00465
Others	0.13907
Total	0.41199

Location 3

Measurement time:	15:58
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00968
174-230 MHz	0.01110
470-694 MHz	0.00862
700 MHz	0.00537
800 MHz	0.01315
900 MHz	0.00099
1400 MHz	0.07615
1800 MHz	0.01126
1900 MHz	0.00021
2100 MHz	0.00609
2300 MHz	0.00044
2600 MHz TDD	0.00042
2600 MHz FDD	0.00064
3.4 GHz	0.02236
3.8 GHz	0.00489
Others	0.14346
Total	0.31482

Location 4

Measurement time:	16:16
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01026
174-230 MHz	0.01163
470-694 MHz	0.00914
700 MHz	0.00300
800 MHz	0.01011
900 MHz	0.00142
1400 MHz	0.01785
1800 MHz	0.01080
1900 MHz	0.00022
2100 MHz	0.00493
2300 MHz	0.00047
2600 MHz TDD	0.00045
2600 MHz FDD	0.00029
3.4 GHz	0.00529
3.8 GHz	0.00522
Others	0.15237
Total	0.24346

Location 5

Measurement time:	16:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01050
174-230 MHz	0.01191
470-694 MHz	0.00929
700 MHz	0.00931
800 MHz	0.02251
900 MHz	0.00228
1400 MHz	0.03310
1800 MHz	0.02160
1900 MHz	0.00023
2100 MHz	0.01912
2300 MHz	0.00049
2600 MHz TDD	0.00046
2600 MHz FDD	0.00032
3.4 GHz	0.00703
3.8 GHz	0.00544
Others	0.15724
Total	0.31081

Location 6

Measurement time:	16:35
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01063
174-230 MHz	0.01211
470-694 MHz	0.00952
700 MHz	0.00611
800 MHz	0.03378
900 MHz	0.01582
1400 MHz	0.00220
1800 MHz	0.00264
1900 MHz	0.00023
2100 MHz	0.00561
2300 MHz	0.00049
2600 MHz TDD	0.00048
2600 MHz FDD	0.00177
3.4 GHz	0.00307
3.8 GHz	0.00546
Others	0.15917
Total	0.26907

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.