

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:	02/01/2026	Time Survey completed:	13:05
Survey address:	Preston PR2		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
Probe	Agos Aria-6000 Antenna	ARIA-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:	12:19
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00591
174-230 MHz	0.00530
470-694 MHz	0.00425
700 MHz	0.00251
800 MHz	0.00442
900 MHz	0.00031
1400 MHz	0.00312
1800 MHz	0.00729
1900 MHz	0.00007
2100 MHz	0.00620
2300 MHz	0.00016
2600 MHz TDD	0.00016
2600 MHz FDD	0.00007
3.4 GHz	0.00188
3.8 GHz	0.00140
Others	0.06608
Total	0.10914

Location 2

Measurement time:	12:28
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00628
174-230 MHz	0.00563
470-694 MHz	0.00448
700 MHz	0.00153
800 MHz	0.00235
900 MHz	0.00033
1400 MHz	0.00095
1800 MHz	0.00173
1900 MHz	0.00007
2100 MHz	0.00216
2300 MHz	0.00017
2600 MHz TDD	0.00018
2600 MHz FDD	0.00008
3.4 GHz	0.00155
3.8 GHz	0.00153
Others	0.07053
Total	0.09956

Location 3

Measurement time:	12:36
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00650
174-230 MHz	0.00599
470-694 MHz	0.00473
700 MHz	0.00463
800 MHz	0.00851
900 MHz	0.00035
1400 MHz	0.00186
1800 MHz	0.00427
1900 MHz	0.00008
2100 MHz	0.00308
2300 MHz	0.00020
2600 MHz TDD	0.00019
2600 MHz FDD	0.00009
3.4 GHz	0.00309
3.8 GHz	0.00166
Others	0.07510
Total	0.12033

Location 4

Measurement time:	12:44
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00689
174-230 MHz	0.00623
470-694 MHz	0.00491
700 MHz	0.00368
800 MHz	0.00636
900 MHz	0.00036
1400 MHz	0.00228
1800 MHz	0.00457
1900 MHz	0.00008
2100 MHz	0.00147
2300 MHz	0.00019
2600 MHz TDD	0.00020
2600 MHz FDD	0.00009
3.4 GHz	0.00226
3.8 GHz	0.00175
Others	0.07838
Total	0.11970

Location 5

Measurement time:	12:52
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00705
174-230 MHz	0.00636
470-694 MHz	0.00506
700 MHz	0.00455
800 MHz	0.00881
900 MHz	0.00037
1400 MHz	0.00294
1800 MHz	0.00618
1900 MHz	0.00009
2100 MHz	0.00242
2300 MHz	0.00020
2600 MHz TDD	0.00020
2600 MHz FDD	0.00010
3.4 GHz	0.00117
3.8 GHz	0.00181
Others	0.08090
Total	0.12822

Location 6

Measurement time:	12:59
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00716
174-230 MHz	0.00655
470-694 MHz	0.00522
700 MHz	0.00272
800 MHz	0.00442
900 MHz	0.00038
1400 MHz	0.00260
1800 MHz	0.01092
1900 MHz	0.00009
2100 MHz	0.00321
2300 MHz	0.00021
2600 MHz TDD	0.00021
2600 MHz FDD	0.00010
3.4 GHz	0.00208
3.8 GHz	0.00190
Others	0.08322
Total	0.13100

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.