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 floor[2] 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:**	15:15
Survey address:	Preston PR1		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
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:	14:25
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00769
174-230 MHz	0.00704
470-694 MHz	0.00555
700 MHz	0.02254
800 MHz	0.00689
900 MHz	0.00061
1400 MHz	0.01769
1800 MHz	0.00989
1900 MHz	0.00009
2100 MHz	0.00331
2300 MHz	0.00022
2600 MHz TDD	0.00023
2600 MHz FDD	0.00013
3.4 GHz	0.00231
3.8 GHz	0.00206
Others	0.08924
Total	**0.17548**

Location 2

Measurement time:	14:34
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00762
174-230 MHz	0.00712
470-694 MHz	0.00558
700 MHz	0.02965
800 MHz	0.01423
900 MHz	0.00060
1400 MHz	0.01404
1800 MHz	0.00799
1900 MHz	0.00010
2100 MHz	0.00595
2300 MHz	0.00022
2600 MHz TDD	0.00023
2600 MHz FDD	0.00055
3.4 GHz	0.00416
3.8 GHz	0.00211
Others	0.09053
Total	**0.19069**

Location 3

Measurement time:	14:42
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00791
174-230 MHz	0.00723
470-694 MHz	0.00583
700 MHz	0.01280
800 MHz	0.00433
900 MHz	0.00080
1400 MHz	0.00630
1800 MHz	0.00256
1900 MHz	0.00010
2100 MHz	0.00178
2300 MHz	0.00023
2600 MHz TDD	0.00023
2600 MHz FDD	0.00037
3.4 GHz	0.00308
3.8 GHz	0.00215
Others	0.09190
Total	**0.14760**

Location 4

Measurement time:	14:50
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00807
174-230 MHz	0.00730
470-694 MHz	0.00578
700 MHz	0.02365
800 MHz	0.00634
900 MHz	0.00085
1400 MHz	0.00340
1800 MHz	0.00340
1900 MHz	0.00010
2100 MHz	0.00274
2300 MHz	0.00023
2600 MHz TDD	0.00023
2600 MHz FDD	0.00038
3.4 GHz	0.01180
3.8 GHz	0.00225
Others	0.09287
Total	**0.16938**

Location 5

Measurement time:	15:00
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00799
174-230 MHz	0.00729
470-694 MHz	0.00578
700 MHz	0.00456
800 MHz	0.00109
900 MHz	0.00042
1400 MHz	0.02275
1800 MHz	0.00401
1900 MHz	0.00010
2100 MHz	0.00105
2300 MHz	0.00023
2600 MHz TDD	0.00024
2600 MHz FDD	0.00012
3.4 GHz	0.00597
3.8 GHz	0.00222
Others	0.09417
Total	**0.15798**

Location 6

Measurement time:	15:09
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00819
174-230 MHz	0.00750
470-694 MHz	0.00588
700 MHz	0.02423
800 MHz	0.00637
900 MHz	0.00057
1400 MHz	0.01461
1800 MHz	0.01980
1900 MHz	0.00010
2100 MHz	0.01021
2300 MHz	0.00024
2600 MHz TDD	0.00024
2600 MHz FDD	0.00014
3.4 GHz	0.00334
3.8 GHz	0.00224
Others	0.09540
Total	**0.19906**

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.