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:	30/07/2026	**Time Survey completed:**	10:33
Survey address:	Preston PR1		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9950A Spectrum Analyser	US55240265	31/10/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025
Cabling	1.7m cable	2072	18/02/2026

[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:	09:36
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00869
174-230 MHz	0.00675
470-694 MHz	0.00555
700 MHz	0.00078
800 MHz	0.00553
900 MHz	0.00195
1400 MHz	0.00369
1800 MHz	0.00055
1900 MHz	0.00009
2100 MHz	0.00283
2300 MHz	0.00084
2600 MHz TDD	0.00054
2600 MHz FDD	0.00051
3.4 GHz	0.00196
3.8 GHz	0.00217
Others	0.08825
Total	**0.13069**

Location 2

Measurement time:	09:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00904
174-230 MHz	0.00727
470-694 MHz	0.00573
700 MHz	0.00514
800 MHz	0.00294
900 MHz	0.00070
1400 MHz	0.03115
1800 MHz	0.00514
1900 MHz	0.00010
2100 MHz	0.00279
2300 MHz	0.00025
2600 MHz TDD	0.00026
2600 MHz FDD	0.00013
3.4 GHz	0.00161
3.8 GHz	0.00223
Others	0.09762
Total	**0.17209**

Location 3

Measurement time:	09:56
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00906
174-230 MHz	0.00777
470-694 MHz	0.00605
700 MHz	0.00252
800 MHz	0.00112
900 MHz	0.00052
1400 MHz	0.01959
1800 MHz	0.00327
1900 MHz	0.00011
2100 MHz	0.00165
2300 MHz	0.00026
2600 MHz TDD	0.00026
2600 MHz FDD	0.00013
3.4 GHz	0.00187
3.8 GHz	0.00238
Others	0.10325
Total	**0.15978**

Location 4

Measurement time:	10:05
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00881
174-230 MHz	0.00798
470-694 MHz	0.00622
700 MHz	0.00086
800 MHz	0.00052
900 MHz	0.00053
1400 MHz	0.00036
1800 MHz	0.00035
1900 MHz	0.00011
2100 MHz	0.00060
2300 MHz	0.00028
2600 MHz TDD	0.00027
2600 MHz FDD	0.00013
3.4 GHz	0.00117
3.8 GHz	0.00254
Others	0.10591
Total	**0.13663**

Location 5

Measurement time:	10:12
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00899
174-230 MHz	0.00814
470-694 MHz	0.00642
700 MHz	0.00110
800 MHz	0.00057
900 MHz	0.00048
1400 MHz	0.00045
1800 MHz	0.00039
1900 MHz	0.00011
2100 MHz	0.00048
2300 MHz	0.00028
2600 MHz TDD	0.00028
2600 MHz FDD	0.00014
3.4 GHz	0.00122
3.8 GHz	0.00259
Others	0.10917
Total	**0.14080**

Location 6

Measurement time:	10:27
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01020
174-230 MHz	0.00894
470-694 MHz	0.00724
700 MHz	0.00101
800 MHz	0.00443
900 MHz	0.00321
1400 MHz	0.00149
1800 MHz	0.00070
1900 MHz	0.00012
2100 MHz	0.00315
2300 MHz	0.00088
2600 MHz TDD	0.00079
2600 MHz FDD	0.00059
3.4 GHz	0.00271
3.8 GHz	0.00321
Others	0.11450
Total	**0.16316**

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.