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:	07/01/2026	**Time Survey completed:**	13:33
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	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 seven locations and are presented in the following pages of this report.

Location 1

Measurement time:	12:28
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00620
174-230 MHz	0.00566
470-694 MHz	0.00450
700 MHz	0.00324
800 MHz	0.00714
900 MHz	0.02110
1400 MHz	0.00018
1800 MHz	0.02038
1900 MHz	0.00007
2100 MHz	0.01732
2300 MHz	0.00017
2600 MHz TDD	0.00017
2600 MHz FDD	0.00506
3.4 GHz	0.00143
3.8 GHz	0.00165
Others	0.06977
Total	**0.16406**

Location 2

Measurement time:	12:39
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00678
174-230 MHz	0.00606
470-694 MHz	0.00480
700 MHz	0.00169
800 MHz	0.00560
900 MHz	0.00743
1400 MHz	0.00021
1800 MHz	0.01005
1900 MHz	0.00008
2100 MHz	0.00484
2300 MHz	0.00019
2600 MHz TDD	0.00019
2600 MHz FDD	0.00041
3.4 GHz	0.00091
3.8 GHz	0.00172
Others	0.07620
Total	**0.12715**

Location 3

Measurement time:	12:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00703
174-230 MHz	0.00644
470-694 MHz	0.00509
700 MHz	0.00434
800 MHz	0.02345
900 MHz	0.01414
1400 MHz	0.00021
1800 MHz	0.00441
1900 MHz	0.00009
2100 MHz	0.00321
2300 MHz	0.00020
2600 MHz TDD	0.00020
2600 MHz FDD	0.00016
3.4 GHz	0.00118
3.8 GHz	0.00189
Others	0.08098
Total	**0.15300**

Location 4

Measurement time:	12:57
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00744
174-230 MHz	0.00672
470-694 MHz	0.00574
700 MHz	0.00786
800 MHz	0.04803
900 MHz	0.01629
1400 MHz	0.00022
1800 MHz	0.01085
1900 MHz	0.00009
2100 MHz	0.00801
2300 MHz	0.00021
2600 MHz TDD	0.00022
2600 MHz FDD	0.00014
3.4 GHz	0.00095
3.8 GHz	0.00200
Others	0.08592
Total	**0.20069**

Location 5

Measurement time:	13:05
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00755
174-230 MHz	0.00698
470-694 MHz	0.00546
700 MHz	0.00694
800 MHz	0.06861
900 MHz	0.01668
1400 MHz	0.00023
1800 MHz	0.03185
1900 MHz	0.00009
2100 MHz	0.01031
2300 MHz	0.00022
2600 MHz TDD	0.00022
2600 MHz FDD	0.00104
3.4 GHz	0.00143
3.8 GHz	0.00219
Others	0.08811
Total	**0.24792**

Location 6

Measurement time:	13:13
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00781
174-230 MHz	0.00723
470-694 MHz	0.00578
700 MHz	0.00290
800 MHz	0.01106
900 MHz	0.02411
1400 MHz	0.00024
1800 MHz	0.00833
1900 MHz	0.00010
2100 MHz	0.00905
2300 MHz	0.00023
2600 MHz TDD	0.00023
2600 MHz FDD	0.00255
3.4 GHz	0.00138
3.8 GHz	0.00220
Others	0.09037
Total	**0.17355**

Location 7

Measurement time:	13:27
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00770
174-230 MHz	0.00718
470-694 MHz	0.00566
700 MHz	0.00446
800 MHz	0.01039
900 MHz	0.01812
1400 MHz	0.00024
1800 MHz	0.02179
1900 MHz	0.00010
2100 MHz	0.01073
2300 MHz	0.00022
2600 MHz TDD	0.00023
2600 MHz FDD	0.00531
3.4 GHz	0.00202
3.8 GHz	0.00232
Others	0.09056
Total	**0.18704**

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.