

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:	08/07/2026	Time Survey completed:	11:32
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	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:	10:35
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01348
174-230 MHz	0.00900
470-694 MHz	0.00745
700 MHz	0.00194
800 MHz	0.00136
900 MHz	0.00501
1400 MHz	0.00055
1800 MHz	0.00051
1900 MHz	0.00010
2100 MHz	0.00081
2300 MHz	0.00054
2600 MHz TDD	0.00050
2600 MHz FDD	0.00043
3.4 GHz	0.00126
3.8 GHz	0.00231
Others	0.11082
Total	0.15606

Location 2

Measurement time:	10:45
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00880
174-230 MHz	0.00820
470-694 MHz	0.00641
700 MHz	0.02521
800 MHz	0.01553
900 MHz	0.01698
1400 MHz	0.02153
1800 MHz	0.01750
1900 MHz	0.00011
2100 MHz	0.00805
2300 MHz	0.00567
2600 MHz TDD	0.00516
2600 MHz FDD	0.00559
3.4 GHz	0.00301
3.8 GHz	0.00272
Others	0.10840
Total	0.25888

Location 3

Measurement time:	10:56
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01078
174-230 MHz	0.00899
470-694 MHz	0.00700
700 MHz	0.00178
800 MHz	0.00520
900 MHz	0.00538
1400 MHz	0.00195
1800 MHz	0.00050
1900 MHz	0.00012
2100 MHz	0.00051
2300 MHz	0.00043
2600 MHz TDD	0.00042
2600 MHz FDD	0.00020
3.4 GHz	0.00136
3.8 GHz	0.00299
Others	0.12910
Total	0.17673

Location 4

Measurement time:	11:05
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01050
174-230 MHz	0.00932
470-694 MHz	0.00726
700 MHz	0.00660
800 MHz	0.01277
900 MHz	0.01026
1400 MHz	0.00201
1800 MHz	0.00063
1900 MHz	0.00013
2100 MHz	0.00138
2300 MHz	0.00104
2600 MHz TDD	0.00114
2600 MHz FDD	0.00049
3.4 GHz	0.00161
3.8 GHz	0.00317
Others	0.13412
Total	0.20240

Location 5

Measurement time:	11:18
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01078
174-230 MHz	0.01003
470-694 MHz	0.00751
700 MHz	0.00389
800 MHz	0.00308
900 MHz	0.00955
1400 MHz	0.00356
1800 MHz	0.00547
1900 MHz	0.00014
2100 MHz	0.00101
2300 MHz	0.00081
2600 MHz TDD	0.00089
2600 MHz FDD	0.00102
3.4 GHz	0.00161
3.8 GHz	0.00336
Others	0.12961
Total	0.19233

Location 6

Measurement time:	11:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01360
174-230 MHz	0.01125
470-694 MHz	0.00834
700 MHz	0.00158
800 MHz	0.00191
900 MHz	0.00530
1400 MHz	0.00059
1800 MHz	0.00055
1900 MHz	0.00014
2100 MHz	0.00065
2300 MHz	0.00075
2600 MHz TDD	0.00050
2600 MHz FDD	0.00038
3.4 GHz	0.00159
3.8 GHz	0.00344
Others	0.15349
Total	0.20407

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.