

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:	09/09/2025	Time Survey completed:	13:14
Survey address:	Blackpool FY1		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025
Probe	Agos Aria-6000 Antenna	6000-1022	08/07/2025
Cabling	1.7m cable	1462	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:	12:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01301
174-230 MHz	0.01337
470-694 MHz	0.00824
700 MHz	0.00817
800 MHz	0.00242
900 MHz	0.00060
1400 MHz	0.00613
1800 MHz	0.00857
1900 MHz	0.00020
2100 MHz	0.00241
2300 MHz	0.00044
2600 MHz TDD	0.00040
2600 MHz FDD	0.00018
3.4 GHz	0.00323
3.8 GHz	0.00445
Others	0.13635
Total	0.20816

Location 2

Measurement time:	12:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00991
174-230 MHz	0.01139
470-694 MHz	0.00873
700 MHz	0.02473
800 MHz	0.00563
900 MHz	0.00064
1400 MHz	0.00463
1800 MHz	0.00190
1900 MHz	0.00022
2100 MHz	0.00160
2300 MHz	0.00049
2600 MHz TDD	0.00043
2600 MHz FDD	0.00019
3.4 GHz	0.00275
3.8 GHz	0.00487
Others	0.14704
Total	0.22515

Location 3

Measurement time:	12:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01067
174-230 MHz	0.01311
470-694 MHz	0.00927
700 MHz	0.01959
800 MHz	0.00745
900 MHz	0.00074
1400 MHz	0.01002
1800 MHz	0.01955
1900 MHz	0.00023
2100 MHz	0.01512
2300 MHz	0.00053
2600 MHz TDD	0.00046
2600 MHz FDD	0.00022
3.4 GHz	0.00633
3.8 GHz	0.00528
Others	0.15641
Total	0.27496

Location 4

Measurement time:	12:52
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01193
174-230 MHz	0.01389
470-694 MHz	0.00965
700 MHz	0.02170
800 MHz	0.00902
900 MHz	0.00071
1400 MHz	0.00664
1800 MHz	0.00186
1900 MHz	0.00024
2100 MHz	0.00169
2300 MHz	0.00055
2600 MHz TDD	0.00049
2600 MHz FDD	0.00022
3.4 GHz	0.00331
3.8 GHz	0.00560
Others	0.16635
Total	0.25384

Location 5

Measurement time:	13:00
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01170
174-230 MHz	0.01385
470-694 MHz	0.01007
700 MHz	0.01209
800 MHz	0.00449
900 MHz	0.00075
1400 MHz	0.03181
1800 MHz	0.00345
1900 MHz	0.00025
2100 MHz	0.00201
2300 MHz	0.00053
2600 MHz TDD	0.00051
2600 MHz FDD	0.00023
3.4 GHz	0.00369
3.8 GHz	0.00586
Others	0.17289
Total	0.27417

Location 6

Measurement time:	13:08
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01648
174-230 MHz	0.01565
470-694 MHz	0.01028
700 MHz	0.00574
800 MHz	0.00246
900 MHz	0.00074
1400 MHz	0.00472
1800 MHz	0.00691
1900 MHz	0.00026
2100 MHz	0.00298
2300 MHz	0.00055
2600 MHz TDD	0.00053
2600 MHz FDD	0.00024
3.4 GHz	0.00491
3.8 GHz	0.00608
Others	0.17858
Total	0.25711

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.