

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:	05/09/2025	Time Survey completed:	13:36
Survey address:	Egremont CA22		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025
Probe	Agos Aria-6000 Antenna	AGOS-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:	12:47
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00935
174-230 MHz	0.01069
470-694 MHz	0.00827
700 MHz	0.00329
800 MHz	0.00430
900 MHz	0.02667
1400 MHz	0.00042
1800 MHz	0.00072
1900 MHz	0.00020
2100 MHz	0.00734
2300 MHz	0.00042
2600 MHz TDD	0.00043
2600 MHz FDD	0.00129
3.4 GHz	0.00192
3.8 GHz	0.00444
Others	0.13597
Total	0.21572

Location 2

Measurement time:	12:54
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01031
174-230 MHz	0.01155
470-694 MHz	0.00884
700 MHz	0.00503
800 MHz	0.02502
900 MHz	0.02463
1400 MHz	0.00045
1800 MHz	0.00573
1900 MHz	0.00021
2100 MHz	0.00289
2300 MHz	0.00045
2600 MHz TDD	0.00043
2600 MHz FDD	0.00031
3.4 GHz	0.00207
3.8 GHz	0.00478
Others	0.14522
Total	0.24794

Location 3

Measurement time:	13:03
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01034
174-230 MHz	0.01187
470-694 MHz	0.00912
700 MHz	0.00469
800 MHz	0.01379
900 MHz	0.01712
1400 MHz	0.00047
1800 MHz	0.00131
1900 MHz	0.00023
2100 MHz	0.00184
2300 MHz	0.00048
2600 MHz TDD	0.00046
2600 MHz FDD	0.00037
3.4 GHz	0.00223
3.8 GHz	0.00514
Others	0.15425
Total	0.23372

Location 4

Measurement time:	13:12
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01090
174-230 MHz	0.01252
470-694 MHz	0.00953
700 MHz	0.00245
800 MHz	0.01587
900 MHz	0.03480
1400 MHz	0.00050
1800 MHz	0.00070
1900 MHz	0.00024
2100 MHz	0.00112
2300 MHz	0.00050
2600 MHz TDD	0.00050
2600 MHz FDD	0.00106
3.4 GHz	0.00236
3.8 GHz	0.00545
Others	0.16255
Total	0.26105

Location 5

Measurement time:	13:20
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01113
174-230 MHz	0.01268
470-694 MHz	0.00969
700 MHz	0.00203
800 MHz	0.00793
900 MHz	0.03590
1400 MHz	0.00051
1800 MHz	0.00070
1900 MHz	0.00024
2100 MHz	0.00301
2300 MHz	0.00052
2600 MHz TDD	0.00051
2600 MHz FDD	0.00072
3.4 GHz	0.00244
3.8 GHz	0.00560
Others	0.16628
Total	0.25988

Location 6

Measurement time:	13:30
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01124
174-230 MHz	0.01298
470-694 MHz	0.00982
700 MHz	0.00267
800 MHz	0.00398
900 MHz	0.03755
1400 MHz	0.00051
1800 MHz	0.00084
1900 MHz	0.00025
2100 MHz	0.00366
2300 MHz	0.00052
2600 MHz TDD	0.00051
2600 MHz FDD	0.00096
3.4 GHz	0.00248
3.8 GHz	0.00569
Others	0.16862
Total	0.26228

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.