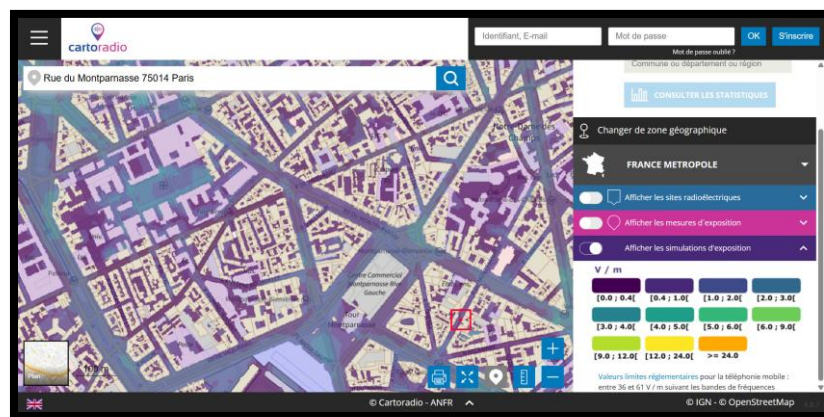


## PRESS RELEASE

Maisons-Alfort, 11 April 2025

### The ANFR launches an online simulation tool for mobile phone base station exposure



The French National Frequencies Agency (ANFR) has published maps of simulated levels of exposure to electromagnetic fields on the [Cartoradio.fr](https://www.cartoradio.fr) platform and on the *OpenBarres* mobile app. These educational maps show the exposure created outside buildings by mobile phone stations in mainland France.

The ANFR's mission is to ensure compliance with limit values for public exposure to electromagnetic fields and to manage the national system used to measure such exposure. Part of the [4<sup>th</sup> National Environmental Health Plan \(PNSE 4\)](#), the modelling of exposure to electromagnetic fields strengthens transparency and accessibility for citizens and local authorities to these information. The tool was developed alongside the French Ministry of Ecological Transition's Risk Prevention Department, the Centre Scientifique et Technique du Bâtiment (CSTB) and GEOMOD by COEXYA.

#### An open access tool

Available on **Cartoradio** and **OpenBarres**, the maps can be used to view simulated exposure levels at any point in mainland France by searching by location (postcode) or specific address. They will be updated every month to take network modifications into account. They simulate the exposure of **more than 130 billion points**. The maps are based on calculations modelling wave propagation in a three-dimensional environment, incorporating data from the IGN's cartographic databases (ground and buildings) as well as the characteristics of the mobile phone stations located outdoors and authorised by the ANFR. The colours show the estimated electric field calculated at 1.5 m above the ground expressed in volts per metre (V/m).

Please note: it is a purely theoretical calculation. Only in-situ measurements can accurately determine the actual exposure level.

## Better understanding and monitoring exposure to electromagnetic waves

For mobile phone base stations in France, regulatory limit values are between 36 and 61 V/m, depending on the frequencies used. Compliance with those limit values provides protection from the proven effects of radio frequency electromagnetic fields.

For most of the country, the simulated levels appear very low compared to the limit values, especially in rural areas. Areas of greater exposure can occur locally, usually in hilly or urban areas.

The simulation will make it possible to focus monitoring on areas where exposure is likely to be higher. In such locations, the ANFR will conduct in-situ measurements to check compliance with the authorised thresholds. If limit value overshoots are found, the Agency will require the immediate shutdown of the radio transmitter in question and impose corrective measures.

## A commitment to transparency for citizens and local authorities

This approach is part of a drive to provide information to citizens and to local authorities who play an important role in the deployment of radio installations and are involved in the responses provided to the populations concerned. The ANFR also supports elected representatives with its online [mesures.anfr.fr](https://mesures.anfr.fr) service, which they can use to request exposure measurements. All the measurement results can be viewed on [Cartoradio.fr](https://cartoradio.fr).

**In the words of Gilles Brégant, Director General of the ANFR:** *"The ANFR is committed to improving the understanding of public exposure to electromagnetic waves. Several years ago, we created the Cartoradio and Openbarres information tools, which provide key data on the transmitters and the measurements taken in the field. Today marks a significant step forward by making these open-access tools available. With over 130 billion points recalculated every month, this tool, the only one of its kind in Europe, will also help us do a better job of protecting the public."*

**Cartoradio** is a reference tool developed by the ANFR that shows the radio stations authorised in France and the exposure measurements that have been carried out. The platform now includes a map of simulated levels of public exposure to electromagnetic waves from mobile phone stations deployed outdoors throughout mainland France.

**Openbarres** is a mobile app developed by the ANFR that records the field strength received by mobile phones in real time. (Downloadable on Android and IOS)

**If you have any questions and/or would like to report any anomalies** with the simulations (mapping, position of antennas, etc.), an online form is available: [Cartoradio - simulation](https://www.anfr.fr/maitriser/nos-missions)

## Find out more:

- Understanding the electromagnetic wave exposure simulation maps: <https://www.anfr.fr/maitriser/information-du-public/cartoradio/simulation>
- Simulation questions and answers: <https://www.anfr.fr/maitriser/information-du-public/cartoradio/questions/-reponses-1/questions/reponses-simulation>
- The ANFR's missions covering the exposure of the general public to waves: <https://www.anfr.fr/maitriser/nos-missions>

**About the Agence nationale des fréquences (ANFR) (French National Frequency Agency)** *The ANFR is a public body attached to the French Ministry of Telecommunications and Digital Technologies. Its remit, as defined by the French Postal and Electronic Communications Code (CPCE), is to plan, manage and control the use of radio frequencies in France. The Agency is also in charge of protecting the public from exposure to radio waves, for the quality of television reception and for monitoring the radio equipment market and the implementation of parental control systems for Internet access.*

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