CEMPROTEC 34

Quick start guide

E.P.E. CONSEIL

Electro-Smog (EMF) Detector – Radio Frequency detection with enhanced sensitivity – High frequency – Low frequency – Magnetic field - 1 MHz to 10 GHz frequency range – Detection 3G / 4G / 5G

10GHz DECT / GSM 3G / 4G / 5G

EPE Conseil would like to thank you for purchasing CEMPROTEC, before using it, please read this guide in its entirety, particularly the "Warnings" section. This section specifically indicates the terms of use so that CEMPROTEC is used safely and within the warranty limitations.

- **What is Electro-Smog ?**

We refer to Electro-Smog as Electro-Magnetic Fields (EMF) produced by technology. EMFs are “generated in the radiofrequency bands (RF/EMF) by popular wireless devices like cell phones, cordless phones, baby monitors, tablets, Wi-Fi enabled computer equipment, cell phone towers/ antenna arrays, radio/television broadcast facilities, and wireless smart meters among others. EMFs are also emitted in the extremely low frequency band (ELF/EMF) by electrical appliances, electrical wiring, and power lines”. (source: https://emfscientist.org)

- **Operating your detector : the battery**

Insert / changing : when putting the battery in place, please ensure the cable is not placed underneath the battery, but it is placed to the side of it.
Failure to comply with these instructions can damage the cable and cause the compartment lid to not close properly.
Turning on the device : Upon start up the battery level is displayed for 3 seconds then the following functions are set : Loud speaker : active / Peak : disactivated
Battery level check: Upon start up the battery level is displayed for 3 seconds in the middle field row; the 2 other rows are off at this point. This bar indicates the battery level with a full green bar representing a full battery.

Battery saving mode : to save the battery the device will switch itself off automatically after 20 minutes.
Push buttons :

- POWER button: press to switch on the device
- HF only button/loud speaker : press to active the Peak function
- HF only button/ loud speaker : press and hold for loud speaker

The following table gives further details on the functions :

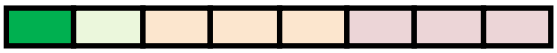
Initial state	Action	End state
Device off	Press the on-off button	Device is turned on
Device on	Press the on-off button	Device is turned off
Peak function off	Press the select button	Peak function on
Peak function on	Press the select button	Peak function off
Loud speaker on	Hold the select button	Loud speaker is turned off
Loud speaker off	Hold the select button	Loud speaker is turned on

Display values for detection levels:
The 3 meter views display the levels of disturbance received for the following 3 types of sensors:

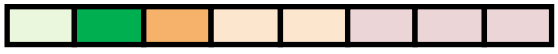
- Magnetic
- Electric
- High resolution

The display is as follows:

- If no disturbance the first green LED will stay lit:



- If a disturbance is detected the level is transcribed with one to two LEDs lit, giving a double level reading. The 8 LEDs therefore allow for 14 levels in total (see standard mode table). Display example :



Technical details :
Battery powered 9V, non-rechargeable.
Maximum current : 50mA
Dimensions : 179,5 x 46 x 32,2 mm
Weight of the device : 80g
Ideal temperature usage : -10°C +50°C
Cleaning recommendations : To clean, use a soft slightly damp cloth with rubbing alcohol.

Warning : CEMPROTEC is by no means a measuring device. CEMPROTEC is a detection device that gives tendances and approximations in relation to radiation.
The human body is likely to directly affect the detection. For a more precise detection, hold the device at least 50 cm away from you.
The devices are calibrated in an environment at a temperature of 20 ° C and a level of air humidity of 45%.
Store CEMPROTEC in a dry place with low humidity.
All modifications to this device are not authorized and will void the warranty.
Keep out of reach of children.

Detect ambient electro-smog (i.e. electric fields from electric cables and appliances (such as computers, fuse boards, lamps and power supplies), magnetic fields from high voltage lines, transformers and inverters, or Hyper Frequencies resulting from cell towers, WiFi/WiMax networks or cordless landline phones, etc.)

1. Press the “on-off” button once to **switch on the device** in standard mode.
2. Hold the device **at arm length** away from your body.
3. **Move slowly** around to detect ambient electro-smog (the device performs a new detection every two seconds).

NB: to **switch the sound** on or off, press and hold the “on-off” button.

Detect ambient Radio Frequencies (RF) smog with enhanced sensitivity (detecting peak values) (i.e. Radio Frequencies resulting from cell towers, WiFi/WiMax networks or cordless landline phones, radio and TV broadcasting, etc.)

1. Press the “on-off” button once to **switch on the device** in standard mode.
2. Press the “select” button once to **enter high-resolution RF mode**. LED 1 and 2 will stay lit.
3. Hold the device **at arm length** away from your body.
4. **Move slowly** around to detect ambient electro-smog (the device performs a new detection every two seconds).

NB: In this mode, all 24 LEDs show RF radiation. The LEDs at the bottom indicate the lowest radiation level while the LEDs at the top show the highest level of radiation.

Standard mode table (indicative field strength is shown with each row of 8 LEDs)

Low frequency magnetic and electric field (detection range : 10 Hz - 5 kHz ; detection on all three dimensions (3D) and **RF field (radio waves)** (detection range : 1 MHz - 10 GHz)

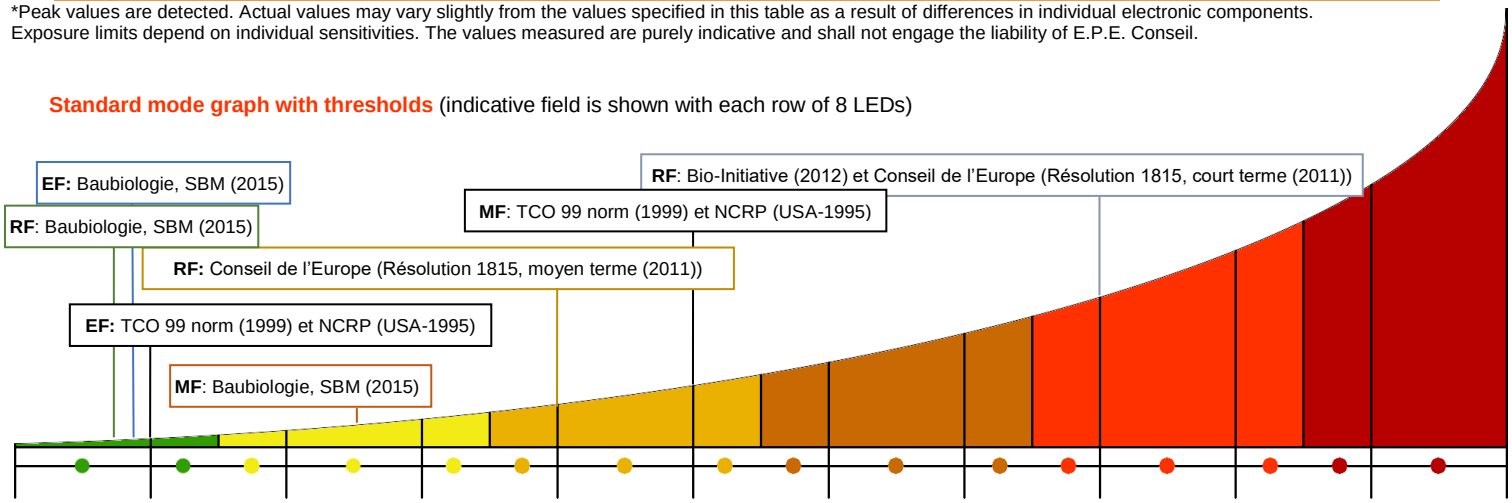
Levels	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
CEMPROTEC lights	**G1**	**G1 + G2**	**G2**	**G2 + Y1**	**Y1**	**Y1 + Y2**	**Y2**	**Y2 + Y3**	**Y3**	**Y3 + R1**	**R1**	**R1 + R2**	**R2**	**R2 + R3**	**R3**
[BF] – Alternating electric field in V/m (volt per meter) CEMPROTEC	0	6	12	17	22	26	30	34	39	45	52	60	70	80	90
[RF] – Radio [µW/m²] (microwatt per square meter)	0	15	40	70	110	150	200	300	500	750	1000	1250	1500	1750	2000
Alternating magnetic field in [nT] (Nanotesla)	0	20	60	100	140	180	220	300	400	650	1000	1500	2000	2500	3000

High-resolution RF mode table (enhanced sensitivity) When the Peak function is activated only the RF is detected (indicative field strength is shown by all of the 24 LEDs). Detection range : 1 MHz - 10 GHz) **values in µW/m²** (Microwatt per square meter)**.**

Levels	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
High frequency [µW/m²] CEMPROTEC	0	1	2,5	10	20	40	50	75	100	140	180	225
Levels	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
High frequency [µW/m²] CEMPROTEC	300	400	550	750	1000	1250	1500	1750	2000	2250	2500	2750

*Peak values are detected. Actual values may vary slightly from the values specified in this table as a result of differences in individual electronic components. Exposure limits depend on individual sensitivities. The values measured are purely indicative and shall not engage the liability of E.P.E. Conseil.

Standard mode graph with thresholds (indicative field is shown with each row of 8 LEDs)



RF:0 V/m	0,08 V/m	0,12 V/m	0,19 V/m	0,27 V/m	0,34 V/m	0,43 V/m	0,53 V/m	0,61 V/m	0,69 V/m	0,75 V/m
RF:0 µW/m²	15 µW/m²	40 µW/m²	100 µW/m²	200 µW/m²	300 µW/m²	500 µW/m²	750 µW/m²	1000 µW/m²	1250 µW/m²	1500 µW/m²
EF:0 V/m	6 V/m	15 V/m	20 V/m	25 V/m	30 V/m	35 V/m	40 V/m	50 V/m	60 V/m	70 V/m
MF:0 nT	20 nT	80 nT	120 nT	160 nT	200 nT	300 nT	400 nT	1000 nT	1500 nT	2000 nT

Indicative field strengths for **Radio Frequencies** (RF) in Volt per meter (V/m) and Microwatt per square meter (µW/m²), **Electric Fields** (EF) in Volt per meter (V/m) and **Magnetic Fields** (MF) in Nanotesla (nT), depending on the colour of the LEDs that light up. The thresholds mentioned above are recommendations and norms from the corresponding sources (see below).

- Baubiologie MAES-SBM. (2015). Indicative values in Baubiologie for rest rooms. *In addition to the stanard measuring technique in baubiologie SBM-2015.* Retrieved December 2, 2015, from http://baubiologie.fr/IMG/pdf/valeurs_sbm-2015_fr.pdf. (**recommendation**)
- BioInitiative. (2012). BioInitiative Report 2012. In A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation. Retrieved November 16, 2015, from http://www.bioinitiative.org/table-of-contents/. (**recommendation**)
- Council of Europe. (2011). Resolution 1815 (2011) Final version. In *The potential dangers of electromagnetic fields and their effect on the environment.* Retrieved November 16, 2015, from http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17994&. (**recommendation**)
- NCRP, (1995) “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields”, NCRP Report No.86, Bethesda, Maryland, USA. (**norm**)
- TCO Development. (2012). TCO-Certified-Displays-6.0. In *TCO Development*. Retrieved November 16, 2015, from http://tcodevelopment.com/files/2013/04/TCO-Certified-Displays-6.0.pdf#page=28. (**norm**)