ESI 21 – QUICK START GUIDE

Radio Frequency Smog Detector — with high-resolution RF mode (enhanced sensitivity)

50 MHz to 8 GHz frequency range — excellent Wi-Fi / WLAN detection

- **What is Electro-Smog?**

We refer to Electro-Smog as Electro-Magnetic Fields (EMF) produced by technology. EMF 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." (source: https://emfscientist.org)

- **Operate your detector: the battery**

Insert / changing: **when putting the battery in place, please make sure that the battery cable is not sited underneath the battery, but is placed instead at the side of the battery, between the battery and the compartment wall**. *Failure to comply with instructions can cause damage to cable and / or cause battery compartment lid to not close properly.*
Battery check: upon start up, the upper LED will light up briefly, either green (battery power between 25% and 100%) or red (battery power below 25%). If red is steadily flashing, power is too low and the battery needs to be replaced.
Battery saving: the device will switch off automatically after 10 minutes in order to save battery.

- **Detect ambient Radiofrequency (RF) smog in Standard Mode**

1. Press once the "on-off" button 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: LED 1 (bottom left) shows the lowest radiation level, while LED 10 (top right) shows the highest radiation level.
To **switch the sound** on or off, press and hold the "on-off" button.

- **Detect ambient Radiofrequency (RF) smog in Hypersensitive Mode (enhanced sensitivity; detecting peak values)**

1. Press once the "on-off" button 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 radiation (the device performs a new detection every two seconds).

NB: LED 1 and 2 (bottom left) show the lowest radiation level while LED 10 (top right) shows the highest radiation level.
To **switch the sound** on or off, press and hold the "on-off" button.

Tables for Standard and Hypersensitive Mode

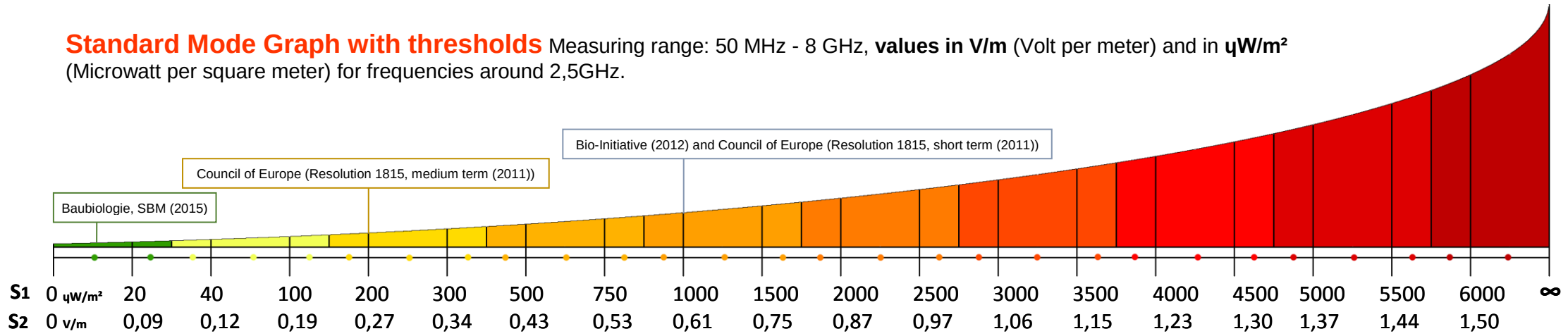
Radiofrequency field strength (**radio waves and microwaves**) — Measuring range: 50 MHz - 8 GHz, values in V/m (Volt per meter) and in µW/m² (Microwatt per square meter) for frequencies around 2,5GHz.

Values* for the ESI 21 Detector		Very weak →									
		Green	**Green / Amber 1**	**Amber 1**	**Amber 1 / Amber 2**	**Amber 2**	**Amber 2 / Amber 3**	**Amber 3**	**Amber 3 / Amber 4**	**Amber 4**	**Amber 4 / Amber 5**
Mode	**Standard** in **V/m** (Volt per meter)	< 0,09	0,09 to 0,12	0,12 to 0,19	0,19 to 0,27	0,27 to 0,33	0,33 to 0,43	0,43 to 0,53	0,53 to 0,61	0,61 to 0,75	0,75 to 0,86
	Standard in **µW/m²** (Microwatt per square meter)	< 20	20 to 40	40 to 100	100 to 200	200 to 300	300 to 500	500 to 750	750 to 1000	1000 to 1500	1500 to 2000
	Hypersensitive in **V/m** (Volt per meter)	< 0,01	0,01 to 0,02	0,02 to 0,03	0,03 to 0,04	0,04 to 0,06	0,06 to 0,07	0,07 to 0,08	0,08 to 0,10	0,10 to 0,12	0,12 to 0,13
	Hypersensitive in **µW/m²** (Microwatt per square meter)	< 0.6	0.6 to 1	1 to 2.5	2.5 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50

Values* for the ESI 21 Detector		→ Very strong								
		Amber 5	**Amber 5 / Red 1**	**Red 1**	**Red 1 / Red 2**	**Red 2**	**Red 2 / Red 3**	**Red 3**	**Red 3 / Red 4**	**Red 4**
Mode	**Standard** in **V/m** (Volt per meter)	0,86 to 0,97	0,97 to 1,06	1,06 to 1,14	1,14 to 1,22	1,22 to 1,3	1,3 to 1,37	1,37 to 1,43	1,43 to 1,5	> 1,5
	Standard in **µW/m²** (Microwatt per square meter)	2000 to 2500	2500 to 3000	3000 to 3500	3500 to 4000	4000 to 4500	4500 to 5000	5000 to 5500	5500 to 6000	> 6000
	Hypersensitive in **V/m** (Volt per meter)	0,13 to 0,15	0,15 to 0,16	0,16 to 0,19	0,19 to 0,30	0,30 to 0,43	0,43 to 0,53	0,53 to 0,61	0,61 to 0,68	> 0,68
	Hypersensitive in **µW/m²** (Microwatt per square meter)	50 to 60	60 to 70	70 to 100	100 to 250	250 to 500	500 to 750	750 to 1000	1000 to 1250	> 1250

* All values are peak values. The values for individual units can slightly vary from the values specified in the table as a result of differences in individual electronic components. Exposure limits depend on individual sensitivities. The measured values are purely indicative and do not create liability of the company EPE Conseil.

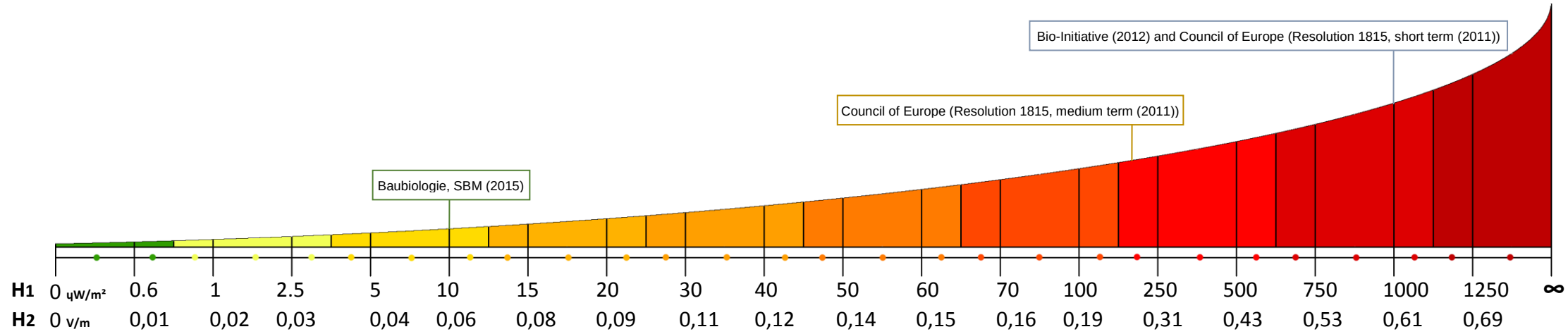
Standard Mode Graph with thresholds Measuring range: 50 MHz - 8 GHz, **values in V/m** (Volt per meter) and in **µW/m²** (Microwatt per square meter) for frequencies around 2,5GHz.



S1	0 µW/m²	20	40	100	200	300	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	∞
S2	0 V/m	0,09	0,12	0,19	0,27	0,34	0,43	0,53	0,61	0,75	0,87	0,97	1,06	1,15	1,23	1,30	1,37	1,44	1,50	

Indicative field strengths for **Radio Frequencies** (RF) in **Standard Mode** in Microwatt per square meter (µW/m²) **(S1)** and in Volt per meter (V/m) **(S2)**, depending on the colour of the LEDs that light up. The thresholds mentioned above are recommendations and norms from the corresponding sources (see hereunder).

Hypersensitive Mode Graph with thresholds Measuring range: 50 MHz - 8 GHz, **values in V/m** (Volt per meter) and in **µW/m²** (Microwatt per square meter) for frequencies around 2,5GHz.



H1	0 µW/m²	0.6	1	2.5	5	10	15	20	30	40	50	60	70	100	250	500	750	1000	1250	∞
H2	0 V/m	0,01	0,02	0,03	0,04	0,06	0,08	0,09	0,11	0,12	0,14	0,15	0,16	0,19	0,31	0,43	0,53	0,61	0,69	

Indicative field strengths for **Radio Frequencies** (RF) in **Hypersensitive Mode** in Microwatt per square meter (µW/m²) (**H1**) and in Volt per meter (V/m) (**H2**), depending on the colour of the LEDs that light up. The thresholds mentioned above are recommendations and norms from the corresponding sources (see hereunder).

- Baubiologie MAES-SBM. (2015). Valeurs indicatives en Baubiologie pour les zones de repos. In *Complément au standard de la technique de mesure en 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**)