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***How to Get More Sensitive Measurements Using the TES 593 Meter!***

Normally, the TES 593 can measure radio frequency (RF) fields as low as 0.001 “microwatts-per-centimeter-squared” (abbreviated “ $\mu\text{W}/\text{cm}^2$ ”). However, it can detect even lower RF levels by using the other measurement units available and converting them back to  $\mu\text{W}/\text{cm}^2$ .

Step 1. Start by measuring in units of  $\mu\text{W}/\text{cm}^2$  (microwatts per *centimeter* squared) – the most common unit of measurement in the United States. To do this, press the UNIT button repeatedly until you see “ $\mu\text{W}/\text{cm}^2$ ” (or “ $\text{mW}/\text{cm}^2$ ” in certain cases) above the measurement number on the display. Note that the special symbol “ $\mu$ ” is the scientific symbol which stands for “micro” (or millionth).

Step 2. If you get all zeros (or “0.000”) on the display, press the UNIT button several times to change from “ $\mu\text{W}/\text{cm}^2$ ” to “ $\mu\text{W}/\text{m}^2$ ”. This new unit is “microwatts per *meter* squared” and this is the European unit of measurement. With the TES 593 in this unit of measurement, you can now detect RF fields down to a level that is 100 times more sensitive.

Step 3. Whatever number you see in the “ $\mu\text{W}/\text{m}^2$ ” mode can be converted to the American units with a little arithmetic. Basically, you will simply divide by 10,000. To do this, move the decimal point 4 places to the left. For example, if the display reads 000.6  $\mu\text{W}/\text{m}^2$ , you would move the decimal place 4 places towards the left (adding zeros on the left as needed) to get a value of 0.00006  $\mu\text{W}/\text{cm}^2$ . Similarly, if the display says 003.0  $\mu\text{W}/\text{m}^2$ , you would move the decimal point 4 places to the left and get a US value of 0.00030  $\mu\text{W}/\text{cm}^2$ .

Step 3. Once you get used to this, a quick little short cut is to look at the display, which for example might say 004.7  $\mu\text{W}/\text{m}^2$ . Then simply ignore the decimal point and place a zero, then a new decimal point, and then another zero all at the left, giving you in this case 0.00047  $\mu\text{W}/\text{cm}^2$ !

Step 4. With this procedure, the lowest level that you can detect with the TES 593 is 0.00001  $\mu\text{W}/\text{cm}^2$ . If the meter also shows all zeros in the  $\mu\text{W}/\text{m}^2$  mode (or 000.0  $\mu\text{W}/\text{m}^2$ ), you can press the unit button as needed to go to the “mV/m” (or “millivolts per meter”) setting. In this mode, the meter can detect even lower levels, down to around 3 or 4 mV/m. However, the formula for converting mV/m to  $\mu\text{W}/\text{cm}^2$  is not easy, so at this point you would simply record the levels in mV/m.

Note 1 – MAX AVG button: For the most sensitive testing of the RF fields, it is probably best to stay in the “peak” measurement mode. This is how the meter starts when first turned on. In this mode you do not see the words AVG, MAX, or MAX AVG, but it is blank there instead.

Note 2 – Sensitivity Issues: Certain individuals may still report symptoms at the most sensitive measurement level of the TES 593 meter. At this point it usually gets very challenging to lower the RF levels any further without shielding all the walls, floors, ceiling, windows and doors of the room, or at least using a good shielding canopy around the bed.