

# het beetje

August 2006



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## English Version

### Measuring Equipment



## Content

Content and Colodings	Charles Claessens	page	2
Microwave Warner	Charles Claessens	page	3
Colofon het bitje	Charles Claessens	page	7

## Colodings & else

Here the answer to the question, posed on the frontpage:  
What is the finger pointing at?

Again a new meter, which already was mentioned in the May issue.  
Now it is here.  
On the following pages, it is described.

Although a certain German manufacturer of measurement meters announced in 2004 , that all the manufacturers of broadband meters would be \*out of business\*, because he had developed a \*Supermeter\*, he himself announced on 31-03-2006 also a brand new broadband meter, with extended frequency range. Obviously because the Spektrumanalysator does not seem to be \*das gelbe vom Ei\*.

Presumably it will be available in October. And yes, this year.  
It is much later than first thought to be.

But that happens to everybody. Everybody experiences delays.

**Gigahertz Solutions** brings in September the HF $\mathbf{W}$ 35C .

The HF-Analyser HF $\mathbf{W}$ 35C will be available in two types.

One type has only the basic functions, the other is with all "chicaneries".

Important: The frequency range of both types starts there, where the momentary types stop, so they are an addition, not a replacement.

The fundamentals of the basic meter is according to the „normal“ HF35C, but the most dominant frequencies of GSM mobile phone, and DECT will be suppressed by more than 40 dB. With that a genuine analysis of the range from 2,4 till over 6 GHz possible (f.i. Bluetooth wireless applications / PC-networks, WIMAX, some radar frequencies and the upper WLAN-band / "WiFi").

To that belongs also the upcoming DECT 2 with 5.8 GHz.

**ROM Elektronik** will present in September the new HFR-4.

It should be able to measure from 1 MHz up to 10 GHz .

Unfortunately the frequencybandfilter, like with the HFA-3, will not be incorporated.

So, the broadband measuring devices are still going strong, and new things are being developed permanently.

# Endotronic Microwave Warner

3



**Endotronic** now has finished the **Microwave Warner**.

Because of the many tests and calibrations, it took a while longer than expected, but now it is here. A bit larger than a package of matches.

There are now 4 LED's. When switched on, with the switch on the right (see following page) the left LED blinks every second as a sign that the device is on.

On the lower surface is a switch for switching the peeper on- or off.

The next three LED's do show, if high frequent radiation is present. 10, 100 or 1.000  $\mu\text{W}/\text{m}^2$ . When radiation is detected, the bleeper starts.

One should hold the device with the thumb on the spot marked \*hold here\*, so that the upper side, where the antenna is placed, can search properly.

The cord is only there in order to prevent losing the device.

A recommended place to store it is a shirt-pocket, in which the device is placed with the control side to the body and with the clamp attached to the edge of the pocket.

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het bitje August 2006



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het bitje August 2006

The device is delivered in a leather pouch, with a manual and loading trafo accordingly the built-in accu.

Dimensions: 50 x 70 x 20mm.

Weight: 70 gram.

According circumstances the following microwave disturbers are being detected and measured at the following distances:

Mobile phone, connecting	80-100 m
Microwave oven	40 m
DECT telephone	6-8 m
Electr. Babysitter	5-6 m
Bluetooth-WLAN	10-50 m
Mobile phone mast	200-400 m
Airway radar	some km
UMTS	ca. 400 m

So, the first, green, lightdiode blinks every second, to announce that the device is working and is checking and controlling the surroundings for technical microwaves in the frequency range of ca. 400 MHz to 3,5 GHz, up to 24 hours with only one accucharge.

As Guinea pig I used a DECT phone.

The second lightdiode, yellow, blinks at ca.  $10 \mu\text{W}/\text{m}^2$  (Salzburger guide line)

I checked and found  $120\text{-}200 \mu\text{W}/\text{m}^2$  (with HF58B and HFA-3).

The third lightdiode, red, blinks at ca.  $100 \mu\text{W}/\text{m}^2$  (old Salzburger guide line).

In praxis happened that with me at about 200-300  $\mu\text{W}/\text{m}^2$ .

The fourth lightdiode, also red, blinks at ca. 1.000  $\mu\text{W}/\text{m}^2$  (sugg. guide line Ecolog-Study).  
With me, this was at ca. 1.700  $\mu\text{W}/\text{m}^2$ .

But one should realise, that ALL meters do have deviations. Also the most expensive Spectrumanalysers do have a tolerance of ca.  $\pm 3$  dB. In Switzerland there is a discussion going on about the \*not measurable\* UMTS signals, where meters of ca. 25.000 € a tolerance show of a factor 4.3 in V/m or 18,5 in  $\text{mW}/\text{m}^2$ .

So, the deviations of the **Microwave Warner** are tolerant and acceptable.

Pinpointing of interference sources is also possible. The device should be held with the thumb on the marked place \*Hold here\*, and the upper edge should never be covered.

When peep + yellow LED do show present microwaves, they can be pinpointed very easily. One should hold the device a bit tilted in front of the chest at about 20 cm distance, and turn your body slowly around your axis. The LED scale shows, from where the strongest signals are coming, and opposite the own body shields off.

When one moves into the direction of the pinpointed source, the amount of signals gets higher, and one may see the source eventually, for instance a mobile phone mast antenna.

With every on- and off switching process of electrical energy, sparks develop with a broadband interference spectrum, so also microwaves, which are shown by the **Microwave Warner**, when they are not technically screened, like with piezo ignitions of gas stoves, light switches and switches which are used by electrical apparatus. The intensity of the disturbance is dependant of the switched capacity. Screened apparatus, where the screensafety is distorted, can be detected by the **Microwave Warner** as continuous malfunction.

Especially remarkably, because the **Microwave Warner**, holds the detected signals a bit longer in its memory, in order to give the LED's the necessary time for lighting.

With a light switch very easy to observe.

The **Microwave Warner** is a real warning device (Indicator), which should help, to expose the immediate surroundings, to avoid them, to dismantle, f.i. how strong the leaking radiation of a microwave oven runs through the house, mobile phones, DECT-phones, etc.

Teachers may check in the classroom whether mobiles are used.  
And everybody has a quick survey of every situation.

Obtainable with:

**Endotronic** GmbH  
Rosenhalde 8  
D- 88260 Argenbühl  
Tel.: 07566-465

and with:

**PSE- Priggen Special Electronic**  
Sellen 102a  
D- 48565 Steinfurt/ Germany  
Tel: 02551-5770  
[www.priggen.com](http://www.priggen.com)  
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Kopij altijd welkom !

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