




Setting the alarm function on or off

1. Press **ALARM** key for 2 seconds to switch the alarm function on or off. The “ALM” and “” symbols in the display indicates that the alarm function is on.
2. When the alarm function is on, the display will show “▲” if the instantaneous measured value exceed the limit value.



Setting the audible sound function off

When the meter is normally turned on, the audible sound function is on.

1. Press  key to turn off the meter.
2. Press and hold **MAX/AVG** key and turn on the meter again to disable the audible sound, the “” symbol will disappear from the display.

Setting the auto power off function off

When the meter is normally turned on, the auto power off function is on.

1. Press  key to turn off the meter.
2. Press and hold **READ** key and turn on the meter again to disable the auto power off function; the “” symbol will disappear from the display.

Making measurements

Important:

If the sensor is moved quickly, excessive field strength values will be displayed which do not reflect the actual field conditions. This effect is caused by electrostatic charges.

Recommendation:

Hold the meter steady during the measurement.

Short-term measurements

Application:

Use either the "Instantaneous" or the "Max. Instantaneous" mode if the characteristics and orientation of the field are unknown when entering an area exposed to electromagnetic radiation.

Procedure

1. Hold the meter at arm's length.
2. Make several measurements at various locations around the work place or the interested areas as described above. This is particularly important if the field conditions are unknown.
3. Pay special attention to measuring the neighboring vicinity for possible radiation sources. Apart from active sources, those components connected to a source may also act as radiators. For example, the cables used in diathermy equipment may also radiate electromagnetic energy. Note that metallic objects within the field may locally concentrate or amplify the field from a distant source.

Long-term exposure measurements

Location:

Place the meter between yourself and the suspected source of radiation. Make measurements at those points where parts of your body are nearest to the source of radiation.

Note: Use the "Average" or "Max average" modes only when the instantaneous measurement values are fluctuating greatly.

Alarm function

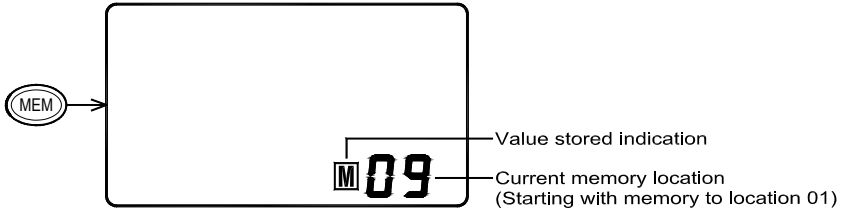
Use this feature in the "Instantaneous", "Max. Instantaneous", "Average" or "Max. Average" modes.

When the instantaneous measured value exceeds the limit value, a sequence of warning beeps will sound.

Data memory

The meter includes a non-volatile data memory that can store a maximum of 99 measured values.

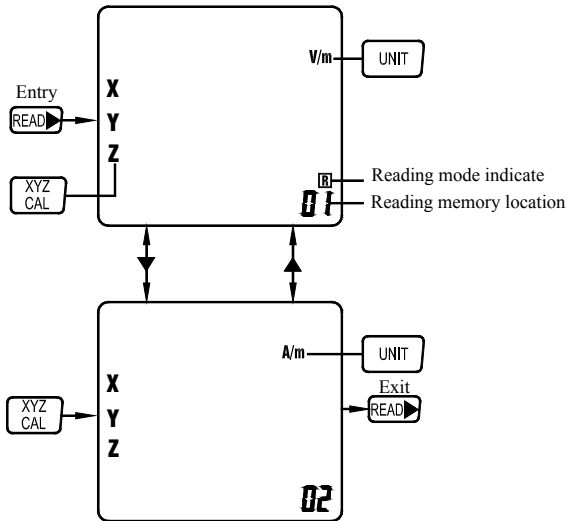
Storing individual measured values



The current memory location number appears in the lower right small display.

Once you press the **MEM** key, it will store a displayed value and increment the memory location by one. Each flash of the "M" symbol display indicates one reading has been stored. When the memory location number shows "99", to indicate the manual data memory is full, the user must clear the entire contents of the data memory before storing new values.








Reading individual measured values







1. Press **READ** key, the display shows "R" (reading mode).
2. Press **▼** or **▲** key to select the desired memory location.
3. Press the **UNIT** key to select the desired reading units.
4. Press the **XYZ/CAL** key to select the desired sensor axis reading.
5. Press the **READ** key to exit.

Deleting stored values

Once the memory is full, the entire contents of the memory can be cleared.

1. Press  to turn off the meter.
2. Press and hold MEM and turn on the meter again; the display will show:
“   L” and “  ”.
3. Press  to select “**YES**”.
4. Press SET to clear memory and exit.

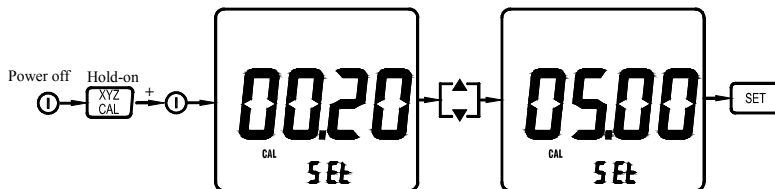
Setting Current Data and Time

1. Press the **SET** key to enter this mode, the “SET” mark is displayed.
2. Press  or  key to move flashing two digit to desired setting position “hh:mm:ss” or “YY/MM/DD”.
3. Press  or  keys to set the current time “hh:mm:ss” and current date “YY/MM/DD”.
4. Press the **SET** key to store setting value and exit.

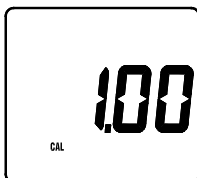
Calibration Factor (CAL)

The Calibration factor (CAL) provides a means to improve the accuracy of the results display by calibrating against the output of a known frequency generator. The field strength value measured is multiplied by the value of CAL that has been entered and the resulting value is displayed. The CAL setting range is from 0.20 to 5.00. The measurement accuracy will be sufficient for most applications even if the frequency response of the sensor calibration factor is ignored and the CAL is set to 1.00 in at all points.

Setting the calibration factor (CAL)



When the meter is normally turned on, the calibration factor set value will display for 2 seconds.



1. Press **ⓘ** key to turn off the meter.
2. Press and hold on the **XYZ/CAL** key, then press **ⓘ** key to turn on the meter to enter the calibration factor setting mode, the "CAL SET" marks is displayed.
3. Press **▲** or **▼** key to increase or decrease the value.
4. Press the **SET** key to store the new setting value and exit.

E-Field Typical Calibration Data:


Frequency	CAL	Frequency	CAL
50MHz	2.13	900 MHz	1.40
100MHz	1.37	1.8GHz	2.06
200 MHz	1.19	2.4GHz	0.66
300 MHz	0.69	3.5GHz	1.05
433 MHz	0.78	5.4GHz	2.20
500 MHz	1.38	8.0GHz	3.16
600 MHz	2.12		
700 MHz	1.66		
800 MHz	1.40		

Battery Installation and Replacement

Battery Installation

Remove the rear battery cover and insert a fresh 9V battery.

Battery Replacement

When the battery voltage drops below the operating voltage, the battery icon  appears and flashes. If it appears, the battery should be replaced.

You, as the end user, are legally bound (**Battery ordinance**) to return all used batteries and accumulators; **disposal in the household garbage is prohibited!**



You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

Disposal: Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

Specifications

General Specifications

Measurement method:	Digital, triaxial measurement.
Directional characteristic:	Isotropic, triaxial.
Measurement range selection:	One continuous range.
Display resolution:	0.1mV/m, 0.1 μ A/m, 0.1 μ W/m ² , 0.001 μ W/cm ²
Setting time: T	Typically 1s (0 to 90% of measurement value).
Display refresh rate:	Typically 0.5 seconds
Display type:	Liquid-crystal display (LCD), 4 digit.
Audible alarm:	Buzzer.
Units:	mV/m, V/m, μ A/m, mA/m, μ W/m ² , mW/m ² , W/m ² , μ W/cm ² , mW/cm ²
Display value:	Instantaneous measured value, maximum value, or maximum average value.
Alarm function:	Adjustable threshold with ON/OFF.
Data memory and read storage:	99 data sets.
Dry batteries:	9V NEDA 1604/1604A
Battery life: >	3 hours
Auto power off:	5 minutes.
Operating temperature range:	0°C to +50°C
Operating humidity range:	25% to 75%RH
Storage temperature range:	-10°C to +60°C
Storage humidity range:	0% to 80%RH
Dimensions:	Approx. 67(W) \times 60(T) \times 247(L)mm.
Weight (including battery):	Approx. 250g

Electrical Specifications

Unless otherwise stated, the specifications hold under the following conditions:

- The meter is located in the far-field of a source, the sensor head is pointed towards the source.
- Ambient temperature: +23C±3C
- Relative air humidity: 25% to 75%

Sensor type: Electrical field (E)

Frequency range: 900MHz, 1800MHz, 2.7GHz, 3.5GHz and 8GHz
(measurements can be made, for reference purposes only, using the entire range of 10MHz to 8GHz)

Specified measurement range:

CW signal (f > 900MHz): 20mV/m to 108.0V/m
53µA/m to 286.4mA/m
1µW/m² to 30.93W/m²
0µW/cm² to 3.093mW/cm²

Dynamic range: Typically 75dB

Absolute error at 1 V/m & 900 MHz: ±1.0dB

Frequency response:

Sensor (with typical CAL factors): ±1.0dB (50MHz to 1.9GHz)
±2.4dB (1.9GHz to 8GHz)

Isotropy deviation: Typically ±1.0dB (f>900MHz)

Overload limit: 10.61mW/cm² (200V/m)

Thermal response (0 to 50°): ±0.5dB