

English

Thank you for purchasing a **C.A 40**. To get the best service from this instrument:

- **read** this user's manual carefully
- **respect** the safety precautions detailed

Meaning of the symbol

Warning ! Please refer to the User's Manual before using the instrument.

In this User's Manual, the instructions preceded by the above symbol, should they not be carried out as shown, can result in a physical accident or damage the instrument and the installations.



SAFETY PRECAUTIONS



- Some scientists think that exposure to an electromagnetic field, over a long period, can cause leukaemia, as well as other forms of cancer, in children
A "careful avoidance of exposure" is recommended, as has been stated by the Environmental Protection Agency of the United States.
Consequently, the most widespread practice today, consists of avoiding long term or repeated exposure.
- We recommend regularly measuring the levels of electromagnetic field inside and outside houses and offices. When a "hot point" is detected, refitting of the room or the work space is recommended to avoid exposure at this point.
- Respect the operating conditions: temperature, humidity, altitude, degree of pollution and place of use.

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1. PRESENTATION

The C.A 40 has been designed to offer the user a reliable, simple and rapid means of measuring the levels of electromagnetic radiation of mains voltage lines, of household appliances and of industrial equipment.

It has three extended measurement ranges: 20 micro Tesla, 200 micro Tesla and 2000 micro Tesla.

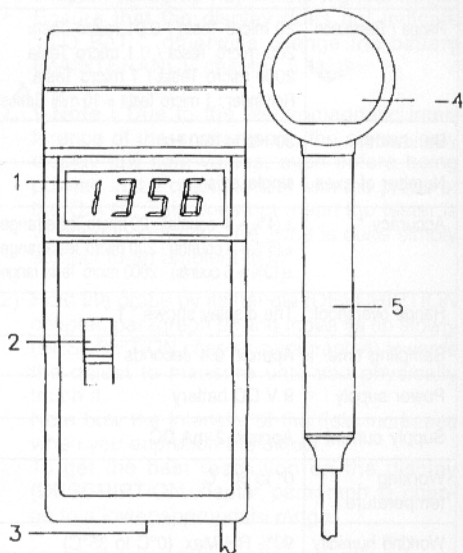
The C.A 40 is a high performance portable instrument, designed and calibrated to measure electromagnetic radiation at different bandwidths, from 50 Hz/60 Hz.

The probe of the C.A 40 is separated from the case to make handling easier.

■ Applications

The C.A 40 can be used to determine the importance of the electromagnetic radiation generated by mains voltage lines, computer screens, TV equipment, video systems and other instruments of this type.

2. DESCRIPTION



- 1 Liquid Crystal Display
- 2 ON / OFF range switch
- 3 Battery compartment
- 4 Sensor part of the probe
- 5 Handle of the probe

5. MAINTENANCE

⚠ For maintenance, use only servicing qualified persons. The manufacturer will not be held responsible for any accident occurring following a repair done other than by its After Sales Service or authorized dealers.

3. SPECIFICATIONS

Display	13 mm LCD, 3 1/2 pts
Range / Resolution	20 micro Tesla / 0.01 micro Tesla 200 micro Tesla / 0.1 micro Tesla 2000 micro Tesla / 1 micro Tesla Reminder : 1 micro Tesla = 10 milli Gauss
Bandwidth	30 Hz to 300 Hz
Number of axes	single axis
Accuracy *	± (4% + 3 counts) - 20 micro Tesla range ± (5% + 3 counts) - 200 micro Tesla range ± (10% + 5 counts) - 2000 micro Tesla range
Range overshoot	The display shows " 1 "
Sampling time	Approx. 0.4 seconds
Power supply	9 V DC battery
Supply current	Approx. 2 mA DC
Working temperature	0° to 50° C
Working humidity	90% RH Max. (0°C to 35°C) 80% RH Max. (35°C to 50°C)
Working altitude	2000 m max
Use	Indoors
Electrical safety	IEC 1010
Degree of pollution	2 (absence of pollution or dry non conducting pollution)
Electromagnetic compatibility	Conforms to CE : emission EN 50081-1 and immunity EN 50082-1
Weight	285 g (battery included)
Dimensions	Case : 163 x 68 x 24 mm Probe : 175 x 45 x 22 mm

* environmental conditions:

- at 50/60 Hz

- RF field of level < 3 V/m and of frequency < 30 MHz

4. USE

- 1) Set the "Off/Range" switch (DESCRIPTION chapter, paragraph 2) on the highest range. Ensure that the display does not indicate " LO BAT ", otherwise change the battery (MAINTENANCE chapter, 5.1).



Note : Due to the electromagnetic interference of the environment, the screen may display low field values, even before being pointed at the object to test with the probe of the C.A 40. This does not mean the tester is working incorrectly. The zone is quite simply subject to an ambient field.

- 2) Hold the probe by its handle (DESCRIPTION chapter, paragraph 5) and move its tip slowly (DESCRIPTION chapter, paragraph 4) towards the object to measure until you physically touch it.
Note how the intensity of the field increases when you approach the object.
To get the best resolution on the display (DESCRIPTION chapter, paragraph 1), change to a lower appropriate range.
- 3) Modify the orientation of the probe (at different angles to the tested object) and observe the influence of these positions on the measurements.
- 4) Now, while approaching the object to measure from different angles, record the highest value displayed.

Note : If the object to measure is switched off during the measurement, the display of the C.A 40 should then return to zero, unless a field, coming from other sources of emission, is detected.

The instrument is designed to display the measurements directly in micro Tesla. However, if you want to get a measurement in milli Gauss, simply multiply the display by 10. For example, for a display of 11.43 micro Tesla, the corresponding value in milli Gauss will be 114.3 (11.43 x 10).

5. MAINTENANCE



For maintenance, use only specified spare parts. The manufacturer will not be held responsible for any accident occurring following a repair done other than by its After Sales Service or approved repairers.

5.1 REPLACING THE BATTERY

The display of "LO BAT" in the left corner of the screen indicates that the voltage of the battery is less than 7.5 V. It is then necessary to replace the battery. However, some measurements can still be done before the instrument becomes too inaccurate.

- Open the cover of the battery compartment (chapter 2, paragraph 3) located at the back of the instrument.
- Remove the 9 V battery and replace with a new one, respecting the polarity.
- Close the cover of the instrument again..

5.2 CLEANING

Use a soft cloth, slightly moistened with soapy water. Rinse carefully, with a slightly damp cloth, and dry immediately with a dry cloth or in a hot air stream.

5.3 STORAGE

If the C.A 40 is not used for an extended period, more than two months, remove the battery and store separately.

5.4 CALIBRATION



It is essential that all measuring instruments are regularly calibrated.

For checking and calibration of your instrument, please contact our accredited laboratories (list on request) or the Chauvin Arnoux subsidiary or Agent in your country.

5.5 MAINTENANCE

Repairs under or out of guarantee: please return the product to your distributor.

6. WARRANTY



Our guarantee is applicable for twelve months after the date on which the equipment is made available (extract from our General Conditions of Sale, available on request).

7. TO ORDER



C.A 40 P01.1675.01
Supplied with a 9 V battery and a user manual

Accessory :

Shoulder bag P01.2980.36