



Repair Instructions for Cogard 1000 – Collector



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1. Basic Information

Before opening a defective COGARD collector we recommend to print any previously read-in data (as far as this is still possible). If the collector operates normally after printing, the malfunctions were simply caused by a full data memory of the COGARD collector. You should nevertheless check the battery of such a collector.

The procedures for opening and closing the COGARD collector are described in the following. The instructions for replacing assemblies will follow subsequently.

2. Opening the COGARD collector

- 2.1. First remove the cutback by using a knife or something similar. Do not use the detached protective sheet for the assembly later on.



After you have removed the cutback you can see the 4 screws that keep the housings together.



2.2 Unscrew the screws. Now pull the upper part housing carefully upwards, thereby holding it vertically (see picture).



Reverse the upper part housing and put it next to the lower part housing.



2.3 Now you can easily access the interior of the COGARD collector for further operations.

Caution: Do not damage wire connections and protect the collector from tensile load.

3. Replacing the rechargeable batteries

- 3.1** First open the COGARD collector as described under chapter 2. After that you can measure the battery working voltage.

If the battery working voltage accounts for 1.8 Volt – 2.4 Volt, the battery is ok but should be recharged. In such a case close the collector (see chapter 6) and recharge it for approx. 48 hours.

If the battery working voltage is 1.7 Volt (or less), you also need to recharge the battery for approx. 48 hours. If the battery does not work properly afterwards or fails in short time, the battery is damaged and needs replacement.



- 3.2** Afterwards you can remove the battery (strictly speaking it is a battery set consisting of two solitary cells) from the lower part housing (see picture on page 6).

Now desolder the “old” battery wires and solder the “new” battery wires on the printed circuit board.

Caution: Observe the polarity during the soldering process. Solder the red battery wire on the plus terminal and the black battery wire on the minus terminal of the printed circuit board (the terminals are not marked on the printed circuit board). The minus terminal is located on the left, the plus terminal on the right.

- 3.3** Place the battery into the lower part housing after you have soldered the wire connections. Now you can close the collector (see 6.). Recharge the battery for about 6 days. Attach the protective sheet only after you have checked the operational capability of the collector.



4. Replacing the inductor

- 4.1** First open the COGARD collector as described under chapter 2. Subsequently check the battery (see 3.1). You should not replace the inductor until the battery is ok and you still experience malfunction when the collector is reading or reading-in.
- 4.2** For this purpose you have to remove the adhesive on the soldering joints extremely carefully and then desolder the inductor.



- 4.3** Now you can solder a new inductor. Therefore simply solder the bared inductor poles (silver) and then add again some hot-melt adhesive on the soldering joints for strain relief.



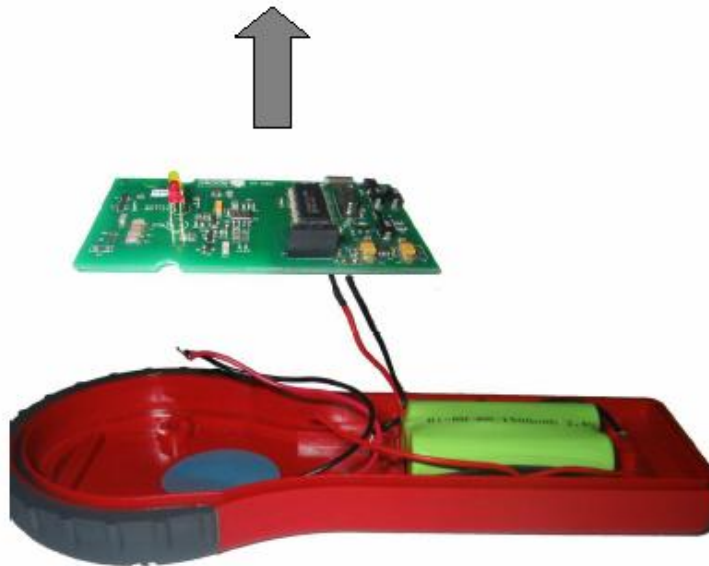
- 4.4** If the inductor itself is not defective but only the wire connections to the printed circuit board are torn, you can also solder the “old” inductor again.

Caution: At this you need to strip the inductor poles (red), so that the poles turn silver again. Hold the soldering iron with brazing solder at the inductor poles until the red isolation dissolves. Afterwards you can solder the inductor again as described under 4.3.



5. Replacing the COGARD printed circuit board

- 5.1 First open the COGARD collector as described under chapter 2. Subsequently check the rechargeable battery (see 3.1). You should not replace the printed circuit board until the battery is ok and you still experience malfunction when the collector is reading.



- 5.2 Subsequently you have to desolder the 8 soldered wires in the following sequence: connections to the battery, buzzer, inductor and the ones for recharging the battery. It is essential that you first desolder the connections to the battery, otherwise you might short-circuit.

Caution: Plus and minus terminals must not be in touch with each other, it would short-circuit!

Afterwards you can remove the printed circuit board.

5.3 Subsequently place the “new” printed circuit board into the lower part housing of the COGARD collector. When this is done, you need to solder the wire connections in the following sequence:

1. Connect the recharging cable: Please bear in mind to connect the plus-cable (red) with the plus terminal and the minus-cable (black) with the minus terminal (marked on the printed circuit board).
2. Connect the inductor: At this there is no polarization, meaning you do not need to observe a certain wire connection! But you have to consider the dismantling of the cable poles, otherwise there will not be an engagement (see 4.).
3. Connect the buzzer: At this there is no polarization, meaning you do not need to observe a certain wire connection!
4. Connect the battery: Please bear in mind to connect the plus-cable (red) with the plus terminal and the minus-cable (black) with the minus terminal (not marked on the printed circuit board) (see 3.2).

Caution: It is essential to keep this sequence when connecting the wires, as you otherwise might short-circuit!!

Now you can close the collector (see 6.). Only attach the front panel after you have checked the operational capability of the collector.



6. Closing the COGARD collector

- 6.1** After you have replaced the printed circuit board, the inductor and the battery you can close the COGARD collector again. Place the upper part housing on the lower part housing, thereby observing that no wire will be jammed in between the two parts. Afterwards screw the two parts together.

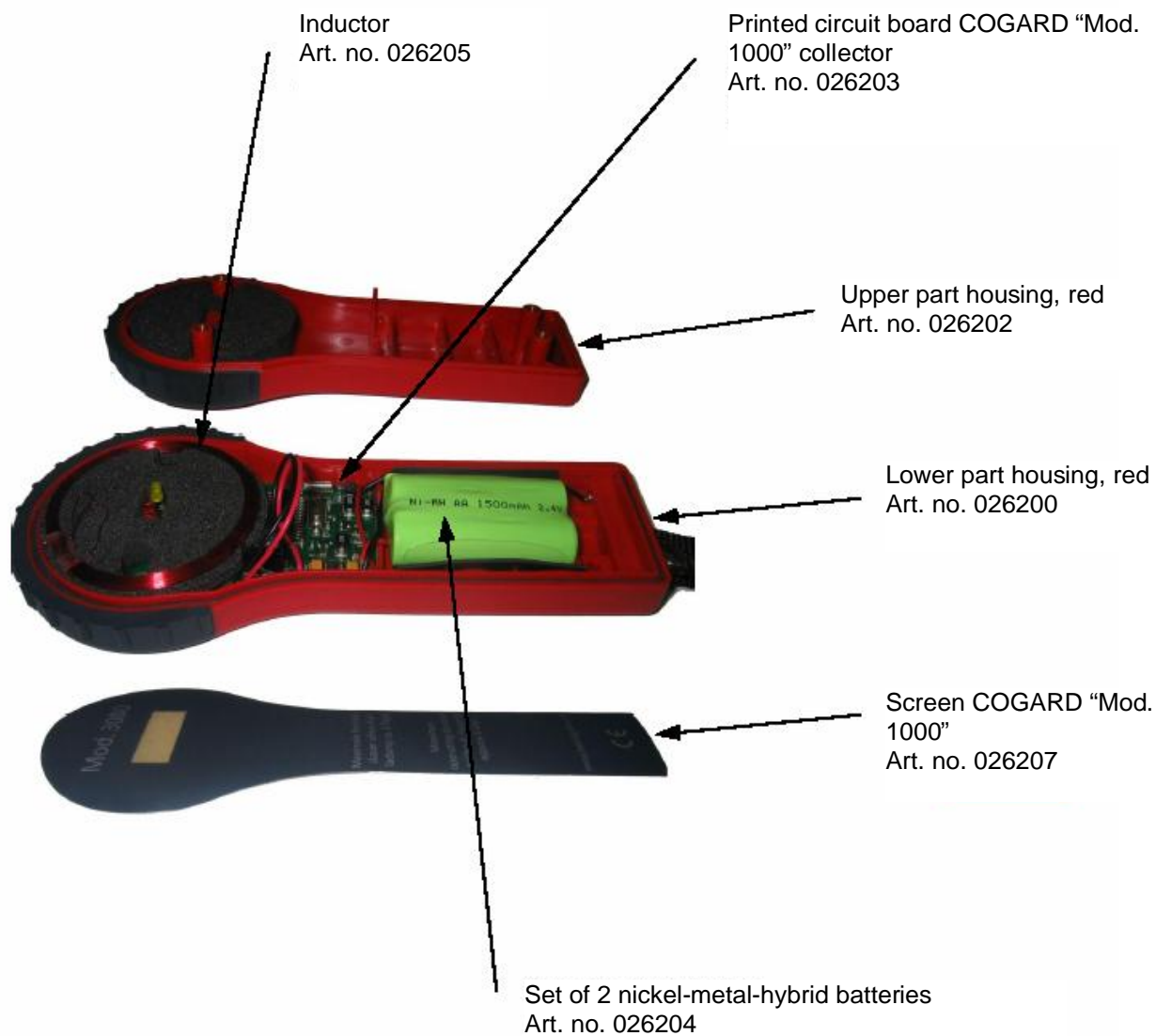


- 6.2** Please check the operational capability after screwing. Do not attach the front panel until the collector operates properly.
- 6.3** You have to completely remove all adhesive residua and to degrease the adhesive surface before attaching the front panel.
Caution: You must not bend the new protective sheet. After removing the sheeting you may not touch the adhesive surface of the front panel.

Please observe the right positioning of the front panel sheet when attaching it on the collector.



7. Spare parts list



<u>Name of spare parts</u>	<u>order number</u>
Upper part housing, red	026202
Complete lower part housing, red	026200
Screen COGARD "Mod. 1000"	026207
Shoulder strap, 15 mm wide	023205
Set of 2 nickel-metal-hybrid batteries	026204
Printed circuit board COGARD "Mod. 1000" collector	026203
Buzzer with electronics assembly and wires	025515
Circular bank for buzzer	024318
Inductor	026205



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