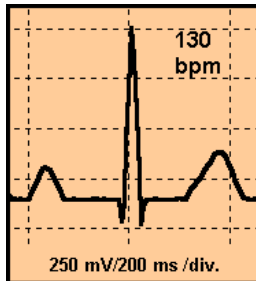
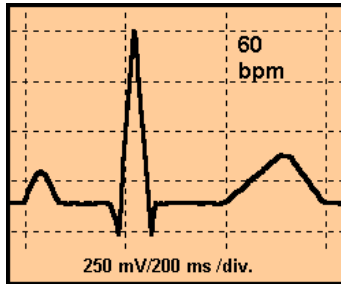


# ECG Simulator

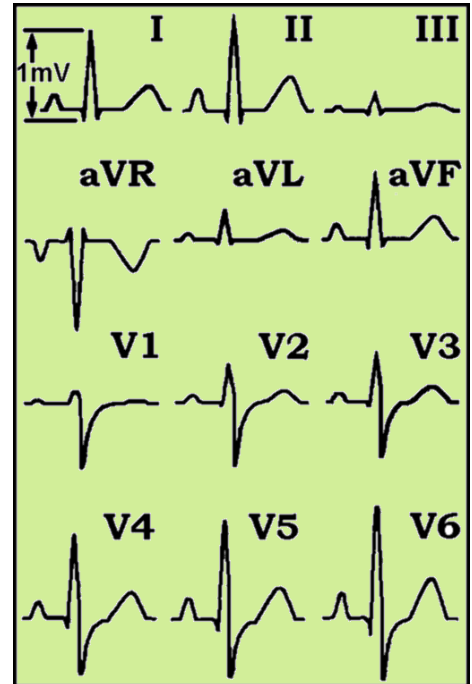
## Ferronato® - FC12D

Well suited for testing electrocardiographs, ECG monitors, Holter recorders, QRS synchronised or triggered devices, etc. Digitally generated waveform, with high amplitude and rate stability.

- ✓ Twelve different realistic signals (Leads)
- ✓ Realistic output impedance
- ✓ Easy connection: Banana and Snap-On
- ✓ Membrane push-buttons
- ✓ Microcontroller based
- ✓ Long battery life (>300 h)
- ✓ Low battery indicator
- ✓ Small, sturdy and lightweight



Captured Lead I signals, at 60 and 130 bpm



### SPECIFICATIONS:

- |                           |  |
|---------------------------|--|
| <b>Waveform:</b>          | Twelve different "PQRST" waves (see above figure).   |
| <b>Signal amplitude:</b>  | Fixed, 1.0 mV peak to peak $\pm 5\%$ , for Lead I; from approximately 0.25 to 2.0 mV for other Leads.                          |
| <b>QRS rate:</b>          | Two selectable values: 60 and 130 bpm, $\pm 0.2\%$ (bpm = Beats per Minute).   |
| <b>Complex width:</b>     | 600 ms at 30 bpm and 435 ms at 130 bpm.  |
| <b>Output impedance:</b>  | Maximum 4500 $\Omega$ between any terminal and N (RL).   |
| <b>Signal Offset:</b>     | 0.2 mV maximum.  |
| <b>Connection:</b>        | Ten outputs with two types of connectors: 4 mm female Banana and Snap-On stud, 20 mm spaced. IEC colours code (or "European"). |
| <b>Light indicators:</b>  | Green LED flashing on each QRS. Red LED flashing on "Low Battery".   |
| <b>Power supply:</b>      | 9 V battery type PP3 or 6LR61. Inverted polarity protected.  |
| <b>Power consumption:</b> | 450 $\mu$ A (integrated), at 60 bpm.   |
| <b>Operating temp:</b>    | From $-10^{\circ}$ C to $50^{\circ}$ C.  |
| <b>Size:</b>              | Maximum dimensions: 139 x 75 x 32 mm.  |
| <b>Weight:</b>            | 140 grams without battery, Approximately 185 grams with battery.   |
| <b>Accessories:</b>       | Includes User's Manual, carrying bag and battery.  |
| <b>Warranty:</b>          | Two years.   |

**Manufacturer:**  
 SERVICIENCIA, S.L.  
 Isabel II, 22 – 45210 Yuncos – (Toledo) - SPAIN  
 Phone: (+34) 925 536154 – Fax: (+34) 925 537644  
 E-mail: [serviciencia@serviciencia.es](mailto:serviciencia@serviciencia.es)  
 Internet: <http://www.serviciencia.es>

**Distributor:**