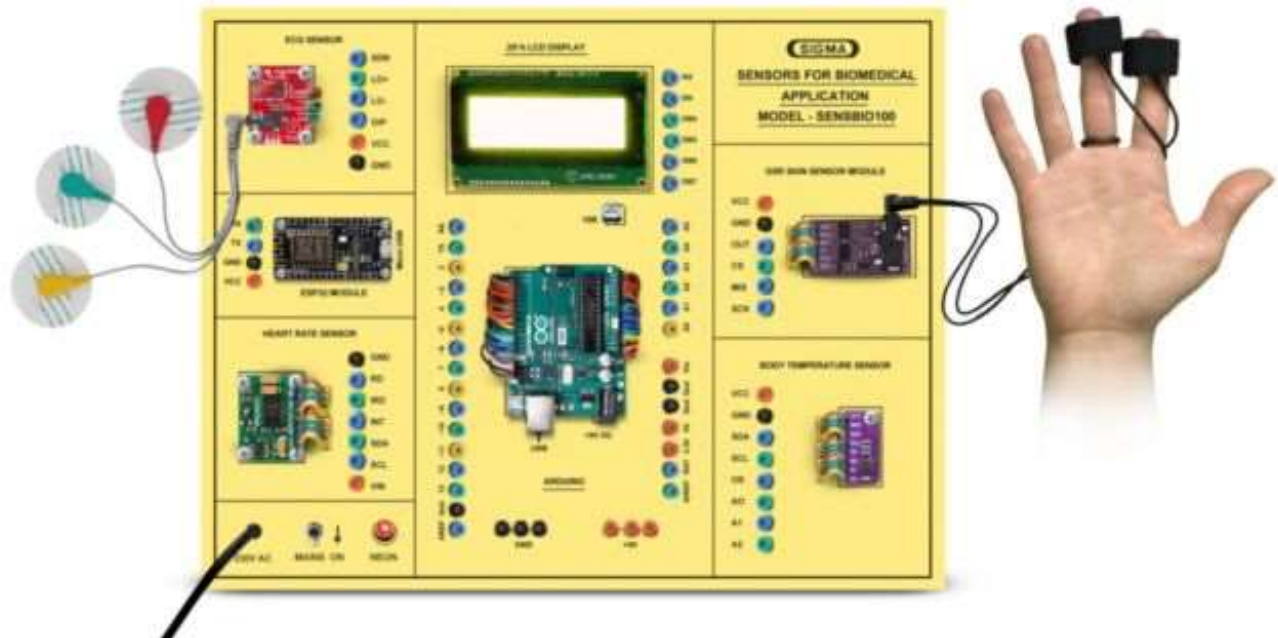# ECG CUM HEART RATE MONITOR

MODEL-ECGHRM100

SPECIFICATIONS

This trainer has been designed with a view to provide practical and experimental knowledge of ECG cum Heart Rate Monitor using Biomedical Sensors programing for Internet of Things (IOT) with Arduino IOT Board.

SPECIFICATIONS

A. Main Specs

1.   Following Parts and Modules are assembled on Single PCB of size - 18 Inch x 15 Inch.
2.   The complete circuit diagram is screen printed on component side of the PCB with circuit and Parts at the same place.
3.   The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement.
4.   Modules and Parts should be removable without desodlering for easy repair / replacement
5.   The acrylic cover is fitted on PCB to safeguard main parts.

B. Arduino Microcontroller Board

1.   Arduino Uno Microcontroller board based on the ATMEGA328P
2.   14 Digital Input / Output pins (of which 6 provide PWM output)
3.   16 MHz Ceramic Resonator
4.   Flash Memory : 16KB (of which 2KB used by boot loader)
5.   USB Port
6.   Power Jack – 9V DC, 1A

C. Sensors:

1.   Electro Cardio Graph - ECG Sensor
     Real time ECG acquisition with 200 samples/sec with 8 Bit ADC
2.   Heart Rate Sensor
     Measuring Range - 30-300 Heart Beats per minute

D. Modules and Hardware:

1.   20 X 4 - LCD Display
2.   ESP32 – Wifi Module
3.   2 mm interconnections

E. Accessories

1.   USB Cable   : 1 No
2.   Ethernet Cable   : 1 No
3.   Micro USB to USB cable for ESP32   : 1 No
4.   Power Supply Adaptor   : +9V DC, 1A
5.   Required Connecting Electrodes   : 1 Set for Each sensor
6.   Jumper wires   : 50 Nos.
7.   Pen Derive with Software, Library, Driver,
     Codes, Soft Copy of Manual and Mobile App   : 16 GB
8.   Printed Practical Manual   : 1 No
9.   E-Books for Biomedical IOT Subject   : 10 Nos. in PDF Format
10. Mp4 Video Class for Biomedical IOT Subject   : 40 Nos
11. Excitation accessories for each sensor

EXPERIMENTS

A. Theory Experiments for Arduino Board

1. To understand theory and working of Arduino Operating software.
2. To understand Pin and Connection Diagram of Arduino.
3. To understand USB Interface for Arduino.
4. To understand 20 x 4 LCD Display.

B. Theory of ESP32 Wireless Module

5. To understand theory and working of ESP32
6. To understand Operating System for ESP32
7. To understand Pin and Connection Diagram of ESP32
8. To understand USB Interface for ESP32

C. Theory Experiments for Sensors

9. To understand theory and Connection Diagram of ECG Sensor with Electrodes
10. To understand theory and Connection Diagram of Heart Rate Sensor – HR

D. Practical Experiments

11. To get draw ECG of a person using ECG Sensor and to interpret it
12. To measure Heart Rate of a person using Heart Rate Sensor and to interpret it

Contact us

Registered Office

SIGMA TRAINERS AND KITS
E-113, Jai Ambe Nagar,
Near Udgam School,
Drive-in Road,
Thaltej,
AHMEDABAD-380054. INDIA.

Contact Person
Prof. D R Luhar – Director

Mobile : 9824001168
Whatsapp : 9824001168

Phones:
Office : +91-79-26852427
Factory : +91-79-26767512
 +91-79-26767648
 +91-79-26767649

Factory

SIGMA TRAINERS AND KITS
B-6, Hindola Complex,
Below Nishan Medical Store,
Lad Society Road,
Near Vastrapur Lake,
AHMEDABAD-380015. INDIA.

E-Mails :
sales@sigmatrainers.com
drluhar@gmail.com