BIOMEDICAL TRAINING SYSTEM

BMT-700

SYSTEM FEATURES

The goal of this equipment is to educate students knowing how to design the specific measuring circuits and detect the basic physiologic signals with the practical handling. Moreover, students understand the electric characters of the sensor and transducer, explicitly.

The equipment has nine modules, including Electrocardiogram Measurement, Electromyogram Measurement, Electro-oculogram Measurement, Electroencephalogram Measurement, Blood Pressure Measurement, Photoplethysmogram Measurement, Respiratory Ventilation Detection, Pulse Meter and Impedance Measurement.

The sensors and transducers are used in this equipment including pressure transducer, photo coupler, strain gauge, temperature sensor, and surface electrode.

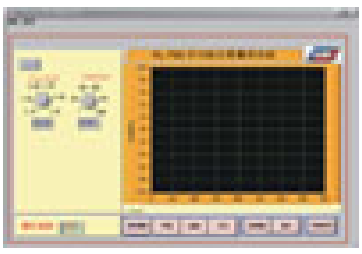
Each module has many detecting points, and can also change the frequency bandwidth and amplifier's gain. Thus, let students understand the correlation between physiologic signal and circuit in each stage.

OUTPUT SIGNALS HAVE MANY DISPLAY'S METHODS

- The main unit of the equipment has a 128×64 LCD Graphic displaying the real-time physiological parameters, like as blood pressure, heart rate, respiratory rate, etc, from the measuring signal.
- The physiological signal also can be displayed with Digital Storage Oscilloscope (DSO) to print or transmit to computer in real-time. Moreover, these data will be analyzed in offline.
- The equipment has the embedded 10 bits A/D converters to convert physiological signal to digital signal, and real-time transmit the digital signal to computer with RS 232 port. The computer will display and store the digital signal.

GRAPHIC USER INTERFACE SOFTWARE

- Developing environment: LabVIEW
- Communication Port: RS-232C
- The physiological signal can be analyzed after connection.
- Easy handling.
- X-axial is TIME/DIV, Y-axial is VOLT/DIV
- Data can be stored, replayed, or printed. The storage formats have *.BMP、*.JPEG、*.XLS.
- Having online help.
- Having the Description-Item to introduce the physiological signal and experimental steps.



MODULE UNITS SPECIFICATIONS

- Electrocardiogram(ECG) Measurement
- Electromyogram(EMG) Measurement
- Electro-oculogram(EOG) Measurement
- Electroencephalogram(EEG) Measurement
- Oscillometric Blood Pressure Measurement
- Photoplethysmogram Measurement
- Respiratory Ventilation Detection
- Pulse Meter