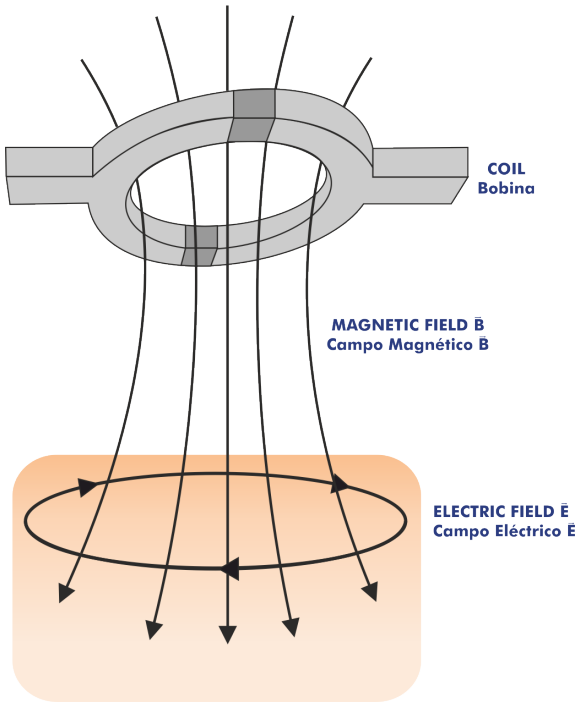
Biomedical Magnetotherapy Unit

BIMAG

www.edibon.com
PRODUCTS
14.-BIOMEDICAL ENGINEERING

PROCESS DIAGRAM AND UNIT ELEMENTS ALLOCATION



Certificate of Approval of the Quality Management System

European Union Certificate (total safety)

UL and CSA Regulations (All our products are manufactured according to current UL and CSA regulations)

Certificate of Approval of the Environmental Management System

Worlddidac Association Certificate of Membership

INTRODUCTION

As technology is improving, new highly advanced treatments and therapies are being developed. It is of great importance to acquire a basic knowledge of them in order to ensure a higher success rate in the healing of patients.

Magnetic therapy uses magnetic fields to induce changes in patients. It is specially used to enhance muscle relaxation and increase organic defenses. It is also widely used in bone healing through the formation of new bone tissue.

The Biomedical Magnetotherapy Teaching Unit, "BIMAG", designed by EDIBON, provides a Gauss measuring device, so that students can better understand the principles of this new therapy. In addition, it includes a bone simulator to understand the effect of the magnetic field.

GENERAL DESCRIPTION

The Biomedical Magnetotherapy Teaching Unit, "BIMAG", designed by EDIBON, allows the students to test magnetotherapy, so as to achieve a better knowledge on its functioning and internal mechanism.

The Biomedical Magnetotherapy Teaching Unit, "BIMAG", includes:

- Real model of the magnetotherapy instrument.
- Gauss meter.
- Human bone model to evaluate the piezoelectric effect of the magnetic field.
- Magnetic field tester.

SPECIFICATIONS

Bench-top unit.

Anodized aluminum frame and panels made of painted steel.

Main metallic elements made of stainless steel.

Diagram in the front panel with distribution of the elements similar to the real one.

Magnetotherapy instrument:

- Application of Magnetotherapy:
  - Frequency of treatment: 1 - 100 Hz.
  - Maximum induction: 100 G ± 20 %.
- Available outputs: 2.
- Two buttons to select the frequency and the intensity of the treahtment.
- LCD display for control and visualization of the magnetic field provided.

Gauss meter:

- Range: 20 - 200 ± 0.1 % μT.
- Bandwidth: 30 - 300 ± 60 Hz.
- Mode selector: off, Tesla and Gauss measurements.

Magnetotherapy applicator:

- Two solenoid coils of 15 cm.
- Solenoid coil of 30 cm.

Human bone model:

- Piezoelectric sensors.

Magnetic field tester.

Cables and accessories, for normal operation.

Manuals: This unit is supplied with the following manuals: Required services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices manuals.

BIMAG detail

Required elements (Not included):

- MED87. Two Channel Digital Oscilloscope 70 MHz.

EXERCISES AND PRACTICAL POSSIBILITIES

1.- Study of the shape of the applied magnetic field.
2.- Study of the polarity of the applied magnetic field.
3.- Study of the intensity of the applied magnetic field according to the position of the 15 cm coils.
4.- Study of the intensity of the applied magnetic field according to the position of the 30 cm coil.
5.- Study of the piezoelectric effect over a magnetic field.

REQUIRED SERVICES

- Electrical supply: single-phase 200 VAC – 240 VAC/50 Hz or 110 VAC – 127 VAC/60 Hz.

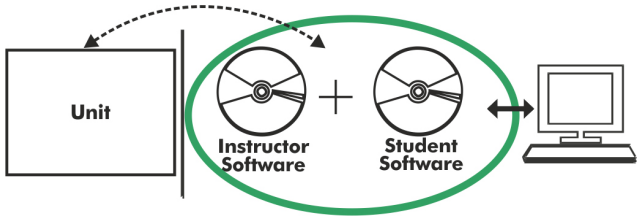
DIMENSIONS AND WEIGHTS

BIMAG:
- Dimensions: 1000 x 500 x 550 mm approx.
  (39.37 x 19.68 x 21.65 inches approx.)
- Weight: 25 kg approx.
  (55 pounds approx.)

REQUIRED ELEMENTS (Not included)

- MED87. Two Channel Digital Oscilloscope 70 MHz.

BIMAG/ICAI. Interactive Computer Aided Instruction Software:



With no physical connection between unit and computer, **this complete software package consists of an Instructor Software (EDIBON Classroom Manager -ECM-SOF) totally integrated with the Student Software (EDIBON Student Labsoft -ESL-SOF)**. Both are interconnected so that the teacher knows at any moment what is the theoretical and practical knowledge of the students.

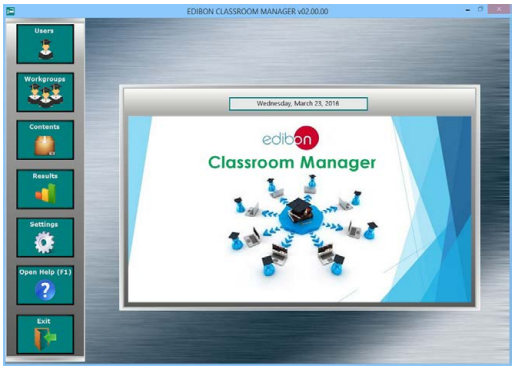
Instructor Software

- ECM-SOF. EDIBON Classroom Manager (Instructor Software).

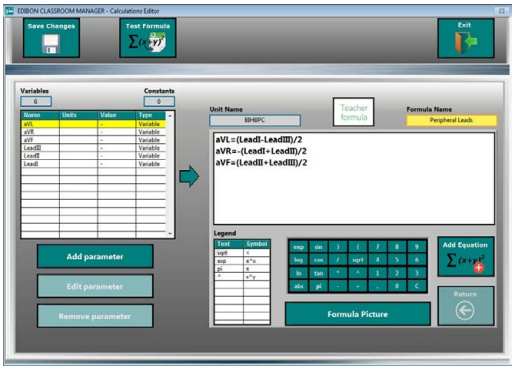
ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... so the teacher can know in real time the level of understanding of any student in the classroom.

Innovative features:

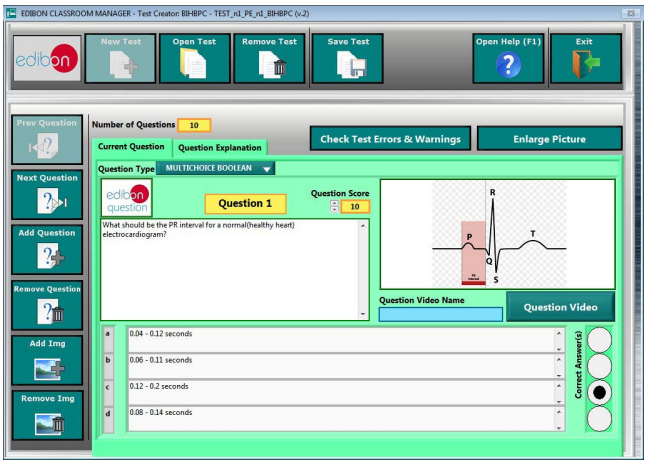
- **User Data Base Management.**
- **Administration and assignment of Workgroup, Task and Training sessions.**
- **Creation and Integration of Practical Exercises and Multimedia Resources.**
- **Custom Design of Evaluation Methods.**
- **Creation and assignment of Formulas & Equations.**
- **Equation System Solver Engine.**
- **Updatable Contents.**
- **Report generation, User Progression Monitoring and Statistics.**



ECM-SOF. EDIBON Classroom Manager (Instructor Software) Application Main Screen



ECAL. EDIBON Calculations Program Package - Formula Editor Screen



ETTE. EDIBON Training Test & Exam Program Package - Main Screen with Numeric Result Question

ERS. EDIBON Results & Statistics Program Package - Student Scores Histogram

Optional

Student Software

- ESL-SOF. EDIBON Student Labsoft (Student Software).

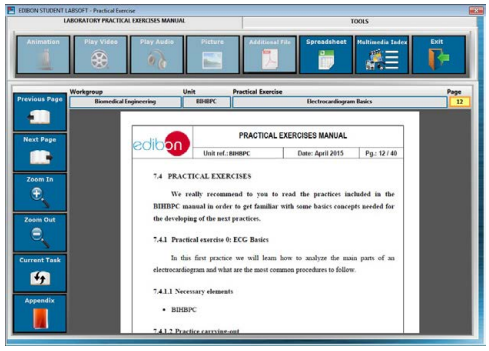
ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

Innovative features:

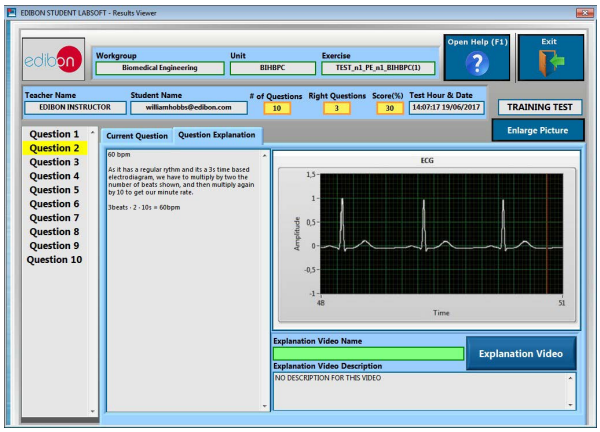
- **Student Log-In & Self-Registration.**
- **Existing Tasks checking & Monitoring.**
- **Default contents & scheduled tasks available to be used from the first session.**
- **Practical Exercises accomplishment by following the Manual provided by EDIBON.**
- **Evaluation Methods to prove your knowledge and progression.**
- **Test self-correction.**
- **Calculations computing and plotting.**
- **Equation System Solver Engine.**
- **User Monitoring Learning & Printable Reports.**
- **Multimedia-Supported auxiliary resources.**

For more information see **ICAI** catalogue. Click on the following link:
www.edibon.com/en/interactive-computer-aided-instruction-software

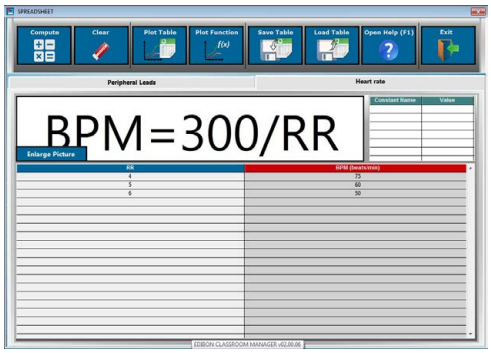
ESL-SOF. EDIBON Student LabSoft (Student Software) Application Main Screen



EPE. EDIBON Practical Exercise Program Package Main Screen



ERS. EDIBON Results & Statistics Program Package - Question Explanation



ECAL. EDIBON Calculations Program Package Main Screen

✱ Specifications subject to change without previous notice, due to the convenience of improvement of the product.

C/ Julio Cervera, 10. Móstoles Tecnológico.
28935 MÓSTOLES. (Madrid). ESPAÑA - SPAIN.
Tel.: 34-91-6199363 Fax: 34-91-6198647
E-mail: edibon@edibon.com Web: **www.edibon.com**

Edition: ED01/25
Date: August/2025

REPRESENTATIVE:

T.S.A.
TECNOLOGIA E SISTEMI AUDIOVISIVI

Via delle Industrie, 71/A, 20864 Agrate Brianza (MB), Italia
Tel. 02 9574 9032
Email info@tsa-av.com
Web: www.tsa-av.com