biosys

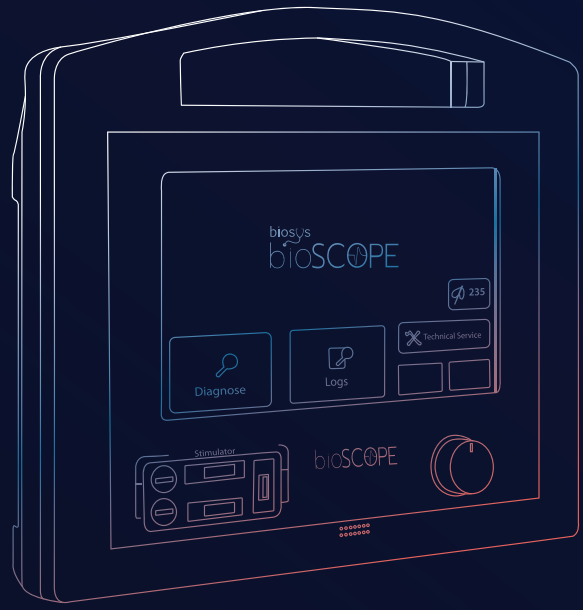
BIOSCOPE

Reliable Protection of
Nerve Functions

biosysmed.com

biosys

Innovative Medical Technologies



bioSCOPE

biosysmed.com

biosys

INNOVATIVE MEDICAL TECHNOLOGIES

Since 2012, Biosys has has been producing innovative medical technologies with the R&D knowledge of expert engineers and doctors with high field experience, creates new generation solutions by identifying the needs of the sector. It constantly works to improve healthcare services worldwide and make it accessible to more people.

Biosys Biomedical Engineering Inc. gained experience in the sector with the cooperation of Aselsan, Arçelik and Baykar Savunma in its previous projects, and then started to produce the Neuromonitor device in its own facilities.

biosysmed.com

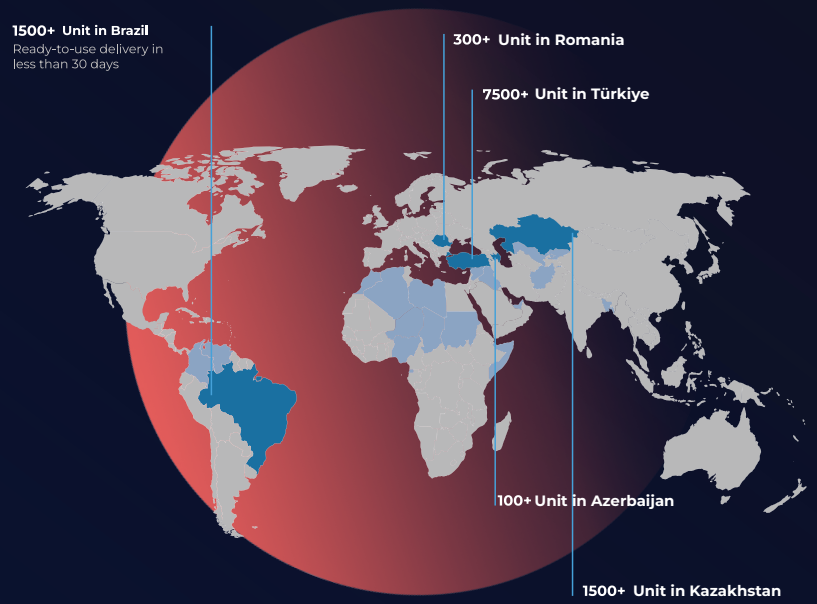
biosys

DETAILED RESEARCH, **CORRECT OUTCOME**

We Make a Difference in the Medical Device Industry With New Generation Technologies.

As Biosys, as a result of the research we conducted to meet the needs of the health sector, we realized that there are vulnerabilities especially in medical device systems and that these vulnerabilities directly affect both healthcare professionals and patients. In line with this awareness, as a result of 5 years of R&D, which we progressed with the consultancy of specialist doctors, we created the Biyovent Intensive Care Type Mechanical Ventilator Device.

With Biyovent, which we developed with the support of the Republic of Türkiye Ministry of Science, Industry and Technology, TUBITAK and Bilkent University Cyberpark, we are breaking new ground in Türkiye in the production of intensive care type mechanical ventilator devices and also, making a difference in the world health sector thanks to its high-level features. In addition to achieving great success in a short time with this new generation technology, we contribute to the health of many individuals around the world.



15000+
Devices

30+
Countries

20
Delivery in less than twenty days

biosysmed.com

biosys

INNOVATIVE DESIGN
FUNCTIONAL USE

Bioscope Neuromonitoring Device minimizes the risk in operations such as thyroid, parathyroid, hand and face surgery, ENT surgery where the risk of nerve damage is high. It ensures patient safety by testing nerve function integrity during the operation. Audio and visual feedback based on data obtained from the patient guides the operator. Helps prevent injury and permanent damage.

WHY **BIOSCOPE** ?

- Maximum patient and doctor safety
- Long-term battery endurance
- Detailed operation report and documentation
- Functional and aesthetic interface
- Portable design and easy installation

biosysmed.com

biosys

EASILY PORTABLE,
MULTI-FUNCTIONAL NEUROMONITOR

Working **Principle**

- Electrodes are used for direct contact with the nerve and surrounding tissues
- Electrical stimulation is generated with the electrodes used.
- The electrical stimulation is transmitted to the relevant muscle by the stimulated nerve. This electrical signal generated in the muscle is transferred to the device.
- This electrical signal transferred to the device is converted into sound and image in the device.
- The resulting signals are controlled by the operator.
- The operator evaluates the signal together with the image and sound.

Neuromonitoring not only detects the location of the recurrent laryngeal nerve, but also precisely detects variant nerve tissues, finds impaired loci, helps to determine the position of the neural restoration process, and helps to interpret the state of the function of the vocal cords after the operation.

Physical **Features**

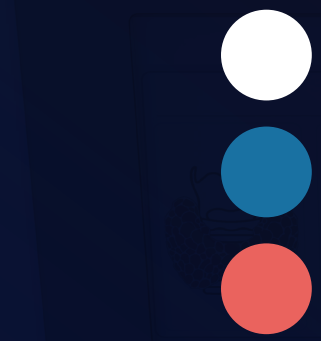
- Height: 30 cm.
- Width: 35 cm.
- Depth: 12 cm.
- Weight: 4.5 kg.

biosysmed.com

biosys

HIGH DATA SAFETY,
AND DETAILED DOCUMENTATION

Your Health is in Safe Hands with High Safety Measures



Consumables and Accessories

- The device works with adapter cable and control connection cable.
- Suitable for monopolar and bipolar probe use.
- EMG Endotracheal Tube and EMG electrodes are suitable for use.

Technical Speficiations

- Audio and visual feedback
- Data recording and reporting
- 2 hours battery life
- Electrode status check with impedance measurement
- Artifact protection
- Hibernate (Screen deactivation)

Modlar

- Single channel measurement
- Dual channel measurement

Electrical Feeding

- Current: 2 A
- Voltage: 19 VDC
- Watt: 40 W
- EMG Isolation: 5000V
- Stimulatör İsolation: 3750 V
- Medical Grade Adapter Usage

Stimulator Parameters

- Current: 0.01-30 mA
- Frequency: 1 Hz - 5 Hz
- Output Sensitivity: ±0.01 mA ± 10%
- Measurement Accuracy: ±0.02 mA ± 10%
- Compliance Voltage: 36 V (Optional 90 V)
- Wave Width: 50, 100, 150, 200, 250, 300 us
- Graph Time: 10, 20, 30, 40, 50, 100 ms
- Time to reach target current: Less than 10 us

biosysmed.com

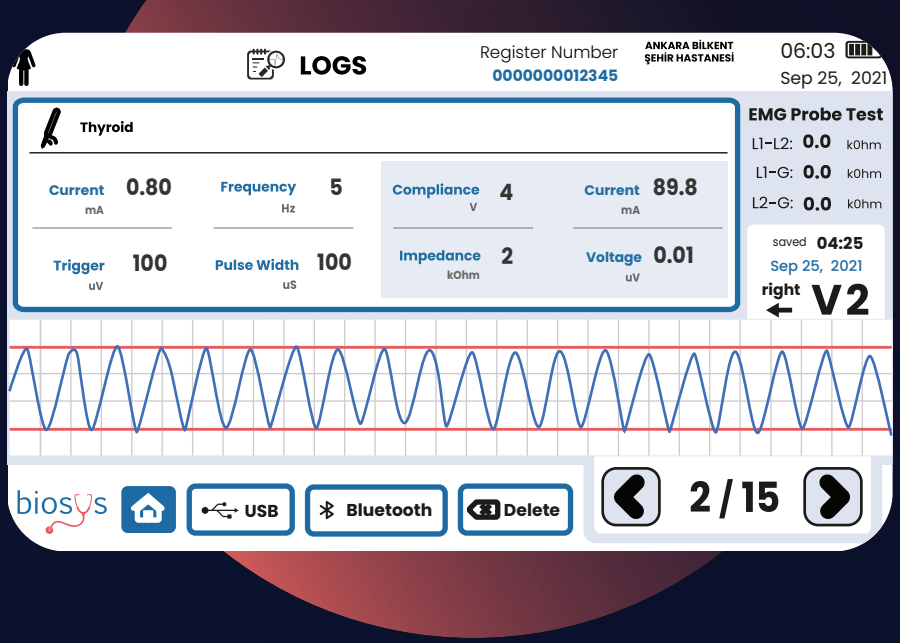
biosys

RELIABLE PROTECTION OF **NERVE FUNCTIONS**

Neuromonitoring

Intraoperative neuromonitoring (IONM) is the process of examining the nervous system by creating electrical impulses. Depending on the type of surgery, electrodes are attached to the muscle groups to be monitored.
The attached electrodes record the response of the nervous system to electrical stimulation and show the changes in the functioning of the nrevous system on the screen of the neuromonitor device. It transmist unusual data occuring in the nervous system to the user.

BIOSCOPE, aims for simplicity wiht its screen design and aims to convey the desired operations to the operator quickly and accurately.



Screen Features

- 10.1" touch screen
- 1024 x 600 resolution
- 50 uV- 50 mV vertical screen modes

biosysmed.com

biosys

TECHNICAL **FEATURES**

General **Features**

Audio and visual feedback
Data recording and reporting
Electrode status check with impedance measurement
Artifact protection

Physical **Features**

Height	30 cm
Depth	12 cm
Width	35 cm
Weight	4.5 Kg

EMG **Amplifier**

Input	1/2 Channel
Automatic/Manuel Gain Selection	1-50K
Bandwidth	30 Hz - 30 KHz
Input Sensitivity	1uV - 40 mV
Input Noise	8 nV/√Hz maximum input voltage noise at 1 kHz 100 fA/√Hz current noise at 1 kHz
Input Impedance	30 GΩ
Commen Mod Rejection	>90 dB@60 Hz
DC Offset Rejection	±4.00 vDC

Internal **Fuse**

32 mA Model F, 250 V 5 x 20 mm (Other similar fuses may not provide the same degree of protection)

Modes

Single Channel
Dual Channel

biosys

TECHNICAL **FEATURES**

Screen **Features**

10.1” touch screen
1024 x 600 resolution
50 uV-50 mV vertical screen modes
Hibernate (Screen deactivation mode)

Alerts

Battery
High Current Alert
High Voltage Alert
High Temperature Alert
Voltage Alert
Prob Connection Alert

Stimulator **Parameters**

Current	0.01-30 mA
Frequency	1 Hz-5 Hz
Output Sensitivity	±0.01 mA ± 10%
Measurement Accuracy	±0.02 mA ± 10%
Compliance Voltage	36 V (Optional 90 V)
Wave Width	50, 100, 150, 200, 250, 300 us
Compliance Voltage	10, 20, 30, 40, 50, 100 ms

Electrical **Feed**

Current	2 A
Watt	40 W
Voltage	19 VDC
Medical Grade Adapter Usage	
Double Electrical Insulation	
2 Hour Battery Endurance	

biosys

Factory of Biosys in Batman

BIOSCOPE

Reliable Protection of **Nerve Functions**

biosys

Üniversiteler Mahallesi İhsan Doğramacı Bulvarı No: 23/C
ODTÜ Teknokent 06800 Çankaya/ANKARA

0850 800 62 97

biosysmed.com