



Wherever Motor
Nerves are at Risk



FACE | NECK | ELBOW | HIP | HAND | KNEE | FOOT & ANKLE



CliniLab
MEDICAL PRODUCTS

Exclusive Representative in Greece





Nerve Stimulator & Locator Device

Immediate and reproducible visual confirmation of nerve function and location in the surgical field, even in obscured anatomy.





The **Checkpoint Stimulator/Locator** is a single-use device intended to provide electrical stimulation of exposed motor nerves or muscle tissue to locate and identify nerves and to test nerve and muscle excitability

- Stimulus Frequency: 16Hz (+/- 1Hz)
- Stimulus Amplitude: User Selectable: 0.5mA (+/- 0.05mA), 2mA (+/- 0.2mA), 20mA (+/- 2mA)
- Stimulus Pulse Duration: Continuously adjustable from 0 μ s to 200 μ s (maximum setting is +/-20 μ s)
- Operating Life: Approximately seven (7) hours of operation (continuous or intermittent stimulation)
- Power Source: Two size N alkaline cells (permanently sealed)





Biphasic Waveform

Generation of biphasic waveform for safe and continuous nerve activation for as long as the stimulation probe is applied

360° LED Indicator Light

Provides continuous visual confirmation that stimulus is being delivered

Pulse Width Slide Control

Continuously variable intensity at each amplitude to fine-tune stimulus parameters

Selective Amplitude Switch (0.5mA, 2mA, 20mA)

Adjust threshold stimulus desired for precise, highly localized individual nerve stimulation to wide and deep generalized nerve activation

Advanced Electronic Circuitry

Performs continuous circuit and software checks insuring reliable stimulus parameters are delivered and maintained

Ergonomic, one-hand design

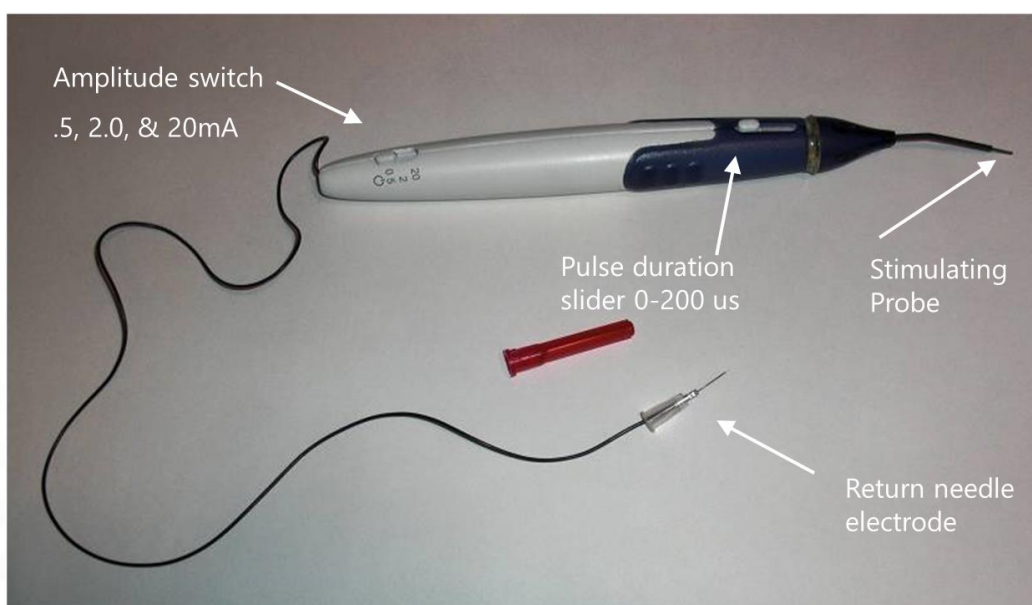
Easy to use; puts all the controls in the surgeon's hand

Built-in Power Supply

Self-contained batteries eliminate the need for external electrical connection; no cables in the sterile field

Sterile, Ready to Use Packaging

No advance preparation by OR staff required; allows for restocking option if not used



Three Primary Clinical Uses

- **Neurorestorative**

Intraoperative assessment of nerve function:

- Nerve Releases
- Neurolysis
- Nerve Transfer
- Neuromas
- Brachial Plexus Exploration

- **Neuroprotective**

Intraoperative nerve location and protection in revisions & procedures when nerves at risk

- Proximal Humeral Fx
- Total Elbow Hardware removal
- Revision Hip
- Revision Shoulder
- Reverse Shoulder
- Tumor Resection

- **Functional Assessment**

Intraoperative assessment of muscle function:

- Tendon Transfer
- Free muscle Transfer
- Tenolysis
- Muscle Viability



Orthopedic Surgeons

- Brachial Plexus surgery/Nerve Transfer
- Shoulder Revision Surgery
- Ulnar nerve transposition/Cubital tunnel revision surgery
- Proximal Humeral Fracture repairs
- Latarjet
- Tenolysis
- Neurolysis
- Tendon Transfer surgery
- Tumor excisions
- Muscle Free Flap surgery

Trauma Surgeons

- Evaluating Tissue Viability in Traumatic Injuries
- Identify nerves on the field of trauma
- Assess residual muscle function
- Evaluate repairs made prior to closure
- Non-Unions

Clinical Use Settings

- Low amplitude settings 0.5 and 2 mA used for:
 - Direct nerve stimulation
 - Identification of individual fascicles
 - Threshold testing
- 20 mA setting provides stimulation at levels providing muscle contraction for:
 - Regional Stimulation
 - Identifying muscle strength
 - Assessing tendon excursion
 - Identifying nerve/muscle integrity in trauma cases
 - Identifying nerve/muscle tissue in tumor resection and revision surgeries (scar tissue present)

Specifications

- Biphasic Waveform
 - No build up of electrical current within the tissue with inclusion of physiologic current recovery phase
 - Permits prolonged tissue contact without the risk of injury
 - Avoids tissue impedance seen in direct current devices
- Variable Pulse Width (stimulus duration)
 - Allows for stimulation of larger, deeply located excitable tissues
 - Allows surgeon to gradually hone in on nerve as pulse width is decreased
 - Allows for stimulation through impedance or surrounding tissue, such as scar or tumor

General Instructions for Use 1/2

- Place the needle return electrode in subcutaneous tissue:
 - In the sterile field but away from the area to be stimulated. If stimulation occurs at the needle site, move the needle.
 - Do NOT cross the midline of the body.
 - Do NOT place in muscle or near other excitable tissue.
- Prepare to deliver stimulation
 - Turn ON the Checkpoint by moving the stimulus amplitude switch from 0 to 0.5 mA.
 - The visual indicator will turn YELLOW, indication that the Stimulator is ON but not generating a stimulus output (because pulse duration is still set to 0 μ s)
 - Increasing amplitude or pulse duration increases the strength of stimulation
 - Amplitude switch provides low and high settings
 - Low amplitude (0.5 & 2 mA) used for direct nerve stimulation.
 - High amplitude (20 mA) used to obtain muscle contraction and should not be used for direct nerve stimulation.
 - If a nerve is thought to be in close proximity and no response is obtained at the low amplitude settings, the surgeon may increase the amplitude to 20mA and gradually increase the pulse width. In this case, the high amplitude permits the surgeon to stimulate a nerve that may be encased in scar tissue and thus not responsive to low amplitudes.
 - Pulse duration slider is used to gradually increase strength at each of the amplitude settings.
 - The stimulator delivers a continuous train of stimulation, which will result in a sustained response as long as the stimulus is applied.
- Deliver Stimulation
 - Place probe in contact with tissue.
 - Adjust the pulse duration slider gradually to increase the level of stimulation. The visual indicator will FLASH YELLOW indicating that stimulation is being delivered.

General Instructions for Use 2/2

- **Contraindications**

- Do NOT use this Checkpoint when paralyzing anesthetic agents are being used (could lead to inaccurate assessment of nerve and muscle function)

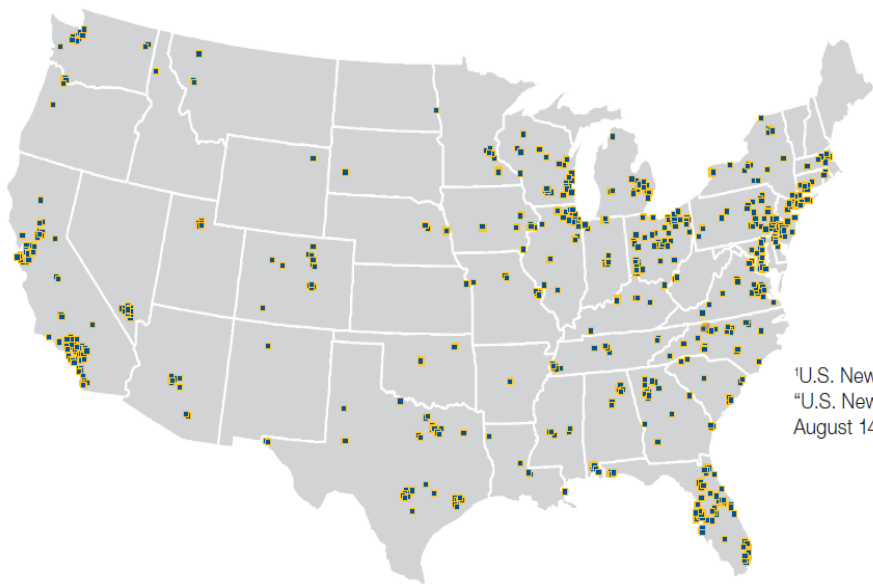
- **Warnings**

- Do NOT apply stimulation across the patient's chest because the introduction of electrical current into the chest may cause rhythm disturbances to the patient's heart.
- Do NOT leave Stimulator unattended in the surgical field.
- Do NOT use Stimulator in the presence of flammable anesthetics.
- Do NOT use this Stimulator in patients with implanted electronic devices. Stimulus current near such devices may cause them to malfunction.
- Do NOT use in cerebrospinal fluid.
- Do NOT use the Stimulator while delivering electrocautery. Electrocautery may interfere with or damage the Checkpoint Stimulator or cause injury.



Over 400 (and 19 of top 20¹)

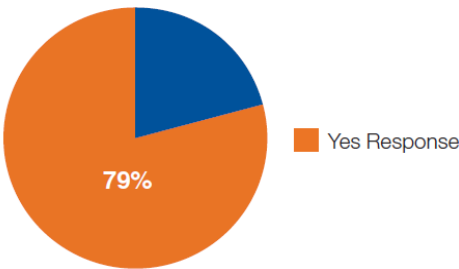
U.S. hospitals trust Checkpoint



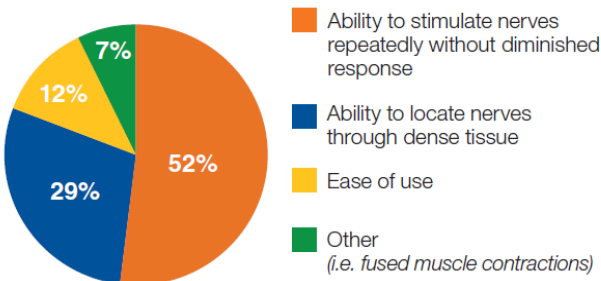
¹U.S. News & World Report
"U.S. News Announces 2018-19 Best Hospitals"
August 14, 2018

Why do they trust Checkpoint?*

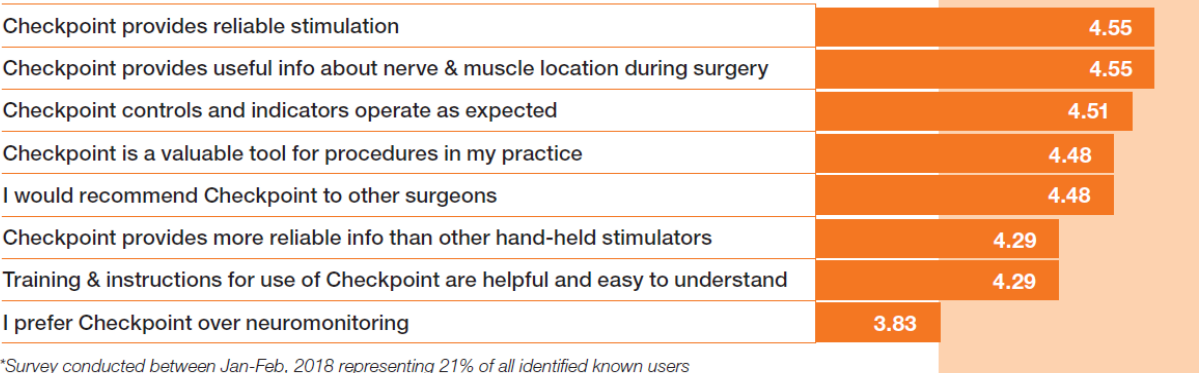
Has Checkpoint Served A Role In Helping You Prevent Iatrogenic Nerve Injury?



What Is The Most Valuable Aspect of Checkpoint



Please Rate Checkpoint On The Following Areas
(1=strongly disagree/5=strongly agree)



*Survey conducted between Jan-Feb, 2018 representing 21% of all identified known users





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