

TENS therapy is a safe, simple, low-cost and effective alternative to narcotic drugs for counteracting chronic pain. The unique and patented BioTENS, with its balanced bipolar waveform, is exceptionally comfortable for the patient while providing stimulation that does not cause iontophoresis ... the electrostatic driving of charged molecules and/or bacteria through the patient's skin.

BioTENS is an Ultra-Low Frequency, Transcutaneous Electrical Neural Stimulator (ULF-TENS). It delivers bipolar, precisely regulated, rhythmic stimulus to both masticatory and facial muscles. BioTENS was developed as the first ULF-TENS to be large enough for office use by clinicians and, at the same time, small enough for private, home use by patients with chronic pain conditions (by prescription only).

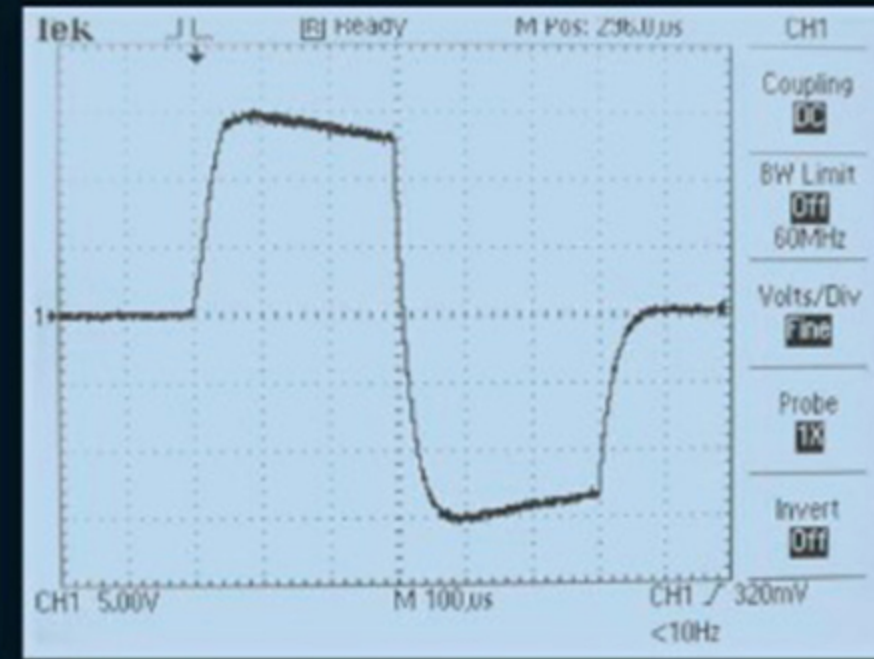
One pair of electrodes can provide gentle stimulation, mediated through the fifth (Vth) and seventh (VIIth) cranial nerves, so that the benefits are received by the entire masticatory and facial musculature. When compared to 3-electrode units that require a ground on the back of the neck, the BioTENS is rated "much more comfortable" by patients. Clinicians appreciate BioTENS for its "precise control of left / right balance."

QuadraTENS was designed in 2006 for medical and dental applications. It is a dual channel, ULF-TENS that is equivalent to the BioTENS. Two channels allow you to relax two sets of muscles simultaneously. However, the QuadraTENS also provides a "burst" mode that produces an increased contraction without the additional "shock" inherent in the single high amplitude spike that is required to produce the equivalent degree of muscle contraction. The burst mode has been optimized to increase the effectiveness of ULF-TENS, especially when applied to larger muscles such as the trapezius.

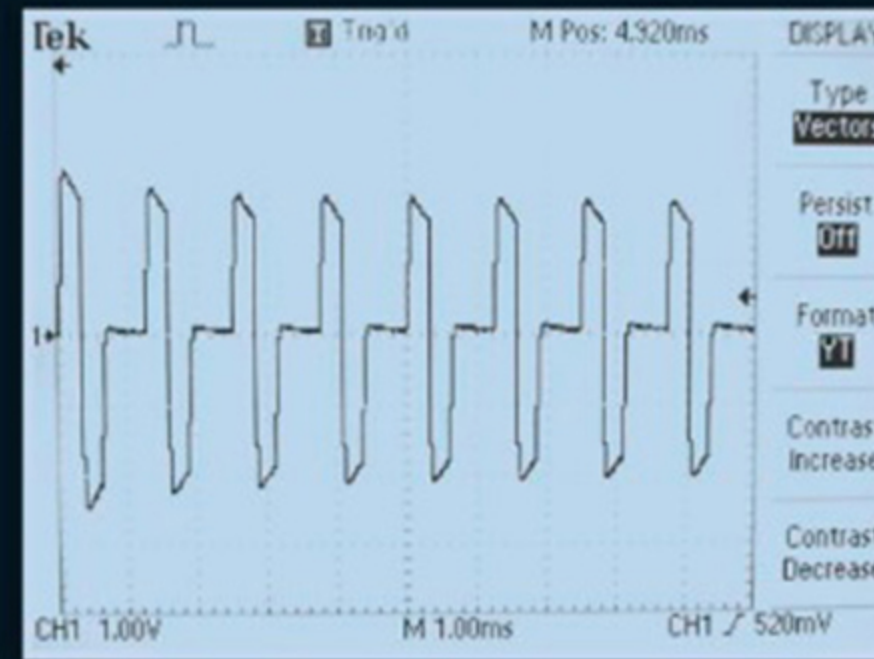
An optional pair of electrodes placed bilaterally on the posterior triangle of the neck, allows for stimulation of the eleventh (XIth accessory) cranial nerve, which contains the motor fibers to the trapezius and the sternocleidomastoid muscles. Alternatively, the electrode pair may be placed directly over the motor point of the trapezius or at any other electrode site.

Due to the 28 millisecond delay between channels, the QuadraTENS completely eliminates cross-over current between channels and provides a masking function that is very useful to patients that are sensitive to craniofacial TENS stimulation.

Unlike drugs, ULF-TENS therapy has no side effects (nausea, tiredness, dependence, etc.). In the past twenty years, many clinicians and patients have found TENS therapy to be remarkably helpful in managing facial, head and neck pain.



QuadraTENS



BioRESEARCH TENS units are lightweight, easy to operate, extremely portable. Patient can receive treatment virtually anywhere in your office. Simple, accurate balance and amplitude controls, precise setting positions and graphics help assure optimum treatment. The QuadraTENS is most commonly used for in-office treatments and the BioTENS is commonly prescribed to patients for home use. Clients can only purchase TENS units directly from BioRESEARCH if they have a prescription.

Performance Specifications

BioTENS

PulseShape: Biphasic, variable symmetry with zero net DC component.

Output: Constant current. Output parameters stable over battery range.

Amplitude Range : 0.7mA to 100 mA (peak to peak).

Pulse Width Range: 300 to 900 microseconds.

Frequency Range: 40 to 100 pulses/minute. Very low frequency.

Balance Range: 1:3 to 3:1.

External Indicators Green LED = normal mode (output on) Yellow LED flashing = stand-by (output off).

Controls: Balance control to equalize the right and left muscle responses. Amplitude dial with "OFF" to 10 range is used to set intensity.

Programmables: Frequency, pulse width and symmetry are located inside battery compartment and are programmable only by clinician. (For patient home use.)

Power Source: A standard, disposable 9 volt battery. Long battery life: 1500 hours of typical use with alkaline or heavy duty type.

Quadra TENS

Pulse Shape: Biphasic, variable symmetry with zero net DC component

Output: Constant current. Output parameters stable over battery range

Amplitude Range: 0.7mA to 80mA (peak to peak)

Pulse Width Range: 300 to 900 microseconds

Frequency Range: 60 pulses/minute. Very low frequency

Balance Range: 1:3 to 3:1

Channel Delay: 28 millisecond delay between channels to guarantee Zero Crossover between channels

External Indicators: Green LED = normal mode (output on) Yellow LED flashing = stand-by (output off) Red = Burst on (8 pulses at 800 Hz)

Controls: Balance control equalizes the right and left muscle responses Amplitude dial with 1 to 9 range is used to set intensity

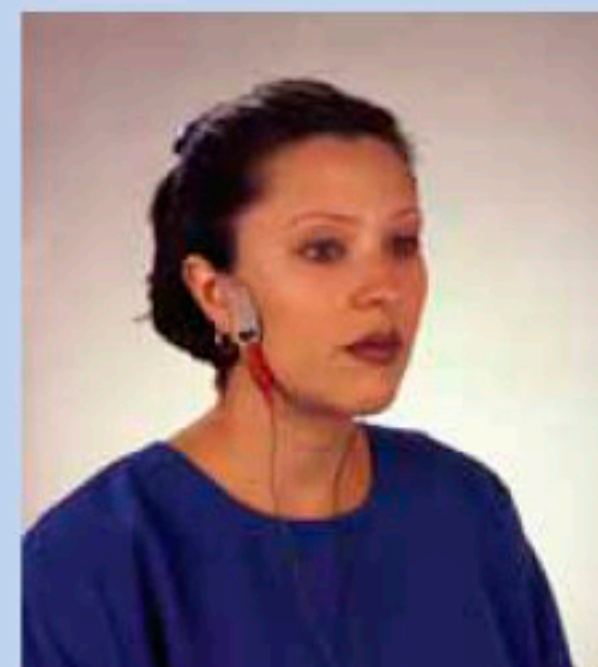
Power Source: A standard, disposable 9 volt battery. Long battery life: 100 hours of typical use with alkaline battery type. Rechargeable can be used with external charger.

INDICATIONS: BioTENS and QuadraTENS are indicated for the symptomatic relief and management of chronic, intractable pain and adjunctive treatment of post-surgical and post-traumatic acute pain.

CONTRAINDICATIONS: BioTENS and QuadraTENS devices are not recommended for patients with known heart disease or patients fitted with demand-type cardiac pacemakers. Do not apply on the eyes or over the carotid sinus. Do not use for an undiagnosed pain syndrome until etiology has been established. BioTENS and QuadraTENS (type) devices are ineffective for pain of central origin.

WARNINGS: For external use only. BioTENS and QuadraTENS devices should be used only under the continued supervision of a practitioner licensed to use such devices. Use only as prescribed. The

safety of BioTENS or QuadraTENS devices for use during pregnancy or delivery has not been established. BioTENS and Quadra-TENS devices should not be used or handled by children without adult supervision. Do not use with another device containing metals and electronic devices. **PRECAUTIONS:** Isolated cases of skin irritation may occur at the site of electrode placement following long-term application of BioTENS or QuadraTENS devices. Use-effectiveness of BioTENS and QuadraTENS devices is directly related to patient selection. **ADVERSE REACTIONS:** There is a possibility of skin irritation at the electrode site. **CAUTION:** Federal law restricts this device to sale by or on the order of a clinician licensed by the law of the state where she/he practices to use or order the use of the device.



BioRESEARCH Assoc. Inc.

QuadraTENS™

To learn more about the products, services and seminars offered by BioRESEARCH Assoc. Inc. call **800-251-2315** or visit **www.biojva.com**

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