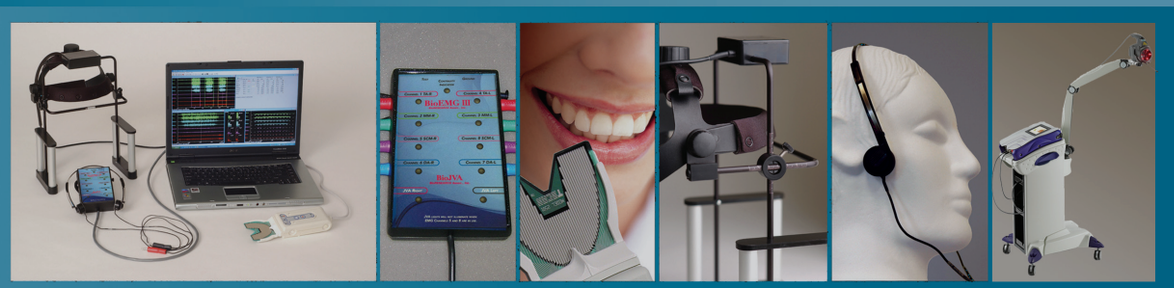
Bio RESEARCH ASSOCIATES INC.

Biometric Diagnostic Aids & Treatment Devices

Your guide to the latest technology



800-251-2315 . www.BioResearch*Inc*.com . Info@BioResearch*Inc*.com

BioJVA ™

All occlusal analysis starts with the TM Joint

BioJVA Joint Vibration Analysis

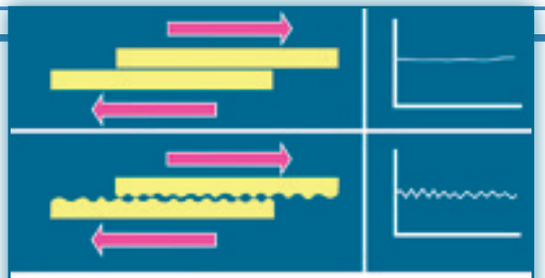
BioJVA is a diagnostic aid used to measure how the patient's joints are functioning before starting any case that repositions the mandible. In less than 5 minutes, your team can provide a highly accurate, quantitative test analyzing the stability and function of the Temporomandibular Joint.

BioJVA or "Joint Vibration Analysis" is a quick, non-invasive method for objectively evaluating the Temporomandibular Joints.

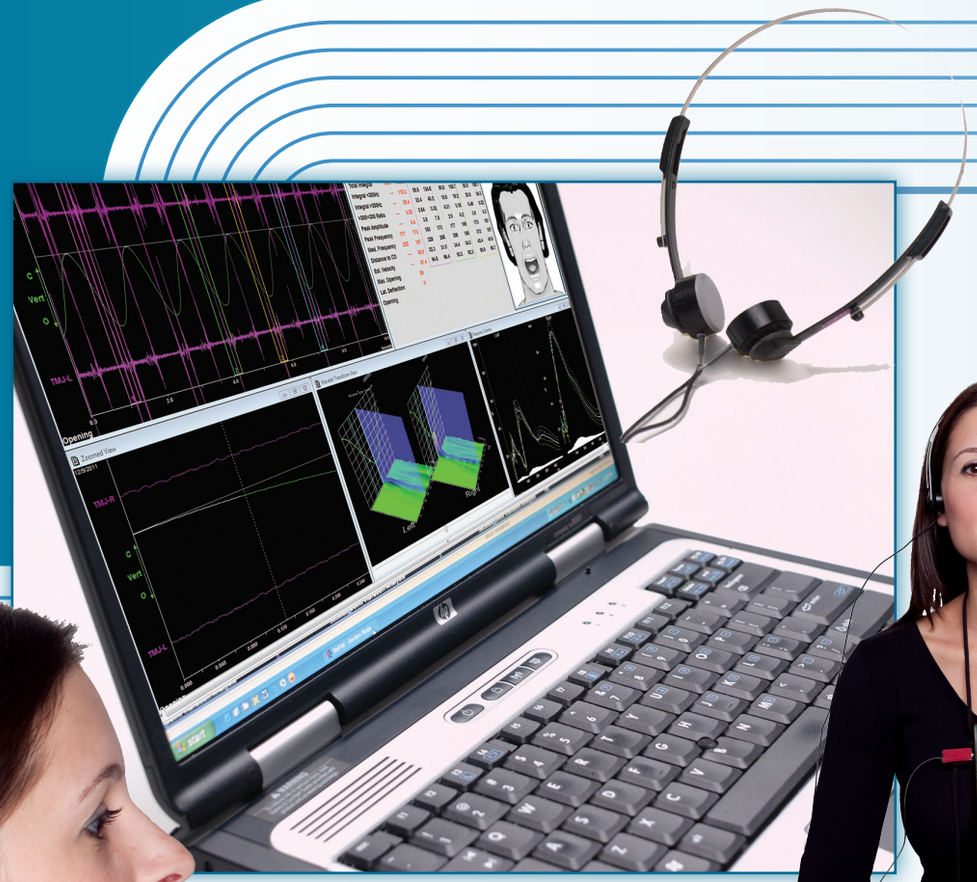
Much like the way dentists evaluate the wear on the teeth, JVA enables the dentist to get a sneak peek into the health of the jaw joint. BioJVA Joint Vibration Analysis is based on simple principles of motion and friction. When smooth surfaces rub together, they create little friction and little vibration. If these surfaces become rough, then friction and vibration are created when these surfaces articulate.

Why JVA?

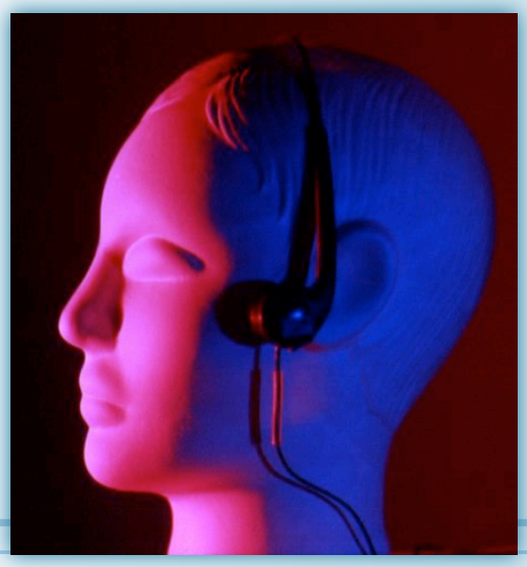
- Identifying a patient's joint problems before symptoms are present
- Proactively guiding the dentist in treatment planning
- Allowing the patient to be educated and understand the health of his or her TM Joints
- Testing treatment impact instantly



Simple Principle



JVA provides a fast, noninvasive and repeatable measurement of TMJ function to aid in your diagnosis. Understanding TMJ function is vital anytime you are changing the vertical, lateral, or A/P position of the mandible. Common treatments that change mandibular posture such as TMD treatment, orthodontics, restorative, and sleep dentistry can benefit from JVA testing.

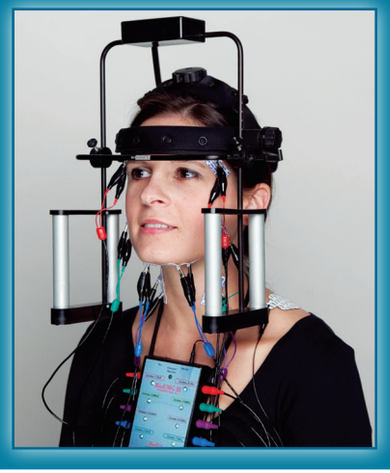


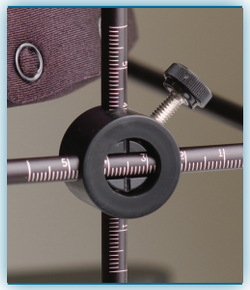
For suggestions on implementation including protocols, practice management, and billing, please call **800-251-2315.**

JT-3D ™

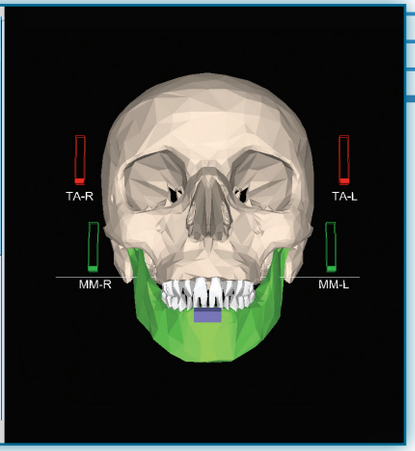
3D Movement and Position of the Jaw

Jaw Tracking generates the most accurate examination of mandibular movement available. Quantitative, reproducible data of deviations, defections and range of motion provides an unparalleled analysis of mandibular kinesiology.
JT-3D, or “Jaw Tracking”, allows the clinician to analyze jaw movement in a dynamic way. The most relevant procedures include chewing, speaking, range of motion, and swallowing.
The analysis of the pattern and speed provides tremendous insight in diagnosis and treatment planning.





The all-new JT-3D records incisor-point movements in three dimensions. A small magnet, attached to the labial surfaces of the mandibular incisors, is tracked by an array of sensors to produce vertical, antero-posterior and lateral components of movement. It mounts simply, yet securely on the head, and provides an incredibly stable base for the sensors. This provides spectacular resolution even on the smallest of mandibular movements.



Jaw tracking can assist in designing optimal chewing patterns as well as detecting abnormal function which can aid in more accurate diagnosis. It also can assist in recording accurate, reproducible “bite registrations”.

Why track jaw movements? It has been widely accepted that certain aspects of mandibular movement are indicative of very specific types of TM Dysfunction. Limitation in opening, jaw movement deviations, opening deflections and restrictions in lateral or protrusive movements, along with other indications, are sited in accepted, published TMD criteria and are routinely used in diagnosing stomatognathic conditions/diseases.

The JT-3D Jaw Tracker is compatible with all current versions of the BioPAK program and can be installed as a simple plug and play device.

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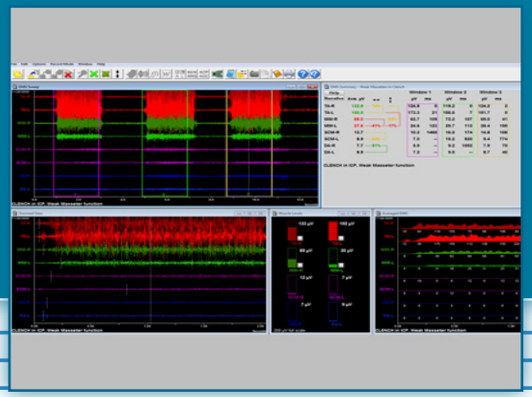
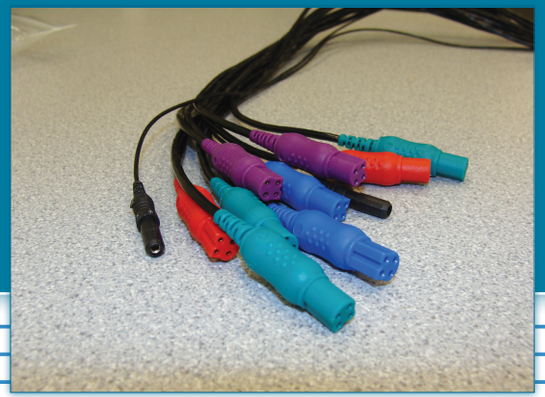
BioEMG III ™

Making Sense out of Muscle Function





BioEMG allows you to evaluate the effectiveness of your patient's craniofacial musculature. Achieving optimal muscle function gives you the confidence that treatment will fit the patient's physiology.

BioEMG, or "electomyography" allows the clinician to evaluate the efficiency of the patient musculature in rest, chewing, and clenching.

Using EMG allows for identifying improper muscle function over a period of time. Proper muscle function ensures the long term stability of the dental work.

Why EMG?

- Knowing what effect each dental procedure will have on the patient muscle function
- Understanding which dental interferences are of concern
- Creating balance between muscle groups
- Quantifying resting levels

Patients View Compliance and case acceptance

Surface EMG is the worldwide standard method for recording muscle-specific activity in skeletal muscles. It has been proven reliable in numerous studies over many years and is a clinical procedure that can be performed in any dental office. This information is invaluable to the clinician that hopes to create beautiful dentistry that works with the patients' physiology for optimum results.

EMG is the only way to objectively measure the actions and reactions of the muscles of the head and neck. This provides the ability to test your treatments and bite postitions before finalizing the treatment position.

The BioEMG III electromyograph records electrical (bio-potential) activity from eight muscles simultaneously. Microvolt signals are amplified, virtually without noise, to 5000 times their original levels. Signals are displayed on a computer as original time domain waveforms and average levels that disclose contraction patterns and relative intensities.

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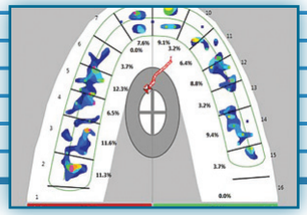
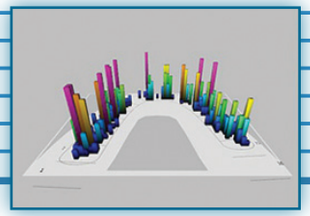
T-Scan III ™

Making Sense out of Articulating Paper

Making Occlusion an Objective Science

The T-Scan III brings unprecedented accuracy to analysis of dental occlusion, making you a more informed practitioner. This, in turn, ensures higher quality results. If you are practicing quality dentistry, the T-Scan III will elevate your potential. Employing this remarkable solution will make it easier for you to demonstrate the quality of your work, with images your patient can understand right in your office, in real-time.





Applications and Benefits

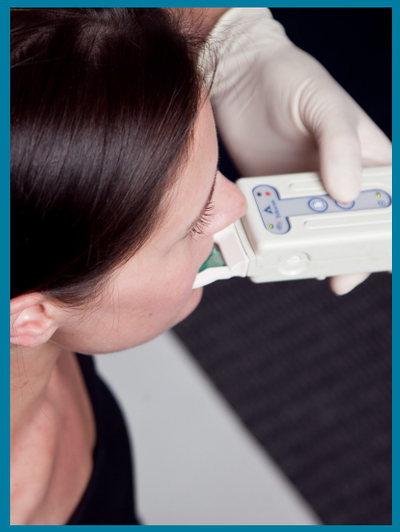
• Applications: fixed & removable prosthetics, implant prosthetics, TMD appliance balancing, occlusal equilibration, disclusion time management, periodontal management, differential diagnosis, orthodontic finishing, locating painfull teeth, & dental case finishing

• Benefits: Improved diagnoses, increased quality of care, decreased treatment time, increased comfort of dental prosthetics, reduced risk of implant failure, reduced risk of traumatized teeth, reduced risk of porcelain fractures, legal documentation of outcome, enhanced patient education, build your practice, increased referral from other clinicians

T-Scan III

The demand for beautiful and physiologically correct cosmetic restorations and implant treatments are at an all time high. Materials can fracture and implants can fail due to excessive occlusal forces and timing problems. TM disorders resulting in head/neck pain and bone/gum breakdown may also be related to occlusal force and timing problems.

The occlusal forces applied to an implant-supported prosthesis can be potentially destructive, shortening the longevity of any implant prosthesis. Material failures, screw loosening, uncementation and implant deosseointegration have been attributed to excessive occlusal loading on dental implants. Poorly directed and non-uniform occlusal loading will torque a prosthesis and apply stresses that may ultimately result in prosthetic failure.



The T-Scan III is the only tool that can quantify the timing and force of your patient's bite. It enables you to look beyond the static marks left by articulating paper. Marks that tell you only that there was contact at some point between first tooth contact and disclusion. **T-Scan III allows** you to see the order of tooth contact, and the force of each contact along the way. For the first time you can adjust the occlusion and control the order and timing of contacts. This can be used to make sure that natural teeth contact and load before implants come into occlusion.

The ability to compare bilateral contacts with pinpoint accuracy is one of the greatest strengths of T-Scan III. The software computes the forces of all the teeth, instantly summarizing this information for the clinician in new diagnostic displays that are accessible with the click of a mouse.

Here's how it works: The ultra-thin, reusable sensor, shaped to fit the dental arch, inserts into the sensor handle, which connects into the USB port of your PC, making it easy to move from one operatory to another. Evaluating occlusal forces is as simple as having a patient bite down on the sensor.

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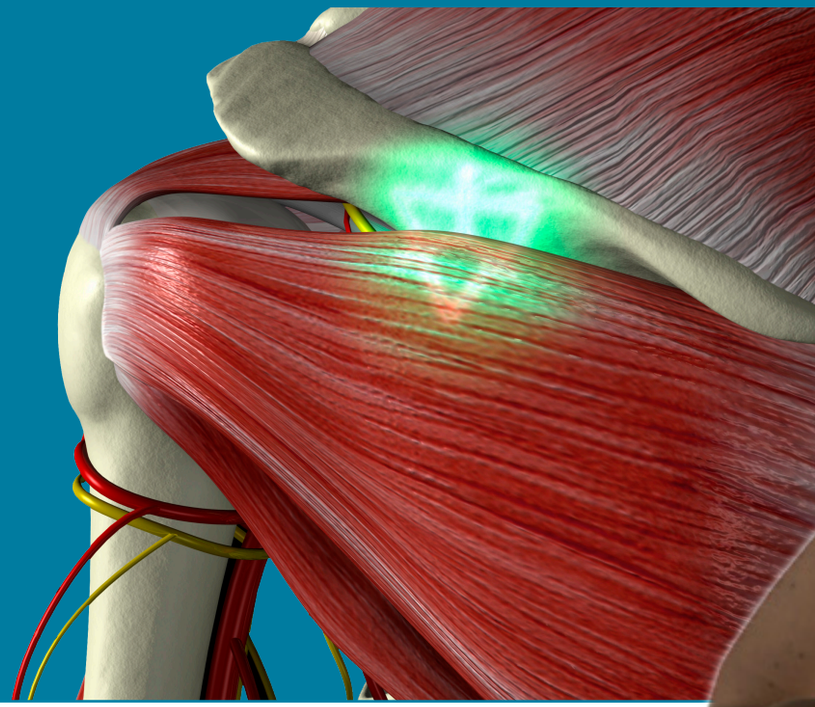
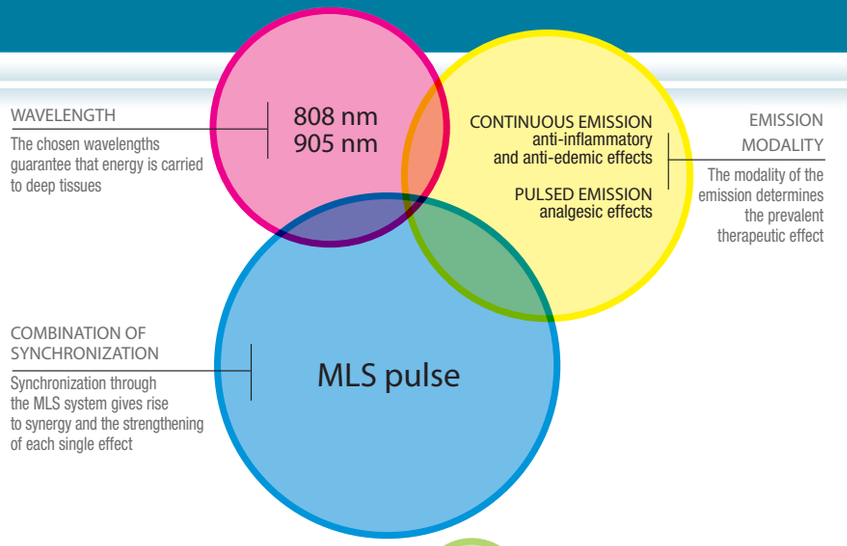
NEW

MLS

The Next Big Thing in Pain Management

Wavelengths of light activate and accelerate the processes of the body's cells to reduce pain and inflammation. One wavelength is used for analgesic effects and the other for reduction of inflammation. This diode laser offers both continuous and pulsed emissions that are synchronized for maximum healing potential. BioResearch has partnered with some of the pioneers in laser therapy in the United States and the world to specialize this laser for dental applications.





WAVELENGTH

The chosen wavelengths guarantee that energy is carried to deep tissues

EMISSION MODALITY

The modality of the emission determines the prevalent therapeutic effect

COMBINATION OF SYNCHRONIZATION

Synchronization through the MLS system gives rise to synergy and the strengthening of each single effect

THERAPEUTIC EFFECT

The marked analgesic effect and the intense anti-inflammatory and anti-edemic effect of the MLS impulse appear simultaneously, strengthening each other

Synergy and strengthening of therapeutic effects: intense anti-inflammatory and anti-edemic effect, strong analgesic effect

ADVANTAGES

Considerable mitigation of symptomatology from the first applications, brief applications providing long-lasting results over time

Considerable reduction of symptomatology till its disappearance. Reduced treatment times and long-lasting results

Better homogeneity and energy distribution

The MLS Laser uses a synchronized action of continuous and pulsed waves to obtain the optimum efficiency for targeting the anatomical structures. The light energy emitted from the MLS Therapy optical group is evenly distributed to achieve a larger surface area of treatment. The delivered energy activates the photoreceptors in the treated area, thus allowing for a larger volume of tissue beneath the skin.

Mphi 5

Mphi

Active again

Thanks to MLS Laser Therapy devices, the patient can quickly overcome the acute phase of pain with long-lasting results, finding a better quality of life and coming back in a short time to the normal activities of everyday life such as work, sports and social life.

In fact, MLS Laser Therapy not only can help to overcome the painful symptoms typical of the musculoskeletal diseases, but also represents a valuable tool for rehabilitation, as it effectively promotes the recovery of the functions that were compromised by surgery or fractures.

Indications and advantages

- **FAST TREATMENT TIMES**, from 3 to 10 minutes.
- **REDUCED NUMBER OF APPLICATIONS:** in many patients the benefits are evident since the first application and scientific studies have shown that between the fourth and fifth application the pain subsides by at least 50%, with recovery of joint functions.
- **SIMULTANEOUS ACTION** on the triad pain, inflammation, oedema.

The MLS Laser Therapy is based on a global approach: the treatment is extended to the whole muscle groups relative to the pathology and after is localized on the trigger points. It is indicated for the treatment of pain and muscle spasms, joint stiffness, arthritis pain. It promotes an increase of blood circulation and muscle relaxation.

This therapy is especially dedicated to traumas, cervical brachialgia, craniofacial pain, shoulder pain, and oedema. This therapy can be used for TMJ pain and inflammation, masticatory muscle soreness, cervical spine and trapezius soreness, trigger points, trigeminal neuralgia, lingual neuralgia (lingual, chorda tympani, glossopharyngeal nerves), temporal tendinitis (or other muscle insertion tendons), orthodontic extrusion and suture release, osseointegration of implants, and after general dental surgies.

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TENS Therapy

Relaxation of Muscles and Reduction of Pain

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.

BioRESEARCH TENS units are lightweight, easy to operate, and extremely portable. Patients can receive treatment virtually anywhere in your office. Simple, accurate balance and amplitude controls and precise settings 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. Patients can only purchase TENS units directly from BioRESEARCH if they have a prescription.

BioTENS and QuadraTENS

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).

QuadraTENS provides the clinician with an effective, low-cost alternative treatment for chronic facial, neck and back pain. The ability to target both cranial nerves and large muscle group separates the QuadraTens from all other Tens systems. It is a dual channel, ULF-TENS that is equivalent to the BioTENS. Two channels allow you to relax two sets of muscles simultaneously.

Electrodes to be worn:

• **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."

• **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.

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Relax Those Muscles

It is possible to observe the effect of the ULF-TENS on the muscles by recording the electrical activity with an electromyograph (BioEMG III). The BioEMG III can show the levels of activity before and after the TENS pulsing. Many pain patients exhibit more muscle activity before pulsing and less activity after pulsing.

NEW

M-Scan ™

Case Acceptance and Compliance Made Easy

M-Scan is specifically designed to record craniofacial muscle activity in both rest and function. This information is invaluable to the clinician who hopes to create beautiful dentistry that works with the patient's physiology for optimum results.

M-Scan ™

M-SCAN incorporates an intuitive display that is extremely fast and easy to interpret compared to conventional electromyography that must be connected to a computer. Patient functional acts are listed on the internal display. With M-Scan you can quickly and easily compare bilateral muscles for symmetry of function. The M-Scan shows not only the microvolt levels for each muscle contraction, but also the difference between the left and right sides.

Surface EMG

Surface Electromyography (sEMG) is the only way to measure the activity and reactions of muscles of the head and neck. The clinician can test the patient before treatment, during treatment, and before finalizing treatment.

Education Tool

M-scan is a patient education tool that can demonstrate the value and efficacy of your appliance.

M-scan can be used easily by Dentists, Hygienists, and Dental Assistants.

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