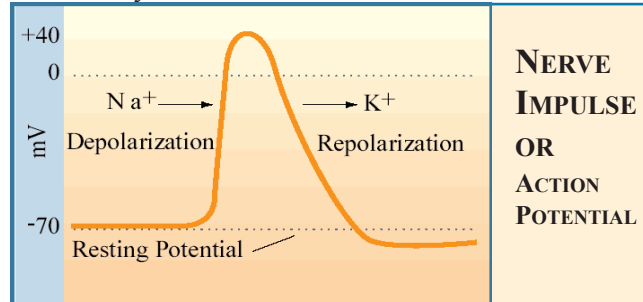


S.E.A (SYNAPTIC ELECTRONIC ACTIVATION)

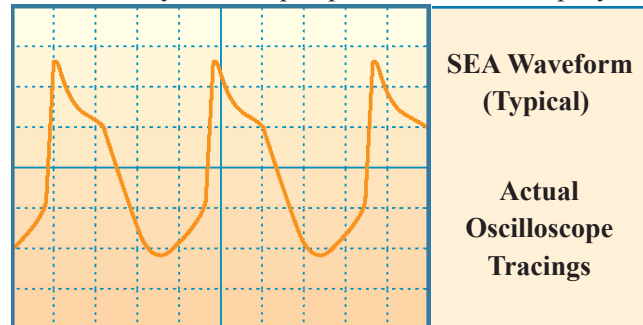
is an innovative therapeutic approach that results in the non-invasive modulation of electrical activity in the nerves. The Synaptic 3000 Modular Series Pain and Depression Management Systems are designed to treat a broad spectrum of pain syndromes.*

WAVEFORM & OUTPUT PARAMETERS

The waveform developed for SEA technology is a biological approach in that it simulates the action potential responsible for producing electrical activity in the neuron, having a fast rise time and a slow decay.



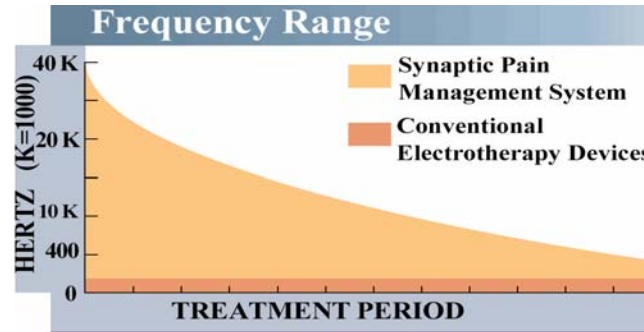
In contrast to conventional electrotherapy devices, the SEA waveform occupies the entire signal time-line at all levels of intensity. Since it is always saturated at both ends of the frequency range, the energy delivered is always greater and more efficient than with conventional devices, which is why low output parameters are employed.



IMPROVED TECHNOLOGY

The Synaptic® System has a peak output current of 57 Milliamps, a peak output amplitude of 57 volts, and a maximum charge per pulse of 71.25 microcoulombs. The frequency range employed is 400 – 40,000 Hertz.

Conventional modalities have a typical frequency range of 50-180 Hertz and commence their activity at the low end of the range, increasing to a maximum as controls are elevated. In contrast, SEA neuromodulation technology commences its frequency sweep at the maximum end of the frequency (40,000 Hertz) and as controls are elevated, the frequency is reduced to 400 Hertz.



This entire frequency sweep occurs at all levels of intensity. At each intensity level the frequency output is controlled by the patient using a Manual Treatment Pattern Generator. The MTPG is a two-way communication apparatus between the instrument and patient that inhibits accommodation.

As the frequency is reduced, the amplitude remains constant but the pulse duration increases, as does the energy under the curve. This increased energy output results in a greater clinical sensation for the patient.

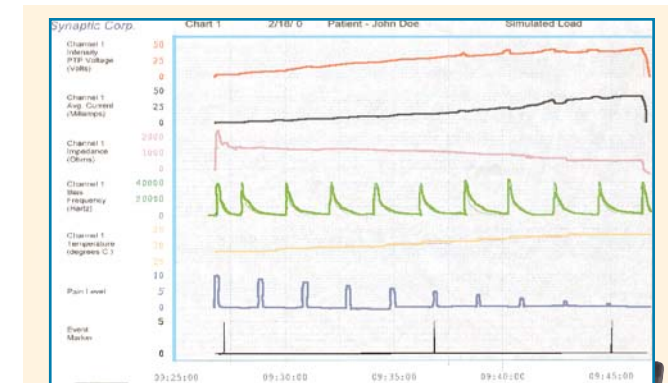
STATE OF THE ART TOOLS

Experienced practitioners along with our own clinical researchers have provided several ideas to enhance the efficacy of the Synaptic systems. Since there is now a better comprehension of how treatment frequency band widths effect different nerve function, a frequency band segment display has been added to each channel.

Users who demand display of exact applied frequency can field-upgrade to the Optional Model-301 Automatic Treatment Pattern Generator (ATPG) to display live digital frequency to + 1 Hertz.

INTRODUCING THE SYNAPTIC 3800 PDM PAIN / DEPRESSION MANAGEMENT SYSTEM

- 3-Channel Treatment with Patient Data Module
- 12 Channels of Patient Treatment Data Available
- High-current Body Treatment for Treating Acute & Chronic Pain*
- Microcurrent Cranial Stimulation for Treating **Depression, Anxiety & Insomnia**
- Physician Selected Treatment Programs ATPG Module
- Sweep Frequency, Single Frequency and Double Modulated Frequency Outputs
- Pain Reduction Program
- Automatic Documentation of a Patient Treatment Session
- Provides Physician Guidance for Staging Ongoing Sessions
- Proof of Treatment to assist Insurance Company Billing
- Documented Patient Progress for Insurance Review
- Record Treated Tissue Temperature Variation
- Record Treated Tissue Impedance Variation
- Record Treated Tissue Current Flow During Treatment
- Record Applied Voltage and Frequency During Treatment
- Pain Score Entered by Patient Before, During & After Treatment
- Record any Special Events During Treatment using "Event Marker"



SYNAPTIC 3800 DIGITAL PDM



Synaptic 3400 Digital
Base SEA Model



Synaptic 3600 Digital
with Cranial Stimulator and Optional ATPG



Synaptic 3800 Digital
Cranial Stimulation and ATPG (standard)

SAFETY FEATURES

- Battery powered treatment system.
- In-line fuse between battery and microprocessor
- System Auto-Test feature
- Emergency shut-down switch: One-button shut-down located on the patient held hand switch.
- Bump Detector: During treatment, should the patient hand held slide control be accidentally "bumped" the system will immediately shut down.

***FDA:** The Model Pain Management System is clinically indicated for the symptomatic relief and management of chronic intractable pain and as an adjunctive treatment in the management of post-surgical and post-traumatic acute pain. As such, the FDA has authorized The Synaptic Corporation to market this device effective June 20, 1997. **Cranial Stimulation Module incorporates identical output and operating characteristics as the Model SBL201M and Model SBL202B cranial stimulation devices manufactured by MediConsultants Inc., Paterson, N.J.**

Caution: Federal law (USA) restricts this device to sale by or on the order of a licensed medical practitioner.

SYNAPTIC® 3000 SERIES BENEFITS

- User-Friendly
- Patient controls treatment using a hand-held remote
- Uses comfortable 40K Hertz high-frequency signals
- Still the Only wide-band, continuously variable frequency, variable wave shape technology available (Patented)

Technical Specifications

Pulse Waveform:	Continuous variable square-wave with fast rise time and slow decay.
Output Voltage:	57 volts peak to peak into 500 Ohm resistive load (0.1 μ f capacitor).
Output Current:	57 mA peak into 500 Ohms
Output Charge:	Maximum charge per pulse of 71.25 microcoulombs
Frequency:	40,000 to 400 Hertz
Recharger:	UL544 medical grade 12 volt
Battery:	12 volt rechargeable
Low Battery Indicator:	Alerts operator to recharge battery
Treatment Session Timer:	05-60 minute in 5 minute increments
Standards:	USA Underwriter Lab and Canadian UL Approval
F.D.A.	Clearance to Market 510 (K)

The Synaptic Corporation
3176 South Peoria Court • Aurora, CO 80014
800.685.7246 303.696.6325 FAX 303.696.7396
<http://www.synapticusa.com>
info@synapticusa.com

GET IN CONTROL

**PAIN
ANXIETY
INSOMNIA
DEPRESSION**



Variable Frequency
Variable Waveshape
Pain Management Systems