

SE3 SpectraSTIM E3

Catalog Number: PL-23-1000

The Therapeutic Alliances SpectraSTIM E3 (the SE3) is a stand-alone neuromuscular stimulator designed for clinical and home applications in rehabilitation and sports medicine. It features four channels of programmable stimulus, operator controls and indicators, and user-programmable protocols.

One to four muscle groups may be treated with the SE3 in an isotonic or isometric fashion. Contractions are elicited by conduction of a low-level electrical stimulus through a set of surface electrodes placed over muscle motor points.

Programmable profile times allow a broad range of treatment applications such as range of motion maintenance, muscle re-education, relaxation of spastic muscles, and prevention or retardation of tissue atrophy. Protocols of Alternating, Synchronous, Independent, and Reciprocal stimulus profiles are easily programmed through touchscreen menus and displays. Default protocols with preset profile times are available for common treatment modalities.

The SE3 has a simple user interface. Effective treatment requires mastery of just a touchscreen display, an illuminated STOP button, and a Patient Leads Cable for connection to one to four muscle sites.

Built in safety features include a self test when the unit is turned on, continuous system checks, and electrode and stimulus integrity checks during a session.



INDICATIONS FOR USE

1. Relaxation of muscle spasms
2. Prevention or retardation of disuse atrophy
3. Increasing local blood circulation
4. Muscle re-education
5. Immediate post-surgical stimulation of calf muscles to prevent venous thrombosis
6. Maintaining or increasing range of motion

Powered muscle stimulators should only be used under medical supervision for adjunctive therapy for the treatment of medical diseases and conditions.

CONTRAINDICATIONS

Powered muscle stimulators should not be used on patients with cardiac demand pacemakers.

WARNINGS

1. The long-term effects of chronic electrical stimulation are unknown.
2. Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.
3. Stimulation should not be applied over the neck or mouth. Severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause difficulty in breathing.
4. Stimulation should not be applied transthoracically in that the introduction of electrical current into the heart may cause cardiac arrhythmias.
5. Stimulation should not be applied transcerebrally.
6. Stimulation should not be applied over swollen, infected, or inflamed areas or skin eruptions, e.g., phlebitis, thrombophlebitis, varicose veins, etc.
7. Stimulation should not be applied over, or in proximity to, cancerous lesions.

PRECAUTIONS

1. Safety of powered muscle stimulators for use during pregnancy has not been established.
2. Caution should be used for patients with suspected or diagnosed heart problems.
3. Caution should be used for patients with suspected or diagnosed epilepsy.
4. Caution should be used in the presence of the following:
 - a. When there is a tendency to hemorrhage following acute trauma or fracture;
 - b. Following recent surgical procedures when muscle contraction may disrupt the healing process;
 - c. Over the menstruating or pregnant uterus; and
 - d. Over areas of the skin which lack normal sensation.
5. Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium. The irritation can usually be reduced by using an alternate conductive medium, or alternate electrode placement.
6. Electrode placement and stimulation settings should be based on the guidance of the prescribing practitioner.
7. Powered muscle stimulators should be kept out of the reach of children.
8. Powered muscle stimulators should be used only with the leads and electrodes recommended for use by the manufacturer.

ADVERSE REACTIONS

Skin irritation and burns beneath the electrodes have been reported with the use of powered muscle stimulators.

3.1 SPECIFICATIONS

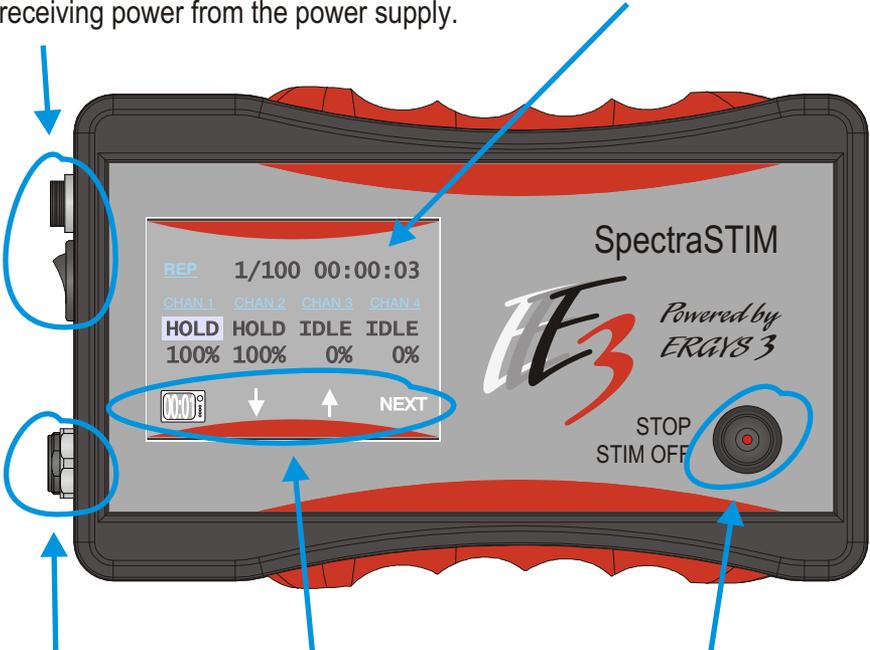
Output Waveform:	Selectable biphasic balanced-charge waveshapes
Intensity:	140 mA (peak) +/- 5% constant current
Average Current: (into 500 Ohm load)	32.48 mA +/- 5%
Maximum Charge: (into 500 Ohm load)	50 microcoulombs per pulse
Power Density:	39.24 milliwatts/cm ²
Impedance Range:	50 to 1500 Ohms
Phase Duration:	Selectable 200, 300, 400, 500 microseconds
Pulses per Second:	Selectable 30, 40, 50, 60
Profile Time:	Selectable Idle 0 - 100 seconds Ramp Up 0 - 10 " Hold 1 - 100 " Ramp Down 0 - 10 " Rest 0 - 100 "
Repetitions	1 - 100
Channels:	Four isolated channels, independently adjustable stimulus amplitudes and profile times
Safety Testing:	System to ground - 100 microamps (max) Patient leads - 10 microamps (max)
Dimensions:	8.0" length x 5.0" width x 2.0" height
Weight:	1 lb, 5 ozs
Power Requirements:	INPUT: 100-240 AC volts, 50-60 Hz OUTPUT: 12 VDC, 2.0A, 24W

Power Inlet & Power Switch

This is the power inlet for the included medical-grade power supply. The green power light will glow when the unit is receiving power from the power supply.

Touchscreen

The touchscreen and an audio indicator provide prompting and instructions for set-up and administration of a session.



Touchscreen Buttons

Under most circumstances, 1 - 4 buttons will appear on the bottom of the display to guide the session.

Stop Switch & Stimulus Indicator

Pressing this button always shuts off stimulus. The red light on the top of the button will glow when stimulus is active.

Patient Cable Connector

Either a lead wire cable or a garment cable plugs into this connector to provide the connection between the muscle sites and the stimulator.

The SpectraSTIM is available for home and clinical use. In the clinic, a Protocol Manager program is available to manage multiple patients/therapy sets.

SpectraSTIM E3 Protocol Manager

Unit Serial Number: NP400xx1205A884C
 Owner: YOUR NAME HERE
 Unit Software: A89

Default Protocol
 Protocol Name: SHORTS SLOW Q/G-H

Edit Protocol
 In Workspace
 From Unit

Unit Commands
 WRITE
 Replace: SHORTS SLOW Q/G-H

Chan	Idle	Up	Hold	Down	Intensity	Max
Chan 1	0	3	5	2	0	140
Chan 2	10	3	5	2	0	140
Chan 3	0	3	5	2	0	140
Chan 4	10	3	5	2	0	140

Reps: 50
 Rest: 2
 Warm-up: 5
 PPS: 60

Last Command: PROTOCOL WRITE OK

LED Control Sound Control

9600 baud
 19200 baud
 Communication

COM1
 COM4

Plot by Timing Only
 Plot by Hold Intensity
 Plot by Maximum