# QUADSTAR II ®

#### Overview

The QuadStar® II is a portable four channel digital NMS, INF and TENS device. The unique device with 3 waveforms, symmetric biphasic, pulsed sine and asymmetrical biphasic can be programmed to deliver NMS, INF or TENS therapy .

There are 9 preprogrammed Fixed Sequences which enable the user to program 20 minutes of INF followed by 20 minutes of NMS therapy and ending with 20 minutes of TENS therapy. A Programmable Sequence allows the user to customize the therapy and times. A graphic representation of the timing parameters is shown on the screen to assist the user to program the on/off ramps and on/off times.

In addition there is a patient lock system when activated prevents the patient from changing any parameters. When the lock is turned off, a patient compliance meter is displayed.



### **General Specifications**

Dimensions:	6.30" x 2.75" x 1.25" (160mm x 70mm x 32mm)
Weight:	11.4 oz. (323 grams)
Power Supply:	4 AA Batteries, type LR6
Channels:	4
Electrodes/Leadwires:	8
Tolerance:	+/- 1%

#### **Interferential Specifications**

Waveform:	Pulsed Sine
CH1/CH3 (Carrier) Frequency:	4000 Hz
CH2/CH4 Frequency:	4001-4150 Hz adjustable
Beat Frequency:	<ul> <li>1-150 Hz</li> <li>CH1/CH2 are an Interferential Pair</li> <li>CH1: Fixed Frequency (4000 Hz)</li> <li>CH2: Adjustable 4001-4150 Hz</li> <li>CH3/CH4 are an Interferential Pair</li> <li>CH3: Fixed Frequency (4000 Hz)</li> <li>CH4: Adjustable 4001-4150 Hz</li> </ul>
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Premodulated INF (Using one Channel):	A mixed Interferential Beat Frequency will be produced only out of CH 1 and/or CH 3.
Modes	
Constant:	Beat Frequency is adjustable from 1-150 Hz
Sweep 1:	Beat Frequency Modulates from 1-10 Hz and back over 12 seconds (6 second increase, 6 second decrease)
Sweep 2:	Beat Frequency Modulates from 80-150 Hz and back over 16 seconds (8 second increase, 8 second decrease)
Sweep 3:	Beat Frequency Modulates from 1-150 Hz and back over 20 seconds (10 second increase, 10 second decrease.
Intensity:	0-98 mA peak to peak
Output Voltage:	0-33 Volts peak to peak (adj.)

## **Neuromuscular Specifications**

Waveform:	Symmetrical, biphasic, square Asymmetrical, biphasic, square
Pulse Rate:	Adjustable 1-120 Hz peak to peak
Pulse Width:	Adjustable 50-400 µS
On Ramp:	0-10 seconds
On Time:	0-99 seconds
Off Ramp:	0-10 seconds
Off Time:	0-99 seconds
Modes:	<b>Constant</b> Use the Constant Mode or a Pulse Rate greater than 60 Hz. for the relaxation of muscle spasms only. Use of continuous stimulation and/or rates above the normal physiological range (e.g., greater than 60 Hz) could lead to rapid onset of muscle fatigue, making the device less effective in producing repeated forceful muscle contractions. <b>Cycled</b> <b>Reciprocating</b>
Intensity:	0 - 120 mA from peak to peak (adj)Mo
Voltage:	0- 60 volts from peak to peak (adj.)



## **TENS Specifications**

Waveform:	Asymmetrical Biphasic Square
Pulse Rate:	Adjustable 1-120 Hz
Pulse Width:	Adjustable 10-250 µS
Modes:	<ul> <li>Constant: Pulse Rate (Hz) is adjustable from 1-120 Hz and Pulse Width (μS) is adjustable from 10-250 μS.</li> <li>B (Burst): 8 Pulses per burst, 2 bursts per second. Pulse Width (μS) is adjustable from 10-250 μS.</li> <li>M (Modulation): Pulse Rate (Hz) is Adjustable from 1-120 Hz and Pulse Width (μS) is adjustable from 10-250 μS and decreases 50% and back to set value over a 10 second cycle.</li> </ul>
Intensity:	0-100 mA peak to peak
Voltage:	0-50 Volts peak to peak

