Chapter 8 : TECHNICAL SPECIFICATIONS

The technical specification details of Premier Stim Plus Digital TENS/ EMS are as follows:

	MECHANISM	TECHNICAL DESCRIPTION
01	Channel	Dual, isolated between channels
02	Pulse Amplitude	Adjustable, 0-110 mA peak into 500 ohm load each channel.
03	Wave Form	Asymmetrical Bi-Phasic Square Pulse
04	Voltage	0 to 55V (Load: 500 ohm)
05	Power source	One 9 Volt Battery.
06	Size	11.8cm(L) x 6 cm(W) x 3.1cm(H)
07	Weight	157 grams with battery.
08	Pulse Rate	Adjustable, from 2 to 150 Hz, 1 Hz/step
09	Pulse Width	Adjustable, from 50 to 300 microseconds, 10 µs/step
10	On Time	Adjustable, 2~90 seconds , 1 Sec./ step
11	Off Time	Adjustable, 2~90 seconds , 1 Sec./ step
12	Ramp Time	Adjustable, 1~8 seconds, 1 Sec./ step, The "On" time will increase and decrease in the setting value.
13	Mode	Six TENS Modes: B(Burst), N(Normal),M (Modulation Rate & Width),S1(Modulation Width), S2 (Modulation Width) and P Three EMS Modes:C(Constant), S (Synchronous), A(Alternate)
14	Burst Mode	Burst rate: Adjustable, 0.5 – 5Hz Pulse width adjustable, 50~300 µs Frequency fixed = 100 Hz
15	Normal Mode	The pulse rate and pulse width are adjustable. It generates continuous stimulation based on the setting value.
16	Modulation Mode	Modulation mode is a combination of pulse rate and pulse width modulation. The pulse rate and width are automatically varied in a cycle pattern. The pulse width is decreased by 50% from its original setting

		in 0.5 second, then the pulse rate is decreased by 50% from its original setting in 0.5 second. Total cycle time is 1 second. In this mode, pulse rate(2-150Hz) and pulse width(50-300μs) are fully adjustable.
17	S1 Mode	Pulse width is automatically varied in a cyclic pattern over a nominal 10 second period. Pulse width decreases over a period of 4 seconds from the initial setting to a value 40% less. The narrower pulse width continues for 1 second. It then increases over a period of 4 seconds to its initial setting. The cycle is then repeated. Pulse rate and pulse width are fully adjustable.
18	S2 Mode	Pulse width is automatically varied in a cyclic pattern over a nominal 10 second period. Pulse width decreases over a period of 4 seconds from the initial setting to a value 70% less. The narrower pulse width continues for 1 second. It then increases over a period of 4 seconds to its initial setting. The cycle is then repeated. Pulse rate and pulse width are fully adjustable.
19	Constant Mode(C)	The pulse rate and pulse width are adjustable. It generates continuous stimulation is delivered.
20	Synchronous Mode(S)	Output from both channels occurs synchronously. The "ON" time includes "Ramp Up" and "Ramp Down" time. Therefore, the setting of ON Time should be no less than two times of the "Ramp" time in this mode.
21	Alternate Mode(A)	The stimulation of the CH2 will occur after the 1st contraction of CH1 is completed. In this mode, the setting of ON Time should be no less than two times of the "Ramp"

		time. The OFF Time should be equal to or greater than the ON Time. ON TIME ≥Ramp up + Ramp down OFF TIME ≥ON TIME
22	Mode P	**The pre-set parameters of the 9 programs are as given below:**

Program	Mode	Pulse Rate	Pulse Width	Timer
P1	Constant	80Hz	180μs	Continue
P2	Burst	100Hz (Burst Rate:2Hz)	180μs	Continue
P3	-70% P.W. Modulation	80Hz	50μs -180μs	Continue
P4	Mixed Frequency	15Hz in 3 Sec / 2Hz in 3 Sec	180μs	Continue
P5	Mixed Frequency	80Hz in 3 Sec / 2Hz in 3 Sec	180μs	Continue
P6	Constant	10Hz	180μs	Continue
P7	Constant	80Hz	60μs	Continue
P8	Constant	80 Hz	180μs	30 Minutes
P9	Burst	100Hz (Burst Rate:2Hz)	180μs	30 Minutes

23	Timer	Adjustable, from 5 to 60 minutes minutes and continue(C), 5 minutes each step.
24	Patient Compliance Meter	This unit can store 60 sets of operation records. Total recorded time is 999 hours.
25	Low Battery Indicator	A low battery indicator will show up when the battery is low.
26	Operating Condition	Temperature:0°~40°C Relative Humidity: 30%~75% Atmosphere Pressure : 700Hpa~1060Hpa
27	Remark	There may be up to a +/-10% tolerance of all parameters and +/-20% tolerance of output amplitude & voltage.