PANTHEON RESEARCH

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OPERATION INSTRUCTIONS
CLINICAL MICROCURRENT STIMULATOR

This operations instructions sheet is intended to allow operation of the clinical microcurrent stimulator, but is not intended as a clinical applications instruction. Please refer to other clinical course material for discussions of how to treat patients with microcurrent.

FEATURES:

1) Frequency adjustment selections: .5 hertz, 2, 5, 10, 20, 40, 80, 100, 160, 200, 1000, and 1500.
2) Polarity adjustment : positive, negative, bipolar
3) Current selections: 10,25, 50, 100, 200,300,400, 500, 600, micro-amperes
4) Power: Battery, internal 12 volts, with external battery charger
5) Electrode types: Facial stimulator probes with q-tip holders, and T.E.N.S. pads capable (not provided.)
6) Dual channels, independent, separate controls
7) Waveform: Square, 50% duty cycle, + and – 70 volt, or single polarity with selection.

DESCRIPTION OF OPERATION

MODE switch:

The Mode Switch, located directly over the Channel 1 label, on the right hand side of the machine, turns the power "on" for the whole machine.

Turn the Mode Switch to "ON" to turn Channel 1 on. This also makes power available to Channel 2, but does not turn Channel 2 "ON". Channel 2 can be turned ON only when Channel 1 is first turned ON.

Turning the Mode Switch to BATT will check the battery. If the battery is good, the light above the Mode Switch will go on (green). If the battery is low, the light above the Mode Switch will not light up.

The position labeled CHARGE should be used when charging the battery (see battery charge). The Mode Switch should be turned to CHARGE when charging the battery.

Always turn the Mode Switch to OFF when finished using the machine, to conserve battery power.

FREQUENCY:

Twelve selections for frequency are available. Select the frequency desired for a given application. This switch is labeled FREQ-HZ. Frequency is the pulsing rate of the electrical stimulus. It is the number of times per second that an electrical impulse is delivered to the patient. These impulses are delivered continuously, in an uninterrupted fashion. The frequencies included are from .5 pulses per second, to 1500 pulses per second. Nogier frequencies are also included.

CURRENT:

This switch is labeled CURRENT/UA , and refers to the adjustment of microampere levels of current that the machine provides. UA is an abbreviation for microcurrent or microampere. The number on the switch designates the amount of current provided at that setting. The selection is from 50 to 1000 microamperes. A microampere is a millionth of an ampere.

POLARITY:

The selection of positive allows the machine to produce only positive levels of current, and correspondingly, the negative produces negative, and bipolar produces biphasic, or two polar electrical impulses, both positive and negative. The probes that are provided have been marked with a white rubber insulation around the positive probe, or, the positive probe has a white stripe on the wire leading to the probe. This probe will be positive with respect to the other probe, when the machine is turned to POSITIVE polarity. It will be negative when turned to NEGATIVE polarity.

DUAL CHANNELS:

This equipment has two outlet ports, or two totally independent output channels. Each is capable of providing it's own independantly adjusted electrical stimulus. This is essentially like having two machines in one machine. The use of dual channels is more common when two pair of skin pads or TENS pad is being used, that are stationery on the skin.

ELECTRODE CONNECTIONS:

The front panel of the machine is labeled Channel One and Channel Two. Channel One outlet corresponds to the controls on the machine labeld Channel One. And, of course, the Channel Two outlet corresponds to the controls that are labeled Channel Two.

To use either of these outputs, merely plug the 3.5 mm plug on the facial probes into the respective channel you choose, and turn the machine on. It will begin to deliver electricity to the probes.

BATTERY CHARGING:

Batteries may be charged by inserting the battery charger into the Battery Charge plug in the front of the machine, and placing the switch on the **CHARGE** mode. Usually, the battery will charge within about 8 hours. This could easily be done overnight.

The battery charger is plugged into a three hole outlet of the wall. There are two indicator lights on the battery charger, one to indicate when the battery is charging, and the other to indicate when the battery is fully charged and complete. When it is complete, when the battery is charged, then the light will indicate that it is finished. You may now remove the charger plug from the front panel, and the machine will be ready to operate.

The batteries in the machine are Nickel Metal-Hydride batteries. They will last about 8 hours when using both channels in the machine, or 16 hours when using only one channel, before needing charging.