**Common Terms:**

**Amplitude** - Intensity is the output of electrotherapy distributed by the unit to the patient. Depending on the waveform, intensity is measured in milliamps (mA), volts (V), and microamps (μA).

**Beat Continuous** - Associated with the Interferential waveform, Beat Continuous is the parameter at which the beat frequency remains constant. When the Sweep setting is turned off, you must select a fixed beat for the therapy session.

**Beat High** - During a sweep, the Beat High setting is the highest number to which the beat frequency increases. The available range for the Beat High parameter is 80 to 150 Hz. This parameter is unique to the Premodulated and IFC waveforms.

**Beat Low** - During a sweep, the Beat Low setting is the lowest number to which the beat frequency decreases. The available range for the Beat Low parameter is 1 to 10 Hz. This parameter is unique to the Premodulated and IFC waveforms.

**Beat Wide** - During a sweep, the Beat Wide setting is the lowest number to the highest beat frequency. The available range for the Beat Low parameter is 1 to 250 Hz. This parameter is unique to the Premodulated and IFC waveforms.

**Burst** - A burst is a series of pulses at a predetermined pulse frequency.

**Burst Frequency (Freq.)** - This is the number of bursts per second (bps). This parameter is unique to the Russian waveform.

**Carrier Frequency (Freq.)** - This is the frequency of the unmodulated medium frequency current. The available carrier frequencies are 2,500, 5,000, and 15,000 Hz for Russian, Interferential and Microcurrent respectively.

**Channel Mode** - The available channel modes are **Reciprocal** (where electrotherapy alternates between channels), and **Co-Contract** (where electrotherapy is distributed from both channels at the same time). This parameter is unique to the EMS and Russian waveform.

**Co-Contract -** where the timing of stimulation can be coordinated through two channels to simultaneously co-contract agonist and antagonist or differing sections of a larger muscle group.

**Compliance Timer:** Logs the total treatment time for the unit has provided. The unit of logging is 10 minutes (i.e. if the instrument is used between 1 – 10 min. the unit will be one). (10 minutes = 1 unit)

**Compliance Number:** Log the total number of Treatments taken from instrument.

**Cycle Time** - Cycle Time is the alternating time which the current is "on" and "off." Contraction and Relaxation time can be set from 1 – 99 seconds. This parameter is unique to the EMS, Russian, Premodulated, and High Volt waveforms.

**Duty Cycle** - This is the ratio of the "On" time to "Total" time of the cycle, expressed as a percentage. The duty cycle describes the pulsed modes of electric stimulation (the lower the percentage, the lower temporal average intensity). 100% is continuous electrotherapy. The available Duty Cycles are 10, 20, 30, 40, 50%. This parameter is unique to the Russian waveform.

**Frequency** - The number of times per second a pulse will repeat itself.

**High Volt Pulse Current** - (HVPC) has a very brief pulse duration characterized by two distinct peaks delivered at high voltage. The waveform is monophasic (current flows in one direction only). The high voltage causes a decreased skin resistance making the current comfortable and easy to tolerate.

**Interferential Current** - (IFC) is a medium frequency waveform. Current is distributed through two channels (four electrodes). The currents cross each other in the body at the area requiring treatment. The two currents interfere with each other at this crossing point, resulting in a modulation of the intensity (the current intensity increases and decreases at the beat frequency).

**Microcurrent -** (MENS) is a monophasic waveform of very low intensity that closely simulates the electrical current generated by the human body.

**Polarity** - refers to the charge of an individual lead: positive, negative or alternating. This parameter is unique to the High-Volt waveform and Microcurrent.

**Premodulated Interferential Current** – This is a medium frequency waveform. Current comes out of one channel (two electrodes). The current intensity is modulated: it increases and decreases at a regular frequency (the Amplitude Modulation Frequency).

**Ramp** - The gradual increase and decrease in current. The purpose of ramping up the current is to maximize patient comfort by preventing the abrupt and sudden exposure to the current. This parameter is unique to the Russian, EMS, and High-Volt.

**Reciprocal** - application where stimulation alternates between agonists and antagonists

**Russian Current** - This is a 2,500 Hz carrier wave, interrupted to create pulse trains or "bursts." The number of bursts per second is determined by the burst frequency and the length of the bursts is determined by the duty cycle.

**Sweep** - This is the modulation of therapeutic frequency commonly used to prevent accommodation. Sweeps are measured in pulses per second (pps) and Hertz (Hz). This parameter is unique to the Interferential and Premodulated.

**Vector** - A vector is a geometrically descriptive feature used to increase the effective therapeutic current at the crossing point of Traditional Interferential (IFC); increases one channel's amplitude while simultaneously decreasing (by the same percentage) the other channel's amplitude with a single key press.

**Vector Scan** - Measured in percentages, vector scans are the rhythmic changes of the position of vector. This parameter is unique to the Interferential.