Waveform Specifications

**IFC (Interferential 4 pole)**

Interferential Current is a medium frequency waveform. Current comes out of two channels (four electrodes). The currents cross each other in the body area that requires 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 a regular frequency).

- **Output Mode:** Pads
- **Carrier Frequency:** Fixed
- **Beat Frequency:** 0-200 Hz
- **Sweep Time:** 15 seconds
- **Sweep Low Beat Frequency:** 1-200 Hz
- **Sweep High Beat Frequency:** 1-200 Hz
- **Scan Percentage:** Static, 10%, 40%, 100%
- **Vector Scan:** Manual (0°-90°), Automatic (40% and 100%), Off
- **Amplitude:** 0-100 mA RMS into 500 ohm
- **Maximum Treatment Time:** 1-60 Minutes
- **Available on Channel:** 1&2, 3&4

**IFC (Interferential 2 pole) Premodulated**

Premodulated Current 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).

- **Output Mode:** Pads
- **Output Intensity:** 0-100 mA
- **Carrier Frequency:** Fixed
- **Beat Fixed (Sweep Off):** 1-200 Hz
- **Sweep Low Beat Frequency:** 1-149 Hz
- **Sweep High Beat Frequency:** 81-200 Hz
- **Cycle Time:** Continuous, 5/5, 4/12, 10/10, 10/20, 10/30, 10/50
- **Mode Selection:** CC or CV*
- **Treatment Time:** 1-60 Minutes
- **Available on Channel:** 1&2, 3&4

*CC= Constant Current
CV= Constant Voltage
### SPECIFICATIONS

#### TENS- Symmetrical Biphasic

The Symmetrical Biphasic waveform has a short pulse duration and is capable of strong stimulation of nerve fibers in the skin and muscle. This waveform is often used in portable muscle stimulation units and some TENS devices. Because of its short pulse duration, the patient typically tolerates the current well, even at relatively high intensities.

- **Output Mode:** Pads
- **Output Intensity:** 0-80 mA
- **Phase Duration:** Adjustable 20-1,000 µsec
- **Frequency:** 1-250 Hz
- **Mode Selection:** CC or CV*
- **Burst Frequency:** 0-4 bps
- **Frequency Modulation:** 0-250 Hz
- **Amplitude Modulation:** Off, 40%, 60%, 80% and 100%
- **Treatment Time:** 1-60 minutes

#### High Voltage Pulsed Current (HVPC)

The High Volt waveform has a very brief pulse duration characterized by 2 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.

- **Output Intensity:** 0-500 V
- **Output Mode:** Pads or Probe
- **Polarity:** Positive or Negative
- **Ramp:** 0.5 sec, 1 sec, 2 sec, 5 sec
- **Display:** Peak Current or Volts
- **Sweep:** Continuous, 80/120 pps, 1/120 pps, 1/10 pps
- **Frequency:** 1-250 Hz
- **Mode Selection:** CC or CV*
- **Burst Frequency:** 0-4 bps
- **Frequency Modulation:** 0-250 Hz
- **Amplitude Modulation:** Off, 40%, 60%, 80% and 100%
- **Treatment Time:** 1-60 minutes

*Available on Channels: 1, 2, 3, 4

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**DANGER**

- Stimulus delivered by the TENS waveforms of this device, in certain configurations, will deliver a charge of 25 microcoulombs (µC) or greater per pulse and may be sufficient to cause electrocution. Electrical current of this magnitude must not flow through the thorax because it may cause cardiac arrhythmia.

*CC= Constant Current  
CV= Constant Voltage
**SPECIFICATIONS**

### Russian

Russian Current is a sinusoidal waveform, delivered in bursts or series of pulses. This method was claimed by its author (Kots) to produce maximal muscle strengthening effects without significant discomfort to the patient.

- **Output Intensity**: 0-100 mA
- **Output Mode**: Pads
- **Channel Mode**: Single, Reciprocal, Co-Contract
- **Duty Cycle**: 10%, 20%, 30%, 40%, 50%
- **Mode Selection**: CC or CV*
- **Anti-Fatigue**: Off or On
- **Cycle Time**: 5/5, 4/12, 10/10, 10/20, 10/30, 10/50, Continuous
- **Burst Frequency (Anti-Fatigue Off)**: 20-100 pps
- **Ramp**: 0.5, 1, 2 and 5 seconds
- **Treatment Time**: 1-60 minutes
- **Available on Channels**: 1, 2, 3, 4

### Microcurrent

Microcurrent is a monophasic waveform of very low intensity that closely simulates the electrical current generated by the human body. Microcurrent can be applied via electrodes or probe.

- **Output Intensity**: 0-1000.0 µA
- **Output Mode**: Pads or Probe
- **Polarity**: Positive, Negative or Alternating
- **Treatment Time**: 1-60 Minutes
- **Available on channels**: 1, 2, 3, 4

*CC= Constant Current  
CV= Constant Voltage*
**SPECIFICATIONS**

**Intelect® Legend XT Therapy System**

### Ultrasound Specifications

- **Frequency**: 1.0 MHz, +/- 5%; 3.3MHz, +/- 5%
- **Duty Cycles**: 10%, 20%, 50%, Continuous
- **Pulse Frequency**: 100Hz
- **Pulse Duration**: 1mSec, +/-20%; 2mSec, +/-20%; 5mSec, +/-20%

#### Output Power

- **5cm² Crystal**: 0-10 Watts at 1 & 3.3 MHz
- **10cm² Crystal**: 0-20 Watts at 1MHz, 0-10 Watts at 3.3 MHz
- **2cm² Crystal**: 0-4 Watts at 1 & 3.3 MHz
- **1cm² Crystal**: 0-2 Watts 3.3 MHz

- **Amplitude**: 0 to 2.5 W/cm² in continuous mode, 0-3 w/cm² in pulsed modes

- **Output accuracy**: ± 20% above 10% of maximum

### Temporal Peak to Average Ratios:

- 2:1, ± 20%, at 50% Duty Cycle
- 5:1, ± 20%, at 20% Duty Cycle
- 9:1, ± 20%, at 10% Duty Cycle

### Beam Nonuniformity Ratio

- 5.0 : 1 maximum

### Beam Type

- Collimating

### Effective Radiating Areas

- **10cm² Crystal**: 8.5cm², +/- 1.5
- **5cm² Crystal**: 4.0cm², +/- 1.0
- **2cm² Crystal**: 1.8cm², +0.2/-0.4
- **1cm² Crystal**: 0.8cm², +0.2/-0.4

### Treatment Time

- 1-30 Minutes