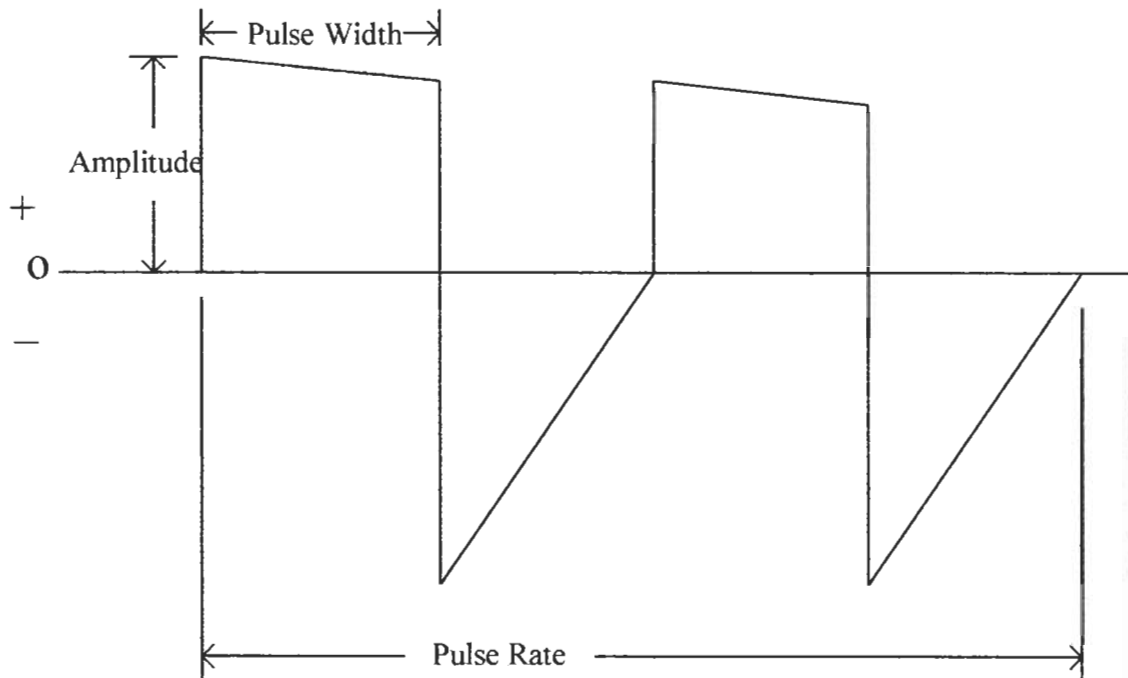


TENS Waveform

Asymmetrical Biphasic



Most TENS units utilize an asymmetrical biphasic waveform so that there is not a problem with leaving a net skin charge which would lead to possible burns.

Amplitude: The magnitude or intensity. Measured in mA.

Pulse Duration (pulse width): The duration of a pulse. Measured in microseconds μsec .

Pulse Rate: Number of pulses per second. Also referred to as Frequency. Measured in hertz (Hz).

Asymmetrical biphasic waveforms have two phases, a dominant phase (more active) and a balancing phase. In the dominant phase the positive going current travels through the positive electrode through the skin and out the negative electrode. During the balancing phase the opposite occurs. Typically, electrode placement would entail placing the positive electrode (Red) proximal to the area of pain and the negative electrode (Black) distally to the area of pain. More stimulation may be felt under the dominant electrode. Neurons depolarize more readily to negative current.

NERVE CELLS ARE POLARIZED, GENERALLY INSIDE IS NEGITIVE, OUTSIDE IS POSITIVE.