## USE AND CARE OF THE - MT 8000 Multi Modality Electrical Stimulator

There are 4 Modalities within this machine, within each modality there are 3-4 Programs P1-P4. These are Preset and can be used as is or changed to suit you.

- Transcutaneous Electrical Nerve Stimulator (TENS)
- Interferential therapy (IF)
- Microcurrent (Mic)
- Electrical Muscle Stimulator (EMS)

# TENS - CLINICAL APPLICATIONS

Electrical Stimulator primarily used for Pain Relief, to relax muscle tension, to improve circulation & healing, to reduce swelling.

# TENS PROGRAMS

All 4 programs, P1-P4 will assist with PAIN, see which one is most comfortable for you and then try the others to compare.

P1=Burst current, mimics acupuncture like TENS and normal TENS combined. For chronic pain.

P2=Normal, (for acute or chronic pain in muscles and for localized circulation and tissue healing)

**P3** =Modulation of PW (Prevents Nerve Adaptation). For chronic pain.

P4=Modulation of PR (Prevents Nerve Adaptation) For chronic pain.

# **IF-CLINICAL APPLICATIONS**

Pain Relief - Symptomatic relief and management of acute and chronic pain & for use with post surgical or post traumatic pain.

Muscle Stimulation-helps with relieving muscle spasm or tension.

Increased Local Blood Flow- assists with tissue healing

Reduction of Oedema(swelling) and reduction of Inflammation.

Fibromyalgia and Trigger Point Intervention

Enhancement of fracture healing

#### IF PROGRAMS

PI = 1-10Hz (Muscle stimulation; Swelling; Circulation)

P2 = 1-150Hz (Pain, Muscle stimulation; swelling; circulation; healing)

P3 = 80-150Hz (Mostly for Pain Relief)

P4 = 2-150Hz Cycle time 5-30 secs. (Pain, Muscle stimulation; swelling; circulation; healing)

# IF BENEFITS

Current penetrates deeper and covers a larger area than TENS. Local muscular contractions, combined with local vascular changes, (enhanced blood flow), and less pain, (allowing greater movement) allows IF to be effective in the reabsorption of tissue oedema/swelling.

# MICROCURRENT – CLINICAL APPLICATIONS

**PI** = Constant **P2** = Pulse Width Modulation **P3** = Pulse Rate Modualtion All 3 Microcurrent programs are used to promote peripheral blood and lymphatic flow; to accelerate healing; to reduce pain, swelling and inflammation; to reduce muscle spasm; to soften scar tissue; to improve tissue oxygenation and the removal of metabolic waste.P1 is for new or intermittent users, P2-P3 are for long term users who may have become used to the electrical stimulation. The modulated current prevents adaptation to the current.

This is used for all types of pain, including neuropathic and is usually less tingly than some of the other modalities. It is like a circulation booster and is also used for tired aching areas such as the legs.

# MICROCURRENT - Therapeutic Uses are as follows:

1.Relieve pain- acute/chronic/neuropathic/musculoskeletal.

- 2.Increased rate of wound healing / tissue regeneration.
- 3.For swollen feet & ankles.
- 4.Stimulation of circulation & lymphatic flow.
- 5.Softening of myofascial trigger points.
- 6.For sprains/strains/musculoskeletal injuries

# **EMS- CLINICAL APPLICATIONS**

Stimulation of both sensory,(pain), and motor,(movement) nerves to reduce pain and improve muscle function. This setting is most likely to have small muscle contractions, or twitches with the tingling sensation. So if pumping swelling out off an area is required, or, if a muscle is weak or tense/tight, then this is the preferred setting to choose.

#### Therapeutic uses are as follows:

- 1. Strengthening of healthy innervated muscle.
- 2. Strengthening of atrophied (disuse) and denervated muscle.
- 3. Facilitation of motor control.
- 4. Maintain or increase joint Range Of Motion.
- 5. Increase muscle metabolism and blood flow.
- 6. Increase venous and lymphatic flow in adjacent tissues.
- 7. Reduction of oedema, via muscle pumping effect.
- 8. Accelerated tissue healing.
- 9. Pain relief (acute, chronic, neuropathic)

#### **EMS**

Use EMS when you would like pain relief AND muscle contraction; (ie. To condition and strengthen weak muscles; to assist poor circulation- lymph and blood; to reduce peripheral swelling; to assist with wound healing.) All 3 programs will assist with these problems, see which one is most comfortable for you and then try the others to compare.

**PI** = Synchronous, Ch1 & Ch2 together **P2** = Ch1 and Ch2 alternate **P3** = Ch1, then *a* slight delay before Ch2

#### To Operate the MT8000 :

Press and hold large round On-Off Button. Use the M(Mode ) button to scroll through the modes. Press the S(Set) button when you are happy with the choice you have made.You will now see the P(program) button within that mode flashing. If not the Program you want, press Ch(Channel)1 button up or down to scroll to the program you want, then press S again to set it. Next item flashing will be the clock, (or the10 secT if in TENS mode-just leave this one as is and press S), press Ch1 up or down to change how long the treatment will go for, then S to set it. It will stop flashing. Do the same for PW(pulse width and PR pulse rate), you don't need to adjust these, so just press the S button for each. When NOTHING is flashing, press Ch1 up until you feel the tingling as comfortable as you like. Press Ch2 up to the same as well. Now the clock will be flashing as it is counting down to zero. The machine will switch to zero when the timer runs out, or to turn it off, simply press and hold the large round On-Off button.

#### ELECTRODE PLACEMENT and CARE :

You essentially put the pads in a circle or square formation around the main site of pain or swelling. You can use 2 or 4 pads for every MODE, EXCEPT IF...IF MUST USE 4 ELECTRODES AT ALL TIMES.

They can be placed :

- 1. Over the site of pain and one in the same dermatome, (a short distance away).
- 2. Over trigger or acupuncture points.
- 3. Over the line of the peripheral nerve for neuralgia.
- 4. Over the spinal nerve roots, close to the spine.

After use, dampen the gel side of the pad to remove any debris, allow it to air dry and re-seal in the zip-lock bag to keep the gel from drying out or getting hair/dust/debris in it. This will shorten the lifespan of the pads. If not using for a while, keep them in the fridge.

# **SPECIFIC INJURY USE :**

If you have read this document, you will note that each mode has many overlapping functions and therapeutic benefits. So for Osteoarthritis, for example, you could use either IF, TENS, or MIC. For Diabetic related pains, you could use the MIC, TENS or IF. For muscular tension, you could use any of the 4 modes, the EMS will have the strongest muscle contractions/twitches. Sprains and strains will benefit from the TENS/IF/MIC. Getting over some type of joint surgery, where there is pain and swelling would benefit from all 4 modes, IF in particular. The IF has the deepest tissue penetration depth of all 4 modes, so in areas where the pain is in a large joint, this will go deeper into the tissues.

<u>**Please note:**</u> For specific injury advice, please contact your treating therapist or Doctor. Additional information is also available in your manual- please refer to the MT8000 Manual provided with your machine.