



Pain Alleviation Technologies

BLS-1082

Owner's Manual



Marchan Medical ^{LLC}

marchanmedical.com

Please read the entire instruction manual before trying to operate PAT. It is unsafe to start using this device before reading the whole manual. Please contact Marchan Medical at 910-585-7935 or visit the website, www.marchanmedical.com with any questions.

Contraindications

Do not use this device on patients who have a cardiac pacemaker, implanted defibrillator, or other implanted metallic or electronic device, because this may cause electric shock, burns, electrical interference, or death.

Warnings

- Do not apply stimulation over the front of your neck because this could cause severe muscle spasms resulting in closure of the airway, difficulty in breathing, or adverse effects on heart rhythm or blood pressure.
- Do not apply stimulation across your chest, as this could cause heart rhythm disturbances.
- Do not apply stimulation over open wounds or rashes.
- Do not apply stimulation over, or in proximity to, cancerous lesions.
- Do not apply stimulation in the presence of electronic monitoring equipment (e.g., cardiac monitors, ECG alarms), which may not operate properly when the electrical stimulation device is in use.
- Do not apply stimulation when the patient is in the bath or shower.
- Apply stimulation only to normal, intact, clean, healthy skin.

Precautions

- PAT is not effective for pain of central origin, including headache.

- PAT can be used with pain medications and other pain management therapies.
- PAT is a symptomatic treatment and, as such, suppresses the sensation of pain that would otherwise serve as a protective mechanism.
- Since the effects of stimulation of the brain are unknown, stimulation should not be applied across the head, and electrodes should not be placed on opposite sides of the head.
- The safety of electrical stimulation during pregnancy has not been established.
- Some people may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium (gel).
- Patients with suspected or diagnosed heart disease or epilepsy should follow precautions recommended by their physicians.
- Use caution if stimulation is applied over the menstruating or pregnant uterus.
- Keep this device out of the reach of children.
- Use this device only with the leads, electrodes, and accessories recommended by the manufacturer.

Possible Adverse Reactions

- Users may experience skin irritation and burns beneath the electrodes with the use of electrical stimulators applied to the skin.
- Users may experience headache and other painful sensations during or following the application of electrical stimulation near the eyes and to the head and face.
- Users should stop using the device and should consult with their physicians if they experience any adverse reactions.

Indications for Use

PAT is a portable microcurrent device to alleviate pain. This device is intended for the relief of pain associated with sore and aching muscles, joints, and tissues in the back, arms, or legs due to strain from exercise or normal household and work activities.

Description

What's in the box?

1. PAT device
2. Carrying case
3. Two packages of 2X2 electrode pads (8 pads)
4. Electrode wires
5. 3 AAA batteries
6. Owner's manual

If anything is missing from the box, please contact Marchan Medical at 910-585-7935.

To reorder electrode pads or replacement wires, please go online to MarchanMedical.com or call 910-585-7935.

PAT Device

DISPLAY

Shows the body part being treated, the time remaining in the treatment, and the intensity of the current.

POWER

Turns the MC-1 on and off.

ENG/ESP

Switches between English and Spanish

PAUSE

Pauses the treatment time for up to five minutes. Push the button to unpause if less than 5 minutes

SOCKET

Plug the electrode pad wire here (use either socket).

TIME & INTENSITY

Shows time remaining and level of current intensity

SOCKET

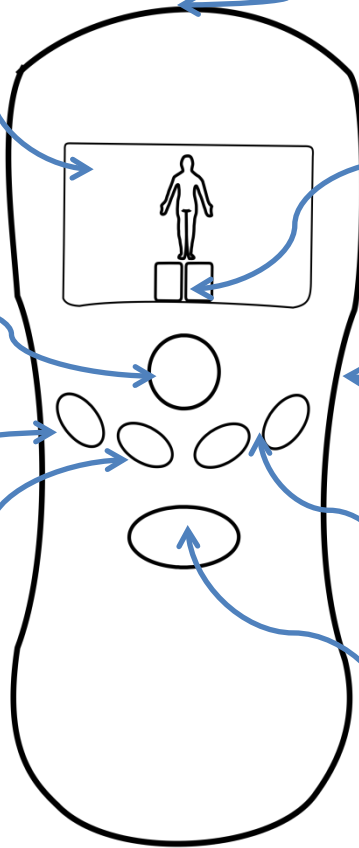
For future use.

+ and -

Increases or decreases the level of current.

MODE

Switches the unit to treat one of 8 different parts of the body (Neck, Shoulder, Elbow, Wrist, Hand, Back/Hip, Knee, Foot).



How Does it Work?

PAT uses direct microcurrent therapy to alleviate pain and discomfort in joints and muscles caused by a variety of conditions including repetitive stress, strains and sprains, pulled muscles and arthritis. Microcurrent therapy has been used for over 50 years to treat pain as well as healing wounds. The well-researched actions of microcurrent, which are currents less than 1/1000 of an amp, include pain reduction, increase of blood supply to the treated area, stimulation of immune system cells, increase of energy production in individual cells, and a decrease of inflammation (please visit our website for a copy of some of these studies).

All of these actions of the current to alleviate pain happen during a 40-55 minute daily treatment. You will probably not feel the current (remember, the current is less than 1/1000 of an amp) and may realize pain relief almost immediately. With multiple treatments, many people realize complete pain alleviation.

PAT is preprogrammed to do automatic and optimal treatments on any part of the body. We have worked out the best combination of currents for each body part. This makes PAT unique in the pain relief field.

Operating Instructions

Setup

- 1) Before using PAT for the first time, remove the battery cover and insert the three AAA batteries into the battery holder, observing the polarity.
- 2) Locate the electrodes pads and the white wire.

Electrode Pad Placement

- 1) For each treatment, you will use two of the 2 inch X 2 inch electrode pads. When connected properly, the current will pass through your body from one pad to the other.
- 2) Determine which area of the body you need to treat for pain. Be sure the area to be treated is clean and dry, free of oils. You should clean the skin with a wet cloth or paper towel and dry gently. You may treat over hairs if you need to. Long hair should be clipped with scissors. Do not shave. Please do not use any creams or lotions on the skin where you will put the electrodes as this might lead to skin irritation or poor conductivity of the currents.
- 3) Snap the white wire onto each of the two electrode pads.
- 4) Remove one of the electrode pads from the plastic and place the pad over or near the area of most pain. Please see the electrode placement drawing(s) on the following pages for guidance. Also, pictures of typical electrode pad placements can be found at www.MarchanMedical.com.
- 5) Place the second electrode near the first but not touching the other. Again, follow the placement guidelines on the following pages and on the website.
- 6) To treat joints place the electrode pads so that they are on either side of the joint so the current can pass through the joint.

- 7) For muscle pain, place one electrode pad over the most painful area with the electrode pad over the same muscle.
- 8) Never place an electrode pad over an open wound or broken skin.
- 9) Never allow the electrodes to touch each other.
You should experiment with different electrode placements until you maximum achieve pain relief.

Treatment

- 1) Pick up PAT and press the POWER button. The LCD screen should show the 8 parts of the body to treat.
- 2) Press the MODE button to cycle through the 8 body parts until the arrow is adjacent to the body part that you need to treat. The arrow should be solid and not blinking, indicating that the unit is ready to treat.
- 3) Plug the white wire into one of the sockets on the top edge of the unit. Make sure the plug is inserted completely.
- 4) If the electrode pads are making good contact, the wire is connected properly to the pads, and the wire is plugged into the socket, **the arrow that was solid should start blinking. This indicates that the current is passing through your body normally.**
- 5) You will see the time left in the treatment and the intensity setting in the boxes under the body figure. The treatment will proceed automatically until finished. **Check periodically to be sure that the arrow is still blinking.**
- 6) If you need to turn the backlight on during treatment or if you need to temporarily pause the treatment, press PAUSE. This will pause the treatment for up to 5 minutes. To begin treatment again, press PAUSE again.

- 7) Unlike traditional TENS units, you will probably not feel anything during the treatment. If you do, it will probably be mild tingling. If the sensations are uncomfortable, using the MINUS (-) button to reduce the intensity to a lower number. Treatment on 1 or 2 is still quite effective.
- 8) Each treatment parameter has been optimized based on what body area or part you are treating.
- 9) When the unit turns itself off, first unplug the wire from the unit. Next unsnap the wires from the electrode pads being careful to only pull the wire off by the snap enclosure, not by pulling on the wire itself.

Note: Do not use electrode pads if they are no longer sticking. Slight dampening of the electrode on the sticky surface may help them stick for one or two more treatments but is only recommended if there are no new electrodes to use. Do not tape them in place as the conductivity of the electrode without enough sticky gel will be minimal.

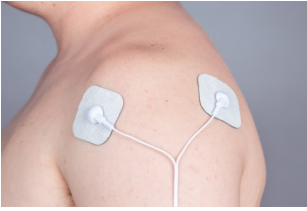
Storage

- 1) Remove the electrode pads carefully by pulling on one edge of the pad. Store each pad by sticking it to the plastic sheet that the electrode came on. Be sure to have the word ON showing to see the proper side of the holder to put the electrode on. This will keep the pad from drying out, ensuring good adhesion for the next treatment. Store the unit, pads, and wires in the case, ready for the next treatment.
- 2) Remember to store PAT at room temperature and handle it carefully. Do not expose it to extreme heat or cold.

Typical Electrode Placements



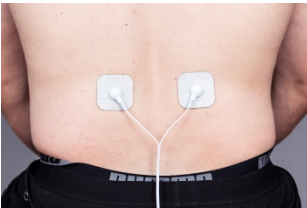
Upper Back—Use NECK setting. Place on either side of the spine where the pain is located. Do not place electrodes on the front of the neck.



Shoulder—Use SHOULDER setting. Place so the current will flow between the electrode pads through the area in the shoulder causing pain.



Muscle—Use the setting that is closest to the painful muscle. Place one electrode over the most painful area with the second electrode over the same muscle.



Back—Use the BACK setting. Place the electrodes on either side of the spine to treat muscle spasm or nerve problems like sciatica.



Elbow-Use ELBOW setting. Place electrode pads so that the current flows through the elbow joint.



Wrist—Use WRIST setting. Place electrode pads on either side of the wrist so that current flows through the wrist joint. For carpal tunnel, place the electrodes more toward the base of the hand



Finger—Use FINGER setting. Place electrode pads on the top and bottom on the finger joints causing the pain. You will treat 2 fingers at a time. Do not allow the electrode pads to touch each other.



Hip—Place electrode pads so that the current passes through the hip joint at the location of the most pain.



Knee—Use KNEE setting. Place electrode pads to pass current through the knee joint. You can either put the electrodes on the inside and outside of the knee as shown here or



on the top and bottom of the knee as shown here



Ankle—Use FOOT setting. Place electrodes on either side of the ankle so that current passes through the joint.



Foot—Use FOOT setting. Place one electrode pad over the area that is causing pain and the other on the opposite side of the foot.

For Maximum Results

1. Avoid using any lotions or creams on the skin where you will place the electrode pads.
2. Clean the skin thoroughly with water and if there is a lot of dead skin, you may consider using an exfoliate on the skin before you start treatment. This will maximize the life of the electrode pads.
3. Clip long hair under the electrode pad placement to just above the skin. Do not shave as this may cause skin irritation.
4. Periodically check to be sure the arrow on the screen is blinking during treatment.
5. Do not hesitate to experiment with electrode placement on a joint or muscle until you get maximum relief.
6. If the current is uncomfortable at the beginning of the treatment, please turn it down to 1.

Questions and Answers

- 1. Can I treat any painful area no matter what causes it?** With the exception of treating over known cancer areas or trans-cerebrally, you can treat any part of the body that is causing pain. You can even treat over bruised or swollen areas. In other words, the unit relieves pain for every type of pain, from everyday aches and pains, to acute injuries, to persistent or chronic pain.
- 2. Can I do more than one treatment a day?** Absolutely! Many times people have found that two or more treatments will be more effective. The currents are so low in these treatments that you cannot over-treat. You can also do a second treatment without removing the electrode pads. Just press the POWER button again and reselect the body part you are treating.
- 3. The area I need to treat is not listed on the device. What MODE should I use?** Use the MODE area that is closest to the spot you need to treat. For example, if you need to treat your forearm for a muscle strain, you could use either the ELBOW or WRIST setting. Try both on subsequent treatments to see which works the best.
- 4. I have done several treatments and still have pain. What is wrong?** Try multiple treatments in one day. PAT is designed to stop pain by cumulative treatments over time. While many get immediate relief, some require many treatments to take care of the underlying issues that are causing the pain. The longer you have had the pain, the more time and treatments it may take to overcome the problem. The research has shown that it may take up to 6 months to get full relief.

5. **I have done a treatment and the pain seems to be worse. What do I do?** This is not common, but may happen, especially when treating persistent or long-standing pain. Much like getting a deep tissue massage, the PAT treatments may release toxins that have built up due to excessive inflammation in the area. When the toxins are released, the pain receptors may be activated, causing pain. This should go away with a few more treatments as the body gets rid of the toxins.
6. **The electrode pad doesn't stick well anymore. What should I do?** The adhesiveness of the pad will diminish over time. If it doesn't stick anymore, you should replace it. New pads can be ordered at www.MarchanMedical.com. The pads will last longer if the skin is clean and free of oils and debris. Never put creams or lotions on the skin where the electrode pads are to be placed.
7. **Someone else wants to use the unit. Can they use the same electrode pads?** We do not recommend sharing electrode pads. Use a new set for each person using the unit.
8. **When is the best time to treat?** You can do a treatment anytime. Many have found that the morning is the best time to relieve pain for the day. Others treat in the evening to relieve pain for a good night's sleep. Feel free to do multiple treatments at multiple times, depending on the level of pain you are experiencing.
9. **I feel a lot of tingling during the treatment and it is uncomfortable. What should I do?** You can turn the current down to a comfortable level by pressing the MINUS (-) button. You can effectively treat with a current as low as 1. Please note that the device buttons will not function to change current after 5 seconds from the last time you press a button.

10. **How can I treat my fingers?** You can place two electrode pads across your fingers on both sides of your hand and treat with the HAND mode. Or you can use the large two snap electrode and wrap it around you fingers. Just be sure that the two ends do not touch each other.
11. **I have treated my pain and it is gone. Should I keep treating the area?** We recommend treating for a few days after the pain is alleviated.
12. **What is the difference in PAT and a standard TENS unit?** TENS units use as much as 1000 times more current than PAT. They are designed to temporarily block pain. By using much lower currents, PAT mimics the body's natural currents and not only can block pain, but can improve the underlying cause of the pain.
13. **Where can I learn more?** The Marchan Medical website has a lot of information, updated regularly. Go to www.marchanmedical.com.

Troubleshooting

Problem	Possible Cause	Solution
The device will not turn on	Battery dead or inserted backwards	Make sure there are fresh batteries in the device. Check to be sure the polarity is correct.
The arrow beside the body part list is not blinking during treatment.	<p>Batteries are low.</p> <p>The PAUSE button has been pressed.</p> <p>Some part of the connection between the device and the body is lost.</p>	<p>Replace batteries.</p> <p>Press the PAUSE button again to restart treatment.</p> <p>Check the electrodes and make sure they are sticking. Replace if necessary. Make sure that the wire is plugged into both the device and the two snaps on the</p>

		electrode pad(s).
The display is very faint	Weak batteries	Replace batteries
Electrode pads will not stick	Pads are either well used or were used on skin that had excessive oil or hair	Replace electrode pads

Specifications

Output: 0-3 Hz pulsed DC monophasic waveform, 1.25 millivolts, 40-250 microamps under 500 ohm load

Timer: 40-55 minutes depending on the mode selected

Batteries: Disposable AAA alkaline (3)

Temperature: Only use if the temperature is between 10-45 degrees C, 20-90 % humidity

Storage: Always store PAT, electrode pads, and accessories in the carry case. Store between -25-70 degrees C, <95% humidity