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USER MANUAL

AccuMed AP210 Mini Electronic Pulse Stimulator



AP210 USER MANUAL

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INTRODUCTION

The AccuMed AP210 Mini Electronic Pulse Stimulator is a portable and battery-powered Transcutaneous Electrical Nerve Stimulator (TENS). The AccuMed AP210 functions as an alternative method for pain relief and management.

The AccuMed AP210 delivers electric pulses to tired and sore muscles. These pulses are generated by the device and delivered through the connecting wires and electrodes to the target body areas. AP210 is designed to relieve pain in various parts of the body, such as the lower back, shoulders, hands, and feet.

The AP210 has 8 operation modes: 1) Massage, 2) Acupuncture, 3) Beat, 4) Cupping, 5) Scraping, 6) Combo, 7) Sole, and 8) Ear. Its display screen shows the battery power, selected mode, current intensity, and remaining time. The device is equipped with the following accessories: four electrode pads, two electrode cables, one battery charger, one USB cable, and one wire roller coupled with the pad holder.

SAFETY WARNINGS

DANGER



Do not use this device if you have an implanted defibrillator or implanted metallic devices. Such use could cause electrical shock, burns, electrical interference, or death.

WARNING



If you have one of the following conditions, please consult with your physician before purchasing or using this device.

Acute disease, malignant tumor, infective disease, pregnant, heart disease, high fever, abnormal blood pressure, lack of skin sensation or an abnormal skin condition, any condition requiring the active supervision of a physician.

NOTICE



Do not use this device while driving.

Do not use this device while sleeping.

Do not use this device in high humidity areas such as a bathroom.

Keep the device away from moisture, high temperatures, and direct-sunlight.

Keep this device out of reach of children.

Stop using this device at once if you feel pain, discomfort, dizziness or nausea, and consult your physician.

Do not attempt to move the electrode pads while the device is operating.

Do not use the device around the heart, on the head, mouth, pudendum, or blemished skin areas.

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DO NOT APPLY STIMULATION of this device in the following conditions:

- 1) ACROSS THE CHEST. Introduction of electrical current into the chest may cause rhythm disturbances to the heart, which could be lethal.
- 2) OVER PAINFUL AREAS. Please consult with your physician before using this device if you have painful areas.
- 3) OVER OPEN WOUNDS OR RASHES, OR OVER SWOLLEN, RED, INFECTED, OR INFLAMED AREAS OR SKIN ERUPTIONS (e.g., phlebitis, thrombophlebitis, varicose veins). Apply stimulation only to normal, intact, clean, healthy skin;
- 4) IN THE PRESENCE OF ELECTRONIC MONITORING EQUIPMENT (e.g., cardiac monitors, ECG alarms). The electronic stimulator may not operate properly when the electrical stimulation device is in use.
- 5) WHILE OPERATING MACHINERY, or during any activity in which electrical stimulation can put you at risk of injury.
- 6) ON CHILDREN.

BE AWARE OF THE FOLLOWING:

- 1) Consult with your physician before using this device. The simulation with the device may:
 - a. Cause lethal rhythm disturbances to the heart in susceptible individuals, and
 - b. Disrupt the healing process after a recent surgical procedure.
- 2) This device is not effective for pain of central origin, including headaches.
- 3) This device is not a substitute for pain medications and other pain management therapies.
- 4) This device has no curative value.
- 5) This device is a symptomatic treatment and, as such, suppresses the sensation of pain that would otherwise serve as a protective mechanism.
- 6) The long-term effects of electrical stimulation are unknown.
- 7) The user may experience skin irritation, burns or hypersensitivity due to the electrical stimulation or electrical conductive medium.
- 8) The user has suspected or diagnosed epilepsy. The user should follow precautions recommended by his or her physician.
- 9) Use caution if the user has a tendency to bleed internally, such as following an injury or fracture.
- 10) Use caution if stimulation is applied over the menstruating uterus.
- 11) Use caution if stimulation is applied over areas of skin that lack normal sensation.
- 12) Stop using the device if it does not provide pain relief.
- 13) Use this device only with the leads, electrodes, and accessories provided and recommended by the manufacturer.

Medical Electrical Equipment needs special precautions regarding electromagnetic compatibility (EMC) and needs to be installed and put into service according to the EMC information provided. Portable and mobile radio frequency (RF) communication equipment can affect Medical Electrical Equipment.

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NOTE:

- 1) Never connect this product with a common headphone.
- 2) Please do not touch the USB port when using the device. The USB port is only used to connect the charger. Do not connect other devices.
- 3) The charger supplied by the manufacturer must be in compliance with IEC/EN 60601-1, the use of unauthorized chargers can impair the safety or damage the device.
- 4) The battery needs to be charged for up to 10 hours before the first use.
- 5) Only charge the unit when battery is completely drained the first 2 times after initial use. Unplug the charger from power outlet when charging is complete. When stimulation intensity decreases, it indicates that the device needs charging. Recharge it and then continue to use the device.
- 6) Do not use the device while charging the battery.

Environmental condition for transport and storage:



Easily fragile product



Keep the product in a dry place away from water and rain.



Product package should be recycled.



Stacked up 4 cartons at most

SPECIFICATIONS:

Power supply: DC 3.7V

Output voltage: 4.2 V @ 500Ω

Output current: 84mA@500Ω

Pulse width: 100µS

Frequency: 110Hz

Timer: 10-60 minutes

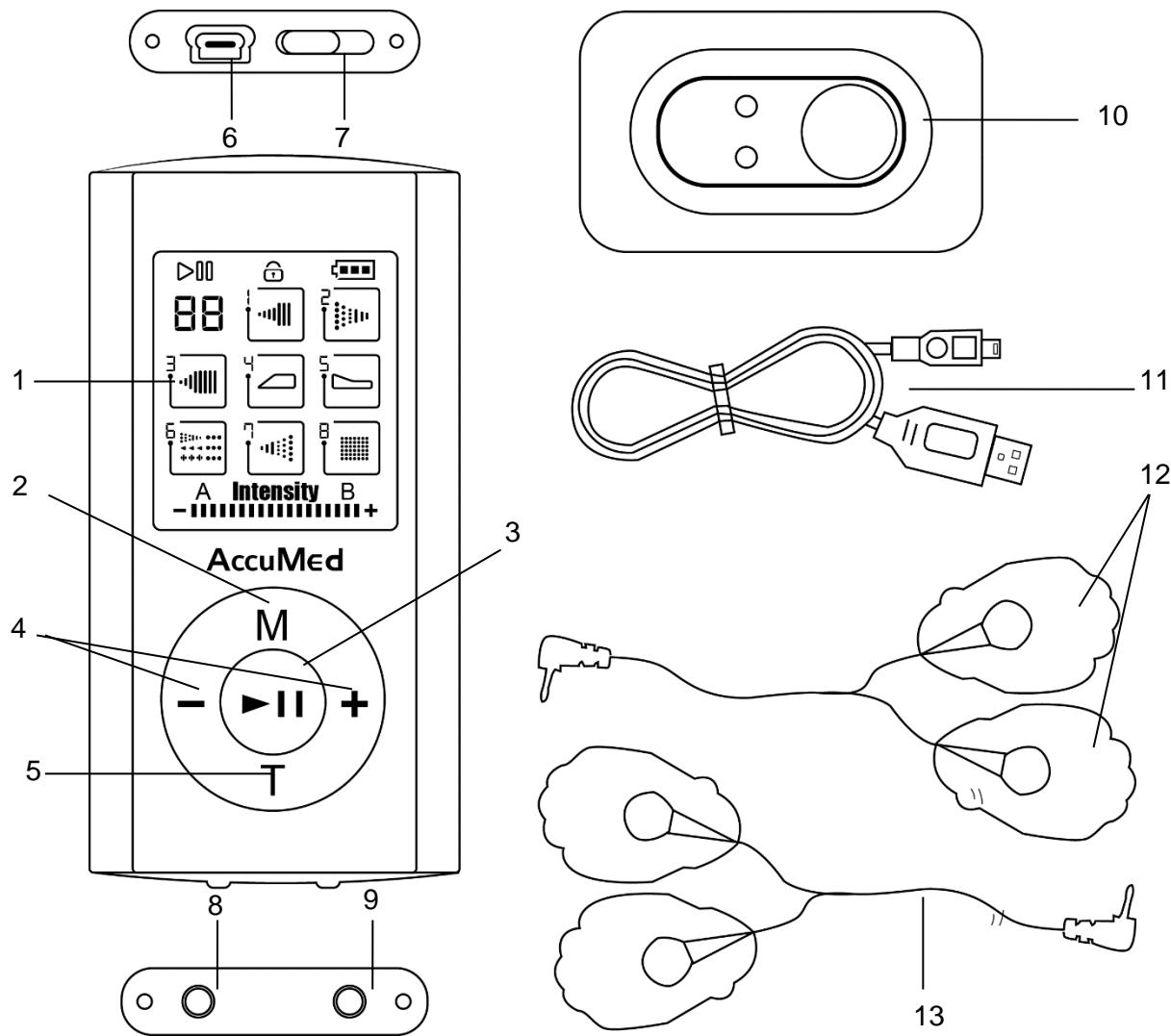
Strength level adjustment: 20 levels

Charger: 100-220V, 50/60Hz, and 10mA (input); DC5V, 300mA (output)

INTENDED USE:

To be used for temporary relief of pain associated with sore and aching muscles in the shoulders, waist, neck, back, arms, and legs due to strain from exercise, or normal household, and work activities.

DEVICE OPERATION OVERVIEW:



- 1. LCD Screen
- 2. Mode Selector
- 3. Play/Pause Button
- 4. Intensity Adjuster (Increase/Decrease)
- 5. Time Adjuster
- 6. USB Port
- 7. On/Off Switch
- 8. A Channel Output
- 9. B Channel Output
- 10. USB Charger
- 11. USB Cable
- 12. Electrode Pads
- 13. Lead Wires

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OPERATE DEVICE:

1. The AP210 unit needs to be charged for up to 10 hours before the initial use.
2. Make sure the power switch of the device is in the OFF position.
3. Connect a pair of electrode pads to one lead wire by snapping them on.
 - Connect the other end of the lead wire to the left output of the device.
 - Snap the other pair of electrode pads to the remaining lead wire and the right output of the device.
4. Use a damp towel or wet wipe to clean skin of treatment area. Remove the protective film from the electrode pad and attach to treatment area. Ensure both pads are on the skin and not overlapping.
5. Turn on the unit by sliding the On/Off switch from Off to On.
6. Once On, the device will automatically enter Mode 1 (Massage). The Timer will default to 20 minutes.

ADJUST INTENSITY:

1. Press the "+" button to increase the intensity of both outputs.
2. Press the "-" button to decrease the intensity of both outputs.

CHANGE MODES:

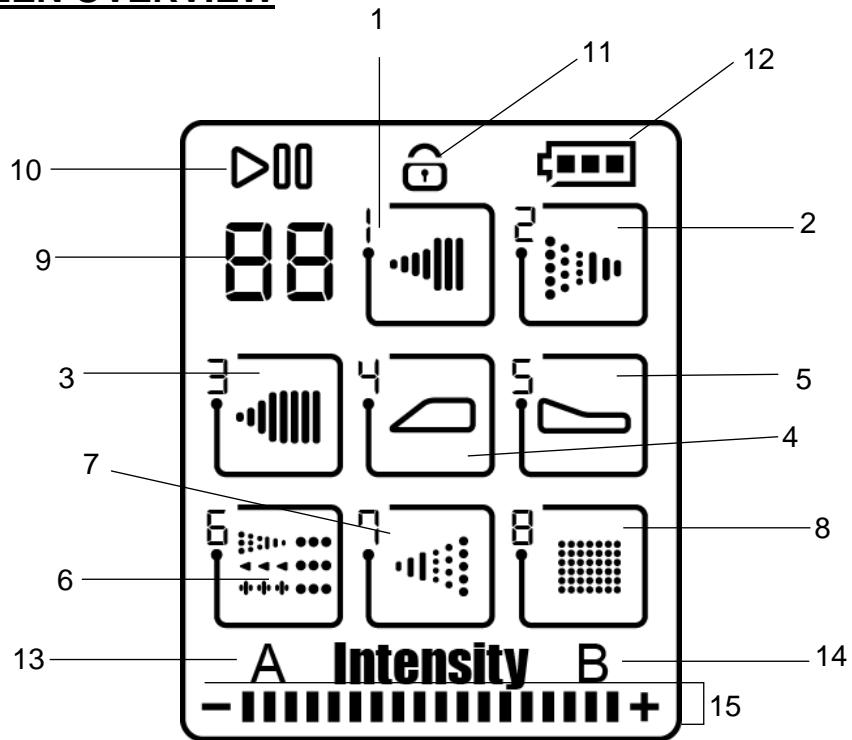
1. Press the M button to select a desired stimulation mode.
2. Press the Play/Pause "► II" button to pause the device and press again to resume.

ADJUST TIMING:

1. Press the T button. Each press of the T button increases the time by 10 minutes. After the time runs out the device turns off automatically, and it can be restarted if treatment needs to be continued.

NOTE: The AP210 unit is safe. The output intensity is only increased by pushing the + key. Even if the intensity is increased to the maximum, it is within the safe range, but may feel uncomfortable. When the user switches the mode, the intensity will automatically go down to the minimum for safety reasons.

LCD SCREEN OVERVIEW



1. Mode 1 (Massage)	9. Play/Pause Icon
2. Mode 2 (Acupuncture)	10. Time
3. Mode 3 (Beat)	11. Lock Icon (Indicates Device is Paused)
4. Mode 4 (Cupping)	12. Battery Life Icon
5. Mode 5 (Scraping)	13. Channel A Intensity
6. Mode 6 (Combo)	14. Channel B Intensity
7. Mode 7 (Sole)	15. Intensity Bar
8. Mode 8 (Ear)	

MODES AND INTENDED USES:

- 1) MASSAGE: Gradually increasing pressure and fades away (a soft squeeze and release), Medium to Strong strength pulses, good for all major muscle groups.
- 2) ACUPUNCTURE: Short Pulses that start strong and fade away gradually (poking, acupuncture type feeling), good for all major muscle groups.
- 3) BEAT: Quick strong pulses in a rhythm, good for all major muscle groups.
- 4) CUPPING: Sudden pressure increase and stop, cupping/pulling sensation, great for shoulder/ upper and lower back.
- 5) SCRAPING: Sudden pressure and then a gradual fade, similar to hot stone therapy, Great shoulder/ upper and lower back.

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- 6) COMBO: Mix of Massage, Beat, Scraping, Acupuncture, good for lower back and abs.
- 7) SOLE: Short pulses then a gradual increase in pressure and stop, great for calf area and feet.
- 8) EAR: Very subtle, for extremely sensitive areas or people with sensitivity to pulse sensations. (like pulling on your ear lobe).

NOTE: Start from the lowest intensity, and then gradually adjust to a comfortable level on a scale from 1 to 10.

RECOMMENDED PRACTICES:

1. Start by using it 1-2 times per day for each treatment area for 10 to 20 minutes.
2. Be sure the treatment site is clean of dirt, body oil, and other cosmetics.
3. The lifespan of the electrode pads will vary depending on the frequency of use and care. Keeping electrode pads clean and sealed in the zip bag after use will extend their lifespan. Replace the electrode pads when they lose their adhesiveness.
4. Charge the battery of the device by connecting the USB cable to the device and computer or connecting the USB cable and charger to the device and wall outlet.

APPLICATION PRINCIPLES:

1. Find the exact pain point or the area where the muscles ache most.
 - A. For best relief of pain, place the electrode pair from one channel on either side of the pain (See Figure 1: Twin mode). You may also place one electrode pair on the area of pain and the other pair near the area of pain.
 - B. Fixing the two or four pads respectively on the opposite sides of the body is not recommended and provides little benefit (See Figure 2).
2. Intensity: The intensity can be gradually increased by one point. Always stay below the point of discomfort.

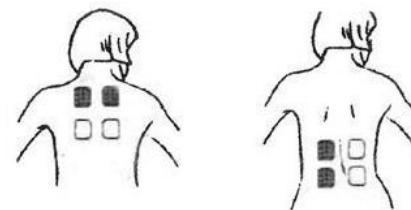


Figure 1: Twin mode (this is the correct mode)

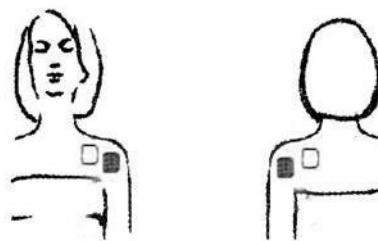


Figure 2: Opposed Mode (Not recommended)

RECOMMENDED APPLICATION DURATION AND MODE SELECTION:

During initial use, choose Mode 1 at a low Intensity level for 10 minutes up to 3 times a day. You may increase the intensity and time after you have become familiar with the device and feel of the stimulation. It is recommended to become familiar with all the modes and intensity levels you find the most relief with.

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Remember, all modes are designed to relieve pain. However, it is difficult to recommend one specific mode for a type of pain as this is usually determined by the individual's preference.

- If you do not feel any pain relief after having tried different modes and intensity levels, it is recommended that you consult your physician.
- If the stimulation sensation becomes weaker or disappears, you may increase the intensity by pressing the up key (+). If the stimulation becomes uncomfortable, press the down key (-) to decrease the intensity.

ALWAYS STAY UNDER THE POINT OF DISCOMFORT!

- If you experience an adverse reaction (skin irritation/redness/burns/other painful sensation), or if you feel unusual discomfort, stop using the device immediately.
- Many people experience immediate relief from muscle pain, while others require several days of regular use to feel the benefits. The results vary and will depend upon your underlying conditions and how often you use the device. If your pain does not improve, you can try to increase the intensity and time or change the mode.

ELECTRODE PADS GUIDELINES:

1. Use the electrode pads supplied by the manufacturer only; other electrodes may present a risk of unsuitable electrical characteristics with your stimulator.
2. Do not use the electrode pads on different people. Skin reaction or cross contamination may occur.
3. Always turn off device before removing or repositioning the electrodes.
4. Wash skin thoroughly, and then dry it before applying the electrodes.
5. Apply the whole surface of the electrode pads firmly to the skin. Do not use electrodes that do not stick properly to the skin or only partially stick to the skin.
6. In case of skin redness under the electrodes after a stimulation session, do not start a new session in the same place if skin redness is still evident.

READJUSTMENTS, ALTERATIONS, AND REPAIRS:

1. Do not disassemble, repair or modify the device without authorization. This will void any warranty on the product.
2. The manufacturer is only responsible for the safety and performance of AP210 when readjustments, alterations, and repairs are carried out by authorized individuals and when the AP210 is used in accordance with the user instructions.
3. Qualified technicians who are familiar with the technical features of the device have been provided with circuit diagrams, PCB drawings, component lists, and setting instructions by the manufacturer.

CLEANING AND MAINTENANCE:

A. FOR THE CONTROL UNIT:

1. To keep the controller clean, use a soft, dry cloth for dust or a soft damp cloth for any dirt and smudges. Do not use any cleaning solutions to clean the controller and its pads.
2. Do not use or store the device where there are magnetic fields or electric waves (near TV set or speakers).
3. Do not place the devices in areas of high temperature, high humidity, or under direct sunlight.
4. Keep the device out of reach of children.
5. All worn accessories should be disposed of according to your local regulations.

B. FOR ELECTRODE PADS:

1. Unplug the output cord from the output jack of the controller after each use. Cover both pads with the protective film before storing. Never fold the electrode pads.
2. Between uses, store the electrodes in the reusable bag in a shady place. Stock room temperature: +5°C~+27°C (41-80°F) and humidity of 30%~80%. No need to sterilize.
3. Never apply the pads to any other surface other than your skin. If the pads become soiled or dirty, the adhesiveness may decrease. In this case, moisten the surface of the pads with water and wipe away the dirty portion. This will allow a temporary restoration of the adhesiveness. However, too much water will result in loss of the adhesiveness.
4. The life of the electrodes varies depending on skin conditions, storage, amount of use, type of stimulation, and stimulation site. Electrode life may be extended by carefully following this Instruction for Use. The expired electrodes are to be recycled to not harm environment.

WARNING: The electrodes are intended for single patient use only!

STORAGE:

CAUTION: Do not store in a damp area. Dampness may affect the device and cause rust.

- Normal working ambient temperature: 5°C~40°C (40-104°F)
- Normal working ambient humidity: ≤80%RH
- Store and transport ambient temperature: -20°C~55°C (4° -131° F)
- Store and transport ambient humidity: ≤93%RH

HOW TO STORE DEVICE:

1. If you need to turn off the device during stimulation, slide the On/Off switch to "OFF".
2. Before storing the TENS use the protective film to cover the electrode pads.
3. Put away the connecting wires and electrode pads.

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TROUBLESHOOTING:

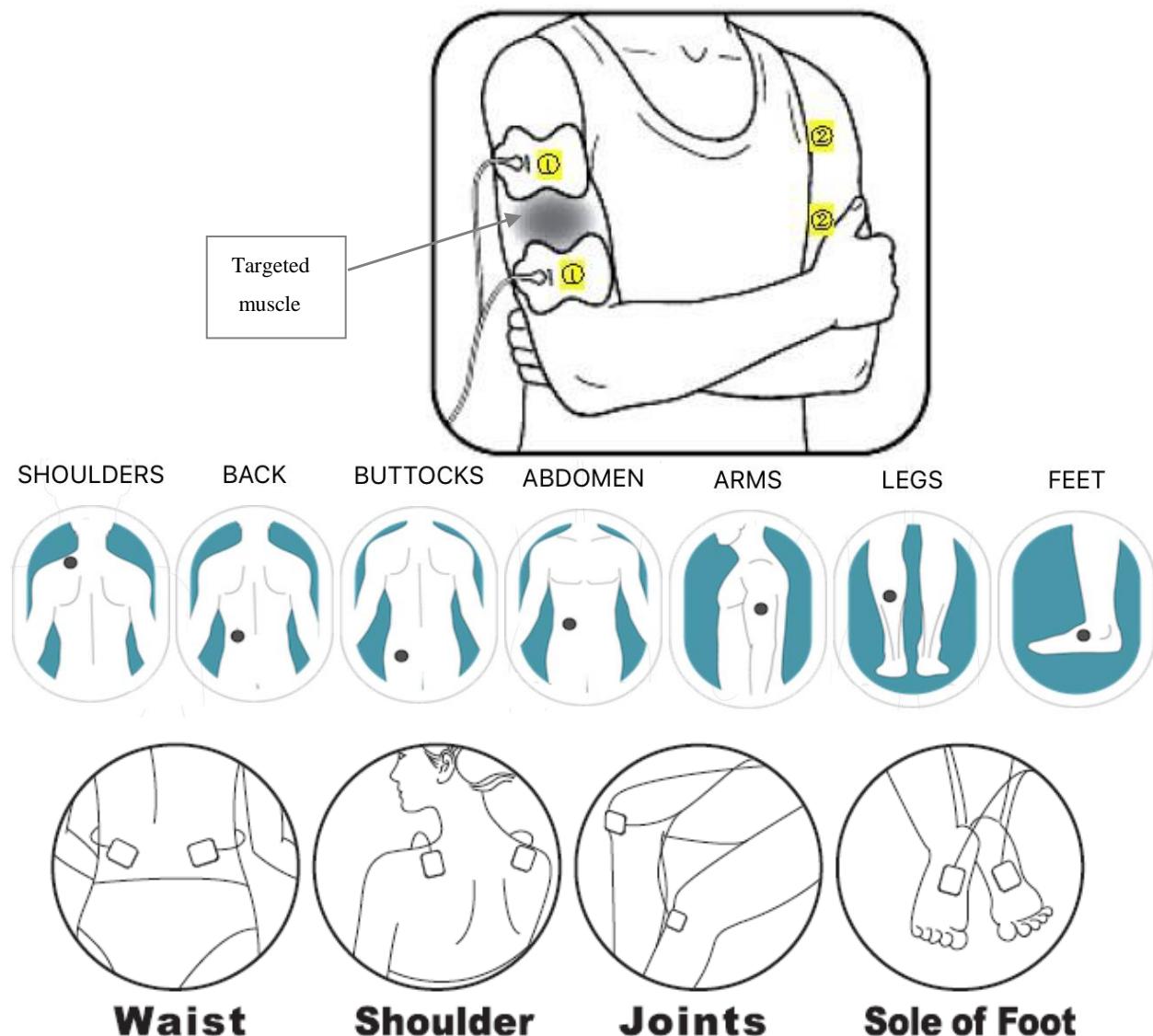
If your device is not operating properly, please check below for common problems and suggested solutions:

1. No power source; no display in LCD:
 - Check if the battery is low and needs to be recharged.
 - If the unit was previously used, switch the power to OFF first, then back to ON.
2. Stimulation is weak or nonexistent:
 - Check that the electrode pads are firmly attached to skin.
 - Check that the electrode pads are not touching each other.
 - Check that electrode pad are not stacked together or overlap.
 - Check that the cord is properly connected to the unit.
 - Check if the battery is low and needs to be recharged.
 - The intensity level is very low.
 - Both pads from the same wire must be attached to one person's body to feel sensation.
3. Electrode pads are not sticky:
 - The electrode pads lost their adhesiveness and need to be replaced.
 - Wash adhesive surface of pads softly with your fingertips for about 3 seconds under slow running water.
 - Make sure you are not perspiring and are in a cool room when using.
 - If electrode pads were applied immediately after washing, make sure to dry the pad before applying.
 - If the electrode pads were exposed to high temperature, high humidity, or direct sunlight, the electrode pads may have been ruined.
4. The skin turns red or the skin feels irritated:
 - The therapy time is too long or the intensity is set too high.
 - The adhesive surface of pads is dirty or dry and must be washed.
 - If problem persists, stop using device and contact your physician.
5. One pad feels stronger than the other:
 - This is normal. Different areas of your body will react differently.
 - Make sure the pads are sticky and are making good contact.
6. Power cut off during use:
 - Check if battery is low and charge if necessary.
 - Check that cord is intact and is not broken.

RECOMMENDED PLACEMENT AREAS:

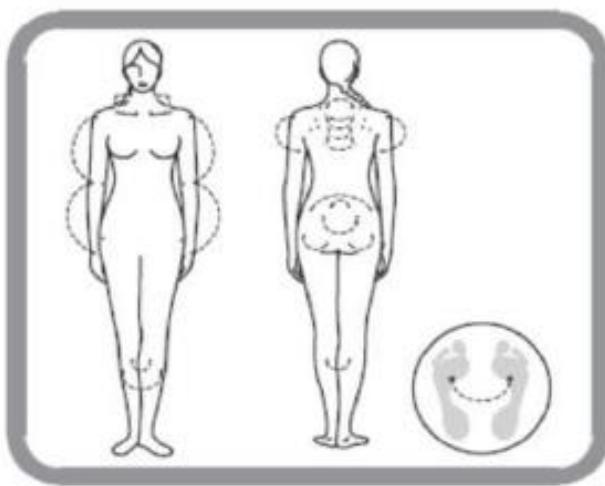
NOTE:

The images below are mere suggestions for where to place the electrodes, but only after the user has gone through the starting procedure, this entire user manual, and is familiar with the device.



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Arms or legs



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To contact AccuMed support, please do one of the following:

- Visit <http://accumed.com/contacts> and use the email form
- Call AccuMed Support at 1(713) 904-1955
- Email AccuMed Customer Support support@accumed.com

For more information please visit www.AccuMed.com

Manufactured for:

AccuMed Biotech

16727 Park Row Drive, Houston, TX 77084

(713) 904-1955

AccuMed	Model: AP210 Input: DC 3.7V Weight: 110g Size: 83*42*9mm
AP210	
Use: Only apply stimulation to normal, intact, clean skin.	
Storage: -20~+55°C, ≤93% humidity, 50~106KPa	
	
	Refer to User Manual before using!
	Distributed by Amcrest Technologies LLC

Notes:

Symbol	Meaning
	Class II equipment
	Type BF applied part
	Operating instructions
	Manufacturer

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