# B**⊜**lifu

### 4 INDEPENDENT CHANNEL TENS EMS UNIT



FM-B2402

## **Customer Service:**



Support@belifu.com

Please download the PDF manual on the below link: https://belifu.com/downloads

## Precaution

· Please read the instructions manual carefully before using the device. If you have any questions, please refer to the salesman, or ask your doctor.

· Please keep this manual for future reference.

## CONTENT

| 3 |
|---|
| 5 |
| 6 |
| 9 |
| 1 |
| 1 |
| 3 |
| 5 |
| 7 |
| 8 |
| 9 |
| 9 |
|   |

## Chapter1: Introductions

#### Working principle

It acts on the human body through the electricity pulsewave, the electric energy is sucked by the human body and the energy form is changed, which causes a series of physical and chemical changes, produces local or systemic physiological reactions, and finally affects the pathological process and plays a corresponding role.

#### Intended use

For TENS mode: To be used for temporary relief of pain and recovery of fatigue associated with sore and aching muscles due to strain from exercise or normal household work activities. For EMS mode: To be used to stimulate healthy muscles in order to improve and facilitate

muscle performance.

#### Applicable people

Adults who suffer from sore and aching muscles in the shoulder, waist, back, neck, upper extremities (arms), and lower extremities (leg) due to strain from exercise or normal hou sehold work activities can use this device.

However, it should not be used by children, pregnant women, or anyone who has an impl anted metallic or electronic device. Ask your physician if you have any questions.

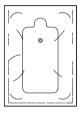
#### Package list

- Device
- · 1 pair of large self-adhesive electrode pads
- · 3 pairs of medium self-adhesive electrode pads
- · 1 set of small self-adhesive electrode pads
- · 4 lead wires with 2 connectors (2.5mm)
- 1 lead wire with 4 connectors (2.5mm)
- USB cable
- Storage bag
- User manual

### Illustrations of the Accessories







Electrode Pads

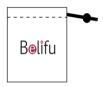
Electrode Pads



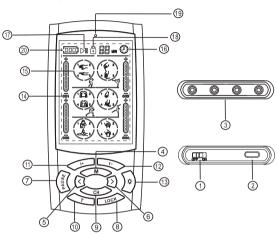
USB Cable

Leads wire

Electrode Pads



Storage Bag



**Chapter 2: Functions Of The Device** 

| Instructions of ports   |                 |                   |                  |
|---|-----------------|-------------------|------------------|
| <ol> <li>Switch on/off</li> </ol>   | ② Charging port |                   | 3 4 output ports |
| Ir  | struc           | tions of buttons  | 5                |
| ④ Mode selection key inside the circle  |                 | ⑤ Main mode left  | selection key    |
| ⑥ Main mode right selection k   | ey              | ⑦ Pause key       |                  |
| ⑧ Lock key  |                 | 9 Channel 1-4 se  | lection key      |
| 🔟 Time key  |                 | Intensity +       |                  |
| Intensity -   |                 | ③ Screen light up |                  |
|   | Instru          | uctions of icons  |                  |
| ① Channel indicator   |                 | (5) Mode icons    |                  |
| Image: Time icon  |                 | Pause icon        |                  |
| B Locked  |                 | Indicator light   |                  |
| Battery     Battery     Battery     Second |                 |                   |                  |

## **Chapter 3: Warnings And Notes**

#### Warnings

We recommend not to use this therapeutic apparatus in the following cases:

1) Do not use this device if the patient has any implantable electronic or metal equipment

(e.g. pacemaker).

2) Has epilepsy.

3) Severe lower extremity arterial circulation problems.

4) Abdominal or inguinal hernia site.

5) Do not use this device if you have a heart disease without consulting a doctor.

6) Do not use this device on pregnant women.

7) Do not use this device over, or in proximity to, cancerous lesions.

8) Be Fever.

9) Has cancer.

 Do not use therapeutic instruments in high humidity environments, such as bathing or showering in a bathroom bathtub.

11) Can not be used after drinking.

12) Low-frequency therapeutic instruments can not be used when using high-frequency surgical instruments.

13) Near the genitals.

14) Recommendation: do not use low-frequency therapeutic instruments near shortwave or microwave therapeutic equipment (e. g. 1m), where the output of the low frequency therapeutic instrument used is unstable.

15) The high frequency surgical equipment and stimulatorr. When connected to a patient, burns may occur at the stimulator electrode and may damage the stimulator.

16) Patients undergoing medical treatment and feeling abnormal.

17) Heart patients with neurological abnormalities in the brain.

18) Patients whose body temperature exceeds 38°C .

19) Infectious diseases Patients.

20) Patients who can not express their will.

21) Do not use this product while charging.

#### Notes

1) Electrode wire is too long may cause suffocation. Keep the product and keep away from children.

2) Make sure you are always aware of all warning items.

 Stimulators should not be used in the throat and mouth. This may result in severe throat muscle spasms and muscle contraction, which is sufficient to block the airway and cause dyspnea.

4) The application of electrodes near the thorax may increase the risk of cardiac fibrillation

5) This stimulator should not treat unattended patients, or suffer from emotional distress, dementia, and low IQ people.

6) Use guidance has been detailed; any improper use may lead to danger.

7) Do not use this device for any undiagnosed pain symptoms, consult a doctor for diagnosis before use.

8) Electrodes can not be placed in arteries, head and pubic area.

9) Patients suffering from heart disease, cancer or other health-threatening conditions should consult a doctor before using this device.

10) If the intensity of stimulation makes you feel 8 uncomfortable, reduce the intensity of stimulation to a comfortable level. If the problem remains, please contact your doctor.

Do not use this equipment in rooms where aerosol (spray) and pure oxygen are used.
 Please do not use this equipment near any highly flammable substances, gases or explosives.

13) Please check that the cable and related connections are in good condition before each use.

14) Turn off the device before using or removing the electrode pad.

 Electronic stimulators can only use electrode wires and electrodes recommended by manufacturers.

#### Consult your doctor before using the device especially in the following cases:

Acute disease, especially patients suspected or suffering from hypertension, thrombosis or malignant mass.

· Patients with various skin diseases.

· Patients with chronic pain disorders (e. g. metabolic disorders) with reduced pain.

· Patients undergoing medication.

#### Adverse reaction

Skin allergies caused by electrode sheetpad gels and electrode irritation burns are
potential adverse reactions. If the skin appears sensitive response, should be
discontinued and consult your doctor.

 If the intensity of stimulation makes you feel uncomfortable, reduce the intensity of stimulation to a comfortable level, and if the oroblem persists, please contact your doctor.

# Explanation of figures, symbols, warning statements and abbreviations on the equipment.

| Meanings of symbols used for marking described in instructions for use |   |  |
|--|---|--|
| $\triangle$  | Caution!  |  |
| Ŕ  | Type BF applied part  |  |
|  | Direct current  |  |
| IP22   | Protected against solid foreign objects of 12,5 mm $\oslash$ and greater; Protection against vertically falling water drops when ENCLOSURE tilted up to 15° |  |
| 8  | Refer to instruction manual   |  |
| SN   | Serial Number   |  |
| ~  | Manufacture date  |  |
|  | Manufacture information   |  |

### Chapter 4: Operation

#### Before using the device, please check following carefully:

- 1. Check the pads for any damages or irregularities.
- 2. Check the electrode wires for any damages or irregularities.
- 3. Check the electrode pads any damages or irregularities.
- 4. Check for any physical damage on the unit.

#### NOTE: Do not use this product while charging.

#### STEP 1: Connect the electrode pads to the electrode wires

Note: Please check the snap connections to ensure they are fastened. Use at least one pair of pads, one pad can't work alone.

#### STEP 2: Plug the wires into the device

Note: Please make sure the wires are fully inserted to the end. Make sure the wires are not loose. A loose connection will decrease the power of the output.

#### STEP 3: Paste the pads on your skin

Note: When using 1 wire with 2 connectors (1 positive, 1 negative) please make sure both pads are stuck on your body; when using 2 wires, please make sure at least 2 pairs of pads (The blue and white snaps are paired) are stuck on your body. Please confirm the wire is plugged well and pads are stuck to your skin before adjusting the unit.

Note: When the electrode pad is stuck to the clothes, don't tear it off heavily. As long as the inside of the side with the electrode pad is covered with water, it can be removed easily.

#### STEP 4: Turn on the unit

Push the switch key on the bottom from OFF to ON. The screen will light up.

Note: Please check the flash channel indicator on the screen to make sure it is the channel you want to use. The flash "CH1" icon indicates you can adjust the mode and intensity level of Channel 1. If you choose other channels (Ch2, Ch3, CH4), the other channel icon will flash to indicate the other channels (Ch2, Ch3, CH4) is working

#### STEP 5: Choose the channel

The default value is CH1, Mode 1 and 0 intensity. Please press the CH\* key to choose the channel you want to use or adjust the mode and intensity, then the selected CH1/CH2/CH3/CH4 icon on screen will flash.

Note: The channel is independent, you can set different mode and intensity on different channel. Please confirm the channel you want to use before choosing the mode and intensity

#### STEP 6: Choose the mode and adjust the intensity of CH1/CH2/CH3/CH4

 Press the '<' or '>' key to select one main mode from 6 round main modes, and press the 'M' key to select one mode inside the circle you want to use. The selected mode and number will flash. Please refer to the Chapter 6 to choose the applicable mode.
 Press the 'I+' or 'I-' key to increase or decrease the intensity level. The treatment will

start when the intensity is higher than 0. When changing the mode or the pads fall off during treatment, the intensity will down to 0.

Note: It is recommended to start with the lowest level of intensity and gradually increase to a level that is comfortable.

#### STEP 7: Set the time

The default time is 20mins. Press the "T" button to adjust the time (10-80mins), it can be increased by 10mins. When it's increased up to 80mins, continue to press the "T" button to jump to 10mins.

#### STEP 8: Pause the treatment

Press the "PAUSE" button to suspend the treatment when changing the m assage point,

the M icon will appear on the screen, anything setting carit be change in a pause state. Press the "PAUSE" button again to continue treatment.

#### STEP 9: Lock the device

The device will be locked after 180 seconds of inactivity, you can also pr ess the "LOCK button to lock the device to avoid accidental press. The **On** icon will appear on the screen in locked state. Press the "LOCK" button to unlock the device.

Note: The backlight will be off automatically after 30 seconds of inactivity, you

can also press the ibutton to light up or off the screen as you like.

#### STEP 10: Turn off the device

Push the switch button on the bottom from ON to OFF to turn off the device. The device will automatically turn off when the time runs out.

#### STEP 11: Remove the pads from your skin and store the products

Remove the pads from your skin gently, and paste the plastic dusproof film on them, take them off the electrode wires and unplug the wires, put them and the device into the storage bag.

Note: Please don't tear off the pads vigorously.

Please don't remove the pads before turning off the device.

### **Chapter 5: Battery And Memory Function**

#### · Battery information

Please use the AC adapter complying the standard : IEC60601-1, DC5V/500mA) Capacity: 300mAh

Voltage: 3.7V

#### . Charging the battery

 The device is powered by an internal, rechargeable lithium battery that can be charged through a standard wall outlet or through the USB port of a computer or power bank. Signs the device needs to be charged include dimness of the screen or failure to display the screen, and weak sensations from the electrodes.

2. Turn off the device.

3. Connect the controller and the charger with USB extension cord.Plug charger into any power outlet. The charging process will last 1-2 hours.

#### Indicator light

The indicator light at the top center of the screen will be red when charging, green for full charge. The battery symbol on the screen will flash during the charge and will stay on in full charge.

#### Memory function

The memory function can help to remember the selected mode, intensity level. The intensity level will be the same after a short pause, the Mode will always be the same as the value as before pause and shut down.

## Chapter 6: Maintenance

Please clean the main machine frequently. Use a piece of soft dry cloth to wipe the dirt on the main machine. Don't wash with water or clean with the detergent, thinner, volatile oil, etc. that contains chemical substances.

The gel surface of the massage pad should be kept clean and avoid dirt like dust, oily substances, sticky substances, etc., otherwise the stickiness will be decreased.

Please put the massage pads back to the pad holders or paste the protective films back onto the pads after use.

When the stickiness of the massage pad becomes weak due to dirt or if there is a tingling sensation in the skin, please use a piece of damp cloth dipped in a little water to gently wipe the get surface. After drying, the stickiness will recover, but if water is overused, the stickiness will be decreased.

Please don't wipe the gel surface with a paper towel.

Please do not scrape the gel surface with nail, brush, etc.

Massage pads are consumables with the service life of generally 20-30 times. If the pads are not sticky or the pulse becomes weak, please change the pads in time.

The batteries for this product are built-in polymer batteries. If it is not used for a long time, please charge it every 6 months.

#### Safekeeping

Please do not put the main machine in the place exposed to sunlight, high temperature, humidity, lots of dust, or the place close to fire, easy to vibrate or shock.Please put where children can't reach it.

#### Cleaning and storing pad

Clean: After using pads on your body, please drop a little clean water on the sticky side and use fingertips to clean it softly

Please turn off the device and disconnect the pads with wires first before you clean the pad.

Do not use nails or other sharp objects on the sticky side.Do not use chemical liquids on sticky side.

Storage: Place pads on pad holder or place plastic film on the sticky side of pad to keep the gel moisture.

 Do not keep device in areas subject to direct sunlight, high or low temperatures, humid area, near to fire, vibration, or shock.

· Do not keep the device at places that can be easily reached by children.

### **WARM TIPS FOR SKINCARE**

To avoid skin irritation, especially if you have sensitive skin, follow these suggestions: 1. Wash the area of skin where you will be placing the electrodes, using mild soap and water before applying electrodes, and after taking them off. Be sure to rinse soap off throroughly and dry skin well.

2. Excess hair may be clipped with scissors; do not shave stimulation area.

3. Wipe the area with skin preparation wipes. Let the area dry.Apply electrodes as directed.

4. Many skin problems arise from the "pulling stress" from adhesive patches that are excessively stretched across the skin during application. To prevent this, apply electrodes from centre outward; avoid stretching over the skin.

5.To minimize "pulling stress", tape extra lengths of lead wires to the skin in a loop to prevent tugging on electrodes.

6. When removing electrodes, always remove by pulling in the direction of hair growth.

7. It may be helpful to rub skin lotion on electrode placement area when not wearing electrodes.

8. Never apply electrodes over irritated or broken skin.

## Chapter 7: Modes And Functions

There are 24 modes to choose from. The "M" button cycles through the 6 main modes, all of these 6 main modes contain different built-in 4 modes.

# Main Mode 1

1) Lateral palm kneading(TENS): It's specially effective for joint pain, sciatica, muscle spasms, and pain in the back, neck, and shoulders.

2) Flat palm kneading(TENS): Enhance function, aid in the healing process, decrease muscle reflex activity, promote relaxation, recreational and well-being.

 Crosscut fist kneading(EMS): It is a type of alternative medicine consisting of finger and palm pressure, stretches, and other massage techniques.

4) Vertical fist kneading(TENS): It is the manipulation of superficial and deeper layers of muscle and connective tissue using various techniques.

# Main Mode 2

 Acupuncture(EMS): <sup>2</sup>This mode is used for the points on the Chinese meridian pressure point chart to assist headaches, a variety of ailments as well as muscle and joint pain. Particularly good for fast relief of acute pain.

2) Moxibustion(EMS): Helps relieve pain, relax the mind and muscle, promote sleep. 3) Acupuncture kneading(EMS): Helps muscle reduction, relaxation of muscle spasms, increase range of motion, injury recovery and post surgery recovery. 4) Moxibustion kneadina(EMS): It helps chronic conditions such as insomnia.

constipation, headaches, and the tension associated with stress.



Rubbing(TENS): Provides the user with a scratching and kneading sensation.
 Releases unhealthy elements from injured areas and stimulates blood flow and healing.
 Rubbing reduction(TENS): it's effective in acute and chronic internal organ disorders.
 Help relieve pain, stiffness, fever, chill, cough, wheeze, nausea and vomiling etc.
 3)Tapping(TENS): Produce a hard thumping sensation that massage your muscles, which can give you an invigorated and revalized reduction, relaxation of muscle soasms.

increase range of motion, injury recovery and post surgery recovery.

# Main Mode 4

1) Lifting-pinching manipulation (TENS+EMS): It strengthens and firms muscles at abs, back, thighs and arms etc.

 Vibrating manipulation(TENS+EMS): For muscle strains, herniated discs, stenosis, spondylosis, spondylolisthesis, and general arthritis pain.

3) High frequency manipulation(TENS): Auto combination of several modes for relaxation. Full body relaxation after workout: exercises & fitness or after a day of hard work.

4) Fibrillation manipulation(TENS): Help for muscle knots and muscle tightness caused by strain, overworking of your muscles.



1)Shiatsu-Deep(TENS): Help for foot pain caused by plantar fasciitis, scarring, collagen

breakdown, and micro-tears, Heel spurs, foot muscles and ligament strains.

2) Thai Massage(TENS): Provide relief from pain and stiffness associated with sports injuries, whiplash, osteoarthritis, muscle spasms, fibromyalgia and strain injuries such as carpal lunnel syndrome.

 Shiatus(TENS+EMS): Shiatsu can help facilitate healing from many minor ailments, such as headaches and back pain to digestive, sinus and skin problems.
 Strength Alternate Massage(TENS+EMS): It can be used to relieve neck pain.

 Strength Alternate Massage(IENS+EMS): It can be used to relieve neck pain, shoulder pain.

Main Mode 6

 Twinkling Cupping(TENS): Use low frequency vibrations to promote circulation of blood and relieve pain. Specifically use for lower back.

2)Cupping(TENS): For relieve back and neck pains, stiff muscles, anxiety, fatigue, migraines, rheumatism, and even cellulite etc.

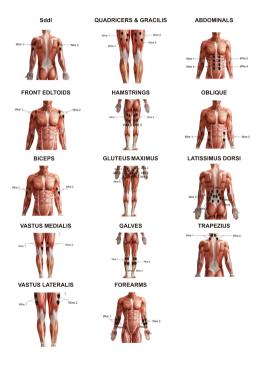
 Fibrillation Cupping(TENS): For muscle strains, herniated discs, stenosis, spondylosis, spondylolisthesis, and general arthritis pain.

4) Cup retaining(TENS): It can be Used for achilles bursitis, sprains, strains, heel pain, bone spurs, tendonitis, ankle impingement, and general arthritis.

## Chapter 8:TENS EMS Electrode Placement Guide

For TENS Neck Pain Chronic Hip Pain Frozen Shoulder Lower Back Pain Tennis Elbow Carpel Tunner Syndrome -----Stomach Pain Erector Spinalis Sciatica ... Knee Pain-Post OP Degenerative Arthritis-Knee Pain Lower Leg Pain ... General System Nerves, Muscle, Tierdness &Bad Blodd Circulation Foot Pain Ankle Pain

For EMS



## Chapter 9: Troubleshooting

| Problems                     | Causes                          | Solutions                     |
|------------------------------|---------------------------------|-------------------------------|
| Skin feels a painful         | Adhesive gel pads are not       | Apply a few drops of water    |
| burning sensation,           | adhering firmly to the skin.    | to the adhesive surface       |
| or the stimulation           | The gel pads are too dry.       | of each pad and make          |
| becomes weakened.            |                                 | sure the pads are pressed     |
|                              |                                 | firmly to the skin during     |
|                              |                                 | application                   |
| Unit is on, but no sensation | Both pads are not firmly on     | Make sure all pads are        |
| is felt from the pads.       | the skin.                       | firmly pressed to the skin.   |
|                              | There is a loose connection.    | Make sure all connections     |
|                              | The intensity level needs to    | are well from the unit to     |
|                              | be increased.                   | the wires and the wires to    |
|                              |                                 | the pads.                     |
|                              |                                 | Increase the intensity level. |
| Adhesive gel pads            | Adhesive gel                    | Replace the pads. Pads        |
| do not stick to skin         | pads need to be                 | can be purchased from         |
| even after cleaning and      | replaced.                       | Belifu official store or      |
| moistening the gel pad.      |                                 | contact support@belifu.       |
|                              |                                 | com.                          |
| Unit does not turn on or the | Battery is low.                 | Recharge the battery.         |
| screen is dim.               |                                 |                               |
| Does not provide adequate    | Not using it long enough.       | Use your massager 20-30       |
| pain relief.                 |                                 | minutes at a time, 3-6 times  |
|                              |                                 | per day.                      |
| Unit turns on, all of the    | Always use two pads (one        | When you use two pads         |
| modes and channels flash.    | channel) or four pads (two      | (one channel) or four pads    |
| Can not select a mode and    | channels) at the same time      | (two channels) at the same    |
| adjust the intensity.        | as it will not work with just   | time, make sure you have      |
|                              | one pad or three pads.          | placed all pads on your       |
|                              |                                 | body, otherwise it won't      |
|                              |                                 | work.                         |
|                              |                                 |                               |
| The pluses strong on one     | Different nerve distribution    | Please wipe the skin with     |
| side and weak on the other   | in different parts of the body, | a wet towel before use to     |
| side.                        | different skin sensitivity, or  | ensure adequate contact       |
|                              | insufficient skin contact with  | with the electrode. It        |
|                              | the electrodes.                 | suggested that the two        |
|                              |                                 | electrodes should be sym      |
|                              |                                 | metrical when attached to     |
|                              | I                               | the body                      |

| Key failure    | The machine is<br>locked or paused. | Press the "LOCK" key to<br>unlock the device or press |
|----------------|-------------------------------------|---|
|                |                                     | the "PAUSE" key to<br>continue the treatment.         |
| Feeling unwell | Too strong.                         | Electrodes or conductors                              |
|                | Too close between electrode         | s. are damaged.                                       |
|                |                                     | The electrode area is too                             |
|                |                                     | small.  |
|                |                                     | Decrease intensity.                                   |
|                |                                     | Reorient electrode position.                          |
|                |                                     | Replace the electorde wire                            |
|                |                                     | or pads.  |

# Chapter 10: Product Descriptions

| Product name                      | 4 independent channel TENS/EMS unit |
|-----------------------------------|-------------------------------------|
| Model                             | FM-B2402                            |
| Charge time                       | About 2 hours                       |
| Battery run time                  | About 8 hours                       |
| Lithium battery power supply      | 3.7V/300mAh                         |
| Load resistance                   | 500Ω                                |
| Output frequency                  | 0Hz~199Hz                           |
| Maximum pulse width               | 180uS                               |
| Velocity Pulse Amplitude          | 0~98 Vpp                            |
| Low voltage protection            | MAX≤3.3V                            |
| Weight                            | 120g                                |
| Size                              | (L)120mm*(W)60mm*(H)11mm            |
| Number of channels                | 4                                   |
| Treatment time                    | 10-80mins                           |
| AC adapter                        | 110V-240V                           |
| Charging interface                | TYPE-C USB                          |
| Backlight current                 | 20-30mA                             |
| Operating current                 | 0~60mA                              |
| Standby current                   | 0~10mA                              |
| Quiescent current                 | 0~ 5uA                              |
| Display                           | LCD liquid crystal                  |
| Operating environment temperature | 5°C ~40°C (41.0 °F ~104 °F)         |
| Battery capacity                  | 300mAH                              |

## Chapter 11: Notes On FCC Certification

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antema.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced for help.

- Consult the dealer or support@belifu.com for help.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

## Chapter 12: Guarantee

 The warranty period for device is two year from date of delivery. In case of a warranty claim, the date of delivery has to be proven by means of the sales receipt or invoice.

2) Repairs under warranty do not extend the warranty period.

3) The following cases are not included in the warranty.

 All damage which has arisen due to improper treatment, e.g. nonobservance of the user instruction.

 All damage which is due to repairs or tampering by the customer or unauthorized third parities.

 Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.

· Accessories which are subject to normal wear and tear.

4) Liability for direct or indirect consequential losses caused by the unit is excluded even if the damage to the unit is accepted as a warranty claim.

5) Anything about the device, please feel free to contact support@belifu.com.