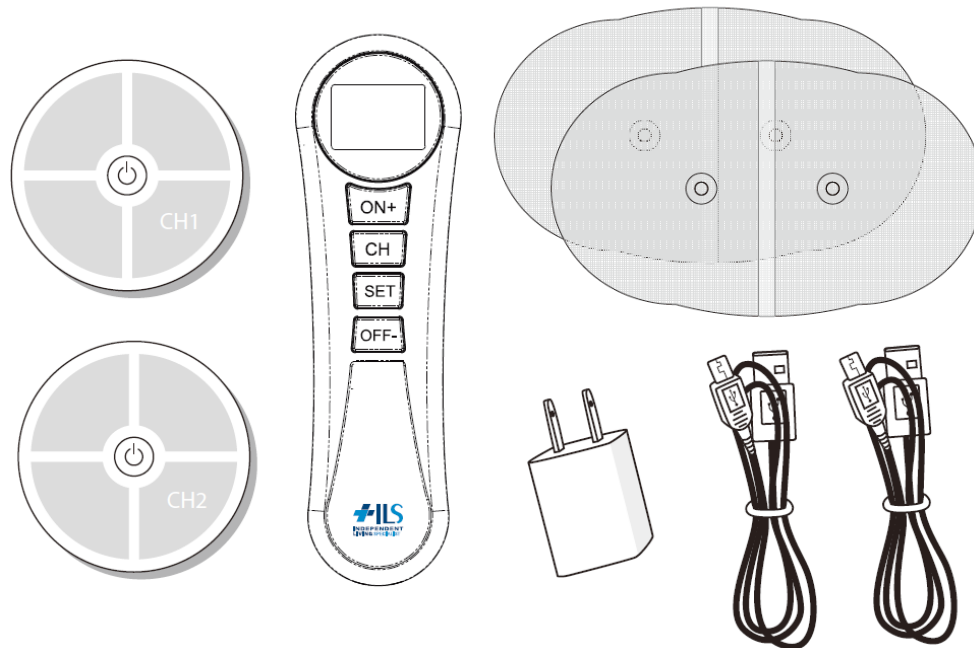


## Wireless TENS/EMS Stimulator

Model no. WR-2605A(Rx)



### Indications for Use :

**Transcutaneous Electrical Nerve Stimulator (TENS)** can be used for the following applications :

- For symptomatic relief of chronic intractable pain.

**Electrical Muscle Stimulator (EMS)** can be used for the following applications :

- Relax muscle spasms
- Prevent or retard disuse atrophy
- Re-educate muscles
- Maintain or increase the range of motion

**Operation Manual**  
Read Before Using



IM-WR2605A(Rx)-CE

# TABLE OF CONTENTS

|  |           |
|--|-----------|
| <b>INDICATIONS AND CONTRAINDICATIONS.....</b>                | <b>1</b>  |
| <b>WARNINGS AND PRECAUTIONS.....</b>                         | <b>2</b>  |
| <b>GENERAL INFORMATION .....</b>                             | <b>5</b>  |
| <b>ABOUT RECHARGEABLE BATTERY .....</b>                      | <b>6</b>  |
| ■ Charging the Remote Using the AC Adaptor.....              |           |
| ■ Charging the Receiver.....                                 |           |
| ■ Charging the System via USB Port.....                      |           |
| <b>STEP BY STEP OPERATION GUIDE FOR TRAINING .....</b>       | <b>8</b>  |
| ■ Preparing Skin for Running a Session.....                  |           |
| ■ Placement of Electrodes .....                              |           |
| ■ Turning ON/OFF Remote.....                                 |           |
| ■ Turning ON/OFF Receiver .....                              |           |
| ■ Communication between Remote and Receiver(s) .....         |           |
| ■ Selecting TENS/EMS Mode.....                               |           |
| ■ Selecting the Program.....                                 |           |
| ■ Selecting the Therapy Time.....                            |           |
| ■ Selecting the Therapy Intensity Level... ..                |           |
| <b>CARE AND MAINTENANCE.....</b>                             | <b>13</b> |
| <b>TROUBLESHOOTING.....</b>                                  | <b>14</b> |
| <b>TECHNICAL SPECIFICATIONS.....</b>                         | <b>15</b> |
| <b>RADIO FREQUENCY WIRELESS INFORMATION .....</b>            | <b>17</b> |
| <b>CONFORMITY OF STANDARDS.....</b>                          | <b>18</b> |
| <b>INFORMATION ABOUT ELECTROMAGNETIC COMPATIBILITY .....</b> | <b>18</b> |
| <b>WARRANTY.....</b>   | <b>21</b> |

## **INDICATIONS AND CONTRAINDICATIONS**

### **Read the operation manual before using.**

Read instruction manual before operation. Be sure to comply with all “CAUTIONS” and “WARNINGS” in the manual. Failure to follow instructions can cause harm to user or device.

Observe your physician’s precise instructions and let them show you where to apply the electrodes. For successful therapy, the correct application of the electrodes is an important factor.

### **Indications for Use**

The WR-2605A(Rx) is a dual channel digital electrical stimulator for active treatment application as the following intended use:

#### **Transcutaneous Electrical Nerve Stimulator (TENS) can be used for the following applications :**

- For symptomatic relief of chronic intractable pain.

#### **Electrical Muscle Stimulator (EMS) can be used for the following applications :**

- Relax muscle spasms
- Prevent or retard disuse atrophy
- Re-educate muscles
- Maintain or increase the range of motion

## INDICATIONS AND CONTRAINDICATIONS

### Warnings

- If you are **under the care of a Physician**, consult with your Physician before using this System.
- The **long-term effects** of this System are not known.
- Do not place the pads **on or close to your heart**.
- Do not place the pads **around or close to your neck**. Do not apply stimulation **over the neck**. Severe spasm of the muscles may occur and the contractions may be strong enough to close the airway or cause difficulty in breathing. **Stimulation over the neck could also have adverse effect on hearing or blood pressure**.
- Do not apply **stimulation across the chest** because the introduction of electrical current into the chest may cause rhythm disturbances to the heart.
- Do not place the pads **on or around your head**. The effects of stimulation of the brain are unknown.
- Do not use the pads over or **close to sores**.
- Do not place the pads **on the front or sides of the neck across or through the heart** (one pad on the front of the chest and one on the back), in the genital region, or on the head, because of the risk of stimulating inappropriate muscles and organs.
- Do not place the pads over **any recent scars, broken or inflamed areas of infection or susceptibility to acne, thrombosis** or other vascular problems (e.g. varicose veins), or any part of the body where feeling is limited.
- Do not place the pads **over areas of injury** or restricted movement (e.g. fractures or sprains).
- Do not use this System **while sleeping**.
- **Do not use if you feel numbness**.
- Do not use this System **in or close to water**.
- Do not apply stimulation **across the chest** because the introduction of electrical current into the chest may cause rhythm disturbances to the heart, which **could be lethal**.
- Do not use the pads **over or close to cancerous lesions**.
- Use the pads only on normal, healthy, clean and dry skin. Do not use the pads on **open wounds or rashes, or over swollen, red, infected or inflamed skin**.
- If you have ever had **back surgery, consult your Physician** before using this System.
- **Electronic monitoring equipment (such as ECG and ECG alarms) may not operate properly when electrical stimulation is in use**.
- Avoid areas in injury or restricted movement (e.g. fractures or sprains)
- Avoid placing the pads **over metal implants**.
- **Do not use in the bath or shower**, or in an environment of elevated humidity (e.g. Sauna, hydrotherapy, etc).
- Operation in **close proximity, such as 3 feet (1 meter), to shortwave or microwave** therapy equipment may produce instability in the device output and may shut the device off.
- Do not use the device in an environment where flammable or **explosive fumes may exist**.
- Patient should **never operate potentially dangerous machinery** such as power saws, automobiles, etc. during electrical stimulation. It might result in burs at the site of the stimulator electrodes and possible damage to the stimulator if you connect to high frequency equipment.
- **Application of electrodes near the thorax may increase the risk of cardiac fibrillation**.
- The system is internally powered (power from battery pack), IP 22, continuous operation. ( Please refer to technical specification section more about the battery information and explanation of the symbol).

### Contraindications

- a. Do not use this device if you have a cardiac pacemaker, implanted defibrillators or any other implanted metallic or electronic device. Such use could cause electric shock, burns, electrical interference, or death.
- b. Do not use this device if you have undiagnosed chronic pain.
- c. Do not use this device if you are pregnant. The safety of electronic muscle stimulation over the pregnant uterus has not been established.
- d. Do not use this device if you suffer from cancer. The effects of electronic stimulation on cancerous tissue are known.
- e. Do not use this device if you are under medical supervision for cognitive dysfunction as you may not be able to comply with safety instructions.
- f. Do not use this device if it is in close proximity to shortwave or microwave diathermy equipment.

## Precautions

- **Read User Manual** before using this System for the first time.
- Keep this manual available whenever you use your System.
- The System is intended for personal use on healthy adult muscle only.
- The safety of using the System during **pregnancy or birth** has not been established.
- The effectiveness of the System depends greatly on a person's individual physical condition. It may not always be effective for every user.
- The safety of neuromuscular stimulation **during pregnancy** has not been established.
- Use caution when/if:
  - Sensory nerve damage is present by a **loss of normal skin sensation**.
  - Use caution prior to using this device on patients suspected of having **heart disease**.
  - Use caution for patients with suspected or diagnosed **epilepsy** when using this device.
  - Use caution following recent **surgical procedures** when muscle contraction may disrupt the healing process.
  - Use caution when there is a **tendency to hemorrhage**, such as following acute trauma or fracture.
  - **A menstruating or pregnant uterus.**
  - Patient experiences **skin irritation** due to electrical stimulation or the electrical conductive medium used, remove the electrodes, discontinue stimulation, and consult the clinician. Irritation may be reduced by an alternative conductive medium or an alternative electrode placement. Isolated cases of skin irritation may occur at the site of electrode placement following long term application.
- This unit should **not be used while driving, operating machinery** or during any activity in which involuntary muscle contractions may place the user at undue risk of injury.
- Some users may **experience skin irritation or hypersensitivity** due to the electrical stimulation or the conductive medium.
- Keep this device **out of the reach of children**. If the patient is a child, make sure he/she is properly supervised during electrical stimulation. Strangulation resulting from baby or child entanglement in monitoring cables.
- Application of moderate heat (thermal wrap) to muscles as well as moistening skin prior to treatment improves treatment efficacy; use of cold packs on treated muscles after treatment is likewise recommended.
- This unit should only be used with the leads, electrodes and accessories provided by the manufacturer.
- The device is not intended for medical use, for the treatment of any medical condition or for any permanent physical changes.
- Contact ILS, or an authorized dealer, if your unit is not working correctly. Do not use in the meantime.
- An effective session should not cause discomfort.
- For first time users, muscle stimulation can be an unusual sensation. We recommend that you begin in a seated position with low stimulation intensity settings to familiarize yourself with the sensation before progressing to higher intensity settings.
- The leads and pads must not be connected to other objects.
- Do not over exert yourself while using muscle stimulation. Any workout should be at a comfortable level for you.
- Do not place **pads over jewelry or body piercings**.

## Pad/Electrode Precautions

- To reposition the pads during a session, always pause the program currently running, reposition the pads and then restart the program.
- The pads are for single person use only.
- Do not plunge the pads into water.
- Do not apply solvents of any kind to the pads.
- Always ensure the unit is OFF before removing the pads.
- Apply the whole surface of the pads firmly to the skin. Do not use pads, which do not adhere properly to the skin.
- If your skin is red under the pad after a session, do not start another session in the same area until your redness has completely disappeared.

## Adverse Reactions

- You may experience **skin irritation** due to prolonged exposure to the stimulation electrodes applied to your skin.
- You may experience **potential allergic reactions** to accessible materials used in the electrodes.
- You may **experience headache** and other painful sensations during or following the application of electrical stimulation near your eyes and to your head and face.
- You should stop using the device and should consult with your physician if you experience adverse reactions from the device.

## **Conditions that may affect your ILS Wireless System**

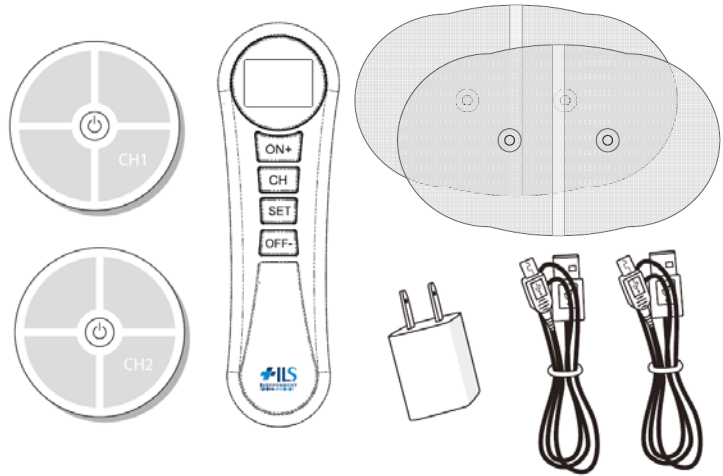
Since the stimulator is a battery-operated electronic System, its output performance and safety may be affected greatly in extreme humidity. Therefore, it is very important to keep the system device(s) dry to ensure the safety and performance of the stimulator.

- The patient may also be an intended operator, at least 15 years old and 8 years intensive reading experience( school), no maximum.
- This system is for home use, indoor, not intended for professional use
- This system is for daily use, no operation time limit on device but it is recommended not exceeding 60 minutes per day.
- If there is any other problem, please consult or return the device to your distributor. Do not try to repair a defective device.
- For plug-in equipment , the power outlet socket must be located near the equipment and must be easily accessible
- WARNING: **No modification** of this system **is allowed**.
- WARNING: Other cables and accessories may negatively affect EMC performance .
- WARNING: **Do not stack and store** this system closed to other equipment.

# GENERAL INFORMATION

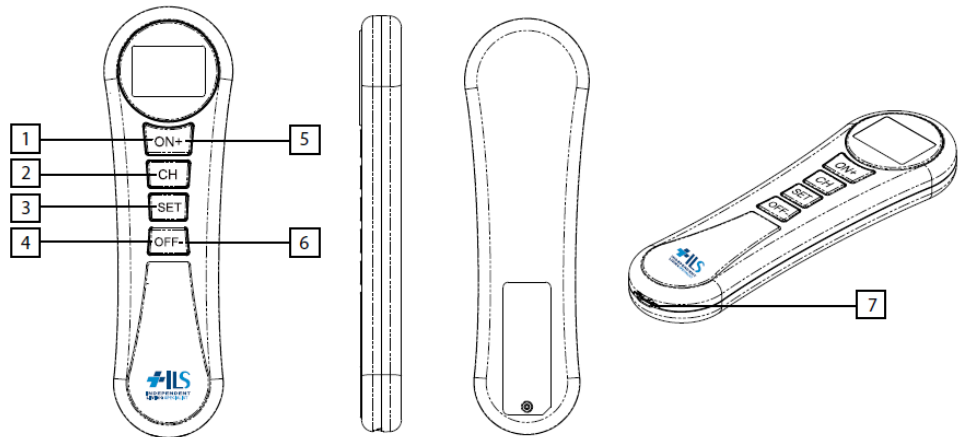
## Package Content

1. Remote x1
2. Receivers (Ch1,Ch2) x2
3. Self Adhesive Electrodes x4  
Size: 130x70mm, snap type
4. USB Charging Cables x 2  
( Length 60 cm )
5. AC Adaptor x1



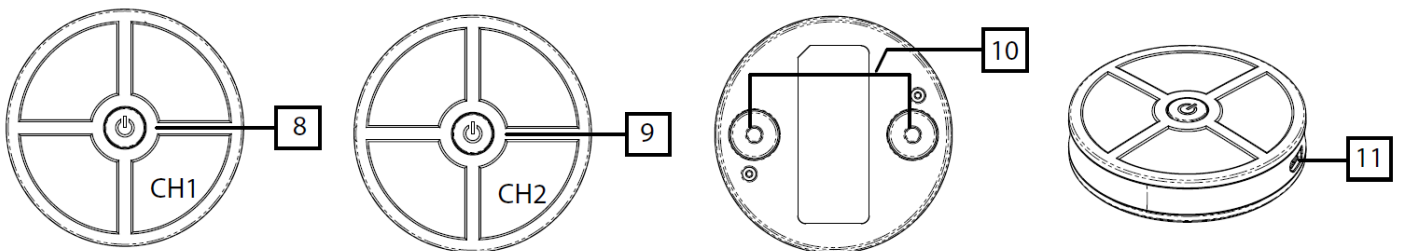
## About Remote Control

1. Power ON key
2. CH key
3. SET key
4. Power OFF + key
5. ON + key : increase
6. OFF key : decrease
7. USB charger socket



## About Recivers

8. CH1 Receiver : Power On/Off key
9. CH2 Receiver : Power On/Off key
10. Snaps for Electrode
11. USB charger Socket

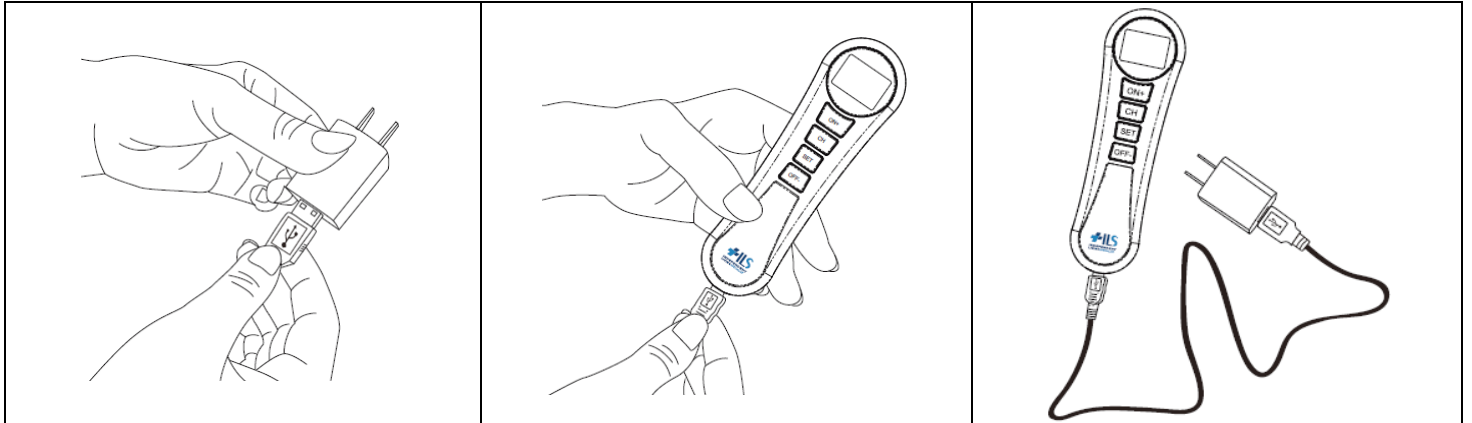


## About Rechargeable Batteries

Please fully charge the batteries in both the remote unit and the receivers before using this device.

### Charging the Remote Using the AC Adaptor

1. Connect the small end of the USB cable to the remote and the larger end to the AC adaptor..

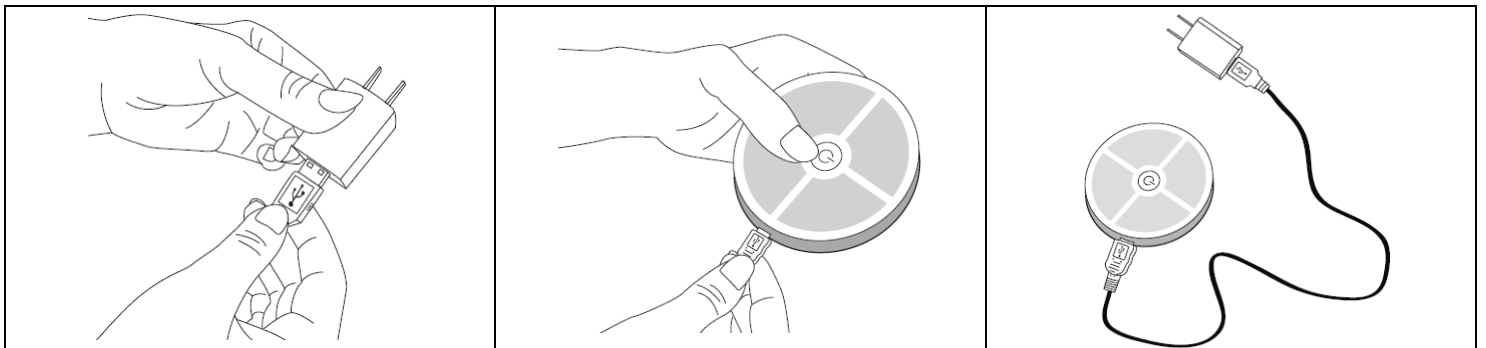


2. Plug the adaptor into any standard wall outlet.

**When the remote has finished charging the battery an icon will indicate “full”.**

### Charging the Receiver

1. Connect the small end of the USB cable to the receiver and the other end into the AC adaptor.
2. Plug the adaptor into any standard wall outlet.



**A orange light indicates the receiver is now in charge mode, once fully charged the orange light will change to Green indicating that the receiver is fully charged.**



**▲Note** : for important precautions for use with AC adaptor , please be informed :

To prevent the risk of electric shock, make sure power cord is unplugged from wall socket. To fully disengage the power to the unit, please disconnect the power cord from the AC outlet. Do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.

**▲Note** : for important precautions regarding the batteries please be informed:

- It is recommended to use a manufacturer supplied or approved battery charger in order to maximize battery life.
- Do not connect the battery to metal objects placed in your pocket or backpack or other containers.
- Do not short the metal (+)(-) terminals. Wishing to put batteries or electrical devices do not end when (+)(-) device error.
- Do not dismantle or modify the battery.
- Please do not take a hammer or other items to hammer blow, or throw batteries and trampling, falls, and fall causing a strong impact, heavy blow, etc.
- Do not use sharp utensils or metal objects to scratch or puncture the battery.
- Do not place the battery into a microwave, oven, or dryer. Do not place the battery into high-pressure or high temperature environments.
- Do not mix this product with other brands or other types of batteries
- Before charging or discharging the battery, read the manual.
- Stay away from conductive objects during battery charging and discharging.
- Keep batteries away from children.
- When the device(s) system is not in use, store in a low humidity, low temperature environment.
- In the event the battery fluid comes into contact with your eyes, do not rub your eyes. Rinse with water and immediately seek treatment.
- If you detect abnormal heat, odors, or flames coming from the battery, discontinue using the battery.
- If the battery fluid leaks and comes into contact with the skin, wash with clean water.
- Do not throw into a fire.
- When discarding or recycling batteries, make sure not to short-circuit (+)(-) the terminals.
- Please recycle. Do not dispose of old batteries with your household waste; dispose of them safely at your recycling centre or business where the batteries were purchased.

**▲Note** : To maximize battery life, please chare the system every 3 months when not in use !!!

# STEP BY STEP OPERATION GUIDE FOR TREATMENT

## Preparing the Skin for Running a Session

Proper preparation of the skin covered by the electrodes allows more stimulation to reach targeted tissues, prolongs electrode life, and reduces the risk of skin irritation. After connecting the wireless units to the electrode pads, use the following steps to prepare your skin at the electrode placement sites:

1. Determine the placement sites for the electrodes.
2. Wash the area with mild soap and water (do not use alcohol). Rinse and dry thoroughly.
3. Trim excess body hair from the area with scissors (do not shave).
4. Optionally, apply skin prep to the area to form a protective barrier on your skin. Apply, let dry, and apply electrode as directed. This will both reduce the chance of skin irritation and extend the life of your electrodes.
5. When removing electrodes, always remove by pulling in the direction of hair growth.
6. It may be helpful to apply skin lotion on electrode placement area when not wearing electrodes.

## Placement of Electrode

1. Place the electrode with the contact plugs up onto a flat surface. Place the wireless unit with the contact jacks down onto the Electrode pad so that plugs and jacks are aligned. Then press down until completely snapped in.
2. Do not remove the clear plastic shield from Electrode until the unit is ready to be placed on the body.



## Turning ON/OFF Remote

1. To turn on the Remote, press and hold the ON/+ button for one (1) second to turn on the device.

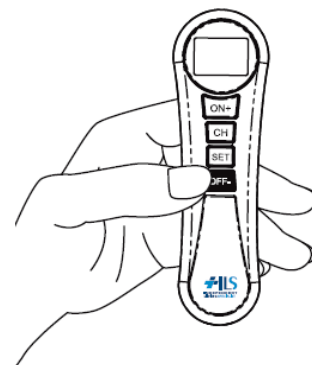
All the treatment status displays clearly on the big LCD screen, with backlight for 10 seconds, with each entry of button.

The most recently selected program will display on the screen.

2. To turn off the Remote, press and hold the OFF/- button for three (3) seconds to turn off the device. Or it will be automatically off when no button is pressed after 3 minutes.

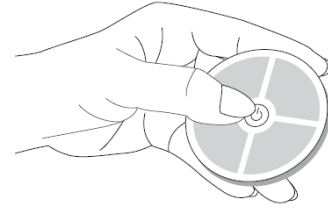
**▲ Note:** Do not turn the unit on until the receiver(s) are properly attached.

**▲ Note:** When stimulating the muscles of the arms or legs bear in mind that the muscle contraction may cause involuntary limb movement which could cause injury to you or others. Always ensure the limb is secured to prevent movement.



## Turning On/Off Receiver

1. Turn on the receiver, press the Power button.
2. Green backlight will be lighted up, and lasting on 3 minutes, then it will light off if no other entry.
3. Green backlight of the receiving unit is then flashing whilst the identical wireless unit receives the signal from the remote .
4. To Turn off the receivers , press and hold the OFF/- button for three (3) seconds.






**▲ Note:** In an emergency you may take off the receiver(s) and electrodes directly from treatment site(s).

**▲ Note :** To prevent unpleasant electric shocks, never remove off the device while it is still turned on.

## Communication between Remote and Receiver(s)

Radio Frequency Wireless technology 2.4G is used in this system, for good quality of service between the remote and wireless unit(s) requirement requires 3 meters (9 feet).

1. LCD symbol on the remote control and LED indicator guide on wireless unit(s):

| Indicator  | Description  |
|--|--|
| <p style="text-align: center;"><b>LCD symbol on Remote</b></p>  | <ol style="list-style-type: none"> <li>1. It shows Mode, Timer, Intensity Level, and wireless unit by Channel number on the LCD display when Power ON, LED backlight for 10 seconds.</li> <li>2. If the paired wireless is connected, it will display :<br/><b>CH 1 , CH 2 , CH 3 , CH 4</b></li> <li>3. If low battery symbol shows  , battery power is low.</li> </ol> <p style="text-align: center;"><b>When charging the remote , the device will shut off automatically.</b></p> |
| <p>Receivers ( Ch1 / Ch2/Ch3/Ch4 ) :</p>                        | <ol style="list-style-type: none"> <li>1. When Power ON, Green LED light on.</li> <li>2. LED in Green blinking on the Channel in use, when it receives signal transmitting from the Remote Control.</li> <li>3. LED in orange light flashing, battery power is low.</li> </ol> <p style="text-align: center;"><b>Receiver unit will turn on when charging the battery, Orange light lasting until fully charged, then it turns off.</b></p>  |

- Whenever the receivers turn on, the remote control unit shall display the identical number of receiver(s).  
Make sure the identical receiver is turned on and properly placed before setting up Program /Timer / Intensity Level.
- The Remote will display treatment status on the LCD sequentially in turn to the Channel of receiver(s). Or, you could turn off the remote when all set.

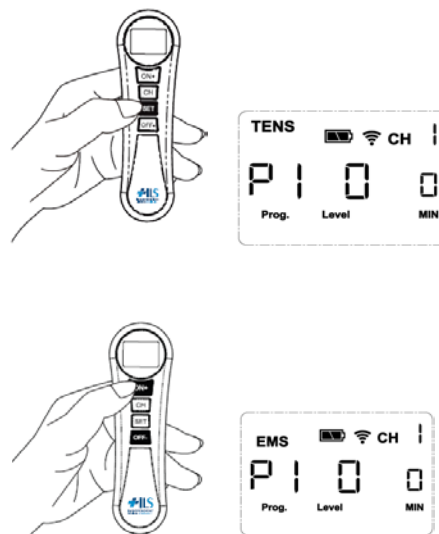
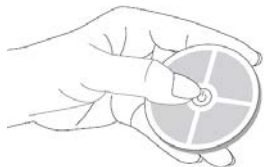
## Selecting TENS/EMS Treatment Mode

**This device offers TENS/EMS Mode.**

### How to Select TENS/EMS Mode

- Press the "SET" button, the preset (default) therapy mode TENS/EMS will flash on the display.  
Use ON + or the button OFF -, if you would like to change the therapy mode.
- Press the SET button again, the numeric number of program is then flashing.
- Press the button ON + (to increase) or the button OFF - (to decrease) for choice of program of the selected modality.

**▲ Note :** Make sure the identical receiver is turned on and properly placed.



## Selecting the Program

The Device offers 8 different preset treatment programs ( P1~P8) respectively for TENS /EMS modes ,  
**Program P9 is self-programmable to set up the desirable pulse width between 30~260uS and frequency at 2~60Hz ( for TENS ) and 7~70Hz (for EMS).**

TENS Programs :

| Program | Pulse width(uS) | Frequency(Hz) | Function Mode        |
|---------|-----------------|---------------|----------------------|
| P1      | 260             | 15            | Constant             |
| P2      | 260             | 60            | Burst                |
| P3      | 260             | 60            | Constant             |
| P4      | 260~156         | 2~60          | Modulation           |
| P5      | 260~156         | 60            | Modulation           |
| P6      | 260             | 7~60          | Modulation           |
| P7      | 260~156         | 60            | Modulation           |
| P8      | -               | -             | cycle (P1~P7)        |
| P9      | 50~260          | 2~60          | Constant(Adjustable) |

EMS Programs:

| Programs | Pulse Width (uS) | Pulse Rte (Hz) | Ramp up (sec) | On Time (sec) | Ramp down (sec) | Off Time (sec) |
|----------|------------------|----------------|---------------|---------------|-----------------|----------------|
| P1       | 260              | 70             | 2             | 3             | 2               | 2              |
| P2       | 260              | 60             | 2             | 4             | 2               | 3              |
| P3       | 260              | 50             | 2             | 5             | 2               | 4              |
| P4       | 260              | 50             | 2             | 6             | 2               | 5              |
| P5       | 260              | 50             | 2             | 2             | 2               | 6              |
| P6       | 260              | 60             | 2             | 4             | 2               | 8              |
| P7       | 260              | 70             | 2             | 6             | 2               | 10             |
| P8       | 260              | 7~60           | -             | -             | -               | -              |
| P9       | 50~260           | 7~70           | -             | -             | -               | -              |

## How to Select Program

Press SET after treatment mode is set.

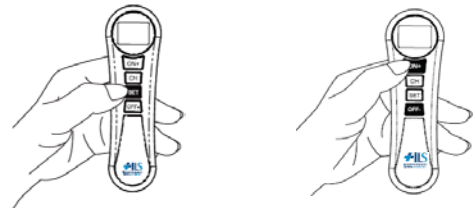
1.To choose Program (P1~P9), use ON + (to increase) or the button OFF – (to decrease)

2.Program P9 is self-programmable on Pulse Width and Frequency . Press the button ON + (to increase) or the button OFF – (to decrease) the desirable setting .

\* for example TENS P9 ( 30Hz,100uS)

\* for example EMS P9 ( 60Hz,120uS)

▲ **Note** : Make sure the identical receiver is turned on and properly placed.



for example :

\*\* TENS P9 ( 30Hz,100uS):

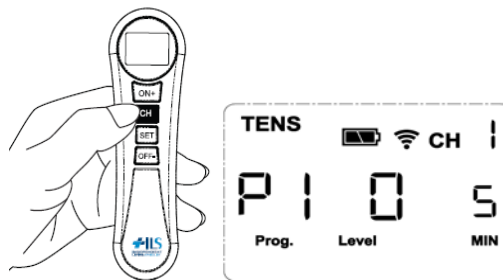


\*\* EMS P9 ( 60Hz,120uS) :

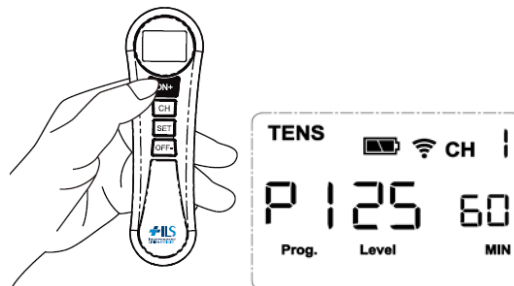


## Selecting the Therapy Time

1. Press the “SET” button again, the preset (default) treatment time will flash on the display.
2. To increase or decrease the treatment time, press the button ON + (to increase) or the button OFF – (to decrease) repeatedly until the desired duration appears on the display.
3. The treatment time you selected will appear on the display the next time you turn the device on.



▲ **Note** : If you change programs during the course of a therapy session, the treatment time will not set unless you manually reset it by performing the steps described above.



## Selecting the Therapy Intensity Level

The Device offers 25 intensity levels!

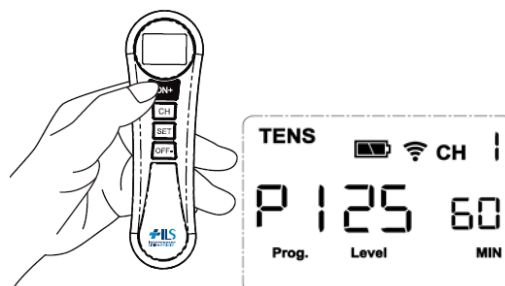
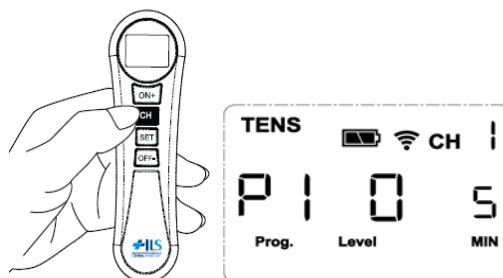
Intensity is adjustable according to the receiver selected. Make sure the identical wireless unit is turned on and properly placed.

1. Press the “SET” button, the numeric number of program is then flashing.
2. To increase or decrease the intensity, press the button On+ (to increase) or the button OFF– (to decrease) repeatedly until the desired intensity level flashes on the display.

▲ **Note**: You will feel the intensity increase or decrease as you select the intensity level.

You can use this as a guide to select a level that is comfortable for you.

▲ **Note** : If you change therapy mode/program during the course of a therapy session, the intensity level will reset to “0” for safety reason.



## CARE AND MAINTENANCE

The ILS Wireless TENS/NMS System is recommended for single person use at home.

### Remote and Receivers

The system device(s) may be wiped clean with a small amount of soapy water on a clean cloth. Do not submerge the stimulator in liquids or expose it to large amounts of water.

- For pet and pests consideration within the user area, you should clear the system device(s) each time before use and keep them safe away in a drawer or somewhere pets and children won't be able to reach.
- Never use aggressive cleaning products or stiff brushes to clean the device.
- Do not clean the system devices when charging. Always un-plug the charger first before cleaning the device(s).
- Do not use the device again until it is completely dry.
- Do not expose the device to direct sunlight and protect it from dirt and moisture.
- Store the system in a clean, dry place.
- Do not dispose of the device(s) in a fire. The battery could explode causing injury or death.

### Electrode

The electrode pads are disposable and use an adhesive that will dry after prolonged usage or storage. Pads should be replaced when they lose their adhesive quality, or you sense a change in stimulation sensation.

If you're in doubt about the integrity of the pads, order fresh pads please order online at <http://ilsau.com.au/>, or contact authorized distributor(s).

### Rechargeable Battery

The rechargeable Battery is built-in the device(s). Please do not attempt to disassemble or force open the built-in battery.

**Batteries have a finite lifetime for 12 months, with approximately 300 cycle times. To maximize battery life, please charge the system every 3 months when not in use.**

When the battery is fully charged, it is good for 2 -3 hours treatment times. If you find the battery can not be charged effectively, or the fully charged battery can only be used for very short time, please order replacement units online at <http://ilsau.com.au/>, or contact authorized distributor(s).

Do not dispose of the device(s) in a fire. The battery could explode causing injury or death.

## How to Store Your System

1. Store your System at room temperature in a dry place, out of the reach of children.
2. Please store in a low humidity, low temperature environment.

## TROUBLE SHOOTING

Always check the unit and accessories before use to prevent damage and defects; these are some of the simple checks:

1. Make sure the Remote and Receiver(s) have a sufficient charged.
2. Make sure the Remote and Receiver(s) turn on and in 3 meters (9 feet) away from each other, for good quality of receiving distance ...

| If this happens ...   | Try this solution...  |
|---|---|
| The Remote is not turning on or I cannot see anything on the screen                   | Ensure that the remote has been fully charged.  |
| The power light on the Receiver(s) flashes continuously.                              | Charge the Receiver(s) or it will turn off automatically.   |
| The Remote and/or Receiver(s) do not seem to be charging.                             | Ensure the USB Cable is correctly into the Remote/ Receiver(s) and firmly plugged into the AC adaptor and into the electrical socket on the other side.   |
| Receiver(s) does not pair with remote<br>The remote does not control Receiver(s) well | <ul style="list-style-type: none"> <li>● Make sure the receiver is fully charged, and turned on, away from Remote in 3 meter distance.</li> <li>● Try to restart the remote and receiver(s).</li> </ul>   |
| Stimulation causes discomfort   | <ul style="list-style-type: none"> <li>● Electrodes lose their adhesive capacity and no longer provide adequate contact with skin.</li> <li>● Electrodes are worn and must be replaced.</li> <li>● Change the positing of the electrodes slightly.</li> <li>● Choose Program that is appropriate to your needs or gives you the greatest pleasure.</li> </ul> <p>▲ <b>Note : Stop and discontinue the treatment due to discomfort and/or pain to reduce the risk of injury if the above solution does not work.</b></p> |
| Stimulation does not produce the usual sensation                                      | <ul style="list-style-type: none"> <li>● Check that all settings are right and check electrodes are properly positioned.</li> <li>● Change the positing of the electrodes slightly.</li> </ul>  |



## TECHNICAL SPECIFICATIONS

Channel: Dual , 2 wireless units independent and individually adjustable channels, electrically insulated from one another.

Pulse Rate : As pre-programmed, in operation mode.

Pulse Width : As pre-programmed, in operation mode.

Timer : 5~60 min. selectable.

Essential Performance :

TENS Programs :

| Program | Pulse width(uS) | Frequency(Hz) | Function Mode        |
|---------|-----------------|---------------|----------------------|
| P1      | 260             | 15            | Constant             |
| P2      | 260             | 60            | Burst                |
| P3      | 260             | 60            | Constant             |
| P4      | 260~156         | 2~60          | Modulation           |
| P5      | 260~156         | 60            | Modulation           |
| P6      | 260             | 7~60          | Modulation           |
| P7      | 260~156         | 60            | Modulation           |
| P8      | -               | -             | cycle (P1~P7)        |
| P9      | 50~260          | 2~60          | Constant(Adjustable) |

EMS Programs:

| Programs | Pulse Width (uS) | Pulse Rte (Hz) | Ramp up (sec) | On Time (sec) | Ramp down (sec) | Off Time (sec) |
|----------|------------------|----------------|---------------|---------------|-----------------|----------------|
| P1       | 260              | 70             | 2             | 3             | 2               | 2              |
| P2       | 260              | 60             | 2             | 4             | 2               | 3              |
| P3       | 260              | 50             | 2             | 5             | 2               | 4              |
| P4       | 260              | 50             | 2             | 6             | 2               | 5              |
| P5       | 260              | 50             | 2             | 2             | 2               | 6              |
| P6       | 260              | 60             | 2             | 4             | 2               | 8              |
| P7       | 260              | 70             | 2             | 6             | 2               | 10             |
| P8       | 260              | 7~60           | -             | -             | -               | -              |
| P9       | 50~260           | 7~70           | -             | -             | -               | -              |

Wave Form : Symmetrical Bi-Phasic square pulse.

Max Charge per Pulse : 20.8 micro-coulombs maximum.

\*\* All electrical specifications are  $\pm 10\%$  at 500 $\Omega$  load.

Input rating: 5Vdc, 1A

Power Source : Remote Control Battery 3.7V /260 mAh Lithium polymer (LiPo) battery, model no. WL-303032

Receiver Battery 3.7V /180 mAh Lithium polymer (LiPo) battery, model no. WL-551430.

AC Adaptor I/P: 100-240Vac, 50-60Hz, 0.3-0.15A ; O/P: 5Vdc, 1.2A

Weight & Dimension: Remote Control 60 grams (battery included), 156.98x47x15.50 mm

Wireless Unit 30 grams (battery included) , 60x60x15.65 mm

Operating Conditions: + 50°F (10°C) to +104° (40°C), 40-90% max. Relative humidity

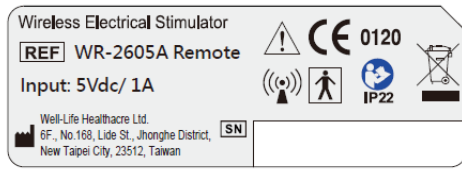
Transport and Storage Conditions: +14°F (-10°C) to +140° (60°C), 30-95% max. Relative humidity

Operation altitude: 3000m.

Operating Atmospheric pressure range: 700~1013 hPa

Transport and Storage Atmospheric pressure range: 500~1060 hPa

(i) There are a number of technical symbols on your system, explained as follows:



Remote Label



Receiver Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and (2) this device must accept any interference received,
- (2) including interference that may cause undesired operation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (3) this device may not cause harmful interference, and (2) this device must accept any interference received,
- (4) including interference that may cause undesired operation.



This symbol means “Serial number “on the back of remote control.



This symbol means “Lot number “on the back of wireless unit.



This symbols means “ Attention, consult the accompanying documents”



Follow instructions for use



This symbol means “ Manufacturer “



This symbol means type BF equipment; this device offers protection against electrical shock by standard compliance to leakage currents of electrode pad.



Interference may occur in the vicinity of equipment marked with the following symbol.

**IP22** Ingress Protecting Rating

The symbol on the device means it is protected against to hazardous parts with a finger and against vertically falling water drops when titled up to 15 degrees.



Stand-by.

(ii) There is a label on the package explained as:



This symbol means “used before”, represent as “YYYY-MM” (for year and month).

## Radio Frequency Wireless Information

Radio Frequency Wireless technology is used in the ILS TENS/EMS Wireless stimulator for communication between the remote control and the stimulation receivers.

|   |  |
|---|--|
| Wireless protocol characteristics   |  |
| Frequency band  | 2.4GHz ISM   |
| Protocol type   | Proprietary frequency  |
| Channel   | 1  |
| Channel width   | 1MHz   |
| Frequency modulation  | GFSK   |
| Frequency deviation   | ±50KHz   |
| EIRP  | Measured max. -5.5 dBm<br>(0 dBm configured as maximum output power)   |
| Effective emission power  | 0dBm   |
| Data rate   | 1Mbps  |
| Quality of service requirement  | 3 meters range between remote and stimulation modules  |
| Wireless Security Measures  |  |
| Device Identification   | 8 bits, shared only with other ILS Wireless TENS/EMS devices   |
| Data Integrity Checks   | Each data frame protected by a 16 <b>[b]</b> length CRC  |
| Acknowledgement   | Each point-to point communication is acknowledged.   |
| Out of range behavior   | - Remote control can't operate on the receivers.<br>- Stimulation receivers won't work .   |
| Wireless Coexistence Testing  |  |
| ILS TENS/EMS Wireless stimulator protocol is designed to allow coexistence with at least 4 other ILS Wireless devices.  |  |
| Each ILS TENS/EMS remote control and receivers is assigned a unique ID. Before initial use, the remote is paired with 4 stimulation receivers in its network. |  |
| Designed for coexistence with wireless products in the same RF band   | -Bluetooth(IEEE 802.15.1)<br>-Wi-Fi (IEEE 802.11)  |
| Utilizes established coexistence principles to minimize cross-talk with other wireless devices  | - FDMA (Frequency Division Multiple Access) .<br>- TDMA (Time Division Multiple Access )   |
| Interference from other devices   | - If the Wireless TENS/EMS RF channel is Interfered by emission from other devices, failsafe outcome is that <u>ILS remote control will not operate, and/or reset the stimulation level to "0" ; the receivers will stop stimulation.</u><br>- Interference from other RF wireless and mobile communication devices is possible. Refer to the following table for recommended distance between ILS Wireless devices with other RF devices. |

## Conformity of Standard

The ILS Rx TENS/EMS stimulator complies with current medical standards.

The ILS Rx TENS/EMS stimulator also complies with IEC 60601-1 on general safety requirements for Electrode-medical devices, the IEC 60601-1-2 standard on electromagnetic compatibility, the IEC 60601-2-10 standard on particular safety requirements for nerve and muscle stimulators, and the IEC 60601-1-11 standard for use in the home environment.


## Information about Electromagnetic Compatibility (EMC)

- The ILS Rx TENS/EMS stimulator is designed to be used in typical approved environments in accordance with the safety standard EMC EN60601-1-2.
- The ILS Rx TENS/EMS stimulator is designed to support anticipated disturbance originating from electrostatic discharge, magnetic fields for the power supply or radiofrequency emitters.
- However it is not possible to guarantee that the stimulator will not be affected by powerful RF field (radio frequency) originating from other sources.

- **ELECTROMAGNETIC COMPATIBILITY INFORMATION**

| Recommended separation distances between portable and mobile RF communications equipment and the ME equipment  |  |  |   |
|--|--|--|---|
| The Wireless Electrical Stimulator is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Wireless Electrical Stimulator can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Wireless Electrical Stimulator as recommended below, according to the maximum Output power of the communications equipment. |  |  |   |
| Rated maximum output power of transmitter W  | Separation distance according to frequency of transmitter<br>m     |  |   |
|  | 150 kHz to 80 MHz<br>$d = \left[ \frac{3,5}{V_1} \right] \sqrt{P}$ | 80 MHz to 800 MHz<br>$d = \left[ \frac{3,5}{V_1} \right] \sqrt{P}$ | 800 MHz to 2.5 GHz<br>$d = \left[ \frac{7}{E_1} \right] \sqrt{P}$ |
| 0.01   | 0.12   | 0.12   | 0.23  |
| 0.1  | 0.37   | 0.37   | 0.74  |
| 1  | 1.17   | 1.17   | 2.33  |
| 10   | 3.7  | 3.7  | 7.37  |
| 100  | 11.67  | 11.67  | 23.33   |

**Declaration – electromagnetic emissions and immunity –  
for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING and are specified  
for use only in a shielded location**

| <b>The Wireless Electrical Stimulator declaration – electromagnetic immunity</b>   |                             |                  |  |
|--|-----------------------------|------------------|--|
| The Wireless Electrical Stimulator system is intended for use in the electromagnetic environment specified below.<br>The customer or the user of the Wireless Electrical Stimulator system should assure that it is used in such an environment. |                             |                  |  |
| Immunity test  | IEC 60601 test              | Compliance level | Electromagnetic environment - guidance   |
| Conducted RF IEC<br>61000-4-6  | 3 Vrms<br>150 kHz to 80 MHz | 3V               | Portable and mobile RF communications equipment should be used no closer to any part of the EQUIPMENT or SYSTEM including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitters.<br>Interference may occur in the vicinity of equipment marked with the following symbol.<br><br> |
| Radiated RF IEC<br>61000-4-3   | 3 V/m<br>80 MHz to 2.5 GHz  | 3V/m             |  |

| <b>Declaration – electromagnetic immunity</b>  |   |   |   |
|--|---|---|---|
| The Wireless Electrical Stimulator system is intended for use in the electromagnetic environment specified below.<br>The customer or the user of the Wireless Electrical Stimulator system should assure that it is used in such an environment. |   |   |   |
| Immunity test  | IEC 60601 test  | Compliance level  | Electromagnetic environment - guidance  |
| Electrostatic discharge (ESD) IEC<br>61000-4-2   | ±6 kV contact<br>±8 kV air  | ±6 kV contact<br>±8 kV air  | Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.   |
| Electrical fast transient/burst IEC<br>61000-4-4   | ±2 kV for power supply lines<br>±1 kV for   | ±2 kV for power supply lines  | Mains power quality should be that of a typical commercial or hospital environment.   |
| Surge IEC 61000-4-5  | ±1 kV differential mode<br>±2 kV common mode  | ±1 kV differential mode   | Mains power quality should be that of a typical commercial or hospital environment.   |
| Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11  | < 5 % UT<br>(> 95 % dip in UT) for 0.5 cycle<br>40 % UT<br>(60 % dip in UT) for 5 cycles<br>70 % UT<br>(30 % dip in UT) for 25 cycles<br>< 5 % UT<br>(> 95 % dip in UT) for 5 sec | < 5 % UT<br>(> 95 % dip in UT) for 0.5 cycle<br>40 % UT<br>(60 % dip in UT) for 5 cycles<br>70 % UT<br>(30 % dip in UT) for 25 cycles<br>< 5 % UT<br>(> 95 % dip in UT) for 5 sec | Mains power quality should be that of a typical commercial or hospital environment.<br>If the user of the EQUIPMENT or SYSTEM requires continued operation during power mains interruptions, it is recommended that the EQUIPMENT or SYSTEM be powered from an uninterruptible power supply or a battery. |
| Power frequency (50/60 Hz) magnetic field IEC 61000-4-8  | 3 A/m   | 3 A/m   | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.   |

| <b>Declaration – electromagnetic emissions</b>  |            |   |
|---|------------|---|
| The Wireless Electrical Stimulator is intended for use in the electromagnetic environment specified below. The customer or the user of the Wireless Electrical Stimulator should assure that it is used in such an environment. |            |   |
| Emissions test  | Compliance | Electromagnetic environment - guidance  |
| CE emissions CISPR11  | Group 1    | The Wireless Electrical Stimulator uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. |

|   |          |   |
|---|----------|---|
| RE emissions<br>CISPR11                                     | Class B  | The Wireless Electrical Stimulator is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes. |
| Harmonic emissions<br>IEC 61000-3-2                         | Class A  |   |
| Voltage fluctuations/<br>Flicker emissions<br>IEC 61000-3-3 | Complies |   |

## Warranty

This ILS Wireless System carries a one-year warranty from the date of purchase.

Product Service Life: Three (3) years.

The warranty applies to the main device and necessary parts and labor relating thereto.

**Consumable items like : batteries, electrodes, and other accessories are warranted to be free from defects in workmanship and materials at the time of delivery.**

The warranty does not apply to damage resulting from failure to follow the operating instructions, accidents, abuse, alterations or disassembly by unauthorized individuals.

The distributors reserve the right to replace or repair the unit at their discretion.

Distributed by:

Independent Living Specialists Pty Ltd.  
67 Mars Road, Lane Cove,  
NSW 2066  
Australia

Free Call : 1300 008 267

llsau.com.au



Well-Life Healthcare Ltd.  
6F., No.168, Lide St., Jhonghe District,  
New Taipei City 23512, Taiwan