



# Biofeedback Nerve and Muscle Stimulator

## Quick User Manual

(KM530)

- ✓ EMG Dual-channel muscle strength assessment
- ✓ Two kinds of stimulation waveforms
- ✓ EMG game training
- ✓ Pre-Prescribed Electrical Stimulation Training
- ✓ EMG triggering assists electrical stimulation training
- ✓ Graphical presentation of training records

# Biofeedback Nerve and Muscle Stimulator



EMG



EMG Game



ETS



STIM



Record










SET

## Product operation guidance

- Please read the interface operation, electrode connection and safety information in the product manual carefully when using this product for the first time.
- Before pelvic floor training, please confirm your needs and pelvic floor muscle conditions to facilitate the selection of electrical stimulation mode.
- If you have learned about your pelvic floor muscle condition and needs, you can directly choose the corresponding electrical stimulation mode.
- If you are not clear about your pelvic floor muscle condition, first you need to use this product for a standard pelvic floor assessment. Please use lubricant to ensure that the probe is in good contact, in a quiet environment and away from all kinds of electrical products, otherwise it will interfere with the EMG value, leading to evaluation the estimation result is not accurate.
- After completing the first evaluation, please interpret the instructions according to the evaluation results and report, and select the electrical stimulation mode for training in combination with your own performance.
- For electric stimulation therapy, electromyography evaluation, electromyography feedback assisted therapy and electromyography feedback game training, please refer to the frequency below.

## Use frequency of biofeedback training stimulator

Training Schedule Reference Table			
ITEMS	First use	After two weeks of use	After one month of use
 EMG TEST	Once/week	Once/week	Once/week
 EMG GAME	Once/two days (Interval time>48H)	Once/day (Interval time>24H)	Twice/day (Interval time>6H)
 ETS			
 STIM			
	 Properly reduce the intensity Feel crisp and numb.	 Increase strength appropriately Feel something crawling inside.	 Increase strength again Feel the beat.

- Note:** Users can use pelvic floor assessment once a week according to their own conditions to monitor their pelvic floor muscle strength. The pelvic floor evaluation test value is not used as a basis for clinical diagnosis, but only as a reference for comparison of self-muscle strength. Pelvic floor muscle training does not have obvious effect in a short time. Please use this product for 3 months.

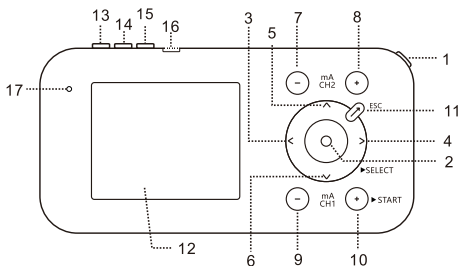
## Description of biofeedback evaluation data

Phase No.	Phase Name	Parameter Name	Reference Value
1	Pre resting stage	Average value	< 4 $\mu$ V
2	Fast muscle (Class II fiber) stage	Maximum value	> 40 $\mu$ V
3	Slow muscle (Class I fiber) stage	Average value	> 35 $\mu$ V
4	Endurance test stage	Average value	> 30 $\mu$ V
5	Post resting stage	Average value	< 4 $\mu$ V

- The curves at the pre and post rest stages should be as stable as possible, and the test value should be less than the reference value. The greater the value or the more the curve beat changes, the more serious the pelvic floor muscle over activity.
- The fast muscle test value should be as large as possible. The larger the value is, the greater the fast muscle strength of the pelvic floor muscle is, and the stronger the muscle strength is; the smaller the value is, the smaller the muscle strength of fast pelvic floor muscle is, and the weaker the muscle strength is.
- The average value of slow muscle was tested at slow muscle and endurance stage. The greater the test value, the stronger the slow muscle endurance and muscle strength of pelvic floor muscle; The smaller the test value, the weaker the slow muscle endurance and muscle strength of the pelvic floor muscle.

(Reference: Chinese Journal of Obstetrics and Gynecology, Vol. 18, Issue 3, May 2017, Application of Glazer Assessment in Postpartum Pelvic Floor Muscle Function Assessment, written by Zhou Zhichun, Zhu Haiyun, Cao Hongmin)

## Introduction to basic product information



### Keypad control

- 1) ON/OFF button: Long press this button two seconds to power on, and press this button one second again to power off.
- 2) Confirmation button (OK Key)
- 3) "<" button: It is used to go left to select the menu, and change the parameters in the parameter setting interface.
- 4) ">" button: It is used to go right to select the menu, and change the parameters in the parameter setting interface.
- 5) "∨" button: It is used to up to select the menu.
- 6) "∧" button: It is used to down to select the menu.
- 7) "CH2 mA-" button: It is used to decrease the intensity level of electrical stimulation in Channel 2.
- 8) "CH2 mA+" button: It is used to increase the intensity level of electrical stimulation in Channel 2.
- 9) "CH1 mA-" button: It is used to decrease the intensity level of electrical stimulation in Channel 1.
- 10) "CH1 mA+" button: It is used to increase the intensity level of electrical stimulation in Channel 1.
- 11) ESC button: It is used to exit the current mode and return to the previous interface.
- 12) Display screen: It is used to display information.
- 13) CH1 port: It is used to connect the electrode patch, vaginal probe or anal probe.
- 14) REF port: It is used to connect the reference electrode.
- 15) CH2 port: It is used to connect the electrode patch.
- 16) USB port: It is used to connect the USB wire for charge.
- 17) LED indicator: It is used to display the status of device operation: #i) It will flash when the running stays on the main interface; #ii) It will normal light on when the running stays on ETS or STIM mode.

## Turn on/off of Biofeedback Nerve and Muscle Stimulator

- **Turn on:** Long press the yellow on/off button at the upper right corner for 2 seconds, and then jump out of the main menu interface, that is, turn on is completed. Press the direction button (up, down, left, right), select the main menu item for subsequent operations.
- **Turn off:** Press and hold the yellow on/off key at the upper right corner for 1 second, and then the screen will turn off to complete the shutdown.

## Introductions to EMG evaluation function

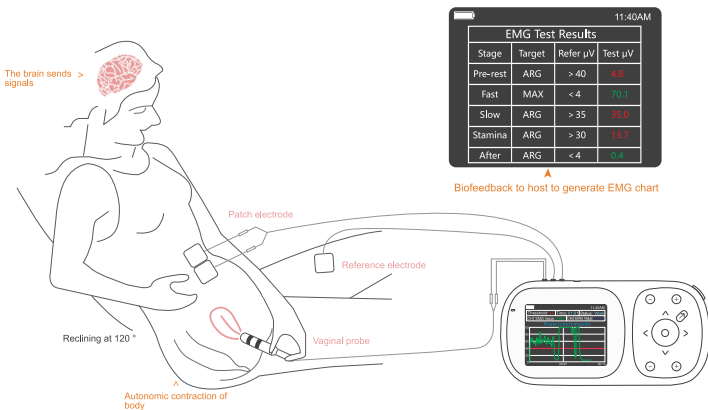
**EMG evaluation:** the muscle condition was quantitatively evaluated and recorded using the internationally accepted evaluation method.

**The probe (vagina/anal) was used for EMG evaluation.**

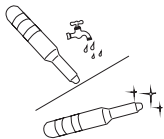
**Scope of application:** applicable to vaginal or anal treatment.

- Before the EMG evaluation test, connect the electrode wire with the accessories and host.  
**Channel 1:** Use the probe (vagina/anal) to evaluate the muscle strength of pelvic floor muscles.  
**Channel 2:** A pair of electrode pads are used to monitor the abdominal muscle strength, prompting users to avoid abdominal muscle strength and affecting the pelvic floor muscle strength.  
**Channel REF:** use a single electrode pad to connect the skin to avoid external signal interference.

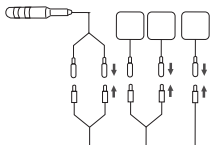
## Placement position of probe and patch electrode (electrode pads):



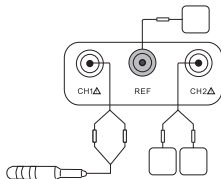
## Using steps:



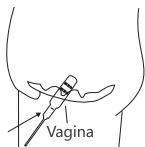
1) Rinse the probe with clean water.



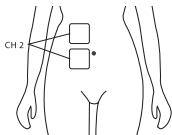
2) Connect the pin of the electrode wire with the probe and the patch electrode.



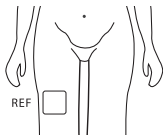
3) Connect the plug of the electrode wire to the host.



4) Put the vaginal probe into the body.

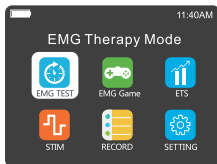


5) Place the CH2 patch electrode on the abdomen.



6) Place the REF patch electrode on the thigh.

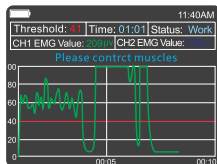
- In the EMG evaluation training interface, start the evaluation according to the screen prompts. The muscles of the body will contract and relax automatically for muscle strength test.



1. Enter the EMG TEST interface for testing (once a week is recommended)



2. Select the Fast EMG Test



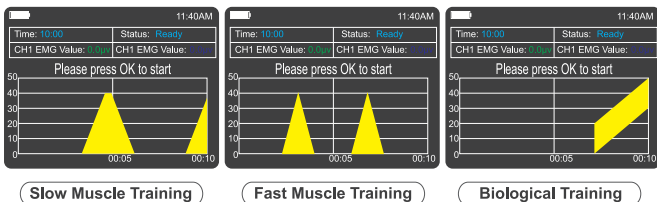
3. Start the test and generate EMG evaluation chart values. After completing the rapid EMG test, the EMG values of 5 stages were obtained. Refer to page 2 for numerical analysis.

## ● Scene training

Using steps: Enter the EMG test interface, select Scene Training, then select your desired mode, contract and relax muscles according to the screen and voice prompts.



There are Slow Muscle Training, Fast Muscle Training and Biological Training. The three modes can be used alternately every day or selected according to user's own muscle conditions. If the explosive force is insufficient, select Fast Muscle Training, and if the endurance is insufficient, select Slow Muscle Training.



**1. Slow Muscle Training:** enhance the endurance of slow muscle contraction, so that the pelvic floor muscles are not easy to feel tired.

**2. Fast Muscle Training:** enhance the explosive force of fast muscle contraction, and make the contraction strength of pelvic floor muscle stronger.

**3. Biofeedback Training:** collect pelvic floor muscle contraction signals, amplify the signals, make the pelvic floor contract, achieve the purpose of exercising pelvic floor muscle contraction, and form conditioned reflex through repeated training.

## ● Introductions to EMG feedback game training function

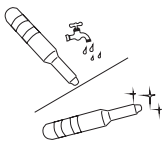
**EMG feedback game training: muscle training through EMG biofeedback therapy to promote muscle strength and restore muscle dysfunction**

**Use the probe (vagina/anal) for EMG feedback game training.**

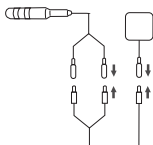
**Scope of application: applicable to vaginal or anal treatment.**

- Before the EMG feedback game training, connect the electrode wire with the accessories and the host.  
Channel 1: Use the probe (vagina/anal) to conduct feedback training on pelvic floor muscles.  
Channel REF: use a single electrode pad to connect the skin to avoid external signal interference.

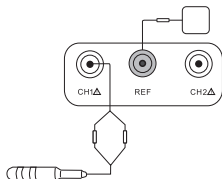
## Using steps:



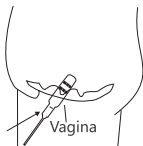
1) Rinse the probe with clean water.



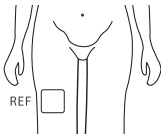
2) Connect the pin of the electrode wire with the probe and the patch electrode.



3) Connect the plug of the electrode wire to the host.

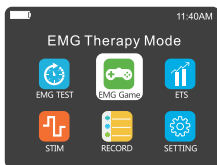


4) Put the vaginal probe into the body.



5) Place the REF patch electrode on the thigh.

- In the EMG feedback game training interface, the entire training mode is based on an active training of the user's contracted muscles, and the device will use the user's training state to perform the game, train the muscle's explosive force, and the entire training process will not generate electrical stimulation.



1. Enter the EMG feedback game training interface.



2. Select EMG feedback game training.

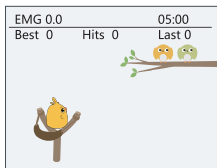


- Six kinds of EMG feedback game training methods are used for the explosive and continuous strength of muscles



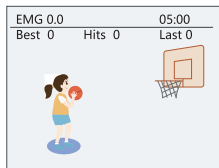
**Big Fish**

Training explosive power



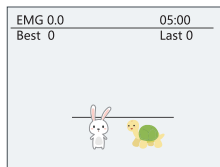
**Angry Bird**

Training Explosive Force



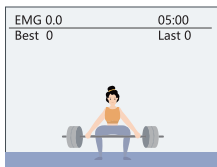
**Shoot**

Training explosive power



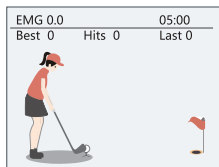
**Race**

Training sustainability



**Weightlift**

Training sustainability



**Golf**

Training explosive power

- **EMG feedback game training rules:** Connect the device to the electrode pads, enter the game interface, within the specified time, if the EMG value is greater than the set threshold, the game will go on smoothly, then you will be prompted to congratulate for passing the game.

## Introduction of EMG feedback assisted therapy function

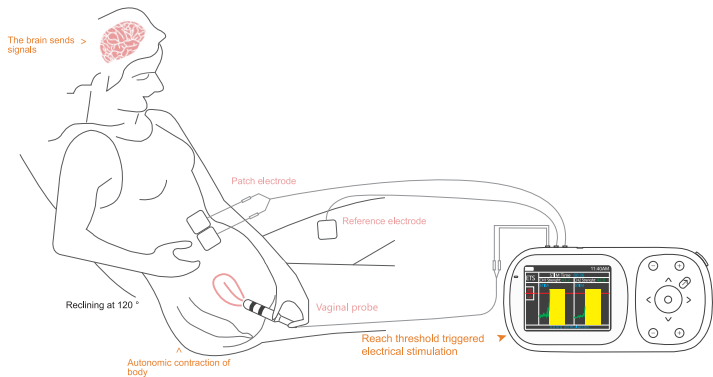
EMG feedback assisted therapy: the device collects and analyzes the patient's surface EMG signal, and trains the patient as a biofeedback stimulus signal, so that the patient can consciously enhance the contraction and relaxation of the trained muscles to achieve the therapeutic effect.

## Use the probe (vagina/anal) for EMG feedback assistance training.

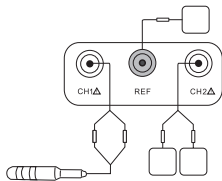
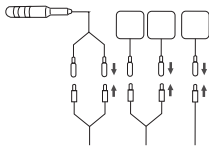
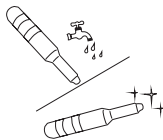
### Scope of application: applicable to vaginal or anal treatment.

- Before the EMG feedback assistance training, connect the electrode wire with the accessories and the host.  
Channel 1: use the probe (vagina/anal) to collect the EMG of the pelvic floor muscle, reach the set threshold, and give electric stimulation treatment.  
Channel 2: A pair of electrode pads are used to monitor the abdominal muscle strength, prompting users to avoid abdominal muscle strength and affecting the pelvic floor muscle strength.  
Channel REF: use a single electrode pad to connect the skin to avoid external signal interference.

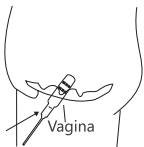
### Placement position of probe and patch electrode (electrode pads):



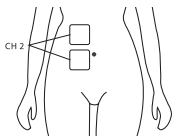
### Using steps:



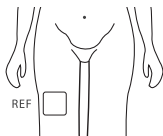
- 1) Rinse the probe with clean water.
- 2) Connect the pin of the electrode wire with the probe and the patch electrode.
- 3) Connect the plug of the electrode wire to the host.



4) Put the vaginal probe into the body.



5) Place the CH2 patch electrode on the abdomen.

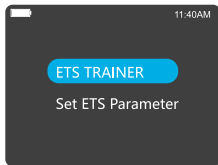


6) Place the REF patch electrode on the thigh.

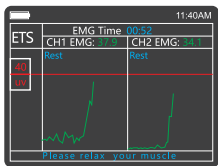
- In the EMG feedback assisted training interface, this link is a combination of active and passive training mode, which can more exercise the user's ability of voluntary contraction.



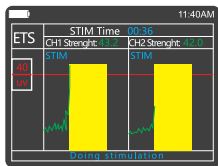
1. Enter the EMG feedback assisted training interface.



2. Select EEMG feedback assisted training.



3. Start training and contract the muscles according to the instrument prompts.



4. When the EMG value reaches the set threshold, electric stimulation exercise is triggered.

## Introduction of electric stimulation training function

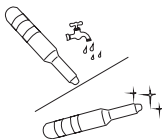
The device can motor neurons of mixed peripheral nervous system by direct stimulation, or indirectly reflexively recruit muscle fibers to contract the muscle to achieve therapeutic effect. The device achieves therapeutic effect by using low-frequency current to stimulate nerve muscle and make muscle contract.

**Use the probe (vagina/anal) for electrical stimulation training.**

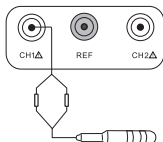
**Scope of application: applicable to vaginal or anal treatment.**

- Before electric stimulation training, connect the electrode wire with the accessories and host.  
Channel 1: Use the probe (vagina/anal) to conduct electrical stimulation training on pelvic floor muscles.

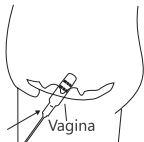
## Using steps:



1) Rinse the probe with clean water.

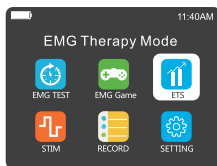


2) Connect the probe to the host (CH2 channel, REF interface is not connected).

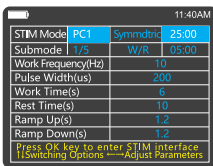


3) Put the vaginal probe into the body.

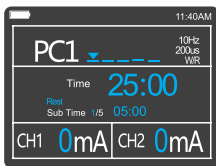
- In the electric stimulation interface, users can choose different working modes and waveforms to exercise. (For fixed mode, please refer to the table below for selection, and for customized mode, please set it under the guidance of trainers)



1. Enter the ETS interface.



2. Select ETS prescription procedure.



3. Exercise according to the strength button of the corresponding channel.

### Prescription procedure for electrical stimulation

P01	Urgent incontinence 1	P10	Sensory nerve regeneration	P16	Newborn mother
P02	Frequent urination	P11	Rectal irritation	P17	Exercise after hysterectomy
P03	Bladder active stimulation	P12/ P13/ P22	Pelvic muscle exercise	P19 /P21	Lack of sensitivity
P04	Sensory nerve regeneration			P20	Pelvic muscle pain
P05-P07	Stress incontinence			PC1 -PC3	Physician or professional designated setting
P08	Muscle training	P14	Exercise pelvic floor muscle endurance		
P09	Mixed incontinence	P15	Maintain pelvic muscle exercise		

## Training records and system settings

- Training record "RECORD" interface: users can view training records of different programs.
- System setting interface: there are date and time, backlight setting, sound setting, record deletion and factory restoration, which can be switched by pressing up and down button.