

# Ultrasound Stimulator

[DK-1]



K . M . G

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**KMG**

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## 1. Cautions Before Use

- **Thank you for purchasing DK-1. Please use it correctly by reading this user guide before use.**
- **Maximum effects can be obtained through accurate use by following the instructions in the operation manual.**
- **Do not use this product for other purposes.**
- **Warning/Precautions**
  1. Do not disassemble the instrument.
  2. The use of this instrument is prohibited for the following persons:
    - ① Patient with acute disease
    - ② Patient with malignant tumor
    - ③ Patient with high fever
    - ④ Person with heart disease (person with a pacemaker implant)
    - ⑤ Pregnant women
    - ⑥ Person with skin disorder on the application area
    - ⑦ Patient with external damage to the pupil
    - ⑧ Patient with allergy and atopic dermatitis
    - ⑨ Patient with damaged skin due to burns
  3. Do not treat by using several instruments on the same patient.
  4. Install in a location away from water sources.
  5. If water enters the instrument, please contact the store where it was purchased
  6. Install in a location that will not be adversely affected by pressure, temperature, humidity, ventilation, sunlight, dust, and air containing salt and sulfur.
  7. Protect the instrument from slanting, vibration, and shock. If the instrument breaks, malfunction may occur.
  8. Use only the displayed voltage.
  9. Do not use the instrument in case of lightning.

## 2. Characteristics

### • Product organization

This Ultrasound Stimulator is used to provide diathermic treatment by applying 1 MHz ultrasonic energy to the ultrasound head. It is used to relieve pain and stimulate the skin. It consists of a button to set up each function, an LCD display showing the operation status of the control panel, and an ultrasound head. In addition, it contains functional circuits for a timer and three modes (Continuous, Vibration, and Beat) as well as the signal-generating part.

### • Operation

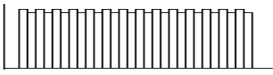
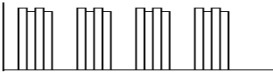

When power is supplied to the equipment through an external power source high-frequency current is generated through the frequency generation part. When high-frequency current that is generated is amplified and transferred to the ultrasound vibrator, ultrasound is generated by the vibrator.

- ① Continuous mode (CONT) – 1 MHz is outputted continuously.
- ② Vibration (MOD1) – 1 MHz is outputted by turning ON for 35msec and OFF for 35msec.
- ③ Beat mode (MOD2) – 1 MHz is outputted by turning ON for 0.5 sec and OFF for 0.5 sec.

## 3. Specification

- Rated Power: 100~240V ~50/60Hz 1.7A
- Power Consumption: Max. of 50[W]
- Ultrasonic Frequency: 1 MHz
- Timer: Within 15 minutes (set in 1 minute units)
- Effective Discharge Area: 7.0 cm<sup>2</sup> ± 10%
- Classification according to the protection format and degree of protection against electric shock: 1st Class Instrument (Instrument with Internal Power Source), BF-Type Instrument
- Safety Equipment
  - Countermeasure established for excessive current due to product disorder (SMPS)
  - Forced suspension following increase in internal temperature due to excessive use (Normal operation is possible by turning off power and then turning it on again a little later.)

• **Output Waveform**

Mode	Waveform	Description
Continuous Mode (CONT)		1 MHz is outputted continuously.
Vibration Mode (MOD1)		1 MHz is outputted by turning ON for 35msec and OFF for 35msec.
Beat Mode (MOD2)		1 MHz is outputted by turning ON for 0.5 sec and OFF for 0.5 sec.

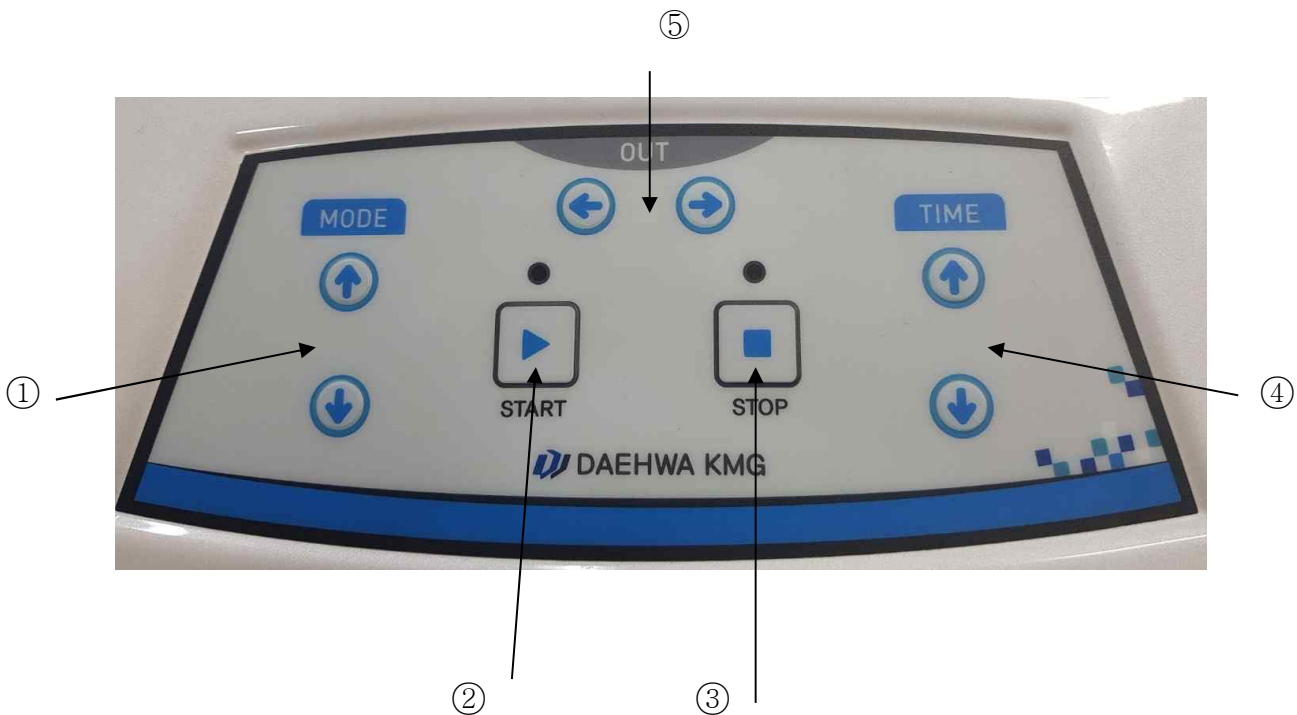
## 4. Installation and Precautions

**When selecting a location for installing this machine, consider the following:**

- ① Location with no moisture and low humidity
- ② Location with little dust and adequate ventilation
- ③ Location where the rated voltage and frequency and sufficient power can be supplied
- ④ Location without mechanical vibration and external electric effect
- ⑤ Location that is not affected by temperature, humidity, salt, and ion components
- ⑥ Since unstable output may occur if the stimulator is operated close to shortwave or ultrashort wave therapeutic devices (within approximately 1m), caution is needed during installation and use.
- ⑦ After using the instrument, turn off the power switch in the rear and disconnect the power cord from the outlet.

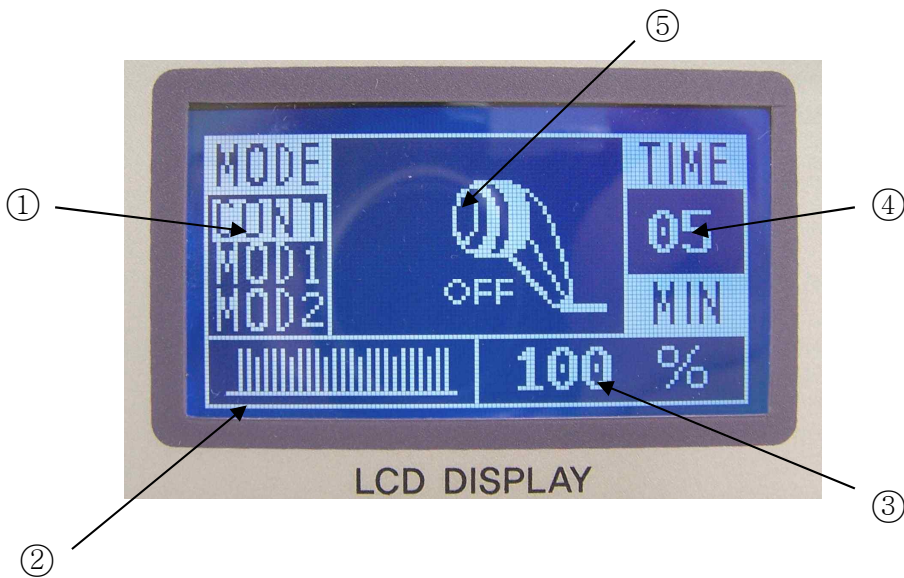
## 5. Name of Each Part and Functional Description

### • Control Part



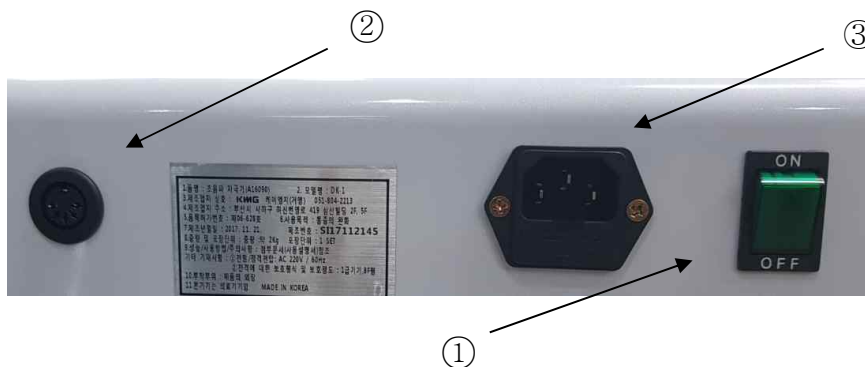
- ① Mode Selection: Change the current mode to Continuous Output (CONT), Vibration Output (MOD1), or Beat (MOD2)..
- ② Start: Start the waveform output.
- ③ Stop: Stop the waveform output.
- ④ TIME UP/DOWN: Increase or decrease the use time.
- ⑤ Output UP/DOWN: Raise the output 0~100%, and then lower it.

• Display Part



- ① Display the selected MODE.
- ② Display the output waveform.
- ③ Display the output strength (0~100%).
- ④ Display the remaining time.
- ⑤ Display the output operation graphically.

• Rear Part/Side Part



- ① Power ON/OFF switch
- ② Output socket
- ③ Power source outlet

• Parts



← ①



← ②



← ③

Part	Amount
① Ultrasound Electrode	1EA
② AC cord(220V)	1EA
③ Ultrasound Electrode support	1EA



## 6. Operation Method and Precautions

### • Items to prepare before use

- ① Inspect whether there is damage to the instrument.
- ② Familiarize yourself completely with the operation method before use.

### • Operation method

- ① Make the patient sit or lie down and assume a comfortable posture to fit the affected area.
- ② Apply a medium such as ultrasound gel on the affected area.
- ③ Connect the front part of the electrode to this instrument.
- ④ Connect the power plug to the power outlet.
- ⑤ Turn the POWER Key "ON."
- ⑥ Basic setting is 5 minutes for the timer. Set to the desired time with the UP, DOWN button switch.
- ⑦ Output for this instrument is 0W ~ 3W. To increase or decrease the output, set the fine output converter or press the push button switch to a suitable output position.
- ⑧ When selecting an output mode, use the Mode Change Switch. Continuous (CONT), Vibration (MOD1), or Beat (MOD2) output may be selected.
- ⑨ Start the stimulation by pressing the START/STOP button switch.
- ⑩ Once the operation time lapses, output will be cut off with an ending sound.
- ⑪ After disconnecting the electrode from the stimulator, disconnect the power plug from the power outlet.

### • Control sequence

- ① Connect the ultrasound head to the instrument.
- ② Turn on the instrument by pressing the POWER Key.
- ③ Set the discharge frequency for the ultrasound head by pressing the 1M key.
  - Ultrasound frequency can be set to 1MHz
- ④ Set the operation mode by pressing the Mode key.
  - Current modes are Continuous Output (CONT), Vibration Output (MOD1), and Beat (MOD2).
- ⑤ Set the output strength between 0~100% by pressing the OUT Up/Down key.
- ⑥ Set the operation time by pressing the TIME Up/Down key.
  - Adjustment range: 1 ~ 15 minutes (1-minute interval)
- ⑦ Start the ultrasound head discharge by pressing the Start/Stop key.
- ⑧ Use the ultrasound head by following the direction of the progress for the affected area.

⑨ If the operation time is terminated, ultrasound strength becomes 0; a warning sound signaling the lapse of the operation time will be emitted.

- **Storage and management method after use**

① Ultrasound discharge head: Wipe off the cream remaining on the ultrasound discharge head with soft cloth or tissue after use. Disinfect the ultrasound discharge head with alcohol.

② Ultrasound Stimulator body: Do not use organic solvent cleaning liquid or benzene or polishing cleaning liquid for management and maintenance or cleaning the product when it is not in use (may damage the ultrasound discharge head or the external case).

③ Cleaning: Clean the instrument body with soft cloth after use. The ultrasound discharge head must be cleaned well since it has residue gel or foreign matter from the skin on it. In addition, when cleaning the instrument body, make sure the cleaning solution does not penetrate.

## 7. Repairs and A/S

### ! Before requesting for repairs

- This instrument has passed strict testing at the plant. If malfunction is suspected, however, please contact the store where it was purchased.

- In case of malfunction, or if the cause is not known, make a request to the store or the sales office instead of attempting self-repair.

- When requesting for repair, provide the following information:

Specify the address where the product will be sent after the repair inspection (Address, Name, Phone Number, Rough Map).

**Note: Disassembly, repair, or modification may only be performed by the manufacturer**

**(A/S will not be provided in case of repair or modification performed by those other than authorized personnel.)  
Injury due to fire or abnormal operation may occur.**

## 8. Labeling Requirement

- **Product: Ultrasound Stimulator (A16090)**
- **Model: DK-1**
- **Manufacturer: KMG (Kumyoung)**
- **Manufacturer's Address: Samsan B/D 2F, 5F, 419, Hasinbeonyeong-ro, Saha-gu, Busan, Korea**
  
- **Item Permit No.:**
- **Purpose of Use: Skin care, Cosmetic Performance and Pain Reducing**
- **Manufacturing Number and Manufacturing Date:**
- **Weight and Packaging Unit**
  - ① Weight: 1.2[Kg]
  - ② Packaging Unit: 1 set
- **Other Necessary Items**
  - ① Power/Rated Voltage: AC100~240V~50/60Hz
  - ② Power Consumption: Max. of 34[W]
  - ③ Form and degree of protection for electric shock: Class 1 instrument (instrument with internal power source), BF-type instrument
- **Attachment Part: Product exterior**
- **This product is a medical instrument.**

## 9. Product Warranty

### <Warranty regulation>

The warranty period for the main body of the instrument is 1 and half year after purchase; accessories are excluded.

If malfunction occurs, request the store where this instrument was purchased or the manufacturer for repair by attaching this certificate.

A repair fee shall be charged under the following cases even if the warranty period has not lapsed:

- Breakdown due to negligent handling
- Breakdown due to product modification or repair performed at a location other than an authorized A/S branch
- Breakdown or loss due to uncontrollable natural disasters such as fire, earthquake, and flood
- Case wherein the cause of the breakdown occurred outside the instrument
- If not written on the warranty certificate

※ Standard regulation applies to domestic use.

※ This regulation does not restrict the right of the customer.

※ The product delivery fee and all costs incurred due to the repair must be paid by the customer.

# Product warranty

<b>Product</b>	<b>Ultrasound Stimulator</b>	<b>Model</b>	<b>DK-1</b>
<b>Warranty Period</b>	<b>1 and half Year</b>	<b>Manufacturing Number</b>	
<b>Purchase Date</b>		<b>Item Permit No.</b>	<b>No.</b>
<b>Customer Field</b>		<b>Point of Purchase</b>	
<b>Name</b>		<b>TEL</b>	
<b>Address</b>			

※ For free repairs, the point of purchase field must be checked at the time of purchase.

※ Other Matters: