

Ultrasound Stimulator

CWM-302

Please read this manual carefully before usage to operate this device correctly and keep it together with Warranty Sheet always at the place you can easily reach out.




Thank you for purchasing our ultrasound stimulator. (CWM-302)

We are an expert maker for electro stimulation devices who always keep researching and working on customer's side. This device has been developed based on our technology and know-how accumulated through continuous R&D. This manual will help you to use the device safely and realize the excellence of it.

manufacturer’s declaration – electromagnetic emissions		
<p>The Ultra-Sound Stimulator (CWM-302) is a device intended to use for muscle pain relief. The customer or the user of the Model CWM-302 should assure that it is used in such an environment.</p>		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 2	The Model CWM-302 must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected.
RF emissions CISPR 11	Class A	The model CWM-302 is suitable for use in all establishments including domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	<p>The [ME EQUIPMENT or ME SYSTEM] is suitable for use in all establishments other than domestic, and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded:</p> <p>Warning: This equipment/system is intended for use by healthcare professionals only. This equipment/system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the [ME EQUIPMENT or ME SYSTEM] or shielding the location.</p>
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

manufacturer’s declaration – electromagnetic immunity

The Ultra-Sound Stimulator (CWM-302) is a device intended to use for muscle pain relief. The customer or the user of the model CWM-302 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 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 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 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 ± 2 kV common mode	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruption, and voltage variations on power supply input lines IEC 60601-4-11	$< 5\% U_T$ ($> 95\%$ dip in U_T) for 0.5 cycle $40\% U_T$ (60% dip in U_T) for 5 cycles $70\% U_T$ (30% dip in U_T) $< 5\% U_T$ ($> 95\%$ dip in U_T) for 5 s	$< 5\% U_T$ ($> 95\%$ dip in U_T) for 0.5 cycle $40\% U_T$ (60% dip in U_T) for 5 cycles $70\% U_T$ (30% dip in U_T) $< 5\% U_T$ ($> 95\%$ dip in U_T) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model CWM-302 requires continued operation during power mains interruptions, it is recommended that the model CWM-302 be powered from an uninterruptible power supply or battery.
Power frequency (50/60 Hz) 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
Note : U is the A.C. mains voltage prior to application of the test level.			
Guidance and manufacturer's declaration – electromagnetic immunity			

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Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
<p>Conducted RF IEC61000-4-6</p>	<p>3 Vrms 150 kHz to 80MHz</p>	<p>3 Vrms 150 kHz to 80MHz</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of the model CWM-302, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d=[3.5/V1]\sqrt{P}$ $d=[3.5/E1]\sqrt{P} \text{ 80MHz to 800MHz}$ $d=[7/E1]\sqrt{P} \text{ 800MHz to 2.5GHz}$ <p>where P is the maximum output power rating of the transmitter in watts(W) according to the transmitter manufacturer and d is the recommended separation distance in meters(m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>Radiated RF IEC61000-4-3</p>	<p>3 V/m 80 MHz to 2.5GHz</p>	<p>3 V/m 80 MHz to 2.5GHz</p>	
<p>Note 1 At 80MHz and 800MHz, the higher frequency range applies.</p> <p>Note 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the model CWM-302 is used exceeds the applicable RF compliance level above, the model CWM-302 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the model CWM-302.

^b Over the frequency range 150kHz to 80MHz, field strengths should be less than [V1] V/m.

II. EQUIPMENT AND FUNCTIONS

This device, CWM-302 is an Ultrasound Stimulator which is effective mainly on pain relief applying 1MHz/3MHz of ultrasound head on the body. This basically has various functions which can be used to relief muscle pain. In case of special request, the function of 3MHz with additional conductor will add the current unit as an option.



✓ GENERAL FEATURES

- 4 different kinds of operation modes (Modulation /Continuation/Vibration/Bit)
- With 4 pre-set output frequency selection user can manually select proper low and high frequency for optimal effect.
- Come standard with 4 cm²/1MHz frequency conductor
- Two optional 2cm²/3MHz or 4cm²/3MHz frequency conductor is available depending on its need

✓ SAFETY FEATURES





- Protection by fuse-Stabilized safety fuse at each (3.15A)

✓ PURPOSE

- Muscle pain relief

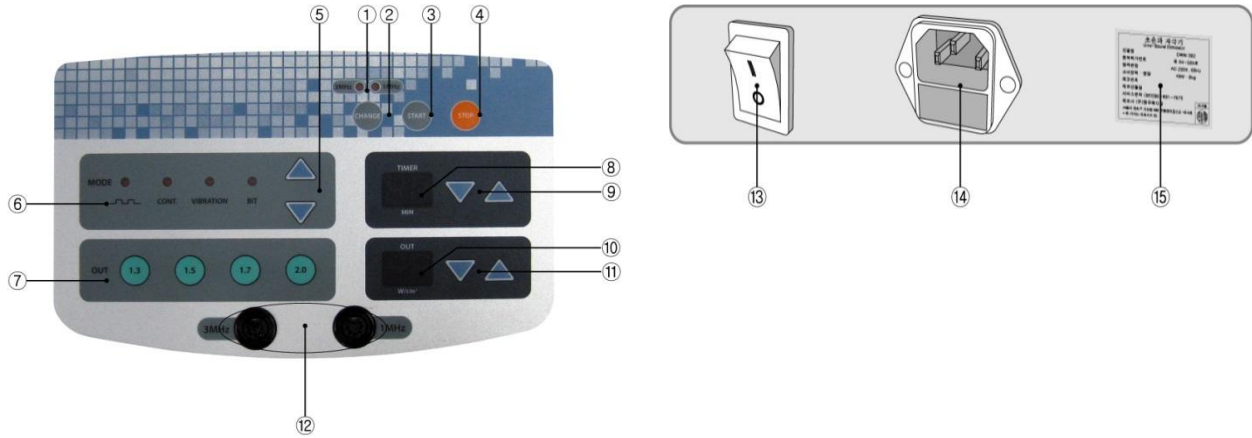
1. ACCESSORY

- Applied part :hand-piece head

ITEM	NAME	DESCRIPTION	PURPOSE	Q'TY
	Frequency Conductors w/ Cable	The bigger 1MHz conductor is used on abdomen, buttocks, waist, belly and hips.	To apply ultrasonic wave to the affected body by putting it on the body part.	1EA
		The small 3MHz conductor is used on face, arms and calves etc.		1EA (Optional)
	Optional Frequency conductor w/ Cable	The optional bigger 3MHz conductor is also available.		1EA (Optional)
	Power cord	AC 220V, 50/60hz	To turn on power	1EA

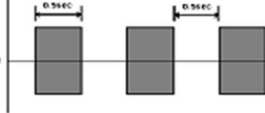

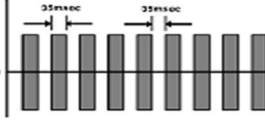
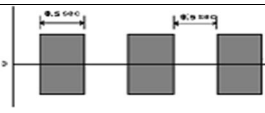
Applied part

2. COMPOSITION OF PRODUCTS AND DISPLAY



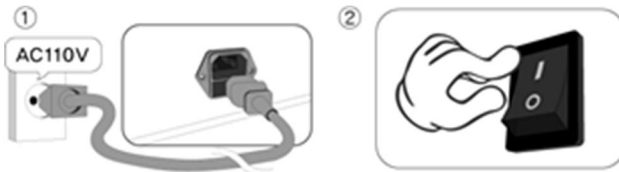
No	Title	Description
①	Output indicator	Indicate output frequency
②	Output selection button	Button for select output frequency type
③	Start button	Button for start
④	Stop button	Button for stop
⑤	Mode selection button	Button for select program mode
⑥	Mode indicator	Indicate program mode
⑦	Step selection button	button for select intensity of output
⑧	Time indicator	Indicate operation time
⑨	Time adjustment up/down key	key for control operation time
⑩	Output indicator	Indicate intensity of output
⑪	Intensity adjustment up/down key	Key for control intensity of output
⑫	Output port for 1MHz & 3MHz	Output port for connect probe
⑬	Power switch	Button for power ON/OFF
⑭	Power socket	Socket for connect power cord
⑮	Specification sticker	Indicate specification of product

3. MODE PROGRAM

Mode	Step				Wave Form	Reference
	1.3	1.5	1.7	2.0		
Modulation	0.65w	0.75w	0.85w	1.0w		1 MHz of current is stopped and applied intermittently (Stops for 0.5 second and applied for 0.5 second)
Continuation	1.3w	1.5w	1.7w	2.0w		1 MHz of current is continuously applied.
Vibration	0.7w	0.8w	0.9w	1.1w		1 MHz of current is applied for 35msec and stopped for 35msec intermittently.
Bit	0.65w	0.75w	0.85w	1.0w		1 MHz of current is applied for 1.0 second and stopped for 1.0 second.

III. STRING OPERATION AND IMPORTANT CAUTION

First of all, have the patient sit in a relaxed, comfortable posture or lie on a bed.



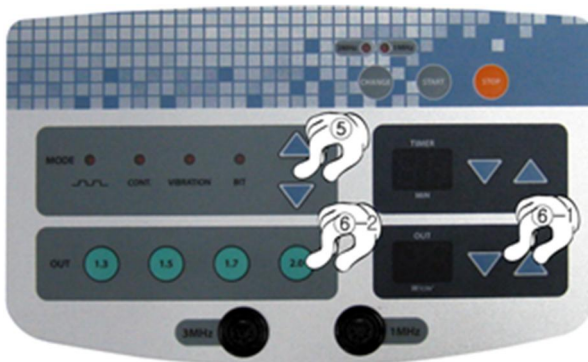
- ① Connect the power cord to the outlet.
- ② Turn on the power switch at the backside of the device.




- ③ Connect the wire lead of your desired ultrasonic conductor into the right insertion hold of output port firmly.
- ④ In case of using 1MHz conductor press key to select the output.

✓ When you turn on the power switch at the backside of the device then initial display shows the selection of 3MHz output frequency automatically.

⚠ Confirm that the value of the output intensity is to "0" position.




- ⑤ Press button to select the desired program mode.
- ⑥¹ Select the desired low and high electric impulse by or button gradually.
- ⑥² Or you can select one of 4 pre-set output range in the out selection, which are commonly used.

 Never operate the unit with wet hands to avoid electric shock.



⑦ Press  or  button to set the desired time.


⑧ The stimulation will start to run by press  key.

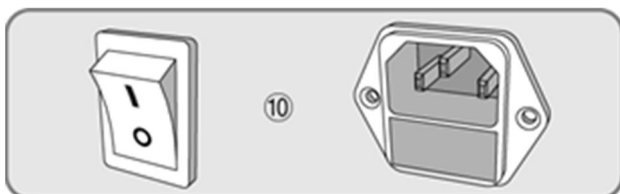


Please apply enough ultrasonic conductive gel to applied part of body before operation. Chungwoo Co., Ltd does not provide gel. So use only CE approved or ISO certificated ultrasound conductive gel.

Do not use the device on specific part of body for a long time.



⑨ After time is over beep sound is ringing and the operation is automatically off. Then  press to completely stop the operation.



⑩ Turn the power switch off at the back panel of device and plug off the power cord and keep all the equipment safe.



Manufacturer
Chungwoo Co., Ltd.