

UMG-VI Mini

DENTAL SIMULATOR

MANUAL INSTRUCTION



TANGSHAN UMG MEDICAL INSTRUMENT CO., LTD

Dear users

- Thank you for choosing our products.
- Before using this product, please read carefully the user's Guide (instructions) and keep it for next time.
- When using this product, please strictly obey to operation rules; periodically maintain it in correct way.
- If something is wrong with this production during the operation, please do not hesitantly contact local dealers or our company. We promise that you will get our perfect service and help.
- We comply with sustainable development, so we have the right not to notify the improvements of any product described in this handbook in advance.

- Before reading instructions of simulation teaching system, please get an idea of below symbols and instruction contents.



WARNING: This represents danger or damage to equipment or hurt to people. Please pay special attention. Please read carefully the warning contents and instructions and operate after fully understand using rules.



ATTENTION: this represents that operator need thoroughly grasp relevant instructions and operation details.

✂ TOOL: this means relevant problems can be solved by tools or demolition can be finished by special tools.

- When seeing above symbols or warnings please read carefully instructions next to symbols or warnings and can do the next operation after fully understand instructions.

- When moving or carrying equipments, please pay attention to below symbols.



1

1. This equipment can be placed only on end at any time. When moving or carrying, please keep the incline angle below 15°.



2

2. Fragile item -- Improper collision or extrusion may damage this equipment.



3

3. This equipment is not water-proof or anti-rain. If liquid goes inside the equipment, malfunction or accident may be caused.



4

4. There is not buckle or design for hoisting on this equipment and its packing. If hoisting is needed, please use some platforms or boxes.



5

5. When saving or transporting this equipment, please make sure the temperature between -10°C and 70°C, and air relative humidity between 10% and 90%(without any condensation) and atmospheric pressure between

500hPa and 1060hPa.

This instruction includes the followings:

- Product introduction, basic function and parameters of dental simulator.
- Operation method, including simulator panel operation, operating light operation and operation of X-ray viewer, plug, electric system, holder, instrument tray arranging, foot controller, built-in multi-plug

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1 Products Brief Introduction

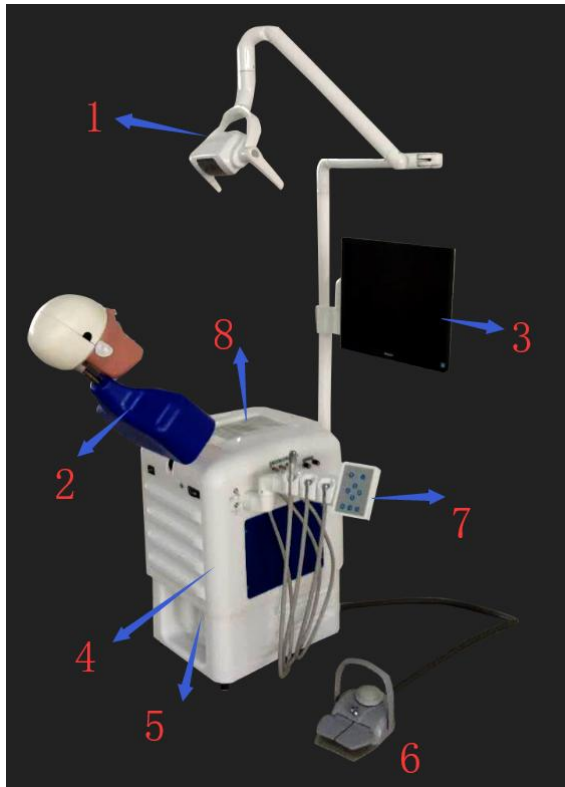
1.1 Brief instruction:

- UMG-VI is our educational unit which is used for simulator education and test. This unit can be used in multimedia education and false tooth repair, it is the necessary unit in Stomatology college and laboratory.
- UMG-VI is made of steel wooden with burly and durable character. The table-board is made of scagliola with intensity, endure, fireproof, shatterproof, easy cleaned and easy disinfected character.
- UMG-VI is an outstanding simulator education unit. The phantom head can be fully moved up and down, rise and fall by electricity. Two sets of memorial position can be setup freely. With function of moving up and down, rise and fall, the user can take clinic simulator test and finish 9 degree and 12 degree education. The user can feel real during the simulator test process.
- UMG-VI is use of phantom head, and client can choose other type of phantom head,. Phantom head can be used during the simulator dentistry diagnoses and cure process and is always following the latest teaching material. What's more, with kinds of assistant educational appliance it will take more advantages for education.
- The light is cool lamp-house, it can reach Omni direction and take credit guarantee for the education.
- The selection multimedia education appliance such as PC unit, dental demonstration system , dental intra oral camera, all can take direct and easy way for education.
- UMG-VI contour artistic, the structure is reasonable, burly and durable and easy fix and maintain is a perfect upgrade unit for the simulator education and test.

1.2 The technology parameter

No.	SUBJECT	PARAMETER	MOMENTUM	REMARK
1	Power	AC220V	±10%	
2	Input power	Max 600VA		Including addition equipment
3	Input pressure	0.8MPa		Internal pressure0.55MPa
4	Gas consumption	55L/Min	±10LMin	
5	Light illumination	18000Lux		
7	Unit noise	≤43dB		
8	Gross weight	75kg		
9	Packing dimension	960*760*780mm, 1300*260*310mm		
10	Phantom travelling distance	lowest 440mm	Raising250±5mm	Panel control with memory program
11	Phantom pitch	0°~ +90°	90°±5°	Panel control with memory program
12	stool moving distance	L 440mm	140±2mm	
13	Operating Light	≥20000lx		700mm

1.3 Unit brief introduction:



1. LED Operating light
2. Phantom body
3. LCD monitor
4. Phantom unit
5. Water bottle, drainage bottle
6. Foot controller
7. Control board
8. Instrument tray

1. This pose dimension is according to normal laying dimension
2. The dimension can be different base on special request.
3. The dimension is only for your reference. You should check your really request for dimension.
4. Dimension size and operating parameter is normal parameter, not for special specification.

2 How to operate

Operation surrounding condition:

Surrounding temperature	5℃~40℃
Relative humidity	≤80 % (not in freezing condition)
Input water pressure	0.25MPa
Input air pressure	0.8MPa
Power supply	AC220V 50Hz±1%



Warning:

This unit is only running under the condition meet the requests we mentioned above. If air supply, water supply and power supply can't meet the standard, it is possible to damage the unit or hurt operator.

2.1 LED Operating Light:



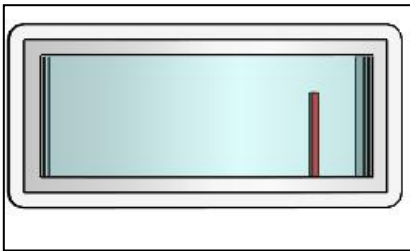
- New operating light with 4 LED, Colour temperature 5500k, Maximum light intensity 20000lx, Maximum power consumption 10W, Rectangular size of the spot 80×160mm, The switch is at the bottom of operating light and this switch with three stop, for switch left is strong light, for right is weak light and middle is switch off



Warning

Do not shoot the brightness directly to eyes to avoid eyes ambustion

2.2 System control panel:



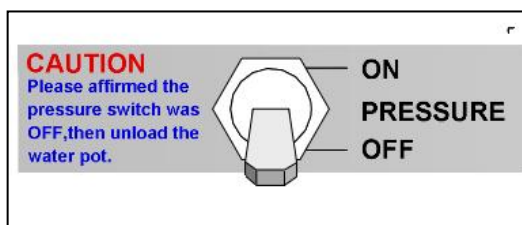
■ Pressure meter and handpieces water fine-adjusted on system control panel is for indicating the status of air turbine and air motor and adjusting water flow. For installation and operation guide please refer chapter 2.4

Notice:

Standard working pressure of air turbine: 0.22-0.25MPa

Standard working pressure of air motor: 0.3-0.33MPa

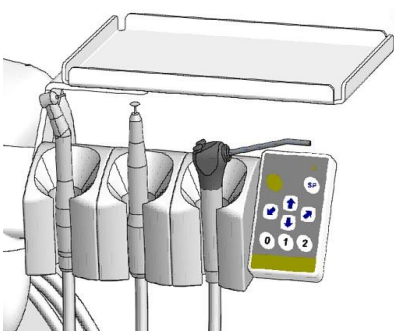
2.3 Introduce pure water bottle and waster water bottle:



■ Two kinds of bottle are both under the unit. When you replace the pure water bottle, please put the switch on “OFF”. And every time when you replace the pure water bottle, you should replace waste water bottle at same time.

Notice: Do not disassembly the pure water bottle while there is still has pressure in pure water bottle

2.4 Installation air turbine and air motor:



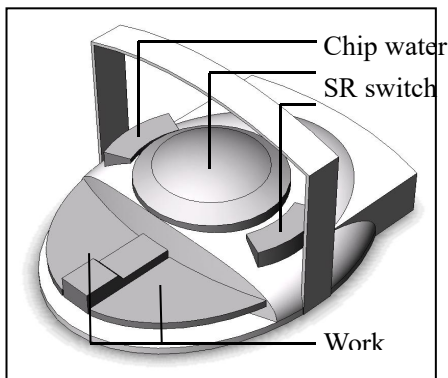
- Arrangement of instrument on holder is (from left to right) : air turbine, air motor, 3-way syringe
- After you installed air turbine and wind it, please take the air turbine from hold and press pedal of foot controller (refer to chapter 2.5), you will find air turbine start to work, and handpieces pressure meter will show the changing
- You can adjust water flow of air turbine and airmotor base on your requirement.
- For maintenance of handpieces, please refer to handpiece maintenance instrument which in air turbine and air motor box.



Notice:

Do not changing the position of air turbine and air motor on holders. Otherwise it will damage them due to difference air pressure in different holders. And air turbine can be worked without water. Please follow the manual instruction of air turbine to avoid any damage for it. Also please prevent from falling down the air turbine.

2.5 Foot controller operation:













- Take the handpieces from holder and press the pedal of foot controller, it starts to work. Loose the pedal, and then stop working. Press chip air, air turbine start spray air; Press chip water, air turbine start to spray water. When you press forward the ball on foot controller, the phantom head moves up. Press the ball backward, it moves down. Press the ball left, the shoulder moves backward and press the ball right, the shoulder moves forward.

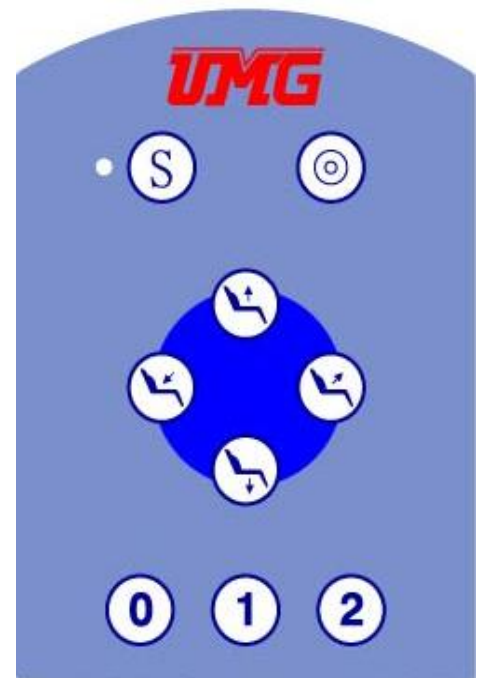










Warning:

Do not operate the ball switch when using handpiece to avoid damage to uses by the needle of high speed revolution.

2.6 operation of the simulator with phantom body:

- The lifting and tilting of the phantom body can be controlled through the panel. Besides, there are two memory positions and a resetting button on the panel. The two memory positions can be set freely.
- The lifting and tilting of the phantom body can also be controlled through the ball switch on the foot control.
- First open the main power switch and system power switch.
- Press  button ,you will hear a “Bee” and the phantom body will lift up until it reaches the limit and you will hear another “bee”
- Press  button ,you will hear a “Bee” and the phantom body will fall down until it reaches the limit and you will hear anther “bee”
- Press  button ,you will hear a “Bee” and the phantom body will move forward until it reaches the limit and you will hear anther “bee”
- Press  button ,you will hear a “Bee” and the phantom body will move back until it reaches the limit and you will hear anther “bee”
- Press  , the phantom body will move to the lowest and foremost position (tilt to 90°)
- Press  or  , the phantom body will move to the setting position.
- Setting the position of the phantom body
 1. Press  , you can hear Intermittent beeps...from the system
 2. Press  and  to adjust the phantom body to the position you want.



3. Press , you can hear continuous beeps...from the system
4. Press  and  to adjust the phantom body to the position you want.
5. Press , finish setting.
6. Press  and  or  and , set the memory position.
7. The current position is memorized. Next time when you need use this position, press the corresponding memory position and the system will move to the memorized position automatically.

Note:

When you control the movement of the dummy by panel or foot control, please clear instrument, pipes and etc. in the moving course which may bump against the dummy. And do not give force to it or force it to move, or damage may be caused.



Warning:

When operating the lifting and tilting button or switch of the head with dummy, stop operation if you do not hear “Beeps” before the equipment moves. Or else, serious damage may be caused by limitation malfunction.



Warning:

Pay special attention to  , to avoid damage to hand or limbs caused by moving dummy.

2.7 Operation when you stop the simulator:



When you want to stop using the simulator, press the 0 Reset button on the control panel of the dummy.



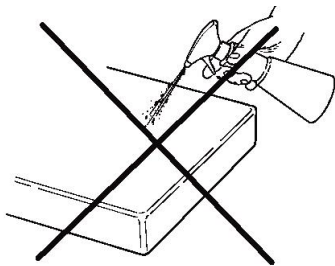
Warning:

Shut the power, water and air total valve and sub-valve after the resetting is completed and cover the simulator to prevent damage caused by water, power and air leakage or dust.

The above is the usage and operation instruction of this simulator. Please refer the operation manual of simulator with dummy for its usage. This manual does not make detailed explanation.

3 maintenance

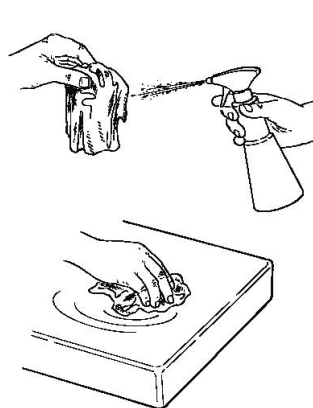
3.1 clean the cover:



- It's OK to use Household detergent to clean the desktop. Spray a little detergent or water to wipe the surface softly.

 **Note:**

Dulling or dropping of baking varnish may be caused if you spray the detergent on the surface or wipe it hard.



 **Warning:**

This equipment is not proof to the direct spray of water or other liquid. If you use too much water or detergent in the wiping cloth, conducting liquid may enter the inner structure of the equipment and unexpected accidents may be caused, such as fire. Therefore, any uncontrollable liquid is forbidden to enter the inner structure.

3.3 Simple elimination of malfunctions:

- This section offers solutions to some common problems

 **Warning:**

If the system makes strange noise, releases smoke or strange smell or sheds liquid, please turn off the main power and circuit breaker and call our service. Please do not take it apart or repair by yourself.

Please find some common problems and solutions as follows. Please follow the solutions

No.	Problem	Cause	solution	Remarks
1	can not be started. The power light is off	fusing or burning inner cable caused by overload or internal short	check and replace the fuse	Φ5×20 3A , attachment
2	can not memorize the moving position of the phantom head	disoperation or the system memory chip is broken	read the operation manual carefully or get touch with us	

3	the lamp is off	No power or power line was break	Check-up the power	
4	poor suction force	the air pressure is not enough or the suction filter is blocked	read the operation manual carefully and clean the suction filter cup.	

This operation manual only covers the usage, maintenance and simple malfunction elimination of simulators Please refer to the system installation manual for detailed installation instruction and principles.

Thank you

1 Yes we can
Best quality control.
2 Yes we can
Best after sale service.
3 Yes we can
Best delivery time.