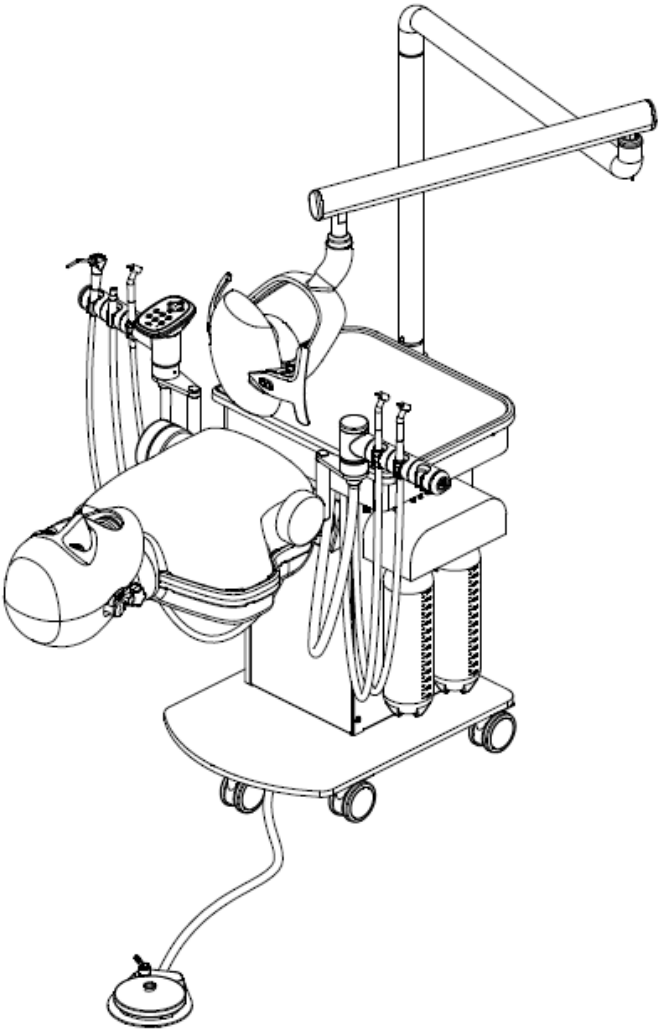
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User's Manual
of
T100 Teaching Simulation System



P/N: 8502127 Rev：B Data of Issue：2022-09-20

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1 Introduction

1.1 Scope of application

Thank you for choosing Ajax dental simulation teaching equipment! This equipment simplifies the complex structure of the general dental comprehensive treatment machine and retains the main operating functions of the general dental comprehensive treatment machine. The equipment is relatively small and does not occupy space for defecation. It is suitable for teaching.

1.2 Intended use: For oral simulation teaching

1.3 Service life: ten years.

1.4 Matters needing attention

Please read this manual carefully before operation

- Ensure that the whole machine is well grounded;
- This equipment must be repaired by professionals;
- All electrical parts and connections must be installed by authorized technicians;
- Only safety tubes and accessories confirmed by AGIS can be installed;
- This equipment cannot work under high temperature, high humidity, flammability, vibration, imbalance or dust environment;
- There shall be no objects that can be touched within all the moving ranges of the equipment;
- When the equipment is working, do not touch the bulb and reflector of the oral lamp;
- This equipment cannot be used in strong electromagnetic environment;
- This device cannot be used for other purposes;
- When replacing electrical components, the power supply must be cut off first;
- The power supply must also be cut off before the machine is maintained and cleaned;
- If it is necessary to add functional accessories to the machine, such as dental scaler, light curing, etc., the selected accessories or instruments must be high-quality products certified by safety regulations;

- Requirements for transportation and storage environment requirements for transportation and storage environment:
- a. Ambient temperature range: -20 ~ +55 ° C;
- b. Relative humidity range: 10% - 93%, including condensation;
- c. Atmospheric pressure range: 700~1060hpa.
- Prevent rain and large vibration during transportation, and pay attention to handle with care;
- The packed equipment shall be stored in a well ventilated room with a relative humidity of no more than 80% and no corrosive gas;
- The placement of relevant wastewater and waste must meet the local environmental protection requirements;
- The maintenance of this model must be carried out by professional maintenance personnel authorized by the company. Unauthorized disassembly and maintenance may cause fatal harm to the machine, and the company will no longer enjoy the right to provide warranty services.

1.5 Cautionary notes

- You should carefully read and understand all the contents in the manual before operation;
- Follow all warnings and instructions on the instrument during operation;
- The power socket line should be configured according to the standard, and the grounding wire must be firm;
- The air pressure of oral simulation teaching equipment has been set when it leaves the factory, and non professionals are not allowed to adjust it at will;
- The action limit of oral simulation teaching equipment has been locked, and non professionals are not allowed to adjust it at will;
- Turn off the main switch of water and gas power supply after use;
- The foot switch must be turned to the water state before the mobile phone can water out;
- During maintenance and repair, the water and gas must be drained before cutting off the water and electricity source, and the water and electricity source must be connected before use;
- III. put the handle and nozzle of the spray gun into the disinfection bag before disinfection, and then conduct 134 ℃ (205.8 kPa) high-pressure steam disinfection, and the disinfection time is not less than 3 minutes;
- Please read the manufacturer's instructions before cleaning and disinfection of high-speed turbine dental drill mobile phones (high-speed mobile phones) and low-speed pneumatic motors (low-speed mobile phones);
- Take special care when holding the optical fiber mobile phone to avoid damaging the luminous end, and make sure that the head will not contact the treated mixture. Keep a certain distance or use a transparent sheet in the first 5 seconds of treatment;

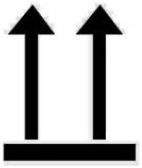
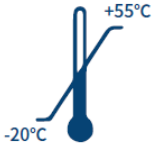
- Any traces left by the mixture on the tool must be removed immediately. Remove the optical fiber phone and clean it with a cloth soaked in alcohol;
- Don't aim the light of optical fiber mobile phone at people's eyes! The light emitted may cause damage to human eyes! Severe cases may induce temporary blindness!
- If it is used with external equipment for planting, the power supply of oral simulation teaching equipment should be disconnected every time to avoid personal injury due to failure and inadvertent touch of the control button;
- Only after the high-speed mobile phone and the low-speed mobile phone stop completely can the car needle be removed, otherwise the collet will be damaged and the car needle will fall out, causing personal injury;
- Only high-quality needles and bolts of appropriate size can be used;
- Before starting to use each time, check the damage of the collet to determine whether the needle is firmly stuck in the mobile phone;
- After replacing the needle of high-speed mobile phone, pull the needle outward to confirm whether it is installed in place;
- The diameter of the needle should be between 1.59-1.60mm (iso1797 class III standard), and the maximum length should be 25mm (iso6360-1 standard);
- High speed mobile phones can be used only when needles or repair tools are installed;
- Do not press the release button of the needle when the tool is in use. The friction between the button and the impeller of the pneumatic motor will overheat the head and may cause burnout;
- Do not touch the bulb of oral lamp directly with your hands. After the bulb cools, wear protective gloves and replace it to avoid scalding;
- It is strictly forbidden to touch the electronic components of the manufacturer with hands or metal instruments;
- Users should regularly maintain and replace aging accessories (such as dental phones);
- It cannot be used when there is flammable anesthetic gas mixed with air or flammable anesthetic gas mixed with oxygen or nitrous oxide.

1.6 Product information

- **Product Name: oral simulation teaching equipment**
- **Model: T100**
- **Working conditions:**

① Ambient temperature: 5 ℃ ~ 40 ℃;
② Relative humidity: ≤ 80%;
③ Atmospheric pressure: 86 kPa ~ 106 kPa;
④ Input voltage: AC110V;
⑤ Frequency: 50 Hz;
⑥ Water pressure: 200 kPa ~ 400 kPa;
⑦ The air pressure of the input air source shall not be less than 500 kPa, not more than 800 kPa, and the flow rate shall not be less than 50 l/min;
⑧ The ground of the fixed equipment shall be flat, and the deflection angle of the fuselage after installation shall not be greater than 0.5 ° .
⑨ This equipment cannot be used in high temperature, high humidity, vibration, combustible, unbalanced or dust environment

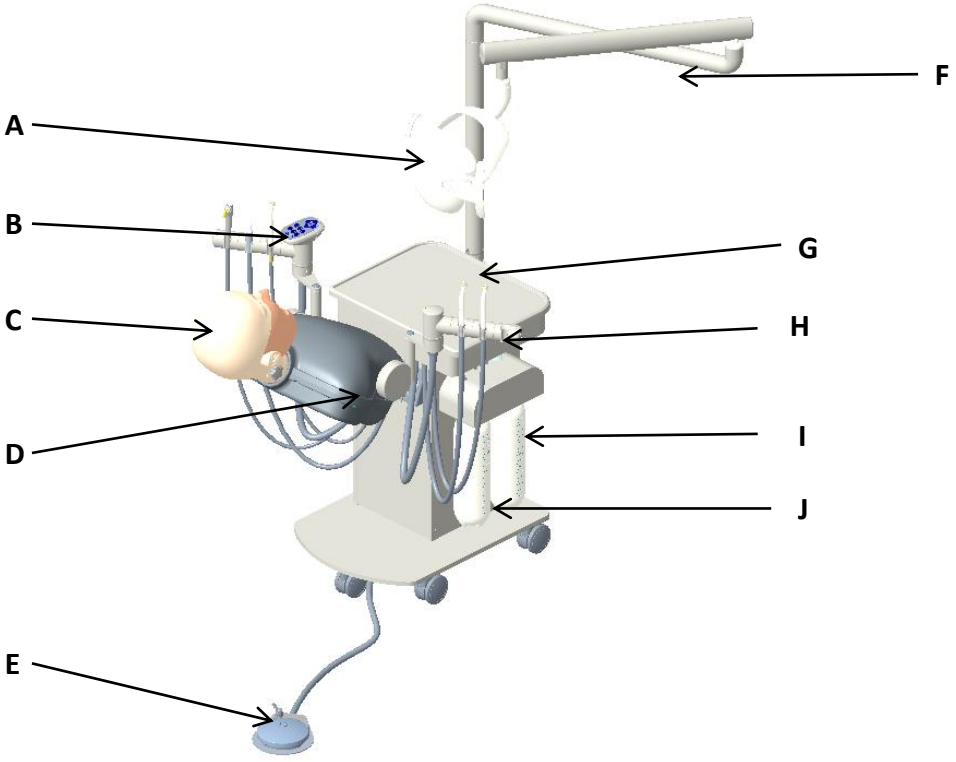
1.7 Symbols Descriptions

 Refer to instruction manual	 Note	 Careful placement
 Keep Dry	 Sun-proof	 Careful placement
 Ground protection	 Humidity limit	 Temperature limit
 Backrest down button	 Backrest up button	 Dental chair up button
 Dental chair down button		

2 Product composition

The following modules are combined according to the needs of customers.

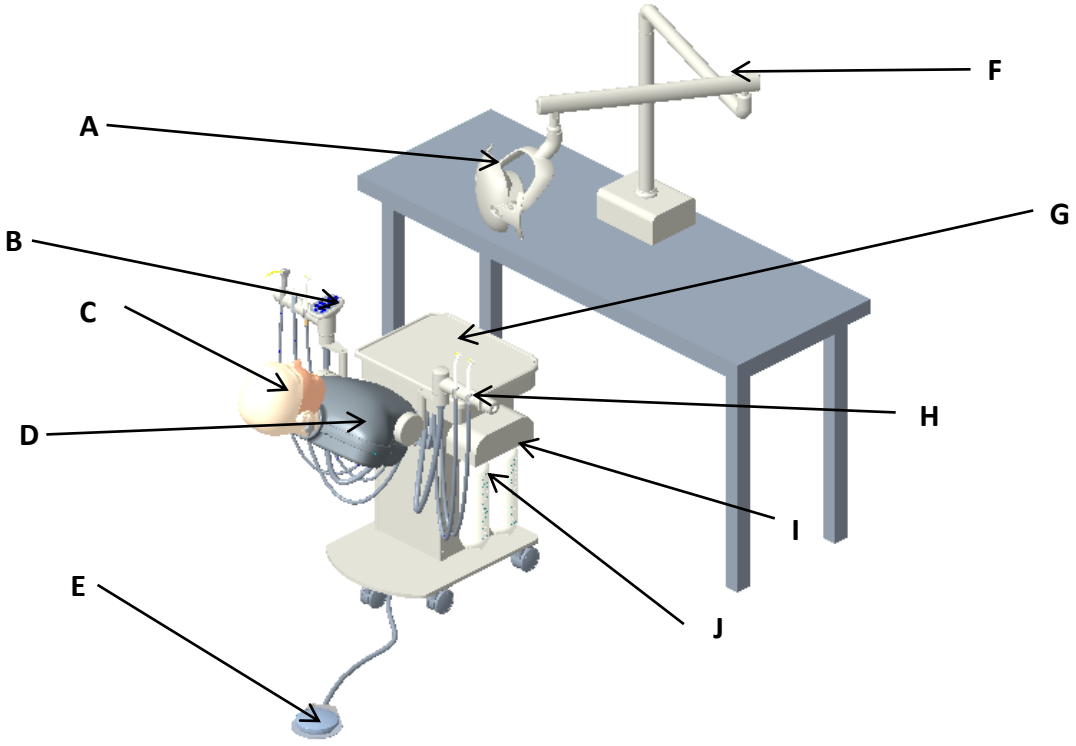
2.1 Integrated oral simulation teaching equipment



Schematic diagram of integrated oral simulation teaching equipment

A	Dental light	F	Integrated lamp arm
B	Main control panel	G	Workbench
C	Head mold	H	Instrument rack
D	Shoulder body	I	Recycling bottle
E	Foot control	J	Water storage bottle

2.2 Split oral simulation teaching equipment



Schematic diagram of the whole split oral simulation teaching equipment

A	Dental light	F	Integrated lamp arm
B	Main control panel	G	Workbench
C	Head mold	H	Instrument rack
D	Shoulder body	I	Recycling bottle
E	Foot control	J	Water storage bottle

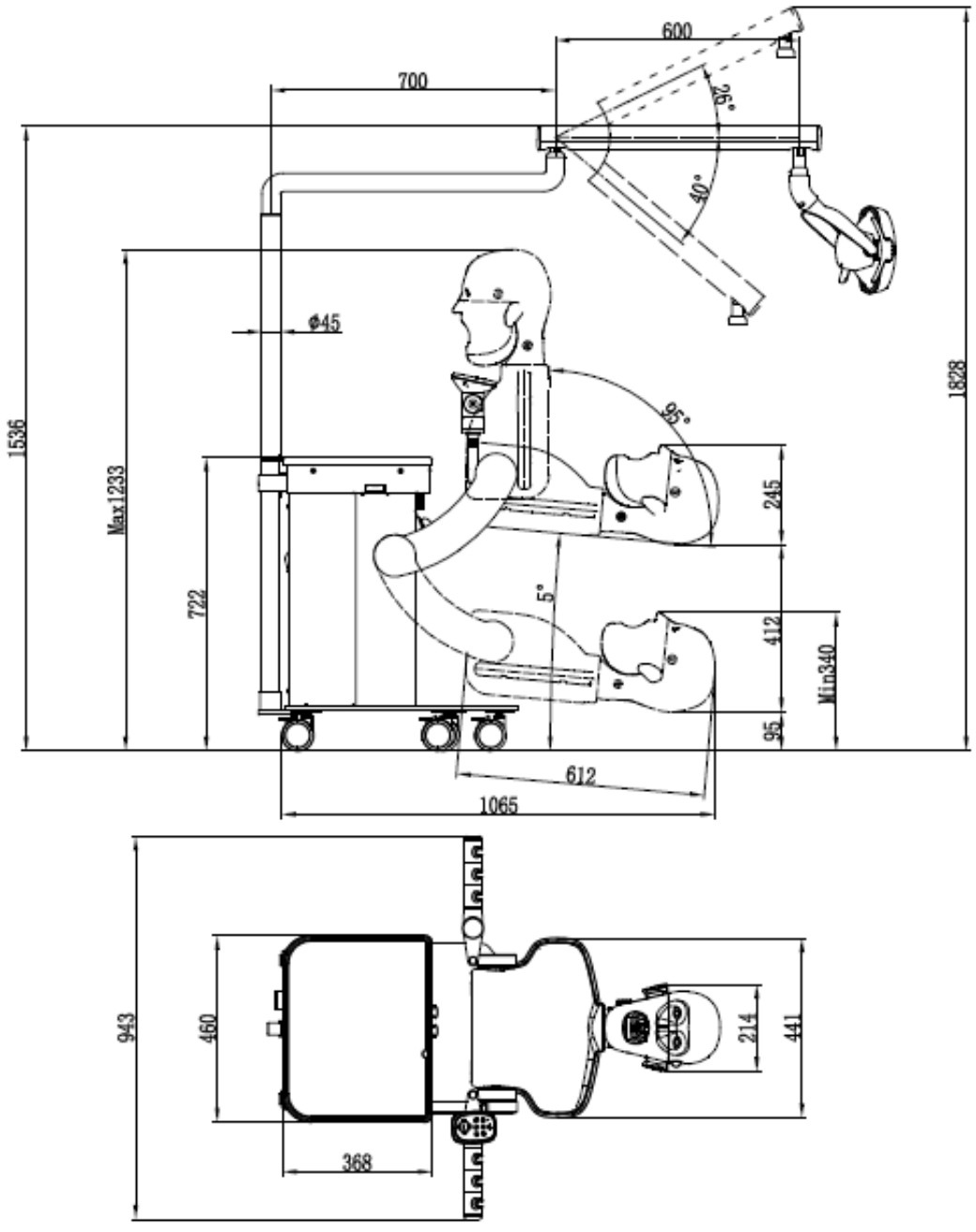
3 Product specifications

Rated power	AC110V, 50Hz
Rated power	350VA
Illumination of dental lamp	8000-15000 Lux
Working pressure of high-speed gas turbine handset	Pressure: 0.22Mpa
Working pressure of low-speed gas turbine	Pressure: 0.3Mpa
Intake air pressure	0.55-0.80Mpa
Inlet water pressure	0.2-0.4Mpa
Power cord	227 IEC(RVV)3x0.75mm
Machine weight	72KG

4 Product size

4.1 Integrated oral simulation teaching equipment.

Company： mm

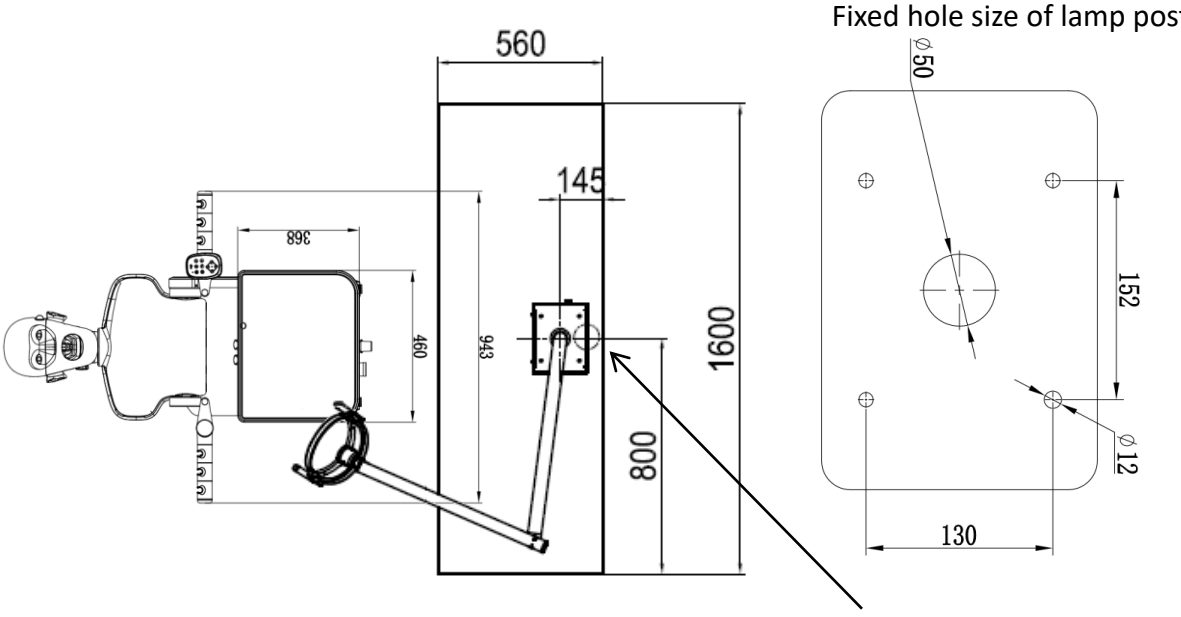


Basic dimension drawing of integrated oral simulation teaching equipment

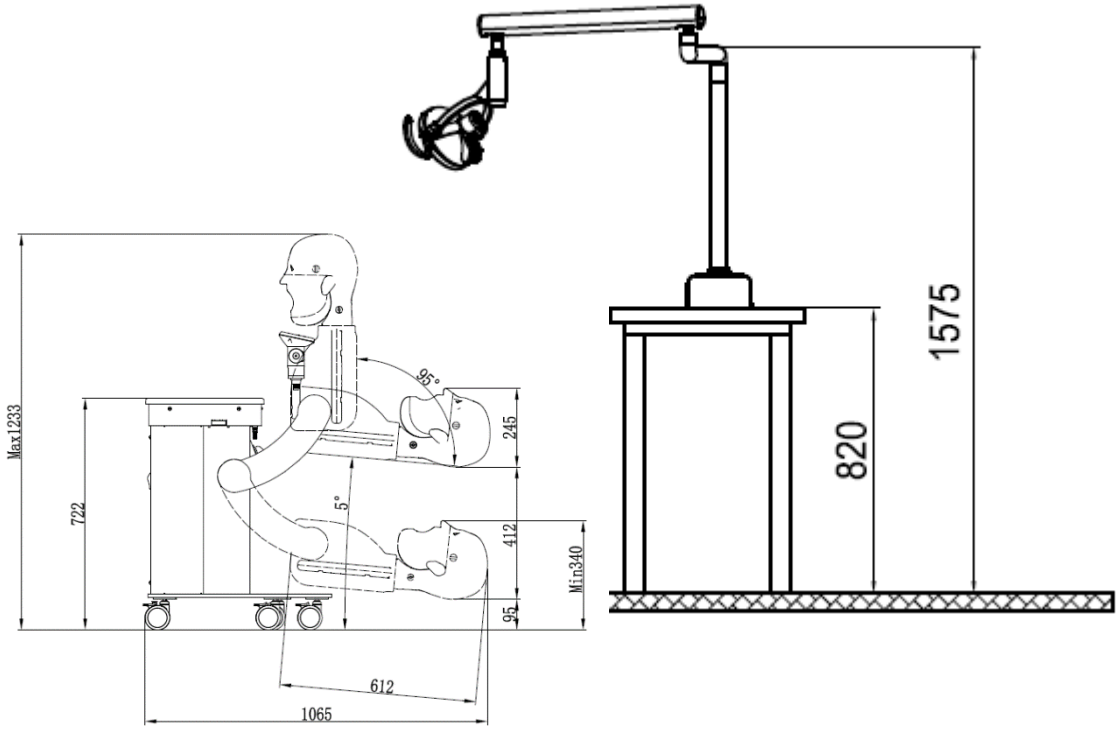
4.2 Split oral simulation teaching equipment

Company： mm

Fixed hole size of lamp post



220V socket and air supply pipe are reserved on the ground, and the pipe joint is PPR4 copper internal thread joint



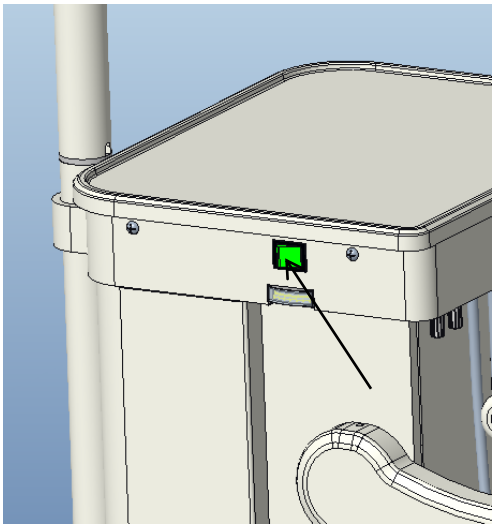
Basic dimension drawing of integrated oral simulation teaching equipment

5 Function introduction

5.1 On / off of oral lamp power supply

5.1.1 Main power switch

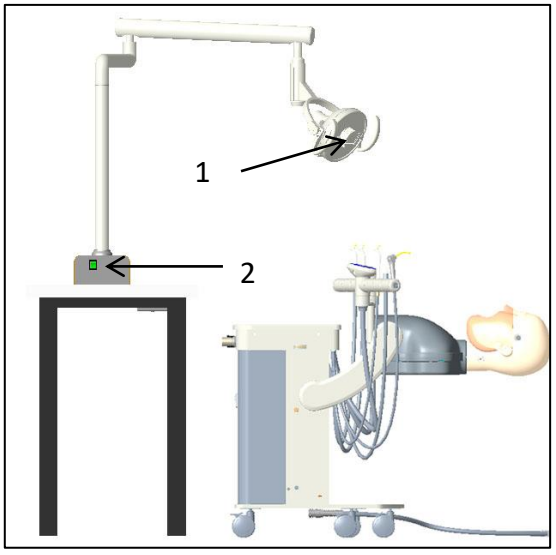
The switch on the workbench can control the power supply of the whole teaching system on and off.



Integrated lamp

5.1.2 Oral lamp power switch

The switch on the oral lamp can control the opening and closing of the oral lamp.



Split lamp

1. Oral lamp 2. Power switch

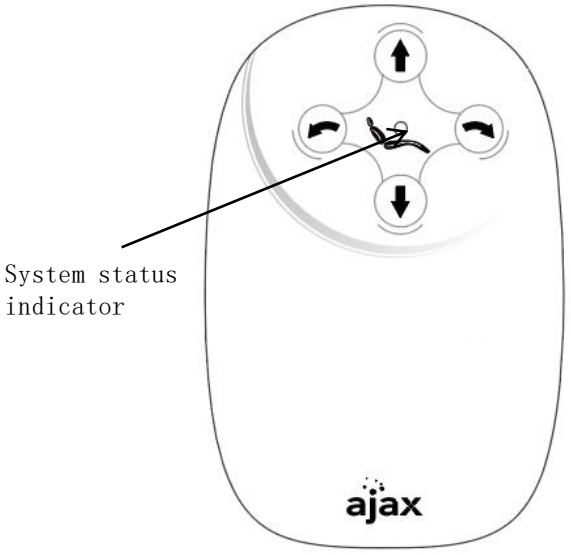
5.2 Shoulder movement

5.2.1 Control panel

Control panel your oral simulation teaching equipment can choose the following two control panels: standard control panel and luxury control panel.

If the indicator light on the control panel is bright, it means that the system is in normal working state and you can operate normally.

Using the direction arrow on the control panel, you can manually operate the lifting / lowering of the shoulder and the pitching of the shoulder.



Standard control panel

Item	Function
	Backrest up
	Backrest down
	Chair down
	Chair up

5.2.2 Shoulder position description

a.Backrest up



Press and hold this button and the backrest will move upwards. When the backrest reach the position you want, you should stop pressing the button, the backrest will stop immediately

Note: If you press the button continuously, when the backrest reach the limit position, it will automatically stop the movement.

b. Backrest down



Press and hold this button and the backrest will move downwards. When the backrest reach the position you want, you should stop pressing the button, the backrest will stop immediately

Note: If you press the button continuously, when the backrest reach the limit position, it will automatically stop the movement

c. Chari up



Press and hold this button and the chair will move upwards. When the chair reach the position you want, you should stop pressing the button, the chair will stop immediately

Note: If you press the button continuously, when the chair reach the limit position, it will automatically stop the movement.

d. Chair down



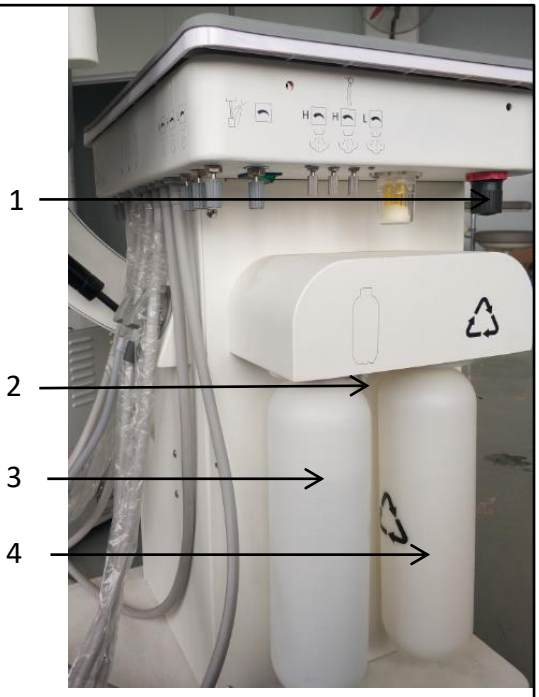
Press and hold this button and the chair will move downwards. When the chair reach the position you want, you should stop pressing the button, the chair will stop immediately.

Note: If you press the button continuously, when the chair reach the limit position, it will automatically stop the movement

5.3 Use of water storage bottle

1. By default, the water used by this equipment is recycled from water storage bottles and recycling bottles.
2. If the equipment you buy has two kinds of water, you can use recycled water or tap water. Please turn the switch of the water storage bottle to the other side when you need tap water.
3. If the air pressure of the water bottle is too high or low, which affects the water outlet, the regulating pressure valve should be adjusted

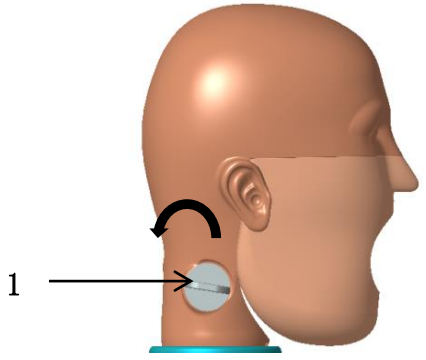
(Note: the water volume of the water storage bottle shall not exceed 1200ml)



1. Regulating valve of water storage bottle
2. Water storage bottle switch
3. Water storage bottle
4. Recycling bottle

5.4 Adjustment of head mold

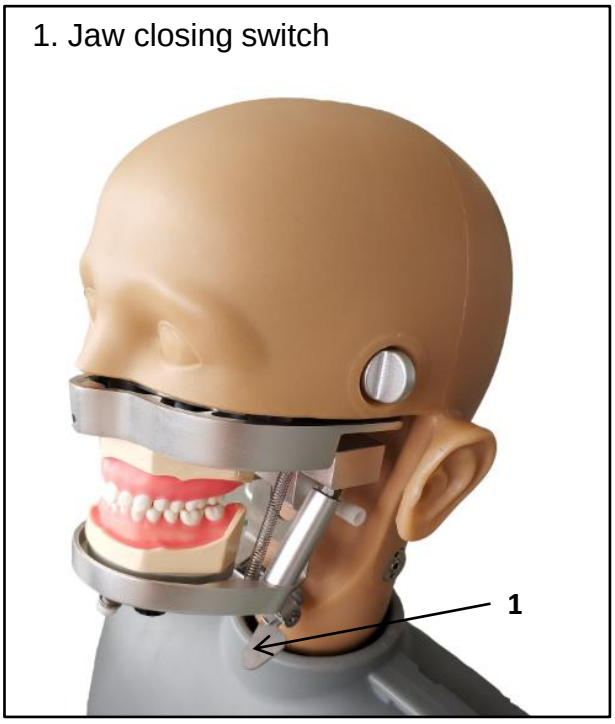
Rotate the head mold adjusting knob counterclockwise to loosen the head mold and adjust it to a proper angle, and rotate the head mold adjusting knob clockwise to fix the head mold.



1. Head mold adjusting knob

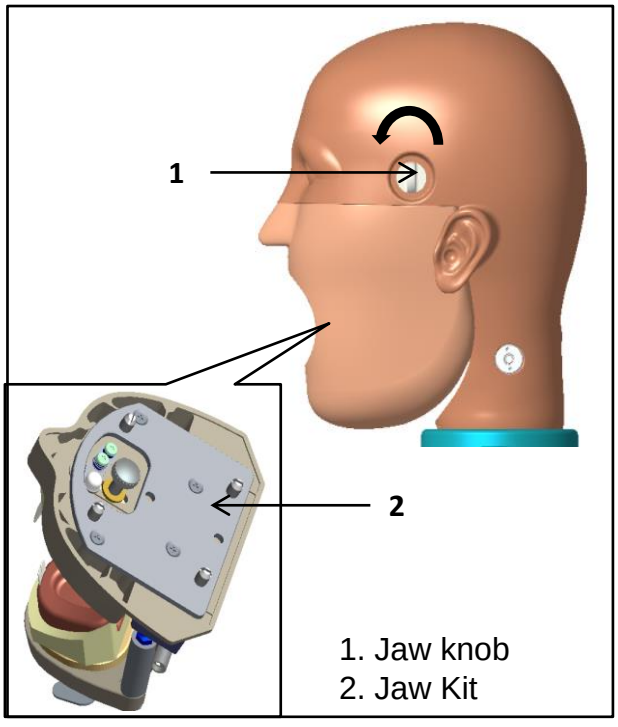
5.5 Closure of jaw

Press the jaw closing switch to close the jaw.



5.6 Disassembly of jaw kit

1. Rotate the jaw knob on the head mold counterclockwise to remove the jaw kit and the mask from the head mold.
2. After installing the jaw set, rotate the jaw knob clockwise to lock the jaw set.

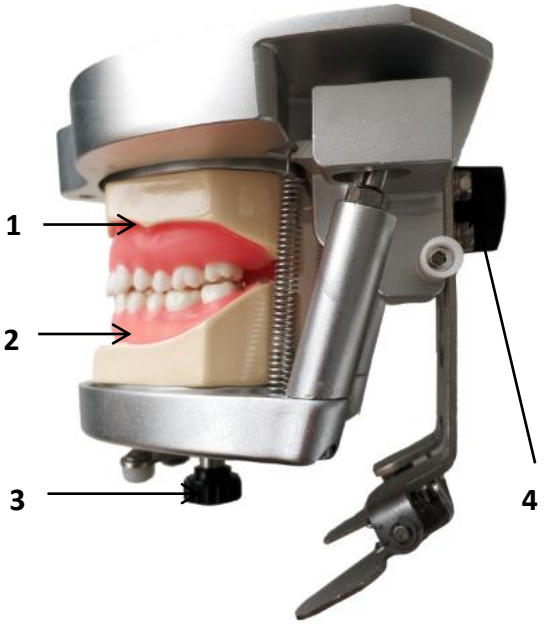


5.7 Disassembly of upper / lower jaw

1. Open the jaw and rotate the lower jaw knob counterclockwise to remove the lower jaw;

2. Open the jaw and rotate the upper jaw knob counterclockwise to remove the upper jaw;

3. After replacing the upper and lower jaws, lock the upper and lower jaw knobs and close the upper and lower jaws; Unscrew the jaw adjustment knob counterclockwise, and adjust the occlusion of the upper and lower jaw with the upper and lower jaw knobs; After adjustment, lock the jaw adjustment knob and the upper and lower jaw knobs clockwise.





1. Maxillary
2 Inferior dentate jaw
3. Lower jaw knob
4. Jaw adjustment knob
5. Maxillary knob

5.8 Disassembly of teeth

After removing the jaw, screw out the broken tooth with a cross screwdriver, and then lock it after replacement.



5.9 Adjustment of mobile phone

1. cooling water regulation

① Remove the dental handpiece from the hanger.

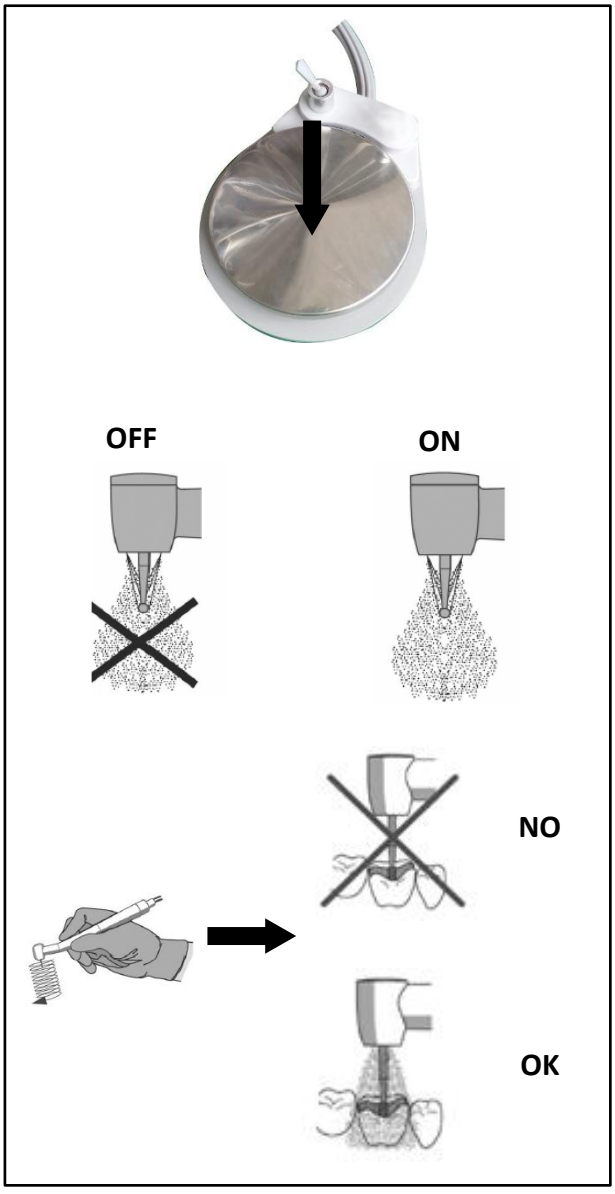
② Turn on the cooling water.

- To turn off the cooling water, please turn the status valve to the position shown in the figure.
- To open the cooling water, please pull the status valve away from the position shown in the figure.

③ Press the foot control to activate the dental handset.

④ Adjust the cooling water flow:

- Turn the controller clockwise to reduce the flow.
- Turn the controller counterclockwise to increase the flow.

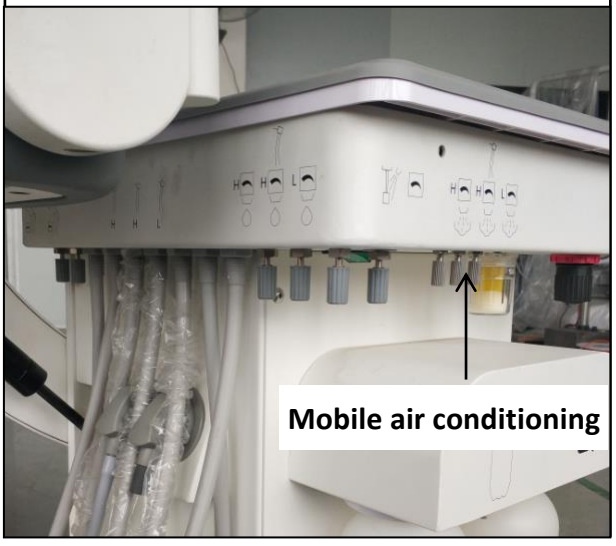


2. Air conditioning of mobile phone

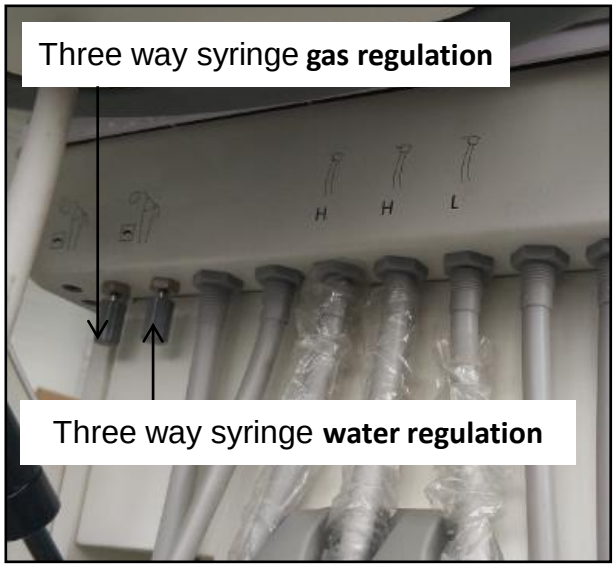
① Remove the dental handpiece from the hanger.
② Find the air controller of the mobile phone.
③ Press the foot pedal to activate the dental handset.
④ Adjust the air of the mobile phone to take the ideal atomization effect as the standard.

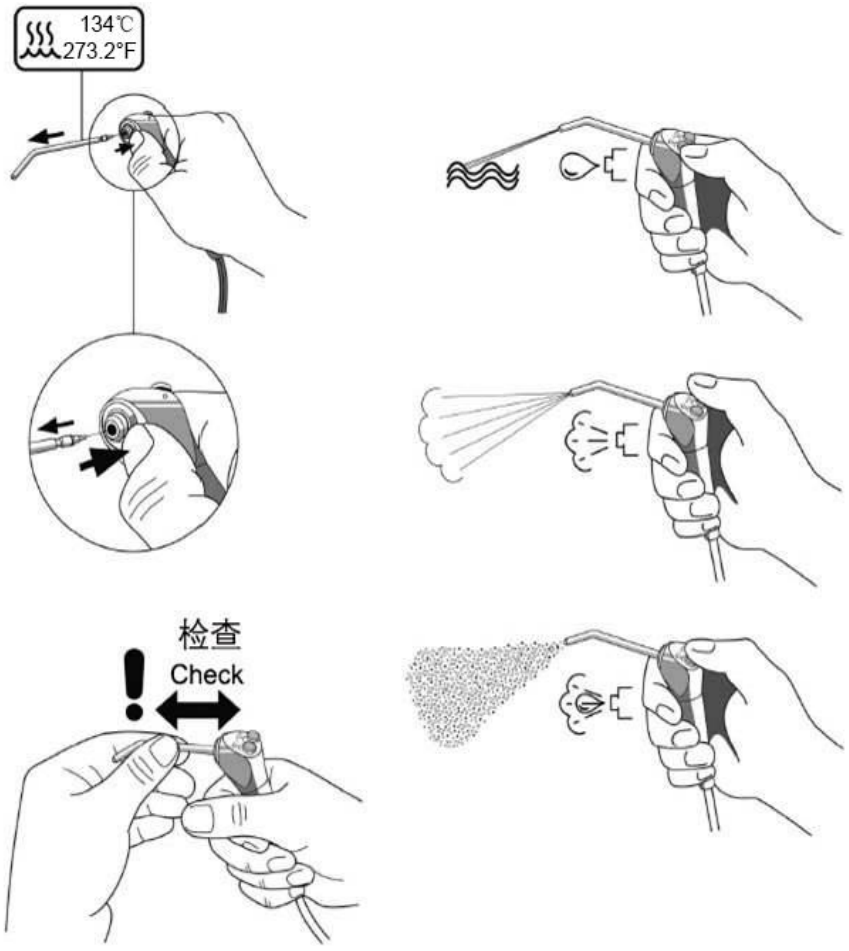
- Turn the controller clockwise to reduce the flow.
- Turn the controller counterclockwise to increase the flow.





5.10 Adjustment of three way syringe





3-ways adjustment

6 Cleaning

6.1 Cleaning of the surface of oral simulation teaching equipment



Equipment surface cleaning

The surface of oral simulation teaching equipment needs regular cleaning and maintenance. During the frequent use of oral simulation teaching equipment: clean the outer surface of oral lamp at least once a week; Clean the assistant unit and mobile phone at least once a week; Clean the head form and shoulder at least once a day.

6.2 Cleaning up strong and weak absorption

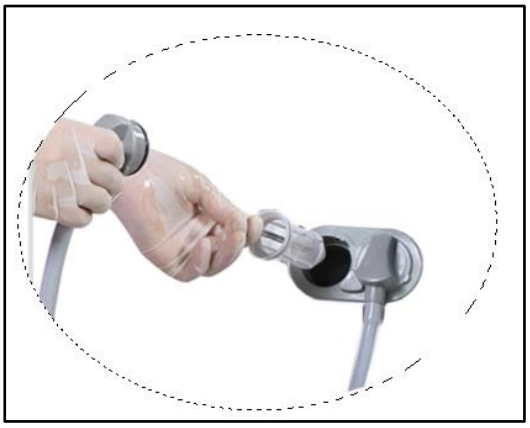
Maintain once a week in normal use, and increase the maintenance times in frequent use. The specific maintenance methods are as follows:
During each cleaning and maintenance, suck 1 liter of water and wash it.

6.3 Cleaning of two in one filter

Strong and weak suction filters help prevent solid substances from entering the suction system. To ensure the normal operation of the suction system, the filter screen should be cleaned at least once a week.

Clean the two in one filter screen:

1. Turn off the suction system.
2. Pull out the two in one filter and remove the filter screen,and clean up the solids.
3. Reinstall.



6.4 Cleaning of dirt collecting cup

It should be maintained once a week during normal use. If it is used frequently, it should be repaired if the maintenance times are increased. The specific maintenance methods are as follows:

1. Unscrew the dirt collecting cup anticlockwise and remove it;
2. Waste used cotton;
3. Put an appropriate amount of cotton into the dirt collecting cup;
4. Tighten the dirt cup clockwise.

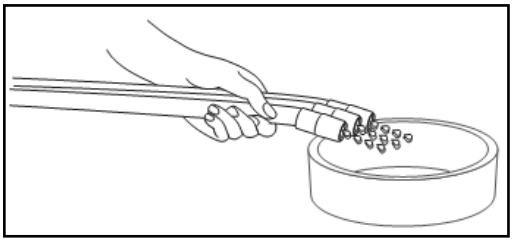


6.5 Handpiece Tubing Clean and Care

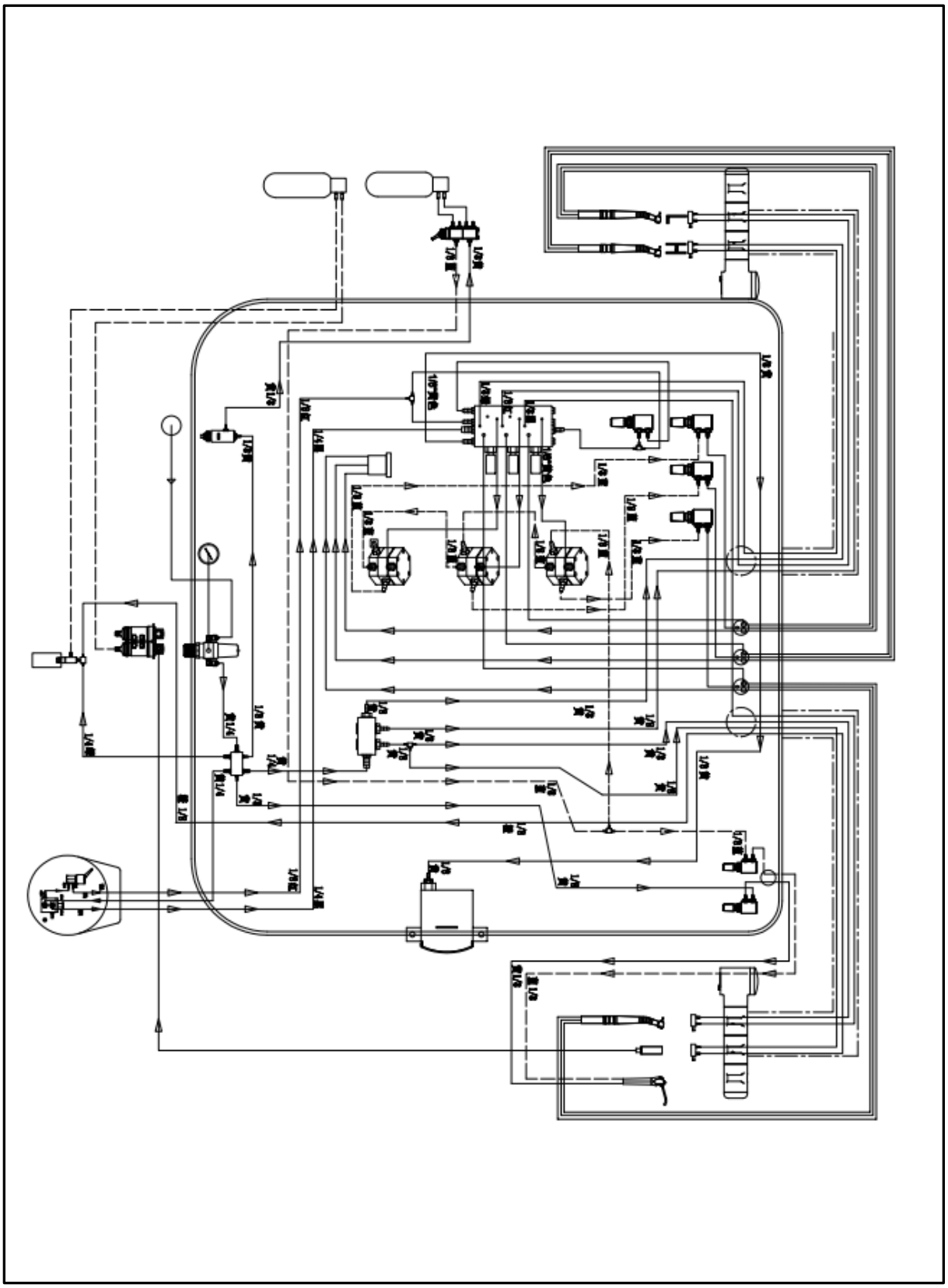
Flush Tubing's Independently or together

Use the handpiece tubing flush system can move more water through the tubing's in less time than using the foot control. After each patient:

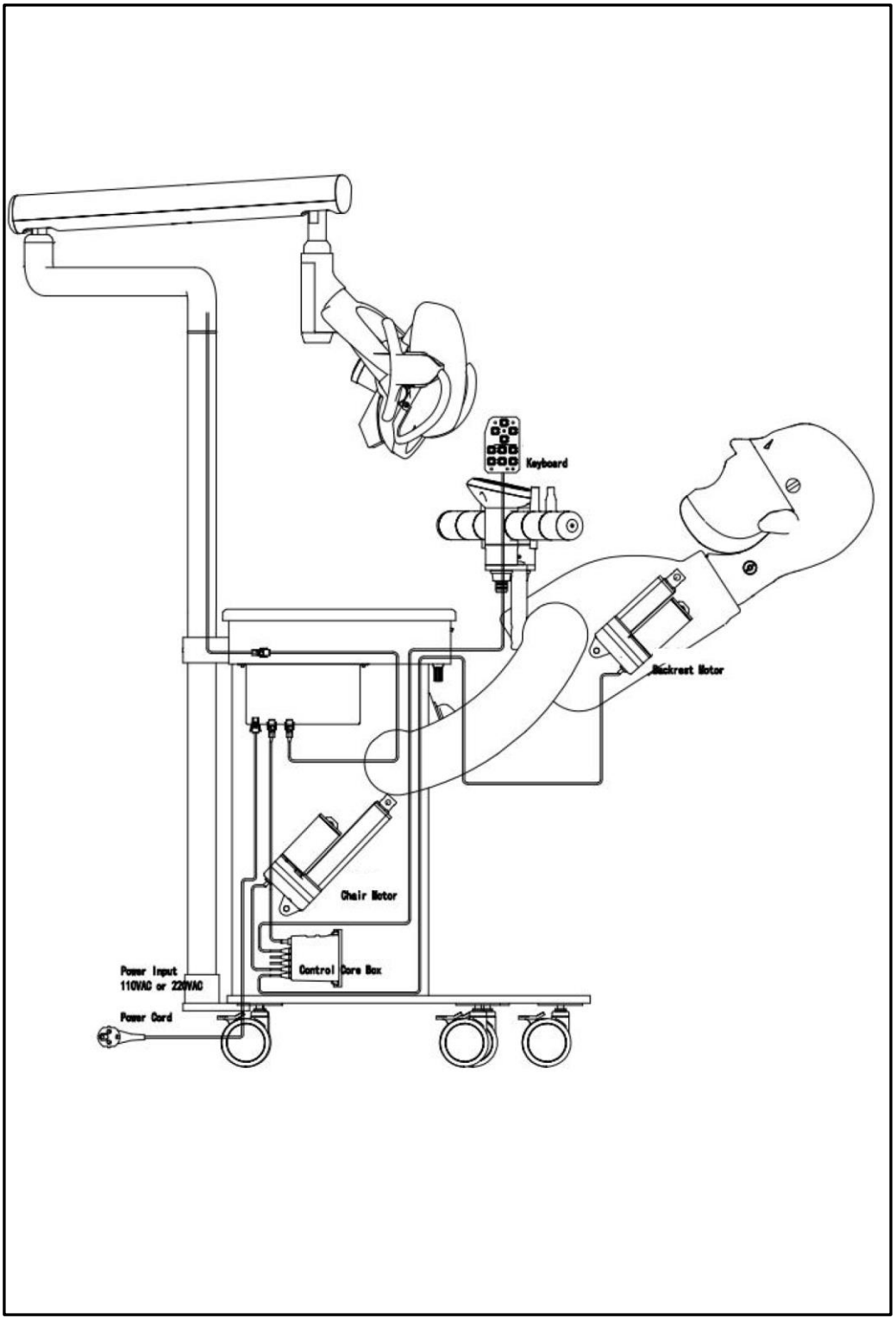
1. Disconnect the handpieces before flushing the tubing.
2. Gather handpiece tubing that use water coolant and hold them over a sink, cuspidor bowl, or basin.
3. Hold the tubing so that the water is directed away from you and into the receptacle .(picture 21.)
4. Flush the tubing continuously about 20~30min.



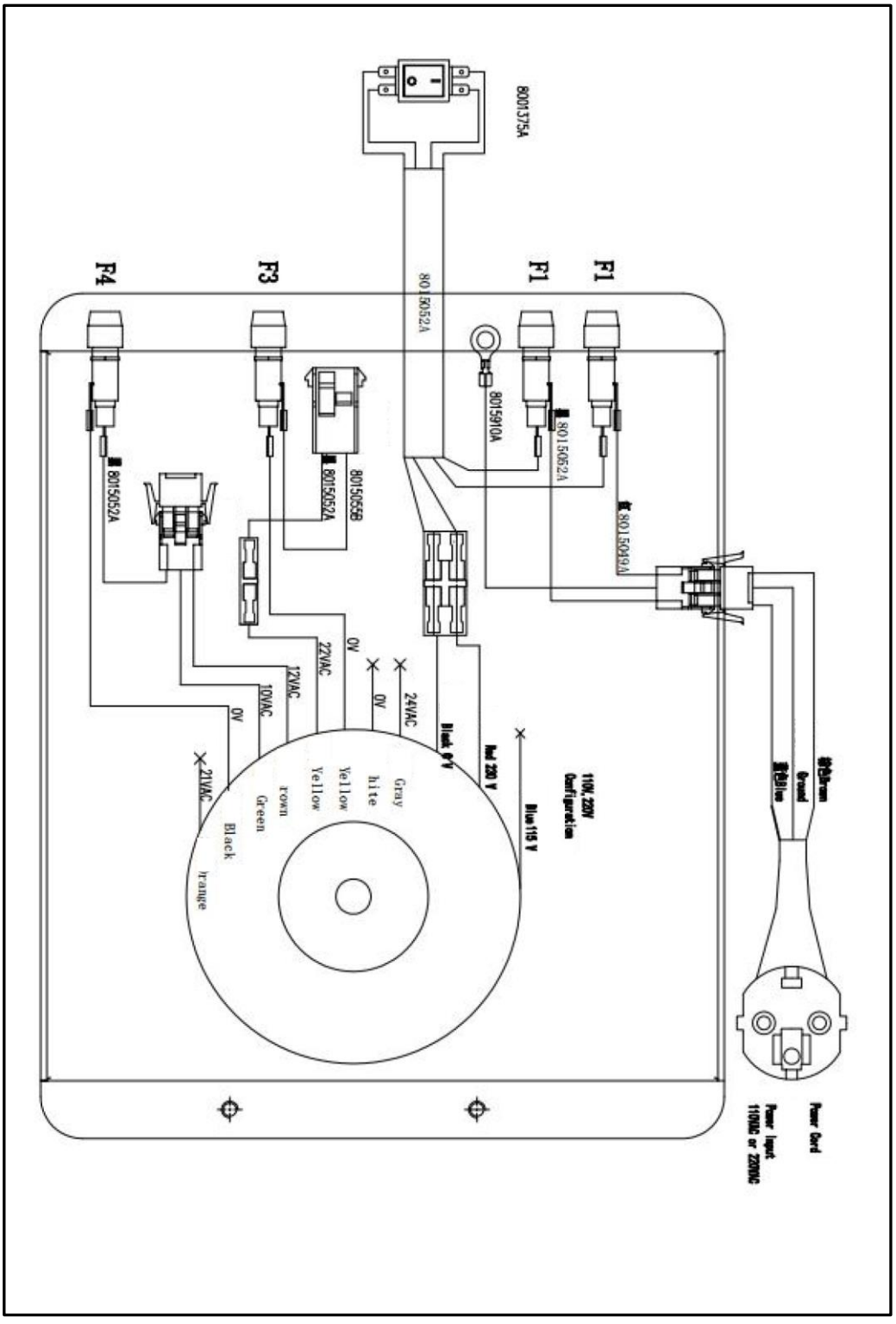
Appendix 1:
Water and gas circuit diagram of oral simulation teaching equipment



Appendix 2: Circuit diagram I of oral simulation teaching equipment



Appendix 3: Circuit diagram II of oral simulation teaching equipment



EMC Statement

Statement of Manufacturer—Electromagnetic Launch		
The dental unit is designed for electro magnetic environment described below. Be sure to apply.		
Lauch Test	Comformance	Electromagnetic Environment
CISPR 11 RF Lauch	1 Group	The dental unit utilizes RF energy for its built-in functions only. Therefore, its RF transmit is very low. There is a low possibility that the equipment will affect other electronic devices in its vicinity.
CISPR 11 RF Lauch	B Class	The dental unit is suitable for all facilities, including household facilities, and can be directly connected to low-voltage public residential power supply.
IEC 61000-3-2 Harmonic Lauch	A Class	
Voltage Fluctuation /Scintillation Launch IEC 61000-3-3	Qualified	

Statement of Manufacturer— Electromagnetic Immunity			
The dental unit is designed for electromagnetic environment described below. Be sure to apply.			
Electromagnetic Immunity Test	**IEC6061 Test Level**	**Test Level Conformance**	**Electromagnetic Environment**
Electrostatic Launch (ESD) IEC 61000-3-3	±6 kV Contact Discharge±8 kV Air Discharge	±6 contact Discharge±8 kV Air Discharge	The floor should be of wood, concrete, or tile. If the floor is covered by synthetic materials, the relative humidity should be at least 30%.
Electrical Fast Transient Burst IEC 61000-4-4	±2 kV to power wire	±2 kV to power wire	The power supply should reach the standard of typical commercial or hospital power supply.
Surge IEC 61000-4-5	±1 kV wire to wire±2 kV ground to ground	±1 kV wire to wire±2 kV ground to ground	The power supply should reach the standard of typical commercial or hospital power supply.
Voltage sags, short interruptions and voltage changes in power input line IEC 61000-4-11	< 5% U_t， lasting 0.5 Cycle (At U_t>95% Sag)40 %U_t， lasting 5 Cycles (At U_t,60% Sag)70% U_t， lasting 25 Cycles (At U_t,30% Sag) < 5% U_t， lasting 5s (At U_t>95% Sag)	< 5% U_t,lasting 0.5 Cycle (At U_t>95% Sag)40 %U_t， lasting 5 cycles (At U_t,60% Sag)70% U_t， lasting 25 cycles (At U_t， 30% Sag) < 5% U_t， lasting 5s (At U_t>95% Sag)	The power supply should reach the standard of typical commercial or hospital power supply.If required to use the equipment during power blackout, it is recommended to use battery or uninterruptible power supply.
Power Frequency Magnetic Field (50/60 Hz) IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic field should be at the same level with PFMF in typical commercial or hospital environment.
Note:U_t refers to the AC network voltage before the test.			

Statement of Manufacturer— Electromagnetic Immunity			
The dental unit is designed for electromagnetic environment described below. Be sure to apply.			
Electromagnetic Immunity Test	**IEC6061 Test Level**	**Test Level Conformance**	**Electromagnetic Environment**
Radio Frequency Conduction IEC 61000-4-6 Radio	3V(Effective Value) 150kHz～80MHz	3V（Effective Value） 3V/m	The isolation distance between portable and mobile RF communications devices and any part of the dental air compressor, including cables, should not be less than recommended isolation distance. The recommended isolation distance is calculated by a formula corresponding to the frequency of the transmitter. Recommended isolation distance formula: *d* = *d* = 80 MHz～800 MHz *d* = 800 MHz～2.5 GHz P—based on the transmitter's maximum rated output power provided by transmitter manufacturer, in watts (W); d—Recommended isolation distance, in meters (m). The field strength of the fixed RF transmitter is determined by surveying the electromagnetic field a, and in each frequency range should be lower than the compliance level. Interference may occur near the equipment marked with the following symbol.
Frequency Radiation IEC 61000-4-3	3V/m80MHz～5GHz		
Note 1: At 80MHz and 800MHz frequencies, apply higher frequency band formula.Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and human bodies.			
The field strengths of fixed transmitters, such as: base stations for wireless (cellular/cordless) phones and terrestrial mobile radios, amateur radios, AM and FM radio broadcasts, and television broadcasts, cannot be accurately predicted theoretically. To assess the electromagnetic environment of fixed RF transmitters, surveys of electromagnetic sites should be considered. If the measured field strength of the dental air compressor is higher than the applicable RF compliance level above, the dental air compressor should be observed to verify that it can operate normally. If abnormal performance is observed, supplementary measures may be necessary, such as reorienting or repositioning the dental air compressor.I n the entire frequency range of 150kHz to 80MHz, the field strength should be lower than 3V/ m.			

Table 206

Recommended separation distance between portable and mobile RF communication equipment and the dental unit

The equipment is intended for use in an electromagnetic environment in which radiated RF disturbance are controlled. The customer or the user of the equipment can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the equipment 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 transimitter		
	150 kHz to 80 MHz $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$	80 MHz to 800 MHz $d=\left[\frac{3.5}{E_1}\right]\sqrt{P}$	800 MHz to 2.5 GHz $d=\left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guideline may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

We reserve the right to make any alterations which may be due to technical improvements.





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