General Doctor®

Super Simulated Manikin

This volume contains the instructions, drug labels, multimedia cd-rom

HONGLIAN Shanghai Honglian Medical Technology Group Co.,Ltd.

Company Introduction

Shanghai Honglian Medical Tech Group was initially built in 1993. It is located in Shanghai - a cosmopolitan. It embraces the most advanced scientific strength and has the geographical advantage of international academic exchange center. It maximizes its own talent in good long-term cooperation with several dozens of domestic and abroad famous universities. It develops international leading products, builds products marketing network that covers all over the country to set the long-term idea for development. It works hard for peace and spurs with long accumulation. After the persistent hard-work for over 10 years, the company has an office of 1000 square meters as marketing center in the Band business center in Shanghai. The covered area of production base in Shanghai Jinshan and Jiading new high level technology development zones has reached to 35,000 square meters. It is a high-tech enterprise that contains a combination of independent research and development, manufacturing, sales and services. The annual turnover is over billions. The brand of General Doctor has become a famous brand among the counterparts. It has a world-wide reputation.

The company invested huge amounts of funds in research and development of independent core technology that is relevant with software for medical education and digital network to maintain the the international competitive advantage. It also gains great breakthrough in artwork of molds and materials. It is the first time to realize the products criterion and quality comes out in front all over the world . At the meantime, the research and development of every core technology of the company achieves great progresses in development. The overall parameters of dozens of systematic products are examined and verified by authoritative department, and it becomes the constitute of the industry criterion, among which, there are several designs and functions have reached the international first-class level. It really achieves its primary goal of basing company upon China and finding a foothold worldwide.

The company passed the ISO9001-2000 in 2002 in the System of National Quality Certification by AOQC; in the same year, it gained the manufacturing license and commercial license of five-year exemption granted by State Food and Drug Administration; series products gained the golden prize of Excellent Products in the 12th National Spark Creative Invention Competition held in 2002; during 2004 and 2011, it achieved the honor of Carrying Out the Terms of Contract to the Letter and Standing by What We Say; in 2007, it won the fame of Shanghai High-tech Enterprise; in 2008, it passed the GB/T24001-2004-ISO14001:2004 of Environmental Management System Requirements; in 2009, it was certificated by Occupational Health&Safety Management System.

The company manufactures the General Doctor brand product. There are over 1000 varieties of series, including medical first aids, diagnosis, clinical, nursing, maternal and child health, paediatrics, anatomy, multi-media, traditional Chinese medicine, oral cavity, specimens, etc. We became the recommended manufacturing suppliers of the 11th Five-Year Planned experimental demonstration center of

medical schools and practice base of occupational education in nursing by Ministry of Health and Ministry of Education. Meanwhile, the CPR simulation human and first-aid appliances of our company have been purchased by Chinese Red Cross for we won the bid. Presently, first-aid products of ours have popularized in different industries, including heath care, medical education, Red Cross, electricity, transportation, fire control,safety in production and public communities, which occupies a delightful market share.

Since the establishment of international trade department in 2005, initially products are exported to Southeast Asia. After two-year development, now the scope has expanded to almost 80 countries scattering in European countries, Middle East and Far East. We also win the bid for several times in the United Nations. The annual export volume is already $5,000,000. And it grows so rapidly by 60% annually. The General Doctor has gained recognition of the international market and won the honor for China.

As the leader of modern medical teaching equipment, the company has built 10 product marketing service center branches, and it applied a set of applicable and popular products service management system in the basis of this network construction to realize the marketing services functions including quick response, online help, nearby maintenance, emergency measures, regular tracking, etc. and become a reliable cooperative partner of majority of users. With the improvement of service system, network of marketing service will gradually cover the major provinces, cities and areas, which enables us to provide medical education bases with better services to the maximum limit.

After achieving the primary goal of great varieties of goods, advanced technology and well service. Honglian staff see the pig picture again. In October, 2007, the company calls on the Third Business Start-up to set the goal of being national corporation model. Pay attention to quality and creativity; focus on brand and indomitable spirit; attach importance to service and integrity; value talents and rules. The purpose of this is to realize the transition to modern management company. Giving returns to society and benefits mankind while improving ourselves. We are willing to cooperate with domestic and abroad friends and march forward hand in hand. We will try our best to serve for the medical teaching for our country and make more contributions to the health of mankind.

Product Introduction

He is like a real human being but actually he is not real. His height is about 1.8 meter, with respiration, heartbeats, pulses. He is able to blink, talk, which can push us to believe that he is a real human being. When he feels uncomfortable, he will weep, sweat, even bleed. His responsibility is being a patient, offering doctors with practices and skills tests. He is GD10000 super simulated human.

The product is developed with the efforts of both company scientific and technical personnel and mechanic in factories. It is an interdisciplinary, high-intelligent and lifelike simulation system with full functions. Simulated human can simulate

different clinical signs, medical treatments and relevant nursing procedures of emergency department, internal medicine and surgical department. It provides services for clinical diagnosis, collection of medical history, laboratory examination and auxiliary examination and a series of clinical procedures of clinical diagnosis, scheming treatment methods, taking nursing measures.
The characteristics of GD10000:
Wireless control- simulated human built-in wireless remoter, which is completely controlled by wireless network handwriting tablet computer.
Lifelike anatomy- simulated human has the body structure and appearance of Asian adult. Precise anatomic structures and obvious anatomic landmark.
Comprehensive covered subjects - diagnosis and treatments of different diseases, such as diagnostics, emergency department, internal medicine, surgical department, etc.
Simple operation - simulated human can lie one his back or his side, also he can sit. Preset cases of illnesses and projects are convenient for users to do practices and examinations.
Portable -simulated human built-in battery supply, which avoids the troubles of wires. It is more lifelike and more flexible.
Cost-effectiveness - enjoy services of low cost and high quality.

Application scopes of GD10000:
Available subjects: emergency departments; cardiovascular medicine, respiratory medicine, gastroenterology, department of nephrology, hematology, department of endocrinology, department of internal neurology, department of rheumatology and immunology; forensic surgery, neurosurgery, thoracic surgery, urinary surgery, department of orthopedics.
Applicable Users: clinical inters, clinical doctors from various departments, medical students, clinical paramedics , emergency care personnel in different areas
Available range: clinical teaching in medical colleges and schools, clinical teaching in hospitals, private practice training, all kinds of examinations and operation training of emergency care personnel.

manual instruction

⚠Safety precautions: please read the following precautions before the application of this system.

1. Safe electricity

(1) Use auxiliary power supply, no recommendation of other power line.

(2) Do not overload the accessory power supply

(3) The product must be equipped with input power supply with earth wire. Ensure the landing and polarization is valid.

(4) Please keep away from the electromagnetic field when using and preserve the product

(5) Please turn off and reboot the system if encounter any malfunction caused by power supply flutter or electromagnetic interference

(6) Do not leave any fluid on the surface or the inner part of the product.

(7) Do not use the system in the rain. The usage of water is only limited in the the supported functions mentioned in the manual instructions.

(8) Do not use any chemical solvents to clean the elements of the system. Only clean water and dilute liquid soap can be used.

2. Safety of simulated human

(1) Do not dismantle the assembled parts of simulated human without permission.

(2) Invasive operation is available only in accordance with the description supported in the manual instruction

(3) Ensure that the simulated human are settled in a stable and solid platform to avoid the operational personnel being hurt.

(4) Do not let foreign matters get into the airway(except gases), save for little lubricant.

(5) When moving the simulated human, do not drag the limbs and drop it. Handling with care and moving smoothly are recommended.

(6) Do not use marker pen and pencil to scribble on the skin of simulated human. These marks cannot be eliminated.

(7) Do not use propanol ethyl carbinol and iodine preservative. These products will spoil or stain the skin of model.

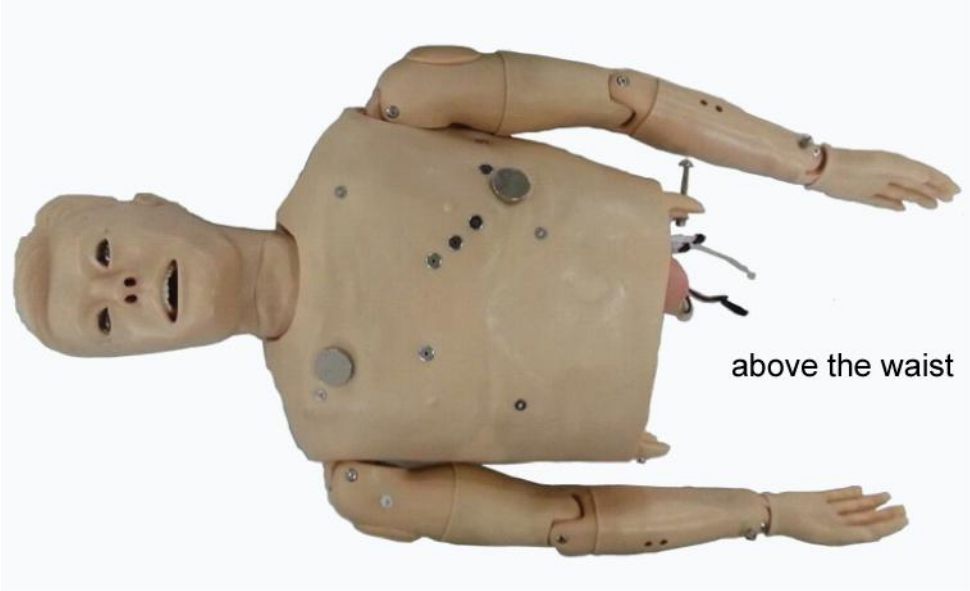
(8) Wrapping model with printed matters like newspaper is prohibited.

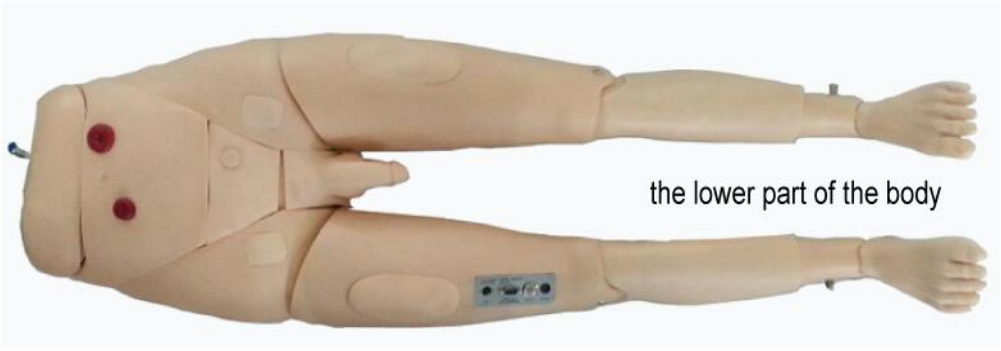
Installment

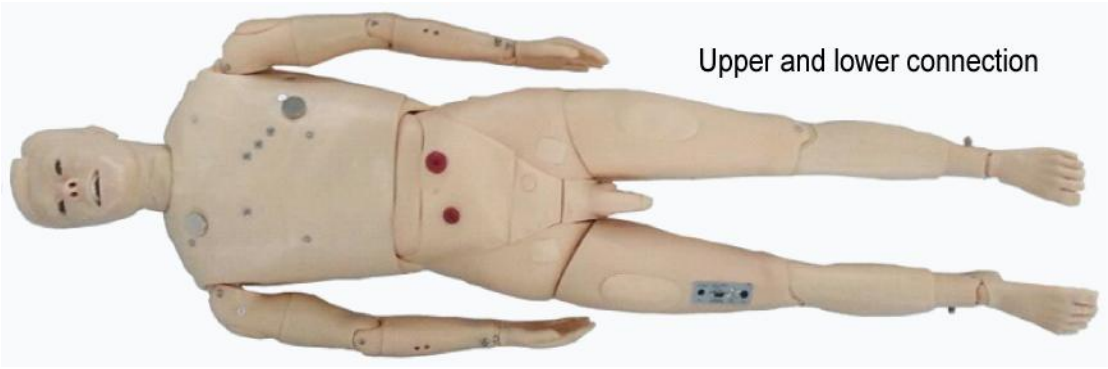
1. Hardware installation

(1) the connection between upper and lower body

Simulated human is separated into two parts, which are upper and lower body. They are connected through robust.







(2) Power interface (on the upper right leg)

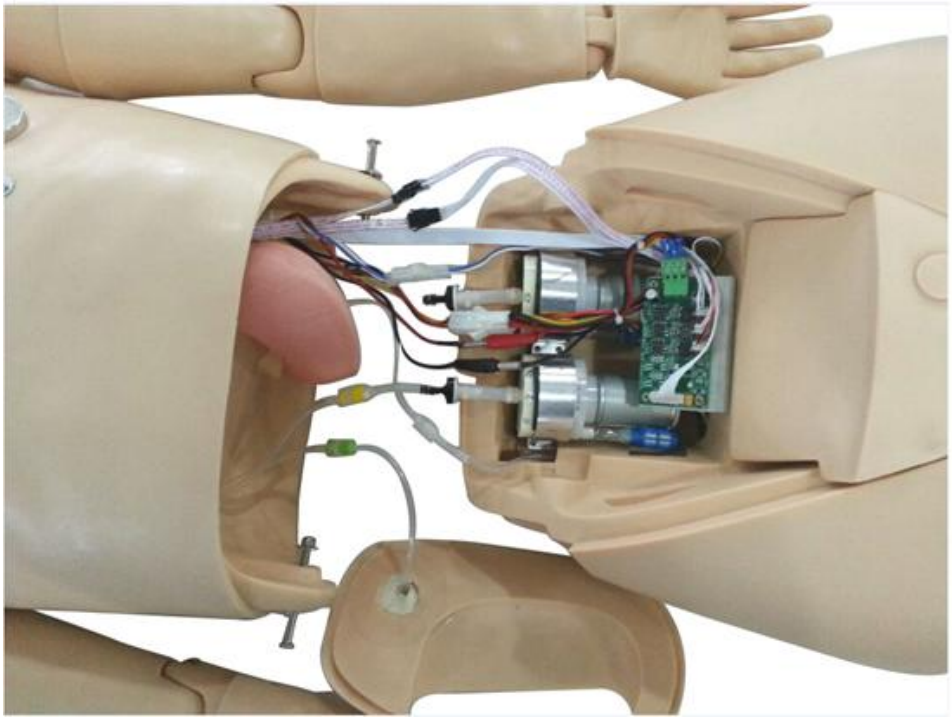
(3) water injection of head

Observe the tear position on canthi. Fluid appears, which means built-in storage bag is full. (filling the storage bag requires the water of xml)

(4)Abdominal connection

Connect in accordance with the matching colors(yellow, red, green, blue). Connect the butt-plugs (black, three plugs are all different needles.) as shown:

(5)Completion of connection is shown as below.



2. Software installation

(1) Hardware recommended configurations

CPU： inter core dou E5200CPU and CPU that has the same functions as AMD。

Internal Storage：2G。

(2) Operating system: support Windows7system。

(3) Whole set software support

Internet Explorer8.0and above is needed

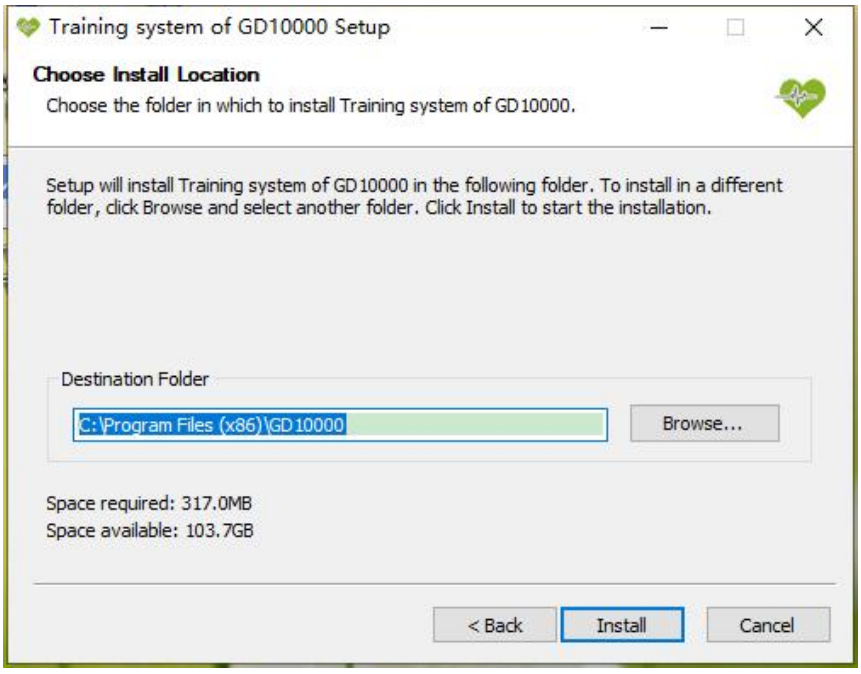
Adobe Flash Player plugin support

(4) Software installation procedure

Training software installation procedure, double click the icon 

,

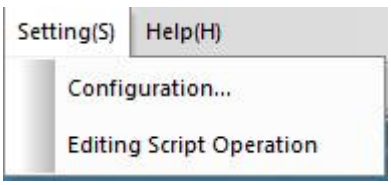
Click next to select location of installation



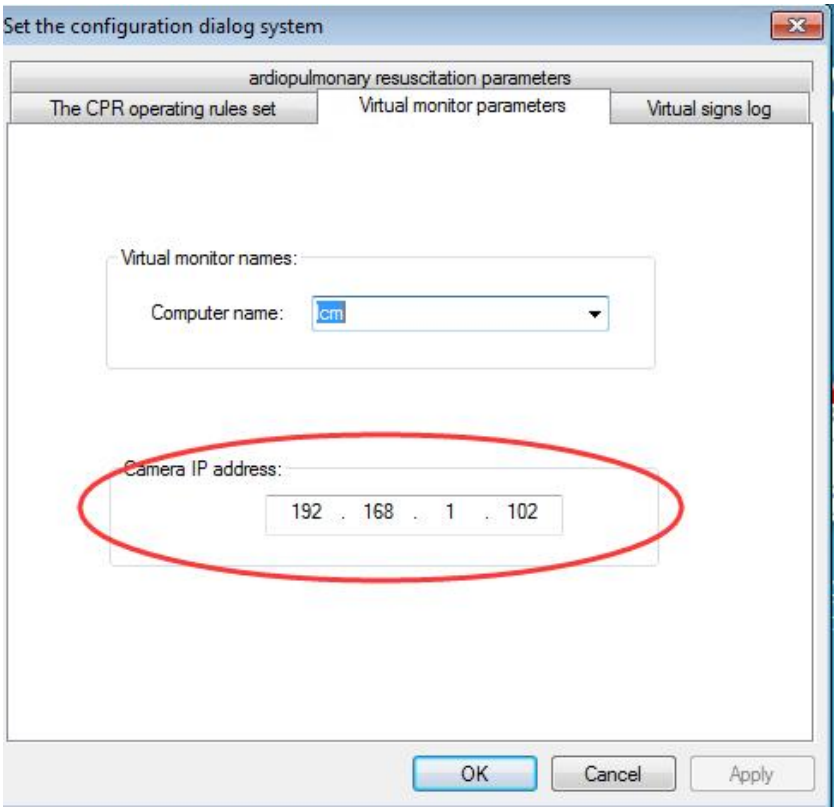
Click install. After completion of installation, click finish.

(5) Setting of virtual monitor

Click setting → system configuration

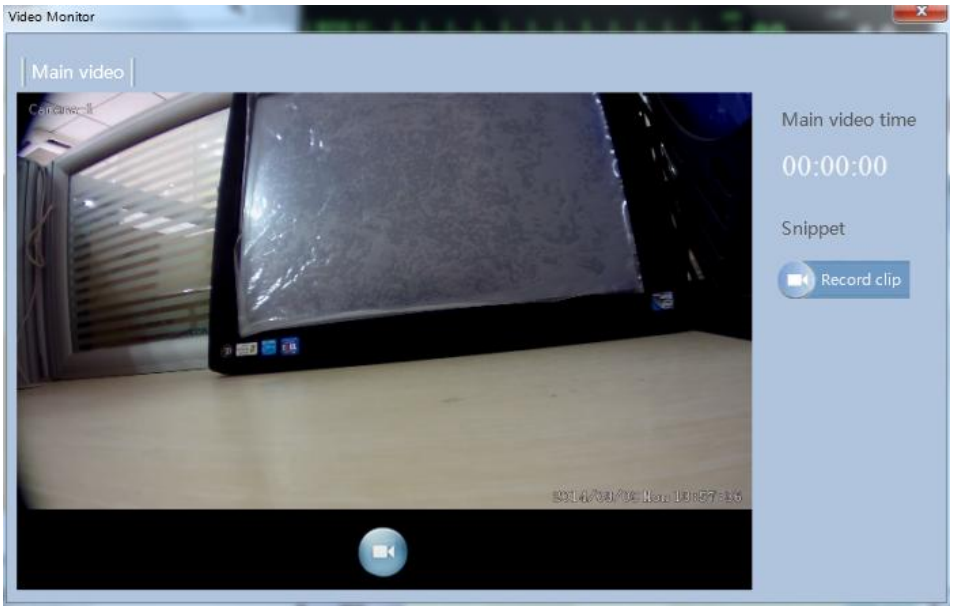


Click parameter of virtual monitor, set the IP address of camera

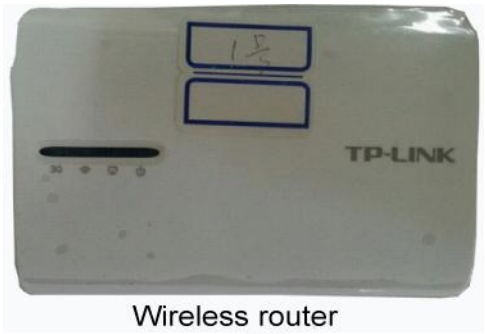


Click camera in the training interface, as the red frame shows below:

It shows that video images monitored. Videos could be recorded.



(6) Simulated human WIFI connection: open wireless router, simulated human, and wireless connection of tablet. Insert encryption lock into USB port. Select the simulated human that needs to be connected, then it will automatically connect.



Wireless router

Product function and operating instructions

1. Head

(1) Simulate pupilla. The sizes of pupilla can be adjusted. Bilateral pupilla both have light reaction directly or indirectly. And they can be controlled respectively.

(2) Simulated human can blink both of his eyes.

(3) Wireless inquisition. Unique dialog function between doctors and patients and inquisition practices are available. Simulated human can articulate after touching the wireless microphone sensor on the head of the him. He can also ask some questions, describe his chief complaint, conditions and simulate coughs like a patient. He can imitate the whole procedure of inquisition. During the procedure of inquisition procedure, instructing teacher will simulate the patient and have a conversation with the simulated human.

2. pulses

(1) Genuine artery pulses, artery pulses can be palpated in bilateral carotid artery, bilateral brachial artery, bilateral radial artery, bilateral femoral artery, bilateral popliteal artery and bilateral arteriae dorsalis pedis.

(2) The strength of pulses change in accordance with vital signs. There are three states including strong, weak and zero.

3. Respiration

(1) Simulated human has genuine autonomous respiration. There are rises and falls of thorax

(2) Simulated human has multiple respiration modes, rates and depths of respiration, which all can be adjusted.

4. Airway management

(1) Mouth intubation is available for simulated human. The positions and depths of intubation can be detected. Wrong intubation shall bring out the alarm warning sound.

(2) Be able to simulate edema of the tongue

(3) Gnathospasmus

(4) Stiff neck
(5) Pharyngeal edema
(6) Left and right bronchial obstruction
(7) Main airway obstruction
(8) Cricothyrotomy and thyrocricocentesis

5. Voice prompts

(1) There are lots of voice prompts restored. Simulated human will make different voices in accordance with different states of illnesses.

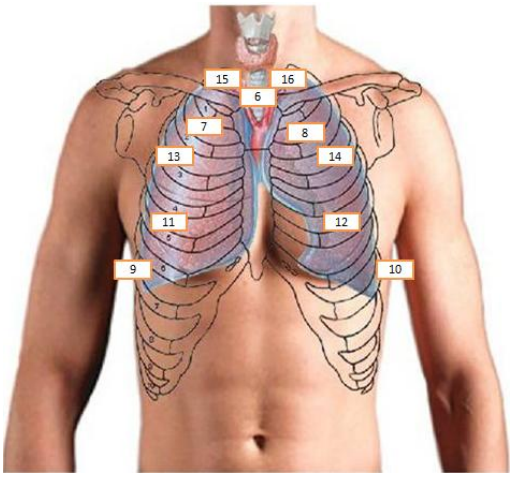
(2)The volume of sounds and other settings can be operated through software.

6. Auscultation

(1) Varieties of respiratory auscultation, breath sounds and respiration are synchronous. Bilateral independent breath sounds can be respectively controlled.

Name	Auscultation position
Normal bronchial breath sound	6
Normal bronchial breath sound	7,8，15,16,
Normal vesicular breath sound	7-14
Tachypnea	7-14
Bradypnea	7-14
Vesicular breath sound weakens	7-14
Vesicular breath sound energizes	7-14
Cogwheel breathing sound	7-14
Cogwheel breathing sound	7-14
Consolidation of lung tissue	7-14
Pulmonary cavity	7-14
Compression atelectasis	7-14

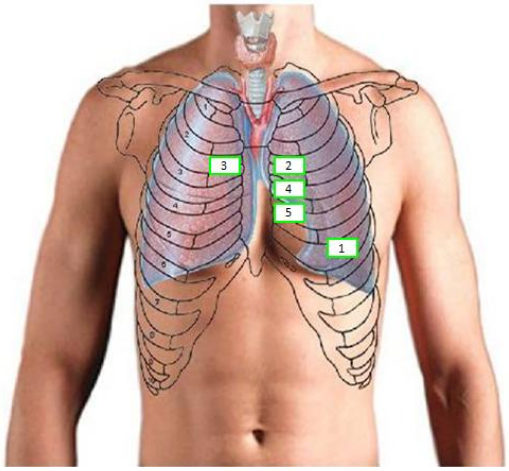
Coarse rales	6,13,14
Medium rales	7-14
Small rales	7-14
Velcro rales	7-14
Crepitant rale	7-14
Sibilant rhonchi	7-14
Sonorous rale	6
Bronchilquy	7-14
Pectoriloquy	7-14
Egophony	7-14
Whispered voice	7-14
Whispered voice strengthens	7-14
Pleural rale	9,10



(2) Varieties of cardiophony, cardiac sounds and heart beats are synchronous.

Name	Auscultation position
Normal cardiac sounds	1，2，3，4，5
S1 increases	1
S1 weakens	1
S1 uncertain	1
S2 increases(A2, P2)	2,3
S2 decreases(A2, P2)	2,3
Pendulum rate(fetal heart rate)	1
S1 split	5
S2 Physiologic split	2
S2 usual split	2
S2 Fixed split	2
S2 paradoxical splitting	2
Protodiastolic gallop	1
Late diastolic gallop	1

Summation gallop	1
Diastolic quadruple rhythm	1
Opening snap	1
Pericardial knock	5
Tumor plop	1
Early systolic ejection sound-pulmonary artery	2
Early systolic ejection sound-aorta	3
Barlow syndrome	1
Barlow Syndrome	1
Artificial valve sound - mitral valve	1
Ejection murmur-mitral area	1
Ejection murmur-aortic area	3
Ejection murmur-tricuspid area	5
Ejection murmur-pulmonary area(organic)	2
Ejection murmur-praecordia(organic)	4
Austin Flint murmur	1
Diastolic accentuated-mitrgaal area(organic)	1
Diastolic accentuated-aortic area	3
Graham Steell murmur	2
Diastolic accentuated-tricuspid area	5
Continuous murmur	2
Pericardial friction sound	5
Nodal tachycardia	1
Sinus bradycardia	1
Sinus irregularity	1
Atrial premature beats	1
Fibrillation	1
Paroxysmal supraventricular tachycardia	1
Ventricular tachycardia	1

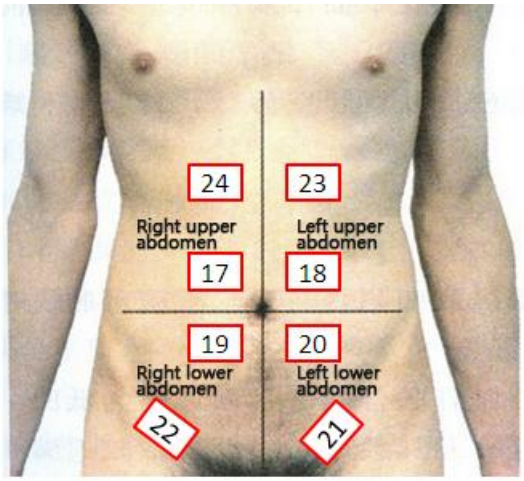


(3) Bowel sounds auscultation

Name	Auscultation positions
Normal Bowel sounds	17,18,19,20
Active Bowel sounds	17,18,19,20
Hyperactive bowel sounds	17,18,19,20
Hypoactive bowel sounds	17,18,19,20
Bowel sounds disappear	17,18,19,20

(4) Auscultation of vascular accentuated

Name	Auscultation positions
Venous murmur	17,18,19,20，23,24
Femoral arterial murmur	21,22
Renal arterial murmur	23,24



7. Blood pressure

(1) Intimate taking blood pressure through hamnatodynamometer. Auscultate through real stethoscope.

(2) Real Korotkoff can be heard in the process of measurement.

Monitor of vital signs

Pulses, blood pressure, blood oxygen and ECG monitoring, etc.
12-lead ECG monitoring. Lots of ECG data have been stored in the system. Real 12-lead ECG monitoring can be conducted. Being able to simulate 12-lead ECG of several kinds of heart diseases. Software interface can display multiple leads.

Emergency treatment

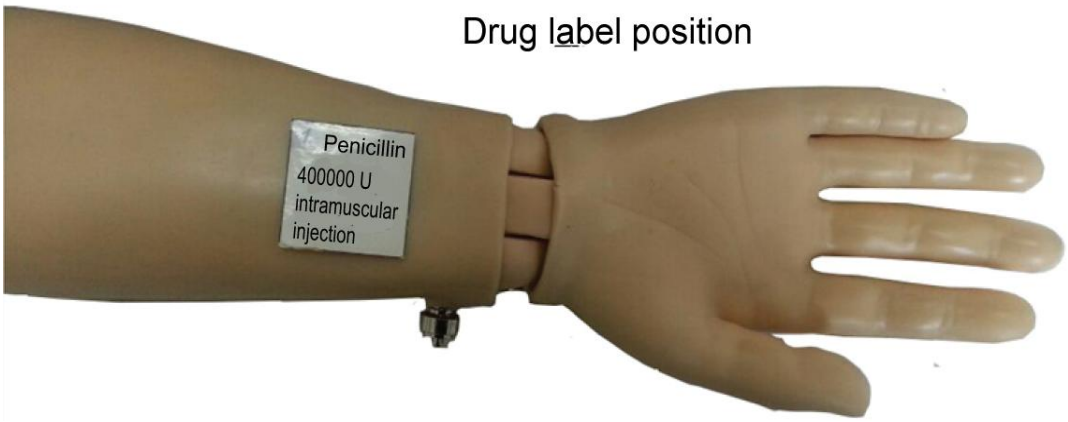
Cardio-pulmonary resuscitation: The treatment will be operated in accordance with the standards in Cardio-pulmonary Resuscitation guidebook. Electronic monitoring airway opening, air blow volume, air blow rate, air blow times, compression locations, compression times, compression depths and rates all can be shown on the computer after being collected by sensors. And the system will judge whether the operation is right automatically.

Support real defibrillation, simulated defibrillation and cardiac pacing.
(Simulated defibrillation operation can refer to J880 manual book)

Drug administration
Intramuscular injection: Bilateral deltoid hypodermic injection, lateral femoral intramuscular injection and intramuscular injection

Intravenous injection: bilateral Arm intravenous injection.

Right arm drug identification system: provide with over 30 kinds of drug labels. Scan he drug labels on the lower part of right arm, near finesse, drug name, doze and method of drug administration scanned will be shown on software.



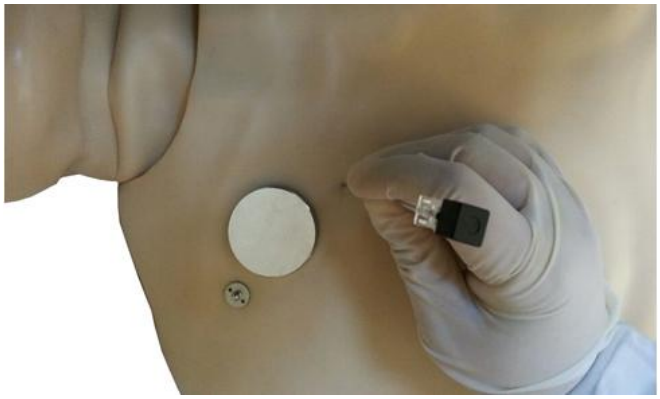
Drug labels

Use real injection pump and infusion pump. Precise doze for special patient has been realized. System can detect the operation of injection and infusion pump.

Pneumothorax puncture

Pneumothorax puncture should be done in the second intercostal of bilateral umidclavicular

line. Draw out gas when succeed in puncture.



There is "Di" prompt sound when puncture is successful.

Thoracentesis and drainage

(1) Thoracentesis and drainage should be done in the fifth intercostal of left midaxillary line. Draw out gas when succeed in puncture.

There is "Di" prompt sound when puncture is successful.

Paracentesis pericardii

Paracentesis pericardii should be done in the fifth intercostal of the inner side of border of cardiac dullness.

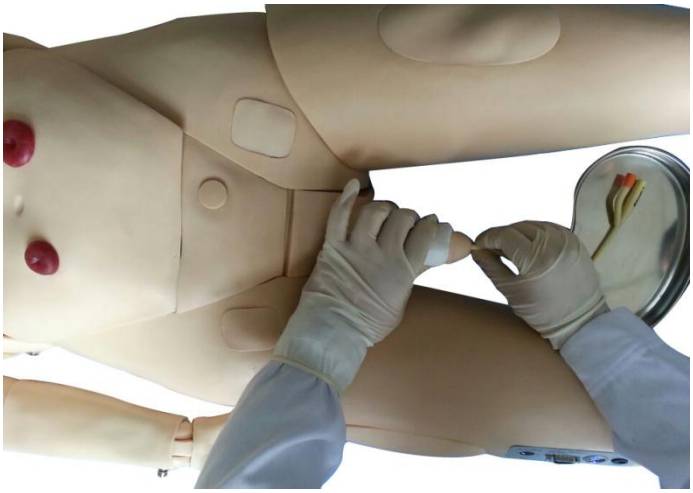
There is "Di" prompt sound when puncture is successful.

Neurologic examination

(1) Knee reflex: simulated human lies on his back. The examiner holds the knee-joint and make it curve at the angle of about 120° with left hand. Knock quadriceps femoris under patella with the percussion hammer on right hand, which can cause calf stretch. There are five states, including no response, weak, normal, active and clonus.

(2) nski syndrome: simulated human lies on his side with his legs straight. Use a prod to touch the lateral border of sole to little toe beside the footing and turn to interior from back to front. Positive reaction will be hallux dorsiflexion, other toes fan out. There are normal and abnormal states.

Oppenheim syndrome: examiner uses big toe and index finger top-down sliding press the shin bone anterior border of tibia of simulated human. Positive reaction is the same as Babinski syndrome. There are normal and abnormal states.



15. Basic nursing functions

(1)Upper and lower fixed dentures, oral care is available

(2)Basic nursing operations are available, like washing face, washing head, eyes and ears cleaning.

(3)Four limbs are flexible to be bent from left to right and top-down. Head, neck and articulationes mandibularis can be moved flexibly. Nursing operations like dressing and changing clothes, binding up, and fixation of fracture are available.

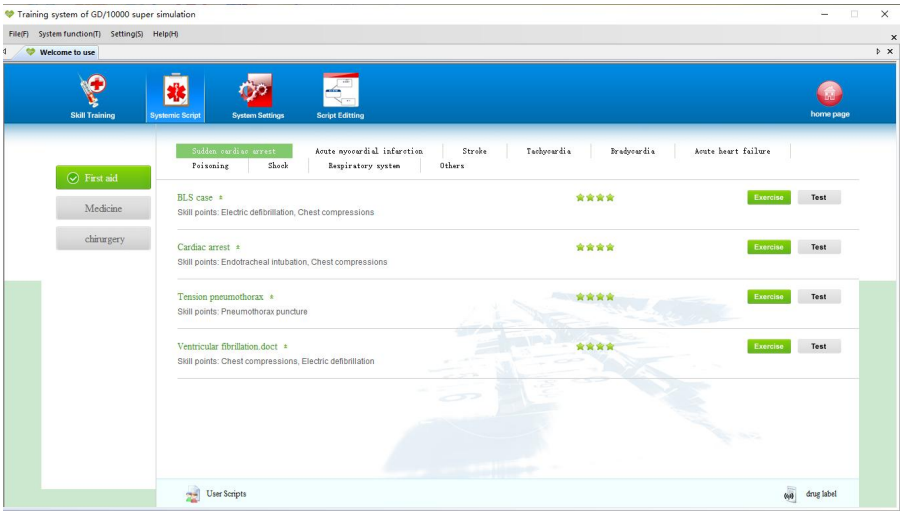
(4)Oxygen therapy is available. Multiple giving oxygen methods (oxygen provision via nasal canula, oxygen provision via masks, etc.), Oxygen

concentration can be adjusted accordingly.

(5)Insertion of nasogastric tube: gastric lavage and gastrointestinal decompression operation are available.

(6) Clyster practice, nursing of colon anastamosis and rectum of simulated human are available.

(7) Catheterization operation can be practiced



16. Case training/examination

（1） Emergency department: built-in multiple emergency cases of illness, independent cases of illness edit unit, editable cases when needed by customers.

（2） Internal Medicine: cases of cardiovascular, respiration, digestion, kidney, Hematology, Endocrine, neurology, Rheumatoid immune. Simulated human can diagnose cases of different departments, laboratory examination and therapeutic measures.

（3） Surgery: including common cases of illness of general surgery, neurosurgery, thoracic surgery, urinary surgery and orthopedics. Simulated human can diagnose cases of different departments. Apart of surgery operations could be observed through video.

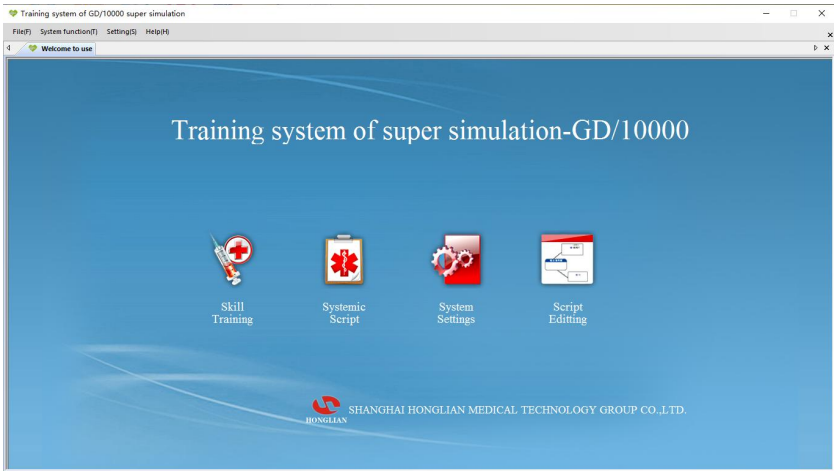
17. Others

(1) External genitals of females and males could be interchanged.

(2) Cyanosis

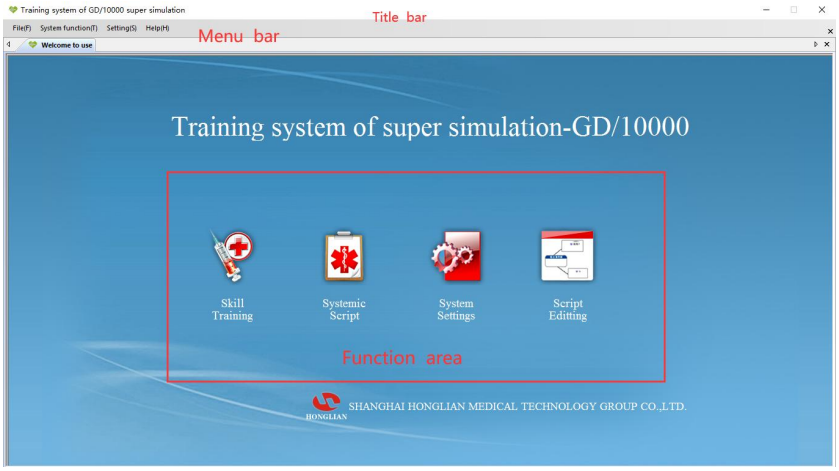
Be able to simulate central cyanosis(black lips) and peripheral cyanosis （ends of four limb）

software system operating instructions



1. Landing interface

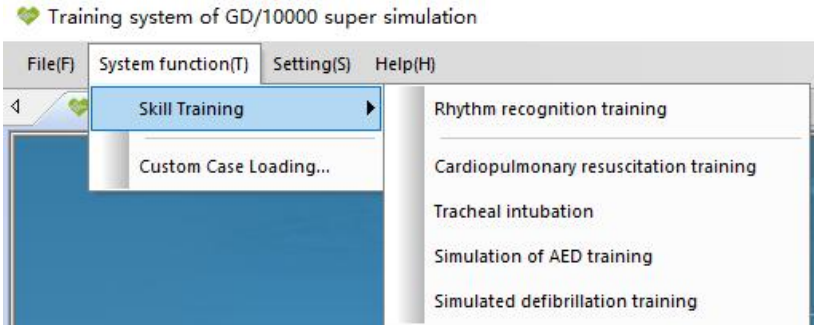
(1)double click GDoctorTrain.exe to enter the login interface



(2) Title bar: display the current window, including minimizing, maximizing and close buttons.

Menu bar: including almost all the orders of system. It is consistent with the function area.

Function area: it is the most vital part because it intuitively shows the main functions and important components of the system, including specialized training, script operation, system settings and script editing.



2. Specialized training

Method 1: click  to enter the interface

Method 2: click systematical functions→specialized skills training and directly enter the interface.

(1) Cardiopulmonary resuscitation training

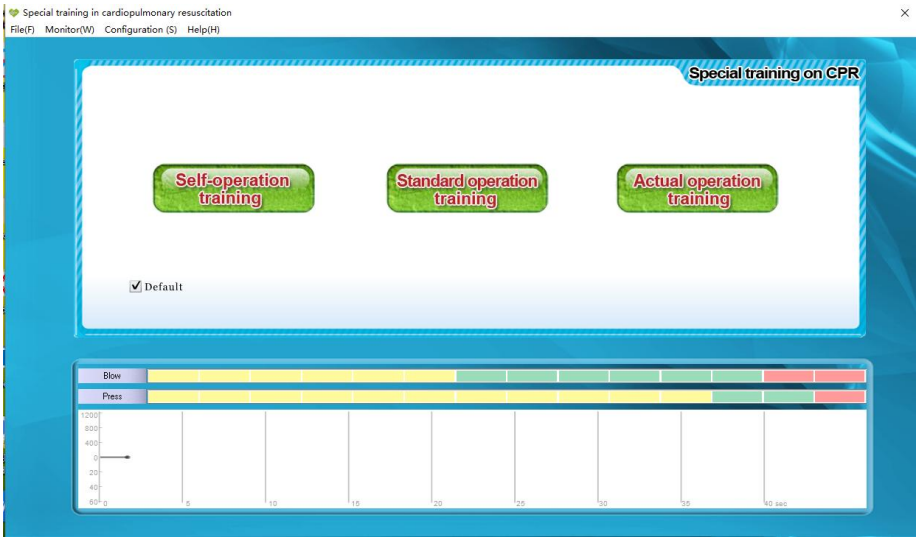
(1) Click icon  to enter the cardiopulmonary resuscitation training

Three training methods:

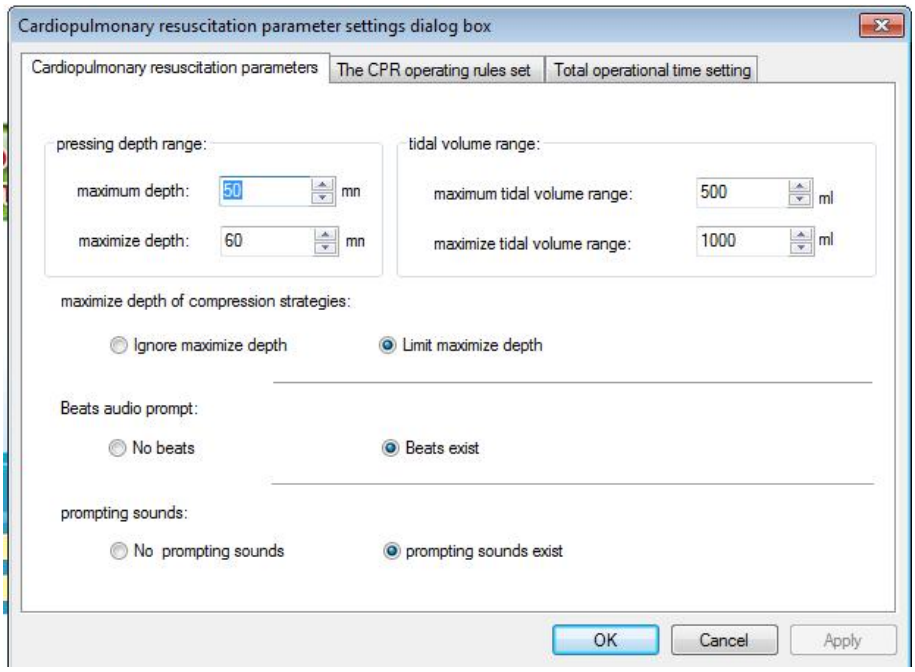
Self-operating practice: No requests for the portion of chest compression to artificial respiration

Standard operating practice: chest compression and artificial respiration at the proportion of 30 to 2. After 30 times of proper compression, 2 times of artificial respiration shall be done(improper operation cannot be included)

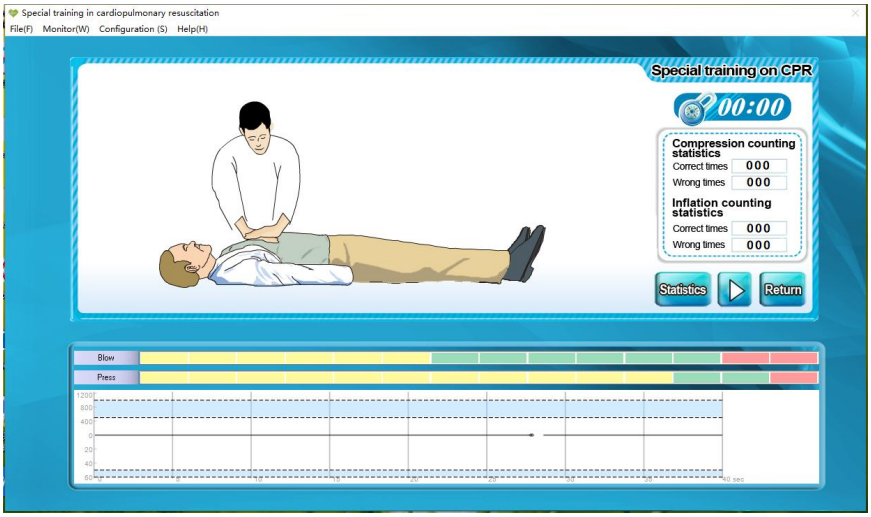
Combat operation practice: chest compression and artificial respiration at the proportion of 30 to 2. After 30 times of proper compression, 2 times of artificial respiration shall be done(both proper and improper operations shall be included)



Choose one method randomly and  or set the operating parameters. Operating parameters settings include cardiopulmonary resuscitation parameters, CPR operating rules and total operating duration.



Cardio-pulmonary resuscitation interface:

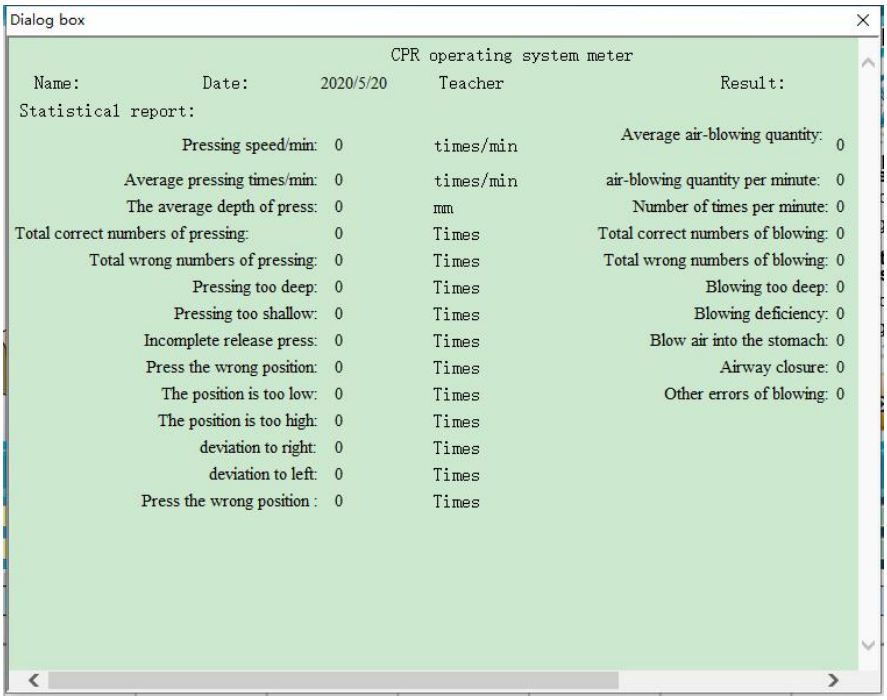


Click  to initialize simulated human.

- ✧ Application of CPR on simulated human. Synchronous FLASH operating demonstration will be shown on interface.
- ✧ Compression and air blowing census: proper and improper compression times of compression could be counted in accordance with the compression depths. Proper and improper compression times of air blowing could be counted in accordance with the air blowing volume.
- ✧ Compression and air-blowing bar code: when air-blowing is insufficient, proper or excessive, bar code will be displayed as yellow, green and red. When compression depth is insufficient or proper, the bar code will be displayed as yellow or green.
- ✧ Click 

to return to premier interface
- ✧ When operation is over, click 

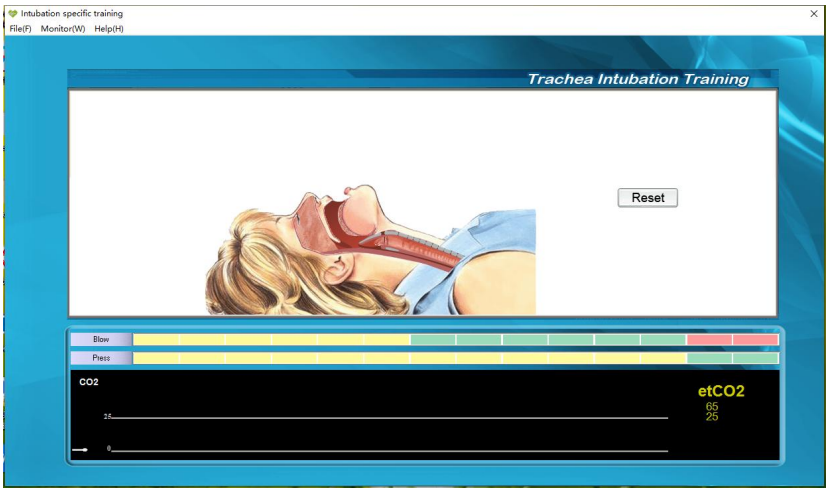
to start collecting statistics. Students' names, reults, dates all can be displayed. statistical list can be printed.



Intubation training

Click  to enter trachea cannula training

- ✧ The interface of cannula training is displayed as follows: application of cannula on simulated human, synchronous FLASH operating demonstration will be shown on interface. Position of intubation and ventilation can be displayed as well.



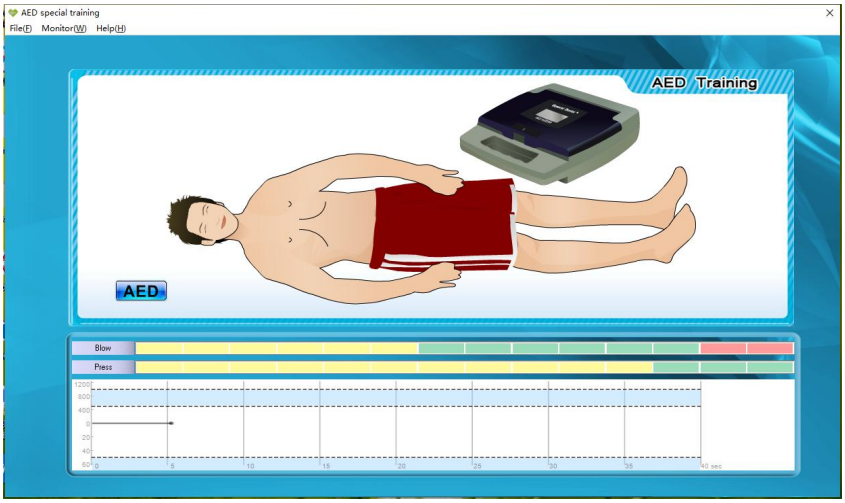
Click  , restarting the rachea cannula training is available

（1） AED 使用训练

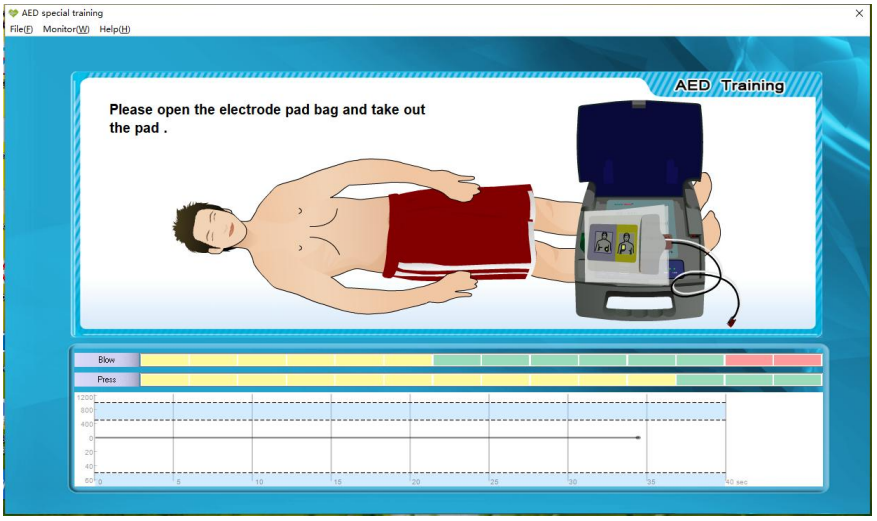
AED training

Click icon  to enter AED training

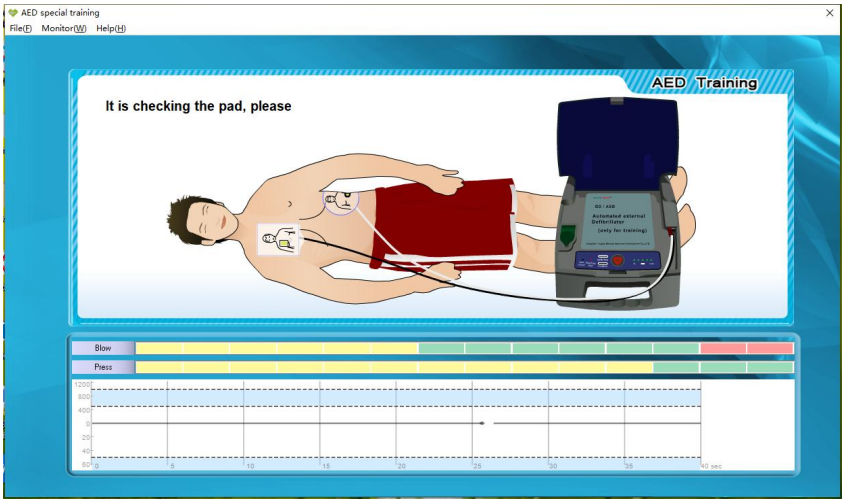
AED training interface is displayed as follows:



1) Click  to start the operation. Being equipped with Chinese audio instructions and text prompts.



AED can automatically analyze heart rate and charge. After completion of charge, click  to discharge. The defibrillation is over.

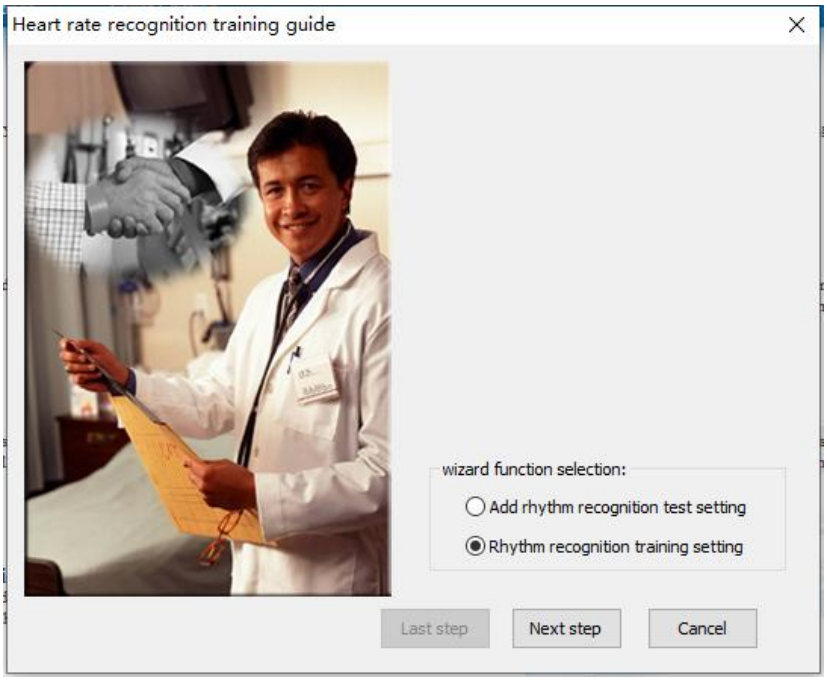


If connected with monitor, electrocardiogram will change accordingly after defibrillation.

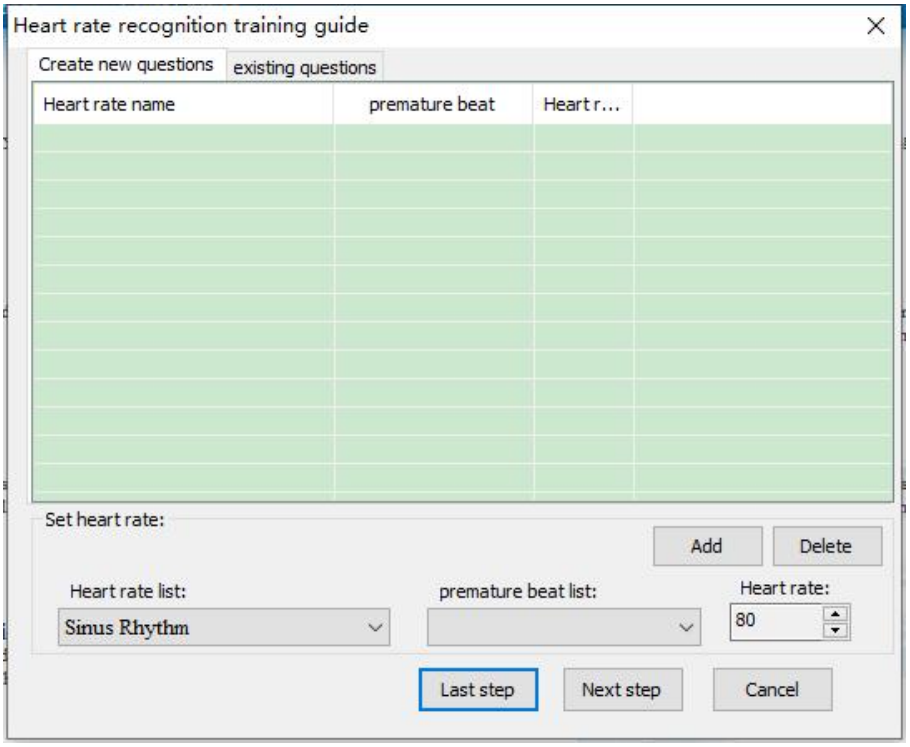
Heart rate recognition training

Click icon  to enter heart rate recognition training

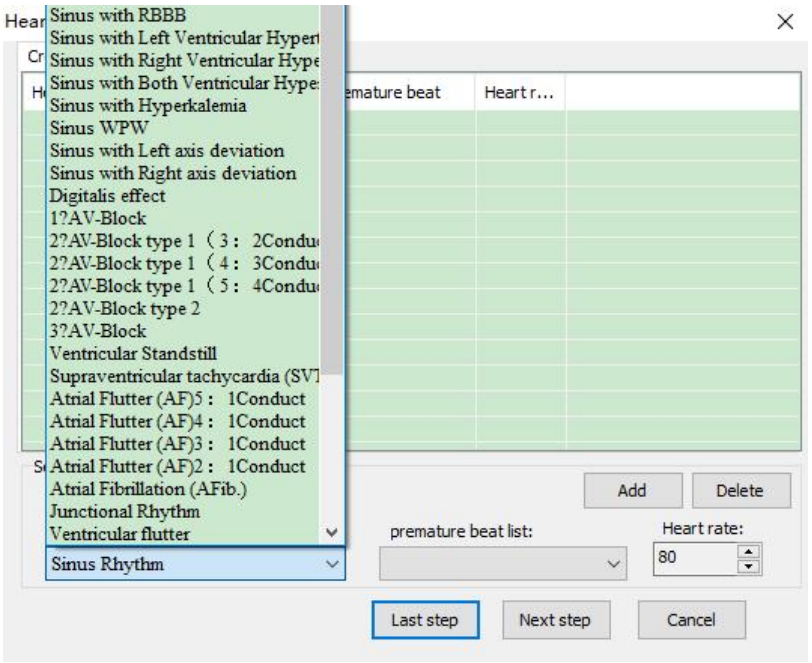
Select heart rate recognition training settings, click Next step



Select matching examinations, click Next step, and the click End to finish examination.



Select add heart rate recognition examination settings, click Next step

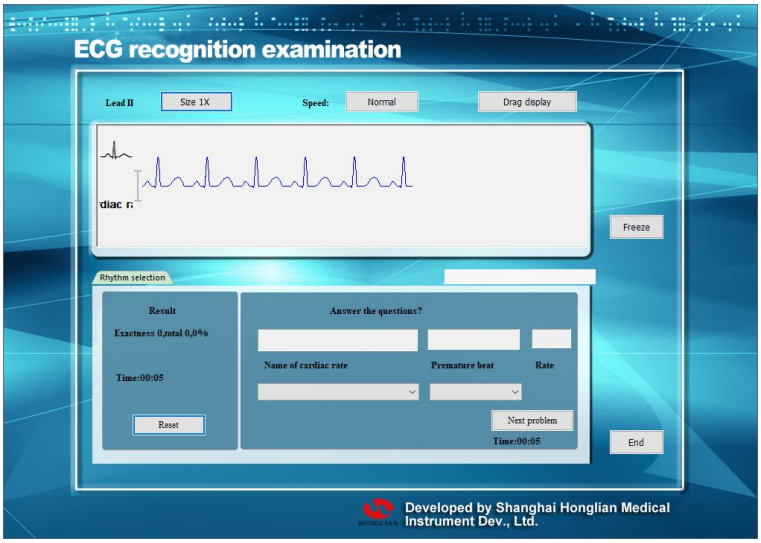


Click Create new questions to set the heart rate or select from the existing examination existing questions. Click Add and click Next step, finally click Next step to start the examination.

Deletion of examination. Select the examination needs to be deleted. Click

Delete to delete added examination.

Training interface is displayed as follows:



It means magnification times of electrocardiographic waves.

It means the pace of ECG playing to see whether it is normal or speed up

It means the display methods of lectrocardiographic waves.

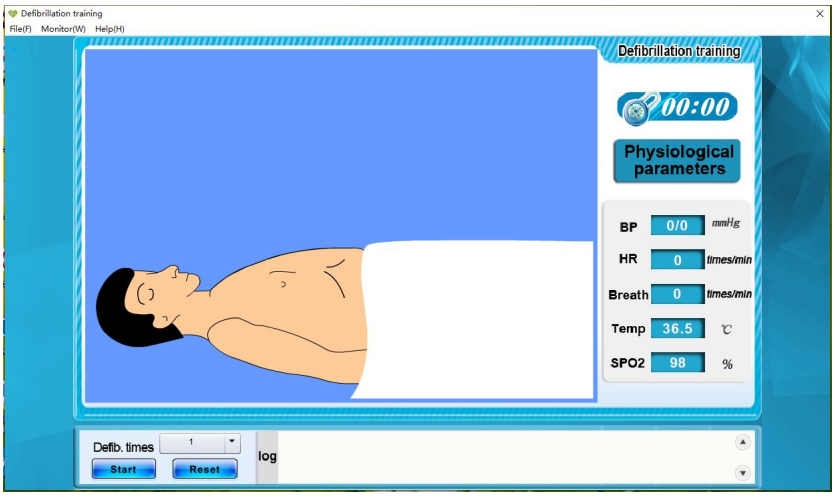
It means freeze lectrocardiographic waves. Electrocardiograph paper will be displayed in the background.

Reset : Restart the training

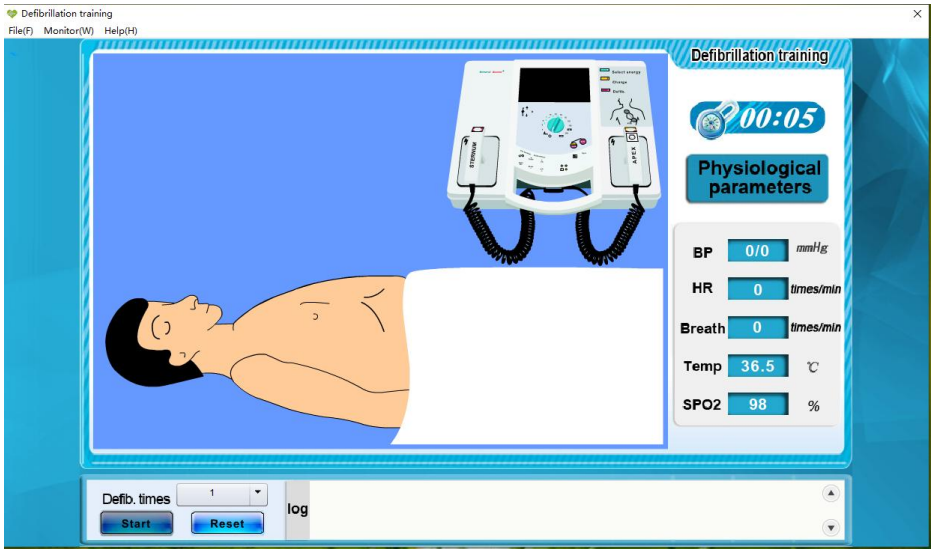
Left side shows the training duration. Select the name of electrocardiogram through drop-down box. Click Next problem, the answer bar shows the correct answers. Click End to exit the training interface directly.

Defibrillator training

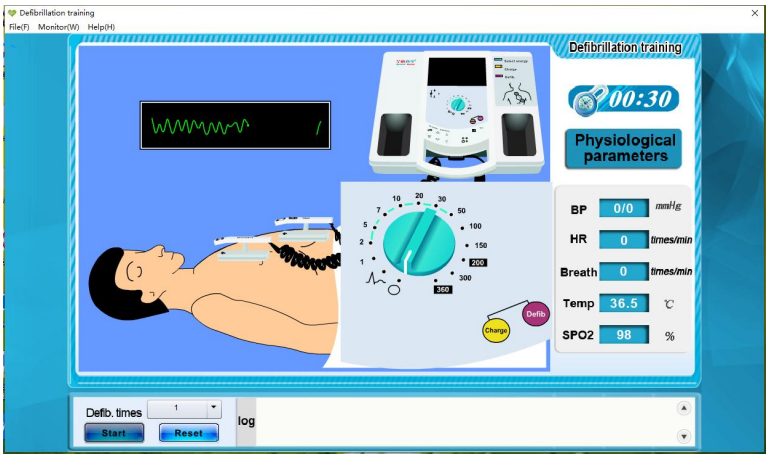
Click  to enter the training interface



1) Set the physiological parameters. Select defibrillation times, then click  to start operation.



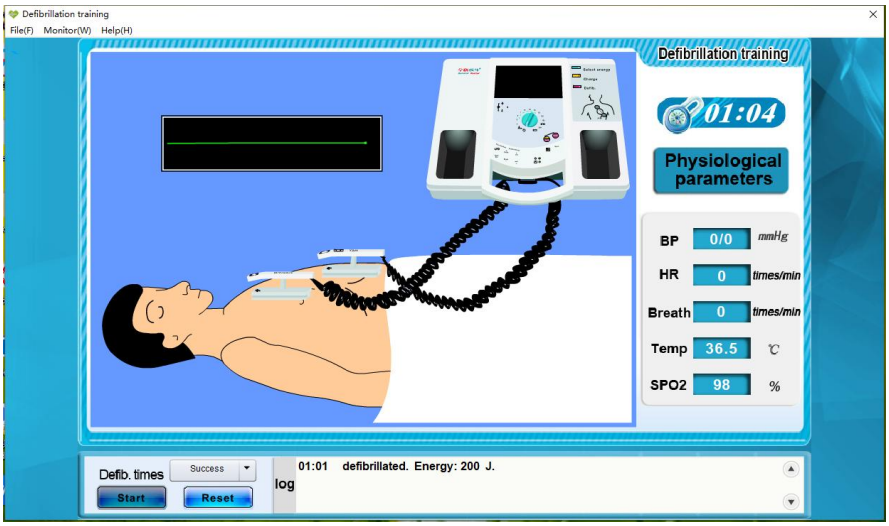
Click defibrillator switch to open the defibrillator and select defibrillation energy



2) Click 

to charge. After the completion of charge, click 

to discharge. Defibrillation is finished.



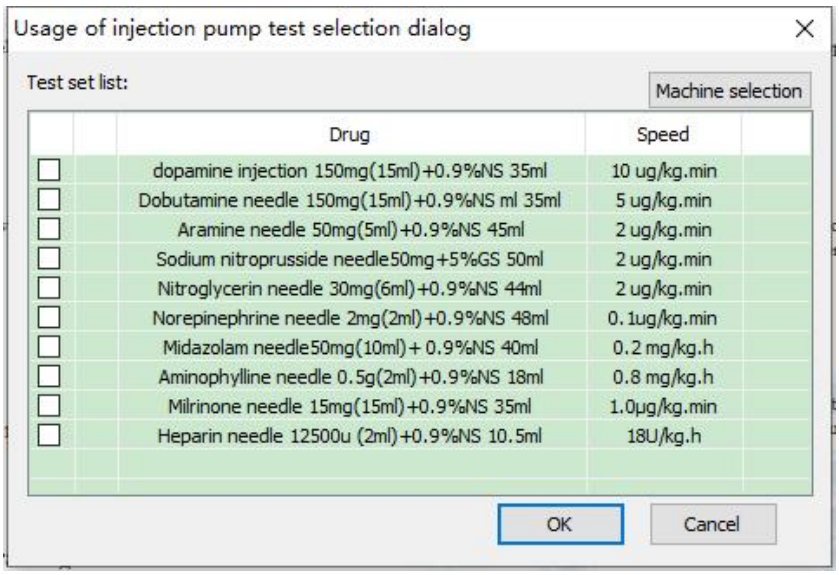
Log records the specific operational procedure and click 

to return to original state.

（2） 注射泵使用训练

Injection pump training

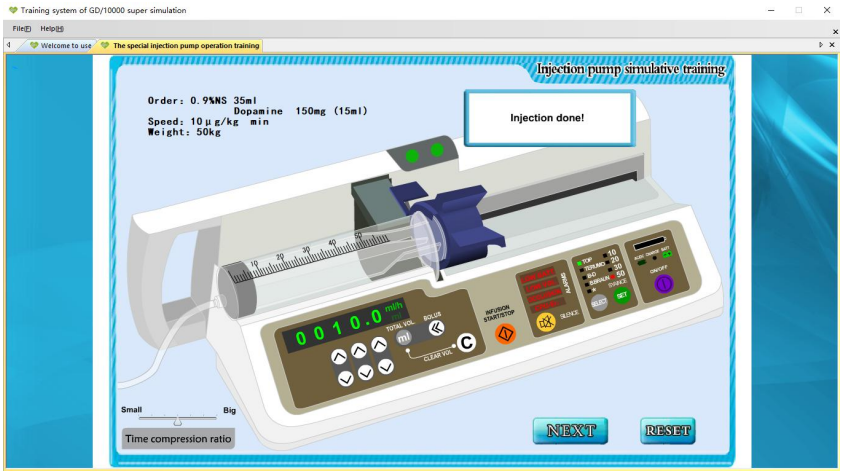
1) Click  to select the drugs need to be injected.



2) Enter the training interface and calculate the pace of administration of drugs.

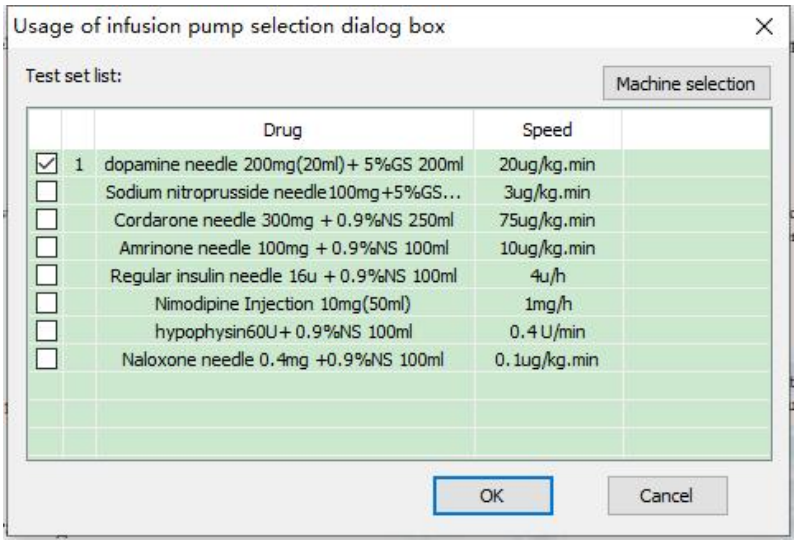
3) Turn on the switch of the injection pump. Start injection after setting the pace of administration of drugs on injection pump.

4) Completion of injection is displayed as follows



(3) infusion pump training

1) Click  to select the drugs need to be injected.



2) Enter the training interface and calculate the pace of administration of drugs.

3) Turn on the switch of the injection pump. Start injection after setting the pace of administration of drugs on injection pump.

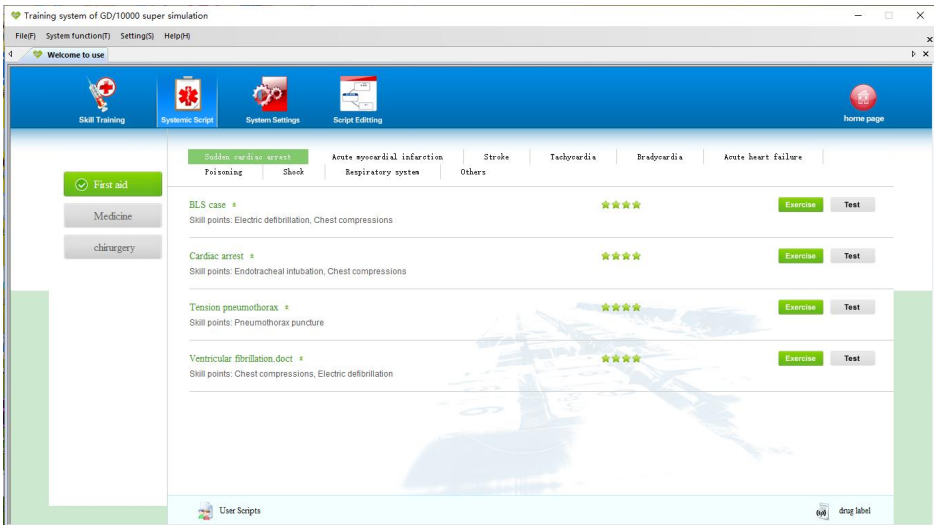
4) Completion of injection is displayed as follows

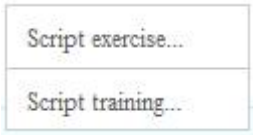
1. Script operation

(1) Script training

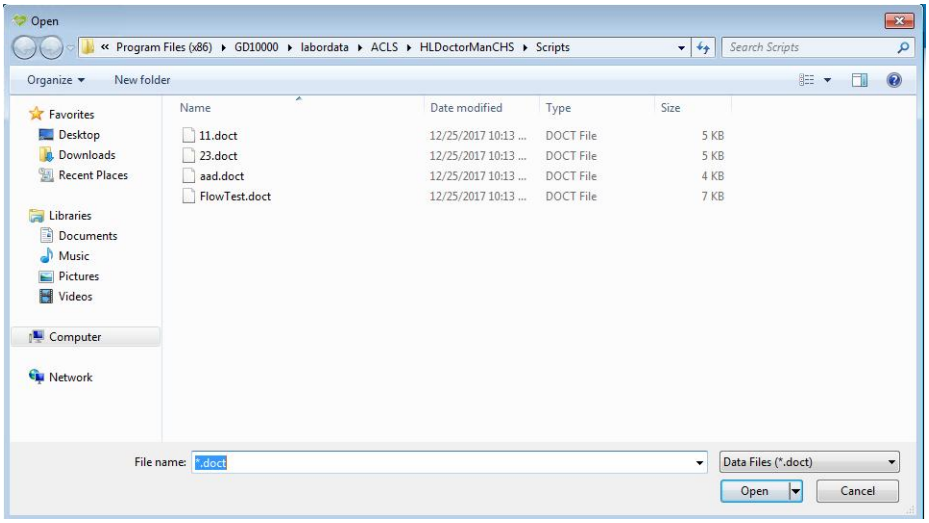
1) Click 

to enter case scene

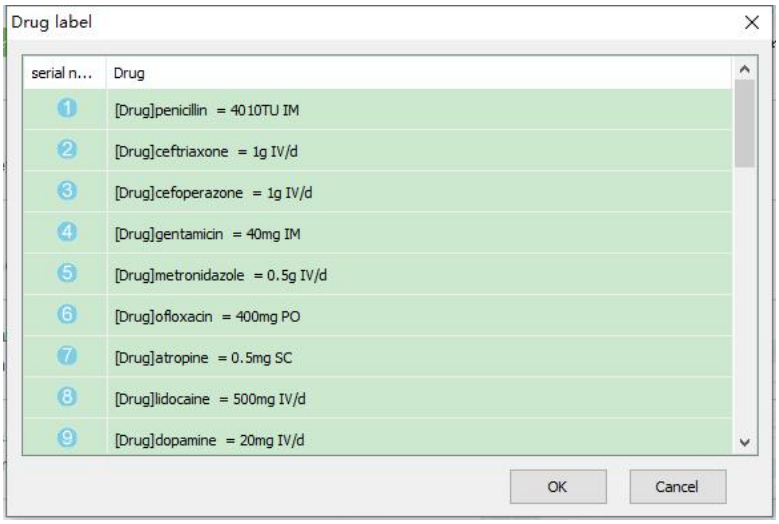


User script: click 

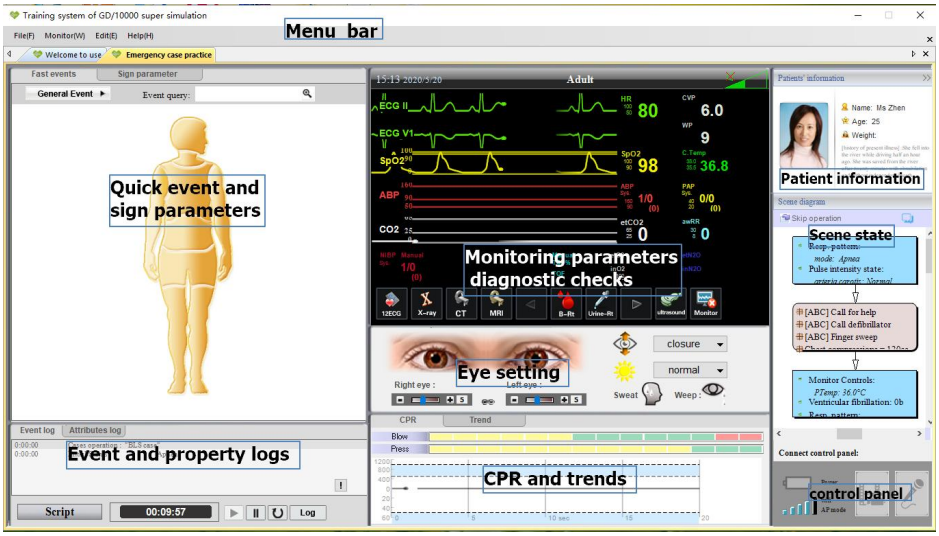
, select script training or test.



drug label: click  , the following digalog boxes will be showed. Select drugs needed. Drug recognition could be done at the arm.



2) Cases scenes training interface introduction,



✧ Menu bar: including document, monitor, edit and help

Click document-exit to exit the software

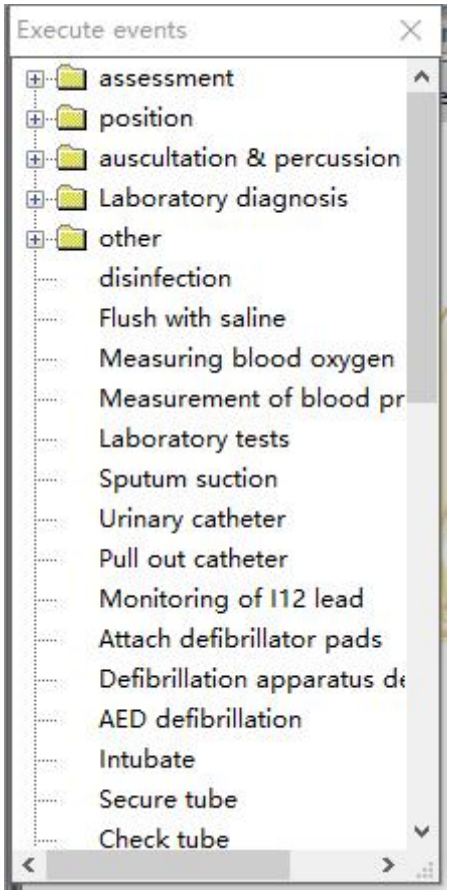
Click monitor to connect monitor

✧ Shortcut event and vital parameter

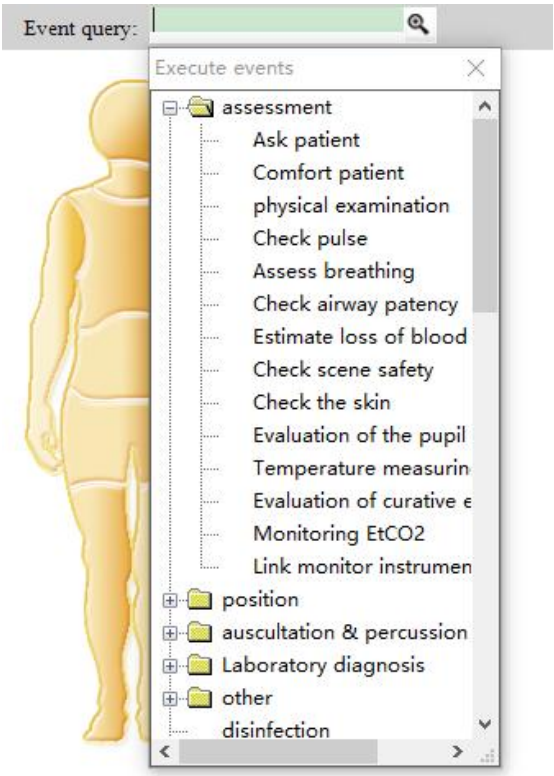
Shortcut event: divide body into seven parts including head, neck, chest, abdomen, pelvina, upper limbs and lower limbs.

Three methods to select event:

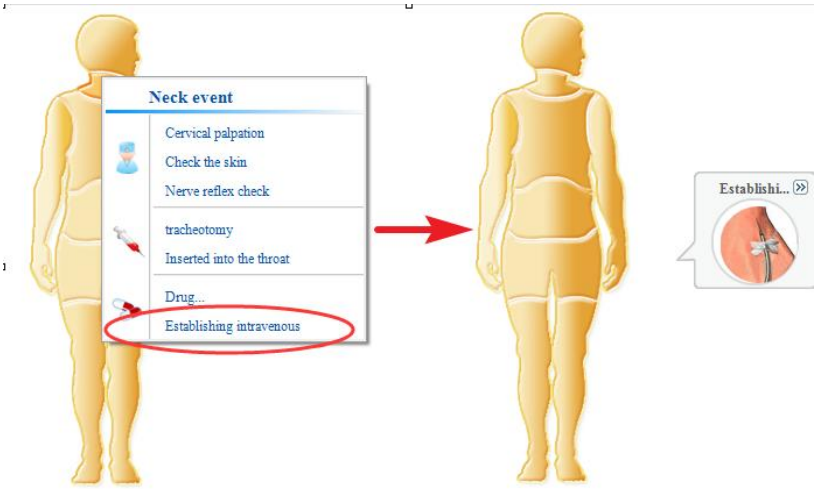
A.lect common event



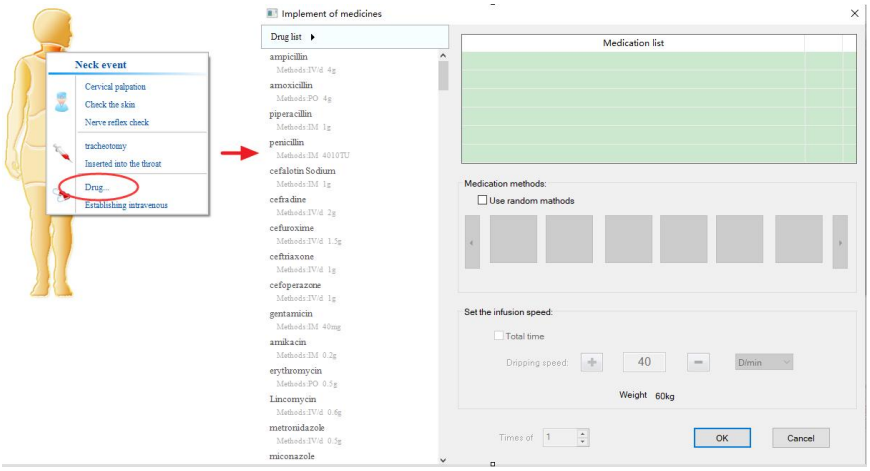
B.vents inquiry



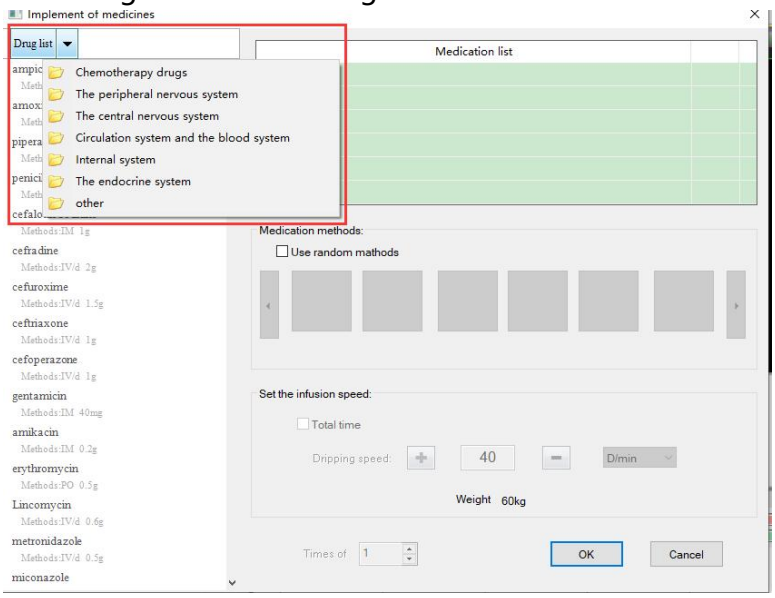
C. Simulate human body: when arrow is put on one part of the body, the color of it will be deepened. Event dialog box will appear when click. Different events can be selected and the event selected will be displayed on the event log.



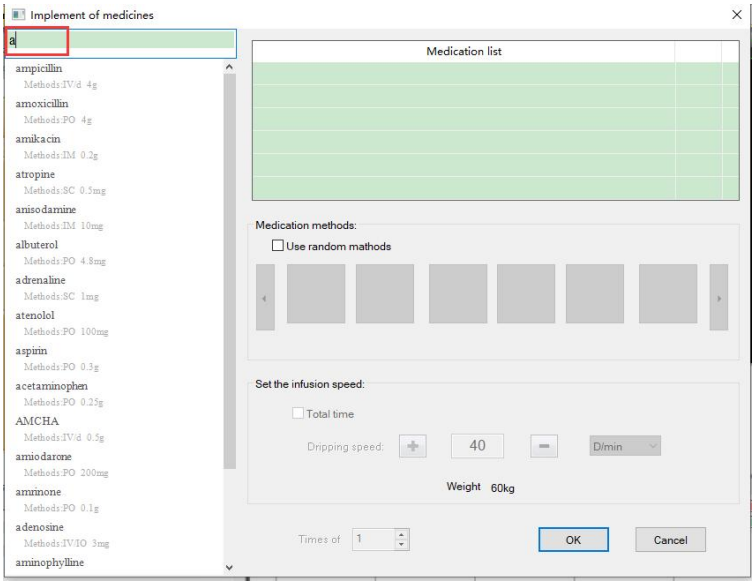
Select drug administration event



Click drug list to select drug needed.

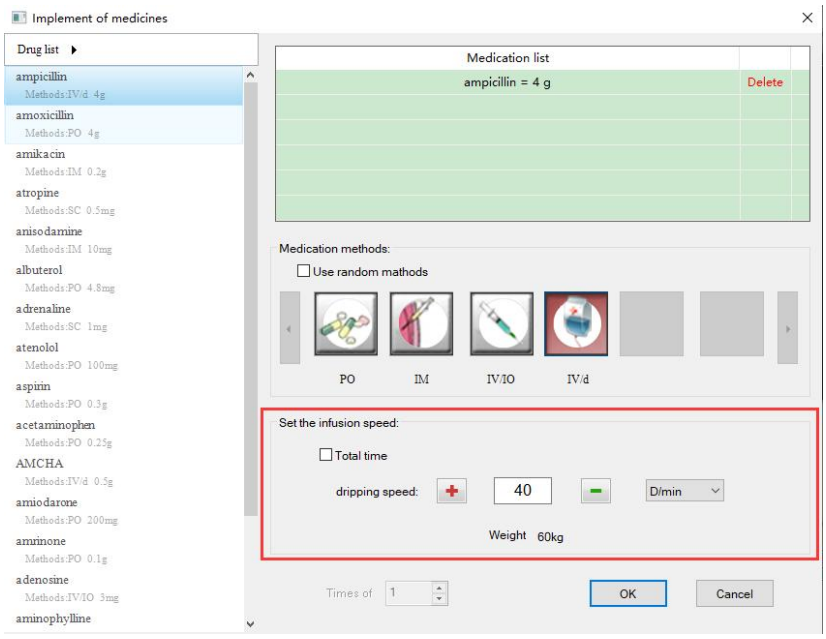


Or directly type the initial of the drug, which can enable you to find the drug effectively.



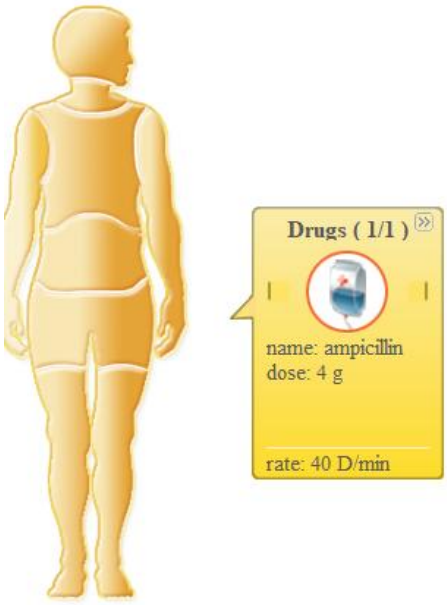
After selecting the drug, set the methods of drug administration or

apply the default method or apply random drug administration. If it is intravenous drip, doze of drug administration could be set.



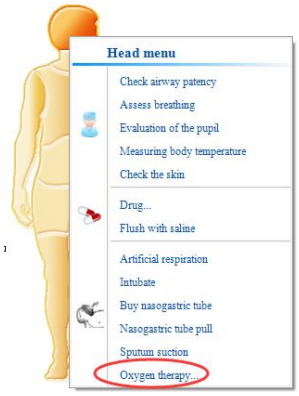
Instruction of injection pump and infusion pump

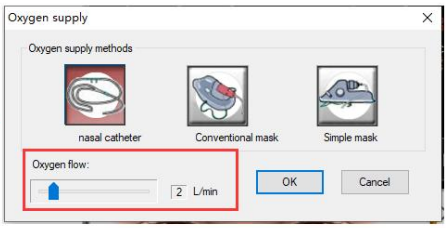
Connect peripheral equipment adapter, and then select the drug needs to be injected through injection or infusion pump.



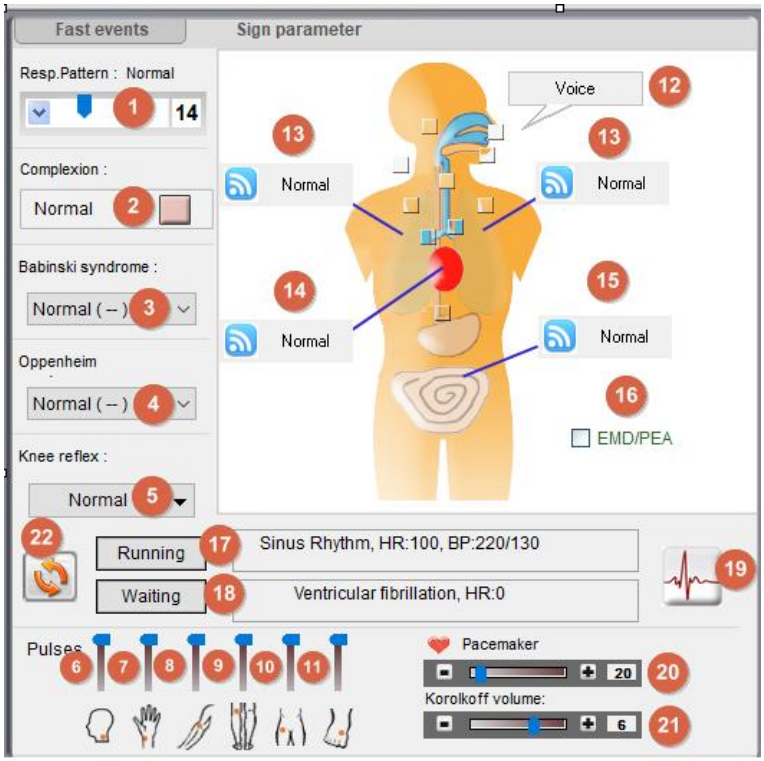
Adapt the doze and pace of drug administration on the real injection or infusion pump.

Breaths event: methods of oxygen supply or oxygen flow are available to be set.





Parameters of sign

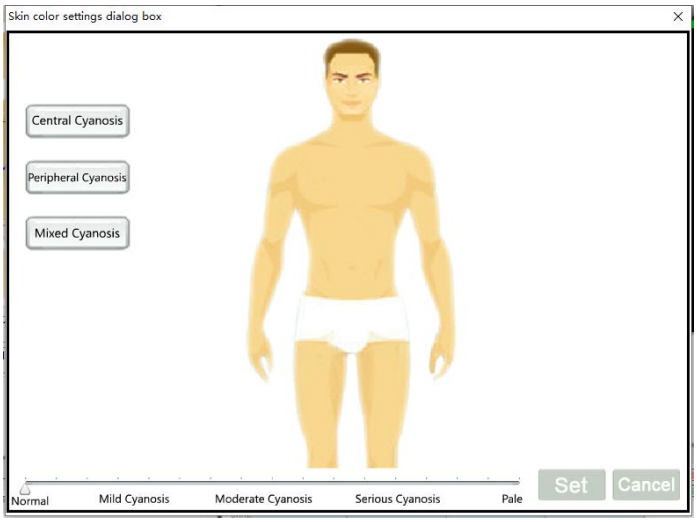


1	respiratory pattern and rate	Multiple respiratory patterns could be set. Changing the respiration times is

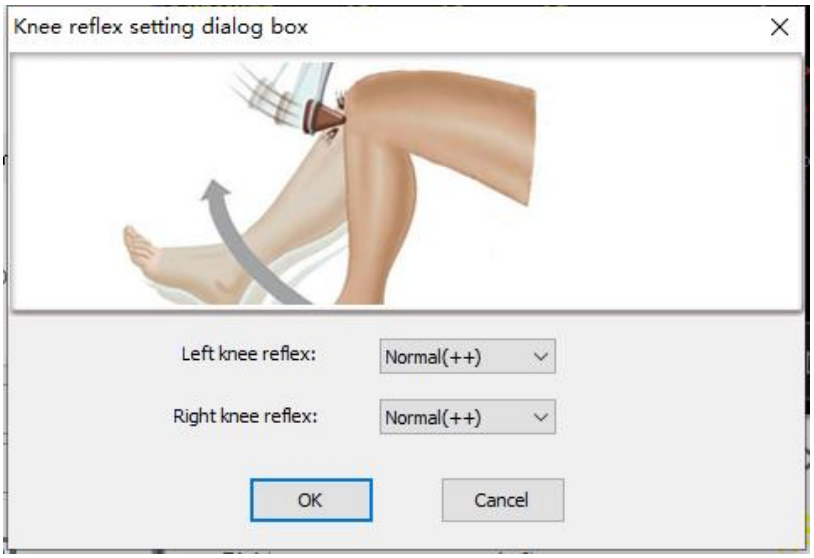
		available through pulling the scroll bar.
2	Complexion	Including normal complexion and cyanosis(Central Type and Peripheral Type)
3	Babinski syndrome	normal (-) left side abnormal (+) right side abnormal (+) bilateral abnormal (+)
4	Oppenheim 征 Oppenheim syndrome	normal (-) left side abnormal (+) right side abnormal (+) bilateral abnormal (+)
5	knee reflex	normal abnormal setting
6	jugular vein throb.	Divided into three levels including strong, medium and weak. The level could be changed through pulling the scroll bar
7	radial artery pulse	ditto
8	arteria brachialis pulse	ditto
9	Popliteal artery pulse	ditto
10	femoral artery pulse	ditto
11	arteriae dorsalis pedis	ditto
12	Pronunciation set-up	Simulation of multiple sounds set-up is available
13	respiratory sound set-up	Various respiratory sounds of different parts auscultation set-up is available
14	cardiac sounds set-up	Set-up of various cardiac sounds auscultation of different parts is available
15	intestinal gurgling sound set-up	Set-up of various intestinal gurgling sound auscultation of different parts is available
16	electrical mechanical dissociation	After selection, heartbeats will not bring out physiological signs.
17	Activation	Activate the heart rate currently set up

18	Waiting	Set up the successive heart rate needs to be activated.
19	ventricular fibrillation	Click will skip to ventricular fibrillation
20	pacemaker current	Directly change pacemaker current when pulling the scroll bar,
21	Blood pressure volume	Directly change blood pressure volume when pulling the scroll bar,
22	Interchange	The heart rate currently in operation and await heart rate could be interchanged.

Complexion set-up: the level of cyanosis could be adjusted or simulated human could be changed into the state of pale.

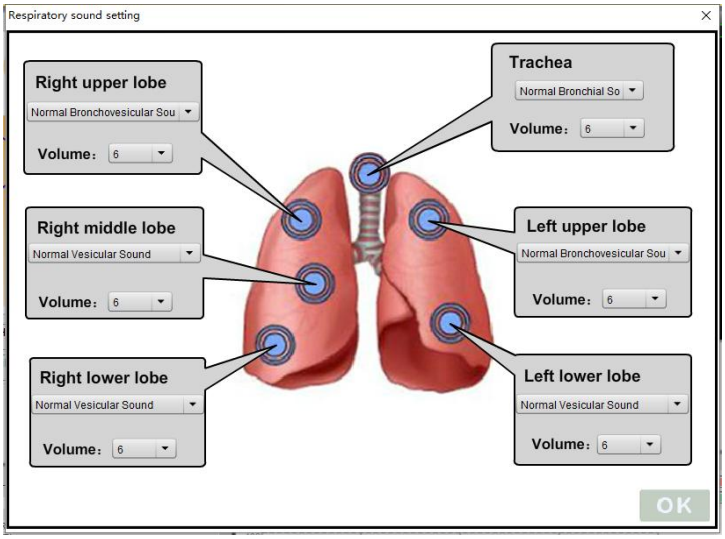


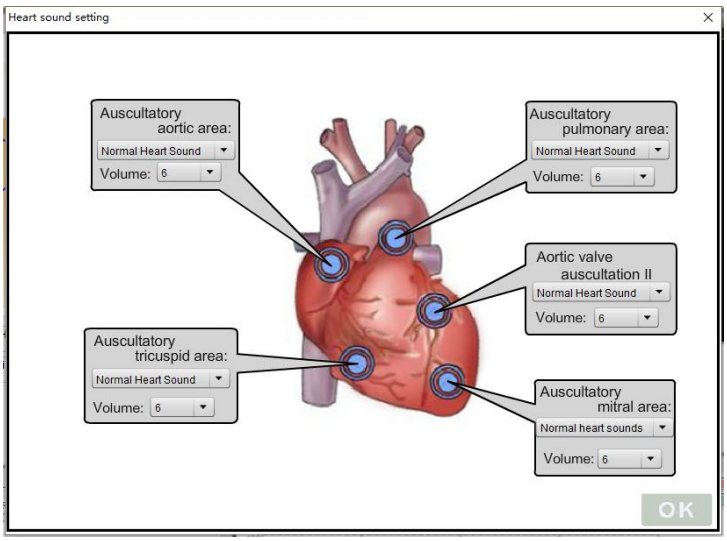
Knee reflex abnormal set-up: Left and right leg could be set up respectively. States are divided into the following, including no response, weaken, normal, active and clonus

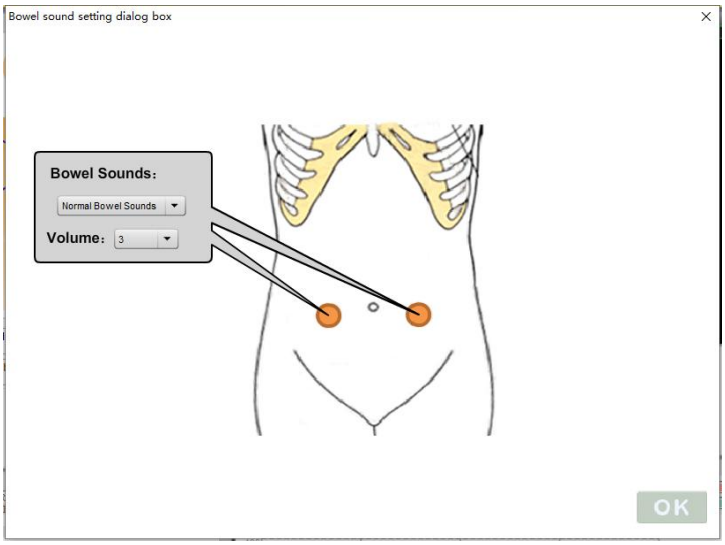


Respiration sounds, cardiac sounds and ;intestinal gurgling sounds

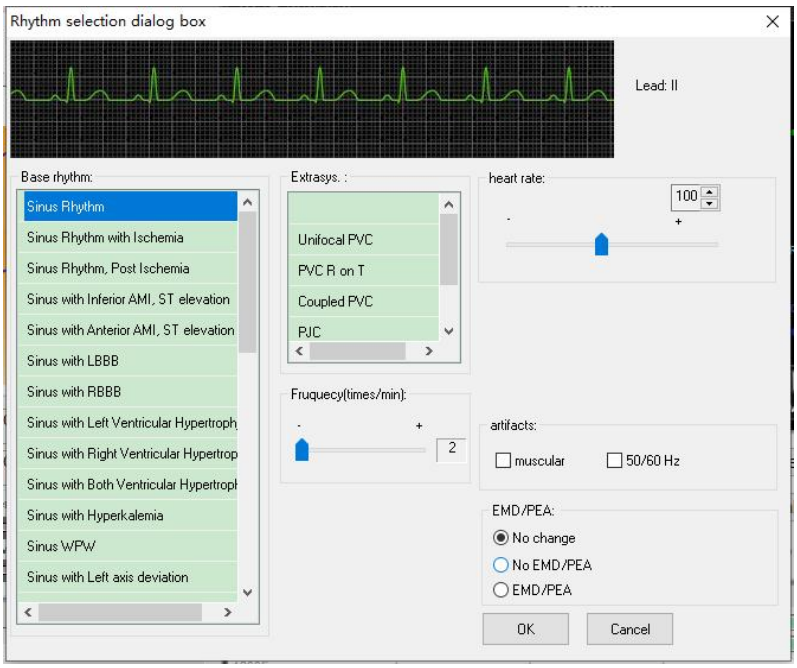
set-up





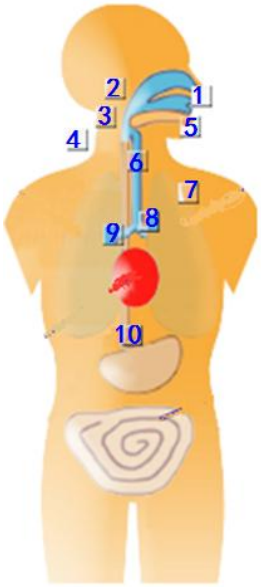


Heart rate set-up: click run and wait to set up the heart rate



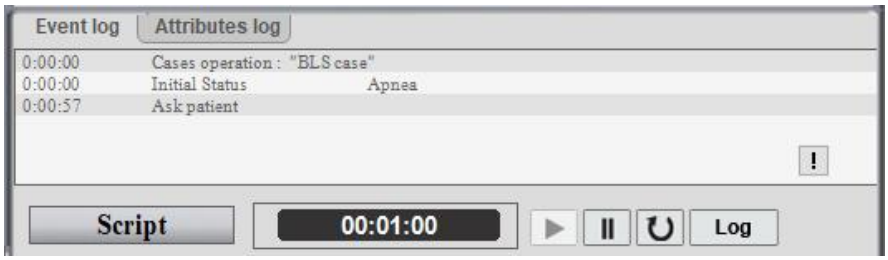
Other settings

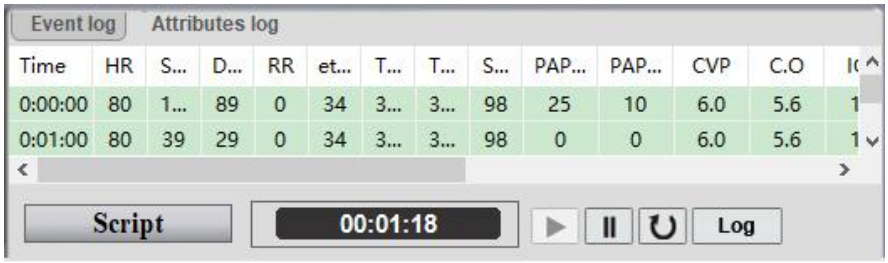
1	Normal jugomaxillary muscle or masticatory spasm
2	Pharyngeal swelling or normal
3	Normal larynx or laryngemphraxis
4	Rigid neck or normal
5	Glossauxesis or normal
6	Normal main airway or obstruction
7	Left pneumothorax
8	Left airway obstruction
9	Right airway obstruction
10	Normal gastrointestinal or gastrointestinal decompression



✧ Event and attribute log

Event log shows the event measures to do. Attribute log show the sign changes in different time of simulated human

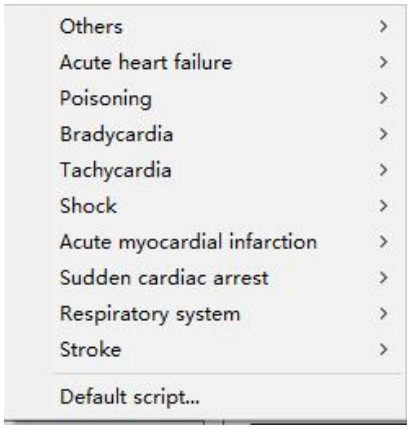




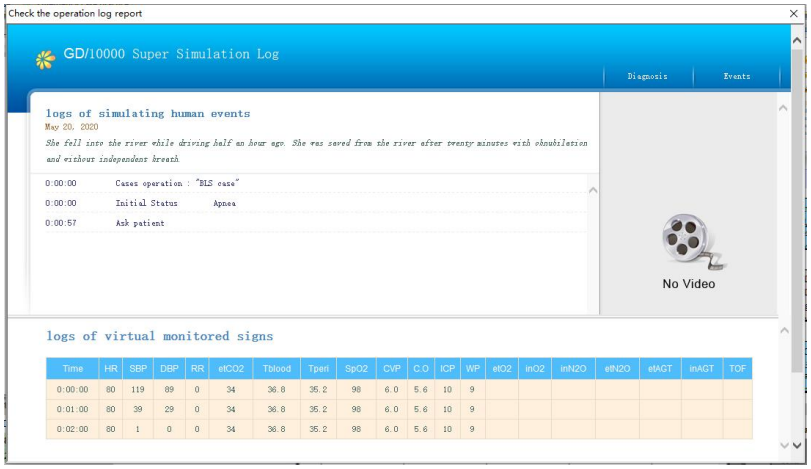
Script	Click to show the script list. Various scripts could be selected
2:07:33	The operational period of current script
▶	Run the script
⏸	Pause the script
↻	Reset the script
Log	Click to show the operational log
!	Event log adding window

Script :including all the cases of illness and custom

cases of ...



Log Able to show the event log, sign log, differential diagnosis and video of simulated human

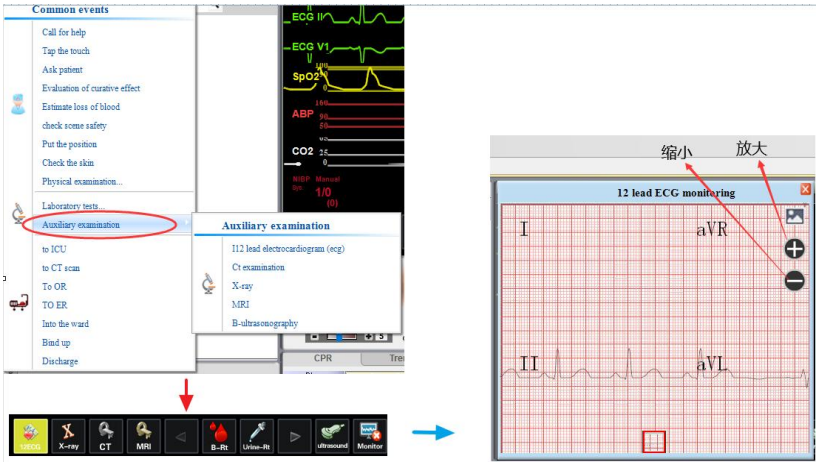


✧ Monitor parameters and diagnostic test

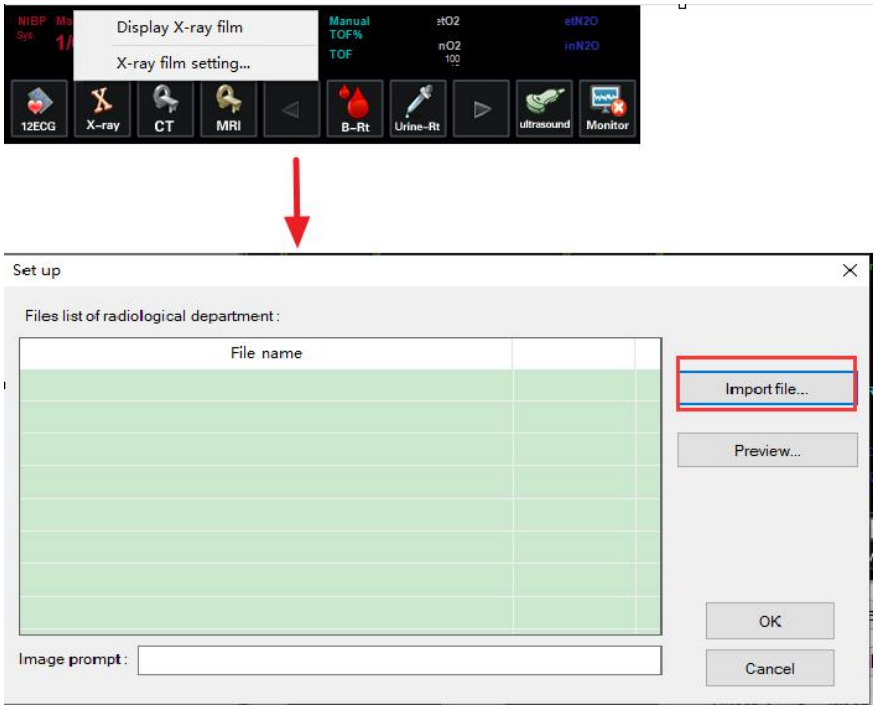
Real-time monitor every item of vital signs, including electrocardiogram, heart rate, blood oxygen saturation, arteriotony, respiration, end-tidal carbon dioxide, temperature and non-invasive blood pressure.

Select accessory examination on the left side of common event

The 12 lead ECG, the icon of electrocardiogram will flash. Click the flashing icon, electrocardiogram will appear. Amplifying and deflating the picture is available through click + or -.

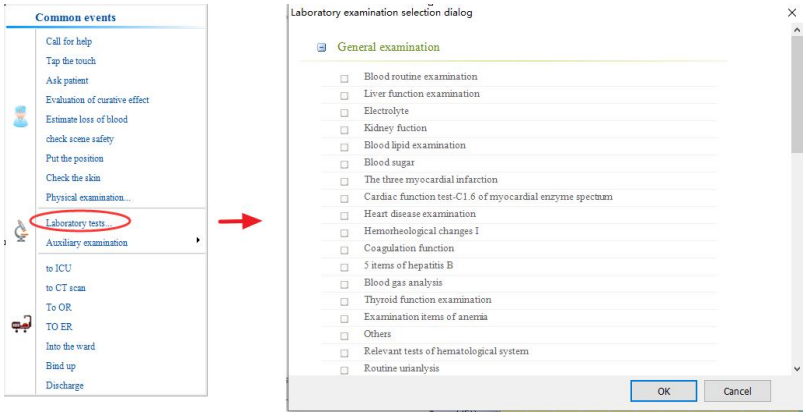


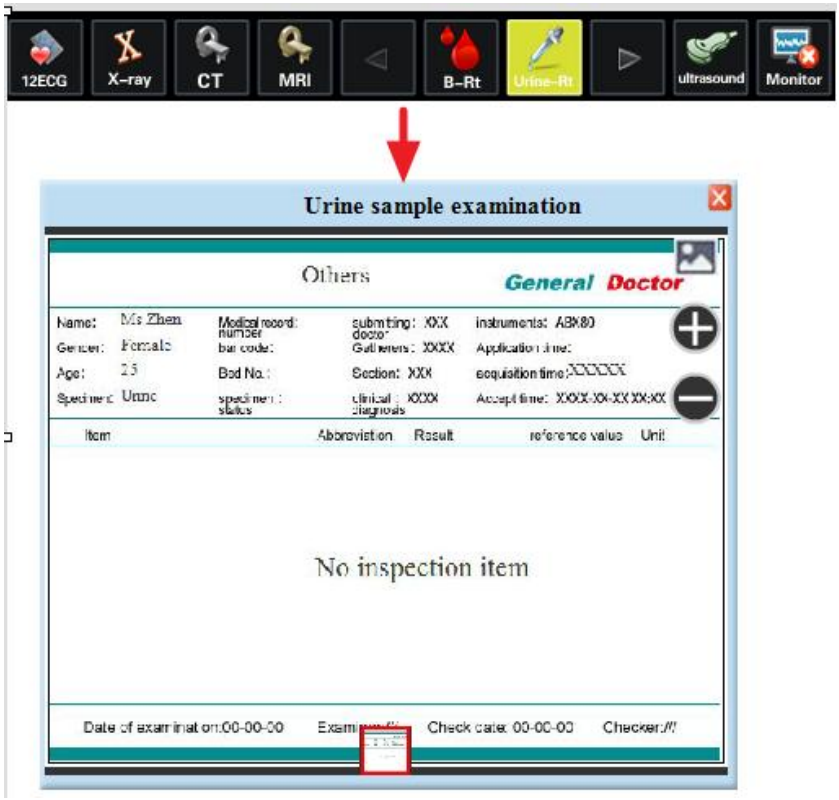
CT examination, X ray examination, MRI examination, B ultrasound examination and the 12 lead ECG. Import of pictures is available.



Select accessory examination on the left side of common event

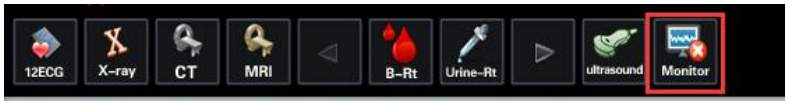
Select laboratory examination-routine urine test, the icon of uronoscopy will flash. Click the flashing icon, examination sheet will appear. Amplifying and deflating the picture is available through click + or -.



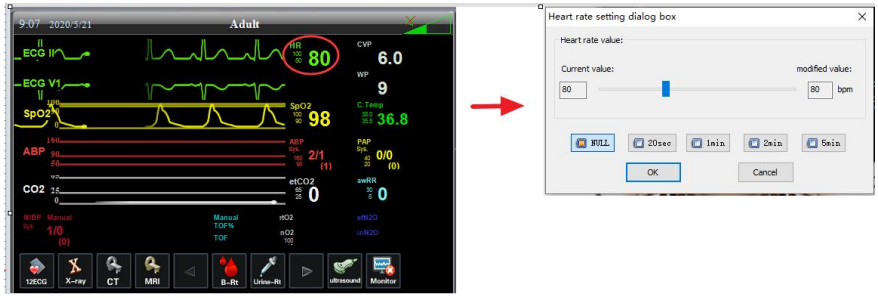


Set-up of blood and feces examination is the same as uronoscopy

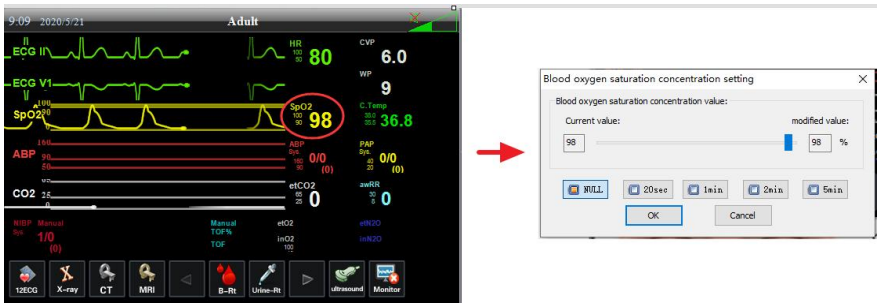
The connection of monitor: click the icon to connect monitor



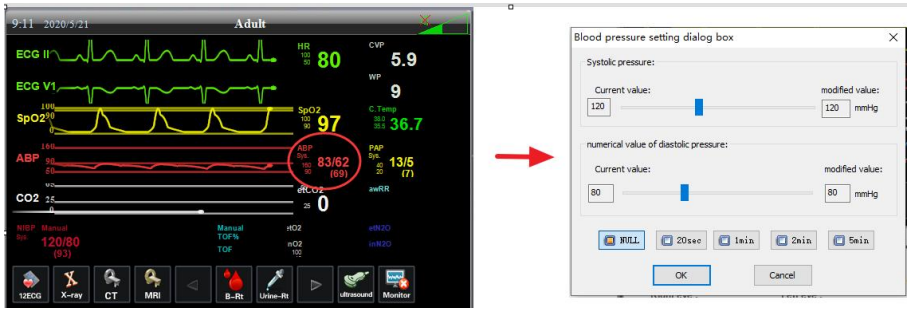
Heart rate set-up: directly click heart rate parameter to set up the heart rate.



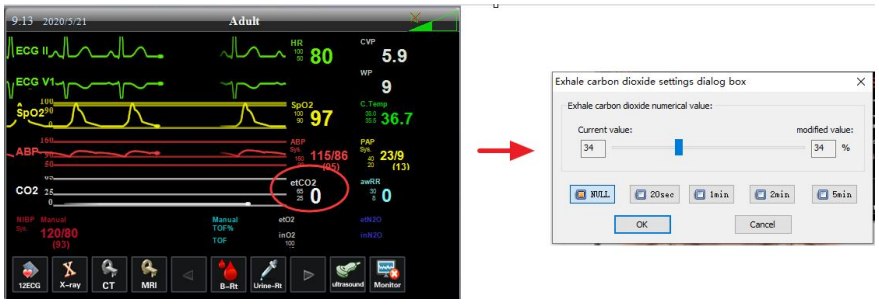
blood oxygen saturation set-up: directly click oxygen saturation parameter to set up the oxygen saturation .



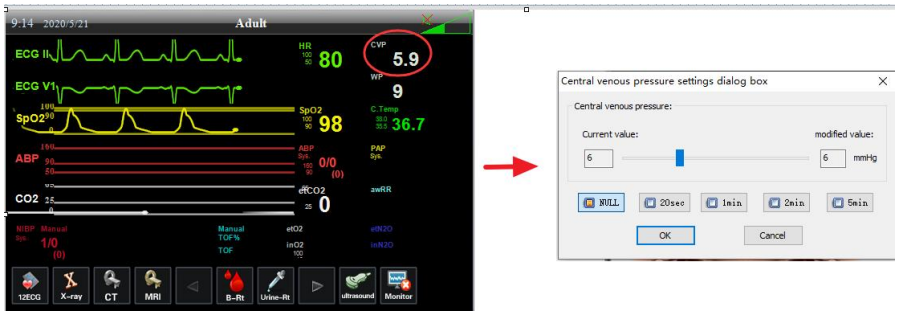
Set-up of modification of blood pressure: directly click blood pressure parameter to set up the blood pressure.



Set-up of modification of end-tidal carbon dioxide: directly click etCO2 parameter to set up the etCO2.

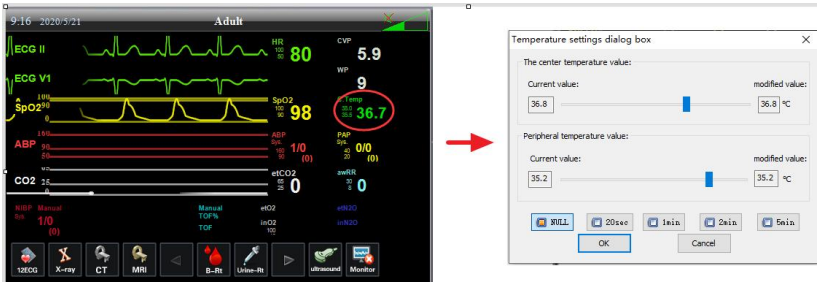


Set-up of modification of central venous pressure: directly click CVP parameter to set up the CVP.

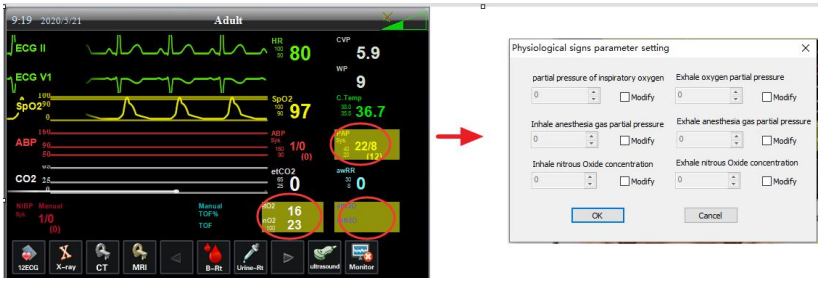


Set-up of modification of temperature: directly click temperature

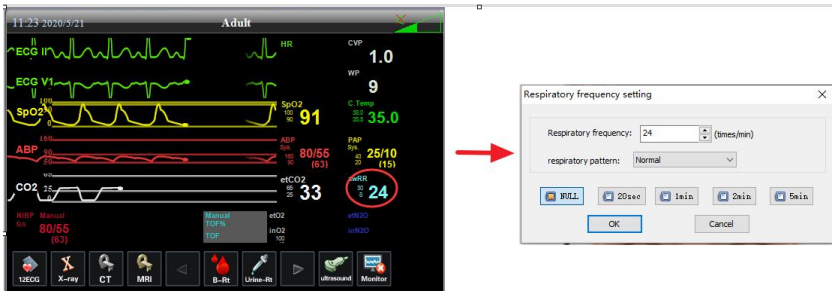
parameter to set up the temperature



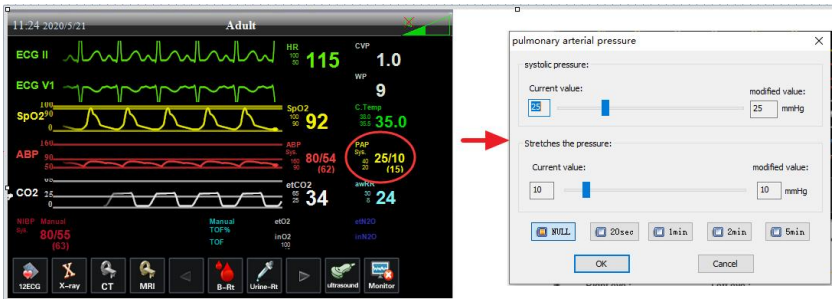
Modification of Physiological signs signal parameters set-up:



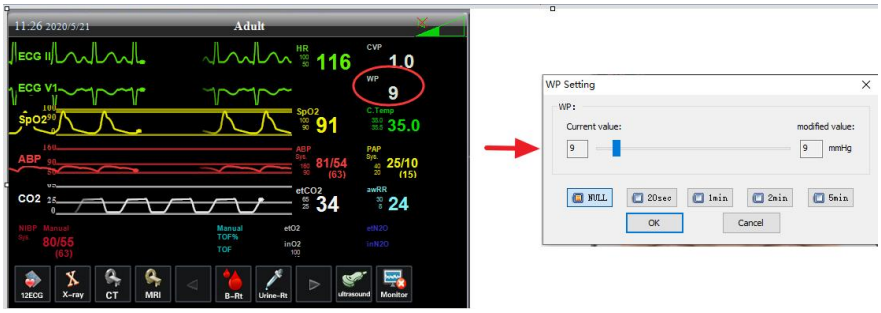
Modification of respiration set-up: directly click respiration parameter to set up the respiration



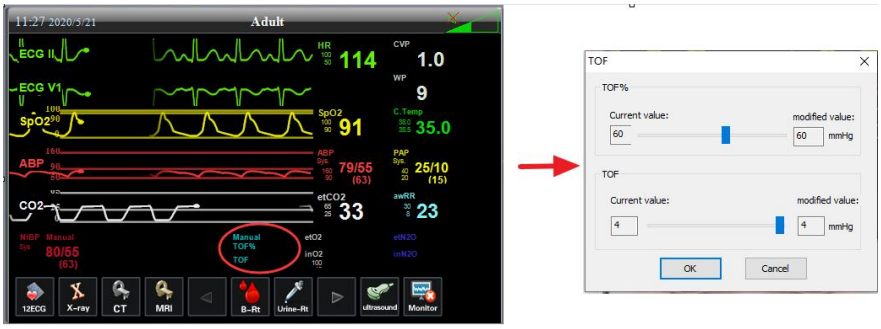
Modification of non-invasive blood pressure set-up: directly click non-invasive blood pressure parameter to set up the non-invasive blood pressure



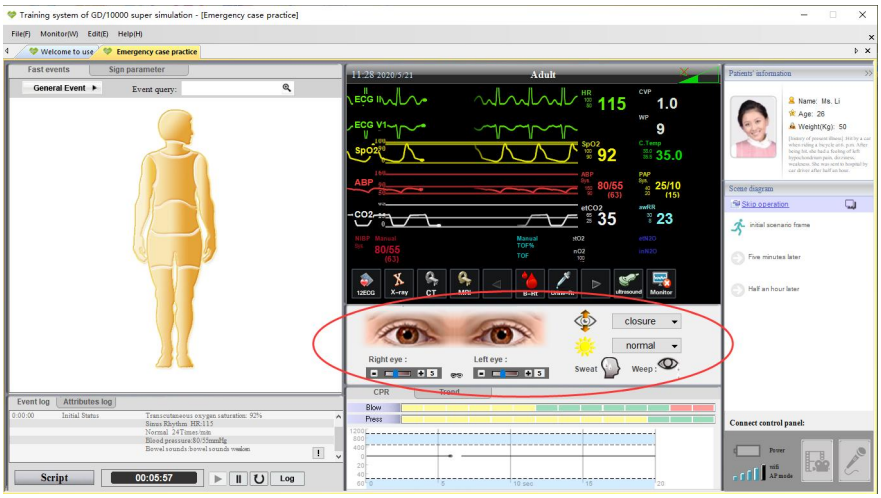
Modification of WP set-up: directly click WP parameter to set up the WP



Modification of TOF set-up: directly click TOF parameter to set up the TOF



✧ Eyes set-up

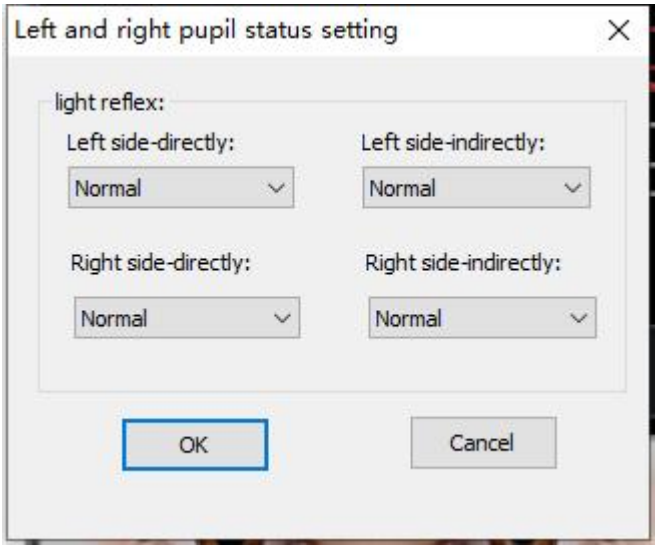


Including settings of direct or indirect light reaction of pupilla. They can be set respectively. The sizes of pupilla can be set as well.

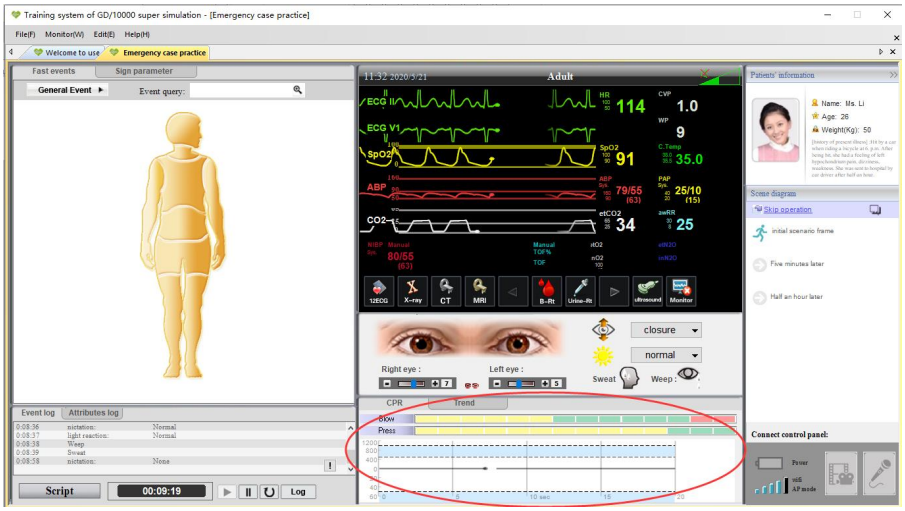
1	Right eye set-up	Set up the size of left pupil through pulling the scroll bar
2	Left eye set-up	Set up the size of left pupil through pulling the scroll bar
3	associated	When set-up the left eye, right eye will change

	set-up	the same as the left eye simultaneously if connected No change for right eye when set up left eye if it is disconnected.
4	Blink	blink Blink intervals
5	Pupilla set-up	normal abnormal set-up
6	Sweat	The simulated human will sweat on his forehead after clicking
7	Weep	The simulated human will weep after clicking

Abnormal Pupilla set-up: Including settings of direct or indirect light reaction of pupilla. There are three states, including normal, slow and no response.

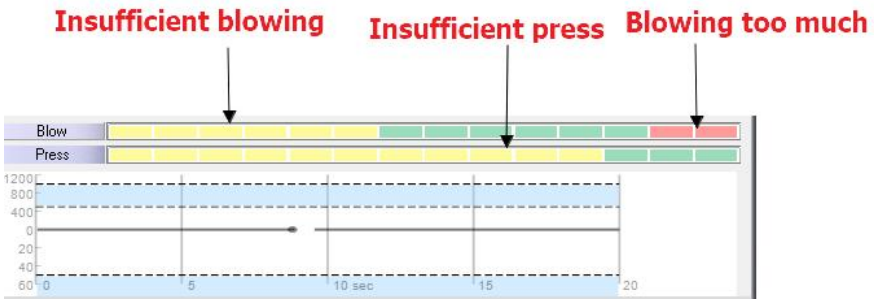


✧ CPR and trends



CPR: Conducting the CPR operation on simulated human, operational waves will be showed simultaneously; the air-blowing volume and compression depths can be shown according to bar

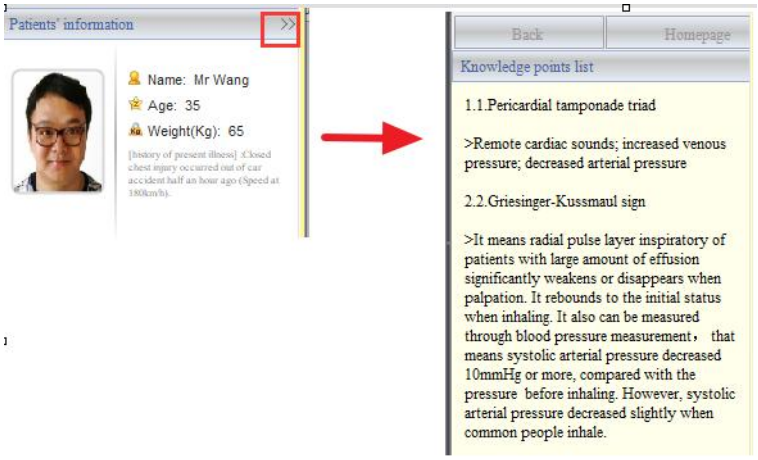
code. Insufficient or excessive air-blowing volume and compression will arouse prompt sounds.



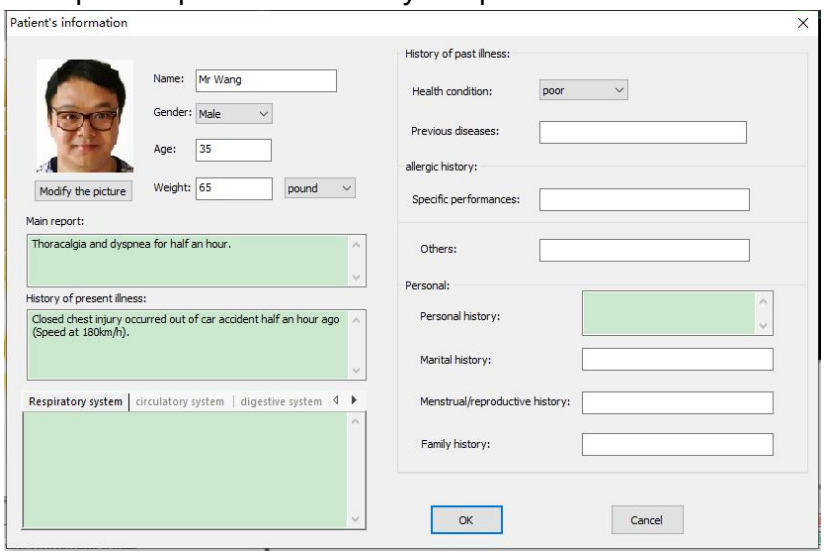
Trends set-up: Physiological signs of trends and changes of past and future could be set up, including HR, BP, SPO2, SAP, DAP, CO, CVP, and T

✧ Patient's information

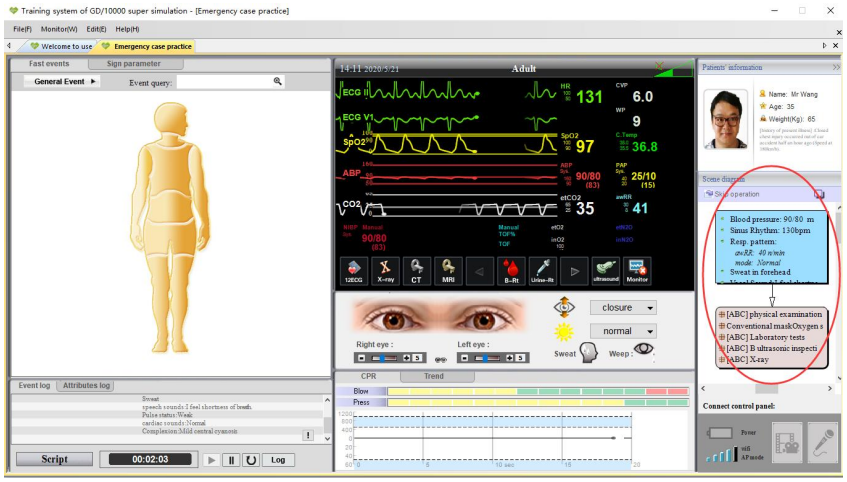
Interface shows the basic information of patient, including name, age, weight, etc. Click red frame to show the knowledge point list of cases of illness.



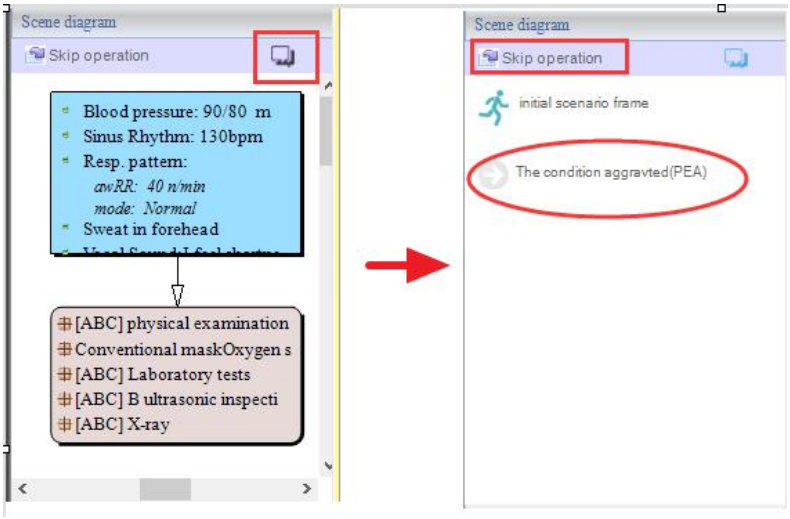
Click patient portrait to modify the patient information



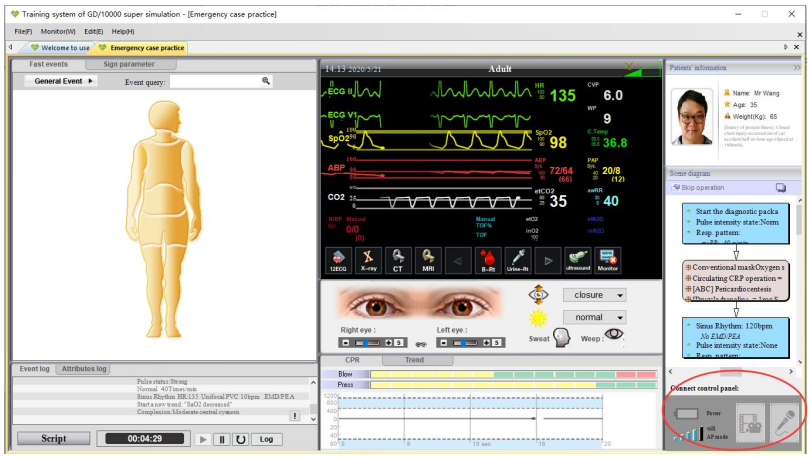
✧ Scene state



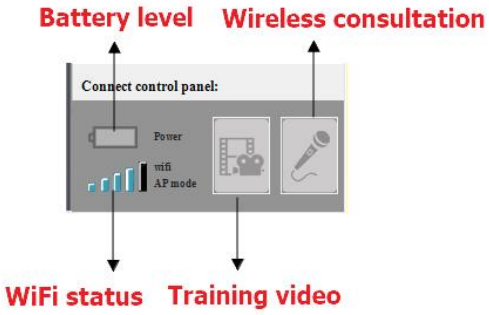
Display the currently running scene points, including scenes and events. Click the red frame on the left side will show all the scenes. Select the scene you would like to skip, just click skip.



✧ Control panel

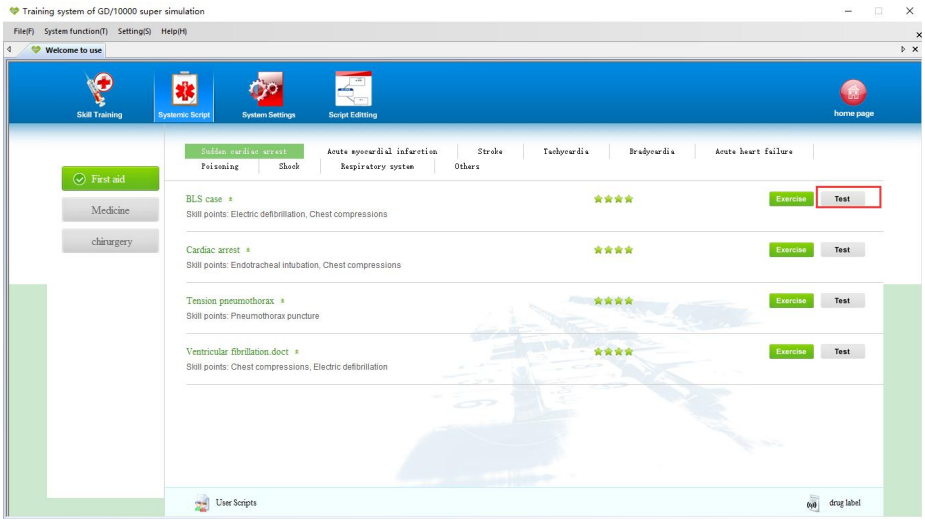


Including dump energy of batteries, state of wireless interrogation, records and replay of the training videos and state of Wifi connection.

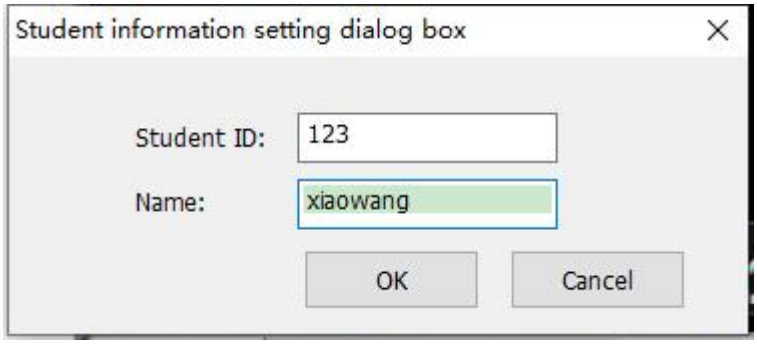


(2) Script examination

Enter script operational interface to select test.

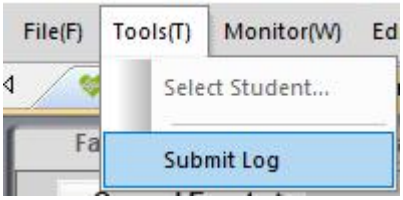


Fill the information of student



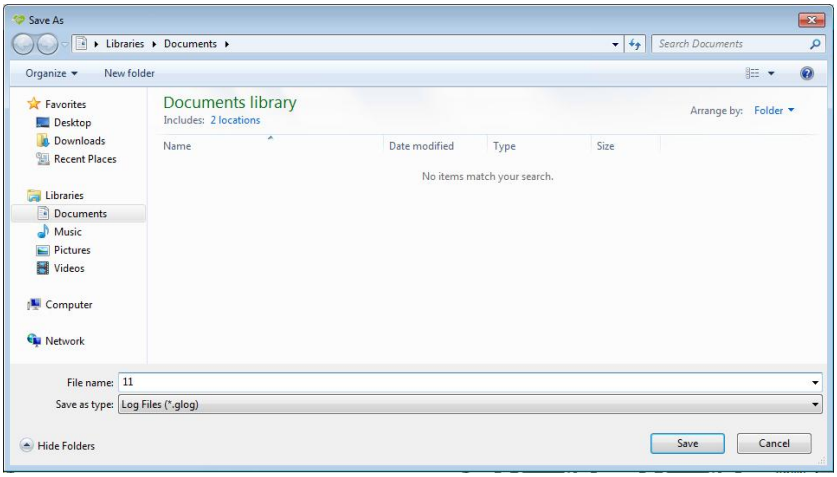
Enter the examination interface

After examination, submit operational log



Save operational log

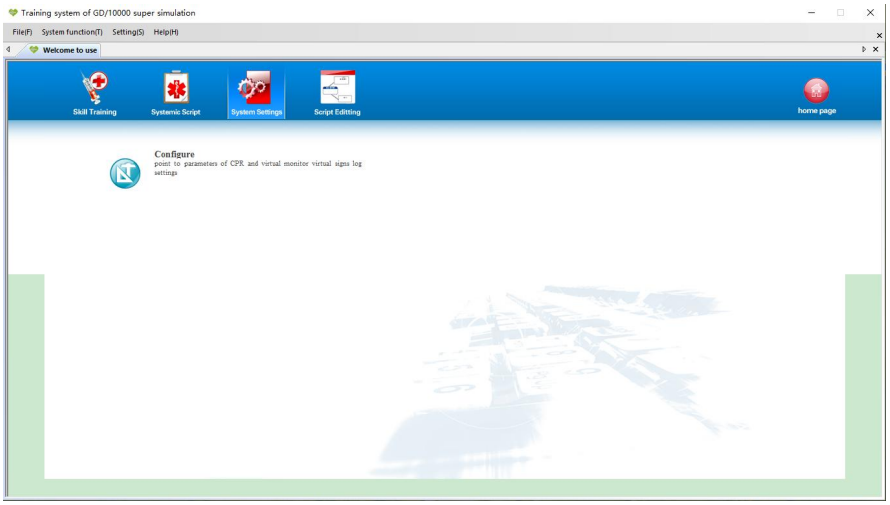
Select save path of the log



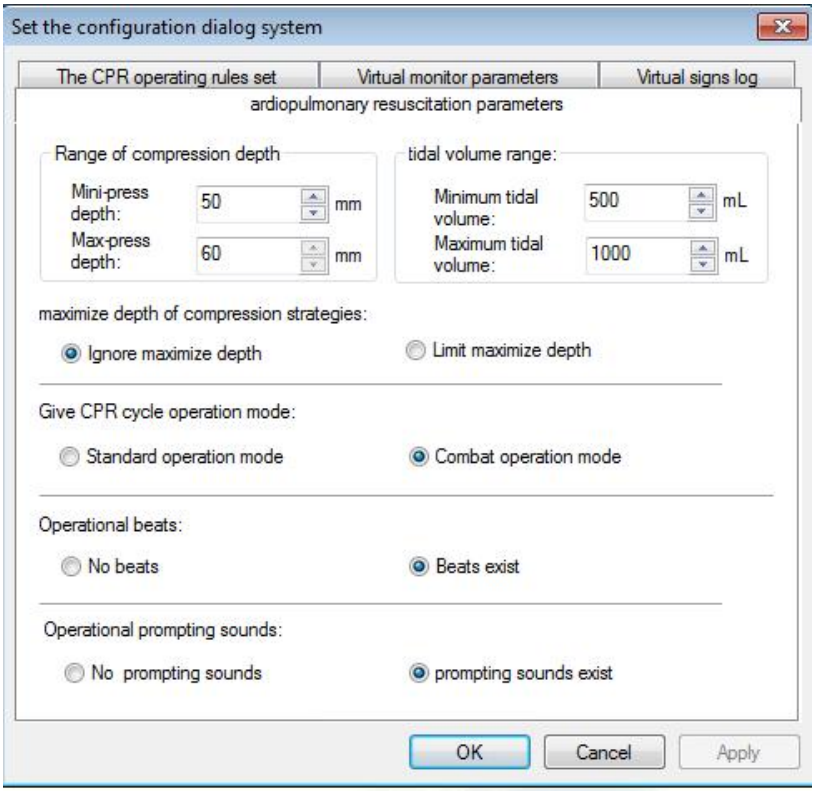
Icon of save is showed as follows

2. System setting

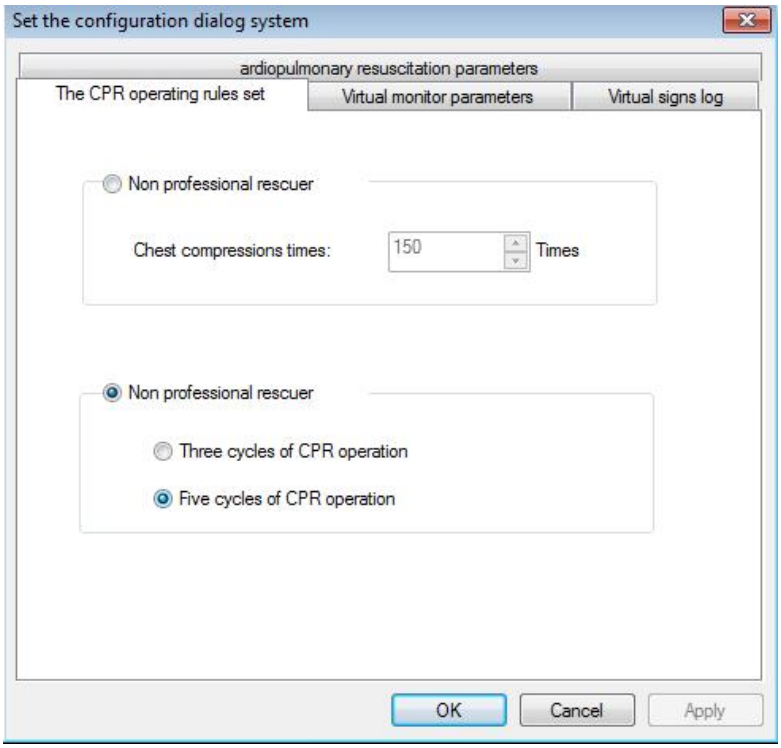
Click system setting-system configuration setting, as shown:



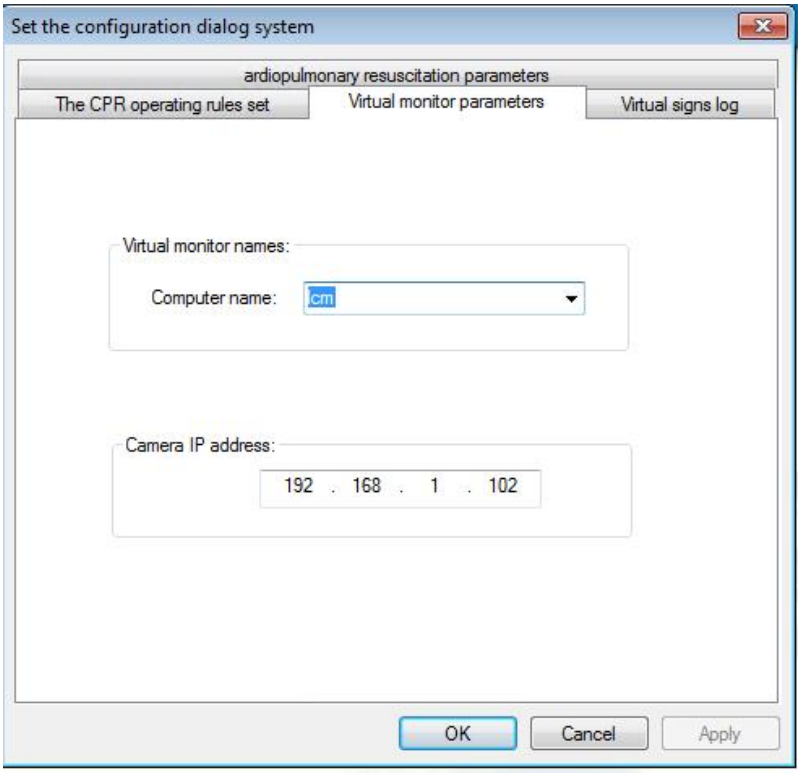
1) Cardio-pulmonary resuscitation parameter setting: compression depth and range, circulation of operation mode, operating rhythm prompt sounds and prompt sounds can be set up.



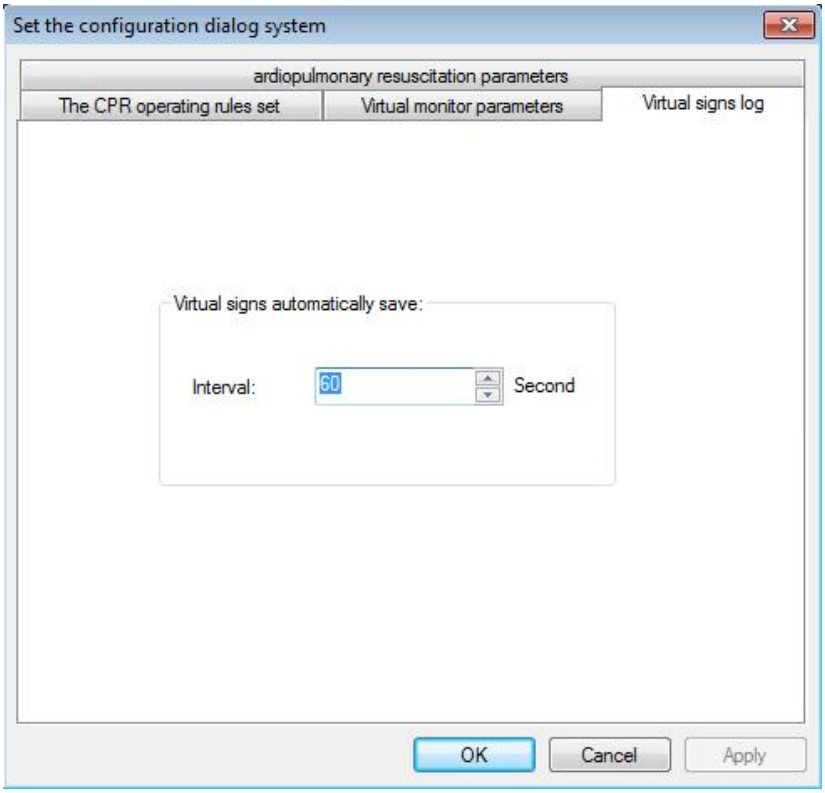
2) CPR operational rules setting: Amateur and professional rescuers are available to set up.



3) Virtual monitor parameter: computer name can be set up. And we can see whether virtual parameter have been shown, including electrocardiogram, cerebral oxygen and other physiological signs.

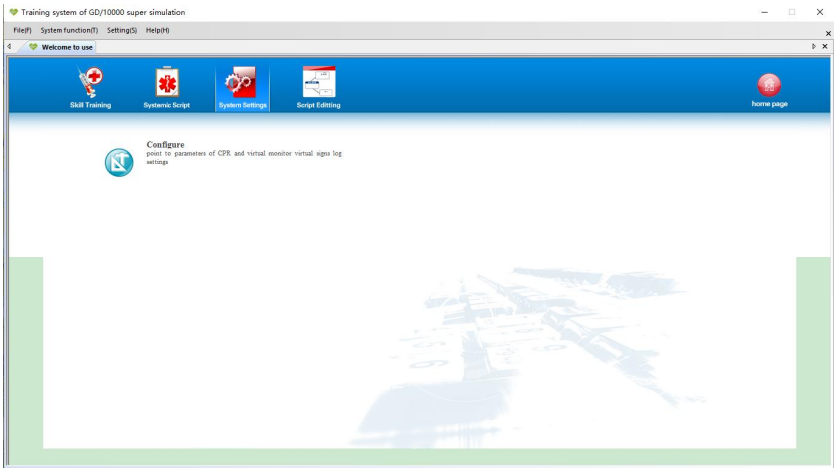


4) Virtual signs log: intervals of automatic saving of virtual log can be set up.



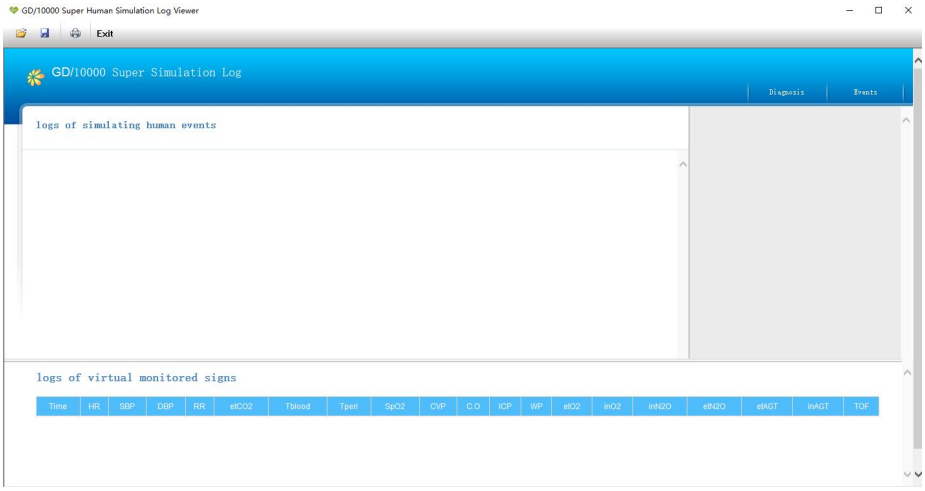
(1) Click 

to enter system setting to set various parameter. The way to set up is the same as mentioned above, as shown:



3. Check log

Click GDoctorLog.exe to directly check the log that has been saved.

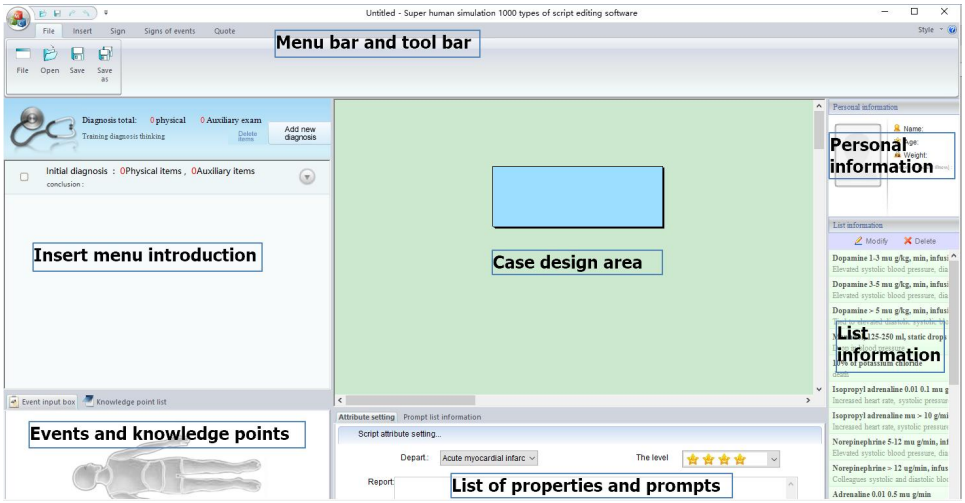


4. Script edit

(1) Click  to enter script edit software

(2) Double click GDoctorScenarioEdit.exe to enter script edit software.

(3) The interface of script edit software is as shown below



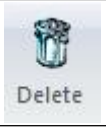
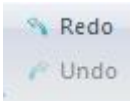
1) Menu bar and tool bar:

Document menu introduction:

File	Create new script, Keyboard shortcut is Ctrl+N
Open	Open the existing script
Save	Save currently designing script, Keyboard shortcut is Ctrl+S
Save as	Save current script as other name or location

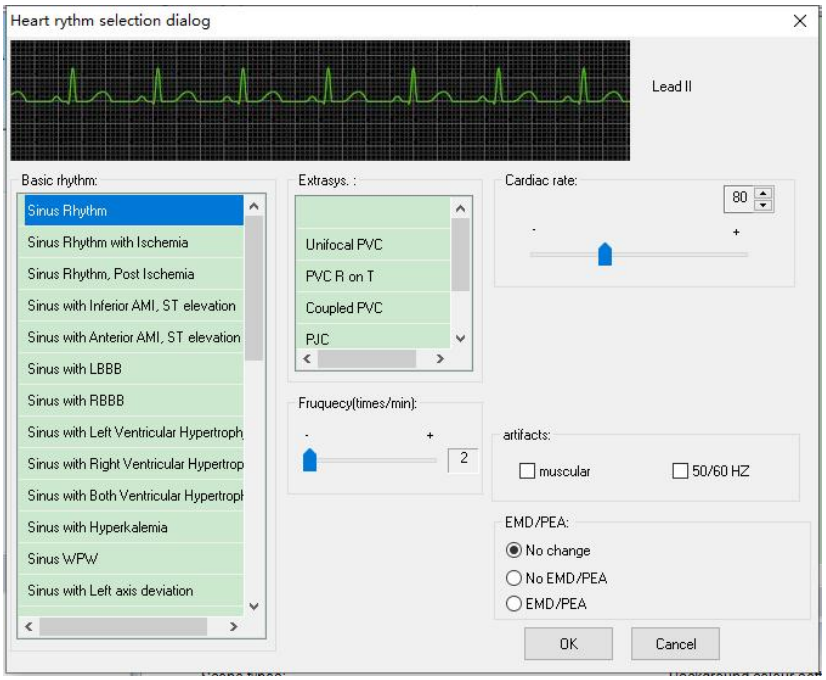
Insert menu introduction

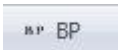
New frame	Create new scene frame
New scene frame	Create new scene frame which covers event and signs
New event frame	Create new event frame which covers selection and combination event frame 

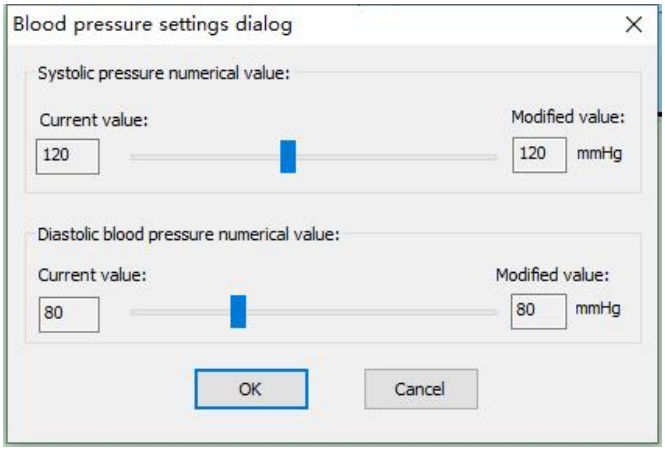
	Connect scene frame and event frame
	Delete scene frame or the element included, delete event or event in the frame, delete connector
	Revoke the user' s operations or recover user' s original operations

Signs menu introduction: including physiological parameters, symptom signs and other settings. Various signs settings could be done in the scene frames .

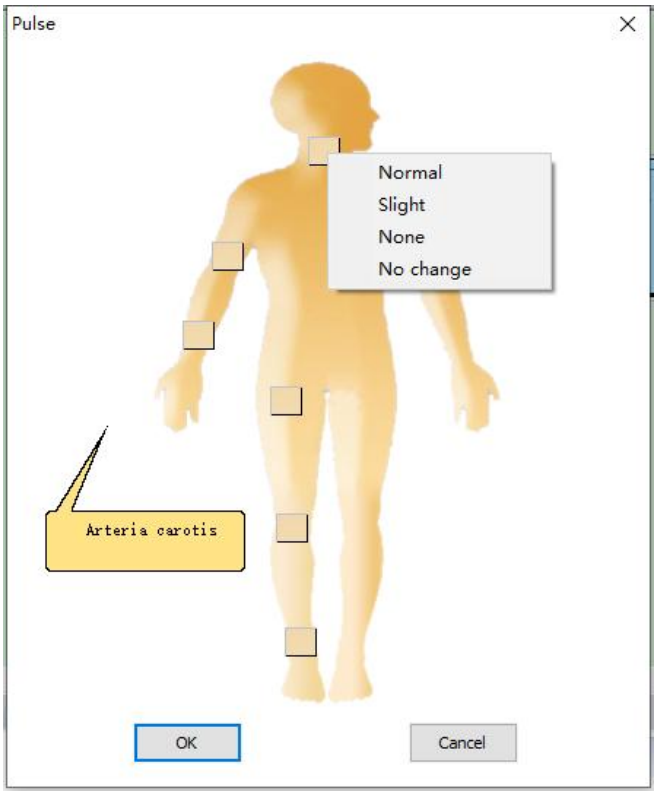
Click  to start the heart rate parameter setting



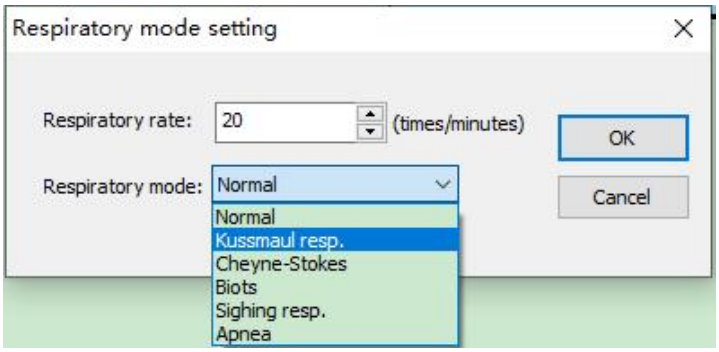
Click  to start the blood pressure parameter setting

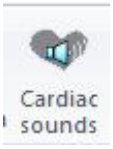


Click Pulses to start the pulses parameter setting

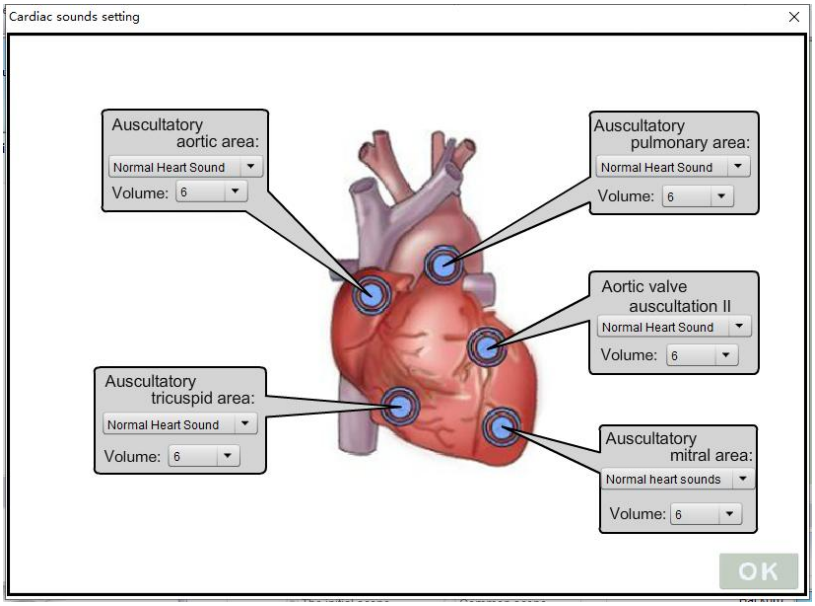


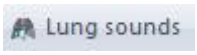
Click Resp. Pattern to start the respiration parameter setting



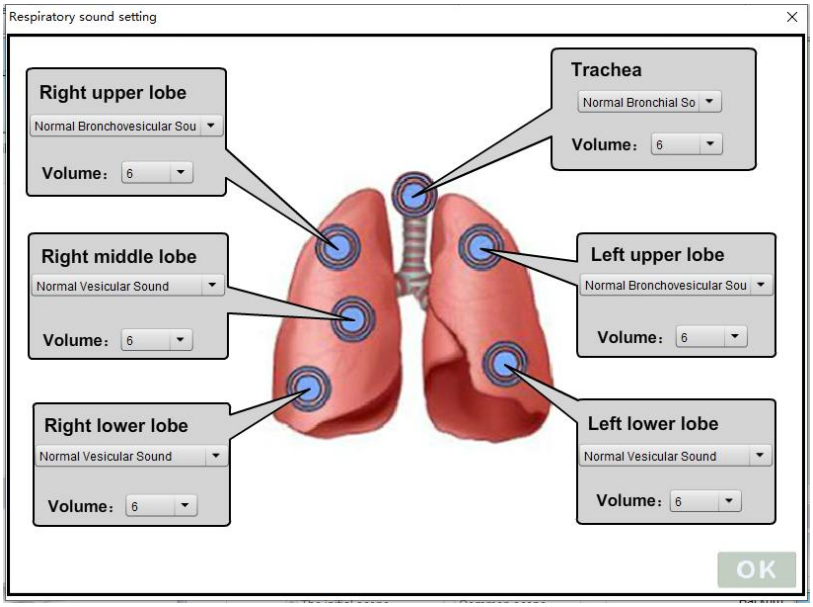
Click 

to start the cardiophony parameter setting



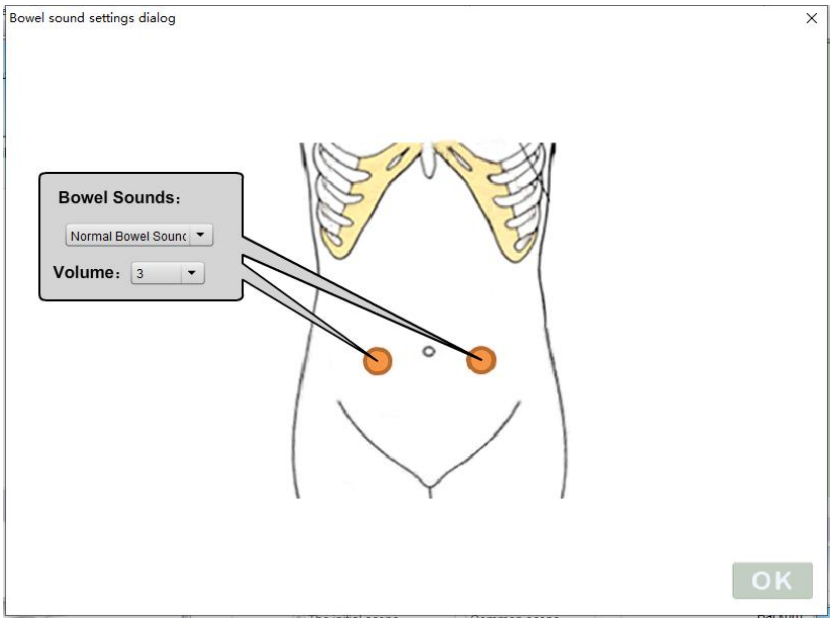
Click 

to start the respiratory auscultation parameter setting

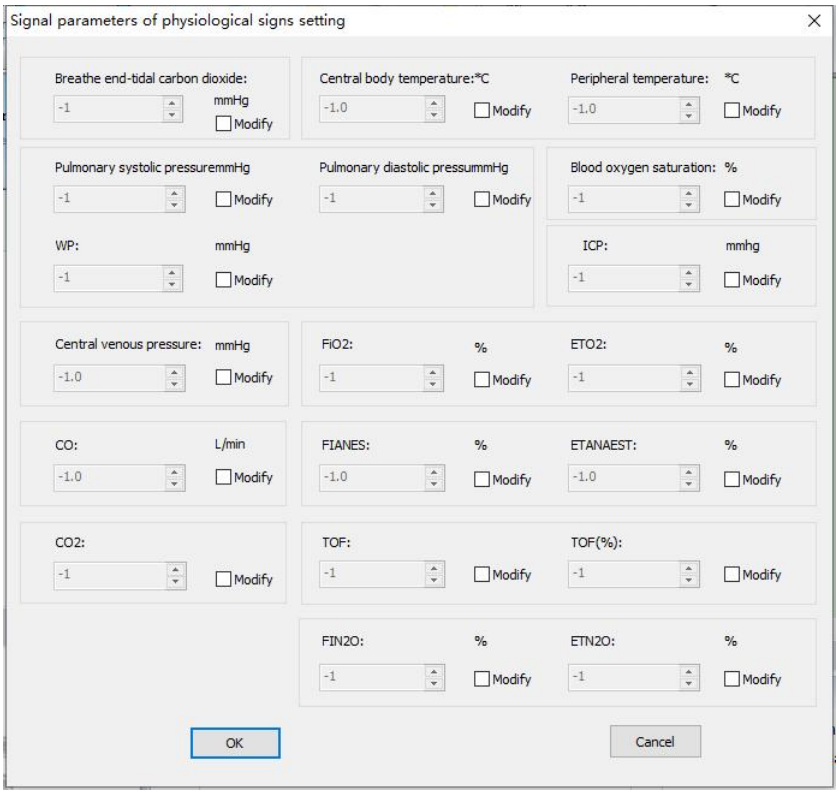


Click 

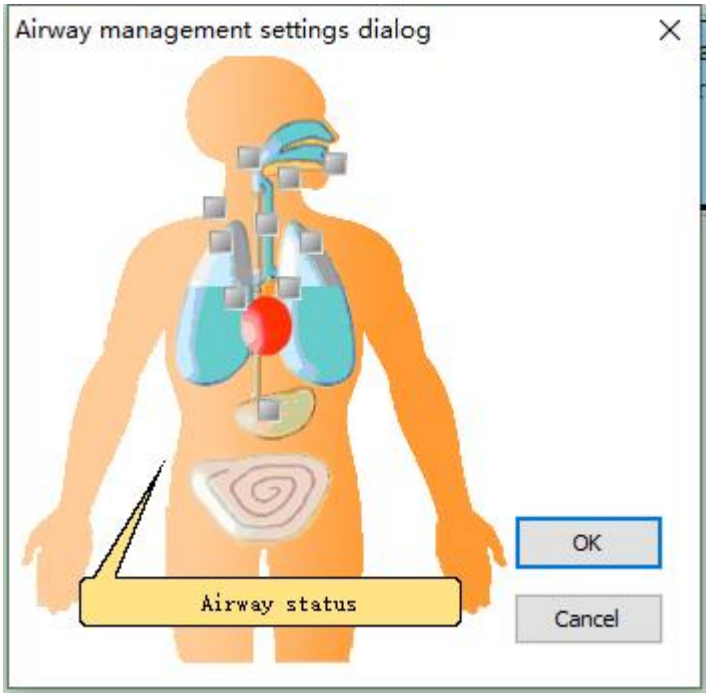
to start the rintestinal gurgling sound parameter setting



Click to start all kinds of parameter settings

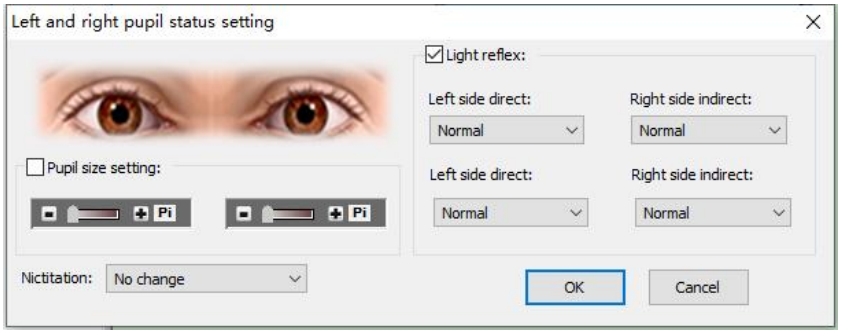


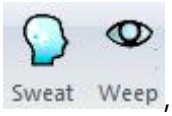
Click to start airway setting



Click 

to start pupilla setting

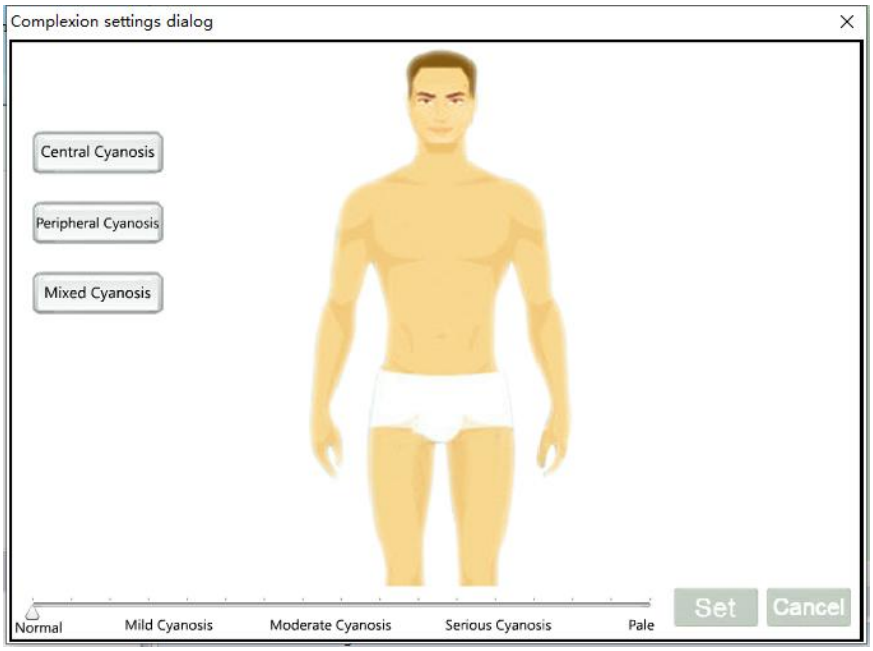


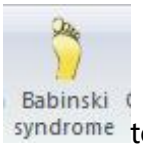
Click 

, sweat on forehead and weep will be shown on the scene frame

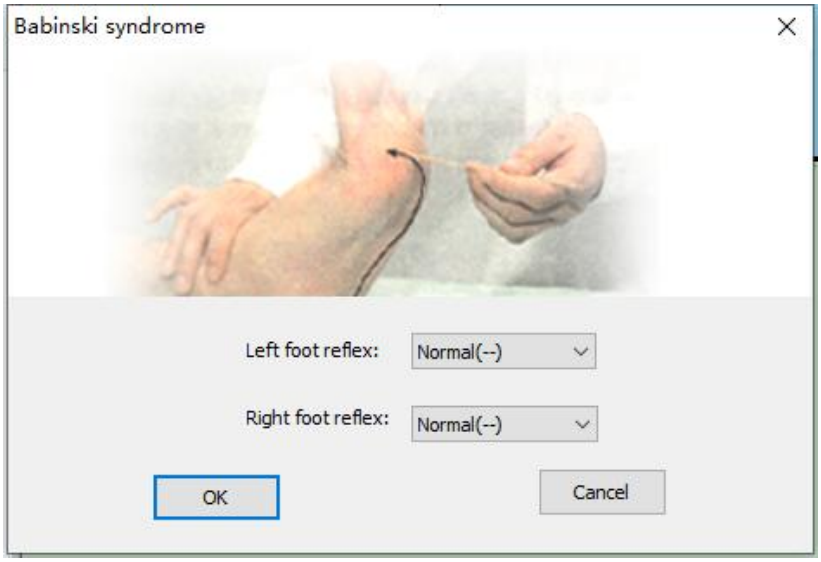
Click 

to start cyanosis setting of simulated human

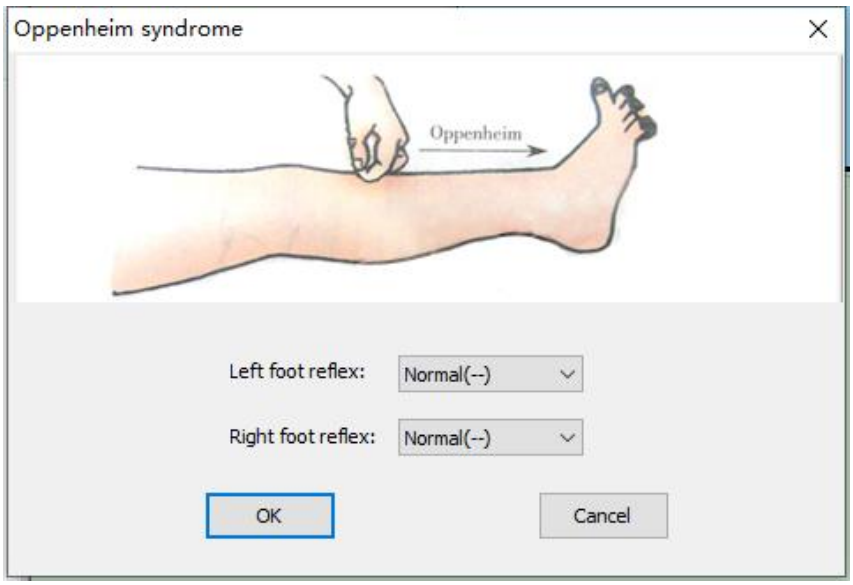




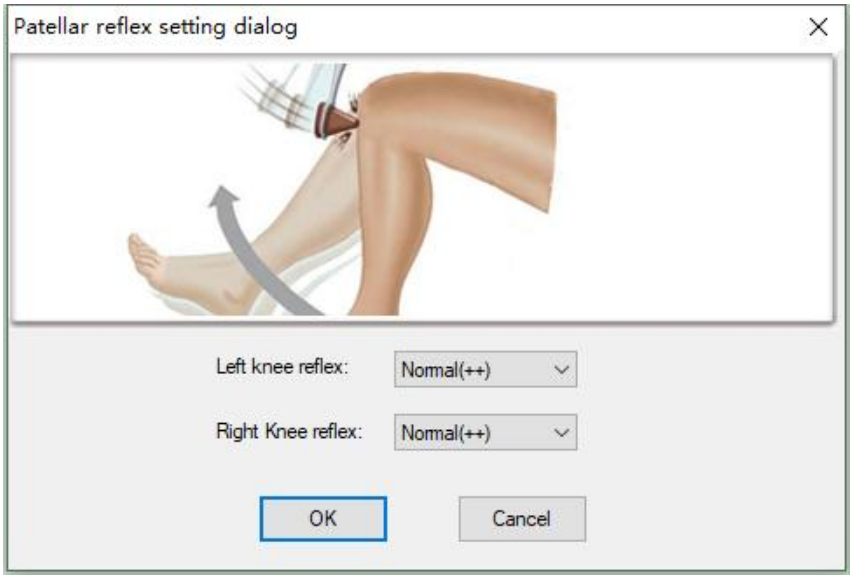
Click to start setting of plantar nerve reflex.

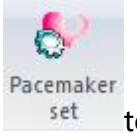


Click to start setting of shin nerve reflex.

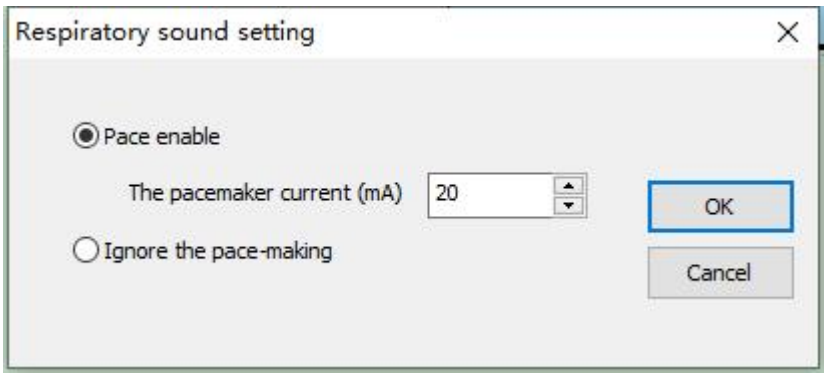


Click to start setting of nerves of knee reflex.

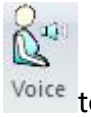




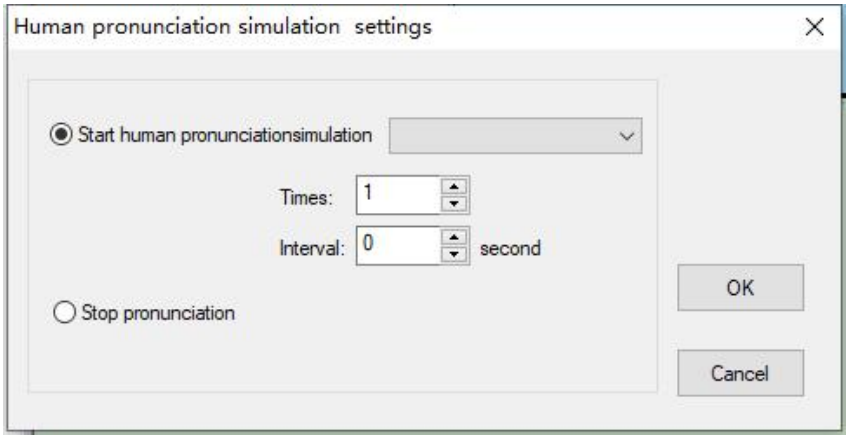
Click to start setting of pacing. Different pacemaker current can be set up.

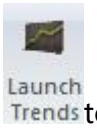


。

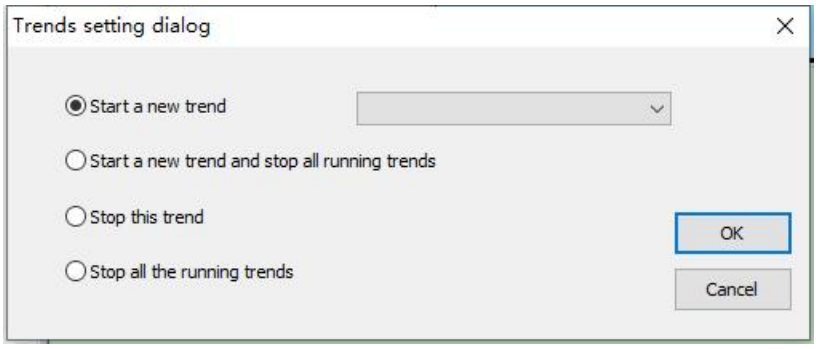


Click to start setting of articulation of simulated human. System offers multiple simulated sounds. Play times, intervals or pause articulation can be set.



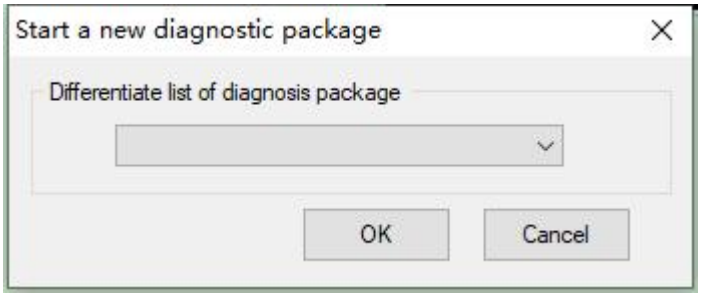


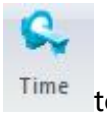
Click to start setting of trends of simulated human. Firstly set up the trend in the quote menu, then come to here to set up.



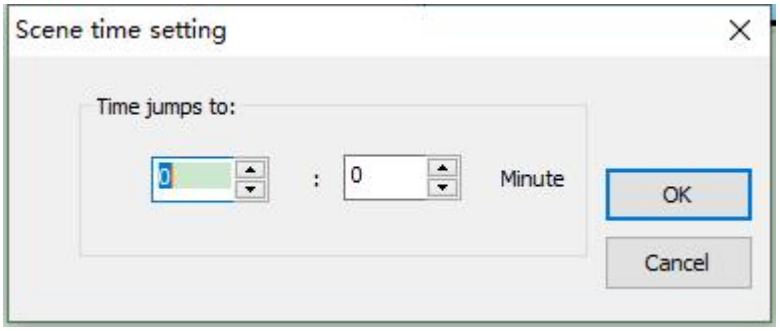
Click to start new diagnostic package. Firstly set up in

the diagnosis project and name .



Click 

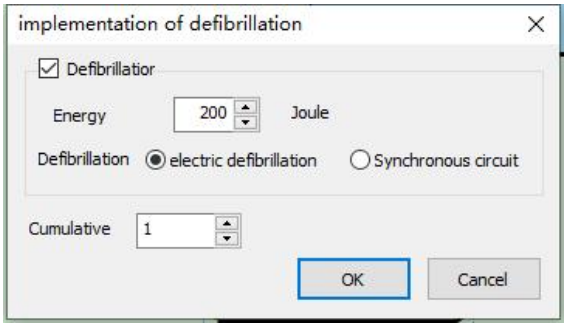
to start setting of scene time.

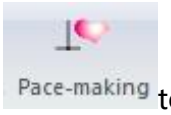


Sign event menu introduction: including event item and others. Different event settings could be done in the event and scene frames.

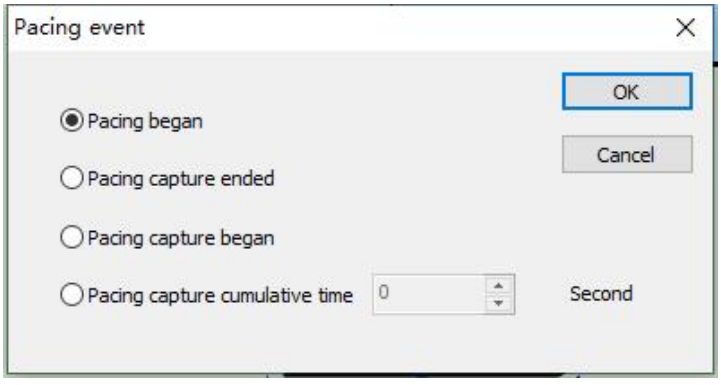
Click 

to start setting of defibrillation times.



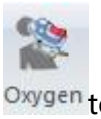
Click 

to start setting of pacing event parameter.

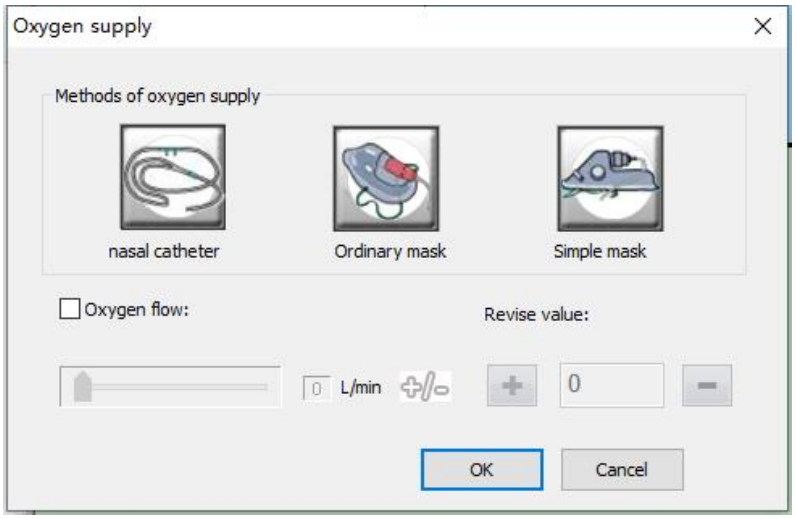


Click 

to show trachea cannula in event frame

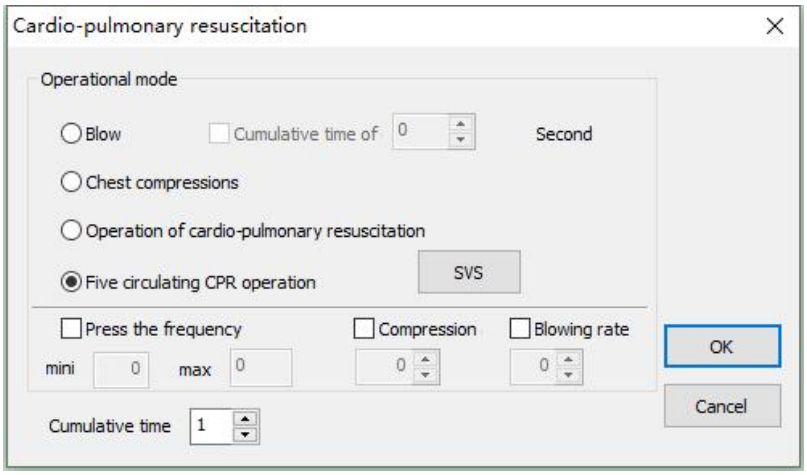
Click 

to start setting of parameter of oxygen supply.



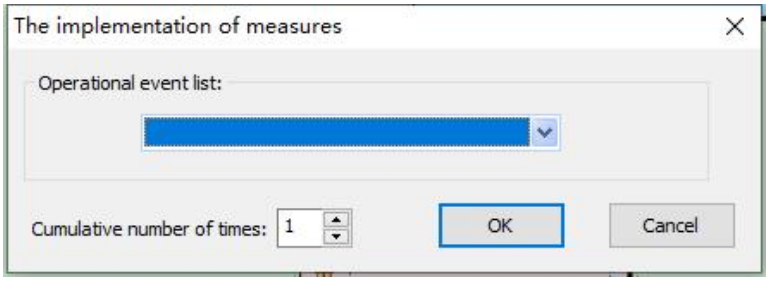
Click 

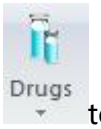
to set parameter of cardio-pulmonary resuscitation.



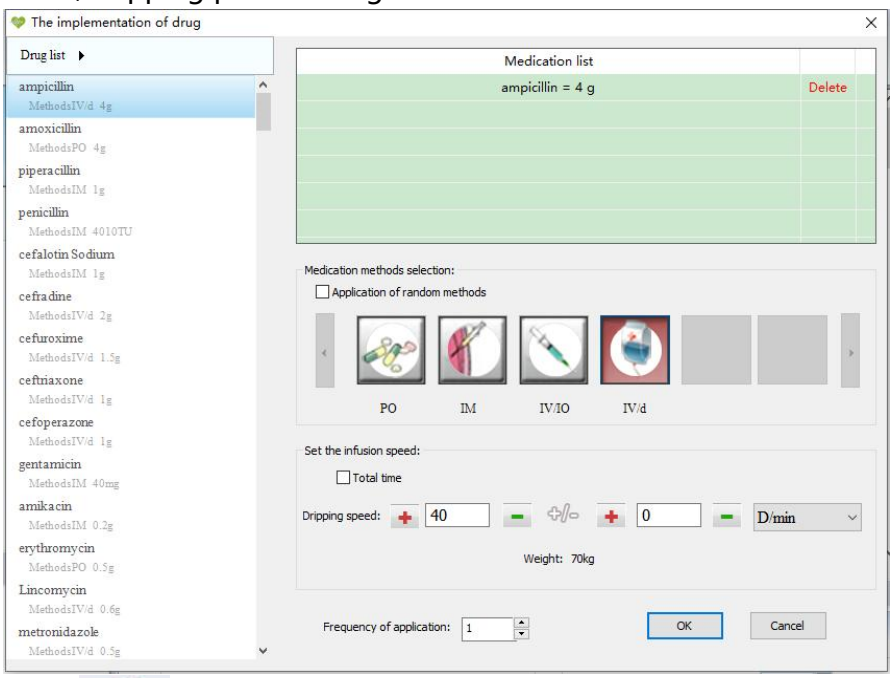
Click 

to set the item of measures for the implementation. Select event in the pull-down menu. Time of event execution can be set up.

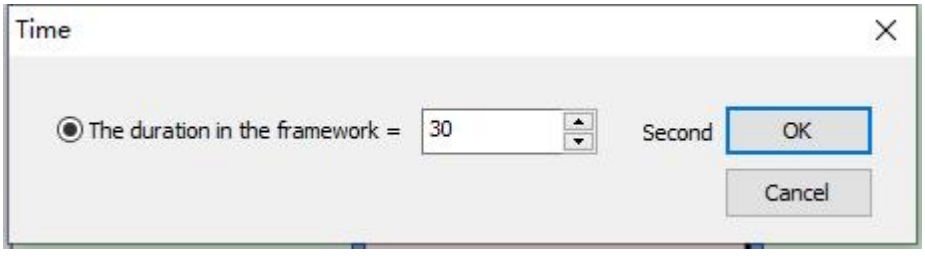




Click to set the drug, including parameters of methods, time, times, dripping pace of drug administration.

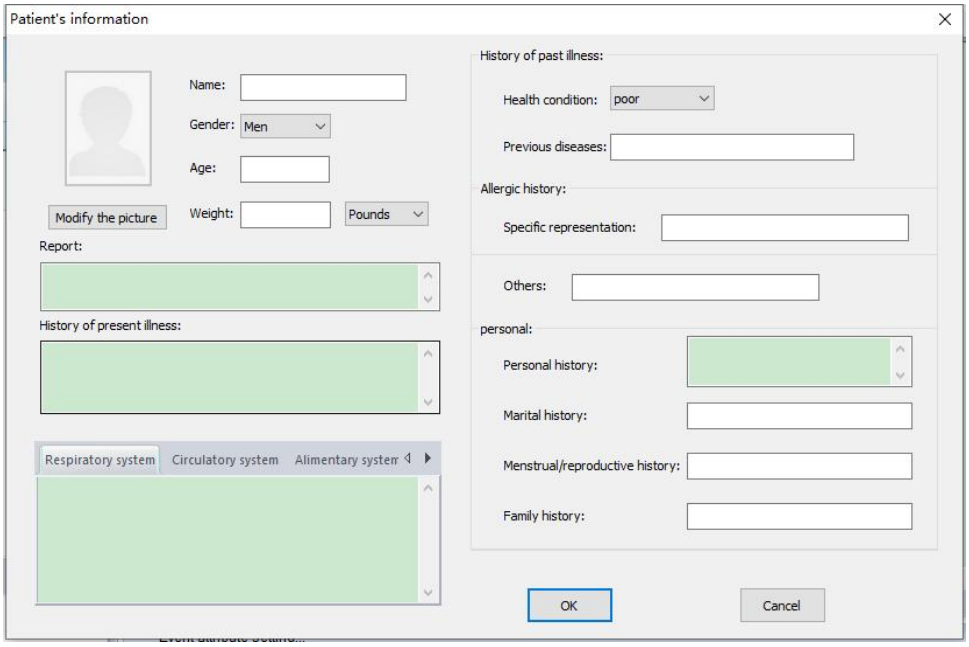


Click to set the patients' time and duration in the frame

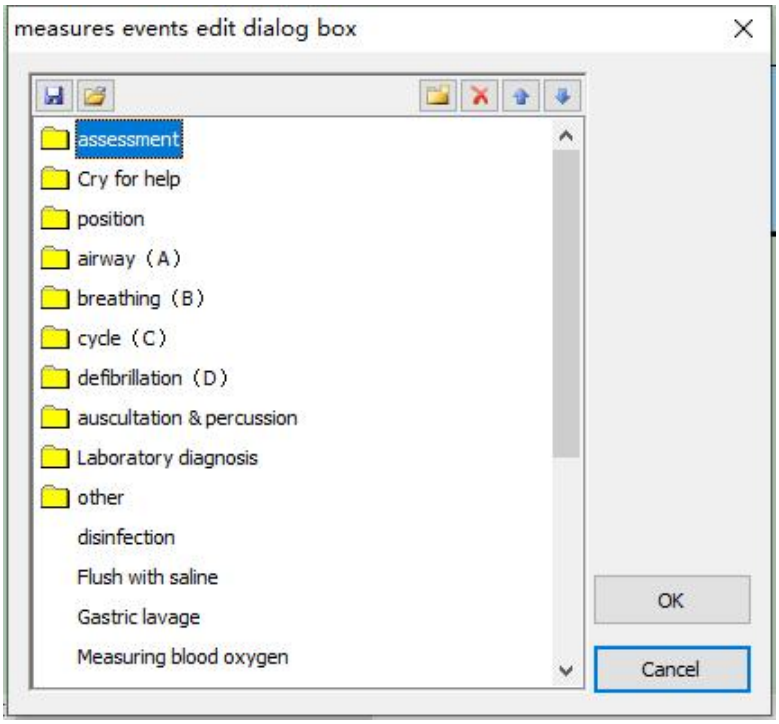


Quote menu introduction:

Click to set the patients' information including name, gender, age, weight and chief complaint. history-taking of presenting complaint, physical examination, etc.

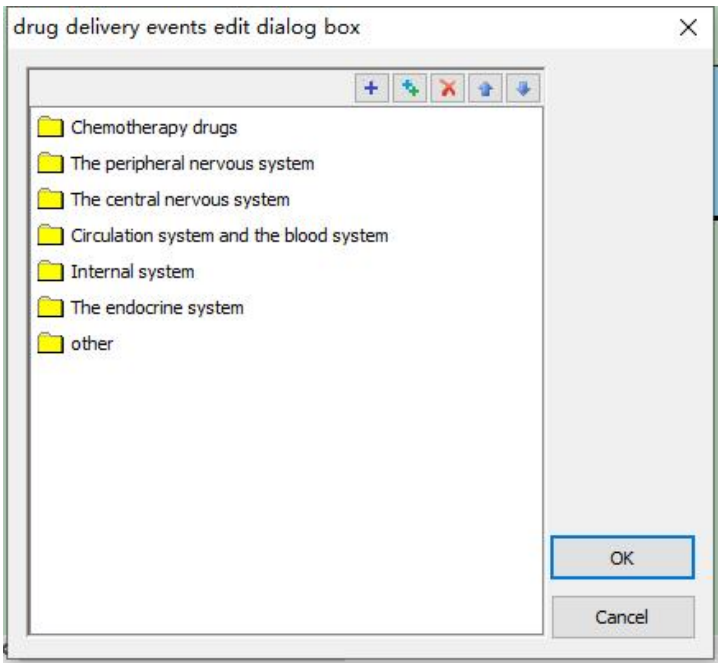


Click to set the implementation of measures. save added event. restore systematical default event list. add new event. delete added event. selected shift up shift down



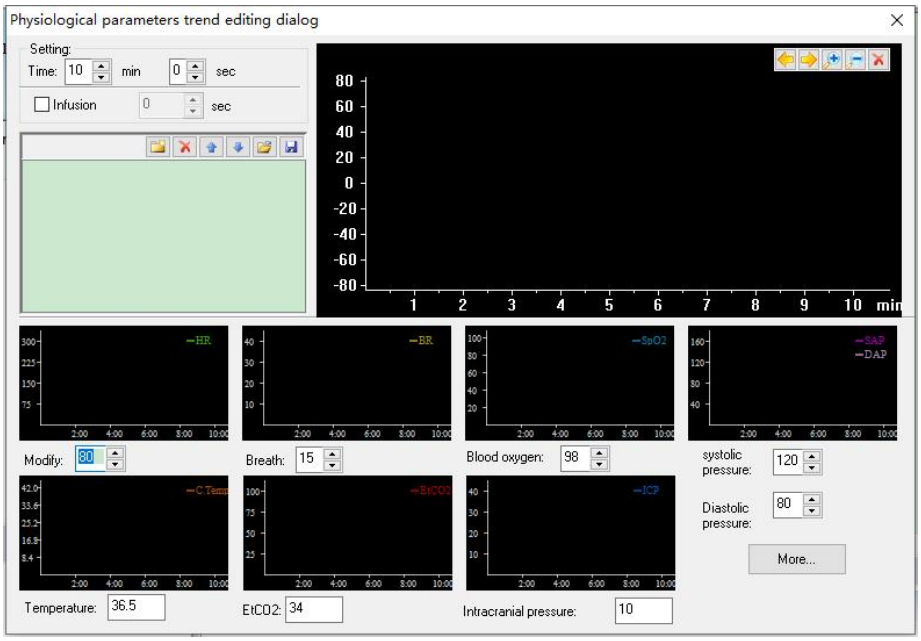
Click 

to show drug supply list frame to select drugs needed.  add classification,  add new drugs,  delete added drugs,  shift up,  shift down



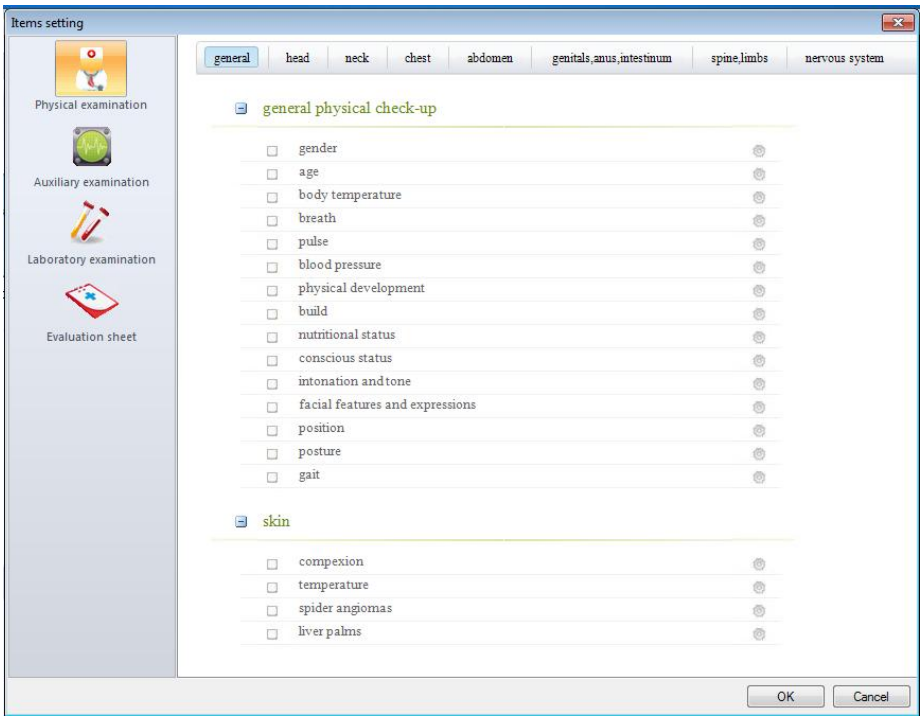
Click 

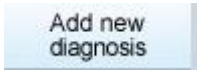
to set up the trends.  create new trend,  delete trend,  shift up,  shift down,  open other location trend,  save trend.  amplify trend,  deflate trend, the starting point and recovery time can be set up



2) Diagnosis item: including physical examination, accessory examination, laboratory examination and evaluation sheet.

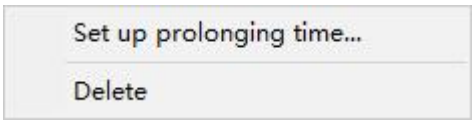
Double click initial differential diagnosis, dialogue box of diagnosis item will appear. Then select the item needs to conduct.

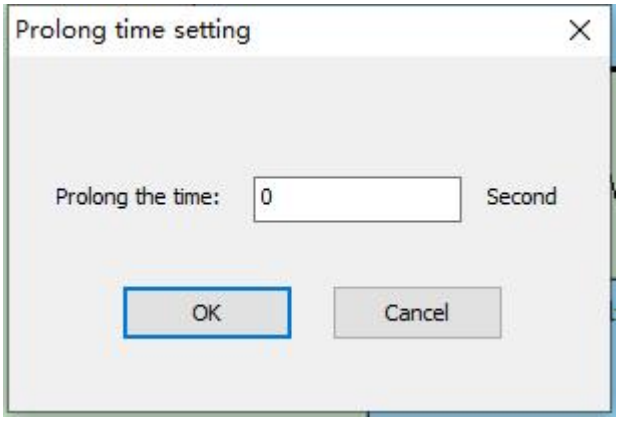


Click 

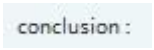
, new diagnosis dialogue box will appear. Input diagnosis name to add new diagnostic package

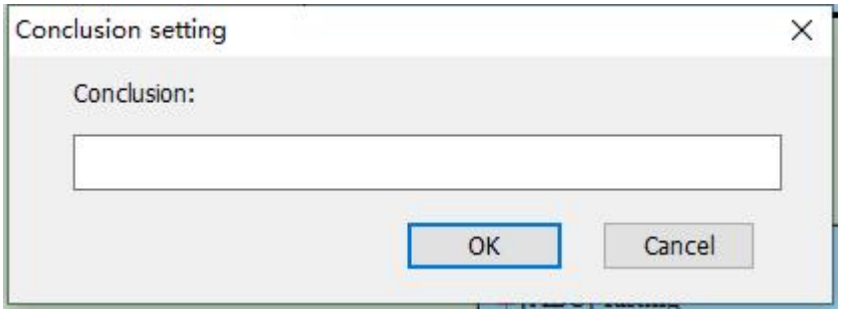
Click  to delete diagnosis or set up prolonged time of diagnosis

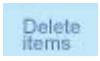




After completion of diagnosis, fill out the diagnostic conclusion, click



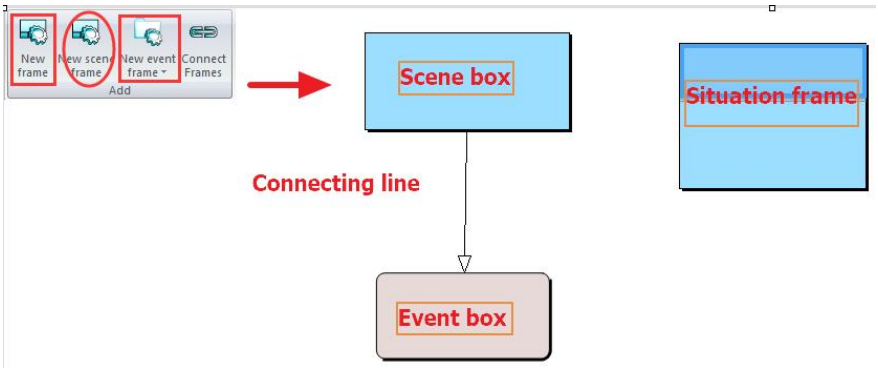


Select diagnostic package you need to delete, click 

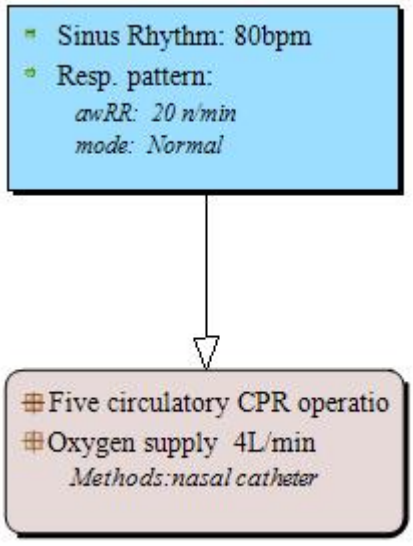
to delete the diagnosis.

3) Design district of cases of illness:

Select insert- create new scene frame, ... and event frame in the menu bar. Adding scene frame,...and event frame is available in design district of cases of illness

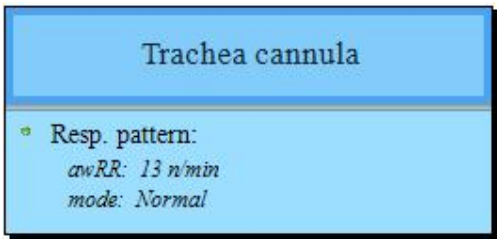


Double click scene frame to add various physiological parameters; double click event frame to add event.



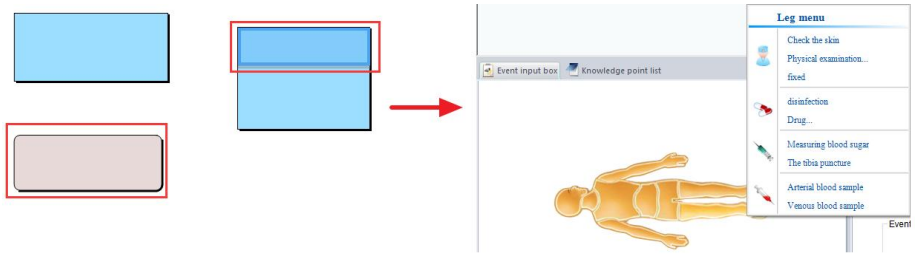
Scene frame is divided into two parts. The upper part is event frame, the lower part is .... Which means the state of transformation of

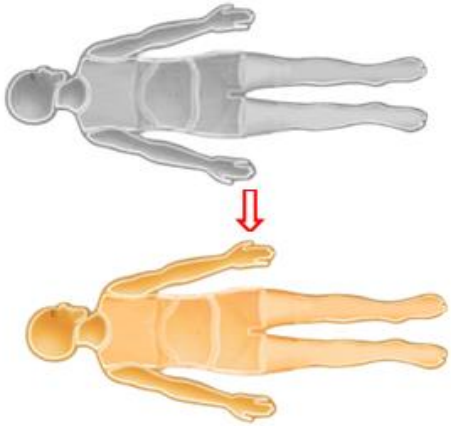
physiological parameters in the scene frame after completion of events in the event frame



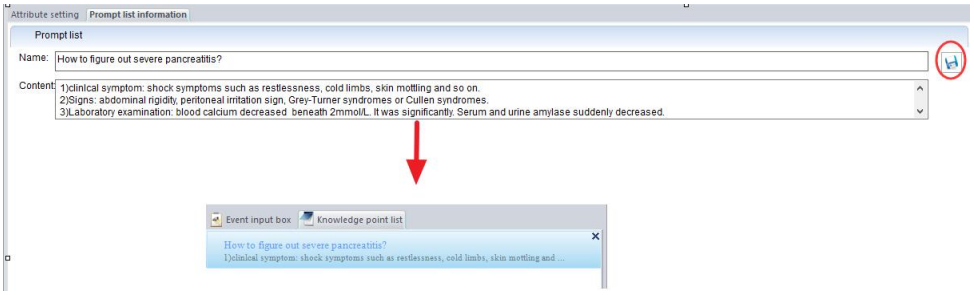
4) Event and knowledge points list:

Double click the event frame in design district of cases of illness. Pictures turn color from gray. Different parts can be clicked to select event.





Knowledge point list: input the script knowledge point of cases on the right prompt side , click save (red frame), then it could be shown in the knowledge point list.

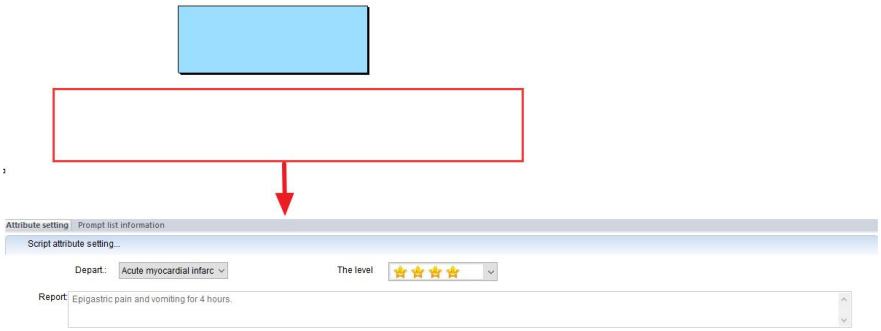


5) Attributes and prompts list setting:

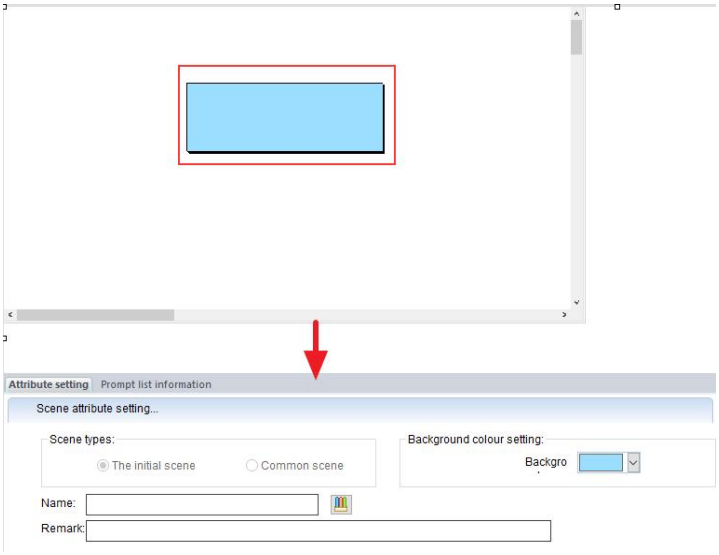
Attributes include settings of script attributes , scene frame attribute setting, event frame attribute and scene frame attribute

Click the blank area in the designing area of cases to set up the script

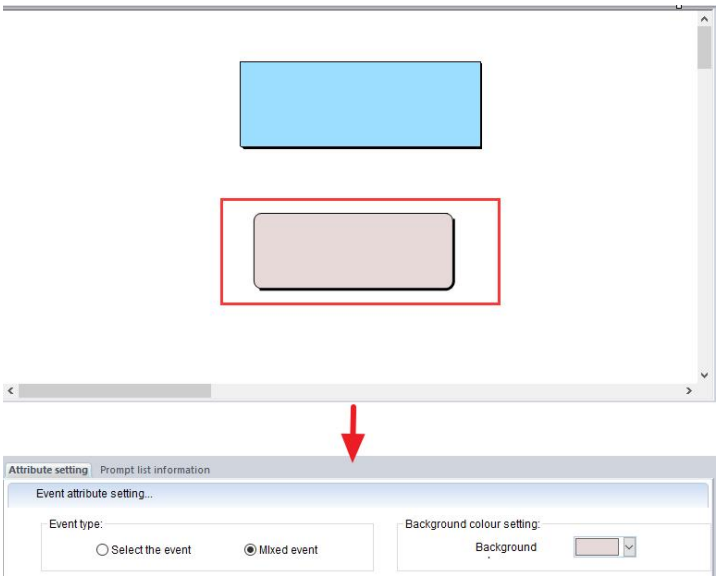
attribute including departments, level of difficulty of script, chief complaints of patients.



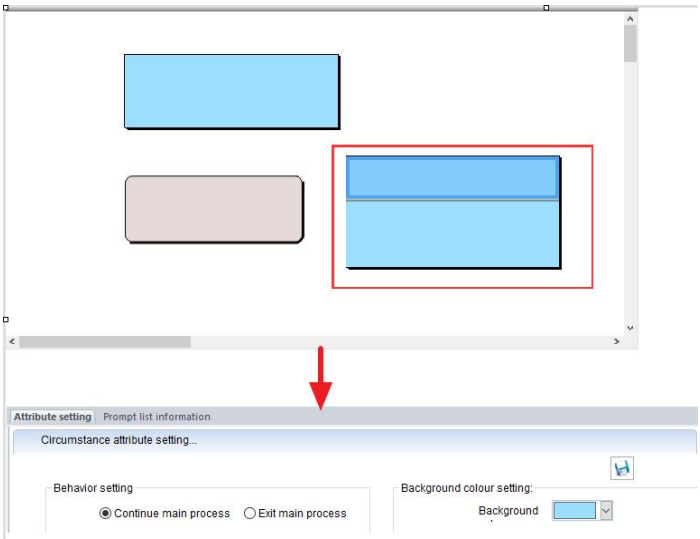
Click scene frame to set up scene attributes including scene types, names, remarks and background color.



Click event frame to set up the event attributes including event type and background color.

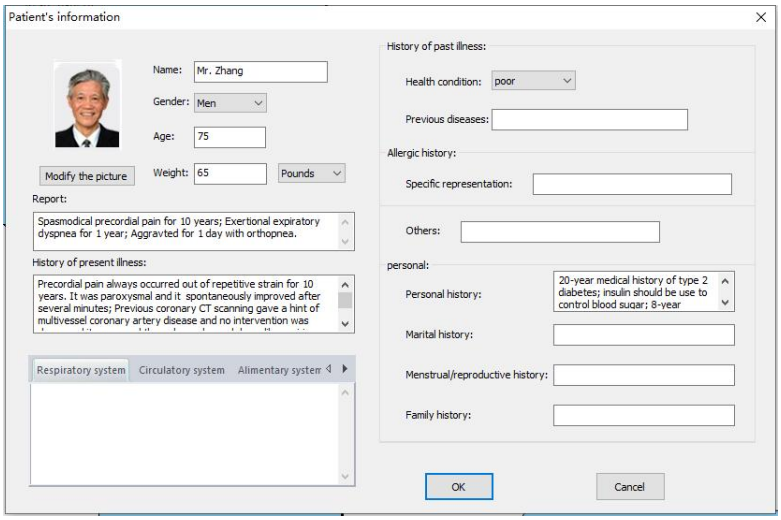


Click scene frame to set the scene attribute, including behavior setting and background color setting



Prompt list setting: input script knowledge point of cases in the prompt list, click save(red frame), then it could be shown in the knowledge point list.

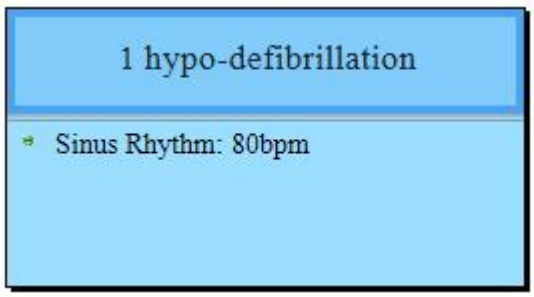
6) Click portrait to show the patients' information, which is editable. As shown in the below. Record the cases through interrogation acquisition



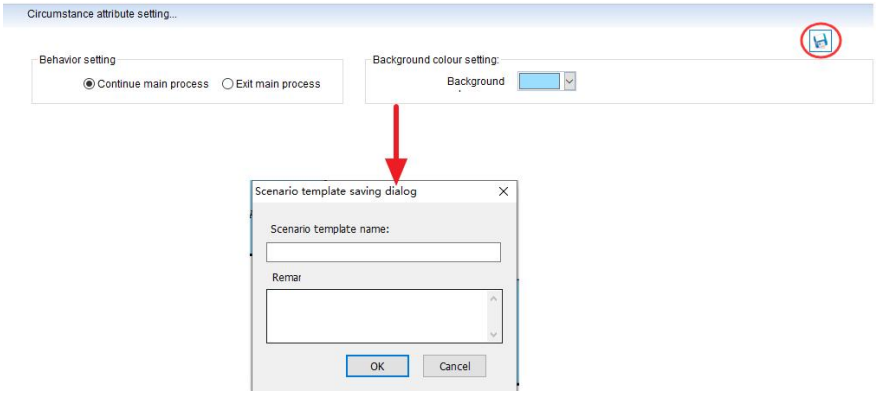
After completion of patients' information, they will show on the interface.

7) List information

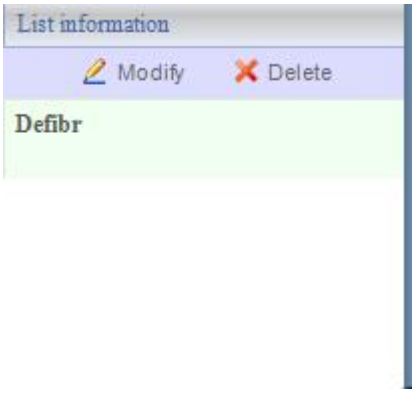
Create a new scene frame to set up the event and signs parameters changes, as shown:



Click scene frame to set up the saved stuffs, as shown in the red frame, there is a box showed that save patient’ s signs template. The names and remarks of signs template could be set.



After settings, the name set up will show on the right side



Saved signs template can be pulled into design area and implemented, as shown. Select the sign template needed, click the left button of mouse and hold on, just pull it into the design area of cases.

e

Maintenance and Conservation

1. Maintenance

(1)After operation training is over, evacuate the injected liquid.

(2)After operation training is over, the model shall be cleaned by soapy wateror clean water and make it dry.

(3)Please clean the models up and put it in cool, dry and ventilated place if it is not used commonly, which could extend the service life.

2. Conservation

(1) Inject purified water when doing operational training relevant with liquid like imitating weeping, sweating, etc. in case of the obstruction of foreign substances in water

3. NOTES:

(1)If any quality problem caused by manufacturing process or component failure(save for human factors) happens in one year of during the guarantee period set in the contracts, we provide maintenance service freely. We promise lifelong maintenance, however, the fee after guarantee period will be paid by customers.

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