

Product standard No.: Q-DBAO 03-2007

**GD/CPR400S (The Latest Generation)
Advanced Automatic CPR Training Manikin (Large-screen LCD)**

Instruction Manual

Introduction

Shanghai Honglian Medical Instrument Co., Ltd. was established in 1993. There are more than 200 employees for technology, production, management and sales. The turnover has reached RMB 50 million every year; it has enjoying great prestige in health education circles. Many famous university and medical institutes are retained as our company's supporters for technology and research, such as Shanghai Jiaotong University, Fudan University, and so on. In January 2002, we were authenticated by British Moody Company and got the Certification of ISO 9001-2000.

We are the first batch of company, which is granted two management licenses and 5-year production exemption from inspection by state Drug supervision bureau.

We are one of the largest enterprises for producing medical instruments in China at present.

"General Doctor" series products include Anatomical Model, Medical Clinic Training Simulator, Medical Nursing training Manikin, etc. They got good reputation from many customers owing to their good material and exquisite handicrafts, and be approved by Ministry of Health, Ministry of Education and Red Cross Society of China. At the same time, they are be recognized by more and more oversea customers, and exported to many countries over the world.

"Go straight" and "honesty-oriented business" are our tenets. We wish we could contribute our power to impel medical education development.

GD/CPR400S is specially designed for professional Cardiopulmonary Resuscitation training referring to American Heart Academy □ Guidelines 2005 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care □ . And it is up-graded from the seventh generation of GD/CPR400S with perfect shaping, better function and convenient operation.

Implementation standard: AHA 2005 Guidelines for CPR and ECC

Features

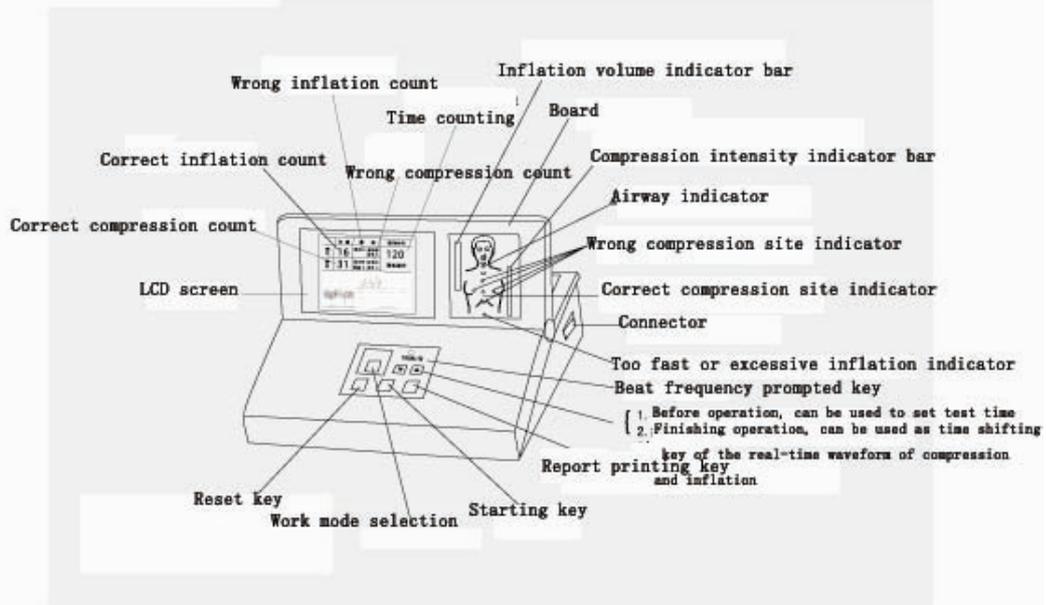
1. Large-screen LCD displays artificial respiration, external chest compression and ECG pulse dynamic state;
2. Simulate standard airway open with sound prompts
3. Artificial hands-bit external chest compression with indicator light display, LCD digital count display, voice prompts
 - 1) Indicator light and LCD digital count displays for proper and wrong compression site; and wrong voice prompts
 - 2) Digital indicator bar (yellow, green and red) for proper compression intensity (4-5cm areas) and wrong compression intensity(□4cm or □5cm) ; correct or wrong LCD count display; and wrong voice prompts
3. Indicator light display, LCD digital count display and voice prompts for artificial mouth to mouth inflation
 - a) Digital indicator bar (yellow, green and red) display for inflation volume ≤500ml-1000ml or >1000ml, wrong or right LCD digital count display, wrong voice prompts
 - b) Too fast or too much inflation volume would activate the stomach indicator light; LCD digital count display and wrong voice prompts
4. Ratio of compression and artificial ventilation: 30:2(individual or two people)
5. Operation period: two times of valid artificial respiration and five circulations of CPR operation
6. Operation frequency: the newest international standard,100times/min
7. Operation ways: training mode and test mode
8. Operation time: Time counting by one second, can set the test operation time;
9. Voice prompts: voice prompts and voice volume setting; voice prompts turn-off setting
10. report printing: can print long transcripts and short transcripts
11. Pupil examination: Realistic pupil states change process of simulated pupil before the test operation and after the test operation
12. Carotid artery examination: By palpation, realistic spontaneous pulse of carotid artery during the compression operation process and after test operation
13. Power supply: 220v power supply , output power through manostat is 24V

Material:

Made of imported thermoplastic material, injected under high temperature via injection mold machine, reasonable structure, realistic touch feeling, beautiful shape, realistic operation, solid and durable, sterilization and cleaning of non-deformation, convenient disassembly

(一) Monitor Structure

Front illustration



Back illustration of display

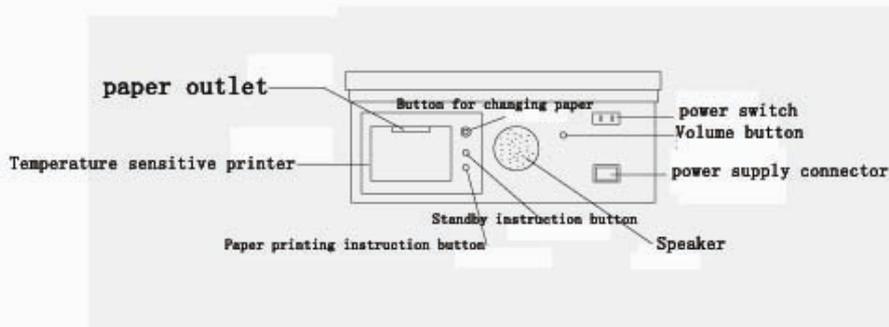


Illustration of compression and inflation

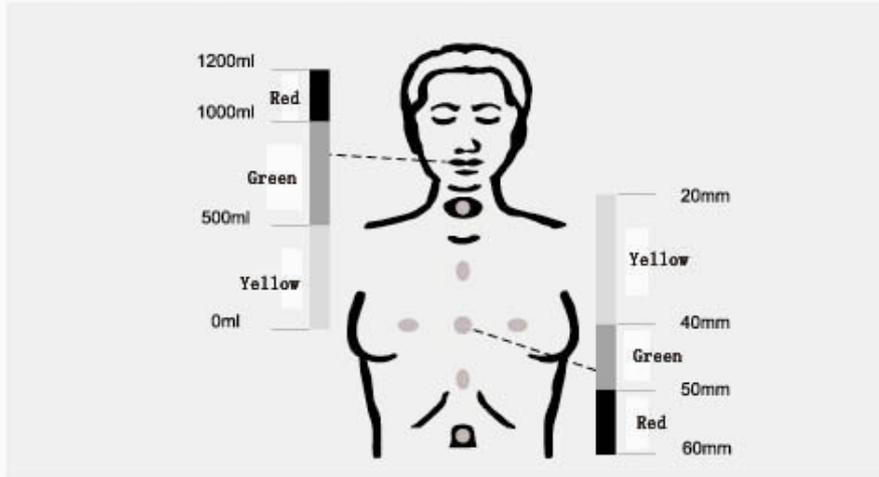
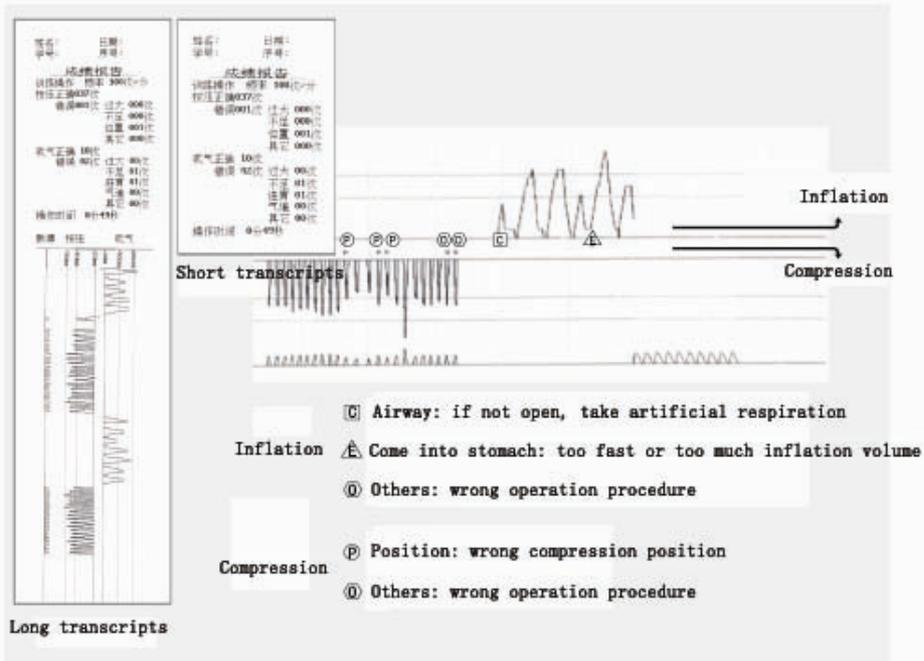
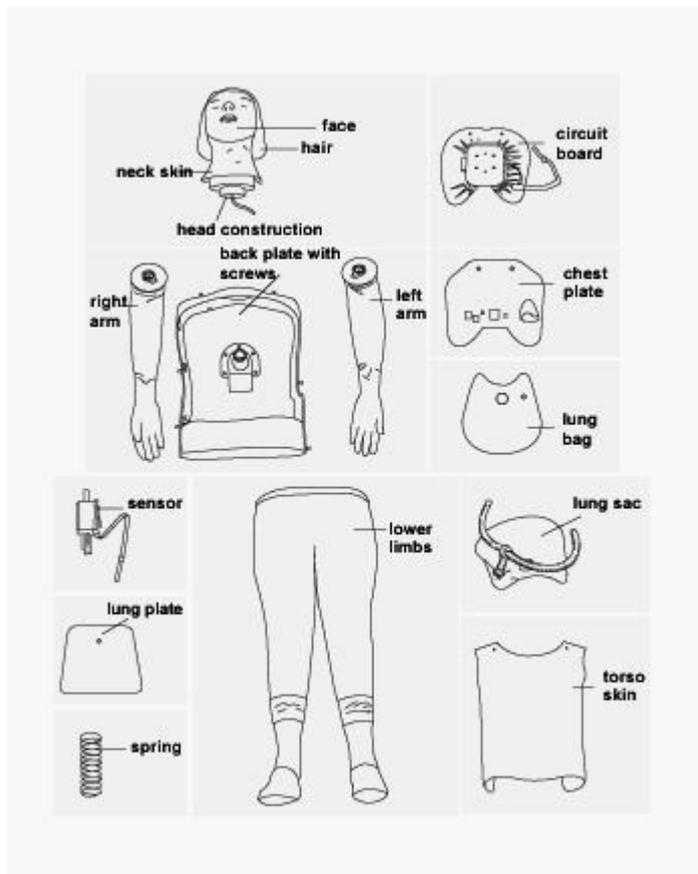


Illustration of report printing





Installation of manikin

Take out manikin from the case, and roll out the CPR operation pad, and then make the manikin lay on the operation pad. Take out the monitor display, power supply connecting cord, and external power line, and connect to the manikin, finally connect the monitor display with the 220V power supply.

Setting function and using mode

Turn on the power switch on the back side of the monitor display, if you need voice prompts, turn on the voice control button and adjust the volume, then there will be voice prompts and LCD screen display: (1) voice prompts: "Thank you for using Honglian product, please select your working mode", (2) LCD screen shows the product name and type; two working mode are available: (1) Training operation; (2) Test operation.

If you select training operation mode, then another voice prompts: "Please press the starting key". Do as the voice prompts. After the first inflation or external chest compression, it begins to count operation time by second unit, and the longest training time is 9 minutes and 59 seconds. Meanwhile, the LCD color screen simultaneously displays dynamic operation waveform and data.

If you select testing mode, there will be voice prompts "Please select working time", press key of "▼▲" to set the test time; Then another voice prompts "please press starting key to begin operation", do as the voice prompts; after two times of correct respiration, it begins to

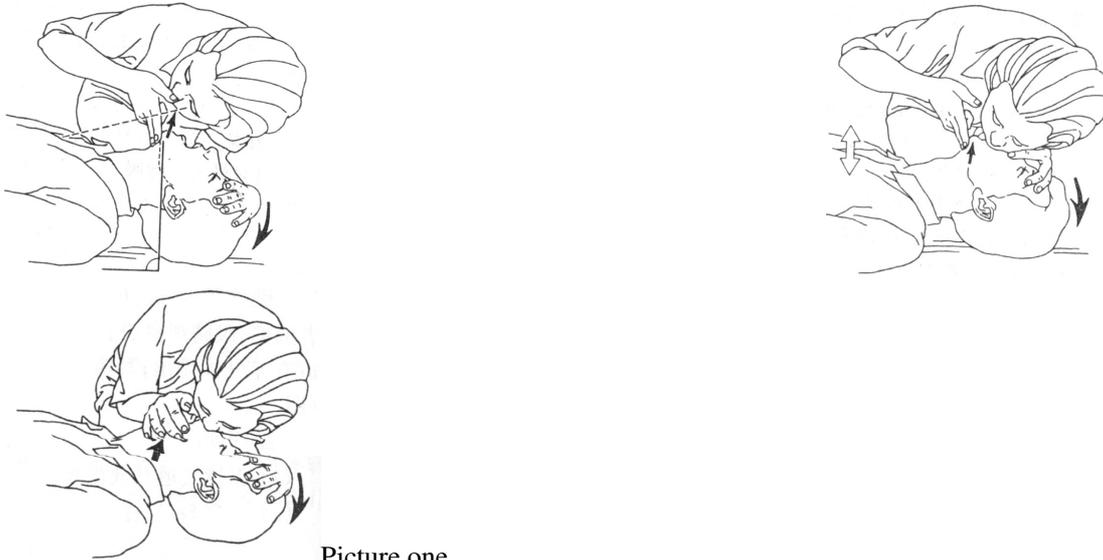
count time by second unit; if your operation time overruns the set time, it will stop automatically. Meanwhile, the LCD color screen simultaneously displays dynamic operation waveform and data.

After finishing the operation, press the time shifting key (the time setting key) "▼▲" to check the dynamic operation waveform process.

Normative actions and notice during the operation:

1. Airway opening

Let manikin be on its back, take out a piece of face shield sheet and put it on the face of manikin, make the isolation patch right on manikin's mouth. One hand pinches nose with two fingers, the other hand reaches to chin or neck to tilt the head back to form 70°-90° angle with the horizontal, which makes the airway open. If the airway is open, indicator light will be green. (Refer to picture one)



Picture one

2. Artificial respiration

First, make artificial mouth to mouth ventilation (In the real emergency scenes, some patients' mouth is closed and the upper and lower teeth is closed-bite, in this case, mouth to mouth ventilation is not available; you can only take mouth to nose ventilation. But the manikin's mouth is open; if taking mouth to nose ventilation, the manikin's mouth must be covered by hand then take the mouth to nose ventilation operation.)

The digital indicator light bar shows the ventilation volume, compression depth.

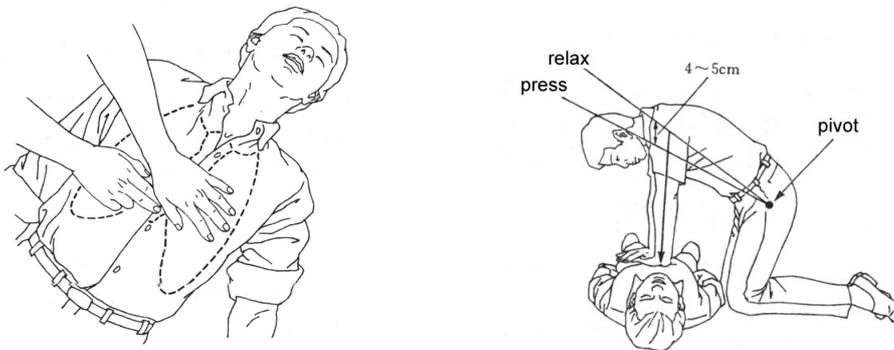
- 1) Proper artificial inflation reaches 500-1000ml, green indicator light is activated with one time of correct LCD digital count;
- 2) Wrong artificial inhalation, too fast or too much volume inflation (\square 1200ml) would cause the red stomach indicator light be activated with voice prompts and one time of wrong LCD digital count;
- 3) Wrong artificial inflation, inflation \square 500ml, yellow indicator light is activated with voice prompts and one time of wrong LCD digital count;
- 4) Wrong artificial inflation, inflation volume \square 1000ml, green and red indicator light is activated with voice prompts and one time of wrong LCD digital count;

3. Manual Compression

1) Compression position: First, confirm the correct chest compression site—the intersection of bilateral costal arch—, cross-stack of both hands and arms perpendicular to the chest compression zone, to make external chest compression (reference to the picture two). If compression site is correct, the green indicator light is activated; if incorrect compression site, yellow indicator light is activated with voice prompts and one time of wrong compression LCD digital count.

2) Compression intensity:

- ✧ Correct compression depth: 4-5cm, the green indicator light is activated with one time of right compression digital count;
- ✧ Wrong compression intensity ≤ 4 cm, the yellow indicator light is activated with voice prompts and one time of wrong digital count;
- ✧ Wrong compression intensity ≥ 5 cm, the red indicator light is activated with voice prompts and one time of wrong digital count.



Picture two

Operation mode:

1. Training: The operation is used to let the new learners master the basic skills and all the procedures. Students should make enough preparation; set the training mode, then press the starting key to start. First, make the airway open, then make mouth to mouth respiration or chest compression, and there is digital display and voice prompts for your correct or wrong operation. The longest operation time is 9 minutes and 59 seconds, if you need to interrupt the operation during the process, press starting key to end or stop the operation for 30 seconds would automatically end the operation. Pressing print key to print long transcripts or short transcripts to make assessment and file them.
2. Assessment operation(individual test or two people test):

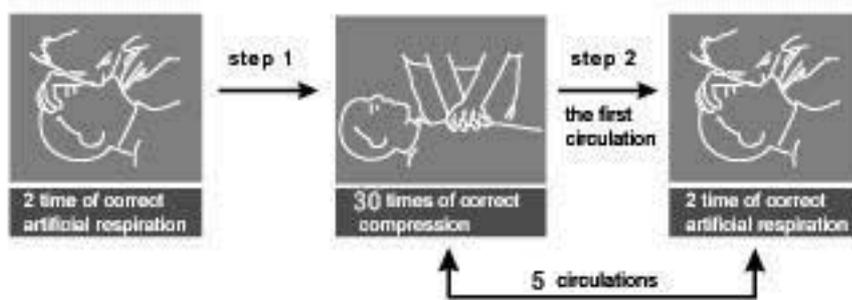
Subject to international latest standard- \square Guidelines 2005 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care \square , the ratio of compression and artificial respiration is 30:2, Operation rate is 100 times/minute. The operation period is two times of valid respirations and 5 cycles of CPR operation.

The standard test operation procedures: first, set the test mode and test time, check and make sure the manikin's pupil in a state of mydriasis, and there is no carotid pulse, then open the airway, and make 2 times of correct mouth to mouth respiration. Once it begins time counting, operate according to the latest international standard 30:2; basing on the operation rate 100times/minute, make correct chest compression 30 times(exclude the wrong compression), then 2times of correct artificial respiration, continually finish 5 cycles of standard operation. Finally the display shows

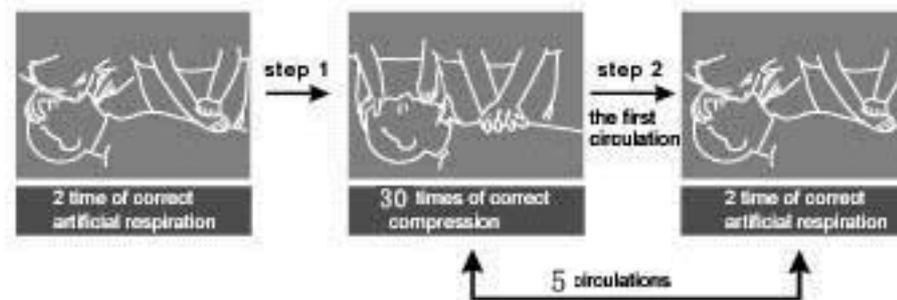
150times of correct chest compression and 12 times of correct artificial respiration (include the first two times counting when open the airway).Until now the whole process is finished and there will be music prompts to indicate the successful operation. Check manikin’s pupil should be in normal state, and there is frequent carotid artery pulse; check the operation time which shows how long it will need to rescue the patient. Pressing the print key to print long transcripts and short transcripts so as to make assessment and file them. (Note: During the operation process, if students do not operate according to the procedures, and the chest compression and artificial respiration is wrong, there will be voice prompts and also record of wrong report, do not need to stop and only need to adjust to right operation).

The latest international standard computer operation procedure pictures for one person and two persons CPR test

1. one person examining



2. two-person examining



Maintenance:

1. Disinfect and clean the manikin with warm soap water, do not submerge the manikin or parts into cleaning fluids or water.
2. If the face skin is damaged, pull out the fixed pin in the ears and discharge the damaged skin, then place a new face skin.
3. If the lung bag is damaged, open the chest wall and take out the lung plate to change a new lung bag.
4. Keep the manikin and monitor display at the dry and ventilated place and avoid direct sunlight or high humidity, so as to extend the using life.

Notice

1. Trainers must use the disposable CPR training face mask when make the mouth to mouth artificial respiration to avoid infection. One piece for one person
2. Keep hands clean, females should erase the lipstick and lip balm to avoid dirtying the face skin

and chest skin, pigments from ballpoint pens and other color pens are also not allowed.

3. Compression must be in accordance with the work frequency to avoid progress confusion. If the progress is confused, turn off the power switch of the computer display and restart.

Warranty

1. Honglian Co. warrants to the customer that its products are free from defects in material and workmanship for a period of one year from the date of customer buy them, and a copy of purchase invoice and warranty card is required for warranty.

2. Product specifications and equipments subject to change without notice.

Packing List

Serial NO.	Description	Qty
1	Standard Full-body Manikin	1 set
2	Deluxe hand pull-type hard plastic case	1 pc
3	LCD display	1 set
4	Deluxe portable monitor display case	1 pc
5	220V external power line	1 pc
6	Display and manikin connection power line	1 pc
7	CPR operation pad	1 pc
8	Replaceable face skin	1 pc
9	Replaceable lung sac	4 pcs
10	Temperature sensitive printing paper	2 rolls
11	Sensor spring	4 pcs
12	Ear plug	6 pcs
13	Cleaning solution	1 bottle
14	Disposable CPR face shield mask (50 pcs)	1 box
15	Artificial respiration face shield mask (hanged type)	1 pc
16	The newest 2005 International standard popularity training book	1 copy
17	Operation training disc	1 pc
18	Warranty card	1 copy
19	Instruction Manual	1 copy
20	Product certificate	1 copy
21	Price guideline of commonly used consumables and wearable parts	1 copy

Packing date: _____

Packer: _____

Checker: _____

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