

YA-EC-U02

User Manual

Power Ultrasound Tables

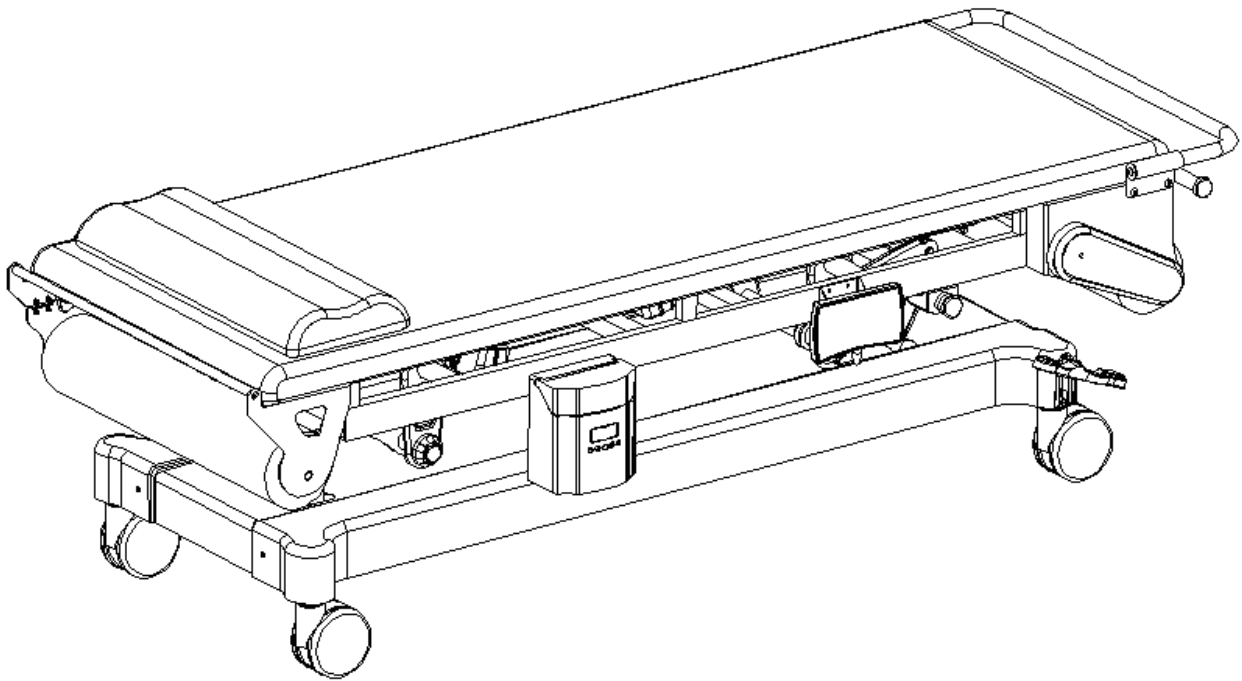


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1. Equipment Composition

A. PRODUCT FEATURES:

- 1) this bed is designed according to ergonomic principles and is used as an auxiliary device for main examination and diagnosis and treatment equipment.
- 2) its humanized structural design enables the examinee with limited mobility to sit comfortably during the examination and cooperate with the doctor to perform the examination from different positions.
- 3) it is also equipped with automatic paper changing and paper roll deviation correction functions, which further ensures the safety and hygiene of the inspected person.
- 4) equipped with a control box for easy operation by doctors.
- 5) plastic-steel alloy combined with central control casters, high strength, wear resistance and durability, good quiet effect, high safety, one-time brake control.
- 6) the bed frame, base and other frames are made of high-quality steel with high strength; electrostatic painting, beautiful, corrosion-resistant, good adhesion and rust-proof effect; high-quality leather, bright luster and soft texture.
- 7) equipped with disposable medical roll paper and roll paper deflection correction function, making it easy to operate roll paper transmission.
- 8) adopting a 4-motor control system with reliable and long-lasting performance.
- 9) safety classification: class i equipment, powered by external power supply, type b applied part, splash-proof equipment for intermittent operation (ipx4).
- Electric examination beds must not be used in the presence of flammable anesthetic gases mixed with air or flammable anesthetic gases mixed with oxygen or nitrous oxide.

B. PRODUCT STRUCTURE:

- This product consists of a bed surface, a bed support platform, an electric system, a lifting part, a roll paper correction system, a roll paper, a base, a brake device, casters, etc., as shown in Figure 1.

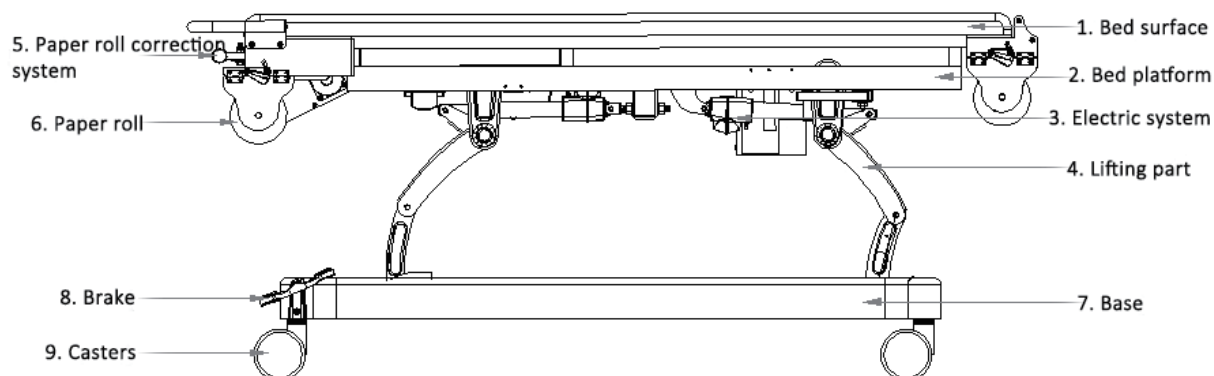


FIGURE 1: YA-EC-U02 PRODUCT DIAGRAM

2.Working Principle

Adopt one-control 4-motor control system; use the controller box to control the bed lifting, backrest tilt angle, longitudinal displacement and paper roll transmission. The principle is:

- A.under the action of the motor, the motor shaft screw rotates the worm gear, the worm gear drives the long screw, the screw rotates and drives the screw sleeve (i.e. electric push rod) forward, and when it moves backward, the motor reverses. When working, the electric push rod extends, the bed rises or tilts as a whole, and when the electric push rod shortens, the bed lowers or reduces the tilt angle accordingly. This is to facilitate patient examination, diagnosis, etc.
- Under the action of the motor, the motor shaft screw drives the pulley to rotate, and the pulley drives the belt to rotate in a circular manner, thereby driving the paper roll rotating device to realize the paper roll transmission to cooperate with patient examination, diagnosis, etc.

3.Main Uses And Scope Of Application

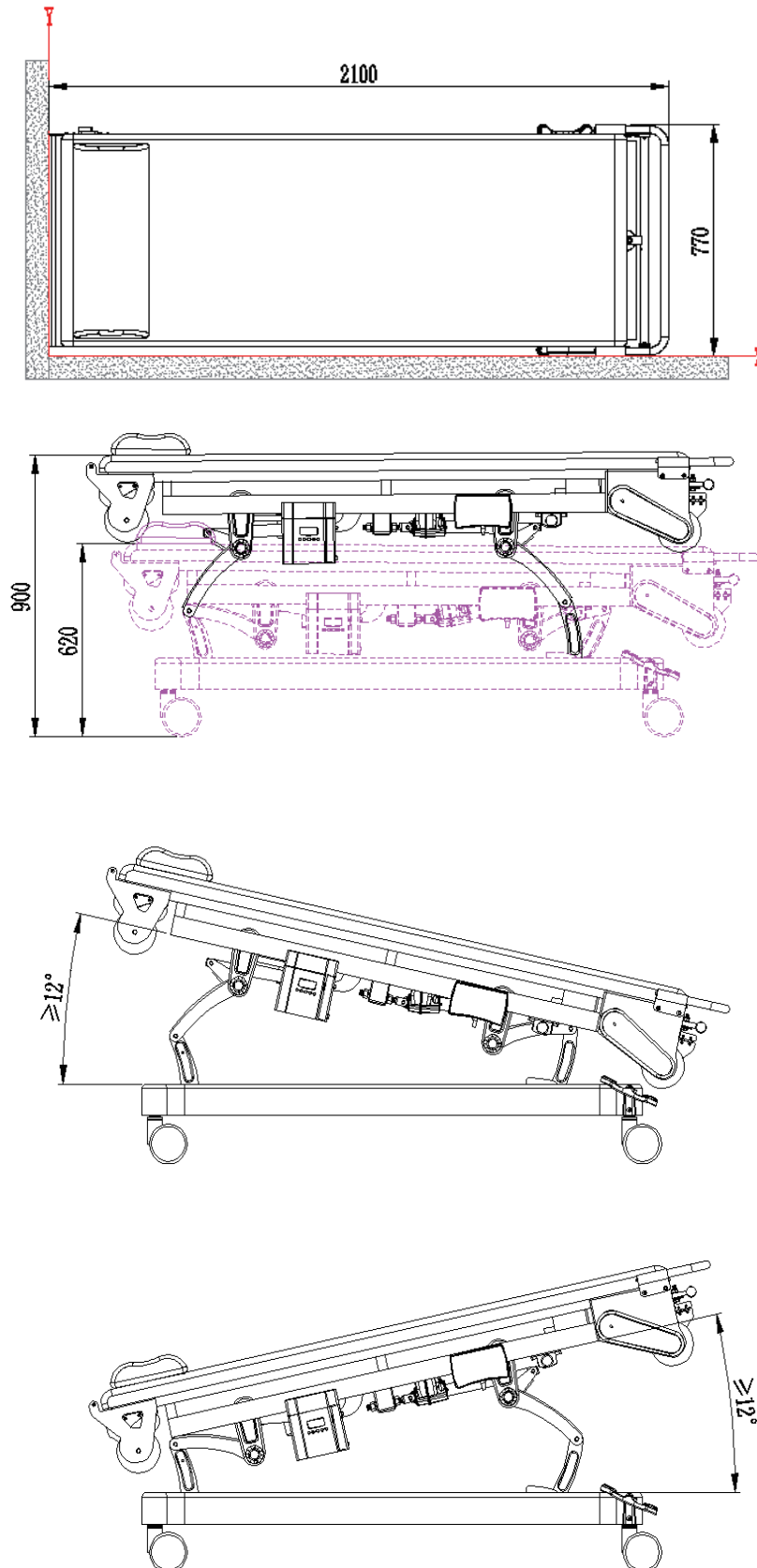
This product is mainly used for multi-position support and operation of patients during medical examinations and simple treatments by medical staff in diagnosis rooms and emergency rooms.

4.Specifications And Performance

Main Specifications

Overall length	2100±100 mm
Overall width	770±100 mm
Minimum height of bed surface from ground (excluding mattress)	560±50 mm
Trendelenburg and Reverse Trendelenburg	≥12°
Maximum height of bed surface from ground (including mattress)	900±50 mm
Minimum height of bed surface from ground (including mattress)	620±50 mm

A.the measurement method of size specifications is as follows:



B.the operating parameters of the inspection bed should meet the requirements of the following table:

Trendelenburg and Reverse Trendelenburg	$\geq 12^\circ$
Maximum height of bed surface from ground (including mattress)	900±50 mm
Minimum height of bed surface from ground (including mattress)	620±50 mm

c.Net weight: 95 kg

d.Load capacity (normal state): 170 kg

e.Safety classification: Class I Internal power supply Type B IPX4

f.Operation mode: intermittent operation

g.Input voltage: AC 220V/50Hz Output voltage: DC 24V

Performance

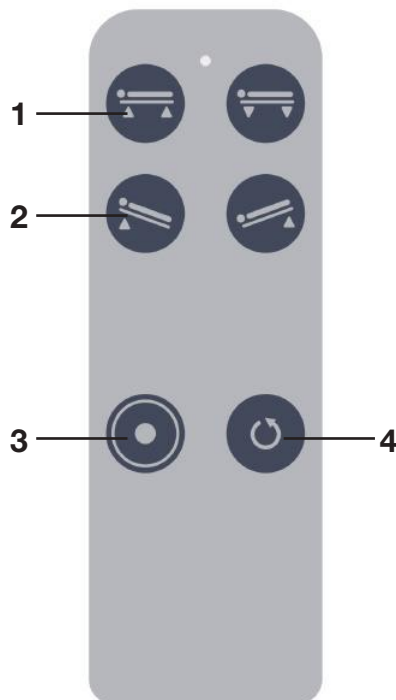
- a.Locking device: The legs of electric examination beds should be equipped with caster locking devices.
- b.Maximum safe load: It can withstand a safe load of 170kg. After 1 hour, the weight is removed and the remaining concavity of the bed frame should be less than 5mm, no abnormality in any part.
- c.Stability: The electric examination bed should not vibrate.
- d.Moving and locking: The bed casters should be flexible when moving and firm when locked. When the casters are not locked, the force applied to the head of the bed is not less than 20N to make the electric examination bed move.
- e.Noise: The working noise should not exceed 65dB (A-weighted).
- Safety: Meets the relevant requirements of YY 0505-2012, GB 9706.1-2007, and YY 0571-2013.

5. Instructions For Use

A. ATTACHMENT LIST

Serial number	Explanation	Amount
1	Electric examination bed	1pcs
2	Casters	4pcs
3	roll paper	1volume
4	roll paper Accessories	1set

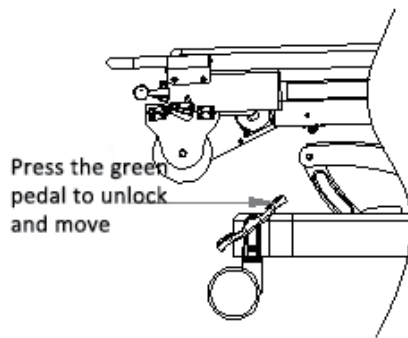
B. INSTRUCTIONS FOR USING THE CONTROL PANEL, AS SHOWN IN FIGURE 1 & TABLE 1:



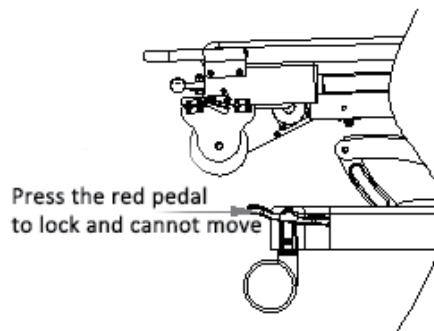
Serial number	explanation
1	Control the lifting of the whole bed
2	Control the bed's Trendelenburg and Reverse Trendelenburg
3	Roll paper inching
4	One-button reset

C. BRAKING DEVICE

Press the red lock pedal as shown to lock the caster (immovable), and press the green unlock pedal to unlock the caster (movable)



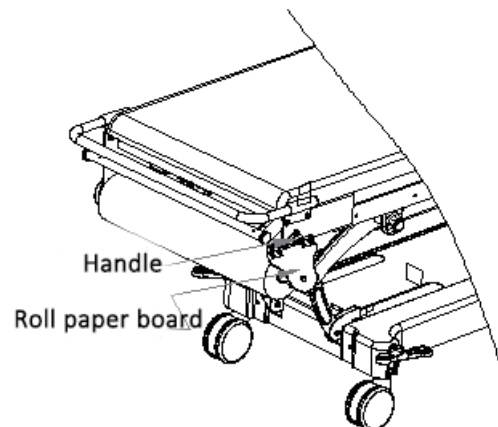
Unlocked state



Locked state

D. REPLACEMENT OF WASTE PAPER ROLLS

While holding the toilet paper roll with one hand, turn the flat handle upward to open it. After the movable paper roll is automatically opened, remove the used toilet paper roll. Repeat the same operation to replace it with a new one. Note: The toilet paper roll is a disposable consumable and cannot be reused.



Hold the roll paper with one hand and turn the handle upward to open it. After the movable roll paper board automatically pops open, remove the used roll paper and replace it with new paper. At the same time, fix the roll paper board and press down the handle

E.BATTERY

This electric examination bed has a built-in 9V battery (9V 6F22 square general-purpose battery in the built-in control box) as a backup power supply. When the network power is suddenly cut off, the electric examination bed can be powered by the battery to restore its function.

F.IF THE INTEGRITY OF THE EXTERNAL PROTECTIVE CONDUCTOR DURING INSTALLATION OR ITS WIRING IS QUESTIONABLE, THE EQUIPMENT SHALL BE OPERATED FROM THE INTERNAL BATTERY.

G.IF THE FUSE BURNS OUT OR THE MOTOR FAILS, PLEASE CONTACT OUR AFTER-SALES DEPARTMENT TO REPLACE THE MOTOR DIRECTLY.

6.Improper Handling Of Power Cords May Cause Safety Hazards

Improper handling of the power cord, for example, rolling over cables or wires, can cause safety hazards. Therefore, patients and medical staff should not roll over the cord.

The manufacturer secures the power cord around the bedside and secures it to prevent safety hazards.

7.Prevention of safety hazards caused by single fault conditions

- The electric examination bed has no electrical component failures that could cause safety hazards, no mechanical parts failures that could cause safety hazards, no temperature limiter failures, and no liquid leakage. It prevents safety hazards caused by single fault conditions. When a single fault occurs on the examination bed, press the emergency stop device on the side of the bed and all dangerous actions will stop.
- Do not put all your body on the head or tail, use the lifting function, and do not do strenuous exercise on the bed.
- When patients use this product, please cover it with a disposable sanitary mattress first, and use the electric functions under the guidance of medical staff.
- Avoid direct contact with human skin.

8. Precautions

- A. Please read this instruction manual carefully before using the product.
- B. This device is to be operated and used by trained medical personnel.
- C. This product must be used with toilet paper sheets and should not come into direct contact with patients or users during use.
- D. This product must be used with our toilet paper sheets and corresponding accessories. If you replace the toilet paper sheets and supporting facilities of other manufacturers without authorization, the toilet paper function may not work properly.
- E. In case of power outage, please unplug the power cord to prevent the unstable current from affecting the normal use of the equipment.
- F. The electric shock type of this equipment belongs to class i and must be connected to a reliably grounded mains power supply.
- G. Please strictly follow the "instructions for use" during use to avoid possible injuries caused by misoperation.
- H. Do not place the power cord randomly when in use to prevent people from tripping or damaging the power cord; please tidy up and put the power cord away when not in use.
- I. protection against electromagnetic interference and suggestions, The power supply used by this device is filtered and output, with stable DC voltage, and contains ramp wave to prevent interference.

Anti-electromagnetic recommendations:

- 1) Reduce interference signals generated by interference sources
 - 2) Cut off the propagation path of interference signals
 - 3) Enhance the anti-interference ability of the interfered object
 - 4) Use separately from the interference substance and avoid using at the same time
- j. To reduce the risk of injury from the patient rolling out of the bed when getting in, out of, or lying in bed when unattended, the bed should be placed in the lowest position.
 - k. Any restrictions related to patient characteristics
 - In clinical practice, this bed cannot be used if the patient is severely schizophrenic and unattended. It cannot be used by patients whose height exceeds 1900mm and whose weight exceeds 170kg.
1. Please check whether the accessories are complete and attached with instruction manual and inspection certificate.
 2. When the battery cannot be used, please hand it over to a professional recycling company for disposal and do not discard it at will.
 3. To reduce the risk of injury from the patient rolling out of the bed when getting in, out of, or lying in bed when unattended, the bed should be placed in the lowest position.
 4. Do not place the power cord randomly when in use to prevent people from tripping or damaging the power cord; please tidy up and put the power cord away when not in use.
 5. If the external protective conductor is in doubt during installation wiring, the device must be operated from the internal power supply.

9.Maintenance And Troubleshooting

1.Maintenance

1. Normal working conditions of the product

- a) Ambient temperature: +50C ~ +400C
- b) Relative humidity: ≤80%

2. Periodic inspection and maintenance

- a) Check the connecting screw once a week to see if it is loose, and lubricate the telescopic rod of the tripod once a month.
- b) Carry out a comprehensive inspection of the product every year (mainly to see whether the functions are running normally). If you have any questions, please contact our professional technicians.
- c) Depending on the frequency of use, please charge it every 7-15 days;
- d) When not in use for a long time, charge the battery at least once a month to maintain it.

3. Cleaning and disinfection methods

- a) Equipment should be cleaned and disinfected after each use or before use after a long period of non-use.
- b) Cleaning: Use a cloth soaked in water or neutral detergent and wring it thoroughly to wipe the surface of the device, then wipe it dry with a dry soft cloth. Do not use highly corrosive or acidic liquids for cleaning, and do not rinse directly with water.
- c) Disinfection: You can wipe the surface of the equipment with absorbent cotton dipped in 70%~75% medical alcohol for disinfection, and then wipe it dry with a dry soft cloth.

2.Troubleshooting

a) Please confirm the following before use

Phenomenon	Diagnosis	Exclusion Operation
Unstable bed	Not placed on level ground	Please move to level ground
The bed is unstable up and down	The bed surface is not installed correctly or the screws are not tightened	Please check the installation position, lock nut
The hand control keys do not respond	The emergency stop switch is pressed	Release the emergency stop state
	The power plug is not plugged into the socket, and the main power switch is turned on.	Please plug the power plug into the socket and turn on the main power.

b) Please confirm the following before use

Fault diagnosis

When you find a fault while using this product, please try the following fault diagnosis and troubleshooting operations

Phenomenon	Diagnosis	Troubleshooting
The bed does not respond after pressing the control key	<ol style="list-style-type: none">1. The function of the control key has been adjusted to the extreme2. Is the power plugged in properly3. Are all the connection plugs of the transformer properly plugged in	<ol style="list-style-type: none">1. Try pressing other control keys3. Unplug the power cord and plug it back in3. Unplug the cord and plug it back in
The bed is making strange noises and shaking when it is lifted	Loose screws	Tighten all screws

c) If the user encounters special circumstances (such as power outage), please press the emergency stop switch or unplug the power plug.

d) If the user encounters a fault that cannot be diagnosed and eliminated, please suspend use to avoid unnecessary safety issues and contact the dealer or our company directly as soon as possible.

e) The company can provide assembly instructions, circuit diagrams, key component lists, legends, calibration details or other qualified technicians who can help users repair the equipment parts specified by the company.

3. Product Usage Information

Production date: See product nameplate for details

Use period: Product service life is 5 years.

10. Packaging, Transportation And Storage











- a. The electric examination bed should be packed with non-toxic materials and equipped with shockproof and moisture-proof devices.
- b. The transportation shall be carried out in accordance with the provisions of the order contract, and the transportation process shall be protected from rain, sun and severe collision.
- c. The packaged electric examination bed should be stored in a cool, dry, dust-free, corrosive gas-free, well-ventilated, clean air indoor environment. The environment should meet the following conditions:
 - 1) Ambient temperature: $-20^{\circ}\text{C} \sim 55^{\circ}\text{C}$
 - 2) Relative humidity: $\leq 93\%$;
 - 3) Atmospheric pressure: $50\text{kPa} \sim 150\text{kPa}$.
- d. The packaged electric examination bed can be transported by common means of transport. When moving, transporting, installing and using the product, avoid collision or strong impact.

11. Product Scrapping And Disposal Of Discarded Parts

Description of any risks associated with the disposal of waste, residues, etc. and equipment and accessories at the end of their useful life and recommendations for minimizing these risks:

- a. If an electric examination bed exceeds its service life and cannot meet the requirements of use, it must be scrapped. Before scrapping, the entire machine must be disinfected.
- b. When electric examination beds reach the end of their service life, the electronic devices will produce discarded parts and components, which will have certain pollution and impacts on the environment and human body; the disposal of these discarded parts must comply with national laws and regulations and be handled by units that specialize in the collection, storage, disassembly, utilization and disposal of electronic waste.

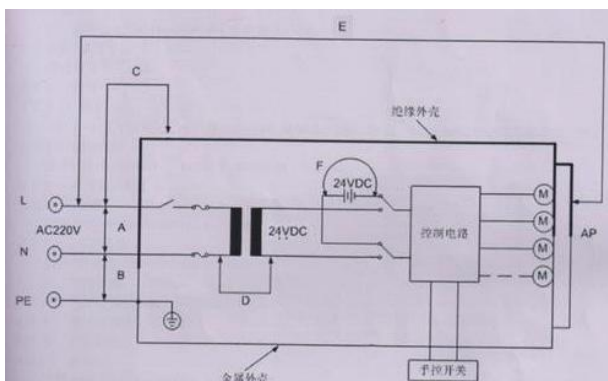
12.Explanation Of Graphics And Symbols

	Warning, refer to the accompanying documents		Manufacturer
	Protective grounding		Maximum safe load
	Type B Applied Part Equipment		up
	Protect from rain		Separate disposal of waste electrical and electronic equipment (Please comply with local laws and regulations)
	Battery		Handle with care

Appendix A (Normative Appendix)

Safety features, applicable items and inspection rules

- A.1 Safety Features
- A.1.1 Classification by protection against electric shock: Class I.
- A.1.2 Type B applied parts are classified according to the degree of protection against electric shock.
- A.1.3 According to the degree of protection against liquid ingress, it is classified into IPX4 level.
- A.1.4 Classification by operating mode: Intermittent operation.
- A.1.5 Rated voltage and frequency a.c. 220 V, 50 Hz.
- A.1.6 Input power 300VA.
- A.1.7 There are no applied parts protected against the effects of defibrillation discharge.
- A.1.8 There is no signal output or signal input section.
- A.1.9 For mobile devices.
- A.1.10 Classified according to the degree of safety when used with flammable anesthetic gas mixed with air or with flammable anesthetic gas mixed with oxygen or nitrous oxide. It cannot be used with flammable anesthetic gas mixed with air or with flammable anesthetic gas mixed with oxygen or nitrous oxide.
- A.1.11 Electrical insulation diagram According to Figure A.1.














Appendix B

Safety and warnings for internal power sources (batteries)

Please read this manual! It provides important safety, installation, and operating instructions to maximize the performance of your equipment and extend the life of your equipment.

- For your own safety, please do not attempt to disassemble it. This device contains no user-serviceable spare parts and repairs should only be performed by factory-trained service personnel.
- Because of the potential health and environmental hazards posed by batteries, they should be replaced under the guidance of a factory-authorized service center. To replace batteries or repair your device, call Customer Service.
- Batteries can be recycled, and proper disposal of batteries is essential. Batteries contain lead, which, if not properly handled, can be harmful to the environment and human health. Please check local regulations for the correct disposal method required or return the device to a factory-authorized service center for battery replacement or disposal.
- Battery replacement should be performed or supervised by personnel who are familiar with the hazards of batteries and the necessary precautions. Non-professionals are prohibited from replacing batteries. When replacing batteries, use sealed lead-acid batteries of the same model and type as the original batteries.
- WARNING—Do not smoke or use open flames near battery packs.
- WARNING—Do not use any organic solvents to clean the battery.
- Warning - Do not place batteries in fire as this may cause the batteries to explode.
- WARNING - Do not open battery; It contains electrolyte which is toxic to skin and eyes.
- WARNING—Batteries can cause electric shock and produce short-circuit current. When replacing batteries, use tools with insulated handles.

Please identify the following signs when using and operating the battery:

Electromagnetic compatibility

- Attention:
- Electric examination table YA-EC-U02 complies with the relevant requirements of electromagnetic compatibility of YY 0505 and YY 0571 standards;
- Users should install and use the product according to the electromagnetic compatibility information provided in the accompanying documents;
- Portable and mobile RF communication devices may affect the performance of the electric examination table YA-EC-U02. Avoid strong electromagnetic interference when using it, such as near mobile phones, microwave ovens, etc.;
- Guidance and manufacturer's declaration are provided in the Annex.
- Warning:
- The electric examination table YA-EC-U02 should not be used close to or stacked with other equipment. If it must be used close to or stacked, it should be observed and verified that it can operate normally under the configuration it is used in;
- Class A equipment is intended for use in industrial environments. Due to the conducted and radiated disturbances of the electric examination table YA-EC-U02, it may be potentially difficult to ensure electromagnetic compatibility in other environments;
- Except for cables sold by the manufacturer of the Electric Examination table YA-EC-U02 as spare parts for internal components, the use of accessories and cables other than those specified may result in increased emissions or decreased immunity of the Electric Examination table YA-EC-U02.

Serial number	Name	Cable length (m)	Whether to block	Remark
1	Power cord	3.0	No	/
2	Hand control cable	2.5	No	/

APPENDIX:

Guidance and manufacturer's declaration – Electromagnetic emissions

The electric examination table YA-EC-U02 is intended to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in such an electromagnetic environment:

Launch test	Compliance	Electromagnetic environment – Guidance
Radio frequency emission GB 4824	1 group	The electric examination table ya-ec-u02 uses rf energy only for its internal function. Therefore, its rf emissions are low and are unlikely to cause any interference to nearby electronic equipment.
Radio frequency transmission GB 4824	Category A	
Harmonic emission GB 17625.1	Not applicable	The electric examination table ya-ec-u02 is suitable for use in all facilities other than domestic and not directly connected to the residential public low-voltage power supply network that supplies domestic use.
Voltage fluctuation/flicker emission GB 17625.2	Not applicable	

Guidance and manufacturer's declaration – electromagnetic immunity

The electric examination table ya-ec-u02 a is intended to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in such an electromagnetic environment:

Immunity Test	Iec 60601 Test Levels	Comply With Level	Electromagnetic Environment Guidance
Electrostatic discharge Gb/t 17626.2	±6 kv Contact discharge ±8 kv Air discharge	±6 kv Contact discharge ±8 kv Air discharge	Floors should be wood, concrete or tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient Pulse group Gb/t 17626.4	±2kv For power lines	±2kv For power lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge Gb/t 17626.5	±1 kv line to line ±2 kv line to ground	±1 kv line to line ±2 kv line to ground	Mains power quality should be that of a typical commercial or hospital environment.
Voltage sag, short interruption and voltage variation on power input line Gb/t 17626.11	<5 % ut for 0.5 cycle (>95% dip in ut) 40 % ut for 5 cycles (60% dip in ut) 70 % ut for 25 cycles (30% dip in ut) <5 % ut for 5s (>95% dip in ut)	<5 % ut for 0.5 cycle (>95% dip in ut) 40 % ut for 5 cycles (60% dip in ut) 70 % ut for 25 cycles (30% dip in ut) <5 % ut for 5s (>95% dip in ut)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the electric examination table ya-ec-u02 requires continued operation during power mains interruptions, a battery powered
Power frequency magnetic field (50/60hz) Gb/t 17626.8	3a/m	3a/m	Power frequency magnetic fields should be characteristic of levels found in a typical location in a typical commercial or hospital environment.

Note: ut refers to the ac network voltage before applying the test voltage

Guidance and manufacturer's declaration – Electromagnetic immunity

The electric examination table YA-EC-U02 is intended to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in such an electromagnetic environment:

Immunity test	Iec 60601 Test Levels	Comply With Level	Electromagnetic Environment Guidance
Radio frequency conduction GB/T 17626.6	3 V (effective value) 150 kHz to 80 MHz	3 V (effective value)	Portable and mobile RF communications equipment should be used no closer to any part of the Electric Examination Table YA-EC-U02, including cables, than the recommended separation distance calculated from the equation appropriate to the frequency of the transmitter. Recommended isolation distance $d =$ $d = 80 \text{ MHz} \sim 800 \text{ MHz}$ $d = 800 \text{ MHz} \sim 2.5 \text{ GHz}$ In the formula: – The maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer; d– Recommended isolation distance in meters (m) b. The field strength of fixed RF transmitters is determined by electromagnetic field survey c and should be lower than the compliance level in each frequency range d. Interference may occur in the vicinity of equipment marked with the following symbol.
Radio frequency radiation GB/T 17626.3	3 V/m 80 MHz ~ 2.5 GHz	3 V/m	

Note 1: At 80 MHz and 800 MHz, the formula for the higher frequency band applies.

Note 2: These guidelines may not be appropriate in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Electric Examination Table YA-EC-U02 is located exceeds the applicable RF compliance level above, the Electric Examination Table YA-EC-U02 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Electric Examination Table YA-EC-U02.

b Over the entire frequency range of 150KHz to 80MHz, the field strength should be less than 3 V/m.

Recommended isolation distances between portable and mobile RF communication equipment and electric examination table YA-EC-U02

The electric examination table YA-EC-U02 is intended for use in an electromagnetic environment in which RF radiated disturbances are controlled. The purchaser or user can prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the electric examination table YA-EC-U02 as recommended below, according to the maximum rated output power of the communication equipment.

Rated maximum output power of the transmitter W	Isolation distance corresponding to different transmitter frequencies/m		
	150 kHz ~ 80 MHz $d = 1.2\sqrt{P}$	80 MHz ~ 800 MHz $d = 1.2\sqrt{P}$	800 MHz ~ 2.5 GHz $d = 1.2\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at maximum output power not listed above, the recommended separation distance d in meters (m) can be determined using the formula in the corresponding transmitter frequency column, where P is the transmitter maximum output power rating in watts (W) provided by the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the formula for the higher frequency range applies.

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



CONTACT US



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-  + (86) 139 6223 1292
-  info@medik-medical.com
info@mediksurgical.com
-  www.medik-medical.com
www.mediksurgical.com