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Product Information

Thank you for purchasing E6 CPR System.

Before using the equipment, please read this manual carefully and understand the information contained in it so as to operate it properly. Keep this manual properly in any accessible place.

Product name: CPR System

Model: E5, E6

Manufacturer: Ambulanc (Shenzhen) Tech. Co., Ltd.

Manufacturer address: 3rd Floor, Block C, Building #5, Skyworth Innovation Industry Park, Tang Tou 1st Road, Shiyan Town, Baoan District, Shenzhen 518108, China

Tel: +86-755- 26072210  Fax:+86-755-23016012

Website: www.ambulgroup.com  E-mail: manager@ambu-lanc.com

Product date: See host

Service life: 8 years

Revision date: 2020-02

Rev.: A2

Software Version: V1.0

⚠️ Attention:

This instrument is not intended for any family purpose.

EC-Representative

EC-Representative: Shanghai International Holding Corp. GmbH(Europe)
Eiffestrasse 80 20537,Hamburg,Germany

Contact pers: Qiming Cheng

Telephone: +49-40-2513175  Fax: +49-40-255726
Intellectual Property Right

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Statement

Ambulanc reserves the right to modify this manual without prior notice.

Ambulanc reserves the right to change related technology without prior notice.

Ambulanc reserves the right to alter product specification without prior notice.

Ambulanc makes no warranty in any form concerning this manual, including (but not limited to) guarantee for implied marketability and adaptability for a specific purpose.

Ambulanc will, at its own discretion, take responsibility for safety, reliability and performance of the instrument in one of the following cases:

- any assembly, expansion, readjustment, improvement and repair operations are performed by any professional approved by Ambulanc;
- related electrical equipment is in compliance with national standards;
- the instrument is used in accordance with the operation instructions.

Ambulanc will not be responsible for safety, reliability and operation condition of the product in one of the following cases:

- any component is dismantled, expanded or re-adjusted;
- the instrument is repaired or changed not by any personnel approved by Ambulanc;
- the product is not used correctly in compliance with this Operating Manual.
Maintenance Service

Scope of Charge-Free Service:

- Charge-free service is provided for any equipment in the range of Ambulanc’s warranty terms.

Scope of Paid Service:

- Paid service is provided for any equipment beyond the range of Ambulanc’s warranty terms.

As well as in one of the following cases even during the warranty period:

- Damage caused by personal fault;
- Improper use;
- Grid voltage beyond the limits;
- Irresistible natural disaster;
- Use of spare part/ consumables not approved or machine service performed by personal not authorized by Ambulanc.

⚠️ Warning:

Failure to implement a set of satisfactory service/maintenance plan by any hospital or institute responsible for using this instrument may cause malfunction of it or even endanger body health.

Warranty

Manufacturing Process and Raw Material:
Ambulanc warrants that no failure will be resulted from any defect in manufacturing process or raw material when this instrument is used and serviced correctly.

After-Sales Service Unit

After-Sales Service Dept., Ambulanc (Shenzhen) Tech. Co. Ltd.

Address: 3rd Floor, Block C, Building #5, Skyworth Innovation Industry Park, Tang Tou 1st Road, Shiyan Town, Baoan District, Shenzhen 518108, China

Service Hot Line:
Tel: +86-755-26073861  Fax: +86-755-23016012

Web site: http://www.ambulgroup.com
E-MAIL: manager@ambu-lanc.com
Return

Return Procedure

Any return as necessary shall comply with the following procedure:

- Acquire right of return: Contact Ambulanc’s customer service, and provide the product ID labeled on external packaging of the instrument, which must be legible for return approval. Indicate product model and describe the reason for return.

- Freight: Any expenses (including customs fee) incurred in transporting the instrument to Ambulanc shall be paid by the user.

Important Information

1. After purchase of the product, the customer shall take full responsibility for maintenance and management of it.

2. Quality assurance will not cover the following even during the warranty period:

   - any damage or loss resulted from improper use or misuse of the product;
   - any damage or loss caused by force majeure such as fire, earthquake, flood or lightning;
   - any damage or loss attributed to failure to meet any operating condition required for the system, such as insufficient power supply, improper installation or unfavorable environmental conditions;
   - any damage or loss incurred due to use of the system in the region not initially intended for it; and
   - any damage or loss caused due to purchase from any unauthorized dealer or agent.

3. This equipment can be used only by certified medical staff.

4. Any software or hardware of this product must not be changed or modified without authorization.

5. In any case Ambulanc will take no responsibility for problem, damage or loss resulted from re-installation, change or repair of the system performed not by personnel authorized by Ambulanc.

6. This system is intended to provide the data required for clinical diagnosis for physicians. The physician takes responsibility for diagnosis process. Ambulanc takes no responsibility for any diagnosis process.

7. Be sure to back any key data to external storage medium, such as clinography and notes.

8. Ambulanc takes no liability for loss of data stored in the system due to
the operator's fault or any exceptional condition.

9. This manual contains warnings for foreseeable potential hazards. User shall keep watch at any time for any hazard not stated in the manual. Ambulanc takes no responsibility for damage or loss resulted from negligence or failure to observe the preventive measures stated in this manual.

10. This manual must be handed over to the successor when the system administrator is changed.
1 Equipment Description

Please read these safety instructions carefully. These safety instructions are an integral part of the equipment and must be kept accessible for review whenever necessary. For purpose of safety, the following information must be paid attention to.

1.1 Warning, Attention and tips

The following safety marks are used in this manual:

⚠️ Warning:

Indicating any risk of harm to patient and/or user.

⚠️ Attention:

Indicating potential equipment damage and undesired treatment effect.

Tips:

Giving useful indicative information.

1.2 Overview

• A functional inspection must be performed before use of the equipment (refer to Section 6 - Functional Inspection).

• Please observe the instructions in Section 5 - Sanitization to prevent infection or bacillosis.

⚠️ Warning:

• [After the training] You can operate E6 only after you have been provided with proper medical training and technical guidance on cardiopulmonary resuscitation equipment. Improper use of it may cause serious injury to body.

• [Fire] Do not use E6 in an oxygen-rich environment or with flammable or flammable anesthetics.

• [Scope of Application] Only use E6 for the intended purpose (see "1.1 Purpose").

• [Maintenance Qualification] Only the manufacturer Ambulanc (Shenzhen) Tech. Co., Ltd. or its authorized professionals can perform maintenance
measures.

- [Do not open] Do not open the E6 shield. Do not replace or modify the external or internal parts of the E6.

⚠️ Note:

- [Other devices] When E6 is used simultaneously with devices that emit high-frequency radiation, (for example, mobile phones, radios) must be kept at a distance of more than 1 m, otherwise it may cause dysfunction.

- [External Power Supply] When using an external power supply to power the cardiopulmonary resuscitation machine, always connect it to a simple-swap interface so that it can be quickly removed in the event of a malfunction.

- [External Power Supply] When using an external power supply to power the cardiopulmonary resuscitation machine, make sure that the power cord is not caught or obstructed. Do not use an external power source when it is not necessary, but use the battery inside the cardiopulmonary resuscitation machine.

- [Liquid] Do not immerse the E6 in a liquid. If liquid enters the hood, it will cause damage to the equipment.

1.3 Software

- A large number of quality assurance measures have been taken in the development of the device software, and the risk due to software defects is minimal.

1.4 Accessories / spare parts

⚠️ Note:

- [Preventing exposure] Take measures to prevent silica gel and rubber parts from being exposed to ultraviolet light and long-term direct sunlight, otherwise these parts will be embrittled.

- [Use only approved accessories] Using accessories from other manufacturers can cause malfunctions and incompatibilities. Please keep in mind that in these cases the rights and responsibilities of the warranty will be void: do not use the accessories recommended in the instructions or do not use the original spare parts.
### 1.5 Symbol Description

Description ICONS and symbols

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚠️</td>
<td>Refer to the document attached for more details</td>
<td>📜</td>
<td>Refer to the operating instructions for more details</td>
</tr>
<tr>
<td>⏰</td>
<td>Date of manufacture</td>
<td>⚠️</td>
<td>BF type applications</td>
</tr>
<tr>
<td>📦</td>
<td>Class-II equipment</td>
<td>☻</td>
<td>Waterproof level</td>
</tr>
<tr>
<td>⚠️</td>
<td>Do not reject into dustbin</td>
<td>☪</td>
<td>Non-ionizing radiation</td>
</tr>
<tr>
<td>📖</td>
<td>Refer to the document attached/manual</td>
<td>⚪/⚪</td>
<td>Main Unit Switch</td>
</tr>
<tr>
<td>🔋</td>
<td>Power supply by adapter</td>
<td>🌋</td>
<td>Power supply by battery</td>
</tr>
<tr>
<td>🍃</td>
<td>Battery level indication</td>
<td>☎️</td>
<td>Medical device</td>
</tr>
<tr>
<td>🏭</td>
<td>Manufacturer</td>
<td>☑️</td>
<td>Serial number</td>
</tr>
</tbody>
</table>

The following definition of the WEEE label applies to EU member states only.

This symbol indicates that this product should not be treated as household waste. By ensuring that this product is disposed of correctly, you will help prevent bringing potential negative consequences to the environment and human health. For more detailed information with regard to returning and recycling this product, please consult the distributor from whom you purchased it.

* For system products, this label may be attached to the main unit only

The product bears CE mark indicating its conformity with the provisions of the Medical Device Regulation EU 2017/745 concerning medical devices and fulfills the general safety and performance requirements of Annex I of this regulation.

![EC REP](image) Authorised representative in the European Community
1.6 Battery

⚠️ **Warning:**
- [Battery Low] When a low battery alarm occurs, do one of the following:
  - Replace the battery with a fully charged battery.
  - Connect an external E6 power supply.

**Note:**
- [Keep the battery installed] In order for the E6 to operate, the battery must always be installed (even when it is powered by an external power source).
- To minimize interruptions, we recommend always having a spare E6 battery that is fully charged in the carrying case.

1.7 Operation

⚠️ **Warning:**
- [Unsatisfactory position] If the E6 cannot be safely and correctly placed on the patient's chest, perform an artificial cardiopulmonary resuscitation again.
- [Incorrect position on the chest] If the relative position of the compression pad to the sternum is incorrect, it will increase the risk of damage to the chest and internal organs. It also affects the patient's blood circulation.
- [Change in position during operation] If the position of the pressing disc changes during operation or defibrillation, adjust the patient position and reposition it. Always use the E6 stabilizer strap to help ensure the correct position.
- [ECG interference] Chest compression can interfere with ECG analysis. Press Pause first before starting the ECG analysis. Reduce interruption time as much as possible. Press Start to restart pressing.
- [Electric Shock] If the external power cord (optional accessory) is damaged, remove it and replace it immediately to avoid electric shock or fire hazard.
- [Keeping Care] Never leave the patient or cardiopulmonary resuscitation machine during cardiopulmonary resuscitation. Only then can you respond quickly when the patient's condition deteriorates or the
cardiopulmonary resuscitation machine fails or alarms. A slow response from a medical professional can result in serious bodily injury.

- [Fault] If an interruption occurs during operation, or if the press is insufficient, or an abnormal condition occurs: Press the On/Off key for 3 seconds to stop E6 and remove the device. Begin artificial chest compressions.

⚠️ Note:

- [Defibrillation Electrodes] Position the defibrillator electrodes and wires so that they are not under the pressure plate. If the electrode already exists on the patient, make sure it is not under the pressure plate. If it is under the pressure plate, a new electrode must be used.

- [Gel is present on the chest] If there is a gel on the patient’s chest (for example, when used for an ultrasound examination), the position of the pressing disc changes during use. Remove all gels before placing the press plate.

- [Application Stabilizer] If the E6 Stabilizer Band is used to prevent or delay any treatment for the patient, the device should be deferred.

- [Auxiliary Therapy] Using other medical devices or drugs with E6 will affect the treatment. For other devices and/or drugs, be sure to refer to their Instructions for Use to ensure they are suitable for use with CPR.

- [Keep your hands away] Do not place your hands on or under the press pad while the E6 is running. Keep your hands away from the lock when attaching the upper part or lifting the patient.

- [Vein Path] ensures unobstructed venous access.

- [Do not block the vent hole] Do not block the vent hole under the hood, as this may cause the device to overheat.

- [Device Alarm] If any malfunction occurs during operation, the alarm light will illuminate and an alarm will sound. See section 7.3 for troubleshooting.

- [Do not use the strap to lift the patient] Do not use the strap to lift the patient. The strap is only used to secure the patient to the E6.

- [Skin burns] The temperature of the cover and battery may rise above 118°F / 48°C. If it is too hot, do not touch it for a long time to prevent skin burns. The patient strap is removed from the patient’s hands.
2 Device Description

2.1 Intended use

It aims to conduct external chest compression to adult patients suffering from acute cardiac arrest (loss of autonomous respiration, pulse beat and consciousness). It can be used when external chest compression is helpful for patients.

2.2 Contraindications

Do not use the E6 CPR System machine when:

- If the E6 cannot be placed safely or correctly on the patient's chest.
- Patient is too small: If the E6 sends 3 quick alarms while lowering the pressure plate, you cannot enter the “Pause” mode or the “Enable” mode.
- The patient is too large: The upper part of the E6 cannot be locked to the back panel without pressing the patient’s chest.
- When using E6, be sure to follow local and international guidelines for cardiopulmonary resuscitation.

2.3 Side effects

The International Resuscitation Liaison Committee (ILCOR) stated that cardiopulmonary resuscitation has the following side effects:

"In view of death from cardiac arrest, rib fractures and other injuries are common and acceptable outcomes of cardiopulmonary resuscitation. After resuscitation, all patients should be reassessed to determine if there is any recovery-related injury."

In addition to the above symptoms, chest embolism and pain are common in the use of the E6 cardiopulmonary resuscitation machine.

2.4 Intended User

Persons using E6 must be verified to have the following conditions:
• Operators with medical technology, such as: first responders, ambulance personnel, nurses, physicians or medical staff;

• Trained for clinical application of E6 approved by Ambulanc (Shenzhen) Tech.Co., Ltd.;

• Learned CPR courses in accordance with the American Heart Association, the European Resuscitation Council guidelines, or similar guidelines

• Improper use can cause serious injury to people (operators and patients).

2.5 Structural composition

The CPR System is composed of the main unit (including suction cup, back plate and battery), power adapter and mainstream ETCO₂ module.
3 Operation

⚠️ Note:

- [Pull up and confirm the grip position] When lifting up, please note that
  the position where the hand is placed is the upper gripper hole without
  the lock button, so as not to loosen the lock.

⚠️ Warning:

- [Patient too large] If the patient is too large, the upper part of the E6
  cannot be locked to the back panel without pressing the patient’s chest.
  Please abandon using the E6 under such case and continue manual

3.1 Adjust and start pressing

⚠️ Warning:

- [Incorrect position on the chest] If the relative position of the pressing
  disc and the sternum is incorrect, the risk of damaging the chest and
  internal organs will increase. It also affects the patient’s blood circulation.

- [Unsatisfactory position] If the E6 cannot be safely and correctly placed
  on the patient's chest, perform manual CPR.

- [Patient too small] If the E6 sends 3 quick alarms when lowering the
  pressing plate, you cannot enter the setting of the pressing depth and
  pressing mode. Restart the manual press.

- [Keeping Care] Never leave the patient or CPR machine during
  cardiopulmonary resuscitation. Only then can you respond quickly when
  the patient's condition deteriorates or the CPR machine fails or alarms. A
  slow response from a medical professional can result in serious bodily
  injury.

- [Fault] If an interruption occurs during operation, or if the press is
  insufficient, or an abnormal condition occurs: Press the On/Off key for 3
  seconds to stop E6 and remove the device. Begin artificial chest
  compressions.

- [Battery Low] When a low battery alarm occurs, do one of the following:
  
a) Replace the battery with a fully charged battery.
  b) Connect the external E6 power supply.
3.2 Use stabilizing belt

Note:
- [Application of Stabilizing belt] If the use of Stabilizing belt will prevent or delay any treatment for the patient, the usage of the E6 device should be deferred.

3.3 Move patient

3.3.1 Fix the patient arms

Note:
- [Do not use the fixing belt to lift the patient] Do not use the fixing belt to lift the patient. The belt is only used to secure the patient to the E6.
- [Skin burns] The temperature of the cover and battery may rise above 118°F / 48°C. If it is too hot, do not touch it for a long time to prevent skin burns. The patient fixing belt is removed from the patient's hands.
- [Vein Path] ensures unobstructed venous access.

3.3.2 Move patient

Note:
- [Position changed during operation] If the position of the pressing plate changes during operation or defibrillation, immediately press the adjustment button to adjust the position. Always use the E6 stabilizing belt to help ensure the correct position.
3.4 Change battery during operation

3.4.1 Change battery

Note: To minimize disruption, we offer a dual battery design. It is recommended to replace the new battery or connect the external power supply to charge the battery after a battery has a low battery alarm. Try to avoid the situation where only one battery is left.

3.4.2 Connect with external power

⚠️ Note:

- [Keep battery installed] In order for the E6 to operate, the battery must always be installed (even when it is powered by an external power source).

3.5 Charging battery

⚠️ Note:

- [Keep battery installed] In order for E6 to operate, the battery must always be installed (even when powered by an external power source).

- [Use only approved accessories] Only accessories approved by the Ambulanc company are allowed to be used with the E6. If you are using an unauthorized attachment, E6 will not operate correctly. Use only E6 batteries for E6 and E6 power supplies. If you use a different battery or power source, it may cause permanent damage to the E6. This will also result in the device not being able to enjoy the warranty service.

3.6 Adjuvant treatment

⚠️ Note:

- [Adjuvant treatment] Using other medical devices or drugs with E6 will affect the treatment. For other devices and/or drugs, be sure to refer to their Instructions for Use to ensure they are suitable for use with CPR.
4  Sanitary treatment

Note:
Do not immerse the E6 in a liquid. If liquid enters the hood, it will cause damage to the equipment. Allow the E6 to dry before wrapping it.

5  Maintainance

5.1 Regular check

⚠️ Warning:
- [Electric Shock] If the external power cord (optional accessory) is damaged, remove it and replace it immediately to avoid electric shock or fire hazard.

5.2 Remove battery and charge

⚠️ Note:
- [Keep battery installed] In order for E6 to operate, the battery must always be installed (even when powered by an external power source). To minimize interruptions, we recommend always having a spare E6 battery that has been charged in the carrying case.

⚠️ Warning:
- [Use only approved accessories] Using accessories from other manufacturers can cause malfunctions and incompatibilities. Please keep in mind that in these cases the rights and responsibilities of the warranty will be void: do not use the accessories recommended in the instructions or do not use the original spare parts.
6 Technical parameters

6.1 Medical Devices Management Category

<table>
<thead>
<tr>
<th>Medical Devices Management Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>Class-IIb</td>
</tr>
</tbody>
</table>

6.2 Physical Specifications

<table>
<thead>
<tr>
<th>Machine size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
</tr>
<tr>
<td>length: 530mm</td>
</tr>
<tr>
<td>width: 230mm</td>
</tr>
<tr>
<td>height: 590mm</td>
</tr>
<tr>
<td>Weight (including battery)</td>
</tr>
<tr>
<td>8.9 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types</td>
</tr>
<tr>
<td>Color TFT</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>3.5 &quot;</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>320 x 240 pixels</td>
</tr>
<tr>
<td>Features</td>
</tr>
<tr>
<td>With resistor type touch screen control</td>
</tr>
</tbody>
</table>
7 EMC

⚠️ Note:
- E6 CPR System machine meets the requirements of IEC 60601-1-2.
- Users should install and use the electromagnetic compatibility information provided by the random file.
- Portable and mobile RF communication equipment may affect the performance of the E6 CPR System machine, avoiding strong electromagnetic interference when used, such as near mobile phones, microwave ovens, etc.
- The guide and the manufacturer’s statement are in the attachment.

⚠️ Warning:
- E6 CPR System machine should not be used close to or stacked with other equipment. If it must be, it should be observed to be able to operate normally in its configuration.
- In addition to the cables sold by the manufacturer of the E6 CPR System machine as spare parts for internal components, the use of extra-standard accessories and cables may result in E6 increased working or reduced immunity.

<table>
<thead>
<tr>
<th>EMR Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>E6 can be used in the following specific EMR environment, in which user shall ensure to operate this equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMR Testing</th>
<th>Compliance Testing</th>
<th>EMR Environment Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio frequency radiation (CISPR 11)</td>
<td>Group 1</td>
<td>E6 generates radio frequency energy only when operating its internal functions. Therefore, this ventilator emits very small amount of radio frequency radiation and it is unlikely to cause any EMI to electronic equipment nearby.</td>
</tr>
<tr>
<td>Radio frequency radiation (CISPR 11)</td>
<td>Class B</td>
<td>E6 is applicable in all facilities, including domestic and public LV power supply network directly connected to house.</td>
</tr>
<tr>
<td>Harmonic wave radiation IEC 60601-1-2 EN 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage fluctuation and flicker emission</td>
<td>Complies</td>
<td></td>
</tr>
</tbody>
</table>
EMI Statement – Requirements for All Equipment and Systems

E6 can be used in the following specific EMR environments, and the user shall ensure to operate this equipment in the following EMR environments.

<table>
<thead>
<tr>
<th>EMI Type</th>
<th>YY0505 Testing Grade</th>
<th>Compliance Grade</th>
<th>EMR Environment Guide</th>
</tr>
</thead>
</table>
| ESD IEC 61000-4-2 | Contact discharge: ±8kV  
Air discharge: ±15kV | Contact discharge: ±8kV  
Air discharge: ±15kV | The ground shall be of wood, concrete or ceramics. In case of composite paving material, the relative humidity shall be at least 30%. |
| EFT IEC 61000-4-4 | To power cable: ±2kV  
To long I/O cable: ±1kV | To power cable: ±2kV  
To long I/O cable: ±1kV | Power supply grade shall be minimally the grade for typical commercial or medical environment. |
| Surging IEC 61000-4-11 | DM: ±1kV  
CM: ±2kV | DM: ±1kV  
CM: ±2kV | Mains power quality should meet the requirements of use in a typical commercial or hospital environment |
| Power frequency magnetic field (50/60Hz) IEC 61000-4-8 | 3A/m | 3A/m | Power frequency magnetic field shall be of the horizontal characteristics as in typical commercial or medical environment. |
| Voltage sag, short interruption and variation IEC 61000-4-11 | < 5% $U_f$ (> 95% fall, $U_i$), 0.5 cycle;  
40% $U_f$ (60% fall, $U_i$), 5 cycles;  
70% $U_f$ (30% fall, $U_i$), 25 cycles;  
< 5% $U_f$ (> 95% fall, $U_i$), 5s; | < 5% $U_f$ (> 95% fall, $U_i$), 0.5 cycle;  
40% $U_f$ (60% fall, $U_i$), 5 cycles;  
70% $U_f$ (30% fall, $U_i$), 25 cycles;  
< 5% $U_f$ (> 95% fall, $U_i$), 5s; | Power supply grade shall be minimally the grade for typical commercial or medical environment. It is recommended to use UPS to ensure continuous operation of this product even in case of AC power outage. |

Note: $U_f$ refers to the AC network voltage before the test voltage is applied.

Guide and Manufacturer Statement – EMI
E6 is intended for the following EMI environments, and E6 purchaser or user shall ensure to operate E6 in these EMI environments:

<table>
<thead>
<tr>
<th>EMI Test</th>
<th>IEC 60601 Test Level</th>
<th>Compliance Level</th>
<th>EM Environment - Guide</th>
</tr>
</thead>
</table>
| Radio frequency transmission IEC 61000-4-6 | 3 V (effective value) 150 kHz~80 MHz (except ISM bandsa) | 3V (effective value) | Any portable or mobile radio frequency communication equipment shall not be used in a distance closer to any part of E6 Emergency Ventilator (including cable) than as recommended. Such distance is determined based on a formula related to transmitter frequency. Recommended Distance  

\[ d = 1.2\sqrt{P} \]

\[ d = 0.4\sqrt{P} \quad 80 \text{ MHz} \sim 800 \text{ MHz} \]

\[ d = 0.8\sqrt{P} \quad 800 \text{ MHz} \sim 2.5 \text{ GHz} \]

where,

- \( P \): the maximum rated output power (in Watt) of transmitter provided by its manufacturer;
- \( d \): the recommended distance (in meter)\(^1\).

The field strength of fixed radio frequency transmitter is determined based on the survey at EMI location\(^2\), and each frequency range should be lower than Compliance Level\(^3\).

Interference may occur near the equipment attached with the following signs.

**Note 1:**
For frequency of 80MHz and 800MHz, a formula in respect of high frequency should be used.

**Note 2:**
As EM transmission is affected by absorption and reflection of buildings, objects and human bodies, these guidelines may not be applicable to all circumstances.
a) ISM bands between 150kHz and 80MHz are 6.765MHz~6.795MHz, 13.553MHz~13.567MHz, 26.957MHz~27.283MHz and 40.66MHz~40.70MHz.

b) ISM bands between 150kHz and 80MHz and compliance levels between 80MHz and 2.5GHz are used to reduce the possibility of interference resulted from mobile/portable communication devices which are accidentally taken into patient’s location. For this reason, additional factor 10/3 is used for calculation of recommended distance to the transmitter within these frequency ranges.

c) Theoretically, field strength of fixed transmitters, such as wireless (cellular/cordless) phone and mobile ground radio base station, amateur radio, FA/FM radio broadcast and TV broadcast, cannot be estimated accurately. Evaluation of EMI environment of fixed radio frequency transmitter should take into consideration survey at EM locations. If field strength measured at the place where E6 Emergency Ventilator is located is higher than the aforesaid applicable radio frequency compliance level, then E6 Emergency Ventilator shall be observed to verify its normal operation. If any abnormal property is found, related remedial measure may be required, such as re-adjustment of orientation or position of E6 Emergency Ventilator.

d) Throughout the frequency range of 150kHz~80MHz, the field strength should be lower than 3V/m.

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**Recommended distance between portable and mobile RF communication equipment and E6 CPR System**

E6 is intended for use in RFI-controlled EMI environments. Based on the maximum rated power of related communication equipment, purchaser or user can prevent EMI by maintaining the minimum distance between portable and mobile RF communication equipment and E6 as recommended below.

<table>
<thead>
<tr>
<th>Max. Output Power of Transmitter (W)</th>
<th>Distance (m) for Transmitters of Various Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 kHz~80 MHz (except ISM bands)</td>
<td>150 kHz~80 MHz (ISM bands)</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
</tr>
<tr>
<td>800 MHz~2.5 GHz</td>
<td>80 MHz~800 MHz</td>
</tr>
<tr>
<td>0.01</td>
<td>0.08</td>
</tr>
<tr>
<td>0.1</td>
<td>0.24</td>
</tr>
<tr>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>10</td>
<td>2.4</td>
</tr>
</tbody>
</table>

\[ d = 1.2\sqrt{P} \]

\[ d = 2.3\sqrt{P} \]
For any maximum rated output power which is not listed in the table above, the recommended distance d (in meter) can be determined based on the formula in the corresponding volume of transmitter frequency, where p is the maximum rated output power in (Watt) of transmitter provided by its manufacturer.

**Note 1:**
For frequency of 80MHz and 800MHz, a formula in respect of high frequency should be used.

**Note 2:**
ISM bands between 150kHz and 80MHz are 6.765MHz~6.795MHz, 13.553MHz~13.567MHz, 26.957MHz~27.283MHz and 40.66MHz~40.70MHz.

**Note 3:**
Additional factor 10/3 is used for calculation of recommended distance to the transmitter within frequency ranges of 150kHz ~ 80MHz and 80MHz~2.5GHz, so as to reduce the possibility of interference resulted from mobile/portable communication devices which are accidentally taken into patient’s location.

**Note 4:**
As EM transmission is affected by absorption and reflection of buildings, objects and human bodies, these guidelines may not be applicable to all circumstances.

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### Basic EMC Properties of E6 CPR System

The E6 CPR System can work normally according to the parameter settings. See Chapter 5 of the manual for details. Alarms can be issued based on real-time monitoring of the E6 status, and to ensure the accuracy of the parameters below of the E6 in the electromagnetic compatibility environment:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressing depth</td>
<td>30~53mm, error ±3mm. Default setting: 50mm, continuous adjustable</td>
</tr>
<tr>
<td>Pressing frequency</td>
<td>110 times per minute, error ±5 times</td>
</tr>
<tr>
<td>Press/Release ratio</td>
<td>50%, error ±5%</td>
</tr>
</tbody>
</table>
| Pressing mode (operator choose)    | - 15:2 (press 15 times, and 6 secs for ventilation)  
- 30:2 (press 15 times, and 6 secs for ventilation)  
- Continuous pressing               |

### Parameters of EMC Cable Material

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapter input power cable</td>
<td>3.0±0.01m</td>
</tr>
<tr>
<td>Adapter output power cable</td>
<td>1.2±0.05m</td>
</tr>
</tbody>
</table>