



Please read this manual before operating

# UDS-J ULTRASONIC SCALER INSTRUCTION MANUAL



- Certified Management System
- EN ISO 9001
- EN ISO 13485

[www.glwoodpecker.com](http://www.glwoodpecker.com)

**GUILIN WOODPECKER MEDICAL INSTRUMENT CO., LTD.**

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## **1 The installation and components of equipment**

### **1.1 Instruction**

Guilin Woodpecker Medical Instrument Co., Ltd. is a professional manufacturer in researching, developing and producing ultrasonic scalers. The product is mainly used for teeth cleaning and also an indispensable equipment for tooth disease prevention and treatment.

The ultrasonic scaler UDS-J has scaling, perio functions with the following features:

- 1.1.1 Automatic frequency tracking ensures that the machine always works on the best frequency and more steadily.
- 1.1.2 Digitally controlled, easy operation and more efficient for scaling.

### **1.2 Components**

1.2.1 The components of machine are listed in the packing list.

The scaling tips and other accessories are not listed in this instruction manual completely. The detail can be found in the instruction for tips and packing list.

1.2.2 Product performance and structure

Ultrasonic scaler is composed of electro circuit, water way and ultrasonic transducer.

1.2.3 Scope of application

Ultrasonic scaler UDS-J is used for the dental calculus elimination.

### **1.3 The main technical specifications**

1.3.1 Power source input: 220-240V~ 50Hz/60Hz 150mA

1.3.2 Main unit input: 24V~ 50Hz/60Hz 1.3A

1.3.3 Output power: 3W to 20W

1.3.4 Output tip vibration frequency: 30kHz±3kHz

1.3.5 Output half-excursion force: <2N

1.3.6 Output primary tip vibration excursion: ≤100μm

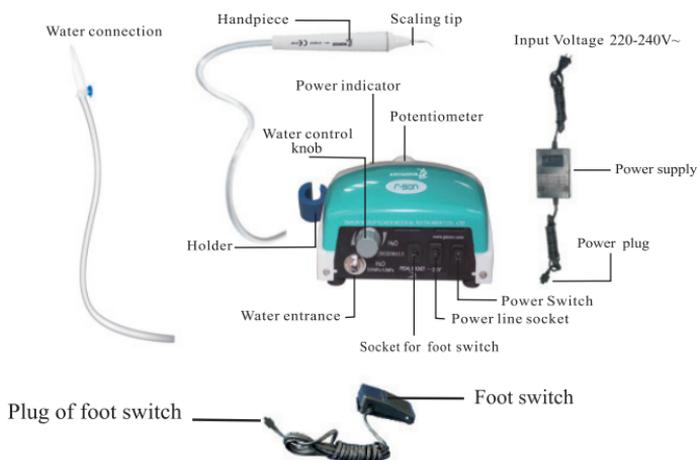
1.3.7 Main unit fuse: T1.6AL 250V

1.3.8 Power source fuse: T0.5AL 250V

- 1.3.9 Water pressure: 0.01MPa to 0.5MPa
- 1.3.10 Main unit weight: 0.8 kg
- 1.3.11 Power supply weight: 1.2kg
- 1.3.12 Operating mode: Continuous operation
- 1.3.13 Type of protection against electric shock: class II equipment
- 1.3.14 Degree of protection against electric shock: Type BF applied part
- 1.3.15 Degree of protection against harmful ingress of water: Ordinary equipment (IPX0), the foot switch is drip-proof equipment (IPX1)
- 1.3.16 Applied part of the equipment: handpiece and tip
- 1.3.17 Degree of safety of application in the presence of a Flammable Anesthetic Mixture with air, Oxygen or Nitrous Oxide: Equipment not suitable for being used in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.

## 1.4 Components instruction

The components of the equipment are as showed in picture 1.



Picture 1

## 2. Installation and adjustment

- 2.1 Open the packing box, make sure that all the parts and accessories are

complete according to the packing list.

2.2 Take the main unit out of the box and put it on a stable plane, keep the main unit straight to the operator.

2.3 Turn the water control knob towards clockwise direction to the max and turn the potentiometer towards clockwise direction to a suitable position. [note2]

2.4 Insert the plug of the foot switch to its socket.

2.5 Connect one end of the water pipe to the water entrance, and the other end to the clean water source.

2.6 Connect the output end of power supply with main unit and get through to the power

2.7 Press the power switch of the main unit, then the power indicator shines.

### 3. Operation methods and function instruction

3.1 Direct the pit of the potentiometer at the "1" dial on the corer before turning on the scaler, make the main unit straight to the operator and turn the water control knob towards clockwise direction about three circles to the maximum.

3.2 The normal frequency is  $30\text{kHz}\pm 3\text{kHz}$ . With the high frequency, a light touch and a certain to-and-fro motion will eliminate the tartar without obvious heating. Overexertion and overstay are forbidden.

3.3 The way of assembly and disassembly of the scaling tips is as showed in picture 2.

3.4 The choice and operation methods of tips is shown in detail in attached materials of the equipment.

3.5 Vibrating intensity: Adjust the vibrating intensity as you need, generally turn the knob to the middle grade. According to patient's different sensitivity and the rigidity of the gingival tartar, to adjust the vibrating intensity during the clinical treatment.

3.6 Water volume adjust: Step on the foot switch, and the tip begins to vibrate, then turn the water control

knob to form spray, so as to cool down the handpiece and clean the teeth.



Picture 2:

Fasten the scaling tip by wrench with the hand between thumb and index finger.

- 3.7 The handpiece can be handled in the same gesture as a pen in hand.
- 3.8 During the clinical treatment, be sure not to make the end of tip touch the teeth vertically and not to make the tip overexert on the surface of the teeth, in case of hurting the teeth and damaging the tip.
- 3.9 After finishing operation, keep the machine working for 30 seconds with the water supply in order to clean the handpiece and the scaling tip.
- 3.10 Unscrew the scaling tip and sterilize it.

#### **4. Sterilization**

- 4.1 All the scaling tips can be autoclaved.
- 4.2 Handpiece can be sterilized by any neutral sterilized liquid for cleaning and sterilizing. Do not sterilize under the high temperature and pressure.
- 4.3 The scaling tip and wrench can be cleaned by ultrasonic cleaner.

#### **5. Contraindication**

- 5.1 The patient who has hemophilia is not allowed to use this equipment.
- 5.2 The patient or doctor who with heart pacemaker is forbidden to use this equipment.
- 5.3 The heart disease patient, pregnant woman and children should be cautious to use the equipment.

#### **6. Storage and maintenance**

- 6.1 The equipment should be handled carefully and lightly. Be sure that it is far from the vibration, and is installed or kept in a cool, dry and ventilated place.
- 6.2 Don't store the machine together with the articles that are combustible, poisonous, caustic, or explosive.
- 6.3 This equipment should be stored in a room where the relative humidity is  $\leq 80\%$ , atmospheric pressure is 50kPa to 106kPa, and the temperature is  $-10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .
- 6.4 Please turn off the power switch and pull out the power plug when the

equipment is not used. If the machine is not used for a long time, please make it get through to the power and water once per month for five minutes.

## 7. Troubleshooting and notes

### 7.1 Troubleshooting

Fault	Possible	Solutions
The scaling tip doesn't vibrate and there is no water flowing out when stepping on the foot switch.	The power line plug is in loose contact.	Make the plug insert to the socket well.
	The foot switch is in loose contact.	Insert the foot switch to its socket tightly.
	The fuse of transformer is broken.	Open the power box, change a new T0.5AL250V fuse.
	The fuse in the main unit is broken.	Take off the cover, change a new T1.6AL250V fuse.
The scaling tip doesn't vibrate but there is water flowing out when stepping on the foot switch.	The tip hasn't been screwed on the handpiece tightly.	Screw the tip on the handpiece tightly (picture 2).
	The connect plug between the handpiece and the circuit board is in loose contact.	Contact our dealers or us.
	Something wrong with the handpiece	Contact our dealers or us [note 1].
The handpiece generates heat.	The water control knob is in a low grade.	Turn on the water control knob to a higher grade [note 2].
	The potentiometer is damaged [note 2].	Change a new one.

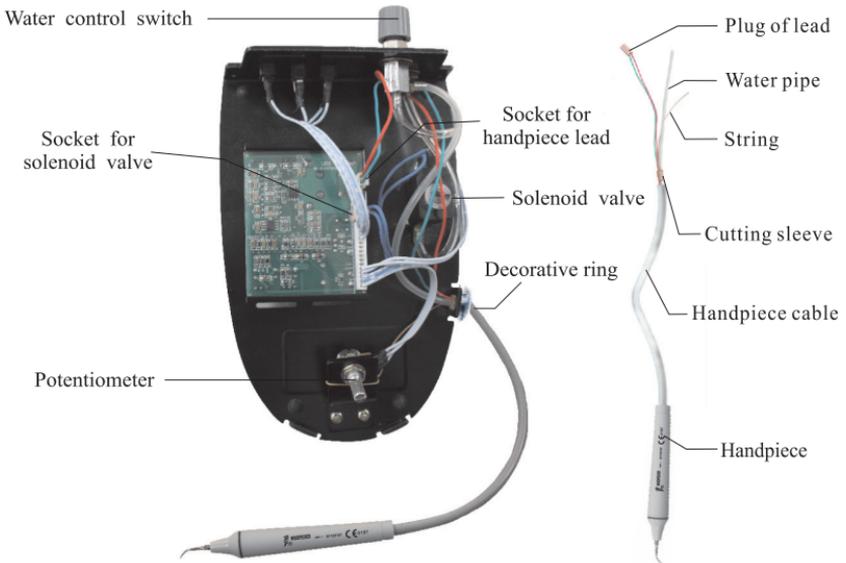
Fault	Possible	Solutions
The scaling tip vibrates but there is no fine spray when stepping on the foot switch.	The water control knob is turn off.	Turn on the water control knob [note 2].
	There is impurity in the solenoid valve.	Clean inside of solenoid valve ( picture 5).
	The water pipe is blocked.	Clean the water pipe by multi-function syringe [note 3].
There is still water flowing out after the power is off.	There is impurity in the solenoid valve.	Clean inside of solenoid valve (picture 5).
The amount of spouting water is too little.	The water control knob is in a low grade.	Turn on the water control knob to a higher grade [note 2].
	The water pressure is not high enough.	Make the water pressure higher.
	The water pipe is blocked	Clean the water pipe by multi-function syringe [note2].
The vibration of the tip becomes weak.	The tip hasn't been screwed on to the handpiece tightly.	Screw the tip on the handpiece tightly (picture 2).
	The tip is vibrated loose.	Screw the tip on the handpiece tightly (picture 2).
	The tip is damaged [ note3 ].	Change a new one.
The vibration is too strong and the potentiometer is failure.	The potentiometer is damaged [note 2].	Change a new one.

If the troubles still can't be solved, please contact with the local distributors or our company.

## 7.2 Notice

[ **Note 1** ] The disassembly of the handpiece (As showed in picture 3):

a) Remove the screw from the cover, pull out the potentiometer vertically, then take off the cover from the end of the machine lightly (there is a line connecting the cover and the machine, don't use too much strength). The inner of the machine is as showed in picture 3.



Picture 3 The disasblt of handpiece

b) Pull out the water pipe in the handpiece cable from the coupling between the water control knob and the water pipe.

c) Pull out the lead plug from circuit board and untie the string.

d) Hold the joint of handpiece cable and the main unit and push it into the main unit about 1cm, then pull out the cutting sleeve from the cable.

e) Take off the handpiece from the main unit, and the disassembly is finished.

The assembly of handpiece is on the contrary. Be sure not to assemble the lead

plug in a wrong direction, otherwise the tip will be electriferous.

Check-up method: get through to the power, step on the foot switch, and check-up the scaling tip with electric pen. If the electric pen shines, the scaling tip is electriferous. Turn off the machine and then insert the lead plug correctly.

[ **Note 2** ] Turn the water control knob towards anticlockwise direction, when the knob can't be turned any more, it comes to the min. On the contrary direction, the water volume increases step by step till the knob is back-out. The grade of the potentiometer is from gear 1 to 9. The ninth grade is the max. Be sure not to overdo.

[ **Note 3** ] To clean the water pipe with the multi-function syringe of the dental unit (as showed in the picture 4):

- a) Snip the water pipe at a distance of 10cm to 15cm from the water entrance.
- b) Turn on the power switch, get through to the power.
- c) Connect the multi-function syringe of the dental unit to the water pipe.
- d) Step on the foot switch.
- e) Turn on the switch of the multi-function syringe, press the air or water into the water pipe in the machine, then eliminate the impurity in the water pipe.



Picture 4 Multi-fuction syringe

[ **Note 4** ] If the scaling tip has been screwed on tightly and there is fine spray too, the following phenomena shows that the scaling tip was damaged:

- a) The vibrating intensity and the pulverization degree become weak obviously.
- b) When operating, there is some buzz when the scaling tip is working.

## 8. Precaution

8.1 Notice when using equipment

8.2 Keep the scaler clean before and after operation.

8.3 The scaling tip, wrench and handpiece must be sterilized before each treatment.

8.4 Don't screw the scaling tip when stepping on the foot switch.

8.5 The scaling tip must be fastened. There must be fine spray coming out from the tip when operating.

8.6 Change a new one when the tip is damaged or worn excessively.

8.7 While scaler working ,the heat of scaling tip will become higher if there is no water flowing out.Please keep the water flow smoothly.

8.8 Don't twist or rub the tip.

8.9 Don't use impure water source, and be sure not to use normal brine instead of pure water source.

8.10 If use the water source without hydraulic pressure, the water surface should be one meter higher than the head of the patient.

8.11 After operating, turn off electrical source, and then pull out the plug.

8.12 As a professional manufacturer of medical instruments, we are only responsible for the safety on the following conditions:

8.12.1 The maintenance, repair and modification are made by the manufacturer or the authorized dealer.

8.12.2 The changed components are original of "WOODPECKER" and operated correctly according to instruction manual.

8.1.13 Please put the power plug into the socket easy to pull out, to make sure it can be pull out in emergency.

8.1.14 The power supply is considered as a part of ME equipment.This device can only be equipped with the special power supply of Guilin Woodpecker Medical Instrument Co., Ltd.

8.1.15 The power supply is NOT waterproof. Please keep it dry and away from the water.

8.16 The screw thread of the scaling tips produced by other manufacturers maybe coarse, rusty and collapsed, which will damage the screw thread of the handpiece irretrievably. Please use "WOODPECKER" brand scaling tip.

## 9. Transportation

9.1 Excessive impact and shake should be prevented in transportation. Lay it carefully and lightly and don't invert it.

9.2 Don't put it together with dangerous goods during transportation.

9.3 Avoid solarization and getting wet in rain or snow during transportation.

## 10. Working condition

Environment temperature:  $+5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$

Relative humidity:  $\leq 80\%$

Atmosphere pressure: 70kPa to 106kPa

## 11. After service

We offer one year free repair to the equipment according to the warranty card.

The repair of the equipment should be carried out by professional technician. We are not responsible for any irretrievable damage caused by the not professional person.

Note: "P" was put on the valve seat to designate the water entrance.



Picture 5 The assembly and disassembly of the solenoid valve

## 12. Symbol instruction



Trademark



Consult the accompanying documents



Date of manufacture



Manufacturer



Class II equipment



Type BF applied part

IPX0

Ordinary equipment

IPX1

Drip-proof



Used indoor only



Appliance compliance WEEE directive



Alternating current

~24V

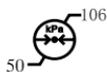
~24V power supply input interface



Foot switch interface



Water control knob



Atmospheric pressure for storage



Temperature limitation



Humidity limitation



Water entrance pressure 0.01MPa-0.5MPa



CE marked product



FDA marked product



Authorised Representative in the EUROPEAN COMMUNITY



- Certified Management System
- EN ISO 9001
- EN ISO 13485

Got the quality management system certification and CE certification issued by TÜV Rheinland

### 13. Environmental protection

There are no harmful factors in our product. You can deal with it based on the local law.

### 14. Manufacturer's right

We reserve the rights to change the design of the equipment, the technique, fittings, the instruction manual and the content of the original packing list at any time without notice. If there are some differences between blueprint and real equipment, take the real equipment as the norm.

### 15. For technical data, please contact



Wellkang Ltd ([www.CE-Marking.eu](http://www.CE-Marking.eu))  
29 Harley St., LONDON, W1G 9QR, UK

## 16. Declaration of conformity

### 16.1 Product conformity the following standards

EN 60601-1:2006	EN ISO 9687:1995
EN 60601-1-2:2007	EN 1041:2008
EN 61000-3-2:2006	EN ISO 14971:2009
EN 61000-3-3:2008	EN ISO 7405:2008
EN 60601-1-4:1996	EN ISO 17664:2004
EN 60601-1-6:2007	EN ISO 17665-1:2006
EN 61205:1994	EN ISO 10993-1:2009
EN ISO 22374:2005	EN ISO 10993-5:2009
EN 62304:2006	EN ISO 10993-10:2010
EN 980:2008	

### 16.2 EMC - Declaration of conformity

<b>Guidance and manufacturer's declaration - electromagnetic emissions</b>		
The model UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are intended for use in the electromagnetic environment specified below. The customer or the user of the model UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED should assure that it is used in such an environment.		
<b>Emissions test</b>	<b>Compliance</b>	<b>Electromagnetic environment - guidance</b>
RF emissions CISPR 11	Group 1	The models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR11	Class B	The models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are suitable for used in domestic establishment and in establishment directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Complies	

**Guidance & Declaration — electromagnetic immunity**

The models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are intended for use in the electromagnetic environment specified below. The customer or the user of the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED should assure that It is used in such an environment.

<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment - guidance</b>
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supply lines ±1 kV for Input/output lines	±2kV for power supply lines ±1kV for interconnecting cable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line to line ±2 kV line to earth	±1 kV line to line	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11.	<5 % $U_T$ (>95% dip in $U_T$ ) for 0.5 cycle 40 % $U_T$ (60% dip in $U_T$ ) for 5 cycles 70% $U_T$ (30% dip in $U_T$ ) for 25 cycles <5% $U_T$ (>95 % dip in $U_T$ ) for 5 sec	<5 % $U_T$ (>95% dip in $U_T$ ) for 0.5 cycle 40 % $U_T$ (60% dip in $U_T$ ) for 5 cycles 70% $U_T$ (30% dip in $U_T$ ) for 25 cycles <5% $U_T$ (>95 % dip in $U_T$ ) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED require continued operation during power mains interruptions, it is recommended that the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE  $U_T$  is the a.c. mains voltage prior to application of the test level.

**Guidance & Declaration - Electromagnetic immunity**

The models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are intended for use in the electromagnetic environment specified below. The customer or the user of the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3V  3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. <b>Recommended separation distance</b> 3V $d = 1.2 \times P^{1/2}$ 80 MHz to 800 MHz $d = 2.3 \times P$ 800 MHz to 2.5 GHz where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and $d$ is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, <sup>a</sup> should be less than the compliance level in each frequency range. <sup>b</sup> Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz end 800 MHz, 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.

<sup>a</sup> 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 models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are used exceeds the applicable RF compliance level above, the model UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED.

<sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

Recommended separation distances between portable and mobile RF communications equipment and the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED			
The model UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED is intended for use in electromagnetic environment in which radiated RF disturbances is controlled. The customer or the user of the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the models UDS-J, UDS-K, UDS-K LED, UDS-L, UDS-L LED, UDS-A, UDS-A LED, UDS-P, UDS-E, UDS-P LED, UDS-E LED, D1, D3, D5, D7, D3 LED, D5 LED, D7 LED are recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency o m		
	150kHz to 80MHz $d=1.2 \times P^{1/2}$	80MHz to 800MHz $d=1.2 \times P^{1/2}$	800MHz to 2,5GHz $d=2.3 \times P^{1/2}$
0,01	0.12	0.12	0.23
0,1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance $d$ in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where $P$ is the maximum output power rating of the transmitter in watts (W) accordable to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz. the separation distance 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.			

The device has been tested and homologated in accordance with EN 60601-1-2 for EMC. This does not guarantee in any way that this device will not be effected by electromagnetic interference Avoid using the device in high electromagnetic environment.

## 17. Statement

All rights of modifying the product are reserved to the manufacturer without further notice. The pictures are only for reference. The final interpretation rights belong to GUILIN WOODPECKER MEDICAL INSTRUMENT CO., LTD. The industrial design, inner structure, etc, have claimed for several patents by WOODPECKER, any copy or fake product must take legal responsibilities.

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for more information



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