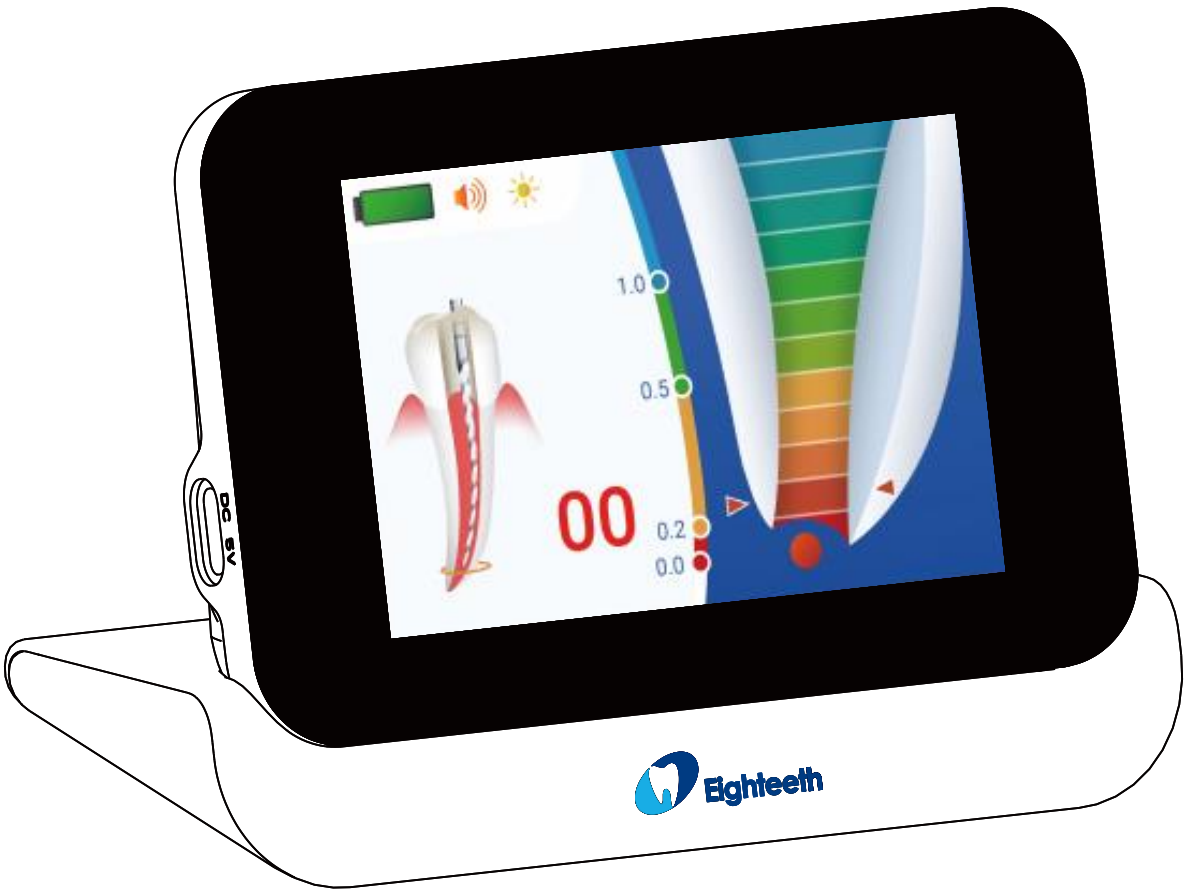
Eighteeth

CE
0197



FindPex

Apex Locator USER MANUAL

Changzhou Sifary Medical Technology Co.,Ltd.

P/N: IFU- 6135110

Version: 03

Revised: 2025.03.31

Size: 96mm × 119mm

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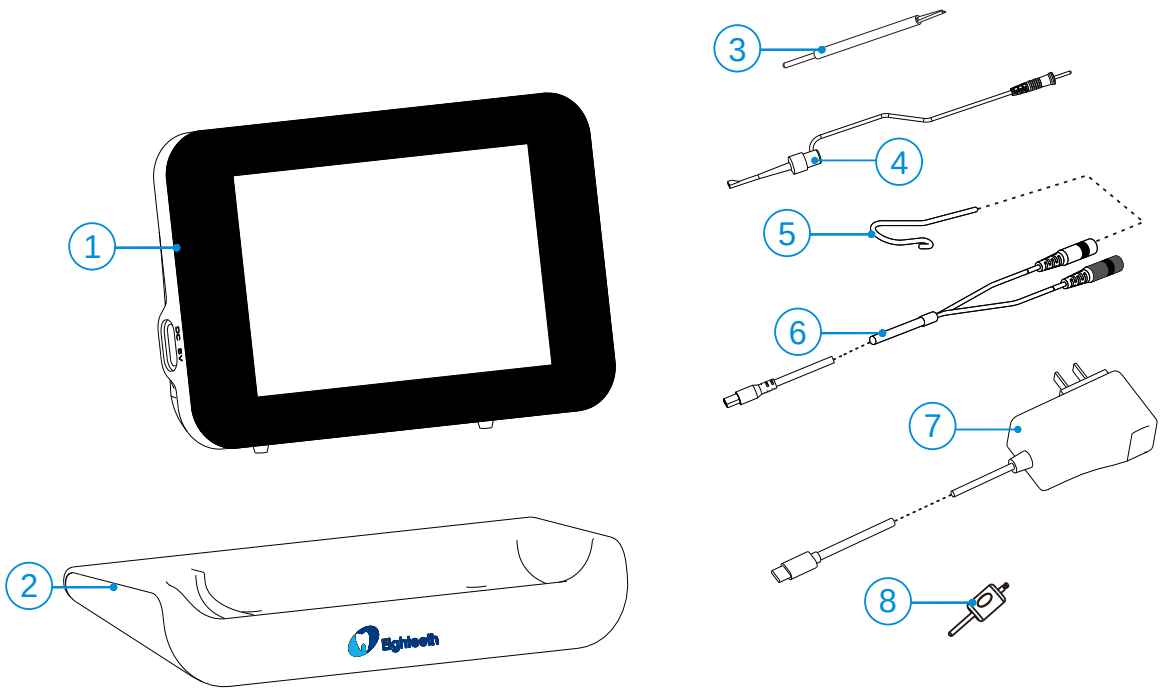
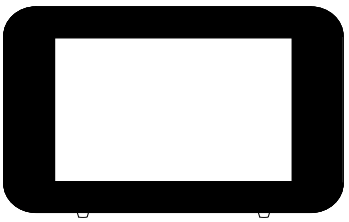
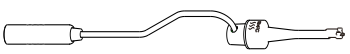
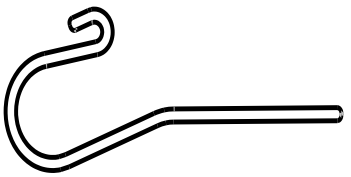
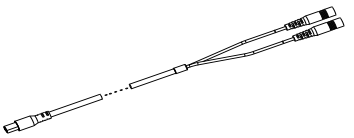
1. Scope of FindPex

1.1 Parts Identification



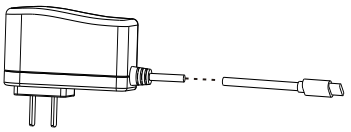
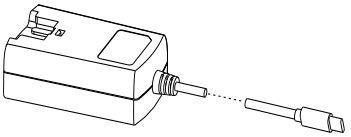
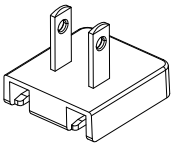
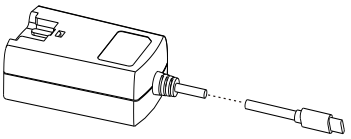
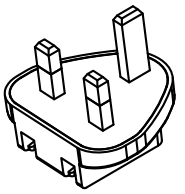
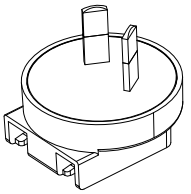
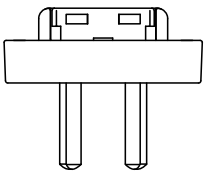
1. Apex Locator
2. Base
3. Touch Probe
4. File Clip
5. Lip Hook
6. Measuring Wire
7. Adapter
8. Tester

1.2 Components

Apex Locator(1pc) Part No. 6151027 	Base (1pc) Part No. 6151028 	Touch Probe (1pc) Part No. 6151011
File Clip (2pcs) Part No. 6151031 	Lip Hook (2pcs) Part No. 6072002 	Measuring Wire (1pc) Part No. 6015002 
Tester (1pc) Part No. 6151005 		

For different regions, there are several different adapter options to be selected as follows.

Standard	Adapter	Power plug

European standard	Adapter (1pc) Part No: 6016021 	/
American standard	Adapter (1pc) Part No: 6516003 	American standard power plug (1pc) Part No: 6016011 
Multi-standard	Adapter (1pc) Part No:6516003 	British standard power plug (1pc) Part No: 6016009 
		Australian standard power plug (1pc) Part No: 6016010 
		Argentina standard power plug (1pc) Part No:6016014 

2. Symbols used in the User Manual

	General warning sign.
	Caution
SN	Serial number
REF	Catalogue number
MD	Medical device
EU REP	Authorized representative in the European Community
	Manufacturer
CN	Country of manufacture
LOT	Lot number
	Class II equipment
	Type B applied part
	Direct current

	Do not dispose of the product into the ordinary municipal waste or garbage system
	Keep dry
CE 0197	CE marking
134℃	Sterilizable in a steam sterilizer (autoclave) at the temperature specified
55℃ -20℃	Temperature limitation
80% 20%	Humidity limitation
106kPa 70kPa	Atmospheric pressure limitation
Eighteeth	Manufacturer’s LOGO
	Follow instructions for use
	Washer-disinfector for thermal disinfection

3. Before Use

3.1 Intended use

FindPex is used to detect the apex of root canal.

This device must only be used in hospital environments, clinics or dental offices by qualified dental personnel and not used in the oxygen-rich environment.

3.2 Contraindications

Do not use this unit in conjunction with an electric scalpel or on patients who have a pacemaker.
Blocked canals cannot be accurately measured.

Read the following warnings before use:

- The device must not be placed in humid surroundings or anywhere where it can come into contact with any type of liquids.
- Do not expose the device to direct or indirect heat sources. The device must be operated and stored in a safe environment.
- The device requires special precautions with regard to electromagnetic compatibility (EMC) and must be installed and operated in strict compliance with the EMC information. In particular, do not use the device in the vicinity of fluorescent lamps, radio transmitters, remote controls, portable or mobile RF communication devices and do not charge, operate or store at high temperatures. Comply with the specified operating and

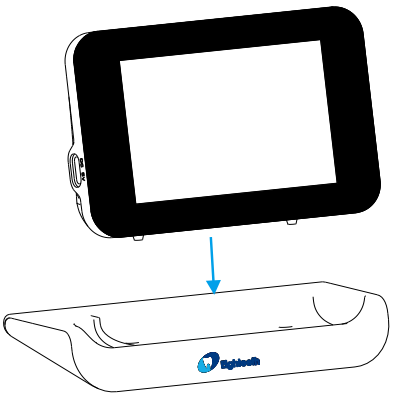
storage conditions.

- Gloves and a rubber dam are compulsory during treatment.
- If irregularities occur in the device during treatment, switch it off. Contact the agency.
- Never open or repair the device yourself, otherwise, void the warranty.
- If there is any liquid leaked, it indicates that the battery is leaked. Remove all of the leaked liquid and contact the local agency.
- When used in ESD environment, the display or charging process of the d evice may be affected. Restart the device to recover. If it still cannot work normally, contact the local agency.
- To restore power supply after power failure occurs during charging, it is necessary to confirm whether the device is charging normally. If it cannot be charged, it can be restored by plugging the adapter again.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the **FindPex,** including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- It is forbidden to use non-original parts for the equipment.
- Only trained technician or distributor can change the battery, the electronic parts will be damaged if use a wrong battery or install it in a wrong way.

4.Installing the FindPex

4.1 Connecting Apex Locator and base

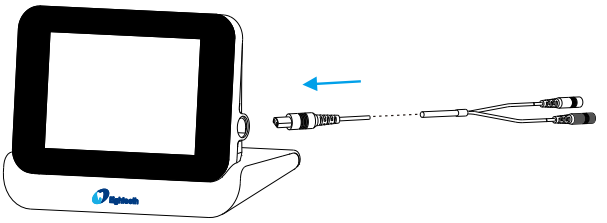
Insert the Apex Locator into the slot on the base of the Apex Locator as shown in below picture.



Please place the Apex Locator in the correct direction into the base. If the direction is incorrect, the Apex Locator will not be able to secure with the base and may fall off.

4.2 Connecting measuring wire

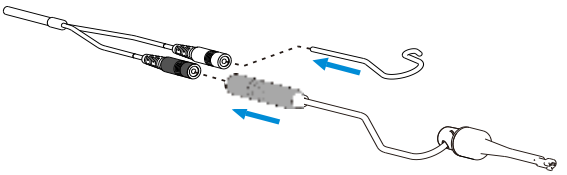
Connect the measuring wire and insert it into the corresponding slot on the right side of the Apex Locator to complete the connection of the measuring wire as shown in below picture



Please use the original measuring wire. Non-original measuring wires may have differences in size and structure, which may damage the Apex Locator or cause deviations in measurement accuracy.

4.3 Connecting file clip and lip hook

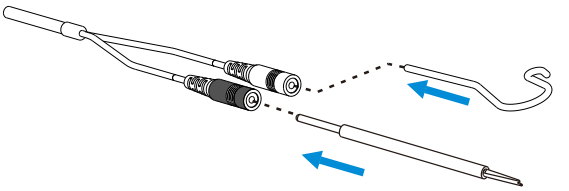
Insert the file clip and lip hook into the corresponding socket of the measure wire



- Please use the original file clip and lip hook that manufactured by Sifary. Because the size of the unoriginal file clip and lip hook are different, it may damage the Apex Locator or cause deviation of measurement accuracy.
- Please check the connection of the device before use to make sure the device functions well.

4.4 Connecting touch probe

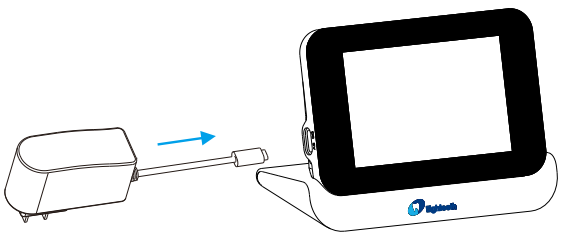
This product is equipped with a touch probe at the factory, which can replace the file clip for use. When using, connect the lip hook and touch probe to the measure wire.



4.5 Apex Locator charging

Plug the USB of adapter into the Apex Locator, and plug the other end into a power outlet.

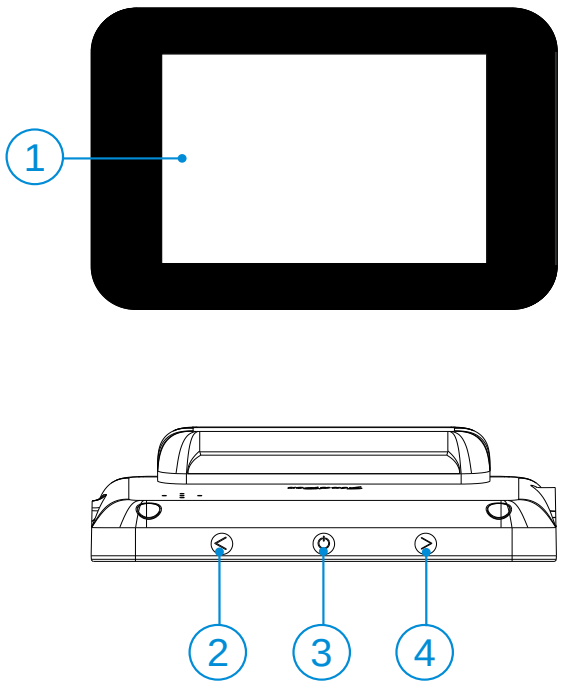
The battery indicator on the display screen of the Apex Locator will flash.



- Only the original adapter can be used.
- Do not use the device while charging.
- Apex Locator power connector can only be used to connect the original adapter cord for charging purpose.
- Don't position the device where it is difficult to operate the disconnection device.

5.Interface

5.1 Panel keys



① Display screen
② Decrease key ＜
③ Power key ⏻
④ Increase key ＞

Turn Power On/Off

Press "⏻" to turn on/off. Long press"⏻" more than 2 seconds with a "didi" alarm sound.

Use interface

After turning on, enter the startup animation, the animation ends, and jump to the use interface

Menu interface

Long press "＜" or "＞" on the use interface to enter the menu interface; Long press "＜" , "＞" or "⏻"on the menu interface to enter the use interface. The menu interface automatically returns to the use interface without operation (Factory set to 5s).

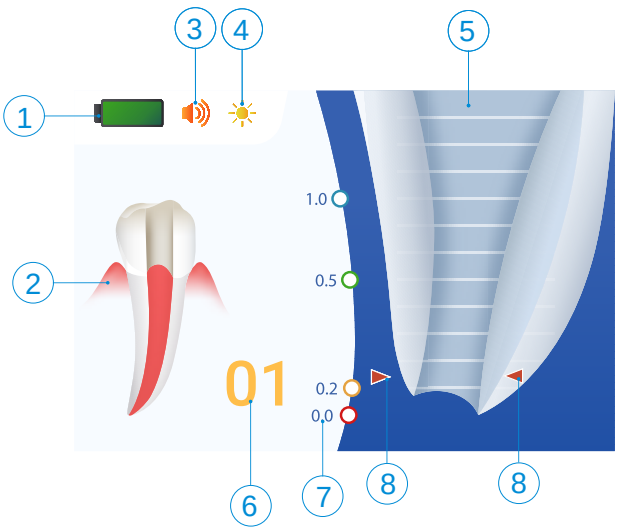
Setting interface

Short press "⏻" on the menu interface to enter the setting interface. Short press "＜" or "＞" to set parameters; Short press "⏻

	" in the setting interface to enter the menu interface.

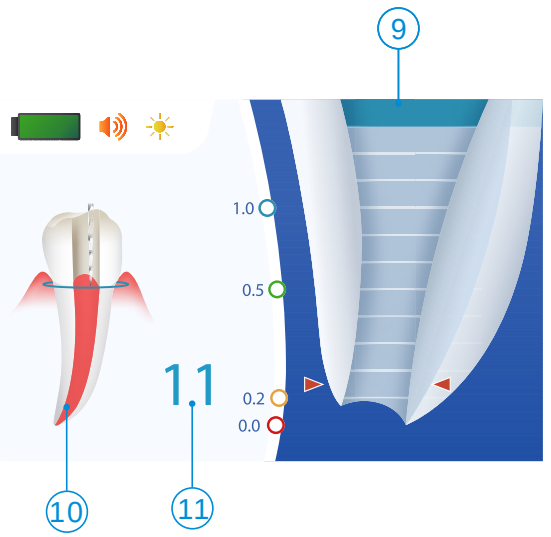
5.2 Use interface

Standby mode



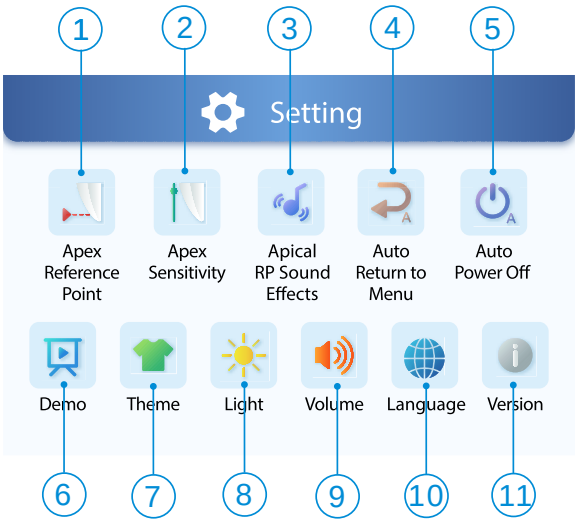
① Battery Indicator
② Teeth model
③ Volume indication
④ Brightness indication
⑤ Unfilled test value indicator bar
⑥ Reference point value
⑦ Reference distance scale value
⑧ Reference point indication

Working mode



⑨ Filled test value indicator bar
⑩ Simulate the entry of a root canal file into the tooth root canal
⑪ Test value

5.3 Menu interface



① Apex Reference Point

② Apex Sensitivity

③ Apical RP Sound Effects

④ Auto Return to Menu

⑤ Auto Power Off

⑥ Demo

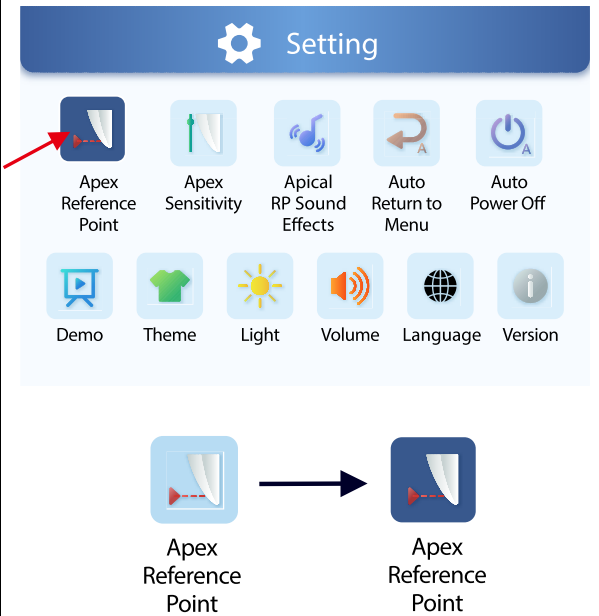
⑦ Theme

⑧ Light

⑨ Volume

⑩ Language

⑪ Version



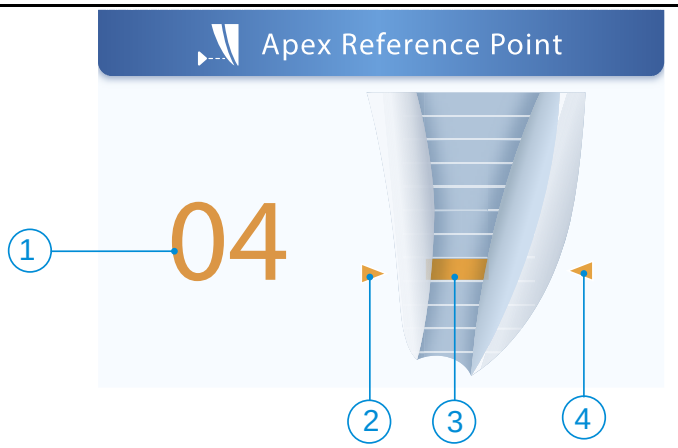
Set parameter selection

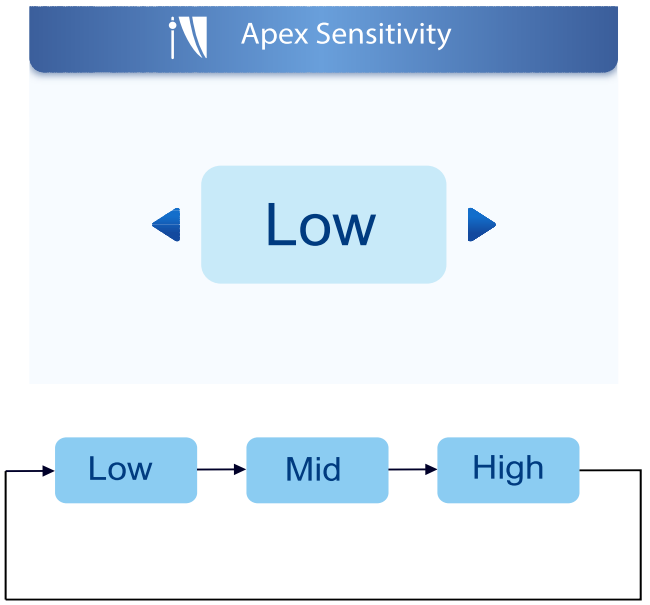
Short press "<" or ">" on the menu standby interface to select the parameter that needs to be adjusted.

Under the light theme, selected parameters are displayed in dark color, and unselected parameters are displayed in light color; Under the dark theme, selected parameters are displayed in dark color, and unselected parameters are displayed in light color.

	Set memory storage function: The Apex Locator has the function of setting memory storage.

5.4 Setting interface

 ① Test value corresponding to Apex reference point ② Apex reference point position ③ Apex reference point corresponding test value indicator bar	**Apex Reference Point:** Short press "⏻" to enter the Apex Reference Point setting. Short press "<" or ">" to select the Apex reference point: 00-07. At position “00”, the Apex reference point coincides with the apical foramen, and the Apex reference is not displayed.

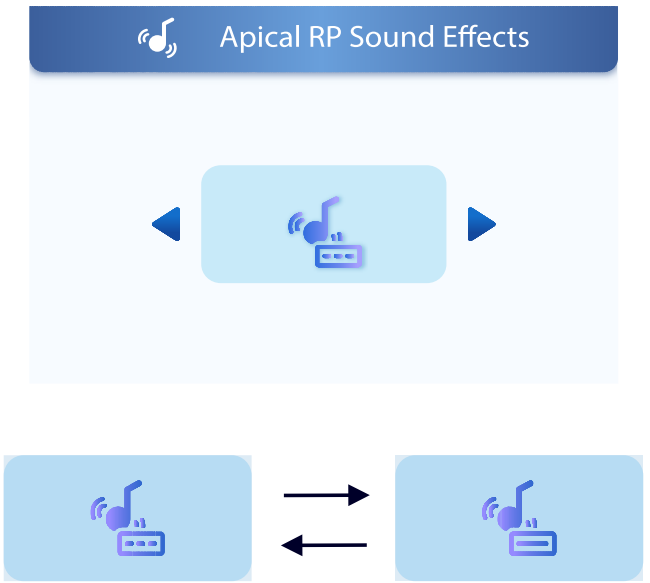


Apex Sensitivity:

Short press "⏻" to enter the Apex Sensitivity setting.

Short press "<" or ">" to set the Apex Sensitivity.

The Apex Sensitivity is divided into three levels: Low, Med, and High.

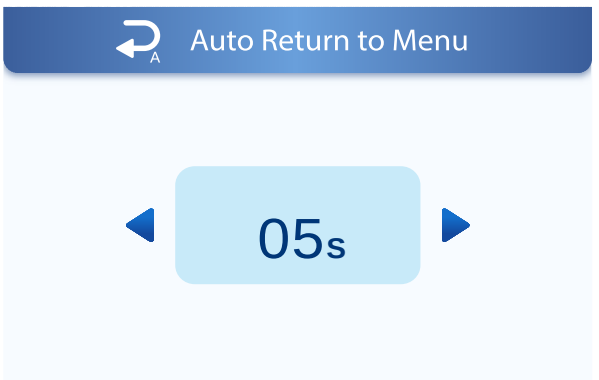
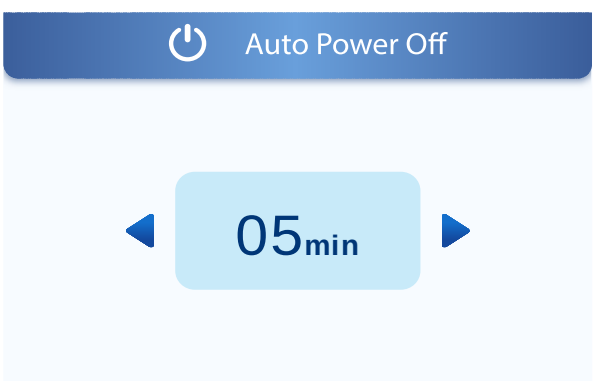
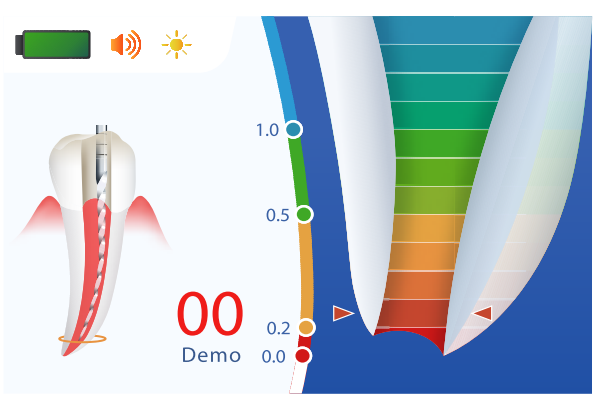


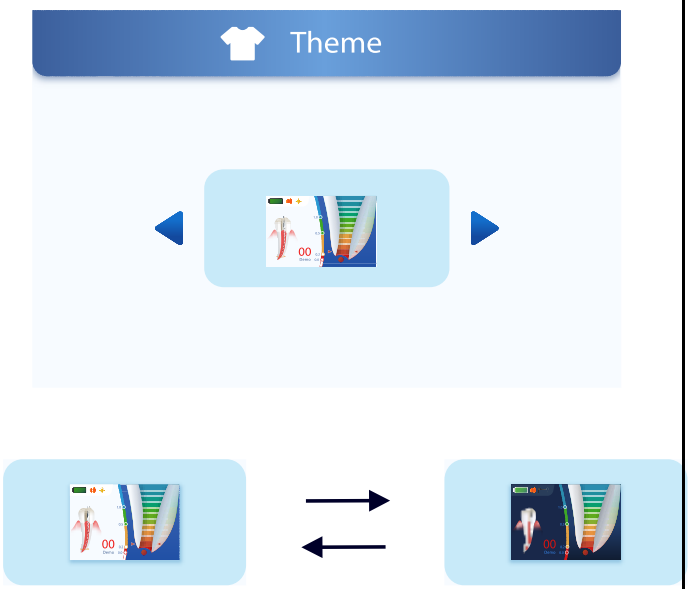
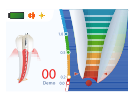
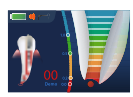
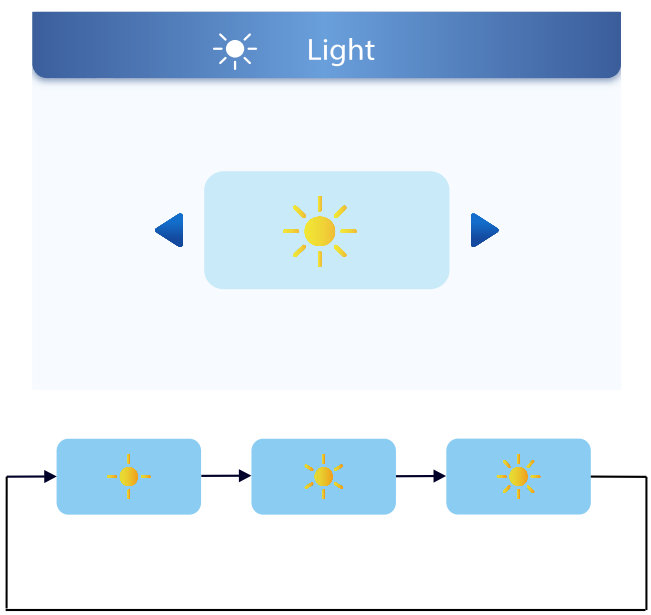
Apical RP Sound Effects：

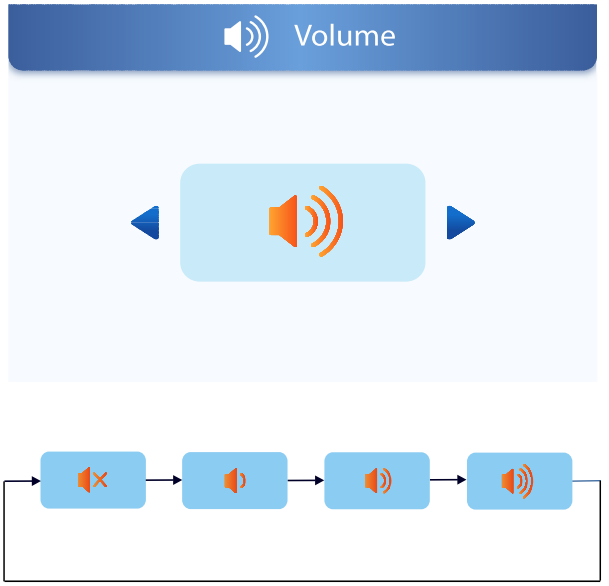
Short press "⏻"to enter the Apical RP Sound Effects setting. Short press "<" or ">" to set the reference point sound effect.

：When using, the root canal is filed to the Apex reference point, and the sound produced by the device is independent of the Apex reference point, which is the factory set sound effect；

：When in use, the root canal is filed to the

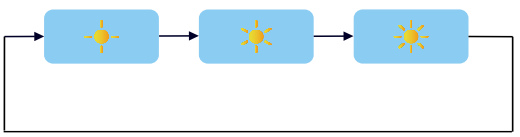
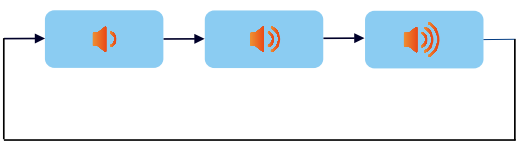
	Apex reference point, and the device emits a long beep sound with no internal.
	**Auto return to Menu:** Short press "⏻" to enter the Auto return to Menu setting. Short press "＜" or "＞" to set the Auto return to Menu. The Auto return to Menu can be adjusted by operator from 5s to 60s.
	**Auto Power Off:** Short press "⏻" to enter the Auto Power Off setting. Short press "＜" or "＞" to set the Auto Power Off. The Auto Power Off can be adjusted by operator from 5min to 15min.
	**Demo:** Short press "⏻" to enter Demo. The demonstration mode is used to simulate the scene of a root canal file entering the root canal. In demonstration mode,

	press any key to exit demonstration mode and return to the menu interface.
	**Theme:** Short press "⏻" to enter the Theme settings. Short press "<" or ">" to set the theme. There are two types of themes, namely: Light Theme:  Dark Theme: 
	**Light:** Short press "⏻" to enter the Light setting. Short press"＜" or "＞" to set the light. Light is divided into three levels.

	**Volume:** Short press "⏻" to enter the Volume setting. Short press"＜" or "＞" to set the volume. Volume is divided into four levels.
	Language: Short press "⏻" to enter the language setting. Short press "＜" or "＞" to select the language mode: Chinese or English. “EN” stands for English

	Version: Short press " ⏻ " to view version information; Short press "⏻" again to exit the version information mode and return to the menu interface

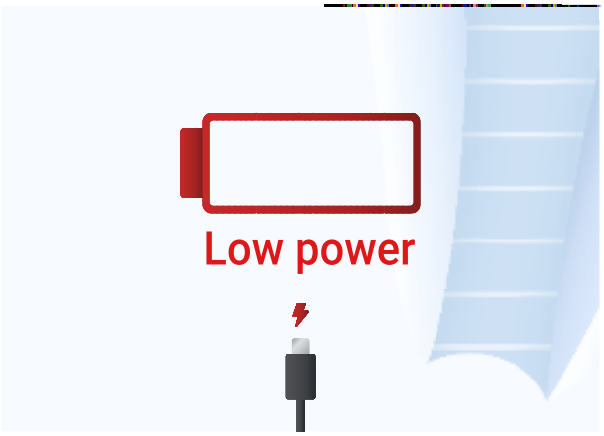
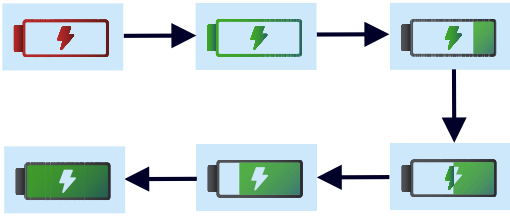
5.5 Quick Settings

Quick brightness setting: When using the interface, short press "<" to quickly set the light, which consists of three levels 	**Quick Set Volume:** When using the interface, short press ">" to set the volume, and quickly set the volume to three levels. 

6.Operation

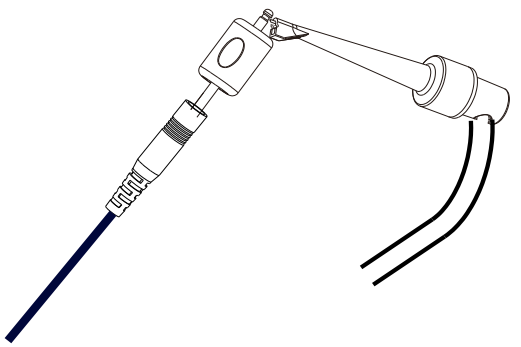
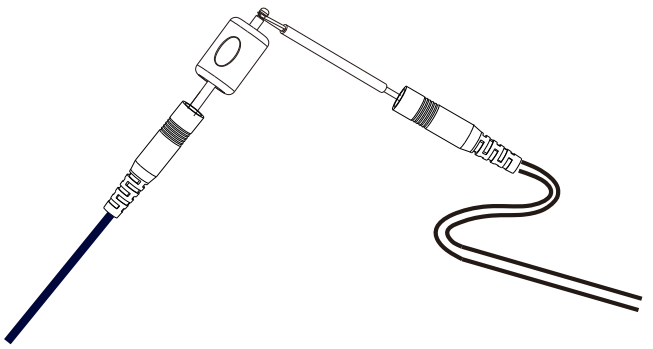
6.1 Charge

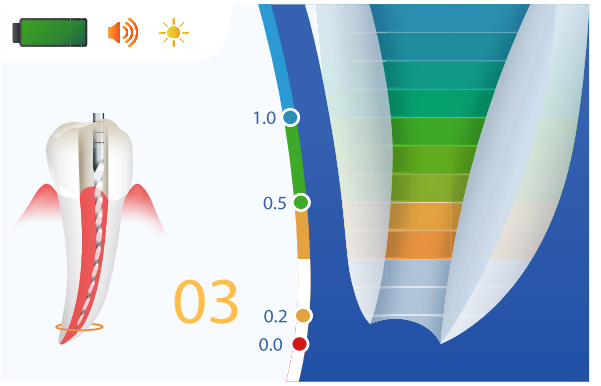
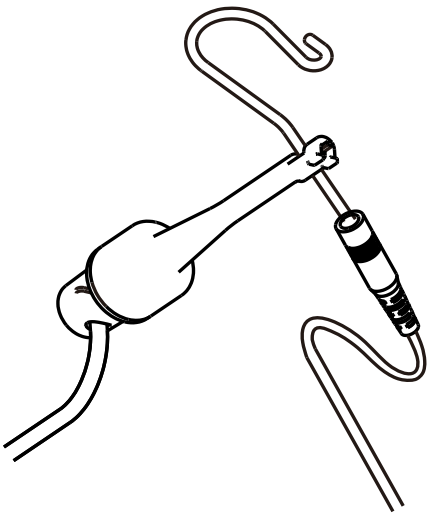
	Display the present remaining amount of the battery. Less than 15% remains, please charge.
	⚠ 1. If the power is less than 15%, the device must be recharged within 30 days, otherwise the battery will be damaged. 2. If you do not use this product for a long time, please charge it at least once a month.

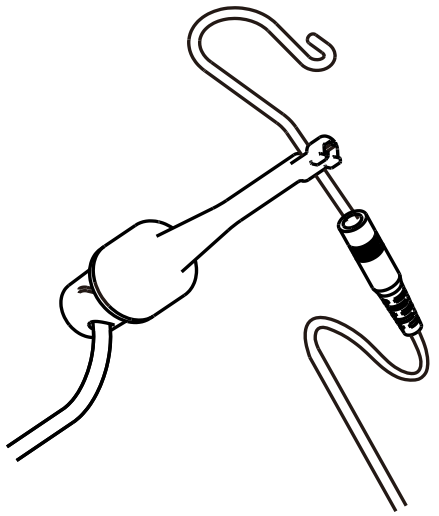
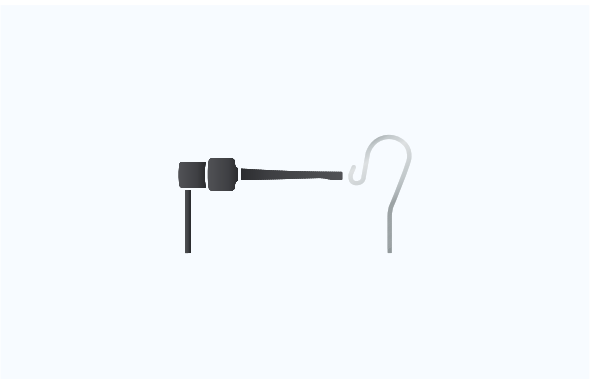
	If the battery level is below 15% and you continue to use it, a low battery alarm will appear after a period of time, and the Apex Locator will automatically shut down.
	Charging indication appears on the screen, and flashes slowly, when battery is fully charged or in a state near full charge, the flash will stop. It takes about 4-5 hours for full charge, depending on residual battery power and battery state. It can be recharged 300-500 times, depending on the operating conditions of the device. Only trained technician or distributor can replace the battery. The electronic parts will be damaged if use a wrong

	battery or installed with a wrong way.

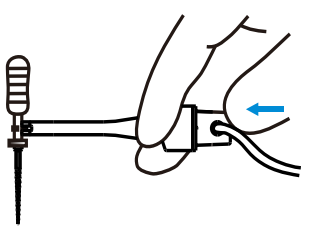
6.2 Function checking of Apex Locator

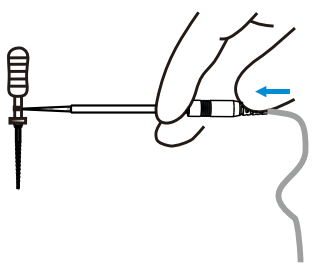
 	➢ After turning on, insert the measuring wire into the Apex Locator. ➢ Insert the tester into one socket of the measuring wire, and insert the file clip or the touch probe into the other socket.. ➢ Clamp the groove of tester with file clip or touch the groove of tester with touch probe. ➢ The test value on the display screen should be displayed as 02, 03, or 04, indicating that the indicator bar is displayed at position 02, 03, or 04

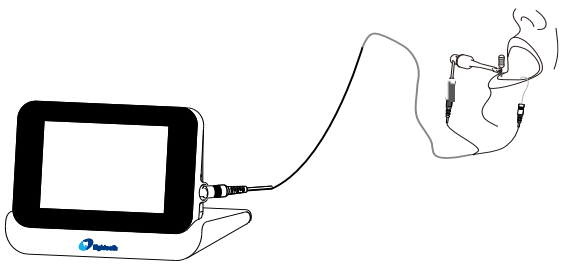
	➢ Recommend to test the Apex Locator with tester once a week. ⚠ If the measurements are not expected, check whether the tester is connected properly. If the connection is normal but the screen still does not show the expected value, please stop using the device and contact the local dealer for processing.
	➢ Before each use, make the file clip touch the lip hook, or use the touch probe to touch the lip hook to confirm the device condition (short circuit). ➢ Confirm that the tester is not installed on the Apex Locator, and then connect the measuring wire, lip hook, file clip, or

 	touch probe according to sections 4.2, 4.3, and 4.4. Finally, short the exposed metal position of the lip hook, file clip, or touch probe, and the connected icon will be displayed on the display screen.

6.3 Operation and not suitable condition

	➢ Press the back cover of the file clip to make the hook of the file clip stick out. And hook the metal handle of the root canal file. Release the pressure and use the elasticity of the file clip to complete the connection

	between the file clip and the dental file. ⚠ ➢ When connecting the root canal file, make sure that the file clip and the root canal file handle are basically perpendicular, otherwise the chuck of the file clip will be easily damaged. ➢ This equipment does not include the root canal files. Please select suitable root canal files according to the clinical needs. The metal part of the root canal file should be well conductive.
	➢ When the file clip can't enter the patient's mouth, the file clip can be replaced by the touch probe. Make the touch probe contact with the metal handle of the root canal file to complete the connection between the touch probe and the root canal

	file.
	➢ Hook the lip hook to the patient's lip. Make sure that the lip hook contacts with the lip fully. Then slowly insert the root canal file into the prepared root canal. ➢ If the patient is fitted with a metal crown or other conductive device, the root canal file and the metal part of file clip should not be in contact with it, to avoid causing wrong measurement results. ➢ Apex Locator should be fixed in patient’s collar with the clip.
	⚠ ➢ To prevent measurement errors caused by conduction between the gums or adjacent root canals, dry the pulp chamber floor with a cotton pellet or other means before testing.

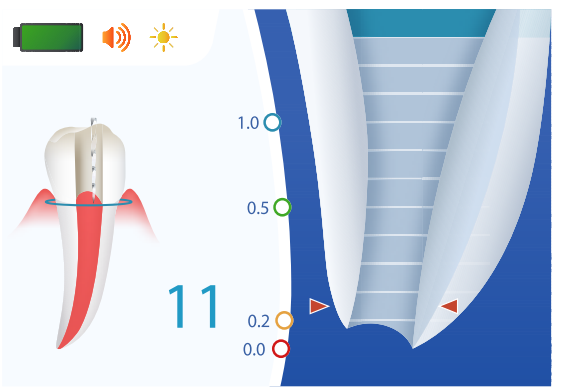
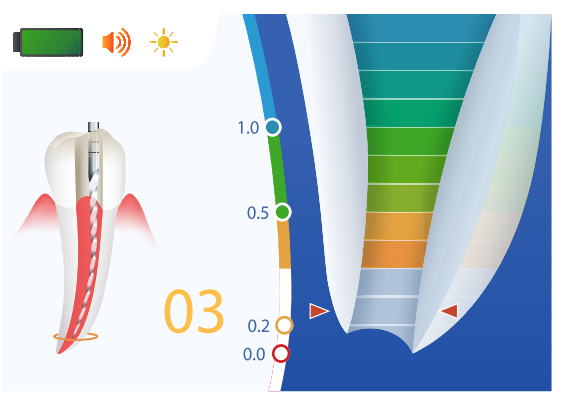
	➢ Use the root canal file with correct number and taper. Make the file fully contact with the canal wall, which facilitates accurate measurements.
 Fig.1 	➢ As the file progresses in the root canal, the aperture on the tooth model will move accordingly, and the measured values will display numerical changes. At the same time, the test value indicator bar will gradually fill the corresponding color from top to bottom. ➢ When displayed as shown in figure 1, the aperture on the tooth model is blue, and the test value indicator bar gradually fills to blue. The reference distance scale value away from 1.0, and the measured value is displayed as 11, indicating that the distance from the tooth root tip is far at this time.

Fig.2

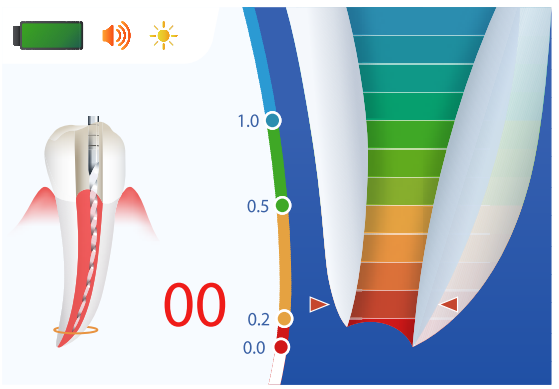


Fig.3

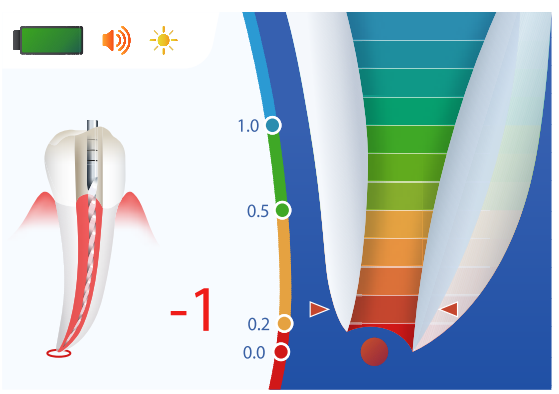


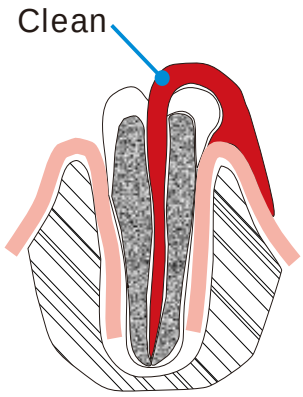
Fig.4

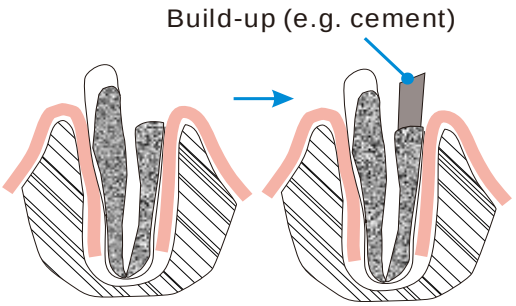
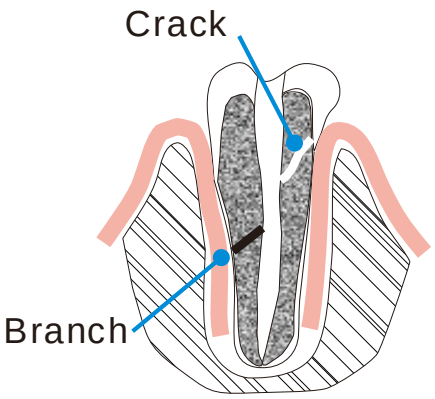
Meanwhile, the Apex Locator makes a "didi" alarm sound at a long interval.

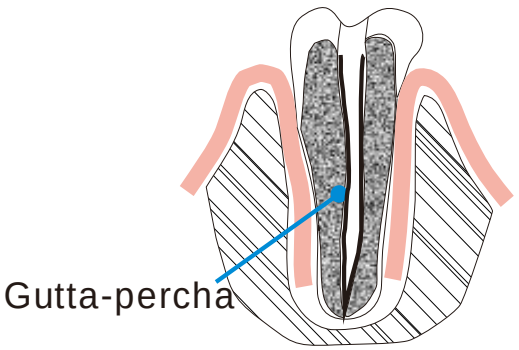
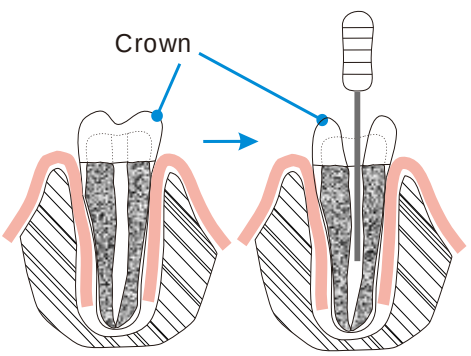
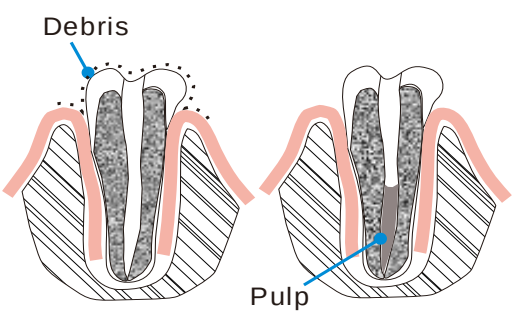
- When displayed as shown in figure 2, the aperture on the tooth model is green, and the test value indicator bar gradually fills to yellow. The reference distance scale value has exceeded 0.5, and the measurement value shows 03, indicating that the distance from the apical foramen is close, and the time interval of "di~di~" alarm sound made by the Apex Locator becomes shorter.
- When displayed as shown in figure 3, the aperture on the tooth model is red, and the test value indicator bar gradually fills to red. The reference distance scale value is 0.0, and the measurement value shows 00, indicating that it reaches the apical foramen, Meanwhile, the

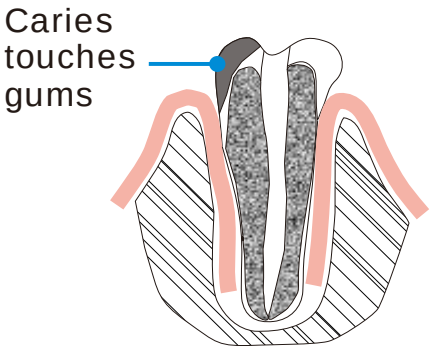
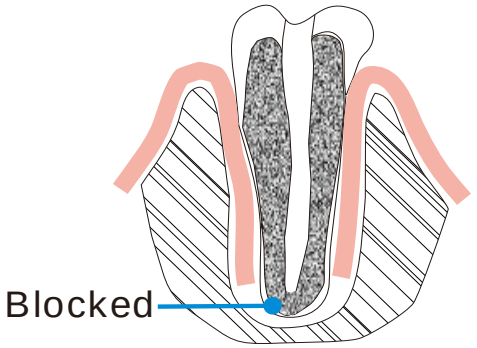
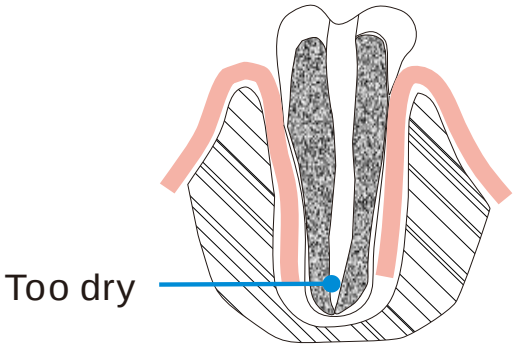
	Apex Locator emits a long beep sound with no internal. ➢ When displayed as shown in figure 4, if the reference distance scale value exceeds 0.0, the measured value displays -1, and the bottom displays "●",it means that the root canal file has penetrated the apical foramen, and the main unit makes a very urgent "di~~" alarm sound.
	⚠ ➢ The position of apical foramen measured by this device is the Major/Anatomic apical foramen. In clinical practice, in order to prevent surgical failure caused by piercing the root apical orifice, the Minor/Physical apical foramen prepared for root canal is located by subtracting 0.5-1.0mm from the measured value.

	➢ The value of reference distance is only an estimated value ,not a clinical basis, ➢ The measured value does not represent the distance. It simply indicates the file progression towards the apex. ⚠ ➢ During measuring, insert the file slowly to prevent penetrating the apical foramen. ➢ The Apex Locator is used to detect the apex of root canal. In clinical use, it must be combined with X-ray and other means to determine the working length of the root canal. ➢ The device should be used by dentists with knowledge of dental root canal length and skill in operation.
Unsuitable situation of root canals for Electric Measurement	

Cannot obtain precise measurements if the root canal conditions as below	
	Root canal with a large apical foramen The root canal cannot be accurately measured because of the lesion or incomplete development of the apical foramen. The results may show that the length measured is shorter than the actual one.
	**Root canal blood overflows from the opening** If blood spills from the root opening and contacts the gums, it will cause leakage of electricity, which cannot be accurately measured. Wait for the bleeding to stop completely. Clean the root canal and the opening, completely empty the root canal blood, and then measure it. **Chemical solution flows out from the opening** If a chemical solution flows out of the root canal, it is impossible to get

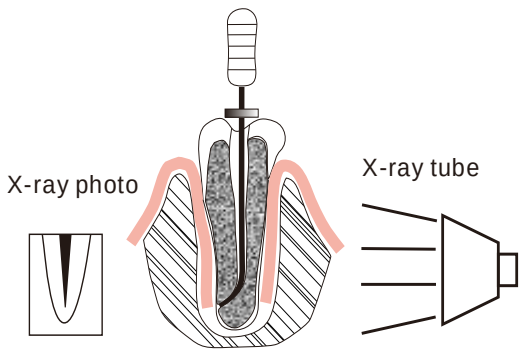
	an accurate measurement. It is important to remove the overflow from the opening.
	**Broken crown** If the crown is broken, a segment of the gingival tissue enters the lumen, and the contact between the gingival tissue and the root file causes electrical leakage, which cannot be accurately measured. In this case, the appropriate material should be used to isolate the gingival tissue.
	**The crack tooth leakage through branch of the root canal** Broken teeth can cause electrical leakage and cannot be accurately measured. Branch tubes can also cause leakage.

	**Retreatment canal which is filled with gutta-percha** The gutta-percha must be completely removed to eliminate its insulation, then pass a small file all the way through the apical foramen and then put a little saline in the canal, but do not let it overflow the canal opening.
	**Crown or metal prosthesis that touches gingival tissue** Accurate measurement cannot be obtained if the file touches a mental prosthesis that is touching gingival tissue. In this case, widen the opening at the top of the crown so that the file will not touch the mental prosthesis before taking a measurement.
	**Cutting debris on tooth and pulp inside canal** Remove all cutting debris on the tooth. Remove all the pulp inside the canal. Otherwise an accurate

	measurement cannot be obtained.
	**Caries touches the gums** In this case, electrical leakage through the caries infected area to the gums are impossible to obtain an accurate measurement.
	**Blocked canal** The meter will not run if the canal is blocked. Opening the canal all the way to the apical construction to measure it.
	**Extremely dry canal** If the canal is extremely dry, the meter may not work until it is quite close to the apex. In this case, try to moisten the canal with oxydol or saline.

Different measuring results between Apex Locator reading and Radiography

Sometimes the FindPex meter reading and the X-ray image will not correspond. This does not mean that the Apex Locator is not working properly or that the X-ray exposure is a failure. An X-ray image might not show the apex correctly depending on the angle of the X-ray beam, and the location of the apex might seem to be other than it really is.



The X-ray photo shows that the actual apex of the root canal is not the same as the anatomic end. In fact, the apex is located at the coronal end. In this case, X-ray may indicate that the file needle has not reached the apex, even if it has actually reached the apex

7.Cleaning, Disinfection and Sterilization

7.1 Foreword

For hygiene and sanitary safety purpose, the file clip, lip hook, touch probe must be cleaned, disinfected and sterilized before each usage to prevent any contamination. This concerns the first use as well use the subsequent uses.

Comply with your national guidelines, standards and requirements for cleaning, disinfection and sterilization.

Reprocessing procedures have only limited implications to this dental instrument. The limitation of the numbers of reprocessing procedures is therefore determined by the function / wear of the device. From the processing side there is no maximum number of allowable reprocessing. The device should no longer be reused in case of signs of material degradation. In case of damage, the device should be reprocessed before sending back to the manufacturer for repair.

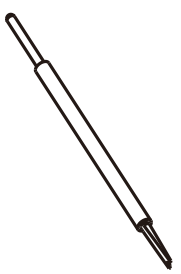
7.2 General recommendations

- The user is responsible for the sterility of the product for the first cycle and each further usage as well as for the usage of damaged or dirty instruments, where applicable after sterility.
- For your own safety, please wear personal protective equipment

(gloves, safety glasses, etc.).

- Use only a disinfecting solution which is approved for its efficacy (VAH/DGHM-listing, CE marking, and FDA approval) and in accordance with the DFU of the disinfecting solution manufacturer.
- The water quality has to be convenient to the local regulations especially for the last rinsing step or with a washer-disinfector.
- Thoroughly clean and wash the components before autoclaving.
- Do not use bleach or chloride disinfectant materials.

Autoclavable Components

File clip	Lip hook	Touch probe
		

- Only the components above can be autoclaved.
- Before first use and after each use, sterilize the above components.

Preparation at the Point of Use: Disconnect the components (Lip hook, file clip and touch probe) from the main unit. Remove gross contaminations from the components with cold water (<40°C) immediately after use. Don’t use a fixating detergent or hot water

(>40°C) as this can cause the fixation of residuals which may influence the result of the reprocessing process.
Store the instruments in a humid surrounding.

- Do not submerge the components or wipe them with any of the following functional water (acidic electrolyzed water, strong alkaline solution, or ozone water), medical agents (glutaral, etc.), or any other special types of water or commercial cleaning liquids. Such liquids may result in metal corrosion and adhesion of the residual medical agents to the components.

Transportation: Safe storage and transportation to the reprocessing area to avoid any damage and contamination to the environment.

Preparation for Decontamination: The devices must be reprocessed in a disassembled state.

- Do not fail to take out the file before cleaning the file clip.
- Observe suitable personal protective measures.

Pre-Cleaning: Do a manual pre-cleaning, until the components are visually clean. Submerge the components in water. Clean the surfaces with a soft bristol brush.

Cleaning: Regarding cleaning/disinfection, rinsing and drying, it is to distinguish between manual and automated reprocessing methods. Preference is to be given to automated reprocessing methods, especially due to the better standardizing potential and industrial safety.

Automated Cleaning:
Use a washer-disinfector meeting the requirements of the ISO 15883 series.
Carefully put the instrument into the washer-disinfector on a tray and set the parameters as follows and start the program:

- 4 min pre-washing with cold water (<40°C)
- emptying
- 5 min washing with a mild alkaline cleaner at 55°C
- emptying
- 3 min neutralising with warm water (>40°C)
- emptying
- 5 min intermediate rinsing with warm water (>40°C)
- emptying

The automated cleaning processes have been validated by using 0.5% neodisher MediClean forte (Dr. Weigert).
Note Acc. to EN ISO 17664 no manual reprocessing methods are required for these devices. If a manual reprocessing method has to be used, please validate it prior to use.

- Use only approved washer-disinfectors according to EN ISO 15883, maintain and calibrate it regularly.
- Follow instructions and observe concentrations given by the manufacturer (see general recommendations).

Disinfection: Automated Thermal Disinfection in washer/disinfector under consideration of national requirements in regards to A0 value (see EN ISO 15883).
A disinfection cycle of 5 min disinfection at 93°C has been validated for the device to achieve an A0 value of 3000.
After automated cleaning, the instrument should be automated disinfected or sterilized immediately. A manual disinfection is not recommended.

Drying:
Automated Drying:
Drying the outside of instrument through drying cycle of

washer/disinfector. If needed, additional manual drying can be performed through lint free towel. Insufflate cavities of instruments by using sterile compressed air.

Functional Testing, Maintenance: Visual inspection for cleanliness of the components and reassembling. Functional testing according to instructions of use. If necessary, perform reprocessing process again until the components are visibly clean.
Before packaging and autoclaving, make sure that the device has been maintained acc. to the manufacturer's instruction.

Packaging: Pack the instruments in an appropriate packaging material for sterilization.

- Check the validity period of pouch given by the manufacturer to determine the shelf life.
- Use pouches which resist to a temperature up to 141℃ and in accordance with EN ISO 11607.

Sterilization : Sterilization of instruments by applying a fractionated pre-vacuum steam sterilization process (according to EN 285/EN 13060/EN ISO 17665) under consideration of the respective country requirements.
Minimum requirements: 3 min at 134 °C (in EU: 5 min at 134 °C)
Maximum sterilization temperature: 137°C
Flash sterilization is not allowed on lumen instruments!

- Use only approved autoclave devices according to EN 13060 or EN 285.
- Use a validated sterilization procedure according to EN ISO 17665.
- Respect the maintenance procedure of the autoclave device given by the manufacturer.
- Use only this recommended sterilization procedure.
- Control the efficiency (packaging integrity, no humidity, color

change of sterilization indicators, physicochemical integrators, digital records of cycles parameters).

- The sterilization procedure must comply with EN ISO 17665.
- Wait for cooling before touching.

Storage: Storage of sterilized instruments in a dry, clean and dust free environment at modest temperatures, refer to label and instructions for use.

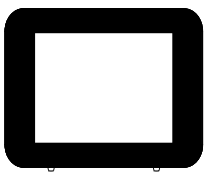
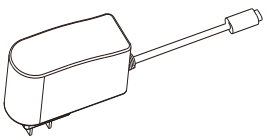
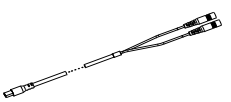
- Sterility cannot be guaranteed if packaging is open, damaged or wet.
- Check the packaging before using (packaging integrity, no humidity and validity period).

Reprocessing validation study information: The above-mentioned reprocessing process (cleaning, disinfection, sterilization) has been successfully validated. Refer to test reports:
- Cleaning Disinfection Validation Report No. RDS2020D0063 001
- Sterilization Validation Report No. RDS2020S0067 001 and RDS2020S0066 001

- The instructions provided above have been validated by the manufacturer of the medical device as being capable of preparing a medical device for use. It remains the responsibility of the processor to ensure that the processing, as actually performed using equipment, materials and personnel in the processing facility, achieves the desired result. This requires verification and/or validation and routine monitoring of the process. Likewise, any deviation by the processor from the instructions provided should be properly evaluated for effectiveness and potential adverse

consequences.

7.3 Disinfection

Disinfection components		
Apex Locator 	Base	Adapter 
Tester	Measuring Wire 	
Wipe all the surfaces with a cloth lightly moistened with Ethanol for Disinfection (Ethanol 70 to 80 vol%) at least 2min, repeat for 5 times.		

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Do not use anything except Ethanol for Disinfection (Ethanol 70 to 80 vol%).

Do not use too much ethanol as it’s going into machine and damage the components inside.

8.Troubleshooting

When trouble is found, check the following points before contacting your distributor. If none of these are applicable or the trouble is not remedied even after action has been taken, the product may have failed. Contact your distributor.

Problem	Cause	Solution
The power is not turned on.	The battery is flat.	Charge the battery.
	Press the power switch too short time.	Long press the power switch.
No charge indicator flash on handpiece screen.	The adapter is not properly connected.	Check if the adapter is connected to the Apex Locator Check if the external AC power supply is connected.
	Charging is completed.	Checking the instructions of the battery.
No sound.	Beep volume is set to "🔇".	Set the volume and select the appropriate volume

9.Technical Data

Manufacturer	Changzhou Sifary Medical Technology Co.,Ltd.
Model	FindPex
Dimensions	15.6cm x 10.6cm x 11.4cm±1cm (package)
Weight	0.65kg±10%
Power supply	Lithium ion battery: 3.7V, 800mAh, ±10%
European standard adapter	Model No: UE05LV2-050100SPA Input: AC 100-240V,50/60HZ,0.2A Output: DC 5V/1A, 5W
Multi-standard adapter	Model No: UES06WOCP-050100SPA Input: AC 100-240V,50/60HZ,0.2A Output: DC 5V/1A
Frequency	50/60Hz, ±10%
Power rating	0.2A MAX
Degree of protection	IPX 0
Electrical safety class	Class II

Applied part	B(File clip, Lip hook, Touch probe)
Operation mode	Continuous operation
Operating conditions	Use: in enclosed spaces Ambient temperature: 10°C ~ 40 °C Relative humidity: 30% ~75% Atmospheric pressure: 70kPa~106kPa
Transport and storage conditions	Ambient temperature: -20 °C ~ +55 °C Relative humidity: 20% ~ 80 % Atmospheric pressure: 70kPa~106kPa

10.EMC Tables

This product has no essential performance.

Guidance and manufacturer's declaration – electromagnetic emissions		
The **FindPex** is intended for use in the electromagnetic environment specified below. The customer or the user of the **FindPex** should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	Professional healthcare facility environment and Home healthcare environment
RF emissions CISPR 11	Class B	Professional healthcare facility environment
Harmonic emissions IEC61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

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The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or reorienting the equipment.

Guidance and manufacturer's declaration – electromagnetic immunity			
The **FindPex** is intended for use in the electromagnetic environment specified below. The customer or the user of the **FindPex** should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	+/- 8 kV contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 kV air	+/- 8 kV contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 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 transients/bursts IEC 61000-4-4	±2kV 100kHz repetition frequency	±2kV 100kHz repetition frequency	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	Line to line: ±0.5kV, ±1kV Line to earth: ±0.5kV, ±1kV, ±2kV	Line to line: ±0.5kV, ±1kV Line to earth: ±0.5kV, ±1kV, ±2kV	Mains power quality should be that of a typical commercial or hospital environment.

Voltage dips IEC 61000-4-11 Voltage interruptions IEC 61000-4-11	0% UT; 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315° 0% UT; 1 cycle and 70% UT; 25/30 cycles sine phase at 0° 0% UT; 250/300 cycle	0% UT; 0.5 cycle at 0°, 45°,90°, 135°, 180°, 225°, 270°, and 315° 0% UT; 1 cycle and 70% UT; 25/30 cycles sine phase at 0° 0% UT; 250/300 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of devices require continued operation during power mains interruptions, it is recommended that devices be powered form an uninterruptible power supply or a battery
Rated Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz or 60Hz	30 A/m 50Hz or 60Hz	Power frequency magnetic field should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Note: UT: rated voltage(s); E.g. 25/30 cycles means 25 cycles at 50Hz or 30 cycles at 60Hz			

Guidance and manufacturer's declaration – electromagnetic immunity			
The **FindPex** is intended for use in the electromagnetic environment specified below. The customer or the user of the **FindPex** should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compli ance level**	**Electromagnetic environment - guidance**
Conducted dis-turbances induced by RF fields IEC 61000-4-6	3 V 0.15 MHz – 80 MHz, 6 V in ISM bands be-tween 0.15 MHz and 80 MHz, 80 % AM at 1 kHz	3 V	Portable and mobile RF communications equipment should be usedno closer to any part of the **FindPex**, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF EM fields IEC 61000-4-3	3 V/m, 80 MHz – 2,7 GHz, 80 % AM at 1 kHz	3V/m	
Proximity fields from RF wireless communication equipment IEC 61000-4-3	See the RF wireless communication equipment table in "Recommended minimum separation distances"	Complie s	**Recommended minimum separation distances** See the RF wireless communication equipment table in "Recommended minimum separation distances"

Recommended minimum separation distances

Nowadays, many RF wireless equipment's have being used in various healthcare locations where medical equipment and/or systems are used. When they are used in close proximity to medical equipment and/or systems, the medical equipment and/or systems' basic safety and essential performance may be affected. The **FindPex** has been tested with the immunity test level in the below table and meet the related requirements of IEC 60601-1-2:2014+A1:2020. The customer and/or user should help keep a minimum distance between RF wireless communications equipment and the **FindPex** as recommended below.

Test frequency (MHz)	Band (MHz)	Service	Modulation	Maximum power (W)	Distance (m)	Immunity test level (V/m)
385	380-390	TETRA 400	Pulse modulation 18Hz	1.8	0.3	27
450	430-470	GMRS 460 FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0.3	28
710	704-787	LTE Band 13, 17	Pulse modulation 217Hz	0.2	0.3	9
745						
780						
810	800-960	GSM 800/900, TETRA 800, iDEN 820,CDMA 850, LTE Band 5	Pulse modulation 18Hz	2	0.3	28
870						
930						

1720	**1700-1990**	**GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS**	**Pulse modulation 217Hz**	**2**	**0.3**	**28**
1845						
1970						
2450	**2400-2570**	**Bluetooth, WLAN, 802.11 b/g/n,RFID 2450，LTE Band 7**	**Pulse modulation 217Hz**	**2**	**0.3**	**28**
5240	**5100-5800**	**WLAN 802.11 a/n**	**Pulse modulation 217Hz**	**0.2**	**0.3**	**9**
5500						
5785						

Guidance and manufacturer's declaration – electromagnetic immunity			
The **FindPex** is intended for use in the electromagnetic environment specified below. The customer or the user of the **FindPex** should assure that it is used in such an environment.			
Proximity magnetic fields	IEC 61000-4-39 test level	Compliance level	Electromagnetic environment – guidance
Proximity magnetic fields	134.2kHz Pulse modulation	65A/m	Power frequency magnetic field should be at levels characteristic of a typical

	2.1 kHz		location in a typical commercial or hospital environment.
Proximity magnetic fields	13.56MHz Pulse modulation 50 kHz	7.5A/m	

- Use of accessories and cables other than those specified or provided by the manufacturer of **FindPex** could result in increased electromagnetic emissions or decreased electromagnetic immunity of **FindPex** and result in improper operation.

Cable information:

Cable Name	Cable Length (m)	Shielded or not	Remark
Adapter Cable	1.2	No	/

- Use of **FindPex** adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, **FindPex** and the other equipment should be observed to verify that they are operating normally.
- If the use location is near (e.g. less than 1.5 km from) AM, FM or TV broadcast antennas, before using this equipment, it should be observed to verify that it is operating normally to assure that the equipment remains safe with regard to electromagnetic disturbances throughout the expected service life.

11.Statement

Service Life The service life of FindPex series products is 3 years. It is recommended that the equipment be checked and repaired at the dealer once a year.
Maintenance MANUFACTURE will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair.
Disposal The package should be recycled. Metal parts of the device are disposed as scrap metal. Synthetic materials, electrical components, and printed circuit boards are disposed as electrical scrap. The lithium batteries are disposed as special refuse. Please deal with them according to the local environmental protection laws and regulation.
Rights 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 CHANGZHOU SIFARY MEDICAL TECHNOLOGY CO., LTD. The industrial design, inner structure, etc, have claimed for several patents by SIFARY, any copy or fake product must take legal responsibilities.

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