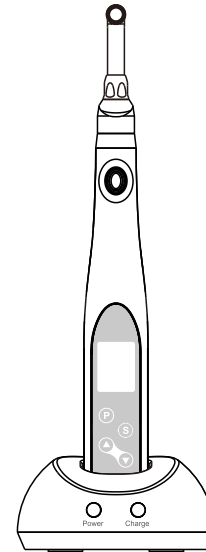


USERS GUIDE

C-SMART mini 2



Safety caution




CAUTION:

Please read the following information completely before use this product.

1. This unit must be used as the user's guide mentions, not for other purpose. Please refer to the usage instruction strictly. We won't take the responsibility for the damage caused by improper use.
2. Before using the main power, make sure the power voltage is according to adaptor voltage range. Improper input voltage will damage the unit and cause danger to operator or patient.
3. Please use the original accessories, such as: contra angle, adaptor, and battery. We won't take the responsibility to any problem or damage caused by using other parts which are not supplied by us.
4. To avoid electric shock, don't insert any other parts into the unit; it may cause electric shock or damage.
5. Avoid the detergent go into the unit, in case that causes the short circuit or problem.
6. Please turn off the instrument at once when something wrong with it. It's not allowed to modify the unit at any condition. Any disassembling or modification will cause the invalidation of the guarantee.
7. Please use the intact standard file. Or it would cause damage to the patient while working.
8. Protect the instrument from ambient electromagnetic interference. When there is a patient who is using the cardiac pacemaker, or there is an electronic operation, don't put the machine around.
9. Unstable voltage and being under electromagnetic environment will interfere with the normal operation.
10. All accessories not provide any sterilization, please clean all the parts that have contacted to patient before using.
11. When discard the accessories, please abide with the local regulation, if necessary, contact our service centre to recover it.
12. This instrument is limited to professional user.


Symbols and definition

 Class II equipment(Adaptor)

 Direct current


 Type B equipment

 Caution! Please read the instruction

 Used indoor only

 CE marked product

 WEEE

 Please refer to the instructions

Standard configuration

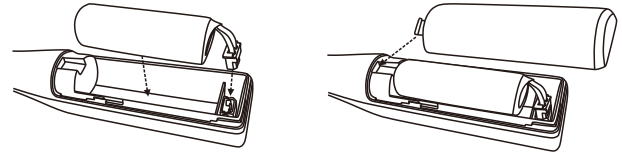
Motor handle	1
Charging base	1
Adaptor	1
Battery	1
Users guide	1

Intended use

This product is the supplementary root-canal treatment device, which can assist the dentists to operate more standard root-canal in the process of root-canal treatment. The device is limited to use dental staff.

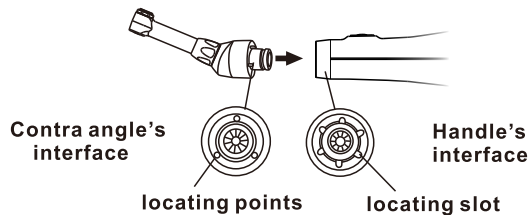
Installation

Install the battery



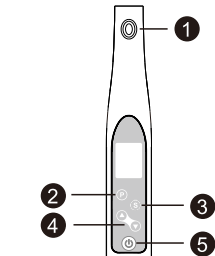
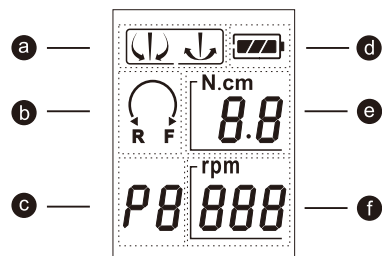
Open the battery cover, one end of the battery terminal access the port of battery compartments, and put the battery into the compartment, close the battery cover can complete the installation; remove the battery is in the opposite way.

Contra angle Installation



1. Aim the anchor points on the connector of the contra angle to the slot inside the unit to connect both parts, there is click after the correct installation.
2. Six directions of contra angle are available, between each direction is 60° .

Operating instruction



- a** Mode
- b** Direction
- c** Program
- d** Power value
- e** Torque
- f** Speed

- 1** On/off button
- 2** Program button
- 3** Setting button
- 4** Increase button
- 5** Reduce button
- 6** Power button

Storage and transportation

1. This equipment should be moved carefully away from the shock, and install or keep in the place that is dry and cool.
2. Avoid being stored with the poisonous, corrosive, flammable and explosive products.
3. During the transportation, shock and impact should be avoided, and lift safety.

After sales

The warranty of the equipment is 2 years, battery and adaptor are 6 months, other accessories are not included in the warranty.

Technical services

1. Power adaptor:

Input:	100-240 Vac 50/60Hz
Output:	DC 10V/1.5A
2. Li-ion battery

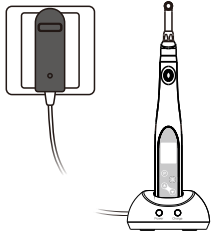
Voltage:	DC 3.7V
Capacity:	1400 mAh
3. Temperatures

Operating:	+10°~+40°C
Storage:	-10°~+55°C
4. Humidity

Operating:	30~75%RH
Storage:	20~85%RH
5. Atmospheric pressure

Operating:	80~106kPa
Storage:	50~106kPa
6. Protection against electrical shock: Type B

Charge





1. Please connect the corresponded power source, the indicator of the adaptor will turn on. Then put the unit into the charging base.
2. Put the unit into a connected charging base, the indicator will turn yellow, it means the battery is charging.

3. After finish the charge, the indicator in the charging base will turn green, the unit will automatically stop charging.
4. The unit should continues charging for more than 4 hours .To avoid the inconvenience from running out of power, please keep the unit under charging.


Routine maintenance

1. If the unit is going to standby for a long time, please open the cover of the unit and remove the battery , clean the unit and store it to a place where is dry and clean.
2. The contra angle that have contacted with the patient should be sterilized under high temperature after each treatment, the cover of the unit should be sterilized by using the alcohol.
3. The ball retainers in contra angle should add lubricating maintenance regularly.



1. Power

Press the power button  for more than 1s to turn on the unit.
Press the power button  for more than 1s to turn off the unit.




2. On/off

Press on/off button  to start the file rotating and press it again to stop the file rotating. When the working direction is reverse, press it will force the file to reverse, the unit will beeps every 1s .

3. Program



Press program button  to select the program, there are 5 programs available(P1-P5), and displays on program area  , every program includes rotate mode, speed and torque.



4. Setting

Press the setting button  to select rotate mode, speed and torque (except reciprocating mode), the parameter which being selected will be flashing. The value of parameter which being selected can be adjusted by pressing increase button  or reduce button  .
Setting mode will exit after 5s without operation.

● Rotate mode

There are 3 rotate modes:


- ▲ **Auto reverse** : The file rotates forwards at a set speed, it will reverses while exceed the set torque, and will stops when the torque disappears.
- ▲ **Continuous** : The file rotates forwards at a set speed, it will reverses while exceed the set torque, and will stop when the torque disappears, and then recover to forward. The icon  will be displayed on mode area  .

▲ **Reciprocating** : The file rotates at first counter clockwise 150°, then rotates clockwise 30°, and will continue this cycle. The icon  will be displayed on mode area .

● Rotate speed

Speed value displays on speed area , available speed value (rpm): 125、250、300、375、425、500 and 625.

● Rotate torque

Torque value displays on torque area , available torque value (N.cm):

0.6、0.9、1.2、1.5、1.8、2.1、2.4、2.7、3.0、3.3、3.6 and 3.9.

Note: Speed and torque can't be adjusted while file is working .

5. Direction switch

Direction can be changed by pressing  or  in standby status.

Direction display:



Clockwise.



Counterclockwise.

Note: After select reverse, press the on/off button into the inversion status; press the on/off button again to stop, and direction will automatically return to forward.

6. Calibration mode




hold the both adjust button  and  more than 3 seconds to enter calibration mode, display figure:



Fig.1



Fig.2

Press the on/off button  to start or stop the calibration. When the calibration is initiated, "CAL" Starts flashing on the display and starts counting down. (Fig.1)

If the calibration was successful, after the buzzer sounds twice to exit the calibration mode.

If the calibration is not successful, the buzzer sounds and display the error message "Err" for 3 seconds, the system automatically exit calibration mode. (Fig.2)

Note: Before entering the calibration mode, make sure you have inserted contra angle and is no resistance state.

7. Power value and charge

Power value will be displayed on power value area .

Note: When the unit is at low voltage, full power icon flashes, and there is a beep every 1s. However, after 10s low voltage status, the unit will automatically shutdown.