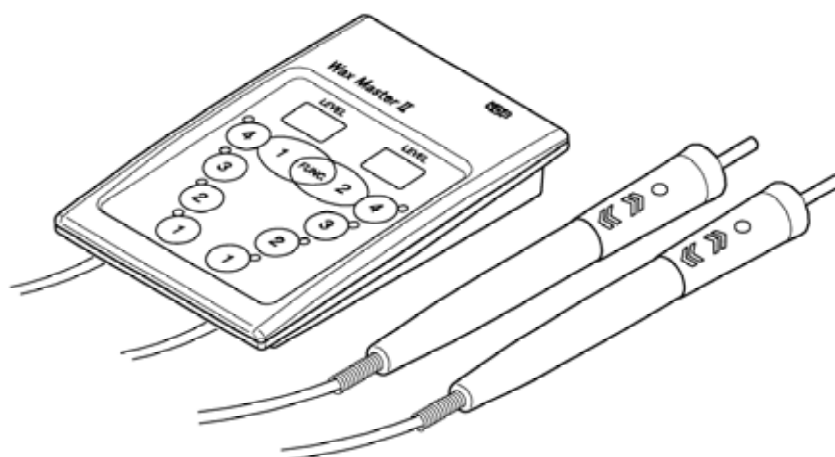


# **Wax Master II** Model DP-2000

## INSTRUCTION MANUAL




### Contents


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Marks and Symbols for Safety Precautions .....	1
Main Specifications .....	2
Descriptions of Each Component .....	2
How to use .....	3
Preparations .....	3
Power Switch On/Off .....	3
Alteration of set temp. ....	4
Operation .....	4
Coning Technique .....	4
Wax Tip Replacement .....	4
Auto Power Off .....	5
Hooking up on the wall .....	5
⤴ ⤵ Buttons .....	5
Default Functions .....	5
Replacement of Wax Grip .....	8
Maintenance .....	8
Optionals .....	9
When in troubles .....	9









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# Marks and Symbols for Safety Precautions









 **WARNING** Symbolizes possible accident of death, heavy injury

 **CAUTION** Symbolizes possible injury on human body or damage on material resources

## **WARNING**

 Do not open the machine for any reason to avoid electric shock.	 Do not place AC adapter in a box container or wrap it with cloth and paper to avoid fire accident.
 Use in the oral cavity is absolutely prohibited to avoid electric shock.	 Do not place the machine within reach of children to avoid skin burns, electric shock.
 Do not place wax grip on a flammable thing to avoid fire accident.	 Unplug the AC adapter when smoke curls up or when you have unusual noise or smell to avoid fire, electric shock.
 Do not come in contact with water to avoid short circuit or electric shock.	 Do not touch with wet hand to avoid electric shock or injury.

## **CAUTION**

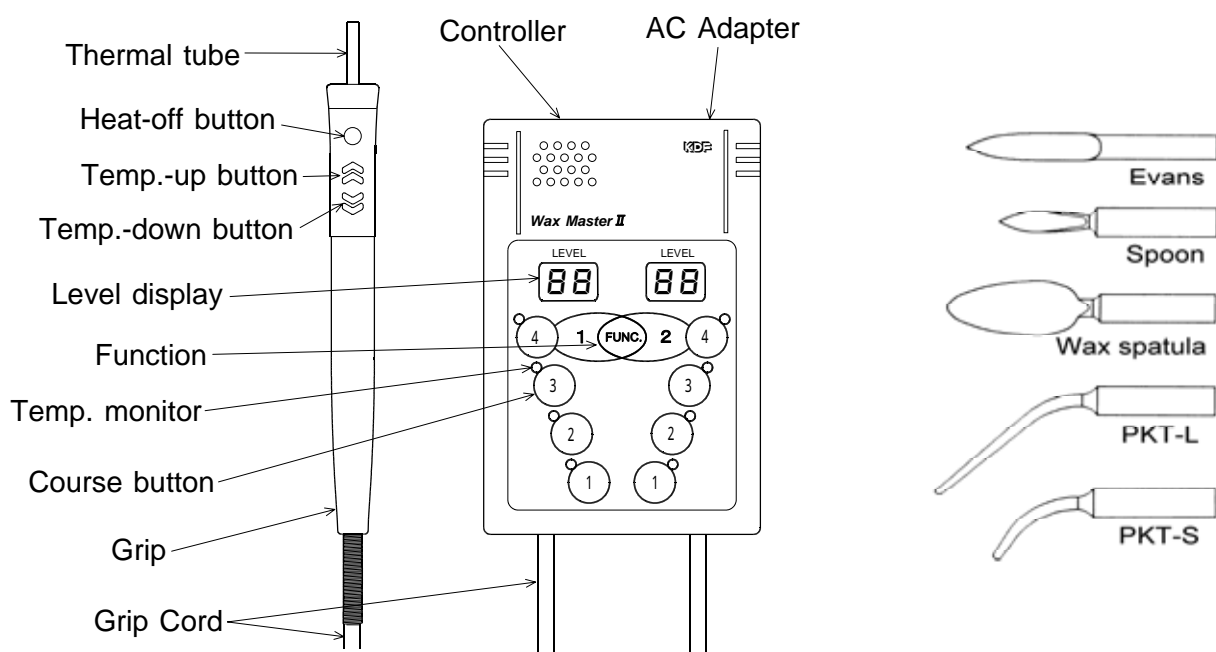
 Power cord plug is recommended off the power outlet when the equipment is not in use.	 Do not use the equipment for any purpose other than dental waxup to avoid fire accident.
 Do not touch the wax tip while the equipment is powered on to avoid skin burns.	 Use of the AC adapter provided is recommended to avoid fire accident.
 Do not place wax grip on the controller to avoid fire accident.	 Do not heat the wax tip with the flame of gas burner.
 Do not pull the cord of wax grip or AC adapter forcibly to avoid fire accident	 Do not use steam cleaner for the cleaning of wax tip and controller to avoid electric shock.

# Main Specifications

Descriptions	Wax Master Model DP-2000
Dimensions	Controller : 80W × 21H × 120D (mm)
Weight	Controller : 74g、 AC Adapter : 190g、 Grip : 31g/piece
AC Adapter	Input ; AC100 ~ 240V ± 10% 50/60Hz Output ; DC12V 1.5A
Consumption Power	18W (Max)
Temp. Sets	4 independent temp. sets for each grip
Wax Grips	2 grips
Chime	Selectable from 3520, 3951, 4435, 4699, 5274, 5920, 6645, 7040Hz
Temp. Step	Selectable from 1, 2, 3, 5, 8, 11, 14, 17
Auto Power Off time	Selectable from 0.1, 0.3, 0.5, 1, 1.5, 2, 2.5, 3
Temp. set Range	Room temp. ~ 300 (temp. of thermocouple)
Frame Material	ABS resin (heatproof 80 )
Grip Material	ABS resin (heatproof 80 ), Polyacetal resin (heatproof 120 )
Tip Material	Cuprum Alloy, Stainless Steel
Workable Environment	0 ~ 40 , 30 ~ 90%RH (but not in wet moisture) Altitude 2000m less
Standard accessories	AC Adapter 1 Tip set 1 Hookup 1 Remover 1 Manual 1

The specifications are being changed without prior notice.

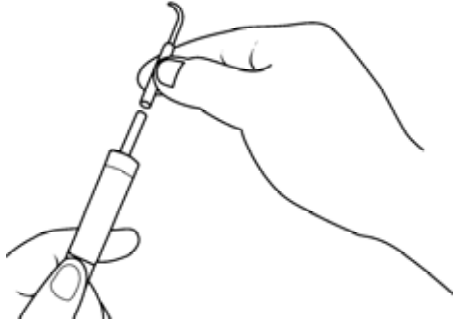
## Descriptions of Each Component



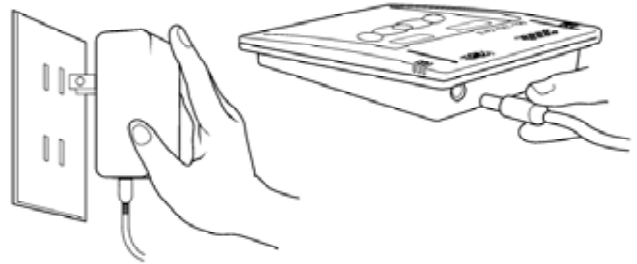
# How to use

## Preparations

- 1 Attach a tip provided on the wax grip end.



- 2 Connect the AC adapter provided to the power outlet and connect the cord plug with the AC adapter inlet of Wax Master .



**!** We recommend you to use the AC adapter provided in the accessory kit. We warn you that an AC adapter of different type may damage the Wax Master .  
We also recommend you not to connect the provided adapter to any other equipment.

## Power Switch On/Off

- 1 Press any one of the course buttons, ④, ③, ②, ①, ①, ②, ③, ④ and the selected course lamp is illuminated and temp. heats up to the set level on display.

**!** For safety purpose keep pressing the button for a few seconds to power switch on.

The levels in frequent uses are programmed in advance.

We recommend you to choose the appropriate level to meet your requirement.

	Course 1	Course 2	Course 3	Course 4
Grip 1,2	50	45	85	23
Tip	PKT-S	Spoon	Wax spatula	Evans

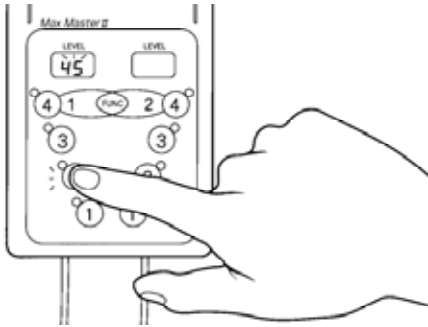
Note) The level display on course is meant to show the temp. of heating element, and not the set temp. of wax tip.

- 2 Repress the selected course button to power switch off.

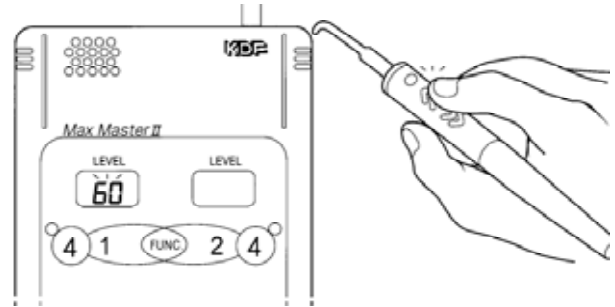
## Alteration of set temp.

- e.g. : When you change the level to **60** on Course 2 Grip 1 -

1 Press course ② on Function 1. In case of the initial change, the default value **45** is displayed.



2 Press **▲ ▼** on the grip to show **60** on the level display of Function 1.



The set value is memorized even when the power switch is off.

## Operation

1. The grip end starts heating up to the set level **60** .
2. The temp. monitor lamp shows the temp. of grip end as follows.
  - Red ; Lower than set temp. (heating up)
  - Orange ; Almost reached the set temp. (temp. holding)
  - Green ; Higher than set temp. (temp. cooling)



When you press **▲ ▼** button, the level varies by 3 in number at each press but this default value is changeable. (Refer to Default Function, page 5)

When you keep pressing the button, the numbers on the level display change continuously. Operate **▲ ▼** button while you press **FUNC** button and level changes by 1 in number regardless of the set value.

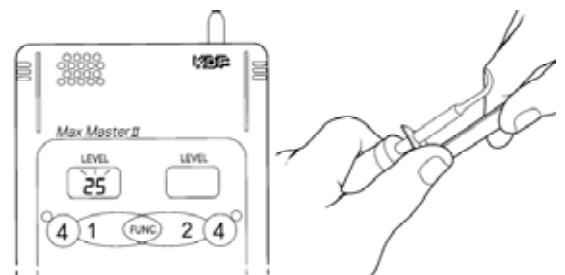
## Coning Technique

With a low temp. set available to melt wax, press **---** on the grip when you wax up and **---** is displayed to hold the current to heater while it being pressed. This is convenient for your wax coning work. While **---** is being pressed, chime continues sounding at 1 sec. intervals.



## Wax Tip Replacement

When you replace wax tip, the thermal tube and wax tip sometimes are hard stuck to wax lump. We recommend you to warm up the wax at temp. of more or less **25** to separate the wax tip without damage.



We do not recommend you to bend the thermal tube or nip it forcibly to avoid defect or electric shock.

## Auto Power Off

For safety purpose, when you forgot to power switch off or no grip button operation for a period of time, Wax Master functions to switch off automatically. Default value of auto power off time is changeable. One (1) hour is set on default value.

While the warning chime sounding, press any one of the buttons on the grip or controller to stop chiming.

Note) Even when the auto power off is functioning during the default function, power will not be switched off but heater control will cease working.

## Hooking up on the wall

A metal hook provided enables you to hook it up on the wall nearby or on the side of work table using the tape or screw provided.

## Buttons

To prevent the input program from being changed by inattentive touch, you can make the activation of buttons on the grip of each course void. Press on the grip while you press **FUNC** button and a dot is illuminated on the bottom right of display to show you that the buttons are void. However, button on the grip still works effective. Repress button while pressing **FUNC** button to release.

## Default Functions

The default values advancedly programmed are changeable for easy and convenient use of this equipment. Press Course button while pressing **FUNC** button to program as follows.

- Temp. variation on Grip No. 1 with buttons

Press **FUNC** + ④ (Grip No. 1)

Display (Left) : P 1

Display (Right) : 3 (Default value)

How to change : Press the Course No. to select the heatup rate. Press **FUNC** to set.

Course No.	④	③	②	①	①	②	③	④
Display (R)	1	2	3	5	8	11	14	17
Heatup rate	1	2	3	5	8	11	14	17

- Temp. variation on Grip No. 2 with buttons

Press **FUNC** + ④ (Grip No. 2)

Display (Left) : P 2

Display (Right) : 3 (Default value)

How to change : Press the Course No. to select the heatup rate. Press **FUNC** to set.

Course No.	④	③	②	①	①	②	③	④
Display (R)	1	2	3	5	8	11	14	17
Heatup rate	1	2	3	5	8	11	14	17

- Temp. recovering speed set on Grip No. 1

(Heat speed to restore to the level on display after heat-off button released)

Press **FUNC** + **3** (Grip No. 1)

Display (Left) : **1**

Display (Right) : **4** (Default value)

How to change : Press Course No. for required temp. recovering speed shown below.

Press **FUNC** to set.

Course No.	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Display (R)	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Speed	Weak ←————— Effect —————→ Strong							

Note) If the recovering speed is strong, temp. will heat over the set level and each type of wax tip will heat up differently. We recommend you to choose an appropriate value.

- Temp. recovering speed set on Grip No. 2

(Heat speed to restore to the level on display after heat-off button released)

Press **FUNC** + **3** (Grip No. 2)

Display (Left) : **2**

Display (Right) : **4** (Default value)

How to change : Press Course No. for required temp. recovering speed shown below.

Press **FUNC** to set.

Course No.	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Display (R)	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Speed	Weak ←————— Effect —————→ Strong							

Note) If the recovering speed is strong, temp. will heat over the set level and each type of wax tip will heat up differently. We recommend you to choose an appropriate value.

- Chime On/Off Set

Press **FUNC** + **2** (Grip No. 1)

Display (Left) : **bu**

Display (Right) : **4** (Default value)

How to change : Press Course No. to change the default value. Press **FUNC** to set.

But after the initial set of chime ON, the temp. reached chime is soundless.

Course No.	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>
Display (R)	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Button chime	×	×	×	×	
press chime	×	×	×	×	
Temp. reached chime	×	×	×		
Void button chime	×	×			
Error chime	×				
Auto power off warning					

: Chime      × : Chimeless

• Chime Volume Set

Press **FUNC** + ① (Grip No. 1)

Display (Left) : **bL**

Display (Right) : **3** (Default value)

How to change : Press Course No. to change the default value. Press **FUNC** to set.

Course No.	④	③	②
Display (R)	1	2	3
Chime Vol.	Low	Medium	Maximum

• Chime Frequency Set

Press **FUNC** + ② (Grip No. 2)

Display (Left) : **bF**

Display (Right) : **5** (Default value)

How to change : Press Course No. to change the default value. Press **FUNC** to set.

Course No.	④	③	②	①	①	②	③	④
Display (R)	1	2	3	4	5	6	7	8
Chime Frequency	Low ←———— Frequency —————> High							

• Auto Power Off Time Set

Press **FUNC** + ① (Grip No. 2)

Display (Left) : **AP**

Display (Right) : **1.0** (Default value 60 min.)

How to change : Press Course No. to change the default value. Press **FUNC** to set.

Course No.	④	③	②	①	①	②	③	④
Display (R)	0.1	0.3	0.5	1.0	1.5	2.0	2.5	3.0
Auto Power Off time	6min.	18min.	30min.	60min.	90min.	120min.	150min.	180min.

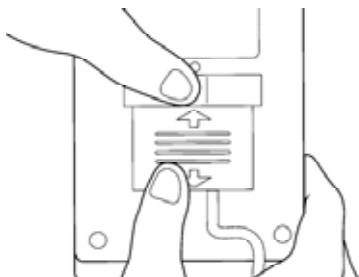
Auto power off function is not deleted.



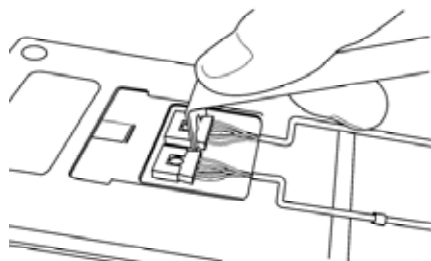
# Replacement of Wax Grip

**⚠** We recommend you to unplug the AC adapter off the power outlet.

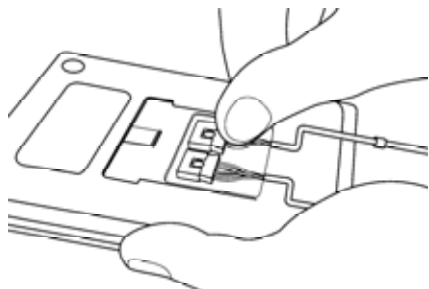
1 Press PUSH on the back of controller to slide open the cover.



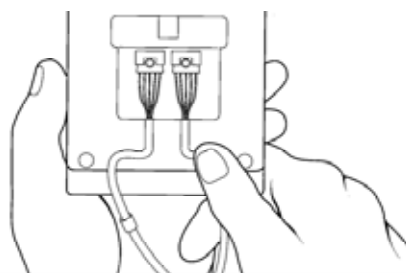
2 Hook the remover provided to the cord connector to pull out.



3 Plug a new grip cord connector with the red mark upside to insert completely.



4 Insert the grip cords into the grooves of the frame to put back the cover in place.



## Maintenance

### Controller ;

- When the grip cord is off the groove while the equipment in use, we recommend you to put it back in place to avoid a possible cord breakdown.
- We recommend you to use neutral cleanser to clean dusts and dirt. Such solvent as thinning liquid or alcohol is not recommendable to avoid a possible resin solution.

### Wax grip and tip ;

- We recommend you to wipe the wax off the tip with tissue paper after use.
- We recommend you to wipe the wax off the thermal tube with tissue paper softening the wax at the temp. level of **25** .
- We recommend you to replace the damaged grip cord with a new one.
- We recommend you to use neutral solvent to clean contaminations.

Thinning liquid or alcohol is not recommendable to avoid a possible resin solution.

**⚠** We recommend you not to use steam cleaner. This will cause damage and electric shock.

# Optionals

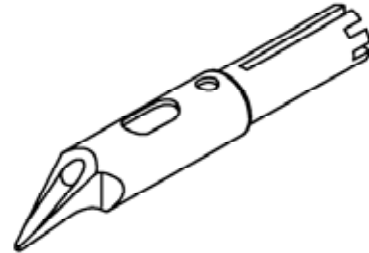
## Grip Stand

A stand to place the wax grip. An easy wax tip removal is capable.







## Pelican Master

This Pelican Master enables you to wax up as well as delicate waxing and forming wax pattern, and is capable of containing enough wax for one piece crown fabrication while you wax up.



## When in troubles

Errors	Possible Causes, Etc.	Recommended Trouble Shootings
E 0	Controller heater may be damaged.	Remove the grip in error and you can use the grip on other side.
E 2	Memory lost. When unplugged, the changed values are lost but continued use available.	Controller repair is recommended.
E 6	Grip heater, T/C abnormal. Both grips not usable.	Remove the grip in error from the controller. The grip on other side is available for use.
No Power on	Possibly no voltage at power outlet. Check with tester required.	If normal voltage at power outlet, repairs of both AC adapter and controller are recommended.
Power off after a certain amount of time	Auto power off functioning. Not abnormal.	Set of longer auto power off time with default function is recommended.
No temp. setting	Possibly inactivation mode on   buttons.	Refer to page 5 to activate   buttons.
AC adapter heated high	Use of box container or cloth wrapping is not recommended.	If abnormally hot, repair is recommended including controller.

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