

OPERATING MANUAL

Ver. 2010. 12

MODEL: NB-104

ROCKER



(주)엔바이오텍

N-BIOTEK
Leading Biotechnology

Rocker Manual

General Information on Precaution

- Precaution is to prevent the possible accident or danger during operation. So, you must keep it.
- Precaution is separated into caution and warning. And, each of them means like this.



Warning

If you don't keep this warning, you can get an accident or a fire.



Caution

If you don't keep this caution, you can get injured as well as a property loss

- Other marks



Warning



Caution



Compliance



Prohibition



**No
disassemble**



**Remove
plug**



Ground

1. Precaution to connect the power cable



Warning



Compliance

You have to use the product under specified electrical conditions
(If you use the product at the place in different power pressure, it causes a fire and malfunction of the product.)



Compliance

Do not make the power plug be pressed by back of the product.
(A space between the product and the plug must be 20cm at least.)



Compliance

The power outlet must be only for this product.
(Using various products simultaneously can cause a fire)
Clean the power plug with a dry towel and connect it properly.
(Foreign substances or unsafe connection can cause a fire.)



Prohibition

Do not bend the power cable hardly and do not make it to be pressed by heavy products.(When it is damaged, it can cause a fire.)



Prohibition

Do not touch the power code with wet hands.(It can cause an electric shock.)



Prohibition

Do not use the damaged power code and outlet.
(It can cause an electric shock and a fire.)



Remove
plug

When you see smoke comes out from the product or smell something is burning or see any other strange symptoms, you have to pull out the power code and stop using it. (It can cause an electric shock and a fire.)

2. Precaution for installation



Warning



Compliance

Use the proper voltage.
Please check the voltage.
(Over-voltage, low-voltage can damage the product and poor performance.)



Prohibition

Do not install at a humid place.
(It causes an electric leakage accident and a corrosive of the product.)



Prohibition

Keep this product out of the direct ray of sun and do not install at a hot place or a place that is near an electric heat.



Prohibition

Do not put inflammable substances near the product. (It can cause a fire)



Compliance

When you install the product, you have to put the distance of more than 20cm from the wall.



Compliance

Install on a flat and solid ground.
(If the ground is not flat, it can cause a vibration of the product.)



Prohibition

When you move the product, do not lay down to its side or reverse the head to bottom. (It can cause the malfunction.)



When you move the product, you must hold up the product.
(Pushing or pulling the product can damage the bottom part of the product.)

3. Precaution for use



Warning



You must not disassemble, fix and remodel the product by yourself.
(You can damage the product throughout a fire and malfunction or get a loss from a different study result than the original purpose)



Do not use the product for different purpose.
(It can cause malfunction or poor function. Consequently, it can cause a wrong result.)



Do not use an inflammable spray near the product.
(The switch and other electric connection parts can cause a fire.)



When you use inflammable substances such as benzene, thinner, alcohol and LP gas, please be careful .(It can cause a fire and an explosion.)



To prevent water and experiment material from going into the control panel during the experiment, make sure to clean the control panel



Do not wash the product with excessive quantity of water, thinner, benzene and Petroleum. (It can cause an electric leakage, and malfunction or damage of the surface.)



When you don't use the product or clean it, please unplug.
(It is to prevent an electric leakage.)



Do not detach the levers and electrical devices.
(It can cause an electric shock and a fire.)



Please be sure to prevent foreign substances from getting into the sealing silicone of the door. (The inflow of open air can cause the change of temperature in chamber and discoloration of the packing part by a foreign substance.)

4. Precaution for ground connection



Warning

Please ground before use of the product, if you don't ground, you can be electrically shocked when malfunction or an electric leakage occurs.

At the place where you can't ground.

- * Please buy equipment to prevent electric leakage.)
- * An electric shock, an electric leakage and a fire can be occurred without an electric leakage breaker.



Prohibition

Do not ground to places like Gas pipe, Water pipe, Lighting rod, Telephone wire, Etc.

- * An electric shock, an electric leakage and a fire can be occurred by wrong ground connection.

Unless you have the outlet for AC 220V, then bury it under ground after connecting the ground line to copper plate.

- * An electric shock, an electric leakage and a fire can be occurred by no ground connection.



General Information & Introduction

1 . Information

- ▶ **Note :** Before operating your Rocker, take a few minutes to familiarize yourself with the contents of this manual.
- ▶ **Important :** The material in this manual is for informational purposes only. The contents and the product it describes are subject to change without notice. The manufacturer makes no representations or warranties with respect to this manual. In no event shall the manufacturer be liable for any damages, direct or incidental, arising out of or related to the use of this manual. Your satisfaction and safety will be assured by a complete understanding of this equipment. Awareness of the stated cautions and warnings, compliance with recommended operating parameters, and periodic maintenance requirements are important for safe and satisfactory operation. The unit should be used for its intended application ; alterations or modifications will void the warranty.
- ▶ **INSPECTION :** This equipment was carefully packed and thoroughly inspected before leaving our factory. Responsibility for its safe delivery assumed by the carrier upon acceptance of the shipment; therefore, claims for loss or damage sustained in transit must be made upon the carrier. So, if you receive this equipment in the customs or carrier, please check all packing (Box) immediate before undertake from your the customs or carrier.
- ▶ **SERVICE :** N-BIOTEK products are designed and manufactured to give the user satisfactory service for many years. Should N-BIOTEK product require servicing, trained service personnel is available from our Service Network throughout the country.

2 . Introduction

- ▶ Rocker is a general instrument which needed in typical laboratories. To adopt motorless and beltless Rotation System that has no noise and no vibration environment and is possible to have long use period without hard care or any fail. A soft-start and stop feature is fitted to most units, preventing from spilling samples.

Location & Leveling & Before installation

1 . Location

- ▶ Choose a site free from rapidly changing ambient temperature conditions or one which will experience high rises in ambient temperature during the summer months.
To assure proper ventilation, allow a minimum of 2 inches (5 Cm) of the clearance between the rear and side of the unit and adjacent walls.

2 . Leveling

- ▶ The unit should be leveled in all directions (side by side, front to back and ground).

WARNING : For personal safety, this apparatus must be properly grounded.
Do not under any circumstances, cut or remove the third (ground) prong from the power cord.

3 . Before installation

- 1) Please check to your electric condition.
- 230 V~, 50/60 Hz
- 2) Avoid a direct ray and light.
- 3) Avoid high humidity and dust air.
- 4) Avoid cold area (below 5°C).

Specification & Features

1. Specification



Specification

Items	Unit	NB-104
Speed range	rpm	2 to 35rpm
Angle range	°	±7° from horizontal
Time range	hour	Up to 3 hours or continuous
Platform size	mm	290(W)x200(D)mm
Capacity		96 well micro-plate x 4 ea
Dimensions	mm	305(W)x255(D)x165(H)mm
Power	V/Hz	110/220V, 50/60Hz, 35W
Weight	kg	6kg

2. Features

- 1) Low noise and Strong power
- 2) No vibration, No malfunction
- 3) Safe use for Petri-dish, culture bottle or flask
- 4) Microprocessor control, Using 10~35RPM, setting up to 3 hours or Infinity for time
- 5) Suitable for bench space
- 6) Rubber pad for non-skid and Groove for spring

Installation & Operation

1. Installation

- 1) Move Rocker to installation place and unpack carefully.
- 2) The unit should be leveled in all directions (side by side, front to back and ground) and vibration free place.
- 3) Connect electric power plug.
 - * Check to electric condition before connect power plug.
 - 230 V~, 50/60 Hz.

WARNING : Before connect the power cable to the plug, turn off the power switch.

2. Operation

- 1) Place the Power switch "**ON**" position which locate in the rear control panel.
- 2) Time set-up
 - ① set time up(it is available to set from 30 minutes to 3 hours)
 - ② place the CONT. position to use constantly.
- 3) Speed set-up

You can control the stirring speed with knob located in the front panel.

 - * Set-up Speed range is from 60rpm to 1000rpm.



Check point

Matters that require

WARNING : Service should only be performed by qualified service personnel. Before replacing any electrical or mechanical components, disconnect unit from its electrical power source. If electrical power is required for service, exercise extreme caution as **LINE VOLTAGE** is present.

► Unit will not function

(1) Electrical connection

Please dis-connect main power cable and connect again.

(2) Voltage supply

Please check to voltage.

(3) Fuse check

(4) Verify voltage on unit

(5) Defective power switch (check voltage at switch)



(주)엔바이오텍
N-BIOTEK
Leading Biotechnology