

MINI RF OPTICAL MOUSE

USER'S MANUAL

Model #: DC-2093

Important Ergonomic Information

Some experts believe that using any mouse or trackball may cause serious injury to hands, wrists, arms, neck, or back. If you feel pain, numbness, or weakness in these areas, see a qualified health professional.

TO REDUCE THE RISK OF INJURY, FOLLOW THESE PRECAUTIONS:

- Take frequent breaks, get up and walk around several times every hour.
- Vary your tasks throughout the day.
- Keep your shoulders relaxed with your elbows at your side. Position your keyboard and mouse so you do not have to reach.
- Adjust your chair and keyboard so your upper arms and wrists are straight.
- Avoid resting your wrists on sharp edges.

System Requirement

- Mouse compatible with standard Microsoft mode
- 3rd button and wheel function require Win98/98SE/2000/Me/XP

Before you begin

- Keep this installation guide for future reference! It contains Important Troubleshooting Information.
- Keep your old PS/2 mouse as a back-up device.

Getting Started

Congratulations on your purchase of an **800dpi** RF (Radio Frequency) wireless mouse. By using the advanced RF technology, a 360° of operation is possible, and no line-of-sight is required between the receiver and the mouse. The 800dpi high resolution will bring users the best operation accuracy and efficiency, especially for a display at 1024*768 or higher. It has a double operation speed and only requires 1/4 space by comparing with a 400dpi mouse.

Package Contains

Your DC-2093 Mouse package includes the following:

1. DC-2093 Mouse (Transmitter)
2. DC-2093 Mini Receiver
3. User's manual
4. 2 AA batteries

Note : If any part is missing, please contact your dealer for a replacement immediately.

Precaution

! The optical mouse *can not* work on a glass or mirror surface. Avoid operating this mouse on a glossy surface, otherwise, this mouse may not operate normally.

! For consideration of saving battery power, it is strongly recommended to operate an optical mouse on a bright surface with fine texture to obtain lower power consumption of the Agilent high illumination LED. A very dark surface will cause higher power consumption.

! For optimal performance, place the receiver at least 8 inches or 20 centimeters away from other electrical devices, such as the computer, the computer monitor, speakers or other external storage drives.

! For a better transmission distance, avoid to use this device on a metal plate or desktop because a large surface of iron, aluminum, copper and other metal will be a shielding or ground to the RF antenna of the mouse and receiver. Operating on a metal may cause the transmission distance shorter.

! If your notebook computer has a metal (contains Al or Mg) case, the metal housing of the LCD panel will isolate partial radiation of the RF signal from the mouse. This will possibly result in reducing the distance of transmission when you operate the mouse right in front of the notebook, and the receiver is connected on the back of the notebook. However, the RF mouse should work properly while you are operating the mouse just beside your notebook computer.

Installation Guide

Step 1. Connecting the Receiver

By using this DC-2093 mouse, you need to keep a free USB port for the included receiver.

Please follow the steps below to finish the connecting:

1. Prepare your original Microsoft Windows CD.
2. Plug the USB connector end of the receiver into a USB port.

3. Turn your Notebook on if it was off. Then, follow the instructions of Windows to complete the registration of a new USB device.

Step 2. Setting up the correct channel and ID

This RF wireless mouse provides 2 different RF channels, and 256 identification codes to avoid interference with other radio devices or other same model of RF wireless mouse. Before using the wireless mouse, you need to follow the following procedures to make the mouse be known by the receiver.

1. Installing the Batteries

This RF wireless mouse uses 2 AA batteries.

To apply the batteries, please follow the following steps:

- Remove the battery cover by pushing down the Tab (see Fig-2) and pull the battery cover out.
- There are signs to indicate the polarity of the batteries. Carefully follow the signs to place the batteries (refer to Fig-1.) Don't reverse the polarity!
- Place the batteries cover back and make sure it is firmly closed.



Fig-1

Battery Warning!

When replace the batteries, use alkaline. You may use other heavy-duty NiMH batteries, but do not mix them with alkaline. Do not mix used and new batteries together!

2. Connecting the mouse to the receiver

Be sure to press mouse connect button first, Then receiver connect button.

Make sure that the mouse is in standby mode, i.e., the red light on the bottom of the mouse is on. If it is not, press any key to wake it up before you go on.

- Press and release the “connect” button on the wireless mouse (refer to Fig-2.) There will be a duration of around 10 seconds for the mouse to get connect with the receiver.

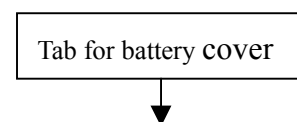


Fig-2

Hold the mouse upside-down and use a pointed object such as pen press and release the “CONNECT” button once (NOT to be longer than 1.5 second).

- Press and release the “connect” button of the receiver at the end opposite to the USB plug (refer to Fig-3.) As soon as the LED inside the receiver starts flashing, the connection is done. A new set of ID and channel has been established, and normal operation can go on.
- If it is inconvenient to observe the LED inside the receiver, the user can also keep moving the mouse after depressing connect buttons on both the mouse and the receiver. The cursor on the screen will start to run according to the mouse movement when the new connection is established.
- Since the transmission is one way from the mouse to the receiver, we urge you to put the mouse as close as possible to the receiver when you feel like to re-connect the mouse and the receiver.
- When there is no concern of RF interference, it would be convenient to use default ID and channel, since no re-connection is required after replacing a pair of new batteries. Whenever there is a power reset, the mouse goes back to default ID and channel. On the receiver, we also provide a way to reset the ID and channel to their default values. Simply press and release the connect switch to light up the LED, and, before the LED goes off, press and hold the switch until the receiver turns off the LED.



Fig-3

Operation Guide

Battery low indication (before you carry out this mouse)

When the voltage level of the battery goes down under the preset level, the scrolling wheel will flash at least three times on moving or clicking the mouse. Although the mouse can still work for a while, the user, at this time, should have a new set of batteries ready for replacement.

Power off the mouse

1. Be sure the mouse is **NOT** in sleep mode. If it is, press any key to wake it up.

2. Press and hold the Connect button on the bottom of the mouse for more than 2 seconds. (The red light will go off while the Connect button is depressed.)
3. Wait until the red light flash once. Release the Connect button.
4. Now, the mouse is in power off mode. No operation can be done.

Power on the mouse

To activate the mouse again, press the Connect button on the bottom of the mouse once.

(**DO NOT** depress the Connect button for more than 1.5 seconds when resuming the mouse from power off mode.) The red light will turn on, and the mouse is ready for normal operation.

Operations on power saving mode

In order to conserve battery power, the mouse is designed to reduce power consumption gradually from standby mode to sleep mode, if it is not operated.

Standby mode – Around 2 seconds after the mouse stops moving, it enters standby mode.

Sleep mode – If the mouse is left intact for around 10 minutes, it goes to sleep mode and shuts down the optical sensor to maintain minimum power consumption. No moving operation is possible in this mode.

Wake up the mouse

This mouse can work promptly under standby mode, so, users might not be able to tell the existence of this mode. But, in sleep mode, users have to press any button to wake up the mouse for normal operation.

GENERAL SPECIFICATIONS

- 800dpi hardware resolution
- Digital Radio Frequency wireless mouse with receiver
- 2 channels and 256 ID selections for your options to prevent interruption
- 3 buttons design with scrolling wheel
- Ergonomic design for comfortable grip

Electromagnetic Characteristics (EMC)

This unit complies with Part 15 of FCC Rules.

Operation is subject to following two conditions:

- (1) This device may not cause harmful interference.**
- (2) This device must accept any interference received, including interference that may cause undesired operation.**



**Tested To Comply
With FCC Standards**

- **CE - Type acceptance:** ETS 300 220 short range devices

Transmitter

- Distance: 3 feet typical
- Power: 3.0V DC (Two AA size of Alkaline batteries)
- Carrier Frequency: 27 MHz
- Dimensions: 98*59*38 mm
- Weight: 106 grams

Receiver

- Interface: USB
- Power: 5V DC, 100mA MAX connected to host computer
- Dimensions: 63*22*17 mm (without counting the extended USB connector)
- Weight: 16 grams

ELECTRIC SPECIFICATIONS

- Operating Voltage Transmitter: 2.85 V DC (powered by batteries)
 Receiver: 4.5 to 5.5V DC (powered by USB port)
- Operating Current Transmitter: 45mA, operate on a white paper
 Receiver: 30mA typical
- Standby Current Transmitter: 8 mA
- Sleep Mode Current Transmitter: below 0.4mA
- Modulation Type FSK

Troubleshooting

1. Mouse does not function

- If mouse is not functional, please turn off the computer first.
- Check the receiver and make sure it is firmly attached to the USB port of the computer.
- Check the placement of batteries and see if they are properly connecting. The "+" and "-" on the batteries must match the "+" and "-" on the slots. If the batteries aren't inserted correctly, the device won't work.
- Restart the computer again. If the LED inside the receiver does not light up when moving the mouse, please re-connect the mouse to the receiver by following **Step 2** in the installation guide.
- **Q:** The mouse cursor can be moved only left & right during operation (it could be caused by low battery or the optical sensor's data error).
A: Please take out one of batteries and put it back for a power reset and then redo the connect procedure (refer to step2-2).

2. Reducing Interference with Other Wireless Devices

- Reducing Interference with Other Wireless Devices:
All 27MHz radio-based devices are subject to interference from other 27MHz radio-based devices, such as cordless telephones, cordless baby monitors, and cordless toys. It may help to move the receiver unit and the base unit of other wireless devices (such as cordless telephone cradle) as far apart as possible. You may need to try several times for a location that is best in your operating environment.
- Move the receiver and the mouse closer to each other so that the receiver is relatively shorter in distance to the mouse than to other 27MHz transmitters. You may need to re-establish the "connection" by following **Step 2** of the installation guide.
Note: Avoid to use this device on a metal surface because a large surface of iron, aluminum, copper, or other metal may act like a shielding to the RF antenna of the mouse and the receiver.

3. Interference with other RF wireless mouse

If the interference comes from other same model of RF wireless mice, please follow **Step 2** “Setting up connection between mouse and receiver” of the installation guide to switch to a new RF channel. A new identification code is also generated upon the completion of channel switching.

Normally, the effective transmission distance is about 3 feet, depending on the environment. If the effective distance between the mouse and the receiver is bad, try to change the location of the receiver.

4. If you have difficulty connecting the wireless mouse:

- Increase the distance between the set of wireless mouse and other radio device units.
- Turn off the other wireless devices, or their base units, that are in close proximity to the receiver of this wireless mouse.
- Try connecting the wireless mouse and its receiver again.
- To verify that your device is connected and working properly, open a document and try the device.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.