

# USER'S MANUAL

## **Kinesis® Evolution™ Fully Adjustable Keyboard** *Track-mounted (under-desk), fully-articulated , programmable ergonomic keyboard & touchpad*

Models covered, PC Compatible  
KB450PC (right-hand touchpad)  
KB460PC (left-hand touchpad)  
KB470PC (dual touchpad)

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## **FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT**

### **Note**

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 when the equipment is operated 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 or more of the following measures:

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

### **Warning**

To assure continued FCC compliance, the user must use only shielded interfacing cables when connecting to computer or peripheral. Also, any unauthorized changes or modifications to this equipment would void the user's authority to operate.

## **INDUSTRY CANADA COMPLIANCE STATEMENT**

This Class B digital apparatus meets all requirements of the Canadian Interface-causing Equipment Regulations.

Cet Appareil numerique de la classe B respecte toutes les exigences du Reglement sur le material brouilleur du Canada.

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## Introduction

Congratulations on your purchase of the Kinesis Evolution track-mounted, fully adjustable keyboard and integrated touchpad. Your new, patented keyboard was created by medical professionals with your health and comfort in mind. The design allows you to optimize your posture and minimize joint and muscle strain while working at a computer.

If you follow the general ergonomic guidelines provided in the manual, you should reduce the computer-associated stresses on your muscles and joints, thereby directly reducing many of the known risk factors associated with repetitive strain injuries (RSI).

Please bear in mind that many factors in your busy life can contribute to RSI. Don't treat your new keyboard like a magical cure for RSI. For the best results, you must use good judgment in performing any repetitive or stressful tasks and participate in a "wellness" program that includes regular exercise and frequent short rest breaks.

We hope that you find using the Kinesis Evolution keyboard system is a welcome change from your previous keyboard and pointing device.

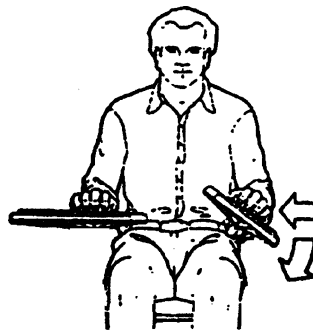
## Quick tour of features

The Evolution™ fully adjustable keyboard provides you with important ergonomic benefits. By allowing you to independently adjust each keyboard half to the separation and tilt that is most comfortable, the Evolution keyboard lets you optimize your posture and maximize comfort.



The retractable, track-mounted Evolution keyboard also allows complete control over keyboard height and easy under-desk storage.

When you are properly positioned, your muscles will be relaxed and your joints will be straight, minimizing important known risk factors for repetitive strain injury. As you spend less energy on unnecessary strain, you preserve more energy for productive work.



## Installation

### Required tools

Screw driver, pliers. The only tools required are a screw driver and pliers to attach the plastic adapter plate to the under-desk track.

### Installing the under-desk track

The easiest way to attach the track to the underside of the desk is to turn the desk upside down on the floor. If this is not feasible, you will need a second person to hold the arm in place while drilling and inserting screws. Loosely install four screws to confirm the positioning of the arm, then install the additional screws and tighten all of them.

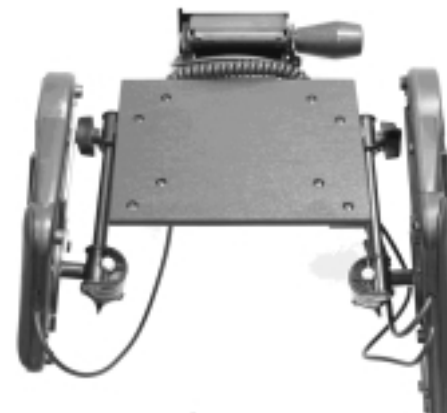
The front edge of the track typically should be recessed about ½ inch from the edge of the desk.

*If you have a lip on the front edge of your desk*

To deal with a front-edge lip, you may need to install a wooden "shim" under the desk, equivalent in thickness to size of the lip. Alternatively, you may wish to mount the track up against the inside of the lip so that the locking latch doesn't engage when the track is fully extended.

### Attaching keyboard to under-desk track

Your keyboard is shipped pre-attached to a plastic adapter plate which mounts to the head of the track. After your track is mounted to the underside of your desk, lay the keyboard/plate assembly in place on top of the track head. Loosen the knobs slightly so that the keyboard sections can be moved out of the way as shown below. **Caution:** if you loosen the knobs too much, the keyboard modules can slide out and fall to the floor.



Use the four provided machine bolts with self-locking nuts to attach the adapter plate to the head of the under-desk track.

### ***Positioning keyboard cables***

You may loop the keyboard halves interconnecting cable over the track head as shown above, or use the self-adhesive clips (provided) to clip the cables to the underside of the track. Avoid placing the cables where they can be pinched or damaged when adjusting the keyboard or stowing it under the desk. For the main cable, avoid placing it where you might step on it or roll over it with your chair.

### ***Connecting keyboard and touchpad to your computer***

Shut down your computer and attach the keyboard and mouse to the same locations that your previous keyboard and mouse were attached. Be careful that you do not swap positions! If your mouse and keyboard ports are PS/2 style (round, 6-pins), you will need to install the provided adapter cables. The keyboard does not require a driver. For your touchpad, do not install any drivers until you have tested the touchpad to evaluate if they are needed.

#### ***Initial testing of the touchpad***

Turn on your computer. When a mouse cursor appears during the bootup process, try the touchpad to see if you can move the cursor. Use only very gentle pressure. You can use the buttons to click, or you can tap very gently on the touchpad surface to click. If you haven't used a touchpad previously, you will want to install and use the *touchpad tutorial* which is installed when you install the cirque drivers (below).

#### ***Initial testing of keyboard***

The cursor keys should move the keyboard cursor around the desktop. Run a text editing application and test every key for functionality. If one or more keys do not perform their expected act, reset the keyboard's special memory chip as explained under "Customizing your keyboard & special key actions."

### ***Using a serial port for your touchpad (Windows 95/98/ME)***

While most PCs will allow you to connect two pointing devices at once, it is simpler if you start out by disconnecting your previous pointing device and attach the cable from your touchpad (labeled "mouse") to the same port.

#### ***Connecting the touchpad to your serial port.***

If you wish to connect the touchpad to your serial port and you have been using a PS/2 port with your old mouse, turn off the computer and attach the 9-pin connector (labeled "mouse") from your keyboard to an available serial port connector on your computer. *Leave your old mouse attached to the PS/2 port!*

#### ***Activating your serial port***

Start your computer and test the touchpad. If it is not working, use the "add hardware" option in the control panel and have it search for new hardware. When it finishes searching, select "Details" to confirm that a "standard serial port" was detected. Then select "Finish" and restart your computer as instructed by Windows. For some computers, you may have to follow this procedure twice to get the touchpad to work correctly on the serial port.

### ***Installing the Cirque driver and tutorial***

Once you know that the touchpad is active, you can install the Cirque drivers and tutorial if you wish. Insert the diskette provided, click on the *Start*, then *Run*, and then type *a:* and browse to find the installation file. Double click to run this program. The driver will be installed and the tutorial will begin.

#### ***Touchpad tutorial***

If you have not used a touchpad extensively, it is a good idea to practice with the Cirque tutorial. Practicing with the tutorial will rapidly improve your comfort and efficiency with this pointing device. After you have installed the Cirque driver, the tutorial will automatically run every time you reboot until you deselect this property in the tutorial's startup screen. Remember that your touchpad is very different than a mouse. Constant force is not required to activate either the pointer or the "tap-to-click" action.

#### ***Customizing your touchpad***

After installing the Cirque driver, you can adjust sensitivity and even customize button actions using the "Mouse" icon in your control panel (click *Start*, the *Settings*, then *Control Panel*).

## **Adapting to your new computing environment**

When adjusting to your new keyboard, please follow these suggestions:

- ! Don't type "hard." Relax!
- ! Make small changes and try them for a while before changing again
- ! Carefully review the ergonomic guidelines below.

### ***Preliminary adjustment of keyboard***

Loosen both adjusting knobs on one side while supporting the keyboard. When making adjustments to the keyboard, be gentle so that movements don't cause damage to the adjustment mechanisms. If adjustment seems difficult, further loosen the adjusting knobs.

When the keyboard section is approximately where you want it, gently tighten

the knobs and repeat the process with the other side.

### ***Preliminary adjustment of chair***

Refer to the instructions for your chair if you are not familiar with its adjustment mechanisms. First adjust the seat height and tilt, with your feet flat on the floor, to make your thighs level with the floor, then adjust the height, depth, and tilt of the backrest.

If your chair has armrests, adjust their width and height so your arms are comfortably draped at your sides. Your forearms should be parallel to the floor when supported by the arm rests.

### ***Final adjustment of the keyboard***

Now refine the adjustments of your keyboard. Adjust one side at a time, being careful not to use force which might damage the keyboard mechanisms.

Loosen the keyboard adjusting knob directly under the arm rest to adjust the keyboard for your forearm length and shoulder width. Then loosen the knob under the keyboard to set the amount of “tenting” (lateral slope; see figure).

***Important warranty note:*** *Damage to the keyboard caused by careless use, such as by forcing the keyboard to move without adequately loosening knobs, is not covered by your warranty.*

## **Ergonomic guidelines: Posture and your Health**

The Kinesis Evolution fully-adjustable keyboard was designed to improve keyboard operator comfort and at the same time, increase productivity. Remember that there is no one right position as long as you follow certain general guidelines: keep joints straight, muscles relaxed.

Posture while keying is known to be one of the contributing factors for RSI. Finding a position that is right for you will require some initial time experimenting with adjustments. Does the chair feel right? Have you tried the adjustment levers? Below we discuss ways in which the Kinesis Evolution track-mounted keyboard can help you achieve your comfort objectives.

### ***Back***

Your back should be resting against the chair back. Adjust your chair back and seat tilt accordingly. The forward flexion of the trunk while working at a desk or on the keyboard can contribute to low back problems.

### ***Shoulders***

Working on a conventional keyboard with hands and arms in front of the trunk

encourages rounding the shoulders. This undesirable shoulder rounding is not desirable as it decreases circulation into the extremities and puts strain on the upper back. The Evolution keyboard relaxes the shoulder area into a neutral posture and improves circulation into the extremities.

### ***Head and Neck***

The conventional keyboard encourages the user to crane both head and neck forward to see the keyboard and screen. The Evolution keyboard facilitates an upright posture for the head and neck, positioning them in proper alignment over the shoulders. The use of the arm rests to gently supports the arms further assists in properly aligning the head and neck with the trunk. Resting the palms on the integrated, padded palm support relaxes and reduces muscle tension in the head, neck, and shoulders.

### ***Arms/Elbows***

The Evolution keyboard provides support for the upper extremities in their natural position, by your sides. Your arms are likely to be most comfortable if they are positioned shoulder width apart, with your forearm resting naturally on the padded arm of the chair. The height and width adjustments on the arm rests allow the user to adjust for upper arm length and body type.

### ***Hand/Wrist***

The most relaxed resting posture for the forearm and hand is the “handshake” position. However, this is not the most effective position for typing, because your hands will tend to fall off the keys and you won’t be able to see the keytops to reposition the hands. A slight central elevation (“tenting”) of a split keyboard (10-20 degrees elevated from horizontal) has been shown to be optimal for most people to allow typing with relaxed forearm muscles. The Evolution track-mounted keyboard addresses this aspect of keyboard ergonomics by providing infinitely tenting adjustments.

### ***Adjusting your keyboard and chair***

Once you are comfortable in your chair, you can start adjusting the keyboard. While you are seated comfortably in your chair, your arm should be straight from the elbow to the fingers with no twist of the wrist. Adjust the keyboard so your forearm is resting on the arm pad and your palm is on the palm rest. Try adjusting the keyboard to different angles, and don’t be shy about trying several positions until you find one that works for you.

### ***Note About Force***

It is not necessary to press each key to its end point for activation. The harder a key is pressed, the greater the pressure on the fingers, hand and wrist. Repeated extra hard depressions put a user at risk for pain and discomfort.

## Customizing your keyboard & special key actions

Your new keyboard is fully programmable, using a non-volatile memory chip which retains the keyboard settings indefinitely even when the keyboard is without power. The **Scroll lock** key serves as a special “Program” key when used in combination with certain other keys on your keyboard, as described below.

### ***Resetting keyboard memory***

If the keyboard ever behaves strangely, the first thing to try is a memory reset.. Two procedures are available:

- (1) Press and hold the **Scroll lock** key, then one of the **Ctrl** keys, and finally add the **F10** function key so that all three keys are depressed. The lights on the keyboard should begin flashing. Release the keys and when the flashing stops in several seconds, the keyboard’s memory has been reset.
- (2) Hold the **F7** key briefly while turning on the power to your computer. After releasing the **F7** key, the keyboard’s lights will flash for several seconds, indicating a successful memory reset.

### ***Remapping (moving key actions)***

Hold down the **Scroll lock** key and tap **F12**, then release both keys. The keyboard’s lights will begin flashing rapidly. To move a key, first tap the “source” key whose action you want to copy somewhere else. The lights will begin flashing slowly. Now tap the key where you want the new action to appear. You can then repeat this key sequence with a different pair of keys or exit from remapping mode by holding **Scroll lock** and tapping **F12**.

You cannot lose a key action through remapping because when you are in “remapping mode,” the default layout is always present for “source” actions.

#### ***Remapping example 1. Remap the left Space bar as Backspace.***

- 1.1 Hold **Scroll lock** and tap F12, then release both keys. The keyboard lights will be flashing quickly.
- 1.2 Tap the **Backspace** key. The keyboard lights will begin flashing slowly.
- 1.3 Tap the left **Space bar**. The keyboard lights will return to flashing rapidly.
- 1.4 Hold **Scroll lock** and tap F12, then release both keys. The keyboard lights will stop flashing.

#### ***Remapping example 2. Return a remapped key back to its factory setting***

- 2.1 Hold **Scroll lock** and tap F12, then release both keys. The keyboard lights will be flashing quickly.
- 2.2 Tap the key in question. The keyboard lights will begin flashing slowly.
- 2.3 Tap the same key a second time. The keyboard lights will flash rapidly.
- 2.4 Hold **Scroll lock** and tap F12, then release both keys. The flashing stops.

### ***Creating a stored keyboard macro (sequence of keystrokes)***

Hold down the **Scroll lock** key and tap **F11**, then release both keys. The keyboard's lights will begin flashing rapidly. First select a "trigger key" (the key or combination of keys that will initiate playback of the macro). The lights will begin flashing slowly. Now type the key or keys that will comprise the body of the macro. When you have finished, hold the **Scroll lock** key and tap **F11**. The lights should stop flashing (if not, you have added **F11** to the end of your macro and you should exit and start over).

### ***Modifier keys and macro trigger keys***

Macros may be triggered by a single key or by a combination with **Ctrl** or **Shift**. If you use **Alt** as part of a macro trigger in Windows, your macro may not play correctly (to play correctly, you must tap and release the **Alt** key once before performing the **Alt + letter** macro trigger combination). The "Windows" keys will not work as modifier keys to trigger macros.

A modifier key (**Shift**, **Ctrl**, **Alt**) may not be a trigger key unless combined with another (non-modifier) key.

### ***Activating or disabling stored macros***

Each time you restart your computer your macros will be turned off (but still stored in the keyboard). To activate stored macros, hold down the **Scroll Lock** key and tap **F10**. No lights will flash but any stored macros will be activated. To disable stored macros, use the same key sequence.

### ***Macro example. Program Ctrl-c to output Constitution***

- 1.1 Hold **Scroll lock** and tap F11, then release both keys. The keyboard lights will be flashing quickly.
- 1.2 Hold either Ctrl key and tap the "c" key. The keyboard lights will begin flashing slowly.
- 1.3 Type "Constitution" exactly as you normally would, including any corrections to correct typographical errors.
- 1.4 Hold **Scroll lock** and tap F11, then release both keys. The keyboard lights will stop flashing.

### ***Key repeat setting***

You can set repeat rates from the keyboard, or by using the Windows control panel as before. To use the keyboard, hold **Scroll Lock** and tap **F9**. While the keyboard's lights are flashing, tap a function key (**F1** through **F12**). where **F1** is very slow (1 cps) and **F12** is very fast (300 cps) repeat rate.

### ***Repeat delay settings***

Setting repeat *delay* can only be accomplished in the control panel. This is the time delay before keys begin repeating when a key is held down.

### ***Note for USB adapter***

If you are using a PS/2-to-USB adapter, the keyboard's on-board repeat rate setting is disabled. Use your computer's normal repeat rate controls (e.g. Windows Control Panel).

## **Care and maintenance of your keyboard and touchpad**

### ***Keyboard***

The Kinesis Evolution adjustable keyboard uses mechanical switches. While providing low force and very long life, mechanical switches can be damaged by liquid or solid debris that gets inside the switch mechanism. Avoid eating or drinking while using your keyboard. Periodic vacuuming will help remove dust that might otherwise work its way inside the switches.

### ***Touchpad***

The Cirque touchpad is a precision, solid-state device which has no moving parts other than the mechanical buttons. The surface of the touchpad is extremely durable and requires no maintenance other than occasional wiping with a damp cloth (after turning off your computer).

Periodic cleaning will help ensure the long life of your keyboard. Use vacuum rather than compressed air, which could blow external dust inside the switches. For the most effective cleaning, remove keycaps before vacuuming, using a keycap removal tool (available from Kinesis or your Kinesis dealer).

### ***Liquid spills***

If a liquid spill does occur, immediately unplug your keyboard and touchpad from the computer. Often the effects of liquid spills can be reversed by rinsing the keyboard with water, then shaking the keyboard sections firmly to remove all water droplets. Allow the keyboard to dry with good ventilation (e.g. in front of a fan) for *several* days before testing it for normal function. Damage from spills is not covered by your warranty.

## **Troubleshooting**

Troubleshooting is intended to differentiate between three possible sources of problems, and thus lead to a likely solution. Possible problems included (1) improper setup, (2) defective devices, and (3) incompatible devices. If your Evolution keyboard is new and has never worked successfully with your computer, all three problem sources are possible. However, if your keyboard/touchpad has previously worked on the current computer (and you have not recently upgraded it or installed new software), you can rule out incompatibility.

For new keyboards, the most effective troubleshooting is accomplished if you can largely rule out incompatibility by testing your new keyboard and touchpad on a different computer, and also check a different keyboard and mouse on the first computer.

### ***The touchpad doesn't work at all***

1. PS/2 adapter cable might be defective. Try installing the touchpad on your serial port, which doesn't require the adapter.
2. On computers having two PS/2 ports, mouse and keyboard connections might be reversed. If the ports are not clearly labeled on your computer, check your computer's User's Manual

### ***Keyboard keys create the wrong output***

Your keyboard has a memory chip which is can store customized settings including macros and layout changes. Sometimes static electricity can scramble the memory even if you haven't intentionally programmed the keyboard. Try one of the memory reset options: (1) hold down the **Scroll lock** key, then add **Ctrl** and finally add **F10**. The LEDs will flash rapidly for several seconds during a keyboard memory reset. If that doesn't happen, shut down your computer and hold the **F7** function key as you turn on the power to start up again. After a few seconds, you can release the **F7** key (the LEDs will flash for several seconds). When the computer finishes booting, test to see if full function is restored.

### ***A single key on the keyboard seems dead***

Reset the keyboard memory (see above). Alternatively, turn on "remapping mode" by holding **Scroll lock** and tapping **F12** (see "Customizing your keyboard and special key actions") and tap the key in question. If the key is electrically active, the lights will flash more slowly. Tapping it again will speed up the flashing. Then exit from remapping mode by holding **Scroll lock** and tapping **F12** again.

If the problem isn't fixed by resetting the memory, or if the speed of flashing lights doesn't change after tapping the key while in remapping mode, the key is probably electrically defective and will need servicing. The most common cause of such a problem in a new keyboard is a bad solder joint.

### ***Touchpad surface works, but one or both buttons don't work***

Try wiggling the buttons to the left and right. Remember that tapping gently on the touchpad surface can substitute for button clicking. If the touchpad drivers are installed, tapping in the upper right corner substitutes for the right mouse button. Also check the "Mouse" icon in the control panel, since the Cirque drivers allow the mouse buttons to be customized.

### ***Touchpad seems to be operating erratically***

Shut down your computer and attach your previous keyboard and mouse. If the problem goes away, check your Device Manager screen for signs of problems. You can find this screen by highlighting the "My Computer" icon, then selecting "Properties," or by going to the Control Panel ("Start," then "Settings") and select the "System" icon.

## **Obtaining technical support**

Contact Kinesis technical support only after you have read the entire user's manual and still have problems or unanswered questions. You may contact Kinesis Technical Support by E-mail (tech@kinesis-ergo.com), fax (425-402-8181), or phone (425-402-8100). Technical support hours for voice phone are 8:00am to 4:30pm Pacific time, Monday through Friday.

When you contact Kinesis, be prepared to document your purchase date, as well as your product model and serial number. Also know the brand and model of your computer and your computer's operating system.

### ***Repairs by authorized repair centers only***

The product may be repaired by authorized, qualified personnel only. However, Kinesis technical support staff may authorize field repairs by the customer.

### ***Getting an RMA number prior to keyboard repair***

For any repair, whether or not it is covered by your warranty, you must contact Kinesis to explain the problem, provide certain information, and obtain an RMA number to write on your package. Packages sent to Kinesis without first obtaining an RMA number may be refused and product cannot be repaired without information and instructions from the owner.

### ***Packaging and Shipping***

If you need to ship the product, transport it only in packaging that protects it against damage. Be sure to contact Kinesis for an RMA number and Kinesis' current shipping address. It is advisable to insure the package since Kinesis is not responsible for items until they are received and accepted at Kinesis repair center.



## **TWO-YEAR LIMITED HARDWARE WARRANTY**

Kinesis Corporation (“Kinesis”) warrants to the original retail purchaser that this Kinesis keyboard (“Product”) is free from defects in materials and workmanship and will perform substantially in accordance with the Product documentation for two years from the date of purchase by the user. This Warranty does not apply to software or diskettes enclosed with the product, which are covered by a Kinesis License Agreement. If Product fails due to accident, abuse, or inappropriate use (e.g. careless adjustment or adjustment without loosening knobs, or due to mechanical damage to cables), Kinesis shall have no responsibility under this two-year Warranty.

### **Purchaser’s Exclusive Remedies**

During the first (2) years after the date of original purchase, the exclusive remedy for a defect in this Kinesis Product shall be, at Kinesis Corporation’s option, either repair or replacement of the defective product. If you suspect the Product is not working properly or if you have questions about the performance of the Product, contact Kinesis Technical Support. If you wish to return the Product to Kinesis for any reason, you must obtain from Kinesis an RMA number and instructions for returning the product. You are responsible for the cost of shipping the product to Kinesis. For Product repaired or replaced under warranty for destinations within the United States or Canada, Kinesis will ship said Product to you by its ground carrier at no charge. Repair parts and replacement Product may be either reconditioned or new. Kinesis retains the right to charge a service fee or return shipping fee on Product sent for warranty repair where no repair was required.

### **Disclaimer of Other Warranties**

The warranty and remedies set forth above are exclusive and in lieu of all others, whether oral or written, express or implied. Kinesis specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. No Kinesis dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty. Kinesis does not warrant that the product will meet your requirements, or that operation of the product will be uninterrupted or error-free, or that all errors will be corrected.

### **Limitation of Liability**

Kinesis is not responsible for special, incidental, or consequential damages resulting from any breach of warranty, or under other legal theory, including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and/or property nor any costs of recovering, reprogramming, or reproducing any program or data stored in or used with Kinesis products.

Some states do not allow the exclusion or limitation of incidental or consequential damages or exclusions of implied warranties, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.