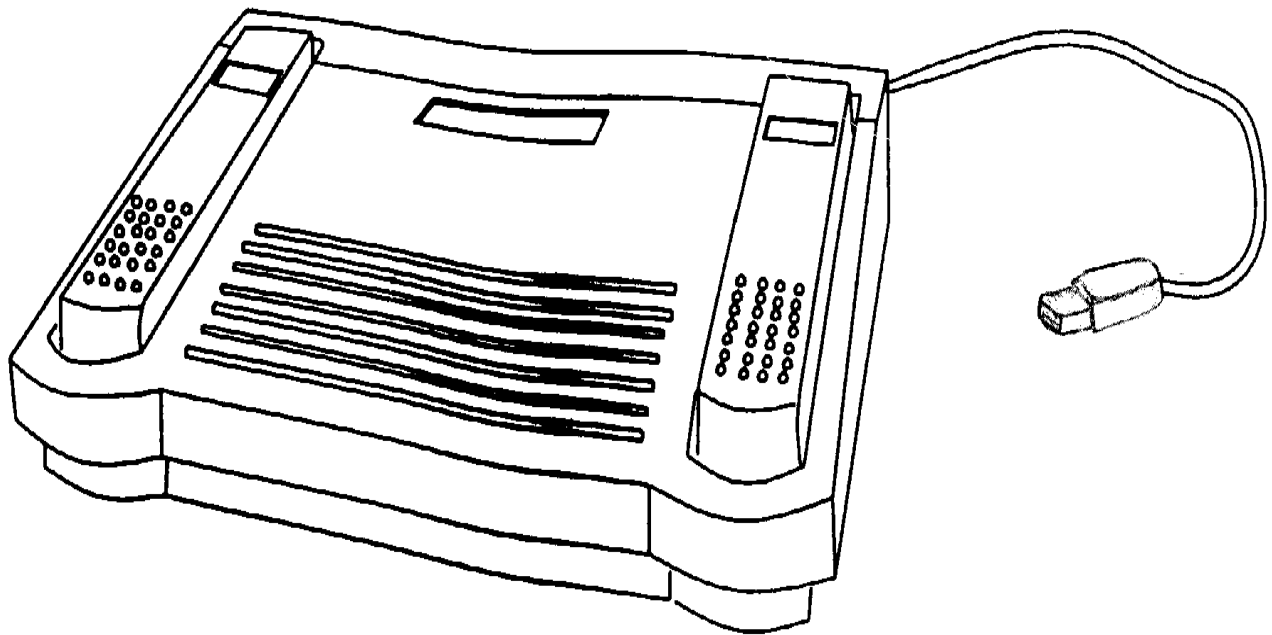


Savant Programmable USB Foot Switch

For Windows 2000/XP



USER'S MANUAL



USER'S MANUAL

Kinesis® Savant™ Programmable USB Foot Switch FS004USB, Version 3.0

For Windows® 2000/XP*

*Macintosh compatibility: Factory-programmed mouse button actions work on newer Macintosh systems but this device is not programmable on Macintosh

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This product was designed and produced for Kinesis by P.I. Engineering (www.xkeys.com).

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
- 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

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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HEALTH AND SAFETY WARNING

Continuous use of any computer input device may cause aches and pains or a more serious cumulative trauma disorder (CTD) such as tendinitis.

- Observe sensible guidelines when using any computer input device to help minimize the possibility of injury.
- Follow established guidelines for computer and workstation setup.
- Exercise good judgment in placing reasonable limits on your computer usage time every day.
- Ensure that you take reasonable rest breaks from computer use during the course of the day.
- At the first sign of stress-related injury (aching, numbness, or tingling of an extremity), consult your health care professional.

Kinesis Corporation bases its product designs on research, proven features, and user evaluations. However, because of the complex set of factors believed to contribute to computer-related injuries, the company can make no warranty that any of its products will prevent or cure any physical ailment.

Your risk of injury may be affected by workstation and chair design, posture, time worked without breaks, type of work, activities outside of the workplace, and individual physiology.

FEATURES AND COMPATIBILITY

The Savant USB Programmable Foot Switch is factory programmed to perform mouse button actions. It can be re-programmed in Windows 2000 or Windows XP to perform any keyboard actions or key combinations (macros).

Once programmed, this device works with generic Windows® USB drivers in cooperation with your regular keyboard and mouse. Any mouse click, keyboard action, key combination or macro can be sent from the foot switch while your regular keyboard and mouse remain active. With limitations, it also works on Macintosh systems.

The factory programmed mouse click actions include *left click*, *right click*, and *middle click* (the latter normally performs “scroll” in Windows but may not be active on the Macintosh). If desired, these special mouse click features can be changed and re-programmed in Windows 2000 and Windows XP, but not on the Macintosh. A keyboard connected to the computer must be used to re-program the foot switch.

Once the downloadable re-programming driver has been installed, a recessed slide switch inside the device activates “programming mode” to allow the user to program each pedal independently, simply by pressing keys on the regular keyboard. A memory chip stores information inside the foot switch virtually indefinitely.

Applications

In general, anything you can type can be stored in a pedal. While usage is normally for a single or small number of actions, many keystrokes can be stored in a single pedal.

Keyboard actions (single keys or macros)

Each pedal of the Kinesis Programmable Foot Switch can be programmed with any single key action or with a sequence of up to approximately 750 keyboard key actions (limited to a total of approximately 1200 key actions for all three pedals).

- *Pre-combined modifiers*. If you frequently use combinations like *Shift-Ctrl left arrow*, you can reduce strain and effort by programming a pedal to perform *Shift-Ctrl*.

- *Repeating key actions*. Normally a single key action programmed into the footswitch repeats if the pedal is held down, while a macro (multiple key actions) does not repeat. However, a special key sequence can be used during programming to cause a macro to repeat when the pedal is held down.

- *Slow output.* If normal programmed output from the footswitch is too fast for the computer, “slow output” can be selected.

- *Separate press/release commands.* For special applications, you can send a “press key” or “release key” only, or you can program “press key” actions separately from “release key” actions.

- *Inserting “delays” between keystrokes.* The footswitch can be programmed with one or more 0.5 second delays.

Setting “Capslock remembered during playback”

Use this feature if you want a macro to always play back in the same Capslock mode in which it was programmed.

Mouse Click actions

This device is factory programmed to perform mouse click actions. In most environments, mouse click actions can be used to substantially reduce the strain caused by and increase productivity lost due to excessive mouse clicking.

Compatibility

In general, the foot switch can be used with any system having an operational USB port. However, drivers required for re-programming the foot switch are only available and provided for Windows 2000/XP.

PC-compatible systems with USB port

This product requires an available USB port and an operating system that supports USB. To be able to re-program the foot switch, your operating system must be Windows 2000/XP. Once programmed, the foot switch can be used with other systems that support USB keyboards.

Macintosh systems with USB port

This product requires a Macintosh system with an available USB port and with an operating system that supports USB (OS 8.6 and newer). It can only be reprogrammed using a PC running Windows 2000/XP.

There are two limitations when using this device in the Macintosh operating environment. First, one USB device cannot modify another device in the Apple operating system. Therefore a pedal programmed for *Command*, *Shift*, *Control*, or *Option* cannot modify the action of another key pressed on a keyboard. However, you could program a pedal (on a PC) to perform *Command-c* or *Command-x*. Second, in OS X the main mouse click will not “click and drag” if the pedal is held down while the mouse is moved (because “one USB device cannot modify another”).

INSTALLATION

The Savant Programmable Foot Switch has two separate electronic identities: one when it is in “play mode” and a separate identity when it is in “program mode.” Play mode is supported by generic drivers provided by the operating system. The drivers required for program mode must be downloaded and installed if you wish to customize the device (http://www.kinesis.com/tech_support/downloads.htm).

Important installation note: before trying to customize the foot switch, first install and test the device in “play mode” as described below. Then if you wish to re-program the foot switch, carefully follow the instructions for installing the “programming driver.”

Installing “Play Mode”

It is strongly recommended that you use the foot switch at least briefly with its factory programming before customizing it. The Savant Foot Switch is shipped with its internal programming switch in the “Play mode.” Do not move the switch to “programming mode” at this time.

Play mode for Windows 2000/XP

Windows 2000/XP installs two “Play Mode” drivers from the operating system, but this usually happens quickly and automatically so you may not notice.

Play mode for Macintosh OS X

The foot switch should be functional with its factory programming immediately after plugging in the device. No drivers need to be installed.

Testing and using pre-programmed actions

Once the required driver is installed, the Kinesis Programmable Foot Switch works like a standard USB keyboard. Just plug the cable into a USB port on your computer. It doesn't matter if the computer is running or turned off.

For now, don't worry about re-programming your foot switch. It is shipped pre-programmed to produce mouse-click actions:

Left pedal: middle mouse button (usually performs “Scroll” action in Windows applications that support scrolling)

Middle pedal: main (left) mouse button

Right pedal: right mouse button

General Operating Guidelines

Your regular keyboard is not required for the Savant Programmable Foot Switch to operate. Your computer should boot with only the Kinesis Programmable Foot Switch attached. However, a regular keyboard must be attached in order to re-program the foot switch.

Adjusting pedal height and travel

If you wish, you may adjust the height of each pedal to optimize your comfort and reduce the likelihood of inadvertently pressing two pedals at once.

The bottom of your foot switch has two large and three small screws. Using a small Philips screwdriver, adjust the *small* screws clockwise to lower the adjacent pedal. Do a functional test to be sure you haven't lowered the pedal so far that it is always "on."

Installing programming software on your PC: Step 1

Download the programming driver *xkeyswxp.exe* from the Kinesis web site: http://www.kinesis.com/tech_support/downloads.htm. If you need a CDROM, please call or email Kinesis to request one (800-454-6374, sales@kinesis.com). A small postage & handling charge may apply.

Installing programming software on your PC: Step 2

Unplug the foot switch and double click the downloaded driver to run it. Once the appropriate driver has been installed, you can plug the foot switch into your USB port. Find the programming button inside the front opening of the foot switch (see drawing, opposite page), then proceed with the following instructions:

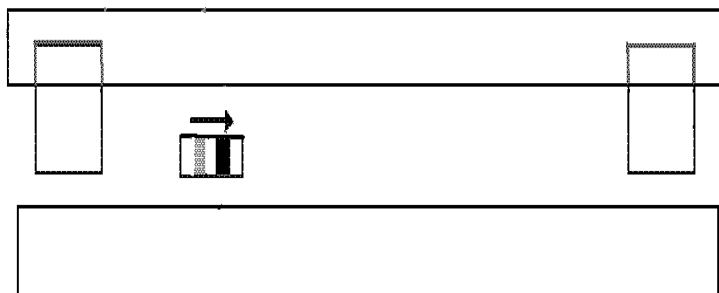
1. Using a non-conductive object like a pencil or plastic ruler, slide the programming switch to the right. A dialog box will appear briefly, followed by the "Add New Hardware Wizard" which is looking for a driver for "X-keys Programming Mode."
2. Click the on-screen "next" button with your mouse. Click "next" and the drivers should be found on your hard drive and installed.
3. Once Windows reports it is done, click "finish."
4. Flip the programming switch to the left to exit from programming mode and reboot your computer. See the next chapter for details on how to customize your footswitch.

CUSTOMIZING YOUR FOOT SWITCH

The Kinesis Programmable Foot Switch has an *internal slide switch* (see drawing below) which is used to activate programming mode. It can be programmed for three different types of actions:

1. Single keyboard key actions,
2. Key combinations or sequences of key actions (“macros”), and
3. Mouse click actions (using one of several approaches described below, depending on your computer’s operating system.

Important programming caution: *Before programming your foot switch, set your Repeat Rate to slow and Repeat Delay to long. Otherwise you may get multiple key actions programmed to a pedal when you only intended a single key action. In Windows, this is typically accomplished in the control panel using the “Keyboard” icon.*



Front view of foot pedal showing internal programming slide switch. Move slide switch to the right to enter programming mode.

General programming procedures

The Foot Switch must be connected to a compatible computer with the Kinesis-provided “programming driver” installed, and a keyboard must also be attached. To re-program your foot switch, perform the following actions:

1. Place the Foot Switch on your desk and enable “Programming Mode” by slightly spreading open the top and bottom until you can see the internal slide switch. With a non-conductive object like a pencil, move the switch to the RIGHT. The green LED inside the unit will begin flashing.
2. Tap the pedal you want to program. This is usually most convenient accomplished using your hand, so you can leave the pedal on your desk and monitor the LED inside. The LED will change to two rapid flashes and a brief pause before repeating.
3. On your keyboard, slowly type the key actions you want to store in the foot switch.

4. When you have finished entering keystrokes for one pedal, tap it again. The green LED will return to steady flashing.
5. If you exceed the maximum number of keystrokes allowed (which is highly unlikely), the red light will come on and the green light will stop flashing. All keystrokes will be lost in the pedal being programmed. Each pedal can hold approximately 750 keystrokes, but the total available for all three pedals is approximately 1200 keystrokes.
6. When you have finished programming, slide the switch to the left. The lights will stop flashing and the green light should be on.

Erasing programming

Any foot switch pedal may be simply re-programmed with new key actions which will replace those previously programmed. However, two other options are available to erase a pedal or the entire device.

Erase a pedal and leave it blank

To erase a pedal and leave it blank, enter programming mode by sliding the switch to the right, press and release the pedal to be erased, then slowly press and release the *Esc* key on the keyboard three times. Tap the pedal again and slide the switch to the left. The green LED should return to non-blinking mode.

To erase the entire foot switch

To erase the entire foot switch memory and leave it blank, enter programming mode by sliding the switch to the right and tap any pedal. On your keyboard, press and release *Esc*, then tap *Backspace*, then slowly tap *Esc* three more times. After the green LED begins flashing steadily again, turn off the programming switch to store the change. *Note: Unlike other programming actions, you don't need to press a pedal again before sliding the programming switch to "Play mode."*

Mouse click choices - what is possible?

There are several ways to perform mouse clicks with the foot switch. Which method you choose depends on your operating system, and on how you use your keyboard (e.g. whether you often use the numeric keypad on your keyboard).

Re-programming "on-board" mouse click emulation using Windows 2000 and Windows XP

If you have changed the factory programming, you can re-program the "on-board" mouse button actions in Windows 2000 and XP, and there are several other mouse-related settings that you can select. In addition to the factory-programmed left button, right button and "Scroll" action, there are "self-scrolling" up and down actions. The latter is similar to a partial *PageDown* or *PageUp* action, moving the screen a few

lines up or down with every press of the pedal.

Mouse click emulation using “mousekeys” in Accessibility Options or Universal Access (Windows and Macintosh OS)

The “mousekeys” utility is provided with all versions of Windows as well as with all Macintosh operating systems. Using mousekeys to perform mouse clicks with your footswitch can be somewhat easier to program but more complicated to use than the “on-board” mouse click actions. One advantage of “mousekeys” is it allows you to program a pedal to perform a double click, which is not possible with the “on-board” mouse click feature.

Confusion can occur because while “mousekeys” converts the numeric keypad to mouse actions, these actions depend on the state of the Numlock key. However, if you never use your numeric keypad and never change the state of Numlock, this option will probably work well for you.

For a pedal to perform a left mouse button action, program it to perform the keypad 5 key from your numeric keypad (the 5 in the number row will not suffice). When you activate “mousekeys” in your control panel, the pedal will perform the normal left mouse button. For more sophisticated applications, see the “mousekeys” documentation provided by your operating system.

Programming “on-board” mouse click actions for Windows 2000/XP

Before attempting to program mouse click actions, first test your foot switch to see if the factory programmed actions are working. Then install the programming driver as described previously before programming one or more of the following actions. Be sure to first turn your repeat rate to its slowest setting and repeat delay to its longest setting. Do not hold down the keys any longer than necessary during the programming steps.

Left mouse button: Esc b 1

Hold *Esc*, tap *b*, then tap *1* in the number row, and finally release *Esc*.

Right mouse button: Esc b 2

Hold *Esc*, tap *b*, then tap *2* in the number row, then release *Esc*.

Middle mouse button: Esc b 3

Hold *Esc*, tap *b*, then tap *3* in the number row, then release *Esc*. In a Windows environment, this action usually scrolls the screen when the mouse is moved.

Note: on some computers, Esc b 4 may be required instead

Self-scroll up: Esc s 1

Hold *Esc*, tap *s*, then tap *1*, then release *Esc*.

Self-scroll down: Esc s -/

Hold *Esc*, tap *s*, then tap *minus*, then tap */*, then release *Esc*.

Advanced programming features

A number of special features can be programmed into the foot switch. However, it is recommended to delay using these features until you have become familiar with the basic operations.

Creating combination modifier keys

The user can hold down multiple modifier keys (e.g. Ctrl, Shift, Alt, Win) with a single pedal while entering alphanumeric keyboard keys with the fingers. For example, if you need to use Shift+Alt in combination with another key, program Shift-Alt into the pedal and you now have turned a 3-key combination into a simpler 2-key one.

1. While in programming mode, tap the desired foot switch pedal.
2. Press and hold the first modifier key, press the second modifier key, then release both keys.
3. Tap the pedal again.
4. Exit from programming mode by sliding the programming switch to the left.

Repeating Keys: Esc Lshift, followed by the desired key action(s)

The normal mode of the programmable foot switch causes a single stored key action to repeat if the pedal is held down. A stored macro (multiple key actions) does not repeat if the pedal is held down. To cause a macro to repeat, proceed as follows when programming the macro:

1. While in programming mode, tap the desired foot switch pedal.
2. Press and hold “Esc,” then press and release the left “Shift,” then release “Esc.”
3. Now type the keys you want stored in the pedal.
4. Tap the pedal again.
5. Exit from programming mode by sliding the programming switch to the left.

Different key actions for the down and up strokes: Esc Lctrl between down & up

It is possible to make the foot pedal transmit one set of key commands on the down stroke and different set on the up stroke of the pedal. Use this feature cautiously so as not to lock up your computer or cause a “stuck key.” Program the device as normal except that a special key sequence, “Esc (LCtrl)” is used as the separator between the down commands and the up commands.

1. While in programming mode, tap the desired foot switch pedal.
2. On the main keyboard, type the key or keys to be sent on the downstroke.
3. Press and hold *Esc*, then press and releasthe *L Ctrl* key, then release the *Esc*.
4. Type the key or keys to be sent on the up stroke.
5. Tap the pedal being programmed again and exit from programming mode by sliding the programming switch to the left.

Slow output: Esc 3 (normal output is Esc 4)

The foot switch can be configured to dramatically slow the rate at which programmed key actions are sent to the computer. This option affects all pedals (it cannot be set to affect only one pedal). This change can be made either before or after the foot switch is programmed, except that the pedal which is pressed during this programming step will lose any stored key actions unless re-programmed again. To activate “***Slow Output***,” turn on programming mode and tap any pedal (this pedal will need to be re-programmed once you have activated slow output):

Hold *Esc*, tap 3, then release the *Esc*.

Inserting “delays” between keystrokes: Esc 5

The foot switch can be programmed with 0.5 second delays. When programming, one 0.5 second delay is inserted for each “Esc 5 Esc” sequence you add:

Holding *Esc*, tap 5, then release *Esc*.

Setting “Capslock remembered during playback:” Esc 8 (turn off with Esc 7)

Use this feature if you want a macro to always play back in the same (upper or lower) case even if the Capslock is sometimes on and sometimes off.

To activate this feature, turn on programming mode and tap an unused pedal (if no pedal is unused, you will have to re-program the selected pedal once you have finished activating this feature):

Holding *Esc*, tap 8, then release *Esc*.

TROUBLE SHOOTING AND TECHNICAL SUPPORT

Programming errors

If programming errors are detected by the foot switch, the LEDs inside the device will blink rapidly or both red and green lights may be on at the same time. To reset and continue programming, try turning the Programming switch off and back on.

Errors could occur for the following reasons:

1. The computer is not operating in a mode to accept the key codes (for example, it may be rebooting)
2. Too many key codes were entered. The maximum is approximately 750 per pedal.
3. There may be an intermittent cable connection. Check all cables for proper connection.
4. Problems with “half-key” actions: Unusual key codes can be programmed into the Kinesis Programmable Foot Switch if the foot switch pedal is released before a keyboard key is completely pressed and released. This can occur because the foot switch can memorize a “half key” action (e.g. down only).

“Half keys” can cause “stuck key” behavior, which is especially confusing if the stuck key is Shift, Ctrl, Alt, or one of the special Windows 95/98 keys. If this mode occurs unintentionally, the stuck key can be released by pressing and releasing the stuck keyboard key. Then repeat the programming process, ensuring that keyboard keys are completely released before releasing the pedal of the foot switch.

Contacting Kinesis 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). Kinesis toll-free sales number is not available for technical support calls. Technical support hours are 8:30am to 4:30pm Pacific time.

When you contact Kinesis, be prepared to document your purchase date, as well as your product model number 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. Unauthorized or inexpertly carried-out repairs may seriously jeopardize the safety of the user (such as

from fire danger) and may invalidate your warranty.

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 get 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, use its original or other packaging that protects it against impact and shock. Be sure to contact Kinesis for an RMA number and Kinesis' shipping address. You should insure the package since Kinesis is not responsible for items until they are received by the Kinesis repair center.

ONE-YEAR LIMITED HARDWARE WARRANTY

Kinesis Corporation (“Kinesis”) warrants to the original retail purchaser that this Kinesis accessory (“Product”) is free from defects in materials and workmanship and will perform substantially in accordance with the Product documentation for one year 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 License Agreement. If Product fails due to accident, abuse, inappropriate use, or unauthorized repair, Kinesis shall have no responsibility under this one-year Warranty.

Purchaser’s Exclusive Remedies

During the first (1) year 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, programming, 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.

