



Intellikeys™

The Smart Keyboard



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Owner's Guide Version 1.0



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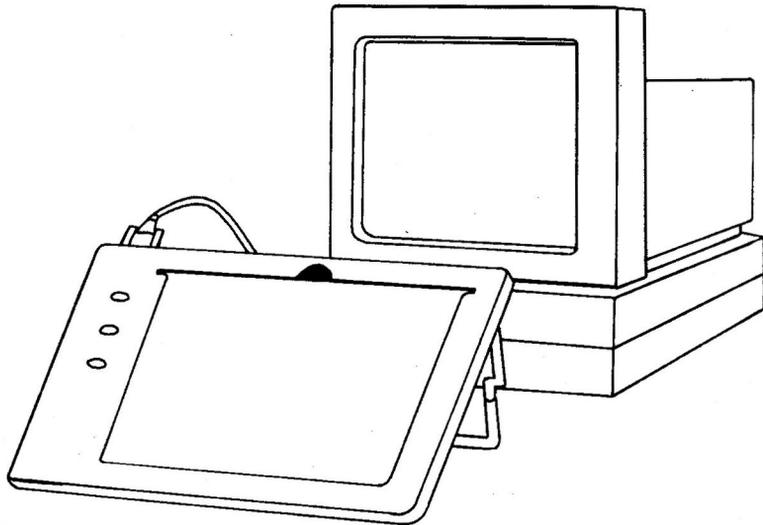
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I. Introduction: Getting to Know IntelliKeys

Congratulations on choosing IntelliKeys™, the keyboard that makes computing fun and accessible. Simply slide any of the six colorful overlays into IntelliKeys and type on a keyboard that matches your personal needs.

IntelliKeys plugs directly into the keyboard port of your personal computer and is very easy to use. Slide in the Alphabet Overlay and a child can use IntelliKeys for early reading activities. Slide in the Numbers Overlay and IntelliKeys becomes the ideal school mathematics keyboard. Try the Arrows Overlay to run scores of popular educational and entertainment programs. The Basic Writing Overlay is excellent for the student who is progressing into word processing. The QWERTY Overlays (with standard keyboard layouts) are ideal for the user who wants complete keyboard access.

Additionally, the Setup Overlay gives instant access to many advanced features that meet the visual, cognitive and physical needs of people with disabilities. The *Access Features Guide*, included with IntelliKeys, provides detailed descriptions of these features.



II. How to Use Your IntelliKeys Keyboard

Compatibility

IBM®. IntelliKeys works with:

IBM AT or compatible

IBM XT or compatible

IBM PS/2, PS/1 or compatible

Apple II®/Macintosh®. IntelliKeys works with:

Macintosh (except Mac Plus, Mac 512 and Mac 128)

Apple IIGS

Apple IIe (Requires IntelliKeys IIe Card)

The same IntelliKeys works on all of the above computers! That means if you want to use it with more than one of these computers, you simply need to use the appropriate cable for each model.

Note on IBM compatibles: IntelliKeys only works with computers that have a standard keyboard port. Some laptop and notebook computers do not have a keyboard port. IntelliKeys can not plug directly into these computers. In order to operate IntelliKeys with such a computer, you will need to use a serial keyboard adaptor. For more information, consult the *Laptop Compatibility* section in the *Access Features Guide*.

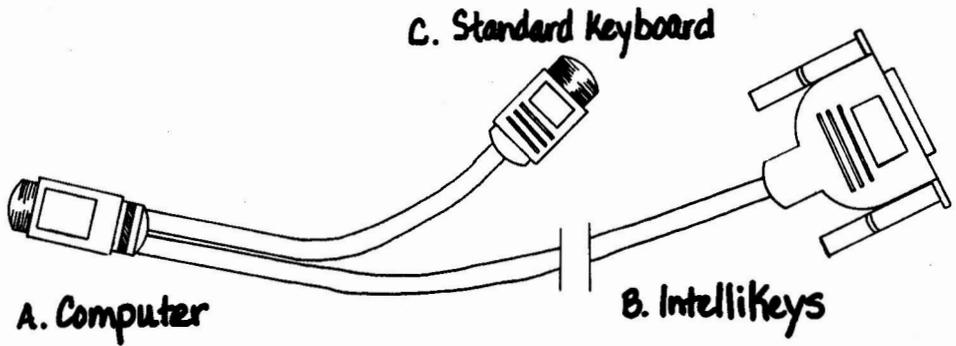
Installation

Cables. Check the label on your IntelliKeys cable to make sure that the cable matches your computer. Your IntelliKeys cable will have one of the following labels:

Cable	Computer
IIGS/Mac	Apple IIGS and Macintosh computers
AT	IBM AT and compatible computers
XT	IBM XT and compatible computers
PS/2	IBM PS/2 and PS/1 computers
Iie	Apple Iie computers (this cable comes with the IntelliKeys Apple Iie Card)

If you do not have the proper cable for your computer, contact your dealer or Unicorn Engineering, Inc. If you are not sure whether you own an AT or XT check you computer owner's manual or contact the dealer from which you purchased your computer. Select the proper cable for your computer and follow these steps to connect IntelliKeys:

1. Turn off your computer.
2. Note the location where your computer keyboard (referred to as the standard keyboard) is plugged into your computer. This is called the keyboard port.
3. Unplug your standard keyboard from the keyboard port.
4. Locate connector A on the IntelliKeys cable (as shown in the drawing below) and plug it into the keyboard port on your computer. Only one of the three IntelliKeys cable connectors will fit in that location.



5. Plug connector B into IntelliKeys.

6. Finally, plug your standard keyboard into connector C. Now, both IntelliKeys and your standard keyboard are plugged into your computer.

7. You may now turn on your computer. You are done installing IntelliKeys.

III. General Use of IntelliKeys

Installing Overlays

To use IntelliKeys, slide an overlay into place. IntelliKeys will beep to show that the overlay is in effect.

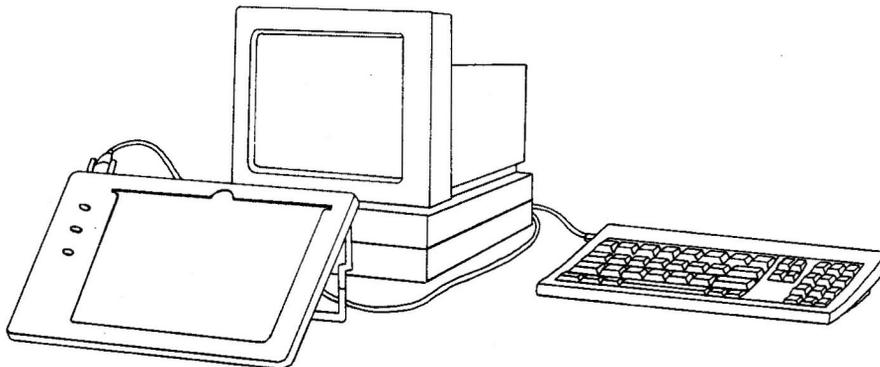
To change the overlay, use the thumbhole at the top center of IntelliKeys to grab hold of and remove the current overlay. You may find that the overlays slide out easier if you lift in the center and give them a slight arch before removing. Then slide another overlay in place. Wait for just a moment, listen for the beep and the new overlay is in effect.

Bar Codes on the Overlays

Each of the seven overlays that comes with IntelliKeys has a simple bar code on the back. IntelliKeys senses the bar code within moments after you slide the overlay in place. Once the bar code is recognized, IntelliKeys will properly adjust to the overlay.

Note: Do not slide in more than one overlay at a time. If you do so, the bar code on the bottom overlay will be recognized, but you will be viewing the top overlay! The top overlay will not appear to work.

IntelliKeys and the Standard Keyboard



You can use IntelliKeys and your standard keyboard at the same time. Go ahead, try it! You may type either on IntelliKeys or on your standard keyboard.

RETURN/ENTER and DELETE/BACKSPACE

The four Elementary Overlays work on both IBM and Apple keyboards. Almost every key has the same name on each computer, but there are two exceptions. 1) The RETURN key on the Elementary Overlays is the RETURN key on Apple computers and the ENTER key on IBM computers. 2) The BACKSPACE key on the Elementary Overlays is the BACKSPACE key on IBM computers and the DELETE key on Apple computers.

Both of these keys have identical functions on the two computers, but have different names. IntelliKeys uses names designed to convey the greatest meaning and to cause the least confusion to users of each system.

Sequential Operation of SHIFT, CONTROL, Etc.

When you use IntelliKeys, you never need to press two keys at the same time. This means that to type a capital letter, you press the SHIFT key, release that key and then press the letter. To type CONTROL-C, you press the CONTROL key, release the CONTROL key and then press the C key.

Do not try to hold down two keys at once when typing with IntelliKeys. IntelliKeys is designed to allow only one key press at a time. If you press two keys concurrently, only one will be typed and you will not get the desired result.

IntelliKeys *latches* the SHIFT and CONTROL keys until you have pressed a subsequent key. Press SHIFT, and the SHIFT key *latches* "down" while you press a letter. As a result, you will get a capital letter. Then, the SHIFT key automatically releases and the next letter you type will not be capitalized. When you type CONTROL followed by the letter C, you will get the CONTROL-C function and then the CONTROL key will automatically release.

The CONTROL and SHIFT keys are called modifiers. A modifier key does not type a character. Instead, it changes or modifies the next character typed. Some programs use modifier keys to print a document (OPEN-APPLE/P might be a printing command). Other programs use a modifier to open a file (ALT-F followed by the letter O might accomplish this purpose). All modifiers on IntelliKeys operate in a sequential manner. First you press the modifier key, then you press the next key in the sequence. Here is a complete listing of the latching modifiers on IntelliKeys:

Apple Modifiers	IBM Modifiers
Shift	Shift
Control	Control
Open-Apple/Command	Alt
Closed-Apple/Option	

When you press two modifiers in a row, they will both stay *latched* until you press a key that is not a modifier. This allows you to type sequences like OPEN-APPLE/CONTROL/RESET and CONTROL/ALT/DELETE.

Indicator Lights

There are three lights located on the left side of IntelliKeys. These give visual indication of the state of certain IntelliKeys features.

The top light indicates if the SHIFT key is *latched*. This is especially important since the IntelliKeys SHIFT keys operate in a sequential manner, as discussed above.

The second light indicates whether or not CAPS LOCK is on, in the same manner as the CAPS LOCK light on most standard keyboards.

The third light indicates different functions for IBM and Apple computers. On IBM computers, it indicates the NUM LOCK. This can be especially important on XT and old AT computers because the NUM LOCK can affect whether or not the arrows work. If the NUM LOCK light is illuminated, the arrows may not function properly on your IBM computer. (There are shareware utilities that will automatically turn the NUM LOCK off every time your computer boots.)

On Apple computers, the third light indicates that IntelliKeys is functioning as a mouse. This important feature is discussed in Chapter V of this manual.

More than One IntelliKeys

You can use more than one IntelliKeys at the same time. Simply plug a second IntelliKeys cable into the first IntelliKeys cable. You make a daisy chain of IntelliKeys. Try plugging in a third IntelliKeys! IntelliKeys has been tested with a total of five units plugged in at the same time on both a Macintosh LC and an IBM PS/2.

Each IntelliKeys keyboard can be used with a different overlay. When using a word processor in a school setting, one student can use the Alphabet Overlay to enter text in a document. A second student can use the Arrows Overlay to move the cursor, format text and place pictures in the document.

IntelliKeys Has Built-In Memory

IntelliKeys has 32k of built-in, battery supported memory. With this memory, IntelliKeys will retain any settings that you make with the Setup Overlay while your computer is turned off. These settings are described throughout this *Owner's Guide* and the *Access Features Guide*.

If you use the Setup Overlay to turn *mouse arrows* on or adjust any of the access features, IntelliKeys will remember your settings. If you set up IntelliKeys to your liking at an Apple II computer at school and then bring IntelliKeys home to your IBM, your settings will still be in effect.

No Memory Space Required

IntelliKeys occupies no memory in your computer and should not interfere with the operation of any software program. Do not confuse this with the discussion of memory in the previous paragraphs. Yes, it is true that IntelliKeys has built-in memory to retain your settings. And, yes, it is also true that IntelliKeys does not use any of your computer's memory.

IV. Using the Overlays

Four Types of Overlays

IntelliKeys comes with seven overlays and a clear plastic sheet. It can also be used with overlays that you make yourself and overlays that come from software publishers. It is helpful to describe the overlays as forming four distinct groups.

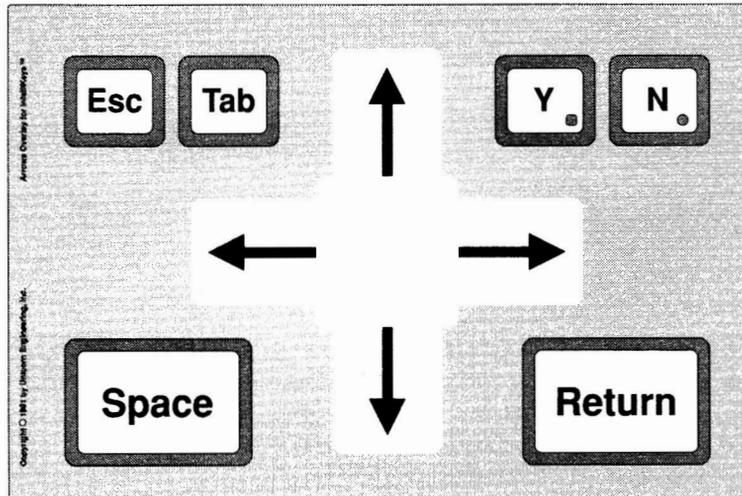
First, there are the four, colorful *Elementary Overlays*: the Arrows Overlay, the Alphabet Overlay, the Numbers Overlay and the Basic Writing Overlay.

There are two *QWERTY Overlays*, one for Apple and one for IBM. The layout on each of these overlays is very similar to the layout on a standard keyboard.

There is also one *Setup Overlay*. The Setup Overlay is designed to adjust keyboard features. You do not actually type with the Setup Overlay.

Finally, there are *Custom Overlays*. Any overlay that you slide into IntelliKeys that is not one of the seven overlays included with IntelliKeys is a Custom Overlay. This can either be an overlay provided by a software company to work specifically with their software or it can be an overlay that you make yourself.

Arrows Overlay



Use the Arrows Overlay for the many games and educational programs that require only ARROW KEYS, SPACEBAR, RETURN, ESCAPE, TAB, Y and N. These include:

Carmen Sandiego™ series from Broderbund Software (Apple II, IBM, Macintosh)

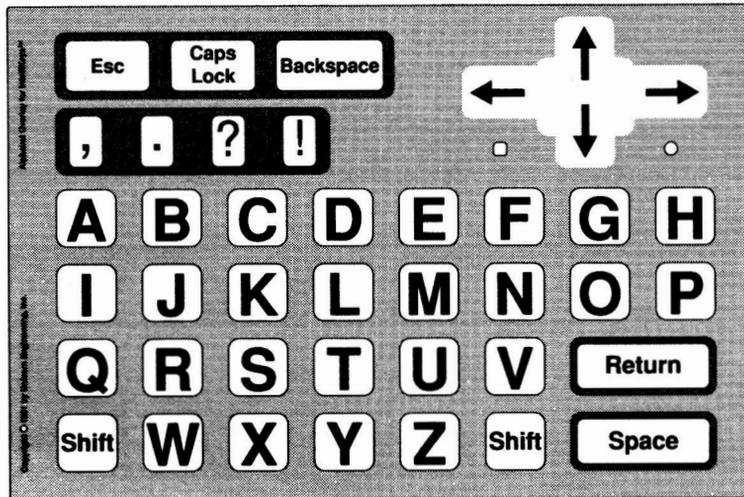
Word Muncher™ series and other early learning software from MECC (Apple II, IBM, Macintosh)

McGee™ series from Broderbund Software (Apple IIGS, Macintosh)

Super Solvers Midnight Rescue™ from The Learning Company (IBM, Macintosh)

The Playroom™ and *TreeHouse™* from Broderbund (Apple II, IBM, Macintosh)

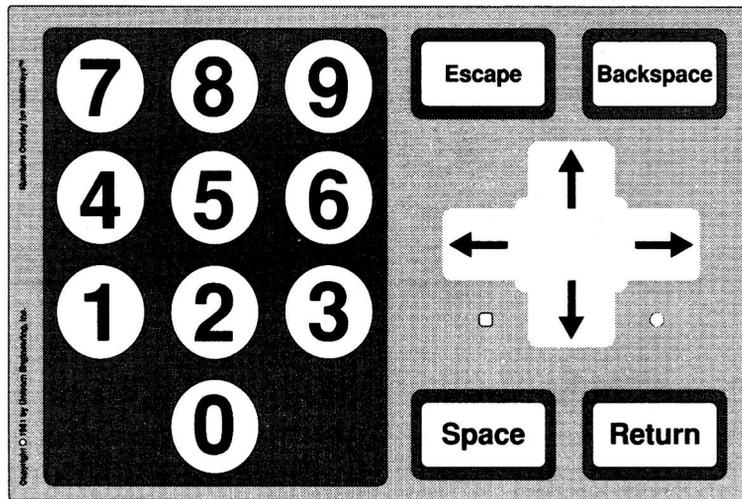
Alphabet Overlay



Use the Alphabet Overlay for programs that respond to basic alphabetical commands, like:

- Charlie Brown's ABCs™* from Queue (Apple II, IBM)
- I Love You in the Sky, Butterfly™* from Hartley (Apple II, IBM)
- Keytalk™* from Peal Software (Apple II, IBM)
- Stepping Stones I™* from CompuTeach (Apple II, IBM, Macintosh)
- Stickybear Alphabet™* from Optimum Resource (Apple IIGS, IBM)
- The Berenstain Bears Learn About Letters™* from Britannica Software (IBM)

Numbers Overlay



Use the Numbers Overlay for programs that use the number keys along with RETURN, SPACEBAR, ARROWS, ESCAPE and BACKSPACE, like:

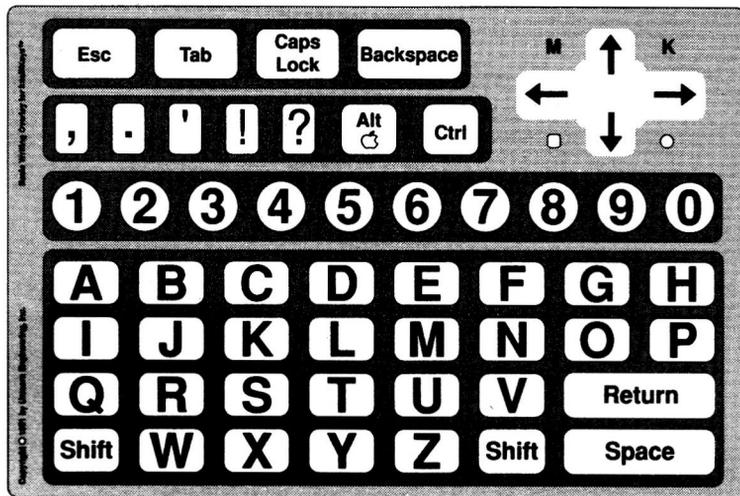
Charlie Brown's 1,2,3's™ from Queue (Apple II)

Kid's Math™ from Great Wave Software (Macintosh)

Stickybear Numbers™ from Optimum Resource (Apple II, IBM)

Super Solvers Outnumbered™ from The Learning Company (IBM, Macintosh)

Basic Writing Overlay



Use the Basic Writing Overlay for most programs. It contains many commonly used computer keys. It is specially designed to facilitate word processing for young people. Sample programs include:

AppleWorks™ from Claris (Apple II)

Bank Street Writer™ (Apple II, IBM)

Basic Learning Skills™ from Jostens Learning Corporation
(Apple IIGS, Macintosh)

Children's Writing and Publishing Center™ from The Learning
Company (Apple II)

Magic Slate™ from Sunburst (Apple II)

Monsters and Make Believe™ from Queue (Apple II, IBM,
Macintosh)

The Alt/Command Key. One key is labelled as both an OPEN-APPLE key and an ALT key. When used with a Macintosh or Apple II computer, this key responds as a COMMAND or OPEN-APPLE key. When used with an IBM or compatible computer, this key responds as an ALT key.

M and K. The small M and K keys located above the arrows are for switching between mouse and keyboard mode on an Apple IIGS or Macintosh. *Mouse arrows* must be turned on in order for these keys to take effect. See Chapter V for more details.

QWERTY Overlay - IBM

The term QWERTY refers to the standard keyboard layout since the top row of letters on the standard keyboard begins with the letters Q-W-E-R-T-Y.



The QWERTY Overlay can be used to run any program. It is based on a standard typewriter keyboard and contains virtually all of the keys that you will find on an IBM 101-key keyboard. It is specifically designed for comprehensive adult programs like word processors, spreadsheets and databases. Here are some sample programs:

DBase™ from Borland (IBM)

Lotus 1-2-3™ from Lotus (IBM)

Word™ from Microsoft (IBM)

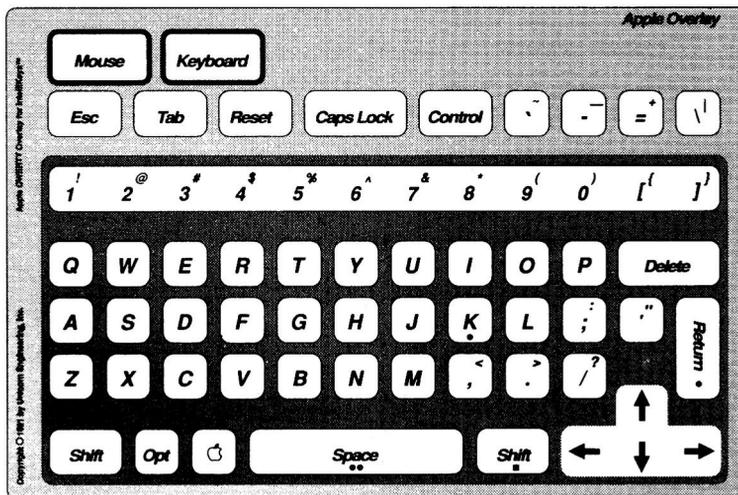
WordPerfect™ from the Word Perfect Corp. (IBM)

Num Pad. If a program requires using the numeric keypad, the Num Pad key puts IntelliKeys into a mode where the numbers are actually the numbers on the numeric keypad. The PERIOD, HYPHEN (minus), EQUAL SIGN and ENTER keys are also changed into their numeric keypad equivalents. Finally, the BACK APOSTROPHE is changed into the NUMERIC PLUS and the SCROLL LOCK is changed into the NUMERIC ASTERISK.

Access Mouse/Keyboard. These keys let you switch into a *mouse mode* and then back into the *keyboard mode*. These keys require the use of a T-TAM or AccessDOS and are only accessible if *mouse arrows* is turned on. See the *Access Features Guide* for details.

QWERTY Overlay - Apple II/Macintosh

The term QWERTY refers to the standard keyboard layout since the top row of letters on the standard keyboard begins with the letters Q-W-E-R-T-Y.



The QWERTY Overlay can be used to run any program. It is based on a standard typewriter keyboard and contains virtually all of the keys that you will find on an Apple keyboard. It is specifically designed for comprehensive adult programs like word processors, spreadsheets and databases. Here are some sample programs:

AppleWorks™ from Claris (Apple II)

Excel™ from Microsoft (Macintosh)

MacWrite™ from Claris (Macintosh)

Word™ from Microsoft (Macintosh)

Works™ from Microsoft (Macintosh)

Mouse/Keyboard. These keys let you switch into *mouse mode*, where you can control the mouse, and then switch back into the *keyboard mode*. See Chapter V for details.

Setup Overlay

The Setup Overlay is discussed in Chapter VII.

Custom Overlays

Any overlay that you slide into IntelliKeys that is not one of the seven overlays included with IntelliKeys is a Custom Overlay. This can either be an overlay provided by a software company to work specifically with their software or it can be an overlay that you make yourself.

In the fall of 1992, the customization software for IntelliKeys will become available. You will be able to use that software to create your own overlays and reprogram IntelliKeys to respond to your overlay. This process will be easy and will not require any special computer knowledge.

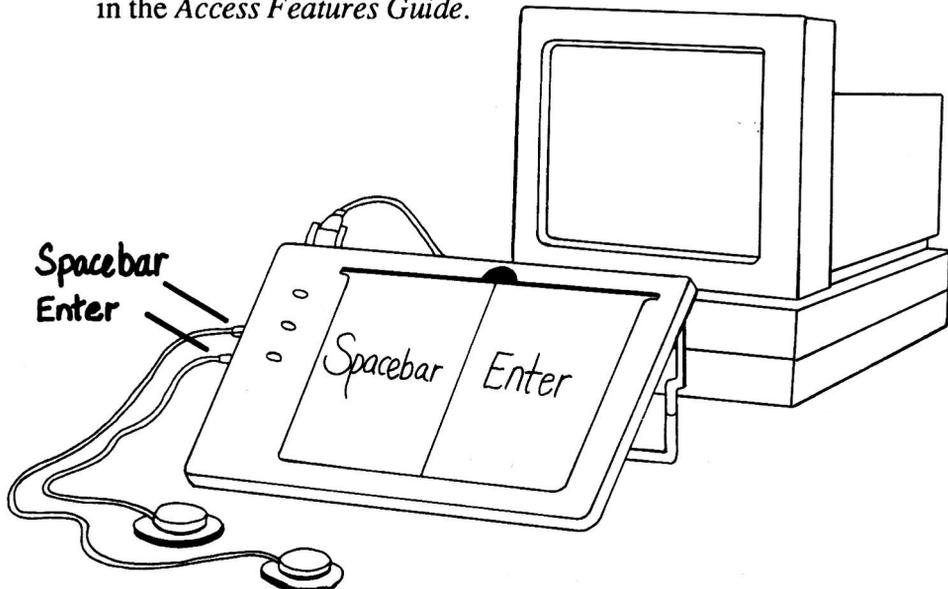
Beginning in the summer of 1992, software publishers will distribute custom overlays that work with their software programs. The software programs will contain information on the software disk that automatically redefines IntelliKeys to work with the custom overlay.

Using IntelliKeys as Two Big Keys

If you use IntelliKeys without any overlay in place, the IntelliKeys keyboard will behave as a two-key keyboard. This can be beneficial to people who use switch-operated software. One key occupies the entire left side of IntelliKeys while the other fills the entire right side. The two halves are defined below:

	Left Half	Right Half
Apple	OPEN-APPLE (COMMAND)	CLOSED-APPLE (OPTION)
IBM	SPACEBAR	ENTER

You can redefine these two halves by using the *Custom Overlay Level* feature in the Setup Overlay. Refer to the chapter on *Switches* in the *Access Features Guide*.



If you slide in a homemade overlay with no bar code on the back, you can use IntelliKeys in this two-key manner. Use a legal size

piece of paper. Trim the length from 14 inches to 13 inches. Use marking pens to design two distinct halves, right and left. The left half will be SWITCH #1, the right half will be SWITCH #2. Slide the overlay into place. Then, slide the clear plastic sheet on top of your homemade overlay.

The Clear Plastic Sheet

Included with your overlays is a clear sheet of plastic the size of an overlay. This is for use with custom overlays printed on paper. When you slide a paper overlay in place, you can slip the clear plastic sheet on top for extra protection and durability.

V. Using IntelliKeys as an Apple® Mouse

When you use IntelliKeys with Macintosh or Apple IIGS computers, it can operate as a mouse. This means that IntelliKeys can serve both as the keyboard and as the mouse. Initially when IntelliKeys overlays are in place, IntelliKeys will behave only as a keyboard and not as a mouse. To initiate the mouse functions, you need to turn on the IntelliKeys mouse.

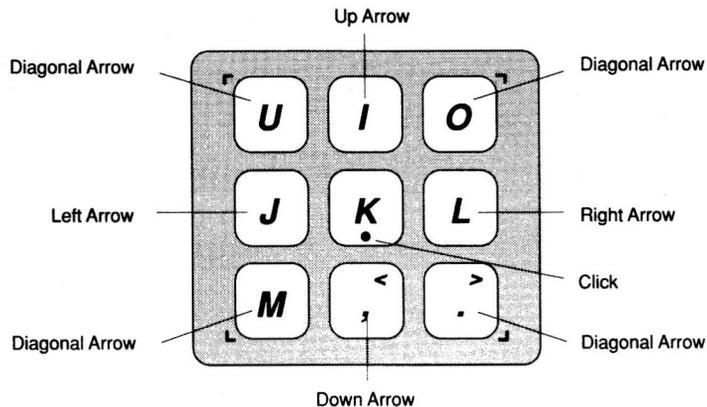
Using the Mouse on the Apple QWERTY Overlay

Turning the Mouse On. The Apple QWERTY Overlay has two keys in the upper left-hand corner. One reads MOUSE and the other reads KEYBOARD. Press the MOUSE key to initiate mouse functions.

Using the Mouse. When the mouse is on, the ARROW keys will become MOUSE ARROWS. Use the four ARROW keys to move the mouse pointer in four directions. The RETURN key becomes a mouse button CLICK. The right-hand SHIFT key becomes a LOCKING CLICK (or drag) key. The SPACE BAR becomes a DOUBLE CLICK. Note the icons located on each of these three keys.

●	=	CLICK
● ●	=	DOUBLE CLICK
●	=	LOCKING CLICK

There is also an eight-direction mouse pad located on your Apple QWERTY Overlay. This mouse pad centers on the letter K (which is also a CLICK).



Adjusting the Mouse Speed. At any time while the mouse is on, you can set the mouse speed with the NUMBER keys, the two BRACKET keys and three punctuation keys (-, = and \). These 15 keys take the mouse speed from a range of 1 to 15, with the numeral 1 being the slowest speed and the BACK SLASH being the fastest speed (15).

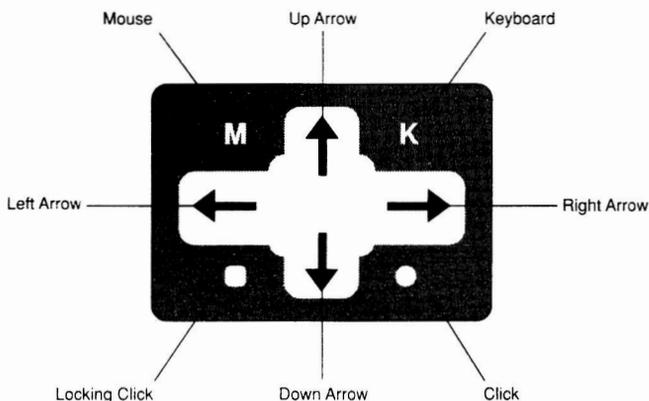
Turning the Mouse Off. To return your IntelliKeys to standard keyboard operation, you simply press the KEYBOARD key. You can swap between mouse and keyboard as often as you like.

Using the Mouse on the Four Elementary Overlays

Turning the Mouse On. On the Setup Overlay you will find the MOUSE ARROWS key. Simply slide in the Setup Overlay and press MOUSE ARROWS ON to activate the mouse capabilities in the Arrows Overlay, Alphabet Overlay, Numbers Overlay and Basic Writing Overlay. Remove the Setup Overlay and replace it with one of the four Elementary Overlays.

Using the Mouse. Notice that each of these four overlays contains the icons for both clicking the mouse button and holding down (dragging) the mouse button with a locking click. Since *mouse arrows* is on, the ARROW keys on all four of these overlays will serve to move the mouse in four directions. These same arrows will not function as standard arrow keys when *mouse arrows* is on.

With *mouse arrows* on, the CLICK and LOCKING CLICK keys will function while the other keys (except the arrows) on each overlay will behave in their standard manner. Therefore, when you use *mouse arrows*, you can use IntelliKeys as a mouse and a keyboard at the same time. (When *mouse on* is not in effect the CLICK and LOCKING CLICK keys have no function.)



The Basic Writing Overlay adds another feature to this *mouse arrows* capability. Notice the small M (mouse) and K (keyboard) keys above the arrow keys. Press the K key and you can use the arrow keys as standard arrows. Press the M key and you return the arrows to their mouse function. This works only if *mouse arrows* is on.

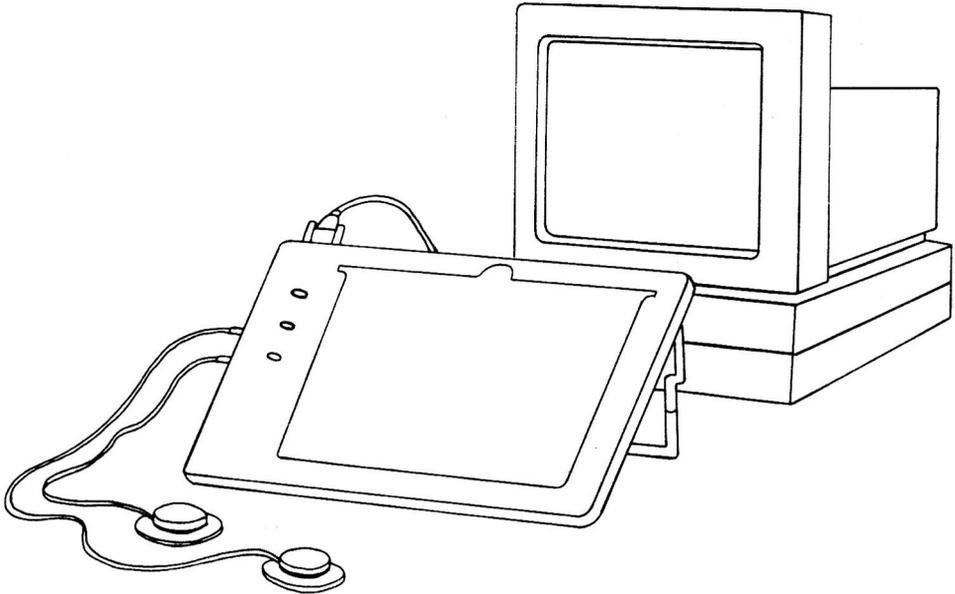
Adjusting the Speed of the Mouse. Insert the Setup Overlay and press the MOUSE SPEED key, then press a numeral from 1 to 15 on the Number Pad. 1 is the slowest mouse speed. 15 is the highest mouse speed. Use the test pad to try the new speed before returning to the overlay of your choice.

Turning the Mouse Off. To turn off the mouse function of the four Elementary Overlays, simply slide in the Setup Overlay and choose **MOUSE ARROWS OFF**.

Turning the Computer Off. IntelliKeys will remember the setting of *mouse arrows* even when your computer is turned off. Therefore, if you wish to make regular use of the IntelliKeys mouse functions, leave the *mouse arrows* on and they will be on each time you use IntelliKeys.

VI. Using the Two Switch Jacks

IntelliKeys includes two switch jacks for people with disabilities who use switches to operate computer software. These switch jacks are located on the left side of the keyboard. They are labelled *Switch 1* and *Switch 2*, respectively.



Using Switches with the Four Elementary Overlays

When you use switches with the four Elementary Overlays, the switches have different definitions depending upon the computer you use. If you are using an Apple II or Macintosh computers, the switch settings correspond to the following keys:

SWITCH 1 = OPEN-APPLE (COMMAND)
SWITCH 2 = CLOSED-APPLE (OPTION)

If you are using an IBM or compatible, the switch settings correspond to the following keys:

SWITCH 1 = SPACEBAR
SWITCH 2 = ENTER

These switch settings will allow you to run the majority of software designed for use with one or two switches.

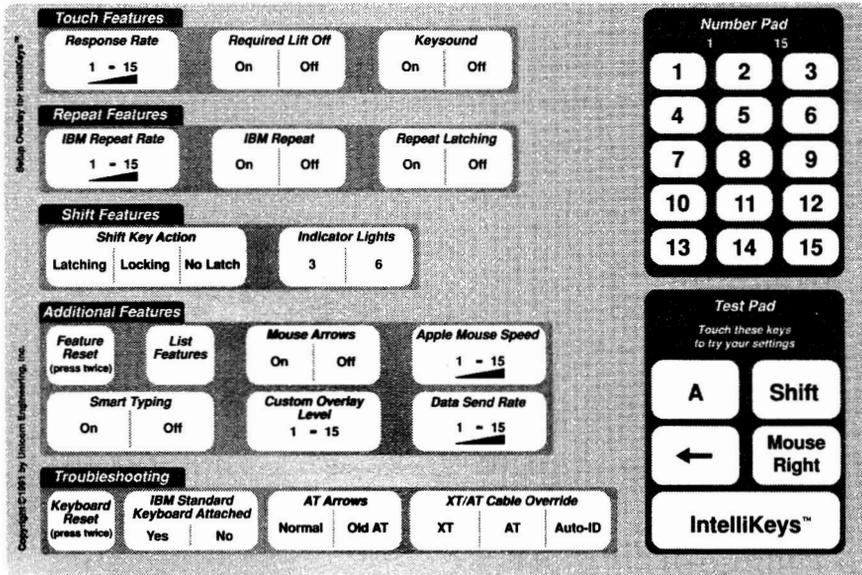
Using Switches with the QWERTY Overlays

When using either of the QWERTY overlays, SWITCH 1 is the same as discussed above (OPEN APPLE or SPACEBAR), but SWITCH 2 is a special REPEAT KEY. This can be valuable for the disabled user who does not typically use switches. See the *Access Features Guide* for details on the REPEAT KEY.

Using Different Switch Settings

There are actually 11 different settings for each of the switches. Only the default settings are described above. You can also choose from 10 other options by using the CUSTOM OVERLAY LEVEL key on the Setup Overlay. This process is fully described in the *Access Features Guide* in the section called *Switches*.

VII. The Setup Overlay



The Concept of the Setup Overlay

With the Setup Overlay, you can customize the way that IntelliKeys responds to your keypresses. You can:

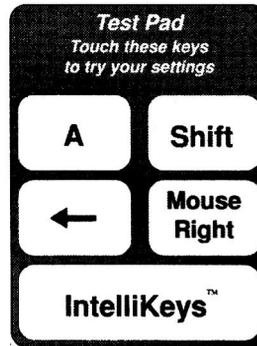
- change the *response rate*
- turn *repeat* on or off
- adjust the *repeat rate*
- change the speed of the Apple mouse

These features can be useful to any typist and may be especially useful for young children. For people with disabilities, these features are often essential.

Adjusting a Feature Setting. To make an adjustment using the Setup Overlay, begin by sliding the Setup Overlay into place.

Touch the key to turn on the feature you wish to set. Several features, like *response rate* and *IBM repeat rate*, also require a value from 1 to 15. For instance, to set the *response rate* to 10, press the key labelled RESPONSE RATE followed by the key labelled 10.

Using the Test Pad. When using the Setup Overlay, you can check the effect of your selections using the Test Pad. This Test Pad has a carefully selected set of keys to allow you to see the results of your choices before you swap back to one of the other overlays.



Using Your Settings. After you are done adjusting the feature settings, remove the Setup Overlay and replace it with the overlay you wish to use. Your settings will remain in effect and will be retained even after you turn off your computer.

To Remove all Changes in Feature Settings. If you wish to return all features to their default settings, press the FEATURE RESET key on the Setup Overlay twice in succession.

Features for Everyone to Try

Response Rate. Use the *response rate* feature to adjust the time required to activate a key. If your child tends to bump against unwanted keys on the way to selecting the key she wants, you can try changing the *response rate*. Then the unwanted keys will not trigger. When she gets to her desired key, she will need to hold it down a little longer.

To change the *response rate*, slide in the Setup Overlay and press the RESPONSE RATE key. Then press a numeral on the Number Pad. 1 will give you a very slow response rate (a very long delay). 15 will produce a rapid response rate with no delay at all. Experiment with 10.

IBM Repeat and IBM Repeat Rate. If the person using IntelliKeys on an IBM computer finds that the keyboard is repeating too fast, it may help to turn *repeat* off or to adjust the *repeat rate*. Slide in the Setup Overlay and you can turn repeat off by pressing IBM REPEAT-OFF. You can also adjust the rate at which your keys repeat. The *repeat rate* is on a scale of 1 to 15. 1 gives you very slow repeats. 15 gives you very fast repeats. Experiment with 10.

Apple Repeat and Repeat Rate. The repeat features discussed above work on IBM and compatible computers only. Apple II and Macintosh users must make their adjustments using the Apple Control Panel. For details, see the *Access Features Guide*.

Apple Mouse Speed. You can use the Setup Overlay to adjust the speed of the IntelliKeys Apple Mouse on the four Elementary Overlays. Press the MOUSE SPEED key and choose a setting from 1 to 15. 1 will cause the mouse to move slowly. 15 will cause the mouse to move quickly.

Troubleshooting with the Setup Overlay

The Setup Overlay is designed with a troubleshooting section to help you solve possible challenges quickly and easily.

Keyboard Reset. If you wish to return the features to their default settings, press this key twice in a row. This will reset the *response rate*, *repeat delay* and all other features.

XT/AT Cable Override. Use this option if you have an XT cable and an AT computer or vice versa. This option is especially useful if you do not know whether you have an XT or AT computer.

IBM Standard Keyboard Attached. If you choose to use IntelliKeys with an IBM computer without another keyboard plugged in at the same time, change this setting to NO.

AT Arrows. If your AT-compatible computer works except for the ARROWS (and PAGE UP/DOWN, HOME/END and INS/DEL), press the OLD AT ARROWS key on the Setup Overlay. Your computer is designed to work with arrows that are part of the AT numeric keypad. By switching to the IntelliKeys *old AT arrows*, you will be redefining the IntelliKeys arrows to become numeric keypad arrows. As long as Num Lock is not on, your arrows should work well. Be aware that when Num Lock is turned on, these arrows will no longer function as arrows. Instead, they will become number keys.

Special Access Features for People with Disabilities

This *Owner's Guide* describes the features most valuable to people without disabilities. IntelliKeys has many additional features designed specifically to benefit people with disabilities. All IntelliKeys features, along with discussions on how they benefit people with disabilities, are described in detail in the *Access Features Guide*.

VIII. Troubleshooting

General		
1	IntelliKeys does not respond at all.	<p>1. Make certain that IntelliKeys is properly installed. Refer to installation instructions in Chapter II.</p> <p>2. Perhaps you have a long <i>response rate</i> setting. Insert the Setup Overlay and press the KEYBOARD RESET key twice in succession. This will reset your keyboard. Reinsert the overlay that you've been working with and try again.</p> <p>3. Turn off your computer, wait 15 seconds and turn it back on again.</p>
2	IBM only — IntelliKeys does not work when the standard keyboard is not plugged in.	Using the Setup Overlay, press the IBM STANDARD KEYBOARD ATTACHED — NO key.
3	IBM only — IntelliKeys does not work with an XT or AT compatible computer. It sends strange characters or it sends none at all.	You may be using the wrong cable. Determine which type of computer you have — an XT or an AT. Using the Setup Overlay, choose either XT or AT from the <i>XT/AT override</i> option. Or, simply experiment with the <i>XT/AT override</i> and see if one of these settings works for you.

4	The wrong keys appear when you type with IntelliKeys.	You may have two overlays in place at the same time. The bar code on the bottom overlay will be recognized, but you will be viewing the top overlay. The top overlay will not appear to work.
5	The keyboard surface of IntelliKeys appears wavy or buckled. This may occur after being exposed to excessive heat or cold.	Allow IntelliKeys to return to room temperature. If problem persists, loosen the screws on the rear of the keyboard one-half turn each. Using the palm of your hand, flatten out the keypad. Then, re-tighten each screw.
Trouble with Arrow Keys or Mouse Keys		
6	Apple only — The ARROW keys do not work as arrows.	You may have <i>mouse keys</i> in effect. If so, your arrows have been turned into <i>mouse arrows</i> . See Chapter V for details.
7	IBM XT or AT only — The ARROW keys do not work as arrows.	<ol style="list-style-type: none"> 1. If you have an old AT computer, try using the <i>old AT arrows</i> setting on the Setup Overlay. See Chapter VII. 2. Check to see if Num Lock is in effect. If so, turn it off. Some software programs automatically set the Num Lock. If so, and if you have an XT or an old AT, this could cause the IntelliKeys arrow keys to behave as the numbers in the numeric keypad. 3. You may have turned on the IntelliKeys <i>mouse arrows</i> feature. Slide in the Setup Overlay and turn <i>mouse arrows</i> off.

8	The ARROW keys do not move the mouse pointer.	If you are using an Apple IIGS or Macintosh computer, make sure the <i>mouse</i> is turned on. (See Chapter V.) IBM mouse movement requires additional hardware or software. (See the <i>Access Features Guide</i> .)
9	Apple II and Macintosh only — <i>Mouse keys</i> do not work on Elementary Overlays.	You may have the <i>mouse arrows</i> turned off. Use the Setup Overlay to turn the <i>mouse arrows</i> on.
10	IBM QWERTY Overlay only — The ACCESS MOUSE key and KEYBOARD key do not work.	These two keys are only designed to work when IntelliKeys is used with a T-TAM device or with AccessDOS software. <i>Mouse arrows</i> must be turned on in order for these keys to work.
Certain Keys or Overlays Do Not Work		
11	The IntelliKeys SHIFT keys work erratically.	<p>1. Check the <i>shift latching</i> setting. You may have <i>locking</i> or <i>no latch</i> in effect. See the <i>Access Features Guide</i> for details.</p> <p>2. Macintosh or Apple IIGS — If you are using Easy Access (a special utility from Apple), check your Easy Access settings. They will affect IntelliKeys.</p> <p>3. IBM — You may be using a utility designed for people with disabilities that alters the function of the SHIFT key. If so, the IntelliKeys SHIFT key could be affected.</p>

12	The QWERTY Overlay does not work.	Make certain you have the proper QWERTY Overlay in place. There are different QWERTY overlays for Apple II/Macintosh and IBM/compatible computers.
13	You are using a Custom Overlay and it does not work.	Use the Setup Overlay and press the KEYBOARD RESET key two times. Then, reload the software that contains the Custom Overlay.
14	You are using a Custom Overlay. One of the keys includes more than one character (like a word or a phrase). When you press that key, not all of the characters appear on the screen.	Use the Setup Overlay and adjust the <i>data send rate</i> . By setting the <i>rate</i> to 1, you should see all characters on the screen. However, it will take a long time for them to appear. Experiment with the <i>data send rate</i> until you find the best value.
IBM Standard Keyboard Does Not Work		
15	The IBM standard keyboard does not work properly while it is plugged in along with IntelliKeys.	Using the Setup Overlay, choose YES from the <i>IBM standard keyboard attached</i> option under <i>Troubleshooting</i> .
16	The IBM standard keyboard does not work when IntelliKeys is unplugged.	When you unplug IntelliKeys from an IBM or compatible, you must remove the IntelliKeys cable and plug the standard keyboard directly into the keyboard port of the computer.

If, after working with the *Troubleshooting* section, your problem persists, please contact your dealer or call us at Unicorn Engineering, Inc. Our toll-free phone number throughout the United States is 800-899-6687. When calling from outside the United States please call our standard phone line at 510-528-0670. You will receive help from our technical support staff between the hours of 8:30 a.m. to 5:00 p.m. PST., Monday-Friday.

IX. Maintaining Your IntelliKeys Keyboard

IntelliKeys is durable and should last for years if handled properly. The surface of the keyboard (the area under the overlays) cannot be damaged by bare hands. However, the computer circuitry in your IntelliKeys will be subject to damage if your IntelliKeys is abused. Handle your IntelliKeys keyboard as you would any electronics or computer product. To prolong the life of your IntelliKeys, please read and follow the instructions below.

1. **Sharp or heavy objects.** Do not place heavy objects directly on the surface of IntelliKeys. Avoid touching the keyboard surface (under the overlays) with sharp objects.
2. **Excessive heat.** Avoid exposing IntelliKeys to temperatures of over 110°F (43°C) as this may induce a buckling or waviness in the surface of your keyboard. Exposing IntelliKeys to extreme heat, temperatures over 140°F (60°C), may cause permanent damage.
3. **Cleaning.** To clean IntelliKeys, dampen a cloth with a mild household cleanser and gently wipe the surface clean. Do not use abrasive or caustic cleansers. Avoid spilling liquids on IntelliKeys.
4. **Original shipping container.** Your IntelliKeys shipping container is designed to last a long time and to protect IntelliKeys. Use the shipping container for storing and transporting your IntelliKeys.

X. FCC Class B 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 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.

Shielded interconnect cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device. The cables supplied with your IntelliKeys are shielded.

Changes or modifications not expressly approved by Unicorn Engineering, Inc. could void the user's authority to operate the equipment.

XI. Warranty, Guarantee, Returns and Repairs

Limited Warranty

Unicorn Engineering, Inc. warrants to the original consumer purchaser that its IntelliKeys ("UNIT") shall be free from any defect in material and workmanship for the period of one year from the date of purchase. If a defect covered by this warranty occurs during this one-year period, you should return the UNIT within this one-year period to Unicorn Engineering, Inc.

This warranty does not cover damage or malfunctions resulting from improper handling, accident, misuse, abuse or any other reason not due to defects in materials or workmanship.

Any implied warranties arising out of the sale of this unit, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the above one-year period. (Some states do not allow the limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

Unicorn Engineering, Inc.'s liability is limited solely to the repair or replacement of the defective unit in its sole discretion, and in no event shall include damages for loss of use or other incidental or consequential costs, expenses or damages incurred by the purchaser, including any data or information which may be lost or rendered inaccurate or any damage to hardware or software, even if Unicorn Engineering, Inc. has been advised of the possibility of such damages. (Some states do not allow this exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.)

Money-Back Guarantee

You may return your IntelliKeys to the dealer from whom you purchased your IntelliKeys for full credit or refund (less any special shipping or handling charges) if you decide it is unsuitable for your use. The keyboard must be received by the dealer within 30 days of the ship date shown on the dealer invoice. You must phone the dealer in advance for return authorization. To receive full credit, keyboards must be received undamaged. Damage to overlays will not invalidate this guarantee. Please, if possible, use your original IntelliKeys shipping container for return shipment.

Repair Work

There is little, if any, repair work that you can safely perform yourself. Unless you receive specific instructions from Unicorn Engineering, Inc., any do-it-yourself repair work will void your warranty if it damages your keyboard or cable.

Repair work performed by Unicorn Engineering, Inc. for damage caused by neglect or abuse or after the warranty expires will be billed in accordance with our current fee schedule. Call for a repair estimate. Before returning your keyboard to Unicorn Engineering, Inc. for repairs under warranty, call for return authorization.

