

miniMusic AxisPad

Version 1.0
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Instructions are available on your phone or handheld in the AxisPad application. You can view them by tapping on the question mark icon, or by choosing "Help" from the Options menu. If you are in the performance screen, you must press the "up" button on your phone or handheld computer to see the settings and icons.

USING AXISPAD

If you are running the demo version it will open in the "slate screen". This is where you perform by moving the stylus around on the screen. On most handhelds, the KrikIt Audio Engine will be used to generate sound, offering rich polyphonic audio and many different instrument timbres; you can even use miniMusic SoundPad to design your own sounds. On older handhelds (running Palm OS 3 or 4) AxisPad will use the basic sound synthesizer included in the operating system (the same synth used for datebook alarms). Some handhelds also have the option of using a sound card, or controlling external electronic musical instruments and other MIDI hardware (See).

When you move the stylus from side to side on the screen, the pitch of the sound goes higher and lower. When you move the stylus up and down, the volume of the sound gets louder and softer. On devices with directional controls (usually a round control found just below the screen, often between other application buttons) you can change the instrument timbre being used by pressing the left and right buttons. The included default sound bank contains several repeated instruments, so you may have to move forward or back several sounds to get a new instrument.

By pressing the up and down controls/buttons, you can open and hide the settings panel. Here you can set the ranges (both the pitch range and the volume range) and there are four icons you can tap. The ranges are represented by a box; the wider the box, the wider the range. Both pitch and volume ranges can reach from a minimum value of zero to a maximum value of 127. The highest and lowest values in the current range are shown along the right side. To change the high or low ends of the range, just tap on the left or right edge of the box and drag it. You can also use the arrows on either side of the range to make small adjustments. You can also tap in the center of the range box to drag it.

In general you will get the best performance from AxisPad by setting the pitch range smaller (especially an octave or less). The pitch range must always have a center pitch, so the width is always even (e.g. it can be from 64-68, which is even, but it cannot be from 64-69, which is odd). The built in speaker on many phones and handhelds cannot reproduce bass frequencies, so you may need headphones or external speakers to hear lower notes. Some instruments available in the KrikIt Synth do not perform well at very high frequencies (often in the highest octave, from pitches 115 to 127).

Beneath the range settings are four icons: Guides, Prefs, Close and Help.

Tapping on the Guides icon allows you to add and edit guide lines to help you perform. For example you could place guides on certain pitches you want to repeat. Or you could set guides at different volume levels that correspond to different stages of a song that grows slowly louder or software as it progresses. You might use guides to match the tuning of an accompanying instrument. To create a new guide, tap on one of the colored boxes along an edge of the screen. Tap on any guide to drag it; move it to the very edge of the screen to delete a guide.

Pressing the up button to re-open the settings panel will exit the guide edit mode. You can also use the center/select button on many handhelds to turn the guide edit mode on and off. This button is usually found in the center of the directional pad or controls.

Tap on the Prefs icon to open the slate preferences screen (see below). Tapping on the Close icon will return you to the library screen and tapping on the Help icon will bring up a short overview of AxisPad.

LIBRARY SCREEN

When you close a slate, you will go to the library screen. This lists all of your saved slates. If you only want to see one category, tap on the pop-up list in the top right corner. To open a slate, tap on its name. Tap on the new button to create a new slate, or tap on the Prefs icon to open the application preferences (these are different than the slate preferences).

SLATE PREFERENCES

Tap on the Prefs icon in the Slate settings panel to open this window. At the top you can change the name of your slate, and use the pop-up menu beneath the name to change what category it is filed in. There are three colors you can set for this slate: Slate color, text color and guide color. Just tap on the color box to bring up the palette.

Next on the screen are two check boxes. Checking "Show Text" will display the slate name and instrument name on the performance screen, along with the "EDIT/PLAY" prompt at the bottom. When the "Show X" box is checked a large X will be drawn on the screen. In some cases this may be more useful than the horizontal and vertical guidelines.

Below these are four more checkboxes specifying certain types of MIDI data. These four settings only affect MIDI data being sent to external hardware (and in some cases internal sound cards). When connected to an electronic music instrument, you may want to play notes on that device and only use AxisPad for sending controller data. If so you can turn off Note On/Off events. If the connected hardware has its own sound setting you may not want AxisPad to send program changes, so you can un-check that. Controllers 0-31 allow for high precision controllers by sending additional data with controllers 32-63; by checking "Control LSB" AxisPad will automatically send the high resolution data for controllers 0-31. Finally checking BendRange instructs connected hardware what pitch bend range you've chosen, some hardware may limit the size of the range more than AxisPad does, so you may want to deactivate this in some cases.

At the bottom of the screen is a slider to choose an instrument timbre to be used. You can also delete a slate by tapping on the "Delete" button.

APPLICATION PREFERENCES

You must close a slate and go to the Library screen in order to open the Application preferences. You can either tap on the "Prefs" icon in the library screen, or choose "Preferences" from the Options menu.

This screen lets you choose how AxisPad generates sound. Tap on the "Play To:" pop-up menu to change the setting. "Basic Sound" is a simple square wave synthesizer that is available on all Palm OS handhelds and phones. It is the same sound used for DataBook alarms. "Serial Port" will not make any sound on your handheld or phone, but sends the control data to an external electronic music instrument or other MIDI hardware (see about MIDI below). "Sound Card" is only available on a few models but uses a dedicated sound chip built into the handheld to create rich audio (found in the Tapwave Zodiac, a few Sony Clie models, and Handspring Visors using the Beat Plus springboard module). "Kriket Synth" is the default setting and uses our Kriket Audio Engine to generate rich audio. You should listen with headphones or amplified speakers for the best sound quality.

You can also change the MIDI channel here; this is only relevant when connected to external MIDI hardware. And you can set the baud rate which AxisPad uses to communicate with such external devices.

ABOUT MIDI

If you connect your handheld to a MIDI instrument (like a synthesiser, keyboard, or sampler) you can use AxisPad to control that external hardware.

Connecting to MIDI hardware requires a serial port on your handheld. Many handhelds support both Serial and USB and can be used for MIDI, for example the Palm universal connector can do both. Many newer handhelds have a USB port only (like the Zire 21, 31, 72, Tungsten E) and cannot be used to connect directly to MIDI hardware. You will have to use the on-screen controls to play.

The easiest way to make this connection is if you have a MIDI instrument with a serial port on the back of it. This is a small round port (a little smaller than the MIDI-in and MIDI-out ports) and is often labelled "host" or "to host". This port is designed to connect the instrument to a computer without additional hardware (to use the MIDI ports you would need something called a MIDI interface). All you need to connect your Palm to such a MIDI instrument is a serial HotSync cable or cradle, and a Mac Serial Adapter (which converts the wide connector of the HotSync cable to the small round serial adapter used by older macintosh computers and by MIDI instruments). If you buy the Universal Connector Serial Cradle made by Palm it includes the Mac Serial Adapter. You may have to set a switch on the back of your MIDI hardware to use the serial port. Consult the manual that came with the MIDI instrument for details on connecting to a computer.

miniMusic sells a small MIDI interface for use with most Serial HotSync cradles. It is an un-powered and out-only interface (you can't use it to send MIDI into the Palm, only out from it). It is well tested on older handheld computers like: Palm III, IIIX, IIle, IIxe, V, Vx, VII, m100, m105, m125, m130, m500, m505, m515, and the Tungsten T (The Tungsten T requires a software patch to use the serial MIDI interface). Other handhelds with the universal connector can send MIDI data, but they may be underpowered (so they would need a powered MIDI interface) or they cannot send data at the MIDI native speed (so they could still connect to some hardware at the 38400 baud "PC-2" speed).

For more information see our web page about MIDI: www.minimusic.com/midi.html

MIDI AND SOUND CARD OPTIONS

When set to "Play To: Serial Port" or "Sound Card" you can tap on the name of an axis ("Pitch Bend" for example) in the settings panel to advance through the axis types: Pitch Bend, Control Change, Key Pressure, Channel Pressure.

If an Axis is set to Control Change, the name of the control is written (if AxisPad knows it, like "Volume") and then the controller number (like #7 for volume). If you tap on the controller number a new slider will appear to change to other controllers (like Pan #10, or Modulation Wheel #1).

Note that Key Pressure has to be linked to a pitch. For AxisPad to handle it correctly the other axis must be set to Pitch Bend, otherwise the key pressure change is set to pitch 64 which may not correspond with any playing notes on your MIDI hardware... we'll try to improve this in the next AxisPad upgrade.

The sound cards built into some handhelds only respond to a few controller types, and we have found that some are not behaving properly on the Zodiac (for example, panning only respond to a range of 0-15 instead of 0-127).

We hope you enjoy AxisPad!

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