pk_hui 1.0.3

www.danielpersson.info

Disclaimer: No responsibility taken for damages to hardware, software or files. This piece of software is distributed as is. Heavy usage will probably wear the rotary encoder out prematurely. Go for it!

This app has been tested on Mac OS X 10.4.11 to 10.5.8 and Windows XP.

Contents

Introduction

What this app wants to do:
1) Enable maximum precision for fader control. The click of the rotary encoder gives tactile precision down to the last bit.
2) Enable you to control basic mixing and recording away from the computer, eg from the recording room or from bed.

This manual refers to usage with Protools. You need to consult the manual that comes with your DAW to figure out how the HUI commands emulated affect your specific DAW. Buttons are in two forms, true and false. A true button is a button that behaves exactly as a button on a HUI would. A false button is a button that is a composition of different HUI commands, or of specific commands for this app.

Requirements

To use pk_hui you need a KORG padKONTROL. We will quickly abandon Korg's obnoxious use of uppercase and from now on call it Padkontrol. You need a computer running Mac OS X 10.4 and above, or Windows XP or Vista. On Windows you need a third party software for virtual MIDI routing, they come in many flavours, but you need to choose one which is capable of transmitting SYSEX messages. Finally, you need a DAW that understands the HUI controller protocol. Development and testing of pk_hui have been done almost exclusively with Protools.

Native mode

Native mode is a special mode for the Padkontrol, outside of the comfort zone of the included editor software. Via an intermediate software, it is in native mode possible to hijack every button, knob, x-y pad, and light of the Padkontrol and control them independently: pk_hui is such an intermediate software. Native mode will not affect any of the 16 scenes already programmed on the Padkontrol, and you can at any moment exit native mode by simultaneously pressing ”SCENE” and ”SETTING” on the Padkontrol.

Starting up

Plug in your Padkontrol and turn it on. Start pk_hui. In the pk_hui window where it says ”MIDI from padKONTROL” and ”MIDI to padKONTROL”, choose the right ports for Padkontrol native mode operation. These ports can show up under different names, consult you Padkontrol manual for this. ”MIDI to padKONTROL” is supposed to be Padkontrol Port A (on some systems called Padkontrol Port 2), ”MIDI from padKONTROL” is supposed to be Padkontrol CTRL (on some systems called Padkontrol Port 2).

Open your DAW. Consult your DAW manual on how to configure it for use with Mackie HUI, and configure it accordingly. The MIDI ports chosen in your DAW for connecting to HUI are the same ports you are supposed to choose in the pk_hui window, where it says ”MIDI from DAW” and ”MIDI to DAW”. These will most probably be virtual MIDI ports. OS X has IAC Busses which are handy for this. On Windows you have to use a third party software to get virtual MIDI ports. When setting up virtual MIDI ports in Windows, be sure to not set the same port as input and output, as this can cause dreaded MIDI looping.

When the appropriate MIDI connections have been set in the pk_hui window, click the ”Enter Native Mode” button. You are ready to go!

Channel strip

Operation is centred around the rotary encoder on the Padkontrol. HUI operates on banks of eight tracks, these eight tracks are outlined in blue in Protools. pk_hui controls the leftmost track in this bank of eight. Initially, the rotary encoder controls the fader for this track. The track name appears on the Padkontrol display, truncated to three characters. Protools sends out four characters for track name and the third of these characters is omitted. Use clever track naming to get the most info out of the track name. Rotating the rotary encoder controls the fader in 7-bit precision. Holding down Padkontrol ”Setting” button enters 9-bit precision for finer control of the fader through the rotary encoder.

Fader - Rotary encoder

Finer control of fader - ”Setting”

Holding down Padkontrol ”Message” button and turning the rotary encoder scrolls through tracks, one at a time. In Protools the blue outline moves accordingly, and it is always the leftmost track in the bank which pk_hui is controlling. In HUI lingo this equals pressing left and right channel arrow switches.

Scroll through tracks - ”Message”

Holding down Padkontrol ”Fixed velocity” button and turning the rotary encoder controls pan for the track. In HUI lingo this means that the rotary encoder is controlling the track’s V-Pot.

Pan - ”Fixed velocity”

Holding down Padkontrol ”Prog change” button and turning the rotary encoder controls right pan if it is a stereo track. In HUI lingo this means pressing HUI pan button once when pressing Padkontrol ”Prog change” button and pressing HUI pan button a second time when ”Prog change” is released, thus restoring it to normal pan operation. This might cause confusion in other DAWs than Protools.

Right pan - ”Prog change”

When releasing the buttons in the channel strip which directs what the rotary encoder is controlling; when releasing those buttons, the rotary encoder goes back to default of controlling the track’s fader.

Fader - Rotary encoder

Holding down Padkontrol ”Pedal” button holds down HUI button ”Alt/Fine”. This is equivalent to the command key on the computer keyboard and does whatever the com-

Alt/Fine - ”Pedal”

mand key does. In Protools it gives you, among other things, finer precision when panning, but you still need to simultaneously hold down the buttons ”Fixed velocity” or ”Prog change” to pan.

Padkontrol ”Hold” button is HUI ”Rec/rdy” (rec arm/enable) for the track. Padkontrol ”Flam” button is HUI ”Solo”, Padkontrol ”Roll” button is HUI ”Mute”. All three are ”true” buttons, that is acting exactly like those buttons on a real HUI would.

The two leftmost columns of pads on the Padkontrol is a level meter. Both columns are active on stereo tracks, only the left one on mono tracks. The level meter is on a 0 to 12 scale. Bottom pads light when signal is between 1 and 4, in Protools equivalent to -60 to -14 dB. Any signal below -60 dB is ignored. Second pads light between 5 and 8, indicating decent level for recording. This is equivalent to -14 to -4 dB in Protools. Third pads light between 9 and 11, indicating high level, for mastering or high-level recording, -4 to 0 dB. Top pads light when signal clips.

Pad 01, at top left on the Padkontrol equals HUI ”F1” button. Tapping this will reset clip indicators in Protools. NOTE: Tapping F1 resets ALL clip indicators, not just the one for the current track.

Rec/rdy - ”Hold”

Solo - ”Flam”

Mute - ”Roll”

Level meter

F1 reset clip indicator - ”Pad 01”

Transport

Padkontrol ”Midi Ch” equals HUI ”Rew”, Padkontrol ”Sw Type” equals HUI ”Ffw”, Padkontrol ”Port” equals HUI ”Rec”, Padkontrol ”Velocity” equals HUI ”Play”, Padkontrol ”Rel. Val.” equals HUI ”Stop”, all are ”true” buttons.

Padkontrol ”Note/CC#” equals HUI ”Shift/Add” button. Also a ”true” button, holding ”Shift/Add” while pressing the transport buttons changes their functions in Protools, eg ”Shift/Add” + ”Rew” takes you directly to the start of the timeline. Consult your Protools/DAW manual for these extra transport functions.

Rew - ”Midi Ch”

Ffw - ”Sw Type”

Rec - ”Port”

Play - ”Velocity”

Stop - ”Rel. Val.”

Shift/Add - ”Note/CC#”

Undo & Save

Padkontrol ”Knob 1 Assign” equals HUI ”Undo”, Padkontrol ”Knob 2 Assign” equals HUI ”Save”, both ”true” buttons. Using Protools, ”Undo” lights when there is something to undo, ”Save” lights when there is something to save. Pressing ”Save” once makes it blink, pressing a second time performs the save. Holding ”Shift/Add” and ”Alt/Fine” while pressing ”Undo” will redo the last action.

Undo - ”Knob 1 Assign”

Save - ”Knob 2 Assign”

In and out of native mode

To exit native mode, press ”Scene” and ”Setting” on the Padkontrol. This will take you back to normal operation, with all of your scenes intact. To return to native mode, you can send a user defined MIDI message to pk_hui. You can define that MIDI message under the ”advanced” tab in the pk_hui window. When in normal operation, there are five user defined MIDI messages on the Padkontrol that work regardless of which scene you are in. You can configure on of those in the Padkontrol Editor software to send the MIDI message that will trigger native mode. Then you can always get back to pk_hui, regardless of which normal scene you are in.

To enter native mode you can also press the ”Enter Native Mode” button again, or use the keyboard shortcut in pk_hui, command+E (control+E on Windows).

Known issues

Windows version is sometimes unstable for unknown reasons.

Faders for MIDI tracks are unreliable on the first attempt to turn the rotary encoder. Protools reports fader position for MIDI tracks differently (wrongly?) than for other tracks, resulting in MIDI tracks being one value off at times. No worries if you don't turn the encoder though.

Protools do report some weird values for audio track faders at times, jumping around with the last bit of the 9 bit fader message in an inconsistent manner. The values pk_hui uses to control faders are the same values Protools reports, if there is error on the Protools side, it is nothing pk_hui can do to fix. Other DAWs are more consistent.

It is possible to scroll past all tracks. This is no big problem, but a bit annoying. Solution: Scroll the other way until you are on familiar grounds again.

When Padkontrol is in native mode it simultaneously sends out normal MIDI on its Port B, ie the port not used for native mode operation. This can be an annoyance or a convenience, but be sure to configure your other MIDI setup to avoid triggering some unwanted notes on your synth in the middle of recording!

Pressing a lot of buttons at the same time will potentially confuse stuff, as the rotary encoder controls stuff based on last button held down.

When the host computer awakes from sleep, nothing works properly.

Beware of MIDI loops when setting up connections on virtual MIDI ports.

Be in touch

Questions, bug reports, support requests, and maybe a word on how you are using pk_hui, please send an email: pk_hui@danielpersson.info
Visit www.danielpersson.info for updates and stuff.

Rotary encoder:
This is the centre of pk_hui.
Initially the encoder controls the fader of track 1.
Buttons changing the behaviour of the rotary encoder are explained on black

not in use
Scroll through tracks (false):
Pan (false):
Right pan (false):

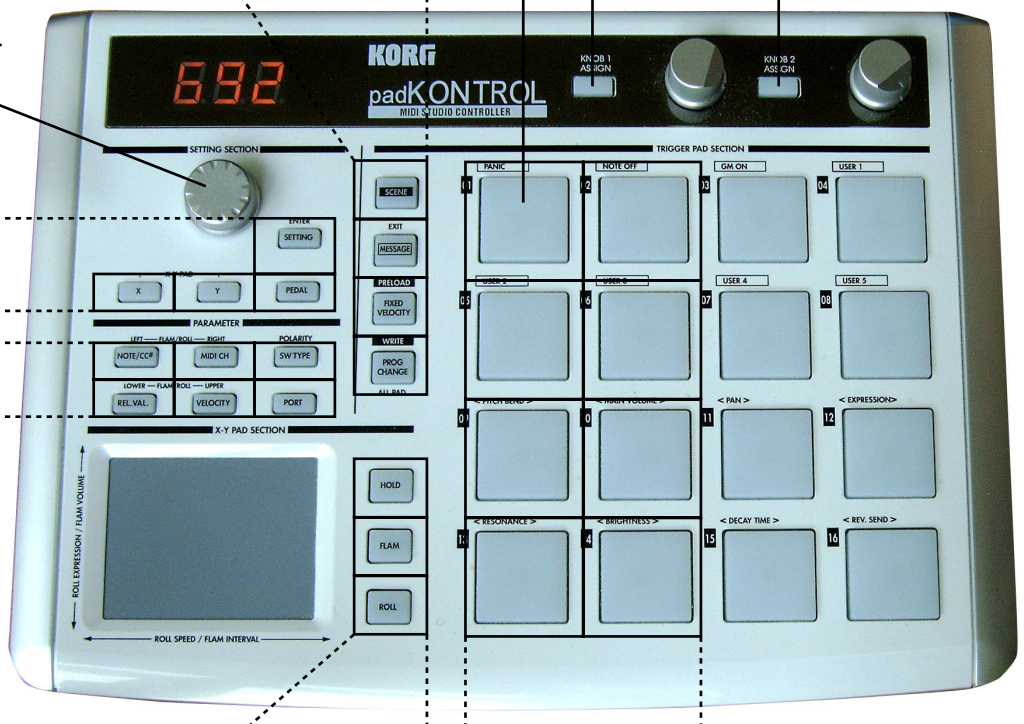
F1 (false):
Resets clip indicator on tap

Undo (true):

Save (true):

		Finer control of fader (false):
not in use	not in use	Alt/Fine (true):

Shift/Add (true):	Rew (true):	Ffw (true):
Stop (true):	Play (true):	Rec (true):



Rec enable (true):
Solo (true):
Mute (true):

Level meter :

Clip	over0dB (12)
High level	-4to0dB (9-11)
Decent level	-14to-4dB (5-8)
Low level	-60to-14dB (1-4)