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AXOCTRL MANUAL

MAY 2021







GET READY

Coding is not required.

HARDWARE MAP

Axoctrl is a very simple circuit board which mostly routes the hardware connections available on Axoloti Core to many different components as potentiometers, buttons, leds etc. Use the scheme below to get oriented configuring your patch in to Axoloti Patcher.

You can map the connections directly using GPIO_IN objects or you can speed up the process using the preconfigured Hohum objects.



LIBRARY

To simplify your first steps with Axoctrl we developed a series of tools and preconfigured patches that will help you to design quickly your idea. You will find our objects and demo patches within Axoloti Library: **File > Library > community > hohum**

TOOLS

Tools are sub-patches with preconfigured connections and functionalities appositely made for Axoctrl. To import a sub-patch into your patch, select one of them from your library or just drag & drop it from the Hohum library. Then, you can connect the knobs, the buttons and the lights as you prefer.

AXOCTRL_CORE

▼ ap	▼ axoctrl_core				
axo	ctrl_core_	1			
0	#1 LED	#4	BUT	×	
0	#2 LED	#5	BUT	<u>×</u> 1	
0	#3 LED	#6	BUT	×	
		#7	BUT	×	
		#8	PAR		
		#9	PAR		
		#10	PAR		
		#11	PAR		
		#12	PAR		
		#13	PAR		
		#14	PAR		
		#15	PAR		
		#16	PAR		
	#	¥17≬	10D		
	#	¥18≬	10D		
	#	¥18∣	10D		

Use this module to get immediate access to all the controls available on the board without pre-configured functions. You can setup up to 9 knobs, 4 buttons, 2 I/O PWM, and 3 lights (1xPWM).

AXOCTRL_SWITCH AND SWITCHER



Include and connect these modules if you want to navigate your patch bank. Connect NEXT and PREVIOUS to button #5 and #4.

AXOCTRL_DISP



Use this module to setup your display on Axoctrl. Connect a "string object" with only text to show the actual patch name. Link the audio out of your patch to OSC SCOPE to show up the spectre of your sound. Combine this module with Axoctrl_lfo to show LFO settings such selected mode and waveform.

AXOCTRL_LFO

▼ axoctri_ifo axoctri_ifo_1 ○ TIM E_PHASE ○ SM OOTH ○ WAVE ○ MODE ○ LFO SYNC UP ○ LFO SYNC DOWN

It's a fully preconfigured LFO with three waveform (square, triangle, sine) and sync mode. Connect buttons to switch between waveforms and modalities or to multiply and divide the tempo when you're in sync mode. Connect two knobs to control Time (free mode) Phase (sync mode) or to smooth the LFO wave shape.

Note: Combine this module with Axoctrl_button to design your custom shortcuts and use less buttons.

AXOCTRL_BUTTON



Get twice the buttons on your Axoctrl and design your custom shortcuts adding the press & hold function.

AXOCTRL_MIXER



Use this object to send audio out from your patch. Connect an LFO signal to use it as VCA. Link one of the knobs to the VOL parameter to adjust the output level. Link the red output source to the display scope to show the signal on the display.

AXOCTRL

▼a) axo	coctrl ctrl_2		
0	PATCH_NAME	IN_L	
0	MIDI_GATE	IN_R	
0	OUT_L	#6 BUT	×
0	OUT_R	#8 PAR	
		#10 PAR	
		#11 PAR	
		#12 PAR	
		#13 PAR	
		#13174	

It's a preconfigured solution that contains all the previous modules. Using this subpatch you'll add some extra features to your patch such the LFO and the display informations. Connect a "string object" with only text to show the actual patch name. Connect the MIDI gate to bright up the yellow led when Axoloti is receiving MIDI messages. Send the audio output of your patch to OUT_L/OUT_R. Grab the incoming audio signals from IN_L/IN_R. Set up as you prefer the blue button (#6) and the remaining knobs.

Features and pre-configurations.

1. LFO * modulating the output VCA

- Tap the grey button to choose a waveform (off-sine-triangle-square)
- Hold 2s the grey button to switch between Free and Sync mode (MIDI sync)
- Use PC4 (#14) to adjust the frequency in Free mode or the phase in Sync mode
- Use PA2 (#15) to smooth wave shape
- Use PAO (#16) to adjust the mix intensity
- When you are in Sync Mode tap on PB6 (#4) and PB7 (#5) to divide or multiply the sync time.

2. Navigation

Hold 2s the white buttons PB6 (#4) and PB7 (#5) to scroll your patch bank and load your patches from the SD-card. If you don't know how to setup a patch bank please see the instructions in the next section.

3. Display

The display will show the patch name, the audio scope, LFO informations such waveform and modality.

Utility Patches

In the Axoctrl library you'll also find some utility-patches that will help you to configure properly your Axoloti and your Patch Bank.

Follow the instructions below to see how to do it:

- 1. Design your patches using the Axoctrl module
- 2. Save your patches in a folder.

3. Open and run "live" the Axoctrl patch "**format_flash_disk.axp**" to clean up your SD-card

4. Open the Axoctrl patch "startup_patch.axp" and load it to your Axoloti

as startup patch: Patch>Upload to SDCard as startup

- 5. Make a new patch bank: File>New patch bank
- 6. Click on "Add" to load your saved patches in the patch bank.

7. Click on 'Upload patch bank" to complete the process and move your files to Axoloti.

Demo Patches

aSynth - a virtual analog monophonic synthesiser with effects aDrum - a pattern based drum machine with random functionality and sync out for Volcas.