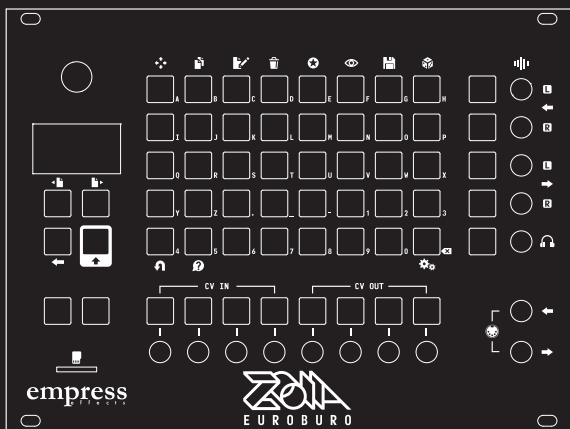




E U R O B U R O

empres
of facts



USER MANUAL
FIRMWARE_VERSION_2.30

FOR SUPPORT AND TO REPORT BUGS

Please Call 1-855-ZOIA-SOS (1-855-964-2767)
or email support@empresseffects.com

FOR FIRMWARE UPDATES

www.empresseffects.com/ZOIA-firmware

FIND GREAT ZOIA PATCHES

www.patchstorage.com/platform/ZOIA

TO UNDERSTAND WHAT ALL THE VARIOUS MODULES DO, CHECK OUT THE MODULE INDEX

www.empresseffects.com/ZOIA-module-index

TO MAKE FEATURE REQUESTS, JOIN OUR IDEA FORUM

www.empresseffects.com/idea-forum

FOR HELPFUL TIPS AND TRICKS

www.empresseffects.com/ZOIA-tips-and-tricks

JOIN THE EMPRESS ZOIA USERS FACEBOOK GROUP

www.facebook.com/groups/EmpressZOIAUsers

JOIN THE DISCUSSION ON REDDIT

www.reddit.com/r/ZOIA

On our website (www.empresseffects.com) you will find lots of further information and details on the following points:

DOWNLOAD

This manual is also available as a PDF file for you to download,

KEYWORD SEARCH

Use the search function in the electronic version of this manual to find your topics of interest quickly.





CUSTOMER SUPPORT

If you have any problems with the device our Customer Support team will gladly assist you.

ISO 7010 SAFETY WARNINGS

GENERAL INFORMATION

Signal Word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning Signs	Type of Danger
	General warning sign
	Electricity Hazard
	Hot Surface
	Sudden Loud Noises



INTENDED USE



This pedal is designed for enhancing guitar tones in live performances and studio recordings.

Use as outlined in the user manual.

The manufacturer is not liable for damages resulting from improper use or use under non-recommended conditions.

SAFETY

	<p>DANGER! Danger for children</p> <p>Dispose of plastic bags and packaging properly to keep them out of reach of babies and young children to prevent choking hazards. Ensure children don't detach small parts like knobs to avoid choking. Never leave children unattended with electrical devices.</p>
	<p>DANGER! Electrical shock</p> <p>Risk of electrical shock from exposed wires or damaged components. Inspect pedals for damage before use. If damaged, stop use and seek professional repair</p>

	<p>DANGER! Power Supply Issues</p> <p>Use the right voltage and current for your pedal's power supply to prevent damage and safety risks. Check the power supply's condition, and for multiple pedals, opt for a dedicated supply to avoid overloading by daisy-chaining</p>
	<p>CAUTION! Overheating</p> <p>Avoid overheating. Do not stack pedals or place in confined spaces. If a pedal overheats, stop using and let it cool.</p>
	<p>CAUTION! Tripping Hazard / Pedal Placement</p> <p>Prevent tripping: Secure cables and place pedals firmly to avoid slips and falls.</p>
	<p>CAUTION! Volume Spikes</p> <p>Beware of volume spikes and unexpected sounds when adjusting pedal settings</p>



NOTICE!

Allergies or Sensitivities

Allergy Alert: Some pedal materials, like adhesives and coatings, may cause reactions. Stop use and seek medical advice if needed.



NOTICE!

Fire Hazard

Keep away from direct heat and open flames.

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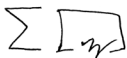
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INTRODUCTION

WHAT IS ZOIA?

ZOIA is an open canvas to paint your sonic ideas. FM synthesis, CV tools, MIDI tools, audio effects, interface options – all at your fingertips. ZOIA transforms the rigmarole of interfacing a studio full of music gear and condenses it into one handy little module, which you can then interface with your own studio full of music gear.

In short, ZOIA is an infinite trick pony whose utility is limited only by your imagination. We're stoked you've chosen to make the Empress ZOIA a part of your life! Please enjoy responsibly.



Steve Bragg

Designer



Jason Fee

Designer

THE BIG PICTURE

The ZOIA Euroburo is, in essence, a fully featured modular synthesizer within a single module. Modules are laid out on the button grid, with each module consisting of a number of parameters. Each parameter is represented by a button on the grid which accesses a specific function of that module.

The button grid represents one page within a patch. When you save a patch, it saves to ZOIA's internal memory each page you've created, along with all of the modules you've added, parameters you've changed, and connections you've made. You can then go on to create a whole new patch and use the knob or MIDI commands to navigate between them.

Instead of thinking of the ZOIA as simply a module, it is probably more accurate to think of it as a platform. It provides the basic tools so that you can build your own effects, synths, and instruments.

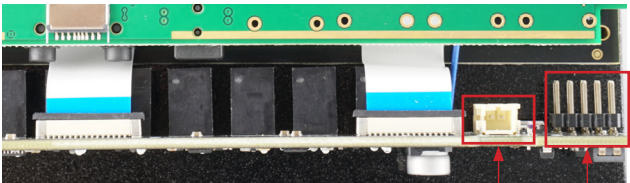
CONNECTING POWER

EURORACK POWER SUPPLY

To connect power from a eurorack power supply, use the included ribbon cable and connect it to the bottom corner of the lower pcb as pictured. Note the polarity as marked on the pcb.

DESKTOP POWER SUPPLY

The Euroburo can be used as a standalone unit by purchasing the optional **desktop addon** which includes an enclosure, power supply, and power connector board. To power the desktop unit, connect one end of the supplied two conductor cable to the white connector behind the lower left section of the faceplate, and the other end to the small power supply circuit board in the desktop case. Then connect the external power supply provided to the rear of the desktop case. The desktop enclosure ships with a 12V power supply, but you can use any centre-negative power supply from 9-12V as long as it can supply a minimum current of 300mA.






Use this power connector for desktop addon (standalone)

Use this power connector for Eurorack

CONTROLS

THE KNOB

The rotary  knob is used for many different interactions with the ZOIA. Navigate between and select patches, options, pages, modules, or connections. Dial in parameters within modules, or move a cursor around while typing. Hold the  knob down while turning to fine tune a parameter. Hold  shift while turning for a super fine tune.

ACTION BUTTONS



Move

Moves modules, pages or patches.



Copy

Copies modules, pages or patches.



Edit

Edits modules, page names or patch names.



Delete

Deletes modules, pages or patches.



Star

Press star on a parameter or connection to add it to the starred list. Press star with nothing selected to view the starred list. [See Starred List, page 23.](#)



View

Cycle through screens of the selected parameter.
View its value, audio/CV visualization, or connection list.



Save

Save pages or patches.



Random

Randomly modifies a parameter or connection.

UTILITY BUTTONS



Page Left/Right

Scroll to next/previous page.



Back

Back out of active selection or menu.



Shift

Hold to access action buttons or to capitalize text.

Note: Auto-shift feature inverts function of this button for the top row of the button grid. This allows one-touch interaction with the action buttons. When Auto-shift is active, hold shift to access grid buttons as normal.

See Config Menu, page 24.

OTHER BUTTONS



Undo

Undoes the last action if it's one of the following: add/modify/delete connection, add/move/copy/delete module, modify parameter.



Help

Press for help on currently selected item.



Backspace


When typing, delete character at cursor.




Config

Press  Shift and  Config to open the config menu.
See [Config Menu, page 24](#).

HEADPHONE OUT

The headphone output audio is a clone of what's sent to the main audio outputs. Headphone volume is adjusted by pressing the grid button next to the headphone jack and twisting the  knob. The headphone module allows you to select between a global headphone volume, or a volume saved with the patch.

CV INPUTS AND OUTPUTS

The four CV input and CV output modules allow you to connect the Euroburo to other eurorack modules. To change the functional voltage range (-5V to 5V, 0V to 5V, or 0V to 10V) and the range of CV signals it will accept or produce, select one of the CV I/O buttons and press  edit.

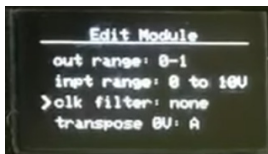
The table below shows example settings of how external voltages get mapped to CV signals within the Euroburo. Use the connection buttons next to the CV I/O jacks to connect to any modules on the grid in the same way you make connections between ZOIA modules.

Voltage In	CV In Module Options		CV Output Of Module
	CV Range	Voltage Range	
0 V	0 to 1	0 to 5V	0
2.5 V	0 to 1	0 to 5V	0.5
2.5 V	0 to 1	0 to 10V	0.25
5 V	0 to 1	0 to 5V	1
-2.5 V	-1 to 1	-5 to 5V	-0.5

CV INPUT CLOCK FILTERS

Like any input jack, the four CV inputs unfortunately pick up a tiny but unavoidable amount of ambient noise from the environment. This interference can translate into unwanted behaviour going into different aspects of your patch as you connect the CV input jacks. To counteract this, the CV input modules have optional noise filters you can engage to make your Euroburo ignore signals below a certain threshold.

To engage a filter, select a CV input module by pressing its grid button, and press **↑ shift** and **✎ edit**. With the knob, scroll down to the clk filter option and select one of the options. The



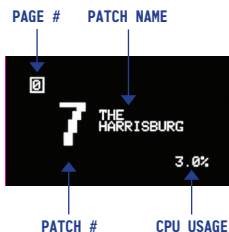
amount of filtering you require may vary, so a bit of trial and error may be necessary. The filter settings you choose for each CV input module are saved with your patch.

CV INPUT AND OUTPUT TRANSPOSE

By default, ZOIA Euroburo's CV inputs and outputs interpret CV signals on a scale ranging from A to A. Many eurorack modules use a scale ranging from C to C modules. To increase compatibility across your modular landscape, you can select either A or C from within the edit options of both the CV input and CV output modules. Enter the edit menu by pressing a CV in our out grid button, and press **↑ shift** and **✎ edit**. The transpose settings you choose for each input or output module are saved with your patch.

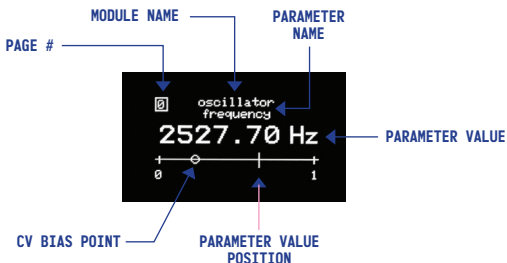
SCREEN LAYOUT

There are many ways ZOIA displays information on the screen. Here are two of the most common views.



The **patch screen** (left) is visible when no module, list, or connection is selected. It gives you general information at a glance as to the patch you're on and the performance of the ZOIA. You can always get to the patch screen by pressing the **← back** button several times.

The **parameter adjust screen** (below) appears when you select a button within a module. The CV bias point is represented by the small circle, and the parameter value position is represented by the small line. When an incoming CV signal from a connection changes the parameter, you'll see the bias point stay in position while the line moves according to the change. [See Signals, page 9](#) for an explanation of what a CV signal is.



THE BASICS

SIGNALS

Each button of a module has several characteristics. With a few exceptions, each button of any given module acts as either an input or an output of either an audio or a CV path.

Audio signals flow from the output button of one module to the input button of another module. Audio processing occurs as the audio goes through the module and the altered audio comes out of the output, much like a standard guitar pedal or synth module. Analysis modules analyze audio signals in some way and output CV signals.

CV (control voltage) signals within the Z0IA are a lot like the CV signals you may be familiar with from the synth world. They are a means of transmitting information from one module to another, or put more simply, they allow you to control various module parameters. You can think CV almost like an automatic expression pedal; as the CV signal sweeps from it's low range to it's high range (and vice versa), it modifies the parameter it's connected to. In the synth world, CV signals can range from -15 volts to +15 volts. In the Z0IA however, CV signals range from 0 to 1, or in some cases from -1 to +1. If a button is a CV input, it can be connected to other buttons that are CV outputs. Each CV input button also has a bias value that can be set by pressing the corresponding button and twisting the knob. The bias value determines the starting point of the CV signal. For example, setting a bias value of +0.5 would limit the range of the CV signal from +0.5 to +1.

MODULES

A module is a collection of inputs, outputs, and parameters, each of which is represented by a button on the grid. Many modules have various optional parameters so you can tailor them to your needs. Individual modules can be renamed, and you can also choose a module's colour so that it's easy to identify on the grid. The number of buttons a module occupies is determined by the number of inputs, outputs, and parameters it has. See the Module Index at www.empresseffects.com/zoia-module-index for a complete description of all the modules and their parameters.

MODULE CATEGORIES

Interface Modules: modules that import the audio, control voltage, MIDI, or grid button presses from the outside world for use in the ZOIA.

Audio Modules: these audio processing modules are more commonly found in the world of modular synthesis. VCAs, filters, oscillators, and many more utilities and effects.

Control Modules: modules that generate and manipulate CV signals within the ZOIA. Sequencers, LFOs (low-frequency oscillators), and ADSRs (attack-decay-sustain-release) are classic examples of control modules.

Analysis Modules: modules which take in audio and analyze it in some way, outputting a control voltage signal.

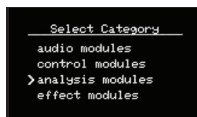
Effect Modules: pre-built effects, such as modulations, reverbs, distortions etc.

Integrated Interface Modules: these modules are similar to standard interface modules, but are permanently situated next to the i/o jacks on your Euroburo. They include audio input and output modules, a headphone outout module, CV input and output modules, and 2 pushbutton modules which you can connect into your patch. All the edit options you adjust within these modules will save as part of your patch.

*Note: holding **↑** **shift** while pressing any audio input or audio output (with the exception of headphone out) will toggle your Euroburo in and out of bypass mode.*

ADD A MODULE

1. Select where the module will go by pressing an empty grid button.
2. Select the category of the module you wish to add.
3. Select the module you wish to add.
4. Edit the options of that module and select "Done?" For more information on how to edit options, see the "Edit a module" section below.



If you find you don't like the placement of the module once it's laid down, don't worry. You can move it after by using the **↕** **move** key.

SELECT A MODULE

Press one of the grid buttons occupied by the module. That button will light up, allowing you to adjust its parameter. This also selects the whole module for moving, copying, or deleting.

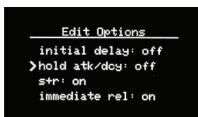
EDIT A PARAMETER

Select a grid button on the module and use the rotary knob to modify the value of the selected parameter. Hold the knob down while turning to fine tune a parameter. Hold shift while turning for a super fine tune. On certain modules you can click the knob to change the way information is displayed.



EDIT A MODULE

Select a module and press edit. Scroll to the option you'd like to edit and click the knob. Once you've found your desired value click again to select it. Be sure to select "Done?" when finished, or the changes you made will be forgotten.




DELETE A MODULE



Select a module and press delete.

MOVE A MODULE

Select a module and press move. Press an unoccupied grid button where module will fit. To move the module to

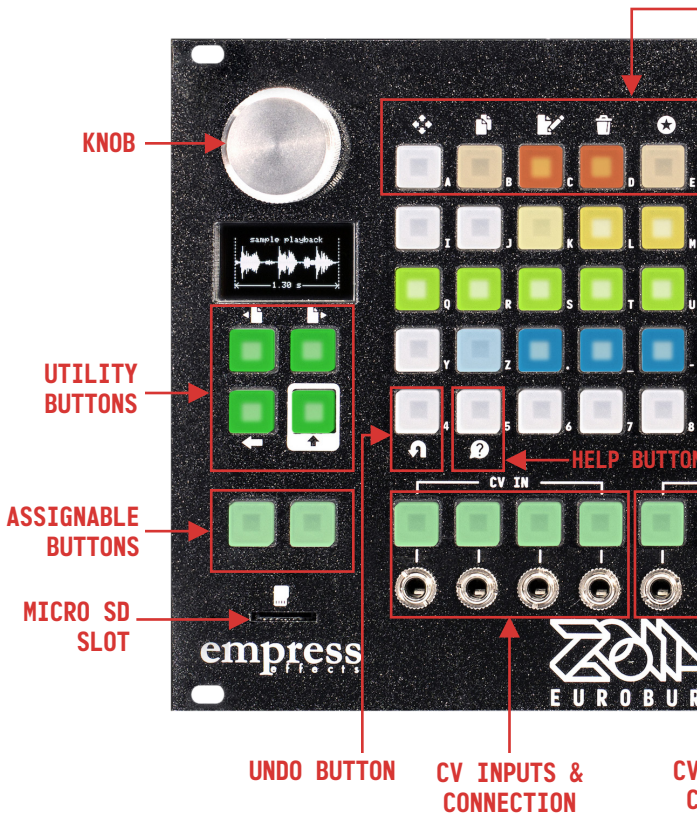
a different page, simply select the module, press  move, navigate to the destination page, then press an unoccupied grid button.

COPY A MODULE

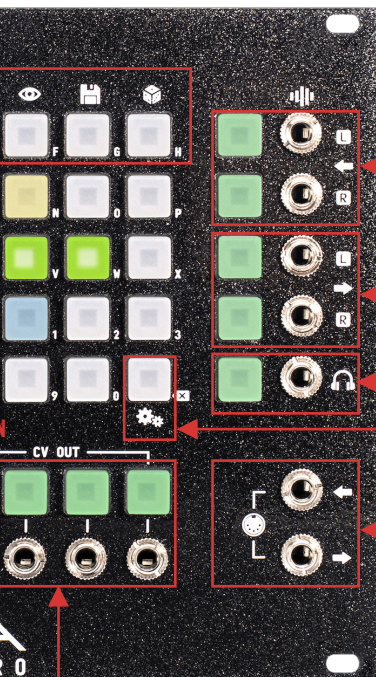
Select a module and press  copy. Select where you want to place it on the grid, then from the menu, select which connections, if any, you'd like to keep for the new module, then select "Done?". To copy a module to a different page, simply select the module, press  copy, navigate to the destination page, then press an unoccupied grid button.

Note: If you place, move, or copy a module into a space where it doesn't fit, it will overlap a previous module, wrap itself to the next row of buttons, or lose some buttons at the bottom corner of the page. Use a new page instead if you need to.

MODULE LAYOUT



ACTION BUTTONS



AUDIO INPUTS &
CONNECTION BUTTONS

AUDIO OUTPUTS &
CONNECTION BUTTONS

HEADPHONE OUTPUT &
VOLUME BUTTON
CONFIG. MENU BUTTON

MIDI I/O



CV OUT
CV OUTPUTS &
CONNECTION
BUTTONS

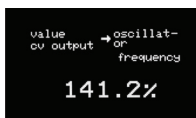
CONNECTIONS


A connection links one button to another. Use them to allow modules to interact with each other or themselves. Think of a connection like a patch cable. For example, you can connect an oscillator to a VCA, a stompswitch to a tap tempo, or you can feed a delay line back on itself to create repeats. Be extra careful when connecting an audio module's output back into its own input. This will create a feedback loop, and while it can be useful, it can also get out of hand very quickly!

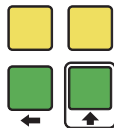
MAKE A CONNECTION

When two parameters (buttons) you wish to connect are on the same page, hold them down at the same time.


The screen will show you what you're connecting. Turn the  knob to adjust the strength of the connection, or click the  knob to change units. When two modules you'd like to connect are on different pages, press one button, move to the other page and press the other button.

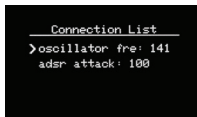





Note: whether bypassed or engaged, changing pages with a parameter selected will display two flashing yellow LEDs to indicate that you're about to make a connection. You can make this connection by pressing a grid button, or cancel by pressing  back.




SELECT A CONNECTION

Press both buttons if on the same page, or press one, then the other if the connection is across pages. From this state you can adjust the strength of the connection by turning the  knob.



You can also select a connection by switching to that parameter's connection list. Press the grid button and press  view until you see the connection list screen. From here you can adjust the strength of each connection listed by using the  knob. Highlight a value, click adjust, make your adjustment and click again to save or press  back to cancel.

DELETE A CONNECTION

This can be done by selecting the connection and pressing  delete.

SEE WHAT IS CONNECTED TO A MODULE PARAMETER

When you press a button, all the buttons it's connected to will light up. You can also see which connections exist in the connection list screen.

SET YOUR CONNECTION STRENGTH

When using connections to alter parameters, it's important to understand how changes will affect your module. The first step is to set your destination parameter to your desired CV bias, which is the point that will either be its minimum (if you apply positive CV), its maximum (if you apply negative CV), its midpoint (if you apply CV that swings between positive and negative), or its resting place (in the absence of applied CV).

Once that is set, the connection strength you set with the **● knob** will determine how far in any given direction your parameter will travel. Click the **● knob** while making a connection to toggle between seeing your connection strength expressed as a % (useful for CV connections) and a dB value (useful for audio connections).

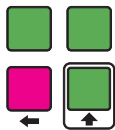
Note: You cannot set a bias point for audio connections.

Note: While you can make module connections across pages, you cannot make connections across patches.

See Patches, page 21.

ENTERING PERFORMANCE MODE



You may wish to prevent ZOLA from creating new connections or deleting existing modules during a live performance. Performance mode helps prevent accidental unwanted changes and lets you focus on your set. You can toggle this mode on and off by pressing **▲ shift** and **◀ back**. You will see the back LED turn magenta to denote that performance mode is active.

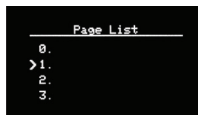


PAGES


A page is represented by one full 8x5 grid of buttons. Each patch can contain up to 64 pages, numbered 0 through 63. Each page can be named, and connections can be made across pages.

PAGE LIST




Press  page left or  page right to enter and navigate through the page list.

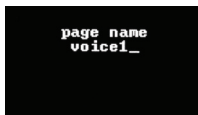


SELECT A PAGE


While in the page list, navigate to the desired page and click the  knob.

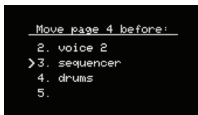
NAME A PAGE

Scroll to a page in the page list and press  edit. From here, you can type in your desired page name. Click the  knob to confirm the name or press  back to cancel. Make sure to save your patch or the name will not be saved. See [Typing Text page 25](#) for more information.




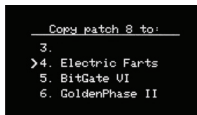
MOVE A PAGE

Scroll to the page you want to move. Press  move. Now select another page. The page that you are moving will be inserted in front of the second page that you select.






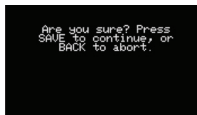
COPY A PAGE

Scroll to the page you want to copy. Press  copy. Now select another page. The page that you are copying will be inserted in front of the second page that you select.








DELETING A PAGE

Press  page left or  page right to enter the page list, scroll to the page you wish to delete and press  delete. You will be asked to confirm the deletion.



IMPORTING A PAGE

Press  page left or  page right to enter the page list, scroll up to Import Pages, and click the  knob. From there, select which patch you'd like to import pages from and click the  knob again. ZOIA will show you a list of all the pages within that patch. Using the  knob, put a star beside all desired pages and click Selection Complete. ZOIA will ask where in your current patch you'd like your pages to go. Click your desired page slot, and ZOIA will push any pages after it down the line to make space. All existing connections within and between pages will be preserved after the Page Import.




PATCHES


A patch represents the entire collection of pages in your page list, including all modules, connections, button values, and page names that you've created. Think of it as the project file that encompasses the whole of your work that you can then save, name, and navigate between using either the knob or the MIDI PC commands.

Presets in the ZOIA pedal and Euroburo are largely interchangeable. The audio I/O, control port, and CV I/O modules will load on both products, but will be inactive on products that don't have that capability. Euroburo-only modules (like CV I/O) that are loaded on a ZOIA pedal will be put on a blank page.

NAME A PATCH


With no module selected, press

 **edit**. From here, you can type in your desired patch name. You can also select a patch from the Patch List and press  **edit**. Click the  **knob** to

confirm the name or press  **back** to cancel. Make sure to save your patch or the name will not be saved. [See Typing Text, page 25](#) for more information.



SAVE A PATCH




Whether a module is selected or not, you can save your patch by pressing  **save**. It is always a good idea to save often.

Note: Saving a patch will write to ZOIA's internal memory, but it won't write to the SD card until prompted to in the config menu. It's

a good idea to save edits to patches with a version number as part of the file name to prevent accidental overwriting. (ie. Hot Fuzz 3)

SELECT A PATCH




There are two ways to do this:

- 1. Knob method:** With no module selected, you can use the  knob to scroll through your Patch List. Click the  knob to select a patch, or press  back to cancel.






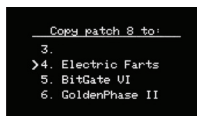
- 2. MIDI Method:** Using an external MIDI controller, you can send the ZOIA a Program Change command on any MIDI channel as selected in the Config Menu.

MOVE A PATCH

In the patch list, scroll to the patch you wish to move and press  move. Then place your patch in the desired location and click the  knob to save or press  back to cancel.




COPY A PATCH

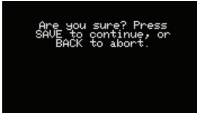
In the patch list, place your cursor next to the patch you wish to copy and press  copy. Then place your copied patch to the location you'd like and click the  knob to save, or press  back to cancel.



Note: Copying a patch will bump all the Patches under your copy location down by 1 slot, and erase patch 63.

DELETE A PATCH


Scroll to a patch from the patch list and press  **delete**. A confirmation screen will come up. Press  **save** to continue or  **back** to abort.

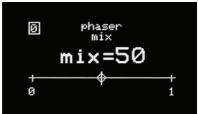


Are you sure? Press
SAVE to continue, or
BACK to abort.

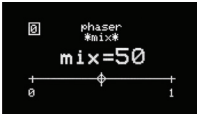
STARRED LIST

When you have a nice big patch built and you'd like to be able to quickly and easily adjust frequently used parameters from the same place, you can add them to the Starred List.

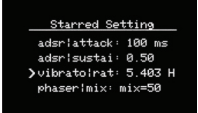
Simply select your desired parameter or connection and press  **star**. You will see asterisks around the parameter or connection name, and that parameter or connection will appear in the Starred List.






phaser
mix
mix=50
0 1



phaser
mix
mix=50
0 1



```
Starred Setting
-----
adsr!attack: 100 ms
adsr!sustain: 0.50
>vibrato!rate: 5.403 H
phaser!mix: mix=50
```

View the Starred List by pressing  **star** with nothing selected. You will see a list of parameters or connections you've added in the order you added them. From here, you can make adjustments to them using the  **knob** or remove them from the list by pressing  **delete**.

STARRED PARAMETER MIDI CC CONTROL


When viewing the Starred List, pressing  **star** again

will allow you to view and assign midi CC's to the starred parameters. Selecting the 'learn' option will assign the next CC received by ZOIA to that parameter. You can set which channel ZOIA will listen for starred CC's in the Config Menu.

CONFIG MENU



The Config Menu is the global options menu for the ZOIA. Here, you have access to options that are not specific to modules, pages, or patches.

```
Config (0.18)
>Save and exit?
CPort: exp
Midi Ch: 1
Patch System: scroll
```

Save and exit?: Press this to save any changes you have made and return. If you press  **back** instead, your changes will not be saved.

Midi Ch: Select which MIDI channel ZOIA will respond to when sending Program Changes, from 1-16. [See MIDI, page 26](#) for more info.

Start Patch: Select which patch you'd like ZOIA to boot into when you power it on.

Auto Shift: Turning on Auto Shift will change the behaviour of the top row of buttons on the grid, so that they will perform their secondary function *without* having to press  **shift**. This can be very handy when building a patch. You can still place, edit, and connect modules on that row by pressing  **shift** while pressing a grid button. It's basically reversing the behaviour, but only for the top row. We recommend against placing modules like keyboard or pushbutton in the top row if you make regular use of the Auto Shift feature.

Starred CC ch: Select which channel ZOIA will listen to for starred parameter MIDI CC messages.

MIDI CC Setup: on (default): Loading a patch with MIDI CC Out modules will send the corresponding MIDI CC messages with the initial values upon patch load.

Patches to SD: Manually export all the patches from ZOIA's internal memory onto the SD card. You can select an existing folder on the SD card, or create a new one. If saving to an existing folder, any patch with the same name will be overwritten.

Patches from SD: Manually import all the patches from the selected SD card folder. Each time patches are imported, a backup folder is created that contains the patches currently loaded on ZOIA. The number of backup folders is limited to 256.

DSP Usage: Shows RAM usage, DSP used by the connection matrix, and DSP usage of the individual modules in your current patch.

Factory Reset: Erase all saved patches and reset Config Menu to its default factory setting.

Hide Firmware: This prevents ZOIA from beginning a firmware update during the boot sequence by renaming any detected firmware files on the card .

TYPING TEXT

Use the button grid to enter text when naming or renaming a patch, page, or module. You can enter a space using



patch name
THE HARRISBURG_

the **_ space** key, delete a character using the **✕ delete** key, or enter a capital letter by pressing the **⬆ shift** key and the letter.

Use the rotary knob to move the cursor around, and click the knob to enter your changes, or press **⬅ back** to cancel.

MIDI

ON-BOARD 1/8" TRS MIDI PORTS

These can be used with the included 1/8" TRS to-5-pin dongles. These ports are designed to work with MIDI only and will not respond to CV from your external synth modules. ZOIA uses MIDI Type A spec classification dongles, the same type used by manufacturers such as Make Noise, Korg, Akai, and many others.

CONTROLLING ZOIA WITH MIDI

While any MIDI module can be set to interact with any MIDI channel from 1-16, the ZOIA has some basic functionality that is not directly module related. You can activate patches, bypass, and engage your ZOIA by sending it MIDI messages.

LOAD A PATCH VIA MIDI (PROGRAM CHANGE MESSAGES)

You can activate a patch by sending a MIDI program change message on the MIDI channel selected in the Config Menu. Send the Program Change number that corresponds to the patch you'd like to load, keeping in mind that ZOIA patches begin at number 0.

ENGAGE AND BYPASS VIA MIDI

You can change the bypass state of ZOIA by sending Control Change #60 with a value of 127 (engaged), 0 (bypassed), or 64 (toggle bypass state) on the selected MIDI channel.

PERFORM A FIRMWARE UPDATE

1. Download the firmware file off the website www.empresseffects.com/zoia-firmware
2. Copy the .bin file to the root directory of the microSD card. The card must be specifically be SDHC or SDXC, and it must be formatted FAT32, with a single partition.
3. Insert the microSD card then power on the unit. If you're using the ZOIA pedal, make sure that the orientation of the card is such that the pins are facing **upward**, or else the ZOIA won't see the card. If you're using ZOIA Euroburo, the pins on your microSD card should be facing **downward**.
4. The ZOIA will boot, load, and verify the firmware file. There are two processors on the ZOIA. It will take approximately 40 seconds for the 2nd processor to be programmed.

SAVING AND LOADING PATCHES FROM THE MICRO SD CARD

A user-curated repository of patches can be found at patchstorage.com

You can import and export patches to and from the Micro SD card from the Patches to SD and Patches from SD options in the Config Menu. [See Config Menu, page 24](#) for more information.

Patches being loaded from the SD card to the ZOIA must be prefaced with a 3 digit patch number (ie. 001, 002, 003, etc.) and have a .bin file extension. (ie. 003_Hot_Fuzz_3.bin)

If you're using the ZOIA pedal, make sure that the orientation of the card is such that the pins are facing **upward**, or else the ZOIA won't see the card. If you're using ZOIA Euroburo, the pins on your microSD card should be facing **downward**.

SPECIFICATIONS

Input Impedance: $\geq 1\text{M}\Omega$

Output Impedance: 100Ω

Frequency Response (-3dB): 10Hz – 23.4kHz

Total Harmonic Distortion: 0.22%

Dynamic Range: 105.5 dBA

Required Current (eurorack case): +12v 300mA

Required Current (desktop enclosure): 9-12v 300mA

Power Input Connector: 2.1mm Barrel Connector

Size: 34hp Eurorack Format Module

Depth (module only): 28mm (including power cable)

REGULATORY COMPLIANCE INFORMATION

FCC (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party in the USA

Americas Compliance Consulting LLC dba iCertifi
1001 SW Disk Drive, Ste 250
Bend, Oregon 97702 USA
FCC_sDoC@icertifi.com
icertifi.com

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 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.

ICES-003 (Canada)

CAN ICES-003(B) / NMB-003(B)

CE (European Union)

This declaration of conformity is issued under the sole responsibility of Empress Effects Inc- 105-62 Steacie Dr, Kanata Ontario K2K 2A9. The device identified on the front page of this manual is in conformity with the requirements of the European Union's Electromagnetic

Compatibility Directive 2014/30/EU, in accordance with the following harmonized standards:

- EN 55032:2015/A11:2020 – Electromagnetic compatibility of multimedia equipment - Emission Requirements
- EN 61000-3-2:2014 – Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
- EN 61000-3-3:2013 – Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
- EN 55035:2017/A11:2020 – Electromagnetic compatibility of multimedia equipment - Immunity Requirements

CK

Name: Colin King

Title: Design Engineer

Company: Empress Effects Inc

Date: August 19, 2023

Location: 105-62 Steacie Dr, Kanata Ontario K2K 2A9

WEEE (2012/19/EU)



This product must not be disposed of with regular household waste. In compliance with WEEE regulations, please take this product to a designated collection facility or return to the supplier for proper recycling. Comply with local laws and regulations for disposal. Contact your local authority or support@empresseffects.com for specific information.



Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling. Ensure that plastic bags, packaging, etc. are properly disposed of. Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.



THANK YOU

The ZOIA wouldn't be possible without our team of beta testers, factory patch makers, videographers, and co-op coders. Thanks to KNOBs, Andreas Paleologos, Daniel Fisher, Mitch Lantz, Simon Labelle, JT Norton, Ash Sargant, Nihal / Fireghosting, Evan Sirchuk, Gabriel Tanaka, Paul Uhl, Ian Pritchard, Benn Jordan, Erik Ångman, Joseph Pailo, aBunchOfPedals, Jake Miller, Patrick Zdunich, Eric Nyffeler, Alexander C. Sprungle, Mike Moger, Christopher HM Jacques, Willem Zenhorst, Martha Plachetka, Matt Lowery, Aldo, Jeremy/Red Means Recording, Kevin Darouian, Matthew Cyr, Taylor Hunt, Colin King, and Andy Nguyen.

FOR SUPPORT AND TO REPORT BUGS

Please Call 1-855-ZOIA-SOS (1-855-964-2767)
or email support@empresseffects.com

FOR FIRMWARE UPDATES

www.empresseffects.com/ZOIA-firmware

FIND GREAT ZOIA PATCHES

www.patchstorage.com/platform/ZOIA

TO UNDERSTAND WHAT ALL THE VARIOUS MODULES DO, CHECK OUT THE MODULE INDEX

www.empresseffects.com/ZOIA-module-index

TO MAKE FEATURE REQUESTS, JOIN OUR IDEA FORUM

www.empresseffects.com/idea-forum

FOR HELPFUL TIPS AND TRICKS

www.empresseffects.com/ZOIA-tips-and-tricks

JOIN THE EMPRESS ZOIA USERS FACEBOOK GROUP

www.facebook.com/groups/EmpressZOIAUsers

JOIN THE DISCUSSION ON REDDIT

www.reddit.com/r/ZOIA



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