# GHOST NOTE
## AUDIO

# SWIRLS

## USER MANUAL

# CONTROLS

**Outputs**
Stereo output.
Line-level, 1/4" connectors

**Rate**
Controls the frequency of the low-frequency oscillator (LFO) for the "manual" chorus setting

**Left**
Controls the depth of "manual" modulation for the left delay line

**Voices**
Adjusts the number of voices (2, 4 or 6) for the Detune effect

**Ratio**
Sets compression ratio, from 1:1 (no effect) to 10:1

**Preset**
Enables "Preset Mode" for the chorus, adding a pair of modulating LFOs to the delay lines; one fast and one slow

**Preset**
Switches between two presets (red and blue). When tweaking the controls, the selected preset is automatically updated in realtime.

**Input**
Controls the input gain for the pedal

**Center**
Controls the depth of "manual" modulation for the center delay line

**Inputs**
Stereo Input.
Line-level, 1/4" connectors

**Low**
Controls the wet mix for the chorus

**Right**
Controls the depth of "manual" modulation for the right delay line

**Mix**
Controls the wet mix for the Detune effect

**Attack**
Adjusts the attack speed of the compressor, up to 170ms. Slower attack (clockwise) creates a more defined plosive "pop" effect

**Detune**
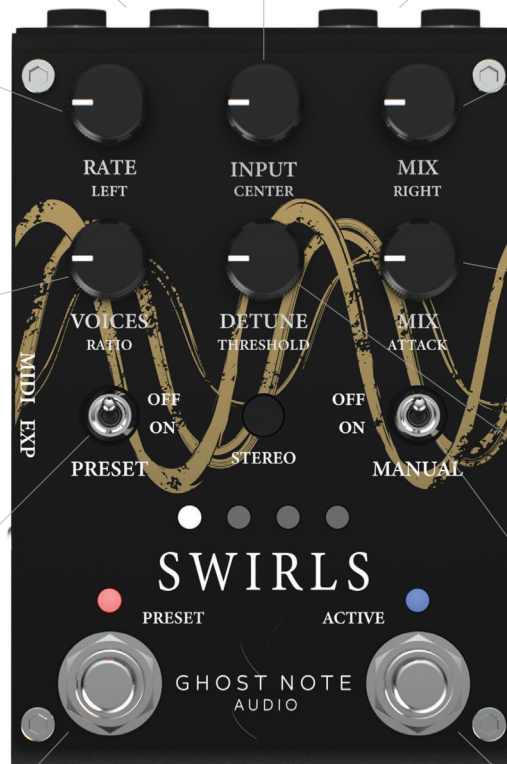Sets the pitch spread between the voices, up to 50 cent

**Threshold**
Adjusts the compressor threshold, where compression starts to occur

**Manual**
Enables "Manual Mode" for the chorus, adding a second modulating LFO to the delay lines

**Active**
Activates or bypasses the pedal, using a relay-based true bypass circuit.

**Stereo**
Press to Enable or Disable Stereo operation

**LED Indicator Lights**
The four LEDs light up to indicate the amount of compression being applied, with each light indicating a 2dB reduction in volume.

RATE — LEFT
INPUT — CENTER
MIX — RIGHT
VOICES — RATIO
DETUNE — THRESHOLD
MIX — ATTACK
MIDI EXP
OFF ON — PRESET
STEREO
OFF ON — MANUAL
SWIRLS
PRESET — ACTIVE
GHOST NOTE AUDIO

# MIDI CONTROL

**MIDI CC Control**

| | |
|---|---|
| **CC #1** | Rate |
| **CC #2** | Input Gain |
| **CC #3** | Chorus Mix |
| **CC #4** | Voices |
| **CC #5** | Detune |
| **CC #6** | Detune Mix |
| **CC #7** | Left Intensity |
| **CC #8** | Centre Intensity |
| **CC #9** | Right Intensity |
| **CC #10** | Comp. Ratio |
| **CC #11** | Comp. Threshold |
| **CC #12** | Comp. Attack |
| **CC #13** | Stereo Mode |
| **CC #14** | Preset Mode |
| **CC #15** | Manual Mode |
| **CC #16** | Change Preset |
| **CC #17** | Active |

**MIDI Setup Mode**

To select the active MIDI channel, hold down the MODE button and press the PRESET footswitch. This enters Midi Setup mode.

Press the MODE button to cycle through channels 0-15. The four LEDs indicate, in binary, which channel is selected.

Press the PRESET footswitch again to exit Midi Setup mode.

**MIDI Channel Select**

| LEDs | Channel |
|---|---|
| ● ● ● ● | 0 (Channel 1) |
| ○ ● ● ● | 1 (Channel 2) |
| ● ○ ● ● | 2 (Channel 3) |
| ○ ○ ● ● | 3 (Channel 4) |
| ● ● ○ ● | 4 (Channel 5) |
| ○ ● ○ ● | 5 (Channel 6) |
| ● ○ ○ ● | 6 (Channel 7) |
| ○ ○ ○ ● | 7 (Channel 8) |
| ● ● ● ○ | 8 (Channel 9) |
| ○ ● ● ○ | 9 (Channel 10) |
| ● ○ ● ○ | 10 (Channel 11) |
| ○ ○ ● ○ | 11 (Channel 12) |
| ● ● ○ ○ | 12 (Channel 13) |
| ○ ● ○ ○ | 13 (Channel 14) |
| ● ○ ○ ○ | 14 (Channel 15) |
| ○ ○ ○ ○ | 15 (Channel 16) |

# EXPRESSION CONTROL

**Expression Pedal Setup**

To select what the expression pedal controls, hold down the STEREO button and press the ACTIVE footswitch. This enters Expression Setup mode.

Press the STEREO button to cycle through the various modes. The 4 White LEDs as well as the footswitch LEDs indicate what control mode is active

Press the ACTIVE footswitch again to exit Expression Setup mode.

**Expression Pedal Settings**

| LEDs | Setting |
|---|---|
| ◐ ● ● ● ● ● | Toggle Preset - use with momentary switch (light blinks) |
| ● ● ● ● ● ● | Latch Preset - use with continous controller or latching switch |
| ● ○ ● ● ● ● | Control Chorus Rate |
| ● ● ○ ● ● ● | Control Input Gain |
| ● ● ● ○ ● ● | Control Chorus Mix |
| ● ● ● ● ○ ● | Control Detune Mix |
| ● ● ● ● ● ◐ | Toggle Active - use with momentary switch (light blinks) |
| ● ● ● ● ● ● | Toggle Active - use with continuous controller or latching switch |

# SPECIFICATIONS

| | |
|---|---|
| **Input Impedance** | 500k Ohm |
| **Output Impedance** | 150 Ohm |
| **Maximum Input Level** | +6.2 dBu |
| **Maximum Output Level** | +4.0 dBu |
| **Power Connector** | 2.1mm Centre Negative |
| **Input Voltage** | 9V DC (or 5V USB-C power) |
| **Input Current** | 100mA |
| **Samplerate** | 48Khz |
| **Bit Depth** | 24 Bit |
| **Frequency Response** | 40Hz - 20KHz |
| **Midi Input** | 3.5mm TRS (Type-A) |
| **Expression Input** | 3.5mm TRS (T=Out, R=Power, S=GND) |
| **Width** | 83mm (3.25") |
| **Height** | 125mm (5") |
| **Thickness (incl. Knobs)** | 55mm (2.15") |
| **Weight** | 590 grams (1.3 lbs) |

# FURTHER INFORMATION

## Audio Connections

The pedal has two 1/4″ unbalanced inputs and outputs. The inputs can accept both line-level or instrument-level signals. Either of the two inputs can be used, and if both are connected, the signals will be mixed together evenly. Likewise, the pedal has two outputs, but they produce the same signal, allowing connection to more than one target device.

## USB Power

The pedal can be powered over USB. This can be great for reducing the number of cables, if you're using the unit on your desk, next to a computer. However, the USB power input is unregulated and can introduce additional noise from your computer over the USB power bus and cause unwanted noise on the output.

For the best results, we always recommend using a dedicated, high quality 9v power supply.

## Firmware Updates

In order to update the firmware version on your pedal, or to upload a different effect altoghether to your hardware, the procedure is simple.

First, make sure the power supply and USB cables are disconnected and that the pedal is off.

Next, hold down the Shift key, and while still pressing it down, connect the USB cable.

This will set the pedal into "bootloader mode", and it will present itself to your computer as a USB storage device.

From there, we can simply download the firmware file we want to upload, and copy it across to the USB storage device. The transfer should only take a second or two, after which the device resets, and your new firmware will be active.

## Faceplate Swap

The faceplate can be reversed, the back side contains the same silkscreen printing, but any gold accents are removed, for a cleaner, more readable interface.

The faceplate is attached using 3mm hex key screws - a hex key is included in the box with every pedal.

## Reprogramming your Pedal

This pedal can be re-programmed to behave as any other pedal in the Daedalus line-up. You do not need to swap out the faceplate in order to test a new effect.

The procedure is the same as when updating the firmware, but you just use the firmware for another effect model. It is perfectly safe (and even encouraged!) to flash your pedal with the firmware of different effect models, if you would like to test them out and see what they sound like.

# WARRANTY INFORMATION

## Ghost Note Audio 2-Year Limited Warranty

### Coverage

Ghost Note Audio warrants that your product will be free from defects in materials and workmanship for a period of two (2) years from the original date of purchase. During this period, we will repair or replace (at our discretion) any product found to be defective under normal use.

### Exclusions

This warranty does not cover:

- Damage caused by misuse, abuse, accidents, or neglect.
- Unauthorized modifications, alterations, or repairs.
- Damage due to improper power supply, incorrect connections, or unsuitable operating conditions.
- Normal wear and tear (including cosmetic damage such as scratches, finish wear, or worn knobs/switches).
- Loss, theft, fire, flood, lightning, or other natural disasters.

### Limits of Liability

Our responsibility is strictly limited to the repair or replacement of defective products as described above. Ghost Note Audio shall not be held liable for any incidental, indirect, or consequential damages, including but not limited to: loss of profits, loss of savings, or damage to other equipment. Liability shall never exceed the original purchase price of the product.

### How to Obtain Service

If you believe your pedal is defective and within warranty coverage:

1. If you purchased your unit from a 3rd party retailer or distributor, please contact them directly, and allow them to arrange for warranty services in collaboration with us. All items purchased from authorized Ghost Note Audio Dealers are subject to the Dealer's terms and conditions for Returns. Items purchased from authorized Ghost Note Audio Dealers should not be returned directly to Ghost Note Audio unless you are specifically instructed to do so by us.
2. If you purchased your unit directly from us (via https://ghostnoteaudio.uk) you can contact us through our website's Contact Form to arrange for repairs or replacement.
3. The customer is responsible for shipping the product to Ghost Note Audio. In cases where the fault is clearly the result of a manufacturing defect or a known production issue, we will reimburse your postage cost (subject to a 25 GBP limit). Please discuss the issue with us to determine if you are eligible for refunded postage.
4. If the repair is covered under warranty, return shipping will be covered by us.
5. Non-warranty repairs may be billed for labor and parts, and return shipping will be the customer's responsibility.

### Transferability

This warranty is offered only to the original purchaser and is non-transferable.

By using this product, the purchaser accepts all terms outlined in this warranty.