bee bee dee

USER'S MANUAL

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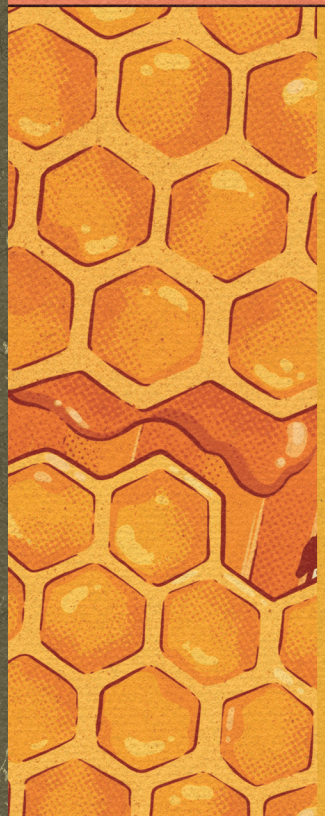

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WELCOME TO THE HIVE

We've always been drawn to the way analog delay feels.
The way it darkens just right.
The way it warbles.
The way it makes time musical.

This is our love letter to that sound.

We built the **BEE BEE DEE** as Beetronics' first-ever delay, and we knew it had to be **special**.

Analog where it matters.
Digital where it inspires.
Every sound a nod to the past, every function a step into the future.

Whether you're chasing **slapbacks** or **spiraling** into pitch-shifted chaos, the **BEE BEE DEE** is designed to be **simple to use, but deep enough to keep you exploring.**

The **BEE BEE DEE** is an analog delay designed to do everything you love about classic echoes, and everything you didn't know an analog delay could do.

At its core are two bucket brigade chips delivering warm, rich, musical repeats with unmistakable character. But behind that analog path is a smart control system, a digital engine that lets you bend time, shift pitch, and move your sound in ways no vintage circuit ever could.

It gives you movement, texture, and life. It gives you control, deep, expressive, and immediate, **without ever pulling you out of the music.**

INSIDE ARE 3 DELAY MODES:

CLASSIC
smooth sine modulation and timeless tone.

LO-FI
Irregular modulation, unstable filters, and shifting character.

PITCH
Rhythmic harmonies, melodic loops, and time-warped ideas.

You can push it into feedback.Jump it up an octave. Burst modulation like punctuation. **EVERYTHING MOVES WHEN YOU DO.**

TONE
Tone filter: **LP (low-pass)**, **HP (high-pass)**, **“FLAT”** in center

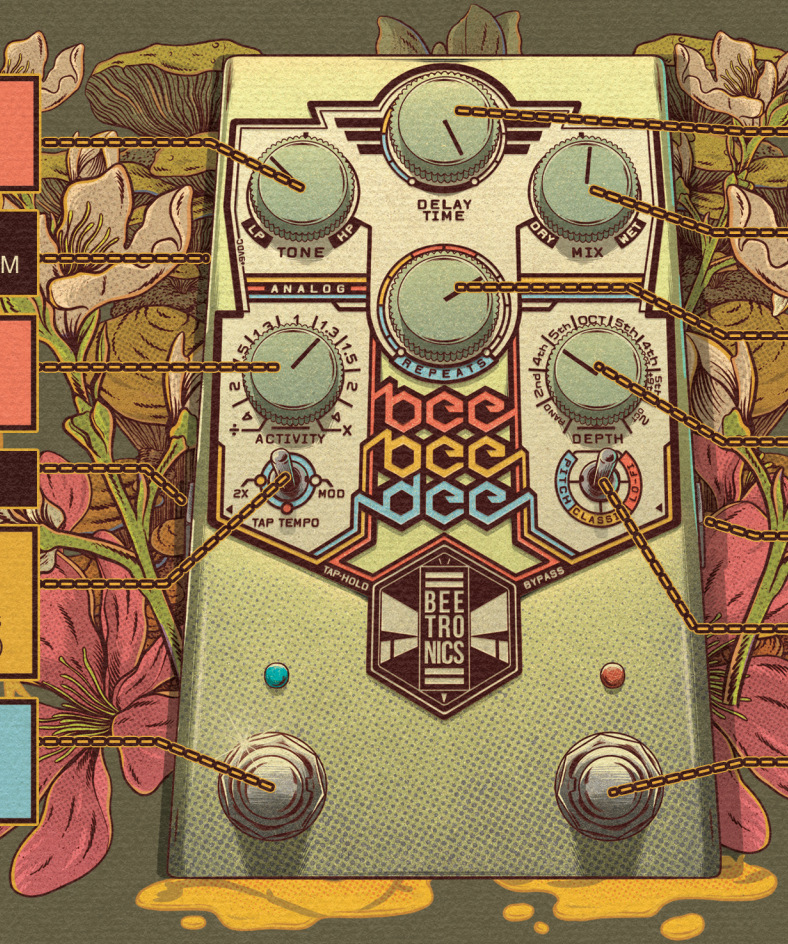
DC POWER JACK
+9VDC center-negative – 250mA – 2.1MM

ACTIVITY
MOD SPEED or
PITCH RATE (tempo-synced)

OUTPUT

PERFORMANCE TOGGLE
Choose performance footswitch function: **TAP, 2x** (octave jump/doubles delay time), or **MOD** (modulation on/off)

PERFORMANCE FOOTSWITCH
TAP or **HOLD** for: **TAP TEMPO, 2x**, or **MOD** functions.



TIME
Sets delay length

MIX
Blend of **DRY** and **WET** signals

REPEATS
Number of echoes

DEPTH
Modulation intensity / selects pitch

INPUT

MODE TOGGLE
Select Classic, Lo-Fi, or Pitch Modes

BYPASS FOOTSWITCH
TAP: Engage effect
HOLD: momentary Feedback boost

Input Impedance: **1M**
Output Impedance: **510ohms**
Power Consumption: **200 mA**
Buffered Bypass

Circuit and Concept Design by **Filipe Alberti** and **Filipe Pampuri**
Faceplate and Illustrations by **Kin Noise**
Manual Design by **Leandro Benyk**

KNOW YOUR KNOBS

EVERYTHING THAT **SHAPES**, SHIFTS, AND BRINGS YOUR **DELAY TO LIFE**

TIME
Sets the **length** of your delay from tight slapbacks to long, spacious echoes.

- **600ms** of clean analog repeats sits around **1** oclock on the knob. Beyond that, you start stretching the **BBD** circuit adding noise, character and lo-fi charm.
- Use tap tempo to go even further, up to **2** seconds.

REPEATS
Controls how many echoes you hear from a single repeat to infinite self-oscillation.

- The feedback circuit is carefully tuned to stay musical and **stable**, letting you freeze phrases or build evolving **loops** without things spiraling out of control.

MIX
Blends your dry and delayed signals.

- Go from subtle ambiance to fully wet perfect for layered sound design or **ambient swells.**

KNOW YOUR KNOBS

TONE (HP/LP TONE FILTER)
Shapes the **EQ** of your repeats using a simple, powerful **filter.**

- The **center** position is **flat.**
- Turn left for **LP** (Low-Pass) darker, warmer echoes.
- Turn right for **HP** (High-Pass) brighter, thinner repeats with a crisp edge.
- Great for defining the mood of your delay or for taming noise when **stretching delay** time beyond clean ranges.

DEPTH
Controls the intensity of **modulation.**

- In **Classic** and **Lo-Fi** modes, it sets how deep the time warps.
- In **Pitch mode**, it selects your target pitch intervals.

ACTIVITY
Sets the speed of modulation or pitch shifts.

- In **Classic**: smooth, sine-wave motion.
- In **Lo-Fi:** unpredictable, irregular movement.
- In **Pitch**: tempo-synced pitch steps with editable subdivisions.

KNOW YOUR KNOBS

PERFORMANCE TOGGLE
(LEFT TOGGLE)

This switch decides how the left footswitch behaves like choosing your tool for the moment.

- **TAP:** Set your tempo on the fly.
- **2X:** Halves the delay time, pitching everything up or down an octave depending on where you are.
- **MOD:** Use the footswitch to turn modulation on/off or inject it momentarily like a burst of movement.

Tap to latch. **HOLD** for expressive, momentary jumps and returns.

DELAY MODE
(RIGHT TOGGLE)

Switches between three voices inside the hive:

- **CLASSIC:** Set your tempo on the fly.
- **Lo-Fi:** Textured and unstable
- **Pitch:** Harmonically shifting and expressive

PITCH MODE

MELODIC. RHYTHMIC. **OTHERWORLDLY**

Pitch Mode turns delay into a musical instrument.

Your echoes shift in pitch, creating harmonies, rhythmic patterns, and unexpected textures. It's driven by a softened square-wave modulation, gently gliding delay time up and down in **rhythmic steps.**

The movement stays locked to tempo, making it feel tight, reactive, and alive.

Because the **pitch shift affects** the entire feedback path, your **phrases** bend and loop in surprising ways - especially at longer delay times, where **things get deep** and **strange**.

USE THE **TONE** CONTROL TO SHAPE YOUR SOUND!

LEFT (LP)
To smooth out **artifacts**

RIGHT (HP)
To embrace the **noise** and **grit**.

PITCH MODE IS WHERE SOUND BECOMES **PLAY.**

What you send in **comes back** transformed sometimes **echoing**, sometimes **answering.**

LO-FI MODE

UNSTABLE. TEXTURED. **ALIVE.**

Lo-Fi Mode takes the **BBD** sound and pushes it into stranger territory. The repeats are darker, grittier, and more unpredictable, a little noisier, a little moodier, and full of life.

The modulation here is irregular, constantly shifting both delay time and tone. What makes it unique is how it also modulates the **TONE** filter, making your repeats get brighter and darker as they echo and drift.

With the right settings, it can make the delay seem to fade in and out, as if it's breathing. Turn right for **HP (High-Pass)**, brighter, thinner repeats with a crisp edge. Great for defining the mood of your delay or for taming noise when stretching delay time beyond clean ranges.

MODULATION CONTROLS:

DEPTH
sets the intensity

ACTIVITY
controls how frequently it moves

You can turn modulation off by rolling down **DEPTH**, or flip the Performance Toggle (left toggle) to **MOD** and use the footswitch to toggle it on and off, latched or momentary.

LO-FI MODE IS WHERE THINGS **GET WEIRD** AND SOMETIMES, THATS WHERE THE **MAGIC IS.**

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PITCH MODE

CONTROL THE MOVEMENT. **SHAPE THE MELODY**

PITCH MODE lets you decide how far, how fast, and when your repeats shift. Its **expressive**, synced, and full of surprises.

ACTIVITY

Sets the tempo-synced rate of the pitch modulation.

Center = 1:1 | **Left** = slower (multipliers) | **Right** = faster (dividers)

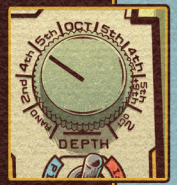
Always **locked** to the delay time for tight, rhythmic results.
The **modulation** is always pulsing.

YOU CAN PLAY ALONG WITH ITS **RHYTHM**, OR IF SYNCING TO A TRACK OR CLICK **TAP THE LEFT FOOTSWITCH ONCE** (IN TAP MODE, SET BY THE PERFORMANCE TOGGLE) TO **RE-SYNC THE CYCLE.**

DEPTH

Selects the pitch interval:

Left of center: Rand, 2nd, 4th, 5th | **Center:** Octave | **Right of center:** 5th+Oct, 4th+Oct, 5th+9th, 2 Oct (Oct + 2 Oct)



Octave is symmetrical, the shift sounds the same in either direction. Other intervals invert when the pitch **LFO moves** up or down for example, a **4th up becomes a 5th down.**

YOU CAN ALSO SET WHETHER THE **MODULATION** CYCLE BEGINS ON THE **DOWNBEAT OR UPBEAT.** IN THE GLOBAL SETTINGS.

PITCH MODE

TAKE YOUR DELAY PERFORMANCE TO **NEW EXPRESSIVE** HEIGHTS:

MOD TOGGLE + PERFORMANCE SWITCH

Control **PITCH ON/OFF** - momentary or latched.

2X MODE

Double or halve the delay time, creating a full octave jump.

HOLD BOTH FOOTSWITCHES

Combine the feedback boost (from **BYPASS**) with a **2X pitch** shift for wild, expressive feedback layers.

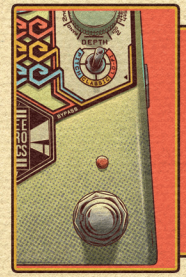
PITCH MODE TURNS YOUR DELAY INTO A MUSICAL COLLABORATOR. YOU PLAY, IT PLAYS BACK. **REIMAGINED.** WHAT YOU SEND IN **COMES BACK** TRANSFORMED SOMETIMES **ECHOING**, SOMETIMES **ANSWERING.**

FOOTSWITCH AND PERFORMANCE TRICKS

EVERYTHING MOVES **WHEN YOU DO**

The **BEE BEE DEE** gives you more than delay, it gives you control. Both footswitches respond to taps and holds, giving you real-time performance power. Use them solo or **combine** them to shape your sound on the fly.

BYPASS SWITCH



- **TAP**: Turns the pedal on or off
- **HOLD (WHILE OFF)**: momentarily engages the delay, great for accents and dub-style stabs.
  If trails are enabled, repeats will continue after you let go.
- **HOLD (WHILE ON)**: boosts feedback, not infinite, but lifts intensity above the knob's setting.
  Perfect for blooming textures or sustained repeats.

PERFORMANCE SWITCH

Selected via the **left toggle**, this switch puts the creative tools at your feet.

TAP

Set your tempo or shift it mid-flight.

- **TAP** to set delay time
- **HOLD** + **TURN ACTIVITY** to select subdivision

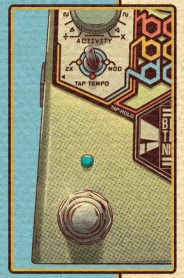
Center = 1:1 | **Left** = slower (multipliers) | **Right** = faster (dividers)

FOOTSWITCH AND PERFORMANCE TRICKS

2X

Jump an octave in a heartbeat and land wherever the echo takes you.

- **TAP** or **HOLD** to double delay speed
- Also shifts the **feedback** line up or down one octave
- Holding returns to normal when released - ideal for **quick jumps or pitch tricks**

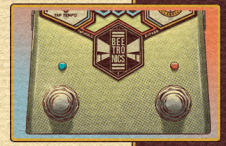


MOD

Drop into modulation. Or pull out clean. Your call.

- **TAP** or **HOLD** to toggle modulation on/off - momentary or latches
- Use it like a mod preset: keep your base delay clean, then engage your dialed-in modulation when needed
- Especially dramatic in **PITCH MODE**, where mod ON/OFF flips the entire **sonic mood**

COMBOS



- Hold **BYPASS** for feedback boost
- Trigger **2X** or **MOD** at the same time using the Performance Switch
- Combine both for spiraling repeats, rising octaves, or dynamic

THIS SYSTEM WORKS IN EVERY MODE. PLAY A PHRASE. FLIP IT. BOOST IT. MODULATE IT. ALL WITH YOUR FEET. **DELAY BECOMES PERFORMANCE.**

GLOBAL SETTINGS

HIDDEN SWITCHES FOR THOSE WHO LIKE TO DIG A LITTLE DEEPER.

HOW TO ENTER:

1 | Unplug the **power supply**. **2** | Hold the **BYPASS** button and reconnect the power supply **3** | **LED**s light up, you are now in Global Settings mode

- Turn any knob to adjust
- To save and exit, hold **BYPASS** for **2 seconds**
- To reset everything, hold the Performance Switch instead

TRAILS

This setting determines whether your delay repeats continue to echo after the pedal is bypassed, or if they stop immediately. Trails are now controlled by the **LEFT TOGGLE** switch:

- **LEFT** position = Trails **ON:** delay trails will naturally fade out
- **RIGHT** position = Trails **OFF:** delay is instantly cut when bypassed

The **LED under the PERFORMANCE SWITCH** confirms your selection:

- **Orange** means trails are **ON**
- **White** means trails are **OFF**

BBD BIAS

Under the hood, your delay is powered by two bucket-brigade chips, and this setting adjusts their internal balance. ● **ACTIVITY** sets **BIAS 1** ● **DEPTH** sets **BIAS 2**
We dial these in at the factory. If you're the kind of player who likes to live dangerously, you can experiment to find your own "sweet spot." If you want to go back, just **HOLD** the **PERFORMANCE SWITCH** while in Global mode to restore the defaults.

MODULATION START POINT

You can customize the modulation's starting point for each mode, allowing you to control exactly how the movement begins. This setting defines whether the modulation initiates from the bottom or the top of its wave, essentially controlling the modulation's initial direction. This feature is especially handy for syncing modulation with your musical ideas, particularly in **Pitch Mode.**

- **Starting from the BOTTOM:** The modulation rises smoothly from where your sound already is. It's gentle and gradual.
- **Starting from the TOP:** The modulation jumps straight to its peak as soon as it's engaged. This creates a more dramatic effect.

To adjust, use the **MODE** toggle to select the delay mode you're editing, then turn the **TIME** knob: fully **CCW** (LED ON) starts from the bottom, fully **CW** (LED OFF) starts from the top, and anywhere in between gives you fine control for timing.

GLOBAL SETTINGS

TRAILS
Select if **repeats** fade naturally after bypass.

LEFT FOOTSWITCH (PERFORMANCE)
- While in Global Mode, **hold** to *restore factory settings*, including bias calibration.

MODULATION START POINT
Choose whether modulation begins from the **bottom** (downbeat) or **top** (upbeat) of its wave.

MODE TOGGLE
Selects which **delay** mode's modulation start point you're adjusting.

RIGHT FOOTSWITCH (BYPASS)
- **Hold** while plugging in power to enter *Global Settings.*
- **Hold** again to save your changes and reboot the pedal.