chase bliss

A field guide to

Reverse Mode C

Table of Contents

Reverse Mode C is a tribute to a very special mode found on the Empress Superdelay, released in 2008.

Made in collaboration with Empress Effects.

9V DC   **Power req: 9V DC Center Negative ~270 mA**

Overview

Reverse Mode C is a very vibrant delay.

It stuffs the ambience around you with color, creating big, moving backgrounds that contrast and uplift your playing.

It can also make some pretty cool reverse delay sounds.

How does it do all that?

Reverse Mode C contains three different echo voices, each one moving in a different direction:

Forward

Reverse

Up or Down Reverse Octave

You can isolate, combine, and sequence these voices to create unique reflections that shift in all directions and span the stereo field, then tie it all together with a variety of flexible modulations that can be synced or drifting.

It's a unique opportunity to bring the space around you to life.

Let's learn how.

Setup

Let's get Reverse Mode C settled into its new home. If you're experienced with pedals you can probably ignore this bit and dive right in.

POWER
Reverse Mode C requires a 9V DC, center negative power supply, with at least 270 mA of current.

You'll see this symbol on your power supply:

I / O
Reverse Mode C can be used in mono, stereo, or mono to stereo. The default setting will automatically work for either mono or stereo:

Mono in, mono out

TS CABLE

Stereo in, stereo out

TSR CABLE

Many stereo devices use dual mono jacks, so you may need a TRS to dual TS-style cable.

If you have a mono input but want to split it to stereo output: Turn on the **MISO** dip switch.

And if you want to use Reverse Mode C to create a wide stereo image: Turn on the **SPREAD** dip switch (pg. 34).

OPTIONS
Reverse Mode C has lots of ways to customize and fine-tune your experience. If you'd like to get right into all that, check out:

- Hidden Options (pg. 16)
- Customize (pg. 34)
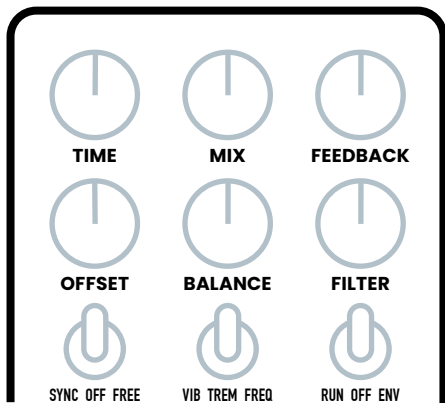- Ramping (pg. 36)
- External Control (pg. 38)

If you don't want to get into all that, it's probably best to start with all dip switches in the off position.

CONTROL

CUSTOMIZE

ON

OFF

ON

OFF

Okay let's get started.

Getting Started

Let's begin somewhere familiar.

TIME   MIX   FEEDBACK

OFFSET   BALANCE   FILTER

SYNC OFF FREE   VIB TREM FREQ   RUN OFF ENV

A nice, clean echo.

The top row of knobs are your essential delay controls. Spend a moment exploring these to get comfortable and try some different **FILTER** positions while you're at it.

Now we can get multidirectional.
multidirectional.
.lanoitɔɘɿibitlum

Rotate the **BALANCE** knob counter-clockwise and notice how the echo gradually changes directions as it morphs from one voice to the next. Now max it out to hear all three voices at once.

BALANCE

Twist the **OFFSET** knob and notice how the voices split apart, each taking on a unique delay time and finding their space in the mix.

OFFSET

Now let's introduce some motion. This is where things come to life.
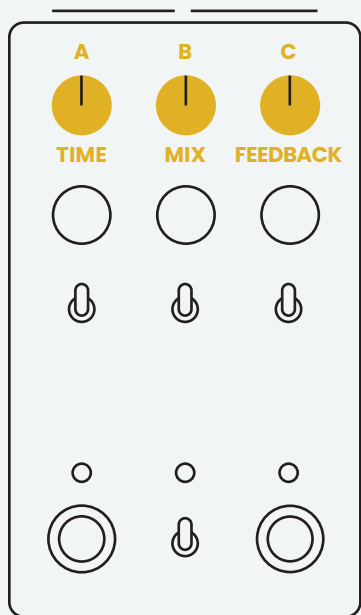
First, a bit of modulation.

And finally, voice sequencing.

RUN OFF ENV

You should sound pretty fantastical by now. Let's get into how all this works.

Controls - Knobs

Space, blend, repeat.

A **TIME**
Sets the global delay time. The maximum time is 4.19 seconds (or 8.38 when set to half sample rate, see footswitches section on pg. 15). You can also use tap tempo to set the delay time.

B **MIX (RAMP)**
Controls the blend between your input signal and the effect. If ramping is engaged (pg. 36), the function of this knob will change. It now controls the speed of the movement.

C **FEEDBACK**
Sets the number of echoes. You can max out this knob without fear of oscillation – in some settings you will get stable, infinite build-up, and in others long, melting decay.

Controls - Knobs
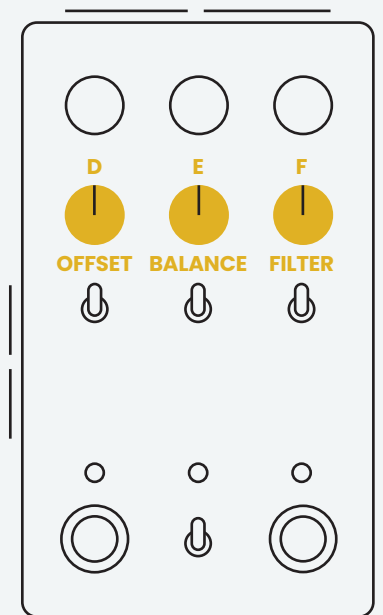
Split, solo, shape.

D **OFFSET**
You can think of **OFFSET** as a secondary time knob. It splits apart the three voices and gives each one a different delay time, all linked to the primary **TIME** knob (or tap tempo). At minimum all three voices share the same global delay setting, but as you turn up the knob they each begin to gradually change in their own way. See pg. 22 for the specifics.

E **BALANCE**
Adjusts the volume of the three voices. The left half of the knob lets you isolate and blend between the voices, and the right half of the knob shifts their relative levels for different mixes. See pg. 21 for the specifics.

F **FILTER**
Allows you to apply either high-pass or low-pass filtering to the echoes. Rotate clockwise to remove low frequencies, or counter-clockwise to remove highs. Leave at noon for no filtering.

Controls - Toggles
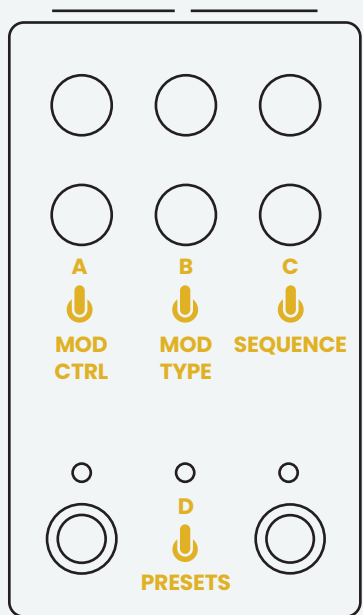
Modulate, morph, save.

A   **MOD CONTROL**

Engages the modulation, and decides whether it is synced or moving freely.

SYNC - On, rate linked to delay time
OFF - Modulation is bypassed
FREE - On, rate independent of delay time

B   **MOD TYPE**

Selects the modulation type.

VIB - Vibrato
TREM - Tremolo
FREQ - Frequency shifting

C   **SEQUENCE**

Engages a sequencer that cycles between the different voices. It can run continuously or be manually triggered by your input signal.

RUN - Synth-style sequencer
**OFF** - No sequencing
ENV - Envelope-controlled sequencer

D   **PRESETS**

The left and right positions each store a preset, while the middle position is live. To save to the right slot, hold the right foot switch for 3 seconds, then add the left footswitch for another 3 seconds. Do the same for the left slot, but start by holding down the left footswitch. The middle LED will blink to indicate success.

Controls - Footswitches
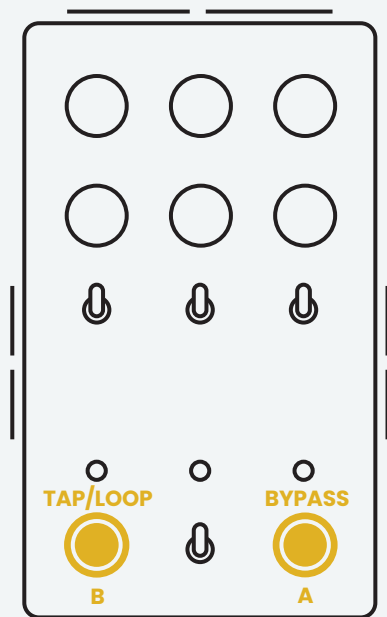
Tap, loop, engage.

A **BYPASS / SAMPLE RATE**
Tap to engage the pedal.

A HOLD
Hold to cut the sample rate in half. This will extend the max delay time up to 8.38 seconds and introduce a mild lo-fi quality. It will also play your existing echoes at half-speed when engaged.

B **TAP / LOOP**
Tap to adjust the delay time.

B HOLD
Hold to capture and repeat the current moment infinitely.

LATCH - The hold commands are momentary by default, meaning their effect will disappear when you remove your foot. Engage the **LATCH** dip switch (pg. 35) if you would rather have them stick around.
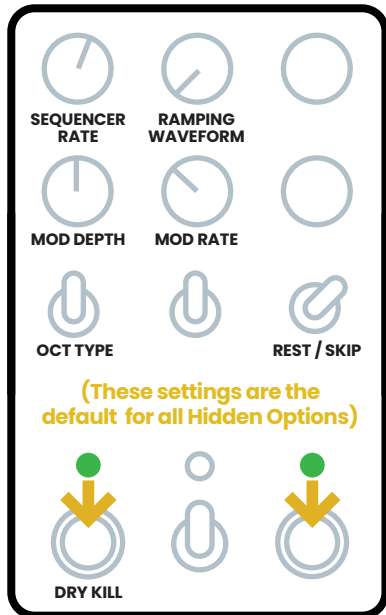
B + A HOLD
HIDDEN OPTIONS
Holding down both footswitches accesses secondary controls that fine-tune various aspects of Reverse Mode C. Keep the switches held down while making your changes, and release when you're finished. See next page for the options.
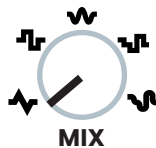
Hidden Options

Hold down both footswitches until the LEDs turn green to access the hidden options.

SEQUENCER
RATE

RAMPING
WAVEFORM

MOD DEPTH

MOD RATE

OCT TYPE

REST / SKIP

(These settings are the
default for all Hidden Options)

DRY KILL

TIME

SEQUENCER RATE
Selects the speed of the sequencer. Each option is a different synced subdivision of the delay time.

MIX

RAMPING WAVEFORM
Selects the shape of the ramping movement (pg. 36). The shapes smoothly blend as you move from one to the next: Triangle, Square, Sine, Random, Smooth Random.

OFFSET

MODULATION DEPTH
Sets the intensity of the modulation.
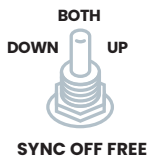
BALANCE

MODULATION RATE
Sets the speed of the modulation. Higher settings will go into audio rate and become a rough textural element.

SWAP - If you prefer that the modulation controls become the primary options, you can make that change using the **SWAP** dip switch (pg.34)

Hidden Options continued

OCTAVE TYPE
Lets you choose whether the reverse octave voice is an upper or lower octave. Only one can be used at a time, but the middle position lets you use both with the sequencer (pg. 31).

BOTH
DOWN   UP
SYNC OFF FREE

REST / SKIP
Controls how the sequencer treats voices that are "muted" by the **BALANCE** knob (details on pg. 21).

REST   SKIP
RUN OFF ENV

RESET
To reset all the hidden options to their default setting, flip the preset toggle to the left position and back to center three times. Once the LEDS start blinking, press both footswitches simultaneously to confirm.
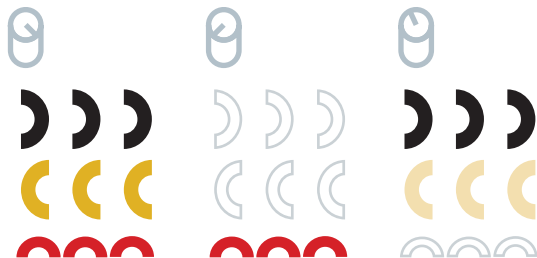
x3

DRY KILL - If you'd like to remove the dry signal from the output (useful for wet/dry set ups), hold the **TAP** switch down while powering up the pedal. Done! This preference will be remembered in the future.
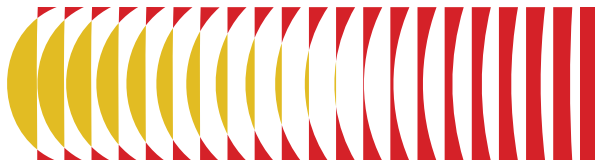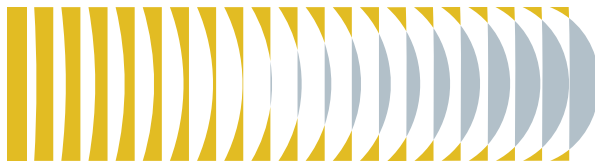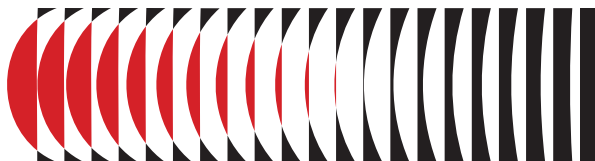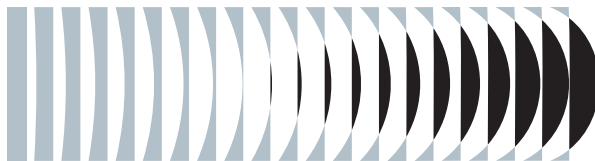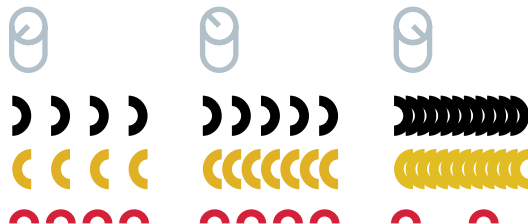
Balance & Offset

These two knobs control Reverse Mode C's voices.

BALANCE sets the volume of the voices.

OFFSET sets the timing of the voices.

Balance

The BALANCE knob controls what voice(s) you hear.

The left half of the knob lets you solo a specific voice, or blend neighboring voices together.
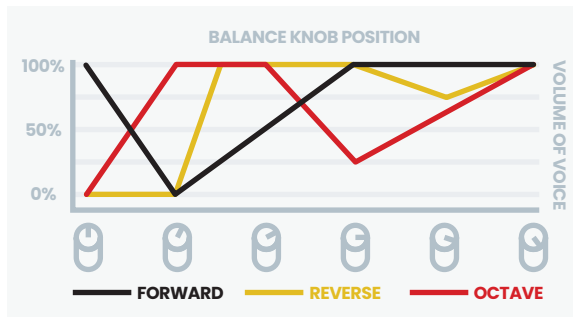
This will be a simple reverse delay.

This will be a blend of both forward and reverse delay.

The right half of the knob plays all three voices at once, and adjusts their relative levels for different mixes.

BALANCE KNOB POSITION

VOLUME OF VOICE

100%

50%

0%

FORWARD   **REVERSE**   **OCTAVE**

Offset

**The OFFSET knob controls the timing of the voices.**

At the minimum position all of the voices share the same delay time, equal to the **TIME** knob (or tap tempo). They are essentially stacked on top of each other.

What **OFFSET** allows you to do is split those voices apart, giving each one its own delay time. This creates space and separation so that each voice can cut through, and also makes for more interesting rhythmic relationships.

The knob sweep contains four targets designed to be pleasing and well-synced.

x1
x1
x1

3/4
1/2
x1

1/8
x1
1/3

1/64
1/64
x2
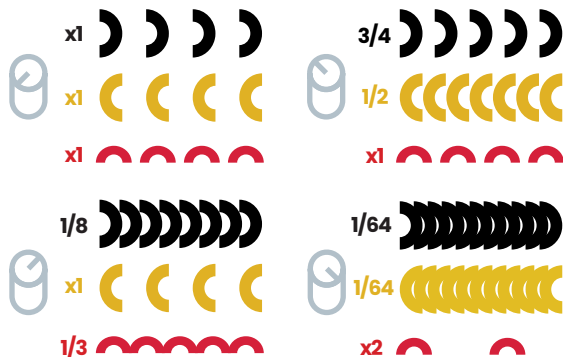
It smoothly adjusts the values as you travel between them to let you discover your own and explore more asynchronous possibilities.
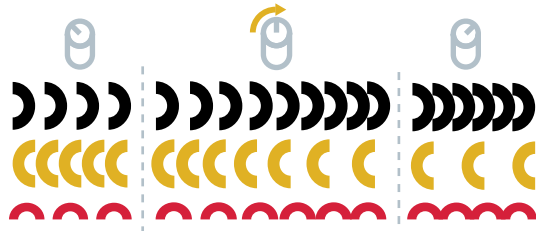
Modulation

Reverse Mode C contains three different types of modulation, each with an alternate variety (accessible via the **MOD TYPE** dip switch, see pg. 35). The movement can be synced to the delay time or free, and pushed into audio rate to become a gritty textural element or create clanging, discordant echoes.

To get things moving, simply select your preferred type and whether you want the motion to be synced to the delay time or free.
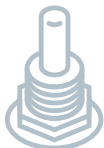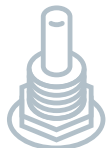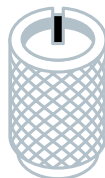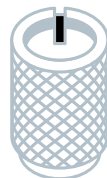
SYNC OFF FREE **VIB TREM FREQ**

There it is.

To customize that movement we can dip into the Hidden Options. You can control the depth and rate by holding down both footswitches and adjusting the **OFFSET** and **BALANCE** knobs.

OFFSET   **BALANCE**
DEPTH   **RATE**

Try maxing out the **RATE** control and exploring the atonal and rough sounds you can get (**DEPTH** will also make a big difference here).

SWAP – If you prefer that the modulation controls become the primary options, you can make that change using the **SWAP** dip switch (pg. 34)

Modulation Types

VIBRATO
Classic tape-style pitch modulation. Gives your echoes a warbly and vintage quality.

ALT MODE
CHORUS
Sparkling, misty pitch modulation. Lends a dream-like quality to the ambience.

TREMOLO (SQUARE)
Abrupt, percussive volume modulation. Chops up your echoes and establishes a strong sense of rhythm.

ALT MODE
TREMOLO (RAMP DOWN)
Plucky, pinging volume modulation. Produces an electronic quality like a synth echoing your playing.

FREQUENCY SHIFTER (UP)
Lush, hypnotic frequency modulation. The stuff of science fiction.
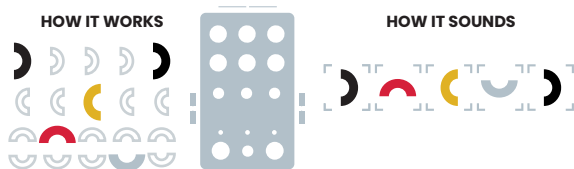
ALT MODE
FREQUENCY SHIFTER (DOWN)
An alternate flavor of frequency shifting that causes your frequencies to continuously spiral downwards.

Sequencing

This is where things get special.

The sequencer introduces an extra layer of motion by stepping through the voices one-by-one, creating a shape-shifting echo.

HOW IT WORKS

HOW IT SOUNDS

Below is the default sequence, which you will notice includes a 4th voice: reverse octave down. This makes for a nice, even 4-step sequence.

FORWARD ECHO **REVERSE OCTAVE UP** **REVERSE ECHO** **REVERSE OCTAVE DOWN**
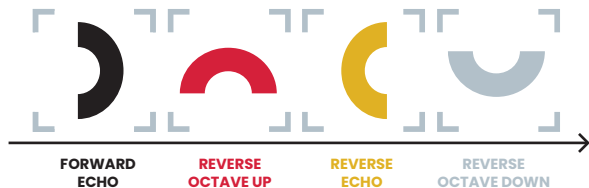
The sequencer has two modes:

RUN
Synth-style sequencer that continuously steps forward at a steady speed synced to the delay.

ENV
Envelope-controlled sequencer that only steps to the next voice when input audio is present.

INPUT AUDIO → **INPUT AUDIO** → **INPUT** →

It can be that simple if you like – just choose your mode and let the sequencer do its thing. But we've also provided some options to let you dig a little deeper.
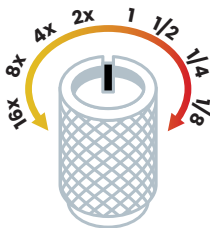
Sequencer Options

There are a few ways to adjust the sequencer to your liking using the Hidden Options.

SEQUENCER RATE

The sequencer is synced to the delay time, but you can have it move either at a faster or slower subdivision. This makes it possible to have long delay times where the sequencer darts between different voices, or a slapback delay that slowly shape-shifts, or everything in-between.

OCTAVE TYPE

The **OCTAVE TYPE** option will also influence the type of patterns you get from the sequencer.

DOWN - Removes the upper octave from the sequence, playing the sub octave twice instead.

*BOTH - Both voices appear in the sequence.

UP - Removes the lower octave from the sequence, playing the upper octave twice instead.

Sequencer Options

REST / SKIP

The sequencer is interactive with the **BALANCE** knob. If you set **BALANCE** in a way that mutes one or more of the voices, the sequencer will react to that in one of two ways:
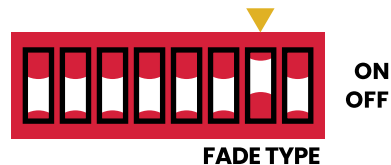
REST - Leaves the muted voices in the sequence, resulting in a full 4-step sequence with moments of silence.

*SKIP - Removes the muted voices from the sequence, resulting in a shorter sequence.

ON
OFF

FADE TYPE

Sets how the sequencer moves from one step to the next – instantly, or in a *smooth, gradual way.*

> * Gray labels are the default settings.

Now *that's* multidirectional!

Customize

The red-labeled dip switches on top of Reverse Mode C allow you to configure it for your setup and fine-tune things to your liking.

SWAP
Lets you make **DEPTH** and **RATE** surface-level controls instead of Hidden Options, useful if you want more immediate control over the modulation. (When engaged, **OFFSET** and **BALANCE** will become the hidden options.)

MISO
Mono In, Stereo Out. Splits a mono input signal into a stereo output.

SPREAD
Hard pans the forward and reverse voices to create a spacious stereo image.

TRAILS
Allows the echoes to fade out naturally after the pedal is bypassed.

LATCH
Changes the hold function for each footswitch from momentary to latching, so that it will remain engaged until the footswitch is held again.

FEED TYPE
Sets whether the octave effect is inside or outside of the feedback loop. This lets you choose between a steady amount of pitch shifting, or echoes that *continuously ascend (or descend).
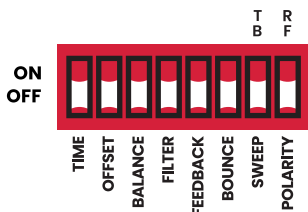
FADE TYPE
Controls how the sequencer moves from one step to the next – immediately, or in a *smooth, gradual way.

MOD TYPE
Lets you engage a secondary flavor of modulation for each type (pg. 26).

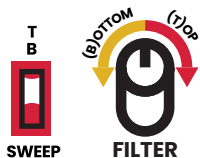> * Gray labels are the default settings.

Ramping

Ramping gives you the ability to automate Reverse Mode C's knobs, either as a one-time movement (ramp) or continuous motion (bounce).

It's easier to get started with Bounce, so let's do that. We're essentially going to modulate a knob.

1. Engage Bounce.

2. Choose which knob(s) you wish to control.

3. Choose the sweep.

4. Set the speed.

Now the tone of the echoes will steadily shift, introducing another layer of modulation. The position of the knob you're controlling is important, because it either sets the maximum or minimum point of the range (depending on the **SWEEP** setting).
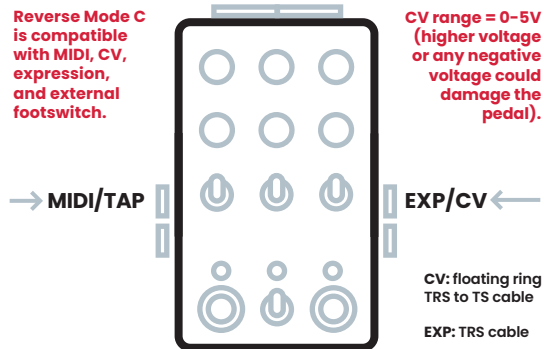
By default, Bounce is a triangle wave, but you can use the Hidden Options to choose from a whole pile of options (pg. 17).

Ramp is the same idea, but the movement only happens once when you turn the pedal on. Your chosen knob(s) either rise or fall to the position set by the knob, then stay there. Useful for creating a wave of motion and activity when you first turn Reverse Mode C on.

Check out the Dip Switches 101 document on our website for a step-by-step on ramping.

Ramping is engaged as soon as the dip switch for a corresponding knob is set to ON. At this point, the **MIX** knob automatically changes to control the ramp speed. You can still adjust **MIX** while ramping by holding down the left footswitch as you move the knob.
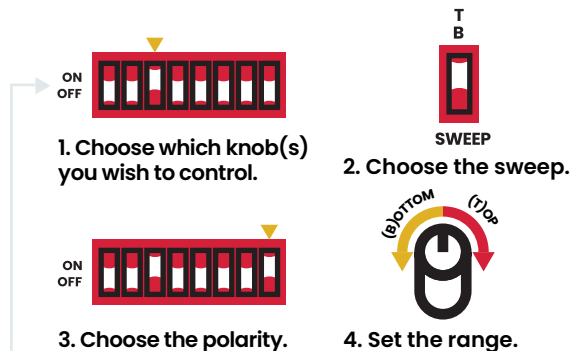
External Control

Reverse Mode C is compatible with MIDI, CV, expression, and external footswitch.

CV range = 0-5V (higher voltage or any negative voltage could damage the pedal).

→ **MIDI/TAP**

EXP/CV ←

CV: floating ring TRS to TS cable

EXP: TRS cable

CV and expression can be used to control Reverse Mode C's knobs.

MIDI lets you go deeper and control everything, including clock sync, the Hidden Options, and the dip switches.

CV and expression are set up the same way as ramping using the dip switches on the top of the pedal. The pedal will simply detect a CV or expression signal when you plug it in and hand over control.

ON OFF

1. Choose which knob(s) you wish to control.

T B

SWEEP

2. Choose the sweep.

ON OFF

3. Choose the polarity.

(B)OTTOM (T)OP

4. Set the range.

If you plug in a CV or expression signal but engage none of the knobs, you will have control over **MIX**.

MIDI requires a Chase Bliss Midibox to convert the signal to a ¼" TRS jack. For details on getting MIDI going with Reverse Mode C, check out the MIDI manual.

The MIDI jack can also be used to control Reverse Mode C's delay time using external tap-tempo.
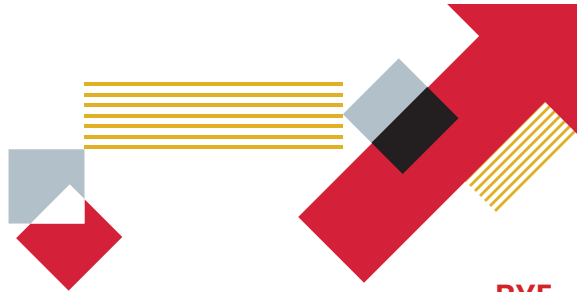
BYE

This is the end of the Reverse Mode C manual.
Hope you're feeling bold and bright.

Write us anytime if you'd like to know more:
help@chasebliss.com

We're happy to help.

.yojnE
.yojnE
.yojnE

small
batch
bliss