source ..... qu-bit electronix
rev 2026.10

data bender _travelers guide _for managing corrupt timestreams

60 s+	5	2
stereo buffer	corrupt types	modes

› then noon = 12 o'clock tags = the panel drawing

stereo circuit-bent audio buffer · over a minute at 96 kHz · tape bends, cd breaks, five ways to corrupt

01 what it is

db_01

a buffer	stereo, always recording · over a minute at 96 kHz / 24-bit
the loop	`time` sets the slice you hear · `repeats` chops it into repeating parts
the damage	`bend` = tape tricks · `break` = cd glitches · `corrupt` = degradation at the end

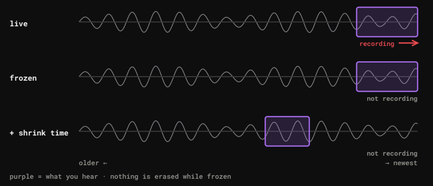
02 the core

db_02 · fig.01

`time`	internal: 16 s (left) to 80 Hz (right) · external: /16 /8 /4 /2 ×1 ×2 ×3 ×4 ×8
`repeats`	min = the whole slice once · up = more, shorter parts, each played that many times
`mix`	dry ↔ wet · freeze at full dry jumps to full wet
`[ freeze ]`	stops recording · shrink `time` to dig up older audio · nothing is erased

__fig.04 : freeze

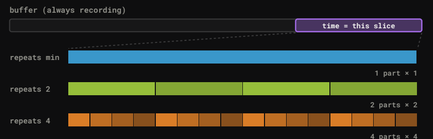
the buffer



purple = what you hear · nothing is erased while frozen

__fig.01 : time × repeats

what you hear



10 first flight

db_10 · first glitch

1. audio into `left` · `left` `right` out
2. `mix` to noon · `time` around noon
3. raise `repeats` to stutter
4. `[ mode ]` to macro (blue) · `[ bend ]` + `[ break ]` on
5. turn `bend` and `break` up slowly
6. `[ freeze ]` to hold what you like

03 macro or micro

db_03 · the big idea

`[ mode ]`	flips how `bend` and `break` behave · each mode remembers its own settings
› macro	blue · automated: the knobs set how wild, changes land on the clock
› micro	green · hands-on: you set speed and which part plays

__fig.02 : macro zones

mode LED blue



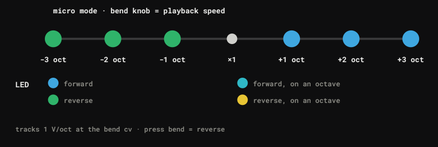
04 bend

db_04 · tape

macro	low → high: reverses · octave jumps · tape stops · slewed speed · all of it
micro	speed –3 … +3 octaves · tracks 1 V/oct · `[ bend ]` = reverse
micro LED	blue forward (cyan on octaves) · green reverse (gold on octaves)
`[ bend ]` / gate	macro: bend on or off

__fig.05 : bend · micro

speed



tracks 1 V/oct at the bend cv · press bend = reverse

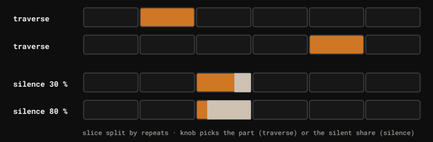
05 break

db_05 · cd

macro	low → high: 2 parts · jumps · more parts · audio-rate repeats · silence · all of it
› traverse	micro, LED off · the knob picks which part plays (needs repeats above 1)
› silence	micro, LED blue · knob = silence duty, 0 – 90 %
`[ break ]` / gate	macro: on or off · micro: traverse ↔ silence

__fig.06 : break · micro

traverse · silence



slice split by repeats · knob picks the part (traverse) or the silent share (silence)

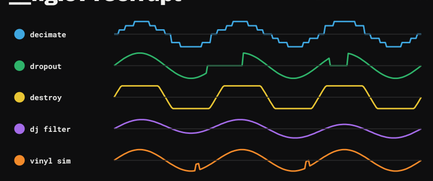
06 corrupt

db_06 · button cycles · knob min = off

decimate	bit crush + downsample in random steps · hiss to heavy distortion	blue
dropout	random gaps · left = few long · right = many short	green
destroy	soft saturation, then hard clipping past noon · loud	gold
dj filter	low-pass ← noon (off) → high-pass	purple
vinyl sim	dust, pops and colour · full = old turntable	orange

__fig.07 : corrupt

LED colour = effect



button cycles · knob min = off · shift + mode: all five or the original three

07 clock

db_07

`[ clock ]`	internal (LED blinks blue) ↔ external (white, at the `time` rate)
clock stops	after 4 beats the LED goes dim white · keeps the last rate
gold flash	a new divide / multiply step
resync	set the corrupt gate to reset + `[ shift ]` + `[ corrupt ]`

__fig.08 : clocked time

divide · multiply



gold flash = a new step · after 4 missed beats the LED dims but keeps the rate
internal: time runs 16 s (ccw) to 80 Hz (cw)

08 shift layer

db_08 · hold shift

`time`	windowing: hard clicks ↔ smooth grains (default 2 %)
`repeats` `mix`	LED brightness · stereo width
`bend` `break` `corrupt`	attenuate their cv inputs
`[ bend ]`	macro bends unique per side ↔ shared
`[ corrupt ]`	gate advances the effect (blue) ↔ resets the clock (green)
`[ freeze ]` `[ clock ]`	freeze button latch ↔ momentary · gates latch ↔ momentary
`[ mode ]`	all five corrupts (blue) ↔ the original three (green)
`[ break ]`	restore default settings (LED pulses, then blinks blue)

__fig.09 : windowing

shift + time



shift + time sets the window on each repeat

12 reset · calibrate · update

db_12

`[ shift ]` + `[ break ]`	defaults: macro, bend/break/freeze off, unique stereo, latching, 2 % window
calibrate	hold `[ mode ]` at power on · 1 V to bend cv › `[ bend ]` · 3 V › `[ bend ]` · `[ shift ]` saves
undo cal	in calibration: `[ break ]` then `[ shift ]` = factory calibration
firmware	usb on the daisy seed · chrome web programmer · top 3 LEDs show the version at boot

11 three patches

db_11 · manual ideas

lo-fi tape	bend and corrupt moderate · modulate bend and time	micro
cd skip	modulate repeats to sweep through the parts	micro · traverse
ghost in the machine	modulate time and repeats · feed it a busy voice	macro · dropout

__fig.03 : the panel

numbers match the legend



`time` `time`	slice length · clock divide
`rep` `repeats`	how many parts
`mix` `mix`	dry ↔ wet
`bend` `bend`	tape · button = on / reverse
`break` `break`	cd · button = on / mode
`cor` `corrupt`	amount · button = type
`btn` `buttons`	mode · clock · freeze · shift
`cv` `jacks`	cv ±5 V · gates 0.4 V · stereo in / out

09 specs

db_09

audio	10 Vpp in and out · left in feeds both sides
cv · gates	cv ±5 V · gates and clock trigger at 0.4 V
size	14 hp · 28 mm deep
power	58 mA +12 V · 60 mA –12 V

design homage to the house of x / powers of x data pages — designed by tom muller with jonathan hickman · panel drawing after the qu-bit panel
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