pulsar / pulse & chance

01 / Connect. Learn. Play.

Your MIDI partner for the **SOMA Pulsar-23**: four voices, core beats, generative variations, basslines and live gestures. Pulsar makes the sound; ZOIA supplies notes, clock and modulation CCs.

The patch is named **pulsar** on ZOIA and its first page is **PULSAR**. **GEN is the startup mode.** A phrase spans 16 steps.

1 / Set up once

Connections: Grid MIDI OUT → ZOIA MIDI IN → ZOIA MIDI OUT → Pulsar MIDI IN. On ZOIA: **MIDI Ch 16**, **Starred CC Ch 16**, MIDI Consume **All**. Select Pulsar's MIDI clock source to use the outgoing clock.

Back up slot 027, then import the new BIN through ZOIA's SD import. Use the four JSON files in **03_Grid_Profile**. Match each filename number to its Grid page and save each page with **Store**.

2 / Learn the four voices

Keep **RUN off**, choose PERC and turn pink D1-D4 all the way down. Start with Pulsar's own loops muted. For each voice: **hold its LRN**, briefly press and release only the matching pink pad, then release LRN. Check every voice separately.

Pink pad	Voice	ZOIA sends
T1	BD	Note 36 / Ch 10
T2	BASS / PERC	Note 48 / Ch 2 (PERC)
T3	SD	Note 38 / Ch 10
T4	HHT	Note 42 / Ch 10

3 / Start, stop and AUX

Pages 1-3: T4 toggles AUX via **CC28**. Outside AUX, T1-T3 provide normal patch selection/navigation. In AUX: **T1 RUN** on/off, hold **T2** for FILL in GEN or Punch-in FX in BEAT, **T3 LOCK** on/off. ZOIA's three feet have the same AUX roles. **Page 4 / pink:** T1-T4 always play the four voices; there is no browsing or AUX button.

Switch AUX with Grid T4 or ZOIA's top-right button. The physical two-foot combination does not synchronise the added guard circuit. Release manual pads to end them; overlapping automatic notes can continue.

Target grid: 16 steps / 4 quarter notes

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Quarter 1				**Quarter 2**				**Quarter 3**				**Quarter 4**			

Four CLK beats per complete cycle are the BEAT default. The grid shows one complete bar.

At your fingertips

02 / Four pages. Clear roles.

Intech Studio Grid PBF4: D1-D4 = rotary controls, F1-F4 = faders, T1-T4 = bottom buttons. CC is the ZOIA MIDI assignment, followed by the Grid element. All incoming CCs use channel 16.

1 / CYAN - GEN	Function
CC32-35 / D1-D4	BD / BASS / SD / HHT density in BEAT and GEN. Fully down mutes the automatic track.
CC38 / F1	BASS/PERC rotation in BEAT and GEN, 0-15 steps.
CC58 / F2	GEN snare rotation, 0-3 sixteenths later.
CC50 / F3	Randomize in GEN. In BEAT, hold Punch-in to apply.
CC54 / F4	Pitch range in BASS mode, from root only up to two octaves.

2 / ORANGE - Beats	Function
CC40-43 / D1-D4	Base values for outgoing CC20-23 on channel 10. Learn the targets on Pulsar.
CC36 / F1	Beat selection 01-16.
CC37 / F2	Shared velocity.
CC56 / F3	Offbeat hi-hat accent in both modes.
CC39 / F4	Tempo from roughly 50 to 200 BPM.

3 / VIOLET - FX & bass	Function
CC48 / D1	Stutter x1 / x2 / x4 in GEN. x2 while holding Punch-in in BEAT.
CC49 / D2	Scatter shifts the read position each step.
CC59 / D3	GEN Evolution varies density and offset per phrase.
CC51 / D4	Bass octave 0 / +1 / +2 in BASS mode.
CC52 / F1	Root C2-B2, twelve steps.
CC53 / F2	Minor / major / Dorian / Phrygian / minor pentatonic / chromatic.
CC65 / F3	GEN Probability sets the hit chance.
CC55 / F4	Melody variation from fixed phrase to more random blending.

4 / PINK - Live & modulation	Function
CC44-47 / D1-D4	Modulation depths for Drift / Pulse / Steps / Bloom.
CC36 / F1	Beat selection as on orange.
CC37 / F2	Velocity as on orange.
CC57 / F3	Fully down PERC, fully up BASS.
CC39 / F4	Tempo. T1-T4 play BD / BASS / SD / HHT.

Learn CC targets: Set pink D1-D4 to 0. Hold LRN at a learnable Pulsar destination and move exactly one orange dial. Patch MIDI-to-CV outputs to the desired MOD input with alligator cables. Test base values before adding modulation.

Pink is reserved for pulsar live. Pages 1-3 retain browsing/AUX. LEDs show local control movement, not parameter values returned by ZOIA.

From beat to performance

03 / Start clear. Then get strange.

From GEN to your first beat

1. Start in GEN. GEN is active after loading. Centre cyan D1-D4 and set orange F4 to the desired tempo. On Grid pages 1-3, press T4 for AUX and T1 to start RUN.
2. Shape GEN. Cyan F1 rotates BASS/PERC and F2 rotates the snare. F3 adds Randomize. Violet D3 varies each phrase in GEN. T3 LOCK holds the Evolution value.
3. Switch to BEAT. Press the purple ZOIA button on page 1, row 3, column 5. The indicator at row 2, column 8 lights in BEAT. Orange or pink F1 fully down selects **01 Four floor**.

Tempo: Orange or pink F4 spans roughly 50 to 200 BPM, with 125 near centre. Select **TEMPO BPM** on ZOIA page 1, row 3, column 1 and allow a few quarter notes to settle.

Beat / orange F1	Beat / orange F1
01 Four floor	09 Two step
02 Offbeat house	10 DnB basic
03 Driving techno	11 DnB rolling
04 Electro	12 Jungle A
05 Breakbeat	13 Jungle B
06 Half time	14 Jungle C
07 Dub step	15 Sparse dub
08 Hip hop	16 Syncopated

Density on cyan: Fully down mutes the automatic track. In BEAT, 40-60% with neutral FX plays the original hits. Random skips begin near 61% and become stronger near 81%. In GEN, snare density of 20-60% plays beats 2 and 4 with rotation and variation at zero and Probability at maximum.

Bass, accent and punch-in

Bass: Raise pink F3 and set Pulsar BASS to MIDI. Violet F1 sets root, F2 scale and F4 melody variation. Cyan F4 sets pitch range. For PERC, lower pink F3 and set Pulsar BASS to PRC/CV.

Hi-hat accent: Orange F3 boosts MIDI velocity on steps 3, 7, 11 and 15. The local HHT Accent control is on ZOIA page 1, row 3, column 7.

BEAT punch-in: Set violet D1 for stutter, D2 for scatter, D4 for bass octave and cyan F3 for Randomize. In AUX, hold T2 or hold **FILL / PUNCH FX** on ZOIA page 1, row 1, column 2.

Local ZOIA controls: Page 2, row 3 / column 1 = Evolution. Page 3 / SHAPE: Fill focus, SD Rotate, Division, Probability, Stutter trim, Timing, Evolve depth. Moving controls or changing pages can overwrite saved values.

Inspiration: SOMA Pulsar-23, Torso T-1, Squarp Hapax, OXI One MkII and EP-133 K.O.II. An original implementation of selected ideas, not a full recreation. MIDI learn: SOMA manual.

Thanks to Empress and the Patchstorage community! Check out **hyacinth** by **sporen**: Bandcamp / more links. You can hear a lot of ZOIA and Patchstorage in the music. Best, Ben / bensnburner.