

Orb

Generative music you can see and touch.
A short guide to everything on the screen.

The idea

Marbles roll inside a glass sphere. Every time a marble hits the shell it plays a note: the marbles **are** the melody. The glow inside the sphere is the **pad**, a soft sound holding the chords, with its own bass underneath.

Everything you hear is one **pattern**: a sound, a melody, chords and a motion. Patterns can be chained into **songs**. And a pattern never quite repeats: notes come and go, phrases are varied, chords move.

First steps

1. Press **Play** (the large button at the bottom of the ring).
2. Tap the **colored circles** on the right of the ring: each one is a different pattern.
3. Drag along the **top arc** for the speed; the bottom arcs set the **tone / pad balance** and the **volume**.
4. Press the **dice** next to the colored circles for a brand-new pattern.
5. Like it? Press **+** to save it as your own pattern.

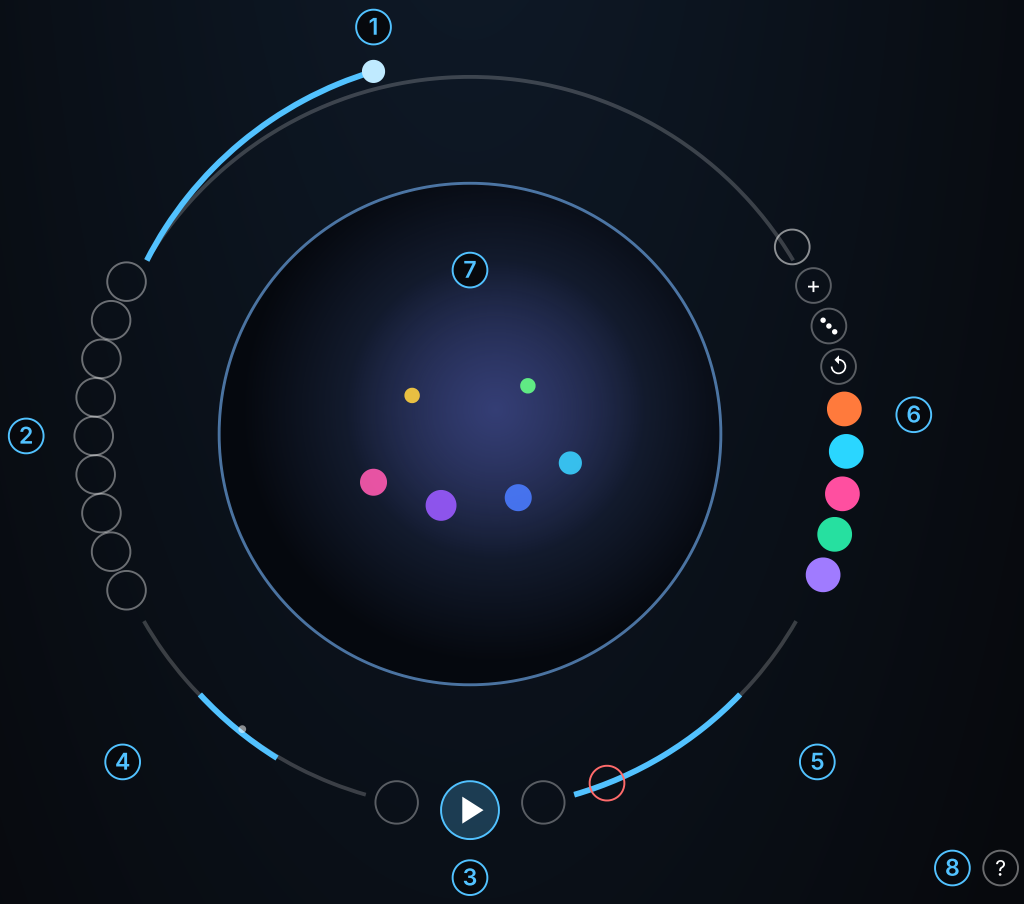
> The buttons on the left open the editors. Nothing you try can break anything: every editor has its own **Reset**, and Orb saves where you are by itself.

Touching the sphere

Drag · pinch	Turn the sphere and look around it · zoom.
Drag a marble	Up / down: its note. Left / right: how loud it plays.
Double-tap a marble	Mute it, or bring it back.
Touch a marble	Selects it: a glowing tag follows it. Tap empty space to clear.
Flick	The sphere keeps spinning and slows down; while it spins, notes bend in pitch (Doppler).

The screen

Everything sits on a ring around the sphere. On iPhone the section buttons form a column on the left and the colored circles sit just outside the ring.



1 · Speed	How fast the marbles roll (BPM).
2 · Sections	Motion, Notes, Chords, Tone, Pad, Grains, Echo, Mix, HUD. Tap to open an editor, again to close.
3 · Transport	Rewind (in a song: back to its first part), Play, Stop, and the red **Record**.
4 · Balance	Tone against pad. Top: the marbles only; bottom: the pad only; in the middle (it clicks in) both at full level.
5 · Volume	The master volume, in dB. The thin arcs either side are the level meter (left and right): white above −6 dB, a dot holds the last peak, and it flashes white if the sound clips.
6 · Patterns	Pattern / Song switch, **+**, the **dice**, ↺, then the colored circles (drag to scroll).
7 · Sphere	The marbles and the pad.
8 · Help	This guide.

Patterns

A pattern is everything that plays: the sound, the melody and its dynamics, the chords, the motion and rhythm, the variations, the key, and the colors of the sphere.

BUILT-IN COLORS

The first circles. Tap one to load it as it was made.

READY-MADE & YOURS

Then the ready-made patterns and the ones you saved. Tap to load.

+ SAVE

Saves what plays now as a new pattern; pick its color.

LONG-PRESS A PATTERN

Change color · Save what plays into it · Share · Delete.

DICE · RANDOM

A whole new pattern on the current color: sound, motion, variations, key, chords, melody.

↺ · RESET

Back to the pattern you loaded, as it was saved or made.

> Random and Reset change what plays right away: if you like what you hear, press **+** first.

Make your own pattern

1. Start from a color close to what you want, or roll the **dice**.
2. **Motion**: how the marbles move and how many there are: the rhythm.
3. **Notes**: draw the melody; then its dynamics; give some marbles their own motion.
4. **Chords**: a progression for the pad, or your own.
5. **Tone** and **Pad**: the sounds. **Mix**: their levels.
6. For a piece that keeps changing: **Density** and **Vary** (Motion), **Vary** and **Voicing** (Chords).
7. Press **+** and choose a color.

The editors

Tap a section button: its controls open as a fan of knobs. **Notes** and **Chords** turn the ring into a clock you draw on.

Knob	Drag up or down; the value shows inside.
Choice knob	Drag through the options, or tap for the next.
Switch	A glass ring, lit when on. Tap.
Random · Reset	At the end of each fan: only that section.

Motion

Motion	The curve the marbles follow, and so the rhythm: **Tusi couple** (2 hits a turn) · **Deltoid** (3, triplets) · **Astroid** (4) · **Pendulum wave** · **Golden drift** (never repeats) · **Star** (5) · **Hemiola** (three against two) · **Harmonics** (long notes under fast ones).
Steps · Fill	How many marbles, 3 to 24; how many of them sound (the rest rest, evenly).
Form	**Grow**, **Full** or **Breathe**: how the marbles arrive.
Swing · Evolve	A lazier groove; a melody that slowly wanders.
Density · Cycle	Notes come and go in a slow wave: only the strongest at first, then the others one by one, then thinning again. **Cycle**: one wave in 8, 16, 32 or 64 bars.
Vary	Every 8th or 4th bar the phrase is said differently once (higher, upside down, backwards, shifted, filled), then the original returns.
Key · Scale	The key and mode of melody and chords (**Theme key**: the color's own).
Follow chords	The melody moves with the pad's chords.

Notes

The melody as a clock: one spoke per step, step 1 at the top. A spoke flashes when its marble hits. Three modes:

Pitch	Spoke length = the note. Drag along a spoke; drag across spokes to draw.
Dynamics	Spoke length = how loud, pp to ff.
Motion	Give a marble **its own motion**. The center is **Auto** (the pattern's motion).
Tap / double-tap	Hear the step / mute it. Silent steps are dashed.
Reset · Random	For the open mode (Pitch also: **Invert**).
Dashed ring	With Evolve on: where a note has wandered from what you wrote. Editing it brings it back.

Chords

The pad's four chords as arcs around the ring, chord 1 at the top. The one playing glows, and a thin hand crosses it as the pad moves on.

Drag a chord	Its degree, I to vii.
Tap a chord	Its shape: Triad, 7th, Sus2, Sus4, Add9, Open.
Progression · Rate	Ready-made progressions; how fast the chords change.
Original	The color's own chords, shown dimmer; editing one starts your own chords from there.
Vary	Over eight rounds some chords are swapped for related ones and an answering progression comes: A A' B A A A' B' A.
Voicing	The chords change position so their top note sings a slow line, different each round.

Tone · the marbles

The **Engine** knob picks the instrument; **Bright**, **Attack**, **Decay** and **Mallet** shape it, and two more knobs depend on the engine.

FM bell · Glass	Glassy bells; a bowed glass harmonica.
Analog saw · Pulse	Synth tones with a filter sweep.
Marimba · Kalimba	Wooden bars; a thumb-piano tine.
Vibraphone · Handpan	Metal bars with tremolo; a handpan whose octave blooms.
Pluck · Ring mod	A plucked string; a metallic clang.
Organ · Flute	A reed organ; a breathy flute.
Piano · E-piano	A grand piano (**Hammer**, **Sustain**); an electric piano.
Additive	Eight harmonics: tilt and even ones.

Pad · the glow

The **Texture** knob picks the pad, and each brings its own bass (the **Bass** knob sets its level). Also: **Level**, a character knob for the texture, **Detune**, **Motion**, **Width**.

Swirl · Strings	The original FM swirl; detuned strings over a bowed bass.
Choir · Breath	Voices over humming basses; airy, fluttering tones.
Glass · Shimmer	Shimmering partials; octaves swelling like a shimmer reverb.
Drone · PWM	An organ stack with a pedal; a breathing string machine.
Analog · Additive	Saws behind a slow filter; breathing harmonics.
Grains · Chimes	Little grains of tone; bells struck now and then over a low bell.

GRAINS · YOUR OWN SOUND

Load a file (a voice, rain, an instrument): Orb plays it as a cloud of grains that follows the chords. **Remove** takes it out again. Knobs: **Grains** (amount), **Size**, **Density**, **Spread**, **Scan**, **Tune**, **Resonance**.

ECHO

Time, **Level**, **Width** (stereo spread) and **Doppler**: the pitch bend of marbles moving when you spin the sphere.

MIX

Tone and **Pad**: each one's level (the balance between them is the arc at the lower left). **Octave**: a soft layer an octave above each hit. **Drive**: warmth and saturation.

HUD · WHAT YOU SEE

Switches for the picture (next page). **Tips** replays the short tour.

Make a sound

1. Open **Tone** and turn **Engine** until the marbles sound right; shape them with Bright and Decay.
2. Open **Pad** and choose a **Texture**; its bass comes with it.
3. Balance them on the lower-left arc; fine-tune each level in **Mix**.
4. Add space with **Echo**.
5. Optional: **Grains** → Load a file, then raise Grains.
6. Stuck? Each fan's **dice** randomizes just that part; its ↺ resets it.

Every knob

Tone: **Bright** (tone color), **Attack** (struck … swelling), **Decay** (how long it rings), **Mallet** (the strike's thump and click), and two knobs of each engine:

FM bell	Mod 1, Mod 2: the bell's overtones	**Kalimba**	Tine (overtone), Buzz
Analog saw	Sweep: the filter's fall	**Vibraphone**	Motor (tremolo), Bar
Marimba	Mode 2, Mode 3: bar tuning	**Handpan**	Bloom, Shimmer
Pluck	Stiffness, Damping	**E-piano**	Bark, Bell
Glass	Attack, Vibrato	**Pulse**	Width, Sweep
Ring mod	Ring, Partial	**Piano**	Hammer, Sustain
Organ	Tremolo, Body	**Flute**	Breath, Vibrato
Additive	Tilt, Even harmonics		

Pad: **Level**, **Detune**, **Motion** (how fast it moves), **Bass**, **Width**, and a character knob of each texture:

Swirl	FM	**Grains**	Density	**Shimmer**	Shimmer
Strings	Bright	**Additive**	Bright	**Breath**	Air
Choir	Vowel (oo, ah, ee)	**Analog**	Filter	**Chimes**	Rate
Glass · Drone	Sparkle · Drawbars			**PWM**	Width

HUD · the picture

Rails	The straight rails the marbles run on (Tusi couple and other straight motions).
Orbit	The sphere turns slowly by itself while playing.
Nebula	The glowing field behind the sphere.
Shell	The sphere's glass shell.
Ripple	Waves on the shell where a marble hits.
Pulse	Marbles swell a little on each hit.
Pitch tilt	Rails tilt with their note: higher notes, steeper rails (sound moves with them).
Trails	Light trails behind the marbles.

Songs

A song chains patterns: each part plays for a number of bars, then the next one fades in; after the last part the song starts again. A bar is one pass of the melody.

SONG MODE

The **switch** at the top of the colored circles turns them into songs; the transport then plays the chosen song. Tap a song to play it, tap it again to edit it. Long-press: **Edit**, **Share**, **Delete**.

THE SONG CLOCK

While a song is edited, its parts circle the ring as arcs in their colors, each as long as it plays; a hand sweeps through the part playing. Tap a part to go there.

MAKE A SONG

1. Save a few patterns that share a key and a tempo.
2. Switch to **Song mode** and press **+**: the song editor opens.
3. Tap the **colored circles**: each one becomes the next part.
4. Drag a part out / in: it plays longer / shorter (4 to 64 bars).
5. Tap a part to hear it; **Copy** or **Remove** it.
6. **Save**, or **Cancel** to leave the song as it was.

> Orb comes with example songs (Sunrise suite, Nocturne, Late show…). Open one in the editor to see how it is built.

Record, share, keep

Record	The red button next to the transport records everything you hear. Press it again, or Stop, to finish: a card offers to share the recording. Recordings are also in the **Files** app: On My iPhone / iPad › Orb › Recordings.
Share	Long-press a pattern or a song › Share. It travels as a small **.orb** file; open it on another device to add it to Orb.
Back up	Long-press the Pattern / Song switch › **Back up all patterns and songs**. **Import…** in the same menu brings a file back.
Files app	Orb's folder also holds the audio file loaded in Grains (it goes with **Remove**).
Auto-save	When Orb leaves the screen it keeps what plays, and comes back to it at the next launch, stopped.
Background	Orb keeps playing when you leave it or lock the screen; songs and variations go on. Play / pause from the lock screen, Control Center or headphones. Unplugging headphones pauses.

Gestures at a glance

Arcs	Drag along them.
Knobs	Drag up / down; tap a choice knob for the next option.
Clocks	Drag along a spoke or arc; drag across to draw; tap to hear.
Circles	Tap to load; long-press for more; drag along them to scroll.