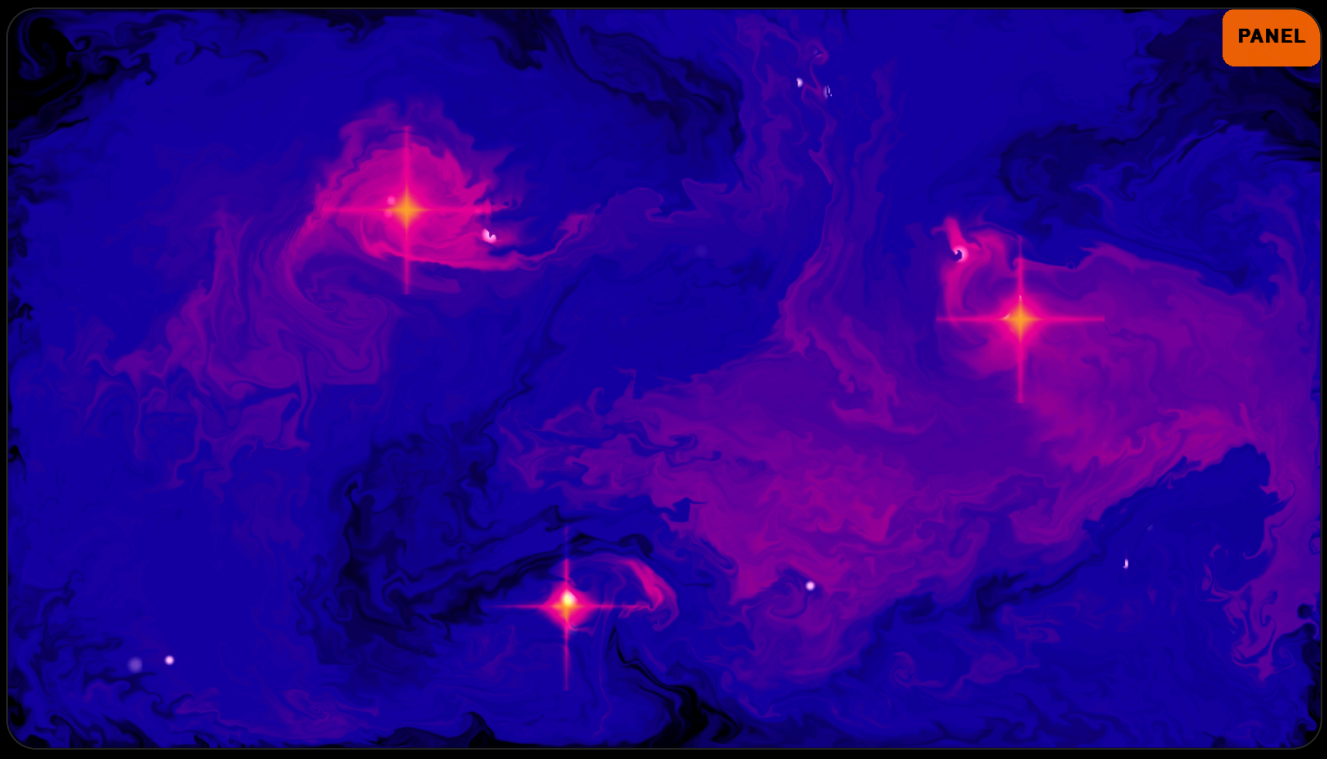
FINGERLIGHT

User Manual

Play lights with your fingertips. The complete guide to every effect, every page and every setting, and to running Fingerlight with a grandMA3 over NDI, sACN and Art-Net.



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1 Introduction

Fingerlight is a touch-screen companion for a lighting console. Your fingers drive effects that are drawn on the graphics card: fluids, particles, beat-locked shapes, pixel patterns, lines and stage looks. The finished picture is sent out as an **NDI** video source. The console receives it and pixel-maps it onto LED walls, battens, pixel tubes or any fixture grid. In the other direction the console can set Fingerlight's colours, choose effects and move the LOOK faders over **sACN or Art-Net**.

Three things to know

- **Output comes only from touch.** There is no background animation. When no finger is down, everything fades to black, so the rig is dark unless someone is playing.
- **Everything is reachable by finger.** No setting needs a keyboard or a config file. Numbers and names are typed on on-screen keypads and keyboards.
- **Colour is a heat field.** Every effect paints "heat". Heat is coloured through three colours, LOW, MID and HIGH, so all effects always share the same palette and match the rest of your show.

2 Installing and starting

What you need

- A Windows PC with a graphics card that supports OpenGL 3.3 (practically anything from the last ten years).
- A multi-touch screen. A mouse works too (one "finger"), which is handy for setting up.
- A network connection to the console or media server for NDI, sACN and Art-Net.

Nothing else needs installing: Python, the graphics libraries and the NDI runtime are inside the installer.

Install

1. **Run the installer**

   Double-click the installer you downloaded (`Fingerlight-Setup.exe`). It installs for the current Windows user, without admin rights, into `%LOCALAPPDATA%\Programs\Fingerlight`, and adds Start-menu and desktop shortcuts and an uninstaller.

2. **Get past SmartScreen if it appears**

   For new software Windows may show *"Windows protected your PC"*. Click **More info**, then **Run anyway**.

3. **If Windows or your antivirus blocks it**

   New software is sometimes stopped before it can run. If you see *"Windows cannot access the specified device, path or file"*, right-click the installer, choose **Properties**, tick **Unblock** at the bottom and click OK, then run it again. If the file vanished or keeps being blocked, open your antivirus (or **Windows Security › Virus & threat protection › Protection history**), choose **Restore** or **Allow** for Fingerlight, and add `%LOCALAPPDATA%\Programs\Fingerlight` as an exclusion. If the installer itself says files were removed, do the same and run it again.

4. **Allow the firewall**

   The first time Fingerlight starts, Windows Firewall asks for network access. Allow it on **Private networks**. Without it, NDI receivers cannot connect and no DMX arrives.

Activate your license

Without a license key Fingerlight runs as a **DEMO**: everything works, but a FINGERLIGHT watermark covers the output. A key removes it, with no reinstall.

1. **Buy**

   At **visuallyimpressive.com/fingerlight**. Your key (it looks like `FL-XXXXX-XXXXX-XXXXX-XXXXX`) is on the thank-you page and in an email from jake@visuallyimpressive.com. Copy it.

2. **Enter it**

   On the OUTPUT page, in the LICENSE row, tap ENTER KEY, then PASTE, then OK. This needs the internet once. After that Fingerlight works offline for good.

3. **No internet on the show machine?**

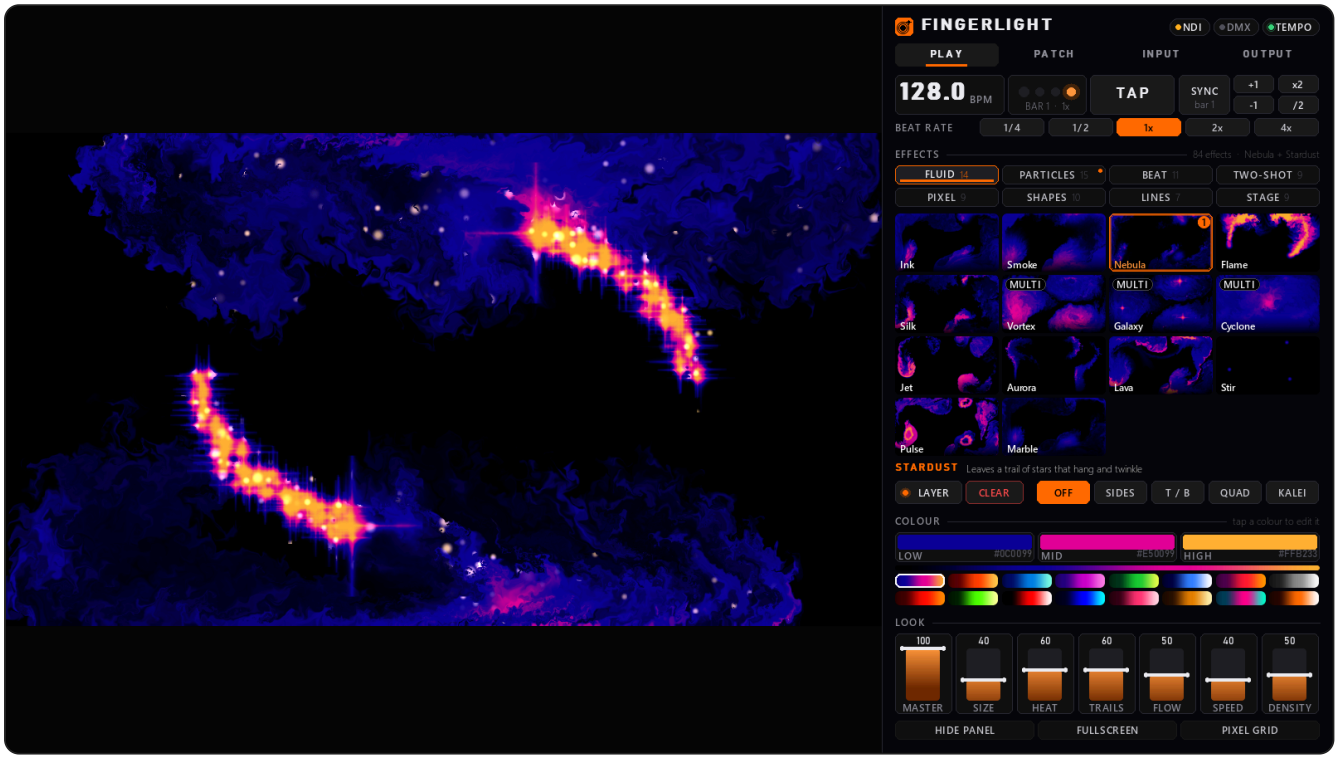
   The LICENSE row shows this machine's ID. On any phone or laptop, open **fingerlight-licence.jake-13b.workers.dev**, enter your key and that machine ID, and save the `fingerlight.licence` file to the top folder of a USB stick. Plug it into the show machine and tap LOAD LICENSE.

- One key works on **2 machines** (main and backup). To move it to another PC, tap DEACTIVATE twice on the old one first, then activate the new one.
- Lost your key? It is in your purchase email, or ask jake@visuallyimpressive.com.

Starting, upgrading and removing

- Start Fingerlight from the desktop or Start menu. It opens maximised (or fullscreen, if `START FULLSCREEN` is on).
- Only one Fingerlight runs at a time. Starting it again brings the running one to the front.
- To upgrade, run the newer installer over the old one. Your settings are kept.
- To remove it, use **Windows Settings › Apps**.
- Settings live in `%APPDATA%\Fingerlight\settings.json` and are saved automatically a couple of seconds after each change, and when you quit.

3 The screen



The Fingerlight window: the canvas on the left, the panel on the right (PLAY page shown).

Canvas

The canvas is exactly the picture that goes out over NDI, scaled to fit. Touch it to play. Touches on the panel never reach the canvas, and the other way round, so you can play with one hand and move a fader with the other.

Panel

The panel has four pages, chosen with the tabs under the logo:

Page	Use it for
PLAY	Tempo, effects, layers, mirror, colours and LOOK faders: everything you need during a show.
PATCH	The DMX addresses of the three colour fixtures and the control fixture.

Page	Use it for
INPUT	Tempo, beat offset, DMX protocol, network port, Art-Net numbering and who is in charge.
OUTPUT	NDI name, resolution and frame rate, the pixel grid, the test pattern, start-up options and Quit.

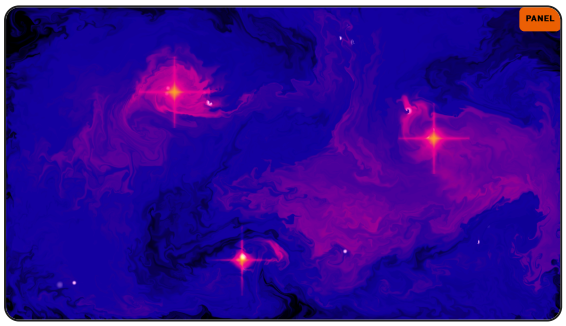
PLAY uses a narrower panel so the canvas stays big; the set-up pages use a wider one.

Status lamps

The three lamps at the top right of the panel are always visible:

Lamp	Green	Amber	Red	Grey
NDI	Sending, at least one receiver connected	Sending, no receiver yet	NDI failed to start	NDI output off
DMX	DMX arriving on a patched universe	Listening, nothing arriving yet	Cannot listen (port in use or blocked)	DMX input off
TEMPO	Shows the current BPM			

Full screen and hiding the panel



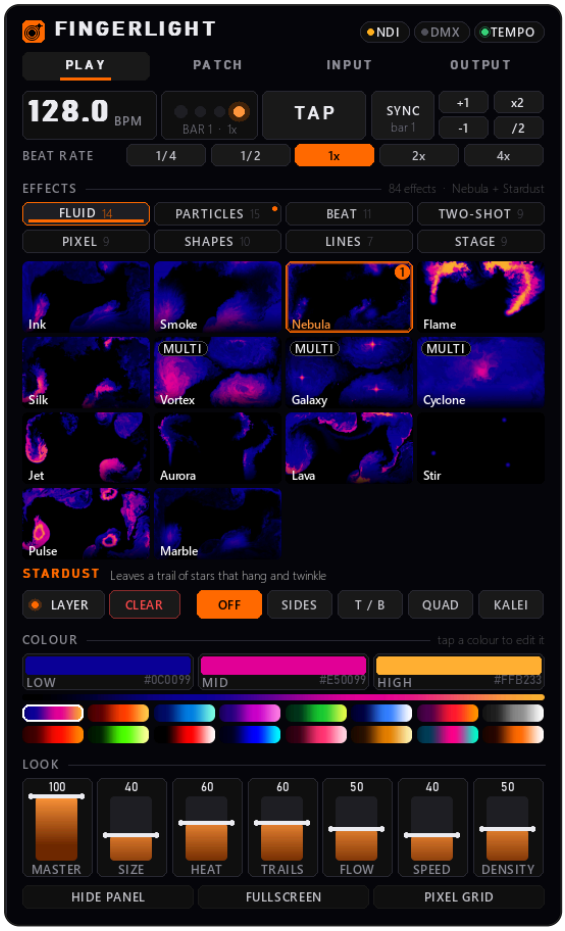
Panel hidden: the canvas fills the window. Tap **PANEL** to get it back.

At the bottom of the PLAY page:

- HIDE PANEL gives the whole window to the canvas. An orange PANEL tab stays in the top corner; tap it to bring the panel back.
- FULLSCREEN switches between a window and full screen.

On OUTPUT, PANEL ON LEFT moves the panel to the left side (handy for left-handed players or when the screen sits to your right) and START FULLSCREEN opens Fingerlight full screen next time.

4 Playing



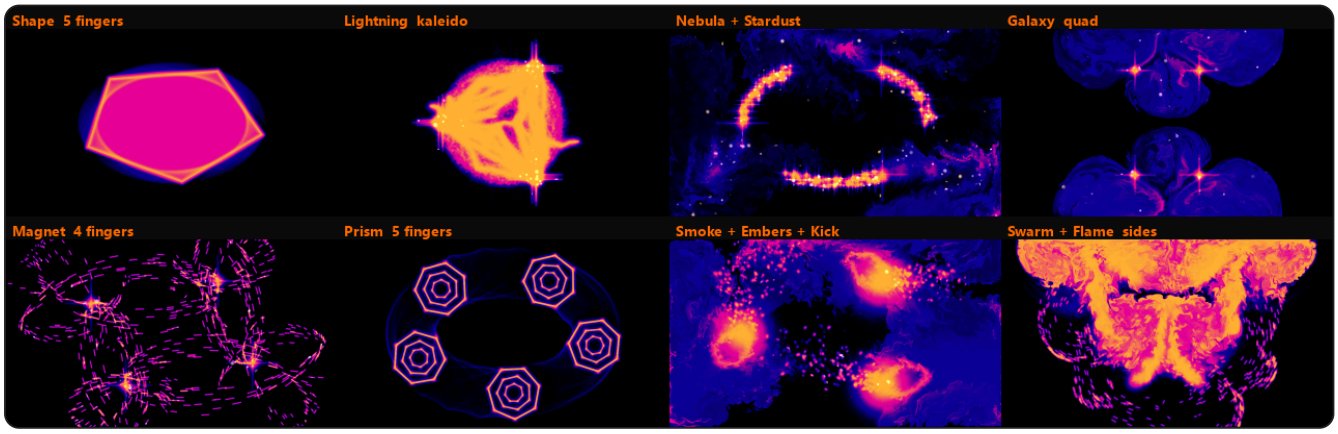
The PLAY page.

From top to bottom the PLAY page holds:

1. **Tempo strip**: BPM, beat lamps, TAP, SYNC, nudges, and BEAT RATE (chapter 8).
2. **Effect groups**: eight buttons, each with the number of effects inside. A small orange dot marks a group that holds an effect that is playing.
3. **Effect tiles** of the chosen group. The playing effect has an orange frame and a numbered badge.
4. **About line**: the name and a one-line description of the effect.
5. **LAYER, CLEAR and MIRROR**.
6. **COLOUR**: LOW, MID and HIGH swatches, the colour ramp and 16 palette chips (chapter 6).
7. **LOOK**: seven faders (chapter 7).
8. **HIDE PANEL, FULLSCREEN and PIXEL GRID**.

Touching the canvas

Put a finger down and move it. Effects react to where you are, how fast you move and how many fingers are down. Effects marked MULTI change with more fingers: Vortex spins neighbouring fingers opposite ways, Web joins every finger to every other, Shape fills the shape between three or more fingers, Beat Strobe goes faster with every extra finger. Lift all fingers and the picture fades to black at the speed set by the **Trails** fader.

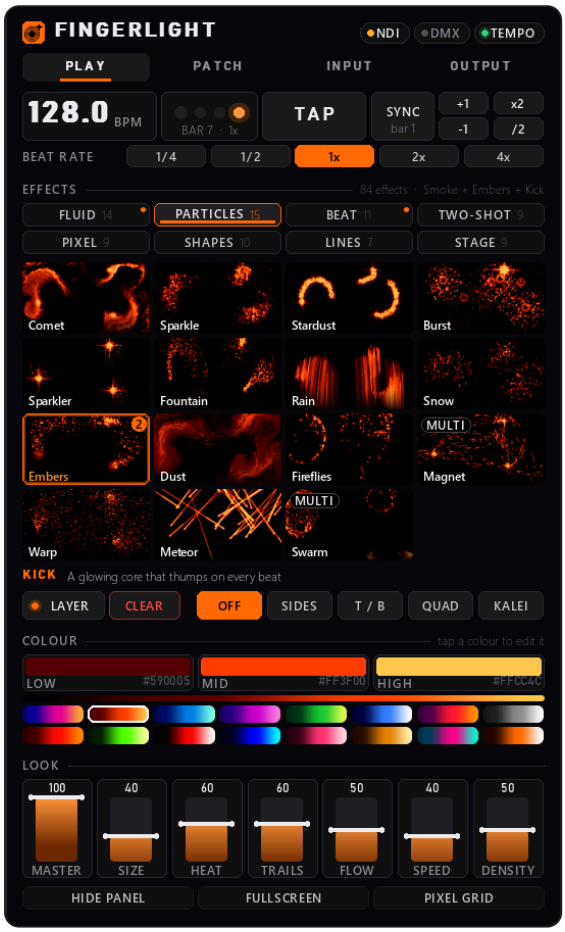


Multi-touch and layers, rendered by the self-test with scripted fingers: Shape with five fingers, Lightning in kaleido, Nebula + Stardust, Galaxy in quad, Magnet with four fingers, Prism with five, Smoke + Embers + Kick and Swarm + Flame mirrored sideways.

Tile badges

Badge	Meaning
BEAT	Locked to the tempo. It still only plays while a finger is down.
HOLD	A two-shot effect: one thing while you hold, another when you let go.
MULTI	More fingers unlock more: extra arms, sides, links or speed.
GRID	Built from the pixel grid, so it stays crisp on low-resolution walls and fixture grids.

Layers



LAYER on with three effects: badges 1, 2 and 3 show the order.

With **LAYER** off, tapping a tile replaces the playing effect.

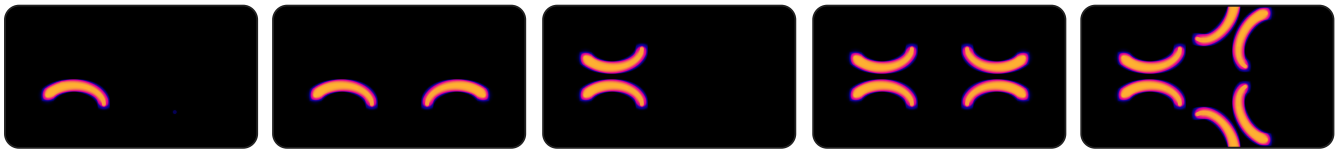
With **LAYER** on, tapping a tile **adds** it to the stack, and tapping a playing tile **removes** it. Up to six effects play at once; adding a seventh drops the oldest. The numbered badge on each tile shows its place in the stack. Layers can come from different groups; the orange dot on the group buttons shows where they are.

Good combinations: a fluid for the body (Smoke, Nebula, Ink) plus particles for sparkle (Embers, Stardust) plus a beat effect for punch (Kick). Stir on its own does nothing visible: it moves what other layers have painted.

CLEAR wipes the canvas and resets every effect, without changing which effects are chosen.

Mirror

Mirror copies whatever you play. It works with every effect and with layers.



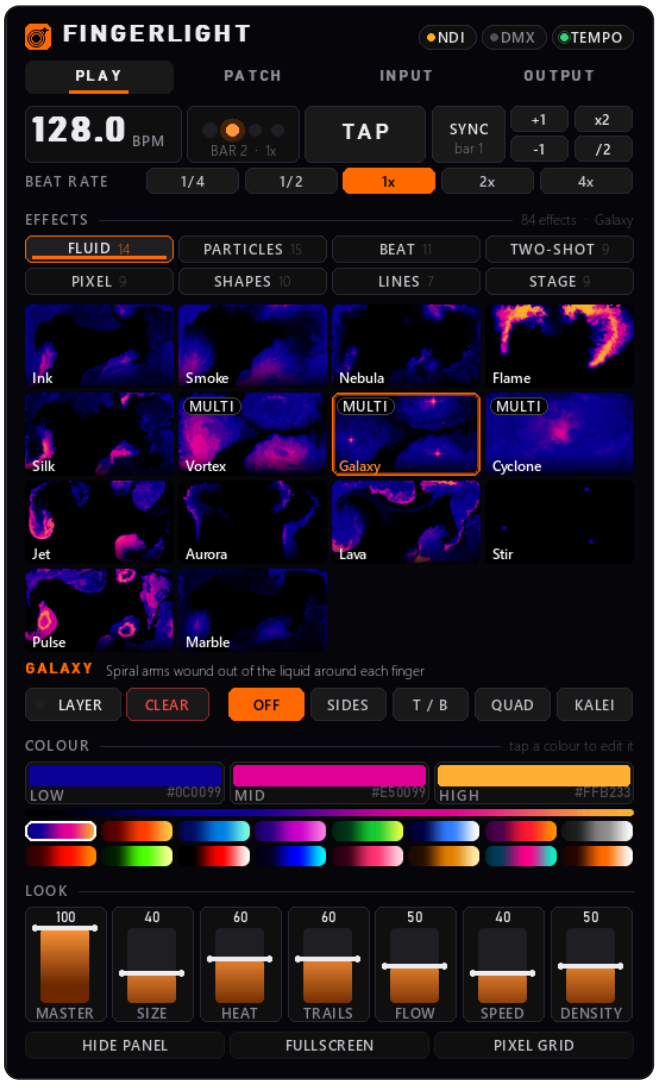
OFF **SIDES** left/right **T / B** top/bottom **QUAD** four ways **KALEI** kaleidoscope

The same two-finger gesture with the Neon effect in each mirror mode.

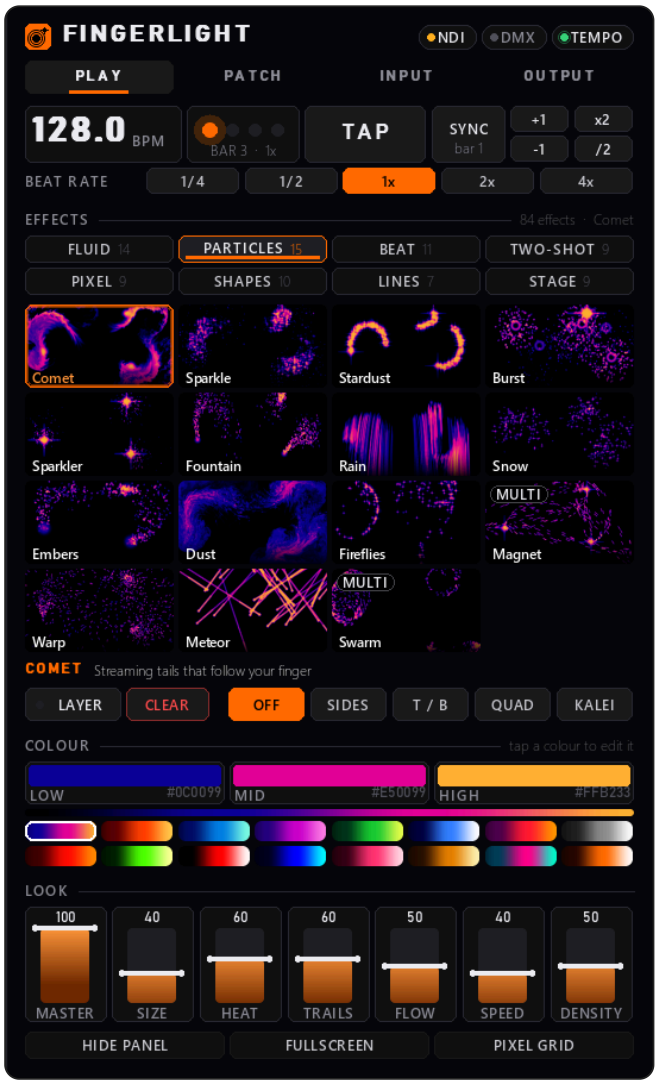
5 The effect library

Fingerlight has 84 effects in eight groups. The number in front of each effect is its position in the library, which is also how the console picks it over DMX (chapter 10).

Group	Character
FLUID	A real-time liquid simulation. Fingers pour colour and stir it; it keeps flowing after you move.
PARTICLES	Sparks, stars, rain, snow and embers that fly from your fingers.
BEAT	Locked to the tempo and playing only while a finger is down: kicks, rings, strobes, chases.
TWO-SHOT	Build while you hold, pay off when you let go: explosions, drops, lightning.
PIXEL	Built on the pixel grid for crisp results on LED walls and fixture grids.
SHAPES	Blobs, rings, flowers, stars, spirals and polygons.
LINES	Neon lines, strings, webs, lightning and laser fans between fingers.
STAGE	Big rig-wide looks: bars, columns, wipes, flashes, strobes and spots.



FLUID group, Galaxy playing.



PARTICLES group, Comet playing.

Fluid

#	Effect	What it does	
1	**Ink**	Pour colour and drag the liquid	
2	**Smoke**	Soft billows that rise and curl	
3	**Nebula**	Coloured gas clouds with stars caught inside	
4	**Flame**	Licks of fire that climb from your fingers	
5	**Silk**	Thin ribbons that twist and fold as you drag	
6	**Vortex**	Spins the liquid; neighbouring fingers spin opposite ways	MULTI
7	**Galaxy**	Spiral arms wound out of the liquid around each finger	MULTI
8	**Cyclone**	All your fingers turn one storm around their middle	MULTI
9	**Jet**	Keeps blowing in the direction you swiped	
10	**Aurora**	Tall shimmering curtains; sweep sideways to wave them	
11	**Lava**	Heavy molten blobs that ooze and drift upward	
12	**Stir**	Moves what is already there (layer it with others)	
13	**Pulse**	Throbbing rings pumped out while you hold	
14	**Marble**	Paints hot and cool stripes that marble together	

Particles

#	Effect	What it does	
15	**Comet**	Streaming tails that follow your finger	
16	**Sparkle**	Glitter that twinkles and drifts	
17	**Stardust**	Leaves a trail of stars that hang and twinkle	
18	**Burst**	Fireworks: tap to explode, hold to keep firing	
19	**Sparkler**	A hot fizzing sparkler on every fingertip	
20	**Fountain**	Sprays up and arcs back down	
21	**Rain**	Drops fall from your fingers and streak down	
22	**Snow**	Soft flakes that sway and drift down	
23	**Embers**	Glowing embers rise and flicker	
24	**Dust**	Clouds of fine dust that hang in the air like haze	
25	**Fireflies**	A cloud orbits each finger; lift to scatter them	
26	**Magnet**	Sparks flow in arcs from finger to finger; one finger pulls them in	MULTI
27	**Warp**	Hyperspace streaks blast out of your finger	

#	Effect	What it does	
28	**Meteor**	Meteors rain in from the sky through your finger	
29	**Swarm**	A flock that chases every finger on the screen	MULTI

Beat

#	Effect	What it does	
30	**Kick**	A glowing core that thumps on every beat	BEAT
31	**Beat Ring**	A ring rolls out from each finger on every beat	BEAT
32	**Beat Burst**	A firework from each finger on every beat	BEAT
33	**Beat Strobe**	Strobe on the beat; 2 fingers 8ths, 3 fingers 16ths, 4 fingers 32nds	BEAT MULTI
34	**Chase**	Columns chase out from your finger, one step per half beat	BEAT
35	**Sweep**	A beam scans across once per beat; two fingers set the band it scans	BEAT MULTI
36	**Bounce**	A ball bounces above each finger, landing on the beat	BEAT
37	**Hop**	A light hops finger to finger on the beat; one finger: round it	BEAT MULTI
38	**Pendulum**	A pendulum swings from each finger, one swing per beat	BEAT
39	**Breathe**	The liquid breathes out from your fingers on every beat	BEAT
40	**Tunnel**	Squares rush into your finger, one per beat	BEAT

Two-shot

#	Effect	What it does	
41	**Supernova**	Hold: a star sucks in light. Let go: it explodes	HOLD
42	**Slingshot**	Hold and pull back like a slingshot; let go to fire	HOLD
43	**Firework**	Hold: a rocket climbs to your finger. Let go: the shell bursts	HOLD
44	**Ink Drop**	Hold: a drop swells. Let go: it splashes into the liquid	HOLD
45	**Dandelion**	Hold: a seed head grows. Let go (or flick): the seeds blow away	HOLD
46	**Black Hole**	Hold: swallows the light around it. Let go: twin jets blast out	HOLD
47	**Thunder**	Hold: a storm gathers overhead. Let go: lightning strikes your finger	HOLD
48	**Riser**	Hold: a build that speeds up every bar. Let go: the drop	HOLD BEAT
49	**Fuse**	Hold and draw a path; let go to light the fuse and run a spark along it	HOLD

Pixel

#	Effect	What it does	
50	**Pixels**	Paint chunky pixels that glow and fade	GRID
51	**Rows**	Light whole rows of the grid; two fingers light rows and columns	GRID MULTI
52	**Checker**	A checkerboard round your finger that flips on the beat	GRID BEAT
53	**Blocks**	Random blocks pop up around your finger	GRID
54	**Snake**	A pixel snake chases your finger in 16th-note steps	GRID BEAT
55	**Diamond**	Pixel diamonds ripple out from taps; hold for one per beat	GRID BEAT
56	**Matrix**	Falling code rains down the columns under your fingers	GRID
57	**EQ**	Graphic-EQ bars: finger height sets the level, bars bounce on the beat	GRID BEAT MULTI
58	**Life**	Paint cells that live and die on the 8th notes (Game of Life)	GRID BEAT

Shapes

#	Effect	What it does	
59	**Blob**	Glowing blobs that melt together when fingers meet	MULTI
60	**Ripple**	Rings spread from taps and drags	
61	**Shockwave**	Tap: a blast ring that shoves the liquid outward	
62	**Bloom**	A flower grows while you hold; more fingers, more petals	MULTI
63	**Halo**	Rings round your fingers; with two or more, one ring spans them all	MULTI
64	**Star**	Spinning stars stamped along your path	
65	**Spiral**	Spinning galaxy arms; more fingers, more arms	MULTI
66	**Prism**	Nested spinning polygons; each extra finger adds a side	MULTI
67	**Radar**	A radar beam sweeps round each finger, leaving an afterglow	
68	**Iris**	Solid disc; pinch two fingers to open and close it	MULTI

Lines

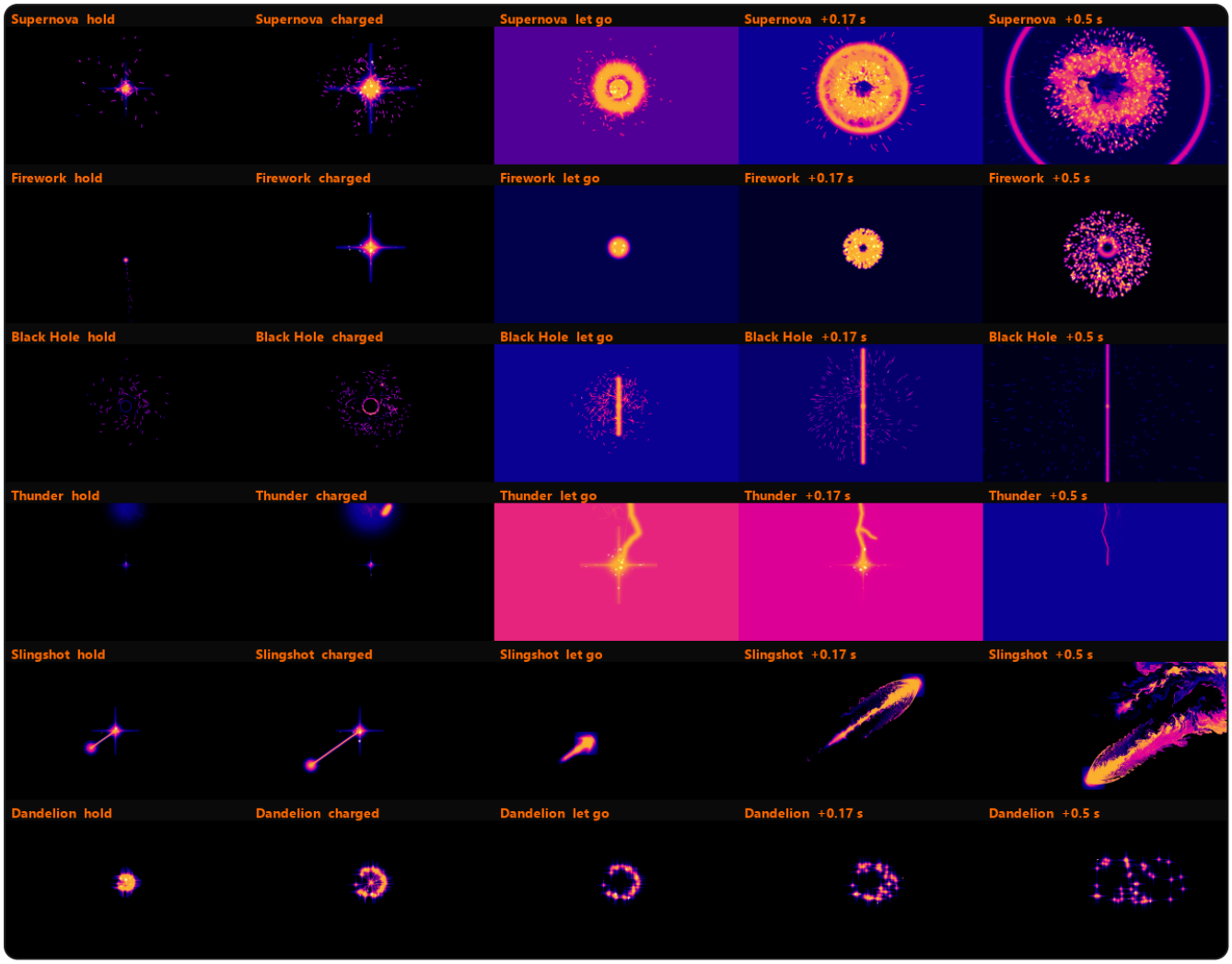
#	Effect	What it does	
69	**Neon**	Crisp glowing lines that slowly fade	
70	**String**	A vibrating string joins your fingers in touch order	MULTI
71	**Web**	Every finger joined to every other finger	MULTI
72	**Lightning**	Arcs crackle between fingers; one finger sparks on its own	MULTI
73	**Laser**	A fan of beams from each finger, sweeping round	

#	Effect	What it does	
74	**Shape**	Three or more fingers fill the shape between them	MULTI
75	**Tether**	Fingers tied to a glowing core that sits between them	MULTI

Stage

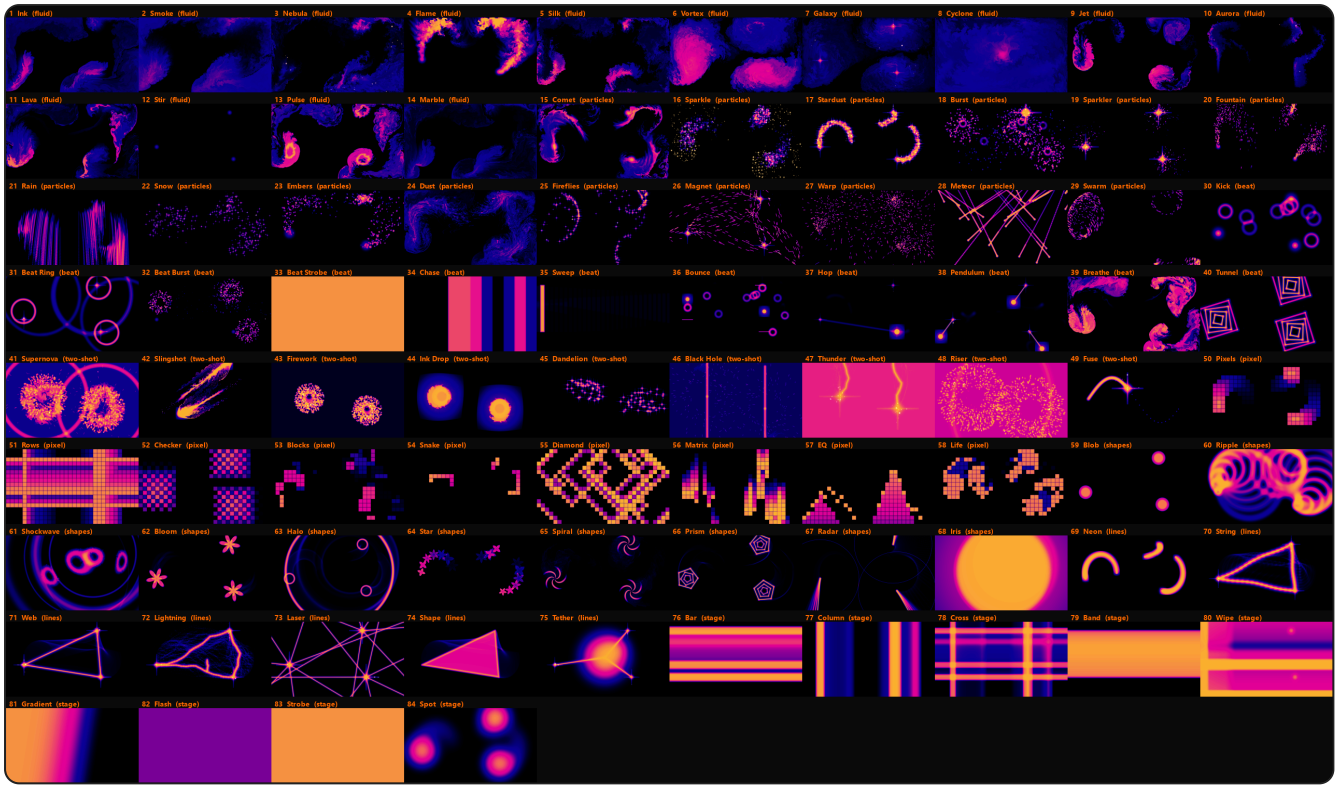
#	Effect	What it does	
76	**Bar**	A full-width bar that follows your finger up and down	
77	**Column**	A full-height column that follows your finger	
78	**Cross**	Bar and column crossing at your finger	
79	**Band**	Two fingers fill the whole band between them	MULTI
80	**Wipe**	Swipe to launch a bar across the whole rig	
81	**Gradient**	One finger: a big glow. Two: a fade from one finger to the other	MULTI
82	**Flash**	Every tap flashes the whole rig	
83	**Strobe**	Hold to strobe: higher on the screen is faster	
84	**Spot**	A big soft spotlight on each finger	

Two-shot effects in time



Each row: hold, charged, let go, 0.17 s later, 0.5 s later. Supernova, Firework, Black Hole, Thunder, Slingshot and Dandelion.

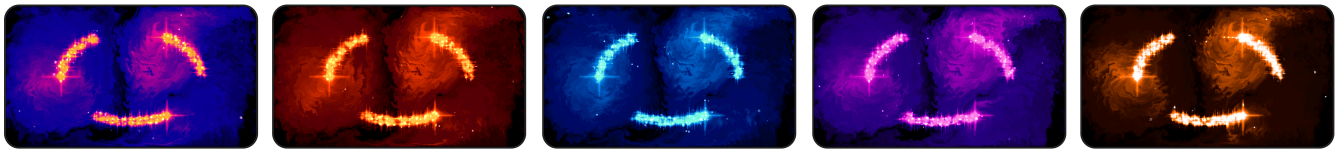
All 84 effects



One frame of every effect, played by the self-test with three scripted fingers in the default Candy palette.

6 Colour

Every effect paints *heat*, from nothing to full. Heat is turned into colour by a ramp from black through **LOW**, **MID** and **HIGH**. Faint edges and haze take the LOW colour, the body of an effect the MID colour and the hottest cores the HIGH colour. The ramp under the swatches shows the result. Changing the three colours re-colours every effect at once, including the tile previews.



Candy **Ember** **Ocean** **UV** **VIP**

The same Galaxy + Stardust gesture in five palettes.

Palettes on the PLAY page

The 16 chips under the swatches are palettes. One tap sets LOW, MID and HIGH together: Candy, Ember, Ocean, UV, Jungle, Ice, Sunset, Mono, Fire, Toxic, Laser, Deep, Rose, Gold, Miami and VIP.

The colour page



Editing the HIGH colour.

Tap the LOW, MID or HIGH swatch on PLAY to open the colour page for that colour. The colour you are editing has an orange frame; tap another swatch at the top to switch.

- **HUE**, **SATURATION** and **BRIGHTNESS**: drag the bars. The number at the right of each heading shows the value (hue in degrees, the others in percent).
- **QUICK COLOURS**: 16 fixed colours, including white and black. A tap sets the colour you are editing.
- **PALETTES**: the same 16 palettes, with names. A tap sets all three colours.

Tap **DONE** to go back to PLAY. Changes are live, so you can edit colours while someone plays.

> **TIP** A dark LOW colour (or black) keeps the background of the rig dark and makes effects punchier. A bright LOW fills the rig with colour as soon as anything is touched.

If the console sends colours (chapter 10), it can change LOW, MID and HIGH at any time. Who wins when both of you change a colour depends on **Who is in charge** on the INPUT page (chapter 11).

7 The LOOK faders

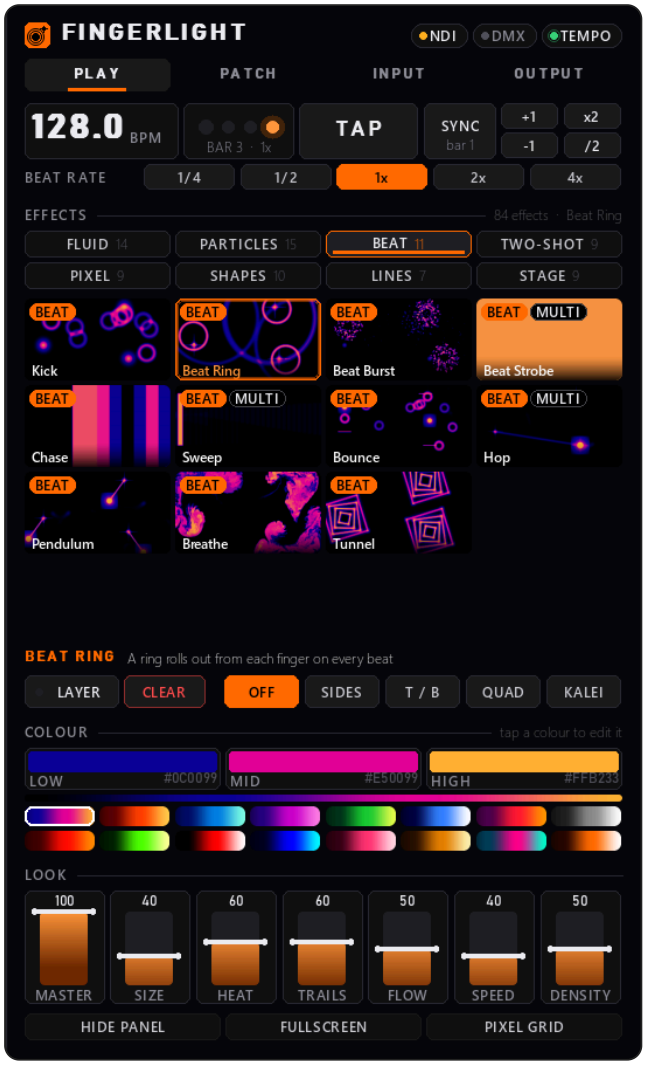
Seven faders at the bottom of PLAY shape every effect. Each shows its value from 0 to 100. Drag with a finger; several faders can be moved at once with several fingers. All seven can also be driven from the console's control fixture.

Fader	Default	What it does
MASTER	100	Overall output level. Pull it down to fade the whole picture.
SIZE	40	How big the marks under each finger are: brush size, particle size, ring size.
HEAT	60	How much heat each touch paints. Higher pushes effects up the ramp towards the HIGH colour.
TRAILS	60	How long things linger. Low is crisp and fast to black; high leaves long trails and slow fades.
FLOW	50	How strongly the liquid moves and swirls (most visible on FLUID effects).
SPEED	40	How fast effects move: particles, spins, sweeps.

Fader	Default	What it does
DENSITY	50	How much there is: particle counts, number of sparks, strands and stars.

8 Tempo

Fingerlight has its own beat clock. BEAT effects, the beat-locked PIXEL effects (Checker, Snake, Diamond, EQ, Life) and Riser follow it. Beat effects still play only while a finger is down: the tempo decides *when* things happen, your fingers decide *whether*.

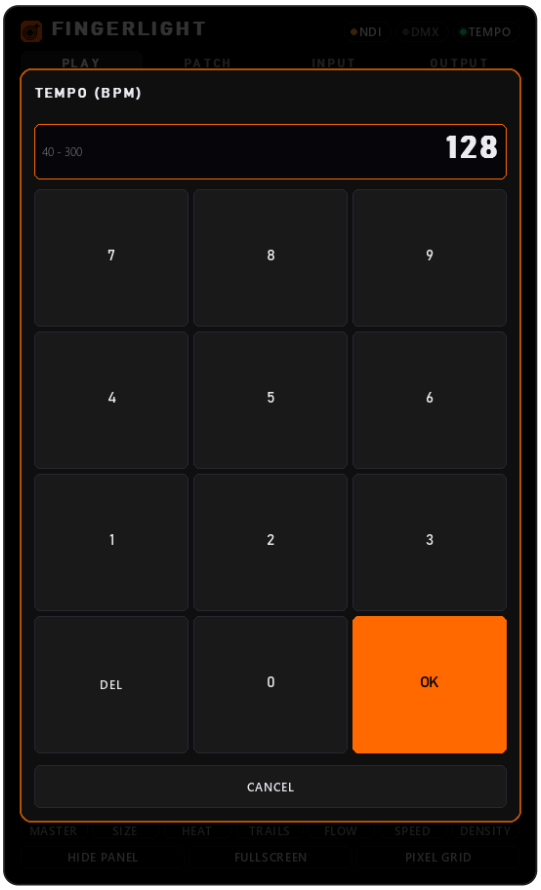


BEAT group with the tempo strip at the top.

The tempo strip

Control	What it does
BPM	The current tempo. Tap the number to type a tempo between 40 and 300 BPM on the keypad.
Beat lamps	Four lamps for the four beats of the bar, with the bar count and the beat rate underneath.
TAP	Tap on the beat, four times or more. Each tap also puts the beat on your tap, so tapping 1-2-3-4 lines the bar up too.
SYNC	"Bar 1 starts now": makes this moment the downbeat without changing the tempo.

Control	What it does
+1 / -1	Nudge the tempo up or down by 1 BPM.
x2 / /2	Double or halve the tempo.
BEAT RATE	1/4, 1/2, 1x, 2x or 4x: how fast all beat effects run relative to the tempo. 2x fires twice per beat; 1/2 once every two beats.



Tap the BPM number to type a tempo.

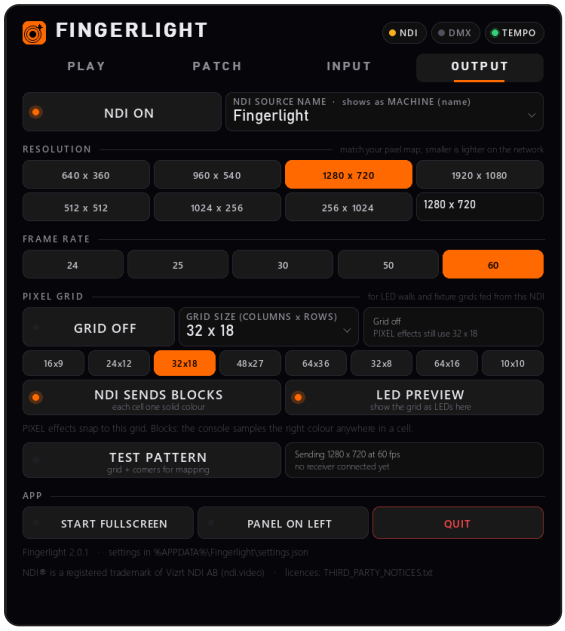
Beat offset (rig delay)

BEAT OFFSET on the INPUT page (0 to 500 ms) shifts Fingerlight's beats *later* by that amount. Use it when the light hits before the music you hear, for example when the video path or the sound system adds delay. Raise it in small steps and judge by eye against the music.

Tempo from the console

The control fixture has a BPM channel and a Tap channel, so a console macro or a beat-synced cue can set or tap Fingerlight's tempo (chapter 10).

9 OUTPUT: NDI and the pixel grid



The OUTPUT page.

NDI

- **NDI ON** / **NDI OFF** starts and stops the NDI source.
- **NDI source name**: tap to rename it on the on-screen keyboard. Receivers list it as **PC-NAME (name)**, for example *STAGE-PC (Fingerlight)*. Give each Fingerlight PC its own name if you run more than one.
- The info box next to the test pattern shows the size and frame rate being sent and how many receivers are connected.

RESOLUTION

Seven presets: 640 x 360, 960 x 540, 1280 x 720 (default), 1920 x 1080, 512 x 512, 1024 x 256 (wide strips) and 256 x 1024 (tall), plus **CUSTOM**: tap it and type a width (64 to 3840) then a height (64 to 2160). Match your pixel map roughly; there is no point sending 1080p to a 32 x 18 grid, and smaller is lighter on the network.

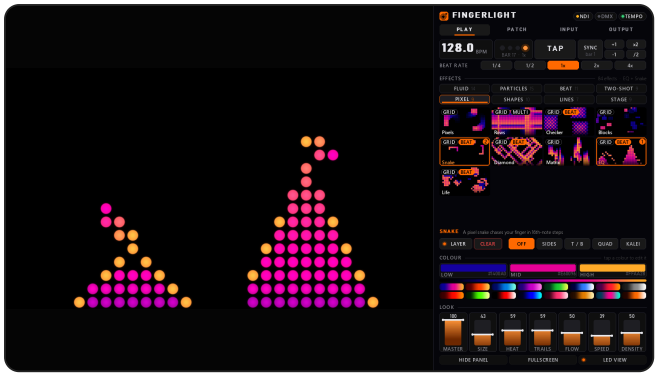
FRAME RATE

24, 25, 30, 50 or 60 frames per second (default 60). Higher is smoother and reacts faster to your fingers.

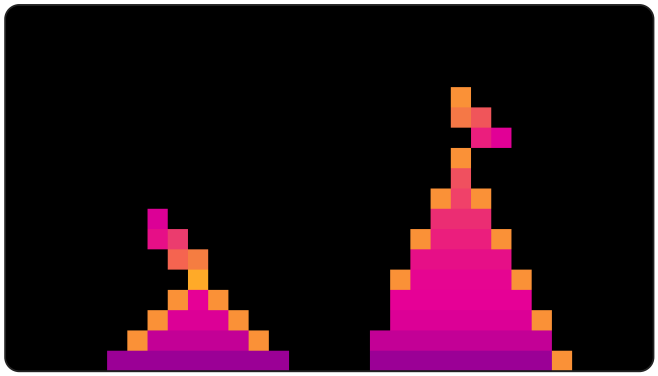
Pixel grid

Use the pixel grid when the NDI feed is mapped onto an LED wall or a grid of fixtures with few pixels, for example 32 columns by 18 rows of LED battens.

- **GRID ON** / **GRID OFF** switches it on. The info box shows the number of cells and how many NDI pixels each cell covers.
- **Grid size**: pick a preset (16x9, 24x12, 32x18, 48x27, 64x36, 32x8, 64x16, 10x10) or tap the field to type columns then rows (2 to 256 each).
- **NDI SENDS BLOCKS**: every cell is sent as one solid colour. The console then samples the right colour wherever it reads inside a cell, so pixel-mapping is forgiving.
- **LED PREVIEW**: the canvas on the touchscreen shows the grid as round LEDs, so you see roughly what the rig shows. The PIXEL GRID button on PLAY toggles this view too (it reads LED VIEW when the grid is on).
- PIXEL effects always snap to the grid size, even with the grid off.

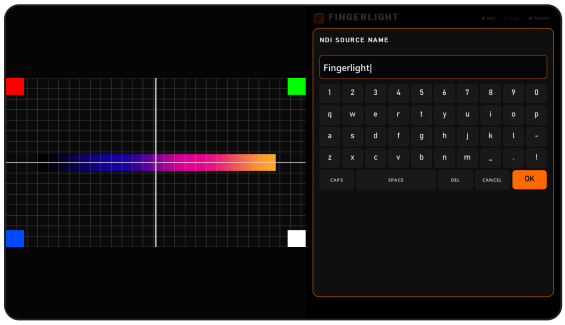


LED preview: 32 x 18 grid, EQ + Snake.



NDI sends blocks: the same moment as sent over NDI, one colour per cell.

Test pattern



Test pattern on the canvas.

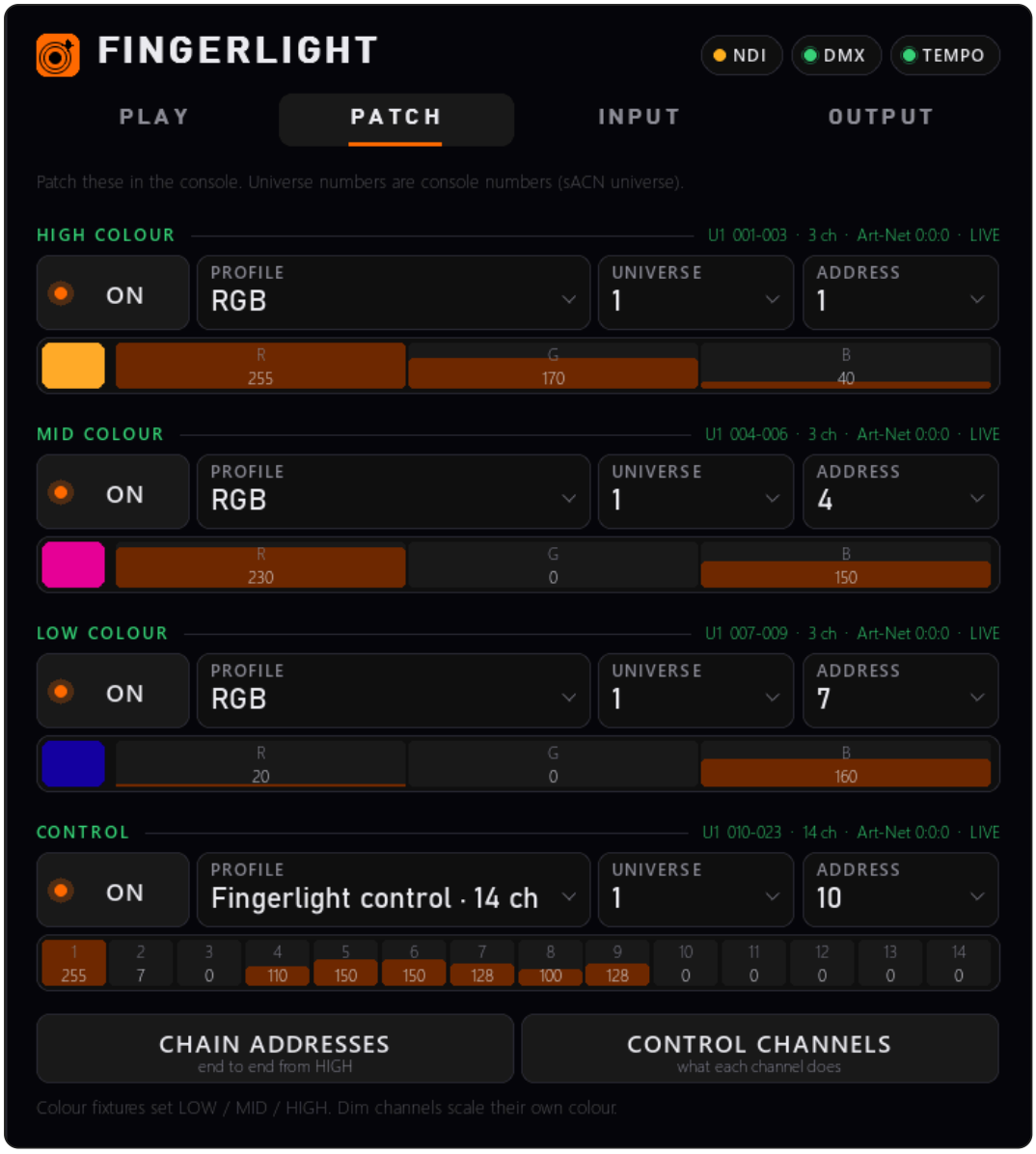
TEST PATTERN replaces the picture with a grid, a centre cross, a colour ramp and four coloured corners: **red** top left, **green** top right, **blue** bottom left and **white** bottom right. Use it to check that the console's mapping is the right way up and not mirrored, and that the edges of the picture reach the edges of the rig. Tap again to switch it off.

App

- START FULLSCREEN: open full screen next time Fingerlight starts.
- PANEL ON LEFT: put the panel on the left of the screen.
- QUIT: tap once, the button reads TAP AGAIN TO QUIT; tap again within three seconds to close Fingerlight.
- The bottom line shows the version and where settings are stored.

10 PATCH: DMX fixtures

Fingerlight listens for four "fixtures" that you also patch in the console. Three colour fixtures set LOW, MID and HIGH. The control fixture picks effects, drives the LOOK faders and sets the tempo.



PATCH page with the console sending. Live rows turn green and show their values.

Each row

- ON / OFF: switch a fixture off if the console should not control it.
- **PROFILE**: the channel layout (colour fixtures only, table below).
- **UNIVERSE**: 1 to 63999, using the console's (sACN) universe numbers.
- **ADDRESS**: the start address. The keypad only allows addresses where the whole fixture fits inside 512 channels.
- The line above the row shows universe, channel range, footprint, the matching Art-Net address and **LIVE** when data arrives.
- The meter under the row shows the live value of every channel. Colour rows also show the resulting colour in a chip on the left.

CHAIN ADDRESSES lays the switched-on fixtures end to end, starting at the HIGH fixture's address, and moves to the next universe if one would run past channel 512. If two fixtures overlap or run past 512, the hint at the bottom names them and the row says **OVERLAP**.

The default patch is universe 1: HIGH at 1, MID at 4, LOW at 7 (RGB, 3 channels each) and CONTROL at 10 to 23.

Colour fixture profiles



Profile list (two pages; NEXT for CMY).

Profile	Ch	Channels
RGB	3	R · G · B
RGBW	4	R · G · B · W
RGBA	4	R · G · B · A
RGBAW	5	R · G · B · A · W
Dim + RGB	4	Dim · R · G · B
Dim + RGBW	5	Dim · R · G · B · W
Dim + RGBA	5	Dim · R · G · B · A
RGB + Dim	4	R · G · B · Dim
RGB 16-bit	6	R coarse · R fine · G coarse · G fine · B coarse · B fine
Dim + RGB 16-bit	8	Dim · Dim′ · R · R′ · G · G′ · B · B′
Dim + RGBW 16-bit	10	Dim · Dim′ · R · R′ · G · G′ · B · B′ · W · W′
CMY	3	C · M · Y
Dim + CMY	4	Dim · C · M · Y

Dim channels scale their own colour. 16-bit profiles use coarse/fine pairs. White and amber are mixed back into RGB.

The control fixture (14 channels)

Ch	Function	Values
1	**Master**	0 to 255 = MASTER fader 0 to 100
2	**Effect**	Picks the main effect: three DMX values per effect (table below)
3	**Layer effect**	0 = no layer; otherwise adds one effect on top. Use the channel 2 value + 1 (Ink = 1, Smoke = 4 …)
4	**Size**	SIZE fader
5	**Heat**	HEAT fader
6	**Trails**	TRAILS fader
7	**Flow**	FLOW fader

Ch	Function	Values
8	**Speed**	SPEED fader
9	**Density**	DENSITY fader
10	**Mirror**	0-51 Off · 52-103 Sides · 104-155 Top/Btm · 156-207 Quad · 208-255 Kaleido
11	**Flash**	Going above 50% (128) flashes the whole output once
12	**Clear**	Going above 50% clears the canvas, like CLEAR
13	**BPM**	0 = leave the tempo alone; 1 = 60 BPM ... 255 = 314 BPM (BPM = value + 59)
14	**Tap**	Each rise above 50% is one tap. Flash it on the beat to tap the tempo

Tap **CONTROL CHANNELS** on PATCH (or the control fixture's profile field) to see this list and the effect values on the touchscreen.

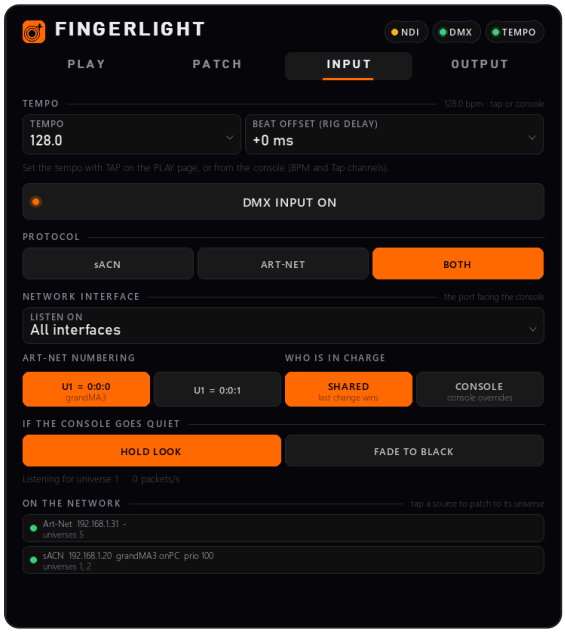
Effect values for channel 2

Ch 2	Effect	Ch 2	Effect	Ch 2	Effect
000-002	**1 Ink**	084-086	**29 Swarm**	168-170	**57 EQ**
003-005	**2 Smoke**	087-089	**30 Kick**	171-173	**58 Life**
006-008	**3 Nebula**	090-092	**31 Beat Ring**	174-176	**59 Blob**
009-011	**4 Flame**	093-095	**32 Beat Burst**	177-179	**60 Ripple**
012-014	**5 Silk**	096-098	**33 Beat Strobe**	180-182	**61 Shockwave**
015-017	**6 Vortex**	099-101	**34 Chase**	183-185	**62 Bloom**
018-020	**7 Galaxy**	102-104	**35 Sweep**	186-188	**63 Halo**
021-023	**8 Cyclone**	105-107	**36 Bounce**	189-191	**64 Star**
024-026	**9 Jet**	108-110	**37 Hop**	192-194	**65 Spiral**
027-029	**10 Aurora**	111-113	**38 Pendulum**	195-197	**66 Prism**
030-032	**11 Lava**	114-116	**39 Breathe**	198-200	**67 Radar**
033-035	**12 Stir**	117-119	**40 Tunnel**	201-203	**68 Iris**
036-038	**13 Pulse**	120-122	**41 Supernova**	204-206	**69 Neon**
039-041	**14 Marble**	123-125	**42 Slingshot**	207-209	**70 String**
042-044	**15 Comet**	126-128	**43 Firework**	210-212	**71 Web**
045-047	**16 Sparkle**	129-131	**44 Ink Drop**	213-215	**72 Lightning**
048-050	**17 Stardust**	132-134	**45 Dandelion**	216-218	**73 Laser**
051-053	**18 Burst**	135-137	**46 Black Hole**	219-221	**74 Shape**
054-056	**19 Sparkler**	138-140	**47 Thunder**	222-224	**75 Tether**
057-059	**20 Fountain**	141-143	**48 Riser**	225-227	**76 Bar**
060-062	**21 Rain**	144-146	**49 Fuse**	228-230	**77 Column**

Ch 2	Effect	Ch 2	Effect	Ch 2	Effect
063-065	22 Snow	147-149	50 Pixels	231-233	78 Cross
066-068	23 Embers	150-152	51 Rows	234-236	79 Band
069-071	24 Dust	153-155	52 Checker	237-239	80 Wipe
072-074	25 Fireflies	156-158	53 Blocks	240-242	81 Gradient
075-077	26 Magnet	159-161	54 Snake	243-245	82 Flash
078-080	27 Warp	162-164	55 Diamond	246-248	83 Strobe
081-083	28 Meteor	165-167	56 Matrix	249-251	84 Spot

Values past 251 leave the effect unchanged. For channel 3 (layer) add 1: Ink = 1-3, Smoke = 4-6 and so on; 0 = no layer.

11 INPUT: DMX and network



The INPUT page with two sources on the network.

TEMPO

The **TEMPO** field (tap to type) and **BEAT OFFSET (RIG DELAY)**, see chapter 8.

DMX INPUT

DMX INPUT ON / **OFF**. With DMX off, everything is played from the panel only.

PROTOCOL

sACN, **ART-NET** or **BOTH** (default). Pick the one your console sends; BOTH accepts either.

NETWORK INTERFACE

Listen on: *All interfaces* (default) or one network port. On a PC with several network cards (venue Wi-Fi plus a lighting network), choose the port that faces the console. Disconnected ports are marked.

Art-Net numbering

Consoles disagree about which Art-Net address universe 1 is. **U1 = 0:0:0** (default) matches grandMA3: universe 1 is Art-Net 0:0:0. Choose **U1 = 0:0:1** if your console counts from 1. The PATCH page shows the resulting Art-Net address for each row.

Who is in charge

Mode	Behaviour	Use it when
SHARED	A console channel only acts when its value *changes*. Last change wins: if you move a fader on the panel, it stays until the console moves that channel again.	The operator at the touchscreen and the console both make changes.
CONSOLE	Every patched parameter follows the console all the time. Panel changes to those parameters are overwritten immediately.	The console must have the final say, for example in a programmed show.

If the console goes quiet

- `HOLD LOOK` (default): keep the last colours and settings and carry on.
- `FADE TO BLACK`: if the control fixture has been receiving and then stops, the output fades to black within a few seconds, and comes back when DMX returns. This needs the control fixture to be patched and switched on.

Under these buttons a line shows which universes Fingerlight listens to and how many DMX packets per second arrive.

On the network

A live list of every sACN and Art-Net source Fingerlight can hear: protocol, IP address, the source name, sACN priority and the universes it sends. A green dot means data is arriving. **Tap a source** and choose one of its universes to move all four fixtures to that universe in one go.

> **PRIORITY** When two sACN sources send the same universe (for example a main and a backup console), Fingerlight follows the one with the higher sACN priority.

12 Working with a grandMA3

A typical set-up: Fingerlight's NDI picture is pixel-mapped onto the rig by the grandMA3, and the grandMA3 sends colours and control back. Menu names on the console differ between software versions; follow the grandMA3 manual for the exact steps.

1. **Network**
   Put the Fingerlight PC on the same network as the console (or its NDI-capable processor). Allow Fingerlight through the firewall on Private networks.

2. **NDI picture**
   Add Fingerlight's NDI source (*PC-NAME (Fingerlight)*) as a video source on the console and use it in the pixel mapper for the fixtures it should drive. Set Fingerlight's resolution close to the shape of the mapped area. Check orientation with `TEST PATTERN`.

3 **Low-resolution rigs**

For battens, tubes or a small wall, switch on the **pixel grid** with the rig's columns x rows and keep `NDI SENDS BLOCKS` on, then use the PIXEL effects.

4 **Colour fixtures**

Patch three fixtures with the same layout as Fingerlight's colour profiles (for RGB, any generic RGB fixture type works) at the addresses on the PATCH page. These become your LOW, MID and HIGH colours.

5 **Control fixture**

Patch a 14-channel fixture at the CONTROL address (a generic type with 14 parameters, or your own fixture type using the channel table in chapter 10). Store effect choices, LOOK levels and mirror modes in cues and presets like any other fixture.

6 **Universes and Art-Net**

Use the console's universe numbers in Fingerlight. For Art-Net from a grandMA3 leave numbering on `U1 = 0:0:0`.

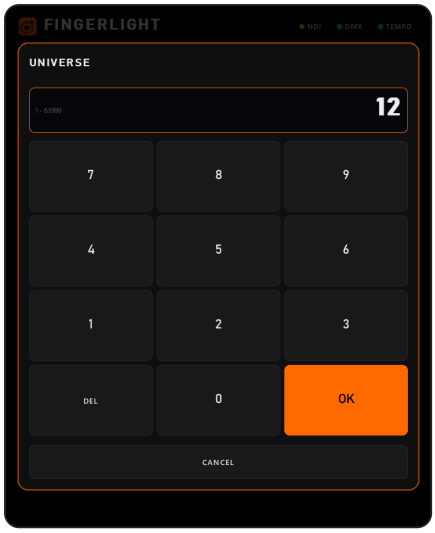
7 **Check**

The DMX lamp turns green and every row on PATCH says LIVE. Move the console's colour fixtures and watch the swatches on PLAY follow.

> **TIP** Program the colours on the console and leave the effects to the touchscreen player: the console keeps the show's colour story, the player adds the movement. Choose SHARED so both sides can make changes.

13 Keypads, keyboard and lists

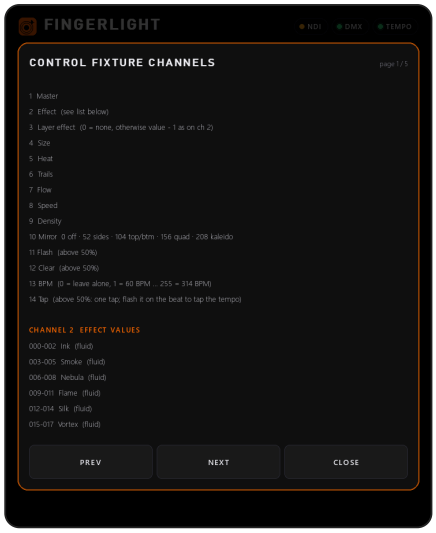
Every number, name and choice is entered on screen. These pop-ups cover the panel; the canvas keeps running.



Keypad: the allowed range is shown on the left. Values outside it are clamped. DEL removes the last digit.



Keyboard: for the NDI name. CAPS for capitals, SPACE, DEL, OK.



Lists: tap a choice. Long lists have PREV / NEXT pages.

`CANCEL` or `CLOSE` leaves without changing anything. With a keyboard attached, Enter is OK, Esc cancels and Backspace deletes.

14 Troubleshooting

Problem	What to check
Chrome warns about the download	New downloads get this until enough people have installed them. Keep the file only if it came from visuallyimpressive.com or the link in your purchase email: in Chrome's download list choose **Keep**.
Windows will not open the installer	The message is "*Windows cannot access the specified device, path or file*": Windows or your antivirus blocked it. See Install: **Properties › Unblock**, or restore and allow it in your antivirus, then run it again.
Fingerlight will not start after installing	The message is "*Failed to start embedded python interpreter*": antivirus removed some of Fingerlight's files after install. Restart the PC (this closes any stuck copy), restore or allow Fingerlight in your antivirus, add `%LOCALAPPDATA%\Programs\Fingerlight` as an exclusion, then run the installer again. Your settings are kept.
The canvas stays black	Is a finger touching the canvas (not the panel)? Is MASTER up? Is HEAT above zero? Is the LOW/MID/HIGH palette all black? In CONSOLE mode, is the console sending Master at zero? With FADE TO BLACK, has the console stopped sending?
The console cannot see the NDI source	NDI lamp amber or green? Firewall allowed on Private networks (Windows Settings › Firewall)? Same network and subnet? Is the network marked Public in Windows? If the network uses NDI groups, set them with NDI Access Manager; Fingerlight does not set groups itself.
NDI lamp red	NDI failed to start. Restart Fingerlight; the reason is shown on OUTPUT.

Problem	What to check
DMX lamp amber (waiting)	Protocol matches the console? **Listen on** the right port? Universe numbers the same on both sides? For Art-Net, check the numbering setting. Look at **On the network** on INPUT: if the console appears there, tap it to patch to its universe.
DMX lamp red	Another program is using the sACN or Art-Net port, or the firewall blocks it. Close other DMX software on this PC and restart Fingerlight.
Colours change on their own	The console is sending colours. Switch the colour fixtures OFF on PATCH, or change them on the console.
My panel changes jump back	Who is in charge is set to CONSOLE. Choose SHARED.
Beat effects land late	Set BEAT OFFSET (RIG DELAY) on INPUT.
Picture is mirrored or upside down on the rig	Use TEST PATTERN and fix the mapping on the console (red should be top left).
The panel is gone	Tap the orange PANEL tab in the top corner, or press Tab.
Fingerlight closed with an error	Details are written to `%APPDATA%\Fingerlight\crash.log`. Send that file to support.

15 Reference

Keyboard shortcuts (optional)

Key	Action
F11	Full screen on/off
Tab	Hide or show the panel
C	Clear the canvas
Enter / Esc / Backspace	OK / cancel / delete in keypads and keyboards

Files

Program	`%LOCALAPPDATA%\Programs\Fingerlight`
Settings	`%APPDATA%\Fingerlight\settings.json` (kept when upgrading)
Crash log	`%APPDATA%\Fingerlight\crash.log`

Defaults

Effect	Ink, LAYER off, mirror off, beat rate 1x, Candy palette
LOOK	Master 100, Size 40, Heat 60, Trails 60, Flow 50, Speed 40, Density 50

Tempo	120 BPM, offset 0 ms
NDI	On, name "Fingerlight", 1280 x 720, 60 fps
DMX	On, sACN + Art-Net, all interfaces, U1 = 0:0:0, SHARED, HOLD LOOK
Patch	Universe 1: HIGH 1, MID 4, LOW 7 (RGB), CONTROL 10
Pixel grid	Off, 32 x 18, blocks on, LED preview on

Fingerlight 2.0.2 · Visually Impressive Productions · Patent pending.
NDI® is a registered trademark of Vizrt NDI AB. grandMA3 is a trademark of MA Lighting Technology GmbH.