

NIGHTJAR

Films after dusk

DOORS AT SUNSET FILMS AT CIVIL DUSK −6.0°

A bird you only see when it moves

By day a nightjar lies lengthwise along a branch, and its patterned plumage makes it very hard to pick out. At dusk the males sing a long mechanical trill, the churr, and in a torch beam their eyes shine back.

Cinema works the same way: pictures that exist only in motion, made visible by a beam of light in the dark. So Nightjar is not a logo that gets animated afterwards. It is a set of states that only make sense in time, and the time is the evening.

About twenty minutes after sunset males begin churring, as a rough guide.
BTO, Nightjar Survey Instructions 2025

About 1,900 notes a minute, in a band of 1–2.5 kHz.
Country Life; Docker, Abrahams & Lowe, Bird Study 2020

A white patch across three primaries marks the male in flight.
European nightjar, Wikipedia

A tapetum lucidum behind the retina is why the eyes shine in torchlight.
European nightjar, Wikipedia



Ident · Horizon, 2.2 s. The mark begins as a line with the sun on it.



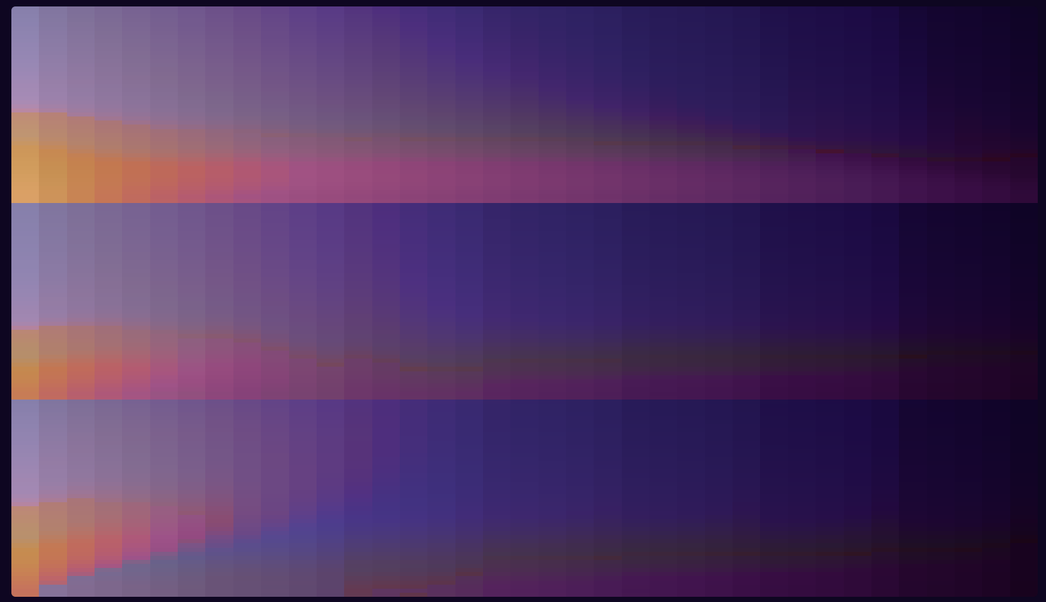
Ident · Eyeshine, 5.1 s. A torch finds an eye; it becomes the mark's.

Doors at sunset. Films at −6.0°.

Twilight is measured in angle: civil dusk at 6° below the horizon, nautical at 12°, astronomical at 18°. Nightjar writes its programme in those units, and a ticket turns the angle into a clock time for its place and date.

PLACE	2027	TO −6°	TO −12°	TO −18°
Nairobi	March equinox	21	45	69
Nairobi	June solstice	23	49	75
Nairobi	December solstice	23	49	76
Lahore	March equinox	25	53	81
Lahore	June solstice	29	63	100
Lahore	December solstice	27	58	87
London	March equinox	34	73	114
London	June solstice	49	123	never
London	December solstice	41	84	125

Minutes after sunset, from the NOAA solar equations (astral 3.2). In London at midsummer the sun never reaches −18°.



The graded twilight sky every frame is drawn from. Across: the sun from 0° to 18° down. Down, three views: towards the sun, to the side, away from it. Rendered with the atmosphere in Hillaire (2020): Rayleigh and Mie scattering, ozone absorption and the Earth's shadow; then graded in the open (page 8).

> **States follow the sky.** Horizon 0° · Wake 2° · Churr 3.5° · Flight 6° · Clap 6.5° · Frame 12° · Night 18°.

One construction, seven states

Horizon

0° · the sun sits on the line



Wake

2° · the point lifts and becomes an eye



Churr

3.5° · the line trembles with the song



Flight

6° · two long wings; white patches



Clap

6.5° · the wings crack down



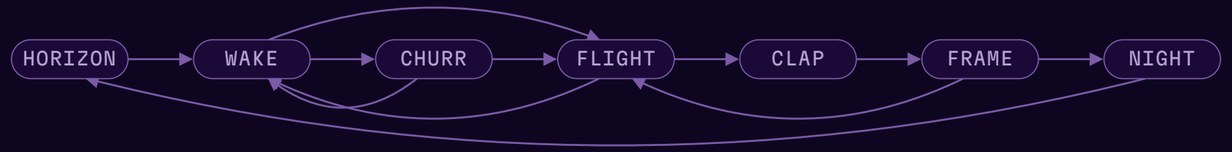
Frame

12° · the halves part into 2.39:1

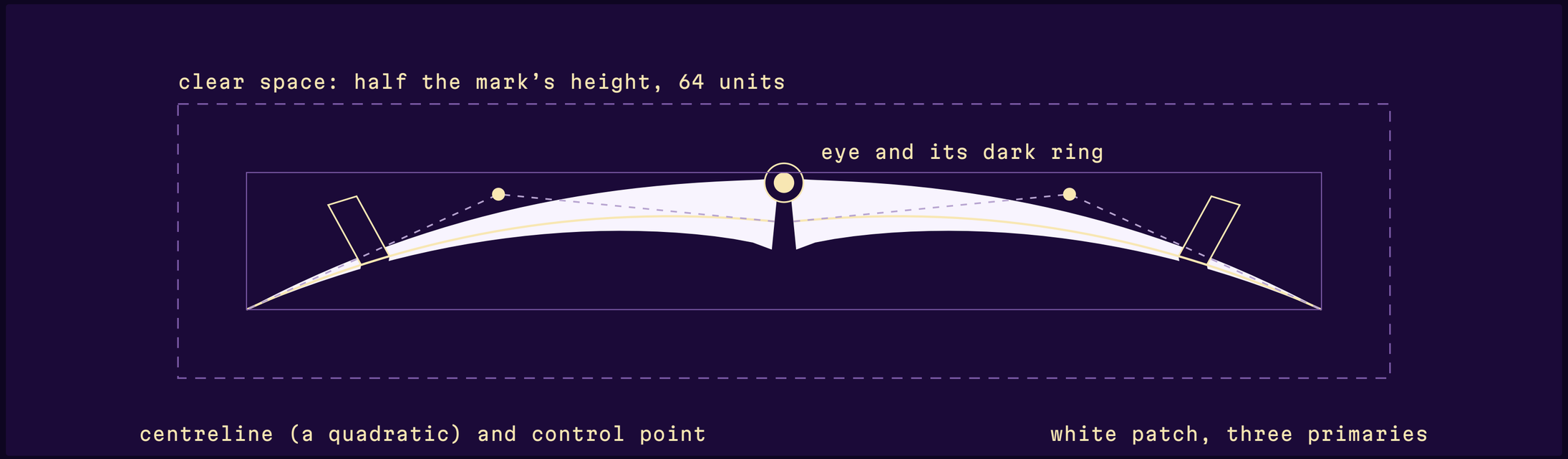
Night

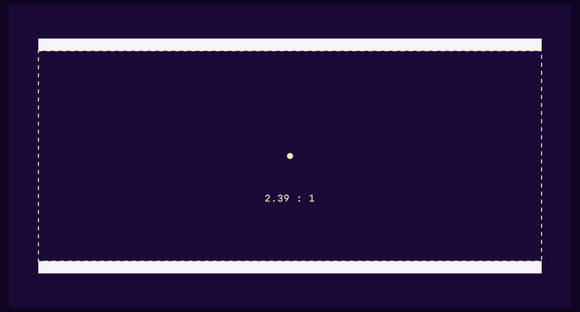
18° · everything folds into the eye

Four blades and an eye. Each wing is an upper and a lower blade on one centreline: together a wing, apart the top and bottom bars of the frame. Same parts in every state, so any state morphs into any other by springs on numbers.



Drawn from parameters, not by hand





For the film, each wing splits along its centreline and the halves part to the edges of a 2.39:1 frame, the anamorphic widescreen ratio.

SPAN
1000 units, tip to tip

CLEAR SPACE
half the mark’s height on every side

MINIMUM SIZE
80 px or 12 mm wide: the white patch stays at least 2 px open

BELOW THAT
the eye alone, the night state, is the favicon

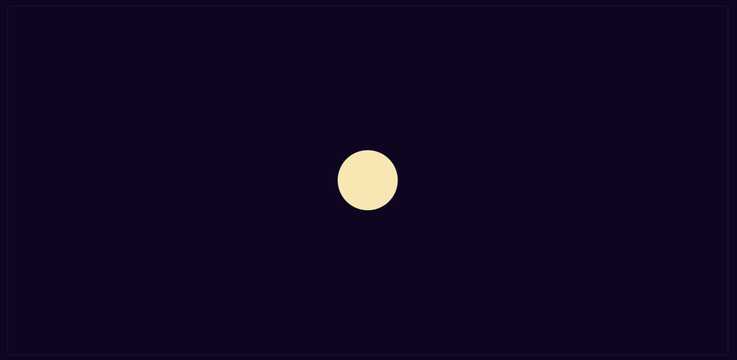
The word is as wide as the wings



Primary lockup: flight over the word, the wingspan equal to the word's ink width.



Screen lockup: the frame state, contrast raised.



Smallest: the eye alone.

NIGHTJAR

horizon · width 200 · weight 140 · contrast 0

NIGHTJAR

flight · width 200 · weight 300 · contrast 0

NIGHTJAR

clap · width 118 · weight 640 · contrast 0

NIGHTJAR

frame · width 150 · weight 520 · contrast 60

NIGHTJAR

night · width 60 · weight 700 · contrast 0

The word follows the mark's state on Science Gothic's axes. Its outlines here are drawn from real instances of the font, spaced with HarfBuzz.

06 TYPE

Three families, three jobs

DISPLAY · SCIENCE GOTHIC

Films after dusk

Thomas Phinney, Vassil Kateliev, Brandon Buerkle, 2025. Modelled on Morris Fuller Benton's Bank Gothic (1930–34). Axes: width 50–200, weight, contrast, slant.

TEXT · GEORAMA

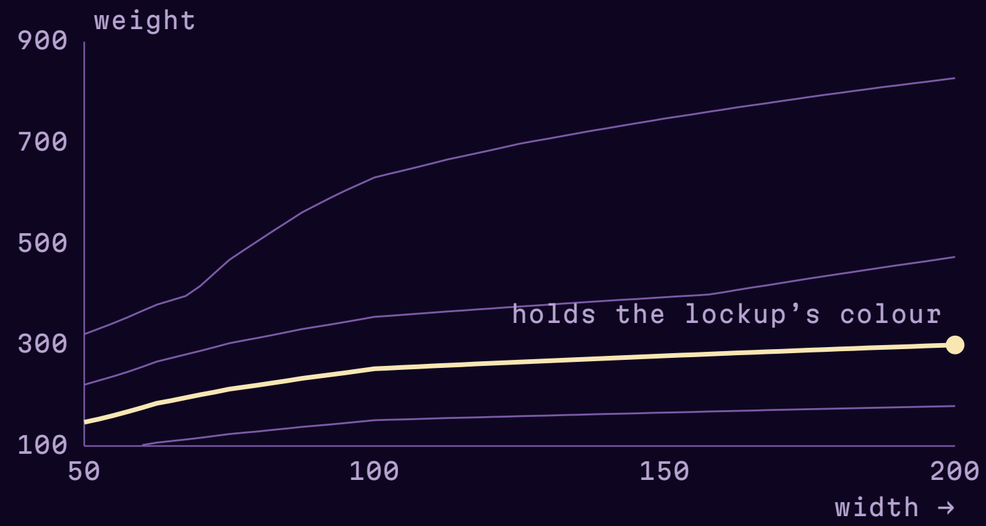
Doors open at sunset. Bring something warm; the heath cools fast once the light has gone.

Production Type. Width and weight, with italics.

ANGLES AND TIME · MARTIAN MONO

−6.0° · 00:29:19:08

Roman Shamin, Evil Martians. Monospaced, so figures never shift as they count.



Ink density of NIGHTJAR (ink area ÷ advance × cap height), measured on 156 real instances. Faint lines are equal density; the lamp line is the weight that holds the lockup's colour at every width. Stretch the letters and they read lighter, so the wider the word, the heavier it is drawn.

Taken from the evening, then designed

Three hues were read off the twilight sky model at the moments the programme uses, at equal luminance so brightness never passes for colour. Each was moved by a stated amount for a stated reason. No hue sits within 20° of a family an earlier Studio Helper sample owns.

#482277
OKLCH 0.353 0.138 300

Nocturne

`model hue 283° → graded 299° (+6°)`

The sky after the purple light. Every ground in the identity.

The model's night zenith is 281-288, a blue that sits beside Halcyon's navy and Bracket's ultramarine. Six degrees toward violet keeps the ramp on the model's own twilight path (the zenith is 303 at the purple light) but owns it.

#bd5ec3
OKLCH 0.632 0.175 325

Purple Light

`model hue 337° → graded 324° (−13°)`

The glow of civil twilight, brightest with the sun 3-4 deg down. The signature.

The purple light reads 328-344 across 3-6 deg. At that hue and the gamut's full chroma it is a neon magenta, which the brief rules out. Thirteen degrees toward violet, with chroma capped, makes it a glow rather than a highlighter, and keeps it 34 degrees clear of Tyrian.

#f8e7b3
OKLCH 0.928 0.069 91

Lamp

`model hue 77° → graded 90° (+13°)`

Sunlight kept for the projector and the eye. Used only as light, so it has no dark steps: a lamp turned down is brown, and brown is off-brief.

Direct sun at 20 deg is 77: amber, and nine degrees from Halcyon's. Moved toward yellow it stops reading as a colour and reads as light, which is its only job.

Every step solved for contrast

	50	100	200	300	400	500	600	700	800	900	950
NOCTURNE	16.1:1	13.5:1	10.5:1	8.7:1	7.2:1	5.2:1	3.6:1	2.4:1	1.7:1	1.2:1	1.0:1
PURPLE LIGHT	16.0:1	13.6:1	10.6:1	8.6:1	7.2:1	5.2:1	3.6:1	2.4:1	1.6:1	1.2:1	1.1:1
LAMP	16.0:1	13.6:1	10.6:1	8.6:1							

ROLE	HEX	GROUND	RATIO	GATE
night	#0e0621			
night-raised	#1b0a38			
night-lift	#300d5b			
moth	#f8f4fe	night	18.15	7.0
moth-soft	#ddd1ec	night	13.51	7.0
moth-mute	#b7a4d0	night	8.66	4.5
rule	#7b5aa6	night	3.61	3.0
purple	#bd5ec3	night	5.21	3.0
purple-text	#e38de3	night	8.61	7.0

ROLE	HEX	GROUND	RATIO	GATE
purple-deep	#5d0975			
lamp	#f8e7b3	night	16.01	7.0
moth-on-raised	#f8f4fe	night-raised	16.88	7.0
mute-on-raised	#b7a4d0	night-raised	8.05	4.5
purple-on-raised	#e38de3	night-raised	8.01	4.5
night-on-purple	#0e0621	purple	5.21	4.5
night-on-lamp	#0e0621	lamp	16.01	7.0
night-on-moth	#0e0621	moth	18.15	7.0
purple-on-moth	#7c2891	moth	7.54	4.5

WCAG 2 contrast. APCA's licence bars commercial use. Step 400 is whatever lightness gives 7.2:1 on Night in every family; Lamp has no dark steps, because a lamp turned down is brown.

09 TWO SCREENS, A PRESS, EVERY EYE

Gamut and colour vision

	SRGB, EVERY SCREEN	DISPLAY P3, WIDE-GAMUT SCREENS	PRESS, SWOP CMYK	
Purple Light	#bd5ec3	color(display-p3 0.7033 0.3714 0.7631)	#bd5ec3 · C29 M81 Y0 K0	passes the gamut alarm, but the round trip moves it dE2000 10.4: proof it
Purple text	#e38de3	color(display-p3 0.8529 0.5531 0.8879)	#e38de3 · C10 M65 Y0 K0	passes the gamut alarm, but the round trip moves it dE2000 12.1: proof it
Nocturne 600	#7b5aa6	color(display-p3 0.4631 0.3525 0.6417)	#785f9b · C59 M66 Y5 K0	out of gamut: the alternate prints within dE2000 3.0
Lamp	#f8e7b3	color(display-p3 0.9740 0.9054 0.6818)	#f8e7b3 · C2 M6 Y37 K0	in gamut; prints within dE2000 3.0

Violets and magentas are the colours CMYK prints worst. Screen and press values are authored separately, checked with LittleCMS against the SWOP profile, and the measured sRGB → CMYK → sRGB round trip is stated for each. LittleCMS's gamut alarm passes the Purple Light, but the round trip moves it by about dE 10: printed pieces carrying it are proofed, not trusted to the number.

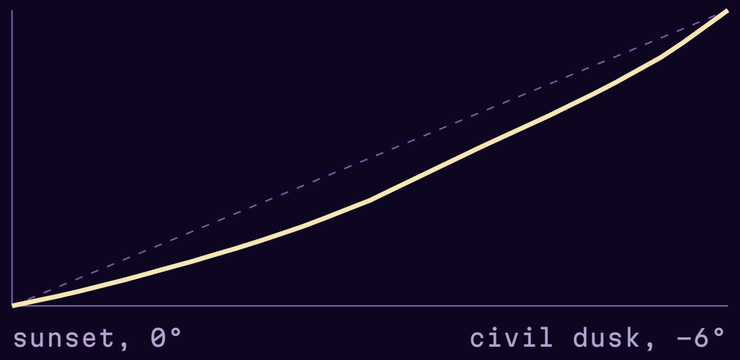


Swatches: Night, Nocturne 600, Purple Light, Purple text, Lamp, Moth, under simulated dichromacy (Brettel 1997). Purple Light and Nocturne are close in hue, so they are always separated by lightness too: Purple Light on Night stays at 4.39:1 or more under every simulation.

Nothing moves without a cause

1. Nothing moves without a cause: time (the sun), sound, light, or a hand.
2. Nothing loops for its own sake. The only cycles are a wingbeat while the bird is actually in flight, and the churr while it is actually singing.
3. Mass is honest. Heavy things (the frame, the camera) are critically damped; light things (feathers, the eye) are allowed a small overshoot and settle. No bounce anywhere.
4. Follow-through is anatomy, not decoration: wingtips lag the wing roots because a real wing is flexible, so tips run on a softer spring.
5. Light leads, form follows: an eye brightens a beat before it moves.

THE DUSK CURVE



Anything that goes down eases on the sky model's own fall in zenith brightness from sunset to civil dusk, in log units.

SPRINGS, NOT DURATIONS



wing · damping 0.74 · 1.05 Hz · overshoot 3.15% · settles 1.002 s
wing roots, thickness, the mark's body



tip · damping 0.62 · 0.88 Hz · overshoot 8.35% · settles 1.147 s
wingtips and the white patches: follow-through



eye · damping 0.8 · 1.6 Hz · overshoot 1.52% · settles 0.633 s
the eye's position and size



light · damping 1.0 · 0.55 Hz · overshoot 0.0% · settles 1.922 s
glow, exposure, eyeshine intensity



clap · damping 0.9 · 3.4 Hz · overshoot 0.15% · settles 0.242 s
the wing-clap: fast, no rebound



frame · damping 1.0 · 0.62 Hz · overshoot 0.0% · settles 1.705 s
the letterbox opening and closing



type · damping 0.96 · 0.85 Hz · overshoot 0.0% · settles 1.132 s
variable-font axes



camera · damping 1.0 · 0.3 Hz · overshoot 0.0% · settles 3.523 s
the camera: heavy, never overshoots



ui · damping 0.92 · 2.2 Hz · overshoot 0.06% · settles 0.393 s
controls, rails, the dial

Damped harmonic oscillators solved exactly, so a film can sample any frame and a hand can throw the wings mid-flight with its own velocity. Heavy things never overshoot; feathers overshoot a little and settle.

Heard before it is seen

The sonic logo compresses a real song's structure: the churr, a terminal phrase that slows and falls like a machine winding down, then two wing claps.

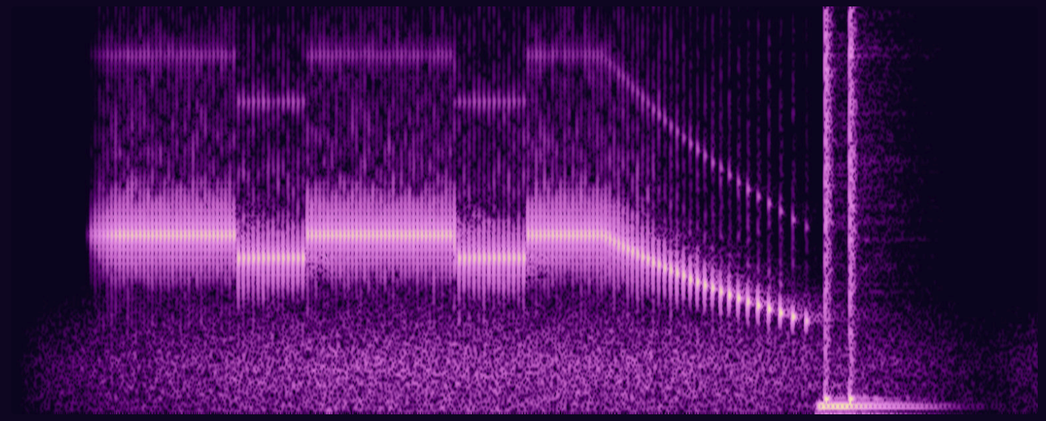
Docker, Abrahams and Lowe (2020) describe a song type ending in "a gradual descent in frequency with a median duration of 6 seconds", followed by wing claps 87% of the time. Nightjar's version is synthesised in code, with no recordings. The visuals read the same schedule the audio plays, so the wings crack down on the sample the clap lands on.

NOTE RATE
31.67 per second (about 1,900 a minute, sourced)

BAND
1000–2500 Hz (sourced)

MINOR PHRASE, TIMBRE
modelled, not measured

LOUDNESS
films normalised to -18 LUFS integrated



Ident · Churr, the soundtrack as exported: spectrogram 0–4 kHz over 8 seconds, computed from the MP4's audio. The steady trill, the wind-down, then two broadband claps.

The evening in 48 seconds



00:00:03:00 Sunset. A line draws out of the sun.



00:00:09:05 The line is the horizon; the sun sits on it.



00:00:17:12 The eye lifts. The line churrs.



00:00:24:00 Flight. White patches catch the light.



00:00:29:10 Two claps. The wings crack down; the image blinks shut.



00:00:31:05 The gate opens on a heath at dusk.



00:00:38:05 The screen carries the mark. An open-air film season.



00:00:44:00 The lockup, then night.

1920 × 1080, 24 fps, each frame eight exposures across a 180° shutter. Stills from the render.

13 IDENTS · 8 SECONDS EACH

HORIZON



1.2 s · sunset



2.2 s · the line draws



4.6 s · the sun lifts

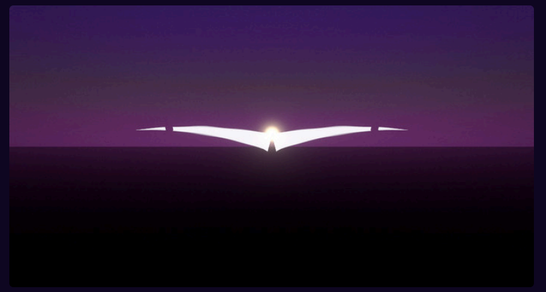


7.6 s · lockup

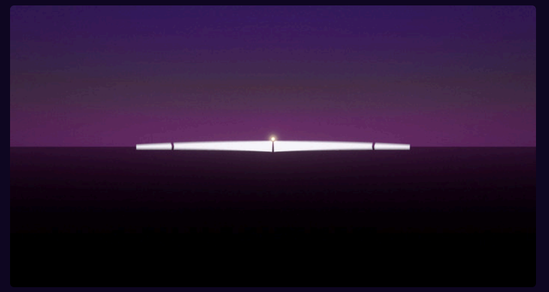
CHURR



3.0 s · the song



5.6 s · wind-down



6.4 s · the clap



7.8 s · the gate opens

EYESHINE



2.0 s · a torch on the heath



3.3 s · two eyes, then one



5.1 s · the eye lifts



7.8 s · lockup

14 BUMPER · 6 SECONDS

Keep the dark

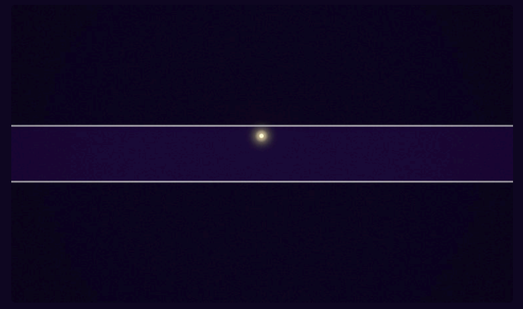
Before each screening. The bars close on the dusk curve, the eye goes out last, and the film begins in black.



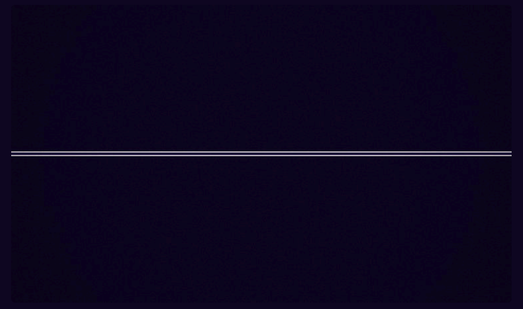
1.0 s · keep the dark



2.6 s

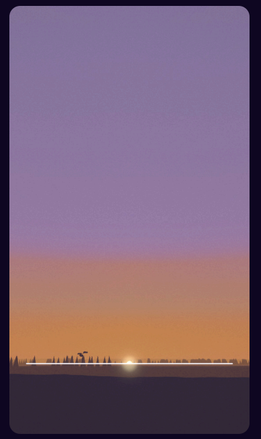


3.9 s · the bars close



4.5 s · the eye goes out last

15 SOCIAL · VERTICAL · 10 SECONDS



1.0 s



5.2 s · flight

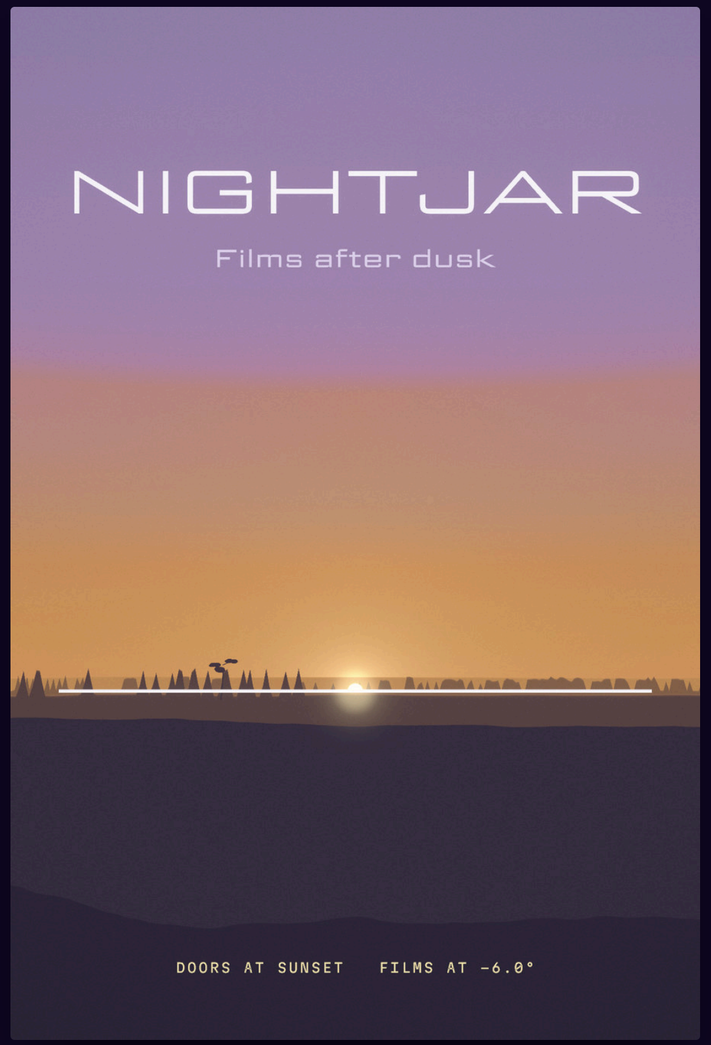


6.8 s · clap



9.6 s · lockup

1080 × 1920, 30 fps. The same construction and sound, recomposed for a phone.



Horizon. On the site, the pointer moves the camera.



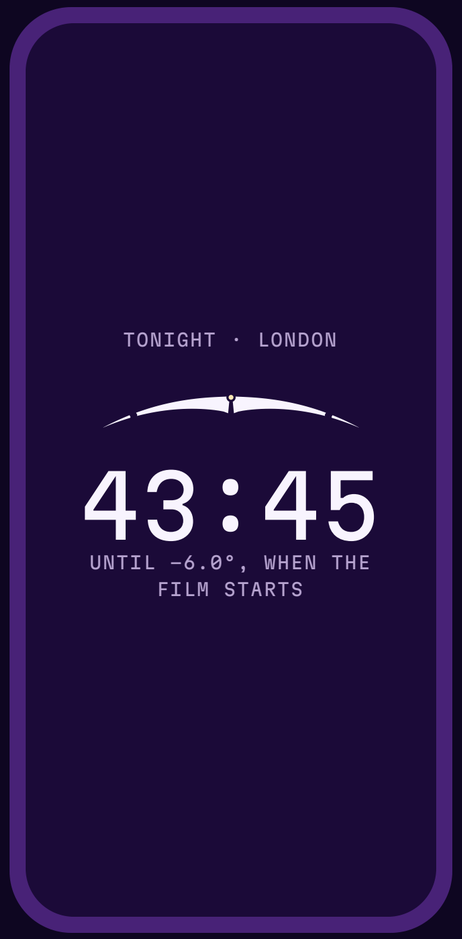
Churr. Hover, and the mark sings.



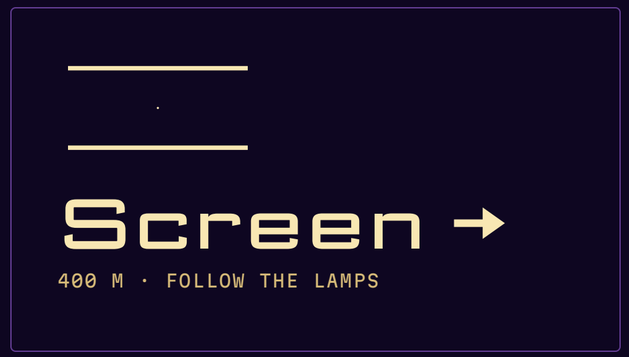
Eyeshine. The pointer is the torch; aim it at the eye.



The ticket carries the angle, and the angle becomes a clock time for its place and date. London at midsummer: sunset 21:21, civil dusk 49 minutes later.



Illustrative: a countdown to civil dusk, four minutes after sunset.



Wayfinding on the heath: lamp-coloured, so it reads by torchlight, with the eye as the only point that glows.

NIGHTJAR

CONCEPT, DESIGN, MOTION, SOUND, CODE

Studio Helper

TYPE

Science Gothic (Phinney, Kateliev, Buerkle) · Georama (Production Type) · Martian Mono (Roman Shamin, Evil Martians) · SIL Open Font License 1.1

SKY

After Hillaire (2020), A Scalable and Production Ready Sky and Atmosphere Rendering Technique, EGSR

TWILIGHT TIMES

NOAA solar position equations

HONESTLY

Nightjar is not a real event; this is concept work. The name is shared by a music and arts festival in Torquay, Victoria, and by film production companies in Singapore, Exeter and the United States. This identity has no connection with any of them and never calls itself a festival. The churr is synthesised, not recorded; the timbre and the minor phrase's rate are modelled. Ticket and phone times are computed, not invented.

Studio Helper
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SOURCES

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