

THE SENSORY OPTIMIZATION SYSTEM

The ADHD Sound & Focus Protocol

Frequency Guide · Audio
Soundscapes · Workspace Auditory
Blueprint



Standard music was built to be enjoyed. Your brain doesn't need to enjoy sound right now — it needs sound to *do a job*: raise your arousal enough to start, mask the environment enough to stay, and settle your system when it's had too much. This guide, and the audio engine that ships with it, are engineered for exactly that.

WHAT'S INSIDE

- 01 Start here — the 5-minute setup
- 02 Why normal music fails the ADHD brain
- 03 The Frequency Guide
- 04 The Audio Soundscapes
- 05 The Workspace Auditory Blueprint
- 06 The Three Protocols
- 07 Templates & the 7-Day Plan
- 08 FAQ & the Quick-Reference Card

◆ READ THIS FIRST

This is a focus and productivity tool, not a medical device or a treatment for ADHD. Audio can meaningfully change how easily you start and sustain work, but it doesn't replace diagnosis, therapy, coaching, or medication. Nothing here is medical advice. If a sound ever causes discomfort, dizziness, or headache, stop and lower the volume. If you have epilepsy or a seizure disorder, talk to your doctor before using rhythmic or binaural audio.

PART 01

Start here — the 5-minute setup

You bought this to focus, not to study a manual. So here's the fastest path to a working session. You can read the science afterward.

- 1 **Put on headphones.** Over-ear or earbuds both work. The binaural channel *only* works with two separate ears, so headphones aren't optional for the full effect.
- 2 **Open the ADHD Audio Engine** (your companion web player). It works offline once loaded — no streaming, nothing to download.
- 3 **Pick the profile that matches your state**, not your task:
 - Can't get started / avoiding it → **Task Activation**
 - Ready, need to stay in it → **Deep Work**
 - Wired, anxious, overloaded → **Calm Brain**
- 4 **Set the timer** (start with 25 minutes) and hit play.
- 5 **Set one tiny first action** — "open the doc," "write the subject line." Do only that. Momentum handles the rest.

♦ THE ONE RULE

Match the sound to your **current nervous-system state**, then let the audio move you toward the state you want. Trying to force "deep focus" audio onto a restless, can't-start brain usually backfires — activate first, then deepen. This whole system is built around that sequence.

Why normal music fails the ADHD brain

If lo-fi playlists and "focus" mixes worked for you, you wouldn't have bought this. There are specific, mechanical reasons they let you down.

The stimulation gap

One well-supported model of ADHD describes a brain that is chronically *under-aroused* in low-stimulation situations and reaches for stimulation to compensate — the tapping foot, the second browser tab, the snack run. A boring task provides too little input, so attention goes hunting for more. This is why you can hyperfocus on something novel for six hours but can't start a tedious form for six minutes.

The right background audio adds a *steady, non-distracting* layer of stimulation. It gives the sensation-seeking part of your brain something to chew on so the task-doing part is free to work. That's the core mechanism — not magic frequencies, but arousal regulation.

Why your playlist actively sabotages you

- **Lyrics compete for language.** Reading, writing, and thinking in words all use the same verbal channel as song lyrics. Instrumental only, for real work.
- **Novelty hijacks you.** A great song is *designed* to grab attention — new sections, drops, hooks. Every one of those is a micro-interruption for a brain that's already novelty-hungry.
- **Skipping is a dopamine slot machine.** The moment a track dips, you reach to skip it — and now you're in the app, and now you see a notification. Curated variety keeps you in the chooser's seat.
- **It doesn't mask anything.** Music with dynamics (quiet parts, loud parts) leaves gaps where the dog bark, the doorbell, and the coworker's laugh punch through.

The two real jobs of focus audio

Effective focus sound does exactly two things. Everything in this system is built around them:

1. **Mask** — flatten the unpredictable environment into a smooth, even wall of sound so sudden noises can't trigger an orienting response and pull you out.
2. **Regulate** — nudge your arousal toward the level the task needs: up to start, steady to sustain, down to recover.

Colored noise (brown, pink) does the masking. Binaural beats and a rhythmic pulse do the regulating. Combined and mixed to taste, they cover both jobs at once — which is what the three-channel engine is for.

ON THE EVIDENCE, HONESTLY

Sound masking — using steady broadband noise to cover distracting sounds — is well established and used in offices and clinics for good reason. **Binaural beats** for focus have *mixed* research: some studies show benefits to attention and mood, others show little effect, and individual response varies a lot. Treat the entrainment channel as a personal experiment, not a guarantee. The honest position: masking reliably helps most people; the beat and pulse layers help *many* people — run your own test using the 7-day plan in Part 7 and keep what works for *you*.

The Frequency Guide

This is the reference section. You don't need to memorize it — the engine's presets already encode these choices — but understanding it lets you build your own blends with intent.

The building blocks

1. Colored noise (the masking layer)

"Colored" noise is random sound weighted toward certain frequencies. The color describes the tilt:

- **White noise** — equal energy across all frequencies. Bright, hissy, like TV static. Effective at masking but fatiguing for many ADHD listeners; the high end grates.
- **Pink noise** — softened highs, balanced to how we actually hear. Sounds like steady rain or wind. Gentler than white, a common favorite.
- **Brown (red) noise** — even more low-end weighted. Deep, rounded, oceanic — like a distant waterfall or heavy surf. This is the ADHD crowd favorite: it masks powerfully without the harsh top end, so you can run it loud enough to actually cover your environment without wearing yourself out. *This is the engine's primary masking channel.*

2. Binaural beats (the entrainment layer)

Play one pure tone in the left ear (say 200 Hz) and a slightly different tone in the right (say 214 Hz), and your brain perceives a third, pulsing tone at the *difference* — here, 14 Hz. That perceived pulse is the binaural beat. The theory of "entrainment" is that exposure to a steady beat gently encourages brainwave activity toward that frequency band. Because the beat is constructed inside your head from two separate ears, **headphones are mandatory** — on a speaker, the two tones just mix in the air and the effect disappears.

3. The rhythmic pulse (the momentum layer)

A slow, soft amplitude swell — sound rising and falling on a gentle cycle. Unlike a metronome's sharp tick, it's felt more than heard. It gives time a shape and a subtle forward motion, which helps with time-blindness and with sustaining a steady work pace. Keep it low; it's seasoning, not the main dish.

The brainwave bands — and what each is for

Binaural beat frequencies are grouped into bands borrowed from EEG research. Here's the practical map:

BAND	RANGE	ASSOCIATED STATE	USE IT FOR
Delta	0.5–4 Hz	Deep sleep	Sleep, not focus. Avoid while working.
Theta	4–8 Hz	Drowsy, meditative, dreamy	Deep relaxation, creative incubation, winding down.
Alpha	8–12 Hz	Relaxed but alert, calm focus	Reading, brainstorming, calming an anxious mind. <i>Calm Brain lives here.</i>
Beta	13–30 Hz	Active, engaged, alert thinking	Analytical work, writing, problem-solving, sustained tasks. <i>Deep Work & Task Activation live here.</i>
Gamma	30 Hz+	High-level integration	Fringe/experimental for focus. Some find it energizing; many find it too much.

✦ THE FREQUENCY CHEAT SHEET

Can't start? Beta, rising 16 → 20 Hz. Activation.

Sustaining focus? Beta, steady 14 → 16 Hz. Deep work.

Overwhelmed / anxious? Alpha, drifting 10 → 8 Hz. Calm.

Winding down / pre-sleep? Theta, 6 → 4 Hz. Recovery.

These are the exact curves the engine's Adaptive mode rides — it starts a session at the top of the range and eases toward the bottom as you go.

Volume & listening safety

- **Masking test:** turn the brown noise up just until the specific sounds you're trying to block (voices, traffic) fade into the background — then stop. Louder isn't better.
- **Binaural tones** should sit *under* the noise, quiet and felt rather than prominent. If the tones are the loudest thing, they become the distraction.
- **Follow the 60/60 habit:** around 60% volume, and give your ears a real break each hour. Focus sessions and ear breaks line up nicely.
- If you get tone fatigue, drop the binaural channel and run brown noise + a whisper of pulse. Masking alone is a complete tool.

The Audio Soundscapes

Your bundle is a live *engine*, not a folder of MP3s — every sound is generated in real time in your browser. That's deliberate: it means infinite length with no loops to notice, it works fully offline, and you can blend the layers to your own ratio instead of being stuck with someone else's mix. Here's the catalog and when to reach for each.

The three channels

CHANNEL	WHAT IT IS	ITS JOB	START LEVEL
Brown Noise	Deep, low-weighted broadband noise	Masks the environment	60–70%
Binaural Beat	Two detuned tones, one per ear	Nudges arousal (needs headphones)	35–50%
Rhythmic Pulse	Slow amplitude swell	Adds momentum & time-shape	15–30%

The soundscape recipes

The three presets are tuned starting points. Think of them as recipes you can adjust:

"Task Activation" — the ignition blend

Lighter masking, a stronger beta beat that *rises* from 16 to 20 Hz, and a noticeable rhythmic pulse. The extra movement and rising frequency raise your arousal to help you push past the starting-line resistance. Use it in short bursts — it's a match, not a marathon fuel.

"Deep Work" — the sustain blend

Heavy brown-noise masking, a steady beta beat around 14–16 Hz, and a minimal pulse. Built to disappear. Once you're moving, this holds a smooth, even sound wall for long stretches without pulling at your attention. The default for most work.

"Calm Brain" — the settle blend

Warm masking, an alpha beat drifting from 10 down toward 8 Hz, and the gentlest pulse. For when your system is over-revved — anxious, scattered, post-meeting, or too many tabs open in your head. Use it to come down to a workable baseline, or as a wind-down at the end of the day.

Match the soundscape to the task

THE TASK IN FRONT OF YOU	START WITH	THEN
A task you're dreading / avoiding	Task Activation	Switch to Deep Work once you're moving
Writing, coding, analysis	Deep Work	Keep binaural low so language stays free
Reading & absorbing	Calm Brain or Deep Work	Alpha suits comprehension for many
Admin, email, small tasks	Task Activation	The pulse keeps you pacing through the list
Brainstorming / ideation	Calm Brain	Relaxed-alert states help divergent thinking
Anxious, can't think	Calm Brain	Regulate first; work second
End of day / wind-down	Calm Brain, low volume	Drop binaural, keep brown noise

The Workspace Auditory Blueprint

The best soundscape can't win against a workspace that leaks distraction. This is the environmental half of the system — how to engineer everything your ears touch so focus is the path of least resistance.

Step 1 — The auditory audit

Sit at your workspace for two minutes and just listen. Write down every sound source that reaches you. Then sort each into one of three columns:

ELIMINATE	MASK	ACCEPT
Phone on desk buzzing, browser tabs playing, TV in next room, chatty notifications	Traffic, HVAC, distant voices, household hum, café clatter	Sounds you truly can't change — one-time, unpredictable

Eliminate what you control at the source (that's cheaper than masking it). **Mask** the steady, unavoidable background with brown noise. **Accept** — and forgive yourself for — the rest.

Step 2 — The five layers of your sound environment

1. **Source control.** Silence the devices. Phone to Do Not Disturb, in a drawer or another room. Close media tabs. This single step beats any soundscape.
2. **Physical barrier.** A closed door, a rug, or soft furnishings dampen echo. Face away from the highest-traffic direction.
3. **The mask.** Brown noise at masking level — the workhorse layer.
4. **The regulator.** Binaural + pulse, tuned to your target state.
5. **The signal.** One reserved sound that means "session over" — the engine's completion chime. Nothing else is allowed to make that sound.

Step 3 — Hardware, by budget

TIER	GET	WHY
Free	Any wired earbuds you own	Two separate ears is all the binaural channel needs
Budget	Over-ear closed-back headphones	Passive isolation blocks sound before masking even starts
Best	Active noise-cancelling over-ears	ANC kills low-frequency drone (HVAC, engines); brown noise handles the rest

◆ SPEAKERS VS HEADPHONES

Speakers are fine for the brown-noise mask if you're alone and want your ears to breathe. But the **binaural channel does nothing on speakers** — the two ear-tones blend in the air. Rule of thumb: headphones when you want the full regulation effect; speakers when you just need masking and comfort over long stretches.

Step 4 — The interruption protocol

Sound is only half of distraction; interruption is the other half. Lock these down before each session:

- ☐ Phone on Do Not Disturb, face down or out of reach
- ☐ Desktop notifications paused (focus/DND mode on)
- ☐ Non-work tabs and apps closed — not minimized, closed
- ☐ A visible "in a session until ____" signal for anyone nearby (a sign, headphones-on cue, a status)
- ☐ Water and anything you'll reach for already on the desk

Step 5 — Build an auditory anchor

Here's the compounding trick. If you use the *same* soundscape for the *same* kind of work, every time, your brain starts to pair that sound with that state — the way a specific playlist can instantly put you back in a memory. After a week or two, pressing play on "Deep Work" becomes a cue that tells your nervous system *it's time to work* before you've done anything else. You're conditioning a focus reflex. Protect it: don't use your Deep Work sound for scrolling or gaming, or you'll dilute the association.

The Three Protocols

A protocol is a repeatable sequence: the exact sound, timing, and actions for a specific situation. Run them as written first, then adjust. Each maps directly to a preset in the engine.

PROTOCOL 01

Task Activation — break the inertia

When you cannot get started, keep avoiding, or feel stuck at the gate.

The engine settings

PRESET

Task Activation

BEAT

16→20 Hz

TIMER

15 min

ADAPTIVE

On

Run it

- 1 **Shrink the task until it's laughable.** Not "do taxes" — "open the tax folder." The first action must take under two minutes.
- 2 **Press play on a 15-minute timer.** The rising beat and pulse are doing arousal work; let them.
- 3 **Do only the tiny action,** then the obvious next one. Ride the momentum. Don't plan — move.
- 4 **When the 15 minutes end,** you'll usually be rolling. Switch to *Deep Work* and keep going, or take the win and step away.

Exit

Either transition to Deep Work, or if you genuinely stalled, stand up, move your body for 60 seconds, and restart the 15. Starting twice still beats not starting.

PROTOCOL 02

Deep Work — sustain the flow

When you're ready to work and need to stay in it without drifting.

The engine settings

PRESET

Deep Work

BEAT

16→14 Hz

TIMER

25 or 50 min

ADAPTIVE

On

Run it

- 1 **Define the session's finish line** in one sentence: "draft section 2," "clear the inbox to zero." One clear target.
- 2 **Run the interruption protocol** (Part 5, Step 4) — 30 seconds, every time.
- 3 **Press play (25 min to start, 50 once you trust it).** Brown noise carries the load; the steady beat holds the state.
- 4 **When your mind wanders,** don't judge it — just return to the task. The sound wall is still holding; step back onto it.
- 5 **Work until the chime.** That reserved sound is your only permission to stop.

Exit

Stand, stretch, water, look at something far away for 20 seconds. Then decide: another Deep Work block, or done. Stack 2–4 blocks with real breaks between them for a strong work day.

PROTOCOL 03

Calm Brain — regulate the overwhelm

When you're anxious, over-stimulated, scattered, or need to come down.

The engine settings

PRESET

Calm Brain

BEAT

10→8 Hz

TIMER

15 min

ADAPTIVE

On

Run it

- 1 Stop trying to work.** Regulation comes first — you can't force focus onto a flooded system.
- 2 Press play, lower the volume** to a soft, comfortable level. Let the alpha beat drift downward.
- 3 Slow your breathing to the pulse** — in as it swells, out as it falls. Do nothing else for a few minutes.
- 4 When your shoulders drop** and thoughts space out, either continue resting or transition gently into Deep Work.

Exit

Use it as a reset between hard tasks, after a stressful call, or as an end-of-day wind-down. At night, drop the binaural channel entirely and keep only low brown noise.

Templates & the 7-Day Plan

The Daily Focus Stack

A simple structure for a full focused day. Copy it into your notes app or print it.

TEMPLATE · DAILY FOCUS STACK

Morning ignition — 1× Task Activation (15 min) → roll into Deep Work

Deep block 1 — Deep Work (50 min) · target: _____

Break — 10 min, screens down, move

Deep block 2 — Deep Work (50 min) · target: _____

Midday reset — Calm Brain (10 min)

Afternoon admin — Task Activation (25 min) · clear small tasks

Wind-down — Calm Brain, low volume, brown noise only

The Session Log

Two weeks of this tells you exactly which blends work for *your* brain. Track it and stop guessing.

TEMPLATE · SESSION LOG

DATE	TASK	PRESET	STATE BEFORE (1–5)	FOCUS QUALITY (1–5)	NOTE

The 7-Day Onboarding Plan

Don't overhaul everything at once. Run this and let the system settle into a habit.

DAY	DO THIS	GOAL
1	One 25-min Deep Work session. Just try it.	Prove the tool works for you
2	Run the auditory audit (Part 5). Fix one "eliminate" source.	Cut leak at the source
3	Use Task Activation to start your hardest task.	Test ignition
4	Mix your own blend from Deep Work. Save the levels you like.	Personalize
5	Use Calm Brain once when stressed.	Test regulation
6	Run a full Daily Focus Stack.	String it together
7	Review your Session Log. Keep what scored 4–5; drop the rest.	Lock in your system

Troubleshooting

PROBLEM	FIX
The tones feel annoying / fatiguing	Drop binaural to 20–30% or mute it. Brown noise alone is enough.
It makes me sleepy	You're too low in the bands. Use Task Activation (beta), raise the volume slightly, check you're not in a warm dark room.
I still get distracted by outside noise	Raise brown noise to true masking level; add closed-back or ANC headphones.
Nothing happens / no binaural effect	You're on speakers or one earbud. Both ears, headphones, required.
Works for a day, then stops	Novelty faded — that's fine. Rotate presets and lean on the <i>anchor</i> habit, not the novelty.
Can't start even with Activation	The task isn't small enough. Shrink the first action until it feels silly.

FAQ & Quick-Reference Card

Do I have to use headphones?

For the binaural channel, yes — it's built from two separate ear-tones and vanishes on speakers. For brown-noise masking alone, speakers are fine.

Can I use this with music I love?

You can, but not for verbal work — lyrics compete with reading and writing. If you want your own music, save it for mechanical or physical tasks and use the engine for cognitive work.

Is this a replacement for medication or therapy?

No. It's an environmental tool that stacks *with* your existing support. Think of it as tuning the room, not treating the brain.

How loud should it be?

Brown noise just loud enough to blur the distractions you're targeting; binaural and pulse quietly underneath. Around 60% total, ears rested each hour.

Why does the frequency change during a session?

That's Adaptive mode. It starts at the top of the target band and eases downward, which helps prevent the sound from becoming a fixed, ignorable wallpaper and gently guides your state across the block. Turn it off in the engine if you prefer a fixed tone.

Will it keep working offline?

Yes. Every sound is generated live in your browser — once the engine has loaded, it needs no internet at all. Good for planes, cafés with bad wifi, and focus modes that block the network.

◆ Quick-Reference Card

The one rule: match sound to your *state*, then let it move you.

Can't start → Task Activation · Beta 16→20 · 15 min · shrink the first step

In the work → Deep Work · Beta 16→14 · 25–50 min · brown noise heavy

Overwhelmed → Calm Brain · Alpha 10→8 · 15 min · breathe to the pulse

Every session: headphones on · phone away · notifications off · one clear target · work until the chime.

Every channel: Brown = mask · Binaural = regulate (headphones!) · Pulse = momentum.

The ADHD Sound & Focus Protocol — Frequency Guide, Audio Soundscapes & Workspace Auditory Blueprint.
A focus and productivity tool, not medical advice or a treatment for ADHD. Stop if any sound causes discomfort.

Pairs with the ADHD Audio Engine web player. © You. All rights reserved.