

Layer II-B - Concrete Session Interface & Production Specification

A build-ready specification for a default 30-minute self-regulation session, including timing, cues, movement, audio, visual logic and progressive removal of scaffolding.

Scope: This document specifies one default implementation of Layer II. It is deliberately ordinary: no metaphysical language, no sensation-seeking, no extreme breathing, and no requirement to use an app once the skills are learned.

1. Design Objective

Produce a repeatable 30-minute practice that trains respiratory regulation, attentional control, interoceptive discrimination, controlled movement, tension regulation and state transition while minimising cognitive load. The session should feel structured but not ceremonial, guided but not dependent on guidance, and calming without ending in sedation.

2. Production Principles

1. Accuracy before atmosphere: timing and instructions must remain unambiguous.
2. Low semantic density: use words only where words communicate a necessary operation.
3. One cue, one job: a sound or phrase should not carry multiple simultaneous meanings.
4. No reward for unusual sensations: the interface never praises heat, tingling, “flow”, dissociation or euphoria.
5. End in ordinary alertness: the final phase deliberately reorients the practitioner to normal activity.
6. Scaffold fading is built into the product from the first week.

3. Default 30-Minute Session Map

Clock	Phase	Primary target	Interface
00:00-02:00	Baseline / arrival	Observe without changing	Sparse spoken prompts; no music; no breathing pacer
02:00-10:00	Respiratory regulation	Approx. 0.1 Hz comfortable breathing	Soft inhale/exhale transition tones

Clock	Phase	Primary target	Interface
10:00-15:00	Attention + interoception	Placement, translation, expansion	Brief cue every 30-60 s
15:00-25:00	Controlled movement	Balance, weight transfer, mobility, tension economy	Sparse movement prompts; optional low-complexity pulse
25:00-28:00	Unguided integration	Remove external control	No pacing; broad awareness
28:00-30:00	Return / reactivation	Normal alertness and transfer	Eyes open, orient, stand/walk, ordinary breathing

4. Global Audio Specification

Signal palette

Signal	Role	Recommended character
Inhale transition	Marks start of inhalation	Soft rising or higher-pitched tone, 150-350 ms, non-percussive
Exhale transition	Marks start of exhalation	Soft falling or lower-pitched tone, 150-350 ms, non-percussive
Attention shift	Marks relocation of attention	Single neutral chime distinct from respiratory tones
Phase change	Marks major session section	Short two-note motif; clearly different from timing cues
Return cue	Signals reorientation	Slightly brighter but still non-startling tone

Avoid bells with long decays that mask subsequent instructions, sharp clicks, alarm-like frequencies, binaural claims, “healing frequencies”, or cues whose branding implies a physiological mechanism not being used.

Level and dynamics

- Speech should remain comfortably intelligible at low playback volume.
- Timing tones should be perceptible but subordinate to bodily sensation.

- Avoid abrupt loudness changes.
- If music is used, keep speech intelligibility effortless and timing cues clearly separable.

5. Baseline / Arrival - 00:00 to 02:00

Purpose: establish a pre-intervention reference state and prevent the practitioner from immediately trying to manufacture calmness.

Script skeleton

- 00:00 - “Take a comfortable position. Do not change your breathing yet.”
- 00:20 - “Notice your current level of activation.”
- 00:45 - “Notice where the body is carrying unnecessary effort.”
- 01:10 - “Notice the natural speed and depth of your breathing.”
- 01:35 - “No correction yet. Just establish the baseline.”

No background pulse is required. Ambient room sound may remain audible. The user may sit or stand. Eyes may remain open or softly focused.

6. Respiratory Regulation - 02:00 to 10:00

Default timing

Use a ten-second complete cycle: approximately five seconds inhalation and five seconds exhalation. Do not insert programmed breath holds. The audio marks only the two transition points.

Cue logic

Time within cycle	Event
0.0 s	Inhale transition tone
5.0 s	Exhale transition tone
10.0 s	Next inhale transition tone

The user is instructed once near the beginning: “Follow the timing gently. Do not make the breath larger than comfortable.” Thereafter avoid repetitive verbal inhale/exhale commands; the tones carry the timing information with much lower cognitive load.

Calibration prompts

- 03:30 - “Keep the breath easy rather than deep.”
- 05:30 - “Release any effort in the shoulders, jaw and hands.”
- 07:30 - “If the timing feels strained, breathe normally for a cycle and rejoin.”
- 09:30 - “Let the next phase arrive without changing the breath abruptly.”

Optional individualisation

If later assessment supports another comfortable resonance-like pace, the session engine should permit phase lengths of roughly 4.5-6.5 seconds rather than treating five seconds as sacred. The interface should store this as a timing parameter, not a named spiritual technique.

7. Respiratory Visual Pacer - Optional

If a screen is present, display one low-information object. Recommended behaviour: a circle expands smoothly across inhalation and contracts smoothly across exhalation. No colour change is required; motion itself is sufficient. Disable numerical countdown by default because it invites performance monitoring.

- No gamification score.
- No streak reward during the actual exercise.
- No “perfect breath” indicator.
- No claims that circle size represents lung volume or “energy”.

8. Attention & Interoception - 10:00 to 15:00

Respiratory pacing stops at 10:00 unless a user still needs it for acquisition. Breathing returns to spontaneous control while attention becomes the explicit task.

Default target sequence

Interval	Target	Instruction
10:00-10:45	Nose / upper airway	Notice airflow, temperature and contact sensations.
10:45-11:30	Abdomen	Notice movement and pressure without changing it.
11:30-12:15	Hands	Notice temperature, contact, pulse or absence of clear sensation.
12:15-13:00	Feet	Notice pressure distribution and floor contact.
13:00-14:00	Whole body	Hold several regions in awareness simultaneously.
14:00-15:00	Body + environment	Include surrounding sound and visual space without abandoning body awareness.

The instruction explicitly permits weak or absent sensation. The practitioner is not asked to imagine an energy field, detect a current, or force sensation into existence.

9. Controlled Movement - 15:00 to 25:00

The movement block uses simple, learnable patterns rather than a branded form. Movements remain comfortably within the individual’s normal range and should be adapted for balance, mobility or pain limitations.

Sequence

Time	Movement	Mechanical emphasis
15:00-16:30	Weight shift left/right	Foot pressure, centre-of-mass control, relaxed upper body
16:30-18:00	Forward/back weight shift	Ankle/hip strategy and balance
18:00-19:30	Slow arm rise/lower	Shoulder control; optional breath coupling
19:30-21:00	Thoracic/pelvic rotation	Controlled axial mobility; no forcing
21:00-22:30	Shallow squat/raise or sit-to-stand variant	Centre-of-mass lowering and leg control
22:30-24:00	Supported single-leg balance / heel raise	Balance and proprioception
24:00-25:00	Free continuous combination	Self-directed integration of previous patterns

Movement cue language

Use concrete verbs and body landmarks: “shift”, “turn”, “rise”, “lower”, “feel the foot”, “release the shoulder”. Avoid “channel”, “open the meridian”, “raise energy” or other explanations that imply an unverified mechanism.

Optional musical pulse

A stable instrumental pulse may enter at 15:00. It should support movement continuity without dictating exact choreography. Recommended range: roughly 60-90 BPM, low rhythmic complexity, no sudden drops, no lyrical narrative, and no expectation-heavy build. Music is removed if it causes the practitioner to move for the song rather than for motor quality.

10. Embedded Tension Checks

Rather than adding a separate long body scan, use brief checks during movement:

- 16:00 - jaw and tongue
- 18:30 - shoulders and hands
- 20:30 - abdomen and gluteal muscles
- 23:00 - feet and toes

Instruction format: “Check whether this region is doing work that the movement does not require. If so, reduce it.” This avoids teaching complete relaxation as a universal objective.

11. Unguided Integration - 25:00 to 28:00

At 25:00 all rhythmic pacing ends. The user may stand or sit comfortably. Breathing is spontaneous. No attempt is made to preserve the earlier six-breath-per-minute rate.

Only two prompts

- 25:20 - “Let the body organise itself without maintaining the previous rhythm.”
- 27:20 - “Broaden attention to include the room around you.”

The purpose is to verify that regulation persists when the scaffold disappears and to reduce dependence on external timing.

12. Return / Reactivation - 28:00 to 30:00

The programme ends by restoring ordinary environmental engagement rather than extending relaxation indefinitely.

Sequence

7. Open or fully refocus the eyes.
8. Broaden peripheral vision.
9. Turn the head and orient to several objects in the room.
10. Stand if seated.
11. Take several ordinary steps.
12. Allow breathing to choose its own rhythm.
13. Resume the next normal activity.

Return principle: Do not finish with “stay in this peaceful state”. The skill target is flexible regulation, not preservation of a special state.

13. Minimal Spoken Script Specification

A complete 30-minute session should contain surprisingly little speech once the user knows the mechanics. Aim for short prompts separated by substantial silence. Each sentence should be executable and observable.

Preferred syntax

- One imperative or observation per sentence.
- Concrete anatomical or sensory nouns.
- No promise of effects.
- No evaluative praise for sensations.
- No demand to “clear the mind”.
- No claim that the exercise is activating a hidden force.

Examples

Prefer	Avoid
“Notice pressure under both feet.”	“Root your energy into the earth.”
“Let the shoulders do less work.”	“Release blocked energy from the shoulders.”
“Move attention gradually from abdomen to feet.”	“Send qi downward.”
“Allow breathing to become spontaneous.”	“Let the life force breathe you.”
“Notice thoughts and return to the selected sensation.”	“Empty your mind completely.”

14. App / Audio Engine State Machine

If implemented digitally, the session can be represented as a simple deterministic state machine rather than a meditation-content library.

State	Entry condition	Exit condition	Outputs
BASELINE	Session start	120 s elapsed	Sparse voice prompts
PACE_BREATH	Baseline complete	480 s elapsed	Transition tones + rare calibration prompts
ATTENTION	Breath block complete	300 s elapsed	Target-shift cue + short instruction
MOVEMENT	Attention complete	600 s elapsed	Movement instructions + optional pulse
INTEGRATE	Movement complete	180 s elapsed	Silence + 2 prompts
RETURN	Integration complete	120 s elapsed	Orientation prompts + brighter end cue
COMPLETE	Return complete	User exits	Optional minimal session log

15. User Controls

A minimal interface should expose only parameters that materially affect execution:

- Respiratory phase length / target rate

- Voice guidance: full / reduced / off
- Visual pacer: on / off
- Movement audio pulse: on / off
- Session length preset: 10 / 20 / 30 / 45 minutes
- Mobility adaptation: standing / chair-supported / seated
- Sound level and cue family

Do not expose dozens of pseudo-physiological “frequency” options. More settings are not inherently more scientific.

16. Ten-Minute Minimum Session

Clock	Phase
00:00-01:00	Baseline observation
01:00-07:00	Comfortable slow respiratory pacing
07:00-09:00	Simple movement + foot/shoulder awareness
09:00-10:00	Return to spontaneous breathing and ordinary orientation

This mode exists to preserve continuity on constrained days, not as a compressed high-intensity version of the full practice.

17. Forty-Five-Minute Extended Session

Extra time should primarily increase movement, mobility, quiet observation and attentional practice. It should not simply extend controlled breathing or make respiration slower. A representative extension adds five minutes of movement, five minutes of attention/interoception and five minutes of unguided integration.

18. Eight-Week Scaffold-Fading Implementation

Weeks	Breathing interface	Attention interface	Movement interface
1-2	Tone every transition; optional visual pacer	Cue every 30-45 s	Full sequence prompts
3-4	Tone every transition; visual pacer optional/off	Cue every 45-60 s	Prompt only at movement changes
5-6	First 2 min fully paced, then intermittent calibration	Beginning/mid/end cues	Sequence card or sparse audio

Weeks	Breathing interface	Attention interface	Movement interface
7-8	Pacer optional; use for calibration days	Mostly self-directed	Mostly self-directed
Long-term	User initiates pace internally when wanted	Unguided except deliberate drills	Free controlled movement or chosen form

19. Interface A/B Testing

Any new overlay - music, spoken phrasing, imagery, visual animation, tactile cue - should be treated as an A/B candidate rather than assumed beneficial. Compare it with a minimal-control version across several sessions.

Useful outcome fields

- Timing accuracy
- Perceived cognitive effort
- Comfort / strain
- Distraction frequency
- Completion likelihood
- Post-session alertness
- Ability to reproduce the same regulation without the overlay

Prefer an interface only if it improves function without materially increasing dependency or performance pressure.

20. Quality-Control Tests for a Finished Session

14. Can a new user understand every instruction literally?
15. Can an experienced user ignore most of the guidance without losing the protocol?
16. Does breathing remain comfortable rather than deliberately deep?
17. Are there long enough periods without speech for internal perception?
18. Can the movement block be performed safely in a small ordinary room?
19. Does the session end with normal alertness?
20. Can every metaphor be translated into a concrete operation?
21. Would the core session still work if all optional music and imagery were removed?

21. Red Flags in Interface Design

- Claims that a sound frequency itself “heals” or unlocks a physiological system
- Gamification that rewards lower respiratory rate or more extreme states
- Language that labels involuntary sensations as progress
- Instructions encouraging prolonged breath holding, forceful hyperventilation or hypoxia in the baseline programme
- Audio designed to overwhelm rather than guide attention
- Narratives implying failure if the user cannot feel a prescribed sensation

- Ending the session in a state that makes immediate ordinary functioning difficult

22. Optional Layer II-B Overlays

Once the neutral session works, optional overlays may be tested without changing the underlying timings or movement objectives. Examples include a preferred instrumental soundtrack, a poetic but mechanically faithful spoken script, non-semantic humming during selected expirations, a culturally derived movement form, or a visual aesthetic that improves adherence.

Constraint: An overlay is allowed to change the experience. It is not allowed to silently change the physiology or redefine the success criterion.

23. Production Deliverables

A complete implementation package should ideally contain:

- 30-minute guided audio master
- 30-minute reduced-guidance version
- 30-minute tones-only version
- 10-minute minimum-session version
- Optional visual respiratory pacer
- One-page movement reference card
- Eight-week scaffold-fading schedule
- Minimal weekly outcome log
- Accessibility alternatives for hearing, vision and mobility differences

24. Core Production Formula

30-minute session: Orient -> Pace -> Attend -> Move -> Remove Scaffold -> Return

The production goal is not to make the session mystical, immersive or impressive. It is to make correct self-regulation easy enough that the user eventually no longer needs the production.