BIOLEVIGACIÓN
SUITE PERFORMÁTICA

J U A N   P A B L O   P O S A D A   A L V A R E Z

JUANERRANTE
SELF-CONTROL MUSIC

BIOLEVIGACIÓN: SUITE PERFORMÁTICA
Guide-Score for the Performer
—

An immersive interactive sound performance piece
Designed and directed by [Juanerrante-Sonic Architecture]

Welcome to a unique training program, where your body becomes the main interface for real-time sound creation and transformation. In Biolevigation, you will not only perform a piece: you will be a test subject in a bio-technological training protocol guided by artificial intelligence. Your physiology, your gestures, and your mental states will be translated into sound, in a journey that challenges the boundaries between the organic and the artificial, the voluntary and the autonomous.

This guide-score will accompany you throughout the four movements that make up the suite. It is not a traditional score: it is a manual of performance instructions, a map of interaction between your body, technology, and the sound space.

REGISTRATION FORM
SOUND MANIPULATION TRAINING SERVICE

Juanerrante-Sonic Architecture
"Sonic architectures for augmented bodies"

MAIN CONTACT INFORMATION
COMPANY: Juanerrante-Sonic Architecture
SERVICE: Biolevigation - Sound Manipulation Training Plan
ADMISSIONS COORDINATOR: [Coordinator's Name]
PHONE: 116753810873
EMAIL: inscripciones@juanerranteSonicarchitecture@gmail.com
HOURS OF OPERATION: Monday to Friday, 10:00 a.m. to 6:00 p.m.

PREREQUISITES FOR ADMISSION
Documents to be submitted before the start of training:
- Completed registration form
- Technical rider for the space where the training will take place
- Previous performance experience (optional but recommended)
- Basic medical evaluation (physical fitness for moderate activity)
- Informed consent for the use of biometric devices

EQUIPMENT TO BE PROVIDED BY THE PARTICIPANT:
- Comfortable clothing for movement (preferably fitted for sensors)

- Physical fitness exam for admission (upon request)
- Psychophysiological exam
- Commitment to attendance and active participation

AVAILABLE TRAINING PLANS

Program	Duration	Levels	Requirements
BIOKINETIC SOUND MANIPULATION	12 minutes	Level I	No prior experience
BIO-KINETIC DANCE	10 minutes	Level II	Level I completed
SONIC NEURO MORPHOSIS	15 minutes	All levels	No prior experience
KINESTHETIC-COGNITIVE SOUNDSCAPE	15 minutes	All levels	Levels I, II & Neuro Morphosis completed

TECHNICAL RIDER

Biolevigation: Performative Suite
Immersive Interactive Sound Performance Work

GENERAL SETTINGS

The work requires a distributed technical architecture across two synchronized computational systems, dedicated to:
- **Computer A**: Sound processing and gestural control
- **Computer B**: Body signal processing and visual control
- **Computer C (optional):** Visual process

Both must be connected via local network (Wi-Fi/Ethernet), with OSC synchronization.

COMPUTADORA A – CENTRAL CORE FOR BIOSIGNAL AND AUDIO PROCESSES

Minimum specifications:

- Processor: Intel i7 / AMD Ryzen 7 or higher
- RAM: 32 GB DDR4
- Storage: SSD 1TB + HDD 1TB
- Operating System: Windows 10/11 or macOS 12+

Required Software:

- Ableton Live 12 Suite
- Max for Live
- E4L (Envelope for Live)
- Receptor OSC (OSCIM o similar)
- Crosier control Data 2,1
- MUSEData 4.0
- MuseDAtaIMmov 5.0

Audio Interfaces:

- Minimum 4 inputs / 8 outputs
- ASIO / Core Audio compatibilityDispositivos

Connected devices:

- 2 smartphones (Crosier-Control) via OSC
- Muse 2 or Muse Athena (BCI) + sensores PPG/fNIRS

COMPUTER B – BODY AND VISUAL PROCESSING

Minimum specifications:

Processor: Intel i7 / AMD Ryzen 7

- RAM: 32 GB DDR4
- Storage: 512 GB SSD
- Graphics card: NVIDIA GTX 1660 or higher

Required software:

- Pure Data (Pd)
- Resolute Arena 7
- WIMUMO-Data 3.1 (muscle capture)
- OSC client

Functions:

- EEG signal analysis
- Myoelectric data processing
- Visual projection control
- EEG and voice signal analysis
- Optional: DMX control for lighting

SMARTPHONES

- App Miin Monitor on Smartphone to Computador A
- 2 smartphones, with 4 RAM minimum, gyroscope physicalsensor
- Sensor2OSC app on Crosier's primary smartphone - control
- OscHooK app on Crosier's secondary smartphone -   control (optional)

AUDIO AND NETWORK CONFIGURATION

- Local network: Dedicated Wi-Fi router (not public)

- Protocol: OSC over UDP/TCP
- Mixing console: Minimum 12 channels
- PA sound system: Stereo, quadraphonic, or ambisonic (optional)
- Stage monitors: 2 independent mixes (performer + system)
- Cables to PA amplifier

STAGE EQUIPMENT AND PHYSIOLOGICAL AUGMENTATION DEVICES

Wearables Devices:
- Muse 2 Band or higher Muse ATHENA
- WIMUMO sensors (arms and torso)
- Crosier-Control assembly
- 2 smartphones with operational sensors (Crosier-Control)

Visuals:
- Projector or LED screen for graphical interface
- HDMI cable (15 m)

Space:
- Minimum clean area of 6x6 m
- Non-slip floor
- Controlled darknessDMX lighting system (optional)

TECHNICAL STAFF REQUIRED

- Sound engineer with experience in multichannel systems and OSC
- Video operator (if using Resolume)
- Technical setup assistant:
- Stage assistant for sensor placement and performer augmentation

ASSEMBLY TIMES

- Basic setup: 4 hours
- Soundcheck and calibration: 1 hour
- Sensor testing with performer: 30 min

Network Settings

Team	Static IP	OSC Port	Software Receptor
Comp A	192.168.1.X WLAN		BCI MUSE Data v5. WIMUMOData
Comp B	192.168.1.X WLAN		Crosier control Data v2.0
Comp B	192.168.1.X. WALV.		WIMUMO
Phone 1	DHCP	8037	ensor2OSC
Phone 2	DHCP	8039	oscHook
Phone 3	192.168.1.X.	5001	Mind Monitor

AUDIO PATCHING - COMPUTER A

OUTPUT	TARGET	CHANNEL	NOTES
1-2	Main L-R	1-2	Amin Mix
3-4	Rear L-R	3-4	Ambisonic From E4L
5-6	FX L-R	5-6	Ambisonic From E4L
7-8	Surround	7-8	Ambisonic From E4L

AUDIO PATCHING - COMPUTER B

EXIT	DESTINY	CANAL	NOTES
1-2	IN 1 y 2	1-2	Main Audio Place

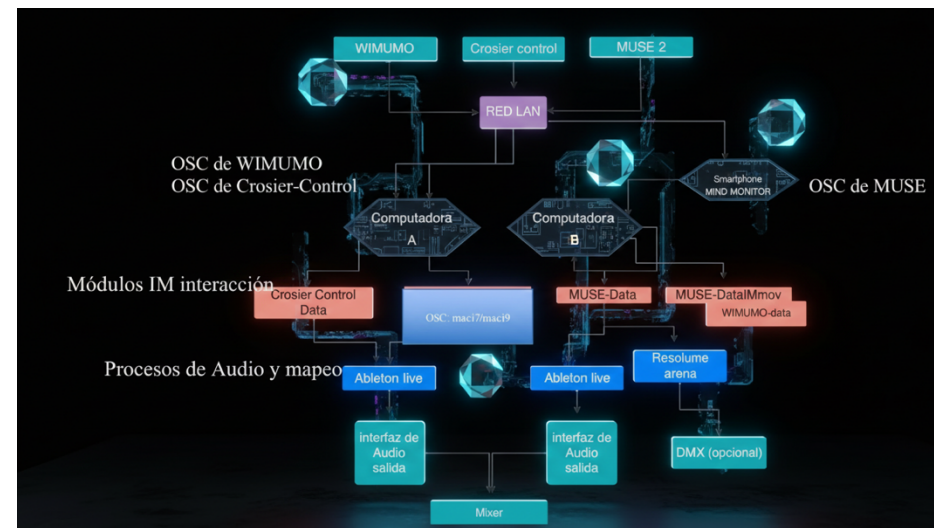| SOURCE	CHANNEL INPUT	NOTES
MIC PERFORMER	1	For voice (wireless)

Stage setup and technical rider

Setting: Clear space, preferably dark or with immersive projections.
Layout:

- o Central area: Performer interacting with the system.
- o Screen or projection: Real-time graphical interface with physiological and sound data.
- o Sound system: Multichannel configuration (stereo, quadraphonic, or ambisonic).).

Technical equipment

- o Crosier-Control cane (smartphone with motion sensors).
- o Muse band (BCI – brain-computer interface).
- o WIMUMO system for myoelectric capture.
- o Computer with Ableton Live, Pure Data, Resolume Arena.
- o o Basic lighting system (optional DMX for future versions).).

PERFORMATIVE SCORE GUIDE

Movement I. Biokinetic Manipulation of Sound

Performative Score – Line of EVENTS IN TIME

Phase	Event	Acción del Performer	System Response
Beginning	Entering the space	Walk to the scenic center	Initial silence, dim light
Presentation	AI Voice	Listen carefully	"Welcome test subject. Take the staff."
Preparation	Lens Placement	Interface lenses are fitted	GUI Activation on Lenses
Activation	Crosier-Control Delivery	Grab the staff with both hands that is on the stage	Activation sound + blue light
Calibration	Test sound	Move staff gently	Confirmation: "System Ready"
TEST 1	Sound Destruction	Staff Front Attack Emote	Sound collapses with bit crush + distortion
Test 2	Chord Lock	Staff in barrier position	Chords freeze + suspended reverb
Test 3	Legato Note Deflection	Rotary rotation of the staff	Notes are deflected with doppler effect
Test 4	Texture suppression	Vertical Swipe or Smash Gesture	Texture is abruptly compressed and filtered
Test 5	Spatial orchestration	Side scan with staff	Sounds are repositioned in space
Evaluation	Final Test	Perform all of the above actions	AI evaluates effectiveness: "Level I passed"
Final	Close training	He was coming and leaving the stage	Light changes to green/breakthrough message

Movement II. Bio-kinetic Dance

Performative Score – Line of EVENTS IN TIME

Phase	Event	Acción del Performer	System Response
Beginning	Muscle activation	Rapid shrinkage test before training start	Confirmation: "Myoelectric system activated"
Calibration	Quick Stress Test	Perform rapid muscle contractions	Test sounds modulated by muscle tension
Test 1	Sound Capture	Hand grip gesture towards floating sounds	Captured sound is stored and slightly distorted
Test 2	Granular Destruction	Sudden movements or jerking	Sound is fragmented into granular particles
Test 3	Acoustic force field	Extend both arms with sustained tension to generate a sound	Dense texture emerges according to level of effort
Test 4	Drone freezing	Sustained isometric contraction to decrease the intensity of the Drone	Sound layers are immobilized in suspension
Test 5	Tempo manipulation	Dance with rhythmic movements and with contractions alter the audio track	Track Speed speeds up or slows down
Test 6	Resonant amplification	Circular gesture with outstretched arms for manipulating intensity and filters	Captured sound gains volume and modulated effects
Test 7	Interactive Cityscape	Navigate and decide to keep/remove sounds trap or destroy by clenching your fist	Environment responds in real-time to your choices
Final	Training Closing	Giving permission and leaving the stage	Ambient sound fades gradually

MOVEMENT III: SONIC NEUROMORPHOSIS

Performative Score – Timeline

Phase	Event	Acción del Performer	System Response
Beginning	Training Presentation	He enters the stage and sits in a lotus flower position	Confirmation: "BCI system activated. Monitoring ongoing."
Calibration	Mental baseline	Close eyes and take a deep breath, wait for AI confirmation	Set baseline levels of brain waves
Test 1	Emotional modulation	It evokes joy → melancholy → tension	Sound modulates density, tempo and timbre according to state
Test 2	States of calm/restlessness	Deep meditation vs. controlled anxiety	Soundscape transforms: harmonic or dissonant
Test 3	Focused concentration	Focus on internal rhythm without getting distracted	Synchronization of rhythmic events in audio
Test 4	Hyper-alertness and stress	Increases conscious alertness	Acceleration of textures and overlays
Test 5	Cognitive fixation	Imagine 3D object with still hands	Sound gains spectral brightness according to mental load
Test 6	Sonified breathing	Conscious control of breathing rhythm	Layers of sound pulse in sync with the breath
Test 7	Cognitive-motor transformation	Moves hands as if manipulating an imaginary object	Sound warped: panning, filters, distortion
Integration	Complete Mind Sculpting	Combine emotion, focus, and visualization	Soundscape reflects multimodal state of mind
Evaluation	Neurosonic Control Test	Maintains rhythmic synchrony + emotional stability 5 sec	AI: "Level III Mastered – Neuro-plasticity Confirmed"

Final	End of training	Coming in and leaving the stage	Sound fades into smooth ambient texture

MOVEMENT IV: KINESTHETIC-COGNITIVE SOUNDSCAPE
Performative Score – Timeline

Phase	Event	Acción del Performer	System Response
Beginning	Immersion in a virtual environment	Explore space with gentle head movements	Ambient sounds are progressively activated (birds, leaves, wind)
Exploration	Kinesic mapping of space	Rotate and observe sky, ground, virtual objects	Sound elements are revealed according to the direction of gaze
Interaction 1	Handling of natural elements	Use Crosier-Control to "touch" river with variable pressure	Water flow modulates according to gesture intensity
Interaction 2	Alteration of the environment	Quick gesture to "break branch"	Dry, resonant fracture sound
Interaction 3	Body synthesis	Combines Crosier-Control gestures and muscle tension	Textures warp, expand, and fragment
Interaction 4	Respiratory Atmospheric Control	Regulates breathing: soft → deep → fast	Wind modulates from breeze to gale according to rhythm
Interaction 5	Seismic Sound Events	Increases cognitive load + firm gesture	Simulated seismic displacement sound
Interaction 6	Lightning generation	Peak Focus + Release Gesture	High-Energy Spectral Burst
Interaction 7	Animal Call	Arm summoning gesture + calm	Sounds of fauna appear responding to the call
Climate control	Modulation of the mental climate	High cognitive load → storm / Calm → clear sky	Textures become cloudy or lighten depending on mental state

Final Domain	Demolition of sonic obstacles	Maximum muscle effort + peak concentration	Rigid sonic structures collapse
Evaluation	Final sound architecture	Reconfigure the landscape at will for 30 seconds	AI: "Level IV completed – Sound Reality Architect"
Conclusion	End of training	Coming in and leaving the stage	Sound returns to neutral ambient state

Throughout these four movements, the performer does not "interpret" a score, but becomes the score itself. Each gesture, each heartbeat, each brain wave writes in real time a unique and unrepeatable sound journey.

This guide-score is a map, but the territory is built by you. Each movement is a rung on a ladder of progressive mastery: from the physical manipulation of sound to the mental architecture of the acoustic landscape. Upon completion of all four levels, you emerge not as a performer, but as a sculptor of sonic realities.

AUMENTED PERFORMER

Performer augmented by: 1) WIMUMO on forearms (muscular gestures), 2) Muse Athena on head (cognitive/spatial micro-gestures), and 3) Crosier Control (direct sound action and modulation). All devices are ergonomically and discreetly integrated under clothing. The performance begins after 3

minutes of organic calibration at rest to establish
individual physiological thresholds.

Performer Augmentation Protocol for "Biolevigation"

Objective: To transform the performer's physiology and gestures into a multifunctional interface for real-time manipulation of an electroacoustic sound environment. The system consists of: 1) WIMUMO devices for muscle biopotentials, 2) Muse Athena headset (BCI), and 3) Crosier Control (motion controller).

Body and Ergonomic Integration

WIMUMO (Muscle Capture): surface electrodes are placed on the forearms, following the topography of the flexor and extensor groups, to capture augmented instrumental gestures. Prior to placement, the skin is cleaned with alcohol to optimize impedance. The cables are grouped and secured with elastic bands, routing them down the back of the arm to the central unit, located in the lumbar region with an elastic belt. This centralizes the weight, does not interfere with the center of gravity, and allows for absolute freedom of movement. The entire system is channeled under the performer's clothing (preferably a compression base layer) for a clean stage aesthetic.

Muse Athena (BCI): the headband is adjusted for firm and stable contact: the front electrodes (AF7/AF8) must be free of hair, and the rear band is placed on the occipital protuberance. The tension should be firm to prevent displacement during expressive movements, but not uncomfortable. The performer is instructed in a repertoire of micro-head gestures. subtle and sustained inclinations, controlled turns) to activate spatial controls, minimizing artifacts in the EEG/fNIRS signal.
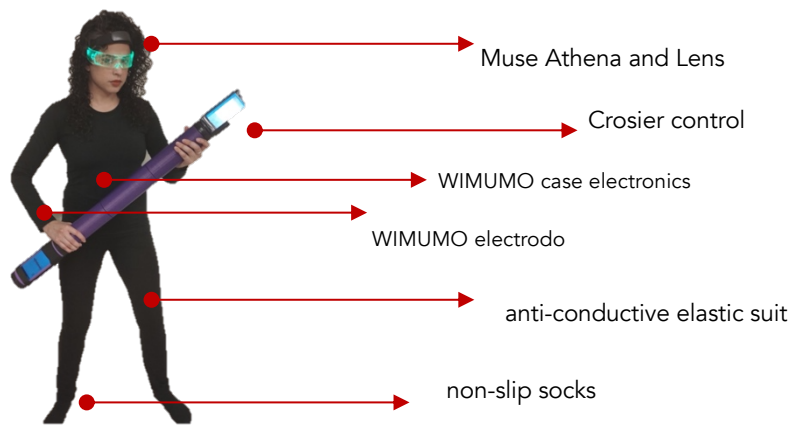
Control Interface Configuration

Crosier Control: Operates as the primary extension of augmented gesture. The performer is trained in its use as:

Modulator Staff: Held with one or two hands to control macro sound parameters (filters, reverb, panning).

Direct Action Interface: To execute specific performative gestures (e.g., sweeps for "spatial orchestration," impacts for "texture suppression," rotational movements for "deflection" of sound materials).

System Calibration and Initialization

Once all devices are in place and the sound system (Pure Data/Max) is operational, the performer must maintain a state of physical and mental rest for 3 minutes. This period is the "organic calibration": it allows the system to record individual baselines (EEG, resting muscle tone, prefrontal oxygenation levels) and the performer to internalize their state of heightened "connection." These reference thresholds are crucial for accurate signal mapping during the performance

- Muse Athena and Lens
- Crosier control
- WIMUMO case electronics
- WIMUMO electrodo
- anti-conductive elastic suit
- non-slip socks

FINAL INSTRUCTIONS FOR THE PERFORMER:

- **Trust the system**: AI is your guide, not your owner. If you fail follow the performance and instructions of the voice

- **Listen to your body**: for the tests of mental interaction, every tension, every breath, every emotion is compositional material.
- **Inhabit space**: Imagine that you are the center of a sound universe that responds to your presence.

- **Accept the mistake**: "Failures" are sonic opportunities. Don't correct them, explore them.

AT THE END OF THE TRAINING:

Having completed all four movements of *Biolevigation* means that you have:

Mastered the biokinetic manipulation of soundIntegrated dance as a tool of synthesisDeveloped conscious sonic neuro-morphosisBecome an architect of immersive soundscapes

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