

ALMUDIO 3D PANNER - USER MANUAL

Almudio 3D Panner is a spatial-audio plugin (VST3) that places your sound anywhere around the listener's head in 3D space. It offers a realistic head-model mode (HRTF), classic left/right panning (Hard Pan), per-band frequency placement, and animated motion paths (LFOs). This manual walks through every control.

TOP BAR

- Settings menu: A question mark icon sits on the top bar. Click it to open the plugin's settings menu, which holds three items: Help Mode, GUI Scaling, and Report a Bug. Each one is covered below.
- Bypass: An on/off button at the top left of the top bar bypasses the whole plugin.

HELP MODE

- Open the question mark menu and click "Enabled" to turn help mode on. A tick appears next to it while it is on, and the question mark circle stays lit, so you can see the state at a glance.
- While help mode is on, hovering over any section shows a pop-up next to the question mark explaining what that section does.
- Click "Enabled" again to turn help mode off.

GUI SCALING

- The GUI Scaling submenu offers two interface sizes, 100% and 125%. A tick marks the one you are using.
- Pick 125% if the interface reads too small on your screen. The whole plugin scales with it, including its menus.
- Your choice is remembered for next time and applies to every instance of the plugin. Instances that are already open keep their current size until you close and reopen them.

REPORT A BUG

- "Report a Bug" opens a panel over the interface, headed "Tell us what happened". Describe the problem in the message box and press Send. The report reaches us directly from inside the plugin, with no email client involved.
- The email field underneath is optional. Leave your address there if you would like a reply.
- Alongside your message, the report sends your plugin version, operating system, DAW, sample rate, interface scale, and whether your copy is activated. Nothing else.

- Send stays greyed out until there is something in the message box. Once the report goes through you see “Thanks, your report was sent” and the panel closes itself. If it fails to send, your text stays on screen so you can try again.
- Cancel closes the panel and keeps whatever you typed.

MODES: HRTF AND HARD PAN

The plugin has two placement modes.

HRTF

- HRTF does 3D placement using a head model, closer to how we actually hear in real life.
- HRTF gives you 20 measured subjects to choose from (D1, D2, and H3 through H20), each based on a real person's head measurement.
- Hover over HRTF to reveal a "Find Your HRTF" button. It opens the SADIE measurement database in your web browser, where you can see photos of the real subjects.
- Pick the subject whose head shape looks closest to your own. That gives you the best mixing result and the clearest sense of the effect.
- Right-click any HRTF to set it as your default. The plugin then launches with that subject every time. You can switch it whenever you want.
- Sample rate: the HRTFs are captured natively at 44.1 kHz, 48 kHz, and 96 kHz. 3D Panner detects your session's sample rate and loads the matching set automatically, so it works at any of these rates using data captured at that exact rate, with nothing to configure.

HARD PAN

- Hard Pan is plain left/right panning, closer to how your DAW normally handles panning.
- It is very direct and does not emulate real-life listening at all.
- Use it when you want a signal at one position only and not in the other ear.

MODE MEMORY

- HRTF and Hard Pan each remember their own sphere placements, elevation, and solo states. Switching between the two recalls whatever you last set in that mode.

INPUT: STEREO OR MONO

The left drop-down menu sets your input type.

- Stereo: For a stereo signal. The right signal is manipulated on the green sphere and the left signal on the red sphere.
- Mono: For a mono or true-mono source. It combines your source into a single bicolor sphere (half green, half red) so you can place that one source in 3D space. Use this for any mono or true-mono material.

PLACING SOUND ON THE XY PAD

- Click and drag a sphere in the XY pad to set the direction and distance you hear the sample from.
- The closer a sphere is to the exact center, the closer and louder the source. The further out, the further and quieter it becomes.
- You can drag any sphere anywhere inside the whole circle that the head sits inside.
- Direction: 0 to 180 degrees is the right side. 0 to -180 degrees is the left side.
- With one motion you can place, move, and set a sphere's distance and direction at the same time.

AZIMUTH AND DISTANCE READOUTS (FLOATING PANEL)

Hover a sphere to show its floating panel.

- Azimuth (top line): The direction you are currently hearing the source from, matching where you see the sphere, using the same convention as above (0 to 180 is the right side, 0 to -180 is the left side). Example: -90 is exactly on your left; 90 is exactly on your right.
- Distance (“DIST: X%”): How far the sphere is from the exact center. 100% is the edge of the circle, 0% is dead center. This controls how far or close the source feels. The distance readout behaves differently between HRTF and Hard Pan modes, so the same percentage can feel different depending on the mode you are in.
- Both lines are editable. Double-click either line to type in a value.
- Double-click a sphere itself to reset its position (direction and distance) back to default.

ELEVATION AND LOCK

On the left side of the plugin is a separate elevation sphere, shown one at a time, representing the height of a signal.

- Mono mode: The left-side sphere is the same bicolor sphere (half green, half red) as the one inside the circle. Raise it for higher elevation, lower it for lower elevation.
- Stereo mode: A lock button appears above the elevation meter and is on by default (shown by an orange light inside it).
 - Lock ON: A single bicolor elevation sphere controls elevation for both the red (left) and green signals together. Raising it raises both, lowering it lowers both.
 - Lock OFF: You can set each sphere's elevation independently. You first see the red sphere on the elevation control and can manipulate it. Press the green sphere to switch the elevation control to whichever sphere you last pressed.
- Double-click the elevation sphere to reset its height to center.

FLOATING PANEL BUTTONS: SOLO, MIRROR, OPPOSITE, MUTE

- Solo: Every sphere has a solo button. Press it to hear only that sphere. A plain solo click is exclusive: it unsolos everything else and leaves only that sphere audible. Hold Control and click another sphere's solo to add it, soloing two or more spheres at once.
- Mirror and Opposite live on the left section of the floating panel, one above the other.
- Mirror (top button, two triangles pointing the same direction): When enabled, moving one sphere makes any other sphere that also has this button enabled perform the exact same movement. Example: drag the green sphere and the red sphere copies it.
- Opposite (button below, two triangles pointing in different directions): Same idea as Mirror but inverted. Move the green sphere right and the left sphere goes left; move it up and the other goes down, and so on.
- Mute: Introduced in the floating panel within the Frequency section. Press it to mute that signal.

OUTPUT GAIN AND METER

- A gain knob at the bottom right sets the plugin's output level. It runs from silent (-INF) at the bottom, through 0 dB (no change) at the center, up to +24 dB. Double-click the knob to reset it to 0 dB.
- Next to the knob is an output level meter. If a clip indicator lights up, click it to reset it.

CREATIVE SCREEN

- The right drop-down labeled “Creative” opens the creative screen. Click it to expand the plugin and reveal more creative options. The plugin window grows wider when the creative screen opens.

FREQUENCY SECTION

The Frequency section has a master on/off (power) button that turns the whole section on and off. When turned on, it has three modes in Stereo and one mode in Mono. Each frequency band becomes its own sphere you can place in 3D space.

STEREO MODES

- Change modes by pressing the three rectangles below the frequency section's master on/off button.
- Green pill (default ON): Cut the RIGHT signal into 1 to 4 frequency bands and manipulate each in 3D space.
- Red pill: Press the bottom rectangle to turn the green pill off and the red pill on. Now you manipulate the LEFT signal's frequency bands.
- Top indicator ON: You get one green and one red pill together, so you can hear and manipulate up to 8 bands total (up to 4 per side) across both the right and left signals.
 - To see and manipulate the LEFT bands: with the top indicator on, click the bottom rectangle to add a red pill alongside the two already on. This gives control of the left side's 1 to 4 bands.
 - To see and manipulate the RIGHT bands: click the middle rectangle so a green pill turns on alongside the top indicator.
 - Ghost circles: With the top indicator on and all bands audible, ghost circles appear showing what is happening to the spheres on the other side.
 - With the top indicator on (all bands audible) plus the red pill on, you manipulate only the left signal's 1 to 4 spheres while seeing the effect on the right signal's spheres, keeping all spheres visible and in control at once.
- Each frequency-band sphere behaves exactly like the green/red sphere in Stereo or the bicolor sphere in Mono: drag it closer or further from center for closer or further, and set direction and elevation the same way as described earlier.

BAND COLORS

- Pink sphere: high frequencies.
- Yellow sphere: high-mid frequencies.

- Purple sphere: low-mid frequencies.
- Cyan sphere: low frequencies.

ANALYZER AND CROSSOVERS

- The top right of the plugin shows a visual analyzer of your sample plus dashed lines colored to match the spheres.
- From right to left the dashed lines are pink (high), yellow (high-mid), purple (low-mid), then cyan (low). Each can be turned on or off from that section.
- Change the band splits by dragging the dashed lines.
- Double-click a dashed line to reset that split to default.

PER-BAND LIMITER KNOBS

Below each frequency-band row are two knobs. They control a limiter on that band's spatialized output (they no longer set the band's frequency range - the dashed lines do that now).

- Top knob - Input Gain: boosts or cuts the band's level going into the limiter. Boost to drive it harder into the ceiling; cut to trim it back. It runs from -24 dB to +24 dB, with 0 dB (no change) at the center.
- Bottom knob - Ceiling: the level the band's peaks are held under, so the band never exceeds it. It runs from -24 dB up to 0 dB.
- Double-click either knob to reset it to its default.

LFO SECTION

Below the Frequency section is an LFO section for animating sphere motion. It offers 8 default LFOs: spiral, spring, X, pendulum motion, orbit, circle, infinity, and random.

- Click any LFO to make it appear on the circle. You can run up to 4 LFOs at once. Hovering shows an “N / 4 LFO slots used” tooltip, and once all 4 slots are full, clicking a new shape does nothing.
- Path-based (normal) LFOs: Drag a sphere toward the LFO path. It magnetizes to the path and is then driven by that LFO.
- All LFOs share the same floating panel buttons except pendulum and random.

FLOATING PANEL FOR A LINKED SPHERE

- Hover a sphere connected to an LFO to show a larger floating panel. It still has azimuth, distance, and solo, plus a time button and an arrow button.
- Time button: Sets how fast the motion runs. It works two ways.
 - Free speed: the fader sets an exact rate, meaning how many full loops per second (measured in Hz). One loop per second is the default, and it ranges from very slow up to very fast. Drag the fader, or double-click the on-screen number to type a value. Double-click the fader to reset.
 - Synced: press the time button to lock the speed to your project tempo. You then choose a note length, from 1/64 all the way up to 32 bars (1/4 is the default).
- Arrow button: Reverses the direction of the LFO motion.

RESIZING AND ROTATING A PATH

- Normal LFOs can be made smaller, bigger, wider, narrower, taller, or shorter using the orange rectangles attached to the big rectangle the LFO sits inside.
 - Corner rectangle: drag to scale the whole path smaller or bigger.
 - Top or bottom rectangle: drag to make it taller or shorter.
 - Left or right rectangle: drag to make it wider or narrower.
- Rotation: At the top of the big rectangle is a two-arrows-in-a-circle button. Drag it in a circular motion to rotate the LFO path.

- Reset: Double-click the LFO path or the rotation button to reset the LFO to its default position.
- Remove: A red X button attached to the rectangle removes the path from the circle when clicked.

DRAW MODE

In the center of the LFO section is a drawing option for custom paths.

- Press the pencil button, then draw the motion you want inside the drawable box for the sphere to follow.
- After drawing, a V (checkmark) appears at the top right of the box. This is the commit button. Press V to make the path appear on the circle.
- A fader under the drawn path smooths your lines. Double-press it to restore to zero (no smoothness).
- The X button on the right side of the drawable box clears the box so you can draw another path.
- Click the pencil again to exit draw mode.

PENDULUM

The pendulum is a special LFO in the center, between the X and orbit visual locations.

- Press it to show a rod (dashed line) from a base connected to the top of the circle, with a bob attached to the dashed line.
- Drag the bob anywhere in the circle. Dragging the bob while your DAW transport is stopped sets its starting angle and rod length.
- The pivot at the top has a “+” and an “X”. Click “+” (or click the pendulum icon again) to add another rod, so you can run more than one pendulum at the same time. Click “X” to delete the pendulum.
- To drive a sphere with the pendulum, drag the sphere into the bob. A glowing orange light turns on to signal you can let go. The sphere is then driven by the pendulum motion.
- Hover a sphere under pendulum motion to show only two buttons in the floating panel: an X button and a drop-down menu.
 - X button: Disconnects the sphere from the pendulum.
 - Drop-down menu: Sets the pendulum’s speed using the real gravity of a body in our solar system. The choices are Sun, Mercury, Venus, Earth (the default), Moon, Mars, Ceres, Jupiter, Saturn, Uranus, and Neptune. Earth gives the same speed as a real pendulum here on Earth. The Sun, with far stronger gravity, makes it swing far faster.

RANDOM LFO

- To randomize a sphere, click the random LFO and drag it onto the sphere you want randomized.
- Dropping random on a sphere shows the big floating panel with the same buttons (time sync, solo, azimuth, distance).
- Instead of a direction value, random shows a percentage that decides how far the sphere can travel in the circle. At 100% it can go as far as the circle allows. At a lower percentage it stays relatively close to the exact center of the head.
- Jump/Smooth switch: in Jump, the sphere teleports to a new point each cycle. In Smooth, it glides from point to point at the rate you chose, so the movement is heard and seen as motion rather than a jump.
- Offset knob (0-100%): shifts WHEN the jump happens inside each cycle. If the jumps land exactly on your transient hits, turn Offset until they fall between them.
- An X button detaches the sphere from the random LFO when pressed.

GLOBAL PLAY AND DAW SYNC

- For any LFO to work, the master play button next to the LFO section text must be on, and your DAW's playback must also be running.
- This lets you adjust LFO parameters whether DAW playback is playing or paused.
- If spheres are moving under LFO control and you cannot grab one, turn off the master play button to stop them, adjust the parameters you want, then turn the master play button back on to resume the motion.

0G (THROW)

- To the right of the play button is a 0G button. When on, spheres can be thrown and preserve the exact speed you threw them at, never stopping until 0G is disabled.
- Disable 0G by clicking the 0G button again, or by right-clicking anywhere inside the circle.
- 0G also works on pendulum movement.
- With 0G off, gravity slowly stops the spheres' motion, just like in real life.
- With 0G on, that stopping is disabled, and the pendulum keeps moving at the chosen planet's speed forever until 0G is turned off.

UPDATES

- When a newer version of 3D Panner is available, a banner appears at the top of the plugin with a link to download the update.