R4GS AUDIO

MX-01

INTELLIGENT CORRECTIVE EQ

USER GUIDE / 0.9.22 / DEVELOPMENT

What MX-01 does

MX-01 is an eight-band intelligent corrective EQ. It listens for tonal problems and makes measured adjustments. It can work on individual point sources or a complete mix, with different workflows and correction strength for each. You can accept automatic correction or manually override individual bands.

Start here

- For a full mix choose **MIX** and start with the **GENERAL** profile. Use gentle overall CORRECTION.
- For a single instrument choose **SOURCE**, select an appropriate listening profile and analyse a representative 25-second section.
- Listen before editing. Use the graphical SPECTRUM view for quick changes or flip to CONTROL for precise adjustment.
- Compare bypassed and processed audio at a similar loudness.

SPECTRUM: see and move the correction



The grey trace shows incoming spectral energy; the orange curve shows the EQ response. The curve and band points are the useful guides to what MX-01 is changing. An uneven incoming spectrum does not automatically mean the source needs correcting.

Use the graphical control points to move a correction directly while listening. The graphical view and the CONTROL screen are two ways to edit the same EQ; switching views does not, by itself, reset an adjustment.

CONTROL: make precise changes



Flip between **SPECTRUM** and **CONTROL** using the button at the top right of the plugin. CONTROL contains the band inspector and rotary controls. Select a band, then adjust it with knobs rather than dragging the graph. Both views work on the same eight-band processing system.

Frequency / Static dB / Q

Frequency positions a band. Static dB adds a fixed boost or cut. Q controls its width: higher Q is narrower, lower Q is broader.

Dynamic dB / Threshold / Attack / Release

Dynamic dB sets the level-dependent part of correction; Threshold determines when it responds; Attack and Release govern the timing. Start by listening to the automatic result before manually changing dynamic settings.

Auto and manual bands

AUTO ACTIVE means MX-01 controls the selected band. Adjusting a control overrides that band while the others can remain automatic. RETURN TO AUTO gives that band back to the analysis system.

The two working modes

SOURCE: point-source listening

SOURCE analyses approximately 25 seconds and holds a stable correction. Use it on snare, guitar, bass, vocals or other individual tracks. Choose the listening profile suited to that source material and use the source-specific listening function to assess the problem. Analyse a passage that contains the issue, not silence or an unrelated intro.

MIX: gentle continuous adaptation

MIX adapts as the arrangement changes. It is appropriate for a stereo mix or changing combined material. Begin with GENERAL and a sensible fader balance. Lower CORRECTION if the mix loses weight or energy. MX-01 should tidy a mix, not make fundamental balance decisions for you.

Correction strength and output

CORRECTION

This is the overall correction strength. A value of 100 is not a quality score. If a chorus becomes too thin, try 75 or 60 before editing every band.

LOW CUT

Filters unwanted low-frequency energy. Check that bass and kick still retain their intended weight.

AUTO GAIN and OUTPUT dB

AUTO GAIN helps compare processed and unprocessed levels but does not guarantee identical perceived loudness. Manually moving OUTPUT dB takes priority and switches Auto Gain off.

Practical listening situations

Boomy bass

Use SOURCE and analyse both sustained and short notes. Listen for notes that bloom or mask the kick. Reduce CORRECTION if the result loses body.

Boxy snare

Analyse repeated hits. Identify the hollow ring, then check that a targeted correction leaves the drum's body intact.

Harsh guitar

Analyse the distorted section rather than a clean intro. Avoid removing the aggression that makes the part work.

Full rock mix

Choose MIX / GENERAL and play both verse and chorus. If the chorus loses impact, reduce overall CORRECTION. Fix fader balance before asking the EQ to compensate.

Independent or stacked

MX-01 is a complete corrective EQ on its own. Other R4GS Audio plugins are optional: TD-01 can provide compression on a source or mix, and BU-01 can bring out detail on individual tracks. When stacking, listen to both plugin order and total processing strength; there is no required chain.

Troubleshooting and version notes

- **Too thin:** lower CORRECTION, inspect low-frequency bands and LOW CUT.
- **Pumping:** review manually adjusted dynamic settings.
- **Unexpected level:** check AUTO GAIN and OUTPUT dB.
- **No obvious automatic changes:** check mode and whether a band is overridden.
- **Project recall:** save and reopen a test session to confirm manual overrides are retained; complete persistence testing is still pending.
- **Many instances:** close unused plugin windows and raise your DAW buffer during mixing if necessary; low-buffer ten-instance reliability has not yet been formally verified.

This guide covers development build v0.9.22. Final licensing and preset/project-recall behaviour must be verified before publication.