

**REBIS AUDIO RA702
MULTI GATE
OPERATORS MANUAL**

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INSTALLATION

Important: Refer all installation and servicing to qualified personnel.

Note: The RA702 should not be installed in close proximity to such equipment as power amplifiers or power supplies which may produce excessive heat or magnetic interference.

Earthing

It is normal practice when installing rackmount equipment to disconnect the earth from the mains lead, and earth the unit mechanically via the rack cabinet.

Whatever earthing system is used **IT IS ESSENTIAL THAT THE CHASSIS OF THE RA702 IS ULTIMATELY CONNECTED TO MAINS EARTH.**

Audio Connections

Audio connections to the RA702 are made via 0.25 inch 'A' type mono jacks.

To avoid earth loops it is normal practice in professional studios to run a single 0V connection to the patchbay, and make signal screens discontinuous. Input screens should be connected at the RA702 and output screens at the patchbay.

AUDIO OPERATION

The **THRESHOLD** control sets the level of signal needed to open the gate. Turning the control clockwise increases the gates sensitivity, i.e. lowers the Threshold. The ideal setting will be a little above the loudest peaks of the unwanted cross mic pickup or background noise. The THD LED is illuminated while signal is above the set threshold.

ATTACK, (the time taken for the gate to open) can be switched between two ranges. The Slow attack range is suitable for most signals, particularly vocals and bass instruments whilst the Fast range should be selected for percussive sounds. Fine tuning of the Attack is done automatically by the RA702 to match the dynamic profile of the material. This semi automatic approach ensures optimum attack with the minimum of adjustment.

The functions of hold and decay are combined in a single **RELEASE** control.

The hold and decay parameters are perfectly proportioned across the range of Release times. This avoids 'hunting' on signals around threshold, and eliminates distortion when applying fast release to low frequency signals.

The **HF** and **LF** filters can be used for frequency conscious gating by adjusting the frequency sensitivity of the side chain without affecting the gated signal.

Use the HF and LF filters to roll off any frequencies which may cause erratic gating. (e.g. snare drum channel - use HF to remove cymbals and LF to remove bass drum, leaving a 'window' for the snare).

Use the **MONITOR** button to listen to the side chain signal while adjusting the filters.

The side chain trigger source, normally the input signal, can be changed to the Ext Key input with the **EXT/KEY** button.

External triggering allows one track to modify the dynamics of another track or tracks. (e.g. use the bass drum to Key a gated bass line).

Using the **MONITOR** button to listen to the side chain source will now allow you to hear the external input.

MASTER BYPASS opens all the gates with a single switch to allow simultaneous drop in or drop out.

In live sound it can be used as a 'panic button' to save precious moments if problems arise. For example it could be used to open all the tom tom mics if the snare mic failed, to compensate for the loss of sound during replacement or adjustment.

SYNC

When multi part backing vocals or brass riffs are performed live the performers often rely heavily on visual cues to achieve good synchronisation.

When a single performer is multitracking the parts, and these cues are absent, it can be quite difficult to end the last note of each phrase together. This leads to ragged 'tails' on otherwise perfect performances.

The Rebis MultiGate solves this problem with its unique Sync feature. In Sync mode the RA702 automatically selects the track with the shortest phrasing, and uses it as a key to close all the gates simultaneously. The result is a clean, tight track with the minimum of rehearsal and re-takes.

GENERAL USE

The RA702 MIDI Gate is normally used in the channel inserts of a mixing desk. If pre and post inserts are available the post eq inserts should be used, and if other signal processors are being used in series with the gate then it should be the last element in the chain.

In the studio, wherever possible, the RA702 should be used at the mix-down stage rather than on the initial recording. If noise gates are used to achieve the sound for the initial recording it is good practice to switch them out for the 'take' and back in for replay and mixdown. This is particularly important when you are using the RA702 to make modifications to the envelope of a sound. Remember a noise gate works by 'taking bits away' and once they've gone you won't be able to put them back.

DRUM SEPARATION

Careful use of the Filters to remove unwanted frequencies from the side chain signal is usually all that is required. Using a contact mic to key the gate, however, will make false triggering virtually impossible. Mic the drum in the normal way, fit a contact mic to the drum (preferably inside) and use it to drive the Ext Key input.

LED INDICATORS

You will notice that the Threshold and Release LEDs remain operative when the Gates are switched out. This can be particularly useful in live situations, allowing the gate to be adjusted off line.

SPECIFICATION

Model: RA702 MultiGate

Channels: 4

Inputs: Max level +21dBm. Impedance 100 kilohms

Outputs: Max level +21dBm into 600 ohms.

Impedance less than 50 ohms

Balancing: Optional electronic

Distortion: Less than 0.05% 20Hz to 20kHz

Noise: -104dBm. 20Hz to 20kHz. Gate closed

-95dBm. 20Hz to 20kHz. Gate open

Frequency Response: +0.5dB. 20Hz to 20kHz

Attenuation: 90dB (gate closed)

Audio Connections: 1/4" A type jacks

Power Requirement: 220-240V AC. 30 watts max

(110-120V by internal connections)

Fuse: 500mA

Dimensions: 19" rackmount x 1U(44mm) x 245mm

Weight: 3.6 kg nett

CONTROLS

IN: Individual gate in/out

Threshold: +20dBm to -40dBm

Threshold LED: Signal above threshold

Attack: Programme related, semi-automatic

Fast range 50uS to 100uS

Slow range 500uS to 2mS

Release: 40mS to 2 Seconds

(combined hold and decay)

Release LED: Fades to indicate release time.

Ext/Key: Selects external side chain source.

LF side chain filter: 20Hz to 5kHz. 12dB/octave

HF side chain filter: 80Hz to 20kHz. 12dB/octave

Monitor: Routes side chain filter to output.

Master Bypass: Holds all gates open.

Master Sync: Synchronises closure of all gates to channel with shortest envelope.