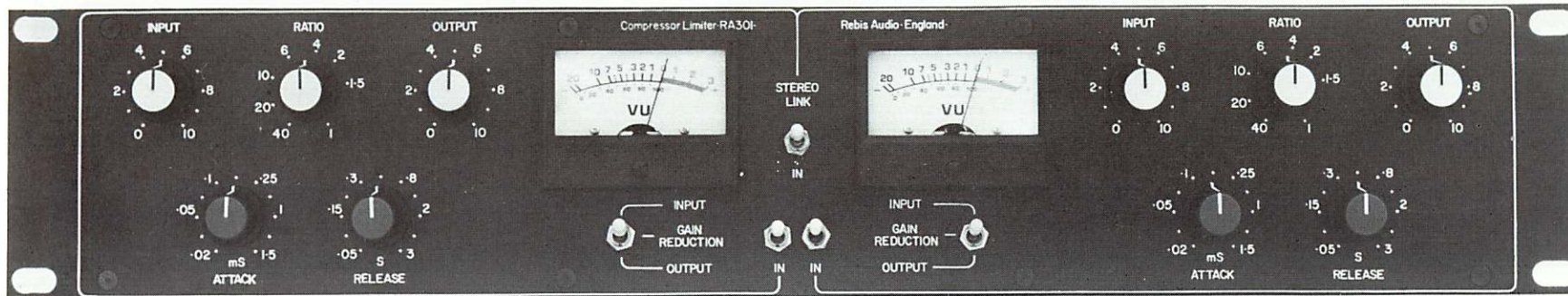


Rebis

Rebis

RA301 Compressor-Limiter



- FEATURES:
- Two independent compressor-limiters in a compact 3 1/2" self powered unit.
 - Front panel link switch for accurate stereo tracking or voice-over.
 - All controls, including ratio, continuously variable.
 - Separate input and output controls allow setting of required gain reduction and matching of system levels.

Compression is often a subtle process which requires the optimising of the various parameters involved for the programme concerned. The RA301 Compressor-Limiter with its wide range and continuously variable controls suffers from none of the limitations experienced with the pre-set and switchable functions on some units.

Though the RA301 is a dual unit, its front panel controls have been carefully positioned to facilitate stereo operation. The two channels can be linked with a front panel switch when compressing stereo material. The excellent stereo tracking, within 1dB from threshold to full compression, ensures no loss of stereo image. Linking can also be used for voice-over work in broadcast applications with the facility of simultaneous compression of the voice channel should this be required.

The flexibility and effectiveness of the RA301 Compressor-Limiter coupled with its high standards of specification and workmanship make it the ideal tool for level control and musical dynamic modification.

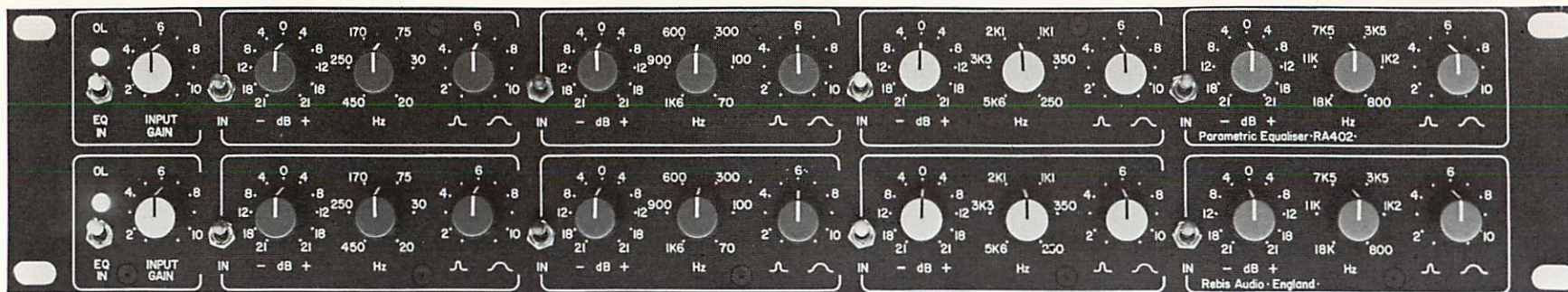
SPECIFICATION:

Input control: Continuously variable threshold down to -20dBm.
Ratio control: Continuously variable compression ratio from 1:1 to 40:1.
Output control: Up to 14dB's of reserve gain above a limited signal of +4dBm.
Attack control: Continuously variable from 20µs to 1.5ms.
Release control: Continuously variable from 50ms to 3secs.
Metering: A V.U. meter displays input, output or gain reduction.
Bypass: Each channel has an in/out switch.
Stereo link: A switch links both channels for preservation of stereo image or voice over. Stereo tracking within 1dB from threshold to full compression.

Maximum compression: 30dB. Maximum gain: 38dB ±1dB.
Maximum input: +24dBm. Maximum output: +23dBm into 600 ohms.
Input impedance: 100 kilohms. Output impedance: Less than 1 ohm.
Noise: Better than -75dB referred to a normal operating level of +4dBm.
Distortion: Less than 0.2% THD at 1kHz with 20dB's of compression.
Frequency response: ± 1dB from 20Hz to 20kHz.
Power requirements: 110-240 volts at 50-60Hz.
Dimensions: Width: 19" (482.6mm). Height: 3 1/2" (88.9mm). Depth: 9 3/4" (247.6mm).

Rebis

RA402 Parametric Equaliser



- FEATURES:**
- Two independent 4 section equalisers in a compact 3½" self powered unit.
 - Bandwidth Variable from 5.5dB/octave to 36dB/octave.
 - In/Out switches for each section and overall equalisation.
 - Nearly 3 octaves overlap between sections.
 - 21dB's of boost or cut.
 - Full equalisation from 20Hz-18kHz.
 - Separate controls for each function.
 - Input gain control with up to 20dB gain.
 - Overload indicator.

The RA402 offers all the advantages of comprehensive and extremely flexible parametric equalisation in a simple to use format. Panel markings are clear and section controls are colour coded. The confusion of concentric controls has deliberately been avoided. The frequency range covers the whole audio spectrum from 20Hz to 18kHz in four overlapping sections. The large overlap provided allows the separate equalisation of several close frequencies, for example when optimising sound levels in sound reinforcement systems by notching out peaks in auditorium response.

For more complex work the two channels of the RA402 can be cascaded to provide eight separate sections of equalisation. The bandwidth controls can give the subtlety of gentle slopes or the extreme notches necessary to remove fixed frequency noise or interference. Pre-set equalisation can be silently switched in or out at any time using the individual or overall bypass switches.

The front panel LED indicates overload anywhere in the equaliser. By staying on for at least 100 milliseconds, even on very fast peaks, overloads can easily be seen and corrected with the input gain control. The LED indicator also illuminates dimly to show power on.

If you are looking for the best in ancilliary equalisation with a reliability and standard you can trust, the Rebis RA402 Parametric Equaliser is for you.

SPECIFICATION:

Input gain: Up to 20dB gain available.

Overload indicator: The LED will light and stay on for 100ms if the peak positive or negative level anywhere in the system exceeds +22.5dBm.

Equalisation: Continuously variable boost or cut of up to 21dB.

Bandwidth: Variable from 5.5dB/octave to 36dB/octave ('Q' 0.89-13).

Frequency: Continuously variable over 4.5 octave range.

Section 1: 20Hz-450Hz. Section 2: 70Hz-1.6kHz.

Section 3: 250Hz-5.6kHz. Section 4: 800Hz-18kHz.

Section Overlap: 2.7 octaves.

Bypass: Each individual section has an in/out switch.

Each parametric has an overall EQ in/out switch.

Frequency Response: ± 1dB 20Hz-20kHz.

Input Impedance: 100 kilohms. Output Impedance: Less than 1 ohm.

Maximum input: +24dBm. Maximum output: +23dBm into 600 ohms.

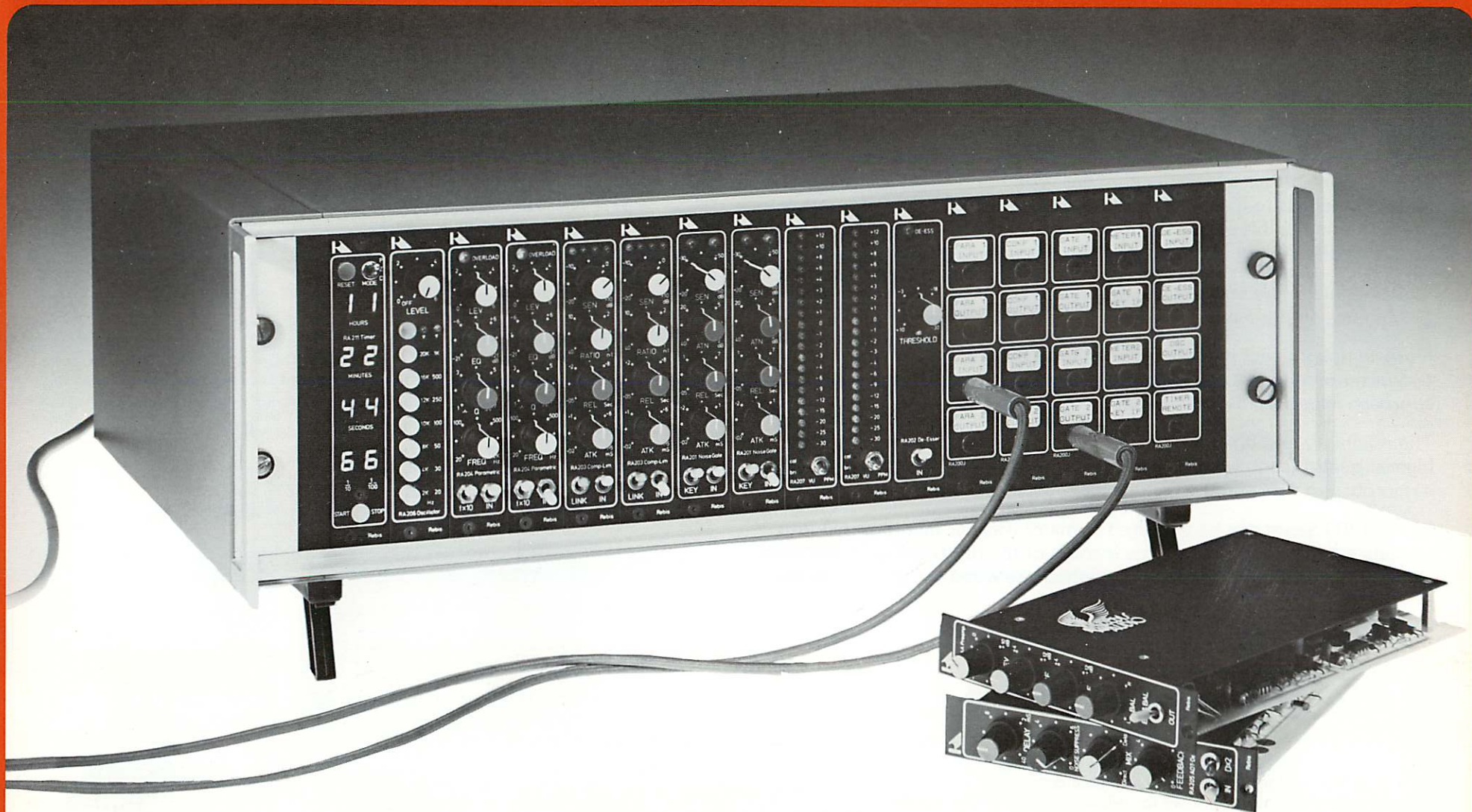
Noise: System in and set for no gain, better than -80dBm. (20Hz-20kHz).

Distortion: Below .02% THD at +12dBm at 1kHz.

Dimensions: 3½" (88.9mm) vertical for mounting in standard 19" (482.6mm) rack. Depth behind panel 10 1/8" (257.2mm).

Weight: Approximately 10 lbs. (4.54kgs.)

Rebis RA200 Series



The most comprehensive modular system of professional studio equipment

Rebis Audio, Kinver Street, Stourbridge, West Midlands, DY8 5AB, England. Tel. Brierley Hill (0384) 71865

Rebis

RA200 Series

RA201 Noise Gate

- FEATURES:
- Continuously variable attack and release.
 - Release characteristics prevent hunting effects.
 - Key input.
 - LED indicators for gating/non gating.

The RA201 Noise Gate has many applications in recording and broadcast studios and in live sound reinforcement systems.

The provision of variable controls for attack and release allow the full use of the dynamic characteristics of the gate. This applies particularly to the production of a tight clean drum sound by removing booming, ringing, spill and cross resonance. Many studios use a group of RA201's for this purpose.

A bank of noise gates in the inserts of a mixer will prevent the recording of general studio noise, cross mic pick up and other unwanted low level signals. In the mixdown situation they will also provide automatic elimination of tape noise from non-contributory tracks.

In sound reinforcement systems noise gates can prevent the amplification of incidental and other noise, particularly useful when large numbers of musicians are involved.

The release characteristics of the RA201 ensure that no spurious noise is produced by indecisive gating or hunting effects, a common problem with other gates.

A key input is provided for the gating of one signal by another for frequency selective gating, foolproof drum separation, tightening of rhythm and brass tracks etc.

A gate status DC output and a control voltage input allow the interfacing of the RA201 with voltage controlled equipment.

The RA201 Noise Gate is also available in a 7 inch format, the RA201X, to retrofit Kepex racks.

SPECIFICATION:

Sensitivity: -40dBm to +20dBm.

Attenuation: 2dB to 40dB.

Release time: 50mS to 10 seconds.

Attack time: 20uS to 4mS.

LED's: Red indicates closed, Green indicates open.

Key switch: Key input allows external audio control of gate operation.

In/Out switch: Bypasses unit entirely.

Input impedance: 100 kilohms.

Output impedance: Less than 1 ohm.

Maximum input: +24dBm.

Maximum output: +23dBm into 600 ohms.

Noise: -92dBm 20Hz to 20kHz.

Frequency response: ± 0.5 dB 20Hz to 20kHz.

Distortion: 0.01% THD at +12dBm at 1kHz.

Aux DC Output: Gate open 2V, gate closed 10V.

DC Control Input: 15 to 40V.

Power requirements: +24 to +40 volts DC at 50mA. (Stabilised).

Dimensions: 5.25" x 1" x 7.9" behind front panel.

Note: All specifications quoted with 40 volts supply.



Rebis RA200 Series

RA202 De-esser

- FEATURES:
- Silent operation
 - Wide threshold range
 - Simple to use

Vocal sibilance often causes problems in both live and recording situations. Brightening vocals by boosting high frequencies, compressing already 'toppy' voices, multitracking sibilant harmonies, or just bad microphone technique, all tend to produce an annoying emphasis of sibilance.

The RA202 De-esser is designed to simply and unobtrusively control the relative level of sibilance.

Unlike some units the RA202 works by compressing the whole audio spectrum thus ensuring that the low frequencies often associated with sibilance are also dealt with. Treatment of only the high frequency components of the programme can result in an unpleasant predomination of this low frequency 'distortion'.

A smooth and inaudible control of sibilant level is guaranteed by the combination of carefully selected attack and release characteristics and a detection system which compares the levels of the 'S' frequency band and the rest of the programme.

The RA202 De-esser is simple to use having only two operating controls, threshold level and a click-free in/out switch. A red LED illuminates to indicate sibilance above the selected threshold level.

Wherever the problem of sibilance control is encountered, in studio, broadcast or motion picture work, the Rebis RA202 De-esser is a simple and cost effective solution.

SPECIFICATION:

Threshold: Variable from -30dBm to $+10\text{dBm}$ at 10kHz .

De-ess LED: Red LED illuminates to indicate sibilance above threshold setting.

Frequency response: $\pm 0.75\text{dB}$ 20Hz to 20kHz (Below threshold)

Input Impedance: 100 kilohms .

Output Impedance: Less than 1 ohm .

Maximum input: $+24\text{dBm}$.

Maximum output: $+23\text{dBm}$ into 600 ohms .

Noise: Less than -80dBm ($20\text{Hz} - 20\text{kHz}$).

Distortion: Less than 0.2% at 6kHz at 20dB of gain reduction.

0.05% at 1kHz at $+18\text{dBm}$ output, no gain reduction.

Maximum gain reduction: 30dB .

Power requirements: $+24$ to $+40\text{ volts DC}$ at 50mA (stabilised).

Dimensions: $5.25'' \times 1'' \times 7.9''$ behind front panel.

Note: All specifications quoted with 40 volts supply .



Rebis RA200 Series

RA203 Compressor-Limiter

- FEATURES:
- Continuously variable ratio from 1:1 to 40:1
 - Wide range attack and release
 - Two units linkable for stereo operation or voice-over
 - LED's indicate gain reduction

After equalisation the compressor-limiter is probably the most hard worked piece of equipment in the studio. It is expected to cope with a whole range of tasks, unobtrusively controlling vocal dynamics, tightening up bass and drum tracks, making weak mixes sound 'thicker', compressing stereo masters and so on. The RA203 Compressor-Limiter will do all you ask of it and do it without fuss. All the controls are continuously variable and wide range giving a flexibility that breeds creativity, a contrast to the frustrations experienced with other units with preset and switchable functions.

Two units can be directly linked when compressing stereo material. In this way the stereo image is maintained by the excellent tracking, within 1dB from threshold to full compression. Linking can also be used for voice-over in broadcast applications with the option of simultaneous compression of the voice channel if required.

The RA203 offers a full specification compressor-limiter in an easily accommodated compact module which will readily interface with both professional and semi-professional systems.

SPECIFICATION:

Sensitivity: Variable threshold from -20dBm to +10dBm.

Ratio: Variable from 40:1 to 1:1.

Release: Variable from 50mS to 3S.

Attack: Variable from 20µS to 1.5mS.

LED's: 4LED's indicate threshold (orange), 5dB, 10dB, 15dB (red) of gain reduction at limit.

In/out Switch: By-passes entire unit.

Link Switch: Allows linking of two units for stereo image preservation or voice-over. Tracking within 1dB from threshold to full compression.

Maximum Compression: 30dB.

Input Impedance: 100 kilohms.

Output Impedance: Less than 1 ohm.

Maximum Input: +24dBm.

Maximum Output: +23dBm into 600 ohms.

Noise: -75dBm (20Hz to 20kHz) with SEN control set to 0dBm.

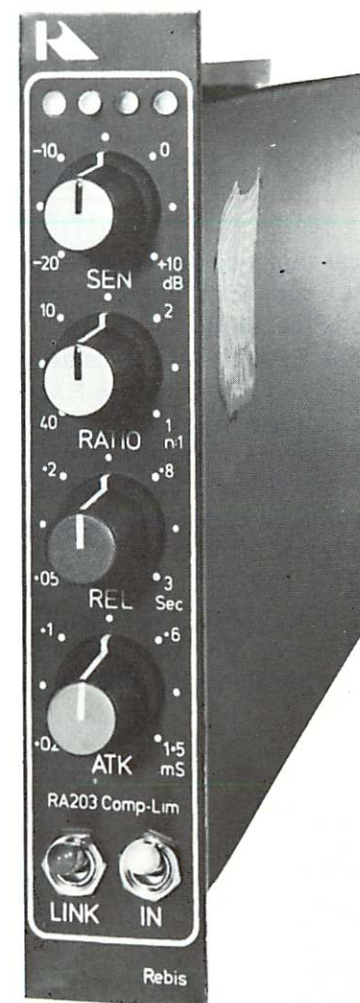
Distortion: Less than 0.3% THD at 1kHz with 15dB compression (Release 3 Secs).

Frequency Response: ±1dB 20Hz to 20kHz.

Power Requirements: 24 to 40 volts DC at 65mA (Stabilised).

Dimensions: 5.25" x 1" x 7.9" behind front panel.

Note: All specifications quoted with 40 volts supply.



Rebis RA200 Series

RA204 Parametric Equaliser

- FEATURES:
- Covers whole audio spectrum in two ranges.
 - 21dB's of boost or cut.
 - Bandwidth variable from 5.5dB/octave to 36dB/octave.
 - Overload indicator.

The advantages of parametric equalisers are obvious. Their individual control of all parameters allow you to zero in on exactly the sound you want.

The RA204 is a truly parametric unit, unlike many of its contemporaries which have the serious limitation of fixed Q. The wide range of the Q control on the RA204 allows both gentle slopes for subtle equalisation and the steep notches essential for removal of fixed frequency noise and interference and for special effects.

The equalisation control has easily enough range to cope with even the most drastic levels of boost or cut you may want to apply.

The ability to sweep the greater part of the audio frequency range with one control is particularly useful for producing dramatic special effects.

A couple of RA204's can preselect a band of frequencies either for processing by other units or for controlling them via key inputs etc.

Restricted desk equalisation can be augmented and updated by the addition of a set of RA204 modules, which can also be interlinked to provide an extremely comprehensive and flexible equaliser when this is required.

SPECIFICATION:

Level: Up to 20dB of gain available.

Overload Indicator: The LED will light and stay on for 100mS if the peak level in the system exceeds +22.5dBm.

Equalisation: Continuously variable boost or cut of up to 21dB.

Q (Bandwidth): Variable from 5.5dB/octave to 36dB/octave, Q 0.89 to 13.

Frequency: Continuously variable in two ranges.

Range 1: from 20Hz to 2kHz.

Range 2: from 200Hz to 20kHz. (With frequency times 10 switch in).

In/Out Switch: Bypasses unit entirely.

Frequency Response: ± 1 dB 20Hz to 20kHz.

Distortion: Below 0.02% THD at +12dBm at 1kHz.

Input Impedance: 100 kilohms.

Output Impedance: Less than 1 ohm.

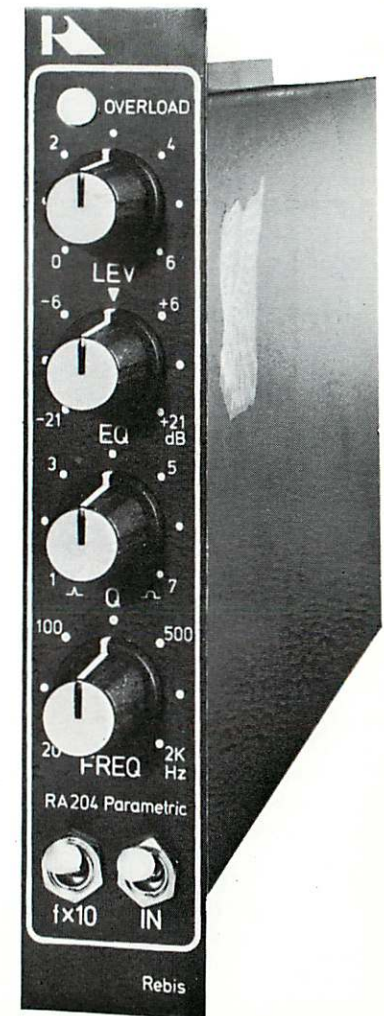
Maximum Input: +24dBm.

Maximum Output: +23dBm into 600 ohms.

Noise: Better than -80dBm 20Hz to 20kHz, set for unity gain.

Dimensions: 5.25" x 1" x 7.9" behind front panel.

Note: All specifications quoted with 40 volts supply.



Rebis RA200 Series

RA205 ADT/Delay

- FEATURES:
- 2mS to 80mS Delay Range; gives from enhancement and ADT to repeat echo.
 - Noise Suppression Control; reduces HF noise, controls HF headroom.
 - Feedback Insert; for weird effects with other units, bounce effect, aux input.
 - Modulation Input; auto sweep for phase/flange/vibrato etc.

When ADT and repeat effects are needed in the studio it often means tying up complex time processing equipment to do simple routine delay tasks. The RA205 ADT/Delay provides these functions in a compact, cost-effective RA200 Series Module.

The 2 to 40mS delay range provides a high quality delay, ideal for feeding electro-mechanical reverberation systems to provide a longer initial delay.

Internal mix and feedback facilities mean that a range of effects can be produced without using extra console mixing.

The subtle EQ changes produced by delaying a signal 2 to 8mS and blending it with the original provides enhancement, particularly useful for brightening vocals. Phasing occurs when the delay is varied over this range. Delays of 8 to 40mS give the thicker double tracking effects which are so consistently in demand.

The feedback control can create tube effect, the resonant frequency of which alters with the delay length. The tuned reverberant aura produced can add a new dimension to drum and vocal tracks.

A longer delay range of 4 to 80mS has been provided to make single and multiple repeat echo possible, and the unique arrangement of the signal paths at the mix control allows the resonance of the feedback to be cancelled to produce natural reverberation.

The break point in the feedback path can be wired to a jackfield for cross patching into other RA200 Series or external signal processors for special effects.

The RA205 also has a modulation input for external D.C. control of the delay length, enabling a wide range of time domain effects to be produced.

By adding an RA208 modulator to your RA205 ADT/Delay, or an RA208 and an RA209 Mixer to a pair of RA205's your time processing facilities can be expanded into a highly comprehensive delay system. (See the RA200 Delay System)

SPECIFICATIONS:

Delay Time: Two continuously variable ranges;
2mS to 40mS and 4mS to 80mS.

Frequency Response: Delayed signal, middle of delay
range: 40mS range ± 1.5 dB 15Hz–15kHz 80mS range
 ± 3 dB 10Hz–10kHz.

Noise (20Hz–20kHz): Direct –90dBm. Delayed
(without noise suppression) 40mS delay, –80dBm.

Noise Suppress: Gives up to 15dB emphasis/de-emphasis
at 10kHz (overall frequency response unaffected.)
Maximum input at 10kHz with full NS +4dBm,
HF then limited. With maximum NS noise reduction
15dB at 10kHz, 10dB at 5kHz.

Distortion: 0.25% THD typical at 0dBm at 1kHz,
15mS delay.

Maximum Input: +19dBm

Maximum Output: +23dBm into 600 ohms

Input Impedance: 100 kilohms

Output Impedance: Less than 1 ohm

Feedback Break: Maximum Input: +19dBm

Maximum Output: +19dBm into 600 ohms

Input Impedance: 10 kilohms

Output Impedance: Less than 10 ohms

Modulation Input: 1 to 12 volts DC

Power Requirements: +40 volts DC at 80mA

Dimensions: 5.25" x 1" x 7.9" behind front panel.



Rebis RA200 Series

RA206 Oscillator

- FEATURES:
- Push button selection of 14 accurate frequencies.
 - Output up to +22dBm into 600 ohms.
 - Constant level at all frequencies.
 - Very low distortion.

An accurate and reliable oscillator is an indispensable tool in the essential maintenance, alignment and testing of tape machines, mixers and ancillary studio equipment. Whilst regular maintenance is a prerequisite of the professional studio, it is an overhead, and the quicker and more efficiently it can be accomplished the better.

The RA206 Oscillator is a quick and easy to use signal source with push button selection for 14 accurate spot frequencies. Two LEDs indicate selection of high (red) or low (green) frequency range and the level control gives a variable output level of up to +22dBm into 600 ohms.

The RA206 is also useful for low frequency marker tones, easily audible at rewind speeds, and for switch tones on cartridge tapes. Its compact size makes it ideal for incorporation into existing equipment.

SPECIFICATION:

Maximum output: +22.0dBm into 600 ohms.

Variance of level with frequency: +0, -0.25dB.

Distortion: 0.05% at +20dBm at 1kHz.

Frequency accuracy: $\pm 5\%$.

Frequencies: 20, 30, 50, 100, 250, 500, 1000 (Hz),
low range.

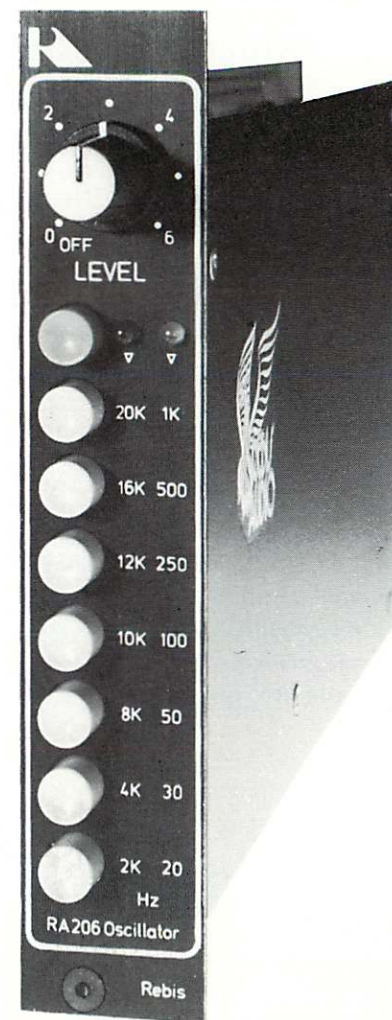
2, 4, 8, 10, 12, 16, 20 (kHz), high range.

(alternative frequencies available at extra cost).

Power requirements: +24 to +40 volts DC at 30mA,
no load (stabilised).

Dimensions: 5.25" x 1" x 7.9" behind front panel.

Note: All specifications quoted with 40 volts supply.



Rebis RA200 Series

RA207 LED Meter

- FEATURES:
- 42dB dynamic range
 - Switchable VU/PPM characteristics
 - 20 LED indicators
 - Electronically balanced input

Mechanical meters have many negative aspects, they are hard to read, limited to one characteristic, suffer from parallax error, annoying illumination failure and take up a large amount of space. By contrast the RA207 LED column meter provides a very compact, easy to read and accurate display with a dramatic change of colour above 0dB for instant indication of overload. LED metering requires a much lower level of concentration and consequently is less tiring. All these aspects of LED column metering make the monitoring of multitrack levels much easier.

The RA207 has a front panel multiturn calibration preset which can vary the 0dB reference by plus or minus 10dB allowing matching to any operating level.

A toggle switch is provided at the bottom of the meter to select either VU or PPM characteristics. The sideways action of this switch means that a simple sweep of the hand is all that is needed to change over a bank of meters. For remote VU/PPM changeover another unit is available, the RA207R. This module allows any number of meters to be switched simultaneously by a master switch whilst retaining individual override capability.

The brightness of the displays can be varied either individually by use of the front panel presets or with simple linking, by one master control.

SPECIFICATION:

Input: Balanced, 100 kilohms.

Range: -30dB to +12dB in 20 steps.

dB Steps: -30, -25, -20, -15, -12, -9, -6, -4, -3, -2, -1, 0, (green).

+1, +2, +3, +4, +6, +8, +10, +12 (red).

Input sensitivity: Variable with multiturn front panel preset from -10dBm to +10dBm for 0dB indication.

Brightness: Variable with multiturn front panel preset or by external DC control.

Accuracy: From -15dB to +12dB \pm 0.2dB.

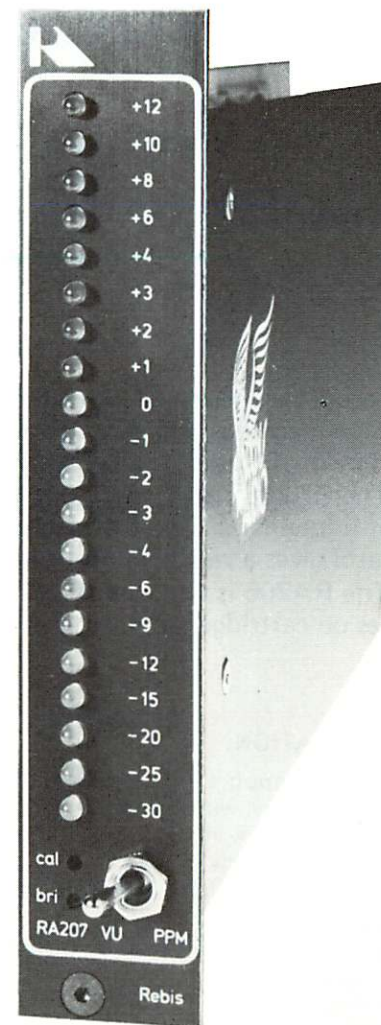
From -30dB to -20dB \pm 0.5dB.

Frequency response: 20Hz to 40kHz \pm 0.5dB.

VU/PPM switching: Selected by front panel switch, reading maintained \pm 0.1dB. (RA207R; front panel switch selects VU, Master, PPM, with external DC master control).

Power requirements: +40 volts DC at 75mA (max brightness).

Dimensions: 5.25" x 1" x 7.9" behind front panel.



Rebis RA200 Series

RA210 RIAA Disc Preamp

- FEATURES:
- Extremely low noise and distortion.
 - Accurate stereo gain.
 - EQ. and Balance bypass switch.

A studio disc amplifier is needed for two jobs, general disc amplification and truthful reproduction of acetates and test pressings.

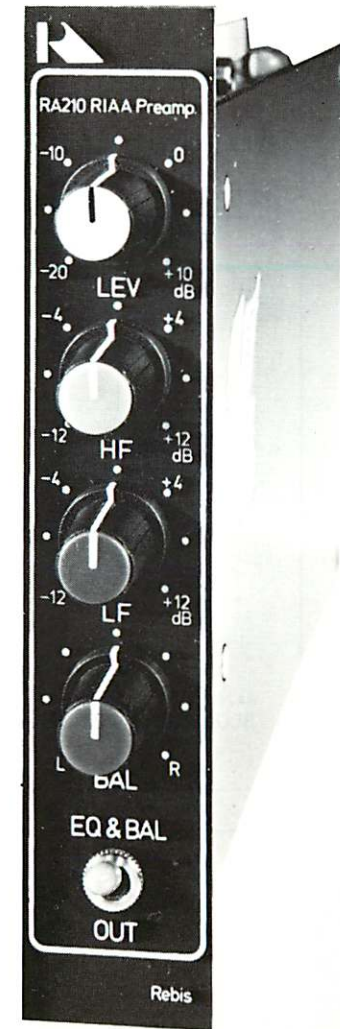
Generally bass, treble and balance controls are useful but for critical judgement of acetates (where the number of plays are strictly limited) and test pressings a reliable reference amplifier with calibrated gain and accurate RIAA response is imperative.

The RA210 RIAA Preamplifier can fulfill both requirements. It offers a professional specification with extremely low noise and distortion. At the flick of a switch its equalisation and balance controls can be bypassed to give a reliable instant reference amplifier whose output is a faithful reproduction of the disc being played. RIAA response is within 1dB and stereo gain match at 0 calibration is ± 0.1 dB. Thus the quality of an acetate or test pressing can be confidently assessed.

SPECIFICATIONS:

- Gain: Set to 0 calibration 48dB at 1kHz. (Amplifies output of 1mV/cm/sec cartridge tracking at 5cm/sec to +4dBm at 1kHz.)
- Gain Control: Continuously variable from -20dB to +10dB referred to 0 calibration.
- Stereo Gain Match: At 0 calibration ± 0.1 dB at 1kHz.
From 0 calibration to -20dB ± 0.75 dB at 1kHz.
From 0 calibration to +10dB ± 0.5 dB at 1kHz.
- HF and LF Controls: Provide up to 12dB boost or cut at 20kHz and 20Hz respectively.
(shelving filter response)

- EQ and BAL Switch: By-passes HF, LF and Balance controls completely.
- Input Impedance: 47 Kilohms
- Output Impedance: Less than 1 ohm
- Maximum Input: At 1kHz -13dBm, 170mV
- Maximum Output: +23dBm into 600 ohms
- Noise: With gain set to 0 calibration, -72dB (20Hz-20kHz) referred to +4dBm, input shorted.
- Frequency Response: Within 1dB of RIAA curve.
- Distortion: 0.002% THD
- Crosstalk: Less than -58dB at 1kHz
- Power Requirements: +40 Volts DC at 50mA



Rebis RA200 Series

RA211 Timer

- FEATURES:
- Large easy to read display.
 - Accurate to 1/100 sec in 1 hour.
 - Three timing modes.

The RA211 Timer is ideal both short and long duration timing, from one hundredth of a second to twenty four hours. Broadcast items and advertisements, whose total duration is critical, can be accurately logged using the RA211.

Album track times can be measured to ensure an optimum time per side for maximum cut. The length of recording sessions as a whole can also be easily monitored.

The RA211 Timer has push buttons for start/stop and reset and a selector switch, for timing mode. Pushing the reset button resets all the circuitry, blanks out the display for hours, minutes and seconds, and shows 00 in the fractional seconds position. The display of just two zeros in the fractional seconds position gives the complete assurance that the timer is 'ready to go.' This reset function and the start/stop function are brought out on the edge connector for remote use. These inputs are available as both a positive voltage input and a short to zero volts input for maximum flexibility. Thus the timer can be started directly from a tape machine play switch or lamp etc.,

The three timing modes are zero, continuous and pause. The zero mode is used for the separate timing of a succession of events where the finish of each event coincides with the start of the next. The next mode, continuous, is again used when timing a series of events which start and end simultaneously but where 'sub-totals' are required as the timing proceeds. The pause mode gives the total time for a Series of events where there is a gap between the end of one and the beginning of the next. When timing just one event any of the above modes can be used.

SPECIFICATION:

Timing Range: One hundredth of a second to 23 hours
59 minutes 59.99 seconds.

Timing Modes: Zero, Continuous, Pause.

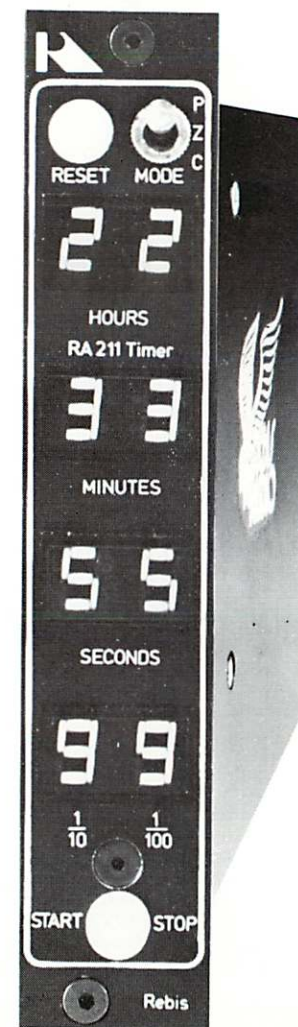
Reset Inputs: Remote inputs for both short to zero
volts and +3 to +40 volts.

Start/Stop Inputs: Remote inputs for both short to
zero volts and +3 to +40 volts.

Accuracy: \pm One hundredth of a second per hour.

Power Requirements: + 40 volts DC at 125mA max.

Dimensions: 5.25" x 1" x 7.9" behind front panel.



Rebis RA200 Series

RA212 Mic/Line Amplifier

- FEATURES:
- Balanced mic and line inputs
 - Switchable 15dB/30dB pad
 - Extremely low noise and distortion
 - HI input accepts mic and instruments
 - High pass filters at 75 Hz and 150 Hz
 - Overload Indicator

The RA212 Mic/Line amplifier allows the interface of any signal source, balanced or unbalanced low impedance microphone, balanced or unbalanced line, high impedance microphone or instrument, to any type of audio equipment.

The low impedance mic input is transformer balanced and has provision for phantom powering built in. This input has a 15dB/30dB pad switch for high level mics and a 75Hz/150Hz 12dB per octave filter switch, very useful for removal of troublesome low frequencies.

The high impedance input will accept unbalanced high impedance mics or direct feeds from guitar, electric piano etc. The line input is electronically balanced accepting up to +30dBm before clipping.

The H.F. and L.F. controls can give up to 21dB of boost or cut, allowing for equalisation of even the most troublesome signal sources.

An LED indicates overload just before clipping, staying on for 100 milliseconds even on fast peaks to make overload obvious.

As part of a self contained system with a rack, case, rear mounting supply and connector modules, the RA212 Mic/Line amplifier makes the RA200 Series useable in any situation. Applications include live stage, outside broadcast, conference recording, theatre P.A., location sound, nature recording etc.

SPECIFICATION:

Input Select Switch: Selects balanced low impedance mic, high impedance unbalanced, or balanced line input.

Pad Switch: Provides 15dB or 30dB attenuation on lo mic input, central position out.

Shelving Switch: Gives 12dB/octave rolloff, 3dB points at 75Hz or 150Hz, central position out.

Overload Indicator: The LED will light and stay on for 100ms if the peak level exceeds +22.5dBm.

HF and LF Controls: Provide up to 21dB boost or cut at 20kHz and 20Hz respectively, shelving filter response.

EQ In Out Switch: Bypasses HF and LF controls.

Channel Cut Switch: Mutes channel output.

Input Impedance: LO MIC 600 ohms balanced,
HI MIC 1 Megohm.

LINE 220 kilohms balanced.

Maximum Input: LO MIC +4dBm (30dB pad in).

HI MIC +14dBm.

LINE +30dBm.

Maximum Gain: LO MIC 80dB. HI MIC 40dB. LINE 20dB.

Frequency Response: LO MIC -1.25dB at 20Hz, -1dB at 20kHz.

HI MIC -1dB at 20Hz, -0.5dB at 20kHz.

LINE -1dB at 20Hz, -0.25dB at 20kHz.

Noise (20Hz-20kHz): LO MIC -125dB referred to input with 80dB gain.

HI MIC -107dB referred to input with 40dB gain.

LINE -87dB referred to input with 20dB gain.

Distortion: Better than 0.05% THD at 1kHz at +12dBm.

Output Impedance: Less than 1 ohm.

Maximum Output: +23dBm into 600 ohms.

Power Requirements: +24 to +40 volts D.C. at 65mA (stabilised).

Dimensions: 1" x 5.25" x 7.9" behind front panel.

Note: All specifications quoted with 40 volt supply



Rebis RA200 Series

RA213 Mono Mixer/Distribution Amplifier

- FEATURES:
- Highly versatile format.
 - Clean feed outputs from each channel.
 - Mix node available on rear connector.

The RA213 Mixer/Distribution Amplifier is a four channel mono mixer incorporating clean feed outputs from each channel. When a signal is fed to all four inputs the RA213 becomes a distribution amplifier, the clean feeds providing four auxiliary outputs each with individual level control.

The inputs of the RA213 will accept a wide range of signal sources, including high impedance mic or guitar pickup, as well as normal studio line level signals. The outputs being very low impedance will match virtually any input and can even be used to drive 600 ohm headphones for foldback or monitoring.

An aux input/mix node is provided which can be used to cascade mixers or to add further signals to the mix.

SPECIFICATIONS

Input Level Controls: Up to 40dB (\pm 1dB) gain available, input to clean feed output.
Output Level Control: Up to 10dB gain available.
Input Impedance: All inputs 100 kilohms.
Output Impedance: All outputs less than 1 ohm.
Maximum Input: +24dBm.
Maximum Output: +23dBm into 600 ohms.

Frequency Response: \pm 1dB 20Hz–20kHz.
Noise (20Hz–20kHz): –98dB referred to input, 40dB gain.
Crosstalk: Adjacent channels at 10kHz, –105dB referred to input into 10 kilohms, –85dB referred to input into 600 ohms.
Distortion: Below 0.02% THD at 1kHz at +12dBm.
Power Requirements: +24 to +40 volts D.C. at 50mA.
Dimensions: 1" x 5.25" x 7.9" behind front panel.

Note: All specifications quoted with 40 volt supply



Rebis

RA200 Series

RA214 Stereo Mixer/Distribution Amplifier

FEATURES: Highly versatile format
 Clean feed outputs from each channel
 Mix node available on rear connector

The RA214 Stereo Mixer/Distribution Amplifier allows the mixing of two stereo inputs into one stereo output, each channel having level and balance controls and a stereo clean feed output. For use as a distribution amplifier the same stereo signal is fed to both pairs of inputs the clean feeds then providing two stereo auxilliary outputs each with level and balance controls.

A stereo aux input/mix node is provided which can be used to mix further signals or to cascade mixers.

As with the RA213 the RA214 will accept both high and low impedance inputs and will easily drive 600 ohm loads.

As well as being useful for extending auxilliary send facilities, splitting signal feeds and performing sub-mixing functions, the RA213 Mono MDA and the RA214 Stereo MDA allow the RA200 Series user to put together a complete input/processing/mixing facility in one self contained compact unit ideal for mobile use.

SPECIFICATIONS

Input Level Controls: Up to 40dB (\pm 1dB) gain available, input to clean feed output.
Output Level Control: Up to 10dB gain available.
Input Impedance: All inputs 100 kilohms.
Output Impedance: All outputs less than 1 ohm.
Maximum Input: +24dBm.
Maximum Output: +23dBm into 600 ohms.

Frequency Response: \pm 1dB 20Hz–20kHz.
Noise (20Hz–20kHz): –98dB referred to input, 40dB gain.
Crosstalk: Adjacent channels at 10kHz, –105dB referred to input into 10 kilohms, –85dB referred to input into 600 ohms.
Distortion: Below 0.02% THD at 1kHz at +12dBm.
Power Requirements: +24 to +40 volts D.C. at 50mA.
Dimensions: 1" x 5.25" x 7.9" behind front panel.

Note: All specifications quoted with 40 volt supply



Rebis RA200 Series

RA200 Series Delay System

- FEATURES:
- Wide delay range; 2-80mS with just one delay module.
 - Noise Suppress Control; dramatic reduction of HF noise without limitation of fixed emphasis/de-emphasis.
 - Feedback breaks; insertion of other units for special effects; auxillary input.
 - Unique Run and Hold; modulation pause control for single sweep and 'playing' of effects without glitches.

A new direction in time.

The development of the RA200 Series Delay System brings a new approach to delay processing. The system is based on three separate modules, the RA205 ADT/Delay, the RA208 Modulator and the RA209 Mixer. This allows you to select the combination of modules which best suit your needs with the added advantage that the system can be expanded as and when necessary.

The RA205 ADT/Delay on its own will give you 2 to 80mS delay for pre echo plate delay, ADT, single repeat echo, a superb reverberation with the RA205's unique signal/phase arrangement, resonant tube effect and phasing. A modulation input is provided for automatic delay control and a break in the feedback path for insertion of other units (e.g. RA204 Parametric Equaliser, RA203 Compressor-Limiter) for special effects.

The RA208 Modulator provides comprehensive automatic control of delay length for one or two delay modules. As well as controlling the single delay module effects already mentioned the modulator makes possible vibrato, chord effect, pitch shift and Leslie/Doppler effects. Its run and hold switch is useful for 'playing' effects in time with the music. When used with two delay modules the dual outputs which can be driven in opposite directions and in different delay areas open up a whole new range of possibilities.

Whilst external console facilities can be utilised to obtain all the effects that the primary delay system of two delays and a modulator offer this can be both inconvenient and wasteful. The RA209 Mixer has all the mixing, phase inversion, signal routing and configuration switching needed to get the best out of the RA200 Series Delay System. Some of the effects possible with this set up are listed below. Obviously the system can be further expanded to include perhaps another modulator, more delays and different signal processors in both direct and feedback signal paths. The scope of the RA200 Series Delay System is only limited by your creative imagination, a challenge we feel sure you will find hard to resist.

EFFECTS POSSIBLE:

Straight delay, vocal enhancement, ADT, Triple Tracking, pitch shifted triple track, chorus, echo, repeat echo, variable room echo, stereo echo, bounce echo, pos and neg flanging and phasing, tube effect, tunable tube, chord effect, vibrato, pitch shift, Leslie/Doppler effect etc.,



Rebis

RA200 Series Delay System

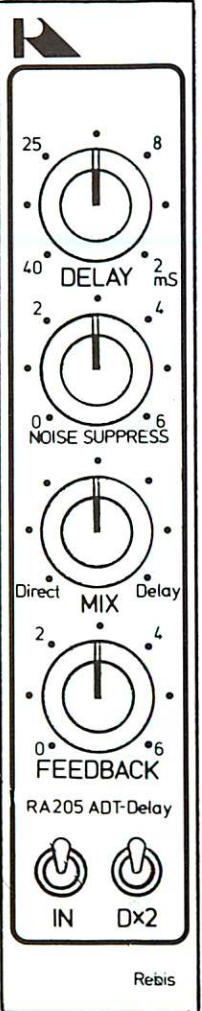
Controls:

RA205 ADT/DELAY

- **DELAY:** Varies delay time from 2 to 40mS, or 4 to 80mS with DELAY RANGE SWITCH set to Dx2.
- **NOISE SUPPRESS:** Reduces high frequency noise. Adjust to suit frequency content of programme.
- **MIX:** Sets balance between delay + feedback and direct+antiphase feedback.*
- **FEEDBACK:** Controls the level of delay output fed back to the input. When unit is used for reverberation alters length of decay.
- **IN/OUT SWITCH:** Bypasses Unit.
- **DELAY RANGE SWITCH:** Doubles DELAY control setting.

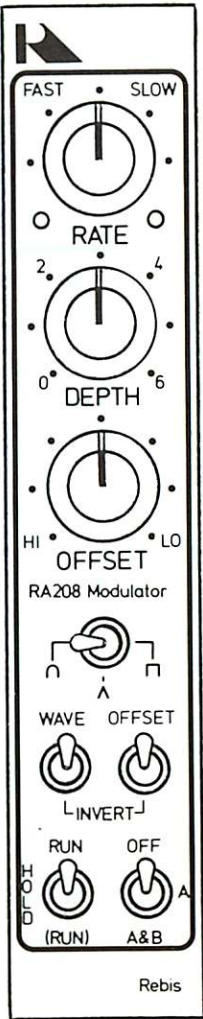
*This unique arrangement has three advantages:—

1. For single repeat effects like ADT it gives a mix of direct and delayed signal.
2. When feedback is used the resonant effects can be cancelled out, at longer delay settings this produces natural reverberation.
3. Repeat echo can be mixed with either the original signal (MIX set to direct) for use in channel breaks, or without the original (MIX set to delay) when fed by an echo send.



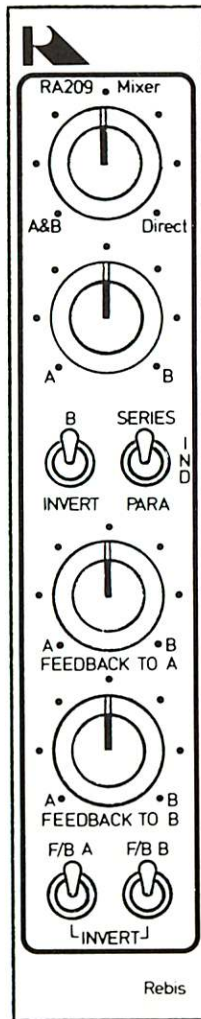
RA208 MODULATOR

- **RATE:** Sets modulation period between 70mS and 40 seconds. (Rate 15Hz to 0.025Hz.)
- **LEDS:** Change-over to indicate rate and direction of sweep.
- **DEPTH:** Modulation depth can be varied over 100% of delay range.
- **OFFSET:** Sets delay length about which modulation occurs. (When the modulator is switched in the DELAY control on the delay module is inoperative.)
- **WAVEFORM SELECTOR:** Triangle for flanging and phasing, sine for vibrato/fluid and square for chord/step effects.
- **WAVE INVERT:** Reverses direction of sweep on output B.
- **OFFSET INVERT:** Reverses action of OFFSET control on output B.
- **CYCLE SWITCH:** The RUN position produces a continuous output cycle. HOLD stops and holds the output at any point in sweep. (RUN) is a momentary position giving a run and hold facility for special effects.
- **OUTPUT SWITCH:** When used with two delays selects drive to delay A only, or to delays A and B. The OFF position activates the DELAY controls of the delay modules. (See OFFSET)

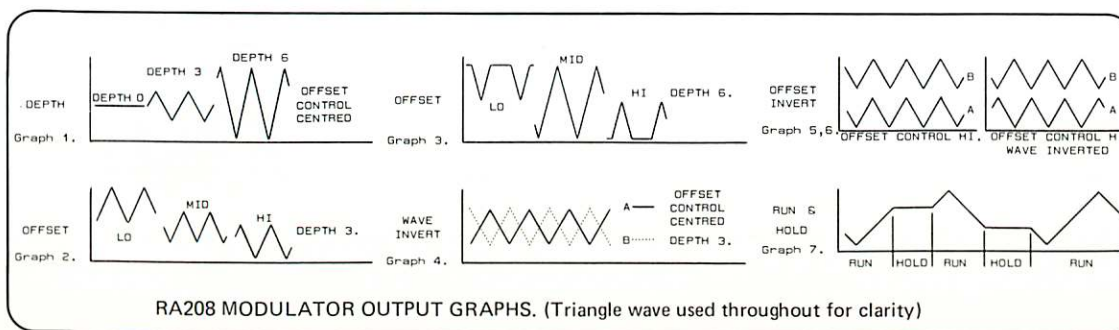
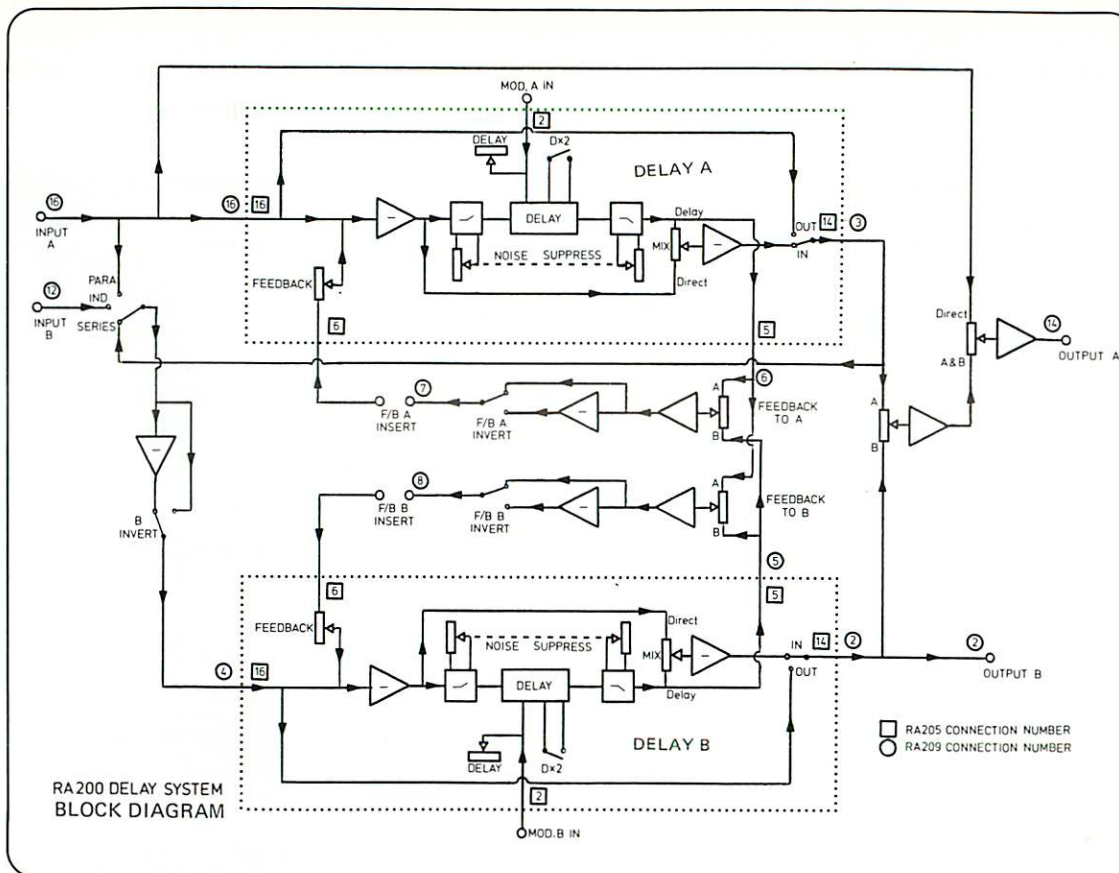


RA209 MIXER

- **OUTPUT BALANCE:** Sets the final balance between the A and B mix (see below) and the direct signal.
- **DELAY BALANCE:** Mix control for outputs of delays A and B.
- **B INVERT:** Inverts signal phase of input to delay B.
- **CONFIGURATION SWITCH:** Selects the delay configuration: SERIES, INDEPENDENT or PARALLEL.
- **FEEDBACK TO A:** Sets balance of delay outputs A and B sent to FEEDBACK control on delay A. (Sent via INVERT switch and feedback breaks.)
- **FEEDBACK TO B:** Sets balance of delay outputs A and B sent to FEEDBACK control on delay B. (Sent via INVERT switch and feedback breaks.)
- **FEEDBACK A INVERT:** Inverts the phase of feedback signal to delay A.
- **FEEDBACK B INVERT:** Inverts the phase of feedback signal to delay B.



Rebis



SPECIFICATIONS:

RA205 ADT/DELAY

Delay Time: Two continuously variable ranges;
2mS to 40mS and 4mS to 80mS.

Frequency Response: Delayed signal, middle of delay
range: 40mS range $\pm 1.5\text{dB}$ 15Hz–15kHz
80mS range $\pm 3\text{dB}$ 10Hz–10kHz.

Noise (20Hz–20kHz): Direct –90dBm. Delayed
(without noise suppression) 40mS delay, –80dBm.

Noise Suppress: Gives up to 15dB emphasis/de-emphasis
at 10kHz (overall frequency response unaffected.)
Maximum input at 10kHz with full NS + 4dBm,
HF then limited. With maximum NS noise reduction
15dB at 10kHz, 10dB at 5kHz.

Distortion: 0.25% THD typical at 0dBm at 1kHz,
15mS delay.

Maximum Input: +19dBm

Maximum Output: +23dBm into 600 ohms

Input Impedance: 100 kilohms

Output Impedance: Less than 1 ohm

Feedback Break: Maximum Input: +19dBm

Maximum Output: +19dBm into 600 ohms

Input Impedance: 10 kilohms

Output Impedance: Less than 10 ohms

Modulation Input: 1 to 12 volts DC

Power Requirements: +40 volts DC at 80mA

Dimensions: 5.25" x 1" x 7.9" behind front panel.

RA208 MODULATOR

Modulation Cycle Time/Frequency: 70mS to 40 Secs;
15Hz to 0.025Hz

Modulation Waveforms: Sine, Triangle and Square with
select switch.

Modulation Depth: Up to 100% of output voltage range.
Offset Range: Modulation centre variable over entire
output voltage range.

LED Indicators: Show start of up sweep and down sweep.

Output Voltage Range: 1 to 12 Volts

Output Switch: Selects A only, A and B, or both off.

Wave and Offset Invert: Switches reverse waveform
phase and offset direction on output B.

Run and Hold Switch: Output can be held at any point
in sweep or manually advanced in stages with
momentary position.

Power Requirements: +40 volts DC at 55mA

COMPATIBILITY:

The delay system is fully compatible with the rest of
the RA200 Series modules and can be used in the
standard 16 channel rack.

Rebis RA 200 Series

The RA200 Series is a versatile modular sound processing system, designed by perfectionists to meet the highest technical standards. Its format has proved to be flexible enough to meet the exacting requirements of professionals in every audio field.

Each module in the series concentrates on doing one job and doing it well, combining comprehensive control parameters with operational simplicity.

More complex signal processing is achieved by simply patching together two or more modules in chains or side chains. The flexibility of this approach makes the RA200 Series the most creative tool in the studio.

The reliability and quality of the RA200 Series is assured by the use of the highest quality components throughout, stringent assembly standards and a rigorous test procedure which includes a 150 hour burn-in before final test.

The RA200 Series can be packaged in many ways or incorporated into existing equipment. Listed below is some of the hardware available from Rebis. Complete packages can be supplied pre-wired for immediate use.

RA200R Rack Frame

The basic rack frame accepts up to 17 RA200 Series modules and takes up only 3U (5¼") of standard 19" rack space (rack depth is 9.8"). The gold plated edge connectors have solder tag terminations for easy wiring. These connectors can either be hard wired to an external patchfield, or interlinked for use with the RA200J Jack module. This has four 'A' or 'B' type jack sockets mounted on a compatible RA200 Series module. The circuit board on which the jacks mount has provision for simple linking to achieve all types of normalling, and series/parallel interconnection between the sockets. A set of coloured labels is supplied with each jack module for identification. A single module blank, the RA200B, completes the basic packaging set, neatly covering any empty module spaces in the rack.



Rebis Accessories

RAPSU1 Power Supply

A freestanding unit, the RAPSU1 will drive at least 17 RA200 Series modules providing +40 V. at 1.2 amps, and +45 volts at 200 mA for phantom power. Both outputs are fully stabilised, low noise and short circuit protected. The RAPSU1 is intended mainly for static installations. It is available for 240 V. or 110 V. mains input. Its overall dimensions are 11" x 5" x 4".

RAPSU2 Power Supply

If mobile or portable use of the RA200 Series is envisaged the rack mounting RAPSU2 is recommended. It has the same outputs as the RAPSU1 but is designed to mount to the rear of the RA200R rack frame, and has an integral cooling fan. Using an RAPSU2 in this way in one of the cases listed below together with RA200J jack modules, a complete self contained system can be realised. The RAPSU2 is 3U (5¼") high by 19" standard rack mounting, and is 2" deep.

RASC3 Studio Case

A 3U case, the RASC3 will accept the RA200R 17 channel rack with integral RA200J connector modules to make an attractive free standing unit. This case does not have rear rack-mounting flanges, and should therefore be used with the RAPSU1 Supply Unit. The case has useful tilt feet at the front and optional lifting handles. Its overall dimensions are 19½" x 6" x 12½" deep.

RAPC3 Portable Case

This portable case is of strong welded construction having heavy spring loaded side handles and front tilt legs. It has rack mounting flanges at the rear to accept the RAPSU2 and makes an ideal mobile unit where heavy handling and risk of front panel damage is unlikely. Overall dimensions are 20" x 6¼" x 13".

RAFC3, RAFC6 Flight Cases

These flight cases should be used for "on the road" applications where complete protection of the equipment is essential. They have textured aluminium finish, heavy plated corners and locking catches to front and rear detachable lids. The front lids have removable internal foam backed panels, with space behind for storage of leads, spare modules etc. The rear lid has a strong leather carrying handle. As with the portable case these flight cases have rack mounting flanges front and rear.

U.S.A.

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