

Technical Specifications

	BUX II-3.0	BUX II-4.5	BUX II-6.0	BUX II-8.0
Output Power				
Continuous Average Power RMS, 1kHz, 1.0% THD+N				
@ 2Ω	2x 1500 W	2x 2200 W	2x 3000 W	2x 3850 W
@ 4Ω	2x 1000 W	2x 1400 W	2x 1900 W	2x 2550 W
@ 8Ω	2x 600 W	2x 750 W	2x 1000 W	2x 1400 W
Bridge @ 4Ω	3000 W	4400 W	6000 W	7700 W
Bridge @ 8Ω	2000 W	2800 W	3800 W	5100 W
Pink Noise 12dB Crest Factor				
@ 2Ω	2x 1900 W	2x 2750 W	2x 3500 W	2x 5100 W
@ 4Ω	2x 1200 W	2x 1700 W	2x 2200 W	2x 3070 W
Frequency Response				
Power Bandwidth ±0.25dB	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz
Phase Response				
@ 1 watt 20Hz-20kHz	±15 deg	±15 deg	±15 deg	±15 deg
Total Harmonic Distortion				
20Hz-20kHz	<0.05%	<0.05%	<0.05%	<0.05%
Intermodulation Distortion				
SMPTE	<0.05%	<0.05%	<0.05%	<0.05%
Crosstalk				
20Hz-20kHz	>75 dB	>75 dB	>75 dB	>75 dB
Voltage Gain				
	26/32/38 dB	26/32/38 dB	26/32/38 dB	26/32/38 dB
Sensitivity				
Rated Power @8Ω	3.5/1.7/0.9 V	3.9/1.9/1 V	4.5/2.2/1.1 V	5.3/2.7/1.3 V
Signal-to-Noise Ratio				
A weighted	115 dB	116.5 dB	118 dB	120 dB
Required AC Mains				
230V - 50Hz (idle)	0.5A	0.5A	0.5A	0.5A
@ 4Ω (1/8 rated power)	5.0 A	7.5 A	8.5 A	13.7 A
Dimensions				
W x H x D (mm)	483x89x442	483x89x442	483x133x480	483x133x480
W x H x D (inches)	19x3.5x17.4	19x3.5x17.4	19x5.25x18.9	19x5.25x18.9
Weight				
Shipping	21-47	22-48	40-90	41-91
Net (Kg-Lbs)	20-45	21-46	38-84	39-85
Protections				
Soft-start, Turn-on Turn-off transients, Muting at turn-on, Over-heating, DC, RF, Short-circuit (CSP), Open or mismatched loads, Overloaded power supply, Input overload (ICL), CRO				

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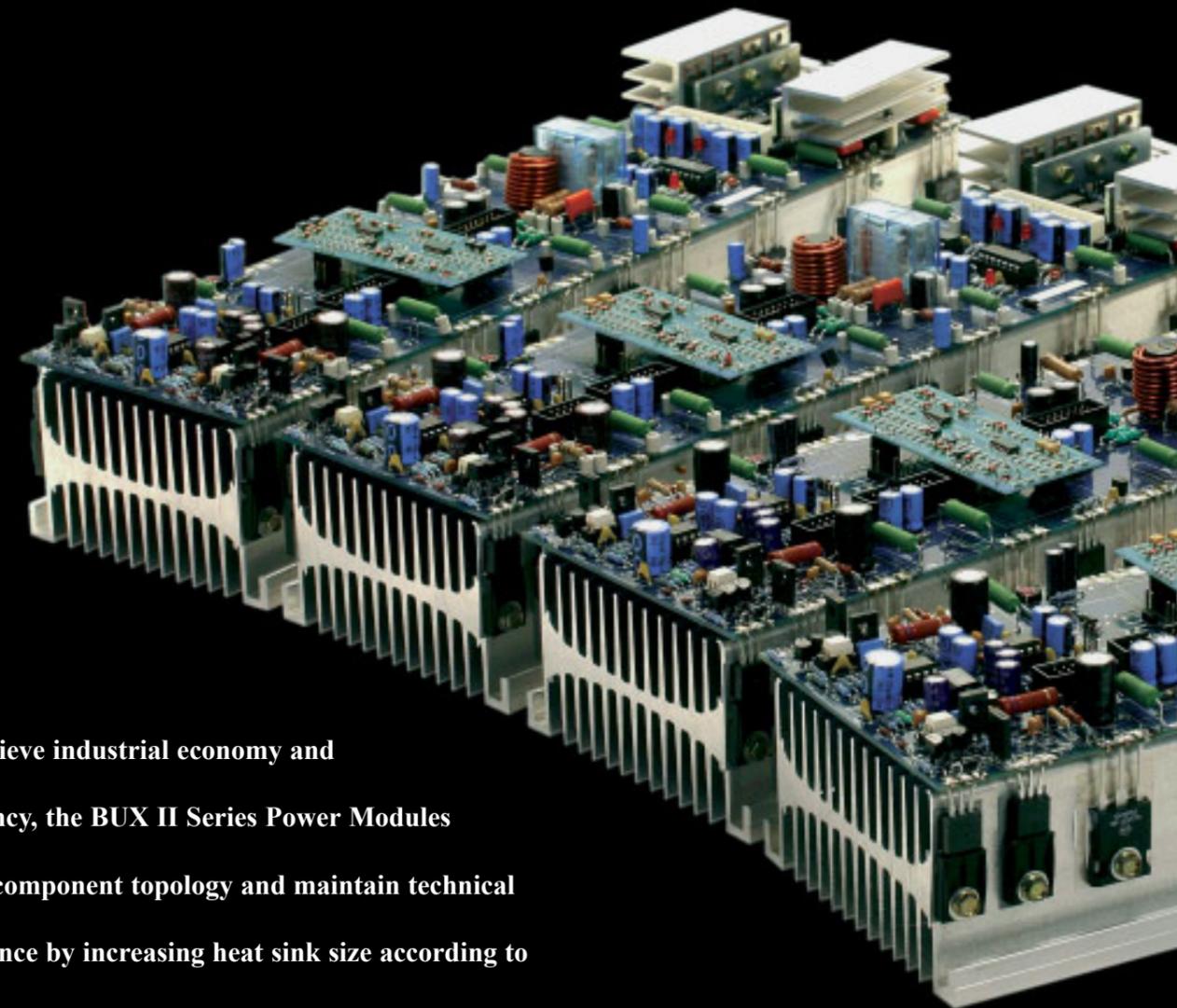


RAM Audio®

BUX II Series

Professional Power Amplifiers

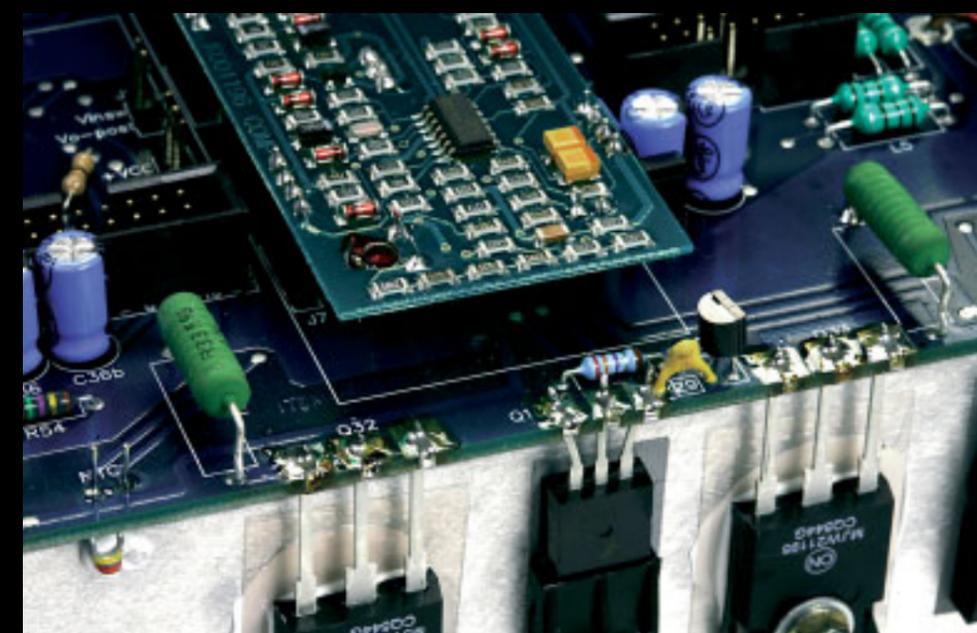




To achieve industrial economy and efficiency, the BUX II Series Power Modules share component topology and maintain technical coherence by increasing heat sink size according to power output.

BUX II Series have been designed giving extreme attention to all production steps from the engineering stand point.

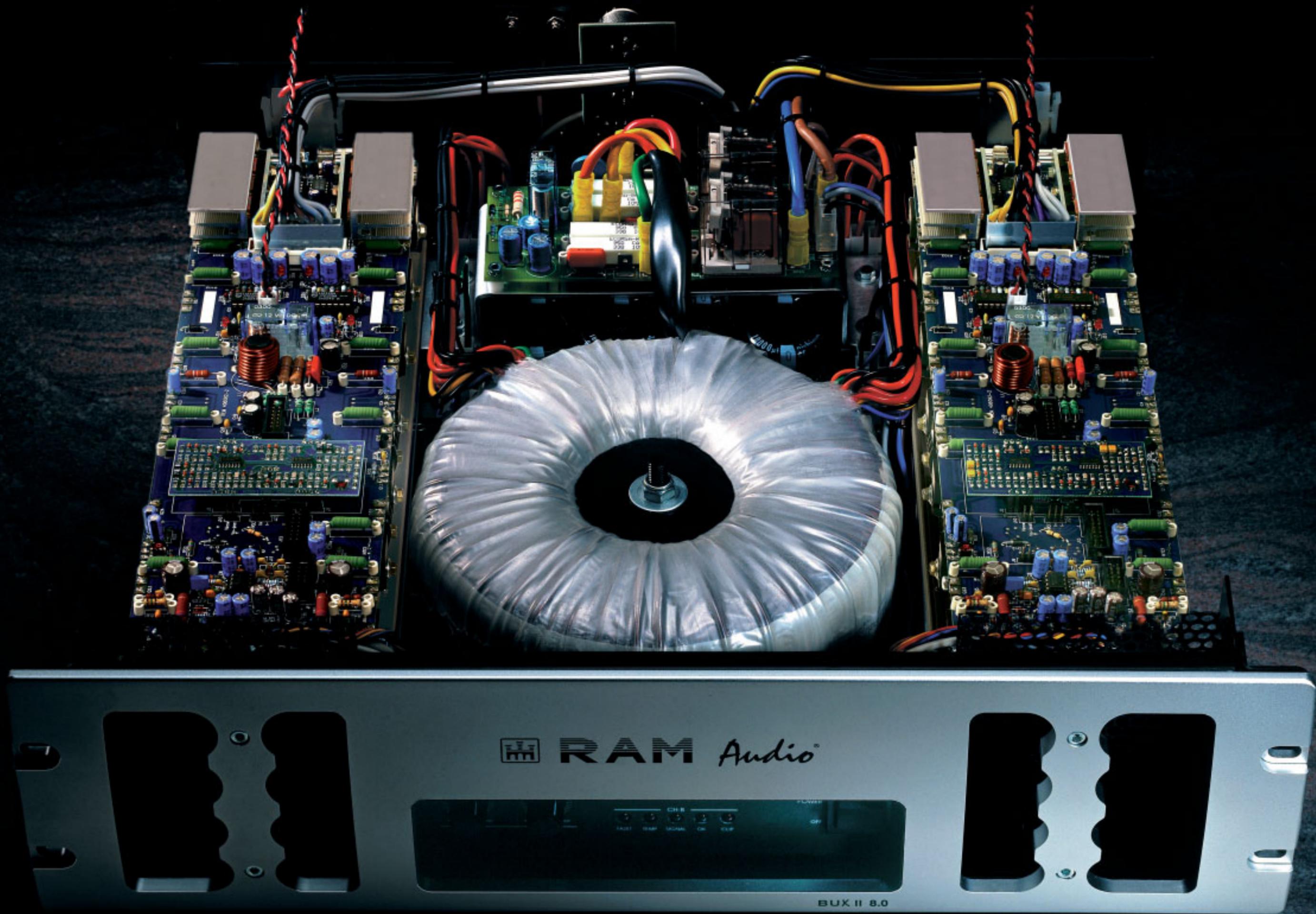
All boards are naturally double sided platethrough fiberglass. Most advanced SMT circuits are used for overall reliability, ease of assembly and full field servicing.



Power amplification at its best means absolutely linear handling of any complex audio signal.

Our BUX II Series are unique, powerful amplifiers built to meet the highest professional requirements, thanks to new circuit philosophy that guarantees outstanding performance with field proven reliability.

With these qualities, RAM Audio units outperform most modern amplifiers in terms of technical specs and pure sonic performance.



 **RAM** *Audio*

BUX II 8.0

BUX II Series Protection Systems

Features

- 2/3U high, heavy duty steel chassis
- Modular construction for easy servicing
- Symmetrical layout for even weight distribution
- High efficiency toroidal main transformer
- Oversized, high energy, linear power supply
- 2 and 3 steps, Class H Audio topology
- Dual, Bridged or Parallel operation
- Twin balanced inputs (Neutrik® XLR connectors)
- Dual Speakon and Binding posts outputs
- 41 step detented input attenuators
- High quality components used throughout
- Dual, continuously variable speed axial fans
- Efficient back to front cooling
- Fault, signal, and clip indicators
- Duraluminium, 8 mm thick front-panel
- Unobtrusive carrying handles
- Selectable Gain: 26, 32 or 38 dB

Protections

- Calibrated mains fuse
- Independent channel supply fuses
- Input signal muting at turn on
- Continuous short-circuit protection (CSP™)
- Thermal overload protection
- Intelligent clip-limiter (ICL™)
- Progressive Ramp input signal
- Currentless Relay Operation (CRO™)



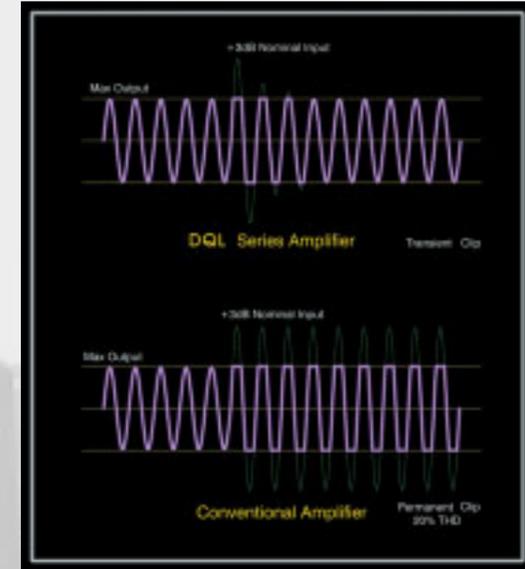
Recessed carrying handles

I.C.L.™ - INTELLIGENT CLIP LIMITER:

The RAM Audio ICL is an anticlip system that differentiates from conventional clip reduction systems in its dynamic tracking of the power supply rail values, to provide instant current/voltage demand and thereby eliminating any limiting of the signal dynamics. More like a valve amplifier, RAM Audio's ICL system maintains sonic quality even when the amplifiers have exceeded the threshold of clipping, providing very high dynamics at negligible distortion levels.

Commonly the anticlip systems limit the input signal matching it with to a fixed reference. The ICL system varies its threshold reference depending on the status of the output signal and the power supply rails. When the system detects the clipping status, it compares the above mentioned parameters, then changes the input signal amplitude to fit the signal between the supply levels, thus avoiding clipping. This change is made on the basis of two time constants, attack and release, this permits no dynamics loss in the first cycles and avoids the "pumping" effect.

This system avoids effectively continuous clipping situations, even when an excessive signal is applied to the amplifier, and protects the speakers against the high frequency harmonics produced.



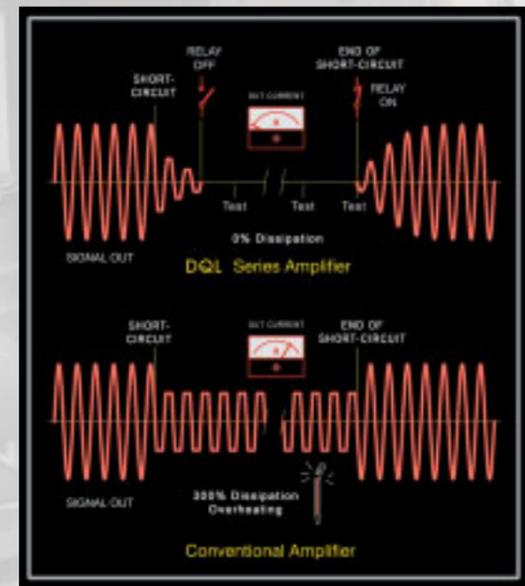
C.S.P.™ - CONTINUOUS SHORT-CIRCUIT PROTECTION:

Conventional short-circuit protection systems rely on simple output current limitation where excessive current through the output terminals continues to be conducted through the output devices, causing excessive stress. This may still lead to failure of the output transistors and associated circuitry, depending on the nature and duration of the short-circuit.

Also, conventional current limiting systems find it hard to differentiate between a direct short-circuit across the speaker terminals and high current transients found in normal music operation. The CSP is a sophisticated protection system where the output current is continually monitored and set according to the load impedance, relative to zero ohms impedance. This allows dynamic performance at relatively higher current ratings in the case of music, but much lower current values in the case of a direct short-circuit or excessively low load impedance.

At the onset of current limiting, the CSP circuit activates, opening the output relay which disconnects the excessive load. Every few seconds, the CSP monitors the short-circuit and maintains that situation if the short-circuit condition persists. This cycle repeats until the load returns to the correct value. The CSP system saves the output transistors from the high current stress of short-circuits, and in conjunction with the CRO system, protects the output relays and all the associated circuitry.

This highly sophisticated current limiting system allows improved dynamic sonic performance at higher power levels, and at the same time, provides the amplifiers with a high degree of immunity against continuous short-circuits and mismatched loads.



C.R.O.™ - CURRENTLESS RELAY OPERATION:

The CRO is a system that protects the amplifier components and avoids transient situations at the speaker outputs when the output relay opens due to an abnormal event (high temperature, short-circuit, etc).

In a conventional amplifier the relay operates with all the signal voltage between its contacts and has to interrupt all the current this voltage produces through the load. This type of operation reduces considerably the relay's life because of the electric arc generated between the contacts. This arc may damage the contacts permanently or at the least, increase the contact resistance, decreasing the damping factor dramatically.

RAM Audio has developed the CRO protection system to avoid those dangerous situations. Basically, the CRO anticipates to the opening or closing of the output relay acting on the input signal, muting it, to permit the relay contacts to work always with zero current.

