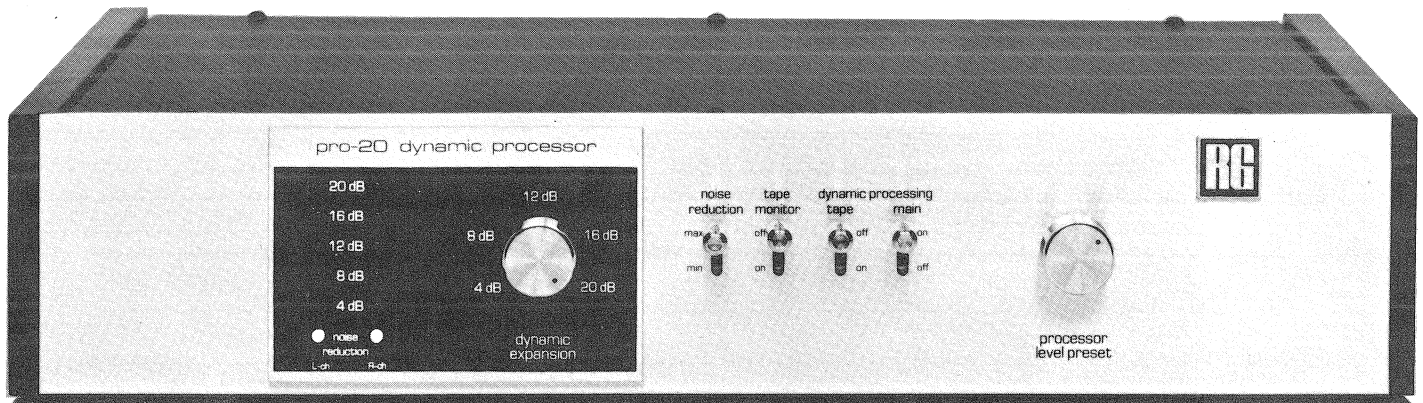


THE RG PRO-20 DYNAMIC PROCESSOR SERIES



MODEL PRO-20W WITH SOLID WALNUT END BLOCKS

FEATURES

- Continuously variable expansion restores up to 20dB of dynamics to any program source—disc, tape, or broadcast.
- Adjustable noise reduction.
- Effectively reduces all low level background noise — hiss, rumble, and hum. Overall signal to noise improvements of up to 20dB.
- Exceptionally low distortion — less than 0.05%.
- Complete tape facilities which include dynamic processing for both recording and playback using any tape recorder plus monitoring from 3 head machines.
- Combines upward and downward expansion with peak unlimiting to restore transients and fine detail as well as more realistic dynamic contrasts.
- Easily set up and used. Expansion control is non-critical and calibration is not required.
- Independent left and right channel processing for accurate stereo image.
- Fast responding LED display accurately tracks processing action for each channel.
- Achieves remarkable restoration of older recordings.
- Patented design eliminates pumping and breathing effects.

An advanced design expander using new patented circuitry, unique in its ability to invert the compression of dynamics found in almost all recording. The RG Dynamic Processor will give stereo reproduction reality and impact never before achieved.



RG PRO-20 SPECIFICATIONS

The need for expansion in quality audio systems has long been recognized. In the 1930's, when compressors first became available to the recording industry, their acceptance was inevitable.

Compressors provided a ready solution to a major recording problem — how to fit onto discs, which could accept a maximum range of only 50dB, program material where the dynamics ranged from a soft level of 40dB to a loud level of 120dB.

Where previously loud levels caused overload distortion (and soft levels were lost in background noise), the compressor now enabled the engineer to automatically make loud passages softer and soft passages louder. **In effect, dynamic reality was altered to fit the limitations of the state of the art.** It soon became obvious that realistic sound from these dynamically limited recordings demanded an inversion of the compression process — expansion — to restore the dynamic accuracy. **That situation remains unchanged, today.**

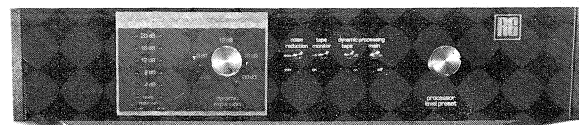
Over the past 40 years, **many attempts have been made to develop expanders.** These attempts have been imperfect, at best. The educated ear, it seems, is somewhat tolerant of errors that occur in compression; expansion faults, however, are glaringly evident. They have included pumping, level instability and distortion — all of which are highly unacceptable. Thus **designing a quality expander** which eliminates these side effects **has proved to be an elusive goal.** That goal, however, has now been achieved.

The reason we accept the loss of program dynamics without objection, is due to an interesting psychoacoustic fact. Even though loud sounds and soft sounds have been compressed to similar levels, the ear still thinks it can detect a difference. It does — but, interestingly, the difference is not due to changes of level but to a change in harmonic structure. Loud sounds are not just stronger versions of soft sounds. As volume increases, the amount and strength of the overtones increase proportionately. In the listening experience, the ear interprets these differences as loudness changes. It is this process which makes compression acceptable. In fact we accept it so well that, **after a long diet of compressed sound, live music is sometimes shocking in its impact.**

The RG Dynamic Processor is unique in that like our ear-brain system it combines both harmonic structure information with amplitude change as a new and singularly effective approach to controlling expansion. The result is a design which overcomes previous annoying side effects to achieve a **level of performance never before possible.** The RG Pro-20 inverts the compression and peak limiting present in almost all recordings to restore with remarkable fidelity the original program dynamics. Additionally, these improvements are accompanied by noticeable noise reduction — a marked decrease in hiss, rumble, hum and all background noise.

The advantages of the RG Pro-20 can make a truly significant difference to the listening experience. Dynamic contrasts are the core of much that is exciting and expressive in music. To realize the full impact of attacks and transients, to discover a wealth of fine detail you were unaware even existed in your recordings is to stimulate both new interest and new discovery in all of them.

Robert Grodinsky
President,
RG Dynamics, Inc.



RG PRO-20BW 17" Black Panel with Solid Walnut End Blocks



RG PRO-20W 17" Silver Panel with Solid Walnut End Blocks



RG PRO-20B 19" Black Rack Panel

Total Expansion, Continuously Variable:	4dB to 20dB
Downward Expansion, Switch MAX:	-4dB to -8dB
Switch MIN:	-3dB
Upward Expansion:	0dB to +12dB
Expansion Attack Rate:	0.6m sec
Expansion Decay Rate:	80m sec
Rated Output Voltage:	1 volt
Max. Output, 1KHz, 50K ohm Load:	7.0 volts
Minimum Sensitivity, Processor Level	
Preset Control Maximum:	80m volts
THD, 1KHz, 1 volt Output, 20dB Expansion:	.04%
IM, 60Hz & 2KHz Mixed 1:1, 1 volt Output, 20dB Expansion:	0.05%
Hum & Noise Below 1 volt Output, 20dB Expansion:	-88dB
Input Impedance:	80K ohms
Output Impedance:	300 ohms
Power Requirements @ 60Hz, 120 volts:	3 watts
120-240 volt/50-60Hz Available	
Dimensions:	
PRO-20W & PRO-20BW:	18" wide 3½" high 12" deep
PRO-20B Rack Mount:	19" wide 3½" high 12" deep
Weight:	
PRO-20W & PRO-20BW:	7 lbs. 11 oz.
PRO-20B Rack Mount:	7 lbs.



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