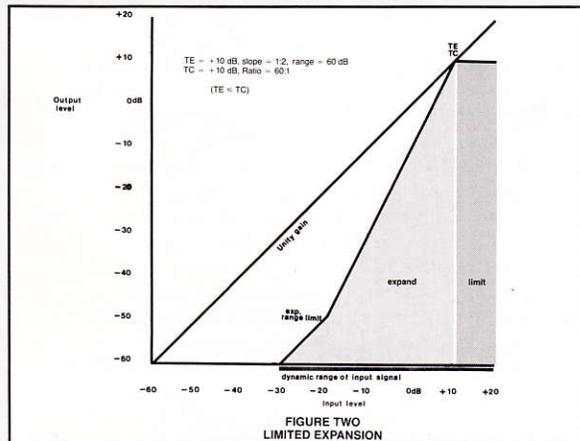


The example given is typical of cassette or cart program material being compressed for transfer or broadcast. As the program is compressed, the residual noise level is raised, in this case by 10 dB. The action of the expander reduces both the signal below the expand threshold, TE, and the residual noise as perceived at the output.

The Limited Expansion mode allows the limiter function of the 610 to complement the operation of the expander. This is highly desirable when expansion is being used to process highly compressed material for transfer. The chart of Figure Two indicates the transfer characteristics of this mode of operation.



As can be seen by the graph, the compressor, operating in its limit mode (TC > 0 dB) places an upper level upon the output signal to avoid clipping at the following stage. The resulting function controls the maximum output level and adds 30 dB to the dynamic range of the signal.

Judicious use of the range control allows expansion of the program and (relative) attenuation of the noise floor.

Among the other specific modes of operation for the Model 610 are: Expanded Voice-over, wherein the expander reduces residual noise level or increases the dynamic range of background material while the compressor reduces the gain or "ducks" the background material in the presence of an announcer's voice; FM pre-emphasis compensated compression, limiting, and expansion which allows the control sections to anticipate FM pre-emphasis thus reducing the frequency of "hits" at the transmitter limiter while providing increased perceived loudness; and Compressed Limiting which both increases "loudness" and performs the function of a peak limiter. Additionally, the 610 performs the function of a peak limiter. Additionally, the 610 performs Envelope Following, Inverse Envelope Following, Gated Compression and Limiting, Noise Gating, Keying, "Companding" and other variations for over 20 modes of operation.

SPECIFICATIONS

INPUT:

Input Impedance: >47 kohm
Maximum Input Level @ 1 kHz: +25 dB balanced, +21 dB unbalanced
Usable Input Level Range for Compression or Expansion: -40 dB to +26 dB
Input C.M.R. @ 50-60 Hz: >60 dB typical

OUTPUT:

Output Source Impedance: <40 ohm balanced, <27 ohm unbalanced

Nominal Output Level into 600 ohm: 0 dBm to +8 dBm
Maximum Output Level into 600 ohm: +24 dBm balanced, +21 dBm unbalanced

Static THD @ 1 kHz, 0 dB in, unity gain, into 600 ohm: 0.01% typical

Static SMPTE IMD, 0 dB in, unity gain, into 600 ohm: 0.01% typical

Dynamic THD @ 1 kHz, +20 dB in, 20 dB gain reduction, ratio 60:1, attack time 20 μ s, release time 0.5 s with auto release in: 0.15% typical

(Dynamic distortion is affected by release time, as in all dynamics processors.)

Output Noise & Hum, 20 Hz-20 kHz @ unity gain, RMS: -84 dB typical

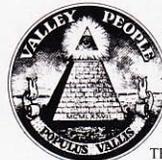
Residual Noise referenced to maximum output level (dynamic range) 1 kohm @ input, 600 ohm load at output: -108 dB typical

Power Requirement: 100, 120, 200, 220, 240 Vac, 50-60 Hz, 12 VA maximum

IEC power connector standard

FEATURES: XLR connectors for all audio inputs and outputs standard. RF suppression on all inputs and outputs. RF and transient suppression in power supply.

NOTES: 0 dB = 0.775 Vrms.
0 dBm = 1 mW/600 ohm.



VALLEY PEOPLE, INC.

P.O. Box 40306/2820 Erica Place
Nashville, Tenn. 37204
615-383-4737

TELEX 558610 VAL PEOPLE NAS