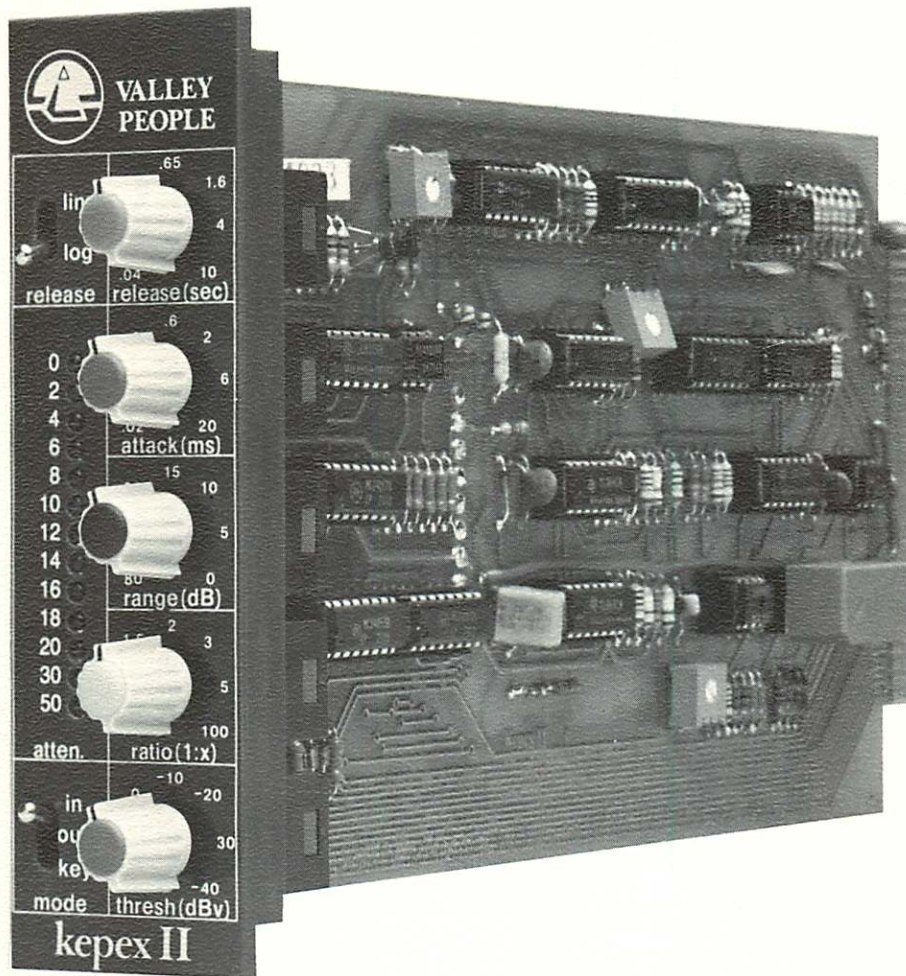


Valley People's

KEPEX II



Keyable Program Expander

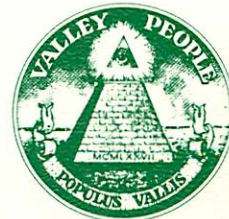
INTRODUCTION. KEPEX II® is the logical extension to the original KEPEX® introduced by Allison Research in 1969. It is, however, a fully new design, providing many new features, as well as significant refinements in control functions and audio performance. The device employs the industry standard Valley People EGC 101 VCA as its gain control element. The important advances in both audio and control linearity and range offered by the EGC 101 allow KEPEX II to be configured for performance levels far beyond that of other designs.

NOISE CONTROL APPLICATIONS. KEPEX II is a multi-use device which tends not to sit idle in the equipment rack. It's the "problem solver" in the multi-track studio. In the area of noise reduction, or

noise gating, reduction or elimination of the following undesirable noise sources is possible:

- Multi-track tape noise
- Instrument amplifier hum, buzz, noise, etc.
- Leakage noise from other instruments
- "Room sound" (reverberation, ambience, echo)

(over)



- Camera noise, air conditioner rumble, set noise, street noise, etc.
- Musician “noises” (pedal squeaks, chair and sheet music noises, etc.)
- Breath noises, lip “smacks”, etc.

EFFECTS APPLICATIONS. KEPEX II is capable of an enormous number of special effects — effects which often make the difference between a dull, unexciting program, and a dramatically “punchy” production. Best of all, most KEPEX effects can be created “in the mix”, from already recorded tracks,

as can KEPEX noise reduction processing. Some of the many possible effects are:

- Tightening “loose” drum sounds
- Removing excess cymbal ring...accentuating percussive impact
- Bringing “distant sound” up close...increased presence
- Stereo simulation from mono tracks
- Electronic music effects...keying one track from another
- Increasing dynamic range via active expansion

How KEPEX II Works...The Controls

KEPEX II acts as a wideband downward expander when active, and as a linear unity gain amplifier when not active. The periods of KEPEX activity are a function of signal levels and the positions of the controls, as follows:

THRESHOLD CONTROL (–40dBv to +20dBv). Signal levels (or KEYING SIGNALS) above THRESHOLD turn the device fully on to unity gain...the signal is passed without modification. As signal level drops below THRESHOLD, gain expansion begins. The lower the signal, the greater the gain reduction.

EXPANSION RATIO CONTROL (1:1.1 to 1:100). Determines the expansion ratio when signal is below threshold. In the mild 1:1.1 position, a 1dB drop in signal level attempts a gain reduction of 1/10th dB. At the extreme 1:100 setting, a gating action occurs, as a signal 1dB below threshold attempts to cause 99dB of gain reduction.

RANGE CONTROL (0dB to 100dB). Determines how much of the attempted gain reduction actually takes place, by limiting the maximum possible gain reduction. For instance, if a 5dB RANGE and a 1:100 RATIO were selected, the degree of gating action would be limited to 5dB.

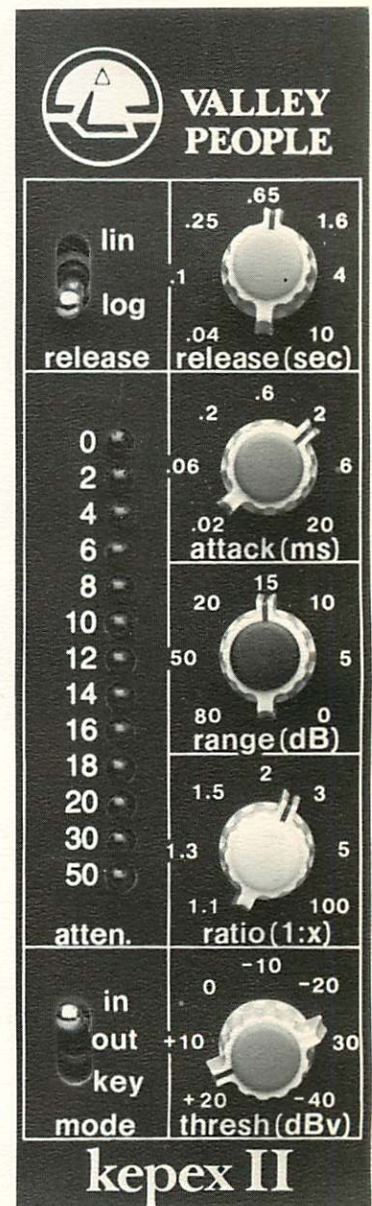
ATTACK TIME CONTROL (.02msec to 20msec). Determines device “turn-on” time as signal is applied or rises abruptly. The slower settings are useful in allowing the device to ignore sharp noise transients which might otherwise cause undesirable false triggering. The faster settings are used when processing transient program material, to insure rapid “turn-on” in order to “catch the leading edge” of fast attack programs. The ATTACK TIME CONTROL is also useful in contouring attack envelopes in KEYED applications.

RELEASE TIME CONTROL (.04sec to 10sec/20dB). Determines “turn-off” time, or the time required for gain to be reduced when signal falls below threshold. The optimum release time setting is a function of the type of material being processed, as well as of the type of effect desired.

RELEASE SHAPE SWITCH (LIN/LOG). In the LIN position, release occurs at a linear number of dB per second. In the LOG position, the release time is slower when the amount of gain reduction is near 0dB. As gain reduction increases, the release time exponentially becomes faster. This action reduces premature attenuation of the trailing edge of signal passages, thus preserving the natural instrument decay envelope. The LOG release position also serves to reduce modulation distortion when fast release times are chosen.

IN/OUT/KEY SWITCH. Selects the operating mode. The IN position is normally used. Here, the input signal is fed both to the VCA and to the control circuits, and gain reduction is caused by the input signal itself. In KEY position, the input signal is fed only to the VCA. A second KEY input signal is fed to the control circuits, but not to the VCA. Thus, the gain envelope of the actual input signal is affected by the gain envelope of the KEYING signal. The KEYING signal itself is not heard at the output, only its effect on the gain of the input signal. Hence, one signal gain modulates another.

GAIN REDUCTION DISPLAY. A 13 element LED display indicates the amount of gain reduction which is incurred, over the range of 0dB to 50dB.



KEPEX II Specifications

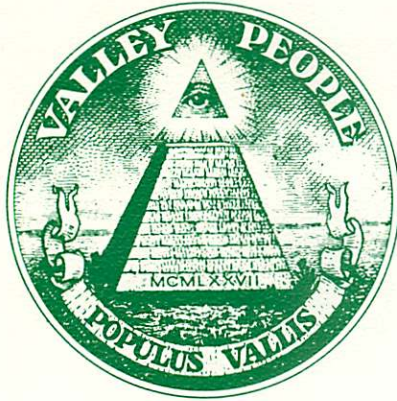
Maximum Input Level	+21dBv* (Electronically Balanced - 50K)
Maximum Key Input Level	+21dBv (Electronically Balanced - 50K)
Maximum Output Level	+21dBv into 2K or Higher - Unbalanced
Frequency Range	5Hz to 100KHz (3dB)
Audio Slew Rate	13v/ μ sec (150KHz Full Power Bandwidth)
Distortion (Static - +10dBv Input)	.05% Max IMD or THD (Dynamic distortion is a function of release time, as in all expanders)
Signal to Noise Ratio (20Hz - 20KHz)	105dB (Reference +21dBv Signal - Full on)
Range of Gain Reduction	Variable, from 0dB to 80dB
Threshold (Signal Required for Full on)	Variable, from -40dBv to +20dBv
Expansion Ratio	Variable, from 1:1.1 to 1:100
Attack Time (For 20dB Gain Increase)	Variable, from .02msec to 20msec
Release Tim (For 20dB Gain Decrease)	Variable, from .04sec to 10sec
Release Shape	Switchable, Linear or Logarithmic
Input Mode	Switchable, IN/OUT/KEY
Gain Reduction Indication	0dB to 50dB, on 13 element LED display
Stereo Intercouple	Via Rear Connector
External VCA Control Inputs (2)	-20dB/volt, @ 4.99K Ω
Panel Dimensions	1½" X 5¼" (Fits TR 804 Processing Package)
Powering	Bipolar 15v, 85ma
Additional Features	Drive for External VCA or Meter Master "OUT" Buss Unbalanced Input Monitor Output Full Remote Voltage Control of All parameters Monitor Output of All Parameter Control Voltages Electronic Switching of Internal/External Parameter Control

*Note: The notation **dBv** refers to .775v RMS

TR 804 Processing Package

This 5¼"H X 8½"W X 11½"D package mounts and powers up to four KEPEX II's or other TR 804 mounting devices, in a free-standing portable configuration. TR 804 is convertible for standard 19" rack mounting. Rack mounting of eight devices may be accomplished in 5¼" of rack space, by adding a TR 804 UR unpowered housing. See the separate TR 804 information sheet for additional specifications.

KEPEX II Is Manufactured By



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TELEX 558610 VAL PEOPLE NAS

a merger of Allison Research & Valley Audio

Warranty

VALLEY PEOPLE, INC. warrants its products and their related enclosures and power supplies to be free from defects in workmanship and material under normal use and service. Said warranty is to extend for a period of twelve months after date of purchase. In the case that a VALLEY PEOPLE, INC. product or any of its related enclosures or power supplies is believed to be defective, same may be returned with transportation prepaid to VALLEY PEOPLE, INC., within twelve months after date of purchase, accompanied by proof of purchase. If the product is found by VALLEY PEOPLE, INC.'s inspection to be defective in workmanship or material, it will be repaired or replaced (at VALLEY PEOPLE, INC.'s election) free of charge and returned, transportation prepaid, to any point in the United States. If inspection by VALLEY PEOPLE, INC. of such products does not disclose any defect in workmanship or material, VALLEY PEOPLE, INC.'s regular charges will apply.

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