AKG BX-10E'2
portable & studio
TTL reverberation system
BLOCK DIAGRAM

1. Input preamplifiers with switchable sensitivity
2. TTL-system input limiters
3. TTL-system output buffer amplifiers
4. Reverb high- and low-frequency equalization controls
5. TTL-system drive amplifiers with switchable decay time
6. Master output amplifiers
7. TTL-system motional-feedback amplifiers
8. TTL-system springs and transducers
9. Power supply
10. Reverb mono stereo switch
AKG BX-10E2

The ultimate "natural sound" portable reverberation unit

The AKG BX-10E2 is a carefully evolved improvement of the original BX-10E two-channel Reverberation unit. Audibly smoother and cleaner than its famous predecessor, the BX-10E2 employs a redesigned Torsional Transmission Line (TTL) system plus newly developed equalization in its TTL-system electronics. [A patented AKG development, the TTL system assures highly accurate and natural reverberation characteristics by using a series of springs having their transmission properties controlled by statistical variations of their parameters. Moreover, the TTL system is the only reverber device— including live chambers—which does not contain any of the dry input signal at its output.] The result is an instrument that is the reference-standard for compact, high-performance reverbs—a unit that is truly portable, yet one that offers both the quality and operating features required in critical studio applications. Unrivalled in its class, the BX-10E2 is surpassed only by AKG's own larger and widely acclaimed BX-20E.

The BX-10E2 offers many important features for superior performance in a quality portable reverberation unit:

- Uses Torsional Transmission Line principal
- High density of resonant frequencies
- High pulse density to duplicate the many sound paths of a naturally reverberant environment
- High degree of statistical diffusion in both frequency and time domains
- Linear frequency response for maximum range of applications
- Precise duplication of natural room-reverberation effects
- Genuine two-channel design. Either channel can be used and controlled separately (channel separation > 35 db)
- Switchable to composite mono drive (inputs 1+2) of reverber channels; dry channels are independent at all times
- Adjustable input sensitivity
- Built-in limiter (one per channel) to prevent over-driving of TTL systems
- Built-in low- and high-frequency shelving equalization for each reverber channel
- Built-in reverber/dry signal mixing
- No acoustic feedback...even when placed close to monitor loudspeakers
- No special mounting or isolation is required for installation
- Ideally suited for van or mobile studio operation. Lightweight (only 47 lbs)

- No locking or readjustments necessary for transportation
- No periodic maintenance, adjustments or "tuning"
- Small space requirements (12" H x 17¾" W x 19½" D)
- RM-10 19" rack mount available

The BX-10E2 provides independent decay-time adjustment, reverber high- and low-frequency equalization, and reverberation/dry signal mixing for each channel. Both channels are electronically and acoustically separate. Decay time is adjusted through mo
tional feedback. Reverberation/dry signal mixing enables reverberation to be added to dry signal without the need of a "reverb return" mixing section in the mixing console. The AKG BX-10E2's unique two-point suspension makes it impervious to acoustic feedback and mechanical vibration.

BX-10E2-Short: For speech and some music applications requiring shorter reverb decay times, AKG offers a special version of the BX-10E2. Known as the BX-10E2-Short, this specially modified unit provides switch-selectable decay times of 1.2 and 3 seconds for improved articulation and intelligibility. The BX-10E2-Short has already gained almost instant recognition by major radio stations throughout the U.S. and is equally at home in film and video production studios.
**TECHNICAL DATA**

Number of Channels: Two

Nominal Input Level: 
- -22, -6, +6 and +12 dBm (independently and internally switchable for each channel)

Maximum Permissible Input Level: 18 dB above selected nominal input level, each channel

Input Impedance: > 2000 ohms, balanced, each channel (stereo or mono operation)

Dry/Reverb Output-Mix Facilities: Each channel independently and continuously adjustable for any dry/reverb output ratio ranging from pure dry signal only to pure reverb signal only

Output Level, Frequency Response, Total Harmonic Distortion, Crosstalk Rejection, Signal/Noise Ratio: These data differ between dry-signal-only and reverb-signal-only output modes; see various entries under appropriate output-data headings below

Output Impedance: < 100 ohms, balanced, each channel

Recommended Load Impedance: > 200 ohms each channel

Power Supply: 120/220 volts ac +15, -10% (internally switchable) 40-60 Hz

Power Consumption: 12 VA

External Dimensions: 12" H x 17¾" W x 19¼" D

Net Weight: Approx. 47 lbs

**DRY-SIGNAL-ONLY OUTPUT DATA**

Nominal Output Level: +3 dBm (±3 dB) each channel

Frequency Range: 20-12,000 Hz

Frequency Response: 50-8000 Hz within tolerance band of ±6 dB from design-center curve with pink noise at input, and with output measured through ½-octave filter

Bass Control Range: ±6 dB shelving at 150 Hz [independently and continuously adjustable for each channel]

Treble Control Range: ±4 dB shelving at 5000 Hz [independently and continuously adjustable for each channel]

Crosstalk Rejection Between Channels: > 70 dB (per DIN 45 405) - 

Hum Sensitivity: < 1 mV/50 mV field

Signal/Noise Ratio at Nominal Output Level (bass and treble controls at "flat" or "0" settings, DIN 45 405)
- Weighted: > 65 dB rms
- Unweighted: > 60 dB rms

Acoustic-Feedback Isolation: 100 dB; i.e. sound level in close proximity to unit may be up to 100 dB SPL before acoustic feedback occurs

Elastic-Suspension Resonant Frequency: < 10 Hz

At 6 dB above selected input level:
- < 0.8% at 40 Hz
- < 0.2% at 1000 Hz

Hum Sensitivity: < 1 mV/50 mV field

Signal/Noise Ratio at Nominal Output Level (bass and treble controls at "flat" or "0" settings, DIN 45 405):
- Weighted: > 65 dB rms
- Unweighted: > 60 dB rms

Acoustic-Feedback Isolation: > 100 dB, i.e. sound level in close proximity to unit may be up to 100 dB SPL before acoustic feedback occurs

Elastic-Suspension Resonant Frequency: < 10 Hz

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Product design and prices are subject to change without notice.

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