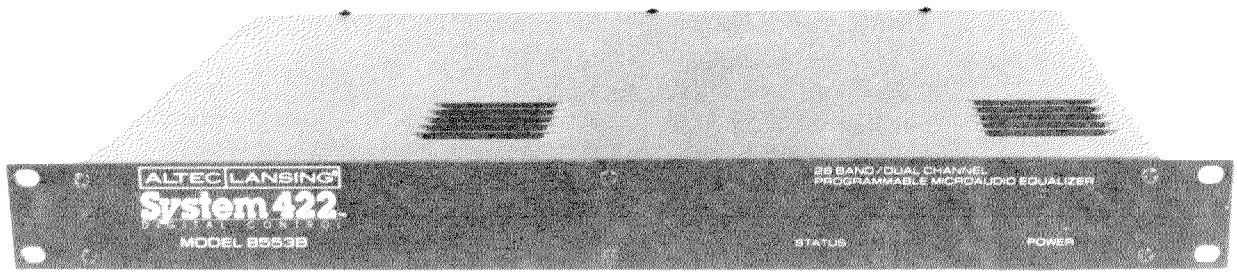
ALTEC LANSING
System 422
DIGITAL · CONTROL

8553B DUAL ONE-THIRD OCTAVE PROGRAMMABLE MICROAUDIO EQUALIZER



DESCRIPTION

The ALTEC LANSING model **8553B** is a dual channel programmable one-third octave equalizer. Since the two channels are fully and independently programmable, there are no front panel controls to adjust. This makes the unit completely tamperproof and compact enough to fit into a single rack-space package.

Each channel has 28 programmable one-third octave frequency bands, programmable high and low pass filters, programmable master gain, and nine non-volatile memories providing one default and eight user preset memories. The gain of each frequency band and the master gain are programmable in precise 1 dB steps from —12 dB to +12 dB but can be easily modified by the user to provide ±6 dB of boost and cut in 0.5 dB steps. High filter Q's provide improved selectivity resulting in less interaction between adjacent bands. The unit has electronically-balanced inputs and outputs with room inside to mount optional input and output isolation transformers.

The unit also features System422™ Digital Control via the PA-422 communications interface, a new serial interface definition for the control of professional audio products. This makes the **8553B** completely compatible with all other programmable products using the interface.

The PA-422 interface permits high speed communications between the programmer and each **8553B** equalizer, and up to 250 equalizers can be series-connected to any single PA-422 output port.

The equalizer is fully programmable from most IBM PC-compatible desktop and laptop computers using Acousta-Graphics Release 2.0 System Management Software™ and the **8062A** PA-422 Dual Output Driver Card or the **8060A** RS-232—to—PA-422 converter. The **8062A** is an IBM PC XT/AT-compatible plug-in accessory card with two PA-422 outputs. The two ports permit independent control of up to 500 programmable devices. The **8060A** is an RS-232—to—PA-422 serial output converter. Although usable with any PC-type computer, it is especially useful with laptops which may not physically accommodate the **8062A** accessory card. With System422™, the equalizer can also be programmed using user-written custom software developed for specific installations. This permits increased flexibility in system designs where special needs are in order.

With its standard μA-bus port, the **8553B** is also programmable from the **8061A** PC Control Adapter, **8051A** Autoprogrammer, or the **8055B** handheld programmer to the degree of the controller's capability.

The ALTEC LANSING **8553B** Dual Channel Programmable MicroAudio Equalizer provides unmatched power, performance, and flexibility to accommodate present and future system needs.

SPECIFICATIONS FOR THE 8553B DUAL CHANNEL PROGRAMMABLE MICROAUDIO EQUALIZER

Channels: Two, completely independent

Filter Type: Active analog 2nd-order bandpass filter set

Number of Bands: 28 one-third octave bandpass filters on ISO center frequencies from 31.5 Hz to 16kHz.

μA-bus Programmability:
(using **8061A**, **8051A**, or **8055B** programmers)

- B/C of each frequency band: ±12 dB in 1 dB steps (standard configuration) ± 6 dB in ½ dB steps (with user hardware modification)
- Master gain: ±12 dB in 1 dB steps (standard configuration) ± 6 dB in ½ dB steps (with user hardware modification)
- Channel selection: rear panel toggle switch

μA-bus Interface Port:

- Type: Non-standard TTL
- Max. Cable Length: 15 m (50 ft.)

System422™ Programmability:
(using **8060A** or **8062A** PA-422 drivers and Acousta-Graphics Release 2.0 System Management Software™)

- B/C of each frequency band: ±12 dB in 1 dB steps (standard configuration) ± 6 dB in ½ dB steps (with user hardware modification)
- Master gain: ±12 dB in 1 dB steps (standard configuration) ± 6 dB in ½ dB steps (with user hardware modification)
- Low pass filter corner frequency: 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz, & OFF (>50 kHz)
- High pass filter corner frequency: OFF (<10 Hz), 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, & 160 Hz
- Memories: Default (DEF), 1, 2, 3, 4, 5, 6, 7, & 8
- Memory pointer: OFF, 1, 2, 3, 4, 5, 6, 7, & 8
- Channel selection: 1, 2
- Device Address: via 8-position DIP switch

PA-422 Interface Port:

- Type: Electronically-balanced, meets EIA-422-A
- Baud rate: 19.2 kilobaud
- Max. cable length: 1.2 kilometers (4,000 ft.)
- Linking: Serial
- Character frame bits: 1 - start bit, 8 - data bits, 1 - even parity bit, 2 - stop bits
- Handshaking: DSR/DTR

Input Circuitry:

- Type: Electronically-balanced, transformer option
- Impedance: 20 kΩ balanced, 15 kΩ unbalanced
- Nominal Level: 0 dBu (0.775 V rms)
- Maximum Level: +18 dBu

Output Circuitry:

- Type: Electronically-balanced, transformer option
- Source Impedance: 20 Ω balanced, 10 Ω unbalanced
- Load Impedance: 600 Ω's minimum
- Nomimal Level: 0 dBu (0.775 V rms)
- Maximum Level: 18 dBm, +24 dBu into 2 KΩ minimum load impedance

High Pass Filter: 3-pole (18 dB/octave), programmable frequency

Low Pass Filter: 3-pole (18 dB/octave), programmable frequency

Frequency Response: 20 Hz — 20 kHz, ±½ dB (with high and low pass filters OFF)

Total Harmonic Distortion: <0.015% (at unity gain from 20 Hz — 20 kHz)

IMD (SMPTE 4:1): <0.015% (at unity gain)

Noise Floor: <—85 dBm (A-weighted, at unity gain, high and low pass filters OFF)