



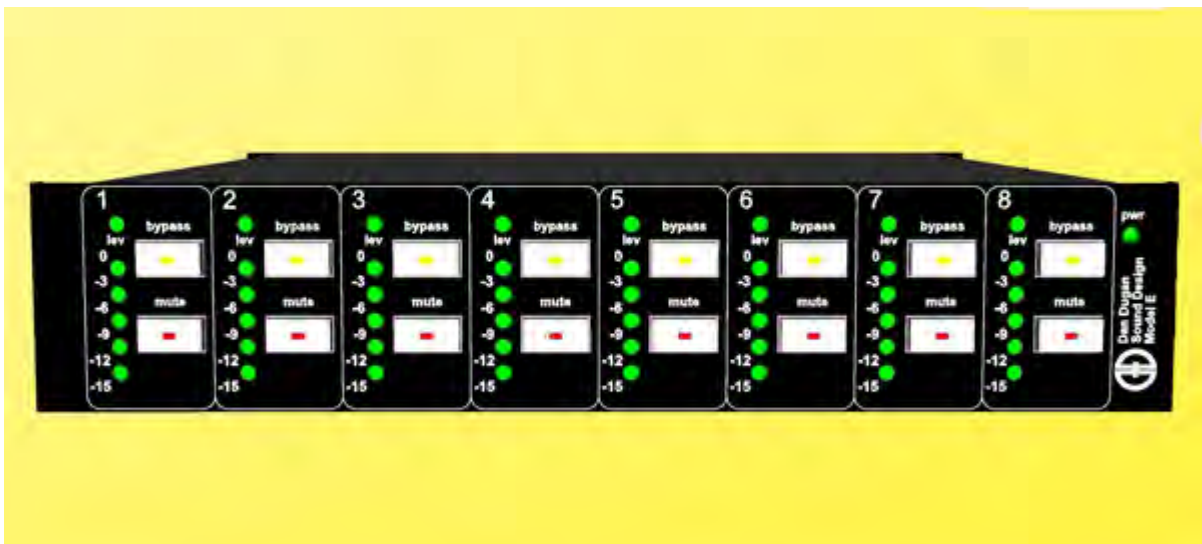
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Dan Dugan Sound Design Model E Brochure

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New for 2006

Model E Automatic Mixing Controller (preliminary)



The Model E Automatic Mixing Controller helps professional audio mixers handle multiple live mic without having to continually ride their individual faders. It provides the most-used function of the Dugan D-series automixers, the Dugan Speech System, in a compact package stripped down to the essential controls.

The eight-channel line-level processor patches into the input insert points of an audio mixing console.

The Model E detects which mics are receiving input and makes fast, transparent cross-fades, freeing the mixer to focus on balance and sound quality instead of being chained to the faders. The Model E's voice-controlled "gain

sharing" tracks unscripted dialogue perfectly, eliminating cueing mistakes and late fade-ups while avoiding the choppy and distracting effects common to noise gates.

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Features

The Model E dramatically improves the performance of live mixing with multiple mikes:

- Eliminates late upcuts
- Reduces PA feedback and studio noise
- Half-rack size—mount two in one RU
- Connects to mixer with TRS insert cables
- Link units for up to 64 mics
- Links with Models D-2 and D-3 controllers

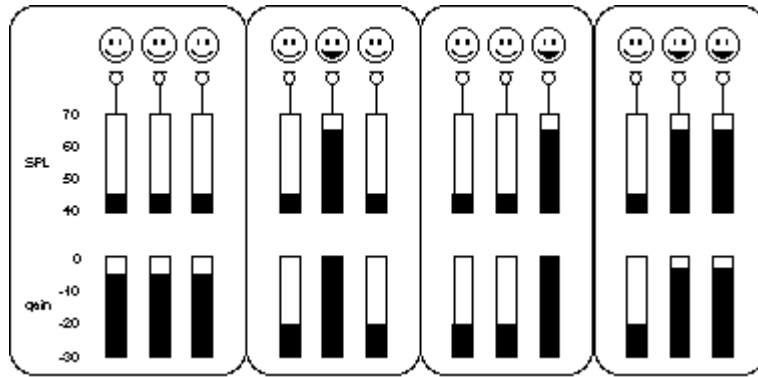
Applications

The Model E supports a broad spectrum of live mixing applications, including:

- Conference reinforcement, video trucks
- Houses of worship
- Film and television dialogue, reality shows.
- Multiple wireless mics for theater
- Boardrooms and civic meeting rooms, community TV
- Teleconferencing and distance learning

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How it Works



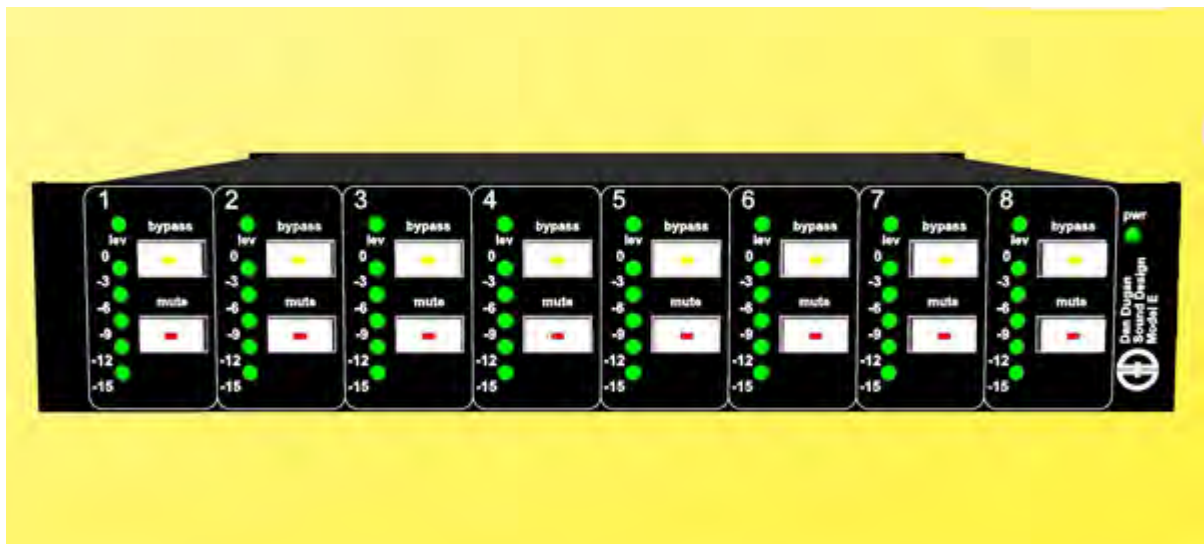
Dugan Speech System in action

The Dugan Speech System automatically manages any number of live mikes in an unpredictable dialogue situation. The above illustration shows the Speech System in action, with four snapshots of a three-mike system under different conditions of stimulation. The top row represents the sound levels at the mics. The bottom row shows the gains the Speech System will apply. For instance, in the first frame no one is speaking, so the inputs are riding at a medium gain, adding up to the gain of one mike. In the second frame, one person is speaking. You'll notice that the talker's gain automatically turns up full, while the other inputs are turned down. In the third frame, another person speaks and the gain automatically shifts to that input, while the other inputs are turned down. And in the fourth frame, when two people speak simultaneously, the gain is automatically shared between them, while the third is turned down.

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Front panel of the Model E controller

The **lev** LED indicates when the audio level is within the range for correct processing. It should stay illuminated when the room is quiet. If it goes out, the input gain on the mixing board should be increased until the level is sufficient. A five-LED ladder, the same as on the original Model D, indicates the gain that the automatic mixing function is applying to the channel. The **bypass** button disables automixing and passes the channel through unchanged. The **mute** button mutes the channel. When the controller is patched pre-fader (true for most mixing boards), mics should be muted here, not on the mixer.

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Back panel of the Model E

The Model E's eight analog inputs and outputs are on TRS connectors. Multiple units can be linked in a ring using the ADAT optical connectors. The Master/Slave switch sets the mode for linking--one unit must be the master. The +4/-10 switch adjusts the side-chain sensitivity for professional or consumer levels. The 10/100BASE-T jack accesses an internal web server for firmware updates and future remote control features.

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Quality You Can Count On

The Model E is made in the U.S.A. The unit is designed to meet applicable national safety standards. A hard-wire bypass relay in each channel patches all channels through when power is off. For more information about the Model E, or to place an order, contact Dan Dugan Sound Design at (415) 821-9776 voice; (415) 826-7699 fax.

Specifications

Audio Inputs: unbalanced, 6K ohm, -22 to +4 dBu nominal level, +21 dBu maximum

Audio Outputs: unbalanced, 100 ohm source, will drive a 600 ohm load

Maximum Output: +21 dBu

Output Noise: less than -91 dBu (A-wtd); 112 dBA dynamic range

Alternative Digital I/O: ADAT optical, 48 KHz or 44.1 KHz 24-bit
(8 channel system only; units cannot be linked when using digital I/O)

Frequency Response: 10 Hz to 22 KHz, +0/-1 dB

Crosstalk: -80 dB at 20 KHz

Distortion: less than .003% THD+N at +21 dBu

Gain: unity

A/D-D/A: 48 KHz, 24-bit

Audio Latency: 600 ns (0.6 ms)

Linking: optical, up to 8 units (64 channels) may be linked in a ring
Links with models D-2 and D-3

Connectors:

Audio: .25" tip-ring-sleeve; tip input, ring output

10/100 BASE T: RJ-45

Linking or Digital I/O: ADAT optical

Power: coaxial 5.5 mm o.d., 2 mm i.d.

Power:

Nominal 12 VDC, 1.3A maximum

Accepts 9-24 VDC, either polarity, or 9-18 VAC

Separate power supply unit:

Input 120VAC, 60 Hz, 27W, output 12 VDC, 1500 mA

Approved UL, CUL

Dimensions: 8.75" x 1.75" x 8.3" depth behind panel (22.2 cm x 4.5 cm x 21 cm)

Adaptors supplied for mounting one or two units in 1 RU of 19" rack

Weight: 3.25 lb (1.47 Kg)

in shipping box with power supply, lb (Kg)

Warranty: one year, parts and labor

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