



Model D Automatic Mixing Controller



The Model D Automatic Mixing Controller is a breakthrough product that extends the convenience of automatic mixing to professional sound mixers. The eight-channel controller patches into your audio console to provide smooth automatic mixing of multiple live mikes. You won't be chained to the faders any more, because the Model D knows who's talking. It frees you to focus on balance and sound quality. Users find it invaluable for broadcasting, sound reinforcement, recording, and live performance situations. The Model D's transparent, voice-controlled cross-fades follow unpredictable dialogue flawlessly, eliminating late fade-ups without the choppy effects of gating. Built-in expandability lets you link units for up to 96 channels to handle the biggest jobs.

The Model D marks inventor Dan Dugan's second major audio product innovation. In 1973, Dugan patented the first automatic microphone mixer. Since then automatic mixers, Dugan's invention, have become a major product category. Now, Dugan's Model D fills another market void with its automatic mixing control functions. The Model D incorporates three Dugan-patented technologies to offer a unique set of mixing capabilities. First, the Dugan Speech System automatically manages any number of live mikes in unscripted talking situations. Second, the Dugan Music System offers automatic soft-muting to help reduce feedback and noise pick-up in live performances, such as opera or for rock concert back-up vocalists. Thresholds are adjusted automatically through continuous monitoring of ambient noise levels. The third system, the Dugan Gain Limiting System, provides a continuous, stepless, number-of-open-microphones master gain adjusting system to prevent feedback and ambient noise build-up when used with either the Music System or with manual or remote mike switching. The combination of these three Dugan technologies make the Model D a unique tool for the industry. The

Model D's professional connectors and marked default control settings allow you to have it up and running with your console in minutes.

The Model D's User-Oriented Features

The Model D dramatically improves the performance of live, multi-mike sound systems

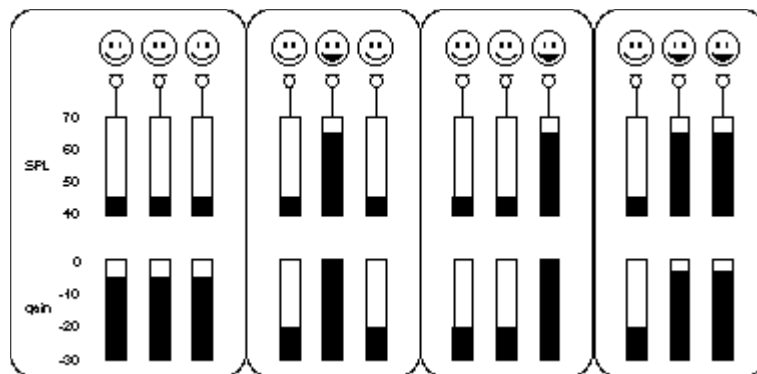
- Eliminates cuing errors
- Reduces feedback and ambient noise pick-up
- Provides convenient remote control capabilities
- Operates in two modes, speech or music
- VCA controller patches into the insertion points of 8 mixer input channels
- Handles up to 96 live mikes when linked with additional units

Multiple Applications

The Model D supports a wide spectrum of live mixing applications, including:

- Broadcast news, talk and game shows
- Conference reinforcement and videotaping
- Dialogue recording for film and television
- Theaters, opera houses, and live performance stages
- Boardrooms and teleconferencing
- Distance learning

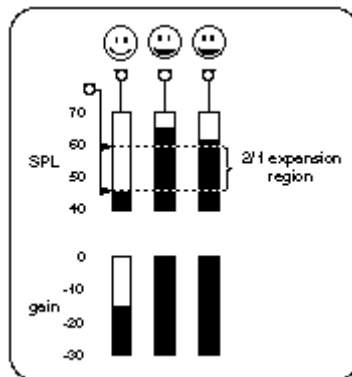
How it Works



Dugan Speech System in action

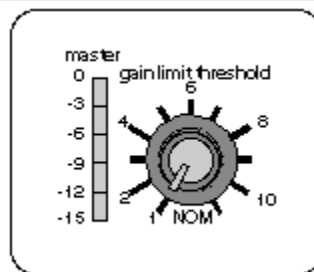
The Dugan Speech System automatically manages any number of live mikes in an unpredictable dialogue situation. The above illustration shows the Speech System in action, offering four snapshots of a three-mike system under different conditions of stimulation. For instance, in the first frame no one is 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 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.



Dugan Music System in action

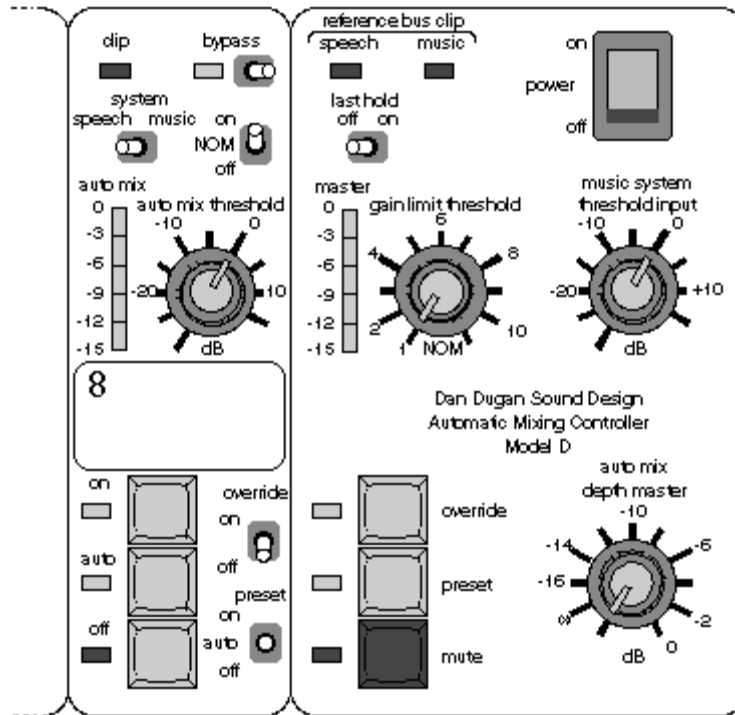
In the Dugan Music System, each channel has an expander gate with an automatically varying threshold. The gate thresholds follow the sound level picked up by an ambient sensing mike.



Dugan Gain Limiting System

The Dugan Gain Limiting System is used with the Music System to prevent feedback or noise build-up when several mikes are in use. It doesn't just count how many mikes are on, it continuously monitors the total gain of the system and reduces all inputs smoothly. You decide, by setting the gain limit, how many mikes can come on before gain reduction begins.

A New Tool for Artistic Applications

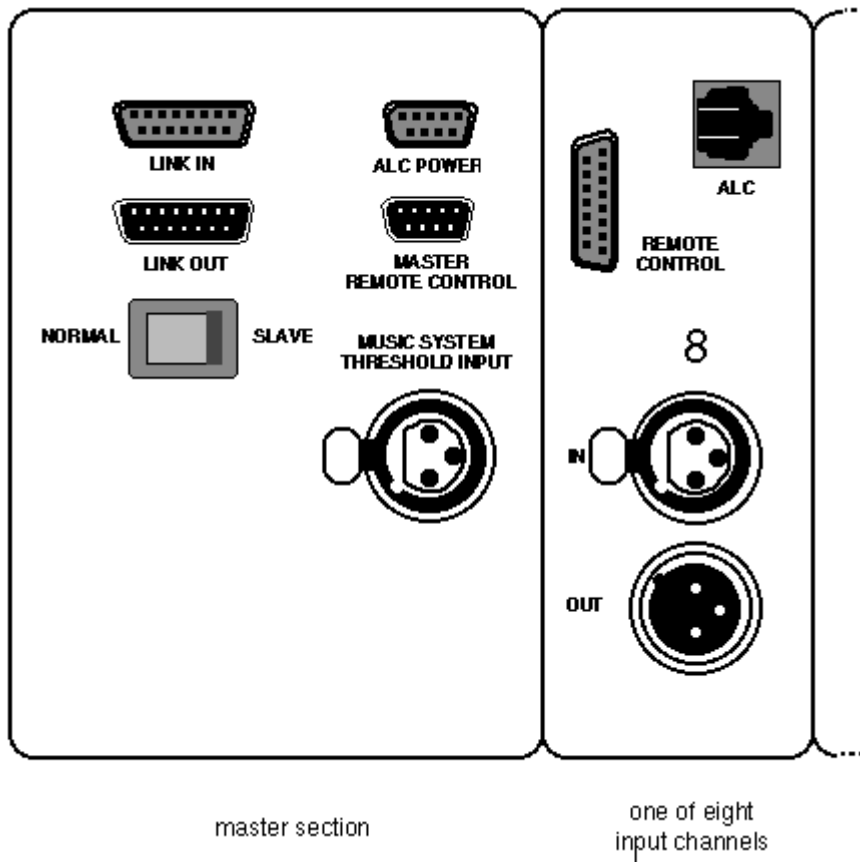


one of eight
input channels

master section

Front panel of the Model D

What distinguishes the Model D from all other automatic microphone mixers is its ability to bring you the highest quality of sound in demanding and artistic applications. A quick glance at the Model D's front and back panels shows that the product is in a class of its own. Its rich array of controls provide you with the tools you need to fine-tune the system for the wide spectrum of audio conditions you encounter. For example, the "last hold" function provides continuous ambience when desired with the Music System. The "auto mix depth" control sets the amount of automatic attenuation. If you select the "override" button, it fades the system to the combination of inputs selected by the override preset switches on each channel. The Model D's "preset" button shifts the system smoothly to your default combination of on, automatic, and off modes for the channels as programmed on the preset switches. This combination also comes up when power is turned on. A momentary "mute" button also allows you to smoothly dump all channels without disturbing other settings.



Back panel of the Model D

The Model D's eight inputs and eight outputs are located on the unit's back panel, along with the music system threshold input. The remote control connectors allow you to easily wire up remote controls for the major functions of the Model D. Multiple units can be daisy-chained using the link connectors. Connections are also provided for an upcoming Dugan automatic level control product that will further extend the capabilities of the Model D.

Quality You Can Count On

Built by an audio mixing professional for other professionals, the Model D comes with all the quality and convenience factors you'd expect to have if you designed the system yourself. The Model D's circuitry is made in the U.S.A., and is modular for easy servicing. All IC's are socketed. The unit is designed to meet applicable national safety standards. There's a hard-wire bypass relay in each channel so that if power is lost to the unit, all channels are patched through. Individual power regulation for each channel further ensures the system's reliability. And, should service ever be necessary, exchange boards are readily available by overnight shipment. For more information about the Model D, or to place an order, contact Dan Dugan Sound Design at 415-821-9776 voice; 415-826-7699 fax.

Specifications

Inputs: active balanced, 50K ohm, -10 to dBu nominal level, dBu maximum

Outputs: unbalanced, 50 ohm source; will drive 600 ohm load

Gain: unity

Frequency Response: 30Hz to 40KHz, 1dB

Output Noise: less than -75dBu; 96dB dynamic range

Distortion: less than .03% THD at □

Linking: daisy-chain, up to 96 channels possible

Connectors: audio, standard XL-type; remote control DB-15; linking, DB-15 ALC unit (provided for); telephone modular

Power: 120 or 240VAC (internal jumper), 50/60Hz, 120VA, design conforms to applicable safety standards

Dimensions: 3RU, 19" x 5-1/4" x 14-1/2" depth behind panel

Weight: 18 pounds; in shipping pack, 23 pounds

Warranty: one year parts and labor