

Model E-1A Automatic Mixing Controller Unbalanced Analog I/O



The Model E-1A Automatic Mixing Controller helps professional audio mixers handle multiple live mics without having to continually ride their individual faders. This eight-channel (analog) or sixteen-channel (digital) signal processor patches into the input insert points of an audio mixing console.

It detects which mics are being used 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-1A's voice-controlled crossfades track unscripted dialogue perfectly, eliminating cueing mistakes and late fade-ups while avoiding the choppy and distracting effects common to noise gates.

APPLICATIONS

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

FEATURES

- Eliminates late upcuts
- Reduces PA feedback and studio noise
- Eight channels analog or sixteen channels digital
- Dugan Control Panel for Java included
- Channels may be grouped into three independent auto mixers
- Half-rack size — mount two in one RU
- Link up to eight units for up to 128 channels

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The virtual remote control panel supplied with the E-1A as a Java applet can also be purchased as an iPad app.

SPECIFICATIONS

ANALOG AUDIO INPUTS	unbalanced, 6 kOhm, -22 to +4 dBu nominal level, +21 dBu maximum	
ANALOG AUDIO OUTPUTS	unbalanced, 100-Ohm source, drives a 600-Ohm load, +21 dBu maximum	
OUTPUT NOISE	less than -91 dBu (A-wtd); 112 dBA dynamic range	
DIGITAL I/O	ADAT optical, 48 kHz/24 bit (will operate with 44.1 kHz digital I/O) Due to the Model E-1's compact size and close spacing of the ADAT connectors, some large cables may not fit. The maximum cable width is 0.48 in (12 mm).	
FREQUENCY RESPONSE	10 Hz to 22 kHz, +0/-1 dB	
CROSSTALK	-81 dB @ 20 kHz	
DISTORTION	less than 0.003% THD+N at +21 dBu	
GAIN	unity	
A/D AND D/A	48 kHz/24 bit (will operate with 44.1 kHz digital I/O)	
AUDIO LATENCY	2 ms	
OPTICAL LINKING	up to 8 units (128 channels) may be linked; links with Models D-2, D-3, E, E-1, E-1A, E-2, E-3, and Dugan-MY16	
CONNECTORS	Audio 10/100 BASE T Linking, Digital I/O Power	1/4-in TRS; tip input, ring output RJ-45 ADAT optical coaxial 5.5 mm o.d., 2 mm i.d.
POWER	nominal 12 VDC 1.3 A maximum; accepts 9-24 VDC, either polarity, or 9-18 VAC separate power supply unit; Input: 100-240 VAC, 50-60 Hz, 0.7 A; Output: 18 VDC, 1.33 A; Approved UL, GS, CE, FCC, CCC, LPS	
DIMENSIONS	1RU H = 1.75 in (4.5 cm) D = 8.3 in (21 cm) W = 8.75 in (22.2 cm)	
RACK MOUNTING	parts supplied for mounting one or two units in 1RU of 19-in rack	
WEIGHT	3.4 lb (1.5 kg) 7.0 lb (3.2 kg) in shipping box with power supply	

Model E-2 Automatic Mixing Controller Balanced Analog I/O



APPLICATIONS

Conference reinforcement, video trucks
 TV news and sports panels
 Reality shows, game shows
 Wireless mics for theater
 Boardrooms, civic meeting rooms
 Teleconferencing and distance learning
 Houses of worship

CONFIGURATIONS

8-Channel
 Dugan Speech System
 Dugan Music System
 Dugan Gain Limiting
 Pre/Post mix matrix for four aux outputs

12-Channel
 Dugan Speech System

16-Channel (ADAT)
 Dugan Speech System

BENEFITS

Eliminates late upcuts
 Reduces PA feedback and studio noise
 Reduces comb filtering from adjacent mics

CAPABILITIES

Link up to eight Dugan controllers into one system
 Partition channels into one to three groups that can span linked units
 Control physically from front panel and Model CP-2 Control Panel (sold separately)
 Control remotely from Dugan Control Panel for Java (included) and Dugan Control Panel for iPad (sold separately)

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Specifications

AUDIO	
ANALOG I/O	12 inputs, 12 outputs, balanced
DIGITAL I/O	8 inputs, 8 outputs, ADAT optical 16-Channel mode: eight additional I/O channels using LINK connectors
GAIN	Unity
SAMPLE RATE	Analog: 48 kHz Digital: 48 or 44.1 kHz (synchronizes to input)
BIT DEPTH	24 bit
AUDIO LATENCY	1.8 ms
FREQUENCY RESPONSE	20 Hz to 12 kHz +/- 0.05 dB, 20 Hz to 20 kHz +/- 0.2 dB
OUTPUT NOISE	-87.5 dBu
MAXIMUM OUTPUT	+22 dBu
DISTORTION	0.003% (THD + N)
LINKING	Up to 8 units can be linked into one system in an optical ring network

CONNECTORS	
AUDIO	Analog: DB25 wired to TASCAM digital audio pinout
CONTROL	Control Panel (CP-2): Four-pin mini-XLR female 4 x RJ45: Four-port internal switch for network Linking: ADAT optical, reassigned for audio I/O in 16-channel mode

POWER	
CONNECTOR	Coaxial with locking collar, 5.5 mm o.d., 2 mm i.d.
ELECTRICAL	Nominal 12 VDC, 1.5 A maximum; accepts 12-24 VDC, either polarity, or 9-18 VAC
EXTERNAL SUPPLY	Input: 100-240 VAC, 50-60 Hz, 0.8A Output: 15 VDC, 2 A Approved UL, CE, LPS

PHYSICAL	
DIMENSIONS	Height = 1.75 in (4.5 cm) Depth = 8.3 in (21 cm) Width = 8.75 in (22.2 cm)
RACK MOUNTING	Parts included to mount single unit or two units side-by-side
WEIGHT	3.5 lb (1.6 kg) 7 lb (2.5 kg) in shipping box with power supply

Model E-3 Automatic Mixing Controller AES Digital I/O



APPLICATIONS

Conference reinforcement, video trucks
 Television news and sports panels, reality shows, game shows
 Multiple wireless mics for theater
 Boardrooms, civic meeting rooms, community TV
 Teleconferencing and distance learning
 Houses of worship

MODES

8-Channel (AES)
 Dugan Speech System
 Dugan Music System
 Dugan Gain Limiting
 Pre/Post mix matrix for six aux outputs

14-Channel (AES)
 Dugan Speech System

16-Channel (ADAT)
 Dugan Speech System

BENEFITS

Eliminates late upcuts
 Reduces PA feedback and studio noise
 Reduces comb filtering from adjacent mics

CAPABILITIES

Link up to eight Dugan controllers into one system
 Partition channels into one to three groups that can span linked units
 Control physically from front panel and Model CP-2 Control Panel (sold separately)
 Control remotely from Dugan Control Panel for Java (included) and Dugan Control Panel for iPad (sold separately)

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Specifications

DIGITAL AUDIO I/O	
MAIN (AES/EBU)	Eight inputs, eight outputs.
AUXILIARY (AES/EBU)	Six inputs and TTL word clock in Six outputs and TTL word clock out
OPTICAL (ADAT)	Eight channels in and eight channels out 16-Channel mode: eight additional I/O channels using LINK connectors
GAIN Unity	
SAMPLE RATE	Input: 32 - 96 kHz (integral sample rate conversion) Output: 48 kHz
BIT DEPTH	24 bits
AUDIO LATENCY	2 ms
FREQUENCY RESPONSE	10 Hz - 22 kHz, +/- 0.0075 dB
OUTPUT NOISE	-125 dBFS (20 Hz - 20 kHz), -128 dBAFS
DISTORTION	-125 dBFS
LINKING	Up to eight units can be linked into one system in an optical ring network
SYNCHRONIZATION	
SOURCES (48 kHz only)	ADAT, Word Clock, DARS, AES Inputs 1-8, MST Inputs 1-3, Internal (for SRC)
OUTPUT	48 kHz word clock
CONNECTORS	
AUDIO	Main: DB-25 wired to TASCAM digital audio standard Aux: DB-25 wired to TASCAM standard except pairs 7-8 that carry TTL for Word Clock I/O ADAT: Optical in and out
CONTROL	Control Panel (CP-2): 4-pin mini-XLR female RJ-45 x 4: 4-port internal switch for network Linking: ADAT optical in and out, connectors reassign for audio I/O 9-16
POWER	
CONNECTOR	Coaxial with locking collar, 5.5 mm o.d., 2 mm i.d.
ELECTRICAL	Nominal 12 VDC, 1.5 A maximum; accepts 12-24 VDC, either polarity, or 9-18 VAC
EXTERNAL SUPPLY	Input: 100-240 VAC, 50-60 Hz, 0.7 A Output: 18 VDC, 1.33 A Approved UL, GS, CE, FCC, CCC, LPS
PHYSICAL	
DIMENSIONS	1 RU H = 1.75 in (4.5 cm) D = 8.3 in (21 cm) W = 8.75 in (22.2 cm)
WEIGHT	3.5 lb (1.6 kg) 7 lb (2.5 kg) in shipping box with power supply