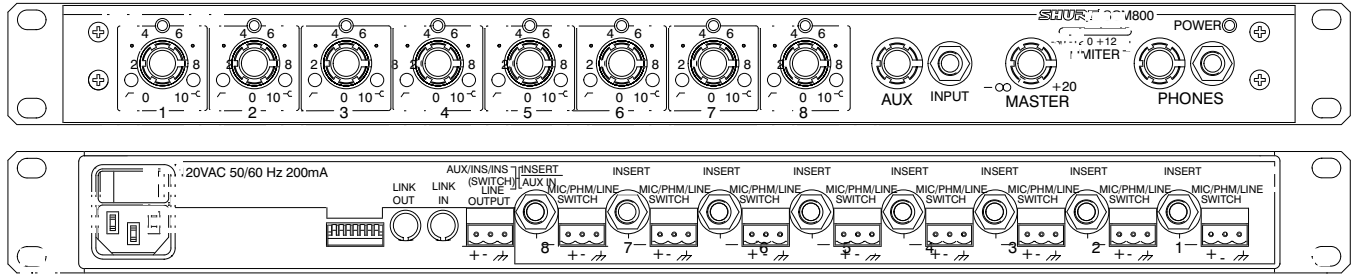


## SCM800/SCM800E EIGHT-CHANNEL MICROPHONE MIXER



### SYSTEM FEATURES

The Shure Model SCM800 is a full-featured, eight-channel microphone mixer for sound reinforcement, general audio recording, and audio-visual systems. Any low-impedance, balanced dynamic or condenser microphone, including a wireless microphone system, can be used with the SCM800 mixer.

Each SCM800 accepts up to eight microphone- or line-level inputs and one aux-level input (two input jacks feed the same channel). Up to four SCM800 mixers can be linked to provide up to 32 input channels. Each input channel has a two-band equalizer, switchable mi-

crophone- or line-level operation, switchable 48 V phantom power, and a 1/4-inch send/receive insert jack.

The SCM800 operates on 120 Vac power; the SCM800E operates 230 Vac power. Both models are supplied with rack-mounting hardware, link cable and removable block terminal connectors. An accessory rack panel adapter (Model RKC800, available separately) converts the removable block input and output connectors to XLR connectors, and the Aux connectors to phono jacks.

### FEATURES

- Compatible with Shure SCM810 and FP410 automatic microphone mixers
- Adjustable EQ per channel: low-frequency rolloff and high-frequency shelving
- 48 V phantom power selectable for each input
- Active balanced microphone- and line-level inputs and line-level output
- Highly RF-resistant chassis and circuitry
- LED indication of channel clipping
- Linking capability for systems up to 32 microphones
- Two Aux-level input jacks that feed one channel
- Insert jack on each channel
- Manual mixing of input channels
- Internal Modification permits 230 V operation (SCM800) or 120 V operation (SCM800E)
- Front-panel headphones output with level control
- Peak-responding output limiter with selectable thresholds and LED indicator

**SPECIFICATIONS**

*Measurement Conditions (unless otherwise specified):*

*Line voltage 120 Vac, 60 Hz (SCM800) or 230 Vac, 50 Hz (SCM800E); full gain; 1 kHz.*

*Source impedances: Mic 150 Ω, Line 150 Ω.*

*Terminations: Line 10 kΩ, Phones 300 Ω (tip-sleeve and ring-sleeve), Direct Out 10 kΩ.*

*Equalization controls adjusted for flat response, Channel 1 gain control full clockwise, other gain controls full counterclockwise*

**Frequency Response** (Ref .1 kHz, channel controls centered)  
50 Hz to 20 kHz ±2 dB; -3 dB corner at 25 Hz

**Voltage Gain** (typical, controls full clockwise)

Input	Output		
	Line	Head-phones	Direct Out
Low-impedance mic (150 Ω)	80 dB	88 dB	34 dB
Line	40 dB	48 dB	-6 dB
Aux	44 dB	52 dB	—
Send/Return	20 dB	28 dB	—

**Inputs**

Input	Impedance		Input Clipping Level
	Designed for use with	Actual (typical)	
Mic	19-600 Ω	10 kΩ	-15 dBV
Line	≤2 kΩ	10 kΩ	+22 dBV
Aux	≤2 kΩ	10 kΩ	+22 dBV
Send/Return	≤2 kΩ	10 kΩ	+18 dBV

**Outputs**

Output	Impedance		Output Clipping Level
	Designed for use with	Actual (typical)	
Line	>600 Ω	60 Ω	+18 dBV
Headphones	8-200 Ω, 60 Ω recommended	300 Ω	+12 dBV
Direct Out	>2 kΩ	1 kΩ	+18 dBV
Send/Return	>2 kΩ	1 kΩ	+18 dBV

**Total Harmonic Distortion**

<0.1% at +18 dBV output level, 50 Hz to 20 kHz (through 20 Hz-20 kHz filter; Input 1 and Master at 5, all other controls full counterclockwise)

**Hum and Noise**

Equivalent Input Noise: -125 dBV (150 Ω source; through 400 Hz-20 kHz filter)

Equivalent Input Hum and Noise: -123 dBV (150 Ω source; through 20 Hz - 20 kHz filter)

Output Hum and Noise (through 20 Hz to 20 kHz filter; channel controls full counterclockwise):

Master full counterclockwise: -90 dBV

Master full clockwise: -62 dBV

**Common Mode Rejection**

>70 dB at 1 kHz

**Polarity**

Mic/Line, Send inputs to all outputs are non-inverting; Aux input to all outputs is inverting

**Overload and Shorting Protection**

Shorting outputs, even for prolonged periods, causes no damage. Microphone inputs are not damaged by signals up to 3 V; Line and Monitor inputs by signals up to 20 V

**Equalization**

Low-frequency: 6 dB/octave cut, adjustable . corner from 25 to 320 Hz

High-frequency: ±6 dB at 5 kHz, ±8 dB at 10 kHz, shelving

**Limiter**

Type: Peak

Threshold: Switchable: off, +4, +8, +16 (dBm at output)

Attack Time: 2 ms

Recovery Time: 300 ms

Indicator: Lights red when limiting occurs

**Input LEDs**

Light at 6 dB below clipping

**Phantom Power**

46 Vdc open-circuit through 6.8 kΩ series resistance per DIN 45 596

**Operating Voltage**

SCM800: 120 Vac rated nominal (see *Voltage Selection* for 230 Vac operation), 50/60 Hz, 200 mA

SCM800E: 230 Vac rated nominal (see *Voltage Selection* for 120 Vac operation), 50/60 Hz, 100 mA

**Temperature Range**

Operating: 0° to 60° C (32° to 140° F)

Storage: -30° to 70° C (-22° to 158° F)

**Overall Dimensions**

44.5 mm H x 483 mm W x 317 mm D (1<sup>3</sup>/<sub>4</sub> x 19 x 12<sup>1</sup>/<sub>2</sub> in.)

**Net Weight**

4.3 kg (9 lb 9 oz)

**Certifications**

SCM800: Listed by Underwriters Laboratories, Inc.; listed as Certified by Canadian Standards Association

SCM800E: Conforms to European Union directives; eligible to bear CE marking; VDE GS-Certified to EN 60950; EU EMC Immunity Requirements: EN50082-1

**REPLACEMENT PARTS**

Knob, Channel Gain & Phones (white) . . . . . 95A8238

Knob, Master (blue) . . . . . 95B8238

Line (Power) Cord (SCM800) . . . . . 95A8389\*

Line (Power) Cord (SCM800E) . . . . . 95A8247\*

Link Cable . . . . . 95A8889

Three -Terminal Block Connector . . . . . 95A8580