Seamless Mixing. Intelligent Installs.

THEY'RE NOT JUST EASY. THEY'RE AUTOMATIC.

Shure SCM810 and SCM410 automatic mixers are the quickest, easiest, and most effective way to set up a multiple-mic room. Without clipping a syllable, they silently activate only the microphones being addressed and automatically adjust each microphone's threshold to changes in background noise.

It's proven technology. Networkable, configurable, and as simple as opening the box, plugging in, and connecting the microphones.

There's no need to buy specialized equipment, because both the SCM810 and SCM410 work with all professional wired and wireless microphones. When you choose a Shure automatic mixer, you get seamless automatic mixing right out of the box.

WHY YOU NEED AUTOMATIC MIXING.

- *With too few open mics*…some talkers sound clear, while others seem far away.

- *With too many open mics*…there is a greater likelihood of feedback and too much background noise is added – making it hard for talkers to be heard clearly. And oftentimes, a talker's voice will be picked up by more than one microphone, resulting in poor audio quality.

Since it is difficult to select precisely the right number of microphones for adequate coverage with no overlap, the solution typically requires that someone turn microphones up and down as people speak. Not only does this demand fast hands, it involves a great deal of guesswork.

Shure automatic mixers address these concerns by opening mics as soon as they are needed and attenuating them when they are not in use.

INTELLIMIX® CIRCUITRY: THE BRAINS OF THE OPERATION.

Shure Automatic Mixers feature our patented IntelliMix algorithm, the most effective automatic mixing technology on the market. IntelliMix combines three key functions: *Noise-Adaptive Threshold, MaxBus, and Last Mic Lock-On.*

Noise-Adaptive Threshold prevents false triggers by quickly distinguishing between constant background noise (such as air conditioning) and rapidly changing sounds (such as speech) for each channel input.

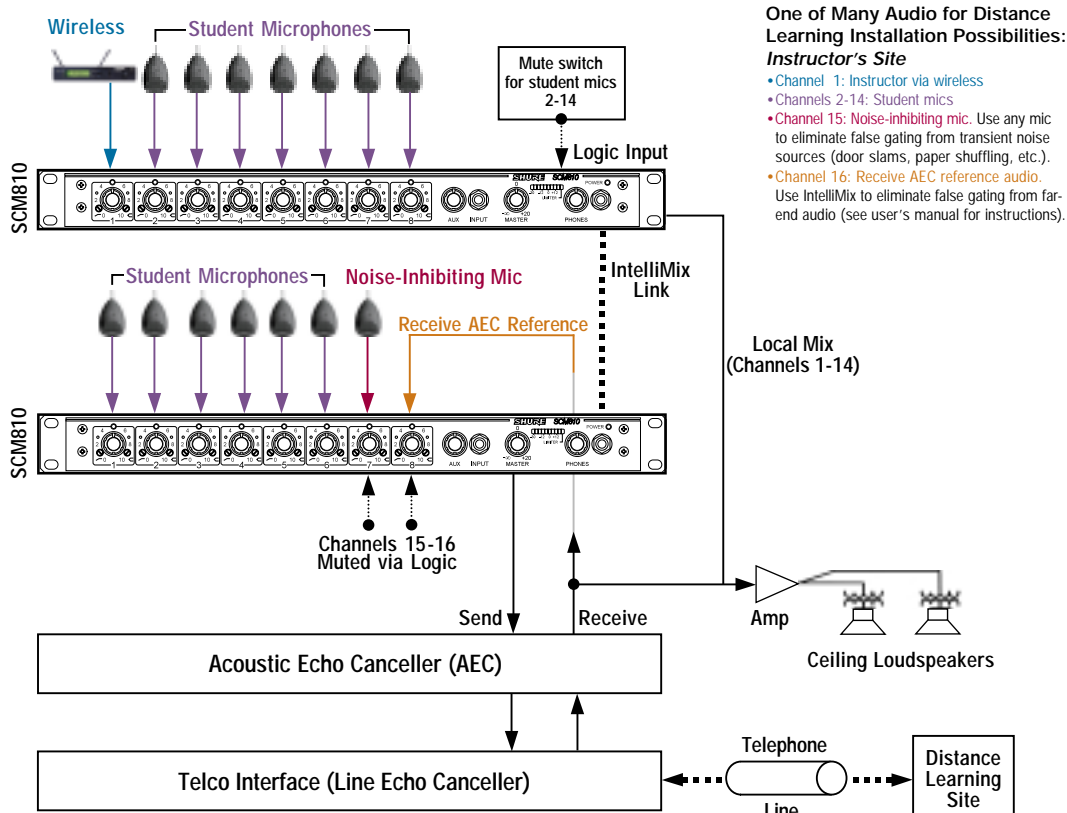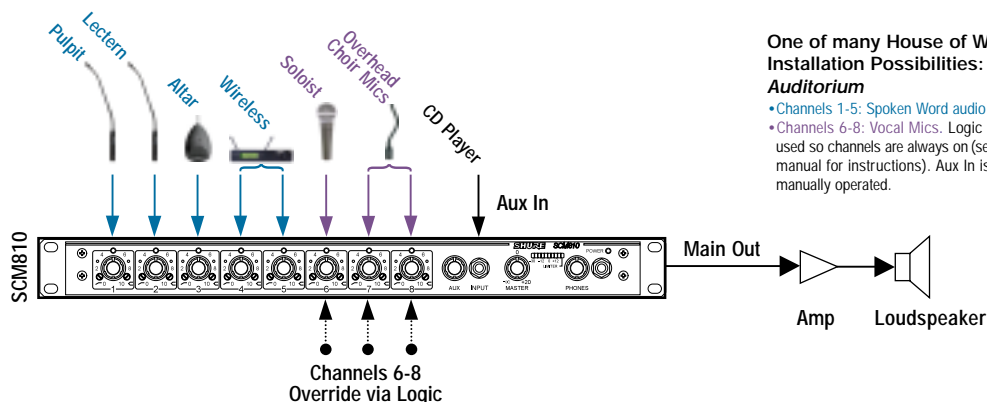*MaxBus delivers clear, natural audio* by turning on only the best microphone for each speaker.

Last Mic Lock-On eliminates ambience dropouts, ensuring that there is always some background ambience present even if no one is currently speaking.

In addition, the *NOMA* (Number of Open Microphones Attenuator) *ensures system stability with no feedback* by automatically maintaining a consistent output level even as additional microphones are opened.

TWO MIXERS. UNTOLD APPLICATIONS.

With the networking capability of both the SCM810 and the SCM410, you can connect the two mixers together (in any combination up to 400 microphones) to create the perfect setup for any size application.

Whether it's sound reinforcement, audio recording or broadcast, you now have a customizable automatic mixing solution for a variety of applications, including: Houses of Worship • Panel Discussions • Distance Learning • Hotel Sound • Courtrooms • Boardrooms • Teleconferencing • Videoconferencing

One of many House of Worship Installation Possibilities:
Auditorium
• Channels 1-5: Spoken Word audio sources
• Channels 6-8: Vocal Mics. Logic override used so channels are always on (see user's manual for instructions). Aux In is always manually operated.

Channels 6-8 Override via Logic

One of Many Audio for Distance Learning Installation Possibilities:
Instructor's Site
• Channel 1: Instructor via wireless
• Channels 2-14: Student mics
• Channel 15: Noise-inhibiting mic. Use any mic to eliminate false gating from transient noise sources (door slams, paper shuffling, etc.).
• Channel 16: Receive AEC reference audio. Use IntelliMix to eliminate false gating from far-end audio (see user's manual for instructions).

Channels 15-16 Muted via Logic

LOOKING FOR A FULL SET OF FEATURES? LOOK NO FURTHER.

In addition to the advanced technologies of IntelliMix and NOMA, Shure Automatic Mixers include a comprehensive set of features to help you customize them to your specific needs. Shared features of the SCM810 and SCM410 include:

• Individual channel gain control
• Adjustable low cut and high frequency shelving EQ filter per channel

Low Cut/High Shelving EQ Filters

• Master output level control
• TTL logic control
• AMX and Crestron™ compatibility
• Internal and external modifications to accommodate almost any installation need, including:
  • Mute any channel in output bus (for noise-inhibiting miking)
  • Channel group gating (for multi-channel choir miking)
  • Change any direct output to insert (send/return) point (for dynamics processing such as AGC, DFR, PEQ)
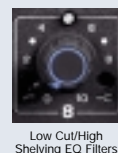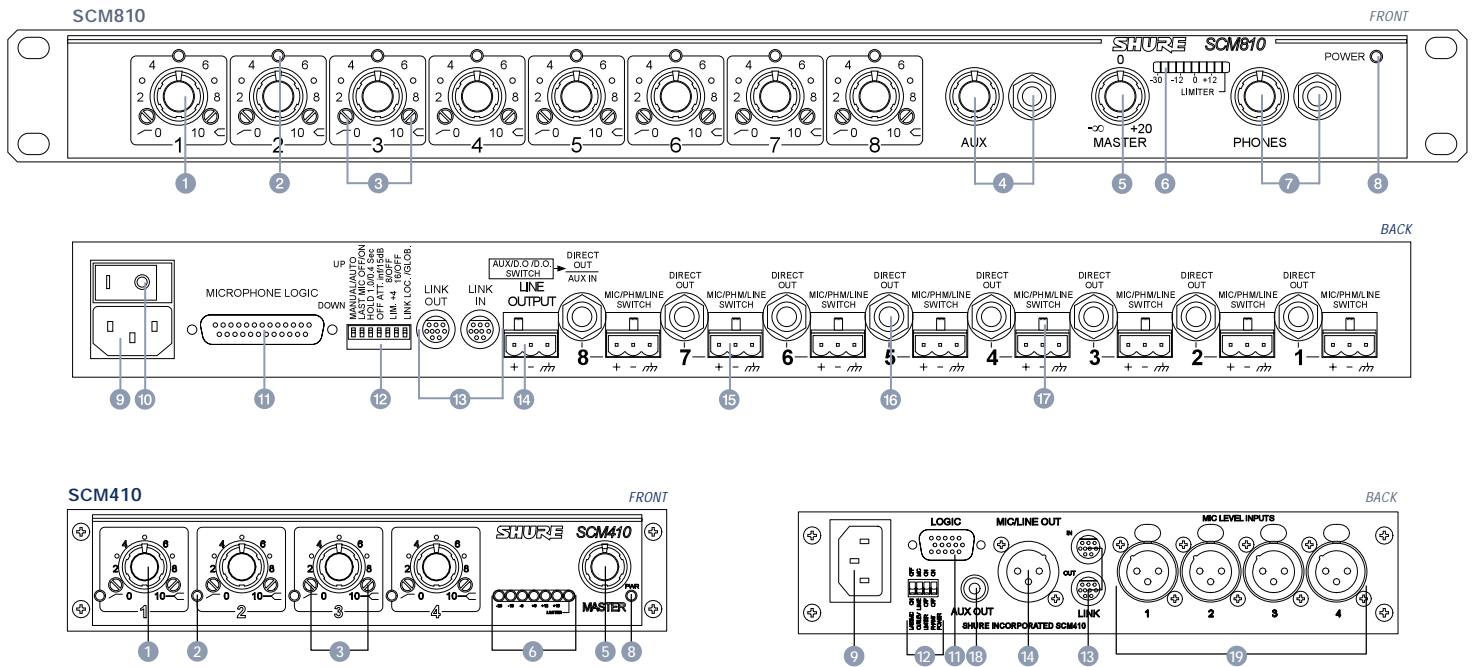
FEATURES

SCM810 – 9 inputs, 9 outputs

• Eight balanced mic-line input channels (Phoenix block connectors)
• One unbalanced 1/4¨ aux input level control
• Eight unbalanced 1/4¨ direct line level outputs
• One balanced master line/mic level output (Phoenix block connector)
• Selectable 48V phantom power per channel
• Level selectable peak output limiter
• Full rack width (single-rack height)

SCM410 – 4 inputs, 2 outputs

• Four active balanced XLR mic level inputs
• One active balanced XLR mic/line selectable output
• One unbalanced RCA aux level output
• 12V phantom power
• +16 dBu peak output limiter
• Half-rack width (single-rack height)

SCM810

SCM410

FEATURES (numbers correspond to both unless otherwise indicated)

FRONT

1. SCM810 – microphone channel gain controls 1-8
   SCM410 – microphone channel gain controls 1-4
2. Easy to view LEDs – light is green when channel is active and red at 6 dB below clipping
3. Adjustable EQ – can adjust to reduce low-frequency signals, and boost or cut high-frequency signals
4. Auxiliary Control and Input – for mixing external devices such as CD players (SCM810 only)
5. Master Control – to set overall level
6. Output Level LED Meter – indicates peak output signal and limiter action
7. Headphone Control and Output provides monitoring of overall mixer output (SCM810 only)
8. Power LED – lights green when unit is on

BACK

9. 120 VAC Power Connector – can be internally changed to 230V Operation
10. Power On/Off Rocker Switch (SCM810 only)
11. Microphone Logic Connector – with mute, override and gate logic terminals for each channel
12. DIP Switch allows for different setup options
13. Link In/Out Jacks – allow linking of SCM410, SCM810, FP410, and AMS8100 mixers
14. Mic/Line Output for connection to amplifiers, recorders, or other mixers (SCM410 modifiable for mic level, SCM810 is mic/line switchable)
15. Mic/Line Switchable Block Connectors for fast and secure microphone connections (SCM810 only)
16. Modifiable Direct Out/Insert 1/4¨ phone jacks on each channel (SCM810 only)
17. Recessed Switch to set mic/line input level and 48V phantom (SCM810 only)
18. Auxiliary Output – allows for use of consumer-level audio equipment (SCM410 only)
19. XLR Microphone Connectors for quick and easy microphone connections (SCM410 only)

SPECIFICATIONS (specifications for both mixers unless otherwise indicated)

FREQUENCY RESPONSE
(at 1 kHz, channel controls centered)
50 Hz to 20 kHz; $\pm$2dB; -3 dB corner at 25 Hz

VOLTAGE GAIN
(typical, controls full clockwise)

SCM810	OUTPUT		
INPUT	line	headphones	direct out
mic	80 dB	88 dB	34 dB
line	40 dB	48 dB	-6 dB
aux	44 dB	52 dB	none
send/return	20 dB	28 dB	none
SCM410	line	mic	aux
mic	80 dB	40 dB	68 dB

INPUT CLIPPING LEVEL
SCM810: Mic: -15 dBV   Line: +22 dBV
       Aux: +22 dBV   Send/Return: +18 dBV
SCM410: Mic: -14 dBV

OUTPUT CLIPPING LEVEL
SCM810: Line: +18 dBV   Headphones: +12 dBV
       Direct Out: +18 dBV   Send/Return: +18 dBV
SCM410: Line: +24 dBV   Mic: -18 dBV
       Aux: +14 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)

COMMON MODE REJECTION
>70 dB at 1 kHz

POLARITY
SCM810: Mic/Line, Send inputs to all outputs are non-inverting;
       Aux input to all outputs is inverting
SCM410: All inputs to all outputs are non-inverting

INPUT CHANNEL ACTIVATION
Attack Time: 4 ms
Hold Time: 0.4 s (switchable to 1.0 s – SCM810 only)
Decay Time: 0.5 s

OFF ATTENUATION
SCM810: 15 dB (switchable to ∞)
SCM410: 13 dB

EQUALIZATION
Low-frequency: 6 dB/octave cut, adjustable corner from 25 to 320 Hz
High-frequency: $\pm$6 dB at 5 kHz, $\pm$8 dB at 10 kHz, shelving

LIMITER
Type: Peak
Threshold: SCM810: switchable: off, +4, +8, +16 dBu output
            SCM410: switchable: off and +16 dBu at output

PHANTOM POWER
SCM810: 48 Vdc open-circuit through 6.8 kΩ series resistance
SCM410: 12 Vdc open-circuit through 680 Ω series resistance

OPERATING VOLTAGE
120 Vac, 60 Hz (SCM810 and SCM 410) or 230 Vac, 50 Hz
(SCM810E and SCM410E)

MICROPHONE LOGIC CONTROL PINS
External voltage supply required: 5 Vdc, 100 mA
Logic output current sinking ability: 500 mA

OVERALL DIMENSIONS
SCM810: 44.5 mm H x 483 mm W x 317 mm D (1 3/4 x 19 x 12 1/2 inches)
SCM410: 44.5 mm H x 219 mm W x 268 mm D (1 3/4 x 8 5/8 x 10 1/2 inches)

NET WEIGHTS
SCM810: 4.3 kg (9.9 lbs)
SCM410: 1.75 kg (3.86 lbs)