SEAMLESS MIXING.
ADVANCED CONTROL.
SCM820
Digital IntelliMix® Automatic Mixer

The SCM820 is the flagship Shure digital automatic mixer for seamless, natural-sounding speech in multiple microphone applications. This innovative 8-channel microphone mixer provides advanced new IntelliMix mixing capabilities along with convenient Ethernet connectivity and versatile configuration options.

- **IntelliMix® Technology**
  - Preset, manual & custom modes

- **Dante™ Digital Audio**
  - Multichannel audio over Ethernet

- **Digital Feedback Reduction**
  - Two channels of patented Shure DFR

- **Remote Control**
  - Convenient browser-based software

- **Dual Mixer Operation**
  - One or two independent mixes

- **Model Variations**
  - Multiple I/O configurations
Smart, Simple Controls

With an intuitive hardware interface and informative LED metering, the SCM820 packs an extensive range of control and visibility into a single streamlined rack unit.

**Channel Control Knobs**
Make quick adjustments to gain, low cut and high shelf EQ, and solo/mute functions.

**LED Meter Rings**
Channel and master meter rings vibrantly display input audio or IntelliMix gain levels.

**Dual Mixer Mode**
Route two entirely different and independent automixes to mix A and B outputs.

**Output Mix Control**
Front-panel master gain and limiter control section with output signal meter strip.

**Hardware/Software Control**
Adjust settings directly on the front and back panels or through the browser-based control software.

Analog & Digital Connections

The SCM820 provides enhanced I/O support to engineers—in both application flexibility and digital connectivity—to make setting up, configuring and managing systems easier and more efficient.

**DB25 or Logic-enabled Block Connector Models**
Eight channel inputs on the back panel connect to mic or line level audio sources.

**Direct Outputs**
Per-channel direct outputs allow the SCM820 to be used as an insert processor or for recording.

**Dante™ Digital Audio Networking**
Dante-equipped models provide multichannel digital audio I/O over Ethernet and enable linking to additional SCM820 units.

**Mix A and B Outputs**
Connect line or mic level mix outputs to a sound reinforcement system, mixing console or recording device.

**Aux Inputs**
Route a mono signal straight to the mix outputs from front and back panel auxiliary inputs, bypassing the IntelliMix bus.

**¼” (6.5 mm) Stereo Headphone Output**
For channel and mix monitoring.
**IntelliMix® Technology**
Proprietary Automixing Functionality

**Noise Adaptive Threshold (NAT)**
Continually adjusts the gate threshold for opening a channel.

**Number of Open Microphones Attenuation (NOMA)**
Determines the ideal gain attenuation for a mix output as additional channels are opened.

**Last Mic Lock-On (LMLO)**
Keeps the most recently activated microphone open until another microphone is activated.

**MaxBus**
Ensures that only one channel is opened per sound source, reducing comb filtering for clear, intelligible speech.

**IntelliMix® Modes**
Tailored Automix Style Presets

**Classic**
Ideal for noisy environments, such as live sound reinforcement, classic mode uses fast-acting, seamless channel gating and consistent perceived ambient sound levels.

**Smooth**
Ideal for quiet environments, such as broadcast or recording applications, smooth mode dynamically balances system gain between open and closed channels.

**Extreme**
A more aggressive form of classic mode, extreme mode is configured to achieve maximum gain before feedback by completely attenuating closed channels.

**Manual**
Deactivates IntelliMix to allow the SCM820 to operate as a standard mixer.

**Custom**
Allows customized IntelliMix settings to be saved to a computer and quickly loaded onto the device.

**Networking Solutions**
Networking options available with the SCM820 enable advanced control and signal routing. Link multiple units together on a network, then control their settings and signal path remotely from a PC or Mac.

**Standard Ethernet or Dante Digital Audio**
Choose the best networking option for the application.

**Dante Upgrade Card**
Upgrade standard Ethernet models to add Dante digital audio.

**Dante Virtual Soundcard**
License included with Dante-equipped models and upgrade card allows a computer to connect to a Dante network for use with playback, recording, and internet calling software.

**Linking Mixers**
Dante-equipped SCM820 mixers can be linked to form large automixes of up to 12 units (96 channels of audio).

**Control System Compatible**
Connects to AMX and Crestron controllers.

Software and hardware-based control of key system settings
Remote Set-up and Control
SCM820 Control Software provides convenient management, monitoring, and configuration support for all key system settings. It features a rich, browser-based graphical user interface and is accessible from any networked computer.

Control tabs

Inputs
Manage parameters and monitor audio levels for each input channel

IntelliMix
Configure IntelliMix modes and route channels to mix outputs

DFR (Digital Feedback Reduction)
Adds two channels of adaptive EQ filtering to find and attenuate feedback frequencies

Outputs
Manage parameters and monitor audio levels for each direct output channel and mix outputs

Link Group
Create and manage larger automixes through linking multiple devices

Preferences
Manage global device settings

DFR (Digital Feedback Reduction)
Enhancing the expansive feature set already available through the SCM820 control software, DFR (Digital Feedback Reduction) adds two channels of adaptive EQ filtering to find and attenuate feedback frequencies, noticeably improving gain before feedback in live sound reinforcement systems.

- Two channels of patented Shure Digital Feedback Reduction
- Assignable to input channels and mix outputs
- Automatic feedback detection and filter deployment
- Up to 16 filters per channel
- 25 Hz to 20 KHz bandwidth
- Up to 18 dB gain reduction per filter
- Selectable low/high Q filter width (1/40th or 1/70th octave)
## Selected Specifications

**SCM820 rear panel**

**SCM820-DAN-DB25 rear panel**

### General

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Frequency Response</td>
<td>20 Hz to 20 kHz (±1 dB)</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>Analog-to-Analog: ±110 dB</td>
</tr>
<tr>
<td>20 Hz to 20 kHz, A-weighted, typical</td>
<td>Analog-to-Dante, Dante-to-Analog: ±113 dB</td>
</tr>
<tr>
<td>Dimensions</td>
<td>44 mm x 483 mm x 289 mm (1.7 in. x 19.0 in. x 11.4 in.), H x W x D</td>
</tr>
<tr>
<td>Weight</td>
<td>5.5 kg (12.0 lbs)</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>100 to 240 V AC, 50-60 Hz, 1 A</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>−18°C (0°F) to 63°C (145°F)</td>
</tr>
</tbody>
</table>

### Analog Connections

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Channel input, Mix output: Active balanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aux input</td>
<td>Stereo, unbalanced</td>
</tr>
<tr>
<td>Direct output</td>
<td>Impedance balanced</td>
</tr>
</tbody>
</table>

| Clipping level                         | Channel Inputs: Line (+0): +20 dBV, Mic (+26): -6 dBV, Mic (+46): -26 dBV |
| Aux Input                              | +10 dBV                                                            |

| Phantom Power                          | 48 V DC, selectable per channel, 14 mA max.                        |
| Max Output Level                       | Line (+0): +20 dBV, Line (-20): 0 dBV, Mic (-46): -26 dBV          |

### Digital Signal Processing

<table>
<thead>
<tr>
<th>AD/DA Converter</th>
<th>24-bit, 48 kHz, ±113 dB dynamic range typical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latency</td>
<td>Analog to Analog: 0.51 ms, Analog to Dante: 0.23 ms</td>
</tr>
<tr>
<td>Gain Adjustment Range</td>
<td>Channel Input, Mix Output: −110 dB to +18 dB</td>
</tr>
<tr>
<td>Input Processing</td>
<td>Low cut, high shelf</td>
</tr>
<tr>
<td>Output Processing</td>
<td>8-band PEQ, limiter</td>
</tr>
</tbody>
</table>

| Networking Interface                   | SCM820: Single Port, 10/100 Mbps Ethernet                           |
|                                       | SCM820-DAN: Dual Port, Gigabit Ethernet, Dante Digital Audio        |

### Available SKUS

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM820</td>
<td>8 Channel Digital Automatic Mixer, block connectors</td>
</tr>
<tr>
<td>SCM820-DAN</td>
<td>8 Channel Digital Automatic Mixer, block connectors, Dante Digital Audio</td>
</tr>
<tr>
<td>SCM820-DB25</td>
<td>8 Channel Digital Automatic Mixer, DB25 connectors</td>
</tr>
<tr>
<td>SCM820-DAN-DB25</td>
<td>8 Channel Digital Automatic Mixer, DB25 connectors, Dante Digital Audio</td>
</tr>
<tr>
<td>A820-NIC-DANTE</td>
<td>Dante Digital Audio Upgrade Card for SCM820 Standard Ethernet Versions</td>
</tr>
<tr>
<td>DB25 Accessory Cables</td>
<td>DB25 to 8 XLR Male, DB25 to 8 XLR Female, DB25(x2) to 8 TRS</td>
</tr>
</tbody>
</table>

**Note:** All specifications subject to change.

**Dante is a trademark of Audinate Pty Ltd.**

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