SCM820 DIGITAL INTELLIMIX® AUTOMATIC MIXER

The Shure SCM820 is an 8-channel digital automatic mixer designed for use in speech applications, including sound reinforcement, broadcasting and audio recording. It uses IntelliMix technology to significantly improve audio quality in any application where multiple microphones are required.

Features

- Seamless automatic mixing and reduced background noise through dynamic channel gating and attenuation
- IntelliMix modes offer five different mixer mode presets of reliable automixing styles (Classic, Smooth, Extreme, Custom) or Manual to quickly tailor the mix for a particular application
- DB25 or logic-enabled block connector models available, each with 8 inputs
- Per channel direct outputs for use as an insert to a mixing console or recording
- Individual channel control for quick adjustment of gain, limiter, EQ, and solo/mute
- LED meter rings vibrantly display real-time settings, input and output levels
- Browser-based control software delivers comprehensive software control, monitoring, routing and configuration
- 3rd party control system (e.g. AMX, Crestron, etc.) compatible
- Models available with Dante™ digital networked audio for multi-channel audio networking over Ethernet
- Dante upgrade card available for standard Ethernet models
- Dante-equipped devices
- DFR (Digital Feedback Reduction) adds two channels of adaptive EQ filtering to find and attenuate feedback frequencies

Available Models and Accessories

I/O AND NETWORKING CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SCM820</td>
<td>Eight Channel Digital Automatic Mixer, Block Connectors</td>
</tr>
<tr>
<td>SCM820-DAN</td>
<td>Eight Channel Digital Automatic Mixer, Block Connectors, Dante™ Digital Audio</td>
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<tr>
<td>SCM820-DB25</td>
<td>Eight Channel Digital Automatic Mixer, DB25 Connectors</td>
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<tr>
<td>SCM820-DAN-DB25</td>
<td>Eight Channel Digital Automatic Mixer, DB25 Connectors, Dante™ Digital Audio</td>
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INSTALLABLE UPGRADE CARD

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>A820-NIC-DANTE</td>
<td>Dante™ Digital Audio Upgrade Card for SCM820 Standard Ethernet Versions</td>
</tr>
</tbody>
</table>

ACCESSORY CABLES

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB25-XLRM</td>
<td>Eight Channel DB25 to XLR Male Audio Snake, 25 ft.</td>
</tr>
<tr>
<td>DB25-XLRF</td>
<td>Eight Channel DB25 to XLR Female Audio Snake, 25 ft.</td>
</tr>
<tr>
<td>DB25-TRSM</td>
<td>Eight Channel DB25 to TRS Audio Snake, 25 ft.</td>
</tr>
</tbody>
</table>
SCM820 Product Specifications

**GENERAL**

**Dynamic Range**
(20 Hz to 20 kHz, A-weighted, typical)
- Analog-to-Analog: 110 dB
- Analog-to-Dante, Dante-to-Analog: 113 dB

**Output Noise (mix output / direct output)**
(20 Hz to 20 kHz, A-Weighted, one channel open)
- Output Pad
  - Line (+0): -90 dBV
  - Aux (-20): -110 dBV
  - Mic (-46): -135 dBV
- Input Gain Setting
  - Line (+0): +20 dBV
  - Aux (-20): 0 dBV
  - Mic (-46): -26 dBV

**THD+N**
1 kHz, +4 dBu out, mix output (MASTER) at +0 dB
<0.05%

**Common Mode Rejection Ratio**
150Ω balanced source, at 1kHz
>70 dB

**Dimensions**
44 mm x 483 mm x 289 mm
(1.7 in. x 19.0 in. x 11.4 in.), H x W x D

**Weight**
5.5 kg (12.0 lbs)

**Housing**
Steel; Extruded aluminum

**Power Requirements**
100 to 240 V AC, 50-60 Hz, 1 A

**Operating Temperature Range**
-18°C (0°F) to 63°C (145°F)

**Storage Temperature Range**
-29°C (-20°F) to 74°C (165°F)

**ANALOG CONNECTIONS**

**Channel Input**
Configuration: Active Balanced
- Clipping Level: Line (+0): +20 dBV
- Impedance:
  - Mic (-46): 5 kΩ

**Phantom Power**
48 V DC, selectable per channel, 14 mA max.
Mic level settings only. Phantom power automatically switched off in LINE position.

**Aux Input**
Configuration: Stereo, Unbalanced
- Clipping Level: +10 dBV
- Impedance: 10 kΩ

**Mix Output**
Configuration: Active Balanced
- Clipping Level: +10 dBV
- Impedance: 350 Ω

**Direct Output**
Configuration: Impedance Balanced
- Clipping Level: +10 dBV
- Max Output Level: +20 dBV

**Headphone Output**
6.35 mm (1/4") TRS, 100 mW, 350 Ω, dual mono (will drive stereo phones)

**DIGITAL SIGNAL PROCESSING**

**AD/DA Converter**
24-bit, 48 kHz, 113 dB dynamic range typical

**Internal Processing**
32-bit

**Latency**
From channel input to mix output:
- Single Device (ms)
- In a Link Group (ms)

**Channel Input Processing**
- Gain Adjustment Range:
  - Low Cut:
    - Comer: 25 Hz to 330 Hz
    - Slope: 12 dB/octave
    - Gain: -110 dB to +18 dB
  - High Shelf:
    - Corner: 5 kHz
    - Slope: 12 dB/octave
    - Gain: -110 dB to +18 dB

**Mix Output Processing**
- Gain Adjustment Range:
  - Low Shelf:
    - Corner: 25 Hz to 20 kHz
    - Slope: 12 dB/octave
    - Gain: -110 dB to +18 dB
  - High Shelf:
    - Corner: 25 Hz to 20 kHz
    - Slope: 12 dB/octave
    - Gain: -110 dB to +18 dB

**6-Band PEQ**
- Bandwidth: 1/70 to 4 octaves
- Ratio: 10:1
- Threshold: -50 dBFS to -20 dBFS
- Attack: 0.1 ms
- Decay: 100 ms

**NETWORKING**

**Network Interface**
SCM820
SCM820-DAN
- Single Port, 10/100 Mbps Ethernet
- Dual Port, 10/100 Mbps Ethernet, Dante digital audio

**Cable Requirements**
CAT 5e or higher, shielded, 100 m maximum

**Power Cable by Region**

**FURNISHED ACCESSORIES**
90A20082 Hardware Kit (SCM820, SCM820-DAN)
- Rack mount screws, screw driver, block connectors incl. strain reliefs for all inputs and outputs

90A20082 Hardware Kit (SCM820-DB25, SCM820-DAN-DB25)

95A20438 Ethernet cable (length 0.25 m)

Power Cable

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Power Cable by Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 95B8389</td>
<td>North America</td>
</tr>
<tr>
<td>Brazil 95A14336</td>
<td>Brazil</td>
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<tr>
<td>Argentina 95A14435</td>
<td>Argentina</td>
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<td>Europe 95A03074</td>
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<td>UK 95B84713</td>
<td>United Kingdom</td>
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<tr>
<td>China 95A89015</td>
<td>China</td>
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<tr>
<td>Korea 95B90730</td>
<td>Korea</td>
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<tr>
<td>Australia 9559428</td>
<td>Australia</td>
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**95A20438** USB Flash Drive

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