Overview
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 dramatically 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
- Mix A and B outputs with selectable mic or line level connect to a sound reinforcement system, mixing console, or recording device.
- Individual channel control for quick adjustment of gain, limiter, EQ, and solo/mute
- LED meter rings vibrantly display real-time settings and output levels
- Windows® 10 control software delivers comprehensive software control, monitoring, routing and configuration
- Models available with Dante™ digital networked audio for multi-channel audio networking over Ethernet
- Dante upgrade card available for standard Ethernet models
- 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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<tbody>
<tr>
<td>A820-NIC-DANTE</td>
<td>Dante™ Digital Audio Upgrade Card for SCM820 Standard Ethernet Versions</td>
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</table>

ACCESSORY CABLES

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<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>
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<tr>
<td>DB25-TRSM</td>
<td>Eight Channel DB25 to TRS Audio Snake, 25 ft.</td>
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</table>
Product Specifications

General

Static 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 (+26): -110 dBV
Mic (+46): -135 dBV

Equivalent Input Noise
(20 Hz to 20 kHz, A-Weighted, input terminated with 150Ω, digital gain at +18 dB)
Input Gain Setting
Line (+0): -93 dBV
Mic (+26): -118 dBV
Mic (+46): -130 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
Gain Setting
Line (+0): -90 dBV
Aux (+26): -113 dBV

Output Pad
Line (+0): -90 dBV
Aux (+26): -113 dBV
Mic (+46): -135 dBV

THD+N
<0.05%

1 kHz, +4 dBu out, mix output (MASTER) at +0 dB

Polarity
Non-inverting, any input to any output

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
Impedance: 5 kΩ
Clipping Level: >70 dB

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
Impedance: 10 kΩ
Clipping Level: +10 dBV

Mix Output
Configuration: Active Balanced
Impedance: 350 Ω
Clipping Level: >70 dB

Direct Output
Configuration: Impedance Balanced
Impedance: 150 Ω
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, Estimated Nominal, ±0.1 ms

Channel Input Processing
Gain Adjustment Range: -110 dB to +18 dB
Low Cut: Corner 25 Hz to 320 Hz
High Shelf: Corner 5 kHz
Gain: -18 dB to +18 dB

Mix Output Processing
Gain Adjustment Range: -110 dB to +18 dB
Low Shelf: Corner 25 Hz to 20 kHz
High Shelf: Corner 25 Hz to 20 kHz
6-Band PEQ: Corner 25 Hz to 20 kHz
Gain: -18 dB to +18 dB
Bandwidth: 1/70 to 4 octaves
Limit: Ratio: 1:1
Threshold: -50dBFS to -2dBFS
Attack: 0.1 ms
Decay: 100 ms

Networking

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

Cable Requirements
Cat 5e or higher, shielded, 100 m maximum

Furnished Accessories

90A20082 Hardware Kit (SCM820, SCM820-DAN)
90A20082 Hardware Kit (SCM820-DB25, SCM820-DAN-DB25)
95A20437 Ethernet cable
95A20438 USB Flash Drive