

# SCM820 Digital Automatic Mixer



## 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
- 3rd party control system (AMX®, Crestron®) compatible
- 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 Furnished Accessories

### I/O AND NETWORKING CONFIGURATIONS

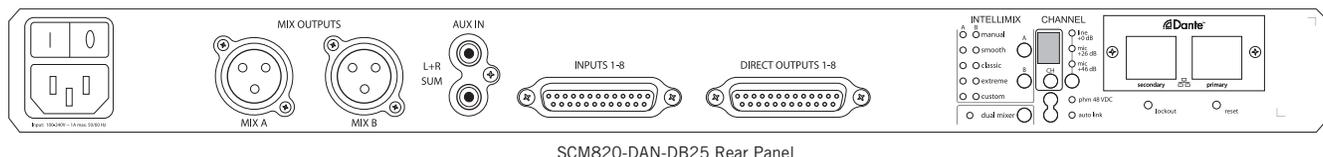
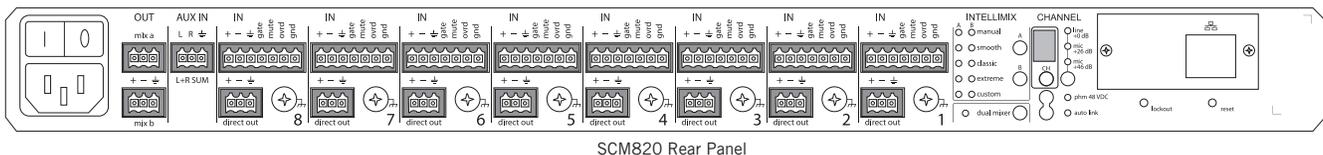
SCM820	Eight Channel Digital Automatic Mixer, Block Connectors
SCM820-DAN	Eight Channel Digital Automatic Mixer, Block Connectors, Dante™ Digital Audio
SCM820-DB25	Eight Channel Digital Automatic Mixer, DB25 Connectors
SCM820-DAN-DB25	Eight Channel Digital Automatic Mixer, DB25 Connectors, Dante™ Digital Audio

### INSTALLABLE UPGRADE CARD

A820-NIC-DANTE	Dante™ Digital Audio Upgrade Card for SCM820 Standard Ethernet Versions
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### ACCESSORY CABLES

DB25-XLRM	Eight Channel DB25 to XLR Male Audio Snake, 25 ft.
DB25-XLRF	Eight Channel DB25 to XLR Female Audio Snake, 25 ft.
DB25-TRSM	Eight Channel DB25 to TRS Audio Snake, 25 ft.



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# Product Specifications

## General

<b>Dynamic Range</b> <i>(20 Hz to 20 kHz, A-weighted, typical)</i>	Analog-to-Analog: 110 dB Analog-to-Dante, Dante-to-Analog: 113 dB
<b>Output Noise (mix output / direct output)</b> <i>(20 Hz to 20 kHz, A-Weighted, one channel open)</i>	Output Pad Line (+0): -90 dBV Aux (-20): -110 dBV Mic (-46): -135 dBV
<b>Equivalent Input Noise</b> <i>(20 Hz to 20 kHz, A-Weighted, input terminated with 150Ω, digital gain at +18 dB)</i>	Input Gain Setting Line (+0): -93 dBV Mic (+26): -118 dBV Mic (+46): -130 dBV
<b>THD+N</b> <i>1 kHz, +4 dBu out, mix output (MASTER) at +0 dB</i>	<0.05%
<b>Common Mode Rejection Ratio</b> <i>150Ω balanced source, at 1kHz</i>	>70 dB
<b>Polarity</b>	Non-inverting, any input to any output
<b>Dimensions</b>	44 mm x 483 mm x 289 mm (1.7 in. x 19.0 in. x 11.4 in.), H x W x D
<b>Weight</b>	5.5 kg (12.0 lbs)
<b>Housing</b>	Steel; Extruded aluminum
<b>Power Requirements</b>	100 to 240 V AC, 50-60 Hz, 1 A
<b>Operating Temperature Range</b>	-18°C (0°F) to 63°C (145°F)
<b>Storage Temperature Range</b>	-29°C (-20°F) to 74°C (165°F)

## Analog Connections

<b>Channel Input</b>	Configuration: Active Balanced Impedance: 5 kΩ Clipping Level: Line (-0): +20 dBV Mic (+26): -6 dBV Mic (+46): -26 dBV
<b>Phantom Power</b>	48 V DC, selectable per channel, 14 mA max. Mic level settings only. Phantom power automatically switched off in LINE position.
<b>Aux Input</b>	Configuration: Stereo, Unbalanced Impedance: 10 kΩ Clipping Level: +10 dBV
<b>Mix Output</b>	Configuration: Active Balanced Impedance: 350 Ω Clipping Level: Line (+0): +20 dBV Aux (-20): 0 dBV Mic (-46): -26 dBV
<b>Direct Output</b>	Configuration: Impedance Balanced Impedance: 150 Ω Max Output Level: +20 dBV
<b>Headphone Output</b>	6.35 mm (1/4") TRS, 100 mW, 350 Ω, dual mono (will drive stereo phones)

## Digital Signal Processing

<b>AD/DA Converter</b>	24-bit, 48 kHz, 113 dB dynamic range typical															
<b>Internal Processing</b>	32-bit															
<b>Latency</b> <i>From channel input to mix output, Estimated Nominal, ±0.1 ms</i>	<table border="1"> <thead> <tr> <th></th> <th>Single Device (ms)</th> <th>In a Link Group (ms)</th> </tr> </thead> <tbody> <tr> <td>Analog to Analog:</td> <td>.51</td> <td>0.76 + 4T<sub>N</sub></td> </tr> <tr> <td>Analog to Dante:</td> <td>.29</td> <td>0.54 + 4T<sub>N</sub></td> </tr> <tr> <td>Dante to Analog:</td> <td>0.28 + T<sub>N</sub></td> <td>0.53 + 5T<sub>N</sub></td> </tr> <tr> <td>Dante to Dante:</td> <td>0.06 + T<sub>N</sub></td> <td>0.31 + 5T<sub>N</sub></td> </tr> </tbody> </table> <p>T<sub>N</sub> = Network latency in milliseconds, as set in the device preferences page or Dante Controller. Note: Dante network latency is typically associated with the receiving device.</p>		Single Device (ms)	In a Link Group (ms)	Analog to Analog:	.51	0.76 + 4T <sub>N</sub>	Analog to Dante:	.29	0.54 + 4T <sub>N</sub>	Dante to Analog:	0.28 + T <sub>N</sub>	0.53 + 5T <sub>N</sub>	Dante to Dante:	0.06 + T <sub>N</sub>	0.31 + 5T <sub>N</sub>
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<b>Channel Input Processing</b>	Gain Adjustment Range: -110 dB to +18 dB Low Cut: Corner: 25 Hz to 320 Hz Slope: 12dB/octave High Shelf: Corner: 5 kHz Slope: 12dB/octave Gain: -18 dB to +18 dB															
<b>Mix Output Processing</b>	Gain Adjustment Range: -110 dB to +18 dB Low Shelf: Corner: 25 Hz to 20 kHz Slope: 12dB/octave Gain: -18 dB to +18 dB High Shelf: Corner: 25 Hz to 20 kHz Slope: 12dB/octave Gain: -18 dB to +18 dB 6-Band PEQ: 25 Hz to 20 kHz, ±18 dB Bandwidth: 1/70 to 4 octaves Ratio: 10:1 Limiter: Threshold: -50dBFS to -2dBFS Attack: 0.1 ms Decay: 100 ms															

## Networking

<b>Network Interface</b>	SCM820 Single Port, 10/100 Mbps Ethernet SCM820-DAN Dual Port, Gigabit Ethernet, Dante digital audio
<b>Cable Requirements</b>	Cat 5e or higher, shielded, 100 m maximum
<b>Network Addressing Capability</b>	DHCP, link-local, static

## Furnished Accessories

<b>90A20082</b>	Hardware Kit (SCM820, SCM820-DAN)
<b>90A20082</b>	Hardware Kit (SCM820-DB25, SCM820-DAN-DB25)
<b>95A20437</b>	Ethernet cable
<b>region dependent</b>	Power Cable <i>(see table below)</i>
<b>95A20438</b>	USB Flash Drive

Power Cable by Region	Part Number
US	95B8389
Brazil	95A14336
Argentina	95A14335
Europe	95C8247
UK	95A8713
Japan	95B9021
China	95B9073
Korea	95B9074
Australia	95A9128

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