8.4 Technical Specifications

Microphone Preamp

Type	XLR Female, Class A XMAX
Maximum Input level (unity gain)	+9 dBu +/- 1.0 dB
Gain Control Range	43 dB (+12 to +55 dB)
Frequency Response to Analog Outputs	20 Hz to 20 kHz, +0.5/-1.5 dB
Frequency Response to USB (Direct)	20 Hz to 20 kHz, +0.5/- 1.5 dB
S/N Ratio to Outputs (+4 dBu)	94 dB
THD+N (min. gain, A-wtd)	< 0.01%
Input Impedance	1 kΩ
EIN (+55 dB gain, 150Ω input, 20 Hz-22 kHz, A-wtd)	< -128 dBu
Common Mode Rejection Ratio (1 kHz, +55 dB gain)	65 dB
Phantom Power	+48 V, ±3V, Global

*Note: All channel inputs sum through mic preamp.

Instrument Inputs

Type	¼"TS Female, Unbalanced, Hi-Z
Maximum Input Level (min. gain, 1 kHz@0.5% THD+N)	+9 dBu ±1.0 dB
Gain Control Range	43 dB (+12 to +55 dB)
Frequency Response to Analog Outputs	20 Hz to 20 kHz, +0.5/-1.5 dB
Frequency Response to USB (Direct)	20 Hz to 20 kHz, +0.5/-1.5 dB
Dynamic Range (min. gain, A-wtd)	> 105 dB
Dynamic Range (mid. Gain, unwtd)	> 108 dB
THD+N (1 kHz, -1 dBFS, A-wtd)	< 0.01%
THD+N (1 kHz, -1 dBFS, unwtd)	< 0.01%
Input Impedance	> 1 MΩ

*Note: All Channel Inputs sum through Mic preamp.

Line Inputs

Type	¼"TRS Female, Balanced
Maximum Input Level (min. gain, 1 kHz@0.5% THD+N)	+26 dBu +/- 1.0 dB
Gain Control Range	Mono Channels: 40 dB +/- 1.0 dB (-5 to +35 dB), Stereo Channels: 0 dB or +10 dB (+10 dB Boost)
Frequency Response to Analog Outputs	20 Hz to 20 kHz, +0.5/-1.5 dB
Frequency Response to USB (Direct)	20 Hz to 20 kHz, +0.5/-1.5 dB
S/N Ratio to Analog Outputs (+4 dBu)	85 dB
THD+N (1 kHz, -1 dBFS, A-wtd)	< 0.01%
Input Impedance (Balanced)	10 kΩ

Main, Control Room, Aux, and FX Outputs

Type (Main Outputs)	XLR Male, Impedance Balanced
Type (Control Room, Monitor, FX Outputs)	¼"TRS Female, Balanced
Rated Output Level (Main Outputs)	+24 dBu, ±1.0 dB
Rated Output Level (Control Room, Aux, FX Outputs)	+18 dBu
Frequency Response	20 Hz to 20 kHz, +0.5/-1.5 dB
Dynamic Range (A-wtd)	> 108 dB
THD+N (Bandwidth 20~20 kHz, -1 dBFS, unwtd)	< 0.01%
Output Impedance	100 Ω

Headphone Output

Type	¼"TRS Female, Stereo, Unbalanced
Maximum Output Level	150 mW/channel @ 56Ω
Frequency Response	20 Hz to 20 kHz, +0.5/-1.5 dB
Dynamic Range (a-wtd)	> 103 dB
THD+N (Bandwidth 20~20 kHz, -1 dBFS, unwtd)	< 0.01%

System Crosstalk

Input to Output (Ref = +4 dBu, 20 Hz to 20 kHz, unwtd)	-90 dBu
Adjacent Channels (Ref = +4 dBu, 20 Hz to 20 kHz, unwtd)	-85 dBu

Signal Level LED

Signal	-30 dBFS (pre-EQ)
Clip	-3.0 dB before clip (pre- or post-EQ)

Channel EQ

Low Cut	100 Hz, -18 dB/octave
High Shelving	±15 dB @ 10 kHz
Mid Peaking (Mono Channels: AR16c, AR12c)	±15 dB @ 140 Hz to 3.5 kHz (variable)
Mid Peaking (Stereo Channels: AR16c, AR12c, All: AR8c)	±15 dB @ 2.5 kHz
Mid-Band Q	Boost: 1.0, Cut: 2.5
Low Shelving	±15 dB @ 100 Hz

Audio Interface

Host Interface	USB 2.0
ADC Dynamic Range (Component)	114 dB
DAC Dynamic Range (Component)	114 dB
Signal to Noise (A-wtd)	-96 dB
Bit Depth	24-bit
Internally Supported Sample Rates	44.1, 48, 88.2, 96 kHz
Jitter	<80 ps RMS (20 Hz – 20 kHz)
Jitter Attenuation	>60 dB (1 ns in => 1 ps out)

SD Recorder

Supported Media Format	FAT16-formatted SD Card, FAT32-formatted SDHC Card
Media Storage Capacity	SD Card: 2 GB, SDHC Card: 32 GB
Recording File Format	Stereo WAV
Playback File Formats	Stereo WAV, MP3
Sampling Rate (WAV)	44.1 kHz
Bit Depth	Recording: 24-bit, Playback: 16- and 24-bit

Power

Connector	IEC
Input Voltage Range	90 to 240 VAC

Physical	AR16c	AR12c	AR8c
Length	15.6″ (397 mm)	15.6″ (397 mm)	12.3″ (313 mm)
Width (chassis only)	18.9″ (480 mm)	15″ (381 mm)	11″ (284 mm)
Maximum Height	3.5″ (89 mm)	3.5″ (89 mm)	3.5″ (89mm)
Weight	14.1 lbs (6.4 kg)	11.9 lbs (5.4 kg)	7.1 lbs (3.2 kg)

Global Warming

Recommended Ambient Operating Temperature 0˚ to 40˚ Celsius / 32˚ to 104˚ Fahrenheit