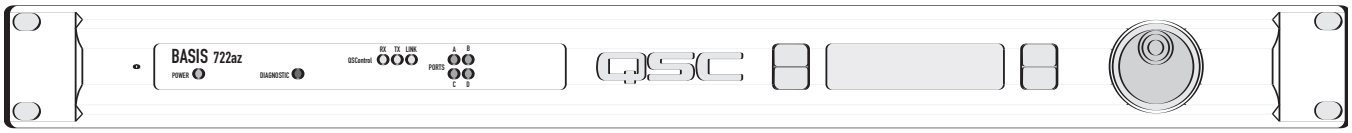
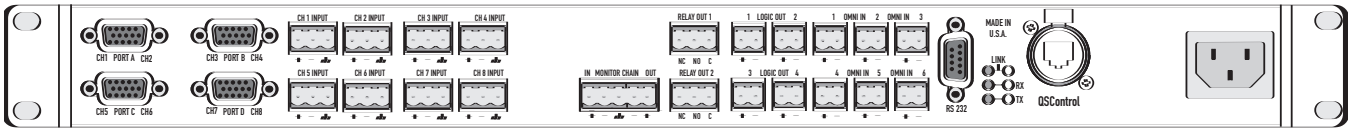
QSControl.net

DIGITAL SYSTEMS PRODUCTS
Preliminary Specifications

BASIS 722az





QSControl.net, QSC's next generation network audio system, achieves the seamless integration of the company's control, processing, and monitoring technologies. QSControl.net brings together QSC's digital, power amplification and loudspeaker products into a unified system that enables the user to administrate it all via a fully integrated graphical user interface. The new generation BASIS devices are designed to operate under the company's QSControl.net platform.

BASIS 722az

The BASIS platform meets the control, monitoring and processing needs of amplification and loudspeaker systems over an Ethernet network. The BASIS 722az units combine two distinct QSC technologies within a single hardware unit. Amplifier and loudspeaker control, monitoring and protection, and configurable DSP are seamlessly integrated into one powerful single RU package.

Through QSControl.net, QSC's BASIS and next-generation RAVE and DSP products can be networked together and controlled from a single software interface. In addition, multiple networked computers can be set up to control and monitor all of the units simultaneously.

Fixed Latency DSP

Users of most other configurable DSP systems are familiar with a variable latency inherent in the processing configuration. Add more processing blocks and you also add delay, whether you want it or not. QSC's DSP engine is unique in having a short and fixed processing latency through the DSP subsystem. When the A/D and D/A converters are included, the total analog-to-analog latency of a single unit is a negligible 2.354 milliseconds. QSC's fixed latency DSP is configurable DSP that stays fast and predictable from one configuration to the next.

For more information, log onto www.qscontrol.net

INPUTS	DSP	OUTPUTS
Analog		**DataPort**
8 line level	24 x 24	4 (8 channels)

Features

- **Amplifier and loudspeaker control, monitoring and protection**
- **Configurable DSP functions and signal paths**
- **Fixed latency DSP engine**
- **Ethernet controllable**
- **Each unit can store eight design configurations that can be changed on the fly**
- **Snapshots can recall config or block and/or parameter settings**
- **Matrix mixer – any size, up to 24 x 24**
- **Automixers – gain sharing**
- **Routers – any size, up to 24 x 24**
- **Gain controls – any channel count, up to 24**
- **Graphic equalizers**
- **Filters – high-pass, low-pass, all-pass, shelf, parametric, parametric shelf, Butterworth high and low-pass, Linkwitz-Riley high and low-pass, Bessel-Thomson high and low-pass**
- **Crossovers – Linkwitz-Riley, Butterworth, Bessel-Thomson in-phase, Bessel-Thomson symmetrical, 2-way, 3-way, and 4-way general purpose adjustable**
- **Compressors, peak limiters, AGC's, gates, dynamics processor**
- **Duckers – up to 8 channels, up to 60 seconds fade in and fade out times, priority mix**
- **Pink noise, white noise, sine**
- **Delays**
- **Macros – user-definable custom blocks**

PRELIMINARY SPECIFICATIONS – BASIS 722az

Performance

	IN	OUT	THRU
Dynamic range (AES-17, -60 dB method, all sensitivities)			
Unweighted	> 115 dB	> 112 dB	> 110 dB
A weighted	> 118 dB	> 115 dB	> 113 dB
Distortion (20 Hz – 20 kHz, all sensitivities)			
+4 dBu (max)	<0.009% THD+N	< 0.009% THD+N	<0.009% THD+N
2 dB below clip (max)	<0.009% THD+N	< 0.009% THD+N	<0.009% THD+N
Crosstalk (20 Hz – 20 kHz)			
Inter-channel (max)	> 75 dB		
Inter-channel (typ)	> 90 dB		
Intra-channel (max)	> 85 dB		
Intra-channel (typ)	> 100 dB		
Frequency response			
20 Hz – 20 kHz (max)	+/- 0.5 dB		
20 Hz – 20 kHz (typ)	+/- 0.2 dB		
Audio converters	24 bit, 48 kHz, in and out		
Mute	Infinite attenuation		
Delay			
Analog input through full DSP chain to analog outputs	2.354 milliseconds (default group delay)		

Inputs/Outputs

Program inputs	8
Connector type	3-pin "phoenix style" (a.k.a. "euro style") detachable terminal blocks
Type	Electrically balanced
Grounding	All shield terminals connected to chassis
Pinout	1:+ 2:- 3:CHASSIS GND
Input impedance (nom.)	Balanced: 10k ohms Unbalanced: 10k ohms
Common-mode rejection	20 Hz – 20 kHz (min.): > 54 dB, 20 Hz – 20 kHz (typ.): > 60 dB
Input sensitivities (variable)	Vrms: 1.5, 3, 9, 18 dBU: 5.7, 11.8, 21.3, 27.3 dBV: 3.5, 9.5, 19.1, 25.1
Program outputs	8
Connector type	4 HD-15 DataPort connections
Cable type	QSC DataPort cable, QSC p-n DPC-x ("x" designates cable length in feet)
Available "stock" lengths	1, 2, 3, 4, 5, 6, 10, and 20 ft., custom lengths available
Maximum qualified length	328 ft. (100 m) using QSC DP cable only. Non QSC cable limited to 6 ft. (audio only)

Monitor

Control room foldback monitoring	
Connector type	5-pin "phoenix style" (a.k.a. "euro style") detachable terminal blocks
Pinout	1:+(input) 2:-(input) 3:CHASSIS GND 4:-(output) 5:+(output)
Tap points	8 internal input, 8 internal output, 8 amplifier (pre-, post-, amplifier) software selectable
Monitor input	
Monitor signal (unit off)	Unity gain connection, relay bypass
Maximum level	+21 dBu
Impedance (nominal)	10k ohms
CMRR, 20 Hz – 20 kHz	> 54 dB
Monitor output	
Monitor	Sum of monitor input and signal from internal monitor tap point(s)
Freq. resp. (20 Hz – 20 kHz)	+/- 0.5 dB
Distortion (20 Hz – 20 kHz)	< 0.05% @ +4 dBu
Noise floor	> 90 dB
Output impedance (nom)	100 ohms
Output load (min)	600 ohms
Monitor level	
Control range (nom)	0 dB to -95.5 dB in 0.5 dB steps

Control Inputs/Outputs

Relay outputs	2 discrete floating relay switch outputs
Connector type	3-pin "phoenix style" (a.k.a. "euro style") detachable terminal blocks
Configuration	Electromechanical relay
Pinout	1:NC 2:NO 3:COM
Switching capacity (nom)	1A 30 VDC
Logic outputs	4 discrete outputs
Connector type	2-pin "phoenix style" (a.k.a. "euro style") detachable terminal blocks
Configuration	Single-ended, TTL compatible
Pinout	1:+(Signal) 2:-(CHASSIS GND)
Omni inputs	6 discrete inputs for TTL logic, voltage control or passive resistance
Connector type	2-pin "phoenix style" (a.k.a. "euro style") detachable terminal blocks
Configuration	Single-ended, ground referenced
Pinout	1:+(Signal) 2:-(CHASSIS GND)
Normal operating range	Reads signals between 0-5 V nominally
Potentiometer operation	Use 10k ohms for full range
Voltage tolerance	+/- 48 V
Current output	0.5 mA with 10k pot (for passive resistive controls)
RS-232 port	Female DB9 connector
QSControl port	Neutrik Ethercon RJ45 ruggedized data connector
Indicators	
QSControl status	Yellow Link, Tx, Rx, front panel Green Link, Tx, Rx, rear panel
Power	Blue, front panel
Diagnostic	Red, front panel
DataPort status (port)	Tri-state (red, green, yellow), front panel
LCD data display	2 line x 16 character, backlit, front panel