



QSCControl.net, QSC's next generation network audio system, achieves the seamless integration of the company's control, processing, and monitoring technologies. QSCControl.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 DSP devices are designed to operate under the company's QSCControl.net platform.

DSP 322ua

The DSP 322ua meets the processing needs of today's demanding audio systems. Controlled over an Ethernet network using QSC's Venue Manager software, this newest generation of DSP devices are fully configurable. Storing up to 8 signal flow design configurations with nearly unlimited snapshot parameter recall, the DSP 322ua can fit any application. And with all data stored in the device memory, files can be uploaded from the unit to multiple computers without complications.

Through QSCControl.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, visit www.qscontrol.net

Inputs	DSP	Outputs
Analog		Analog
8 universal mic/line	24 x 24	8 line level

Features

- Universal inputs - mic/line with pre-amps and phantom power
- 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
- THX™ approved for professional cinema applications

DSP functions include, but are not limited to:

- 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 generators
- Delays
- Macros – user-definable custom blocks with password protection

QSC and the QSC logo are registered trademarks of QSC Audio Products Inc. in the U.S. Patent and Trademark office and other countries. THX is a trademark of THX Ltd. All other trademarks are the property of their respective owners.

PERFORMANCE

	In	Out	Thru
Dynamic Range (AES-17, -60 dB method, all sensitivities)			
Unweighted	> 110 dB	> 112 dB	108 dB
A weighted	> 113 dB	> 115 dB	111 dB
Distortion (20 Hz – 20 kHz, all sensitivities)			
Gain = 0 - 30 dB	< 0.008% THD+N	< 0.009% THD+N	< 0.009% THD+N
Gain > 30 dB	< 0.05% THD+N	< 0.009% THD+N	< 0.05% THD+N
Crosstalk (20 Hz – 20 kHz)			
Inter-channel (maximum)	> 75 dB		
Inter-channel (typical)	> 90 dB		
Intra-channel (maximum)	> 85 dB		
Intra-channel (typical)	> 100 dB		
Frequency Response			
20 Hz – 20 kHz (maximum)	+/- 0.5 dB		
20 Hz – 20 kHz (typical)	+/- 0.2 dB		
Audio Converters	24 bit, 48 kHz, in and out		
Mute	Infinite attenuation		
Delay			
DSP 322ua in stand-alone mode	2.354 milliseconds (default group delay)		
<i>Analog input through full DSP chain to analog output</i>			

INPUTS/OUTPUTS

Program Inputs	8 inputs
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 (nominal)	Balanced: 6.8k ohms / Unbalanced: 13.6k ohms
Common-mode Rejection	20 Hz – 20 kHz (minimum): > 54 dB / 20 Hz – 20 kHz (typical): > 60 dB
E.I.N. (maximum)	150Ω, 30 dB: 124.5 dBu / 150Ω, 60 dB: 125.0 dBu
Input Sensitivities (variable)	Vrms: 0.9mV to 15.46 V / dBu: -62.2 to +26 dBu / dBV: -64.4 to +23.7 dBV
Phantom Power (per IEC 1938 [1996])	+ 48 V (software selectable)
Program Outputs	8 outputs
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
Maximum Output Level	9 V (rms) / +21.2 dBu / +19 dBV

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 (nominal)	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
RS-232 Port	Female DB9 connector (setup and diagnostics purposes only)
QSCControl Port	Neutrik Ethercon RJ45 ruggedized data connector
Indicators	
QSCControl 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
Signal Presence	Tri-State (red, green, yellow), front panel