QSCControl.net, QSC’s next generation network audio system, achieves the seamless integration of the company’s signal transport, 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 RAVE devices are designed to operate under the company’s QSCControl.net platform.

**RAVE 522ua**

The RAVE platform meets the processing and signal transport needs of audio systems over an Ethernet network. The RAVE 522ua units combine two distinct QSC technologies within a single hardware unit. Configurable DSP, and CobraNet™ audio transport are seamlessly integrated into one powerful single RU package.

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

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**Features**

- Universal inputs - mic/line with pre-amps and phantom power
- Configurable DSP functions and signal paths
- Fixed latency DSP engine
- Ethernet controllable
- CobraNet audio transport with new intuitive GUI
- Two Ethernet ports – CobraNet and control can be run over a single cable or be divided between the two ports. The CobraNet port is 100Base-T. The control port is 10Base-T.
- 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

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<table>
<thead>
<tr>
<th>Inputs</th>
<th>DSP</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog</td>
<td>CobraNet</td>
<td>Analog</td>
</tr>
<tr>
<td>8 universal mic/line</td>
<td>16 of 32</td>
<td>24 x 24</td>
</tr>
</tbody>
</table>

CobraNet is a trademark of Cirrus Logic, Inc.

THX is a trademark of THX Ltd.
RAVE 522ua Specifications

PERFORMANCE

<table>
<thead>
<tr>
<th></th>
<th>In</th>
<th>Out</th>
<th>Thru</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Range (AES-17, -60 dB method, all sensitivities)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unweighted</td>
<td>&gt; 110 dB</td>
<td>&gt; 112 dB</td>
<td>108 dB</td>
</tr>
<tr>
<td>A weighted</td>
<td>&gt; 115 dB</td>
<td>&gt; 114 dB</td>
<td>111 dB</td>
</tr>
<tr>
<td>Distortion (20 Hz – 20 kHz, all sensitivities)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain: 0 - 30 dB</td>
<td>&lt; 0.009% THD+N</td>
<td>&lt; 0.009% THD+N</td>
<td>&lt; 0.009% THD+N</td>
</tr>
<tr>
<td>Gain: &gt; 30 dB</td>
<td>&lt; 0.05% THD+N</td>
<td>&lt; 0.009% THD+N</td>
<td>&lt; 0.05% THD+N</td>
</tr>
<tr>
<td>Crosstalk (20 Hz – 20 kHz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-channel (maximum)</td>
<td>&gt; 75 dB</td>
<td>&gt; 85 dB</td>
<td>&gt; 100 dB</td>
</tr>
<tr>
<td>Inter-channel (typical)</td>
<td>&gt; 90 dB</td>
<td>&gt; 85 dB</td>
<td>&gt; 100 dB</td>
</tr>
<tr>
<td>Frequency Response</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Hz – 20 kHz (maximum)</td>
<td>+/- 0.5 dB</td>
<td>+/- 0.2 dB</td>
<td></td>
</tr>
<tr>
<td>Audio Converters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain: 0 – 30 dB</td>
<td>&lt; 0.008% THD+N</td>
<td>&lt; 0.009% THD+N</td>
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</tr>
<tr>
<td>Gain: &gt; 30 dB</td>
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Delay

<table>
<thead>
<tr>
<th>BASIS to Network</th>
<th>Standard CobraNet™ latency</th>
<th>Low latency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog input through full DSP chain to CobraNet output</td>
<td>7.104 milliseconds</td>
<td>4.438 milliseconds</td>
</tr>
<tr>
<td>Network to RAVE</td>
<td>6.313 milliseconds</td>
<td>3.646 milliseconds</td>
</tr>
<tr>
<td>CobraNet input through full DSP chain to analog output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAVE to RAVE</td>
<td>8.083 milliseconds</td>
<td>5.417 milliseconds</td>
</tr>
<tr>
<td>Analog input through full DSP chain, over CobraNet network, through full DSP chain, to analog outputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAVE in stand-alone mode</td>
<td>2.354 milliseconds (default group delay)</td>
<td></td>
</tr>
</tbody>
</table>

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: 6.81k 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): 150 Ω, 30 dB: -124.5 dBu / 150 Ω, 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: + 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: 1NC / 2NO / 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+: / 2-: / 3: 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+: / 2-: / 3: CHASSIS GND
- Normal Operating Range: Reads signals between 0-5 V nominally
- Potentiometer Operation: Use 10k ohms for full range
- Voltage Tolerance: +/- 48 V

RS-232 Port

- Female DB9 connector (setup and diagnostics purposes only)

QSCControl Port

- Neutrik Ethercon RJ45 ruggedized data connector

CobraNet Port

- Neutrik Ethercon RJ45 ruggedized data connector

Indicators

- QSCControl Status
- CobraNet Status
- Power
- Diagnostic
- LCD Data Display
- Signal Presence

Specifications subject to change without notice.

1675 MacArthur Boulevard • Costa Mesa, CA 92626 • Ph: 800/854-4079 or 714/957-7100 • Fax: 714/754-6174

RAVE 522ua - 04/23/07