The 215PCM is a self-contained active subwoofer system with dual 15-inch drivers. It provides power amplification not only for itself, but also two channels for driving stereo full-range or mono bi-amp “top box” speakers as well. Thus, it serves as a core module for portable live sound reinforcement systems and is ideal for corporate/industrial events. The 215PCM can supply extreme SPL within the recommended bandpass of 35-150 Hz (-3 dB). The 215SB is a passive subwoofer system with no backpack electronics. The 215PSB is a powered subwoofer, but without the “top-box” electronics.

The power and processing electronics of the 215PCM are contained in a backpack mounted on the rear of the subwoofer enclosure. Powering the 215PCM and 215PSB is an integral 3000-watt amplifier (equivalent to a bridged-mono PL 230) for the subwoofer itself. For the 215PCM, the backpack also contains a two-channel amplifier equivalent to a PL 236 (725 W at 8 ohms; 1100 W at 4 ohms; 1850 W at 2 ohms) for the top boxes.

The subwoofer amp and the top-box amp each have the processing equivalent of a DSP-3. Both processing units have eight user-configurable and selectable presets (using a personal computer and QSC’s Signal Manager software).

The cabinet of the 215 enclosure is constructed of Composilite™ carbon fiber composite material, which is extremely stiff and strong. The high rigidity of the cabinet walls raises the enclosure’s natural resonances to frequencies higher than the subwoofer’s operating range, so the cabinet performs as an ideal enclosure.

A bonus of the Composilite material is its very light weight, which enhances the cabinet’s portability. Strategically placed wheels and handles on the backpack provide easy single-person mobility.
## System Specifications

### Description
215PCM: Comprised of the 215SB Subwoofer Cabinet with a “backpack” containing two QSC DSP-3 24-bit Signal Processors, 1 vibration damped QSC PL230 3000 Watt amplifier and 1 vibration damped QSC PL236 3600 Watt amplifier. All interconnections for the audio signals and AC power are complete inside the backpack.

**NOTE:** Regular production PL230 and 236 amplifiers are not recommended replacements for the amplifiers in your 215PCM. See owners manual.

### Frequency Range
- **Recommended Bandpass:** 35 - 150 Hz (±3 dB)
- **Frequency Response:** 36 - 360 Hz (-3 dB)
- **Usable Frequency Range:** 29 - 440 Hz (-10 dB)

### Maximum Output
- **Calculated Peak Output:** 141 dB SPL
- **Measured Continuous Output:** 131 dB SPL

### Impedance
4 ohms (nom.) 3.7 ohms (min.) 23.3 ohms (max.)

### Power Handling
- 1300 W RMS, 2 hours (AES)
- 1000 W RMS, 8 hours (IEC)
- 800 W RMS, 100 hours (IEC)

### Sensitivity
- 101 dB half-space, 95 dB full space, 35 - 100 Hz, 1W, 1m

### Nominal Coverage
Omnidirectional (100 Hz)

### Transducers
Two 15-inch (394 mm) high efficiency subwoofer drivers.
- 4-inch (102 mm) voice coil, copper on fiberglass former.
- High excursion, multi-vented voice coil construction.

### On-board Power
Subwoofer: One vibration damped QSC PL230 amplifier in bridge mode, 3000 Watts at 4 ohms
Top Boxes: One vibration damped QSC PL236 amplifier, 2-Ch.’s, 1300 Watts per Ch. at 4 ohms/Ch.

### On-board Processing
Two QSC DSP-3 24-bit, 48 kHz Digital Signal Processors. (One Processor per amplifier)

### Connectors
- Neutrik NL4MP
- Standard Bridge Mono Wiring
- Pin 1+= Positive Input Signal
- Pin 1−= Negative Input Signal
- AC Power - NEMA L5-30 receptacle
- CH1/CH2 Input - female XLR, Input 3 (discrete mono) - female XLR
- Parallel Out (discrete mono - male XLR) wired directly in parallel with Input 3 connector
- Output to Top Boxes - two Speakon NL4MP receptacles:
  - CH1 wired for 4-wire biamp use
  - CH2 wired for 2-wire (left channel) normal use

### Controls
- AC Power switch and MODE switch (Combination Mode/Discrete Mode)

### Operating Modes
Combination Mode: Inputs are wired to both the Subwoofer Processor and the Top Box Processor inputs. Cross feeds CH3 (sub) with CH1 and CH2 for system applications.
Discrete Mode: Use all three inputs. Top Box Processor inputs are from CH1 and CH2 Input connectors.
Subwoofer Processor input is from Input 3 connector, input is connected ONLY to Processor Input 1.

### Signal Routing
- Signal Routing is dependant on MODE Switch position and Processor configuration.

### Other Features
- Built-in heavy-duty casters and handles. Durable rubber anti-skid feet on two sides of cabinet.
- Weather-resistant enclosure.

### Enclosure Type
High efficiency horn-ported box hybrid, tuned to 35 Hz. Material: Composilite™ cored construction.

### Weight
- 215PCM: 230 pounds (104.3 kg)
- 215SB: 175 pounds (79.4 kg)

### Overall Dimensions
- 215PCM 40” W x 26” H x 30” D, nominal (102 x 66 x 76 mm). Refer to drawing for details.
- 215SB 40” W x 26” H x 25” D, nominal (102 x 66 x 64 mm). Refer to drawing for details.

### Pole Cups
Three 2-inch diameter, 6-inch deep, aluminum. Refer to drawing.

### Flying Points
Four 16-inch “L-track” rails at corners. Refer to drawing.

### Power Requirements
- 120 VAC, 50/60 Hz, NEMA L5-30 connector (230 V. model available)

<table>
<thead>
<tr>
<th>Current Consumption @ 120 VAC, typical, pink noise</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idle</td>
<td>2A</td>
</tr>
<tr>
<td>Subwoofer 1/8 power, Top Box idle</td>
<td>11A</td>
</tr>
<tr>
<td>Subwoofer 1/8 power, Top Box 1/8 power 8 ohms each channel</td>
<td>19A</td>
</tr>
<tr>
<td>Subwoofer 1/8 power, Top Box 1/8 power 4 ohms each channel</td>
<td>23A</td>
</tr>
<tr>
<td>Subwoofer 1/8 power, Top Box 1/8 power 2 ohms each channel</td>
<td>28A</td>
</tr>
</tbody>
</table>

**NOTE:** 1/8 power is representative of current draw with typical music program material with occasional clipping.

### Digital Signal Processor Specifications

#### Type
User configurable, custom DSP with software for PC. Computer connection needed only for set up.

#### Signal Processing
Two QSC DSP-3 Processors, 24 bit, 48 kHz, one for each amplifier

#### Frequency Response
- **at 3 dB below full scale input voltage:**
  - 20 Hz - 10 kHz ±0.3 dB (XLR inputs on 215PCM rear panel)
  - 20 Hz - 20 kHz ±0.7 dB (XLR inputs on 215PCM rear panel)
  - 20 Hz - 20 kHz±0.2 dB (if using DataPort input on Processors)

#### Distortion
<0.01% THD+N @ +4 dBu out

#### Delay (throughput)
1.00 millisecond

#### Dynamic Range
- >93 dB unweighted, 20 Hz - 20 kHz, 1.5V, 4V and 9V sensitivity
- >88 dB unweighted, 20 Hz - 20 kHz, 18V sensitivity
### Amplifier Specifications

**Output Power in watts**
- **Subwoofer Amplifier (PL230 type)**: 4 Ohms, 1 kHz, 1% THD - 3000 Watts
- **Top Box Amplifier (PL236 type)**: 8 Ohms per channel (20 - 20 kHz, 0.03% THD) - 725 Watts
  - 4 Ohms per channel (20 - 20 kHz, 0.05% THD) - 1100 Watts
  - 8 Ohms per channel - 800 Watts
  - 4 Ohms per channel - 1300 Watts
  - 2 Ohms per channel - 1850 Watts

**Distortion**
- **(both amplifiers)**: SMPTE-IM
- Typical, 10 dB below rated power, 20 - 20 kHz - Less than 0.01%
- Typical, full rated power, 5 kHz. - <0.015%

**Frequency Response**
- **(both amplifiers, without processors, at 10 dB below rated output power)**: 20 Hz to 20 kHz, ±0.2 dB, -3 dB points: 8 Hz and 100 kHz

**Damping Factor (both amplifiers)**: Greater than 500

**Noise**
- **(unweighted, 20 - 20k Hz, both amplifiers)**: -107 dB

**Voltage Gain**
- **Input Sensitivity, Vrms** (this is the amplifier input sensitivity, not the Processor input sensitivity)
  - Subwoofer Amplifier: for rated power into 215SB Subwoofer - 1.07 V
  - Top Box Amplifier: for rated power into 8 Ohms - 1.23 V
  - Top Box Amplifier: for rated power into 4 Ohms - 1.07 V

**Input Clipping, Vrms (both models)**: 10 V (if 0 dB gain in Processor signal path)

**Controls**
- Ch. 1 and Ch. 2 gain knobs accessible via adjustment opening in the cabinet.

**Cooling**
- Continuously variable speed fans, one intake vent, two exhaust vents.

**Amplifier Protection (both amps)**
- Full short circuit, open circuit, thermal, ultrasonic, and RF protection
- Stable into reactive or mismatched loads
- Turn-on/turn-off muting, DC-fault power supply shutdown, clip limiting
- 2-step Class-H

**Load Protection (both amps)**
- Stable into reactive or mismatched loads

**Output Circuit Type (both amps)**
- 2-step Class-H

### QSC System Manager Connectivity

- **(applicable only to users employing QSC System Manager)**

<table>
<thead>
<tr>
<th>System Interface Compatibility</th>
<th>Cable</th>
<th>DataPorts Used</th>
<th>Amplifier Status Monitor Features</th>
<th>RS-232 Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSC System Manager monitors</td>
<td>QSC DPC-X DataPort cable, male-male (various lengths available, contact QSC’s Technical Services Department)</td>
<td>2 (1 per Processor)</td>
<td>Senses channel clipping</td>
<td>Two (one for each processor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Senses amplifier protect status</td>
<td>Normal 9-pin serial cable, male-to-female</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reports standby/operate mode</td>
<td>25 feet (7.6 meters)</td>
</tr>
</tbody>
</table>

### DSP Capabilities

<table>
<thead>
<tr>
<th>High-Pass Filter</th>
<th>Low-Pass Filter</th>
<th>High-Shelf Filter</th>
<th>Low-Shelf Filter</th>
<th>Limiter</th>
<th>Compressor</th>
<th>Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarity</td>
<td>Parametric EQ</td>
<td>Level Meter</td>
<td>2 to 1 Mixer</td>
<td>1 to 2 Splitter</td>
<td>Mute</td>
<td>Fader</td>
</tr>
<tr>
<td>Pink &amp; White Noise Source</td>
<td>Variable Frequency Tone Source</td>
<td>Clip &amp; Protect Indication available if operating the DSP real-time from PC</td>
<td>External Contact Closure Sensing (pin #9 of RS-232, operates with “Switched Gain” objects in Signal Manager software)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice.

All specifications identical on 215PSB with the exception of any top box electronics or connectivity.
ISIS Series 215PCM / 215PSB / 215SB Frequency Response and Impedance / Enclosure Dimensions

Physical Dimensions
All units in inches

Dimensions and angles are typical and subject to change. Please check with your QSC representative before making dimension-critical decisions.

Flying Track Extrusion Detail
Material: Aluminum, high tensile aircraft alloy

Specifications are subject to change without notice.

Frequency Response with Recommended Processing

Unprocessed Frequency Response and Impedance
SPL @ 1W, 1m

Specifications subject to change without notice.

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