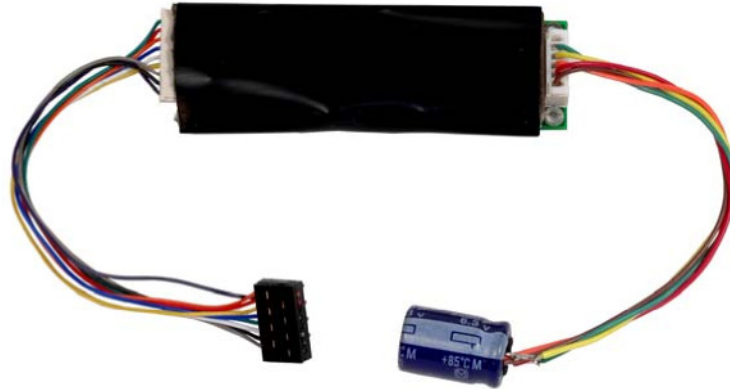


Quantum Revolution

QSI Quantum Sound Decoder for Aftermarket HO



Quantum Revolution has been developed for installation in existing non-sound HO engines. By taking the large capacitor off the board, making the unit smaller, adding components to keep the board running cool, and giving customers options for CAM or Back EMF motor speed detection as well as programming for different speaker arrangements, Sounds Like Trains can offer the proven QSI Quantum System in a package that will be easier to install in more engines.

The QSI Quantum System is designed to allow the greatest realism and flexibility in HO model train operation. Providing operation over common DC voltages, the Quantum HO system is programmable in analog to optimize operation with individual power packs. In addition, engine behavior can be programmed in both Analog and Digital Command Control to suit the operator, the specific engine, or layout conditions. All Quantum Systems are designed to be both backward compatible, via Legacy technology, and future expandable with downloadability.

Quantum Revolution maintains all the desirable elements of the original QSI HO Quantum System in addition to many new features and capabilities. The Quantum Revolution represents an entirely new and advanced hardware design with greater computing ability and expanded memory for additional sound effects and features.

Original Quantum HO Features

- **NMRA DCC Operation.**
- **Quantum Legacy™.** Operation in DC from standard power pack. *(US Patented)*.
- **Advanced Analog™ with QARC™ Technology.** Features and programming can be controlled in Analog DC with Quantum Engineer™ Controller. *(US Patented and Patents pending)*.
- **Five Sound Channels** allows simultaneous railroad sounds such as horn, bell, motor or chuff, pumps, air let-offs, and others.
- **System Volume Control** allows users to easily turn the overall volume up or down.
- **Individual Volume Control** of all sounds to customize the railroad experience for each operator.
- **Scale Sounds™.** Sound frequency response and individual sound volumes are equalized and balanced to best represent prototype sounds appropriate to the scale of the model locomotive.
- **Sound-of-Power™** simulates the sounds of locomotives under load.
- **Pro-Power™** special on-board power supply that improves immunity to shorts and opens as the locomotive operates.
- **Regulated Throttle Control™ (RTC™)** with a) *Inertial Control™*, b) *Power Share™*, c) *Selectable Load* and d) *Heavy Load* under Analog operation *(Patent pending)* gives more realistic momentum control of the locomotive.
- **Quantum Air Brakes™** *(Patent pending)* allows operators to use the Quantum braking system in a prototypical manner.
- **Five Light Drivers** including headlight, reverse light, hazard light, cab light and number board lights.
- **Stat Chat™** for instant verbal feedback, status reports and scale speed reporting.
- **Magnetic Wand™** allows quick hardware based operation for reset, engine select, and volume control. *(Patent Pending)*
- **Quantum Doppler™ Effect** computes scale miles per hour for prototypical sounds. *(Patented)*

Quantum Revolution Additional Features

- **Regulated Throttle Control in DCC** (Patent Pending) Momentum control in DCC has been unavailable previously.
- **Quantum Download:** Load the Quantum System with new software and sounds using the QuiKit™ and files downloaded from the Sounds Like Trains web site.
- **Cool operation.** Due to innovative power supply design, circuit board can be mounted anywhere in locomotive.
- **Expandable lighting and feature control** with Optional Feature board (not available on some models).
- **Magnetic Wand:** Remote placement of detector gives better accessibility and isolation from speaker magnets (Patent Pending).
- **New Sound Effects**, including a) *Stream Cocks*, b) *Sanding Sounds*, c) *Coal Shovel and Load*, d) *Coal Auger*, e) *Water Load Scenario*, f) *Fuel Load Scenario*, and g) additional *Appliance Operation Effects*.
- **Optional Cam Input** in addition to default on-board Back EMF motor speed detection for realistic wheel revolution synchronizing with engine chuff.
- **Added DCC Function Keys** and features as specified by the NMRA.
- **Speed Curves for Analog.**
- **Technical Support Guarantee.** Sounds Like Trains is dedicated to responsive support of Quantum customers. Along with developing web based technical support, we are building a team of in-house specialists as well as independent technical support centers to answer technical questions, to install Quantum systems, to troubleshoot, and solve any problems a Quantum customer may have.



Quantum Engineer (shown with DC Power Pack) allows full feature function of the Quantum Revolution system in Analog DC.

Quantum Revolution Specifications*

Physical Size	TBA
Maximum Peak Voltage	30 Volts
Steady State Current	2 Amps
Stall Current (1 sec)	4 Amps
Speaker Load	8/16 ohm
Light outputs	5
Expandable Feature Boards	TBA

*Specifications may change without notice.



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