

QSI's New Titan DC/DCC Sound & Power Decoders

Break the Stereo Sound Barrier!

Fred Severson, a Principal and Chief Engineer of QSI (Quinn-Severson Industries) announced today, the imminent release of the new Quantum DC/DCC "Titan Series" digital sound decoders. According to Fred, a seasoned veteran of locomotive sound unit designs for most of the major locomotive manufacturers, "The Titan Series represents the culmination and pinnacle of more than 30 years of locomotive sound system development by QSI." He went on to say that, "The Titans performance features dwarf the current leading technology options and unquestionably represent a mega step into the next generation. For example, the Titans flexibility offers the user in ONE decoder more features than are currently available by combining all the features of the TWO leading competing products."

"You can order the Titan specifically for the locomotive and sound you want and still have the option to choose by CV selection: multiple prime movers, horns, whistles, bells, etc. In addition the user can also cut, paste, edit and/or download completely different or updated sound files. Other good news is that aftermarket pricing will be comparable to the current QSI Q2 aftermarket products, the Revolutions, Magnums and Aristo PnPs."

"Conversely, the locomotive manufacturers' pricing will increase because the current OEM products - Q1a - use a special dedicated sound processor that has been discontinued in favor of the new advanced Titan sound processor that costs a little more. We have contacted all the various OEMs that we design sound systems for and some have elected to make the jump to the next generation Titans and some have not. Since we are now concentrating all our development efforts on the Titan, we will no longer be offering the Q1, Q2 OEM sound systems to the companies that have elected to maintain the status quo of the predecessor systems. In the short run we will sacrifice some revenue, but eventually the Titan quality will become the "gold standard" and the market leader. Furthermore, many US Patents are issued or pending to protect QSI's technology, QSI's OEM's and the Titan's future."

When asked about price competition Fred said, "We understand that in the rapidly developing sound decoder market there are prices ranging from the \$50 to \$130. As such, some users may elect to purchase quantity rather than quality, so be it. However, we also understand that all users have a favorite locomotive and for that one they will go for the best and that's where the Titan comes in. Running a Titan along with lower resolution sound decoders will make many Titan fans."

About the Titan's Sounds

The Titans boast an advanced 2nd Generation custom proprietary sound processor, that has significantly more horse power than the present leading 32 bit technology offerings. In addition to the high resolution digital sound, the Titan's sound engine packs a surprise: exclusive breakthrough stereo sound. Each stereo channel has 32 independent controllable sounds, on-off-volume or a total of 64 for mono. All this may seem excessive, overwhelming, ridiculous and much more than anyone would need, but the devil is in the details!

Here is what all this "tech talk" translates to for the average model railroader: the ultimate level of realism in features like dual separate prime movers or double and triple articulated chuffs, physical harmonious separation of horn & whistle bells and other loco sound control options. Take for example, due in future software releases, the feature that multi-chime horn sounds will be played by their individual chimes using Titan's additional sound channels. This not only allows the user to make up any horn sound he wants from the basic chimes - prototypical or his own custom horns, but also to play horns where each chime will contribute its own character in response to the horn command.

Then there is something QSI calls "atmospherics" that creates the environmental sound effects changes when a locomotive passes through different spatial environments, like from a village to country, again adding another sound feature mimicking the real thing.

Titan's (Non-Sound Related) Decoder Features

The Titans can not only boast the next generation performance in sound but there are many new “motor control” and “lighting” features in future releases, to further enhance performance:

- Bi-Directional Digital Communication
- High Speed Bi-Directional Service Mode Programming
- CPU controlled “Super Cap Hold-Up Option”
- Set “Auto Stop Distance” Based on Speed and Prototypical Breaking

Many more of these unique exclusive decoder features are detailed in the feature list below.

Stereo Recordings

In anticipation of the Titans arrival, crews have been around the country for the past two years making high resolution digital stereo recordings of many of the most popular steam and diesel locomotives. Here are a few:

- [Last Winton 201 Motor Captured In High-Def Audio Prior To Retirement](#)
- [Quest for Fire: Recording the Locomotives of Strasburg and Cass](#)

Many more are in process or planned. Also, in conjunction with the stereo recordings and mandated by the Titan's 64 sound channels, new recording techniques were developed using four microphones with four separate channels. The microphones were specifically located to capture all the distinct locomotive sounds from start up, idle warm up, loaded acceleration, notching, transition, deceleration, coasting, braking, and more, through shutdown. These locomotive recording techniques represent an industry first and are unequalled in scope. The result is that the Titan gives the user 3X more actual locomotive running sounds throughout the complete running range than the current products offer.

Backwards Compatibility: Q1a, Q2, Q3

In conjunction with QSI's policy of making an effort to breathe new life into and supporting its older technology products there is more good news. Owners of the older OEM (Q1a) sound systems offered in locomotives made by Atlas, Broadway Ltd, Life-Like, Intermountain and others, will be able to update to some Q2 Revolution era sound files. This is accomplished by using the Quantum Programmer or by sending in their Q1a Upgrade Chips for reprogramming.

In the same concept, Q2, Revolutions, Magnums, and Aristo PnPs will be able to download some aspects of the new Q3 Titan files also with the Quantum Programmer as described above. Note that due to hardware differences some features will be lost when upgrading to the next levels. Select legacy sounds will be available as the product matures.

Current Pending Orders

As is the case when technology transitions to the next level, some customers have pending orders/repairs for the discontinued products. All such orders will be shipped using the equivalent Titan replacements at the same pricing.

Titan Series Products Planned

Models	Scale	Format	Release
Titan-A	HO/S/O	Atlas / Athearn Board Replacement Format	5/11
Titan-U	HO/S/O	Universal Generic Format with NMRA 8 Plug	4/11
Titan Aristo	G	Aristo / Polks, PNP G Locomotives	6/11
Titan Magnum	O-G	Universal Generic Format	5/11
Titan-USA	G	PnP USA Trains Variations	TBD
Titan Driver	HO/S/O	Non sound PNP BEMF mobile decoder to accommodate the plug-in "Sound Plug"	9/11
Titan Sound Plug	HO/S/O	Sound Only Plug-In to the Titan Driver	9/11
Titan Micro	N	Narrow N Scale (0.39" W)	TBD
GWire Receiver-TE	All	GWire Wireless Receiver Compatible with "Crest" Train Engineer "Revolution Wireless Control System"	9/11

Features Lists:

Specifications:

Note: [Blue Items Planned for Future Software Releases.](#)

Feature	Brand A	QSI® Titans	Brand B
Operation Modes DC and DCC	DCC & DC	DCC & True DC	DCC & DC
Sound in Conventional DC Mode	Yes	Yes	Yes
Full Operation from DC Power Pack	No	Yes	No
Speaker Impedance	4 - 8 Ohms	4 Mono, 8 Stereo	8 Ohms
Included Speaker Options	No	Yes	No
Sound Memory Size	32 Mbit	64-256 Mbit	16 (Unconfirmed)
Custom Advanced Sound Processor	No	Yes	No
Number of Simultaneous Sound Channels	8	64	22
Stereo or Dual Channel Sound	No	Yes	No
High Speed Bi-Directional Service Mode	No	Yes	No
Manual Reset	No	Yes	No
Asymmetric DCC	No	Yes	No
CPU Controlled Super Cap Hold-Up Option	No	Yes	No
Audio Band With	4K	4-8K	8K
Number of Function Outputs	6	10-14	4-6
LED Compensation Mode	Yes	Yes	Yes
Function Mapping	Yes	Yes	F0 – F12
Steady State Motor Current (Only Ho Listed)	1.1 A	1.5-2.0 A	1.0A
Function Output Current	0.25A	0.1A	0.1A
Decoder Size (Only Ho Listed)	1.41" x 0.61" x 0.25"	1.75 x 0.66" X 0.26"	1.7" x 0.67" x 0.28"
Additional Decoder Formats	No	Yes	Yes
JST Harness w/NMRA 8 Pin Plug Included	Yes	Yes	No

Sound Features:

Feature	Brand A	QSI® Titans	Brand B
Separate Dual/Triple Prime Mover/Chuff Sounds	No	Yes	No
Reverb Effects	No	Yes	Yes
Doppler Effects	No	Yes	No
Echo Effects	No	Yes	No
Multiple Prime Movers Selectable by CV	Yes	Yes	No
Horn /Whistle Sound Selectable by CV	Yes	Yes	Yes
Bell Sound Selectable by CV	Yes	Yes	No
Custom Horns from Individual Chimes	No	Yes	No
User Downloadable Sound Set Options	Yes	Yes	No
User Cut, Paste and Insertion of Custom Files	No	Yes	No
Programmable Automatic Horn/Whistle/Bell	No	Yes	Yes
Water Fill Scenario	No	Yes	Yes
Fuel Loading Scenario	No	Yes	No
Fireman Coal Loading	No	Yes	Yes
Train Maintenance	No	Yes	No
Coal Auger	No	Yes	No
Radio Cab Chatter	No	Yes	No
Separate Channels for Dual Motor/Chuff Sound	No	Yes	No
Demo Scenarios: Automate Sounds for Displays	No	Yes	No
Sound of Power	No	Yes	Yes
Power Loading	No	Yes	No
Power Braking	No	Yes	No

Non Sound Related Decoder Features:

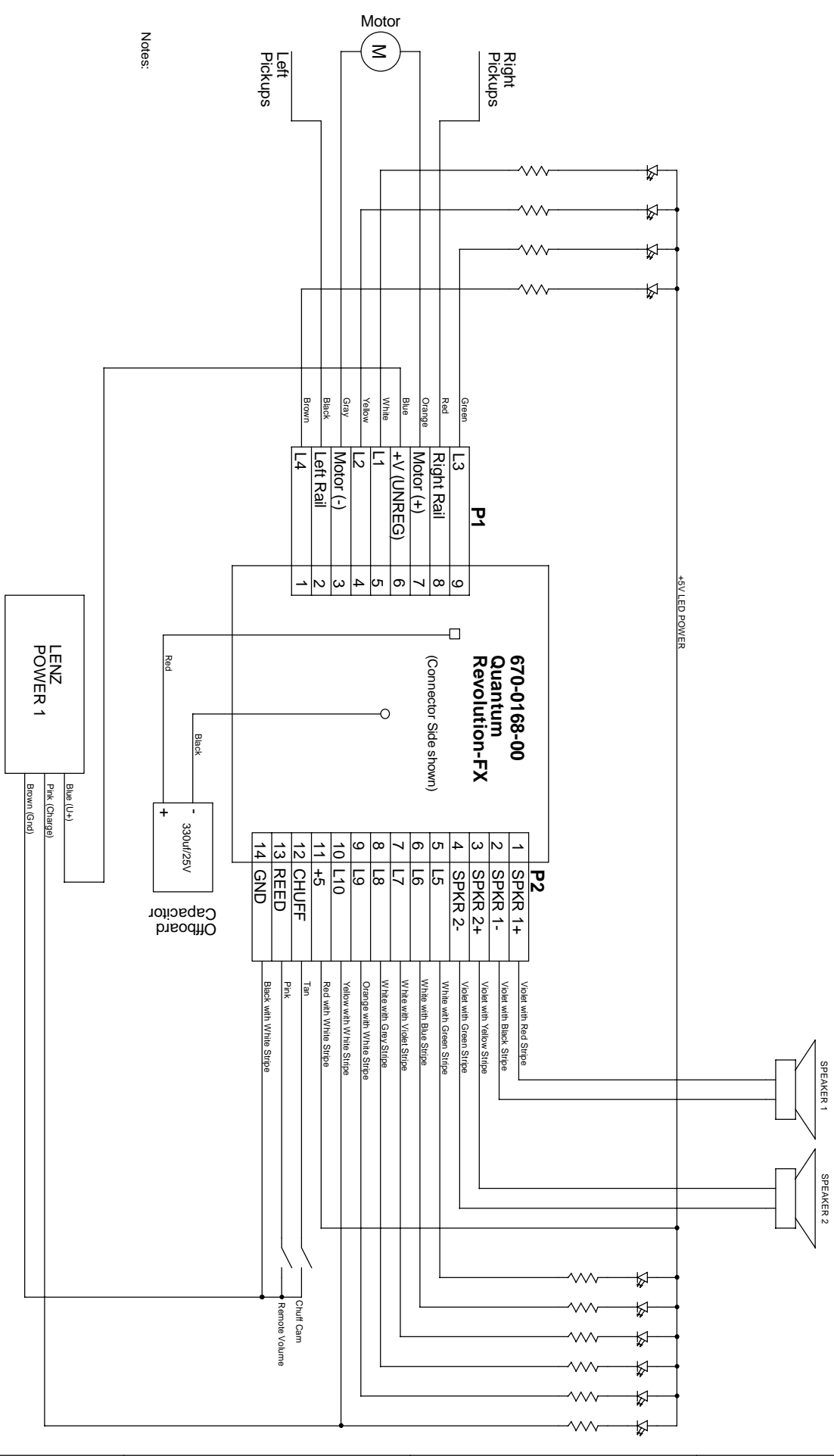
Feature	Brand A	QSI® Titans	Brand B
Adjustable BEMF Control	Yes	Yes	Yes
RTC (Regulated Throttle Control)	No	Yes	No
Very Slow Speed Performance < 1 SMPH	Yes	Yes	No
Remote Lighting Bus Support	No	Yes	No
Prototypical Breaking	No	Yes	No
User Programmable Defaults	No	Yes	No
Set Auto Stop Distance Based on Speed	No	Yes	No
Automatic Un-Coupler Operation	No	Yes	No
Firebox Flame Levels	No	Yes	No

Price, Warranty and Support:

Feature	Brand A	QSI® Titans	Brand B
List Price (MSRP) (HO Versions Only)	\$99.95	\$119.95	\$119.00
Calculated MSRP w/Spkrs + NMRA 8Plug	\$111.95	\$119.95	\$134.95
Warranty	2 Yr Limited	2 Yr Unconditional	90 Day Limited
Printed Manual Included	No	Yes	No
# of Tech Support Staff on Call	1-2	4-6	1-2

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PRELIMINARY



Notes:

When using LENZ POWER 1, L10 is not supported. Software must be configured via CV Manager.

Q S Industries, Inc. 3800 SW Cedar Hills Blvd, Suite 224 Beaverton, OR 97005 USA Ph: 503-350-0595 Fx: 503-656-9995	
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