SOUNDTRAXX
PRODUCT CATALOG

Contact

We have over 100 years of experience between our staff members that we use to provide you with the best service and support possible. We are here to assist you with anything from technical troubleshooting, to providing programming assistance, to making recommendations and repairs. It is our goal to guarantee that you get the most out of all of your SoundTraxx products.

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Durango, CO 81301 USA

Bringing the **Fun & Magic of sound**
to your model railroading experience

Contents

about
SOUNDTRAXX

SoundTraxx has been designing and manufacturing the latest in state-of-the-art sound systems for the discriminating model railroader for over 25 years. Our expertise in creating innovative and fun products for DCC and sound cannot be surpassed.

Many of our ground-breaking features began with our early products. Our first product was a powerful little lighting system called the Hyperlight. The Hyperlight was the first microprocessor-controlled lighting system to provide brilliant, selectable lighting effects —all within one product. We still incorporate this system into our Digital Sound Decoders.

In 1992, our first steam sound system included the first digital, playable whistle. Today our sound decoders use a more sophisticated version of this feature. Steam versions also introduced our customers to Dynamic Digital Exhaust™, a method of adjusting the sound volume and 'cut-off' of the steam exhaust chuff automatically. This enhanced the illusion of a steam locomotive coasting into the station or working to ascend a steep grade. This feature has evolved into one of the most exciting new features for steam, diesel, and electric locomotives in our new line of Tsunami2 Digital Sound Decoders (pg. 7).

Our Fireman Fred features (named to describe a set of sound effects associated with the work of a locomotive fireman) were the first of their kind. They have been a popular addition to SoundTraxx steam sound decoders over the years. Tsunami2 diesel sound decoders now include Fireman Ed features, while Motorman Omura tends to Tsunami2 electric engines.

We incorporate industry leading technology into easy-to-use products in our new Tsunami2 and Econami lines of Digital Sound Decoders. We continue to invest in cutting-edge manufacturing machinery and emphasize quality control and customer support. Our current sound decoders can play a multitude of sounds including whistles, bells, airhorns, compressors, dynamic brakes, and diesel engine prime movers.

Above all we think model trains are fun just like you do, and we strive to maximize this feeling with each of our products.

*Our manufacturing facility at 141 Burnett Drive, Durango, Colorado.

Our Philosophy

At SoundTraxx, we believe in superior customer service above all else. We design robust products with a long life, strive to bring fun to each customer, and aim to serve each customer for the life of their product and beyond. We have assembled a staff of professionals to design, manufacture, and sell our products right here in the U.S.A. All of our electronics are manufactured in our own facility in Durango, using the industry's finest components and our state-of-the-art manufacturing equipment.
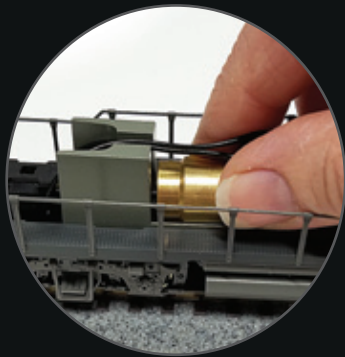
1: Test your Locomotive's Stall Current

Testing your locomotive's stall current is the **first and most important** thing to do before your purchase. The manufacturer of the locomotive may have provided this information for you, but beware! There are occasionally situations where a motor might not meet the manufacturer's specifications. Likewise, this measurement should not be confused with its operating current. Therefore, we highly recommend that you do the following:

1. Place the locomotive on a section of track powered with a conventional DC powerpack set to the same track voltage as your command station.
2. Connect a DC ammeter in series with one of the track feeders. If your powerpack has built-in meters, they may be used for this purpose.
3. Grasp the locomotive, and turn the powerpack on.
4. Stop the motor from turning by holding the flywheel or driveshaft.
5. Be sure that the powerpack voltage remains at the voltage set in Step 1.
6. Measure the current the locomotive is drawing while the motor is stalled. **This is the stall current and must be less than the decoder's rated capacity.**

*Note: *Visit our YouTube channel to see a video demonstration on How to Test your Stall Current.*
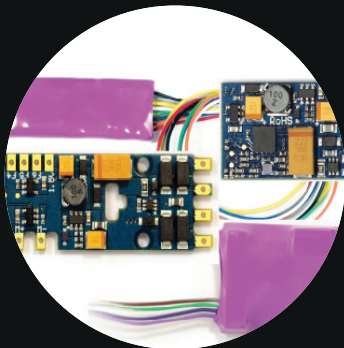
2: Choose the Right Board Format

SoundTraxx manufactures a wide variety of board formats to facilitate the easiest installation possible. Choose the board that best fits in your model.

Generally, the locomotive size, type, and available space for the installation will dictate your board format selection. Decoder dimensions are listed in this catalog and on our website. In many cases, choosing the right board format will be obvious. The Decoder Selector tool (available on our website) can provide additional guidance. For further help look to suggestions from fellow modelers, your local retailer, or contact our Customer Support Center by phone (970)259-0690 or email support@soundtraxx.com.

Also take into account the installation process when choosing a decoder. Some of our decoders are installed by way of small plastic caps that hold the wires in place. Some models are designed to plug into a mating connector on the factory-installed circuit board. Others simply plug into harnesses from prior installations.

3: Choose the Right Sound for your Model

Sometimes, choosing the right sound is easy, but if you aren't sure, we suggest selecting the sound that you like best. Many sound effects are adjustable, such as the exhaust chuff rate, bell ring rate, or number of airpumps. All SoundTraxx Digital Sound Decoders have a 'menu' of airhorns or whistles, bells, diesel prime movers, steam exhaust chuffs, and many other sounds that can be easily selected using a DCC command station.

Steam and electric models are easy once you find the board format that will fit in your model, as they have all available steam or electric sounds in one decoder.

When choosing the decoder for a diesel locomotive you need to pay a little more attention as we have a few manufacturer specific diesel decoders in each board format. The prime mover (i.e. ALCO, EMD, GE...) is an important factor to take into consideration.

The features list and decoder comparison chart (on the next page) offer a quick overview of technical specifications, sounds, and operating characteristics across our product line to help you to determine the product family that best suits your needs.

Also, our website contains sound samples, locomotive history and many helpful documents to guide you in the decision-making process.

measure, listen...
and let us find a decoder for you

DCC DECODER FEATURES:
- Compatible with NMRA DCC Standards and Recommended Practices
- No special programmers required
- Supports 'Operation Mode Programming' allowing CVs to be changed on the mainline without the use of a programming track

THROTTLE FEATURES:
- Speed interpolation provides smooth response in any speed step
- Programmable acceleration, deceleration, starting voltage, 3-point speed curves and braking
- Digital Sound Decoders: Hyperdrive2 advanced motor control
- Mobile Decoders: Hyperdrive advanced motor control

LIGHTING FEATURES:
- Function current: 100mA each
- Over 20 Hyperlight lighting effects
- LED Compensation Mode

* TSU-4400 function current: 400mA each

SOUND FEATURES:
- No special programmer required
- No download time required
- Pre-loaded with multiple sound files including: prime movers, exhaust chuffs, airhorns, whistles, bells, compressors and more
- Industry leading number of polyphonic sound channels - no sound interrupts another
- Industry exclusive 7-Band Equalizer to customize each speaker installation
- All sounds recorded from the prototype

Feature	Tsunami	Econami	Tsunami2
Motor Current (amps)	.75-1	1-2	1-4
CV Lock	✔	✔	✔
Total Factory CV Resets	✔	✔	✔
Selective Factory CV Resets		✔	✔
Supports All Programming Modes	✔	✔	✔
Max Number of Outputs	6	6	6
28-Function Support		✔	✔
NMRA Function Mapping	✔	✔	✔
Flex-Map Function Mapping		✔	✔
Motor Control Features			
2-4 Digit Addressing (w/advanced consist control)	✔	✔	✔
14, 28, 128 Speed Steps	✔	✔	✔
Standard & User Loadable Speed Curves	✔	✔	✔
3-Point Speed Curves		✔	✔
Silent Drive	✔	✔	✔
Back EMF & Back EMF Cut out	✔	✔	✔
Switching Mode		✔	✔
Variable Momentum	✔	✔	✔
F11 Braking	✔	✔	✔
Constant Brake Distance			✔
Lights			
Hyperlight Effects	14	20+	20+
Directionally Configurable Lighting Outputs	✔	✔	✔
CV-Adjustable Brightness		✔	✔
CV-Adjustable Master Brightness			✔
Audio Features			
Primary Mixer	✔	✔	✔
Alternate Mixer			✔
High Pass Filter			✔
7-Band Equalizer	✔	✔	✔
Reverb	✔		✔
Reactive Dynamic Digital Exhaust (DDE)			✔
CurrentKeeper Support		✔	✔
Diagnostic LEDs	✔	✔	✔
Steam Sound Features			
Exhaust Chuff Selections	1	4	10
Whistles	5-8	16	90
Bells	1	6	12
Airpump	1	4	10
Dynamo	1	4	8
Blower	1	1	10
Power Reverse			✔
Grade-Crossing Whistle Signal		✔	✔
BEMF Auto-chuff (no cam needed)		✔	✔
2-Cylinder Exhaust Chuff with Articulation	✔	✔	✔
3-Cylinder Exhaust Chuff		✔	✔
Rod Clank	✔	✔	✔
Snifter Valve	✔		✔
Drifting Effects			✔
Cylinder Cocks		✔	✔
Wheel Slip			✔

Feature	Tsunami	Econami	Tsunami2
Johnson Bar	✔	✔	✔
Coupler	✔	✔	✔
Glad Hand Release		✔	✔
Train Line Charge			✔
Independent Brake	✔	✔	✔
Brake Squeal	✔	✔	✔
Train Brake			✔
Emergency Stop ('Big Hole') Sounds		✔	✔
Sander Valve			✔
Fireman Fred Servicing Sounds	✔		✔
Clickety-Clack (Rail Joints)			✔
"All Aboard!"/Coach Doors		✔	✔
Cab Chatter			✔
Water Stop	✔	✔	✔
Ash Dump			✔
Fuel Loading			✔
Wheel Chains			✔
Selectable Fuel Type (coal, oil, wood)			✔
Diesel Sound Features			
Prime Mover Selections (max per decoder)	1	5	12
Airhorns	16	16	40+
Bells	1	7	14
Compressor	1	2	4
Grade-Crossing Airhorn Signal		✔	✔
Low Oil Pressure Alarm Bell			✔
Engine Start, Exhaust, & Shutdown	✔	✔	✔
Manual RPM Notching		✔	✔
CV-Adjustable Prime Mover Pitch Shift			✔
True Idle	✔		✔
Straight-to-Eight			✔
Straight-to-Idle			✔
Dynamic Brake with Braking Rate			✔
Poppet Valve	✔	✔	✔
Electronic Air Dryer			✔
Radiator Fan	✔	✔	✔
Coupler	✔	✔	✔
Glad Hand Release		✔	✔
Train Line Charge			✔
Train Brake			✔
Emergency Stop ('Big Hole') Sounds		✔	✔
Independent Brake	✔	✔	✔
Brake Squeal	✔	✔	✔
Hand Brake			✔
Sander Valve			✔
Steam Generator			✔
Fireman Ed Servicing Sounds			✔
Auxiliary Head End Power Generator			✔
Clickety-Clack (Rail Joints)			✔
"All Aboard!"/Coach Doors		✔	✔
Cab Chatter			✔
Fuel Loading			✔

Tsunami2

Premium Digital Sound Decoders

Tsunami2 is SoundTraxx' line of high-performance Digital Sound Decoders designed to enhance your model railroading experience by giving you a wide variety of innovative features and the most realistic sounds for your models.

Tsunami2's industry leading processing power provides the horsepower necessary to support 16 polyphonic sound channels, 28 function support, tons of sound and lighting effects in addition to Hyperdrive2 advanced motor control. An expanded memory eliminates the need to spend time downloading and programming sounds. We have the industry's largest library of pre-loaded sounds in each decoder giving you all of the sounds your model needs in one decoder! This includes countless new and remastered airhorns, whistles, bells, exhaust chuffs, prime movers and more. In total, Tsunami2 offers over 50 individual sounds in each decoder!

Tired of losing control of your model while trying to "run your prime mover?" Tsunami2 has completely eliminated the need to manually adjust notching rates with the introduction of Reactive Dynamic Digital Exhaust (DDE) for diesel models. This revolutionary feature senses changes in load on the model, resulting in louder volumes and increased RPM level as the engine climbs a grade — and the reverse going downhill. Coupled with up to three braking options, straight-to-eight and the all new straight-to-idle feature, operation of your locomotive couldn't get any more easy, fun or realistic!

EVER EXPANDING SOUND LIBRARY

SoundTraxx continuously records new locomotive sounds, growing our sound library each year to provide the most comprehensive collection in the industry. Most recently, our Tsunami2 Steam collection gained an additional 28 new whistle selections to choose from. This gives you a grand total of *90 beautiful whistles* in each of the four available formats!

Our collection of diesel recordings also continues to expand, with some oft-looked for prime movers rounding out our offerings. Our Sound Selection References and sound samples are available on our website to help you choose the decoder and sound set that is the best fit and character for your model!

Common Decoder Features Include:
- Powerful 32-bit processor capable of 16 simultaneous sound channels
- Our most powerful amplifier for increased volume range
- Hyperdrive2 advanced motor control
- Functioning locomotive and train brakes with adjustable braking rates
- 20+ Hyperlight lighting effects
- 4-6 function outputs
- Standard, 3-point, and user-loadable speed curves
- Flex-Map function mapping easily maps any function to any key
- Compatible with NMRA DCC Standards & RPs
- User adjustable reverb to customize every sound effect
- Alternate Mixer- volume settings for home and club layouts
- Clickety-Clack and authentic cab chatter

Diesel Specific Features
- Each decoder format provides up to 12 manufacturer specific prime movers (ALCO, EMD, GE, etc.)
- Reactive Dynamic Digital Exhaust (DDE) for diesel models
- Startup, shutdown, and exhaust through 8 notches
- Automatic or manual notching
- Functioning dynamic brake with variable load sound and adjustable braking rate
- Over 40 airhorns
- Selectable compressors, bells, and couplers
- First ever Fireman Ed with general service, fueling, cab sounds, and more
- Prototypically correct HEP modes and steam heat for passenger train operations
- GenSet Support
- Gas Turbine Electric (GTEL) Support
- Prime mover pitch shift

Steam Specific Features
- Improved high-speed exhaust chuff
- 10 exhaust chuffs
- Reactive Dynamic Digital Exhaust with drifting feature that changes with load
- Rod clank and valve packing sounds for drifting downgrade
- No cam necessary for an accurate chuff
- Adjustable exhaust cut-off
- 90 whistles
- Selectable airpumps, bells, dynamos, couplers, and more
- Fireman Fred sounds
- Locomotive servicing sounds such as ash dump and water stop
- 2-cylinder and articulated settings plus new 3-cylinder exhaust chuffs
- Cylinder cocks, blowdown, and wheel slip
- Configurable for coal, oil, wood, or auger-fuel types

Electric Specific Features
- Pantograph operation sounds
- Electric DDE with traction motor whine
- Over 40 airhorn/air whistle selections
- Motorman Omura provides cab sounds, operates doors, and services the engine
- Selectable compressors, bells, and couplers
- Trolley bell, stop request bell, and door sounds for trolleys and traction models
- Steam heat for authentic passenger train operation
- Catenary arcing light effect
- Shower of sparks sound effect

revolutionary features
## and loads of fun
all packed into one decoder

Tsunami2 TSU-1100

The TSU-1100 is a universal-style, 1-amp sound decoder with 4 function outputs. This is our smallest sound decoder, and it is ideal for N scale and small HO scale models with minimal space. It includes an optional capacitor or can be wired to a CurrentKeeper (P.N. 810140) to maintain performance over dirty track and switches.

Model TSU-1100 Specifications

Motor Stall Current:	1A Maximum
Dimensions:	27 x 10.5 x 5mm
Function Outputs:	4
Function Current:	100mA (each output)
Audio Amplifier:	1 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

| P.N.	Description
884006	*NEW!* TSU-1100 Steam-2
885001	TSU-1100 EMD Diesel
885021	*NEW!* TSU-1100 EMD-2 Diesel
885002	TSU-1100 GE Diesel
885003	TSU-1100 ALCO Diesel
885004	TSU-1100 Baldwin & Other Diesels
886001	TSU-1100 Electric
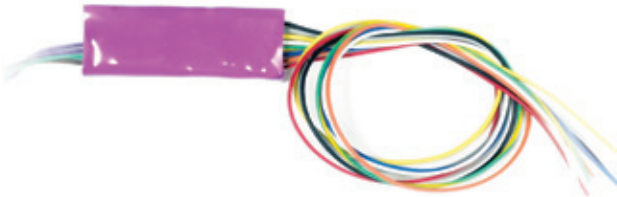
Tsunami2 TSU-2200

The TSU-2200 is a universal-style, 2-amp sound decoder with 6 function outputs. This version is perfect for all models with a slightly higher stall current, HO to S. It includes an onboard connector for use with a CurrentKeeper (P.N. 810140) to maintain performance over dirty track and switches.

Model TSU-2200 Specifications

Motor Stall Current:	2A Maximum
Dimensions:	35 x 18 x 6mm
Function Outputs:	6
Function Current:	100mA (each output)
Audio Amplifier:	2 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

P.N.	Description
884007	*NEW!* TSU-2200 Steam-2
885005	TSU-2200 EMD Diesel
885022	*NEW!* TSU-2200 EMD-2 Diesel
885006	TSU-2200 GE Diesel
885007	TSU-2200 ALCO Diesel
885008	TSU-2200 Baldwin & Other Diesels
886002	TSU-2200 Electric
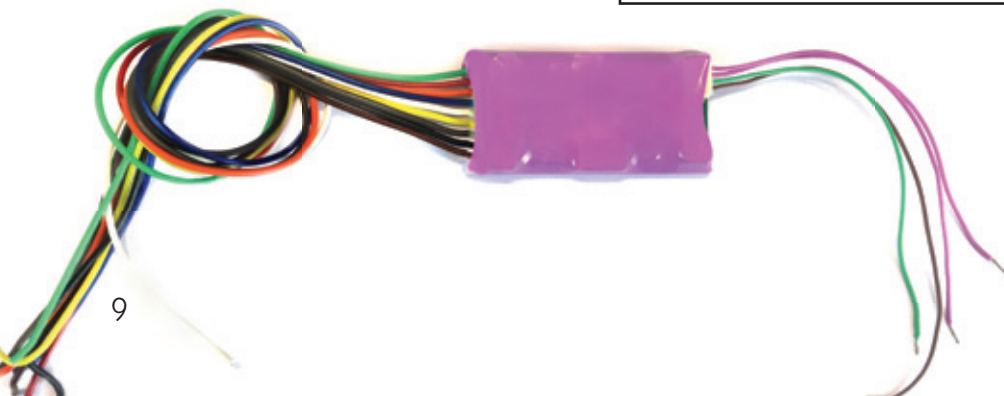
Tsunami2 TSU-21PNEM

The TSU-21PNEM is a 1-amp sound decoder with 6 function outputs designed for easy plug-in operation when mated to a 21-pin NEM connector.

Model TSU-21PNEM Specifications

Motor Stall Current:	1A Maximum
Dimensions:	30.5 x 15.5 x 6.5mm
Function Outputs:	6
Function Current:	100mA (each output)
Audio Amplifier:	2 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

P.N.	Description
884008	*NEW!* TSU-21PNEM Steam-2
885009	TSU-21PNEM EMD Diesel
885023	*NEW!* TSU-21PNEM EMD-2 Diesel
885010	TSU-21PNEM GE Diesel
885011	TSU-21PNEM ALCO Diesel
885012	TSU-21PNEM Baldwin & Other Diesels
886003	TSU-21PNEM Electric

Tsunami2 TSU-PNP

The TSU-PNP is a 2-amp sound decoder with 6 function outputs. It is designed to replace the factory-installed light board in many manufacturers' HO diesel models such as those made by Atlas, Athearn, Bowser Manufacturing, and InterMountain. It includes a connector for the easy addition of a CurrentKeeper (P.N. 810140) for trouble-free, smooth running over dirty track and switches.

Model TSU-PNP Specifications

Motor Stall Current:	2A Maximum
Dimensions:	74 x 17 x 5mm
Function Outputs:	6
Function Current:	100mA (each output)
Audio Amplifier:	2 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

P.N.	Description
885013	TSU-PNP EMD Diesel
885024	*NEW!* TSU-PNP EMD-2 Diesel
885014	TSU-PNP GE Diesel
885015	TSU-PNP ALCO Diesel
885016	TSU-PNP Baldwin & Other Diesels

Tsunami2 TSU-4400

The TSU-4400 is a universal-style, 4-amp sound decoder with 6 function outputs designed for models with higher stall currents such as some S, O and large-scale locomotives. This decoder features easy-to-use terminal blocks for no-fault wiring and a higher output amplifier for awesome volume, indoors or out. It includes an onboard connector for quickly adding a SoundTraxx CurrentKeeper (P.N. 810140).

Model TSU-4400 Specifications

Motor Stall Current:	4A Maximum
Dimensions:	69 x 30.5 x 14mm
Function Outputs:	6
Function Current:	400mA (each output)
Audio Amplifier:	3 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 26V

P.N.	Description
884009	*NEW!* TSU-4400 Steam-2
885017	TSU-4400 EMD Diesel
885025	*NEW!* TSU-4400 EMD-2 Diesel
885018	TSU-4400 GE Diesel
885019	TSU-4400 ALCO Diesel
885020	TSU-4400 Baldwin & Other Diesels
886005	TSU-4400 Electric

Econami
DIGITAL SOUND DECODERS

The biggest name in sound is also the biggest name in value! At just $84.95 MSRP, Econami is a full-featured line of Digital Sound Decoders designed with value in mind.

Available in two formats to suit both steam and diesel locomotives, Econami provides high-quality 16-bit sound, Hyperlight lighting effects, and Hyperdrive2 advanced motor control for enhanced realism. Econami also features Flex-Map technology for easy function key assignment.

The Econami line is easy to install in a variety of models. The ECO-PNP easily replaces the manufacturer-installed light board for various models. Also, the ECO-21PNEM mates nicely to any model with an NEM-supported 21-pin socket.

Both, steam and diesel versions include multiple exhaust chuffs or prime movers, along with 16 whistles or airhorns to suit the most popular models. In addition, each decoder features multiple selections for airpumps or compressors, bells, and couplers for even more customization!

big features
& budget friendly
right at your finger tips

Econami ECO-21PNEM

The ECO-21PNEM is a 1-amp sound decoder with 6 function outputs. It simply plugs into models equipped with a 21-pin NEM connector. Use with our JST-21PNEM Adapter (P.N. 810159) to easily adapt this decoder to an NMRA 9-Pin DCC "quick plug" equipped model.

Model ECO-21PNEM Specifications

Motor Stall Current:	1A Maximum
Dimensions:	30.5 x 15.5 x 6.5mm
Function Outputs:	6
Function Current:	100mA (each output)
Audio Amplifier:	1 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

P.N.	Description
881006	ECO-21PNEM Steam
882006	ECO-21PNEM Diesel

Econami ECO-PNP

The ECO-PNP is a 2-amp sound decoder with 6 function outputs. It is designed to replace the factory-installed light board in many manufacturers' models such as those made by Atlas, Athearn, InterMountain, and Bowser Manufacturing.

Model ECO-PNP Specifications

Motor Stall Current:	2A Maximum
Dimensions:	74 x 17 x 5mm
Function Outputs:	6
Function Current:	100mA (each output)
Audio Amplifier:	2 Watt, 8 ohm load
DCC Track Voltage:	7.5V - 22V

P.N.	Description
882004	ECO-PNP Diesel
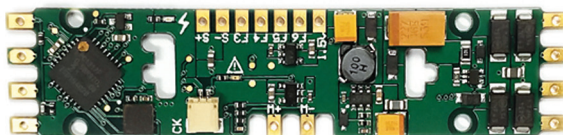
SoundCar

Stop limiting your train to locomotive sounds!

The Tsunami SoundCar is the *only* DCC Digital Sound Decoder to replicate railcar sounds and lights. The Tsunami SoundCar is a 16-bit, universal-style sound decoder featuring many new recordings, most of which can be customized to accommodate a variety of rolling stock. Furthermore, the decoder has automated sound sequences and auto-adjusting features for simplified operation and easy consisting.

The Tsunami SoundCar has been updated with *new sounds* including BeastBanter™ selections that provide livestock sound effects for cattle and sheep. Other new sounds include additional airhorns, whistles, and bells for cab cars and cabooses. SoundCar also adds other railcar sounds such as clickety-clack, flange squeal, flat spots, generator, brake cylinders, and glad hand release to your railroad.

For even more realism, the decoder has four Hyperlight lighting outputs for interior and exterior lights. These effects can simulate interior coach lights, marker lamps, flashing rear-end devices (FRED), and more.

These decoders are easy to install in all scales, N to G. They work with any 8-Ohm speaker. For the optimal experience, use a Tsunami SoundCar Digital Sound Decoder in every third or fourth car in a consist. Let Tsunami SoundCar bring your layout to life!

P.N.	Description
829100	Tsunami SoundCar DSD

SoundCar Sound Effects:

- 5 Bells
- 11 Airhorns & Whistles
- BeastBanter with "Spook the Livestock" feature
- Brake cylinders
- Brake squeal
- Flange squeal
- Flat spots

- Clickety-Clack: Adjustable for 2-, 4- & 6-axle trucks
- Emergency brake valve ("big hole"): Activated when the emergency stop button is pressed
- Generators: User-adjustable for reefers and passenger cars
- Handbrake tie down & untie

- Coupler clank
- Coupler release with glad hand separation
- Retainer bleed-off
- 4 Hyperlight lighting outputs

Tsunami SoundCar

CurrentKeeper

20mm Round Speakers
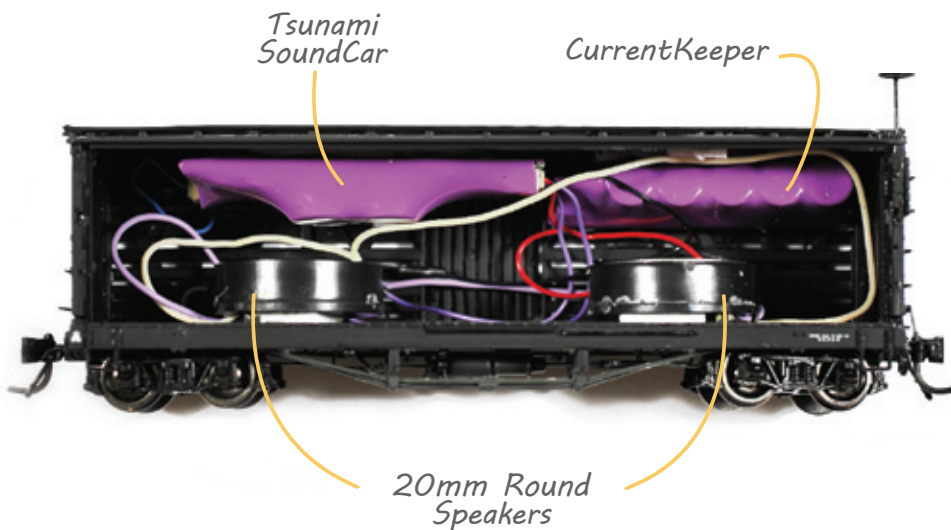
Sample installation in an HOn3 stock car using two baffled 20mm speakers and a CurrentKeeper.

SoundCar & Intelligent Consisting

With Tsunami SoundCar, your operating sessions can be more realistic than ever! Our easy-to-use Intelligent Consisting™ lets you add and remove cars from your train without tricky programming. When the mode is activated, you can simply wave a magnet over the cars to quickly cut them in or out of the consist. Just like a brakeman with a brake club, this action is synchronized with a sound effect of the car's hand brakes being tied or untied.

P.N.	Description
810141	SoundTraxx IC Wand - For use with Intelligent Consisting. Measures 5.5" long.

sound for
your entire train

SOUNDTRAXX
Mobile Decoders

Equip your fleet with DCC without breaking the bank! SoundTraxx DCC Mobile Decoders provide high-performance operation and 14 Hyperlight lighting effects in a variety of easy-to-use formats for models that do not exceed a 1-amp stall current.
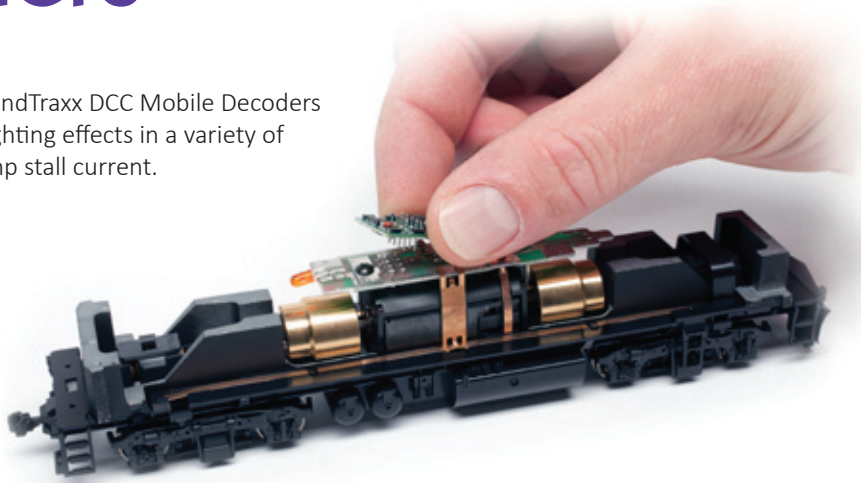
MC1Z102P6

For Z/N-scale, this 2-function decoder is available with a 6-pin NEM651 connector popular in many newer models. This decoder will operate in DCC only.
Measures: 13 x 9 x 3mm.
P.N. 851001

MC1Z102SQ

For Z/N-scale, this 2-function decoder with an attached wire harness, or 'squid cable,' for easy installation in some Z and most N-scale models. This decoder will operate in DCC only.
Measures: 13 x 9 x 3mm.
P.N. 851002

MC1H102P8

This HO-scale, 2-function plug-and-play decoder is suitable for use with a variety of models. It is manufactured with an NMRA compatible 8-pin 'direct-plug.' This decoder will operate in DCC only.
Measures: 17 x 17 x 7mm.
P.N. 852001
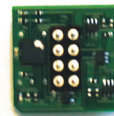
MC2H104AT

This HO-scale, 4-function decoder is designed to replace the manufacturers' existing light board in HO-scale diesel models. This decoder will operate in both DC and DCC.
Measures: 74 x 17 x 3mm.
P.N. 852002

MC2H104OP

This HO-scale, 4-function decoder with a 9-pin JST to 8-pin NMRA wiring harness can be used in many DCC-ready models that have an NMRA 8-pin socket. This decoder will operate in both DC and DCC.
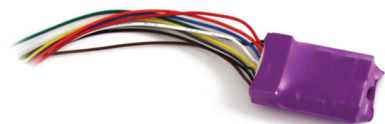Measures: 25 x 16 x 6mm.
P.N. 852003

MC2H104P9

This HO-scale, 4-function decoder has a 9-pin 'universal' JST wiring harness that is mostly used in older pre-DCC or brass models. This decoder will operate in both DC and DCC.
Measures: 25 x 16 x 6mm.
P.N. 852004

SURROUNDTRAXX ®

SurroundTraxx DSP-80 Multi-Train Sound System for DCC

SurroundTraxx is a major breakthrough in sound systems for model trains! For the first time, a sound system has been designed with multiple trains in mind. SurroundTraxx gives you the realism of high-fidelity sound moving with the train as it travels about the layout, without installing speakers onboard the engine.

SurroundTraxx works with a multiplicity of audio speakers that are strategically placed in hidden locations around the layout. Using the latest digital signal processing (DSP) technology and advanced block detection techniques, SurroundTraxx faithfully reproduces the sounds made by each train on the layout and directs the sound to the speaker closest to the train's location. As a train moves along its route, SurroundTraxx makes continuous adjustments to the sound level of each speaker so that the sound appears to follow the train around the layout.

SurroundTraxx does not simply switch the sound from speaker to speaker. It uses an intelligent cross-fade algorithm that factors in train speed, direction, and distance between speakers. The sound makes a smooth transition as your train travels from one sound zone to the next without abrupt pops or thumps.

- DCC surround-sound system for your layout
- Suitable for all scales-- N through G!
- Sounds interact and "move" with your trains; no onboard speakers necessary
- Use with any 8-ohm speaker (or subwoofer)
- 6 sound channels (supports 6 "sound zones")
- Simultaneous sound operation for up to 6 trains at once
- Memory storage for up to 99 locomotive profiles
- Extensive sound library to suit steam and diesel prototypes
- Ambient effects such as echo and reverb

| P.N.	Description
840001	SurroundTraxx DSP-80 Multi-Train Sound System for DCC

SOUNDTRAXX
Accessories

We carry a variety of speakers and accessories to help you get the most out of your sound system. Below is a small sample of our speakers, parts, wiring aids, and enclosures designed to make your installation a success. Visit our website (www.soundtraxx.com) for a full list of accessories.

Featured Accessories

CurrentKeeper
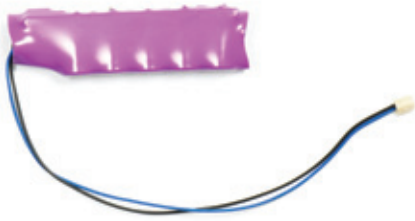
The CurrentKeeper is ideal for imperfect track or models that lack multiple pickups as it allows you to maintain operations during momentary losses of power. The CurrentKeeper will sustain power to the decoder for up to 10 seconds during electrical interruptions for hiccup free operation of sound, lights and motor.

The CurrentKeeper can be used with all SoundTraxx Digital Sound Decoders, Mobile Decoders, and Lighting Decoders. Equipped with a 2-pin harness, the CurrentKeeper plugs directly into your Tsunami SoundCar equipped models as well as most Econami and Tsunami2 Digital Sound Decoders making for easy "solder free" installations. It measures 40 x 6 x 11mm.
P.N. 810140

Mini Cube Speakers

These revolutionary speakers allow for big sounds in the smallest spaces. The unique design of these speakers allows for faithful reproduction of sounds throughout a very wide frequency range. With the factory supplied enclosure they can be mounted inside small locomotive cabs, under the narrow hood of diesel models and almost anywhere other speakers may not fit. If you have a model with limited space, these are the speakers for you!

Mini Cube Oval Speaker/Baffle

This tiny speaker comes with a properly proportioned speaker enclosure and it provides great results for models with space constraints! It measures 16 x 12 x 11.3mm(D) and has a peak power rating of 1 watt.
P.N. 810154

Mini Cube 2 Oval Speaker/Baffle

This is our smallest speaker and it comes with a properly proportioned speaker enclosure which provides remarkable volume for tiny models! It only measures 13 x 9 x 9.4mm(D) with a peak power rating of 75mW operating at 32 Ohms.
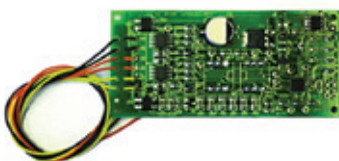**P.N. 810155**

Note: We recommend using two of the Mini Cube speakers when installed with higher powered Digital Sound Decoders. Failure to do so may result in damage to the Mini Cube speaker or the decoder.

Popular Accessories

PTB-100 Programming Track Booster

The PTB-100 facilitates the reliable programming of Digital Sound Decoders, in addition to providing short circuit detection. It works well with Tsunami and other previous generation decoders.
P.N. 829002

35 x 16mm Oval Speaker

A small speaker ideal for narrow hood diesels. It measures 35 x 16 x 8mm(D) with a peak power rating of 2 watts.
P.N. 810113

Oval & Round Speaker Gasket Kits

These come in a packages of four gaskets for mounting to a variety of our oval and round speakers.
P.N. 810118-810121 | P.N. 810138-810139

23mm Megabass Square Speaker

This speaker is perfect for enhancing the low bass sounds that are found in most diesel decoders. It measures 23 x 23 x 10.2mm(D) and has a peak power rating of 4 watts.

P.N. 810129

27mm Megabass Round Speaker

This speaker is great for boosting the low frequencies in most diesel and "big" steam sounds. It measures 27 x 14.3mm(D) and has a peak power rating of 2 watts.

P.N. 810130

28mm Megabass Square Speaker

Our largest Megabass speaker which provides the best low frequency bass sounds for your steam, diesel, or electric models. It measures 28 x 28 x 11.2mm(D) and has a peak power rating of 4 watts.

P.N. 810131

28mm (1") Speaker & Baffle Kit

Two of our favorites! This high-output speaker is convenient for HO scale and larger models. Our simple, snap-together baffle kit is designed for this speaker.

P.N. 810153 (speaker) **| 810110** (baffle)

50 x 90mm Oval Speaker

This is one of our largest speakers for use with the TSU-4400 in O-scale or larger models. It measures 50 x 90 x 37.5mm(D).

P.N. 810090

40 x 28.5mm Oval Speaker

Great sound if you can fit this one! It measures 40 x 28.5 x 11.3mm(D) and has a peak power rating of 2 watts.
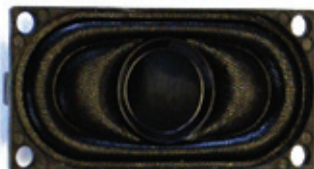
P.N. 810078

40 x 20mm Oval Speaker

This is a great speaker for many HO scale and larger locomotives. It measures 40 x 20 x 8mm(D) and has a peak power rating of 1.5 watts.

P.N. 810103

35 x 20mm Oval Speaker

If you have more space, this speaker is great for larger models. It measures 35 x 20 x 5.3mm(D) and has a peak power rating of 2 watts.

P.N. 810115

DBX-9000 Locomotive-to-Tender Wiring Kit

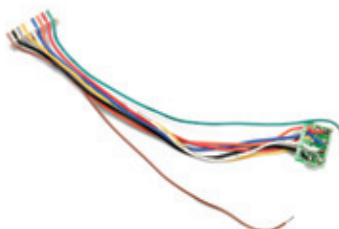This quick-disconnect harness assembly can be used for easy separation between the steam engine and tender.

P.N. 810132

9-Pin JST to NMRA 8-Pin Wiring Harness

This harness easily converts our Digital Sound Decoders to plug and play decoders for use with models equipped with an NMRA 8-Pin socket.
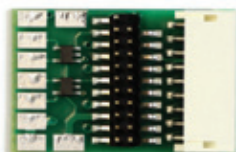
P.N. 810135

JST-21PNEM Adapter

Easily adapt any SoundTraxx 21PNEM decoder to a NMRA 9-Pin DCC "quick plug" equipped model. It can also be used with SoundTraxx 9-Pin JST Power Harness (P.N. 810069) to create a universal-style decoder. Measures: 22.5 x 16 x 7.5mm.
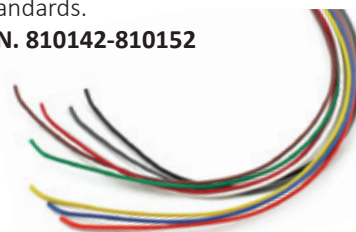
P.N. 810159

Ultra-Flexible Wire

Available in 10-foot lengths, this ultra-flexible 30AWG wire makes decoder installations a breeze. We offer 11 colors to match the NMRA and SoundTraxx standards.

P.N. 810142-810152

SOUNDTRAXX