

An Introduction to DCC and Sound



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SOUNDTRAXX™

NEW DIMENSIONS IN DIGITAL SOUND TECHNOLOGY

The Case For Sound

- Sound is addicting!
- Sound adds the fourth dimension in realistic model railroading
- Sound adds fun and interest to operating sessions!



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Prototype Sound Practices

- Whistle Signals
 - Communicate the same way real train crews do!
 - Warn others when your train is coming
- Correct use of bell
- Operable brakes with sound !
- User controlled (you're the engineer!) for more fun and realism!

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Installing Sound

- Installations are not as difficult as they may seem
- For new modeler's many locomotives can now be purchased with sound already installed!

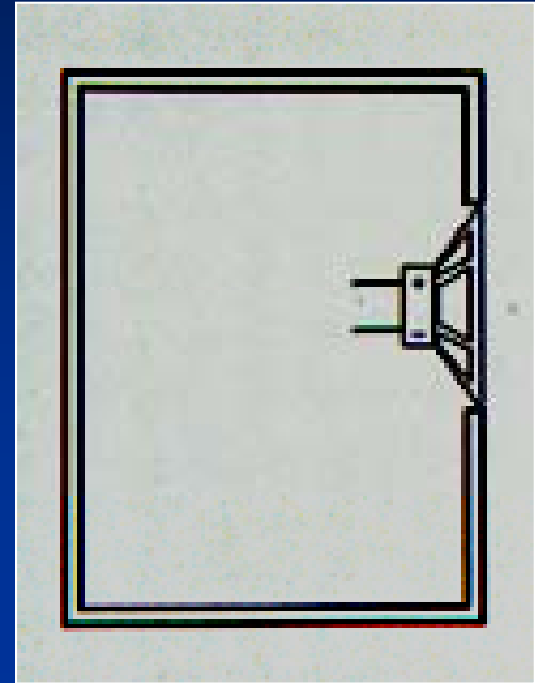
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Acoustic Suspension Speaker *'Sealed Box'*

- Easy to build
- Adapts well to model trains

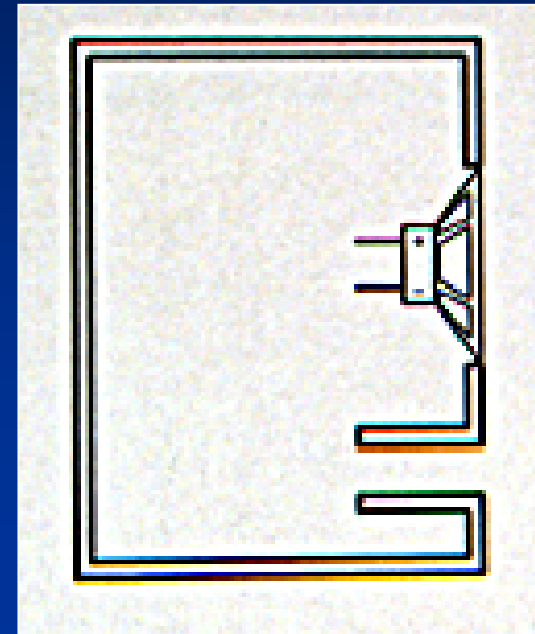


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Vented Port Speaker

- Improved efficiency
- Negligible benefits for small speakers



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Desirable Enclosure Characteristics

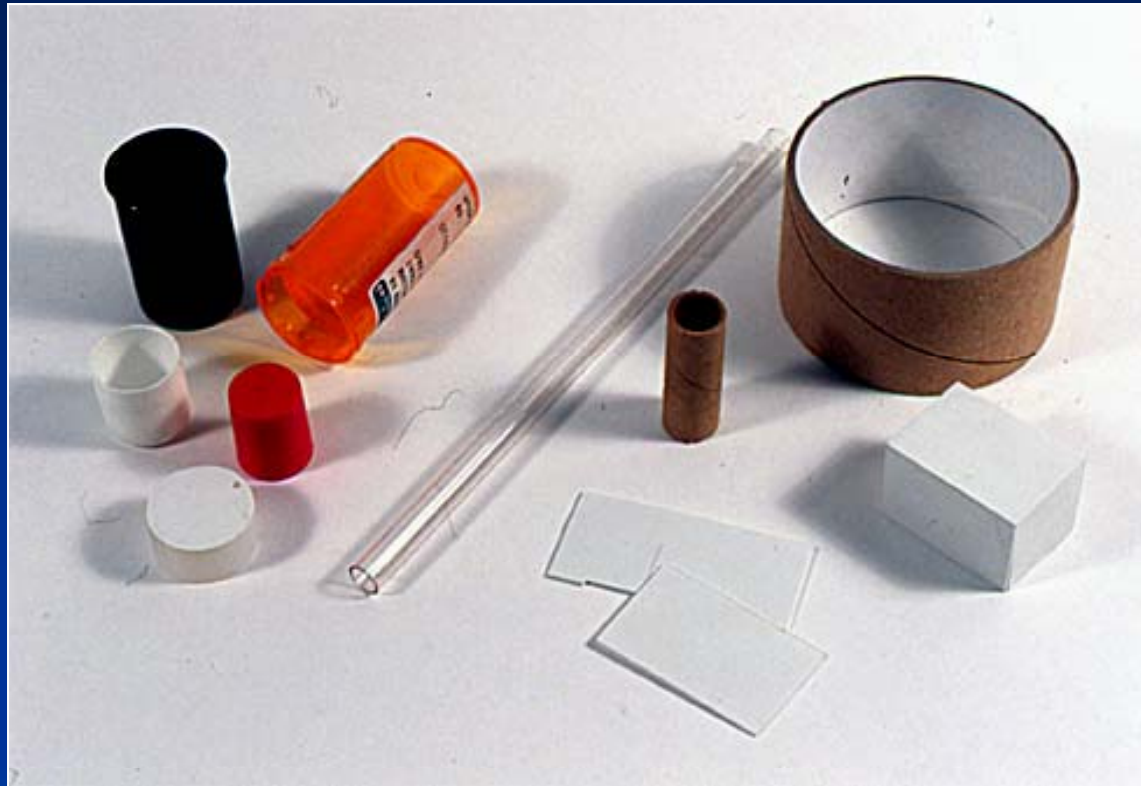
- Proportional to Speaker Size
- $W = 1, D = 0.79, L = 1.26$
- Airtight
- Made of stiff and dense material

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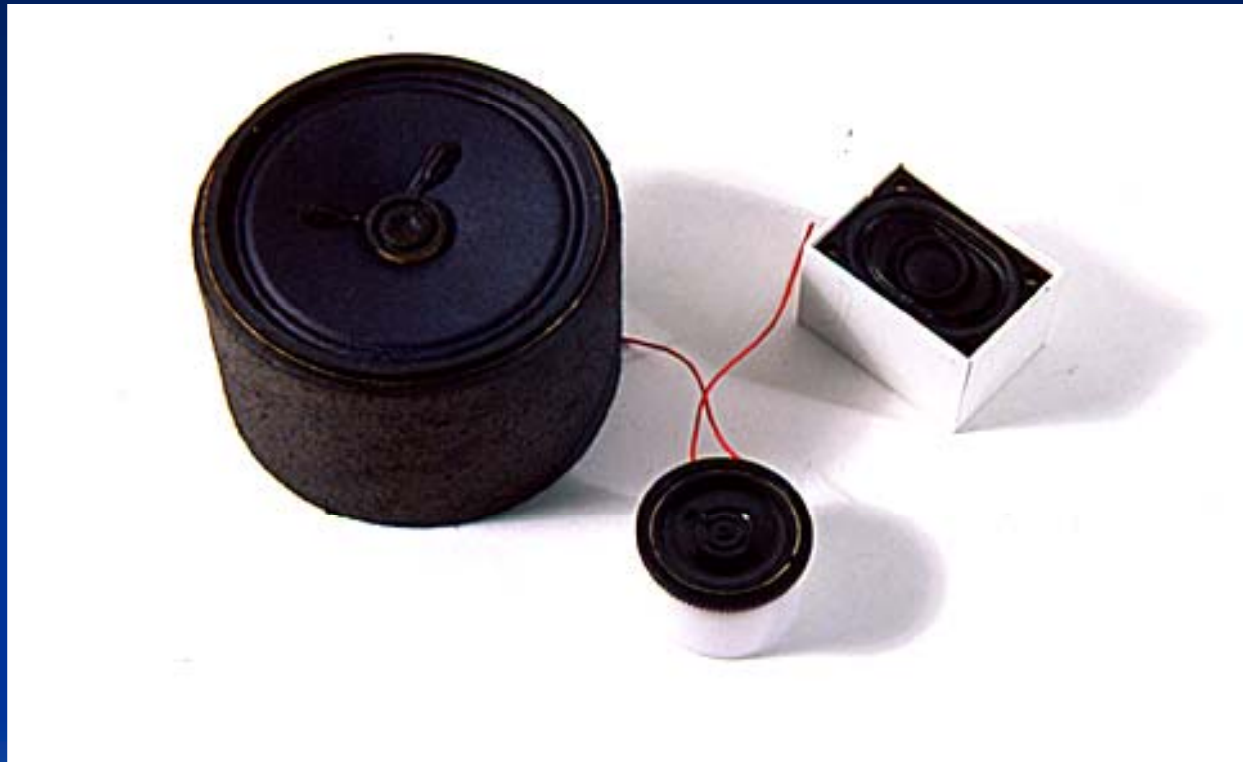
Speaker Enclosure Materials



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Speaker Baffle Examples



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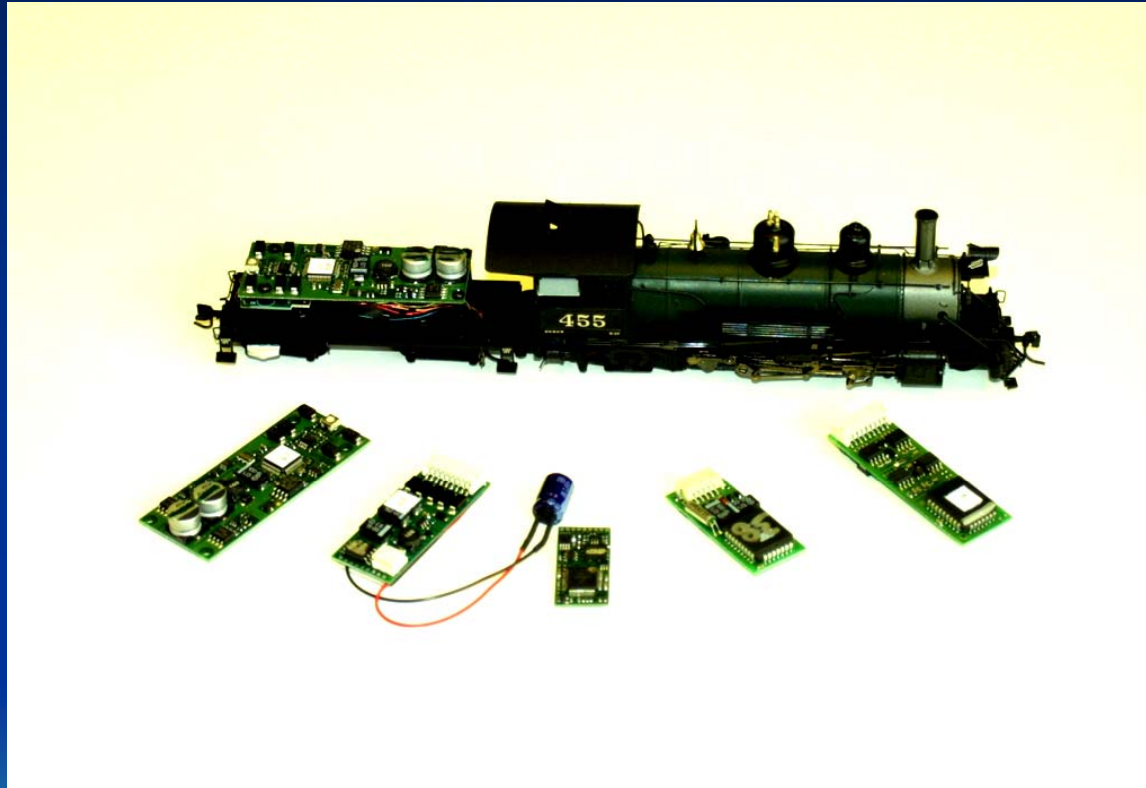
Athearn with TSU-GN1000



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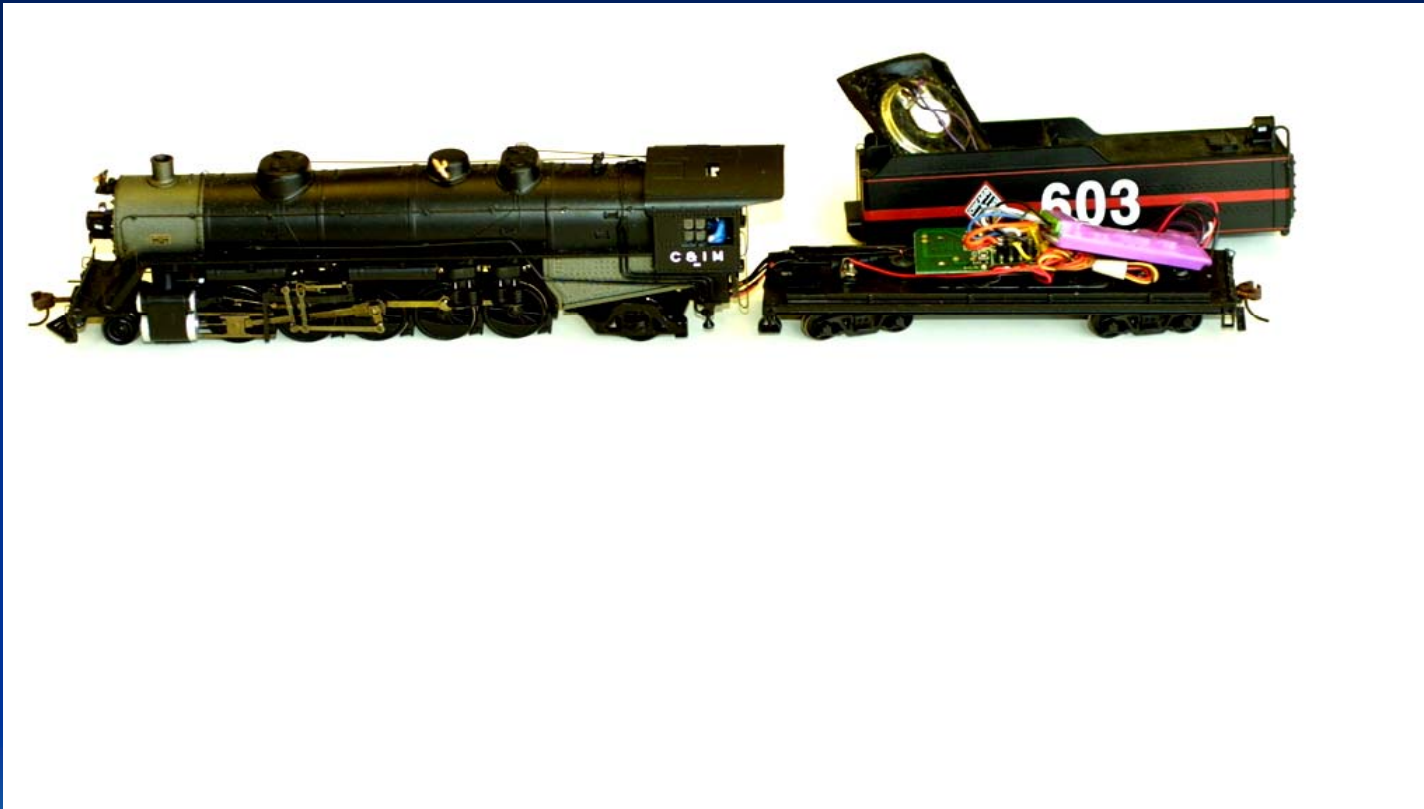
Blackstone K-27



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H0 Bachmann 2-10-2 Locomotive



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Athearn HO Challenger



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More Than Just A Whistle & Bell!

- Complete sounds for a steam locomotive
- Complete sounds for a diesel locomotive

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Prototype Sounds

- Tsunami decoders match prototypes closely to allow modeler all of the sounds they hear when they are near the real thing!

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Prototype Sounds

Steam Sounds

- Whistle (Selectable in each Tsunami)
- Exhaust Chuff
- Bell (Adjustable ring rate)
- Air Compressor (Single Phase vs. Cross Compound)
- Dynamo (Dyno Light feature and purpose)

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Prototype Sounds

Steam Sounds

- Blower
- Rod Clank
- Steam Release/ Cylinder Cocks
- Coupler Clank
- Brake Squeal
- Brake Release

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Prototype Sounds

Steam Sounds

- Snifter Valve
- Johnson Bar
- Pop (Safety) Valve
- Blower Draft
- Water Stop
- Injectors

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Prototype Sounds

Diesel Sounds

- Air Horn (Selectable in each Tsunami)
- Bell (Adjustable ring rate)
- Prime Mover (EMD 567, 645, 710/ Alco 244, 251 V12, 251 V16, 539, GE, Fairbanks Morse)
- Air Compressor

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Prototype Sounds

Diesel Sounds

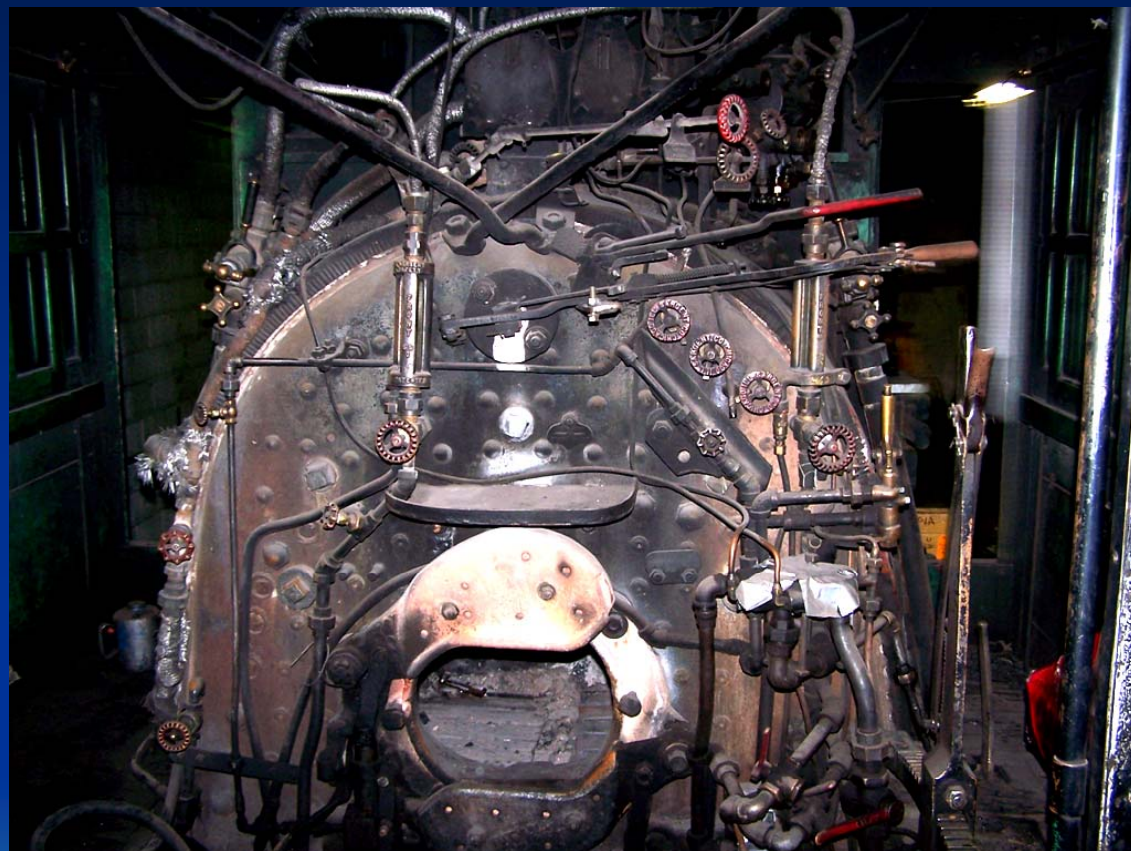
- Radiator Fans
- Coupler Clank
- Brake Squeal
- Brake Release
- Dynamic Brake (adjustable)

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Let's step into the cab



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Running a Tsunami K class

- Turn on the dynamo Pulling Up a Grade
- Whistle signals (F2&3)
- Turn on the bell (F1)
- Throw Johnson bar
- Release the brake (F11)
- Crack the throttle
- Hear the snifter lift
- Open the cylinder cocks (F4)
- Increase throttle
- Close cylinder cocks (F4)
- Blow a grade crossing



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Diesel Operations



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Lets step into the cab



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Running an EMD 710 Tsunami

- Turn on the prime mover and let the lines pump up
- Whistle (horn) signals (F2&3)
- Turn on the bell (F1)
- Release the engine brakes (F11)
- Ramp engine to pullout the slack
- Ramp prime mover to run 2 (F4)
- Increase to run 3
- Blow a grade crossing (talk about alternating ditch lights)

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Running an EMD 710 Tsunami

- Continue running engine to run 8.
- Turn on dynamic brake
- Turn on brake squeal
- Apply braking feature via CV 61

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Questions?

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