

September 2022 Volume 15, Number 9

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Layout of the Month

This month's photographs are from Bob Rothgery's Elk Pass HO scale layout. They were taken by Gary Myers during the August 6, 2022 Sunrise Division layout mini-tour.



September Meeting Notes

Signing in to the hybrid meeting began about 6:45 p.m. on September 1, 2022. The meeting began at 7:00 p.m. with 14 participants in attendance at the church and 5 attending via Zoom. The meeting began with introductions followed by Announcements, Tool Time, Show 'n' Tell, and the Clinic, all of which are reported on in greater detail in this edition. The meeting concluded at 8:45 p.m.

Next Meeting

The next meeting will be Thursday, October 6, 2022 in person at Holy Love Lutheran Church, 4210 S Chambers Road, Aurora, Colorado. Mask wearing is optional for all attendees. The meeting will start at 7:00 p.m. The meeting will also be streamed on Zoom with sign-in between 6:30 and 7:00.

URL of the Month

This month's featured YouTube video is another from the Chicago area.

The Final Rush Hour - Saying Goodbye to the Burlington Northern E Units - May 1992

https://www.youtube.com/watch?v=cL_E67e4Uj4

Upcoming Tool Time

Cut Glass—Gary Myers

Upcoming Clinic

1903 Salida 100' Dual Gauge TT Bridge—Gary Myers

Upcoming Show 'n' Tell Themes for 2022

October-Steam

November-2000's Era

December-Holiday Theme

Announcements

In an attempt to reduce problems, we continue to ask that Show 'n' Tell photos, Clinic presentations, and Tool Time photos be taken before the meeting and sent to Gary Myers

(garymyers06@comcast.net) for

presentation at the meeting and to the editor for inclusion in the Sunrise Herald (rlhoch422@gmail.com). (Ed.)

The Foothills Society of Model Railroaders swap meets have resumed at Green Mountain Presbyterian Church, 12900 W. Alameda Pkwy, Lakewood, CO. The meets are held on the third Saturday of odd numbered months.

Rail Fair at the State Fair Grounds (TECO Train Expo Colorado, Pikes Peak Region) October 15 and 16, 2022.



Rail Fair at the State Fair Grounds

October 15 & 16, 2022
Sat 9-4:30 * Sun 10-4

Livestock Pavilion
@
State Fair Grounds
1001 Beulah Ave
Pueblo, CO 81004

Vendors!
Contact Mike Peck (719) 640-2076
mmp85trainnut@hotmail.com



Module Update

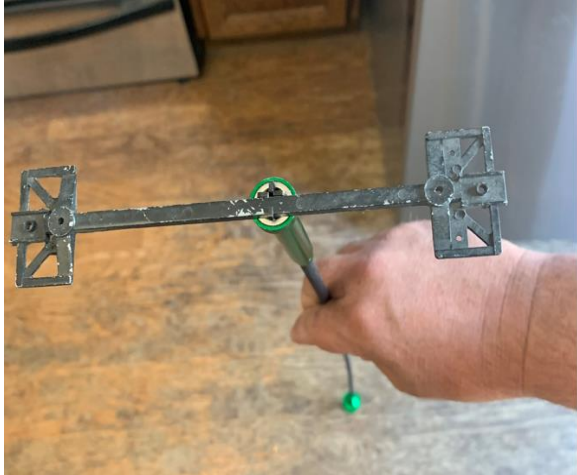
"Work on several areas has taken shape. Grant has been working on the overhead crane which is nearing completion. Adam is working on bridge abutments for the truss bridge. William is rebuilding a girder bridge. Both bridges have received damage in the past and need to be replaced. Larry and Rich are working on landscape between the modules. Larry is working on two Tortoise switch machines in an area where it has been hard to reach the manual switches. Chuck has repaired the damage on the icing platform."

Larry Stephens

Tool Time

William Boorman presented the Tool Time. He presented a combination magnet/pick-up tool from the auto parts store that he finds very handy for finding and picking up those parts that always seem to fly away and make their way to the floor. The tool is about 2 feet long. The photos show it being used as a magnet and as a grabber.





Show 'n' Tell

This month's Show 'n' Tell subject was Mining.

Jeffery Mason showed his scratch-built mine adit on his Copperline and Santa Fe Railroad.. And, it is truly scratch-built—made from match sticks and tongue blades.



Next was Grant Harrison's exquisite mine building.





the supplied interior wall bracing and stud walls. I designed and 3d printed the interior details including the cable winch, air compressor, boiler, forge, mine carts, and lamp shades. The interior lighting is prewired LEDs from amazon that I inserted into the lamp shades. The power for the lights is from a battery box with switch located in the base. The base of the diorama is several layers of purple insulation foam board carved to shape and covered with Paper Mache. The ground cover is mostly Arizona Rock and Mineral Cumbres and Toltec shade in various sizes colored with dry pastels and some air brushing.



The diorama won first place at the clubs show and I also sent it in to be judged for the AP certifications where it won a Merit award but I think I have to get it judged again due to paper work issues."

Adam Crews showed his great grandfather's mining helmet and belt with the work tag attached. Adam's great grandfather, Edward Landman was born May 18, 1900. He worked in the coal mines in southeastern Pennsylvania in his early teens and hopped a train to Colorado during the Great Depression to work in the silver mines.

Here is what Grant had to say about this model. *"When I lived in Kansas City the local NMRA chapter would have what they called a make and take where the club would work with kit manufacturers to provide a small selection of building kits to choose from at a good rate and the club would order the selections. For the April meeting the kits would be passed out and several of the more experienced structure builders would provide tips and techniques to build the kits. There was usually an internal club show in October where people who had built kits from the Make and Take were encouraged to bring them to show off and to be placed in the contest if they so choose.*

The Quartz Hill mine that I built is from Wild West models, the kit provided the outside walls, windows and internal mine head. I replaced





Rich Flammini sent this picture of his recently constructed quarry. He says *"This is an urban mine. The quarry fills in the space for an access hole in the layout. The bottom can be dropped down so the back of the layout can be reached. I attached threaded "screws" in the bottom of the foam sides and then wing nuts to secure the bottom in place. I recently received more fencing that will surround the rest of the pit. The quarry truck is used to haul larger chunks of material that cannot be handled by the conveyor."*



Gary Myers sent these PowerPoint photos.

Show n Tell September 2022 - Mining
CF&I Monarch Limestone Quarry – Gary Myers



Photo taken by Gary Myers from US 50.

Show n Tell September 2022 - Mining
CF&I Monarch Limestone Quarry – Gary Myers



Monarch Branch on Scenic Line Layout. Mine was scratchbuilt by Hal Zimbelman from photos.



Empty NG gondolas

Show n Tell September 2022 - Mining
CF&I Monarch Limestone Quarry – Gary Myers



CF&I Limestone tipple ruins





NG highside gondolas are loaded by gravity feed, and stored downhill to the right.



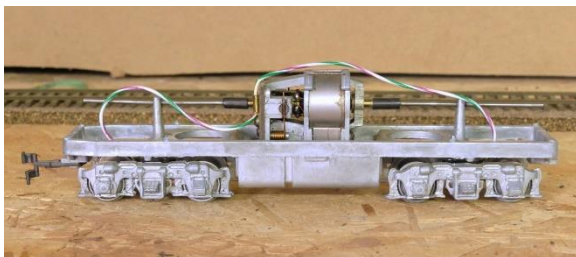
Clinic

Athearn From Box to Track by Larry Stephens

Ever since I saw a Rio Grande coal train around the Tennessee Pass area years ago, I wanted to run a train with an engine in the front, a mid-engine and a pusher engine. With DC it didn't work so I tried DCC and success. This is how I got there and some information on Athearn. I cover speed matching, sound and weathering that is of use on all brands of engines.



An Athearn Blue Box.



Athearn's first motor.
Open frame motor and rubber band powered.



Athearn's next motor and it was gear driven.
This motor is not recommended for DCC.



Athearn's F7 could be purchased as Super Powered.
The weight allowed it to pull longer trains.



Athearn's latest motor in the Blue Box series.
This motor is the one to use for DCC.



The left photo is of a straight wound armature from an early Athearn motor. The right photo is a skew wound armature from a late Athearn motor. The skew wound is superior to the straight wound. It is capable of spinning at a slower speed and draws about half the current. It also provides a more accurate BEMF voltage.

Athearn's latest motors for the Blue Box series are of two different heritages. The early ones are made in USA and the later ones are made in China. Ready for this? The Chinese made motor is better. It has a more powerful magnet which helps with low speed operation. This is of the design used in the Genesis series. The Athearn Blue Box has decent detail. It's a simple kit. Install the metal handrails and paint. Horns and some plastic pieces need to be installed. Add some plumbing to the air tanks. Throw away the

horn hook's and install some Kaydees. Looks decent but under that shell are some problems. How to mount a decoder and where to place the speaker. It is also under weight unless you have a super powered F7.



I add weight to the frame and leave clearance for the decoder. This is an Alco PA.

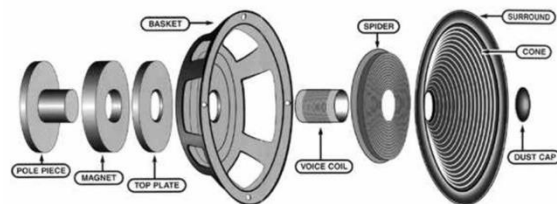


I add weight to the frame and under the walk way. I leave clearance for the decoder. This is a FM Trainmaster.

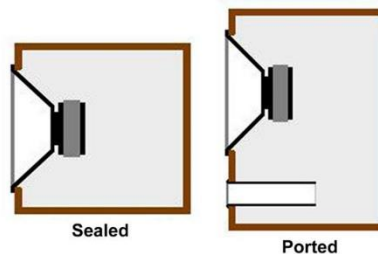
Sound

DCC has given us sound. It has given manufactures of locomotives at lot of different ways to handle sound. Some manufactures have figured it out and some seem not to be concerned as their speakers lack any low frequencies. That tin can sound.

But first a little bit about speakers



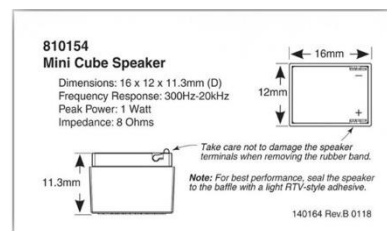
The speaker and its enclosure requires a lot of compromises. So here is "Speakers 101".



Enclosure

These two are the most common types of enclosures. The sealed takes more power and the ported can produce lower frequencies.

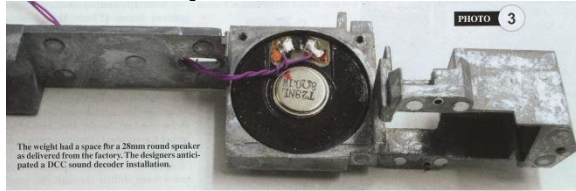
Why your model diesel locomotive doesn't even come close to sounding like a real Diesel locomotive.



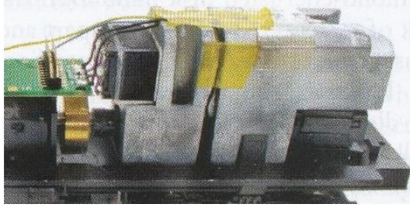
It is that "sugar cube", "dime size" speaker. The speaker is too small and lacks design elements that could make it sound better.

Speakers in order to reproduce lower frequencies require space to push the air, that low frequencies require. A 12 mm by 16 mm in a small enclosure is not going to do it. The speaker needs a much bigger enclosure and a way to breathe but there are some ways to

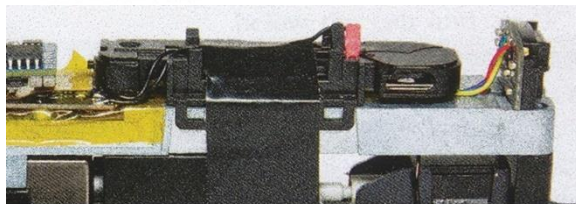
make a small speaker sound better.



The manufacture of this Loco decides to sacrifice weight for a better sound by giving you a 28 mm speaker. I do not know if it is a closed or bass reflex design.



The manufacture of this Loco decides to prioritize weight over a better sound by giving you a 16 mm speaker. Probably a closed box design that won't have much bass.



Ah, finally a smart manufacture who knows a thing or two about sound. A small speaker but a large tuned chamber. If tuned right this will probably be one of the best sounding locos out there.



Options for mounting in a powered Locomotive.
Top: A ported round enclosure.
Bottom: A ported speaker with enclosure.



Options for mounting in a powered Locomotive.
Used laptop speakers. The are about 1/2 the cost as new ones for mounting in locomotives.

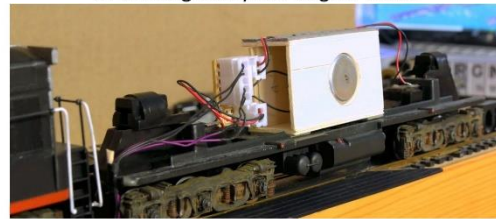


Options for mounting in a powered Locomotive.
These used laptop speakers each have a port.

Or you can put the speaker in a dummy locomotive.



This 28 mm speaker goes in the dummy engine behind the lead engine. The sound is directed to the front of the engine by the engine shell.



The back side of the speaker. The sound is directed to the rear of the engine. The red and black wires are for picking up power from the track and goes to the decoder for additional pick up. 12 wheels vs 6 wheels each side.

Speed Matching

This part of the clinic consists of video screen captures that is not easily done in print. You will need to have gone thru JMRI speed matching to follow the changing of settings.

I will match three engines, a lead, mid-engine and a pusher engine.



There is a lot of information on speed matching from many sources. So I'll skip the basics. I first reduce the top speed by adjusting the top speed to a lower number. I then click on match ends then test to see if top speed is as fast as I'll ever run the engine.

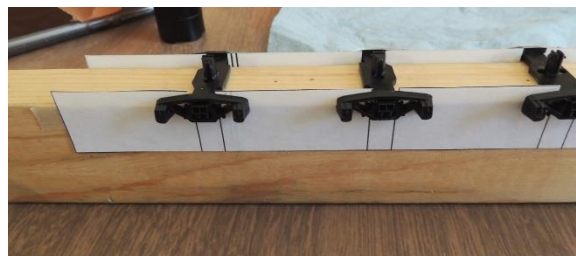
Next I set BEMF to 235 (default 255). Now with one engine set at BEMF 235, does the engine move? Change the BEMF so that the engine moves at speed step 3. Why do I use step 3? There is friction in the motor, friction in the trucks and the mass of the engine. Step 1 the motor moves, step 2 now the gears move and step 3 the engine moves. This allows the engine to start slower. At step 3 the engine is apt to run jerky so progress through step 4 or 5. Do this for all three engines.

The lead and mid-engine will be balanced first. The engine that is faster will have its BEMF reduced. Place two heavy loaded cars behind each engine. Adjust the BEMF of the fastest engine to match the slowest engine. Test both engines at a slow speed. If the top speed doesn't match use the speed table to readjust.

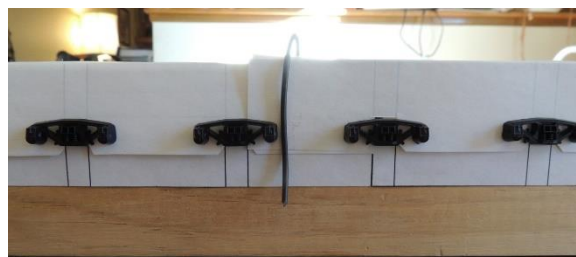
The rear engine is more for show. It's not needed for model trains. So the load does not need to be the same as the other engines. Also as it is pushing all of its cars, the number of cars it pushes need to be kept down. Now that the lead and mid-engine are matched we will adjust the rear engine but not speed matched, but load matched. Using either engine you've just matched, with the two heavy loaded cars. Place one heavy loaded car behind the second engine, which is going to be your pusher engine. Repeat the matching process as done on the first two engines. You now have a lead engine pulling 2/5s of the train, a mid-engine pushing and pulling 2/5s of the train and a rear engine pushing 1/5 of the train. As the train travels around the layout the load will balance out about one car at the front section and about one car at the rear section.

Truck Weathering

A fast track process as there are better ways of weathering but they take much more time.



I first make a mask so I can paint 14 sides at a time.



I next make a top mask.



The bottom and top mask.
Fourteen trucks so I can do 7 cars at once. I can do three to four batches in an afternoon.

- (1) Spray one pass going top left with dull coat then spray one pass going bottom right with dull coat on both sides of the trucks. Let dry.
- (2) Do the same with Tamiya Nato Black or a color of your choice on both sides of the trucks. Let dry.
- (3) Do the same with dull coat again but this time back off so the spray will be rough. Pan Pastels stick better to a rough surface.

I use two Pan Pastels for weathering train car trucks and four pan pastels for weathering engine trucks. The results are lightly weathered. The main goal is to remove that plastic look. With this process you can paint trucks for 21 to 28 cars in a few hours.

I use micro brushes to apply the Pastels. I use Raw Umber to tone down the black and Burnt Sienna Shade to high light the brakes and springs on rolling stock, For the engine trucks I also use Red Iron Oxide Shade

and Red Iron Oxide Ex, Dark to give them more depth.



For additional detail on engine trucks I paint the brake rods and friction pads silver toned down slightly with a drop of white and black.

I now have arrived at my goal. Nice engines with great pulling power and great sound. Two engines at the front, two in the middle and two in the rear. Engines are capable of running slow. I can run a long train that does not derail by pulling or pushing cars off of the track.

Clinic had two videos at this point so I have two screen shots instead.

First the real thing and then the copy-cat.



Como Train Day August 20, 2022

Alan Esler sent pictures that he took at the Como Train Day. Here are a few.





Mystery Passenger Cars

Rich Flammini spotted these 3 private cars at Denver Union Station on Wednesday, July 27th. No one was around to ask any questions so he asked that they be included here to see if any readers have any information about them.

