

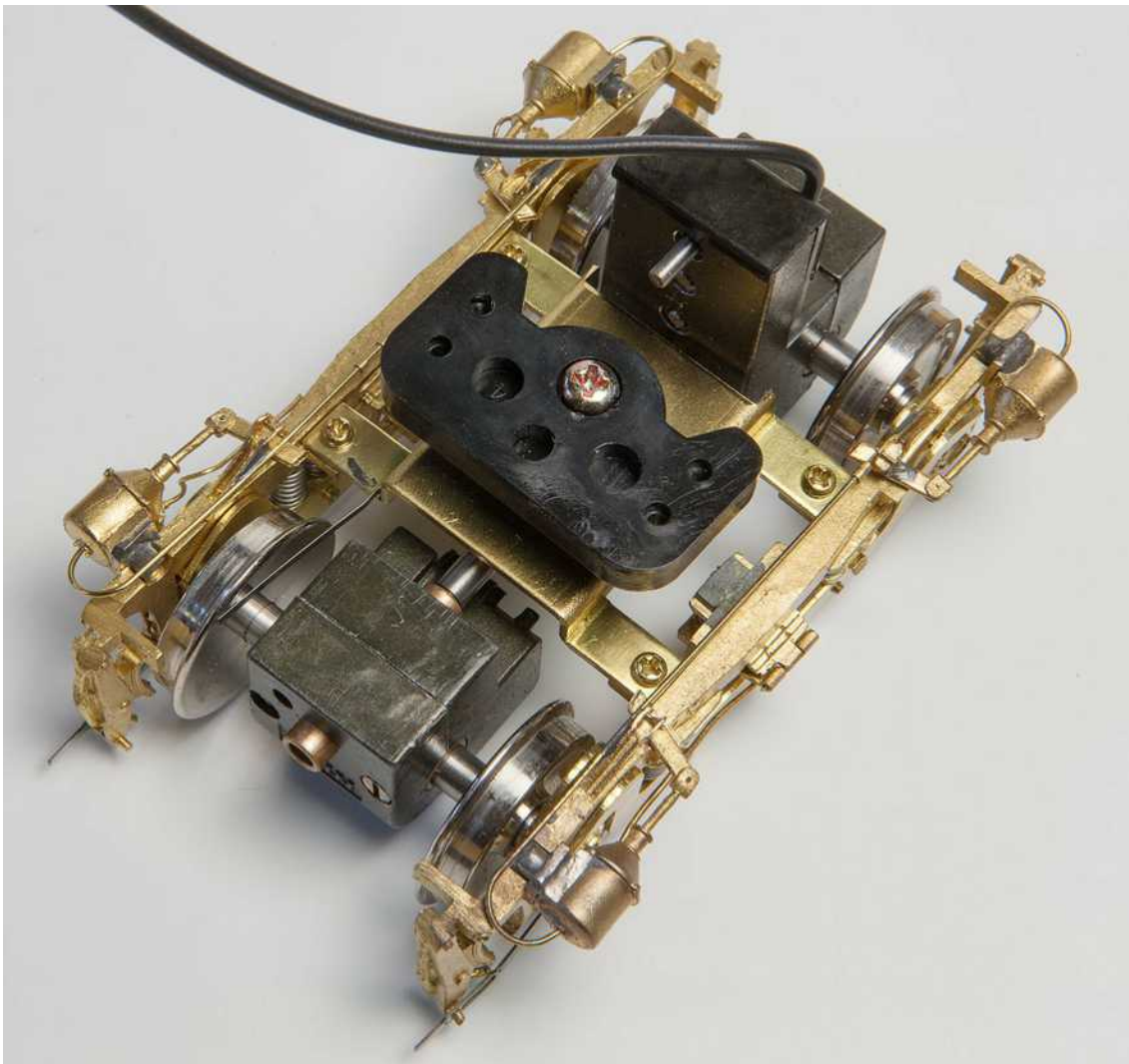
Alco C425 tweaking and install

Bob #1 September 17, 2016, 9:31pm

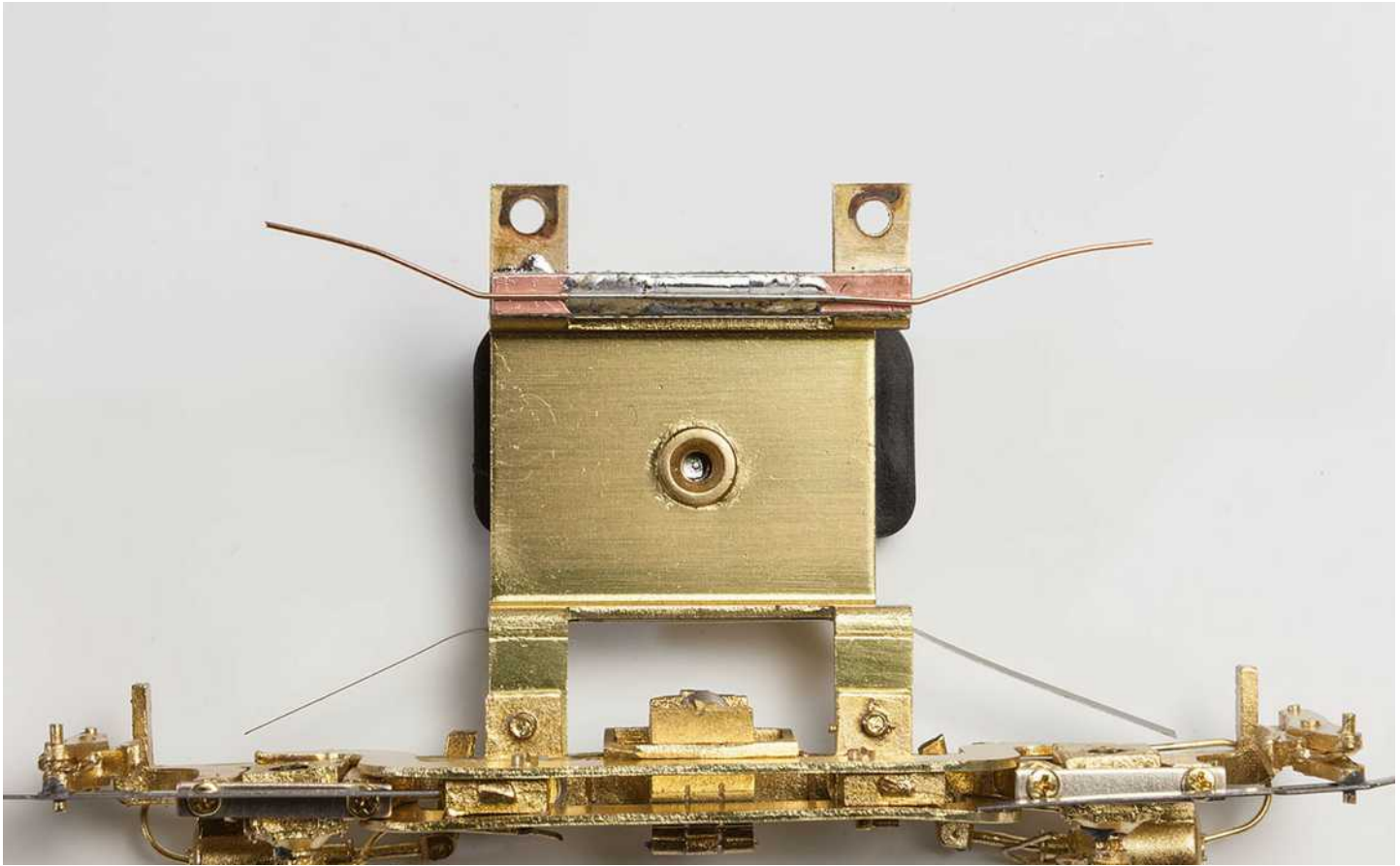
Because it has been so slow here on the forums, I'm digging deep into the fairly mundane to find things to share. Here is one project currently on my work bench.

I have an undecorated Overland Alco C425 and a C/P Erie-Lackawanna C424 to get running on the A&O. These are reasonably-detailed engines with the late-1980s low-slung Overland drive. But for some strange reason, both units only pick up power on half the wheels. This doesn't make for the best operation when the wheels and/or track gets dirty.

Here's a top view of the front truck. There are wipers only on the left two wheels, and a single wire that went to the motor. The flat wiper is soldered to the side of the truck bolster.



One simple solution came to mind—resistance solder a small piece of double-sided PC board to the other side of the bolster, underneath, and conventional soldering a length of 0.020" phosphor bronze wire as a pickup. Soldering went fairly easy, using no-clean flux and leaded eutectic solder.



The wipers will be tuned during reassembly after painting. If you expand the first photo, the visible wiper barely touches the back of the wheel. That one might just be replaced with matching wire wipers.

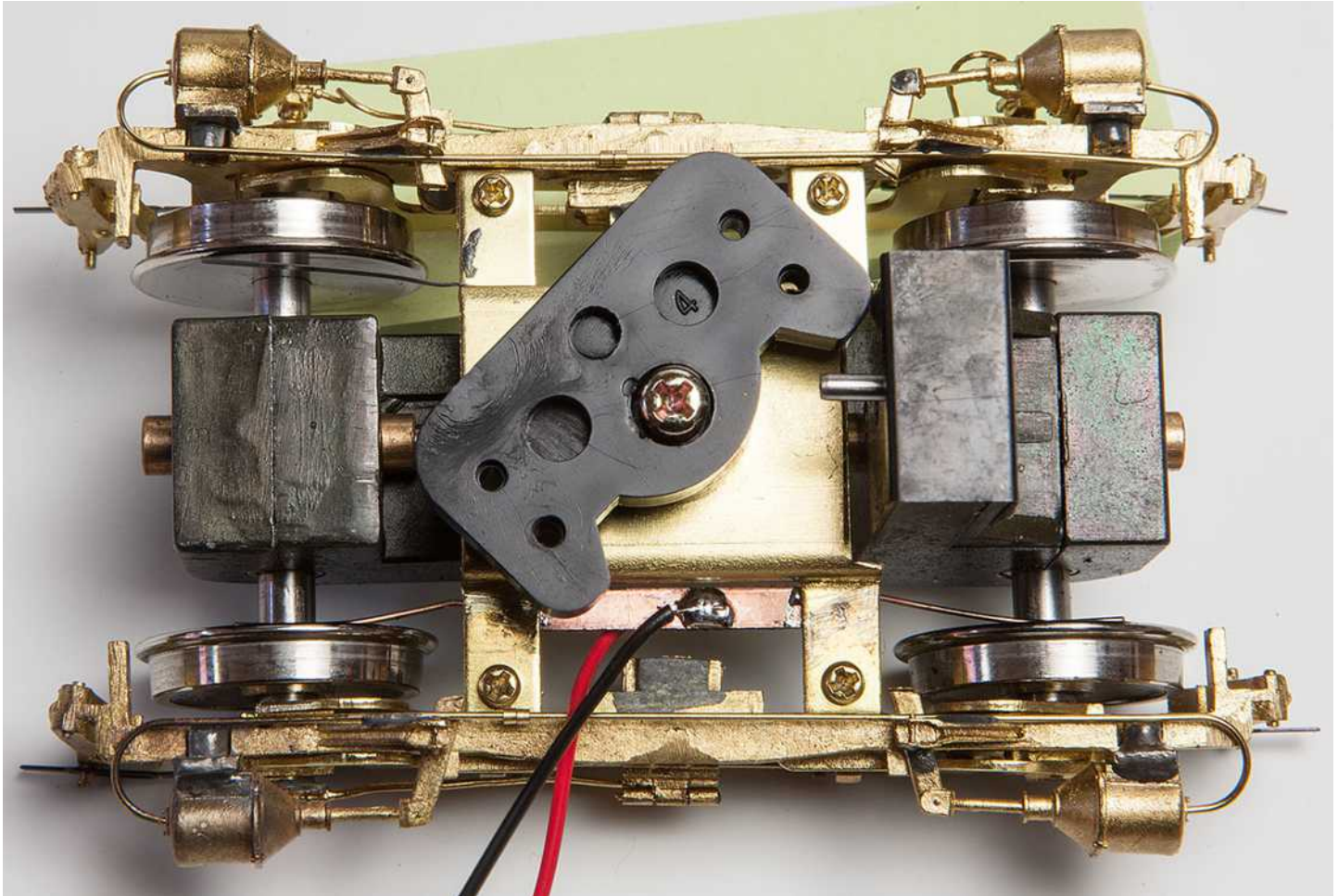
Unscrewing the black Overland truck wire revealed a horrible soldering job of the wire to the crimp lug, done with acid flux, that corroded both the joint and even the steel screw that held it into place. It was ready to let go.

This is not an uncommon occurrence on imported brass locomotives. One of the factory wires soldered to the Pittman motor on this engine fell off in my hand, corroded beyond recognition. On a C&LS locomotive, I had to cut back most of the motor brush wire's length because acid flux used during soldering wicked down underneath the wire insulation, making most of the wire impossible to solder.

Anyway, here we get a new pair of pickup wires. These are 30 AWG stranded wire, very flexible, procured from [Pololu.com](https://www.pololu.com/). Too small of a gauge for O-scale? Not really. These locomotives draw

less than 1 Amp from the track at normal speeds. They have Pittman 8413 motors rated at a 3.75A stall current, at 12 Volts.

1 Amp flowing through 1' of 30 AWG wire drops only 0.1 Volt, so the wire dissipates less than 100 mWatt (half, if both trucks equally pick up current.) Of course the wires, once clipped to service length, will be far shorter.



[cwebster](#) #2 December 28, 2016, 11:28pm

Thanks for posting this Bob – it is really helpful!

Is the phosphor bronze wire you used the same material that Tichy sells? Also, what decoder are you using in these locomotives – I assume that the Pittman's stall current is too high for the HO ESU LokSound V4 decoder you used in the C&LS RS32.

Bob #3 December 29, 2016, 3:26am

The wire was procured perhaps 15 years ago from the former Caboose Hobbies in Denver. A label on the tube says "Creative Model Associates". Presumably wire from Tichy or Clover House would be equivalent. It is just straightened phosphor bronze wire that has a nice spring to it. 0.032" seemed a bit too stiff, and 0.020" was the next smaller size I had on hand.

Soldering the PC board to the brass required a resistance soldering iron. Alternatively you could use epoxy, but then a pickup wire would need to be soldered to the factory pickup wiper.

Your intuition about decoders is spot on. This unit requires a Loksound V4L because the motor current would be excessive for the HO decoder. At one time I hoped to use the V4 HO decoder in Atlas SW9s. Through a mutual friend Matt at ESU confirmed that the HO decoder was tried and fried in that model.

As for the C425 I wish that the Overland drive shafts didn't make so much noise! The sound must be turned up a bit louder than I would prefer to drown it out. This seems to be common with the 1980's design. I did observe that the spring underneath the bolster screw was a bit too long. Also a universal joint had a tendency to hit the head of the phillips screw, which I subsequently filed down for greater clearance.

Bob #4 January 9, 2017, 8:50pm

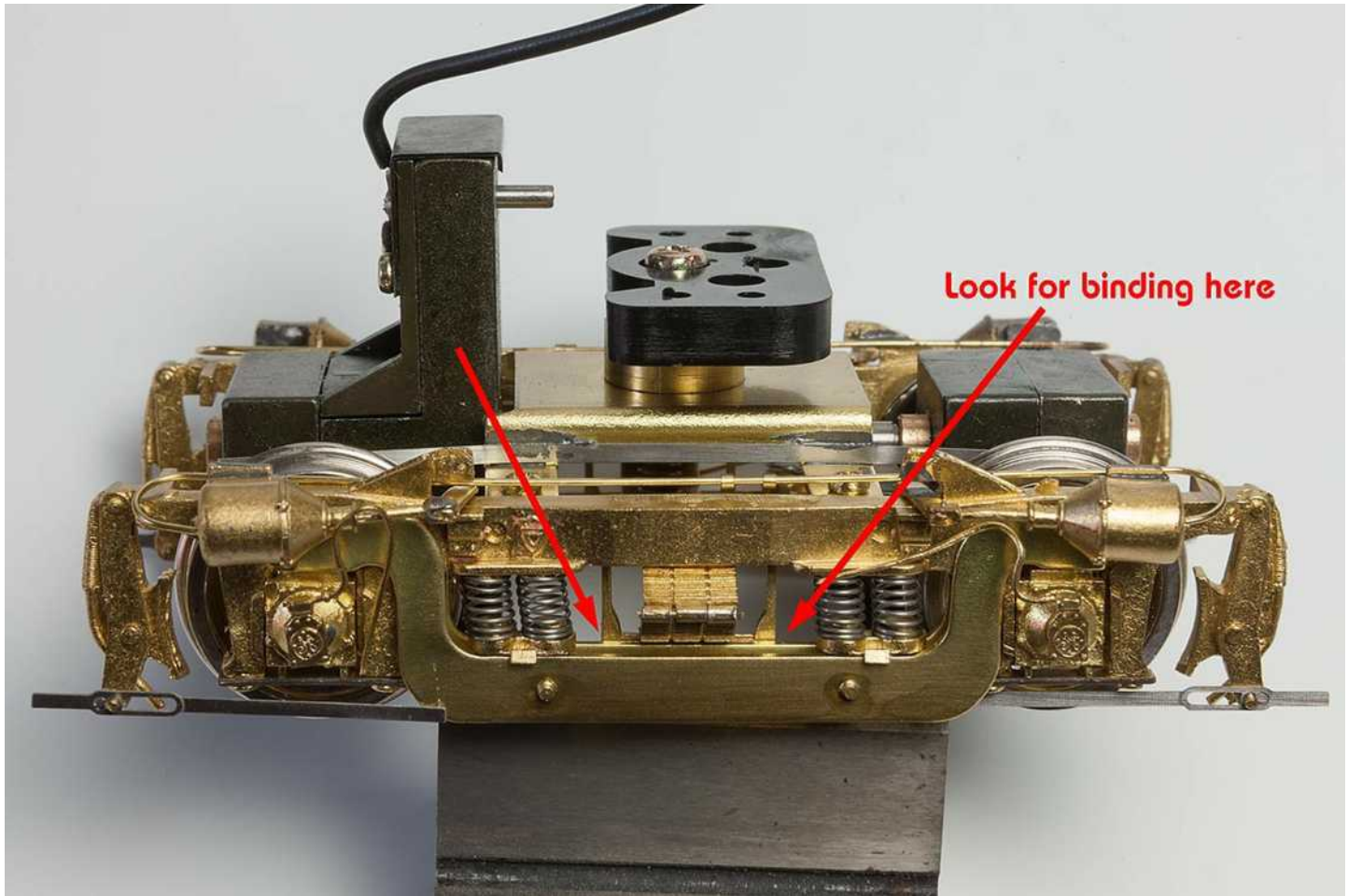
During the December 2016 op session the Overland C425 tripped circuit breakers a number of times. I took it home after the session and tweaked a few things but didn't find the root cause. A few days later I was able to test it in David's now quiet basement layout, on the track where the problem occurred, and heard a "snap" prior to the circuit breaker cutting out and beeping. That told me it was a genuine short circuit problem.

Excellent!

Close inspection revealed that on the fireman's side the rear truck side frames and brake adjusters hung very low compared to the engineer's side, and on a gentle vertical curve they would short to the rail. That was just what I hoped to find—a repeatable short was identified, the location of the arc was seen, so now it would be just a matter of diagnosing what's going on with the trucks.

Inspection on the layout revealed that two of the axle journal bearings were hanging up on something and not dropping fully-down, thereby causing that side frame to run low. In this close-up shot, **not** taken on the problem side, I highlighted where I discovered serious binding on the problem side. Simply bending the offending part inside just a tiny bit solved the friction problem. But would that be

enough?



Also notice that one of the brake adjusters popped out.

By the way, this particular photo angle was shot *before* I removed electrical pickup wires from the gear towers. The black wire was extremely corroded from the use of acid flux by Ajin when the factory assembled this brass locomotive. Only a few copper strands were still intact, even when examined well under the black insulation.

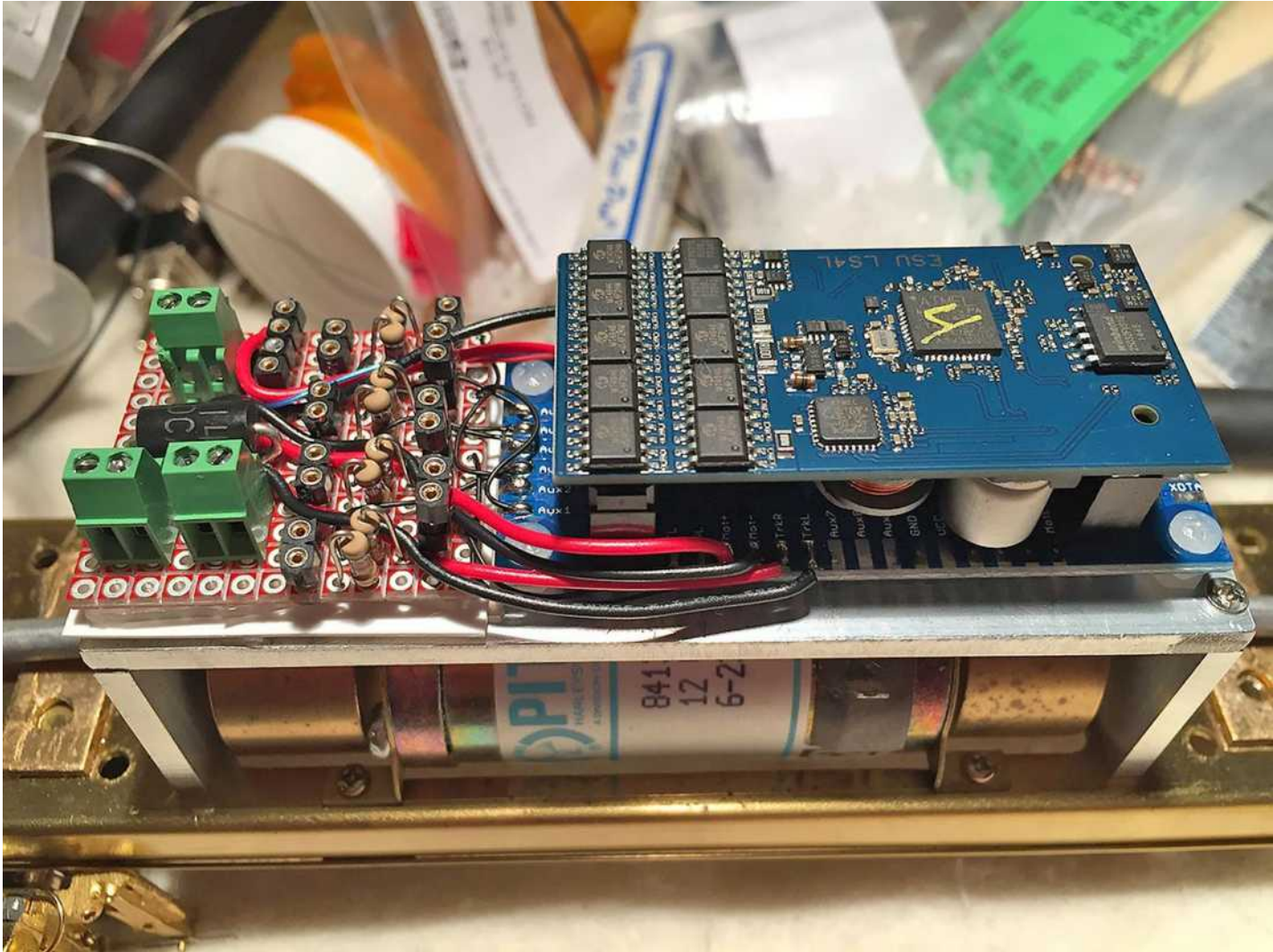
More photos to come, if another hunch reveals other issues.

Film at 11:00.

Bob #5 January 10, 2017, 1:51am

Here is another photo that may be mildly interesting. An aluminum U-shape provides a mounting surface for the decoder and a small circuit board above the motor and flywheel. This helps to keep

wires out of the flywheels, and forms a solid mounting perch for the tall Loksound decoder and carrier board. The small red board is attached with Loctite double-sided clear tape to a 0.010" styrene insulator and then again to the aluminum.



The green screw connectors accept wires from the truck pickups (near side) and motor wires (far side.) These allow for easy disassembly, including removal of the trucks, for future painting and maintenance.

A 4 pin black screw machine connector, with one pin soldered shut, creates a polarized plug for a Loksound large (10 Farad) Current Keeper. The remaining two pin plugs will connect to various LEDs. Generally speaking, pairs of LEDs such as twin sealed-beam headlight will be wired in series. Lighting plans include headlights, rear lights, number board lights, white class lights, walkway lights, and ground lights.

A Tang-Band 1925S speaker module and the current keeper are double-stick taped to brass structural members inside the Overland car body. The black diode on the red PCB is a high-power TVS or transient voltage suppression diode, a 1.5KE20CA, to prevent transient voltage

damage to the decoder.

ErikLindgren #6 January 11, 2017, 9:12pm

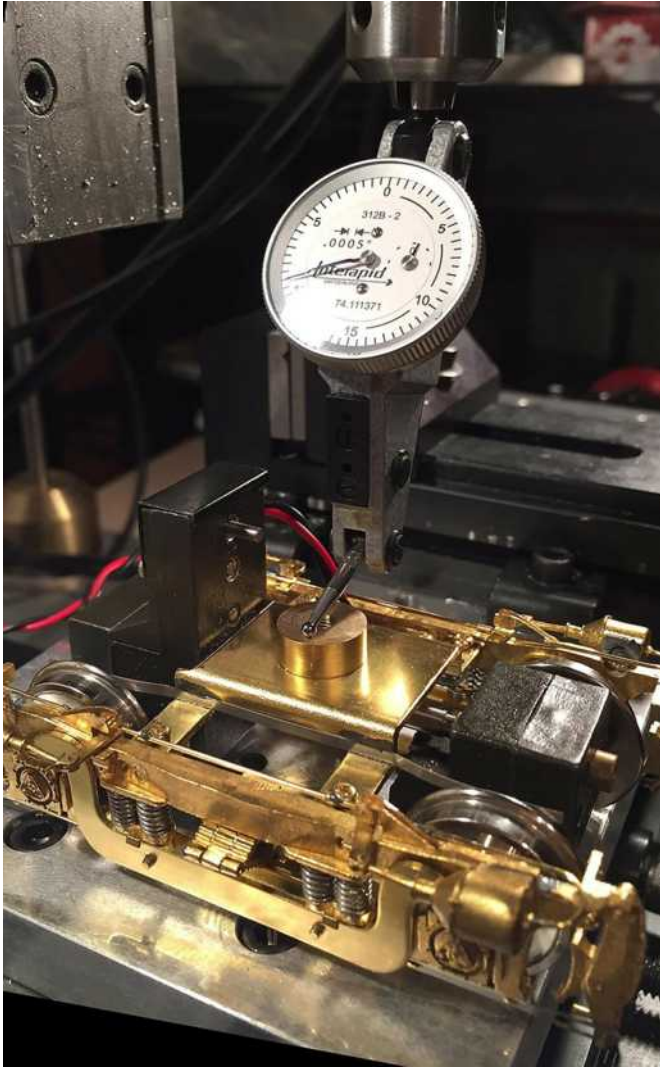
Beautiful equipment Mr Sobol.

Bob #7 January 14, 2017, 6:51pm

The first round of tweaking didn't solve the short circuit problem. The front corner of the fireman's side trailing truck still rode low. Harrumph! 🙄

Further examination revealed two things, only one easy to fix. Overland's axle bearing hole on the low axle was too high and way oversize, allowing the side frame to ride low even without bearing any weight. I didn't choose to fix this problem as it would be a lot of work to carefully mill or drill a properly-centered hole then add a new brass or bronze sleeve.

The easier problem was found after asking "When applying a load, why did that corner start equalizing before the others?" It was taking the load before the others, and this is a *heavy* engine. One easy thing to do was stretch the springs on that corner so that they would be a bit harder to compress. That did not help very much.



It turned out that the bearing face of the bolster wasn't exactly level. I used a simple setup on my Sherline mill to indicate the upper face of the bolster bearing. Careful bending of the tabs that attach the side frames improved matters to within a couple thousandths. I also made sure that all 4 wheels were planar so that the truck did not rock on the tooling plate.

The engine is back together and ready for another test run. I hope this solves the problem as I'm anxious to run it through the paint shop.

1 Like

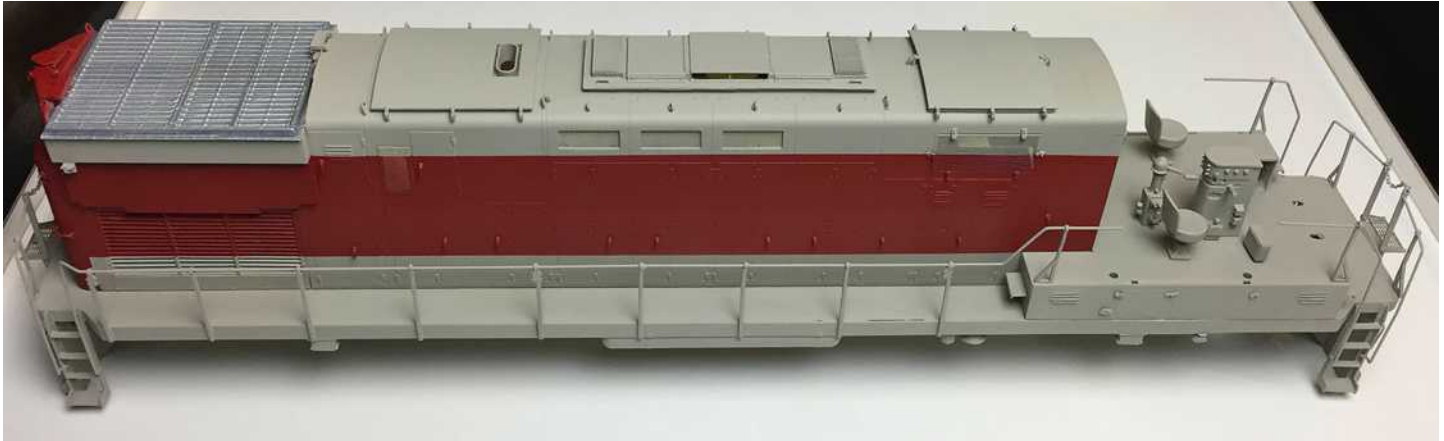
Bob #8 January 27, 2017, 3:06pm

Leveling the bolster fixed the problem. 😊

Now the unit goes back to the work bench to build lighting harnesses then into the paint shop.

Bob #9 February 20, 2017, 3:29pm

Work on this mid-1980's Overland unit has been anything but routine. Some locomotives from this era have a reputation for cold solder joints and this one is no exception! While doing the basic air brush work two joints cracked on corners of the cab, the roof walkway fell off, and two structural mounts inside the shell gave way! The latter are structural cross-members used to attach the shell to the frame. I noticed the problem not long after shooting the following photo.



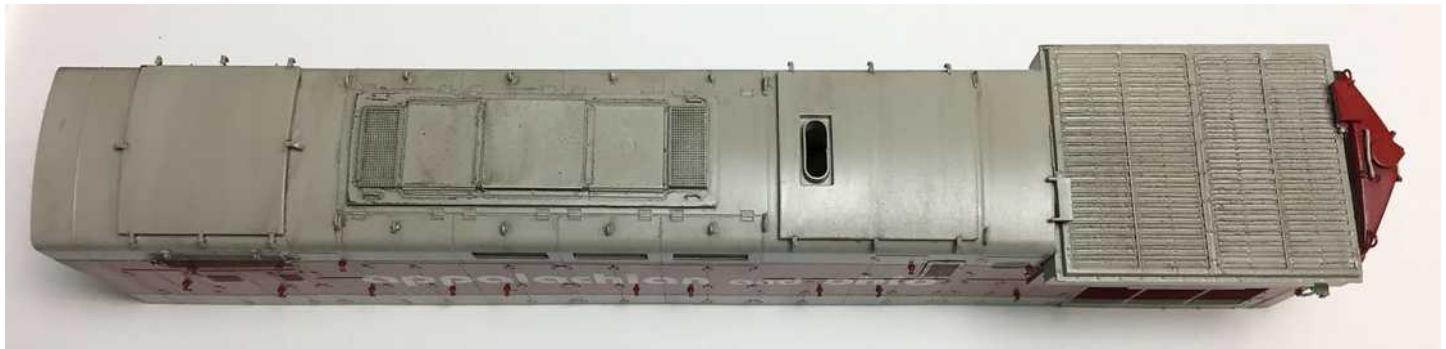
Repairs to the mounts went surprisingly well with a PBL resistance iron and carbon tip. Applying heat to the cross-members instead of the shell completed the repairs without visible damaging the paint. Years ago PBL sold 50-50 solder paste in a syringe applicator which is my go-to for this type of repair.

Paint separation lines are not perfectly straight but they will be covered by a black decal pin stripe. A fresh roll of Tamiya masking tape produced perfect edges with absolutely no paint bleed-under. It was quite easy to burnish the tape into all of the recesses around the doors. Unlike regular yellow or blue masking tape once burnished it stayed put. And unlike regular tape, there was no need to cut a new, sharp edge on a piece of glass.

Aluminum radiator shutters did not look right so they were masked and painted the same gray as the roof. That errant detail received inspiration from prototype photos of Delaware-Lackawanna 4253 and 4254. Upon further inspection it appears that the DL frequently pressure-washes their engines, and what looked like aluminum was actually a light color paint being revealed after a top coat of black had failed.

I'm no expert on weathering. For the first time I tried highly-diluted tube oil paints for a hybrid "sludge wash" and "filter", inspired by Youtube videos of skilled military aircraft and armor modelers. I was wowed! It was *really* easy to produce very subtle streaks and modulation that would be impossible

with acrylics, ink washes, or gouache. Best of all I could set it aside for a couple hours, then come back to it to refine any areas that didn't look right using nothing more than a cotton bud or even a fingertip. Here's what it initially looked like, prior to refinement.



What's the down side of oils? Dry time. This one sat for 4 days before I felt comfortable tweaking the edges around the upper doors with a gouache + Photoflow pin wash, followed by a matte acrylic spray.

Eventually the roof received a big "splat" of exhaust. These things were honorary steam engines, and most roads painted the roofs black. A few photos I found on the internet gave me ideas for the shape of carbon deposits. Here is a shot after a weathered black acrylic spray. I may have gotten a bit carried away. 😬

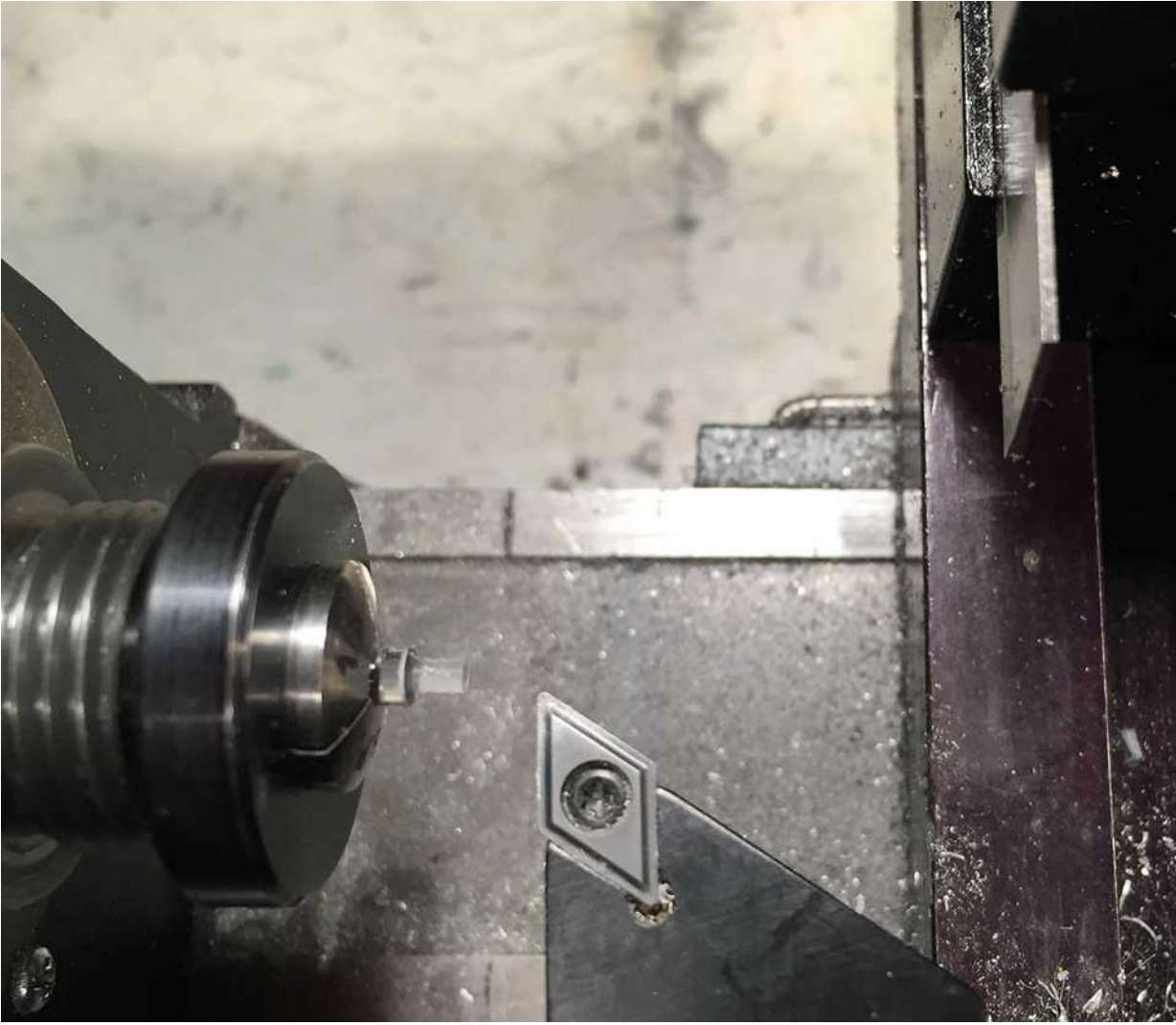
The "tail pipe" needs refinement. The roof walk went back on before the exhaust; less shadowing might have occurred had I waited a bit longer. Again the PBL iron completed the task with almost zero damage to the paint.



Bob #10 February 20, 2017, 4:12pm

The C425s usually had individual red, white and green class lights above the number boards and a single white light at the rear. Different railroads located the colors in varying sequences from left to right. Some C424s had all 3 colors on both ends.

MV lenses don't seem to be available any more, so it was time for plan B, make my own by turning 1/8" polycarbonate rod in the lathe. Here it has been turned to an outside diameter of 0.071" prior to sanding a rounded dome on the end.



How do you part off something this small and still catch it? Certainly not with your fingers! An old pill jar can help. The parting tool can be barely seen through the bottle to the right of the polycarbonate lens.



Here's what the cab looks like with the lenses in place.



I was originally planning on just lighting the white class lights. But while watching a video review of an HO UP gas turbine model I noticed that the front class lights could be rotated between all 3 colors. How'd they do that? Yesterday I stumbled upon exactly that in a sound schedule for a Loksound V4 645 turbo. This particular file was edited by a good friend for an engine on his layout. Here's a peek at LokProgrammer showing the Class Light "code" in sound slot 10.

The screenshot shows the LokSound V4.0 software interface. The main workspace displays a state transition diagram for a Class Lights configuration. The diagram shows a sequence of states: Mute, White, Green, and Red, triggered by function presses. The transitions are as follows:

- Mute to White: triggered by 1: [F = true]
- White to Green: triggered by 1: [F = false]
- Green to Red: triggered by 1: [F = true]
- Red to Mute: triggered by 1: [F = false]

The interface also includes a left sidebar with various controls (Drivers' cab, Read / Write CVs, Decoder, Information, Sound) and a bottom status bar showing capacity information.

File name	Duration	Size	%	Volume
a2-1.wav	1.596 Sec.	24,976 Byte	100%	
da2-1.wav	0.486 Sec.	7,638 Byte	100%	
a3-2.wav	1.981 Sec.	30,999 Byte	100%	
da3-2.wav	0.590 Sec.	9,261 Byte	100%	
a4-3.wav	1.819 Sec.	28,464 Byte	100%	
da4-3.wav	0.178 Sec.	2,833 Byte	100%	
a5-4.wav	1.633 Sec.	25,564 Byte	100%	
da5-4.wav	0.288 Sec.	4,542 Byte	100%	
a6-5.wav	1.076 Sec.	16,854 Byte	100%	
da6-5.wav	0.255 Sec.	4,030 Byte	100%	

This sound slot is then triggered by the DCC function button of your choice. Although the “sound slot” name suggests playing sounds, that is only one of the many things it can do.

On the first press of the function button mapped to this sound slot, the white light on output AUX3 turns on. Press again, only the green light wired to AUX4 illuminates, and so forth.

Hmm... the A&O really has no use for green as that would indicate a second section following behind. But white for extras and red for a helper might be handy. If I light just two of the 3, the rotation sequence with function presses would be W-R-off-off. Adding two more LEDs would increase the total to 18. 🙄

PeteM #11 February 20, 2017, 7:51pm

Bob, outstanding work as always! Thank you so much for posting the Loksound sequential class lights code. I have been wracking my (somewhat undersized) brain to figure out how that was done after I saw the Bowser SD40-2 at the local HO club. So simple, but I would never have got there. Now I can complete my Kaslo Shops CN Wide cab on Weaver GP38-2 conversion... 😊

Bob #12 February 20, 2017, 9:00pm

You are welcome. I hoped someone might find the class light sound slot code useful. It wasn't obvious to me how to do it until I found a worked example. Probably obvious, but also checking CV122 "Persistent function" on the decoder tab could be desirable so that the lights don't change due to a short circuit event.

Upon reflection it just dawned on me that for two lights I can edit the slot so that the function press sequence is white, off, red, off. Duh! 😊 😬 😡 😬

Another, unrelated thought. Sometimes we find it hard to remember when Drive Hold is turned on. The easiest for an operator would be a light somewhere on the engine, but that would show up in videos. Perhaps a sound could play when it turns on and another one for turning it off. Maybe a single spitter valve? One if by land and two if by sea? (On/Off) 😬 Or use the radiator fan?

PeteM #13 February 20, 2017, 11:54pm

It's amazing how much flexibility there is in the Loksound V4 code. I am no programmer so it doesn't come naturally to me but once shown the logic, I can extrapolate a bit. Looking forward to playing with this some more!

Agreed regarding DriveHold on or off - nice ideas for an alert. 😊 I suppose an unobtrusive sound is the best, as you say. I fiddled with it a bit, but I've reverted to using Coast instead. I've mapped it to F9 and turned off DriveHold for now. I find that with a high CV3 setting I can get as much "sound of load" and higher notching at slow speeds with heavy trains just from physical forces without needing DriveHold. I glued a cut-down map pin head into the F9 button on my DT402Rs so I can find the coast button without having to look away from the train when switching.



Also, I wasn't able to stop locos accurately enough when switching using either DriveHold or the independent brake. That's where the TCS WOW 5-step braking function is streets ahead imho. With TCS WOW I set CV4 max and use the brake - again with a pin added to the function button so I can always find it in a hurry. 🙄 No need for coast of course as that's taken care of in Prototype Throttle mode. However, imho this is the best for single units switching, but not nearly as good as Loksound for consists.

On the Loksound, I set CV4 to a fairly low number so I can gradually decrease throttle coming to a stop where I want. Not as fun/realistic feeling as the TCS brake but a lot safer! Fortunately the brake squeal still sounds before coming to a stop even with coast engaged. This setup has proven much easier than DriveHold for my operators to learn quickly. In the long run, I do think DriveHold has massive potential, it's just not that intuitive in use or easy to learn fast.

What I am really looking forward to however is this: **Control stand**

I think that combined with Loksound will be the ultimate "near-prototypical" user experience. 😊

Bob #14 February 21, 2017, 12:29am

I would enjoy running with a control stand throttle. That said, one major item missing on example throttle is a way for the operator to specify the simulated load.

When switching, a light engine can quickly accelerate to yard speed only using the lowest notches. When pulling a heavy cut of cars it accelerates slowly even in run 8. A train sitting on a grade starts to roll downhill in idle unless the brake is set. This reveals one of the big shortcomings of load-sensing decoders. The decoder doesn't know the mass of the train nor the grade.

Years ago the Tennessee Valley Railroad Museum had a "rent a locomotive" program. I was surprised that their GP9 running light needed run 3 to slowly climb the grade at the historic passenger depot! One of the more enjoyable tasks was a challenge by the instructor to pick a tree and try to stop the coupler even with it from 10-15 MPH.

I like the pushpin, especially since the button is a considerable distance from the speed encoder. In a freshman engineering class we learned about a nuclear power plant control room with side-by-side lever controls that looked alike but did different things. A creative person removed the handles and substituted the large levers from bar room beer taps. Heineken did one thing and Miller did something else. Because they had different shapes they could now be distinguished by feel.

We too have modified our operator throttles. At present the majority of operators in the "gene pool" for A&O op sessions are, shall we say, *new* to running engines with momentum. Drive hold and its relatives (such as momentum multiplier) further multiply opportunities for chaos. We configured a programmable option button on each throttle as emergency stop. This instantly halts the train, not the entire layout.



The button is directly below the throttle potentiometer, so it is easy to locate without looking.

1 Like

PeteM #15 February 21, 2017, 3:12am

All good Bob. For sure momentum takes some getting used to unless you have a reliable, repeatable brake, which I think only TCS WOW has at the moment. Great idea about the e-stop! 😊

I was skeptical about the Iowa Scaled throttle myself at first, but I wouldn't recommend such a thing to you lightly! 😊

Part of why I like it is that Iowa Scaled are up to about 45 pages on MRH forum gathering input from modellers and loco engineers alike to develop the design and functionality. Adjustable train load settings being one of them:

"I have a friend, Steve G., who is an engineer and gave me feedback on the use of the controls. He told me that there are many variables to how throttle notching is utilized and, of course, much depends on the train tonnage, grades, and switching situations.

For example, with a heavy train on a grade he might notch up to 4 to get the train started or maybe even notch 5 but that may border on feeling uncomfortably high; compare this with situations where he's kicking a few cars: here he'll go from idle to notch 8, get moving quickly, and then go from notch 8 straight to idle while working the independent brake; compared to running at a high rate of speed (say, 60-70 mph) in flat territory where he'll have the notching set between 4-6. Another factor is the number of engines used and thus higher vs. lower horsepower, etc. The point being that there are many factors involved with operating a throttle realistically and they can change with many different situations. I've seen many modelers start a long train in notch 8 by default and this may not be realistic.

Hopefully, the tonnage feature on this throttle will prove very useful for more realistic operation by requiring the operator to use notching in a more appropriate manner. Here's a possible scenerio:

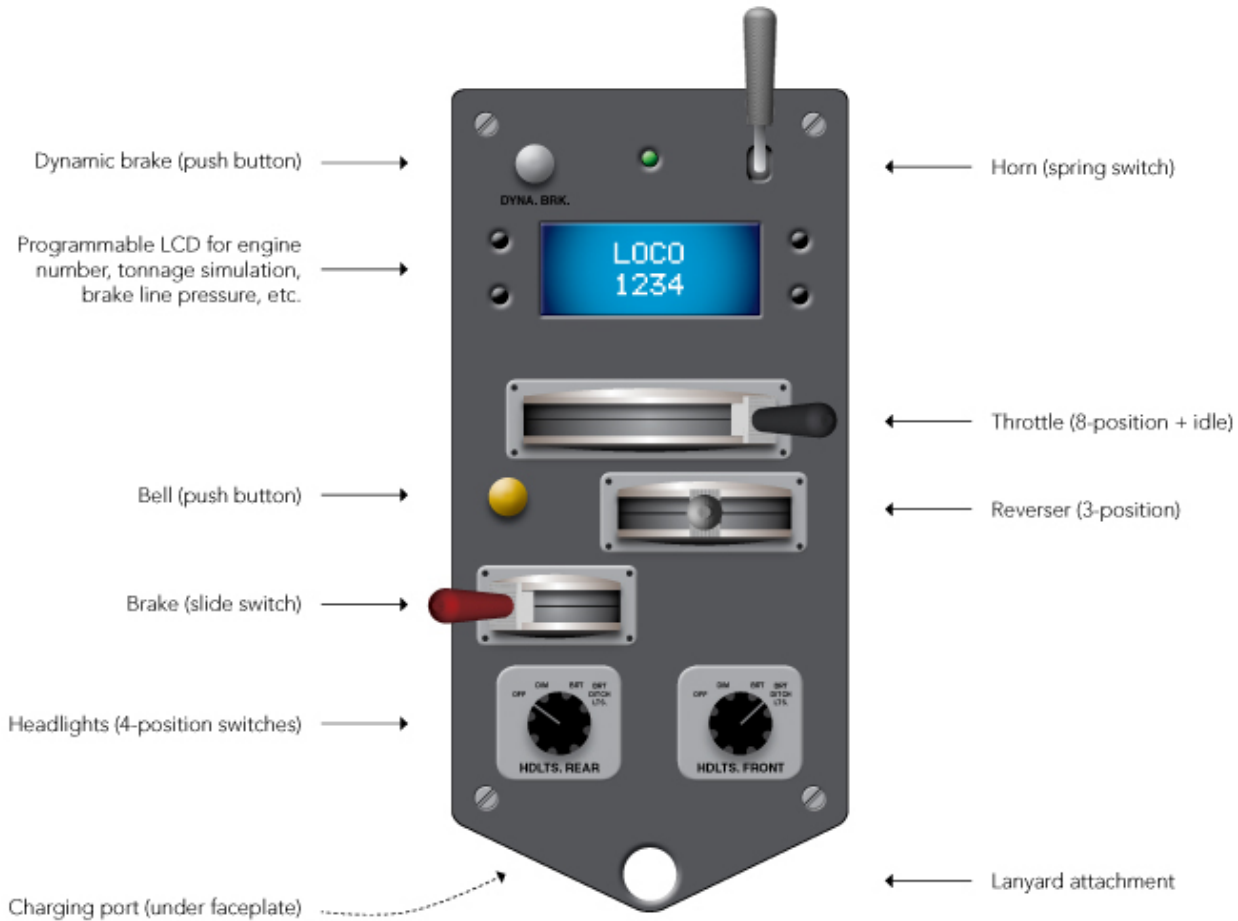
- a consist of two engines pulls out of servicing to head towards their waiting train (a heavy manifest). In this situation the operator would have tonnage set on "loco only". Under this setting the speed curve / momentum is set to allow the engines to move easily in the first few notches with minimum momentum.
- after coupling to the train, the operator would switch the tonnage setting to "heavy". Under this setting the speed curve / momentum would change to where the train would not start moving until the throttle notched around 4-5 with momentum increased for a slower start.
- now the train has moved down the line and stops to drop several cars at an industry. The train is blocking a grade crossing and needs to be broken mid-train which, in effect, cuts the tonnage in half. In this situation the operator would change the tonnage setting to "medium" and move the cars with another speed curve / momentum and would notch accordingly.
- another stop down the line requires spotting only two cars which are right behind the engine. In this case the tonnage would be switched to "light" again with appropriate speed curve / momentum set.

You get the idea. The tonnage CVs will be custom configurable so modelers will be able to set them up per their preferences and also share with other modelers who like their configurations based on whatever decoder they're using. To me, this feature combined with a realistic notching feel and response is very exciting. "

They also went through a similar process to develop a realistic braking functionality as you can see in the MRH thread.

As well they are working with Matt Herman to develop their functionality to work with Loksound

decoders which I think bodes well. Here's the latest functional layout and physical prototype:



I'm looking forward to seeing how it turns out anyway, and hopefully will have budget to try one. 😊

1 Like

PeteM #16 February 21, 2017, 3:12am

Only 1 image allowed per post, sorry



1 Like

[ErikLindgren](#) #17 February 21, 2017, 9:15pm

Love the throttle concept!

[jaybarnaby](#) #18 February 24, 2017, 11:00pm

What are you using for paint? I know there has been a lot of research and experimenting. I can't remember what the last was...

Bob #19 February 25, 2017, 12:03am

Jay -

Well, now, that's a big subject!

For a primer I tried the new gray Badger Stylynrez polyurethane. I saw that a number of aircraft and armor modelers had given it better reviews than Gunze and Tamiya primers. It self-levels beautifully to a thin film that doesn't obscure detail, dries quickly, but it is *really* thick. Badger says to shoot it straight without dilution. To make life easier I ordered my first single-action airbrush, a Paasche H and used the medium tip (#3 if I recall) and about 30 PSI. It did tend to clog a bit but briefly dipping the airbrush tip in warm water then a quick spray on newspaper did the trick. I would expect clogging to be a major problem in a dual-action brush. The first color coat can go on in less than an hour but the primer can still easily scratch if not cured overnight.

Badger also makes the primer in black. In hind sight I should have ordered a bottle as it would have been perfect for the trucks so that any areas with light coverage would look like shadows not a clean gray.

The tricky bit for A&O paint is color matching. David's gray is Floquil lacquer Concrete, a light yellowish gray. I have a bunch of vintage PollyScale Milwaukee Road Gray that is darker and not as warm as Concrete. I found a bottle of PS Concrete and mixed some of it in, by eye. To further lighten the paint and make it even warmer, I added an undocumented amount of Golden High Flow Acrylics (for artist airbrushing), both Titan Buff (an unbleached titanium white) and yellow oxide. In the end my gray is darker and not as warm, but I actually prefer the look (sorry, David.)

On this model I tried Tamiya masking tape. Wow! It is fabulous, easy to lay down and burnish into the crevices, and for the first time I got perfect lines and zero bleed under the tape.

To date I've only shot PollyScale Pacemaker Red but it is considerably darker than David's Scalecoat Pacemaker Red (SC is more of a barn red). I shot the red with a Badger Crescendo dual-action airbrush at 25 PSI, diluted with acrylic airbrush thinner (contains acrylic resins and tends to make the paint less matte) and a bit of flow aid.

For a gloss coat I sprayed an old bottle of Future acrylic floor finish diluted with a small percentage of water. From there it was the usual decal job, followed by another coat of Future to seal the decals.

I won't be able to exactly replicate the gray mix as I only have 1/2 bottle of PS Concrete left. So it will be time for more trial mixing before the next engine.

Another possibility would be TruColor paints. I ordered a few samples from a railroader in Arizona who runs a small internet hobby shop on the side. Perhaps a D&H or EL gray could be warmed with

some yellow and lightened up with a buff to make a respectable A&O gray. To me the down sides are cost and acetone. Although acetone makes it dry quickly, I have two gas pilot lights across the basement from my window spray booth, and I enjoy having a house above the man cave.

Golden acrylics by themselves probably won't get the job done. I've gotten a lot closer with paint match mixes, but the big issue was that they don't spray as smoothly as PS, even with flow aid. They take a long time to really dry hard, leave a thicker film, and adhesion isn't as strong as PS. Maybe the TruColor will work out better.

Then there's the craft paint angle to explore. In the June 2015 issue of RMC a fellow wrote about mixing substitute PollyScale paints using craft paint, lots of acrylic airbrush medium, and flow aid. This might be just the ticket for the NR&W coal hopper fleet.

[jaybarnaby](#) #20 February 25, 2017, 12:54am

That is indeed a darker red. I have some bottles of the PS Pacemaker Red but comparing it to what I've always thought of as the standard, the 489, it is certainly too dark. And I can't think of any way to lighten it. Can't add white as we are not looking for the Lionel girls' train set. And, if I ever get around to it, (I have one on back order but I think it may get shipped UP...) I may need a slightly lighter color for HO. Not sure about that though.

Black primer? isn't part of the reason for primer to give a neutral base for the color? and at the same time highlight any mistakes you have made in building? I got to using PS sand for that purpose. Not technically a primer but i performed those two functions quite well.

And, David is going to have to look for a new grey too unless he has a gallon of the Floquil on hand.

I have always wondered about mixing from Tamiya acrylics. I'm sure it can be done but so far i have had no good luck on either the A&O re/grey nor DRGW Aspen Gold. I do plan to try to spray an Athearn SD50 on which the orange is too orange with clear yellow and see if that fixes it. I can't see a clear yellow bothering the basic black but it might fix the orange. Someday... Tamiya has about a dozen greys but they are all either air force or navy and therefore tend toward blue.

I did get one bottle of Tru-color but am leery of it, Like you, I prefer water-based acrylics for clean-up and non-explosiveness. Yes I know, Tamiya is alcohol based and therefore not totally safe. I just like their paint and it isn't acetone.

What color are you going to paint the coal cars? I would assume black. See if you can talk Rick into doing the painting if you buy the Krylon... He does have some secret ability to make that stuff work.

Bob #21 February 25, 2017, 5:14am

Jay -

The next time I do some paint testing I want to try lightening the PS Pacemaker Red with Golden High Flow Naphthol Red Light. The latter is a bit transparent but it is much closer to light barn red. As you observe, adding white creates "Mary Kay" pink that would be fine if you are modeling the GW GP7 #705 in the WP Museum. Also the PS Pacemaker Red is a bit on the magenta side. Perhaps a few drops of a bright yellow would help here. A cool red can clash with a warm gray. So far the Golden acrylics seem compatible with PS paint.

My interest in black primer is only for the trucks. The gray primer works great on the car body to create a uniform neutral base color.

On trucks I want to use a primer for better paint adhesion because during ops they will get knocked around more than the car body. Black seems useful because it would disguise any spots that receive too little primary color and weathering. A lot of O-scale brass trucks, including the ones on the C425, actually equalize so I want to minimize the thickness of paint to avoid gumming up the works.

The NR&W hoppers will be black. About half are currently black so I just need to remove the pad printing then shoot a light black coat on the sides and ends. The other half are a box car brownish red.

I'm not a fan of rattle-cans, but Rick uses them with great skill. He warms the can in a pot of water (not boiling!) to make the paint more fluid. I prefer the greater control afforded by an air brush.

1 Like

CentralFan1976 #22 March 24, 2017, 7:19pm

Hi, Bob!

I've been doing some research about the Stynylrez and Pledge Floor Care Finish (acrylic), and I have a question.

Since all my freight units that I'm kit bashing are black (CentralFan as in NYC... 😊), can I just use the Black Stynylrez straight as my locomotive black and then just use the acrylic floor wax right over the Badger primer, and then decal?

Or do I have to put a coat of black paint over the primer, then the floor wax, then decal?

Thanks,
Mario

Bob #23 March 25, 2017, 6:58pm

Mario -

The only reason I can imagine you would need to paint black over the primer is if the primer isn't quite what you want (weathered black, perhaps?) Otherwise, a gloss coat over the Stylynrez should work just fine.

In hind sight I wish I had picked up a bottle of the black to use on locomotive trucks. On those, there is a lot of 3-D relief to paint. If a later color coat misses spots in a nook or cranny, what peeks through would look like a shadow.

Let us know how it works out for you.

CentralFan1976 #24 March 25, 2017, 8:42pm

Thanks!

We're on our way to an EMD-repowered FM CFA-20-4.









Thanks!

Bob #25 March 27, 2017, 5:58pm

Mario -

It appears that Badger is coming out with a glossy black version of the Stynylrez primer. On one hobby site it was back-ordered. This might save a gloss coat step prior to decals.

1 Like

Bob #26 March 27, 2017, 6:59pm

Getting back to C425s, does anyone have information about the Alco Century rear class lights? The cab usually has individual white, green and red lamps. On the rear of Delaware-Lackawanna's 2453 I have one photo showing yellowish lamps in full sunlight. Yet in a video recently posted to Trainorders, the rear lamps appear to be lit red.

There are doors next to the rear class lights. Is there a lever inside to change colors?

If anyone knows, I'm all ears.

***** a few minutes later...

I can answer my own question. There is a wonderful fallen flags web site that has scans of some operator's manuals. Quoted from the C420-C628 manual:

At the front, individual lenses and lights for each of three colors are provided. Control switches for each aspect are mounted on the access door in the front wall of the cab.

At the rear, two colored lenses, red and green, are arranged so that each in turn may be swung between the light and the clear glass lens to give the desired color indication . The colored lenses, accessible through small doors in hood, are moved by pushing upward on the knob at the bottom of the light assembly and rotating it in increments of 90 degrees to the color indication desired. A switch at the compartment control panel will turn "On" both classification lights.

Time to order some tiny red LEDs! I'll need to make an interior rear lighting fixture to hold both white and red LEDs.

Farther up in this post is a Loksound slot 10 example of how to rotate class lights with a single function. Several prototype railroaders have told me that number board lights should only be on for the "lead" unit, presuming that's the lead # given to the dispatcher. So... it would be easy to change that sound slot programming to rotate the lights as follows:

off / number boards / number boards + white / number boards + red / off.

bigtrainjames #27 April 13, 2017, 9:22pm

Hi Bob,
I wanted to let you know that P&D still has a substantial inventory of MV Lenses in the shop. For whatever reason, they do not appear on the website (or at least I couldn't find them there). There were many different varieties, some for specific locos and others for general use. I'm sure Pat would be happy to send some out to you.

Cheers,
Jim

Bob #28 April 13, 2017, 10:11pm

Jim -

Thank you for the tip on MV lenses! Your post is very appreciated. I need a few more MVs in selected sizes.

I'm grateful for what Pat and the P&D staff continue to do for us O-scalers who like to build stuff. Years ago David and I visited the "Mother Ship" and a feeding frenzy broke out! Since that day P&D has frequently received funds from my checking account and credit card. *For any of the readers who enjoy the craft of O-scale 2-rail, if you haven't shopped there you need to!* — end of unsolicited commercial message...

There are a few A&O locomotives that will need upgrades for MV lenses that have yellowed over time, or have glued-in burned-out regular bulbs, including ones to fill the early style Pyle National "big glass steam-era reflector" headlights. I don't mind turning my own polycarbonate class light inserts for most locomotives as the best fit rarely lines up with sizes that MV produces (tooling a new size is expensive and not expected!)

Thanks again.

CentralFan1976 #29 April 14, 2017, 4:03pm

How sandable is the primer? Should I fill the scratches and sand what I can first, or prime and sand and prime and sand, and prime?

Here's some of the scratches...



Perhaps use a more traditional primer to spot prime and sand, and then use the Badger?

Thanks!
-Mario

Bob #30 April 14, 2017, 4:28pm

It is a primer, not a filler. It does sand very nicely. It won't hide much of anything in the way of scratches, and certainly not the deep ones on the nose of that engine! You will need to first use a traditional body filler of your choice. I usually use orange Bondo from a local body shop, particularly on brass engines.

So fill, sand, repeat until everything is buttery smooth.

1 Like

[CentralFan1976](#) #31 April 14, 2017, 9:55pm

Dang blasted...





