



3rd Rail SP 4-8-2 Class MT-4

Review and Photos by George Brown

Mountain-type steam locomotives with their 4-8-2 wheel arrangements served in both passenger and high-speed freight service on many U.S. railroads. Unique variants of this high-speed workhorse were the Southern Pacific MT Class 4-8-2s with skyline casings. These casings were installed beginning in the early 1940s and covered the top of the boilers for a semi-streamlined look that characterized the SP's premier service passenger locomotives late in the steam era.

The prototype for our evaluation model was MT-4 number 4352, which rolled off the floor of the SP's Sacramento erecting shop in January 1929. This engine was one of six MT-4s that in the postwar 1940s wore *Daylight* colors on their cabs and tenders to match their *San Joaquin Daylight* passenger trains. Number 4352 rolled on 73" drivers, and because the main drivers developed cracks in their spokes in the late 1940s, they were replaced with Boxpok wheels, as 3rd Rail modeled on our 1:48 scale MT-4. In the 1950s, diesels bumped steam off mainline passenger trains with MT class locomotives assigned to commuter service in the San Francisco Bay area as well as freight and helper runs along the West Coast.

Construction and Features

As a quintessential representative of 3rd Rail steam locomotives, the MT-4 is brass with detailed lost wax castings modeling components like the generator, air pumps, various valves and handles, pipe unions, and light housings. Realistic hand-



rails, air lines, and steam or water pipes are various sizes of brass wire with some of the wire spiral scored to simulate insulation

wrapped around the pipes. On top of the tender's water tank are simulated wooden planks that are actually etched into a single



sheet of brass.

A 3rd Rail hallmark is the use of sprung drivers with fully articulating side rods that allow for independent vertical movement of each driver. Each driver axle turns in machined bronze journals. Axle journals on the trailing truck and tender trucks are also individually sprung, and the axles spin in engineering plastic bearings. Other operating mechanical details are the



opening vent on the cab roof and the small windshield frames that pivot out in front of the cab windows. However, neither these windshield frames nor the cab's front windows have any panes installed. On the tender, all four hatches on the water tank open, with three of them covering controls for the TrainMaster Command Control, Engineer-On-Board (EOB) speed control, and

RailSounds 4.0 electronics.

Lighting includes a constant brightness headlight and a pair of green LED classification lamps on the boiler front, number boards on each side of the skyline casing, and a directional back-up light on the tender. Although it is not an intentional lighting feature for the model, the speed sensor LED that is on the Pittman 9000 series motor casts a soft red glow onto the right side of the trailing truck frame, which looks like a reflection from the firebox.

Inside the unlit cab is a detailed boiler backhead with painted dials and pointers. Painted figures of the crew sit at their respective stations on each side of the non-slip floor. I especially like the hinged step plate that fills the necessarily wide void between the cab and tender.

Without my counting rivets, overall dimensions of the engine and tender are reasonably consistent with the prototype MT-4 with exception of the drivers, which measure to a scale 70". In past discussions

with model train builders, drivers for 3-rail O gauge locomotives often have to be slightly undersized because of the huge flanges needed for reliable operation on tubular track. Since my layout has tubular track, this is an acceptable compromise to me.

Electronics from Train America Studios and Lionel ride inside the tender, with a conventional multi-wire cable electrically connecting the engine and tender. Two cams on the front axle operate a pair of micro switches that trigger the voluminous puffs of smoke from Train America Studios' smoke unit and the simultaneous steam exhaust chuff sounds. Slide switches select smoke unit operation and also the puff and chuff rate at two or four per driver revolution. In my only criticism of the MT-4, these switches are mounted visibly under the cab. Several pipes partially obscure both switches from view, but if the engine were mine, I'd carefully mute the switches' brass trimmed face plates and screws with flat black paint.

On the subject of paint, both the satin black paint and *Daylight* colors are beyond reproach as are the silver smoke box front and lettering. The silver striping between each of the colors on the cab and tender is without a doubt among the most precise I've had the pleasure to see on a model locomotive.

At Trackside

Based on my past experience with a number of brass locomotives from several

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manufacturers, including 3rd Rail, they ran fine out of their box, but careful lubrication and break-in of several hours turned them into really great performing engines.

Our evaluation MT-4 proved to be no different because as track passed under its wheels, it ran smoother and smoother. I've also experienced that after the initial two

to three hours of running the engine, a second lubrication of the driver journals and drive rod pins proved beneficial. And like real steam locomotives, it appears that no two limited production, hand-built brass locomotives are ever identical, either physically or operationally.

Operation of

the coil coupler, also from Train America Studios, was problem free, with the coupler opening on every command from the CAB-1. And best of all, the coupler never opened by itself. Smoke from the fan-driven smoke unit was a lot more than I'm comfortable with, so its test lasted for only a few minutes.

Final drive gearing is low even with its tall drivers, so our number 4352 started and pulled not only its heavy passenger consist but also an extremely heavy freight train without a whimper. Even though 4-8-2s are normally high-speed engines, our MT-4 ran, looked, and sounded great lugging a drag freight around my layout. Consistent with the engine's low gearing, cutting the track power resulted in fast stops, which surprised me since the motor has a sizable flywheel on it.

Though the MT-4 is a large 8-coupled engine, it is also short enough to be attractive when running through both my O72 and O54 main lines. There is minimal front and rear overhang on the engine itself, and the tender's short wheelbase lends itself to tracking tight turns. Of course, the EOB electronics held the engine's speed at a constant rate regardless of track curvature or minor grades on the editorial Carpet Central. Although I prefer running TMCC locomotives at 14 volts in command operation, if for no other reason than light bulb life in the rolling stock, the MT-4 with its EOB speed control performed best and was most responsive to speed changes at the recommended 18 volts.



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Southern Pacific 4-8-2 Class MT-4 steam locomotive

3-rail 054 curve; 2-rail 48" radius


TMCC with RailSounds 4.0; length including coupler 25-3/8"

Price: \$1,274.95 with *Daylight* decoration; \$1,199.95 for all black

Made in Korea by 3rd Rail Division of Sunset Models, 37 S. Fourth St., Campbell, CA 95008

408-866-1727; www.3rdrail.com

At the End of the Run

For the most part, I'm an operator and usually rate locomotives on how they look and perform on a layout. As to the MT-4, it did well on the rails in all aspects. But to me it has an additional attribute of being an unusually handsome shelf model from any viewing angle. The *San Joaquin Daylight* MT-4 from 3rd Rail is one of those rare locomotives that I would be equally pleased to just look at on my mantle as well as to run on my layout. 

Southern Pacific C-30-1 Caboose

When I coupled the SP MT-4 to a freight train, a model of the SP C-30-1 wood caboose, also from 3rd Rail, rode at the end of the train. This all brass 1:48 scale 30' caboose sells for \$219.95 and models one of the over 600 steel-framed wooden cabooses that the SP built between 1917 and 1928. As a single class of cabooses, the C-30-1 was the largest on the railroad and served on Southern Pacific and Texas & New Orleans trains from Louisiana to the Pacific Coast well into the 1960s.

Our evaluation C-30-1 was lettered in the simple prewar SP scheme, but postwar Southern Pacific lettering is also available as is T&NO and SF. Interior lighting shows off the industrial green inside paint and also the two figures riding in the slant side cupola, one facing forward and the other riding backward. Opening doors on both ends are spring loaded and close completely. Red LED marker lamps have an on/off switch mounted underneath the car's floor. Also under the floor is the underframe detail and brake equipment. Our 3-rail caboose rode on sprung brass trucks with pick-up rollers and operating tinplate couplers, which negotiate O42 and wider curves. Models equipped with 2-rail trucks and scale couplers are also available from 3rd Rail.

In keeping with the MT-4 and other 3rd Rail products that I own or have reviewed, the finish on the caboose is pristine. External decoration is true to prototype with minimal white lettering and handrails.

On the rails, the 1 lb 9 oz caboose tracked well and didn't pull any of my lighter scale-sized plastic cars off the rails in O42 turns. It looked great with the MT-4 at the head end of the train and downright fabulous with my 3rd Rail SP MK-5 Mikado on the point.

3rd Rail Southern Pacific MT-4 Performance

Weight on Driving Wheels: 6 lbs, 15 oz

Tender Weight: 2 lbs, 8 oz

Tractive Effort (conventional control): 3 lbs, 1 oz @ 9.8 VAC, 3.9 A, 38.2 W

Minimum Sustained Speed (command control): 4 scale mph @ 17.9 VAC, 1.2 A, 21.5 W

Maximum Tested Speed (command control): 60 scale mph @ 18.1 VAC, 1.4 A, 25.3 W

Test Train

Eight-car streamlined passenger; train weight 13 lbs; pull to move train 12 oz; O scale aluminum cars (amps for interior lights subtracted from all performance data)

