

John Sipple

# Sipple on Trains

## E7 A & B

**Precision Craft Models delivers their first production sound locos in N scale**

### Union Pacific and Their E7's

From 1945 to 1949, the E7 ushered in the postwar E period. Four hundred twenty-eight A units and 82 B units went to 31 different railroads. The follow-on E8 would sell fewer locomotives to two fewer railroads, making the E7 the high-water mark. It spelled the difference between pre and postwar production by introducing the same bulldog nose found on the wildly popular F units. On a chassis the same length for both periods, the cab was moved forward on the E7, offering more usable area in the engine bay behind.

The E7 was also different outwardly from the latter-day E8 and E9 models. Compared to the stainless steel side grilles on the last models, the E7 had the older "chicken wire" vents high in the side. It also had rectangular side windows that would be replaced by portholes. Finally, right behind the cab on both sides was a louvered vent panel of the same dimensions as the door ahead of it; the E8 and 9 versions dispensed with this feature.

### Precision Craft Model's UP E7's

My review samples represent perhaps the early to mid '50's. By the late '50's and early '60's, ladder rungs up the engineer's side of the nose appeared and snow shields sprouted over the radiator fans. The period modeled is actually a more pleasing time, when the simple lines of the locomotive were not punctuated with mechanical realities. Paint work is excellent, lettering is sharp and clear, even under magnification, and placement seems correct.

Handgrabs are separately applied, as are the horns above the cab. The diaphragms between cars are flexible and work very nicely. The nose coupler on the A unit can be replaced by a snap-in piece that replicates the closed coupler streamline doors of the early prototypes.

The E7A arrived from EMD at 71 feet 1.25 inches over the coupler pulling faces. This works out to 5.33



*This photo shows Precision Craft's E7 A and B units several times larger than they really are. Put in those terms, these N-scale models are a considerable accomplishment, both in terms of sound operation and also in their high quality of modeling accuracy.*

inches, which is just what the A unit model measures. To be fair, the nose coupler sticks out farther on the model than on the prototype, so I tried striker to striker distance, which is 68 feet or 5.1 inches. I got 5.13, and that works out to 68 feet 4.8 inches, which is not bad at all. This slight extra length also finds itself in the distance between truck centers, again, no big thing. The height is within a scale inch, as is the locomotive width.

While the B-unit has the same height and width, the prototype B was a foot shorter over the strikers, at 67 feet. Our sample worked out to 67 feet plus, about 2.7 scale inches long. Neither version looks at all long, compared to the prototype pictures. General Motors worked with a form factor based on the 72-foot passenger car, never mind that the lighter weight streamliner cars stretched out to 85 feet within 10 years of the first EA rolling out. These were lo-o-o-ong locomotives for their time, and the models capture that sense very faithfully.

### The Challenge of Sound in N-scale

There's a very simple reason that an upright bass viol is so much bigger than a violin, and why a tuba is larger than a trumpet. Lower frequencies require larger resonant chambers. Moving to 1/160 means that all dimensions are nearly half that of HO's 1/87. When you have a locomotive the size of a pack of chewing gum, stuffed with motor, drive components and weight, how much room can be left over for sound equipment, and just how well can sound be reproduced by a sound system that small?

A competent acoustic engineer could predict with fair accuracy two things about N scale sound versus the larger HO-scale rendition. First, there will be less bass response, and second, the loudness potential (usually measured in decibels) would be noticeably reduced.

Any good scientist would also put “scale sound” on the table. When your eyes are six feet away from an N-scale model, what is the scale distance? That would be 6 times the scale factor of 160, which equals 960 feet or about the length of a three football fields including the end zones. Just how loud is a diesel locomotive at that distance? Not only is it noticeably quieter than when you’re right up beside it, the lower frequencies will dissipate as they tend to do with an open sound source.

These locos are pretty loud, though not as loud as an HO-scale locomotive from PCM with a LokSound board inside it. The physicists predicted this. Also, it does sound somewhat tinnier, which is to say, less bass response. That was predicted, too. Don’t expect sound for N scale to ever get a lot better than this; the laws of physics aren’t easily broken. Perhaps a train show floor is a poor place to listen to these things because of the open acoustics of an arena. In my train room, the little N-scale locomotives sound much better than they would on a modular layout spread out in a shopping center.

With all that said, I like it. I’m one of those people who gets a childish joy out of sound in model railroad locomotives of all scales. Of course, PCM has chosen the very best locomotive design for this project. The extra long covered wagons of passenger service — the E’s, the PA’s, the other long, A1A-trucked

streamliners — have larger resonance chambers. The next thing will be steam locos with big tenders. In some ways, this is even better. The hardest will be small steamers, Geeps and switchers.

The sound is very authentic. At different throttle settings, I can hear the distinctive 567 V-12 “chug,” and it is just as I recall it at various engine speeds, meaning they have used a complex sound sample. When both units are running with four prime movers throbbing, it isn’t terribly distinct, but one unit is more clear. Kudos to the chef.

## Operation

Take ‘em out of the package, put ‘em on the track and run ‘em. It’s really that simple. However, if you plan to

run in DC, you really need a pretty good quality DC power pack. Some of the older or less costly ones leak AC current deliberately to enhance low speed operation; you can often hear engines hum at slow speeds when this happens. This can also confuse the DC-DCC sensing circuitry. Be smart. Go for a good, pure DC supply.

Control is precisely the same as it is for the HO PCM models with Loksound decoders. DC operation is enhanced with the Loksound DC Master control box, and DCC responds to any modern DCC system from any manufacturer. You should also keep in mind that any sound equipped locomotive will draw more current, especially at startup when it has to charge the large sound capacitors, so it will be wise to plan your power supply’s capacity accordingly.

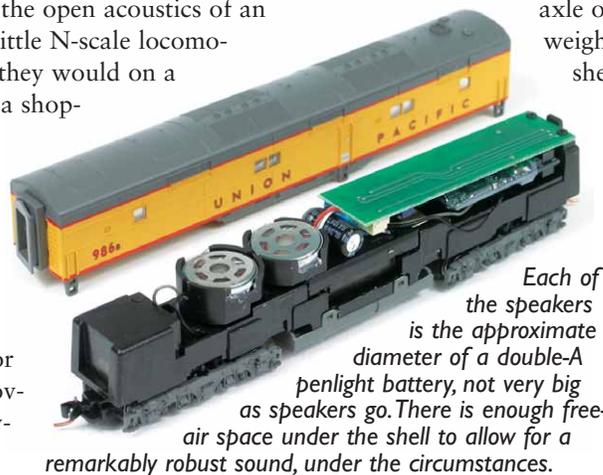
Each unit has traction tires on the last axle of the rear truck. Obviously, more weight could have been placed inside the shell if the sound board, speaker housings and sound chamber space was filled with metal. The traction tires are a good compromise to give back the pulling power lost from weight reduction. It should also be noted that all six wheels in each truck are powered, a welcome exception from the prototype’s A1A axle configuration in each truck.

Operation around my long Code 80 test layout was just perfect, running across switches and crossovers at full speed without a

single problem. I also muted the sound and listened to the units in dead silence. Up to around half speed, they are almost completely silent, the sign of a well-designed drive train. Above half throttle and the two together began to make noticeable but not objectionable gear whine.

Quality sound is finally here for N-scale, and now that it’s arrived, there’s no going back. Extra points are allotted to Precision Craft Models for having a complex sound sample and providing faithfulness to the original 567 V-12 engine. This a very good model in both fidelity to the prototype, quality of detail and smoothness of operation. It’s also a very good start on a future line of sound-equipped N-scale locomotives.

Bring ‘em on, I say. **HM**



*Each of the speakers is the approximate diameter of a double-A penlight battery, not very big as speakers go. There is enough free-air space under the shell to allow for a remarkably robust sound, under the circumstances.*