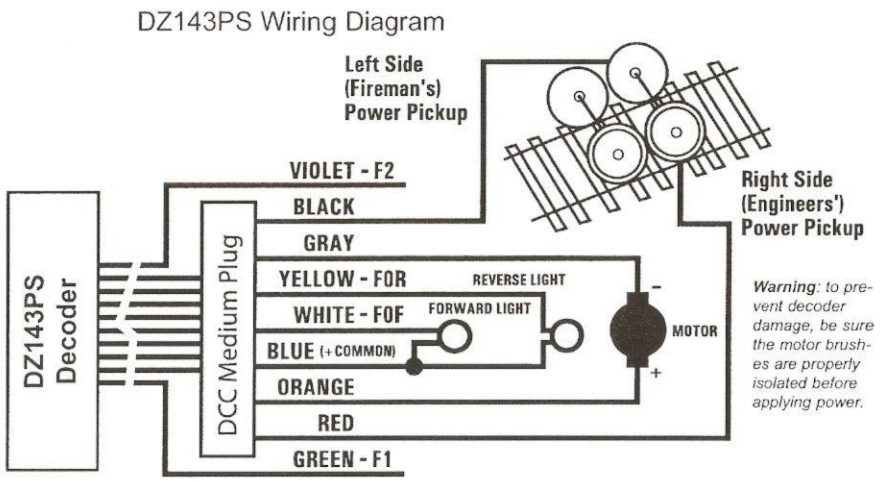
ADDING DCC TO A RIVAROSSI SWITCHER

by Jerry Hansz

Here we go again! I had a Rivarossi 0-8-0 switcher that began to run "squirrely". I opened it up, and found the forward chassis contact was on the verge of breaking apart. It lay in the pending box for a coupla months.

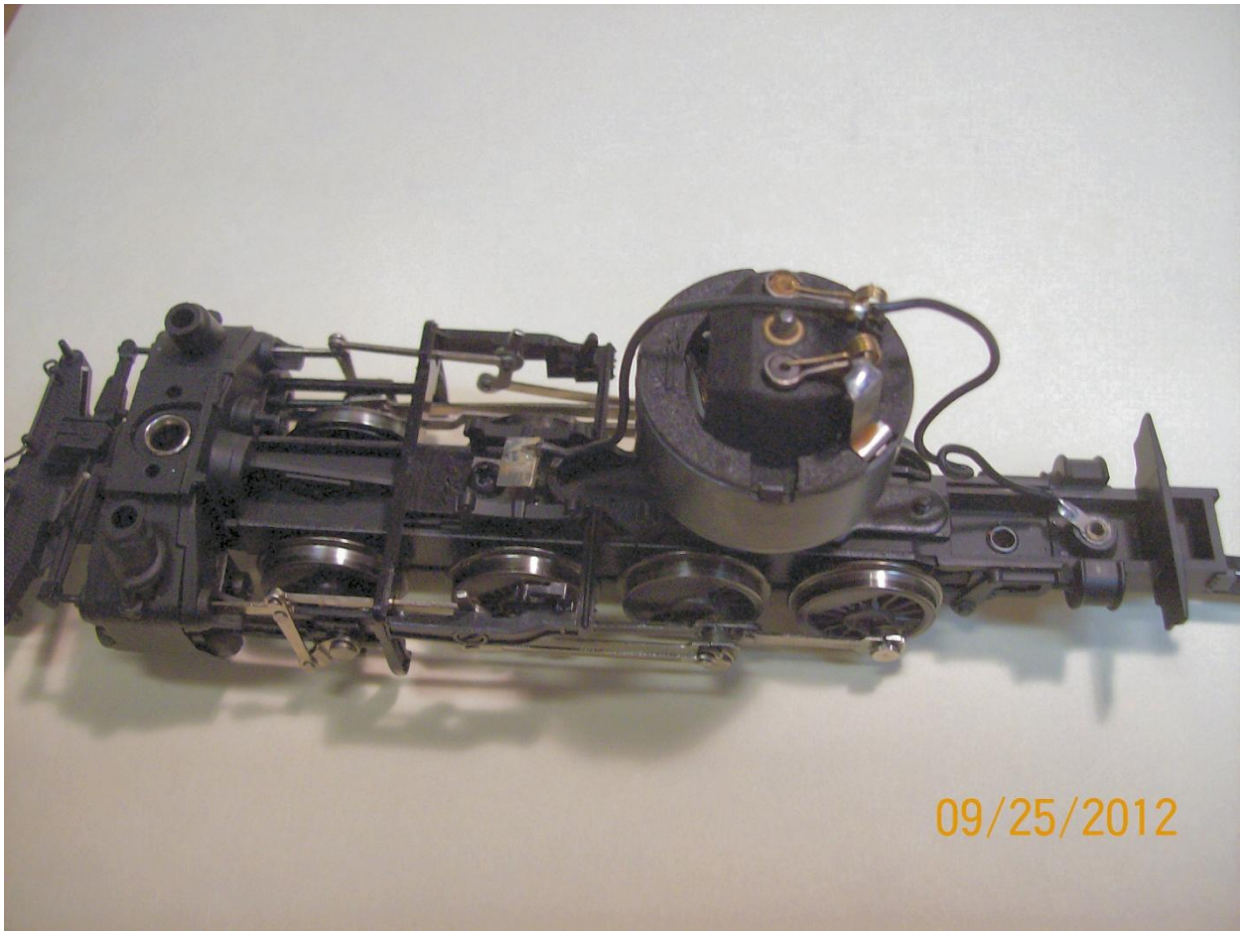
A flash-why not convert it to DCC? With the multimeter and the test power, I discovered the electrical layout. The manufacturer's specs said it was rated for 12VDC at 0.4A maximum. There would be room in the firebox for a z-scale DCC decoder.

So, I acquired a Digitrax DZ143PS decoder (the DZ143 would work, but the PS was on sale). Diagonal cutters made short work of the 8-pin plug.



In the next photo, note that a black wire is connected from a forward chassis contact to the right-hand motor contact and to the tender drawbar. This turns out to be the left-side pickup. The left-hand motor contact is connected the motor shell. This is the right-side pickup. With DC power plus to the left-hand contact, and minus to the right-hand contact, the locomotive moves forward. Great! Should be a piece of cake.

Turns out the forward contact broke off with very little hand pressure. I re-soldered it to the remaining contact. The wire was unsoldered from the right-hand motor contact, and soldered to the DZ143PS black wire. I separated the left-hand contact from the motor shell, and soldered the DZ143PS red wire to the motor shell.



0-8-0 CHASSIS TOP VIEW

I then soldered the DZ143PS gray wire to the right-hand motor contact, and the orange wire to the left-hand motor contact. I decided not the use the locomotive lights, so all other wires were trimmed and taped to the DZ143PS.

Would it all fit? Yep! The decoder slipped easily into the upper firebox. The rear tabs were inserted into the locomotive shell, and the shell pressed down nicely to the cylinder block. !!! what happened to the front mounting screw? The smoke box front was in the box, but no screw! I scrambled through the junk on the bench, no luck!

Finally found a screw from the junk box that would fit, and it all came together. Picked up the smoke box front, and the screw fell out! Wow! It now resides in the junk box. Snapped the smoke box front on, and - onward.

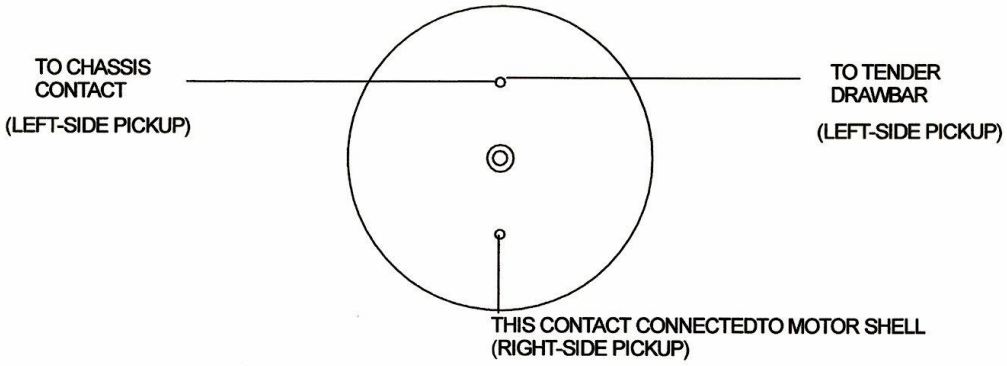
Now, would it work? Set up on the programming track, programmed for long address 2556, normal forward, DCC & DC running. On the main track she runs forward and reverse nicely. I ran her down to the engine terminal and parked her on track one. Success!

I needed another locomotive on the Oidar Branch, so 2556 was the candidate. She ran down from Unter-Talheim, and is parked by the engine crew shack.

The following Autosketch drawing shows how the wiring was modified for DCC.

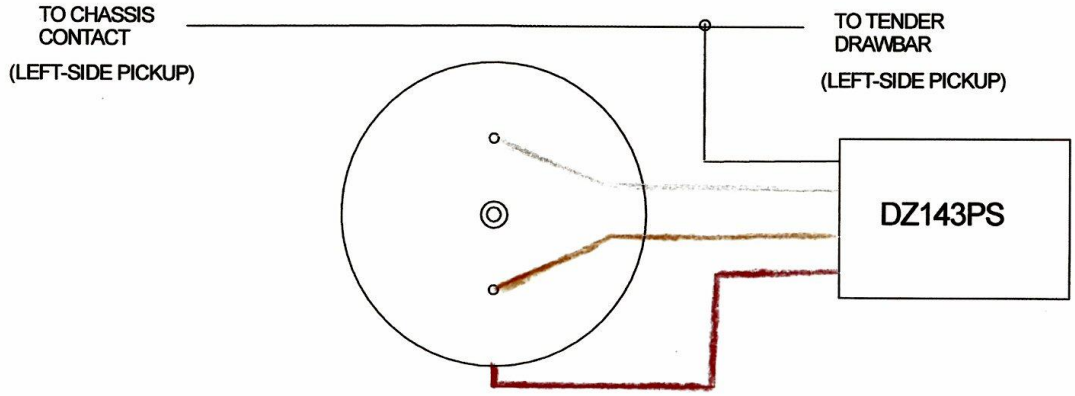
ATSF 2556 DCC CONVERSION DETAILS

BEFORE CONVERSION



← TOWARD LOCOMOTIVE FRONT

AFTER CONVERSION



LEFT-SIDE WIRES REMOVED FROM MOTOR CONTACT AND CONNECTED TO DZ143PS BLACK WIRE. MOTOR SHELL DISCONNECTED FROM MOTOR CONTACT AND CONNECTED TO DZ143PS RED WIRE. DZ143PS ORANGE WIRE CONNECTED TO RIGHT-SIDE MOTOR CONTACT. DZ143PS GRAY WIRE CONNECTED TO LEFT-SIDE MOTOR CONTACT.

ATSF2556DCC.SKF DRAWN 9/26/2012