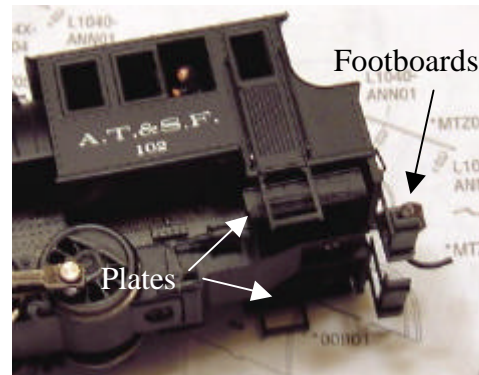


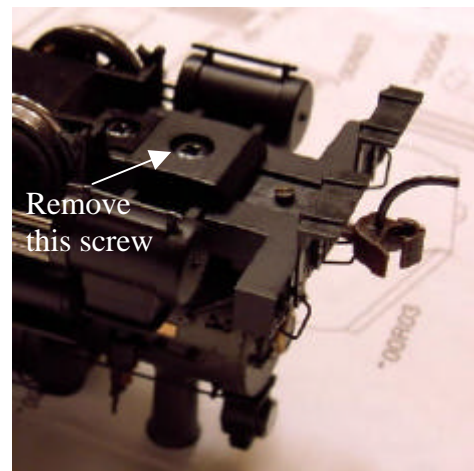
Decoder Installation Bachmann Spectrum 0-6-0T

Remove Shell

On the underside of the locomotive at the rear remove the two riveted steel plates (plastic) by grasping them with tweezers and pulling straight down. These two plates are attached to the locomotive with two pins. One pin goes into the chassis and one into the shell. Removing them makes it easier to remove the shell. While you are removing things, remove the two footboards at the rear of the locomotive. These are not required to be removed in order to remove the shell but they have a tendency to pop off and fly across the room during disassembly. So, it is easier and safer to remove them purposely. Each is attached by two pins located at the top of the footboard hanger straps. Just pop these off and set them aside with the steel plates removed earlier.



Turn the locomotive over and remove the screw between the cylinders. Lift the front of the boiler up and away from the cylinder assembly. At the rear of the locomotive push the fireman's and engineer's arms inside the cab windows. Pull the boiler/cab assembly forward to disengage the two tabs under the cab. Gently wiggle and lift the shell up and free of the chassis.



Select a Decoder

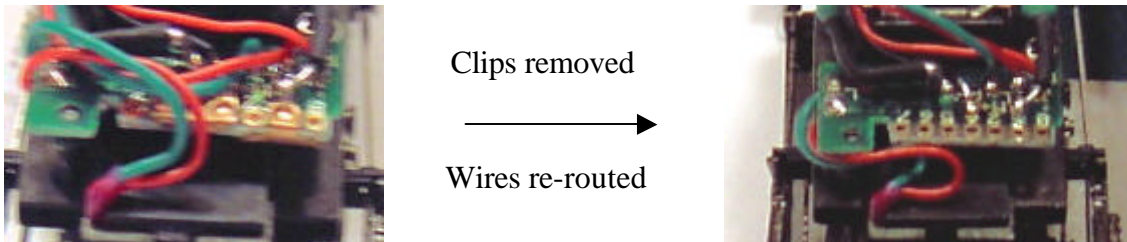
As far as current rating is concerned, any 1 amp decoder should work just fine for this locomotive but physical size is a challenge. A DN121 would fit in the cab with wires routed through the firebox to the circuit board in the boiler but the decoder would be visible in the cab. This locomotive has a nicely detailed cab and the large windows make the interior quite visible. I decided to look for other options. It looked like there might be room for a DZ121



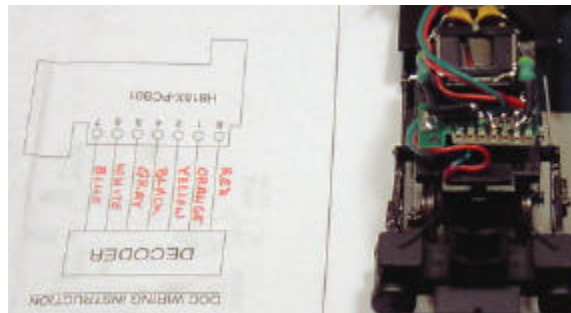
decoder in the smoke box. A trial fit confirmed that the DZ121 would fit nicely in the smoke box above the clear plastic light pipe. The best fit seemed to be with the Digitrax logo on the decoder shrink wrap facing down as shown in the photo.

Wiring

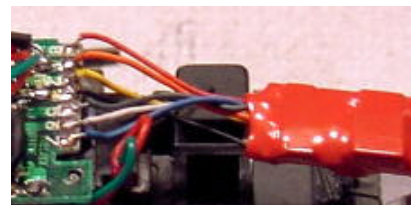
This locomotive does not have an NMRA plug. Instead, there is a row of solder pads on the circuit board for decoder installation. Remove the two brass shorting clips from the front edge of the circuit board and re-route the wires for the front light bulb to the underside of the circuit board as shown below.



Cut the wires on the DZ121 to about one inch in length. Strip and tin a little over one sixteenth inch on the end of each wire. With the DZ121 positioned toward the front of the locomotive and oriented with the logo facing down carefully solder the wires from the decoder to the circuit board according to the diagram in the 0-6-0T instructions.

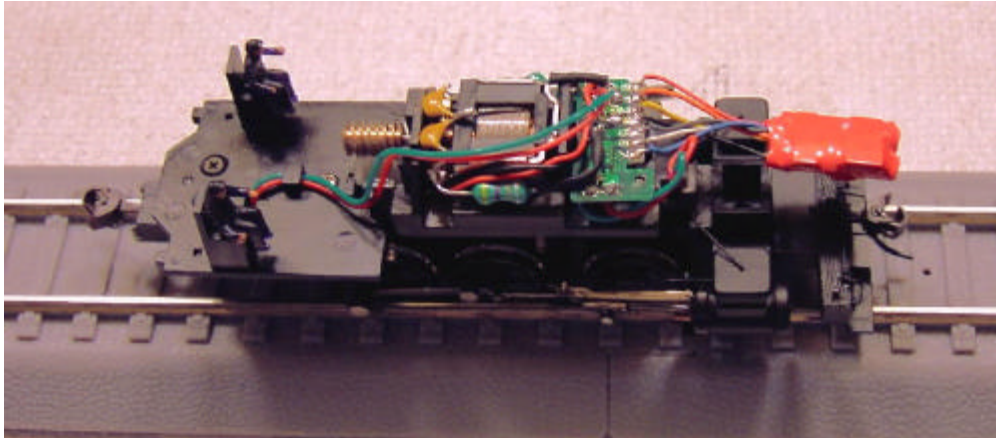


Use a good quality liquid solder flux to aid in the soldering operation. Double check your wiring to be sure you have made the proper connections. Examine the circuit board under magnification to insure that you have not created any solder bridges between the solder pads on top of the circuit board. Check the underside of the circuit board and trim any excess wire below the solder pads.



Test run

With the decoder connections complete, place the locomotive on the programming track and check for programmability. If all appears well, move the locomotive to an active track and give it a test run. Check forward and reverse operation as well as lighting.



Re-assemble

Reverse the procedure at the beginning of this article to re-install the shell. Fit the DZ121 into the smoke box and carefully stuff the wires out of harms way as you go. Fit the two tabs at the back of the locomotive into their slots and lower the boiler onto the chassis. Replace the screw between the cylinders. Re-install the two steel plates and the rear footboards. Your 0-6-0T is ready for DCC service!

