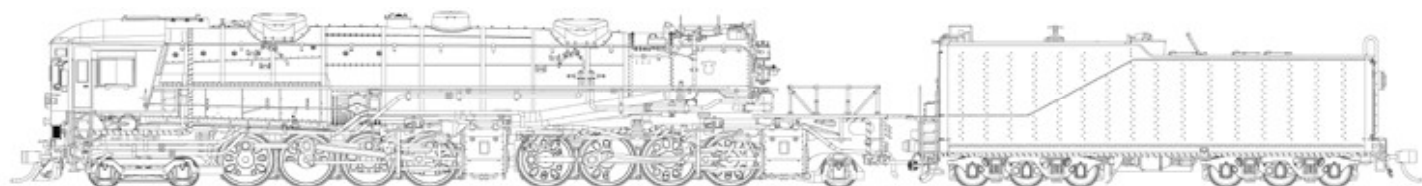




**Baldwin Locomotive Works  
SOUTHERN PACIFIC  
AC-8/10/11/12  
4-8-8-2 Cab Forward  
Articulated Steam Locomotive**



# Operators Manual

# **Operators Manual**

## **Your Presentation Quality Collectors Box Includes:**

- N Scale Baldwin Locomotive Works Model  
AC-8/10/11/12 4-8-8-2 Articulated Locomotive
- Oil Tender with Electronics
- Operators Manual
- Warranty Information
- Traction Tire & Coupler Pack

## **Table of Contents:**

- N Scale AC-8/10/11/12 4-8-8-2 Articulated Steam Locomotive Features
- Oil Tender Features
- Preparing The InterMountain AC-8/10/11/12 Steam Locomotive For Operation
- DC (Basic Analog Mode) Operation
- Digital Command Control (DCC) Operation
- Ongoing Maintenance Activities
- Pilot Coupler Conversion

## **N Scale AC-8/10/11/12 4-8-8-2 Articulated Steam Locomotive Features:**

- Detailed cab interior
- Painted gauge faces
- Detailed boiler back-head
- Directional lighting and lighted number boards
- Highly detailed piping including flexible high pressure piping
- Operating side rods, eccentric cranks and valve gear
- Detailed feed-water system, air pumps, generator and brake gear
- Formed wire railings and grab irons
- Diamond Plate patterned walkways and deck plate
- Prototypically correct articulation of the trailing engine
- Recommend operation on 15" Radius minimum curve
- 10 Pin NMRA Standard Plug for quick & easy DCC Installation
- Micro-Trains® Pilot Coupler

## **Oil Tender Features:**

- Formed wire railings and grab irons
- Detailed trucks and brake piping
- Diamond Plate patterned deck plate
- Operating directional back-up light
- Micro-Trains® Coupler

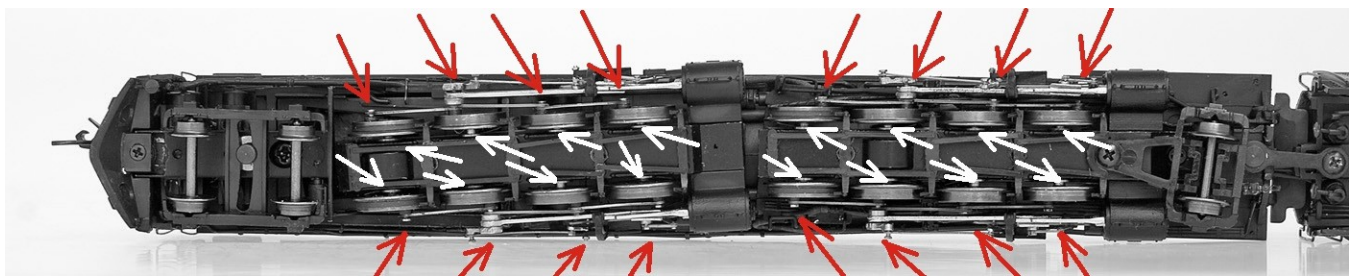


### **Preparing the InterMountain AC-8/10/11/12 Steam Locomotive for Operation:**

Every InterMountain AC-8/10/11/12 Steam Locomotive is factory tested prior to release. The InterMountain AC-8/10/11/12 Steam Locomotive is factory lubricated on all internal driveline components. The external driveline components are not factory lubricated to protect the finished model in its presentation packaging.

**Once initial set-up and test run is complete the following lubrication is required prior to normal operation of the locomotive:**

- Using high quality plastic compatible lubricating oil, carefully (but sparingly) lubricate all moving parts of the external side rod assemblies. InterMountain Railway recommends Labelle® 108 - Synthetic Oil Multi-Purpose Light Weight.
- Lubricating the drive axles at their bearings is also recommended (see image below).
- Avoid and remove any excess oil prior to normal operation of the locomotive.



**Lubrication Locations**

### **DC (Basic Analog Mode) Operation:**

**Operating the Locomotive with a standard N Scale Compatible (DC Analog) power pack:**

- Set the DC Power pack direction control switch to forward.
- Set the DC Power pack throttle to Zero/Stop position.
- Turn on the N Scale Compatible DC Power pack.
- To Accelerate: Advance the throttle control slowly until the locomotive moves forward. Adjust the throttle as required to achieve the desired speed.
- To Decelerate: Reduce the throttle control slowly. Adjust the throttle as required to achieve the desired speed.
- To Stop: Reduce the throttle control slowly to the Zero/Stop position.
- To Reverse or Change Direction: With the throttle in the Zero/Stop position, change the power pack direction control switch to reverse or opposite position. Then accelerate, decelerate, and stop as described above.

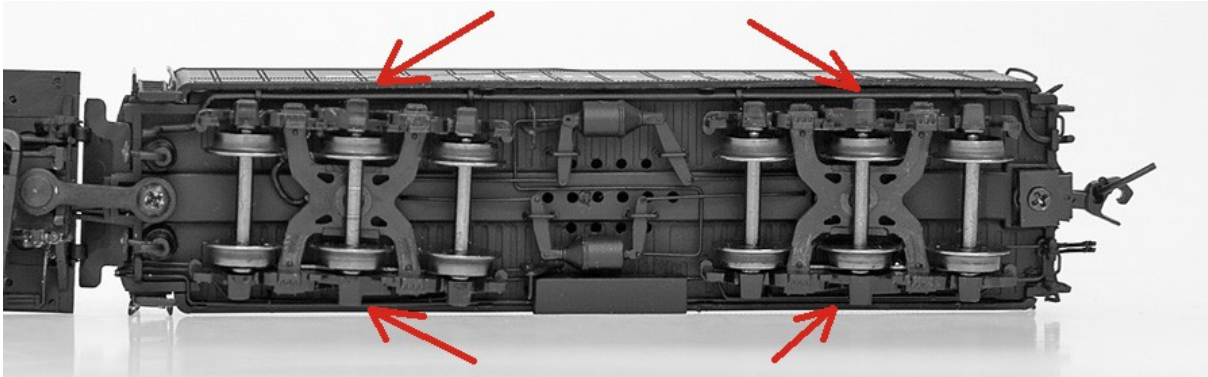
### **Important Notes:**

- NEVER Reverse or Change direction while the locomotive is moving as this may damage the driveline components.
- Avoid rapid throttle changes and abrupt stops to reduce excessive strain on driveline components.

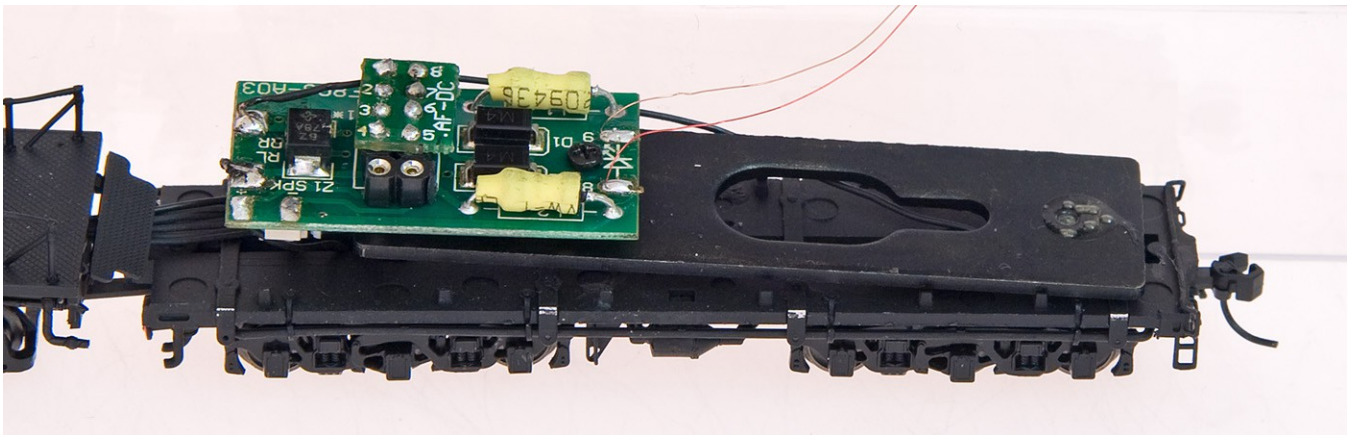
## Digital Command Control (DCC) Installation & Operation:

Your N Scale AC-8/10/11/12 is equipped with a 10 pin NMRA compliant plug for the installation of a decoder in your locomotive. The following instructions will guide you in the installation of your decoder. To install a decoder in your AC-8/10/11/12 locomotive requires only the removal of the tender body.

- 1.Prepare the locomotive by placing it on a protected surface. The foam pad included in your presentation package would work just fine.
- 2.Remove the tender body by inserting a flat tool between the edges of the body and sliding it back and forth. This will release the body from the base frame. You will need to do this on both sides.

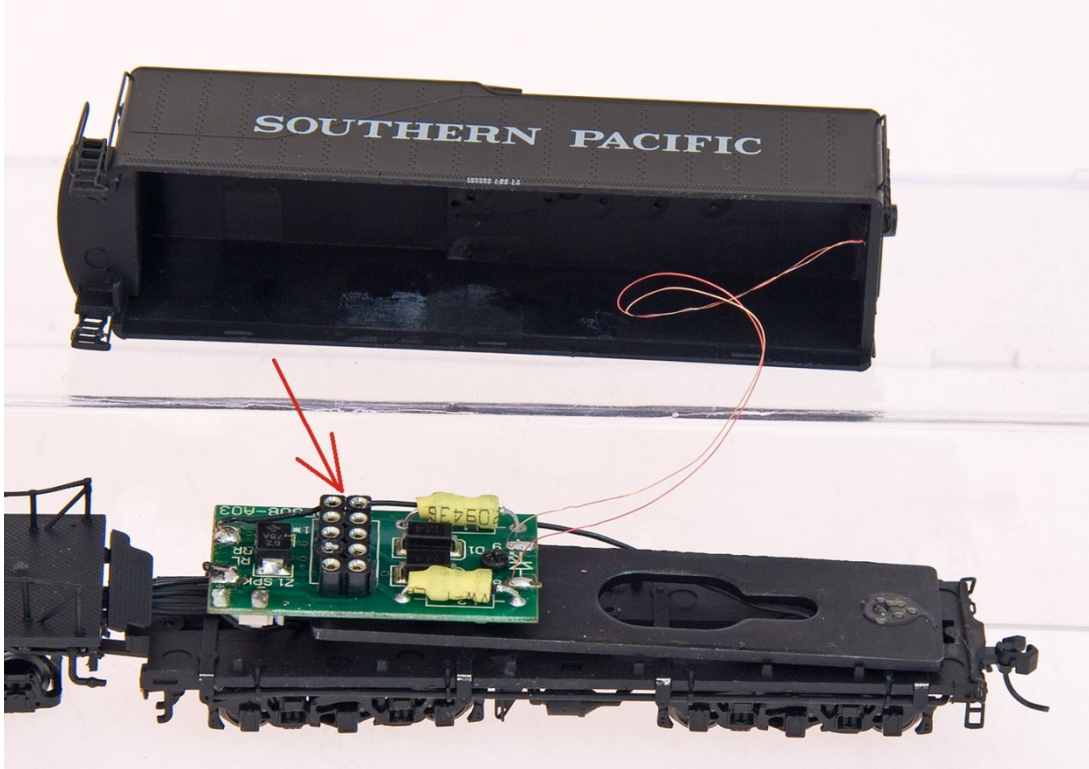


- 3.Remove the tender body, being careful not to pull on the tender light wires.





4.Remove the NMRA dummy plug and plug in your decoder. Align Pin-1 from the decoder (orange wire) to Pin-1 on the plug (marked with a \*1). Backwards installation of the decoder is harmless and will only result in the locomotive operating opposite to the direction indicator on your DCC system.



5.Replace the tender body.

### **Operating the DCC Equipped Locomotive with a qualified NMRA Command Station:**

- Select the factory default locomotive address. (Address 3 with most brands of decoders)
- Set the controller to the preferred speed-step range.
- To Accelerate: Advance the throttle control slowly until the locomotive moves forward. Adjust the throttle as required to achieve the desired speed.
- To Decelerate: Reduce the throttle control slowly. Adjust the throttle to achieve the desired speed.
- To Stop: Reduce the throttle control slowly to the Zero/Stop position.
- To Reverse or Change Direction: With the throttle in the Zero/Stop position, change the direction control to reverse or opposite position. Then accelerate, decelerate, and stop as described above.

### **Important Notes:**

- NEVER Reverse or Change direction while the locomotive is moving to avoid damaging driveline components.
- Avoid rapid throttle changes and abrupt stops to reduce excessive strain on driveline components.

# Operational and Decoder Functions:

## Sound Equipped Locomotive Only-

Your new locomotive comes equipped with a LokSound Select Micro DCC & DC “Dual Mode” decoder integrating a full-featured, 8 channel sound system, and a .75A motor controller. The LokSound Select follows all NMRA DCC standards and recommended practices. It can be used with 14, 28, or 128 speed steps, supports two digit as well as “4-digit” addressing. Up to 29 function keys are supported.

The LokSound Select supports all DCC-programming modes including Programming on the Main Track. Because of its unique low-power design, the LokSound Select can be programmed on the programming track of all popular DCC systems. **No programming track boosters or other circuitry is required.**

- Over 20 sound effects, including the bell, playable whistle, air pump, exhaust chuff, coupler, steam release, cylinder cocks, brake release, side rod clank, blower, injector, dynamo, firebox blower, synchronized brake squeal, and more!
- 8 channel sound: The LokSound Select can playback up to 8 sounds at a time.
- 5<sup>th</sup> generation motor control with load compensation for smooth and precise operation.

**Default Address = 3.** **Decoder Reset CV8 = 8**, then interrupt track power for approximately 5 seconds and restore power. The decoder will revert back to address 3 after a decoder reset.

Your sound equipped locomotive comes with the following DCC function key commands:

F0 (f) Headlight/Dynamo	F8 Shut Down / Mute
F0 (r) Backup light	F10 Air Pump
F1 Bell	F11 Oil Burner
F2 Steam Whistle	F12 Blower
F3 Single Chime Air horn	F15 Crossing Communication
F4 Short Steam Whistle	F16 Rail Clank (Loco must be moving)
F5 Coupler Clank	F17 Brake Release
F6 Injector	F18 Sand Valve
F7 Number Board Lights/Dynamo	F19 Headlight/Reverse Light Dimmer

**Chuff Rate at speed step 1:** CV57 Default 87 (Range 0-255) Lower numbers = Faster Chuff

**Chuff Rate at higher speed steps:** CV58 Default 40 (Range 0-255) Lower numbers = Faster Chuff

**Master Volume: CV63 Default=192 (Range 0-192)**

**Individual Sound Volume Control (MUST SET CV32=1 FIRST):**

Chuff: CV259 Default=128 (Range 0-128)

Steam Whistle: CV275 Default=128 (Range 0-128)

Bell: CV283 Default = 99 (Range 0-128)

Dynamo: CV299 Default=128 (Range 0-128)

Air Pump: CV307 Default=120 (Range 0-128)

Air Horn: CV371 Default=128 (Range 0-128)

A complete list of the sound volume CVs can be found on our website as well as other helpful LokSound tips:  
<http://intermountain-railway.com/customerservice/dccwebpage/ESU-FAQ-Page.html>

## **Ongoing Maintenance Activities:**

Apply the following recommendations as needed.

### **Cleaning Wheels:**

Use a small amount of rubbing alcohol as needed to remove most normal build up on wheels. The frequency of wheel cleaning can vary depending on factors such as track condition, duration of running time, etc.

### **External Lubrication:**

Using high quality plastic compatible lubricating oil, carefully (but sparingly) lubricate all moving parts of the external side rod assembly. Lubricating the drive axles at their bearings is also recommended. Always avoid excessive lubrication and remove any excess oil prior to normal operation of the locomotive.

### **Internal Driver Set – Gear Lubrication:**

After extended operational service, inspect and lubricate the drive gears in each driver set with high quality plastic compatible gear oil or light grease. Again, light application of the lubricant is best. An experienced modeler or technician should perform the drive gear lubrication as removal and reassembly of the driver set cover plates and brake gear detail is required to access these components.

### **Drive Motor:**

The Drive Motor in this locomotive is permanently lubricated and requires no additional lubrication.

We hope you enjoy the operation of your InterMountain N Scale AC-8/10/11/12. If you have any questions about your locomotive, or any other InterMountain product, feel free to contact us by phone at (800) 472-2530 or by e-mail at [intermountain@intermountain-railway.com](mailto:intermountain@intermountain-railway.com).

# Pilot Coupler Conversion

Your N scale AC-8/10/11/12 comes with a pilot coupler conversion allowing for issue free double-headed operation. The extended coupler can be exchanged for a short shank coupler by following these simple steps:

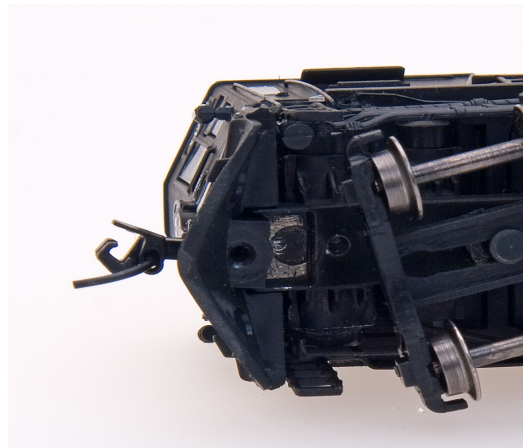
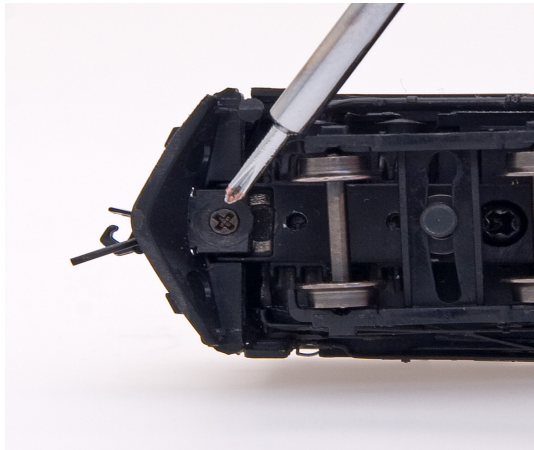
1. Included in your locomotive presentation box is a packet containing replacement couplers and traction tires.



2. Remove the coupler from the package and assemble as shown.



3. Remove the coupler mounting screw and slide the coupler out the front of the pilot.



4. Assemble the coupler in the box and reinstall by sliding the coupler into the front. Tighten the screw to hold the coupler in place.



# Traction Tire Replacement

Your locomotive comes with traction tires on the leading driver of each 'engine'. Each set of 4 driving axles is called an 'engine'. There are two 'engines' on the Cab Forward. Should these tires need to be replaced, an extra set of 4 tires is included. This process requires patience and the need to work extremely carefully. Do this work on a clean work space so as not to loose any of the small parts. Please read through the steps below before starting the work.

1. Included in your locomotive presentation box is a packet containing replacement couplers and traction tires. Have this packet handy but don't remove the tires from the packet until you are ready to replace them.
2. There is one traction tired driver axle on both 'engines'. Replace the traction tires on one driver axle at a time. It is not required to replace more tires than necessary, however these instructions are the same for the traction tired drivers on both 'engines'.
3. Using a small pair of side cutters, slide the cutter head between the hex-head pin holding the side rod to the driver and the side rod. This is a press-fit hex-head pin and NOT a screw. Do not cut the pin with the side cutters! Use a small flat blade screwdriver under the cutters. Twisting the screwdriver while pulling STRAIGHT up on the pin with the cutters will release the pin. It is extremely important that the pin is pulled STRAIGHT up and completely out without rocking it. If it is rocked, the hole that the pin fits into will elongate and the pin will not hold when re-inserted. Set the pins in a safe place as they'll be re-inserted later.
4. Do the above for both sides of the driver.
5. Turn the locomotive upside-down and gently pry the brake hanger off the bottom of the 'engine' you are working on with a small flat blade screwdriver. Pull it straight out.
6. Remove the two Phillips head screws and remove the bottom plate from the drivers. The traction tired driver can now be pulled out. No other drivers should be pulled out.
7. Using a #11 X-acto blade, scrape out the old traction tire from the groove. Be sure to clean the groove completely or the new traction tire will not lay flat causing the locomotive to wobble.
8. Remove one new traction tire from the included package. Using a round smooth pointed tool, re-install the new traction tire. The tool will help guide the tire into the groove. Make sure the tire is fully seated and does not twist as it is going into the groove. It should be completely flat in the groove. Install one tire completely before doing another one (if necessary).
9. Set the driver back in the locomotive with the hole for the pin aligned to the side rod, and re-assemble the locomotive in the reverse order from above. Do not try to turn the wheels on the axle to align the pin holes. If the wheels get turned on the axle, they'll have to be re-quartered.
10. Re-insert the hex-head pins last. Be extremely careful to re-insert the pins into the side rod and driver completely STRAIGHT!

If you should elongate the hole in the driver and the pin will not hold, a replacement driver is required. Contact us for information on availability of replacement drivers. Limited supply. There is a fee for a replacement driver and is subject to availability.