

## Instruction Manual



## SOUTHERN PACIFIC 2-6-0 M-6 ELECTRIC



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 **ACCUCRAFT TRAINS**  
MUSEUM QUALITY BRASS MODELS



### Prototype Information

Steam Locomotive Numbers 1727 and 1744 were built by the Baldwin Locomotive Works in Philadelphia, Pennsylvania in November 1901 for the Southern Pacific Railroad. The locomotives entered regular service in December 1901. They were originally a Vauclain Compound having one low and one high pressure cylinder per side in an arrangement pioneered by Samuel Vauclain. This compound design was an early attempt to utilize steam more efficiently by cycling it twice through the cylinders. It proved costly to maintain. In addition, the heavy pounding of the rods and crossheads due to the unequal pressure caused them to be very hard on the track and a rough ride for the crew members. The Southern Pacific (Espee) took the hint and they converted to simple operation. To further upgrade the locomotives, they were superheaded in 1908.

Southern Pacific Mogul Class M-6 2-6-0 weights 174,000 pounds (87 tons) ready for service, has 63" driving wheels, 21"x28" cylinders, Stevenson valve gear and a tractive effort of 33,200 pounds. Her boiler is rated for 200 pounds of steam pressure. Both models use class 90C tenders.

These engines worked all over the Espee (SP) Pacific Lines system, but spent most of their careers in California. Mogul locomotives were originally built for and used in general freight service, however, as the years went by and trains got heavier and longer they were relegated to lighter duties such as secondary freight and passenger trains, branch line locals and yard switching duties. The M-6 was found to be excellent for working on light rail, in tight clearances and on the curvature found around industries and packing houses. They had the reputation of being able to "fit through a keyhole". The crews liked them for their smooth ride, and they were known to be easy on fuel oil and water. They could haul fifty or so loaded refrigerator cars and run up to 65 miles-per-hour. On the San Joaquin Division, they earned the nicknames of "Fresno Malley" or "Valley Malley" as they could pull as much freight in the California valleys as a true Mallet could pull in the California hills.

On May 21st, 1999, the Rio Grande Pacific Corporation's subsidiary company Gandy Dancer Incorporated purchased the Ex-Southern Pacific 1744. Under the direction of their director of Steam Locomotive Operations Joe Dale Morris, The locomotive was completely restored to operating condition. When all required maintenance work and restoration work was completed, the 1744 was sent to the Rio Grande Pacific's subsidiary New Orleans & Gulf Coast Railway of Belle Chasse, Louisiana. the 1744 was operated in regular recreational train service for a short time and then was put up for sale.



### NOTES:



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### General information about outhern Pacific M-6:

This accurately detailed model is constructed of brass and stainless steel. Pittman gear head motors power all 6 drivers. The museum quality finish and lettering represents this locomotive as it would have looked in the mid 1950's.

Your Accucraft M-6 has a new style power distribution board in the tender.

To gain access to the inside of the tender all the 1.6 hex bolts will need to be removed around the outside of the semi Vanderbilt tank and also the rear handrail 1.6 bolts, and carefully disconnect the front handrails down low on the ladder.

Track power is routed through this board to the motors. An aftermarket sound system also gets its power from this board. Please refer to the wiring Diagram at the rear of this manual.

The lights on this locomotive are LEDs rated at 6 volts.

Your locomotive and tender are electrically connected via 12-prong plug at the rear of the locomotive, under the rear deck.

The plug takes the place of the usual "wireless drawbar" that has traditionally been found on metal locomotive

models. The drawbar on this model is just what its name implies; a drawbar only. Power is routed from front to back and vice versa via the 12-prong plug.

Both locomotive and tender units have carbon brush pickups on both rails, to ensure reliable operation when using track power.

Disassembly on this large and complex model is not recommended. However, if absolutely necessary, the 1.6mm hex bolts and nuts can be turned with a nut driver sized for U.S. 00-90

Your 2-6-0 is designed to run on a 48" minimum radius curve track.

Please take care in lifting this large and heavy model. It is recommended that the locomotive be picked up by grasping it under the frame on both ends.



**Model Features:**

This limited production model has been handcrafted for Accucraft Trains by BMMC, which is one of the most respected makers of large scale brass models. This museum quality model features:

- Full cab interior details, with operating cab windows.
- Detailed boiler with fittings, domes, pipes and handrails
- Operating steel drive rods, valve gear and cross heads
- Prototypical livery and lettering
- Steel helical gears in a die-cast transfer box
- Pittman motor

**Technical Specifications:**

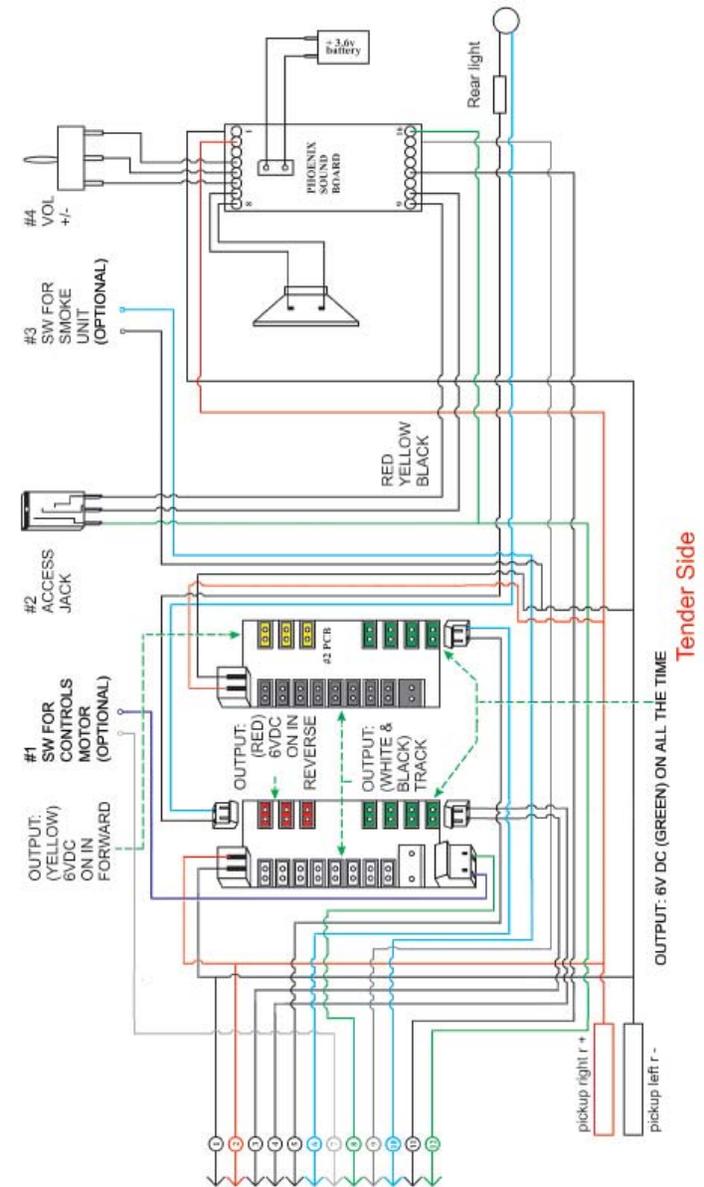
Scale 1:32  
 Gauge 45 mm  
 Mini. Radius 48 in.  
 Dimensions 28.54x3.75x5.79 in.  
 Power 0~24V DC

\*Be sure to leave at least 3" clearance (measured from the inner rail) to allow for overhang.

**Caution!**

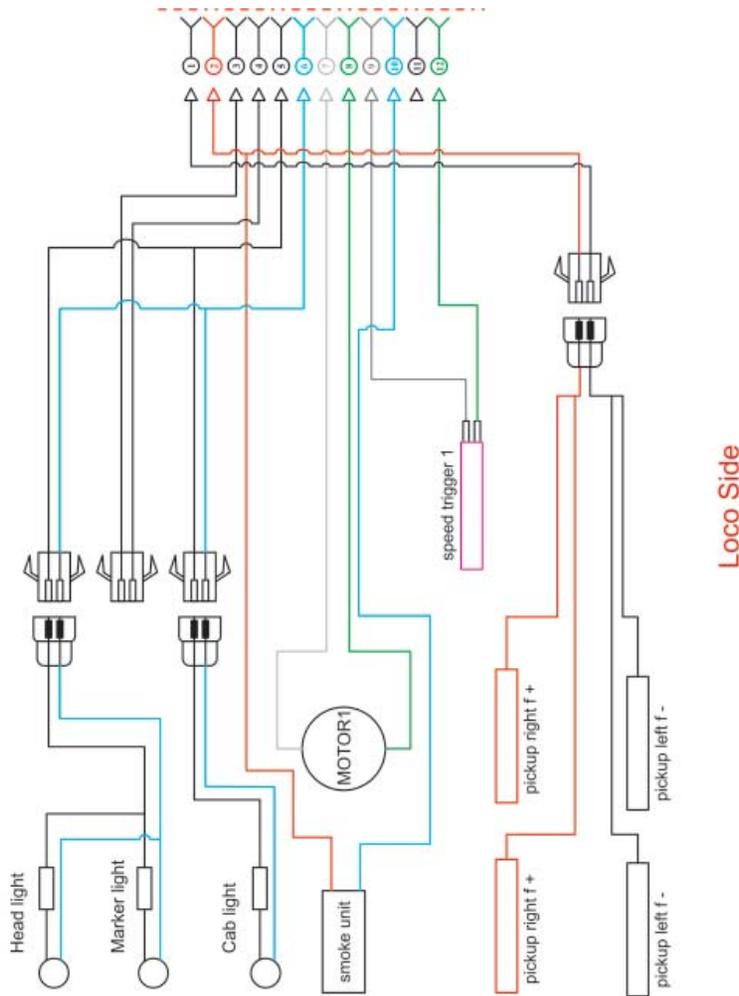
This model is an accurate replica of the original locomotive. It has sharp and moving parts. The locomotive drive rods are stainless steel with sharp edges.

OPERATORS MUST NOT COME IN CONTACT WITH A MODEL THAT IS BEING POWERED AT ANY TIME. UNDER NO CIRCUMSTANCES SHALL ACCUCRAFT TRAINS BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING IN REGARD TO ANY ACCUCRAFT PRODUCT.





SP 2-6-0 M-6 Electric Diagram



**Lubrication:**

Please lubricate your Accucraft Model before attempting to operate.

With a bit of care, your Accucraft Model should give you many years of pleasure and reliable service. Lubrication is of prime importance on a model of this type with so many moving parts. Always use quality lubricants. This should not be a problem, for there are many modern lubricants available in hobby and sport shops. Light oil such as Labelle #108 or Hoppe's Gun Oil will do a good job on lubricating most of the moving parts. For pistons and slides, a heavier lubricant such as Labelle #102 would suffice. For gears use gear grease such as Permatex Super Lube or another hobby gear lubricant.

To access the many moving parts of this model: Using a soft towel or foam sheet, the model should be carefully placed on its side. A drop of light oil on every moving part is necessary; there are many moving parts on this locomotive. Be sure to lubricate all the crank pins, crosshead slides, piston rods, etc. that is visible to you. Make sure you lubricate the locomotive and tender axle's journals as well.

Do not over lubricate, since excess oil only picks up unwanted dirt. Be careful to keep lubrication off the painted

surfaces to avoid having shiny areas. Use a type of oil that is a bit heavier to lubricate the axle bushings and pivot points of the lead and trailing trucks.

The main gear box is lubricated in the factory, and will not require any attention when you first run your model. However, in time; you should make sure that the gears are well lubricated with some technical gear grease. The gear box cover is held on with screws, and removing it will allow you to access all the gears and busings that need lubrication. Take note of how the cover comes off and replace it exactly the way it was when you started. Lubrication of the locomotive should be done every 25 hours of operation.

After following the recommended lubrication procedures, your Accucraft 2-6-0 is ready to provide many years of reliable operation.

We recommend that you use a D.C. power supply with a capacity of 2.5 amps or larger and 24 volts output. Always pick your model up by grasping it under the frame on both ends. It is a very heavy model so make sure you grasp it firmly.



**Electrical Pickup**

Your Accucraft model is powered by the DC voltage off the track through the engine and the tender. All drivers are insulated on the both side of the locomotive, and the electricity is picked up with 12 pickup wheels.

Be sure to clean electrical pickup units before each operation. Replacement electrical pickup units can be ordered from Accucraft Trains.

**Lighting**

This model features directional lighting.

**General Maintenance:**

Clean the exterior surfaces of your locomotive with a clean, soft and lint free cloth. To remove stubborn soil or greasy spots from the painted surfaces use alcohol on a soft, lint free cloth.

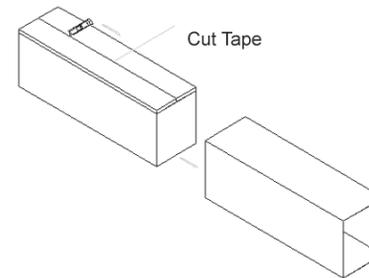
Accucraft Trains locomotives are fine scale brass models with small parts. To provide maximum protection from shipping damage, we carefully pack the models in metal cases, We ship via UPS with insurance coverage to its full value. Please contact UPS if package is damaged.

Each locomotive is packed under UPS guidelines for shipping. We do not warrant any damage resulted from re-packing by any party other than Accucraft Trains.

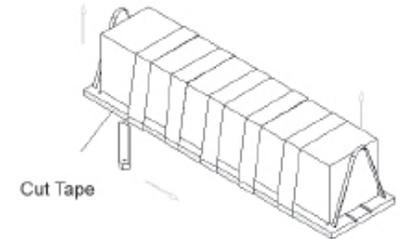


Please read following directions before unpacking your locomotive.

1. Remove foam around the locomotive. Slide the inner box cover to the side, and open the inside cardboard box with a cutting knife.



4. Place taped locomotive on a flat surface. Carefully cut the tape along the wood board side surface. Be sure to cut both sides of the wood board. Slowly lift the tape from the locomotive. Be very careful with small parts. Tape cannot be re-used to re-pack the model. Use new packing tape if necessary.



2. Lift the metal case from the cardboard box.  
 3. The locomotive is firmly taped to a 1/2" wood board which is then fastened to the metal case with 4 M6 bolts. Bolts must be removed before lifting the locomotive with wood board from the metal case.

