

## **PLine**

**Built in Brass**



Freelance Tractor Locomotive Model (16mm scale)

**PLEASE READ THIS OWNERS MANUAL CAREFULLY BEFORE OPERATING THE MODEL**

### **General Description of Freelance Tractor Loco:**

This model is crafted in 16mm scale, and is of all metal construction (Brass, Aluminium, Steel and Phosphor bronze). It is powered by a single motor with an ALL METAL worm gear & belt reduction drives delivering a gear ratio of 1:17 on both axles. The motor is a high speed & torque 12v PM DC motor.

The Model comes unpainted and is ready to run with a dashboard mounted 3-position centre "off", toggle switch to control the direction and needs a MOSFET based PWM manual speed regulator to control the speed of the Model. The Directional light of the Model is on the Motor and only works when the Model is moving forward.

#### **Model Engineering Company**

47, Sankharitola Street, Calcutta-700014, India.

Visit us at: <http://pline.co.in>

Email: [info@pline.co.in](mailto:info@pline.co.in)

## Owner's Manual: Freelance Tractor Locomotive in 16mm scale

### ***Coupler Selection:***

Your PLine Freelance Tractor locomotive comes with a pair of factory installed standard milled aluminium "Link Pin" type couplers, you may use any other suitable body mounted couplers available from other manufacturers. These couplers can be mounted by removing the original couplers and screwing in place the replacement couplers directly to the front and rear buffer beams.

We do not recommend you to try and disassemble this model. Also please take care while lifting this model up. It should always be picked by grasping it by under the frames on both ends.

### ***Battery Pack Selection:***

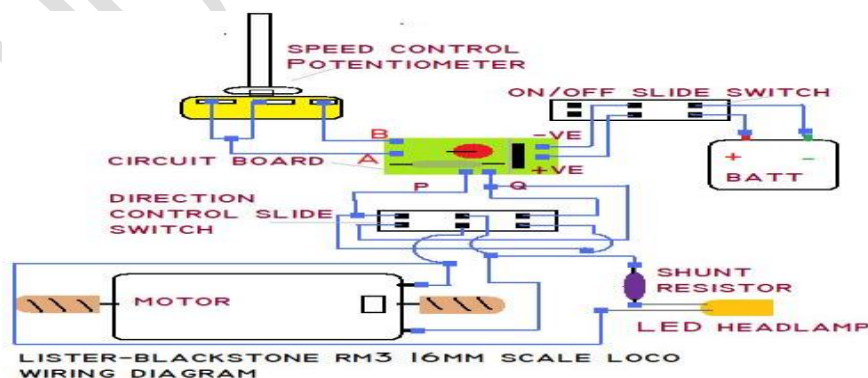
Your Tractor loco does not come with a Battery Pack, as per International Shipping & Security norms. We recommend any deep-cycle Battery pack with an output of 12v rated at 2AH (or higher rating). You can use NiCad or Metal Hydride rechargeable battery packs.

Install a suitable PWM speed regulator rated at 12v 3A.

Connect your preferred battery pack to the battery wire leads inside the Engine bonnet by detaching the snap-fit Bonnet Lid. BE CAREFUL TO CONNECT THE CORRECT POLARITY OF THE BATTERY TERMINALS TO THE CONNECTOR STRIP. THE WIRE AT THE OTHER END OF THE CONNECTOR STRIP GIVE YOU THE POLARITY . INCORRECT POLARITY CONNECTION CAN DAMAGE THE CONTROL SYSTEM OF YOUR MODEL.

### ***Suggested Wiring Diagram:***

Refer to the below sketch for your Model's wiring details.



**Model Engineering Company**

47, Sankharitola Street, Calcutta-700014, India.

Visit us at: <http://pline.co.in>

Email: [info@pline.co.in](mailto:info@pline.co.in)

## Technical Specifications of Freelance Tractor Loco:

- ◆ Scale: 16mm
- ◆ Gauge: 32mm (factory set)
- ◆ Length: 133mm (over buffer beams)
- ◆ Width: 60mm
- ◆ Height: 110mm
- ◆ Motors: 12v DC PM Motor
- ◆ Gear Ratio: 1:17
- ◆ Minimum turning Radius: 600mm

## Caution!!

This model is an accurate replica of the original locomotive. It has sharp and moving parts. The locomotive drive gears are made of Brass & Steel with sharp edges. OPERATORS SHOULD NOT COME IN CONTACT WITH THE MODEL AT ANY TIME WHILE IT IS POWERED. UNDER NO CIRCUMSTANCES SHALL Model Engineering Company OR ANY OF ITS ASSOCIATES BE HELD RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING IN REGARD TO ANY PLINE PRODUCT.

## Model Features:

The Tractor locomotive is handcrafted brass model and is available unpainted so that you can paint it in your favourite paint scheme.

- ◆ The Model is handcrafted in all Brass, with Steel and Aluminium parts
- ◆ Directional headlamp (forward direction), on motor
- ◆ All scale fittings like brake column, hub caps, driver seat, etc are turned brass.
- ◆ Front and side radiator grills are photo-etched brass
- ◆ Cab front, side & rear Windows, are glazed

### Model Engineering Company

47, Sankharitola Street, Calcutta-700014, India.

Visit us at: <http://pline.co.in>

Email: [info@pline.co.in](mailto:info@pline.co.in)

## **Operating & Maintenance:**

Like any other Engineering masterpiece, there are a few precautions to be taken before you can actually run it on a layout.

Before you start running your model outdoors, you need to lubricate all the moving parts and break it in. This is because the gearboxes and the bushes must be worn in sufficiently to allow smooth running.

### ***Lubricating:***

With a bit of care, your Tractor loco should give you many years of pleasure and reliable service. Lubrication is of prime importance for a model of this type with small 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 would be good enough for lubricating most of the moving parts. For gears use suitable gear grease such as Permatex Super Lube or any other hobby gear lubricant.

The gear drives in the Power Bogie with the worm & wheel arrangements can be lubricated by applying grease on the gear teeth using a small screw driver.

To access the many moving parts of this model it is best to carefully place it on its side on a soft towel or foam sheet. A drop of light oil on every moving part is necessary, and there aren't many on this locomotive. Be sure to lubricate all 4 wheel bearings.

Do not over lubricate, for excess oil only picks up unwanted dirt. Be careful to keep lubrication off the painted surfaces as these cause shiny areas.

Thorough Lubrication of the locomotive should be done every 10 hours of operation.

CAUTION: Make sure the belt and pulleys do not come in contact with any lubricants, in case they do make sure to wipe off any traces of lubricant from the belt & pulleys, before operating the model.

### ***Maintenance:***

Clean the body of the Model with a clean soft lint free cotton cloth. To remove stubborn grease stains from the painted surface use a detergent solution with a lint free cloth. With a little care your PLine will give you years of trouble free running.

## **IMPORTANT!**

Some parts may have loosened during shipment. Inspect your model prior to any operations. Please contact PLine at [info@pline.co.in](mailto:info@pline.co.in) for more assistance.

THANK YOU!

**Model Engineering Company**

47, Sankharitola Street, Calcutta-700014, India.

Visit us at: <http://pline.co.in>

Email: [info@pline.co.in](mailto:info@pline.co.in)

DO NOT COPY

**Model Engineering Company**

47, Sankharitola Street, Calcutta-700014, India.

Visit us at: <http://pline.co.in>

Email: [info@pline.co.in](mailto:info@pline.co.in)