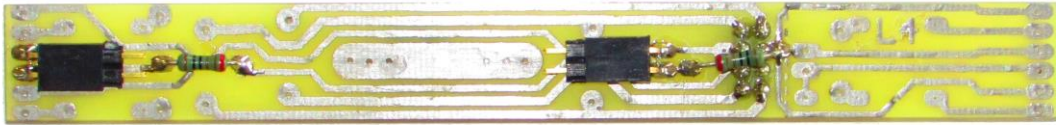


# JTElectronics

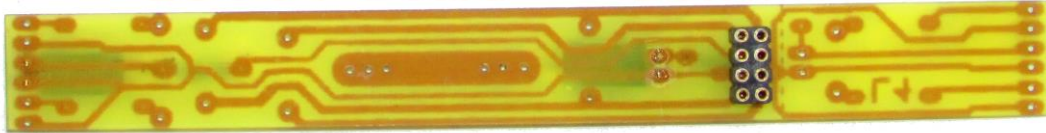
## Locomotive Wiring Board

### Model: JTELOCO4

LOCO4 Board Top View



LOCO4 Board Botom View



The JTELOCO4 Locomotive Wiring Board will allow you to wire a locomotive to be "DCC Ready" where you can then plug in a standard DCC Decoder into this Locomotive DCC Wiring Board.

Originally designed to fit in an Athearn Blue Box locomotive but may suit others. Board size is approx. 137mm long by 15mm wide, and you can cut it to approx. 102mm long if required.

This will save you heaps of time and make installation easy and tidy by running short wires from the pads on the board to the track pickups and to the motor.

Sockets and plugs are provided to connect the front and rear lights to the board. There's also 1k ohm resistors fitted on the board so you can directly connect LED's - remove the resistors and replace with jumper wire if you want to use 12V lamps/globes.

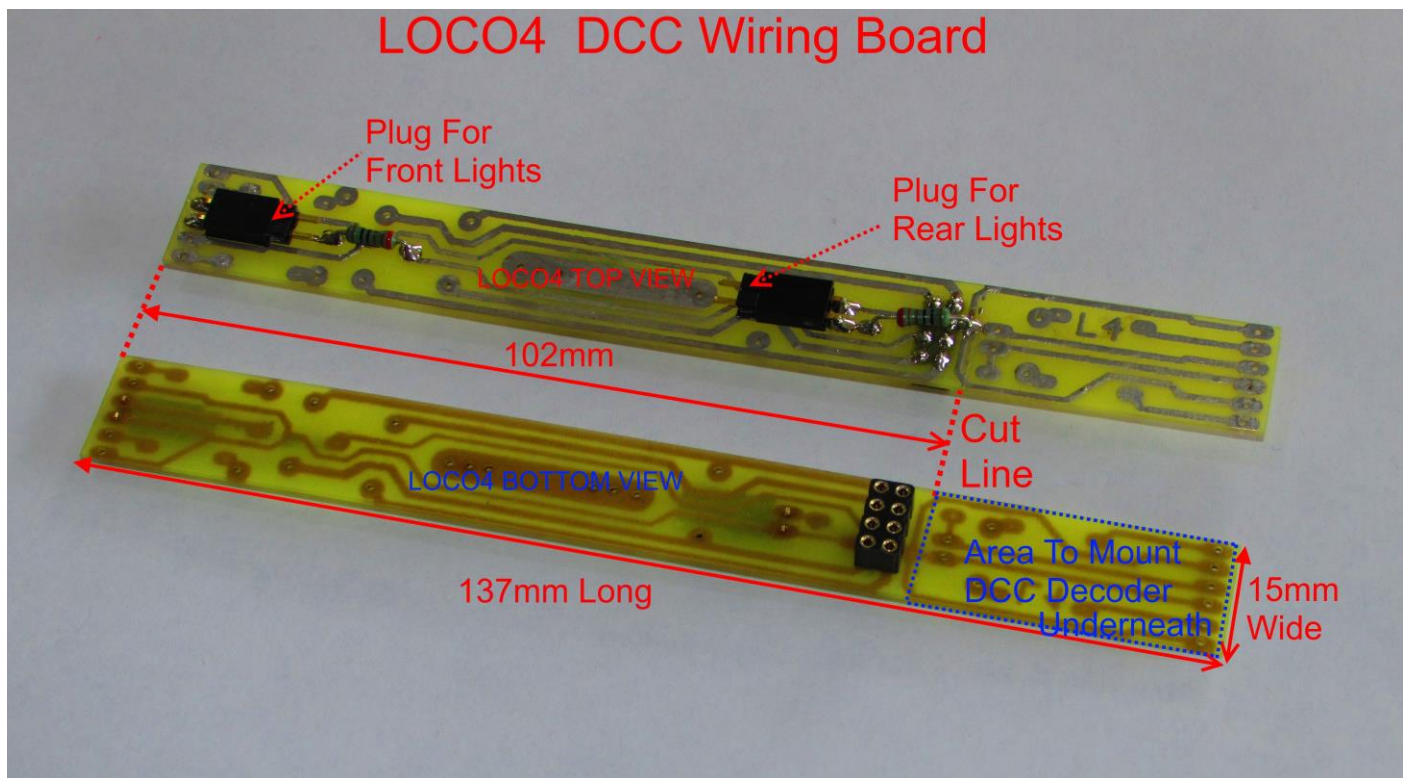
\* The JTELOCO4 board is now approximately 15mm wide so may fit in a thinner chassis without having to sand down the edges.

\* The JTELOCO4 board has versatile solder pads and solder tracks at both ends for possibly mounting LED's directly on the board, for front lights, rear lights, ditch lights etc. You can use these solder pads for whatever other wiring may be required. eg. extension of DCC sound speaker wires... but check your wiring carefully!!

## **JTELOCO4 BOARD SPECIFICATIONS:**

Board Dimensions                      Approx. 137mm x 15mm

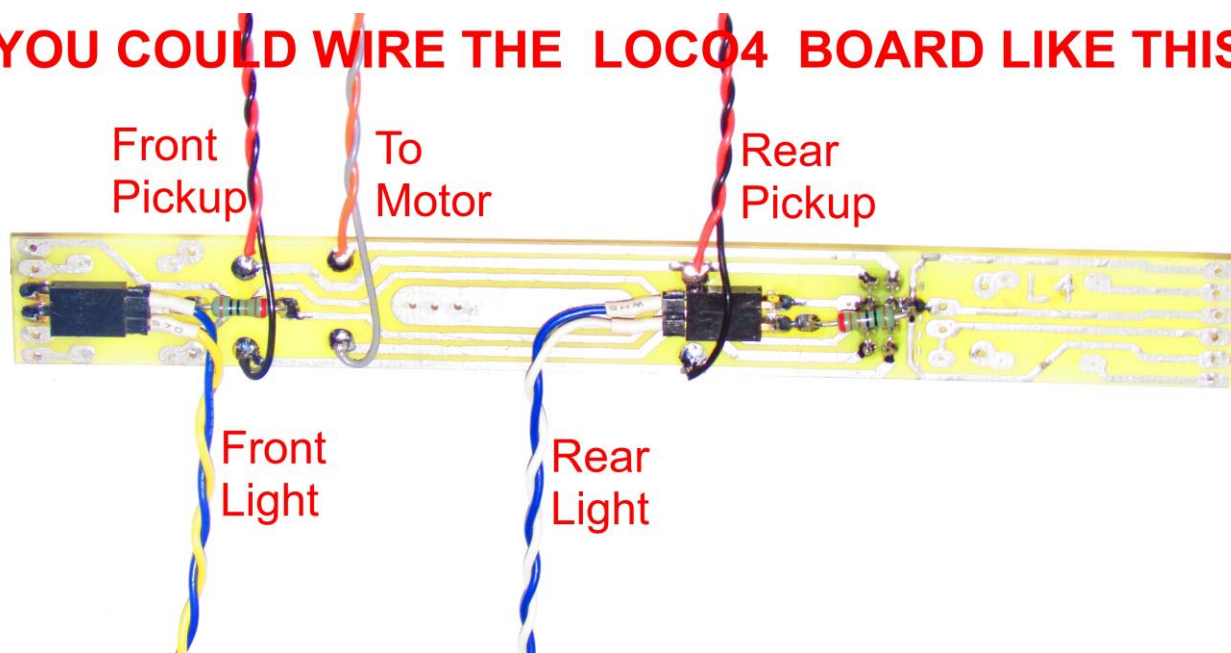
JTELOCO4 model is depicted by the marking "L4" on the board



## JTELOCO4 WIRING EXAMPLE

The wiring of this JTELOCO4 board follows the NMRA recommended wiring colour code. The 8-pin socket for your decoder also follows the NMRA standard. Please refer to the information below when installing the JTELOCO4 board into your locomotive.

### YOU COULD WIRE THE LOCO4 BOARD LIKE THIS



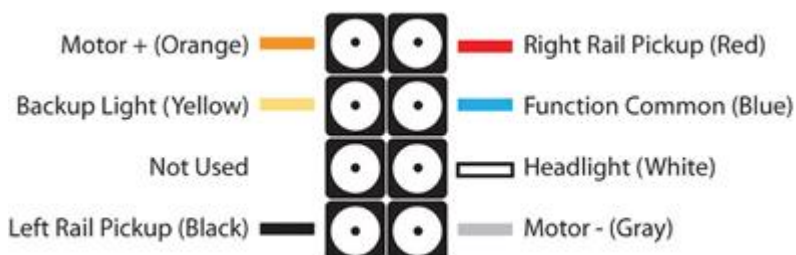
## B. Locomotive Color Code of Wiring

If the manufacturer of model locomotives or cars uses wires within these to connect the power pick-ups to the motor(s) and/or light(s), the following is the recommended color assignment for these wires. All other wiring connections have no recommended color, but may not use one of the following colors. Also, the purpose of any other wiring connections has to be documented.

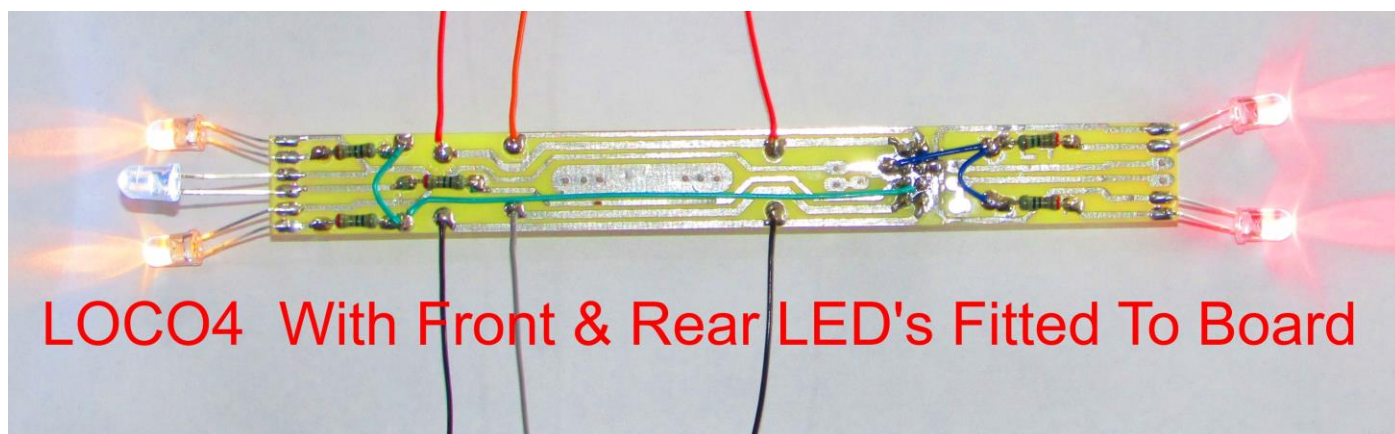
RED	from right-hand rail power pick-up (or center rail, outside third rail, traction/overhead wire) to motor or interface
ORANGE	from interface to motor brush (+) connected to right-hand rail (or center rail, outside third rail, traction wire)*
BLACK	from left-hand rail power pick-up to motor or interface
GRAY	from interface to motor brush (-) connected to left-hand rail *
WHITE	front headlight(s) power sink
YELLOW	rear headlight(s) power sink
BLUE	common (+) headlight(s)/function(s) power source
BLACK with WHITE stripe	common (-) power sink

\* Present only when an interface is built-in the locomotive or car

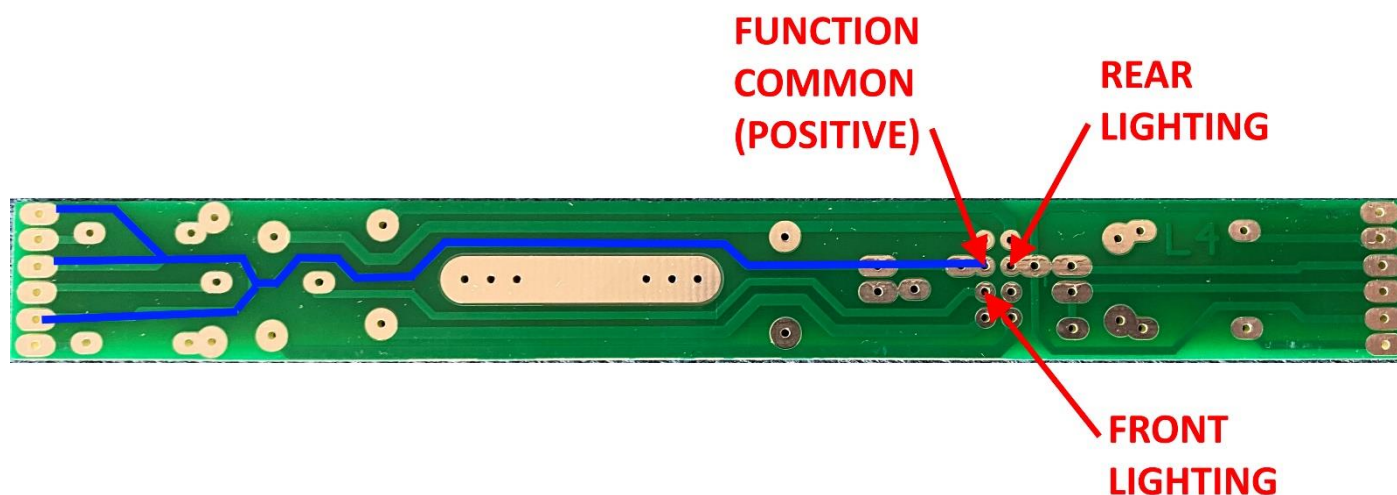
**NMRA compliant 8-pin DCC Decoder socket pinout on the LOCO4 board:**



With some extra wiring and extra resistors, you could possibly mount the front and rear LED's directly to the JTELOCO4 board like this:



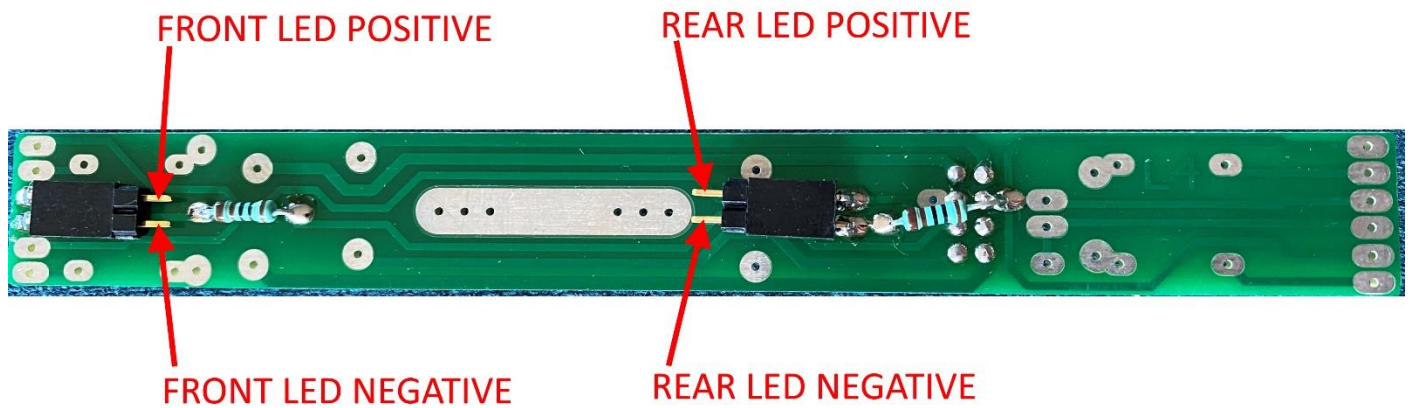
To assist with your wiring, below is a picture of the JTELOCO4 board with the “Function Common” track highlighted in blue. This feeds the positive voltage to various circuit board pads and your LED will connect to this, as well as the appropriate function circuit board pad. Remember you must always connect an appropriate resistor in series with the power to each LED! The resistor can be connected in either wire (the positive or negative). Also remember in these pictures **you are looking at the REAR of the 8-pin DCC decoder connector** so keep this in mind and to be careful when matching these photos to wiring diagrams of the 8-pin DCC plug/socket.



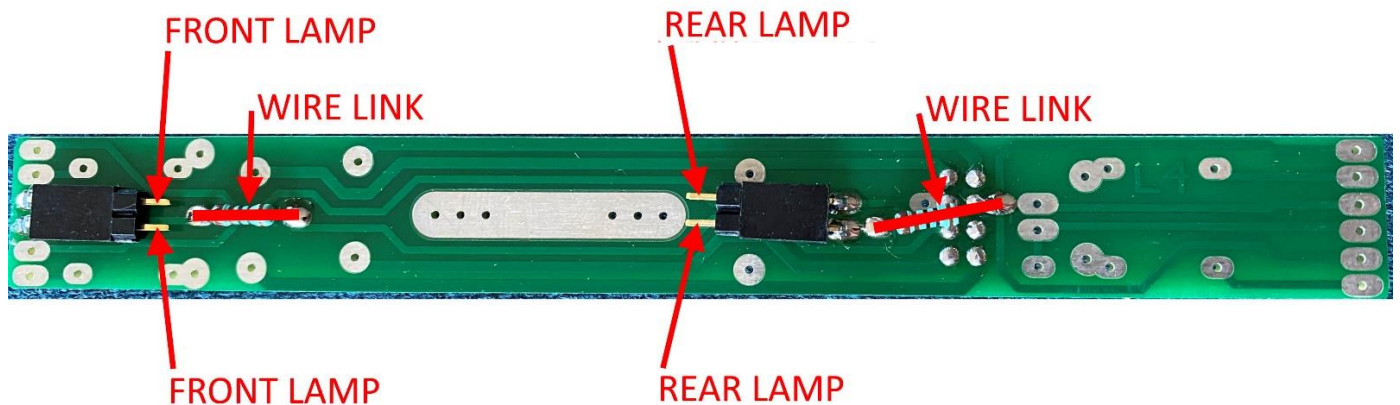


The JTELOCO4 comes with 1k (1000 ohm) resistors already fitted for connecting a front and a rear LED. You just need to connect the LEDs directly to the appropriate connector pins.

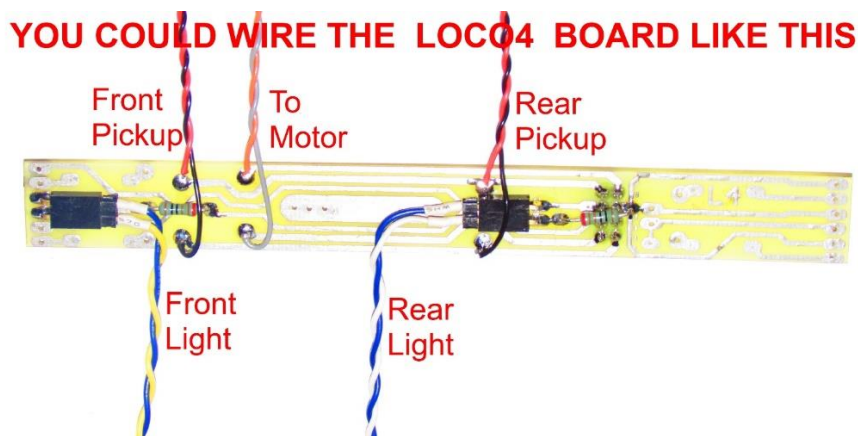
There are also 2-pin connectors which allow easy disconnection of the wiring if you need to completely remove the outer shell of the locomotive for maintenance.



**WHEN USING 12 VOLT LAMPS, INSTEAD OF LEDs, REMOVE THE TWO CURRENT LIMIT RESISTORS AND REPLACE WITH WIRE LINKS.**



It's handy to use correct colour coded wires so you know where the wires go, and heatshrink where the wires are soldered to the connector pins for insulation and to help strengthen the connection.





Note that if you look really close, some photos show the top and bottom brush holders have been swapped (which you need to do to isolate the motor from the chassis) so the pins from the bottom brush holder can now be used at the top of the motor and soldered through the board to hold the board in place - no cable ties... no long messy wires getting tangled in moving parts...



