

Stand Alone LocoNet Wiring

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Introduction

LocoNet devices such as throttles are normally powered from the RailSync lines (1 and 6) in the LocoNet cable and send and receive their information on the LocoNet lines. (3 and 4) For stand alone LocoNet operation we must provide both a power source and a pull up termination.

Background

Many LocoNet devices such as the TC-64, SE8c, etc. may be used on the LocoNet without requiring a Digitrax command station. This means that the LocoNet may be used as an accessory bus with any system, DCC or DC, for use with detection, signaling, etc. To operate the LocoNet without a command station we must supply both the power on lines 1 and 6, and the pull up termination on lines 3-4.

Solution

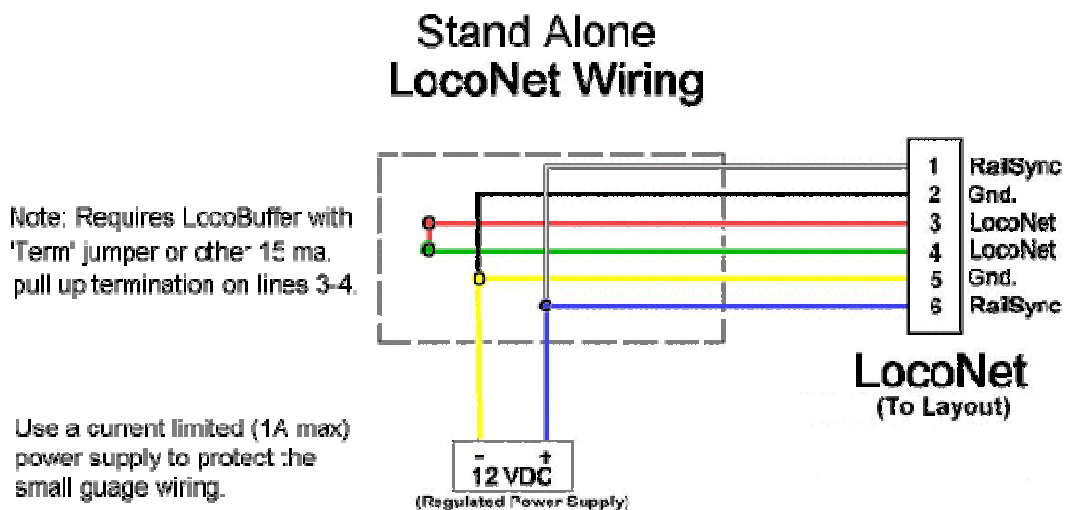


Figure 1: Wiring schematic for stand alone LocoNet use.

How It Works

Throttles and many other LocoNet devices only use the RailSync as a source of power. These devices can also work directly from DC power, which is what happens with a Digitrax UP-5 panel when it is powered from a wall wart. The 'LocoNet' cable has the usual RailSync information replaced with DC power from a small (500ma.) wall wart supply. That provides ample clean power for throttles and accessory devices.

Modifications

All the modifications are made inside of the area marked with dashed lines on the above image.

Pull Up

The LocoNet also requires a 15 ma. pull up constant current source to 12V. You may provide this pull up termination by selecting 'Term' on a LocoBuffer connected to the LocoNet. You may also create your own current source if desired with the following simple circuit.

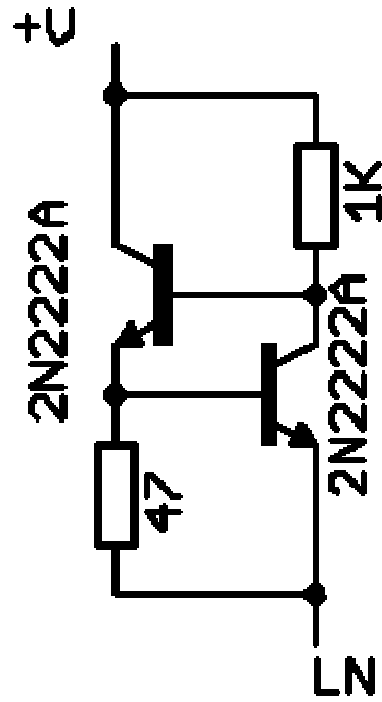


Figure 2: Schematic for LocoNet termination.

Options

You may simply use a UP-5 panel from Digitrax powered from a wall wart. Run the power wiring (shown as an option in the UP-5 directions) to the panel. Be sure that you only connect to the front jacks. There will not be any power available on the rear jacks. This essentially does the same as shown above by providing isolated DC power to the throttles.