

SIGNAL MOUNTING ADAPTERS

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1. INTRODUCTION

The Signaling Solution Signal Mounting Adapter is a simple and most useful mounting adapter available. These are designed to make installation easy for you. You can all the delicate work at the work bench with all the comforts that you really like to have in your hobby.

2. DESCRIPTION OF SIGNAL MOUNTING ADAPTERS KIT

The Signaling Solution offers different kinds of signal mounting adapters. We have single and double head adapter kits for color light signals, position light signals, color position light signals and search light signals.

Each kit comes with a signal base which is a square circuit board that is designed to mount itself right below the signal and also attach the signal to the layout. The base has a wiring board that is used to hold any resistors or diodes, needed for signals. There is also a provision made for the signal wires and the cable that goes back to the signal control board.

The Signal Mounting Adapter can be used with any brand of signals and they can be used with signals that use light rather than LEDs. So it's a very general purpose product. Its compatible with all scales, doesn't matter whether it is N scale or HO scale or G scale. The wiring boards need not be changed at all and the only modification required would be to trim the base plate board with a razor saw or a cut-off disc or whatever to make it little bit smaller for smaller scale signals.

3. PRINCIPLE TYPES OF SIGNALS

There are four principle types of signals and two versions of signal mounting adapters explained in the following paragraphs.

- **Color Light Signal Mounting Adapter**

The single head comes with 3 resistors which would be needed with red, yellow and green leads. The double head version has 6 resistors. Now, we use fairly a standard value of resistors that work fine and the signal is powered by a 5 volt circuit controller board. If you are going to use the signal from a higher voltage like 9 or 12 Volt power source, which you will sometimes encounter, you can change the resistor values accordingly and increase the value. We use the standard axial lead quarter wire resistors for these, so the resistors that come with these kits are 220 Ohms and they work fine.

- **Position Light Signal Mounting Adapter**

This type of adapter comes with 7 resistors and 3 diodes. The reason for this is that to approach mounting, diode coupling is required so as to turn on the center bulb only when one of the three aspect lines is activated. The circuit mounting board has all the space required for diodes and resistors.

The two head version is just like the one explained above, except that there are more parts and is a bigger circuit board.

- **Color Position Light Signal Mounting Adapter**

It has 6 resistors so that you can wire the 6 LEDs on a color position light signals, each with a separate resistor.

Now some signals come with a pair of lights, like the green pair wired in series on the signal itself, in which you really need only 3 of the resistors, and not 6. In fact, for that case you could use a color light signal mounting adapter rather than a color position light adapter if you want. That would work just fine.

- **Search Light Signal Mounting Adapter**

It comes with 2 resistors and is designed to specifically work with our Master Signal Controller. It can handle either with 3 pin LED version of the signal or the 2 pin LED version.

Notice that this Signal Mounting Adapter will work with signals that are either common anode or common cathode and the only difference that you make in terms of the installation is that the adapters include diodes, which are the position light adapters that are put into correct polarity of the signal itself.

4. INSTALLATION OF SIGNAL MOUNTING ADAPTERS

4.1. INSTALLATION TOOLS

- 1) Small needle nose pliers
- 2) Small diagonal cutter/ edge cutter for trimming the resistor leads
- 3) Soldering Iron Tip with 10 – 20 watts capacity
- 4) Cyanal Acrolyte Glue or Super Glue

4.2 INSTALLATION PROCEDURE

- 1) The first step in assembling the SMA board is to bend the resistor leads. Take needle nose pliers and bend the resistor leads by 90 degrees. Then, insert the leads through the proper holes in the wiring board. You can install all the resistors similarly.
- 2) Next solder all the leads to the back of the board. It only takes a small amount of solder to do this.
- 3) After the wiring, clean it with some denatured alcohol and allow it to dry.
- 4) Now, assemble the wiring board and the base plate board into a T-shaped arrangement. In the wiring board, one end is labeled as signal and the other end is labeled cable. The signal end of the board is the one that is attached to the base plate.
- 5) Hold the wiring at 90 degrees angle with respect to the base plate and spread super glue in the silver rectangle of the base plate.
- 6) Allow the super glue to harden in order for the board to gain full strength.
- 7) Once the board is set up, insert the signal mass through the hole into the base plate near the end of the wiring board, where they are going to be attached.
- 8) Now take a flat modular phone cable, as it is very cheap and is color coded. Trim the three leads, red, yellow and green, to about half inch long, strip them and solder them in the correct holes in the wiring board.
- 9) Once the wires are attached, push the mounting adapter into the mounting hole and fasten it down using a semi permanent adhesive. The drilled hole should be a three quarter inch diameter hole along the side of the track where you want the signal to be mounted. It is easier to install the signal from above.
- 10) Now push the wiring board and cable back down through the hole into your layout mounting board.

**OTHER SIGNALING
AND LAYOUT CONTROL
PRODUCTS WE SUPPLY**

BD16 Block Occupancy Detector for 16 blocks
BD8 Block Occupancy Detector for 8 blocks
MSC Master Signal Controller
GCC Grade Crossing Controller
GCX Grade Crossing Expander
Detectable Wheel Sets
Signal Mounting Adapters
Optical Isolators

And our new CLICS™ System

COMPLETE LAYOUT INTEGRATED CONTROL SYSTEM