

There are many variations of the circuits used with Model Railroads for signalling, detection, and positioning. The documentation at this site and [www.modelRRsignals.com](http://www.modelRRsignals.com) contain enough of the basic circuits for construction on perf board. For detailed elementaries, a drawing package is available. For bare board purchases, enough information to assemble is in the on line docs.

The SLC design uses modified Twin-T as the *standard* detection method. Parts are in the package. As are required parts for using a "broken beam" for detection. And a few steering diodes for use with common cathode LEDs.

Most circuits are packaged *as they are ordered* so they will contain the correct parts for a specific application. It is often the case where a modeler desires a combination of circuits best suited to *their* installation. Tell me what you want to accomplish and I **compile the package to order**.

SLC signal boards are required for three or more aspects. For two aspect signalling use, I still recommend the **SLC** because it permits extending and expanding the system functions at a later time with no requirement for more advanced controllers.

For signalling, specialty components used to accommodate "non-contact" detection are available. The circuits presented have been tested and are in use with these components and are known to function as designed.

There are many options for detecting on DCC equipped layouts. The choices I have provided for include modified Twin-T with relay isolation, current transducers(CTs), and ambient light photo-optical. These methods may be mixed block to block; the SLC provides interfacing into the signal logic.

For utility circuits the LBO board is used. Some of the more advanced signalling methods may require an LBO in addition to the SLC. Such as multi-point "photo-optical" detection and "servos" for operating semaphore signals. In many cases, one LBO will integrate into multiple blocks, such as the power controller for Approach Lighting.

Assembly of the circuits is not difficult. Basic soldering skills however are required. Aero-space quality is not necessary but there is a limit to what the small components can take. Most boards returned for repairs involve faulty soldering with a *very few* incorrectly assembled.

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## PRICING

<b>Bare Circuit Boards</b> , no components (documentation on-line)	\$10
SLC Signal Logic Controller	
LBO Latch, Bridge, Oscillator Utility board	
<b>Parts kits for DIY assembly</b>	\$20
(All kits include circuit boards)	
<b>Specialty parts</b> provided as requested	ask

**Assembly** is no longer offered for orders (medical). If assembly is required for modified boards, there may be considerable delay in delivery. I might add that technical suggestions and advice may be of lesser quality, as well.

### Installation and Technical Manual

The text portion is available at **no cost** on line. Including the basic diagrams required for assembly and installation. Over 100 pages if both SLC and LBO manuals are down-loaded. Instructions for using individual boards are available as part of this download.

A drawing package is available in printable format that contains the circuits in elementary form. Understand, this package embraces over forty years experience in the field and contains the intellectual content behind the designs. It is priced accordingly...

**Drawing package** (eMail in PDF format, letter sized) \$15

**Shipping** (USPS "Flat Rate", per package) \$5  
 Five of most anything will fit a single box  
 International rate varies from \$15 upward; please Ask  
 (There is no restricted technology, in components or boards)

### NMRA Members,

please include your NMRA number. The price break is not a fixed percentage but I do discount to the organization where I can; sometimes 15%(+), sometimes only free shipping.

### Individual parts

are available as *convenience* stock. The price will include time and effort to dig pieces out of bulk containers. Most of the parts are standard electronics devices and should be available most anywhere at reasonable cost. Tell me what you need and I'll price it out on an individual basis.

## Orders

eMail Orders to: **signals@hudsontelcom.com**

Snail Mail Orders: Signal Aspect  
 P. O. Box 101832  
 Irondale, Ala 35210

**PAYPAL** account: **bhudson@hudsontelcom.com**  
**Money Orders** to: **Bill Hudson**