

GENERAL SIGNAL INSTRUCTIONS

N.J.International produces operating systems for all of our LED signal types. Other manufacturers also produce operating systems of varying design. Please note that the signal operating system you choose determines the detail signal hookup. Please refer to the operating system installation manual for these instructions.

Crossbucks & Crossing Gates - These are equipped with LEDs which will operate at standard power pack voltage (9-14v), and with any of the many detectors and flashers available in the market place. The LED leads have the required dropping resistors installed. Crossbucks can be activated using the **NJ Crossing Flashmaster #8003**.

The gates are provided with a brass rod (except N Scale) to attach to an Activating Mechanism. Activation of the gates can be achieved utilizing the **NJ Servo Master Activation System #8000**.

Signals - All signals come pre-wired with the necessary dropping resistor attached. They operate from standard power pack voltage (9-14v) and are compatible with all signal and DCC systems.

Signals are in three categories

- Simple red, amber, green individual LEDs. These have one lead from each LED with a resistor attached and a second grounding lead attached to the signal structure. A single common ground lead attached to the signal structure then provides the common ground to complete the circuit.

- Bi-Color/Bi-Polar LEDs are installed in a variety of signals. The LEDs have two leads, each with a resistor attached and each functioning as both positive and negative by reversing the current. These LEDs cannot be wired in common, each leg must have its own resistor attached.

Both category 1 & 2 type signals above can be activated and controlled utilizing the NJ ABS Signal System #8005.

- Semaphores - They are equipped with a 3-volt bulb and a protective dropping resistor. The bulb should be wired "hot", directly to a power source as it remains "on" in all positions of the blade. A rod in the pole is provided to attach to an activating mechanism. True three position activation can be accomplished utilizing the **NJ Servo Master Activation System #8000**.

Please visit our website www.NJInternational.com which includes full operating and installation manuals for our activation systems referenced above.

A full product listing is available, please send a stamped, self-addressed #10 business envelope to:

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