

RICHMOND CONTROLS NEWSLETTER - FOURTH QUARTER 2006

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INTRODUCTION

The following discusses what's new at Richmond Controls since the Third Quarter 2006 Newsletter. Feel free to call if you need additional information - Jim

NEW PRODUCTS

Lighting Module for PCM N Scale E7: For customers wanting to change the light sources in the PCM E7, there are several options using BRIGHT Sunny White LEDs with no blue tint..

When the headlight lenses are removed, two 0.052" diameter holes remain. These can be fitted with Sunny White 3 mm LEDs whose tip diameters have been reduced to 0.052". The existing PCM LED circuit board must be removed from the cab interior casting to make room for the back end of these LEDs.

The easiest option is to insert two modified Sunny White 3 mm LEDs into the existing 0.052" holes. If inserted end-first, these LEDs will be a loose fit, but they can be held in position with a bit of Pacer's Formula 560 Canopy Glue.

The existing 470 ohm current limiting resistors ("471") will allow very large LED currents, resulting in extremely bright headlights. It may be desirable to raise the total resistance to around 2200 ohms if the light intensity is considered to be too bright. This is a matter of personal preference.

Modified LEDs and wired surface mount LEDs can be obtained from Richmond Controls for \$3.00 each.

For locomotive owners desiring a functioning WHITE headlight and Mars Light for DC operation, the Richmond Controls EZGP-002 for \$36.00 can be used. It will be supplied with the 3 mm Sunny White LEDs with 0.052" tips discussed above. The module can be mounted to the ceiling of the body shell, and it has provisions to acquire power from the stock circuit board without using any wires attached between the body shell and the chassis. (This means that when the body shell needs to be removed to service the mechanism, there are no wires connecting the body shell to the chassis that would be at risk of being broken.)

Mars Light for 1-1/2" Scale: This was mentioned as a possible future product in the Second Quarter Newsletter, and the first unit has been built and shipped for use in a locomotive with 12 volt DC power available. It uses a 12 volt 50 watt 1" diameter halogen track-light bulb to generate a realistic Mars Light effect. Our EZ07 can drive these lamps in Mars Light and other special patterns. Modules will be tailored to specific lamps when lamp specifications are furnished by customers. The main differences are the lamp diameters and the amount of current needed to keep the filament warm for optimal lamp life.

The same module is capable of driving the same lamps used as alternating ditch lights.

PRODUCT REDESIGNS

EZ-FIT™ LEDs: As the name should imply, these LEDs fit easily into the existing headlight holes in models. They are primarily useful for the smaller scales, Z through HO, and can be supplied in Golden White, Sunny White, red, or other colors. Obvious applications include the Z Scale Micro-Trains F7, the N Scale Kato, Life-Like and Intermountain E, F, PA, and Erie Built units, and many Athearn HO Scale units. I am particularly hopeful that these LEDs will greatly simplify the problem of equipping Athearn Genesis F units with a variety of LED-based lights.

These LEDs are presently available only when supplied with Richmond Controls lighting modules. They readily replace the common 1.4 mm 1.5 volt lamps, and can even be smaller diameter and shorter. In the Kato N Scale F3/F7 original versions, for example, these LEDs slip right into the lower headlight hole and they are so short that no modification of the chassis is required to clear the back end of the lower light source.

When used with EZ-LITE™ modules, these EZ-FIT™ LEDs add \$4.00 each to the basic module cost, rather than the normal \$2.00 cost for conventional LEDs.

Atlas N Scale Shay: In the last newsletter, it was mentioned that this locomotive could be fitted with two identical modules, to provide a bright directional headlight for each end. Right after that

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was published, I found a better way, requiring only one module to serve both ends.

The new module uses bright Golden White surface mount LEDs to provide bright directional headlights for each end. Installation of the single module is very easy, but simple soldering is required in two places. Installing the LEDs is not quite so easy, and a bit of drilling is required, in the form of opening up the existing headlight holes.

The price of the new EZ00-SHAY module is \$36.00.

O Scale Emergency Vehicle Lighting: The EZ08 module for this application has been upgraded to supply a larger variety of lighting effects for typical O Scale cars. For example, the cast metal O Scale police cars with light bars are being fitted with four white LED headlights (two per side, alternating bright/dim), four red tail lights (two per side, alternating bright/dim), and two red and two blue (or four red) LEDs for the light bar, emitting alternating complex triple strobe patterns. Other colors and pattern options are available. The price is \$30 PLUS \$2.00 per LED. In the example above, the module is the EZ08-0012 (12 LEDs) for \$54.00.

Flicker Resistant O Scale Locomotive Lighting: Some customers have reported that their EZ08 locomotive lighting modules, typically with a headlight and a Mars Light, behave poorly at low track voltages. Apparently the applied voltage in this situation is half-wave rectified AC with a low peak voltage, and the power available to the EZ08's microprocessor is not steady enough for flicker-free operation.

We have been supplying the EZ08 to some O Scalars, on request, equipped with a bridge rectifier and very large filter capacitor at the power input, and this appears to remedy that problem.

This modification adds \$10.00 per module.

FUTURE PRODUCTS

Items discussed below have been proposed by several potential customers. They will be developed if demand justifies that effort.

Lights for Alkem Scale Models Yard Light Tower (status update): As part of the development of the EZ-FIT™ LEDs discussed above, a special LED that fits the lamp bracket for this tower has been created. I have laid out a circuit board to be installed inside the base, for wiring these LEDs together, but have not yet had any of these boards made. The light module will include provisions for easily plugging the entire tower into a socket, so it can be quickly removed from a layout module for safe transport.

This product will be offered as a complete bag-of-parts set to equip one tower with six LED light sources and provide for fairly simple connections to power and to the LEDs.

FINAL NEWSLETTER

As 2006 draws to a close, this appears to be an ideal time to end this series of quarterly newsletters. We have successfully fitted lights in models in every scale from Z to 1-1/2", for any source of power and every known type of simple and special effect light, and there doesn't seem to be much new to be discussed any more. The Internet has become such a useful and rapid means of dispersing the kind of information normally put into this newsletter that I feel that using that medium will improve the flow of information about new Richmond Controls products and new applications of existing products.

I intend to direct new product announcements to the model railroad magazines and to model railroad Internet sites that solicit this type of information. That way, news about products for any scale can be limited to the web sites that focus their attention on that scale.

TRAIN SHOWS

Upcoming Train Show plans for Richmond Controls include the Oklahoma City Train Show and Southern Plains N Scale Convention (November 30 - December 3), the Plano (Dallas area) Train Show (January 13 & 14), San Antonio Train Show (late January), Greater Houston Train Show (in Stafford on February 10.), and the O Scale March Meet in Arlington Heights (Chicago area) in mid-March.