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## INTRODUCTION

The following discusses what's new at Richmond Controls since the First Quarter 2001 Newsletter. Feel free to call if you need additional information - Jim

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## NEW LOCOMOTIVES AND CARS

Note: I generally don't devote any space to discussing installations in HO Scale and larger locomotives, since installations in these locomotives are so simple and straight forward (at least, when compared to N, Nn3 and Z Scale). There is usually a Richmond Controls lighting module for any locomotive in HO and larger scales.

This past quarter most of our new applications have been for EZ09 configurations too numerous to discuss in detail. These were for HO, S and O Scale locomotives.

**Life-Like N Scale FA1** - The Life-Like light board can be modified to provide a bright, constant-intensity headlight using an incandescent lamp. Contact us for details.

**Atlas N Scale Classic GP35** - The EZ02 and EZ11/13 can be fitted in this locomotive. All of the usual lighting can be furnished for forward-only operation. This includes headlights, ditch lights (steady, alternating or controllable), signal lights (Mars Lights, Gyalights, Oscitrol Lights, single or dual) and various beacons (strobe, rotating, or Pyle Stratolite). Special lighting can be provided if required. Since this is a "Classic" locomotive, the module plugs into the chassis.

**Kato N Scale SD80 and SD90** - These locomotives accept various versions of the EZ04. The module is installed in the body shell in the rear and remains with the body shell when it is removed from the chassis. This is essentially the same as with other recent N Scale locomotives (SD50/60, B23-7, SD40-2, C44-9W, GP20, etc.). When the shell is reinstalled on the chassis, power is automatically connected to the module.

The "white" LEDs supplied with the locomotive by Kato are very nice, and it is expected that the main reason for purchasing a new lighting package for these locomotives would be to obtain alternating ditch lights or replace the blue-tinted LEDs. Please refer to the discussion of Automatic Ditch Light control later in this newsletter.

**N Scale Collector Impact Cars** - These cars are furnished in packages of two cars -- a 40 foot Union Pacific car and a 50 foot Southern Pacific car. Both can be given track powered, flicker-resistant soft interior lighting using standard Richmond Controls products.

The EZ41-00W (\$33.00) is ideal for the 40 foot car, and the EZ31-00W (\$36.00) is best for the 50 foot car. Both kits come with thin etched-metal axle wipers to route

power from metal wheels to the car's interior. Installation is very simple and involves replacing the plastic MicroTrains wheels with metal wheels (Intermountain, Northwest Shortlines, etc.), drilling a #57 hole through the center of the two truck-mounting pins, attaching the wipers to the truck-mounting pins using 00-90 screws (supplied), attaching the module to the car ceiling using double-sided foam tape (supplied), and plugging the power wires onto the screw tips. On request, we will supply pre-drilled truck-mounting pins, and we can supply the metal wheel sets.

The lighting is intentionally subdued, so that it won't look like someone is making a movie inside the car. It is not very noticeable in a brightly lighted room, but it is obvious in a darkened room. After being powered for about a minute, the lights generally will not flicker.

**Nn3 and Z Scale Locomotive Lighting** - A VERY small version of the EZ11 has been created for simple bright constant-intensity headlights for the smaller scales. The EZ10 module is a bit smaller than the visible portion of the eraser on a standard wooden pencil. It can power one to four constant-intensity lamps. Applications so far have been in a wide variety of Nn3 steam locomotives and the Z Scale C44-9W by Rogue River. We also have VERY TINY plug-and-socket connector sets (1 to 4 circuits) and several wiper designs for those in the smaller scales wishing to pick up power in the tender and connect it to the locomotive.

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## PLANNED NEW PRODUCTS

**Overland N Scale Tunnel Motors** - It is expected that the EZ04 will be ideal for this application. With this module the user can have dual headlights and dual Mars Lights or Gyalights (as per SP, KCS and D&RGW practice). The light source can be either be lamps or "white" LEDs. The Richmond Controls display at train shows includes a Hallmark tunnel motor with "white" LED headlights and Gyalights.

**Walthers HO Scale Sperry Rail Service Car** - The photo of this car in the Walthers ad shows what appears to be a yellow strobe light in addition to the headlights. The EZ05-021 provides this lighting combination for \$34.00.

**Kato N Scale RDCs** - Kato's ad shows an Alaska Railways RDC2 with a Pyle Stratolite mounted above dual headlights. This lighting can be provided by the EZ05 or EZ04 for \$34.00. If constant-intensity, subdued, flicker-resistant interior lighting is also desired, the EZ51 can probably provide all of the lighting for the entire RDC.

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## NEW FEATURES

**Automatic Ditch Light Control** - Any Richmond Controls locomotive lighting module can now be supplied with Automatic Ditch Light Control. An appropriate sensor (supplied) must be mounted in the locomotive and a non-contacting actuator (also supplied) must be positioned at trackside locations. When the sensor is briefly activated, the ditch lights switch to the Alternating mode, and a timer starts counting down. When the timer is finished (presently 45 seconds), the ditch lights automatically return to the Steady mode. Any time the sensor receives the appropriate signal, the timer resets and starts over, while keeping the ditch lights alternating.

In the real world, some railroads use this type of ditch light operation when approaching grade crossings. The mode can be set to change to Alternating when the Engineer blows the horn, and the mode returns to Steady after a time delay.

So far, available sensors and actuators include reed switches used with trackside magnets, and infrared phototransistors used with trackside infrared LEDs. Potential mounting locations in locomotives like the SD90 or C44-9W include in the radiator area, in the Engineer's window, and in front of the fuel tank.

This option adds \$10.00 to the module price. Upgrades to existing modules are possible -- please inquire.

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## FEATURE SUMMARY

**Beacons and Strobes** - Most lighting modules can be supplied with the purchaser's choice of beacons and strobes. Available light sources include 1.3 mm and 2.4 mm incandescent lamps, and 0.075" yellow LEDs. Doug Gary uses 0.075" red LEDs on the monorail on his Disneyland module.

Available patterns include the Strobe (single or double bright flash once per second), Western-Cullen rotary beacon (same as the Strobe), Gyralight-pattern (intensity rises once per second to a bright flash, then falls and repeats), and Prime Stratolite. Dual strobes can be supplied with single or dual flashes (or more!) and the strobes can be synchronized to each other or unsynchronized.

In the real world, the Stratolite has 4 fixed lamps pointing forward, backward, and to each side. They are flashed in sequence to simulate a rotating lamp or mirror. The cycle repeats every 3/4 second. The Richmond Controls simulation of this beacon generates four different intensity levels with a brief off-time between each different intensity level. The video tape "Extreme SP" shows them in action.

Details West makes wonderful detail parts for these beacons in HO Scale. The RB-106 is the Stratolite and the

RB-126 is the Western-Cullen beacon. Both can be modified to accept either the lamp or the LED supplied with the Richmond Controls kit.

Detail Associates makes O Scale versions. The 5073 is the Western-Cullen beacon and the 5074 is the Stratolite. The yellow plastic dome supplied can easily be modified to accept a lamp or LED.

The Sunrise Enterprises N Scale beacons are too small (so far) to include LEDs. However, until Dan tackles that problem, the lamps and LEDs supplied with Richmond Controls kits look fairly reasonable as N Scale beacons.

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## RECENT SPECIAL MODULES

Our modules were designed to be easily configured to provide the user's choice of features. Some of the unusual features provided during the last few months include:

- Unsynchronized front and rear strobes (HO AEM7)
- Flickering firebox lights (O Scale steam locomotives)
- Pulsing orange exhaust stack light (O Scale diesels)
- Porch-mounted alternating ditch lights using "white" surface-mount LEDs (N Scale SD60M).
- Headlights, Reverse Lights, Signal Lights, Porch Lights, Classification Lights, Marker Lights, Numberboard Lights, Ground Lights, Cab Lights (O Scale diesel, total of 17 lamps with an EZ09).
- Dim Reverse Headlights (HO Scale diesel).
- Directional classification lights changing from yellow to red (HO Scale diesel).

We are always looking for new ideas -- so please don't hesitate to ask for something different.

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## TRAIN SHOWS

Train Show plans for the remainder of 2001 include the N Scale Collector Convention (Lancaster, June 27), NMRA (St. Louis, July 12), Santa Fe Historical and Modeling Society Convention (Kansas City, July 19), Burnet Train Show (Burnet TX, August 17), NMRA Pacific Southwest Region Convention (Las Vegas, September 13), Southern Pacific Historical and Technical Society Convention (Bakersfield, September 27 -- [GREAT! - we can visit Tehachapi !!!] ), Ft. Worth Train Show (November), and Oklahoma City Train Show (December 1).