RICHMOND CONTROLS NEWSLETTER - THIRD QUARTER 2001

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INTRODUCTION

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

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.

Con-Cor N Scale S2 4-8-4 - Owners of these locomotives who desire a bright, constant intensity headlight and possibly a bright constant-intensity back-up light in the tender can consider the EZ11-010 (forward-only, $22.00) or the EZ21-020 (one forward and one reverse, $28.00). Richmond Controls also has a tiny two-circuit plug and socket set, the EZPS-266, for $4.00. This item can be used to route the lamp power from the locomotive to the tender, if the lighting module is installed in the locomotive. For lighting installations in the tender, of course the lamp power will flow in the other direction.

Atlas N Scale GP38-2 - This locomotive is similar to a GP40-2 inside and thus requires a similar lighting module -- the EZ13 for steady lights and the EZ01 for special effects lights. With the EZ01, it can have just about any combination of lighting available from Richmond Controls. This includes headlights, signal lights (Mars, Gyralight, Oscitrol), beacons (strobe, Western-Cullen, Stratolite), and ditch lights (steady, alternating, automatic).

Overland N Scale Tunnel Motors - The EZ13 is ideal for steady, constant-intensity applications, and the EZ04 is best for special effects applications. With the EZ04 module the user can have dual headlights and dual Mars Lights or Gyralights (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 tunnel motor with "white" LED headlights and Gyralights. In this case, we used "white" surface-mount LEDs to avoid having to enlarge the existing headlight holes to accept lamps. One "white" LED is located inside over the two headlight holes above the windshield, and another is located inside, behind the two nose light holes. Short lengths of fiber optics rod are used to transmit the light the short distance through the light casting to the front of the locomotive. Richmond Controls can supply the fiber optics rod at additional cost. Anyone wanting improved lighting in a tunnel motor or any other brass locomotive should consider using these surface mount "white" LEDs in order to avoid drilling holes in the brass. We will continue searching for a way to filter out the objectionable blue tint of these LEDs.

PLANNED NEW PRODUCTS

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.

FEATURE SUMMARY

Signal Lights - Most *special effects* lighting modules can be supplied with the purchaser's choice of signal lights. This includes Mars lights, Gyralights, and Oscitrol lights in single or multiple configurations. Available light sources include 1.3 mm and 2.4 mm incandescent lamps, and (for an extra charge) "white" LEDs.

(To digress: our Mars light simulates the pattern seen when the light beam moves in a horizontal "figure-8" pattern. Our Gyralight simulates the pattern seen when the beam moves in a circle. Our Oscitrol lights feature two lights pointing slightly to either side and alternating between bright and dim, 180 degrees out of phase with each other.)

Oscitrol lights are inherently dual lamp signal lights. The Mars light and Gyralight can be supplied either as single or dual lamp versions. The dual-lamp versions generally operate in phase, but one customer (JP) is experimenting with dual-lamp Gyralights operating 180 degrees out of phase with the light sources placed very close together. The resulting effect includes some appearance of motion.

Sunrise Enterprises makes a number of castings to allow the user to have more realistic installations of signal light packages like those used by the SP and D&RGW.

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:

- Directional headlight and reverse light plus tender electrical pickups in Con-Cor N Scale Big Boys and Challengers.
- Zener diode voltage reduction in HO Scale modules for use with high-voltage DCC systems.
- Tiny directional headlight and reverse light module for Nn3 locomotives. (The module is smaller than the eraser on a #2 pencil.)

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- Dual Headlights and Gyralights for the Kato N Scale GP30, with two lights in the nose.

PRODUCTION PROBLEM -- FREDs

One of our suppliers, a well-known distributor who devotes a lot of effort to self-congratulation about being "#1", did not notify us when the manufacturer of an integrated circuit notified them that the part was being obsoleted. As a result, although the distributor had the opportunity to offer good customers a chance make a "last buy", we were not informed. Consequently, we ran out of the critical integrated circuit and now have a large supply of circuit boards but no integrated circuits to use for the FRED circuits. The distributor has showed a complete lack of concern, so our only option appears to be to scrap all those circuit boards and design a new one using other technologies.

As a result, we will be unable to deliver FRED circuits until a new circuit has been designed, tested, and converted to printed circuits. I expect this to involve a delay of 3 to 6 months.

For the do-it-yourself folks who may wish to use the LM3909 integrated circuit to build their own FRED flashers (not our favorite, but still a option), THAT integrated circuit has ALSO been obsoleted. So now we all need to fall back on Plan B. First, we have to figure out what Plan B will be. Do you have any suggestions?

REQUEST FOR MARKETING INFO

I would like to break from what appears to be a long-standing tradition in the model railroad manufacturing industry and ***ASK*** customers what products they would like to see us develop. In addition to asking *WHAT* people would like to have, I also would like your thoughts on the *SPECIFICATIONS* for whatever it is you might request.

YOUR IDEAS -- Do you have any suggestions for us?

DIRECTIONAL CONTROL FOR CAR LIGHTING -- Just to "prime the pump", is there much interest in modifying car-lighting boards like the EZ31, EZ41, EZ51, and EZ61 to include DIRECTIONAL control of exterior lights like marker lights and tail lights?

These boards already provide flicker-resistant track-powered operation with constant-intensity lighting. One good customer (KK) has suggested there might be a need for directional tail light operation. One specific example is a modern Santa Fe caboose with a red tail light at each end. Whichever tail light is facing to the rear when the train is moving forward would be lighted and the other would be dark. Interior lights remain non-directional.

The design trick is the have a short-term memory so that when the car temporarily loses contact with the track (like when running over a switch or some dirt on the rails), the circuit will remember which direction it was most recently traveling, and retain that operating mode briefly.

For users of conventional power supplies, the voltage polarity on the rails will determine the direction of motion and the operating mode. For DCC users, since the power on the rails is essentially pure AC and there is no "polarity", I suspect a decoder would be required. Is there any interest in this potential product?

HIGH VOLTAGE FLICKER-RESISTANT LIGHT MODULE FOR KATO LIGHT KITS -- Kato makes a wonderful lighting kit for their N Scale passenger cars. While the present Kato kit does not offer flicker-resistant lighting, the Kato trucks are far superior to other trucks in their ability to maintain electrical contact with the rails (because ALL wheels contribute, not just half of them).

Apparently some DCC users have discovered to their surprise that if they install the Kato light kit with its 12 volt bulb and then run the car on a DCC system applying 18-20 volts to the rails, the bulbs may get VERY hot and the heat may damage the plastic roof. (Don't you hate it when that happens?) Apparently the surprise is that some users are not aware of the magnitude of the voltage on the rails. Kato is very careful to specify a 12 volt maximum rating for the lighting kit and some locomotives.

It may be possible to offer a replacement light module to be used with the Kato lighting kit. I imagine the replacement would offer constant-intensity, flicker-resistant lighting with an input voltage rating of perhaps 30 volts peak. This would allow it to survive exposure to most conventional and DCC systems including older MRCs, Digitrax set above "N", and the Atlas DCC system. I suspect that in order to achieve any respectable level of light intensity while keeping the current to a minimum, it would be necessary to use the same type of BRIGHT yellow LEDs that we presently use in our lighting kits. (With "white" LEDs, the blue interior light tint looks really goofy.) Is there any interest in this potential product?

TRAIN SHOWS

Train Show plans for the remainder of 2001 include the Ft. Worth Train Show (November), and Oklahoma City Train Show (December 1), plus a quick trip to Round Rock (Austin) at the end of October.