Rich Melvin

Official Car

More About Time Line Command

In our last issue (*OGR* January 2005, Run 205), I introduced the ***Time Line Command*** of Creative Trains Company. TLC is a new, open-source command system that adds the concept of "Time of Day" to your layout. With TLC, your towns and cities can come to life and join with your trains in filling your miniature world with action. With TLC you can make an entire city blossom with life and synchronize it to any hour of the day on your layout.

Now remember, when I refer to the "time of day" I'm not talking about the actual, real time of day. I'm talking about what time is it *on your layout* according to the way you have programmed your scene. If it is 10 PM on your layout, the train room lighting (i.e., daylight) will be dimmed, the lights inside your layout buildings will be on, and things may be pretty quiet since most of the businesses and factories are closed. If it is mid-afternoon, however, the train room lights will be on full, the lights in the buildings will be off, and there might be a lot of noise coming from the big factory at the edge of town because it's the middle of the work day. Shopkeepers might be sweeping their sidewalks, and every hour, on the hour, your clock tower bell strikes. All these things will be possible with TLC.

As you think about those effects, it might strike you that it's awfully complicated to get a whole town set up with TLC, but it's really as simple as two wires. You already have to run two wires to each of your buildings to connect a light or a sound module, and connecting TLC is no more complicated than that! The same wire that carries the power (AC or DC) for the building lights also carries the TLC Command Signal! Hookup is as easy as connecting two wires.

Since this is a brand new concept, there are no products on the market yet with TLC. It will be very simple, however, for manufacturers to incorporate TLC into their buildings and accessories. The ***Time Line Command Building Module*** can operate window shades, signs and other animations and bring a bit of life to an otherwise inanimate building. A building equipped with a ***Time Line Command Building Module*** will put on a little show all by itself — by having its interior lights could go on and off in a predetermined pattern, for example. The individual building will have no idea what time it is on the layout or what the building next door is doing, but if you next add the ***Time Line Command Clock***, (TLCC), every building equipped with TLC will know what time it is and will perform its pre-programmed "scene" according to the time of day on the TLCC.

If you don't like the pre-programmed scene that came with your building or accessory, you can add the ***Time Line Command Director*** (TLCD). The TLCD allows you to be the "Director" who composes and sequences the scenes that will play out on your layout! You tell each building what time you want its lights to come on and go off, what time you want the church bell to ring, when the clock tower should strike the hour, when the factory will start making noise, when the noon whistle should blow, when the saw mill starts running . . . literally EVERYTHING on a TLC-controlled layout is under your control. You can set the TLC system time of day, the time of the year, and how fast the clock should run. Individual building triggers can be set using the ***Time Line Command Director***, so you can program the whole show by telling each scene component what to do and when to do it.

Public display layouts are great places for TLC. By using a "fast clock," a display layout can be programmed to go through an entire 24-hour cycle in a 30 minute window. TLC can control literally everything on a model railroad. By interfacing the TLC modules to other external devices, you can have full-time, programmable and automated control of absolutely every-

O GAUGE RAILROADING *is published seven times yearly*

O GAUGE RAILROADING (ISSN 1062-1482) is published seven times per year in January, February, April, June, August, October and December by OGR Publishing, Inc., 33 Sheridan Rd., Youngstown, OH 44514-1680; phone: 330-757-3020; fax: 330-757-3771; e-mail: Info@ogaugerr.com; website: www.ogaugerr.com.

SUBSCRIPTIONS: By mail in USA: 1 year (7 issues) $31.95 US; 2 years (14 issues) $59.95 US; 3 years (21 issues) $84.95. Canadian subscriptions add $1.35 US per issue; Foreign subscriptions add $2.00 US per issue. Remit all funds in US dollars.

CONTRIBUTIONS: News items, construction articles, photos, etc. pertaining to 2 and 3-rail O scale trains all types are solicited. Manuscripts, photos, drawings and other items contributed for publication become the property of OGR Publishing, Inc., and will not be returned unless accompanied by a stamped, self addressed envelope. Upon publication, contributors and authors will assign exclusive publication rights to OGR Publishing, Inc. for these manuscripts, photos, drawings and other items. Feature articles will be paid for upon publication. Please do not submit previously published manuscripts, photos or drawings. Information about submitting articles may be obtained from the editor. OGR Publishing, Inc. assumes that all letters, product information and items of general interest are offered gratis. OGR Publishing, Inc. will not be responsible for the opinions expressed by the editors, authors or advertisers.

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PRINTED in the USA, Periodical postage paid at Youngstown OH 44514 and at additional mailing offices.

POSTMASTER: Send address changes to OGR Publishing, Inc., 33 Sheridan Rd., Youngstown OH 44514-1680.

CHANGE OF ADDRESS: Publisher must be notified at least 60 days prior to address change. Please give us both old and new addresses in full, including zip+4. Magazines not forwarded by the USPS and/or failure to notify us of the change may result in your missing an issue and/or additional postage. We do not guarantee delivery to business addresses.

OFFICE HOURS: Monday to Friday, 8:30 a.m. to 4:30 p.m., Eastern time.

thing on a model railroad. You can control the lighting (both the layout and the room lighting), the accessories, the sounds, and even the trains themselves with TLC.

What kind of equipment do you need to start using TLC? Many of you already have almost everything needed in the form of either a Lionel TrainMaster Command Control (TMCC) system or an MTH Digital Command System (DCS). Lou Kovach and his software engineers have written the program code to work with TMCC, DCS, or any NMRA-standard DCC system! You can use a TMCC CAB-1 remote or a DCS remote to control TLC modules. If you are using the TMCC remote, TLC commands run as ENGine commands. If you are using DCS, the TLC commands are set up as ACCessory commands.

So . . . what exactly do you buy, and whom do you buy it from, to get started? Right now, there is nothing to buy except an idea and the technology to support the idea. Our role in this new venture is to act as an independent advocate among manufacturers, vendors, and users of TLC so that as the system evolves everyone is using the same digital command standards. If every manufacturer, large and small, agrees to adhere to the TLC Command Standards, there will be no compatibility problems when TLC-equipped products built by different manufacturers are combined.

Anyone interested in TLC can learn more about this by going to our website (www.ogaugerr.com) and clicking on the "TLC" link. There you will find a PDF file available for free download that contains the written specs of how the TLC system works. This document

With *Time Line Command,* the possibilities for your layout to come alive are limitless. Imagine watching your city scene (modeled on Bill Bramlage's, perhaps) come alive as the room lights dim and nighttime comes and building lights brighten. They might even include, as does one of these photos of the Hartford, CT, skyline at Christmastime, the word "JOY" spelled out on the side of one office building.

Time Line Command **will work seamlessly with Lionel's TrainMaster Command Control system and MTH's Digital Command System.**

includes timing diagrams, the packet formats, and bit placements — everything needed to start designing a new product with TLC at its core. Admittedly, it takes someone with a very deep knowledge of digital design to take written specs and make something useful from them. For Original Equipment Manufacturers (OEMs) and modelers who are interested but want a ready-made package to start with, we will also offer an "OEM Developer's Kit." This kit will provide OEMs and individuals with sample circuit designs they can use directly or modify to make their product or model unique while keeping the TLC command structure within the core design. The kit includes the source code, schematics and software listings, the command language structure, and all the other digital specifications needed to get started. We will charge either a fee for the OEM Developer's Kit based on the number of units produced or a flat annual rate, but we don't want the license cost to be a barrier to using TLC. A small manufacturer, for example, may pay as little as $100 for this kit and the license to use the TLC command structure. Our goal is not to get rich selling software licenses. Our goal is to promote the broad acceptance of the TLC command standards in order to begin the process of bringing some across-the-board electronic compatibility to the O gauge market.

If you are interested in using TLC in your products but don't want the hassle of manufacturing and programming your own chips, we will supply completed chips for use in your products for a very nominal price. These chips will be pre-programmed with several output functions ready for you to incorporate into a circuit board design for a specific building or accessory. A manufacturer may thus place the chip in the form factor required by his own circuit board design.

We will also be prepared to provide complete, ready-to-use circuit boards. More than just a chip, these will be completed circuit boards ready to hook up to power lights, animation mechanisms, sound modules, and other external devices using the TLC system to issue the digital commands.

If you would like to see the technical specifications and learn more about TLC, go to our web site at www.ogaugerr.com, click on the "TLC" button, and then click on "Technical Specs." Fill out the short form you'll find there, and that's it.

Time Line Command could be the next big step forward for the O gauge hobby. It's the key to bringing action and life to all those parts of your layout that don't do anything now. We're ready to share the specifications of the ***Time Line Command*** system with anyone who is interested. With your help, and hopefully the help of all the O gauge manufacturers, we can take the first small steps towards achieving full compatibility in this area of the hobby.