

RPO

Summer 1993
Vol. 1, No. 2

Next Meeting:
October 18
Collinsville, IL
(see page 11)



Gateway Division - Mid Continent Region - NMRA

RPO

Summer 1993: Volume 1, Number 2

The *RPO* is the official publication of the Gateway Division of the Mid-Continent Region (MCoR) of the National Model Railroad Association (NMRA).

Editor:

Richard Schumacher

Cover Photographer:

Herb McCurdy

This Issue's Contributors:

Ed Hawkins

Chris Thies

Your name could be here!

Articles, photos, and other materials for publication are to be sent to the Editor. No payment can be made for publication of any materials. Items submitted for publication must arrive by the first of the month prior to the issue date. Issues are published quarterly: Spring, Summer, Fall, and Winter.

Subscription to the *RPO* is one of the services provided by membership in the Gateway Division. Send new membership applications to the Treasurer.

The editorial content of this publication reflects the opinion of the Editor only, unless otherwise credited, and does not necessarily reflect the policy of the Gateway Division.

Advertising of interest to our membership is accepted for publication in the *RPO*. Contact the Editor or Treasurer for current rates and artwork size information.

Please send submissions, suggestions, letters, and address corrections to:

The Editor, RPO
c/o Richard Schumacher Associates
PO Box 510500
St. Louis MO 63151-0500

Articles may be submitted in any format (handwritten, typed, or plain unformatted text on disk - either 3.5" or 5.25"), photo submissions are currently limited to 35mm color slides or 35mm negatives.

The *RPO* is composed in *Microsoft Word for Windows* and imaged on a 600 dpi QMS PostScript laser printer.

Whistle Stop

by Christopher Thies

The March meeting of the Gateway Division opened a new set of horizons for the Division. The proposed change to the Division Bylaws to have once a month meetings that alternate between Missouri and Illinois was passed unanimously by the membership. The Gateway Division's boundaries include a large portion of Southern Illinois and with the addition of a regular meeting site in Illinois, more of the Division's members will be able to partake of the educational and inspirational opportunities we provide at our meetings. This change may cause some confusion as to which months the meetings are held where. The scheduling of Division meetings now follow this "rule of thumb" - all meetings are held on the third Monday of the month with even numbered monthly meetings located in Illinois and the odd numbered monthly meetings located in Missouri.

The monthly meetings held in Illinois have already started. Almost 20 Gateway Division members attended the first meeting there with five additional new faces who may become members. The present location for the Illinois meetings is centrally located and easily accessible to most all Division members so I hope to see more of you at the next Illinois meeting.

The membership directory questionnaire is included in this issue. The membership directory will be a big benefit to you in helping to identify other members that have common interests or have modeling skills to assist you in your modeling adventures. Please complete and return the

questionnaire at the next meeting, or by the beginning of November, so we can get this directory in your hands quickly.

The month of June had a wonderful event that all should have attended. The Turkey Creek Division sponsored the Mid-Continent Region's Convention on the 17th, 18th, and 19th at the Holiday Inn Holidome in Lenexa, Kansas. The MCoR convention was an excellent opportunity to meet new friends, see old friends, and to be inspired and educated. There is nothing like spending a weekend with a large group of people who have come together to share this great hobby we call model railroading. Approximately 20 Gateway Division members ventured to Kansas City for this enjoyable weekend.

Gateway Division Hosted Regional And National Conventions

The Mid-Continent Region's annual convention site rotates around the region on a semi-official seven year schedule. St. Louis hosted the Region convention in 1989 so our turn comes up again in 1996. That may sound like a long time away but considering that a Regional convention can take almost two years of planning, that puts us into the summer of 1994 when we have to start. The Division will be sponsoring this convention so some planning as to the convention committee members needs to begin now. If you would be interested in working on this committee, please let Chris Thies or Herb McCurdy know.

The NMRA National Convention site also rotates around the country on a similar schedule. The 1998 National

Convention was slated to be held in Florida, around Ft. Lauderdale, but no proposal to host the National is being submitted from that area. The Turkey Creek Division put together and submitted a proposal to the NMRA at the National Convention in August to host the National Convention in Kansas City in 1998, since no bid is forthcoming from Florida. During the June and later Gateway Division meetings, a discussion was held as to the Division possibly hosting a National Convention sometime in the near future. It has been since around 1970 when the last National Convention was held in St. Louis. Per the NMRA's rotating site schedule, the 1999 National Convention is slated to be held somewhere in the Mid-Plains area, which includes St. Louis. In the coming months, the Division officers will be gathering information to present to the membership concerning the Division possibly hosting the 1999 NMRA National Convention. If we do decide to submit a proposal to host the National Convention, we will need to enter a letter of intent with the NMRA on or around January 1st, 1994. Much information gathering and sharing needs to be done before that date for the Division membership to make an informed decision so keep your eyes out for information shared in the *RPO* and keep your ears open for information shared at Division monthly meetings.

The RPO Needs Your Help

The *RPO's* publishing schedule has changed from the original proposed six times a year to only four times a year. Many reasons are responsible for this.

One of the main factors is lack of member supplied articles. Another revolves around the original reason for the six times a year schedule. That schedule was decided upon to coincide with the Division's six times a year meetings. Since we now meet once a month (12 times a year), that logic does not apply (and the suggestion for monthly newsletters was promptly declined by our editor).

In addition, a six times a year publishing schedule puts a significant time strain on the lives of those involved with it's publication. Even the *Caboose Kibitzer*, our Region publication, is sometimes late and is only published quarterly for similar reasons.

Division Store

To provide an outlet for NMRA, MCoR and Gateway Division promotional materials and supplies, a "Division Store" has been established. The items presently available include: NMRA Standards Gauges in most scales (\$2.50/ea); NMRA patches (\$2.50/ea); MCoR Car Kits (\$8.00/ea).

In the future, Gateway Division patches will be sold through the "Division Store" along with anything else from the NMRA and MCoR that would be of interest to our members. We are providing this as a service, and at the same time, get to raise a little extra money for the Division's checkbook as NMRA materials net a ten percent return for us.

Support the "Division Store" by checking your tool box to see if your Standards Gauge can still be found (or hasn't been bent by that 20 lb. sledge hammer you use for kitbashing), or get

an NMRA patch to wear proudly on your vest. John Lee will be handling the "Division Store" so visit with him at our next meeting to see what you might want.

MCoR Limited Edition Car Kits

We have around 40 car kits still available in St. Louis so don't miss the opportunity to make your purchase as they are going fast. Two roadnames are available, the *KO&G* and the *M&StL*, with two numbers available for each roadname. The kits were produced by *Accurail* and are only \$8.00/ea for MCoR members and \$9.00/ea for non-MCoR members. This is a real bargain for fund raising type limited run kits as a quick look in *MR* shows that most kits of this nature are in the \$10 to \$20 range (plus postage!)

See the selection at the next Division meeting as they will be on sale at the "Division Store" display. Don't miss your chance as these are beautifully done kits and help the MCoR raise money to offset expenses not completely covered by your membership dues.

Membership Directory

The Gateway Division needs your help in preparing a membership directory as a service to its members. We would like to publish the directory by the November meeting so a cutoff date of November 1st has been set for us to receive the questionnaire. Please fill out the questionnaire and return it to Richard Schumacher (Box 510500, St. Louis, MO 63151-0500) or hand deliver it to Richard at any Division

meeting. Any members not completing and returning a questionnaire by November 1st will be listed in the directory with name and address only.

NMRA Membership Discount Opportunities

Your NMRA membership provides you with more than you think. W.W. Grainger has a national agreement with the NMRA to sell electrical products to NMRA members. Grainger only sells to businesses and with this agreement, the NMRA is considered a business to allow it's members access to Graingers large stock of products. In addition, Phillips Lighting products, purchased through Grainger, can be had with a 35-45% discount. This discount only applies to purchases involving case lot quantities, so get together with your fellow modelers for extra buying power and discounts. All that is required is the following account number, 822913141, and your NMRA membership card to receive this discount. Grainger has 3 locations in St. Louis so check your yellow pages for the nearest location.

In addition to nationally negotiated discount programs, many companies offer discounts to NMRA members as a courtesy. As an example, check your local hobby shop. Some of them in the Metro area provide a 10% discount to NMRA members. Remember to take your membership card to your local hobby shop the next time you visit and if, for some reason, the shop does not offer the discount, try some gentle persuasion to convince them of the benefits. Remember that the key word here is "gentle."

If any of you know of any specific discounts available to NMRA members, either locally or nationally, please let us know so we can inform all the members of the Gateway Division in future issues of the *RPO*.

About This Issue

A note from your Editor

I was starting to believe there was a "curse" on this issue. Shortly after the very first issue came out, it was decided to go to monthly meetings and then even more quickly decided to go to quarterly newsletters. We calculated it would be more economic to publish larger issues slightly less frequently, especially since we would not be trying to match the every-other-month meeting schedule anymore.

We had originally planned to publish 8.5x11 newsletters, like the *Caboose Kibitzer*, starting with this second issue. This would allow us to print larger or more photographs, and be easier to compose for printing (the strange size newsletter you are holding in your hands is determined by Postal Service regulations - this is the largest it can be for normal 1st class postage rates).

This issue was originally prepared to print as 8.5x11, typeset, and sent to the low-bid printer - who promptly lost the original artwork! Aarrrrgh!

After reviewing the costs, and the problems with conventional low-cost printing sources (like photographs that print wrong), I determined it would cost less to individually image each copy on a high-res laser printer. However, because of paper feeding problems with the 11x17 sheets required for an 8.5x11 final newsletter, I ended up

recomposing the entire newsletter in this "RPO classic" size.

I also discovered some new software to automatically make the impositions for this issue. Impositions are the fact pages 4 and 9 are printed on the back of pages 10 and 3 so when all the pages are folded they appear in the right place. The big advantage of this software is it can figure out how to place our 6x8.5 pages on an 8.5x14 so it will fold, staple, and trim correctly. If you need to image impositions on a PostScript laser or typesetter, I recommend *Double-Up* from Legend Communications (DOS or Windows).

By the way, a 16-page (4 sheet) newsletter this size can be mailed for 29¢ (it is just slightly under 1 ounce with this weight paper including the staples, stamp and mailing label). Look for future RPOs to come this size.

Yes, each copy was individually printed on a PostScript laser printer.

Call Board

Superintendent

Christopher Thies
(314) 845-1987

Assistant Superintendent

Randy Meyer
(314) 579-0933

Division Director

Herb McCurdy
(314) 487-9291

Secretary / RPO Editor

Richard Schumacher
(314) 846-2224

Treasurer

John Lee
(314) 638-0515

Event Committee Chairman

Phil Sheahan
(314) 832-0843

Achievement Program Chairman

Brad Joseph
(618) 233-8140

Achievement Program Assistant

Chairman (North, South & East)
Open

Achievement Program Assistant

Chairman (West)
Randy Meyer
(314) 579-0933

1993 Division Meet Committee

Chairman
Randy Meyer
(314) 579-0933

1994 Division Meet Committee

Chairman
Randy Meyer
(314) 579-0933

Membership/Promotion Committee

Chairman
Christopher Thies
(314) 845-1987

ACF Paint Guide

by Ed Hawkins

Background

Starting in May 1988 and continuing until October 1992, I was fortunate to have been able to conduct research at the American Car & Foundry archives, located in St. Charles, Missouri.

Mr. John Krug, chief engineer of ACF Industries, acted as primary point of contact for the archives and he was kind enough to allow access to the builders photographs and other technical data stored in the archives. For this I owe a great deal of gratitude to Mr. Krug.

As a result of researching the original bill of materials, available for cars built between 1931 and 1952, some interesting information regarding painting instructions for the cars was documented. Further, quite a number of the bill of materials contained actual paint samples. John allowed me to have a small slice from the sample. Then the hard part started.

Matching the colors

Along with my friends and colleagues, Pat Wider and Ray Long, the challenge to match the paint chips to "something" was upon us. Using various modeling paints typically available in hobby shops, we sprayed samples of all the basic freight car red colors as they come right from the bottle. While a few colors matched within reason, many others didn't come close so mixing was begun. Rather than taking a shotgun approach, we decided to mix several combinations of colors using a 25/75, 50/50, and 75/25 percent formulas.

Each of these are reported with a shortened code as specified on the paint guide cross reference. These codes mean nothing; they are simply a short hand way of identifying the color.

So as time went on, the paint chips were eventually matched to a model paint that can be duplicated anywhere. One word of caution, however. The bottles of paint are not necessarily identical from bottle to bottle and batch to batch. I have documented two bottles of #110074 Floquil Box Car Red to be quite different. This is a problem I see no real way around, but the overall intent can still be realized. Once the painted car is weathered, any differences in the paint becomes less important. The main thing is to find the basic hue of the car being modeled.

There are really only four or five basic shades of freight car red that captures the essence of the primary hues. The others are minor differences that most modelers, including myself, won't get too excited about. In time, Accuflex should be developing some paint matches to the ACF color samples. That way, many of the basic "common" shades will be available commercially.

Much of the information contained herein has been published over the past few years in *Railmodel Journal*. The August 1989 issue was used as an introduction, with numerous articles in many of the issues that followed, to include specific types of cars. For convenience of those who do not have access to the back issues, editor Robert Schleicher of *RMJ* published two consolidated soft-bound books that contains the articles published from 1989 through early 1992. They are entitled *Freight Car Models*, Vol. I and

II, and should be readily available in hobby shops.

Authentic Paint Guide (Boxcar Red) Circa 1940-1950s

Note: Roads not shown have no paint chips to base a prototype color

Road	Paint Code	Basic shade of boxcar color
ACL, early	F04	light red-brown
ACL, later	F12	oxide
ALTON	F28	red-brown
ATSF	F04	light red-brown
B&O	F09,F11, A02	light oxide, oxide
C&EI	F12,A03	oxide
C&O	F19	red-brown
CB&Q	F18,F28	red-brown
CG	F19,A01	red-brown, oxide
CNW, CMO, early	F19	red-brown
CNW, CMO, later	S11,A01	oxide
D&H	F04	light red-brown
DL&W	F19	red-brown
DT&I	S15	deep red oxide
ERIE	F04,F19	light red-brown, red-brown

GM&O, early	F19	red-brown
GM&O, later	F12,A01, A03	oxide
GN, early	F15	light brown
GN, later	F19	red-brown
GTW	F04	light red-brown
IC	F17,F19, A04*	red-brown, * A04 used on hopper only
ITC, early	F04,F19	light red-brown, red-brown
ITC, later	F04,F19, F12	light red-brown, red-brown, oxide
L&N, early	F19,F28	red-brown
L&N, later	A02,A03	oxide
MKT, early	F04	light red-brown
MKT, later	F12,A01	oxide
MP, early	F03	brown
MP, later	F15,F19	light brown, red-brown
NKP	F04	light red-brown
NP	F17,F19	red-brown
NYC	F19,F28	red-brown
RDG	F19	red-brown
RI, early	F03,F15	brown, light brown

RI, later	F19	red-brown
SLSF	A03	oxide
SOO	F16,F22	light brown
SP	F19	red-brown
UP	F12,S11, A03	oxide
WAB	F12	oxide
WM	F09,S01	light oxide

F21	75/25 Oxide Red/SFCB (186/175)
F22	75/25 Oxide Red/Boxcar Red (186/074)
F23	75/25 Boxcar Red/Oxide Red (074/186)
F26	75/25 Oxide Red/D&H Caboose Red (186/088)
F28	75/25 SFCB/D&H Caboose Red (175/088) See S13 for close equivalent

Paint Codes (Boxcar Red)

FLOQUIL

F01	Oxide Red (186)
F03	Boxcar Red (074) - non Rev 1, browner shade
F04	ATSF Mineral Brown (179)
F08	Boxcar Red (R74) - old version no longer made, see F19 for equivalent
F09	Zinc Chromate Primer (601)
F11	80/20 Oxide Red/SFCB (186/175)
F12	50/50 Oxide Red/SFCB (186/175)
F15	50/50 SFCB/Boxcar Red (175/174)
F16	50/50 Oxide Red/D&H Caboose Red (186/088)
F17	50/50 D&H Caboose Red/SFCB (088/175)
F18	75/25 Boxcar Red/SFCB (074/175)
F19	50/50 Boxcar Red/Oxide Red (074/186)

ACCUPAINT

A01	Oxide Brown (12)
A02	Rich Oxide Brown (54)
A03	50/50 Oxide Brown/Rich Oxide Brown (12/54)
A04	Alkyd Brown (39)

SCALECOAT

S01	Oxide Red (2)
S02	Boxcar Red (13)
S11	75/25 Oxide Red/Boxcar Red (2/13)
S13	75/25 Boxcar Red/Oxide Red (13/2)
S15	50/50 Oxide Red/Tuscan (2/12)

Adventures in Wiring

by Richard Schumacher

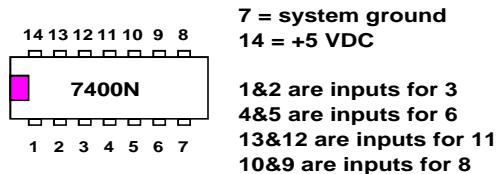
Last issue discussed basic model railroad signal concepts. The circuits we will create use very simple TTL integrated circuits (ICs), they are so simple that multiple gates (logic elements) fit into a single package.

The 7400 has four copies of the gate circuit in each package (that's why it's called a quad NAND gate). The 7404 has six copies. And the UPA2003C has drivers for seven bulbs.

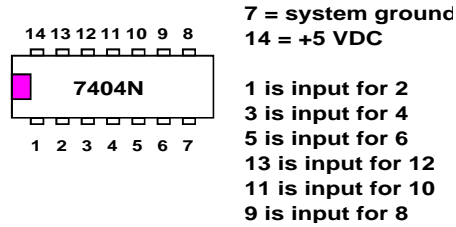
In the circuits, leftover gates are ignored. For reliability, unused inputs are connected to +5. Unused outputs are not connected to anything. Ceramic disc capacitors are added between +5 and ground to decrease electronic noise that may cause the circuit to flicker (these are called despiking capacitors). Any value from .01 to .1 mfd. will work fine. Disc capacitors don't have any polarity to worry about. If you have major problems, try connecting a 10 mfd tantalum capacitor where the +5 line leaves the circuit board (you need to connect the polarity right for this one).

Each TTL IC needs to be connected to +5 and the system ground. The UPA2003A is connected to system ground only. These power connections are not normally noted on circuit diagrams, you're supposed to "know" you have to make them (fun, fun, fun!).

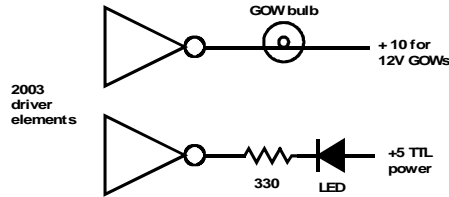
The **7400** is a quad 2-input NAND gate. On any gate, when either input is "low" the output will be "high." If both inputs are "high" the output is "low."



The **7404** is a hex inverter. On any one inverter, a "low" input makes a "high" output, and a "high" input makes a "low" output.

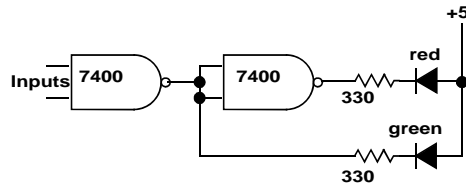


The **UPA2003C** is a driver. Pin 8 is attached to the system ground. 1 is input for 16. 2 for 15. 3 for 14. 4 for 13. 5 for 12. 6 for 11. 7 for 10.



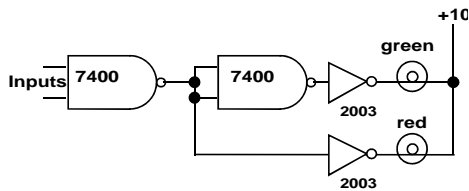
Signal Circuits

The basic circuit to drive a **2-color LED color light signal** uses 1/2 of one 7400N package (that means you can run two signal heads off one package). The two LEDs are located in the signal head. You also use this same circuit to power the 3-wire version of the bi-color LED for a searchlight signal (the middle wire goes to the +5, and the other two connect to the current-limiting resistors). When either input of this circuit is made "low" the "red" LED lights, when both inputs are "high" the "green" LED lights instead.



The GOW version, the **2-color GOW color light signal**, works the same way, but requires driver elements from

a UPA2003C to power the bulbs. Note that a separate +10VDC supply is used for the bulbs. The “ground” side of the +10VDC power supply is connected to the system ground as well. Be careful not to connect the +10 to a TTL ICs - you'll have fewer working parts if you do that.



These circuits can be assembled on a prototyping circuit board (Radio Shack still sells these). Remember to use rosin-core solder, a very low wattage soldering iron (15 watt or smaller), and make quick solder connections to the ICs and LEDs to prevent heat damage.

Next issue will go into greater detail on how these circuits work and how you connect them to your layout.

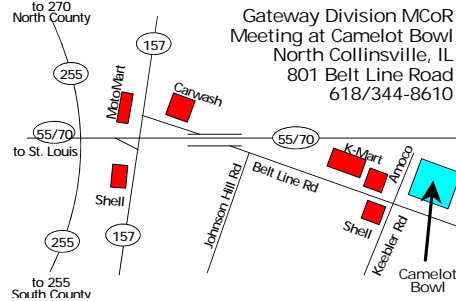
Next Issue

Photos of St. Louis area contest models from the Regional meet. More articles! More fun! More model railroading!

Where's The Meeting?

Meetings in odd numbered months (January, March, May, July, Sept., and November) are held at the National Museum of Transportation on Barrett Station Road in West County.

Meetings in even numbered months (the other ones) are held at Camelot Bowl in North Collinsville (see map).



Meetings are the third Monday of each month with the clinic portion starting at 7:00 pm. The business meeting follows the clinic after a short break.

Calendar of Events

Mon, October 18

Gateway Division Meeting
7:00 pm Camelot Bowl, Collinsville

Fri, November 5

Club Open Houses
7:30 pm - 10:00 pm
(part of Gateway Division Meet)

Sat, November 6

Gateway Division Annual Meet
8:00am - 10:00 pm
Lutheran High School South
9515 Tesson Ferry Road

Mon, November 11

Gateway Division Meeting
7:00 pm Museum of Transport