



# The CRM&HA Newsletter

January/February 2002

Dennis Moriarty/Editor

Volume 11 Number 1

Meetings are held at 7:30 PM on the 1<sup>st</sup> Thursday of the month at the Central SC Library

## Editorial

### By Dennis Moriarty

I was reading some of our old CRM&HA newsletters and came across one of Chuck Laman's last editorials before he passed away. (March/April 1997 issue). For those of you that don't know, Chuck was the newsletter editor for several years. And he put out a very fine newsletter. His editorial can be used again today as **we are having our train show** on February 16<sup>th</sup>. The following is Chuck's editorial and I quote:

### SHOW TIME!

Our advertising campaign will be kicking into high gear over the next two weeks and hopefully all your friends, neighbors, and relatives will become aware of our upcoming show. You can reinforce our ads by calling attention to them and letting everyone know that this will be a good show – **not to be missed!** Aside from attracting many dealers, and having good attendance, how do we make our upcoming train show a success? The degree of success will depend largely on the perception of us that the dealers and our paying guest walk away with. Will they get their moneys worth? That's up to us!

**First we need** to be identifiable—that means wearing our green club T-shirts and/or hats. Second, we must be friendly and make our guests feel at home. Encourage them to ask questions about our hobby and our club. Some will ask for advice or want to tell you about their trains. Be a good listener and be thoughtful in answering questions, even though you may be asked "How fast can that train go?" at least a dozen times! Remember, everyone you talk to may be a potential model railroader and club member. Try to make every effort to turn them onto the hobby and the club. If they didn't have a least a little interest in trains they wouldn't be there, but that little interest can quickly be killed with an inappropriate remark or attitude—don't let that happen regardless of the degree of provocation. If all of us play the part of gracious host, show success, at least in terms of public sentiment will be assured, and we will be able

to look forward to a bigger and even better show next year?

Chuck Laman

Now doesn't that tell it all, then and now.

Please **call Bob Hanson or Bill Hughes** if you can help with the train show on February 16, 2002 at the Seneca N.G. Armory, as all members will be needed to help make it a success.

Please **call Howard Garner** at 878-4705 if there is anyway you can help with the SEC convention.

**If you received** a snail mail issue of the newsletter and have an E-Mail address, please send your E-Mail address to me.

**Please support** the newsletter by submitting articles, news and or information. If you don't wish to write please give me a phone call. E-Mail, copy on disk and written contributions are most appreciated. My address is Dennis Moriarty, 519 Beacon Shores Drive, Seneca, SC 29672. Phone 864-888-2332. E-Mail MQK @ carol.net.

**Thank you,** Curt Ehmann, Rob Seel, Bob Folsom and Mike Moore for your contributions this month.

### Thank you!

We wish to thank Clarence Harold of **Realty Executives** in Seneca for printing our newsletter at **no cost** to the club. 888-8225

### Sad Note

**Wayne Todd** who joined the CRM&HA last year, passed away on November 12<sup>th</sup> 2001. Wayne will be missed. Wayne was a retired minister and lived in Salem.

### Reminder

#### Dues Due

Our Paymaster, Richard Nichols would like very much like to see your dues for 2002. Please attach the membership application on the last page of the newsletter with your dues. The mailing address is on the application, or hand them to Richard in person at a meeting.

**CEO's Corner**  
**By Rob Seel**  
**Rob Goes to Washington**  
**A Travel Journal, September 25 - 28, 2001**  
**PART 2**

Wednesday, September 26th: If I had both a wristwatch and a timetable I might have had some idea of where we were on our trip when I woke up at dawn. I looked out the window at the lush, rolling Virginia hills; some of it even covered with kudzu. They say kudzu can grow up to one foot of length per day if the conditions are favorable. It seems, then, that the devil weed is making its way north, so you folks in Maryland better be alert! I looked over to my left, across the aisle, where I spotted my compu-geek neighbor sound asleep against the other side of the car. I got up to wash my face and to do other necessary things, and then returned to my seat to watch the sun rise. We passed many run-down farms on dirt roads, over-grown pastures, and then an increasing number of nicer, historic-looking houses. Before I knew it we were pulling into another station, but this one had a metal letter sign on a clean brick garden wall welcoming us to Charlottesville, VA.

**Charlottesville!** That was a surprise to me. I had thought, for no real reason, that we would follow the path of I-85 and pass through Petersburg, Richmond, and Fredericksburg. Then, I remembered those cities were along the Seaboard Coast Line and Atlantic Coast Line. But I was pleased to be in Charlottesville, to see a city's name on the station, and to see what a nice little city it is. We left Charlottesville, and I decided this would be a good time to walk up to the dining car to see about breakfast.

**Before getting** to the dining car, I had to walk back through the lounge - café. The snack bar was open for breakfast too, offering vacuum-sealed and cardboard boxed cereals, scrambled eggs, Danish's, bagels, etc., all for slightly higher than reasonable prices. I moved on ahead to the dining car and was seated at a table with an older couple from Toms River, NJ. Space in the dining car is limited, so passengers are seated four to a table. This is a good way to meet other people casually, but apparently not everyone agrees that this is so. Amtrak has a somewhat apologetic "that's the way it is" attitude as you are led to your seat. John and Janet were just returning from visiting their sons, who now live in McDonough, GA. Jack is retired, used to work for the now-defunct Sea-Train container shipping company, but now works at a local Stop & Shop. Janet helps out at home and at church. They were traveling to Trenton.

**If Amtrak feels** a need to be apologetic for its seating policy, Amtrak certainly does not need to apologize for its breakfast — especially the coffee. I

could have ordered a menu breakfast plate of pancakes or omelets, but I went a-la-carte instead. For \$6.75 plus tip I had turkey sausage patties, biscuits, skillet potatoes, and two cups of wonderful coffee with half-and-half and sugar. The coffee itself was served in a little, round, Pyrex carafe, big enough to hold two cups of hot beverage.

**After I enjoyed** a pleasant breakfast I coughed and choked my way through the smoky lounge car and then to my seat. Compu-geek was still sound asleep — wild night in the lounge, I suspect. So I just sat there and looked out the window. Rolling through Manassas, I knew we would be in DC before too long. I remember seeing the railroad yards of Alexandria from I-95, but now I was passing through them. I saw a lot of interesting things, but it was impossible for me to take any photos. But I did see a GP-59 diesel locomotive painted in commemorative Southern Railway green, and a red Norfolk Southern caboose. We eased into Alexandria station about 15 minutes early, and I caught an excellent view of the George Washington Masonic Memorial from the train. The train station is also a Metro stop above King Street, and the Washington Memorial sits on a hill at the end of the street.

**In no time** we were on ex-Pennsylvania Railroad track (as evidenced by the old catenary towers still spanning the tracks but without wires) heading through Arlington, across the Potomac River, past the Jefferson Memorial, and into the heart of DC. The train crew requested silent observation as a respectful gesture as we passed the Pentagon for those who had been killed in the terrorist attacks. The plane crash occurred on the opposite side of the Pentagon, so none of the damage was visible from the train. As soon as we could see the US Capitol dome, though, we plunged into a tunnel to emerge on the other side of Union Station ahead of schedule, about 10:00 AM.

**I stepped out** of my royal blue and stainless steel canister coach into Raiifan Heaven. Union Station is a very busy place served by Amtrak on the right, Virginia Railway Express (VRE) and Maryland Area Rail Commuter (MARC) trains on the left and DC Metro to the far left, downstairs. Even at non-peak hours this place is hopping. First things first, however: I found a pay phone and called Frances to leave a message that I had arrived. Then, with my camera bag on one shoulder, my duffel bag on the other, and my camera around my neck I found a clear platform and started walking. Along the way I spotted a very unusual looking Amtrak car: It was obviously made from a Budd "Am-can" stainless steel car, but with a goofy, open-end platform with sound system, lights, electronics, and a pair of low-tech rear-view mirrors borrowed from some kid's bicycle. I took a couple of photos of this one-of-a-

kind-oddity and then proceeded to walk 500 feet or so to the end of the platform. Standing out there, all by myself except for the occasional railroad worker carting by, I started snapping photos of trains coming and going while trying to look "obvious." With the recent terrorism I did not want to raise anyone's concern, especially walking down a long platform with two bags and pointing a camera at passing trains! I did notice, however, that an Amtrak "Clocker" arriving from New York had stopped in the distance as I was setting up for a picture — and he didn't move. I waited, camera down, for two minutes or so before snapping my photo and returning back to the terminal. Strangely enough, the engineer waited until I was nearly to the opposite end of the platform before he brought the train in. Hmmm.

**It was not** until I had returned to that peculiar Amtrak solo car and began inquiring as to its use that people started asking me questions. "We saw you down there at the end of the platform. Did you have permission to be down there? May I see some ID please?" Not only was there no one to ask if I could, but I was careful not to leave the public platform. "No," I said to the nice Amtrak policeman, "but there was no one to ask and I was trying to be obvious as to my reason for being there." I gladly showed him my South Carolina driver's license, but had to explain laughingly that I had since cut sixteen inches of hair from my mane and that I don't look much like my photo any more. He smiled, and told me that the unusual passenger car we were standing next to was Amtrak President George Warrington's private car. We wished each other a pleasant day, and I headed inside the terminal.

### **Directions to Train Show**

**Take 123/76** to N. Pine St. (This where the overpass is). Turn south to Armory Dr. Turn left.

**From North 1<sup>st</sup> Street**, turn North on N. Pine St. (N. Pine St. is one block west of Oak St. which is Hi-way 59). Go north on N. Pine St. to Armory Dr. Turn Right.

### **HO Report**

#### **By Bob Folsom**

The balmy weather disguises the fact that the Holidays are upon us. A work session on the HO layout is not on the top of everyone's priority list right now, so let's look to the new year. At a minimum, the layout could simply be set up in its present form for our train show. It would be more fun to have a better control system and that is a priority that could be met before the show. If you have any recommendations, please pass them on. Beyond that, if we can do any more with scenic or wiring refinement, that is a plus. I will be poised to attack better wiring, new train control, and connecting track sections that look more realistic in January and February before the show. That may

be a way of solving the "cabin fever" problem that sets in after the Holidays.

**Also, remember** that the club layout is a chance run your HO trains while your own layout plans are developing, or to practice some wiring, track work, scenery, or rolling stock development skills with guidance - so . . . stay tuned!

### **Minutes of Regular Meeting**

#### **November 1, 2001**

The meeting was called to order by Rob Seel at 7:32 PM at the Pickens County Library. The minutes from the October meeting were read and approved. The Treasurer's report was read and approved. We have \$5,386.05 on hand as of October 30. The newsletter deadline is December 10.

#### **Business in Process**

**February Show:** Bob Hanson said we will probably be at the Seneca NGA. We are working on a backup location at Seneca Middle School. There was some confusion regarding the cost of using the school facility. Since we charge admission, our cost would be higher than the previously announced \$25/hr utility fee and could include paying for two maintenance workers while we are there. Bob said he would check into this.

**Christmas party:** December 6. Everyone needs to bring some goodies. Hanson: plates, Zonay: fruit cake, Delorme: Soda, Seel: coffee. Everyone is encouraged to bring something nice for the white elephant gift exchange—no junk!

**TE2002:** Garner and Zonay attended the SER Director's meeting in Nashville. We have 36 dealer tables reserved so far.

#### **New Business**

The floor was opened for nominations for next year's officers.

#### **Railfan Report**

**Richard Nichols** gave a report on his recent trip to France. He said their subway system was efficient, cheap, and clean.

**Howard Garner** told of the Prototype Modeler's Seminar that he attended. This is a great conference on freight car history. He showed a neat complementary kit that he received at the conference. He stopped off at one of THE Railfanning spots in the country, Rochelle, Ill. and saw lots and lots of trains.

**Steve Zonay** reported seeing a GE 70-tonner in a gondola car on a southbound Norfolk Southern freight in Easley recently.

**The meeting** was adjourned at 8:12 PM. Afterwards, Dennis Moriarty showed an interesting video of Henry Ford's "live" museum and another brief video clip of the 1218 and the 611 in action.

Submitted by Stationmaster: Mike Moore

### **Minutes of Regular Meeting**

## December 6, 2001

The meeting was opened by Rob Seel at 7:30 PM at the Pickens County Library. Fourteen members and four guests were present. The minutes from the November meeting were read and approved as was the treasurer's report. As of December 6, we had \$5,386.05 on hand (unchanged from the last report).

**Dennis Moriarty** announced that the December newsletter would be the last time Clarence Harold would be printing it for us since he has sold his business. He has done a great service to our club by printing the newsletter free of charge.

### Business in Process

**TE2002:** Howard Garner says things are "lookin' good" for the upcoming show. Check out the latest updates on the web-page.

**February Show:** Bob Hanson says we're still good for the Seneca National Guard Armory, but we'll keep the middle school as a backup for now. Steve Zonay said we have four more tables rented for the show.

### New Business

**Upcoming meetings:** January: Seel, February: Farrell, March: Delorme, April: Moore

**We need(ed)** someone to pick up the new key for the mailbox. Rob Seel volunteered.

**Reminder:** It's dues time again!

**Officers:** N scale: Bill Hughes, Large Scale: Bob Hanson, HO: Folsom  
CEO: ???

### Railfan Report

Folsom saw a high-railer flat bed truck pulling a gon, a hopper with a crane, and another gon on the NS main. It was the consensus of the group that this was an outside contractor picking up old ties along the right-of-way. Moore mentioned two sightings of foreign power on NS recently: UP and HCLX in the BNSF "pumpkin" scheme. Zonay said he saw some LMX and UP power on CSX in Rocky Mount, NC. McMillin told of a recent North American Rail Car Owners Association (NARCOA) excursion on the old Blue Ridge Line in north Georgia and western NC.

### Hobby News

**Chuck Laffoon announced an open house at Rail and Spike in Easley on December 14 and 15.**

**The meeting** was adjourned at 8:02 PM. Following the meeting we had our annual gift exchange during which everyone shared an interesting little bit of information about themselves that had been previously unknown to the group. Then we enjoyed some goodies. A good time was had by all!

Submitted by Stationmaster: Mike Moore



### Historical Model Railroad Trains In the Clemson Depot By Curt Ehmman

The model train display that Curt Ehmman and Bob Hanson have been working on was finally installed in the Clemson Depot on November 6th. Although the display was finished in September, an occupancy Permit was denied until recently, due to some minor construction glitches, and the County's new requirement of an on-site fire hydrant.

**Once that** was finished Bob and Curt were able to complete the job, ably assisted by Ralph Milz.

Chamber of Commerce members present were President Eddie Nail, Beth Long and Judy Abert. Arlene Young, of the City's Community

Development Dept. has been our contact on the project, and witnessed it's completion. The Grand Opening of the station is expected sometime in November, when the Chamber of Commerce has their new offices ready for business. At that time, you will find the display, high up on the East wall of the new Reception area.

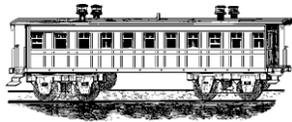
**The following description** of the trains will be posted next to the display case: Both of these model railroad trains were built to a scale of 1/64th of the original equipment. It was called **S Gauge**, by A. C. Gilbert in 1939, when he sold them under the American Flyer name. For the first time, engines were die-cast, and ran on realistic 2-rail track!

**The first** is a freight train, in Southern colors, headed up by a GP-9 Diesel Engine. It was built by Lionel's Fundimensions Division, using original American Flyer "Toy" or "Hi-Rail" S-Gauge dies. The set was placed on the market in 1984, as part of their "**Historic American Railroad**" series, and consists of 9 assorted cars, all bearing Southern road names.

**The second** is the famous **Southern Crescent Limited** passenger train, consisting of 5 types of cars: Railway Post Office, Railway Express Agency, Baggage/Passenger Combo, Passenger, and Observation. These 5 "heavy-weight" cars are

headed up by a Pacific 4-6-2 USRA Steam Engine, built by American Models in 1997 in "Scale" **S Gauge**.

**The City of Clemson** is to be congratulated for restoring, in such detail, the exterior of this historic building, while designing the interior as a convenient public service facility for the people of Clemson.



### **Comment on ½ Wave Supply By Dennis Moriarty**

In the last newsletter it was mentioned that ½ wave power supplies aid the operation of DC motors. I have successfully used this method for years with HO Athern Engine motors and found that they run very smooth. I recently read an article about some other motors that may not like ½ wave impulses. If you decide to use ½ wave power supplies for your DC motor, check the motor for overheating. Do not use ½ wave power supplies on Z-scale or can motors of any scale. Some of these motors like pulses of up to 150 cycles per second instead of 30.

### **Simple Electrical and Electronic Circuits for Model Trains**

#### **Voltage Regulators**

**By Dennis Moriarty**

IC Voltage Regulator Features

- Output Current up to 3 Amps Output Voltages of 5, 6, 8, 9, 10, 12, 15, 18, 24V
- Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe Operating Area Protection

In the last newsletter the first article about simple circuits for model railroaders was about power supplies. In presenting a few examples of **simple** circuits I hope you will become interested in this phase of the hobby and learn the fun of experimenting with electrical circuits. **All** of the required parts are available at Radio Shack or other electronic stores. They also sell manuals about circuits, construction and safety when building circuits.

**This article** will continue with the power supply theme and discuss a way of obtaining more than one voltage from a power supply and regulating the voltage so it stays relatively constant even though we put different power loads on the power supply. This is possible by the use of IC (Integrated Circuit) voltage regulator chips. (**Sorry** this is an "electronic component", but a simple one to use as it only has three leads). An IC is an electronic circuit built into a chip. It may contain several transistors, resistors and other items to serve specific functions. This saves us from having to build complicated circuits by doing the work for us. Also the IC chips are

much smaller than we could make with several parts.

**Some of** these chips come marked with the numbers 78XX. Where XX is a number giving the chips voltage output. A 7805 chip will put out a regulated 5 volts, a 7812 a regulated 12 volts and so on. There are other regulator chips that have different numbers, but they do the same job except they may have a higher maximum current rating before they overheat. See the list that follows. Most of these chips have a built in protection device that protects them from short period overloads such as a short across your track.

**When wiring** a device to a **track** it is recommended that you wire in a circuit breaker between your circuit and the track to further protect your circuits in case of a short on the track. Obtain a circuit breaker with as low a current rating as possible and still allow the trains to run without tripping it.

**Regulated means** that the chip tries to hold the required voltage no matter what the load is (within the chips limits). They will work as long as the input voltage is higher than the output voltage. As an example we could set up our toy controller to 15 volts and could hook up two chips to the output. One would give us 5 volts and the 12 volts, which would let a toy transformer, provide power to two or more different circuits. This works as long as the load is low. If the load is high the input voltage should be about 3 volts higher than the output voltage. A 9-volt battery could be used as a power source to a 7805 regulator chip circuit and have a 5-Volt output. You can also use a chip such as the 7805 in a moving passenger car obtaining power from the wheels and track. As long as the track voltage is above 5 volts the chip will output 5 volts, thus keeping one 5-volt light bulb or two 2 ½ volt bulbs wired in series from burning out.

**A word about construction** for this and most projects. Radio Shack sells perforated insulation board. The holes in the board are the same spacing as the legs on the chips and are large enough to allow the wires on capacitors and resistors to pass through. The method of wiring is called "Ugly Wiring" because it doesn't use manufactured printed circuit board. The leads to the parts are pushed through the holes and jumper wires are soldered from part to part on the backside of the board. This works fine for a single project in the train room. Many projects can be put on the same perfboard if the board is large enough. The 78XX series and several other IC chips generate heat because they are doing work (in this case lowering voltage). The chips will take more load and last longer if you bolt them to a piece of copper or aluminum and mount them vertically on your board so the heat can escape. If required, the heat sink can be held up by bolting to the perfboard. Use

small bolts, you might have to drill a larger hole than the holes predrilled in the board for the bolts. Better yet you can buy what is called a heat sink from Radio Shack which is a chunk of aluminum made with cooling fins for the purpose. Please study the schematic to see how the circuit is wired. The black dots are where you solder the parts together. The length of the wires is unimportant. The round hole in the top of the chip is where you bolt the chip to the heat sink. The back of the chip is metal and is internally connected to the center #2 lead of the chip, so be sure the heat sink is electrically insulated by separation from other parts. When finished the whole board could be mounted (by hot glue or bolting) in a box. Be sure to drill a few holes in the box for ventilation and for the wires to pass in and out.

**An easy way to explain** what the regulator IC chip is and how it works is to **equate the electrical circuit to water**. We can all visualize water as we use it everyday. Voltage is like water pressure. The pressure could be contained in a pipe or could be measured by the height of a waterfall. The higher the fall the more pressure at the bottom. The current is the amount of water passing per a unit of time. Niagara Falls has more current than White Water Falls, but White Water Falls is higher so it has more pressure. The amount of work that the water can do depends on both the pressure and the current. The same is true with electricity. The Voltage Regulators are like water pressure regulators. We all have them at our house. The city water supply varies in pressure depending on how many households are watering their lawns. Also the amount of water needed in the house varies depending how many faucets are open at one time. As long as the city water mains have a higher pressure than the house needs, the regulator can maintain a constant pressure in the house no matter how many faucets are open. Our voltage regulators do the same thing. As we put a load on a circuit, like a train going up hill, our power supply voltage will drop because the wires in the transformers are small. But as long as the input voltage stays higher than the regulator output the regulator will maintain a constant voltage, just like the water pressure regulator. **(Thus our power supply should be at least 3 volts higher than the regulator's output voltage).**

**While we** are on the subject of electrical/water, I am going to add a few more relationships.

**Electrical resistance** is like the size of a water pipe. A small pipe resists the flow of water and more pressure (voltage) is required to push the same amount of water (current) through the small pipe than a larger pipe.

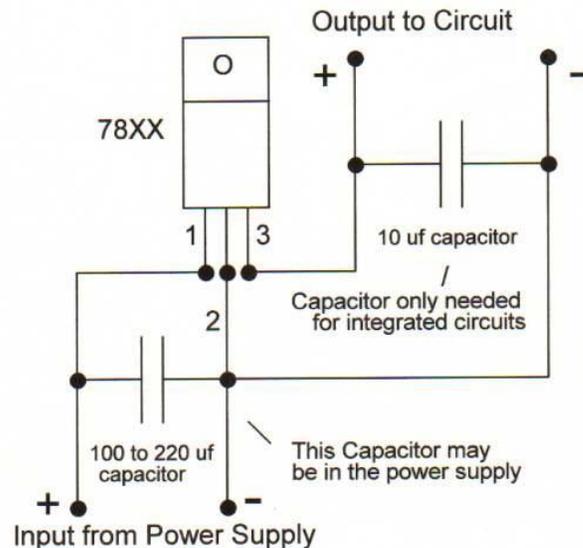
**An electrical switch** is like a water valve.

**A rheostat (variable resistor)** is like a faucet. You can control the amount of water flow depending how far the faucet is open. The rheostat varies the flow of electricity depending where you set it.

**A double pole single throw electrical switch** is like a two way valve that lets you chose one of two hose pipes off your outdoor water faucet.

**An electrical capacitor** is like a water tower. You put the water in and have a reserve of water when you need it. Or you can put the water in slow and later take it out fast as you have built up a supply. Or like the filter capacitor in the power supply you could fill your water tower with a piston pump that surges the water in as the piston goes back and forth, you can at the same time, take the water out in a slow steady stream.

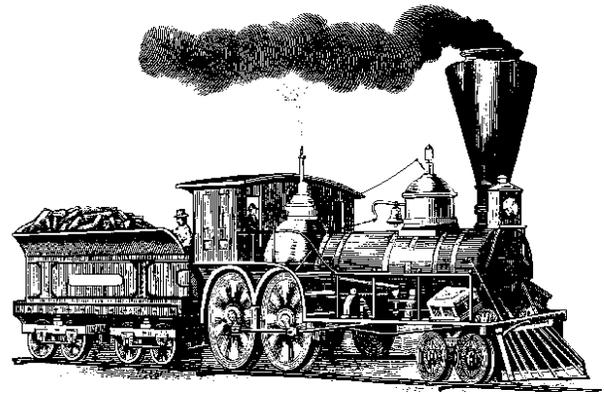
**A diode (rectifier)** is like a check valve. A check valve has a flapper in it that lets the water go one way but closes when the water tries to go the other.



**Below** is a limited list of available voltage regulators and their current limitations.

Regulator Type	Output Voltage	Maximum Output Current
LM78L05	+5V	0.1A or 100mA
LM340LA-5.0	+5V	0.5A or 500mA
LM78L12	+12V	0.1A or 100mA
LM340LA-12	+12V	0.1A or 100mA
LM78L15	+15V	0.1A or 100mA
LM340LA-15	+15V	0.1A or 100mA

LM78M05T  
 +12V  
 0.5A or 500mA  
 LM78M12T  
 +15V  
 0.5A or 500mA  
 LM7815T  
 +5V  
 1A or 1000mA  
 LM7805T  
 +12V  
 1A or 1000mA  
 LM7812T  
 +15V  
 1A or 1000mA  
 LM7815T  
 +5V  
 1.5A or 1500mA  
 LM340T-5.0  
 +12V  
 1.5A or 1500mA  
 LM340T-12  
 +15V  
 1.5A or 1500mA  
 LM340T-15  
 +5V  
 3A or 3000mA  
 LM323K  
 +12V  
 3A or 3000mA  
 +15V  
 3A or 3000mA



### Trivia

Its that time of year again. Remember to save your Crepe Myrtle, Nandena, and Oak Leaf Hydrangea cuttings for making trees on your layout.

### Future Meeting Programs

**January:** Rob Seel  
**February:** Ted Ferrell  
**March:** Delorme  
**April:** Moore

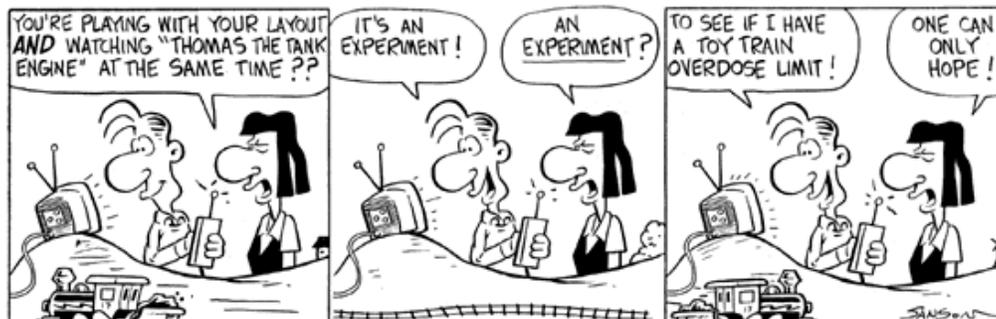
### CMR&HA TRAIN CREW

Engineer and CEO: xxxx  
 General Division Super: Mac McMillin  
 Stationmaster: Mike Moore  
 Paymaster: Richard Nichols  
 HO Division Super: Bob Folsom  
 Large Scale Division Super: Bob Hanson  
 N Scale Division Super: Bill Hughes

**HTTP:\\central-railway.tripod.com is the club website.**

**HTTP:\\WWW.TextilExpress.org is the SER convention website.**

Cartoon from [WWW.toytrunkrailroad.com](http://WWW.toytrunkrailroad.com)



# Central Railway Model & Historical Association Membership Application

Name: \_\_\_\_\_ Member # \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

1. Declared Interest Group: HO N General (Circle one)

2. Other Railroad Interests: Modeling Collecting Railfanning History  
Other? \_\_\_\_\_

3. Modeling Scale: Z N HO S SN3 O G (Circle yours)

4. Railroad Memberships: NMRA NRHS Other? \_\_\_\_\_

5. Do you have a home lay-out? Y N Open to Visitors? Y N

6. I can help the Association by:

- Working on one of the modular projects
- Helping with set-up and operation of lay-outs at shows.
- Organizing an excursion to a show or museum.
- Serving on a committee (i.e. Audit, Publicity, etc.)
- Serving as Officer or Director.
- Preparing a short program for monthly meeting.
- Other: \_\_\_\_\_

7. Please record my membership in the Association for 2000. Enclosed is my (check) or (cash) in the amount of \$20.00, Send to: Treasurer, CRM&HA, P.O. Box 27, Central SC, 29630-0027. Phone (864) 261-3496

Signature \_\_\_\_\_

C.R.M.&H.A.

Dennis Moriarty, Editor

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**FIRST CLASS MAIL**

**ADDRESS CORRECTION REQUESTED**

