



The Kingpin

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Mid Central Region
National Model
Railroad Association

June, 2008

President's Message

Home from another MCR Convention, tired, worn out, but not as tired and worn out as Gary Sole, Chuck, and the rest of the convention crew. Great Convention guys and gals, and we had a great time in Cleveland. My spouse says that I can get lost anywhere and I proved her right again. We toured downtown Cleveland on the way to the convention hotel in Independence, Ohio from Louisville KY Figure that one out.

I received a pleasant surprise at the convention banquet. I knew that I had submitted my paperwork for my seventh AP Award a few days before the convention but knew it would not be completed in time for the convention but thanks to Ivan Baugh, Frank Koch, Mike Brestel, Dick Briggs MMR and Howard Smith MMR along with Paul Richardson MMR. I was presented with the Certificate at the Awards Dinner in Cleveland. I am now Master Model Railroader 411. Thanks again guys, I really appreciate it.

Thanks to the BOD of the MCR we held one of the shortest meetings in recent history. Some of the things we are trying to implement are working and some are not. By highlighting a few items from each division to talk about instead of reading the whole report we cut over an hour from the meeting. We were out of here in one hour and 55 minutes.

Thanks again to Chuck Klein, and the whole division in Cleveland for a great convention....we have to do it again in a few years.

Beth and I got to stop at a couple of layouts on the way home and would have liked to stop at some more, but time constraints sent us on our way. I had to get my suit back to Louisville and to the funeral home where I borrowed it from. I did not see why I should purchase one to wear one time a year. The suit was really nice and easy to put on and adjust with the full length zipper in the back of the coat.

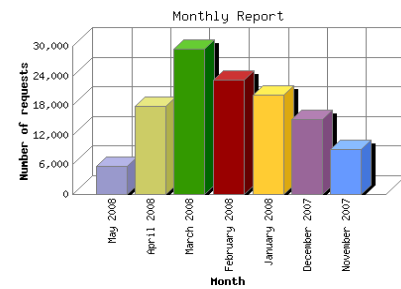
The new building project is out and a few of you picked them up at the convention...two per package and priced right. Grab a few to go on your layout, I have bought two packages to build. Great looking passenger sheds from Mountaineer Precision Products.

See you in October
Jerry Ashley MMR
President MCR, NMRA

Webmaster Report
Mid-Central Region
Ivan W. Baugh, Webmaster
May 11, 2008

I regret I cannot attend this Board of Directors' meeting. It is the first one I have missed since I became webmaster in 2001.

Our web site continues to enjoy good use. This chart shows the monthly distribution of the hits Since November 2007 when I activated the free statistics package. These pages, listed in descending order, received a significant number of hits since our last meeting: projects, layouts, divisions, schedule, conventions, newsletter Board of Directors, how-to and MMR in MCR.



Month	Number of requests	Number of page requests
1. November 2007	9,032	4,243
2. December 2007	15,189	6,411
3. January 2008	20,122	8,452
4. February 2008	23,202	8,173
5. March 2008	29,384	19,436
6. April 2008	17,882	9,364
7. May 2008	5,726	3,038

Howard Smith, MMR and past Mid-Central Region President submitted a layout tour which I have posted on the web site. Divisions 2, 3, 4, 6, 7, 8, 9, and 10 have layout tours posted on our web site. If your division does not have representation on the layout tours, please encourage at least one member from your division to submit a tour. If they need help preparing the material, I will gladly assist them.

Each time I receive a division newsletter, I update the schedule with pertinent items. You can always check there for current information about national, region, and division activities.

This is your web site; I have the privilege of maintaining it. Please continue to submit new materials for the web site from your division.

Robert Ashley, Sr. Division 1; supplied this article for the newsletter that was printed in the Division 2 "Peddler Freight". The articles have been altered slightly to remove some names and to update the fact that his wife is now deceased. Robert says, NO, I'm not related to Jerry, as far as he knows.

COMMON RAILROAD RADIO TERMS

Many of us are attending the operating sessions at various layouts. We use Walkie-Talkies to communicate with the dispatcher or the engineer of a train. On the real railroads, we use Two-way Radios, and hand signals when possible, to communicate with the dispatcher, conductor, engineer, brakeman and trainman.

Because there are many ways to say something, it is helpful if we use the same terms, in order to minimize the chance of a misunderstood order. Here is a list of some of those terms commonly used in prototype railroad communications. Have fun.

GENERAL TERMS FOR GOOD RADIO ETIQUETTE.

ROGER	Reply indication you understand and will comply with the last transmission.
OVER	Said at the end of your transmission and means you expect a response. This is not used during continuous switching movements since it will slow you down.
OUT	Said at the end of your transmission and means you have completed your transmission and do not expect a response. Note: never use OVER and OUT together. OVER means "answer me" and OUT means "don't answer me".
CORRECTION	Said after you make a mistake in a transmission.
REPEAT or SAY AGAIN	Said when you do not understand the transmission.
HIGHBALL	Conductors term to tell the Engineer to proceed to the next destination per the orders.
POINT	The rear of the train. It must be protected by a Conductor or a Brakeman during a backup movement, whether on the train or standing in a safe position on the ground.
CONSIST	The Locomotive(s), Cars and Caboose (when required) that make up a train.
TIE	Coupling cars and locomotives together, i.e., "good tie 3016 (locomotive number)" after stretching the coupler to test the coupling.
CUT	Uncoupling the cars or locomotive, i.e., "good cut 3016 (locomotive number)" after the cars have separated when uncoupling.
SAFETY	Stopping the train short of coupling cars so adjustments can be made to align the couplers and check air hoses. Usually, this distance is a minimum of ten to fifty feet depending on the railroad.
'B' END	The end of the car where the hand brake is located.
'A' END	The end of the car where the hand brake (Ain't) is not.

DIRECTIONAL TERMS.

(Note: Each locomotive has a letter 'F' stenciled on the side of the frame near that end and indicates the normal end in forward movements, i.e., 'short hood' forward or 'long hood' forward during switching movements. This does not apply to a 'consist' when instructing movement.)

AHEAD	Pronounced A-Head, you are instructing the Engineer to move forward.
OK BACK	You are instructing the Engineer to move backwards

STOPPING TERMS.

THAT WILL DO	Often pronounced 'THAT'LL DO', means stop the movement.
THAT'LL DO WHEN YOU GET 'EM STOPPED	Stop the movement at your convenience.
STOP, STOP, STOP	Used in emergency situations, only, means, stop the movement, now, i.e., dump the air.

SLOWING TERMS.

STEADY UP OR PINCH 'EM DOWN	Decrease your speed.
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MOVEMENT TERMS

SLACK	Used with 'SLACK BACK' or 'SLACK AHEAD' to release the tension on the couplers in order to release the knuckle when cutting cars.
HOLD WHAT YOU'VE GOT	Do not move the train until you hear from me and me only.
STRETCH 'EM OUT	Pull on the couplers to test for poor ties. (Test the coupler locking pin engagement)

OTHER TERMS USED IN PROTOTYPE RAILROADING.

LIGHT ENGINE	A locomotive with nothing coupled at either end.
LIGHTS OR LIGHTS AND GATES	Conductor or brakeman notifies the engineer that the crossing lights and gates are working.
REQUEST THREE STEP PROTECTION	Instructs the engineer to place the locomotive in a safe mode to prevent accidental movement when going in between or under cars. The engineer must confirm when safe.
IN BETWEEN OR STEPPING IN	Going in between cars for any reason.
CANCEL THREE STEP PROTECTION	Tells the engineer to return the locomotive to normal mode.
GETTING AIR	Going in between cars to connect hoses and open angle cocks.
IN THE CLEAR	You are on the ground and out of danger from the cars and locomotive.
ON BOARD	You are onboard the train and out of danger from the cars and locomotive.

Bob Ashley, Sr.
CVSR Brakeman
Division 1, MCR, NMRA

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Furnished by Frank Hermanek

RESISTANCE SOLDERING

A couple of months ago when I wrote about welding, brazing and soldering I suggested that you should try resistance soldering as it's a great tool to make joints close to each other without remelting them. Well I took that advice and kitbashed a Bowser/Pennsy H9, a 2-8-0 Consolidation (Connie) and scratchbuilt a 1923 Mack Railtruck.

Going back, years ago the price was right and I purchased the H9 kit. Never built it, as Belpaire fireboxes are not to be found on my HO Gauge *Imperial Valley Railroad*. For years the kit sat on the shelf until along came an MRR'er article on modeling an ALCO N-5a in HO Scale. Simply great, as it gave construction guidelines and a list of commercial parts for converting the engine into a type N-5a. Finally, the H-9 could be transformed into a proper looking Connie; but not until all the cast-on details were removed and a new cab built. Removing the cab left gaping, see-through slots in the Zamak casting. These were filled in with Squadron Green Putty; and, following another MRR'er article, new components for the cab were laid out and cut from 0.010" brass.

Assembling the detail parts into the cab was done using two "new" tools. These included silver-solder, a lead free soldering alloy, in powder and paste form, and a resistance-soldering unit. (The paste is both a vehicle, for easy dispensing of the powdered solder alloy, and a flux, which cleans the surfaces to be joined while preventing oxidation of the joint.) The soldering unit consists of a power supply with rheostat; an on/off footpedal for power input; a tweezer type handpiece; and, two electrodes – a ground (an alligator clamp) and a handpiece probe.

The ground is attached near the area being soldered while the probe is "touched" to the spot being joined. This causes a low voltage, high amperage current to pass through the parts being joined. Resistance at the joint generates heat that melts the solder/paste making a clean, well-bonded joint. Heat is controlled and confined to the area being worked so it does not spread out to loosen neighboring details previously joined. Operation is simple: attach the clamp, touch the probe to, or near, the mate faces, and depress the foot switch allowing current to flow causing the solder to melt. When the solder flows the foot pedal is released **BUT** – *the probe is held firmly in place* until the joint has cooled and the solder has hardened. This takes only a few seconds and assures a tight joint.

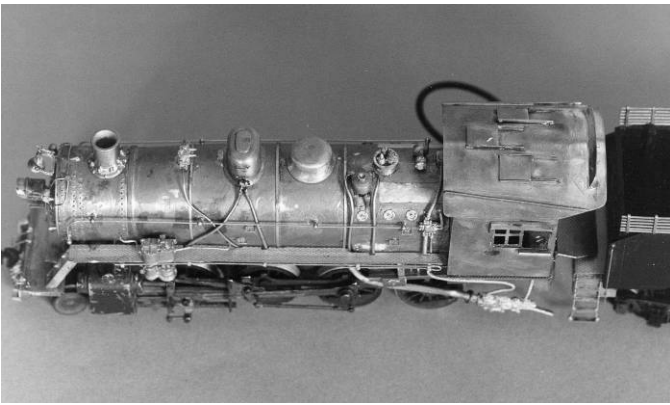
A rheostat on the power supply controls the amount of current delivered, so an assortment of parts and sizes, big or small, can be soldered. However, part size will dictate the amount of energy needed for joining. Therefore, it is best to experiment and determine what power level is right for the parts you're working with. And, **ALWAYS REMEMBER:** *touch, press and hold the probe in place until the joint has cooled.*

As noted earlier, the resistant soldering unit was used in joining the 2-8-0's cab walls. To keep the cab's corners tight and square components were fixtured using one-inch hardwood blocks purchased in Hobby Lobby. A thin bead of paste is spread along the inside of the joint to-be and the probe is then drawn along it causing it to melt and form a continuous, bright metallic fillet. This is repeated for the four walls and roof. The finished cab is shown in Photo 1.

In assembling the 2-8-0's cab I used the probe; whereas, the tweezer handpiece was mostly used to construct the 1923 Mack Railtruck shown in Photo 2. While the Railtruck's cab was assembled using the probe, all the small flat details, as the sideboards and trucks were joined using the tweezers. As with the probe - release the foot pedal to stop current flow and maintain pressure, holding the tweezers shut, until the solder has solidified.

Honestly, I could not have kitbashed the 2-8-0 or built the railtruck without the resistance-soldering unit. It enabled me to make joints, neighboring each other, that would have been impossible with a heated soldering pen or gun. Without the resistance-soldering unit neither the Mack Railtruck nor the 2-8-0 Connie would ever have been built.

FRANK



Furnished by Frank Hermanek

Tips from a Master Modeler

Welding, Brazing, Soldering.....What's the Difference?

By Frank Hermanek MMR #360

I guess that every one of you recognize that each of the above terms - welding, brazing and soldering relate to some form of joining metals. That's great, but how are they similar to each other and yet different?

Let's start with "welding". Many of us have seen some form of welding being performed whether it be by stick, torch or arc. Car manufacturers' ads show automated lines filled with robots spot (resistance) welding car bodies together. Regardless of which welding process is used it will share one common trait with the others - each uses heat to locally *Melt* and join two pieces of metal together. Sometimes a filler metal is added to give the joint strength.

Prototype railroads use all of the welding processes noted plus one that is referred to as *Thermit Welding*™. Thermit Welding is used to join rails; here's how it works. Two rail ends are butted together and encased in a ceramic mold. The mold is filled with iron oxide and aluminum powders. Highly flammable magnesium powder, contained within a sleeve, is wrapped around the mold. A flare is lit and plunged into the magnesium powder that immediately begins to burn. The heat causes a chemical reaction between the iron oxide and aluminum powder. This reaction is *exothermic*, that is it gives off heat, heat hotter than the melting temperature of either the aluminum or iron oxide powders. The iron oxide-aluminum liquid produced is superheated, reaching temperatures of about 5,600 degrees F - way in excess of the melting temperature of the iron track. The butted rail ends melt and fuse to form a strong, tight welded joint.

Soldering and brazing, unlike welding, do not melt the metals being joined. Both processes are more like "hot gluing". They use non-ferrous *filler metals* that melt at temperatures substantially below that of the metals being joined. Typical braze filler metal alloys are aluminum, silver, copper, nickel and gold. Yes, gold! Gold alloys are used by jet engine manufacturers in joining components for operation in the hot sections of the engine. Expensive, but required.

Filler metals for soldering are generally alloys of tin that contain temperature suppressants such as lead, antimony, cadmium and zinc. Suppressants, based on their individual melting temperature, can depress the melting temperature of an alloy several hundred degrees. Each of these suppressants, when the alloy is melted, vaporizes and produces fumes harmful to your health. **STAY AWAY FROM THEM.** Find alternative lead, zinc, etc. free substitutes. I've been working with one that's sold as "silver solder"; it's not silver solder because "silver solder" is a silver/copper alloy used in brazing. What it is, is a tin alloy containing 5% silver. It melts at 483 degrees F and produces joints harder and much stronger than those obtained from a tin/lead or tin/zinc alloy. It's also available as either wire or in paste form. The paste or binder also performs the function of flux. Paste enables the alloy to be dispensed in a syringe type cartridge through hypodermic needles. The needles come in various sizes so the amount being dispensed can be controlled in both quantity and location. As an aside, I often apply some of the alloy to a joint, clamp the assembly, and pop it into the kitchen oven for ten to fifteen minutes at 500 degrees F. Produces good fit-up with no messy after clean up.

Getting back to the subject. Brazing is performed at temperatures above 842 degrees F; suffice to say, soldering is performed below 842 degrees F. All three joining processes require the use of considerable heat to complete a joint. Welding requires the most heat, sometimes hotter than 3,000 degrees F, as it melts the pieces being joined. These temperatures will affect the properties of the parts being welded - they'll be less strong and softer than they were before being welded. Properties can only be recouped by a follow-up thermal treatment.

Brazing also requires considerable heat and in some cases the use of complex, highly sophisticated and expensive, furnaces. Soldering on the other hand, can be performed at your workbench, with a torch or an iron. Even, as noted, in the kitchen oven. Think of soldering as hot gluing but using cold glue and applying the heat afterwards.

When soldering metals don't limit yourself to the standby iron. Explore, investigate. Try joining brass and copper parts with both the newer (lead free) and older alloys. Try a mini-butane torch and, above all, the "resistance" soldering tool.

Frank

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A Lifetime of Model Railroading

Did you ever look back to the first time you remember trains? I was born in Bellevue, Ohio in 1938 and trains were all around us. When I was four or five, my dad took me to see a train wreck in the middle of town. The locomotive was lying on her left side and was breathing smoke and steam and it sticks in my mind as if it was today. It could have been the collision between the W & LE and the NKP in 1943.

By then I had my first Lionel train set, a 1688 Torpedo engine and cars. We moved to Akron before the end of WW II. Dad went to Riedel's train store in Cleveland and bought a Lionel O-72 M-10000, City of Portland train set. We didn't have any track since the war had shut down production. So, my dad made the track using aluminum strips and wood ties. It filled our 11' x 23' recreation room. Mom decided for us that either she or the O-72 had to go. She won.

I bought a Lionel 0-4-0 switcher and a 6-8-6 steam turbine in 1949. After building and adding scenery to two O-27 layouts my buddy sold me his collection of Varney HO trains in 1954. It was time to tear down the old layout. I sold my 0-4-0 switcher so I could buy a boat and motor. That launched a series of boats. I sold my sixth boat, on Lake Erie, and have retired from boating.

In the meantime, my son, Bob, Jr., was helping me to build our present HO layout. It is unfinished, has brass track and hand built turnouts. We never got past just running trains on three continuous main lines. The yard is full of cars and engines, but, I never got around to making it operational. He learned a lot about AC and DC electricity and went on to use that knowledge in his career. I have added Digitrax DCC to the control panel so I have the best of both worlds.

Bob's son, Robby, is following in his footsteps as well. My youngest grandson, Patrick, was introduced to trains when he was eighteen months old at the Voris street grade crossing, in Akron, in 2002. He is up to his eyeballs with Thomas the Tank Engine wooden trains. His O gauge Thomas is put away for a surprise birthday.

I was volunteered for the Cuyahoga Valley Scenic Railroad by my wife who said 24/7 was driving her crazy, after I retired in May 2002. Working with the CVSR as a Trainman and a Brakeman has helped to round out my hobby. I now know all about the hard work that Railroaders must endure. Maybe I will make Conductor, someday. I lost my wife in 2007.

My wife modeled in Z and N gauges and I am keeping her layouts active. I model in HO & O and also like to say "full size" just for the fun of it. We have enough trains, still in the boxes, to supply a hobby shop. We joined the NMRA at the Philadelphia show last July. We have met many new friends and enjoyed the visits to Coshocton and Ashland, meeting Dean Freytag. Attending his seminar at Nick's Train Supply was very good. He is a true Icon.

My son and Robby have joined me in attending the operating sessions at member's homes. They have since joined the NMRA. We are a railroad family. It is time to stop buying trains and let's finish the layout and maybe use more of the basement. **Time is running out!**

Bob Ashley, Sr., Division 1, MCR, NMRA



Furnished by Bob Fink, MMR, Division 3

Model Railroad Construction Methods

Another reason I like Open Spline and FOAMBOARD Roadbed ...

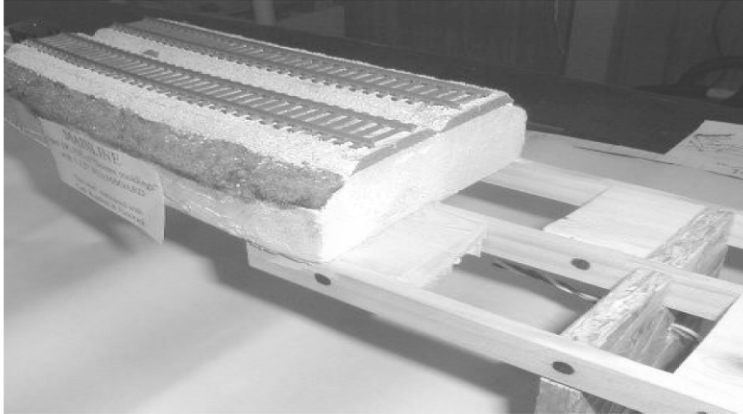


Photo 1 Basic FOAMBOARD & Spline Roadbed

At the January meeting we showed a number of ways to build roadbed. My favorite has become Foamboard and I just found another reason I like it. I decided to add a crossover between the double mainlines. It was so easy to cut in the new track that I thought I'd show you in a few pictures. Photo 1 is a mockup of how my spline and Foamboard works. The 1 1/2" foamboard was contoured with a "hotwire" rig. Then 1/4" cork roadbed is added and flextrack with homemade turnouts on wood turnout plates. It's easy to remove the cork and old track if you use latex "Liquid Nails" glue to hold it down.

AS soon as the old track was out I glued down some 1/4" thick wood plates cut to fit the switches and the tie outline. Edges were beveled for ballasting.



Photo 2 Adding wood turnout plates

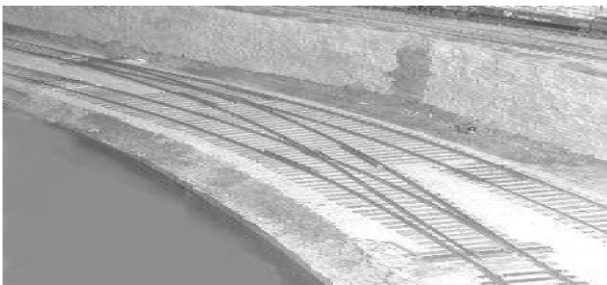


Photo 4 The final arrangement



Photo 3 Wood ties & Ballast added

Ties were then laid out on white glue and ballast added while the glue is "wet".

Homemade turnouts went in next. Add switch machines, some debugging and it's done. Did I also say this roadbed method is FAST, CHEAP and STABLE? It sure is and it works. Glad I tried it.

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POPULAR MODEL RAILROAD SCALES

We have all heard people discuss their model railroad. Often times that conversation was about a scale that was different than the scale you model. If it isn't the same scale as yours, there can be many items of discussion that have no scale, i.e., DC vs. DCC, how KD type couplers function, scenery, laying track and others. However, when you are discussing the scale itself, it helps to understand why people chose that scale. The following chart may shed some light about each scale and give you a little understanding about the space required for each. Please consider copying this chart and carry it with you if it helps.

Name	Proportion	Scale to Foot	Track Gauge	Minimum Radius*	Length of Scale Mile
Z	1:220	.4 mm	6.5 mm	5 3/4"	24'-0"
N	1:160	1.9 mm	9.0 mm	7 1/2"	33'-0"
HO	1:87	3.5 mm	16.5 mm	15"	60'-7 1/2"
S	1:64	3/16"	7/8"	22 1/2"	82'-6"
O	1:48	1/4"	1 1/4"	23"	110'-0"
Gn3	1:22.5	12.5 mm	1 3/4"(N ^o .1)	23 5/8"	234'-8"



Some narrow gauges use the next track gauge smaller, i.e., On30 uses HO track gauge and Nn3 uses Z track gauge. G gauge has several proportions depending on manufacturer, but, all use the same track gauge. Also see NMRA "General Standard Scales, S-1.2".

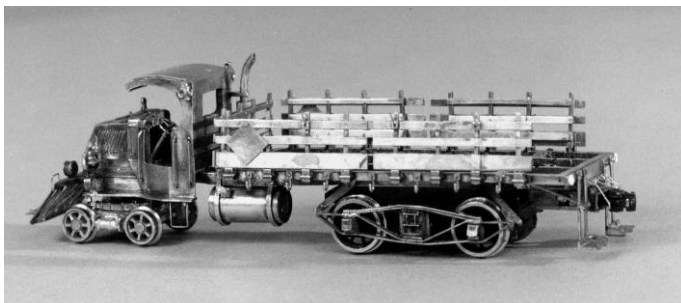
Bob Ashley, Sr., Division 1, MCR, NMRA



Furnished by Don Phillips

Connie and Mack

Frank Hermanek's article on soldering in the October Oil Can was accompanied with pictures of a 2-8-0 and a Mack Truck showing the soldered models before being finished. That was the before, here's the after. Connie, the 2-8-0, not only took **2nd Place** at **Gateway 2001**, the NMRA National Convention in St. Louis but also won the "Testors/Floquil Best Locomotive Finish" award. Mack the Truck won **1st Place** with 117 points at NMRA's **Maple Leaf 2003** Convention in Toronto.





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2009 SPRING CONVENTION

A presentation was given at the recent MCR convention banquet in Independence, OH, highlighting the 21st Century Limited to be hosted by Division 6 in Columbus OH. The convention will be held April 30th thru May 3 2009. The registration form is available on the Division 6 web page as well as the preliminary information about the convention. The web site will be updated as details are finalized and a link will be posted on the Regional web site in the near future. The presentation at the banquet promises another great Regional Convention. The Convention fee will be \$70 after August 1, 2008. The early bird registration is \$55, which is a bargain, worth sending in your registration early.

BOARD MEETING NOTES

The Regional Board meeting was held at the MCR Convention in Independence, Oh and set a new record for elapsed time. One hour and fifty-five minutes. The minutes will be available on the Region web site very soon. Be sure to check the site and review the changes to the MCR Regulations approved by the BOD. Most of the changes were editorial in nature. New sections were added which will clarify job responsibilities.

BUILDING PROJECT REPORT

The building sales for the freight house were somewhat a surprise in that the kits are virtually gone. Thanks to the Divisions who supported this Regional fund raising effort. The project has netted approximately \$2300.00 so far. The new building kits are available now and pictures and order form will appear on the Regional web site in the near future. The kits are available in four scales and are a PRR passenger shelter. They are packaged with two structures to a pack.

FUTURE CONVENTION SITES

The MCR BOD received proposals for the 2010 and 2011 MCR regional Conventions and awarded bids as follows: Division 9 will host the 2010 MCR Convention in Charleston, WVA. The 2011 MCR Convention will be held at the Geneva Lodge, near Ashtabula, OH. This Convention will be hosted by Division 5.

From the Editor's

Modelers Keep sending these wonderful articles to share, we need more articles for the next issues. Please remember the deadline dates, they are posted on our MCR webpage. The last BOD meeting minutes and Treasurers Report failed to meet the deadline for acceptance in this issue.

Nat & Carolyn King
MCR Newsletter Editors
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