



April Meeting Found Us Operating

By Gary Myers

We met at Don Meeker's spectacular Rocky Mountain Lines HO-scale model railroad for an exciting evening of hands-on operating.

Don graciously and patiently stepped us through the basic operations on his railroad and gave brief tutorials on his computerized CTC system, which is available as free software.

Don likened operating with an interesting analogy, saying, "Operating on a model railroad can be compared with studying the cheetah." Let's say you want to learn about a cheetah. You would probably start with a book or go online and read something about those cats. If you wanted to learn more, you might go see a cheetah in a natural history museum. At the museum you would probably see a stuffed cheetah in a diorama, unmoving, frozen in its surroundings. This is analogous to a model diorama scene, where nothing is moving.

As your desire to learn and see more grew, you might go to see a cheetah in a zoo. There you would see a live animal in a fenced area pacing or lying about, with a small space for him to run around. This

Continued April Meeting – page 1



Don Meeker opened his home for a layout tour and operating session for the members of Sunrise Division.

Sunrise Gypsy Division On The Move Again

Yes, it is true. Once again our meeting place needs to be changed, but this time it is for the best of reasons. We have outgrown our quarters.

Starting with our May 6 meeting we will be at Holy Love Lutheran Church, 4210 South Chambers Road in Aurora. The church is one block north of Quincy Avenue on Chambers Road, and is on the east side of the street. The cross street is Chambers Way. There is a map on the next page.

You may be wondering why the Division is moving. The history is simple to relate. For several years we met at the Aurora Municipal Building, but our meeting night was taken over by a City organization who, of course, had priority over non-City groups. We then moved to Firestation #2 in Aurora.

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May Meeting Will Bridge the Gaps

By Gary Myers

Don Francis will dazzle us with bridge building and instruct us in the ways of not ending up with a crummy looking bridge, or something like that. I think he must have seen some of my trestles.

For June, we will not have a regular meeting, as it is during the Region's convention week, and we are actually co-hosting it with the South Suburban Division, so go to the convention. If you can volunteer to help out, let Nate Bryant know.



Remember to renew
your membership in
the NMRA when it
comes due.

Show & Tell Themes

May 6 "Tanks" for the Memories
July 1... Independence Day Special: Depots
August 5..... Favorite Train
September 2..... Labor Day Special: Shop
Buildings
October 7..... Oktoberfest: Beer Cars
November 4..... A Piece of Railroadiana
December 2..... Christmas Past: Your oldest
locomotive or rolling stock or the one
you've owned longest

Officers

Division Superintendent
Gary Myers
Assistant Superintendent
Don Francis
Treasurer
William Johnson
Secretary
Tom Frerichs

May Show & Tell Is "Tanks For the Memories"

If you wondered where Show & Tell themes originate, worry no more. Our Superintendent, Gary Myers, is responsible. In his own words:

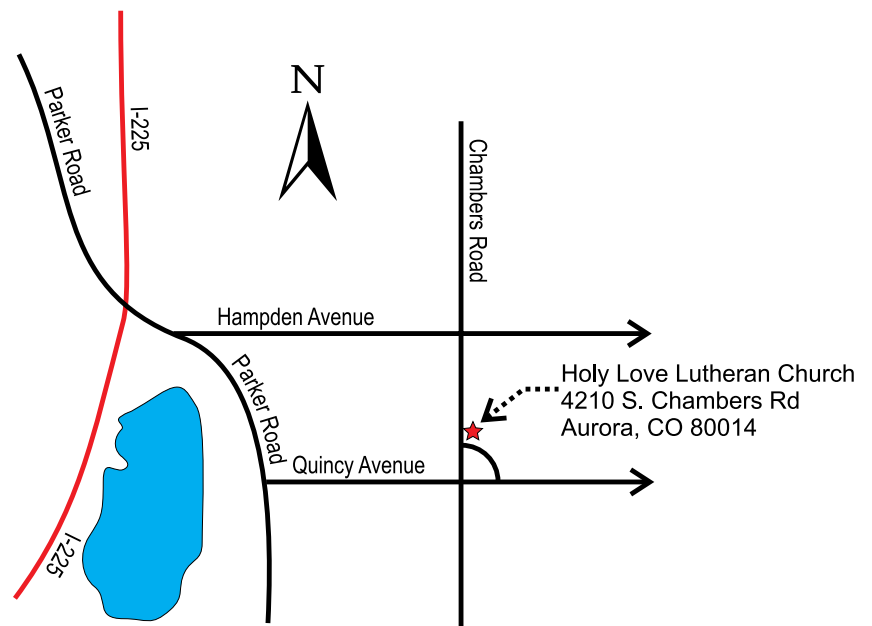
Tank Cars. I thought Memorial Day in May, so "Tanks for the Memories" came from that, and I always liked Bob Hope. Probably too much information. Sometimes it is just hard to think of a Show and Tell item of the month.....

Now you know. If you have any ideas for other themes, I'm sure Gary will appreciate your input.

New Location – continued from page 1

Our membership turnout has been so good that we ran out of space at the firestation. With the number chairs we needed to set up, there was no room to easily view the Show & Tell exhibits. We were also concerned that putting on clinics was difficult because of the lack of space.

Moving to the new location will allow us to have some room to move around, and a vote of thanks is due to those that worked on getting us these new quarters.



This map to our new meeting place at Holy Love Lutheran Church is not to scale, but will help you find the spot to be on May 6. The unlabeled curved street is Chambers Way.

April Meeting - continued from page 1



Dick Hunter, Bill Johnson, and Al Johnson were some of the operators on Don Meeker's layout. (Photo by Gary Myers)

Editor's Note: Although I wasn't there, I can imagine the conversation. Looking at how they are standing, I think it went something like this. Dick: "That boxcar is moving. Are you going to stop it?" Bill: "I'm not going to touch it." Al: "I'm not touching anything."



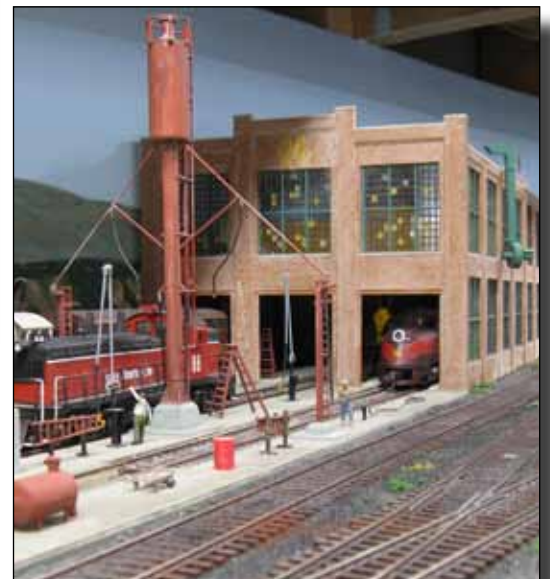
Above: Dave Spritke running his RML coal train up the grade, with power in his favorite Utah Railway colors. Meanwhile, the Salad Bowl Express snakes its way through the canyon behind Dave. **Right:** The engine shed at Rocky Mountain Line's South Yard facility. (Photos by Gary Myers)

would be like watching your model train running in a loop on a 4x8 sheet of plywood. If you want to see how the cheetah really lives, you would go to Africa to see him in the wild, chasing down prey, running across the savannah, living, and breeding. This is the cheetah truly alive.

Operating trains on a layout designed for operating, brings the layout "alive." Having the interaction with train crews, switching freights, the dispatcher, moving passengers, hostling engines and shuttling cabooses and their crews activates the railroad, bringing life to the scenes of otherwise static displays and models, and although in scale, act like what's going on in the real world, sort of like the cheetah in its natural habitat.

Well, after all that complicated technical jargon with the cheetah, Don gave us a couple minutes of rules and instructions, we were off and running. Some of the guys were very new to operating, so the learning for some was enormous, but everybody including the most experienced modelers present, learned some things and all greatly enjoyed the fun.

Although it was Holy Week and many could not attend, we did manage to get eighteen attendees for the evening, so a good turnout by the Division and a nice break from the regular meeting format.



NMRA News

Compiled by Gary Myers

- About a month ago, the NMRA sent out a press release outlining an exciting photo contest the NMRA and Union Pacific were cosponsoring for our 75th Anniversary. The Grand Prize is a railfan's dream...a day-long ride in the cab of a UP steam engine! The flyer is attached as the last page.
- The deadline has been extended to August 15. See the attached contest rules and have some fun shooting some entries!
- NMRA Vice President Allen Pollock announced that he will resign effective with the conclusion of the Board meeting at the Milwaukee convention. According to NMRA regulations, the Board will select a replacement at that meeting. Any member interested in being considered for the VP office for the remaining two-year portion of Allen's term should immediately send his/her qualifications statement to NMRA Secretary Bob Gangwish at secy@hq.nmra.org
- Donations to the Diamond Club are already arriving at Headquarters. The Diamond Club's goal is to fund added content to the web site, beginning with the digitization of the Kalmbach Memorial Library's 100,000 photos. If funds allow, additional content, such as virtual layout tours, streaming video, loco sound files and more may be added.
- Host groups from three cities in the U.S. and Canada have indicated that they plan to present bids for the 2014 National Convention at the annual Board meeting at the Milwaukee Convention. The Board continues to discuss ways to cut costs at the convention.
- Standards and Conformance Department Head Didrik Voss reported that he has been working with the major manufacturers of Large Scale model railroad equipment on Recommended Practices for Large Scale couplers, as well as Standards for track and wheel.
- A new three-year contract was signed with White River Productions, the company who currently produces and designs Scale Rails.
- According to a continuing survey being conducted by Gerry Leone of NMRA members who have chosen not to renew their membership, one of the most frequently cited reasons has been, "No one from my local Division or Region ever contacted me." If there are other reasons you wish to relate or if you feel the Division could improve in any way, shape or form, please feel free to contact Gary Myers at garymyerso6@comcast.net
- A group of volunteers from all across the NMRA is currently putting together a "Regions and Divisions Handbook," which is slated to be completed by the July convention. If you would like to have a hand in this book's creation, please visit <http://groups.yahoo.com/group/regionsanddivisions/> and join the group.

Upcoming Events

June 3-6, 2010 Tracks To Alamosa - Rocky Mountain Region Convention, Alamosa, CO
June 12-13, 2010 Limon Railroad Days, Limon Depot, CO
July 11-17, 2010 NMRA Convention, 75th Anniversary - NMRA National Convention

Next Meeting for Sunrise Division, RMR, NMRA
Clinic on Bridge Building by Don Francis
May 6, 2010 – 7:15 PM
Holy Love Lutheran Church
4210 South Chambers Road, Aurora, Colorado 80014

Lions and Tigers and Programming CVs...Oh, My!

By Tom Frerichs

You might be thinking of making the leap into Digital Command Control (DCC) for your layout, but then you hear all the talk about “programming CVs.” You start wondering if your brain is up to the task.

Take heart, friends. It is simpler than the gurus make it sound.

Let us start with that scary word *programming*. Have you ever, in the middle of the winter, turned your home’s thermostat up to 72 degrees when you were cold? Congratulations. You successfully programmed your furnace to turn on if the temperature drops below 72 degrees at your thermostat. If you are a father, you have had to turn the temperature down to 72 degrees. That is because programming your children to save money is a lot harder than programming a thermostat.

Programming a DCC decoder is the same concept as setting a thermostat with this difference: a simple thermostat has only a single setting while a DCC decoder can have many different settings to program. When you program a DCC decoder you can set many things, such as the top speed of your locomotive or which direction it will run when you press FWD on your DCC throttle.

What Are CVs?

Half of that frightening phrase, programming CVs, should be less scary now, but what about the other half: the CV part?

CV stands for *configuration variable* or *configuration value*, and deciphering the meaning of those words is not difficult. Think of programming your furnace: you are configuring it to turn on when the temperature drops below a set value. That value can be changed, so it’s a variable.

Let me give you an analogy that might make it easier to understand what a CV happens to be. Think of an old-fashioned hotel. Behind the main desk is a rack

with pigeonholes, one pigeonhole for each room. When the guest staying in Room 17 comes in from a night of frivolity, possibly watching trains at the depot, and requests his key, the desk clerk turns around and gets the key out of the pigeonhole marked 17.

CVs are the computer version of that rack of pigeonholes. CV₁ is the first pigeonhole; CV₂ is the second, and so on. When a decoder needs to know a particular setting, for example its address, it turns around and gets that setting from the particular pigeonhole or CV specified in the standard.

All decoders support a specific set of CVs to be NMRA compliant. For example, CV₁ will always be the *short locomotive address*, but different manufacturers may use other CV numbers for different purposes. These are

Fortunately, for most of us, the only thing we will need to change on a decoder is its address.

for advanced functions, such as prime mover sound volume or back EMF repetition rate, and there is nothing standard about these. This is the reason you need to keep that manu-

facturer’s decoder manual handy if you want to try to adjust these other, advanced features.

Fortunately, for most of us, the only thing we will need to change on a decoder is its address. In addition, most DCC systems have nice English prompts so you will not have to remember those esoteric numbers when you are setting values.

Getting a Little Technical

Although you will not have to know any of the following to use DCC, a little knowledge of what is going on under the hood may help you to understand why things work the way they do.

DCC decoders are tiny digital computers. They receive digital information from the DCC controller through the track, and they control the locomotive motor and other functions. In some ways, they really are miraculous.

A little mind stretching is now in order. Suppose you had a simple desk calculator, and it could only display one digit. You could display ten different values: zero through nine. Let’s upgrade and make that a two-place calculator. That calculator could display 100 different values: zero through ninety-nine. Let’s add one more place on that calculator so it could display three places. We would have the ability to show 1,000 different values ranging from zero to 999. You might see a pattern emerging here. Each time we add a place we multiply the number of possible values by ten.

DCC decoders, like all modern computers, do not use decimal numbers internally; they use something called *binary* numbers. Instead of zero through nine, they only use zero and one.

In place of our decimal calculator above, let us use a binary calculator. If it could only display one place, then we would have two choices: zero and one. If we had two places on that calculator, we could display four different values: 00, 01, 10, and 11. These cor-

respond to zero through three in decimal. With three places, we'd have eight possible values for a range of zero to seven in decimal; with four digits, we'd have sixteen values with a range of zero to fifteen. For each additional place on our binary calculator, we double the number of possible values.

Our DCC decoders use eight places internally for a range in decimal of zero to 255. By the way, a single *Binary digIT* is a *bit*. Eight binary digits make up a *byte*. This is considered an example of humor by geeks. Now you know why they do not get dates.

The biggest number that a CV can store is one byte. That means that the range for a CV is zero to 255. If you will look at decoder manuals, you will see that many values are limited to this range.

However, not all CVs use values from zero to 255. For various reasons, some CVs do not use the full eight bits that we could store. We might only be able to use seven bits. For example, the short address of a locomotive can only be from zero to 127.

In other cases, you'll see that even fewer places are used. On an MRC sound decoder that I own, one volume setting is limited to a range of zero to thirty-one, but notice this: that top number, thirty-one, is one less than a power of two, namely thirty-two.

That's enough technical stuff for right now, but it will come in handy to remember that a CV can only store a range of zero to 255. It will also be useful to remember that many values, if they can't use the full CV range, will end up being limited to some power of two.

Programming a Decoder Address

Before we get to the ugly details, let me say that every reasonable DCC system lets you program the decoder address without any fuss. You press a key and enter the value as a decimal number. The DCC system does all the hard work for you.

What is meant by the phrase decoder address? Watch out. Here comes another analogy.

Have you ever been on a party line? Way back in the olden days, several different homes could share the same telephone connection. This was done because of the cost of running telephone wires; it was cheaper to share the same line.

It was simple enough to make a call. You would gently pick up the receiver and listen to see if anyone else was using the line. If they were not, then you would tap the hook to get the operator's attention and ask her to connect you to whomever you were calling. Of course, if someone else were using the line, you would be polite, carefully replace the receiver, and try to make your call later. On the other hand, you could be a gossip and, without breathing hard, listen to what was being said. There really was no privacy on a party line.

How about those times when you got a call? Everyone's telephone on the party line would ring, so how could you know for whom the call was intended? The secret was the pattern of rings. It might be that if you heard two long rings followed by a short ring, then the call was meant for you. On the other hand, if you heard a short ring, a long ring, and then a short ring you would know that it was for your neighbor. You soon learned to listen for a particular pattern of rings and ignored all the others. Unless, of course, you were a gossip.

DCC decoders do something very similar. The "address" that you use when programming a decoder—the number you enter into the decoder—tells the decoder to pay attention only to those commands from your controller that have that number attached, and you select which number to send with commands by a setting on your throttle. In effect, your layout track is a party line with every decoder listening for its particular "ring" or address.

What would happen if you programmed more than one decoder with the same address? When you send a command with your throttle, such as increasing the speed, every decoder with that address would be listening for commands with that address and would react. Every one of those locomotives would speed up. Therefore, it is a very good idea to make your addresses unique.

DCC has been around for a few years, and there have been a few additions made to the standard to accommodate changing circumstances. One of these changes was the addition of long addresses.

Remember that a CV can only store a range of zero to 255.

Every reasonable DCC system lets you program the decoder address without any fuss.

Originally, only short addresses were available. The short address is stored in CV1 and is limited to values from 0 to 127, with some command stations limiting the range even more.

There are two things wrong with this scheme. First, with large club layouts there was always a chance of address conflicts if members brought their locomotives from home. Joe's F3 worked fine on his layout with address 115, and Sam's 2-8-0 ran great with the same address on his home layout. However, when Joe and Sam brought their locomotives to the club and tried to run them at the same time, it was a little frustrating.

Second, it was hard to remember the addresses. That 2-6-6-2 Mallet over there...is it address 93 or 94? The number on the side of the tender is 3840, but that isn't much help in remembering the address.

Recognizing this as a major problem, the DCC folks added a *long address*. Instead of being limited to a range of zero to 127, a long address can range from one to 9999. The range can actually be bigger, but most throttles and command stations limit it to that range. Now the address programmed into the decoder can match the locomotive number. That Mallet can have address 3840 instead of some arbitrary value such as 93.

If you were paying attention before, you will remember that a single CV can have a value ranging from 0 to 255. How can you cram 3480 into a CV? You cannot. Instead, two CVs, CV17 and CV18, are used. Fortunately, our controllers and throttles make it simple to enter the correct values into these CVs because the way the long address is split up between the two CVs is complex. To actually enter a long address into the CV17 and CV18 requires converting the decimal number to binary and then selecting certain bits for each CV.

The final issue with addressing is this: how does a decoder determine whether to listen for the short address or the long address? The answer is in the most confusing CV of all: CV29. I'll talk about CV29 later, but for right now you should know that a single bit of the byte stored in CV29 tells the decoder which address to pay attention to. Again, our throttles and controllers make it simple to set this value.

One last tip: almost every decoder, when it is reset to factory values, is set up to listen for short address three. For that brand new locomotive that you just brought home or for a brand new decoder that you just installed, short address three will usually work to run that engine.

Consisting, or Running More Than One Engine in a Train

You're running the Super Chief on your layout. Twelve passenger cars following three EMD FP7s featuring beautiful War Bonnet livery are running on your plywood empire. So, how do you control your A-B-A lash up with DCC? You do it by consisting them, and there are three ways to do this.

The first way, and the least desirable, is to set the decoder addresses in each locomotive to the same value. There are a lot of problems with this technique, not the least of which is that you cannot split off that last A unit and run it separately without reprogramming its address.

The second way is to use your throttle. Most DCC systems allow you to treat a list of separate de-

coder addresses as one unit. In other words, it will send the same command to each address in the list.

The third, and best way, is to use the consisting CV, CV19. Doing this is called setting up an *advanced consist*. A value, called the *consist address* is entered into CV19 of each decoder by your controller/throttle. If this value is not zero, then instead of responding to its long or short address each decoder will respond instead to the consist address. This address is limited, just like short addresses, to a range of zero to 127, and most controllers limit the range even more to just the top end.

What is the advantage of advanced consisting? Most DCC systems allow you to quickly set up and tear down advanced consists on your layout without using a separate programming track. When setting up an advanced consist you will be asked for the address of the lead and last locomotives, then the addresses of any locomotives in between. You will also be asked which direction each locomotive is traveling, forward or reverse. Once the consist is set up, you use the consist address to control all the locomotives as a single unit.

When a consist is broken apart—once zero is written to CV19 for each locomotive—each engine will respond to its original address again. Each locomotive becomes independent. Most DCC systems make this a very simple task.

Setting the Speed

Most, though not all, decoders support two ways of controlling the way a locomotive reacts to the speed setting on your throttle. The first uses three CVs, and the second uses twenty-eight CVs. You do not need to

Almost every decoder, when it is reset to factory values, is set up to listen for short address three.

change these values, but doing so will make your locomotive easier to control and more realistic in operation.

Using the three CV method is probably sufficient for almost every locomotive you own. The CVs that you will need to change are: CV2 – starting voltage, CV5 – maximum voltage, and CV6 – midpoint voltage. Some decoders do not support CV6. All three of these CVs have a range of zero to 255.

A couple of quick points need to be made. New decoders support 28 speed steps. Very old decoders had only 14 speed steps, but, to be honest, if you have any decoders that old you should seriously consider replacing them. Newer decoders offer much better operation. Also, most DCC systems support either 14 or 28 speed steps, but not both at the same time.

Second, most new decoders support both 28 and 128 speed steps, and most DCC systems support both types simultaneously. In the examples below I will be using 28 speed steps.

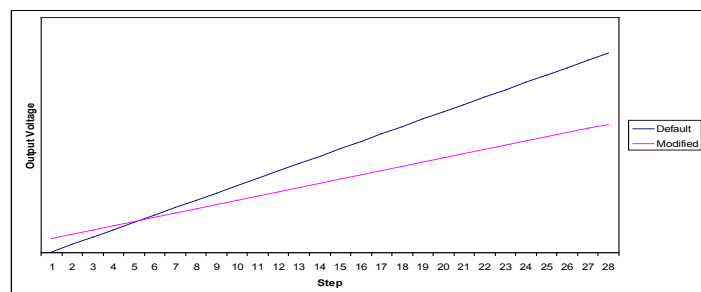
CV2 is used to set the voltage corresponding to step 1 of your throttle, one step above stopped. CV5 is used to set the voltage corresponding to step 28 of your throttle, or full speed. CV6, if supported, is the voltage for step 14. The value in CV2 should be less than the value in CV6, and the value set in CV6 should be less than the value set in CV5.

There is a catch, however. Depending upon your decoder, you can use special values in these CVs to mean special settings. For example, for Digitrax decoders (and many others), you can use zero to mean “ignore this value and use the default.”

For a Digitrax decoder, setting all of these CVs to zero really means that CV2 is set to 0, CV5 acts as though it were set to 255, and CV6 is ignored.

Suppose we had the following values set up in those CVs.

CV	Value	Step	Voltage % (Ratio)
CV2	0	1	0% (0/255)
CV6	0	N/A	N/A
CV5	0	28	100% (255/255)



With this setup, the voltage would range in a straight line from basically nothing to full bore as you increased your throttle setting from 0 to 100%. If you graphed the throttle step setting against the voltage, it would look like Default line in the chart above

Let’s change the values to different settings. Here, we will set CV5 to 255 and leave CV6 set to zero.

CV	Value	Step	Voltage % (Ratio)
CV2	0	1	0% (0/255)
CV6	0	N/A	N/A
CV5	255	28	100% (255/255)

That ends up with the same behavior. The voltage would increase as a straight line from zero to 100% as you turned your throttle.

None of my locomotives ever start moving at the first step. Some of them have to get to step 5 or 6 before they start to move. Setting CV2 is the way to correct this. You do that by setting CV2 using this formula: <step where locomotive just starts to move>/28 * 255.

Suppose the locomotive starts to move at step 2. With the setup above, that means that CV2 needs to be set to 2/28 * 255 or (rounding) 18. You now have the value, but don’t change it yet.

The next thing to change is the top speed using CV5. My N-scale locomotives run at far above prototype speeds, and I need to tame them a bit. Very few EMD F3s ever got to 200 miles per hour.

Begin by adjusting your throttle to the step where the locomotive is running at top prototype speed. If you do not have a way to actually measure the scale speed, at least pick a speed where it *looks* like it is moving correctly. Note the step and use this formula: <step where locomotive is going as fast as it should>/28 * 255.

Suppose our locomotive is going at top speed at step 18. The formula would be 18/28 * 255 or (again rounding) 164. We now have a value for CV5 and our table will look like the following.

CV	Value	Step	Voltage % (Ratio)
CV2	18	1	14% (18/255)
CV6	0	N/A	N/A
CV5	164	28	64% (164/255)

By changing the values of CV2 and CV5 the graph matches the Modified line in the chart.

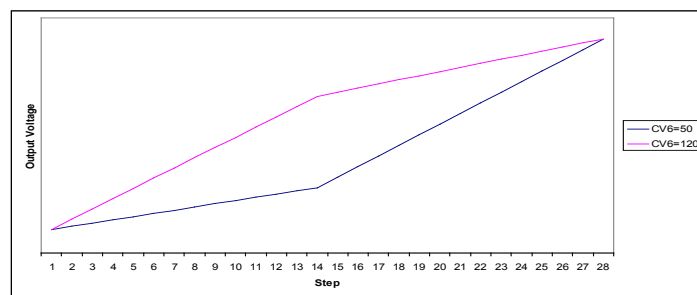
Now our locomotive will start at step 1 and reach its maximum speed at step 28, but what do we do with CV6?

CV6 splits the straight line from step 1 to step 28 into two halves. If we change CV6 to a value between CV2 and CV5, then we have a straight line from the CV2 value to the CV6 value and another straight line from the CV6 value to the CV5 value.

Let us begin by calculating a value for CV6 that keeps our straight line. It's a very simple calculation: $(\text{CV}_5 \text{ value} - \text{CV}_2 \text{ value}) / 2 + \text{CV}_2 \text{ value}$. For the example, that would be $(164-18)/2+18$ or 91. Our table would like the following using these values.

CV	Value	Step	Voltage % (Ratio)
CV2	18	1	14% (18/255)
CV6	91	14	35% (91/255)
CV5	164	28	64% (164/255)

Let us now change the value in CV6 to something smaller. Using the value 50 our graph would look follow the line labelled CV6=50.



This means that as we increased our throttle, the locomotive would slowly increase speed until we got to step 14, then it would quickly speed up as we went from step 14 to step 28.

Setting CV6 to 120 would give the opposite effect as shown in the graph above with the line labelled CV6=120.

I mentioned the 28 step version of speed control. It uses the same kinds of calculations, i.e. each speed step would be a ratio of the CV value divided by 255. The difference is this: instead of three CVs for the start, midpoint, and ending values, there are 28 CVs (CV67 through CV94) and each CV corresponds to a particular step.

Why would you need to use the 28 step speed table? One reason would be to match the speed performance of two very dissimilar locomotives. Using the 28 step table is more of an art than a science, but if you really want to consist your Big Boy with a GP40, you may need to use this fine a control.

If your decoder supports 128 steps, you will still have only the 28 step table. The decoder will interpolate

the missing values, so the value in CV67 will still map to step 1, and the value in CV94 will map to step 128.

The Ugly CV - CV29

Fortunately, almost every DCC system makes programming CV29 easy to do. That is because this CV does a lot of things, such as select the short or long address and determining which direction of travel corresponds to your throttle's forward setting, but it does it all in one CV.

If you want to calculate the value, here are the rules. You need to add the result of each decision to get the final value.

- If the normal direction of travel of your locomotive is forward (meaning if you set your throttle to go forward the locomotive actually goes forward), then start out with the value zero. If the normal direction of your locomotive is reversed, start out with 1.
- If you want to use 14 step operation add 0. If you want to use 28 or 128 step operation, add 2.
- If you want to have the decoder operate only on DCC, add 0. If you also want it to operate on a DC (analog) system, add 4.
- If you want to use the three value speed table, add 0. If you want to use the 28 value speed table, add 16.
- If you want to use short addressing, add 0. If you want to use the long address, add 32.

Here is a table with the same rules. You may find it easier to follow.

Question	If no, add this value	If yes, add this value
Is forward really forward?	1	0
28/128 step mode?	0	2
Run on DC?	0	4
3 step speed table? (Instead of 28 step table)	16	0
Short address?	32	0

Let us use an example. Let's figure the value for a decoder that is installed in a locomotive that will go forward when the throttle is set for forward. It will use

28 step mode, not run on a DC system, use the three speed setting CVs, and will use a long address. For a decoder like this we would add up the values: 0 (normal direction of travel is forward) + 2 (use 28 step instead of 14 step mode) + 0 (will not run on DC) + 0 (using the three step speed table) + 32 (will use the long address). That equals 34.

We should all be thankful that our DCC systems figure this out for us.

It Really Isn't This Complicated

As I was reading this, it looked a lot more complicated than I promised. I guess I am more of a geek than

I thought. However, you can start your DCC journey with just changing the decoder address, and that is simple. As the next step you might consider using the three CV speed table. That will stop those jackrabbit starts and the 300 mile per hour trains. Most DCC systems allow you to make these changes without knowing the inner workings.

Future Installments

If there is any interest, in future installments I will try to explain function remapping and some of those fancy lighting effects modern decoders make available.



More photographs of Don Meeker's impressive layout taken during the Sunrise's tour & operating session last April Fool's Day.

Top left: A pair of impressive trestles on the Rocky Mountain Lines. **Top right:** Mike O'Neill ran a freight train, including this ACME boxcar with a Wile E. Coyote logo on the door, passing along on the upper deck. *Photographer's*

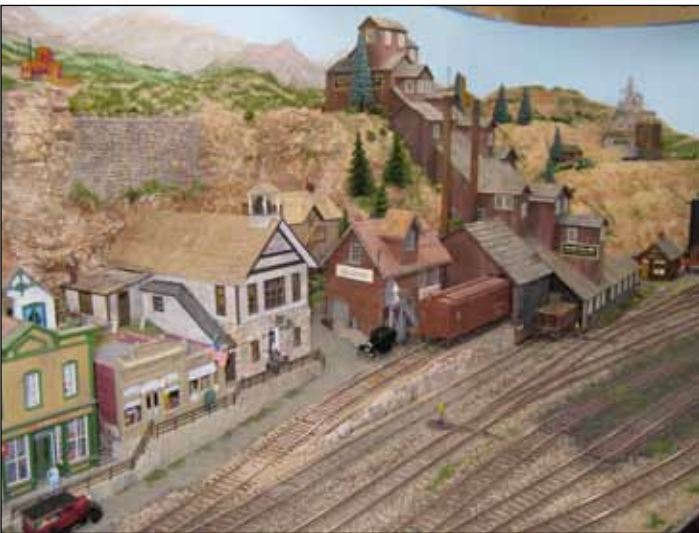
note: Sorry for the blur, but ACME trains never stop! **Bottom left:** Don named this Craftsman Supply Company in honor of model railroad giant Harold Carstens, founder of Railroad Model Craftsman. **Bottom right:** One of 4 reefers submitted by Gary Myers for Show & Tell, American Refrigerator Transit Company ART-22128. This was one of the Show & Tell models for April, and it did duty running on the layout later. *(Photos by Gary Myers)*





Here is a sampling of scenes from around Don Meeker's Rocky Mountain Lines layout visited by Sunrise Division last April 1.

Top left: Don used N-scale structures up in the hills from his mining town to bring forced perspective to create the illusion of distance. **Middle left:** Some of the downtown area near the Gold Brick Mining Corporation operations, next to their Mill and Mining Supply buildings. **Bottom left:** A favorite, Murphy's Furniture Mart, Makers of the Murphy Miracle Mattress: "If it's a good mattress, it's a miracle." **Top right:** Gary Myers running the Salad Bowl Express through Centennial City. **Bottom right:** A switchback at the mining town area, where the Gold Brick Mining Corp holds rights. *(Photos by Gary Myers)*



Pictures Of Layout Visit Extraordinaire



Tracks to Alamosa

The Rocky Mountain Region, NMRA,
2010 Convention

Alamosa, CO - Thursday through Sunday
June 3 through 6, 2010



www.TracksToAlamosa.org

Tracksalamosa@ecentral.com

Ride the Rio Grande Scenic Railroad Alamosa to La Veta and return.

Saturday is an all day roundtrip train ride from Alamosa to La Veta. This includes time in La Veta for lunch and looking around. Both coach and dome seating is available.

Clinics — A number of programs are in the works. We plan to have several clinics following a theme of "Railfanning in 2010". Clinics will run Friday morning and evening.

Contest — Both NMRA-judged and popular vote contests are included.

Layout Tours — We are planning to have several layouts open Sunday afternoon, on your way home from Alamosa.

Prototype Tours — We are setting up tours of the yard and shop in Alamosa.

Hobo Breakfast — The Sunday morning breakfast will be hosted at the Rio Grande Depot during morning train departures.

Local Transportation — Alamosa is easy to get around in. Maps and instructions will be provided for the locations we are using.

Non-rail Activities — The Great Sand Dunes National Park and Preserve just northeast of Alamosa. Inn of the Rio Grande Indoor Water Park (a small fee for those not staying at the hotel). Summerfest on the Rio, a local festival in Cole Park, Friday through Sunday, open free to the public. Information on other activities in Alamosa will be available.

Location — Our headquarters will be the Inn of the Rio Grande, 333 Santa Fe Ave., Alamosa, CO, 81101. This is along US 160, on the east end of Alamosa. They have offered us a rate of \$84+ tax per room. Reservations received after May 4, 2010 will be at the group rate on an availability basis only. Their reservation line is 719-589-5833 or 1-800-669-1658. Be sure to specify you are members of the Tracks to Alamosa Convention.

Tentative Schedule

- **Thursday evening** – Registration.
- **Friday morning** – Registration, clinics, contest entry.
- **Friday afternoon** – Open time, yard and shop tours.
- **Friday evening** – Registration, clinics, contest entry, Summerfest on the Rio (free, non-rail activity).
- **Saturday morning & afternoon** – Train trip: Alamosa to La Veta and return (extra fare), Summerfest.
- **Saturday evening** – Contest judging, videos, social center, Summerfest.
- **Sunday morning** – Model pick up, Hobo breakfast (extra fare), contest awards, RMR-BOD meeting, Summerfest.
- **Sunday afternoon** – Layout tours on the way home, Summerfest.

Judges are needed for the contest. If you would like to help out, please check the box on the registration form.

Want More Information?

US Mail

Send SSAE to:

Tracks to Alamosa
% Richard Hunter
832 Geneva Street
Aurora CO 80010-3941

Web Site

www.TracksToAlamosa.org

E-mail

Tracksalamosa@ecentral.com

Tracks to Alamosa Convention – June 3–6, 2010

Registration Form

Primary Registrant must be at least 18 years old.

Is primary a **current Member** of the NMRA? _____

If yes, NMRA # _____

If yes, the immediate family is considered to be members. Every registration must include at least one Primary Registrant. The Adult Limited allows family members, in or outside of the immediate household, to attend the breakfast and/or ride the train only.

Names of other immediate family members (residing in the same household) on this registration. Include age if under 12 at the time of the convention. Grandchildren may be included on grandparents registration as immediate family. _____

Name _____

Address _____

City, State, Zip _____

Phone _____

E-mail _____

Number	Item	Fare	Total
_____	Primary Registrant	\$ 35	\$ _____
_____	Spouse/Other Immediate Family Members	\$ 20	\$ _____
_____	Children under 12 (with registered adult) ¹	\$ 0	\$ _____
_____	Adult Limited	\$ 10	\$ _____
_____	Train – Coach Seating ²	\$ 40	\$ _____
_____	Train – Dome Seating ²	\$ 55	\$ _____
_____	Sunday morning awards breakfast	\$ 15	\$ _____
_____	Non-NMRA member surcharge	\$10 per person, \$20 family maximum	\$ _____
_____	Late Fee (After March 31)	\$10 per person, \$20 family maximum	\$ _____
Grand Total			\$ _____

Make check payable to: Tracks to Alamosa

Send registration form and check to:

832 Geneva Street, Aurora, CO 80010-3941

Cancellation Policy: Full refund prior to April 16. Full refund less \$10 /person, \$20/family after April 15 to May 15. No refunds after May 15.

I would like to serve as a contest judge: []

I-13-SNL

¹ Children under 12 must be with parent/guardian at all times.

² We may have a limit on the number of seats if the train fills up before we get enough registrations.



The National Model Railroad Association, Inc.'s

75th Anniversary Photography Contest



Win a cab ride in a Union Pacific steam locomotive!

The National Model Railroad Association and the Union Pacific Railroad are pleased to announce a model photography contest to help celebrate the 75th anniversary of the NMRA. The NMRA will pick one photograph submitted by an NMRA member in good standing depicting one or more models of UP equipment and/or structures in a realistic scene. The photograph will be judged for prototype fidelity of the modeling and scene as well as for photographic art.

The member submitting the photograph will win a cab ride in one of the mainline steam locomotives operated by the Union Pacific on the Kansas City to Jefferson City leg of the Missouri River Eagle Excursion. Airfare (up to \$500.00), two hotel nights, and transportation to and from the excursion will be provided for the winner by the NMRA.

To be eligible, the photograph must be in an envelope postmarked (or originated in transit by a third-party service such as FedEx or UPS) by August 31, 2010, and received no later than September 7, 2010. Only one photograph may be submitted per envelope, but there is no limit on the number of photographs a member may submit. Photographic prints, slides, or digital images are acceptable. Prints must be 8" x 10." Digital images must be taken with a camera of 7.1 megapixels or greater to satisfy the printing requirements. All submitted photographs shall become the property of the NMRA, and the NMRA and Union Pacific may use the photograph in any manner they choose. All members participating in the contest agree to provide to the NMRA the original medium of the photograph (negative, transparency, or digital file) if requested.

Please send all photographs to Robert J. Amsler, Jr., 514 Dover Place, St. Louis MO 63111. Be sure to protect photographs from bending or mishandling in the mail.