



Photographing Railroad Models

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Today's Agenda

Objective: easy to follow methods for digital model railroad photography. Assumes limited photography knowledge.

- **Specific, simple recommendations for:**
 - Digital camera equipment
 - Composition, lighting, exposure
- **Post-processing of the digital image**
 - Freeware software
- **Get a copy of this presentation:**
 - http://home.comcast.net/~atsf_arizona/John_Sings_Phographing_Railroad_Models_John_Sing_v23.pdf



Model Photography

- **Model railroad photography is different than:**
 - Landscape
 - Action / sports
 - Portraits / people
- **What you are trying to achieve is:**
 - Representation of a real life object or real life scene
- **Therefore:**
 - Small size of our models forces certain techniques and methods
 - Composition (especially eye-level angles) plays a major role



Set your mind at ease.....

- **No matter how expert..... only a low % of the shots anyone takes will turn out well**
- **Having the right equipment / technique makes all the difference**
 - Equipment doesn't have to be too expensive
 - Just needs to be the right *kind* of equipment
- **Once you have basics of technique....to get good, there is only one way: Practice, practice, practice**
 - Analyze, study other's photos that you like
 - Converse a lot about this topic, ask a lot of good questions, be observant
 - Share and give back



Equipment Recommendations

- **Affordable digital cameras for model photography**
 - Focus on **Optics and Color Quality**
 - All are not all the same – do your research
 - If you're wanting to do inexpensive but good model photography, I recommend for a particular digital camera type: **Super zoom**
 - Also known as 'bridge' cameras, between compacts and full digital Single Lens Reflex (DSLR) cameras
- **Usually Super Zooms have these essential features:**
 - Good **optical** zoom (minimum 10x)
 - Macro mode (close-ups)
 - Manual controls for **exposure, aperture, time-delay,**
 - Number of pixels: anything over 6 megapixels is *plenty*
- **I use: Sony Cyber-Shot DSC-H2 (Feb 2006)**
 - Bought at Fry's in March 2007 for \$299
 - Current model is DSC-H20, street price is \$250 or less



Types of digital cameras: http://www.neocamera.com/feature_camera_types.html



Super zoom digital camera



- **A super zoom digital camera is more affordable, compared to a Digital Single Lens Reflex (DSLR):**
 - Smaller package
 - More oriented to point and shoot
 - Possible to fit a huge 10x, 12x or even higher zoom range into something small enough to be considered truly portable
- **Other camera types:**
 - If you can afford a digital SLR, that's great, go for it
 - But to get started, the Super Zoom is good enough
 - *Warning:* small compact cameras usually don't have the manual controls, and more importantly, the optics quality you're looking for
- **Super zoom review web sites:**
 - <http://www.dpreview.com/reviews/Q109superzoomgroup/>
 - http://www.cameralabs.com/buyers_guide/superzooms/best_super_zoom_camera.shtml
- **Digital Photo Review website:**
 - <http://www.dpreview.com/>



Tips on camera settings

1. No flash

- Use ambient light
- Use proper light setting



We are *not* trying to replicate a lightning storm!

2. Use high numbered aperture

- For depth of field

3. Use macro for close-ups

4. Time delay

- Required by high numbered aperture

5. Tripod

- To accommodate time-delay
- Or set camera on layout *if it's your layout*



• Let's see what I mean by these.....

• Digital camera settings explained:

- <http://www.digital-photography-forbeginners.com/Digital-Camera-Settings.html>



Lighting – no flash

- Turn off the flash!



- Use ambient lighting or use planned lighting
 - Set camera to correct camera lighting setting (auto, daylight, incandescent, fluorescent)
 - Helps if layout lighting designed with photography in mind



Today's digital cameras are amazing in their ability to sense light



Use of Aperture (depth of field)

- **Use camera's 'aperture setting'**
 - i.e. tell camera to prioritize photo on your *manually set* aperture
 - Use as high a numbered aperture as camera allows
 - Bigger number = better depth of field
- **Small numbered aperture (F/3.5):**
 - 'out of focus' in foreground and background – not good for model photography
- **Medium numbered aperture (F/8):**
 - Better focus in foreground and background; F/8 is "acceptable"
 - F/8 is often all the inexpensive super zooms will support



Photos by: Charlie Comstock



Value of aperture

- **Use highest numbered aperture available to drive best depth of field**
 - This also needs longer exposure
 - This is what drives use of time-delay and tripod when using ambient light
- **Note: DSLR cameras support even larger numbered aperture than SuperZooms**
 - Digital SLRs are approximately \$600+



F/22 aperture example

Photo by: Charlie Comstock



Use time-delay

- **Set the camera on tripod (or on layout, *if it's your layout*)**
- **Use the time-delay**
 - Today's image stabilization digital cameras help immensely

Simple Lighting

- **You can use simple incandescent floor lamp**
- **Set camera lighting to 'incandescent'**
 - This is known as the 'white balance' setting
- **This produces:**
 - Single point of major light, simulating "sun"
 - Supplemented by ambient room lighting
 - Note: don't combine different *types* of lighting
 - i.e. incandescent + fluorescent = **bad, confuses camera**





Basic technique Summary

a. Exposure, lighting, macro

- No flash!
- Use ambient lighting, ambient lighting, don't mix lighting types
- Set 'white balance' to match the type of light (incandescent, etc).
- Use macro for close-ups

b. Manual controls – set on “aperture mode”

- For depth of field
- Use the “largest numbered” aperture your camera supports
- F/8 is common on the affordable super-zooms – works OK
- Much larger aperture numbers available on the higher priced DSLR cameras

c. Tripod, lighting

- Use time-delay whenever possible
- Use tripod or (if it's your layout, set camera on the layout)
- Today's **Image stabilization** in digital cameras help immensely



Setting / Composition



- **Diorama - photo backdrop**
- **Outdoor daylight**
- **The super-simple white paper backdrop**
- **On the fly (still can do pretty good!)**



Layout / Module as Backdrop



Look for the
“*picture within the picture*”

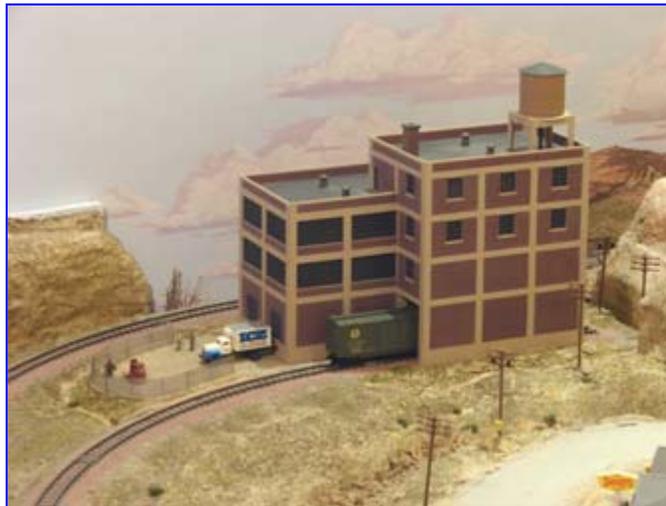


Any layout, module
can provide the
photo backdrop



Angles

- Use “eye-level” as major technique
- Experiment with composition!
 - Look for “picture within the picture”
 - Take a lot of photos, analyze
 - Throw away the bad
 - Keep practicing!



Helicopter = OK



Eye-level = often better



Set camera on the layout at eye-level (or below!)



Better

Better



Outdoor Lighting

- **Provides much better realism than indoor**
 - Take a module / diorama with you to the great outdoors

- **Early morning best**
 - Reds/oranges/diffused sunlight much better

 - Than direct overhead noon lighting





Outdoors = better lighting, backdrop



Sunrise



Cloudy day

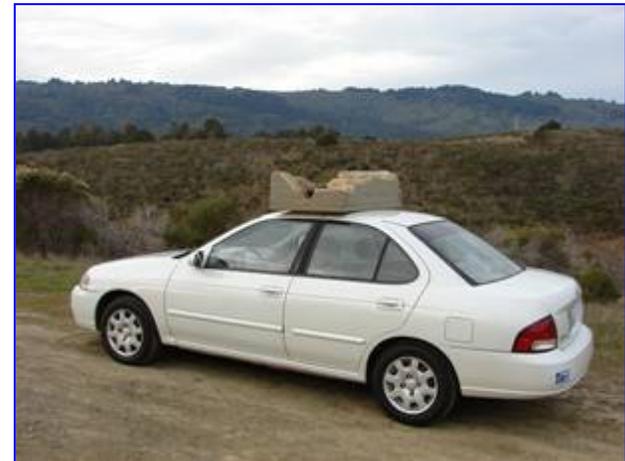




Outdoor diorama doesn't have to be complex



**Just takes creativity –
you can do it too!**





Tips for Layout Tour Photos

- **Tell a story of the visit**
- **When composing scenes**
 - Combine eye level, with “You are there”
- **Use the other techniques already stated**
- ***Really helps* if the owner’s layout is well lit**
 - Example shots: John Petrovitz’s “SP in Bay Area”



Example Layout Tour



**John Petrovitz's N scale
"SP in the Bay Area"**



Example layout tour



**John Petrovitz's N scale
"SP in the Bay Area"**



Super simple white backdrop

- **But... you don't have to have a layout or even a diorama**
- **The following photos are nothing more than:**
 - Model posed at near eye level
 - With simple white printer paper background
 - Posed with good incandescent lighting and composition
- **Using, of course:**
 - Tripod
 - Time delay
 - High numbered aperture
 - Color setting for incandescent (desk lamp)



Example: simple white background



**Use white printer
paper as background**

**Put the model on the
paper**





Finally..... “On The Fly” (OTF) photos

- **i.e. No backdrop, ambient light, above eye-level, must be taken quickly as time / effort available is minimal**
 - i.e. You are on a layout tour (my layout tour photos all are OTF)
 - Or you only have short time / effort available to take the Coast Division Model Contest / Show Tell photos
 - Goal: create “good enough” raw material
- **=>Final result can always be good enough<= when combined with *post-processing***
 - *Post-processing, in fact, necessary for best model photos anyway*



On The Fly

- Following photos are **taken with the Sony's “point and shoot” automatic capability, with:**
 - Tripod
 - Time delay
 - Ambient light
 - Lighting set on camera appropriately
- And then **post-processed**
- The keys are:
 - Good technique to create good raw material photos
 - Straight-forward post-processing using digital photo software



On The Fly



The setting not ideal!



On The Fly



For all these, method was:

Tripod, time-delay, super zoom,
angle, ambient and floor lamp light,
color setting





On The Fly



So, how do we 'improve'
the *raw* On The Fly photos?

:-)

That's next.





Post-Processing Digital Image

- **No matter how expert..... only a low % of the shots anyone takes will turn out well**
- **Post-processing provides:**
 - **Cropping**, “after the fact” zoom in
 - Minor color adjustment
 - Resizing
 - Captioning
- **Free or inexpensive digital photo editing software makes this within reach of everyone**
- **Freeware software**
 - Many available
- **I use “IRFanView”**
 - <http://www.irfanview.com/>



Basic digital photo editing



- **Cropping**
- **Color adjustment**
- **Resizing**
- **Adding Captions**



Cropping “PA’s in the Desert”



- **Raw shot**

- Horrible!



- **Crop the picture**

- Actually good

- **Idea: Find the picture *within the picture***

- Take many shots, so you have plentiful raw material

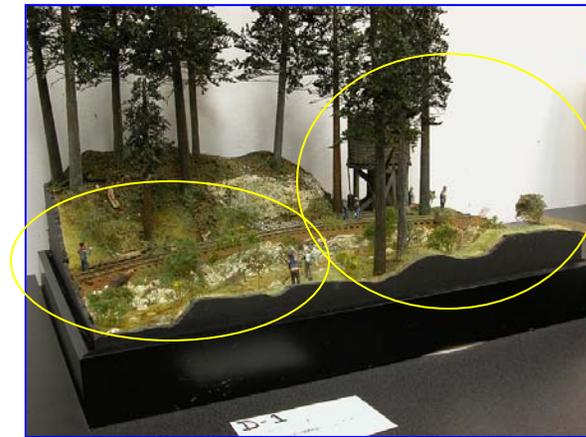


Better!



More cropping examples

- **Frank Markovich's diorama:**





Minor color adjustment

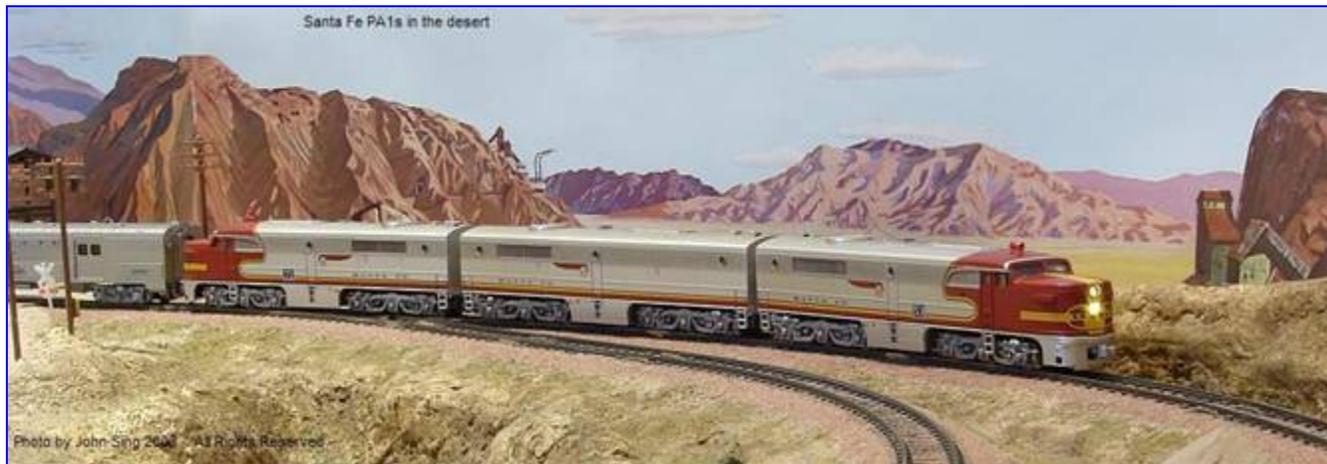
- Can't save everything, but can turn marginal into acceptable, as shown





Resizing “PA’s in the Desert”

- **After cropping, then make your pictures web-friendly by resizing**
 - Use the freeware software to reduce the size of the picture so that it will load quickly on the internet (less than 100K is best)
 - Web sites and PowerPoints only need low resolution
- **Adding captions**
 - Same freeware editing programs usually allow adding text





Now it's up to you



- Today's goal was provide a good base of information
- But *most importantly*:
- Find model railroad friends who already have the photo skills you want
- Meet up with them, discuss, learn and *share*





Future possible follow-on clinics: “Photo to Website”



- **Example of this clinic in action, using photos taken from a Coast Division Model Contest table:**
 1. Raw photos
 2. Uploaded to computer, organizing by folders
 3. Select photos
 4. Crop, color balance
 5. Resizing
 6. Captions

Maybe for the next edition of this clinic.....

Comments on this clinic? Email to: singj@us.ibm.com



Next Step

- **If you liked this presentation, I would suggest downloading and reading these clinics as your next step**
- **Mark Schutzer's 2009 PCR Clinic on Model Photography:**
 - http://markschutzer.com/Brass_Clinics/Model_photography2009.pdf



धन्यवाद

Hindi

謝謝

Traditional Chinese

תודה

Hebrew

Tesekkurler

Turkish

Спасибо

Russian

Thank You

English

Gracias

Spanish

شكراً

Arabic

ありがとうございました

Japanese

Obrigado

Brazilian Portuguese

Grazie

Italian

භවතුඹ

Sinhala

谢谢

Simplified Chinese

Merci

French

Danke

German

நன்றி

Tamil

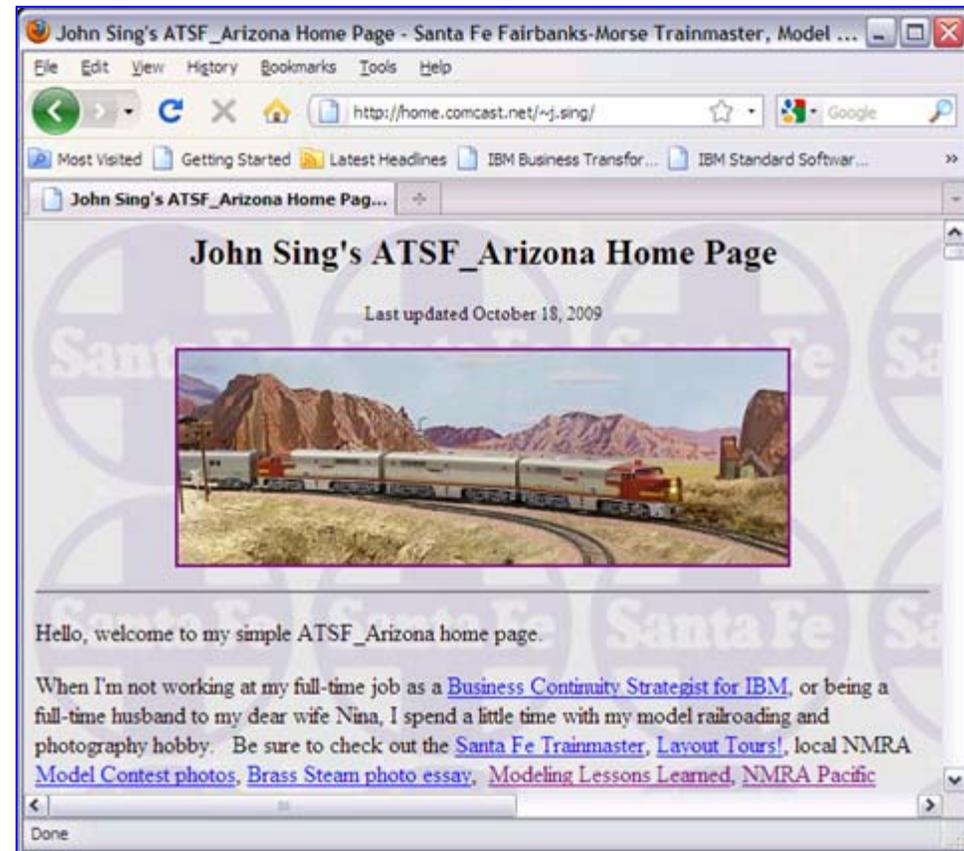
감사합니다

Korean



John Sing's web site

- You can go to my web site for more examples of photos



<http://home.comcast.net/~j.sing>



Great resources

- **Charlie Comstock**
 - <http://s145079212.onlinehome.us/rr/howto/photography/index.html>
- **Bob Boudreau**
 - <http://sites.google.com/site/railphotog/>
- **Model RR Photo How-To – UK forum**
 - <http://www.all-model-railroading.co.uk/forum/showthread.php?t=5593>
- **Google**
 - Search on “model railroad photography”



More resources

- **Digital Photography camera web site**
 - <http://www.dpreview.com/>