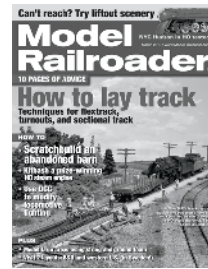




January



February



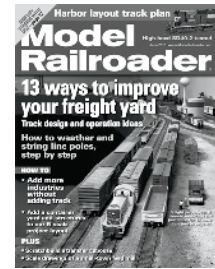
March



April



May



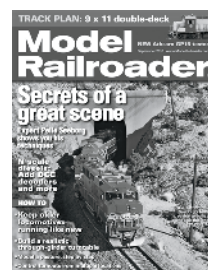
June



July



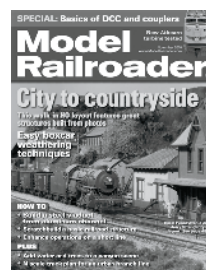
August



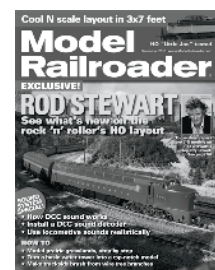
September



October



November



December

# INDEX

## Volume 77 • January-December 2010

© 2010 Kalmbach Publishing Co., 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612. No part of this volume may be reprinted without the specific permission of the publisher.

**Using the index:** Most feature material has been indexed at least three ways – once by title, again under the author's last name, and finally by subject, usually falling under at least one of the MR subject categories.


An asterisk (\*) preceding an entry indicates a feature by its title.

**MR subject categories:**

Biographical sketches	Control and electrical	Obituaries	Techniques
Cartoons	Cover photos	Operation	Track plans
Construction articles	Layout descriptions	Prototype information	
<b>MR departments:</b>			
DCC Corner	News & Products	Step by Step	Workshop
Editorials (From the Editor)	The Operators	Trackside Photos	
Information Desk	Product Reviews	Trains of Thought	

**Now on ModelRailroader.com**

The 2005 through 2010 annual indices are available as PDFs at [www.ModelRailroader.com](http://www.ModelRailroader.com). For a searchable index of articles in *Model Railroader* and other model and prototype railroad publications, visit [index.mrmag.com](http://index.mrmag.com).



### 0-9

- \*3 clever ideas for detailing structure models, Aug p56
- \*7 handy turnout tips, Aug p34
- \*13 tips for freight yard operation and design, Jun p32

### A

- \*Achieve realistic colors under artificial lighting, Dec p52
- \*Add a lived-in look to your passenger cars, May p46
- \*Add a river scene to your layout, Jan p62
- \*Add DCC sound to an Alco S-2, Dec p42
- \*Add more industries without adding track, Jun p44
- \*Add moving vehicles to your layout, Feb p46
- \*Add simulated fuses to your operating sessions, Jan p44
- \*Add work stations to your layout, Jun p58
- \*Authentic loads enhance opera-

tions, Jul p42

### B

- Ball, Don  
Add work stations to your layout, Jun p58
- \*Baltimore & Ohio at its peak, The, Mar p64
- Besougloff, Neil  
**See also Editorials**  
**See also Step by Step**
- \*Big steam in coal country, Oct p50
- \*Big time railroading at Horseshoe Curve, Aug p48
- \*Bit of America in Sweden, A, Mar p52
- Bruening, Len  
Car forwarding with tags, Jul p54
- \*Build a backwoods scene for your layout, Jul p30
- \*Build a fold-down wye, May p56
- \*Build an easy container yard backdrop, Apr p50
- \*Building resin freight car kits, Feb p50
- Burgess, Jack  
Make templates for easy scratch-

- building, Apr p47
- \*Build a through girder turntable, Sep p36
- \*Busy mainline town in HO, A, Jul p38

### C

- \*Car forwarding with tags, Jul p54
- Cartoons**
- Abbott, George, Aug p93
- Gustafson, Raymond "Sketch," May p97
- Matteo, Matt, Jan p113, Feb p109, Apr p101, Jul p89, Sep p93, Oct p97, Nov p93, Dec p109
- Sedita, Joe, Mar p101, Jun p97
- Chapman, Bob  
Achieve realistic colors under artificial lighting, Dec p52
- Christianson, Dick  
Salt Lake Route part 1: The inspiration for a small layout, Jan p36
- Salt Lake Route part 2: Benchwork with folding legs, Feb p40
- Salt Lake Route part 3: Laying realistic sectional track, Mar p34
- Salt Lake Route part 4: Wiring a

- small layout for DCC, Apr p62
- Salt Lake Route part 5: Easy-to-build desert scenery, May p50
- Salt Lake Route part 6: Industry and yard scenery, Jun p38
- \*City to countryside, Nov p48
- \*Classic mill spans many modeling eras, Jun p67
- \*Color with powdered pastels, Jul p45
- Construction articles: Layouts and modules**
- Salt Lake Route part 1: The inspiration for a small layout, Jan p36
- Salt Lake Route part 2: Benchwork with folding legs, Feb p40
- Salt Lake Route part 3: Laying realistic sectional track, Mar p34
- Construction articles: Miscellaneous**
- Add moving vehicles to your layout, Feb p46
- Add simulated fuses to your operating sessions, Jan p44
- Add work stations to your layout, Jun p58
- Build a fold-down wye, May p56
- Install lightweight liftout panels, Mar p58

Make your own roadbed, Oct p45  
Salt Lake Route part 4: Wiring a small layout for DCC, Apr p62  
Scratchbuild exhaust fans, Sep p55

#### Construction articles: Rolling stock and locomotives

Building resin freight car kits, Feb p50  
Detail a Seaboard Coast Line GP30, Aug p62  
How to kitbash your favorite steam locomotive, Mar p46  
Kitbash a General Electric steeplecab, Jan p54  
Model new car sides using styrene, Oct p58  
N scale locomotive makeover, Sep p42  
Scratchbuild a transfer caboos, Jun p46

#### Construction articles: Scenery

Add a river scene to your layout, Jan p62  
Build a backwoods scene for your layout, Jul p30  
Build an easy container yard backdrop, Apr p50  
Continue your roads into the backdrop, Oct p38  
How to model a harbor and pier, Feb p72  
Model trackside brush realistically, Dec p64  
Salt Lake Route part 5: Easy-to-build desert scenery, May p50  
Salt Lake Route part 6: Industry and yard scenery, Jun p38  
Secrets of a great scene, Sep p32

#### See also Step By Step

#### Construction articles: Structures

Build a through girder turntable, Sep p36  
How to build a viaduct, Nov p42  
Make templates for easy scratchbuilding, Apr p47  
Scratchbuild an abandoned barn, Mar p61  
Scratchbuild a section house, Nov p56  
Update a common water tower kit, Dec p70

#### See also Step By Step

#### Contests

How to kitbash your favorite steam locomotive, Mar p46  
Kitbash a General Electric steeplecab, Jan p54  
\*Continue your roads into the backdrop, Oct p38  
\*Control turnouts from multiple locations, Sep p52

#### Cover photos

Crise, Steve, Dec  
Forbes, Jim, Mar, Apr, Jun, Aug  
Kraker, Jeff, May  
Lancaster, Penny, Dec (inset)  
Sassi, Lou, Apr, Jul, Oct, Nov  
Søeberg, Pelle, Sep  
Zuback, Bill, Jan, Feb

## D

#### DCC Corner

4 easy decoder installations and 1 near miss, Oct p72  
Add sound to an N scale diesel, Jul p62  
Controlling locomotive lighting, Mar p72  
How sound decoders work, Dec p40  
How to speed match locomotives, Feb p78  
Simplified yard control panels with DCC, Jun p72  
Tips to convert a layout to DCC, Jan p78  
Tools for a DCC workshop, Sep p68  
Understanding configuration variables, May p70

Understanding power districts, Aug p66  
What is Digital Command Control?, Nov p68  
Wiring reversing sections for DCC, Apr p72  
\*DCC sound for a Stewart F unit, Jan p66  
Deeds, Clay  
N scale Erie empire on a door, Dec p76  
\*Detail a Seaboard Coast Line GP30, Aug p62  
Dombey, Bruce  
Scratchbuild exhaust fans, Sep p55  
Dombrowski, John  
Baltimore & Ohio at its peak, The, Mar p64  
\*Don't finish that project!, Jan p52  
\*Double-deck track plan for an N&W branch, A, Sep p64  
\*Dual-gauge HO track plan, Jan p58

## E

\*Easy boxcar weathering, Nov p40

#### Editorials

Benefits of making a list, Jul p8  
Defining the edges, May p6  
"Do-overs" are allowed, Oct p8  
It's all in the details, Nov p8  
Nicknames for the fellas, Aug p8  
Plenty of clever ideas, Feb p6  
Sectional track, Mar p6  
Sound systems and more, Dec p8  
Source of inspiration, Jan p6  
Special and annual issues, Sep p8  
Weathering techniques, Apr p6  
We've got a fresh look!, Jun p8  
\*Enhancing brick structures, May p66  
\*Ethanol: An industry you can model, Jul p56

## F

Fisher, Danial  
Double-deck track plan for an N&W branch, A, Sep p64  
Fontaine, Jason  
Learn while building, Jul p46  
Foreman, Ron  
Update a common water tower kit, Dec p70  
Foster, Robert P.  
Pennsylvania branch line for a spare room, A, May p63

## G

Gautrey, Andy  
Kitbash a General Electric steeplecab, Jan p54  
\*Get a variety of rocks from a single mold, Mar p44  
\*Get your railroad up and running with flextrack, Mar p39  
Grivno, Cody  
How to weather a diesel locomotive, Apr p34  
See also News & Products  
See also Step by Step

## H

Hare, Allen  
Steam-era logging in the New River Gorge, May p58  
Harris, Steve  
Build a fold-down wye, May p56  
Harris, Tom  
Long trains on the Lakeside Lines, Nov p34  
Hediger, Jim  
See also Information Desk  
See also Workshop  
7 handy turnout tips, Aug p34

HO track plan for a home office, An, Apr p60  
Model a transloading terminal, Aug p39  
\*HO scale logging branch in 9 x 11, An, Oct p42  
\*How to build a viaduct, Nov p42  
\*How to kitbash your favorite steam locomotive, Mar p46  
\*How to model a harbor and pier, Feb p72  
\*How to weather a diesel locomotive, Apr p34  
Huntrods, Rick  
Narrow gauge inspiration, Jun p60

## I-J

#### Information Desk

Bad weather was just part of the job, Jul p20  
Below decks – a hidden world in the diesel shop, Aug p22  
Coaling trestle refuels steam locomotives, Sep p20  
Diesel shop handles light running repairs, Oct p24  
Engine and train crew change procedures, Mar p22  
Ethanol plant color scheme, Apr p22  
Heavy-duty truck handles track maintenance, Feb p26  
RIP track, railroading's pit lane, The, Jun p20  
Switch heaters keep ice and snow out of turnouts, Dec p24  
Use a stub-end station for compact passenger service, Nov p22  
What's a GP10 locomotive?, May p22  
Wreck cleanup – a complex and difficult business, Jan p22  
\*Install lightweight liftout panels, Mar p58  
Janes, Don  
Add DCC sound to an Alco S-2, Dec p42  
Johnson, Tom  
Continue your roads into the backdrop, Oct p38  
Jones, Jonathan  
Track plan for an N scale urban branch line, Nov p64

## K

Kawala, Dana  
Superdetailed scenes on a room-sized railroad, Jun p50  
See also Product Reviews  
Kingsnorth, Bob  
Control turnouts from multiple locations, Sep p52  
Kirkwood, Ken  
Add a river scene to your layout, Jan p62  
\*Kitbash a General Electric steeplecab, Jan p54  
Koester, Tony  
How to build a viaduct, Nov p42  
See also Trains of Thought  
Kraker, Jeff  
Less space, better railroad, May p34  
Kreiss, Joseph  
Build an easy container yard backdrop, Apr p50  
Kurpanek, Detlef  
Ethanol: An industry you can model, Jul p56

## L

Layout descriptions (by owner and name; "T" indicates track plan, followed by scale)  
Baltimore & Ohio Mount Royal

Division (T, HO), Mar p64  
Black Stag Lumber Co. RR (T, HO), May p58  
Chicago, Burlington & Quincy Brookfield Division (T, HO), Jan p70  
Christianson, Dick, Salt Lake Route (T, N), Jan p36  
Connecticut Co. Streetcars (T, O), Sep p56  
Deeds, Clay, Erie RR at Herbtton (T, N), Dec p76  
Diamond, Sy, Glenwood & Sierra RR (T, N), Oct p66  
Dombrowski, John, Baltimore & Ohio Mount Royal Division (T, HO), Mar p64  
East Broad Top and Pennsylvania RR (T, HO), Apr p52  
Erie RR at Herbtton (T, N), Dec p76  
Fontaine, Jason, Southern New England RR (T, HO), Jul p46  
Glenwood & Sierra RR (T, N), Oct p66  
Grand D'Elusion RR (T, HO and N), Apr p42  
Grand Street & Three Rivers City (T, HO), Dec p56  
Hare, Allen, Black Stag Lumber Co. RR (T, HO), May p58  
Harris, Tom, Lakeside Lines RR (T, HO), Nov p34  
Hewitt, Matt, Shadowton Ridge Northern (T, HO), Oct p50  
Huntrods, Rick, San Juan Silverton (T, HO), Jun p60  
Järfälla Model RR Club (T, HO), Feb p52  
Kraker, Jeff, Roanoke & Southern (T, HO), May p34  
Lakeside Lines RR (T, HO), Nov p34  
Lewis, Les, Connecticut Co. Streetcars (T, O), Sep p56  
Louisville & Nashville, Mascoutah, Ill. (T, HO), Sep p48  
Pennsylvania RR Altoona Area (T, HO), Aug p48  
Pennsylvania RR and East Broad Top (T, HO), Apr p52  
Reading Co. (T, HO), Nov p48  
Reynolds, Larry, Pennsylvania RR Altoona Area (T, HO), Aug p48  
Roanoke & Southern (T, HO), May p34  
Rhode Haven (T, HO), Feb p56  
Salt Lake Route (T, N), Jan p36  
San Juan Silverton (T, HO), Jun p60  
Shadowton Ridge Northern (T, HO), Oct p50  
Shook, Don, East Broad Top and Pennsylvania RR (T, HO), Apr p52  
Sommer, Marshall, Rhode Haven (T, HO), Feb p56  
Southern New England RR (T, HO), Jul p46  
Stewart, Rod, Grand Street & Three Rivers City (T, HO), Dec p56  
Strangarity, Jerry, Reading Co. (T, HO), Nov p48  
Suarez, Mike, Suarez Southeastern (T, HO), Jun p50  
Suarez Southeastern (T, HO), Jun p50  
Trautwein, Marcel, Grand D'Elusion RR (T, HO and N), Apr p42  
Wilhelm, Ron, Louisville & Nashville, Mascoutah, Ill. (T, HO), Sep p48  
Wolter, Dick, Chicago, Burlington & Quincy Brookfield Division (T, HO), Jan p70  
\*Learn while building, Jul p46  
Leider, David J.  
Scratchbuild a section house, Nov p56  
Leone, Gerry  
Build a backwoods scene for your layout, Jul p30

- \*Less space, better railroad, May p34  
Lewis, Les  
Under wire on Connecticut Co. streetcars, Sep p56
- \*Locomotive sounds add fun and realism to operation, Dec p46
- \*Long trains on the Lakeside Lines, Nov p34

## M

- \*Make templates for easy scratch-building, Apr p47
- \*Make your own roadbed, Oct p45
- \*Manual signal that protects a crossing, A, Apr p67
- Markowitz, David  
Dual-gauge HO track plan, Jan p58
- Marsh, Roger  
N and HO scale room-sized track plans, Feb p68
- Meier, Horst  
Modeling the prairie (Step by Step), Dec p34  
Scratchbuild an abandoned barn, Mar p61
- Mende, Alan  
How to kitbash your favorite steam locomotive, Mar p46
- Miller, Lloyd  
Working the harbor on the New York Central, Jun p55
- Mindheim, Lance  
3 clever ideas for detailing structure models, Aug p56  
Add simulated fusees to your operating sessions, Jan p44
- \*Mix and match decals for railroad equipment, Oct p64
- \*Model a transloading terminal, Aug p39
- \*Model trackside brush realistically, Dec p64
- \*Model new car sides using styrene, Oct p58
- \*Modeler's guide to hazardous material markings, A, May p42
- \*Modeling a hometown on the Louisville & Nashville, Sep p48
- \*Modeling rural America in N scale, Oct p66
- \*Modeling the meat-packing industry, part 1, Jan p48
- \*Modeling the meat-packing industry, part 2, Feb p64
- Murphy, Dennis  
Color with powdered pastels, Jul p45

## N

- \*N and HO scale room-sized track plans, Feb p68
- \*Narrow gauge inspiration, Jun p60
- \*New England in a condo, Feb p56

### News & Products

- B.T.S. buys Babbitt Railway Supply Co., Sep p10
- Celebrating a century, Dec p10
- Club marks 40th year, Mar p10
- European DCC manufacturer to offer HO scale locomotives, May p10
- Hobby industry officers elected, Oct p10
- Honors and awards, Oct p10
- iHobby Expo sets attendance record, Feb p10
- Kawala promoted to senior editor, Jun p10
- Lenz switches distributors, Oct p10
- Meet the staff at the big train show, Jun p11
- MTH to offer DC-only locomotives with Digital Command Control decoder sockets, Apr p10
- New News & Products is easier to use, The, Jun p10

- New train chief named at Horizon, Mar p10
- National Model Railroad Association marks 75th anniversary, Oct p10
- NMRA, museum plan big exhibit, Feb p11
- Trainfest sets attendance record, Mar p10
- Turning 65 but not retiring, Nov p10
- Walthers names new CFO, Aug p10
- Walthers names Stephens to VP post, Sep p10
- World's Greatest Hobby show sets attendance record, May p10
- Noblitt, Tom  
Don't finish that project!, Jan p52
- \*N scale double-deck track plan, Aug p44
- \*N scale Erie empire on a door, Dec p76
- \*N scale locomotive makeover, Sep p42

## O

### Obituaries

- Acme Model Engineering Co. founder dies, Nov p10
- Evergreen Scale Models founder dies, Aug p10
- International Hobby owner dies, Sep p10
- Olstyn, Mark  
Urban switching in HO, Dec p66
- Operation  
13 tips for freight yard operation and design, Jun p32  
Add more industries without adding track, Jun p44  
Add simulated fusees to your operating sessions, Jan p44  
Authentic loads enhance operations, Jul p42  
Car forwarding with tags, Jul p54  
Locomotive sounds add fun and realism to operation, Dec p46  
Two simple solutions for more traffic, Nov p60

### Operators, The

- Authority to use the main track – part 2, Jan p114
- Blue signal protection, Dec p110
- Continuity in operation, May p98
- Industrial switching layouts, Aug p94
- Only perfect is good enough, Mar p102
- Operate like an "old head," Apr p102
- Operating by the clock, Feb p110
- Operating night on the Beer Line, Nov p94
- Passenger opportunities, Jun p98
- Perishable operations – part 1, Sep p94
- Perishable operations – part 2, Oct p98
- Switching mail and express, Jul p90
- Osse, Steven  
See also News & Products  
See also Step by Step

## P-Q

- Pate, Brian  
Two simple solutions for more traffic, Nov p60
- Patterson, Ken  
Model trackside brush realistically, Dec p64
- \*Pennsylvania branch line for a spare room, A, May p63
- Polsgrove, Mike  
See DCC Corner
- Popp, David  
Busy mainline town in HO, A,

- Jul p38
- N scale locomotive makeover, Sep p42
- See also DCC Corner
- See also Editorials
- See also Step by Step
- Product Reviews: Cars, freight**  
65-foot drop-end mill gondola, N, Athearn, Jul p70  
ACF two-bay covered hopper, N, Athearn, Jun p80  
Acid tank car, HO, Athearn, Jan p92  
Airslide covered hopper, HO, Athearn, Feb p84  
Airslide covered hopper, N, Athearn, Feb p84  
BN shoving platform (caboose), HO, Athearn, Dec p90  
Bulkhead flatcar, HO, Atlas, Apr p82  
CP Rail wide-cupola caboose, HO, Rapido Trains, Aug p72  
DM&IR wood caboose, HO, Walthers, Sep p74  
Hi-cube auto-parts boxcar, N, Trainworx, Feb p90  
Low bulkhead flatcar, HO, Atlas, Sep p76  
MILW ribbed-side bay-window caboose, HO, Walthers, Jun p81  
MILW ribbed-side 40-foot boxcar, HO, ExactRail, Jul p70  
NYC 14-panel 70-ton coal hopper, N, Bluford Shops, Dec p92  
PRR class G31B gondola, HO, Tangent, Mar p80  
PS-2CD covered hopper, N, ExactRail, Apr p82  
PS-2 covered hopper, N, BLMA, Aug p76  
Pullman-Standard waffle-side boxcar, HO, ExactRail, Aug p74  
RBL insulated boxcar, HO, ExactRail, May p78  
Thrall mill gondola, N, Atlas, Sep p76  
Trinity bathtub coal gondola, HO, Atlas, Jun p75  
Trinity covered hopper, N, ExactRail, Jan p90  
Trinity covered hopper, O, Atlas O, Jul p68  
Trinity general-service tank car, N, Atlas, Oct p80  
Trinity hi-cube 50-foot boxcar, N, ExactRail, Nov p76  
Trinity insulated tank car, HO, Atlas, Aug p74  
Two-bay offset-side hopper, N, Atlas, Mar p82  
UP Bethlehem quad hoppers, HO, Tangent, Dec p86
- Product Reviews: Cars, passenger**  
ATSF *El Capitan*, N, Kato, Apr p76  
Heavyweight 10-1-2 Pullman sleeper, N, Micro-Trains, Sep p75  
Heavyweight baggage car, HO, Walthers, Mar p82  
Heavyweight passenger cars, O, Atlas O, Jun p80  
Heavyweight 28-1 Pullman parlor car, N, Micro-Trains, Dec p90  
GN heavyweight RPO, N, Micro-Trains, Jan p92  
NYC 20th Century Limited observation, HO, Walthers, Jan p90  
SP class 77-C-3 chair car, HO, Athearn, May p80  
SP class 79-C-2 chair car, HO, MTH, Oct p78  
Steam generator car, HO, Rapido, Feb p88  
UP *City* lightweight 4-4-2 sleeper, HO, Walthers, Apr p78  
UP *City* lightweight baggage-express car, HO, Walthers, Dec p88
- Product Reviews: Control and electrical**  
DCC decoder for Kato N scale F7A, Train Control Systems, Jul p72

- Hex Frog Juicer, Tam Valley Depot, Feb p87
- Model Train Speedometer, Bachrus, Apr p80
- Navigator DCC system, ESU, Dec p92
- SoundFX DCC decoders, Digitrax, Oct p75
- Tech 6 power pack, MRC, Jan p88
- Product Reviews: Locomotives, diesel**  
Alco C-424, HO, Atlas, Nov p74  
EMD DDA40X, HO, Bachmann, Feb p82  
EMD DDA40X, N, Bachmann, Feb p83  
EMD FP7, HO, Athearn, Apr p74  
EMD GP15-1, HO, Athearn, Sep p70  
EMD GP39-2, HO, Atlas, Jan p84  
EMD GP7, HO, Bachmann, Jun p76  
EMD SD40-2, HO, Broadway Limited, Jun p74  
EMD SD40-2, Z, Micro-Trains, Mar p78  
EMD SD70ACe, HO, MTH, Jan p82  
EMD SW7, HO, Broadway Limited, Feb p86  
EMD SW9 and SW1200, HO, Walthers, Aug p70  
Gas-electric doodlebug, HO, Bachmann, Jul p66  
GE 44-tonner, N, Bachmann, Mar p76  
GE ES44AC, N, Fox Valley Models, May p74
- Product Reviews: Locomotives, other**  
MILW "Little Joe" electric, HO, MTH, Dec p82  
Presidents Conference Committee streetcar, HO, Bowser, May p76  
UP "veranda" gas-turbine-electric, HO, Athearn, Nov p70
- Product Reviews: Locomotives, steam**  
0-6-0T saddle-tank switcher, Bachmann, Oct p76  
2-6-6-2 Mallet, On2½, Bachmann, May p72  
2-6-6-2T Mallet, 1:20.3, Bachmann, Jan p86  
4-6-6-4 Challenger, HO, Sunset Models, Jul p64  
Chessie class T-1 4-8-4 Northern, HO, Broadway Limited, Nov p72  
C&O class H-4 2-6-6-2 Mallet, HO, Bachmann, Aug p68  
C&O class H-4 2-6-6-2 Mallet, N, Bachmann, Aug p69  
PRR I sa 2-10-0, HO, Broadway Limited, Sep p72  
NYC class J-3A 4-6-4 Hudson, HO, MTH, Mar p74  
SP class AC-12 Cab-Forward, InterMountain, Jun p78  
SP class MT-4 4-8-2 Mountain, HO, Athearn, Oct p74
- Product Reviews: Structures**  
Boomtown USA matboard structures, HO, Walthers, Nov p76  
Don's Mower & Saw, HO, Walthers, Feb p90  
Ethanol plant DDG building, HO, Walthers, Oct p80  
Firehouse, HO, Woodland Scenics, Jun p81  
Grain elevator and shed, Z, Micro-Trains, Aug p76  
Northern Pacific class C depot, HO, American Model Builders, May p80  
Shell gas station, HO, Summit USA, Jul p72
- Product Reviews: Train sets**  
MiniTrains HO n2½ Plymouth freight set, Dec p84
- Prototype drawings**  
Classic mill spans many modeling eras, Jun p67

