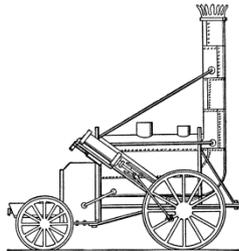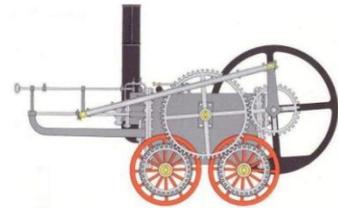# PRINT YOUR OWN DECALS

Presented by
BOB VAN CLEEF
of the
North River Railway

WHY PRINT YOUR OWN

- PROS

- Lower cost for copies
- Exactly what you want

- CONS
- Higher cost for first set
- Time consuming

# ALL SORTS OF TRANSFERS

- **Waterslide**
  - Most Popular
 - Slides of paper when soaked in water

- **Rub-on**
  - Not quite as common
  - More difficult to create
  - Transferred to surface using rubbing or pressure

I use two programs to develop my designs. The first is Corel Draw for manipulating images and creating artwork. The second is the MS desktop publisher where the images, fonts and other components are assembled into the decal artwork. Both programs are fairly inexpensive and have plenty of power to do the job. This sheet shows complete decal sets for (2) cars. Note the "+" marks used as cutting guides. You should include car numbers and reporting marks in your design and don't forget the car ends.
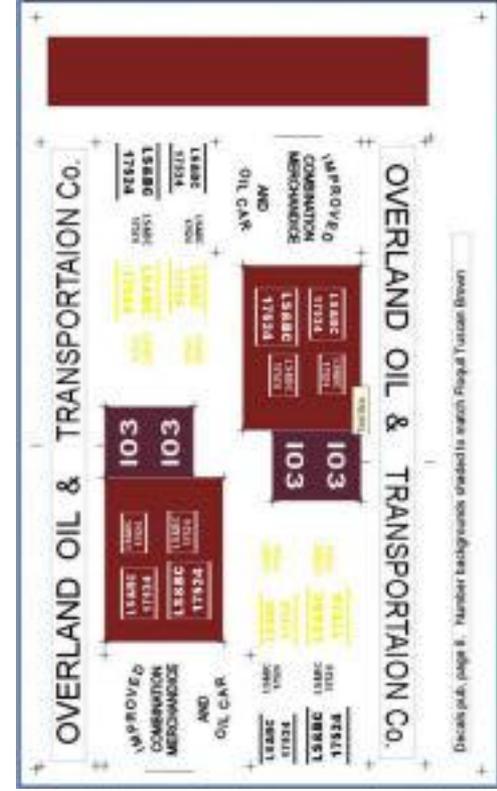
Making your own decals is not that expensive all things considered. The cost of a blank sheet ranges from about $0.50 to $2.00 depending on the paper type and the quantity you buy. Printer ink is negligible unless you are creating brick walls or other patterns that fill the page with ink. I figure a set of decals for a car costs from $0.20 to $0.50 including waste and scraps.

- xxx
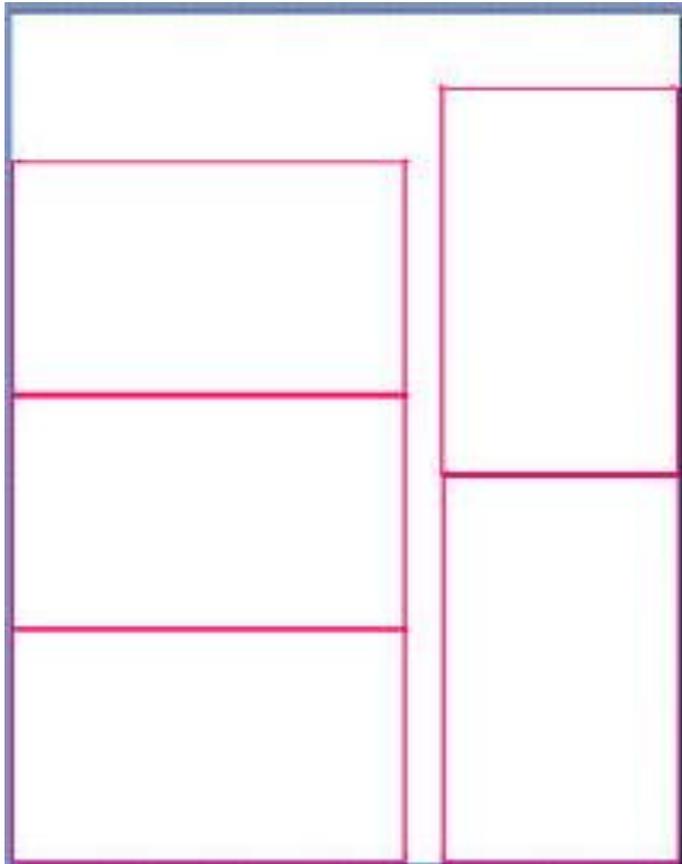
Most papers come in the standard 8-1/2" x 11'' letter size sheets. One way to cut the expenses involved in printing decals is to cut the sheets down to the size of a standard 3" x 5" index card. This task can be made easier through the use of the same graphics program used to create the decals to create various templates to guide the cutting of the sheets. Just print a "+" at the corner of each card to guide your cutting.

•

KEEP TRACK OF WHAT YOU DID

DECAL TRAVELER TICKET, sheet _____

Step	date	time					
Print:			Micro Mark / Evans / Other				
Fix Layer:			Floquil	Krylon	_____		
Film layer:			Floquil	Model Flex	_____		
Set solution			Floquil	Model Flex	Polly S		
Decal			Printed	Rail Graphic	Champion		
Soften solutoin			Floquil	Model Flex	Polly S		
Finish			Gloss satin Flat glaze crystal cote Floquil/ Model Flex /Krylon /Polly S				

Both inkjet and laser printers make great decals. Just make sure you match the paper to the printer you use. This DOES make a difference. Inkjets use wet ink and are a bit less expensive to keep in supplies. Lasers use a dry powder that is heated and fused to the paper. They are a bit more expensive but work equally well with the proper paper and the right settings

Either way you will probably find that the printer should be set for photos instead of plain paper. Make these settings on the decal paper, not the plain paper coupons and record the printer's paper type, quality, ink volume drying time and whatever other options are available for later use. Some printers allow you to set a dwelling time between pages to allow the ink to dry and prevent smudging. Glossy finishes like decals should be set for a small volume of ink and a long dwelling time. Work carefully and do NOT touch the front surface of the paper at any time. Keep your work area dust-free and allow two to three days time for the ink to completely dry.

•

STORAGE OF PAPER AND DECALS

- Decals, according to most manufacturers, are a perishable item and have a shelf life of around 90 days.

- I have decals that are over 30 years old and still quite usable.

- Store all decals flat and at a constant humidity.

- Keep away from sunlight and at room temperature.

- Cut larger sheets into smaller sizes and Store in plastic bags.

OVERLAND OIL & TRANSPORTAION Co.

IMPROVED
COMBINATION
MERCHANDICE

AND

OIL CAR

LS&BC
17534

LS&BC
17524

103

103

LS&BC
17534

LS&BC
17524

OIL CAR

AND

MERCHANDICE
COMBINATION

IMPROVED

OVERLAND OIL & TRANSPORTAION Co.

Decals pub. page 8.   Number backgrounds shaded to match Floquil Tuscan Brown

You might want to look at a few special fonts for help in your overall design. Fonts can range from special lettering to various images you may want to use such as logos, reporting marks and special symbols. When purchasing fonts you should realize there are two different categories. The first and most common are the raster fonts. These are less expensive and you can control the exact size in points. The point is a newspaper term and equals 1/72 inch. The other category is the vector fonts. These are more expensive and more detailed but can be resized easily without loosing any detail

The decal, once dry, is now ready for finishing. Some sort of top coat or fixative is required to seal the ink from running in water or smudging. Some manufacturers have their own product however the most common product recommended is either Krylon Crystal Clear or Matte Finish available at A. C. Moore and other craft stores. Spray the first coat sparingly then when dry spray another heavier coat and let dry again thoroughly. Certain types of Rub-on decals will also require a tack layer
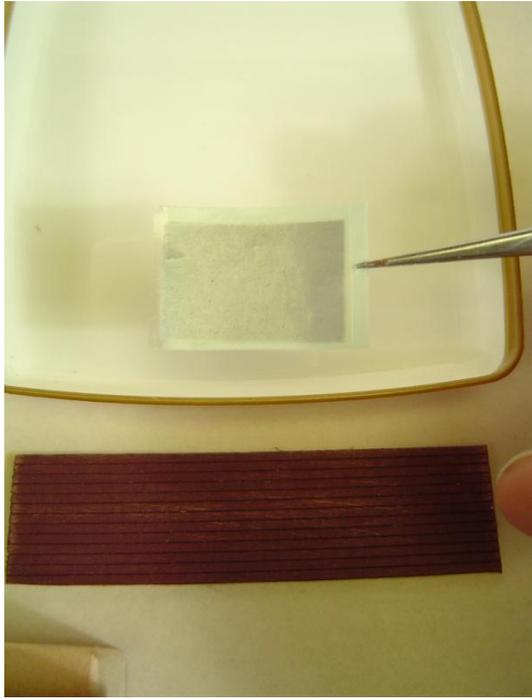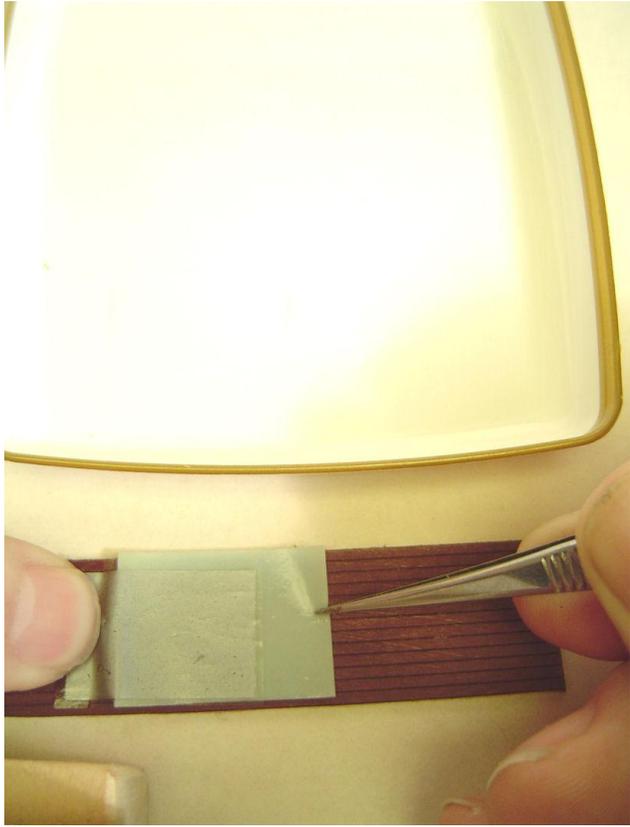
Rub-on decals do not have the same shiny film as water slide decals but the are more fragile and can be a bit trickier to apply.   Use a blunted point to apply pressure to the center of the decal. Some use a blunt pencil or the stylus used on a PDA. Another weapon of choice can be the type of orange-stick a manicurist used to clean under fingernails. Hold the decal against the surface and start rubbing the center with the point. Work in increasingly larger circles and you should be able to see when the artwork separates from the backing.   Keep holding the backing against the surface until the artwork has been completely separted and is adhering to the surface. Again, use some kind of varnish to protect the decal.

111
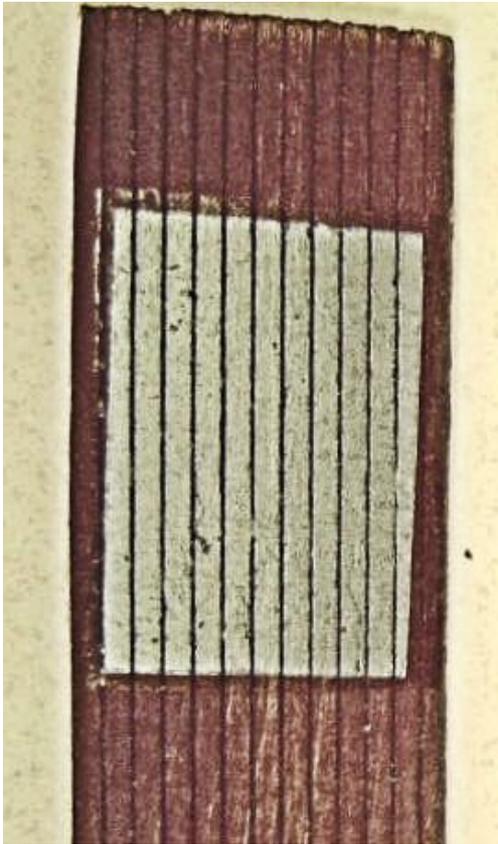
Check the decal carefully. Once the solvent has dried you can cut the decal along the scribing and cracks of a car side and apply another layer of solvent. As before, brush the solvent on once then refrain from further touching until the solvent as dried. I you do this right you may still have a tell-tale shine around the decal where the film shines through from under the artwork but it should be minimal Note that the bluntness or sharpnes of the knife used to scribe the decal will have a great effect as to how the film wraps around the corner of the scribing

222

- 333

WATERSLIDE DECALS

LAYERS of WATER SLIDE DECAL
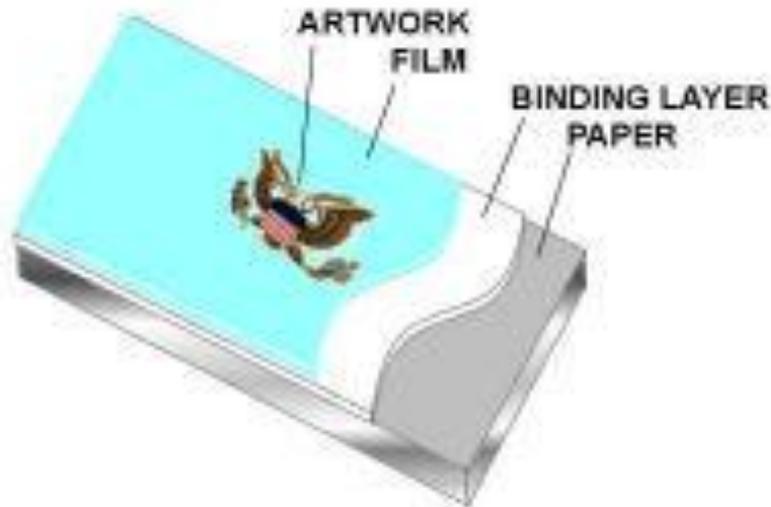
ARTWORK FILM

BINDING LAYER PAPER

- Slides off the paper when soaked in water
- A paper backing or carrier that forms the base.
- On top of this there is a thin binding or release layer of water-soluble glue that will hold the decal to the surface to which it is applied.
- A thin transparent layer forms the decal proper.
- The only thing remaining is for you to apply your own artwork via inkjet or laser printer.

RUB-ON DECALS
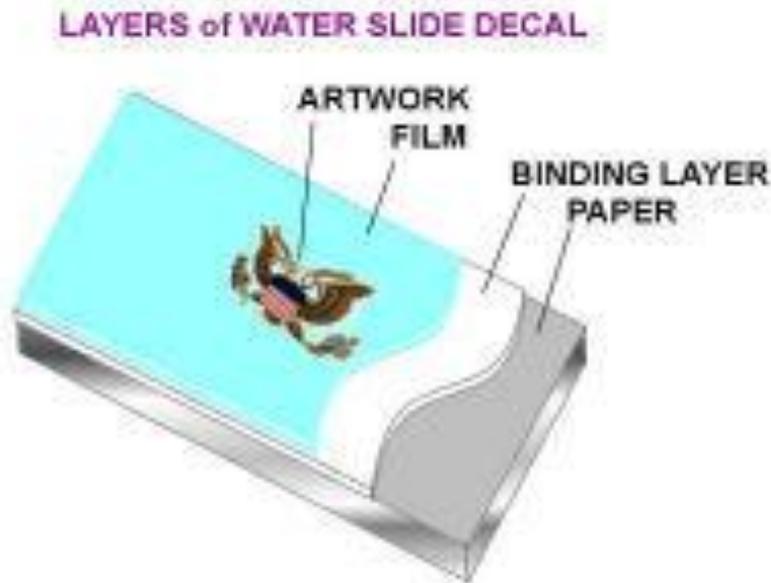
LAYERS of WATER SLIDE DECAL

ARTWORK FILM

BINDING LAYER PAPER

- Slides off the paper when soaked in water
- A paper backing or carrier that forms the base.
- On top of this there is a thin binding or release layer of water-soluble glue that will hold the decal to the surface to which it is applied.
- A thin transparent layer forms the decal proper.
- The only thing remaining is for you to apply your own artwork via inkjet or laser printer.

EVEN MORE USES

A Block house made from printed papers.

Adhesive backed papers come in thicknesses ranging from simple paper to 1/8" pasteboard. The thinner papers are suitable for covering the solid walls (or roofs) of a model while the thicker papers can be used for the walls themselves. You can even create whole towns from built-up the thicker papers. Simple print pictures of individual buildings, then stack the cut-outs several layers deep for an impressive backdrop.
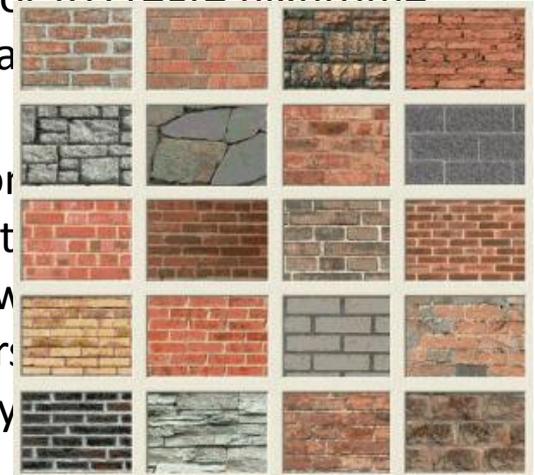
EVEN MORE USES

Acetate both clear or tinted can be used to create stained glass and clear store front windows. Just print whatever lettering you want to use, size the window as required, then print.

MORE USES

- **Decal papers** Also used to photo-etch photo-sensitive printed circuit boards

- **Vellum papers** used for night time window and interior scenes. Print people etc. on vellum and backlight with white LED. Vellum can also be used for signs and billboards

- **Photo papers** can also be printed for interior scenes

- **Foils** – Can be used to Create mirrors and a large number of special effects

- **Decal papers** are commonly used for Dry-slide and Rub-on decals but can also be used to photo-etch photo-sensitive printed circuit boards

- **Vellum papers** can be used for transparent for windows or to create nighttime interior scenes in buildings. Print people etc. on vellum a LED. Vellum can also be used for signs and billboards

- **Adhesive backed** papers come in thicknesses ranging from pastboard. The thinner papers are suitable for covering t of a model while the thicker papers can be used for the w even create whole towns from built-up the thicker papers of individual buildings, then stack the cut-outs several lay impressive backdrop.

For More Information…

The Penydarren Tramroad 	http://www.irsociety.co.uk/Archives/59/Penydarren.htm

The Rocket
	http://www.mylargescale.com/Community/Forums/tabid/56/aff/8/aft/9987/afv/topic/Default.aspx

The history of steam engines 	http://www.e4training.com/steam/index.htm

Newcomen steam engine 	http://en.wikipedia.org/wiki/Newcomen_steam_engine

Denis Papin 	http://en.wikipedia.org/wiki/Denis_Papin

start your engines 	http://library.thinkquest.org/C006011/english/sites/index.php3?v=2

Spartacus Educational 	http://www.spartacus.schoolnet.co.uk/

Science Photo Library
	http://www.sciencephoto.com/images/download_lo_res.html?id=863100060

Rainhill Trials 	http://en.wikipedia.org/wiki/Rainhill_Trials

THE Rainhill Trials Oct 1829 	http://www.resco.co.uk/rainhill/index.html

Blackpowder Engine Challenge 	http://www.youtube.com/watch?v=oE29MJOnTdE

Huygens' explosion engines 	http://library.thinkquest.org/C006011/english/sites/huygens.php3?v=2

Newcomen Engine in Action
	http://videos.howstuffworks.com/discovery/34867-massive-engines-newcomen-engine-in-action-video.htm

RESOURCES

- **BelDecal.com   http://www.beldecal.com/** - Thick and thin-film papers for inkjet and laser papers. Also magnetic and rub-on transfer.

- **DecalPaper.com** - Wide variety of papers

- **Evans Designs** – Software and complete line of supplies to generate signs, windows, wall textures, etc. and related papers.

- **Great Decals** – Decal suppliers. Links to several vendors for conventional decals, dry transfers, supplies and information

- **Griffin Decals** – Authentic decals extracted directly from builder's photographs 1880-1930. Pricy but they are authentic.   Site hosted by Great Decals.

- **HYAZ / Papilio** - Full line of inkjet and laser decals including rub-ons, foil, vinyl and types too numerous to list here.

- **Micro-Mark** – Full line of kits, refills and supplies for laser and inkjet decals. designed for the do-it-yourself modeler who wants to make his own decals. Kits available for both inkjet and laser printers

- **Microscale Decals** – thin-film Decal sets for modern equipment. Also does custom work from scratch or camera ready. Resident Artist for custom designs

RESOURCES

- **Papillo Inkjet Media** - Retail outlet for HYAZ papers and expands offerings to various fixitives and accessories for decal work

- **Rail Fonts.Com** – Fonts and type faces specifically designed for railroad lettering. Also various images using one image in place of each letter. Well worth looking into when designing decals, passes or other railroad related items.

- **Rail Graphics** (note new URL)– Large assortment of generic and basic decals for wide variety of car styles. Also does custom work from scratch or camera ready.

- **Railroad Paint Shop** – Source for paint schemes (prototype and imaginary) for engines and equipment. Schematics also great for detailing equipment. They can help you design custom decals for a price and advise you on how to lay out a decal sheet.

- **Rings 'N Things** – All sizes of small plastic bags to store cut and uncut decals as well as small parts, dry color, and any number of other things. You can also find all sorts of little goodies you wouldn't think of including small tools, Beads used for spacers on electrical components or power lines on layouts, elastic chord for power lines.

This presentation has been brought
 to you by the North River Railway

Bob Van Cleef
46 Broadway
Coventry, CT 06238
http://www.northriverrailway.net

THE END