

MRH \$500 CONTEST CHICAGO FORK

A starter layout you can build for under \$500

– By Prof Klyzlr

A switching layout on a budget ...



Total honesty? Chicago Fork was not designed as a build-a-layout-to-a-price project. The original Chicago Fork is an O scale 2-rail micro layout, Inglenook, built to answer a challenge from local modelers. Following its exposure on the Small/Micro Layout



1: CB&Q GP38 # 187 prepares to make it's next switching move on Chicago Fork.

website carendt.us/scrapbook/page97a/index.html#chicago many visitors to the site requested a HO version track plan, and the Chicago Fork layout shown here was born.

As a minimum-space switching layout, Chicago Fork utilizes the popular 3:2:2 Inglenook track arrangement, with a twist. Instead of two discrete turnouts, a simple sector plate is used to replace one turnout, thus saving the length of the turnout and associated clearance distance. The Inglenook provides a veritable wealth of potential switching scenarios for the modeler to choose from. A generic warehouse as shown with car spots can fit just about anywhere in the USA. Any industry which uses car spots could be easily substituted.

In the case of a layout on a budget, switching tends to give the most play value, so it is a logical option for this challenge. The



2: An overhead build-stage shot of the Chicago Fork scene.

Inglenook track arrangement can be operated in simple play mode, where the order of the cars and switching is guided by any simple random-draw system. Or a prototypical switch list or car spot sheet can simulate the real-life cellphone conversation between a local switch crew and the industry dock manager. The simplicity of the Inglenook configuration also significantly helps keep the budget under control.

While I personally prefer to switch with an SW1500, the HO version Chicago Fork is equipped with rolling stock duplicating that on its larger O scale predecessor. An Atlas CB&Q DCC-ready GP38, a CB&Q caboose, and handful of cars are the starting stock on this project. The contest budget needs to be carefully watched here. The difference between MSRP and eBay prices for the same roster of equipment can be significant!

Splurging on one DCC sound-equipped loco could immediately decimate an already tight budget. It's interesting to note that opting for kit rolling stock may or may not represent a savings when compared to inexpensive RTR options. However, for the dollars, a good-quality kit such as those by Tichy and Red

Caboose represent a greater opportunity for learning modeling skills than its equivalent RTR car.

Benchwork

Some modelers love to build it, some will do anything possible to minimize the pain. In Chicago's case, 5mm foamcore has been used to create a monocoque structure. The module is super-light, yet more than strong enough to handle regular movement in a home setting.

Building benchwork is often written off as a noisy, dusty, messy process, which is all but impossible in the average apartment. Using foamcore, I constructed Chicago in one sleepless night, without waking my wife or any of the neighbors. I achieved this easily using quiet-operation modeling tools, which most modelers will likely already own. You might need to stock up on X-Acto blades, though.

Design

The module design includes an integrated covered backdrop/ceiling, benchwork fascias, and lighting system. This cameo scene can be appreciated in its best light under any conditions.





1a-1b: Schematic trackplan of “Chicago Fork”, as drawn and presented by the late Carl Arendt.

Most small shelf layouts are perceived as nothing more than switching-planks due to lack of presentation framing and lighting. Lack of fascia and lighting really does sell the potential of micro/small layouts short and a terrible disservice to what can be amazingly-detailed modeling.

Speaking of the design, I know some may be looking at the foamcore and sector plate thinking, “nice stand-alone unit, but there’s no way to expand it”. Not true. With careful attention to the track geometry, the angle of the sector plate is such that it can be removed, and a second PECO Code 83 #5 turnout dropped in place. From there the options are: extending the layout to complete the Inglenook as-is, or build more foamcore modules and connect them end-to-end, limited only by available space and the motivation of the modeler.

The track used on Chicago Fork is PECO Code 83 US-geometry flextrack and turnouts. PECO turnouts are designed with a built-in over-center spring. This permits positive manual-throw operation right out of the box. Personally I prefer Caboose Industries ground throws, and use N scale #218s mounted at the layout edge. A short wire-in-tube extension allows fully-manual control without having to reach into the scene.

After Chicago Fork was built, it occurred to me that another option is the turnout kits from Proto:87 Stores. These would



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4: It's 3 am, and the all-foamcore base of Chicago Fork takes shape. No sleeping spouses or significant-others were awakened in the construction of this layout.

not only represent an upgrade in visual detail and mechanical performance, but would also save some money. It also matches with the ethos of quality-over-quantity, which is an inherent part of wringing the most out of any small layout.

Wiring and control

Wiring and control can be a pleasure or a chore on any layout. The difference comes down to making the most appropriate choice for the layout design and its envisioned operations. On a small switching layout, it's less about corralling a roster of locos, but rather optimizing the slow-speed crawl performance of the few active units in play.



5: Note the overhanging module roof/fascia/lighting pelmet and 6" deep "L-girder" base. Foamcore is imminently suitable for benchwork building as long as basic structural principles are respected.

The Parts list/Budget is as follows:

Qty	Description	Cost each	Total
2	60"x40" x 3/16" Foamcore sheet (white)	\$20.00	\$40.00
1	30"x40" 2.5mm matte board (white)	\$5.00	\$5.00
3	(PECO) Code 83 flextrack	\$5.57	\$16.71
1	(PECO) Code 83 LH #5 turnout	\$27.25	\$27.25
1	PECO SL14 pins	\$2.87	\$2.87
1	Rail Joiners	\$4.60	\$4.60
1	Caboose Ind N scale 218S ground throw	\$3.25	\$3.25
1	Analog DC Controller (MRC Railpower 1300)	\$40.00	\$40.00
1	Walthers "Buds Trucking" bkgnd structure	\$35.00	\$35.00
1	Fine rock ballast	\$10.00	\$10.00
1	Woodland scenics mixed turf	\$6.30	\$6.30
1	Heki "pull-apart" foliage matting	\$15.00	\$15.00
2	DC Power cable	\$1.00	\$2.00
1	2-light 50W Halogen lighting kit	\$15.00	\$15.00
2	20W Phillips MR12 Halogen "brillantline" bulbs	\$8.00	\$16.00
2	"Fiddly Bits" spraypaint (1x Matte Black + 1x Lt Blue)	\$6.95	\$13.90
1	Atlas GP38 CB&Q (DCC ready)	\$80.33	\$80.33
1	Altas Wide-vision caboose	\$24.00	\$24.00
1	40' Red Caboose tankcar kit	\$17.27	\$17.27
1	40' Red Caboose flatcar kit	\$13.57	\$13.57
1	Athearn 40' HiCube Burlington boxcar	\$13.56	\$13.56
1	LBF MILW boxcar	\$13.27	\$13.27
		Total Cost	\$414.86
		Minus Trains	\$161.99
		Layout Only	\$252.87

Table 1: The "Chicago Fork" levered eBay to come in under the target \$500 limit. I purchased all layout benchwork, trackage, lighting, paint, and wiring items new from local stores. However, the rolling stock and locomotive came from eBay. This saved money and also provided items not available locally. For the contest, I set prices by summing the 3-highest and 3-lowest price auctions for each item, and averaged the result. The \$85 remaining from the budget actually forms a "Misc/consumables" fund to accommodate variances in eBay auction prices, minor tool upgrades, extra X-acto blades, etc.

This is one area where the budget really bit hard on the realistically-doable options. Even a starter DCC system from most of the major manufacturers easily eats almost half the contest budget. Analog DC is the option which best fit the budget criteria. That said, at eBay prices, a Bachmann E-Z Command DCC system potentially could be substituted, if needs and whims really required one. Whichever system is chosen, the wiring is easily accommodated by less than 6' of DC power cable, and a microswitch to handle the turnout frog switching.

Structures and scenery

Structures and scenery are another area where spending time instead of money can pay dividends in improved modeling skills and the wow-factor impression. While the three car-spot Chicago Hoist and Fork warehouse shown was kitbashed from a Walthers Buds Trucking Co kit, a sheet of styrene and some foamcore could easily achieve a comparable result.

Another alternative is using some of the cost-effective card structure kits available from KingMill Enterprises and Scalescenes. Whatever the preferred option, a few lengths of styrene I-beam, brass wire, and scale corrugated metal can form an effective scratchbuilt awning. The chain-link fence is simply brass wire soldered together to form a frame and draped with \$2 worth of decorative plastic mesh.

Bottom-line

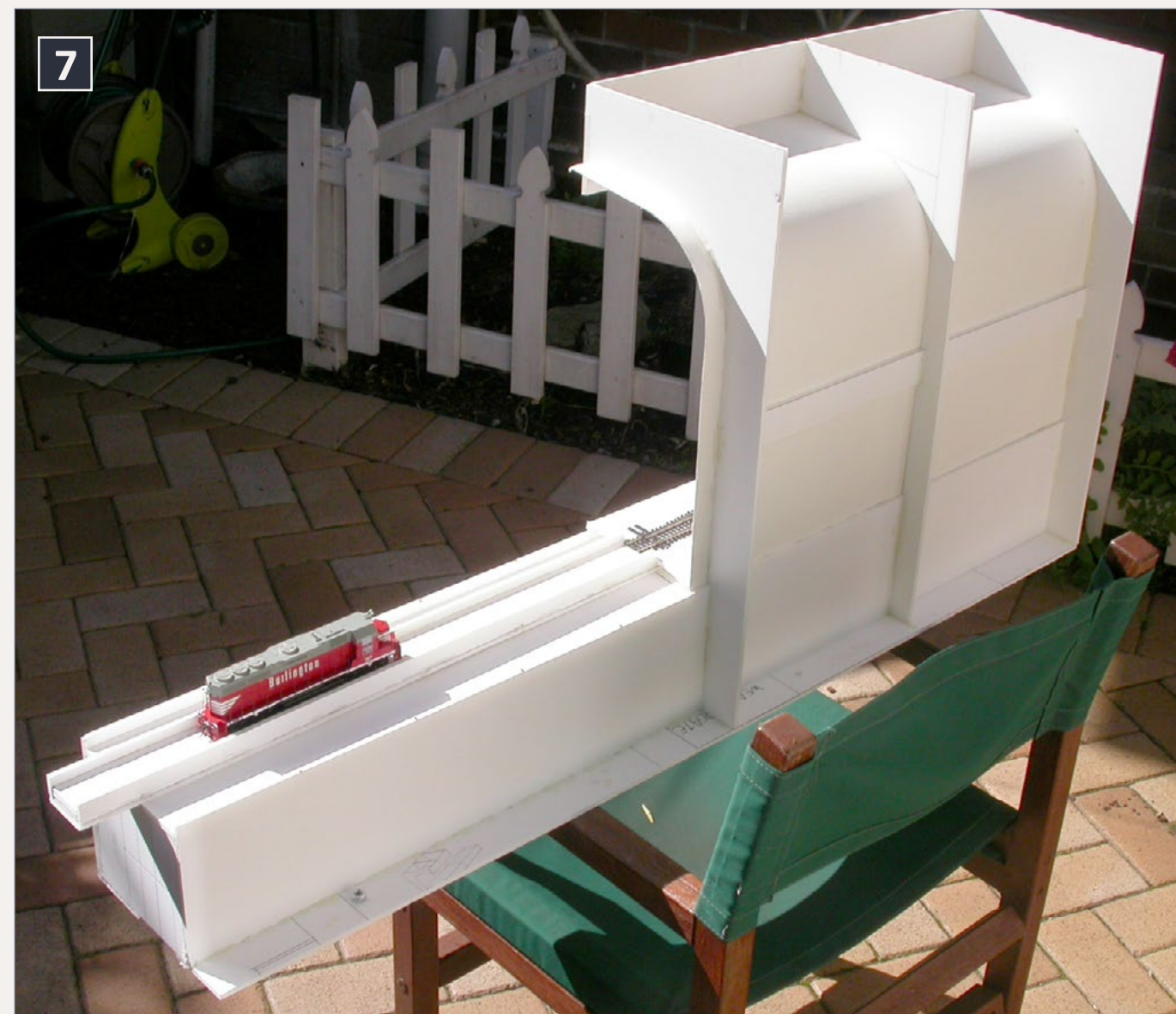
So how did I do on the budget? The layout itself, (everything including benchwork, lighting, track, structures and scenery, throttle and wiring) ended up at around 50% of the budget. The rest was taken up by the locomotive, freight cars, and a small "miscellaneous expenses" fund to cover minor extras, consumables, or budget overruns. Without the savings

available via eBay, even this modest layout could well have exceeded the target \$500. When working to a fixed budget, spending carefully and wisely is not just advisable, it's essential.

What did we get for our money? A "fully presentable" single-scene layout which will fit in almost any home. It needs no custom tools to assemble, and no noisy/dusty/messy power tools, which immediately gains points with the Domestic Authorities. It's fully capable of quickie game type operations for sharing the hobby with children and non-train visitors. It is equally capable of hosting more prototype-inspired operations for the hardcore ops-minded modeler.



6: The day after the night before. Chicago Fork shot outside in raw foamcore stage. The PECO Code 83 #5 turnout, Athearn boxcar, and Atlas GP38 look strangely at-home...



7: The rear of Chicago Fork, showing the profile supports for the roof and lighting system. The coved backdrop/ceiling is 2mm matteboard.

A high quality locomotive paired with a basic quality throttle, reliable track, and manual turnout controls present an easy-to-use human interface and satisfying operating performance. It can be ready to run at the flick of a power switch. The layout provides many opportunities for expanding the modeler's skills, while not imposing so much of any given discipline that the tasks become a burden.

So who's keen to start building?

Photos continue on the next pages ...



8: Ahh, that's better. A quick shot of sky-blue spraypaint on the backdrop and Matte Black on the fascias makes the foamcore module immediately more presentable.



9: "Chicago Fork" and its larger O scale 2-rail predecessor set up side-by-side at a local O-scale modelling get-together.



10: Chicago Fork displayed at forearm height, just begging to be operated...

“Chicago Fork” Tool List

The Tool list for “Chicago Fork” is largely made up of items found on any modeler’s workbench. With the exception of the Hot glue gun and Soldering iron, the tools do not require power, making operation virtually silent. This along with the use of foam core permits building of layout sections at times and in locations which might otherwise be domestically impossible.

The tool list is as follows:

- Minimum 600mm (24") ruler
- “Sharpie” marker or equivalent
- X-acto knife + spare blades (!)
- Lo-temp hot glue gun (art and craft version)
+ spare glue sticks (!)
- Rail nipper/rail-cutting saw
- Needle-nosed pliers
- Fine file (track tweaking)
- ACC
- PVA (White) glue
- Isopropyl alcohol
- Soldering iron + 60/40 General Purpose solder
- Paints for painting/weathering (Tamiya XF series acrylics
+ Jo Sonja Goache)
- Disposable brushes



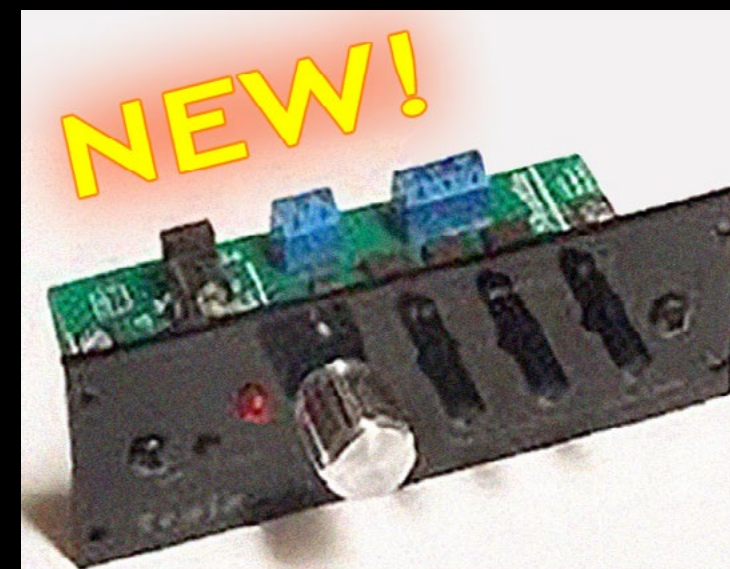
Prof Klyzlr’s parents report that from a young age, he showed significant interest in anything train-related. However, it was through the support and encouragement of local narrow gauge modelling mentors that the

seeds of scale railway modelling really took hold.

Prof’s modeling interests cover a lot of ground, including narrow gauge Australian logging, standard gauge US shortline, and switching operations. He is also active in Small/Micro Layout design and Layout-Sound modelling.

Prof actively promotes model railroading to the general public at exhibitions and events, and can be often found encouraging and assisting fellow modellers in and around Sydney, Australia.

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