Believable Operation: Thoughts and Practical Achievements

by Tony Newton

Introduction

Many of us forget that railways were built to carry stuff (including people) from place to place and not to provide a spectacle for the likes of us. So there's a lot to be said for running a layout to timetable in prototype fashion to reflect this sense of meeting the needs of a community. Don't stop reading here: I'm not going to tell you to wait until the hands of the clock creep round to the appointed time before running a train: in fact I'd regard that as pretty peripheral. What I am going to do is discuss how you can run a pattern of trains in a sequence thought out to match some location - real, imagined, or adapted - which can be a source of considerable satisfaction.

OO gauge seems an ideal environment for this kind of modelling. There's enough RTR to put a layout together and provide it with the right rolling stock and power to run like a real railway, something you might regard as more important than worrying because the rails are a millimetre or so too close together. What follows is a summary of my own efforts to create a credible stage upon which I run my trains in a believable context. As it happens, the layout itself contains hand-built track and some kit-built engines and rolling stock, which helps both its operation and its running, but very little of the following depends on that and could be achieved with RTR.

Source of Inspiration

In principle, I've been heavily influenced by Frank Dyer's masterpiece "Borchester" (Model Railway Journal Nos 27 & 30-36) and "The Ins and Outs" by John Cockroft (Model Railways, January 1990), all of which I'd recommend reading. Frank Dyer shows how purpose in movement puts believability into a layout and John Cockroft's article details the pattern of operation in a modest-sized terminus, showing how purpose of movement worked out in steam days to include a surprising number of light engine movements and sundry shunts. My passenger timetable is based on the Cockroft article which covered movements in the five-platform L&Y half of Bradford Exchange; I've transposed it to an imaginary adaptation of the real Lancashire, Derbyshire, & East Coast Railway's station in Chesterfield and reduced the number of platform faces to three. In doing so, a lot of detail has been changed but I have attempted to keep the essential principles such as non-regular-interval services, services to fairly remote locations, quite long layovers of stock in the platforms, and plenty of light engine movements. I imagine it could transpose equally well to many other locations and periods.

Context of the Layout

The layout is shown in fig 1. In spite of being continuous as a model, it is operated as a terminus with passenger services to Lincolnshire, Sheffield, South Yorkshire, Nottingham & London, with local goods to/from a marshalling yard ten to twenty miles away and coal from a nearby pit to Woodford and points south: see map in fig 2.

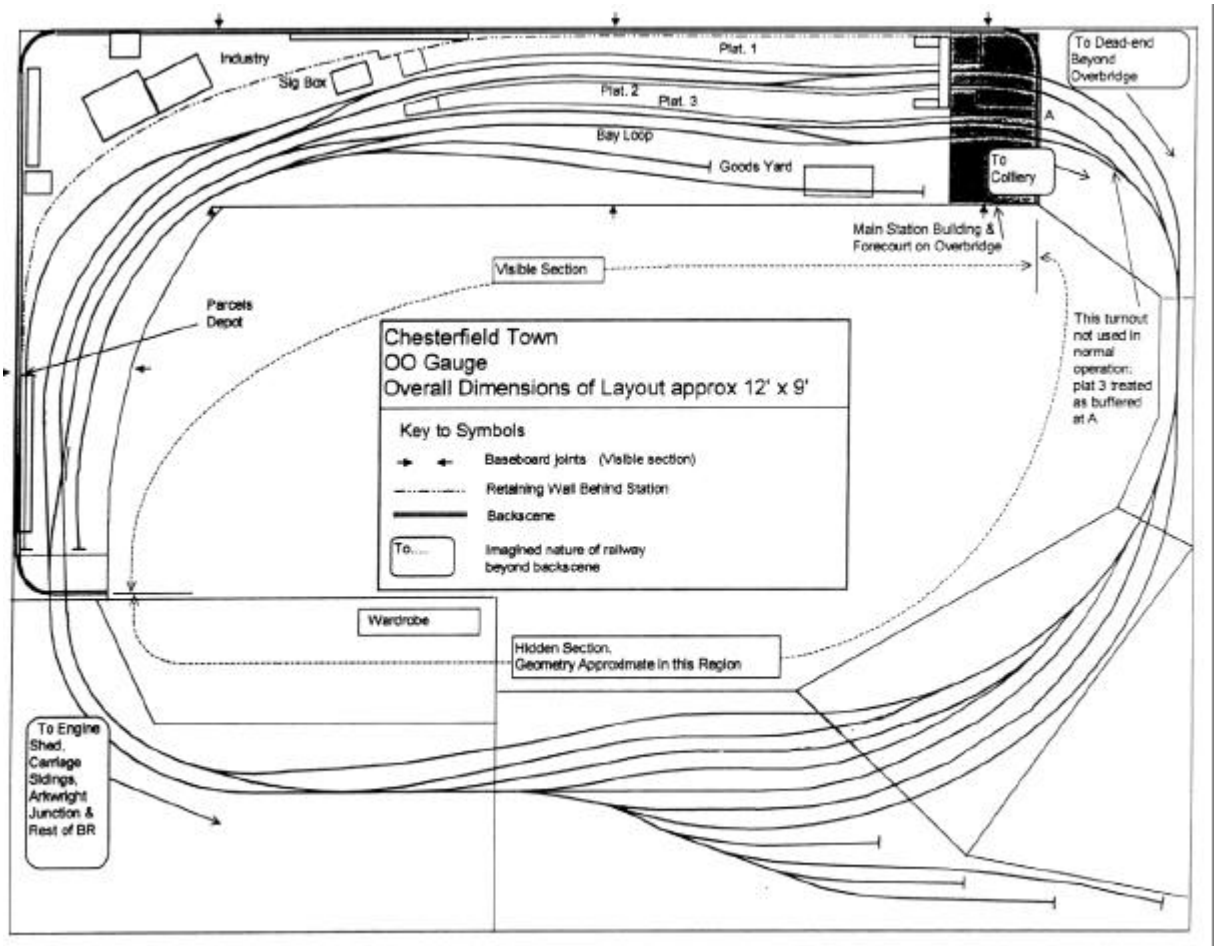

Figure 1.

The historical theory is:
That the Lancashire Derbyshire and East Coast planned and built Chesterfield as a through station, ready for the next stage over the Peak District to Lancashire, but ran out of money, (very little different from reality).
That the Manchester Sheffield & Lincolnshire (later to become the Great Central) didn't build its Chesterfield loop but made a connection with the LDECR route, (a concept flying totally in the face of reality or credibility).
The LDECR's station in Chesterfield was Market Place: I've not used that name because I don't want anyone to get the idea that it pretends to be a historically correct model, and I've called it Chesterfield Town.
The period is late 1950s or thereabouts, after the LDECR became, via the Great Central and the LNER, part of British Railways. I think this period is about as late as you can go without having to start virtually afresh as British Railways began to move away from steam-era working, and the sundry movements making it fun to operate got whittled away.

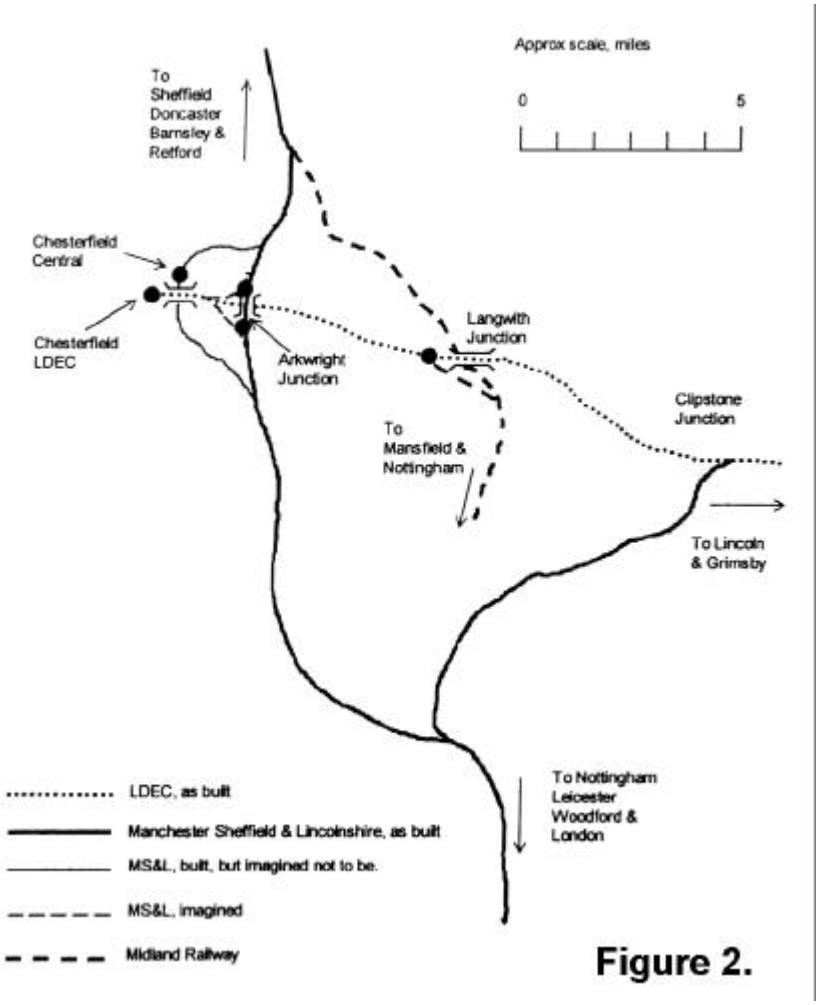

Figure 2.

The Timetable - Practical Details

Fig 3 gives the timetable, which is better described as a movement sheet for the station, following John Cockroft's example. Note:

The movements are arranged in order of departure times. One consequence of this is that an arrival at the top of a page may take place before you finish the previous page; use the spaces "Last departure on this page" and Movements on next..." to write yourself reminders and avoid being caught out.

Movements actually take place without waiting for any particular time: what is preserved is their sequence. For example the 0930 departure to Nottingham will take place after the 0924 departure to Sheffield but it might take place two, five, or ten minutes later or even the following week. The operation is halted whenever is convenient and resumed later, using the space provided at the top of each sheet to note the time (i.e. railway time) at which you broke off.

There are references to a "neck"; this is a direct copy from Cockroft, which I use to mean "somewhere offstage not far away"

There isn't a formal space to specify which engine is to be used. This is OK since one might expect some variation; I've generally used the "Next for inwd engine" column for this where appropriate, usually to specify the Station Pilot or Goods Pilot.

	Destination	Number of trains per day		Character of Service
Passenger		Inwards	Outwards	
	London	4	4	Long distance ordinary or express
	Lincoln	4	4	Local
	Grimsby/Cleethorpes	3	6	Ordinary
	Barnsley	1	0	Ordinary
	Sheffield	11	12	Local to nearby city
	Arkwright Junction	5	5	Feeder to mainline trains
	Langwith Junction	2	2	School train
	Nottingham (via LMS)	7	7	Local
Parcels	In from London: Individual vans out to York, Lincoln, Boston & March			
Newspaper	In from London: Return empty			

Figure 3.

The Timetable - Miscellaneous Comments

I find that running a layout makes a lot more sense if I think of it as theatre. Railway modellers produce sets of varying degrees of realism and run trains to the fiddle yards, just as an actor might slope off to the wings for a rest and the audience happily believes he is going to sort out MacBeth or whatever: the parallels are there in quantity. I owe my thanks to Ray Earle ("Penny Hasset", Model Railway Journal 34) for wising me up to this concept.
Running a full day's timetable can last several weeks, since I rarely have more than the occasional hour to spare for working the layout between the business of having a life, building/adapting new stock & engines, and fighting off people who believe that because I've retired early I have unlimited amounts of time to devote to every other activity. In fact this can be a considerable advantage, since the fiddle yard needs re-sorting every timetable hour or so, and a break between acts (theatre analogy again) is useful.
Do also note that the requirement to create the timetable from an estimate of the necessary trains to serve a community goes only so far, i.e. for the guidance of wise men and the blind obedience of fools. The frequency of trains can start off as a pretty arbitrary guess when your layout is a might-have-been, and you can always read round, join specialist societies, or scour magazines for better information to get it spot on. However I found myself wanting to add or delete trains to create a more interesting operating pattern: as long as the service looked as though it might reasonably have come about that way it still felt pretty satisfying.
It isn't necessary to use a spreadsheet of course but it is very handy, because you never get the timetable right first time, and it would be jolly boring if you did. A great deal of the satisfaction comes from adjusting the movements to suit: being able to edit and re-print keeps your sheets neat without too much effort. Equally, there's nothing to stop you writing it on cards, one for each movement.

Passenger Operation

The passenger-rated trains connect with destinations as shown in the table below. The Grimsby/Cleethorpes service is frankly unbalanced and needs to be modified.
Ex-LMS trains treat Chesterfield as a foreign station, i.e. the incoming engine releases itself via a run-round loop and moves off to the shed (offstage) and returns after a realistic interval for turning & watering, but not coaling.
Virtually all others treat Chesterfield as home base: the train is removed to the sidings by the station pilot, or shunted as necessary to form another train with a different engine. Once the train is removed the engine runs off to shed.
One exception to the basic pattern is a morning Sheffield-London XP which arrives in platform 1 behind a smallish engine and is taken away, after the minimum of delay consistent with the operation, by an express engine which attaches at the other end of the train. There is a reverse working in the evening.

Mineral Trains

There are two of these a day working from the colliery via a one-engine-in-steam branch, through the station, and on to the main line. A light engine from the shed goes up the branch to collect a full train which it then works back. There should be corresponding empty workings but there aren't, awaiting time to invent some more room in the fiddle yard and build two-bob Airfix kits or buy hundred-and-twenty-bob Bachmann minerals.

Merchandise Trains

The goods yard is really too small and this side is frankly vestigial, spun out as far as possible. A goods pilot fusses about and gets wagons from the yard and imaginary off-stage industries to make up an outgoing train. The daily goods arrives late morning, leaves a train, and departs with the outgoing one. The pilot distributes the incoming wagons as required. A little later an engine & brake van from the shed picks up sundries (sometimes big sundries) left by the daily goods and takes them to the colliery. It returns later, usually with empties which it leaves in the yard for the next day's goods.
Even in such an inadequate yard, there's room for better operation, using some means of creating day-to-day variation in traffic; it's been done before, using playing cards for instance. Actually, I sometimes just let an engine stooge up and down the yard with a few wagons, add sound and steam from memory, and drool.

Motive Power

This is summarised in the table below. Could it work with unmodified RTR? Well, all items except the 04 diesel and BR 2-6-4T have compensation and/or some form of pickup spread over a flexible wheelbase, and this does give improved running to the extent that backing an engine onto a train is smooth, controllable, and feels like the prototype. Without it, running won't be as good, but that's the case with any layout.
Without kit-built engines what could you do? We pampered LNER types could run an entire layout out of (mostly) Bachmann boxes, although it would clearly lose the ex-Great-Central feel it has at present. The J10 & J11 could be replaced by J39s (or some combination of J39, J94, J72, & V1), the GC O4 by another WD, and the class 24 by a class 25 (or a further steam engine if you find that too modern). The Park Royal railbus could be replaced by a second Hornby DMU (or a Lima) with a little re-jigging of the timetable where it depends on the shortness of the railbus to fit in available spaces. For LMS and GWR followers I've suggested a few examples from current or not-too-distant-past proprietary ranges corresponding to my LNER classes.

Rolling Stock

Goods stock is a combination of modified RTR and plastic kits; I confine myself to stuff that could actually be handled in a small goods yard apart from a double bolster used to serve the off-stage industries. Again the modifications are my choice (Gibson or similar wheels and three-link couplings) and the concept would work perfectly without them.
Coaching stock is mostly proprietary, comprising:
A five-coach set of 4 BR Mk1s (2 Bachmann and 2 Mainline) together with a BSL Thompson third: set A1 in the timetable,
A four coach set of 3 Gresleys (all Hornby) and 1 Bachmann Thompson: set A2 in the timetable,
A four-coach compartment set from Southern Pride: set B1 in the timetable,
An ex LMS three-coach compartment set for the Nottingham trains, Airfix/Mainline: set B2 in the timetable,
A parcels rake, comprising Lima and Mainline vehicles and an etched brass LNER full brake.
Again, nothing that couldn't be replaced by RTR.

Concluding Noises

Does all this sound like "Of course I modified and built as I needed but you lesser types could cope with toys"? I hope not; I build stuff because I like it, and I like the results when I get something closer to what I want. BUT - I've ceased to believe that this is some sort of holy grail, with everything else being a poor second-best. Instead, I see operating in a convincing manner as every bit as satisfying, maybe more so, possibly even closer to the spirit of just what makes a railway tick (theatre again, where the action/dialogue is generally more important than the stage settings) and likely to be workable in one lifetime. I won't pretend that I've achieved it all with RTR because I haven't, but on the other hand I'm pretty damn sure that I could have if I'd felt that way inclined, and it wouldn't have taken me twenty-five years to do it. And unlike extensive building, prototypically consistent operation is open to everyone who's prepared to sit down and think a bit. If you want to improve on the running or appearance of RTR, or if you just fancy something they don't produce - or even just want to build for the sake of it - then you can build or adapt at your own pace and get the enormous satisfaction it can bring, without feeling

that you've got to get it finished to run the layout. And that, I might suggest, is possibly the biggest plus-point of OO.

As Implemented				Alternatives	
				GW Option	LMS Option
Steam Engines: LNER					
LNER	V2 2-6-2	Bachmann	London XP	Hall	Patriot Jubilee
LNER	B1 4-6-0	Bachmann	All passenger except Sheffield	Manor	Black 5
LNER	B1 4-6-0	Bachmann	All passenger except Sheffield	43xx Mogul	2P 4-4-0
LNER	J39 0-6-0	Bachmann	Passenger, mostly Lincoln	2251 / Prairie	Fowler 2-6-4T
MS&LR	J10 0-6-0	DJH kit	Station pilot, local goods	Pannier	Jinty / 4F
GCR	J11 0-6-0	Bec kit / Airfix 4F tender chassis	Station pilot, local goods	Dean Goods4F	
GCR	O4 2-8-0	Anchorage kit	Coal, sometimes local goods	28xx	Stanier 8F
Steam Engines: Standard					
M.O.S.	WD 2-8-0	Bachmann	Coal		
BR	4MT 2-6-4T	Wrenn	Passenger		
Steam Engines LMS					
LMS	4F	Airfix	Nottingham passenger		
LMS	2P	Mainline	Nottingham passenger		
Diesel Engines and Railcars					
BR-Sulzer	Class 24	Hornby modified	London passenger		
Drewry	Class 04	Bachmann	Miscellaneous shunting		
BR	Class 110 DMU	Hornby	Sheffield trains		
Park Royal	Railbus	Airfix: Branchlines chassis	Langwith Junction & Arkwright Junction		
GWR	Railcar	Lima	Langwith Junction & Arkwright Junction		

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