TIMETABLE PLANNING,

by David Baxter

or the article you should have read 18 months ago

It is almost certain that if you have built a layout and are now thinking about planning a timetable for it that you have left it a bit late. The proper time to plan the timetable is when you are planning the layout as the two are very interrelated, the one dictating the other. Connexions that look logical enough on paper can prove to be unnecessary in practice and conversely, things that you haven't thought of can prove to be vital.

By planning both at the same time you can go through the movements on paper and find out the layout's short-comings without the frustrating experience of having to later modify it to suit the traffic working.

Even BR are sometimes guilty of this fault so if it does apply to you, you are in good company.

Traffic

This is the operative word at the beginning. You must decide, right at the outset, what sort of situation your line is in. If it is based on an actual line then the situation is laid down for you. If you are going to reproduce St. Ives or Sidmouth or Llandudno Junction or Boat of Garten in miniature it would seem logical to reproduce the type of traffic passing through these stations.

If your layout is free-lance then the same principles apply—you just have a little more homework to do. You must decide what sort of country your layout serves and what is the principal traffic—seaside resort, market town, industrial town, fishing port or whatever. You should also pinpoint the location geographically so that you know how it fits into the general picture.

Stock

Having some idea of the traffic pattern the next thing is to consider the locos and stock you will need to reproduce it. This should be quite precisely worked out; not too much, not too little. A layout which has too much stock on it is worse than one which is understocked. If a small station which was only designed to have a maximum of two trains in it at the same time is crowded with more it can result in a sort of complicated chess game before anything can leave.

Passenger stock is most conveniently handled if marshalled into sets and I always like to identify these by letters, A, B, C, etc., or possibly L1, L2 for local sets and M1, M2, etc. for main line sets. The maximum length of these sets will probably be determined by the length of your run-rounds, platforms and sidings. Trains must normally complete their movements within clearances so that they do not block other movements when they come to rest. You may allow an occasional exception to this rule if you wish to have an extra long train, say two sets coupled together, but the timing of it will have to be carefully selected in relation to other movements.

Locomotive stock must be carefully planned according to the traffic. Tank engines can be used for local passenger, shunting and light freight duties. Heavy freight, usually 0-6-0s, can be used on local passenger in addition to freight duties and are useful for empty stock workings. Express passenger locos can be used on fast fitted freights in addition to passenger trains. Each loco must be allotted a definite roster number and the roster allocated to particular trains as with the passenger sets.

Freight stock can be more flexible although it is advisable to lay down maximum loadings according to the length of the respective reception lines.

Sequence of Movements

Simultaneously with working out the required locos and stock you will be formulating a suitable sequence of movements. Again, if you are reproducing the traffic of an actual line this will be more or less laid down for you by the timetable in operation on this line at any given period. Free-lancers have to be a little more resourceful. You may wish to reproduce a whole day's workings or you may select a particularly busy period of the day. For instance, a market town on market day might be busiest between 8 am and 4 p.m. A fishing port between 5 am and noon. The thing is that you must think yourself into your imaginary situation, rather like a script writer on 'The Archers', and work out what will be the likely traffic demand.

A complete movement for one train must include, if necessary, getting it from the stabling point to the starting point and back to stabling point afterwards at the destination station. Similar considerations apply to locomotives which may, of course, require turning as well. Allow a short interval between the end of one movement and the beginning of the next for 'recovery' in the event of late running for any particular item of stock.

Obviously, the workings will have to be 'balanced' which really means that the stock must start any movement from the point at which the previous one left it.

At this stage it is useful to draw a diagrammatic map of each station with all the reception and stabling roads shown and all roads shown and all point connexions. To help you remember where locos and stock were last left you can cut out small pieces of card and mark them to represent each item. As you work out each movement of the sequence you move the pieces of card round the diagram and you will be able to see at a glance where everything is and also be able to prevent any possible conflicting movements.

You will now have a movements sequence list for each operating point which will look like the example below and you will know exactly the optimum amount of stock and number of locos you will need.

As an alternative to a list you can put each movement on a card and turn over the card as you complete the movement which helps you to remember where you are up to.

It is quite a good idea to make your sequence continuous by arranging that all the stock finishes up in the same position as it started so that you can if you wish carry straight on and start the sequence again.

All that is necessary now is to add a time scale to the sequence. This must be generous enough to allow time for the shunting movements involved. Allow one minute for every reversal of locomotive and stock and half a minute for every reversal of loco only.

If you are working from a real timetable it will indicate the actual period of time necessary for the sequence and your timings will indicate the time necessary on the model layout. By dividing this into the real time you will arrive at a 'scale time'—say one hour's operation on the model for every four hours on the prototype. You can, of course, construct a special clock which will indicate 'scale time', i.e. move faster than normal. But this is not necessary.

The times on the timetable can be translated by starting at 00.00 or 12 o'clock. If this represents, say 6.0 am on ¼ scale time then 7.0 am will be 00.15 on the timetable and so on.

The times are inserted on the sequence sheet or cards in the time column and this is all you need really. You can, if you wish, now construct a conventional timetable, but the sequence list constitutes the operating instructions for each operator.

Timetable buffs will wonder why I have not mentioned 'train graphs' which is the method by which real railway timetables are constructed. A train's progress is represented by a line on a graph where time is on the horizontal axis and distance on the vertical. From this it is easy to plot the relative position of all trains to each other. In my experience this of very little help on a model railway, as usually the maximum length of run is too short for it to be effective.

If you are like me you will find that a timetable breathes life into your layout and transforms it from a rather aimless existence to something with a purpose in life.

	Time	Movement	Loco roster	Stock
DOWN		Express Passenger arrives Down platform Detach M2	1	M1 plus M2
DOWN		Express Passenger departs Motor train shunts from bay platform to down platform to attach through coaches (M2)	1	M1
UP		Motor train departs from down platform to branch	3	Motor plus M2