

While working on the “tower” feature in 2010 I was having trouble figuring out the correct terminology for all the various operator locations in the Columbus area. I ask for help on the PennsyWest forum. Here are two of the answers I received. I think the reader will find them helpful in better understanding the subject. – Alex Campbell

### **BLOCK STATION, INTERLOCKING & TRAIN ORDER OFFICE**

By Dave Hyer

A block station controls the use of a main track segment between its location and the next block station in either one or both directions, in Manual Block System territory. This track segment is a "block", and might be many miles long. The block station controls the indication of the block signals. Manual block signals could be the train order signal at the block station, or a signal at a distant location (another entrance to the block), or a signal that was otherwise part of an interlocking, if there was such at the location.

An interlocking station controls a crossing or convergence of conflicting routes with signals, switches, derails, and locks, all appliances which had to be positioned in sequence and were interconnected so that conflicting routes and signals could not be lined up (i.e., interlocked). Perhaps most importantly, interlocking rules are in effect at an interlocking, which often is the only distinguishing factor in the technology in use. CTC control points function the same way in many cases. Some towers, especially on the PRR due to labor contracts, contained CTC machines that controlled many miles of main track as well as the interlocking where the tower stood, and maybe others, as well.

The interlocking machine in the structure contained the mechanical or electronic locking but the field appliances could be powered by rods and levers, electricity, or air, or in combination. Interlocking signals only convey train movement authority within the limits of the interlocking, defined as the tracks within the signals controlled by the interlocking operator. However, interlocking signals could also have a dual function as block signals, automatic or manual.

Thus an interlocking station could also be a block station. Maybe for one railroad at a crossing, for example, but not the other railroad. Here again, dual use of available assets.

Block stations convey authority for a train to move on the main track beyond the manual block station, although not sole authority. The train needs a schedule or train order as well. The block stations simply keep the trains separated. Some kind of block system, manual or automatic, was required where passenger trains operated, and, as an extra layer of protection, was used in other territories.

The structure used depended on how much visibility the operator required for approaching trains, what speeds were in effect, train density, money available, and what structures and personnel might already be in place.

Some block stations were in the passenger stations if conveniently located. Sometimes a small interlocker would be placed in a depot if there was a crossing or junction. Otherwise a building would be built for the specific purpose.

Not all interlockings were block stations. Not all block stations were interlockings. They are different animals which tended to hang out together. Either were train-order stations, as well, where a dispatcher could have an order delivered if needed. A third animal.

In the case of switchtenders, hand throw switches could not be interlocked, although they might be equipped with contacts tied into adjacent automatic block signals. Movements were usually required to stop and precede on hand signals from the operator or switchtender after he lined the route. In some places, the switchtender had a manually operated signal.

The designations of 'block station', 'interlocking', and 'train order office' were all officially made in the employee's timetable. 'Tower', 'crossing', 'depot' were more loosely used, but sometimes officially, and depended on local traditions and general railroad preferences. C&O called all towers and most train order stations 'cabins'. PRR seemed to avoid the term 'tower' even if they were multiple floor structures, preferring the designated station name. Other railroads called every such building a 'tower' even if it was one-story.

There's a lot more to it, believe me. Very difficult to lay this all out simply and crisply. Study the employee timetables, they will show what was where, for a start. Bear in mind that all these 'points used to control the traffic', as you call them, were established over decades by multiple predecessors of the five railroads. It turned out rather haphazard, don't you think? You should see Chicago.

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## A Complex Question

By Ernest Clausing

You asked a very complex question. Each road has its own rules and terminology. What is a block station on one road may be just an interlocking on another road. What is a tower on one road may be a cabin on another.

For example, Scioto was NOT a PRR block station but it was an interlocking. Operators could stop PRR trains at Scioto, so a generalization that it was therefore a block station will soon fall apart. By PRR definition it was not. You will need to make a complete analysis of the operating rules and timetables of each railroad to answer your question. That will be quite a study.