

Signals and points

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SIGNALS AND POINTS

s'Murmeli



Semaphore signals at Romanshorn in 1965.

Multiple aspects

On my journeys I see the rapidity of change. One example of this is Swiss signalling which, now that the last semaphores are a distant nostalgia, is changing again.

The large familiar standard signals with multiple coloured lights have, (greatly simplified), two separate functions. One is as an absolute indication, red or green, whether a track or section is closed or clear, with also the 'distant' or approach signal with a warning function, to show the aspect of the next main, or 'stop' signal. In addition there are aspects for movements over diverging points and switches at reduced speed, with multiple lights, green or yellow. These are 'route signalling' showing in principle the aspects of the old semaphores, with a speed limit for each diverging aspect. Their functioning in such cases is semi-automatic following the route settings. Drivers also have to observe dwarf signals protecting points on their route; these clear together with the main block signals and are electronically interlocked.

Time was when each station had its block instruments and lever frame, under the stationmaster's control; he set the route, locked it, cleared his signals and supervised movements. This was quite different to British practice where it was signalmen in their boxes, alongside the tracks, and not the station master, who passed the trains and operated the block instruments in their own right. There were few signal boxes in Switzerland, except at very big or complex stations, and many of these could only operate under a 'release' given from the stationmaster's panel. Today many of the familiar panels in station offices which replaced the old lever frames have also gone. Central control has taken over; stations are often unmanned. Dispatching at the platform is the conductor's task. For this there are more signals, at the platform end. These are the familiar triangular cases containing three white lights and a green. The white lights show different stages of the brake test for a train newly made up or an engine change. When all is ready, the train conductor turns a key in a small

ALL PHOTOS: by the author who is a Swiss railwayman

orange box, releasing a double aspect, white and green, giving the driver his signal to depart.

This too is changing. On the high speed lines only very notional fixed signalling remains, as a visual back-up to the in-cab information of the European Train Control System installations (ETCS). These, harmonised in Europe, will one day standardise signalling and train control. This leads into moving block, cab signalling and high speeds, short headways and a much safer and more efficient railway. Switzerland has equipped the Olten – Bern fast line, and the Lötschberg base tunnel and its approaches; the Gotthard base tunnel will also be fully equipped. Locomotives and driving cabs must be fitted with receivers and computer displays. Now, open access lives from such harmonisation, but train operators can haul a lot of equipment, on trains and locomotives from other countries. The DB ICE trains going to Interlaken were early examples.

Trains without ETCS are not allowed on the high speed lines, which, apart from line capacity, is one reason why freights still go through Burgdorf, or over the old Lötschberg line. Since however ETCS is a mandatory European

New standard signal on the BLS at Reichenbach.



standard, this is the price for future high performance corridors, on all main lines. The SBB is to be fully equipped.

Elsewhere, where visual signals will remain, resignalling is already far advanced. You will already find today they have another form, where those great signals you knew, with 5 or more lights, are replaced by a small circular backboard and a single light of three choices, red, yellow or green. This also reflects how signals are no longer tied to notional stations and fixed block section, but can be located at optimal sites and distances for the operations planned. Moreover, since they no longer impose speeds by route indications, many now have a digital speed indicator. This can give speed orders not only through junctions and switches, but when clearances are short or trains not far ahead. In the near future some five centres will control operations. Equally, with many more unit trains and far less intermediate changes of train make-up, brake test and departure signals are disappearing. A mobile telephone signal to depart may also soon take over. Another change: the flashing milky-white light on a platform which signals the entry of the train, or even the passage through the platform of a non-stop, once to be found in all busy stations, is also gradually disappearing, so look out for survivors.

to gain or lose time in section to facilitate the smooth operation of stations and train crossings. It has been a tour-de-force to convert the Swiss system, with its hand-thrown unlocked points and crossings, treadle-operated semaphores, open-air lever frames, and elderly block systems of 40-years ago, to a high speed network for tomorrow. Just at one or two places, like Filisur, and Bauma, you can still hear the ding-dong of the old bell. But it's nostalgia; they don't really feature in the rule book any more. Many bells, and semaphore signals, are now in private gardens.



ABOVE LEFT: A Semaphore Signal at Seetal.

ABOVE RIGHT: A Train Conductor is activating the departure order.

BELOW: Signals at Liestal. Platform 3 signal at stop, the through track clear to enter the section at 100 km. Note also the dwarf signals on the main lines.



The RhB side of Chur Bahnhof. It may be a bit much to fathom out, but the picture has the following information, from left to right - the train details (for public information); the signal number; the main signal; the brake test (3 white lights show 'test complete and OK'. It will, with green main signal, show when white/green the order to depart); a points signal, two whites showing the setting and a square (blank on the picture) showing restricted freedom (or not) of shunting moves.

There are some mixtures. Chur still shows one. The RhB lines have traditional colour lights whilst alongside the SBB has the newest-generation light signals. Biel recently had new single-light main signals, but still a flashing white light on the platform tracks and also the white-green departure signal. Chur is a special case, because the SBB are taking their operation into the Zürich Control Centre (in future, I learn, to be housed at Zürich Airport; let's hope they keep things apart), leaving the RhB to examine how they will handle their part of the layout, including their mixed gauge track from Chur to Domat-Ems.

It's all a far cry from the days when the wayside Stationmaster came out with his baton to acknowledge the passing train, with hand signals laid down to instruct drivers

Double Slips

I understand that the double slip crossing is steadily disappearing in Britain, but SRS members may like to know that in several countries it is called the 'English' point or crossing - in Switzerland "D'Engländer". Just watch out on your next visit; in Switzerland we love them and they are found in places where a British operator's hair might stand on end. Look at Erstfeld or Spiez, Zürich HB or Bern HB, Lausanne, St. Gallen, Basel, and you will find long ladders of track diagonally crossing the layout, every intersection with its own double slip. Others are on the narrow gauge; the rebuilding in Meiringen has just seen one disappear. They are beautiful but expensive items, with their many components and moving parts, and they have to be well maintained if taken at speed - they can be, but I still tend to take a step back at the platform end when something approaches across them. Odd survivals include some sets by the old SBB carriage sidings in Chur, though surely not for long, as today's fixed formations and reversible trains, and the disappearance of CIWL blue sleepers and DSG dining cars, mean that not much happens there any more. 