

SOUTHERN RAILWAY.

Signal Instruction No. 18, 1936.

Instructions to all concerned as to
**INTRODUCTION OF COLOUR LIGHT SIGNALS ON ALL LINES BETWEEN
 WATERLOO "B" BOX AND CLAPHAM JUNCTION AND FROM THERE TO
 MARSH LANE BOX (BERRYLANDS)**
 (In place of existing semaphore running signals)

AND

**ABOLITION OF VAUXHALL "D," QUEEN'S ROAD EAST, CLAPHAM
 JUNCTION "D," CLAPHAM CUTTING AND DURNSFORD ROAD BOXES;**

ALSO

**PROVISION OF FLYOVER BRIDGE AT EAST SIDE OF WIMBLEDON CARRYING
 THE UP LOCAL LINE OVER THE DOWN AND UP THROUGH LINES TO ITS
 NEW POSITION NEXT THE DOWN LOCAL LINE**

AND

**RE-ARRANGEMENT OF MAIN RUNNING LINES BETWEEN WATERLOO
 AND WIMBLEDON**

ON SUNDAY, 17th MAY, 1936.

Rules 77, 78, 79 and 80 to be observed. Drivers to keep a good look-out for hand signals.

Commencing at 1.0 a.m. on Sunday, 17th May, colour light signals will be installed on all lines between Waterloo "B" box and Clapham Junction and from there to Marsh Lane box (Berrylands) in place of existing semaphore running signals.

Vauxhall "D" box will be abolished.

Queen's Road East box will be abolished and the points at present worked therefrom will be operated from Queen's Road West box which will, in future, be known as Queen's Road.

Clapham Junction "D" and Clapham Cutting boxes will be abolished and the points at present worked from Clapham Junction "D" box will, in future, be operated from Clapham Junction "A" box.

Durnsford Road box will be abolished and the points remaining in use at present worked therefrom will, in future, be operated from Wimbledon "A" box.

A new flyover bridge carrying the up local line over the down and up through lines to its new position next the down local line will be provided 763 yards east of Wimbledon "A" box. The up local line will be on a rising gradient of 1 in 60 from a point 495 yards east of Wimbledon "A" box to the flyover bridge, and on a falling gradient of 1 in 45 from the flyover bridge to a point 1,172 yards east of Wimbledon "A" box.

The main running lines between Waterloo and Wimbledon will be re-arranged and on and from 7.0 a.m. on Sunday, 17th May, the location of these lines will be as follows:—

Existing Line.	New Line.
BETWEEN WATERLOO AND WATERLOO "C."	
Down main local	Down main local (No alteration).
Down main through	Up main local.
Up main relief	Down main through.
Up main through	Up main through (No alteration).
Up main local	Up main relief.
BETWEEN WATERLOO "C" AND VAUXHALL EAST.	
Down main local	Down main local (No alteration).
Down main through... ..	Up main local.
Up main through	Down main through.
Up main local to through connecting line.	Up main through.
Up main local	Up main relief.
BETWEEN VAUXHALL EAST AND WIMBLEDON "A."	
Down main local	Down main local (No alteration).
Down main through	Up main local.
Up main through	Down main through.
Up main local	Up main through.

Two diagrams, one showing the altered signalling and layout between Waterloo and Clapham Junction and the other the new flyover bridge and altered signalling and layout between Clapham Junction and Marsh Lane (Berrylands) are attached to this notice, the colour light running signals being prefixed by letters to denote from which box the signals are worked, as follows :—

Prefix Letters.	Signal Box.	Prefix Letters.	Signal Box.
W.C.	Loco. Junction.	W.H.	Wimbledon " A. "
W.D.	Queen's Road.	W.J.	Wimbledon " B. "
W.E.	West London Junction.	W.K.	Wimbledon " C. "
W.F.	Clapham Junction " A. "	W.L.	Raynes Park.
W.G.	Earlsfield.	W.M.	Maiden.

Automatic signals are prefixed by the letters W.A.

Earlsfield and Wimbledon " C " boxes will be switched out of circuit for certain periods and during the time these signal boxes are so closed the running signals will work automatically.

A plate bearing the prefix letters and the number of the signal will be fixed to each signal post carrying running signals.

The colour light running signals will show four, three or two aspects and will be known as automatic, semi-automatic, or controlled signals, viz. :—

Automatic signals are those which are not worked from a signal box and are controlled by track circuit only.

Semi-automatic signals are those which are controlled from one or more signal boxes when such boxes are open, in addition to being controlled by track circuit, but which, when the boxes are closed, work automatically and are then controlled by track circuit only.

Controlled signals are those which are always controlled from a signal box and are also controlled by track circuit.

The lights of the four-aspect running signals will be arranged as shown on the diagrams and not as appearing on page 4 of the General Appendix to the Working Time Tables.

The aspects of the colour light running signals will be the same by day as by night.

Colour light running signals will be fitted with small side lights repeating the aspects exhibited by the signals to assist Drivers of trains drawn close up to such signals.

Back lights will not be provided in any of the colour light running signals.

The height of the centre of the red light of the colour light running signals will vary between 10 and 18 feet above rail level.

Track circuits have been installed throughout the area covered by the colour light signals and all colour light running signals and certain shunt signals at Loco. Junction, Queen's Road, Clapham Junction " A.," Wimbledon " A " and " C " boxes will be controlled by the track circuits.

Colour light running signals are replaced to Danger after the engine has passed a distance varying from 15 to 233 yards beyond the signal.

" P " (proceed) signs will be provided at certain automatic and semi-automatic signals, as indicated on the diagrams, for use in accordance with the instructions under the heading " Passing signals at Danger " on pages 5 and 6 of the Supplement dated 4th March, 1936, to the book of instructions for the information of Drivers, Firemen and Guards.

JUNCTION INDICATORS.

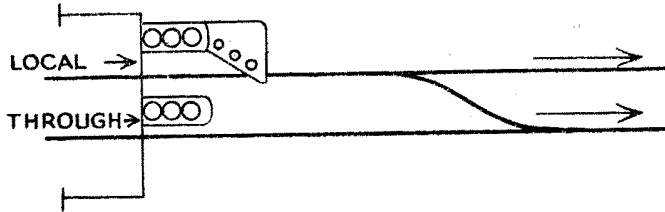
A new feature in connection with this colour light signalling scheme is the introduction of an indicator, known as the " Junction Indicator," to work in conjunction with colour light signals applicable to movements over junctions and facing crossings. The object of the junction indicator is to avoid providing a separate signal post or doll for each diverging route at a junction or facing crossing, and the indicator will consist of a row of three lunar white lights arranged to denote by its angle with the main signal the extent of divergence intended, viz., an angle of 45 degrees for a diverting movement to the right or left, as the case may be, with a further movement of 45 degrees for every additional divergence in the same direction. No junction indication will be exhibited when the signal is at Danger or when the signal is off for a movement along the straight or main road.

The following diagrams give examples of the application of the Junction Indicators :—

EXAMPLE No. 1.

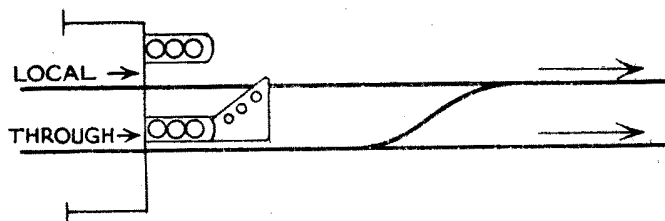
The indication will be, in addition to the running signal being off, three white lights arranged 45 degrees upper quadrant to the right or left as the case may be.

Crossing set from local to through.



or

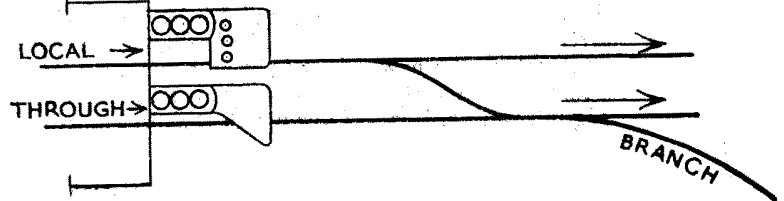
Crossing set from through to local.



EXAMPLE No. 2.

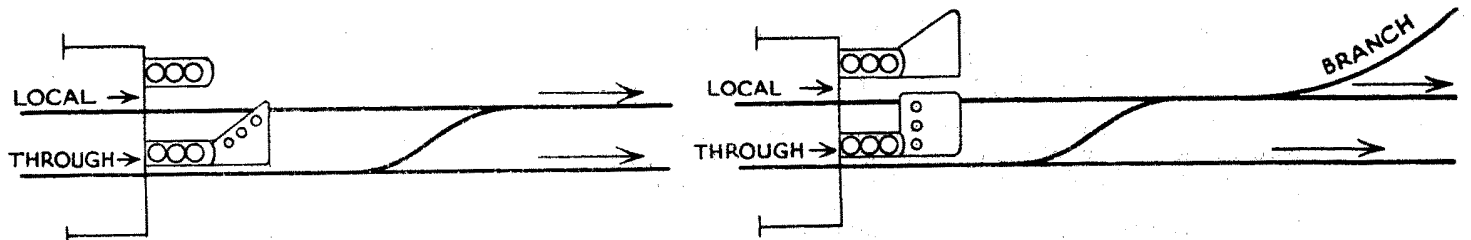
The indication will be, in addition to the running signal being off, three white lights arranged horizontally to the right or left as the case may be.

Crossing and junction set from local to branch.



or

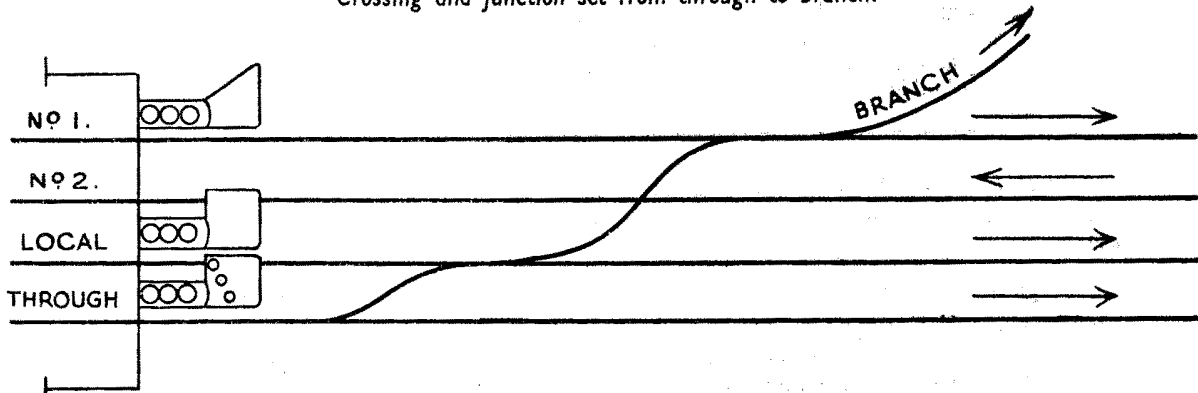
Crossing and junction set from through to branch.



EXAMPLE No. 3.

The indication will be, in addition to the running signal being off, three white lights arranged 45 degrees lower quadrant to the left.

Crossing and junction set from through to branch.



The following indicates the action to be taken in connection with any irregular working of the junction indicator :—

Nature of irregularity.	Action to be taken.
Junction indicator showing 1, 2 or 3 lights—signal aspect showing red.	Treat as Danger signal.
Junction indicator showing 1, 2 or 3 lights—signal aspect showing no light.	Treat as Danger signal.
Junction indicator showing 2 or 3 lights—signal aspect showing no main light but either yellow or green side light.	Driver must bring his train to a stand and then proceed cautiously, being prepared to stop at the next signal, if necessary. The circumstances must be reported at the next signal box.
Junction indicator showing 2 instead of 3 lights—main signal aspect showing either yellow or green.	Proceed and report the circumstances at the first convenient opportunity. It will not be necessary to stop specially for this purpose.

As soon as the Signalman becomes aware of the failure a Handsignalman must be appointed at the signal to instruct Drivers, as may be necessary, as to the route they will travel after passing the signal.

FAILURE OF SIDE LIGHT.

In the event of the side light of a colour light running signal being out, but the main signal is functioning correctly, a Driver must obey the indication given by the main signal. The circumstances must be reported at the first convenient opportunity but it will not be necessary to stop specially for this purpose.

TELEPHONES.

Telephones have been provided at or adjacent to certain signals, as indicated on the diagrams, for use in accordance with the instruction under the heading "Passing signals at Danger," on pages 5 and 6 of the Supplement dated 4th March, 1936, to the book of Instructions for the information of Drivers, Firemen and Guards. Code ringing will not be in operation in connection with the telephones at signals in the new colour light area and, as indicated on the plate provided in each telephone cupboard, **it will only be necessary to remove the handset from the rest and listen until the Signaller replies.** After use the handset must be replaced and the cupboard door closed.

SHUNT SIGNALS.

The ground signals at Waterloo, Queen's Road, West London Junction, Clapham Junction "A," and, in certain cases, at Loco. Junction and Wimbledon, as indicated on the diagrams, will not, in future, show a red, yellow or green light during darkness, fog or falling snow, but will be floodlighted.

The shunt signals shown below will precede the running signals, *i.e.*, they will be worked for all running movements in addition to shunting movements. The object of this arrangement is to avoid the Danger indication being passed by the Driver of a running train.

Drivers of trains whose movement has been authorised by a running signal are not required to observe the position of the relevant shunt signal. It may, however, happen in an emergency that a shunt signal applicable to the direction and line on which the train is travelling has been placed at Danger by the Signaller and, in such circumstances, if this signal is noticed by a Driver, he should bring his train to a stand. During shunting operations on lines to which these shunt signals apply, the indications shown by the shunt signals must be strictly observed.

Signal Box.	Shunt Signal.
Queen's Road	35
West London Junction	41
Clapham Junction "A"	24, 35 & 88
Wimbledon "A"	99

SIGNALLING IN FOGGY WEATHER OR DURING FALLING SNOW.

Fogsignalmen will not be provided at any of the colour light signals referred to in this Signal Instruction.

STARTING TRAINS AGAINST FIXED SIGNALS AT WATERLOO.

When it is impracticable for the starting signal to be operated for an outgoing train, owing to its length necessitating the engine standing ahead of the signal, the Driver must understand that he is under the control of such signal and must not start until he receives verbal instructions to do so from the Yard Foreman.

The Yard Foreman must ascertain from the person in charge of the platform that the train concerned is ready to start and afterwards obtain the Signaller's permission by telephone. To prevent any misunderstanding arising, the messages should be given in the following form, for example :—

Yard Foreman — speaking—	Is line clear for 9.8 a.m. boat train to Southampton Docks to start from platform No. 11 against fixed signal ?
Signalman — speaking—	No, line is not clear ;
	or
	Yes, line is clear for 9.8 a.m. boat train to Southampton Docks to start from platform No. 11 against fixed signal.

When the line is clear the Yard Foreman must go to the engine and instruct the Driver that he may proceed and upon which line the train is to travel, after which a green hand-signal held steadily must be exhibited by the Yard Foreman to the Driver, who must not start until he fully understands what is required.

The Yard Foreman must make a note of each train started against a fixed signal.

VAUXHALL WEST BOX.

A detonator placing machine will be provided at the up Windsor through home signal to which the instructions on pages 49 and 50 of the General Appendix to the Working Time Tables will apply.

CLAPHAM JUNCTION " A " BOX.

A new " Limit of Shunt " indicator will be provided at the Earlsfield end of the up loop platform and the indicator must not be passed in connection with shunting movements back on the up loop line.

The following ground signals will be abolished :—

Up main through to down main local or down main through lines.

No. 1 siding to down main local line, down main through line or forward on No. 1 siding.

DURNSFORD ROAD.

The down local line from a point 258 yards the Earlsfield side of existing Durnsford Road box to a point 133 yards the Wimbledon side of Gap Road overbridge, will be slued to the right into its original position.

The down siding from a point close to Wimbledon " A " box to Durnsford Road Bridge will again be brought into service, and the Wimbledon Borough Council Electricity siding connected to the down siding by hand points.

The connection at Durnsford Road between the down local line and Wimbledon Borough Council Electricity siding, together with the relevant ground signals, will be abolished.

SWITCHES FOR PLACING SIGNALS AT DANGER.

Switches are provided adjacent to all automatic signals between Waterloo " B " box and Malden, also at the semi-automatic signals at Earlsfield, and these switches can be operated to place or maintain such signals at Danger and at the same time to prevent the appearance of or extinguish the illuminated letter " P " where provided. The switches are operated by means of special keys which have been supplied to the Station Masters concerned and are to be used in connection with Rules 136, 184 and 197, as well as for permanent way operations, as indicated below. Station Masters must satisfy themselves that they and all members of their staff who may be affected, are aware of the actual location of the switches. When it is essential to make a wrong line movement and the signal box affected is closed and cannot be opened, or there is no signal box, the switches must be used, but such wrong line movement must only be made when there is no alternative means of meeting the emergency.

(a) If a train fails to stop at a station at which it is booked to call and the whole of the train overruns the platform, it must not, as a general rule, be set back but must proceed on its journey and the station ahead must be advised of the circumstances so that suitable arrangements can be made for dealing with any passengers that may have been overcarried.

If, however, it is essential for the train to set back to the platform, the instructions in clause (c) must be observed.

(b) If, owing to obstruction or other mishap, a train is brought to a stand between stations and it is essential for it to return in the wrong direction to the station or signal box in the rear, the working must be carried out in accordance with the instructions appearing in clause (c).

(c) (i) At stations where the signal box is open the wrong line movement referred to in clause (a) or (b) must, if the train has passed the most advanced signal worked from such box, be dealt with in accordance with Rule 184 by the issue of Wrong Line Order Form " D " ; should, however, the wrong line movement require to take place only within station limits, i.e., the train is standing between two consecutive stop signals worked from the box concerned the movement may be carried out as a shunting operation under the authority of the Signaller.

(ii) At stations where the signal box is closed it must, if possible, be switched into circuit in accordance with Train Signalling Regulation 24, and the wrong line movement dealt with as described in the preceding paragraph (i) of this clause.

(iii) If a train has passed the box in rear the Signaller, before issuing the wrong line order, must satisfy himself that such approaching train has been brought to a stand at the stop signal to the rear of the point to which the wrong line movement is to return. If no train is approaching, the Signaller must take steps to prevent one doing so while the wrong line movement is in progress.

(iv) If it is not possible for the signal box to be opened, and at stations where there is no signal box, the wrong line movement must be carried out under the control of the Station Master as follows :—

The Signaller at the box in the rear must be immediately advised of the circumstances by the Station Master and instructed to prevent any train proceeding on the line affected until he is advised that the wrong line movement has been completed. The Station Master must also ascertain whether any train is in progress between such signal box and the station to which the wrong direction movement is about to be made.

The Station Master must then proceed to the signal to the rear of his station platform and operate the special switch to place or maintain such signal at Danger and must satisfy himself that the signal correctly exhibits the red aspect ; in operating the switch care must be taken to avoid the signal being changed to Danger immediately in front of an approaching train. The Station Master must also arrange for a Handsignalman to be provided at the station in order that the wrong direction movement may be brought to a stand at the desired point.

If the Station Master is advised that a train is not approaching from the box in the rear on the line affected he must, before issuing the Wrong Line Order referred to below, send out a Handsignalman who must exhibit a hand danger signal and place on the rail three detonators not less than one mile from the point to which the wrong line movement is to return ; should the Handsignalman when going out observe a train approaching him on the line affected he must immediately place on the rail three detonators and continue to exhibit a hand danger signal. The Station Master may then, provided sufficient time has been allowed for the Handsignalman to proceed to the prescribed distance, issue Wrong Line Order Form " D," making the necessary alterations in the form accordingly, in ink. The person conveying this Wrong Line Order Form " D " to the Driver of the train which requires to return in the wrong direction must pilot the train back to the desired point.

If, however, a train has left the box in the rear, the Station Master must not issue Wrong Line Order Form "D" until he has personally satisfied himself that the train which is approaching from the box in the rear has been brought to a stand at the stop signal to the rear of the point to which the wrong line movement has to be made, and that the Driver of such approaching train has been informed of the circumstances.

When the wrong line movement has been completed and the train concerned disposed of, the Station Master must recall the Handsignalman and restore the special switch at the signal to its normal position, advising the Signalman in the rear accordingly.

(d) The special switches must also be made use of, if the signals referred to in Rule 197, clause (b), are automatic signals, to place or maintain such signals at Danger. The switches must not be replaced to normal until the single line working forms have been withdrawn and ordinary working is about to be resumed.

(e) For instructions respecting the use of the switches by the staff of the Engineer's Department in connection with permanent way operations see pages 8 and 9 of No. 1 Supplement to the General Appendix to the Working Time Tables.

PERMANENT SPEED RESTRICTIONS.

The following are particulars of the revised and new permanent speed restrictions in connection with the re-arrangement of lines between Waterloo and Wimbledon :—

At or Between	Lines Affected.	Section of Line Affected.	Speed Not to exceed M.P.H.
Clapham Junction	Down main through ...	Through station	40
Clapham Junction... ..	Up main through ...	Through station	40
Durnsford Road	Up through to up local...	Through crossover	30
Wimbledon and Durnsford Road.	Up local	Over curves on flyover ...	40
Wimbledon " A " box ...	Down local to down through.	Through crossover	30
Wimbledon " A " box ...	Up through to up local ...	Through crossover	30

NOTE.—These restrictions are additional to those shown in the Permanent Speed Restriction Notice operating from 1st December, 1934, except that the particulars in respect of Clapham Junction referred to above take the place of the particulars for Clapham Junction appearing on page 13 of that Notice.

On completion of the work shown herein the alterations in and additions to the book of Instructions to Drivers, Firemen and Guards, dated 31st March, 1935, contained in the supplement dated 4th March, 1936, will operate on all lines between Waterloo " B " box and Clapham Junction " A " box and from there to Maiden.

F. BUSHROD,
Superintendent of Operation.

Waterloo Station,
1st May, 1936.

(R. 55497.)