

BRITISH RAILWAYS

(WESTERN REGION)

(For the use of employees only.)

Notice to Enginemen, Guards, etc.

INTRODUCTION OF MULTIPLE ASPECT SIGNALLING PADDINGTON-HAYES.

st Stage-HAYES TO HANWELL

Saturday and Sunday, 11th and 12th April, 1953.

Between the hours of 10.0 p.m., Saturday, and 8.0 a.m., Sunday, the Signal Engineer will be engaged in taking out of use the existing colour light signals on the Down and Up Main and Relief Lines between Hayes and Hanwell, and bringing into use Multiple Appect Signals as detailed hereunder.

Multiple Aspect Colour Light Signalling.

(a) The method of signalling to be adopted is known as "four aspect signalling" and the signals will generally be capable of displaying any one of 4 aspects (except where otherwise indicated) in accordance with Rule 43, namely:—

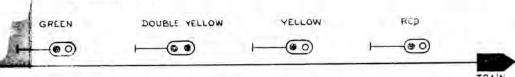
Red-Stop.

Yellow-Proceed-prepare to stop at next signal.

Double Yellow-Proceed-pass next signal at restricted speed.

Green-Proceed.

The following diagram indicates the sequence of aspects which will be encountered:—



TRAIN

The Double Yellow aspect is equivalent to an Outer Distant Signal at Caution, and will always be at full Service Braking Distance from the signal at Red for the maximum speed of the Line at that point.

The Double Yellow aspect indicates that at least two signal sections ahead are clear, and the Green aspect that at least three signal sections ahead are clear. In some instances, where signals are more closely spaced more than one signal in succession will display the Double Yellow aspect immediately in rear of a Signal at Single Yellow. Furthermore, in certain circumstances dependent on the movement of trains ahead, a succession of Double or Single Yellows may be encountered.

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(b) At diverging junctions, junction indicators will be provided in accordance with Rule 35(e) and will consist of a line of 5 white lights, at least any three of which will be alight when the stop signal is cleared for the divergence. The exhibition of any lights in the junction indicators must not be taken as a Proceed aspect if the stop signal is displaying the Red aspect.

The signals in rear of the junction directing signal are arranged so that the Green aspect is only given for the route over which the higher speed is run. If the road is set for the slower speed route, the junction directing signal will be maintained at Red until the train has passed the signal immediately in rear thereof and has occupied a track circuit immediately on the approach side of the Junction signal. The two signals next in rear of the junction directing signal will, therefore, be at Double Yellow and Yellow in the direction of travel so that the Driver will have his train under control to take the junction for the diverging route.

In the case of diverging junctions leading to Goods, Reception, or Yard Lines, Junction indicators will not be provided, but the Proceed indication will be given by the illumination of a small yellow light together with a route indication where provided. These signals will not be normally illuminated.

- (c) Where, owing to local conditions, the approach view of a signal is restricted, a banner repeating signal in accordance with Rule 42 may be provided. Drivers must clearly understand that when such a banner repeater is "Off," the signal it repeats will be showing any one of the Proceed aspects, viz., green, double yellow or yellow, and must be prepared to act accordingly.
- (d) The centre of the Red light of multiple aspect signals will generally be approximately 12 feet above rail level in the case of straight post structures, and approximately 17½ feet in the case of bracket or gantry structures. Except in special circumstances the signals will be situated immediately to the left hand side or over the Line to which they apply.

In order to give Enginemen a view of a signal when the engine is standing close up to it, colour light signals are fitted with segments let into the lenses, which cast a beam downwards and outwards towards the engine cab.

No backlights will be provided in any of the colour light signals.

(e) Multiple aspect signals will be replaced to Danger by track circuits ahead thereof. Generally in the Area covered by this Notice, multi-aspect signals will be maintained at Red until the Line is clear up to a point approximately 200 yards in advance of the next signal. This distance (approximately 200 yards) is known as the overlap. In some instances to facilitate the working, certain signals will be allowed to exhibit the Single Yellow aspect when the overlap ahead of the next signal is occupied, but only after the track circuit immediately on the approach side of the signal has been occupied and the approaching train has been brought to, or nearly to a stand. This form of control is known as "Delayed Yellow Control," and is equivalent in practice to a train having been accepted under the "Warning" in ordinary semaphore signalling. Drivers of trains which have been brought to, or nearly to, a stand at a signal which is then changed from Red to Single Yellow must understand that the line is clear only as far as the next signal ahead, and must regulate the speed of their trains accordingly.

2. Identification of Signals.

- (a) Multiple aspect signals will be classified as Automatic, Semi-Automatic, or Controlled signals, as follows:—
 - (i) Automatic signals are those which will not be worked from a Signal Box but which will be controlled by track circuit only. Automatic signals will be identified in accordance with Rule 35(c) by a plate affixed thereto, thus:—



(ii) Semi-Automatic signals are those which will be controlled from a Signal Box when such Box is open, but which, when the Box is closed will work automatically and be controlled by track circuit only.

Semi-Automatic signals will be identified in accordance with Rule 35(c) by a plate affixed thereto, thus:—



- (iii) Controlled signals are those which will always be under the control of a Signal Box. Where applicable, the Diamond sign (Rule 55, Diagram No. 1) will be affixed thereto.
- (b) All Multiple Aspect signals will also be fitted with plates bearing letters and numerals for identification and reference purposes as follows:—
 - (i) Controlled and Semi-Automatic signals will be identified by the prefix letters of the Signal Box concerned followed by a numeral.

The Signal Box prefix letters will be as follows:-

Signal Box.		Pre	efix Lett	ers.
Hayes & Harlington			Н.	
Southall West Junction			WJ.	
Southall West Station			WS.	
Southall East Station	***	***	ES.	
Southall East Junction	***		EJ.	
Hanwell			HL.	

(ii) Automatic signals will be identified by the prefix letters of the Line concerned followed by a numeral corresponding to the mileage of the lesser of the two mile posts between which the signal is situated. Where more than one automatic signal occurs between successive mile posts, suffixes A, B, C, etc., ordered in the direction of running will be added to the numeral. The Running Line prefix letters will be as follows:—

Line.		Pre	efix Letters	l
Up Main	 ***		UM.	l
Down Main	 ***		DM.	
Up Relief	 ***		UR.	
Down Relief	 ***		DR.	

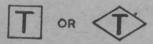
(iii) Repeating signals will be identified similarly by a plate bearing the identification number of the particular signal to which they apply, followed by the suffix R.

Drivers and others having to refer to those signals which are fitted with an identification plate must always quote the identification letters and numbers appearing thereon.

3. Provision of Telephones.

Telephones communicating with the Signal Box concerned will be provided as follows:—

- (i) At all Automatic signals.
- (ii) At all Semi-Automatic signals.
- (iii) At certain controlled signals which are remote or difficult of access from the Controlling Signal Box. The provision of a telephone at a Controlled signal will be indicated by the letter T on a plate affixed to the signal or inscribed on the Diamond Sign, where such sign is provided, thus:—



During the periods when a Signal Box is closed, the telephones at Automatic and Semi-Automatic signals normally communicating therewith will communicate with an adjacent Box which is open.

Telephones will be housed in cabinets painted with diagonal black and white stripes located on or in the vicinity of the Signal and as far as practicable on the left hand side of the Line to which they apply.

4. Use of Telephones provided at Signals.

For instructions in regard to the use of telephones at Signals see Notice No. L.K.245.

5. Automatic Train Control.

In the multi-aspect signalled area covered by this Notice, an A.T.C. Ramp will be provided (except where otherwise indicated) approximately 200 yards on the approach side of each four aspect signal. The audible signals given in the cab of the engine are as follows:—

On the approach side of a signal at Green Bell. ,, ,, signal at Red, Yellow or Double Yellow Siren.

6. Signalling in Foggy Weather or During Falling Snow.

Fogsignalmen will not be provided at any of the multiple aspect signals referred to in this Notice. Fogsignalmen must, however, be appointed during Single Line Working at a signal which becomes the Distant signal applicable to the obstructed line and which has to be observed by Drivers travelling over the Single Line in the wrong direction.

A Handsignalman must also be appointed at a signal which acts as the Distant signal controlling trains approaching the Single Line to travel over that line in the right direction.

7. Permanent Way Trolleys.

Permanent Way Trolleys cannot be relied upon to operate track circuits, and before a trolley is placed on the line the permission of the Signalman at the nearer Signal Box must be obtained. If the Signalman at the Signal Box in advance is required to give such permission he must, before so doing, confer with the Signalman at the Signal Box in the rear.

The telephone at a signal may be used for obtaining the Signalman's permission. When permission has been given protection in accordance with Rule 215 must be carried out before the trolley is placed on the line.

8. Working of Diesel Cars.

As some Diesel Cars cannot be relied upon to operate track circuits, Diesel cars must not work in the multiple aspect signalled areas except under special arrangement. The Parcels Diesel Car No. 34, however, working between Paddington and Southall is of a pattern which can be relied on to operate track circuits and will be described by a distinctive code over the sections of the line concerned, and the instructions on page 132 of the General Appendix under the headings "Rule 55" and "Instructions to Signalmen" will not apply to this vehicle.

9. Rule 82.

If a Driver observes a signal to be out when it should be illuminated he must treat it as a signal giving its most restrictive aspect (Red in the case of a Stop signal), and report the circumstances to the Signalman at the Box in advance.

The Signalman must arrange for a Handsignalman to be appointed as quickly as possible.

10. Rules 178-181.

Colour light signals must not be relied upon for the protection of a train stopped by accident, failure or obstruction, and the train must be protected in the usual way, except that if no other line is affected it is not necessary for protective purposes for a Guard or Fireman to go back beyond the next colour light signal in rear of the train, provided it is shewing "Danger." In the event of it being necessary for a second train or engine to approach from the rear to render assistance, the Guard or Fireman who is protecting his train must, after advising the Signalman at the Box ahead by telephone of the circumstances, wait at the signal in rear to pilot the assisting train or engine to the rear of his own train.

11. The following New Signals will be brought into use and as indicated on the attached sketch. The number of the signal which will appear on the identification plate affixed to the signal is as indicated.

HAYES.

Form.	No. of Signal.	Description.	Position.	Distance from Box.	
A () B	H.77	A. Up Main Starting (already in use). B. Up Main Approach Colour Light.*	Existing Bracket.	As at present.	
A A B B	H.68	A. Up Relief Outer Advanced Starting (already in use). B. Up Relief Approach Colour Light.*	Existing Bracket.	As at present.	
8	HJ	Down Main Home (3 aspect signal—the green aspect will be exhibited only when all Hayes Down Main Stop Signals are placed to the Clear position). No A.T.C. Ramp is provided for this signal.	Down Side of Down Main.	1,265 yards	
	Н.7	Down Relief Home (3 aspect signal—the green aspect will be exhibited only when all Hayes Down Relief Stop Signals are placed to the Clear position). No A.T.C. Ramp is provided for this signal.	Down Side of Up Main.	1,265 yards.	

*—Approach Colour Lights.—No light will be exhibited in these signals when the semaphore arm above them is in the Danger position. A Yellow, Double Yellow or Green light will be exhibited when the semaphore arm above them is in the Clear position. Sidelights are provided to assist Drivers standing close to such signals. At night no green light will be exhibited by the semaphore arm when placed to the Clear position. An A.T.C. Ramp will be provided immediately in advance of these signals.

SOUTHALL WEST JUNCTION.

A 00 B	W.J.2	A. Up Main Home. B. Up Main to No. 2 Up Goods Home (already in use).	Existing Bracket.	As at present.
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L		.		

Form.	No. of Signal.	Description.	Position.	Distance from Box.
Southall W	est Jun W.J.8	ction—continued. A. Up Relief to Up Main Junction Indicator. B. Up Relief or Up Relief to Up Main Home. C. Up Relief to No. 2 Up Goods Home. D. Up Relief to No. 2 Up Goods Route Indicator. Indication "G."	Up Side of Up Relief.	230 yards.
A B	W.J.53	A. Down Main to Down Relief Junction Indicator. B. Down Main or Down Main to Down Relief Home.	Down Side of Down Main.	322 yards.
	W.J.48	Down Relief Home.	Down Side of Up Main.	322 yards.

SOUTHALL WEST STATION.

A B	W.S.2	A. Up Main to Up Relief Junction Indicator. B. Up Main or Up Main to Up Relief Home.	Up Side of Down Main.	409 yards.
	W.S.5	Up Relief Home.	Up side of No. I Up Goods.	409 yards.

Form.	No. of Signal.	Description.	Position.	Distance from Box.	
outhall West Sta		tion—continued. A. Down Main Home. B. Down Main to Yard or to Down Goods Home. C. Down Main to Yard or to Down Goods Route Indicator. Indications "Y" or "G."	Down Side of Down Main.	18 yards.	
A A B S S	W.S.95	 A. Down Relief to Down Main Junction Indicator. B. Down Relief or Down Relief to Down Main Home. C. Down Relief to Yard or Down Goods Route Indicator. Indications "Y" or "G." 	Up Side of Down Relief.	139 yards.	

Note.—An illuminated indicator (Identification No. W.S.95.R) displaying "On" or "Off" is provided under the Verandah roof of the Down Relief Platform. The "Off" indication will be given when Signal No. W.S.95 is displaying any of the Proceed aspects.

8	W.S.6	Up Relief Starting.	Up Side of Up Relief.	110 yards.
0				
1				

SOUTHALL EAST STATION.

Ô	E.S.75	Up Main Home.	Up Side of Up Main.
1			
	E.S.79	Up Relief Home.	Up Side of Up Relief.

Form.	No. of Signal.	Description.	Position.	Distance from Box
Southall East Statio	n—cont E.S.88 E.S.84	inued A. Down Main Home. B. Down Relief Home. C. Down Relief to Bay or to Bay Siding Route Indicator. Indications "B" or "BS." D. Down Relief to Bay or Bay Siding Home.	Existing Double Bracket.	As at present.

At the same time the existing Southall East Station Bay to Up Relief Starting (No. E.S.17) will become a 3 aspect signal and will display the "Green" aspect when Southall East Junction Up Relief Home (No. E.J.39) is displaying other than a Red aspect.

SOUTHALL EAST JUNCTION.

	Form.	No. of Signal.	Description.	Position.	Distance from Box.	
	B D C O A	E.J.47 E.J.39	A. Up Main Home. B. Up Relief to Up Main. Junction Indicator. C. Up Relief or Up Relief to Up Main Home. D. Up Relief to Up Goods Loop Home.	Existing Gantry.	As at present.	
	A B	E.J.2	A. Down Main to Down Relief Junction Indi- cator. B. Down Main or Down Main to Down Relief Home.	Down Side of Down Main.	353 yards.	
		E.J.7	Down Relief Home.	Down Side of Up Main.	353 yards.	

Form.	No. of Signal.	Description.	Position.	Distance from Box.
Southall E	st Jun E.J.38	ction—continued. Up Relief Starting.	Up Side of Up Relief.	1,020 yards
9				

At the same time Southall East Junction Up Goods Loop to Up Relief Starting (No. E.J.35) will become a 3 aspect signal and will display the Green aspect when Hanwell's Up Relief Home (No. H.L.5) is displaying other than a Red aspect.

BETWEEN SOUTHALL EAST JUNCTION AND HANWELL.

BEIWEEN	U.M.8	Up Main Automatic Home.	Up Side of Up Main.	1,291 yards Down Side of Hanwell Box.
	U.M.7	Up Main Automatic Home. (4 aspect signal, but the Double Yellow aspect will not be in use. The Green aspect will be displayed only when Hanwell's Up Main Home is in the Clear position.	Down Side of Up Main.	736 yards Down Side of Hanwell Box.
	D.M.7A	Down Main Automatic Home.†	Down Side of Down Main.	2,313 yards Up side of Southall East Junction Box.
	D.M.7 B	Down Main Automatic Home.	Down Side of Down Main.	I,775 yards Up Side of Southall East Junc- tion Box.
1		† See note on page 10.		X

Form.	No. of Signal.	Description.	Position.	Distance from Box.	
Between So	uthall D.M.8	East Junction and Hanwell—conti Down Main Automatic Home.	nued. Down Side of Down Main.	1,220 yards Up Side of Southall East Junc- tion Box.	
	D.R.7A	Down Relief Automatic Home.†	Down Side of Down Relief.	2,313 yards Up Side of Southall East Junc- tion Box.	
	D.R.7		Down Side of Down Relief.	194 yards from and on the approach side of Signal No. D.R.7.A.	

Note.—The Off indication will be displayed when Signal No. D.R.7.A. is displaying other than a Red aspect.

other than a R	D.R.7 B.	Down Relief Automatic Home.	Down Side of Down Relief. (On same bracket as Signal No. U.M.7.)	I,775 yards Up side of Southall East Junc- tion Box.
	D.R.8	Down Relief Automatic Home.	Down Side of Down Relief.	I,220 yards Up Side of Southall East Junc- tion Box.

 \dagger Switches will be provided in Hanwell Signal Box to place and maintain these Signals at Danger in an emergency.

Form.	No. of Signal.	Description.	Position.	Distance from Box.	
HANWELL	H.L.5	Up Relief Home. (4 aspect signal, but the Double Yellow aspect will not be in use. The Green aspect will be displayed only when Hanwell's Up Relief Inner Home and Up Relief Starting are in the Clear position.	Up Side of Up Relief.	736 yards.	
	-	A. Down Main Home (already in use). B. Down Main Automatic Distant for Signal No.D.M.7.A. (2 aspect signal Yellow or Green. The Green aspect will be displayed when the Down Main Home is Clear and Auto Signal D.M.7.A. is displaying a Double Yellow or Green Aspect.) An A.T.C. Ramp will be provided immediately in advance of this Signal.	Up Side of Down Main.	149 yards.	
Ø ^A Ø ^B		A. Down Relief Home (already in use). B. Down Relief Automatic Distant for Signal No. D.R.7.A. (2 aspect signal—Yellow or Green. The Green aspect will be displayed when the Down Relief Home is clear and Auto Signal No. D.R.7.A. is displaying a Yellow, Double Yellow or Green Aspect.) An A.T.C. Ramp will be provided immediately in advance of this Signal.	Down Side of Down Relief.	160 yards.	

Shunting Signals.

There will be no alteration to the existing Shunting Signals in the area covered by this Notice.

12. Signals to be taken out of use.

At the same time the following signals will be taken out of use:-

(i) Hayes and Harlington-Down Main Distant (Semaphore) and A.T.C. Ramp. Down Relief Distant (Semaphore) and A.T.C. Ramp.

(ii) Southall West Junction-

Up Main Distant and A.T.C. Ramp.

Up Main Home (on Bracket).

Up Main Starting.

Up Relief Distant and A.T.C. Ramp.

Up Relief Homes Bracket. Up Relief Starting Bracket.

Down Main Distants and A.T.C. Ramp.

Down Main Homes Bracket.

Down Main Starting (Semaphore).

Down Relief Distants and A.T.C. Ramp.

Down Relief Home Bracket.

Down Relief Starting (Semaphore).

(iii) Southall West Station-

Up Main Distants and A.T.C. Ramp.

Up Main Homes Bracket.

Up Relief Distants and A.T.C. Ramp.

Up Relief Home Bracket.

Up Relief Starting.

Down Main Distant and A.T.C. Ramp.

Down Main Homes Bracket.

Down Main Starting.

Down Relief Distant and A.T.C. Ramp.

Down Relief Homes Bracket and Platform Co-acting Signal.

Down Relief Starting Bracket.

(iv) Southall East Station-

Up Relief Distants and A.T.C. Ramp.

Up Relief Home.

Up Main Distants and A.T.C. Ramp.

Up Main Home.

Down Main Home (on Double Bracket).

Down Main Distant and A.T.C. Ramp. Down Relief Distant and A.T.C. Ramp.

Down Relief Homes (on Double Bracket).

To Bay or Bay Siding Starting Bracket.

(v) Southall East Junction-

Up Relief Distant and A.T.C. Ramp.

Up Relief Homes (on gantry).

Up Relief Starting.

Up Relief I.B.S. Home and Distant and A.T.C. Ramp.

Up Main Distant and A.T.C. Ramp.

Up Main Home (on gantry).

Up Main I.B.S. Home and Distant and A.T.C. Ramp.

Down Main Distant and A.T.C. Ramp.

Down Main Homes Bracket.

Down Relief Distant and A.T.C. Ramp.

Down Relief Home.

(vi) Hanwell-

Up Main Distant and A.T.C. Ramp.

Up Relief Distant and A.T.C. Ramp.

Down Main Starting.

Down Main I.B.S. Home and Distant and A.T.C. Ramp.

Down Relief Starting and Co-acting Signal.

Down Relief I.B.S. Home and Distant and A.T.C. Ramp.

13. Block Telegraph Working Re-arrangement.

At the same time Absolute Block Telegraph working between Southall West Junction and Hanwell on the Up Main, Down Main, Up Relief and Down Relief Lines and between Southall West Junction and Hayes on the Down Main and Down Relief Lines will be dispensed with and Track Circuit Block Working will be instituted. Block Bells will be retained for emergency purposes. Train Describers will be provided between Southall West Junction, Southall West Station, Southall East Junction and Hanwell.

Instructions for working Block Bells and Train Describers are contained in Circulars

The switching out facilities at Hayes & Harlington, Southall West Junction and L.K.245 and 246. Hanwell are dispensed with.

The switching out facilities at Southall East Junction are retained.

14. Track Circuits.

All existing Track Circuits will be renamed and re-arranged as indicated on the attached diagram. "Vehicle on Line" switches for the Track Circuits through the Up and Down Relief Platform Lines through Southall Station will be dispensed with.

15. Re-naming of Goods Lines.

At the same time the following alterations in the naming of Lines will be carried out:—

Up Goods Running Loop between Hayes and Southall West Junction to be re-named Up Goods Line.

Up Goods Running Loop (Up Side of Up Relief) between Southall West Junction and Southall West Station to be renamed No. I Up Goods Line.

Up Avoiding Line (Down Side of Down Main) between Southall West Junction and Southall West Station to be renamed No. 2 Up Goods Line.

As from 12.1 a.m., Sunday, all the Signals shewn herein to be taken out of use will be extinguished, and trains will be Handsignalled through the sections affected.

Trainmen must keep a sharp look-out for Hand Signals and must ignore any aspect which may be displayed by any of the colour light signals in the area affected.

Hanwell's Down Main and Down Relief Homes and Distants will be disconnected and maintained at Danger and Caution respectively.

Hayes Up Relief Outer Advanced Starting, Up Main Starting, Up Relief and Up Main Distants will be disconnected and maintained at Danger, and Caution respectively.

The Signal Engineer will have occupation of the locking frames at Hayes, Southall West Junction, Southall West Station, Southall East Station, Southall East Junction and Hanwell during the hours of 12.1 a.m. and 8.0 a.m. (or until completion), Sunday, for the purpose of altering and testing the locking.

All arrangements for the safe working of the Line (including the appointment of Handsignalmen) must be made by the District Inspector in accordance with Rule 77.

Paddington Station, 2nd April, 1953. N. H. BRIANT, District Operating Superintendent.

The Receipt of this Notice must be acknowledged by First Train.

9346 4/53 4,000

Dep	Station1953					1953.		
Received copy of Mr	. Briant's	Notice	No.	E.13,	dated	2nd	April, in	connection

Received copy of Mr. Briant's Notice No. E.13, dated 2nd April, in connection with the introduction of Multiple Aspect Signalling, Hayes to Hanwell.

District Operating Superintendent, Paddington. (Signature.)

