

*C. J. Woolstenholme*

**BRITISH RAILWAYS**

**(Private—Not for Publication)**

**PLYMOUTH SIGNAL BOX**

**DESCRIPTION and METHOD of OPERATION**

**of the**

**SIGNALLING CONTROL PANEL**

# SIGNALLING RECORD SOCIETY

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# Description and Method of Operation of the Signalling Control Panel

## PART 1—DESCRIPTION

### 1. GENERAL

The installation at Plymouth comprises electrically worked points, multiple aspect colour light running signals, miniature yellow and position light shunting signals. These are all operated from a control panel of the "mosaic" type using the "Entrance-Exit" method of operation.

### 2. CONTROL PANEL

The Control Panel depicts diagrammatically the running lines, points and signals in the area controlled therefrom.

(1) Throughout the pictorial layout depicting the running lines are series of rectangular apertures uniformly spaced in which white lights appear when the route has been correctly set for the passage of a train. These lights extend from the position on the panel corresponding to the signal in question as far as the next signal in advance. In addition, as explained in Part 2, certain white lights become illuminated in isolation.

Route  
Indications

(2) The extent of all track circuits is also shown on the pictorial layout and their occupancy is indicated by the display of a series of red lights in the aforementioned apertures.

Track  
Circuit  
Indications

When no lights appear or the white lights are displayed the applicable track circuit is clear.

(3) An indication that a power supply is available for the track circuit indications is provided in the lower right hand portion of the panel.

Track Circuit  
Indications  
Power  
Supply

(4) On the Down Main, Up Main, Down Devonport Branch and Up Millbay Branch a red indicator similar to a track circuit indication is given. This indicates relative to a particular signal the state of the line sufficiently far in rear so that the signalman may know when the replacement to danger of that signal would cause a change to a more restrictive aspect in the face of an approaching train.

Train  
Approaching  
Indications

(5) In the upper portion of the signalling control panel free thumb switches are placed in horizontal rows, one such switch being provided for each set of points, to enable the points to be individually operated if and when required. An arrow is engraved on the face of the switch, and the latter may be turned so that the arrow is positioned upwards or inclined either to the left or right. To individually reverse or maintain reverse a set of points, the point switch is turned to the right, and similarly to the left for the normal position. The switch is otherwise allowed to remain in the mid-position when

Point  
Switches

automatic route setting is in operation. To the left and right of the point switch is a list of the positions in which all other points, interlocking with the points in question must be locked before the points can respond to the switch. A red light mounted immediately above the point switch is caused to be illuminated whenever the points are locked either by the occupation of track circuits or by reason of the interlocking with signals, in which circumstances the points will not respond to the operation of the switch. The red light also appears immediately the point switch is placed to either the normal or reverse position and the points have correctly responded to indicate that the points will be held in that position until the switch is restored to the mid-position.

(6) Immediately to the left or right of the red light referred to in the above paragraph, a white light is illuminated when the points are correctly detected normal or reverse as the case may be. The number corresponding to that of the point switch is affixed on the sleeper at the appropriate points together with an arrow which indicates the direction of movement of the point tongues required to place the points in the normal position.

Point  
Indicators

(7) In addition to the above point indications, the operation to the ON position of the switch labelled POINT INDICATIONS in the lower right hand portion of the signalling control panel, will cause the applicable rectangular aperture forming the normal or reverse position of the points on the track diagram to be illuminated by a white light. The appropriate indication will remain illuminated so long as the POINT INDICATION switch is in the ON position. These two white indications will also be caused to flash alternatively irrespective of the position of the aforementioned switch whenever the points concerned are out of correspondence with their controlling relays and therefore during the time the points are being moved.

Point  
Indicators

(8) In the event of a point contactor failing to release after the points have been called and correctly set a flashing red light will appear to the right of the "Point" switch in the row at the bottom right of the control panel and a warning buzzer will sound. The audible warning can be silenced by turning the switch from the "Clear" to the "Fault" position. The visual warning will then exhibit a steady red light which will remain until the line-man has corrected the fault whereupon the audible warning will again sound and the white light commence flashing. The audible warning is silenced and a steady white light exhibited by returning the switch to the "Clear" position.

Point  
Fault  
Indications

(9) For each signal a free rotary switch is provided on the panel track line in a position corresponding to the site of the signal. Engraved on the face of the switch are

Signal  
Switches

one or two arrows. Multiple aspect colour light signals having no subsidiary shunting signals are controlled by a switch having one red arrow. If such a signal is provided with a subsidiary shunting signal, it is controlled by a rotary switch having one red and one yellow arrow. Ground position light shunting signals are controlled by rotary switches having one yellow arrow. To maintain or restore a signal to danger the switch must lie in such a position that the engraved arrow or arrows be at right angles to the line to which the signal refers (normal position), whilst as a preliminary to clearing the signal the switch must be turned through 90° so that the arrow points in the same direction as the movement controlled by the signal. In the case of those switches having two arrows, the red arrow should be turned in the direction of the movement if it is required to clear the main aspect, calling-on aspect, or miniature yellow aspect; the yellow arrow should be turned in the direction of the movement if it is required to clear the position light shunting aspect.

(10) Incorporated in the signal profile adjacent to each signal switch is an aperture capable of displaying either a red or a green light according as the signal is in the "On" position or is exhibiting any one of the proceed aspects respectively. In the case of multiple aspect signals, total failure of the signal lamp will cause the indication light in the signal profile to be extinguished. In the case of switches operating slots on signals controlled by other signal boxes, a white light is given in the aperture in the signal profile when the slot has been taken off, irrespective of whether the signal is at danger or not by reason of track circuit or other controls. The illumination of a red indication in such an aperture indicates that the slot has correctly replaced the controlled signal to danger.

Signal  
Indicators

(11) The profiles on the panel of the two Limit of Shunt indicators on the Up and Down main lines at the west and east end of the station respectively include apertures in which a red light is exhibited, indicating that the lamps in these indicators are correctly illuminated.

Limit of  
Shunt  
Indicators

(12) All signals and slots are approach locked where necessary i.e. the interlocking will be held even if the signal or slot switch is restored normal should a train have reached a certain point on the approach side of the signal whilst a proceed aspect was being displayed. The interlocking will then be held until either the train passes the signal or an automatic time release has operated. The time release will not commence to operate until the signal is properly at danger, and during the time the approach locking is effective the route lights concerned will remain alight. The standard timing of the automatic release is two minutes in the case of signals controlling running movements and 30 seconds in the case of ground shunt signals except those automatically cleared which are subject to two minutes.

Approach  
Locking

(13) Except in the case of certain slot switches (i.e. 62, 67, 68 and 71) a push button is provided in the track line at the forward end of the route. In addition to turning the signal switch to the reverse position the appropriate push button for the desired route must be subsequently momentarily depressed in order to clear the signal.

Push  
Buttons

In certain cases a ground position light signal is provided in advance of a multiple aspect colour light signal. In such cases it will only be necessary to depress the push-button immediately to the rear of the multiple aspect colour light signal next in advance or, in the case of miniature yellow signals for movements to sidings, the push button at the forward end of the route, in order to set up the complete route and automatically clear the intermediate position light ground signal. In such cases the rotary entrance switch for the position light ground signal concerned must be in the normal position.

In order more readily to locate the appropriate push buttons, they are coloured to agree with the colour of the arrow on the corresponding signal switch, i.e., they are coloured accordingly red, yellow or red/yellow.

(14) The extent of the overlap ahead of a signal is denoted on the panel by a dot being placed inside the rectangle that appears in the track line to indicate a track circuit joint.

Extent of  
Overlap

(15) Plungers for operating Emergency Block Bells when their use is required by the Track Circuit Block Regulations are provided on the panel adjacent to the ends of the diagrammatic track leading to each adjacent signal box.

Emergency  
Block  
Bells

When a bell is being rung from an adjacent signal box a white light above the respective plunger will be illuminated for several seconds to aid identification.

(16) At a position on the panel adjacent to certain platform starting signals (as shown below), a flashing blue light will be displayed when the platform staff have operated a Train Ready-to-Start Plunger. The light will continue to flash until the signal controlling the departure of the train is cleared when the light will be extinguished.

Train  
Ready-to-  
Start  
Indicators

Train Ready-to-Start indicators are provided for the following platforms:

For trains starting in the Down direction:

Platforms 2, 3, 4, 5, 6, 7 and 8.

For trains starting in the Up direction:

Platforms 5, 6, 7 and 8.

(17) For the emergency operation of points 201—209 and 271—275, hand cranks are located one each at Lipson and Devonport Junctions and these are released by depressing a plunger on the panel adjacent to the relevant points. A white light over each plunger is normally exhibited, indicating that the hand crank is correctly locked in the release instrument, this white light is replaced by a red light when the hand crank has been released.

Point  
Hand  
Cranks

Six hand cranks are provided for the emergency operation of the points in the station area, each housed in a glass fronted locked box on the operating floor.

(18) Ground frames exist at Cornwall Junction and East and West of Devonport Albert Road Station. Two-position switches, one for each set of points, are located on the control panel adjacent to the diagrammatic position of the points themselves.

Ground  
Frame

When the ground frame is not in use the release switch stands in the normal (N) position and is placed in the reverse (R) position to release the ground frame. The aperture to the left of the release switch exhibits a red light when interlocking conditions prevent a release being given. The aperture to the right of the switch exhibits a white light when the switch is turned to release the ground frame. This white light is replaced by a red light when the release has been taken.

(19) Emergency detonator placers are sited on the Up and Down Lines at the west end of Mutley Tunnel and to the west of Cornwall Loop Junction. They are operated by turning the appropriate two-position switch mounted on the panel from "OFF" to "ON". When the detonators are off the line a white light is exhibited to the left of the appropriate switch. When the detonators are on the line a red light to the right of the switch is exhibited.

Emergency  
Detonator  
Placers

(20) Also located in the lower right hand portion of the signalling control panel are the following, reference to their operation being contained in Part 2 of this publication.

Miscellaneous  
Equipment

- (1) Earth Leakage indicator and switch.
- (2) Power Supply indication and switch.
- (3) Signal Lamps Auxiliary Filament Warning and Switch.
- (4) Switch for dimming ground signals.
- (5) Plunger for summoning lineman.
- (6) Switch for dimming panel lighting intensity.

In the top left hand corner of the panel there is located a socket for testing Panel Indication Lamps.

(21) For a description and method of operation of the train Describer and Telephone Panel which is mounted above the Signalling Control Panel, refer to separate publications.

Train  
Describer  
Panel

## PART 2—METHOD OF OPERATION

### 1. POINTS

(1) Points are normally operated automatically to the required position as necessary whenever a signal switch and associated push-button has been operated to clear a desired signal provided the point switch is in its mid-position and the points are free of interlocking or track circuit control. The setting up of a route, as the process

Automatic  
Operation

of reversing a signal switch and depressing the push-button is termed, calls the points to the required position and when they are properly set locks them in that position for as long as the signal switch remains reverse.

(2) In general, points will continue to remain in the same position even after the signal switch is restored normal until called to a different position by the setting up of another route. An exception is made for catch points protecting the running line and in these cases, the points concerned will be called to the normal position automatically but not locked as soon as the signal switch has been restored normal and the points have become free of inter-locking or track circuit control.

(3) The Points may also be operated individually, if free, by use of the point switch. When the points have set properly, they will become locked and it will not be possible to set up a route which requires the points in the opposite position until the switch is replaced to the mid-position. When it is desired to turn the switch from normal to reverse or vice versa, a pause must be made in the mid-position until the red lock light is extinguished.

(4) The points, whether being set automatically or individually can only operate in the correct sequence as demanded by the point-to-point interlocking. When operating points individually, the point switches of all other points which interlock with the points in question must be placed in the position corresponding with the point setting demanded by the interlocking.

(5) The points will remain locked after being set for a route if the approach locking becomes effective until the time release has operated, or, if a train has passed the signal, until all the relevant track circuits have been cleared, or, in the case of trailing points in the overlap for the signal concerned, a separate automatic time release will come into operation to free the points in order to cater for a train not proceeding beyond the signal next ahead immediately protecting the points. The latter time release is adjusted to ensure that such a train has come to a stand at the signal in question.

(6) In the case of those facing points which are insufficiently far in advance of the protecting signal to ensure that they will complete their movement should they commence to move immediately the signal is passed by a train inadvertently, in addition to the above track circuit locking, the points will also be held by the occupation of track circuits on the approach side of the protecting signal for a predetermined time even if the signal is maintained at danger to ensure that they cannot be reached by a train under any circumstances whilst they are in motion under normal conditions. This track circuit locking is released by the operation of an automatic time release to permit the points being altered after the train has come to a stand at the protecting signal.

(7) In order to facilitate traffic working facing points are not locked in either position when the signal next in rear of the signal immediately protecting such points is operated to a proceed aspect provided that the overlap applicable to the position to which the points may be altered is clear. Approach locking of these points, however, will apply as in the foregoing paragraph.

(8) Should the two white indications forming the normal and reverse position of the points on the track diagram continue to flash alternately for a greater time than would ordinarily be taken for the points to complete their movement after a route has been set up, the signal switch should be restored, and an attempt should be made to operate the points by means of the individual point switch before treating them as defective. If an obstruction unduly interferes with the free movement of the points an overload protection device will come into operation to disconnect the power supply and the points will be stopped in mid-stroke. This device will be automatically reset as soon as the point switch is operated to reverse the direction of motion of the points, so that further attempts can be made to set the points to the required position.

(9) During the time that hand-signalling has to be resorted to or whenever other circumstances dictate, the point switches must always be used to set and lock the points in the required position before a train is authorised to travel over them other than by means of the fixed signals. The points must not be assumed locked when the switch is turned to the required position unless the red lock light is illuminated. This does not avoid the need for the points to be clipped for each movement as necessary. One of the two white indications forming the normal and reverse position of the points on the track diagram as appropriate may be illuminated by the operation to ON of the POINT INDICATIONS switch. When these indications are in use they will be unaffected by the operation of the route lights described below in Section 2.

(10) In the event of the "Fault" indication becoming displayed the lineman must be immediately advised and no attempt must be made to move any points, either individually or by route setting, until the lineman has advised the signaller in which group of points the failure has occurred. Normal working may then be resumed except in the affected area.

All points in the affected area must be treated as defective and no attempt should be made to operate them from the panel, either individually or by route setting, until the failure has been rectified.

(11) If it becomes necessary to resort to hand crank operation all signals interlocking with the defective points must be first placed at danger. When this has been done and the defective points are in the station area a hand

Facing  
Points in  
Overlap

Failure of  
Points to  
Detect

Hand  
Signalling

Point  
Contactor  
Fault

Hand  
Crank  
Operation

crank may be obtained by breaking the glass in one of the special hand crank boxes provided and issued to the person appointed to operate the points. Only in cases of extreme emergency should more than one hand crank be issued. In the case of defective points in the Lipson and Devonport Junction areas the appropriate hand crank is located in an interlocked release instrument on the site and may only be withdrawn on an electrical release being given from the signal box.

When the hand crank is electrically released the person appointed to operate the points must telephone the signalman when he arrives at the site and await instructions before attempting to remove the hand crank from the release instrument.

When a hand crank has been obtained the person to whom it is issued must then proceed to the site of the defective points and telephone the signalman for further instructions. A signal post telephone may be used for this purpose.

Before the hand crank may be inserted in the point machine a padlocked clasp or strap covering a plug on the top of the machine must be unfastened and lifted. This action will cut off the electric power from the points. After the hand crank has been removed from the machine *the strap must not under any circumstances be replaced over the plug in the machine, until the signalman has given permission.*

The signalman must not authorise the replacement of this strap if he has given permission for a train to pass over the points until such train has cleared the points.

During the time of failure it may, however, be feasible to properly signal movements other than over the defective points. Attention is drawn to the importance of ascertaining that both facing and trailing points are correctly set before a train is authorised to pass over them other than by means of the fixed signals.

(12) When it is necessary to withdraw a hand crank from one of the instruments referred to in para (11) the signalman must depress the appropriate release plunger on the control panel, causing the white light above the plunger to be replaced by a red light and a release to be given to the hand crank instrument. This will also cause a pointer on the hand crank instrument to be deflected. The hand crank may then be rotated through 180 degrees in an anti-clockwise direction and withdrawn by pulling it away from the instrument. The signalman must keep the plunger depressed until he receives an assurance that the hand crank has been withdrawn.

Hand  
Crank  
Release  
Instrument

To replace the hand-crank it must be inserted in the instrument with the free end upwards and rotated in a clockwise direction until it hangs vertically downwards. The red light above the plunger on the control panel will then be replaced by a white light.

The person replacing the hand crank in the release instrument must remain at the telephone adjacent to the release instrument until he receives permission to leave from the signalman.

(13) In the event of a failure occurring whereby the hand crank cannot be withdrawn from the instrument an emergency key may be obtained by breaking the glass in one of the special key boxes provided in the signal box. The emergency key must then be taken to the hand crank release instrument and after the signalman's permission has been obtained, inserted in the same key hole in the front of the instrument and turned to release the hand crank which may then be withdrawn from the instrument and used to operate the points in accordance with para (11).

Failure of  
Hand Crank  
Instruments

When the hand crank has been restored to the instrument after being used to operate the points the emergency key must be removed from the small keyhole and returned to the signal box.

(14) The point machines are of the Westinghouse Brake and Signal Company's style M3 and the relevant instructions in the General Appendix must be complied with in so far as they apply.

Type of  
Point  
Machine

(15) A release can be given to operate the ground frame points at Cornwall Junction and Devonport (Albert Road) when the red light to the left of the two-position switch described in Part 1.2.(18) is extinguished.

Ground  
Frame  
Operated  
Points

On receiving the shunters request for a release, and provided the red lock light is not exhibited, the signalman may turn the appropriate release switch from normal to reverse. A release is then given to the ground frame and a white light exhibited to the right of the two-position switch. The shunter will then withdraw the key and operate the ground frame in accordance with the instructions contained in the Regional General Appendix in so far as they apply. When the Annetts key is turned from position 1 to position 2 in the release instrument the right hand release light on the control panel will change from white to red. This red light will remain exhibited so long as Annetts key is withdrawn.

No movement conflicting with the ground frame can be set up until the ground frame points have been restored, the Annetts key returned to the key release instrument and turned clockwise to position 1 and the release switch on the control panel restored to the normal position, when the white release light will be extinguished.

(16) Switch collars must be affixed to the point switches whenever the occasion demands.

## 2. SIGNALS

(1) Signals and slots are operated by first turning the appropriate signal switch and then by momentarily de-

Operation

pressing the push-button for the required route (where provided).

(2) For the signal or slot to clear, the switches for all conflicting signals and slots must have been replaced to the normal position, and such signals have been returned properly to danger and freed of approach locking after the previous movement.

(3) Where points are involved these will be set automatically and locked in the required position if not already in that position provided they are free to be so set at the instant of turning the signal or slot switch and depressing the push-button. Should a point switch not be in its mid-position but in a position holding the points other than as required, the point switch must first be placed to its mid-position before the signal or slot switch and push-button are operated. Similarly if the points are locked by reason of the interlocking or track circuit occupancy the action of turning the signal or slot switch and pressing the push-button will not be effective.

In the case of certain signals alternative routes are available to the same destination and in these cases automatic preference is given to one of these routes. A list of these alternative routes and method of selecting the non-preferred routes is given in appendix "B".

(4) Where points are involved, it follows, therefore, that a route cannot be preselected, i.e. stored up, since the operation of the push-button is not effective unless at that instant all the points concerned are free to respond or are already set in the required position.

(5) After the route has been set up, and the points where these are involved have been locked in the required position, a succession of white route lights will be illuminated in turn throughout the extent of the route. Whilst the route is so illuminated no conflicting or opposing route can be set up.

Should a signal become approach locked, the route lights will continue to be displayed until the approach locking has been released.

(6) If a route has been correctly set up as described the signal will clear either immediately or after the necessary delay where approach control is in force.

(7) When a train has passed a signal which has been cleared for it, the white route lights appropriate to each successive track circuit will be extinguished and red track circuit lights will take their place. If the signal switch has not been restored to normal after the passage of the train, white route lights will again take the place of the red lights as each track circuit becomes unoccupied. Should a train pass a signal at danger, all the track circuit indications applicable to the particular track circuit will become illuminated irrespective of point setting.

In general, the white route lights in advance of a train

will remain illuminated until the train has occupied the appropriate track circuit, although the signal switch applicable to the signal in rear may have been restored to normal. In some cases, however, in order to facilitate traffic working in the station area, the white route lights in advance of a train may be extinguished after an interval of time consistent with the train having come to a stand. Under these conditions, the interlocking has then become freed to enable an opposing shunting movement to take place.

(8) Multiple aspect colour light signals are controlled by track circuits and interlock with points and other signals as far as the next similar signal ahead and also interlock with signals controlling opposing movements within and beyond the overlap. In normal cases these controls extend up to the termination of the O/L but in special cases where such controls would have an adverse effect on traffic working they are modified and the signal in the rear is allowed to display a single yellow (delayed yellow) after the approaching train has been brought nearly to a stand, provided the line is clear and the points are locked correctly up to the next signal.

Certain of the multiple aspect colour light signals are provided with position light calling on signals. In those cases, the appropriate signal switch and push button are operated in the normal manner, but if the track circuit conditions are such that the multiple aspect signal cannot clear due to a train standing in rear of the signal next in advance a calling-on aspect will be displayed to the driver. Once a calling-on aspect has been displayed it will remain thus even though the track circuits in rear of the next signal become unoccupied subsequently. Multiple aspect colour light and position light calling on signals will be replaced to danger on being passed and the signal or slot switch must then be restored to normal in accordance with the Rules, and the signal will not clear again until this has been done and the switch, together with the push-button if provided, re-operated.

(9) Position light shunt signals, where provided subsidiary to multiple aspect colour light signals, interlock with points and signals up to the next signal in advance and beyond as necessary. Where a calling on signal is provided, the two signals are combined, two white lights inclined at an angle of 45° signifying "Shunt Ahead" and this indication with the addition of the letter "C" signifying "Calling On".

Position light shunt signals are replaced to danger on being passed, and the signal switch must be restored to normal as described in paragraph (8) above before the signal can be cleared a second time.

(10) Miniature yellow signals, where provided subsidiary to multiple aspect colour light signals, are used to control running movements into sidings and other lines

which are not track circuited. They interlock with points and signals and are controlled by track circuits as far as the limit of the signalled area. Miniature yellow signals are generally replaced to danger on being passed, and the signal switch must be restored to normal as described in paragraph (8) above before the signal can be cleared a second time.

(11) Position light ground shunting signals interlock with points and signals up to the next signal in advance and beyond as necessary. Ground shunting signals, are replaced to danger by the movement clearing the first track circuit ahead of the signal.

(12) In several cases position light ground shunting signals are provided applicable to the line and direction of traffic movement for which a multiple aspect signal is cleared. In these cases the operation of the signal switch for the multiple aspect signal and the depression of the push-button immediately to the rear of the next multiple aspect signal in advance (or in the case of signals reading into sidings or docks, the push-button at the forward end of the route), will cause the intermediate ground shunting signal to display a proceed aspect but it is essential for these movements that the Entrance switch for the intermediate ground shunting signal is in the normal position. The multiple aspect signal will not clear until the appropriate ground shunting signal is displaying a proceed aspect.

The ground shunting signal will continue to display a proceed aspect when a train is approaching it under these circumstances even after the main signal has been replaced, either by track circuit control or by the replacing to normal of the entrance key, until the train has passed the ground shunting signal.

Should it become necessary to replace the ground shunting signal to danger after having been cleared automatically as described above, the switch for the controlling multiple aspect signal in rear should be restored to normal which will replace both the multiple aspect signal and the ground shunting signal to danger, or if the train has already passed the multiple aspect signal, the ground shunting signal can be put to danger by momentarily turning the ground shunting signal switch to the reverse position and back again to normal. It will NOT be necessary to depress the associated push-button after turning the ground shunting signal switch to the reverse position in this instance.

When such ground shunting signals are used for shunting movements their operation and control is as described in paragraph (1) above.

The signal indications displayed through the aperture in the profile of such ground shunting signals on the signalling control panel will at all times give a correct indication of the aspect exhibited by the signal irrespec-

tive of whether it has been operated automatically or by the operation of the signal switch.

(13) In general when a signal has been cleared and the train has passed it, it will not be possible to set up an opposing route, even though the signal switch may have been restored to normal until the train has passed completely beyond the signal permitting the opposing movement. In order to facilitate certain traffic movements in the station area, this control has been modified in that the opposing route can be set up after a time delay consistent with the train having come to a stand between the two opposing signals.

(14) Where propelling movements could predominate, position light shunt signals and miniature yellow signals will not be replaced to danger independently of the signal switch until the whole of the train has passed.

Also to facilitate propelling movements it is possible to clear shunt signals at the engine end of the train although the movement has not cleared the intervening track circuits, provided the shunt signals are cleared progressively in the opposite direction to that of the proposed movement.

(15) Under "delayed yellow" conditions and in the case of multiple aspect signals in rear of facing junctions over which only a restricted speed is permissible, also where calling on, shunt and miniature yellow signals are provided below multiple aspect signals, the appropriate signal will not clear after the route has been set up until the berth track has been occupied (for a given time if necessary) so as to ensure the speed of the train has been suitably reduced.

(16) Except in emergencies, after a signal has been cleared for an approaching train, the signal or slot switch must not be restored to normal if the train has passed the point at which approach locking commences unless an intervening signal is already at danger.

If a multiple aspect signal or a ground shunting signal is replaced to danger in such circumstances, more restrictive aspects would be caused to be displayed in the face of the approaching train. Should the switch for a multiple aspect signal not be restored to normal after the passage of a train, a white light immediately in advance of the switch will be caused to flash until this has been done.

(17) Signal switches should always be maintained in the normal position, except when required to operate a signal for a train, in the interests of orderliness and efficient operation of the panel.

(18) When a route is set up preparatory to clearing a multiple aspect colour light signal, the position of any facing points which may be in the overlap concerned are

Interlocking  
of opposing  
Routes

Propelling  
Movements

Approach  
Control

Restoring  
Signal  
Switches

Normal  
Position  
of Switches

Indication  
of Overlap

indicated by the appropriate white light forming the normal or reverse position of the points on the track diagram. In addition if any points in the overlap are in that position which will cause the signal to display a delayed yellow aspect, a similar points indication will be given.

(19) If, when a route has been set up and the signal concerned is displaying or is about to display a delayed yellow aspect on account of points in the overlap not being in the required position (whether locked or not), the operation of the points to the position required can only be made by using the individual points switch or by setting up the appropriate route controlling the signal immediately in rear of the points.

(20) Switch and push-button collars must be affixed whenever the circumstances demand this being done.

(21) It is essential that in setting up a route the push-button be depressed only after the switch has been placed to the reverse position, otherwise the associated relay will not operate and therefore, the route will not be set up. The push-button must also be fully and deliberately depressed as a mere flick may not allow sufficient time for the relay to operate.

Overlaps where delayed Yellow Aspect provided

Switch Collars

Push-Button Operation

## GENERAL NOTES

(1) In the event of a complete power failure, even for the limited time such as would exist before the standby supply is connected, this would cause signals to fail in the face of approaching trains and under no circumstances must any route be set up, either by route setting switches and buttons or individual point keys until it has been ascertained that no train is approaching on or foul of the route in question.

(2) During the hours of darkness, the Signals Dimming Switch should be operated to the Dim position. This will cause the lamps of all position light ground shunting signals to be dimmed in order to eliminate unnecessary glare to Drivers.

(3) When so desired, the indication lights on the signalling control panel and the train describer panel may be dimmed by the use of the Panel Dimming Switch.

(4) Should the "Power Supply" indicator display "Stand by" or the "Earth Leakage" or "T.C. Indications", or "Points" indicators show "Fault" the lineman should be notified immediately.

Should the "Signal Lamps" indicator display "Aux" the lineman, if on duty, should be notified immediately. If the lineman is not on duty he should not be specially called but should be notified as soon as he next reports for duty.

When any change occurs in the above indications an

Power Failure

Signal Lamp Dimming Switch

Panel Dimming Switch

Miscellaneous Indications

audible warning will sound and the indication concerned will exhibit a flashing light. The audible warning can be silenced by turning the associated switch in the direction of the flashing indication, this action will also cause the indication to exhibit a steady light.

(5) In the event of a lineman not being available at the signal box, depression of the "Linemans Call Plunger" on the control panel will sound klaxon horns in the Cornwall Junction, Devonport Junction and Lipson Junction areas and east and west of Plymouth Station.

On hearing the Klaxon the lineman will contact the signalman from the nearest available telephone.

(6) The socket in the top left hand corner of the signalling control panel is for testing indication lamps before inserting in the panels.

(7) The emergency block bells and the alarm buzzer provided in conjunction with the switches in the lower right hand portion of the panel should be tested periodically to ensure that they function correctly when required.

Linemans Call Plunger

Lamp Test Socket

## APPENDIX A

Signalled Routes and Associated Facilities Abbreviations:

MA — Multiple Aspect Signal

DY — Delayed Yellow Aspect

CO — Call-on Signal

MY — Miniature Yellow Signal

PLS — Position Light Shunt Signal

PLGS — Position Light Ground Shunt Signal

\*1 — Provision of facility referred to in Part 2, Section "SIGNALS", clause 14, second paragraph.

\*2 — Alternative routes available. See Appendix "B", and Section "SIGNALS", clause 3 second paragraph.

## LIST OF ROUTES

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
2		4 Signal	Slot on L111	
3		5 Signal	MA	
4		14 Signal	MA	
5		7 Signal	MA	
6		14 Signal	MA	
7	A	15 Signal	MA	
7	B	66 Signal	MA with position 4 Junction Indicator	
8		10 Signal	Slot on MG43	
10		14 Signal	MA	
11		13 Signal	MA	
13	A	15 Signal	MA	
13	B	66 Signal	MA with position 4 Junction Indicator	
14		16 Signal	MA	
15	A	Platform 8 via 252N	MA/CO/DY *2	
15	B	Platform 7 via 252N	MA/CO/DY *2	
15	C	Platform 6 via 252N	MA/CO/DY *2	
15	D	141 Signal	PLS	
15	E	Platform 8 via 252R	MA/CO/DY *2	Automatically clears 141A
15	F	Platform 7 via 252R	MA/CO/DY *2	Automatically clears 141B
15	G	Platform 6 via 252R	MA/CO/DY *2	Automatically clears 141C
15	H	Platform 5	MA/CO/DY	Automatically clears 141D
15	I	Through Line	MA/CO/DY	Automatically clears 141E
16		18 Signal	MA	
17	A	54 Signal	Slot on MB87 & 90	
17	B	21 Signal	Slot on MB87 & 90	
18	A	126 Signal	PLS	
18	B	Docks via 210R	MY *2	Automatically clears 126A
18	C	Platform 2 via 210R	MA/CO/DY *2	Automatically clears 126B
18	D	Platform 3 via 210R	MA/CO/DY *2	Automatically clears 126C
18	E	Platform 4 via 210R	MA/CO/DY *2	Automatically clears 126D
18	F	Docks via 210N	MY *2	
18	G	Platform 2 via 210N	MA/CO/DY *2	
18	H	Platform 3 via 210N	MA/CO/DY *2	
18	I	Platform 4 via 210N	MA/CO/DY *2	
18	J	Through Line	MA/CO/DY	

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
18	K	120 Signal	PLS	
18	L	Platform 5	MA/CO/DY	Automatically clears 120H
18	M	Platform 6	MA/CO/DY	Automatically clears 120I
18	N	Platform 7 via 214N	MA/CO/DY *2	Automatically clears 120J
18	P	122 Signal	PLS	
18	Q	Platform 7 via 214R	MA/CO/DY *2	Automatically clears 122A
18	R	Platform 8	MA/CO/DY	Automatically clears 122B
18	S	Up Siding 1	MY	Automatically clears 122C
18	T	Up Siding 2	MY	Automatically clears 122D
21	A	Turn Table Siding	MY	
21	B	Platform 8	MA/CO/DY	Automatically clears 141A
21	C	Platform 7	MA/CO/DY	Automatically clears 141B
21	D	Platform 6	MA/CO/DY	Automatically clears 141C
21	E	Platform 5	MA/CO/DY	Automatically clears 141D
21	F	Through Line	MA/CO/DY	Automatically clears 141E
21	G	141 Signal	PLS	
36	A	Spur	MY	
36	B	146 Signal	PLS	
36	C	64 Signal via 242R	MA	
36	D	64 Signal via 242R	PLS	
36	E	Turn Table 1	MY	
36	F	52 Signal	MA	
36	G	52 Signal	PLS	
38	A	146 Signal	PLS	
38	B	64 Signal via 242R	MA	
38	C	64 Signal via 242R	PLS	
38	D	Turn Table 1	MY	
38	E	52 Signal	MA	
38	F	52 Signal	PLS	
40	A	64 Signal	MA	
40	B	64 Signal	PLS	
40	C	Turn Table 1	MY	
40	D	52 Signal	MA	
40	E	52 Signal	PLS	
42	A	64 Signal via 245N	MA	
42	B	64 Signal via 245N	PLS	
42	C	Turn Table 1 via 245N	MY *2	
42	D	52 Signal via 245N	MA *2	

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
42	E	52 Signal via 245N	PLS *2	
42	F	142 Signal	PLS	
42	G	Turn Table 1 via 245R	MY *2	
42	H	52 Signal via 245R	MA *2	
42	I	52 Signal via 245R	PLS *2	
42	J	Turn Table 2	MY	
42	K	Up Main Limit of Shunt	PLS	
44	A	64 Signal	MA	Automatically clears 142
44	B	142 Signal	PLS	
44	C	Turn Table 1	MY	
44	D	52 Signal	MA	
44	E	52 Signal	PLS	
44	F	Turn Table 2	MY	
44	G	Up Main Limit of Shunt	PLS	
46	A	64 Signal	MA	Automatically clears 142
46	B	142 Signal	PLS	
46	C	Turn Table 1	MY	
46	D	52 Signal	MA	
46	E	52 Signal	PLS	
46	F	Turn Table 2 via 248N	MY *2	
46	G	Up Main Limit of Shunt via 248N	PLS *2	
46	H	Turn Table 2 via 248R	MY *2	
46	I	Up Main Limit of Shunt via 248R	PLS *2	
46	J	Neck	MY	
47	A	Engine Spur 2 via 224N	MY	
47	B	Engine Spur 1 via 224N	MY	
47	C	59 Signal via 224N	MA	
47	D	59 Signal via 224N	PLS	
47	E	Down Main Limit of Shunt via 224R	PLS	
48	A	64 Signal	MA	Automatically clears 142
48	B	142 Signal	PLS	
48	C	Turn Table 1	MY	
48	D	52 Signal	MA	
48	E	52 Signal	PLS	
48	F	Turn Table 2 via 248N	MY *2	
48	G	Up Main Limit of Shunt via 248N	PLS *2	

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
48	H	Turn Table 2 via 248R	MY *2	
48	I	Up Main Limit of Shunt via 248R	PLS *2	
48	J	Neck	MY	
49	A	Engine Spur 2	MY	
49	B	Engine Spur 1	MY	
49	C	59 Signal	MA	
49	D	59 Signal	PLS	
49	E	Down Main Limit of Shunt	PLS	
50	A	64 Signal	MA	Automatically clears 142
50	B	142 Signal	PLS	
50	C	Turn Table 1	MY	
50	D	52 Signal	MA	
50	E	52 Signal	PLS	
50	F	Turn Table 2 via 248N	MY *2	
50	G	Up Main Limit of Shunt via 248N	PLS *2	
50	H	Turn Table 2 via 248R	MY *2	
50	I	Up Main Limit of Shunt via 248R	PLS *2	
50	J	Neck	MY	
51	A	Engine Spur 2	MY	
51	B	Engine Spur 1	MY	
51	C	59 Signal	MA	
51	D	59 Signal	PLS	
51	E	Down Main Limit of Shunt	PLS	
52	A	Up Devonport Branch	MA with position 1 Junction Indicator	
52	B	58 Signal	MA	
53	A	57 Signal	MA	
53	B	Engine Spur 2 via 227R	MY	
53	C	Engine Spur 1 via 227R	MY	
53	D	59 Signal via 227R	MA	
53	E	59 Signal via 227R	PLS	
53	F	Down Main Limit of Shunt via 227R	PLS	
54	A	Up Devonport Branch	MA with Position 1 Junction Indicator	
54	B	58 Signal	MA	
55		57 Signal	MA	
57	A	Engine Spur 2	MY	

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
57	B	Engine Spur 1	MY	
57	C	59 Signal	MA	
57	D	59 Signal	PLS	
57	E	Down Main	PLS	
		Limit of Shunt		
58		60 Signal	MA	
59		61 Signal	MA	
60		62 Signal	MA	
61		63 Signal	MA	
62		Keyham	Slot on K59	
63		65 Signal	MA	
64		68 Signal	MA	
65	A	67 Signal	MA	
65	B	Up Laira Goods	MA with position 4 Junction Indicator CO with position 4 Junction Indicator	
65	C	69 Signal	MA with position 5 Junction Indicator	
66		68 Signal	MA	
67		Laira Junction	Slot on L1	
68		Millbay	Slot on MB 72. 73. 74. 79. 80.	
69		71 Signal	MA	
71		Mount Gould Junction	Slot on MG5	
102	A	10 Signal	PLGS	
102	B	Loco Depot	PLGS	
104		14 Signal	PLGS	
109	A	15 Signal	PLGS	
109	B	66 Signal	PLGS	
110	A	120 Signal	PLGS *1	
110	B	122 Signal	PLGS	
112	A	120 Signal	PLGS	
112	B	122 Signal	PLGS	
113	A	54 Signal	PLGS	
113	B	21 Signal	PLGS	
114	A	120 Signal	PLGS	
114	B	122 Signal	PLGS	
114	C	Engine Neck	PLGS	
120	A	Docks	PLGS	
120	B	Platform 2	PLGS	
120	C	Platform 3	PLGS	
120	D	Platform 4	PLGS *2	
		via 217R		
120	E	Platform 4	PLGS *2	
		via 217N		
120	F	Through Line	PLGS *2	
		via 216R		
120	G	Through Line	PLGS *2	
		via 216N		
120	H	Platform 5	PLGS	
120	I	Platform 6	PLGS	
120	J	Platform 7	PLGS	

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
121	A	141 Signal	PLGS	
121	B	139 Signal	PLGS *1	
121	C	135 Signal	PLGS	
122	A	Platform 7	PLGS	
122	B	Platform 8	PLGS	
122	C	Up Siding 1	PLGS	
122	D	Up Siding 2	PLGS	
123	A	Platform 8	PLGS	
		via 252N		
123	B	Platform 7	PLGS	
		via 252N		
123	C	Platform 6	PLGS	
		via 252N		
123	D	141 Signal	PLGS	
126	A	Docks	PLGS	
126	B	Platform 2	PLGS	
126	C	Platform 3	PLGS	
126	D	Platform 4	PLGS	
128	A	Dock 2	PLGS	
128	B	Dock 1	PLGS	
128	C	Platform 2	PLGS	
129		131 Signal		
131	A	141 Signal	PLGS *1	
131	B	139 Signal	PLGS *1	
135	A	Platform 3	PLGS	
135	B	Platform 2	PLGS	
137	A	Platform 8	PLGS	
137	B	Platform 7	PLGS	
137	C	Platform 6	PLGS	
139	A	Through Line	PLGS	
139	B	Platform 4	PLGS	
139	C	Platform 3	PLGS	
139	D	Platform 2	PLGS	
141	A	Platform 8	PLGS	
141	B	Platform 7	PLGS	
141	C	Platform 6	PLGS	
141	D	Platform 5	PLGS	
141	E	Through Line	PLGS	
142		64 Signal	PLGS	
146		64 Signal	PLS	
148		152 Signal	PLGS	
149		Platform 2	PLGS	
150		68 Signal	PLGS	
152		68 Signal	PLGS	
159	A	Engine Spur 2	PLGS	
159	B	Engine Spur 1	PLGS	
159	C	59 Signal	PLGS	
159	D	Down Main	PLGS	
		Limit of Shunt		
159	E	179 Signal	PLGS	
159	F	Down Siding	PLGS	
		East		
161	A	Engine Spur 2	PLGS	
161	B	Engine Spur 1	PLGS	
161	C	59 Signal	PLGS	
161	D	Down Main	PLGS	
		Limit of Shunt		
161	E	179 Signal	PLGS	

Automatically clears  
152

SIGNAL No.	ROUTE	DESTINATION	TYPE OF SIGNAL	NOTES
161	F	Down Siding East	PLGS	
163	A	Engine Spur 2	PLGS	
163	B	Engine Spur 1	PLGS	
163	C	59 Signal	PLGS	
163	D	Down Main Limit of Shunt	PLGS	
163	E	179 Signal	PLGS	
165	A	Engine Spur 2	PLGS	
165	B	Engine Spur 1	PLGS	
165	C	59 Signal	PLGS	
165	D	Down Main Limit of Shunt	PLGS	
165	E	179 Signal	PLGS	
167		Down Siding East	PLGS	
169		57 Signal	PLGS	
171		57 Signal	PLGS	
179		Down Main Limit of Shunt	PLGS	
181		Engine Spur 2	PLGS	
185	A	67 Signal	PLGS	
185	B	Up Laira Goods	PLGS	
185	C	69 Signal	PLGS	
187		71 Signal	PLGS	
189		71 Signal	PLGS	

## APPENDIX "B"

Test of alternative routes. (See Section "SIGNALS", Clause 3, second paragraph).

The non-preferred route may be selected by locking the points listed in the right hand column below in the position shown by means of the individual point switch.

SIGNAL No.	DESTINATION	PREFERRED ROUTE	ALTERNATIVE ROUTE	POINTS TO BE LOCKED TO SELECT ALTERNATIVE ROUTE
15	Platform 8	15A (via 252N)	15E (via 252R)	251N
15	Platform 7	15B (via 252N)	15F (via 252R)	251N
15	Platform 6	15C (via 252N)	15G (via 252R)	251N
18	Docks	18B (via 210R)	18F (via 210N)	210N
18	Platform 2	18C (via 210R)	18G (via 210N)	210N
18	Platform 3	18D (via 210R)	18H (via 210N)	210N
18	Platform 4	18I (via 210N)	18E (via 210R)	210R
18	Platform 7	18Q (via 214R)	18N (via 214N)	214N
42	Turntable 1	42G (via 245R)	42C (via 245N)	258N
42	52 Signal	42D (via 245N)	42H (via 245R)	257N
		42E (via 245N)	42I (via 245R)	257N
46	Turntable 2	46H (via 248R)	46F (via 248N)	251N
46	Up Main Limit of Shunt	46I (via 248R)	46G (via 248N)	251N
48	Turntable 2	48H (via 247N)	48F (via 247R)	251N
48	Up Main Limit of Shunt	48I (via 247N)	48G (via 247R)	251N
50	Turntable 2	50H (via 247N)	50F (via 247R)	251N
50	Up Main Limit of Shunt	50I (via 247N)	50G (via 247R)	251N
120	Platform 4	120E (via 217N)	120D (via 217R)	217R
120	Through Line	120G (via 216N)	120F (via 216R)	216R

## APPENDIX "C"

## RESTORED POINTS

(See Part 2. Section "POINTS" Clause 2)

212  
213  
220  
230  
231  
240  
250  
255  
259  
261

### APPENDIX "D"

Facing points held by Track Circuits on the approach side of the protecting signal.

(See Part 2, Section "POINTS" Clause 6)

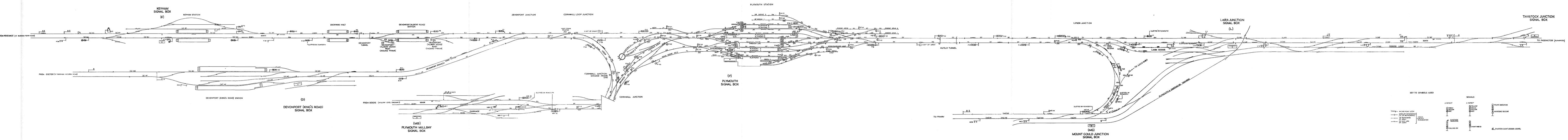
Signal No.	Description	Facing Point	Facing Point	Facing Point	Points to be
210					
211					
214					
227					
241					
246					
263					
27	Platform 5	15A (via 27N)	15B (via 27N)	15C (via 27N)	27N
28	Platform 7	15E (via 28N)	15F (via 28N)	15G (via 28N)	28N
29	Platform 6	15D (via 29N)	15H (via 29N)	15I (via 29N)	29N
30	Docks	15J (via 30N)	15K (via 30N)	15L (via 30N)	30N
31	Platform 5	15M (via 31N)	15N (via 31N)	15O (via 31N)	31N
32	Platform 3	15P (via 32N)	15Q (via 32N)	15R (via 32N)	32N
33	Platform 4	15S (via 33N)	15T (via 33N)	15U (via 33N)	33N
34	Platform 7	15V (via 34N)	15W (via 34N)	15X (via 34N)	34N
35	Turntable 1	15Y (via 35N)	15Z (via 35N)	16A (via 35N)	35N
36	Signal	16B (via 36N)	16C (via 36N)	16D (via 36N)	36N
37	Turntable 2	16E (via 37N)	16F (via 37N)	16G (via 37N)	37N
38	Up Main	16H (via 38N)	16I (via 38N)	16J (via 38N)	38N
39	Limit of Shunt	16K (via 39N)	16L (via 39N)	16M (via 39N)	39N
40	Turntable 3	16N (via 40N)	16O (via 40N)	16P (via 40N)	40N
41	Up Main	16Q (via 41N)	16R (via 41N)	16S (via 41N)	41N
42	Limit of Shunt	16T (via 42N)	16U (via 42N)	16V (via 42N)	42N
43	Turntable 4	16W (via 43N)	16X (via 43N)	16Y (via 43N)	43N
44	Up Main	16Z (via 44N)	17A (via 44N)	17B (via 44N)	44N
45	Limit of Shunt	17C (via 45N)	17D (via 45N)	17E (via 45N)	45N
46	Turntable 5	17F (via 46N)	17G (via 46N)	17H (via 46N)	46N
47	Up Main	17I (via 47N)	17J (via 47N)	17K (via 47N)	47N
48	Limit of Shunt	17L (via 48N)	17M (via 48N)	17N (via 48N)	48N
49	Turntable 6	17O (via 49N)	17P (via 49N)	17Q (via 49N)	49N
50	Up Main	17R (via 50N)	17S (via 50N)	17T (via 50N)	50N
51	Limit of Shunt	17U (via 51N)	17V (via 51N)	17W (via 51N)	51N
52	Platform 4	17X (via 52N)	17Y (via 52N)	17Z (via 52N)	52N
53	Through Line	17A (via 53N)	17B (via 53N)	17C (via 53N)	53N

### APPENDIX "C"

#### RESTORED POINTS

(See Part 2, Section "POINTS" Clause 2)

- 215
- 213
- 220
- 230
- 231
- 240
- 250
- 252
- 259
- 261



KEY TO SYMBOLS USED

<ul style="list-style-type: none"> <li>Facing Point Lock</li> <li>Obstacle (e.g. bridge, viaduct, etc.)</li> <li>Level Crossing</li> <li>Level Crossing with Footbridge</li> <li>Level Crossing with Road</li> <li>Level Crossing with Railway</li> <li>Level Crossing with Road and Railway</li> <li>Level Crossing with Road and Railway and Footbridge</li> <li>Level Crossing with Road and Railway and Footbridge and Road</li> <li>Level Crossing with Road and Railway and Footbridge and Road and Railway</li> <li>Level Crossing with Road and Railway and Footbridge and Road and Railway and Footbridge and Road and Railway</li> </ul>	<ul style="list-style-type: none"> <li>2 ASPECT</li> <li>3 ASPECT</li> <li>4 ASPECT</li> <li>5 ASPECT</li> <li>6 ASPECT</li> <li>7 ASPECT</li> <li>8 ASPECT</li> <li>9 ASPECT</li> <li>10 ASPECT</li> <li>11 ASPECT</li> <li>12 ASPECT</li> <li>13 ASPECT</li> <li>14 ASPECT</li> <li>15 ASPECT</li> <li>16 ASPECT</li> <li>17 ASPECT</li> <li>18 ASPECT</li> <li>19 ASPECT</li> <li>20 ASPECT</li> <li>21 ASPECT</li> <li>22 ASPECT</li> <li>23 ASPECT</li> <li>24 ASPECT</li> <li>25 ASPECT</li> <li>26 ASPECT</li> <li>27 ASPECT</li> <li>28 ASPECT</li> <li>29 ASPECT</li> <li>30 ASPECT</li> <li>31 ASPECT</li> <li>32 ASPECT</li> <li>33 ASPECT</li> <li>34 ASPECT</li> <li>35 ASPECT</li> <li>36 ASPECT</li> <li>37 ASPECT</li> <li>38 ASPECT</li> <li>39 ASPECT</li> <li>40 ASPECT</li> <li>41 ASPECT</li> <li>42 ASPECT</li> <li>43 ASPECT</li> <li>44 ASPECT</li> <li>45 ASPECT</li> <li>46 ASPECT</li> <li>47 ASPECT</li> <li>48 ASPECT</li> <li>49 ASPECT</li> <li>50 ASPECT</li> <li>51 ASPECT</li> <li>52 ASPECT</li> <li>53 ASPECT</li> <li>54 ASPECT</li> <li>55 ASPECT</li> <li>56 ASPECT</li> <li>57 ASPECT</li> <li>58 ASPECT</li> <li>59 ASPECT</li> <li>60 ASPECT</li> <li>61 ASPECT</li> <li>62 ASPECT</li> <li>63 ASPECT</li> <li>64 ASPECT</li> <li>65 ASPECT</li> <li>66 ASPECT</li> <li>67 ASPECT</li> <li>68 ASPECT</li> <li>69 ASPECT</li> <li>70 ASPECT</li> <li>71 ASPECT</li> <li>72 ASPECT</li> <li>73 ASPECT</li> <li>74 ASPECT</li> <li>75 ASPECT</li> <li>76 ASPECT</li> <li>77 ASPECT</li> <li>78 ASPECT</li> <li>79 ASPECT</li> <li>80 ASPECT</li> <li>81 ASPECT</li> <li>82 ASPECT</li> <li>83 ASPECT</li> <li>84 ASPECT</li> <li>85 ASPECT</li> <li>86 ASPECT</li> <li>87 ASPECT</li> <li>88 ASPECT</li> <li>89 ASPECT</li> <li>90 ASPECT</li> <li>91 ASPECT</li> <li>92 ASPECT</li> <li>93 ASPECT</li> <li>94 ASPECT</li> <li>95 ASPECT</li> <li>96 ASPECT</li> <li>97 ASPECT</li> <li>98 ASPECT</li> <li>99 ASPECT</li> <li>100 ASPECT</li> </ul>	<ul style="list-style-type: none"> <li>ROUTE INDICATOR</li> <li>MANUALLY YELLOW</li> <li>POSITION LIGHT SIGNAL</li> </ul>
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