

Bell Codes

Call attention	1
Class 1	4
Class 2	3-1
Class 3	1-3-1
Class 5	2-2-1
Class 9	1-4
Class 0	2-3
Train incorrectly described	5-3
Cancelling	3-5
Train entering section	2
Train out of section	2-1
Obstruction danger	6
Obstruction removed	2-1-2
Opening Signal Box	5-5-5
Closure of signal box	7-5-5
Testing Equipment	16
Shunting into forward section	3-3-2
Shunt withdrawn	8
Blocking back outside home	3-3
Stop and examine train	7
SPAD right direction	4-5-5
SPAD wrong direction	2-5-5
Train passed w/o tail lamp	9 (forward) 4-5 (back)
Release token	5-2
Token replaced	2-5

Checking and Testing Equipment

- Where provided, you must test the bells and block indicators as long as no train has been signalled or is due to be signalled.
- Bell 16
- Move the block indicator to Line Clear > Train on Line > Normal
- Clear section signal and return to danger at Line Clear Position

Checking and Testing Equipment (cont)

- After this is done, do the same for the adjacent box, the adjacent box will acknowledge your 16 to complete the test.

ETB

- Bell 16
- Remove token and clear section signal
- Ensure the adjacent box does the same
- Adjacent box will acknowledge your 16

Stop and Examine Reasons

Signals of alarm

An insecure load

Train half derailed or does not seem fit to proceed

Other mishaps

Stop and Examine Procedure

If you become aware of anything unusual or wrong with a train, or you receive stop and examine train (7), you must immediately:

- Stop the train concerned
- Tell the signaller who controls the area from which the train approached what has happened
- Arrange for the train to be examined and dealt with as necessary

If you cannot stop the train concerned before it enters the area controlled by another signaller, you must immediately tell that signaller what has happened by sending stop and examine train.

If the driver has stated that the train is fit to proceed, or a competent person and yourself have agreed that the train is fit to proceed, you may signal the train as normal.

If the train is deemed not fit to resume normal working then the driver should be instructed to jump out of the train so it is deleted.

When to send obstruction danger

If you need to stop trains from signal box A because of an obstruction or other emergency between your signal box and signal box A, or within the section at your signal box, you must immediately and without sending call attention, send obstruction danger (6) to signal box A.

You must do this whether or not you have received is line clear or train entering section bell codes. You do not need to send obstruction danger if the obstruction is only affecting the line for trains heading towards you from signal box A.

You must also send obstruction danger when you see, or become aware of, a train approaching for which you have not:

- Acknowledged is line clear
- Received train entering section
- Received train or vehicles proceeding without authority in the right direction
- Acknowledged shunting into forward section.

Sending obstruction danger

When sending the obstruction danger bell code, you must:

Place or keep the block indicator to train on line until the obstruction has been removed. If necessary, place or keep your signals at danger to protect the obstruction.

You must then immediately tell the signaller at signal box A the reason for sending obstruction danger via box or global chat. You must reach a clear understanding of those lines that must remain blocked and those that can be reopened for trains.

If, after you have sent obstruction danger to signal box A, you receive train proceeding without authority in the right direction for a train which had been accepted before obstruction danger was sent, you must take all possible actions to stop the approaching train.

Sending obstruction danger (cont)

Only then must you acknowledge train proceeding without authority in the right direction. If you receive cancelling from the signaller at signal box A for a train which had been accepted before you sent obstruction danger, you must acknowledge cancelling but you must keep the block indicator at train on line until the obstruction has been removed.

Receiving Obstruction Danger

If you receive obstruction danger (6) from signal box B, you must: immediately place or keep all signals leading towards signal box B at danger, and place or keep the block indicator for the line from signal box B at train on line and keep it in this position until you are sure that line is clear and you have sent the bell code for obstruction removed. Should no train have been signalled towards signal box B, you must acknowledge obstruction danger.

If you cannot stop a train heading towards signal box B, or there is already a train in the section, you must not acknowledge obstruction danger but immediately send train proceeding without authority in the right direction to signal box B.

If you succeed in stopping a train heading towards signal box B for which is line clear has been acknowledged, you must, after acknowledging obstruction danger, send cancelling to signal box B.

You must find out the reason why obstruction danger was sent. You must reach a clear understanding of those lines that must remain blocked and those that can be reopened for trains.

You must not allow any train to proceed towards signal box B until you have received obstruction removed and the signaller at signal box B has acknowledged is line clear.

When the obstruction has been removed

When the obstruction has been removed or a train can pass clear of the obstruction, you must send obstruction removed to Signal Box A and place the block indicator to normal.

However, if the signaller at signal box A had been unable to stop a train for which is line clear has been acknowledged, you must not send obstruction removed to signal box A until that train is clear of the section as shown in regulation 'sending train out of section'.

Lever Colours

Red	Controls stop signals or shunt signals.
Yellow	Controls distant signals
Red over Yellow	Controls an intermediate block signal, consisting of both a stop signal and a distant signal
Blue	Controls facing point locks
Black	Controls points
Blue over Black	Controls electrically operated combined points and FPLs.
White over Blue	Spare levers previously connected to a FPL which have been replaced with electrically operated points.
Brown	Controls crossing/gate interlocks

Clearing Routes

- **Determine Train Information:** You need to know its classification, destination, location from which it will be approaching, length and any other relevant information before deciding how to route it. If a train has been offered by another box, the signaller should provide you with any required information by telephone.

Clearing Routes (cont)

- **Set Route:** Once you know the necessary information, decide how you will route it through your area. Consider what platform to use, whether there are any length restrictions, etc. Set points and FPLs. Take note of which signals will need to be cleared, but do not clear them immediately.

- **Clear Signals:** When the train has entered the section in rear of your box, you should clear your home signals for the route you have set. Once you receive clearance to send the train to the next signal box you can clear the starter signals and distant signal.

Ground Frames

Before you give a release for a ground frame, you must reach a clear understanding with the ground frame operator about:

- The movement to be made
- Whether or not the train is to be shunt in

If the train is to be shut in, before you restore the ground frame release to normal operation, you must get confirmation from the ground frame operator that the train is clear of the running line. You must not release the ground frame for a movement from the siding to the running line until all track circuits are clear:

- Between the protecting signal for the running line and the points to be released
- To the next main running signal on the line to which the movement is to be made unless the Signal Box Special Instructions allow a movement onto an occupied line

If the ground frame line releases into an Absolute Block section, you must obtain permission from the signaller controlling that section before performing the movement.

Shunting into forward section

You must not allow a train to enter the forward section for shunting purposes until you have sent shunting into forward section (3-3-2), and the signaller at signal box B has acknowledged this. (Signal box A)

You may send this bell signal if the position of the block indicator is normal or at train on line. (Signal box A)

When the line is clear to the home signal, you must acknowledge shunting into forward section and place the block indicator to line clear if the block controls allow you to do this. (Signal box B)

When the train is ready to enter the section for shunting purposes and you have reached a clear understanding with the driver, you must:

- Clear the signal if you can, or instruct the driver to pass the section signal at danger
- Send train entering section to signal box B. (Signal box A)

When you receive train entering section from signal box A, you must place or keep the block indicator at train on line. You may allow the line up to the home signal to be occupied, fouled or obstructed until you receive shunt withdrawn (8) from signal box A. (Signal box B)

Completion of Shunting Movement

When the movement is completed and the forward section is again clear, you must send shunt withdrawn to signal box B. (Signal box A)

You must acknowledge shunt withdrawn to signal box A and then take one of the following actions. (Signal box B)

If the block indicator was normal when shunting into forward section was acknowledged and if the line up to the home signal is clear, place the block indicator to normal.

Completion of Shunting Movement (cont)

If the block indicator was at train on line when shunting into forward section was acknowledged, and if the line is still obstructed, you must keep the block indicator at train on line, or if the line is now clear, you must send train out of section or obstruction removed depending on the circumstances and place the block indicator to normal.

Sending Train without Tail Lamp

If a train passes without a tail lamp, or you are not sure that it has a tail lamp and you cannot deal with the train before it enters the section, or to do so would mean bringing the train to a sudden stop, You must:

Send train passed without tail lamp (9) to signal box C

Not send train out of section to the signal box A, but instead send train passed without tail lamp (4-5)

Keep the block indicator at train on line.

You must stop the first train travelling towards signal box A. Tell the driver what is going on, and instruct to proceed at caution when the signal is cleared. Inform the driver to report if anything is seen to be abnormal.

If you receive train out of section from signal box C, or the signaller there tells you the train is complete, you must send train out of section to signal box A and place the block indicator to normal.

Receiving

If you receive train passed without tail lamp (9), you must stop the approaching train and find out if it is complete.

If the train is complete and the line is clear as shown in regulation 'Sending train out of section', you must send train out of section to signal box B, and place the block indicator to normal.

Receiving (cont)

If the train is complete but you are not in a position to send train out of section, you must tell the signaller at signal box B that the train is complete. If the train is not complete, you must tell the signaller at signal box B and take any other necessary action depending on the circumstances. A staff member should be called to inspect the line and delete any detached train, if necessary.

Signal Types

Home Signals	Placed in the rear of the box and are the first encountered. Placed before any points. Will generally control which platform or line trains are routed towards. There can be multiple home signals to allow higher traffic flow. Inner > Intermediate > Outer
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Starter Signals	Signals placed near or in advance of the box so that the signaller can check that the train is complete before it proceeds. At stations the first starter signals will be on the platform. There are often multiple in succession: Starter > Advanced Starter > Outer advanced starter
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Signal Types (cont)

Section Signals A section signal is any controlling the entrance to a block section. They are not actually a type of signal (and will always be a starter signal). They are marked with a white stripe to indicate they must be released by an adjacent box.

Intermediate Block Signals Consist of both a stop and distant signal within block section, controlled by one lever.

Blocking Back

Blocking Back You must send blocking back outside home signal, and when this has been acknowledged, place or keep the block indicator at train on line. You may only allow the line outside the home signal to be occupied when blocking back outside home signal has been acknowledged, and the block indicator is at train on line.

Blocking Back Acknowledgement You must not acknowledge blocking back outside home signal if you have allowed a movement to be made which would conflict with a movement at signal box B, unless you are sure that such a movement could be made safely.

Blocking Back (cont)

When the line is clear When the line is again clear to the home signal, you must send obstruction removed to signal box A, and place the block indicator to normal.

Working Signalling Equipment

Distant Signal Replace as soon as the train has passed the signal

Stop Signal Replace to danger as soon as the last vehicle of the train has passed the signal.

Stopped on approach Side of a Stop Signal Replace the signal to danger. If you have cleared a signal for a train to proceed, you must not replace it to danger if this will cause the driver to see an irregular sequence of aspects or indications.

Working Signalling Equipment (cont)

Emergency If you replaced any signal to danger, you must make sure the driver is aware you have done so. If you cannot clear a stop signal, you must not clear any associated signals on the approach to it until the train has stopped or nearly stopped at each signal in turn. You do not need to apply this if the stop signal on the approach to the stop signal at danger is a colour light that can show a yellow aspect.

Diverging Junction If the signal at a diverging junction does not have approach release arrangements, you must not clear the signal for a route where the speed must be reduced, until the train is close to the signal.

Train Proceeding w/o Authority - Immediate Actions

If a train or vehicle proceeds without authority in the right direction, or has entered the section without your authority, you must send the bell code for 'train proceeding without authority in the right direction' to Signal Box B. You are then to stop any train travelling towards signal box B on any other line, and or stop any train on the opposite line, if you consider this to be necessary.

Train Proceeding w/o Authority - Immediate Actions (cont)

If possible, alter the position of points to divert trains and prevent collisions. Place or keep signals at danger against the train or vehicle and any other trains that could be put in danger. Arrange for the line on which the train or vehicle is proceeding without authority to be cleared. You should also lower all level crossings and take any other possible action to reduce the risk of a collision.

Receiving - Immediate Actions

If you have received train proceeding without authority in the right direction from signal box A, you must place or keep the block indicator at train on line for that line, and stop any train proceeding towards signal box A. If it is possible, alter the position of points to divert trains and prevent collisions, and place or keep signals at danger against the train or vehicle and any other trains that could be put in danger. Try to arrange for the line on which the train or vehicle is proceeding without authority to be cleared. If necessary, send train proceeding without authority in the right direction to signal box C, unless you can divert the train or vehicle. Ensure to lower all affected level crossings and take any other possible action to reduce the risk of a collision.. Once the train has stopped, only then you must then acknowledge train proceeding without authority in the right direction. Staff members should be called, or the train should be respawned if it derails - whichever is necessary.

The same instructions apply in the wrong direction, but you must send train proceeding without authority in the wrong direction instead.



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Page 5 of 5.

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