Instructions for track workers who use emergency protection equipment
This handbook is for those personnel who need to go on the operational railway to carry out their duties, and have been trained to carry out emergency protection. It does not apply to:

- train drivers
- guards
- shunters
- signallers
- crossing keepers
- those who act as a designated person (DP).

We define all personnel, other than those listed above, who go on to the operational railway as track workers for the purpose of the Rule Book.

Published by:
RSSB
The authoritative version of this document is available at www.rssb.co.uk/rgsonline

Contents approved by Traffic Operation and Management Standards Committee.

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First issued December 2011
Issue 2, September 2015
Comes into force 05 December 2015

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1 Detonators

You should check each detonator to make sure the date of manufacture stamped on it is not more than five years ago.

You must not use any detonator that is older than five years; or is showing signs of rust or decay or is damaged. You must return these to your issuing point.

If you have to place detonators at a signal, you must place the first next to the signal and the other two beyond the signal.

If there is a 3rd rail, if possible, place the detonator on the running rail furthest from the 3rd rail.

You must place detonators 20 metres (approximately 20 yards) apart.

If you have to place detonators on the line when not at a signal and you are to stay near the detonators, you must stand at least 30 metres (approximately 30 yards) beyond the detonators so that the train driver will see your handsignal after exploding the detonators.

Detonator secured to rail
2 Signal-post replacement switch

Signal-post replacement switches (SPRS) are provided at some automatic and semi-automatic signals. When operated, they place the signal to danger.

Although called a SPRS, they are not always on the signal post but will be near to the signal and may be on a separate post.

Signal-post replacement key and switch
3 Track-circuit operating clips

A track-circuit operating clip is a device which, in an emergency, can be clipped over the top of each running rail to operate the track circuit.

Do not use track-circuit operating clips where there is a 4th rail. In 3rd-rail areas, place the clip on the running rail furthest from the 3rd rail first.

If you have applied a track-circuit operating clip, it must not be removed until normal working can begin, or other protection has been given.

You must get the permission of the signaller before you remove a track-circuit operating clip.

A track-circuit operating clip must be used only once.
4 Protecting a line that is unsafe

4.1 Immediate actions
If you are to protect a line that is obstructed or unsafe, except where there is a 4th rail, you must place a track-circuit operating clip, if available, on each affected line.

You must try to contact the signaller in the quickest way.

If you cannot contact the signaller, you must walk towards the direction that trains can approach from so that you can place three detonators, 20 metres (approximately 20 yards) apart, on each line concerned at 2 kilometres (1 1/4 miles). This is called full detonator protection.

You must display a hand danger signal to any train that approaches on the affected line.

4.2 If a train approaches
If a train approaches before you get to the 2 kilometre (1 1/4 miles) point, you must, if it is safe to do so, immediately place three detonators on that line. You must also show the hand danger signal to warn the driver.
4.3 Reaching a telephone or signal box

If you reach a telephone linked to the signal box or the signal box itself, you must place three detonators on the affected line and then speak to the signaller. If the signaller tells you the line is protected, you do not need to continue to the 2 kilometre (1 1/4 miles) point.

If you reach a signal fitted with a signal-post replacement switch, you must operate the switch before placing the three detonators and then speak to the signaller.

4.4 Reaching a tunnel

If you reach a tunnel before reaching the 2 kilometre (1 1/4 miles) point, you must place three detonators on the affected line at the tunnel entrance.

You must, taking care for your own safety, continue through the tunnel to reach the 2 kilometre (1 1/4 miles) point. If this is within the tunnel, place the detonators at the far end of the tunnel.
Key

Track-circuit operating clip

Three detonators (20 metres or approximately 20 yards apart)

Reaching a tunnel

Direction of travel

Obstruction

2 km / 1 1/4 miles

Direction of travel
4.5 Reaching a junction

If you reach a junction before reaching the 2 kilometre (1 ¼ miles) point, you should place three detonators before the junction and then decide the order in which you will protect each line. This will depend on which line a train is more likely to approach on.

Direction of travel

Key

- Track-circuit operating clip
- Three detonators (20 metres or approximately 20 yards apart)

Note
In this example, the person carrying out protection considered route 'A' the priority to protect.
4.6 Removing the protection
You must not remove the protection placed on the line until the line is again safe or you are told to because some other type of protection is being given by someone else.

4.7 After full protection has been provided
When you have carried out full protection, unless you are told differently, you must stay near the detonators and continue to display the hand danger signal.