

TECHNICAL INSTRUCTION

TI 106
Issue 1
June 2008
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NETWORK RAIL - SIGNAL ENGINEERING

Level Crossing CCTV Systems: Mixing Of Colour with Black & White

Relevant Standard: RT/E/C/11600: Section X: Level Crossings

Purpose

This TI has been produced to control mixing of colour with black and white CCTV systems used for level crossing surveillance. No work has been done as yet to demonstrate that mixing colour and black and white CCTV monitors is acceptable and that perceptual errors by operators are not introduced into the task of checking crossing clear.

Background

Up until recently all CCTV systems used for level crossing surveillance were monochrome (black & white). New systems installed from this date will normally be colour and any renewals of existing systems will normally be colour. Unless controlled, there is a concern that the mixing of new colour with existing black and white systems in the same workstation/ panel may increase the risk of perceptual errors by operators.

Compliance Requirements

This TI shall be implemented on receipt.

Action Required

Before starting a change over programme from the existing black and white to colour CCTV systems used for level crossing surveillance on the same panel / workstation the following shall be considered.

If the answer to both of the following questions is 'yes' then there is no requirement for further action:

1. Are all the CCTV monitors being changed at the same time?
2. Will all the CCTVs present the signaller with colour images?

If the answers to any of the following questions is 'yes' additional guidance shall be sought from Brian Mulvana, Senior Level Crossings Support Engineer or David Jones, Principal Level Crossings Engineer:

1. Are the CCTV monitors on the panel close together?
2. Can the signaller see any active monitors without having to change where (s)he is standing or looking?
3. Can more than one CCTV image be on display at the same time?
4. Will the change over mean that black and white CCTVs will be mixed with colour CCTVs?
5. Will the change over result in any of the CCTVs being repositioned within the box, panel or workstation?

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Additionally, in seeking guidance from Brian Mulvana, Senior Level Crossings Support Engineer or David Jones, Principal Level Crossings Engineer, please provide the following:

1. How long will the mix of colour and black and white CCTV monitors be on the same on the same panel/workstation?

Colour systems should not be deliberately degraded to black and white. This reduces the definition to less than older black and white systems and introduces its own risks.

Exempt from this requirement are:-
None

Staff to be Briefed

Project staff and maintenance staff.

Expiry Date

Until incorporated in a national standard, or further investigation addresses the concern.

END



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