

Signaller Briefing Note

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Published and issued by
Network Rail
40 Melton Street
LONDON
NW1 2EE

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Amendment Record

Issue	Date	Description
1	15 April 2003	Initial issue.
2	3 June 2003	Section 2.1.4.1 amended to state precedence of visible alarm over audible alarm. Section 2.1.4.2 amended to delete references to signal being clear for less than 5 seconds. New section 2.1.8 added to describe revised softkey layout, subsequent sections renumbered. Section 2.1.18 mitigating actions amended to correspond with Track Circuit Block Regulations. Section 2.1.19 (old numbering) deleted and reference to incorrect train description moved to section 2.7. Section 2.2 introductory paragraphs deleted. New sections 2.5 and 2.6 added for System Support Requests D336 and D338, subsequent sections renumbered. Section 3.1 amended in accordance with System Support Requests D335 and D337.
3	29 August 2003	Section 2.1 updated as follows as a result of the IECC Upgrade 003 Pilot Installation Critical Review Report (SCS-SSP(003)-SA-18): Section 2.1.4.1 amended to include description of reduced SPAD indication. Section 2.1.15 amended to include use of 'on approach' and 'beyond' to describe positions relative to signal, and description of SPAD messages associated with multiple signals and inhibits.

Author	Approved	Date	Authorised	Date
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Document ID: SCS-SSP(003)-UG-2-003

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I Introduction

Integrated Electronic Control Centre (IECC) systems are installed and operational at eleven Network Rail Signalling Control Centres (SCCs).

Following the Cullen inquiry into the Ladbroke Grove rail accident, Network Rail contracted AEA Technology Rail to introduce a Signal Passed at Danger (SPAD) Alarm into the IECC.

The SPAD Alarm is part of a package of IECC improvements, designated Upgrade 003, that comprises software changes and enhancements to the Automatic Routesetting Subsystem (ARS) and Flexible Display Subsystem (DIS).

This briefing note provides signallers with information on IECC Upgrade 003.

2 Features of IECC Upgrade 003

The features of IECC Upgrade 003 relevant to signallers are described in this section.

2.1 IECC SPAD ALARM

The Cullen Ladbroke Grove Rail Inquiry Part 1 Report recommended that there should be a unique alarm for SPADs, which should sound until it is turned off. The IECC SPAD Alarm provides this facility.

Prior to IECC Upgrade 003, the IECC provided a facility through ARS to alert Signallers that a particular track had become unexpectedly occupied or apparently occupied. The cause of unexpected occupations vary; they include SPADs but also include other causes such as Track Circuit failures.

2.1.1 IECC SPAD Alarm Operational

When the IECC SPAD Alarm is operational (*i.e.* the ARS and DIS subsystems which perform the SPAD detection and indication are both operating normally) an indication consisting of a rotating baton which successively shows ‘\ | / —’ is shown adjacent to the ‘update confirmation character’ on the bottom row of the signalling screens. The baton changes at nominally ½ second intervals.

If the baton is static or if the ‘update confirmation character’ is not flashing (*e.g.* during system initialisation or fault conditions) then this denotes that the IECC SPAD Alarm is not operational and SPAD detection can not be performed. It should be noted that the baton indication is not related to inhibiting (switching off) SPAD detection at individual signals (see section 2.1.7).

2.1.2 Audible SPAD Alarm

When a SPAD is detected the signaller will be notified by a unique audible SPAD alarm accompanied by a SPAD indication on the signalling screen and a message on the GPVDU. The unique audible SPAD alarm sounds continuously until silenced. The audible SPAD alarm is silenced by pressing the [SAS] key or by selecting the SAS softkey.

If a further SPAD is detected whilst the audible SPAD alarm is sounding then the audible SPAD alarm will silence for between ¼ second and ¾ second. It is not possible to silence the audible SPAD alarm during this period of silence.

2.1.3 ARS Subareas

When a SPAD is detected the IECC will disable (*i.e.* switch off) the ARS subarea containing the signal at which the SPAD has occurred, and also the adjacent ARS subarea(s).

2.1.4 SPAD Indications and Messages

2.1.4.1 Indication on Signalling Screens

The location of a SPAD is indicated on the signalling screens by a yellow background to the track section beyond the SPADed signal. This indication will temporarily obscure any visual