

SSI Data Procedures

Chapter E: Maintenance

Chapter E

1 Introduction

This chapter defines the processes to be adopted for the holding of spare Memory Modules, and for return and re-use of Memory Modules before and after repair.

2 Provision of On-site Spare Memory Modules

For each commissioned CI, the following represents the absolute minimum requirement for on-site spare Memory Modules.

- 1 x PPM Memory Module
- 2 x Interlocking Memory Module
- 1 x Diagnostic Memory Module

This level of spare holding will allow the restoration of a minimum duplicated interlocking configuration in event of failure of all MPMs and PPMs within a CI. The actual spares holding will need to be such that the figure does not fall below the minimum value when due allowance has been made for modules returned for repair.

3 Return of Faulty Memory Modules

Faulty Memory Modules should be returned complete with installed program and data and with a copy of the ISSR to the manufacturer or Railtrack authorised repairer. To aid investigations, unless it has been established beyond reasonable doubt that the fault lies only within the Memory Module, it is desirable that the MPM or PPM in which the Memory Module was used should be returned with the Memory Module.

The line relating to the Memory Module returned for repair should be struck out from page 2 of the ISSR held with the CI (example ISSRs are enclosed with Chapter D).

4 Provision of Replacement Memory Modules

Programming of replacement Memory Modules (as distinct from modules supplied as part of the installation and commissioning of a new or modified scheme) may only be undertaken by Railtrack Records Group or by a body authorised to undertake such work by Railtrack. Replacement memory modules must be reprogrammed in accordance with the instructions in Chapter G.

5 Re-use of Memory Modules and EPROMs following repair

5.1 Modules Returned Sealed and Programmed

If Memory Modules are returned directly to site for continued use, it is desirable that they should be returned sealed and fully programmed. It is the responsibility of the repairer to ensure that modules are returned sealed and programmed only if the following conditions have been met:

EITHER:

- a) The Memory Module has been received by the repairer with the seal intact and with the labels on the module corresponding with the ISSR, and

SSI Data Procedures

Chapter E: Maintenance

- b) All EPROMS are in accordance with the labels on the Memory Module, and
- c) The Device Checksum of Data EPROMs and non-vital Program EPROMs corresponds with the label, and
- d) The contents of Vital Program EPROMs are verified against a Verification Master.

OR

The EPROMs have been re programmed in accordance with Chapter G. This requires that the authorised repairer has access to the required Data masters for the site in question.

Memory Modules returned to site in this manner shall be accompanied by a repair certificate confirming that the above verification has been completed and containing sufficient information to allow completion of the details on page 2 of the ISSR.

5.2 Modules Returned Unprogrammed

If the conditions for returning Memory Modules sealed and programmed cannot be met, or if the modules are being returned following repair to stock for general re-use, they shall be returned unsealed and with the EPROMs removed. The EPROMs may be included in a separate anti-static container if they are fit for re-use. The modules may then be reprogrammed subject to the provisions of Section 4.

EPROMS returned with unsealed Memory Modules must not be re-used without reprogramming.

6 Installation of Replacement Modules on Site

On delivery to site, the replacement Memory Modules shall be checked against the accompanying documentation and against the ISSR, and then checked in service in accordance with Chapter D at the earliest suitable opportunity. If the checks are successful, the details of the Memory Module, together with record of receipt and of checking shall be entered on the next available line in the appropriate section of page 2 of the ISSR. A copy of the amended ISSR shall be returned to Railtrack Records Group (see Chapter F).

In the event of failure of the above checks, the module shall be returned to the supplier.