

BRITISH RAILWAYS BOARD

SPECIFICATION 1921A

for

INTERFACING A PANEL MULTIPLEX SYSTEM WITH A

SOLID STATE INTERLOCKING SYSTEM (MKII)

FORWARD

This specification supersedes all previous issues. It is issued by:-

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The information contained herein is confidential and must not be used other than for the purpose for which this specification was released.

REFERENCES

Reference in this specification is made to:-

British Railways specification:

1908A Specification for Panel Processor Module (Mk II).

The latest issue of all specifications, drawings and British Standards shall apply unless otherwise stated.

2009/2261r/1

1. GENERAL

A Panel Multiplex system is required to interface each SSI Central Interlocking with its associated signalman's panel indications and buttons. This specification is based on Mark II Panel Processors to specification BR 1908A being employed in the Central Interlocking.

1.1 Output System

The output system comprises one or more output cards each of which drives a group of panel indications, and two output scanners which interface the output cards to the two SSI Panel Processors. Each output scanner receives messages over a serial link from one of the Panel Processors.

1.2 Input System

The input system contains one or more input cards each of which monitors the state of a group of panel button/switch contacts, and two input scanners which interface the input cards to the two SSI Panel Processors. Each input scanner transmits messages over a serial link to one of the Panel Processors.

1.3 Serial Links

The four serial links employ asynchronous data transmission and are to EIA standard RS-422-A dated December 1978 with a transmission speed of 2400 baud.

1.4 Cyclic Transmission

Messages as defined in Section 2 are to be sent or received via the links on a continuous cyclic basis and hence no provision is required for message acknowledgments.

2. MESSAGE CONTENT

The protocol is based on BS 4505.

2.1 Message Words

Words in the messages consist of:

- One start bit
- Eight data bits
- Even parity bit
- One stop bit.

The eight data bits carry the message information and may be control characters, BCC or status as well as message data.

2009/2261r/2