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BRITISH RAILWAYS BOARD

SPECIFICATION 1922
MESSAGE HANDLING AND DATA TRANSMISSION REQUIREMENT BETWEEN
A SOLID STATE INTERLOCKING AND A TRAIN DESCRIBER SYSTEM

FOREWORD

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.

1. GENERAL

1.1 Scope

The specification describes the method to be used to link a Solid State Interlocking with a Train Describer system using simplex continuous cyclic scanning transmission.

1.2 Reference

BS4505 : 1969 Parts 1-7.

2. INTERFACE

2.1 Asynchronous data transmission shall be used.

2.2 The link shall be internal to a building and not exceed 100 metre cable distance.

The interface shall be to R1A Standard RS-422-A (Dec. 78) with a transmission speed of 2400 bits/second.

Each channel shall be a 2 wire circuit and the transmitter shall be electrically isolated from the receiver. This isolation shall be within the Solid State Interlocking.

2.3 The output interface link from the Solid State Interlocking to the Train Describer will be duplicated. Identical messages will be sent continuously over each of the links, but the links will not be in synchronism with each other. The Train Describer system shall be designed to accept data from both links and shall raise a fault alarm through its normal alarm reporting facilities in the event of a link failure. A link failure is defined as complete loss of data, or receipt of corrupt data, for a time equivalent to 3 complete field scans.

It is not necessary for the Train Describer to test for divergence between the data input on both links.

3. PROTOCOL

3.1 The protocol is based on BS4505.

3.2 Character Usage

The characters STX, ETX, DLE shall only be used as defined below except where they follow directly ETX when they shall be assumed to be the BCC.