

Diode Track Circuit Signalling Works Test Specification

Includes:	Diode (Rectified AC).
Excludes:	All other track circuit types.
Related Test Specifications:	NR/L2/SIG/30014/D120 TS5-91, TS5-95.
Related Standards:	NR/PS/SIG/11755 (DC Track Circuits). Note: all relevant Technical Instructions and Notice Boards are to be checked for new instructions.
Related Design details:	Scheme plan, Bonding Plan, Loc area plan, REB/Location drawings.
Recording of Testing:	Completion of tests shall be by application of the Check Marks and recording of values on Test Copy diagrams, by recording of values on the appropriate Record Card, and by signing the appropriate Test Certificate.
Pre-requisites:	Treadles Set Up and Tested, REB/ Location case and Cable tests complete prior to function testing.

General

This test specification is formed of the following sections, which correlate to the competency levels identified in NR/L2/SIG/30014/B410 for this type of equipment or testing.

1. Inspection and Bonding
2. Wire Count and Continuity
3. Set Up and Test
4. Extremities / Interference
5. Correspond

General definitions of terms are given in NR/L2/SIG/30014, however terms specific to this specification are defined in the last section of this specification.

1. INSPECTION AND BONDING

1.1. Carry out a Physical Dimension Track Circuits Check to specification NR/L2/SIG/30014/D120/TC5-91.

1.2. *CHECK for CORRECT TYPE:*

- 1.2.1. Check equipment and bonding fitted is as specified in the wiring, track circuit and bonding diagrams.
- 1.2.2. Check that for new work a 9Ω Track Relay type is fitted. (Earlier versions utilised a 20Ω relay).
- 1.2.3. Check that Treadles are fitted as close to but not further than 3m from the IRJ's at the Diode End.
- 1.2.4. Check any welded stainless steel (Eutectic) strips are as shown on the bonding plan.

1.3. *CHECK for NO DAMAGE:*

- 1.3.1. Visually Check Track Circuit Equipment and Bonding for no damage.
- 1.3.2. Check for safe Insulation; bonding and track circuit cable sheaths and cores are not damaged and the cable is either new or not suffering from 'wet' or 'dry' insulation defects.

1.4. *CHECK for CORRECT POSITION:*

- 1.4.1. Check no prohibited practises or combinations with adjoining track circuits or other equipment, either on track or in equipment housings.
 - 1.4.1.1. The area shall not be electrified nor within 1.5Km of an area that is electrified, and the track circuit does not contain S&C over which there are signalled moves.
 - 1.4.1.2. Electric Point Heaters are not permitted.
 - 1.4.1.3. Adjoining track circuits:

Conflicts with Track Circuit	Specific Conflicts
HVI and Reed	Relay / Feed end not to abut - Permitted at Diode end
FS2600	Not allowed
Aster "U" or SF15	Tx of Aster not permitted to abut for new work
All other non-D.C. designs	IRJ's are required in both running rails and sharing of common rails is precluded, interfaces within S&C layouts are not achievable
Other D.C. track circuits	Double rail IRJ's shall be fitted, the sharing of a common rail is prohibited and correct electrical staggering shall be achieved
	Diode track is not to abut the relay end of a Low Voltage DC track. The two tracks shall not be the first two on approach to a signal that uses the berth track occupied to either approach release the signal aspect or release overlap locking

1.4.2. Check the overall track circuit length is greater than 18.3m and the maximum is 1000m on concrete or wooden sleepers.