

**High Voltage Impulse Track Circuit; Test 255 of SMS'**

Useful information on where to test and what results to expect.

**For Information ONLY. NOT for testing, installation or commissioning purposes.**Equipment required for testing:Fluke digital multimeter  
Integrator test adaptor  
Track shunt

Relay End						Feed End						Relay/Feed Ends		
Train Shunt	Train Shunt	Voltages (V)				Voltages (V)						Pulse Rate	External Interference Voltages (V)	
T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11				
Drop Shunt (ohms)	Drop Shunt (ohms)	Track Relay Coil (DC)		Track Transformer		Load Test (DC)	Power supply		Transmitter Power (DC)	Track Trans		No of Pulses in 7 secs	Un-shunted Interference Test (DC)	Shunted Interference Test (DC)
		V1	V2	+Ve	-Ve		Volts (AC)	Current (AC)		+Ve	-Ve			
Train shunt across track trans  MIN: 0.5 ohms  Desired: 2.5 ohms	Train shunt across relay end rails  MIN: 0.5 ohms  Desired: 2.5 ohms	Measure at V1+ and V1-  MIN: 20v  MAX: 50v	Measure at V2+ and V2-  MIN: 30v  MAX: 100v	Measure at VA – VB  MIN: 20v  MAX: 120v	Measure at VB – VA  MIN: 2v  MAX: 12v	0.5 ohms shunt on rails and measure Voltage VA – VB  MIN 6v	MIN: 95v  MAX: 121v	MIN: 0.3a  MAX: 0.5a	<i>TEST TO BE DONE WITHIN 2 MINS.</i> Connect a short between C- and terminal 6. Disconnect any strapping between t1 and t6.  Measure voltage between t1 and t3  MIN: 120v	Measure At feed end track trans on VA – VC  MIN: 20v  MAX: 120v	Measure on feed end rails Between VC – VA  MIN: 2v  MAX: 12v	Touch rear of feed end track trans and count pulses  MIN: 15  MAX 30	Disconnect PSU fuse Measure voltage at track relay  MAX: 6v	Disconnect PSU fuses connect short circuit at feed end trans V+ and V- Measure voltage at track relay terms.  MAX: 7v

**Important information and checks**

Minimum length of track circuit is 18.3m.

Check the maximum distance of 80m from Tx / Rx track transformer to rails for cables is not exceeded.

Check the maximum distance of 500m from Rx equipment to its track transformer for cables is not exceeded.

Check and determine the distance from Tx equipment to its track transformer for cables, record this information on the diagrams and set the transmitter link accordingly.

Check that the centre tap of the track transformer resistor is permanently insulated (purple bomb end) and tied back clear of the casing.