

TPWS Signal Generator Mk2

and Test Kit



Designed for Function

The TPWS Signal Generator MK2 has been designed to provide functional testing of a vehicle's train-borne TPWS sub-system within the depot environment. The equipment consists of a handset with an internal aerial, an external aerial test coil and an interconnection cable to allow in-cab testing whilst the external aerial test coil is secured to the train-borne TPWS aerial.

DESCRIPTION	UR Part No.
TPWS Signal Generator Mk 2 Test Kit	0062/016169
Transportation Case	0062/016166
TPWS Signal Generator Mk 2 Unit	0062/016165
External Aerial Test Coil	0062/016162
Interconnection Cable	0062/016168
Micro USB Power Charger (with adaptors)	0062/016329
Operating Manual	0062/016167
Lanyard	URPC/002149



Key features

Replicates all TPWS Trackside Loops stimuli to simulate all TPWS Signal Modes: OSS SLOW, OSS FAST, and TSS as shown below as captured by an oscilloscope

- Both in SET A and SET B directions (also known as Normal Direction and Wrong Direction respectively).
- Passenger and Freight mode timing setting options to replicating the on-board OSS Timer.
- Reduce Signal Output setting to enable boundary test of TPWS Signal Generator Signal Strength.
- Additional Opposite Direction setting which reverses the Arming and Trigger Frequencies to enable complete testing.

- Micro USB Charger, Input 94V AC to 264V AC, For AU, EU, UK and US
- Low power consumption of 0.6W (max 0.16A current draw) in transmission mode to enable extended battery life and prolonged depot testing without the need for recharge.
- Product life span is estimated to be 15 years if all recommendations are followed

The TPWS Signal Generator MK2 Unit implements a Keypad membrane for ease of use with an interactive LCD graphical user interface (GUI) and has two aerial test modes to allow remote in-cab testing using the test kit setup.



In-built aerial known as the 'internal aerial'

External connector to allow connection to an Aerial Test coil - known as the 'external aerial'

A 5V 2A battery charger is used to allow up to 15 hours of continuous live testing with full 3.7V battery capacity without recharge. Charge status is provided by the Charging LED.

REFERENCE	TITLE
PIC045- 1001	PIC045-1001 TPWS Signal Generator Mk2 GA
NRSXSA004-1001	TPWS hand held Signal Generator kits GA
PIC045-06	TPWS Signal Generator Mk2 - Operation Manual Issue D
PIC045-38	TPWS Signal Generator MK2 EU Declaration of Conformity
PIC045-47	TPWS Signal Generator Mk2 UKCA Declaration of Conformity
PIC045-34	TPWS Signal Generator Mk2 Technical File Issue B

Documents available upon request. Please contact customerservice@unipartrail.com

About Unipart

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Specification

PARAMETER	MIN	TYP.	MAX	UNIT
POWER				
Frequency	60		.70	kHz
Signal PCB Amplitude 100% (Internal Aerial)	0	1.2	520	mVms
Signal PCB Amplitude 100% (External Aerial)	0	1.2	520	mVms
Power consumption (standby)	20	23	26	mW
Power consumption (normal)	500	530	560	mW
Power consumption (transmit - Internal Aerial)	500	560	580	mW
Power consumption (transmit - External Aerial)	500	550	580	mW
Supply Voltage	3.0	3.7	4.2	Vdc
Charging Voltage	90	100-240	264	Vac
Charge Time	10	12	14	hrs
DISPLAY				
Luminance	1500	2000		cd/m ²
ENVIRONMENT				
Operating humidity	20		75	%
Storage temperature	-15		+55	°C
IP Rating		IP4X		
CALIBRATION				
Calibration period		12		Months
Warranty period		15		Months
MECHANICAL				
Dimension Unit	WxDxH = 124 x 260 x 36			mm
Dimension Kit	WxDxH = 427 x 555 x 211			mm
Weight unit		1.2		kg
Weight kit		7.15		kg
TPWS FOUR SYSTEM COMPATIBILITY				
Control Unit	Classic / Classic plus serial / EVO 1 / EVO 2			
TPWS Aerial	Standard / Low profile			

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