



ISUSD So

Device description:

Serial number:

Date and time of test:

Date of expiry:

REDFLEX MR101

102813-0010

26/05/2022 @ 11:30

26/05/2023

Test results:

Uncertainty of value(s):

Customer:

Queensland Police Service

As stated in SGS Report TC220871

As stated in SGS Report TC220871

The test confirmed that the device was compliant in accordance with the manufacturer's specification and the requirements of AS2898.2.

Following satisfactory completion of these tests, the device's speed computing unit was sealed using tamper evident adhesive seal.

CTPI Signature: Name of signatory:	CTPI
Position of signatory:	Approved Signatory
Testing laboratory:	SGS Australia Pty Ltd, NATA Accredited Laboratory No. 18628 10/585 Blackburn Road, Notting Hill VIC 3168

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service printed overleaf. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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SGSPAPER 20593157

Date: 27/05/2022



SGS Australia Pty Ltd



Calibration Report

Report Reference Number	TC220871
Test Scope	Certification of Radar Speed Measuring Device
Date of Issue	27/05/2022
Date and Time of Test	26/05/2022 @ 11:30
Compiled by	CTPI Calibration Engineer
Approved by	CTPI Calibration Engineer
Testing Laboratory	
SGS Australia Pty Ltd, NATA Ac	credited Laboratory No. 18628
10/585 Blackburn Road, Notting	Hill VIC 3168
Applicant	
Queensland Police Service	
20 Pickering Street, Alderley, Q	LD 4051
< <u>http://www.sgs.com/en/Terms-and-Com</u> jurisdiction issues defined therein. Any holder of this document is advised to intervention only and within the limits of C unauthorized alteration, forgery or falsific prosecuted to the fullest extent of the law Accredited for compliance with ISO/IEC The results of the tests, calibrations and/ standards.	

Summary of Results

The device under test is Compliant with the requirements of AS2898.2 Section 2.2 and SGS test procedure PR-TE-626-1.

Comments:

- A compliant result indicates that the measurement results fall within specification limits by an amount at least equivalent to the uncertainty of measurement.

- No adjustments were performed on the device.

Device Under Test Description

Description:

REDFLEX MR101 317-107-000 S/N:102813-0010

Condition:

- The device under test was found to be in a satisfactory physical condition.

Test Equipment

Item	ID	Calibration Due Date
Anechoic Chamber	2059	Calibrated Before Use
Hygrometer	2139	25/11/2022
Pendulum Microwave Counter/Analyzer	2058	Checked Before Use
Rubidium Frequency Standard	1840	22/06/2022
Tektronix Arbitrary/Function Generator	1942	Checked Before Use

Environmental Conditions

The ambient temperature and humidity at the time of test are shown below:

Ambient temperature (°C) +/-1 °C	Relative humidity (%) +/-4%
22.3	50.9

Test Results

Antenna Frequency Test:

Measured Centre Frequency(GHz)	24.12476
Measured Occupied Bandwidth (MHz)	42.0
	~ <u>~</u>
	NO W
<u>^</u>	
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Speed Simulation Test (End to End):

Simulated Speed (km/h)*	Simulated Range (m)	DUT Indicated Speed (km/h)	DUT Indicated Range (m)	DUT Indicated Direction**
-20.00	6.80	19.96	6.34	R
20.00	6.80	20.03	5.83	A
-50.00	6.80	49.90	6.70	R
50.00	6.80	49.93	6.16	A
-100.00	6.80	99.93	6.80	R
100.00	6.80	100.00	6.35	A
-150.00	6.80	150.09	6.77	R
150.00	6.80	150.10	6.55	Â
-200.00	6.80	200.01	6.78	R
200.00	6.80	200.09	6.54	A
-250.00	6.80	249.99	6.80	R
250.00	6.80	250.00	6.59	A
-20.00	20.40	19.90	20.46	R
20.00	20.40	20.10	20.48	A
-50.00	20.40	49.90	20.43	R
50.00	20.40	50.00	20.45	A
-100.00	20.40	99.89	20.46	R
100.00	20.40	100.05	20.45	A
-150.00	20.40	150.01	20.39	R
150.00	20.40	150.17	20.49	Α
-200.00	20.40	200.00	20.38	R
200.00	20.40	200.10	20.51	Α
-250.00	20.40	249.90	20.40	R
250.00	20.40	250.00	20.48	Α
-20.00	40.80	19.80	40.89	R
20.00	40.80	20.20	40.89	Α
-50.00	40.80	49.80	40.86	R
50.00	40.80	50.01	40.89	Α
-100.00	40.80	99.80	40.85	R
100.00	40.80	100.15	40.93	Α
-150.00	40.80	149.93	40.83	R
150.00	40.80	150.20	40.89	Α
-200.00	40.80	199.95	40.83	R
200.00	40.80	200.10	40.92	А
-250.00	40.80	249.90	40.81	R
250.00	40.80	250.02	40.95	Α
-20.00	71.40	19.70	71.50	R
20.00	71.40	20.30	71.50	Α
-50.00	71.40	49.79	71.50	R
50.00	71.40	50.11	71.55	Α
-100.00	71.40	99.70	71.51	R
100.00	71.40	100.29	71.51	Α

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-150.00 71.40 149.80 71.53 R 150.00 71.40 150.30 71.50 A -200.00 71.40 199.90 71.48 R 200.00 71.40 200.20 71.55 A -250.00 71.40 200.20 71.52 R -250.00 71.40 249.80 71.52 R 250.00 71.40 250.10 71.53 A	Simulated Speed (km/h)*	Simulated Range (m)	DUT	DUT	DUT
150.00 71.40 150.30 71.50 A -200.00 71.40 199.90 71.48 R 200.00 71.40 200.20 71.55 A -250.00 71.40 249.80 71.52 R 250.00 71.40 250.10 71.53 A **A negative speed indicates a receding vehicle and a positive speed indicates an approaching vehicle **A is approaching and R is receding.				71 53	
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ORS RUS	**A is approaching ar	nd R is receding.	hicle and a positive speed in	ndicates an approachin	ng vehicle

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Tamper Evident Seals

The device under test was sealed with SGS tamper evident seals CTPI



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Uncertainty of Measurement

The estimated uncertainty of values quoted, at 95% confidence level, with a coverage "k" factor of 2 is:

- Radar Frequency: ± 0.00057GHz at measured frequency
- Speed: ± 0.36km/h from 20km/h to 250km/h

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SGS Australia Pty Ltd



Calibration Report

Report Reference Number	TC220872
Test Scope	Certification of Radar Speed Measuring Device
Date of Issue	27/05/2022
Date and Time of Test	26/05/2022 @ 12:00
Compiled by	CTPI CTPI Calibration Engineer
Approved by	CTPI CTPI Calibration Engineer
Testing Laboratory	
SGS Australia Pty Ltd, NATA Ac	credited Laboratory No. 18628
10/585 Blackburn Road, Notting	Hill VIC 3168
Applicant	
Queensland Police Service	
20 Pickering Street, Alderley, Q	LD 4051
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Summary of Results

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Comments:

- A compliant result indicates that the measurement results fall within specification limits by an amount at least equivalent to the uncertainty of measurement.

- No adjustments were performed on the device.

Device Under Test Description

Description:

REDFLEX MR101 340-505-000 S/N:102814-0005

Condition:

- The device under test was found to be in a satisfactory physical condition.

Test Equipment

Item	ID	Calibration Due Date
Anechoic Chamber	2059	Calibrated Before Use
Hygrometer	2139	25/11/2022
Pendulum Microwave Counter/Analyzer	2058	Checked Before Use
Rubidium Frequency Standard	1840	22/06/2022
Tektronix Arbitrary/Function Generator	1942	Checked Before Use

Environmental Conditions

The ambient temperature and humidity at the time of test are shown below:

Ambient temperature (°C) +/-1 °C	Relative humidity (%) +/-4%
22.3	51.2

Test Results

Antenna Frequency Test:

Measured Frequency (GHz)	24.09069
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Page 3 of 5

Simulated Speed (km/h)*	DUT Indicated Speed (km/h)	DUT Indicated Direction**
20.00	20.00	A
20.00	20.00	А
20.00	20.00	Α
50.00	49.91	Α
50.00	49.91	Α
50.00	49.91	Α
100.00	99.98	A
100.00	99.99	A
100.00	99.99	A
150.00	149.90	A
150.00	149.90	A
150.00	149.90	A
200.00	199.86	A
200.00	199.87	A
200.00	199.86	A
250.00	249.82	Α
250.00	249.82	А
250.00	249.82	А
-20.00	20.00	R
-20.00	20.00	R
-20.00	20.00	R
-50.00	49.91	R
-50.00	49.91	R
-50.00	49.91	R
-100.00	99.99	R
-100.00	99.99	R
-100.00	99.98	R
-150.00	149.90	R
-150.00	149.90	R
-150.00	149.90	R
-200.00	199.86	R
-200.00	199.86	R
-200.00	199.86	R
-250.00	249.82	R
-250.00	249.82	R
-250.00	249.82	R

Speed Simulation Test (End to End):

*A negative speed indicates a receding vehicle and a positive speed indicates an approaching vehicle **A is approaching and R is receding.

Tamper Evident Seals

The device under test was sealed with SGS tamper evident seals CTPI





Uncertainty of Measurement

The estimated uncertainty of values quoted, at 95% confidence level, with a coverage "k" factor of 2 is:

- Radar Frequency: ± 0.00057GHz at measured frequency
- Speed: ± 0.36km/h from 20km/h to 250km/h





ISUSD SP

Device description:

Serial number:

Date and time of test:

Date of expiry:

Test results:

Uncertainty of value(s):

Customer:

REDFLEX MR101

102814-0005

26/05/2022 @ 12:00

26/05/2023

As stated in SGS Report TC220872

As stated in SGS Report TC220872

Queensland Police Service

The test confirmed that the device was compliant in accordance with the manufacturer's specification and the requirements of AS2898.2.

Following satisfactory completion of these tests, the device's speed computing unit was sealed using tamper evident adhesive seal.

CTP	I	
Signature:		
18782821823828328328 187828218283828382828428 1878282818283828282828282828282828282828282	บบบาทสายสายสายสายสายสายสายสายสายสายสายสายสายส	GSGSGS
Name of signatory:	CTPI 55	GS
Position of signatory:	Approved Signatory	

Testing laboratory:

SGS Australia Pty Ltd, NATA Accredited Laboratory No. 18628 10/585 Blackburn Road, Notting Hill VIC 3168



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SGSPAPER 20593158

Date: 27/05/2022



Queensland Police Service

SPEED CAMERA TRAILER

ROAD SAFETY CAMERA OFFICE - FIXED CAMERA OPERATIONS GROUP

	Speed Camera Tra	iler Set-Up Cheo	klist		
Operato			Frailer No:		
CTPI	387915	-	576011	DB 1	58UD!
tem	Pre Deployment		Yes	No	
	sure Work Order received with checklists and fact	shoot attached	res		N/A
	upment required -			1	
	uitabily rated vehicle for towing trailer				
	erry can filled with diesel	5			
	ruecam & measuring tape				
	railer keys				
	X Wooden blocks for trailer stability				
The second se	aptop Notebook				
	APIOD NOTEBOOK				
<u> </u>		- Physical Setup			
1.0	onfirm posted speed signs are correct in drive by (and the second			
	elease Speed Camera Trailer (STC) from vehicle -			a ang a marg	1920-102940-1019
	Lower jockey wheel				
	ngage mechanical brake			<u> </u>	
	Disconnect electrical and mechanical couplings				
	Disconnect safety chain	D shata see b		<u></u>	
the property of the property o	anually parallel SCT to road (< 5cm difference F to	R, photograph)		Contraction of the second	
	easurements		and the second sec		
	FWD: 1.46m - REAR: 1.45	5			-
	vitch on breakers -				17
	Front and rear trailer legs				
	Camera mast				
	evel trailer to camber of the road, using trailer legs	(ensure one			
	heel on the ground)				
	emove jockey wheel and store in trailer				
	ock wheel using chain and Police padlock				
	emove pin and foldback towing arm, lock with Pol				
10 Er	nsure camera is fixed to housing and is locked in pe	osition	9		
11 Be	efore installing, manually set camera angle on top	of camera			
12 In	stall and connect camera to housing				
13 Ra	aise camera/solar/security mast				
14 Iso	olate Breakers -				
-	Front and rear trailer legs				
-	Camera mast				
15 Ca	amera housing locked in 22° to road (photograph)			-0.1	
16 Sv	witch on breakers -		1.1.1		alter Rationalities
-	Camera and flash				
-	Modem		1/		
17 Sp	pray-paint around legs with florescent paint		Ľ /		
18 Ta	ake photos of SCT - front, rear, sides & legs	×	P		
	Gener	ator Setup			
1 Er	nsure SCT is fuelled with diesel				
2 (1	heck oil level of generator (approx. 1 <u>/</u> 2 to 3/4), wh	nen cold			

SPEED CAMERA TRAILER SET-UP CHECKLIST V10 09/04/2019



Queensland Police Service

SPEED CAMERA TRAILER

ROAD SAFETY CAMERA OFFICE - FIXED CAMERA OPERATIONS GROUP

3	Align generator for automatic operation (Generator Control Panel)	and the second sec		an all a transmission
	- Key switch on			
	-Ensure green GCB LED is flashing			
	-Depress auto pushbutton (orange LED on)	+ + + + + + + + + + + + + + + + + + +		
	-Residential switch set for location			
	On main breaker board ensure auto generator breaker is on			
5	Generator run hours (if trailer has a generator)			
	Security Setup			
	Adjust security motion detectors for angle and sensitivity and test			
	On main breaker board ensure quiet mode correct for location			
3	Functionally test security system	9		
	Deployment - Notebook Setup			
1	Open program mRemoteNG	2		
2	Select correct camera to set up			
3	Select deployment set up wizard	L L		
4	Select or check;			
	- Site Details/Location			
	- Site Layout Data			
	- Image			
	- Camera Alignment (adjust camera position as required)			
5	Speed validations - minimum of 3			
	Select Start to start deployment			
No. No. No. No.	Deployment - Post Physical Setup			
1	Ensure all compartments are locked			
	Ensure all key/tools/equipment returned to vehicle			
	Turn security alarm on (Mobile App)			
J	Deployment - Quality Assurance			
1	Review deployment notebook setup			
	Confirm data being received			
	Enter site into ICMS and enable			
and the second second second	ional Comments:			
	age Inspection:			
Signa CTPI		Date: 12/09	22	

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Queensland Police Service

SPEED-CAMERA-TRAILER

12/09/21-	Site: Operator:	3879 CTPI	15
ed Camera Trailer Deployment Hazard Check L	-	_	
	Yes	No	N/A
Nork Order Number:			
Environment and Climate Pre-Deployment			
Conduct location inspection prior to activity and identify potential hazards (minimising if			
Provide briefing to personnel involved on potential hazards and obstacles	2		
Check Monitor Bureau of Meteorology (BOM) website prior to deployment	B		
Personnel to wear fluorescent vests/Hi-Vis clothing			
Fire extinguisher available and compliant to AS 1851			
Choose hard surfaces for parking areas where possible			
			
Equipment inspection/check conducted prior to the deployment	9		
Select access to site that does not involve potentially dangerous road crossings			
All electrical outlets to be considered live unless disproved	P		
No equipment to be used that appears badly maintained or damaged			
No hot refuelling of generators to take place			
No spare fuel to be stored in the proximity of the generator			
Deployment and Infrastructure			
Check the strength of phone networks at the deployment site			
	B		
All work in public conducted as planned in a professional manner			
Human Resources		/	
QPS and Contractor staff assigned on the basis of skill and experience	P		
Staff not to be engaged in high risk work			
Staff not to be rostered for excessive hours			
Traffic and Transport			
Ensure consideration to traffic flow and peak hour times are considered			
	Administration Work Order Number: Environment and Climate Pre-Deployment Conduct location inspection prior to activity and identify potential hazards (minimising if possible) (Google Earth) Provide briefing to personnel involved on potential hazards and obstacles Check Monitor Bureau of Meteorology (BOM) website prior to deployment Personnel to wear fluorescent vests/Hi-Vis clothing Fire extinguisher available and compilant to AS 1851 Choose hard surfaces for parking areas after or during wet weather Deployment vehicles are required to have flashing amber/Red blue lights All deployment vehicles to have headlights on Health and Safety Personnel must declare they are medically and physically fit Two personnel required to deploy trailer at all times Safe Work Method statement developed and briefing provided to personnel If required, sign onto contrators Safe Work Method Statement Consultation with stakeholders including QPS RSCO, the relevant road authority and the Chartactor during deployment planning process Traffic Management plan (TMP) prepared by accredited Traffic control contractor when Toad closure required Bequipment inspection/check conducted prior to the deployment Select access to site that does not involve potentially dangerous road crossings	addministration Yes Administration Yes Work Order Number:	addministration Ves No Administration Ves No Work Order Number:

Speed Cancon Mailer Hazer Check List V94 05/06/2017



Detection Device

(PDD)

Validation

Radar/LIDAR Trailer

Registration

Redflex MR101 (Speed Camera Trailer) Validation Test Report Start Deployment Validation

Site Number:	387915		Test Date:	12/09/2022
Location:	Pacific Motorway, Upper Coomera		Test Time:	12:23
Device	Serial Number	Calibra	ation Date	Operator

Speed Radar: 102814-0005

Tracking Radar: 102813-0010

TC003305

158UDB

Validation Test	PDD – Speed (km/h)	Radar/LIDAR – Speed (km/h)
1	98	97
2	79	79
3	97	95
4	99	97
5	100	98
6	96	95

Speed validation testing was completed with a secondary independent traceable speed measurement device. On completion of this validation testing, the Photographic Detection Device was found to be producing accurate results.

QUALITY CONTROL

Report Date	: 12/09/2022
	СТРІ
Signature:	
Print Name:	СТРІ

Report Date	e: 12/09/2022	Δ	
	CTPI		
Signature:			
Print Name			

CTPI

N/A

26/05/2022

26/05/2022

05/05/2022

Survey: 19/08/2022



Redflex MR101 (Speed Camera Trailer) Validation Test Report End Deployment Validation

Site Number:	387915		Test Date:	02/02/2023
Location:	Pacific Motorway, Upper Coomera		Test Time:	08:54
Device	Serial Number	Calibr	ation Date	Operator
Dhatagaachia	NK7-LX System: K7LX 0366		N/A	CTPI
Photographic Detection Device	Speed Radar: 102814-0005	26/	05/2022	CIPI
(PDD)	Tracking Radar: 102813-0010	26/	05/2022	
Validation Radar/LIDAR	TC003305	19/	10/2022	
Trailer Registration	158UDB	Survey:	19/08/2022	N/A

Validation Test	PDD – Speed (km/h)	Radar/LIDAR – Speed (km/h)
1 .	109	107
2	59	58
3	90	89
4	110	108
5	106	. 106
6	91	90

Speed validation testing was completed with a secondary independent traceable speed measurement device. On completion of this validation testing, the Photographic Detection Device was found to be producing accurate results.

QUALITY CONTROL

Report Date: 02/02/2022 CTPI	~
Signature	
Print Name: CTPI	

Report Date	e: 02/02/2022 CTPI	\	
Signature:			
Print Name:	CTPI	1	ł