



**Certificate of Compliance  
for the  
Calibration of Redflex HADECS3X Enforcement System**

We, Redflex Traffic Systems Pty Ltd of 31 Market Street, South Melbourne, Victoria, Australia 3205 hereby certify that the Redflex HADECS3X system comprising of the components as listed below, has been calibrated according to the Home Office Speed Meter Handbook (fourth edition) 15/05, and the timing of the secondary check has been verified and both comply with the terms of the specification for type approval.

<b>Location:</b>	4666A - M1
<b>Redflex HADECS3X NK7 serial number:</b>	HAD00305
<b>Speed Radar - Serial number:</b>	38148-01289
<b>Tracking Radar - Serial number:</b>	38147-00107
<b>Date of calibration:</b>	08/10/2021
<b>Certificate Number:</b>	CV10103304
<b>Calibration carried out by:</b>	John Campbell
<b>Signature:</b>	
<b>Checked By:</b>	Ron Moore
<b>Signature:</b>	



### CERTIFICATION RECORD

<b>CALIBRATION CERTIFICATE NUMBER:</b>	CV10103304	<b>REFLEX HADECS3X NK7 SERIAL NUMBER:</b>	HAD00305
<b>SR CERTIFICATE NUMBER:</b>	705091	<b>SERIAL NUMBER:</b>	38148-01289
<b>PRODUCT MODEL:</b>	AGD SR-340		
<b>FIRMWARE VERSION:</b>	MI-096-1	<b>TEST SOFTWARE VERSION:</b>	1.3.1.7
<b>DATE OF CERTIFICATION:</b>	08 October 2021	<b>RADAR TEMPERATURE (°C):</b>	27.94
<b>RELATIVE HUMIDITY (%):</b>	61.90	<b>AMBIENT TEMPERATURE (°C):</b>	21.80
<b>CERTIFICATION TEST PROCEDURE REFERENCE:</b>	See 1201-007 REDFLEXradar-Certification System User Manual		
<b>DESCRIPTION</b>	<b>COMMENT</b>		<b>Pass/Fail</b>
EQUIPMENT TESTS			<i>Pass</i>
VISUAL INSPECTION			<i>Pass</i>
SPEED MEASUREMENTS			<i>Pass</i>
<b>DESCRIPTION</b>	<b>MEASURED</b>	<b>LIMITS</b>	
TRANSMIT FREQUENCY MEASUREMENT (GHz)	24.08760446	24.075 - 24.120	
<b>TRACEABILITY RECORDS OF INSTRUMENTS USED IN CERTIFICATION TEST</b>			
<b>INSTRUMENT DESCRIPTION:</b>	<b>SERIAL NUMBER:</b>	<b>CALIBRATION CERTIFICATE NUMBER:</b>	<b>NEXT CALIBRATION DUE DATE:</b>
TEKTRONIX AFG3022B Function Generator	C014082	21011117	22nd January 2022
PENDULUM CNT-90XL Frequency Counter	413964	3492130001	22nd January 2022
FLUKE 971 Temperature Humidity Meter	35181596	2101118	21st January 2022
AGD MC-116 Target Simulator	106553-0002	116066	5th February 2023
<b>CERTIFICATION TEST CARRIED OUT BY:</b>	<b>John Campbell</b>	<b>NEXT CERTIFICATION TEST DUE:</b>	<b>07 October 2022</b>
<b>CHECKED BY</b>	<b>Ron Moore</b>	<i>Template V20210222RX (SR)</i>	



## SPEED MEASUREMENT

<b>CALIBRATION CERTIFICATE NUMBER:</b>	<b>CV10103304</b>	<b>REDFLEX HADECS3X NK7 SERIAL NUMBER:</b>	<b>HAD00305</b>
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**SERIAL NO: 38148-01289**

Simulated Speed (mph)	Measured Speed (mph)				Speed Limits (mph)	Pass/Fail
	Advancing		Receding			
	Min	Max	Min	Max		
13.05	<span style="color: blue;">13.05</span>	<span style="color: blue;">13.05</span>	<span style="color: blue;">13.05</span>	<span style="color: blue;">13.05</span>	12.74 - 13.36	<span style="color: blue;">Pass</span>
18.64	<span style="color: blue;">18.58</span>	<span style="color: blue;">18.63</span>	<span style="color: blue;">18.58</span>	<span style="color: blue;">18.63</span>	18.33 - 18.95	<span style="color: blue;">Pass</span>
24.85	<span style="color: blue;">24.85</span>	<span style="color: blue;">24.85</span>	<span style="color: blue;">24.85</span>	<span style="color: blue;">24.85</span>	24.54 - 25.17	<span style="color: blue;">Pass</span>
31.07	<span style="color: blue;">31.01</span>	<span style="color: blue;">31.04</span>	<span style="color: blue;">31.01</span>	<span style="color: blue;">31.04</span>	30.76 - 31.38	<span style="color: blue;">Pass</span>
37.28	<span style="color: blue;">37.28</span>	<span style="color: blue;">37.28</span>	<span style="color: blue;">37.28</span>	<span style="color: blue;">37.28</span>	36.97 - 37.59	<span style="color: blue;">Pass</span>
43.50	<span style="color: blue;">43.43</span>	<span style="color: blue;">43.45</span>	<span style="color: blue;">43.43</span>	<span style="color: blue;">43.45</span>	43.19 - 43.81	<span style="color: blue;">Pass</span>
49.71	<span style="color: blue;">49.71</span>	<span style="color: blue;">49.71</span>	<span style="color: blue;">49.71</span>	<span style="color: blue;">49.71</span>	49.40 - 50.02	<span style="color: blue;">Pass</span>
55.92	<span style="color: blue;">55.86</span>	<span style="color: blue;">55.86</span>	<span style="color: blue;">55.86</span>	<span style="color: blue;">55.86</span>	55.61 - 56.23	<span style="color: blue;">Pass</span>
62.14	<span style="color: blue;">62.14</span>	<span style="color: blue;">62.14</span>	<span style="color: blue;">62.14</span>	<span style="color: blue;">62.14</span>	61.83 - 62.45	<span style="color: blue;">Pass</span>
68.35	<span style="color: blue;">68.29</span>	<span style="color: blue;">68.29</span>	<span style="color: blue;">68.29</span>	<span style="color: blue;">68.29</span>	68.04 - 68.66	<span style="color: blue;">Pass</span>
74.56	<span style="color: blue;">74.56</span>	<span style="color: blue;">74.56</span>	<span style="color: blue;">74.56</span>	<span style="color: blue;">74.56</span>	74.25 - 74.88	<span style="color: blue;">Pass</span>
80.78	<span style="color: blue;">80.72</span>	<span style="color: blue;">80.72</span>	<span style="color: blue;">80.72</span>	<span style="color: blue;">80.72</span>	80.47 - 81.09	<span style="color: blue;">Pass</span>
86.99	<span style="color: blue;">86.99</span>	<span style="color: blue;">86.99</span>	<span style="color: blue;">86.99</span>	<span style="color: blue;">86.99</span>	86.68 - 87.30	<span style="color: blue;">Pass</span>
93.21	<span style="color: blue;">93.14</span>	<span style="color: blue;">93.14</span>	<span style="color: blue;">93.14</span>	<span style="color: blue;">93.14</span>	92.89 - 93.52	<span style="color: blue;">Pass</span>
99.42	<span style="color: blue;">99.36</span>	<span style="color: blue;">99.42</span>	<span style="color: blue;">99.36</span>	<span style="color: blue;">99.42</span>	99.11 - 99.73	<span style="color: blue;">Pass</span>
105.63	<span style="color: blue;">105.57</span>	<span style="color: blue;">105.57</span>	<span style="color: blue;">105.57</span>	<span style="color: blue;">105.57</span>	105.32 - 105.94	<span style="color: blue;">Pass</span>
111.85	<span style="color: blue;">111.78</span>	<span style="color: blue;">111.83</span>	<span style="color: blue;">111.78</span>	<span style="color: blue;">111.83</span>	111.54 - 112.16	<span style="color: blue;">Pass</span>
118.06	<span style="color: blue;">118.00</span>	<span style="color: blue;">118.00</span>	<span style="color: blue;">118.00</span>	<span style="color: blue;">118.00</span>	117.75 - 118.37	<span style="color: blue;">Pass</span>
124.27	<span style="color: blue;">124.21</span>	<span style="color: blue;">124.22</span>	<span style="color: blue;">124.21</span>	<span style="color: blue;">124.22</span>	123.96 - 124.58	<span style="color: blue;">Pass</span>
136.70	<span style="color: blue;">136.64</span>	<span style="color: blue;">136.64</span>	<span style="color: blue;">136.64</span>	<span style="color: blue;">136.64</span>	136.39 - 137.01	<span style="color: blue;">Pass</span>
149.13	<span style="color: blue;">149.07</span>	<span style="color: blue;">149.07</span>	<span style="color: blue;">149.07</span>	<span style="color: blue;">149.07</span>	148.82 - 149.44	<span style="color: blue;">Pass</span>
161.56	<span style="color: blue;">161.49</span>	<span style="color: blue;">161.49</span>	<span style="color: blue;">161.49</span>	<span style="color: blue;">161.49</span>	161.25 - 161.87	<span style="color: blue;">Pass</span>
173.98	<span style="color: blue;">173.86</span>	<span style="color: blue;">173.92</span>	<span style="color: blue;">173.86</span>	<span style="color: blue;">173.92</span>	173.67 - 174.29	<span style="color: blue;">Pass</span>
186.41	<span style="color: blue;">186.29</span>	<span style="color: blue;">186.33</span>	<span style="color: blue;">186.29</span>	<span style="color: blue;">186.33</span>	186.10 - 186.72	<span style="color: blue;">Pass</span>

*Template V20210222RX (SR)*



**CERTIFICATION RECORD**

<b>CALIBRATION CERTIFICATE NUMBER:</b>	<b>CV10103304</b>	<b>REDFLEX HADECS3X NK7 SERIAL NUMBER:</b>	<b>HAD00305</b>
<b>TR CERTIFICATE NUMBER:</b>	<i>31700116</i>	<b>SERIAL NUMBER:</b>	<i>38147-00107</i>
<b>PRODUCT MODEL:</b>	AGD TR-317		
<b>BIOS VERSION:</b>	<i>MI-135-7</i>	<b>DSP SOFTWARE VERSION:</b>	<i>MI-144-9</i>
<b>PIC FIRMWARE VERSION:</b>	<i>N/A</i>	<b>TEST SOFTWARE VERSION:</b>	<i>1.3.1.7</i>
<b>DATE OF CERTIFICATION:</b>	<i>08 October 2021</i>	<b>RADAR TEMPERATURE (°C):</b>	<i>N/A</i>
<b>RELATIVE HUMIDITY (%):</b>	<i>61.20</i>	<b>AMBIENT TEMPERATURE (°C):</b>	<i>22.11</i>
<b>CALIBRATED BANDWIDTH (MHz):</b>	<i>41.30</i>		
<b>CERTIFICATION TEST PROCEDURE REFERENCE:</b>	See 1201-007 REDFLEXradar-Certification System User Manual		
<b>DESCRIPTION</b>	<b>COMMENT</b>		
EQUIPMENT TESTS			<i>Pass</i>
VISUAL INSPECTION			<i>Pass</i>
SPEED AND RANGE MEASUREMENTS			<i>Pass</i>
<b>DESCRIPTION</b>	<b>MEASURED</b>	<b>LIMITS</b>	<b>PASS/FAIL</b>
TRANSMIT FREQUENCY MEASUREMENT (GHz)	<i>24.12439052</i>	24.123 - 24.127	<i>Pass</i>
BANDWIDTH MEASUREMENT (MHz)	<i>42.00</i>	39.00 - 44.00	<i>Pass</i>
<b>TRACEABILITY RECORDS OF INSTRUMENTS USED IN CERTIFICATION TEST</b>			
<b>INSTRUMENT DESCRIPTION:</b>	<b>SERIAL NUMBER:</b>	<b>CALIBRATION CERTIFICATE NUMBER:</b>	<b>NEXT CALIBRATION DUE DATE:</b>
TEKTRONIX AFG3022B Function Generator	<i>C014082</i>	<i>21011117</i>	<i>22nd January 2022</i>
PENDULUM CNT-90XL Frequency Counter	<i>413964</i>	<i>3492130001</i>	<i>22nd January 2022</i>
FLUKE 971 Temperature Humidity Meter	<i>17580804</i>	<i>2101118</i>	<i>21st January 2022</i>
AGD MC-116 Target Simulator	<i>117117-00017</i>	<i>116066</i>	<i>5th February 2023</i>
<b>CERTIFICATION TEST CARRIED OUT BY:</b>	<b>John Campbell</b>	<b>NEXT CERTIFICATION TEST DUE:</b>	<b>07 October 2022</b>
<b>CHECKED BY:</b>	<b>Ron Moore</b>	<b>Template V20210222RX (TR)</b>	





### SPEED AND RANGE MEASUREMENT

<b>CALIBRATION CERTIFICATE NUMBER:</b>	<b>CV10103304</b>	<b>REDFLEX HADECS3X NK7 SERIAL NUMBER:</b>	<b>HAD00305</b>
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**SERIAL NO: 38147-00107**

Simulated Range (m)	Simulated Speed (mph)	Measured Advancing		Measured Receding		Range Limits (m)	Speed Limits (mph)	Pass/Fail
		Range (m)	Speed (mph)	Range (m)	Speed (mph)			
23.80	31.07	23.91	31.07	23.79	31.01	22.10 - 25.50	30.76 - 31.38	Pass
23.80	62.14	24.00	62.20	23.70	62.07	22.10 - 25.50	61.83 - 62.45	Pass
23.80	93.21	24.05	93.33	23.62	93.27	22.10 - 25.50	92.89 - 93.52	Pass
23.80	124.27	24.10	124.34	23.60	124.34	22.10 - 25.50	123.96 - 124.58	Pass
23.80	155.34	24.09	155.39	23.60	155.34	22.10 - 25.50	155.03 - 155.65	Pass
23.80	186.41	24.03	186.47	23.68	186.41	22.10 - 25.50	186.10 - 186.72	Pass
51.00	7.46	51.10	7.58	51.10	7.46	49.30 - 52.70	7.15 - 7.77	Pass
51.00	12.43	51.11	12.54	51.10	12.33	49.30 - 52.70	12.12 - 12.74	Pass
51.00	18.64	51.17	18.77	51.07	18.64	49.30 - 52.70	18.33 - 18.95	Pass
51.00	24.85	51.19	24.92	51.01	24.82	49.30 - 52.70	24.54 - 25.17	Pass
51.00	31.07	51.20	31.07	51.00	31.01	49.30 - 52.70	30.76 - 31.38	Pass
51.00	37.28	51.20	37.39	51.00	37.21	49.30 - 52.70	36.97 - 37.59	Pass
51.00	43.50	51.20	43.62	51.00	43.50	49.30 - 52.70	43.19 - 43.81	Pass
51.00	49.71	51.20	49.77	51.00	49.71	49.30 - 52.70	49.40 - 50.02	Pass
51.00	55.92	51.23	55.93	50.99	55.86	49.30 - 52.70	55.61 - 56.23	Pass
51.00	62.14	51.25	62.26	50.95	62.07	49.30 - 52.70	61.83 - 62.45	Pass
51.00	68.35	51.30	68.48	50.91	68.35	49.30 - 52.70	68.04 - 68.66	Pass
51.00	74.56	51.30	74.63	50.90	74.56	49.30 - 52.70	74.25 - 74.88	Pass
51.00	80.78	51.30	80.83	50.90	80.72	49.30 - 52.70	80.47 - 81.09	Pass
51.00	86.99	51.30	87.10	50.90	86.93	49.30 - 52.70	86.68 - 87.30	Pass
51.00	93.21	51.30	93.33	50.90	93.21	49.30 - 52.70	92.89 - 93.52	Pass
51.00	99.42	51.30	99.48	50.90	99.42	49.30 - 52.70	99.11 - 99.73	Pass
51.00	105.63	51.32	105.70	50.90	105.57	49.30 - 52.70	105.32 - 105.94	Pass
51.00	111.85	51.32	111.95	50.89	111.78	49.30 - 52.70	111.54 - 112.16	Pass
51.00	118.06	51.35	118.18	50.88	118.06	49.30 - 52.70	117.75 - 118.37	Pass
51.00	124.27	51.34	124.40	50.87	124.27	49.30 - 52.70	123.96 - 124.58	Pass
51.00	136.70	51.35	136.81	50.85	136.64	49.30 - 52.70	136.39 - 137.01	Pass
51.00	149.13	51.35	149.25	50.88	149.13	49.30 - 52.70	148.82 - 149.44	Pass
51.00	161.56	51.34	161.65	50.89	161.49	49.30 - 52.70	161.25 - 161.87	Pass
51.00	173.98	51.30	174.11	50.90	174.03	49.30 - 52.70	173.67 - 174.29	Pass
51.00	186.41	51.29	186.52	50.91	186.35	49.30 - 52.70	186.10 - 186.72	Pass
81.60	31.07	81.83	31.13	81.70	30.94	79.90 - 83.30	30.76 - 31.38	Pass
81.60	62.14	81.90	62.27	81.60	62.01	79.90 - 83.30	61.83 - 62.45	Pass
81.60	93.21	82.00	93.39	81.56	93.20	79.90 - 83.30	92.89 - 93.52	Pass
81.60	124.27	82.00	124.40	81.50	124.27	79.90 - 83.30	123.96 - 124.58	Pass
81.60	155.34	82.00	155.42	81.50	155.28	79.90 - 83.30	155.03 - 155.65	Pass
81.60	186.41	81.94	186.57	81.60	186.34	79.90 - 83.30	186.10 - 186.72	Pass

*Template V20210222RX (TR)*