



# OFFICER COPY

## Pierce County Radio Communications

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

### CERTIFICATE OF CALIBRATION & ACCURACY

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>02/07/2022</u>
Model:	<u>MPH Industries BEE III</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>BEE-664021141</u>		
Operating Frequency Band:	<u>Ka</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

### TUNING FORK

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>67430</u>	Date Certified:	<u>02/07/2022</u>
Oscillation (Cycles per Second):	<u>2029</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>20</u>		

When operated between the temperature of -22F to +140F no correction is required.

### TUNING FORK

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>67151</u>	Date Certified:	<u>02/07/2022</u>
Oscillation (Cycles per Second):	<u>5038</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>50</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 2/7/22 [Signature]  
DATED SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Industries BEE III</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>BEE-122202781</u>		
Operating Frequency Band:	<u>Ka</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>57819</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2018</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>20</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>59282</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>5042</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>50</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>Decatur Electronics</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>Genesis II Directional</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>G2S-22432</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>204702</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2538</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>204778</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4733</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022  
DATED

Raymond Fleming  
SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Industries BEE III</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>BEE-664016406</u>		
Operating Frequency Band:	<u>Ka</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>501420</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2821</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>28</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>501449</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>5033</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>50</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 3/09/2022 [Signature]  
DATED SIGNED





**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Industries BEE III</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>BEE-122200782</u>		
Operating Frequency Band:	<u>Ka</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>59505</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2019</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>20</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>59283</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>5041</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>50</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED



**Pierce County**  
**Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>Decatur Electronics</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>Genesis II Select</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>G2S-26208</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>222754</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2538</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>223309</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4734</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington

03/09/2022  
DATED

[Signature]  
SIGNED



**Pierce County**  
**Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>Decatur Electronics</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>Genesis II Select</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>G2S-36360</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>273601</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2537</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>277842</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4719</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Industries BEE III</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>BEE-122201340</u>		
Operating Frequency Band:	<u>Ka</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>756609</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2018</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>20</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>756694</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>5042</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>Ka</u>		
MPH:	<u>50</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED





**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Python</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>PYT546006652</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>308554</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2522</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>308340</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4679</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED



**Pierce County**  
**Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Python</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>PYT546004626</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>290946</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2542</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>280652</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4729</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022 Raymond Fleming  
DATED SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>MPH Industries</u>	Date Certified:	<u>03/09/2022</u>
Model:	<u>MPH Python</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>PYT546007663</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>308539</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>2519</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>35</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>308039</u>	Date Certified:	<u>03/09/2022</u>
Oscillation (Cycles per Second):	<u>4683</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>65</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/09/2022  
DATED

Raymond Fleming  
SIGNED



**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445  
(253) 798-7147

**CERTIFICATE OF CALIBRATION & ACCURACY**

I, Raymond Fleming do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Traffic Radar equipment:

Manufacturer:	<u>Decatur Electronics</u>	Date Certified:	<u>03/14/2022</u>
Model:	<u>Genesis VPD</u>	Agency:	<u>Steilacoom PS</u>
Serial Number:	<u>04025</u>		
Operating Frequency Band:	<u>K</u>		

The aforesaid radar meets and exceeds all manufacturer's specifications.

**TUNING FORK**

I, Raymond Fleming do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>147326</u>	Date Certified:	<u>03/14/2022</u>
Oscillation (Cycles per Second):	<u>2392</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>33</u>		

When operated between the temperature of -22F to +140F no correction is required.

**TUNING FORK**

I, Raymond Fleming do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the following Doppler Radar Tuning Forks:

Tuning Fork Serial No.:	<u>147436</u>	Date Certified:	<u>03/14/2022</u>
Oscillation (Cycles per Second):	<u>5592</u>	Agency:	<u>Steilacoom PS</u>
Operating Frequency Band:	<u>K</u>		
MPH:	<u>77</u>		

When operated between the temperature of -22F to +140F no correction is required.

I certify under penalty of perjury, under the laws of the State of Washington, that the above statements are true and correct.

Dated and Signed at Tacoma, Washington 03/14/2022  
DATED

Ray Fleming  
SIGNED





**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445

(253) 798-7147

**CERTIFICATE OF ACCURACY**

I, Raymond S Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the laser Speed Measuring Device (SMD) listed below. The SMD was found to meet or exceed all manufacturer's specifications.

**Laser SMD Information and Certification Summary**

Manufacturer: <u>Laser Technology, Inc</u>	Date Certified: <u>03/14/2022</u>
Model: <u>TruSpeed</u>	Agency: <u>Steilacoom PD</u>
Serial Number: <u>TJ004601</u>	

**Distance Tests**

Long Range . . . . .	Expected: 204.5 ft	Tested: 204.4ft	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
----------------------	--------------------	-----------------	------------------------------	--	-------------------------------

**Operational Tests**

Controls Operational . . . . .	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
RFI Indicator . . . . .	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

**Pulse Characteristics Tests**

Pulse Frequency (Rep Rate) . . . . .	Expected: 199- 200Hz	Tested: 200.00 Hz	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Pulse Width . . . . .	Expected: <=25 nS	Tested: 7.50 nS	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Double Pulse . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

**Beam Characteristics Tests**

Optical Power . . . . .	Expected: 7-800 mW	Tested: 718.3 mW	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Horizontal Beam Width . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Vertical Beam Width . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Sight Alignment . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

I certify under penalty of perjury, under the laws of the State of Washington, that the foregoing is true and correct.

Dated and Signed at Tacoma, Washington 03/14/2022   
DATE SIGNED



## CERTIFICATION CONCERNING DESIGN AND CONSTRUCTION OF ELECTRONIC SPEED MEASURING DEVICES

I, Raymond Fleming, do certify under penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that the following is true and correct:

I am employed with Pierce County as a Communications Systems Technician, Speed Measuring Device (SMD) Specialist, and assigned as the custodian of the SMD records. I have been employed in this capacity since Aug 29<sup>th</sup>, 2016. Part of my duties include the maintenance and repair of all types of electronic radar and laser speed measuring devices (SMD's) used by the Steilacoom Police Department.

The Steilacoom Police Department currently uses the following SMD's:

SMD TYPE:	MODEL:	MANUFACTURE:
Radar	Genesis VPD	Decatur Electronics
Radar	Genesis II Directional	Decatur Electronics
Radar	Genesis II Select	Decatur Electronics
Radar	BEE-III	MPH Industries
Radar	Python	MPH Industries
Laser	TruSpeed	Laser Technology

I have the following qualifications with respect to the above stated SMD's:

I have twenty-five years combined military and civilian experience as a communications specialist in the maintenance and repair of electronics equipment and four years with Pierce County repairing, maintaining, and certifying SMD's for cities throughout the state. I received training from the following manufacturers as well as from the Pierce County Lead Systems Technician. On March 22, 2017 I successfully completed the MPH Industries course in operation and maintenance of Doppler traffic radar and traffic laser. On April 4<sup>th</sup>, 2019 I successfully completed the Laser Technology Inc, course for factory service training on the LTI Tru-Speed series laser radar.

The Pierce County Radio Communications Division maintains manuals for all of the above listed SMD's. I am personally familiar with those manuals and know how each of the SMD's are designed and operated. From March 27<sup>th</sup>, 2017, to March 15<sup>th</sup>, 2022, I performed a majority of the SMD testing. The units are evaluated and certified to meet or exceed existing performance standards.

The Pierce County Radio Communications Division maintains a testing and certification program for the Steilacoom Police Department wherein each SMD is inspected and checked every 24 months by the following means:

Radar SMD's utilize the Doppler effect to measure speed. Testing consists of using a precision signal generator to inject a signal into the SMD to simulate speeds of 35mph and 65mph for the stationary/moving radars. It also includes injection of a signal to simulate 35mph for stationary radar only. The signal must cause the SMD to display the exact speed,  $\pm 1$  mile per hour, in order to be certified for accuracy. I then measure the frequency of the tuning fork(s) assigned to each SMD to ensure that they are within  $\pm 5$ Hz tolerance. I issue a certificate of accuracy for both the SMD and the tuning fork(s). The original certificates are issued to the Steilacoom Police Department who in turn issues a copy to the court. I also retain a copy for my records along with the maintenance and service records for each SMD serviced.

Laser SMD's measure speed based on the velocity of light and a precision time base reference. Testing consists of three accuracy certification checks (1) Internal Self-Test (2) Pulse Check to include pulse width, power output, pulse repetition rate, and double pulse (3) and a Distance Check to include sight alignment, vertical, and horizontal beam width  $\geq 200$  feet. The checks ensure that the SMD is within tolerance and functioning properly. I then issue a certificate of accuracy for each SMD. The original certificates are issued to the Steilacoom Police Department who




in turn issues a copy to the Court. I also retain a copy for my records along with the maintenance and service records for each SMD serviced.

All radar SMD's operated by the Steilacoom Police Department directly measure by digital message from the Doppler signal. They do not reconstitute the Doppler signal in any way, including the use of devices such as a phase lock loop (PLL), before the speed is measured.

Based upon my education, training and experience, and my knowledge of the radar SMD's listed above, it is my opinion that each of these electronic pieces of equipment is so designed and constructed as to accurately employ the Doppler effect in such a manner that it will give accurate measurements of the speed of motor vehicles when properly calibrated and operated by a trained operator or, in the case of laser SMD's, each of these pieces of equipment is so designed and constructed as to accurately employ measurement techniques based on the velocity of light in such a manner that it will give accurate measurements of the speed of motor vehicles when properly calibrated and operated by a trained operator.

I certify under the penalty of perjury, under the laws of the State of Washington, that the foregoing is true and correct.

  
Raymond Fleming  
Communications Systems Technician/  
Speed Measuring Device Specialist

Signed and dated at Tacoma, Washington Pierce County

SUBSCRIBED AND SWORN TO BEFORE ME THIS 15<sup>th</sup> DAY OF  
March, 2022.

  
Notary Public in and for the State of Washington, County of Pierce.

Commission expires 11/15/2022.





**Pierce County  
Radio Communications**

1422 112<sup>th</sup> Street East  
Tacoma, Washington 98445

(253) 798-7147

**CERTIFICATE OF ACCURACY**

I, Raymond S Fleming, do certify under the penalty of perjury, under the laws of the State of Washington, in the County of Pierce, that all applicable tests and measurements were made on the laser Speed Measuring Device (SMD) listed below. The SMD was found to meet or exceed all manufacturer's specifications.

**Laser SMD Information and Certification Summary**

<b>Manufacturer:</b> <u>Laser Technology, Inc</u>	<b>Date Certified:</b> <u>07/28/2022</u>
<b>Model:</b> <u>Tru-Speed S</u>	<b>Agency:</b> <u>Steilacoom PD</u>
<b>Serial Number:</b> <u>TJ012088</u>	

**Distance Tests**

Long Range . . . . .	Expected: 204.5 ft	Tested: 204.5ft	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
----------------------	--------------------	-----------------	------------------------------	--	-------------------------------

**Operational Tests**

Controls Operational . . . . .	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
RFI Indicator . . . . .	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

**Pulse Characteristics Tests**

Pulse Frequency (Rep Rate) .	Expected:199- 200Hz	Tested: 200.00 Hz	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Pulse Width . . . . .	Expected: <=25 nS	Tested: 7.81 nS	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Double Pulse . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

**Beam Characteristics Tests**

Optical Power . . . . .	Expected: 7-800mW	Tested:751.12 uW	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Horizontal Beam Width . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Vertical Beam Width . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Sight Alignment . . . . .			<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail

I certify under penalty of perjury, under the laws of the State of Washington, that the foregoing is true and correct.

Dated and Signed at Tacoma, Washington

07/28/2022  
DATE

[Signature]  
SIGNED