RoadPod[®] VT 5900 - Setup & Installation Guidelines

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Close

Setup

About...

MTExec.exe

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1. Install the MTF software

Ensure that the latest version of MTE software is loaded on your laptop.

From the top toolbar select Help >> About and confirm the version you are using.

Connect the communications cable from the USB

3. Check the RoadPod VT5900

socket to the RoadPod. Click on the RSU icon. A New Connection will be established. Click OK.

RSU	New Connection									
21	New Connection! A new RSU connection has been detected									
	RSU Identifier: MT24RFRW RSU Type: MC5900 Channel: 0							•		
								८7₿		
							OK			
		RSU Status - Channel 0						×		
		Data	RSU	Powe	er Triggers	Memory	Config.			
		Prop	erty		Value					
		e	MT24RFRW							
	Attribute									
		Direction A 1 - North bound, A trigger f					ger first. [1	1		
		Direction B			0 - Unused or unknown. [0]					
		Lane				A=00, B=00				
		Opera			perator ZAP					
			Description	on	MCSetup factory setup A=30ms, B=30ms					
			ockout							
		5	Sensor		Spacing - 1000 mm, 3 ft 3.4 in					
					Effective si	ize - 0 mm,	Oft			
			irst Data		Unknown	(Roadeida	Linit et art -	15:03 Thurs	day, 5 July 20	
			ast Data	-					sday, 5 July 2	
		E	ncoding		StampEx					
		6	Data type	B	Axle sensor	rs - Paired	(Class/Spe	ed/Count)		
		<							>	
					RSU not	active			Close	

2. Confirm Communication Settings

Version: 5.0.6.0 Build number: 6748

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Acknowledgements: ZIb Copyright (c) Jean-loup Gailly and Mark Adler SHA-1 hash (FIPS 180-1) Copyright (c) US Department of Commerce USD/UEC 20200-2020 Comp Description Exception Office Acadian

Build date: 10:13 Fri 09 Nov 2018

From the top toolbar select View >> Settings >> Communication.

🚵 МТІ	Exec	
File	View Technical Window Hel	p
RSU	Report look Setup look Toolbars	2 ₽ Q ↔ G O P 2 ♥ 0 9
Setup	Output Application theme Modify for touch screen	
Unioa	Algorithm	
View	Settings •	Reports -0' 0-0'
6	Event logs Script editor	Communication
Chann		COM I PARTING AND IN THE COMMENTATION OF THE COMMENT. THE COMMENTATION OF THE COMMENT.
		File n Senal ports on this machine
		ISSer Name Du Detail Type Statut Scott Resconstructions Performance Statut Statut Image: Scott Resconstructions Performance Statut Statut Image: Scott Resconstructions Performance Statut Statut Statut Image: Scott Resconstructions Performance Statut
		٢
		Refresh OK Show debug messages in log Cancel

The message "RSU not active" should display.

Confirm the battery level on the Power page. Active life remaining should be more than the next

survey period. RSU Status - Channel 0 Data RSU Power Triggers Memory Config. Pre-Reg Main Main battery - replaceable alkaline cells 6.5 24.0 the battery now. 1 UNA 14 I The battery life remaining is an estimate only and is dependent on a number of factors including shelf-life, temperature, traffic patterns and the time the unit is active. 20.0 Active life remaining: 1364 days Battery remaining: 93.0% ince last power-up 484 days Temperature 19.5 C 4.8 4.5 8 0 5.48 Battery is in Use Close

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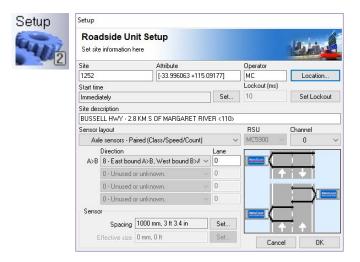
If not, change

Click Close.

4. Set up the RoadPod VT

With the communications cable connected click the *Setup* icon.

Enter all details about the survey site; in this example only, both the Eastbound and Westbound lanes are being surveyed. Click *OK*.



5. Check all details are correct by clicking the *RSU* icon again. The status should now state "Running".

Data	RSU	Power	Triggers	Memory	Config.	
M	ain	Ma	in battery -	replaceabl	e alkaline cell	s Pre-Re
	6.5 6.12	is depend	dert on a r temperatu s active. Active life	number of fa		e time 20
		Time since last power-up 217 d			217 days	
			٦	Temperature	e 21.2 C	
		6.5				
	4.8					
	4.5			-		
		_				-8.0
	4.0	4.0		Battery is i		

Installation - some points to note

For short-term traffic surveys where class and speed information is required, paired tubes need to be installed with precise spacing. Full coverage almost always requires a logger installed per lane.

Single lane

Paired tubes installed across a single lane.

Two-lane bidirectional

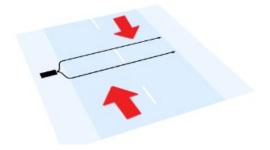
Paired tubes installed across a two-lane bidirectional carriageway.



RS

A single logger can be used for bidirectional traffic only if the occurrences of two simultaneous

vehicles crossing the tubes is very low.



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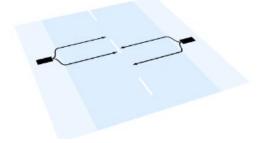
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Two-lane separate tubes

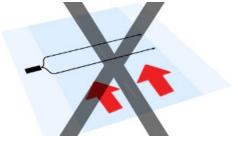
- Paired tubes installed in each lane.
- Can be used for any flow direction.
- Used at sites where anchor points are widely separated on opposite sides of the carriageway.



Two or more unidirectional lanes

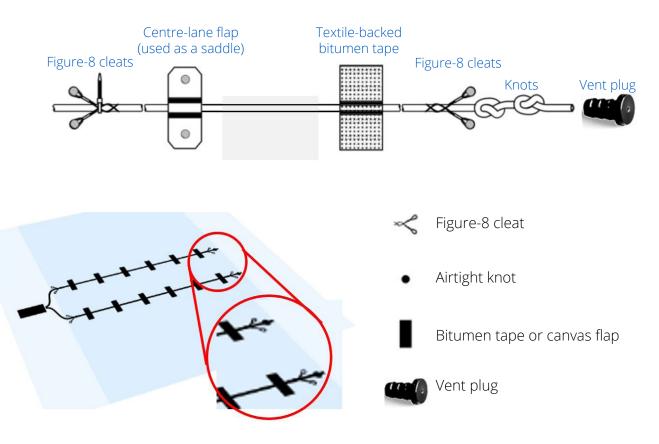


One pair of tubes should not be used across two or more uni-directional lanes. The resulted data is prone to errors as the layout tends to overestimate heavy vehicle traffic.



Installation - Procedure

A generalised tube configuration for use with one RoadPod VT unit is illustrated below.



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To install pneumatic tubes (suggested method)

- Prepare two road-tubes by cutting your roll into equal lengths, sufficiently long enough to cover the required lanes and reach the unit's securing point.
- 2. Using a tape measure or one-metre stick, mark the one-metre tube spacing on the road with a lumber crayon or chalk.



Spacing tubes with gauge

- 3. Attach Figure-8 Cleats to one end of each tube, using two per tube (see details on next page).
- 4. Seal the same end of each tube with vent plugs (or two knots), adjacent to the cleats.
- 5. Secure both tubes to the road using a road nail through the eyelet of each cleat.
- 6. Attach Figure-8 cleats to the kerb side of each tube, using two per tube, and secure to the road using road nails or screws. Ensure that the tubes are of equal length from the kerb to the counter, parallel to each other and perpendicular to the direction of travel.
- 7. Double-check that the tube spacing is one metre.
- 8. Stretch each tube 10-15% to reduce lateral movement. If necessary, tie a cable around the kerb side cleats to prevent slippage. Ensure that the tube length from the kerb to the air sensors is exactly the same. A difference in length will result in incorrect speed and wheelbase values.
- 9. Attach the *Centre-Line Flaps* as required using two road nails/screws per cleat. This will minimise lateral movement over long distances. Using one in the centre of each lane, in addition to between two lanes will maximise data

quality. As an alternative, use short lengths of textile-backed bitumen tape (8-10 cm).



Centre flap as saddle



Centre flap used folded



Bituman tape used as saddle

- 10. Remove the inner tray from the stainless steel case and feed both tubes up through the handle.
- 11. Place the main system unit next to the tray and attach each tube to the appropriate air sensor. Remember to use the convention of the A tube being the first hit by vehicles travelling in the lane closest to the logger. Use the *Status LEDs* or the *Traffic View* (when connected to a laptop) to verify the correct tube connections.
- 12. Place the main system unit into the road case and push the tubes into the locking cut-outs.

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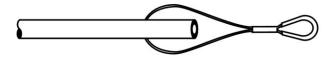
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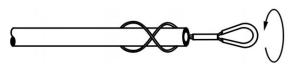
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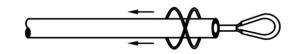
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To attach a Figure-8 cleat

- 1. Place one end of the pneumatic tube over the large loop of a Figure-8 Cleat.
- 2. Twist the Figure-8 Cleat to form a second loop and slide over the end of the tube.
- 3. Bunch the two loops together and pull the tube through as necessary.



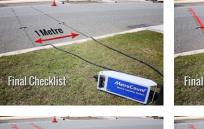




A final checklist

When installed, tubes must be:

- Correctly spaced;
- Parallel to each other;
- Perpendicular to the direction of vehicle travel;
- Equal length from the path to the logger.
 This must be checked after tensioning the tubes.









Unloading data from the RoadPod VT

1. Open MTE and connect to the Road Side Unit

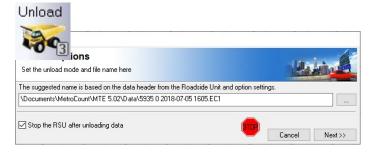
Click on the *RSU* icon. A new connection with be established. Click *OK*.

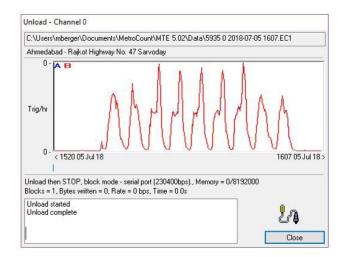
The RSU Status page should indicate that the RSU is active or *Running*. Click *Close*.



2. Click the Unload icon.

Ensure the file extension (.EC0, .EC1, etc) is <u>not</u> <u>changed</u>. To finish the survey check "*Stop the RSU after unloading data*". Click *Next* >>.





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