TC-Speed Connect Notes

4/15/24

Contents

nstalling the program	2
Uninstalling the program	2
Running the program	3
How the program works	4
Profile Page	4
Connected Sign Page	5
Data Viewer Page	6
About Page	8

Please note the following:

• MUTCD compliance limits a lot of options. Deselect the checkbox in the profile page for more familiar configuration.

• The 'Inactivity Display State' (shows blank screen or zero when not detecting traffic) is not included due to its limited usage and some legacy OCAN firmware errors where the command conflicts with another command that affects Speed Logs.

• Any detected speed above Max Speed will be met with a blank screen as per current guidance.

• Control of the LogMin and LogMax variables has been taken away from the user to ensure that the posted speed limit falls on a boundary of the binned data. This way we can more accurately tell speeding vehicles from compliant ones.

Installing the program

• Open the following link in your web browser:

https://trafficalm-speed-connect-public.s3.us-west-2.amazonaws.com/TCSCWindows.application

• Double-click the .application file that gets downloaded. If you see the following dialog, hit OK.



• Hit the Install button on the dialog that opens.

Application Install - Security Warning	×
Publisher cannot be verified. Are you sure you want to install this application?	¢
Name: TC-Speed Connect From (Hover over the string below to see the full domain): trafficalm-speed-connect-public.s3-website-us-west-2.amazonaws.com Publisher: Unknown Publisher	
Install	<u>D</u> on't Install
While applications from the Internet can be useful, they can potentially harm yo you do not trust the source, do not install this software. <u>More Information</u>	our computer. If

• The program will proceed to download and once completed will open itself.



Uninstalling the program

• Click the windows button in the bottom-left of the desktop and start typing 'Add or Remove Programs'.



• When the 'Add or Remove Programs' option is shown, click on it and find 'TC-Speed Connect' in the list. Then hit the Uninstall button.



• On the dialog that appears, select 'Remove the application from this computer' and hit OK.

TC-Speed Connect Maintenance	×
TC-Speed Connect Choose the type of maintenance you need.	€
 Restore the application to its previous state. Remove the application from this computer. 	
<u>Q</u> K <u>C</u> ancel <u>M</u> ore Inform	nation

Running the program

• The installer will place an icon on the desktop which can be double-clicked to start the program.



• Whenever you open the program and have internet access, it will check for an update and give you the option to download it.

Update Av	ailable	×
	on update version of TC-Speed Connect is available. Do you want to download it now?	ر ()
Name:	TC-Speed Connect	
From:	trafficalm-speed-connect-public.s3-website-us-west-2.amazonaws.com	
	<u>Ο</u> Κ <u>Σ</u> kij	þ

How the program works

There are four pages: Profile, Connected Sign, Data Viewer and About

💎 TC Speed Connect - 1.1.0.3		– 🗆 X
Profile Connected Sign	Data Viewer About	
Load Profile from *.tcp File	Unsaved Profile	Save Profile to *.tcp File
	Sign Hardware Units	
	Full Matrix V MPH V	
	Radar Sensitivity: 0% Brightness Offset: 0	
	Limit sign behavior to national MUTCD requirements (removes extra modes and red LED options)	
Configurations Schedule		
	Configuration 1	

• Used for:

- creating sign profiles (which are a combination of configurations, day-plans and schedules).
- saving out profiles as .tcp files.
- loading in .tcp files.
- The configurations are now set up via a wizard which opens when you hit the Edit button on a given configuration.

• Schedules are set up with the assignment of day plans to a hierarchy mirroring the logic executed on the sign. A preview is included so you can test what you've set.

Configurations Schedule		
At 12:00 PM, activate configuration: 1	Current Mode Current Mode Deaily Mon Tue Wed Thu Fri Sat Sun Non-Recurring Day Plans T/4/2024 - T/4/2024	
At time: 12 V : 00 V AM V Add Activate: << Configuration 1 >> Remove	Add Date Range	Driver Speed: 45 MPH Time: 02:46 AM Date: Mon 04/15/2024

Connected Sign Page

🔷 TC Spee	ed Connect -	1.1.0.3					- 🗆 X
Pro	file	Connected Sign	Data Viewer	About			
	Main	Terminal					
			Actions			Sign Status	\$
			Push Loaded Profile to Sign			Serial Number: 50831119020001	
						Custom Name: Test_Sign	
			Pull Profile from Sign		J	Firmware Version: 9IDFBV1.44B	
			Enable / Disable Scheduling			System Time: Mon Apr 15 12:04:14 2024	
						DST Enabled: True	
			Download Speed Log as *.tcs F	ile		Scheduling Enabled: True	
			Download Event Log as *.tce F	ila		Units: MPH	
			Download Event Log as .ice P			Voltage: 12.4V	
			Set Clock			Temperature: 18.9°C	
						Ambient Light: 0%	
			Radar Setup		J	LED Power Output: 1%	
			Perform Self-Test			LED Runtime: 488 hours	
			Feriorini Self-Test			UART2 Baud Rate: 9600	
			Set Display Hold Time			Power Source: AC	
						Error Messages: None	
					Dis	connect	

- Used for:
 - Scanning for and logging into signs via Bluetooth or direct serial connection.
 - Uploading and downloading sign profiles.
 - Downloading speed logs as .tcs files.
 - Downloading event logs as .tce files.
 - Checking sign status and running tests.
 - Setting per-sign options.

• The disconnect button is always present at the bottom of the screen when connected.

• If an action is greyed out on the left, it means you don't have current user rights on the sign to perform that action.

• To cut down on communication traffic between the sign and the device, there is now a refresh button for getting the most recent sign status (although some of the actions will prompt a refresh by themselves).

• A Terminal tab is included for direct AT command communication with the sign.

	20001 LED DFB Ver	9IDFBV1.44B			
LOCATION: Te System Time I	st_Sign DST_Mon Apr 15 12	34:06 2024			
Display OFF.	Units MPH , Approa	h only, Squelch Setting: 100.			
Min Speed:	010. Mode: 036				
Speed Limit: (035, Mode: 036				
	045, Mode: 036 055, Mode: 000				
	055, Mode: 000 011, Max Log Bin: (
Impact Detect	OFF, Schedules En	bled			
Light Sense =	00133, Brightness (Voltage Highest: 18	ffset: 0 Brightness Level: 04, Output: 13	%		
Temperature	+19.8, Temperatu	e Highest: +28, Lowest: -02			
UART2 BAUD					
	AGES: ALL MESSAG	:5 cumulated Run Time (Hours): 000488			
No Traffic Det					

Data Viewer Page This page consists of two tabs:

Event Logs

Profile	Connected Sign	Data Viewer	·]	About								
Event Logs	Speed Logs											
Load Event Log File	(*.tce)					test <u>e</u> ve	nt_log	.tce			Convert L	egacy Event Log
elect Date Range:	4/4/2024 to 4/15/2024											
				SYST			WER 🔽 IN		Ð			
Date	Event Type	Display On	Stealth Mode	Test Mode	Demo Mode	Scheduling On	Units Rada	r Tracking Approaching Only	Amber LEDs Powered	Red LEDs Powered	Automatic LED Dimmin	g Sensor Pov
4/4/2024 11:10 PM	User cleared logs.	True	False	False	False	False	MPH	True	False	False	True	False
4/4/2024 11:10 PM	Diagnostic command engaged.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:35 PM	Successful login: User 3.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:36 PM	Diagnostic command engaged.	False	False	True	False	False	MPH	True	False	False	True	False
4/5/2024 5:36 PM	User changed display mode.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:36 PM	User changed display mode.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:36 PM	Diagnostic command engaged.	False	False	True	False	False	MPH	True	False	False	True	False
4/5/2024 5:36 PM	User changed display mode.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:38 PM	Successful login: User 3.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:38 PM	Diagnostic command engaged.	False	False	True	False	False	MPH	True	False	False	True	False
4/5/2024 5:38 PM	User changed display mode.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:38 PM	User changed display mode.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:42 PM	Successful login: User 3.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:42 PM	Diagnostic command engaged.	False	False	True	False	False	MPH	True	False	False	True	False
4/5/2024 5:42 PM	User changed display mode.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:45 PM	Successful login: User 3.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:45 PM	Diagnostic command engaged.	False	False	True	False	False	MPH	True	False	False	True	False
4/5/2024 5:45 PM	User changed display mode.	False	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:45 PM	User changed display mode.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:47 PM	User failed to log in.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:47 PM	User failed to log in.	True	False	False	False	False	MPH	True	False	False	True	False
4/5/2024 5:47 PM	User failed to log in.	True	False	False	False	False	MPH	True	False	False	True	False

• Used for examining .tce event log files downloaded from signs via the program.

• These are loaded via the 'Load Event Log File' button in the top left.

• Legacy event logs (usually saved as *.csv) can be converted to the .tce format via the 'Convert Legacy Event Log' button in the top right.

• Once loaded, logs can be filtered by date and by category using the checkboxes across the middle of the page.

Profile	Connected Sign	Data Viewer	About									
Event Logs	Speed Logs]										
Load Speed Log File ((*.tcs)		t	est <u>s</u> peed_log.tcs					t Legacy	Speed		Export to Excel (*.xlsx file
Select Date Range:	7/9/2021 to 8/3/2021	Select Speed Limit:	45 MPH (15 M	PH to 120 MPH)								
						Average Ve	hicle Count Per	Hour 7-9-202	1 to 8-3-202	1		
					Over 120 MPH 107 MPH to 120 MPH							
					94 MPH to 108 MPH							
	Total	Detections: 92934			D1 MPH to 93 MPH							
	85th Percer	ntile Speed: 50.5 MPH			55 MPH to 67 MPH							
	osurrereer	inic speed. 50.5 milli			42 MPH to 54 MPH 29 MPH to 41 MPH							
	50th Percer	ntile Speed: 40.5 MPH			15 MPH to 28 MPH							
					Under 15 MPH	12.1 mm 1.2 mm 2.3 mm 3.4 mm 4.5 mm		5555				
	25th Percer	ntile Speed: 40.5 MPH				21 23 23 24 24	120 20 20 20 20 20 20 20 20 20 20 20 20 2	101	2 2 3	7.05	0.0	
							Sa					
	Distribu	ution of Vehicle Speeds 7-9-2021 to	8-3-2021			Average Ve	hicle Count Per	Day 7-9-2021	to 8-3-202	1		
					Over 120 MPH							
					107 MPH to 120 MPH 04 36791 to 100 MPH							
					81 MPH to 93 MPH							
					55 MPH to 67 MPH							
			Circler 15 34711 (1.3%)		42 MPH to 54 MPH			-				
			 United To MAPPIN(1256) State To MAPPIN(1256) State To MAPPIN(1255) St		29 MPH to 41 MPH 15 MPH to 28 MPH							
			 (3) AMPHICSUB 2 AMPHICS (2) THU (4) AMPHICSUB2 AMPHICSUS2 (4) AMPHICSUS2 AMPHICSUS2 (5) AMPHICSUS2 AMPHICSUS2 		TS MPH to 28 MPH Under 15 MPH							
			61 METHOD 10 METHOD (0.0%) 54 METHOD 10 METHOD (0.0%) 107 METHOD 120 METHOD (0.0%) Chart 120 METHOD (0.0%)			a s		į.	ε	3	5	
		Save					5					

- Used for examining .tcs speed logs downloaded from signs via the program.
- These are loaded via the 'Load Speed Log File' button in the top left.
- Legacy speed logs (usually saved as *.csv) can be converted to the .tcs format via the 'Convert Legacy Speed Log' button in the top right.
- The data can be exported to an Excel file using the 'Export to Excel' button also in the top right.
- Once loaded, logs can be filtered by date and by posted speed limit using the controls at the top.
- Three charts are shown. Each of them has a 'Save' button that exports the chart to a high res .png file.
 - Distribution of vehicle speeds: percentage of vehicles travelling in each speed range)
 - Average vehicle count per hour: shows busiest hours of the day plus speeds via the heatmap.
 - Average vehicle count per weekday: shows busiest days of the week plus speeds via the heatmap.

About Page



• Shows copyright, privacy policy and contact information