

## **Connecting the LCD Race Display via Direct Ethernet Connection**

Using the latest version of DataPro and upgrading the firmware on your Stack LCD Motorsport display provides important improvements to the hardware operation. This document will detail the process for installing the latest version of Stack DataPro, updating the LCD display firmware, and uploading a configuration via direct ethernet connection. Note: This document assumes that you have already installed the Stack hardware in your vehicle per the included instructions and have authorized your hardware in a previous version of DataPro.

I.) After downloading DataPro, unzip the file and install the application on to the PC.



2.) Open DataPro with your configuration. We will need to assign an IP to the dash in order to connect to the LCD via ethernet. Under the Miscellaneous tab, uncheck the "Optain an IP address automatically" checkbox. Additionally, designate an IP address for the dash. This can be any series of 3 digit numbers. (123.123.123.123 used here)

he Actions view		XXX		
	A #8 🖽 🏘 🖻 🛋 🖓 🎩 8 🐇		LCD Race Dash	
🐓 Inputs	Parameter		Setting	
-	Enable internal termination of CAN bus 1	×		
Switches	Enable internal termination of CAN bus 2	×		
<u> </u>	Car Number	1		
Alarms	Obtain an IP address automatically			
27.	Static IP Address	123.123.123.123		
Recorder	Time Zone	(UTC-06:00) Central Tir	ne (US & Canada)	
Telemetry				
Display				
Video				
Video				
Uideo Gateway				
Gateway 2				
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Uideo Gateway Gateway 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Firmware Upgrade	2 2 11 22		
Video Gateway Gateway 2 Gate Gateway 2 GPS	Firmiare Upgrade Current Version: Race Dash 1, v3.41 build 15	.3.3.11.22		
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Jupipay     Video     Gateway     Gateway 2     Ges     Steering Wheel     Shift Lights     Math Channels	Firmware Upgrade Current Version: Race Dash 1, v3.41 build 16 Upgrade Package: Upgrade Once initiated, the upgrade pr	Bronze	Factory Re	set

3.) Upload your configuration to a USB flash drive. This may require authorizing the LCD dash display, if you have not yet authorized the hardware in a previous version of DataPro.



- 4.) Eject the USB drive from the PC.
- 5.) Power the LCD dash on in the vehicle.
- 6.) Plug the USB drive into the USB port on the LCD display's harness.
- 7.) This should bring up the USB flash drive screen on the LCD display with the options; Upload Configuration, Upgrade Firmware, Download Data, and Exit.
- 8.) Upload your configuration by pressing the top left button. Do not remove power from the dash display while this upload is taking place.
- 9.) You may now Exit the USB Flash Drive menu and remove the flash drive.
- 10.) The dash now has the static IP you have assigned. To confirm the IP, press and hold switch 1 when the dash is powered on.

II.) To connect via ethernet, we will need to set a static IP on the PC. Open the Control Panel and then click Network and Sharing Center.

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Adjus	Adjust your computer's settings			View by: Large icons 👻		
p	Action Center	<b>1</b>	Administrative Tools		AutoPlay	<u>*</u>
3	Backup and Restore	2	Color Management	0	Credential Manager	
	DataPro Vehicle Connection (32-bit)	ľ	Date and Time	۲	Default Programs	E
	Desktop Gadgets	÷.	Device Manager		Devices and Printers	
2	Display	٩	Ease of Access Center	£	Flash Player (32-bit)	
	Folder Options	A	Fonts		Getting Started	
•3	HomeGroup	R	Indexing Options		Intel(R) Graphics and Media	
e	Internet Options	(III)	Java (32-bit)	Ŷ	Keyboard	
	Location and Other Sensors	Ĩ	Mouse		Network and Sharing Center	

12.) Select Change Adapter Settings (top left) and double click on your local area connection followed by the Properties button.

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😋 🔾 🗢 🔛 🕨 Control Panel 🕨	All Control Panel Items > Network and Sharing Center - 4 Search Control Panel	Q
Control Panel Home Manage wireless networks Change adapter settings Change advanced sharing settings	View your basic network information and set up connections           Image: Connect or disconnect         See full map           ROBO         Unidentified network         Internet           Unidentified network         Internet         Connect or disconnect           View your active networks         Access type: No Internet access         Connect or disconnect           Unidentified network         Access type: No Internet access         Connection: Connection	Ø
	Public network Publi	
See also HomeGroup Internet Options	<ul> <li>Access files and printers located on other network computers, or change sharing settings.</li> <li>Troubleshoot problems</li> <li>Diagnose and repair network problems, or get troubleshooting information.</li> </ul>	
Windows Firewall		

13.) Double click the IPv4 from the items list.

Local Area Connection Properties
Networking Sharing
Connect using:
Realtek PCIe FE Family Controller
Configure This connection uses the following items:
Install Uninstall Properties
Description Allows your computer to access resources on a Microsoft network.
OK Cancel

14.) Select Use the Following IP Address and type the first 3 numbers of the IP of the dash. (Used in step 2) The last number should not match the dash, but can be anything else, 0-999. Using the exact IP of the dash will create a conflict. Close these menus once completed.

nternet Protocol Version 4 (TCP/IPv4) Properties						
General						
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.					
Obtain an IP address automatical	у					
Use the following IP address:						
IP address:	123 . 123 . 123 . 111					
Subnet mask:	255.0.0.0					
Default gateway:	· · ·					
Obtain DNS server address autom	natically					
• Use the following DNS server add	resses:					
Preferred DNS server:						
Alternate DNS server:	• • •					
Validate settings upon exit	Ad <u>v</u> anced					
	OK Cancel					

15.) Open your template in DataPro Designer. Verify your configuration and click the Connection Manager button at the top of the screen or select Connection Manager from the Tools menu.



- 16.) Click the Add New Connection button or select New Connection from the Edit menu.
- 17.) Name the connection and enter the exact IP assigned to the dash (Step 2). Click OK when completed.

🙀 DataPro Connection Manager			
Eile Edit View Help			
Ali 🔹 🌜 🖼 🚧			
N Apply Action to All Vehicles	MAC Addr. IP Addr.	Status	
Fi 160325 LCD Race Dash 00:41:29	00-D0-C9-D6-67-11 123.123.123.123		
Apply an action to all vehicles		Vehicle Set: D	EFAULT Connections: 1

## With the LCD race dash connected, you can now preform a few tasks. Upgrading firmware, Uploading a configuration, and Calibrating vehicle sensors.

1) To upgrade the firmware, use the Miscellaneous tab and browse fo the firmware file. The file type should .tar.gz. Click the Upgrade button. Do not remove power from the dash display while this upload is taking place.

Test - DataPro I	Jesigner		
<u>File</u> <u>Actions</u> <u>V</u> i	ew <u>T</u> ools <u>H</u> elp		
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が Inputs	Parameter	Setting	
<b>@</b>	Enable internal termination of CAN bus 1	X	
(O) Switches	Enable internal termination of CAN bus 2	×	
	Car Number	1	÷
Alarms	Obtain an IP address automatically		
Recorder	Static IP Address	123.123.123.123	
	Time Zone	(UTC-06:00) Central Time (US & Canad	la)
Telemetry			
Display			
Video			
Gateway			
Gateway 2	Sirmuare Llocrade		
🧭 GPS	Current Version: Race Dash 1, v3.41 build 16.3.3.11.	22	
Steering Wh	2el Upgrade Package: fw_build_3_41.tar.gz B	rowse	
Shift Lights	Upgrade Once initiated, the upgrade process ca	nnot be cancelled!	Factory Reset
Math Chann	els		
Miscellaneo	JS LCDRACE		
Ready		System LCD Race Dash	Locale US 🛛 🥥 🥌 I

Stack Motorsport North America Sycamore, IL USA 60178 Tel: 888 867 5183 Fax: 888 364 2609 Email: <u>sales@stackltd.com</u> www.stackltd.com 2) To upload a configuration, use the Upload button on the top of DataPro Designer or select Upload from the Actions menu. Make sure the USB Flash Drive Upload box is unchecked. **Do not** remove power from the dash display while this upload is taking place.

Upload Configuration	8 ×
	Please make sure this PC is connected to the vehicle before clicking Start.
633	Checking connection.
	Validating user-configuration.
	Building system configuration files.
	Uploading new configuration.
USB Flash Drive Upload LCD Dash Serial Number:	Complete.
1511308	Start <u>C</u> lose
	Details >>
Ready	Cancel

3) To calibrate sensors, click the Calibrate button at the top of DataPro Designer or click Calibrate from the Actions Menu.

alibrator - 1511308	1	×
Parameter	Value	
Throttle	96.5/ 1.1 %	Set <u>V</u> alue
		OK Cancel
<u>N</u> otes:		
		-

3a) Select the sensor you wish to calibrate followed by the Set Value button.

(	Calibrate Throttle	-		×
	Current Value:	THROTTLE	1.1	%
	Zero Throttle Value	96.3	%	Set <u>Z</u> ero
	Full Throttle Value	1.1	%	Set <u>Full</u>
	Instructions: Enter the offsets for zer connected, set zero thro appropriate SET button. appropriate SET button.	o and full throttle. ottle on the vehicle Then set full throt	Alternatvely, and click the tle and click t	, if he
	Connected	0		Cancel

3b) When the sensor is at each location, click the Set Zero and Set Full respectfully. Click Ok on the menu and on sensor capture menu and click OK on the Calibrator menu when finished. A prompt will appear asking to upload, select Yes to upload or No to upload later.

Upload Re	quired
?	Configuration must be uploaded to complete calibration. Do you want to upload now?
	Yes <u>N</u> o Cancel

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