



PORTABLE PROHUB CCS CABINET CONNECTIONS - 2WD AND AWD READY MODELS

2026 models onwards

This guide explains the cabinet connection points and plug-in locations required when assembling Portable ProHub CCS cabinets for 2026 models onwards. Use it to confirm each module, monitor, harness, and power connection before commissioning the cabinet.

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The cabinet is supplied with many internal connections already fitted. During assembly, fit the required monitor mount, bracket, or brackets and monitors first, then fit the boom arm and boom arm DAQ module before completing the external cabinet connections.

Before making any cabinet connections, confirm the cabinet model, destination power supply, supplied harness labels, and any fitted options such as AWD Ready, the vehicle cooling fan outlet, or the thermocouple module. Do not connect mains power until all module and monitor connections have been checked.

Recommended assembly sequence: fit the monitor mount, bracket, or brackets and monitors first. For a 2-monitor setup, fit the dual monitor mount. For a 3-monitor setup, fit the three-way horizontal bracket. For a 4-monitor setup, fit the three-way horizontal bracket plus the small vertical bracket for the fourth monitor. The reference photo in this section shows the 4-way setup only. Then fit the boom arm and boom arm DAQ module, connect the dynamometer module harnesses, connect the CAN harnesses, check any fitted options, and finish by confirming the mains power supply connection.

CCS dynamometer module to cabinet connections

The 2WD modules are marked **REAR LEFT** and **REAR RIGHT** in relation to the vehicle position when mounted on the dynamometer.

A unit fitted with the AWD Ready option will also have **FRONT LEFT** and **FRONT RIGHT** connections on the opposite side of the cabinet, as well as a Vehicle Cooling Fan power socket.

Plug the larger harnesses from the dynamometer modules into the side of the cabinet marked **REAR LEFT** and **REAR RIGHT**.



ProHub 2WD Models

Orange Plug
Rear Left
Example

AWD Ready
Front Module
Power & Fan
Sockets



The purple CAN harnesses can be threaded through the bottom of the cabinet and secured with the conduit retaining brackets located as shown in the image to the left.

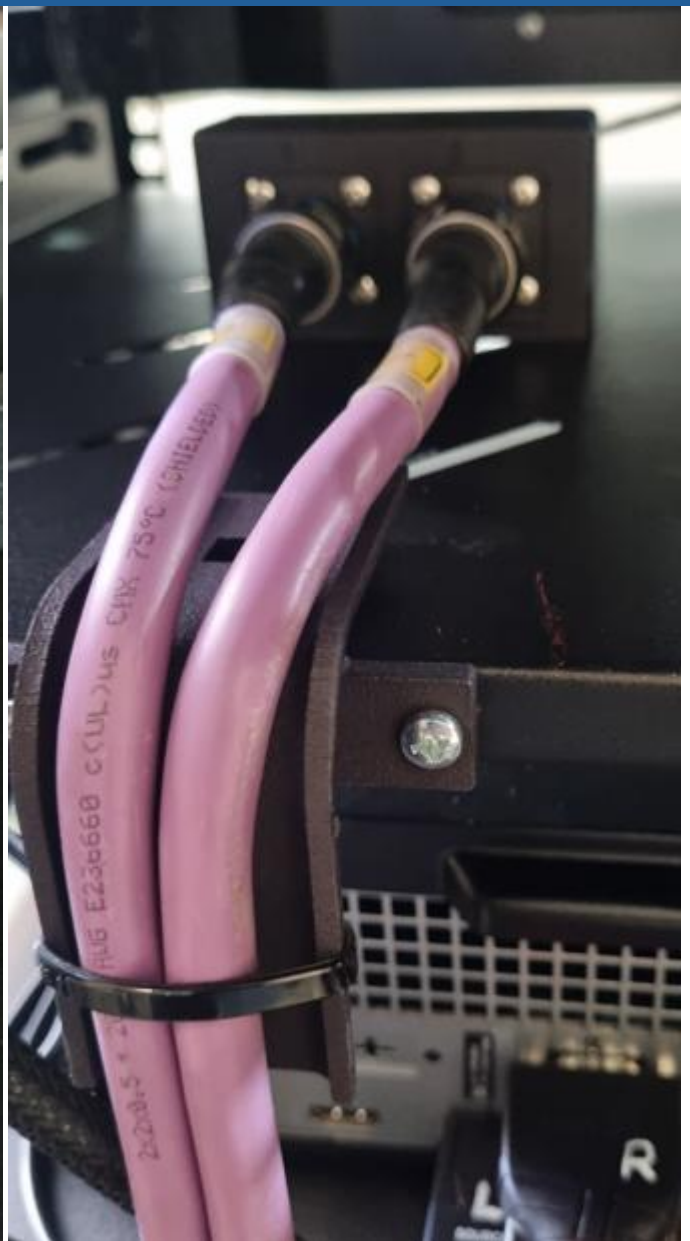
Tip: For **US models only**, there is a 110V power cable inside the cabinet that can be passed down and out through the aperture at the bottom of the cabinet **before** fitting the purple CAN harnesses.



CAN harness connections (purple cables)

The purple CAN cables are housed inside a 20 mm conduit section. First, fit the conduit gland nut to the bracket in the base of the cabinet. Then screw the purple CAN cables into the CAN hub, using the 2-way or 4-way connection box depending on whether the dynamometer is a 2WD or AWD model. The CAN hub is mounted on the inside shelf of the cabinet and is marked 1 and 2.

Push the connectors fully in, then rotate the outer locking rings clockwise until the connectors are fully seated.



NOTE:

An **AWD Ready** Cabinet will have a CAN hub with 4 connectors as shown on the left image.

The additional (3 & 4) are for future use when upgrading to an AWD model.

Boom arm DAQ module connections

After the monitor mount, bracket, or brackets and monitors have been fitted, fit the boom arm to the cabinet. Then install the boom arm DAQ module in the location shown below using the supplied screws.



IDC/Voltage Toggle Switch – Toggles input from IDC Lead from IDC function to 0-30V DC function.

Make the following connections to the boom arm DAQ module: SEC - Secondary Ignition RPM/Tacho inductive clamp; PRI - Primary Ignition RPM/Tacho using the voltage spike probe; IDC - Injector Duty Cycle/Analog Voltage Input Cable using the voltage spike probe; CAN 3-B - CAN cable connection, with the CAN cable packed inside the boom arm; MAP 1 - 5 metre vacuum/pressure hose; MAP 2 - 5 metre vacuum/pressure hose; FP - fuel pressure connection for the user's own pressure hose. The Weather Station is located internally in the boom arm DAQ module.

Note: The keyboard transmitter is also shown in the top photo.

The CAN cable fitted to **CAN 3-B** on the boom arm DAQ module runs through the boom arm and connects to the CAN hub inside the cabinet at position **CAN 3-B**, as shown below.

CAUTION - DO NOT FIT THE OBD2 CABLE INTO ANY CAN PORT MARKED 3B, 3C, OR 3D. THE OBD2 CABLE MUST ONLY BE FITTED TO CAN 4A OR CAN 4B. OBD2 OPERATES AT 500KB BUS SPEED AND WILL CRASH THE 1MB BUS USED BY THE DATA ACQUISITION BOX.



Monitor setup - 2-way, 3-way and 4-way configurations

Monitor mounting options vary by setup. For a 2-monitor setup, fit the dual monitor mount. For a 3-monitor setup, fit the three-way horizontal bracket. For a 4-monitor setup, fit the three-way horizontal bracket plus the small vertical bracket for the fourth monitor. The reference photos below show the 4-way setup only.

In a 4-monitor setup, each monitor is labelled on its lower bezel: **LEFT**, **CENTRE**, and **RIGHT** across the bottom row, with the **TOP** monitor mounted above the **CENTRE** monitor.

The monitor cables run from the back of each monitor, along the bracket or mount, and down through the centre post in spiral wrap into the cabinet, where they connect to the PC. Each cable is labelled to match its monitor, and the video ports on the PC use the same labels. Plug each cable into its matching port so every screen displays in the correct position.



Front view – LEFT, CENTRE, RIGHT and TOP monitors



Rear view – cables routed down the bracket post to the PC

US Models Only – 110V Power Plug



Plug the 110V power plug into a general power outlet. An extension cord may be needed.

AFR Meter – Mainline LC-2

The Twin Channel AFR meter is mounted on the inside right-hand side of the cabinet. It will already be connected, apart from both sensor harness cables. Connect these harness cables to the AFR meter DTM connectors, pass them out through the aperture at the bottom of the cabinet, and connect them to the supplied O2 sensors.



NOTE:
The 'Analog Out"
harness coming from the
AFR meter is not used for
CCS models.

Optional Vehicle Cooling Fan Power Outlet

The vehicle cooling fan power outlet is located on the upper left or upper right-hand side of the cabinet, depending on whether the dynamometer is configured for left- or right-hand drive vehicles. The outlet will match the specified mains power supply, for example 380V-415V 3PH for Australia and Europe, 208V 3PH for Japan and the USA, or 220V 1PH for Japan and the USA.

Fan switching can be controlled manually through the CCS software by clicking the **FAN** icon on screen or by pressing **Ctrl + V** on the keyboard. In newer versions of the program, the fan can also be optioned to turn on at axle speed or road speed, and the run-on time can be defined so the fan stays on for a set period after the vehicle comes to a stop.

Optional Thermocouple Module

The optional 8 Channel Thermocouple module CAN-EGT8 is mounted on the boom arm using the supplied adapter bracket. Its CAN harness, marked MLCCS-EGTBOXCBL, plugs into the DTM4 socket marked CAN 3-EXT in the Data Acquisition box.



Mains power supply to the cabinet

Connect the larger harness shown below, with the orange plug, to the mains power supply wall socket.

The ProHub unit will be wired to suit the destination country power supply. If you are not sure of the required supply, contact Mainline for confirmation before connecting mains power. The Australian 5-pin plug is shown; this plug is removed on exported models. If connecting to a Disconnect Panel in the USA, use a minimum of 8 AWG 4-core cable for 3-phase connection, or 7 AWG 3-core cable for single-phase connection.



MAINLINE Contacts

Phone: +61 2 4648 0612

Tech Support Request Form: <http://www.mainlinedyno.com.au/index.php/contact/support-request-menu>

Mainline Dyno Users Facebook Group: <https://www.facebook.com/groups/483915706071402>