



f-POD Ultra General Operators Instructions

01-04-19



*Performance
Systems*

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Safety Instructions

The f-POD has been designed with total safety a priority including a sealed fuel system with a Vacuum/Pressure relief valve and Vapour Capture Device and a fully sealed electrical system, to reduce spark risk.

However it is your responsibility to read and adhere to the instructions in this manual carefully. It is recommended when filling or emptying into a fuel that you use a sealed safety drum adaptor with an ATEX approved flame trap vent.

This f-POD is only intended for the adding or removal of fuel into or out of race cars, and should only be filled or drained with fuel from and to approved fuel drums. It must not be used for any other application unless approved by the manufacturer.

Fire extinguishers, suitable for the type of fuel being used must be adjacent to the f-POD during use. Suitable 'spill kits' should be available in the event of a leakage or spillage of fuel.

This f-POD must not be operated in the vicinity of naked flames or heat sources.

There must be no smoking whilst in the vicinity of the f-POD.

Operators must stay with the f-POD during all automatic procedures.

The Grounding Cable, must always be attached to the f-POD and connected to the chassis of the race car or fuel container being filled or emptied, **before** the hoses are connected.

The f-POD must be emptied fully after end of day use and before charging the battery.

The f-POD must not be used to store fuel. Do not climb on or stand on the f-POD

The f-POD must be fully emptied before transportation.

The f-POD must be regularly inspected for any leaks. EEC will not be responsible for any damage or considered pollution from any leakage.

If an operator comes into bodily contact with any fuel they should rinse thoroughly with water and seek immediate medical attention.

EEC are not responsible for any loss of recorded data.

Only fully trained operators can use the f-POD.

Maintenance and repairs should only be carried out on the f-POD by persons trained and qualified to work in explosive atmospheres.

General

Read this manual carefully before using the f-POD. This manual contains essential information and instructions for the correct and safe use of the f-POD. If problems arise that could have been avoided by referring to this manual, your warranty could be affected.

Please contact us if you have any problems or questions.

Environment

The f-POD must at all times be kept in an upright position, including when in transport or storage.

The f-POD, is designed to be used indoors in a dry environment. It may be used outside as long as it is protected from precipitation.

For correct and accurate operation, it must be placed on a flat and level floor.

Recommended ambient temperature for operation should be between 0 and 40 degrees C.

Do not use around other systems that emit RF in the range of 10^4Hz to $3 \times 10^{11}\text{Hz}$

Do not use near sources of ionizing radiation.

The old parts and the f-POD itself, should be returned to EEC Performance Systems for correct and safe disposal at the end of its serviceable life.

Maintenance and Cleaning

Cleaning of the f-POD should be with a damp cloth. Be careful that no cleaning agents containing solvents are used. Do not use high pressure cleaning hoses on the f-POD.

Hoses, couplings and the grounding cable should be regularly inspected for damage. Control panel switches condition and operation should be intact and working correctly. Damaged hoses must be reported and changed. Do not repair or shorten hoses. This is not considered safe and will also affect the accuracy of your machine.

Outer covers can be removed to remove dust from component surfaces and inspect for leaks.

Hose and pipe line couplings must not be undone.

There are no operator serviceable parts inside the electrical box of the f-POD.

Any malfunctions must be reported to EEC Performance Systems for advice.

Only original spare parts can be fitted, only available from EEC Performance Systems.

The f-POD must be serviced annually, by EEC Performance Systems or by their nominated service agent.

Maintenance and repairs may only be carried out by persons with training and qualification of working in explosive atmospheres

General Specification f-POD Ultra

General Construction:	Aluminium & Ply Flightcase Construction Mounted on Antistatic Castors. IP65 Sealed Steel Electrical Cabinet.
Dimensions:	640w x 680d x 950h mm
Gross Weight Empty:	91kg
Power Source:	Internal 12Vdc 33Ahr AGM Battery
Max Current Draw:	15Adc
Max Power:	180W
Suitable Fuels:	Petrol up to 15% alcohol blends (E15), Diesel up to 20% bio-diesel blends (B20), and Kerosene. For other application contact EEC Performance Systems for advice.
Ambient Temperature:	0 – 40 degree C
Maximum Use Per Day:	3 Hours overall
IP Rating:	Control Panel IP65 <i>except touch screen, which is IP60</i>
Noise:	Less than 70db(A)
Vibration:	Does Not Exceed 2.5m/s ²

Preparing the f-POD for use

Before the f-POD is switched on, you must have a suitable fire extinguisher available and kept adjacent to the machine.

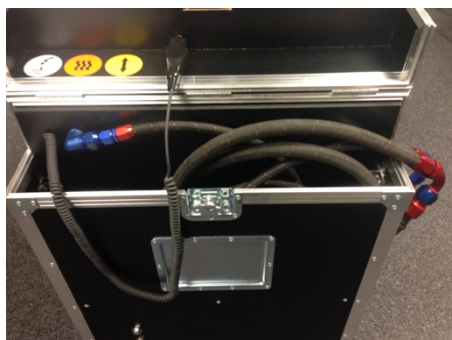
In the unlikely event of fire inside the machine, switch the battery isolator to 'OFF', then perform your usual fire evacuation procedure.

Release the Loadcell locking knob underneath the bowser. (See P.10)

Open the rear cupboard and identify the Grounding Cable, Fuel Hose and Vent Hose

The Fuel Hose is identified with a FUEL label and is normally a -12 size pipe, but can for some applications also be a -12. The Vent Hose is identified with a VENT label and is usually a -8 size pipe, but can for some applications also be a -12.

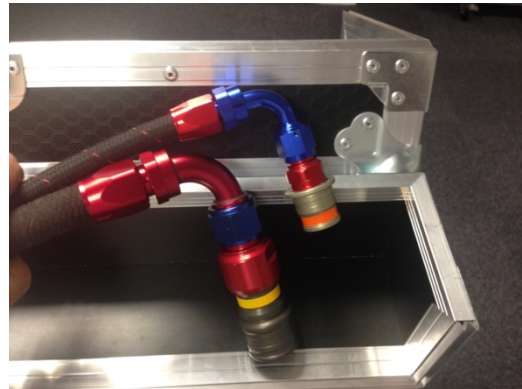
The Grounding cable has a large spring clip to attach to a suitable earth point on the vehicle chassis or fuel drum



Hoses and connectors must be regularly inspected for cuts, damage and leakage.



Grounding Cable



Fuel & Vent Hose

Always connect the Grounding Lead to the chassis of the car or fuel container BEFORE connecting the hoses!

When the machine is idle, curl and return hoses into the rear cupboard.

REMOVE HOSES CONNECTED TO A VEHICLE OR FUEL CAN IMMEDIATELY AFTER FUEL TRANSFER AS AUTO-SIPHONING WILL OCCUR!
(Unless your f-POD has the Antisiphon Option)

To switch the f-POD on (Internal Battery)

Turn the Control Switch from 'OFF' to 'ON INT'



f-POD OFF



f-POD ON
LED INDICATOR ILLUMINATED

Wait for the system to boot up then the PIN Code screen will appear
Type in PIN Code then touch the green 'confirm' button. Default PIN is 1111
Please now refer to the software operation manual.

To switch the f-POD on (External Battery)

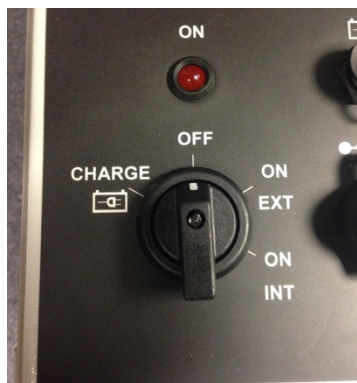
If the f-POD has insufficient charge left in the internal battery, a slave battery can be connected via the red 'Anderson' type connector on the top left hand side of the Control Panel.



ANDERSON CONNECTOR FOR EXTERNAL BATTERY

Plug a suitable 12Vdc battery into the external battery socket. Please ensure your slave battery connections are the correct polarity with respect to the Anderson connector and make sure the connector on your battery connector is in good condition and makes a good electrical connection. Poor intermittent connections can corrupt the PC and software.

Turn the Control Switch from 'OFF' to 'ON EXT'



f-POD OFF



f-POD ON
EXTERNAL BATTERY

Wait for the system to boot up then the PIN Code screen will appear
Type in PIN Code then touch the green confirm button. Default PIN is 1111

If you have a situation where the internal battery failed during a pumping operation, the software will let you finish the procedure.

Please now refer to the software operation manual

Operator Present – Push To Pump

The f-POD has a Push To Pump feature which means that when you wish to pump fuel from the f-POD to a Fuel Drum the operator must keep the green pump button pushed to complete the procedure. If the button is released during pumping, the operation is paused until the button is pressed and held again. When the procedure is complete the alarm will sound as usual and the button can be release. Operator present can be optioned for all operations if required.



Operator Present – Push To Pump

E-Stop Switch Operation

There is a red E-Stop or Emergency Stop button located on the far right hand side of the Control Panel.

If you have a need to stop the pumping procedure urgently, then push the red E-Stop button.

This will cut power to the pump immediately and pause the software. When it is safe to continue, release the E-Stop button by gently twisting the red knob clockwise and then press the 'resume' button on the touch screen to restart pumping.



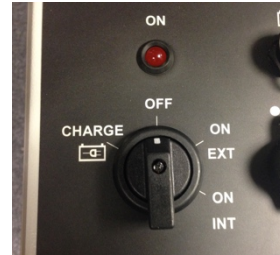
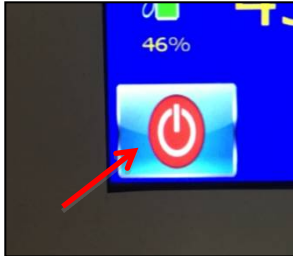
E-STOP BUTTON

To switch the f-POD off

At the end of the day or you are wishing to charge the battery, you must empty the f-POD of fuel first.

Press the red 'Off' button on the bottom left hand of the touch screen and follow prompted instructions.

Do not switch the Control Switch off before shutting down the PC correctly!



The PC will go through its close down procedure. When the screen has gone blank, then you can turn the Control Switch to 'OFF'

If there is no red 'OFF' button on the home screen the machine has an "auto shutdown PCB fitted and is safe to turn off immediately with the control switch.

NEVER SWITCH THE MACHINE OFF WHILST PUMPING AS THIS CAN DAMAGE THE f-POD or WINDOWS SOFTWARE

Charging The Battery

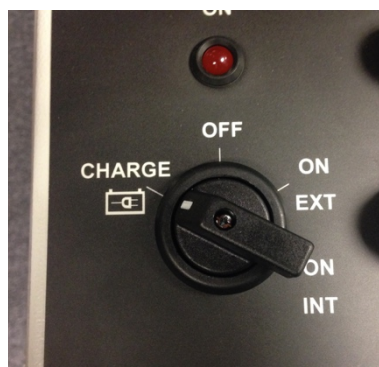
The battery must be charged every night after use. The machine must be empty of fuel before charging. With the Control Switch set to 'OFF', connect the battery charger to the connector on the control panel. Plug the battery charger into a mains socket then turn the Control Switch to 'Charge' to begin charging.



CHARGER SOCKET



BATTERY CHARGER CONNECTED



The battery charger has indicator lamps to provide the following status information

Two RED lamps, one to indicate the power is on, the other to indicate bulk charging.

The YELLOW lamp will indicate that it about 80% charged.

The GREEN lamp will indicate that the battery is fully charged.

When the battery is fully charged, unplug the charger from the mains, turn the battery isolation switch to 'OFF', disconnect the charger connector from the control panel and secure its sealing cap.

Transportation & Storage

The f-POD must always be emptied and switched off before transportation or storage and must never be used to transport or store fuel.

There is a knob located under the bowser designed to limit the movement of the loadcell during transportation. To activate this, turn the knob clockwise until it stops. To release, turn the knob full anti-clockwise. Always check it is released before using the bowser.

Do not over-tighten.

The f-POD must always be kept upright. **Do not use forklifts.**

For transportation by flight, the tank must be fully drained and left vented. There is a -12 drain cap accessed under the bowser to completely drain the fuel tank. **DO NOT OVER-TIGHTEN THE DRAIN PLUG** as you may damage the tank. **To vent the tank for flight you must remove the dry break connector from the vent hose.**

Please consult your shipping operator for further requirements.



TANK DRAIN CAP



LOADCELL LOCK

DO NOT OVER TIGHTEN



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