Fuel Management System
Setup Guide

EVO-EXPC & EVO-EXPC2
Expansion Consoles for TS-5000 evo and TS-550 evo
Notice
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Inspection of Materials
Visually inspect all components for defects or damage prior to installation. If any defect or damage is found, do not use the product and contact FFS for further assistance.

Return Shipping Charges
FFS will not accept shipments of returned products without a Return Material Authorization (RMA) number. RMA's are obtained by contacting FFS's Technical Service division — NO RMA's will be given without the unit's serial number(s). Returned material remains the property of the buyer until replaced or repaired.

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Important Safety Messages
Franklin Fueling Systems (FFS) equipment is designed to be installed in association with volatile hydrocarbon liquids such as gasoline and diesel fuel. Installing or working on this equipment means working in an environment in which these highly flammable liquids may be present. Working in such a hazardous environment presents a risk of severe injury or death if these instructions and standard industry practices are not followed. Read and follow all instructions thoroughly before installing or working on this, or any other related, equipment.

As you read this guide, please be aware of the following symbols and their meanings:

Warning This symbol identifies a warning. A warning sign will appear in the text of this document when a potentially hazardous situation may arise if the instructions that follow are not adhered to closely. A potentially hazardous situation may involve the possibility of severe bodily harm or even death.

Caution This is a caution symbol. A caution sign will appear in the text of this document when a potentially hazardous environmental situation may arise if the instructions that follow are not adhered to closely. A potentially hazardous environmental situation may involve the leakage of fuel from equipment that could severely harm the environment.

Danger This symbol identifies an electrical danger. An electrical danger sign will appear in the text of this document when a potentially hazardous situation involving large amounts of electricity may arise if the instructions that follow are not adhered to closely. A potentially hazardous situation may involve the possibility of electrocution, severe bodily harm, or even death.

Alarms and warnings are designed to alert you with specific details when a problem occurs so you can take appropriate corrective action.

Follow all applicable codes governing the installation and servicing of this product and the entire system.

Always lock out and tag electrical circuit breakers while installing or servicing this equipment and any related equipment. A potentially lethal electrical shock hazard and the possibility of an explosion or fire from a spark can result if the electrical circuit breakers are accidentally turned on during installation or servicing. Please refer to the Installation and Owner’s Manual for this equipment, and the appropriate documentation for any other related equipment, for complete installation and safety information.

Follow all federal, state and local laws governing the installation of this product and its associated systems. When no other regulations apply, follow NFPA codes 30, 30A and 70 from the National Fire Protection Association. Failure to follow these codes could result in severe injury, death, serious property damage and/or environmental contamination.

Always secure the work area from moving vehicles. The equipment in this manual is usually mounted underground, so reduced visibility puts service personnel working on this equipment in danger from moving vehicles entering the work area. To help eliminate these unsafe conditions, secure the area by using a service truck to block access to the work environment, or by using any other reasonable means available to ensure the safety of service personnel.

When the Fuel Management System is used to monitor tanks containing gasoline or other flammable substances, you may create an explosion hazard if you do not follow the requirements in this manual carefully.

All wiring must enter the console’s enclosure through the designated knockouts. An explosion hazard may result if other openings are used.

You must run wiring from probes or sensors to the Fuel Management console in conduits which are separate from all other wiring. Failure to do so will create an explosion hazard.

Substituting components could impair intrinsic safety. T5 series consoles are intrinsically safe for sensors installed in – Class I, Division 1, Group D – hazardous locations. Substitution of components could make the energy limiting circuitry in the system ineffective and could cause an explosion hazard. Repairs to a T5 series console or attached components should only be performed by a qualified, factory-trained technician.
Certified Programmer/Service Person: Only a Franklin Fueling Systems certified programmer or service person is allowed to access both the user interface keypad and areas internal to the Fuel Management System console.

Station Owner/Operator: The station owner or operator of the Fuel Management System console is only allowed to access the user interface keypad. Access to areas internal to the console is strictly prohibited.

Approvals
All Fuel Management System models are UL and cUL listed 6L79 as Liquid Level Gauge / Leak Detection Systems. Third party approved leak detection — Pd (probability of detection) = 99.2 % for 0.1 or 0.2 GPH leak tests (0.1 = annual precision test, 0.2 is the monthly regulatory compliance test).

*The static tank test does not support Manifolded tanks.

**SCALD is 3rd party approved for ONLY two Manifolded tanks.

Related Documentation
The system installation and programming instructions are provided for your use in separate documents. Detailed installation and testing instructions for each type of leak detection sensor are present in the relevant manual, and, likewise, the installation, testing and programming of various upgrade kits and optional accessories are also contained in separate manuals, addenda or in one of this document's appendices.

*TS550 evo® Series Fuel Management Systems Installation Guide (000-2170)*
*TS-550 evo® Series Fuel Management Systems Programming Manual (000-2173)*
*TS-550 evo® Series Fuel Management Systems Operation Guide (000-2171)*

Manuals can be found on-line at: http://www.franklinfueling.com
Introduction

The EVO-EXPC and EVO-EXPC2 are expansion consoles that include a Power Supply module and space for additional modules. The Expansion Console connects to your primary console via the bus extension port.

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The EVO-EXPC and EVO-EXPC2 lack Control Modules and LCD screens, so that it can operate efficiently as a secondary unit to house any additional modules that your primary console was unable accommodate due to space restrictions.

- No communication ports are available through the EVO-EXPC or EVO-EXPC2.
- Only one EVO-EXPC or EXPCC2 can operate in a TS-5 Series system.
- A EVO-EXPC or EVO-EXPC2 can only communicate with a TS-550 evo or TS-5000 evo, and cannot communicate with a TS-5/TS-608.

Installation

Figure 1: EVO-EXPC2 Mounting Dimensions
**Connection**
The EVO-EXPC and EVO-EXPC2 have the normal Power Supply Module connections, but only the BUS EXT is active.

Connect the BUS EXT High, Low and Ground on the main console to the High, Low and Ground on the expansion console.

**Installation Notes**
- The EVO-EXPC and EVO-EXPC2 can contain a maximum of 3 of any one type of module, and a maximum of 6 per system (3 in the main FMS console).
- The wiring for the BUS extension must be shielded cable with the drain connected to ground at one end.
- The maximum length for the BUS extension is 750 feet (229 m)
- Both the main console & the expansion console should be connected to the same electrical breaker.
- Remove the bus termination jumper JP1 in the main console’s power supply module (Figure 4).
Bus Termination Jumper Removal

The EVO-EXPC/EVO-EXPC2 provides system bus termination when installed and running. Therefore the system bus termination currently provided by the Power Supply Module must be removed. Leaving the jumper in place will result in erratic system performance. Refer to the TS-550.evo Installation Guide 000-2170 for instructions on installing a module.

Be extremely careful when removing the power supply module so it does not rub against any other part of the system. After it is removed from the system, locate the system bus termination jumper JP1 and remove it (Figure 4).