



Installation Manual

Upgrading the Wayne Vista to EMV
using Freedom Electronics Easy Pump

Rev 2.1 • 11/2021

Kit #	SV00000 Kit
Description	Easy Pump Install
Pump Model	Vista 1,2,3

Freedom Electronics
Technical Support 800-761-9369 Option 2



Easy Pump with Wayne Vista

Parts list

Manufacturer Part #	Description	Quantity
SV00001	Vista FIM-20 Insert	2
SV00002	Vista Insert Bracket	2
SV00003	Vista Insert Gasket	2
SV00004	Vista Card Reader Insert - Full Length	2
SV00005	Vista Insert Overlay	2
SV00006	Vista Card Reader Insert Gasket - Full Length	2
SV00007	Vista Blanking Bracket Gasket	2
SV00008	Vista Card Reader Insert - Half Length	2
SV00009	Vista Card Reader Insert Gasket - Half Length	2
SC00004	24V/5V Dual Power Supply	1
SC00005	Power Supply Bracket	1
SC00007	FIM-20 Power Cable	2
SC00002	FIM-20 Printer Data Cable	2
SC00021	Power Supply AC Input Cable	1
M3x0.5mmx12mm	M3 Phillips No. 1 with 0.5mm Pitch and 12mm Length (McMaster P/N: 92000A122) "PAX Screw"	8
6-20x3/8xHex	3/8" Hex Head #6-20 (McMaster P/N: 93880A146)	8
6-32x3/8	3/8" Phillips No. 2 #6-32 Thread (McMaster P/N: 90272A146)	8
8-32x3/8	3/8" Phillips No. 2 #8-32 Thread (McMaster P/N: 90272A192)	10
SP00025	Bag of zip ties (25 pack)	1
FE-Tear Bar Kit	Kit for Tearbar printers (sold seperately)	
FIM-20	Sound Payments IM-20 (sold seperately)	

Tools Required

- Flat Head screwdriver
- Phillips® Screwdriver
- 5/32" Nut Driver
- 5/16" Nut Driver
- 1/4" Nut Driver
- Cutters/dykes
- Pliers
- Putty knife
- Isopropyl Alcohol

- We recommend completing the Forecourt install first. Then install a kit into the first dispenser and verify operations before moving onto any others.
- The site will be able to run on dual systems, the new Easy Pump and the existing DCR's. This allows one dispenser at a time to be upgraded without affecting the customers other dispensers.
- Dispensers with DW-12, DW-10, and Clamshell printers can be upgraded with the standard kit.
- Dispensers with Tearbar printers will require the tearbar printer kit for proper printer operation. (sold separately)
- DCPT printers are NOT compatible with Easy Pump.
- eReceipts are available in place of a printer, or in combination with a printer.
- Vista dispensers with SPM Keypads CANNOT be upgraded at this time.
- Non-CAT Vista dispensers CANNOT be upgraded.



Important Safety Information

Know Your Environment

Working at a fueling station can present many dangers. It is a potentially dangerous environment of electricity, flammable fuels, vapors, and interaction with the general public. Only trained and knowledgeable individuals should perform service on the equipment. It is important to your safety and the safety of others to follow proper procedures.

Emergency Shut Off (ESO)

Know how to turn OFF power to all the fueling equipment by locating the ESO switch and circuit breakers. You must know how to shut off all fuel flow and electricity in an emergency.

Follow the Regulations

Information is available at Occupational Safety and Hazard Association (OSHA), National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), as well as other national, state and local entities. All applicable codes must be followed to maintain safe installation, service, use and operation of the equipment.

LOTO (Lockout/Tagout)

Always make sure ALL power to the dispenser is turned OFF before servicing the dispenser. Follow OSHA Standard 29 CFR 1910.147 The Control of Hazardous Energy (Lockout/Tagout).

No Sparks - No Smoking

Sparks from power tools, burning cigarettes, static electricity, vehicles and other sources can ignite fuels and their vapors. Ensure that you use safe and established practices while working with electrical devices and equipment. **WARNING – EXPLOSION HAZARD. DO NOT DISCONNECT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS.**

Wear Proper PPE

Check with your company, customers and the job/site specifics to determine what types of personal protective equipment are appropriate. Always wear the proper PPE to prevent injuries and save lives.

Barricade Your Work Area

One of the dangers of working at an active retail fueling station is the potential impact of customers and the general public. It is important to properly establish your work area by barricading, to reduce the potential of vehicles or customers from entering the work area. The use of barricades is both for the protection of workers and protection of the general public/customers.

Read the Manual(s)

Knowledge of all related manufacturer procedures, manuals and documents is important. Follow the Recommended Practices of The American Petroleum Institute (API). Understand the specific procedures before starting work. If you do not understand a procedure, call Freedom Electronics at 770-792-8888.

Notify Site

On arrival identify yourself to the site manager and inform them of the work you will be performing.



Easy Pump with Wayne Vista

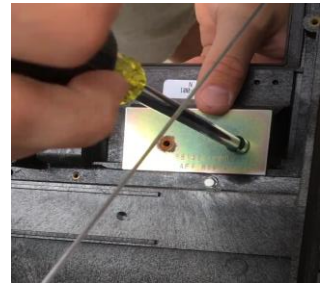
1. **Before you begin work, read and understand the Important Safety Information.**

2. Remove power from the Vista dispenser.

3. Remove the keypad assembly and card reader. Save screws for use in step 11.



4. Secure associated cables cleanly inside dispenser.



5. Remove blanking plate and save screws for step 9.

6. Remove old gaskets using a putty knife and clean with alcohol.



7. Install gasket (SV00007) to blanking plate.

8. Install gasket (SV00006) to card reader insert (SV00004) for Full Length bracket.
Install gasket (SV00009) to card Reader insert (SV00008) for Half Length Bracket.



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9. Install Card Reader Insert and secure using blanking plate and screws (from step 5), and the screw through the card reader slot.



10. Install gasket (SV00003) to the FIM-20 Insert (SV00001).



11. Install FIM-20 Insert using Bracket (SV00002) to secure using screws from step 3.



12. Install FIM-20 Insert Overlay (SV00005).



Easy Pump with Wayne Vista

13. Install the FIM-20 into FIM-20 Insert and secure with (4) M3x0.5mm screws.
 - Verify the gasket is present on the FIM-20 before installing.
 - The FIM-20's will be labeled per fueling point. Make sure to install the correct FIM-20 into the correct fueling point.

Repeat steps 3-13 on the other side of the dispenser.

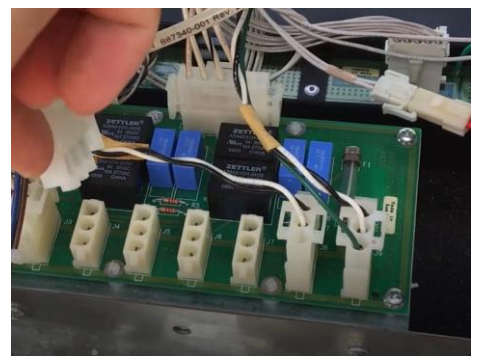
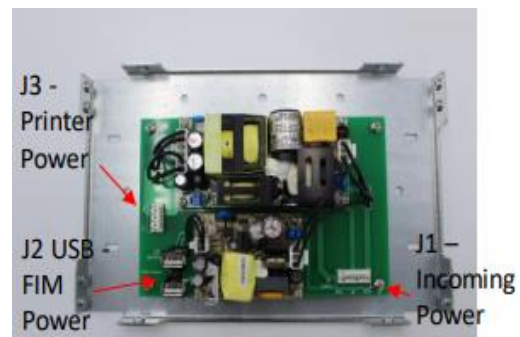
14. Mount the Power Supply Board (SC00004) onto Power Supply Bracket (SC00005) using (4) screws (6-32x3/8).

15. Mount power supply assembly to the Vista side frame using (2) screws (6-32x3/8).

16. Connect Power Supply AC Input Cable (SC00021) to J1 of the power supply board and to an open position (J3-10) on the Vista iGEM Relay Board.

17. Connect the FIM-20 Power Cable (SC00007) to the FIM-20 and to either J2 USB ports of the power supply board.

Repeat on other side of the dispenser.



18. Connect the Printer

For *DW-10/12 or Clamshell* Printers, connect the Printer Data Cable (SC00002) to the FIM-20 and to the printer data port. Remove old printer data cable. Repeat on other side of the dispenser



For *Tearbar Printers*, refer to the Tearbar Printer Kit Installation Instructions available on the Freedom Electronics website. *Kit sold separately.

19. Set the printer baud rate to 115200.

Clamshell Printer

Checkpoint #5: Baud Rate Setting																	
Baud Rate configuration	With shunt jumpers, the baud rate can be set as described in the following table:																
	<table border="1"> <thead> <tr> <th>0 0</th> <th>0 1</th> <th>1 0</th> <th>1 1</th> </tr> </thead> <tbody> <tr> <td>○—○</td> <td>○—○</td> <td>○ ○</td> <td>○ ○</td> </tr> <tr> <td>○—○</td> <td>○ ○</td> <td>○—○</td> <td>○ ○</td> </tr> <tr> <td>38.4 K baud</td> <td>115.2 K baud</td> <td>192 K baud</td> <td>230.4 K baud</td> </tr> </tbody> </table>	0 0	0 1	1 0	1 1	○—○	○—○	○ ○	○ ○	○—○	○ ○	○—○	○ ○	38.4 K baud	115.2 K baud	192 K baud	230.4 K baud
	0 0	0 1	1 0	1 1													
	○—○	○—○	○ ○	○ ○													
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38.4 K baud	115.2 K baud	192 K baud	230.4 K baud														
<ul style="list-style-type: none"> ○ If there is no jumper the RS 232 communication baud rate is 230 k Baud. ○ The default baud rate setting for the TPSWS002 printer is 115.2 K baud (TTL Level). ○ By applying 5V to pins 5 or 6, TTL communication will automatically be set. In this case, the baud rate will be 38,400 bauds, whatever the jumper setting. 																	
Default																	

DW-10 and DW-12 Printers

Switch No.	Function	ON	OFF	Initial Settings
1	Auto Cut	Enabled	Disabled	ON
2	Hand shake	XON/XOFF	DTR/DSR	ON
3	Bit length	7 bits	8 bits	OFF
4	Parity check	With parity	None	OFF
5	Parity selection	Even parity	Odd parity	OFF
6	Baud rate selection	-	115200	ON
7				ON
8	Print density selection	Dark	Standard	OFF

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20. Close all dispenser doors securely.

21. Power dispenser back on.

