FuelMax Guide

FuelMax Setup And Operators Guide

Read This Book
This book has important information for safe installation and operation of this equipment. Read and understand this book before applying power. Keep this book and tell all service personnel to read this book. **If you do not follow the instructions, you can cause damage to the equipment, injury, or death.**

Triangle Microsystems Inc.
1807 Garner Station Blvd.
Raleigh, NC 27603
(919)-878-1880
http://www.trianglemicrosystems.net

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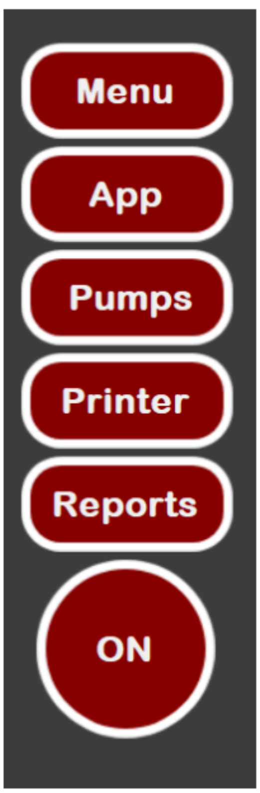
I - 1. FuelMax Console Programming Overview

The FuelMax is completely programmable from start to finish, directly on the console. This manual covers initial application setup and dispenser configuration programming, as well as an operator’s guide. The basic navigation for the Fuelmax is accomplished using the left side group of menu buttons. They are labeled accordingly to make programming as easy as possible.



← Menu navigates to the main menu where all fuel control takes place.

← App navigates to application setup.

← Pumps navigates to the dispenser and tank configurations.

← Printer navigates to receipt printer and comm port setup.

← Reports navigates to a menu with detailed sale and volume data.

← This is the power button for communication to the dispensers.

The FuelMax programming menus are split into 4 categories, each with its own purpose. The App setup is for anything related to the console itself. The Pumps setup is anything related to configuration for the site and dispensers. It is laid out similar to the EZ configure program for familiarity. Printer is where headers and footers can be configured for receipt printing. Comm port selection should be handled by the program automatically, but just in case there are any issues the comm port selection is available to access under Printer as well. Reports shows detailed graphs and charts for sales and volume data. There is also configuration for printing manager and shift reports. The “ON” button enables communication to the dispensers. Once the system is powered on and communicating the button will transition to an “OFF” button allowing you to end communication.

I - 2. Fuelmax Wiring and Initial Setup

Upon receiving your new FuelMax console, it should be Reset and ready to program. Make sure to plug in the AC power adapter, a strong wired Ethernet connection, and the USB to RS232(serial) adapter. The FuelMax has multiple USB ports available to choose from. The one you use will be auto detected by the system. The other end of the RS232 adapter will plug directly into the electronic cable ran from the EZ Converter Board in the interconnect box. All receipt printers for FuelMax will be connected through USB as well. Make sure when connecting the Ethernet cable that it is plugged into the Lan port on the FuelMax. We strongly recommend that the FuelMax system be plugged into a UPS (battery backup with surge protection) and it should be wired onto its own circuit breaker.

FuelMax (Bottom View)

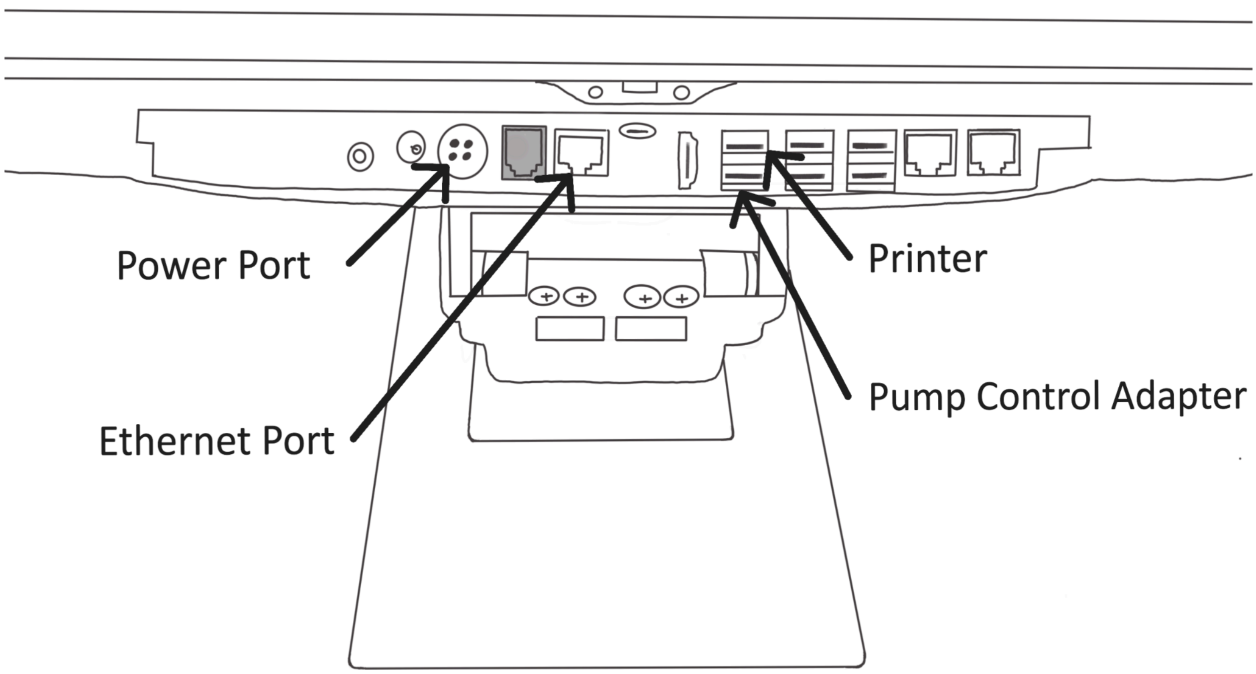


FIG. 1 FuelMax IO

I - 2. FuelMax Wiring Diagram

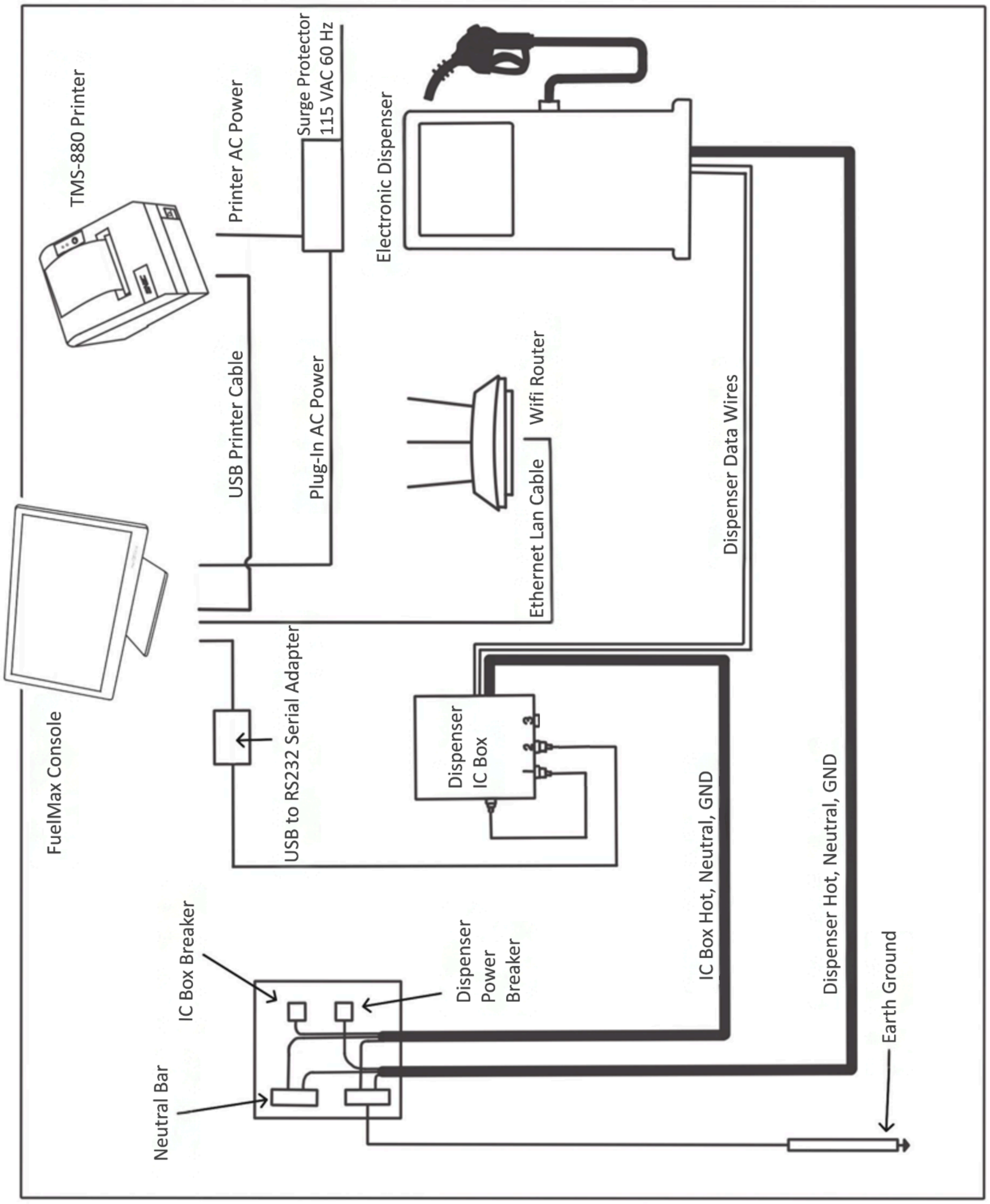
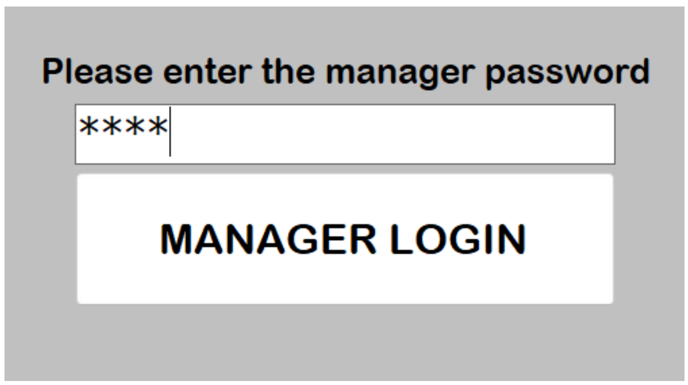


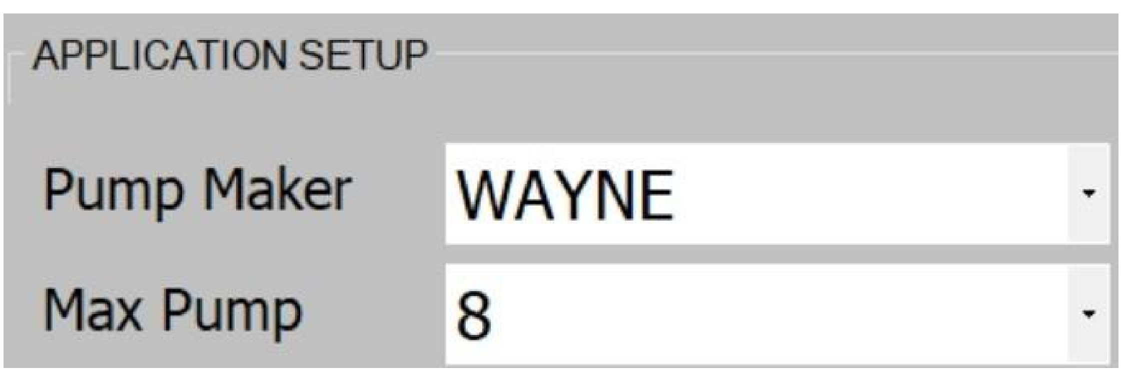
Fig. 2 FuelMax Wiring Diagram

II - 1. First Boot And Application Setup

Once all connections to the FuelMax are made you are ready to boot the device for the first time. The power button is on the bottom right hand corner of the system. Once the screen comes on it should automatically boot into a blank configuration of the FuelMax interface. “Menu” is the default page that is loaded. This is where all fuel control actions will occur. To get started setting up the device you will need to navigate to the app setup by tapping the “App” button on the far left side (as shown in Fig. 1). There will be a prompt to enter the manager's password. The default password is “1234”. After entering your password there will be a new button in the bottom left for logging out of manager mode. You will stay logged in until the logout manager button is pressed in the bottom left hand corner of the screen.

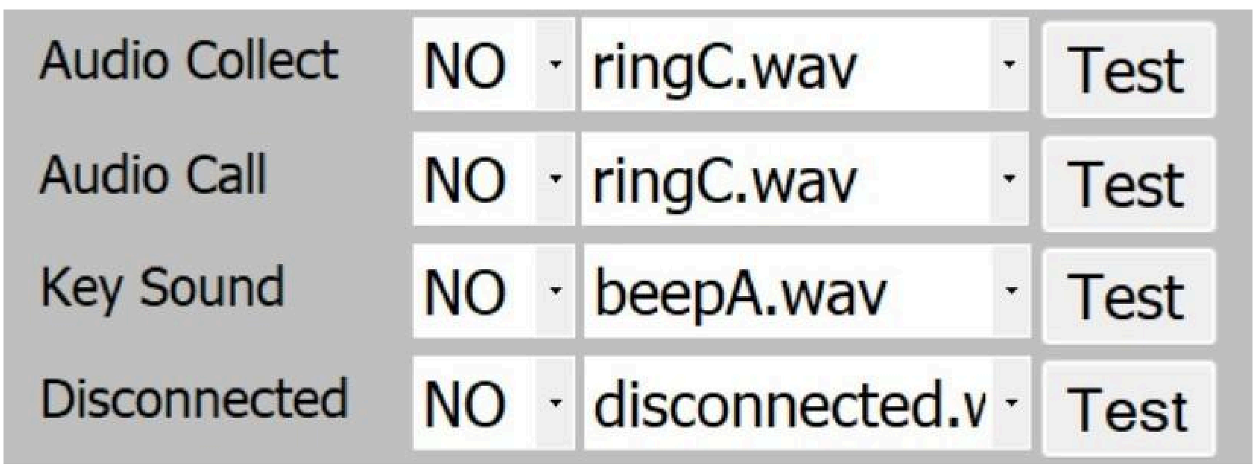


The first step in application setup is to choose the pump maker brand of your site's dispensers. You can click on the dropdown in the top left labeled Pump Maker and a list of all major brands will appear. Select your brand and it will change the selected choice in the box. If you are using an M2E board to control mechanical dispensers then the dropdown box should be set to Gilbarco or Wayne depending on the way the M2E is configured. The dropdown box below labeled Max Pump configures the maximum amount of dispensers the program can control. This eliminates extra resource usage if the site is only using 8 or less.



After configuring the pump maker and max pump you can set stacks, audio collect, audio call, key sounds, disconnected sound, and discount. FuelMax allows up to 5 stacked sales. The stack dropdown allows you to enable and configure how many sales are allowed to be stacked at one time.

Sound alerts are very important for a smoothly operating fueling system. FuelMax allows full customization of the sounds used to alert different operations. “Audio Collect” is audible after a sale is complete and it is awaiting a payout. “Audio Call” is audible when a dispenser handle is lifted and awaiting authorization. “Key Sound” is the sound played when a key is pressed on screen. “Disconnected” is used to alert that the pumps have gone offline and are not communicating. All sound configurations can be turned on or off with the lefthand side yes or no dropdown. The next option allows customization of what sound is assigned to the function. There is also a test button to demo the sound right in the menu.

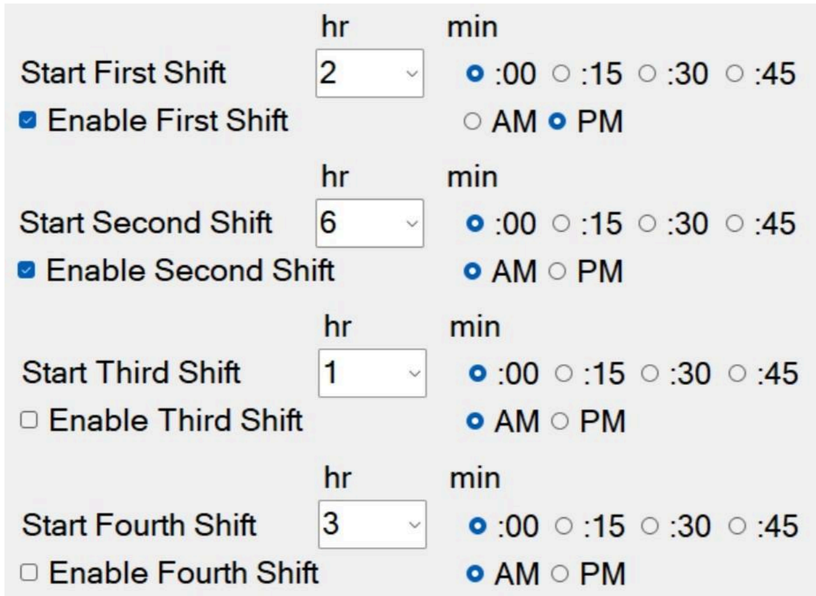


Discount is used if you have a different cash price from the credit self price. If you intend on using split pricing for discounts make sure to enable the dropdown option located below the audio options.

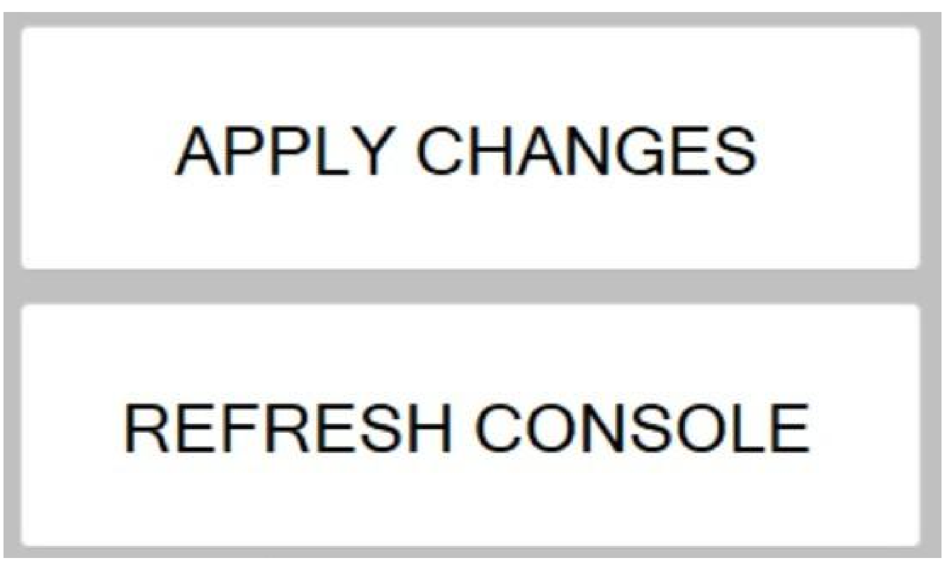
“Default Preset ($)” configures the maximum total amount per sale. Default is $500 but some marinas and commercial sites may require a higher allowed total due to high volume sales and increased pricing.

“Manager Pin” allows managers to change the default password from “1234” to whatever password is desired. Make sure to remember this password or else you will lose access to your programming and reporting and have to call support to get it unlocked.

Fuelmax uses specified shifts for reporting. Under “Manager Pin” there is a new menu that allows up to 4 shifts to be configured. On the lefthand side you can select if the shift is enabled or not. The dropdown in the center is for selecting the hour the shift starts at. The buttons off to the right are to select minutes and morning or evening. Shift reports will be based on the specified shifts in this menu.

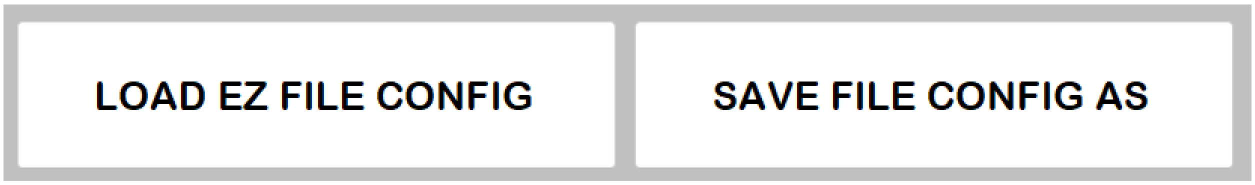


On the far right top corner of the screen there are two buttons. “Apply Changes” and “Refresh Console”. If any configurations were changed you must tap “Apply Changes” to save it before leaving the menu. Each programming menu has a button for applying changes that must be used to save your configuration. If there are any issues with the system instead of turning the console off, the “Refresh Console” button restarts the program to potentially clear things up.



II - 2. Site Configuration

The FuelMax has all the features of EZ configure built right into its menus for easy configurations of new and existing sites. Navigate to the “Pumps” menu button on the left side of the screen. If your site has an existing .tms configuration file it can be loaded from the “load EZ File Config” button at the top right of the “Pumps” setup menu. The windows file explorer will open and allow you to select the premade file. Click open and the file should be loaded into the FuelMax.



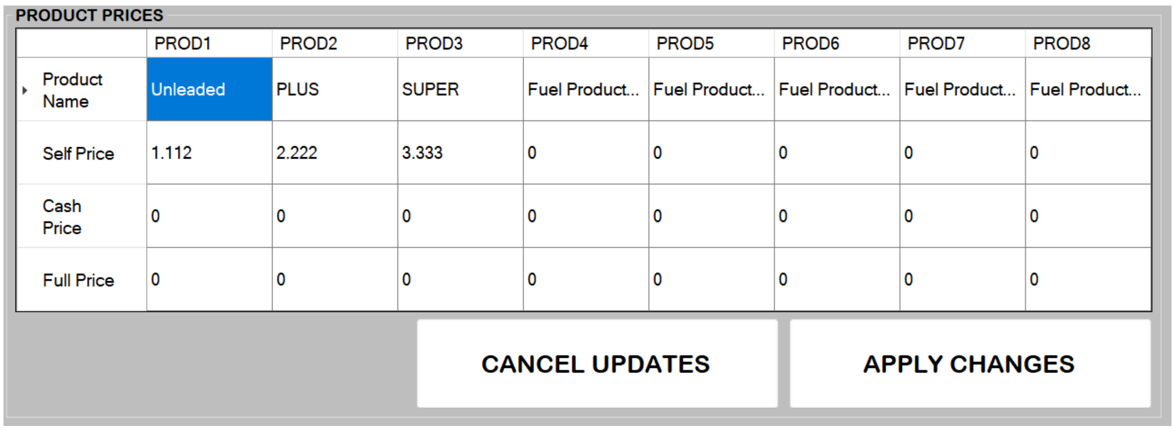
If you loaded a file from the file explorer then all that is required is you click “Apply Changes” before exiting the menu. If you don't have a premade file then the next step is to make one. Creating a configuration file starts with the “Tank Setup” data array. It is located on the upper left of the screen. This array assigns each tank to a grade. Grades can be used to represent which products are in each tank. Certain scenarios require more than one tank to contain a single product and that can be reflected with grades. On the right hand side of the array is where tank volume information is tracked. This is not to be used in place of a tank monitoring system. It is useful for tracking volume levels corresponding to sales data. Each time a new shipment of fuel is delivered the volume can be updated and will be available for reporting.

TANK SETUP

	Grade	Volume
Tank 1	1	0
Tank 2	2	0
Tank 3	0	0
Tank 4	0	0
Tank 5	0	0
Tank 6	0	0
Tank 7	0	0
Tank 8	0	0

APPLY CHANGES

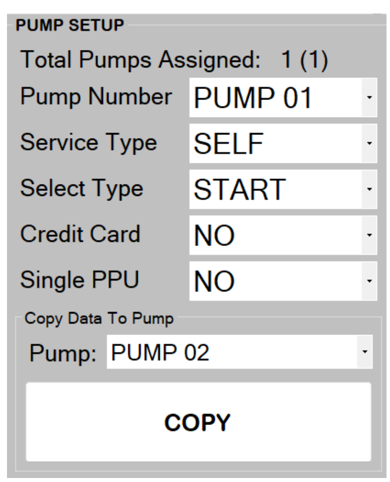
The next part of setting up the site configuration is products and pricing. This is located in the data grid array on the top right of the screen labelled “Product Pricing”. The top row is for designating a name for each product at the site. When you click on a box in the grid an on screen keyboard should appear for entering the product name. Directly below each product is the “Self Price”. The self price would be the self service price at your site. Below that is the cash price if your site is running two tier pricing. Below that is the full service pricing. Full service pricing would be used if you have dispensers configured to use full service. If you don't have two tier pricing or full service dispensers then the prices in those rows can be left blank.


PRODUCT PRICES

	PROD1	PROD2	PROD3	PROD4	PROD5	PROD6	PROD7	PROD8
Product Name	Unleaded	PLUS	SUPER	Fuel Product...	Fuel Product...	Fuel Product...	Fuel Product...	Fuel Product...
Self Price	1.112	2.222	3.333	0	0	0	0	0
Cash Price	0	0	0	0	0	0	0	0
Full Price	0	0	0	0	0	0	0	0

CANCEL UPDATES
APPLY CHANGES

The bottom half of the screen is where everything comes together. The “Pump Setup” menu is where products and grades will be assigned to one another per fueling position and hose. On the far left side of the menu there are options related to the fueling position configuration. “Total Pumps Assigned” shows the total number of fueling positions configured and the address they are assigned at. “Pump Number” is a dropdown box for navigating which fueling position is being configured. “Service Type” changes the fueling position from Self or Full service. “Select Type” determines how the fuel product is selected and a sale is started. “Credit Card” would be enabled for pay at the pump scenarios. “Single PPU” would be used to address how many displays your dispenser has. “Copy Data To Pump” is a simple tool for copying configurations to matching dispensers for ease of programming. The Pump number at the top will be copied to the selected pump in the copy tool dropdown.

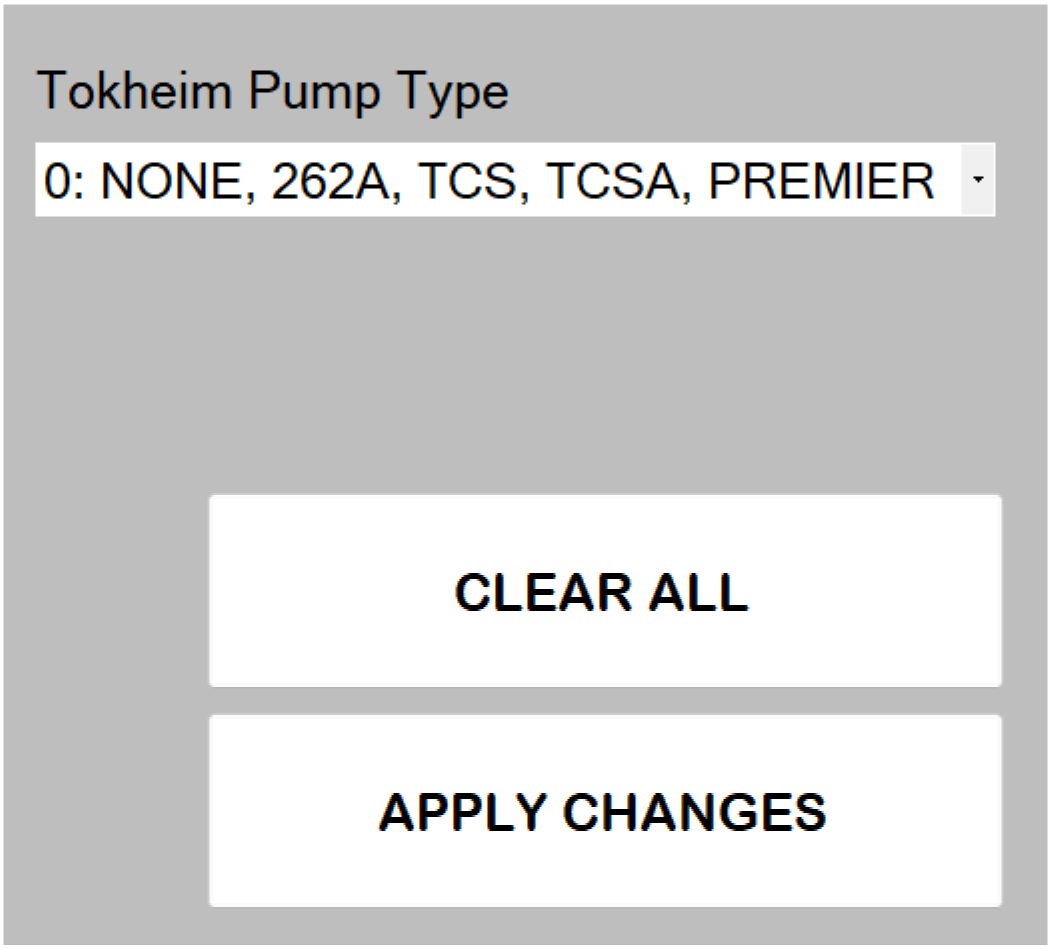


To the right there is a grid array of dropdown boxes. This is where the products and grades are assigned to one another. Each fueling position is made up of 8 assignable hoses and can have up to two grades per product. Which hoses the products are assigned to is determined by the Pumps manufacturer and the number of hoses at the fueling position. Each model dispenser uses a specific assignment which needs to be specified by using the appropriate positions determined by the manufacturer. “Please refer to the pump manufacturer’s manual for hose assignment information.” The first column is the product name. A dropdown box will show all configured product names for you to choose from. The next two columns for “First Tank” and “Second Tank” are for assigning the grades to the products. The tank assignment also represents blender products if the first tank and second tank are set to different grades. If there is no product to blend then the “Second tank” will be left blank, unassigned.

	Product Name	First Tank	Second Tank
Hose A	Unleaded	Grade 1	Unassigned
Hose B	PLUS	Grade 1	Grade 2
Hose C	SUPER	Grade 2	Unassigned
Hose D	Unassigned	Unassigned	Unassigned
Hose E	Unassigned	Unassigned	Unassigned
Hose F	Unassigned	Unassigned	Unassigned
Hose G	Unassigned	Unassigned	Unassigned
Hose H	Unassigned	Unassigned	Unassigned

The example above is a three product dispenser. Unleaded is assigned to a single hose and is dispensing from grade one. When the handle is lifted the button for unleaded is pressed and it dispenses from what is configured in hose A. Plus is a blended product that uses grade one and grade two mixed. It is also dispensed from that same hose after selecting plus to start the sale. Premium is dispensed from grade two only and would start after super is selected. The hose configuration grid like the one shown above would also be used to configure all kinds of setups ranging from single hose single product to a three plus one configuration.

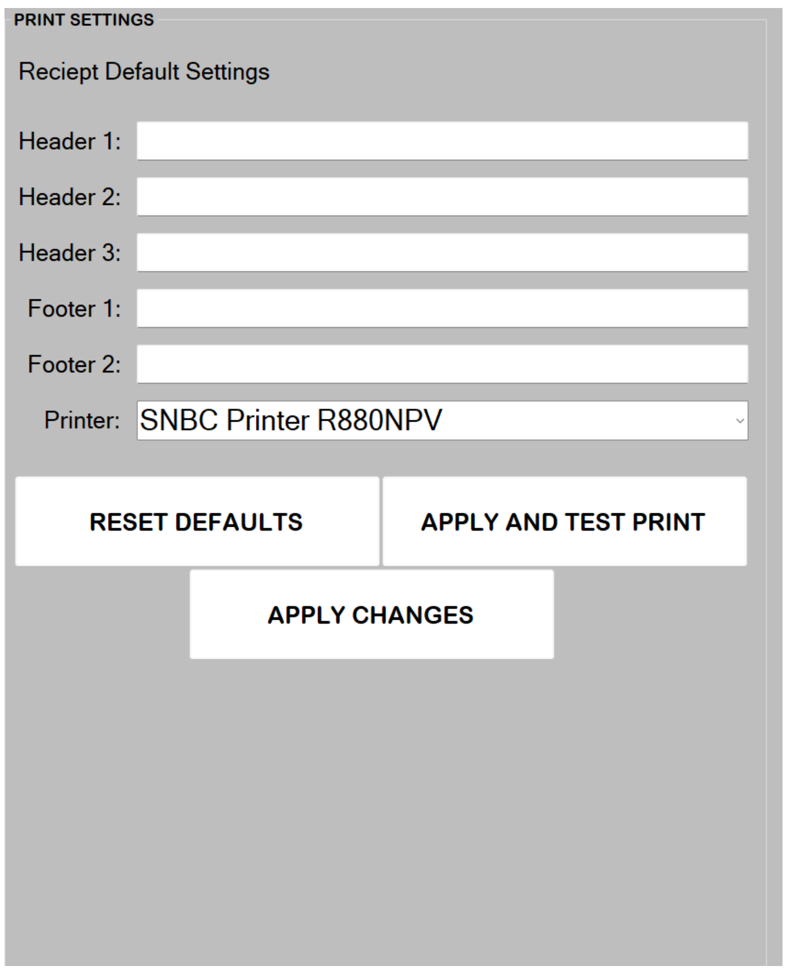
Tokheim is supported on the FuelMax. In order to properly configure Tokheim there is an additional dropdown box to the right of the pump configuration grid. Tokheim Pump Type is used to configure the specific dispenser used in your site. Make sure to select the option that applies to your dispensers so that the FuelMax console can properly communicate with them.



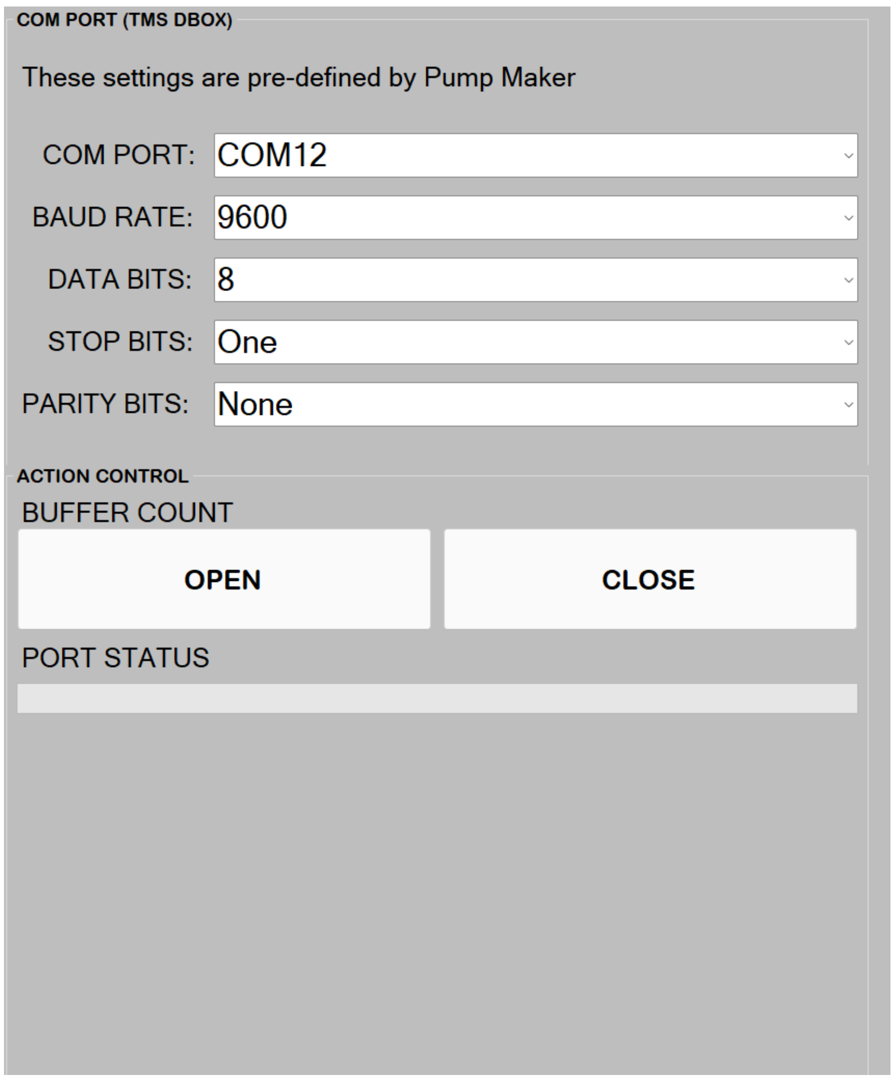
After successfully configuring all of your products, prices, and fueling positions make sure to tap the Apply Changes button in the bottom right hand corner of the screen. This will save the configuration to the program and send out any prices that have been changed.The Clear All button can be used if a full reset of the file needs to be made.

II - 3. Printer and Communication

The FuelMax makes the customization of receipt headers and footers very easy. On the lefthand side of the screen there is a button labeled Printer in the navigation bar. Tapping on the Printer button will bring up the print configuration menu and the communication menu. The FuelMax has three header lines and two footers. Each line can only contain up to forty characters. Tapping on each line will pull up a keyboard allowing you to type. At the bottom down below the receipt header lines is the printer selection dropdown. The two printers we have full support for at this time are the SNBC R880NPV and the Epson TM-T88V. Make sure to select which brand printer you are using. Incorrect printer settings will cause receipts to print out misaligned. At the bottom of the Print Settings menu there are three buttons. Reset Defaults will clear out the headers entered above and reset the printer to a default configuration. There are two buttons for applying changes. One is used for testing printing and the other is for applying changes.



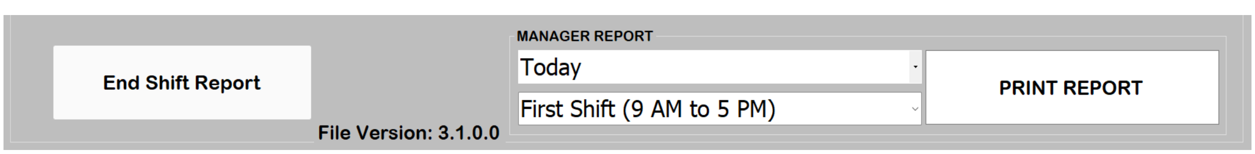
The right side of the Printer menu is for configuring communication to the serial adapter if necessary. The com port should automatically be selected for you whenever the FuelMax is powered on. If for any reason the com port is not set properly there is a dropdown box labelled Com Port used for manually selecting from active connections. The other options in that menu are for troubleshooting and should not have to be changed. If the com port had to be manually selected make sure to tap the open button down below at the bottom of the Com Port menu. A green bar will appear across the bottom showing the connection is active if the correct port is selected.



II - 4. Reporting

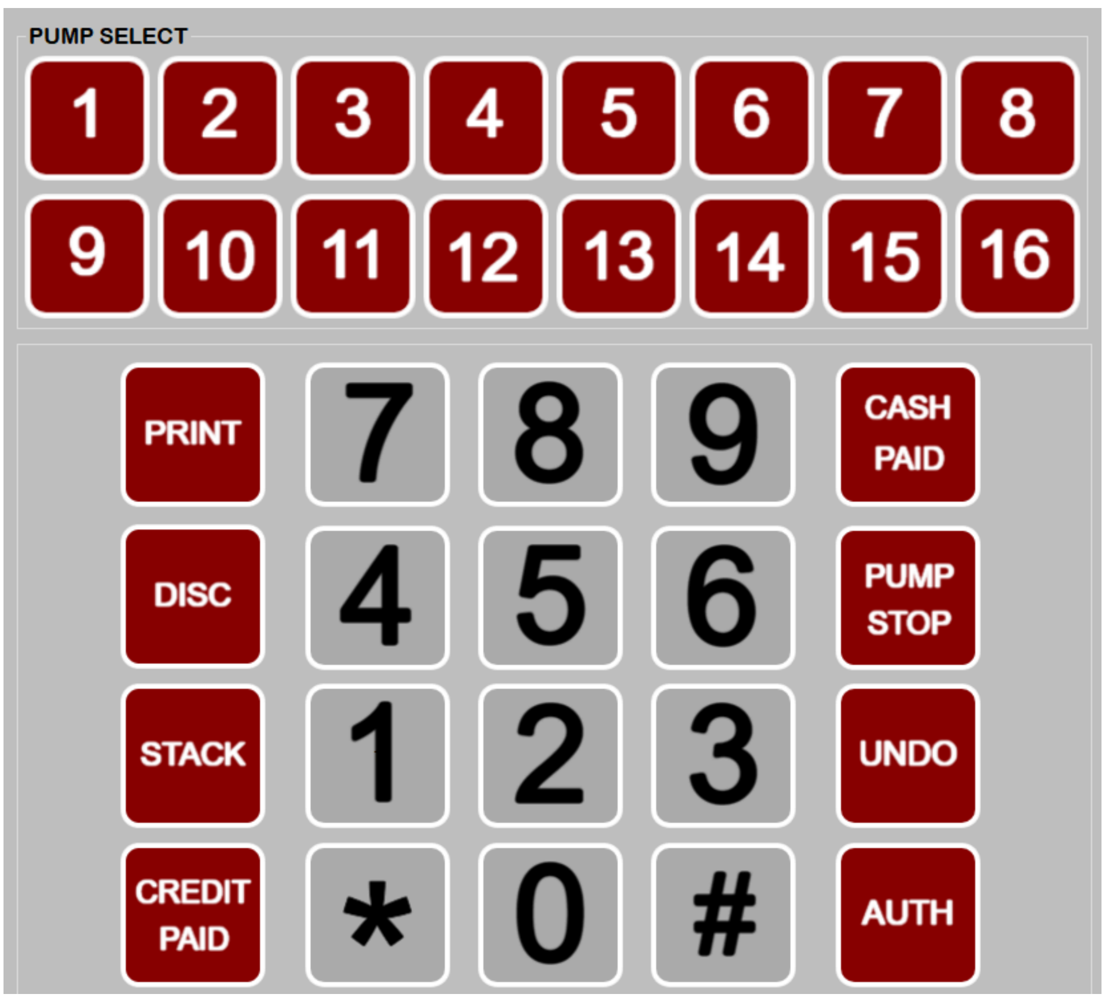
The Reports button on the left hand side navigation bar is for accessing the reporting menu. This menu will contain all of the totals and volume readings from the site. It can be printed in multiple ways to show individual shifts or multiple days. The reporting is mostly made up of visual charts showing basic data as a glance. Individual pump totals for the day and daily sales will be available at a glance. The charts are all labelled and have exact values listed.

The bottom of the page allows for reports to be printed for more detailed data. The bottom left hand side of the screen has a button called End Shift Report. This button is used to print the totals and volume for the current shift that is active. Once the next shift starts it will display the totals for that shift. An operator should use this button to print out the shift totals at the end of a shift before the next one starts. It does not require a manager password to use. The bottom righthand side of the screen is where manager reports are generated. There are two dropdown boxes for the day and the shift. The top box has options to go back two days and print reports. The bottom box allows the configured shifts to be printed individually or an entire day to be printed all at once. The shift selection box will be disabled if no shift configurations in the App menu are present. The print report button will send the report to the printer if you are logged in as the manager. If you are not it will prompt you to login and will keep you logged in until you log out.

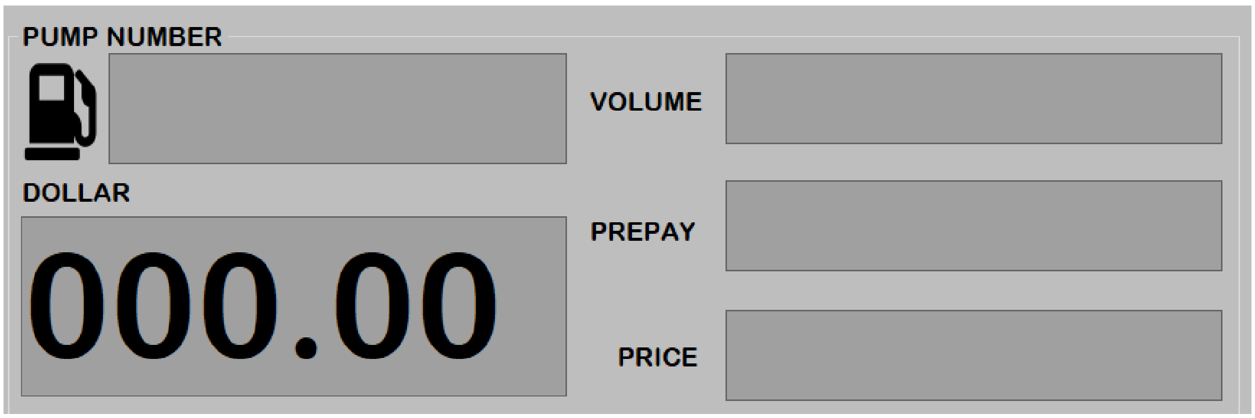


III - 1. Basic Fuel Control

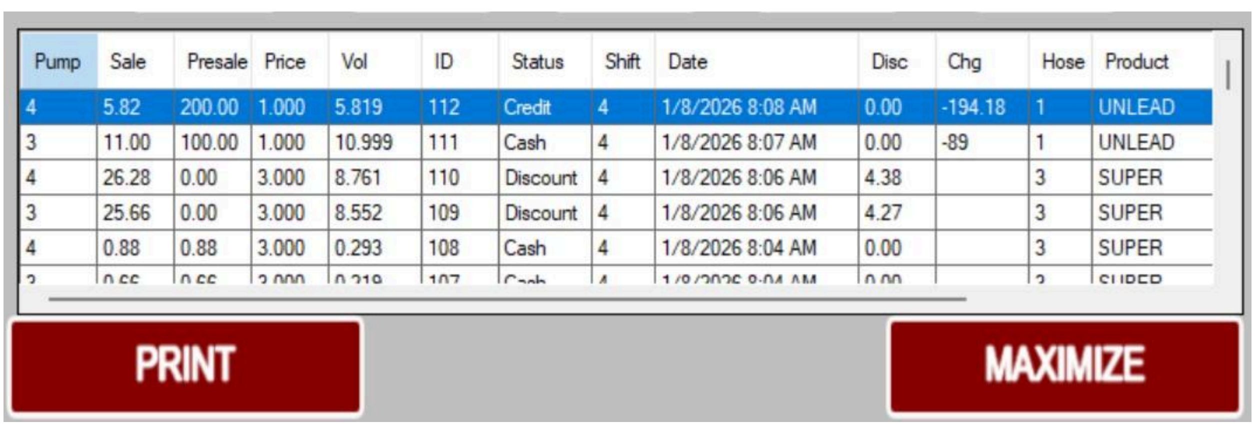
The Menu button returns you to the main menu of the console. The console design is made familiar for ease of use. The main pump control is laid out similar to the Petrosmart EZ. The top two rows select fueling positions one through sixteen. The number pad below is sure for inputting prepay and preset values. Print is used to print the receipt for the current fueling position. Disc switches to your discounted cash price specified in pump setup. Stack is for activating a stack sale for the current fueling position. Credit Paid and Cash Paid are used to pay out sales. The payment method will be reflected on the receipts down below. Pump Stop is for pausing the dispenser from pumping without ending the sale. Undo is used to cancel anything sale related. It can undo authorization, prepay values entered, etc. Auth is how you authorize the dispenser. Once Auth is pressed the sale information is sent and the pump is ready to use.



The top right of the screen is used to show sale data. It is updated live and shows all data required to complete a sale. The top lefthand box labeled Pump Number with the dispenser logo indicates which fueling position you are using. The bottom left hand box labeled Dollar will display your dollar amount for the active sale. This box is also responsible for showing change due if a prepay sale is stopped short of the prepay amount. The top right box labeled Volume displays how much fuel was dispensed in gallons. The middle box labeled Prepay shows the pre configured amount for the sale if it was specified before authorization. This would only apply for a prepay or preset sale. Price in the bottom right shows the active price for the sale. This will change if a prepay was set with two tier pricing.

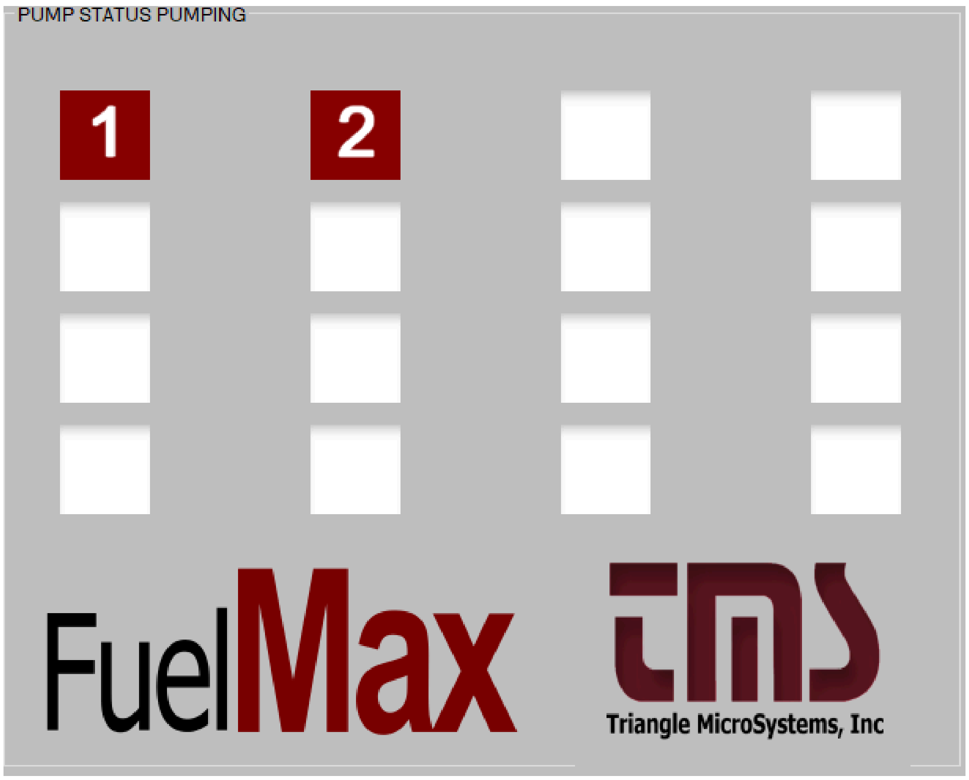


The bottom left corner of the screen now has a detailed transaction log. The log gets updated every time there is a sale. It includes the pump number, sale total, presale value's, price per gallon, volume total, Id number of the sale, credit or cash, shift value, date and time, discounted price, change due, hose number and product name. It will allow you to maximize to see the entire log. You can select any of the sales on this transaction log and press the print button to print a receipt for it. Stacked sales will also appear here and can be selected to pay them out.



Pump	Sale	Presale	Price	Vol	ID	Status	Shift	Date	Disc	Chg	Hose	Product
4	5.82	200.00	1.000	5.819	112	Credit	4	1/8/2026 8:08 AM	0.00	-194.18	1	UNLEAD
3	11.00	100.00	1.000	10.999	111	Cash	4	1/8/2026 8:07 AM	0.00	-89	1	UNLEAD
4	26.28	0.00	3.000	8.761	110	Discount	4	1/8/2026 8:06 AM	4.38		3	SUPER
3	25.66	0.00	3.000	8.552	109	Discount	4	1/8/2026 8:06 AM	4.27		3	SUPER
4	0.88	0.88	3.000	0.293	108	Cash	4	1/8/2026 8:04 AM	0.00		3	SUPER

The FuelMax has a status menu for additional navigation and updates to keep the site running smoothly. In the bottom righthand side of the screen the active fueling positions will be displayed with a red box that is numbered one through sixteen. Tapping on an active pump will navigate to that dispenser for ease of operation. The status menu will show when a dispenser is disconnected by displaying a red X. When a handle is lifted and the pump is calling the status menu will show a phone. The pump authorized condition will show a circle with a check mark in it. When a sale is active and the dispenser is fueling it will display a pump nozzle. Finally when a sale is completed and is awaiting payout it will show a dollar sign. If there is not a dispenser configured it will show a blank white box.



III - 2. Operating Guide

To do a FILL-UP sale:

When a customer lifts a dispenser nozzle at a fueling position that has not been authorized, the console will make your call sound of choice and the corresponding pump status indicator will change to a "blinking phone" icon.

1. Press the corresponding PUMP SELECT button; the pump icon in the upper left corner of the display will show that number.
2. Press AUTH; the pump status indicator will change to a blinking nozzle icon. When the customer finishes and hangs up the nozzle, the console will alert and the corresponding pump status indicator will change to a blinking dollar sign ($).
3. Press the CREDIT PAID or CASH PAID button to finalize the sale after the customer has paid.

To do a PRESET sale:

1. Press a PUMP SELECT button to select the fueling position to be preset; the pump icon in the upper left corner of the display will show that number.
2. Enter the amount to be preset using the numeric keypad.
3. Press AUTH; the pump status indicator will change to a blinking nozzle icon. When the preset amount has been dispensed and the customer hangs up the nozzle, the console will alert and the corresponding pump status indicator will change to a blinking dollar sign ($).
4. After the customer pays, press the CREDIT PAID or CASH PAID button to finalize the sale.

To do a PREPAY sale:

1. Select the fueling position to be preset by pressing the corresponding PUMP SELECT button.
2. Enter the amount to be prepaid using the numeric keypad.
3. Press the CREDIT PAID or CASH PAID button; the pump status indicator will change to a blinking nozzle icon. The sale will automatically finalize when the prepaid amount has been dispensed and the customer hangs up the nozzle; no further action by the operator is necessary.
   NOTE: If the nozzle is hung up before the prepay amount is dispensed, the console will alert and the corresponding pump status indicator will change to a blinking dollar sign ($). The console will display the amount to be refunded to the customer. Press the CREDIT PAID or CASH PAID button to finalize the sale.

To DISPLAY TOTALS:

1. Press the Reports button on the left hand side of the screen.
2. There will be charts and graphs to display relevant totals.

To do a STACK sale:

A STACK sale is one in which a fueling position is authorized for a second sale before the first sale has been finalized (paid out) on the console. This applies only if the Stack function is enabled on the console.

1. Select the desired fueling position by pressing the PUMP SELECT button.
2. Press STACK and then AUTH; the pump status indicator will alternate between a bracketed fueling position number and a nozzle icon, and the customer can begin fueling.
   NOTE: At this point, the $-amount of the second sale will be displayed; the $-amount of the first sale will appear in the transaction history below, with the word STACK to its right. The stack sale should be highlighted red to indicate which sales are still pending payout.
3. When dispensing is complete, select which transaction is still highlighted red.
4. Press the CREDIT PAID or CASH PAID button to finalize the sale.

To CHANGE FUEL PRICES:

1. Press the PUMPS button on the left hand side of the screen.
2. Enter the manager's password to gain access to the pump setup menu.
3. The top right grid will have products and their respective prices.
4. Change the prices that need to be adjusted.
5. Press the Apply Changes button directly below the price change data grid. The prices should automatically update on the dispensers outside.
6. Press LOGOUT MANAGER to return to normal function.