



## Programming and Operating Instructions for TMS-MPC Systems controlling Electronic Pumps and Dispensers

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### 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.**

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TMS ---- 02.15.2001

## TMS MPC SYSTEM INTRODUCTION

MPC consoles can control multi-product dispensers (MPD's) with up to 4 grades per fueling position. Each side of an MPD counts as one fueling position on the console (regardless of the number of grades); each hose on a single-product dispenser counts as one fueling position. An MPC-8 console can control a maximum of 8 fueling positions; an MPC-16 console can control a maximum of 16 fueling positions. There are two console models in the MPC product line: the MPC Standard and the MPC Hybrid. MPC Standard consoles are intended for use with electronic dispensers only. MPC Hybrid consoles can control mechanical dispensers (regardless of manufacturer), electronic dispensers, or a combination of the two. Every MPC console is assembled at the factory with one of several available software types; each software type allows the console to communicate with electronic dispensers made by a specific manufacturer. Specify specific pump manufacturer when ordering an MPC Standard or Hybrid system.

the MPC Standard and the MPC Hybrid models are available in an 8 or 16 fueling position version, and will control any combination of the following:

**APS electronic dispenser models:** Classic.

**Bennett electronic dispenser models:** 6000, 7000, 8000, and 9000, Horizon 2000. **NOTE: the MPC will not control Bennett 5000 dispensers..**

**Gilbarco electronic dispenser models:** Highline, Salesmaker, MPD (-A3, -1, -2, -3), Advantage Series pumps/dispensers, including blend style

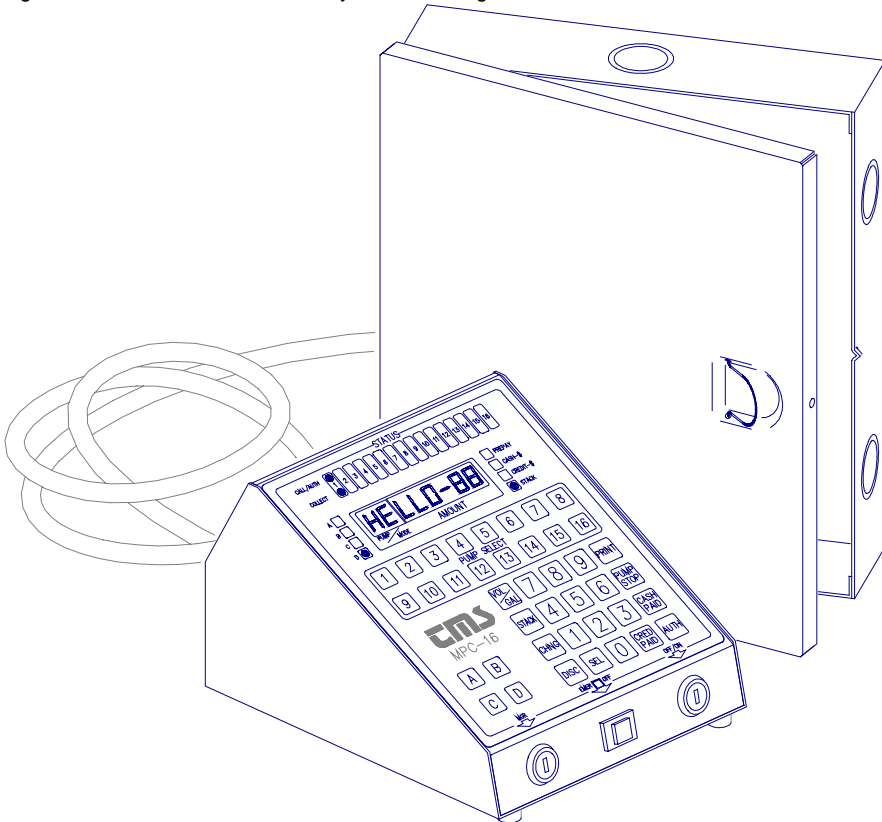
### NOTE:

Some **Gilbarco** electronic pumps/dispensers transmit the final transaction data at a much slower rate than others do, which may cause the MPC Hybrid console to miss pulses received from any mechanical fueling position in operation. Turning the console's dipswitch position #6 ON allows the console to momentarily (less than a second) close the fast valves of all mechanical positions in operation anytime an electronic handle is hung-up. This slows the fuel delivery rate to allow an accurate pulser reading from the mechanical hoses, while the console and "slow" electronic pumps/dispensers complete a data transmission

**Mechanical dispensers:** All makes of mechanical hoses, regardless of manufacturer. In addition, the MPC Hybrid also controls **Gasboy** 9800 series, **Krause, PMC** (Pump Measure Control) electronic hoses via the 800F Mechanical Interface Box.

**Tokheim electronic dispenser models:** 162, 262A, TCS, TCSA, and Premier. **NOTE: MPC systems will not control Tokheim Model 262 (non-A) dispensers, or Tokheim MMD's (222's, 333's, or 444's).**

Figure 1 shows an MPC Standard system including the console, IC Box, and cable.



**Figure 1**  
TMS MPC for Tokheim System Console, Cable, and IC Box

## THE STATUS LIGHTS, KEY SWITCHES, AND THE MODE/AMOUNT DISPLAY WINDOW

Refer to Figure 2 on the opposite page while learning about the console controls.

The status lights are all located at the top of the console, and show the status of each fueling position.

### **CALL/AUTH LIGHTS (#1):**

A flashing light above a fueling position number indicates that a customer has picked up a hose and turned the handle on. The operator must authorize that fueling position before the customer can pump fuel. When authorized, the light for that fueling position changes to constantly on.

### **COLLECT LIGHTS (#2):**

A flashing light below a fueling position number indicates a customer has hung a hose up, and the post-pay sale is waiting to be finalized. If a light under a fueling position number stays on, a present and a stacked sale (two sales at one position) are waiting to be finalized.

### **A, B, C, D LIGHTS (#3):**

These lights, located at the left end of the display window, indicate which product button or hose has been selected during a sale at an MPD. During sales at a single product fueling position, only the "A" light turns (the only hose available) no matter the grade.

### **PUMP/MODE Portion of the Display Window (#4)**

The display window has a total of eight digits. The two left -most digits are labeled "PUMP/MODE", and display the fueling position or MODE number that has been selected by the operator.

### **The Manager's Keyswitch (#5):**

This keyswitch is located on the left front of the console, and must be in the ON position (horizontal as shown in figure 2) to enter or change programmed information in the console's memory. For normal operation, the keyswitch should be in the OFF position (vertical) and the key removed from the console.

### **NOTE:**

The console is operational whether the manager's keyswitch is turned ON or OFF. It is recommended to turn the keyswitch OFF for security reasons only.

### **The Emergency Off Switch (#6):**

This switch (EMER OFF) is the red switch located on the front of the console. Pressing this switch causes the "EMER OFF" light to flash, and a "turn off" signal is sent to all fueling positions. Press this switch again, and the light will stop flashing, and a "resume pumping" signal will be sent to each position that was originally pumping (and not yet hung up).

### **NOTE:**

The Emergency Off Switch may not meet the Local Building, Electrical, or Fire Codes for the emergency shut off of fuel dispensing equipment. Refer to the Installation Guide for a description of the Emergency Off relay circuit, and the Local Building, Electrical, or Fire Codes for proper emergency precautions and/or connections for shut off of fuel dispensing equipment.

### **The OFF/ON Keyswitch (#7):**

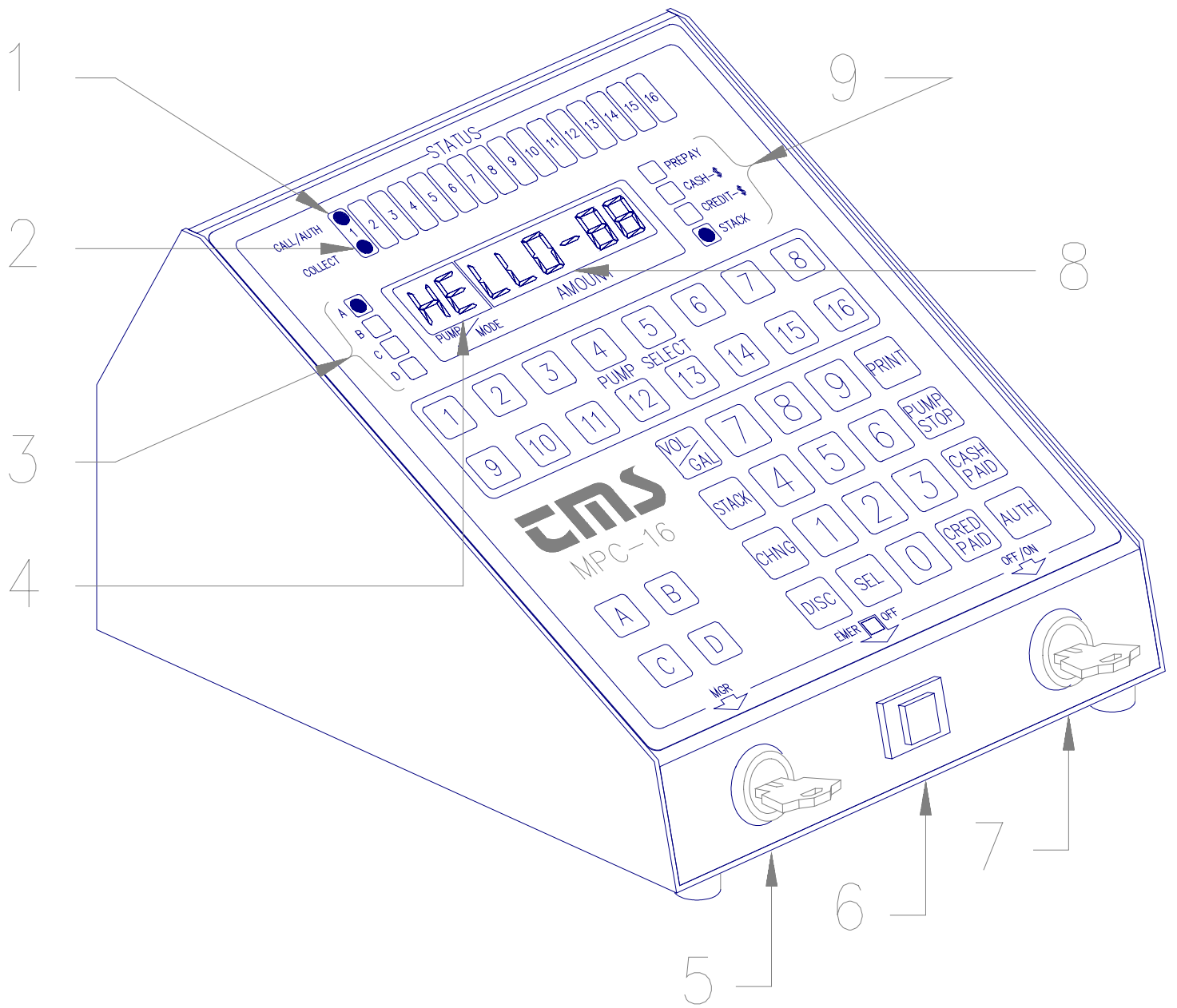
This keyswitch, located on the right front of the console, must be in the ON position (horizontal as shown in figure 2) for normal operation. This switch should be turned OFF whenever AC power to the system is turned off.

### **AMOUNT Portion of the Display Window (#8):**

The six right -most digits display data for sales in progress, programmed data, and sales total information stored in the console's memory for the fueling position or MODE that is selected.

### **PREPAY, CASH, CREDIT, STACK Lights (#9):**

These lights, at the right end of the display window, indicate if the sale is a pre-pay (prepay, and either cash or credit light on), a cash, or credit post-pay (both lights on indicate cash = credit pricing). If a stack sale is present at a fueling position (light stays on while viewing the stacked sale).



**Figure 2**  
TMS MPC Console Switches, Lights, and Display

## THE KEYPADS AND BUTTONS

Refer to Figure 3 on the opposite page while learning about the **PUMP SELECT** and **DATA ENTRY** keypads and the function buttons.

### The 0 Through 9 Buttons:

These buttons are located on the lower right side of the console, and are used to enter prepay sale amounts, to access various programming modes, and to enter program data into the console's memory.

### PUMP SELECT keypad (#1):

This set of 8 or 16 buttons is used to select fueling positions to view sales in progress, or to authorize positions for preset, prepay, or post-pay sales, and to program information into the console's memory by individual fueling position.

### VOL/GAL (#2):

Press this button to view volume amounts. The correct fueling position must be selected and in the collect status to view a volume amount. If the sale has been paid-out, see instructions for MODE 17 on page 23. Hold a tank number on the Data Entry keypad while in MODE 64 or 74 and press this button to view the volume sold from a particular tank.

### STACK (#3):

Press this button to toggle between the current and the stacked sale. To allow a stacked sale, the console's dipswitch position 3 must be ON (see page 7). The stack light will flash if the fueling position selected has a sale in the stacked position. Press the **STACK** button to view the stacked sale and the light stays on. Press **STACK** again to toggle to the current sale. For more information, see **COMPLETING A STACKED SALE** on page 23.

### The A, B, C, and D PRODUCT buttons (#4):

These four buttons are located in the lower left corner of the console and are used for programming and retrieving sales total information relative to product hoses. These buttons are not used during normal operation, and do not relate to any tank. The A button relates to the first hose, B the second, C the third, and D the fourth hose at a particular fueling position.

### NOTE:

The hose at any single product fueling position is ALWAYS identified as the "A" hose at the console.

### CHNG (#5):

The change button has three functions:

1. Press **CHNG** to enter (or change) programmed data into the console's memory.
2. Following an incomplete prepaid sale, press and hold **CHNG** to view the change (\$) due to the customer.
3. While a prepaid sale is in process, press and hold **CHNG** to view the remaining amount of the sale.

### DISC (#6):

Press this button to alternate between the cash or credit value of the post-pay sale in the COLLECT status. The dollar amount displayed will change only if two-tier pricing is used.

### SEL (#7):

Press and hold this button while pressing numbers on the **DATA ENTRY** keypad to enter a desired program or totals MODE. Press again to return to normal operation.

### CREDIT PAID (#8):

Press to finalize a credit post-pay sale, or to authorize a prepay sale at the credit price.

### AUTH (#9):

Press after pressing a **PUMP SELECT** button to authorize a sale. If the sale is to be a preset, prepay cash, or prepay credit sale, press after the sale amount has been entered on the data entry keypad.

### CASH PAID (#10):

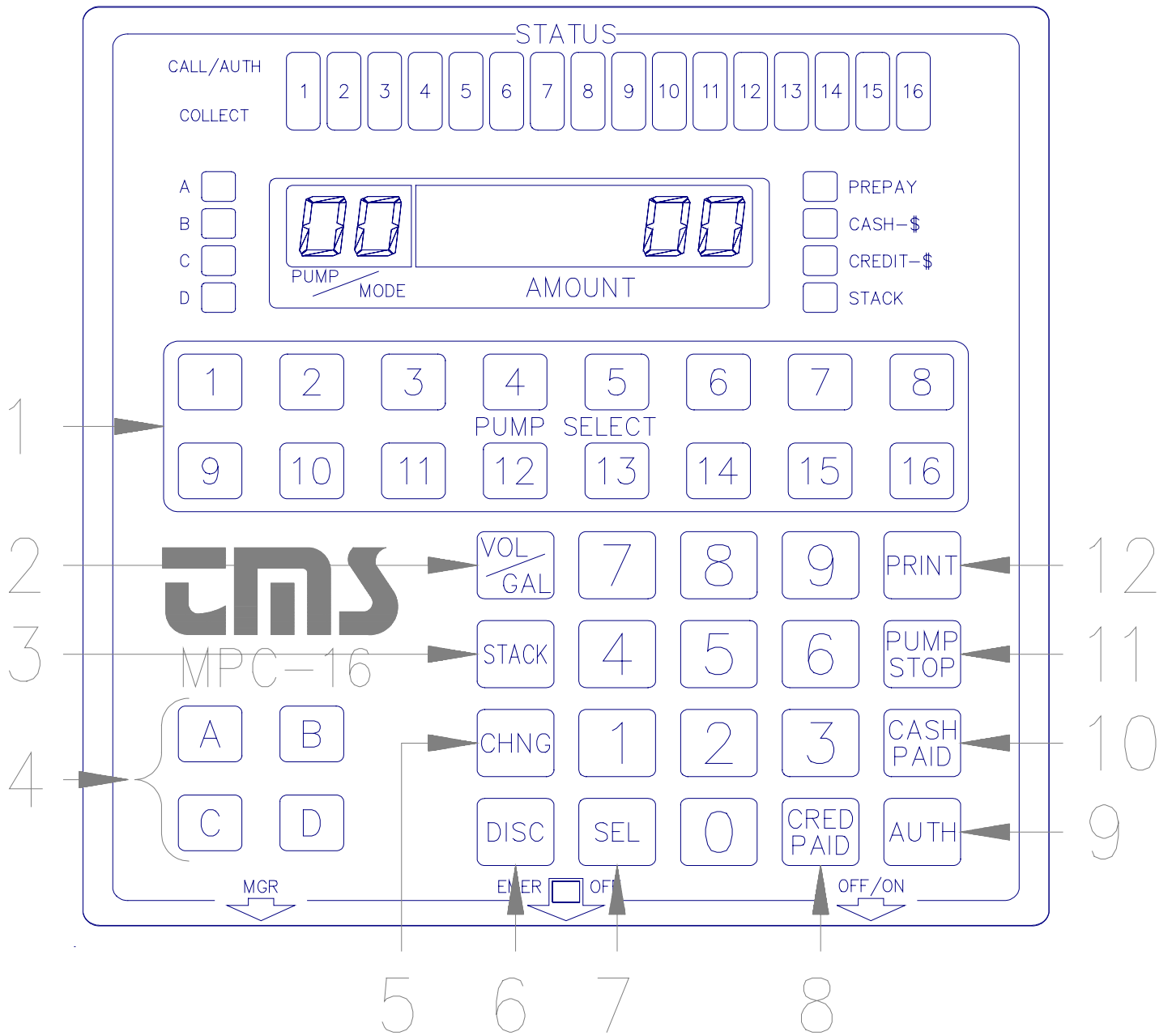
Press to finalize a cash post-pay sale, or to authorize a prepay sale at the cash price.

### PUMP STOP (#11):

Press to de-authorize a fueling position, or stop a sale in progress at a particular fueling position.

### PRINT (#12):

Press to print a receipt for the last finalized sale of the fueling position displayed in the MODE window of display, or to print various reports and program instructions for MODES described later in this document starting on page 8.



**Figure 3**  
The Pump Select and Data Entry Keypads, and the Function Buttons

## GENERAL PROGRAMMING INFORMATION

The programming steps required for the MPC are found in the suggested set-up sequence on page 8. The console must know what kind of pumps/dispensers it is controlling by fueling position, if the fueling position is full or self service, what grade (tank) is dispensed through each product hose, and the price of each grade. This allows the console to send prices to the pumps/dispensers, and to maintain grade totals.

Setting the style in which sales are made and completed is accomplished through the 8 position dip switch located on the inside of the console as shown in figure 6, on page 7. Operational options include allowing pre-paid, post-paid and stacked sales, and single or two-tier pricing schemes.

The console can be programmed to give totals by individual fueling positions as well as sales totals by grade and tank. The mechanical totalizer readings and declining tank inventories can be programmed into memory, and be read from the console. Full or Self Service operation by fueling position and manual or automatic receipt printing are also programming options.

The MPC console controls blend style pump/dispensers. The blended product is considered a grade like any other, and the product hose or button at the pump/dispenser is assigned to a "dummy" tank in the console's memory. With a printer attached, the total sale amounts of each grade, expressed in both money and volume, are printed on the Shift, Manager's and Accumulating reports, and are accurate as well.

The A, B, C, and D lights and product buttons on the MPC console (fig. 4) correspond to the hoses or product select buttons at individual fueling positions. During a sale, lights on the console indicate which hose or product select button has been selected at the pump/dispenser. For a multi-product fueling position, the A light indicates that the A hose (or product select button A) has been selected, the B light indicates the B hose, and so on; at a single product fueling position the A light is the only product hose indicator.

Be aware that the product light does not correspond to the fuel "grade" being dispensed from a particular hose; it corresponds to the hose itself. Fuel grades (up to six) correspond to "tanks" assigned to hoses during the initial programming of the console (see TANK TO PRODUCT HOSE ASSIGNMENT on page 9).

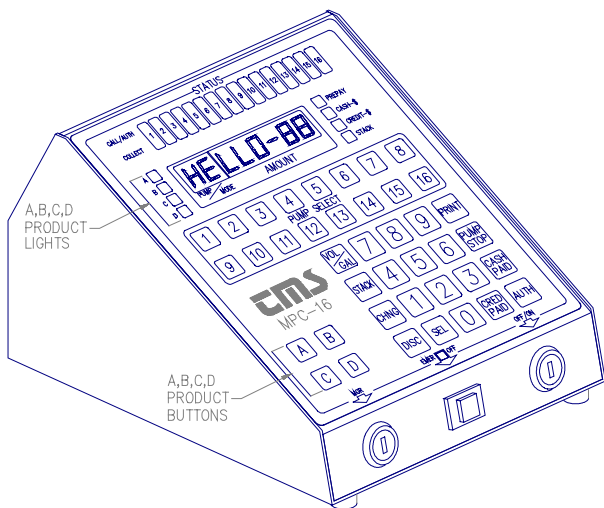
### REMEMBER:

The manager's keyswitch must be in the ON position before programmed data can be entered or changed.

The CHNG button must be pressed to change or enter data into the console's memory.

**HOLD** the SEL button to enter any programming or totals MODE.

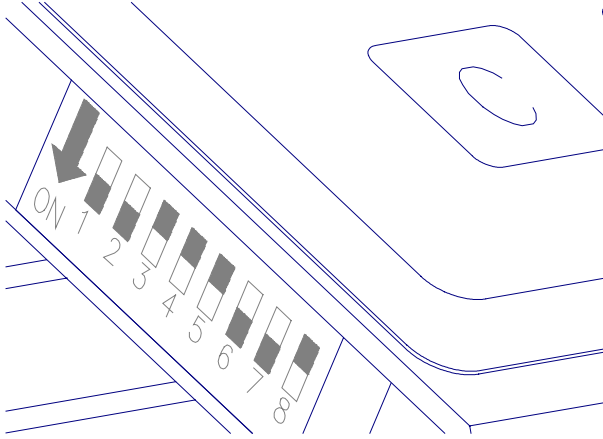
**PRESS** the SEL button to exit any programming or totals MODE.



**Figure 4**  
MPC Console A,B,C, and D Product lights and Buttons

## SETTING THE CONSOLE DIPSWITCH FOR OPERATIONAL OPTIONS

Operational options include allowing pre-paid, post-paid, and stacked sales and single or two-tier pricing schemes. The console dipswitch is set from the factory with both prepaid and postpaid sales allowed, stacking is disallowed, single tier pricing, and according to the number of fueling positions ordered (8 or 16 fueling positions). Figure 5 illustrates #1 ON, #2 ON, #3 OFF, #'s 4 and 5 OFF, and #8 OFF (16 fueling positions).



**Figure 5**  
Factory Setting for a Sixteen Fueling Position MPC Console

TMS-MPC DIPSWITCH SETTINGS	
ON allows, OFF disallows	
Position	Description
1	Prepay Sales
2	Postpay Sales
3	Stacking Sales
4&5	Pricing Structure ON = two tier, OFF = single tier
6&7	Not Used
8	# of Fueling Positions ON = eight, OFF = sixteen

**Prepay:** A customer pays for a specific amount of fuel before pumping. The operator sets the fueling position for that amount, presses the **PAID**, then the **AUTH** button. The console requires no further steps from the operator.

**Preset:** the operator sets a fueling position for an amount, and presses the **AUTH** button. The customer has not paid any money, so when the customer hangs the nozzle up, he must pay the operator before the sale can be made final.

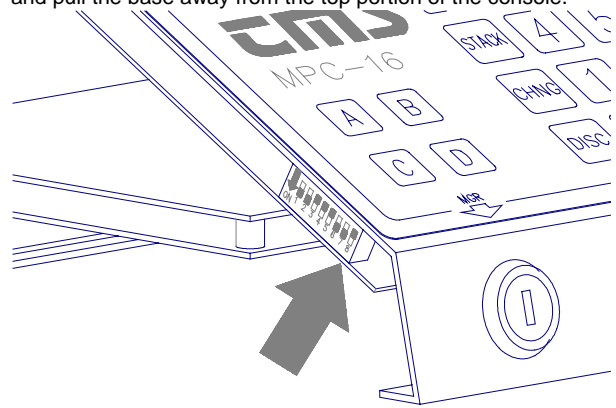
**Post-pay:** the amount of fuel dispensed is entirely up to the customer. The operator pre-authorizes the sale for fill-up.

**Stacking:** allows the operator to re-authorize a sale for a second customer while waiting for the first customer to pay.

**Two -tier:** the cash and credit prices per gallon are not the same.

**Single tier:** there is no difference between the cash and credit price per gallon.

The 8 position dip switch is located at the lower left corner of the console near where the A,B,C, and D product buttons are (see figure 6), on the inside of the console. To gain access to the console dipswitch, remove the four rubber feet on the underside of the console and pull the base away from the top portion of the console.



**Figure 6**  
TMS MPC Console Dipswitch

### **PROGRAMMING HINTS:**

Program the console by using one finger from each hand.

To select a programming or totals MODE, hold SEL while pressing the first, then the second digit of the desired MODE on the DATA ENTRY keypad. Do not press the SEL button again until another MODE number or operating mode is desired.

**Never HOLD an A, B, C, or D product button.**

The MANAGER keyswitch must be turned ON (horizontal) before the console will allow data changes.

DEFINITIONS:

## HOW TO PROGRAM THE CONSOLE

### SUGGESTED PROGRAMMING SEQUENCE

The console by utilizing a MODE for each programming operation. The console will not send information to the pumps/dispensers, or operate correctly unless this MODE sequence is followed.

SUGGESTED PROGRAMMING SEQUENCE		
PRIORITY	MODE	ACTION
1	32	Specify Dispenser Type
2	28 or 29	Product Hose to Tank Assignment
3	34	Self or Full Service Operation
4	21-26	Set Prices, Product Codes, and Inventory Levels by Tank
5	30-31	Set Desired Beeper Settings
6	35-36	Set Current Time and Date
7	37	Print Programmed Data Report

### MODE 32 SPECIFY PUMP/DISPENSER TYPE

This is the first and most important step in programming the console. For the console to operate properly, each fueling position must be defined by programming the correct code number into the console's memory. Both sides of an MPD are programmed with the SAME two-digit code.

To program the correct code for each fueling position, follow this procedure:

1. Select MODE 32.
2. Press and HOLD the desired pump select position.
3. Enter the appropriate code:

#### **APS**

Classic 00

#### **Bennett**

With 1 to 3 hoses per side 00  
 With 4 hoses per side 01  
 All Blenders regardless of hoses 02

#### **Gilbarco**

##### **With cash/credit**

Highline, MPD (-A3, -1, -2, -3) 00  
 Advantage hoses assigned 1234 00  
 Advantage hoses assigned 1236 02  
 Advantage hoses assigned 1356 04

##### **Without cash/credit**

Highline, MPD (-A3, -1, -2, -3) 01  
 Advantage hoses assigned 1234 01  
 Advantage hoses assigned 1236 03  
 Advantage hoses assigned 1356 05

#### **Mechanical**

With 2.5:1 pulse ratio 06  
 With 1:1 pulse ratio 07  
 With 1:10 pulse ratio 08  
 With 1:100 pulse ratio 09

#### **Tokheim**

162 and 262A single price display 00  
 TCS, TCSA Premier, 262A (2 display)03  
 TCS, TCSA Premier Blender 21  
 Blender reversed plumbed 22

### MODE 28 AND 29 - TANK TO PRODUCT HOSE ASSIGNMENT

The plumbing from the tanks to the pumps/dispensers determines what grade is dispensed through a product hose.

MODE 28 allows the assignment of product hoses to tanks by individual fueling positions (single, and multi-hose pumps/dispensers). When controlling single-hose fueling positions (including mechanical), or a combination of single and multiple hose fueling positions, use MODE 28.

MODE 29 programs all "A" product hoses of every fueling position to the same tank (station wide), all of the "B" product hoses to another, and so on. Use MODE 29 only if all fueling positions are MPD's, and all are plumbed the same way. If the fuel from "like" product hoses is not from the same tank, use MODE 28.

#### **NOTE:**

The blended product (B product) of Blender fueling positions must be assigned to a "dummy" tank to allow pricing by tank, and for a product code and grade total to show on receipts and reports.

### MODE - 28 ASSIGN PRODUCT HOSES TO A TANK BY INDIVIDUAL FUELING POSITIONS

To assign individual fueling positions and product hoses to a tank, follow this procedure:

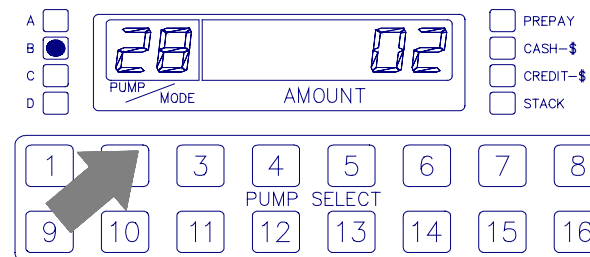
1. Select MODE 28.
2. Press and HOLD the desired pump select button.
3. Press the corresponding hose/product (A, B, C, and D) button.
4. Enter the tank number (1 through 6) on the DATA ENTRY keypad.
5. Press CHNG button.
6. Repeat steps 3 and 5 for all hoses at that fueling position.
7. Release pump-select button.
8. Repeat steps 2 through 6 for each fueling position.

### MODE - 29 ASSIGN PRODUCT HOSE GROUPS TO A TANK

To assign product hose groups to a tank, follow this procedure:

1. Select MODE 29.
2. Press the corresponding product (A, B, C, and D) button.
3. Enter the tank number (1 through 6) on the DATA ENTRY keypad.
4. Press CHNG button.
5. Repeat steps 2 through 4 for each product hose.

Figure 7 illustrates the display window just before the CHNG button is pressed when programming fueling position 2, product hose B to tank 2. The MODE is 28, and the second hose (B) dispenses grade 2.



**Figure 7**  
Programming information in MODE 28

**MODE 34 - PROGRAM SELF OR FULL SERVICE OPERATION BY FUELING POSITION**

**IMPORTANT!**

If some positions are to be set to full service operation, this procedure must be done before tank prices are entered in MODES 21 through 26.

All consoles are shipped from the factory set for self-service operation. In self-service operation, the operator must authorize the fueling position before fuel can be dispensed. When a call signal is received from a full service fueling position, the console automatically sends an authorize signal, and will automatically "pay the sale out" after the nozzle is hung up. No operator actions are required for positions programmed for full service.

To program one or more fueling positions for full service operation, follow this procedure:

1. Select MODE 34.
2. Press and HOLD the desired pump select position.
3. Enter either:
  - 00 = self service (default)
  - 01 = full service
4. Press CHNG button.
5. Release pump select button.
6. Repeat steps 2 through 5 for each fueling position.

**REMEMBER:**

The manager's keyswitch must be in the ON (horizontal) position before programmed data can be entered.

**MODES 21 THROUGH 26 - SET PRICES, PRODUCT CODES, AND INVENTORY LEVELS BY TANK**

Programming prices by tank (or grade) sends the prices to every fueling position assigned to the tank selected in step 1 below, and allow assigning a product (name) code and a declining inventory to a tank (or grade).

**NOTE:**

Self, or full-service settings must **NOT** be changed after price programming!

To program information by tank, follow these steps:

1. Select the appropriate MODE for the desired tank.
  - MODE 21 = tank 1
  - MODE 22 = tank 2
  - MODE 23 = tank 3
  - MODE 24 = tank 4
  - MODE 25 = tank 5
  - MODE 26 = tank 6
2. Press the A, B, C, D buttons at the bottom left corner of the console to assign the following information to the tank selected in step 1:
  - "A" = tank's SELF SERVICE PRICE
  - "B" = tank's FULL SERVICE PRICE
  - "C" = tank's PRODUCT CODE (NAME)
  - "D" = DECLINING TANK INVENTORY

To program the **SELF SERVICE PRICE**, press and release the **A button** (the A light turns on).

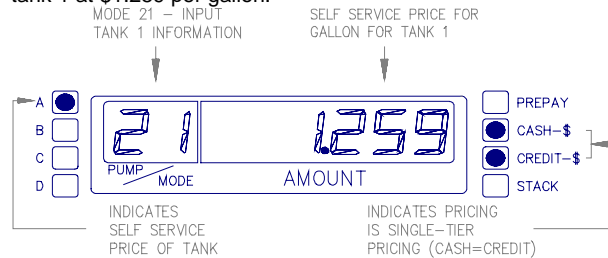
- \* For **SINGLE TIER** pricing (both CASH and CREDIT lights on):
  - a) Enter the price per gallon.
  - b) Press the CHNG button (all lights turn off).

\* For **TWO TIER** pricing:

- a) Press CASH PAID button (CASH lights turns on).
- b) Enter cash price per gallon.
- c) Press CHNG button (all lights turn off).
- d) Press "A" product button (A light turns back on).
- e) Press CREDIT PAID button (CREDIT light turns on).
- f) Enter credit price per gallon.
- g) Press CHNG button (all lights turn off).

To program the **FULL SERVICE PRICE** (skip this step if all of the fueling positions are self service), press and release the **B button** (B light turns on) and follow the same steps explained under self service pricing by tank.

Figure 8 illustrates the display window just before the CHNG button is pressed when programming the single tier, SELF SERVICE price of tank 1 at \$1.259 per gallon.



**Figure 8**

Programming information in MODE 21

To program the **PRODUCT CODE**, press and release the **C button** (C light turns on), and refer to the list of Product codes below to assign the name of fuel to the tank.

- a) Enter the appropriate two-digit code
- b) Press CHNG button.

PRODUCT CODES			
Code	Description	Code	Description
00	BLANK	28	PREMIUM UNLEADED
01	GASOLINE	29	EXTRA UNLEADED
02	REGULAR	30	XTRA UNLEADED
03	PREMIUM	31	SUPER UNLEADED
04	SUPER	32	LEADED
05	SUPREME	33	LEADED GASOLINE
06	EXTRA	34	LEADED PREMIUM
07	XTRA	35	REGULAR LEADED
08	SILVER	36	PREMIUM LEADED
09	ULTIMATE PREMIUM	37	DIESEL
10	NO LEAD	38	AUTO DIESEL
11	MIDGRADE NO LEAD	39	HWY. DIESEL
12	SUPER NO LEAD	40	NON-HWY. DIESEL
13	NO LEAD PLUS	41	KEROSENE
14	LEAD FREE	42	K1 KEROSENE
15	LEAD FREE PLUS	43	HYDRAULIC OIL
16	LEAD FREE EXTRA	44	JET FUEL
17	LEAD FREE XTRA	45	AVGAS
18	LEAD FREE SUPER	46	#2 HEATING OIL
19	UNLEADED	47	TURBINE OIL
20	UNLEADED GAS	48	PROPANE
21	UNLEADED REGULAR	49	CNG
22	UNLEADED EXTRA	50	METHANOL
23	UNLEADED XTRA	51	ETHANOL
24	UNLEADED PLUS	52	M85
25	UNLEADED PREMIUM	53	GASOHOL
26	UNLEADED SUPER	54	LNG
27	REGULAR UNLEADED	55	LP

To enter the **PRESENT TANK LEVEL** (in gallons) press the **D button** (D light turns on).

- a) Enter the measured volume amount.
  - b) Press the CHNG button.
6. Repeat steps 1 and 2 for all tanks in use.

### **MODE 30 AND 31 - BEEPER SETTINGS FOR THE CALL AND COLLECT**

The console acknowledges a button on the keypad being pressed by emitting an audible beep. The console can be programmed to utilize this "beeper" to alert the operator that a customer has lifted the nozzle and is requesting authorization (call), or that a customer has finished fueling and the sale needs to be finalized (collect).

To change the call and collect beeps from a repeating beep (default), to a single beep, or no beep at all, follow these steps:

1. Select the appropriate MODE:  
  
MODE 30 = The CALL beeper  
MODE 31 = The COLLECT beeper
2. Enter the desired setting.  
  
00 = repeating beep (default)  
01 = for a single beep  
02 = no beep
3. Press the CHNG button.

### **MODES 35 AND 36 - SET/DISPLAY THE TIME AND DATE**

The console has an internal time clock that allows it to print the correct time and date on all receipts and reports. The time will periodically need to be changed to accommodate Daylight Savings Time, or initially if the console is installed in a time zone other than Eastern.

The time (MODE 35) must be entered in Military time. For example, to set the time for 9:00 AM, enter 0900; for 9:00 PM, enter 2100. The date (MODE 36) must be entered as a six-digit number. Use the following format MM:DD:YY. For example, September 22, 1994 would be entered as 092294; for December 31, 1994, enter 123194. The time will appear in the standard format on all receipts and reports.

### **MODE 35 - VIEW, OR SET THE CONSOLE'S TIME CLOCK**

To view the time:

1. Select MODE 35.

To set the console's time clock, follow these steps:

1. Select MODE 35.
2. Enter the time in Military fashion.
3. Press CHNG button.

### **MODE 36 - VIEW, OR SET DATE IN THE CONSOLE**

To view the date:

1. Select MODE 36.

To set the date, follow these steps:

1. Select MODE 36.
2. Enter the date as a six-digit number.
3. Press CHNG button.

### **MODE 37 - PRINT PROGRAMMED DATA REPORT**

If a printer is installed, this printout will confirm data programmed into the console's memory, and that the dipswitches are set correctly.

The console is now ready to control the pumps/dispensers. If communication or operational problems occur, review the suggested programming sequence starting on page 8 of this book and the pump/dispenser's program/start-up guide.

### **REMAINING PROGRAMMING OPTIONS**

Refer to page 13 for a complete list of modes, and their descriptions.

The remaining programming options available with the TMS-MPC console are as follows:

- MODE 38 Automatic/Manual Receipt Printing
- MODE 39 Slowdown Point of Mechanical Positions
- MODE 42 Customize Shift Reports
- MODE 43 Customize Manager's Report
- MODE 50 Specify Accumulating Totals Type
- MODE 51-52 Enter Money Totalizer Amounts
- MODE 53-54 Enter Volume Totalizer Amounts
- MODE 98 Enter Receipt Header Information

### **REMEMBER:**

Press the SEL button to exit any programming or totals MODE.

**MPC MODE REFERENCE GUIDE**

Function	Mode	Description	Page
Display & Control	1-16	Display Current Sale & Control Fueling Positions	14
	40	Change Shifts	23
Programming (Manager Key Req'd)	18	Assign Prices By Individual Fueling Position	14
	21	Tank 1 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	22	Tank 2 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	23	Tank 3 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	24	Tank 4 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	25	Tank 5 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	26	Tank 6 Program Data (Self or Full-Service Price, Grade Name, and Inventory Level)	10
	28	Assign Tanks to Hoses by Individual Fueling Position	9
	29	Assign Tanks to Hose Group	9
	30	Audio Alert (beeper) for the CALL Light	11
	31	Audio Alert (beeper) for the COLLECT Light	11
	32	Specify Pump/Dispenser Type By Individual Fueling Position	8
	34	Specify Full Service Operation By individual Fueling Position	9
	35	View or Set the TIME	11
	36	View or Set the DATE	11
	38	Specify Automatic Receipt Printing	15
	39	Set Slow Down Point For Mechanical Fueling Positions (Station Wide)	16
	42	Customize Shift Reports	16
	43	Customize Manager's Report	16
	50	Specify Accumulating Totals Method	17
	51	Enter Mechanical Totalizer Money Amounts By Individual Fueling Position (5 Least Significant)	19
	52	Enter Mechanical Totalizer Money Amounts By Individual Fueling Position (5 Most Significant)	19
	53	Enter Mechanical Totalizer Volume Amounts By Individual Fueling Position (5 Least Significant)	19
54	Enter Mechanical Totalizer Volume Amounts By Individual Fueling Position (5 Most Significant)	19	
98	Program Printer Receipt Heading (Store Name, Address, Phone Number Etc...)	20	
Display	51	Display Mechanical Totalizer Money Amounts By Individual Fueling Position (5 Least Significant)	25
	52	Display Mechanical Totalizer Money Amounts By Individual Fueling Position (5 Most Significant)	25
	53	Display Mechanical Totalizer Volume Amounts By Individual Fueling Position (5 Least Significant)	25
	54	Display Mechanical Totalizer Volume Amounts By Individual Fueling Position (5 Most Significant)	25
	60	Current Shift Cash & Credit Sales Total*	23
	63	Current Shift Volume Total*	23
	64	Current Shift Tank Usage**	23
	65	Current Shift Start Time	23
	66	Current Shift Start Date	23
	70	Previous Shift Cash & Credit Sales Total*	24
73	Previous Shift Volume Total*	24	
74	Previous Shift Tank Usage**	24	
75	Previous Shift Start Time	24	
76	Previous Shift Start Date	24	
Print	27	Print Current Declining Tank Inventory Balance	
	37	Print Programmed Data Report	
	41	Print Manager's Totals/Sales Report	
	47	Print Available Product Names and the Corresponding Code Numbers	
	57	Print Accumulating Totals Report	
	67	Print Current Shift Sales Report	
	77	Print the Previous Shift Sales Report	
	87	Print the 2nd Previous Shift Sales Report	
	97	Print the 3rd Previous Shift Sales Report	
99	Print a List of Available MODES and Their Descriptions		

\* View individual fueling position totals by selecting the desired MODE, and either:  
 HOLD a PUMP SELECT button for single product fueling positions.  
 HOLD a PUMP SELECT button, then PRESS an A,B,C, or D PRODUCT button for multi-product fueling positions.

\*\* To view real tank usage select the desired MODE, HOLD the tank number on the DATA ENTRY keypad, then HOLD the VOL button.

## MODE DEFINITIONS IN NUMERICAL SEQUENCE

### MODES 1 THROUGH 16 - FUELING POSITION DISPLAY

The current money amount for sales in progress, or waiting to be finalized for each fueling position is displayed when the corresponding PUMP SELECT button is pressed. Hold the VOL button while a fueling position is displayed to view the volume amount for the sale.

### MODE 17 - VIEW THE LAST PAID OUT SALE

The console displays the money and volume amounts for the last paid-out sale.

To display the last paid out sale, follow these steps.

1. Select MODE 17.
2. Press and hold the desired pump select number.
3. While holding pump select number, press the VOL button to display the volume amount for that sale.
4. Repeat steps 2 and 3 as needed.

#### **NOTE:**

Selecting the desired fueling position, and pressing print can print the same information. The printer will always print the last paid-out sale.

### MODE 18 - SET PRICES BY FUELING POSITION AND HOSE

Setting the tank to product hose assignments in MODE 28 or 29, then programming the prices by tank in MODES 21 through 26 (see page 10) is more efficient means of maintaining prices per gallon. MODE 18 allows pricing by individual fueling position and product hose.

To set prices by fueling position and product hose, follow these steps:

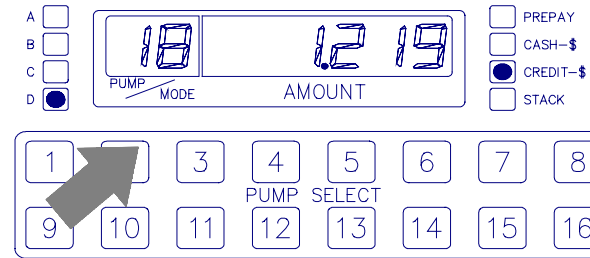
\* SINGLE TIER (cash and credit the same) pricing:

1. Select MODE 18.
2. Press and HOLD the desired pump select button.
3. Press and release the corresponding product hose (A, B, C, and D) button.
4. Enter the price per gallon for the product hose desired on the DATA ENTRY keypad.
5. Press CHNG button.
6. Repeat steps 3 through 5 for all product hoses at that fueling position.
7. Release pump select button.
8. Repeat steps 2 through 7 for each fueling position.

\* TWO TIER (cash and credit different) pricing:

1. Select MODE 18.
2. Press and HOLD the desired pump select position.
3. Press and release the corresponding product hose (A, B, C, and D) button.
4. Press the CASH PAID button.
5. Enter the cash price per gallon for the product hose desired on the DATA ENTRY keypad.
6. Press CHNG button.
7. Press the same product button again.
8. Press the CREDIT PAID button.
9. Press CHNG button.
10. Repeat step 3 through 5 for all product hoses at that fueling position.
11. Release pump select button.
12. Repeat steps 2 through 11 for each fueling position.

pressed when programming the two tier credit, price of \$1.219 per gallon at the fourth (D) hose of fueling position 2.



**Figure 9**

Programming information in MODE 18

### MODES 19 AND 20 - ARE NOT USED

### MODES 21 THROUGH 26 - SET PRICES, PRODUCT CODES, AND INVENTORY LEVELS BY TANK

Programming the console by tank is the quickest and easiest way to set prices for every fueling position, and is the only way to assigning a product (name) code and a declining inventory to a tank. The programming instructions for these MODES are found on page 10.

### MODE 27 - PRINT DECLINING TANK INVENTORY BALANCE

The volume levels of the fuel tanks at the station can be entered into the console's memory by following the instructions for MODES 21 - 26 on page 10. The console will then subtract from these levels as sales are completed. The Declining Tank Inventory report can be printed at anytime a by selecting MODE 27 and pressing the PRINT button. This report will print the amount of fuel left in each tank.

#### **REMEMBER:**

The console does not add fuel to the present tank levels following a product delivery. The new tank levels must be measured, then entered as a total into the console's memory.

### MODE - 28 ASSIGN PRODUCT HOSES TO A TANK BY INDIVIDUAL FUELING POSITIONS

MODE 28 allows the assignment of each fueling position (single, and multi-hose pumps/dispensers) and product hose to a tank. Use MODE 28 when the site contains Single-Hose fueling positions (including mechanical), or a combination of Single and Multiple hose fueling positions. See page 9 for programming instructions for MODE 28.

### MODE - 29 ASSIGN PRODUCT HOSE GROUPS TO A TANK

MODE 29 programs all of the "A" product hoses of every fueling position to the same tank, all of the "B" product hoses to another, and so on. Use MODE 29 only if all fueling positions are MPD's, and all are plumbed the same way. If all of the "like" product hoses are not the same, use MODE 28. See page 9 for programming instructions for MODE 29.

### MODES 30 AND 31 - BEEPER SETTINGS FOR THE CALL AND COLLECT

The console acknowledges a button on the keypad being pressed by emitting an audible beep. The console can be programmed to utilize this "beeper" to alert the operator that a customer has lifted the nozzle and is requesting authorization (call), or a customer has finished fueling and the sale needs to be finalized (collect). The call and collect beeps can be changed from a repeating beep (default), to a single beep, or no beep at all. See instructions for this MODE on page 11.

### MODE 32 - SPECIFY PUMP TYPE

For the console to operate properly, each fueling position must be defined by programming the correct code number into the console's memory. See page 8 for set up sequence and MODE 32 instructions.

### MODE 33 - IS NOT USED

Figure 9 illustrates the display window just before the change button is

### **MODE 34 - PROGRAM SELF OR FULL SERVICE OPERATION BY FUELING POSITION**

All consoles are shipped from the factory set for self-service operation. Using MODE 34, each fueling position can be set to self or full service operation. In self-service operation, the operator must authorize the fueling position before fuel can be dispensed. When a call signal is received from a full service fueling position, the console automatically sends an authorize signal, and will automatically "pay the sale out" after the nozzle is hung up. No operator actions are required for positions programmed for full service. See page 9 for MODE 34 instructions.

### **MODES 35 AND 36 - SET/DISPLAY THE TIME AND DATE**

The console has an internal time clock that allows it to print the correct time and date on all receipts and reports. The time will periodically need to be changed to accommodate Daylight Savings Time, or initially if the console is installed in a time zone than the Eastern. See page 11 for instructions to set the time or the date in the console.

### **MODE 37 - PRINT PROGRAMMED DATA REPORT**

If a printer is installed, this printout will confirm data programmed into the console's memory, and that the dipswitches are set correctly. A printer can be ordered at any time to allow printing of MODE instructions, reports, and receipts.

### **MODE 38 - MANUAL OR AUTOMATIC RECEIPT PRINTING**

The console can be set to automatically print a receipt when a sale is paid-out. Normally, a receipt for the last paid out sale (for the fueling position selected) is printed by the operator manually pressing the print button. If the console is programmed for auto-print operation, when a post-pay sale is finalized by the operator, or when a prepay or full service sale is completed, the console will automatically print a receipt.

To program the console for automatic, or back to manual receipt printing, follow these steps:

1. Select MODE 38.
2. Enter the desired setting:  
  
00 = manual (default)  
01 = automatic
3. Press CHNG button.

### **MODE 39 SET VALVE SLOWDOWN POINT (OF MECHANICAL PUMPS/DISPENSERS ONLY)**

The valve slowdown point is designed to slow the delivery rate of fuel to a speed that allows the console to de-authorize a hose when it reaches the pre-set, or pre-paid amount. The amount set in MODE 39 (01 to 99, expressed in pennies) determines how far in advance the console will "turn off" the main valve, to slow the rate of fuel. This solves the problem of preset, or prepay sales over-running the predetermined amount only if slow and fast valves are present, and connected to the TMS system. If sales over-run, the slowdown point amount needs to be increased, typically by the amount of the over-run.

The console does not set the slowdown point of electronic pumps/dispensers.

To set, or change the valve slowdown point (of mechanical positions only), follow these steps:

1. Select MODE 39.
2. Enter a number between 01 and 99 (default = 15).
3. Press the CHNG button.

### **MODE 40 - CHANGE SHIFTS**

MODE 40 resets the totals for present shift to zero, moves those totals to the previous shift, and if printer is connected with both green lights ON, prints the report. See instructions for MODE 40 are found on page 23.

### **MODE 41 - MANAGER'S REPORT**

The manager's report prints the completed sales that accumulated from the initial start-up, or the time the report was last printed and **reset to zero**. The manager's report can be printed, or reset to zero after the report prints at any time. This report cannot be accessed without a printer. See instructions for MODE 41 are found on page 24.

### **MODES 42 AND 43 - CUSTOMIZE REPORT PRINTOUTS**

The console stores in its memory, a wide variety of totals for the shift and manager's reports, that summarize the volume of fuels dispensed and their corresponding money amounts. The user can choose to print the information, in any order desired, or not at all. The console comes set from the factory to print all of the information ON ALL SHIFT REPORTS AND THE MANAGER'S REPORT.

To customize the reports, follow these steps:

1. Select the desired mode.  
  
MODE 42 = SHIFT REPORTS  
MODE 43 = MANAGER'S REPORT
2. Enter the desired single digit code numbers in the order they should appear on the customized reports (The digits will shift from right to left on the AMOUNT side of the display).  
  
1 = STATION TOTALS  
2 = TANK ACTIVITY  
3 = GRADE ACTIVITY  
4 = PUMP TOTALS
3. Press the CHNG button.

Example:

1. If the SHIFT REPORTS should print GRADE ACTIVITY (3), TANK ACTIVITY (2), then STATION TOTALS (1), but not PUMP TOTALS, MODE 42 would show "\_\_\_321" in the AMOUNT side of the display.
2. If PUMP TOTALS (4) was the only information desired on the MANAGER'S REPORT, MODE 43 would show "\_\_\_\_4" in the right most position in the AMOUNT side of the display.

Again, the reports can print the above information in any order desired.

### **MODE 44 THROUGH 46 - NOT USED**

### **MODE 47 - PRINTS LIST OF AVAILABLE TANK PRODUCT CODES**

Use the list of available product codes to assign a name to the fuel dispensed. See instructions for MODES 21 THROUGH 26 on page 10 to program the product codes to a tank.

### **MODE 48 AND 49 - NOT USED**

**MODE 50 - SPECIFY ACCUMULATING TOTALS TYPE BY FUELING POSITION**

The ACCUMULATING TOTALS, displayed in MODES 51 through 54 and printed in MODE 57, are expressed in both money and volume amounts, and represent a grand total of all sales combined. These values are totaled by using one of two methods. The user can choose the console accumulating method (default), where the console maintains the totals by adding individual sale amounts, or the pump totalizer method where the console retrieves the hose totals stored at the pump/dispenser.

If the user chooses the **console accumulating method**, there are three ways the user can maintain the accumulating totals.

1. The user can enter the MECHANICAL TOTALIZER readings (see instructions for MODES 51 through 54 on pages 18 and 19), and avoid having to manually record the readings at the pump/dispenser. The console will add the sale amounts (money and volume) to the totals as sales are completed to approximate the readings on the mechanical totalizers.

**NOTE:**

On Mechanical fueling positions, the volume amounts are calculated by dividing the number of pulses received from the money pulser, by the price per gallon programmed in the console's memory. The readings on the totalizers should be read and verified against the console on a regular basis, and any differences should be corrected at the console.

2. The user can enter the ELECTRONIC TOTALIZER readings. The console will add the sale amounts (money and volume) to the readings input as sales are completed to match the readings on the electronic totalizers. Again, the user can avoid having to manually record the readings at the pump/dispenser.

3. The user can choose to not input any totals into the console's memory, allow the totals to start at zero, and accumulate.

If the user sets the console for the **pump totalizer method**, to read the pump/dispenser's electronic totalizers, the totals can not be reset, and the amounts displayed in MODES 51-54 and printed on the MODE 57 report are determined by the pump/dispenser.

To choose the console, or pump/dispenser accumulating method for each fueling position, follow these steps:

1. Select MODE 50.
2. Press and hold the desired fueling position on the PUMP SELECT keypad.
3. Enter the desired two-digit code:
  - 00 = Console accumulating (DEFAULT)
  - 01 = Pump/dispenser accumulating
4. Press the CHNG button.
5. Release the PUMP SELECT button
6. Repeat steps 2 through 5 as needed.

**MODES 51 THROUGH 54 ENTER ACCUMULATING TOTALS**

The console can display a limited amount of digits in the amount side of the window, so the accumulating totals have been divided.

**MONEY:**

MODE 51 displays the five LEAST SIGNIFICANT digits, while MODE 52 displays the five MOST SIGNIFICANT digits of the money total.

**VOLUME:**

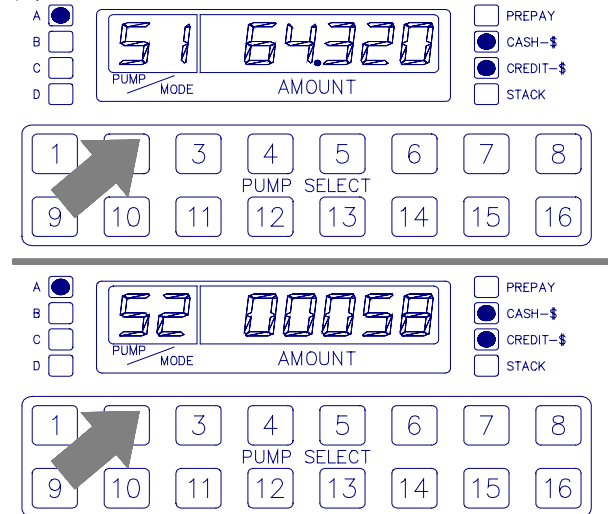
MODE 53 displays the five LEAST SIGNIFICANT digits, and MODE 54 displays the volume total's five MOST SIGNIFICANT digits.

The maximum money amount that the console can show is \$9,999,999.990 (up to ten digits). MODE 52 shows \$9,999.9 and MODE 51 shows 99.990. The maximum volume total the console can show is 9,999,999.900. MODE 54 would show 9,999.9 and MODE 53 would show 99.900.

The amounts on the totalizers can be noted, then entered into the console's memory in MODES 51 through 54, to show or print a money or volume total for each fueling position by product hose. Use the following examples.

**Example:**

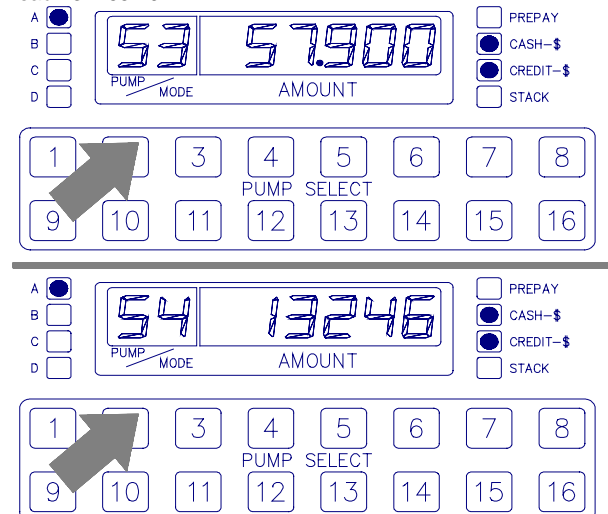
Figure 10 shows the total that would be displayed in MODES 51 and 52 for the first hose (A) at fueling position 2, if the money totalizer read \$5,864.32.



**Figure 10**

**Example:**

Figure 11 shows the total that would be displayed in MODES 53 and 54 for the first hose (A) at fueling position 2, if the volume totalizer read 1324657.9.



**Figure 11**

**REMEMBER:**

The totalizer readings can be input only if the "console accumulating" method was chosen in MODE 50.

**NOTE:**

At the pump/dispenser, the money totalizer displays two digits, and the volume totalizer displays one digit to the right of the decimal point (in BLACK); the console shows three digits to the right of the decimal point. Enter zeros in the third, or the second and third places to the right of the decimal point when entering amounts from the totalizers into the console's memory.

To enter the totalizer readings, follow these steps:

1. Select the desired MODE:
  - 51 = least significant \$ TOTAL (last 5 digits)
  - 52 = most significant \$ TOTAL (first 5 digits)
  - 53 = least significant VOLUME TOTAL (last 5)
  - 54 = most significant VOLUME TOTAL (first 5)
2. Press and HOLD the desired pump select position.
3. Press and release the desired product (A, B, C, and D) button.
4. Use the DATA ENTRY keypad to enter the corresponding readings for the MODE, fueling position, and product hose selected.
5. Press CHNG button.
6. Repeat steps 3 and 4 for all product hoses at that fueling position.
7. Release pump select button.
8. Repeat steps 2 through 6 for each fueling position as needed.

**MODES 55 AND 56 ARE NOT USED****MODE 57 ACCUMULATING TANK AND GRADE ACTIVITY, AND HOSE TOTAL READINGS REPORT**

This MODE delivers a report that shows an accumulating totals report when the PRINT button is pressed. The user can define the information printed by reading the definitions and instructions for MODE 50 and MODES 51 through 54.

**MODES 58 AND 59 ARE NOT USED****MODES 60 THROUGH 66 DISPLAY PRESENT SHIFT TOTALS**

The 60's MODES display the totals for the sales that are completed during the present/current shift totals.

**NOTE:**

The present shift report prints the completed sales that accumulated from the initial start-up, or from the last shift change (printed and **reset to zero** using MODE 40). The present shift report can be printed, or reset to zero after the report prints at any time (see instructions for MODE 40 on page 23)

To print these totals on a report, Select MODE 67 for the current shift, then press the PRINT button.

The following is a list of the CURRENT SHIFT MODES and their description:

**MODE 60** Display the grand total of the cash and credit sales.

**MODES 61 AND 62 ARE NOT USED**

**MODE 63** Display the grand total of the volume dispensed.

**MODE 64** Display the total volume pumped from each real tank.

**NOTE:**

The "DUMMY" tank(s) always read zero. Grade totals are available on printed reports only.

**MODE 65** Display the time the current-shift started.

**MODE 66** Display the date the current-shift started.

**MODE 67 PRINT THE CURRENT SHIFT TOTAL REPORT**

This report can be printed at anytime, to check the current shift sales data of the fuel dispensed.

**MODES 68 And 69 ARE NOT USED****MODES 70 THROUGH 76 DISPLAY PREVIOUS SHIFT TOTALS**

The 70's MODES display the previous shift totals in the same format explained for MODES 60 through 66. This information can be printed in MODE 77.

**MODE 77 PRINT THE PREVIOUS SHIFT TOTAL REPORT**

This report can be printed at anytime, to review the previous shift sales data of the fuel dispensed.

**MODES 78 THROUGH 86 ARE NOT USED****MODE 87 PRINT THE SECOND PREVIOUS SHIFT TOTALS**

This report can be printed at anytime, to review the second previous shift sales data of the fuel dispensed.

**MODES 88 THROUGH 96 ARE NOT USED****MODE 97 PRINTS THE THIRD PREVIOUS SHIFT TOTALS**

This report can be printed at anytime, to review the third previous shift sales data of the fuel dispensed.

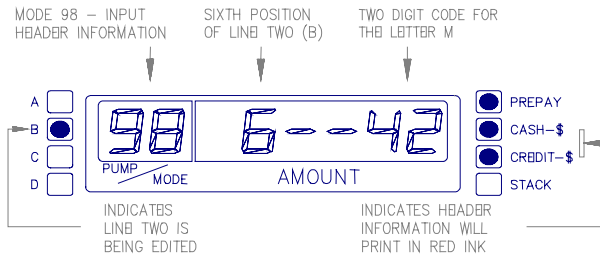
**MODE 98 PROGRAM THE RECEIPT HEADER INFORMATION**

The print header consists of four lines, A, B, C, and D. While programming the header, the corresponding status lights on the console indicate which line of the header is being edited, the left most digit in the amount side of the window shows the position within the line, and the two right most digits shows the character code.

Repeatedly pressing the product (A, B, C, D) buttons alternates between large letters (light blinks), and regular sized letters (light stays on). The maximum number of letters per line is, for regular sized letters, 38, and for large letters 19.

Repeatedly pressing the PUMP STOP button alternates from the header printing black (prepay, cash, and credit lights OFF), to printing red (prepay, cash, and credit lights ON).

After entering the desired two-digit code, press the AUTH button to advance to the next position within the line. Press the AUTH button without entering a code (00) to enter a space within the line.



**Figure 12**

Pressing the CHNG button enters the programmed information into the console's memory, and will cause the header to print on receipts and reports.

Press the DISC button to stop printing the header without losing the programmed information. Press the CHNG button again to resume printing the header.

**PROGRAMMING HINT:**

Use the HEADER CODE chart, and figure 13 on the next page, and for each line in the header message, write down the complete header with the corresponding two -digit code written above each letter.

To enter the print header information into the console's memory, follow these steps:

1. Select MODE 98.
2. Press the product button for the desired line number:
  - A = line 1
  - B = line 2
  - C = line 3
  - D = line 4
3. Press the product button again to print this line in large letters.
4. Enter the desired two-digit code from the chart on the next page.
5. Press the AUTH button.
6. Repeat steps 3 and 5 until the information on the line is entered.
7. Repeat steps 2 through 6 until the whole header has been entered.
8. Press the CHNG button.

HEADER CODES					
Code	Equals	Code	Equals	Code	Equals
00	SPACE	19	@	38	I
01	1	20	,	39	J
02	2	21	.	40	K
03	3	22	!	41	L
04	4	23	?	42	M
05	5	24	;	43	N
06	6	25	:	44	O
07	7	26	"	45	P
08	8	27	'	46	Q
09	9	28	[	47	R
10	0	29	]	48	S
11	(	30	A	49	T
12	)	31	B	50	U
13	-	32	C	51	V
14	/	33	D	52	W
15	#	34	E	53	X
16	{	35	F	54	Y
17	}	36	G	55	Z
18	&	37	H		

**MODE 99 - PRINT LIST OF AVAILABLE MODES**

Select MODE 99 and press the PRINT button to print a list of available MODES and their descriptions. Select any other MODE and press the PRINT button and details, or instructions for that MODE will print.

## HOW TO OPERATE THE CONSOLE

### REMEMBER:

The console is shipped from the factory, with both prepaid and postpaid sales allowed, stacking is disallowed, single tier pricing structure, and correctly configured as ordered from the factory (8 or 16 fueling positions). The user can change these settings by setting the dipswitches described on page 7. Two Tier pricing implies that the Cash and Credit prices are different. Single tier states the cash and credit prices for fuel are the same.

A flashing light above a fueling position number indicates that a customer has picked up a hose and turned the handle on. The operator must authorize that fueling position before the customer can pump fuel. When authorized, the light for that fueling position changes to constantly on.

A flashing light below a fueling position number indicates a customer has hung a hose up, and the post-pay sale is waiting to be finalized. If a light under a fueling position number stays on, a present and a stacked sale (two sales at one position) are waiting to be finalized.

### DEFINITIONS:

**Prepay:** a customer pays for a specific amount of fuel before pumping. the operator sets the fueling position for that amount, presses the **PAID**, then the **AUTH** button. The operator makes no further steps.

**Preset:** the operator sets a fueling position for an amount, and presses the **AUTH** button. The customer has not paid any money, so when the customer hangs the nozzle up, he must pay the operator before the sale can be made final.

**Post-pay:** the amount of fuel dispensed is entirely up to the customer. The operator authorizes the sale for fill-up.

**Stacking:** allows the operator to re-authorize a sale for a second customer while waiting for the first customer to pay.

**Two-tier:** the cash and credit prices per gallon are not the same.

**Single tier:** there is no difference between the cash and credit price per gallon.

### HOW TO COMPLETE POST-PAY (FILL UP) SALES

To complete POST-PAY sales, follow these steps:

1. Press the desired PUMP SELECT button.
2. Press the AUTH button.
3. Wait for the customer to hang the nozzle up and pay for the amount of fuel dispensed.
4. Press the DISC button to toggle between the cash and credit value of the sale, when two-tier pricing is used.
5. When the desired value shows in the amount side of the window, press the corresponding CASH PAID, or CREDIT PAID button.
6. Press the print button to print a customer receipt if an optional printer is present.
7. Repeat steps 1 through 6 as needed.

### HOW TO COMPLETE PRESET SALES

To complete PRESET sales, follow these steps:

1. Press the desired PUMP SELECT button.
2. Enter the requested amount using the DATA ENTRY keypad.
3. Press the AUTH button.
4. Wait for the customer to hang the nozzle up and pay for the amount of fuel dispensed.
6. Press the DISC button to toggle between the cash and credit value of the sale, when two-tier pricing is used.
7. When the desired value shows in the amount side of the

window, press the corresponding CASH PAID, or CREDIT PAID button.

8. Press the print button to print a customer receipt if an optional printer is present.
9. Repeat steps 1 through 8 as needed.

### HOW TO COMPLETE PREPAY SALES

To complete PREPAY sales, follow these steps:

1. Press the desired PUMP SELECT button.
2. Enter the requested amount using the DATA ENTRY keypad.
3. Press either the CASH PAID, or the CREDIT PAID button.
4. Press the AUTH button.
5. Repeat steps 1 through 4 as needed.

If the customer does not receive the full pre-paid amount, press the CHNG button to view the change due, then press the appropriate PAID button.

### COMPLETING SALES WITH STACKING ALLOWED

To complete stacked sales, follow these steps:

1. Press the desired fueling position PUMP SELECT button.
2. Press the STACK button to alternate between the current and stacked sale.
3. Press the DISC button to toggle between the cash and credit value of the sale, when two-tier pricing is used.
4. When the desired value shows in the amount side of the window, press the corresponding CASH PAID, or CREDIT PAID button.
5. Press the print button to print a customer receipt if an optional printer is present.
6. Press the STACK button, or another PUMP SELECT button to return to normal operation.

### HOW TO PRINT A RECEIPT

After completing a sale using any method, the console will print a receipt showing the money and volume amounts for the last paid-out sale if the operator PRESSES PRINT button.

### HOW TO STOP PUMPING AT ALL FUELING POSITIONS

Press the red EMER OFF button on the front of the console.

### HOW TO STOP PUMPING AT ONE FUELING POSITION

Press the desired PUMP SELECT button, then press the PUMP STOP button. The customer must return the hose to the pump before the fueling position can be re-authorized.

### HOW TO VIEW THE PREVIOUS PAID-OUT SALE

To display the last paid out sale, follow these steps.

1. Select MODE 17.
2. Press and hold the desired pump select number.
3. While holding pump select number, press the VOL button to display the volume amount for that sale.
4. Repeat steps 2 and 3 as needed.
5. Press the SELECT button to resume normal operation.

### HOW TO CHANGE SHIFTS

This resets the totals for present shift to zero, moves those totals to the previous shift, and prints the report.

To change shifts, follow these steps:

1. Select MODE 40.
2. Press and hold the CHNG button.

### HOW TO VIEW THE PRESENT SHIFT TOTALS

The 60's MODES display the totals for the sales that are completed during the present/current shift totals. To print these totals on a report, Select MODE 67 for the current shift, then press the PRINT button. Review the following list of the CURRENT SHIFT MODES:

**MODE 60** Display the grand total of the cash and credit sales.

**MODE 63** Display the grand total of the volume dispensed.

**MODE 64** Display the total volume pumped from each real tank.

**MODE 65** Display the time the current-shift started.

**MODE 66 65** Display the date the current shift started.

To view the PRESENT SHIFT totals by individual fueling positions and product hoses, follow these steps:

1. Select the desired MODE.  
  
MODE 60 = cash and credit total  
MODE 63 = volume total
2. Press and HOLD the desired PUMP SELECT position.
3. Press and release the desired product (A, B, C, and D) button.
4. Read the information for the MODE, fueling position, and product hose selected.
5. Repeat steps 3 and 4 for all product hoses at that fueling position.
6. Release pump select button.
7. Repeat steps 2 through 6 for each fueling position.

To display real tank volume totals, follow these steps:

1. Select the MODE 64.
2. Hold the desired tank number on the DATA ENTRY keypad.
3. While holding the tank number, press and hold the VOL button to display the volume total for the tank selected.
4. Repeat steps 2 and 3 as needed.

#### NOTE:

The "DUMMY" tank(s) always read zero. Grade totals are available on printed reports only.

### HOW TO DISPLAY THE PREVIOUS SHIFT TOTALS

The 70's MODES display the totals for the sales that were completed during the previous shift. To print these totals on a report, Select MODE 77, then press the PRINT button. Review the following list of the PREVIOUS SHIFT MODES:

**MODE 70** Display the grand total of the cash and credit sales.

**MODE 73** Display the grand total of the volume dispensed.

**MODE 74** Display the total volume pumped from each real tank.

**MODE 74** Display the total volume pumped by tank (grade totals are only reported via the TMS-35 printer).

**MODE 75** The time the previous shift started.

**MODE 76** The date the previous shift started.

To view the PREVIOUS SHIFT totals by individual fueling positions and product hoses, follow these steps:

1. Select the desired MODE.  
  
MODE 70 = cash and credit total  
MODE 73 = volume total
2. Press and HOLD the desired PUMP SELECT position.
3. Press and release the desired product (A, B, C, and D) button.
4. Read the information for the MODE, fueling position, and product hose selected.
5. Repeat steps 3 and 4 for all product hoses at that fueling position.
6. Release pumps select button.
7. Repeat steps 2 through 6 for each fueling position.

To display real tank volume totals, follow these steps:

1. Select the MODE 74.
2. Hold the desired tank number on the DATA ENTRY keypad.
3. While holding the tank number, press and hold the VOL button to display the volume total for the tank selected.
4. Repeat steps 2 and 3 as needed.

#### NOTE:

The second and third shift totals can be printed, but are not accessible through the console's display and can not be viewed.

### HOW TO PRINT/RESET AND PRINT THE MANAGER'S REPORT

The manager's report prints a total of sales. The report starts with the first completed sale, and ends at the time the report is printed and **reset to zero**. The manager's report can be printed, or reset to zero after the report prints, at any time.

To print the manager's report **without resetting** the totals to zero, follow these steps:

1. Select MODE 41.
2. Press the **PRINT** button.

To print the Manager's report **and reset the totals to zero**, follow these steps:

1. Turn the Manager's key switch to the ON (horizontal) position.
2. Select MODE 41.
3. Press the **CHNG** button.

## **HOW TO VIEW THE ACCUMULATING MONEY AND VOLUME TOTALS**

The console can display a limited amount of digits in the amount side of the window, so the accumulating money totals have been divided.

### **MONEY:**

MODE 51 displays the five LEAST SIGNIFICANT digits, while MODE 52 displays the five MOST SIGNIFICANT digits of the money total.

### **VOLUME:**

MODE 53 displays the five LEAST SIGNIFICANT digits, and MODE 54 displays the volume total's five MOST SIGNIFICANT digits.

The maximum money amount that the console can show is \$9,999,999.990 (up to ten digits). MODE 52 shows \$9,999.9 and MODE 51 shows 99.990. The maximum volume total the console can show is 9,999,999.900. MODE 54 would show 9,999.9 and MODE 53 would show 99.900.

The totals displayed in MODES 51 through 54 can be noted, then combined to show a total money or volume total for each fueling position by product hose. These totals can be printed, if a printer has been connected to the console, by selecting MODE 57 and pressing the PRINT button.

To view the accumulating total readings, follow these steps:

1. Select the desired MODE:  
  
51 = least significant MONEY TOTAL  
52 = most significant MONEY TOTAL  
53 = least significant VOLUME TOTAL  
54 = most significant VOLUME TOTAL
2. Press and HOLD the desired pump select position.
3. Press and release the corresponding product (A, B, C, and D) button.
4. Read the information for the MODE, fueling position, and product hose selected.
5. Repeat steps 3 and 4 for all product hoses at that fueling position.
6. Release pump select button.
7. Repeat steps 2 through 6 for each fueling position as needed.

## **RESET MODES 51 THROUGH 54 ACCUMULATING MONEY AND VOLUME TOTALS TO ZERO**

If the console accumulating method was chosen in MODE 50, the money portions of the accumulating totals, MODES 51 and 52, can be reset to zero separately from the volume portions of the accumulating totals, MODES 53 and 54 (this excludes the TANK ACTIVITY shown on the MODE 57 printout).

To reset the accumulating totals to zero, follow this procedure:

1. Select the desired MODE:  
  
51 or 52 = \$ TOTAL  
53 or 54 = VOLUME TOTAL
2. Press and HOLD the "0" (zero) button.
3. Press CHNG button.
4. Repeat steps 1 through 3 as needed.

### **REMEMBER:**

The MANAGER keyswitch must be in the ON position (horizontal) before the console will accept entered or changed programmed data.

## **HOW TO CHANGE THE PRICE PER GALLON BY GRADE**

Changing prices by tank (or grade) sends the prices to every fueling position assigned to the tank selected.

To program information by tank, follow these steps:

1. Select the appropriate MODE for the desired tank.  
  
MODE 21 = tank 1  
MODE 22 = tank 2  
MODE 23 = tank 3  
MODE 24 = tank 4  
MODE 25 = tank 5  
MODE 26 = tank 6
2. Press the product button (A or B) at the bottom left corner of the console.  
  
A = tank's SELF SERVICE PRICE  
B = tank's FULL SERVICE PRICE

\*For **SINGLE TIER** pricing (cash and credit price the same, both the cash and credit lights on):

- a) Enter the price per gallon.
- b) Press the CHNG button (all lights turn off).

\*For **TWO TIER** ( cash price not equal to credit) pricing:

- a) Press CASH PAID button (CASH lights turns on).
- b) Enter cash price per gallon.
- c) Press CHNG button (all lights turn off).
- d) Press "A" product button (A light turns back on).
- e) Press CREDIT PAID button (CREDIT light turns on).
- f) Enter credit price per gallon.
- g) Press CHNG button (all lights turn off).

3. Repeat steps 1 and 2 for each grade as needed.

## **HOW TO CHANGE THE DECLINING TANK INVENTORY BALANCE**

The new tank levels must be measured, then entered as a total into the console's memory.

To enter the new tank inventory balance, follow these steps:

1. Select the appropriate MODE for the desired tank.  
  
MODE 21 = tank 1  
MODE 22 = tank 2  
MODE 23 = tank 3  
MODE 24 = tank 4  
MODE 25 = tank 5  
MODE 26 = tank 6
2. Press the D product button at the bottom left corner of the console.
3. Enter the new level.
4. Press the CHNG button.
5. Repeat steps 1 through 4 as needed.

## **HOW TO PRINT THE DECLINING TANK INVENTORY REPORT**

Select MODE 27 and press the PRINT button.

## **HOW TO PRINT THE PROGRAMMED DATA REPORT**

Select MODE 37 and press the PRINT button.

## **HOW TO PRINT THE ACCUMULATING TOTAL REPORT**

Select MODE 57 and press the PRINT button.

### **HOW TO PRINT THE CURRENT SHIFT TOTAL REPORT**

Select MODE 67 and press the PRINT button. This report can be printed at anytime, to check the current shift sales data of the fuel dispensed.

### **HOW TO PRINT THE PREVIOUS SHIFT TOTAL REPORT**

Select MODE 77 and press the PRINT button. This report can be printed at anytime, to review the previous shift sales data of the fuel dispensed.

### **HOW TO PRINT THE SECOND PREVIOUS SHIFT TOTALS**

Select MODE 87 and press the PRINT button. This report can be printed at anytime, to review the second previous shift sales data of the fuel dispensed.

### **HOW TO PRINT THE THIRD PREVIOUS SHIFT TOTALS**

Select MODE 97 and press the PRINT button. This report can be printed at anytime, to review the third previous shift sales data of the fuel dispensed.

### **SPECIAL NOTES AND HINTS:**

Program the console by using one finger from each hand.

**HOLD** the SEL button to enter any programming or totals MODE.

**PRESS** the SEL button to exit any programming or totals MODE.

**Never HOLD an A, B, C, or D product button.**

The MANAGER keyswitch must be in the ON position (horizontal) before the console will allow data changes.

The CHNG button must be pressed to change or enter data into the console's memory.

The console does not add fuel to the present tank levels following a product delivery. The new tank levels must be measured, then entered as a total into the console's memory.

The blended product (B product) of Blender fueling positions must be assigned to a "dummy" tank to allow pricing by tank, and for a product code and grade total to show on receipts and reports.

The "DUMMY" tank(s) always read zero in totals MODEs and reports.

Grade totals are available on printed reports only.

The STACK light will flash if the fueling position selected has a sale in the stacked position. Press the **STACK** button to view the stacked sale, and the light says on. Press **STACK** again to toggle to the current sale.