



**Water Machine
(AD-820)
Microprocessor User's Manual**

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011994

ADC Part No. 182707

Retain This Manual In A Safe Place For Future Reference

Please read this manual carefully to thoroughly familiarize yourself with the ADC model AD-820 Water Machine Computer (Microprocessor) System features, operational instructions, and programming characteristics.

ADC products embody advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe and trouble-free operation.

We have tried to make this manual as complete as possible and hope you will find it useful. ADC reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, material, and to change or discontinue models.

Replacement parts can be ordered from your distributor or the ADC factory.

When ordering replacement parts from the factory, you can FAX your orders to ADC at (508) 678-9447 or telephone your orders directly to the ADC Parts Department at (508) 678-9010. **Please specify the machine model number and serial number so that your order is processed accurately and promptly.**

IMPORTANT: Please observe ALL safety precautions displayed on the equipment and/or specified in the AD-820 Installation Manual (ADC P/N 182705) included with the unit.

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SECTION I

INTRODUCTION/FEATURES

The microprocessor (computer) controller used in the model AD-820 Water Vending Machine is a fully programmable, highly sophisticated controller system which performs a variety of self checks automatically to ensure high product water quality.

USER FRIENDLY

The L.E.D. display informs the user/purchaser of machine status;

1. Amount (cents) or quantity of coins needed to be inserted per gallon.
2. If a selection is made and more money is needed, the L.E.D display will prompt the user/purchaser to add the additional amount required.
3. Amount of Gallons purchased and if credit is due after the container size selection is made.
4. Right Bay and Left Bay update information displayed simultaneously. Prompts the user/purchaser to use other bay if one (1) is in use or if one (1) is out of order.
5. L.E.D. Display will inform user/purchaser (reads "SPILL") if container is not aligned under nozzle properly and water is missing container or the container has overflowed.

PROGRAMMABLE

Changes in the programs are made at the selection keypad and the actual programs are displayed for verification.

COIN or FREE VEND

The microprocessor (computer) controller can be programmed for coins to start, or for promotions, programming allows for "FREE" vend by making a container selection.

PURCHASE AMOUNT PER GALLON

The amount of money needed to vend per gallon is programmable from "0 to \$12.75". Once this amount has been programmed, the microprocessor (computer) controller will automatically calculate the necessary amount needed for multi-gallon selections.

As an example, if the amount per gallon is set for .25 and 50 cents is inserted, the L.E.D. display will prompt the user/purchaser to select up to 2 gallons. The user/purchaser can make either a one 2 gallon selection or two 1 gallon selections.

CONTAINER SIZE SELECTION KEYS

The container size selection keys can each be programmed from "0 to 6 Gallons" in .5 (1/2) gallon increments.

AUDIBLE TONE (bUZZ)

A tone will sound for each coin inserted, program entry, or the end of the fill cycle. End of fill cycle tone/bUZZ can be eliminated if desired.

COIN COUNT

The number of coins inserted (up to 65,327) for each coin slot can be viewed through the computer's (microprocessor controller) L.E.D. display.

GALLON COUNT

The number of gallons vended (up to 65,327) for both the left side and the right side can be viewed through the computer's (microprocessor controller) L.E.D. display. The computer keeps a running count of each gallon dispensed (vended) until the limit is rolled over or until each limit is cleared manually.

DIAGNOSTICS

ALL major circuits are monitored. These include the sediment filter, base switch, tank fill switch, flow meter, etc. Should a failure occur in the monitored circuits, the L.E.D. display will show a failure error message.

SECTION II

USER/VENDING OPERATING INSTRUCTIONS

The microprocessor (computer) controller will interact with the user throughout the vending process. The following is an example of a typical water machine vending process:

| **NOTE:** Value amounts and gallon quantities noted below are shown as examples ONLY.

| **NOTE:** MINIMUM PURCHASE IS ONE (1) GALLON.

1. Display(s) read the amount required per gallon ...
i.e., "INSERT" "\$.25" "PER" "GALLON"
2. Put properly sized container(s) to be filled in the appropriate vend bay (i.e., left or right). Container **must** be centered within bay.
3. For single gallon purchase:
 - a. User inserts .25 cents ...
 - b. Display(s) will read...
i.e., "SELECT" "UP TO" "1 GAL"
 - c. User selects appropriate side (left side where container is in bay) and makes container size choice.
 - 1) Press left [1 GAL.] selection key.
 - d. Display(s) will read...

| | |
|-------------------|----------------------------------|
| Left Side Display | Right Side Display |
| "FILL 1" | "INSERT" "\$.25" "PER" "GALLON" |
 - e. When vend is completed, the display will read...
"DONE" "THANK" "YOU"
 - f. The microprocessor (computer) controller will then be ready for the next vend selection ... and the L.E.D. displays will read...

"INSERT" "\$.25" "PER" "GALLON"
4. For multi gallon/container purchase:
 - a. User inserts coins necessary for quantity of gallons/containers required ...
i.e., user inserts .75 cents for a total of 3 gallons in two (2) containers.
 - b. Display(s) read quantity of gallons ...
i.e., "SELECT" "UP TO" "3 GAL"
 - c. User selects appropriate bay side (i.e., left side) and gallon/container size.
 - 1) Press left [1 GAL.] selection key.

d. Display(s) will read...

Left Side Display Right Side Display

"FILL 1" "2 GAL" "REMAIN"

e. The left vend size will now fill the container. Selection **must now be made** on the right side ...

1) Press right [2 GAL.] selection key.

f. Display(s) will read...

"FILL 1" "FILL 2"

g. When vends are completed, the L.E.D. display(s) will read...

"DONE" "THANK" "YOU"

h. The microprocessor (computer) controller will then be ready for the next vend selection ... and the L.E.D. display(s) will read...

"INSERT" "\$.25" "PER" "GALLON"

NOTES

1. If multiple coins are required (i.e., 1.00 for 1 gallon), the L.E.D. display(s) will prompt the user to add coins until the amount required to vend is satisfied.

i.e., if \$1.00 is required and only 50 cents is inserted, the display(s) will read "Add .50" etc., until the correct amount is inserted.

2. Credits ...

1) If too much money is inserted or the gallons selected is less than the amount of money inserted, the microprocessor (computer) controller will retain the credit balance (either amount of money or gallons) for five (5) minutes. If, after the five (5) minutes has elapsed no selection is made, the credit will be cancelled (lost).

3. If there is a power outage or interruption and the unit is not equipped with a battery back-up (or if the battery is dead), when the microprocessor (computer) controller power is reestablished, the L.E.D. displays will read "PURGE" "SYSTEM" "DO NOT" "DRINK". To reset/bypass this condition, close the program switch (program mode) and open program switch (run mode).

NOTE: At the time of installation of the machine the displays will read the above mentioned codes. Refer to the Electrical Troubleshooting Booklet (ADC P/N 182706) included with the unit.

IMPORTANT: DO NOT OVERRIDE THE SAFETY ROUTINE FOR THE INSTALLATION.

4. If one side of the vend bay is inoperative, the display will read "USE" "OTHER" "SIDE" and the other display will prompt the user for selection.

If both bays are inoperative, display(s) will show an error message and the display(s) will read "OUT" "OF" "ORDER".

NOTE: For explanations of error messages, refer to the Electrical Troubleshooting Booklet (ADC P/N 182706) included with the unit.

5. Minimum purchase is one (1) gallon, however, vend is available in .5 (1/2) gallon increments.

SECTION III

L.E.D. DISPLAY CODES

NOTE: For a complete explanation of error messages refer to the Electrical Troubleshooting Booklet (ADC P/N 182706) included with the unit.

| | |
|--------------------------------|--|
| "BASE" "SWITCH" "ERROR" | Indication that the base switch has tripped...water filling within the cabinet or the switch circuit is open or is disconnected. |
| "BAY" "OVER" "FLOW" "ERROR" | Vend bay catch basin is full of water...indication of possible clogged drain, drain pump failure, or switch circuit is open or is disconnected. |
| "bUZZ" | Audible tone (buzzer) which sounds at each keyboard entry and at the end of the fill cycle. |
| "CARBON" "FILTER" "ERROR" | Carbon filter is in need of replacement. |
| "FLOW" "METER" "ERROR" | Microprocessor (computer) controller detects a flow error (dispensing problem). |
| "OUT" "OF" "ORDER" | Machine/bay is inoperative...could be one of several failures ... refer to the <u>Electrical Troubleshooting Booklet</u> (ADC P/N 182706) included with machine. |
| "PL .." | Program Location ... there are a total of 10 locations. |
| "PULSES" | Measurement used in calibration of vending bay(s) for gallon vend. |
| "RO" "ERROR" | R.O. membrane needs cleaning or replacement. |
| "SEDI" "FILTER" "ERROR" | Sediment filter is in need of replacement. |

| | |
|--|---|
| <p align="center">"SPILL"</p> | <p>Excessive water is detected in bay drain...possibly the container is not positioned properly or there is an overflow of the container ... system will reset after a few seconds and try again.</p> |
| <p align="center">"SYSTEM" "PURGE" "DO" "NOT" "DRINK"</p> | <p>SYSTEM INSTALLATION SAFEGUARD. This code appears when power is first applied to the machine...after initial installation, if there is a power interruption (and the unit does not have battery back-up) this display code will appear ... reset by program switch.</p> |
| <p align="center">"SYSTEM" "REFILL" "PLEASE" "WAIT"</p> | <p>Low water level in the containment tank ... will reset when water level recovers.</p> |
| <p align="center">"TANK" "FILL" "SWITCH" "ERROR"</p> | <p>Indication that high level switch has failed or the switch is not connected (open circuit) in the machine and will not allow more water into the storage tank.</p> |
| <p align="center">"USE" "OTHER" "SIDE"</p> | <p>Bay is not operative...use other bay.</p> |
| <p align="center">"UV" "ERROR"</p> | <p>Problem in the ultraviolet light circuit.</p> |
| <p align="center">"WATER" "INLET" "ERROR"</p> | <p>Inlet water pressure is not present or the inlet pressure is below the minimum value.</p> |

SECTION IV

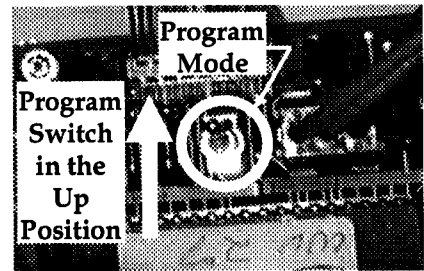
PROGRAMMING INSTRUCTIONS

A. Introduction To Programming

The microprocessor (computer) controller can be programmed to operate for different applications. The various program selections or parameters are stored in the computer (microprocessor controller) memory and are cataloged as "Program Locations." There are a total of 10 program locations which are cataloged as "PL 01" through "PL 10". These parameters have been preprogrammed by the factory as noted on page 36 of this manual.

These "Program Locations" contain various registers that can be manipulated for various operations. The registers also contain information about the machine such as gallon counts, coin counts and dispensing information, and coin denomination.

ALL programming is done through the keyboard selection buttons(keys) on the front of the control panel. To change programs or to put the computer (microprocessor controller) in the coin/gallon count display modes, the program switch (PS) located on the back side of the microprocessor (computer) controller **must be put into the program mode (switch in the up position)** as shown in the illustration.



To make a program change, first make sure that there is no vend/fill cycle in progress. Put the program switch (PS) in the program mode (switch in the up position). The left display will now read "PL 00" and the right display will be blank. From this point, any of the 10 program locations can be accessed by pressing the left [1 GAL.] selection key to enter a specific location or the left [1/2 GAL.] [2 GAL.] selection keys can be pressed to advance locations downward or upward.

To alter the programming, locate the specific program location or parameter to be changed. With the left display reading "PL 01", to advance to the specific location, press the left [2 GAL.] selection key until the desired program location is displayed (i.e., "PL 01", "PL 02", "PL 03", etc.). The left [1/2 GAL.] selection key will advance the program locations downward. Once the correct program location is displayed and access to change is desired, press the left [1 GAL.] selection key. The left [1 GAL.] selection key provides two (2) functions:

1. Allows access into a program location.
2. Advances to the next bit (part of a programming location) or next location.

IMPORTANT: When in a program location and the left [1 GAL.] selection key is pressed, whatever parameter is shown in the display will be stored in the computer's memory and the programming is now advanced to the next step (bit) or program location.

The left [2 GAL.] selection key or the left [1/2 GAL.] selection key provide the following functions:

1. Change numeric values ... [2 GAL.] increases ... [1/2 GAL.] decreases.
2. Flip flop for status changes ... by pressing either selection key.

If the change is numeric (i.e., "AMOUNT" "PER" "GALLON"), press the left [2 GAL.] selection key to increase the number value, or, press the left [1/2 GAL.] selection key to decrease the number. Pressing the left [1 GAL.] selection key will store the change and advance to the next step (bit) or program location.

NOTE: To accelerate increase/upward value, press and hold in the left [2 GAL.] selection key. To accelerate decrease/downward value, press and hold in the left [1/2 GAL.] selection key.

NOTE: When making numerical change, please keep in mind to stay within the programming limits shown on page 37 of this manual.

If the change to be made is a status change (i.e., from "COIN" to "FREE") simply press the left [1/2 GAL.] selection key or the left [2 GAL.] selection key and the display will revert back and forth between status choices. Once the correct status is displayed, pressing the left [1 GAL.] selection key will store the change and advance you to the next step (bit) or program location.

NOTE: While in a program location and an error is made where the parameter shown was incorrect and the left [1 GAL.] selection key was pressed whereby the display advanced to the next step (bit) ... **YOU CANNOT GO BACKWARDS**. To change the incorrect parameter, you must either exit and reenter the programming mode (put the program switch in the run mode {down position} then flip back to the program mode {up position} and start the programming sequence over again - or - continue through the steps (bits) in that location by pressing the left [1 GAL.] selection key until the next program location is displayed (i.e., "PL 02") and then go back to the beginning of the original errored location (i.e., press left [1/2 GAL.] selection key to "PL 01") and reenter (press left [1 GAL.] selection key) that program location and start over again.

Once the change or changes desired are made, to exit the program mode put the program switch (PS) in the run mode (down position).

NOTE: You can exit the programming mode at any time (even if you are in the middle of a program location) by simply putting the program switch (PS) in the run mode (down position). However, if a change was made, be sure the left [1 GAL.] selection key is pressed before opening the program switch to insure that the change was stored in the computer's memory.

B. Explanation of Programming Flow Charts

This section explains the programming through the use of flow charts. A flow chart is nothing more than a diagram of the programming process.



Represents the microprocessor (computer) controller's L.E.D. display. For example, if the flow chart shows "PL 00" the computer display will read the same.



Represents the key on the label that is to be pressed. For example, if the flow chart shows [1/2 GAL.], you would press that key.

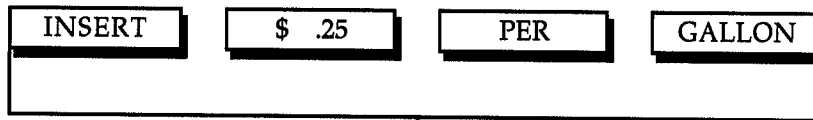


Represents the program path.

On the side of each flow chart is an explanation of the chart procedure, and in some cases, the programming limits.

C. ENTERING and EXITING PROGRAM MODE (Quick Reference)

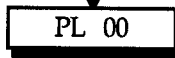
(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position)

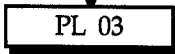
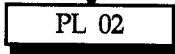
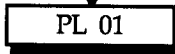
To Enter Program Mode



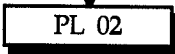
Left display reads



To advance to the next program location, press the left side [2 GAL.] selection key.



To revert back to lower program locations, press left side [1/2 GAL.] selection key.

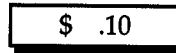


To enter a specific program location (i.e., PL 02), press left side [1 GAL.] selection key.

Left Display reads



Right Display reads



(i.e., actual coin slot value)

(Program Switch In Run Mode Position)

To exit program mode, put program switch in run mode position. L.E.D. displays return to run mode.

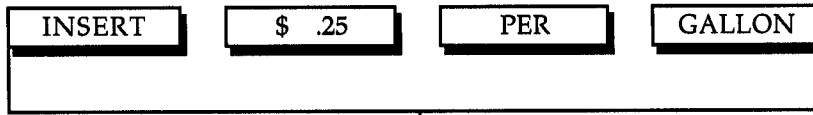


SECTION V

REVIEWING (DISPLAY) COUNTS

A. LEFT COIN COUNT

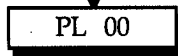
(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

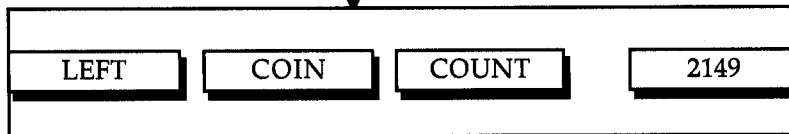
(Program Switch In Program Mode Position) To Enter Program Mode

Left Display reads



Press left [1 GAL.] selection key.

Left Display reads



Right Display will read actual coin count in units (i.e., 2149 coins)

Or

(To Retain Coin Count)

(To Clear Coin Count)



To clear or delete left coin count press left side [2 GAL.] selection key.

(Left Display)



(Right Display)

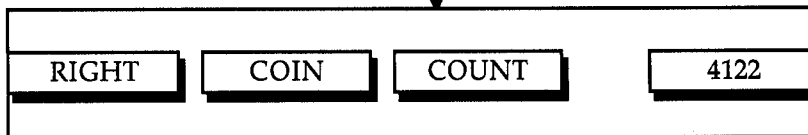
To retain coin count, press left [1 GAL.] selection key once.



Press left [1 GAL.] selection key twice.



(Left Display)



(Right Display)

Or

TO EXIT REVIEW MODE,
 put program switch in
 the run mode.

TO REVIEW RIGHT COIN
COUNT,
 proceed to
Flow Chart B.

B. RIGHT COIN COUNT

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from
LEFT COIN COUNT
(Flow Chart A)

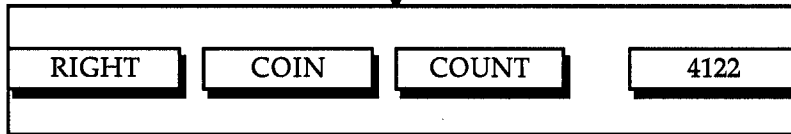
PL 00 Left Display reads

1 GAL.

Press left [1 GAL.] selection key twice in quick succession.

1 GAL.

Left Display reads



Right Display will read actual coin count in units (i.e., 4122 coins)

Or

(To Retain Coin Count)

(To Clear Coin Count)

2 GAL.

To clear or delete right coin count, press left side [2 GAL.] selection key.

(Left Display)



(Right Display)

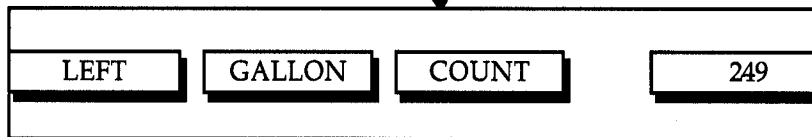
To retain coin count, press left [1 GAL.] selection key once.

Press left [1 GAL.] selection key twice.

1 GAL.

1 GAL.

(Left Display)



(Right Display)

Or

TO EXIT REVIEW MODE,
put program switch in
the run mode.

**TO REVIEW LEFT BAY
GALLON COUNT,**
proceed to
Flow Chart C.

C. LEFT BAY GALLON COUNT

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

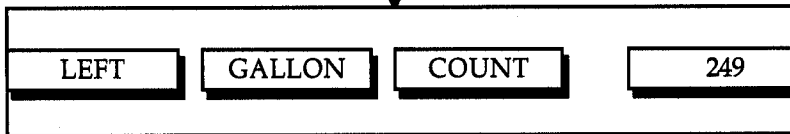
Continuation from
RIGHT COIN COUNT
(Flow Chart B)



Press left [1 GAL.] selection key three (3) times in quick succession.



Left Display reads



Right Display will read actual gallons vended.

Or

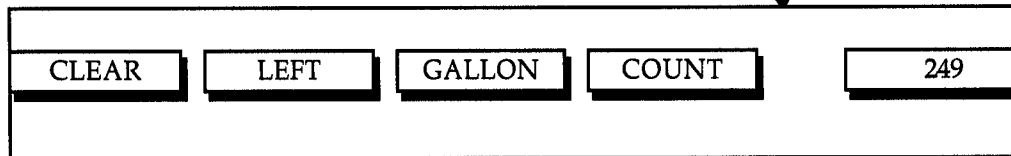
(To Retain Gallon Count)

(To Clear Left Gallon Count)



To clear or delete gallon count, press [2 GAL.] selection key.

(Left Display)



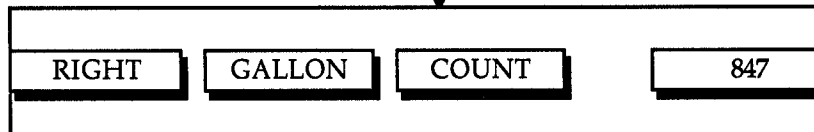
(Right Display)

To retain gallon count, press left [1 GAL.] selection key once.

Press left [1 GAL.] selection key twice.



(Left Display)



(Right Display)

TO EXIT REVIEW MODE,
put program switch in
the run mode.

Or

**TO REVIEW RIGHT BAY
GALLON COUNT,**
proceed to
Flow Chart D.

D. RIGHT BAY GALLON COUNT

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

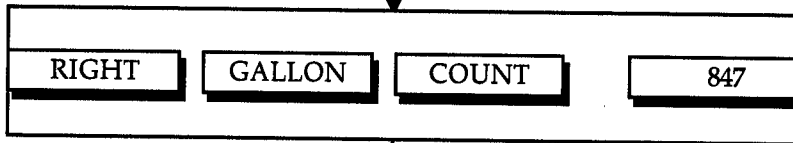
Continuation from
LEFT BAY GALLON
COUNT
(Flow Chart C)



Press left [1 GAL.] selection key four (4) times in quick succession.



Left Display reads

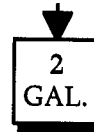


Right Display will read actual gallons vended.

Or

(To Retain Gallon Count)

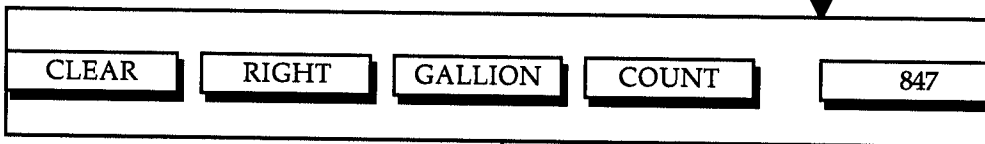
(To Clear Right Gallon Count)



To clear or delete gallon count, press [2 GAL.] selection key.

(Left Display)

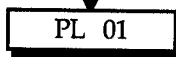
To retain gallon count, press left [1 GAL.] selection key once.



Right Display



Press left [1 GAL.] selection key twice.



Or

TO EXIT REVIEW MODE,
put program switch
in the run mode.

PROCEED TO NEXT
PROGRAM LOCATION

SECTION VI

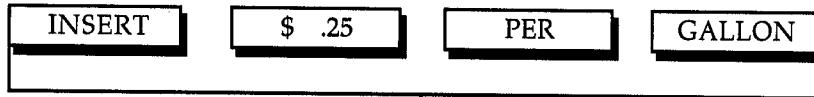
PROGRAMMING/FLOW CHARTS

Listed below, is an index of the flow charts on the following pages.

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| "COIN" or "FREE" Status | |
| "buzz" or "NO buzz" Status | |
| Insert "CENTS" or "COIN" | |
| <u>B. Program Location 02 ("PL 02")</u> | 19 |
| Left Coin Slot Value | |
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| Right Coin Slot Value | |
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| <u>E. Program Location 05 ("PL05")</u> | 24, 25 |
| No. 1 Left Key Gallon Vend Value | |
| No. 1 Right Key Gallon Vend Value | |
| <u>F. Program Location 06 ("PL06")</u> | 26, 27 |
| No. 2 Left Key Gallon Vend Value | |
| No. 2 Right Key Gallon Vend Value | |
| <u>G. Program Location 07 ("PL07")</u> | 28, 29 |
| No. 3 Left Key Gallon Vend Value | |
| No. 3 Right Key Gallon Vend Value | |
| <u>H. Program Location 08 ("PL08")</u> | 30, 31 |
| No. 4 Left Key Gallon Vend Value | |
| No. 4 Right Key Gallon Vend Value | |
| <u>I. Program Location 09 ("PL09")</u> | 32, 33 |
| No. 5 Left Key Gallon Vend Value | |
| No. 5 Right Key Gallon Vend Value | |
| <u>J. Program Location 10 ("PL10")</u> | 34, 35 |
| No. 6 Left Key Gallon Vend Value | |
| No. 6 Right Key Gallon Vend Value | |

A. PROGRAM LOCATION 01 (PL 01)

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from PL 00

Left Display reads **PL 00**

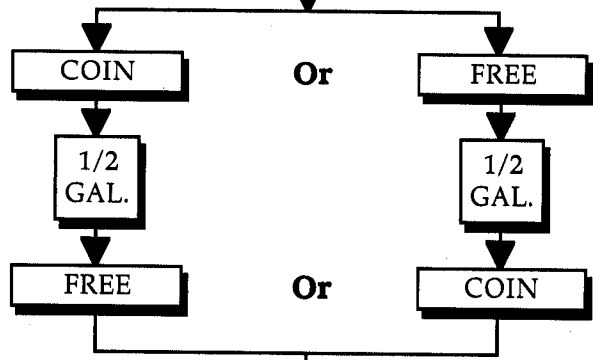
2 GAL.

Press left [2 GAL.] selection key once.

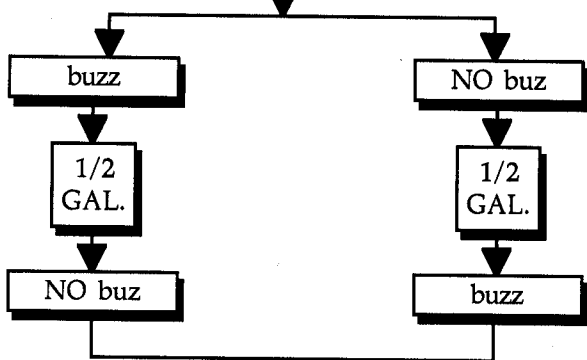
Left Display reads **PL 01**

1 GAL.

Press left [1 GAL.] selection key. Left display will read vend status, either "COIN" (coins required) or "FREE" (no coins required). If no change is required, press [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] selection key and then press [1 GAL.] selection key.



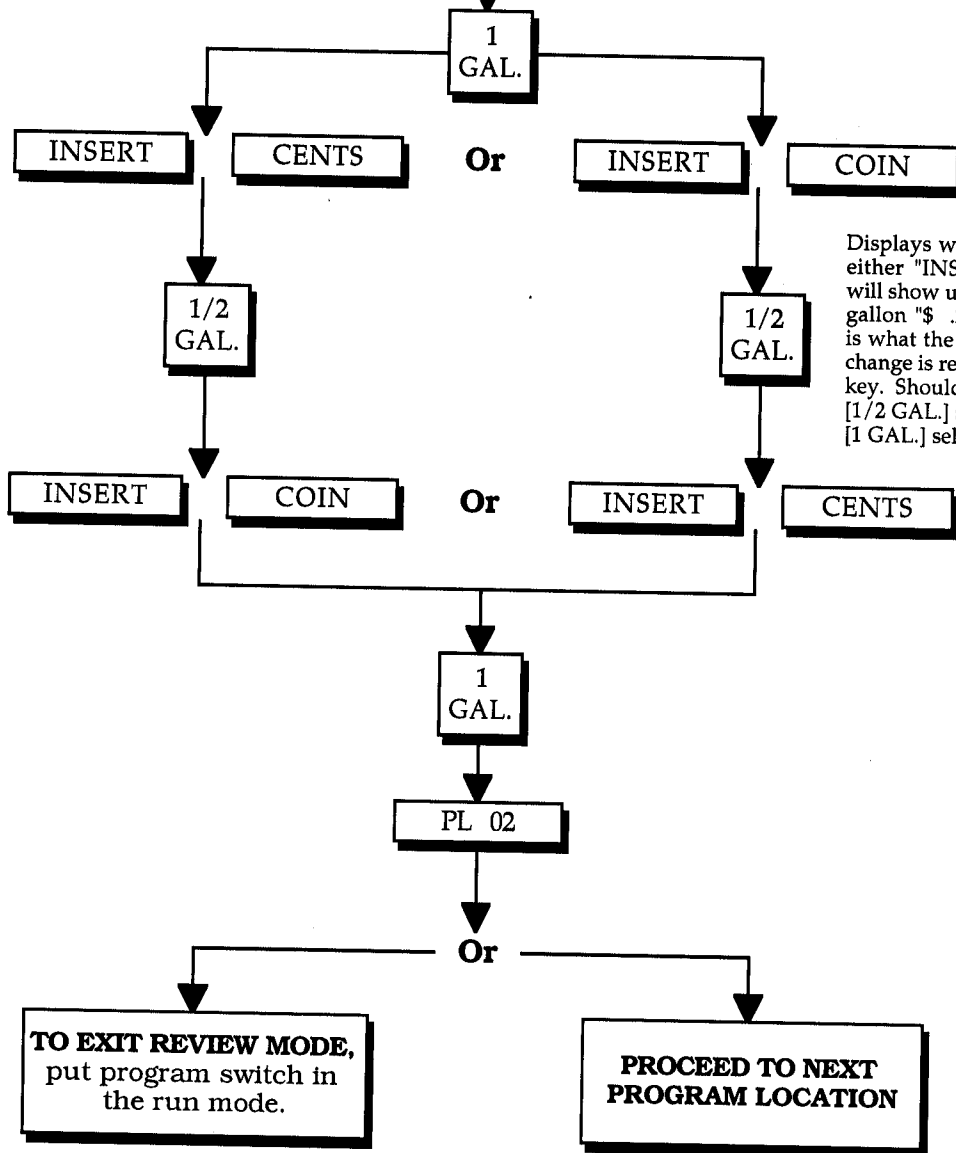
1 GAL.



Left display will read buzz (tone) status, either "buzz" or "NO buz". If no change is required, press [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] selection key and then press [1 GAL.] selection key.

continue to next page

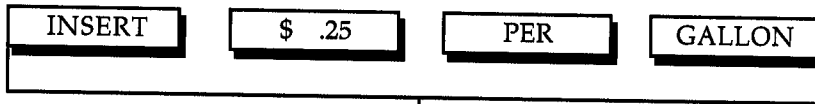
continued from previous page



B. PROGRAM LOCATION 02 (PL 02)

LEFT COIN SLOT VALUE

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from PL 01

PL 00

2 GAL.

Press left [2 GAL.] selection key twice.

2 GAL.

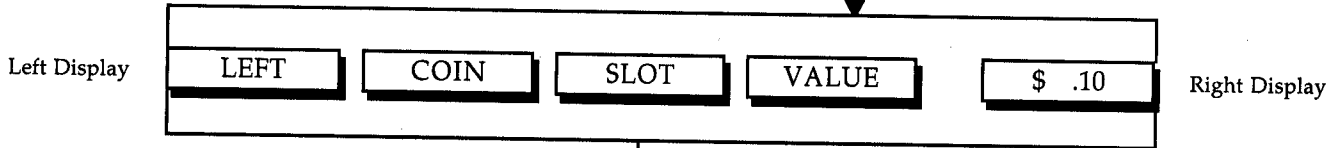
PL 01

Left display will read "PL 01" and then read "PL 02".

PL 02

1 GAL.

Press left [1GAL.] selection key once.



(If No Change) **(To Change)**

Left display will read "LEFT" "COIN" "SLOT" "VALUE" and right display will read actual value of the coin slot denomination (i.e., 10¢). If no change is required, press [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

1 GAL.

Or

(To Decrease)

(To Increase)

1/2 GAL.

2 GAL.

NOTE: Left Coin Slot value is programmable.
0 - 1275 in increments of 5.

(Hold In To Accelerate)

(Hold In To Accelerate)

1 GAL.

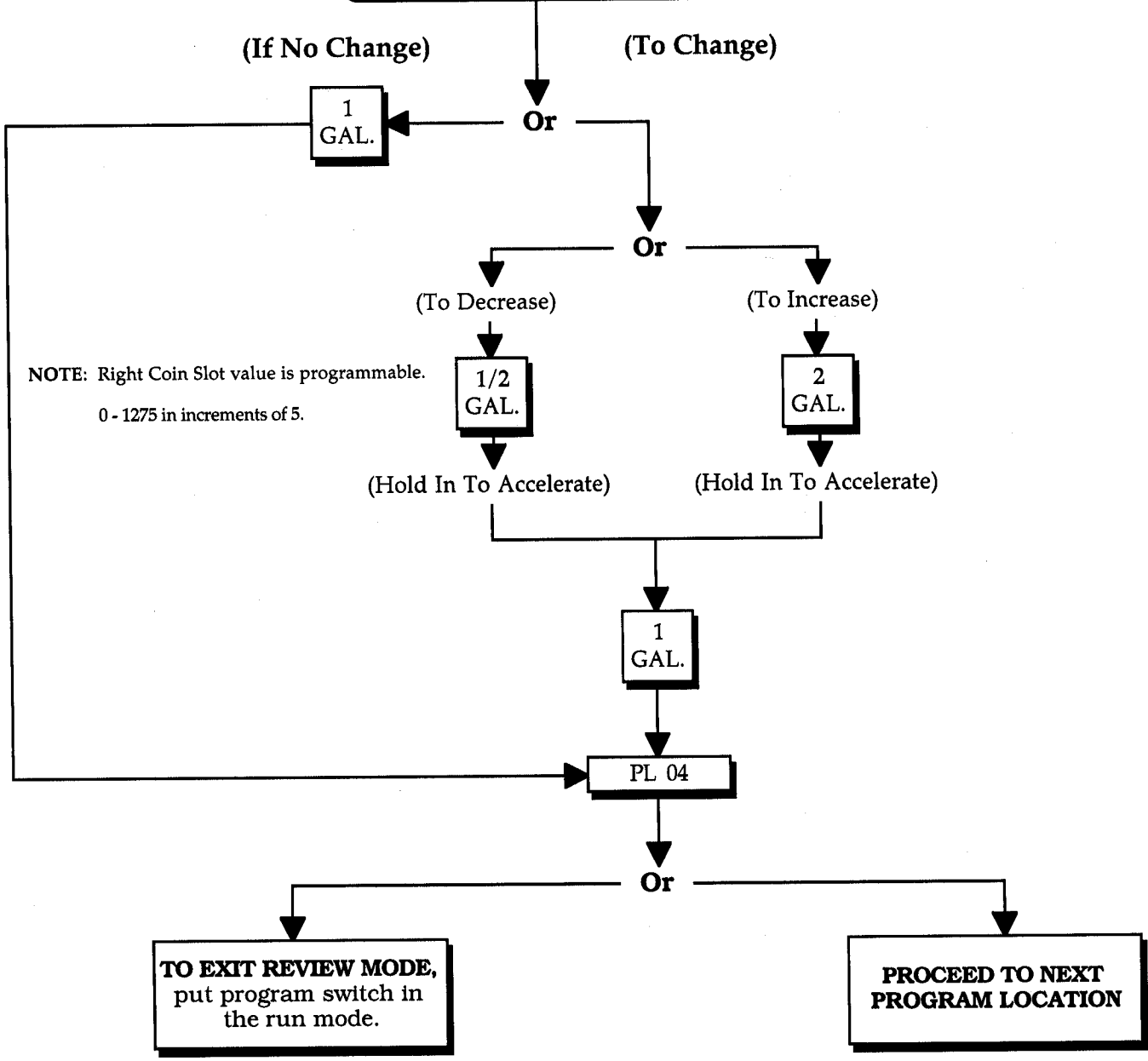
PL 03

TO EXIT REVIEW MODE, put program switch in the run mode.

Or

PROCEED TO NEXT PROGRAM LOCATION

continued from previous page



D. PROGRAM LOCATION 04 (PL 04)

AMOUNT PER GALLON

(No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position)

To Enter Program Mode

Continuation
from
PL 03

PL 00

2
GAL.

2
GAL.

2
GAL.

2
GAL.

Press left [2 GAL.] selection key four (4) times.

PL 01

PL 02

PL 03

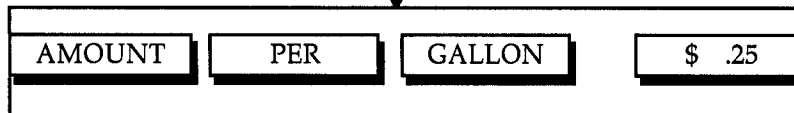
Left display will read "PL 01", "PL 02", "PL 03", and then read "PL 04".

PL 04

1
GAL.

Press left [1GAL.] selection key once

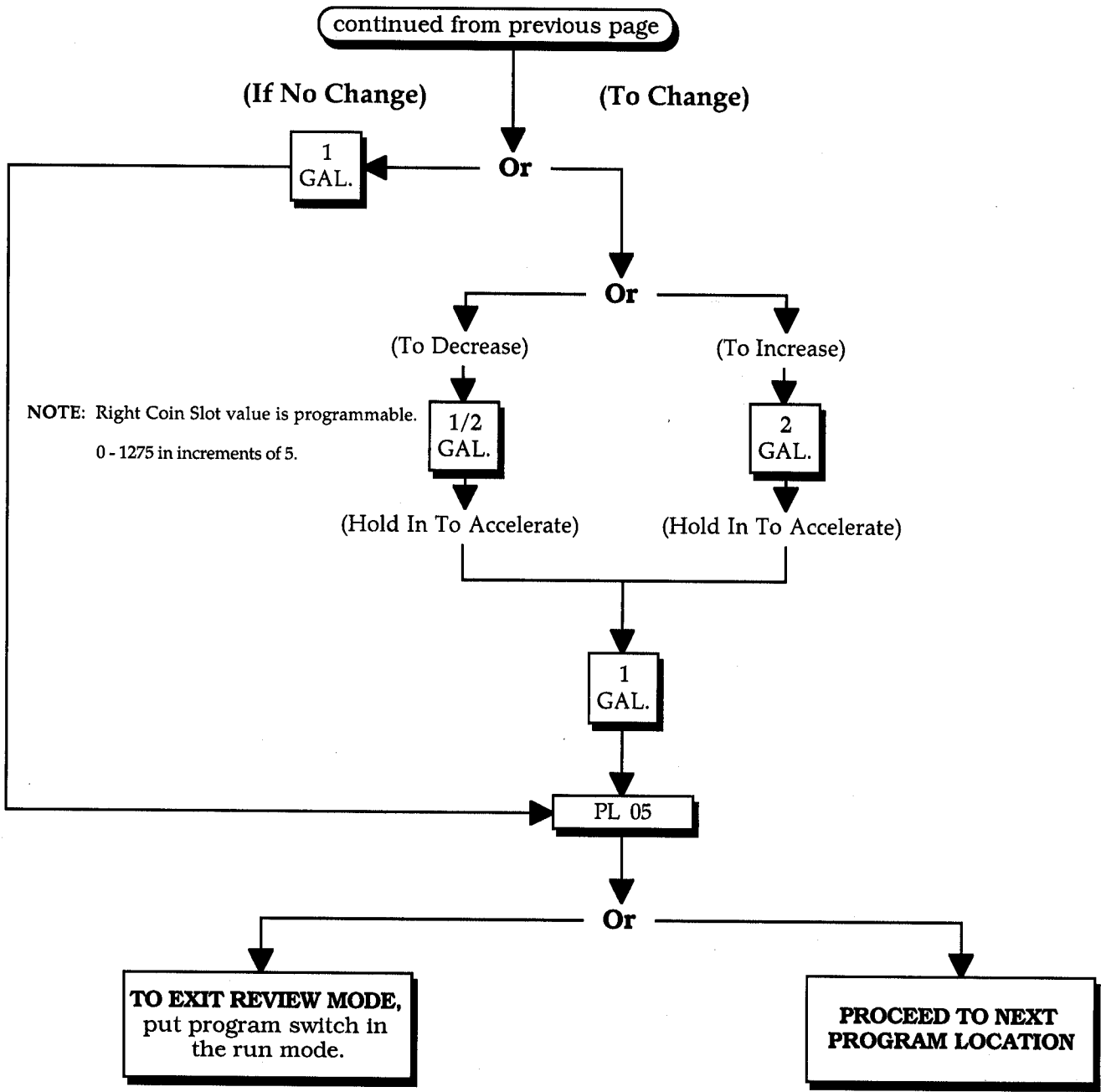
Left Display



Right Display

Left display will read "AMOUNT" "PER" "GALLON" and right display will read actual value required. If no change is required, press [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

continue to next page



E. PROGRAM LOCATION 05 (PL 05)

**NO. 1 LEFT and RIGHT KEYS GALLON VEND VALUE
(No Vend In Progress)**



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from
PL 04

PL 00

2
GAL.

2
GAL.

2
GAL.

Press left [2 GAL.] selection key five (5) times.

2
GAL.

2
GAL.

PL 01

PL 02

PL 03

PL 04

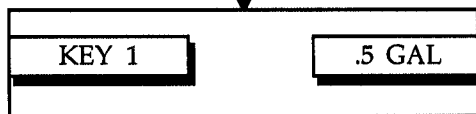
Left display will read "PL 01", "PL 02", "PL 03", "PL 04", and then read "PL 05".

PL 05

1
GAL.

Press left [1GAL.] selection key once.

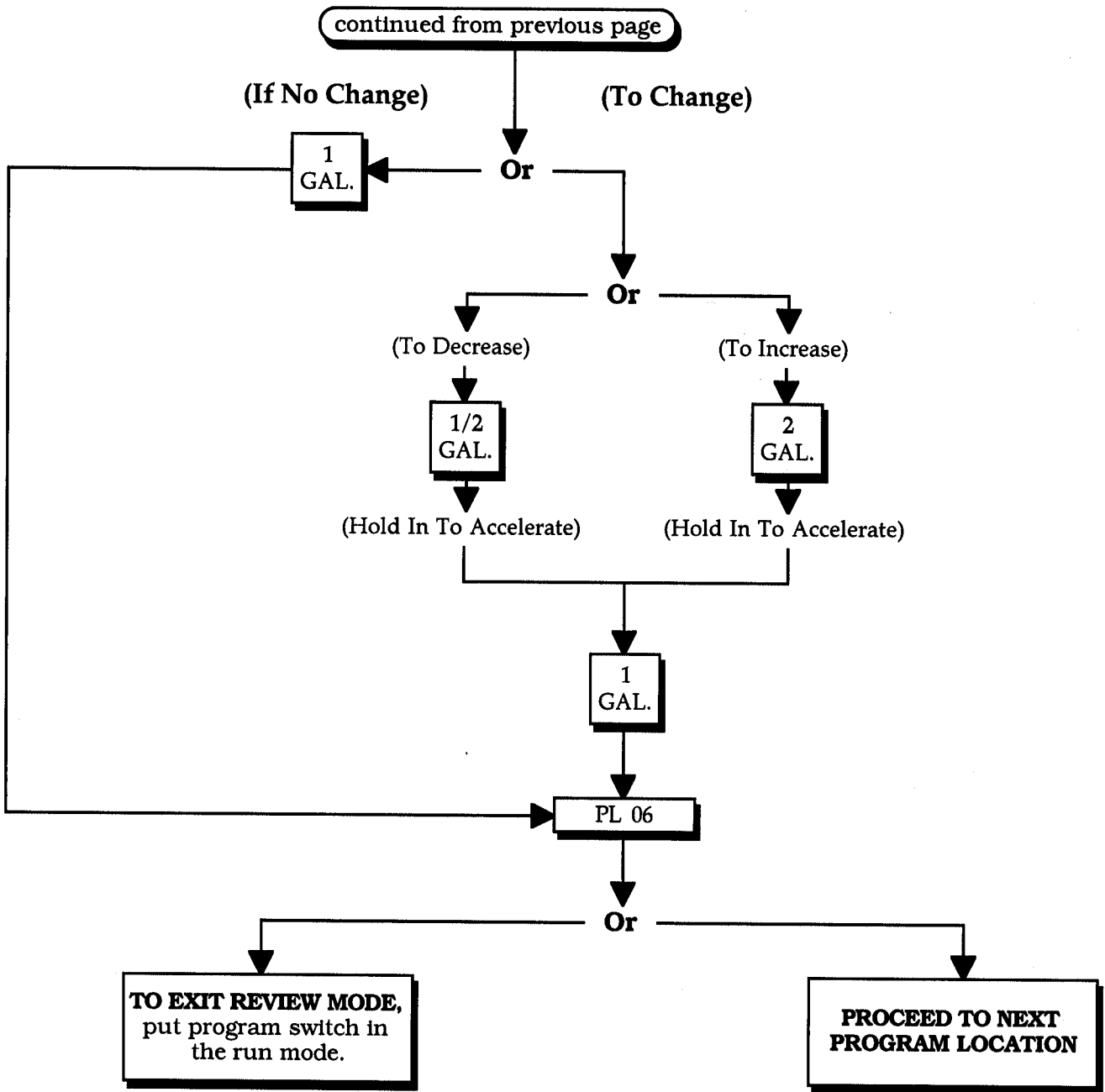
Left Display



Right Display

Left display will read "KEY 1" and right display will read actual gallon amount that will be vended (i.e., .5 GAL). If no change is required, press left [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

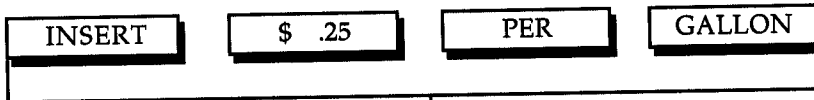
continue to next page



NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallon increments.

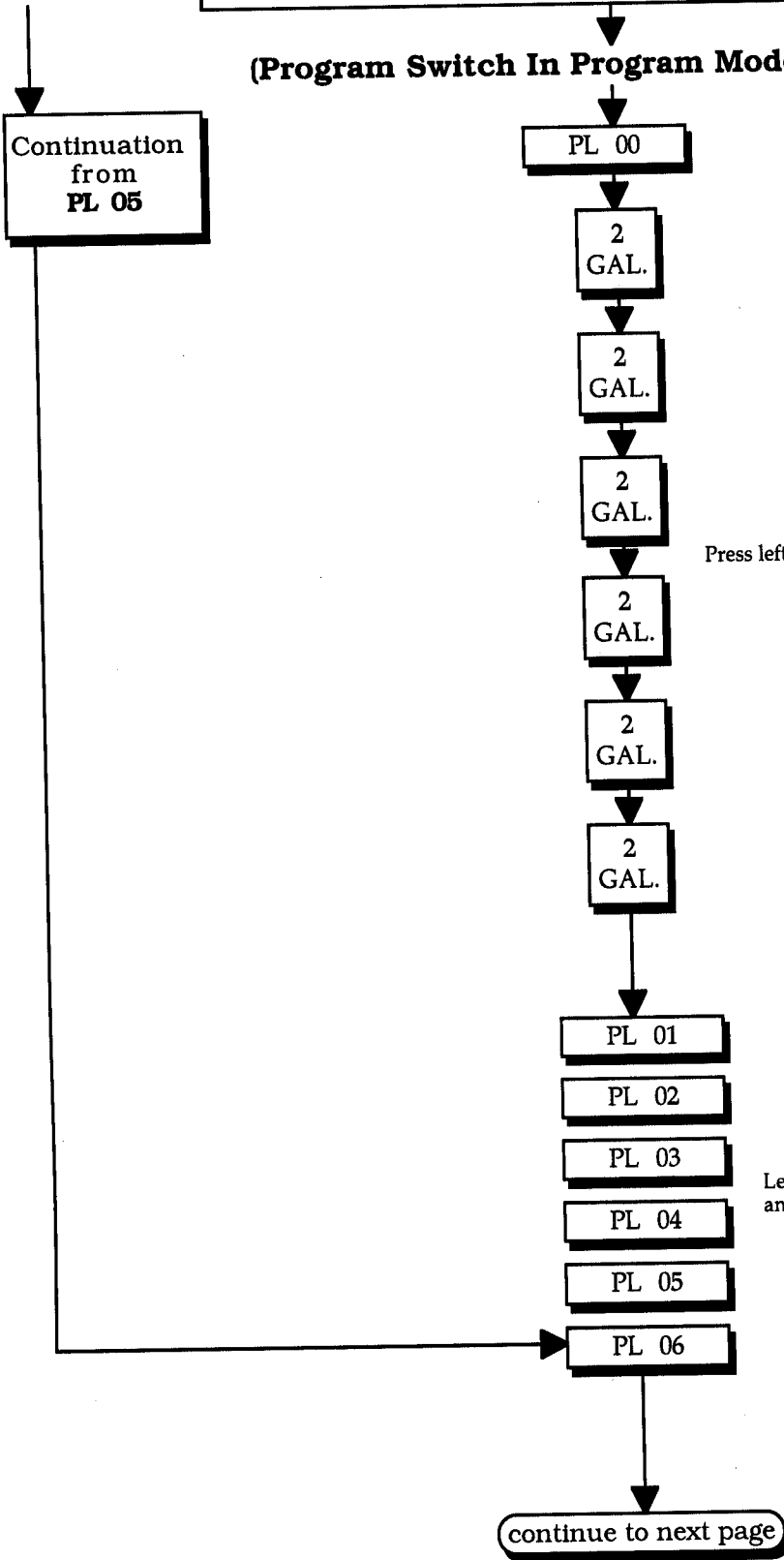
F. PROGRAM LOCATION 06 (PL 06)

NO. 2 LEFT and RIGHT KEYS GALLON VEND VALUE (No Vend In Progress)



L.E.D. displays read the amount required per gallon.

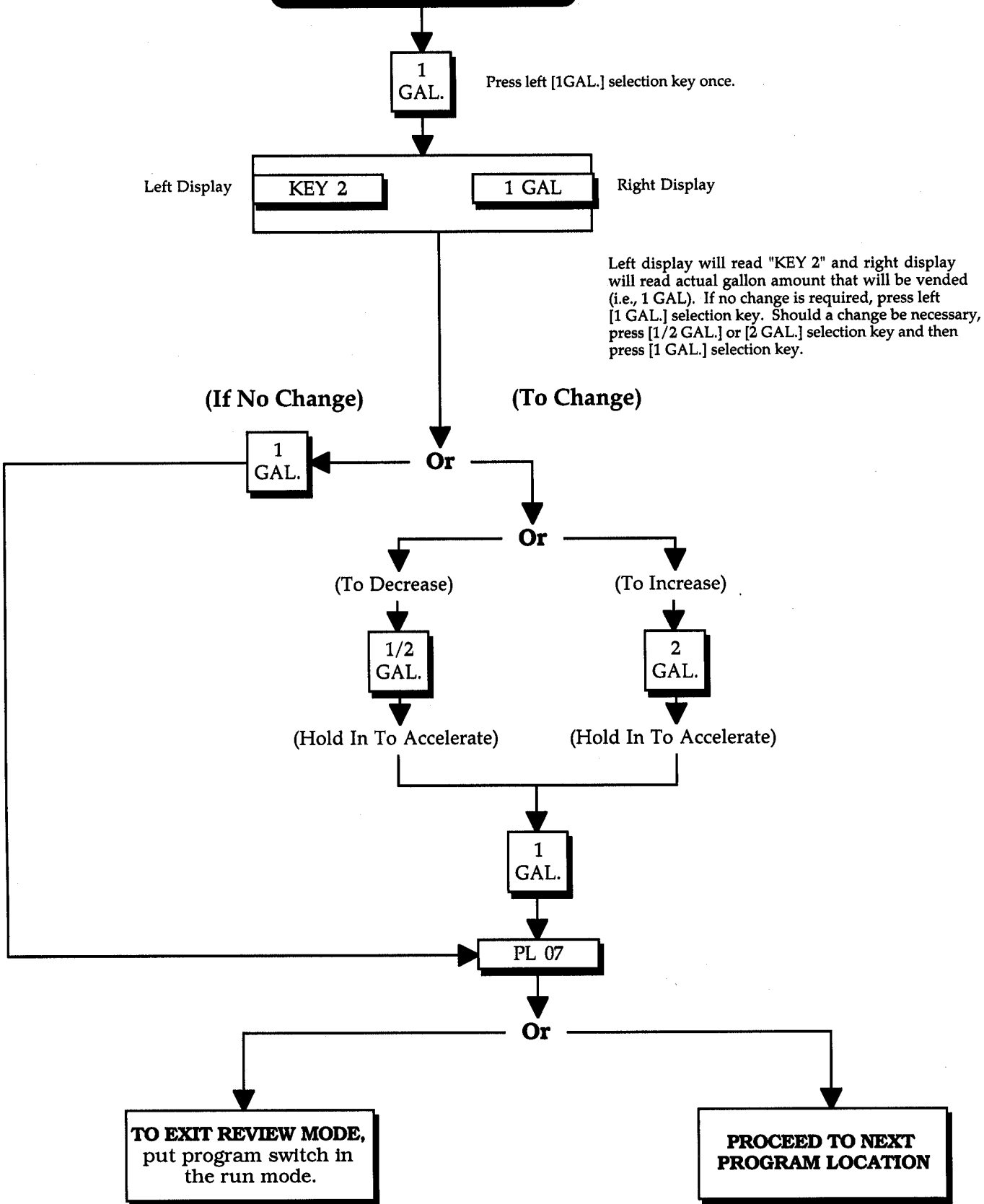
(Program Switch In Program Mode Position) To Enter Program Mode



Press left [2 GAL.] selection key six (6) times.

Left display will read "PL 01", "PL 02", "PL 03", "PL 04", "PL 05", and then read "PL 06".

continued from previous page



NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallons increments.

G. PROGRAM LOCATION 07 (PL 07)

NO. 3 LEFT and RIGHT KEYS GALLON VEND VALUE (No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from PL 06

PL 00

2 GAL.

2 GAL.

2 GAL.

2 GAL.

Press left [2 GAL.] selection key seven (7) times.

2 GAL.

2 GAL.

2 GAL.

PL 01

PL 02

PL 03

PL 04

Left display will read "PL 01", "PL 02", "PL 03", "PL 04", "PL 05", "PL 06", and then read "PL 07".

PL 05

PL 06

PL 07

continue to next page

continued from previous page

1
GAL.

Press left [1GAL.] selection key once.



Left display will read "KEY 3" and right display will read actual gallon amount that will be vended (i.e., 2 GAL). If no change is required, press left [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

(If No Change)

(To Change)

Or

1
GAL.

Or

(To Decrease)

(To Increase)

1/2
GAL.

2
GAL.

(Hold In To Accelerate)

(Hold In To Accelerate)

1
GAL.

PL 08

Or

TO EXIT REVIEW MODE,
put program switch in
the run mode.

**PROCEED TO NEXT
PROGRAM LOCATION**

NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallon increments.

H. PROGRAM LOCATION 08 (PL 08)

NO. 4 LEFT and RIGHT KEYS GALLON VEND VALUE (No Vend In Progress)



L.E.D. displays read the amount required per gallon.

(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from PL 07

PL 00

2 GAL.

2 GAL.

2 GAL.

2 GAL.

2 GAL.

2 GAL.

2 GAL.

2 GAL.

2 GAL.

Press left [2 GAL.] selection key eight (8) times.

PL 01

PL 02

PL 03

PL 04

PL 05

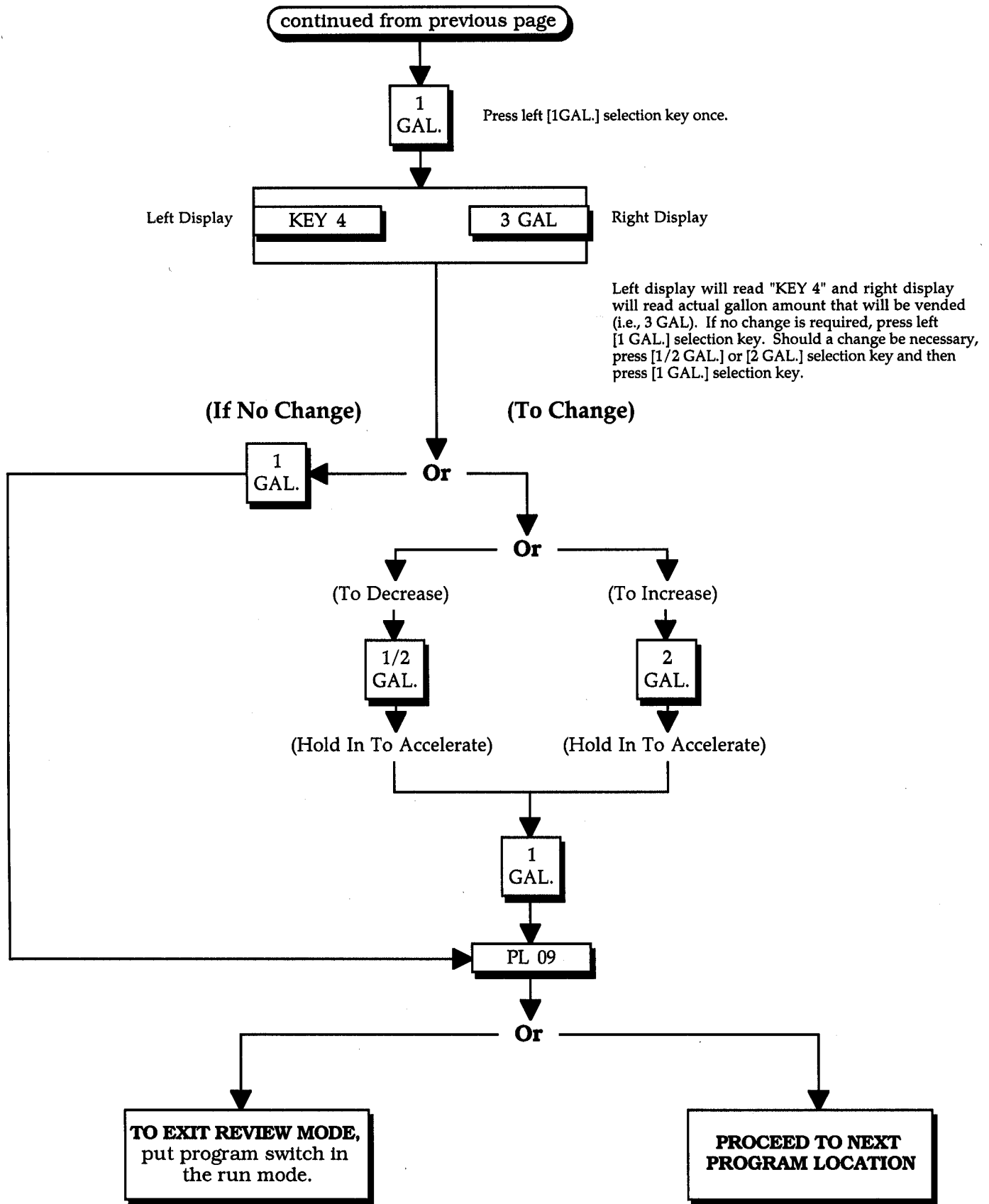
PL 06

PL 07

PL 08

Left display will read "PL 01", "PL 02", "PL 03", "PL 04", "PL 05", "PL 06", "PL 07", and then read "PL 08".

continue to next page



NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallon increments.

continued from previous page

1
GAL.

Press left [1GAL.] selection key once.



Left display will read "KEY 5" and right display will read actual gallon amount that will be vended (i.e., 5 GAL). If no change is required, press left [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

(If No Change)

(To Change)

Or

1
GAL.

Or

(To Decrease)

(To Increase)

1/2
GAL.

2
GAL.

(Hold In To Accelerate)

(Hold In To Accelerate)

1
GAL.

PL 09

Or

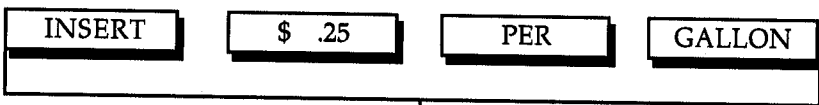
TO EXIT REVIEW MODE,
put program switch in
the run mode.

**PROCEED TO NEXT
PROGRAM LOCATION**

NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallon increments.

I PROGRAM LOCATION 10 (PL 10)

NO. 6 LEFT and RIGHT KEYS GALLON VEND VALUE (No Vend In Progress)

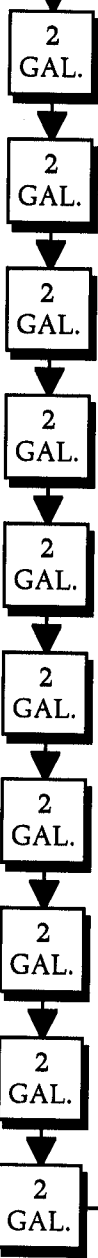


L.E.D. displays read the amount required per gallon.

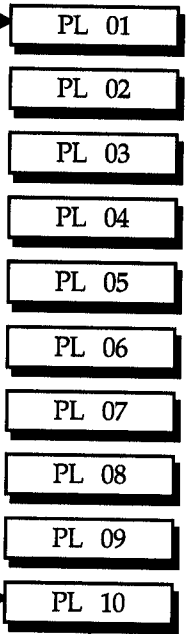
(Program Switch In Program Mode Position) To Enter Program Mode

Continuation from PL 09

PL 00



Press left [2 GAL.] selection key ten (10) times.



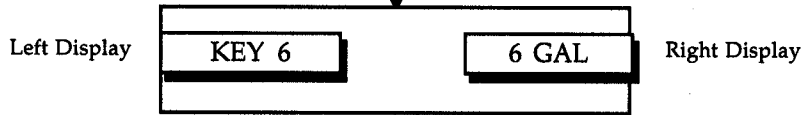
Left display will read "PL 01", "PL 02", "PL 03", "PL 04", "PL 05", "PL 06", "PL 07", "PL 08", "PL 09", and then read "PL 10".

continue to next page

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1
GAL.

Press left [1GAL.] selection key once.



Left display will read "KEY 6" and right display will read actual gallon amount that will be vended (i.e., 6 GAL). If no change is required, press left [1 GAL.] selection key. Should a change be necessary, press [1/2 GAL.] or [2 GAL.] selection key and then press [1 GAL.] selection key.

(If No Change)

(To Change)

Or

1
GAL.

Or

(To Decrease)

(To Increase)

1/2
GAL.

2
GAL.

(Hold In To Accelerate)

(Hold In To Accelerate)

1
GAL.

PL 00

Or

**TO EXIT REVIEW MODE,
put program switch in
the run mode.**

**PROCEED TO NEXT
PROGRAM LOCATION**

NOTE: Gallon vend value can be programmed from .5 GAL (1/2 gallon) to 6 gallons in .5 gallon increments.

SECTION VII

FACTORY PRESET PROGRAMS/PARAMETERS

Unless otherwise stated at the time of ordering, the microprocessor (computer) controller has been preprogrammed by the factory with the programs/parameters shown in the chart below. Should changes be found necessary, please read this manual carefully to thoroughly familiarize yourself with the microprocessor (computer) controller's programming characteristics.

| <u>Program Location</u> | <u>Display Code</u> | |
|-------------------------|-----------------------------------|--|
| PL 01 | COIN | Coin(s) required to start. |
| | bUZZ | Buzz at the end of the fill cycle. |
| | INSERT CENTS | Display will read actual amount of money needed to be inserted for vend. |
| PL 02 | LEFT COIN SLOT VALUE \$.10 | Left side coin slot denomination. |
| PL 03 | RIGHT COIN SLOT VALUE \$.25 | Right side coin slot denomination. |
| PL 04 | AMOUNT PER GALLON \$.25 | Purchase amount required for each gallon. |
| PL 05 | KEY 15 GAL | 1/2 Gallon |
| PL 06 | KEY 2 1 GAL | |
| PL 07 | KEY 3 2 GAL | |
| PL 08 | KEY 4 3 GAL | |
| PL 09 | KEY 5 5 GAL | |
| PL 10 | KEY 6 6 GAL | |

SECTION VIII

PROGRAMMING LIMITS

| <u>Program Location</u> | <u>Parameter</u> | <u>Range</u> | <u>Increments</u> |
|-------------------------|-----------------------|----------------|-------------------|
| PL 02 | LEFT COIN SLOT VALUE | \$ 0 TO 12.75 | .05 |
| PL 03 | RIGHT COIN SLOT VALUE | \$ 0 TO 12.75 | .05 |
| PL 04 | AMOUNT PER GALLON | \$ 0 TO 12.75 | .05 |
| PL 05 | KEY 1 Gallon Vend | 0 to 6 GALLONS | .5 |
| PL 06 | KEY 2 Gallon Vend | 0 to 6 GALLONS | .5 |
| PL 07 | KEY 3 Gallon Vend | 0 to 6 GALLONS | .5 |
| PL 08 | KEY 4 Gallon Vend | 0 to 6 GALLONS | .5 |
| PL 09 | KEY 5 Gallon Vend | 0 to 6 GALLONS | .5 |
| PL 10 | KEY 6 Gallon Vend | 0 to 6 GALLONS | .5 |

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