

Installation Instructions

Purpose of This Document

This manual provides installation, programming, and operation instructions for the following Customer Programmable Preset Kits:

- K93709-01 The Advantage Series (One Sided)
- K93709-02 The Advantage Series (Two Sided)

The Customer Programmable Preset system allows a customer to preset a desired volume or dollar amount. It provides:

- A five-digit LCD (liquid crystal display) indicating the type of preset and amount
- Audible valid key and error indicator
- Numeric keypad
- Keypad time-out feature
- Capability to display last valid preset amount
- Automatic power-up/power-down with dispenser

Read NFPA 30A and NFPA 70



Before installing the equipment, the installer must read, understand and follow this manual, NFPA 30A, NFPA 70 and applicable federal, state and local codes and regulations. Failure to do so may adversely affect the safe use and operation of the equipment.

Related Documents

See the following manuals for more information:

- MDE-2531 The Advantage Series Service Manual
- PT-1728 The Advantage Series Parts Manual

Recommended Tools

- Slotted Screwdriver
- Phillips Screwdriver
- Pliers
- IC Extractor Tool, Gilbarco P/N Q11850-01
- Nut Driver Set
- 3/16" T or Allen Wrench

Parts List

MPD, Dual and Quad models using a backlight regulator board require one K93755-01 Card Cage Kit for installation (not included in kit, order separately). You do not need this kit if unit uses the AC Backlight Power Supply (T17772-G1) or the Main Power Supply.

Graphics are order entry items. T18782-XX for Option Door and T17885-XX for Keypad Overlay.

This Document Is Subject To Change Without Notice

Parts List
Cont.

Qty. -01	Qty. -02	Part Number	Description
1	1	T17331-G3S	Preset Controller Board
1	1	K93376-G1	Preset Software Kit
1	2	R19206-G1	Cable Assembly
1	1	R19281-G1	Cable Assembly
2	4	Q11577-02	Flat Cable Mount
1	2	T17734-G2	Preset Option Door

Safety

Alert Symbol

This is a standard alert symbol. When you see this symbol, along with the following signal words, be alert to the potential for personal injury.



Signal Words

These signal words alert you to important safety hazards.

⚠ DANGER
The hazard or unsafe practice **will** result in severe injury or death

⚠ WARNING
The hazard or unsafe practice **could** result in severe injury or death

⚠ CAUTION
The hazard or unsafe practice could result in **minor** injury

Installation
Instructions



1. Read all instructions before beginning.



2. Follow all safety precautions.

- Barricade area.



- Do not allow vehicles or unauthorized people in work area.



- Do not smoke or have open flames in work area.



- Do not use power tools in work area.



- Wear protective gear while performing this procedure.

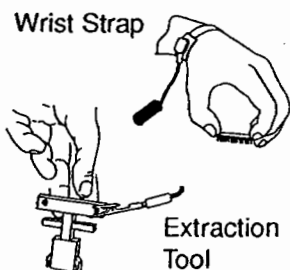
3. Record all electronic and mechanical totals.
4. Turn off all power to unit, lights and STPs.
Use system circuit breakers.
Multiple disconnects may be required.
5. Turn off system battery by pressing CLEAR then ENTER on managers' keypad.



Electrostatic Discharge

Printed Circuit Boards (PCBs) and Integrated Circuits (ICs) are sensitive to electrostatic discharge caused by static electricity. Electrostatic discharge damages electronic parts. When removing PCBs or handling sensitive parts:

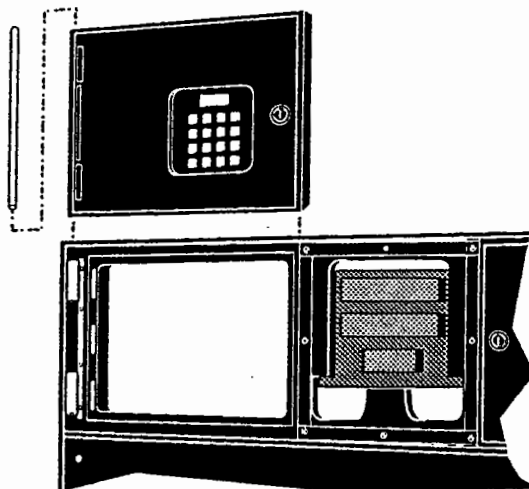
- Touch an unpainted metal surface to discharge any static electricity buildup.
- Use a wrist strap connected to a grounded metal frame or chassis.
- Place removed PCBs or ICs on a grounded anti-static mat.
- Use an IC Extraction Tool (Gilbarco P/N Q11850-01) to remove ICs.
- Place PCBs you plan to return for credit or repair in anti-static bags.



Note: Save all hardware in the following steps.

6. Open main access door.
 - Use a 3/16" Allen wrench to loosen the four screws (each side) along main access door bottom.
 - Unlock the four draw latches located behind each option door.
 - Open main access door to a maximum 90° angle.
7. Remove left access door. Use a slotted screwdriver and pliers to remove hinge pin. (See Figure 1.)
8. Install Customer Programmable Preset Option Door (T17734-G2) using hinge pin removed in Step 7.

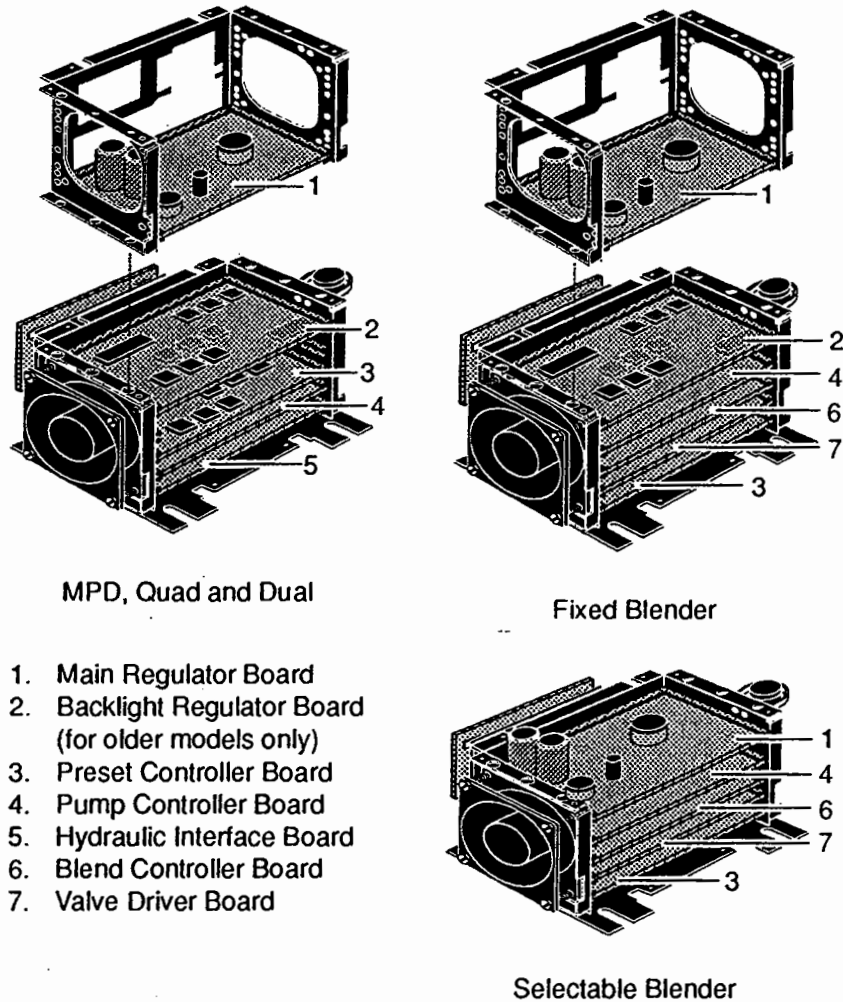
Figure 1: Installing Preset Option Door



Preset Controller Board and Software Installation

9. Remove IC Q12403-XXEP (in K93376-G1S Kit) from protective packing. Hold IC by the ends and carefully insert it into U9 of the Preset Controller Board (T17331-G3S). Set leads (pins) then press IC firmly into place.
10. Slide Preset Controller Board into appropriate card cage slot (see Figure 2).

Figure 2: Installing Preset Controller Board



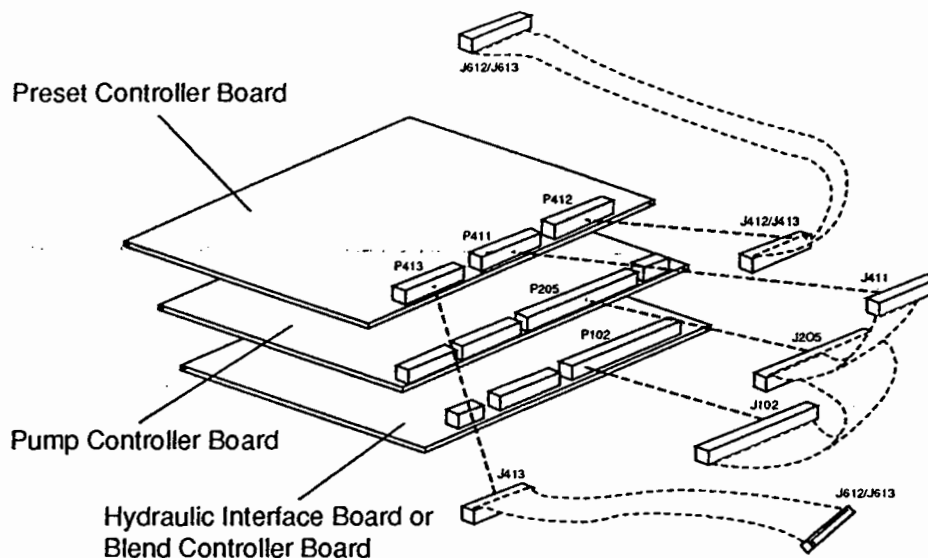
Cable Installation

11. Connect (R19206-G1) Preset/Pump Controller Cable Assembly J412/J413 to connector P413 on Preset Controller Board for A side installation. Mark connector J612/J613 of that cable with the letter A. See Figure 3 on next page.

Note: For dual units, connect J412/J413 from Side B kit to connector P412 on Preset Controller Board. Mark connector J612/J613 of that cable with the letter B.

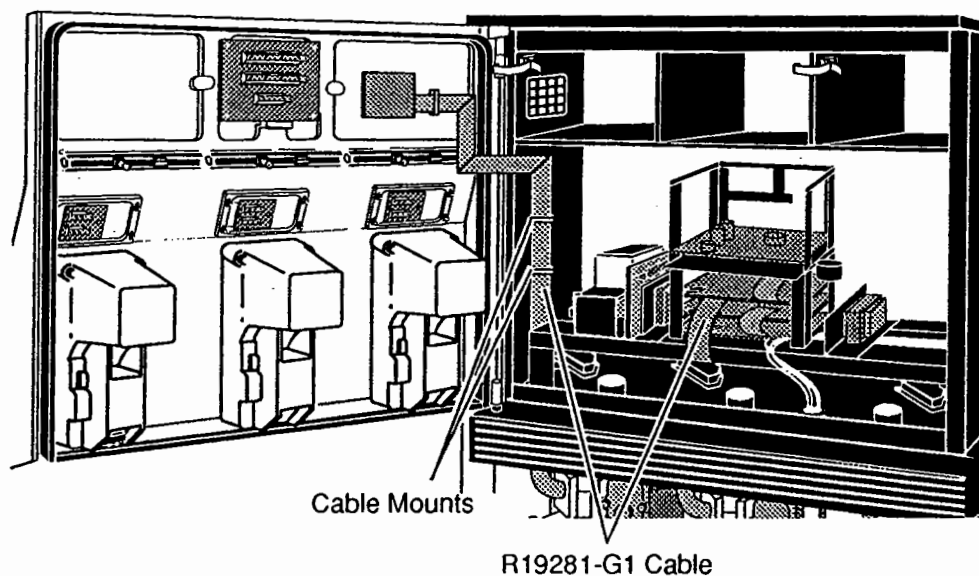
12. Connect (R19281-G1) Preset/Pump Controller Cable Assembly J102 to P102 on Hydraulic Interface Board or Blend Controller Board. Connect J411 to P411 on Preset Controller Board. Connect J205 to P205 on Pump Controller Board.

Figure 3: Installing Cables



13. Adhere Cable Mounts (Q11577-02) to electronics chassis at locations shown. (See Figure 4.)
14. Route R19281-G1 Cable through mounts. Close cable mounts.

Figure 4: Installing Cable Mounts



Final Assembly

15. Close and lock Main Access Door.
16. Apply graphics to Customer Preset Option Door.
17. Follow programming and operating instructions.

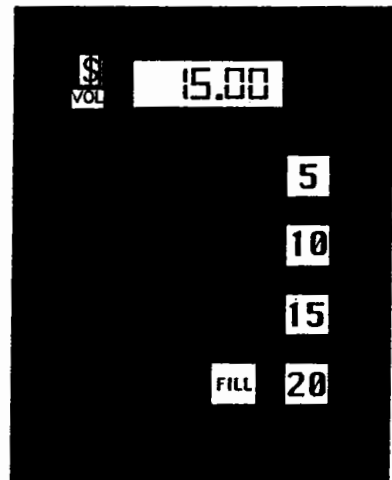
Programming

This section covers programming and operation for:

- Customer Programmable Preset
Customer programs his own volume or cash preset.
- Five Button Programmable Preset
Customer selects one of four set cash values or Fill for preset amounts.
- Five Button Cumulative Programmable Preset
Customer can add to set preset values already displayed.



Customer Programmable Preset

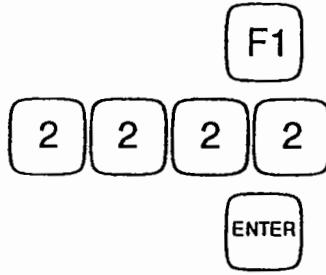


Five Button Programmable Preset

To Enter Program Mode:

Use the modular electronics managers' keypad to enter programming mode.

- Press F1.
- Enter PIN Code (Default = 2222).



Press ENTER.

To Enter Test and Program Mode:

- Press 5, then ENTER.



To Start Self Test:

Self test must take place before you can program.

- Press 1, then ENTER twice.
- 11.111 displays for one second, 222.22 for one second, 3333.3 for one second, 44444 for one second and 55555 for one second.
- An 8 moves across the display from left to right.
- The display blanks and the beeper sounds twice.



For Customer Programmable Preset (not 5 button), continue with keypad test.

Note: If the keypad test is not started within five seconds, the test aborts and the display returns to normal.

Keypad Test Sequence

Starting with 1, press each key in order ending with S3. The beeper sounds after you press each key. The display shows the key number you press (1 being first and 16 for S3 being last). See Figure 5 for key locations.

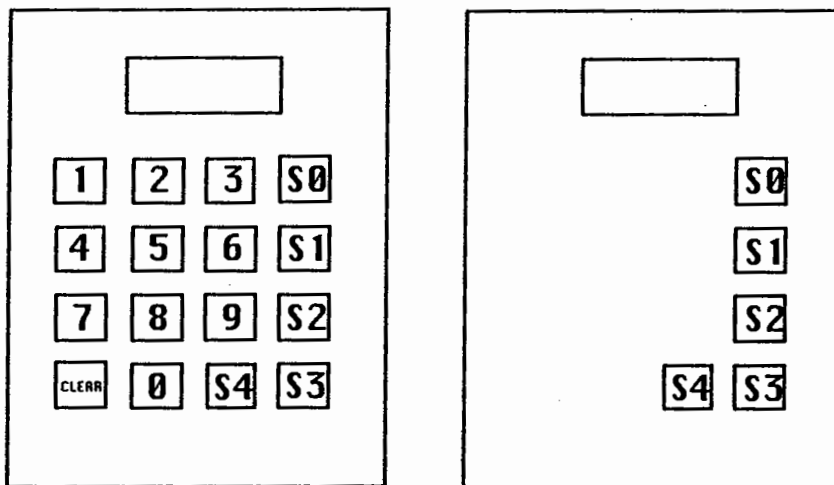
Note: If programming functions are not started within ten seconds, the display returns to normal.

Programming Functions

You must complete programming functions 1-3 for Five Button Preset and 1-2 for Customer Programmable Preset.

Note: Pressing S2 twice at anytime while in the programming mode resets all programming and restarts sequence.

Figure 5: Key Locations

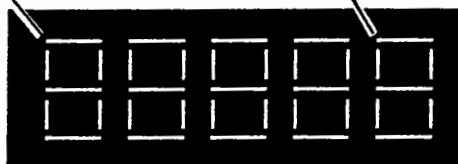


Customer Programmable Preset

Five Button Programmable Preset

Program Function Displays Here

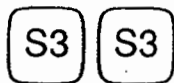
Preset Type Displays Here



Programmable Preset Display Area

Programming Function 1

This function programs whole units or decimals.



1. After self test, press S3 twice on Preset Keypad. You are now in programming function 1. See Figure 5 for key locations.



2. Press S0 to change the following:
0 in LSD position = Decimal Mode (number of decimal places on preset display matches number of decimal places on main display board).

1 in LSD position = Whole units only, no decimals (Customer Programmable Preset only, not Five Button).



3. Press S4. You are now in programming function 2.



Programming Function 2

This function programs preset type.



1. Press S0 to change the following:
0 in LSD position = Customer Programmable Preset
1 in LSD position = Five Button Non-cumulative Preset
2 in LSD position = Five Button Cumulative Preset



2. Press S4. You are now in programming function 3.



or



If programming Customer Programmable Preset, press F2 on Manager Keypad to exit programming mode. Continue with programming function 3 for Five Button Preset.

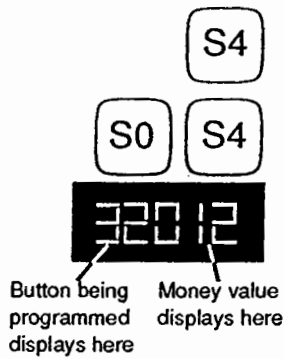
Programming Function 3

This function programs buttons to set cash values. See Figure 1 for button locations.

Buttons are pre-programmed to 5, 10, 15 and 20 dollar values.

- S0 is pre-programmed to a \$5.00 default.
- S1 is pre-programmed to a \$10.00 default.
- S2 is pre-programmed to a \$15.00 default.
- S3 is pre-programmed to a \$20.00 default.

To program buttons to other values:



1. Press S4 to display button you want to program.
2. Press S0 as many times as you need to get the dollar value you want, then press S4.

Press S1 to program second digit in two-digit numbers (eg., \$12,00).



3. Press F2 on Manager Keypad to exit programming mode.

Operating Instructions

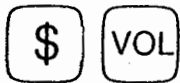
This section provides information to perform customer programmable presets. This information includes:

- Toggling between money and volume amount
- Money/volume presets
- Clearing presets
- Keypad time-out
- Customer limits

Note: The display shows a zero dollar amount whenever the dispenser is ready to receive a new preset value (dollar or volume).

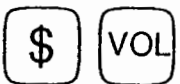
Power Up

Turning on the dispenser applies power to the system. The programmable preset software version appears on the preset LCD display. Do not use the dispenser until the version number changes to zeros.



- The system defaults for dollar (money) preset after applying power to the dispenser.
- Press either \$ (money) or VOL (volume) key to change the display arrow to either money or volume preset.
- Decimal points display on the LCD screen as they appear on the dispenser main display.

Money or Volume Presets



Press \$ or VOL key **before** entering preset amount. Enter preset amount. Pressing either \$ or VOL after entering one or more digits changes the sale type of the newly selected format. It also erases the amount entered before.

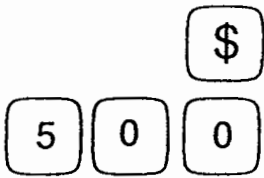


Press ENTER.

Note: You cannot change the value type after pressing ENTER without clearing preset amount.

Example Of A Money Preset

To enter a money preset amount:



Press \$ to show a dollar amount, if system is preset for volume.

Enter dollar amount. A beep sounds each time you press a number key. Each number moves to left as you enter additional numbers. In this example, the amount is \$5.00.

Note: Only the first five digits entered appear on the display. The unit ignores extra digits.



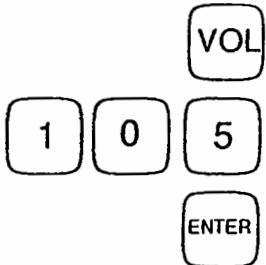
Press ENTER. A beep sounds. Preset value flashes, showing dispenser accepts amount.

Note: Positions P1 and P2 on keypad overlay can be set as preset values. When programming, enter value first (\$5.00), then press S0 or S1. From then on, when P1 is pressed, \$5.00 displays. Set P2 the same way.

Dispense fuel.

Example Of A Volume Preset

To enter a volume preset amount:



Press VOL to show a volume amount, if system is preset to dollars.

Enter volume amount. A beep sounds each time you enter a number key. In this example, the volume amount is 10.5 gallons.

Press ENTER. A beep sounds. Preset value flashes showing dispenser accepts amount.

Dispense fuel.

Clearing A Preset Value

Pressing CLEAR erases a stored customer preset value.

Note: If customer is dispensing fuel, pressing CLEAR does not affect the transaction.



Press CLEAR. A beep sounds and a zero amount appears on the display.

Keypad Time-Out

The system allows a customer five seconds between each keypad digit entry. If customer does not press ENTER before the five seconds, a time-out occurs and all customer data is erased.

Value type defaults to money (\$) if a time-out occurs.

Customer Preset Limits And Incorrect Entries

The system allows you to enter either money or volume amounts within specific limits. The system does not accept amounts outside these limits. In addition, it beeps three times to alert a customer of an incorrect entry. These limits include:

Money	Volume
00001 to 99000	000.10 to 990.00
0000.1 to 9900.0	
000.10 to 990.00	

Note: Preset type does not change.

