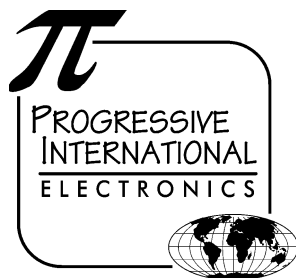


the #1

dispenser control console

Installation Guide





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THE #1 Dispenser Control System
Installation Guide
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HISTORY OF DOCUMENTATION
CHANGES & REVISIONS

Version 1.0 — June 1985

Version 2.0 — August 2001

THE #1

PURPOSE OF THIS DOCUMENT

This manual contains instructions for installation of THE #1 Dispenser Control Console. Instructions for installing or servicing fuel dispensers and POS terminals are not included. For more detail on any product not manufactured by PIE, or for PIE's own distribution box, always refer to that product's accompanying documentation.

NOTICE

Progressive International Electronics reserves the right to revise and improve this document as required. This publication details our Dispenser Control Console at this time, and may not accurately describe these products at all times in the future. Specifications are subject to change without notice.

PATENTS

Progressive International Products are manufactured or sold under one or more of the following U.S. patents.

5, 790,410	5,663,887	5,361,216
5,831,861	5,557,529	5,270,943
5,694,326	5,394,336	5,108,742

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THE #1

WARRANTY

Progressive International Electronics, Inc. (PIE) warrants to the Purchaser of THE #1 Dispenser Control Console manufactured by PIE against defects in material or workmanship for 1 (one) year from date of shipment. Seller will replace or repair defective parts or issue credits to the Purchaser's account in accordance with the following Conditions of Warranty.

Conditions of Warranty

- Credit will be applied only when completed warranty request form and defective parts are received and inspected.
- Decisions to repair or replace defective equipment are solely at the discretion of PIE.
- When parts shipments are made prior to receiving required warranty request and defective parts, they will be billed to the Purchaser.
- In all cases, approved warranty requests will be expedited by issuing the appropriate credit to the Purchaser's account or shipping replacement parts.
- Credits will not be issued for parts and no cash refunds for warranty credits will be made.
- All components and parts must be returned to the factory prepaid and, in turn, replacement components and parts will be returned prepaid by the factory.
- PIE's warranty applies only if the equipment has been installed and used in accordance with PIE's instructions. Warranty is void if any unauthorized alteration or addition has been made to the equipment or if it has been subject to damage caused

by abuse, act of nature, misapplication, accident or improper operation.

- PIE's liability for any damages, including contribution and indemnification, arising out of or in any way connected with the supplying of the equipment or its use, shall not in any case exceed the cost of repair of the equipment as herein provided. Upon expiration of the warranty, all such liability, as well as any other liability, shall terminate.
- Nothing contained herein shall make the Purchaser, its agents or employees, an agent or representative of PIE, and PIE assumes no responsibility of any act, omission, representation or warranty by the Purchaser or anyone else except as expressly stated herein.
- The final decision as to the validity of any claims arising under the warranty shall be determined solely by PIE.

The foregoing warranty is in lieu of all other warranties, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose which exceed the aforesaid obligations and are hereby disclaimed and excluded by Progressive International Electronics.



System Installation

System Installation Warnings

Safety hazards are inherent with all electrical equipment. Standard precautions must be taken at all times during installation and operation of THE #1 systems. In addition to normal electrical precautions, the following points should be noted during installation.

- Installation must comply with National Electrical Code, as well as Federal, State/Provincial, Local, and all applicable codes.
- High voltages are present in THE #1 components, as well as the equipment to which it is attaching. To prevent personal injury or equipment damage, disconnect all power before proceeding with installation.
- THE #1 equipment must be installed in nonvolatile, noncombustible, nonexplosive areas. The main box must be protected from severe vibration, extreme temperatures and excessive humidity.
- All THE #1 peripheral equipment must be installed in nonhazardous locations.

For Use in USA

Installation of THE #1 must comply with the requirements of the National Electrical Code (NFPA 70), the Automotive and Marine Station Code (NFPA 30A), and all Federal, State, Local, and applicable safety codes.

For Use in Canada

Installation of THE #1 must comply with requirements of the Canadian Electrical Code, the Flammable and Combustible Liquid Code, and all Federal, Provincial, State, Local, and applicable safety codes.

System Installation
System Evaluation

IMPORTANT!

The instructions included in this guide are for the installation of THE #1, both postpay and prepay/postpay versions.

THE #1 consists of a console, an interconnection box and an interconnection cable. One end of the interconnection cable is factory wired into the interconnection box. The other end is factory wired into a male plug. A receptacle for this plug is provided on the console back panel.

The interconnection box must be matched to the console for proper operation. Matching identification is supplied on the product labels affixed to the console and the interconnection box.

This equipment is to be used with self-contained and remote dispensers containing the following:

Self-contained dispensers

- pulser circuit — .amp 12vdc
- shutoff valve — 25watt 125 vac max
- slowdown valve — 25watt 125 vac max
- reset mechanism & pump motor circuit — ½ hp, 10amp 125vac max

Remote pump dispensers

- pulser circuit — .amp 12vdc
- shutoff valve — 25watt 125 vac max
- slowdown valve — 25watt 125 vac max
- reset mechanism & pump motor circuit — ½ hp, 10amp 125vac max

System Installation Pre-Installation

Inspect all equipment when received for evidence of shipping damage. If such has occurred, describe the damage and have the carrier's agent sign the description. Title to damaged equipment remains with the buyer. It is the buyer's responsibility to file a claim with the carrier involved.

Check the 120vac outlet into which the console will be plugged. It should be a properly grounded three prong receptacle. Poor grounding can result in improper operation or shock hazard.

Check the labels on the backs of the console and interconnection box to assure that they are properly matched. If they are not, call the factory at once.

Check the junction boxes in the dispensers to be controlled to assure that they contain adequate volume for the conductors to be installed. The size of the junction box is specified and may be referenced by the Underwriters Laboratories Standard, UL87.

Console Mounting

The console may be mounted in any convenient non-hazardous location, either horizontally or tilted. It must be mounted in such a manner, however, that a free flow of air is assured around the console. If the flow of air around the console is unduly restricted, the console may overheat during extended operation.

System Installation

Interconnection Box Mounting

The interconnection box may also be mounted in any convenient location with two restrictions. First, it must be mounted sufficiently close to the console to enable the interconnection cable to be plugged into the receptacle on the console back panel. The standard cable length is six feet. If a longer cable is desired, it must be ordered in advance so that it can be prewired into the interconnection box at the factory. Second, it must be mounted in such manner as to allow easy access to the interior to enable initial field wiring for installation, service and operation of the manual override switch.

Wiring



Wire the system per the enclosed wiring diagrams.

CAUTION: *While wiring, make sure that no ac power is allowed to the console or to the ac circuits being wired into the interconnection box. This will prevent possible shock hazard to the installer and destruction of console components should an ac wire inadvertently come in contact with the low voltage dc circuits. If there is any question about the proper wiring of the system, call the factory for clarification and assistance before attempting to check out the system operation.*

System Installation

Operation Diagnostics

1. Ensure that the manual override switch in the interconnection box is in the "auto" position. Plug the interconnection cable into the back of the console.
2. Plug the console power cord into the ac outlet and turn the console power switch, located on the console back plate, to the "on" position. The red signal light should come on and the display should show all zeros.
3. Push the green signal light button. The red signal light should go off and the green signal light should come on. The display should continue to show zeros. Power should be available at the dispenser.
4. Conduct several postpay fueling operations. With the postpay only system, this involves nothing more than pushing the green signal light button just before the beginning of each delivery. With the prepay/postpay system, the preset thumbwheel switches on the face of the console should first be set to a number higher than the delivery is expected to attain before the green signal light button is pushed. Note that, once the green signal light button has been pushed, changing the preset amount set on the switches will not change the amount loaded into the console. Changing the preset number will only be effective when the red signal light is on. At the conclusion of each delivery, the red signal light should come on and the display should show the same number on the dispenser computer.
5. Conduct several prepay fueling operations (prepay/postpay systems only). Set the amount to be delivered on the preset thumbwheel switches first then push the green signal light button and proceed with the delivery. Just before conclusion of the delivery, the pumping rate will slow down automatically. At the conclusion of the delivery the pump will shut off automatically. Following conclusion of delivery, the console

display and the dispenser computer should show the amount set on the thumbwheel switches.

6. At the conclusion of all deliveries, either postpay or prepay, the audible alarm beeper should sound for a brief period of time.

With a prepay/postpay system, do not attempt operation with all zeros set on the preset thumbwheel switches. With this setting, the console will not allow the dispenser to be turned on.

System Installation
Trouble Shooting

Most installation problems can be avoided if the preceding instructions are followed carefully. Should trouble be encountered, however, the following checks should be made.

1. Change consoles. If this solves the problem, the defective console should be returned to the factory for repair.
2. Check the manual override switch in the interconnection box. If the switch is on "man" instead of "auto", the console will not turn the dispenser on and off.
3. With prepay/postpay consoles, check the amount set on the preset thumbwheel switches. If all zeros are set, the console will not turn on the dispenser.
4. With prepay/postpay console, make sure that you are setting the amount to be prepaid into the preset thumbwheel switches before you push the green signal light button. If the thumbwheel settings are changed after the green signal light button is pushed, the console will shut the dispenser off at the previous set amount.
5. Make sure the console is plugged into a grounded outlet. Poor grounding can result in premature dispenser shutoff and erratic counting, either intermittently or continuously.
6. Check the pulser trip adjustment. Improper adjustment will cause a constant plus or minus variation of up to one cent between the console display reading and the dispenser computer reading.
7. Check to see if there are any electric heaters, cash registers, compressors etc. on the same electrical circuit as the console. Many of these types of equipment generate electrical noise in the circuit which can cause the console to count erratically or to turn the dispensers on and off at odd times. It is always

best to have the console operating on a circuit which is on a different leg of the power main than on the leg used by noise generating types of equipment.

8. Check to make sure that all wiring connections are properly made and in accordance with the wiring diagram.

At any time that uncertainty or doubt may exist as to the proper action to take, remember that it is always best to contact the dealer from which you bought the equipment or the factory for assistance rather than to chance creating further problems by proceeding based on guessing.

Diagram: THE #1 to Single Suction Dispenser (Prepay)

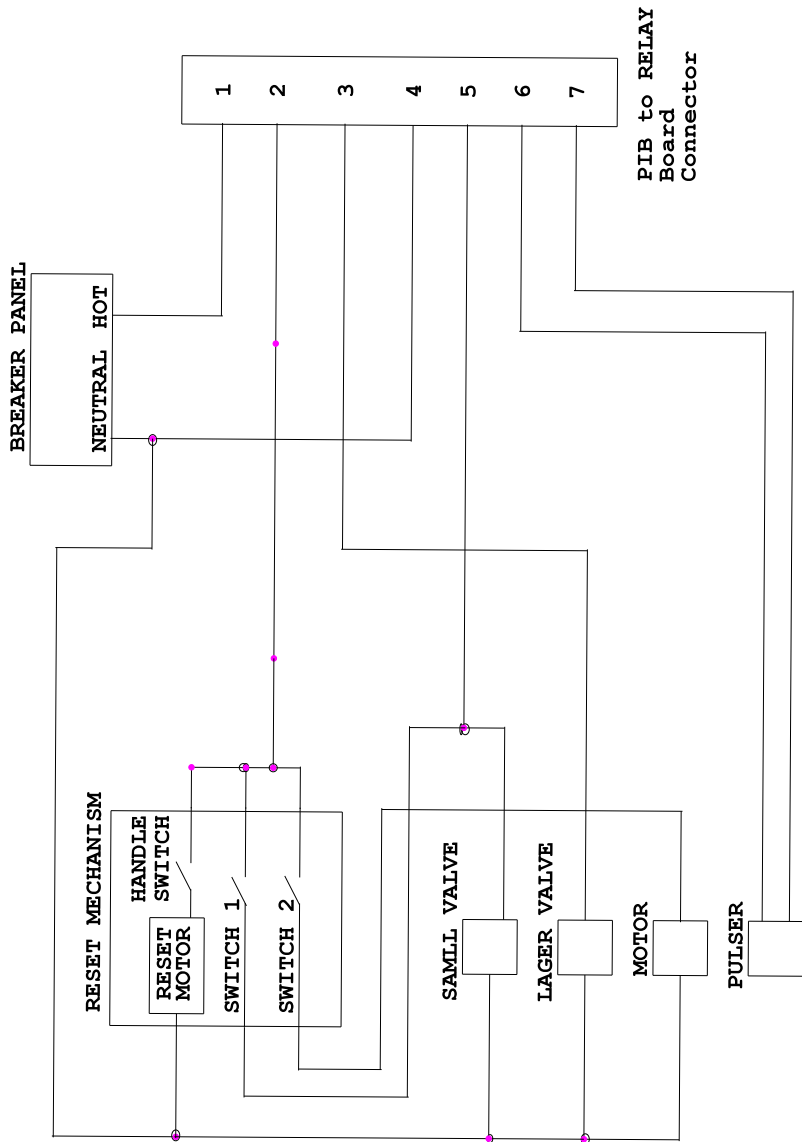


Diagram: THE #1 to Single Suction Dispenser (Postpay)

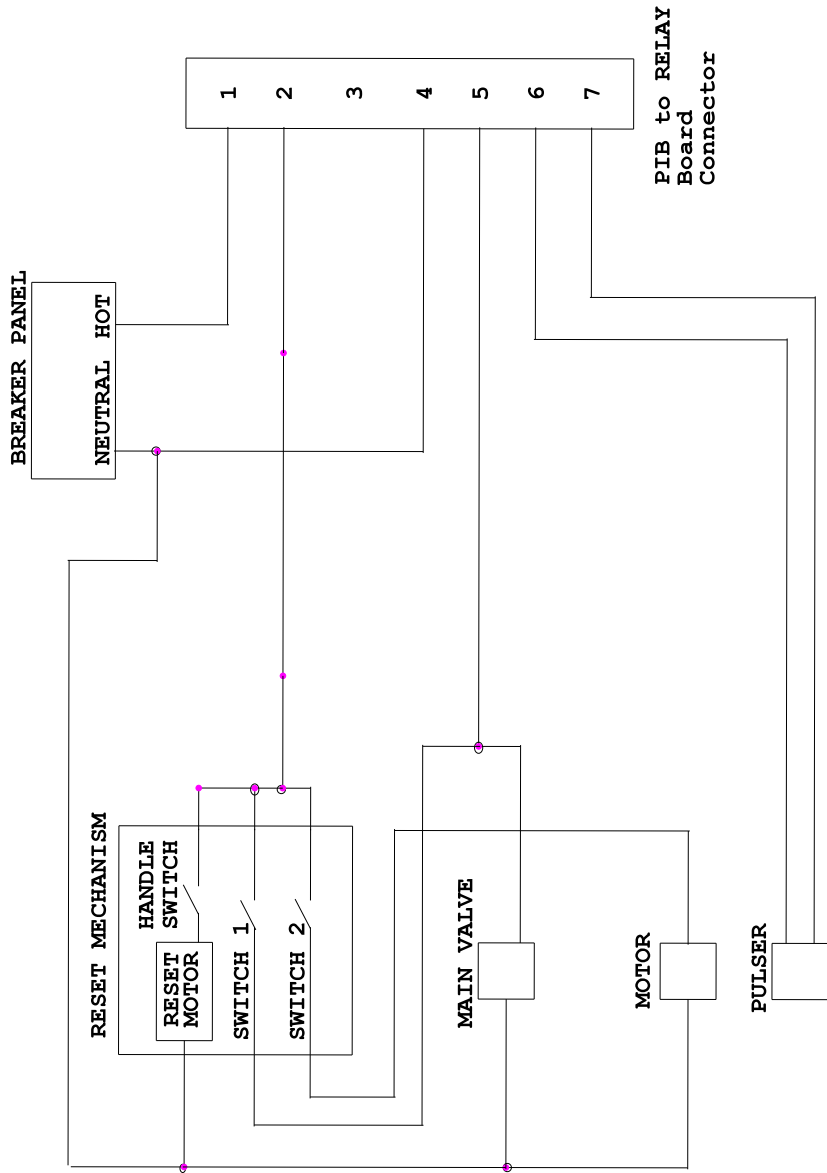


Diagram: THE #1 to Submerged Dispenser (Prepay)

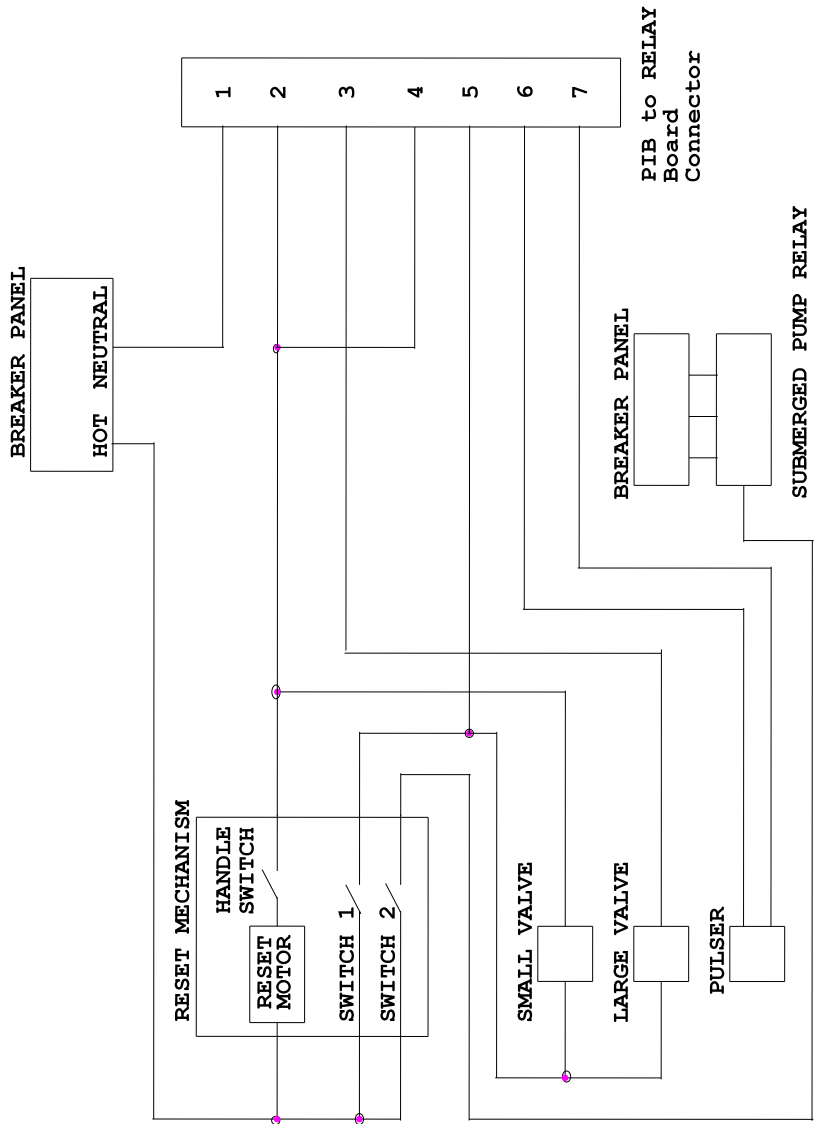


Diagram: THE #1 to Submerged Dispenser (Postpay)

