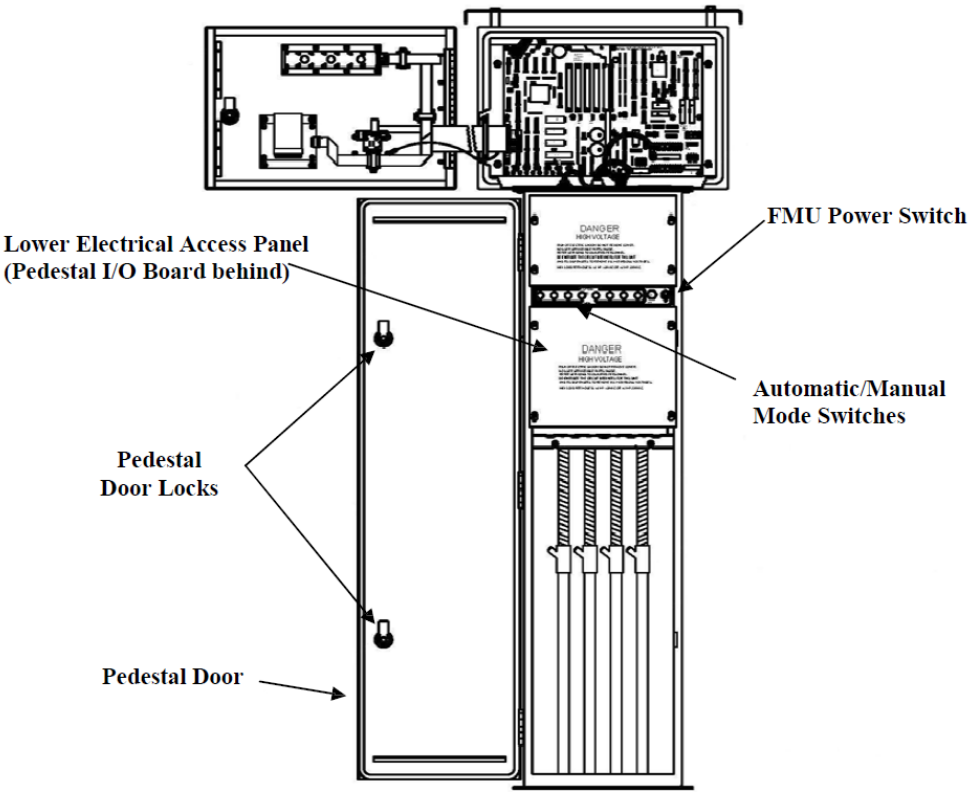
COUNT TEST – DoD FMU

The **Count Test** is performed to:

- verify the dispenser doesn't record quantity when the dispenser is resetting and not pumping fuel
- determine the divide rate (number of pulses per gallon or liter) of each pulser
- troubleshoot pulser problems

If pulses are not received when performing the Count Test, the FMU may be tested (see step 11) to verify it is sending power to and receiving pulses from the pulser.



1. Ensure the LCD displays:

```
FUELMASTER FUEL MANAGEMENT SYSTEM

INSERT KEY, HOLD 1 SECOND TO BEGIN
```

2. Insert a Configuration Key in the key receptacle. The following display will be observed:

```
*SUPERVISOR MENU:  *

A=CONFIG, B=REPORTS, C=HOSES, D=EXIT*
```

3. Depress function key "A" to select the Configuration Menu. The following display (time and date will differ) will be observed:

```
*CONFIGURATION: 13:58:47, 03/20/89, THUR*

*A=MODIFY, B=TEST, C=TIME/DATE, D=EXIT*
```

4. Depress function key "B" to select the diagnostic tests. The following display will be observed:

```
TESTS:1=SW, 2=OUTS, 3=LCD, 4=KEYPAD, 5=RCPT,

A=PROKEE, B=COUNT, C=RESET, D=EXITS
```

5. Depress function key "B" to select the Count Test. The following Count Test display will be observed (the number to the left of the “00000” is the hose number):

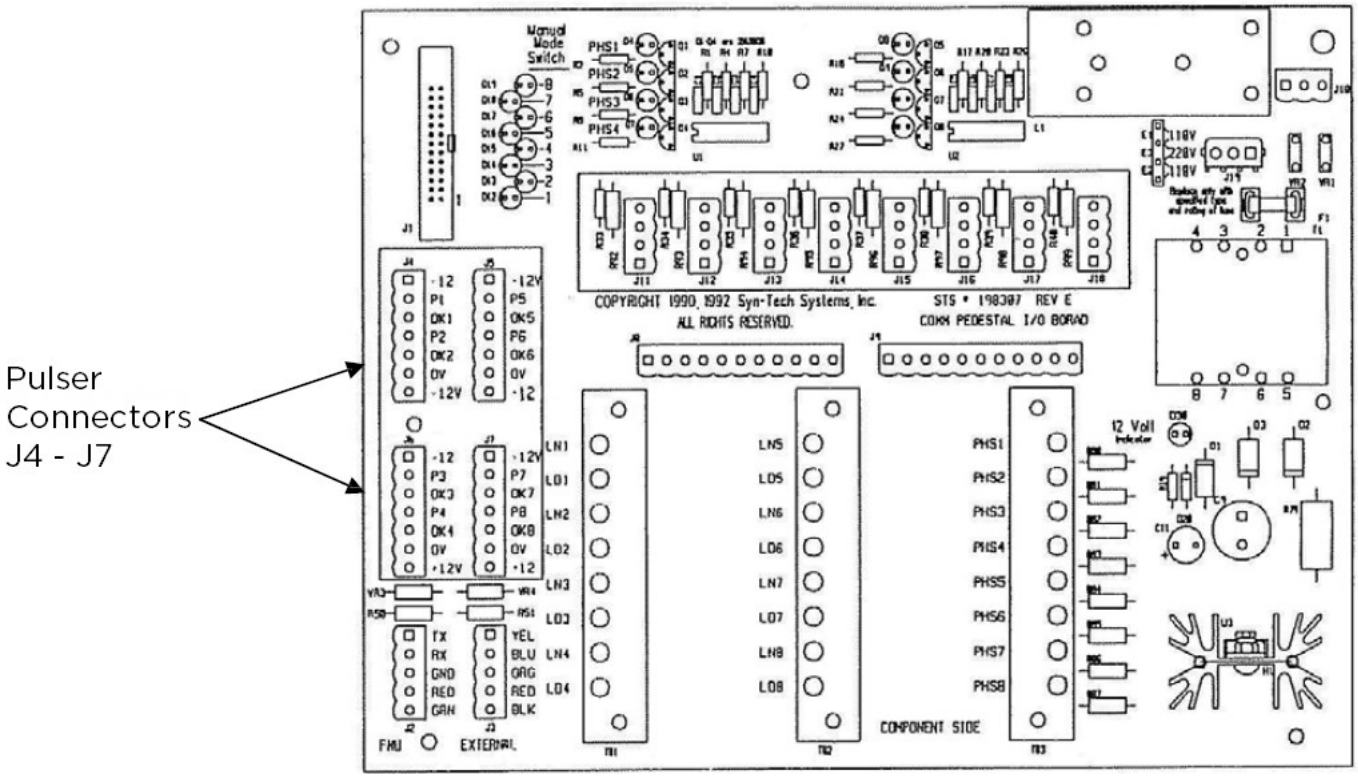
```
CNT TEST 1-00000 3-00000 5-00000 7-00000

D=EXIT 2-00000 4-00000 6-00000 8-00000
```

6. Unlock and open the Pedestal Door.
7. Switch the Automatic/Manual Mode Switch for the hose being tested to Manual (test one hose at a time).
8. Go to the fuel dispenser, turn the pump reset handle on for hose 1, and observe the Count Test display. If no quantity is registered (i.e., no zeroes change to a number), proceed to step 9. If any zeros change to a number, perform the following:
   a. Exit the Count Test.
   b. Move the Automatic/Manual Mode Switch for hose 1 to auto.
   c. Start a transaction on hose 1 with a Prokee.
   d. Pump a quantity of fuel into a vehicle or receptacle. Record the hose number, quantity, and time; then, turn off the pump reset handle.
   e. Ask the Central Controller operator to download the transactions from this FMU.
   f. Find the transaction performed in steps c and d, above. Compare the downloaded quantity with the recorded quantity. If the quantities match, no further action is required. If the quantities do not match, pump handle

detection must be turned on (may require dispenser wiring changes), or the pulser must be replaced with a pulser having 110 VAC control.

9. Repeat steps 2 through 5 to return to the Count Test display; then, dispense (as accurately as possible) one gallon of fuel.
10. Observe the Count Test display. The "00000" display for the hose being tested should count forward the number of pulses received to register one gallon. A display of "00010" (+/- 1) indicates a 10:1 pulser. A display of "00100" (+/- 10) indicates a 100:1 pulser. Provide the divide rate detected to the Central Controller operator.
11. Repeat steps 2 through 9 for each hose to be tested. If the "00000" display did not increment forward during the Count Test, serviceability of the FMU to power the pulser(s) and read pulses can be determined by generating pulses within the FMU (see figure below):



a. Ensure all pump reset handles are turned off.

WARNING Electrical shock hazard! Do not touch any bare conductors.

b. Remove the lower electrical access panel cover.

c. Check the LCD is still displaying:

```
CNT TEST 1-00000 3-00000 5-00000 7-00000

D=EXIT 2-00000 4-00000 6-00000 8-00000
```

d. Disconnect the 7-pin connector (with wires attached) from the applicable J4 through J7 receptacle (J4 for hoses 1 and 2, J6 for hoses 3 and 4, J5 for hoses 5 and 6, and J7 for hoses 7 and 8).

e. Using a jumper wire, momentarily touch a jumper wire between pins "+12V" (either of the two "+12V" in each receptacle) and "P_" (P1 for hose 1, P2 for hose 2, etc.).The applicable "00000" display should increment forward one count every time "+12V" and "P_" are jumpered together. If the "00000" display does increment forward, the FMU is serviceable, generating pulser power and reading pulses. A problem exists in the wiring between the FMU and the fuel dispenser pulser, or the fuel dispenser pulser is not functioning. If the "00000" display does not increment forward, a problem may exist in the FMU and additional troubleshooting is required with Syntech Systems, Inc.'s CSC.

12. When testing is complete, reconnect any disconnected pulser connectors, reinstall any removed electrical access panels, move all active Automatic/Manual Mode Switches to automatic, restore FMU power, and close the Pedestal Door.

TIP	If any questions arise, contact Syntech Systems, Inc.'s Customer Satisfaction Center (CSC) at 1-800-888-9136, ext. 2, or email support@myfuelmaster.com.