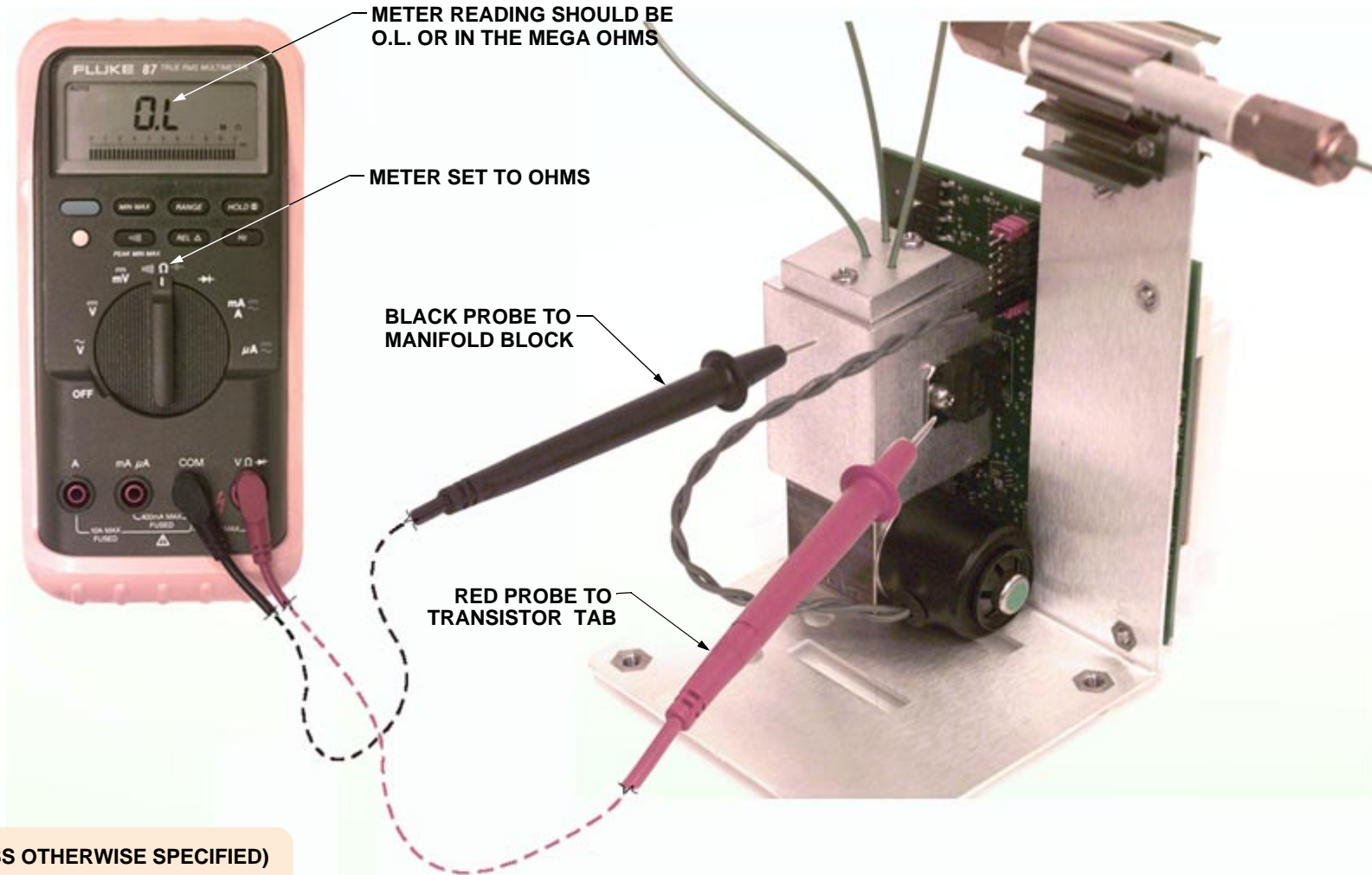


24 VOLT SHORT TEST FOR EFC TYPES I, III, IV, AND 5



NOTES: (UNLESS OTHERWISE SPECIFIED)

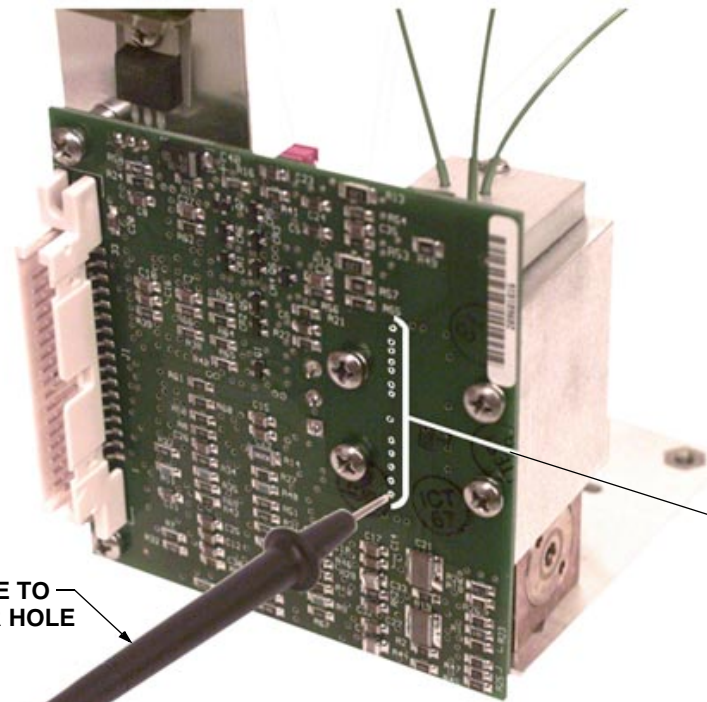
1. THIS TEST MUST BE DONE BEFORE RIBBON CABLE IS ATTACHED.

TRANSDUCER SHORT TEST

FOR EFC TYPES I, III, IV, AND 5

METER READING BE O.L. OR IN THE MEGA OHMS

METER SET TO OHMS



CHECK ALL 13 TRANSDUCER HOLES

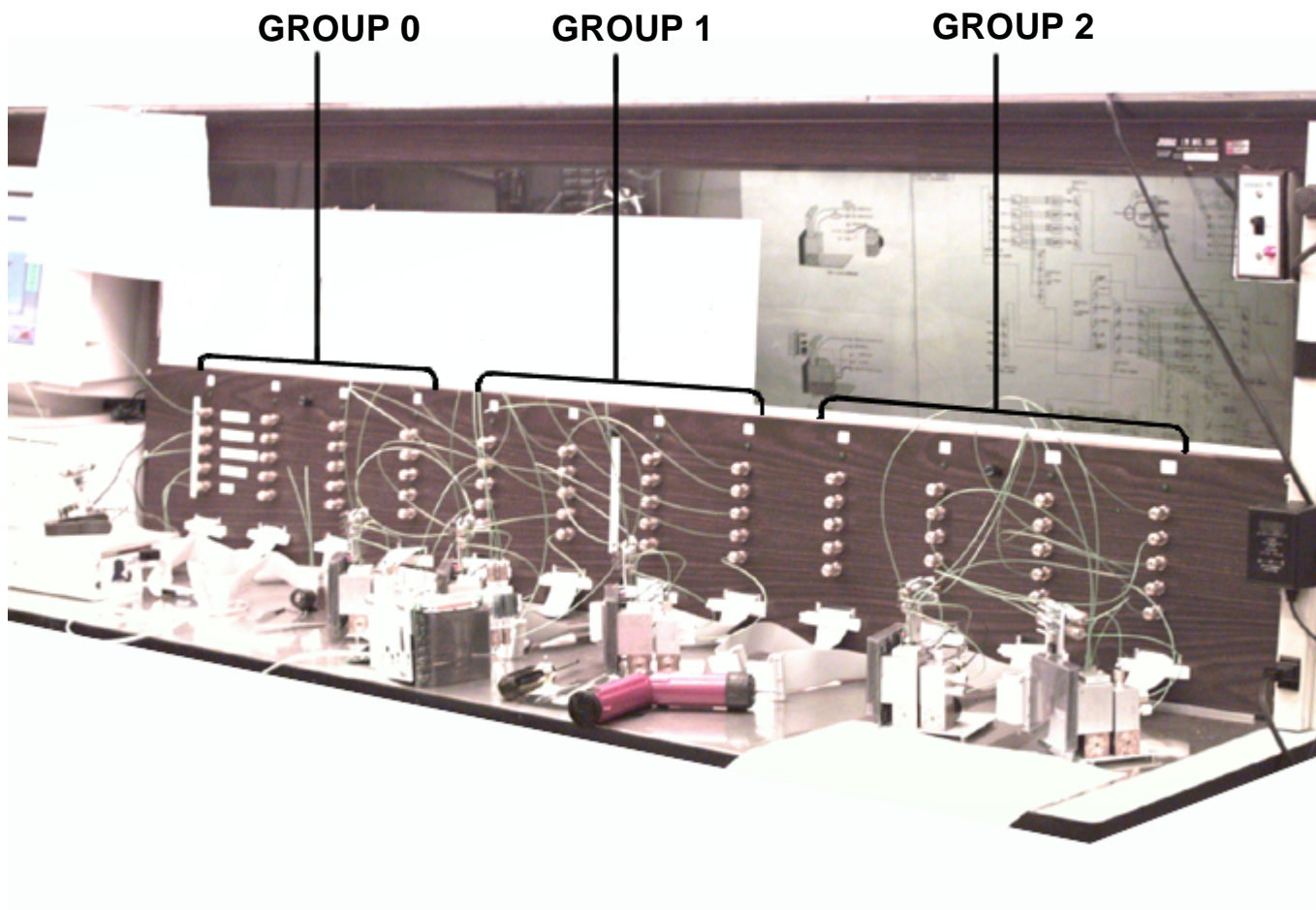
BLACK PROBE TO TRANSDUCER HOLE

RED PROBE TO A GROUNDED SURFACE

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. THIS TEST MUST BE DONE BEFORE RIBBON CABLE IS ATTACHED.

TEST FIXTURE CONNECTIONS

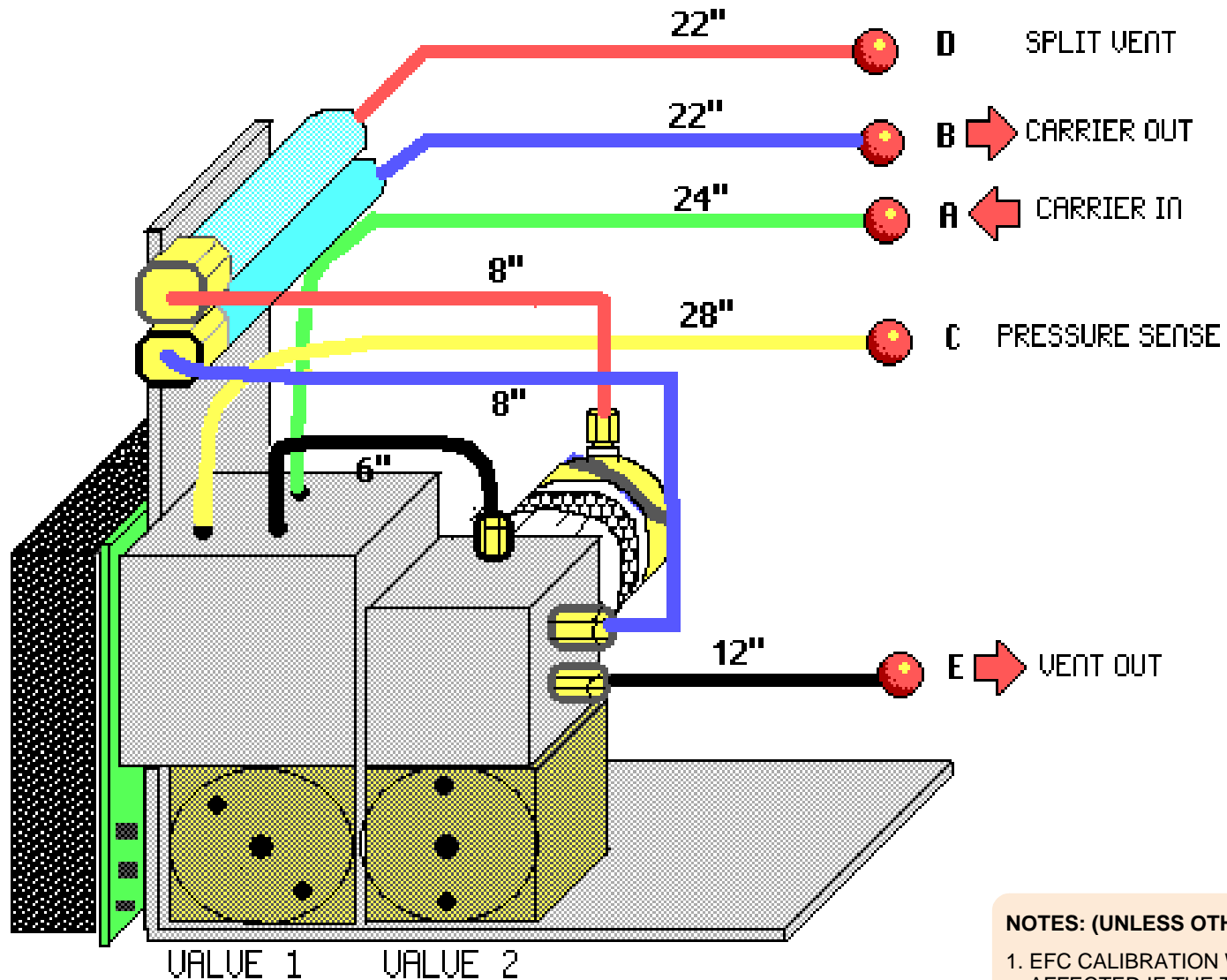


NOTES: (UNLESS OTHERWISE SPECIFIED)

1. EFC TYPES CANNOT BE MIXED WITHIN A GROUP.

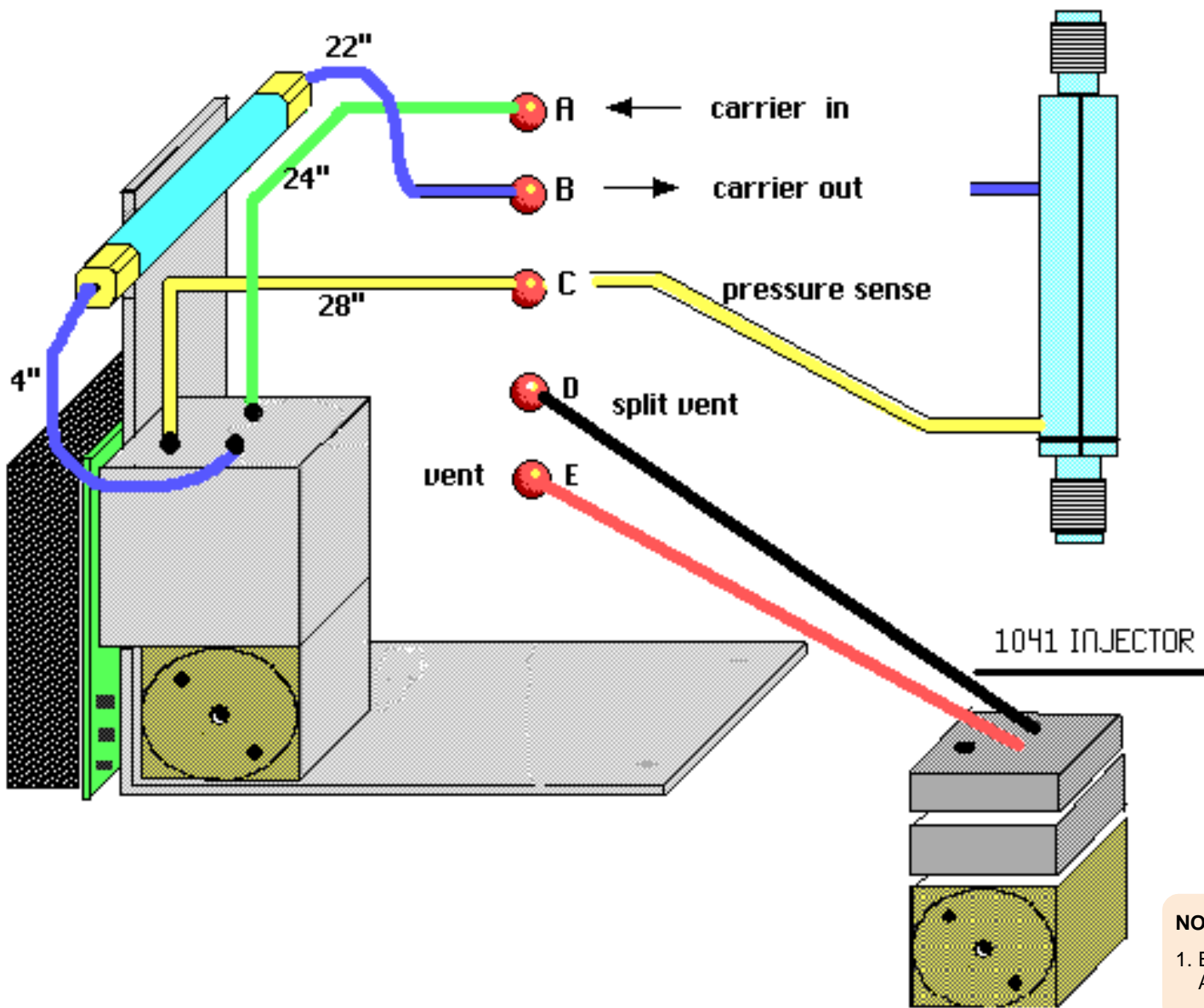
TEST FIXTURE CONNECTIONS

FOR EFC TYPE I



NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. EFC CALIBRATION WILL BE ADVERSLY AFFECTED IF THE TUBING IS SHORTENED.

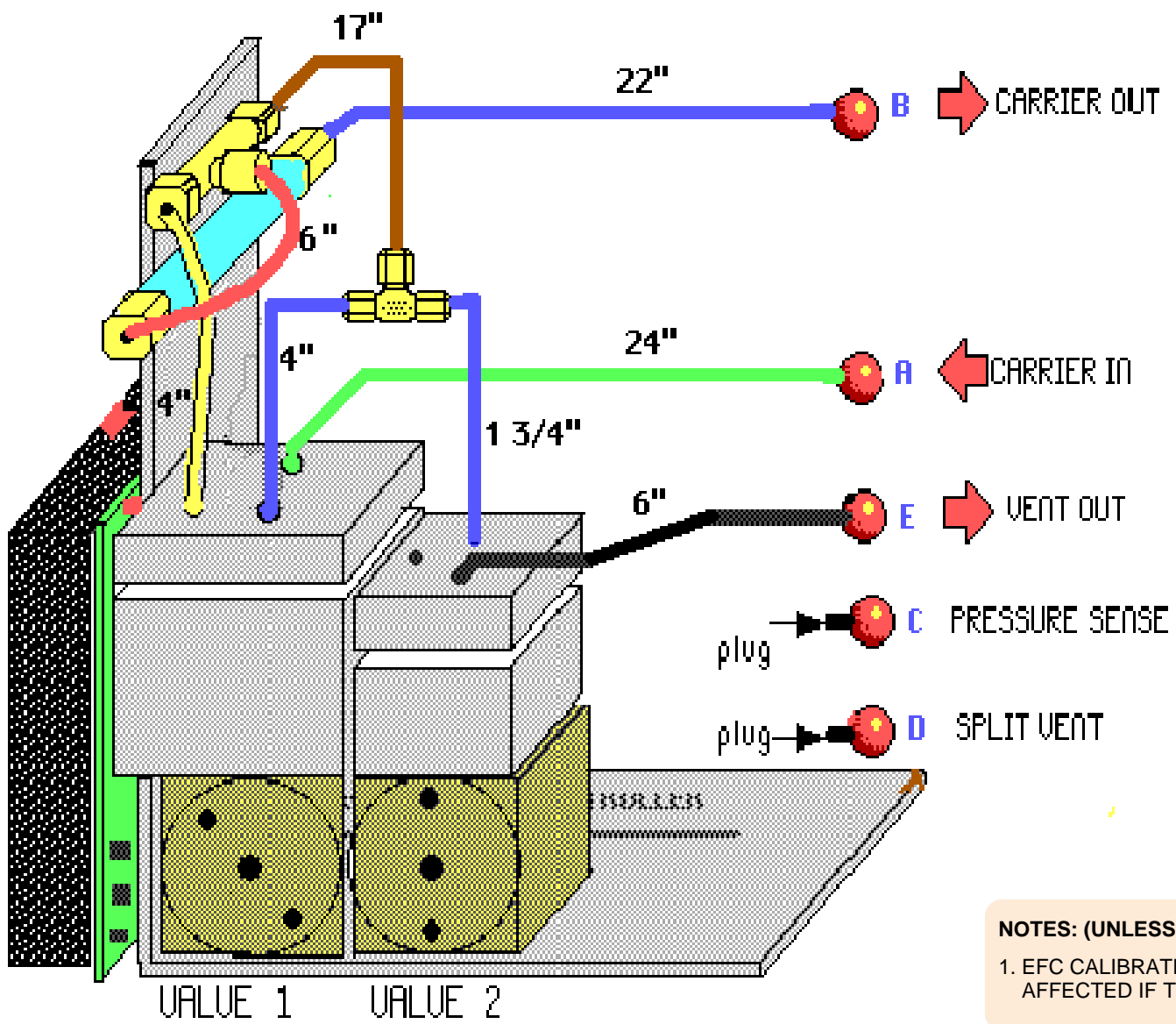
TEST FIXTURE CONNECTIONS FOR EFC TYPE III



NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. EFC CALIBRATION WILL BE ADVERSLY AFFECTED IF THE TUBING IS SHORTENED.

TEST FIXTURE CONNECTIONS

FOR EFC TYPE IV

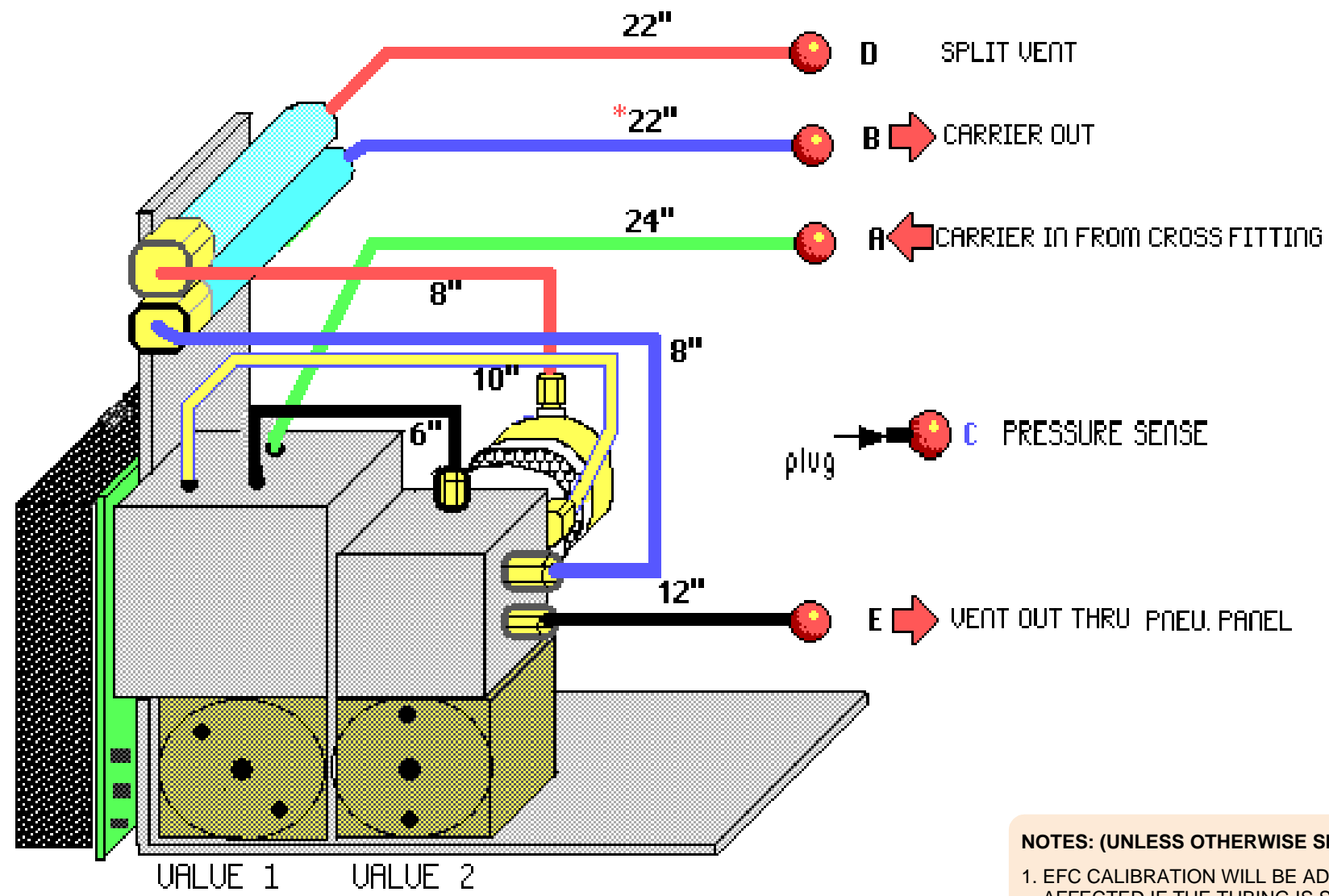


NOTES: (UNLESS OTHERWISE SPECIFIED)

1. EFC CALIBRATION WILL BE ADVERSLY AFFECTED IF THE TUBING IS SHORTENED.

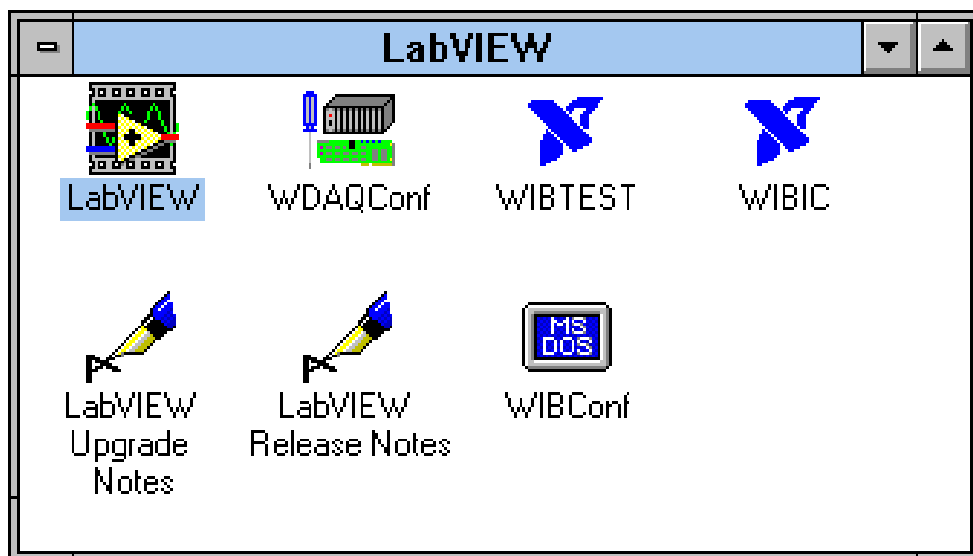
TEST FIXTURE CONNECTIONS

FOR EFC TYPE V



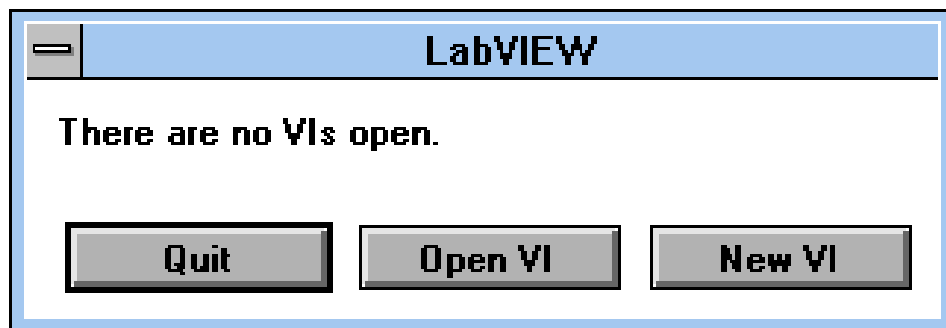
NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. EFC CALIBRATION WILL BE ADVERSLY AFFECTED IF THE TUBING IS SHORTENED.

LabVIEW TEST & CALIBRATION PROGRAM

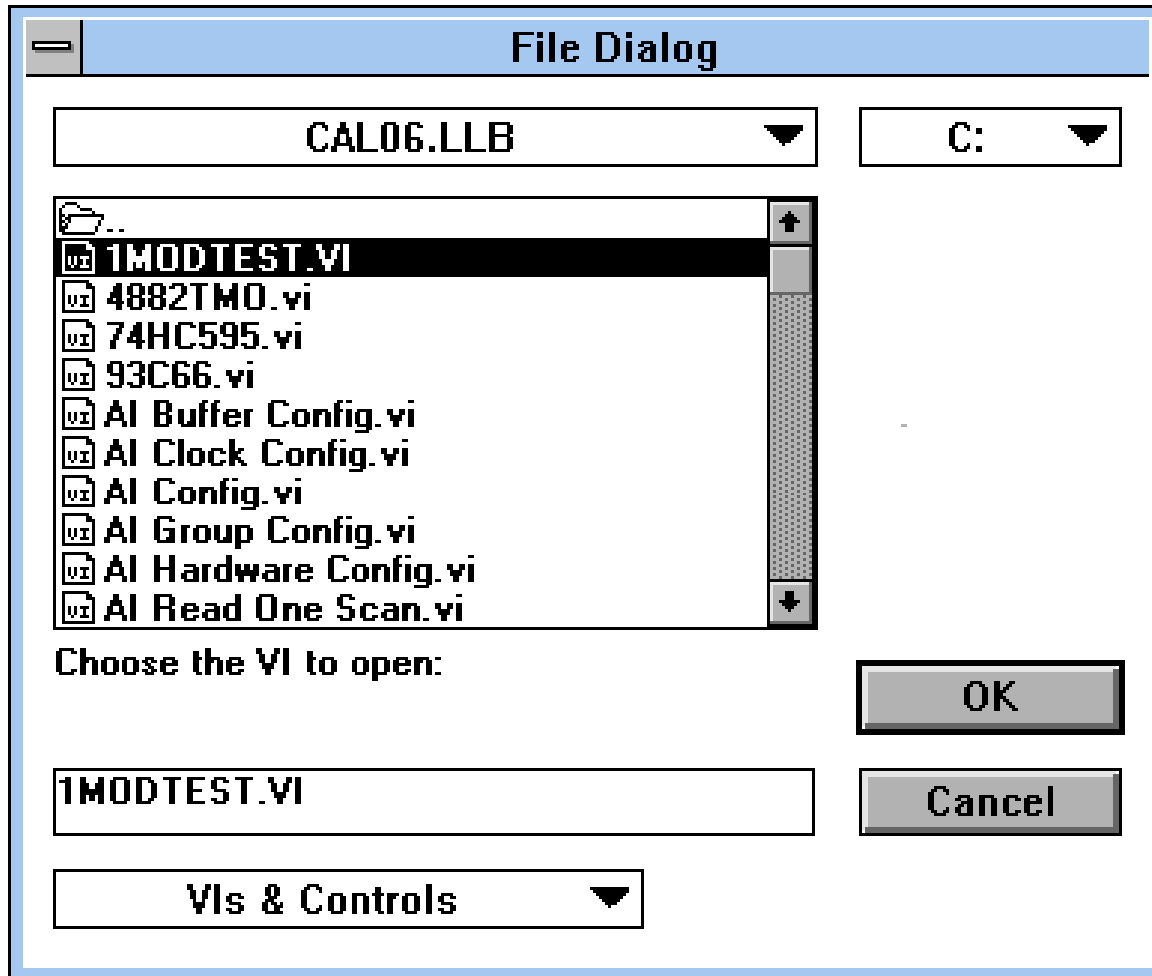


1. Start LabVIEW by double clicking on the LabVIEW icon from the LabVIEW group in Program Manager.

A window with the heading Untitled-1 will appear. Close Untitled-1, the following dialog box appears.



2. Click on the Open VI button.



3. In the File Dialog box select the test file, c:\fix_soft\eiccal06\cal06.llb\1modtest.vi.

Click on OK, the 1MODTEST.VI open screen appears.

NOTE: The test file name and its location may change. See supervisor for correct file.

5. Click on this arrow to goto QUICK TEST.

1MODTEST.VI

File Edit Operate Controls Windows Text Help

Test Sequence:

1 1st 5 5th
2 2nd 0 6th
3 3rd
4 4th

Test Parameters:

Func. Test Warm up (Mins) 10
Leak Test (Mins) 1
Calibration Warm up (Mins) 30

Group 0:

TYPE# 1
REV#0 4

Group 1:

TYPE# 3
REV#1 4

Group 2:

TYPE# 1
REV#2 4

Use Old Ser. #

0
1
2
3
4
5
6
7
8
9
10
11

Test Codes:

0 = No Test.
1 = Module Functional Test.
2 = Pressure Calibration.
3 = Helium Calibration.
4 = Nitrogen Calibration.
5 = Hydrogen Calibration.
6 = Custom Gas Calibration.
7 =

Printer Setup Parameters:

PORT# LPT1 STOP BITS ONE
BAUD RATE 2400 PARITY NONE
DATA BITS 8 ERROR CODE 0

Test Fixture Setup Parameters:

DVM GPIB ADDRESS 22
MENSOR GPIB ADDRESS 1
SETRA PORT # 0
INTERFACE PCB # 1

Fixture# 2 Ref. Flow. Ser# 3

Tank Pressure (psi)

Helium 105
Nitrogen 105
Hydrogen 105

Type Codes:

0 = Non Existant Type.
1 = Split/Splitless Injector. (1077/1078)
2 = Pressure Controlled, 50 cc/min.
3 = Flow Controlled, 50 cc/min.
4 = Pressure Controlled, 500 cc/min.

FUNCTIONS:

QUICK TEST 0

Fixture Test OFF

Software Revision 4.00

4. From the FUNCTIONS pull-down menu select QUICK TEST.

10. Click on this arrow to begin QUICK TEST.

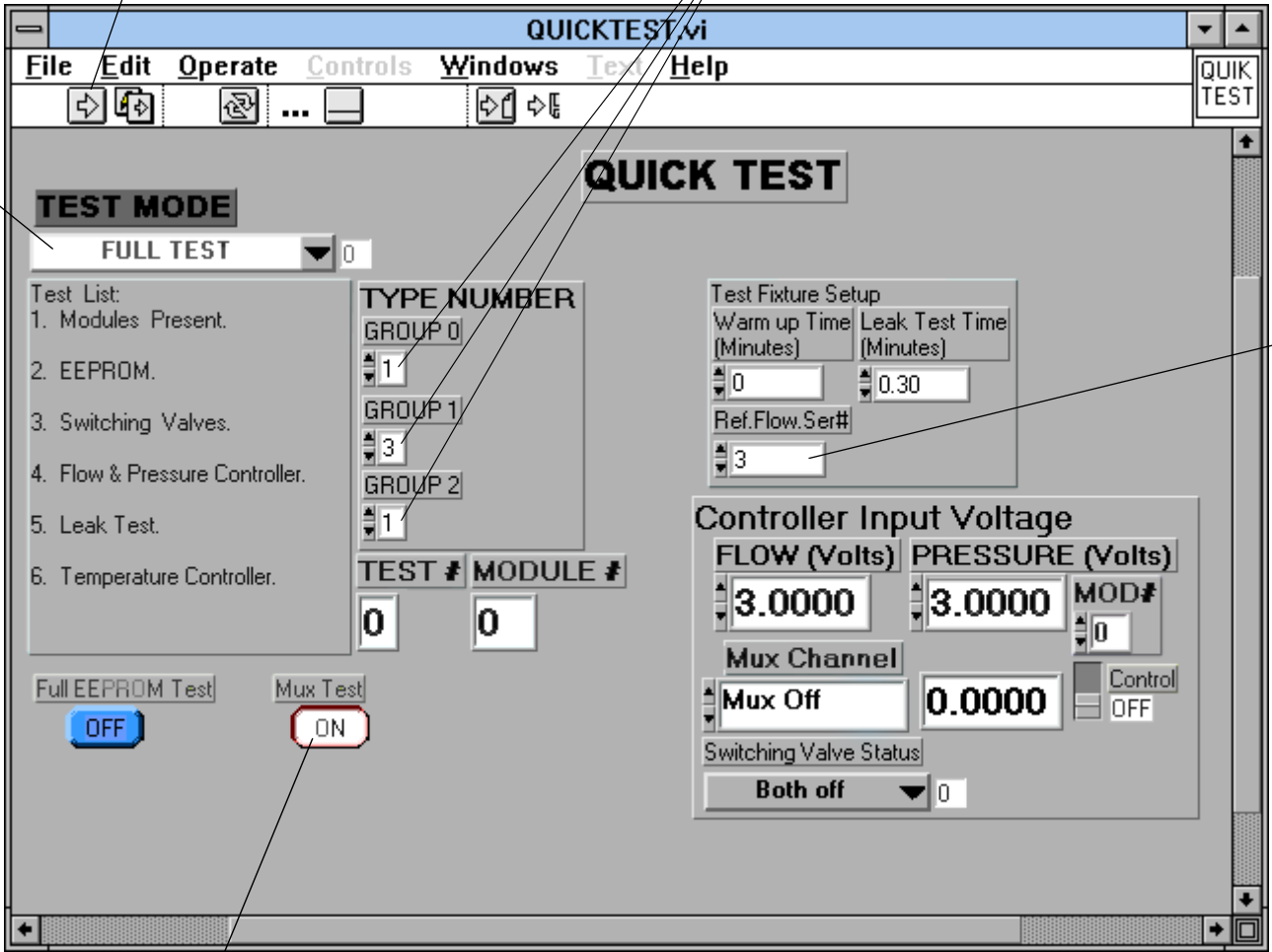
12. Click on this arrow to exit.

8. In the TYPE NUMBER box enter the EFC types connected in each group, refer to page 3.

6. From the TEST MODE pull-down menu select FULL TEST.

11. When the test is complete select EXIT from the TEST MODE pull-down menu.

9. In the Test Fixture Setup box enter the Ref Flow number from the flow sensor.



7. Turn Mux Test on.

NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. REFER TO THE EFC TROUBLE SHOOTING GUIDE FOR TEST ERRORS.

18. Click on this arrow to begin TEST&CALIBRATE.

The screenshot shows the 1MODTEST.VI software interface with the following sections:

- Test Sequence:** A list of steps (1st to 4th) with corresponding time values (5, 0, 30 minutes).
- Test Parameters:** Fields for Func. Test Warm up (10), Leak Test (1), and Calibration Warm up (30).
- Printer Setup Parameters:** Fields for PORT# (LPT1), STOP BITS (ONE), BAUD RATE (2400), PARITY (NONE), DATA BITS (8), and ERROR CODE (0).
- Test Fixture Setup Parameters:** Fields for DVM GPIB ADDRESS (22), MENSOR GPIB ADDRESS (1), SETRA PORT # (0), INTERFACE PCB # (1), Fixture# (2), Ref. Flow Ser# (3), and Tank Pressure (105 psi) for Helium, Nitrogen, and Hydrogen.
- Group 0, 1, 2:** Fields for TYPE# and REV# for each group.
- FUNCTIONS:** A pull-down menu currently set to TEST&CALIBRATE.
- Software Revision:** A purple box displaying 4.00.

16. FIXTURE # should be 2

15. Enter the Ref Flow number from the flow sensor.

17. Enter the EFC types connected in each group, (refer to page 3) and the PCB revisions.

14. From the FUNCTIONS pull-down menu select TEST& CALIBRATE.

- NOTES: (UNLESS OTHERWISE SPECIFIED)**
1. REFER TO THE EFC TROUBLE SHOOTING GUIDE FOR TEST ERRORS.
 2. EACH TEST TAKES 1.5 HOURS PER EFC MODULE TO COMPLETE.
 3. AFTER TESTING EFC MODULES MUST BE BAGGED AND SEALED IMMEDIATELY.