SAVE CLEAR

TROUBLESHOOTING THE EMS411 OPACITY MONITOR

Please fill in the following and fax to 203.634.6663 or email to service@emsct.com
Company name _____

Your name _____, Ph. _____, Email _____

Fax _____

Note: It is assumed that the person conducting the testing below is familiar with the EMS411 operation and typical electronic instruments used for the procedures. If you are not familiar with the EMS411 system, please read the operation manual especially the part maneuvering to the different pages on the control unit.

Control Unit:

1. What is the controller Opacity displaying now? _____ %

2. Press "ESC" button twice to enter the “About Page” and record; s/n _____, Date Manufactured _____, Flange to Flange_____. Press right arrow key to change display and record; Sensor Loc. _____, Stack exit ID _____ and OPLR _____.

3. From the "Setup" menu record the; Alarm set point _____ , Alarm time delay _____ , True Zero Check _____ , True Span Check_____

4. Return to the Main page by pressing "ESC" button and selecting Main Display by pressing "Enter" button.

5. Initiate a cal cycle with the "F1" push button and wait 30 seconds or until the front panel meter reading stabilizes and record values.

Zero Value	Span Value

Environmental Monitor Service, Inc.
P.O. Box 4340 Yalesville, CT 06491
Ph. 203.935.0102 Email: service@emsct.com

Go to the sensor location and continue. Make sure that you have a good meter such as fluke that can measure both DC Volts & 0-20mA current.

6. Observe the alignment target and sketch in the ball of light below:

7. Remove the transceiver cover and with your meter using the Orange test point on the Signal Processor PCB 1667 (see last page for location) as ground., measure and record the following on the Power Modulator PCB 1668:

TP4, +15 VDC (Yellow)	TP3, -15 VDC (Orange)	TP-1 (Brown)

8. On the Signal Processor PCB 1667 measure and record the Reference voltage on TP2 (Red) DCV _____ and Measurement voltage on TP1 (Brown) DCV _____.

9. Replace the cover and place the switches on the service module to the following positions;

TP4, +15 VDC (Yellow)	TP3, -15 VDC (Orange)	TP-1 (Brown)

10. Record the Opacity reading now _____

11. Place Opacity/T2 switch to T2 and record _____.

12. Return Opacity/T2 switch to Opacity.

13. Put the zero switch to the zero position wait until the Opacity reading settles and record it _____. Now switch the meter switch to T2 and record the reading _____.

14. Put the span switch to span and record the T2 reading _____. Now switch the meter switch to Opacity and record the reading _____.

15. Return both zero and span back to Operate positions.

16. Swing open the transceiver and clean the transceiver front window. Close the transceiver.

17. Put the zero switch to the zero position wait until the Opacity reading settles and record it _____. Now switch the meter switch to T2 and record the reading _____.

18. Put the span switch to span and record the T2 reading _____. Now switch the meter switch to Opacity and record the reading _____.

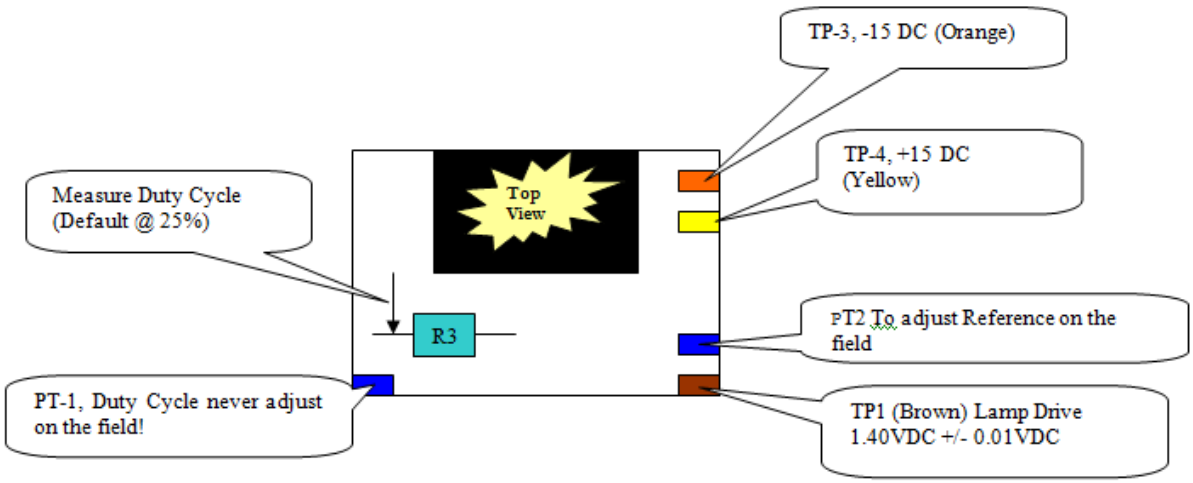
19. Return both zero and span back to Operate positions.

What did you adjust?

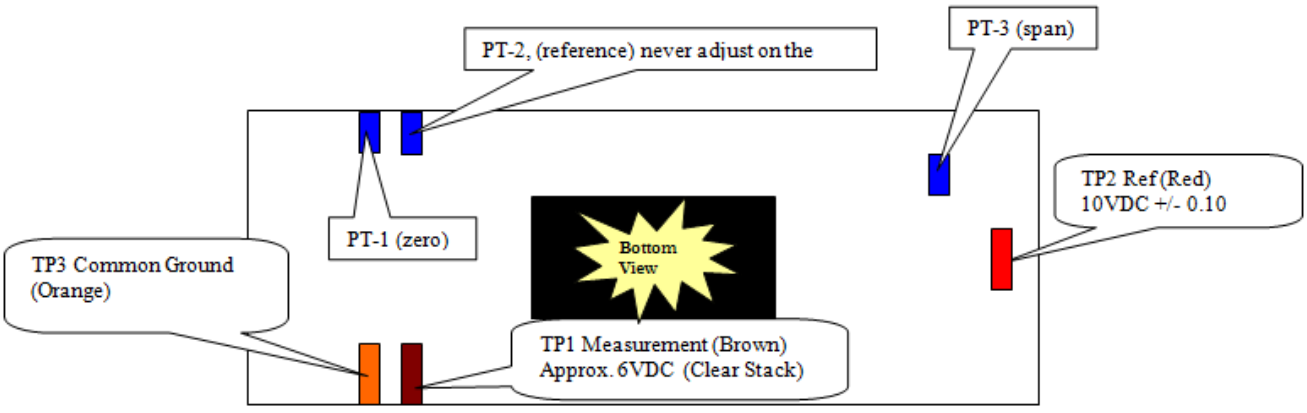
To the best of your knowledge, please tell us what potentiometers on which PCB you turned:

_____

Power Modulator PCB 222-1668
Top View
Figure 1



Signal Processor PCB 222-1667
Bottom View
Figure 2



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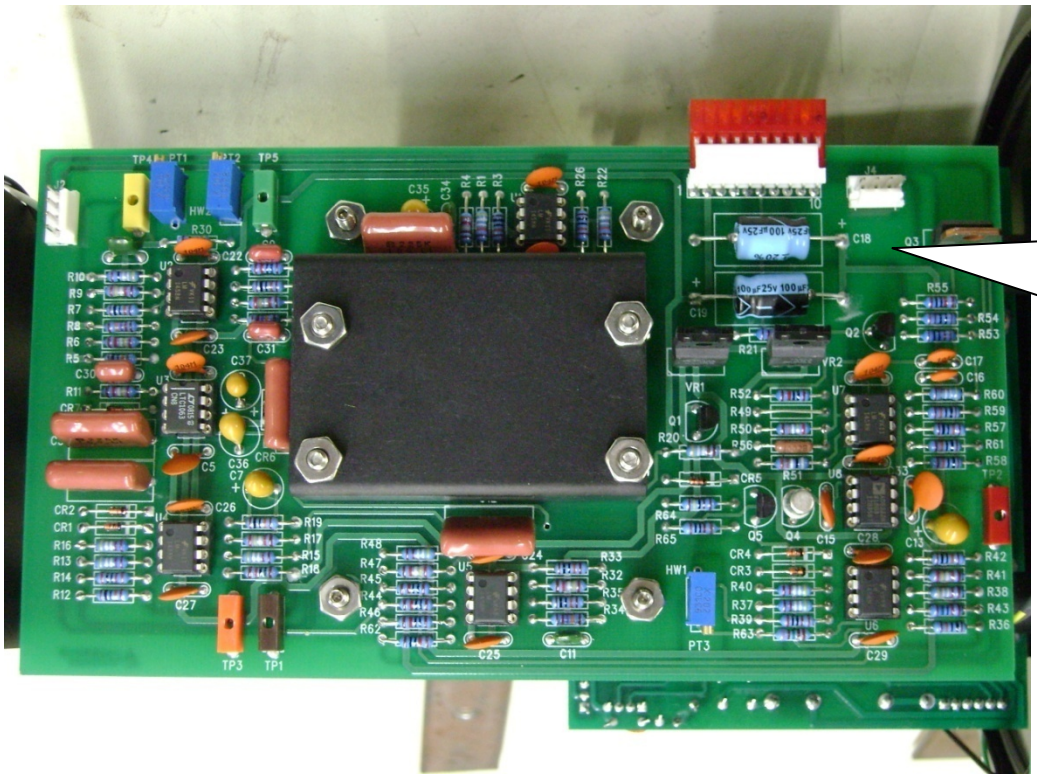
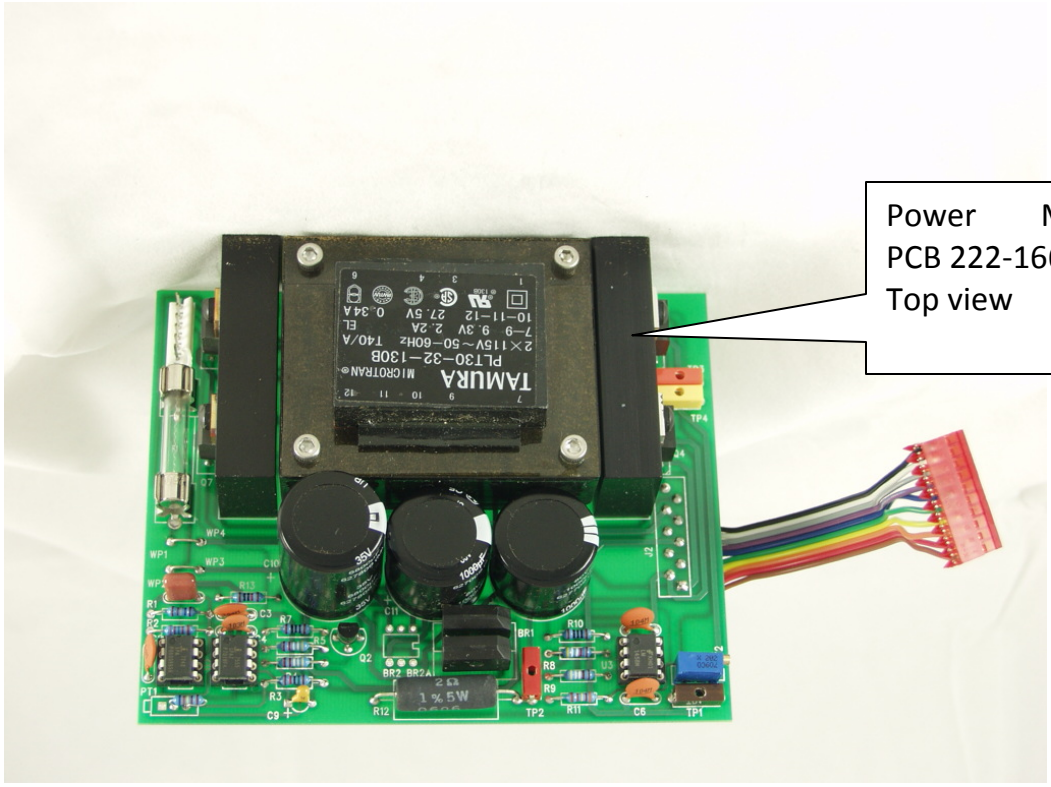


Signal Processor
PCB 222-1667
Bottom view



Power Modulator
PCB 222-1668
Top view

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