



**TIP TEMPATURE MONITOR
CALIBRATION INSTRUCTIONS
PACE PART NUMBER 8001-0087-P1
MANUAL NUMBER 5050-0557**

1) Tools:

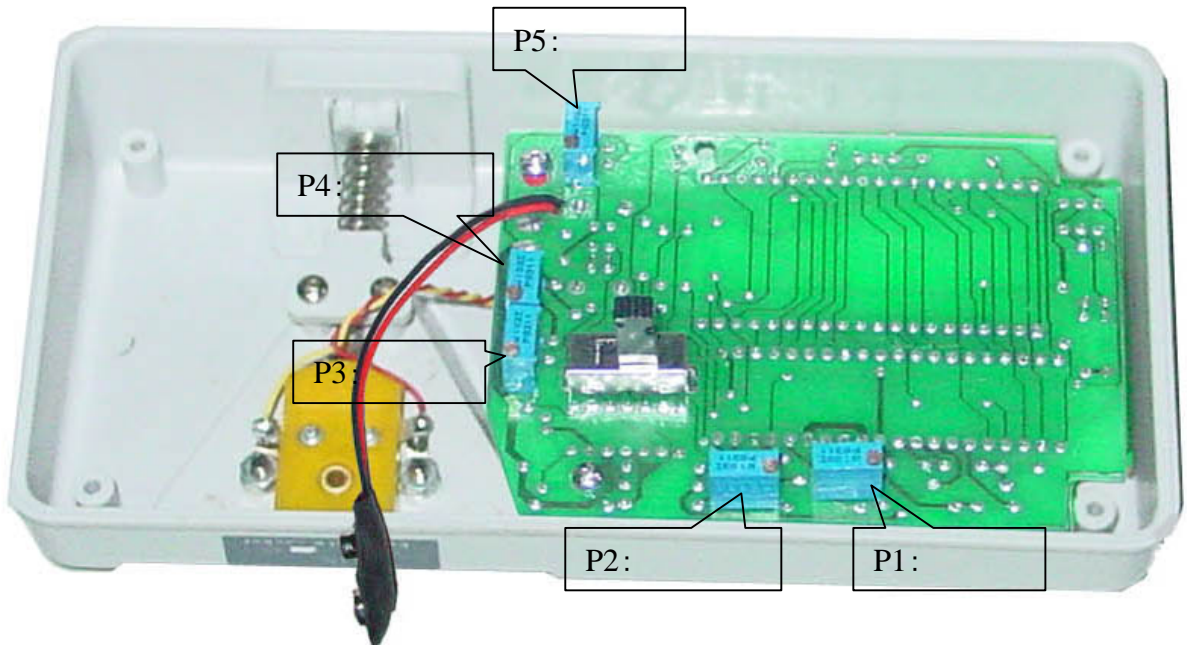
Temperature Calibrator (i.e. Fluke 724, Omega CL351-2A, or Victor VC14) screwdriver, 9volts battery, Sensor (PACE P/N 1285-0046-P1), multi-functional meter, DC power,

2) Calibration preparation:

a) Connect Tip Temp. Monitor with the 9v battery and the sensor. (There is a sensor shipped together with the monitor.) Turn the "C and F switch" on PCB to the "C" position. Then switch the Tip Temperature Monitor on and leave it there for half an hour.

3) Calibration Steps:

- i. Set Temperature Calibrator output at 0°C. Adjust P3 potentiometer until the monitor display shows ambient temperature plus 1°C.
- ii. Turn the "C and F switch" on PCB to "F" position. Adjust P4 potentiometer until the monitor display shows $(1^{\circ}\text{C} + \text{ambient temperature}) \times 1.8 + 32$.
- iii. Set Temperature Calibrator output at 450 Celsius. Adjust P1 potentiometer until the monitor display shows $(450^{\circ}\text{C} + \text{ambient temperature}) \times 1.8 + 32$. ($\pm 6^{\circ}\text{F}$ tolerance)
- iv. Turn the "C and F switch" at PCB board bottom to the "C" position. Adjust P2 potentiometer until the monitor display shows $450^{\circ}\text{C} + \text{ambient}$ ($\pm 3^{\circ}\text{C}$ tolerance).
- v. Repeat above 4 steps until they all reach the requirements
- vi. Turn the monitor power switch to "Check" position. And turn the "C and F" "switch on the PCB to "C" position. Adjust P5 potentiometer until the monitor display shows 450°C . Then again turn the "C and F" switch to "F" position. The monitor display should show $810^{\circ}\text{F} \sim 811^{\circ}\text{F}$. If it is not so, slightly adjust the P5 potentiometer so as to make the display shows the above figure. If still it is not reading within the $810^{\circ}\text{F} \sim 811^{\circ}\text{F}$ range, slightly adjust P1 potentiometer so as to make the display shows the above figure. Please keep it in mind that step i., ii., iii., iv. should be within the range.



C and F exchange rate

°C	°F		°C	°F	
1°C	33.8°F		2°C	35.6°F	
3°C	37.4°F		4°C	39.2°F	
5°C	41°F		6°C	42.8°F	
7°C	44.6°F		8°C	46.4°F	
9°C	48.2°F		10°C	50°F	
11°C	51.8°F		12°C	53.6°F	
13°C	55.4°F		14°C	57.2°F	
15°C	59°F		16°C	60.8°F	
17°C	62.6°F		18°C	64.4°F	
19°C	66.2°F		20°C	68°F	
21°C	69.8°F		22°C	71.6°F	
23°C	73.4°F		24°C	75.2°F	
25°C	77°F		26°C	78.8°F	
27°C	80.6°F		28°C	82.4°F	
29°C	84.2°F		30°C	86°F	
31°C	87.8°F		32°C	89.6°F	
33°C	91.4°F		34°C	93.2°F	
35°C	95°F		36°C	96.8°F	
37°C	98.6°F		38°C	100.4°F	
39°C	102.2°F		40°C	104°F	
41°C	105.8°F		42°C	107.6°F	
43°C	109.4°F		44°C	111.2°F	
45°C	113°F		50°C	122°F	
100°C	212°F		200°C	392°F	
300°C	572°F		400°C	752°F	
450°C	842°F		500°C	932°F	
600°C	1112°F		700°C	1292°F	

Notes: In case, the engineer has no Temperature Calibrator at hand, he can use standard voltage as alternative. The data is as follows:

0	0 mV
100	4.095 mV
200	8.137 mV
300	12.207 mV
400	16.395 mV
450	18.513 mV
500	20.64 mV
600	24.902 mV



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