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MT-1 CALIBRATION REPORT

DATE..... 05/23/97
 MODEL..... MT-1
 SERIAL NUMBER..... 70118479

Probewell Lab Inc. certifies that the instrument mentioned above has been calibrated using a Metronic Portable Watthour Standard traceable to the National Institute of Standards and Technology (NIST) or the National Research Council of Canada (NRC).

CALIBRATION STANDARD USED

Manufacturer/Model	Serial No.	Description	Calibrated
Radian RM-10-08	500325	Metronic portable watthour standard	08/23/96

COLLECTED DATA

	FORM 1S		FORM 2S	
	120V	240V	120V	240V
2.5A	-0.01	0.04	-0.06	0.04
5A	-0.05	0.03	-0.02	0.01
10A	-0.03	-0.03	-0.03	-0.02
15A	-0.02	0.00	-0.01	0.01
20A	0.01	0.02	-0.02	0.01
25A	0.00	-0.01	-0.02	-0.01
AVERAGE	-0.02	0.01	-0.03	0.00
MAXIMUM	0.01	0.04	-0.01	0.04
MINIMUM	-0.05	-0.03	-0.06	-0.02
OVERALL				
AVERAGE	-0.01			
MAXIMUM	0.04			
MINIMUM	-0.06			

PROBEWELL CALIBRATION RESULTS

date 6/12/97
initials NSG/DMG

ProbeWell MT-1
serial # 70118479

standard used for calibration:
Radian RM-10
serial # 3319

240 volts, form 2S

<u>test amps</u>	<u>ProbeWell accuracy</u>
2.5	<u>+ .04</u>
5	<u>+ .03</u>
10	<u>.00</u>
15	<u>+ .02</u>
20	<u>+ .03</u>
25	<u>+ .02</u>

Test Leads Setup for 3S Adapter

Please note that the potential polarity differs from the setup for MT-1 shown on Fig. 2. Moreover, current test leads are used only on left side. **Note:** Test lead can be connected to either the 6 or 9 o'clock jaws since they are inter-connected.

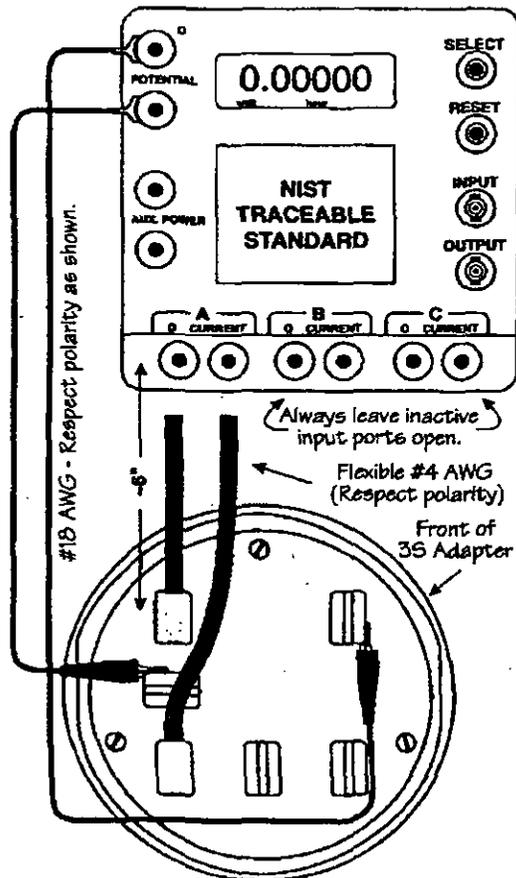


Fig. 3

Shop Calibration

Description

With this sub-menu you can change the calibration of MT-1. It is used when you need MT-1 calibration to correspond exactly to a NIST traceable standard. The maximum percentage deviation allowed in relation with the original MT-1 calibration is $\pm 1\%$, by steps of 0.01%. By default, the deviation is +0.00% (nil). The correction factor is stored in the nonvolatile memory of the MT-1 socket.

Procedure

1. Write down the average error result given by the accuracy test. Exit the Accuracy Test Menu by pressing twice on **Reset**, then press **Mode** to call the 'Shop Calibration' menu and press **High** to access. The following sub-menu should appear:

```

SHOP CALIBRATION
+0.00%
<HIGH> ->
<LOW> - <MED> +
  
```

To change calibration, press **Low** or **Med** to decrease or increase respectively the deviation percentage of MT-1. The **High** key allows you to move the cursor by one step.

2. When the average error is greater than (+)0.00%, it means that MT-1 measures more energy than it should and must be slowed down by that value. Therefore you subtract the "+value".

When the average error is smaller than (-)0.00%, it means that MT-1 measures less energy than it should and must be speeded up by that value. Therefore you add the "-value".

Example 1: If the average error is +0.12%, and the value in the sub-menu is +0.00%, you subtract 0.12% and the value shown on the display will become -0.12%.

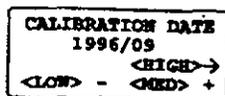
Example 2: If the average error is +0.12%, and the value in the sub-menu is +0.05%, your new value would be -0.07%.



Example 3: If the average error is -0.15%, and the value in the sub-menu is -0.03%, your new value would be +0.12%.

Example 4: If the average error is -0.15%, and the value in the sub-menu is +0.03%, your new value would be +0.18%.

- Once the new value is written in, press **Reset**. You are then asked to enter the current year and month. The following should appear:



- Once the date is set, press **Reset** twice and the Saving Menu appears. Press **Med** to save the new value in the nonvolatile memory of the socket. MT-1 is now calibrated against your traceable Standard.

Note

At power on, the message 'Shop Cal + date' appears on the display instead of 'Cal. + date'. This message reminds you that MT-1 is calibrated according to your specifications.

A booklet containing more details is provided with each Accuracy Testing Kit.

Appendix A

Specifications

General Specifications

Power	
Supply	120/240 VAC ±10% (self-selection)
Line Frequency	60 Hz ±10%
Consumption	50 VA (maximum)
Temperature	
Operation [†]	32 °F to 122 °F (0 °C to 50 °C)
Storage	-13 °F to 158 °F (-25 °C to 70 °C)
Dimensions (HxLxD)	
Socket (Diam.xD)	6.9" x 6.8" (175 x 172 mm)
Remote Control	8.3" x 3.9" x 1" (210 x 100 x 26 mm)
Carrying Bag	10" x 11" x 8" (250 x 280 x 200 mm)
Weight	
Socket	5.1 lb (2.30 kg)
Remote Control	0.6 lb (0.28 kg)
Overall with Carrying Bag	7.8 lb (3.55 Kg)
Safety	
Electric	Fuses (1A), Meter Detection, Surge Ground
Heat	Quiet Fan (5 CFM), Safety Heat Sensor
Optional Test Accessories	
High Tech Optical Pick-up	
Automatic Accuracy Testing Kit (including cables and interface)	
RS-232C Communication Kit	

Base and Meter Specifications

Type of Base	Ring-type or ringless. No adapter required. A lock/unlock latch insures fixation.
Bypass Circuit	200 Amps

[†] Extended Temperature option available (-4 to 158 °F / -20 to 70 °C).