

Certifying the RB-10 Bantam Lite Portable Meter Test System with a RD-2X
Series Reference Standard

Hardware Requirements

- 1) RB-10 Bantam Lite Portable Meter Test System
- 2) RD-20, RD-21, or RD-23 Reference Standard
- 3) Standard Cross-Check Test Cable
- 4) 120V VAC Auxilliary Power Input Cable (Radian part no. 194015)
- 5) BNC-BNC Input Cable (Radian part no.'s RM-1C, RM-2C, RM-3C)
- 6) Input Voltage/Current Cable (Radian part no.'s 5210202 [blk], 5210203 [red])

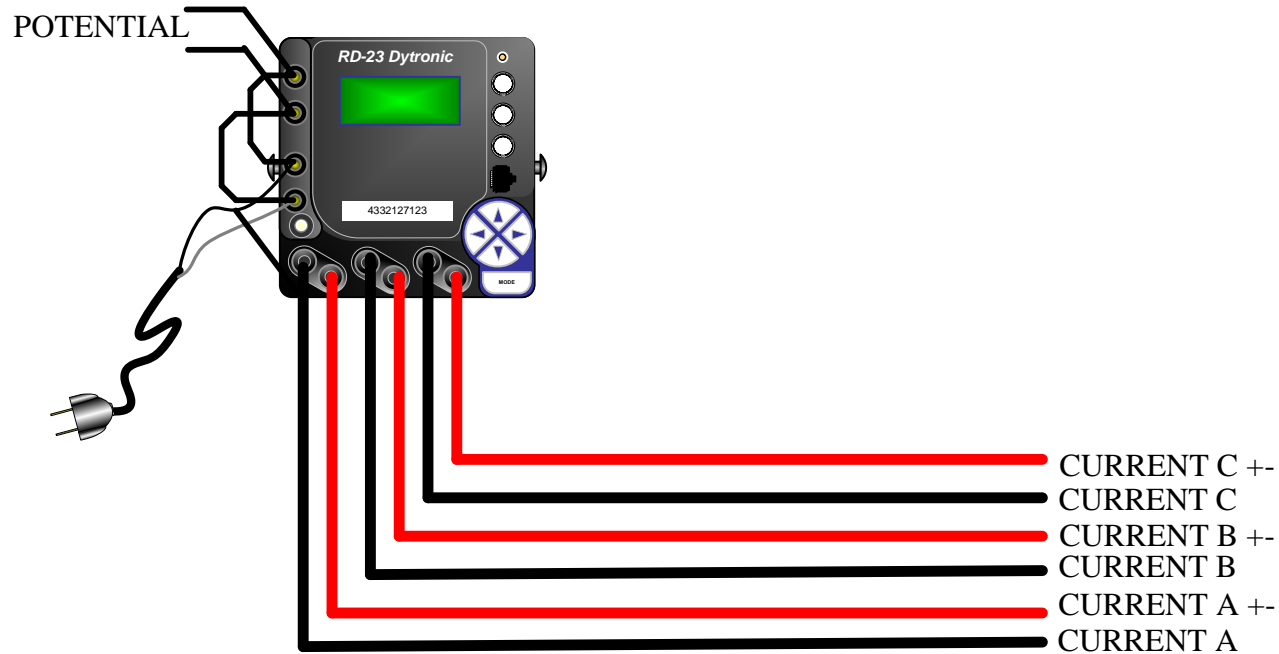
Any work with the RB-10 Bantam Lite Portable Meter Test System, associated accessories, energized standards, and energized meters can present the danger of electrical shock. The RB-10 and its accessories should be operated by qualified personnel. The information provided in this instruction set is intended to serve as a guide for properly qualified electric utility personnel. This instruction set is not intended to replace existing electric utility safety procedures and those listed in the Handbook for Electricity Metering.

Operation of the RB-10 should not be conducted if the work area is wet or damp. Operation should also not be conducted if flammable gases or fumes are present in the work area. When using the RB-10 never make voltage and current connections/disconnections when the system is live. For service or repairs to the RB-10 contact Radian Research, Inc. Do not attempt to service or make modifications to the RB-10 due to the risk of electrical shock.

Radian Research, Inc. assumes no liability for failure to comply with existing applicable safety precautions as well as those listed in this warning statement.

Hardware Setup

1. With the RB-10 completely powered OFF, ensure that the external test cable and handheld controller are securely connected to the RB-10.
2. Make the following settings to the top panel of the RB-10:
 - a) LINE VOLTAGE – OFF
 - b) SUPPLY VOLTAGE – 120
 - c) TEST CURRENT ADJUSTMENT – FULLY COUNTER CLOCK-WISE
 - d) ON/OFF ROCKER SWITCH – OFF
 - e) TEST CURRENT TAP – 0.25
 - f) ELEMENTS - ABC
2. Make all the necessary hardware connections, as shown in the diagram below.



Hardware Setup

- 2.a. Using a 120V VAC Auxilliary Power Input Cable, apply 120VAC to the Primary Standard's auxiliary power input.
- 2.b. Using a BNC-BNC cable, connect port two of the Primary Standard to PORT A of the RB-10 handheld.
- 2.c. Using two input voltage/current leads, connect the primary standard's auxiliary power input to the potential input.
- 2.d. Connect the RB-10's Standard Cross-check cable to the Primary Standard as shown in the diagram on the previous page.

Test Procedure

Running a Test:

1. Turn the RB-10 LINE VOLTAGE switch ON and wait 30 seconds for power up
2. Select 1 RUN TESTS
2. Select 2 Test Standard
3. Select the appropriate test – The handheld will display the internal standard's serial number, the service voltage, the current, and the phase angle.
4. Press the ENTER key – the handheld will prompt you to connect the Primary Standard to the handheld
5. Select the appropriate range for your first test point from the TEST CURRENT TAP switch
6. Turn on the current via the ON/OFF rocker switch
7. Adjust the current to the specified value for the first required test point, using the TEST CURRENT ADJUSTMENT knob – The current value will appear on the INS RMS screen of the Primary Standard.
8. Press the ENTER key – the handheld will display the pulse output of both the Primary standard and the internal standard
9. Once the handheld acquires the specified number of pulses, it will display the percent error of the Primary Standard. This value must be inverted to show the error for the internal standard.
10. Repeat this process for all remaining test points.