

**Purpose:** Checking the Output Drivers of the Model 1802 Digital R/G Bridge

**System:** MPMS

## Introduction

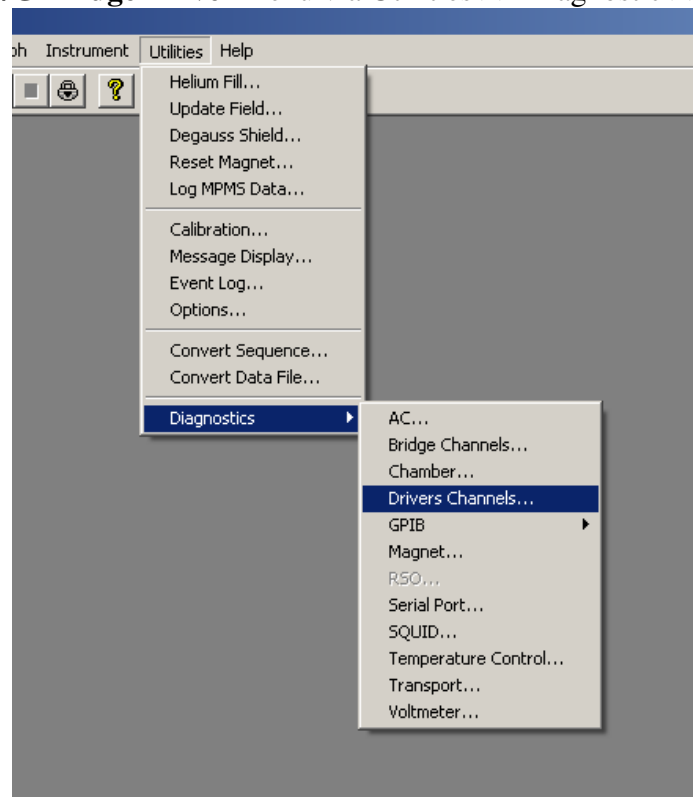
The output drivers of the Model 1802 controller can be checked by verifying the proper voltage is across the rear panel binding posts labeled DRIVER OUT #1 and DRIVER OUT #2. (See **Figure 1** to identify the location.)

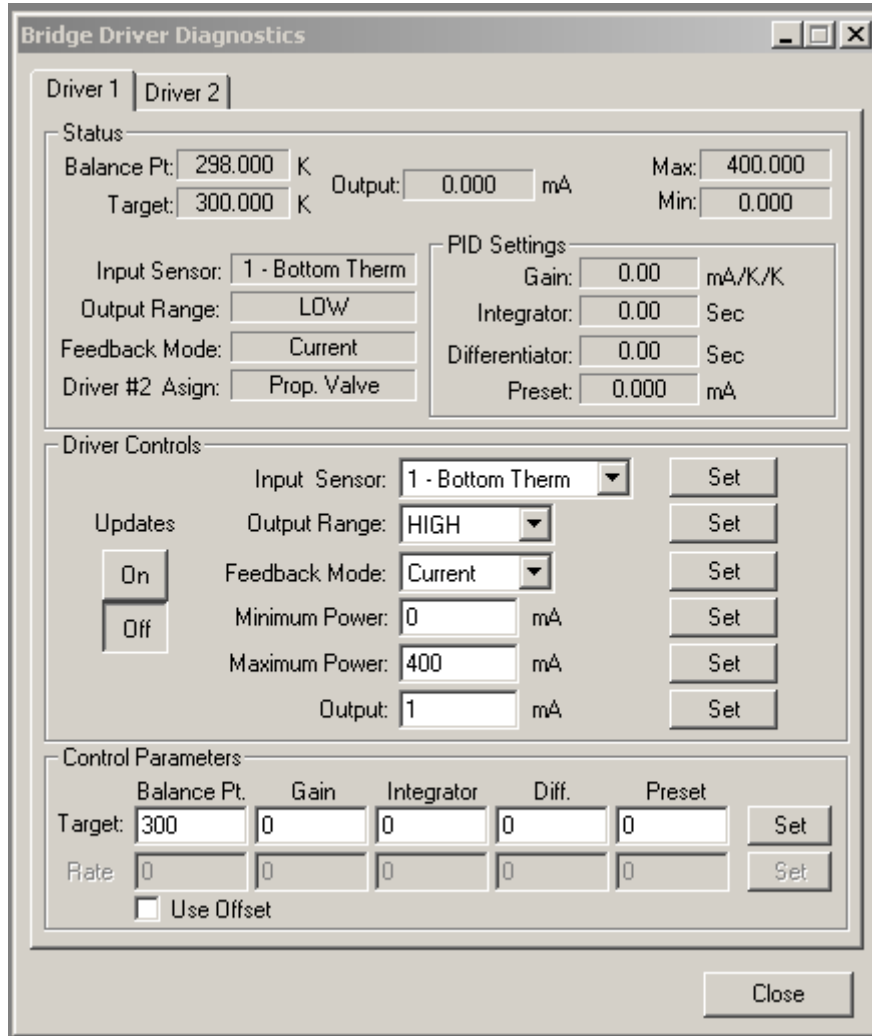
## Procedure

1. Disconnect the "D" shell connector from the ANALOG I/O port on the rear panel of the 1802 controller.
2. Connect a 100 ohm, 1 watt resistor in parallel (see **Figure 1**) to each driver output binding post (labeled DRIVER OUT #1 and DRIVER OUT #2).

**Note:** Connect a voltmeter in parallel to each binding post during the measurement of that channel.

3. Set up the **R/G Bridge Driver** menu via Utilities >> Diagnostic >> Drivers Channels





Select Chart Driver 1 and in Driver Control set the output drivers to zero:

1. Updates: Off
2. Output Range: HIGH → set
3. Feedback Mode: Current → set
4. Maximum Power 400 mA → set
5. Output: 1 mA (10, 100, 320, 350) → set

On the attached voltmeter (DVM on the Fig.1) you should read following:

1 mA	0.1 V
10 mA	1 V
100 mA	10 V
320 mA	3.2 V
350 mA	3.2 V

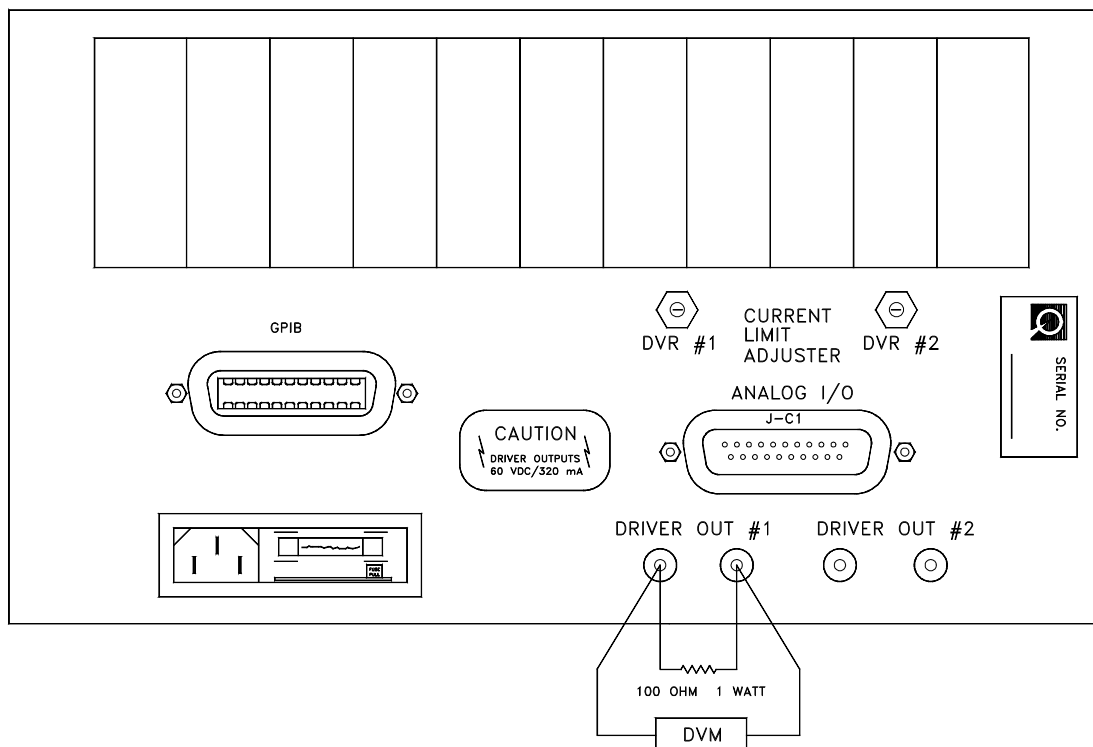
1. Updates: Off
6. Output Range: LOW → set
7. Feedback Mode: Current → set
8. Maximum Power 40 mA
9. Output: 1 mA (10, 32, 35) → set

On the Voltmeter you should see, correspondingly

1 mA	0.1 V
10 mA	1 V
32 mA	3.2 V
35 mA	3.2 V

Repeat the procedure for Driver 2.

6. If any of the voltages do not correspond to those stated in this procedure, contact your Quantum Design service representative and report what voltages were present.
7. Return the 1802 controller to its original state.



**Figure 1** Rear Panel of the 1802 Digital R/G Bridge