



MesaLabs

Bridge Throwing Distance – user instructions.
“Why is my bridge break torque result always too high”
Rev 1.0
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There is a defined parameter named “Bridge Throwing Distance” that was put in the Torqo code to separate the removal peak detection from the bridge peak detection. Otherwise the trailing part of the removal peak would nearly always be interpreted as the bridge peak. Bridge Throwing forces the system to wait several degrees before seeking the bridge peak. The value of Bridge Throwing is set in degrees, and it was not formerly part of the Bridge Profile. Rather it was set as a system variable. Note: in Torqo model 1600 Firmware version 6.2.5 the Bridge Throwing was added to the Bridge Profile and can be set in the Edit Profile screen.

Model 1600 with Firmware Versions 6.2.5 and later:

Create a Removal and Bridge profile. In the Edit Profile menu, go to Page 2 and you will see Bridge Throwing button, this allows you to set the Bridge Throwing Distance in the profile. The Bridge Throwing is 3 degrees by default, this means the cap will rotate 3 degrees past the removal peak before beginning to search for the bridge break (TE band break) torque peaks. Increase the bridge throwing distance (in degrees) if the removal torque peak is still being seen as a bridge break peak.

The screenshot shows a software interface titled "REMOVAL & BRIDGE TEST SETUP". At the top right is a help icon (question mark). Below the title is a "Name" field containing "Mesa Bridge 2". The interface is split into two main columns. The left column contains "Re-Application Options" with an "Application Torque" field set to "0.00 kg-cm", and "Other Custom Options" with a "Bridge Throwing" field set to "3 deg". The right column contains "Close Options" with an "Application Torque" field set to "8.64 kg-cm" and a "Peak Detect" field set to "6 deg". At the bottom of the right column is a "Header / Comment" field. At the very bottom of the screen are three buttons: "TO PAGE 1", "OK", and "CANCEL".



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Model 1600 and Model 1590, Firmware Versions 5.09 and earlier use this procedure:

In order to change the Bridge Throwaway Distance, use this procedure. It will be easiest to attach a USB mouse to the Torqo USB port (underneath the touchpanel, behind the screw-on connector cover).

1. On the Torqo, Go to the Main Menu
2. Have the key switch in Program mode
3. Press the Exit to Windows button (or Exit to Windows CE).
4. Right click the mouse on the Start Button and select Explore.
5. On Model 1600 units open the D:\Torqo\SYSTEM folder.
 - a. On Model 1590 units open the C:\Torqo\SYSTEM folder.
6. Open the Accessory on-screen keyboard
 - a. On the Model 1600 click the Start button then All Programs->Accessories->Accessibility->On-Screen Keyboard
 - b. On the Model 1590 there is a Keyboard icon in the lower right screen corner, click it to bring up the on-acreen keyboard.
7. In the Explorer window open the file mesa.txt, it will open in the notepad text editor, you will see a line of text like this one:
Bridge Throwaway Distance = 10
8. Change the 10 (or whatever your setting is) to the desired separation distance (in degrees) i.e.
Bridge Throwaway Distance = 2
9. Select File->Save in the notepad editor menu then exit from the notepad program.
10. Close the explorer window and close the on-screen keyboard.
 - a. On the Model 1590 the on-screen keyboard is closed by clicking the lower right keyboard icon and clicking close on-screen keyboard.
11. Start the Torqo application using the icon on the upper right of the desktop.
12. Test the bridge removal to verify the Bridge Throwaway Distance is working correctly.