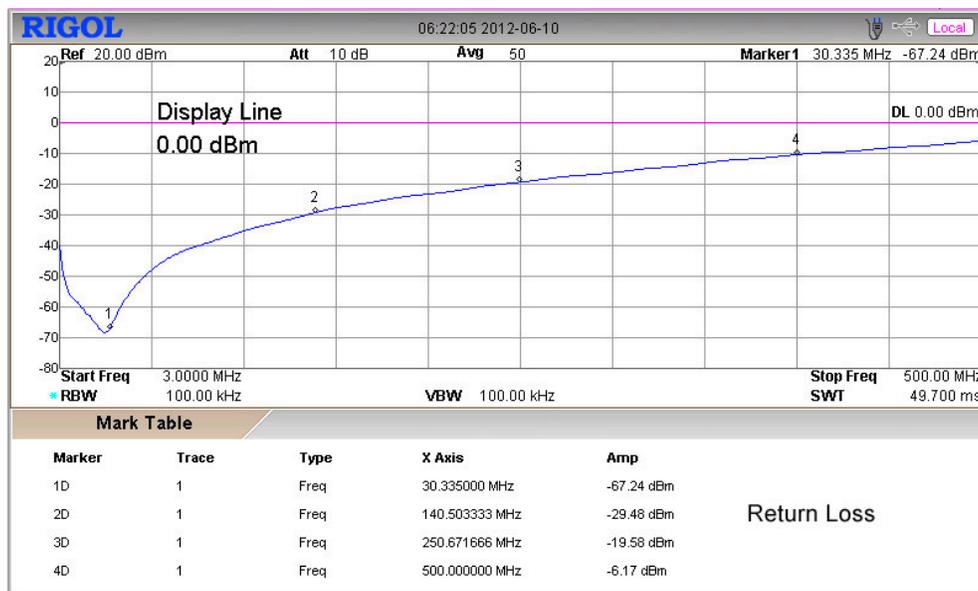




The RLB-E external reference (four ports) is a high performance Return Loss bridge optimized for ham radio applications. The external reference impedance is generally 50 to 300 ohms. The bridge components are precision SMD devices with a wide band 1:1 750 MHz SMD transformer using micro strip construction.

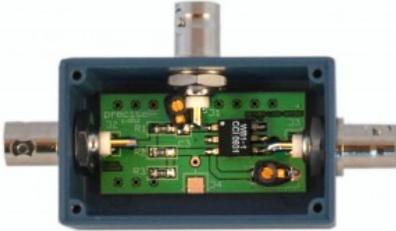
Return Loss Bridges operate by comparing the unknown impedance to a reference impedance. The INPUT port is connected to a test frequency source such as an RF oscillator or tracking generator from a spectrum analyzer. The DET (detector) is connected to an oscilloscope or spectrum analyzer for analysis. The DUT (device under test) is connected to the item to be tested such as an antenna, network, coax, or any other device. If the impedances are exactly equal, then the detector output will be essential zero (0). However, Return Loss

performance is very dependant on the characteristics of the reference. Most bridges have a residual return loss from 30-40 dB (1000-1 to about 10,000). This high sensitivity allows for measuring equivalent SWR of 1:101 or better.



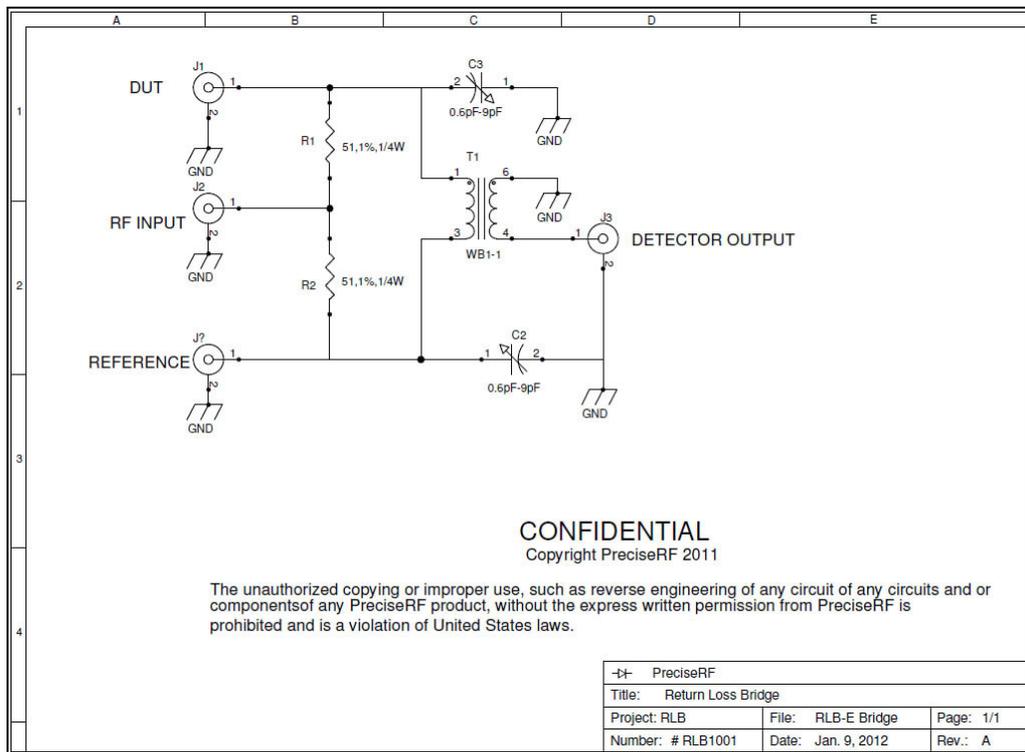
Specifications

Max input power:	15 Watt PEP crest factor 4:1
Insertion loss:	Negligible (< .1 dB)
Bandwidth:	2-500 MHz (-6dBm)
VSWR:	Better than 1:1.1
Max Return Loss:	> -40 dBm (see graph Return Loss versus frequency)
Detector output:	-10 dB +/- 2 dB into 50 ohms
Impedance	RF IN and Detector OUT 50ohms
Connectors:	BNC
Physical:	.25 lbs 2.25 x 1.4 x 1.2 in
Application:	High sensitivity antenna, transmission lines, and component and SWR measurements using an oscilloscope or spectrum analyzer.



Each RLB-E Return Loss Bridge comes completely assembled in a premium shielded die cast aluminum alloy A380 housing. The housing is blue baked enamel per Federal Standard 595 #25109 over primer wash per DOD-P-15328.

While carefully calibrated at the factory, the RLB-E may be custom calibrated to meet your special application by adjusting C3 for lower frequencies and C2 for higher frequency. **CAUTION:** This calibration is only recommended for users who are skilled in making precision high frequency spectrum analyzer and tracking generator measurements.



All products are calibrated and tested to meet or exceed published specifications. The optional NIST calibration certificate is provided for users needing a calibration reference showing the actual performance achieved. This calibration is done using NIST traceable instruments. Some test and measurement equipment was calibrated at the PreciseRF laboratory using NIST traceable instruments. The item calibrated may be used as a calibration reference only, and shall not be used as a NIST calibration standard. This certificate shall not be reproduced without the express written permission from the calibration facility.

PreciseRF warrants its products to be free from defects in material and workmanship for one (1) year from the date of purchase. If you need support or service for your PreciseRF product, whether the product is under warranty or otherwise, please contact PreciseRF and arrange for a return or repair authorization. Manufactures Suggested Retail Price (MSRP). Prices and specifications subject to change without notice.

