



# Variable Gain Amplifier Monotonicity Testing

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- Test Conditions
- Measurements
- Calculations



# Global Defaults

The screenshot shows the 'Calculate\_Monotonic\_Steps' application window. The menu bar includes File, Edit, Test Plan, Tester, Limits, Options, Help, and Debug. The 'Test Plan Settings' pane is open, with 'Global Defaults' selected. To the right of this pane are three large green buttons: 'Compile', 'Run', and 'Repeat'. The main workspace contains a grid of parameter settings for various test components:

- Out:** Gain (63), Th\_En (Th\_En)
- Device Power:** Device Power 2 (Voc 4), Device Power 3 (Voc 3), Device Power 3 (open), Device Power 1 1 (Voc 1), Device Power 1 6 (Voc 2)
- Fixture:** Fixture Power (ON), Meas Rf 4 (DutRf1), Meas Rf 5 (DutRf5)
- Receiver:** Frequency (60 MHz), If Bw (4 MHz), Input (.005 - 2 Input), If Gain (50)
- Source:** Source 1 (Frequency: 60 MHz, Power: -40 dBm, Rf State: ON), Source 2 (Frequency: 200 MHz, Power: -40 dBm, Rf State: OFF), Source 3 (Frequency: 300 MHz, Power: -100 dBm, Rf State: OFF)
- Static/Digital:** Serial Clock Period (200 n), Yoff (0), Von (5), Delta (Db2), Current Meas Max (100 u), Clock (Db3), Strobe 1 (Db4), Db 6 (on)
- Testhead:** Input Port (Rf 5), Output Port (Rf 4), Source 1 (Rf 5)
- Other:** System (Average) (1), PowerVI Y 1 Output (OFF), Snc120 tpu t (Source 1 Attn: 40db), Snc20 tpu t (Source 2 Attn: 40db), Snc120 tpu t (Source 1 Output Mode: low band)



# Section Defaults

Calculate\_Monotonic\_Steps

File Edit Test Plan Tester Limits Options Help Debug

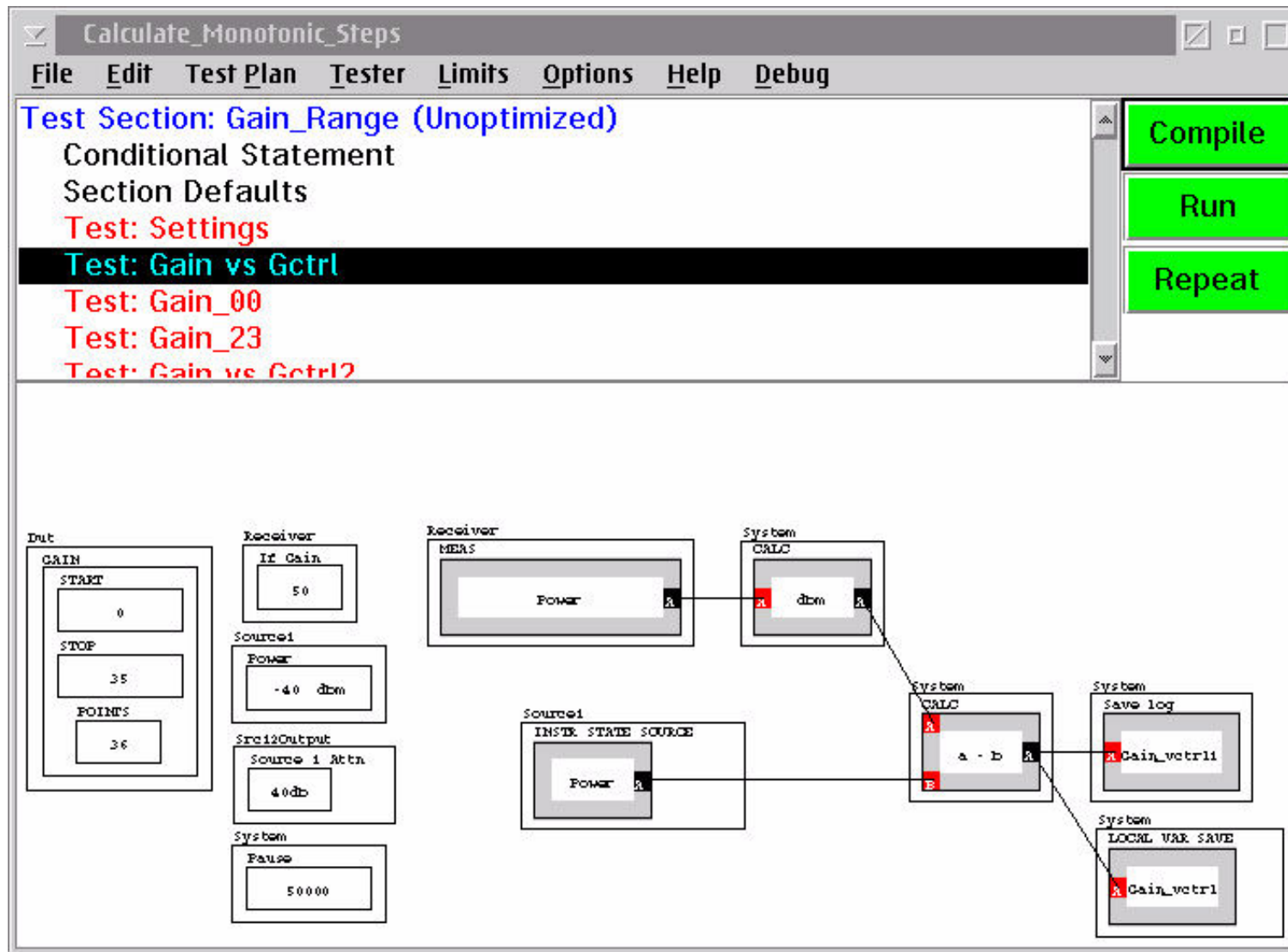
Test Section: Gain\_Range (Unoptimized)  
Conditional Statement  
**Section Defaults**  
Test: Settings  
Test: Gain vs Gctrl  
Test: Gain\_00  
Test: Gain\_23  
Test: Gain vs Gctrl2

Compile  
Run  
Repeat

Fixture	Receiver	Source1	System
Head Rf 4 DutRf1	FREQUENCY MASTER Source1 CONFIG Frequency SCALE 1 OFFSET 0	Frequency 25 Mhz Power -40 dbm Rf State ON	Averages 16

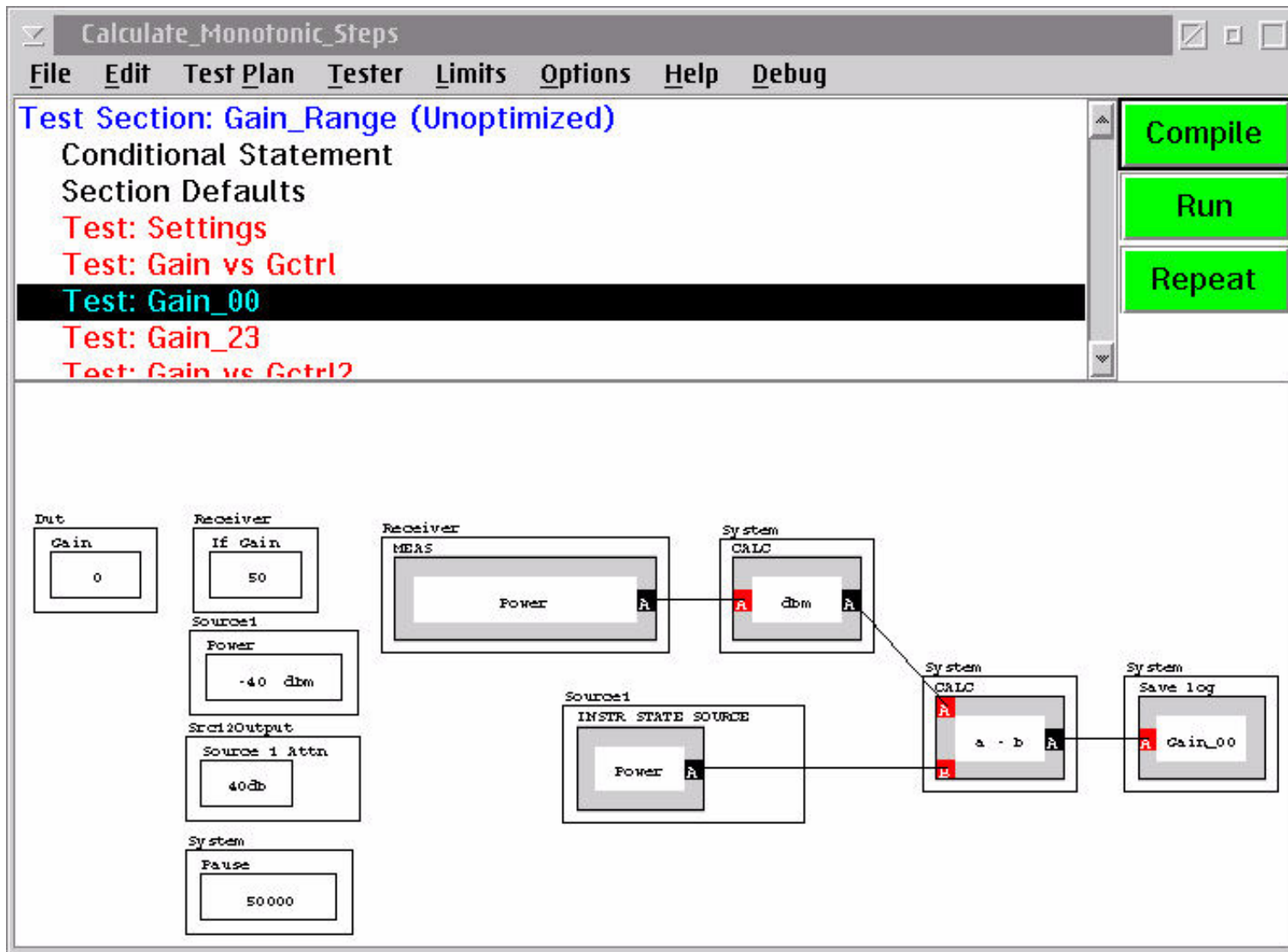


# Gain vs Gain Control Setting



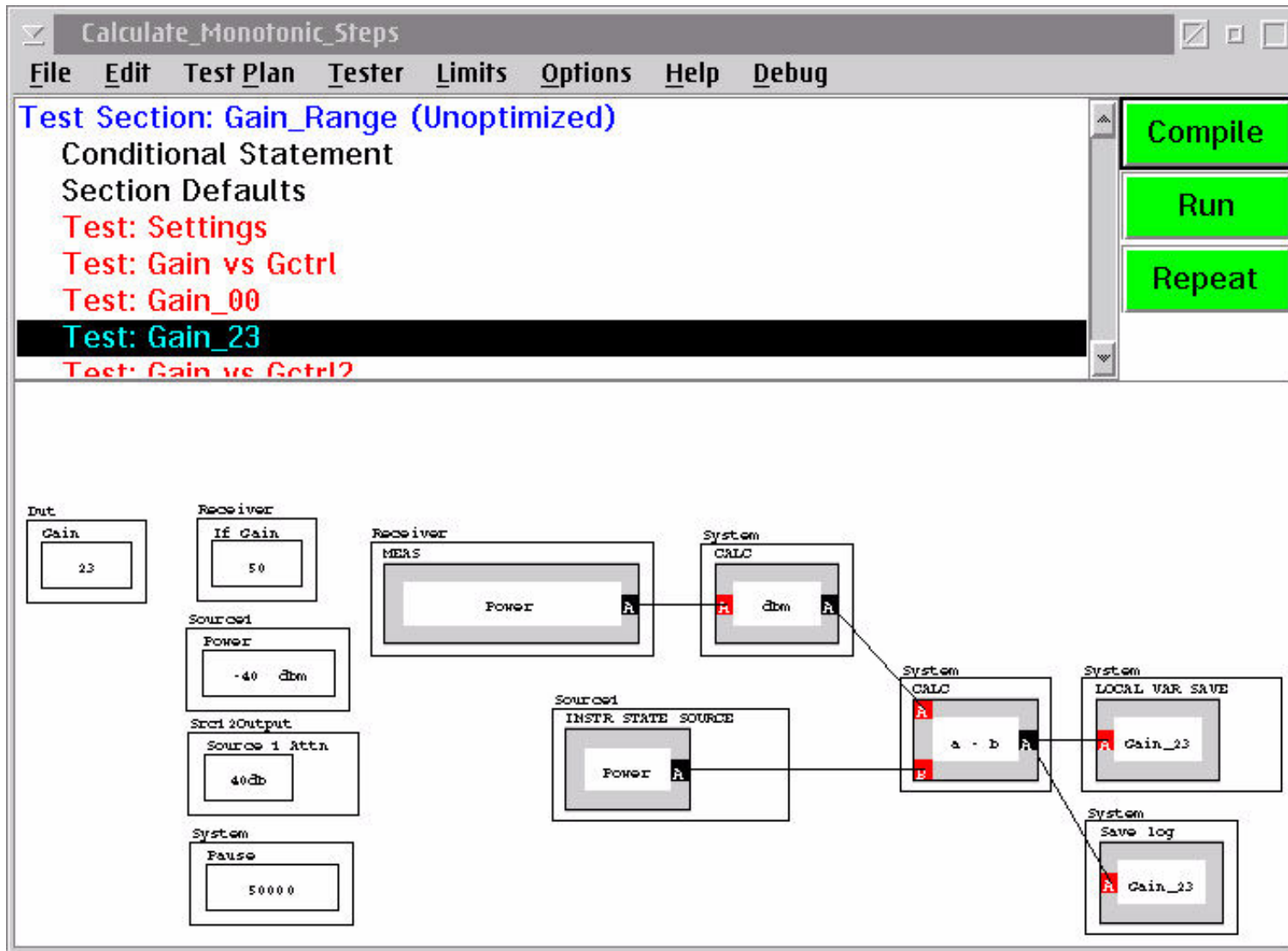


# Gain at Setting 00



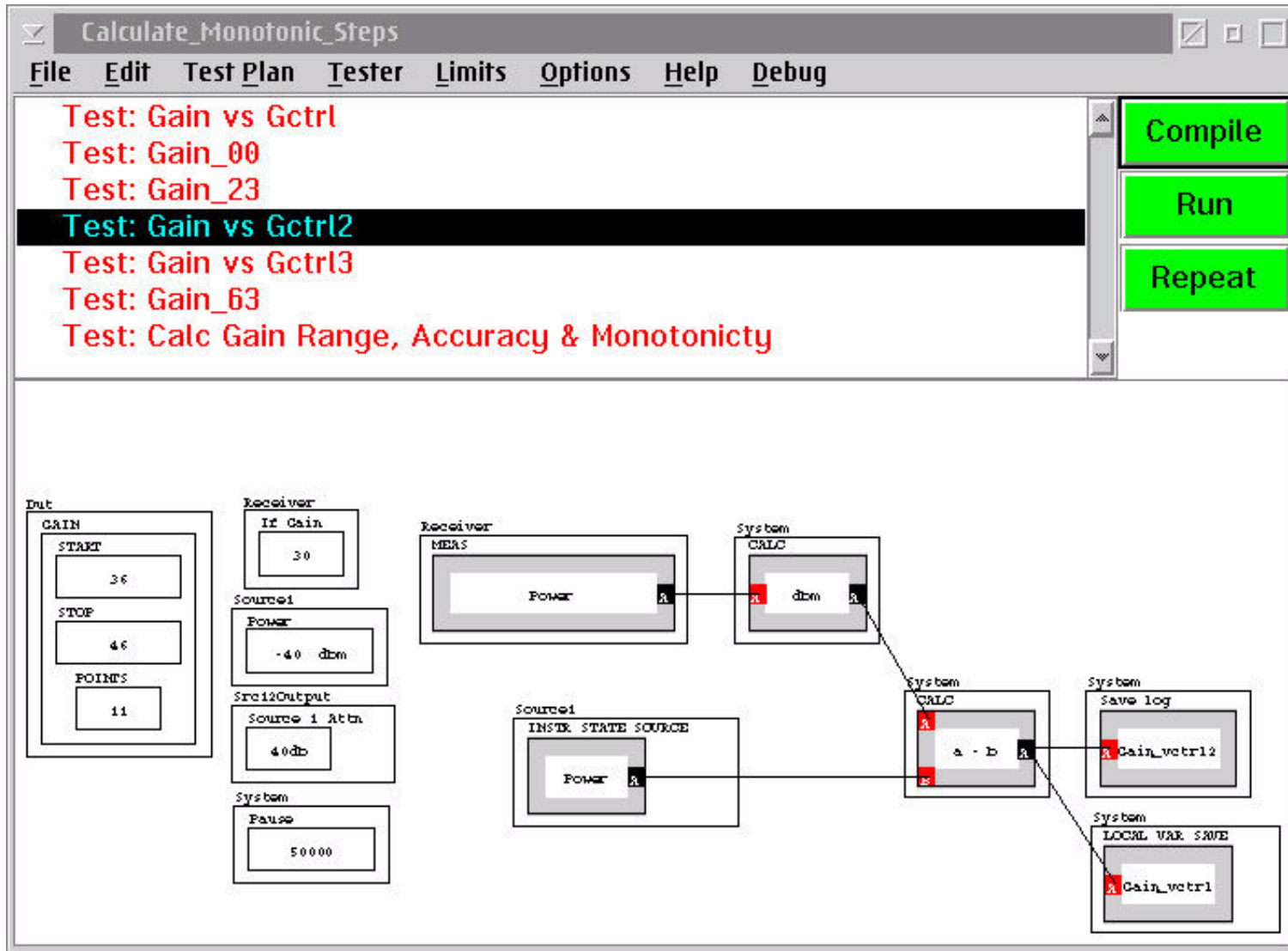


# Gain at Setting 23





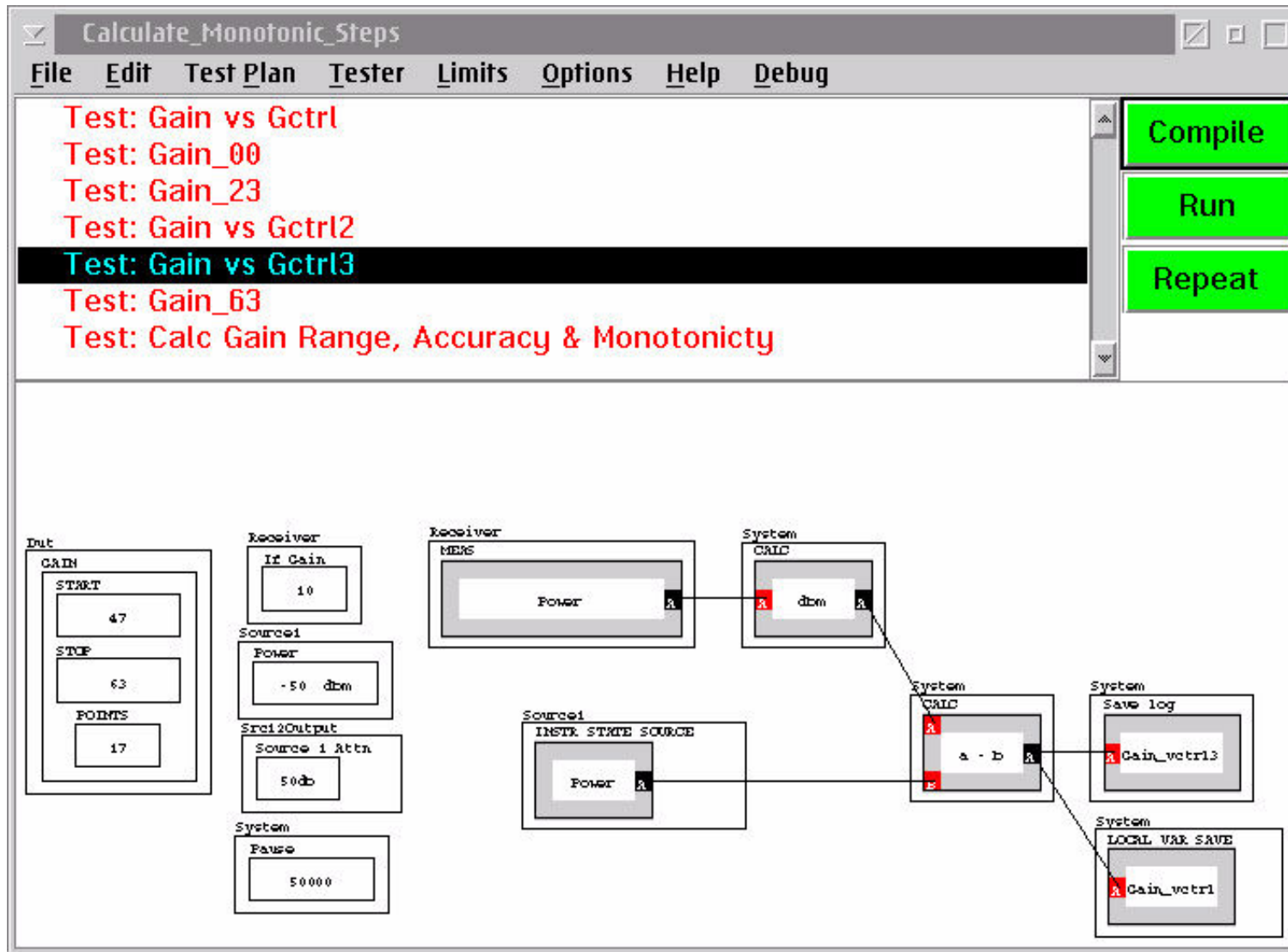
# Gain vs Gain Control Setting, 2nd Range







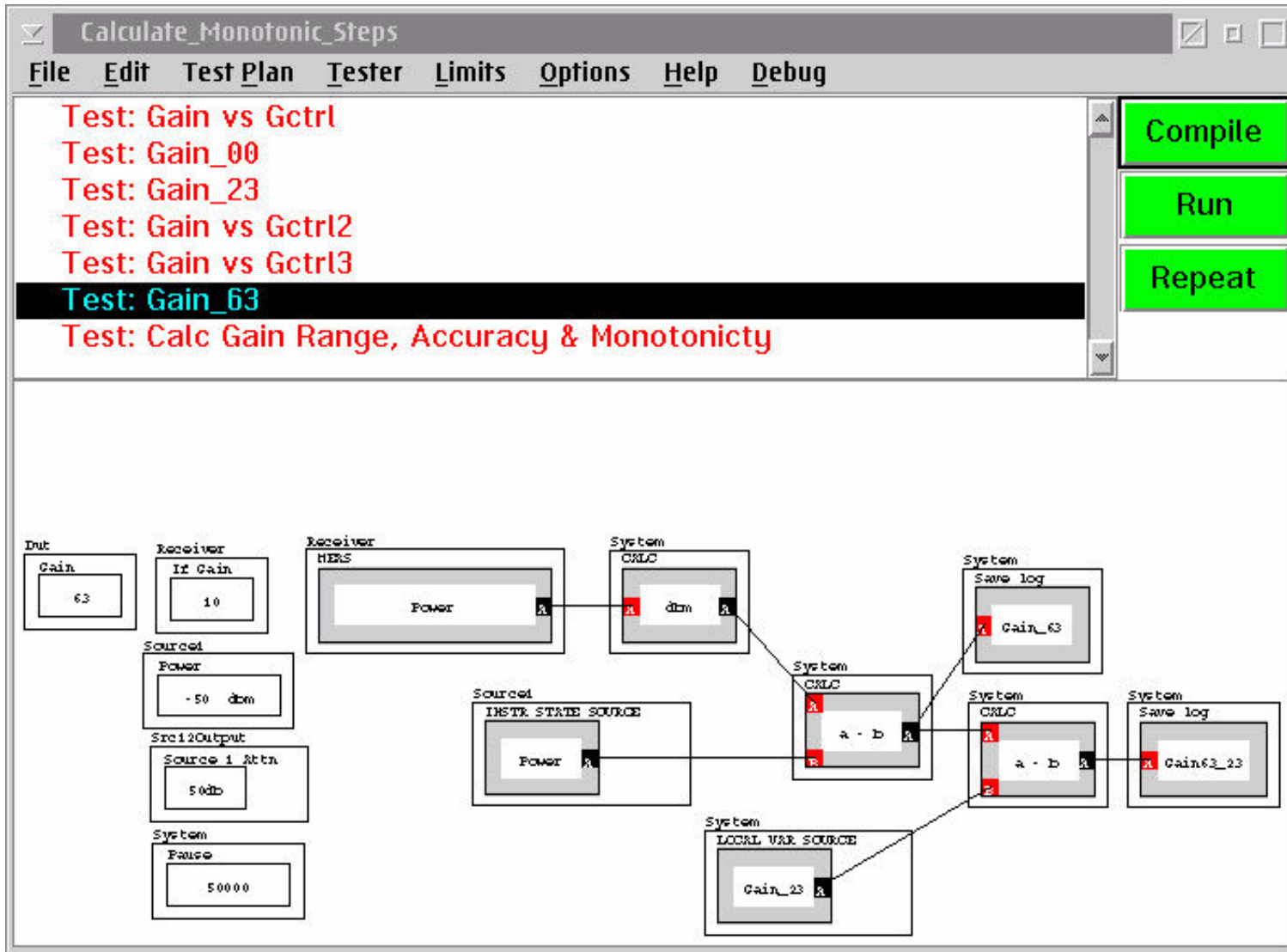
# Gain vs Gain Control Setting, 3rd Range







# Gain at Setting 63





# Calculate Gain Range, Accuracy and Monotonicity

