



Why does the amplitude of my function generator not match the displayed amplitude?

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Solution: Instruments like the Rigol DG Arbitrary Waveform Generators are designed with a 50 ohm output impedance in parallel with the output of the instrument.

When a circuit or device is connected to the output, it is electrically connected in parallel to this 50 ohms.

With such designs, the user must specify the actual impedance of the circuit or device that the instrument is connected to. The instrument will then adjust it's actual output value based on this setting.

If the programmed impedance does not match the physical impedance of the instrument or device, the actual output voltage will not be correct.

Impedance mismatching can also cause reflections and may lead to ringing and altered waveform shape.