Test confidently with low-noise DC power

Agilent E3600 Series DC power supplies get the job done

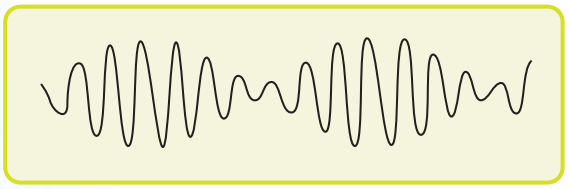
From IC design to radio frequency (RF) signal transmission, where deviations on the voltage and current supply are significant, linear-regulated power supplies such as Agilent's E3600 series provides low output noise with excellent regulation.

Minimize interference and reduce signal-to-noise ratio for RF applications:

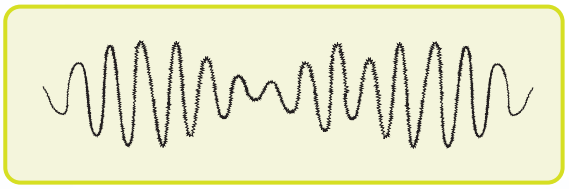
In the transmission and reception of RF signals, it can be a challenge to obtain a clean output signal from the active antenna, a downconverter or a preamplifier. Power supplies used to power up these circuits play a major part in minimizing signal distortion.

The example below shows how a circuit's power supply can affect an RF signal:

Circuit powered by a low noise power supply



Circuit powered by a power supply without low-noise feature



The Agilent E3600 Series provides a wide range of linear power supplies that are tailored for applications sensitive to radio interference. With low output noise of 1 mV_{p-p}/ 0.2 mV_{rms}, you can minimize interference and reduce the signal-to-noise ratio of the RF signal.

Solid output voltage and current for IC design and troubleshooting:

From op-amps used in analog audio circuits to high density ICs in digital systems, today's devices are highly sensitive to noise on the power supply. For example, when an op-amp has its input referenced to the supply, any high frequency noise that exists on the supply will be coupled into the output. The use of bypass or decoupling elements would clean up the output, but that would lead to greater design complexity and higher product cost. The E3600 series aims to address this challenge with its low noise and stable output.

Agilent E3634A - V_{pp} mean = 1.49mV

Other power supply - V_{pp} mean = 33.59mV

The noise analysis above shows Agilent's ability in providing a clean and precise DC power.

Learn more about finite noise such as normal mode voltage noise and common mode current noise and the output characteristics of linear power supplies at *http://cp.literature.agilent.com/litweb/pdf/5989-2291EN.pdf* titled "Understanding linear power supply operations".

Agilent Technologies

Reliable power, repeatable results

Agilent E3600 Series power supplies provide low-noise outputs so you can minimize interference and enhance repeatability of your measurements. With stable signal levels and low transients, you get the output power you need—better and sooner.

Key features:

- Low output noise (best at 1 mV_{p-p}/ 0.2 mV_{rms})
- Excellent regulation (best at 0.01% + 2 mV ; 0.01% + 250 uA)
- Fast load transient response (< 50 µSec)
- Remote sensing
- Programmable (GPIB & RS-232)
- Overvoltage and overcurrent protection

E3600 Series offerings summary

Categories	Models	Voltage (max)	Current (max)	Power (max)	No. of ranges	Ripple & noise	Load & Line regulation	I/O interface
Single-output manual power supplies	E3610A/11A/12A E3614A/15A/16A/17A	up to 120 V up to 60 V	up to 3 A up to 6 A	30 W up to 60 W	2 1	2 mV_{p-p} 1 mV_{p-p}	0.01%+2 mV	-
Multiple-output manual power supplies	E3620A (dual-output) E3630A (triple-output)	up to 25 V up to +/-20 V	up to 1 A up to 2.5 A	50 W 35 W	1	1.5 mV_{p-p}	0.01%+2 mV	-
Single-output programmable power supplies	E3632A/33A/34A E3640A-E3645A	up to 50 V up to 60 V	up to 20 A up to 8 A	up to 200 W up to 80 W	2	best at 2 mV_{p-p} best at 5 mV_{p-p}	0.01%+2 mV 0.01%+3 mV	GPIB & RS-232
Multiple-output programmable power supplies	E3646A-E3649A E3631A	up to 60 V up to ±25 V	up to 5 A	up to 100 W 80 W	1	best at 5 mV_{p-p} 2 mV_{p-p}	0.01%+3 mV 0.01%+2 mV	GPIB & RS-232

more information — Get data sheet, application notes and more at www.agilent.com/find/E3600

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Product descriptions and specifications subject to change without notice.

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