KIKUSUI AMERICA, INC.

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MONTHLY NEWSLETTER

KIKUSUI

Kikusui America – Monthly Newsletter

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Features:

- **Kikusui Intelligent Power Supplies** – Unlocking Precision with Synchronization and Power Simulation
- **Ad Campaigns** – Updates and Highlights
- **Obon Festival in Japan** – Tradition and Celebration

Our Product Line:

PWR-01 Series
Compact Wide-Range DC Power Supply

PWX Series
1U Wide-Range DC Power Supply

PLZ-5WH2 Series
Multifunctional High-Voltage Electronic Load

Kikusui Intelligent Power Supplies: Unlocking Precision with Synchronization and Power Simulation

KIKUSUI's PBZ series intelligent bipolar power supplies simplify complex electrical testing with features like arbitrary waveform generation, synchronized outputs, and programmable operations. As modern automotive, aerospace, robotics, and medical subsystems grow more complex, thorough testing against power fluctuations and disturbances is vital. The PBZ series enhances reliability with high-speed response, parallel operation, and precise power simulation. Its synchronization capability eliminates phase mismatches, improving test accuracy. This white paper highlights how PBZ power supplies help engineers ensure system reliability after production.

1. Overview of Power Testing Needs and Difficulties:

Advanced platforms like modern cars, satellites, and medical devices rely on bidirectional electrical current, enabling energy to flow both ways for efficient operation. These devices use different power waveforms to match their functions and often operate in harsh environments with varying power demands. Power fluctuations from sources such as a car battery turning on or off can affect performance. Examples include EV regenerative braking, smart grids balancing renewable energy, industrial power systems, and space applications. As these systems grow more complex, thorough testing is essential to ensure safe and reliable operation.

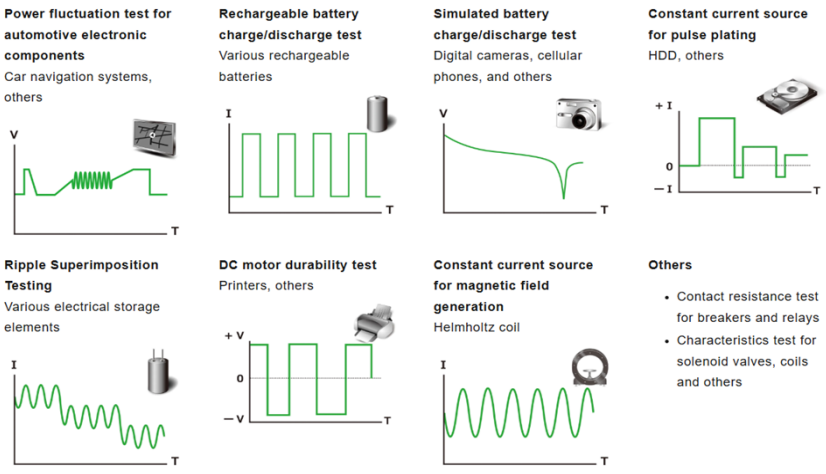


Figure 1: Power testing uses different waveforms by device, with synchronized outputs ensuring accurate results.

Power testing systems with numerous electrically powered subsystems, like those in automobiles, presents significant challenges. Variations in timing across subsystems can compromise test accuracy, while voltage instability can cause inconsistent outcomes. Measurement errors often arise from unsynchronized power sources, and electromagnetic interference (EMI) can interfere with sensitive equipment, leading to misleading results. To ensure precise and efficient testing, these platforms need programmable, dependable power supplies equipped with advanced features such as the capability to generate and synchronize multiple power outputs and waveforms.

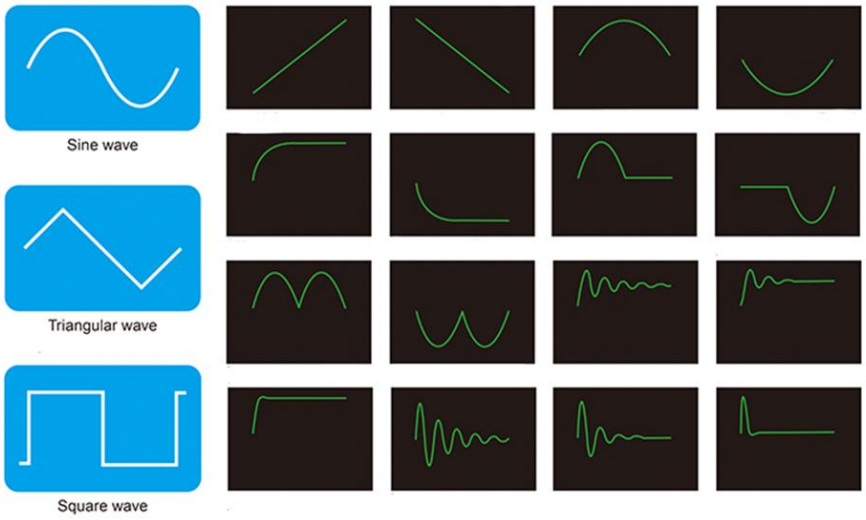


Figure 2: Waveforms represent repeating voltage or current patterns over time and play a crucial role in effective power control, signal communication, and the operation of devices. Each type of waveform serves distinct practical purposes.

2. Synchronized operations between units:

Synchronization of power equipment is essential for safe, accurate testing and reliable results. When power simulation outputs are synchronized, subsystems receive input waveforms timed to match real-world operation. Unsynchronized waveforms cause timing errors, unreliable data, phase mismatches, and potential equipment damage.

As illustrated in Figure 5, synchronized testing ensures all power supplies start simultaneously, improving timing accuracy, eliminating phase mismatches, and enabling consistent voltage/current measurements. This leads to safer, more reliable power delivery and helps ensure that:

- Motors, transformers, and circuit breakers function properly
- System data is recorded in correct operational order
- Aerospace defense systems stay stable
- Industrial machines and robots avoid failures
- Vehicles perform as expected
- Medical devices produce accurate diagnostic images
- Battery storage systems charge and discharge efficiently

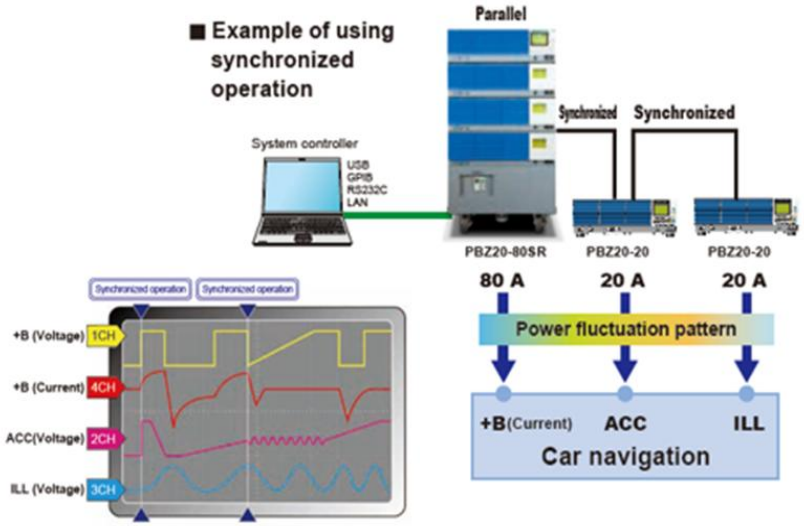


Figure 3: An automobile GPS relies on four power lines with different voltages to operate and retain settings when the car is off. Power fluctuations during engine start or shutdown can impact stability. Testing these voltage changes simultaneously allows engineers to simulate real-world conditions and verify reliable performance.

3. Quality Testing Solutions for Reliable Performance:

Modern electric subsystems are increasingly complex and require thorough testing to ensure safe, reliable operation. They face challenges like power fluctuations, environmental stresses, and timing issues that can lead to measurement errors, data loss, or failure. Accurate power testing that mimics real-world conditions is essential. Synchronizing waveforms during tests prevents phase mismatches, unstable voltages, and unpredictable behavior. The KIKUSUI PBZ series supports synchronized operation across multiple units, eliminating timing errors and providing precise power simulation. This approach improves testing accuracy, efficiency, and overall reliability after production.

4. Marketing activities:

I. Kikusui LinkedIn page:

To learn more about our recent product updates and activities, please visit our LinkedIn page:

URL: Kikusui America, Inc.: Company Page Admin | LinkedIn

II. Video production:

Please find the links below to our recently released video, **"PWX and TOS 9300 Series,"** and our YouTube channel.

Video URL:

PWX: https://kikusuiamerica.com/products-index/dc/pwx/

TOS: https://kikusuiamerica.com/products-index/safety-testers/electrical-safety-multi-analyzer-tos9300-series/

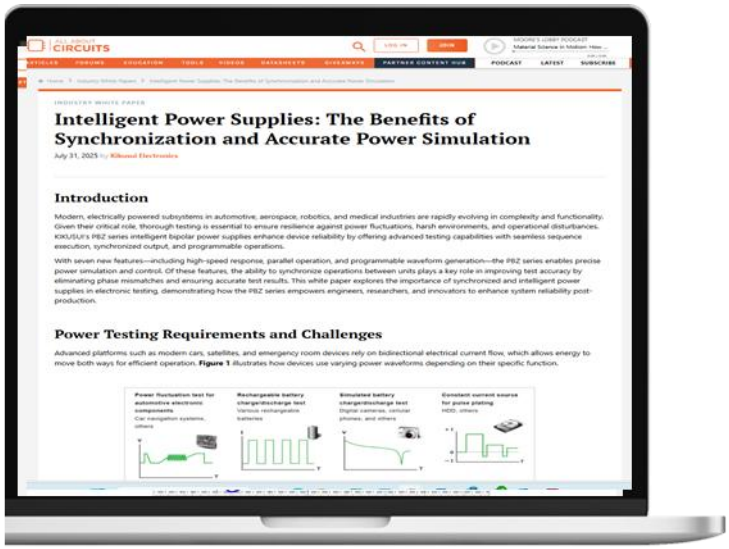
Our YouTube Channel:

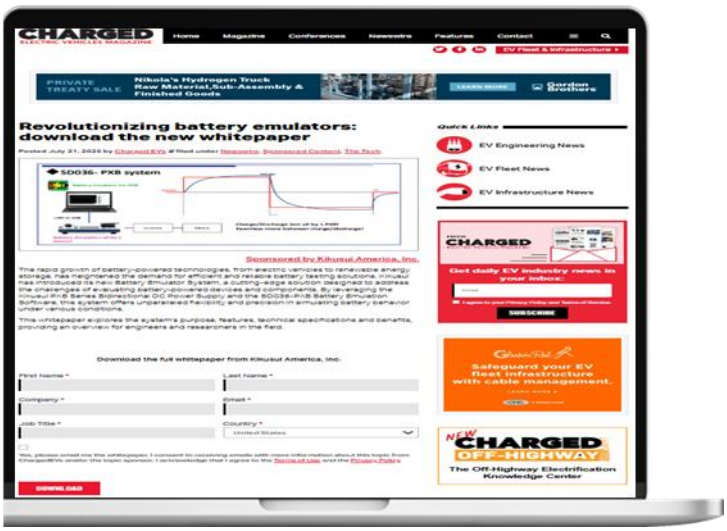
URL: Kikusui America - YouTube

III. White Paper Publications:

We recently released two white papers on the following titles.

1. "Intelligent power supplies: The benefits of synchronization and accurate power simulation" Will start marketing by the end of this month
   URL: [Intelligent Power Supplies: The Benefits of Synchronization and Accurate Power Simulation - White Paper]





2. "Kikusui Solutions for the battery-powered devices: Revolutionizing battery Emulators "
   URL: [Charged EVs | Revolutionizing battery emulators: download the new whitepaper - Charged EVs]

IV. Kikusui in battery show Detroit:

Mark your calendar for **October 6–9, 2025**, at Huntington Place in Detroit, Michigan! Swing by **Exhibit Halls A–E, Booth 505** to meet our team and explore our latest offerings at the Electric & Hybrid Vehicle Technology Expo-North America's largest advanced battery and EV showcase.

URL: [Battery Show North America | Electric & Hybrid Vehicle Technology Expo North America 2025 | Kikusui America, Inc.]

5. Obon Festival in Japan (お盆祭):

Obon, Japan's midsummer "Festival of Souls," is a deeply spiritual and family-centered Buddhist tradition celebrated in **2025 from August 13 to 15** across most of the country, especially in Tokyo, Kyoto, and Osaka. The three-day festival honors ancestral spirits believed to return home for a visit, starting with welcoming lanterns or bonfires (mukae-bi), followed by family gatherings, grave cleanings, food offerings, and community Bon Odori dances. It concludes with toro nagashi—floating paper lanterns sent down rivers or lakes to guide spirits back to the afterlife—and in Kyoto, the iconic Gozan-no-Okuribi mountain bonfires on August 16 mark their farewell. While Obon isn't an official public holiday, many businesses close and domestic travel surges as people return to their hometowns or take summer trips during this period.