

# Battery Simulator

NSG 5004A

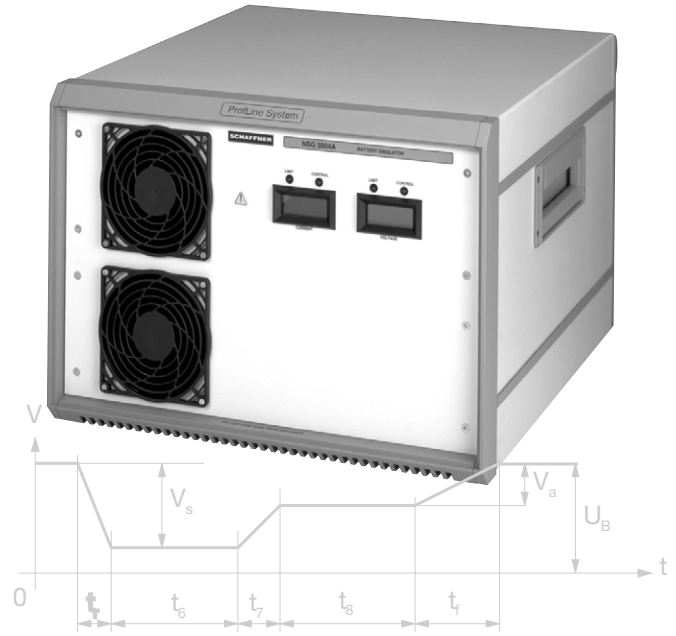
- **Bipolar amplifier**
- **Sensor feedback**
- **Complex supply variations**

Dips in the voltage of the vehicle battery occur when the starter motor is operated. Brief voltage variations and even oscillations can, however, manifest themselves on the primary power distribution lines through the switching of large loads and ancillary electric motors.

ISO and SAE have designated the test condition dealing with the effects of voltage variations as pulse 4.

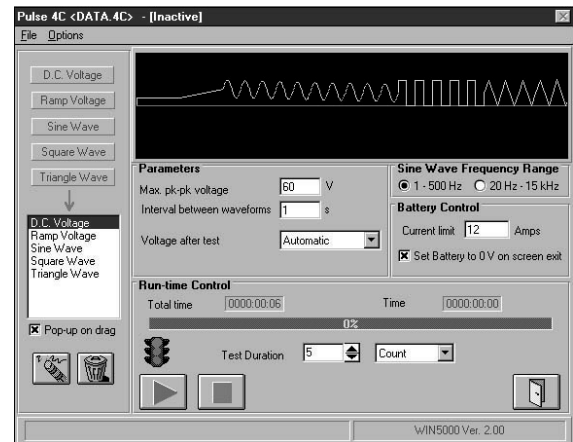
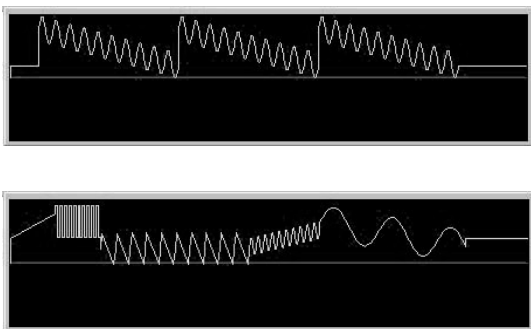
The NSG 5004A Battery Simulator is a specialised type of solid state power source. Controlled via a driver board in the mainframe's processor unit, it generates the requisite voltage ramps upon demand. These variations can be altered and adapted by the user over quite large ranges.

The power section is installed in its own housing and can be supplied for currents of 12.5A and 25A. The total power delivery rating can be increased to 37.5A by adding a supplementary power unit.



# Arbitrary Waveform Generator

This generator, a processor-based control board for the Battery Simulator, enables arbitrary and complex waveforms to be devised using a convenient 'drag and drop' technique, while simultaneously providing a graphic presentation of the curve.



| Brief Specifications                          |   |            |                     |   | NSG 5004A Battery Simulator               |  |
|---|---|------------|---------------------|---|---|--|
| Output voltage                                | Current                                     | Impedance  | Regulation response | Current limiting                                    | Pulse modes                               |  |
| 0 to 30Vdc, stabilized via sensor connections | 12.5A/25A/37.5A, short-term 3 x I for 100ms | 0.01Ω eff. | ≤ 30V/ms            | 0.1A to I <sub>max</sub> . Adjustable in 0.1A steps | Single, continuous, programmed 1 to 99999 |  |