

ISO Standard Compliant Automotive Transient Surge Simulator

ISS-7810



Make EMC Test Easier !

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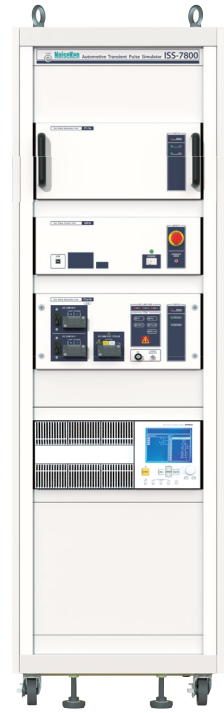
For a secure and safe mobility society

Technological innovation called “CASE” (Connected, Autonomous/Automated, Shared, Electric) is diversifying at an unprecedented pace in automotive development. As the electrification of automobiles progresses, it is becoming increasingly important to check the EMC resistance of electronic devices in vehicles due to mutual interference.

The ISS-7810 is a simulator that outputs transient surges required by the international standard ISO 7637 for verifying the noise immunity tolerance of automotive electronic devices.

- Perform testing in compliance with ISO 7637-2 and ISO 7637-3 Standards.
- Perform various 12V / 24V tests.
- Mounted on a space-saving vertical rack.
- A wide variety of options such as coupling clamps and waveform verification is available.
- The included remote control software allows individual test sequences setting.
- Highly operable and intuitively user-friendly integrated remote control software.

*Please contact our sales representative for detailed specifications.



*Product image is for illustration purpose only. Actual product may vary.

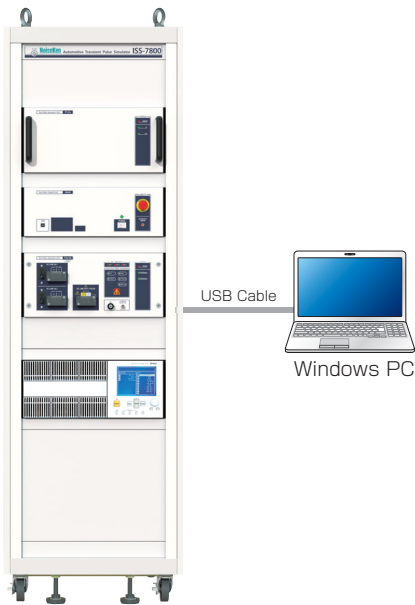
System overview

The ISS-7810 is a rack-mounted test system with separate pulse units. It has excellent expandability and can be equipped with pulse 5a/5b and Slow pulse +/- if necessary (*1). In addition, sequence tests and reports can be created by controlling the entire system with software using a PC.

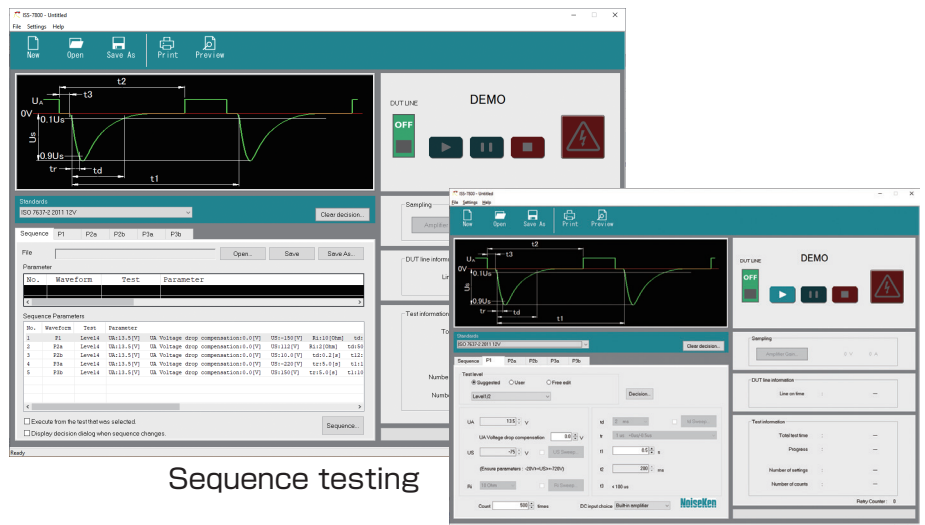
MODEL	ISO 7637-2					ISO 7637-3			
	2011 edition			2004 edition		2007 edition			
	pulse 1/2a	pulse 2b	pulse 3a/3b	pulse 4	pulse 5a/5b	Fast pulse a	Fast pulse b	Slow pulse +	Slow pulse -
ISS-7810	○	○	○	○	*1	○	○	*1	

*1 - to be introduced in 2024; model names are subject to change

Remote control software



Automotive Transient Surge Simulator
MODEL : ISS-7810



Sequence testing

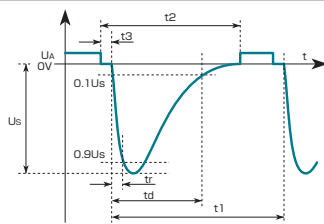
Sweep function

ISS-7810 System Image

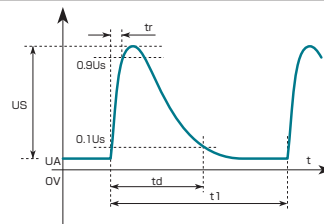
Specifications

Test Pulse Generator Unit P1/2a

Parameter	Specifications		
	pulse 1 (12V)	pulse 1 (24V)	pulse 2a (12V / 24V)
Output voltage (Us)	-10V ~ -330V Step -1V	-20V ~ -600V Step -1V	20V ~ 330V Step 1V *setting available from 12V
Output impedance (Ri)	4, 10, 20, 30, 50, 90Ω	10, 20, 30, 50, 90Ω	2, 4, 10, 20, 50, 90Ω
Pulse width (td)	1, 1.75, 2, 6ms		0.05, 1, 2ms
Rise time (tr)	1(+0/-0.5), 2(+0/-1.0), 3(+0/-1.5)μs		1(+0/-0.5)μs
Pulse repetition time (t1)	0.5s ~ 99s Step 0.1s		0.2s ~ 99s Step 0.1s



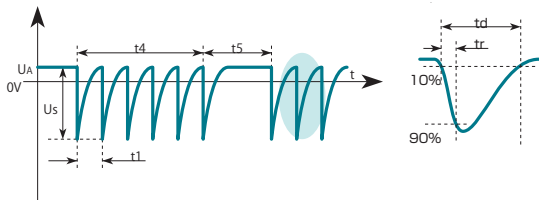
pulse 1



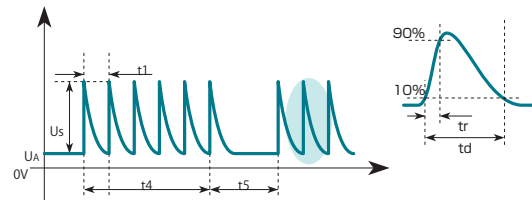
pulse 2a

Test Pulse Generator Unit P3a/3b & CDN

Parameter	Specifications	
	pulse 3a (12V · 24V)	pulse 3b (12V / 24V)
Output voltage (Us)	-10V ~ -350V Step -1V	10V ~ 350V Step 1V
Output impedance (Ri)	50Ω	
Pulse width (td)	0.15 (±0.045) μs	
Rise time (tr)	5 (±1.5) ns, 3.5ns max	
Pulse repetition time (t1)	10μs ~ 1000μs Step 1μs	
DUT power capacity	DC60V / 50A	



pulse 3a

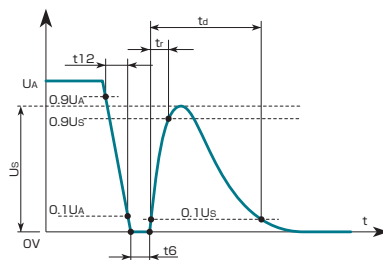


pulse 3b

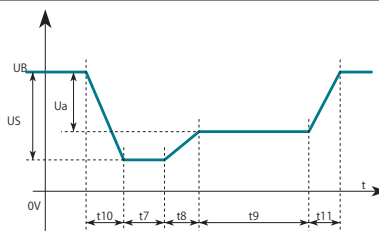
Bipolar Power Supply BP4610 P2b/4

Parameter	Specifications
	pulse 2b (12V · 24V)
UA, US	0V ~ 60V Step 1V
Ri	0Ω ~ 0.05Ω
td	0.1s, 0.2s, 0.5s, 1s, 2s, 4s
t12, tr, t6	1ms, 2ms, 5ms

Parameter	Specifications
	pulse 4 (12V · 24V)
UB	0V ~ 60V Step 1V
Us, UA	0V ~ 60V Step 1V (less than UB)
Ri	0Ω ~ 0.02Ω
t7, t8, t10, t11	1ms ~ 999ms Step 1ms
t9	0.1s ~ 99.9s Step 1ms



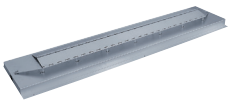
pulse 2b



pulse 4

Options

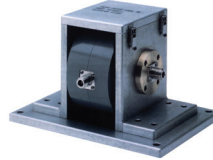
Coupling Clamp MODEL : ISS-7630-CUP



Clamp used in the capacitive coupling clamp method of the ISO 7637-3 standard.

Contents: Coupling clamp, BNC Coaxial cable 0.5m, BNC coaxial cable 0.1 m, 50Ω 5W terminator, Metal fasteners

Injection Probe MODEL : F-120-2



Clamp used for the Inductive coupling clamp test method of the ISO 7637-3 Standard. Calibration fixture (FCC-BCICF-1) is also available.

* for 7637-3 Slow pulse
* the photo includes the calibration fixture

DCCBOX



DCC box to use for the ISO 7637-3 Standard direct capacitive coupling method.

Waveform Verification Set



A set of resistors and attenuators for observing each pulse of the Simulator.

Set contents: 1Ω resistor, 2Ω resistor, 10Ω resistor, 50Ω resistor, 2.5kΩ 40 dB attenuator, 50Ω 20 dB attenuator × 2 pcs. each

*resistors can be purchased separately

No Load Waveform Verification Attenuator MODEL : 00-00007A



Attenuator for observing high frequency and high voltage pulses of Test Pulses 3a/3b.

2,5kΩ 40dB attenuator

50Ω Load Waveform Verification Attenuator MODEL : 00-00006B



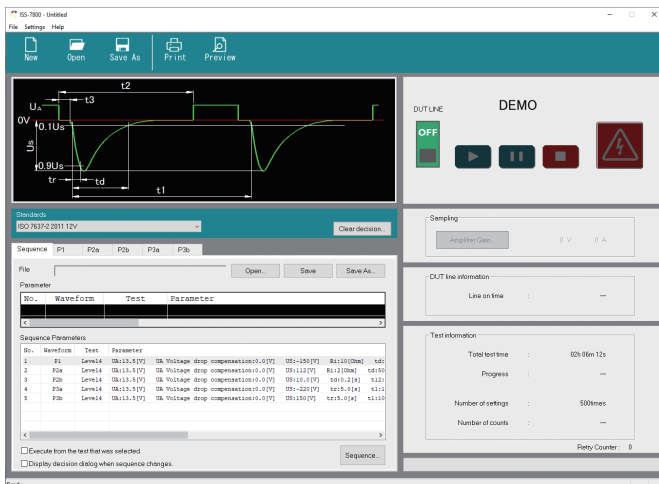
Attenuator for observing high frequency and high voltage pulses of Test Pulses 3a/3b.

50Ω 20dB attenuator (2 pcs.)

Remote control software

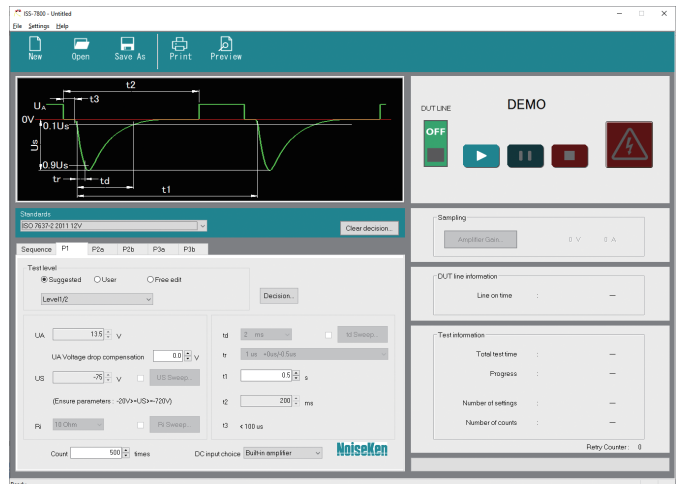
Dedicated software for remote control of ISS-7810 allowing to easily conduct each pulse test required by the Standard. Sequence tests are also available, in which test pulses and test levels are combined in any order, and parameters such as surge voltage, internal impedance, and pulse width can be set to sweep.

Sequence testing



Combine test pulses and test levels in any order.

Sweep function



Sweep settings for surge voltage and internal impedance available.

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