



GeneratorJoe

ES5200 AutoStart Engine Controller

Controls Any Engine... Any time. Any where.

- **UL508 listed for use on UL2200 gensets**
- **Lowest overall installation Costs**
- **5 Year Warranty - Best in the Business**



UL508

Not All Engine Controllers are Created Equal

The ES52 from GenJoe is *the* world leader when it comes down to controller dependability. It has been precisely engineered to deliver rock-solid resistance to: • Electrical Interference • Voltage Fluctuation • Vibration • Physical Shock • Temperature Extremes • Moisture. When it comes to reliability, no other microprocessor-based controller even comes close! No wonder every ES52 is backed by the longest warranty in the business: **5 Full Years.**

If you need an Engine Controller that will deliver years of trouble-free performance at the lowest overall cost, the ES52 was built for you. They have been proven in tens of thousands of installations all over the world. And, they'll work for you, too. *On Any Engine. On Any Generator. Guaranteed.*

Easiest to Install - Easiest to Service

The ES52 has been engineered to get you up and running in the fastest possible time and save you money too. Its production-line-friendly design saves you time and money with:

- **Plug-in Terminals** - No Wire Crimping, Broken Terminal Barriers, Stripped or Broken Screws
- **High Capacity Removable Relays** - No Slave Relays Required for Loads Under 20 amps
- **Capable of Direct Generator Connection** for Speed Sensing - Up to 300V
- **Built-in Kick-Back Diodes** - Save Time and Money on Every Installation
- **Pre installed Removable Fuse** - No External Fuse Installation Required
- **Fully Field Adjustable Settings** - You Choose What's Best for Your Particular Application

Compare the ES52 with the competition

	Plug-In Terminals	Replaceable Relays	Relay Capacity	Built-In Fuse	Generator Output Sensing	Max. Speed Sensing Input Voltage	Universal Speed Sensing	Epoxy Sealed	Warranty
DynaGen ES52	Yes	Yes	20A	Yes	All Models	300	Yes	Yes	5 Years
Murphy ASM150/160	No	No	5A	No	No	38	No	Yes	2 Years
ECU* 9907/9910 9988L/9988N	No	No	5A	No	9907 Only	28	No	Yes	1 Year
Deep Sea 4110	Yes	No	1A	No	Yes	277	No	No	1 Year



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Tough Customers



The **US Army** conducted a series of tests to establish the ruggedness of a battlefield communications system installed in a Humvee outfitted with a GenJoe ES52 series controller. The rough treatment even included jolting chopper transport. The result: Both the Humvee and the ES52 came through with flying colors.



NASA and Carnegie-Mellon University took a Nomad Lunar Rover to the harsh Atacama Desert in Peru for out-of-this-world testing. Their onboard controller? An ES52 Series from GenJoe. The result: Both Rover and ES52 were A-OK!

ES52 AutoStart™ Engine Controller

Specifications

UL Recognition

UL508 - File # E250327 for use on UL2200 generators

Operating Voltage

7 to 32 VDC continuous

Operating Temperature

-40 to +85°C

Physical

- High Impact UV resistant ABS enclosure
- Encapsulated in epoxy for field reliability & robustness
- Dimensions: 3.3"W - 3.3"H - 1.8"D
- Weight: 0.67 lbs
- Industry standard mounting configuration (compatible with ECU, and Murphy)
- Eurostyle removable connectors for all inputs/outputs

Front Panel Indications

High intensity LED's with regulated brightness for:

- Low Oil Pressure (RED)
- High Water Temperature (RED)
- Over-Crank (RED)
- Over-Speed (RED)
- Engine Running (GREEN)
- Preheat/Timer (AMBER)

Adjustability

Four on-board potentiometers and DIP switches for field adjustments (no PC required)

Potentiometer adjustability for:

- Crank Disconnect frequency (12 - 4156Hz)
- Over-speed frequency (44 - 8492Hz)
- Crank/Rest Time (4 to 36 seconds)

4 Timer Outputs via DIP switch settings:

- Preheat (0 to 32 seconds pot adjustable)
- Slow (0 to 256 seconds pot adjustable)
- Air-Gate (fixed 10 seconds)
- Choke (fixed to start 2.5 seconds into cranking)

DIP Switch adjustable settings for:

- Crank Attempts (1 to 6 attempts)
- Speed Range (Low or High)
- Oil verification before cranking(Enabled/Disabled)
- Timer Setting (Preheat, Slow, Air-gate or Choke)
- Loss of Speed while Cranking (Enabled/Disabled)

Note: Setup Mode allows easier setting of crank disconnect and overspeed. Provision for single long crank attempt from 0 - 256 sec

Speed Sensing (user selectable sensing ranges)

- Magnetic pickup: 1V to 300V
- Generator Output Frequency: 100mV to 300VAC (no external transformer required) requires 1VRM minimum at 60Hz & 100mV at 20Hz
- Accepts Tach signal from belt driven alternators

Loss of Speed signal protection during cranking and running can be disabled while cranking

Inputs

- Low oil pressure switch failure (N.C. on oil failure)
- High engine temp failure (N.O. type close on failure)
- Aux. Failure (N.O. type close on failure)
- LED Test input (Turns on all LEDs)

Failure inputs can close to either +battery or ground. All failure inputs are ignored for a period of 15 seconds at engine startup.

Protection

- On-board replaceable 20A mini-fuse (standard automotive type)
- 400W transient protection on main power input, annunciation outputs, and failure inputs
- Reverse Polarity Protected
- Short circuit & overload protection on annunciation outputs
- ESD protected on all inputs
- Power Supply Surge Withstand: 1500V for 250uS
- Zero speed restart prevents starter pinion wear by ensuring that no engagement of the starter is possible unless the speed is zero.

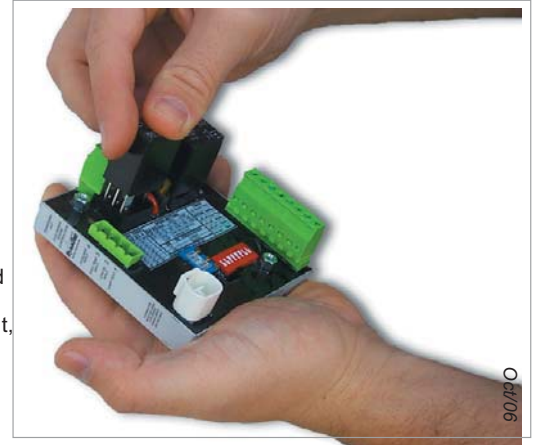
Relay Outputs

- Fuel & Crank (starter) have 20Amp high capacity replaceable automotive relays
- Relays outputs are switched to battery positive
- 12 or 24 VDC battery systems
(replace relays for either 12 or 24V operation)

Annunciation Outputs

All annunciation outputs are switched to battery positive (300mA max) and have output for:

- Preheat
- Low Oil
- High Temp
- Overcrank
- Overspeed
- Engine Run
- Warm-up
- General Failure



ES52 showing on-board 20A relays, fuses, and annuncia-



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