

Black Square

Steam Gauge Overhaul - Analog King Air Talking Points

The Steam Gauge Overhaul series breathes new life into the default MSFS aircraft with a total systems overhaul, focusing on primary instrumentation, radio navigation equipment, and electrical systems. All equipment featured in the aircraft are based on real units, and are designed to meet the requirements of the most serious simmers flying IFR, or those looking for a real challenge.

1. Extensive manual with **systems guide**, operating limitations, electrical schematics, checklists, and tutorials, available to anyone on JustFlight.com.
2. **Hot-swappable radio stack** via switches on the right of the panel. All custom coded radios with frequency memory.
3. **175+ Random or Scheduled Failures** available from in-panel interface, with engine damage.
4. **State-saving** of panel configuration, frequencies, cabin aesthetics, and more.
5. TDS GTNxi 750 and PMS50 GTN 750 integration.
6. Electric meters accurately respond to all loads, and multi-bus load shedding is simulated.
 - a. Try turning on the landing lights while watching the load meters.
 - b. Hold one of the generator switches to "RESET" while watching both load meters.
 - c. Disable the bus-tie system by positioning the "BUS SENSE" switch to "TEST".
7. Battery charge current is accurately simulated. Run the battery down, and then connect to external power to see the **charging spike on the "BATT" meter setting**. If the current is high enough, "BATT CHARGE" annunciator will illuminate. Too high charge current will fry the battery.
8. **Every single circuit breaker** is pullable, each one with correct electrical logic.
 - a. See schematic in manual
 - b. Pull breaker for gauge to see effect when aircraft power is on.
Example: Pull "QTY IND" (under fuel gauges) to see fuel quantity needle fall to zero.
 - c. Pull any of the "AVIONICS BUS" breakers (right panel) to knock out a third of all avionics.
 - d. Pulling "GEN RESET" (right panel) will disable the generator reset switches.
9. **Working windshield wipers**. Try them in different rain intensities to see the effect!
10. **Fully simulated environmental control system**. See temperature indicator on right panel, and "HOT"/"COLD" LED's on the left panel. Heat is from bleed air, the right engine must be above 60% Ng for Air conditioning. Fans, vents, and windows affect cooling/heating rate.
11. 45+ Normal and Abnormal (Emergency) checklists with native control/instrument highlighting.
12. **KNS-80 RNAV Computer** with data memory. Tutorial in manual. Real manual available online.
13. Custom Weather Radar. See "NAV" and "LOG" pages for failure system.
14. Improved turbine dynamics. **Observe ITT spike on startup** and accurate Gas Generator RPM.
15. Improper engine management will slowly **damage engines to failure** ("Engine Stress Damage" must be enabled in MSFS options). Running the starter too long will burn out the starter motor.
Be careful! Hot-Starts are possible! Engine limits are in the manual.
16. Custom coded **pressurization controller**, instrumentation, and warnings.
17. Emergency gear extension hand pump, and ground locking latch (red down lock release button).
18. Custom propeller governor and **autofeather logic**. Follow run-up checklist to demonstrate.
19. Remote compass controller (left of pilot's DME).
20. Oxygen system will deplete based on pilot and copilot weight and altitude. Crew masks work.
21. Custom sounds. Try lifting the gear handle on the ground, or turning on inertial separators.

Frequently Asked Questions:

1. You can always fly the original default aircraft. This does not affect its installation.
2. You need to have the default aircraft installed; however, there are workarounds.
3. Compatible with all default liveries via an easy conversion process, with tutorial.
4. The aerodynamics are slightly improved, and are compatible with third party mods.
5. The doors don't open, because this is a limitation of the default exterior model.
6. The camera cannot go into the cabin, because the bounding box used for the camera is part of the exterior model, which cannot be altered and redistributed as part of a paid product. It is possible for modders to add this functionality by moving only six vertices.