

Technical Newsletter

A23-1146-001

System: Global Express P-2000XP Integrated Avionics

Product: IC-800 Integrated Avionics Computer (IAC)

Part No.: 7017300-61005, -61006, -61007, -61008, -62005, -62006, -62007, and -62008

Title/Purpose: IC-800 Low Battery Annunciation and Maintenance

Transmittal Information

Honeywell Pub. No. A23-1146-001

Summary

Added a statement stating that the FMS BATTERY MAINT REQD message will be seen on the FMS CDU on Batch 2 configuration and later. Also changed the part numbers in the heading to list specific dash numbers that are affected by this document.

Revision History

Technical Newsletter Pub. No. A23-1146-001 has had two revisions as summarized in Table 1.

Table 1. Technical Newsletter Revisions

Revision	Date of Release
Initial Release	5 December 2003
001	28 April 2004
002	30 March 2006

5 December 2003

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1. Introduction

The IC-800 Integrated Avionics Computer, Honeywell Part No. 7017300-6xxxx, has an internal battery, which maintains data stored in Random Access Memory (RAM) when aircraft power is removed from the LRU. The internal battery, which provides maintenance-free operation for years in normal service, provides holdup power for the following functions:

- Auto Flight Control System (AFCS):
 - Integrated Maintenance Test (IMT) RAM
- Electronic Display System (EDS):
 - Integrated Maintenance Test (IMT) RAM
- Fault Warning Computer (FWC):
 - Integrated Maintenance Test (IMT) RAM
 - Fault Warning Trend/Limit Data RAM
 - Fault Warning CAS Message RAM
- Flight Management System (FMS):
 - Last Known "Present Position"
 - Integrated Maintenance Test (IMT) RAM
 - FMS CUSTOM DB RAM (Custom waypoints and stored flight plans)
- FMS AIRCRAFT DB RAM (Smart Perf)

Note: The NAV Database is not affected by loss of the internal battery.

2. Anomaly

In the event the internal battery wears out prior to being changed, the data listed above, sometimes referred to as NVM data, will be lost when power is removed from the LRU. While NVM data including all stored fault history may be lost, the LRU will continue to function properly when power is re-applied.

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The IC-800 has a battery monitor that detects a low battery voltage condition, which is indicated via CAIMS on the AM-200 PMAT and also indicated on the FMS CDU. When a low battery is detected the PMAT will display one of the following active faults:

IAC1 BATTERY FAULT

IAC2 BATTERY FAULT

IAC3 BATTERY FAULT

**Symptom Text: IAC BATTERY VOLTAGE DETECTED
LOW, BATTERY NEEDS TO BE REPLACED**

On the FMS CDU, the scratchpad will display the following:

FMS BATTERY MAINT REQD

A low battery condition does not require an immediate maintenance action nor does it limit in any way dispatch of the aircraft. Honeywell recommends the battery be replaced during the next scheduled maintenance, not to exceed 3 weeks, to prevent loss of NVM data.

Note: These faults will only be available on aircraft that have a PMAT loaded with Dove .026 or later LDI. The scratchpad message on the CDU displays only if the aircraft is at Batch 2 configuration (IC800 P/N 7017300-6X007) or later.

If battery power is lost the FMS setup options will revert to default settings during the next power-up, and can be reprogrammed before each flight. Other FMS parameters (active flight plan, performance entries, and offside radio commands) are automatically loaded from the cross-side IC-800 when the LRU is powered up and the system comes up in "DUAL" mode. The CUSTOM DB can be manually loaded from the cross-side FMS utilizing the Data Load menu found under Maintenance page 2/2 of the FMS, or re-loaded from diskette if previously saved via the dataloader. The AIRCRAFT DB (Smart Perf) can only be re-loaded via diskette using the Data Load menu found under Maintenance page 2/2 of the FMS.

Note: Honeywell recommends a copy of the AIRCRAFT DB be kept onboard the aircraft in the event this maintenance action is required at an outstation.

3. Corrective Action

Per BD-700 Aircraft Maintenance Manual :

- a) Remove the IC-800 from the aircraft (TASK 31-41-01-000-801).
- b) Replace the IC-800 internal battery (TASK 31-41-01-960-801).
- c) Reinstall the IC-800 into the aircraft (TASK 31-41-01-400-801).

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4. Parts Required

The replacement battery, Honeywell Part No. 7014664-902, is available and can be obtained by contacting Customer Response Center at:

Telephone: +1-602-436-0272
Fax: +1-602-822-7272
Toll Free in the U.S. and Canada
Telephone: +1-877-484-2979
Fax: +1-877-484-2980

For additional information or questions, contact your local Honeywell Field Service Engineer, or the Customer Response Center at +1-602-436-2005.

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