

FAA STC ST03112CH | EASA STC 10044506

Installation & Activation of a Dual Astronautics Corporation of America Electronic Flight Bag (EFB) System on Boeing 747 Series Aircraft

OVERVIEW

- » FAA STC ST03112CH
- » European Aviation Safety Agency (EASA) STC 10044506

Governs the installation and activation of an Astronautics Corporation of America (Astronautics) Electronic Flight Bag (EFB) in accordance with Electronic Cable Specialists (ECS) master data list ECS-207709.

YOUR NEEDS

STC ST03112CH, which utilizes previously installed provisions under FAA STC ST02765CH, provides your operation the approval to install and activate an EFB system.

YOUR BENEFITS

When combined with the previously installed provisions, the Astronautics EFB system provides flight crews the ability to interact with electronic maps, charts, and manuals in lieu of accessing standard paper documentation. System installation will reduce materials costs and aircraft weight without compromising ergonomic concerns.

STC AIRCRAFT EFFECTIVITY

- » Boeing 747-400/-400D/-400F series aircraft

STC CONFIGURATIONS & LIMITATIONS

- » **Configuration 1:** Dual Astronautics EFB systems with display units mounted on the left and right side consoles of the flight deck.

STC Limitations:

- *STC ST02765CH Astronautics EFB provisions must be installed prior to, or in conjunction with this installation.*
- *Boeing Service Bulletin number 747-46-2013 must be installed prior to, or in conjunction with this installation.*

- » **Configuration 2:** Dual Astronautics EFB systems with display units mounted on mechanical mounting assemblies on the left and right sidewalls of the flight deck.

STC Limitations:

- *STC ST02765CH Astronautics EFB provisions must be installed prior to, or in conjunction with this installation.*
- *STC ST02683CH Configuration 2 EZMount® installation must be installed prior to, or in conjunction with this installation.*
- *Map lights located on left and right sidewalls of the cockpit must be removed prior to installing the display units*

PRODUCT DESCRIPTION

- » The Astronautics EFB single processor (SP) system is a two LRU system configuration with a slim display unit (DU) and remote electronic unit (EU). The installation is configured to support a “user friendly” pilot interface system refined with various airlines focus groups. This EFB system installation will be a Class 3 EFB installation as defined by FAA AC 120-76A.
- » The EFB system is designed to be an open architecture system to host Type A, Type B, and/or Type C AMMD applications. The intended initial use of the EFB is for the following types of applications:
 - a. Viewing Charts
 - b. Viewing Documents
 - c. Airport Moving Map without own ship position
- » No software applications will be approved under this project.

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PRODUCT DESCRIPTION CONT'D.

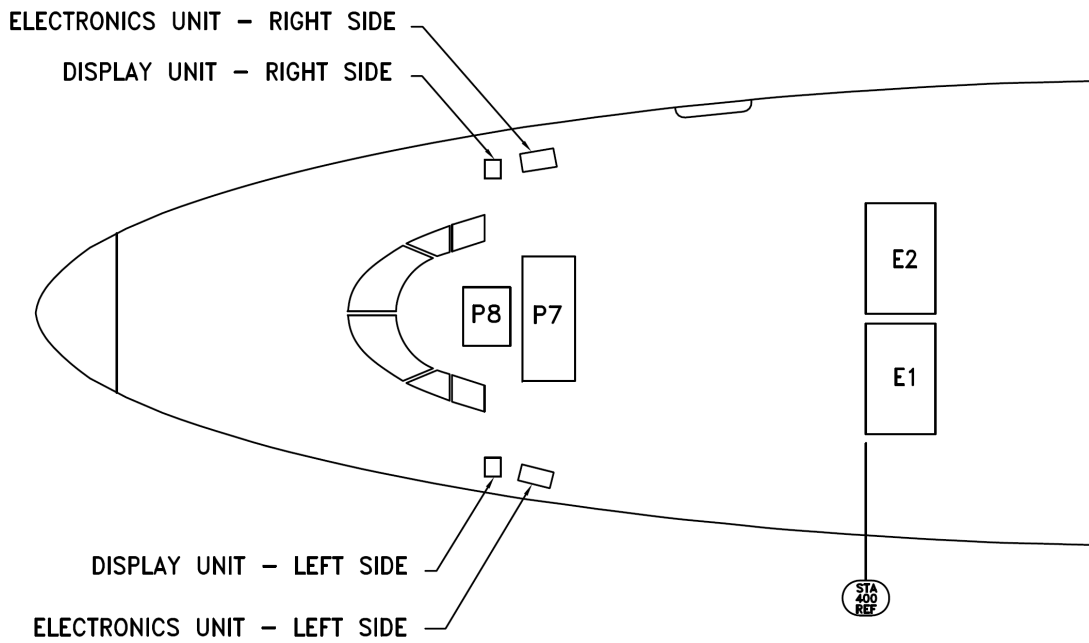


FIGURE 1:
Installation Overview

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MECHANICAL CHANGES

The following mechanical changes are made for Configuration 1:

- » The EUs for the EFB systems will be installed into previously installed mounting provisions in the left and right brief case stowage areas per STC ST02765CH.
- » The DUs will be mounted to the left and right side consoles of the flight deck to previously installed mounting provisions per Boeing Service Bulletin 747-46-2013. The DU is secured in each corner with a captive screw.

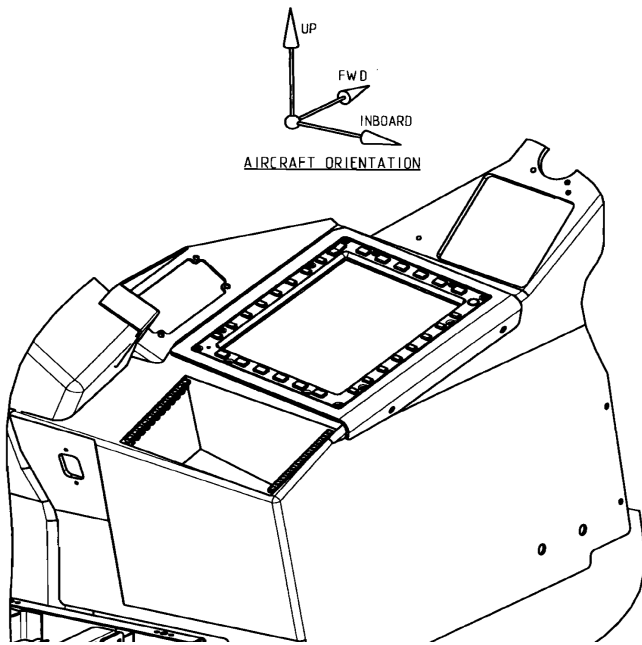


FIGURE 2:
DU Mounted in Boeing Side Console
(Configuration 1)

MECHANICAL CHANGES CONT'D.

The following mechanical changes are made for Configuration 2:

- » The EUs for the EFB systems will be installed into previously installed mounting provisions in the left and right brief case stowage areas per STC ST02765CH.
- » The DUs will be attached to ECS EZMount® mechanical mounting provisions in the left and right windows previously installed per STC ST02683CH. The DU is attached to the EZMount® attachment ball and then installed into the EZMount® base. To remove the DU requires releasing the attachment ball from the EZMount® base. To remove the ball from the EZMount® it requires removal of 2 screws and then releasing tension of the adjustment crank handle.

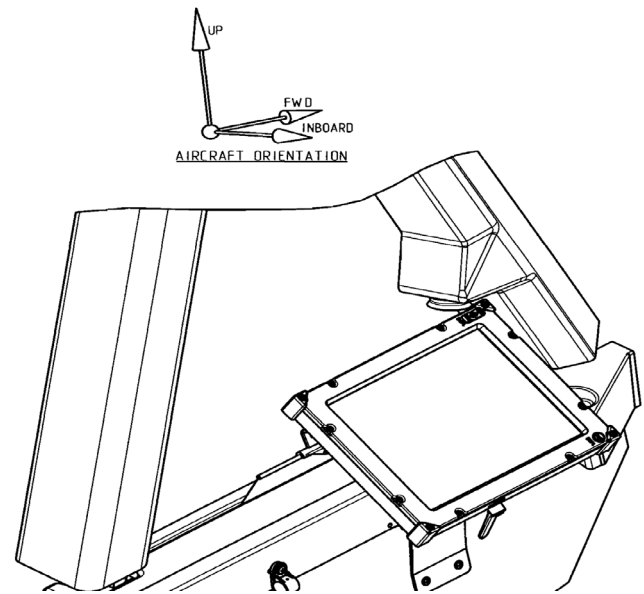


FIGURE 3:
DU EZMount® Installaion
(Configuration 2)

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ELECTRICAL CHANGES

The following electrical changes are made for Configuration 1:

- » Previously installed 28 VDC power wires will be terminated at the EFB circuit breakers.
- » The previously installed lighting wires will be connected.
- » The previously installed ARINC 429 data bus wiring connections for the left and right EU will be completed by installing jumper wires in the respective wiring interface unit (WIU). The left EU will be then connected to the left FMC, left MMR, left IRU, and printer. The right EU will then be connected to the right FMC, right MMR, right IRU, and printer.
- » The previously installed weight on wheels discrete wiring connection will be completed for the left and right EU at the WIU.

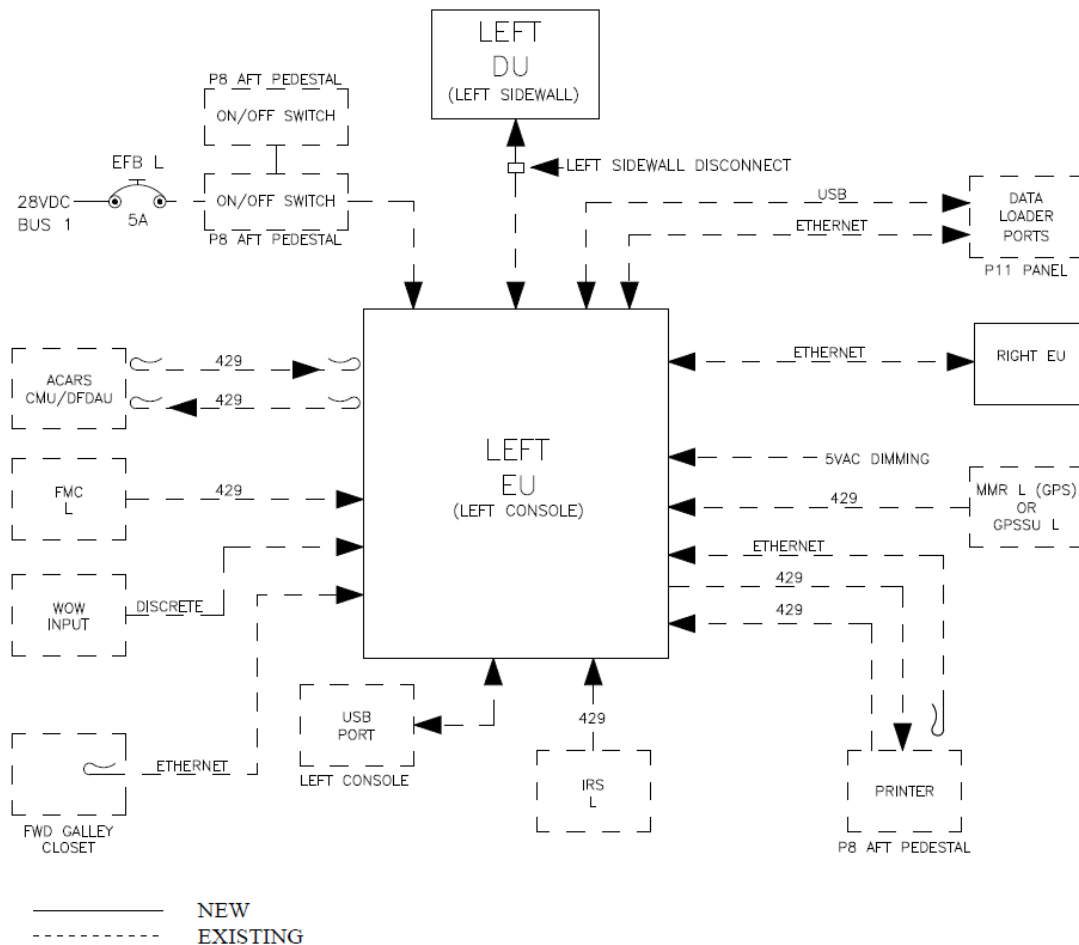


FIGURE 4:
EFB Left System Block Diagram
(Configuration 1)

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ELECTRICAL CHANGES CONT'D.

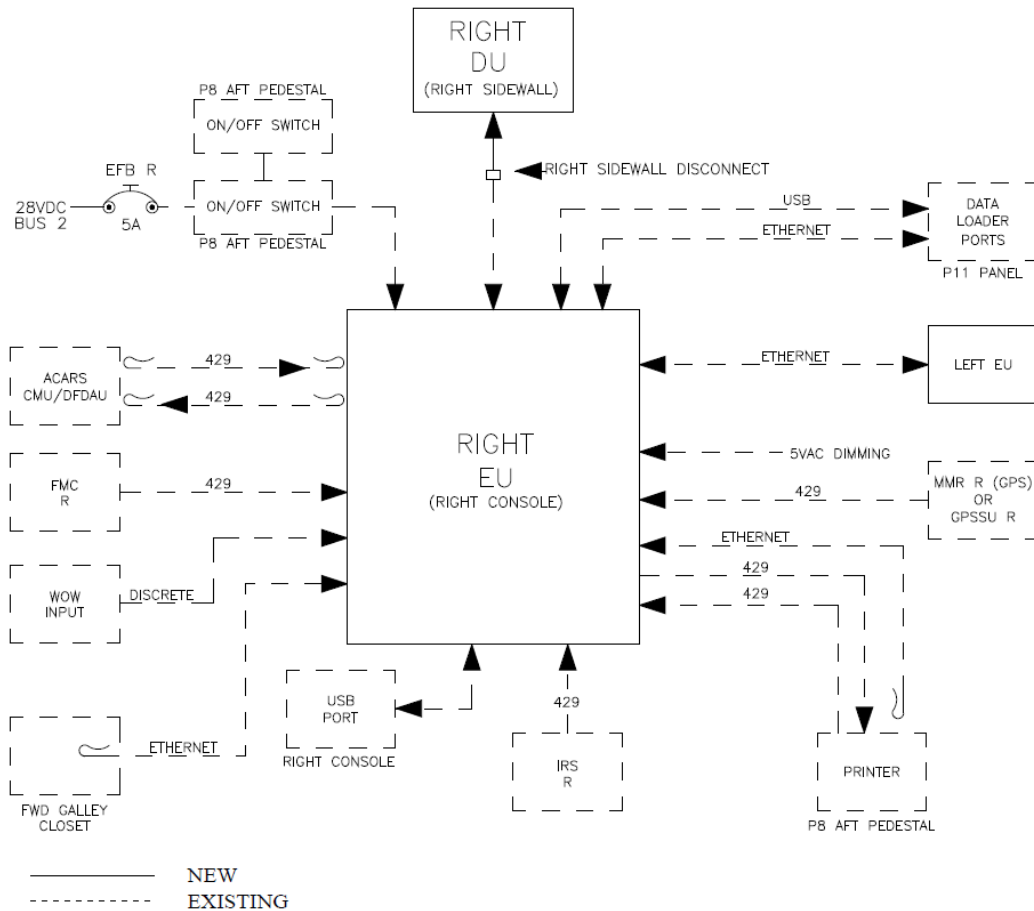


FIGURE 5:
EFB Right System Block Diagram
(Configuration 1)

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ELECTRICAL CHANGES CONT'D.

The following electrical changes are made for Configuration 2:

- » Previously installed 28 VDC power wires will be terminated at the EFB circuit breakers.
- » A wire harness will be connected from the left and right sidewall disconnects to each installed DU.
- » The previously installed lighting wires will be connected.
- » The previously installed ARINC 429 data bus wiring connections for the left and right EU will be completed by installing jumper wires in the respective WIU. The left EU will be then connected to the left FMC, left MMR, left IRU, and printer. The right EU will then be connected to the right FMC, right MMR, right IRU, and printer.
- » The previously installed weight on wheels discrete wiring connection will be completed for the left and right EU at the WIU.

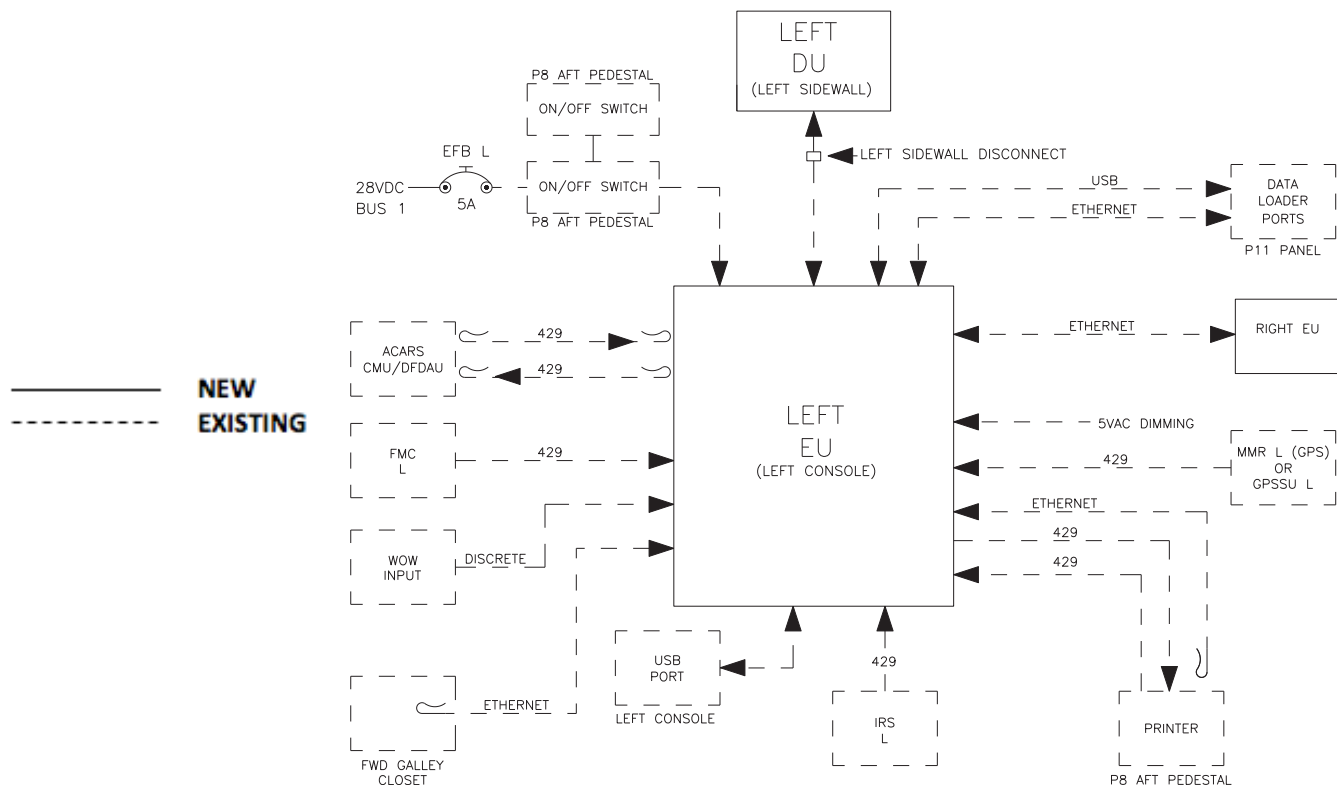


FIGURE 6:
EFB Left System Block Diagram
(Configuration 2)

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ELECTRICAL CHANGES CONT'D.

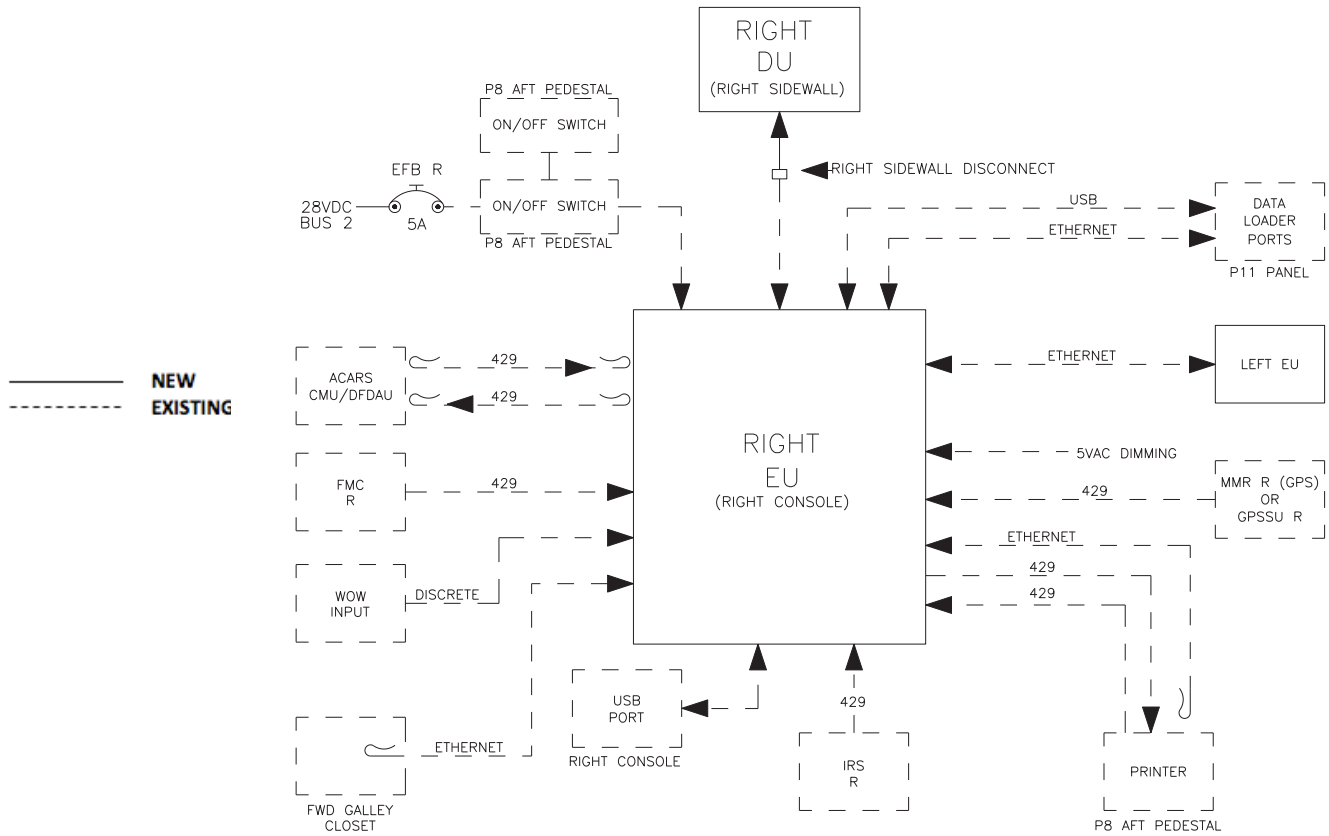


FIGURE 7:
EFB Right System Block Diagram
(Configuration 2)