

FD900X2 Ver B

Installation and Operation Manual

Wireless Audio Transmitter



TECHNICAL SUPPORT
678-867-6717, or
www.FlightDisplay.com

Flight Display Systems
Enhancing the Flight Experience

FD900X2 Ver B

Wireless Audio Transmitter

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Flight Display Systems

1765 Grassland Parkway

Alpharetta, GA 30004

678-867-6717 Phone

678-867-6742 Fax

sales@flightdisplay.com

www.flightdisplay.com

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General Information

The FD900X2 Ver B is a two channel Wireless Audio Transmitter that represents a state of the art audio experience. The quality of the “Surround-Sound” audio matches high-end speaker systems at a fraction of the cost. The FD900X2 Ver B has features that allow installation in the smallest of mounting areas with the minimum of interface equipment. Built with retrofit aircraft integration in mind, this transmitter can be mounted almost anywhere in the cabin.

Front View



Additional Information

This Wireless Audio Transmitter is for use exclusively with the Sennheiser HDR-140 Headsets (not included). The headset operation information is included with the purchase of a headset. A brief overview of headset operation is to turn the headset ON using the slide ON/OFF switch. Press the TUNE button to tune in the first clear frequency. Adjust the VOLUME with the volume adjustment wheel. Subsequent channel selections are obtained by pressing the TUNE button.



Sennheiser HDR140

Specifications

Channels	2
TX Frequencies	926.6, 927.7 (900Mhz)
RF Output Power	0.75 mW
Total Harmonic Distortion	<0.5%
Signal-Noise Ratio	>68 dBA
Maximum Sound Level	100 dB
Frequency Response	20-20,000 MHz
Dimensions	6" (W) x 1.6" (H) x 3.6" (D)
Weight	7 oz
Power	28VDC @ 180 mA
Input	DB15 High Density Male
Materials	ABS Plastic (Burn Rating - UL94-5VA)
DO-160 TESTED	FAA/PMA Approved

Installation Instructions

All cabin entertainment equipment, such as the FD900X2 Ver B, should be installed on a non-essential bus and have a dedicated circuit breaker. It is a requirement that a switch be installed so that the pilot can de-energize the system should it become necessary.

There are two #8 mounting holes located on the ends of the housing. It is sufficient to mount the display by the two attach points. Mounting locations in the cabin can be anywhere that is not blocked or enclosed by metal surfaces. A drawer, cabinet, headliner or other suitable location is fine.

When using the headsets, it is necessary to cycle the headset to get the frequency's to tune. Sometimes if the operator leaves his/her hands touching the headset the arms and body will act like an antenna and the tuning is more difficult. For optimum tuning, press the TUNE button and release.

It is important to match the output impedance of the audio sources. The input of the FD900X2 should be low level audio such as that used for the inputs to home or automotive entertainment systems. If one source is significantly stronger than another, it will cause significant variation in the volume levels between channels. It may also cause frequency bleeding and crossover between the audio channels.

Power

The FD900X2 Ver B is a 28VDC device that requires 180 mA of power to operate.

Audio Wiring Suggestions

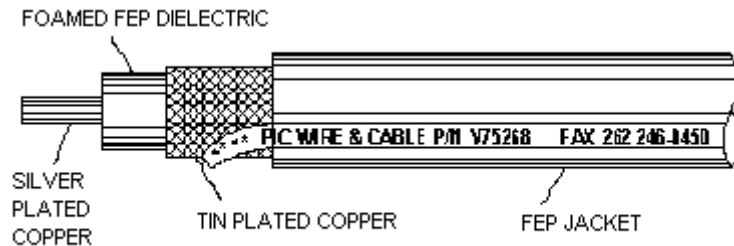
The center conductor of coaxial cable should be high, and outer shield should be the return/low.

Avoid routing audio wiring parallel to:

- AC wiring
- Strobe wiring
- DC motor supply cables
- Inverter cabling
- Or any other potential noise source.

Wiring

Recommended cable for audio purposes is PIC 75 Ohm Coax, P/N V75268. This is a lightweight, flexible, and low signal loss cable which meets FAA flammability requirements of FAR 23.1359(d), FAR 25.853(a) and FAR 25.869(a)(4).



Similar aviation coaxial cable can be used from other vendors, as well.

Pinout for High Density DB-15

Part Numbers for DB-15 connectors, manufactured by Tyco or Amp.

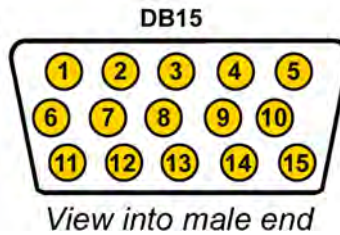
High density, D-sub, 15 contact receptacle (female)

P/N 748565-1

HD15F pins

P/N M39029/57-354

Wiring Diagram



Pin Number	Description
1	28VDC Power
2	N/C
3	Audio #1 - Left
4	Audio #1 - Ground (L/R)
5	Audio #1 - Right
6	28VDC Ground
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	N/C
13	Audio #2 - Left
14	Audio #2 - Ground (L/R)
15	Audio #2 - Right

Operating Instructions

The passengers will be able to access the different audio channels by momentarily pressing the TUNE button found on the headset (not supplied). It is necessary to cycle the headset through the different frequencies once turned on so that it may recognize the transmitting frequencies.

If you recognize degradation in the quality of your audio or that you cannot channelize the frequencies, check to make sure your headset batteries have sufficient power.

Technical Support

Should you have any questions concerning this product or other Flight Display Systems products, please contact our Product Support representatives at (678) 867-6717.

Flight Display Systems

1765 Grassland Parkway

Alpharetta, GA 30004

Phone: 678-867-6717

Fax: 678-867-6742

Email: sales@flightdisplay.com

For further product information, technical data and sample wiring diagrams, please click on the **Dealers** section of our web site at www.flightdisplay.com

Instructions for Continued Airworthiness

The FD900X2 Ver B is designed not to require regular general maintenance.

Warranty Information

Flight Display Systems warrants the FD900X2 Ver B against material or manufacturing defects for a two-year period (effective 1/1/2009 on all equipment shipped with 2009 pricing). Warranty begins on date of installation.

If product support is required, please call our Technical Support team at 678-867-6717 to obtain assistance. If the return of the unit to the factory is required, an RMA number will be issued at that time. Flight Display Systems will, upon receipt of the failed hardware, remanufacture or replace the unit at our discretion.

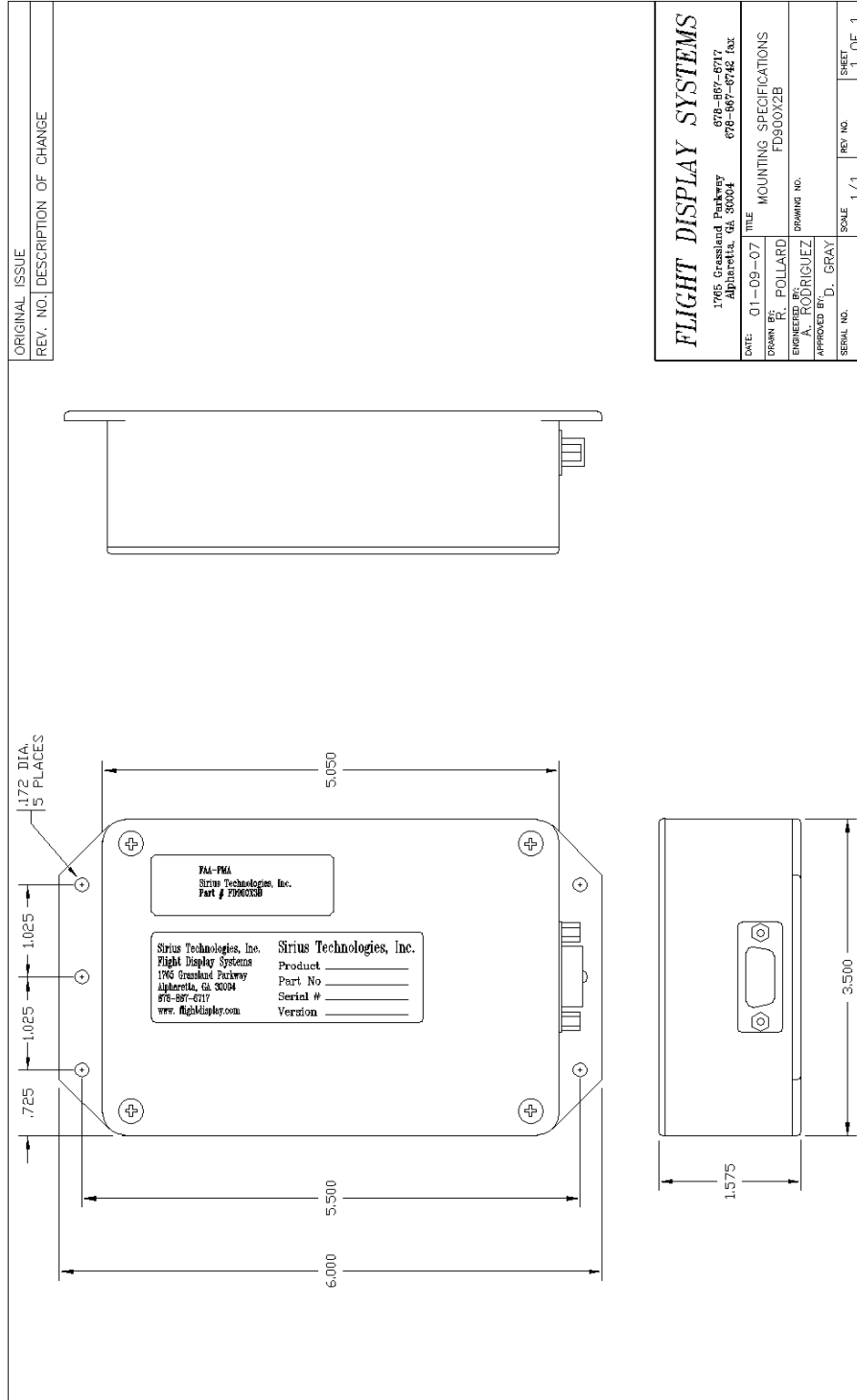
Flight Display Systems will pay Ground Shipping charges for warranted items. Charges for express shipment will be the responsibility of the sender.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. We shall not be liable for incidental or consequential damages.

This warranty does not cover a defect or failure that has resulted from improper or unreasonable installation, use or maintenance, as determined by Flight Display Systems. This warranty is void if there is any attempt to disassemble or open this product without factory authorization.

Any labor charges associated with the removal of product or related troubleshooting by a firm other than Flight Display Systems or its designee will not be covered.

Assembly Drawing



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Log of Revisions

Rev	Date	Page	Description
A	01/29/2007	---	---
B	05/14/2007	1 2	Added paragraph about scanning headsets. Updated frequencies used by unit.
C	01/15/2007	1	Update photo.
D	09/15/08	7	Updated assembly drawing
E	04/15/2009	2,6	Updated specifications, warranty info