

# Aircraft 4 Channel Power Amplifier with 5 Headphone Outputs

## DX-140



The Alto Acapella Series DX-140 is a TSO-C139a certified combination amplifier for aircraft cabin loudspeakers and headphones. The unit has 4 channels with 3 stereo inputs with discrete source selection, volume control and speaker on/off and a PA override feature. The amplifier has 4 independent audio power amplifier outputs supporting loudspeaker loads down to 4 ohms. The amplifier consists of a 4 X 40W / channel Class D audio amplifier stage. The integrated Digital Signal Processor contours the sound for perfect matching to the loudspeakers. Additionally, the unit provides outputs that can be configured for 5 stereo headphones. For control purposes there are 13 opto-isolated discrete logic inputs. These can be configured as volume/select controls for the speakers and headphones. The unit is fully configurable via a custom software interface to support numerous combinations of loudspeaker, headphone, and PA override functions.

## FEATURES

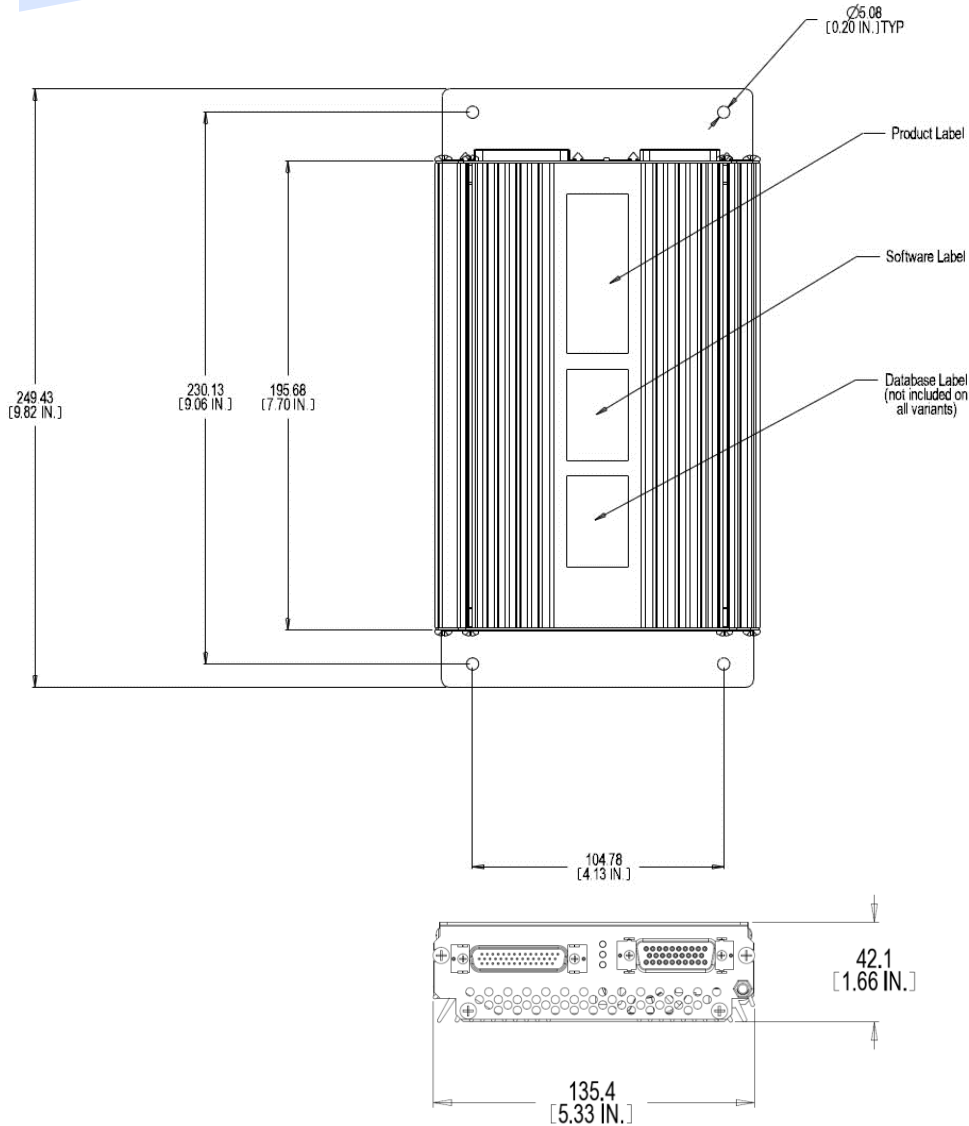
- Unit certified to TSO-C139a
- 4 channels, 40 Watts RMS per channel Class D for very high efficiency with low heat output
- Integral EQ customized for each aircraft interior
- Advanced DSP including dynamic bass management, signal compression, spatial enhancement, Sinewatch™ distortion elimination
- Supports up to 3 inputs with selection, volume control and speaker on/off via discrete logic
- Supports up to 5 headphones
- PA Override feature
- Operates on 28VDC power supply
- Weighs under 2.2 Lbs.
- Small enclosure with forced air cooling for flexible mounting

## SPECIFICATIONS

- Product Code 106570-0140
- Frequency Response 20Hz - 20KHz custom contoured to specific aircraft cabin
- Power Supply 28VDC
- Operating Current 500 mA idle, 1 A nominal, 6 A maximum
- Audio Input 3 stereo analog inputs, diff 44kohm input plus one Mic configurable as Ground biased
- Output Power All inputs accept line signal between 600mV and 4V RMS nominal  
40 Watts RMS/channel (160W) total
- Output Load Loudspeaker: 4 - 8 Ohm recommended  
Average impedance of all 4 channels must be >3.5 ohms  
Headphones: 32 ohm load recommended
- Distortion <0.1% THD @ 50% rated power, maximum 3% (distortion limiter active)
- Equalizers Custom designed EQ/crossovers matched to aircraft cabin utilizing loudspeakers from the Alto Aviation Entertainment System (AES) catalog
- Dimensions 5.3"W x 1.7"H x 9.8"D (135mmW x 42mmH x 249mmD)
- Weight < 2.2 lbs / 1.0 kg
- DO-160G Env. Cat. [A2X]CAB[(SC)(HR)]EXXXFXZ[Z(RX)]AZ[AC][TT]M[XXE3X][XXXX]XAX

DX-140

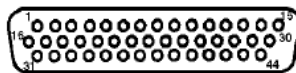
# DIMENSIONS



# CONNECTORS

## Signal Connector J4

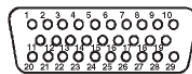
44 pin Male Hi-Density D-Sub Mating connector



Positronic # ODD44M5B100V5X  
Positronic # ODD44F10JVLX

## Power Connector J5

29 pin Male Std-Density D-Sub Mating connector



Positronic # MD29M5B100V5X  
Positronic # RD29F10JVLX

DX-140 Digital Amplifier with 5 Headphone Outputs