

Echelon ANR 150 Noise Reduction Headset



General Description

The Echelon ANR 150 is a medium-weight aircraft communications headset. It features electronic noise reduction circuitry for improved reduction of aircraft motor and wind noise. The Echelon ANR 150 also features extended response receivers for improved sound reproduction from the aircraft radio and entertainment system.

The Echelon ANR 150 noise reduction system may be powered from either a battery module or an aircraft power module. The battery module is designed for portable applications and uses one 9 volt battery. Operating time with alkaline batteries is 40 hours minimum. The aircraft power module is designed for permanent installation and provides power to the headset from the aircraft electrical system. The aircraft power module works with negative ground electrical systems.

The Echelon ANR 150 headset features a stereo headphone plug and a stereo/mono select switch. The Echelon ANR 150 can be plugged directly into an aircraft radio for standard monaural communications or into an intercom system wired for stereo entertainment.

FAA TSO C57a and C58a approved.

Design Features (See Figure 1)

Fitting and Comfort: A unique headband design distributes ear cushion pressure evenly over the entire ear with no pressure points, unlike conventional designs which apply more pressure on the bottom of the ear than on the top. An added advantage of this design is that the headset folds into an extremely compact shape for storage. A clamp adjustment on each knuckle adjusts to provide greater noise reduction or greater comfort. The earcups pivot on two planes to conform to any wearer. Detented sliders adjust the headband for best fit on any head size. A large head pad evenly distributes the headset weight on the head with no pressure points. Comfortable foam-filled ear cushions are standard.

Boom Microphone: A flexible gooseneck boom permits precise microphone placement. The boom rotates overhead to use the microphone on either side of the head. The plug-in microphone cartridge features a noise-canceling electret element. The cartridge unsnaps for easy replacement. A built-in microphone amplifier (electret version) operates on current supplied by the aircraft radio via the microphone jack.

Cordage and Plugs: The microphone cordage is protected inside the boom arm. Shielded wire throughout the headset protects against RFI and EMI. Strain-reliefs on all cords provide maximum durability. A separate plug connects the headset to either a battery module or an aircraft power module. The headset also has separate microphone and receiver plugs. The receiver plug is a stereo type, but a selector switch on the cord permits monaural operation.



Figure 1

Specifications

Receivers and Noise Reduction Circuits:

Receiver Type:

Dynamic

Frequency Response:

50 Hz-15 kHz

Sensitivity (max. volume):

95 \pm 5 dB SPL (1kHz, 1mW input per earcup side)

Impedance (max volume):

Stereo: 300 ohms per side

Mono: 150 ohms

Noise Reduction Power Consumption:

50 mW nominal, 1.5W peak per side (dependent on noise level)

Microphone:

Element Type:

Noise-canceling amplified electret

Frequency Response:

300-5000 Hz

Sensitivity (ref:1V/ μ bar at 1 kHz):

-51 \pm 3 dB (12 Vdc, 100-ohm load)

Matching Impedance:

50-600 ohms

Operating Voltage (supplied by aircraft radio):

8-16 volts dc

Cordage:

Headset: Straight Y-cord, 6 ft (1.8 m)

Aircraft Power Module: Straight cord, 3 ft (0.9 m)

Headset Connectors:

Power: 3.5 mm 2 conductor right angle plug for connection to battery module or aircraft power module

Microphone: PJ-068 equivalent plug

Receivers: PJ-055 equivalent plug for receivers (stereo/mono selector switch in the cordage).

Battery Module Connector:

3.5 mm 2 conductor jack for connection to headset

Aircraft Power Module Connectors:

Input Power From Aircraft: Straight cord, 6 ft (1.8 m) with 12V fused power plug adapter.

Output Power to Headset: 3.5 mm 2 conductor jack

Weights:

Headset with foam cushions (without cord): 18 oz (560 g)

Battery Module (with batteries): 3 oz (85 g)

Aircraft Power Module: 2.2 oz (62 g)

Color:

Black

Ordering Information

Description	Cat. No.
Echelon ANR 150 Headset, with electret mic, battery module, and carrying case	300714-002
Echelon ANR 150 Headset, with electret mic, aircraft power module and carrying case.	300714-003
Battery module	590564-001
Aircraft power module	71046-002
Gel-filled ear cushions (package of 2)	800027-002
Foam cushions (package of 2)	800027-003
Headband pad.	800198-001
Replacement electret microphone	800136-002
Microphone windscreen (electret)	57012-001
Model PT-300 Push-to-Talk Switch*	63966-000

* For aircraft without a fixed push-to-talk switch, a portable push-to-talk switch must be used.



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