

# Telex

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## User Instructions



**Echelon 20  
Headset**

**TELEX**®

The Echelon 20 full cushion aviation headset offers comfort, excellent hearing protection and value.



Echelon 20 Reference View  
Figure 1

## GENERAL DESCRIPTION

The Telex Echelon 20 is a medium-weight noise-reduction headset with amplified, noise-canceling, electret microphone.

## DESIGN FEATURES

(See Figure 1)

Comfortable foam-filled headband pad and ear cushions. The headband pad evenly distributes the headset weight with no pressure points, for maximum wearer comfort. The lightweight ear cushions combine comfort with an excellent acoustic seal. An outer urethane layer ensures long life. Gel-filled ear cushions are also available for this headset for users who prefer this type. All cushions are field-replaceable.

**Boom Microphone:** The boom arm features a sealed ball-and-socket joint and flexible boom for precise microphone placement on any head size. The boom rotates overhead for microphone placement on either side of the head. The microphone cartridge features a noise-canceling electret element. The cartridge snaps on and off for easy replacement. The microphone amplifier is in the microphone cartridge. It operates on current supplied by the aircraft radio via the microphone jack.

**Cordage:** 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.

# OPERATION

## Headband Pressure Adjustments

There are three pressure settings for headband comfort. Increasing the pressure will improve the seal between the earcup and the head for greater noise reduction. To change the pressure setting, remove the headset and fold the earcup inward as shown, then rotate the adjustment knob to the desired setting. Repeat for both earcups. Both sides of the headband should be set to the same pressure setting to keep the headband properly centered on the head.

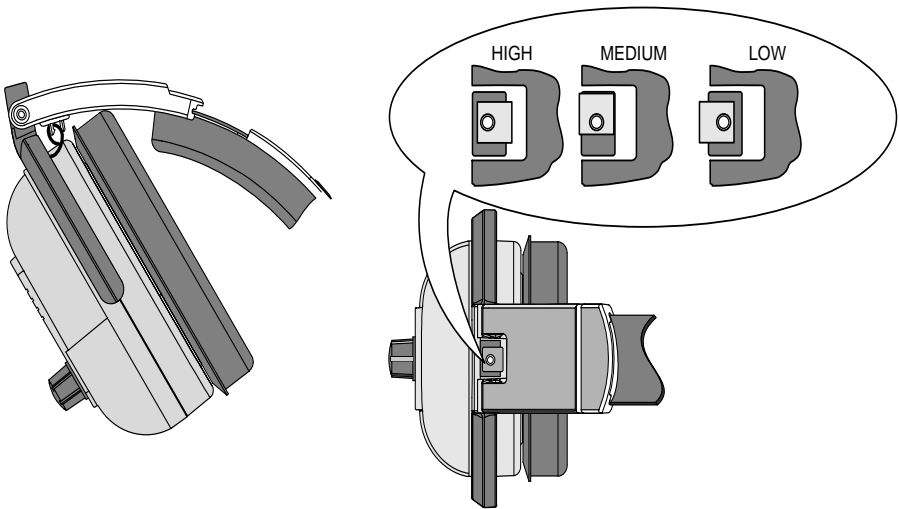


Figure 2

## Boom Microphone Placement

1. Rotate the entire boom overhead to wear the microphone on either the right or left side of the head.
2. For best noise cancellation, position the microphone as close to the mouth as possible and speak in a normal voice. (See figure 3)
3. When the microphone is not in use, it may be swung slightly away from the mouth.

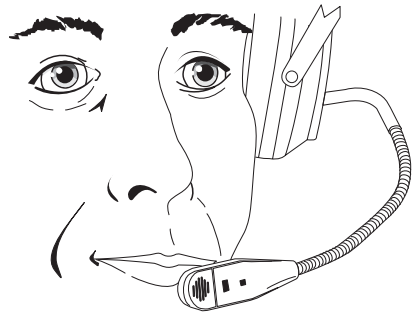
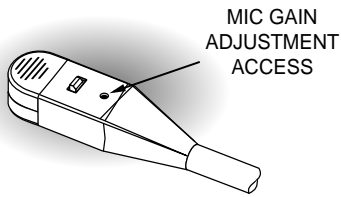


Figure 3

## Microphone Gain Adjustment

The microphone gain has been factory-adjusted to the nominal level required for aviation use. It should normally not require readjustment. Readjustment by a qualified avionics technician is recommended if adjustment is needed. To access the gain trimmer, insert a small flat-blade screwdriver through the access hole in the mic assembly. Clockwise rotation of the trimmer increases gain.



*Figure 4*

# SPECIFICATIONS

**Receivers:**

Type: Dynamic  
Frequency Response: 100 Hz - 3.5 kHz  
Sensitivity: 95 dB SPL minimum (1 kHz, 1 mW input)  
Impedance (at 1 kHz): 150 ohms (receivers wired in parallel)

**Microphone and Amplifier:**

Element Type: Noise-canceling electret  
Frequency Response: 100 Hz - 3.5 kHz  
Sensitivity: -50 ±6 dB (ref:1 V/ μbar at 1 kHz with 12 Vdc supply voltage and 470-ohm DC , 150ohm AC load).  
Matching Impedance: 50-600 ohms  
Gain Adjustment Range: ± 5 dB (clockwise rotation increases gain)  
Operating Voltage (supplied by aircraft radio): 8-16 volts dc

**Cordage:**

Straight Y-cord, 5.5 ft (1.67 m)

**Connectors:**

PJ-068 equivalent plug for radio mic jack; PJ-055 equivalent plug for radio phone jack

**Weight:**

Effective Head Weight: Approximately 14.2 oz. (403g)

**Color: Medium Gray**

# ORDERING INFORMATION

Headset .....	Catalog no. PRD000012000
Thin-skin foam ear cushions (set of two) .....	Catalog no. 800456008
Gel-filled ear cushions (set of two) .....	Catalog no. 800456009
Head pad .....	Catalog no. 800456004
Microphone cartridge .....	Catalog no. 800136100
Microphone windscreen .....	Catalog no. 800456000
Model PT-300 Portable Push-To-Talk Switch* .....	Catalog no. 63966000
Zipper Pouch .....	Catalog no. 590061003

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

## TELEX COMMUNICATIONS, INC. - LIMITED WARRANTY

**Uniform Limited Warranty:** Telex branded products are warranted by Telex Communications, Inc. against malfunction due to defects in materials and workmanship for a specified period, as noted in the individual product line statements below, beginning with the date of original purchase by the end-user. If such malfunction occurs during the specified period, the product will be repaired with new or remanufactured equivalent parts and products or replaced (at our option) without charge. The product will be returned to the customer postage prepaid.

**Exclusions and Limitations:** The limited warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product line statements below, (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product, including accidents; (e) defects resulting from excess moisture, lightning or power surges; or (f) malfunction occurring at any time after repairs have been made to the product by anyone other than a Telex Service Department employee or any of its authorized service representatives. The warranty is void if the label bearing the product serial number (if applicable) has been removed or defaced.

**Other Express or Implied Warranties Excluded:** TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF, AND EXCLUSIVE OF, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY EXCLUDED, WITHOUT LIMITATION, ARE THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR USE OR FOR A PARTICULAR PURPOSE, AND WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE OR ANY OTHER MATTER. IF, UNDER APPLICABLE LAW, IMPLIED WARRANTIES MAY NOT BE VALIDLY EXCLUDED, THE DURATION OF SUCH IMPLIED WARRANTIES IS LIMITED TO THE WARRANTY PERIOD.

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**Other Rights:** This warranty gives you specific legal rights, and you may also have other rights, depending upon where you live.

**Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to the appropriate Telex Service Department listed below or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or invoice.

**Applicable Law.** The validity, performance and construction of this limited warranty shall be governed by the laws of the State of Minnesota without reference to its choice of law principles. The Minnesota federal courts and/or the state courts located in Hennepin County, Minnesota, shall have exclusive personal and subject matter jurisdiction over, and the parties shall each submit to the jurisdiction of such courts and to venue in Minnesota with respect to any dispute concerning the product or pursuant to this limited warranty, and all objections to such jurisdiction or to such venue are hereby waived.

**For additional warranty repair or service information, contact the Telex Service Department listed below:**

**USA, Canada, & Latin America**  
1720 E 14<sup>th</sup> Street  
Glencoe, MN 55336  
Tel: 320-864-3177  
Fax: 320-864-3225



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