

Telex

User Instructions

CE



Echelon 100 Headset

TELEX®



*Echelon 100 Reference View
Figure 1*

GENERAL DESCRIPTION

The Telex Echelon 100 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 ear cushions combine comfort and light weight with 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. The amplifier output level is adjustable through an opening in the earcup.

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. 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.

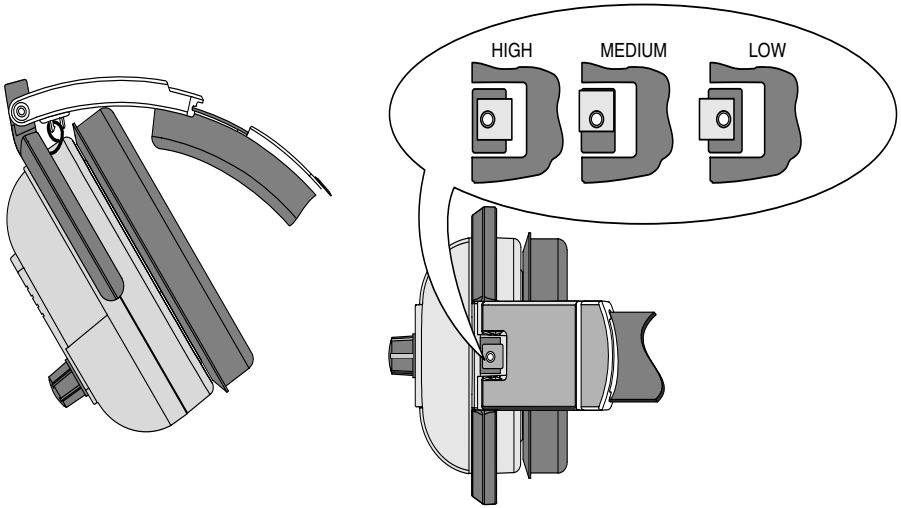


Figure 2

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 canceling, 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.

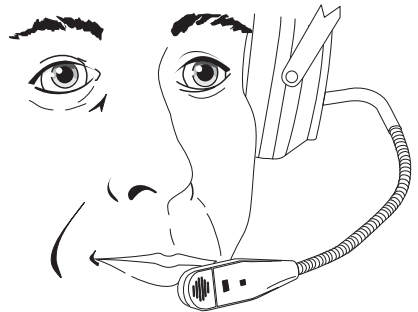


Figure 3

Microphone Gain Adjustment

The microphone gain has been factory-adjusted to the nominal level required for FAA certification, and it should normally not require readjustment. Readjustment by a qualified avionics technician is recommended. 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.

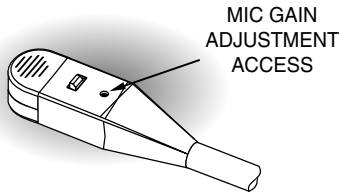
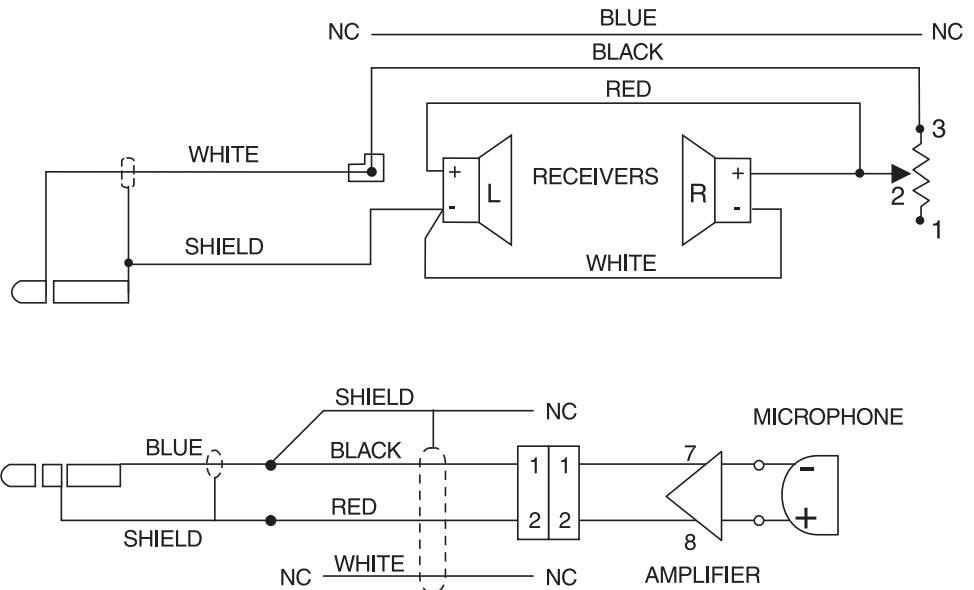


Figure 4

Echelon Wiring Diagram



Exploded View Parts List (See Figure6)

Item No.	Part No.	Description	Qty
1	700084-100	Earcup Assy, Boom-side	1
2	700084-104	Earcup Assy, Non Boom-side	1
3	700085-100	Cover, Left	1
4	700085-101	Cover, Right	1
9	800103-000	Receiver Assy	2
10	800136-000	Microphone Assy	1
11	700486-002	Boom Assy	1
19	70381-000	Boom Stop	1
20	700007-000	Ball Half	2
21	700094-001	Ball Spring	1
22	60074-130	Y-Cord Assy	1
25	51856-004	Screw, Plastite, #4-20 x 1/4" Lg	1
26	51856-030	Screw, Plastite, #4-20 x 1/2" Lg	4
27	700140-002	Cup Liner	2
28	700141-000	Receiver Cover	2
29	59145-002	Foam Donut	2
33	800154-004	Headband Assy	1
34	700134-001	Extrusion, Cord Clip	2
35	700453-001	Clamp Knob	2
36	800198-001	Headpad	1
37	63456-007	Bend Relief	1
38	800027-003	Cushion, Foam	1 Pair
39	550015-000	Overhead Cord, 28•	AR
40	54131-009	Potentiometer, Volume Control	1
41	53435-001	VC Knob	1
42	700869-000	Knob Skirt	1
43	56517-000	Knob Insert	1

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1 NOTE: Slip outside ball (20) around boom (11) . Place boom stop (19) into slot on boom (11) . Push inside ball half (20) to hold boom stop (19) into place. Orient ball half (20) with cup assembly so that boom will swing over but not under the earmcup assembly (1).

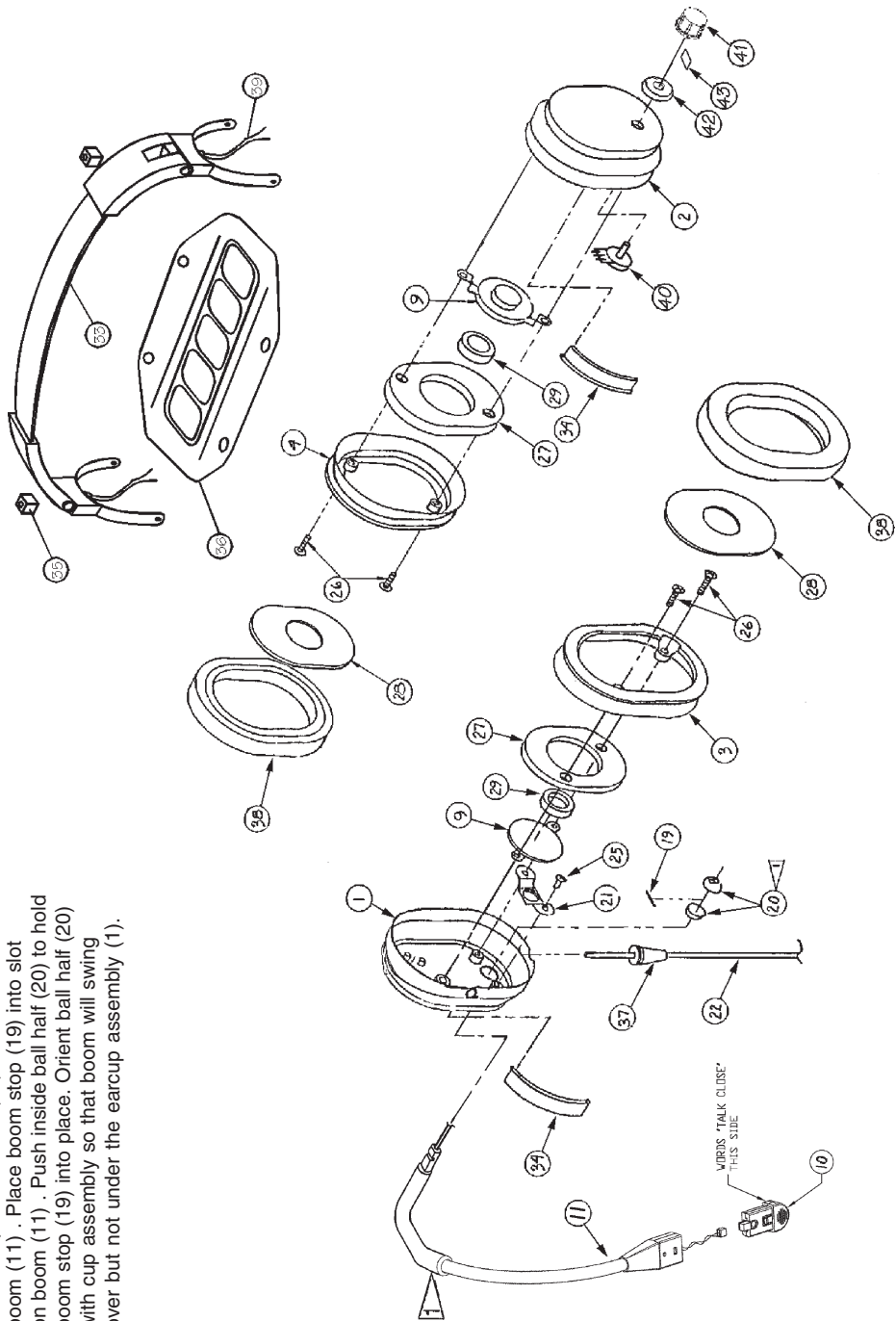


Figure 6

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: -48 ± 6 dB (ref:1 V/ μ bar 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 15 oz. (425g)

Color: Black

ORDERING INFORMATION

(See Exploded View Parts List for a complete listing of replacement parts)

Headset	Catalog no. 300535-100
Thin-skin foam ear cushions (set of two)	Catalog no. 800027-003
Gel-filled ear cushions (set of two)	Catalog no. 800027-002
Head pad	Catalog no. 800198-001
Microphone cartridge	Catalog no. 800136-000
Microphone windscreen	Catalog no. 57012-001
Model PT-300 Portable Push-To-Talk Switch*	Catalog no. 63966-000

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

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