

# **ENVIRONMENTAL TEST REPORT**

**FOR THE**

**E13 ANR HEADSET**

**MANUFACTURED BY**

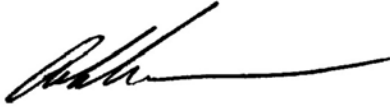
FlightCom Corporation  
7340 SW Durham Road  
Portland, OR 97224

**PREPARED BY**

CASCADE TECHNICAL SCIENCES, INC  
1800 NE 25<sup>TH</sup> Ave Suite 18  
Hillsboro, OR 97124

**APPROVAL SHEET**

Cascade Technical Sciences, Inc. here by certifies that the information presented in this report is, to the best of our knowledge, true and correct in all respects.



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Cascade Technical Sciences, Inc.  
Andrew Fuhrmann, QA Manager

April 6, 2004  
Date

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**REVISION SHEET**

<b>Rev</b>	<b>Description</b>	<b>Date</b>	<b>Approval</b>
A	Initial release	4/6/04	N/A

## FORWARD

The objective of this test program was to subject customer provided test hardware to environmental simulation in compliance with customer stated specification, including any authorized modification, deviations or concessions to the original requirements. The hardware consisted of items identified in the appropriate sections of this report. In addition to test hardware identification, each section contains information that describes the associated test setup and performance and the resulting data. CascadeTEK, Inc measuring instruments used in testing were calibrated according to the requirements of ANSI/NCSL Z540-1-1944 and are NIST traceable. Calibration records are on file and available for inspection by request. Because the test methods are well established and are qualitative or semi-quantitative in nature, CascadeTEK, Inc does not apply measurement uncertainty unless obligated by contract. Measured value related to the corresponding tolerance requirement is used to decide whether a test meets the requirements of the specification. Any test hardware operational setups and resulting evaluations or inspections performed by the customer are not included in this report, unless they were explicitly requested. While observations and/or specification compliance statements may be reported, no interpretations or opinions regarding customer product performance are intended. Unless otherwise indicated in the appropriate report section, all contract obligations were met and the test objective achieved.

**NOTE: This test report is presented in color. Legibility of graphs and charts will be decreased when viewed in black and white.**

**ADMINISTRATIVE DATA**

**PURPOSE OF TEST:** To demonstrate compliance to the applicable requirements of the specifications sited below.

**ITEM SUBJECT TO TEST:** Headset, E13 ANR part number 100-0017-00 with serial number M00890

**TEST SPECIFICATIONS:**

- a. RTCA/DO-160D with Change 1 through 3, Environmental Conditions and Test Procedures for Airborne Equipment.
- b. Document Number TP-E13ANR Rev Draft 1 dated February 29, 2004, RTCA/DO-160D Test Procedure for the E13 ANR Head Set Part Number 100-0017-00

**SUBMITTED BY:** FlightCom Corporation  
7340 SW Durham Road  
Portland, OR 97224

**TESTING AGENCY:** Cascade Technical Sciences, Inc.  
1800 NE 25<sup>th</sup> Ave Suite 18  
Hillsboro, OR 97124

**DATES TESTING CONDUCTED:** March 8, 2004 through March 26, 2004

**AUTHORIZATION TO TEST:** FlightCom Corporation Purchase Order # 201459

**SUMMARY OF TEST RESULTS**

The E13 ANR Head Set P/N 100-0017-00 with Serial Number M00890 was subjected to and completed the specified environmental tests with the results as shown in Table I:

<b>TABLE I</b>			
<b>TEST TITLE</b>	<b>SPECIFICATION REFERENCE</b>	<b>TEST RESULTS</b>	<b>Quality Evidence</b>
Altitude Test	TP-E13ANR Rev (Draft 1) Section 10.3	PASS	Test Report CTS 4412 Section 1.0
Ground Survival High and Operating High Temperature Test	TP-E13ANR Rev (Draft 1) Section 10.2	PASS	Test Report CTS 4412 Section 2.0
Ground Survival Low, Operating Low Temperature and Temperature Variation Test	TP-E13ANR Rev (Draft 1) Sections 10.1 and 10.5	PASS	Test Report CTS 4412 Section 3.0
Vibration, Operating Shock, and Crash Safety Shock Impulse Test	TP-E13ANR Rev (Draft 1) Sections 10.6 and 10.8	PASS	Test Report CTS 4412 Section 4.0
Decompression and Overpressure Test	TP-E13ANR Rev (Draft 1) Section 10.4	PASS	Test Report CTS 4412 Section 4.0
Humidity Test	TP-E13ANR Rev (Draft 1) Section 10.7	PASS	Test Report CTS 4412 Section 4.0
Crash Safety Shock Sustained Test	TP-E13ANR Rev (Draft 1) Section 10.9	PASS	Test Report CTS 4412 Section 5.0
Explosive Proofness Test	TP-E13ANR Rev (Draft 1) Section 10.10	PASS	Test Report CTS 4412 Section 6.0