



Aircraft And Medical Instruments

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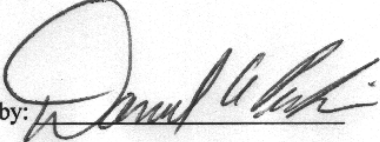
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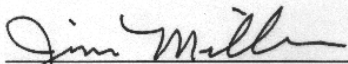
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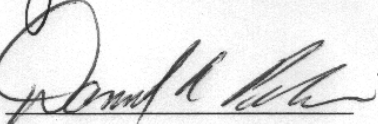
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# UMA Drawing Number ST2222-201B EMI GROUND TEST PROCEDURE

## INSTALLATION OF UMA ELECTROLUMINESCENT LIGHT BEZELS IN BEECH Model 65 TCDS 3A20

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# Record of Revisions

Rev.	Date	By	Paragraphs Affected	Remarks
B	10/07/2002	DP	5. and 5.12	Add engine and fuel quantity instruments and engines running

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1 Scope

This test plan establishes procedures for conducting ElectroMagnetic Interference (EMI) testing to the requirements of the Federal Aviation Administration (FAA). The test will show that the aircraft flight instruments, communication systems, navigation systems, autopilot/flight director are not adversely affected.

2 Applicable Documents

UMA, Inc. Drawing ST2222-100 “ EL Light Bezel Installation Instructions for all UMA EL Light Bezels PN:2-2X-X & 2-3X-X and required accessories”

3 Description of Test Article

The EMI test will be conducted after a ground functional test is completed.

4 Procedure

Testing will be conducted on the aircraft with a newly installed UMA ElectroLuminescent (EL) Light Bezels (Part #'s 2-2X-X and 2-3X-X) and UMA EL Inverter (Part #10-700-XX) . The aircraft systems will be evaluated for EMI signs during normal operation.

Some aircraft systems will require standard ramp test equipment to conduct the evaluation.

WHEN THE AIRCRAFT SYSTEMS BEING EVALUATED ARE OPERATING THERE SHOULD BE NO STAND-OFF CONDITIONS DISPLAYED ON ANY INSTRUMENT. A TRANSIENT MOTION OF FLICKER IS ACCEPTABLE PROVIDED NO PERMANENT DEVIATION IS ESTABLISHED. COMMENTS OF ANOMALIES OBSERVED SHOULD BE MADE AS APPROPRIATE. IF NONE SO STATE IN COMMENTS SECTION.

RAMP TEST EQUIPMENT WHICH CAN SIMULATE THE FOLLOWING WILL BE REQUIRED:

VOR/ILS  
MARKER BEACON  
ATC

5 EMI Test Procedure, the following tests are only applicable to installed equipment.

With the aircraft located in an acceptable location, noise free area, for operation, verify normal operation of Starting/Charging system. Each of the following tests, of installed equipment, the EL Brightness Control(s) will be varied slowly from Low to High to Low. The following tests are to be performed with the engines operating.

5.1 Lighting

Observe all cockpit lighting for normal operation.

Comments:

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5.2 HSI (Horizontal Situation Indicator) Compass System

Verify that HSI slaves correctly and the warning flag is retracted.

Comments:

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5.3 VOR/LOC/ILS

5.3.1 Verify normal operation of the Navigation receiver(s) and VOR indicator(s) and audio output, at 108.00Mhz to 117.95 Mhz at 1 Mhz increments. Simulate VOR signal at an input level of +3 dbm above minimum threshold level ( level at which Warning Flag disappears).

Comments:

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5.3.2 Verify normal ILS operation of the Navigation receiver(s) and ILS indicator(s) at 108.10, 109.35, 110.7 and 111.95Mhz. Simulate LOC and G/S signals at an input level of +3 dbm above minimum threshold level ( level at which Warning Flag disappears).

Comments:

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5.4 DME (Distance Measuring Equipment)

Simulate a DME input at 108.00Mhz and 100NM at 200 Kts at a level 3dbm above threshold, check for proper operation, verify stable Distance, Ground Speed, and Time to Station displays, and audio indent.

Comments:

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5.5 Marker Beacon

Check for proper operation at a level 3dbm above threshold.

Comments:

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5.6 GPS

Check GPS receiver for proper operation.

Comments:

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5.7 VHF Communications

Check each VHF Communications receiver(s) for interference at 1 Mhz increments from 118.000 to 136.950 Mhz with the squelch disabled, for interference.

Comments:

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5.8 Cabin Audio

Check for normal operation.

Comments:

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5.9 Interphone

Check for normal operation.

Comments:

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5.10 ATC Transponder

Check for normal operation in both "A" and "C" modes at 3dbm above threshold.

Comments:

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5.11 Weather Radar

Adjust for a display of local features. Observe the display in different modes and ranges for clarity and lack of excessive noise.

Comments:

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5.12 Engine Instruments

Check for normal operation of engine instruments and fuel quantity indicators.

Aircraft Registry: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Date: \_\_\_\_\_

Location of Test: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

At the time of my witnessing of the above tests, I observed no unacceptable EMI conditions with the UMA ElectroLuminescent Light Bezel system..

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Certificate Type: \_\_\_\_\_

Certificate Number: \_\_\_\_\_

Dated: \_\_\_\_\_