

RTCA, Incorporated
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Change No. 1

-to-

RTCA/DO-197A

Minimum Operational Performance Standards
for an Active Traffic Alert and Collision
Avoidance System I (Active TCAS I)

Copies of this document may be obtained from

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Please contact RTCA for price and ordering information.

p. 10, 2.2.3.2. Change to RF Power levels is follows:

a) From: Maximum RF power: 54 dBm (250W)
Minimum RF power: 50 dBm (100W)

b) From: Maximum EIRP: 57 dBm (500W)
Minimum EIRP: 53 dBm (200W)

To: Maximum RF power: 56 dBm (400W)
Minimum RF power: 52 dBm (158W)

To: Maximum EIRP: 59 dBm (794W)
Minimum EIRP: 55 dBm (316W)

p. 16, 2.2.6. Replace the table with the following:

Number of Airborne TCAS Interrogators (NT)	K Upper Limit for $\sum P(k)$ k=1	
	If RR < 240	If RR > 240
0	250	118
1	250	113
2	250	108
3	250	103
4	250	98
5	250	94
6	250	89
7	250	84
8	250	79
9	250	74
10	245	70
11	228	65
12	210	60
13	193	55
14	175	50
15	158	45
16	144	41
17	126	36
18	109	31
19	91	26
20	74	21
21	60	17
≥22	42	12

p. 19, Figure 2-3. Replace Figure 2-3 with the following six-level whisper-shout sequence.

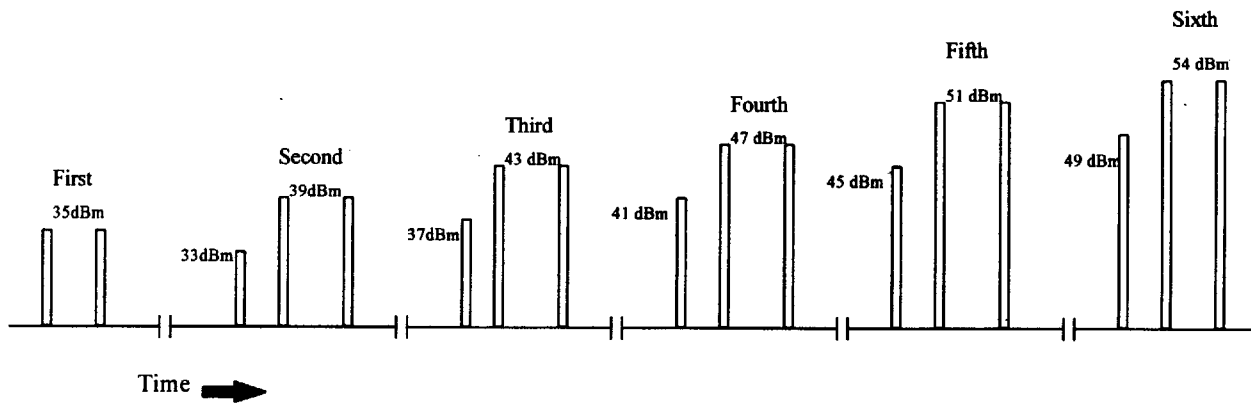


Figure 2-3 Example Whisper-Shout Sequence.
First Pulse of Interrogation Serves as Second Pulse of Suppression

p. 20, Figure 2-4. Replace Figure 2-4 with the following.

<u>Whisper Shout Interrogation Powers</u>	<u>Scan Period</u>	<u>Rate Power Product</u>
250+125+50+20+8+3.2 watts	2 sec.	228 watts/sec
125+50+20+8+3.2 watts	1 sec.	206 watts/sec
125+50+20+8+3.2 watts	2 sec.	103 watts/sec
50+20+8+3.2 watts	1 sec.	81 watts/sec
50+20+8+3.2 watts	2 sec.	41 watts/sec
20+8+3.2 watts	1 sec.	31 watts/sec
20+8+3.2 watts	2 sec.	16 watts/sec
8+3.2 watts	1 sec.	11 watts/sec

p. 51, 2.4.2.5.

Change the Conditions to the following:

Active TCAS I initialized and operating at T=0 seconds. Each of the 22 intruders is assigned a discrete address and transmits only TCAS broadcast interrogations and only at the following times and rates:

Intruders 1-9 every 10 sec starting at T=30 sec.

Intruders 10-16 every 20 sec starting at T=70 sec.

Intruders 17-22 every 20 sec starting at T=130 sec.

The timing of the TCAS broadcast interrogations and the ATCRBS interrogations are controlled to prevent overlap with each other.

Change the Scenario Descriptions to the following:

Scenario Description**Scenario A**

250 watts/sec measured at T=20 sec

250 watts/sec measured at T=60 sec

144 watts/sec measured at T=120 sec

42 watts/sec measured at T=180 sec

Scenario B

118 watts/sec measured at T=20 sec

74 watts/sec measured at T=60 sec

41 watts/sec measured at T=120 sec

12 watts/sec measured at T=180 sec

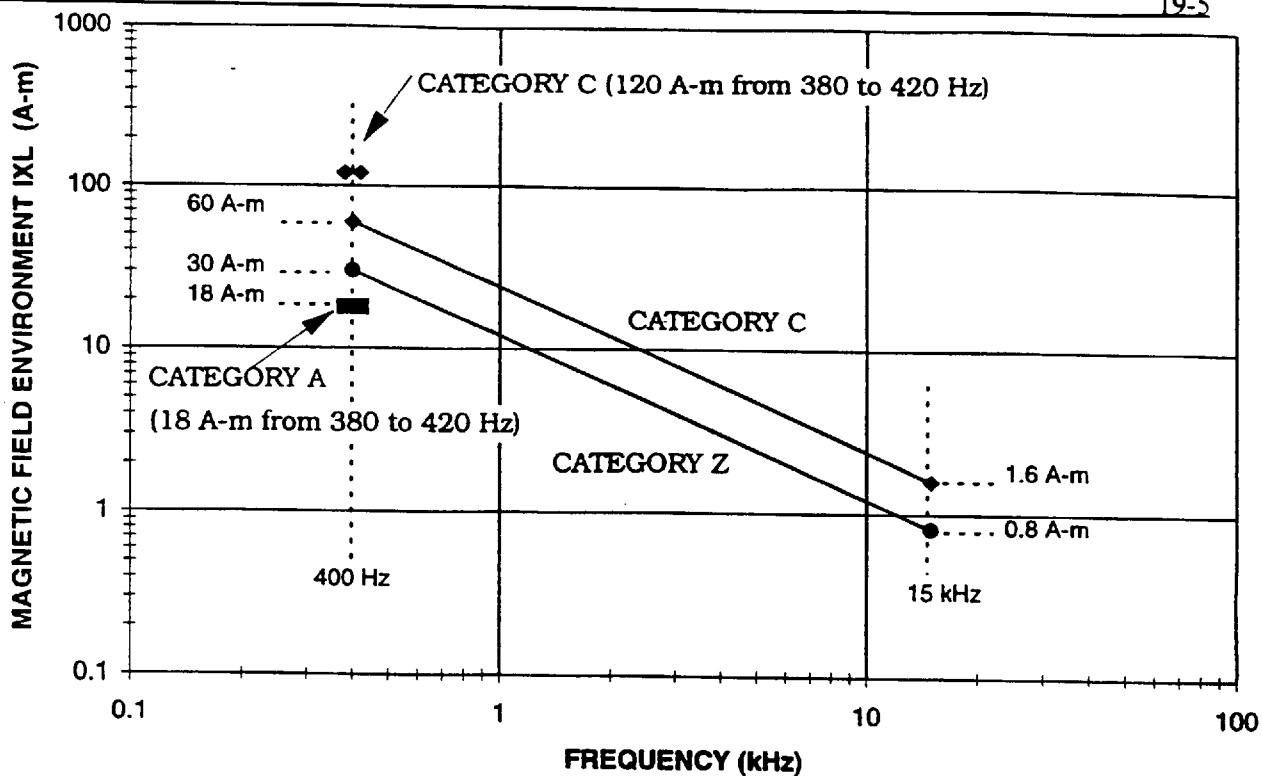


Figure 19-1(a) Audio Frequency Magnetic Field Susceptibility Test Levels

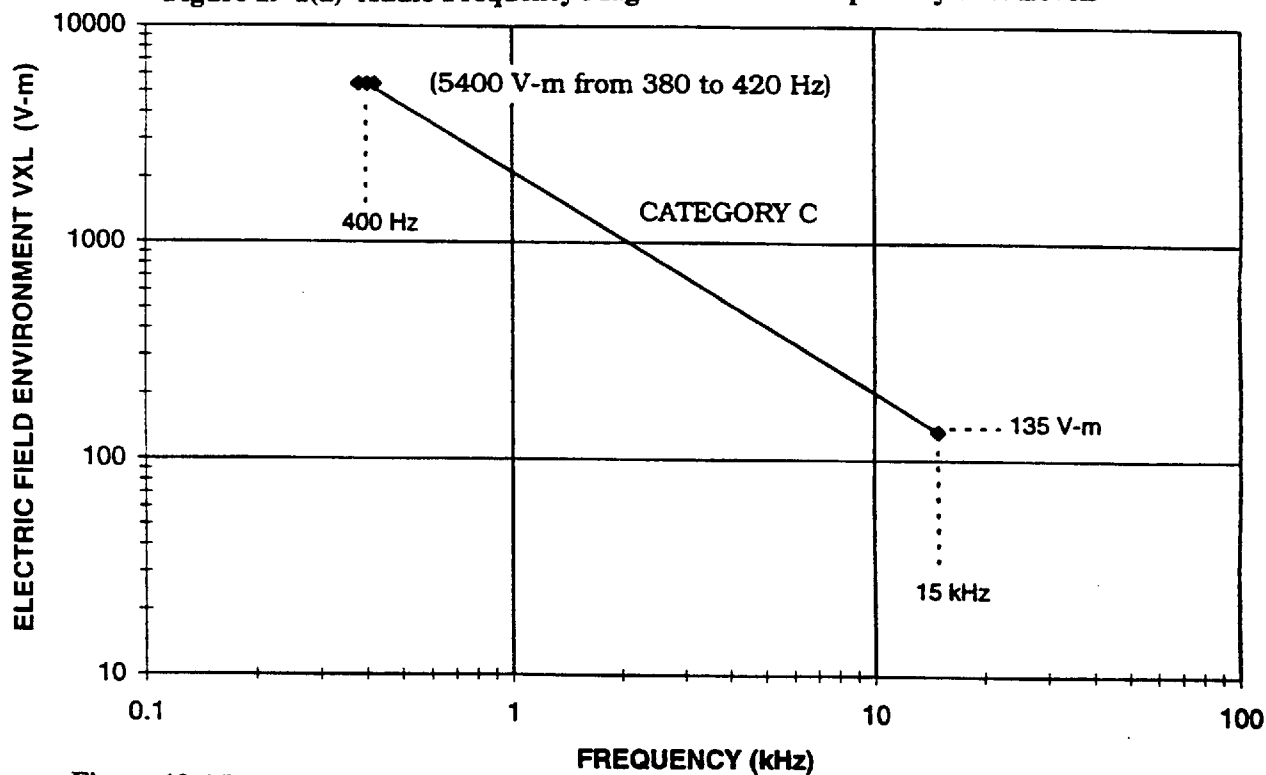
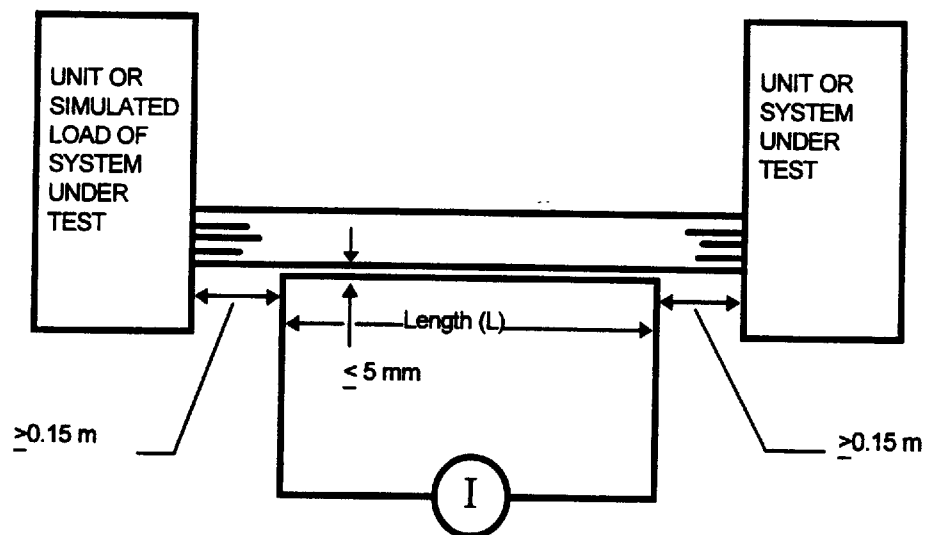


Figure 19-1(b) Audio Frequency Electric Field Susceptibility Test Level-Category C



Note 1: The interconnecting wire bundle shall be spaced a minimum of 50 mm above the ground plane.

Note 2: Magnetic Field Environment = Current (I) x Length (L)
(amperes rms x meters)

Figure 19-2 Audio Frequency Magnetic Field Susceptibility Test Setup

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MINIMUM OPERATIONAL PERFORMANCE STANDARDS FOR AN ACTIVE TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM I (ACTIVE TCAS I)

Page 19, Figure 2-3, EXAMPLE WHISPER-SHOUT SEQUENCE, change the quantity ".35 dBm" between the first two pulses at the left of the figure, to read: "35 dBm".