

## **Type Acceptance Test Report**

**Multimode PCS Repeater  
FCC Rule Parts: 2, 15 & 24**

**ACS Report Number: 03-0089-24TA**

Manufacturer: EMS Wireless  
Model: Link2Cell

**Substitution Field Strength  
Emissions**

## 1.0 Substitution Field Strength

### 1.1 Test Methodology

TIA 603-A section 2.2.12 was the guiding document for this test.

### 1.2 Test Results

The limit for this test is determined by the formula  $43 + \log(P_{\text{watts}})$ .

### 1.3 Sample Calculations

$P_g$	=	Output generator Level (dBm)
CA	=	Cable Attenuation(dB)
AG	=	Antenna Gain(dBi)
$P_d$	=	Corrected Level(dBm)

**Table 1: Downlink Substitution Field strength Data**

Substitution Field Strength Measurement Data Sheet In Accordance with TIA 603-A Test Data Sheet Version 1.0								
Enter ACS Project #:	03-0089	Notes						
Enter Test Date:	9/11/2003	1) High Channel						
Enter Technician Name:	Orozco & Rudd	2) Low Channel						
Enter Manufacturer:	EMS Wireless	3) Middle Channel						
Enter EUT Name:	Link2Cell	4)						
RF Output Power(dBm):	2	6)						
RF Output Power(Watts):	0.002	7)						
Frequency (MHz)	$P_g$ - Generator Level (dBm)	CA - Cable Attenuation (dB)	AG - Antenna Gain (dB)	Corrected Reading (dBm)	$P_d$ - Substitution Field Strength (dBc)	Limit (dBc)	Margin (dB)	Notes
5970	-70.00	-1.38	11.20	-57.42	-59.42	-15.00	44.42	1
7960	-70.00	-1.55	9.70	-58.75	-60.75	-15.00	45.75	1
5880	-70.00	-1.38	11.20	-57.42	-59.42	-15.00	44.42	2
7840	-70.00	-1.55	9.70	-58.75	-60.75	-15.00	45.75	2
3860	-50.00	-1.09	9.70	-39.21	-41.21	-15.00	26.21	3
5790	-87.00	-1.38	11.20	-74.42	-76.42	-15.00	61.42	3
7720	-70.00	-1.55	9.70	-58.75	-60.75	-15.00	45.75	3
9650	-70.00	-1.74	12.00	-56.26	-58.26	-15.00	43.26	3



**Table 2: Uplink Substitution Field strength Data**

Substitution Field Strength Measurement Data Sheet In Accordance with TIA 603-A Test Data Sheet Version 1.0								
Enter ACS Project #:	03-0089	<u>Notes</u>						
Enter Test Date:	9/11/2003	1) High Channel						
Enter Technician Name:	Orozco & Rudd	2) Mid Channel						
Enter Manufacturer:	EMS Wireless	3) Low Channel						
Enter EUT Name:	Link2Cell	4)						
RF Output Power(dBm):	15	6)						
RF Output Power(Watts):	0.032	7)						
Frequency (MHz)	Generator Level (dBm)	Cable Attenuation (dB)	Antenna Gain (dB)	Corrected Reading (dBm)	Substitution Field Strength (dBc)	Limit (dBc)	Margin (dB)	Notes
3820	-50.00	-1.09	9.70	-39.21	-54.21	-28.00	26.21	1
5730	-60.00	-1.38	11.20	-47.42	-62.42	-28.00	34.42	1
3700	-33.00	-1.09	9.70	-22.21	-37.21	-28.00	9.21	2
5550	-72.00	-1.38	10.30	-60.32	-75.32	-28.00	47.32	2
3700	-33.00	-1.09	9.70	-22.21	-37.21	-28.00	9.21	3
5550	-72.00	-1.38	10.30	-60.32	-75.32	-28.00	47.32	3