

*FCC PART 15, SUBPART B and C  
TEST REPORT*

*for*  
**WIRELESS PHOTO-RECEIVER**  
**MODEL: MI046**

Prepared for

FARMTEK, INC.  
1000-D HIGHWAY 78 NORTH  
WYLIE, TEXAS 75098

Prepared by: \_\_\_\_\_

KYLE FUJIMOTO

Approved by: \_\_\_\_\_

MICHAEL CHRISTENSEN

COMPATIBLE ELECTRONICS INC.  
114 OLINDA DRIVE  
BREA, CALIFORNIA 92823  
(714) 579-0500

DATE: JUNE 2, 2005

	REPORT BODY	APPENDICES					TOTAL
		<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
PAGES	15	2	2	12	9	42	

This report shall not be reproduced except in full, without the written approval of Compatible Electronics.



## TABLE OF CONTENTS

Section / Title	PAGE
<b>GENERAL REPORT SUMMARY</b>	4
<b>SUMMARY OF TEST RESULTS</b>	4
1. PURPOSE	5
2. ADMINISTRATIVE DATA	6
2.1 Location of Testing	6
2.2 Traceability Statement	6
2.3 Cognizant Personnel	6
2.4 Date Test Sample was Received	6
2.5 Disposition of the Test Sample	6
2.6 Abbreviations and Acronyms	6
3. APPLICABLE DOCUMENTS	7
4. DESCRIPTION OF TEST CONFIGURATION	8
4.1 Description of Test Configuration - EMI	8
4.1.1 Cable Construction and Termination	9
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	10
5.1 EUT and Accessory List	10
5.2 EMI Test Equipment	11
6. TEST SITE DESCRIPTION	12
6.1 Test Facility Description	12
6.2 EUT Mounting, Bonding and Grounding	12
7. TEST PROCEDURES	13
7.1 Radiated Emissions Test	13
7.2 Radiated Emissions Test (continued)	14
8. CONCLUSIONS	15



**LIST OF APPENDICES**

APPENDIX	TITLE
A	Laboratory Recognitions
B	Modifications to the EUT
C	Additional Models Covered Under This Report
D	Diagrams, Charts, and Photos <ul style="list-style-type: none"><li>• Test Setup Diagrams</li><li>• Radiated Emissions Photos</li><li>• Antenna and Effective Gain Factors</li></ul>
E	Data Sheets

**LIST OF FIGURES**

FIGURE	TITLE
1	Plot Map And Layout of Radiated Test Site



## GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:                    Wireless Photo-Receiver  
 Model: MI046  
 S/N: N/A

Product Description:            See Expository Statement.

Modifications:                   The EUT was not modified during the testing.

Manufacturer:                   Farmtek, Inc.  
 1000-D Highway 78 North  
 Wylie, Texas 75098

Test Date:                        May 26, 2005

Test Specifications:            EMI requirements  
 CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.209, and 15.249

Test Procedure:                ANSI C63.4: 2003

Test Deviations:                The test procedure was not deviated from during the testing.

## SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz	This test was not performed because the EUT operates on batteries only and cannot be plugged into the AC public mains.
2	Radiated RF Emissions, 10 kHz - 9300 MHz	Complies with the <b>Class B</b> limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



## 1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Wireless Photo-Receiver Model: MI046. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2003. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



## 2. ADMINISTRATIVE DATA

### 2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

### 2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

### 2.3 Cognizant Personnel

Farmtek, Inc.

Mike Douglas      President

Compatible Electronics, Inc.

Kyle Fujimoto      Test Engineer  
Michael Christensen      Lab Manager

### 2.4 Date Test Sample was Received

The test sample was received prior to its qualification testing on May 26, 2005.

### 2.5 Disposition of the Test Sample

The test sample has not been returned to Farmtek, Inc. as of June 2, 2005.

### 2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
PCB	Printed Circuit Board
TX	Transmit
RX	Receive



### **3. APPLICABLE DOCUMENTS**

The following documents are referenced or used in the preparation of this EMI Test Report.

<b>SPEC</b>	<b>TITLE</b>
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2003	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz



**4. DESCRIPTION OF TEST CONFIGURATION****4.1 Description of Test Configuration - EMI**

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

The Wireless Photo-Receiver Model: MI046 (EUT) was tested as a stand alone unit. The EUT was continuously transmitting.

The antenna is a reverse polarity whip antenna.

The final radiated data was taken in the mode described above. Please see Appendix E for the data sheets.



#### **4.1.1      Cable Construction and Termination**

There were no external cables connected to the EUT.



**5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT****5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
WIRELESS PHOTO-RECEIVER (EUT)	FARMTEK, INC.	MI046	N/A	<b>NWNMI046</b>



5.2 **EMI Test Equipment**

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Radiate Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	June 16, 2004	June 16, 2005
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22279	June 16, 2004	June 16, 2005
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	June 16, 2004	June 16, 2005
Preamplifier	Com Power	PA-103	1582	February 3, 2005	Feb. 3, 2006
Biconical Antenna	Com Power	AB-900	15250	March 11, 2005	Mar. 11, 2006
Log Periodic Antenna	Com Power	AL-100	16202	February 17, 2005	Feb. 17, 2006
Computer	Hewlett Packard	D5251A 888	US74458128	N/A	N/A
Monitor	Hewlett Packard	D5258A	DK74889705	N/A	N/A
Loop Antenna	Com-Power	AL-130	17089	September 3, 2004	Sept. 3, 2005
Horn Antenna	Antenna Research	DRG-118/A	1053	January 16, 2004	Jan. 16, 2006
Microwave Preamplifier	Com-Power	PA-122	25195	February 25, 2005	Feb. 25, 2006
EMI Receiver	Rohde & Schwarz	ESIB40	100172	October 28, 2004	Oct. 28, 2005
Antenna Mast	Com-Power	AM-100	N/A	N/A	N/A
Turntable	Com-Power	TT-100	N/A	N/A	N/A
Antenna Mast	EMCO	2090	9609-1176	N/A	N/A



## 6. TEST SITE DESCRIPTION

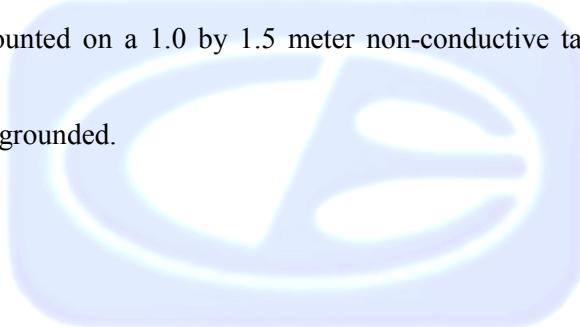
### 6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

### 6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



## 7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

### 7.1 Radiated Emissions Test

The spectrum analyzer and EMI Receiver were used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-103 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies above 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer and EMI Receiver record the highest measured reading over all the sweeps.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.30 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2003. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.



## 7.2 Radiated Emissions Test (continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data. The final qualification data sheets are located in Appendix E.

### Test Results:

The EUT complies with the limits of CFR Title 47, Part 15, Subpart B; and Subpart C, section 15.205, 15.209 and 15.249 for radiated emissions.



## 8. CONCLUSIONS

The Wireless Photo-Receiver Model: MI046 meets all of the Class B specification limits defined in CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



## **APPENDIX A**

### ***LABORATORY RECOGNITIONS***



## ***LABORATORY RECOGNITIONS***

**Compatible Electronics has the following agency accreditations:**

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

**Compatible Electronics is recognized or on file with the following agencies:**

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)



## **APPENDIX B**

### ***MODIFICATIONS TO THE EUT***



## MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 or FCC Class B specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.



## APPENDIX C

***ADDITIONAL MODELS COVERED  
UNDER THIS REPORT***



## **ADDITIONAL MODELS COVERED UNDER THIS REPORT**

### **USED FOR THE PRIMARY TEST**

Wireless Photo-Receiver  
Model: MI046  
S/N: N/A

There were no additional models covered under this report.



## **APPENDIX D**

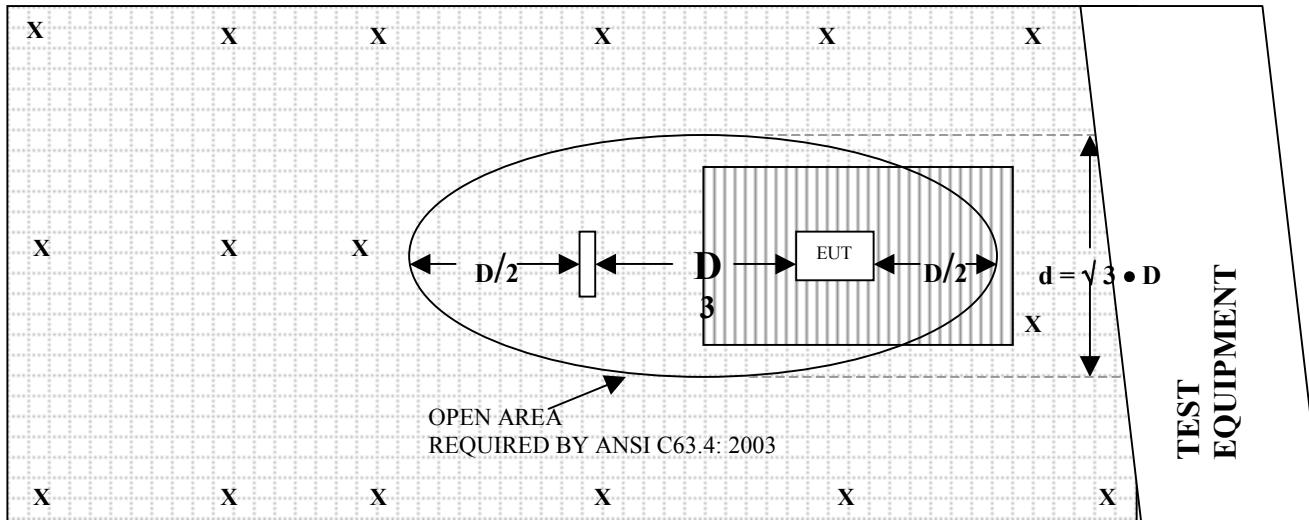
### ***DIAGRAMS, CHARTS, AND PHOTOS***



**FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED TEST SITE**

**OPEN LAND > 15 METERS**

OPEN LAND > 15 METERS



**OPEN LAND > 15 METERS**

 = GROUND RODS	 = GROUND SCREEN
 = TEST DISTANCE (meters)	 = WOOD COVER



**COM-POWER AB-900****BICONICAL ANTENNA****S/N: 15250****CALIBRATION DATE: MARCH 11, 2005**

<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>	<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>
30	10.90	120	13.10
35	10.90	125	12.40
40	10.90	140	11.90
45	10.30	150	11.80
50	11.40	160	13.30
60	10.40	175	15.40
70	7.40	180	14.60
80	6.20	200	15.70
90	8.20	250	16.50
100	10.10	300	19.20



**COM-POWER AL-100****LOG PERIODIC ANTENNA****S/N: 16202****CALIBRATION DATE: FEBRURY 17, 2005**

<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>	<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>
300	12.70	700	19.20
400	13.70	800	19.40
500	16.00	900	21.50
600	16.50	1000	23.50



**COM-POWER PA-103****PREAMPLIFIER****S/N: 1582****CALIBRATION DATE: FEBRUARY 3, 2005**

<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>	<b>FREQUENCY (MHz)</b>	<b>FACTOR (dB)</b>
30	33.2	300	33.0
40	33.0	350	32.8
50	33.1	400	32.8
60	33.0	450	32.8
70	33.2	500	32.5
80	33.2	550	32.5
90	33.1	600	32.4
100	33.2	650	32.4
125	33.1	700	32.3
150	33.0	750	32.2
175	33.0	800	32.2
200	33.0	850	32.4
225	33.0	900	31.8
250	33.0	950	32.3
275	32.9	1000	32.0



**COM-POWER PA-122****MICROWAVE PREAMPLIFIER****S/N: 25195****CALIBRATION DATE: FEBRUARY 25, 2005**

<b>FREQUENCY (GHz)</b>	<b>FACTOR (dB)</b>	<b>FREQUENCY (GHz)</b>	<b>FACTOR (dB)</b>
1.0	31.45	6.0	31.35
1.1	31.34	6.5	31.10
1.2	31.29	7.0	30.54
1.3	31.28	7.5	29.72
1.4	31.25	8.0	29.22
1.5	31.21	8.5	28.75
1.6	31.14	9.0	28.67
1.7	31.07	9.5	29.14
1.8	31.12	10.0	30.12
1.9	31.04	11.0	29.30
2.0	31.20	12.0	29.86
2.5	31.56	13.0	30.57
3.0	32.17	14.0	29.90
3.5	32.56	15.0	30.14
4.0	32.51	16.0	31.13
4.5	32.52	17.0	29.97
5.0	32.33	18.0	28.77
5.5	31.60		



**ANTENNA RESEARCH DRG-118/A****HORN ANTENNA****S/N: 1053****CALIBRATION DATE: JANUARY 16, 2004**

<b>FREQUENCY (GHz)</b>	<b>FACTOR (dB)</b>	<b>FREQUENCY (GHz)</b>	<b>FACTOR (dB)</b>
1.0	24.4	10.0	38.7
1.5	25.2	10.5	39.0
2.0	28.2	11.0	38.9
2.5	28.5	11.5	41.3
3.0	30.1	12.0	40.5
3.5	31.0	12.5	40.0
4.0	31.2	13.0	40.2
4.5	31.9	13.5	40.5
5.0	33.2	14.0	41.6
5.5	33.7	14.5	44.8
6.0	34.3	15.0	41.4
6.5	35.0	15.5	39.2
7.0	36.7	16.0	39.4
7.5	37.3	16.5	40.9
8.0	37.1	17.0	42.6
8.5	37.3	17.5	45.1
9.0	37.7	18.0	41.7
9.5	38.6		



**COM-POWER AL-130****LOOP ANTENNA****S/N: 17089****CALIBRATION DATE: SEPTEMBER 3, 2004**

<b>FREQUENCY (MHz)</b>	<b>MAGNETIC (dB/m)</b>	<b>ELECTRIC (dB/m)</b>
0.009	-40.8	10.7
0.01	-40.9	10.6
0.02	-41.8	9.7
0.05	-42.0	9.5
0.07	-41.5	10.0
0.1	-41.7	9.8
0.2	-44.1	7.4
0.3	-41.6	9.9
0.5	-41.5	10.0
0.7	-41.4	10.1
1	-41.0	10.5
2	-40.6	10.9
3	-40.8	10.7
4	-41.0	10.5
5	-40.4	11.1
10	-40.7	10.8
15	-41.6	9.9
20	-41.3	10.2
25	-43.0	8.5
30	-42.6	8.9





**FRONT VIEW**

FARMTEK, INC.  
WIRELESS PHOTO-RECEIVER  
MODEL: MI046

FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**REAR VIEW**

FARMTEK, INC.  
WIRELESS PHOTO-RECEIVER  
MODEL: MI046  
FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



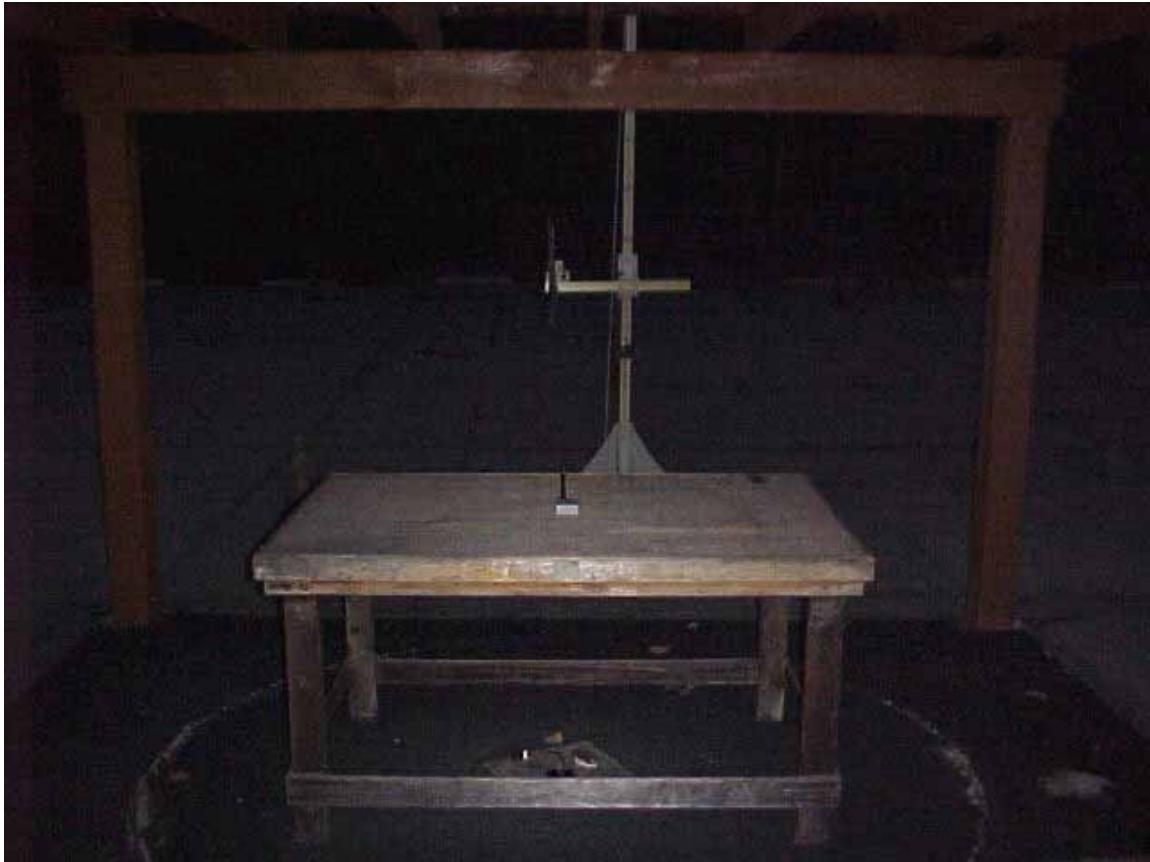


**FRONT VIEW**

FARMTEK, INC.  
WIRELESS PHOTO-RECEIVER  
MODEL: MI046  
FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**REAR VIEW**

FARMTEK, INC.  
WIRELESS PHOTO-RECEIVER  
MODEL: MI046  
FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**APPENDIX E**

***DATA SHEETS***



***RADIATED EMISSIONS***  
***DATA SHEETS***



**FCC 15.249**

Farmtek, Inc.

Date: 05/26/05

Wireless Photo-Receiver

Lab: B

Model: MI046

Tested By: Kyle Fujimoto

Configuration: Continuous Transmit Mode

**Low Channel**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
903.37	88.37	V	94	-5.63	Peak	1.42	180	
1806.6	44.91	V	74	-29.09	Peak	1.39	45	
1806.6	40.97	V	54	-13.03	Avg	1.39	45	
2709.9	49.82	V	74	-24.18	Peak	1.03	45	
2709.9	46.92	V	54	-7.08	Avg	1.03	45	
3613.2	43.12	V	74	-30.88	Peak	1.51	180	
3613.2	30.52	V	54	-23.48	Avg	1.51	180	
4516.5		V	74	-74	Peak			No Emission
4516.5		V	54	-54	Avg			Detected
5419.8		V	74	-74	Peak			No Emission
5419.8		V	54	-54	Avg			Detected
6323.1		V	74	-74	Peak			No Emission
6323.1		V	54	-54	Avg			Detected
7226.4		V	74	-74	Peak			No Emission
7226.4		V	54	-54	Avg			Detected
8129.7		V	74	-74	Peak			No Emission
8129.7		V	54	-54	Avg			Detected
9033		V	74	-74	Peak			No Emission
9033		V	54	-54	Avg			Detected

## FCC 15.249

Farmtek, Inc.  
Wireless Photo-Receiver  
Model: MI046  
Configuration: Continuous

Date: 05/26/05  
Lab: B  
Tested By: Kyle Fujimoto  
ode

## Low Channel

FCC 15.249

Farmtek, Inc.  
Wireless Photo-Receiver  
Model: MI046  
Configuration: Continuous

Date: 05/26/05  
Lab: B  
Tested By: Kyle Fujimoto  
Node

## Middle Channel

FCC 15.249

Farmtek, Inc.  
Wireless Photo-Receiver  
Model: MI046  
Configuration: Continuous

Date: 05/26/05  
Lab: B  
Tested By: Kyle Fujimoto  
lode

## Middle Channel

FCC 15.249

Farmtek, Inc.  
Wireless Photo-Receiver  
Model: MI046  
Configuration: Continuous

Date: 05/26/05  
Lab: B  
Tested By: Kyle Fujimoto  
Node

## High Channel

FCC 15.249

Farmtek, Inc.  
Wireless Photo-Receiver  
Model: MI046  
Configuration: Continuous

Date: 05/26/05  
Lab: B  
Tested By: Kyle Fujimoto  
Node

## High Channel



**Test Location** : Compatible Electronics **Page** : 1/1  
**Customer** : Farmtek, Inc. **Date** : 5/26/2005  
**Manufacturer** : Farmtek, Inc. **Time** : 11:30:38  
**Eut name** : Wireless Photo-Reciever **Lab** : A  
**Model** : MI046 **Test Distance** : 3.0 Meters  
**Serial #** : N/A  
**Specification** : FCC B  
**Distance correction factor (20 \* log(test/spec))** : 0.00  
**Test Mode** : Spurious Emissions  
10 kHz to 9300 MHz  
Vertical and Horizontal Polarization  
Tested By: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	33.350	48.00	1.61	10.90	33.13	27.38	40.00	-12.62
2V	34.170	46.20	1.64	10.90	33.11	25.63	40.00	-14.37
3H	34.185	37.60	1.64	10.90	33.11	17.03	40.00	-22.97
4V	39.020	55.10	1.77	10.90	33.02	34.76	40.00	-5.24
5V	43.907	47.40	1.88	10.43	33.04	26.67	40.00	-13.33
6V	46.631	51.30	1.94	10.67	33.07	30.84	40.00	-9.16
7H	50.185	40.00	2.00	11.38	33.10	20.28	40.00	-19.72
8V	53.660	50.10	2.04	11.01	33.06	30.09	40.00	-9.91
9H	53.660	38.40	2.04	11.01	33.06	18.39	40.00	-21.61
10V	56.099	53.20	2.06	10.77	33.04	32.99	40.00	-7.01
11V	58.546	51.30	2.09	10.53	33.01	30.91	40.00	-9.09
12V	60.998	49.20	2.13	10.08	33.02	28.39	40.00	-11.61
13V	68.291	47.60	2.35	7.88	33.17	24.66	40.00	-15.34
14V	73.158	50.40	2.43	7.00	33.20	26.64	40.00	-13.36
15V	82.195	49.60	2.52	6.66	33.18	25.61	40.00	-14.39
16V	87.781	54.80	2.58	7.78	33.12	32.03	40.00	-7.97
17H	87.781	49.40	2.58	7.78	33.12	26.63	40.00	-13.37
18V	165.790	38.00	3.26	14.13	33.00	22.40	43.50	-21.10
19H	341.504	38.30	4.79	13.15	32.83	23.41	46.00	-22.59
20H	360.064	42.20	4.98	13.33	32.80	27.72	46.00	-18.28
21V	406.580	38.90	5.37	13.87	32.80	25.34	46.00	-20.66
22V	672.457	31.50	6.80	18.50	32.35	24.44	46.00	-21.56
23V	737.257	32.40	6.80	19.28	32.22	26.25	46.00	-19.75
24H	819.402	33.30	6.58	19.83	32.28	27.43	46.00	-18.57