



SMK MANUFACTURING, INC. TEST REPORT

FOR THE

2 WAY IR REMOTE CONTROL, RRC9001-4041E & RRC9001-4001L

FCC PART 15 SUBPART B SECTIONS 15.107 AND 15.109 CLASS B & ICES-003 ISSUE 4

TESTING

DATE OF ISSUE: MAY 29, 2008

PREPARED FOR:

SMK Manufacturing, Inc. 1055 Tierra Del Rey, Suite H Chula Vista, CA 91910

P.O. No.: 29318 W.O. No.: 87968

PREPARED BY:

Mary Ellen Clayton CKC Laboratories, Inc. 5046 Sierra Pines Drive Mariposa, CA 95338

Date of test: May 15, 2008

Report No.: FC08-048

This report contains a total of 18 pages and may be reproduced in full only. Partial reproduction may only be done with the written consent of CKC Laboratories, Inc. The results in this report apply only to the items tested, as identified herein.



TABLE OF CONTENTS

Administrative Information	.3
Approvals	.3
Site File Registration Numbers	.3
Summary of Results	.4
Conditions During Testing	.4
Equipment Under Test (EUT) Description	.4
Equipment Under Test	.4
Peripheral Devices	.4
Report of Emissions Measurements	.5
Testing Parameters	.5
FCC 15.109 Radiated Emissions	.7
ICES-003 Radiated Emissions	.13



ADMINISTRATIVE INFORMATION

DATE OF TEST: May 15, 2008

DATE OF RECEIPT: May 15, 2008

REPRESENTATIVE: Manuch Dizechi

MANUFACTURER: SMK Manufacturing, Inc.

1055 Tierra Del Rey, Suite H Chula Vista, CA 91910 **TEST LOCATION:** CKC Laboratories, Inc. 110 Olinda Place Brea, CA 92823

TEST METHOD: ANSI C63.4 (2003) and ICES-003 Issue 4

PURPOSE OF TEST: To perform testing of the 2 Way IR Remote Control, RRC9001-4041E & RRC9001-4001L with the requirements for FCC Part 15 Subpart B Sections 15.107 and 15.109 Class B & ICES-003 devices.

APPROVALS

QUALITY ASSURANCE:

Steve 7 Bel

Steve Behm, Director of Engineering Services

TEST PERSONNEL:

Septimiu Apahidean, EMC Engineer

SITE FILE REGISTRATION NUMBERS

Location	Japan	Canada	FCC
Brea A	R-301 & C-314	IC 3172-A	90473



SUMMARY OF RESULTS

Test	Specification	Results
Conducted Emissions	FCC Part 15 Subpart B Section 15.107 Class B ICES-003 Issue 4	NA
Radiated Emissions	FCC Part 15 Subpart B Section 15.109 Class B ICES-003 Issur 4	Pass

NA = Not Applicable

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing. Conducted emissions not required for this device because it is battery powered.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

IR Remote

Manuf:SMK Manufacturing, Inc.Model:RRC9001-4041ESerial:NAFCC ID:NA

IR/FSK Remote

Manuf:	SMK Manufacturing, Inc.
Model:	RRC9001-4001L
Serial:	NA
FCC ID:	NA

PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.



REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in $dB\mu V/m$, the spectrum analyzer reading in $dB\mu V$ was corrected by using the following formula. This reading was then compared to the applicable specification limit.

	SAMPLE CALCULA	ATIONS
	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	$(dB\mu V/m)$



TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANG										
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING							
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz							
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz							

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

<u>Peak</u>

In this mode, the spectrum analyzer/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

<u>Average</u>

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.



FCC 15.109 RADIATED EMISSIONS

Test Setup Photos



RCC9001-4041E



RCC9001-4041E





RCC9001-4001L



RCC9001-4001L



Test Data Sheets

Test Lo	ocation: C	CKC Laboratories, Inc. •110 N Olinda Place • Brea, CA 92823 • 714-993-6112									
Custom Specific Work C Test Ty Equipm Manufa Model: S/N·	ner: S cation: F Drder #: 8 7pe: N nent: I acturer: S F	MK Man CC 15.10 7968 Maximized R Remote MK Manu RC9001-4	ufacturin 9 (2006) 1 Emissio 9 1facturing 4001L	ng, Inc. Radiated ons g, Inc.	d Class B	S	Da Tin Sequence Tested F	ne: 5/15/2 ne: 12:44 e#: 2 3y: Sep A	2008 :02 Apahidean		
S/N: Test Fauinment:											
Functio	n	S/N		C	alibration	Date	Cal I	Due Date	As	set #	
Spectru	ım Analyzer	MY46	186290	02	2/12/2007	1	02/12	2/2009	02	869	
Bilog A	ntenna	2451	100_20	0	1/21/2008	R	$01/2^{-1}$	1/2010	01	995	
Pre am	n to SA Cabl	e Cable #	¥10	04	5/16/2007	, 1	05/16	6/2009	P0	5050	
Cable		Cable1	5	0.	1/05/2007	,	01/04	5/2009	PO	5108	
Dro Am		1027 A	02548	0	1/03/2007 6/01/2006	:	01/0.	1/2009	10	200	
Ple All	ip	1937A	02348	00	0/01/2000)	00/0	1/2008	00	309	
Equip	ment Under	$\frac{Test (* = 1)}{2}$	EUT):				1		0.01		
Functio	n .	N	/lanufactu	irer	-	Model #			S/N		
IR Rem	note*	S	MK Man	ufacturin	ig, Inc.	RRC900)1-4001I	-			
Suppo	rt Devices:										
Functio	n	N	/lanufactu	irer		Model #	-		S/N		
Test C	onditions / N	lotes:									
Test C The equ The EU Humidi Transa	<i>Conditions / N</i> uipment unde JT is poweree ity: 44%, Pre ducer Legend	<i>lotes:</i> er test (EU d from fou ssure: 100 <i>d:</i>	T) is an i 11 AAA b kPa.	nfrared ratteries.	emote. T New bat	teries we	is power re install	ed on and led prior to	sending a so testing. T	signal cont Temperatur	inuously. re: 23°C,
Test C The equ The EU Humidi Transa T1=Pre T3=Cab	<i>Conditions / N</i> uipment unde JT is powered ity: 44%, Pre <i>ducer Legend</i> camp 8447D_ ble #10 P050	<i>Votes:</i> er test (EU d from fou ssure: 100 <i>d:</i> AN00309 050 0516	T) is an i Ir AAA b <u>kPa.</u> _ 060108 09	nfrared real real atteries.	emote. T New batt	teries we T2=Bilo T4=Cab	is power re install og-AN01 le #15 P	ed on and led prior to 995 BILO 205198 Si	sending a s testing. T G_012110 te A. 0105	signal cont Cemperatur	inuously. re: 23°C,
Test C The equ The EU Humidi Transa T1=Pre T3=Cat	Conditions / N uipment under JT is powered ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data:	<i>lotes:</i> er test (EU d from fou ssure: 100 1 : _AN00309 050_0516	T) is an i ir AAA b kPa. _ 060108 09 eading lis	nfrared reatteries.	emote. T New batt	teries we T2=Bilo T4=Cab	is power re install og-AN01 le #15_P Te	ed on and led prior to 995 BILO 05198_ Si st Distance	sending a solution of testing. T G_012110 te A, 0105 e: 3 Meters	signal cont l'emperatur 09	inuously. re: 23°C,
Test C The equ The EU Humidi Transa T1=Pre T3=Cat Measun #	Conditions / N uipment under JT is powered ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data: Freq	Votes: er test (EU d from fou ssure: 100 d: AN00309 0500516 R Rdng	T) is an i Ir AAA b <u>kPa.</u> <u>060108</u> 09 eading lis T1	nfrared reatteries.	emote. T New batt argin. T3	teries we T2=Bilo T4=Cab	is power re install og-AN01 le #15_P Te Dist	ed on and led prior to 995 BILO 205198_ Si st Distance Corr	sending a solution of testing. T G_012110 tte A, 0105 e: 3 Meters Spec	signal cont Temperatur 09 Margin	inuously. re: 23°C, Polar
Test C The equ The EU Humidi Transa T1=Pre T3=Cat Measun #	Conditions / N uipment under JT is powered ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data: Freq MHz	Votes: er test (EU d from fou ssure: 100/ d: AN00309 050_05160 Rdng dBµV	T) is an i Ir AAA b kPa. _ 060108 09 eading lis T1 dB	nfrared reatteries.	emote. T New batt argin. T3 dB	teries we T2=Bilo T4=Cab	is power re install og-AN01 le #15_P Te Dist Table	ed on and led prior to 995 BILO 205198_ Si st Distance Corr dBµV/m	sending a solution of testing. T G_012110 te A, 0105 e: 3 Meters Spec dBµV/m	signal cont Temperatur 09 Margin dB	inuously. re: 23°C, Polar Ant
Test C The equ The EU Humidi Transo T1=Pre T3=Cal Measun #	Conditions / M uipment under JT is powered ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data: Freq MHz 31.555M	Notes: er test (EU d from fou ssure: 100 d: AN00309 050_05160 Rdng dBµV 41.5	T) is an i rr AAA b kPa. _ 060108 09 eading lis T1 dB -27.8	nfrared reatteries. ted by m T2 dB +17.8	emote. T New batt argin. T3 dB +0.1	teries we T2=Bilo T4=Cab T4 dB +0.9	is power re install og-AN01 le #15_P Te Dist Table +0.0	ed on and led prior to 995 BILO 905198_ Si st Distance Corr dBµV/m 32.5	sending a solution of the sending a solution of the sending. The sending of the sender	Signal cont Cemperatur 09 Margin dB -7.5	inuously. re: 23°C, Polar Ant Vert
Test C The equ The EU Humidi Transa T1=Pre T3=Cat Measun # 1 2	Conditions / M uipment under JT is poweren ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P05(rement Data: Freq MHz 31.555M 48.257M	<i>Totes:</i> er test (EU d from fou ssure: 100 <i>d</i> : AN00309 05005166 Rdng dBµV 41.5 48.7	T) is an is rr AAA b kPa. 060108 09 eading lis T1 dB -27.8 -27.7	ted by m T2 dB +17.8 +9.5	emote. T New batt argin. T3 dB +0.1 +0.1	T2=Bilo T4=Cab T4 dB +0.9 +1.2	is power re install og-AN01 le #15_P Te Dist Table +0.0 +0.0	ed on and led prior to 995 BILO 005198_ Si st Distance Corr dBµV/m 32.5 31.8	sending a so testing. T G_012110 te A, 0105 e: 3 Meters Spec dBµV/m 40.0 40.0	Signal cont Temperatur 09 Margin dB -7.5 -8.2	Polar Ant Vert Vert
Test C The equ The EU Humidi Transa T1=Pre T3=Cal Measur # 1 2 3	Conditions / M uipment under JT is powerer ity: 44%, Pre ducer Legena camp 8447D_ ble #10_P050 rement Data: Freq MHz 31.555M 48.257M 167.326M	<i>Notes:</i> er test (EU d from fou ssure: 100 <i>1:</i> AN00309 050_05160 ARdng dBμV 41.5 48.7 50.0	T) is an in rr AAA b kPa. _ 060108 09 eading lis T1 dB -27.8 -27.7 -27.7	ted by m T2 dB +17.8 +9.5 +10.0	emote. T New batt argin. T3 dB +0.1 +0.1 +0.3	T2=Bilo T4=Cab T4 dB +0.9 +1.2 +2.3	is power re install og-AN01 le #15_P Te Dist Table +0.0 +0.0	ed on and led prior to 995 BILO 005198_ Si st Distance Corr dBµV/m 32.5 31.8 34.9	sending a so testing. T G_012110 te A, 0105 e: 3 Meters Spec dBµV/m 40.0 40.0 43.5	signal cont remperatur 09 Margin dB -7.5 -8.2 -8.6	Polar Ant Vert Vert Vert
Test C The equ The EU Humidi Transo T1=Pre T3=Cal Measun # 1 2 3 4	Conditions / N uipment under uipment under JT is poweren ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data: Freq MHz 31.555M 48.257M 167.326M 40.030M	<i>Notes:</i> er test (EU d from fou ssure: 100 <i>A</i> . AN00309 50_05160 Rdng dBμV 41.5 48.7 50.0 43.6	T) is an ii nr AAA b kPa. 060108 09 eading lis T1 dB -27.8 -27.7 -27.7 -27.8	nfrared r atteries. ted by m T2 dB +17.8 +9.5 +10.0 +13.9	emote. T New batt argin. T3 dB +0.1 +0.1 +0.3 +0.1	The EUT there is we T2=Bilo T4=Cab T4=Cab T4 dB +0.9 +1.2 +2.3 +1.1	is power re install og-AN01 le #15_P Te Dist Table +0.0 +0.0 +0.0 +0.0	ed on and led prior to 995 BILO 005198_Si st Distance Corr dBµV/m 32.5 31.8 34.9 30.9	sending a so testing. T G_012110 te A, 0105 e: 3 Meters Spec dBµV/m 40.0 40.0 43.5 40.0	Margin dB -7.5 -8.2 -8.6 -9.1	inuously. re: 23°C, Polar Ant Vert Vert Vert Vert Vert
Test C The equ The EU Humidi Transa T1=Pre T3=Cat Measur # 1 2 3 4	Conditions / N uipment under uipment under JT is poweren ity: 44%, Pre- ducer Legend camp 8447D_ ble #10_P050 rement Data: Freq MHz 31.555M 48.257M 167.326M 40.030M 127.934M	Notes: Pr test (EU d from fou ssure: 100 d: AN00309 050_0516 · Rdng dBµV 41.5 48.7 50.0 43.6 46.8	T) is an ii rr AAA b kPa. 060108 09 eading lis T1 dB -27.8 -27.7 -27.7 -27.8 -27.6	nfrared r atteries. ted by m T2 dB +17.8 +9.5 +10.0 +13.9 +11.8	emote. T New batt argin. T3 dB +0.1 +0.3 +0.1 +0.3	T2=Bilo T4=Cab T4=Cab T4 dB +0.9 +1.2 +2.3 +1.1 +2.0	is power re install og-AN01 le #15_P Te Dist Table +0.0 +0.0 +0.0 +0.0	ed on and led prior to 995 BILO 995 BILO 005198_ Si 8t Distance Corr dBµV/m 32.5 31.8 34.9 30.9 33.3	sending a so testing. T G_012110 te A, 0105 e: 3 Meters Spec dBµV/m 40.0 40.0 43.5 40.0 43.5	Signal cont Temperatur 09 Margin dB -7.5 -8.2 -8.6 -9.1 -10.2	inuously. re: 23°C, Polar Ant Vert Vert Vert Vert Vert Horiz
Test C The equ The EU Humidi Transa T1=Pre T3=Cat # 1 1 2 3 4 5 6	Conditions / N uipment under UT is poweren ity: 44%, Pre ducer Legena eamp 8447D_ ble #10_P050 rement Data: Freq MHz 31.555M 48.257M 167.326M 40.030M 127.934M 55.686M	<i>Totes:</i> Pr test (EU d from fou ssure: 100 <i>I</i> : AN00309 050_05166 A00 A00 A00 A00 A00 A00 A00 A	T) is an is ar AAA b kPa. 060108 09 eading lis T1 dB -27.8 -27.7 -27.7 -27.8 -27.6 -27.7	nfrared r atteries. ted by m T2 dB +17.8 +9.5 +10.0 +13.9 +11.8 +7.1	emote. T New batt argin. T3 dB +0.1 +0.1 +0.3 +0.1 +0.3 +0.1	T2=Bilo T4=Cab T4=Cab T4 dB +0.9 +1.2 +2.3 +1.1 +2.0 +1.3	is power re install og-AN01 le #15_P Te Dist Table +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	ed on and led prior to 995 BILO 005198_ Si st Distance Corr dBµV/m 32.5 31.8 34.9 30.9 33.3 27.7	sending a solution o testing. T G_012110 te A, 0105 e: 3 Meters Spec $dB\mu V/m$ 40.0 43.5 40.0 43.5 40.0	signal cont remperatur 09 Margin dB -7.5 -8.2 -8.6 -9.1 -10.2 -12.3	inuously. re: 23°C, Polar Ant Vert Vert Vert Vert Horiz Vert



8	112.106M	40.7	-27.6	+11.1	+0.3	+1.9	+0.0	26.4	43.5	-17.1	Vert
9	167.651M	41.2	-27.7	+9.9	+0.3	+2.3	+0.0	26.0	43.5	-17.5	Horiz
10	223.989M	41.6	-27.6	+10.9	+0.2	+2.7	+0.0	27.8	46.0	-18.2	Horiz
11	135.964M	38.6	-27.6	+11.8	+0.3	+2.1	+0.0	25.2	43.5	-18.3	Horiz
12	223.974M	38.1	-27.6	+10.9	+0.2	+2.7	+0.0	24.3	46.0	-21.7	Vert
13	167.706M	36.5	-27.7	+9.9	+0.3	+2.3	+0.0	21.3	43.5	-22.2	Vert



Customer:	SMK Manufacturing, II	nc.			
Specification:	FCC 15.109 (2006) Radi	ated Class B			
Work Order #:	87968		Date: 5/15	/2008	
Test Type:	Maximized Emissions		Time: 12:3	0:50	
Equipment:	IR Remote		Sequence#: 1		
Manufacturer:	SMK Manufacturing. Inc		Tested By: Sep	Apahidean	
Model:	RRC9001-4041E			- r	
S/N:					
Test Equipment•					
Function	S/N	Calibration Date	Cal Due Date	Asset #	
Spectrum Analyzer	MY46186290	02/12/2007	02/12/2009	02869	
Bilog Antenna	2451	01/21/2008	01/21/2010	01995	
Pre amp to SA Cab	le Cable #10	05/16/2007	05/16/2009	P05050	
Cable	Cable15	01/05/2007	01/05/2009	P05198	
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309	
Equipment Under	• <i>Test</i> (* = EUT):				
Function	Manufacturer	Mod	el #	S/N	
IR Remote*	SMK Manufact	uring, Inc. RRC	9001-4041E		
Support Devices:					
Function	Manufacturer	Mod	el #	S/N	

CKC Laboratories, Inc. •110 N Olinda Place • Brea, CA 92823 • 714-993-6112

Test Conditions / Notes:

Test Location:

The equipment under test (EUT) is an infrared remote. The EUT is powered on and sending a signal continuously. The EUT is powered from four AAA batteries. New batteries were installed prior to testing. Temperature: 23°C, Humidity: 44%, Pressure: 100kPa.

Transducer Legend:

T1=Preamp 8447D_AN00309_060108	T2=Bilog-AN01995 BILOG_012110
T3=Cable #10_P05050_ 051609	T4=Cable #15_P05198_ Site A, 010509

Measu	rement Data:	Reading listed by margin.				Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	40.110M	43.1	-27.8	+13.8	+0.1	+1.1	+0.0	30.3	40.0	-9.7	Vert
2	48.042M	44.6	-27.7	+9.6	+0.1	+1.2	+0.0	27.8	40.0	-12.2	Vert
3	128.254M	42.8	-27.6	+11.8	+0.3	+2.0	+0.0	29.3	43.5	-14.2	Vert
4	32.060M	32.9	-27.8	+17.6	+0.1	+0.9	+0.0	23.7	40.0	-16.3	Vert
5	56.241M	42.8	-27.7	+7.0	+0.1	+1.3	+0.0	23.5	40.0	-16.5	Horiz
6	136.204M	37.7	-27.6	+11.8	+0.3	+2.1	+0.0	24.3	43.5	-19.2	Vert
1											



-												
I	7	112.081M	38.3	-27.6	+11.1	+0.3	+1.9	+0.0	24.0	43.5	-19.5	Horiz
I												
	8	168.046M	36.2	-27.7	+9.9	+0.3	+2.3	+0.0	21.0	43.5	-22.5	Vert
Ļ												
	9	167.901M	34.9	-27.7	+9.9	+0.3	+2.3	+0.0	19.7	43.5	-23.8	Horiz
Ļ												
	10	223.994M	35.3	-27.6	+10.9	+0.2	+2.7	+0.0	21.5	46.0	-24.5	Vert



ICES-003 RADIATED EMISSIONS

Test Setup Photos



RCC9001-4041E



RCC9001-4041E





RCC9001-4001L



RCC9001-4001L



Test Data Sheets

Test Lo	ocation:	cation: CKC Laboratories, Inc. •110 N Olinda Place • Brea, CA 92823 • 714-993-6112									
Custom Specific Work C Test Ty Equipn Manufa Model: S/N:	ner: cation: Drder #: pe: nent: acturer:	SMK Man ICES-003 87968 Maximized IR Remote SMK Manu RRC9001-4	ufacturin -Issue 4 (I Emissio facturing 4001L	ng, Inc. CISPR ns , Inc.	22 B) RA	ADIATED Date: 5/15/2008 Time: 12:44:02 Sequence#: 2 Tested By: Sep Apahidean					
Test E	quipment:	<u> </u>									
Functio	n Angl	S/N	196200	0	Calibration	Date	Cal I	Due Date	As	set #	
Spectru Bilog A	Im Analyzer	MY401 2451	186290	0	1/21/2008	2	02/1	2/2009	02	809 005	
Pre am	n to SA Cab	le Cable #	¥10	0	5/16/2007	7	01/2	6/2009	P0	5050	
Cable		Cable1	5	0	1/05/2007	7	01/0	5/2009	PO	5198	
Pre Am	ıp	1937A	02548	0	6/01/2006	5	06/0	1/2008	00	309	
Eauin	∙ ment IInder	T_{PSt} (* = I	•(T U T								
Functio	on	<u>1057 (-1</u>	Jor 1). Janufactu	rer		Model #			S/N		
IR Ren	note*	S	MK Man	ufacturi	ng, Inc.	RRC900)1-4001I		2/11		
Suppo	rt Devices:				0						
Functio	on	N	/Ianufactu	rer		Model #	:		S/N		
Test C The equ The EU Humidi Transe	<i>conditions / I</i> uipment und JT is powere ity: 44%, Pre ducer Legen	Votes: er test (EU ed from fou essure: 100 d:	T) is an i 1r AAA b kPa.	nfrared 1 atteries.	remote. T New bat	The EUT	is power re install	red on and led prior to	sending a solution testing. T	signal cont 'emperatur	inuously. e: 23°C,
T1=Pre	amp 8447D	_AN00309	_060108			T2=Bilo	g-AN01	995 BILO	G_012110		
T3=Cal	ble #10_P05	050_0516	09			T4=Cab	le #15_F	P05198_ Si	te A, 0105	09	
Measu	rement Data	: Re	eading lis	ted by n	nargin.		Te	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
1	MHZ	<u>dBμ V</u> 50.0	<u>dB</u>					$\frac{dB\mu V/m}{24.0}$	$\frac{dB\mu V/m}{20.0}$	<u>dB</u>	Ant
1	107.320101	50.0	-21.1	+10.0	+0.3	+2.3	-10.0	24.9	30.0	-5.1	vert
2	127.934M	46.8	-27.6	+11.8	+0.3	+2.0	-10.0	23.3	30.0	-6.7	Horiz
3	31.555M	41.5	-27.8	+17.8	+0.1	+0.9	-10.0	22.5	30.0	-7.5	Vert
4	48.257M	48.7	-27.7	+9.5	+0.1	+1.2	-10.0	21.8	30.0	-8.2	Vert
5	40.030M	43.6	-27.8	+13.9	+0.1	+1.1	-10.0	20.9	30.0	-9.1	Vert
6	223.989M	41.6	-27.6	+10.9	+0.2	+2.7	-10.0	17.8	30.0	-12.2	Horiz



7	55.686M	46.9	-27.7	+7.1	+0.1	+1.3	-10.0	17.7	30.0	-12.3	Vert
0	1 60 00134	10 -		0.0	0.0	• •	10.0	15.4	20.0	10.4	
8	168.031M	42.6	-27.7	+9.9	+0.3	+2.3	-10.0	17.4	30.0	-12.6	Horiz
9	112.106M	40.7	-27.6	+11.1	+0.3	+1.9	-10.0	16.4	30.0	-13.6	Vert
10	167.651M	41.2	-27.7	+9.9	+0.3	+2.3	-10.0	16.0	30.0	-14.0	Horiz
11	135.964M	38.6	-27.6	+11.8	+0.3	+2.1	-10.0	15.2	30.0	-14.8	Horiz
12	223.974M	38.1	-27.6	+10.9	+0.2	+2.7	-10.0	14.3	30.0	-15.7	Vert
13	167.706M	36.5	-27.7	+9.9	+0.3	+2.3	-10.0	11.3	30.0	-18.7	Vert



Test Location:	CKC Laboratories, Inc. •110 N Olinda Place • Brea, CA 92823 • 714-993-6112											
Customer:	SMK Manufacturing, Inc.											
Specification: 1	ICES-003 -Issue 4 (CISPR 22 B) RADIATED											
Work Order #:	87968		Date: 5/15/2008									
Test Type: 1	Maximized Emissions		Time: 12:30:50									
Equipment: 1	IR Remote		Sequence#: 1									
Manufacturer:	SMK Manufacturing, Inc.		Tested By: Sep Apal	nidean								
Model:	RRC9001-4041E											
S/N:												
Test Equipment:												
Function	S/N	Calibration Date	Cal Due Date	Asset #								
Spectrum Analyzer	MY46186290	02/12/2007	02/12/2009	02869								
Bilog Antenna	2451	01/21/2008	01/21/2010	01995								
Pre amp to SA Cabl	le Cable #10	05/16/2007	05/16/2009	P05050								
Cable	Cable15	01/05/2007	01/05/2009	P05198								
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309								
Equipment Under	<i>Test</i> (* = EUT):											
Function	Manufacturer	Model #	S	/N								
IR Remote*	SMK Manufact	uring, Inc. RRC900)1-4041E									
Support Devices:												

FunctionManufacturerModel #S/N

Test Conditions / Notes:

The equipment under test (EUT) is an infrared remote. The EUT is powered on and sending a signal continuously. The EUT is powered from four AAA batteries. New batteries were installed prior to testing. Temperature: 23°C, Humidity: 44%, Pressure: 100kPa.

Transducer Legend:

T1=Preamp 8447D_AN00309_060108	T2=Bilog-AN01995 BILOG_012110
T3=Cable #10_P05050_ 051609	T4=Cable #15_P05198_ Site A, 010509

Measurement Data: Reading listed l			ted by ma	I by margin. Test Distance: 3 Meters							
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	40.110M	43.1	-27.8	+13.8	+0.1	+1.1	-10.0	20.3	30.0	-9.7	Vert
2	128.254M	42.8	-27.6	+11.8	+0.3	+2.0	-10.0	19.3	30.0	-10.7	Vert
3	48.042M	44.6	-27.7	+9.6	+0.1	+1.2	-10.0	17.8	30.0	-12.2	Vert
4	136.204M	37.7	-27.6	+11.8	+0.3	+2.1	-10.0	14.3	30.0	-15.7	Vert
5	112.081M	38.3	-27.6	+11.1	+0.3	+1.9	-10.0	14.0	30.0	-16.0	Horiz
6	32.060M	32.9	-27.8	+17.6	+0.1	+0.9	-10.0	13.7	30.0	-16.3	Vert



7	56.241M	42.8	-27.7	+7.0	+0.1	+1.3 -10.0	13.5	30.0	-16.5	Horiz
8	223.994M	35.3	-27.6	+10.9	+0.2	+2.7 -10.0	11.5	30.0	-18.5	Vert
9	168.046M	36.2	-27.7	+9.9	+0.3	+2.3 -10.0	11.0	30.0	-19.0	Vert
10	167.901M	34.9	-27.7	+9.9	+0.3	+2.3 -10.0	9.7	30.0	-20.3	Horiz