

EXHIBIT D

[FCC Ref. 2.1033(b)(6)]

"Report of Measurements"

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**PRODUCT DESCRIPTION**

The Model 27938XXX-C (base unit) is a 900MHz single-line cordless telephone that operates from 924MHz to 926MHz. The antenna used for the base is permanently attached to the EUT.

Refer to Exhibit D(6) for complete frequency list.

**15.107 (a)      POWER LINE CONDUCTED INTERFERENCE**

**Requirements:**

Frequency of Emission (MHZ)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

**Test Procedure:**

ANSI STANDARD C63.4-1992. using a 50uH LISN. Both lines were observed with the EUT transmitting. The bandwidth of the spectrum analyzer was 9KHz QP with an appropriate sweep speed. The ambient temperature of the EUT was 24°C with a humidity of 60%.

The spectrum was scanned from 0.15 to 30MHz.

**Test Data:**

The highest emission read for LINE was 42.46 dBμV@ 0.15 MHz.

The highest emission read for NEUTRAL was 42.14 dBμV@ 0.15 MHz.

The graphs on Appendix 1 and 2 represent the emissions taken for this device.

**Test Results:**

Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

**15.249 (a), (b) and (c) FIELD STRENGTH OF EMISSIONS****Requirements:**

Fundamental Frequency	Field Strength of Harmonics	15.209	
94dB $\mu$ V	54 dB $\mu$ V/m@ 3m	30-88 MHz	40 dB $\mu$ V/m@ 3m
		88-216 MHz	43.5
		216-960 MHz	46
		Above 960 MHz	54

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.

Emissions that fall in the restricted bands (15.205) must be less than 54dB $\mu$ V/m

**Procedure**

The test procedure used was ANSI STANDARD C63.4-1992 and DA-00-705 using an appropriate spectrum analyzer, as listed in the Test Equipment List. The bandwidth (RBW) of the spectrum analyzer was 100KHz/120KHz up to 1GHz with an appropriate sweep speed. The RBW above 1.0GHz was = 1.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the EUT was 24°C with a humidity of 60%.

**Test Data:**

Refer to Exhibit D(3)-3

**FIELD STRENGTH OF EMISSIONS****BASE UNIT**

<b>Emission Frequency MHz</b>	<b>Meter Reading @3m dBμV</b>	<b>Antenna</b>	<b>Cable and ACF dB</b>	<b>Field Strength dBμV/M</b>	<b>FCC Limit dBμV/M</b>	<b>Margin dB</b>	<b>Detector &amp; BW KHz</b>
<b><u>Channel 1</u></b>							
<b>924.017</b>	<b>55.00</b>	<b>RT4 V</b>	<b>33.40</b>	<b>88.40</b>	<b>94</b>	<b>-5.60</b>	<b>PK 100</b>
1848.034	—						
2772.051	—						
<b><u>Channel 40</u></b>							
<b>926.004</b>	<b>55.30</b>	<b>RT4 V</b>	<b>33.40</b>	<b>88.70</b>	<b>94</b>	<b>-5.30</b>	<b>PK 100</b>
1852.008	—						
2778.012	—						

**15.249 (d)      BAND EDGES**

**Requirements:**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

**Measurement:**

The base was attenuated by 50 dB. The handset was attenuated by 50 dB.

**Test Data:**

The Bandedge was measured at the Low and High end of the band. See Plots [Appendix 3 and 4].

**2.202    BANDWIDTH**

**Measurement:**

The measurements were made with the spectrum analyzer's resolution bandwidth (RBW) = 30KHz (Base) and the video bandwidth (VBW) = NONE and the span set as shown on plot.

**Test Data:**

**Base:**

Channel 1:     **0.244 MHz** [Refer to Appendix 5]

Channel 40:    **0.240 MHz** [Refer to Appendix 6]

BANDWIDTH =        **0.244 MHz**



**TEST FACILITY AND EQUIPMENT LIST**

**FACILITIES**

Radiated      ANSI C63.4 (FCC OET/55) open field 3 metre test range. This test range is protected from the cold and moisture by a non-conductive enclosure.

Conducted     2.5m Anechoic Chamber

**EQUIPMENT**

Anritsu 2601A Spectrum Analyzer  
Advantest R3261A Spectrum Analyzer  
Hewlett-Packard RF generator # 8640 B with an 002 doubler  
A.H. Systems biconical antenna; ..... 20 MHz to 330 MHz  
A.H. Systems log periodic antenna; ..... 300 MHz to 1.8 GHz  
Compliance Design P950 Preamp (16 dB) ... 25 MHz to 1.0 GHz

**NOTE:**

The Anritsu 2601A Spectrum Analyzer and the Advantest R3261A Spectrum Analyzer are calibrated annually, and that calibration is directly traceable to the National Research Council of Canada. (NRC)  
This equipment is only used by qualified technicians and only for the purpose of EMI measurements. The three metre test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

**ADDITIONAL TEST EQUIPMENT LIST**

1. Spectrum Analyzer: HP 8591EM, S/N 3639A00995, (9KHz - 1.8GHz), Calibrated April 2003
2. Spectrum Analyzer: ANRITSU 2601A, S/N MT64544, (10KHz - 2.2GHz), Calibrated May 2003
3. Spectrum Analyzer: IFR AN940, S/N 635001039, (9KHz - 26.5GHz), Calibrated March 2003
4. Preamp: HP 8449B, S/N 3008A00378, (1 - 26.5GHz), Calibrated August 2003
5. Horn Antenna: Q-PAR 6878/24, S/N 1721, (1.5-18GHz)
6. Horn Antenna: A. H. Systems SAS 572, S/N 164 (18 - 26.5GHz)
7. Line Impedance Stabilization Network.: Marstech, Cal. July 2003

**FEDERAL COMMUNICATIONS COMMISSION**

Laboratory Division  
7435 Oakland Mills Road  
Columbia, MD 21046

August 22, 2003

Registration Number: 90578

Electrohome Electronics Ltd.  
809 Wellington St. N.  
Kitchener, Ontario, N2G 4J6  
Canada

Attention: Tuat Huynh

Re: Measurement facility located at Roseville  
3 meter site  
Date of Renewal: August 22, 2003

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website [www.fcc.gov](http://www.fcc.gov) under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,



Ms. Phyllis Parrish  
Information Technician

FCC ID: G9H2-7938C  
Marstech Report No. 23401D  
EXHIBIT D(5)

**Model 27938XXX-C FREQUENCY TABLE**

CH	Handset TX Freq	Handset RX Freq	Base Tx Freq	BU Rx Freq
1	2402437832	924014600	924014600	2402437832
2	2402590688	924065552	924065552	2402590688
3	2402743544	924116504	924116504	2402743544
4	2402896400	924167456	924167456	2402896400
5	2403049256	924218408	924218408	2403049256
6	2403202112	924269360	924269360	2403202112
7	2403354968	924320312	924320312	2403354968
8	2403507824	924371264	924371264	2403507824
9	2403660680	924422216	924422216	2403660680
10	2403813536	924473168	924473168	2403813536
11	2403966392	924524120	924524120	2403966392
12	2404119248	924575072	924575072	2404119248
13	2404272104	924626024	924626024	2404272104
14	2404424960	924676976	924676976	2404424960
15	2404577816	924727928	924727928	2404577816
16	2404730672	924778880	924778880	2404730672
17	2404883528	924829832	924829832	2404883528
18	2405036384	924880784	924880784	2405036384
19	2405189240	924931736	924931736	2405189240
20	2405342096	924982688	924982688	2405342096
21	2405494952	925033640	925033640	2405494952
22	2405647808	925084592	925084592	2405647808
23	2405800664	925135544	925135544	2405800664
24	2405953520	925186496	925186496	2405953520
25	2406106376	925237448	925237448	2406106376
26	2406259232	925288400	925288400	2406259232
27	2406412088	925339352	925339352	2406412088
28	2406564944	925390304	925390304	2406564944
29	2406717800	925441256	925441256	2406717800
30	2406870656	925492208	925492208	2406870656
31	2407023512	925543160	925543160	2407023512
32	2407176368	925594112	925594112	2407176368
33	2407329224	925645064	925645064	2407329224
34	2407482080	925696016	925696016	2407482080
35	2407634936	925746968	925746968	2407634936
36	2407787792	925797920	925797920	2407787792
37	2407940648	925848872	925848872	2407940648
38	2408093504	925899824	925899824	2408093504
39	2408246360	925950776	925950776	2408246360
40	2408399216	926001728	926001728	2408399216