

Marstech Limited

11 Kelfield Street, Etobicoke, Ontario, Canada, M9W 5A1
Telephone (416) 246-1116, Fax (416) 246-1020

Authorized by:
Professional Engineers
Ontario



Engineering &
Administrative



Testing For FCC
Submissions/Verifications

Industry Canada
Industrie Canada
Approved Test Facility



TEST REPORT			
REPORT DATE: 7 October 1998		REPORT NO.: 98389D1	
CONTENTS:	See Table of Contents		
SUBMITTOR:	CLARION CO. LTD. 50 Kamitoda Toda Saitama JAPAN 335-8511		
SUBJECT:	Model No:		JC-215R
	FCC ID:		AX292AJC215R
TEST SPECIFICATION:	FCC CFR 47 Part 15 and Part 2, Subpart J NOTE: Tests Conducted Are "Type" Tests.		
DATE SAMPLE RECEIVED:	16 September 1998	DATE TESTED:	23 September and 2 & 13 October 1998
RESULTS:	Equipment tested complies with referenced specification.		
ALTERATIONS	None		
Tested by:	Original signed by: Jim Sims	Approved and Certified by:	<i>Ed. Chang</i>
	<i>Ed. Chang</i>	for	Robert G. Marshall, P. Eng.
	Edward Chang		Date: 13 / Oct. / 1998
THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF MARSTECH LIMITED. This report was prepared by Marstech Limited for the account of the "Submittor". The material in it reflects Marstech's judgement in light of the information available to it at the time of preparation. Any use which a Third Party makes of this report, or any reliance on decisions to be made based on it, are the responsibility of such Third Parties. Marstech accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report			

TECHNICAL REPORT - FCC 2.1033(b)

Applicant

Clarion Co. Ltd.
50 Kamitoda
Toda Saitama
JAPAN 335-8511

FCC Identifier

AX292AJC215R

Manufacturer

Tochigi Clarion Electronics Co., Ltd.
1824 Oaza-Motegi, Motegi Haga-gun, Tochigi
Japan 321-3531

TABLE OF CONTENTS

<u>Exhibit</u>	<u>Description</u>	<u>FCC Ref.</u>	<u>Page</u>
A	Installation and Operating Instructions Furnished to the User.	2.1033(b)(3)	Exhibit A Exhibit A(1)-1
B	Description of Circuit Functions	2.1033(b)(4)	Exhibit B Exhibit B(1)-1 to -5
C	Block Diagram Schematic Diagram	2.1033(b)(5)	Exhibit C Exhibit C(1)-1 Exhibit C(2)-1 to -2
D	Report of Measurements Device Measured Test Facility and Equipment Test Summary Test Results and Methods	2.1033(b)(6)	Exhibit D Exhibit D(1) Exhibit D(2)-1 to -2 Exhibit D(3) Exhibit D(4)-1
E	Photographs Label Equipment	2.1033(b)(7)	Exhibit E Exhibit E(1)-1 Exhibit E(2)-1 to -14

EXHIBIT D

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

"Report of Measurements"

MARSTECH LIMITED

EXHIBIT D(1)

DEVICE MEASURED

[FCC Ref. 2.1033(6)]

APPLICANT:

CLARION CO. LTD.
50 Kamitoda
Toda Saitama
JAPAN 335-8511

MANUFACTURER:

Tochigi Clarion Electronics Co., Ltd.
1824 Oaza-Motegi, Motegi Haga-gun, Tochigi
JAPAN 321-3531

FCC IDENTIFIER:

AX292AJC215R

TRADE NAME:

YAMAHA

MODEL NUMBER:

JC-215R

Marstech Limited
11 Kelfield Street
Etobicoke, Ontario
M9W 5A1 CANADA

TECHNICIANS:
Jim Sims - Com-Serve Corp.
Ed Chang - Marstech Ltd.

for Ed. Chang
Robert G. Marshall, P. Eng.

Date: 13 / Oct. / 1998

EXHIBIT D(2)

TEST EQUIPMENT LIST AND TEST FACILITIES

Test Site & Equipment

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

Description of the measurement facility is on file with the Commission.

Refer Exhibit D(2)-2 attached.

and

Marstech Limited

Spectrum Analyzer Anritsu Model MS2601A

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2050

September 23, 1997

IN REPLY REFER TO
31040/SIT
1300F2

Electrohome Electronics Ltd
809 Wellington Street, North
Kitchener, Ontario N2G 4J6, Canada

Attention: Gerry Gallagher

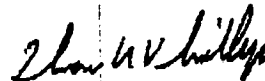
Re: Measurement facility located at Roseville
(3 meter site)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,



Thomas W. Phillips
Electronics Engineer
Customer Service Branch

EXHIBIT D(3)

TEST SUMMARY

<u>FCC Ref.</u>	<u>Description</u>	<u>Page</u>
15.111	Spurious Emissions at Antenna Terminals	Exhibit D(4)-1

EXHIBIT D(4)

RESULTS

15.111 Spurious Emissions at Antenna Terminals

The radio frequency voltage or power generated within the equipment and appearing on a spurious frequency was checked at the equipment output terminals when loaded with an artificial antenna. The following data shows the magnitude of each harmonic and other spurious emission that was detected when the equipment was operated under the conditions specified in 2.989. The magnitude of the spurious emissions attenuated more than 20 dB below the permissible value are not shown.

NOTE: The values shown are with reference to the carrier (dBc).

Receive: All emissions were more than 20 dB below the limit of 2nW.

CHANNEL		FREQUENCY (MHz)	LEVEL (μ V)	LIMIT (μ V)
Channel 2	RX	114.2	6	316
Channel 20	RX	115.6	5.6	316
Channel 40	RX	117.3	5	316