

Report No. : AF014435-001 Date : 2005 July 06

Application No.: LF202072(2)

Client : Milwaukee Electric Tool Corporation

(An Atlas Copco Company) 13135 W. Lisbon Road

Brookfield WI 53005 USA

Sample Description : One (1) submitted sample stated to be :

Description: Boombox Radio / Job site Radio

Model No.: 00777 Rating: AC 120V

No. of sample(s): One(1) piece \*\*\*

Date Received : 2005 June 02

Test Period : 2004 June 02 – 2005 July 06

Test Requested : FCC Part 15 Certification

Test Method : FCC Rules and Regulations Part 15 – July 2004

ANSI C63.4 – 2003

Test Result : See attached sheet(s) from page 2 to 12.

Conclusion : The submitted sample was found to comply with requirement of FCC

Part 15 Subpart B.

Remark : Class II permissible change or modification of presently authorized equipment

from CMA Report AB017483 issued 2001 December 16.

For and on behalf of CMA Testing and Certification Laboratories

Authorized Signature: Page 1 of 11

EMC Engineer - EL. Division

FCC ID: P3600777



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1 General Information

The equipment under test is an AM, FM and Weather band receiver. The EUT is powered by AC 120V with 12-18V rechargeable battery pack.

The brief circuit description is listed as follows:

- IC8 and associated circuit act as FM and Weather band tuner
- IC7 and associated circuit act as AM Tuner
- IC6 and associated circuit act as Tuner Control
- IC2, IC4, IC9, IC10 and associated circuit act as Amplifier

#### 1.2 Related Submittal Grants

This is a single application for certification of an AM, FM and Weather band receive



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#### 1.3 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber is set up for investigation and located at :

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A shield room is located at:

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.



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### 1.4 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S43284
Broadband Antenna	Schaffner	CBL6112B	2692	CA3025
Signal Generator	IFR	2023B	202302/938	S43098
LISN	R&S	ESH3-Z5	100038	S43377
LISN	R&S	ESH3-Z5	100010	S43101
Pulse Limiter	R&S	ESH3-Z2	100001	S43325



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## 2 Description of the radiated emission test

#### 2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4-2003

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of  $1.5 \,\mathrm{m}$  x 1m and  $0.8 \,\mathrm{m}$  high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

#### 2.2 Test Result

All modes had been test. The measurement data based on measurements employing the CISPR qusai-peak detector were indicated in next page.

All other measurement were 20 dB below the 15.109 limits. Thus, those highest emissions were presented in next page (section 2.3).

It was found that the EUT meet the FCC requirement.



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### 2.3 Radiated Emission Measurement Data

### **Radiated emission**

### pursuant to

## the requirement of FCC Part 15 subpart B

Operation mode: FM

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBµV/m)	Antenna and Cable factor (dB)	Field Strength (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
98.193	Н	24.4	9.2	33.6	43.5	-9.9
108.800	Н	22.3	11.0	33.3	43.5	-10.2
118.800	Н	26.6	11.0	37.6	43.5	-5.9
294.592	Н	24.3	13.9	38.2	46.0	-7.8
217.600	Н	19.5	9.7	29.2	46.0	-16.8
356.392	Н	25.3	14.9	40.6	46.0	-5.4



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### 2.3 Radiated Emission Measurement Data

#### **Radiated emission**

### pursuant to

## the requirement of FCC Part 15 subpart B

Operation mode: Weather band

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBµV/m)	Antenna and Cable factor (dB)	Field Strength (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
173.099	Н	29.8	10.4	40.2	43.5	-3.3
173.120	Н	29.8	10.4	40.2	43.5	-3.3
173.146	Н	29.7	10.4	40.1	43.5	-3.4
173.173	Н	29.8	10.4	40.2	43.5	-3.3
173.195	Н	29.7	10.4	40.1	43.5	-3.4
173.224	Н	29.9	10.4	40.3	43.5	-3.2
173.247	Н	29.8	10.4	40.2	43.5	-3.3
346.198	Н	16.6	14.9	31.5	46.0	-14.5
346.240	Н	16.8	14.9	31.7	46.0	-14.3
346.292	Н	16.2	14.9	31.1	46.0	-14.9
346.346	Н	16.3	14.9	31.2	46.0	-14.8
346.390	Н	16.5	14.9	31.4	46.0	-14.6
346.448	Н	16.6	14.9	31.5	46.0	-14.5
346.494	Н	16.2	14.9	31.1	46.0	-14.9



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3 Description of the Line-conducted Test

#### 3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 - 2003 The EUT was setup as described in the procedures, and both lines were measured.

#### 3.2 Test Result

The result showed that the EUT met the FCC requirement.

### 3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the document are saved with filename TestRpt2.pdf



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4 Photograph

### 4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup5.jpg

### 4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho4.jpg

### 5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp1.jpg to LabelSmp2.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf
Permissive Change Letter	PerChLetter.pdf



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## 6 Appendices

A1. A2. A3. A4. A5. A6. A7. A8. A9.	Photos of the set-up of Radiated Emissions Photos of the set-up of Conducted Emissions Photos of External Configurations Photos of Internal Configurations ID Label/Location Conducted Emission Measurement Data Block Diagram Schematics Diagram User Manual Operation Description	1 page 2 pages 1 page 3 pages 1 page 2 pages 1 page 1 page 1 page 14 pages
A10. A11	Operation Description Permissive Change Letter	4 page 1 page
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\*\*\*\*\* End of Report \*\*\*\*\*