



ELECTRONICS REGIONAL TEST LABORATORY (NORTH)

## TEST REPORT



TEST REPORT No.	DATE	PAGE NO.
ERTL(N)/90(4)-2K6/C0044	05/05/2006	1 OF 5
Service Request No.0044	Date : 20/04/2006	
Name & Address of the Client	M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)	
Description/ Identification of the Item: -		
Nomenclature	Handheld Trans-receiver	
Model No./Type No.	ACD5BD WPN9	
Value/Tolerance	-	
Serial No.(s)	01	
No. of Samples	01	
Trade Mark/Make	ASIAN ELECTRONICS/WESTINGHOUSE	
Year of Manufacture	2006	
Applicable Standard Specification IS/IEC/JSS/other	FCC PART 15C Test Method: ANSI C63.4-1992	
Manufacturer's Name & address	M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)	
Name & address where testing carried out (Subcontracting/Single Window/On-Site/ Using Customer Facilities)	ERTL(N),New Delhi	
Test Method/Operating Procedure	ANSI C63.4-92	
Condition of item on its receipt	Good	
Date of receipt of item	20/04/2006	
Date of Completion of Testing	08/05/2006	

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Equipment used:

Sl.No.	Nomenclature	Make	Model No
1.	Receiver	R&S	ESIB26
2.	Antenna Mast	EMCO	1050
3.	Turntable	EMCO	1050
4.	Bi-conical Antenna	EMCO	3146
5.	Antenna log periodic	EMCO	3104
6.	Spectrum Analyzer	HP	HP8566B
7.	Pre-selector	HP	HP85685A
8.	Quasi Peak Adaptor	HP	HP85-650A
9.	Controller	HP	HP9000 Series

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TEST CONFIGURATION DETAIL:

Sl. No.	Equipment Description	Model No.	Make	Cable Description
1.	Handheld Receiver	ACD5BDWPN9	Asian	Unshielded, along with Electronics ballast fitted in the metal structure

Test Facility:

3 meter open area test site & conducted emission measurement facility located at Electronics Regional Test Laboratory(North), Ministry of Communication & Information Technology, Deptt. of Information tech. Govt. of India, S - Block, Okhla Indl. Area, Phase - II, New Delhi - 110 020, Listed by FCC(USA) vide letter registration no. 90618 dtd. 15<sup>th</sup> Jan 2004.

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## TEST REPORT



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## Test Results:

S.No.	Parameter	Cl. No.	Nominal Value/ requirement			Measured Value/ Observation	Remarks
1.	<b>Radiated Emission Test</b> Class B (Consumer product) (as per FCC Part 15 ) Under normal working Condition Test Method: ANSI C63.4-92  Measurement Distance: 3 m	15.209	Freq In MHz		Emission Limit dBuV/m (Q.P)	Satisfactory Refer Annexure: B	---
			30-88		40		
			88-216		43.5		
			216-960		46		
			Above 960		50		
2.	<b>Radiated Emission (Fundamental /Harmonics)</b> Measurement distance: 3m EUT Under normal working condition EUT: Fundamental Freq: 433.9 MHz	15.231	Fundamental Freq in MHz	Field Strength of Fundamental (uV/m )	Field Strength of spurious emissions uV/m	Satisfactory Refer Annex "B"	-
			260-470	3,750 to 12500	0375 to 1250		
3.	<b>Activation Time of the Manually operated Transmitter</b>	15.231	Shall be less than 5 sec			4.2 sec	Satisfactory

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- Remarks:
- a) This report pertains to the parameters mentioned in the test results column.
  - b) Uncertainty in measurement has been taken into Consideration while declaring the results of the parameters mentioned in the report.
  - c) Conversion Formula & sample calculations are enclosed at Annexure - C.

Approved By  
(Authorised Signatory)

Name: Sulekh Chand

Designation: Scientist "D"

Mahavir Prasad  
Issued by (MAHAVIR PRASAD)  
Scientist 'C'

ANNEXURE-B  
 Test Report No  
 ERTL(N) 90 (4)- 2K6/C0044  
 DATED :08/05/2006

Radiated Emission  
 Measurement Distance: 3m

Sl No	Freq. in MHz	Pol	Emission Observed dBuV/m	Limit in dB/uV	Variation In dB	Remarks
1	31.8	V	34.5	40	-5.5	Satisfactory
2	33.6	H	36.3	40	-3.7	
3	34.5	V	33.5	40	-6.5	
4	54.0	V	36.0	40	-4.0	
5	57.6	H	30.1	40	-9.9	
6	60.3	V	34.2	40	-5.8	
7	63.6	V	31.0	40	-9.0	
8	65.6	H	27.8	40	-12.2	
9	67.0	V	36.9	40	-3.1	
10	69.9	V	34.7	40	-5.3	
11	73.1	H	32.1	40	-7.9	
12	75.7	H	36.8	40	-3.2	
13	76.8	H	37.7	40	-2.3	
14	79.4	V	38.4	40	-1.6	
15	80.1	H	39.8	40	-0.2	
16	81.1	H	38.4	40	-1.6	
17	84.0	H	36.7	40	-3.3	
18	100.8	H	36.9	43.5	-6.6	
19	121.1	H	31.2	43.5	-12.3	

Emission Of Fundamental Freq & Spurious emission

Frequency	Polarization	Emission in dBuV/m	Remarks
Fundamental (433.9 MHz)	V	78.89	Satisfactory
Harmonics & spurious	V	58.63	

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ANNEXURE - C  
Test Report No  
ERTL(N)90(4)-2K6/C0044  
DATED : 08/05/2006

Conversion Formulas :

- A) Field strength : Emission observed in dBuV+Antenna factor  
(dBuV/m) (dB/m) + Cable loss (dB)
- B) Field strength : Antilog (Field strength in dBuV/m)  
(uV/m) : -----  
20
- C) Interference : Antilog (Interference observed in dBuV)  
(uV) -----  
20

Sample Calculation :

Field strength in dBuV/m = Emission observed (dBuV)  
+ Antenna factor (dB/m)  
+ Cable loss (dB)

Example : Emission observed = 18dBuV at 35 MHz  
Antenna factor = 10dB/m  
Cable loss = 2dB

Field strength (dBuV/m) : 18 dBuV + 10dB/m + 2 dB = 30dBuV/m

Field strength uV/m : Antilog (field strength in (dBuV/m))  
-----  
20

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TEST REPORT No.	DATE	PAGE NO.
ERTL (N)/90(4)-2K6/C0072	08/05/2006	1 OF 4
Service Request No.0067		Date: 26/04/2006
Name & Address of the Client		M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)
Description/ Identification of the Item:-		
Nomenclature		Handheld Trans-receiver
Model No./Type No.		ACD5BD WPN9
Value/Tolerance		-
Serial No.(s)		01
No. of Samples		01
Trade Mark/Make		ASIAN ELECTRONICS/WESTINGHOUSE
Year of Manufacture		2006
Applicable Standard Specification IS/IEC/JSS/other		FCC PART 15C Test Method: ANSI C63.4-1992
Manufacturer's Name & address		M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)
Name & address where testing carried out (Subcontracting/Single Window/On-Site/ Using Customer Facilities)		ERTL (N), New Delhi
Test Method/Operating Procedure		FCC Part 15
Condition of item on its receipt		Good
Date of receipt of item		26/04/2006
Date of Completion of Testing		05/05/2006

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**EQUIPMENT USED :**

Sr No	Nomenclature	Make	Model No
1.	Antenna Mast	EMCO	1050
2.	Antenna log periodic	EMCO	3104
3.	Spectrum Analyzer	HP	HP8566B

**TEST CONFIGURATION DETAIL:**

Sr No	Equipment Description	Make	Model No.	Cable Description
1	Handheld Receiver	Asian	ACD5BD WPN9	Unshielded, along with electronic ballast fitted in the metal structure.

**Test Facility:**

3-meter open area test site & conducted emission measurement facility located at Electronics Regional Test Laboratory (North), Ministry of Communication & Information Technology, Deptt. of Information tech. Govt. of India, S - Block, Okhla Indl. Area, Phase - II, New Delhi - 110 020, Listed by FCC(USA) vide letter registration no. 90618 dtd. 15<sup>th</sup> Jan 2004.

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ERTL (N)/90(4)-2K6/C0072

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**Test Results:**

S.No.	Parameter	Cl. No.	Nominal Value/ requirement	Measured Value/ Observation	Remarks
1.	<b>Band width test</b> Under normal working condition Transmitting mode	15.215	The permitted emission bandwidth is no wider than 0.25% of the operating frequency (433.9 MHz)	311 KHz (For detail refer Annex A)	Satisfactory

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TEST REPORT NUMBER	DATE	PAGE NO.
ERTL (N)/90(4)-2K6/C0072	08/05/2006	4 OF 4

- Remarks:
- a) This report pertains to the parameters mentioned in the test results column.
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Approved By  
(Authorised Signatory)

Name: Sulekh Chand

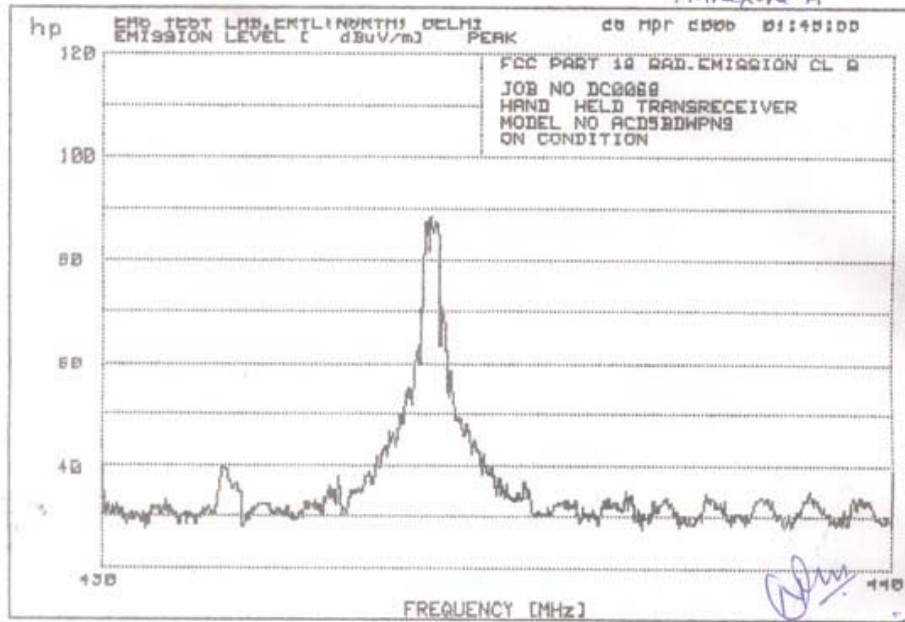
Designation: Scientist "D"

Mahavir Bhand

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Signature of Issued by  
Name: Mahavir Bhand  
Designation: Scientist "D"

Annexure 'A'



operating frequency - 433.9 (MHz).

*[Signature]*  
Mehar, Pand



ELECTRONICS REGIONAL TEST LABORATORY  
(NORTH)  
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TEST REPORT No.	DATE	PAGE NO.
ERTL(N)/90(4)-2K6/C0068	08/05/2006	1 OF 4
Service Request No.0063		Date : 26/04/2006
Name & Address of the Client		M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)
Description/ Identification of the Item:-		
Nomenclature		Handheld Trans-receiver
Model No./Type No.		ACD5BDWPN9
Value/Tolerance		-
Serial No.(s)		01
No. of Samples		01
Trade Mark/Make		ASIAN ELECTRONICS/WESTINGHOUSE
Year of Manufacture		2006
Applicable Standard Specification IS/IEC/JSS/other		FCC PART 15C Test Method: ANSI C63.4-1992
Manufacturer's Name & address		M/S Asian Electronics Limited 68,M.I.D.C. Satpur, Nasik -422007 Maharashtra (India)
Name & address where testing carried out (Subcontracting/Single Window/On-Site/ Using Customer Facilities)		ERTL(N), New Delhi
Test Method/Operating Procedure		ANSI C63.4-92
Condition of item on its receipt		Good
Date of receipt of item		26/04/2006
Date of Completion of Testing		05/05/2006

*Mehavishand*  
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**EQUIPMENT USED:**

Sl.No.	Nomenclature	Make	Model No
1.	Spectrum Analyzer	HP	HP8566B
2.	Pre-selector	HP	HP85685A
3.	Quasi Peak Adaptor	HP	HP85-650A
4.	LISN	ESH3-Z6	R&S

**TEST CONFIGURATION DETAIL:**

Sl. No.	Equipment Description	Model No.	Make	Cable Description
1.	Handheld Receiver	ACD5BDWPN9	Asian	Unshielded, along with electronics ballast fitted in the metal fixture

**Test Facility:**

3 meter open area test site & conducted emission measurement facility located at Electronics Regional Test Laboratory(North), Ministry of Communication & Information Technology, Deptt. of Information tech. Govt. of India, S - Block, Okhla Indl. Area, Phase - II, New Delhi - 110 020, Listed by FCC(USA) vide letter registration no. 90618 dtd. 15<sup>th</sup> Jan 2004.

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TEST REPORT NUMBER	DATE	PAGE NO.
ERTL (N)/90(4)-2K6/C0068	08/05/2006	3 OF 4

Test Results:

S.No.	Parameter	Cl. No	Nominal Value/ requirement	Measured Value/ Observation	Remarks		
1.	<b>Conducted Emission Test</b> Class B (Consumer product) <b>(As FCC PART 15)</b>  EUT: Under normal working condition .  Test Method: ANSI C63.4-92	15.107	Emission limit		Incompliance Refer Annexure A1-A3	Satisfactory	
			Freq (MHz)	Emission limit			
				QP dBμV			Avg dBμV
			0.15-0.50	66-56			56-46
			0.50-5	56			46
			5-30	60			50

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Approved By  
(Authorised Signatory)



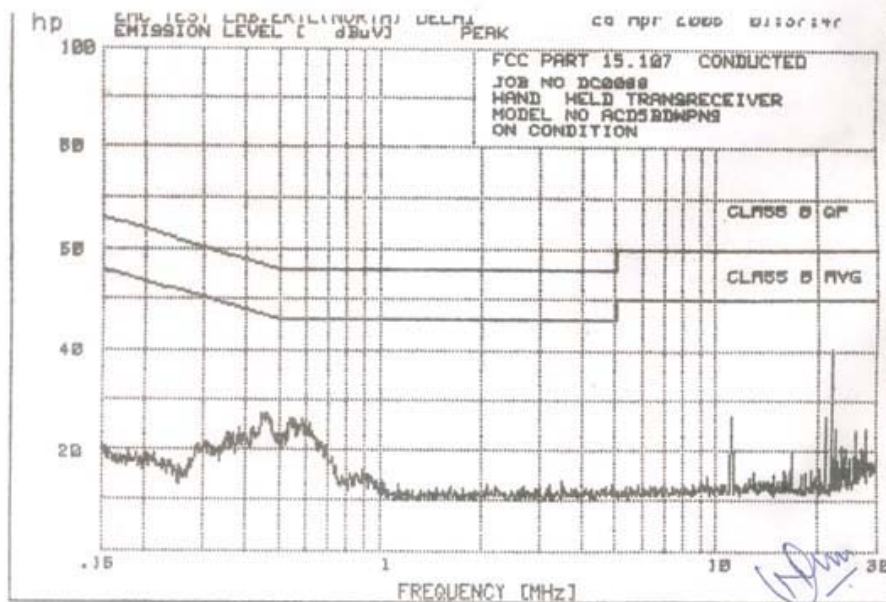
Name: Sulekh Chand

Designation: Scientist "D"

  
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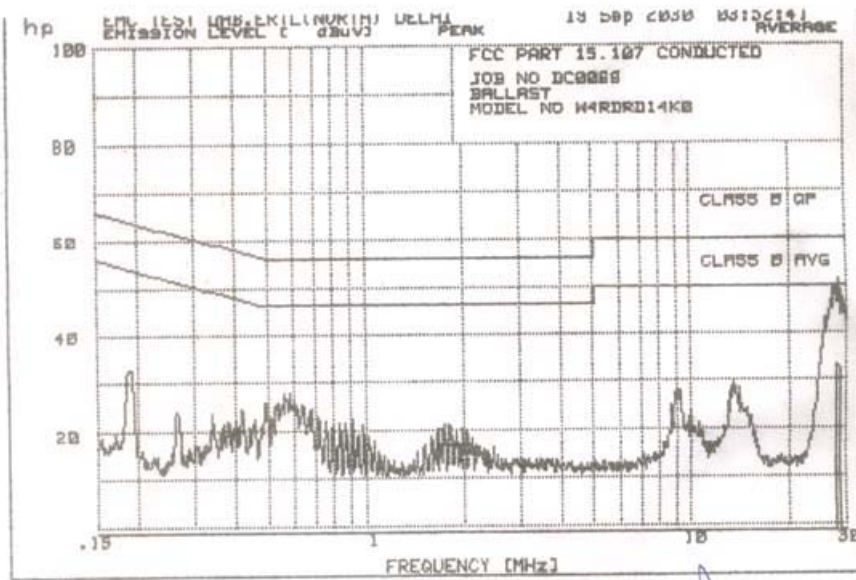


Annex A2



Merhavi Band

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