

TEST RESULT SUMMARY

UNITED STATES STANDARD 47 CFR PART 2, SUBPART J AND PART 90, SUBPART I

MANUFACTURER NAME	ADC WIRELESS SYSTEMS
NAME OF EQUIPMENT	Dual Unit Compact Voice and Mobile Data Base Station
MODEL NUMBER	CVMDBS
MANUFACTURER ADDRESS	9645 Scranton Road San Diego, CA 92121
TEST REPORT NUMBER	S8239A-06
TEST DATE	22 May 1998

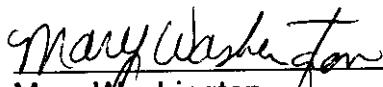
According to testing performed at TÜV Product Service, Inc., the above-mentioned unit is in compliance with the electromagnetic compatibility requirements defined in United States Standard 47 CFR Part 2, Subpart J, Paragraphs 2.985, 2.989, 2.991, 2.993, and Part 90, Subpart I, Paragraph 90.210.

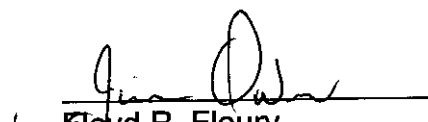
TÜV Product Service reports apply only to the specific sample tested under stated test conditions. It is the manufacturer's responsibility to assure the continued compliance of production units of this model. TÜV Product Service, Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV Product Service, Inc. issued reports.

As the responsible EMC Project/Division Managers, we hereby declare that the equipment tested at TÜV Product Service, Inc. as specified above conforms to the requirements of United States Standard 47 CFR Part 2, "Frequency allocations and radio treaty matters; general rules and regulations" and Part 90, "Private Land Mobile Radio Services".

Date: 24 June 1998

Location: San Diego, California
USA


Mary Washington
Responsible Engineer


Floyd R. Fleury
EMC Manager, EIC

Not Transferable

EMC EMISSION - TEST REPORT

UNITED STATES STANDARD 47 CFR PART 2, SUBPART J AND PART 90, SUBPART I

Test Report File No. : **S8239A-06** Date of Issue: 24 June 1998

Model / Serial No. : CVMDBS / Engineering 001

Product Type : Dual Unit Compact Voice and Mobile Data Base Station

Applicant : ADC WIRELESS SYSTEMS

Manufacturer : ADC WIRELESS SYSTEMS

License holder : ADC WIRELESS SYSTEMS

Address : 9645 Scranton Road
: San Diego, CA 92121

Test Result : ☒ **Positive** ☐ **Negative**

Test Project Number
Reference(s) : S101823901-06

Total pages - Test Report : 12

TÜV Product Service, Inc. is a subcontractor to TÜV Product Service, GmbH according to the principles outlined in ISO/IEC Guide 25 and EN 45001.

TÜV Product Service reports apply only to the specific sample tested under stated test conditions. It is the manufacturer's responsibility to assure the continued compliance of production units of this model. TÜV Product Service, Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV Product Service, Inc. issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval. This report shall not be used by the client to claim product endorsement by NVLAP or any agency of the US government.

TÜV Product Service, Inc. and its professional staff hold government and professional organization certifications and are members of AAMI, ACIL, AEA, ANSI, IEEE, NVLAP, and VCCI

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EMISSIONS TEST REGULATIONS :

The emissions tests were performed according to the following regulations:

- | | | |
|--|---|--|
| ☐ - EN 50081-1 / 1991 | | |
| ☐ - EN 55011 / 1991 | ☐ - Group 1 | ☐ - Group 2 |
| | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55013 / 1990 | | |
| ☐ - EN 55014 / 1987 | ☐ - Household appliances and similar | |
| | ☐ - Portable tools | |
| | ☐ - Semiconductor devices | |
| ☐ - EN 55014 / A2:1990 | | |
| ☐ - EN 55014 / 1993 | ☐ - Household appliances and similar | |
| | ☐ - Portable tools | |
| | ☐ - Semiconductor devices | |
| ☐ - EN 55022 / 1987 | ☐ - Class A | ☐ - Class B |
| ☐ - EN 55022 / 1994 | ☐ - Class A | ☐ - Class B |
| ☐ - BS | | |
| ☐ - VCCI | ☐ - Class A ITE | ☐ - Class B ITE |
| ☐ - 47 CFR Part 15, Subpart B | | |
| ☐ - 107(b) | | |
| ☐ - 107(a) | | |
| ☐ - 107(e) | ☐ - Class A | ☐ - Class B |
| ☐ - 109(b) | | |
| ☐ - 109(a) | | |
| ☐ - 109(g) | ☐ - Class A | ☐ - Class B |
| ■ - 47 CFR Part 2, Subpart J | | |
| ■ - 2.985 | | |
| ■ - 2.989 | | |
| ■ - 2.991 | | |
| ■ - 2.993 | | |
| ■ - 47 CFR Part 90, Subpart I | | |
| ■ - 90.210 | | |
| ☐ - AS/NZS 3548: 1995 | ☐ - Class A | ☐ - Class B |
| ☐ - CISPR 11 (1990) | ☐ - Group 1 | ☐ - Group 2 |
| | ☐ - Class A | ☐ - Class B |
| ☐ - CISPR 22 (1993) | ☐ - Class A | ☐ - Class B |

Environmental Conditions In The Laboratory:

	<u>Actual</u>
Temperature:	: 23 °C
Relative Humidity:	: 50 %
Atmospheric Pressure:	: 100.0 kPa

Power Supply Utilized:

Power supply system : 120 V / 60 Hz / 1 ϕ

Symbol Definitions:

- - Applicable
- - Not Applicable

Emissions Test Conditions: CONDUCTED EMISSIONS (Interference Voltage)
The CONDUCTED EMISSIONS (INTERFERENCE VOLTAGE) measurements were performed at the following test location:
■ - Test not applicable

- ☐ - SR-2, Shielded Room, 12' x 24' x 10', Metal Chamber
- ☐ - SR-3, Shielded Room, 12' x 20' x 8', Metal Chamber
- ☐ - SR-4, Shielded Room, 10' x 17' x 8', Copper Screen Chamber
- ☐ - SR-5, Shielded Room, 16' x 28' x 15', Metal, Semi-Anechoic Chamber
- ☐ - CSR-1, Shielded Room, 10' x 7' x 7', Metal Chamber

Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.
☐ - NM-7A, NM-17/27, NM-37/57, NM-67, CCA-7, & H/P 9836 HP-1B Computer	156, 162, 166	Automated RFI Measurement System (ARMS), NO. 1	Eaton/Aitech	(multiple)
☐ - NM-17/27, NM-37/57, CA-7 and H/P 9826 Computer	168, 170, 177, 178	Automated RFI Measurement System (ARMS), NO. 2	Eaton/Aitech	(multiple)
☐ - H/P Spectrum Analyzer, Model 8568B; Display Section RF Analyzer Section; H/P 85550A, Quasi-Peak Adapter H/P Computer System, Model 810 with HP 85800A Software	187, 188	Automated RFI Measurement System (ARMS)	Various	(multiple)
☐ - LISN-3, 50 A	262-263	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	3-4
☐ - LISN-3, 50 A	264, 265	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	5-6
☐ - LISN-2, 25 A	413	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	7
☐ - LISN-2, 25 A	--	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	7
☐ - FCC-LISN-50-25-2	553	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	112
☐ - FCC-LISN-50-25-2	552	Power Mains Network (LISN), 50 μ H/250 μ H/50 Ω /0.25 μ F	Fischer Custom Communications, Inc.	113
☐ - 8012-50-R-12-BNC	266	LISN, 50 μ H/50 Ω /0.1 μ F	Solar Electronics Co.	--
☐ - 9252-50-R-24-BNC	458	LISN, 50 μ H /250 μ H/50 Ω /0.25 μ F	Solar Electronics Co.	941719
☐ - 9252-50-R-24-BNC	457	LISN, 50 μ H /250 μ H/50 Ω /0.25 μ F	Solar Electronics Co.	941720
☐ - MDS-21	277	Absorbing Clamp	Rohde & Schwarz	821023
☐ - ESHS 20	428	EMI Test Receiver	Rohde & Schwarz	837055/001
☐ - ESHS 30	459	EMI Test Receiver	Rohde & Schwarz	832354/004
☐ - CAT-20	598	20 dB Attenuator	Mini-Circuits	--
☐ - CAT-20	615	20 dB Attenuator	Mini-Circuits	--

Remarks: _____

Emissions Test Conditions: RADIATED EMISSIONS (FCC Part 2, Para. 2.993 & Part 90, Para. 90.210)
The RADIATED EMISSIONS measurements were performed at the following test location:
☐ - Test not applicable

- ☒ - Roof (Small Open Area Test Site)
- ☐ - Canyon #1 (10- and 30-Meter Open Area Test Site), Carroll Canyon, San Diego
- ☐ - Canyon #2 (3- and 10-Meter Open Area Test Site), Carroll Canyon, San Diego

Testing was performed at a test distance of :

- ☒ - 3 meters
- ☐ - 10 meters
- ☐ - 30 meters

Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.
☐ - NM-37/57A	420	OATS measurement set (Roof)	Eaton/Ailtech	0561-09261
CCA-7	373			0773-03117
☐ - NM-37/57	171	OATS measurement set (Canyon)	Eaton/Ailtech	0709-82078
CCA-7	172			0187-0322
☐ - HFH 2-Z2	208	Antenna, Loop	Rohde & Schwarz	880
☐ - 3104	235	Antenna, Biconical	EMCO	3031
☒ - 3115	251	Antenna, Double Ridge Guide	EMCO	2495
☐ - 94455-1	231	Antenna, Biconical	Eaton/Ailtech	0811
☐ - 3110B	491	Antenna, Biconical	EMCO	9508-2
☒ - AFD3-0102-13-ST	366	Pre-Amplifier (38 dB gain), 1 to 2 GHz	Miteq, Inc.	16429
☒ - AFD3-0208-40-ST	367	Pre-Amplifier (30 dB gain), 2 to 8 GHz	Miteq, Inc.	155382
☐ - 3146	242	Antenna, Log Periodic Dipole	EMCO	1597
☐ - 3146	243	Antenna, Log Periodic Dipole	EMCO	106X
☐ - 3146	244	Antenna, Log Periodic Dipole	EMCO	1063
☐ - 7405	570	Loop Probes	EMCO	9104-1959
☒ - 8566B	407	Spectrum Analyzer	Hewlett Packard	2311A02209
☒ - 85662B	406	Spectrum Analyzer Display	Hewlett Packard	2309A04682
☐ - ESVS 30	427	EMI Test Receiver	Rohde & Schwarz	830350/006
☐ - ESVS 30	466	EMI Test Receiver	Rohde & Schwarz	833825/003

Remarks: _____

Emissions Test Conditions: RADIATED EMISSIONS (Electric Field)

The **RADIATED EMISSIONS (ELECTRIC FIELD)** measurements, in the frequency range of 30 MHz-1000 MHz, were tested in a horizontal and vertical polarization at the following test location :

■ - Test not applicable

- ☐ - Roof (Small Open Area Test Site)
- ☐ - Canyon #1 (10- and 30-Meter Open Area Test Site), Carroll Canyon, San Diego
- ☐ - Canyon #2 (3- and 10-Meter Open Area Test Site), Carroll Canyon, San Diego

Testing was performed at a test distance of :

- ☐ - 3 meters
- ☐ - 10 meters
- ☐ - 30 meters

Test Equipment Used :

	Model No.	Prop. No.	Description	Manufacturer	Serial No.
☐ -	NM-37/57A	420	QATS measurement set (Roof)	Eaton/Aitech	0561-09261
	CCA-7	373			0773-03117
☐ -	NM-37/57	171	QATS measurement set (Canyon)	Eaton/Aitech	0709-82078
	CCA-7	172			0187-0322
☐ -	HFH 2-Z	208	Antenna, Loop	Rohde & Schwarz	880
☐ -	3104	235	Antenna, Biconical	EMCO	3031
☐ -	3110	451	Antenna, Biconical	EMCO	1378
☐ -	94455-1	251	Antenna, Biconical	Eaton/Aitech	0811
☐ -	3110B	491	Antenna, Biconical	EMCO	9508-2
☐ -	CBL6111	460	Antenna, Bilog	Chase	1013
☐ -	CBL6111	461	Antenna, Bilog	Chase	1291
☐ -	3146	242	Antenna, Log Periodic Dipole	EMCO	1597
☐ -	3146	243	Antenna, Log Periodic Dipole	EMCO	106X
☐ -	3146	244	Antenna, Log Periodic Dipole	EMCO	1063
☐ -	7405	570	Loop Probes	EMCO	9104-1959
☐ -	8566B	404	Spectrum Analyzer	Hewlett Packard	2311A02209
☐ -	85662B	406	Spectrum Analyzer Display	Hewlett Packard	2309A04682
☐ -	ESVS 30	427	EMI Test Receiver	Rohde & Schwarz	830350/006
☐ -	ESVS 30	466	EMI Test Receiver	Rohde & Schwarz	833825/003

Remarks: _____

Emissions Test Conditions: INTERFERENCE POWER

The **INTERFERENCE POWER** measurements were performed by using the absorbing clamp on the mains and interface cables in the frequency range 30 MHz - 300 MHz at the following test location :

■ - Test not applicable

- ☐ - SR-2, Shielded Room, 12' x 24' x 10', Metal Chamber
- ☐ - SR-3, Shielded Room, 12' x 20' x 8', Metal Chamber
- ☐ - SR-4, Shielded Room, 10' x 17' x 8', Copper Screen Chamber
- ☐ - SR-5, Shielded Room, 16' x 28' x 15', Metal, Semi-Anechoic Chamber
- ☐ - CSR-1, Shielded Room, 10' x 7' x 7', Metal Chamber

Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.
☐ - MDS-21	277	Absorbing Clamp	Rohde & Schwarz	821023
☐ - NM-7A, NM-17/27, NM-37/57, NM-67, CCA-7, & H/P 9836 HP-1B Computer	156, 162-168	Automated RFI Measurement System (ARMS), NO. 1	Eaton/Ailtech	(multiple)
☐ - NM-17/27, NM-37/57, CCA-7, & H/P 9826 Computer	168, 170, 171, 178	Automated RFI Measurement System (ARMS), NO. 2	Eaton/Ailtech	(multiple)
☐ - H/P Spectrum Analyzer, Model 8566B, Display Section RF Analyzer Section, H/P 85650A, Quick-Peak Adapter H/P Computer System, Model 310 with H/P 85869A Software	187, 188	Automated RFI Measurement System (ARMS)	Hewlett Packard	2304A04531 2304A02500 2811A01325
☐ - ESVS 30	427	EMI Test Receiver	Rohde & Schwarz	830350/006
☐ - ESVS 30	466	EMI Test Receiver	Rohde & Schwarz	830350/003

Remarks: _____

Emissions Test Conditions: CONDUCTED EMISSIONS (FCC Part 2, Paragraphs 2.985, 2.989, 2.991 and Part 90, Paragraph 90.210)

The EQUIVALENT RADIATED EMISSIONS measurements were performed at the following test location :

☐ - Test not performed

- ☐ - SR-2, Shielded Room, 12' x 24' x 10', Metal Chamber
- ☐ - SR-3, Shielded Room, 12' x 20' x 8', Metal Chamber
- ☐ - SR-4, Shielded Room, 10' x 17' x 8', Copper Screen Chamber
- ☐ - SR-5, Shielded Room, 16' x 28' x 15', Metal, Semi-Anechoic Chamber
- ☒ - TR-1, Test Room

Test Equipment Used :

Model No.	Prop. No.	Description	Manufacturer	Serial No.
■ - 8566B	407	Spectrum Analyzer	Hewlett Packard	2311A02209
□ - 85662B	406	Spectrum Analyzer Display	Hewlett Packard	2309A04682
□ - 3115	453	Antenna, Double Ridge Guide	EMCO	9412-4363
■ - 8491A	562	Attenuator (6 dB)	Hewlett Packard	----
■ - IN100W	--	Attenuator (30 dB)	Inmet	--

Remarks: _____

Equipment Under Test (EUT) Test Operation Mode - Emissions Tests :

The equipment under test was operated under the following conditions during emissions testing:

- ☐ - Standby
- ☐ - Test Program (H - Pattern)
- ☐ - Test Program (Color Bar)
- ☐ - Test Program (Customer Specified)
- ☐ - Practice Operation
- ☐ - Normal Operating Mode
- ☒ - Transmit - full power

Configuration of the equipment under test:

- ☐ - See Constructional Data Form in Appendix B - Page B2
- ☒ - See Product Information Form(s) in Appendix B - Page B2

The following peripheral devices and interface cables were connected during the testing:

- | | |
|---|----------------|
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - _____ | Type : _____ |
| ☐ - unshielded power cable | |
| ☐ - unshielded cables | |
| ☐ - shielded cables | MPS.No.: _____ |
| ☐ - customer specific cables | |
| ☐ - _____ | |
| ☐ - _____ | |

Emissions Test Results:

Conducted Emissions, 10/150/450 kHz - 30 MHz

☐ - PASS ☐ - FAIL ☒ - NOT APPLICABLE

Radiated Emissions (FCC Part 2, Para. 2.993 & Part 90, Para. 90.210)

☒ - PASS ☐ - FAIL ☐ - NOT APPLICABLE

Radiated Emissions (Electric Field), 30 MHz - 1000 MHz

☐ - PASS ☐ - FAIL ☒ - NOT APPLICABLE

Interference Power at the Mains and Interface Cables, 30 MHz - 300 MHz

☐ - PASS ☐ - FAIL ☒ - NOT APPLICABLE

Equivalent Conducted Emissions (FCC Part 2, Paragraphs 2.985, 2.989, 2.991 and Part 90, Paragraph 90.210)

☒ - PASS ☐ - FAIL ☐ - NOT APPLICABLE

GENERAL REMARKS:

SUMMARY:

All tests according to the regulations cited on page 3 were

■ - Performed

□ - Not Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements cited on page 3.

□ - **Does not** fulfill the general approval requirements cited on page 3.

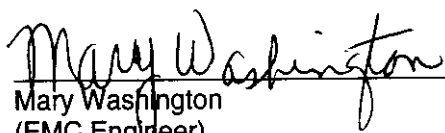
Statement of Measurement Uncertainty

The data and results referenced in this document are true and accurate. There may be some degree or level of measurement uncertainty. As EN 45001 does not allow recommendations to be included in the test report, the reader is encouraged to request a copy of the TÜV policy concerning pass or fail judgment with respect to possible measurement uncertainties.

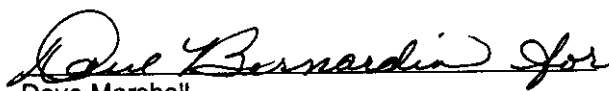
Equipment Received Date: 14 May 1998
Testing Start Date: 14 May 1998
Testing End Date: 22 May 1998

- TÜV PRODUCT SERVICE, INC. -

Responsible Engineer:


Mary Washington
(EMC Engineer)

Responsible Test Engineer:


Dave Marshall
(EMC Test Engineer)

Technical Documentation

Test Data Sheets
and
Test Setup Drawing(s)

NOTES: OTHER: 251

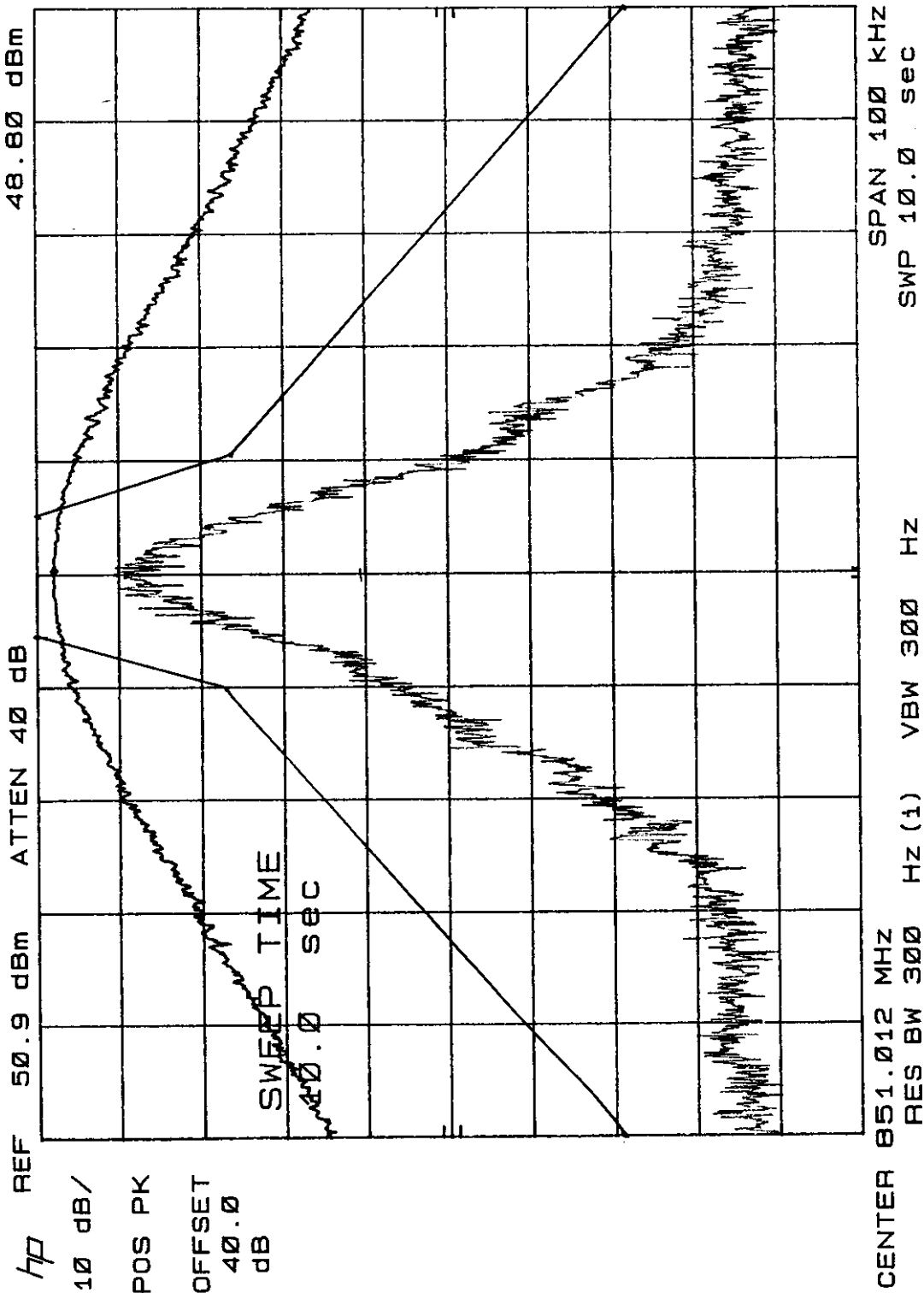
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CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Low Channel

DATE: 14 May 1998
SPECIFICATION: FCC Part 2, Para. 2.989, 2.991, Part 90, Para. 90.210

REPORT No: S8239

MARKER 851.012 3 MHz
48.80 dBm



CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Low Channel

W/KR	219.0 msec
	49.10 dBm

REF 56.0 GBM ATTEN 30 GB

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854.037	979	MHZ
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0000

CENTER 851.027 979 MHz
RES BW 30 KHZ (1) VBW 1 MHz
SPAN 0 SWP 500 msec

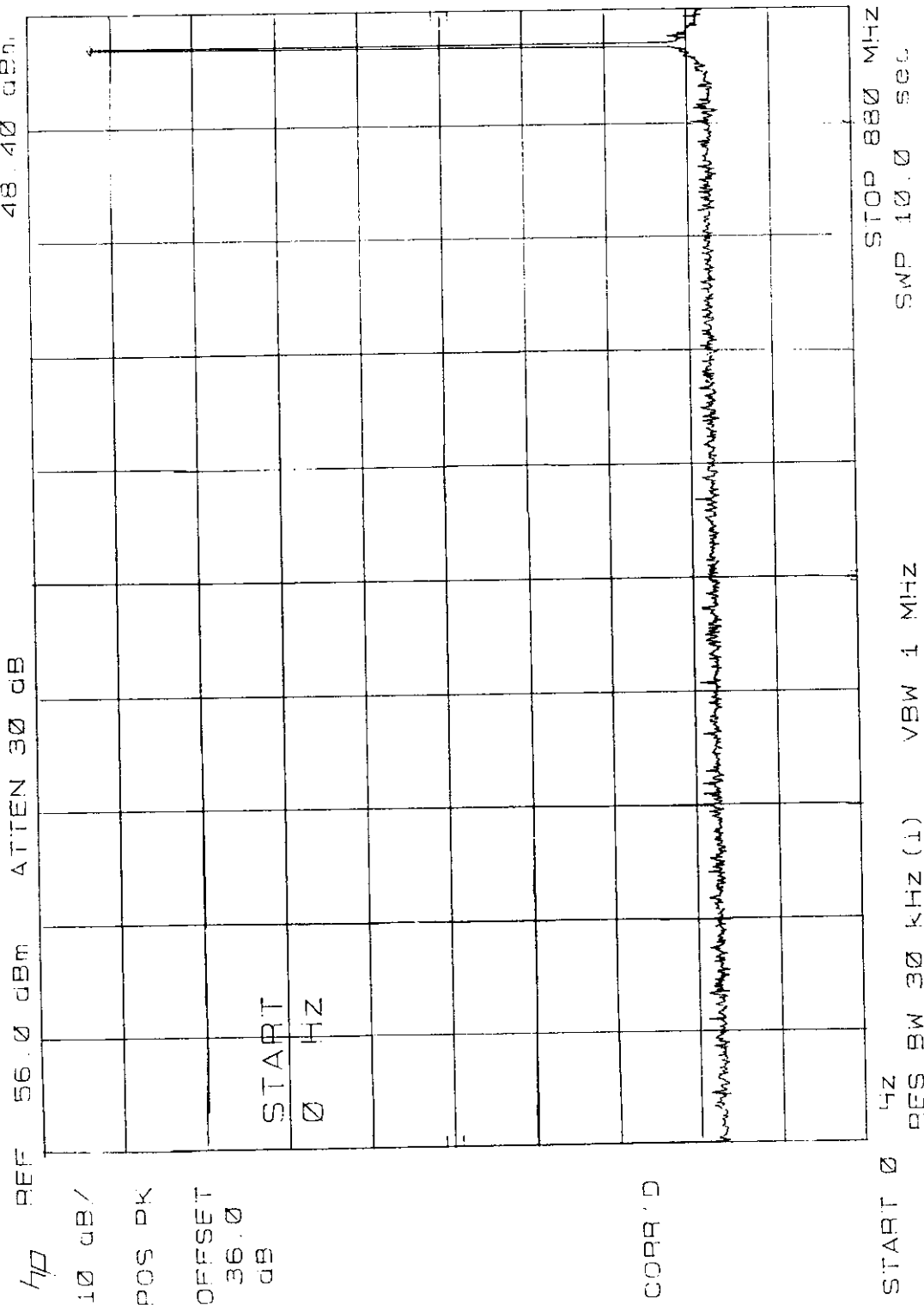
CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Low Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

MARK 852.7 MHz
48.40 dBm



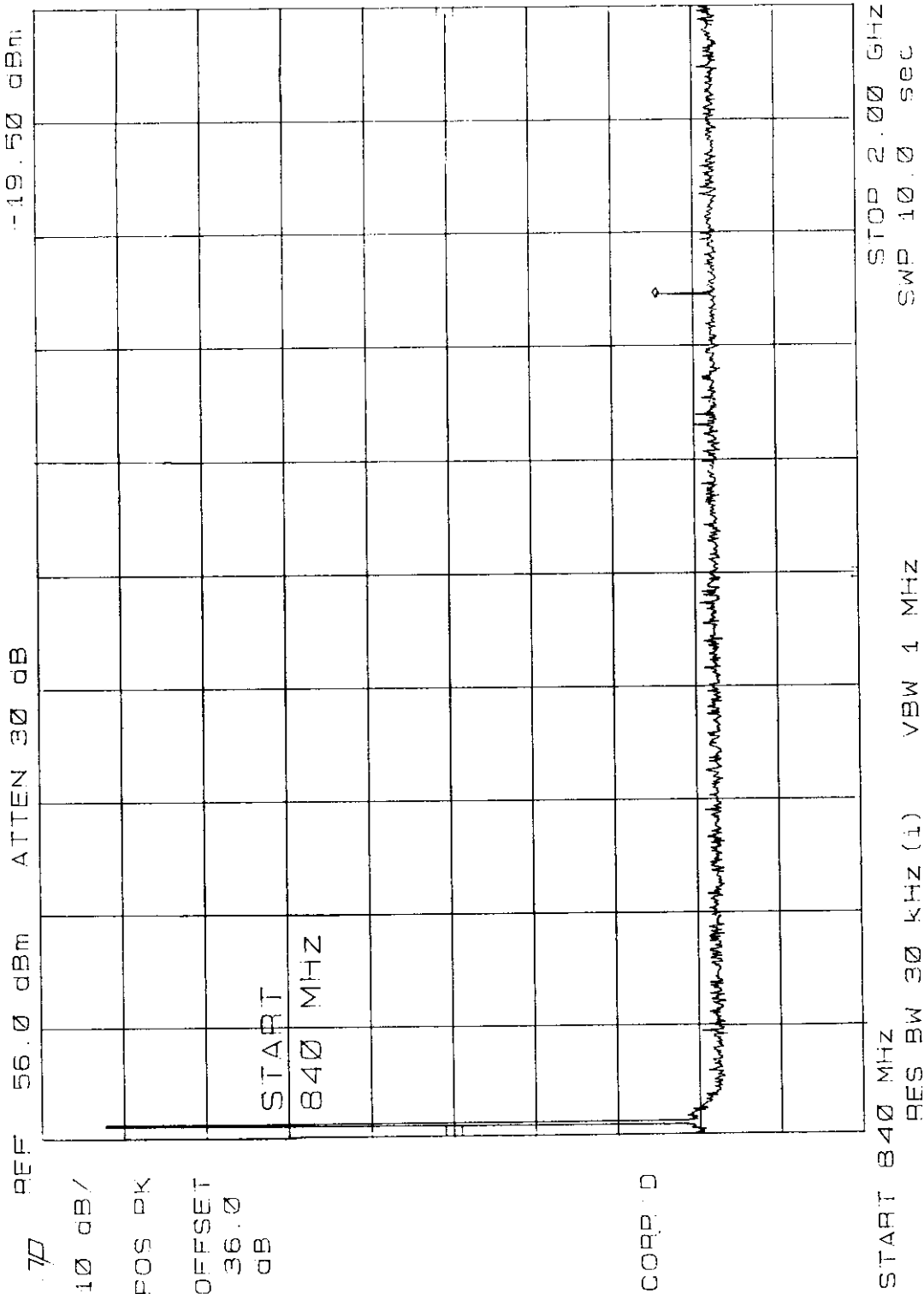
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EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Low Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

MKR 1.705 GHz
-19.50 dBm



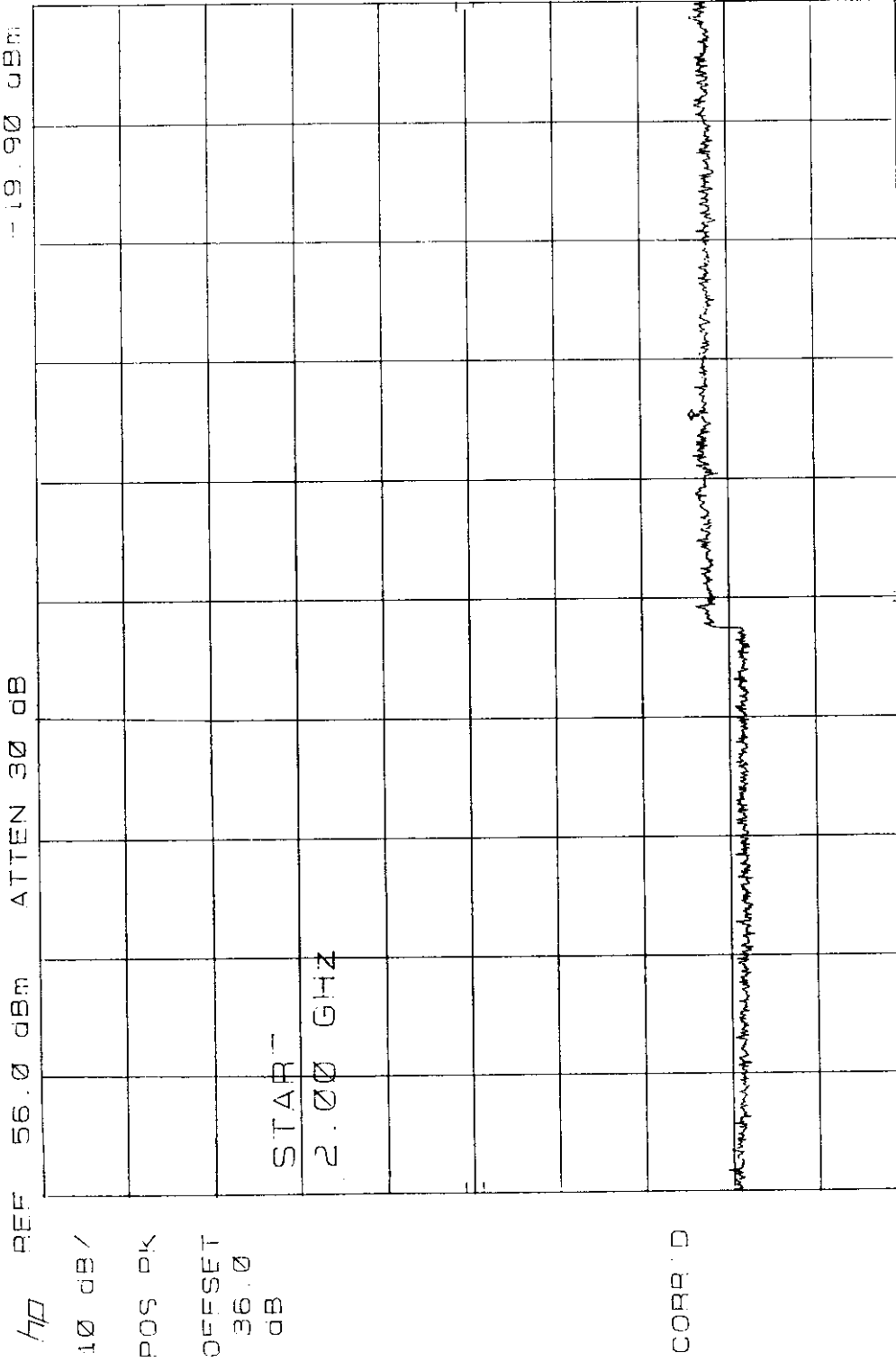
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NOTE(s): Low Channel

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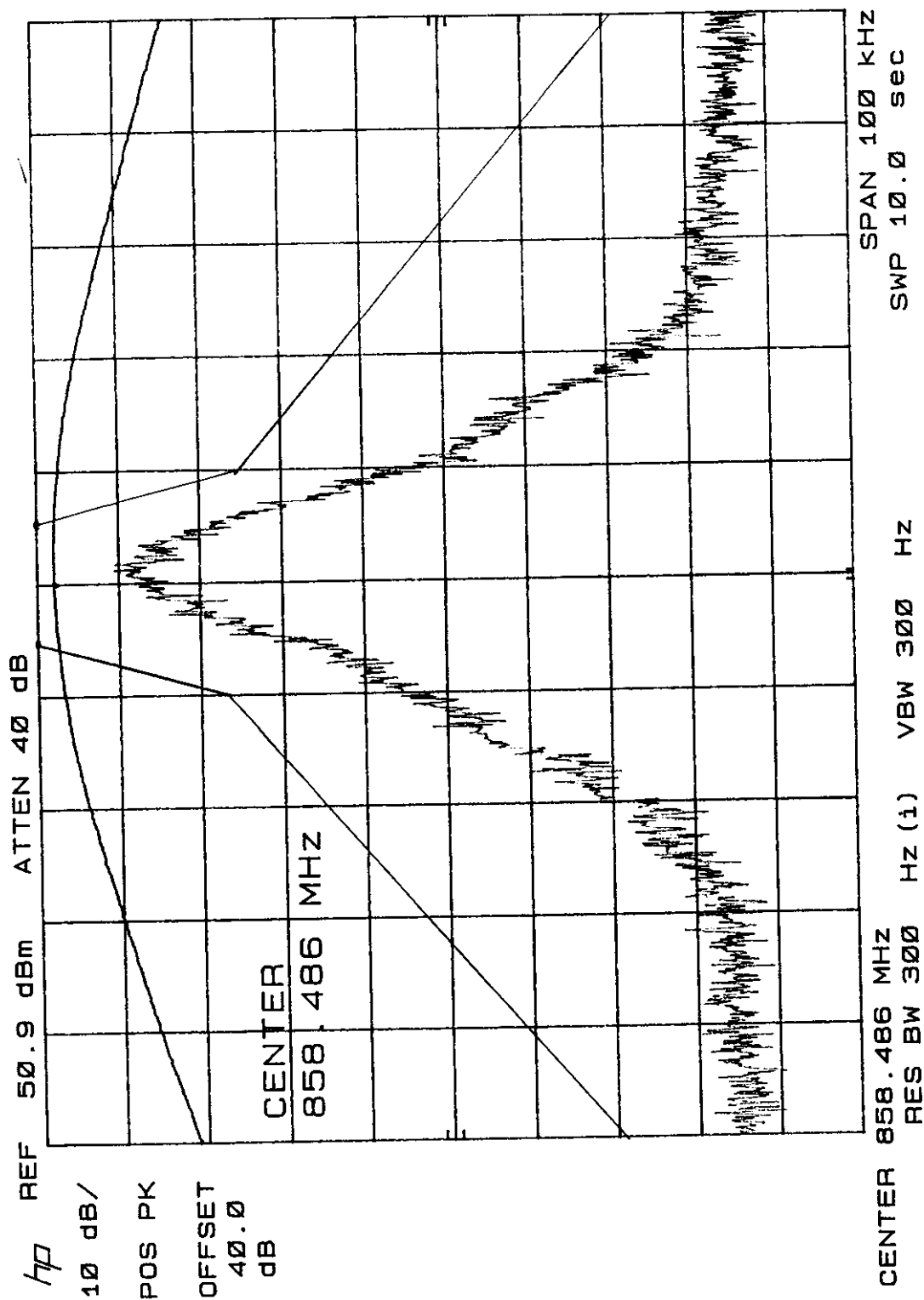
SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

MKR 7.224 GHz
-19.90 dBm



START 2.00 GHz
RES BW 30 KHZ (1)
VBW 1 MHZ
STOP 10.00 GHz
SWF 100 sec

CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Mid Channel
DATE: 14 May 1998
REPORT No: S8239
SPECIFICATION: FCC Part 2, Para. 2.989, 2.991, Part 90, Para. 90.210



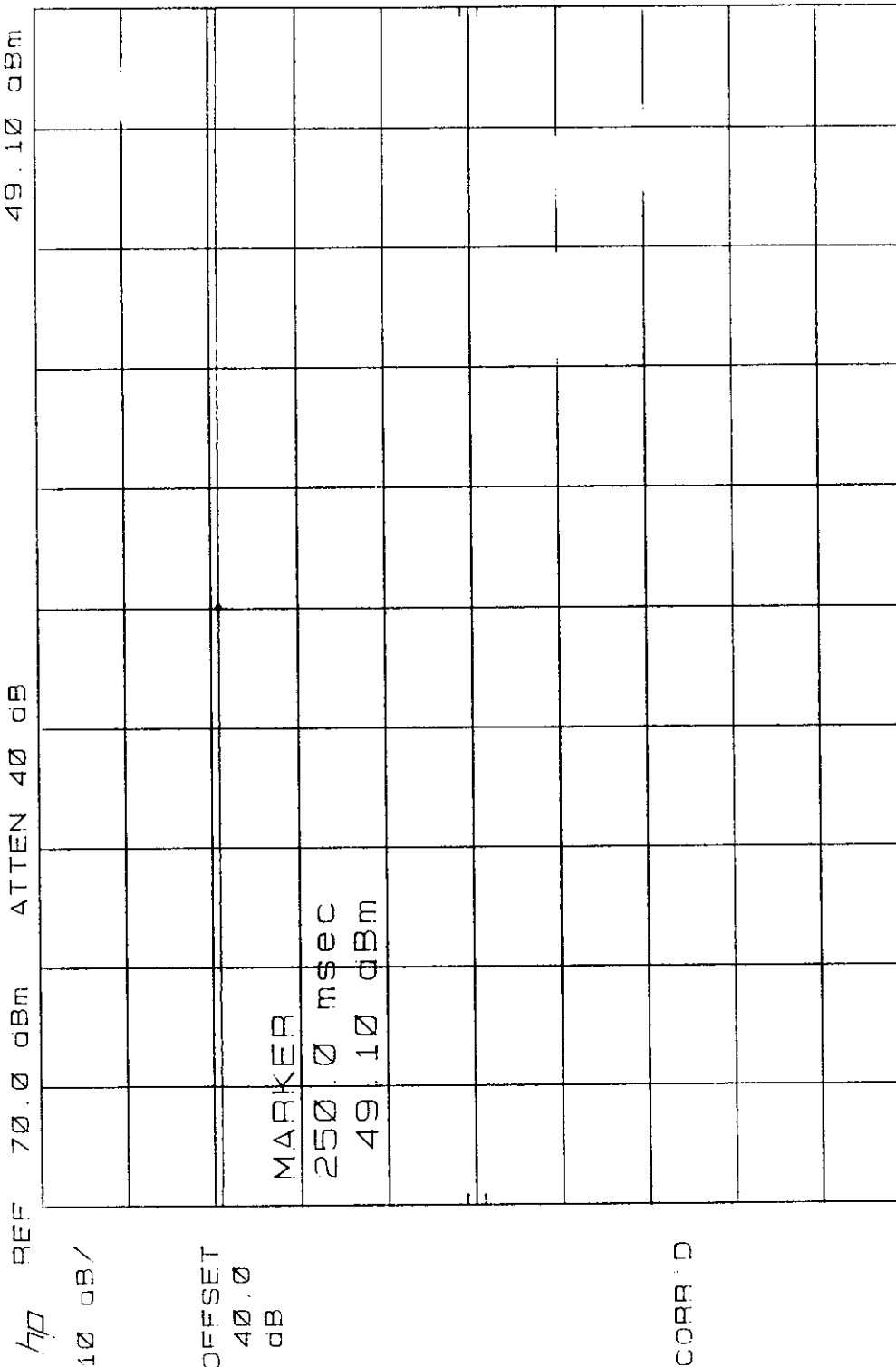
CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Mid Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.985

MARK 250.0 msec
49.10 dBm



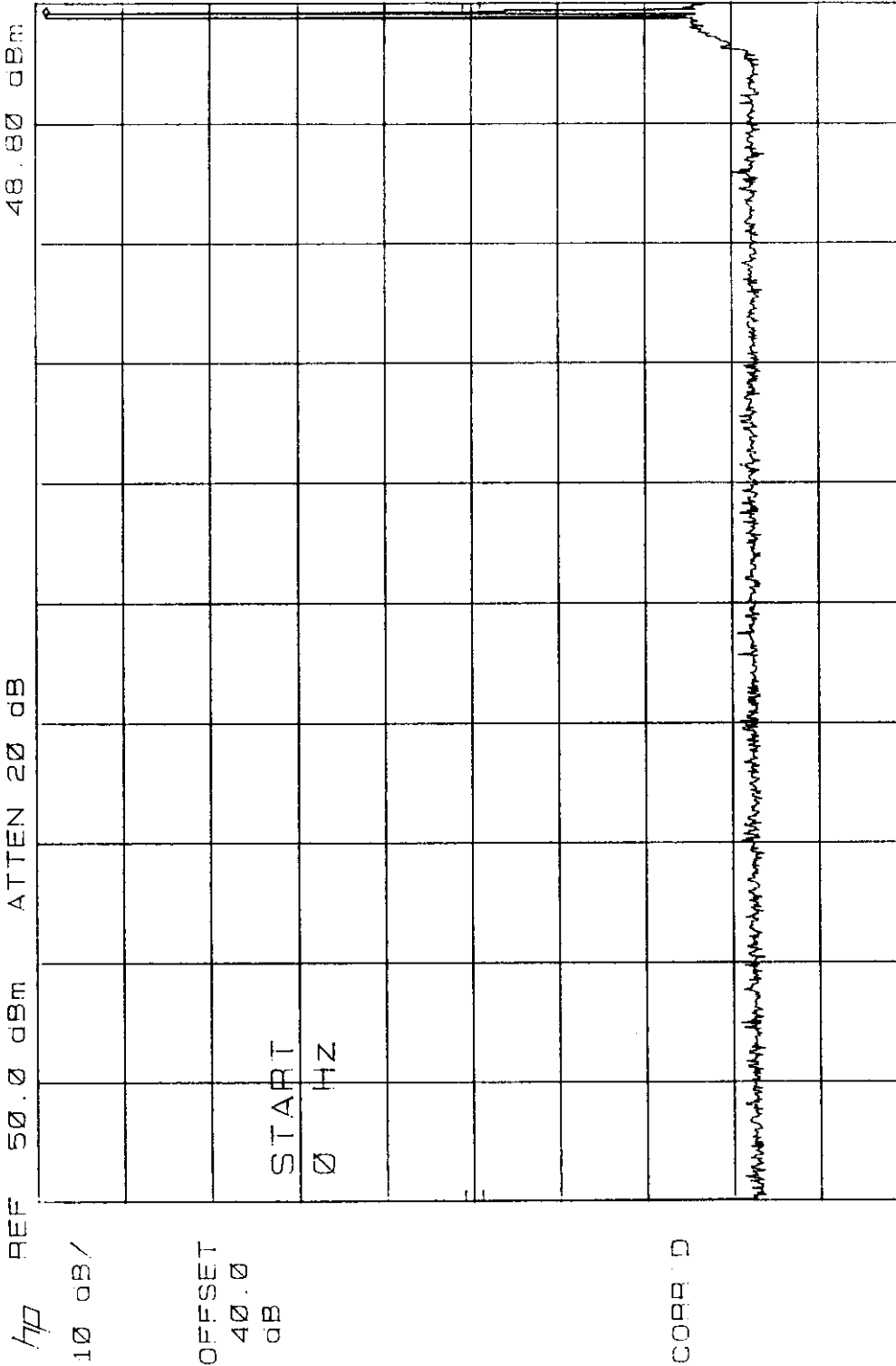
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EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Mid Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

MKR 863.0 MHz
48.80 dBm



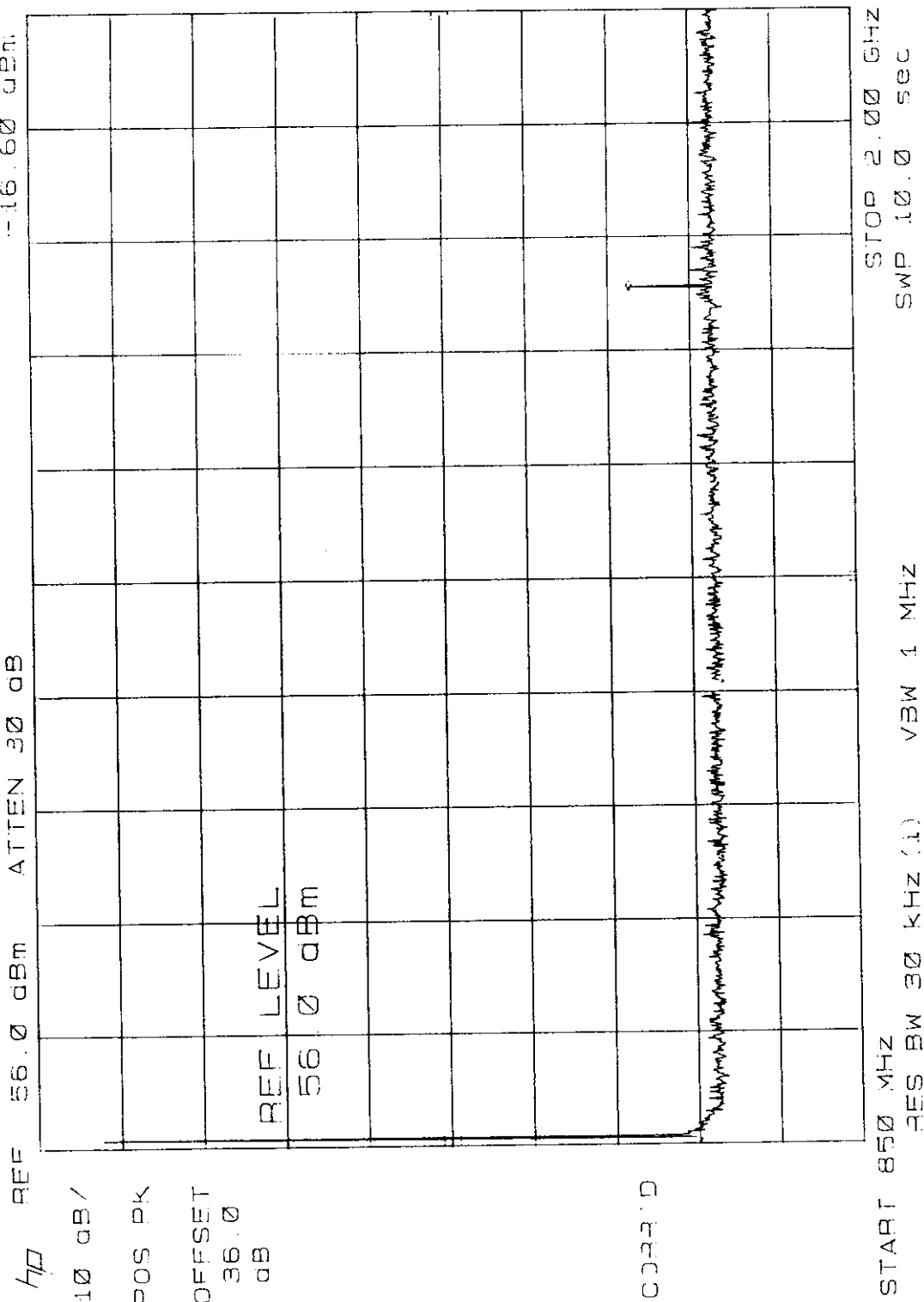
CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Mid Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

Mk B 1.719 GHz
-16.60 dBm



CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): Mid Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

MKR 9.672 GHz
-19.90 dBm

ATTEN 30 dB

REF 56.0 dBm

HP

10 dB/

POS PK

OFFSET

36.0

dB

START
2.00 GHz

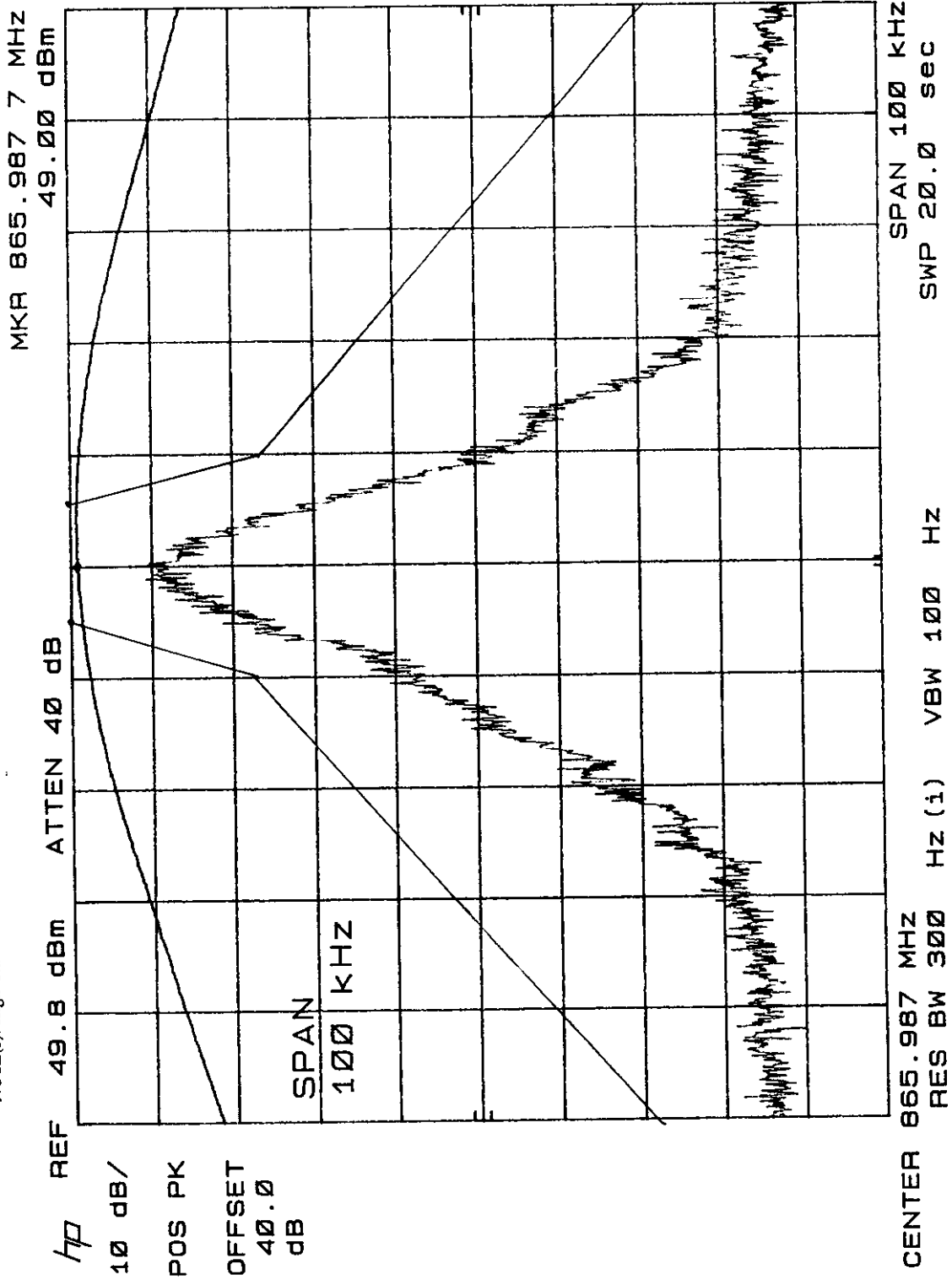
CORR'D

START 2.00 GHz
RES BW 30 KHz (1)
VBW 1 MHz
STOP 10.00 GHz
SWP 100 sec

CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): High Channel

DATE: 14 May 1998
SPECIFICATION: FCC Part 2, Para. 2.989, 2.991, Part 90, Para. 90.210

REPORT No: S8239

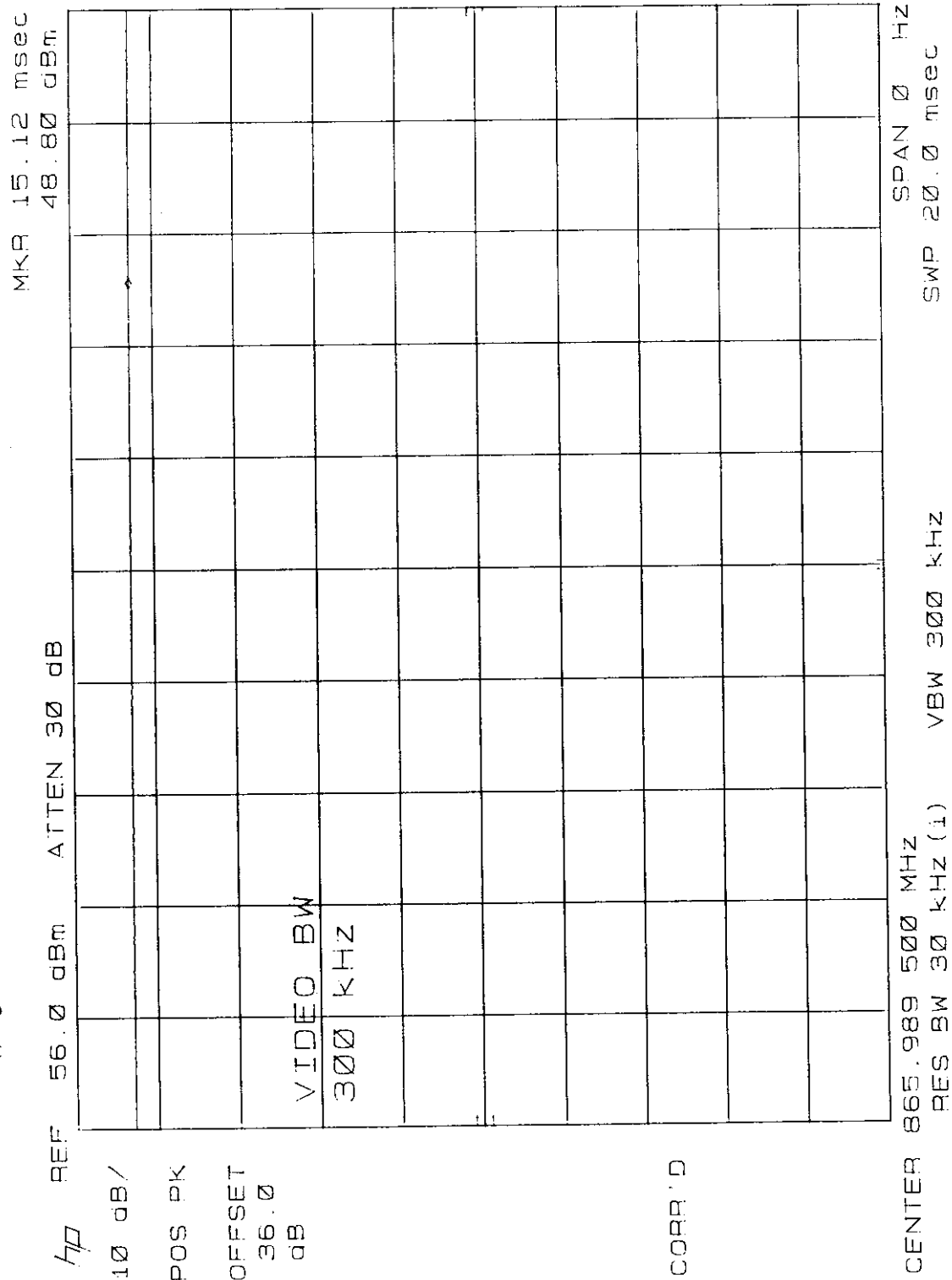


CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): High Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.985

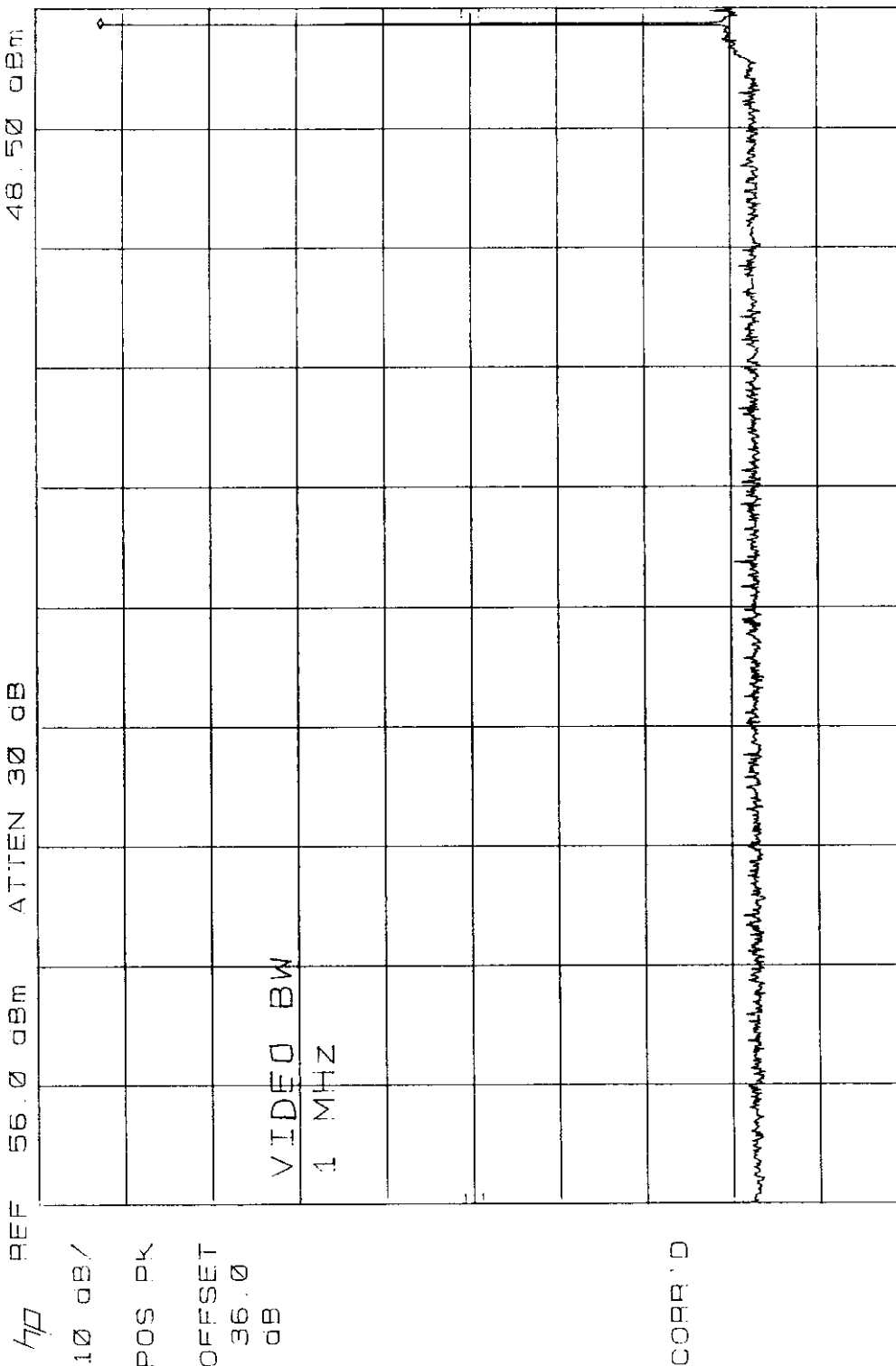


CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): High Channel

DATE: 22 May 1998
SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

REPORT No: S8239

MK.P 868.6 MHz
48.50 dBm



START 0 HZ
RES BW 30 KHZ (1)
VBW 1 MHz
STOP 880 MHz
SWP 10.0 sec

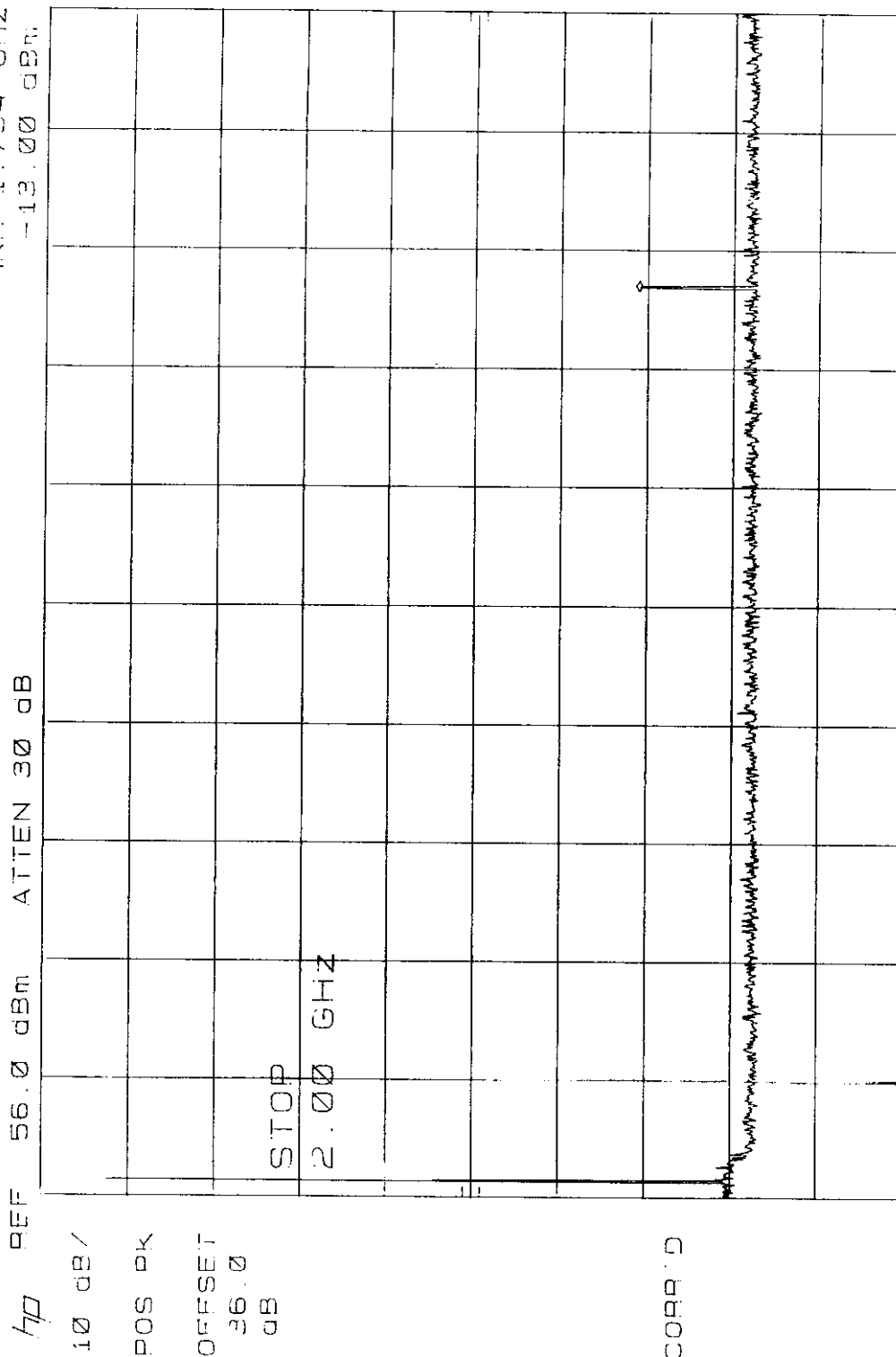
CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): High Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para.2.991, Part 90, Para. 90.210

MkP: 1.734 GHz
-13.00 dBm



START 850 MHz
RES BW 30 kHz (1)
VBW 1 MHz
STOP 2.00 GHz
SWP 10.0 sec

CUSTOMER: ADC WIRELESS SYSTEMS
EUT: Dual Unit Compact Voice and Mobil Data Base Station
NOTE(s): High Channel

DATE: 22 May 1998

REPORT No: S8239

SPECIFICATION: FCC Part 2, Para. 2.991, Part 90, Para. 90.210

NK 8.152 GHz
-21.20 dBm

REF 56.0 dBm ATTN 30 dB

10 dB/

POS PK

OFFSET

36.0
dB

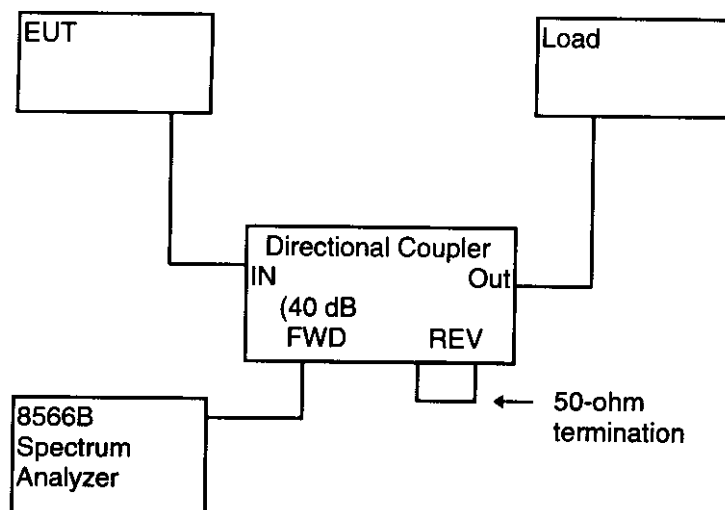
SWEEP TIME

100 sec

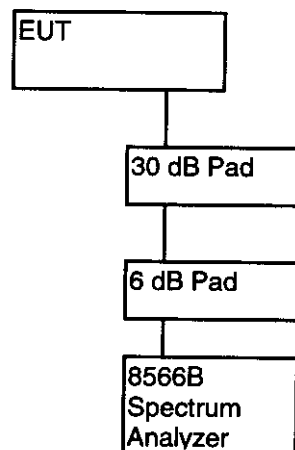
CORR'D

START 2.00 GHz
RES BW 30 kHz (1)
VBW 1 MHz
STOP 10.00 GHz
SWP 100 sec

Test Setup for FCC Part 2, 2.985, 2.989, 2.991, and Part 90, Paragraph 90.210



AND



Appendix A

Test Setups
(Photographs)



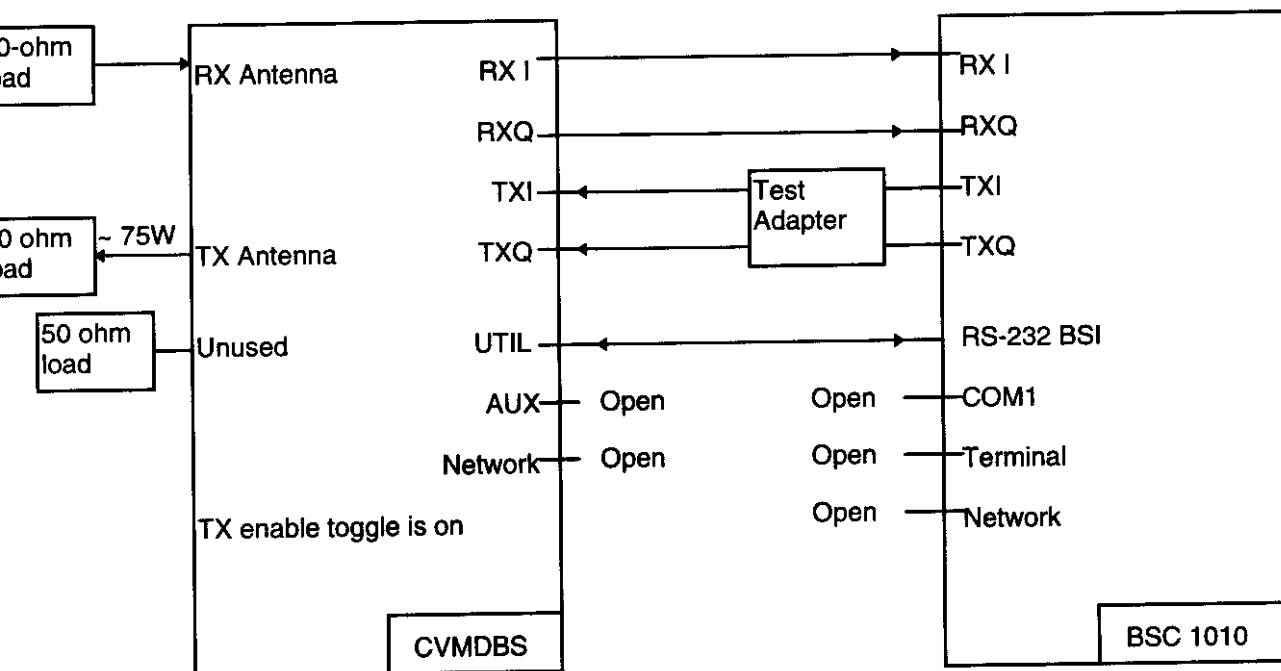


Appendix B

Product Information Form(s)

CUSTOMER INFORMATION			
COMPANY NAME:	ADC WIRELESS SYSTEMS		
COMPANY ADDRESS:	9645 Scranton Road		
	San Diego, CA 92121		
PHONE NUMBER:	619 642 7481		
FAX NUMBER:	619 550 0279		
CUSTOMER CONTACT:	Peter Kokenis		
PRODUCT DESCRIPTION			
NAME, MODEL, SERIAL # OF EUT:	Dual Unit Compact Voice and Mobil Data Base Station, Model CVMDBS, S/N Eng 001		
DESCRIPTION OF EUT:	Compact Voice and Mobile Data Base Station (CVMDBS). Operates in SMR band under Part 90. Provides both Tx and Rx functions using 4-level filtered FSK modulation at 9.6 k symbol rate. The base station operates in the same mode whether using voice or data. Voice is provided as digital information over a wire line to the CVMDBS. Actual modem functions provided by external BSC. The CVMDBS is just a digital radio transceiver.		
Components of EUT			
Description	Model Number	Serial Number	FCC ID Number
Tx Sim 75W	293-245-012	056307018170003	N/A
Control computer	501-892-02	02360F018172442	N/A
PC/RX SIM	502-170	055707018180006	N/A
Mx	502-174	055405018170180	N/A
Chassis	502-179-1	056207018117006	NFRCVMDBS
OPERATING MODE(S):	Transmits a continuous data stream full duplex with the receive whether mobiles are present or not.		
I/O CABLES			
CONNECTION	Serial data "Aux" port		
SHIELD	Yes		
CONNECTORS	DB9		
TERMINATION TYPE	--		
LENGTH	5'		
REMOVABLE	Yes		
CONNECTION	Serial data "UTIL" port		
SHIELD	Yes		
CONNECTORS	DB9		
TERMINATION TYPE	--		
LENGTH	5'		
REMOVABLE	Yes (only used for setup)		
CONNECTION	Network port		
SHIELD	yes		
CONNECTORS	DB25		
TERMINATION TYPE	--		
LENGTH	10'		
REMOVABLE	Yes (not used for this product)		
CONNECTION	Rx antenna (LNA)		
SHIELD	yes coax		
CONNECTORS	TNC		
TERMINATION TYPE	50		
LENGTH	Variable		
REMOVABLE	Yes		

POWER CORDS				
UNIT:	CVMDBS			
MANUFACTURER:	--			
SHIELDED:	No			
LENGTH:	5'			
POWER INTERFACE				
FREQUENCY/AC/DC VOLTAGE:	60 Hz / 120 Vac			
PHASES/CURRENT:	1 / 4			
OSCILLATOR FREQUENCIES				
FREQUENCY	EUT LOCATION		DESCRIPTION OF USE	
10 MHz	Rear internal		Over reference oscil.	
POWER SUPPLY				
DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #	SWITCHING/LINEAR FREQ.
400 watt	SSI	SDS-400-24	Internal	SW
100 watt	IPD	SRW-100-4004-15	Internal	SW
POWER LINE FILTERS				
MANUFACTURER	MODEL NO.	QTY.	LOCATION ON EUT	
Corcom	10VSK	1	Rear access	
CRITICAL EMI COMPONENTS				
DESCRIPTION	MANUFACTURER	PART # OR VALUE	QTY.	LOCATION ON EUT
--				
DESCRIPTION OF ENCLOSURE:		Enclosure and modules material either aluminum sheet metal or aluminum and stainless steel. Conductive metal card guides. 7"H x 17.25"W x 15"D; weight is 45 lbs. Maximum; Finish: chem film, yellow.		
INTERFACING AND/OR SIMULATORS PERIPHERAL EQUIPMENT:				
DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #	FCC ID
BSC Base Station Controller	M/A Com	BSC 1010	181	--
Test Adapter	ADC	N/A	N/A	N/A
BLOCK DIAGRAM:		See page B4.		



Approximately 4 minutes to boot CVMDBS

- All power LEDs green
- STAT 0 on cc blink 1 Hz
- STAT 2 on cc blink 1 Hz
- On line LED MX on blinking
- Code LED MX on blinking

Appendix C

Change History

Not Applicable

Appendix D

Supplemental Information

Not Applicable

FCC ID: NFRCVMDBS

**EXHIBIT 2
USER'S GUIDE**