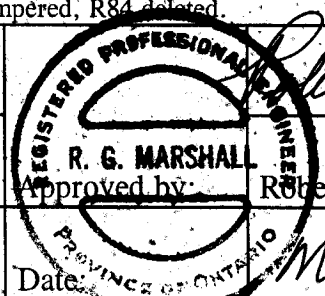


Marstech Limited

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

TEST REPORT

REPORT DATE:	22 March 1999	REPORT NO:	99053D
CONTENTS:	See Table of Contents		
SUBMITTOR:	THOMSON CONSUMER ELECTRONICS, INC. Audio & Communications Product Dev. 101 West 103rd Street Indianapolis, IN 46290-1102 USA		
SUBJECT:	Model No: 26730XXX-A FCC ID: G9H26730		
TEST SPECIFICATION	FCC CFR 47 15.233 AND 2.989 Sections: 15.35, 15.107, 15.109, 15.207 and 15.209 NOTE: Tests Conducted Are "Type" Tests.		
DATE SAMPLE RECEIVED:	1 March 1999	DATE TESTED:	2, 3, 9 & 10 March 1999
RESULTS:	Equipment tested complies with referenced specification.		
ALTERATIONS	The following alterations are required for compliance with referenced specification: (1) <u>Handset</u> : R21, 22K Ω was changed to 15K Ω . (2) <u>Base Unit</u> : R81 resistor jumpered, R84 deleted.		
Tested by:	Original signed by: Jim Sims <i>Hiran De Silva</i> Ed. Chang Hiran De Silva	 Approved by: Robert G. Marshall, P. Eng. Date: Mar 29/99	

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.

Authorized by:
Professional Engineer
Ontario

Engineering &
Administrative



Testing For FCC
Submissions/Verifications

Approved Test Facility



TECHNICAL REPORT - FCC 2.1033(b)

Applicant

Thomson Consumer Electronics, Inc.
Audio & Communications Product Dev.
101 West 103rd Street
Indianapolis, IN
46290-1102 USA

FCC Identifier

G9H26730

Manufacturer

Integrated Display Technology Ltd.
Block D, Xixian Chen Tian Industrial Estate
Xixian Town, Baoan City
China

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<u>Exhibit 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)
B Description of Circuit Functions	2.1033(b)(4)	Exhibit B Exhibit B(1)
C Block Diagram Schematic Diagram	2.1033(b)(5)	Exhibit C Exhibit C(1)-1 to -2 Exhibit C(2)-1 to -2
D Report of Measurements Device Measured Test Facility and Equipment Test Results and Methods	2.1033(b)(6)	Exhibit D Exhibit D(1)-1 Exhibit D(2)-1 to -3 Exhibit D(3)-1 to -26
E Photographs Label Equipment	2.1033(b)(7)	Exhibit E Exhibit E(1)-1 to -2 Exhibit E(2)-1 to -6

EXHIBIT D

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

"Report of Measurements"

EXHIBIT D(1)

DEVICE MEASURED

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

APPLICANT:

Thomson Consumer Electronics, Inc.
Audio & Communications Product Dev.
101 West 103rd Street
Indianapolis, IN
46290-1102 USA

MANUFACTURER:

Integrated Display Technology Ltd.
Block D, Xixian Chen Tian Industrial Estate
Xixian Town, Baoan City
China

FCC IDENTIFIER:

G9H26730

MODEL NUMBER:

26730XXX-A

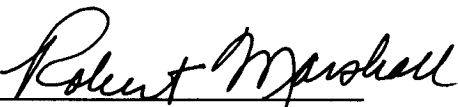
SERIAL NO.:

Not Marked

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

TECHNICIANS:

Jim Sims - Com-Serve Corp.
Edward Chang - Marstech Limited
Hiran De Silva - Marstech Limited


Robert G. Marshall, P. Eng.

Date: Mar 29/99

EXHIBIT D(2)

TEST FACILITY AND EQUIPMENT LIST

FACILITIES

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

Conducted 2.5m Anechoic Chamber

EQUIPMENT

Hewlett-Packard spectrum analyzer # 8554 RF & 141T video.
Anritsu 2601 A spectrum analyzer.
Advantest R3261A Spectrum Analyzer
Hewlett-Packard RF generator # 8640 B with an 002 doubler
Hewlett-Packard attenuator 30 dB # 11708A.
Narda 20 watt (20 dB) attenuator
Compliance Design P950 Preamp (16 dB)..... 25 MHZ -1.0 GHZ
A.H. Systems biconical antenna; 20 MHZ - 330 MHZ
A.H. Systems log periodic antenna; 300 MHZ - 1.8 GHZ
Eaton dipole antennas; T1, T2, T3 25 MHZ - 1.0 GHZ
CDI Roberts dipole antennas; T1, T2, T3 & T4.....25 MHZ - 1.0 GHZ

NOTE:

The Anritsu 2601 A spectrum analyzer, the Hewlett-Packard 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 meter test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2060

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

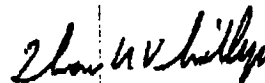
Re: Measurement facility located at Roseville
(3 meter site)

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

FCC ID: G9H26730
Marstech Report No. 99053D
EXHIBIT D(2)-2

EXHIBIT D(2)

SPECTRUM ANALYZER -	ANRITSU MS2601A S/N MT64544 - NEXT CALIBRATION APRIL 1999
MULTIMETER -	FLUKE 75
POWER SUPPLY -	IN HOUSE
OVEN -	IN HOUSE
FREEZER -	IN HOUSE

SUMMARY OF RESULTS

COMPLIANCE
(yes) (no)

FIELD STRENGTH OF THE CARRIER FREQUENCIES

Handset:	48 MHz and 49 MHz bands	(x)	()
Base Station:	43/44 MHz and 46 MHz bands	(x)	()

OCCUPIED BANDWIDTH

Handset:	48 MHz and 49 MHz bands	(x)	()
Base Station:	43/44 MHz and 46 MHz bands	(x)	()

SPURIOUS RADIATED EMISSIONS

Handset:	48 MHz and 49 MHz bands	(x)	()
Base Station:	43/44 MHz and 46 MHz bands	(x)	()

LINE CONDUCTED SPURIOUS EMISSIONS

Base Station:	<u>Telephone Mode:</u>	(x)	()
	43/44 MHz and 46 MHz bands		

TRANSMITTER ENVIRONMENTAL TESTS

Handset:	(x)	()
Base Station:	(x)	()

EQUIPMENT REQUIREMENTS AND IDENTIFICATION

a) Manufacturers or applicants name:	(x)	()
b) FCC ID:	(x)	()
c) Serial number:	(x)	()
d) Antenna:	(x)	()
e) Operator controls:	(x)	()
f) Security Coding	(x)	()
g) Equipment/Packaging Marking	(x)	()

CARRIER FREQUENCY FIELD STRENGTH

RESULTS

Handset: **Maximum field strength of 5,961 μ V/M: Channel # 01**
Handset: **Maximum field strength of 4,649 μ V/M: Channel # 25**

Base Station:

Modes:

Telephone: **Maximum field strength of 9,802 μ V/M: Channel # 01**

Telephone: **Maximum field strength of 9,851 μ V/M: Channel # 25**

TEST CONDITIONS

Equipment Positioning:

Handset: vertical or upright

Base Station: standing on its back with the antenna extended in the vertical plane

Antenna Polarization:

Handset: vertical

Base Station: vertical

Antenna Type: T.1; tuned half wave dipole

Measurement Bandwidth: 100 KHz (IF)

Supply Voltages:

Handset: 3.6 VDC from an internal battery.

Base Station: 120 VAC/60 Hz to 12 VDC (adapter)

METHODS OF MEASUREMENT

The cordless phone components were placed in turn on a one metre high, non-metallic turntable. Measurements were made in a minimum of 3 positions for the handset and 2 for the base station. If adjustable, the whip antennas were fully extended.

For each of the above conditions the turntable was rotated through 360 degrees while the receiving antenna, at three (3) metres from the EUT, was varied in height from 1 to 4 metres and set in both planes of polarization to find the maximum signal strength. The unmodulated carrier level was measured using a spectrum analyzer and a substitution signal from an RF generator. The measured level was converted to a field strength using the antenna correction factors and cable losses.

All base station measurements were made with the equipment under test connected to an artificial telephone line network, with 48 VDC applied.

RADIATED EMISSION RESULTS

BW: 100/120 KHz

Span: 5 to 50 MHz

HANDSET

TEST #	MODE	FREQ MHz BAND	LEVEL μV	ANT. TYPE (PZ)	ANT. FACT.	F.S. $\mu V/M$	LIMIT $\mu V/M$	DIFF. TO LIMIT; dB
CARRIER		48.760	4,168.7	RT.1 V	1.43	5961.2	10,000	-4.49
CARRIER		49.970	3,162.3	RT.1 V	1.47	4648.6	10,000	-6.65

BASE STATION

TEST #	MODE	FREQ MHz BAND	LEVEL μV	ANT. TYPE (PZ)	ANT. FACT.	F.S. $\mu V/M$	LIMIT $\mu V/M$	DIFF. TO LIMIT; dB
CARRIER		43.720	7,482.1	RT.1 V	1.31	9801.6	10,000	-0.17
CARRIER		46.970	7,243.3	RT.1 V	1.36	9850.9	10,000	-0.13

OCCUPIED BANDWIDTH RESULTS

RESULTS

The highest level emission resulting from the modulation process exceeding the specified frequency range of ± 10 KHz (20 KHz) over the carrier frequency was:

Handset:

Unmodulated carrier level: **-37.63 dB** (30 dB external pad) **Channel # 01**
Unmodulated carrier level: **-36.97 dB** (30 dB external pad) **Channel # 25**

- a) At the maximum frequency deviation at 2,500 Hz: Channel # 01
-73.18 dB at -12.5 KHz.
- b) At the maximum frequency deviation at 2,500 Hz: Channel # 25
-76.58 dB at +12.5 KHz.

Base Station:

Unmodulated carrier level: **-32.94 dB** (30 dB external pad) **Channel # 01**
Unmodulated carrier level: **-34.67 dB** (30 dB external pad) **Channel # 25**

Telephone:

- a) At the maximum frequency deviation at 2,500 Hz: Channel # 01
-71.93 dB at +12.5 KHz.
- b) At the maximum frequency deviation at 2,500 Hz: Channel # 25
-72.15 dB at +12.5 KHz.

METHODS OF MEASUREMENT

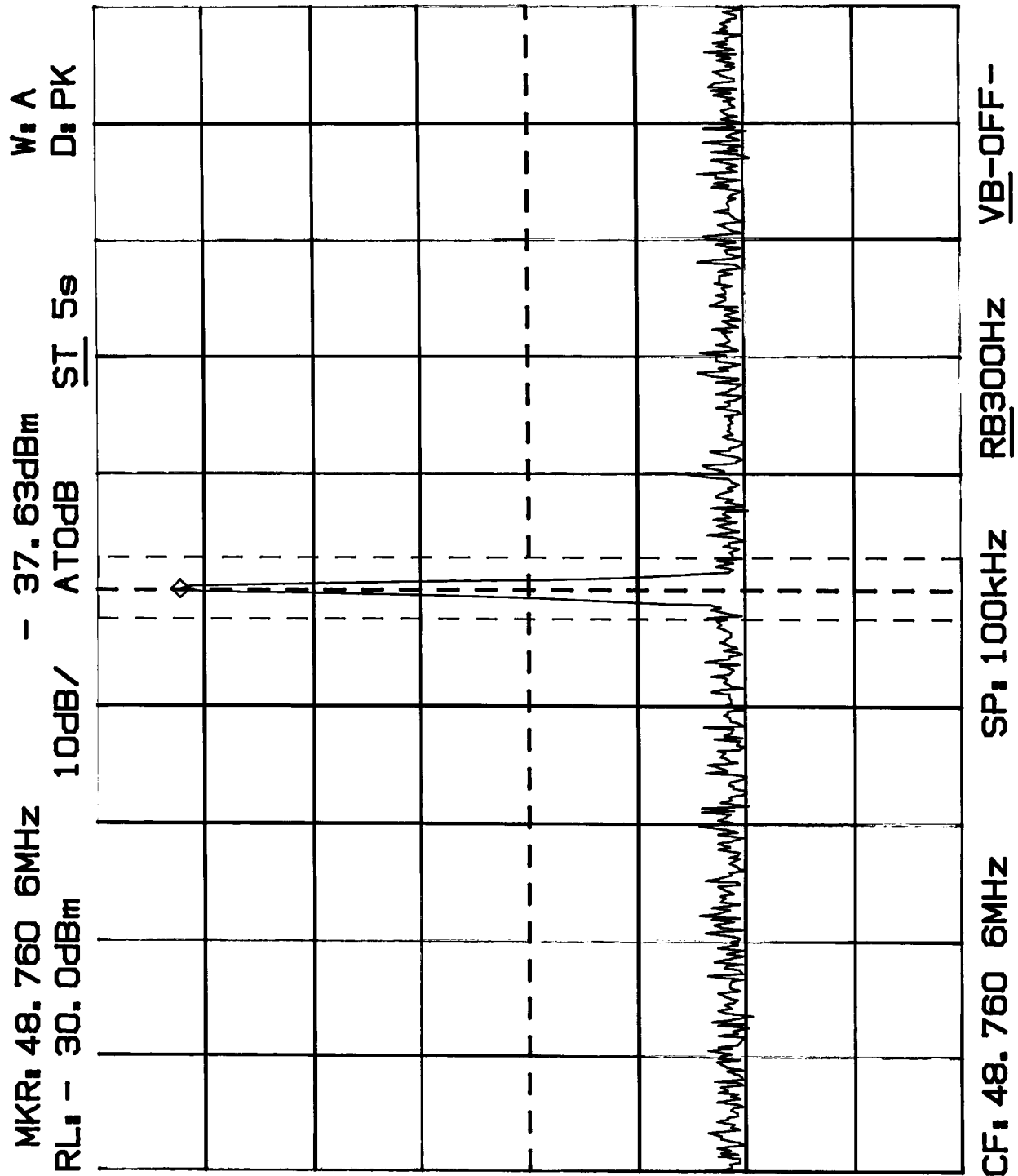
Each transmitter was operated in turn under the standard test conditions specified, and at the maximum output power. An external 2,500 Hz audio signal was coupled to the standard input port and adjusted to a level which produced 85% of the measured "Maximum Frequency Deviation". In this case, the base station and the handset modulation in-band emissions, meet the requirements at maximum frequency deviation. Levels for compliance have therefore been evaluated at these levels. Any internal modulation source that normally operates on a continuous basis was disabled.

A portion of the radio frequency power delivered by the transmitter into the standard output termination was coupled to a spectrum analyzer.

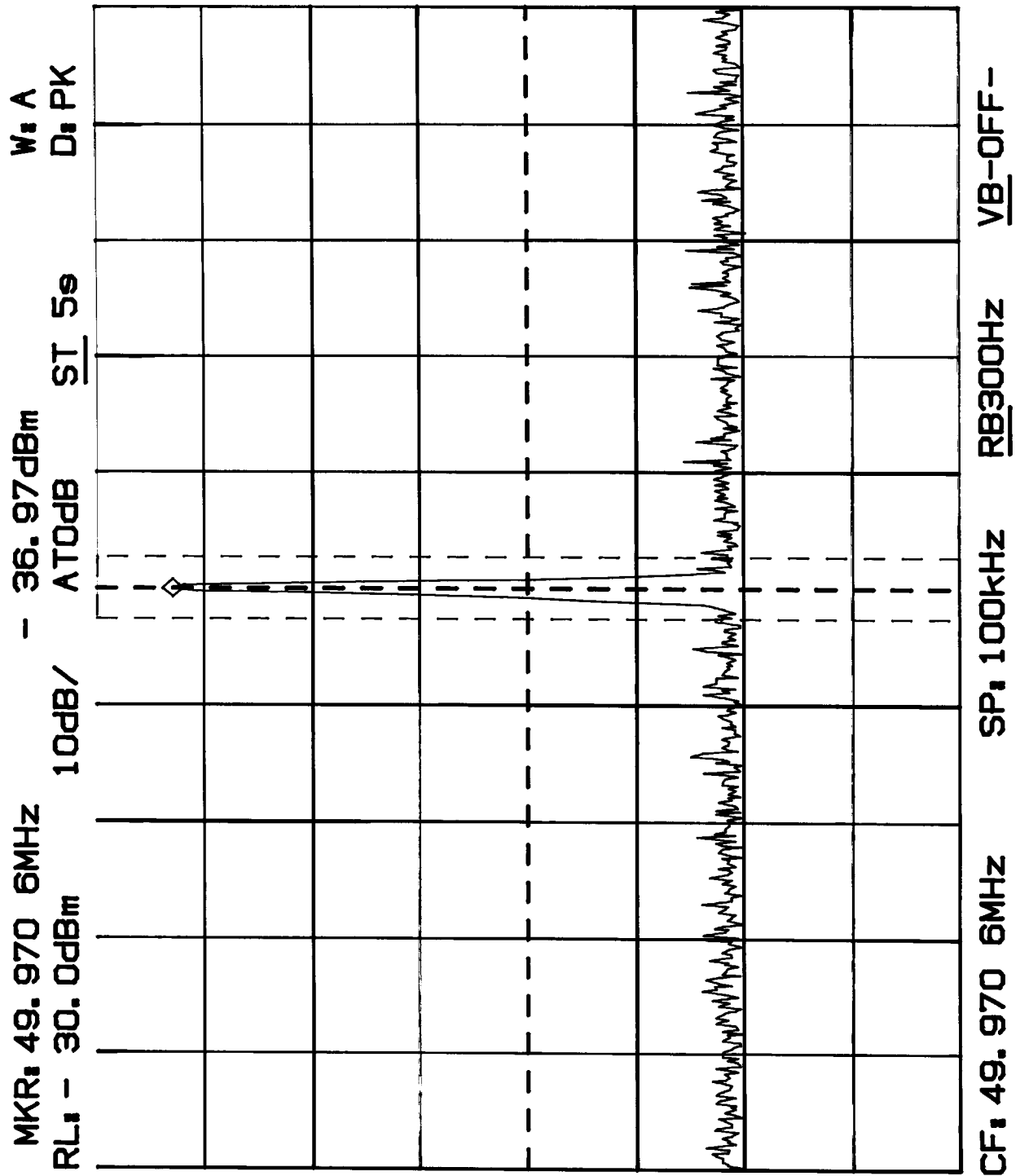
If the cordless telephone contained an internal modulation source that normally operates continuously or for more than three (3) seconds, then the above test was also repeated with the external 2,500 Hz disconnected.

Please refer to the attached results.

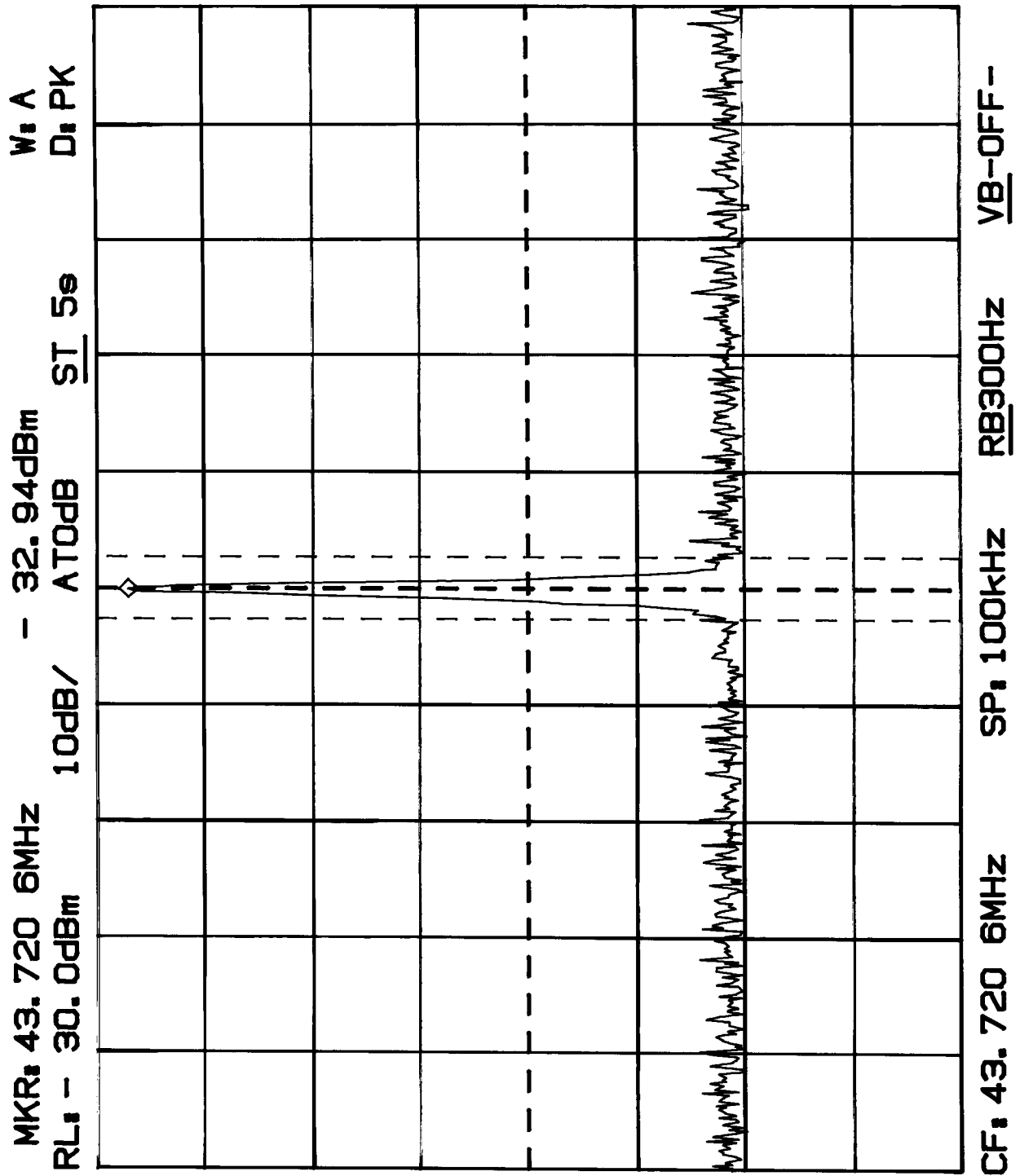
HANDSET; UNMODULATED CARRIER LEVEL
MODEL 26730XXX-A; Channel 1



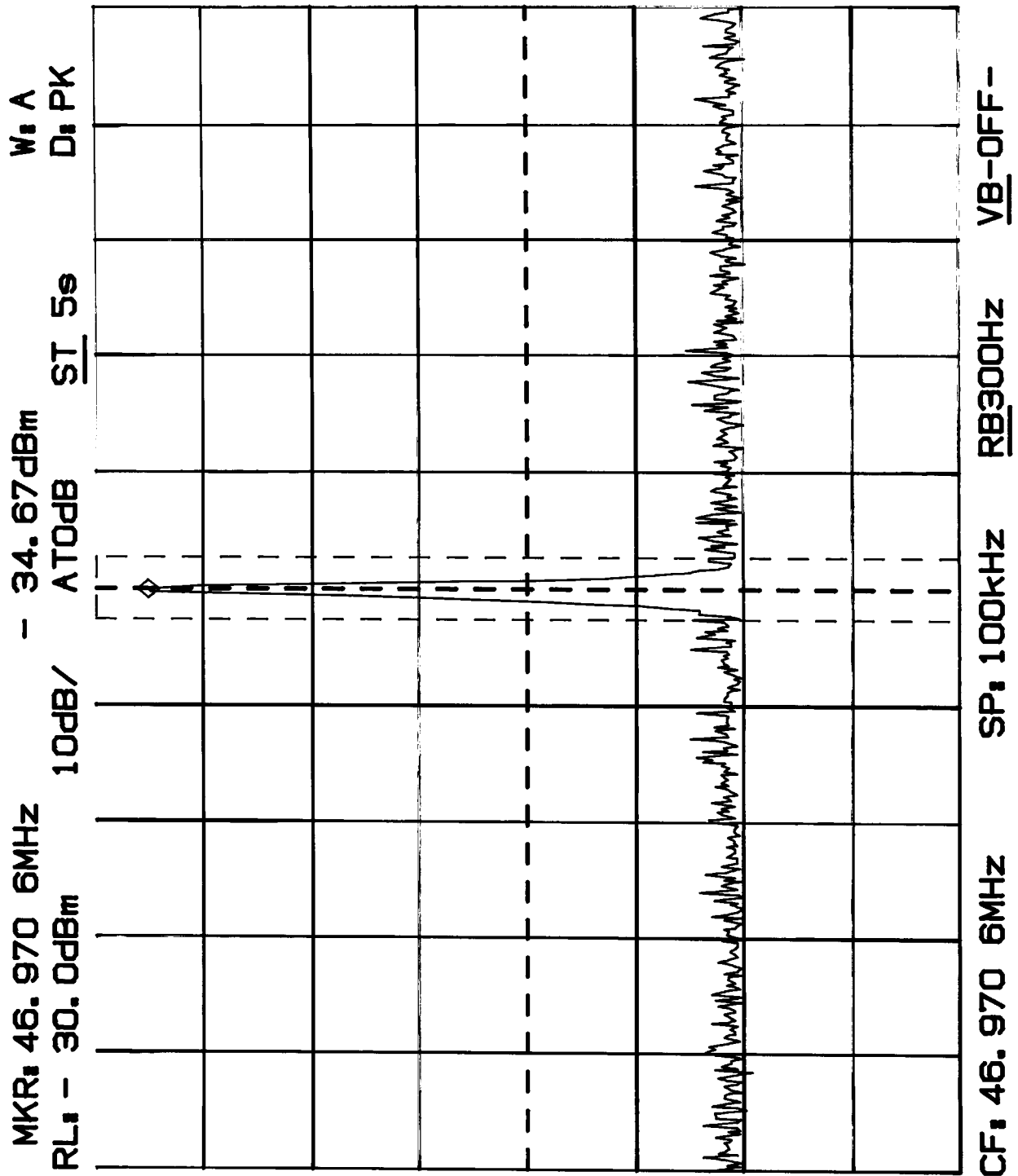
HANDSET; UNMODULATED CARRIER LEVEL
MODEL 26730XXX-A; Channel 25



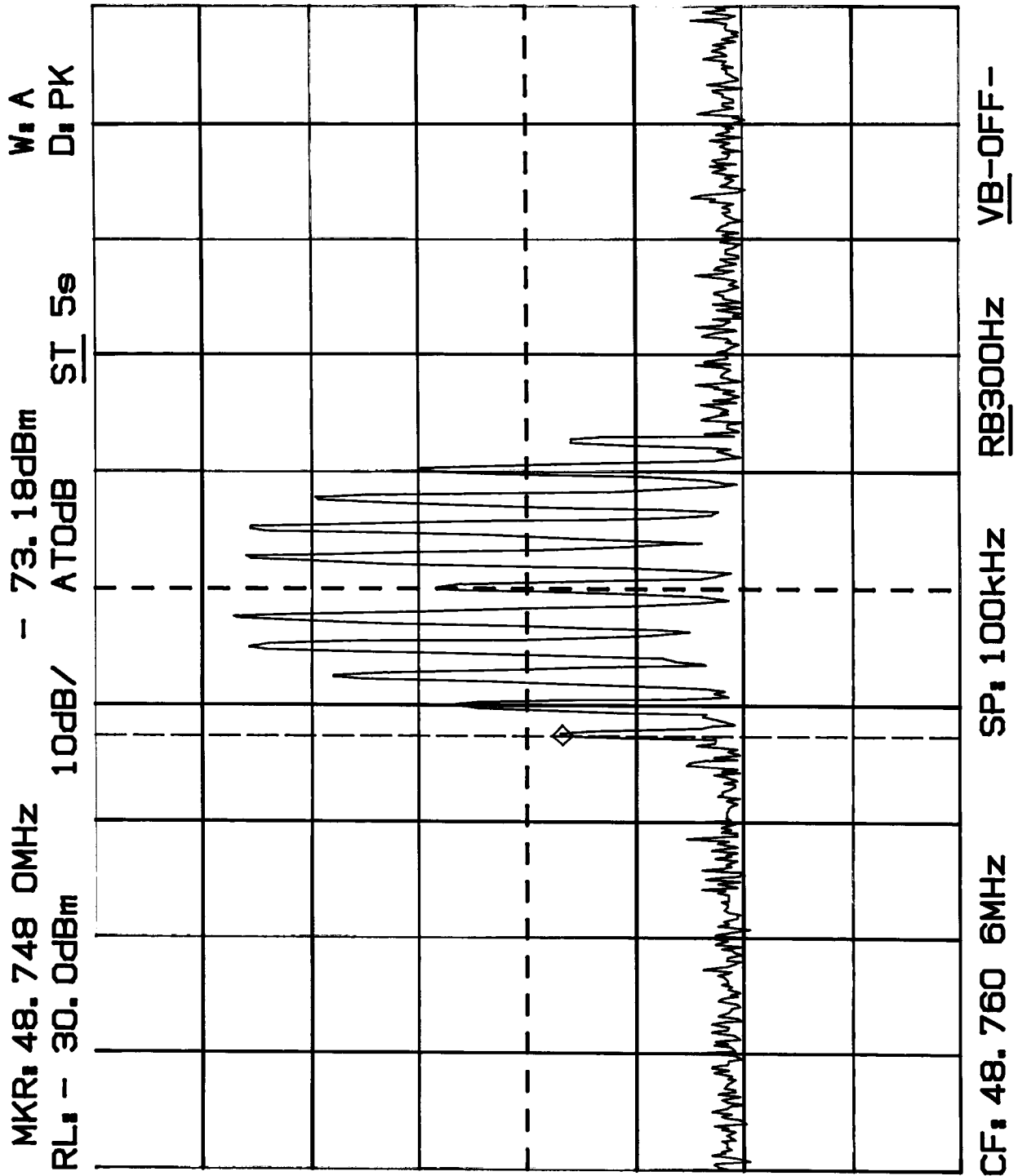
BASE STATION
UNMODULATED CARRIER LEVEL
MODEL 26730XXX-A; Channel 1



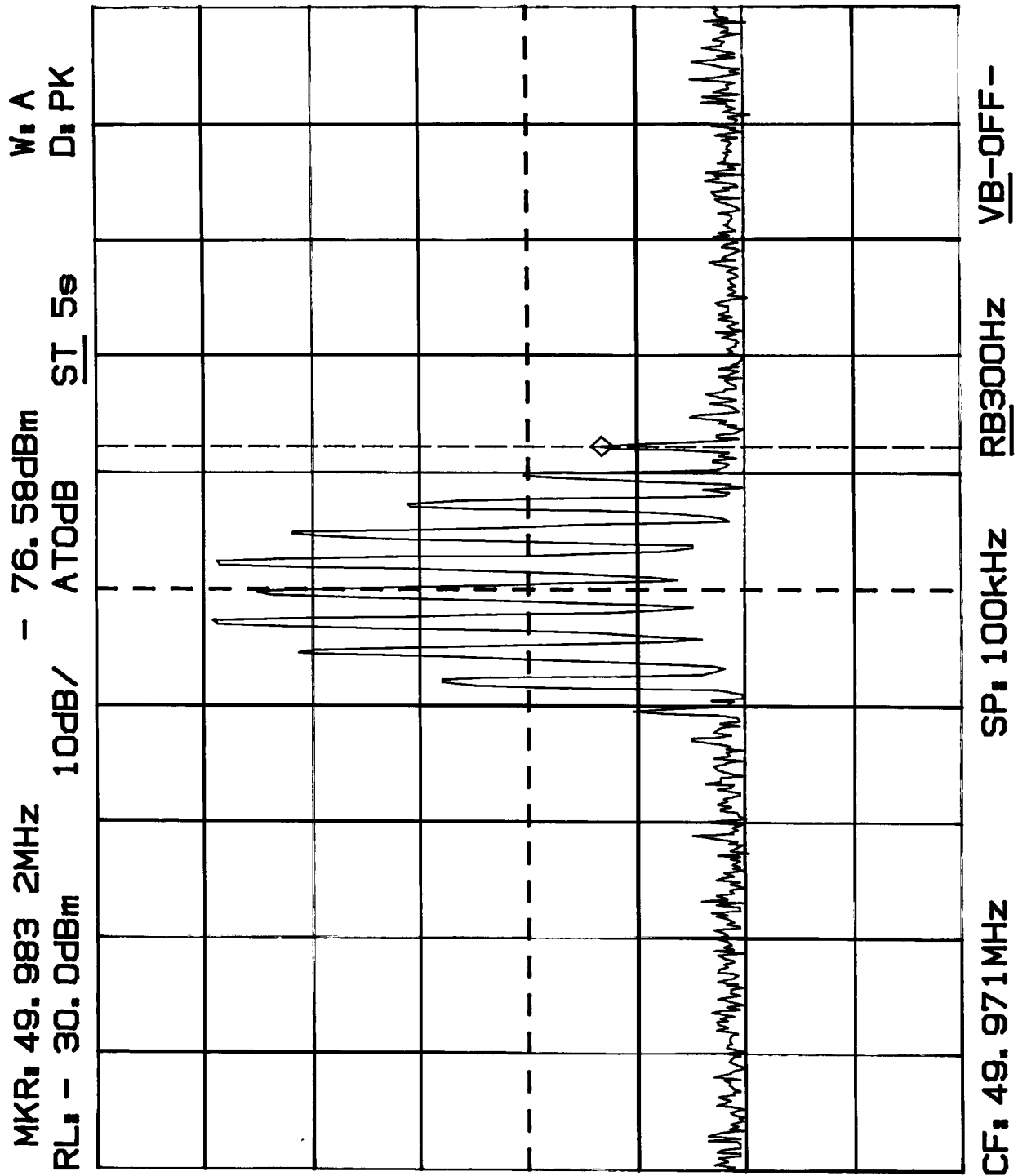
BASE STATION
 UNMODULATED CARRIER LEVEL
 MODEL 26730XXX-A; Channel 25



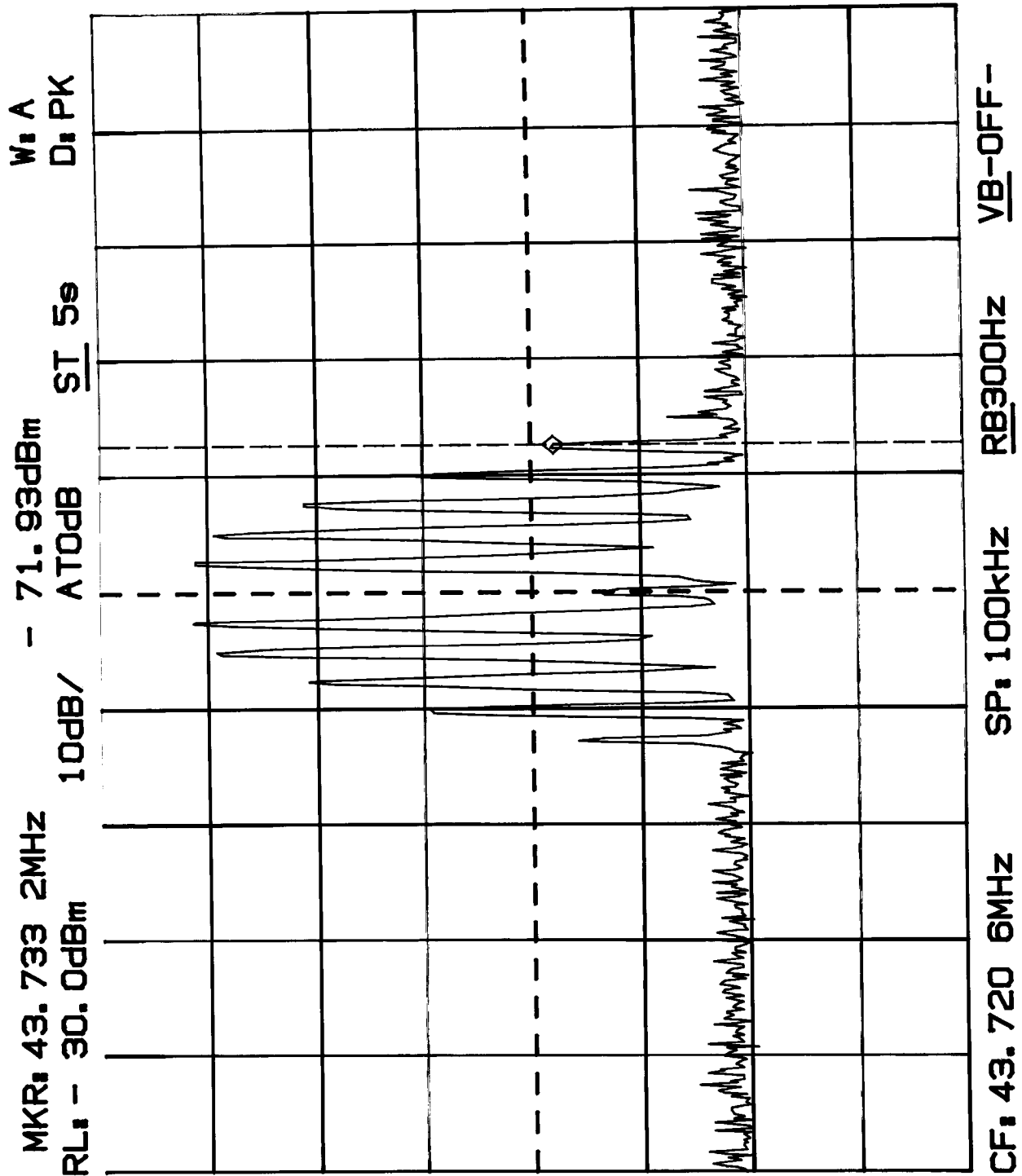
OUT-OF-BAND HANDSET; Channel 1
2.10 VOLTS AT MFD; MODEL 26730XXX-A



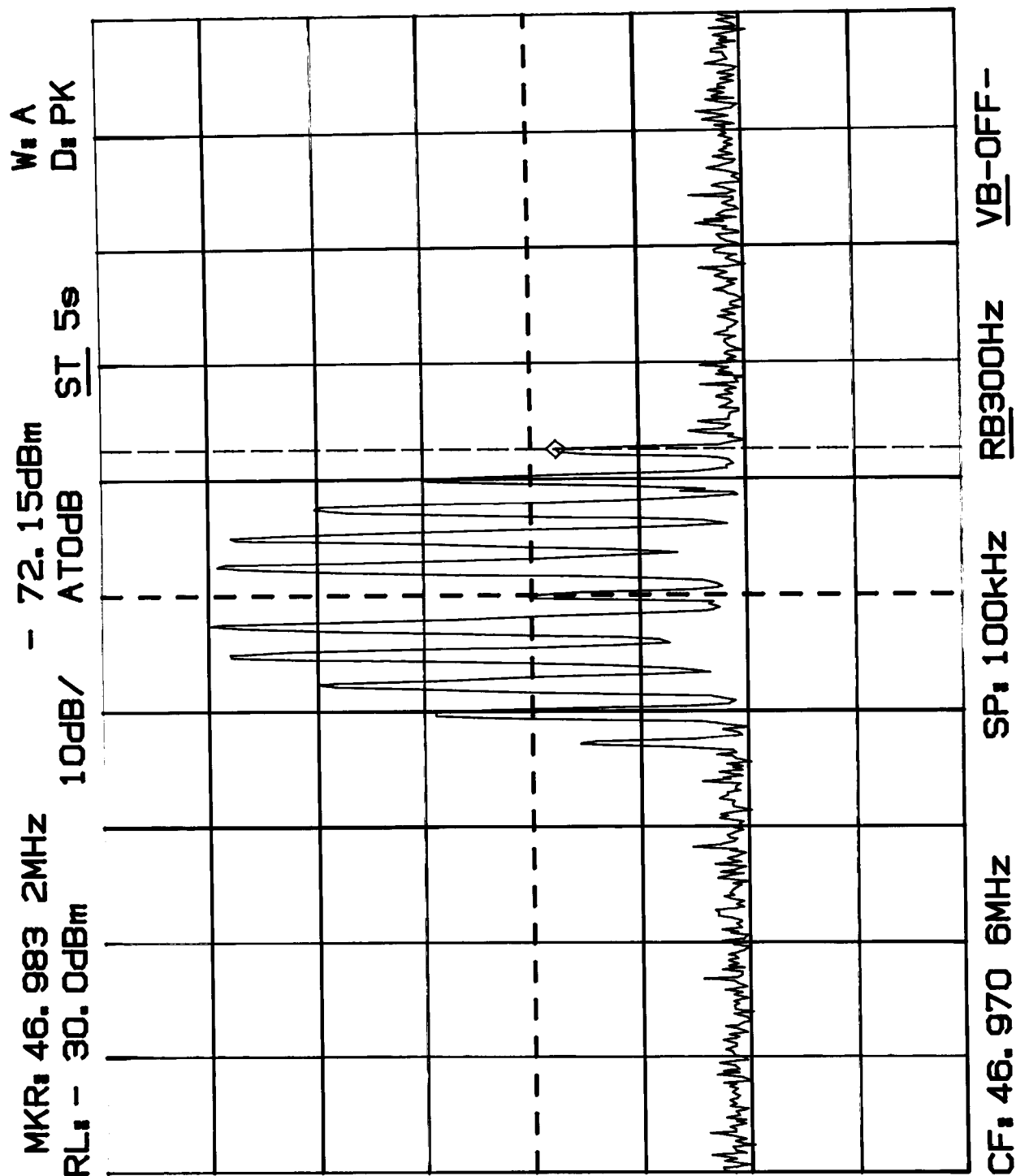
OUT-OF-BAND HANDSET; Channel 25
2.50 VOLTS AT MFD; MODEL 26730XXX-A



OUT-OF-BAND BASE STATIONS; Channel 1
 4.0 VOLTS AT MAX. MFD; 2500Hz Signal
 MODEL 26730XXX-A



OUT-OF-BAND BASE STATION; Channel 25
 4.0 VOLTS AT MAX. MFD; 2500Hz Signal
 MODEL 26730XXX-A



SPURIOUS RADIATED EMISSIONS

RESULTS

The maximum field strength of any spurious emission, with respect to the applicable limit, to 1,000 MHz, while transmitting or receiving was:

<u>Handset:</u>	Maximum field strength of: NONE FOUND	Channel 01
	Maximum field strength of: NONE FOUND	Channel 25

<u>Base Station:</u>	Maximum field strength of: NONE FOUND	Channel 01
	Maximum field strength of: NONE FOUND	Channel 25
	Maximum field strength of: NONE FOUND	RECEIVE

TEST CONDITIONS

Equipment Positioning:

Handset:	laying on its sides, back and standing vertically
Base Station:	standing on its back and vertically with the antenna extended in the vertical plane.

Antenna Polarization:

Handset:	horizontal and vertical
Base Station:	horizontal and vertical
Base Station: Receive	horizontal and vertical

<u>Measurement Bandwidth:</u>	100 KHz/120 KHz Q.P. (IF)
-------------------------------	---------------------------

Supply Voltages:

Handset:	3.6 VDC from an internal battery.
Base Station:	120 VAC/60 Hz to 12 VDC (adapter)

METHODS OF MEASUREMENT

The cordless phone components were placed in turn on a one metre high, non-metallic turntable. Measurements were made in a minimum of 3 positions for the handset and 2 for the base station. If adjustable, the whip antennas were fully extended.

For each of the above conditions the turntable was rotated through 360 degrees while the receiving antenna, at three (3) metres from the EUT, was varied in height from 1 to 4 metres and set in both planes of polarization to find the maximum signal strength. The level was measured using a spectrum analyzer and a substitution signal from an RF generator. The measured level was converted to a field strength using the antenna correction factors and cable losses.

All base station measurements were made with the equipment under test connected to an artificial telephone line network, with 48 VDC applied.

POWER LINE CONDUCTED EMISSIONS

RESULTS

The largest RF voltages on the AC power lines, over the frequency range of 450 KHz to 30 MHz, was **7.19 μ V (17.13 dB μ V) at 24.72 MHz** from the base station while transmitting and/or receiving. (B side of the line in the telephone mode) Refer to the attached results.

TEST CONDITIONS

<u>Measurement Bandwidth:</u>	9 KHz Q.P. (IF)
<u>AC Test Voltage:</u>	120 VAC (filtered and stabilized)
<u>Mode of Operation:</u>	Telephone

METHODS OF MEASUREMENT

The base station portion of the cordless phone was placed on a wooden table directly above a 50 ohm line impedance stabilization network (LISN). If adjustable, the whip antenna was fully extended vertically and the AC power attachment cord went directly down to the LISN. The LISN is grounded directly to the floor of the test facility. Excess AC cord was coiled in a figure eight pattern before connecting directly to the 50 micro-henry LISN.

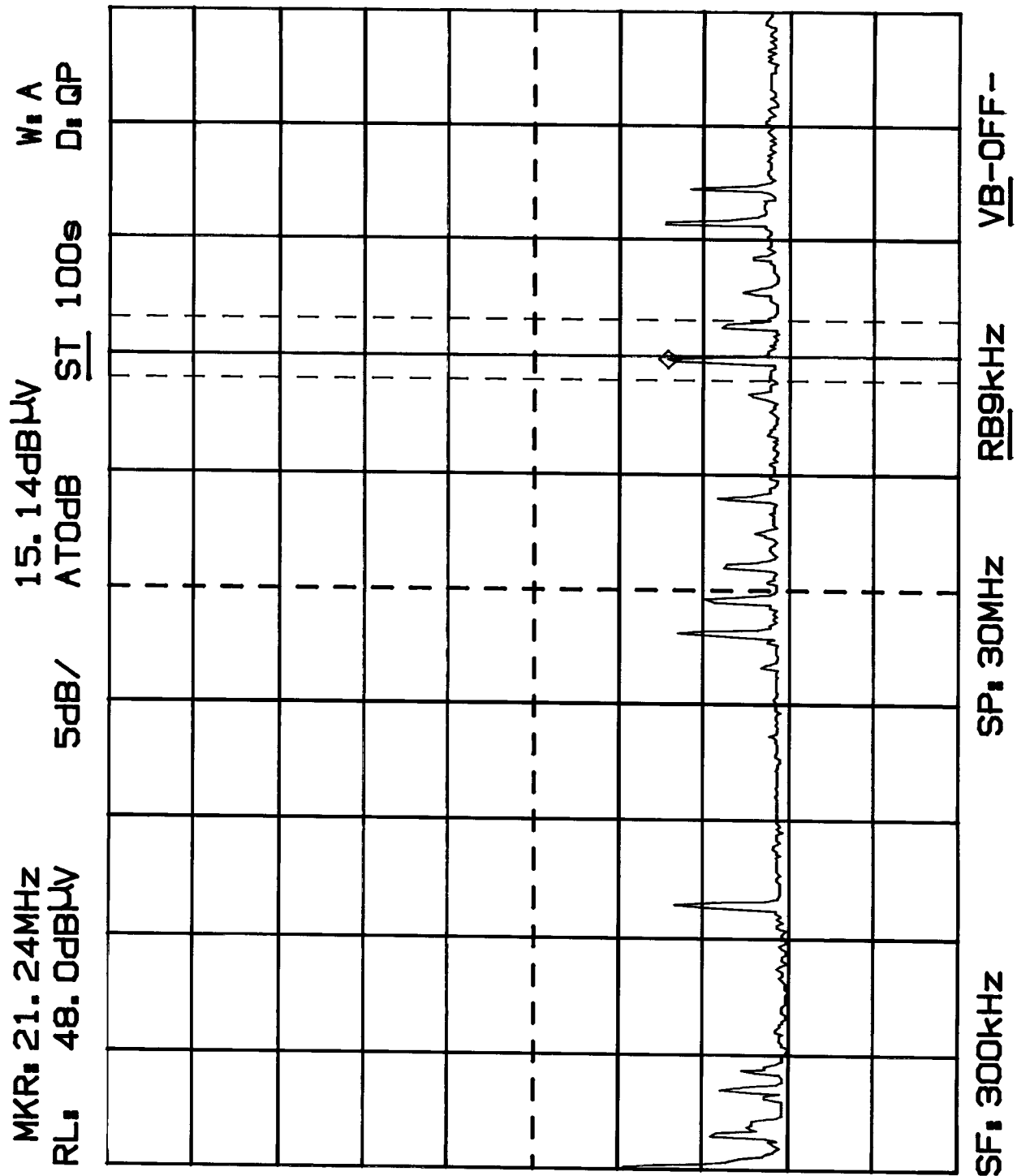
The base station was connected to a simulated 9,000 foot phone line and 48 VDC was applied. The 9,000 foot phone line network was grounded to the nearest AC outlet with a test lead.

A length of low loss RF foam cable was used to couple the RF voltages from the LISN to the spectrum analyzer. The base station transmitter was keyed on by the handset transmitting nearby. All of the RF voltages were recorded and are attached.

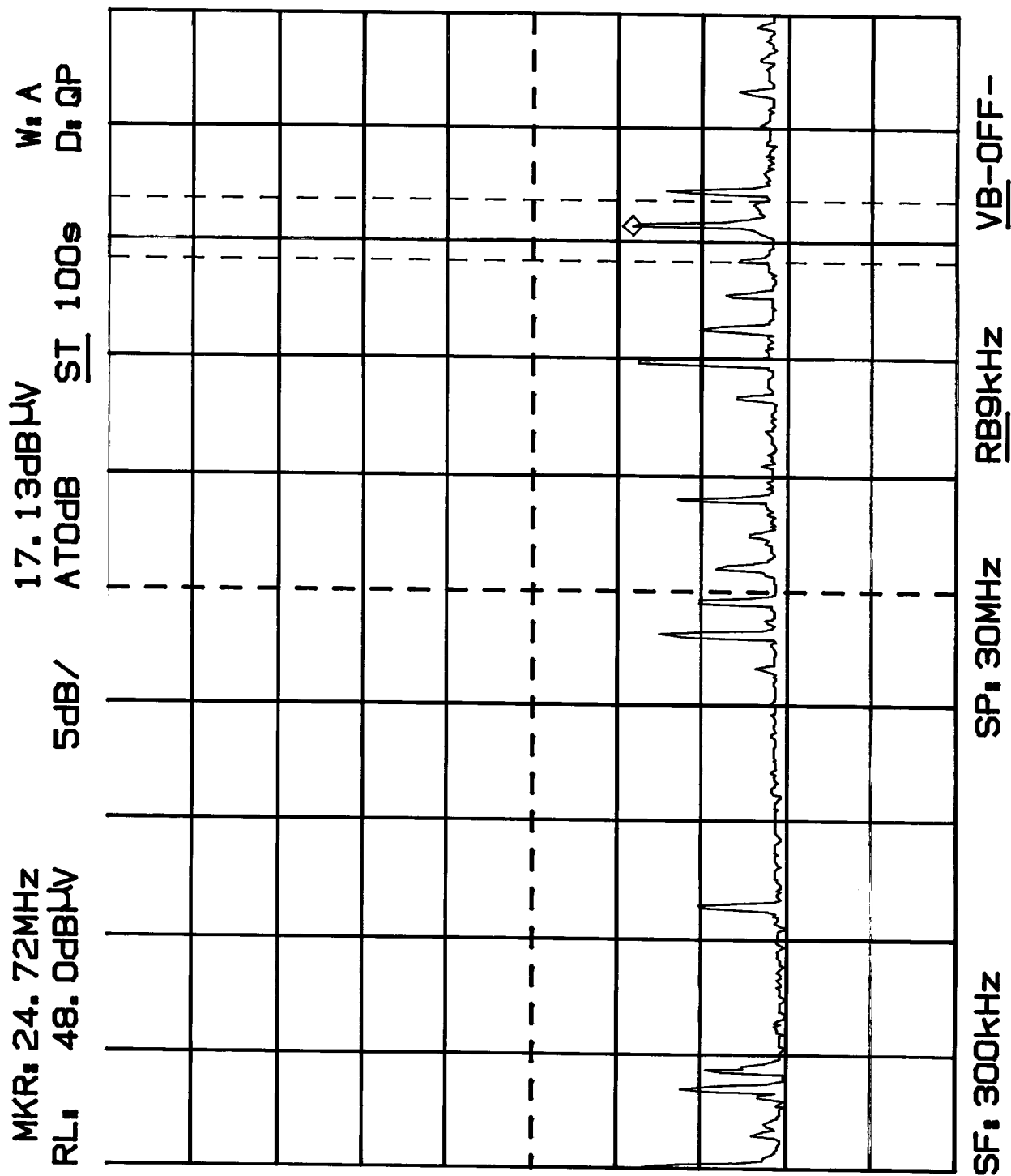
The base station was tested in all modes of operation which were applicable to the specific equipment under test. This included operating modes such as "calling/paging", quiescent or receive mode and standard telephone/transmit operation in both the 43/44 MHz and the 46 MHz bands.

If the cordless phone contained an intercom mode of operation, then this test was repeated in that mode. The attached results represent the **worst case results** in each test condition and frequency band.

POWER LINE CONDUCTED EMISSIONS
MODEL 26730XXX-A; SIDE: A



POWER LINE CONDUCTED EMISSIONS
MODEL 26730XXX-A; SIDE: B



TRANSMITTER ENVIRONMENTAL TESTS

FREQUENCY TOLERANCE OF CARRIER

MINIMUM PERFORMANCE STANDARD: The stability of the carrier frequency shall be maintained within +0.01 percent over a range of:

- a) Temperature from -20 to +50 degrees Celsius at normal supply voltage;
- b) Voltages that vary from 85 percent to 115 percent of the rated supply voltage at a temperature of +20 degrees Celsius.

TEST RESULTS:

Channel 1:

Handset: The largest deviation from the authorized carrier frequency of 48,760,000Hz was -869Hz ± 10 Hz at +50 degrees Celsius and 3.6 VDC. The test limit is ± 4876 Hz.

Base Station: The largest deviation from the authorized carrier frequency of 43,720,000 Hz was -676Hz ± 10 Hz at +50 degrees Celsius and 120 VAC. This was within the ± 4372 Hz limit.

Channel 25:

Handset: The largest deviation from the authorized carrier frequency of 49,970,000 Hz was -876Hz ± 10 Hz at +50 degrees Celsius and 3.6 VDC. The test limit is ± 4997 Hz.

Base Station: The largest deviation from the authorized carrier frequency of 46,970,000 Hz was -702Hz ± 10 Hz at +50 degrees Celsius and 120 VAC. This was within the ± 4697 Hz limit.

TEST CONDITIONS:

Supply Voltages: 85%, 100% and 115% of 120VAC, $\pm 2\%$

Stabilization Time: 60 minutes

Temperature: -20, -10, 0, +10, +20, +30, +40 and +50, ± 3 degrees Celsius

Modulation: Both transmitters were unmodulated.

METHOD OF MEASUREMENT:

Both the base and handset components were placed individually in a thermal chamber. The frequency was monitored by a spectrum analyzer and recorded at 1 minute intervals.

The base station was powered from a variable AC transformer. The handset battery was disconnected to enable external DC power operation. The antennae of both transmitters were replaced with short lengths of miniature 50 Ω cable fitted with BNC connectors, for shielded connections to the frequency counter.

At +20 degrees Celsius, after the chamber had stabilized for at least 60 minutes and the samples had been turned off for 15 minutes, the transmitters were operated continuously for 5 minutes at each voltage condition. At the temperature extremes, each transmitter was operated for 5 minutes following stabilization. The frequencies were recorded at 1 minute intervals. The temperature was monitored by a thermocouple on the enclosure.

ENVIRONMENTAL TEST RESULTS FCC 15CHANNEL 1

	<u>BASE</u>	<u>HANDSET</u>
+50°C	<u>120V</u>	<u>3.6V</u>
	43719344	48759189
	43719337	48759178
	43719338	48759168
	43719327	48759138
	43719324	48759131
+40°C	<u>120V</u>	<u>3.6V</u>
	43719456	48759495
	43719448	48759452
	43719431	48759434
	43719426	48759387
	43719407	48759372
+30°C	<u>120V</u>	<u>3.6V</u>
	43719551	48759630
	43719523	48759610
	43719516	48759572
	43719487	48759549
	43719478	48759501
+20°C	<u>102V</u>	<u>120V</u>
	<u>138V</u>	<u>3.6V</u>
	43719669	43719680
	43719671	43719672
	43719683	43719672
	43719671	43719675
	43719674	43719670
		43719682
		43719686
		43719683
		43719684
		43719680
		48759829
		48759830
		48759828
		48759828
		48759830

+10°C	<u>120V</u>	<u>3.6V</u>
	43719698	48759763
	43719810	48759828
	43719843	48759873
	43719899	48759891
	43719909	48759947
0°C	<u>120V</u>	<u>3.6V</u>
	43719949	48759958
	43719971	48760003
	43719997	48760018
	43720005	48760041
	43720024	48760055
-10°C	<u>120V</u>	<u>3.6V</u>
	43720033	48760073
	43720039	48760081
	43720041	48760079
	43720049	48760088
	43720046	48760086
-20°C	<u>120V</u>	<u>3.6V</u>
	43720059	48760072
	43720055	48760066
	43720058	48760067
	43720056	48760062
	43720054	48760060

MODEL NO.: 26730XXX-A
DATE: 9 March 1999
BASE FREQ: 43,720,000 Hz
HANDSET FREQ: 48,760,000 Hz

ENVIRONMENTAL TEST RESULTS FCC 15CHANNEL 25

	<u>BASE</u>		<u>HANDSET</u>
+50°C	<u>120V</u>		<u>3.6V</u>
	46969329		49969204
	46969315		49969190
	46969312		49969164
	46969300		49969146
	46969298		49969124
+40°C	<u>120V</u>		<u>3.6V</u>
	46969543		49969588
	46969516		49969527
	46969485		49969505
	46969462		49969449
	46969431		49969422
+30°C	<u>120V</u>		<u>3.6V</u>
	46969749		49969791
	46969690		49969760
	46969660		49969699
	46969609		49969670
	46969582		49969611
+20°C	<u>102V</u>	<u>120V</u>	<u>138V</u>
	46969656	46969622	46969663
	46969652	46969659	46969665
	46969647	46969664	46969660
	46969649	46969658	46969669
	46969644	46969659	46969662
			49969793
			49969795
			49969796
			49969800
			49969803

+10°C	<u>120V</u>	<u>3.6V</u>
	46969809	49969824
	46969836	49969875
	46969892	49969898
	46969919	49969960
	46969964	49969988

0°C	<u>120V</u>	<u>3.6V</u>
	46969982	49970002
	46970006	49970028
	46970017	49970039
	46970037	49970051
	46970043	49970058

-10°C	<u>120V</u>	<u>3.6V</u>
	46970051	49970064
	46970059	49970069
	46970065	49970070
	46970065	49970070
	46970068	49970071

-20°C	<u>120V</u>	<u>3.6V</u>
	46970064	49970050
	46970065	49970053
	46970068	49970050
	46970064	49970046
	46970065	49970046

MODEL NO.: **26730XXX-A**

DATE: **9 March 1999**

BASE FREQ: **46,970,000 Hz**

HANDSET FREQ: **49,970,000 Hz**

CLEAR CHANNEL DETECTION

Test Procedure

Setup the equipment as per figure 1.

Verification of Base Unit Detector

1. Connect the base unit to an AC source and place the handset in the off hook mode and select channel 1.
2. Using the spectrum analyzer verify the base and handset frequencies are on channel 1 using the RX antenna.
3. Put the handset on hook.
4. Set the signal generator to channel 1 modulated at 1KHz dev., approx. 20KHz, to produce approximately -30dBm to -40dBm on the analyzer from the RX antenna when feeding this signal to the TX antenna several seconds.
5. Turn the handset on and go off hook.
6. Re-measure the base and handset frequencies. They must be other than the initial ones.
7. Busy the resulting frequency and repeat the above steps.

Verification of Handset Unit Detector

1. Connect the base unit to an AC source and place the handset in the off hook mode and select channel 1.
2. Using the spectrum analyzer verify the base and handset frequencies are on channel 1 using the RX antenna.
3. Put the handset on hook.
4. Set the signal generator to channel 4 modulated at 1KHz dev., approx. 20KHz, to produce approximately -30dBm to -40dBm on the analyzer from the RX antenna when feeding this signal to the TX antenna for several seconds.
5. Place the handset off hook.
6. Re-measure the base and handset frequencies. They must be other than the initial ones.
7. Busy the resulting frequency and repeat the above steps.

TESTS RESULTS

Model: 26730XXX-A

Date: 10 March 1999

Base Unit Detector

Step 2 - Check initial channel

43,719,688 Hz
Base

Channel 1

Step 6 - Recheck channel frequencies

44,399,692 Hz
Base

Channel 13

Step 7 - Recheck channel frequencies

46,769,729 Hz
Base

Channel 21

Handset Unit Detector

Step 2 - Check initial channel

48,759,775 Hz
Handset

Channel 1

Step 6 - Recheck channel frequencies

49,399,766 Hz
Handset

Channel 13

Step 7 - Recheck channel frequencies

49,829,779 Hz
Handset

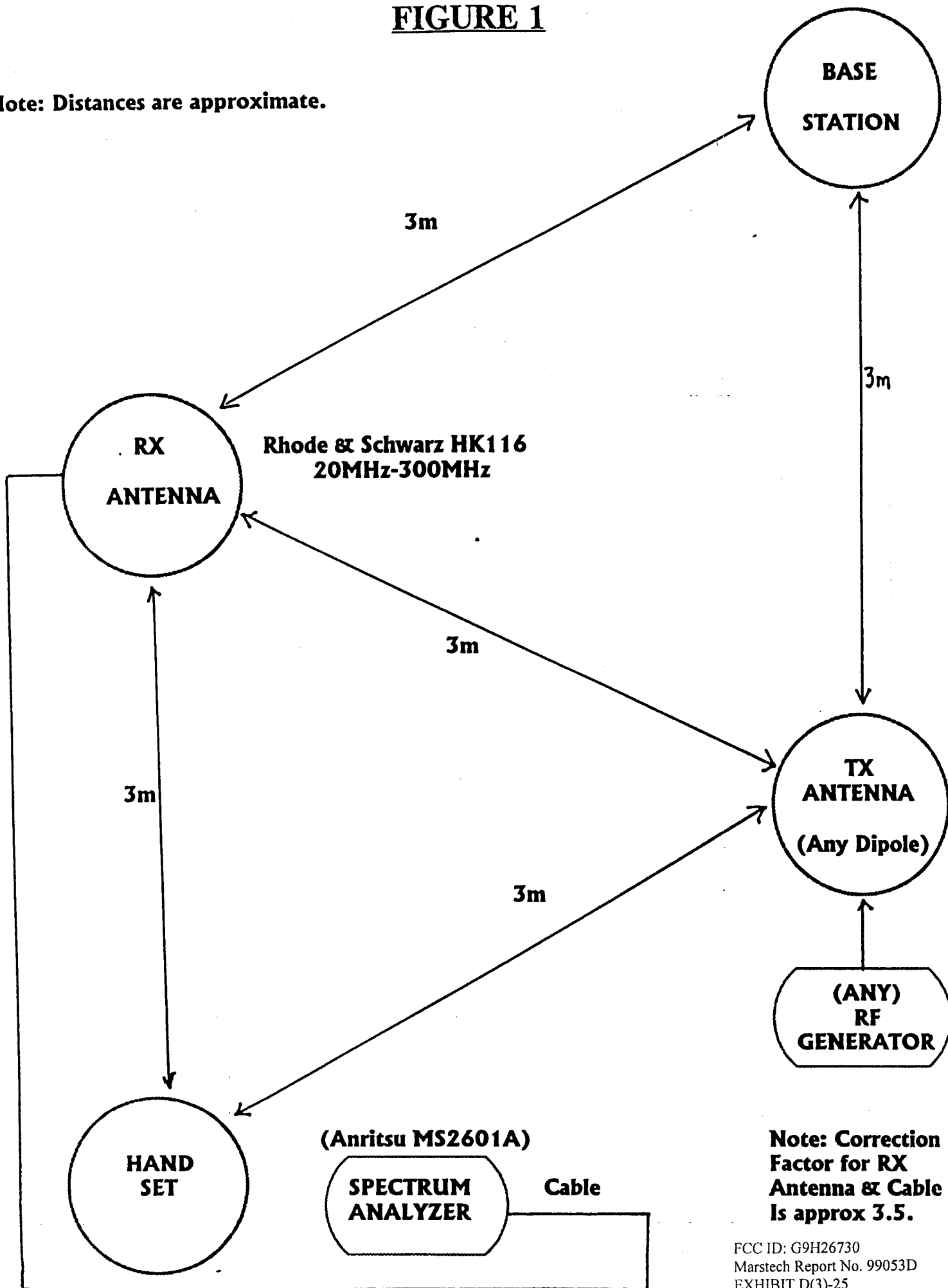
Channel 21

Results: Satisfactory

Technician: Hiran De Silva

FIGURE 1

Note: Distances are approximate.



D-1

VI. Verify According to the 15.233(b)(2)(i) Requirements

According to 15.233(b)(2)(i), an automatic channel selection mechanism that will prevent establishment of a link on any occupied frequency on channels one through fifteen must be incorporated. The following test method is used to confirm this function:

1. Turn on the EUT and record the frequency of base from the spectrum analyzer.
2. Turn off the EUT.
3. Set the signal generator(HP3325B) to the frequency recorded in step 1.
4. Turn on the EUT again and read the frequency from the spectrum analyzer. If the reading is not same as the frequency recorded in step 1, this means the EUT complies with the requirements.
5. Press the channel select button 25 times and read the frequency every time the button is pressed. If the frequency reading is not same as the frequency recorded in step 1, this means the EUT complies with the requirements.
6. Repeat steps 1-5 for the handset.
7. Repeat steps 1-6 for another frequency pairs.

P/S: The level of the radiated signal generated by signal generator is set to 10dB below, 10dB above and equal to the EUT's radiated level respectively for testing.

RESULT : After three pairs of frequency (channel 1, 8, 15) was verified with the steps mentioned above, no frequency reading is recorded same as the pre-set frequency of signal generator.