



EXHIBIT B - Technical Report

Attached is the technical report of measurements of radiated and conducted emissions from the Superset 4125 and 4150 telephone sets.



TITLE: NORTH AMERICAN EMC CERTIFICATION
REPORT ON: MITEL SUPERSET 4125 AND 4150

ABSTRACT: This document reports on the test results obtained during testing of the Mitel Superset 4125 and 4150 showing conformance to the North American EMC requirements.

ORIGINATOR: SCOTT SMITH


DATE ORIGINATED: 16-DEC-98

DATE LAST MODIFIED: 18-DEC-98

SUPERSESSION DATA: NONE

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1. INTRODUCTION / OVERVIEW

1.1. PURPOSE

To report on the test results collected during testing of the Mitel Superset 4125 and 4150, and to demonstrate compliance with the regulatory EMC requirements of the North American market.

1.2. SCOPE

This reports deals only with the EMC requirement of the Regulatory Approvals testing. All tests were performed with the hardware comprising the Superset 4125 and 4150 (SS4125/50) cabled and functional.

1.3. REASON FOR ISSUE / REISSUE

1 16-Dec-98 First issue of this document.

1.4. EXECUTIVE SUMMARY

The SS4125 and SS4150, with the were found to satisfy the requirements for a Class B computing device as specified in FCC part 15 and ICES-003.


Test Performed	Result	Details
Radiated Emissions	Pass	SS4125: 1.1 dB margin at 729.3 MHz (PC frequency) SS4125: 7.4 dB margin at 78.6 MHz (EUT frequency) SS4150: 0.6 dB margin at 729.3 MHz (PC frequency) SS4150: 11.5 dB margin at 48.13 MHz (EUT frequency)
Conducted Emissions	Pass	No frequencies within 20 dB of the limit for either set.

1.5. MEASUREMENT PROCEDURES

The measurement procedures used during the testing of the Product were ANSI C63.4 and C108.8.

1.6. REFERENCES

- A. ICES-003 Issue 3 (1997): Interference-Causing Equipment Standard for Digital Apparatus
- B. C108.8-M1983 (1983): Electromagnetic Emissions from Data Processing Equipment and Electric Office Machines – Electromagnetic Compatibility
- C. CFR Title 47, Part 15 (1996): FCC Rules for Radio Frequency Devices
- D. ANSI C63.4 (1992): Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
- E. DK104454 (Change Level 1, 1998): International EMC Verification Report on: Mitel SS4025 2-layer Rev 2, 4125/4150 Rev 7,PKM48, PKM Sim Rev 3,PKM ONS Sim Rev 2

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1.7. TESTING FACILITY INFORMATION

The testing recorded in this report was performed by:

Mitel Corporation
EMC Test Facility
350 Legget Drive, P.O. Box 13089
Kanata, ON
Canada
K2K 1X3

Attention: Scott Smith, Jr.Eng.
Approvals Engineer

Phone: (613) 592-2122
Fax: (613) 592-4784

An FCC listed testing facility (FCC Site File: 31010/SIT/MITEL).

1.8. MANUFACTURER INFORMATION

The manufacturer of the equipment under test in this report is:

Mitel Corporation
340 Legget Drive, P.O. Box 13089
Kanata, ON
Canada
K2K 1X3

1.9. APPLICANT INFORMATION

The testing recorded in this report was performed on behalf of:


Mitel Corporation
Regulatory Approvals Department
350 Legget Drive, P.O. Box 13089
Kanata, ON
Canada
K2K 1X3

Attention: John McNamee
Manager, Regulatory Approvals

Phone: (613) 592-2122
Fax: (613) 592-4784

1.10. COPY NOTICE

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2. DESCRIPTION OF EQUIPMENT

2.1. INVESTIGATED DESIGN ISSUES

The Superset 4125 and 4150 telephone sets have been previously verified to comply with the North American and European Class B EMC emissions as stand alone devices (Reference E). For the previous tests the RS-232 interface was not functional due to a lack of software for the PBX, the PC, and the firmware of the set itself. Recently this software has been developed. The testing in this report was performed to verify that the sets continue to comply with the emissions requirements while connected to a personal computer with call control capability. Since it is also likely that these sets will be used in a residential environment, the FCC certification procedure will be followed.

At this time, the only options available for use with the SS4125/50 sets using the serial port and personal computer interface software are the Plantronics Headset, and the Superset Interface Module 1 (SIM1) with one Programmable Key Module (PKM48) attached. This is because the interface software is only available for use with Mitel's SX2000 family of PBX switches, which do not currently support more than one PKM48 or the SIM2. Further testing will be carried out and this document will be amended as appropriate when new software is developed to address this limited number of options, and when the sets are supported on the SX200 family of PBX's.

Finally, the PCB of both telephone sets has undergone minor layout revisions to replace sockets with surface mount packages, and to remove cuts and straps. No components or circuitry were added to or removed from the design of the set since the verification testing referred to above.


2.2. EQUIPMENT UNDER TEST

Model	Superset 4125
Manufacturer	Mitel Corporation
Assembly Number	Set:141858601 PCB: 141966303
Revision	Set: B.0 PCB: 7.1
Serial Number	AHAAD4522

Model	Superset 4150
Manufacturer	Mitel Corporation
Assembly Number	Set:141948601 PCB: 141966302
Revision	Set: F.3 PCB: 7.4
Serial Number	AFACV9288

Model	Superset Interface Module 1 (SIM1)
Manufacturer	Mitel Corporation
Assembly Number	Set:142747601 PCB: 142490301
Revision	Set: A.5 PCB: 3.4
Serial Number	AAAKQ7005


Model	Programmable Key Module (PKM48)
Manufacturer	Mitel Corporation
Assembly Number	Set: 142744601 PCB: 142367301
Revision	Set: A.4 PCB: 2.2
Serial Number	AAAKQ7337

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Model	Polaris Headset
Manufacturer	Plantronics Inc.
Assembly Number	P51-U10P-QDIM
Revision	N/A
Serial Number	SU6585

2.3. SUPPORT EQUIPMENT

Description	Assembly	Rev	Serial	Manufacturer
Personal Computer	561	N/A	E000000008	Systium
Motherboard (Pentium II 333)	JN440BX	AA	IUJN82801664	Intel
PC/EISA Expansion Board	N/A	N/A	N/A	Intel
SCSI Interface Board	917306-00	N/A	BF0M83109X8	Adaptec
128 MB DIMM Module	0821981036-00	N/A	PC100-333-620	N/A
CD-ROM Drive	N/A	N/A	N/A	TEAC
Hard Disk Drive (Viking II)	PX04W011	01-D	194811232552	Quantum
Floppy Disk Drive	193077A2-91	N/A	1352336	TEAC
Monitor (17" Ultrascan)	55341C297Z58	N/A	8089283	Dell
Keyboard	82350	A00	12743-868-1866	Dell
Mouse	141189-201	N/A	ID75BCUF121M	Compaq
Speakers	LCS-600	N/A	N/A	Labtec
Printer (LX-300)	P850A	N/A	1YLY198181	Epson
SX2000 Micorlight	138523601	1.8	AAAHR0295	Mitel
Power Converter (MP914AA)	1258033AA	3.17	AAAGQ4261	Mitel
MC III R (MC215AA)	1072153AA	3.1	AAHS2481	Mitel
CRC II (MC307NA)	137333301	3.2	AAAFM0385	Mitel
PSC II (MC312AB)	1073123AB	C.2	AAHE3356	Mitel
DNIC (MC330AA)	1073303AA	2.4	AHAAA7692	Mitel
Supeset 420	138735601	B.8	AFABO0882	Mitel

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3. RADIATED EMISSIONS

3.1. SYSTEM CONFIGURATION AND SETUP


The system was configured as per ANSI C63.4. The EUT was cabled to the support equipment and was fully functional. Cables and support equipment were located according to the measurement procedures indicated, and cables were adjusted to maximize emissions. In order to achieve maximum activity on the cables:

- a) a call was placed from the SS420 via the PBX to the EUT,
- b) this call was continuously cycled between "Hold" and "Retrieve" by the PC via the RS-232 interface,
- c) the EUT and SS420 were continuously monitored by the PKM48,
- d) the PC was additionally running a video game demo in full screen, high graphics mode, that utilized the speakers, CD-ROM Drive and Hard Disk Drive, and
- e) the PC continuously polled the keyboard, mouse and printer ports for activity (automatic function of the operating system).

Preliminary testing showed that the headset had no effect on emissions since the PC software performing the call control automatically uses the speakerphone portion of the EUT. Refer to Photographs 1 and 2 of Appendix C for the location of equipment and cables situated above the ground plane.

3.2. TEST PROCEDURE

With the equipment under test located on a turntable situated 3 meters from the receiving antenna and configured as per Section 3.1, the frequency spectrum from 30 to 1000 MHz is scanned with a biconical-log period antenna and a receiver/spectrum analyzer. Maximum emission is determined by rotating the turntable through 360 degrees and varying the height of the receiving antenna from 1 to 4 meters in both vertical and horizontal polarizations. All frequencies within 10 dB of the allowable limit are then formally measured at a distance of 3 m using a tuned dipole antenna connected to a receiver using a quasi-peak detector. If there are less than six frequencies within 10 dB of the allowable limit, the six highest frequencies are recorded. The antenna polarization and maximum emission at each frequency to be recorded are tabulated in Section 3.3.

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3.3. TEST RESULTS

3.3.1. SUPERSET 4150 WITH SIM1 AND PKM48:

Detector: CISPR Quasi-Peak, 120 kHz Bandwidth
 Test Distance: 3 meters
 Test Performed: 16-Dec-98

Frequency (MHz)	Polarization (Vert/Horiz)	E _A (dB μ V)	AF (dB/m)	E _F (dB μ V/m)	Class B Limit (dB μ V/m)	Margin (dB)
48.13	Vertical	24.5	4.0	28.5	40	11.5 ²
243.4	Vertical	18.8	19.3	38.1	46	7.9
250.0	Vertical	17.0	19.4	36.4	46	9.6
597.7	Vertical	16.1	28.7	44.8	46	1.2 ¹
666.0	Vertical	15.4	29.7	45.1	46	0.9 ¹
729.3	Horizontal	14.1	31.3	45.4	46	0.6 ¹

¹ These frequencies radiate directly from the PC chassis with no peripherals attached or powered, and placement of the AC power cord has no effect on the emissions of these frequencies. For information purposes only, does not affect certification.

² Highest emission directly related to EUT. For information purposes only, does not affect certification.

E_A = Antenna voltage as measured by Quasi-Peak receiver.
 AF = Antenna Factor calculated as per ANSI C63.4, plus cable losses.
 E_F = Total field strength voltage (E_F = E_A + AF).

Refer to spectral plots contained in Appendix E of this report.

3.3.2. SUPERSET 4125 WITH SIM1 AND PKM48:

Detector: CISPR Quasi-Peak, 120 kHz Bandwidth
 Test Distance: 3 meters
 Test Performed: 17-Dec-98


Frequency (MHz)	Polarization (Vert/Horiz)	E _A (dB μ V)	AF (dB/m)	E _F (dB μ V/m)	Class B Limit (dB μ V/m)	Margin (dB)
48.13	Vertical	23.6	4.0	27.6	40	12.4
78.6	Vertical	24.7	7.9	32.6	40	7.4 ²
243.4	Vertical	16.1	19.3	35.4	46	10.6
250.0	Vertical	15.4	19.4	34.8	46	11.2
597.7	Vertical	13.8	28.7	42.5	46	3.5
666.0	Vertical	14.3	29.7	43.6	46	2.4 ¹
729.8	Horizontal	13.6	31.3	44.9	46	1.1 ¹

¹ These frequencies radiate directly from the PC chassis with no peripherals attached or powered, and placement of the AC power cord has no effect on the emissions of these frequencies. For information purposes only, does not affect certification.

² Highest emission directly related to EUT. For information purposes only, does not affect certification.

E_A = Antenna voltage as measured by Quasi-Peak receiver.
 AF = Antenna Factor calculated as per ANSI C63.4, plus cable losses.
 E_F = Total field strength voltage (E_F = E_A + AF).

Refer to spectral plots contained in Appendix E of this report.

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4. CONDUCTED EMISSIONS

4.1. SYSTEM CONFIGURATION AND SETUP

The system was configured as per ANSI C63.4. Conducted Emissions testing is performed in a shielded enclosure 3.6 x 3.6 x 2.4 meters. The EUT was placed on a table of nominal size, 40 cm from the rear wall of the chamber and at least 80 cm from any other conducting surface, including the cases of the LISN's. Support equipment and cables were positioned in accordance with the measurement procedures indicated, and cables were adjusted to maximize emissions. In order to achieve maximum activity on the cables:

- a) a call was placed from the SS420 via the PBX to the EUT,
- b) this call was continuously cycled between "Hold" and "Retrieve" by the PC via the RS-232 interface,
- c) the EUT and SS420 were continuously monitored by the PKM48,
- d) the PC was additionally running a video game demo in full screen, high graphics mode, that utilized the speakers, CD-ROM Drive and Hard Disk Drive, and
- e) the PC continuously polled the keyboard, mouse and printer ports for activity (automatic function of the operating system).

Preliminary testing showed that the headset had no effect on emissions since the PC software performing the call control automatically uses the speakerphone portion of the EUT. Refer to photographs 3 and 4 of Appendix C for the location of equipment and cable placement inside the shielded enclosure.

4.2. TEST PROCEDURE


Maximum emission is achieved by manipulation of the interface cables, within the specifications described by the measurement procedures, while observing the display of a spectrum analyser in real time that is connected to the LISN. Once maximum emissions have been achieved, the spectrum analyser is replaced with a receiver controlled by a MacIntosh computer running LabView software. Initial scanning is performed using a Peak detector at scan rate of 100 ms per 8 kHz step. Any Peak signals that are identified as being within 10 dB of the Quasi-Peak limit are remeasured using a Quasi-Peak detector and monitored for 15 s. Results are tabulated in Section 4.3 below.

4.3. TEST RESULTS

Detector: CISPR Quasi-Peak (10 kHz Bandwidth)
Test Performed: 12-Dec-98


For both the SS4125 and SS4150 no frequencies were within 20 dB of the Class B limit.

Refer to Spectral Plots contained in Appendix F of this report.

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5. APPENDIX A: MODIFICATIONS REQUIRED

No modifications to any EUT were required to achieve compliance to the stated standards.

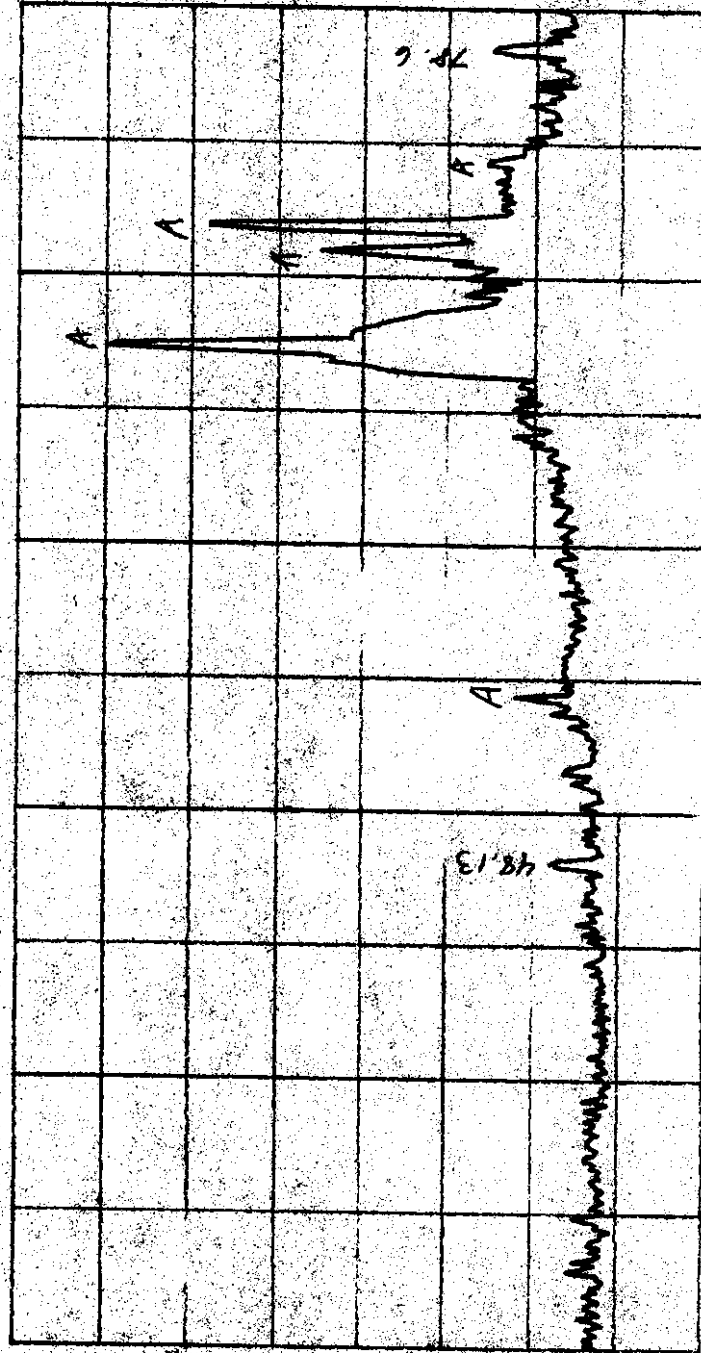
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9. APPENDIX E: RADIATED EMISSIONS SPECTRAL PLOTS

11:27:06 17 DEC 1998 SS4125, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 70.0 dBμV



dB/
ATN
10 dB

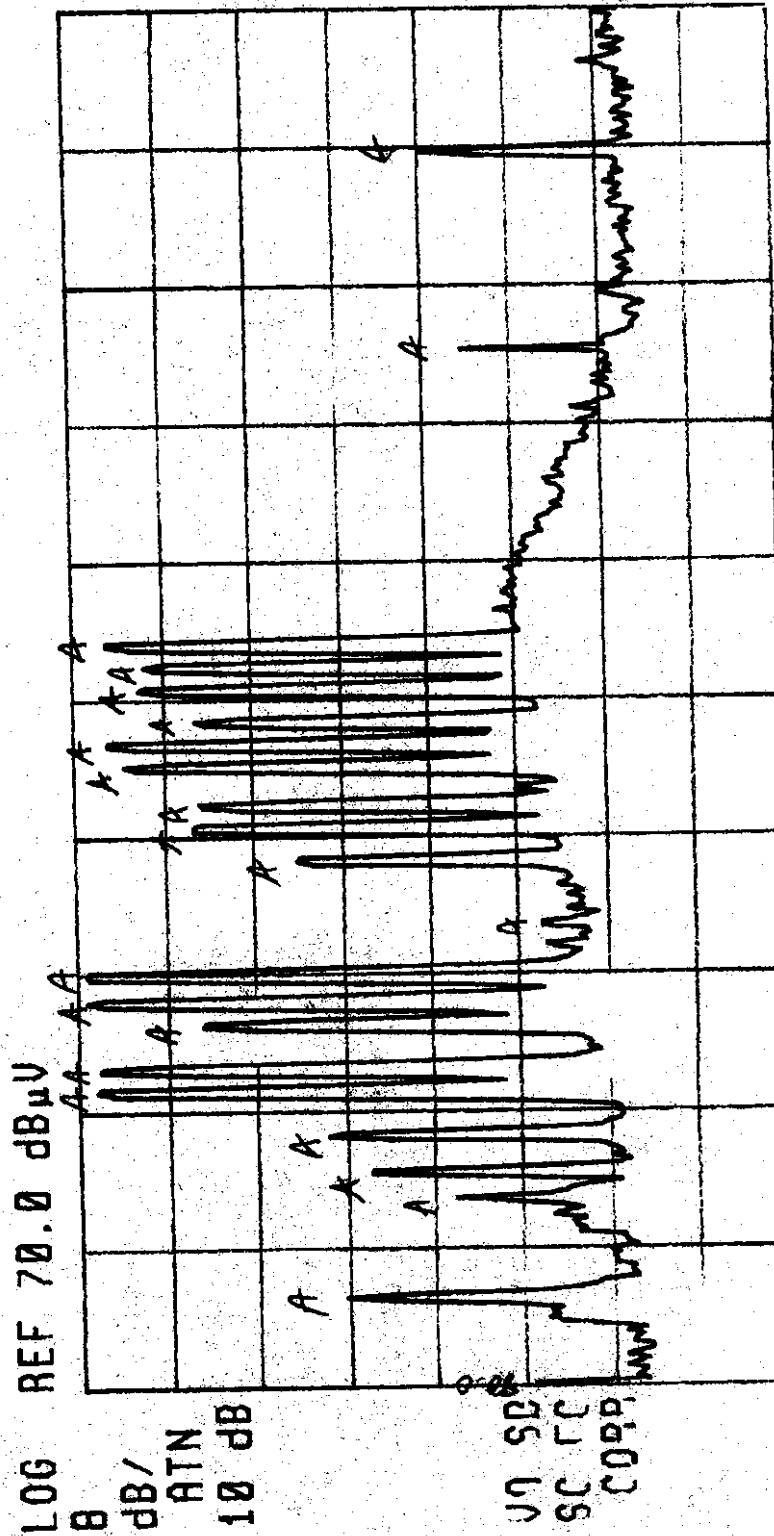
VA SB
SC FC
CORR

START 30.00 MHz
IF BW 120 kHz
AVG BW 1 MHz
STOP 80.00 MHz
SWP 46.9 msec


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11:23:30 17 DEC 1998 SS4125, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG



LOG REF 70.0 dBμV
STOP 130.00 MHz
SWP 46.9 msec
START 80.00 MHz
IF BW 120 kHz
AUG BW 1 MHz

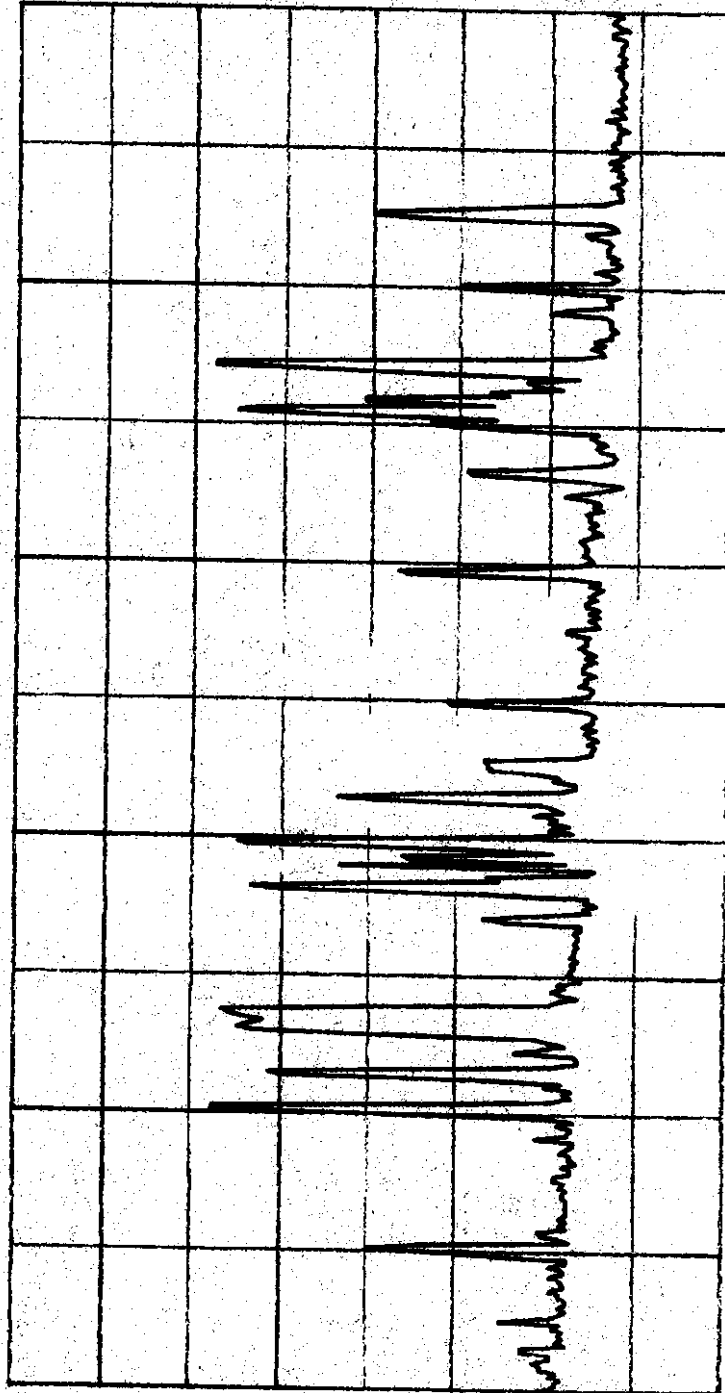
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11:20:15 17 DEC 1998 SS4125, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 70.0 dB μ V

ALL AMBIENTS



START 130.00 MHz IF BW 120 kHz
STOP 180.00 MHz SWP 46.9 msec
AVG BW 1 MHz

UN SB
SC FC
CORR

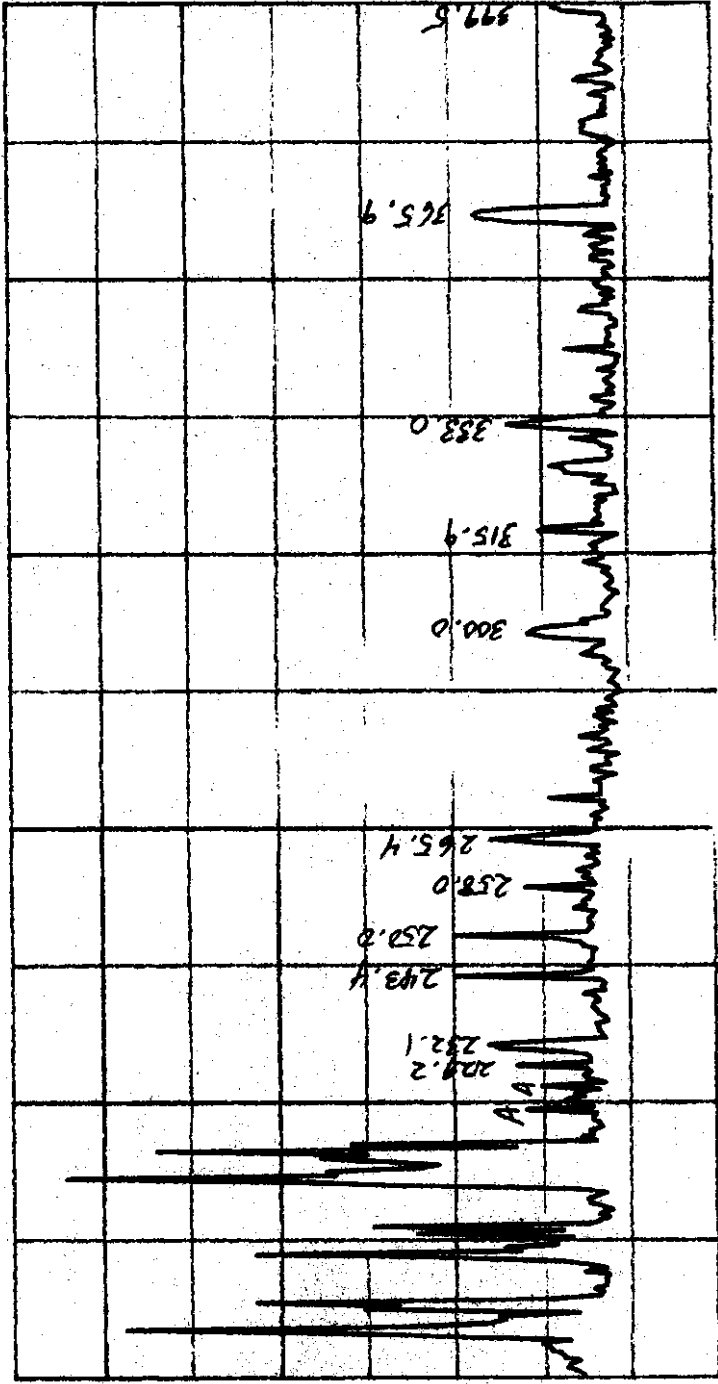
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11:17:19 17 DEC 1998 SS4125, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 62.0 dBμV

8 dB/
#ATN
0 dB



VA SB
SC FC
CORR

START 180.0 MHz IF BW 120 kHz
STOP 400.0 MHz SWP 206 msec
AUG BW 1 MHz

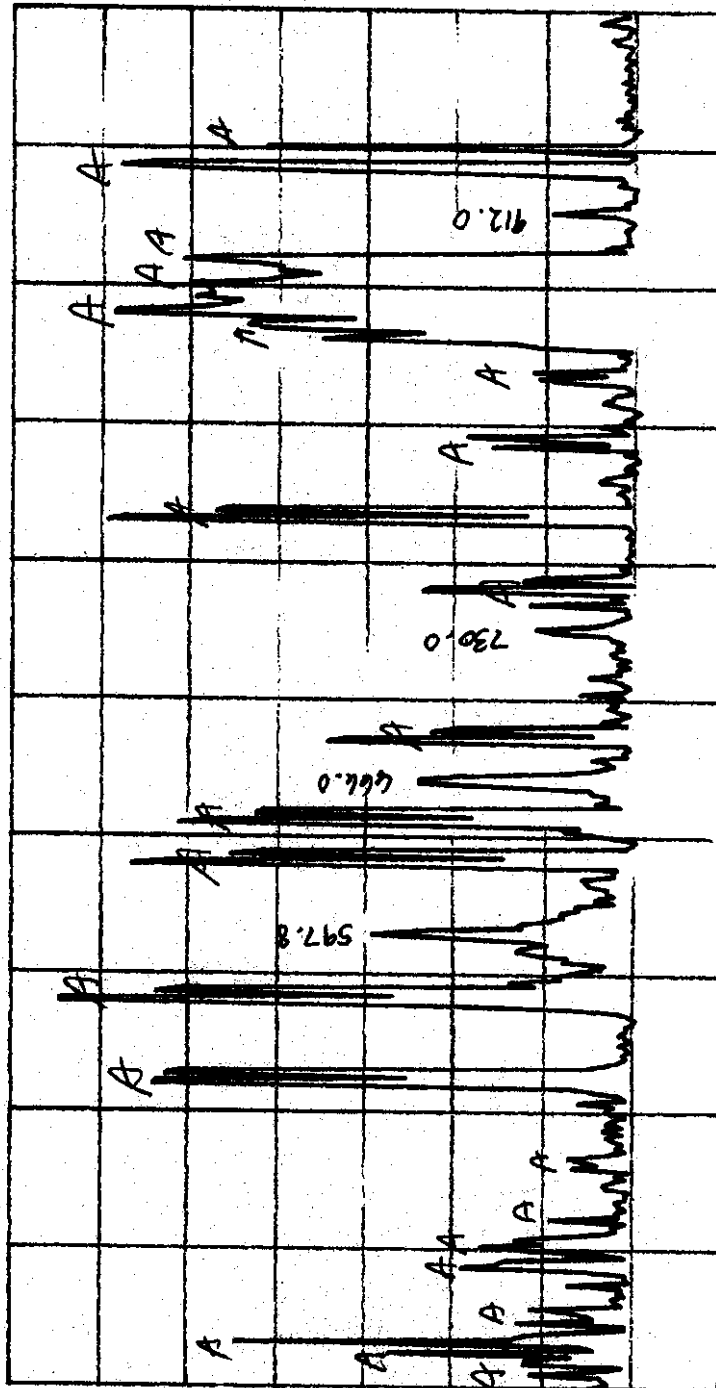
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11:13:05 17 DEC 1998 SS4125, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 62.0 dBμV

8 dB/
#ATN
0 dB



VA SB
SC FC
CORR

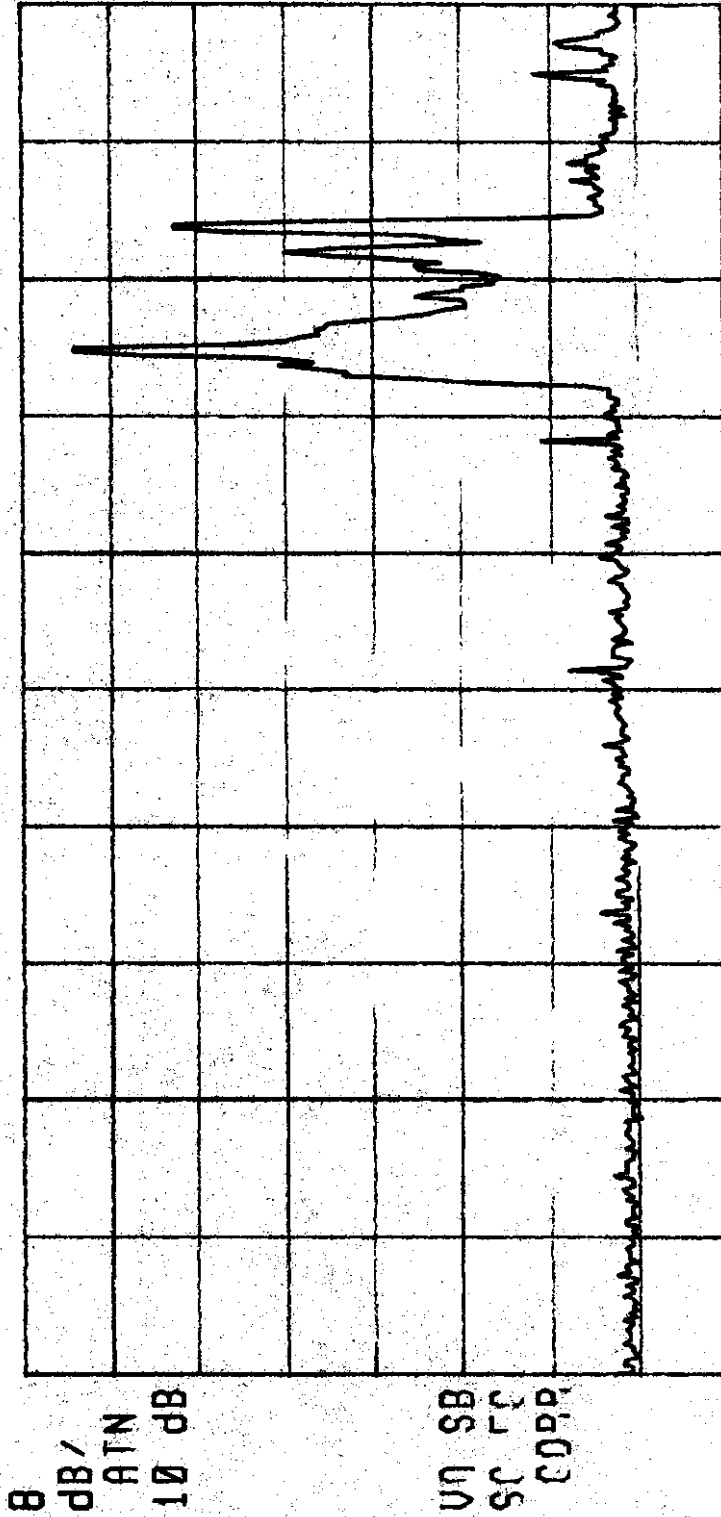
START 400.0 MHz IF BW 120 kHz AVG BW 1 MHz STOP 1.0000 GHz SWP 563 msec

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11:09:58 17 DEC 1998 SS4125, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV ALL AMBIENTS



STOP 80.00 MHz
IF BW 120 kHz
AUG BW 1 MHz
SWP 46.9 msec

8
dB/
ATN
10 dB

VN SB
SC FC
CORP



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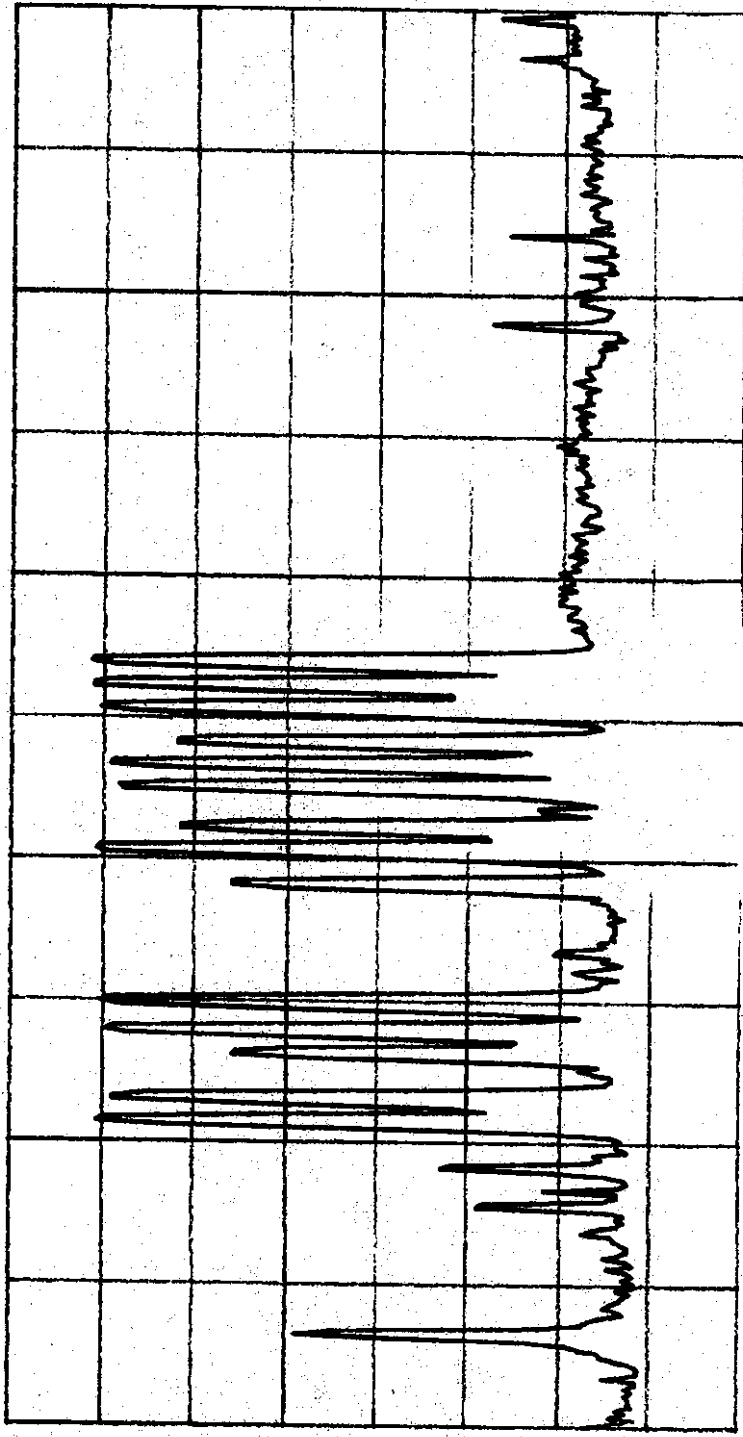
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11:07:03 17 DEC 1998 SS4125, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 70.0 dBμV
ALL AMBIENTS



dB/
ATN
10 dB

VA SB
SC FC
CDPR

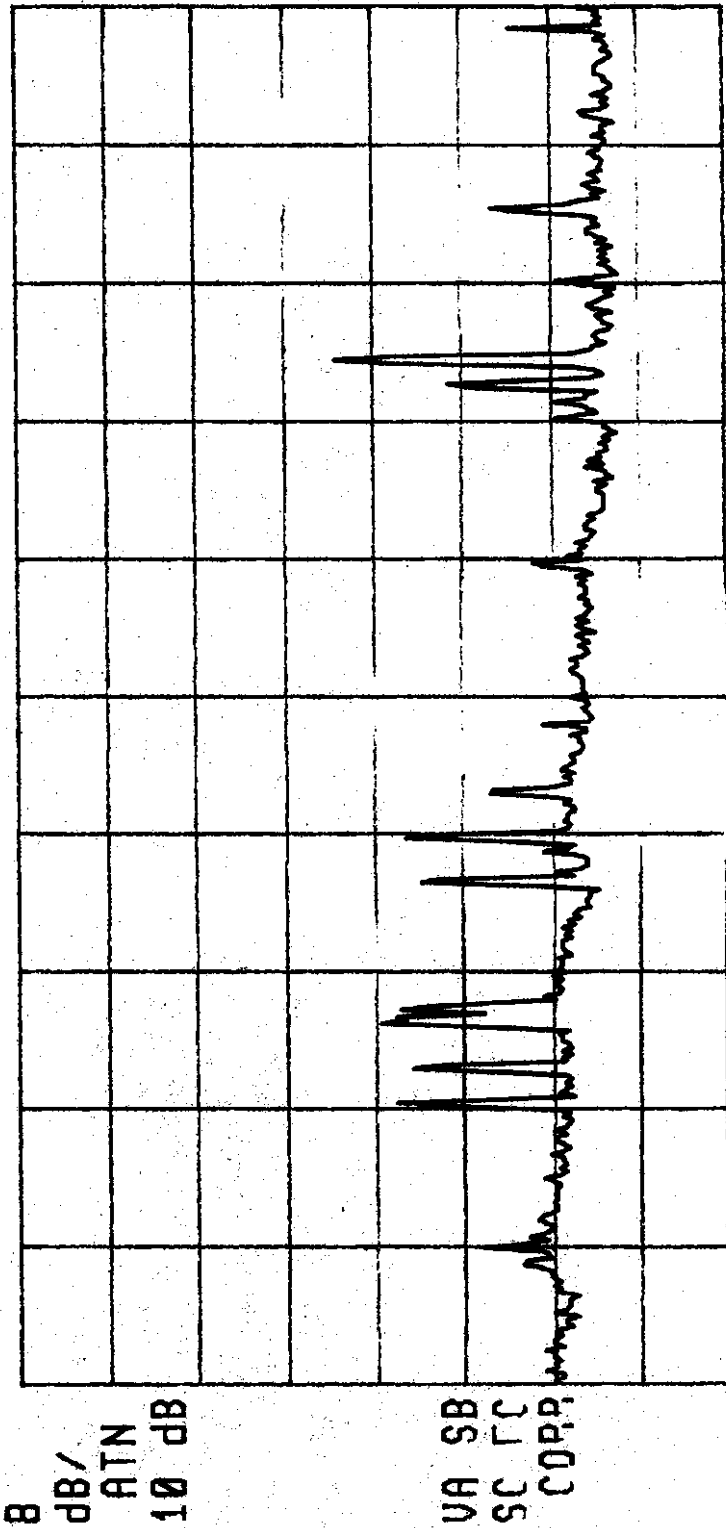
START 80.00 MHz IF BW 120 kHz
STOP 130.00 MHz SWP 46.9 msec
AVG BW 1 MHz

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11:04:11 17 DEC 1998 SS4125, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV ALL AMBIENTS



START 130.00 MHz IF BW 120 kHz
STOP 180.00 MHz SWP 46.9 msec
AUG BW 1 MHz

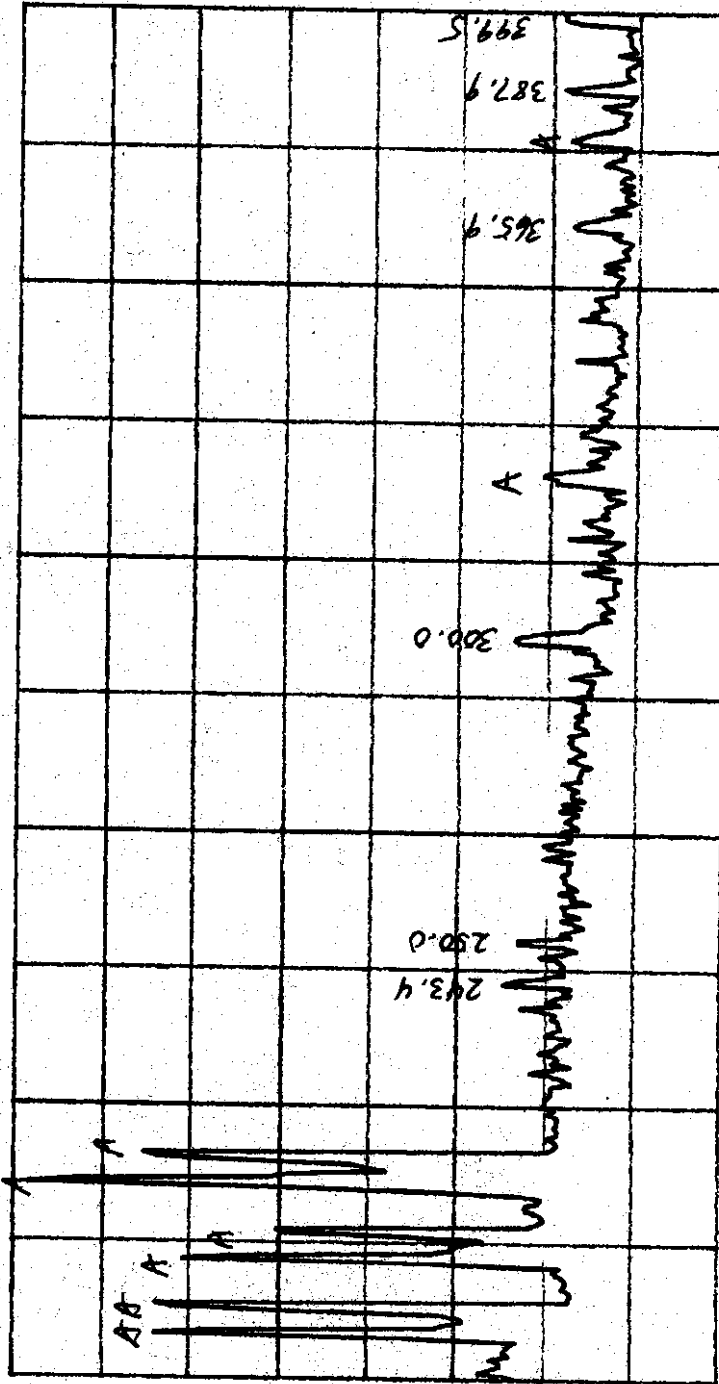
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11:01:07 17 DEC 1998 SS4125, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 62.0 dBμV

B dB/
#ATTN
0 dB



VA SB
SC FC
CORR

START 180.0 MHz IF BW 120 kHz AVG BW 1 MHz STOP 400.0 MHz SWP 206 msec

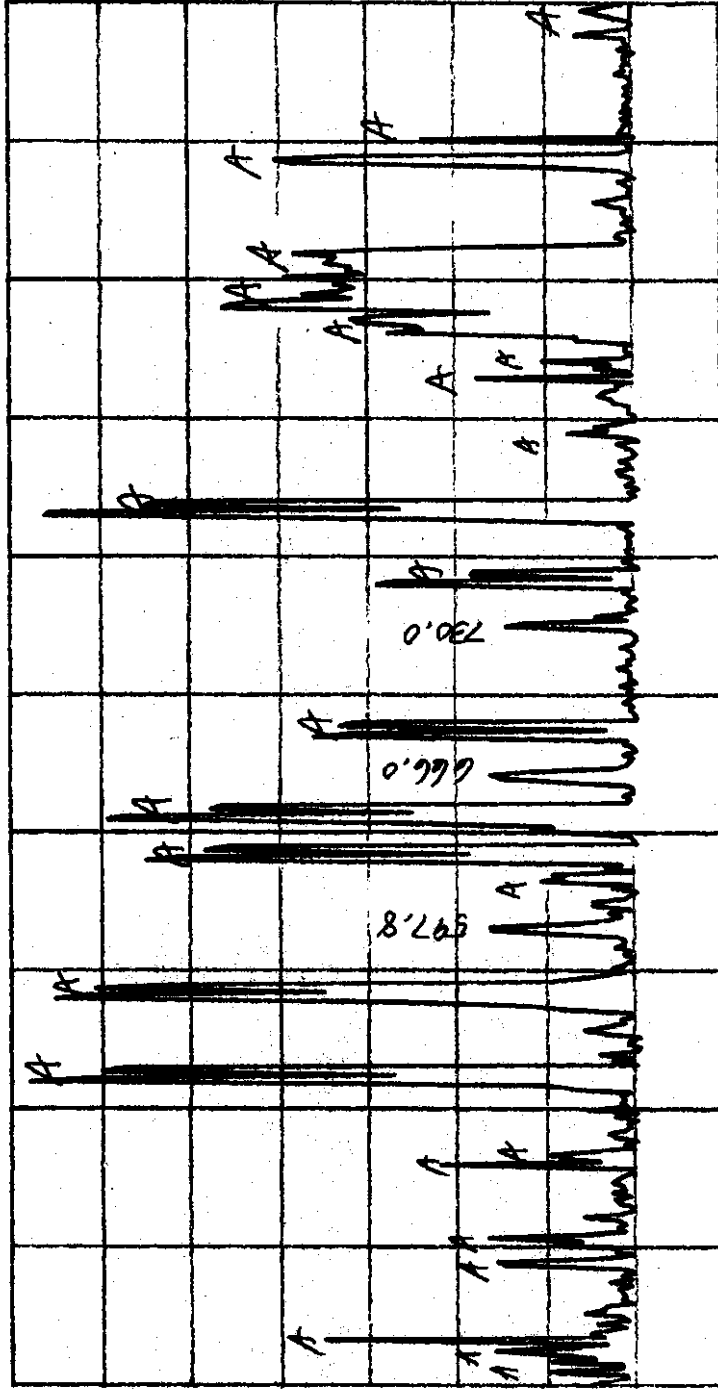
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10:56:53 17 DEC 1998 SS4125, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 62.0 dBμV

8 dB/
#ATN
0 dB



VA SB
SC FC
CORR

START 400.0 MHz IF BW 120 kHz AUG BW 1 MHz STOP 1.0000 GHz SWP 563 msec



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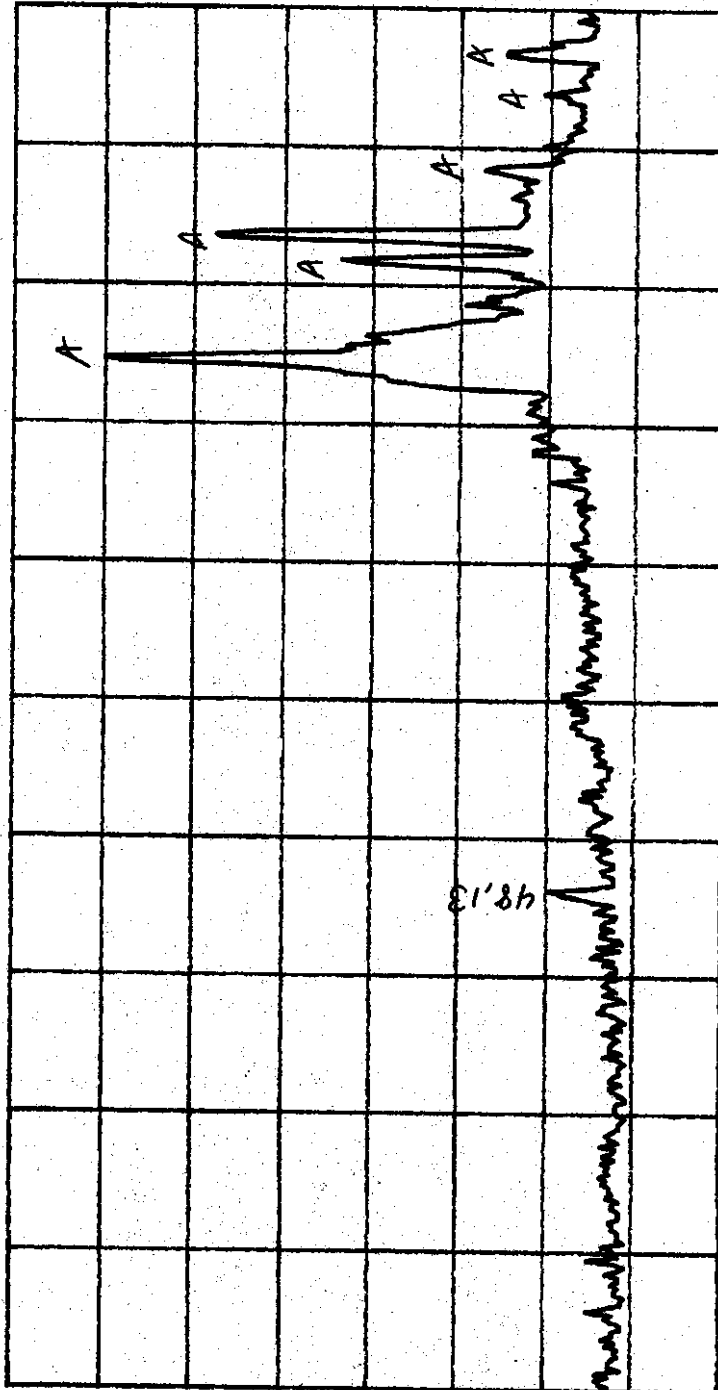
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16:07:25 16 DEC 1998 SS4150, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV

8 dB/
ATN
10 dB



VA SB
SC FC
CORR

START 30.00 MHz IF BW 120 kHz
STOP 80.00 MHz SWP 46.9 msec
AUG BW 1 MHz



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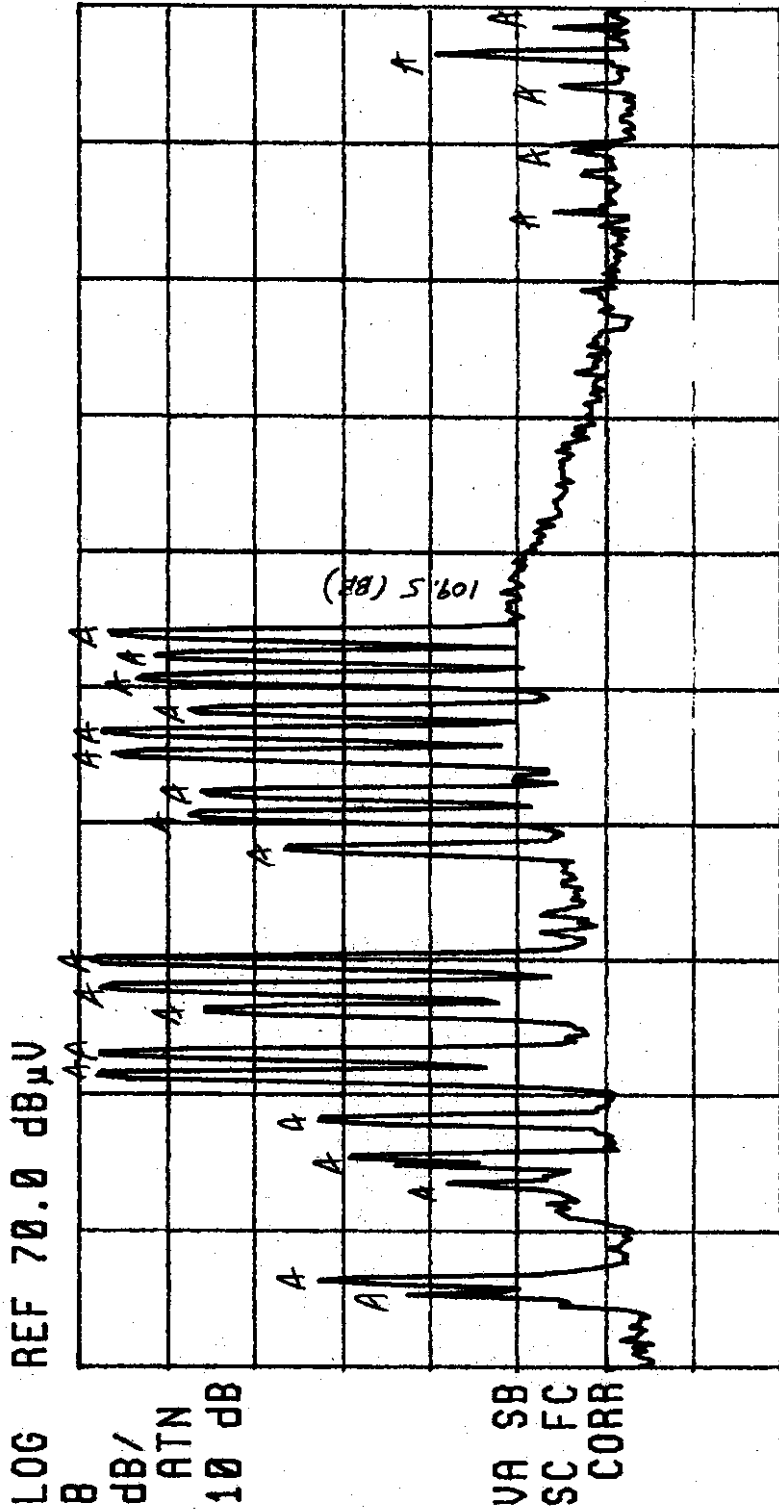
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16:02:02 16 DEC 1998 SS4150, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG



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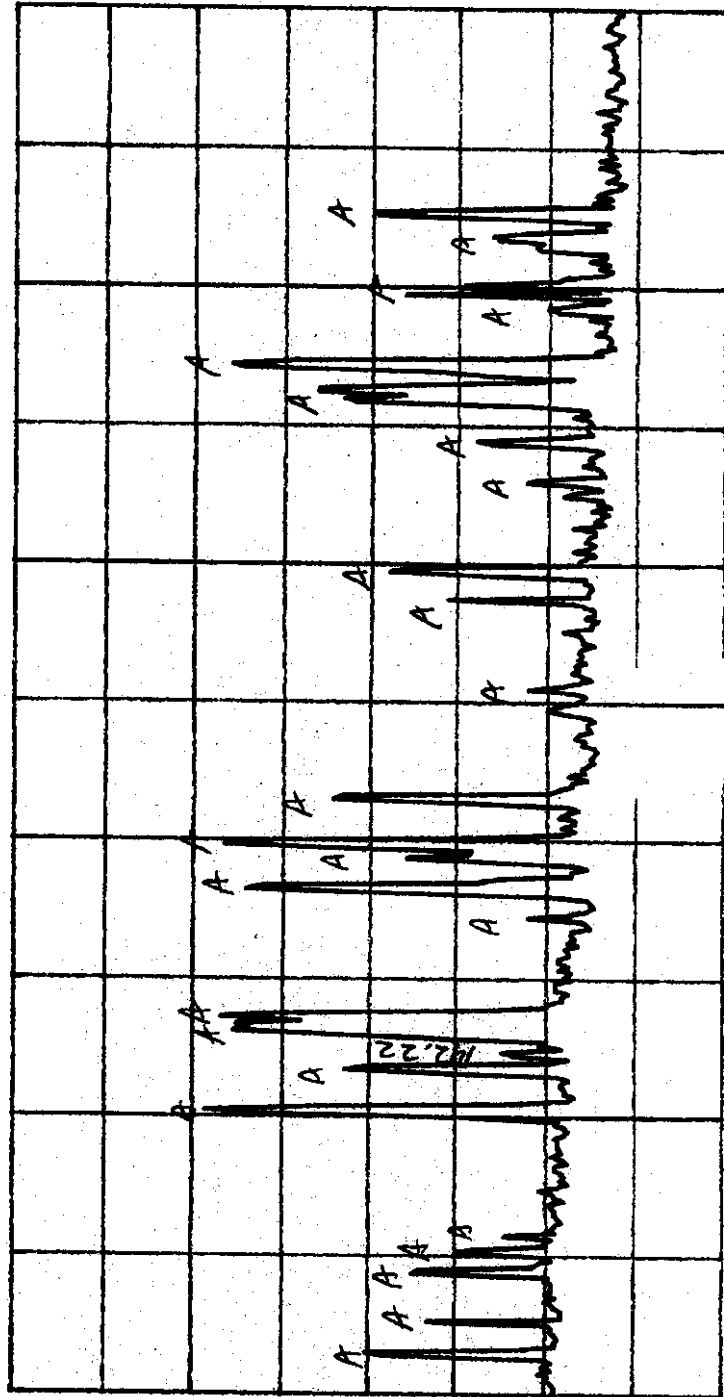
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15:59:05 16 DEC 1998 SS4150, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dB μ V

8 dB/
ATN
10 dB



START 130.00 MHz

IF BW 120 kHz

AUG BW 1 MHz

STOP 180.00 MHz

SWP 46.9 msec



DOCUMENT NUMBER

DK104815

CHANGE LEVEL

1

SECURITY LEVEL

RESTRICTED

PAGE NUMBER

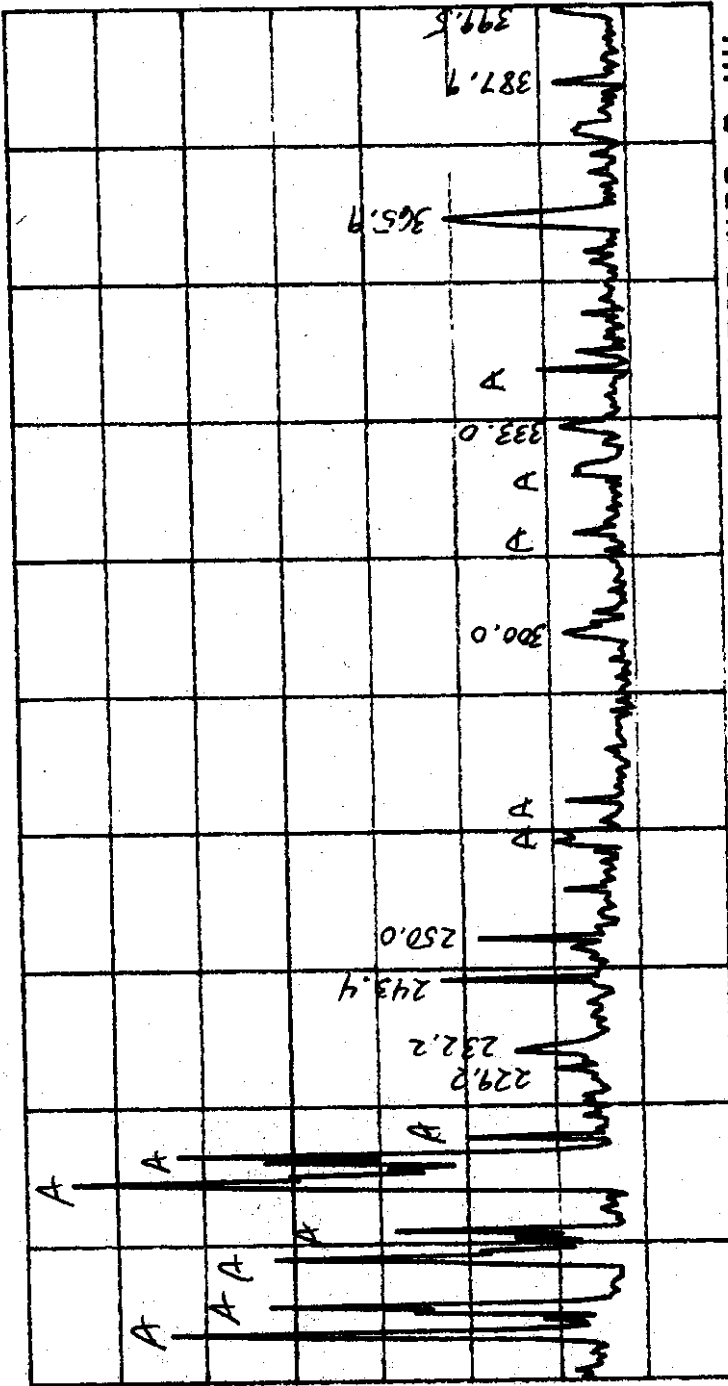
31

15:56:07 16 DEC 1998 SS4150, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 62.0 dBμV

8 dB/
#ATN
0 dB



VA SB
SC FC
CORR

STOP 400.0 MHz
SWP 206 msec

AVG BW 1 MHz

START 100.0 MHz
IF BW 120 kHz



DOCUMENT NUMBER
DK104815

CHANGE LEVEL
1

SECURITY LEVEL
RESTRICTED

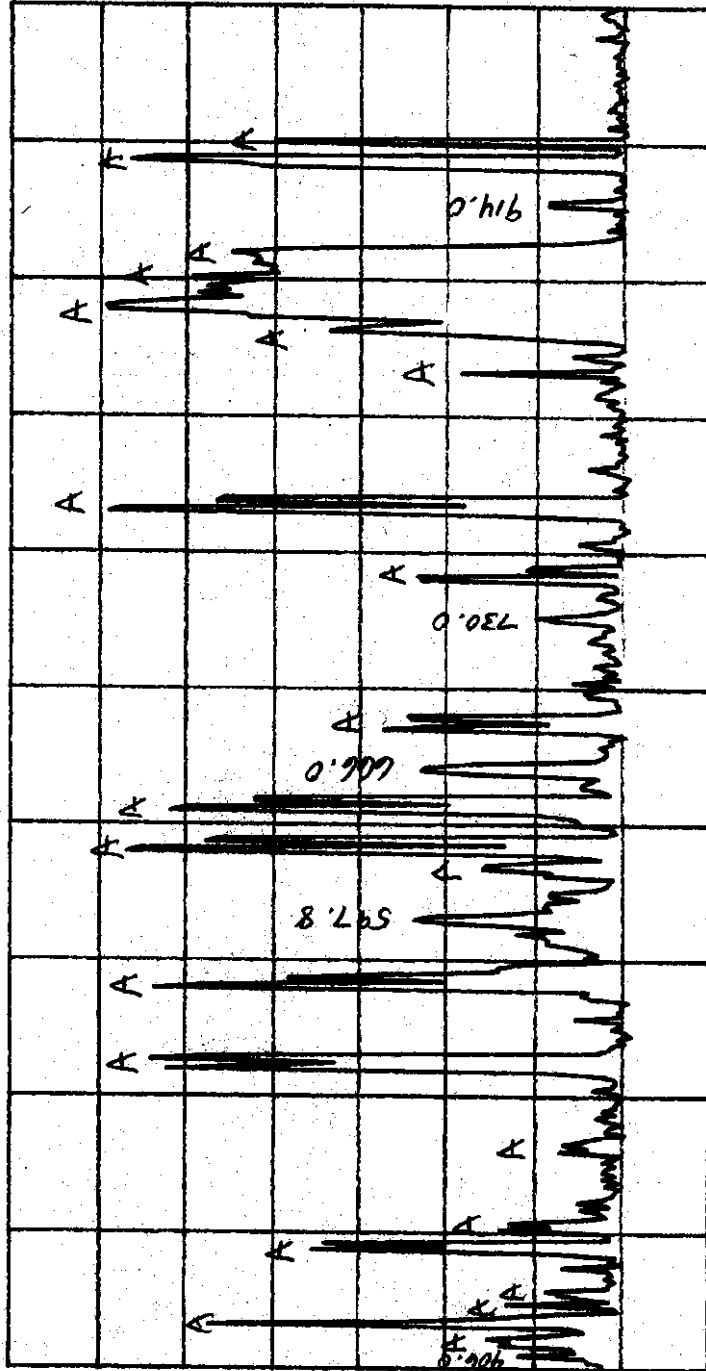
PAGE NUMBER
32

15:52:56 16 DEC 1998 SS4150, SIM1, PKM 3m Vert

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 62.0 dBμV

B
dB/
#ATN
0 dB



VA SB
SC FC
CORR

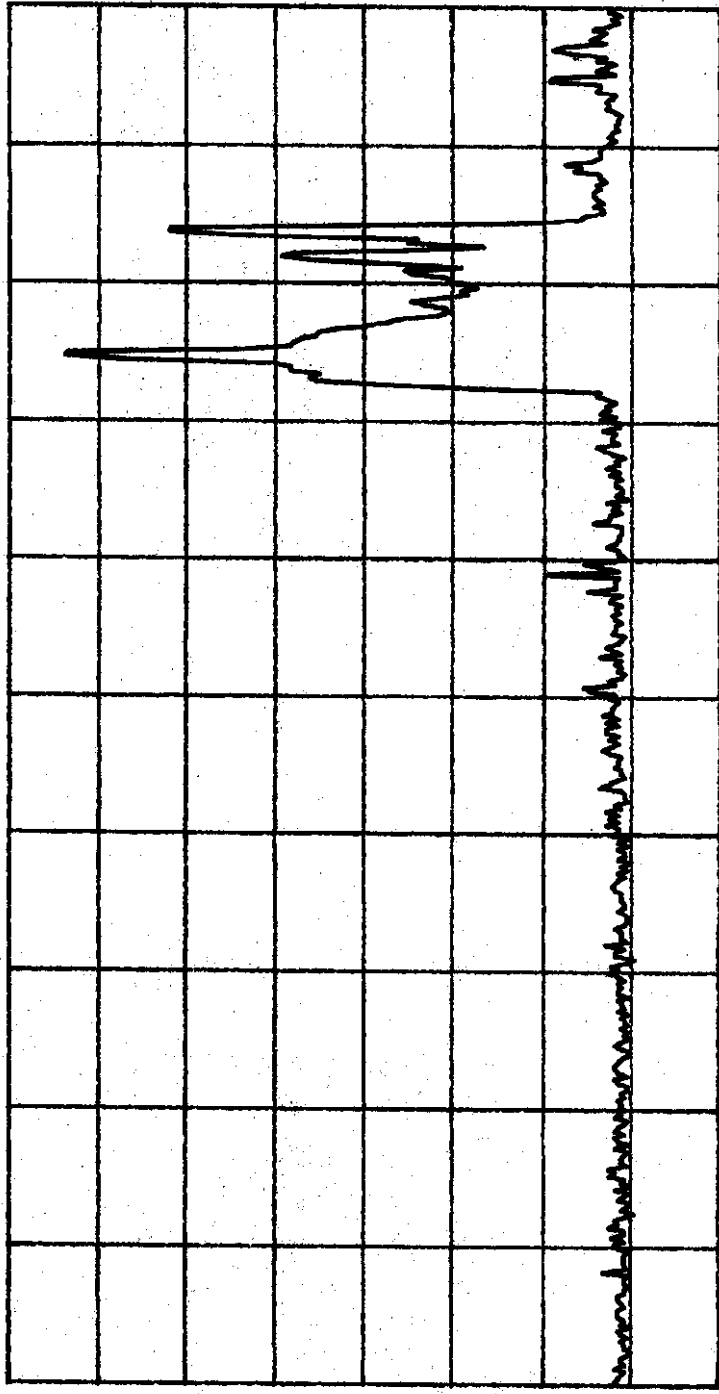
START 400.0 MHz IF BW 120 kHz
STOP 1.0000 GHz SWP 563 msec
AVG BW 1 MHz

	<p>DOCUMENT NUMBER DK104815</p>	<p>CHANGE LEVEL 1</p>	<p>SECURITY LEVEL RESTRICTED</p>	<p>PAGE NUMBER 33</p>
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15:34:16 16 DEC 1998 4S4150, SIM1, PKM 3m Horiz


ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV
8 dB/ ATN 10 dB
ALL AMBIENTS



VA SB
SC FC
CORR

START 30.00 MHz IF BW 120 kHz AVG BW 1 MHz
STOP 80.00 MHz SWP 46.9 msec

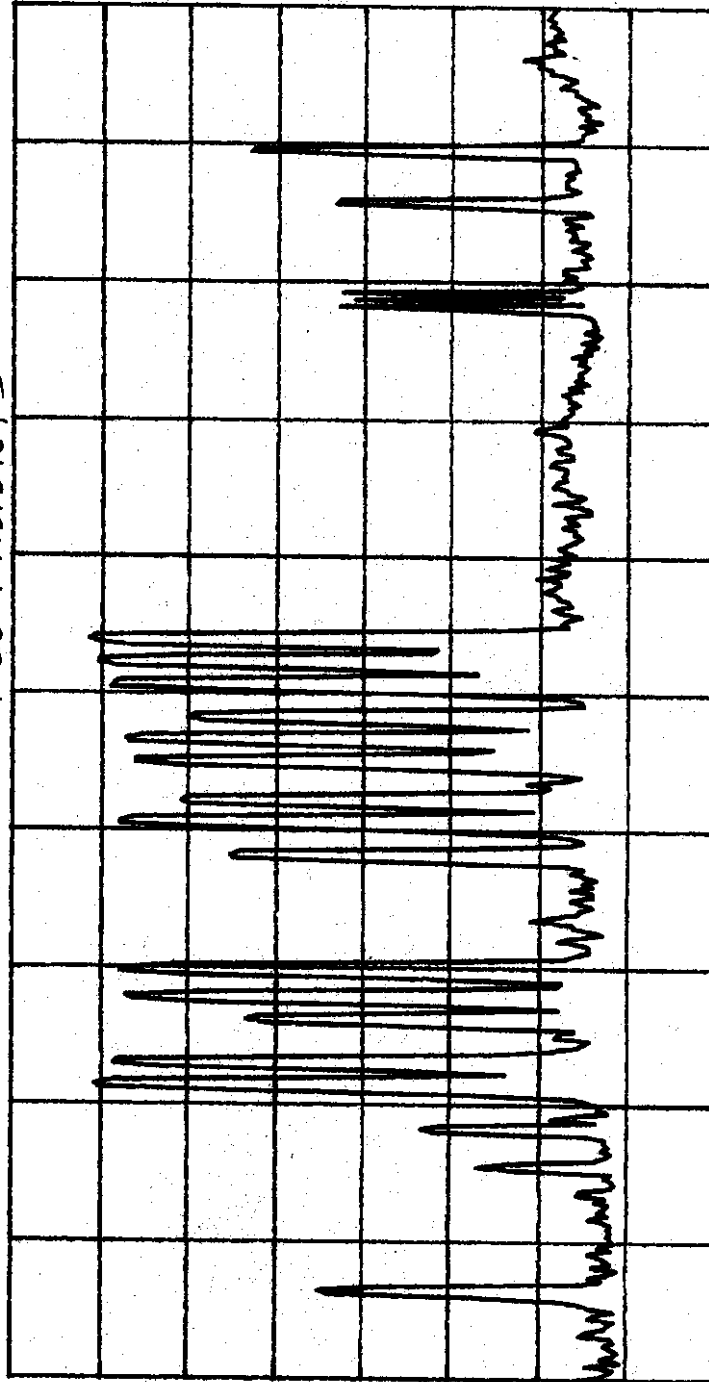
 MITEL®	DOCUMENT NUMBER DK104815	CHANGE LEVEL 1	SECURITY LEVEL RESTRICTED	PAGE NUMBER 34
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15:40:16 16 DEC 1998 154150, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV

ALL AMBIENTS



8 dB/
ATN
10 dB

VA SB
SC FC
CORR

START 80.00 MHz

IF BW 120 kHz

AUG BW 1 MHz

STOP 190.00 MHz

SWP 46.9 msec



DOCUMENT NUMBER
DK104815

CHANGE LEVEL
1

SECURITY LEVEL
RESTRICTED

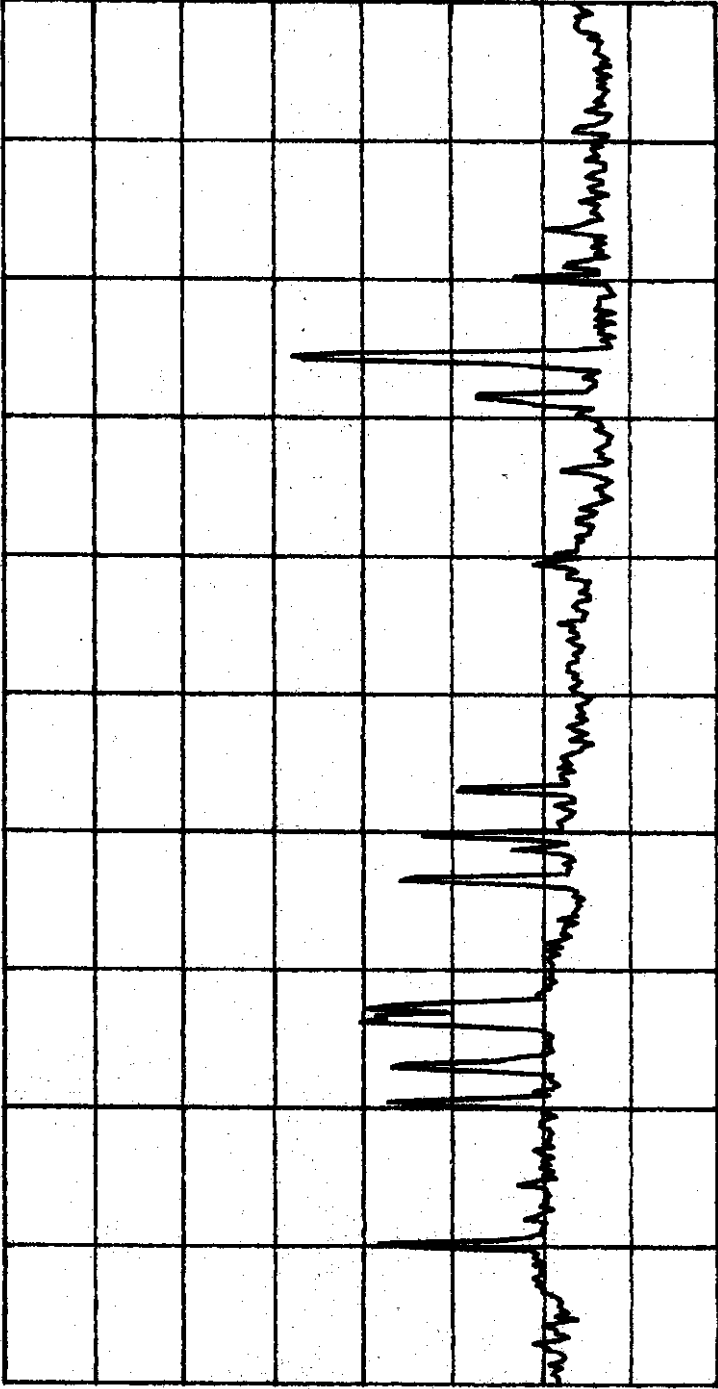
PAGE NUMBER
35

15:43:23 16 DEC 1998 SH4150, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG


LOG REF 70.0 dBμV
8 dB/
ATN
10 dB

ALL AMBIENTS



VA SB
SC FC
CORR

START 130.00 MHz IF BW 120 kHz
STOP 180.00 MHz SWP 46.9 msec
AVG BW 1 MHz

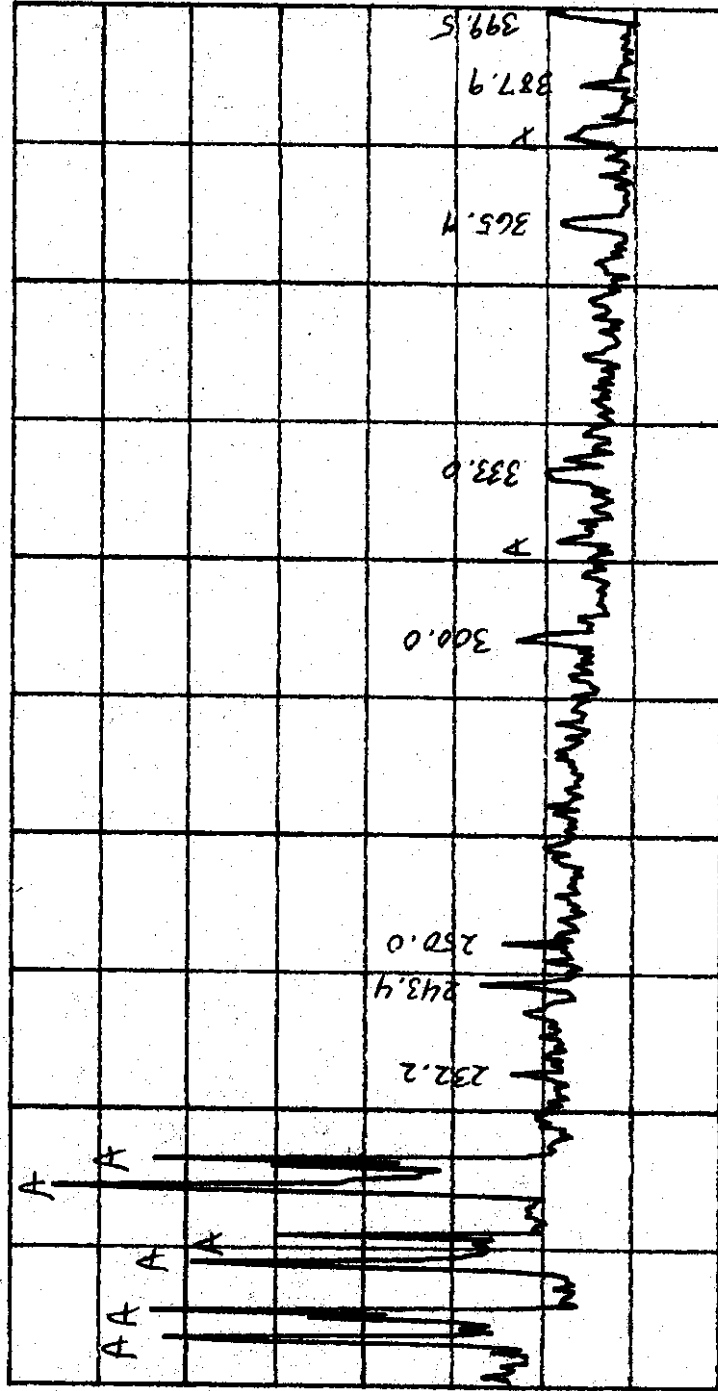
 MITEL ®	DOCUMENT NUMBER	CHANGE LEVEL	SECURITY LEVEL	PAGE NUMBER
	DK104815	1	RESTRICTED	36

15:46:33 16 DEC 1998 SS4150, SIM1, PKM 3m Horiz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 62.0 dB μ V

B dB/
#ATN
0 dB



START 180.0 MHz IF BW 120 kHz
STOP 400.0 MHz SWP 206 msec
AVG BW 1 MHz



DOCUMENT NUMBER
DK104815

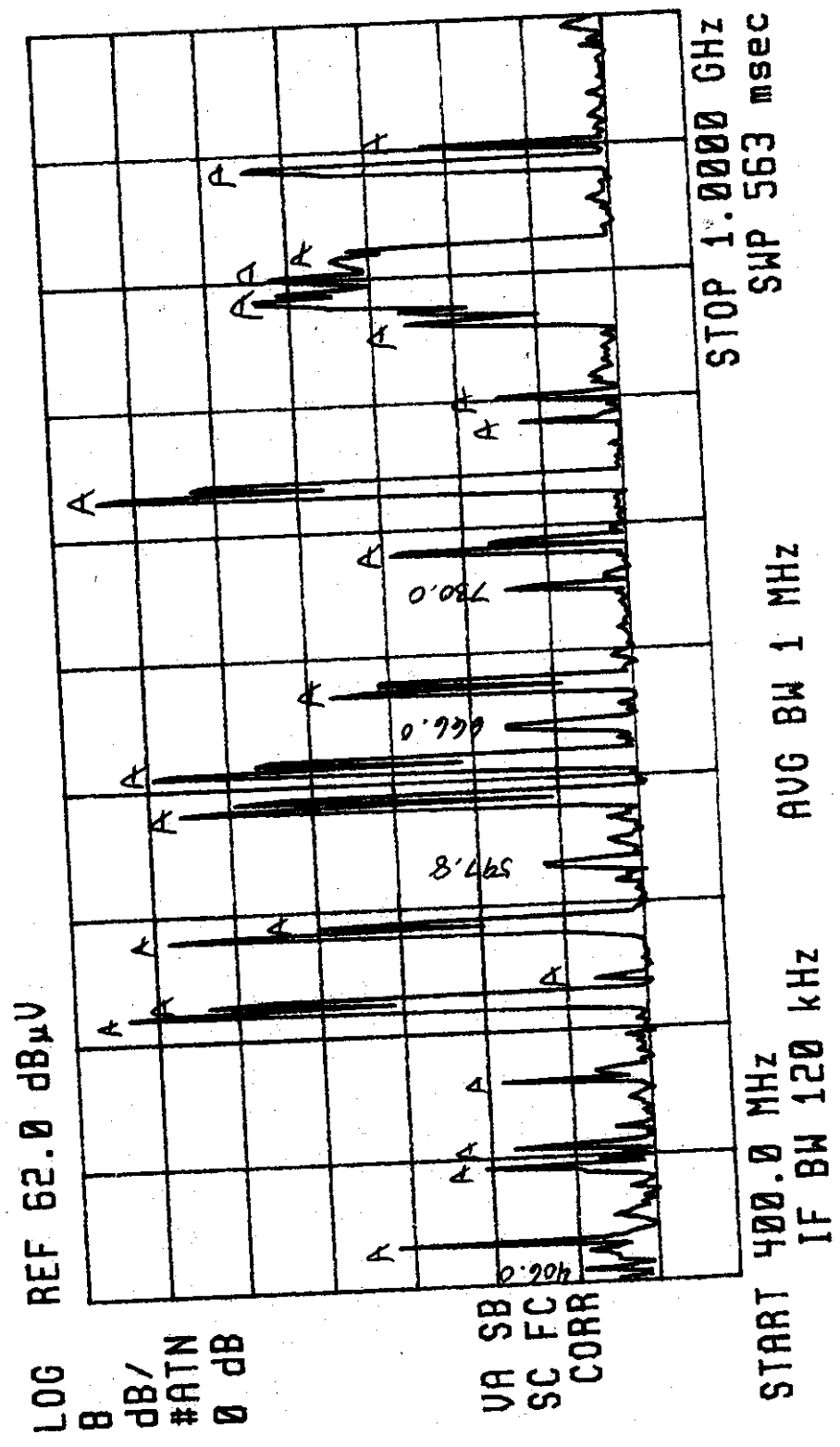
CHANGE LEVEL
1


SECURITY LEVEL
RESTRICTED

PAGE NUMBER
37

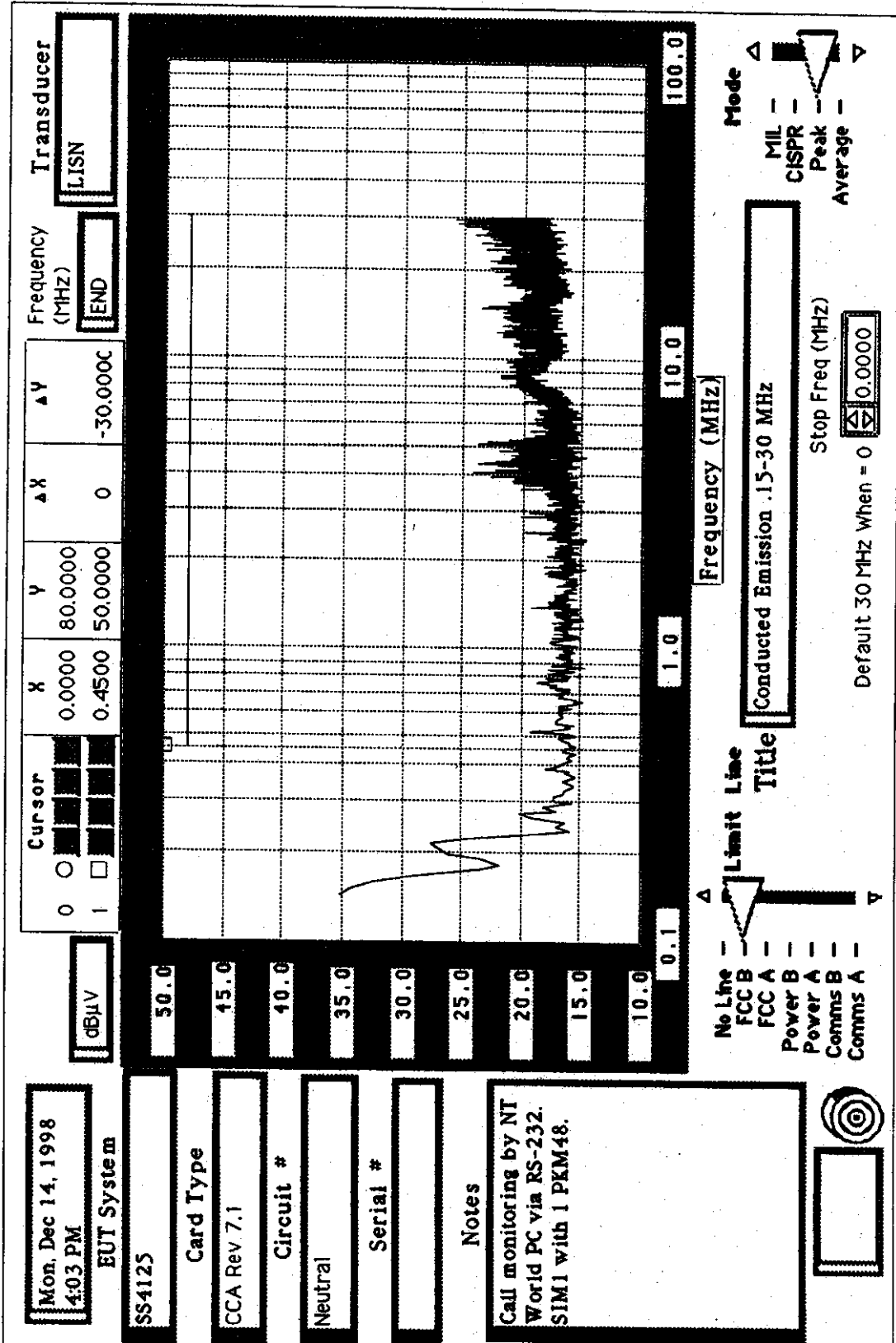
15:49:47 16 DEC 1998 SS4150, SIM1, PKM 3m Horiz


ACTV DET: PEAK
MEAS DET: PEAK QP AVG



	DOCUMENT NUMBER DK104815	CHANGE LEVEL 1	SECURITY LEVEL RESTRICTED	PAGE NUMBER 38
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10. APPENDIX F: CONDUCTED EMISSIONS SPECTRAL PLOTS



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	DK104815	1	RESTRICTED	39



DOCUMENT NUMBER
DK104815

CHANGE LEVEL
1

SECURITY LEVEL
RESTRICTED

PAGE NUMBER
40

Mon, Dec 14, 1998
3:33 PM

EUT System

SS4125

Card Type

CCA Rev 7.1

Circuit #

Line

Serial #

Notes

Call monitoring by NT
World PC via RS-232.
SIM1 with 1 PKM48.

Cursor

0

1

X

0.0000

0.4500

Y

80.0000

50.0000

ΔX

0

ΔY

-30.0000

Frequency (MHz)

END

Transducer

LISN

dBμV

50.0

15.0

40.0

35.0

30.0

25.0

20.0

15.0

10.0

Frequency (MHz)

0.1

1.0

10.0

100.0

Mode

MIL

CISPR

Peak

Average

Limit Line

Title

Conducted Emission .15-30 MHz

Stop Freq (MHz)

0.0000

Default 30 MHz When = 0



DOCUMENT NUMBER

DK104815

CHANGE LEVEL

1

SECURITY LEVEL

RESTRICTED

PAGE NUMBER

42

Mon, Dec 14, 1998

4:39 PM

EUT System

SS4150

Card Type

CCA Rev 7.4

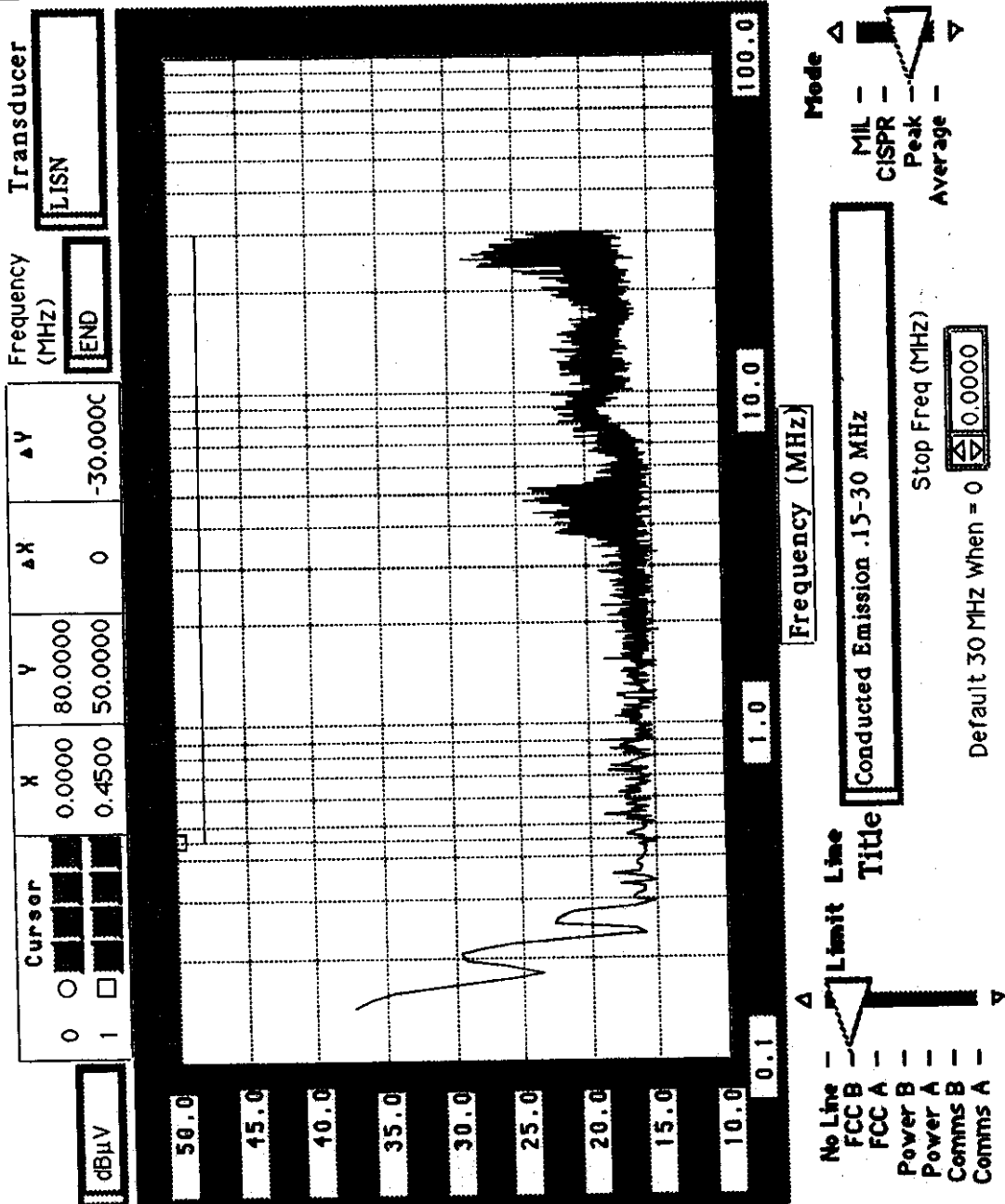
Circuit #

Neutral

Serial #

Notes

Call monitoring by NT
World PC via RS-232.
SIM1 with 1 PKM48.



- No Line
- FCC B
- FCC A
- Power B
- Power A
- Comms B
- Comms A

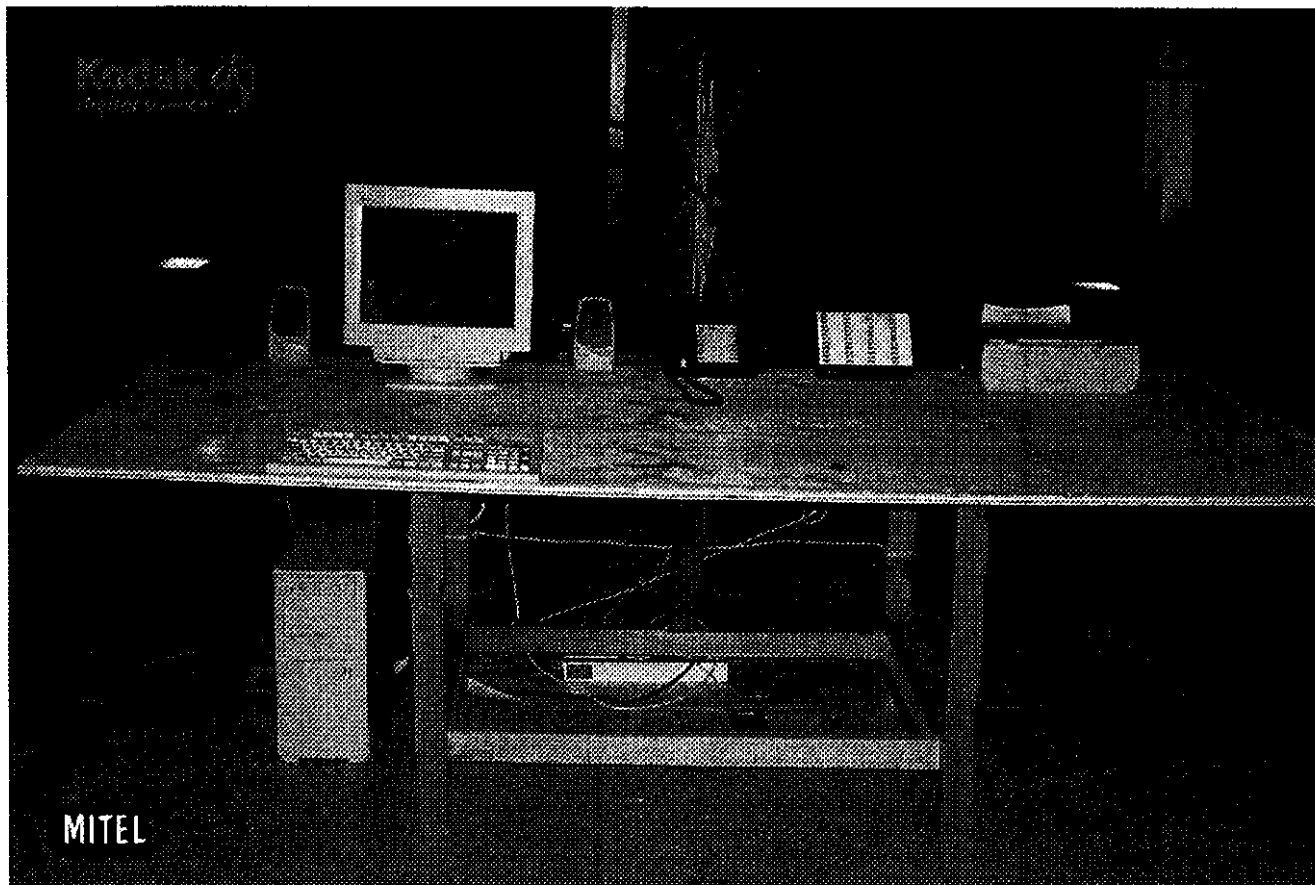


EXHIBIT C - Customer Instructions


Attached is a copy of the Installation Guides provided to the customer describing how to install the telephone sets and the associated peripherals and accessories.



7. APPENDIX C: PHOTOGRAPHS



Photograph 1: Radiated Emissions – Front View

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	DK104815	1	RESTRICTED	14


6. APPENDIX B: TEST EQUIPMENT

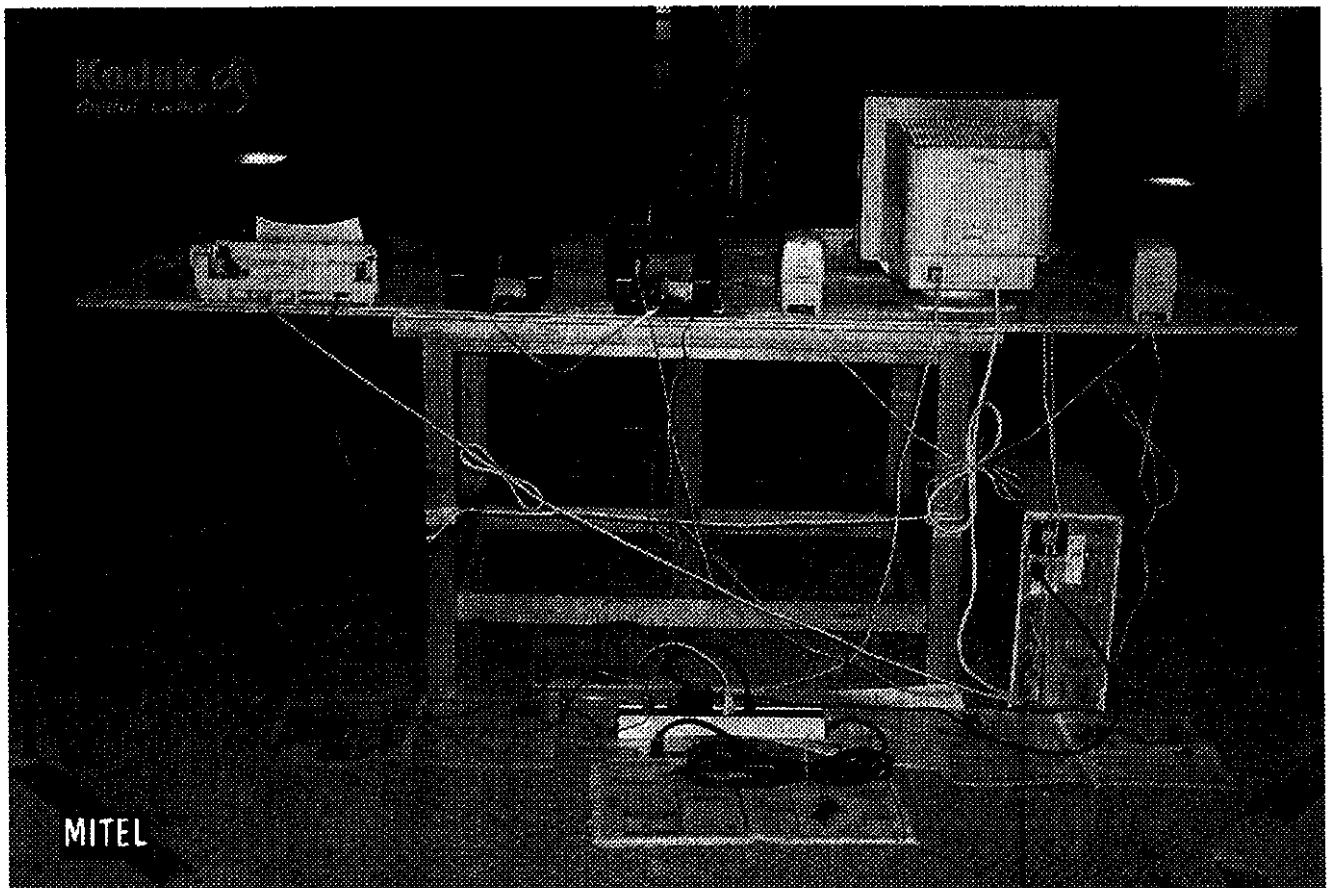
OATS, Carp

Manufacturer	Model No.	Description	Asset No.	Calibration Date (Last/Next)
Hewlett Packard	8542E/85420E	EMI Receiver	7412	981112/991111
Compliance Design	B-1000	Dipole Antenna Set	MS12692	980701/990701
Electro-Metrics	EM-6917A-1	BiLog Antenna	7493	980407/990406


Test Lab, Phase IV

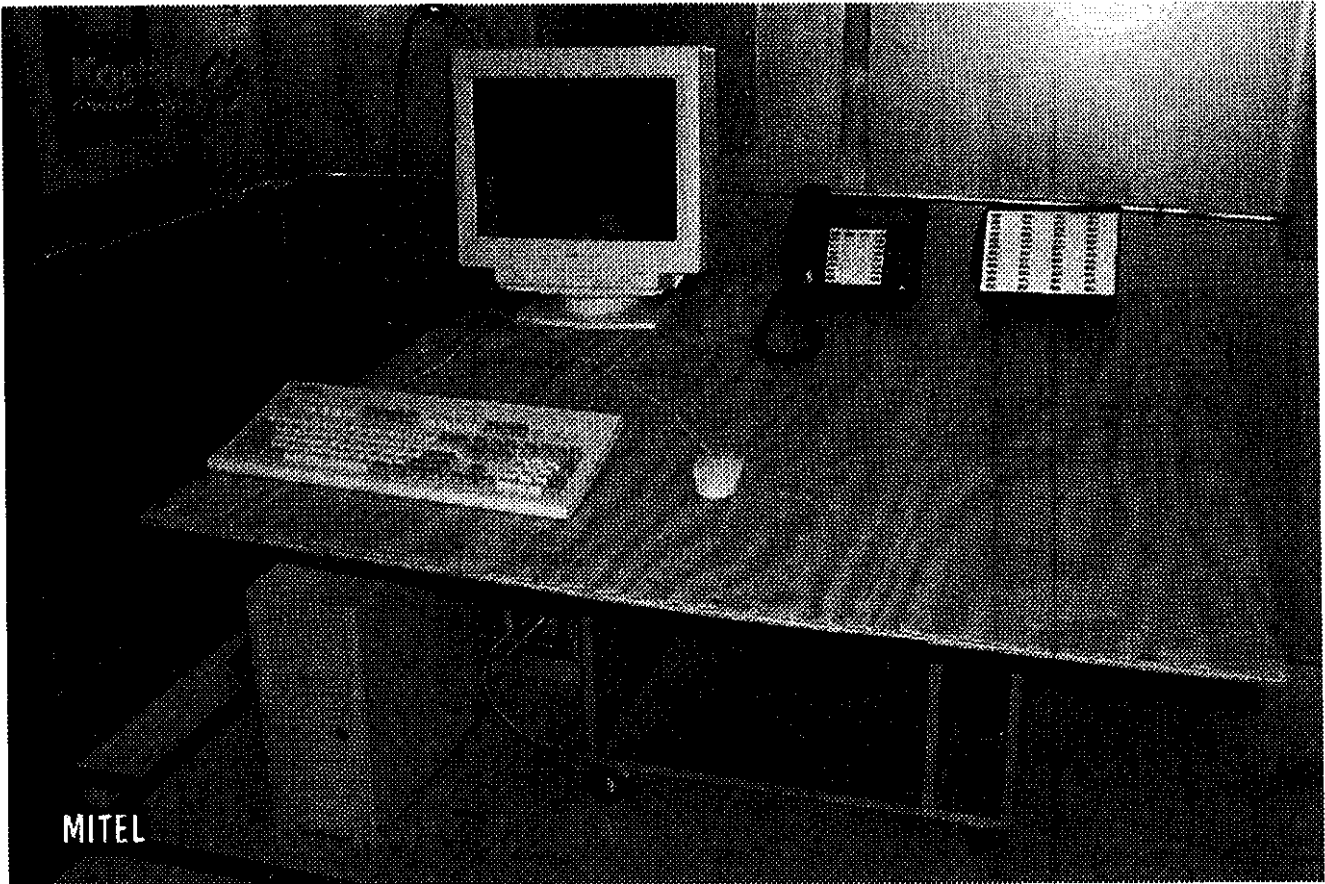
Manufacturer	Model No.	Description	Asset No.	Calibration Date (Last/Next)
Rohde & Schwarz	ESH3	EMI Receiver	5915	980407/990402
Rohde & Schwarz	ESH3-Z5	LISN	6982	980123/990118
Rohde & Schwarz	ESH3-Z5	LISN	6803	980123/981214
Apple	MacIntosh SE	Personal Computer	MS20491	N/A

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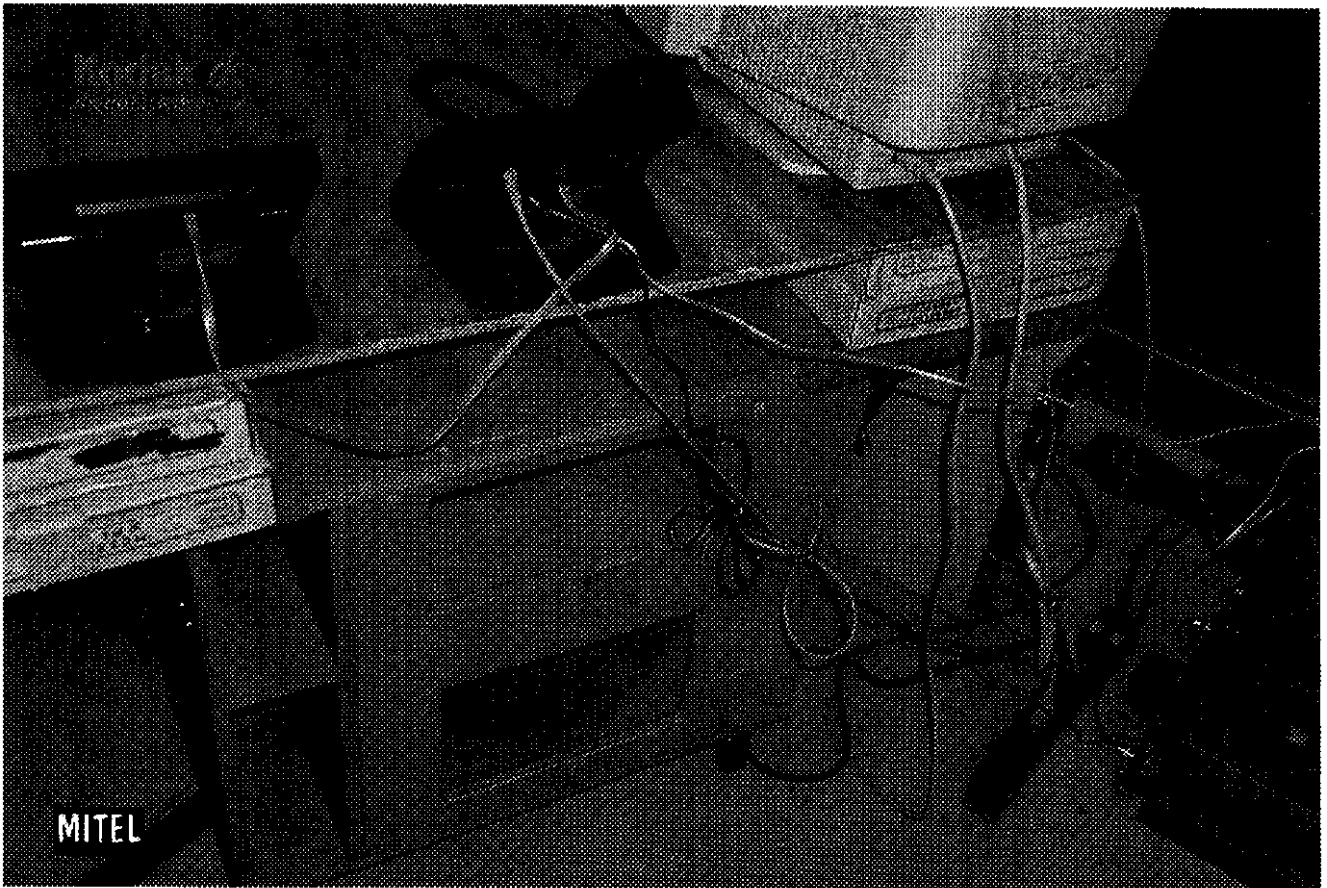
Photograph 2: Radiated Emissions – Rear View

 MITEL [®]	DOCUMENT NUMBER	CHANGE LEVEL	SECURITY LEVEL	PAGE NUMBER
	DK104815	1	RESTRICTED	15




Photograph 3: Conducted Emissions - Front View

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Photograph 4: Conducted Emissions– Rear View
Note: Setup moved more than 40 cm from rear wall for picture purposes only.

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8. APPENDIX D: INTERFACE CABLE CONSTRUCTION AND CONNECTIONS

No.	Description	Source	Destination	Length (m)	Hood	Ferrite
1	Tip/Ring	PBX (SX2000)	SS4125/50	1.5 *	Plastic	No
2	PKM Cable	SS4125/50	PKM48	0.6	Plastic	No
3	Handset Cord	SS4125/50 (base)	Handset	1.0	Plastic	No
4	RS-232 Cable	PC	SS4125/50	1.8	Shielded	No
5	AC Cord	SS4125/50	AC Mains	2.0	Plastic	No
6	AC Cord	Monitor	AC Mains	1.8	Shielded	No
7	Video Cable	PC	Monitor	1.5	Shielded	Yes
8	Keyboard Cable	PC	Keyboard	1.8	Shielded	No
9	Mouse Cord	PC	Mouse	1.7	Shielded	No
10	Speaker Cord (Right)	Left Speaker	Right Speaker	1.8	Plastic	No
11	Speaker Cord (Left)	PC	Left Speaker	2.0	Plastic	No
12	AC Cord	Printer	AC Mains	1.5	Plastic	No
13	Printer Cable	PC	Printer	2.0	Shielded	No
14	AC Cord	PC	AC Mains	1.8	Shielded	No

* Length of cable inside shielded enclosure (conducted emissions) or above ground plane (radiated emissions) only.

