TEST REPORT

Ref. Report No.
00-341-051-02

Name and address of the applicant

AM Equipment
P.O. BOX 790
402 E. HAZEL JEFFERSON, OR 97352
U.S.A.

Standard / Test regulation

FCC Part 15, Subpart B

Test result

Pass

Test item(s) ;

Superregenerative Receiver
(RF Remote Switch)

Model/type ref. ;

AM-202

Manufacturer ;

U-TEK Engineering

Additional information ;

-Required Authorization : Certification
-FCC ID. : OYT3201218

Incoming date : October 12, 2000

Test date : November 02, 2000

Issue date : November 06, 2000

Tested and reported by

Jeong-Min Kim , Senior Engineer

Reviewed by

Seok-Jin Kim , EMC Team Leader

KOREA TESTING LABORATORY

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. GENERAL INFORMATION

1. Grantee's Name and Mailing Address	:	AM Equipment P. O. Box 790, 402 E. HAZEL JEFFERSON, OR 97352 U.S.A.
2. Manufacturer's Name and Mailing Address	:	U-TEK Engineering 2-237, Ichon Ind. Goods Center 129, Songhyun-Dong, Dong-Gu, Inchon, Korea 401-040

3. Equipment Descriptions

3.1 Tunning Frequency	:	311 MHz
3.2 Detect Method	:	Superregenerative Detector
3.3 Oscillator Used	:	311 MHz (Resonator)
3.4 Power Supply	:	DC 8V(Battery)

4. Rules and Regulations	:	FCC Part 15, Subpart B
5. Measuring Procedure	:	ANSI C63.4-1992

6. Date of Measurement

6.1 Line Conducted	:	Not Applicable
6.2 Radiated Emission	:	November 02, 2000

. GENERAL REQUIREMENTS OF THE EUT

1. Labelling Requirement (Section 15.19)

> This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interface, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1.1 Location of Label : Bottom side of EUT
1.2 How Applied : By ink-printing on adhesive label

2. Information to User (Section 15.21)

The following or similar statements were provided in the manual for user instruction.
Please refer page 2 of the attached manual for details.

> CAUTION : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

3. Special Accessories (Section 15.27)

3.1 Were the special Accessories provided? [ ] yes, [x] no

3.2 If yes, details for the special accessories are as follows :

3.3 If yes, were the appropriate instructions provided on the first page of the text concerned with the device?
[ ] yes, [ ] no

3.4 Are these accessories provided of the type which can be readily obtained from multiple retail outlets ?
[ ] yes, [ ] no

And therefore does the manual specify what additional components or accessories are required to used in order to comply with the Rules?
[ ] yes, [ ] no

. RADIATED EMISSION MEASUREMENT (Section 15.109)

1. Test Procedure

1.1 Preliminary Testing for Reference

Preliminary testing was performed in a KTL absorber-lined room to determine the emission characteristics of the EUT. The EUT was placed on the wooden table which has dimensions of 0.8 meters in height, 1 meter in length and 1.5 meters in width. Receiving antenna (Biconical antenna : 30 to 300MHz, Log-periodic antenna : 200 to 1000MHz or Horn Antenna : 1 to 18GHz) was placed at the distance of 1 meter from the EUT.

In order to cohere the individual components of the characteristic broadband emission from the receiver(EUT), a RF generator(CW signal) and a log-periodic antenna were used. The frequency and output level of the generator were adjusted for highest observed coherent receiver emissions on the spectrum analyzer with RF amplifier.

An attempt was made to maximize the emission level with the various configurations of the EUT. The effect of changing the position of the cable was observed to find the worst case configuration while rotating the table and varying antenna height and it's polarization.

Radiated and spurious emissions were checked from 30 MHz to 3000 MHz according to section 15.33.

1.2 Final Radiated Emission Test at an Absorber-Lined Room

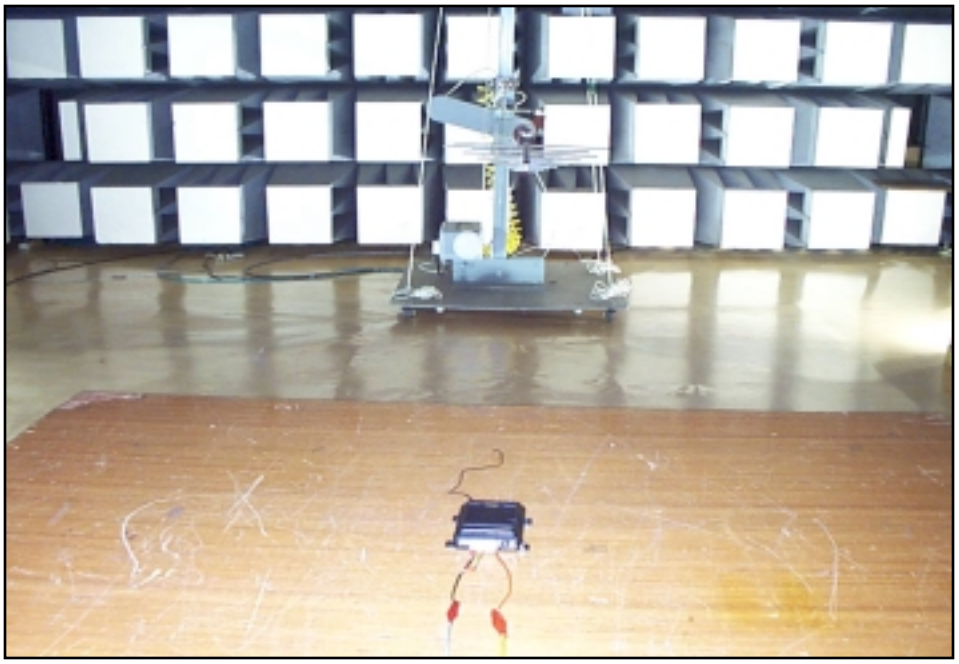
The final measurement of radiated field strength was carried out in a KTL Absorber-Lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.

Based on the test results in preliminary test, measurement was made in same test set up and configuration which produced maximum emission level. Receiving antenna was installed at 3-meter distance from the EUT, and was connected to an EMI receiver or spectrum analyzer(for above 1GHz) with a RF amplifier.

Turntable was rotated through 360 degrees and receiving antenna height was varied from 1 to 4 meters above the ground plane to read maximum emission level.

The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

2. Photograph for the test configuration



3. Sample Calculation

The emission level measured in decibels above one microvolt (dB∂) was converted into microvolt per meter (∂/m) as shown in following sample calculation.

For example :

	Measured Value at 310.3 MHz	54.0 dB∂
+	Antenna Factor	13.9 dB
+	Cable Loss	3.3 dB
-	Preamplifier	30.0 dB
-	Distance Correction Factor *	0.0 dB
=	Radiated Emission	41.2 dB∂/m
	(=	114.8 ∂/m)

* Extrapolated from the measured distance(1.5m) to the specified distance(3m) by an inverse linear distance extrapolation.

4. Measurement Data

- Resolution Bandwidth : ___ CISPR Quasi-Peak (6dB Bandwidth : 120kHz)
  _x_ Peak (3dB Bandwidth : 100kHz)
- Measurement Distance : 3 Meter

Frequency (MHz)	* D.M.	* A.P.	Measured Value (dB∂)	* A.F. + C.L (dB)	* A.G. (dB)	* D.C.F. (dB)	Emission Level (dB∂/m)	Emission Level (∂/m)	Limit (∂/m)	** Margin (dB)
310.3	P	H	54.0	17.2	-30.0	-	41.2	114.8	200	- 4.8
586.4	P	H	44.9	22.4	-30.0	-	37.3	73.3	200	- 8.7
930.9	P	V	43.9	28.8	-30.0	-	42.7	136.5	200	- 3.3
-	-	-	-	-	-	-	-	-	-	-

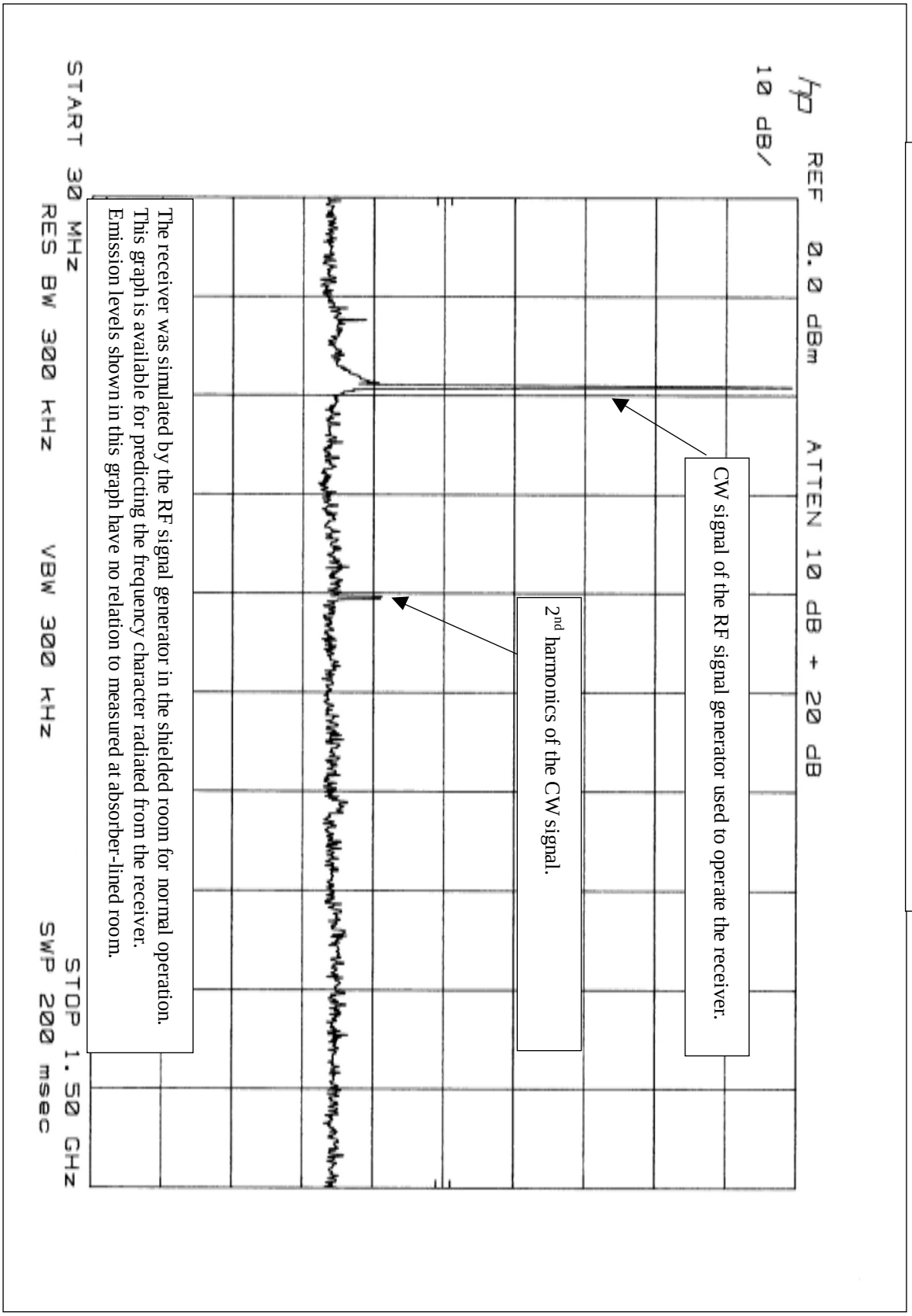
Note

The observed spectrum analyzer noise floor level with RF preamplifier (30dB) was 35.0 dB∂(below 1000 MHz) and 45.0 dB∂(above 1000MHz). And all other emissions not reported on data were more than 25dB below the permitted level.

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
A.P. : Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain
D.C.F. : Distance Correction Factor
< : Less than

** Margin (dB) = Emission Level (dB) - Limit (dB)

5. Reference Data (Frequency spectrum data on radiated emission form the receiver.)



. TEST EQUIPMENT USED FOR MEASUREMENTS

Equipment	Model No.	Manufacturer	Serial No.	Effective Cal. Duration
[x] EMI Receiver (20MHz-1GHz)	ESVS30	R & S	830516/002	06/13/00-06/12/01
[x] Spectrum Analyzer (9kHz-26.5GHz)	8563A	H. P.	3222A02069	02/18/00-02/17/01
[ ] Spectrum Analyzer (100Hz-22GHz)	8566B	H. P.	3014A07057	05/24/00-05/23/01
[ ] Quasi-Peak Adapter (10kHz-1GHz)	85650A	H. P.	3107A01511	05/24/00-05/23/01
[ ] RF-Preselector (20Hz-2GHz)	85685A	H. P.	3010A01181	05/24/00-05/23/01
[ ] Test Receiver (9kHz-30MHz)	ESH3	R & S	860905/001	06/13/00-06/12/01
[x] Pre-Amplifier (0.1-3000MHz, 30dB)	8347A	H. P.	2834A00543	05/24/00-05/23/01
[ ] LISN(50ohm , 50μH) (10kHz-100MHz)	3825/2	EMCO	9011-1720	-
[x] Plotter	7470A	H. P.	3104A21292	-
[x] Tuned Dipole Ant. (30MHz-300MHz)	VHA 9103	Schwarzbeck	-	*
[x] Tuned Dipole Ant. (300MHz-1GHz)	UHA 9105	Schwarzbeck	-	*
[x] Biconical Ant. (30MHz-300MHz)	BBA 9106	Schwarzbeck	-	*
[x] Log Periodic Ant. (200MHz-1GHz)	3146	EMCO	-	*
[x] Horn Ant. (1GHz-18GHz)	3115	EMCO	-	*
[ ] DC Power Supply	6260B	H.P.	1145A04822	-
[ ] Shielded Room (5.0m x 4.5m)	-	SIN-MYUNG	-	-

* Each set of antennas has been calibrated to ensure correlation with ANSI C63.5 standard. The calibration of antennas is traceable to Korea Standard Research Institute(KSRI).