

ADDRESS: No.85-5, Shir Men Road, Tu Cheng City,

Taipei Hsien, TAIWAN, R. O. C.

PHONE : 886-2-22608375 FAX: 886-2-22748013

E - mail : hometek@ms15.hinet.net

FCC TEST REPORT FOR

APPLICANT: FUNAL ELECTRIC COMPANY OF TAIWAN

ADDRESS: NO.24, CHIEN KUO RD.,

T.E.P.Z. TANTZU, TAICHUNG,

TAIWAN, R. O. C.

EUT: 17" MONITOR

MODEL NO.: PM41F

FCC ID: LLW9ZBPM41F

Under Part 15, SUBPART B. CLASS B

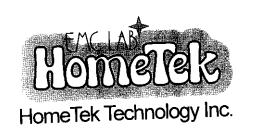
Certification

PREPARED BY:

HomeTek Technology Inc.

No. 85-5, Shir Men Road, Tu Cheng City, Taipei Hsien. TAIWAN, R. O. C.

Report # : FB7I007



ADDRESS: No.85-5, Shir Men Road, Tu Cheng City,

Taipei Hsien, TAIWAN, R. O. C.

PHONE: 886-2-22608375 FAX: 886-2-22748013

E - mail : hometek@ms15.hinet.net

TEST REPORT CERTIFICATION

EUT MODEL NO. FCC ID Final Test Date APPLICANT ADDRESS	 17" MONITOR PM41F LLW9ZBPM41F 9/10/98 FUNAI ELECTRIC COMPANY OF TAIWAN NO.24, CHIEN KUO RD., T.E.P.Z. TANTZU, TAICHUNG,
ADDICEO	T.E.P.Z. TANTZU, TAICHUNG, TAIWAN, R. O. C.

MEASUREMENT PROCEDURE USED:

PART 15 SUBPART B OF FCC RULES AND REGULATIONS (47 CFR PART 15) FCC / ANSI C63.4-1992

WE HEREBY SHOW THAT:

THE MEASUREMENT SHOWN IN THE ATTACHMENT WERE MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED, AND THE MAXIMUM ENERGY EMITTED BY THE EQUIPMENT WAS FOUND TO BE WITHIN THE FCC LIMITS APPLICABLE.

IPMENT WAS FOU	ND TO BE WITTE	
TEST ENGINEER	: John Hu	_DATE: 9/19/98
СНЕСК ВҮ	: JOSEPH CHOU	_DATE: 9/19/98.
APPROVED BY	: DS HIJANG/Manager	_DATE:

TABLE OF CONTENTS

TABLE OF CONTENTS	2
GENERAL INFORMATION	4
GENERAL INFORMATION MODIFICATION LIST	5
1 TEST INSTRUMENTS & FACILITIES	5
1 TEST INSTRUMENTS & FACILITIES 2 TEST PROCEDURE	6
2 TEST PROCEDURE	8
3 TEST SETUP4 CONFIGURATION OF THE EUT	11
5 EUT OPERATING CONDITION	11
5 EUT OPERATING CONDITION	12
7 RESULT OF CONDUCTED POWER LINE TEST (1)	13
7 RESULT OF CONDUCTED POWER LINE TEST (1)	14
9 RESULT OF CONDUCTED POWER LINE TEST (2)	15
9 RESULT OF CONDUCTED POWER LINE TEST 10 PHOTO OF CONDUCTED POWER LINE TEST	16
10 PHOTO OF CONDUCTED POWER LINE TEST (3)	
11 RESULT OF CONDUCTED POWER LINE TEST	
12 PHOTO OF CONDUCTED POWER LINE TEST	
1 TEST INSTRUMENTS & FACILITIES	19
1 TEST INSTRUMENTS & FACILITIES 2 TEST PROCEDURE	19
2 TEST PROCEDURE	21
3 TEST SETUP4 CONFIGURATION OF THE EUT	21
4 CONFIGURATION OF THE EUT	21
6 LIMIT OF RADIATED EMISSION CLASS B:	
6 LIMIT OF RADIATED EMISSION CLASS B	24
7 RESULT OF RADIATED EMISSION TEST (1)	25
9 RESULT OF RADIATED EMISSION TEST (2)	27
9 RESULT OF RADIATED EMISSION TEST (2)	28
10 PHOTO OF RADIATED EMISSION TEST (3)	30
11 RESULT OF RADIATED EMISSION TEST (3)	31
12 PHOTO OF RADIATED EMISSION TEST	32
PHOTOS OF EUT	
PHOTOS OF EUT	
PHOTOS OF EUTPHOTOS OF EUT	37
PHOTOS OF EUT	
A DDENDIX A	

APPENDIX A

BLOCK DIAGRAM

APPENDIX B

USER'S MANUAL

GENERAL INFORMATION

1 APPLICANT : <u>FUNAI ELECTRIC COMPANY OF TAIWAN</u>

2 ADDRESS : NO.24, CHIEN KUO RD.,

T.E.P.Z. TANTZU, TAICHUNG,

FCC ID: <u>LLW9ZBPM41F</u>

TAIWAN, R. O. C.

3 MANUFACTURER : FUNAI ELECTRIC COMPANY OF TAIWAN

4 ADDRESS : NO.24, CHIEN KUO RD.,

T.E.P.Z. TANTZU, TAICHUNG,

TAIWAN, R. O. C.

5 DESCRIPTION OF EUT:

EUT : 17" MONITOR

FCC ID : LLW9ZBPM41F

Model Number : PM41F

Serial # : <u>N/A</u>

Data Cable : SHIELDED

Power Cord : <u>UN-SHIELDED</u>

Power Supply Type : <u>SWITCHING</u>

Page: 2 of 37

6 FEATURES OF EUT: 796W

- 6.1 CRT
 - Size & Deflection Angle: 17" 90° Def.
 - Face Plate: Silica-Coating
 - Dot Pitch: 0.26mm
- 6.2 Sync. Input Signal
 - Input Form: Separate, TTL, Positive/Negative
 - H. Scanning Frequency: 30 ~ 96 KHz
 - V. Scanning Frequency: $50 \sim 200 \text{ Hz}$
- 6.3 Video Input Signal
 - Input Form : Separate, RGB Analog 0.7Vp-p/75 ohm, Positive
- 6.4 Linearity: Horizontal; ±7.0% Vertical; ±7.0%
- 6.5 Video Band Width: 135 MHz
- 6.6 Input Connector: 15-pin, D-SUB connector
- 6.7 Display Colors: Analog Input: Unlimited Colors
- 6.8 Display Area: 300mm(H) x 225mm(V)
 - * Display size can be preset by user through microprocessor control panel

FCC ID: <u>LLW9ZBPM41F</u>

- 6.9 Voltage Input: 90 264 Vac, 50/60 Hz
- 6.10 Power Consumption: 135 watts

FB7I007

MODIFICATION LIST

THE FOLLOWING ACCESSORIES WERE ADDED TO THE EUT DURING TESTING :

FCC ID: LLW9ZBPM41F

- 1. Added a ferrite core (EASY. RH 17.5x28.5x9.5) on Data Cable, Shown as page 32.
- 2. Added a ferrite core (EASY. RH 17.5x28.5x9.5) on Power Cord, Shown as page 32.
- 3. Added a ferrite core (EASY. RH 25x12x15) on Ground Wire of Power Connector, and make three and half turns, Shown as page 33.
- 4. Added a ferrite core (EASY. RH T31x7x9) on the Cbale of Degauss coil, and make three and half turns, Shown as page 35 "EUT Inside View".

FB71007 Page: 4 of 37

CONDUCTED POWER LINE TEST

1 TEST INSTRUMENTS & FACILITIES

The following test Instruments was used during the conducted test:

Item	Instruments/ Facilities	Specification	Manufacturer	Model # / S/N#	Date Of Cal.
1	EMI Receiver	9KHz ~ 30MHz	ROHDE & SCHWARZ	ESHS 30 844827/007	FEB/98
2	LISN	50 Ω/50uH/100A 9KHz ~ 30MHz	SCHWARZ BECK	NNLK 8121 8121370	FEB/98
3	LISN	9KHz ~ 30MHz	ROHDE & SCHWARZ	ESH3-Z5 846128/007	FEB/98
4	Signal Generator	9KHz ~ 2080MHz	ROHDE & SCHWARZ	SMY02 845096/018	FEB/98
5	Pulse Limiter	9KHz ~ 30MHz	ROHDE & SCHWARZ	ESH3Z2 357.8810.52	N/A

FCC ID: LLW9ZBPM41F

Note: All equipment upon which need to calibrated are with period of 1 year.

2 TEST PROCEDURE

- 2.1 The EUT was tested according to **ANSI C63.4 1992**.
- 2.2 The EUT was placed <u>0.4</u> meter from the conducting wall of shielding room and kept at least <u>0.8</u> meter from any other grounded conducting surface.
- 2.3 The frequency range form 0.45 MHz to 30 MHz was investigated.
- 2.4 The LISN used was 50 Ohm / 50 uHenry as specified by Section 5.1 of ANSI C63.4 1992.
- 2.5 All the support peripherals are connect to the other LISN.
- 2.6 Cables and peripherals were moved to find the maximum emission levels for each frequency.

FB71007 Page: 5 of 37

3 TEST SETUP

3.1 Typical: Setup Of Conducted Test

ANSI C63.4-1992

FCC ID: LLW9ZBPM41F

ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9kHz TO 40 GHz

NONCONOUCTIVE 10cm **EUT** TABLE 1.5 x 1 METER 10cm 80 cm To GROUND PLANE 1 3.3 3.3 3.1 40cm CONDUCTING GROUND PLANE LISN EXTENDS AT LEAST 0.5m LISN BEYOND EUT SYSTEM FOOTPRINT BONDED TO GROUND PLANE

+LISNs may have to be moved to the side to meet 3.3 below.

LEGEND:

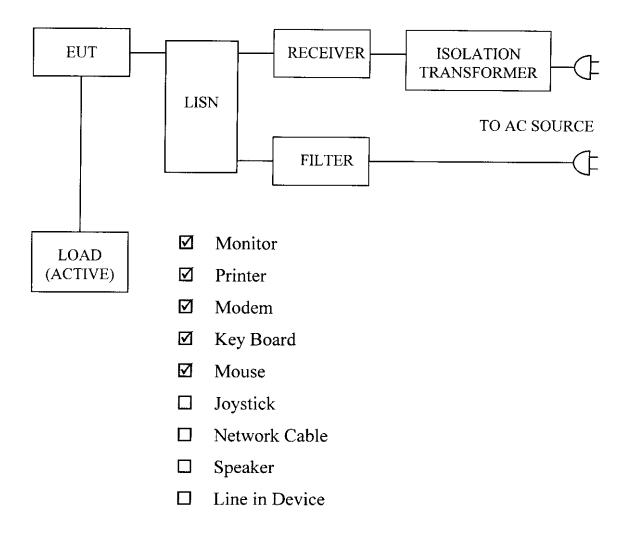
- 1. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 to 40 cm long, hanging approximately in the middle between ground plane and table.
- 2. I/O cables that are connected to a peripheral shall be bundled in center. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1m.
- 3. EUT connected to one LISN. Unused LISN connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, ground plane.
 - 3.1 All other equipment powered from second LISN.
 - 3.2 Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
 - 3.3 LISN at least 80 cm from nearest part of EUT chassis.
- 4. Cables of hand-operated devices, such as keyboards, mouses, etc., have to be placed as close as possible to the host.
- 5. Non-EUT components being tested.
- 6. Rear of EUT, including peripherals, shall be all aligned and flush with rear of tabletop.
- 7. Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the floor ground plane (see 5.2).

Test Configuration
Tabletop Equipment Conducted Emission

FB71007 Page: 6 of 37

FCC ID: <u>LLW9ZBPM41F</u>

3.2 Block Diagram Of Conducted Test



FB7I007 Page: 7 of 37

4 CONFIGURATION OF THE EUT

The EUT was configured according to ANSI C63.4 - 1992. All I/O ports were connected to the appropriate peripherals. All peripherals and cables are listed below (including internal device):

FCC ID: LLW9ZBPM41F

4.1 EUT

Device : 17" MONITOR

Manufacturer : FUNAI

Model Number : PM41F

Serial Number : N/A

FCC ID : LLW9ZBPM41F

Data Cable : Shielded, 1.4 m

Power Cord : Un-Shielded, 1.8 m

4.2 PERIPHERALS

☑ Host Personal Computer

Manufacturer : UMAX

Model Number : UDLX-A0

Serial Number : N/A

FCC ID : N/A (DoC By C&C LAB)

Data Cable : Shielded

Power Cord : Un-Shielded, 1.8 m

FB7I007

FCC ID: <u>LLW9ZBPM41F</u>

Printer

Manufacturer : HP

Model Number : DJ400

Serial Number : MY77M1C3Q8

FCC ID : B94C2642X

Data Cable : Shielded, 1.5 m

Power Cord & Adaptor : Un-Shielded, 1.8 m

✓ Modem

Manufacturer : DATATRONIC

Model Number : 1200CK

Serial Number : N/A

FCC ID : E2050V1200CK

Data Cable : Shielded, 1.5 m

Power Cord & Adaptor : Un-Shielded, 1.8 m

✓ Mouse (PS II)

Manufacturer : LOGITECH

Model Number : M-S34

Serial Number : LZA73037418

FCC ID : DZL211029

Data Cable : Shielded, 1.8 m

FB71007 Page: 9 of 37

HomeTek Technology Inc.

FCC ID: LLW9ZBPM41F

KeyBoard I

Manufacturer

: SILITEK

Model Number

: SK-2000U

Serial Number

: N/A

FCC ID

: GYUR50SK

Data Cable

Shielded, 1.5 m

☑ KeyBoard II

Manufacturer

: AST

Model Number

: SK-2000REW

Serial Number

: N/A

FCC ID

: GYUR26SK

Data Cable

Shielded

4.3 REMARK:

FB7I007 Page: 10 of 37

5 EUT OPERATING CONDITION

- 5.1 Operating condition is according to **ANSI C63.4 1992**.
- 5.2 The oscillator frequency of the EUT were $30 \sim 96$ KHz.

FCC ID: LLW9ZBPM41F

- 5.3 Turn on the power of all equipments.
- 5.4 Test program sent "H" pattern to peripherals as following:
 - 5.4.1 Printer
 - 5.4.2 Monitor
 - 5.4.3 Modem
 - 5.4.4 Keyboard
- 6 LIMIT OF CONDUCTED POWER LINE EMISSION CLASS B:

Frequency Range	dBuV	uV
0.45 ~ 1.705 MHz	48	250 uV
1.705 ~ 30 MHz	48	250 uV

6.1 In the above table, the tighter limit applies at the band edges.

FB7I007 Page: 11 of 37

7 RESULT OF CONDUCTED POWER LINE TEST (1)

7.1 The frequency range from <u>0.45</u> MHz to <u>30</u> MHz was investigated. All readings are quasi-peak values.

FCC ID : <u>LLW9ZBPM41F</u>

7.2 IF bandwidth: 9 kHz, Meas Time: 1 sec.

7.3 Temperature : $\underline{26}$ °C, Humidity : $\underline{72}$ % RH.

7.4 Quasi-Peak:

Frequency (MHz)	Lir	ne 1	Line 2		Limit	
Trequency (MITIZ)	dBuV	uV	dBuV	uV	dBuV	uV
0.560	41.21	114.95	42.29	130.17	48	250
0.841	41.66	121.06	40.33	103.87	48	250
1.500	38.60	85.11	38.17	81.00	48	250
3.285	37.64	76.21	39.38	93.11	48	250
6.100	38.13	80.63	40.75	109.02	48	250
12.580	41.04	112.72	37.88	78.34	48	250
20.560	40.40	104.71	34.43	52.66	48	250
28.260	44.20	162.18	36.00	63.10	48	250

REMARK:

1. Model: PM41F

2. Measuring mode: 1600 x 1200 93.75KHz/75Hz

3. Uncertainty in conduction emission measured : $< \pm 2.0$ dB.

Test Engineer:

FB7I007 Page: 12 of 37



RESULT OF CONDUCTED POWER LINE TEST (2) 9

The frequency range from 0.45 MHz to 30 MHz was investigated. All 9.1 readings are quasi-peak values.

FCC ID: LLW9ZBPM41F

IF bandwidth: 9 kHz, Meas Time: 1 sec. 9.2

Temperature: 26 °C, Humidity: 72 % RH. 9.3

9.4 Quasi-Peak:

	Line 1		Line 2		Limit	
Frequency (MHz)	dBuV	uV	dBuV	Uv	dBuV	uV
0.543	40.95	111.56	42.37	131.37	48	250_
0.909	39.02	89.23	40.99	112.07	_48	250
1.640	37.44	74.74	37.18	72.28	48	250_
3.740	38.42	83.37	40.66	107.89	48	250
6.750	35.10	56.89	37.59	75.77	48	250
12.040	37.71	76.82	35.04	56.49	48	250
16.780	38.81	87.20	35.88	62.23	48	250
20.980	36.85	69.58	31.71	38.50	48	250

REMARK:

Model: PM41F

Measuring mode: 1280 x 1024 91.146KHz/85.024Hz

Uncertainty in conduction emission measured : $< \pm 2.0$ dB.

Test Engineer:

Page: 14 of 37

FB71007

RADIATED EMISSION TEST

1 TEST INSTRUMENTS & FACILITIES

The following test Instruments was used during the radiated emission test:

FCC ID: LLW9ZBPM41F

Item	Instruments /facilities	Specification	Manufacturer	Model # / S/N#	Location	Date of Cal.
1	SPECTRUM ANALYZER	9KHz ~ 1.8GHz	НР	HP8591 3710A06158	Open Site	APR/98
2	EMI TEST RECEIVER	20MHz ~ 1GHz	ROHDE & SCHWARZ	ESVS10 845165/017	Open Site I	FEB/98
3	PRE- AMPLIFIER	0.1MHz ~ 1.3 GHz	НР	8447D 1937A02095	Open Site I	MAY/98
4	EMI TEST RECEIVER	20Hz ~ 26.5GHz	ROHDE & SCHWARZ	ESMI 845442/006	Open Site II	FEB/98
5	PRE- AMPLIFIER	20MHz ~ 7GHz	ROHDE & SCHWARZ	ESMI-Z7 846363/001	Open Site II	FEB/98
6	SIGNAL GENERATOR	9KHz ~ 2080MHz	ROHDE & SCHWARZ	SMY02 845096/018		FEB/98
7	ANTENNA (BI-LOG)	25MHz ~ 2GHz	ARA	LPB2520 S/N:1096	Open Site II	MAR/98
8	ANTENNA (BI-LOG)	25MHz ~ 2GHz	ARA	LPB2520 S/N:1095	Open Site I	MAR/98
9	CABLES			No. 2, No. 4 No. 1, No. 3	OATS 1 OATS 2	JUL/98 JUL/98
10	OPEN AREA TEST SITE	□ OATS 1 ☑ OATS 2				
11	ANTENNA (DIPOLE)	30 ~ 300MHz	ROHDE & SCHWARZ	HZ-12 842899/08		JAN/98
12	ANTENNA (DIPOLE)	300 ~ 1000MHz	ROHDE & SCHWARZ	HZ-13 842007/0004		JAN/98

Note: 1. Items $1 \sim 10$ upon which need to calibrated are with period of 1 year.

2. Items $11 \sim 12$ upon which need to calibrated are with period of 3 year.

FB7I007 Page: 18 of 37

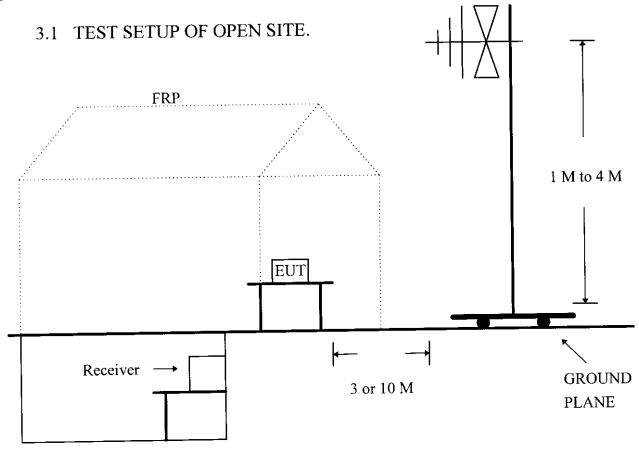
2 TEST PROCEDURE

- 2.1 The EUT was test according to ANSI C63.4 1992.
- 2.2 The radiated test was performed at HomeTek Lab's Open Site \underline{II} .
- 2.3 This site is on file with the FCC laboratory division, reference 31040/site 1300F2, Date: August 22, 1997.

FCC ID: LLW9ZBPM41F

2.4 The frequency range from $\underline{30}$ MHz to $\underline{1}$ GHz, the measurement were made at $\underline{3}$ meters, with a BI-log antenna.

3 TEST SETUP



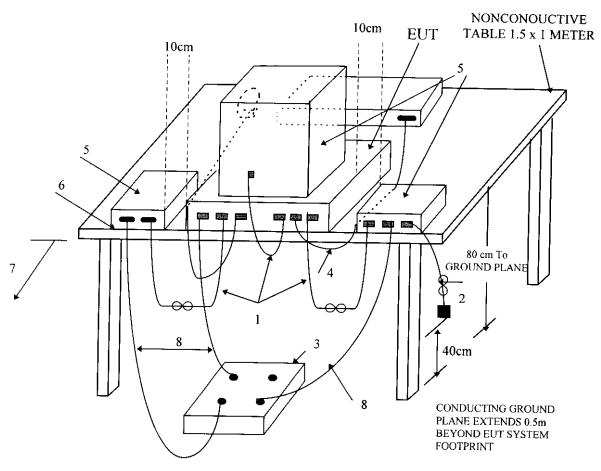
FB7I007 Page: 19 of 37

3.2 TEST SET OF EUT

ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9kHz TO 40 GHz

ANSI C63.4-1992

FCC ID: <u>LLW9ZBPM41</u>F



LEGEND:

- 1. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 to 40 cm long, hanging approximately in the middle between ground plane and table.
- 2. I/O cables that are connected to a peripheral shall be bundled in center. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1m.
- 3. If LISNs are kept in the test setup for radiated emissions, it is preferred that they be installed under the ground plane with the receptacle flush with the ground plane.
- 4. Cables of hand-operated devices, such as keyboards, mouses, etc., have to be placed as close as possible to the controller.
- 5. Non-EUT components of EUT system being tested.
- 6. The rear of all components of the system under test shall be located flush with the rear of the table.
- 7. No vertical conducting wall used.
- 8. Power cords drape to the floor and are routed over to receptacle.

Test Configuration Tabletop Equipment Radiated Emission

FB7I007 Page: 20 of 37

4 CONFIGURATION OF THE EUT

Same as "Conducted Power Line test", section 4

5 EUT OPERATING CONDITION

- 5.1 Same as "Conducted Power Line test", section 5
- 5.2 The radiated emission in the frequency range from 30 MHz 1000 MHz was test in a horizontal and vertical polarization at HomeTek Lab's open site II.

FCC ID: LLW9ZBPM41F

6 LIMIT OF RADIATED EMISSION CLASS B:

Frequency (MHz)	Measurement Distance	dBuV	uV/m
30 - 88	3 (M)	40	100
88 - 216	3 (M)	43.5	150
216 - 960	3 (M)	46	200
Above 1000	3 (M)	54	500

- 6.1 The tighter limit shall apply at the edge between two frequency bands.
- 6.2 Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

FB7I007 Page: 21 of 37

7 RESULT OF RADIATED EMISSION TEST (1)

7.1 The frequency range from <u>30</u> MHz to <u>1</u> GHz was investigated. All readings are quasi-peak values with resolution bandwidth of <u>120</u> kHz.

FCC ID: LLW9ZBPM41F

- 7.2 The measurements above $\underline{1}$ GHz with a resolution bandwidth of $\underline{1}$ MHz are peak reading at $\underline{3}$ meters.
- 7.3 The measurements were made at $\underline{3}$ meters of HomeTek Lab's open site \underline{II} .
- 7.4 Temperature : $\underline{27}$ °C, Humidity : $\underline{72}$ % RH.
- 7.5 Radiated Emission data: Horizontal

Frequency	Reading	ANT	Cable	Emission	Emission	Limit	Limit
(MHz)	Level	factor	Loss	Level	Level	(dBuV)	(uV/m)
	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(uV/m)		
36.33	14.82	14.85	0.43	30.10	31.99	40.0	100
54.66	19.93	12.68	0.42	33.03	44.82	40.0	100
62.21	24.90	10.20	0.51	35.61	60.33	40.0	100
69.00	24.51	7.73	0.58	32.82	43.75	40.0	100
132.01	22.26	11.55	0.67	34.48	52.97	43.5	150
144.09	21.93	10.07	0.74	32.74	43.35	43.5	150
480.68	17.23	18.28	1.22	36.73	68.63	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.68</u> MHz.
- Corrected Reading: (17.23) + (18.28) + (1.22) = 36.73. (Emission Level)

FB7I007 Page: 22 of 37



7.6 Radiated Emission data: Vertical

Frequency (MHz)	Reading Level (dBuV)	ANT factor (dBuV)	Cable Loss (dBuV)	Emission Level (dBuV)	Emission Level (uV/m)	Limit (dBuV)	Limit (uV/m)
35.03	21.55	11.28	0.41	33.24	45.92	40.0	100
52.02	21.82	12.51	0.46	34.79	54.89	40.0	100
55.40	24.49	10.38	0.43	35.30	58.21	40.0	100
62.24	30.09	6.35	0.51	36.95	70.39	40.0	100
67.58	26.95	6.14	0.48	33.57	47.70	40.0	100
114.86	22.23	14.49	0.63	37.35	73.71	43.5	150
132.97	22.80	14.24	0.74	37.78	77.45	43.5	150
480.65	15.53	20.43	1.22	37.18	72.28	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.65</u> MHz.
- Corrected Reading: (15.53) + (20.43) + (1.22) = 37.18. (Emission Level)

REMARK:

1. Model: PM41F

2. Measuring mode: 1600 x 1200 93.75KHz/75Hz

3. Uncertainty in radiated emission measured : $< \pm 4.0$ dB.

Test Engineer:

Page: 23 of 37

FCC ID: LLW9ZBPM41F

FB7I007

9 RESULT OF RADIATED EMISSION TEST (2)

9.1 The frequency range from <u>30</u> MHz to <u>1</u> GHz was investigated. All readings are quasi-peak values with resolution bandwidth of <u>120</u> kHz.

FCC ID: LLW9ZBPM41F

- 9.2 The measurements above $\underline{1}$ GHz with a resolution bandwidth of $\underline{1}$ MHz are peak reading at $\underline{3}$ meters.
- 9.3 The measurements were made at <u>3</u> meters of HomeTek Lab's open site <u>II</u>.
- 9.4 Temperature: 27 °C, Humidity: 72 % RH.
- 9.5 Radiated Emission data: Horizontal

Frequency	Reading	ANT	Cable	Emission	Emission	Limit	Limit
(MHz)	Level	factor	Loss	Level	Level	(dBuV)	(uV/m)
	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(uV/m)		
35.77	17.82	14.85	0.43	33.10	45.19	40.0	100
52.33	16.01	13.75	0.46	30.22	32.43	40.0	100
62.31	23.22	10.20	0.51	33.93	49.72	40.0	100
68.66	27.25	7.73	0.58	35.56	59.98	40.0	100
115.10	19.77	12.29	0.61	32.67	43.00	43.5	150
124.09	21.68	11.91	0.66	34.25	51.58	43.5	150
141.61	22.59	10.21	0.76	33.56	47.64	43.5	150
480.66	17.43	18.28	1.22	36.93	70.23	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.66</u> MHz.
- Corrected Reading: (17.43) + (18.28) + (1.22) = 36.93. (Emission Level)

FB71007 Page: 25 of 37



9.6 Radiated Emission data: Vertical

Frequency (MHz)	Reading Level (dBuV)	ANT factor (dBuV)	Cable Loss (dBuV)	Emission Level (dBuV)	Emission Level (uV/m)	Limit (dBuV)	Limit (uV/m)
34.38	22.62	11.25	0.38	34.25	51.58	40.0	100
55.16	25.31	10.38	0.43	36.12	63.97	40.0	100
61.88	29.95	6.35	0.51	36.81	69.26	40.0	100
64.55	27.29	5.69	0.43	33.41	46.83	40.0	100
114.12	24.65	14.49	0.63	39.77	97.39	43.5	150
124.22	20.73	14.60	0.66	35.99	63.02	43.5	150
163.76	18.73	12.14	0.79	31.66	38.28	43.5	150
480.66	14.94	20.43	1.22	36.59	67.53	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.66</u> MHz.
- Corrected Reading: (14.94) + (20.43) + (1.22) = 36.59. (Emission Level)

REMARK:

1. Model: PM41F

2. Measuring mode: 1280 x 1024 91.146KHz/85.024Hz

3. Uncertainty in radiated emission measured : $< \pm 4.0$ dB.

Test Engineer:

Page: 26 of 37

FCC ID: LLW9ZBPM41F

FB7I007

11 RESULT OF RADIATED EMISSION TEST (3)

11.1 The frequency range from <u>30</u> MHz to <u>1</u> GHz was investigated. All readings are quasi-peak values with resolution bandwidth of <u>120</u> kHz.

FCC ID: LLW9ZBPM41F

- 11.2 The measurements above $\underline{1}$ GHz with a resolution bandwidth of $\underline{1}$ MHz are peak reading at $\underline{3}$ meters.
- 11.3 The measurements were made at <u>3</u> meters of HomeTek Lab's open site <u>II</u>.
- 11.4 Temperature : <u>27</u> °C, Humidity : <u>72</u> % RH.
- 11.5 Radiated Emission data: Horizontal

Frequency (MHz)	Reading Level (dBuV)	ANT factor (dBuV)	Cable Loss (dBuV)	Emission Level (dBuV)	Emission Level (uV/m)	Limit (dBuV)	Limit (uV/m)
35.76	19.14	14.85	0.43	34.42	52.60	40.0	100
52.24	12.89	13.75	0.46	27.10	22.65	40.0	100
62.50	20.51	10.20	0.51	31.22	36.39	40.0	100
68.56	23.98	7.73	0.58	32.29	41.16	40.0	100
71.23	27.64	7.28	0.51	35.43	59.09	40.0	100
176.82	20.81	11.56	0.76	33.13	45.34	43.5	150
264.48	18.37	14.66	0.89	33.92	49.66	46.0	200
480.35	18.56	18.29	1.37	38.22	81.47	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.35</u> MHz.
- Corrected Reading: (18.56) + (18.29) + (1.37) = 38.22. (Emission Level)

FB7I007 Page: 28 of 37



11.6 Radiated Emission data: Vertical

Frequency (MHz)	Reading Level (dBuV)	ANT factor (dBuV)	Cable Loss (dBuV)	Emission Level (dBuV)	Emission Level (uV/m)	Limit (dBuV)	Limit (uV/m)
35.20	19.37	11.28	0.41	31.06	35.73	40.0	100
55.00	24.80	10.38	0.43	35.61	60.33	40.0	100
62.95	28.28	5.97	0.53	34.78	54.83	40.0	100
114.88	22.82	14.49	0.63	37.94	78.79	43.5	150
124.99	20.53	14.60	0.66	35.79	61.59	43.5	150
163.72	19.46	11.89	0.76	32.11	40.32	43.5	150
172.13	20.58	13.80	0.79	35.17	57.35	43.5	150
480.67	16.90	20.43	1.22	38.55	84.63	46.0	200

- Emission Level = Reading Level + ANT Factor + Cable Loss.
- Sample Calculation for <u>480.67</u> MHz.
- Corrected Reading: (16.90) + (20.43) + (1.22) = <u>38.55</u>. (Emission Level)

REMARK :

1. Model: PM41F

2. Measuring mode: 640 x 480 31.469KHz/59.941Hz

3. Uncertainty in radiated emission measured : $< \pm 4.0$ dB.

Test Engineer:

Page: 29 of 37

FCC ID: <u>LLW9ZBPM41F</u>

11 RESULT OF CONDUCTED POWER LINE TEST (3)

11.1 The frequency range from <u>0.45</u> MHz to <u>30</u> MHz was investigated. All readings are quasi-peak values.

FCC ID: LLW9ZBPM41F

11.2 IF bandwidth: 9 kHz, Meas Time: 1 sec.

11.3 Temperature : $\underline{26}$ °C, Humidity : $\underline{72}$ % RH.

11.4 Quasi-Peak:

Frequency (MHz)	Lir	ne 1	Line 2		Limit	
Trequency (WITE)	dBuV	uV	dBuV	uV	dBuV	uV
0.569	37.42	74.30	39.31	92.36	48	250
1.045	33.33	46.40	33.91	49.60	48	250
2.655	20.76	10.91	24.04	15.92	48	250
5.400	25.70	19.27	29.19	28.81	48	250
9.700	23.56	15.07	28.23	25.79	48	250
13.900	29.31	29.21	29.67	30.44	48	250
20.280	25.33	18.47	23.38	14.76	48	250
28.750	24.08	16.00	23.31	14.64	48	250

REMARK:

1. Model: PM41F

2. Measuring mode: 640 x 480 31.469KHz/59.941Hz

3. Uncertainty in conduction emission measured : $< \pm 2.0 dB$.

Test Engineer:

Page: 16 of 37

FB7I007