



**pkm electronic GmbH**  
 Ohmstraße 1, D-84160 Frontenhausen  
 Tel.: 08732 – 6381; Fax: 08732 - 2345  
 e-mail: pkm.accredited-labs@t-online.de

<b>pkm ref. no.:</b> 22336
<b>T:</b>
<input type="checkbox"/> <b>DOC:</b>

## EMC - Test - Result

for Information-Technology Equipment (IT)

<b>Model:</b> 60-2774 (27 MHz)
<b>Client:</b> ECHO TOYS LTD
<b>Product:</b> School Bus
<b>Sample:</b> 1 of 2
<b>Ser.- No.:</b>
<b>Date in:</b>
Ref.: 22336

Technical documents (for internal use only)			
	att.	mis.	not suf.
Circuit diagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCB-layout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Component-layout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parts-list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
List of countries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Users manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 mains transformer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Message:</b>			
<b>Modif.-cost:</b>			

**Remarks:** über IECC, Hong Kong acc. to FCC

Following test are done		ok	not ok
IT TK	Interference voltage	<input type="checkbox"/>	<input type="checkbox"/>
IT1/2	Interference voltage	<input type="checkbox"/>	<input type="checkbox"/>
IT3/4	Interference radiation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IT5/6	Interference radiation	<input type="checkbox"/>	<input type="checkbox"/>
IT 7	Interference power	<input type="checkbox"/>	<input type="checkbox"/>
N 1	Harmonics	<input type="checkbox"/>	<input type="checkbox"/>
N 2	Voltage Fluctuations	<input type="checkbox"/>	<input type="checkbox"/>
N3	Voltage dips and interruptions	<input type="checkbox"/>	<input type="checkbox"/>
I1	Electrostatic discharge (ESD)	<input type="checkbox"/>	<input type="checkbox"/>
I2	Electrical fast transient (Burst)	<input type="checkbox"/>	<input type="checkbox"/>
I3	Electromagnetic irradiation	<input type="checkbox"/>	<input type="checkbox"/>
I4	Surge	<input type="checkbox"/>	<input type="checkbox"/>
I5	Conducted radio frequency	<input type="checkbox"/>	<input type="checkbox"/>
I6	Power frequency magnetic field	<input type="checkbox"/>	<input type="checkbox"/>

Tests done according	
<input type="checkbox"/>	EN 50081-1:01.92
<input type="checkbox"/>	EN 50082-1:01.92
<input type="checkbox"/>	EN 50082-2:03.95
<input type="checkbox"/>	EN 55015:05.96
<input type="checkbox"/>	EN 61547:10.95
<input type="checkbox"/>	EN 55022:08.94
<input type="checkbox"/>	EN 55013:06.90
<input type="checkbox"/>	EN 61000-3-3:01.95
<input type="checkbox"/>	EN 61000-3-2:04.95
<input type="checkbox"/>	ETS 300683
<input checked="" type="checkbox"/>	<b>FCC</b> Part 15 Subpart C Section 15.227 & 15.209 (Measurement for Frequency below 30MHz)

	Date	Name
Effected / Counter checked	02.05.2006	<i>[Signature]</i>

EMC	<input checked="" type="checkbox"/> released
	<input type="checkbox"/> not released

**Remark to client: Please take care of running production control !**



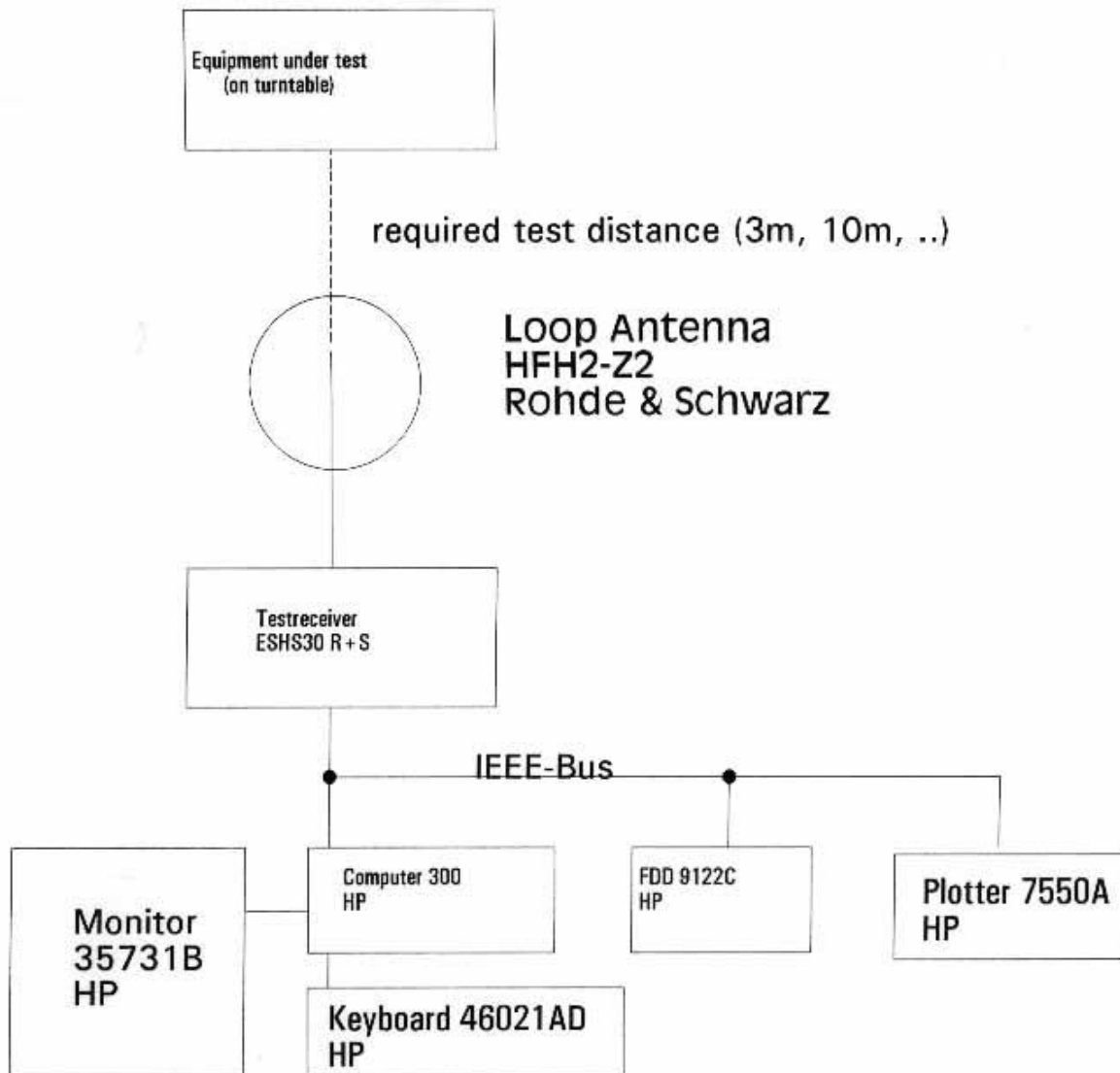
## TEST EQUIPMENT LIST

Quantity	Equipment	Serial-number	Manufacturer
2	Receiver ESVS 30	#82852/006	Rohde & Schwarz
	Receiver ESVS 30	#833825/010	Rohde & Schwarz
3	Receiver ESHS 30	#839667/002	Rohde & Schwarz
	Receiver ESHS 30	#839667/008	Rohde & Schwarz
	Receiver ESHS 30	#39667/008	Rohde & Schwarz
2	Broadband antenna 30MHz-1000 MHz	#1064	Chase
	CBL 6111	#1331	
1	Loop Antenna 9kHz-30MHz	#871336/48	Rohde & Schwarz
	HFH2-Z2		
1	Turntable DT 312	#312/336	Deisel
3	Shielded room DC...		
	10 GHz 3,5 m x 3,5 m		Siemens
2	LISN ESH2-Z5	#831079/018	Rohde & Schwarz
	LISN ESH2-Z5	#879675/028	Rohde & Schwarz
1	LISN NSLK 8127	#8127230	Schwarzbeck
2	Antenna mast system AM 9104		Schwarzbeck
3	Plotter HP7550A	#2936A43117	Hewlett Packard
	Plotter HP7550A	#2631A46736	Hewlett Packard
	Plotter HP7550B	#3026A03892	Hewlett Packard
1	Spectrum Analyzer 8562A	#3043A05643	Hewlett Packard
3	Controller 300		Hewlett Packard
	Controller 300		Hewlett Packard
	Controller 300		Hewlett Packard
3	Floppy-Disk-Drive 9122C	#2804A04362	Hewlett Packard
	Floppy-Disk-Drive 9122D	#2614A63990	Hewlett Packard
	Floppy-Disk-Drive 9122D	#2339A13495	Hewlett Packard
3	Monitor 35741B	#8838J26540	Hewlett Packard
	Monitor 35731B	#8627K33194	Hewlett Packard
	Monitor 35731B	#8619K25961	Hewlett Packard
3	Keyboard 46021AD	#2844S60217	Hewlett Packard
	Keyboard 46021AD	#2645S20154	Hewlett Packard
	Keyboard 46021AD	#2706S40044	Hewlett Packard



# Radiated Emission Testprocedure Magnetic field emissions

## TESTFACILITY





## Notes for Radiation Measurement

(Magnetic field emissions)  
acc. to ANSI C63.4 - 1992

**1. Measurement facility:**

Measurement facility located at Frontenhausen (Germany) on field with the FCC Pursuant to Section 2.948 of the FCC Rules.

**2. Distance between the EUT and measuring antenna:**

3 meters.

**2. Measuring instrumentations:**

Rohde & Schwarz ESHS 30 Test Receiver ( 9 KHz - 30 MHz ) with a CISPR weighting QP detector, 6 dB bandwidth set at 10 KHz.

**3. Frequency range scanned:**

The frequency range 9KHz - 30 MHz has been scanned. Readings of the highest emissions relating to the limit were reported as above.

**4. Measuring antenna:**

Loop Antenna for the frequency range 9kHz - 30MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable included in the Antenna Factor for measurement data. The center of the loop 1m above the ground plane, positioned with its plane vertical at the specified distance and rotated about its vertical axis for maximum response at each azimuth about the EUT.

**5. Arrangement of EUT:**

During the test, the sample was operated at rated supply voltage and arranged for maximum emissions.

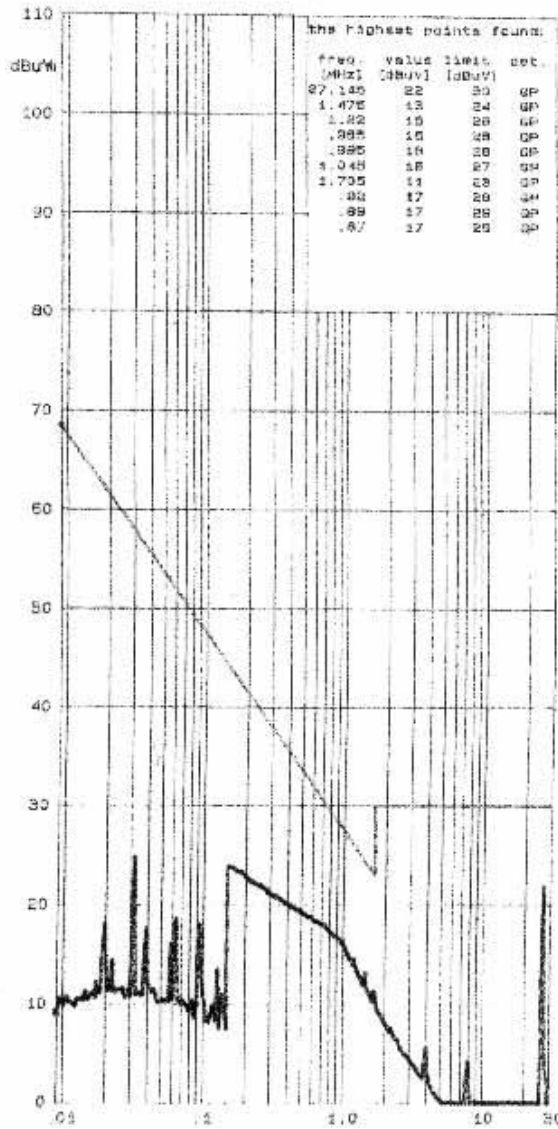
**6. Measuring Procedure:**

In accordance with the relevant sections of American National Standards Institute (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".



IT 3/4

Interference RADIATION 9 KHz - 30 MHz  
FCC Part 15 Subpart C Section 15.227+15.209  
Cabin 2



Model/System: 60-2774 (27MHz)

pkz/Ser. No: 01

Manuf./Imp.: ECHO TOYS

Date: 02.05.2000

Set under test: SCHOOL BUS

Test equipment:

Rohde & Schwarz ESH3-30

HFH2-ZE Rohde&Schwarz

Connected nets:

Operating Mode:

TRANSMITTING

test distance 30m

RFI suppression parts:

22336  
\* two db safety margin for type approval necessary

Operator: BL

Result:

PKM electronic GmbH  
Friedenhausen

f [MHz]



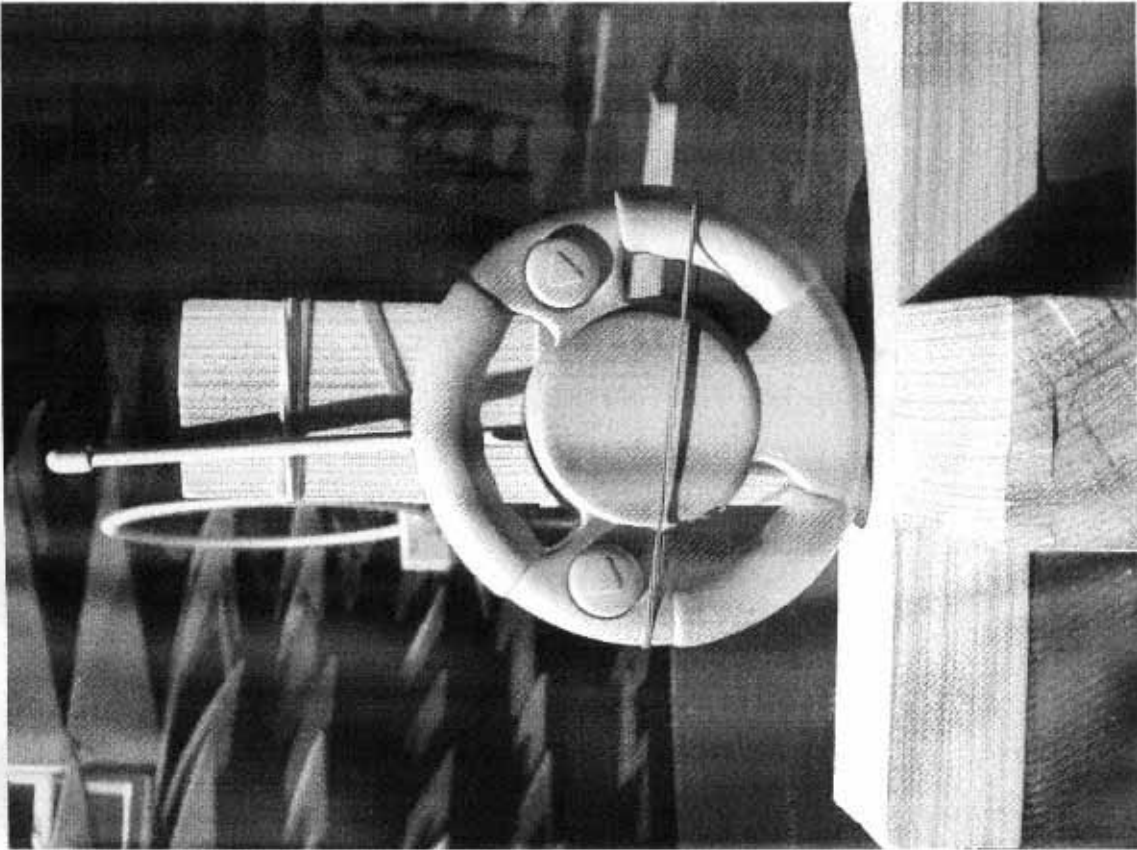
electronic GmbH

# FCC - Testreport

No. FCC-22336

Date: 03.05.2000

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electronic GmbH

# FCC - Testreport

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Date: 03.05.2000

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