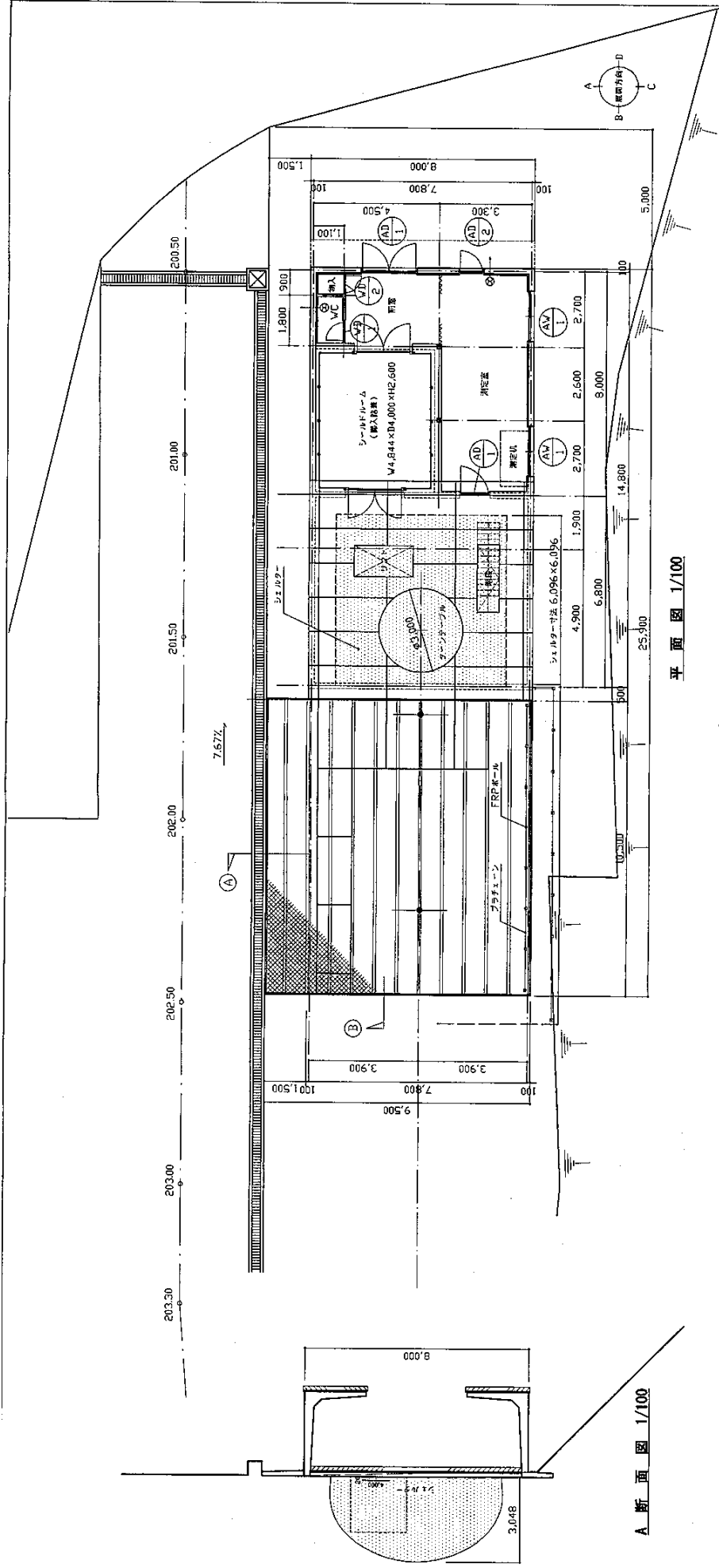
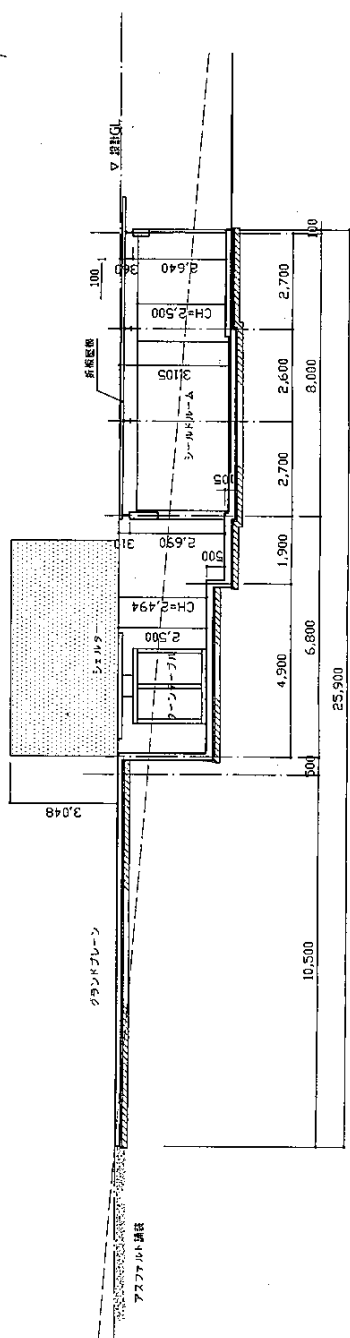


APPENDIX B



A 断面図 1/100



B 断面図 1/100

CHANGE	DATE	SCALE	NAME
..	2000.2.10	1:100	MM
..	..	..	..
..	..	..	..
..	..	..	..

設計者 株式会社 山北建設事務所
 設計者 山北建設事務所
 設計者 山北建設事務所
 設計者 山北建設事務所

設計者 株式会社 山北建設事務所
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設計者 株式会社 山北建設事務所
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設計者 株式会社 山北建設事務所
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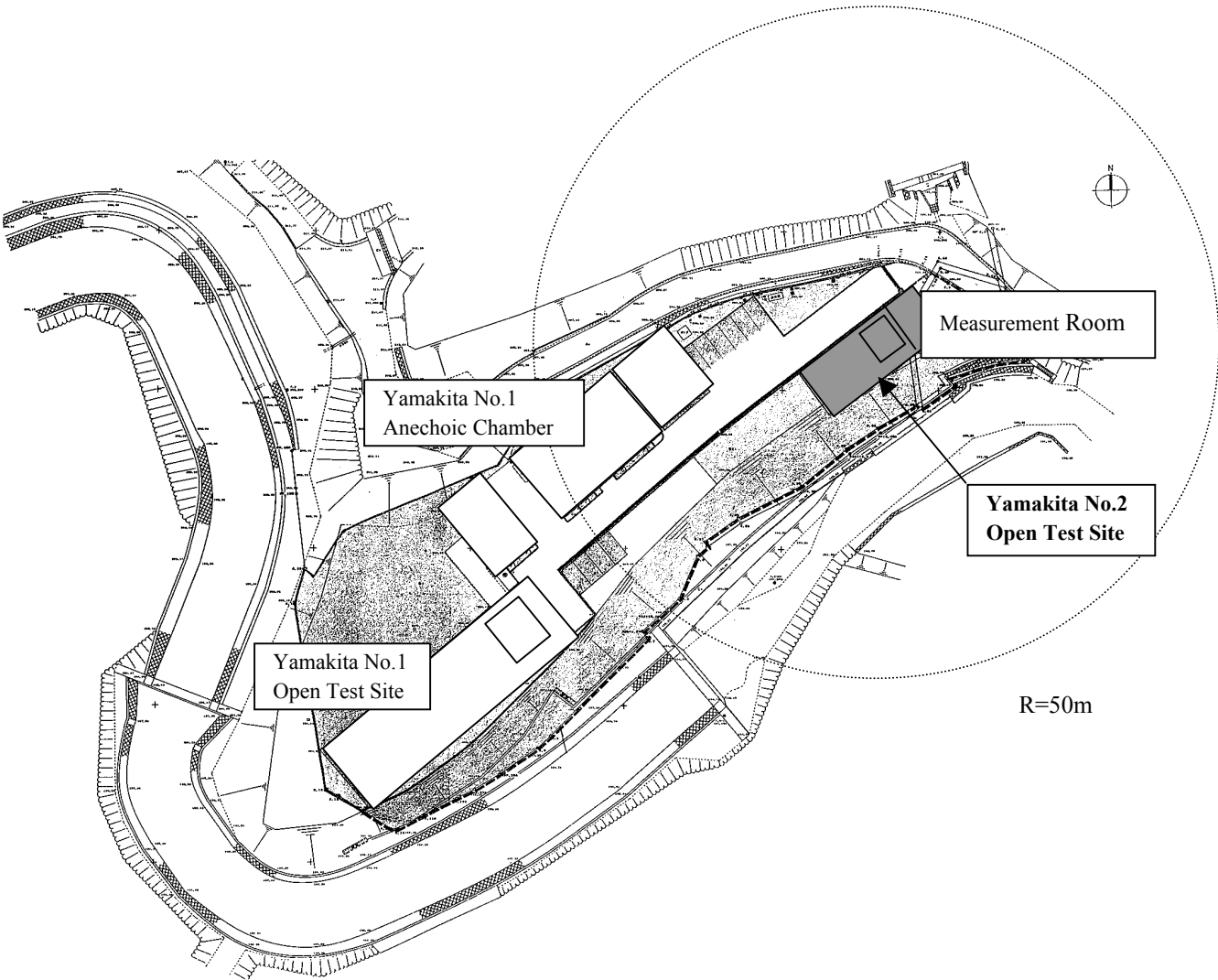
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 設計者 山北建設事務所
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 設計者 山北建設事務所

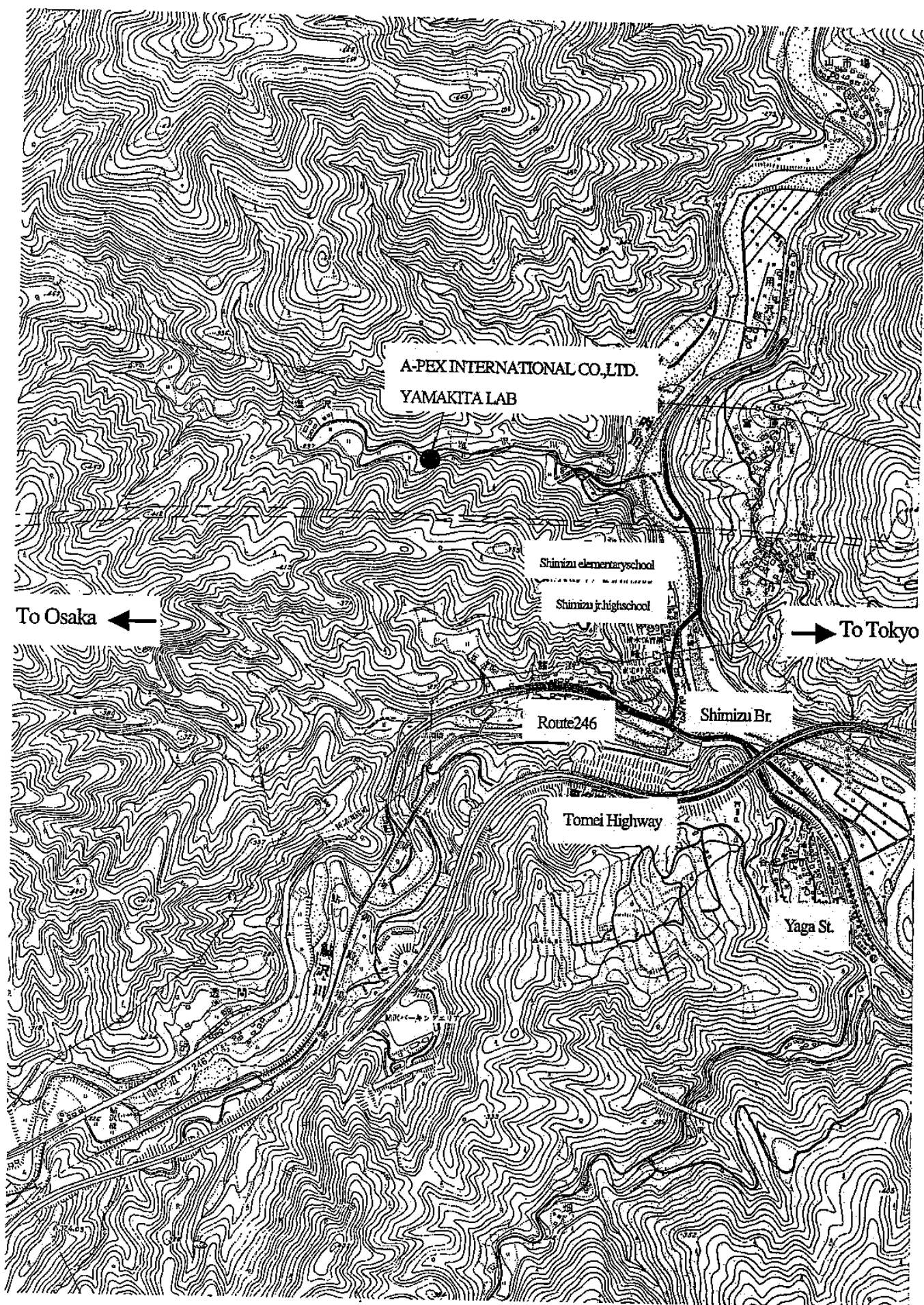
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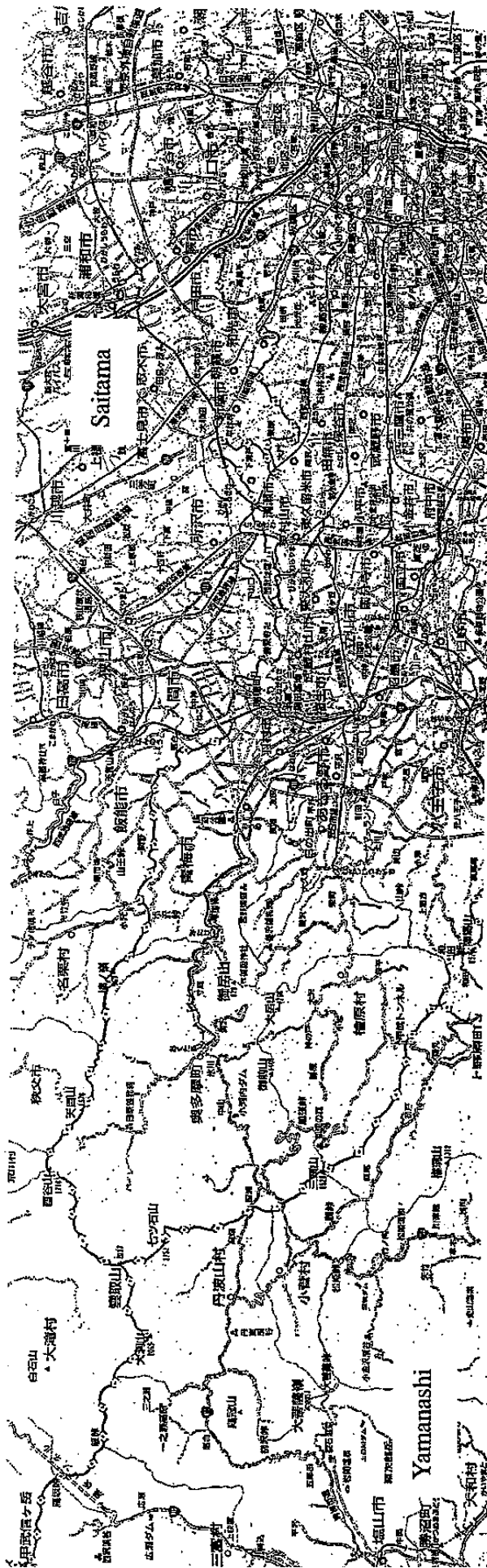
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設計者 株式会社 山北建設事務所
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A-PEX INTERNATIONAL CO., LTD
YAMAKITA LAB.







Saitama

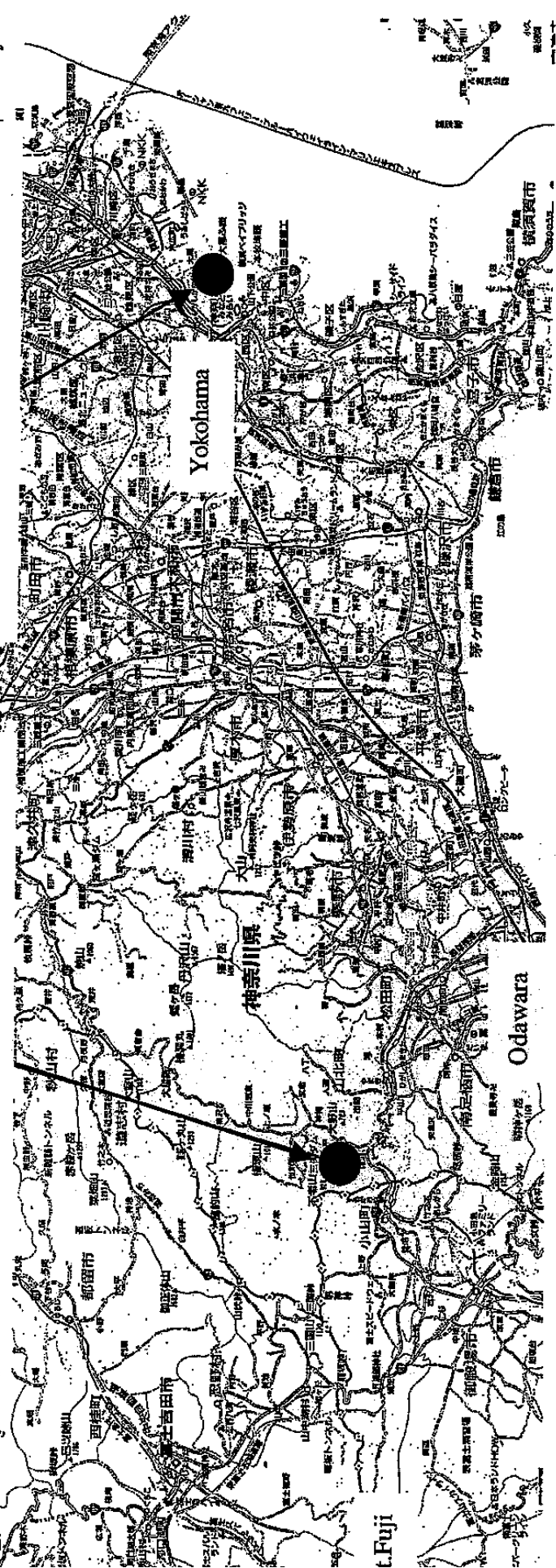
A-PEX INTERNATIONAL CO.,LTD.

YAMAKITA LAB

A-PEX INTERNATIONAL CO.,LTD.

YOKOHAMA LAB

Tokyo



Yokohama

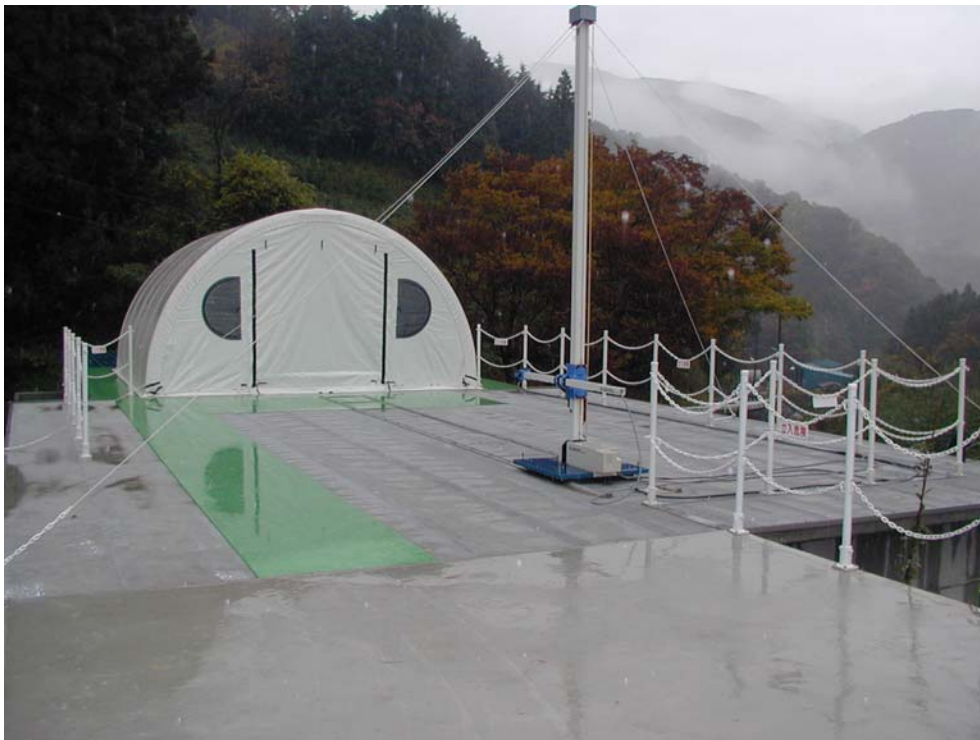
t.Fuji

Odawara

APPENDIX C



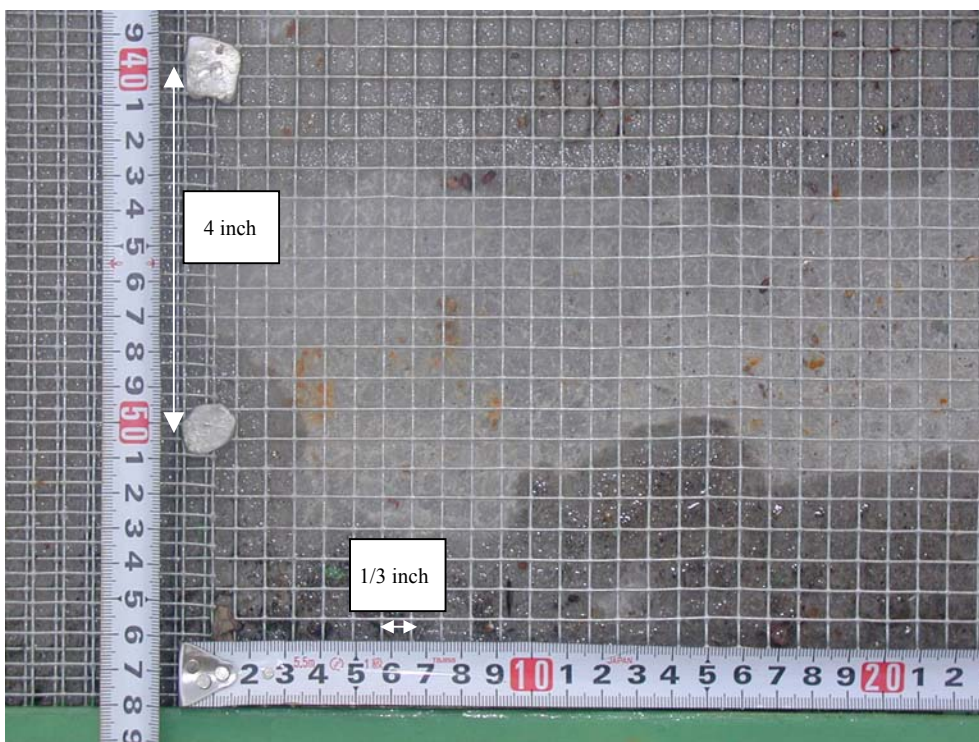
VIEW FROM EAST



VIEW FROM WEST



CONDUCTING GROUND PLANE



GROUND PLANE (BETWEEN METAL AND WIREMESH)



TURN TABLE



UNDER VIEW OF TURN TABLE (CONDUCTIVE MATERIAL)



ANTENNA MAST 1



ANTENNA MAST 2



WEATHER PROTECTION ENCLOSURE 1



WEATHER PROTECTION ENCLOSURE 2

APPENDIX D

Specifications

Frequency range	20 to 1000 MHz
Frequency setting	In 100-Hz, 100-kHz steps or any step size (switch-selected)
numerical	via keyboard
in steps	any size selectable
automatic scanning	for RF analysis
Display	8-digit LCD
Resolution	100 Hz
Setting error	<3 x 10 ⁻⁶
RF input	Z _{in} = 50 Ω, N connector, female
VSWR	<1.2 with ≥10 dB RF attenuation, <2 with 0 dB RF attenuation
Oscillator radiation	
at RF input (0 dB RF attenuation)	<20 dBμV
w/o preamplifier	<10 dBμV
with preamplifier	switchable between input filter and 1st mixer
Preamplifier	10 dB
Gain	
Preselector	
1 filter with fixed tuning	20 to <51.3 MHz
5 tracking filters	51.3 to <125.3 MHz 125.3 to <273.3 MHz 273.3 to <495.3 MHz 495.3 to <717.3 MHz 717.3 to 1000 MHz
Maximum input level (with and w/o preamplifier)	
RF attenuation 0 dB (AC-coupled)	50 V
DC voltage	130 dBμV
Sinewave AC voltage	97 dBμV/MHz (100 V for 0.5 ns)
Pulse spectral density	
RF attenuation ≥10 dB (AC-coupled)	50 V
DC voltage	137 dBμV = 1 W
Sinewave AC voltage	150 V
Max. pulse voltage (20 μs)	10 mWs
Max. pulse energy (20 μs)	
RF attenuation ≥10 dB with option ESVS-B1 (DC-coupled)	7 V
DC voltage	137 dBμV = 1 W
Sinewave AC voltage	1500 V
Max. pulse voltage	100 mWs
Max. pulse energy (10 μs)	
Interference rejection, non-linearities	
Image-frequency rejection	
1st IF	>80, typ. 100 dB
2nd IF	>90, typ. 100 dB
IF rejection	>90, typ. 100 dB
Intercept point d3, with f1-f2 ≥5 MHz	Preamplifier off on
Level (f1, f2) at receiver input	-10 dBm -20 dBm
f _m <50 MHz	typ. 15 dBm typ. 5 dBm
f _m ≥50 MHz	typ. +20 dBm typ. +5 dBm
Intercept point k2	>35 dBm >25 dBm
RF shielding	
Voltage indication at a field strength of 10 V/m with 0 dB	
RF attenuation (f ≠ f _m)	<0 dBμV
Additional error in quasi-peak	
Indication range at 10 V/m	<1 dB
Interference/interference immunity to EN 50081-1/EN 50082-1	
Intermediate frequencies	
1st IF	1354.7 MHz
2nd IF	74.7 MHz
3rd IF	10.7 MHz

IF bandwidths			
Nominal	-3 dB (±20%)	-8 dB (±10%)	Shape factor
bandwidth			BW _{50dB} /BW _{60dB}
10 kHz	7 kHz	0.5 kHz	1:4 typ.
120 kHz	90 kHz	120 kHz	1:5.5 typ.

Noise indication	off	Preamplifier on
Average value, BW = 10 kHz	<-10, typ. -15 dBμV	<-14, typ. -21 dBμV
BW = 120 kHz	<+1, typ. -4 dBμV	<-3, typ. -8 dBμV
Peak value, BW = 10 kHz	typ. -3 dBμV	typ. -6 dBμV
BW = 120 kHz	typ. +8 dBμV	typ. +2 dBμV
Quasi-peak band C/D	typ. +2 dBμV	typ. -4 dBμV
Spectral density measurement (PK/MHz, BW = 120 kHz)	typ. 25 dBμV/MHz	typ. 21 dBμV/MHz

Voltage measurement range

Lower limit (additional error caused by inherent noise <1 dB)

	off	Preamplifier on
Average indication (AV)		
BW = 10 kHz	<-5, typ. -11 dBμV	<-10, typ. -17 dBμV
BW = 120 kHz	<+5, typ. 0 dBμV	<+1, typ. -8 dBμV
Peak indication (PK)		
BW = 10 kHz	typ. 12 dBμV	typ. 7 dBμV
BW = 120 kHz	typ. 23 dBμV	typ. 17 dBμV
Quasi-peak indication (QP)		
CISPR band C/D		
(pulse rep. frequency 100 Hz)	<10, typ. 6 dBμV	<4, typ. 0 dBμV
Upper limit		
AV, PK, QP	137 dBμV (RF attenuation ≥10 dB)	
Inherent spurious response	<0 dBμV (equiv. input voltage)	

Level display	
digital in dBμV, dBμA, dBm, dBμV/m, dBμA/m, dBpW	3 1/2 digits, resolution 0.1 dB
analog	on moving-coil meter in operating range of IF detector with additional digital display of lower range limit
Operating ranges	30, 60 dB
Display modes	average (AV), peak (PK), pulse spectral density (PK/MHz), quasi-peak (QP)

Averaging, hold and measuring times

1 ms to 100 s (1/2/5 steps)

Measuring error

(level indication, AV for S/N >18 dB)

0 to 55 °C

-10 to 0 °C

-10 to +55 °C

Level calibration

sinewave and harmonics generator

Demodulation modes

A0 (zero beat)

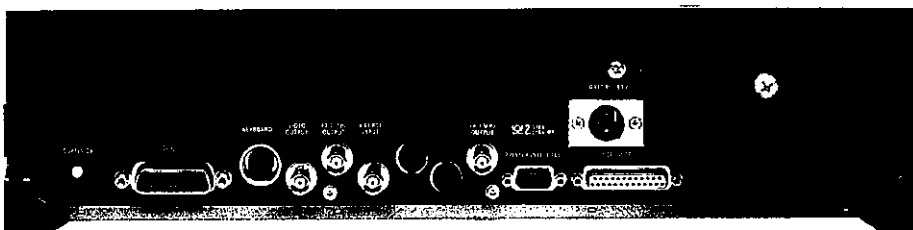
A3 (for ASE emissions)

F3 (for FSE emissions)

Internal clock, permanently operated from internal battery

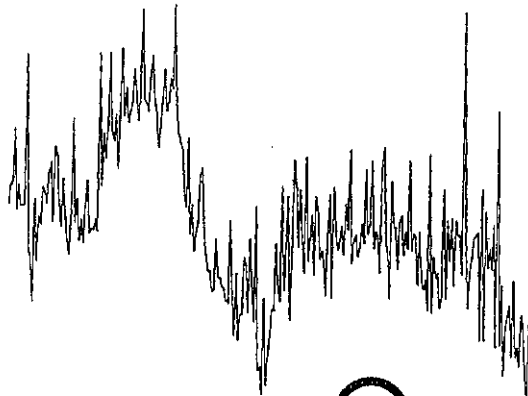
Connectors and Interfaces

Remote control	to IEC 825-2 (IEEE 488)
Remote-control connector	24-contact Amphenol connector
Interface functions	AH1, L4, SH1, T8, SR1, PP1, RL1, DC1, DT1, C1, C2, C3, C11
Plotter language	HP-GL
Front-panel outputs	
Supply and coding connector for antennas etc.	12-contact Tuchel connector
AF output	Z _{out} = 10 Ω, jack JK34
EMF	adjustable up to 1.5 V



ESVS10

Rear-panel outputs	
IF 74.7 MHz	$Z_{out} = 50 \Omega$, BNC connector, female
Gain ref. to RF input (RF attenuation 0 dB)	10 dB without preamplifier, 20 dB with preamplifier
Bandwidth (-3 dB)	2 MHz
IF 10.7 MHz	$Z_{out} = 50 \Omega$, BNC connector, female
EMF in range of analog level display for unmod. sine wave signal:	
Operating range 30 dB	1 to 30 mV
60 dB	1 mV to 1 V
Bandwidth = IF bandwidth	
Video output (envelope detector)	
EMF in range of analog level display:	
Operating range 30 dB	4 to 126 mV
60 dB	4 mV to 4 V
User interface	
25-contact Cannon connector; includes 6 control lines for an external device, display voltage (analog) with and without meter simulation, input for external triggering, RS-232-C interface for firmware updating	
Printer connection	
parallel interface, 15-contact Cannon connector	
Keyboard connection	
DIN connector (5-contact)	
Rear-panel inputs	
Ext. reference frequency	BNC connector (female)
Required level	EMF ≥ 1 V from 50 Ω
Frequency	50 MHz
Ext. battery	3-contact connector
Required voltage	11 to 33 V



General data	
Rated temperature range	-10 to +55°C (no condensation)
Storage temperature range	-25 to +70°C
Mechanical resistance	shock-tested to MIL-STD-810 D (shock spectrum 40 g), vibration-tested to MIL-F-28800 D, class 5;
RFI suppression	complies with IEC Publ. 68-2-6, complies with VDE 0878, Part 1a, PTT Decree 527/1979 and MIL-STD-461C (CE03 and RE02)

Power supply	
AC supply	100/120/240 V $\pm 10\%$, 230 V $\pm 6\%$ -10%, 60 VA
	47 to 420 Hz
	safety class I to VDE 0411 (IEC348)
Battery	
Internal	12 V, 10 Ah
Operating time	approx. 2.5 h
External	11 to 33 V (switch-on voltage >12 V), 1.9 A at 24 V, 3.3 A at 12 V
Dimensions (W x H x D)	435 mm x 236 mm x 353 mm (incl. controls)
Weight	23.7 kg/20.4 kg with/without batteries

Ordering Information

Order designation	► EMI Test Receiver ESVS 10 1011.2006.10	
Accessories supplied	power cable, connector for external battery, operating manual	

Option		
Pulse Power Attenuator	ESVS-B1	818.1815.02

Recommended extras

For interference measurements			
RF Current Probe			
20 Hz to 100 MHz	EZ-17	818.2063.02	
RF Current Injection Probe			
20 Hz to 100 MHz	EZ-17	818.2063.03	
VHF Current Probe 20 to 300 MHz	ESV-Z1	353.7018.02	
Absorbing Clamp 30 to 1000 MHz	MDS-21	194.0100.50	
Adapter (BNC female to N male)		118.2812.00	
V-Network 5 μ H/50 Ω	ESH-26	638.5016.52	

Antennas and accessories			
Broadband Dipole 20 to 80 MHz	HUF-Z1	358.0512.52	
Log-periodic Broadband Antenna			
60 to 1300 MHz	HL 023 A1	577.8017.02	
Biconical Antenna 20 to 300 MHz	HK 116	4000.7732.02	
Log-periodic Antenna			
200 to 1300 MHz	HL 223	4001.5501.02	
Conical Log Spiral Antenna			
200 to 1000 MHz	HUF-Z4	837.2210.52	
RF Probe (BNC connector)	HVF-Z	204.1010.02	
Adapter (BNC female to N male)		118.2812.00	
Preamplifier 10 dB	ESV-Z3	397.7014.52	
Tripod	HFU-Z	100.1114.02	
Mast (for tripod)	HFU-Z	100.1120.02	
Wooden Tripod	HZ-1	837.2310.02	
RF Connecting Cable (12 m)	HFU2-24	252.0030.56	
RF Connecting Cable (7 m)	HFU2-25	252.0055.56	
Antenna Positioning Mast			
4 m, stationary use	HCM	1008.8058.04	
4 m, mobile use	HCM	1008.8107.04	
6 m, stationary use	HCM	1008.8059.06	
6 m, mobile use	HCM	1008.8107.06	
Turntable			
metal	HCT 12	1008.8307.02	
wooden	HCT 12	1008.8307.03	
Positioning Controller	HCC	1008.8207.02	

Other accessories			
6-V Lead Acid Storage Battery, maintenance-free, 10 Ah (2 required)		338.4012.00	
Keyboard (English)	PSA-Z1	1009.5001.32	
Keyboard (German)	PSA-Z1	1009.5001.31	
Headphones		110.2959.00	
Service manual		1011.2441.24	
Service Kit	EZ-8	816.1067.02	
19" Rack Adapter			
with front handles	ZZA-95	396.4911.00	
without front handles	ZZA-951	396.9488.00	
Set of Front Handles	ZZG-95	396.5176.00	
Transit Case	ZZK-953	1013.9389.00	
Trolley	ZZK-1	1014.0510.00	
Pinwriter (24-pin), 220 V	PDN	351.4512.02	
Pinwriter (24-pin), 120 V	PDN	351.4512.03	
Printer Cable	EZ-11	816.1787.02	
IEC-bus Connecting Cable 1 m	PKC	282.2013.10	
2 m	PKC	282.2013.20	
Plotter (DIN A4)	Advantest R9533		

ESVS10

Specifications

Frequency range	9 kHz to 30 MHz
Frequency setting	1. with tuning knob in 10-Hz, 10-kHz steps or any step size (switch-selected) 2. numerical keyboard entry 3. in steps of any selectable size 4. automatic scanning (RF analysis)
Display	7-digit LCD
Resolution	10 Hz
Setting error	$< 3 \times 10^{-5} + 30$ Hz
RF input	$Z_{in} = 50 \Omega$, N connector, female
VSWR	< 1.2 with ≥ 10 dB RF attenuation
Oscillator radiation at RF input	< 2 with 0 dB RF attenuation
w/o preamplifier	(0 dB RF attenuation)
with preamplifier	< 20 dB μ V
Preamplifier	< 10 dB μ V
Gain	switchable between input filter and 1st mixer
Proselector	10 dB
	five-bandpass filters
	9 kHz to < 150 kHz
	150 kHz to < 4.05 MHz
	4.05 MHz to < 12.8 MHz
	12.8 MHz to < 21.55 MHz
	21.55 MHz to 30 MHz
Maximum input level (with and w/o preamplifier)	
RF attenuation 0 dB	
DC voltage	7 V
Sinewave AC voltage	130 dB μ V
Pulse spectral density	96 dB μ V/MHz
RF attenuation ≥ 10 dB (DC-coupled)	
DC voltage	7 V (= 1 W)
Sinewave AC voltage	137 dB μ V
Max. pulse voltage (10 μ s)	700 V
Max. pulse energy (10 μ s)	100 mW
Interference rejection, non-linearities	
Image-frequency rejection	
1st IF	> 90 , typ. 100 dB
2nd IF	> 75 dB
IF rejection	> 90 , typ. 100 dB
Intercept point d3, with f1-f2 ≥ 100 kHz and 0 dB RF attenuation	
	Preamplifier off on
Level (f1, f2) at receiver input	-10 dBm -20 dBm
$f_0 < 2$ MHz	typ. 15 dBm typ. 0 dBm
$f_0 \geq 2$ MHz	> 15 dBm ≥ 0 dBm
Intercept point k2	typ. ± 20 dBm typ. ± 5 dBm
	> 40 dBm > 20 dBm
RF shielding	
Voltage indication at a field strength of 10 V/m with 0 dB RF attenuation (f $\geq f_0$)	< -10 dB μ V
Additional error in quasi-peak indication range	< 1 dB
Intermediate frequencies	
1st IF	74.7 MHz
2nd IF	80 kHz
IF bandwidths	
Nominal bandwidth	-3 dB ($\pm 20\%$) -6 dB
200 Hz $\dagger$	140 Hz
200 Hz $\ddagger$	200 Hz
10 kHz $\dagger$	7 kHz
	4.20-30 Hz
	0.5 kHz
	± 0.5 kHz
Shape factor	$B_{50\text{dB}}/B_{30\text{dB}} = 1:6$ (typ.) $B_{50\text{dB}}/B_{30\text{dB}} = 1:3.5$ (typ.)

Noise indication

Average value, BW=200 Hz	off	Preamplifier on
$f_0 = 9$ to 50 kHz, -24 to < -50 dB μ V	< -30 dB μ V	< -30 to < -38 dB μ V
$f_0 > 50$ kHz	< -30 dB μ V	< -38 dB μ V
	typ. -35 dB μ V	typ. -41 dB μ V
Average value, BW=10 kHz, $f_0 > 50$ kHz	< -14 dB μ V	< -20 dB μ V
	typ. -17 dB μ V	typ. -25 dB μ V
Peak value (typ. increase as against average value)		+11 dB
Quasi-peak band A (9 to 50 kHz)	typ. -24 to -30 dB μ V	typ. -30 to -38 dB μ V
band B (50 to 150 kHz)	typ. -32 dB μ V	typ. -38 dB μ V
band C (≥ 150 kHz)	typ. -13 dB μ V	typ. -19 dB μ V
PK/MHz (BW ≥ 10 kHz)	typ. -34 dB μ V/MHz	typ. -28 dB μ V/MHz
Voltage measurement range (f ≥ 50 kHz)		
Lower limit (additional error caused by inherent noise < 1 dB)		
	off	Preamplifier on
Average indication (AV)		
$B_{10} = 200$ kHz	typ. -31 dB μ V	< -32 typ. -37 dB μ V
$B_{10} = 10$ kHz	< -8 typ. -10 dB μ V	< -12 typ. -18 dB μ V
Peak indication (PK)		
$B_{10} = 200$ kHz	typ. -5 dB μ V	typ. -14 dB μ V
$B_{10} = 10$ kHz	typ. $+10$ dB μ V	typ. $+4$ dB μ V
Quasi-peak indication (QP)		
CISPR band A (pulse top, frequency 25 Hz)	typ. -30 dB μ V	typ. -36 dB μ V
CISPR band B (pulse top, frequency 100 Hz)	typ. -31 dB μ V	typ. -37 dB μ V
Spectral density (PK/MHz)	typ. -50 dB μ V/MHz	typ. -44 dB μ V/MHz
Upper limit		
AV, PK, QP		137 dB μ V/RF attenuation ≥ 10 dB
Inherent spurious response		< -10 dB μ V (equivalent voltage)

Level display	
digital (in dB μ V, dB μ A, dBm, dB μ V/m, dB μ A/m, dB μ W)	3 1/2 digits, resolution 0.1 dB
analog	on moving-coil meter in operating range of IF detector with additional digital display of lower range limit
Operating ranges	30, 60 dB
Display modes	average (AV), peak (PK), spectral density measurement (PK/MHz), quasi-peak (QP)
Averaging, hold and measuring times	1 ms to 100 s (1/25 steps)
Measuring error (level indication)	± 1 dB (digital display)
AV for S/N > 16 dB	typ. < 2 dB (analog display)
Level calibration	factory generator
Demodulation modes	A0, zero beat
Date, time of day	A3 (for A3E emissions)
	internal clock, permanently operated from internal battery

Connectors and interfaces

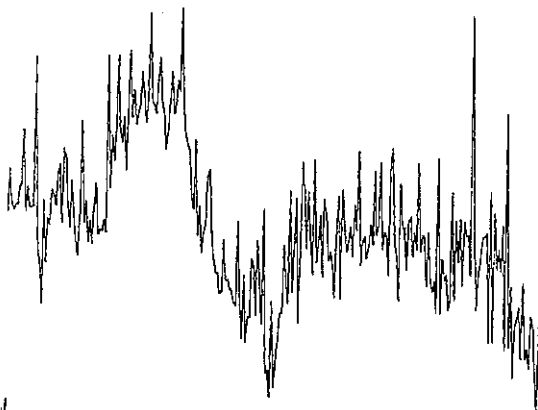
Remote control	to IEC 625-2 (IEEE 488)
Remote-control connector	24-contact Amphenol connector
Interface functions	AH1, EX, SH1, TS, SH2, BP1, BP2, BP3, BP4, BP5, BP6, BP7, BP8, BP9, BP10, BP11, BP12, BP13, BP14, BP15, BP16, BP17, BP18, BP19, BP20, BP21, BP22, BP23, BP24
Plotter language	HP-GL
Front-panel outputs	
Supply and coding connector for antennas etc.	12-contact interlock connector
AF output	$Z_{out} = 10 \Omega$ jack, 100 V
EMF	adjustable up to 1.5 V

$\dagger$ meets tolerances to CISPR 16
 $\ddagger$ meets tolerances to CISPR 16 (min. 8 kHz max. 10 kHz) and complies with MIL tolerance (10 kHz $\pm 10\%$)



ESHS10

Rear-panel outputs	
IF 74.7 MHz	$Z_{out} = 50 \Omega$, BNC connector, female
Gain ref. to RF input (RF attenuation 0 dB)	10 dB without preamplifier, 20 dB with preamplifier
Bandwidth (-3 dB)	2 MHz, max. bandwidth of preselector
IF 80 kHz	$Z_{out} = 50 \Omega$, BNC connector, female
EMF in range of analog level display for unmod. sine wave signal:	
Operating range 30 dB	1 to 30 mV
60 dB	1 mV to 1 V
Bandwidth = IF bandwidth	
Envelope detector output	BNC connector, female
EMF in range of analog level display:	
Operating range 30 dB	4 to 126 mV
60 dB	4 mV to 4 V
User interface	25-contact Cannon connector; includes 6 control lines for an external device (eg artificial mains network), display voltage (analog) with and without simulation of meter response, input for external triggering, RS-232-C interface for firmware updating
Printer connection	parallel interface, 15-contact Cannon connector
Keyboard connection	DIN connector (5-contact)
Rear-panel inputs	
Ext. reference frequency	BNC connector
Required level	EMF ≥ 1 V from 50 Ω
Frequency	5/10 MHz
Ext. battery	3-contact connector
Required voltage	11 to 33 V



General data	
Rated temperature range	-10 to +55°C (no condensation allowed)
Storage temperature range	-25 to +70°C
Mechanical resistance	shock-tested to MIL-STD-883C (shock spectrum, 40 g), vibration-tested to MIL-STD-2000D, Class S; complies with IEC Publ. 68-2-6
RFI suppression	complies with VDE 0876, Part 1a, Regulation 527/1979 and MIL-STD-461C (CE03 and RE02)

Power supply	
AC supply	100/120/220/240 V $\pm 10\%$, 50 VA 47 to 440 Hz, safety class I to VDE 0411 (IEC348)
Battery	
Internal	12 V, 10 Ah
Operating time	approx. 4 h
External	11 to 33 V, 1.2 A at 24 V, 2.3 A at 12 V
Dimensions (W x H x D)	435 mm x 238 mm x 363 mm
Weight	21 kg/19 kg with/without batteries

Ordering information

Order designation	► EMI Test Receiver ESHS 10 1004.0401.10
Accessories supplied	power cable, connector for external battery, operating manual

Recommended extras

For Interference measurements		
RF Current Probe (20 Hz to 100 MHz)	EZ-17	816.2063.02
RF Current Injection Probe (20 Hz to 100 MHz)	EZ-17	816.2063.03
RF Current Probe (9 kHz to 30 MHz)	ESH2-Z1	338.3516.52
Active Probe (9 kHz to 30 MHz, high-impedance)	ESH2-Z2	299.7210.52
Passive Probe (9 kHz to 30 MHz, VDE 0876)	ESH2-Z3	299.7610.52
Four-line Artificial Mains Network (9 kHz to 150 kHz/30 MHz, VDE 0876)	ESH2-Z5	338.5219.53
T-Network	ESH3-Z4	800.1510.52
Four-wire T-Network	EZ-10	816.1215.02
Antenna Impedance Converter	EZ-12	1026.4800.02
Two-line V-Network	ESH3-Z5	831.5518.52
V-Network 5 μ H/50 Ω	ESH3-Z6	836.5016.52
Attenuator (20 dB, 10 W)	ESH2-Z11	348.7516.52

Rod Antenna	HFH2-Z1	335.3216.52
Rod Antenna (MIL)	HFH2-Z6	837.1866.54
Loop Antenna (9 kHz to 30 MHz)	HFH2-Z2	335.4711.62
Loop Antenna (9 kHz to 1 MHz)	HFH2-Z3	335.6214.52
Inductive Probe	HFH2-Z4	338.3016.52
Tripod	HFU-Z	100.1114.02
Wooden Tripod (for HFH2-Z6)	HZ-1	837.2310.02
Roof-mounting Kit (for Loop Antenna HFH2-Z2)	HFH2-Z5	335.6718.02

Other accessories

6-V Lead Acid Storage Battery, maintenance-free, 10 Ah (2 required)		338.4012.00
Keyboard (English)	PSA-Z1	1009.5001.32
Keyboard (German)	PSA-Z4	1009.5001.31
Headphones		110.2959.00
Service Manual		1004.0553.24
Service Kit	EZ-8	816.1087.02
19" Rack Adapter		
with front handles	ZZA-95	398.4911.00
without front handles	ZZA-951	396.9488.00
Set of Front Handles	ZZG-95	398.5176.00
Pinwriter (24-pin), 220 V	PDN	351.4512.02
Pinwriter (24-pin), 120 V	PDN	351.4512.03
Trolley Case	ZZK-953	1013.9389.00
Trolley	ZZK-1	1014.0510.00

Cables			
IEC-bus Connecting Cable 1 m	PCK		262.2013.10
2 m	PCK		262.2013.20
Printer Cable	EZ-11		816.1767.02

Control cables for artificial mains networks			
from ESHS 10 to ESH3-Z5			
Control Cable 2 m		EZ-14	 1026.6341.02
from ESHS 10 to ESH2-Z5			
Control Cable 2 m		EZ-13	 1026.5293.02

Control cables for artificial mains networks in shielded cabins			
from ESHS 10 to ESH3-Z5 (both cables required)			
Control Cable	2 m	EZ-14	1026.5341.02
	10 m	EZ-8	816.0683.02
from ESHS 10 to ESH2-Z5 (both cables required)			
Control Cable	2 m	EZ-14	1026.5341.02
	10 m	EZ-8	816.0626.02

Feeder cables for active antennas in shielded cabins		876.0626.02
(2 required)		
Feeder Cable 3 m	HZ-3	837.3469.02
10 m	HZ-4	816.0519.02

ESHS10

SHIELDED ROOM

1 Information

1.1 General Information

1. Kind of Application : Filing of Facility according to the ANSI C63.4 and FCC Part 2 section 2.948
2. Facility : Shielded Room
3. Type of Measurement : FCC Part 15 Subpart B/C, Part18
4. Applicant : UL Apex Co., Ltd.
5. Applicant's address : 4383-326, Asama-cho, Ise-shi, Mie-ken 516 – 0021 Japan
Phone : +81-596-24-6717 / Fax : +81-596-24-8020
6. Location of the Test Site : 907, Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 Japan
Phone : +81-465-77-1011 / Fax : +81-465-77-2112
7. Name of Test Site : Yamakita EMC Lab. No. 3 Shielded Room
8. Person Responsible to the Application : Osamu Watatani (Site Manager)
9. Test Engineer : Osamu Watatani
Fumiaki Matsuo
Hiroshi Naka
Akira Sato
Takahiro Suzuki
Ichiro Isozaki
Toyokazu Imamura
Makoto Hosaka
Takashi Konno
10. A statement of this facility : This facility is available to do measurement works for other on a contact basis.
11. Date : March 15, 2005

Testing Laboratory

UL Apex Co., Ltd.

907, Kawanishi, Yamakita-machi, Ashigarakamigun, Kanagawa-ken 258-0124 JAPAN

Telephone: +81 465 77 1011 Facsimile: +81 465 77 2112

2 Description of facility

This shielded room is referred to Appendix A (Drawings).

The shielded measuring room used in the conducted interference measurement is approximately 19.2 square (4.8 meters x 4.0 meters) and 2.6 meters high. It is constructed with stainless steel plated 2mm iron plate on all walls, ceiling and floor.

The shielding effective provided to this enclosure is more than 80dB.

The measurement system is placed in this room.

2.1 Shielded room

The shielded enclosure used in the conducted interference measurement is approximately 19.2 square meters

(inside dimensions of shielded screen is 4.8 m x 4.0 m).

Horizontal conducting ground plane which is of stainless steel plate (Size: 4.8m x 4.0m, Thickness: 2mm) is bonded to the floor by 14-M10 bolts of the shielded measuring room.

Vertical conducting surface which is made of stainless steel plate (Size: 4.0m x 2.6m, Thickness: 2mm) is bonded to the floor by 14-M10 bolts of the shielded measuring room.

See Appendix B.

Testing Laboratory

UL Apex Co., Ltd.

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3 Measurement equipment

3.1 Measurement equipment list

No.	Item	Manufacture	Model	Serial	Calibration Interval/Date Calibrated
1	TEST RECEIVER	Rohde & Schwarz	ESHS10	839698/014	1 Year / 05. 18, 2005
2	SPECTRUM ANALYZER	Advantest	R3265A	55060826	1 Year / 11. 17, 2005
3	SIGNAL GENERATOR	Rohde & Schwarz	SMY01	843574/009	1 Year / 10. 18, 2000
4	LISN	Schwarzbeck	NSLK8126	8126354	1 Year / 06. 22, 2005
5	LISN	Schwarzbeck	NSLK8127	8127344	1 Year / 10. 31, 2005
6	LISN	Schwarzbeck	NNLK8129	8129137	1 Year / 07. 09, 2005

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3.2 Calibration of the measurement equipment

a) Daily inspection

The instruments are inspected and adjusted, if necessary, before the beginning of the measurements every morning to ensure that are properly maintained. If the improper or unfit instrument is founded in the daily inspection, the instrument has to be returned for repairing or calibration to each manufacturers.

b) Regular inspection

The instruments used in this test site are periodically calibrated by each manufactures.

The period of the calibration of each instruments varies depending upon its purpose.

The schedule of next calibration date is indicated on the maintenance label of the each instrument.

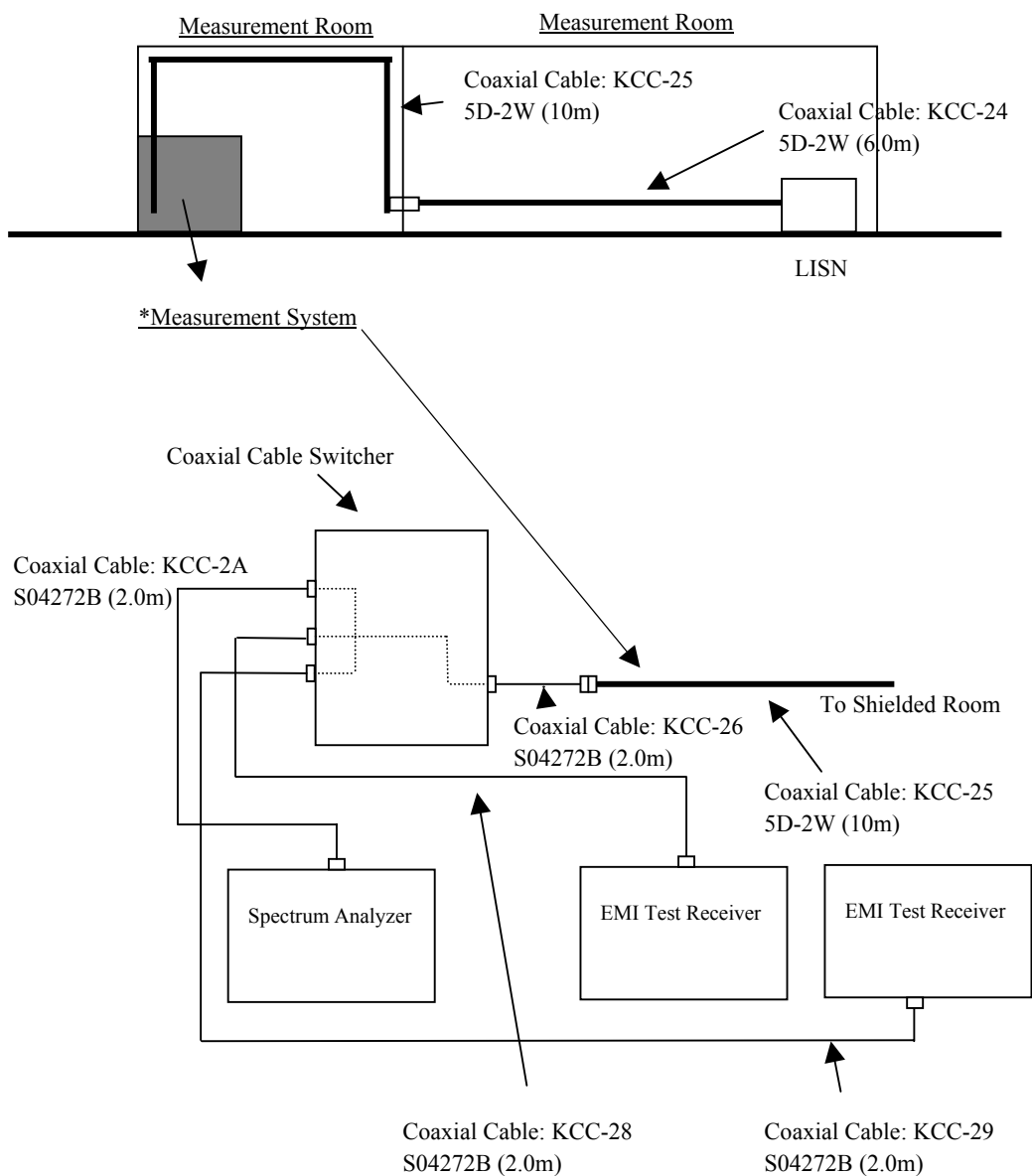
Testing Laboratory

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3.3 Measurement system (Shielded Room)



Testing Laboratory

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APPENDIX A

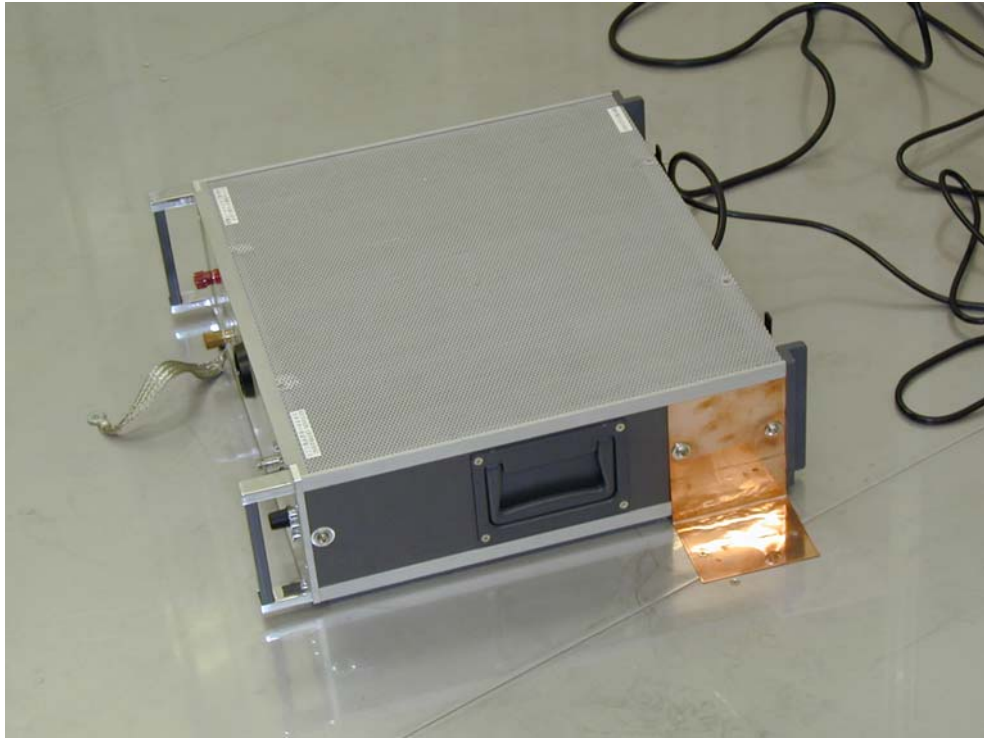
APPENDIX B



EUT STAND THE SHIELDED ROOM 1



EUT STAND THE SHIELDED ROOM 2



LISN