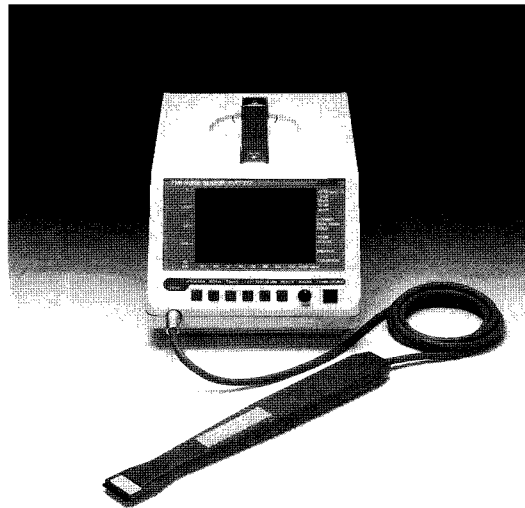


## **EMI NOISE SENSOR**

### **MODEL FVC-777**

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#### **GENERAL**

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With the rapid popularization of a wide variety of electronic equipment, electro-magnetic interference with communication and information processing systems and other electronic devices is now becoming a problem of practically intolerable proportion.

Therefore the limits for the levels of these electro-magnetic emissions are being progressively standardized by FCC, VDE, VCCI, CISPR, etc. Due to the unavailability of handy measuring instruments, countermeasures to reduce emissions to an acceptable level have been based mostly or entirely on expert technicians' experiences.

Simply by touching the probe to the circuit to be measured, you can ascertain electric field strength and magnetic field strength for each classified frequency band based on FCC, VDE, VCCI, CISPR standards. As a result, the user can readily evaluate the effectiveness of EMI countermeasures. This will enable the user to substantially save the time and expense to design and develop protective measures to reduce emission. The FVC-777 is your partner to EMI solutions.

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#### **FEATURES**

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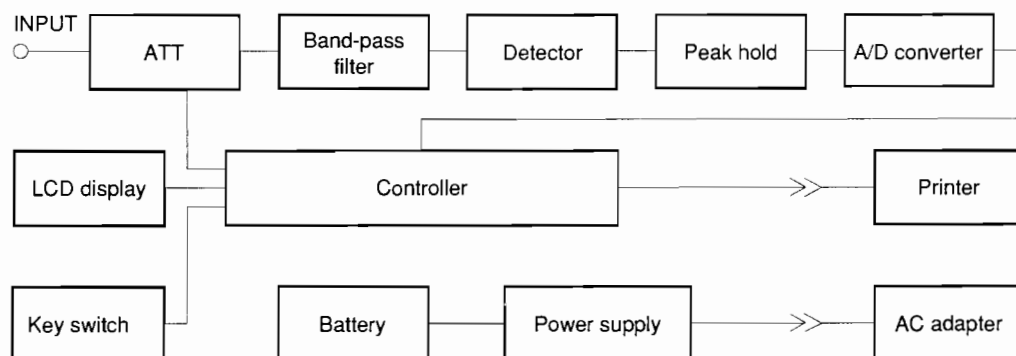
1. Locates and measures sources of interference for a wide frequency range (100KHz to 1000MHz).
2. For each frequency band, the strength of electric field or magnetic field is graphed on the display for ease of monitoring.
3. Compact and lightweight design with a built-in battery gives mobility and also allows measurements in location without AC power supply.
4. Since measurements are taken at close distance, they will not be easily affected by external radio waves, eliminating the need of a shielded room.
5. Measurement data can be printed out by the optional printer.
6. Peak values can be held on the display, offering easy-to read indication.

# MODEL FVC-777

## SPECIFICATIONS

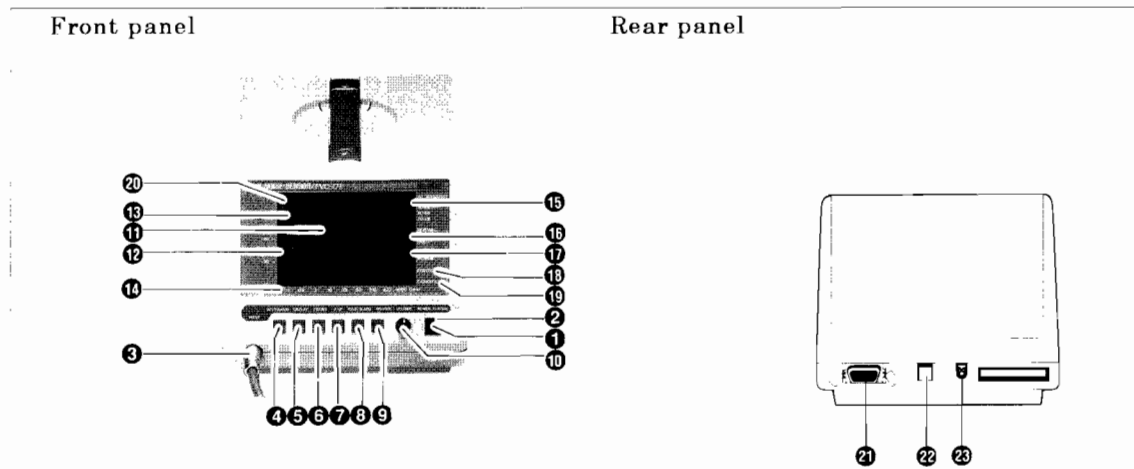
Item		Specifications
Frequency range		100k~500kHz    500k~3MHz    3M~10MHz 10M~30MHz    30M~88MHz    88M~216MHz 216M~470MHz    470MHz~1000MHz
Input sensitivity	Electric field probe F-10-006 Resolution Dynamic range	Measurable source voltage 5.6mV~560mV, when the attenuator is set to 0 dB (Calibrated at 20MHz) Approx. 0.3 dB 35 dB or more
	Magnetic field probe F-10-007 Resolution Dynamic range	Measurable source current 0.01mA~1.0mA, when the attenuator is set to 0 dB (Calibrated at 20MHz) Approx. 0.3 dB 30 dB or more
	Magnetic field probe F-10-008 Resolution Dynamic range	Measurable source current 0.063mA~6.3mA, when the attenuator is set to 0 dB (Calibrated at 200MHz) Approx. 0.3 dB 30 dB or more
Attenuator		10dB/ 20dB/ 30dB selectable, applicable levels vary according to the type of probe used
Display	Scale	0~-40dB 10dB/div, 2dB/subdiv
	Display method	Bar graph
	Mode	NORMAL / PEAK HOLD / HOLD
	Resolution	32 dots/div
	Display	EL back-lighted, LDC (81 x 112 mm)
Audible signal		Dial-TONE/ ALARM
Optional printer		SEIKO DPU-201G
Power supply	Battery	9.6 V, 1800mA/H, one hour operation for 5-hour charging
	AC	90~132V (range extended to 264V by exchanging AC adaptors), 47~63Hz, approx. 25W
	DC	10~15.5V, approx. 1.5A, approx 15W
Ambient temperature		5~40°C
Dimensions (W x H x D)mm		190 X 163 X 275 (No projection included)
Weight		Approx. 4 kg (sensor's main unit only)

## BLOCK DIAGRAM



# MODEL FVC-777

## CONTROLS, INDICATORS AND TERMINALS



### ■ CONTROLS

- ① Power switch
- ② Power on indicator
- ③ Probe connector
- ④ Attenuator selecting switch
- ⑤ Display mode selecting switch
- ⑥ ▼ down switch
- ⑦ ▲ up switch
- ⑧ Tone/Alarm selecting switch
- ⑨ Printer starting switch
- ⑩ Volume control

### ■ LCD DISPLAY

- ⑪ Bar graph
- ⑫ Scale
- ⑬ Auxiliary scale
- ⑭ Frequency band indication
- ⑮ Attenuator selection indicator
- ⑯ Display mode indicator
- ⑰ Tone/Alarm selection indicator
- ⑱ Printer operation indicator
- ⑲ Condition indicator
- ⑳ Alarm threshold level indicator

### ■ REAR PANEL

- ⑳ Printer connector
- ㉑ Charge switch
- ㉒ DC input connector

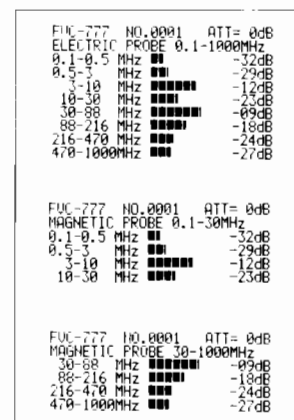
### STANDARD ACCESSORIES

- Electric near-field probe (100KHz~1000MHz)  
MODEL: F-10-006
- Magnetic near-field probe (100KHz~30MHz)  
MODEL: F-10-007
- Magnetic near-field probe (30MHz~1000MHz)  
MODEL: F-10-008
- AC adaptor
- Carrying case

### OPTIONS

- Printer (SEIKO DPU-201G) MODEL: 16-00001A
- Printer cable MODEL: 05-00005A

### PRINTOUT EXAMPLE



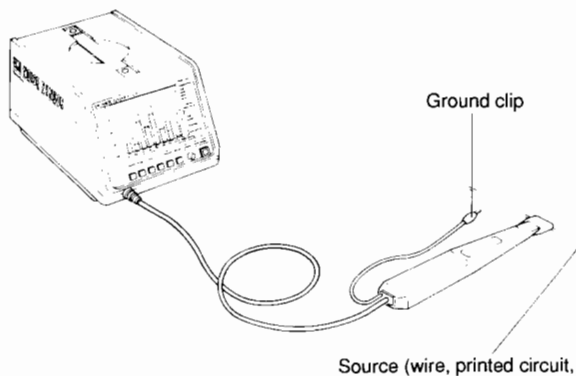
# MODEL FVC-777

## MEASUREMENTS BY VARIOUS PROBES

An electric field probe and two magnetic field probes are furnished as standard accessories. They have different measuring frequency ranges and applications.

### ■ Electric near-field probe (F-10-006)

Specifically designed to detect and measure sources of high frequency voltages in electronic equipment. The probe picks up electric-fields and produces an output voltage which is amplified to transmit it to the main unit. The ground lead of the probe shall be connected to the ground of the circuit to be measured.



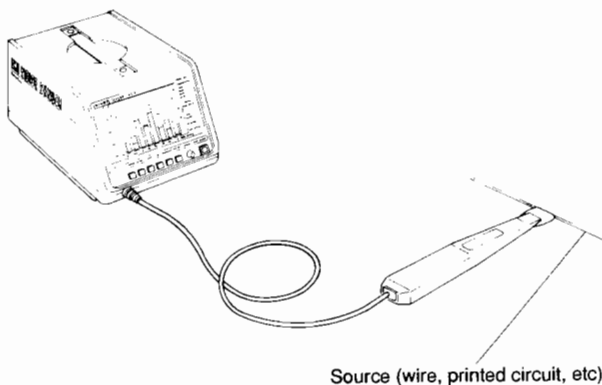
Frequency range: 100KHz~1000MHz

Tolerable voltage of the probe tip: 500V  
(DC to 100Hz)

An electrode probe at its tip picks up electric fields. Place the side on which a seal is attached in close contact with the circuit to be measured. If the tip is placed farther away from the circuit, the probe output is lowered.

### ■ Magnetic near-field probe (F-10-007/ F-10-008)

Specifically designed to detect and measure sources of high frequency currents in electronic equipment. The probe picks up magnetic fields and produces an output voltage which is amplified to transmit it to the main unit.



Frequency range: 100KHz~30MHz  
30MHz~1000MHz

Tolerable voltage of the probe tip: 500V  
(DC to 100Hz)

A dual loop antenna at its tip picks up magnetic fields. Place the side on which a seal is attached in close contact with the circuit to be measured. For maximum coupling, place the edge of the tip parallel to it. Placed at different angle or farther away from the circuit, the probe produces smaller signals.

※The sensor in conjunction with a probe measures the sources of EMI for high frequency voltages or currents and measurements are made in the near-field. The measurement results therefore cannot be converted to the far-field strength to be expressed in V/m.

● Designs and specifications are subject to change without notice.



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