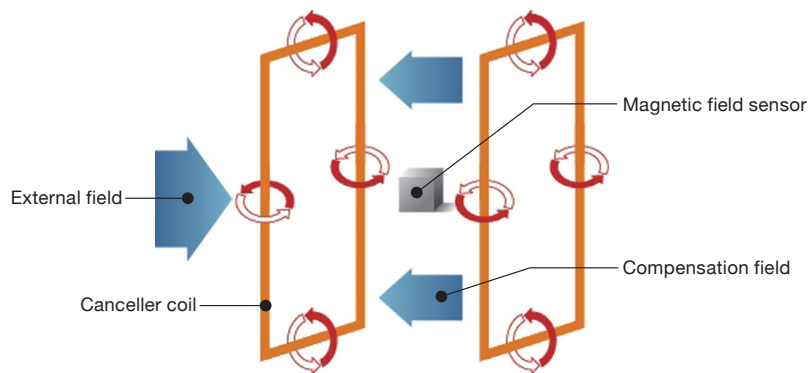


# FS-78210AMC

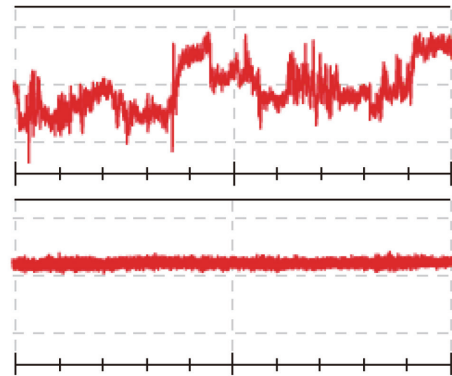
Active Magnetic Field Canceller System for Scientific Instruments

## ● Principle of active magnetic field canceller system

The fluctuating magnetic fields are detected by sensors installed near the instrument, and the canceller coils generate compensating magnetic fields according to controller output, in order to cancel the magnetic fields around the sensors.



Schematic of magnetic field canceller



Timeline graph Top: Canceller OFF, Bottom: Canceller ON

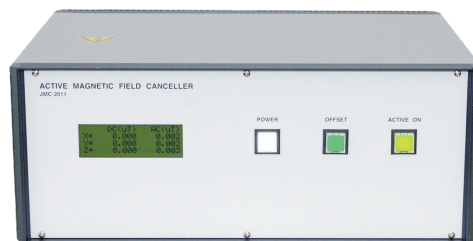
## ● Outline of system

Up to -40 dB compensation is feasible on quasi-DC to 1 kHz frequency range by adopting wide range/high sensitivity 3-axes separable fluxgate type magnetic field sensor and low noise control circuit.

### Configuration



3-axes separable magnetic field sensor



Controller Unit



Example of installation to JIB-PS500i,  
with docking type cage

## ● Features

- Wide range/high sensitivity 3-axes separable fluxgate type magnetic field sensor
- Low noise control circuit
- Feedback control
- No need for operation by customer after installation completed

# FS-78210AMC

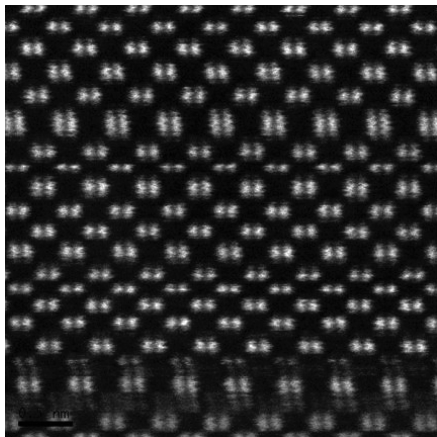
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## Example of image disturbance caused by quasi-DC magnetic field from electric trains

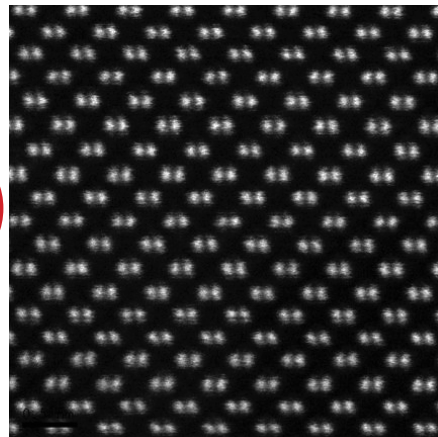
(Observed on 200 kV STEM aberration corrected HRTEM, Sample Si [110] Dark field image  $\times 25\text{ M}$ )



200  $\mu\text{s}/\text{pixel}$   
Scan: 52 sec



200  $\mu\text{s}/\text{pixel}$   
Scan: 52 sec



## Specification

Magnetic field attenuation	Maximum -40 dB
Maximum compensation field	Below 4.0 $\mu\text{T}$
Frequency range	Quasi-DC (0 Hz) to 1 kHz
LCD monitor	Continuously display DC and AC field strength
Magnetic field sensor	Orthogonal 3-axes fluxgate type, sensing range $\pm 100\text{ }\mu\text{T}$
Power supply	AC 100-200 V 3 A (Please prepare one socket with ground)

## Applicable Instruments

Transmission Electron Microscope (TEM), Scanning Electron Microscope (SEM), Ion Beam Application Equipment (FIB), Electron Probe Microanalyzer (EPMA), Auger Microprobe, Electron Beam Lithography System, etc.

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\*Please inquire us for details

\*Specifications and appearance are subject to change without notice.

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