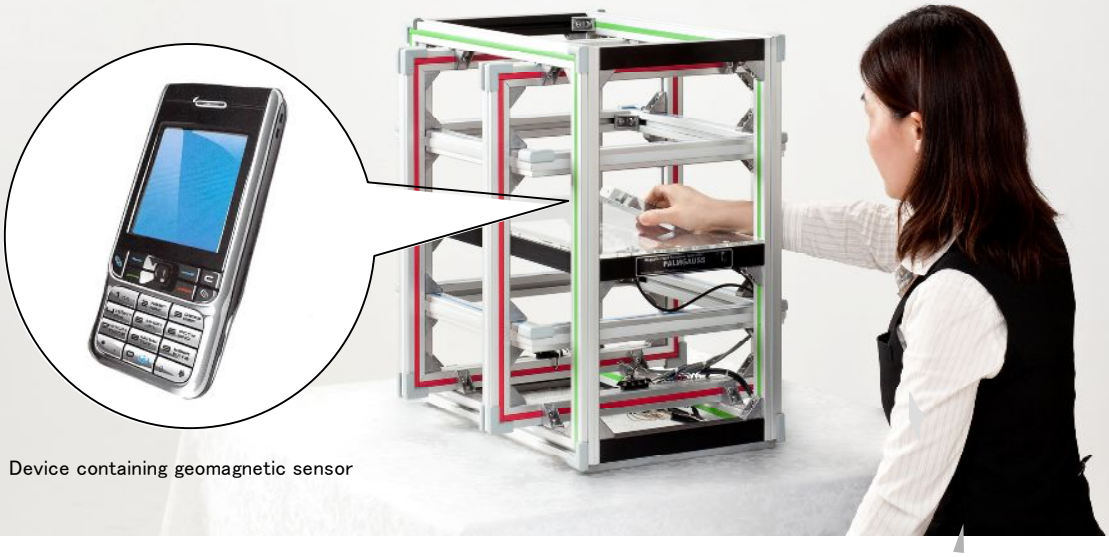
Ideal for Performance Evaluation of Mobile Device Mounted Magnetometers

Geomagnetism Canceller/Simulator

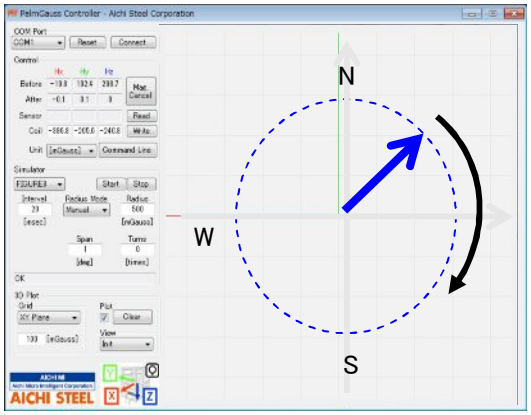
PALMGAUSS-S

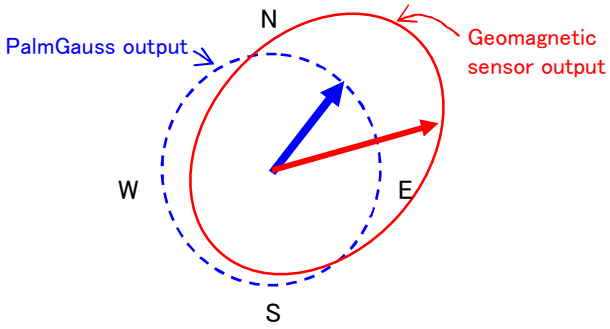
By combining Helmholtz Coils in a 3-axis configuration, it is possible to create magnetic fields in a space in the center. Ideal for the calibration and evaluation of geomagnetic sensors.



Device containing geomagnetic sensor

Application 1: Calibration and evaluation of geomagnetic sensors or e-compasses





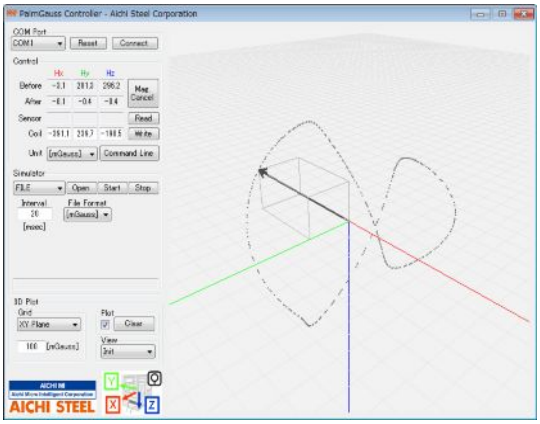
Use case) **Evaluation of azimuth accuracy**
Create a circular field and evaluate azimuth accuracy from the geomagnetic sensor output

Application 2: Replicate magnetic environments

Geomagnetic data (Sample)

Xaxis	Yaxis	Zaxis
0mG	0mG	0mG
300mG	0mG	0mG
285mG	0mG	95mG
150mG	70mG	250mG
100mG	250mG	-133mG

Use case) – Replicate the magnetic field of a calibration motion
– Compare and evaluate various conditions



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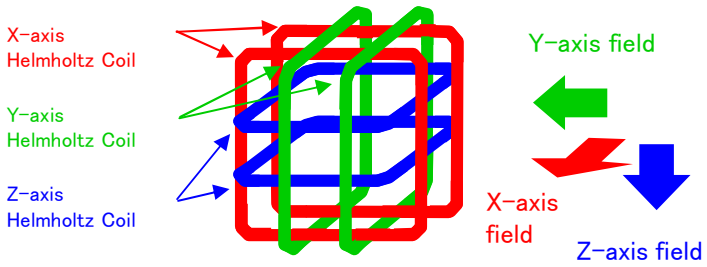
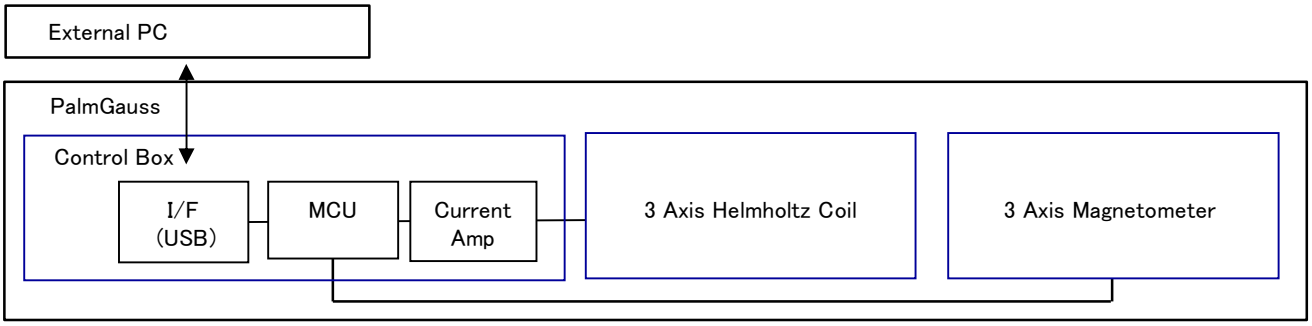
Principle of field generation

By arranging 3 sets of Helmholtz Coils orthogonally to each other, magnetic fields of any strength and in any direction can be created.



Block Diagram

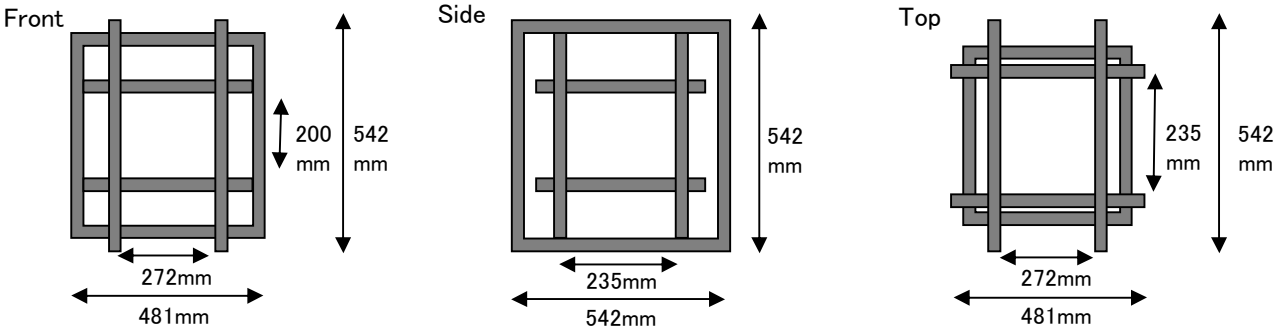


Basic Specification

Item		Model : PGS-5G
Power Supply Voltage		AC90 to 240V (50 / 60 Hz)
Power Consumption		< 400(V・A)
Directions of Field Control		3 Axes (X,Y,Z)
Controlled Area		±70 × ±70 × ±70 mm
Maximum Magnetic Field Strength		5.0 Gauss
Magnetometer		Amorphous MI Measurement Range: ±3Gauss※ Measurement Frequency: DC
Field Strength in Cancelled Area		< 10mGauss (typical)
Helmholtz Coils	X-axis	481 × 481 × 265 mm
	Y-axis	542 × 542 × 299 mm
	Z-axis	420 × 420 × 230 mm
Weight	Coil	21.5 kg
	Control Box	6.0 kg

※The attached sensor has a measurement range of ±3Gauss.
If a field exceeding ±3Gauss is applied, the sensor values will not be guaranteed.

Opening Dimensions (Supports not shown)



S/W Specification

Communication Specifications

1	Baud Rate	38400
2	Data Bit	8
3	Parity	None
4	Stop bit	1
5	Flow	None
6	Receive	LF
7	Transmit	CR+LF

Command Specifications (Extracts)

Parameter1	Parameter2	Comment
HELP		
HELP	MAG	
INFO		
V		
INIT	9600 or 38400	BR: Default 38400
MAG	CANCEL	

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