A.R.A. TECHNOLOGIES

LOOP ANTENNAS

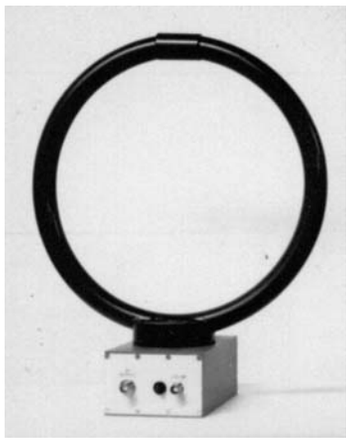
ARA TECH offers two different models (**ALA-130/A** and **ALA-1030/B**) of active loop antennas, three different models (**PLA-130/A**, **PLA-1030/B**, and **PLA-205/B**) of passive loop antennas, and two different pairs (**PLA-2050** & **PLH-2050** and **PLA-451** & **PLH-450**) of loop sensors or field pick up coils and radiating loops.

The **PLA-130/A** and **ALA-130/RS** are designed for the shielded room testing requirements per MIL-STD 285 and NSA test standard 65-6. The **PLA-130/RS** is capable of handling 1 kW input power while the **ALA-130/RS** provides the dynamic range required for shield room attenuation measurements. The **ALA-130/RS** and **PLA-130/A** are sold together as a set known as the **APL-130/RS**.

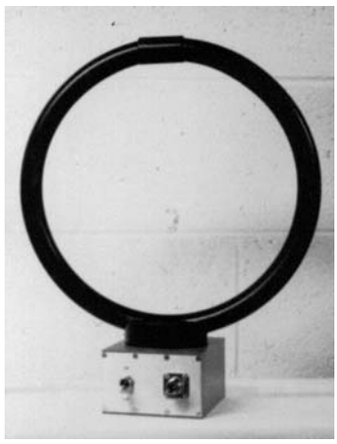
The **PLA-1030/B** is a single band passive loop antenna for immunity or emission testing.

The **PLA-205/B** is optimized for generating fields in the low end of the frequency band from 20 Hz to 5 MHz. It can also be used for emission testing at low frequencies. When used with our extremely sensitive **BBH series** receive antennas, it provides the best combination for testing shielding effectiveness in the 20 Hz to 5 MHz band.

All loop calibrations are made relative to a 50 ohm load. Active and passive loops (except field generating coils **PLH-450** and **PLH-2050** and field pick-up coils **PLA-2050** and **PLA-451**) are individually calibrated in accordance with procedures specified in IEEE-291 section 2.3.1.



PLA-130/A



ALA-130/RS

SPECIFICATIONS

	Frequency Range	Input Power	Impedance	Size		Connector	Type
				Loop	Base		
ALA - 130/RS	1 kHz - 30 MHz	N/A	50 ohm	12" dia	6" x 4"	BNC Female	Active
ALA - 1030/RS	10 kHz - 30 MHz	N/A	50 ohm	24"x24"	6" x 4"	BNC Female	Active
PLA - 130/A	1 kHz - 30 MHz	1 kW	50 ohm	12" dia	6" x 4"	N Female	Passive
PLA - 205/B	20 Hz - 5 MHz	5 Watts	50 ohm	24"x24"	4" x 3"	BNC Female	Passive
PLA - 1030/B	10 kHz - 30 MHz	5 Watts	50 ohm	24"x24"	6" dia	BNC Female	Passive
PLA - 2050/A	20 Hz - 100 kHz	N/A	N/A	5.2" dia	3" x 2.5"	BNC Female	Passive
PLH - 2050/A	20 Hz - 100 kHz	5 Amps	N/A	4.7" dia	4.7" dia	Banana Jack	Passive

Options

1. 10-foot RF cable with ferrite sleeves
2. Tripod, TP-5 or TP-3
3) Carrying Case

LOOP ANTENNAS

ALA-130/A
Typical H-field Antenna Factor

Frequency	AFH ($dB\ AV^{-1}m^{-1}$)
1 kHz	5.5
3 kHz	-3.0
10 kHz	-14.5
30 kHz	-24.9
50 kHz	-29.2
80 kHz	-34.1
100 kHz	-35.7
200 kHz	-41.4
500 kHz	-48.6
700 kHz	-51.0
1 MHz	-55.7
2 MHz	-61.5
3 MHz	-64.7
6 MHz	-65.9
10 MHz	-62.8
20 MHz	-54.4
30 MHz	-50.1

ALA-130/A
Typical Sensitivity
(Minimum detectable H-Field, MDF)
(Referenced to 1 kHz Bandwidth)

Frequency	MDF ($dB\ \mu A/m$)
1 kHz	26.9
3 kHz	15.8
10 kHz	4.1
30 kHz	-7.9
50 kHz	-13.4
80 kHz	-17.4
100 kHz	-19.6
200 kHz	-25.2
500 kHz	-32.4
700 kHz	-35.4
1 MHz	-39.2
2 MHz	-43.8
3 MHz	-45.3
6 MHz	-48.4
10 MHz	-50.6
20 MHz	-49.5
30 MHz	-49.4

PLA-1030/B
Typical H-Field Antenna Factor

Frequency	AFH ($dB\ AV^{-1}m^{-1}$)
10 kHz	39.4
30 kHz	29.2
50 kHz	24.6
80 kHz	20.0
100 kHz	18.2
200 kHz	12.0
500 kHz	4.2
700 kHz	1.2
1 MHz	-1.6
2 MHz	-8.1
3 MHz	-11.3
6 MHz	-16.9
10 MHz	-19.5
20 MHz	-20.2
30 MHz	-19.6
40 MHz	-19.0
50 MHz	-19.3

PLA-205/B
Typical H-field Antenna Factor

Frequency	AFH ($dB\ AV^{-1}m^{-1}$)
100 Hz	68.5
200 Hz	64.6
330 Hz	60.9
400 Hz	59.4
600 Hz	55.7
1 kHz	49.6
3 kHz	36.5
10 kHz	22.5
30 kHz	12.0
50 kHz	6.9
80 kHz	3.0
100 kHz	1.3
200 kHz	-3.9
500 kHz	-6.5
700 kHz	-6.9
1 MHz	-7.2
2 MHz	-8.1
3 MHz	-8.4
5 MHz	-8.4

PLA-205/B

PLA-130/A
Typical H-Field Antenna Factor

Frequency	AFH ($dB\ AV^{-1}m^{-1}$)
Lo-Band	
1 kHz	56.5
3 kHz	46.7
10 kHz	36.0
30 kHz	25.5
50 kHz	21.1
80 kHz	16.4
100 kHz	14.7
200 kHz	8.7
500 kHz	2.8
700 kHz	1.0
1 MHz	.2
2 MHz	-1.4
3 MHz	-1.6
Hi-Band	
1 MHz	6.0
2 MHz	-.3
3 MHz	-3.9
6 MHz	-10.6
10 MHz	-12.7
20 MHz	-14.2
30 MHz	-14.7