

Our **SAS series** antennas are ideally suited for spectrum surveillance and spectrum management applications. These are extremely broadband portable receive antennas designed specifically for accurate measurement of the vertical electric field intensity. Integral active networks provide outstanding performance over the entire frequency range of operation --- performance normally associated with full-scale antennas many times larger.

The **SAS-11** and **SAS-210/CR** antennas are supplied with protective radomes for outdoor use. Optional radomes are available for outdoor use of the **SAS-210** and **SAS-220** antennas. A gradual roll-off in the response below 10 kHz prevents overload, in **SAS-11** antennas, due to strong 60 Hz harmonics in areas where man-made noise is a problem. Schottky diodes give the low-band preamplifier additional protection. **SAS antennas** can be modified for significantly larger overload protection when used in a high field environment.

The **SAS-230/22** is a new 20 MHz to 3 GHz dual band surveillance antenna. This unit is available with an active high and low band preamplifiers which maybe bypassed remotely by integrated low loss coax switches. The **SAS-230/21** has an active low band but a passive high band for optimal dynamic range.

All **SAS** antennas operate with a 12- volt DC power supply. Remote and rack mountable power supplies are also available for use with **SAS** antennas. These antennas can be modified for use with auto batteries for vehicle mounted applications. The **SAS-2 series** antennas have an integrated rechargeable power supply for stand - alone operation.



SAS-11/E



SAS-220 ON A VEHICLE

EXTREMELY BROADBAND E-FIELD RECEIVE ONLY ANTENNAS

SPECIFICATIONS:

POLARIZATION :	Vertical	ICE:	2" radial with radome
PATTERN:	Omnidirectional	OVERLOAD:	0.5 V/m
IMPEDANCE:	50 Ohms	TEMPERATURE:	-40°C to +70°C
WIND:	150 mph		

	OUTPUT PORTS	FREQUENCY	CONNECTO R	RADOM E	POWER SUPPLY	SIZE (H x D)	WEIGHT (LBS/KG)
SAS-11/E	2	100 Hz - 200 MHz 30 MHz - 1 GHz	BNC female	Yes	Remote	27" x 28"	35 / 16
SAS-11/E-1	1	100 Hz - 1 GHz	BNC female	Yes	Remote	27" x 28"	35 / 16
SAS-2/S	1	100 Hz - 1 GHz	BNC female	No	Internal Recharge	35" x 19"	10 / 4.5
SAS-2/SE	2	100 Hz - 2 GHz	BNC female	No	Internal Recharge	35" x 19"	10 / 4.5
SAS-210/CR**	1	20 MHz - 1 GHz	N female	Optional	Remote	14" x 19"	15 / 7
SAS-220/CR***	1	20 MHz - 2 GHz	N female	Optional	Remote	14" x 19"	15 / 7
SAS-230/22*	2	20 - 1000 MHz 800 - 3000 MHz	N Female	Yes	Remote	17" x 19"	18 / 8
Active/Receive only							

* For active low band and passive high band, order Model # **SAS-230/21**

OPTIONS:

- A) Tripod
- B) Remote Power Supply: Power Supply Voltages (115 VAC Standard, 230 VAC, 15 VDC, 24 VDC, 27 VDC)
- **C) **SAS-210/C** for transmit and receive applications (passive version of **SAS-210/CR**)
- D) Rack mountable Power Supply
- ***E) Limiter in high band for overload protection of 100 V/m below 20 - 100 MHz and 70 V/m above 100 MHz (**SAS-220/A**)



SAS-11/E ON A VEHICLE



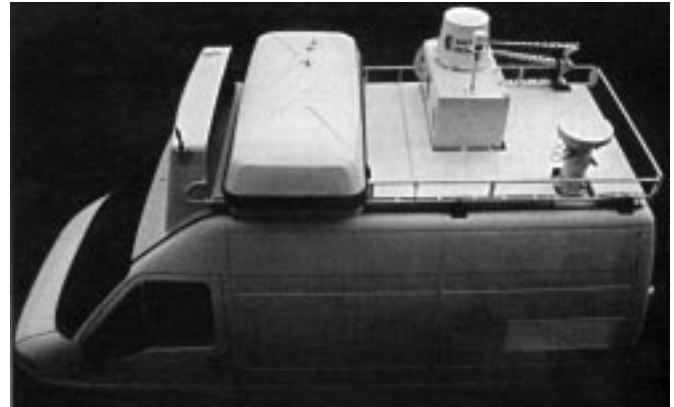
SAS-230/22

EXTREMELY BROADBAND E-FIELD RECEIVE ONLY ANTENNAS

SAS-11/E

**TYPICAL E-FIELD ANTENNA FACTOR (AFE) AND
SENSITIVITY (MINIMUM DETECTABLE E-FIELD,
MDF) REFERENCED TO 1 KHZ**

FREQUENCY	AFE (dB m ⁻¹)	MDF (dB μV/m)
Lo Band		
100 Hz	46.3	62.7
320 Hz	29.3	46.9
1 kHz	17.7	36.2
2 kHz	14.0	32.6
5 kHz	6.5	26.1
10 kHz	4.9	18.9
20 kHz	3.9	14.2
50 kHz	3.3	5.6
100 kHz	3.3	1.2
200 kHz	3.1	-3.9
500 kHz	2.9	-9.6
1 MHz	2.6	-10.4
2 MHz	2.3	-10.7
5 MHz	2.7	-11.4
10 MHz	3.7	-11.9
20 MHz	4.9	-12.5
30 MHz	6.9	-12.9
40 MHz	8.9	-12.0
Hi Band		
40 MHz	9.9	-16.2
50 MHz	6.1	-20.1
80 MHz	2.8	-24.4
100 MHz	2.5	-24.1
200 MHz	4.4	-22.6
300 MHz	5.3	-22.2
400 MHz	8.5	-17.9
500 MHz	10.5	-16.6
600 MHz	9.6	-17.7
700 MHz	10.9	-16.6
800 MHz	14.5	-13.6
900 MHz	17.2	-10.9
1000 MHz	19.9	-7.7



SAS-220/CR ON VEHICLE

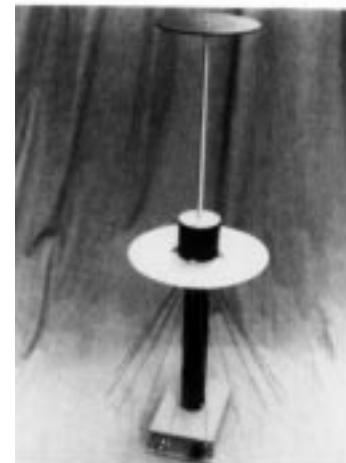
SAS-220/A

**TYPICAL E-FIELD ANTENNA FACTOR (AFE) AND
SENSITIVITY (MINIMUM DETECTABLE E-FIELD, MDF)
REFERENCED TO 1 KHZ**

FREQUENCY	AFE (dB M ⁻¹)	MDF (dB μV/M)
20 MHz	17.6	-4.6
40 MHz	11.6	-9.8
80 MHz	4.9	-16.3
100 MHz	2.6	-19.7
300 MHz	2.3	-19.0
400 MHz	4.3	-16.9
500 MHz	6.7	-15.0
600 MHz	10.5	-12.4
800 MHz	10.5	-12.1
1000 MHz	15.2	-11.3
2000 MHz	28.3	-7.4

TYPICAL E-FIELD ANTENNA FACTOR

	SAS-2/S	SAS-2/SE
FREQUENCY	AFE (dB M ⁻¹)	AFE (dB M ⁻¹)
100 Hz	47.2	46.2
1 kHz	12.1	15.0
10 kHz	9.9	7.7
100 kHz	4.4	4.2
1 MHz	4.1	3.0
30 MHz	4.5	7.3
100 MHz	6.0	6.7
300 MHz	5.5	5.5
1000 MHz	14.8	19.4
2000 MHz		30.5



SAS-2