

### SD-T Series

The RFS Model SD230T antenna is a transportable, broadband, lightweight, traveling wave antenna for short to medium range ionospheric communications.

For detailed model specifications and ordering information please contact RFS.

- Designed specifically for use by the defense forces or emergency services, this antenna can be erected within 20 minutes on an existing mast.
- Supplied in a canvas carry bag, the SD230T antenna comes complete with wire elements, balun transformer, terminations, halyard and pulley assembly, stub mast and counterpoise earth system. Normally a user supplied item, the main mast is available as an option if required. A counterpoise earth system is provided for use when the antenna is erected over soil with poor conductivity or over concrete.
- To aid in the rapid deployment of the SD230T antenna, the wire elements are made of a plastic coated, highly flexible copper braid reinforced with synthetic fibers. These wire elements are wound on formers for ease of storage. The balun transformer and terminations are sealed to prevent the ingress of moisture and to reduce the possibility of damage to these components during normal usage.



SD230T

#### ELECTRICAL SPECIFICATIONS

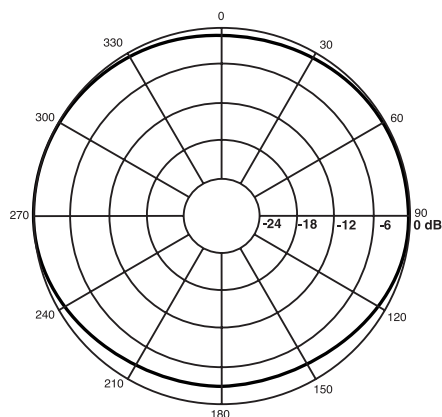
Model Number	SD230T.xxx
Frequency Range, MHz	2 - 30
Power Rating, kW	0.2 Average, 0.6 PEP, 1 Average, 3 PEP
Impedance, ohms	50 unbalanced
Azimuth Radiation Pattern	Non-directional
VSWR	<2.0:1 for 3 to 20MHz, <2.5:1 for 2 to 30MHz
Input Connector	N type socket

#### MECHANICAL SPECIFICATIONS

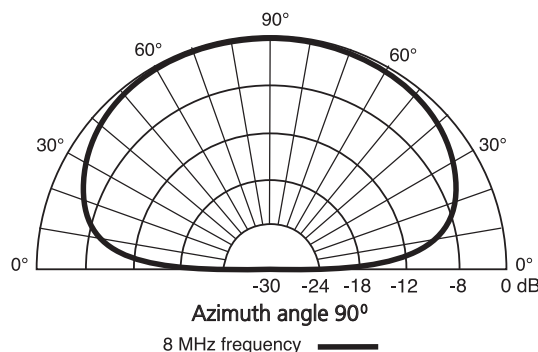
Mast/Antenna Height, m (ft)	12 (39.4) +/- 1.5 (4.9)
Ground Dimensions, m (ft)	22.5 (73.8) x 2 (6.6) Note#1

Note 1

Listed ground area excludes mast guys and counterpoise.



Azimuth Radiation Pattern

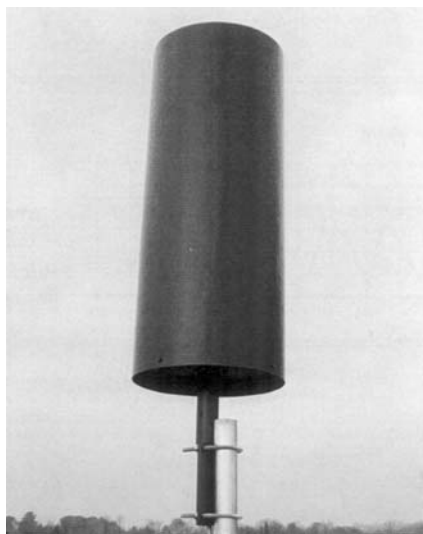


Elevation Radiation Pattern

## DTLB Series

The DTLB115 is a crossband antenna covering the VHF and UHF aeroband from 115 to 500MHz. This antenna is used extensively for ground-to-air communications from control towers or shelters as well as for counter-measures operations.

- The DTLB115 antenna is made of aluminum alloy (AG3) and protected with a polyester radome, providing excellent protection against the hardest conditions: rain, icing, sand storms, marine corrosion and industrial pollution.
- The coaxial output is made on a cable which exits from the lower mounting tube: Length - 1.00m, Connector - N socket



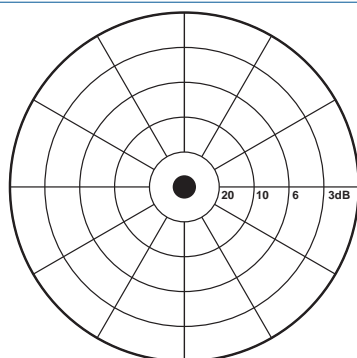
DTLB115 Antenna

### ELECTRICAL SPECIFICATIONS

Model Number	DTLB115
Frequency Range, MHz	115 - 500
Power Rating, kW	0.4 cw
Impedance, ohms	50
Polarization	Vertical
Isotropic Gain, dBi	2.5
VSWR	<2:1
Half Power Beamwidth E-Plane, degrees	90
Half Power Beamwidth H-Plane, degrees	Omnidirectional
Input Connector	N type socket
Coaxial Tail Length, cm (in)	100 (39-1/4) length of RG213U

### MECHANICAL SPECIFICATIONS

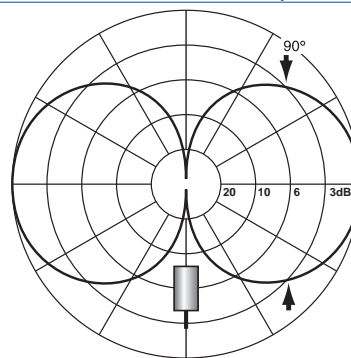
Operating Temperature Range, °C (°F)	-30 to +70 (-22 to 158)
Weight, kg (lb)	11.5 (25.3)
Dimensions (Height/Length), cm (in)	135 (53-1/8)
Radome Height, cm (in)	95 (37-3/8)
Radome Diameter, cm (in)	36 (14-11/64)
Mounting (Standard), mm (in)	Fastening by 2 rings for mast 60 - 95 (2-3/8 - 3-3/4)
Effective Area Front (full antenna), sq m (sq ft)	0.4 (4.30)
Wind Rating (no ice), km/h (mph)	220 (137)
Wind Rating (2cm Ice), km/h (mph)	140 (87)
Material	Aluminum alloy
Material - Radome	Polyester
Color	Army green (IR NATO 24X5); White; Grey



Horizontal pattern  
(H plane)

140MHz Frequency

Azimuth Radiation Pattern



Vertical pattern  
(E plane)

140MHz Frequency

Elevation Radiation Pattern

### LLB20T Series

The LLB 20T is a 1kW Transmit and wideband receive antenna.

Characteristics of this rugged tactical antenna are:

- Time required to assemble is less than 15min
- Folding girder/beam
- Folding elements fitted with bayonet connections
- No specific tools required for assembly
- All components are self contained - cannot be misplaced
- Packed into a small transit case
- Highly resistant TAN X - 24X5 IR coating
- Can be fitted on various telescopic masts and mounted either in horizontal or vertical polarization - 2 or 3m of insulated mast is required for correct operation in vertical polarization
- Outstanding radio-electrical performances.



LLB20T antenna

#### ELECTRICAL SPECIFICATIONS

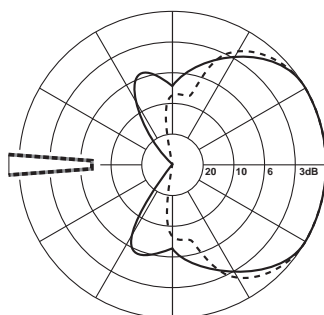
Model Number	LLB20T
Frequency Range, MHz	20 - 500
Power Rating, kW	1 cw
Impedance, ohms	50
Polarization	Horizontal; Vertical
Isotropic Gain, dBi	7
VSWR	<2.5:1
Half Power Beamwidth E-Plane, degrees	70
Half Power Beamwidth H-Plane, degrees	130
Input Connector	HN type
Front to Back Ratio, dB	15 typical

#### MECHANICAL SPECIFICATIONS

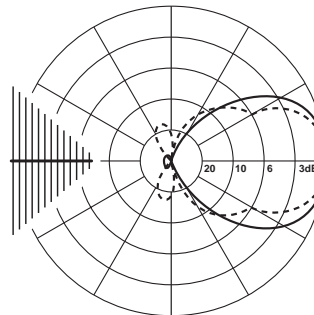
Weight, kg (lb)	45 (99)
Dimensions (Height/Length), cm (in)	460 (181-7/64)
Dimensions (Width), cm (in)	820 (322-53/64)
Effective Area Front (full antenna), sq m (sq ft)	0.8 (8.61)
Wind Rating (no ice), km/h (mph)	130 (81)
Wind Rating (1cm Ice), km/h (mph)	100 (62)
Material	Aluminum alloy
Coating	TAN X
Color	Army green (IR NATO 24X5)
Packed Weight, Kg (lb)	55 (121)
Packed Dimensions, cm (in)	260 x 45 x 45 (102-23/64 x 17-23/32 x 17-23/32)

Note 1 This antenna can be used in receive mode but with reduced performances between 20 and 30 MHz

Options Insulating mast Ø118mm, Protective cover for insulating mast, Protective antenna cover, Antenna color, Down coaxial cable, Telescopic mast



Vertical polarization  
(H plane)  
80MHz Frequency ———  
450MHz Frequency - - - - -



Horizontal polarization  
(E plane)  
80MHz Frequency ———  
450MHz Frequency - - - - -

LLB20T Elevation Radiation Pattern

LLB20T Azimuth Radiation Pattern

### LLB22TR Series

The LLB 22TR is a 1kW transmit and very wideband receive antenna.

Characteristics of this rugged tactical antenna are:

- Time required to assemble is less than 15min
- Folding girder/beam
- Folding elements fitted with bayonet connections
- No specific tools required for assembly
- All components are self contained – cannot be misplaced
- Packed into a small transit case
- Highly resistant TAN X – 24X5 IR coating
- Can be fitted on various telescopic masts and mounted either in horizontal or vertical polarization – 2 or 3m of insulated mast is required for correct operation in vertical polarization
- Outstanding radio-electrical performances.



LLB22TR antenna

#### ELECTRICAL SPECIFICATIONS

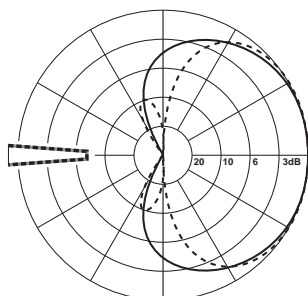
Model Number	LLB22TR
Frequency Range, MHz	30 - 1350 Note#1
Power Rating, kW	1 cw
Impedance, ohms	50
Polarization	Horizontal; Vertical
Isotropic Gain, dBi	7
VSWR	<3:1
Half Power Beamwidth E-Plane, degrees	40 to 70 depending on frequency
Half Power Beamwidth H-Plane, degrees	100 to 130 depending on frequency
Input Connector	HN type
Front to Back Ratio, dB	7 to 15 from 30 to 100MHz, >15 above 100 MHz

#### MECHANICAL SPECIFICATIONS

Weight, kg (lb)	30 (66)
Dimensions (Height/Length), cm (in)	302 (118-29/32)
Dimensions (Width), cm (in)	590 (232-9/32)
Effective Area Front (full antenna), sq m (sq ft)	0.7 (7.53)
Wind Rating (no ice), km/h (mph)	120 (75)
Wind Rating (1cm Ice), km/h (mph)	90 (56)
Material	Aluminum alloy
Coating	TAN X
Color	Army green (IR NATO 24X5)
Packed Weight, Kg (lb)	39 (85.8)
Packed Dimensions, cm (in)	165 x 45 x 43 (65 x 17-23/32 x 17)
Assembly Time, minutes	5 for 2 people

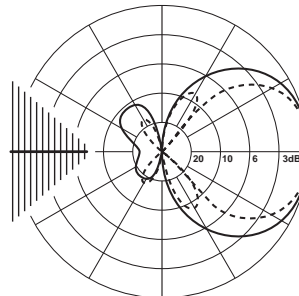
Note 1 This antenna can be used in receive mode but a reduction of some performances within 20 and 30 MHz

Options Insulating mast Ø118mm, Protective cover for insulating mast, Protective antenna cover, Antenna color, Down coaxial cable, Telescopic mast



Vertical polarization  
(H plane)  
40MHz Frequency ———  
500MHz Frequency - - - - -

LLB22TR Elevation Radiation Pattern



Horizontal polarization  
(E plane)  
40MHz Frequency ———  
500MHz Frequency - - - - -

LLB22TR Azimuth Radiation Pattern

### APL-3T Series

The tactical microwave antenna APL-3T operates in the 1350-1850MHz frequency band and can be installed at the top of a vertically erected mast.

In addition to its radio-electrical performances, its main features are:

- Light weight and rugged design
- Ease of deployment and reduced drag
- Installation is quick and requires one operator only
- The aerial covers the full Band III, and operates in linear polarization. The choice between horizontal and vertical polarization is achieved by the proper choice of orthogonal fittings at the rear of the antenna.
- The parabolic reflector is illuminated by a primary feed which is fitted to the center of the assembly with a quick fastener system.
- The antenna assembly is protected by an extremely resistant coating of TAN X army green IR NATO 24X5.



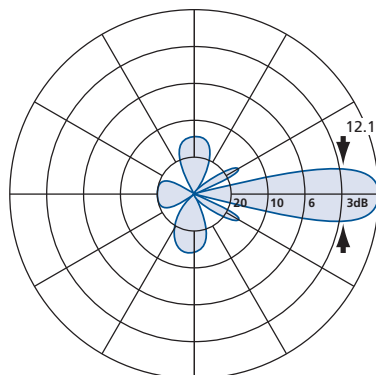
APL-3TB-III antenna

#### ELECTRICAL SPECIFICATIONS

Model Number	APL-3T
Frequency Range, MHz	1350 - 1850
Power Rating, kW	0.15
Impedance, ohms	50
Polarization	Horizontal; Vertical
Isotropic Gain, dBi	22
VSWR	<1.8:1
Half Power Beamwidth E-Plane, degrees	10.5
Half Power Beamwidth H-Plane, degrees	10.5
Input Connector	4/11 socket, N type socket
Front to Back Ratio, dB	>20
Side Lobe (max), dB	>12 for 0 to 90 degrees, >30 for 90 to 180 degrees
Cross Polarization, dB	>30

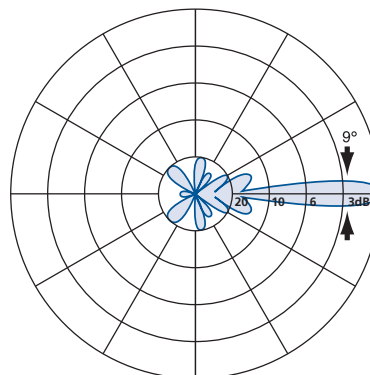
#### MECHANICAL SPECIFICATIONS

Weight, kg (lb)	8.1 (17.8)
Mounting (Standard), mm (in)	on 40mm spigot (H or V)
Effective Area Front (full antenna), sq m (sq ft)	0.39 (4.20)
Material	Aluminum alloy
Coating	TAN X
Color	Army green (IR NATO 24X5)



Vertical or Horizontal polarization  
(H or E plane)  
1350MHz Frequency

Azimuth Radiation Pattern



Vertical or Horizontal polarization  
(H or E plane)  
1850MHz Frequency

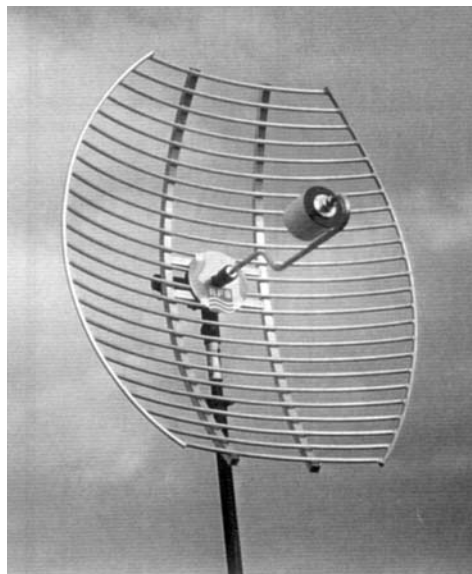
Azimuth Radiation Pattern

## APL-4T Series

The tactical microwave antenna APL-4T operates in the 1350-2700MHz frequency band and can be installed at the top of a vertically erected mast.

In addition to its radio-electrical performances, its main features are:

- Light weight and rugged design
- Ease of deployment and reduced drag
- Installation is quick and requires one operator only
- The aerial covers the full frequency range 1350-2700MHz and operates in linear polarization. The choice between horizontal and vertical polarization is achieved by the choice of orthogonal fittings at the rear of the antenna.
- The parabolic reflector is illuminated by a primary feed which is fitted to the center of the assembly with a quick fastener system.
- The antenna assembly is protected by an extremely resistant coating of TAN X army green IR NATO 24X5



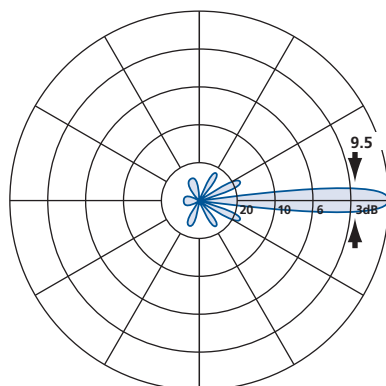
APL-4T antenna

### ELECTRICAL SPECIFICATIONS

Model Number	APL-4T
Frequency Range, MHz	1350 - 2700
Power Rating, kW	0.15
Impedance, ohms	50
Polarization	Horizontal; Vertical
Isotropic Gain, dBi	28
VSWR	<2:1
Half Power Beamwidth E-Plane, degrees	7
Half Power Beamwidth H-Plane, degrees	7
Input Connector	N type socket
Front to Back Ratio, dB	>30
Side Lobe (max), dB	>15 for 0 to 20 degrees, >25 for 20 to 115 degrees, >30 for 115 to 180 degrees
Cross Polarization, dB	>30

### MECHANICAL SPECIFICATIONS

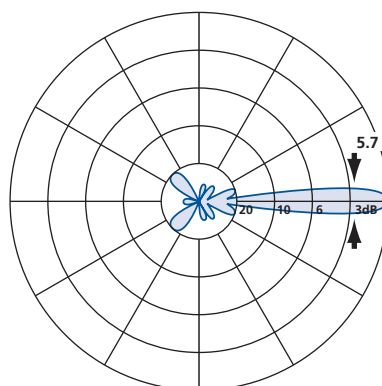
Weight, kg (lb)	14 (30.8)
Mounting (Standard), mm (in)	on 40mm spigot (H or V)
Effective Area Front (full antenna), sq m (sq ft)	1.04 (11.20)
Material	Duralinox
Coating	TAN X
Color	Army green (IR NATO 24X5)



Vertical or Horizontal polarization  
(H or E plane)

1350MHz Frequency

Azimuth Radiation Pattern



Vertical or Horizontal polarization  
(H or E plane)

2600MHz Frequency

Azimuth Radiation Pattern