

## Laird Technologies' Base Station Antennas

Laird Technologies offers an extensive array of base station and in-building wireless antennas. Responding to the ever-increasing variety of frequencies and applications, Laird Technologies offers VHF, UHF, 700 MHz, Cell/PCS dual-band and GSM/UMTS tri-band variations. Leading the industry with the internally matched, fully welded, gold anodized Yagi, all Laird Technologies base station antennas represent high performance and long-lasting value. For example, Laird Technologies omni-directional models are the antennas of choice for research bases in Antarctica.



Model	Frequency Range	Tuned Frequency	Gain	Length	Maximum Power
<b>VHF Models</b>					
FG1400	140-144 MHz	142 MHz	Unity	92"	150 watts
FG1403	140-144 MHz	142 MHz	3 dBd	107"	150 watts
FG1440	144-148 MHz	146 MHz	Unity	92"	150 watts
FG1443	144-148 MHz	146 MHz	3 dBd	107"	150 watts
FG1480	148-152 MHz	150 MHz	Unity	68"	200 watts
FG1483	148-152 MHz	150 MHz	3 dBd	107"	200 watts
FG1520	152-156 MHz	154 MHz	Unity	68"	200 watts
FG1523	152-156 MHz	154 MHz	3 dBd	107"	200 watts
FG1560	156-162 MHz	159 MHz	Unity	68"	200 watts
FG1563	156-162 MHz	159 MHz	3 dBd	107"	200 watts
FG1620	162-168 MHz	165 MHz	Unity	68"	200 watts
FG1623	162-168 MHz	165 MHz	3 dBd	107"	200 watts
FG1683	168-174 MHz	171 MHz	3 dBd	107"	200 watts
FG2200	220-225 MHz	222.5 MHz	Unity	68"	200 watts
FG2203	220-225 MHz	222.5 MHz	3 dBd	107"	200 watts

<b>UHF Models</b>					
FG3603	360-380 MHz	370 MHz	3 dBd	44"	200 Watts
FG3803	380-406 MHz	385 MHz	3 dBd	44"	200 Watts
FG4060	406-416 MHz	411 MHz	Unity	26"	200 Watts
FG4063	406-416 MHz	411 MHz	3 dBd	44"	200 Watts
FG4065	406-416 MHz	411 MHz	5 dBd	76"	200 Watts
FG4100	410-430 MHz	420 MHz	Unity	26"	200 Watts
FG4103	410-420 MHz	415 MHz	3 dBd	44"	200 Watts
FG4203	420-430 MHz	425 MHz	3 dBd	44"	200 Watts
FG4205	420-430 MHz	425 MHz	5 dBd	76"	200 Watts
FG4300	430-450 MHz	440 MHz	3 dBd	26"	200 Watts
FG4303	430-440 MHz	435 MHz	3 dBd	44"	200 Watts
FG4305	430-440 MHz	435 MHz	5 dBd	76"	200 Watts
FG4403	440-450 MHz	445 MHz	3 dBd	44"	200 Watts
FG4405	440-450 MHz	445 MHz	5 dBd	76"	200 Watts
FG4500	450-470 MHz	460 MHz	Unity	26"	200 Watts
FG4503	450-460 MHz	455 MHz	3 dBd	44"	200 Watts
FG4505	450-460 MHz	455 MHz	5 dBd	76"	200 Watts
FG4505W	450-470 MHz	460 MHz	5 dBd	76"	200 Watts

### Fiberglass Omnidirectional

- Includes VHF through 2.4 GHz models
- High performance and reliable collinear J-pole design surrounded by durable high density fiberglass
- Durable gold anodized sleeve and cap will not oxidize
- Custom tuning available
- FedEx/UPS shippable on most models



## Technical Data - Product Features & Information

- **VSWR:**  
<2:1 at resonance
- **Maximum Power:**  
200 watts - Most VHF and UHF and above models.
- **Impedance:**  
50 ohms, Models with DC continuity.
- **Mounting Sleeve:**  
Heavy wall, gold anodized 1 1/4" aluminum.
- **Radiator:**  
Precision copper clad elements sealed in white ultraviolet-inhibiting fiberglass radome.
- **Mounts to:**  
See optional mounting kits listed.
- **DC Grounded:**  
All models excluding FG24005, FG24008, and FG8063WPTNF.
- **Vertical Beam Width:**  

Unity	3 dBd	5 dBd	6 dBd	7 dBd
75	33	20	17	14
- **Antenna Weight:**  
VHF 3 dBd & UHF 7 dBd = 8 lbs.  
All others = 6 lbs. (or less)
- **Termination:**  
Recessed type "N" female connector.
- **Wind Survival:**  
125 M.P.H.
- **Polarization:**  
Vertical Polarization.



FM1



FM2



FM3



FM3W



FMW4

Model	Frequency Range	Tuned Frequency	Gain	Length	Maximum Power
-------	-----------------	-----------------	------	--------	---------------

### UHF Models

FG4507	450-460 MHz	455 MHz	7 dBd	107"	200 Watts
FG4603	460-470 MHz	465 MHz	3 dBd	44"	200 Watts
FG4605	460-470 MHz	465 MHz	5 dBd	76"	200 Watts
FG4607	460-470 MHz	465 MHz	7 dBd	107"	200 Watts
FG4705	470-480 MHz	475 MHz	5 dBd	76"	200 Watts
FG4900	490-512 MHz	501 MHz	Unity	26"	200 Watts
FG4907	490-500 MHz	495 MHz	7 dBd	107"	200 Watts
FG5003	500-512 MHz	506 MHz	3 dBd	44"	200 Watts
FG5007	500-512 MHz	506 MHz	7 dBd	107"	200 Watts

### 700 - 900 MHz Models

FG7463	746-796 MHz	771 MHz	3 dBd	23 1/2"	200 Watts
FG7466	746-796 MHz	771 MHz	6 dBd	61"	200 Watts
FG8060	806-866 MHz	813.5 MHz	Unity	15"	200 Watts
FG8063	806-866 MHz	813.5 MHz	3 dBd	25"	200 Watts
FG8063WPTNF	806-896 MHz	851 MHz	3 dBd	29"	200 Watts
FG8066	806-866 MHz	813.5 MHz	6 dBd	65"	200 Watts
FG8240	824-896 MHz	835 MHz	Unity	15"	200 Watts
FG8243	824-896 MHz	835 MHz	3 dBd	25"	200 Watts
FG8246	824-896 MHz	835 MHz	6 dBd	65"	200 Watts
FG8693	869-902 MHz	882 MHz	3 dBd	25"	200 Watts
FG8960	896-940 MHz	898 MHz	Unity	15"	200 Watts
FG8963	896-940 MHz	898 MHz	3 dBd	25"	200 Watts
FG8966	896-940 MHz	898 MHz	6 dBd	65"	200 Watts
FG9023	902-928 MHz	915 MHz	3 dBd	25"	200 Watts
FG9026	902-928 MHz	915 MHz	6 dBd	65"	200 Watts
FG9283	928-970 MHz	930 MHz	3 dBd	25"	200 Watts
FG9360	936-970 MHz	953 MHz	Unity	15"	200 Watts
FG9286	928-970 MHz	930 MHz	6 dBd	65"	200 Watts
FG9366	936-970 MHz	953 MHz	6 dBd	65"	200 Watts

### 2.4 GHz Models

FG24005	2400-2500 MHz	2450 MHz	5 dBi	14"	100 Watts
FG24008	2400-2500 MHz	2450 MHz	8 dBi	24"	100 Watts

### Dual Band Model

FG821/18503	821-896 MHz	858.5 MHz	Unity	14"	100 watts
	1850-1990 MHz	1920 MHz	3 dBd		

### Fiberglass Base Antennas Mounting Options

FM1	Stainless Steel U-Bolt Mount (2)
FM2	Fiberglass Mounting Bracket (2)
FM3	Heavy Duty Large Mount (2)
FM3W	Heavy Duty Large Mount w/weld (2)
FMS9	9 Inch Standoff (2)
FMW4	4 Inch Wall Mount (2)

### Fiberglass Base Antenna Accessories

SP3-90-6-BFF	Bulkhead Surge Protector, Bulkhead N Fem to N Fem, 6KA Discharge, .4dB IL, 3 GHz
SP3-90-6-BFM	Bulkhead Surge Protector, Bulkhead N Fem to N Male, 6KA Discharge, .4dB IL, 3 GHz
SP6-230-BFF	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Fem
SP6-230-BFM	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Male
CCT213	Heavy Duty Crimp Tool
CN400	Type N Male
R400100	100' Spool High Performance ATX400
R400500	500' Spool High Performance ATX400
PT40025NN	Pigtail 25 ft. ATX400 N to N
PT40050NN	Pigtail 50 ft. ATX400 N to N
PT40075NN	Pigtail 75 ft. ATX400 N to N
PT400100NN	Pigtail 100 ft. ATX400 N to N
IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

Model	Frequency Range	Gain	Length	Extended Length
<b>VHF Models</b>				
VG1502	150-174 MHz	2 dBi	55"	102"
VG1325	132-150 MHz	5 dBi	55"	102"
VG1505	150-174 MHz	5 dBi	55"	102"
VG1326	132-150 MHz	6 dBi	55"	102"
VG1506	150-174 MHz	6 dBi	55"	102"
VG2002	200-225 MHz	2 dBi	55"	102"

<b>UHF Models</b>				
VG4065	406-450 MHz	5 dBi	25"	35"
VG4505	450-512 MHz	5 dBi	25"	35"
VG4506	450-512 MHz	6 dBi	25"	35"

Model	Description	Mast
-------	-------------	------

<b>Mounting Options</b>		
FM1	Stainless Steel U Bolt Mount (2)	1 7/8"
FM2	Heavy Duty Base Mounting Bracket (2)	2 1/2"

Model	Frequency	Elements	Gain	Front-Back Ratio	Boom Length	Boom Diameter
<b>Gold Anodized Non Welded VHF Models</b>						
Y1363	136-150 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
Y1365	136-150 MHz	5	9.2 dBd	20 dB	72"	1-1/4"
Y1503	150-174 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
Y1505	150-174 MHz	5	9.2 dBd	20 dB	72"	1-1/4"
Y2203	220-250 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
Y2205	220-250 MHz	5	9.2 dBd	20 dB	72"	1-1/4"

<b>Gold Anodized Fully Welded VHF Models*</b>						
YXXX3W	User Defined	3	7.1 dBd	17 dB	41-1/2"	7/8"
YXXX5W	User Defined	5	9.2 dBd	20 dB	72"	1-1/4"

\*may require truck freight

<b>Gold Anodized Fully Welded UHF Models</b>						
Y4065	406-430 MHz	5	9.2 dBd	20 dB	37"	7/8"
Y4066	406-430 MHz	6	10.2 dBd	20 dB	44"	7/8"
Y4303	430-450 MHz	3	7.1 dBd	17 dB	20-3/16"	7/8"
Y4305	430-450 MHz	5	9.2 dBd	20 dB	37"	7/8"
Y4306	430-450 MHz	6	10.2 dBd	20 dB	44"	7/8"
Y43012	430-450 MHz	12	11 dBd	20 dB	68 -1/16"	1-1/4"
Y4503	450-470 MHz	3	7.1 dBd	17 dB	20-3/16"	7/8"
Y4505	450-470 MHz	5	9.2 dBd	20 dB	37"	7/8"
Y4506	450-470 MHz	6	10.2 dBd	20 dB	44"	7/8"
Y45012	450-470 MHz	12	11 dBd	20 dB	68 -1/16"	1-1/4"
Y4705	470-490 MHz	5	9.2 dBd	20 dB	37"	7/8"
Y4706	470-490 MHz	6	10.2 dBd	20 dB	44"	7/8"

<b>Gold Anodized Fully Welded 800/900 MHz Models</b>						
Y8063	806-896 MHz	3	6 dBd	15 dB	16-3/4"	7/8"
Y8066	806-896 MHz	6	9 dBd	16 dB	27-11/16"	7/8"
Y80612	806-896 MHz	12	11 dBd	20 dB	48-7/8"	7/8"
Y8963	896-970 MHz	3	6 dBd	15 dB	16 3/4"	7/8"
Y8966	896-970 MHz	6	9 dBd	16 dB	27 11/16"	7/8"
Y89612	896-970 MHz	12	11 dBd	20 dB	48-7/8"	7/8"
Y80618	806-896 MHz	18	14 dBd	25 dB	69 7/8"	1"
Y89618	896-870 MHz	18	14 dBd	25 dB	69 7/8"	1"

## Voyager®

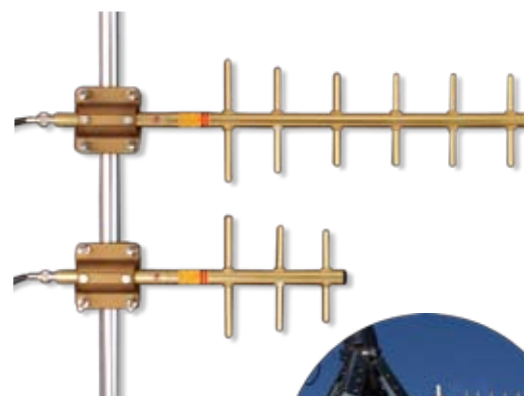
- Field tunable for quick field deployment
- Rugged design performs in harsh environments
- UV inhibiting insulators will not crack, decay, or disassemble with UV exposure



VG1505 and VG4505 shown with optional FM2 Mounting Kit

## Directional Yagis

- 360 Fully Welded Gold Anodized models or value leader Silver Series available
- Line up includes 3 element/7.1 dBd gain to 18 element/14 dBd gain variations
- Internal matching design will not ice up, detune, or corrode
- VHF Custom tuning available



Y8066 and Y8063 shown with YM78HD Heavy Duty Mounting Kit





YS4503

## Silver Series Yagis

- Broad bandwidth allows gain performance to be more consistent through the frequency range

### Technical Data - Product Features & Information

- **VSWR:** <1.5:1
- **Maximum Power:** VHF - 500 watts  
UHF & 800/900 MHz - 300 watts
- **Impedance:** 50 ohm
- **Mounting:** Gold Welded VHF, UHF and 800/900 MHz up to 2 - 7/16" mast. HD Mounting Kit included.  
Silver Series VHF up to 2" mast.  
UHF and 800/900 MHz up to 1 - 5/8" mast.  
Stainless steel brackets included.
- **Tuning:** VHF Yagi's are pre-tuned on a network analyzer to the lowest frequency for that model. Others are center tuned.
- **Elements material:**  
3/8" diameter solid 6061-T6 aluminum.
- **Boom Material:**  
Heat treated 6061-T6 aluminum tube.
- **Boom Diameter:** UHF, 800/900 MHz - 7/8"  
VHF - 3 dB 7/8", 5 dB 1/4"
- **Termination Type:** N Female.



YE240015  
Enclosed Yagi

## Enclosed Yagi

- 2.4 GHz is completely sealed and is strong enough for outdoor use
- 15 dBi high gain moves your lower power ISM or WLAN signal from point to point with minimal signal loss

Model	Frequency	Elements	Gain	Front-Back Ratio	Boom Length	Boom Diameter
-------	-----------	----------	------	------------------	-------------	---------------

### Black Anodized Fully Welded UHF Models

YB4505	450-470 MHz	5	9.2 dBd	20 dB	37"	7/8"
--------	-------------	---	---------	-------	-----	------

### Black Anodized Fully Welded 800/900 MHz Models

YB8066	806-896 MHz	6	9 dBd	16 dB	27-11/16"	7/8"
YB8966	896-970 MHz	6	9 dBd	16 dB	27-11/16"	7/8"
YB80618	806-896 MHz	18	14 dBd	25 dB	70"	1"
YB89618	896-970 MHz	18	14 dBd	25 dB	70"	1"

### Replacement Mounting Kits All accommodate up to 2-13/32" diameter mast

YM78	Stainless Steel Mounting Bracket for YS series Yagis with 7/8" boom
YM78HD	HD Yagi Mounting Kit for Yagis with 7/8" boom
YM100HD	HD Yagi Mounting Kit for Yagis with 1" boom
YM125HD	HD Mount Bracket for Yagis with 1-1/4" boom

### Silver Series VHF Models

YS1363	136-150 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
YS1503	150-174 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
YS1505	150-174 MHz	5	9.2 dBd	20 dB	72"	1-1/4"
YS2165	216-225 MHz	5	9.2 dBd	20 dB	72"	1-1/4"
YS2203	220-250 MHz	3	7.1 dBd	17 dB	41-1/2"	7/8"
YS2205	220-250 MHz	5	9.2 dBd	20 dB	72"	1-1/4"

### Silver Series UHF Models

YS4063	406-430 MHz	3	7.1 dBd	17 dB	20 3/16"	7/8"
YS4065	406-430 MHz	5	9.2 dBd	20 dB	37"	7/8"
YS4303	430-450 MHz	3	7.1 dBd	17 dB	20 3/16"	7/8"
YS4305	430-450 MHz	5	9.2 dBd	20 dB	37"	7/8"
YS4306	430-450 MHz	6	10.2 dBd	20 dB	44"	7/8"
YS43012	430-450 MHz	12	11 dBd	20 dB	68-11/16"	1-1/4"
YS4503	450-470 MHz	3	7.1 dBd	17 dB	20 3/16"	7/8"
YS4505	450-470 MHz	5	9.2 dBd	20 dB	37"	7/8"
YS4506	450-470 MHz	6	10.2 dBd	20 dB	44"	7/8"
YS45012	450-470 MHz	12	11 dBd	20 dB	72"	1-1/4"
YS47012	470-490 MHz	12	11 dBd	20 dB	68-11/16"	1-1/4"
YS4906	490-512 MHz	6	10.2 dBd	20 dB	44"	7/8"

### Silver Series 800/900 MHz Models

YS8063	806-896 MHz	3	6 dBd	15 dB	16 3/4"	7/8"
YS8066	806-896 MHz	6	9 dBd	16 dB	27 3/4"	7/8"
YS80612	806-896 MHz	12	11 dBd	20 dB	49"	7/8"
YS8963	896-970 MHz	3	6 dBd	15 dB	16 3/4"	7/8"
YS8966	896-970 MHz	6	9 dBd	16 dB	27 3/4"	7/8"
YS89612	896-970 MHz	12	11 dBd	20 dB	49"	7/8"

Model	Description	Gain	Front-Back Ratio	Length
-------	-------------	------	------------------	--------

### Enclosed 2.4 -4.9 GHz Models

YE24006	2.4-2.5 GHz	11.2 dBi	20 dB	8"
YE24007	2.4-2.5 GHz	12.7 dBi	20 dB	8"
YE240015	2.4-2.5 GHz	15 dBi	20 dB	16"
YE490012	4.9-5.8 GHz	14.5 dBi	20 dB	7 3/4"
YE525012	5.25-5.35 GHz	14.5 dBi	20 dB	7 3/4"

### Antenna Masts

YMST4	4"x1-1/4" OD x .065" wall alum. mast
YMST8	8"x1-1/4" OD x .065" wall alum. mast
YMST18	18"x1-1/4" OD x .065" wall alum. mast (2p)

Model Description

### Yagi Accessories

SP3-90-6-BFF	Bulkhead Surge Protector, Bulkhead N Fem to N Fem, 6KA Discharge, .4dB IL, 3 GHz
SP3-90-6-BFM	Bulkhead Surge Protector, Bulkhead N Fem to N Male, 6KA Discharge, .4dB IL, 3 GHz
SP6-230-BFF	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Fem
SP6-230-BFM	DC-6GHz Bulkhead Surge Protector, Bulkhead N Fem to N Male
CCT213	Crimp Tool For ATX400
CN400	N Connector For ATX400
R400100	100 ft. Roll of ATX400
R400500	500 ft. Roll of ATX400
IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

Model	Frequency Range	Omni Gain	Offset Gain	Dipole Bays
-------	-----------------	-----------	-------------	-------------

### Dipole Arrays 2 Bays

YDA1502	150-174	3 dBd	6 dBd	2
YDA4502	450-470	3 dBd	6 dBd	2

### Single Or Replacement Dipoles

YDA***1	Specify Freq.	Unity	N/A
---------	---------------	-------	-----

### Dipole Arrays 4 Bays

YDA1364	136-150	6 dBd	9 dBd	4
YDA1504	150-174	6 dBd	9 dBd	4
YDA4504	450-470	6 dBd	9 dBd	4
YDA4704	470-490	6 dBd	9 dBd	4
YDA4904	490-512	6 dBd	9 dBd	4

Model Description

### Antenna Masts

YMST4	4"x1-1/4" OD x .065" wall alum. mast
YMST8	8"x1-1/4" OD x .065" wall alum. mast
YMST18	18"x1-1/4" OD x .065" wall alum. mast (2 pieces)

### Replacement Power Dividers / Stacking Harnesses

YPD***2N	For 2 bay array or to stack 2 Yagis (N)
YPD***2P	For 2 bay array or to stack 2 Yagis (PL259)
YPD***4N	For 4 bay array (N)
YPD***4P	For 4 bay array (PL259)
YPD8**2N	For stacking 2 800 MHz Yagis (N)
YPD9**2N	For stacking 2 900 MHz Yagis (N)

### Dipole Array Accessories

IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

## Dipole Array

- Custom pattern performance at installation
- 360 degree welds around each element to boom joints on UHF models eliminates pattern degradation and maintains dimensional stability
- Nickel plated brass N female connector provide durability and performance



YDA4504

### Technical Data - Product Features & Information

- **VSWR:** <1.5:1
- **Max Power:** 300 watts
- **Impedance:** 50 ohms
- **Termination Type:** N Female and SO239 upon request.
- **Lightning Protection:** DC Ground
- **Vertical Beam at 1/2 Power:** Unity - 90 degrees  
3 dB - 39 degrees  
6 dB - 24 degrees  
9 dB - 15 degrees
- **Mast Size Needed:**  
VHF: 3 dB - 8 ft.  
6 dB - 18 ft.  
UHF: 3 dB - 4 ft.  
6 dB - 8 ft.
- **Element Material:** 3/8" diameter solid 6061-T6 aluminum rod.
- **Wind Survival:** 100 M.P.H.
- **Boom Material:** Heat treated 6061-T6 aluminum tube.
- **Hardware:** Stainless steel U-Bolt included.

Contact Laird Technologies for technical assistance, product applications, part number questions, warranty and service questions.

Contact any of the Laird Technologies distributors listed below to order antenna solutions.

#### NATIONAL

Tessco Technologies  
800-508-5444  
www.tessco.com

Talley Communications  
800-949-7079  
www.talleycom.com

Hutton Communications  
877-648-8866  
www.huttoncom.com

#### MIDWEST

Primus Electronics Corp.  
800-435-1636  
www.primuselectronics.com

Pulstar  
800-634-4246  
www.pulstar.net

Santa Fe Distributing Inc.  
800-255-6595  
www.s-f-d.com

#### SOUTHEAST

HYT America, Inc./Marketronics  
800-845-1230  
www.hytamerica.com

TEDI  
800-729-8334 www.rfdistributor.com

#### SOUTHWEST

Sparco Technologies  
800-890-1359  
www.sparcotech.com

#### CANADA

Omni Provincial Electronics  
877-291-9633  
www.omnipro.ca

#### OEM DISTRIBUTORS

Arcadian Sales  
888-925-5967  
www.arcadiansales.com

Stellar Satellite Communications  
Orbcomm network solutions  
703-433-6491  
www.stellar-sat.com