Mobile Low Profile Vertical

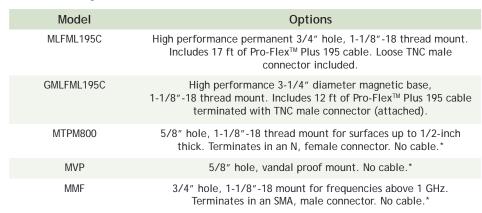
The MLPV antennas provide superior pattern coverage for mobile and fixed applications from 380 MHz to 5.8 GHz. Their design provides industry leading wideband performance and reliability, with minimum loss and no tuning required. Dual band versions (MLPVDB series) are also available. All models feature an attractive, compact housing environmentally tested for both indoor or outdoor applications.

Features

- · Attractive, low profile design for maximum overhead clearance
- Industry leading wideband performance provides outstanding coverage across multiple frequency bands with no tuning required
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Wideband, multi-band and no ground plane models available for maximum installation flexibility with a minimum number of installed antennas required
- NGP models provide 3 dBi gain performance without a ground plane
- Black over chrome base standard. Also available in white over chrome or black over black base

Mounting

The following mounts are recommended with all MLPV antennas [except (B) MLPV4900NGP]:



The following mounts are recommended for the (B)MLPV4900NGP antenna:

	are recommended for the (B)ME. Trycoller differmat
Model	Options
MTPMHF	High frequency 5/8" hole, 1-1/8"-18 thread mount for surfaces up to 1-inch thick. N female connector. No cable.*
MVPHF	High frequency 5/8" hole, 1-1/8"-18 thread. Vandal proof mount for surfaces 1/2 to 1-inch thick. M to N female connector. No cable.*
MHFML195C	High performance permanent 3/4" hole, 1-1/8"-18 thread mount. Includes 17 ft of Pro-Flex™ Plus 195 cable. TNC male connector included (loose).
GMHFML195C	High performance 3-1/4" diameter magnetic base, 1-1/8"-18 thread mount. Includes 12 ft of Pro-Flex™ Plus 195 cable terminated with TNC male connector (attached).





BMLPV2400NGP

MLPV800





WMLPVDB800/1900S

BMLPV800HD



Technical Data

Maximum Power: 150 watts (all models, except UHF) 100 watts (UHF models)
Polarization: Vertical
Nominal Impedance: 50 Ohm
VSWR: < 1.5:1 < 2.0:1 (dual-band and UHF models)
Color (add to prefix to indicate choice): Black over chrome (prefix not needed), black over black (B) or white over chrome (W)
Mount Method: Compatible with most 1-1/8" - 18 thread mounts, including 3/4" hole mounts

^{*}Order cable assembly separately.

Mobile Low Profile Vertical Antennas

Antenna Electrical Specifications

Model*	Frequency Range	Bandwidth	Gain***
MLPV380	380-410 MHz	30 MHz	Unity
MLPV406	406-440 MHz	34 MHz	Unity
MLPV430	430-480 MHz	50 MHz	Unity
MLPV450	450-512 MHz	62 MHz	Unity
MLPV700	740-870 MHz	130 MHz	3 dBi***
MLPV800	806-960 MHz	154 MHz	3 dBi***
BMLPV800HD	806-960 MHz	154 MHz	3 dBi***
MLPVDB800/1900	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi/4 dBi
BMLPVDB800/1900HD	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi/4 dBi
BMLPVDB800/1900SHD	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi/4 dBi
MLPVDB800/1900S	806-960 MHz and 1710-2500 MHz	154 MHz and 790 MHz	3 dBi/4 dBi
MLPVDB902/2400	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi/4 dBi
MLPVDB902/2400S	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi/4 dBi
MLPV1700	1700-2700 MHz	1000 MHz	4 dBi***
MLPV2400NGP**	2.4-2.5 GHz	100 MHz	3 dBi
MLPV4900	4.9-5.9 GHz	1000 MHz	4 dBi
MLPV4900NGP**	4.9-5.0 GHz	100 MHz	3 dBi

Mechanical Specifications

Model (all colors)*	Antenna Dimensions	Weight (Mass)
MLPV380	3.38" H x 1.5" OD	0.31 lbs (.14 kg)
MLPV406	3.38" H X 1.5" OD	0.31 lbs (.14 kg)
MLPV430	3.38" H X 1.5" OD	0.31 lbs (.14 kg)
MLPV450	3.38" H X 1.5" OD	0.31 lbs (.14 kg)
MLPV800 and MLPV700	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)
BMLPV800HD, BMLPV800/1900HD	2.4" H x 1.5" W x 1.7" D (at the base)	0.44 lbs (0.19 kg)
BMLPVDB800/1900SHD	1.79" H x 1.5" W x 1.7" D (at the base)	0.34 lbs (0.15 kg)
MLPVDB800/1900	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)
MLPVDB800/1900S	1.79" H x 1.5" OD	0.29 lbs (0.13 kg)
MLPVDB902/2400	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)
MLPVDB902/2400S	1.79" H x 1.5" OD	0.29 lbs (0.13 kg)
MLPV1700	1.79" H x 1.5" OD	0.34 lbs (0.15 kg)
MLPV2400NGP**	3.38" H x 1.5" OD	0.31 lbs (.14 kg)
MLPV4900**	1.79" H x 1.5" OD (at the base)	0.34 lbs (0.15 kg)
MLPV4900NGP	2.4" H X 1.5" OD	0.29 lbs (0.13 kg)

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 $^{^*}$ To order black over black version, add the prefix "B" to the part number. To order the white over chrome version, add the prefix "W" to the part number. Note: MLPV4900 is not available in white over chrome. ** Can be used with or without a ground plane. ***Measured on a 1 x 1 foot ground plane.

Elevated Feed Mobile Data Antennas

These elevated feed mobile antennas are designed for installations requiring elevation of the antenna over surrounding objects that could prevent true omnidirectional coverage. They are ideal for public safety vehicles with overhead light bars that often obstruct the RF signal. They are designed to operate both on and off a ground plane without degradation in VSWR performance.

Features

- Feed point is elevated above its mounting surface, easily clearing the overhead light bars in police and ambulance vehicles which often obstruct the RF signal.
- · Quiet, closed coil trilinear rod.
- Excellent VSWR performance on or off a ground plane.
- Rugged molded polymer elevated feed housing and stainless steel spring and rod, for maximum resistance to every day wear and tear. Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts.
- High frequency microwave mounts utilize Pro-Flex[™] Plus 195 low loss coaxial cable for optimal performance at microwave frequencies.
- 2.4 GHz model available with DC grounding option.

Mounting Options

Antenna Model	Recommended Mount Model(s)	Options
(B)MEFC24005	MLFML195C	Low frequency 3/4" hole permanent mount, 17 ft. Pro-Flex™ Plus 195, TNC male standard
(B)MEFC24005	GMLFML195C	Low frequency magnetic mount, 12 ft. Pro-Flex™ Plus 195, TNC male standard
(B)MEFC49005HF (B)MEFC58005HF	MHFML195C*	Permanent Mount, 17 ft. Pro-Flex™ Plus 195, TNC male loose
(B)MEFC49005HF (B)MEFC58005HF	GMHFML195C*	Magnetic Mount, 12 ft. Pro-Flex™ Plus 195, TNC male attached





BMEFC49005HF



Technical Data

Maximum Power: 50 watts (MEFC24005) 10 watts (MEFC49005HF & MEFC58005HF)
Polarization: Vertical
Nominal Impedance: 50 Ohm
VSWR: < 1.5:1
Radome Material: UV stable ABS
Radiator Material: .100" OD stainless steel; bright (MEFC) or black finish (BMEFC)
Mount Method: Compatible with most 1-1/8"-18 thread mounts. See recommended mount

For detailed specifications, visit http://antenna.pctel.com.

options for each model.*

^{*} Models (B)MEFC49005HF and (B)MEFC58005HF must be ordered with recommended mount(s) listed above. Consult factory for other connector options offered with these mounts.

Elevated Feed Point Antennas

Antenna Electrical Specifications

Model	Frequency Range	Gain (ground Plane)	Gain (no Ground Plane)	Horizontal Beamwidth @1/2 Power	Vertical Beamwidth @1/2 Power
(B)MEFC24005*	2.4-2.5 GHz	5 dBi	3.5 dBi	360°	45°
(B)MEFC49005HF	4.9-5.0 GHz	5.5 dBi	5.5 dBi	360°	18°
(B)MEFC58005HF	5.7-5.8 GHz	5.5 dBi	5.5 dBi	360°	18°

Mechanical Specifications

Model	Antenna Height	Weight (Mass)	Temperature Range	Wind Loading (Frontal) @ 125mph	Bending Moment @ 125 mph
(B)MEFC24005*	16" (40.6 cm)	0.5 lbs (0.227 kg)	-40°C to +70°C	3.1 lbf.	18.6 in-lb
(B)MEFC49005HF	12" (30.4 cm)	0.5 lbs (0.227 kg)	-40°C to +70°C	3.1 lbf.	18.6 in-lb
(B)MEFC58005HF	12" (30.4 cm)	0.5 lbs (0.227 kg)	-40°C to +70°C	3.1 lbf.	18.6 in-lb

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^{*}Prefix "B" indicates black.

No Ground Plane Elevated Feed Point Antennas

The elevated feed point antennas are designed for those applications that lack a ground plane. They are ideal for mirror or trunk lid mounting applications or for vehicles with non-metallic surfaces where no ground plane is available.

Features

- Elevated feed point eliminates vehicle "shadow" effect
- Does not require a ground plane; excellent for non-metallic vehicles
- · Stainless steel shock spring included on all models
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts
- Optional "push pin" mount contact interface on select models

Antenna Electrical Specifications

	Model	Frequency Range	Factory Tuned Frequency	Gain	Rod/Coil Type
	BMUF4085P	406-430 MHz	Field tunable within the specified frequency range	5 dB	Collinear/Closed
(1	B)MUF7603(P)	760-870 MHz	815 MHz	3 dB	Collinear/Closed
	(B)MUF8073	806-866 MHz	815 MHz	3 dB	Collinear/Closed
	(B)MUF8045	806-866 MHz	815 MHz	5 dB	Trilinear/Closed
	(B)MUF8043	825-896 MHz	835 MHz	3 dB	Collinear/Open
	(B)MUF8455	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
	(B)MUF9043	896-940 MHz	898 MHz	3 dB	Collinear/Open
	(B)MUF9115	896-940 MHz	898 MHz	5 dB	Trilinear/Closed

Mechanical Specifications

Model	Antenna Height at lowest frequency
BMUF4085P	Approximately 38"
(B)MUF7603(P)	Approximately 38"
(B)MUF8073	Approximately 23"
(B)MUF8045	Approximately 33"
(B)MUF8043	Approximately 23"
(B)MUF8455	Approximately 33"
(B)MUF9043	Approximately 22.5"
(B)MUF9115	Approximately 32"





Technical Data

Maximum Power: 125 watts (all models, except 4000 series) 200 watts (UHF series models)
Polarization: Vertical
Nominal Impedance: 50 ohms
VSWR at Resonance: < 1.5:1
Radiator Material: .100"062" diameter stainless steel; bright or black finish
Spring: Stainless steel; bright or black finish
Phasing Coil Housing: UHF models: Molded polymer jacket with bright or black chrome plated brass bushing
700, 800 & 900 MHz models: Molded polymer jacket with copper, nickel and chrome plated brass bushing
Rod Ferrule: 5/16"-24 thread; bright or black chrome plated brass
Body: UV stable ABS

^{*}Prefix "B" indicates black. Spring included.

Elevated Feed Point Antennas





Technical Data

Maximum Por 10 watts	wer:
Polarization: Vertical	
Nominal Impo 50 ohms	edance:
VSWR: < 2.0:1	
Radiator Mat 0.090" 17- E-coat	erial: 7 stainless steel with black
Rod Ferrule: 3/8-24 ferr	rule stud with black E-coat
Coax Cable: 17 ft PRO-F	FLEX™ PLUS cable
Connector: FME (attac	hed)
Black poly	ousing Materials: carbonate and black nate-blend resins
	nensions: diameter tube to 1.125" max. ube (truck mirror tube support)
Mount Metho Mirror mou	od: int (included with assembly)

For detailed specifications, visit http://antenna.pctel.com.

3 dB Gain, No Ground Plane Elevated Feed, Cellular/PCS Dual Band Antenna

The ASPDM913U mirror mount elevated feed, dual band antenna provides 3 dB gain and optimal omnidirectional coverage of both cellular and PCS frequencies. It features a 3/8"-24 ferrule stud adaptable to standard mirror bracket mounts, side-body mounts and shock springs. Its rugged design withstands high vibration truck environments. This antenna operates both on or off a ground plane without degradation in VSWR performance.

Features

- Dual Band Performance provides optimal coverage of cellular and PCS frequencies with 3 dB gain
- Ground Plane Independent provides maximum installation flexibility on or off a ground plane without degradation in VSWR performance
- 3/8"-24 Ferrule Stud adaptable to standard, off-the-shelf mirror bracket mounts, side body mounts and shock springs
- Rugged withstands high vibration truck environments

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	E-Plane Beamwidth	Nominal Gain
ASPDM913U	824-894/1850-1990 MHz	70 MHz/140 MHz	34°/22°	3 dB/3 dB

Model	Antenna Height (from mounting plane)	
ASPDM913U	19"	

3 dB Elevated Feed Point Antenna with N female termination

The ASPG918 elevated feed point antenna provides omnidirectional coverage without a ground plane, allowing maximum installation flexibility on various parts of the vehicle. This model is terminated with an N female bulkhead for maximum connection flexibility when used with a separate cable assembly.

Features

- Black DURA-COAT™ finish complements new vehicle styling
- High Performance elevated feed point design provides omnidirectional coverage when off-roof mounting is required
- Versatile ground plane independent design allow installation where necessary, for both mobile or fixed applications
- Problem Solver corrects coverage problems caused by the wrong positioning of rooftop antennas
- Built-in N female bulkhead allows connection to various cable types for maximum installation flexibility and greater performance optimization (cable assemblies must be purchased separately)

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain	Rod/Coil Type
ASPG918	890-960 MHz	58 MHz	3 dB	Collinear, open

Mechanical Specifications

Model	Approximate Antenna Height	
ASPG918	24"	





Technical Data

Maximum Power: 10 watts

Polarization: Vertical

Nominal Impedance: 50 ohms

VSWR: < 2.0:1

Radiator Material:

One piece stainless steel collinear with black DURA-COAT $^{\text{TM}}$ finish.

Spring: Stainless steel, black DURA-COAT™

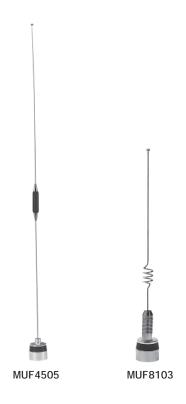
Base

N female bulkhead. Cable assembly with mating N male connector on one end is required for operation. Cable assemblies sold separately.

Extension Housing Materials: Black poly carbonate and black polycarbonate-blend resins

Mount Method: Compatible with low profile male-female contact mounts (sold separately)

7/8-5/16" through hole mounting. Antenna includes N female termination. Cable assembly sold separately.





Technical Data

Maximum Power: 200 watts
Nominal Impedance: 50 ohms
VSWR at Resonance: < 1.5:1
Radiator Material: .100"062" diameter stainless steel
Optional Spring: Stainless steel
Phasing Coil Housing: Low profile molded polymer jacket with copper, nickel and chrome plated bushing
Base Coil Housing: Low profile molded polymer with copper, nickel and chrome plated bushing
Antenna Type: 3 dB: 5/8 wave over a 1/4 wave 5 dB: 5/8 wave over a 1/4 wave

For detailed specifications, visit http://antenna.pctel.com.

Heavy Duty Low Profile Base Gain Antennas

These antennas feature a heavy-duty low profile base with tapered loading coil jacket, chrome plated brass fittings and an optional heavy-duty stainless steel spring. Available with either an open coil rod or our "quiet" closed coil rod design.

Features

- · Low profile double-sealed housing for maximum weather-proofing
- Plated fittings for superior performance and durability in the toughest environments
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Rod/Coil Type
MUF3505(S)	350-400 MHz		5 dB	Collinear/Closed
MUF4065(S)	406-430 MHz	Antennas are field tunable	5 dB	Collinear/Closed
MUF4505(S)	450-470 MHz	within the	5 dB	Collinear/Closed
MUF4705(S)	470-490 MHz	specified frequency range.	5 dB	Collinear/Closed
MUF4905(S)	490-512 MHz		5 dB	Collinear/Closed
MUF8105(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Open
MUF8005(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Closed
MUF8103(S)	806-896 MHz	815 MHz	3 dB	Collinear/Open
MUF8003(S)	806-896 MHz	815 MHz	3 dB	Collinear/Closed
MUF8325(S)	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
MUF9035(S)	896-940 MHz	898 MHz	5 dB	Trilinear/Closed

Model	Antenna Length at lowest frequency
MUF3505(S)	Approximately 32"
MUF4065(S)	Approximately 32"
MUF4505(S)	Approximately 32"
MUF4705(S)	Approximately 32"
MUF4905(S)	Approximately 32"
MUF8105(S)	Approximately 25"
MUF8005(S)	Approximately 25"
MUF8103(S)	Approximately 15.5"
MUF8003(S)	Approximately 15.5"
MUF8325(S)	Approximately 25"
MUF9035(S)	Approximately 25"

^{*}Suffix "S" indicates spring.

VHF Base Loaded Chrome Coil Antenna, No Ground Plane

Designed for installations that lack a suitable ground plane, the MHB5802(S) antenna features a tapered loading coil jacket with chrome plated fittings and an optional heavy-duty stainless steel spring. The base loaded matching network supports the collinear or trilinear rod sections above without the need of a ground plane.

Features

- · No ground plane required
- · Rugged construction; optional heavy-duty shock spring
- Sleek, sturdy, sealed phasing coil design
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MHB5802(S)*	144-174 MHz	Field tunable within specified frequency range	Unity no ground plane (2.4 dB with a ground plane)

Mechanical Specifications

Model	Antenna Height at lowest frequency
MHB5802(S)*	Approximately 58"

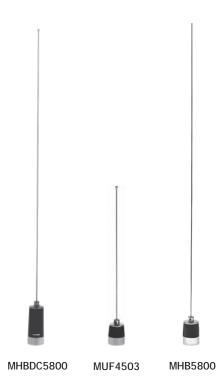




Technical Data

Maximum Power: 200 watts
Nominal Impedance: 50 ohms
VSWR at Resonance: < 1.5:1
Radiator Material: .100"062" diameter tapered
Optional Spring: Stainless steel
Base Coil Housing: Molded polymer jacket with copper, nickel and chrome plated bushing
Antenna Type: Base loaded 1/2 Wave

^{*}Suffix "S" (Spring) is not a retrofit option, please indicate at time of order.





Technical Data

Maximum Power:
200 watts
Nominal Impedance:
50 ohms
VSWR at Resonance:
< 1.5:1
Radiator Material:
.100"062" diameter stainless steel
Grounding:
DC Grounded (MHBDC model only)
Optional Spring:
Stainless steel
Base Coil Housing:
Molded polymer jacket with copper,
nickel and chrome plated bushing
Antenna Type:
Base loaded 5/8 Wave

For detailed specifications, visit http://antenna.pctel.com.

5/8 Wave Heavy Duty Antenna

These 5/8 Wave antennas utilize the MAXRAD chrome coil design with the enhancement of a heavy duty tapered rod for maximum durability in tough environments.

Features

- The matching coil is supported by a low loss coil for superior performance in heavy shick applications
- The tapered coil housing design enhances appearance and prevents moisture from entering the load
- Mates with all 1-1/8" -18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain with/without Ground Plane
MHB5800132(S)	132-174 MHz	Field tunable	3 dB
MHBDC5800(S)**	144-174 MHz	Field tunable	3 dB
MHB5800(S)*	144-174 MHz	Field tunable	3 dB
MUF3003(S)	300-325 MHz	Field tunable	3 dB
MUF4063(S)*	406-430 MHz	Field tunable	3 dB
MUF4303(S)*	430-450 MHz	Field tunable	3 dB
MUF4503(S)*	450-470 MHz	Field tunable	3 dB
MUF4703(S)*	470-490 MHz	Field tunable	3 dB
MUF4903(S)*	490-512 MHz	Field tunable	3 dB

Model	Antenna Height at lowest frequency
MHB5800132(S)	Approximately 58"
MHBDC5800(S)**	Approximately 58"
MHB5800(S)*	Approximately 58"
MUF3003(S)	Approximately 16"
MUF4063(S)*	Approximately 16"
MUF4303(S)*	Approximately 16"
MUF4503(S)*	Approximately 16"
MUF4703(S)*	Approximately 16"
MUF4903(S)*	Approximately 16"

^{*} Suffix "S" indicates spring and is not a retrofit option, please indicate at time of order.

^{**} MHBDC5800(S) has a 5 MHz bandwidth @ 1.5:1 VSWR.

Base Loaded Chrome Coil Antennas, No Ground Plane

Designed for installations that lack a suitable ground plane, these antennas feature a tapered loading coil jacket with chrome plated fittings and an optional heavy-duty stainless steel spring. The base loaded matching network supports the collinear or trilinear rod sections above without the need of a ground plane.

Features

- No ground plane required
- · Rugged construction; optional heavy-duty shock spring
- Sleek, sturdy, sealed phasing coil design
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain with/without Ground Plane	Rod/Coil Type
MUF4065NGP(S)*	406-430 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4305NGP(S)*	430-450 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4505NGP(S)*	450-470 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4705(S)*	470-490 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF4905(S)*	490-512 MHz	Field tunable	5 dB/3 dB	Collinear/Closed
MUF8103NGP	806-866 MHz	815 MHz	3 dB	Collinear/Open
MUF8003NGP(S)	806-866 MHz	815 MHz	3 dB	Collinear/Closed
MUF9000NGP	896-940 MHz	898 MHz	Unity	Straight
MUF9103NGP	896-940 MHz	898 MHz	3 dB	Collinear/Open
MUF9035NGP(S)	896-940 MHz	898 MHz	5 dB	Trilinear/Closed

Mechanical Specifications

Model	Antenna Height at lowest frequency
MUF4065NGP(S)*	Approximately 33"
MUF4305NGP(S)*	Approximately 33"
MUF4505NGP(S)*	Approximately 33"
MUF4705(S)*	Approximately 33"
MUF4905(S)*	Approximately 33"
MUF8103NGP	Approximately 17.25"
MUF9000NGP	Approximately 17.25"
MUF900NGP	Approximately 7.25"
MUF9103NGP	Approximately 17.5"
MUF9035NGP(S)	Approximately 27.5"
MUF9035NGP(S)	Approximately 27.5"

^{*}Suffix "S" indicates spring





Technical Data

Maximum Power 200 watts	·:
Nominal Impeda 50 ohms	ince:
VSWR at Resona < 1.5:1	nce:
Radiator Materia .100"062" di	al: iameter stainless steel
Optional Spring: Stainless steel	
	using: er jacket with copper, ome plated bushing
Base Housing Co Tapered jacke chrome plated	t with copper, nickel and
Mount Method: Compatible wi	ith 3/4" hole mounts
and unity gain	/2 wave (800 MHz, 900 MHz models) /8 wave over a 1/2 wave

Mobile Wideband



*MWU4002S operates without a ground plane without compromising VSWR performance.



Technical Data

Maximum Power: 200 watts (UHF) 160 watts (VHF)
Nominal Impedance: 50 ohms
VSWR: < 2.0:1
Radiator Material: .100"062" diameter stainless steel
Spring: Stainless steel
Phasing Coil Housing: Molded polymer jacket with bright or black chrome plated bushing
Base Coil Housing: Molded polymer jacket with copper, nickel and chrome plated bushing

For detailed specifications, visit http://antenna.pctel.com.

VHF and UHF Wideband Antennas - No Tune

These antennas address equipment inter-operability challenges by providing superior bandwidth coverage without sacrificing antenna performance. Their no tune wideband design eliminates the need to install multiple antennas to cover various VHF or UHF frequency bands, thus reducing installation costs and complexity and improving overall coverage of the desired frequencies.

Features

- Rugged stainless steel spring and wideband tube assembly for maximum durability and shock absorption
- · Thick-wall housing, double-sealed for maximum weatherproofing
- Mates with all 1-1/8" -18 thread mounts, including 3/4" mounts
- MWU4002S operates with or without a ground plane without compromising VSWR performance.

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
(B)MWV1365S**	136-174 MHz	38 MHz	Unity
(B)MWU4002S**	380-520 MHz	140 MHz	2.0 dB with a ground plane Unity w/o a ground plane
MWU4505(S)	440-480 MHz	40 MHz	4.5 dB
MWB4505	450-470 MHz	20 MHz	5 dB
MWU4063S	406-470 MHz	64 MHz	3 dB

Model	Antenna Height at lowest frequency
(B)MWV1365S	Approximatey 20"
(B)MWU4002S	Less than 12"
MWU4505(S)	Approximately 32"
MWB4505	Approximately 32"
MWU4063S	Approximately 12"

^{*}Prefix "B" indicates black. Suffix "S" indicates spring.

^{**}This model includes a spring.

VHF and UHF Wideband Antennas - Field Tunable

These field tune antennas address equipment inter-operability challenges by providing superior bandwidth coverage without sacrificing antenna performance. All models are built to withstand high vibration conditions.

Features

- · Outstanding bandwidth performance
- Rugged compact design ideal for high vibration conditions
- Mate with all 1-1/8" -18 thread mounts, including 3/4" mounts
- Select models feature a removable whip design for fine tuning or replacement.
- MWV1322HD(S) operates with our without a ground plane without compromising VSWR performance.

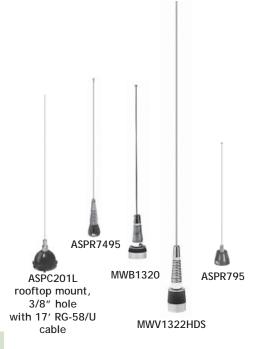
Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain
MWV1322(S)*	132-174 MHz	26 MHz	2.4 dB
MWV1322HD(S)*	132-174 MHz	26 MHz	2.4 dB with a ground plane/Unity w/o a ground plane
MWB1320***	132-512 MHz	24 MHz	Unity
ASPR7495	150-512 MHz, field tunable	24 MHz (406-512 MHz)	Unity
ASPR795	108-512 MHz, field tunable	100 MHz (406-512 MHz)	Unity
ASPC201L**	108-512 MHz, field tunable	100 MHz (406-512 MHz)	Unity

Mechanical Specifications

moonamour opcomo	4110110	
Model	Whip Length at lowest frequency	
MWV1322(S)	Approximately 48"	
MWV1322HD(S)	Approximately 48"	
MWB1320	Approximately 22"	
ASPR7495	16-3/8"	
ASPR795	26"	
ASPC201L*	26"	
ASPE7495	16-3/8"	

*Suffix "S" indicates spring.** Model ASPC201L includes 17 ft RG-58/U cable and UHF male connector. ***Model MWB1320 comes with spring and requires a ground plane.****Model includes elastomer spring.





Technical Data

Maximum Power:	
150 watts	
100 watts (ASPC201L)	

Nominal Impedance: 50 ohms

VSWR at Resonance:

< 1.5:1 (ASPR795 and ASPC 201L) < 2.0:1 (all other models)

Radiator Material:

0.125" diameter, 17-7PH stainless steel (Models MWV1322HD(S) and ASPR7495 only) 0.072" diameter, 17-7PH stainless (ASPC201L)

0.046" diameter, stainless steel (ASPR795) .100"-.062" diameter tapered stainless steel (all other models)

Spring Material (if available with the antenna): Stainless steel

Base and Fittings:

Aluminum, plated steel and brass (ASPR795)

Base Coil Housing:

Molded polymer jacket with copper, nickel and chrome plated bushing

Antenna Type:

Base loaded 1/2 wave (MWV models) 1/4 Wave (all models)

Mounting Method:

1-1/8" -18 thread mobile mounts, including 3/4" hole mounts (all models except ASPC201L)

3/8" hole snap-in mounts (ASPC201L only)

Chrome Nut Antennas

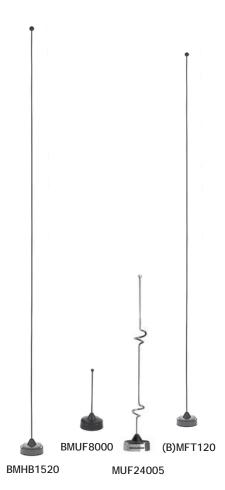




Figure A - MAB Replacement Ball

Chrome Nut Antennas

These antennas feature a super flexible design that protects the .062" diameter rod against damage that can be caused by limited vehicle height clearance. They also include a rubber seal gasket to prevent water leakage. All models are available in bright chrome or black finish.

Features

- · Economical
- · Flexible rod
- · Ready to install; no rod cutting is required
- Available in either bright chrome or black finish
- Antenna includes rubber seal gasket to prevent water leakage
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



Technical Data

Maximum Power:

150 watts

Nominal Impedance: 50 ohms

VSWR at Resonance: < 1.5:1

Radiator Material: .062" diameter stainless steel, bright or black finish

Mount Nut: Brass; bright or black chrome finish

Antenna Type:

1/4 Wave (Unity gain models)

5/8 Wave over a 1/4 Wave (3 dB gain models))

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
(B)MFT120	118-940 MHz	Field Tunable	Unity
(B)MHB1520	152-162 MHz	157 MHz	Unity
MHB1620	162-174 MHz	167 MHz	Unity
(B)MUF3800	380-406 MHz	393 MHz	Unity
MUF4060	406-430 MHz	418 MHz	Unity
MUF4300	430-450 MHz	440 MHz	Unity
MUF4500	450-470 MHz	460 MHz	Unity
MUF4700	470-490 MHz	480 MHz	Unity
MUF4900	490-512 MHz	501 MHz	Unity
MUF7000	760-870 MHz	816 MHz	Unity

Model	Frequency Range	Factory Tuned Frequency	Gain
(B)MUF8063	806-866 MHz	815 MHz	3 dB
(B)MUF8000	806-896 MHz	835 MHz	Unity
(B)MUF8253	825-896 MHz	835 MHz	3 dB
MUF8963	896-940 MHz	898 MHz	3 dB
MUF24005	2400-2480 MHz	2.45 GHz	5 dB

Model	Antenna Height at lowest frequency
(B)MFT120	Approximately 24"
(B)MHB1520	Approximately 21.625"
MHB1620	Approximately 21.625"
(B)MUF3800	Approximately 7.375"
MUF4060	Approximately 7.375"
MUF4300	Approximately 7.375"
MUF4500	Approximately 7.375"
MUF4700	Approximately 7.375"
MUF4900	Approximately 7.375"
MUF7000	Approximately 3.3"

Model	Antenna Height at lowest frequency
(B)MUF8063	Approximately 14.5"
(B)MUF8000	Approximately 2.9"
(B)MUF8253	Approximately 14.0"
MUF8963	Approximately 12.0"
MUF24005	Approximately 8.75"

^{*}Prefix "B" indicates black.

Magnetic Mount Antennas



Miniature Magnetic Mount Antennas

Our BMMG antennas feature 12' RG-174 coaxial cable fully integrated into the antenna. They are compact, easy to install and are available with a variety of connector options. High performance Pro-Flex™ Plus 195 cable available with 2.4 GHz model.

Features

- · One piece construction for easy transport and installation
- · Black coated whip assembly and machined polymer base provides minimum visibility
- · No tuning required

Antenna Electrical Specifications

Model	Frequency Range	Gain
BMMG824/1850U	824-896 MHz/1850-1990 MHz	Unity/Unity
BMMG824/1900ML195*	824-896 MHz/1850-1990 MHz	2 dBi/6 dBi
BMMG24005	2400-2484 MHz	5 dBi
BMMG24005ML195*	2400-2484 MHz	5 dBi



Technical Data

Maximum Power: 50 watts
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Radiator Material: .062" diameter stainless steel, black chrome finish
Base: Machined polymer
Bushing: Black chrome triple-plated brass
Antenna Base: Molded acrylonitrile butadiene styrene
Mounting Base: Black coated stainless steel
Magnet Mounting Force: 5 lbs minimum
Mount Method: Built-in magnetic base

For detailed specifications, visit http://antenna.pctel.com.

Mechanical Specifications

Model	Antenna Height	Rod/Coil Type	Cable
BMMG824/1850U	4"	n/a	10' RG-174
BMMG824/1900ML195*	10.5″	Collinear/Open	12' Pro-Flex™ Plus 195
BMMG24005	9″	Trilinear/Open	6' ML100A
BMMG24005ML195*	9"	Trilinear/Open	Pro-Flex™ Plus 195

Connector Options (not all connectors available with all models)

C-NC = No connector

FFME = Female FME

MMCXRA = MMCX Right Angle Plug

MSMA = SMA Male

MSMART = Male SMA, Reverse Threaded

NCP = Male N

NF = N female

PL = Male Mini-UHF

RPC = Rev Pol TNC

RPMSMA = Rev Pol Male SMA

UN = Male N

BN = BNC

Please specify connector option when ordering. Add \$2.00 for N connector option.

Magnetic Mount Antennas

Wide Base Magnetic Mount Antennas

These magnetic mount antennas are ideal for temporary installations where quick antenna removal may be needed. All models provide coverage of their specific frequencies without the need for tuning.

Features

- · Wideband design: cover all specified frequencies without tuning
- Magnetic base for quick removal. Ideal for test equipment applications.
- Protective surface prevents scratches on the vehicle's surface
- Patented whip design special phasing coil achieves in-phase signal transmission and reception using two collinear elements at both frequencies (ASPRDM1994 models)
- Cable/connector is fully integrated to the antenna for simple installation and maximum mobility



	•	
Model	Frequency Range	Gain
ASPA1894B	806-869 MHz	3 dB
ASPRDM1994M	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994S	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994T	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994U	824-894/1850-1990 MHz	3 dB/3 dB
ASPRDM1994PC	824-894/1850-1990 MHz	3 dB/3 dB
MDBM800/1900	824-896/1850-1990 MHz	2 dBi/2 dBi
MDBM824/1850	824-896/1850-1990 MHz	2 dBi/4 dBi

Mechanical Specifications

	I		
Model	Connector	Antenna Height	Coax Cable (Built-in)
ASPA1894B	BNC male	Approx 14"	12 ft PRO-FLEX™ Plus 195
ASPRDM1994M	Mini-UHF male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994S	SMA male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994T	TNC male	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994U	SAP	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
ASPRDM1994PC	SAP with Mini-UHF and TNC adapter	14.1"	15 ft PRO-FLEX™ PLUS 195, A/U
MDBM800/1900	Available with SMA, TNC or Mini- UHF(male)	14.37"	13′ RG-58/U
MDBM824/1850	Available with SMA or TNC (male)	10.5"	14 ft PRO-FLEX™ PLUS 195





Technical Data

Maximum Power: 10 watts
Polarization: Vertical
Nominal Impedance: 50 ohms
VSWR:
2.0 across the band (ASPRDM models and MDBM800/1900) <1.9:1 (ASPA1894B) <2.5:1 (MBDM800/1900)
<1.5:1 across each band (MDBM824/1850)
Radiator Material: Stainless steel, black chrome plated
Antenna Base: Molded high strength plastic
Mounting Base: Black coated stainless steel
Boot: Rubber
Mounting Force: 105.8 ounces minimum (MDBM800/1900) 300 ounces minimum (MDBM824/1850)
Mount Method: Built-in magnetic base

MAX Base Antennas







(B)MAXSCAN1000

BMAXC233805

BMAX8155S

BMAXC Antennas

Molded Base Antennas

These antennas feature a rugged molded polymer base, plated spring-loaded contact pin and .100" diameter stainless steel whip for long-lasting, trouble-free operation. Models are available with open or closed coil rod, and can be ordered in all black finish. This series offers models for many types of wireless applications, including WiFi and WiMAX mobility, VHF and UHF land mobile radio, 700 Public Safety, 800 MHz and 900 MHz digital radio and AMPS/PCS voice/data support.

Features

- Molded polymer base provides ruggedness and durability in harsh mobile environments.
- Wideband performance (Wi-Fi and WiMAX models) provide coverage of 2.2 GHz to 2.9 GHz frequencies without tuning. WiMAX model covers 2.3-3.8 GHz frequencies.
- 3 dB or 5 dB models available for most frequency ranges
- Most models available in bright chrome or black finish
- Antenna is ready to install; no rod cutting is required (unless otherwise noted)
- Designed to mate with all 1-1/8"-18 thread mounts, including 3/4" mounts
- · Spring-loaded gold plated contact pin

PCTEL

Technical Data

Maximum Power:

200 watts (VHF models) 150 watts (UHF models) 100 watts (all other models)

Polarization: Vertical

Nominal Impedance: 50 ohms

VSWR at Resonance:

- < 1.5:1 (Most models, except as noted below)
- < 1.9:1 (MAX7635S only)
- < 2.0:1 [(B)MAX150/450(S) and (B)MAX140/440(S)]

Radiator Material:

.100" OD stainless steel; bright (MAXC) or black finish (BMAXC)

.062" diameter black stainless steel

Spring: Stainless steel; bright or black finish (not all options available with every model)

Base Coil Housing: Molded polymer with a plated insert ring and a spring-loaded contact pin

Phasing Coil Housing:

Molded polymer jacket with copper, nickel and chrome plated bushing

Rod Ferrule: 5/16" -24 thread; bright or black chrome plated finish

Mount Method: Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Rod Type
(B)MAXMFT(S)**	118-940 MHz	Field Tunable	Unity	Straight
(B)MAX150D(S)	150-174 MHz	160 MHz	Unity	Collinear/Open
BMAX150/450(S)	150-174 MHz/450-470 MHz	160/460 MHz	Unity	Collinear/Closed
(B)MAXSCAN1000(S)	150-174 MHz/450-470 MHz/800-840 MHz	160 MHz/460 MHz/ n/a	Unity	Collinear/Closed
MAX455	450-470 MHz	Field Tunable	5 dB	Collinear/Closed
(B)MAX7603S	760-870 MHz	815 MHz	3 dB	Collinear/Open
BMAX7633S	760-870 MHz	815 MHz	3 dB	Collinear/Closed
(B)MAX7635S	760-870 MHz	Broadband****	5 dB	Trilinear/Closed
(B)MAX8055(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Closed
MAX8135(S)	806-866 MHz	815 MHz	5 dB	Trilinear/Open
(B)MAX8033(S)***	806-896 MHz	835 MHz	3 dB	Collinear/Closed
(B)MAX8053(S)	806-896 MHz	835 MHz	3 dB	Collinear/Open
BMAX8155S*	806-896 MHz	Broadband****	4.5 dB	Collinear/Closed
BMAX824/1850	824-896 MHz/1850-1990 MHz	Broadband****	2.2 dBi/4 dBi	Collinear/Open
(B)MAX8355(S)***	825-896 MHz	835 MHz	5 dB	Trilinear/Open
(B)MAX8375(S)	825-896 MHz	835 MHz	5 dB	Trilinear/Closed
(B)MAX9105(S)***	870-950 MHz	898 MHz	5 dB	Trilinear/Closed
BMAX9155S*	890-945 MHz	Broadband****	4.0 dB	Collinear/Closed
MAX9053	896-940 MHz	896 MHz	3 dB	Collinear/Open
MAX9075(S)	896-940 MHz	896 MHz	5 dB	Trilinear/Open
(B)MAX9085(S)	896-940 MHz	896 MHz	5 dB	Trilinear/Closed
(B)MAXC24503	2.2-2.9 GHz	Broadband****	3 dBi	Collinear/Closed
(B)MAXC24505	2.2-2.9 GHz	Broadband****	5 dBi	Collinear/Closed
BMAXC233805	2.3-3.8 GHz	Broadband****	5 dBi	Collinear/Closed

^{*} This model is only available in black with a spring.

** This is a field tunable model.

*** Prefix "B" indicates black. Suffix "S" indicates spring. Spring available with black model only.

**** Optimized across the entire specified frequency range.

MAX Base Antennas

Model	Antenna Height at lowest frequency	Antenna Type
(B)MAXMFT(S)**	Approximately 26"	1/4 wave
(B)MAX150D(S)	Approximately 17"	1/4 wave
BMAX150/450(S)	Approximately 20"	1/4 wave/Collinear array
(B)MAXSCAN1000(S)	Approximately 21"	1/4 wave or Collinear array
MAX455	Approximately 33"	5/8 wave over a 1/2 wave
(B)MAX7603S	Approximately 14"	Wideband collinear
BMAX7633S	Approximately 14"	Wideband collinear
(B)MAX763S5	Approximately 25"	Dual 1/2 wave over a 1/4 wave
(B)MAX8055(S)	Approximately 24"	Dual 1/2 wave over a 1/4 wave
MAX8135(S)	Approximately 24"	Dual 1/2 wave over a 1/4 wave
(B)MAX8033(S)***	Approximately 13"	5/8 wave over a 1/4 wave
(B)MAX8053(S)	Approximately 13"	5/8 wave over a 1/4 wave
BMAX8155S*	Approximately 13"	Collinear array
BMAX824/1850	Approximately 12"	Dual Band Collinear
(B)MAX8355(S)***	Approximately 24"	Dual 1/2 wave over a 1/4 wave
(B)MAX8375(S)	Approximately 13"	5/8 wave over a 1/4 wave
(B)MAX9105(S)***	Approximately 23"	Dual 1/2 wave over a 1/4 wave
BMAX9155S*	Approximately 13"	Collinear array
MAX9053	Approximately 11"	5/8 wave over a 1/4 wave
MAX9075(S)	Approximately 23"	Dual 1/2 wave over a 1/4 wave
MAX9085(S)	Approximately 23"	Dual 1/2 wave over a 1/4 wave
(B)MAXC24503	5.25" (133.35 mm)	ISM mobile and WLAN
(B)MAXC24505	7.50" (190.50 mm)	ISM mobile and WLAN
BMAXC233805	4.75" (12.06 cm)	WiMAX mobile

^{*} This model is only available in black with a spring.

** This is a field tunable model.

*** Prefix "B" indicates black. Suffix "S" indicates spring. Spring available with black model only.

5/8 Wave Molded Coil Antennas

Economical yet durable, the (B)MMC antennas feature insert molded top stud and bottom mounting threads that will not leak water, pull-out or rotate. Additionally, they can be ordered with a black shock spring for a complete black finish.

Features

- · Molded weather-proof matching coil in an attractive black base
- · Coil is wound on a low-loss coil form to withstand the heaviest shocks
- Optional 55" whip extends the frequency range down to 144 MHz
- Mates with all 1-1/8" -18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

	Model	Frequency Range	Factory Tuned Frequency	Gain
(B)	MMC150(S)	144-174 MHz	Field Tunable	3 dB
В	MMC380S	380-400 MHz	Field Tunable	5 dB
(E	B)MMC450	450-470 MHz	Field Tunable	5 dB

Mechanical Specifications

Model	Antenna Height at lowest frequency
(B)MMC150(S)	Approximately 59"
BMMC380S	Approximately 40"
(B)MMC450	Approximately 40"





Technical Data

Maximum Power: 200 watts
Nominal Impedance: 50 ohms
VSWR at Resonance: < 1.5:1
Radiator Material: .100"062" diameter tapered stainless steel; bright or black finish
Optional Spring: Stainless steel (if included with model)
Rod Ferrule: 5/16"-24 thread; bright or black chrome plated brass
Base Coil Housing: Molded polymer jacket with copper, nickel and chrome plated insert ring and stud
Phasing Coil Housing: Molded polymer jacket with bright or black chrome plated brass bushing
Antenna Type: Base loaded 5/8 Wave 5/8 wave over a 5/8 wave (Collinear Model)

^{*}Prefix "B" indicates black. Suffix "S" indicates spring.





Technical Data

Nominal Impedance: 50 ohms	
Radiator Material: Stainless steel DURA-CON™ plated or black DURA-COAT™ finish (select models)	
Base: Aluminum, brass and plated steel	
Mount Method: Compatible with A/S® male-female contact mounts (sold separately)	

For detailed specifications, visit http://antenna.pctel.com.

3 dB Vehicular Antenna, Male-Female Contact Interface

These antennas feature a male-female contact mount interface that provides positive connection for noise-free cellular or PCS phone operation.

Features

- Noise-free male-female contact mount interface provides positive connection for noise-free cellular or PCS telephone operation, especially for digital applications
- · Rugged one piece construction, including phasing coil
- Patented Whip Design special phasing coil achieves 3 dB operation at both cellular and PCS frequency bands (dual band model)
- Convenient whip can be easily removed from base when needed

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	Gain	VSWR at Resonance	Maximum Power
ASPA1855	806-869 MHz	63 MHz	3 dB	< 1.5:1	100 watts
ASPA1865	806-869 MHz	63 MHz	3 dB	< 1.5:1	100 watts
ASP1815	806-960 MHz	154 MHz	Unity	< 1.5:1	100 watts
ASPD1865	824-894 MHz	70 MHz	3 dB	< 1.9:1	100 watts
ASPDM1965	824-894/ 1850-1990 MHz	70 MHz/140 MHz	3 dB/ 3 dB	< 2.0:1	10 watts
ASPG1865	890-960 MHz	70 MHz	3 dB	< 1.5:1	100 watts

Model	Finish	Whip Length
ASPA1855	DURA-CON™ plated	Approximately 14"
ASPA1865	DURA-COAT™ black	Approximately 14"
ASP1815	DURA-COAT™ black	Approximately 4" No cutting or tuning needed
ASPD1865	DURA-COAT™ black	Approximately 14.7"
ASPDM1965	DURA-COAT™ black	Approximately 14"
ASPG1865	DURA-COAT™ black	Approximately 14"

Rooftop Mount Antennas

Mosaic® Vibration Resistant Collinear Antennas

The Mosaic® high performance collinear antennas provide exceptional coverage of VHF and UHF frequencies with 5 dB or 3 dB gain performance. They feature a black UV stabilized ABS base that resists chalking and provides long lasting operation. Patented DURA-FLEX® elastomer spring eliminates duplex system noise caused by semi-conductive deposits found in traditional coil springs. A springless model is also available.

Features

- Enhanced Performance all brass inserts eliminate interference caused by dissimilar metals
- Long Life black UV stabilized ABS base resists chalking and provides long lasting operation
- Noise-Free unique patented DURA-FLEX® elastomer spring eliminates duplex system noise caused by semi-conductive deposits found in traditional metal coil springs
- System Oriented compatible with 1-1/8" -18 thread mobile mounts, including 3/4" hole mounts for easy antenna replacement or upgrade

Antenna Electrical Specifications

Model	Frequency Range	Gain
ASP7455	138-174 MHz	3 dB
ASPH7455	210-230 MHz	3 dB
ASP76551	445-470 MHz	5 dB
ASP7795	445-470 MHz	3 dB
ASP7795LS**	445-470 MHz	3 dB
ASPB76552	470-494 MHz	5 dB
ASPF7795	485-505 MHZ	3 dB
ASPC76553	494-512 MHz	5 dB

Mechanical Specifications

Model	Antenna Height
ASP7455	54" max. including spring and coil
ASPH7455	27"
ASP76551	Approximately 34"
ASP7795	Approximately 15"
ASP7795LS**	Approximately 16"
ASPB76552	Approximately 33"
ASPF7795	Approximately 13"
ASPC76553	Approximately 33"





Technical Data

Maximum Powe 150 watts	er:
Polarization: Vertical	
Nominal Imped 50 ohms	lance:
< 1.7:1 (ASP)	a DURA-FLEX® spring
(5 dB models	ter, 17-7PH stainless steel s) diameter, 17-7PH stainless
Spring Materia DURA-FLEX®	l: elastomer (if included)
	per clad steel wire, low loss roof housing (ASPH7455)
Base Coil: 14 AWG copp waterproof h	per clad steel wire, nousing
radiators	per wire, encapsulated with r, plated brass (ASPC76553)
Base and Fittir All brass	ngs:
	: with 1-1/8" -18 thread mobile uding 3/4" hole mounts

^{**} This model does not include a spring

Rooftop Mount Antennas



MN9155

Integrated Connector Antennas

These integrated connector antennas provide a simple and cost effective solution for the 900 MHz ISM band. Featuring an N male connector built into the base, these antennas mount easily to any N female bulkhead or panel mount connector.

Features

- UV-stable polycarbonate base allows years of trouble-free use even in harsh environments
- Broadband frequency coverage. A single antenna covers the entire 900 MHz ISM band
- Integrated N, male connector. Eliminates the use of an adapter by allowing direct application to many types of radios



Technical Data

Maximum Power: 100 watts
Polarization: Vertical, linear
Nominal Impedance: 50 ohms
VSWR: < 1.5:1
Base: Molded Makrolon polycarbonate; black
Radiator Material: .100" diameter, 17-7 PH stainless steel rod; bright chrome finish
Bushing: Nickel plated brass
Mount Method: N male connector built in

For detailed specifications, visit http://antenna.pctel.com.

Antenna Electrical Specifications

Model	Frequency Range	Gain
MN9153	902-928 MHz	3 dB (with a ground plane)
MN9155	902-928 MHz	5 dB (with a ground plane)

Model	Antenna Height
MN9153	13.2"
MN9155	22.5″

Dual Band VHF/UHF Collinear Antenna

The MBD1444(S) antenna offers VHF and UHF dual band coverage with 2 dB gain at (VHF), and 5 dB gain at (UHF) frequencies. The antenna features a tapped coil design to maximize bandwidth. A shock spring is available for heavy duty applications.

Features

- · VHF/UHF dual band coverage
- 2 dB Gain at VHF frequencies; 5 dB gain at UHF frequencies
- Model designed for business or amateur bands
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MDB1444(S)*	144-148 MHz and 440-448 MHz	146/444 MHz	VHF 2 dB, UHF 5 dB

Mechanical Specifications

Model	Antenna Height at lowest frequency
MDB1444(S)*	Approximately 38"

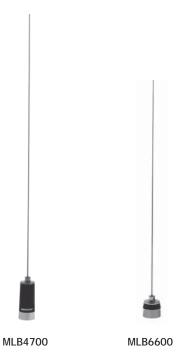




Technical Data

Maximum Power: 200 watts
Nominal Impedance: 50 ohms
VSWR at Resonance: < 1.5:1 (UHF models) < 2:1 (VHF models)
Radiator Material: .100"062" diameter stainless steel
Optional Spring: Stainless steel
Phasing Coil Housing: Molded polymer jacket with bright or black chrome plated bushing
Loading Coil: Tinned copper wire wound on a low-loss coil form
Base Coil Housing: Molded polymer jacket with copper, nickel and chrome plated bushing
Antenna Type: VHF: 1/2 wave UHF: 5/8 wave over a 1/2 wave

^{*} Suffix "S" indicates spring, which is not a retrofit option. Please indicate at time of order.





Technical Data

Maximum Power: 200 watts 500 watts (MLBDC models)
Nominal Impedance: 50 ohm
VSWR at Resonance: < 1.5:1
Radiator Material: .100"062" diameter tapered stainless steel
Optional Spring: Stainless steel
Loading Coil: Tinned copper wire wound on a low-loss coil form (All models, except MLB6600S)
Base Coil Housing: Molded polymer with copper, nickel and chrome plated bushing
Lightening Protection: DC grounded (MLBDC models only)
Antenna Type: Base loaded tapped 1/4 wave (MLBDC models) Full length 1/4 wave (MLB6600S) Base loaded 1/4 wave (MLB models)

For detailed specifications, visit http://antenna.pctel.com.

Lowband Quarter Wave Antennas

The MLB lowband antennas are a popular choice for State Patrol, Land Management and serious CB applications. They provide superior performance for a variety of lowband applications.

Features

- The matching coil is supported by a low-loss coil form to withstand the heaviest shocks (all models, except MLB6600S)
- Durable, attractive housings designed to deter moisture ingress for long lasting, reliable operation.
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MLB2700(S)	27-31 MHz	Field Tunable within specified range	Unity
MLBDC2700(S)**	27-31 MHz	Field Tunable within specified range	Unity
MLB3000(S)	30-35 MHz	Field Tunable within specified range	Unity
MLBDC3000(S)**	30-35 MHz	Field Tunable within specified range	Unity
MLBDC3400(S)**	34-37 MHz	Field Tunable within specified range	Unity
MLB3400(S)	34-40 MHz	Field Tunable within specified range	Unity
MLBDC3700(S)**	37-40 MHz	Field Tunable within specified range	Unity
MLB4000(S)	40-47 MHz	Field Tunable within specified range	Unity
MLBDC4000(S)**	40-47 MHz	Field Tunable within specified range	Unity
MLBDC4500(S)**	45-48 MHz	Field Tunable within specified range	Unity
MLBDC4700(S)**	47-50 MHz	Field Tunable within specified range	Unity
MLB4700(S)	47-54 MHz	Field Tunable within specified range	Unity
MLB6600(S)	66-132 MHz	Field Tunable within specified range	Unity

Model	Antenna Height at lowest frequency
All models	Approximately 52"

^{*}Suffix "S" indicates spring

^{**} This model is DC grounded

Lowband Full Length Quarter Wave Antenna

This is a rugged full length Quarter Wave for lowband applications. It features a high quality stainless steel shock spring.

Features

- The ultimate in durability for lowband applications
- · Stainless steel construction
- 96" tapered stainless steel whip
- · Adjustable, die cast zinc mount

Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain
MLB3001	30-54 MHz	Field Tunable	Unity

Mechanical Specifications

Model	Antenna Height at lowest frequency
MLB3001	Approximately 105"





Technical Data

Maximum Power: 250 watts
Nominal Impedance: 50 ohm
VSWR at Resonance: < 1.5:1
Radiator Material: .200"100" diameter tapered stainless steel
Spring: Stainless steel
Cable Options: MK10 (10' cable) MK20 (20' cable) Both options are complete with spade lugs installed, and loose solder on PL259 connector.
Mounting Base: 3-1/2" diameter
Antenna Type: Full length 1/4 wave

^{*}Spring assembly included

GPS & Multi-band Transit Antennas





The Max-Matics™ GPS+ antennas are available with various mount configurations, including magnetic (above top) and permanent/blind installation stud (above bottom).



GPS+ Combination Antennas

The Max-Matics™ GPS+ antennas have been designed to provide maximum performance and versatility for telematics applications, including fleet monitoring and asset tracking.

By combining the high performance of a GPS antenna with the flexibility to add virtually any PCTEL permanent mount compatible mobile antenna, The GPS+ provides reliable, real-time wireless voice and data coverage for fleet monitoring applications. This antenna is designed to facilitate installation. It includes all necessary hardware for "blind" installations when removal of the vehicle's headliner in not desired.

Its precise performance and ease of installation provides outstanding value and flexibility for the most demanding wireless mobile applications.

Features

- Combination GPS/mobile antenna design provides GPS tracking coverage and voice/data wireless coverage capabilities for fleet monitoring or fleet tracking applications.
- UV-stable housing features attractive Industrial design that is available in off-white or black textured finishes.
- 3 or 5 Vdc operating voltage supply enables operation with most GPS systems on the market.
- Several models are available, including trunk lid mount, permanent stud mount, mirror mount or magnet mount versions. The variety of mounts provides flexibility and versatility to end users.
- Various connector options are available for both the GPS antenna and the mobile antenna's permanent mount.
- High frequency mobile antenna mount provides a VSWR of less than 1.5:1 at frequencies from 27 MHz to 2.4 GHz for all PCTEL mobile antennas used as part of the GPS+ antenna series.

Low Noise Amplifier Specifications

Frequency Band: 1575.42 MHz

Amplifier Gain: 26 dB +/-3

Polarization: Right hand circular

Nominal Impedance: 50 ohms

Output VSWR: 1.5:1, typical

DC Current: 20 mA Nominal; <30 mA @ -40°C to +85°C

DC Voltage: 3-5.5V (internal regulated)

Axial Ratio: < 3.0 dB @ boresight

Noise Figure: 1.8 typical

Filtering: Hybrid (including pre-selector)

Out-of-band Rejection: >40 dB @ +/- 50 MHz

For detailed specifications, visit http://antenna.pctel.com.

Mechanical Specifications

Housing Material	Housing Dimensions	Mobile Antenna Mount Interface	Cable	Cable Pull Force	Mounting Options
Black or off-white, UV-stable polycarbonate	2.25" W x 4.25" L x 1.25" H	1-1/8"-18 thread mount	17' RG-174 (GPS antenna side) 17' RG-58/U (mobile antenna side)	5 kgf, minimum (magnetic mount models)	Stud, mirror, trunk or magnet

Environmental Specifications

Burn-out Protection	Operating Temperature Range	Storage Temperature Range
Protected from damage by RF signals when the power received by the antenna is no greater than +17 dBm, maximum	-40°C to +85°C	-40°C to +100°C

To order, please follow the following part number configuration:

Color	Mount type	GPS Connector	Mobile Antenna Connector
Black textured finish is standard and no color code is required for this choice. For a white textured finish, begin the part number with "W"	Add the appropriate suffix (choose from the list below) to indicate your choice of mount:	Choose among: Male SMA (MSMA) Female SMA (FSMA) Male TNC (MC) Female FME (FFME) Right angle SMB jack (RASBJ) Right angle SMB plug (RASBP) MCX MMCX Right angle MMCX plug (RAMMCX) Male SMC (MSMC) Male BNC (BN)	Choose among any of the connector options available for the BM mounts with RG-58 cable: PL259 (standard) Reverse Polarity SMA (MSMARP) Mini-UHF (PL) BNC (BN) TNC (C) Male N (NM) Female FME (FME) Male SMA (MSMA) Right Angle Male SMA (RAMSMA)
N/A	GPSPMM (for magnet mount)	Specify your GPS connector of choice by adding the connector abbreviation	Specify your connector of choice for the mobile antenna side by adding the connector
(W)*	GPSPSM (for stud mount)	from the above list to the part number.	abbreviation from the above list to the part number.
N/A	GPSPMR(for mirror mount)	Male SMA (MSMA)	N/A
N/A	GPSPTM (for trunk mount)	Right angle SMB plug (RASBP)	N/C

^{*} WHITE VERSION ONLY AVAILABLE IN STUD MOUNT (GPSPSM) MODELS

GPS & Multi-band Transit Antennas



"Sharkfin" Multi-Band Antenna

PCTEL

Technical Data

Maximum Power: 10 watts (all models, except GPSDBHF) 5 watts (GPSDBHF)	
Polarization (GPS Models): Right hand circular	
Input Impedance: 50 ohms	
VSWR: < 1.8:1 (GPS) < 2.0:1 (RF)	
Grounding Protection: DC grounded (GPSDBHF only)	
Azimuth Coverage (GPS Models): 360°	
Elevation Coverage (GPS Models): Hemispherical	
Operating Supply Voltage (GPS Models): 2.7 - 5.5 V	
Housing: Black, UV protected ABS	
Housing Dimensions (major axis x minor axis x height): 97 mm (3.8") x 60 mm (2.4") x 70 mm (2.8")	
Cable: 10 ft RG-174 (all models except GPSDBHF) 12 ft Pro-Flex™ Plus 195, black (GPSDBH	F)
Mount Method:	

For detailed specifications, visit http://antenna.pctel.com.

Through hole mounting

Sharkfin Multi-band Roof Mount Antennas

The Sharkfin antennas provide multi-band omnidirectional coverage in an attractive, low profile housing. The tri-band and quad-band models also provide GPS navigation support capability. Their low profile through-hole footprint offers an attractive antenna design that provides optimal sealing for leakage resistance.

Features

- Low, aerodynamic profile eliminates wind noise commonly experienced with external mount vehicular applications
- Overmolded gasket design provides optimal sealing from condensation and water ingress
- Integrated antenna mast design provides secure installation to the vehicle
- UV stability for outdoor applications
- GPS navigation support on select models

GPS Antenna Electrical Specifications

Operating Frequency	Nominal Gain	Gain - Antenna Element	Noise Figure
L1: 1575.42	24 dB	3.5 dBic	2.0 dB nominal

Multi-band Antenna Electrical Specifications

Model	Antenna Gain	
GPSQB and GPSTB	824-896 MHz (AMPS); 1850-1990 MHz (PCS) 2.4-2.5 GHz (WiFi) (GPSQB only)	Unity
GPSQBE	870-960 MHz (GSM); 1710-2170 MHz (3G)	Unity
GPSDBHF	2.4 GHz-2.5 GHz (Wi-Fi); 4.9-5.9 GHz (Public Safety/WiMAX)	Unity

Model*	Frequencies Covered	Number of Pigtails
GPSQB	AMPS/PCS/GPS/WLAN	3
GPSQBE	GSM/3G/GPS/WLAN	3
GPSTB	AMPS/PCS/GPS	2
GPSDBHF	Wi-Fi/Public Safety/WiMAX	1***

Environmental Specifications

Operating Temperature Range	Humidity Rating
-40° C to +85° C	95%

*To order, please follow the following part number configuration:

Base Model	GPS Connector Code	AMPS/PCS Connector Code	Wi-Fi Connector Code
Example: GPSQBE	Choose among: Right angle SMB Plug (RASBJ) Male SMA (MSMA) Female FME (FFME)	Choose among: Male SMA (MSMA) Male TNC (C) Female TNC (FC) Female FME (FFME)	Choose among: Reverse Polarity TNC (RPC) Male TNC (C) Reverse Polarity Male SMA (RPMSMA)

^{***} NOTE: Model GPSDBHF includes a single pigtail terminated with Reverse Polarity, Reverse threaded Male SMA plug. Call factory for other connector options. This model does not include GPS.

Silhouette Transit Antennas

The silhouette antennas are designed for transit vehicle installations requiring overhead clearance, including buses, fire-fighting engines, railroad equipment, airport service vehicles, and construction equipment. These low profile multiband antennas provide wideband coverage of specific frequencies without field tuning required.* They are housed in a high impact molded ASA radome for long-lasting performance under severe environmental conditions. A GPS multi-band model is also available.

Features

- Rugged high impact molded ASA radome assures long, reliable performance and protection against the elements
- High Performance when mounted on a flat surface, maximum radiation is vertical and omnidirectional
- Disguised Appearance low profile for minimum exposure to theft or vandalism
- Wideband Coverage requires no field tuning*
- GPS Tracking Support Capability model AST800/1900GPS only

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth**	Gain
ASPB574**	148-160 MHz	0.5 MHz	Unity
ASPC574**	160-174 MHz	0.5 MHz	Unity
ASP572	450-470 MHz	20 MHz	Unity
ASP772	450-470 MHz	20 MHz	Unity
ASPB572	470-488 MHz	18 MHz	Unity
ASPC572	488-512 MHz	24 MHz	Unity
ASP764	764-806 MHz	42 MHz	Unity
ASP931	806-894 MHz	88 MHz	Unity
AST8001900GPS	806-960 MHz and 1850-1990 MHz 1575.42 +/-10 MHz (GPS L1)	154 MHz/ 140 MHz	Unity (800/900 MHz and 1850-1990 MHz) 3.5 dBic Nominal (GPS)
ASPG931	890-960 MHz	154 MHz	Unity





Technical Data

	n Power: ts (AST8001900GPS) atts (all other models)
Polarizat Vertica Right h	
Nominal 50 ohn	Impedance:
	I (GPSL1 frequencies)
	Material: high impact molded ASA
asseml	eparately. Call factory for cable bly options. Model AST8001900GPS es 17 feet RG-174U on the GPS side.
	ethod: ard 1-5/16" roof hole mount ed with screws and weather-proof

^{*} All models except those covering VHF frequencies

^{**} Field Tunable within specified frequencies

GPS & Multi-band Transit Antennas

Mechanical Specifications

Model	Termination	Dimensions
ASPB574**	SO-239 (UHF female, panel mount)	4.1" H x 17" L x 3.5" W
ASPC574**	SO-239 (UHF female, panel mount)	4.1" H x 17" L x 3.5" W
ASP572	UHF female, panel mount (mates with PL259 male)	3.13" H x 8" L x 3.5" W
ASP772	BNC female bulkhead	3.4" H x 8" L x 3.5" W
ASPB572	UHF female, panel mount (mates with PL259 male)	3.4" H x 8" L x 3.5" W
ASPC572	UHF female, panel mount (mates with PL259 male)	3.4" H x 8" L x 3.5" W
ASP764	N female, panel mount	3.4" H x 8" L x 3.5" W
ASP931	N female, panel mount	3.4" H x 8" L x 3.5" W
AST8001900GPS	N female, panel mount (800/1900 MHz frequencies) 17 ft RG-174/U with male SMA (GPSL1 frequencies)	3.4" H x 8" L x 3.5" W
ASPG931	N female, panel mount	3.4" H x 8" L x 3.5" W

Low Noise Amplifier Specifications (Model AST8001900GPS only)

Frequency Band	Axial Ratio	Amplifier Gain	Isolation between Antennas
1575.42 +/-10 MHz	< 3 dB @ boreside	26 dB +/-3 (across 20 MHz bandwidth)	65 dB active (806-960 MHz to GPS)60 dB active (1850-1990 MHz to GPS)20 dB passive (1575 MHz +/-1 MHz to GPS)

DC Current	DC Voltage	Noise Figure	Filtering	Out-of-Band Signal Rejection	P1 dB	OIP3
20 mA nominal; < 30 mA @ -40°C to +85°C	3 - 13.5 V	< 1.8:1 typical @ 25°C < 2.2:1 @ -40°C to +85°C	Hybrid (including pre-selector)	> 30 dB @ +/-50 MHz	> 5 dBm typical	14 dBm typical

PCTEL, Inc. WEB: www.antenna.pctel.com

^{*} All models except those covering VHF frequencies ** Field Tunable within specified frequencies

Medallion® GPS/Multi-band Low Profile Horizontal Antenna

The Medallion® ASPDM8891TG is designed for mobile roof mount or fixed applications requiring voice coverage and GPS tracking support. Featuring a rugged low profile design for maximum overhead clearance and reduced visibility, this antenna is ideal for digital voice radio coverage or vehicle tracking in public safety or mass transit vehicles.

Features

- Multi-band Cellular and PCS coverage with active GPS tracking support
- · Broadband covers the entire range of specified frequencies without tuning
- Low Profile for maximum overhead clearance
- Economical only one antenna is needed to obtain multiple band coverage
- Durable high impact molded radome provides added protection for long lasting performance while ultrasonic seal protects the GPS component against extreme weather conditions
- Versatile ideal for transit buses or trains, public safety and emergency vehicles and construction equipment - also great for fixed mount applications.







Technical Data

Maximum Power:

5 Watts

Polarization:

Vertical linear (800/1900 MHz frequencies) RHCP (GPS frequency)

Nominal Impedance:

50 ohms

Radome Material:

Black ABS

Weather Protection:

Ultrasonic seal and O-ring; foam Neoprene perimeter pad

Mount Method

Through-hole mount (3/4-inch hole openings)

GPS & Multi-band Transit Antennas

Antenna Electrical Specifications

Model	Frequency Range	Bandwidth	VSWR	Gain	E-plane Beamwidth
ASPDM8891TG	806-894 MHz 1850-1990 MHz 1575.42 MHz	60 MHz 70 MHz 140 MHz 10 MHz	< 2.5:1 < 2.0:1 < 2.0:1 < 2.0:1	Unity (800/1900 MHz) 5 dBic (GPS)	55° nominal

Mechanical Specifications

Model	Dimensions	Cable	Connector
ASPDM8891TG	4.88" O.D. x 1.38" H	16.5 ft Pro-Flex [™] Plus 195 (800/1900 MHz) 16.5 ft RG-174/U (GPS)	TNC male loose (800/1900 MHz) SMA plug (male) attached (GPS)

Low Noise Amplifier Specifications

Model	Amplifier Gain	Output VSWR	DC Current	DC Bias	Noise Figure	Filter Attenuation		
ASPDM8891TG	27 dB, typical	2.0:1	15 mA, maximum	5.0 V	1.5 dB, typical	1575.42 +/-20 MHz 7 dB min	1575.42 +/-50 MHz 20 dB min	1575.42 +/-100 MHz 30 dB min

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GPS/GSM Multi-band Through Hole Low Profile Antenna

The GPSGSMSMMSMA multi-band GPS antenna provides omnidirectional coverage of GSM frequencies from 824-896 MHz and 1710-1990 MHz plus GPS L1 vehicle tracking support. This low profile antenna is designed for permanent roof top vehicular installations. It is ideal for mass transit applications requiring voice coverage and GPS tracking to improve operational dispatch and schedule maintenance efficiencies. The antenna's very low profile design minimizes its exposure to theft or vandalism.

Features

- Extremely low profile housing for minimum visibility and maximum overhead clearance
- Multi-band frequency coverage and GPS support minimize the number of antennas required on the vehicle for easier, more cost effective installations
- UV stability for long lasting outdoor operation
- Adhesive VHB tape layer supports permanent installation and provides added protection to the vehicle's surface

GPS Antenna Electrical Specifications

Center Frequency	Current Draw	LNA Gain
L1: 1575.42 +/- 3 MHz	< 15 mA @ 3-5V	25 +/- 3 dB

GSM Antenna Specifications

Operating Frequencies	Typical Gain (without cable)
824-896 MHz	2dB +/- 1dB @ 900 MHz
1710-1990 MHZ	1dB +/- 1dB @ 1800 MHz

Mechanical Specifications

W	/eight	Dimensions	Temperature Range
	45 lbs 1 grams)	3.1 x 0.59 inches (8 x 1.5 cm)	-40°C to +85°C





Technical Data

Maximu 8 wa	um Power (GSM): tts
0	ation: t hand circular (GPS) ar (GSM frequencies)
Input II 50 ol	mpedance:
	i:1 (GPS) i:1 (GSM)
Radom Black	e: « UV stable plastic
	eet (5 meter) RG-174/U (GPS) eet (5 meter) RG-174/U (GSM)
	ctor*: SMA (GPS) SMA (GSM)
1/2 i Mour shim hole	Method: nch through hole mount nt assembly includes flat adapter for installations on existing larger diameters. sive VHB tape layer included.

^{*}Consult factory for other connector options.



GPSGSMMMMSMA



Technical Data

Maximum 8 watts	Power (GSM):
	on: and circular (GPS) (GSM frequencies)
Input Imp 50 ohm	
VSWR: < 1.5:1 < 2.5:1	
Radome: Black U	V resistant plastic
	(5 meter) RG-174/U (GPS) (5 meter) RG-174/U (GSM)
	r*: MA (GPS) MA (GSM)
5	thod**: ic mounting re VHB tape layer included.
Magnet Po 2.8 lbf	ull Force: , minimum

GPS/GSM Multi-band Magnetic Low Profile Antenna

The GPSGSMMMMSMA multi-band GPS magnetic mount antenna provides omnidirectional coverage of GSM frequencies from 824-896 MHz and 1710-1990 MHz plus GPS L1 vehicle tracking support. This low profile antenna features a strong magnetic mount base that makes installation and removal quick and simple. The assembly includes an adhesive VHB tape layer for more permanent installations, if necessary. Its low profile housing reduces antenna exposure to theft or vandalism. It is ideal for vehicular applications requiring voice coverage and asset tracking support to improve operational dispatch efficiencies. Applications include commercial delivery, maintenance, public safety or mass transit vehicles.

Features

- Extremely compact low profile housing for minimum visibility and maximum overhead clearance
- Multi-band frequency coverage and GPS tracking support minimize the number of antennas required on the vehicle for more cost effective installations
- UV stability for long lasting outdoor applications
- Adhesive VHB tape layer for more permanent installations, if required. Tape provides added protection to the vehicle's surface

GPS Antenna Electrical Specifications

Center Frequency	Current Draw	LNA Gain
L1: 1575.42 +/- 3 MHz	< 15 mA @ 3-5V	25 +/-3 dB

GSM Antenna Specifications

Operating Frequencies	Typical Gain (without cable)
824-896 MHz	2dB +/-1dB @ 800 MHz
1710-1990 MHZ	1dB +/-1dB @ 1800 MHz

Weight	Dimensions	Temperature Range
0.4 lbs (181.4 grams)	2.8 x 2.4 x 0.5 inches (7.2 x 6.2 x 1.4 cm)	-40°C to +85°C

^{*}Consult factory for other connector options.

^{**}The top of the antenna housing must be directed toward the sky, as indicated by the "AIRWARD" on the antenna radome.

Multiple Mount GPS L1 GPS Antenna

The AGPS26 global positioning system (GPS) antenna features an electrically shielded LNA PCB assembly that is permanently encased in a UV-stable, black radome. Providing 26 dB of gain and 3 to 5 Vdc operation, this active GPS antenna provides outstanding GPS support for many vehicle tracking applications. This magnetic mount antenna can be ordered with additional screw or tape mount hardware for maximum installation flexibility.

Features

- Rugged, low profile housing for minimum visibility
- Various mount options for maximum versatility. Magnetic mount standard. Screw or tape mount hardware optional.
- Wide variety of connector options provide greater flexibility and compatibility with most GPS systems



Filter/LNA Antenna Electrical Specifications

Operating Frequency	Noise Figure:	Gain	Out-of-Band Attenuation
L1: 1575.42 +/- 1.023 MHz	1.8 dB typical 2.2 dB maximum	26 dB	fo=1575.42 MHz fo +/-20 MHz, 7 dB typical fo +/-50 MHz, 20 dB typical fo +/-100 MHz, 30 dB typical

Antenna Patch Electrical Specifications

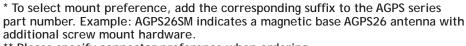
Center Frequency	Gain typical at zenith	Bandwidth	Axial Ratio
1575.42 +/-3 MHz (when covered with a radome and measured on a 2.75 x 2.75 inch ground plane)	+5.0 dBic (-1.0 dBic minimum at 10° elevation)	10 MHz minimum (10 dB return loss)	3.0 dB typical

Mechanical Specifications

Dimensions	Weight (Mass)
2" x 1.77" x .55"	4.09 +/-0.35 oz

Environmental Specifications

Operating Condition	Storage Condition
-40°C to +85°C temperature	-40°C to +85°C temperature
10 to 95% RH humidity	10 to 95% RH humidity



^{**} Please specify connector preference when ordering.



Technical Data

Polarization: Right hand circular
Input Impedance: 50 ohms
VSWR: < 2.0:1, maximum (Filter/LNA)
Operating Supply Voltage: 3-5 Vdc: 50 mV p-p ripple (max)
Current Consumption: 20 mA, maximum at 3-5 Vdc (9 mA typical)
Housing: Black, UV-stable plastic
Cable: 17 feet RG-174/U
Connectors Options**: MSMA or Right Angle SMB Plug standard TNC, BNC, FFME, MMCX, SMC also available
Cable Pull Force: 10 lbs, minimum
Magnet Pull Force: 5 lbs, minimum
Mount Method: Magnet (MM suffix)
Additional Mount Options*: Screw (SM), adhesive tape (TM)



High Performance GPS Magnetic Mount Series

The AGPSHP high performance magnetic mount global positioning system (GPS) antennas utilize an electrically shielded LNA PCB assembly and ceramic filter designed to provide high out-of-band rejection for optimal integration in multi-band installations. Their assembly is permanently encased in a compact, UV-stable radome, making it ideal for concealed vehicle tracking applications.

• Pre

Features

- Preselection filter for outstanding interference rejection
- · Rugged, low profile housing for minimum visibility
- · Two gain options for GPS system adaptability
- ESD/Reverse Polarity/Transit voltage protection



Electrical Specifications (Filter/LNA)

Housing: Black, UV-stable plastic
Amplifier Gain without Antenna Element and Cable: 35 dB +/-4 (AGPSHP35MM) 16 dB +/-3 (AGPSHP16MM)
Noise Figure (25°): 1.8 typical
Voltage: 3-5.5 V (internal regulated)
DC Current @ 5 Volts: 20 mA Nominal < 35 mA @ -40°C to +85°C (AGPSHP35MM) 20 mA maximum, 5 Vdc, 12 mA typical (AGPSHP16MM)
Filtering: Hybrid (including pre-selector)
Out-of-Band Signal Rejection: -40 dB @ +/-50 MHz typical (AGPSHP35MM) -20 dB @ +/- 50 MHz typical (AGPSHP16MM)
Cable Pull Force: 10 lbf, minimum
Magnet Pull Force: 5 lbf, minimum

Antenna Electrical Specifications (Patch)

Model	Center Frequency	Polarization	Nominal Impedance	VSWR	Gain at Zenith	Axial Ratio
AGPSHP35MM	1575.42 MHz (GPS L1)	Right hand circular	50 ohms	1.5:1 typical	4 dBiC Nominal	3.0 dB typical
AGPSHP16MM	1575.42 MHz (GPS L1)	Right hand circular	50 ohms	1.5:1 typical	4 dBiC Nominal	3.0 dB typical

Mechanical Specifications (both models)

Dimensions (L x W x D)	Weight
2" x 1.77" x .55"	4.09 +/- 0.35 oz

Environmental Specifications (both models)

Operating Temperature Range	Storage Temperature Range	Operating Condition	Storage Condition
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity

Cable:

Connector:

17 ft RG-174/U

Mounting Method:

Male SMA (attached) standard

2 built-in rare earth Nd magnets

AGPS26GMMSMA - 26 dB Gain GPS L1 Glass Mount Antenna

The AGPS26GMMSMA glass mount global positioning system (GPS) antenna utilizes an electrically shielded LNA PCB assembly and ceramic filter designed to to provide high out-of-band rejection for optimal integration in multi-band installations. The assembly is permanently encased in a compact, UV-stable radome, making it ideal for concealed vehicle tracking applications.

Features

- Outstanding interference rejection
- High bond tape for vehicle windshield glass installation
- Rugged, low profile housing for minimum visibility
- 26 dB gain
- · ESD protection

Electrical Specifications (Patch)

Center Frequency	Polarization	Nominal Impedance	VSWR	Gain at Zenith	Axial Ratio
1575.42 MHz (GPS L1)	Right hand circular	50 ohm	1.5:1 typical	3 dBiC Nominal	< 3 dB @ boresight

Mechanical Specifications

Hous	ing	Housing Dimensions	Mounting Method	Cable	Connector
Black, U\ plas		2.22 x 1.97 x.59 inches (L x W x D)	High Bond tape for glass mounting	17 feet RG-174/U	Male SMA (attached)

Environmental Specifications

Operating Temperature Range	Storage Temperature Range	Operating Condition	Storage Condition	High Bond Tape Specifications
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C temperature 10 to 95% RH humidity	-40°C to +85°C temperature 10 to 95% RH humidity	Conformable foam Acrylic adhesive Moisture and Solvent resistant High Shear and peel adhesion



Electrical Specifications (Filter/LNA)

Center Frequency: 1575.42 +/-1 MHz (GPS L1)
Amplifier Gain without Antenna Element and Cable: 26 dB +/-3
Nominal Impedance: 50 ohm
Noise Figure (25°): 1.8 typical
VSWR: 1.5:1 typical
Voltage: 3-5 V (regulated)
DC Current @ 5 Volts: 20 mA Nominal < 30 mA @ -40°C to +85°C (Filter Out-Of- Band)
Filtering: Hybrid (including pre-selector)
Out-of-Band Signal Rejection: 40 dB @ +/-50 MHz typical



32000 Series



Technical Data

Polarization: Right hand circular	
Input Impedance: 50 ohms	
VSWR: 1.5:1 typical	
Axial Ratio: <3 dB @ boresight	
Radome Color: Black	
RF Cable: 17 ft RG-174	
Mount Method: Through-hole for 1-inch diameter mounting holes	

For detailed specifications, visit http://antenna.pctel.com.

Low Profile GPS L1 Through-Hole Mount Antennas

These GPS vehicle tracking antennas feature light, low profile housings that are highly adaptable for vehicle tracking or marine navigation applications. Their radome is molded from high grade polymer resin for UV and abrasion maximum resistance under severe environmental conditions. These antennas utilize an electrically shielded LNA PCB assembly and ceramic filter designed to provide high out-of-band rejection for optimal integration in multi-band installations.

Low Noise Amplifier Specifications

Model	Frequency Band	Amplifier Gain	Nominal Impedance	Output VSWR
3226MSMA	1575.42 MHz (GPS L1)	26 dB +/-3	50 ohms	1.5:1 typical
3226MC	1575.42 MHz (GPS L1)	26 dB +/-3	50 ohms	1.5:1 typical
3235MSMA	1575.42 MHz (GPS L1)	34 dB +/-4	50 ohms	1.5:1 typical
3235MC	1575.42 MHz (GPS L1)	34 dB +/-4	50 ohms	1.5:1 typical

Model	DC Current	DC Voltage	Noise Figure	Filtering	Out-of-Band Rejection
3226MSMA	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz
3226MC	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz
3235MSMA	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz
3235MC	20 mA Nominal < 30 mA @ -40°C to +85°C	3 - 13.5 V	1.8 typical	Hybrid (including pre-selector)	> 40 dB @ +/-50 MHz

Antenna Electrical Specifications

Model	Frequency	Gain
3226MSMA	1575.42 MHz (GPS L1)	+3.5 dBiC Nominal
3226MC	1575.42 MHz (GPS L1)	+3.5 dBiC Nominal
3235MSMA	1575.42 MHz (GPS L1)	4 dBiC Nominal
3235MC	1575.42 MHz (GPS L1)	4 dBiC Nominal

Mechanical Specifications

Model	Dimensions	Weight (Mass)	Connector Options
3226MSMA	2.5" OD x 0.5" D	25 grams	Male SMA plug
3226MC	2.5" OD x 0.5" D	25 grams	Male TNC
3235MSMA	2.5" OD x 0.5" D	25 grams	Male SMA plug
3235MC	2.5" OD x 0.5" D	25 grams	Male TNC

Environmental Specifications

Temperature Range	Humidity	Mechanical Shock	Fluid Shower
-40°C to +85°C (operating)	95%	25 g maximum	Water, salt mist, windshield wiper fluid Detergent with wax: no degradation

Glass Mount Antennas



APDM5920U, vertical installation. The antenna can also be installed horizontally.



Technical Data

Maximum Power: 10 watts
Polarization: Linear, horizontal or vertical
Nominal Impedance: 50 ohms
VSWR: < 2.0:1
Radiator Material: ABS
Coax Cable: 10 ft RG-174/U cable (bottom fed)
Connector SAP (female FME)
Mounting Method: Normount® Z500 tape

For detailed specifications, visit http://antenna.pctel.com.

Inside Window Glass Mount

This vertical or horizontal polarization antenna is designed for inside glass mount installations operating in the 800 MHz cellular, 900 MHz trunking, 1800 MHz DCS and 1900 MHz PCS bands without the need for tuning. Its tape mount easily attaches to a vehicle's windshield or other glass surfaces making the antenna ideal for public safety or other applications requiring an unobtrusive design.

Features

- Quad Band covers 800 MHz cellular, 900 MHz trunking, 1800 MHz DCS, and 1900 MHz PCS
- Low Profile "sleek" appearance blends well with car dash interior
- Efficient simple mounting method allows installation in minutes without holes
- Economical one antenna serves the function of four, minimizing installation and inventory requirements
- Antenna can be oriented vertically or horizontally for maximum installation flexibility

Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APDM5920U	824-960/1710-1990 MHz	Unity	136/280 MHz

Mechanical Specifications

Model	Antenna Dimensions
APDM5920U	0.5" D x 5.9" L

Normount® is a registered trademark of Norton, a Saint-Gobain Co.

"On-Glass" Dual Band, Window Mount 3 dB Gain Antennas

Our "On-Glass" Premium antennas have been precision engineered to provide optimal coverage for both iDEN and PCS frequencies in a low profile antenna design. They are available with various connector options.

Features

- Precision Engineered 3 dB performance at all specified frequencies in smaller footprint for minimal visual obstruction
- Flexible Foot firmly adheres to curved glass surfaces for secure vehicular installations
- Patented Whip Design special phasing coil achieves in-phase signal transmission and reception using 2 collinear elements at both frequencies
- High Performance patented coupling box provides maximum efficiency while PRO-FLEX™ PLUS 195 cable minimizes loss
- Convenient install only one antenna to cover all 800/900 MHz and PCS frequencies, minimizing installation time and costs
- Frequency Tuned Design optimum performance with no field tuning required
- Straked Whip for reduced wind noise and better RF reception



Model	Frequency Range	Bandwidth	Gain
APDM928M	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928S	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928T	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928U	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB
APDM928PCS	806-960/1850-1990 MHz	154 MHz/140 MHz	3 dB/3 dB

Mechanical Specifications

Model	Connector	Antenna Height
APDM928M	Mini-UHF male	14"
APDM928S	SMA male	14"
APDM928T	TNC male	14"
APDM928U	SAP	14"
APDM928	None	14"
APDM928PCS	SAP with Mini-UHF and TNC adapters	14"





Technical Data

Maximum Power: 10 watts
Nominal Impedance: 50 ohms
VSWR: <1.9:1
Radiator Material: 0.090" 300 series stainless steel with black DURA-COAT™ finish
Cable: 15 ft PRO-FLEX™ PLUS 195 cable
Mount Method: Glass mount

For detailed specifications, visit http://antenna.pctel.com.



APDM928.1 Series

U.S. Patent No. 4,839,660 and 6,215,241 B1 and other patents pending



Technical Data

Maximum Power: 10 watts
Nominal Impedance: 50 ohms
VSWR: <1.9:1
Radiator Material: 0.39" flexible plastic
Coax Cable: 15 ft PRO-FLEX™ PLUS 195 cable
Whip Length: 4 inches
Mounting Method: Glass mount

For detailed specifications, visit http://antenna.pctel.com.

"On-Glass" Dual Band Window Mount Quarter Wave Antennas

Our "On-Glass" unity gain quarter wave antennas provide optimal coverage of both iDEN and PCS frequencies in very compact design for minimum visibility. They are available with several connector options.

Features

- Sleek Appearance smaller footprint provides minimum visual impact
- Low Profile short quarter wave design for localized urban areas where higher gain may not be required
- Flexible Foot improved design adheres better to curved glass surfaces
- Frequency Tuned Design optimum performance with no field tuning required
- High Performance patented coupling box provides maximum efficiency while PRO-FLEX™ PLUS 195 cable minimizes loss
- Economical one antenna serves the function of two, minimizing installation time and inventory requirements

Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APDM928.1N	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1PC	S 806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1T	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz
APDM928.1U	806-960/1850-1990 MHz	Unity/Unity	154 MHz/140 MHz

Mechanical Specifications

Model	Connector
APDM928.1M	Mini-UHF male
APDM928.1PCS	Female FME with Mini-UHF and TNC adapter
APDM928.1T	TNC male
APDM928.1U	FME

Our "On-Glass" 3 dB antennas provide optimal coverage of 800 and 900 MHz frequencies with outstanding VSWR performance of <1.5:1. Their patented mount design features a compact coupling box and flexible foot that transmits and receives through glass without holes while firmly adhering to curved glass surfaces.

Features

- Flexible Foot improved design adheres better to curved glass surfaces on today's automobiles
- Optimum Performance a typical VSWR of less than 1.5:1 across the specified frequencies
- Frequency Tuned Design optimal performance in virtually every installation with no tuning required
- Hand-adjustable Whip constant tension keeps whip vertical during normal use, yet whip can be folded down quickly and easily before entering a car wash, without using tools. Whip removal is not required
- Models available with open or enclosed coil straked whips

Technical Data



10 watts (all models except APR series) 35 watts (APR models)

Nominal Impedance: 50 ohms

VSWR:

< 1.5:1

Radiator Material:

Stainless steel, black DURA-COAT™ finish

Base: Polyurethane molded foot with brass insert and stainless steel hardware

Coax Cable: 15 ft PRO-FLEX™ PLUS 195

Whip Length:

Approximately 13" (APD876.3 models)

14.7" (APD873.3 models)

12.7 inches (APR models)

Mounting Method: Glass mount

For detailed specifications, visit http://antenna.pctel.com.



APR852.3 Series U.S. Patent No. 4,238,799



Glass Mount Antennas

Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
APR852.3	806-869 MHz	3 dB	63 MHz
APR852.3M	806-869 MHz	3 dB	63 MHz
APR852.3N	806-869 MHz	3 dB	63 MHz
APR852.3P	806-869 MHz	3 dB	63 MHz
APR852.3T	806-869 MHz	3 dB	63 MHz
APD873.3M	824-896 MHz	3 dB	70 MHz
APD873.3T	824-894 MHz	3 dB	70 MHz
APD876.3M	824-894 MHz	3 dB	70 MHz
APD876.3T	824-894 MHz	3 dB	70 MHz
APXD873.3M	824-894 MHz	3 dB	70 MHz
APXD873.3T	824-894 MHz	3 dB	70 MHz
APXD876.3M	824-894 MHz	3 dB	70 MHz
APRG852.3M	890-960 MHz	3 dB	70 MHz
APRG852.3N	890-960 MHz	3 dB	70 MHz
APRG852.3T	890-960 MHz	3 dB	70 MHz
APRG852.3U	890-960 MHz	3 dB	70 MHz

Mechanical Specifications

Model	Connector	Whip Style
APR852.3	No connector	Open
APR852.3M	Mini-UHF male	Open
APR852.3N	N male	Open
APR852.3P	UHF male	Open
APR852.3T	TNC male	Open
APD873.3M	Mini-UHF crimp	Open
APD873.3T	TNC Male crimp	Open
APD876.3M	Mini-UHF crimp	Enclosed-straked
APD876.3T	TNC Male crimp	Enclosed-straked
APXD873.3M	Mini-UHF attached	Open
APXD873.3T	TNC Male attached	Open
APXD876.3M	Mini-UHF attached	Enclosed-straked
APRG852.3M	Mini-UHF male	Open
APRG852.3N	N male	Open
APRG852.3T	TNC male	Open
APRG852.3U	SAP (female FME)	Open

"On-Glass" Unity Gain Window Mount Antennas

These antennas feature patented "On-Glass"® technology that permits RF transmission and reception through glass. They utilize DUO-BOND™ mounting that permits installation without holes, providing a complete seal against moisture and long lasting holding power.

Features

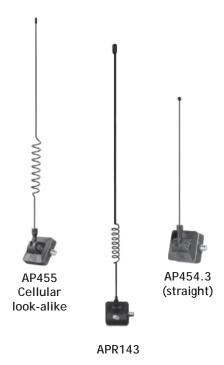
- Unique patented "On-Glass" ** technology transmits and receives through glass
- Efficient DUO-BOND™ mounting method allows no-hole installation in minutes, with long-lasting holding power
- Weather Proof water cannot enter vehicle through gasket failure or cable channels
- · Effective mounts high in the vehicle for optimal omnidirectional coverage
- Convenient whip is easily adjustable to vertical position and is removable for car wash clearance
- Disguise cellular look-alike models available for covert public safety applications



Model	Frequency Range	Gain
APR143	138-174 MHz	Unity
APS151	144-174 MHz	Unity
APR153	150-174 MHz	Unity
APR152	150-174 MHz	Unity
AP454.3	410-512 MHz	Unity
AP455	440-470 MHz	Unity

Mechanical Specifications

Model	Connector	Antenna Height from Mounting Surface	Rod Type
APR143	PL-259 attached	20.7" perpendicular	Coil
APS151	PL-259 attached	20.7" perpendicular	Coil
APR153	PL-259 attached	19.8" perpendicular	Open Coil
APR152.3	PL-259 attached	23.7" perpendicular	Straight Whip
AP454.3	UHF male on cable	8"	Straight
AP455	UHF male on cable	18"	Coil





Technical Data

Maximum Po 50 watts	wer:
Normal Impe	edance:
VSWR: < 1.5:1	
17-7PH sta	terial: teel, black DURA-COAT™ finish ninless steel encapsulated il (AP454.5)
Coax Cable: 15 ft RG-5	(if included): 8/U
	ounting Footprint: are (APR models)
Coupling Un DC ground	it: ed, shunt-fed
COAT™ fin	ethod: " mount with black DURA- ish and stainless steel hardware c ABS cover

For detailed specifications, visit http://antenna.pctel.com.

Glass Mount Antennas





Technical Data

Maximum Power: 10 watts
Nominal Impedance: 50 ohms
VSWR: < 1.9:1
Radiator Material: 17-7 stainless steel with DURA-COAT™ finish
Coax Cable: 16.5 ft RG-58/U
Connector: Sold separately
Mounting Method: Polyurethane molded foot with brass insert and stainless steel hardware

For detailed specifications, visit http://antenna.pctel.com.

No Ground Plane Quarter Wave Antennas

This quarter wave antenna features patented "On-Glass" [®] technology that permits RF transmission and reception through glass. It covers 380-474 MHz TETRA frequencies with no field tuning required. It features DUO-BOND™ mounting that permits installation without holes, providing a complete seal against moisture.

Features

- Unique patented "On-Glass" technology transmits and receives through glass
- Weather Proof water cannot enter vehicle through gasket failure or cable channels
- Effective mounts high in the vehicle for optimal omnidirectional coverage
- Broadband requires no field tuning across the entire TETRA range of frequencies
- Efficient simple mounting method allows no-hole installation in minutes with long lasting holding power.

Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth
AP354	380-474 MHz	Unity	94 MHz

Mechanical Specifications

Model	Whip Length	
AP354	10 inches	

Reinstallation Kits and Coupling Box Packs

Part Number	Description	Antenna Series
KAV353//5PCK	Reinstallation kit for all VHF glass mount antennas, pack of 5	APR143, APR153, APR152.3 SERIES
KAV377//5PCK	Reinstallation kit for "On-Glass"® antennas, pack of 5	APR874.3, APD873.3, APD876.3, APDM927, AP-454, AP455, APR143, APR152.3, APR153, ASP151, APR-852, APRG-852
KAV398//5PCK	Reinstallation base and swivel, pack of 5	APDM928
K93001//10PCK	Reinstallation tape, pack of 10	APR852.3, APA874.3, APD873.3, APRG852.3, APD876.3, APDM927, AP354, APR143, APR152.3, APR153
KCB354//5PCK	Replacement Box, 380-474 MHz, pack of 5	AP354
KCB454//5PCK	Replacement Coupling Box, 410-512 MHz, pack of 5	AP454
KCB852//5PCK	Replacement Coupling Box, 806-869 MHz, pack of 5	APR852
KCB876//5PCK	Replacement Coupling Box, 824-894 MHz, pack of 5	APD876
KCB928//5PCK	Replacement Coupling Box, 806-960 MHz and 1850-1990 MHz, pack of 5	APDM928



KAV353//5PCK



KAV377//5PCK



KAV398//5PCK



K93001 Tape//10PCK



KCB354 with Counterpoise Tape



KCB454



KCB852//5PCK



KCB876



KCB928

Reinstallation Kits & Coupling Boxes



MDF150/450

VHF/UHF Dual Band Coupler

Designed for use in dual matched systems or with dual band antennas. The MDF150/450 allows the simultaneous operation of a VHF/UHF transceiver with dual antennas or the operation of separate radios with a single antenna. The coupler splits the signal and directs the RF energy to the proper channel while providing excellent (55 dB) isolation to the unused port.

Features

- · Heavy duty electroplated steel housing
- High Q silver plated inductors for minimum RF loss
- Multiple stage filter design provides 55 dB isolation between ports
- Ideal for use with MAXRAD dual band antennas or with separate antennas

PCTEL

Technical Data

Maximum Power:

150 watts through proper port with antenna port termination at 50 ohms for both bands

Impedance:

50 ohms nominal at all ports

VSWR:

Less than 1.5:1 through usable bands

Construction:

Electroplated steel; bright chrome finish housing

Suppression:

55 dB @ 150 MHz; 55 dB nominal at 450 MHz

Insertion Loss:

<.4 dB through frequency band of operations

Connectors:

SO-239 (mates with PL259)

For detailed specifications, visit http://antenna.pctel.com.

Antenna Electrical Specifications

Model	Frequency Range
MDF150/450	VHF Port: 144-174 MHz UHF Port: 406-512 MHz

Mechanical Specifications

Model	Dimensions
MDF150/450	1-5/16" x 5 3/4" x 2"

Stainless Steel "M" Series

3/4" hole; 1-1/8"-18 thread; installs from above





SM

Connectors are shipped loose. Connectors may be attached upon request for an additional charge.

Mobile Mounts



NMO

NMO Style Series with Gold Contact Pin and Brass Nut Ring Mount

3/4" hole; 1-1/8"-18 thread; installs from above (NMO brass mount series replaces the Brass "BM" Series)

Model	Length of Coax	Coax	Connector	Туре	Former Part
NMO58AU-NC	17′	RG-58A/U	None	N/A	BM-NC, BMSU-NC
NMO34	17′	N/A	None	N/A	BM34, BM34800
NMOPFP195-NC	17′	Pro-Flex™ Plus 195	None	N/A	BMML195-NC
NMO58U-NC	17′	RG-58/U	None	N/A	BMCU-NC, BMC-NC
NMO58UBN	17′	RG-58/U	BNC	Crimp	BMBN
NMO58UFFME	17′	RG-58/U	Female FME*	Crimp	BMFFME
NMOPFP195FFME	17′	Pro-Flex™ Plus 195	Female FME*	Crimp	BMML195FFME
NMO58UMSMA	17′	RG-58/U	Male SMA	Crimp	BMMSMA
NMOPFP195MSMA	17′	Pro-Flex™ Plus 195	Male SMA	Crimp	BMML195MSMA
NMO58UNCP	17′	RG-58/U	N	Crimp	BMNCP
NMO58UNSO	17′	RG-58/U	N	Solder	BMNSO
NMOPFP195RPC	17′	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp	BMML195RPC
NMO58UTSP	17′	RG-58/U	Teflon PL259	Solder	BMP
NMO58AUSP	17′	RG-58A/U	PL259	Solder	BM, BMSP
NMO58AUCP	17′	RG-58A/U	PL259	Crimp	BMCP
NMO58UCP	17′	RG-58/U	PL259	Crimp	BMCU
NMOPFP195CP	17′	Pro-Flex™ Plus 195	PL259	Crimp	BMML195
NMO58UCP	17′	RG-58/U	PL259	Crimp	BMPCP
NMOPFP195C	17′	Pro-Flex™ Plus 195	TNC	Crimp	BMML195C
NMO58UC	17′	RG-58/U	TNC	Crimp	BMC
NMOPFP195PL	17′	Pro-Flex™ Plus 195	Mini-UHF	Crimp	BMML195PL
NMO58UPL	17′	RG-58/U	Mini-UHF	Crimp	BMPL, BMSUPL
NMO58AUPL	17′	RG-58A/U	Mini-UHF	Crimp	BMSPL
NMOWTC	17′	RG-58 Teflon	TNC	Crimp	BMFC

^{*} Connectors are attached on these models only. For all other models, connectors are shipped loose. Connectors may be attached upon request for an additional charge.

BRASS "BMA" Series

 $3/8\ensuremath{^{\prime\prime}}$ or $3/4\ensuremath{^{\prime\prime}}$ hole; 1-1/8\ensuremath{^{\prime\prime}}-18 thread; installs from above; can be used for metal thickness up to 1/8\ensuremath{^{\prime\prime}}





BMA

^{*} Connectors are shipped loose. Connectors may be attached upon request for an additional charge

^{**} This mount installs from below.

Mobile Mounts



K166



ASP3



K44/5PCK



K45/5PCK

K and ASP3 Mounts

3/4" Hole Rooftop Mounts for 800 MHz "Male-Female Contact" Antennas

Model	Length of Coax	Coax	Connector
K166M	17′	RG-58/U	Mini-UHF crimped
K166MTT	25′	RG58/U	Mini-UHF crimped
K166T	17′	RG-58/U	TNC male crimped
KD166N	17′	Pro-Flex™ Plus 195	N male crimped
KD166T	17′	Pro-Flex™ Plus 195	TNC male crimped
KD166M	17′	Pro-Flex™ Plus 195	Mini-UHF male
KE166U	17′	Pro-Flex™ Plus 195	FME Female
KE166M	17′	Pro-Flex™ Plus 195	Mini-UHF
KE166UMT	17′	Pro-Flex™ Plus 195	FME Female**
KEX166	17′	Pro-Flex™ Plus 195	None
KE166N	17′	Pro-Flex™ Plus 195	N male crimped
KE166-NC	17′	Pro-Flex™ Plus 195	Mini-UHF

3/4" Hole Rooftop Mounts for A/S Low Profile Antennas

Model	Description	Length of Coax	Coax	Connector
ASP3	Standard Professional Cast Aluminum Swivel Base, 3/8"-24 Threaded Hole	N/A	None	None

3/8" Snap-In Rooftop Mount for Quarter Wave Antennas

Model Length of Coax		Coax		Connector
K44//5P0	CK N/A	Sold Separately		None
Model	Description	Length of Coax	Coax	Connector
3/8" Hole Snap-In Rooftop Mount K45//5PCK Pack of 5 adapters for Rooftop Mounts		N/A	N/A	N/A

^{*} Connectors are shipped loose. Connectors may be attached upon request for an additional charge

^{**} Plus MINI-UHF to FME and TNC to FME adapter loose

High Frequency Mounts

3/4" hole; 1-1/8"-18 thread; Crimp on

Model	Mount Type	Coax	Connector
MMF	Permanant microwave mount for frequencies from 800 MHz to 3.0 GHz for 0" to .06" thick roof surfaces.	None	Male SMA*
MHFML195C	Permanant microwave mount for frequencies from 3.0 GHz to 5.8 GHz	17 ft. Pro-Flex™ Plus 195	Loose TNC male standard. Contact factory for other connector options.
GMHFML195C	Magnetic base microwave mount for frequencies from 3.0 GHz	12 ft. Pro-Flex™ Plus 195	Attached TNC male standard. Contact factory for other connector options.
MLFML195C	Permanent mount for frequencies from 800 MHz to 3.0 GHz	17 ft. Pro-Flex™ Plus 195	Loose TNC male standard. Contact factory for other connector options.
MHFPFP240C	Permanent mount for frequencies from 800 MHz to 3.0 GHz	17 ft. Pro-Flex™ Plus 240	Loose TNC male standard. Contact factory for other connector options.
GMHFPFP240C	Magnetic mount for frequencies from 800 MHz to 3.0 GHz	12 ft. Pro-Flex™ Plus 240	Loose TNC male standard. Contact factory for other connector options.
GMLFML195C	Magnetic base mount for frequencies from 800 MHz to 3.0 GHz	12 ft. Pro-Flex™ Plus 195	Attached TNC male standard. Contact factory for other connector options.



5/8" hole; 1-1/8"-18 thread; Crimp on

Model	Mount Type	Coax	Connector
МТРМНЕ	Permanant microwave mount for frequencies from 3.0 GHz to 5.8 GHz. For surfaces up to 1-inch thick.	None	N female* connector
MVPHF	Vandal-proof microwave mount for frequencies from 3.0 GHz to 5.8 GHz. For surfaces up to 1/2-inch thick.	None	M to N female* connector

^{*} Cable assembly with mating connector sold separately.





MHFML195C



GMHFML195C



MLFML195C



MHFPFP240C



GMLFML195C





MTPMHF

Mobile Mounts





K794 Series

Thick Surface Mounts - BMATM Series

3/8" or 3/4" hole; 1-1/8"-18 thread; thick plate; installs from below; can be used for metal thickness to 3/16"

Model	Length of Coax	Coax	Connector	Туре
BMATM-NC	17′	RG-58/U	None	N/A
BMATMML195NC	17′	Pro-Flex™ Plus 195	None	N/A
BMATM	17′	RG-58/U	PL259	Solder
BMATMCP	17′	RG-58/U	PL259	Crimp
BMATMC	17′	RG-58/U	TNC	Crimp
BMATMFC	17′	RG-58 Teflon	TNC	Crimp
BMATMMSMA	17′	RG-58/U	Male SMA	Crimp
BMATMNSO	17′	RG-58/U	N	Solder
BMATMPL	17′	RG-58/U	Mini-UHF	Crimp
BMATMFPL	17′	RG-58 Teflon	Mini-UHF	Crimp
BMATMMFME	17′	RG-58/U	Male FME*	Crimp
BMATMFFME	17′	RG-58/U	Female FME*	Crimp
BMATM38	N/A	None	None	N/A

^{*} Connector is installed on these mounts only. For all other mounts, connectors can be attached for an additional charge.

3/4" Hole Mount for up to 1/2" Thick Roof Thickness

Model	Length of Coax	Coax	Connector
K794	17′	RG-58/U	None
KE794	30′	RG-58/U	None

^{*} Connectors are shipped loose. Connectors may be attached upon request for an additional charge

Thick Surface Mounts - BMATM3 Series

3/8" hole; 1-1/8"-18 thread; thick plate; can be used for metal thickness of 1/32"-1/2"

Model	Length of Coax	Coax	Connector	Туре
BMATM338	N/A	None*	None	N/A
BMATM3-NC	17′	RG-58/U	None	N/A
BMATM3CP	17′	RG-58/U	PL259	Crimp
BMATM3	17′	RG-58/U	PL259	Solder
BMATM3MSMA	17′	RG-58/U	Male SMA	Crimp
BMATM3PL	17′	RG-58/U	Mini-UHF	Crimp



BMATM338







MTPM



MVP

MTPM Series

5/8" hole; 1-1/8"-18 thread; thick plate mount; can be used for metal thickness of up to 1 inch. MTPM800 accommodates thickness up to 1/2 inch.

Model	Coax	Connector
MTPM	None*	UG363/U
MTPM800	None*	N Female
MTPMHF	None	N female

MVP/Vandal Proof Mount

5/8" hole; 1-1/8"-18 thread; thick plate mount; can be used for metal thickness up to 1/2 inch.

Model	Mount Type	Coax	Connector
MVP	Vandal-proof permanent mount for frequencies under 3 GHz. Accomodates surfaces up to 1/2-inch thick.	None*	M to N Female
MVPHF	Vandal-proof microwave mount for frequencies from 3.0 GHz to 5.8 GHz. For surfaces up to 1/2-inch thick.	None*	M to N Female

^{*} Cable assembly with mating connector sold separately.



G

G Magnetic Mount Series

Black or chrome 3-1/4" diameter magnetic mount; 1-1/8"-18 thread

Model	Length of Coax	Coax	Connector (attached)	Туре
(R)(B)G-NC	12′	RG-58A/U	None	N/A
(R)(B)GC-NC	12′	RG-58/U	None	N/A
(R)(B)G	12′	RG-58A/U	PL259*	Crimp
(R)(B)GBN	12′	RG-58/U	BNC	Crimp
(R)(B)GC	12′	RG-58/U	TNC	Crimp
(R)GML195C	12′	Pro-Flex™ Plus 195	TNC	Crimp
(R)GP	12′	RG-58/U	Teflon PL259	Solder
(R)(B)GPL	12′	RG-58/U	Mini-UHF	Crimp
RBGFPL	12′	White Teflon	Mini-UHF	Crimp
(R)GML195NCP	12′	Pro-Flex™ Plus 195	N	Crimp
(R)(B)GNCP	12′	RG-58/U	N	Crimp
(R)GML195MSMA	12′	Pro-Flex™ Plus 195	Male SMA	Crimp
(R)GMSMA	12′	RG-58/U	Male SMA	Crimp
(R)(B)GFFME	12′	RG-58/U	Female FME*	Crimp
RGRF240-NC	12′	Pro-Flex™ Plus 240	None	N/A

Note: Connectors are shipped loose. Connectors may be attached upon request for an additional charge.

^{*} This mount uses a small contact button.

⁽B) prefix indicates black option

⁽R) prefix indicates an optional rubber boot

GM Series

Black or chrome, 2-3/8" diameter magnetic mount; 1-1/8"-18 thread

		•		
Model	Length of Coax	Coax	Connector (attached)	Туре
(B)GM-NC	12′	RG-58A/U	None	N/A
(B)GMC-NC	12′	RG-58/U	None	N/A
(B)GMML195-NC	12′	Pro-Flex™ Plus 195	None	N/A
(B)GM	12′	RG-58A/U	PL259	Crimp
(B)GMBN	12′	RG-58/U	BNC	Crimp
(B)GMC	12′	RG-58/U	TNC	Crimp
(B)GMML195C	12′	Pro-Flex™ Plus 195	TNC	Crimp
BGMFFME	12′	RG-58/U	Female FME	Crimp
(B)GMML195MSMA	12′	Pro-Flex™ Plus 195	Male SMA	Crimp
(B)GMMSMA	12′	RG-58/U	Male SMA	Crimp
(B)GMML195NCP	12′	Pro-Flex™ Plus 195	N	Crimp
(B)GMNCP	12′	RG-58/U	N	Crimp
GMSUNCP	12′	RG-58A/U	N	Crimp
GMNF	12′	RG-58/U	Female N	Crimp
(B)GMPL	12′	RG-58/U	Mini-UHF	Crimp







GL Series

Black/chrome, 2-3/8" diameter magnetic mount; 5/16"-24 thread stud

Model	Length of Coax	Coax	Connector (attached)	Туре
GLBN	12′	RG-58/U	BNC	Crimp



(B) prefix indicates black

Note: Connectors are shipped loose. Connectors may be attached upon request for an additional charge.

Mobile Mounts



(B)MBM



TGBWP45

(B)MBM Series

Black or chrome, 1-1/8"-18 thread; mirror bracket mount

Length of Coax	Coax	Connector	Туре
17′	RG-58A/U	None	N/A
17′	RG-58/U	None	N/A
17′	RG-58A/U	PL259	Solder
17′	RG-58/U	BNC	Crimp
17′	RG-58/U	TNC	Crimp
17′	RG-58/U	Mini-UHF	Crimp
	of Coax 17' 17' 17' 17' 17'	of Coax 17' RG-58A/U 17' RG-58/U 17' RG-58A/U 17' RG-58A/U 17' RG-58/U 17' RG-58/U	of Coax Connector 17' RG-58A/U None 17' RG-58/U None 17' RG-58A/U PL259 17' RG-58/U BNC 17' RG-58/U TNC

TGBWP Series

1-1/8"-18 thread; trunk/hood groove bracket mount

Model	Length of Coax	Coax	Connector	Cable Exit Angle	Туре
TGBWP45-NC	17′	RG-58A/U	None	45°	N/A
TGBWP45C-NC	17′	RG-58/U	None	45°	N/A
TGBWP45	17′	RG-58A/U	PL259	45°	Crimp
TGBWP45C	17′	RG-58/U	TNC Plug	45°	Crimp
TGBWP45PL	17′	RG-58/U	Mini-UHF	45°	Crimp
TGBWP45FFME	17′	RG-58/U	Female FME*	45°	Crimp
TGBWP45NCP	17′	RG-58/U	N	45°	Crimp

Prefix "B" indicates black.
*Connectors are attached on these models only. For all other models, connectors are shipped loose. Connectors may be attached upon request for an additional charge.

T Series

1-1/8"-18 thread mount; trunk lid mount

Model	Length of Coax	Coax	Connector	Туре
TTT	N/A	None	None	N/A
T-NC	17′	RG-58A/U	None	N/A
TC-NC	17′	RG-58/U	None	N/A
Т	17′	RG-58A/U	PL259	Solder
TP	17′	RG-58/U	Teflon PL259	Solder
TBN	17′	RG-58/U	BNC	Crimp
TC	17′	RG-58/U	TNC	Crimp
TNCP	17′	RG-58/U	N	Crimp
TPL	17′	RG-58/U	Mini-UHF	Crimp



Т



 BMT_mt

BMT Series

Black 1-1/8"-18 thread; all metal trunk lid mount

Model	Length of Coax	Coax	Connector	Туре
BMT-NC	17′	RG-58A/U	None	N/A
BMTC-NC	17′	RG-58/U	None	N/A
BMTML195-NC	17′	Pro-Flex™ Plus 195	None	N/A
BMT	17′	RG-58A/U	PL259	Solder
BMTBN	17′	RG-58/U	BNC	Crimp
BMTC	17′	RG-58/U	TNC	Crimp
BMTPL	17′	RG-58/U	Mini-UHF	Crimp
BMTML195-NC	17′	Pro-Flex™ Plus 195	Reverse Polarity TNC	Crimp

Connectors are shipped loose. Connectors may be attached upon request for an additional charge.

Mobile Replacement Whips, Rods, Adapters, Connectors

Coaxial Cable Specification Chart

Cable	Inner				Braid	Shield	Capacitance	At	tenuati	on** (c	IB/100	ft)
Туре	Conductor	Outer Jacket	OD	Dielectric Material		Coverage	(pF/ft)	100 MHz	450 MHz	900 MHz	1.6 GHz	2.4 GHz
RG-58/U	Solid	Black PVC	0.195"	Solid Polyethylene	TC	95%	28.50	4.5	10	16	22	28
RG-58A/U	Stranded	Black PVC	0.195"	Solid Polyethylene	TC	95%	30.80	4.9	11.5	20	27	36
RG-58 Teflon ¹	Stranded	White Teflon	0.160"	White Teflon	SC	95%	28.50	3.1	8.1	12.3	21	27
RG-174	Solid	Black PVC	0.110"	Solid Polyethylene	TC	95%	30.08	8.4	20	29.5	41	52
RG-316	Stranded	Brown Teflon	0.110"	White Teflon	SC	95%	26	8	17	25	33	41
RG-213	Stranded	Black PVC	0.405"	Solid Polyethylene	ВС	97%	30.8	2.2	4.7	8	13	17

High Efficiency, Low Loss Coaxial Cable Specification Chart

Cablo	Cable Inner Outer op Dielectric Braid Shield C		Inner Outer Dielectric Braid Shield Capacita		Capacitance		Atten	uation'	* (dB/1	100 ft)			
Туре	Conductor	Jacket	OD	Material	Type	Coverage	(pF/ft)	200 MHz	700 MHz	900 MHz	2.4 GHz	4.9 GHz	5.8 GHz
Pro-Flex™ Plus 100A	Solid	Black PVC	0.110"	Solid Polyethylene	TC	95%	30.8	10.4	20	22.8	39	58	64
Pro-Flex™ Plus 195	Solid	Black PVC	0.195"	Solid Polyethylene	TC	95%	31	5.1	9.8	11.1	19	28	32
Pro-Flex™ Plus 195, White	Solid	White PVC	0.195"	Solid Polyethylene	TC	95%	31	5.1	9.8	11.1	19	28	32
Pro-Flex™ Plus 195, A/U	Stranded	Black PVC	0.195"	Solid Polyethylene	TC	95%	31	6	12	13	22	32	36
Pro-Flex™ Plus 400	Solid	Black PVC	0.405"	Foam Polyethylene	TC	95%	23.9	1.8	3.4	3.9	7	10	11
Pro-Flex™ Plus 240	Solid	Black PVC	0.240"	Foam Polyethylene	TC	95%	23	3.4	6.6	7.5	12.6	18	20

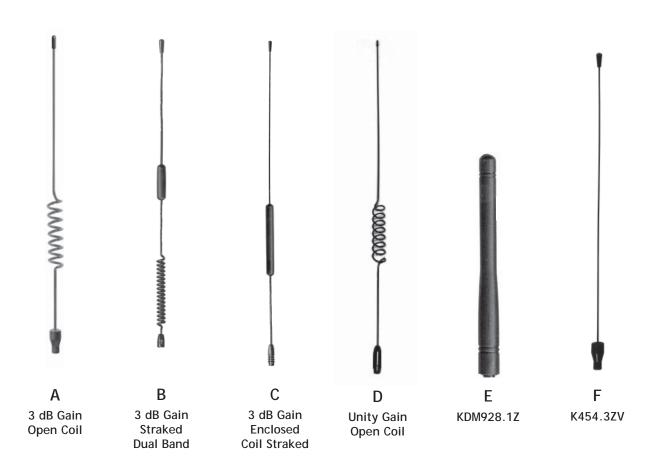
Impedance: 50 ohms

Braid Type: TC = Tinned Copper SC = silver coated copper BC = bare copper

"On-Glass" Whips and Adapters, Packs of 5 units

"On-Glass" Replacement Whips

Model Series	Part Number	Whip Style	Frequency
APR852	KR852Z//5PCK	А	806-869 MHz
APDM928	KDM928Z//5PCK	В	iDEN/PCS
APD876.3	KD876Z//5PCK	С	Cellular
APR153	KAVR153Z (sold as a unit)	D	150-174 MHz
APDM928.1	KDM928.1Z//5PCK	E	iDEN/PCS
AP454.3	K454.3Z//5PCK	F	410-512 MHz



Mobile Shock Springs, Antenna Springs and Coils





















Mobile	Snock	Spr	ings

Model	Description
MAXS//5PCK	5/16-24, Max base spring, chrome, pack of five
MQS	Shock spring for MLB3001
MS//5PCK	Chrome coil spring, pack of five

Mobile Antenna Springs and Coils for Antenna Specialists®

Part Number	Description	Antenna Series
K223//5PCK	Replacement spring with 1/4"-20 female bottom thread. Accepts 0.125" diameter whips, pack of five	ASPR7495
KR723//5PCK	DURA-FLEX® noiseless elastomer spring for UHF low profile gain antennas with 1/4"-20 female bottom thread. Accepts 0.125" diameter whips, pack of five	UHF low profile gain antennas
KR726//5PCK	DURA-FLEX® noiseless elastomer replacement spring for VHF, low profile antennas with 1/4"-20 female bottom thread. Accepts 0.100" diameter whips, pack of five	ASP7455, ASPH7455, ASP7795



BTGB34



BMMB38



Miscellaneous Mobile Accessories

Model	Description
	•
BMMB34	3/4" mirror mount, black
BMMB38	3/8" mirror mount, black
BNUT//20PCK	3/4" brass nut, 20 pack set
CNUT//20PCK	Bright chrome mount nut for 1/4 wave, 20 pack set
MANUT//100PCK	Nut and O-ring for 3/8" mounts, 100 pack set
ORNG//100PCK	O-ring for 3/4 mounts, 100 pack set
BTGB34	3/4" "L" bracket, black
MAX//5PCK	Max Base, contact washer, 5 pack set
MMB34	3/4" mirror mount, chrome
MMGSK	Seal gaskets, fit around 3/4" mount nut, 6 pack set
MRC//25PCK	Chrome rain cap, 25 pack set
TGB34	3/4" hole "L" bracket, chrome
MAB//100PCK	Antenna ball/set screw for MFT120, package of 100
MNFA//5PCK	M mount to N female adapter, package of 5

Replacement Rods

Replacement Coils

Antenna	Replacement
Model	Rod #
ASP7455	. KR731//5PCK
ASPB76552	
ASPC76553	. KRC7243//5PCK
ASPC201	. K42//5PCK
MHB5800	. MATH//5PCK
MHB5800132	. MATH132//5PCK
MHB5802	. MATH//5PCK
MHBDC5800	. MATH//5PCK
MLB2700	. MATH//5PCK
MLB3000	. MATH//5PCK
MLB3001	. MAR96
MLB3400	. MATH//5PCK
MLB4000	. MATH//5PCK
MLB4700	. MATH//5PCK
MLB6600	. MATH//5PCK
MLBDC2700	. MATH//5PCK
MLBDC3000	. MATH//5PCK
MLBDC3400	. MATH//5PCK
MLBDC3700	. MATH//5PCK
MLBDC4000	. MATH//5PCK
MLBDC4500	. MATH//5PCK
MLBDC4700	
MMC150	. MATH//5PCK
MUF4505	. MUB450//5PCK
MUF4505NGP	. MUB450NGP//5PCK
ASP76551	. KR724//5PCK
ASPRDM1994	. KRDM1994Z//5PCK

Antenna Model	Replacement Coil #
ASP7455	K725//5PCK
ASP76551	K722//5PCK
MHB1520	MAT1520//5PCK
MHB5800	MAT58//5PCK
MHB5802	MAT582//5PCK
MLB2700	MAT27//5PCK
MLB3000	MAT30//5PCK
MLB3001	MAT3001
MLB3400	MAT34//5PCK
MLB4000	MAT40//5PCK
MLB4700	MAT47//5PCK
MLB6600	MAT66//5PCK
MUF4065	MAT406
MUF4505	MAT450//5PCK
MUF4505NGP	MAT450NGP//5PCK
MWB1320	MATMWB//5PCK
MWV1322	MATMWV//5PCK
MWV1322HD	MATMWVHD//5PCK

Miscellaneous Mobile Accessories

Part Number	Description
K34/25*	3.75" (95.2 mm) diameter rubber plug for covering 1-5/16" (33.3 mm) hole after antenna removal.
K35/25*	1.5" (38.1 mm) diameter rubber plug for covering 3/4" (19.1 mm) hole after antenna removal.
K37/25*	1.25" (31.8 mm) diameter rubber plug for covering 3/8" (9.5 mm) hole after antenna removal.
K39/25*	1.5" (38.1 mm) diameter rubber plug for covering 7/8" (22.2 mm) hole after antenna removal.
K67	Ground plane kit for fiberglass-bodied vehicles. Complete with instructions and sufficient adhesive backed foil for one lowband/VHF or six UHF ground planes (3" x 44'). Includes metal clips for circuit continuity.
K115	Handy clip for quick-action fastening down of long whips when not in use. Attaches with single clamp to gutter; no hole in vehicle. Durable plastic insulator.
K332	Ground plane disk provides ground plane for fiberglass-bodied vehicles.



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PCTEL, Inc. WEB: www.antenna.pctel.com

^{*} Package of 25.