

### Mast Mount Omnidirectional (MMO) Antennas

The MMO series base antenna provides outstanding coverage in a rugged U.V. stable, plastic radome with an aluminum base that is ideal for indoor or outdoor applications.

#### Features

- The MMO24005PTRPC provides a broad elevation pattern antenna radiation pattern that has been shaped to direct energy where it is needed, while suppressing the misdirected upper and lower sidelobe energy.
- Pipe mount is included for added convenience.
- Multiple band coverage supports 2.4 GHz and 5.15-5.8 GHz broadband networks, eliminating the need for a second or third antenna in POP locations where mounting space is limited or costly. (MMO24580608 model).
- Optimized elevation pattern, minimizes misdirected energy by suppressing sidelobe energy and directing the radiated energy towards the desired area of coverage.



Multiple band MMO24580608 omnidirectional antenna

#### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	H-plane Beamwidth	E-plane Beamwidth
MMO24005PTNF	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24005PTNM	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24005PTRPC	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24005PT36NF	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24005PT36RPBN	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24005PT36RPC	2.4-2.485 GHz	5.5 dBi +/-0.5	360°	32°
MMO24580608NF	2.4-2.48/ 5.15-5.85 GHz	6 dBi/ 8 dBi	360°	22°/ 15°

#### Mechanical Specifications

Model	Antenna Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plane Area
MMO24005PTNF	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24005PTNM	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24005PTRPC	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24005PT36NF	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24005PT36RPBN	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24005PT36RPC	11.3" (287 mm)	0.5 lbs (0.23 kg)	2.2 ft-lbs	4.6 lbs	0.5 ft <sup>2</sup>
MMO24580608NF	26" (660.4 mm)	0.50 lbs (0.226 kg)	11.5 ft-lbs	10.6 lbs	0.12 ft <sup>2</sup>



#### Technical Data

<b>Maximum Power:</b> 25 watts
<b>Polarization:</b> Vertical linear
<b>Normal Impedance:</b> 50 ohms
<b>VSWR:</b> < 1.5:1 (MMO24005 series) < 2.0:1 (except MMO24005 series)
<b>Wind Survival:</b> 125 mph
<b>Radome Material:</b> White UV stable plastic
<b>Connector:</b> N female or N male. 12" or 36" RG-58/U pigtail with RP-TNC plug connector (MMO24005 series only). Other connector options available (MMO24005 series only).
<b>Mounting Method:</b> Pipe mount (included). MMOD Diversity mount bracket for MMO24005PTRPC (optional).

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



MFB49009 MFB58009 MFB24012



Vented System



MMK1924



MMK8A



MFB24004  
with MMK11



MMK12

## MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

These wireless broadband omnidirectional antennas are designed to provide maximum performance and reliability under the toughest weather conditions. The antennas feature a UV stable, vented radome that provides ultimate protection against weather elements. They can be mast or wall mounted.

### Features

- UV stable, pultruded fiberglass radome. Allows outdoor installation even in harsh climates.
- Vented system design (all models except MFB24012), provides reliable performance by protecting the electrical design against extreme moisture and/or temperatures.
- Thread relief on connector (all models, except MFB24012 which has a pigtail). Improved accessibility for taping reduces installation time and improves overall effectiveness.
- Internal o-ring seal in the base of the antenna with integrated connector at the base. Assures a watertight seal to prevent water from migrating into the antenna connector (all models, except MFB24012 which has a pigtail).
- Electrical downtilt options on select models, provide system planners flexibility in challenging operating environments.



### Technical Data

Maximum Power: 25 watts
Polarization: Vertical
Normal Impedance: 50 ohms
VSWR: < 1.5:1
Radome Material: UV resistant pultruded fiberglass
ESD Protection: Not standard, but all models can be ordered with DC grounding. Add "DC" to the part number to order the antenna with DC grounding.
Termination: N female 16" RG-213 pigtail with N female connector (for model MFB24012 only.)
Mounting Base Diameter: 1.25 inches (all models except MFB24012) 1.5 inches (model MFB24012)
Mounting Method: MMK1924 — L bracket mount for wall or pipe mount (except MFB24010 and MFB24012) MMK8A - Aluminum extruded bracket for mast mounting (except model MFB24012) MMK11 - Ceiling mount bracket (for MFB24004, MFB24006 and MFB24008 only) MMK12 - Heavy duty bracket for mast mounting the MFB24012 MMK14 - Light duty mounting clamp for MFB24012

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

## Antenna Electrical Specifications

Model	Frequency Range	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB19006A	1.85-1.99 GHz	6 dBi	140 MHz	24°
MFB19008A	1.85-1.99 GHz	8 dBi	140 MHz	12°
MFB24004	1.85-1.99 GHz	4 dBi	100 MHz	30°
MFB24006	2.4-2.484 GHz	6 dBi	100 MHz	20°
MFB24008	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24008NM	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24008NMDC	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24008RPN	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24008DT7	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24008DT12	2.4-2.484 GHz	8 dBi	100 MHz	13°
MFB24010	2.4-2.484 GHz	10 dBi	100 MHz	9°
MFB24012	2.4-2.5 GHz	12 dBi	100 MHz	7°
MFB49009	4.9-5.0 GHz	9 dBi	100 MHz	8°
MFB51510	5.15-5.35 GHz	10 dBi	200 MHz	7°
MFB58009	5.725-5.875 GHz	9 dBi	150 MHz	8°
MFB58010	5.725-5.825 GHz	10 dBi	100 MHz	6°
MFB49009DC	4.9-5.0 GHz	9 dBi	150 MHz	8°

## Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area	Wind Survival
MFB19006A	11.6" (295 mm)	0.38 lbs (0.172 kg)	1.4 ft-lbs	3.0 lbs	.4 ft <sup>2</sup>	125 mph
MFB19008A	24.0" (601 mm)	0.70 lbs (0.318 kg)	5.7 ft-lbs	5.9 lbs	.07 ft <sup>2</sup>	125 mph
MFB24004	8.1" (206 mm)	0.34 lbs (0.154 kg)	0.7 ft-lbs	2.1 lbs	.02 ft <sup>2</sup>	125 mph
MFB24006	11.6" (295 mm)	0.38 lbs (0.172 kg)	1.4 ft-lbs	3.0 lbs	.04 ft <sup>2</sup>	125 mph
MFB24008	20.2" (513mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24008NM	20.2" (513mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24008NMDC	20.2" (513mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24008RPN	20.2" (513mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24008DT7	20.2" (513 mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24008DT12	20.2" (513 mm)	0.50 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB24010	36.0" (914 mm)	0.65 lbs (0.295 kg)	14.7 ft-lbs	10.1 lbs	.11 ft <sup>2</sup>	125 mph
MFB24012	44.0" (1,118 mm)	3.00 lbs (1.400 kg)	41 ft-lbs	22.4 lbs	.25 ft <sup>2</sup>	125 mph
MFB49009	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB51510	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB58009	15.7" (399 mm)	0.43 lbs (0.195 kg)	2.7 ft-lbs	4.1 lbs	.046 ft <sup>2</sup>	125 mph
MFB58010	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph
MFB49009DC	20.2" (513 mm)	0.5 lbs (0.226 kg)	4.4 ft-lbs	5.2 lbs	.06 ft <sup>2</sup>	125 mph



MFB9153

### 900/800 MHz MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The MFB 900/800 MHz series are base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

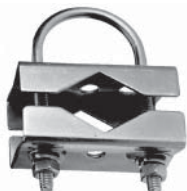
#### Features

- White ultra-violet resistant pultruded fiberglass radome
- Thick walled aluminum mounting base
- Unity/3 dB/5 dB/7 dB models
- UPS shippable
- Factory tuned



#### Technical Data

Maximum Power: 150 watts
Normal Impedance: 50 ohms
Radome Material: 1.0" OD pultruded white fiberglass
Radiator Material: Coated steel wire
ESD Protection: DC grounded
Wind Survival: 100 mph
Termination: Unity and 3 dB models, N Female
Mounting Base Diameter: 1-5/16"
Mounting Method: Mast or wall mounted. Mounting hardware is sold separately. MMK1: light duty mast mount for antennas under 30" MMK3: light duty mast mount for antennas over 30" MMK4: heavy duty mast mount MMK6: cast mounting bracket MMK9: Aluminum mast mount for 1-5/16" OD antennas MBSWM: wall mounting bracket for antennas over 30" (two are required)



MMK3



MMK1



MMK4



MMK6



MBSWM



MMK9

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

## Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB8130	806-866 MHz	813 MHz	Unity	40 MHz	75°
MFB8133	806-866 MHz	813 MHz	3 dB	30 MHz	40°
MFB8135	806-866 MHz	813 MHz	5 dB	20 MHz	22°
MFB8580	806-866 MHz	858 MHz	Unity	40 MHz	75°
MFB8583	806-866 MHz	858 MHz	3 dB	30 MHz	40°
MFB8585	806-866 MHz	858 MHz	5 dB	20 MHz	22°
MFB8353	824-896 MHz	835 MHz	3 dB	30 MHz	40°
MFBW8903	890-960 MHz	N/A	3 dB	70 MHz	40°
MFBW8905	890-960 MHz	N/A	5 dB	70 MHz	22°
MFB8963	896-940 MHz	898 MHz	3 dB	30 MHz	40°
MFB8965(NF)	896-940 MHz	898 MHz	5 dB	20 MHz	22°
MFB9387	896-940 MHz	938 MHz	7 dB	20 MHz	17°
MFB8967(NF)	896-940 MHz	898 MHz	7 dB	20 MHz	17°
MFB9150	902-928 MHz	915 MHz	Unity	20 MHz	75°
MFB9153	902-928 MHz	915 MHz	3 dB	20 MHz	40°
MFB9155(NF)	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9155RPC	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9157(NF)*	902-928 MHz	915 MHz	7 dB	20 MHz	17°

\* Bandwidth @ 2.0:1 VSWR

# NON CELLULAR OMNIDIRECTIONAL BASE STATION ANTENNAS

## Fiberglass Omnidirectional Antennas

### Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MFB8130	14"	.75 lbs	1.4 ft-lbs	2.3 lbs	.06 sq ft
MFB8133	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8135*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8580	14"	.75 lbs	1.4 ft-lbs	2.3 lbs	.06 sq ft
MFB8583	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8585*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8353	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFBW8903	23"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFBW8905	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8963	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8965*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9387*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft
MFB8967*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft
MFB9150	14"	.75 lbs	1.4 ft-lbs	2.3 lbs	.06 sq ft
MFB9153	23.25"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB9155(NF)*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9155RPC	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9157 (NF)*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft

\* For N Female (NF) connector add \$10.00. Mount sold separately.

### 746-869 MHz, 3 dB Gain MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

This is an omnidirectional base station antenna that provides 3 dB gain within the specified frequency. It is designed for mast mounting.

#### Features

- N female connector
- Thick walled aluminum mounting base
- White fiberglass radome

#### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	Vertical Beamwidth at Half Power	Horizontal Beamwidth at Half Power
MFBW7463	746-869 MHz	3 dB	40°	360°

#### Mechanical Specifications

Model	Antenna Length	Weight (Mass)	Temperature Range
MFBW7463	27"	1.5 lbs	-40°C to +70°C

Model	Lateral Thrust at Rated Wind with 1/2" of Ice	Equivalent Flat Plate Area with 1/2" of Ice	Wind Survival with 1/2" of Ice
MFBW7463	20 lbf	.22 ft <sup>2</sup>	125 mph



#### Technical Data

<b>General Specifications:</b> 746-869 MHz omnidirectional antenna
<b>Maximum Power:</b> 50 watts
<b>Normal Impedance:</b> 50 ohms
<b>Polarization:</b> Vertical
<b>VSWR:</b> < 1.8:1
<b>Termination:</b> N female
<b>Mounting Method:</b> MMK12 heavy duty cast mast mount (sold separately)

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



MFB4505

### UHF White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

These 450-480 MHz white fiberglass omnidirectional antenna series consists of base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and are UPS shippable.

#### Features

- UPS shippable
- Effective "J" pole design requires no radials or ground plane
- Unity, 3 dB, and 5 dB models



#### Technical Data

Maximum Power: 250 watts
Normal Impedance: 50 ohms
Radome Material: Pultruded white fiberglass
Radiator Material: Coated steel wire
ESD Protection: DC grounded
Wind Survival: 100 mph
Termination: N male with 16" jumper; N female optional
Mounting Hardware (sold separately): MMK1: light duty mast mounting for antennas under 30" MMK3: light duty mast mounting for antennas over 30" MMK4: heavy duty mast mounting bracket MMK6: cast mount bracket MMK9: Aluminum mast mount for 1-5/16" OD antennas (two required with the 10" sleeve antenna models) MBSWM: wall mounting bracket for antennas over 30" (2 required)



MMK1



MMK3



MMK4



MMK6



MBSWM



MMK9

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



## Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB4500	450-460 MHz	455 MHz	Unity	10 MHz	90°
MFB4503	450-460 MHz	455 MHz	3 dB	10 MHz	38°
MFB4505(NF)	450-460 MHz	455 MHz	5 dB	10 MHz	27°
MFB4600	460-470 MHz	465 MHz	Unity	10 MHz	90°
MFB4603	460-470 MHz	465 MHz	3 dB	10 MHz	38°
MFB4605(NF)	460-470 MHz	465 MHz	5 dB	10 MHz	27°
MFB4705	470-480 MHz	475 MHz	5 dB	10 MHz	27°

## Mechanical Specifications

Model	Weight (Mass)	Height	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MFB4500	1.0 lbs	30"	5.2 ft-lb	5 lbs	.11 sq ft
MFB4503	4.0 lbs	71"	29.0 ft-lb	10.8 lbs	.30 sq ft
MFB4505	4.5 lbs	77"	40.4 ft-lb	12.6 lbs	.35 sq ft
MFB4600	1.0 lbs	30"	5.2 ft-lb	5 lbs	.11 sq ft
MFB4603	4.0 lbs	71"	29.0 ft-lb	10.8 lbs	.30 sq ft
MFB4605	4.5 lbs	77"	40.4 ft-lb	12.6 lbs	.35 sq ft
MFB4705	4.5 lbs	77"	40.4 ft-lb	12.6 lbs	.35 sq ft



MFB VHF Unity Model 3 dB version includes exposed whip

### VHF White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The 144-174 MHz white fiberglass antenna series consists of base matched half wave antennas encapsulated in a heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

#### Features

- Effective “J” pole design requires no radials or ground plane
- White ultra-violet resistant pultruded fiberglass radome
- Thick-walled aluminum mounting base
- Unity/3 dB models
- UPS shippable

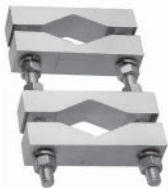


#### Technical Data

Normal Impedance: 50 ohms
VSWR: < 1.5:1 VSWR
Radome Material: Pultruded white fiberglass
Radiator Material: Coated steel wire
ESD Protection: DC grounded
Wind Survival: 100 mph
Termination: N male with 16" jumper
Mounting Base Diameter: 1-5/16"
Mounting Method: (Sold separately) MMK3: light duty mast mounting MMK4: heavy duty mast mounting MMK6: cast mount bracket MMK9: Aluminum mast mount for 1-5/16" OD antennas (two required with the 10" sleeve antenna models) MBSWM: wall mounting bracket (2 required)



MMK3



MMK4



MMK6



MBSWM



MMK9

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

## Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB1443	144-150 MHz	144 MHz	3 dB*	3.5 MHz	29°
MFB1500	150-156 MHz	153 MHz	Unity	3.0 MHz	80°
MFB1503	150-156 MHz	150 MHz	3 dB*	3.5 MHz	29°
MFB1560	156-162 MHz	159 MHz	Unity	3.0 MHz	80°
MFB1563	156-162 MHz	156 MHz	3 dB*	3.5 MHz	29°
MFB1683	168-174 MHz	168 MHz	3 dB*	3.5 MHz	29°

## Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MFB1443	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1500	71"	3 lbs	29.2 ft-lbs	10.8 lbs	.30 ft <sup>2</sup>
MFB1503	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1560	71"	3 lbs	29.2 ft-lbs	10.8 lbs	.30 ft <sup>2</sup>
MFB1563	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1683	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>

\*Note: 3 dB gain antennas are factory tuned to the lowest side of the frequency range. Field tuning to the desired frequency is required. Mount sold separately. For SO-239 connector, please add \$27.00; for N female connector, please add \$10.00.

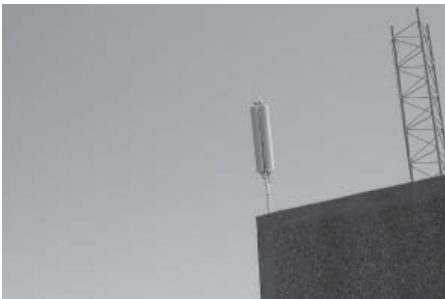


## 2.4 GHz ISM All Terrain Sectorized Omnidirectional Antenna

The MSO24014 all-terrain adjustable omnidirectional antenna allows sector adjustments of up to +/- 15 degrees, permitting installers to contour the coverage area according to the specific geographic conditions of the territory. For applications with more specific coverage demands this antenna offers various azimuth (horizontal plane beamwidth) pattern options optimized to address differing coverage, cost control and tower space limitation challenges. As the subscriber base grows, they can accommodate increased throughput capacity without the need to replace the antenna.

### Features

- Increased system capacity
- Superior isolation
- Electrical and mechanical beamtilt adjustments
- Pattern selectivity
- Mounting flexibility
- Downtime reduction



The MSO24014PTNF's mount design allows mast or tower leg mounting for greater flexibility when tower space availability is limited.



### Technical Data



MSO24014PTNF

General Specifications: 2.4 GHz ISM sectorized omnidirectional antennas
Maximum Power: 50 watts**
Polarization: Vertical
Normal Impedance: 50 ohms
VSWR: < 1.5:1
Radome Material: ASA-ABS, UV resistant
ESD Protection: DC grounded
Cable: 18" Pro-Flex™ Plus 195
Termination: N, female connector at power divider input
Mounting Method: Center pipe mount (1.25" OD pipe included) or direct tower leg mount
Pattern Shaping Kits: Standard omnidirectional. Power divider is included. Other options are available*** Consult the factory for details.

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

\*\* Power limitation of power divider 10 watts.

\*\*\* Optional patterns require use of one radio.

## Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	Bandwidth @ 1.5:1 VSWR	Power Divider
MSO24014NF	2.4-2.5 GHz	14 dBi*	16°	3-way equal split

## Mechanical Specifications

Model	Dimensions	Weight (Mass)	Temperature Range	Wind Survival
MSO24014NF	19.75" x 5" OD (501 L x 127 mm OD)	8 lbs (3.6 kg)	-42°C to +75°C	125 mph (200 km/hr)

\* Antenna gain specified when sectors are fed individually.



The ISOMAX24014PTNM is the ideal solution for wireless Internet service providers operating three (3) separate co-located radios in high capacity applications.



### Technical Data

General Specifications: 2.4 GHz ISM sectorized antenna array
Maximum Power: 50 watts
Polarization: Vertical
Normal Impedance: 50 ohms
VSWR: < 1.5:1
Radome Material: ASA-ABS, UV resistant
ESD Protection: DC grounded
Mechanical Tilt (per sector): 5° uptilt to 10° downtilt
Cable: 18" Pro-Flex™ Plus 195
Termination: Three (3) N, male connectors
Mounting Method: Center pipe mount (includes 36" x 1.25" OD pipe) Other mounting options possible.

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

## All Terrain Maximum Isolation Sectorized Antenna Array

The ISOMAX24014PTNM maximum isolation sectorized antenna array complements our popular MSO24014NF sectorized omni by providing providers the ability to use three (3) co-located radios per compact antenna, while retaining the flexibility to individually adjust each sector from 5° uptilt to 10° downtilt. The antenna provides typical port-to-port isolation of -68 dB. It is the ideal solution for wireless Internet service providers operating three (3) separate radios in high capacity urban locations where maximum isolation between radios is important to keep potential interference from reducing data throughput.

### Features

- Increased system capacity. Individually fed sectors increase the number of users, achieve higher gain, and increased data throughput.
- Typical port-to-port isolation of -68 dB. Minimizes interference issues with adjacent antennas allowing greater data throughput.
- Mechanical beamtilt adjustments. The flexibility to adjust the antenna radiation pattern to the surrounding terrain allows installers to maximize pattern performance for optimal customer base coverage.
- Downtime reduction. Radio/antenna damage in single mast mount omnis result in 100% failure of the effected radio/antenna. The modular design of the ISOMAX24014PTNM minimizes downtime periods by maintaining links of the un-damaged, individually-fed sectors. This could increase system survivability by up to 66%.

### Antenna Electrical Specifications

Model	Frequency Range	Nominal Gain	Nominal Isolation	E-Plane Beamwidth	Single Sector Front-to-Back
ISOMAX24014PTNM	2.4-2.5 GHz	14 dBi per sector	- 68 dB	16° per sector	-33 dB

### Mechanical Specifications

Model	Dimensions (per sector)	Weight (Mass)
ISOMAX24014PTNM	19.75" L x 4.7" W x 3" D (501 x 120 x 76 mm)	9 lbs (4 kg)

Temperature Range	Lateral Thrust at Rated Wind	Wind Survival
-40°C to +85°C	138 lbs	125 mph

## MBS Series, UHF/VHF Aluminum Omnidirectional Antennas

The MBS VHF/UHF base station antennas feature 6061-T6 seamless aluminum construction and a no ground plane design for simplified mounting.

### Features

- Base matched 1/2 wave vertical antenna requiring no ground plane or radials for effective operation
- Easily adjusted to exact operating frequency
- All stainless steel hardware
- 6061-T6 seamless aluminum

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MBS150	144-174 MHz	Antennas are field tunable within the specified frequency range.	Unity	6 MHz	70°
MBS450	450-470 MHz		Unity	20 MHz	52°

### Mechanical Specifications

Model	Antenna Height	Weight (Mass)	Lateral Thrust at Rated Wind	Bending Moment at Rated Wind	Equivalent Flat Plate Area
MBS150	43"	1.1 lbs	6.7 lbs	12.0 ft-lbs	.17 ft <sup>2</sup>
MBS450	15"	.0.4 lbs	2.0 lbs	1.2 ft-lbs	.05 ft <sup>2</sup>



MBS150



### Technical Data

Maximum Power: 250 watts
Normal Impedance: 50 ohms
Radiator Material: 6061-T6 aluminum tubing
ESD Protection: DC grounded
Wind Survival: 90 mph
Termination: SO-239 standard
Maximum Mounting Pipe Diameter: VHF: 1-1/4" UHF: 1"
Mounting Method: Built-in clamp (included)

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



MBX450



### Technical Data

Maximum Power: 250 watts
Normal Impedance: 50 ohms
Radiator Material: 6061-T6 aluminum tubing
ESD Protection: DC grounded
Wind Survival: 90 mph
Termination: SO-239 standard
Maximum Mounting Pipe Diameter: VHF: 1-1/4" UHF: 1"
Mounting Method: Built-in clamp (included)

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

## MBX Series, UHF/VHF Aluminum Omnidirectional Antennas

The MBX VHF/UHF antennas offer an economical choice for omnidirectional high gain applications. The 6061-T6 aluminum tubing and stainless steel hardware provides years of trouble free service.

### Features

- Base matched vertical collinear antenna with phasing stub coupling for efficient operation without radials
- Adjustment to exact operation frequency with stainless steel full-lock clamps

### Antenna Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MBX150	144-174 MHz	Antennas are field tunable within the specified frequency range.	3 dB	4 MHz	27°
MBX450	450-470 MHz		3 dB	14 MHz	30°

### Mechanical Specifications

Model	Height at Lowest Frequency	Weight (Mass)	Lateral Thrust at Rated Wind	Bending Moment at Rated Wind	Equivalent Flat Plate Area
MBX150	110"	1.7 lbs	12.4 lbs	56.7 ft-lbs	.32 sq ft
MBX450	30"	0.6 lbs	3.2 lbs	4 ft-lbs	.09 sq ft

Suffix N indicates N connector option. Please add \$3.00 for N connector.



## MBS Series Base Station Adapters

The MBS VHF/UHF/800 MHz series is ideal for temporary installations. The MBS adapter allows a mobile VHF, UHF or 800 MHz antenna to be used as a base station. By providing radials, the antenna can be used in areas where a ground plane is not available.

### Features

- Will accept any antenna that utilizes 1-1/8" -18 thread mounts
- Mounts on 1" - 1.75" outside diameter masts
- Converts any 136-940 MHz mobile antenna into a base station

### Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Insertion Loss at Highest Frequency
MBS	132-512 MHz	Dependent upon the antenna			.1 dB
MBSUHF	406-512 MHz	Dependent upon the antenna			.1 dB
MBS800	806-940 MHz	Dependent upon the antenna			.2 dB



### Technical Data

<b>Maximum Power:</b> 250 watts (MBS) 200 watts (MBSUHF) 100 watts (MBS800)
<b>Construction Material:</b> Stainless steel
<b>Termination:</b> MBS: SO-239; N female MBSUHF: N female MBS800: N female

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

\*Antenna is not included.

### Base Station Mounts

Model	Description	Application	Qty per Assembly
MBSWM	Wall mount	For wall mounting antennas of up to 2-1/4" in diameter.	1
MMK1	3-groove backing plate	For mounting a 1-5/16" outer diameter antenna to a 1-1/4" maximum outer diameter mast.	1
MMK1924	Stainless steel "L" bracket mount for wall or pipe mount	For mounting an omnidirectional antenna to a 2" maximum diameter mast. Bracket is 6" long with a 5/8" diameter hole for mounting the antenna.	1
MMK2	1-1/2" stainless steel "L" bracket	For mounting an antenna with a base connector to a 2" maximum diameter mast. Bracket is 9" long with a 5/8" diameter hole for mounting the antenna.	1
MMK3	Base station mount bracket	For mounting a 1-5/16" outer diameter antenna to a 1-1/4" maximum outer diameter mast.	2
MMK4	Heavy duty fiberglass base station mount	For mounting an antenna with 2-2/2" maximum diameter onto a 2-1/2" maximum outer diameter mast.	2
MMK6	MFB base station mount bracket	For mounting a 1-5/16" outer diameter antenna base without a pigtail to a maximum 2" diameter mast.	1
MMK8A	Aluminum MFB mount bracket	For mounting a 1-1/4" diameter antenna to a 2-1/2" maximum diameter mast.	1
MMK9	Aluminum MFB mount bracket	For mounting a 1-5/16" diameter antenna to a 2-1/2" maximum diameter mast.	1
MMK11	Ceiling Mount	For mounting MFB24004	1
MMK12	Heavy duty MFB mount bracket	For mounting	1
MPAB7	Heavy duty outdoor adjustable mount with +/-35° uptilt/downtilt adjustment	Adjustable outdoor mounting bracket for MP XF 800/900 MHz directional panel antennas. One 6" and one 8" bracket.	2
MPAB8	Heavy duty outdoor adjustable mount with 17° uptilt/downtilt adjustment	Adjustable outdoor mounting bracket for MPXF 800/900 MHz directional panel antennas. Two 6" brackets.	2
MPAB8W	Heavy duty outdoor adjustable mount with 17° uptilt	Downtilt adjustment / Adjustable outdoor mounting bracket for MPXF 800/900 MHz directional panel antennas. Two 6" galvanizing brackets.	1
MPAB11	Short adjustable indoor mount	Short adjustable indoor mounting bracket for MPXF 800/900 MHz directional panel antennas.	1
MPAB12	Long adjustable corner mount	Long adjustable indoor corner mount for MPXF 800/900 MHz directional panel antennas.	1
MYK1	Mount kit for 7/8" boom yagis	For mounting 7/8" diameter boom yagis to a 1-5/8" maximum diameter mast.	1
MYK2	Mount kit for 1-1/4" boom yagis	For mounting 1-1/4" diameter boom yagis to a 2" maximum diameter mast.	1
MYK3	Heavy duty mount for 7/8" boom yagis	For mounting 7/8" diameter boom yagis to a 2" maximum diameter mast.	1
MYK4	Mounting kit for bottom dipole fiberglass base station antennas	For mounting to a 2" maximum diameter mast.	1
MYK9	Heavy duty aluminum plate mounting bracket	For mounting to a 2" maximum diameter mast.	
MYK10	Heavy duty cast yagi bracket	For mounting a 7/8" OD yagi to a 2-1/2" maximum OD mast. Adjustable for vertical or horizontal polarization.	1
MYK14	Sand cast mounting bracket for 3/4"-7/8" boom yagis	For mounting antennas with boom diameters of 3/4" to 7/8" to 3" maximum diameter masts.	1
MYK17-NL	Mounting bracket for 0.75" diameter boom yagis	For mounting to masts measuring 1-5/8" in diameter.	1

MMK Mounts for Base Station Antennas



MMK1



MMK2



MMK3



MMK4



MMK6



MMK8A



MMK9



MMK11



MMK12

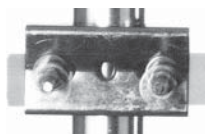


MMK1924



MBSWM

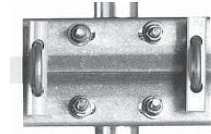
MYK Mounts for Yagi Antennas and MPAB Mounts for Panel Antennas



MYK1



MYK2 (front)



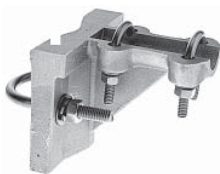
MYK3



MYK4 (front)



MYK9



MYK10



MYK14



MYK17



MPAB7



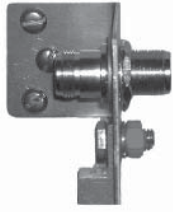
MPAB8



MPAB11



MPAB12



MGB



MMA1

## Replacement Parts

Model	Frequency Range
MGB	DC grounding block used for grounding coax to ground (earth)
MMA1	Adapts internal thread marine mount to 3/4" M style mount. N female connector.