Multi-band Indoor / Microcell Antenna

800-2500MHz

DAS-M1

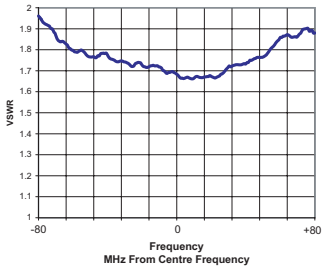
DAS-M1

The DAS-M1 antenna is a revolutionary solution for indoor/outdoor distributed antenna systems. With multi-band coverage from 800-2500 MHz and a ground independent design, the applications are limitless.

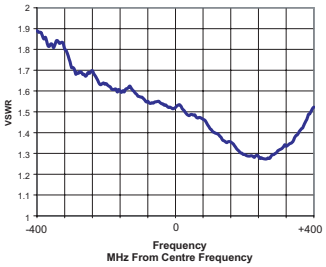
The DAS-M1 is a discrete, lightweight design for mounting on ceilings as a part of a multi-band distributed antenna system. It can also be "inverted" and mounted outdoors for wireless payphone, microcellular or picocellular applications, maintaining an IP66 ingress rating as the antenna includes multiple sealing gaskets.

- Easy to install on metallic or non-metallic surfaces,
- Excellent PIM characteristics
- Multi band design offers one solution for CDMA, GSM, 3G, PCS, DECT, WLAN and Bluetooth applications
- Strong omnidirectional performance

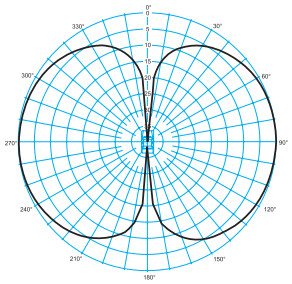
Typical VSWR response for DAS-M1
800-960MHz



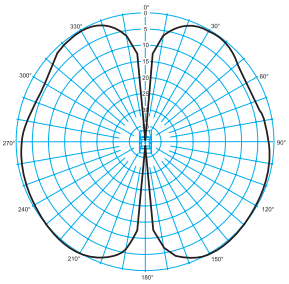
Typical VSWR response for DAS-M1
1700 - 2500MHz



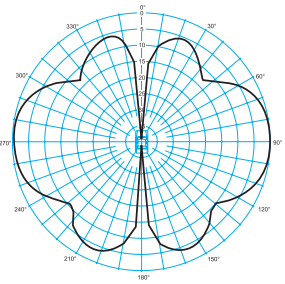
DAS-M1 - E Plane 890MHz



DAS-M1 - E Plane 1900MHz



DAS-M1 - E Plane 2450MHz



Electrical

Model No	DAS-M1		
Nominal Gain *dBi*	1.6	2.0	3.3
Frequency *MHz*	800 - 960	1710 - 2200	2400 - 2500
Tuned Bandwidth	Entire specific band		
VSWR (Return Loss)	<2.0:1		
Nominal Impedance Ω	50		
Vertical Beamwidth	95°	80°	50°
Input Power *W*	50W		

Mechanical

Model No	DAS-M1
Construction	All silver plated brass construction with Geloy ASA radome
Dimensions *mm* *H x D*	90 x 160
Weight *kg*	0.05
Termination	Silver plated N-Type female connector
Suggested Mounting	Ceiling or external. Complete with all gaskets to maintain IP66

Power for Telecommunications

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As the worlds telecommunications networks are extended and upgraded, greater focus is being placed on the provision of rural communications services. Today, major telecom network operators, carriers and turnkey equipment manufacturers routinely install photovoltaic powered communication systems - testimony to the reliability of solar power.

RFI have a longstanding partnership with BP Solar and as a key distributor in the region can offer an unbeatable range and service level.

The BP range of solar panels are built tough, as they need to be for remote applications. They feature the latest in photovoltaic technology, providing the highest current output available. The range is ideal for:

- **Radio Sites**
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We hold comprehensive stock of Solar panels, regulators, inverters, mounting frames and DC wiring equipment and can rapidly satisfy any order. Our engineering staff are ready at hand to assist in system design for your application.

bp solar

Distributor

mobile antennas

VHF Unity Gain Roof Mount

35-45 MHz

SW35

SW35

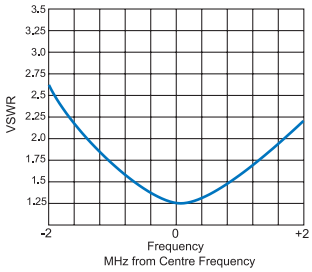
The SW35 is the mobile antenna which RFI recommends in VHF low band, two frequency simplex or duplex applications. The relatively broad bandwidth of this base loaded antenna allows coverage of both transmit and receive frequencies in a small, physically manageable antenna.

The whip section of highly flexible 17-7PH stainless steel provides maximum durability, retaining its shape after knocks, bumps or bends. This whip section is fitted to a base loading coil which incorporates an impedance matching circuit. The coil is housed in black fibreglass with chrome plated brass end-fittings. The antenna is suitable for field tuning over the band 35-45 MHz.

The antenna is designed to fit standard VHF bases, such as the MB9 and can utilise the full line of accessories and fittings which are offered with this range.

- Recommended for two frequency applications
- Broad bandwidth allows coverage of both transmit and receive frequencies (Tx to Rx splits of up to 2 MHz)
- Base loaded construction
- Strong - fibreglass coil with chrome plated brass end-fittings
- Flexible 17-7PH tapered stainless steel radiator takes the knocks and keeps its shape

Typical VSWR response (SW35)



Electrical

Model No.	SW35
Gain	Unity over a ¼ wave
Frequency *MHz*	35 - 45
Power *W*	100
Tuned Bandwidth	1.5 MHz @ 1.5:1 VSWR
	2 MHz @ 1.75:1 VSWR
Tuning	Field tune to minimum VSWR

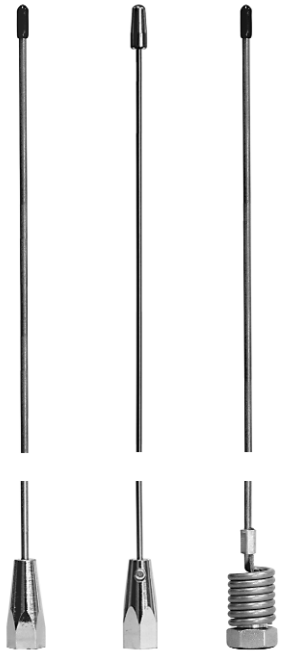
Mechanical

Model No.	SW35
Whip Material	Tapered 17-7PH stainless steel
Whip Length *mm*	1600 (including base coil)
Mounting	MB9, MB10 or MB12 bases (not included)
Cable and Connector	Not included, order separately

VHF Unity Gain Roof Mount

66-175 MHz

SW1
TSW1
111ST



SW1, TSW1, 111ST

In the 66-175 MHz band, ¼ wave antennas are preferred in many mobile applications. Mounted high on a vehicle they provide excellent omnidirectional performance, are easily tuned and are extremely affordable. They fit standard VHF roof mount bases such as the MB9 and can utilise the full line of accessories and fittings available for such applications.

SW1

- Parallel stainless steel whip
- Interference thread locking mechanism prevents loosening of whip due to vibration

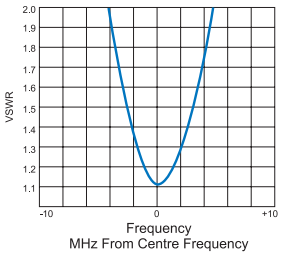
TSW1

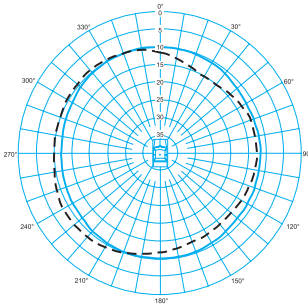
- 17-7PH tapered stainless steel whip
- Resilient construction retains shape after bending or knocks

111ST

- ¼ wave stainless whip with integral spring
- Ideal for heavy industrial applications

Typical VSWR response (SW1)





MOUNTING NOTES
The SW1 and all the other antennas featured on this page are excellent performers when mounted on the roof. Mounting these antennas in other positions will result in degraded performance. As an example, in a gutter mount position as shown here, the result is a pattern 'pulled' to the open side of the roof which is likely to impact considerably on performance.

TEST FREQUENCY: 77 MHz
REFERENCE ANTENNA *MODEL: SW1* —— *MOUNT: MB9* *POSITION: Roof Centre*
TEST ANTENNA *MODEL: SW1* - - - - - - *MOUNT: Gutter Mount Driver Side*

Electrical

Model No.	SW1	TSW1	111ST
Gain	Unity over a ¼ wave		
Frequency *MHz*	66 - 88	66 - 175	
Power *W*	100		
Tuned Bandwidth	3% @ <1.5:1 VSWR on MB9 base (typically at 70MHz)		
Tuning	Field tune to minimum VSWR		

Mechanical

Model No.	SW1	TSW1	111ST
Whip Material	Parallel stainless steel	Tapered 17-7PH stainless steel	Parallel stainless steel with integral spring
Whip Length *mm*	1205	1277	1270
Mounting	Suit MB9, MB10 or MB12 bases (not included)		
Cable and Connector	Not included, order separately		

Delta Series Broad Band Roof Mount

66-1000 MHz

DSW1401
DSW1402

MB14 Base

DSW1402 DSW1401

Delta Series antennas are broadband ¼ wave antennas designed to cater to modern mobile transceivers which commonly cover an entire operating band of frequencies.

The Delta series antennas allow coverage of greater than 6% bandwidth for a VSWR of less than 1.5:1 in the VHF bands. This bandwidth is even greater at UHF frequencies due to the increased diameter to length ratio of the whip section.

This bandwidth is made possible through the extraordinary performance characteristics of the MB14 antenna base. The MB14 base is intricately constructed, much like a coaxial connector, and provides a useable frequency range extending well above 1000 MHz. The precisely controlled termination results in a superb match, and facilitates the unusually broad bandwidth.

Delta Series antennas are unity gain antennas, which deliver a standard, omnidirectional pattern when mounted in the centre of a metal roof.

The radiating sections are constructed from extremely flexible 17-7PH stainless steel to resist bending and deformity. The DSW1401 features a bright stainless steel finish and the DSW1402 is finished in stylish black high gloss plating. The antennas are supplied packaged complete with whip section, mounting base fitted with cable and an instruction sheet for easy installation by semi-skilled personnel.

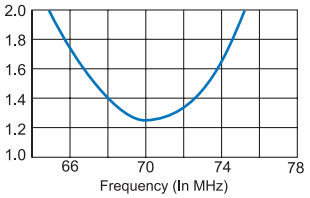
- Broad bandwidth allows coverage of entire operating bands
- MB14 constant impedance base designed specifically for high performance at frequencies up to and above 1000 MHz
- Whip sections are interchangeable and easily replaced in the field
- 17-7PH stainless steel whip section
- Supplied package includes base, whip, cable and instruction sheet for easy installation
- Slimline ferrule

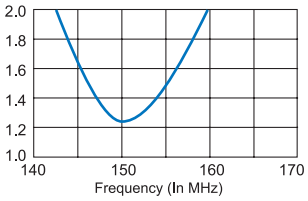
Delta Series Broad Band Roof Mount

66-1000 MHz

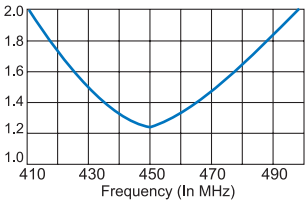
DSW1401
DSW1402

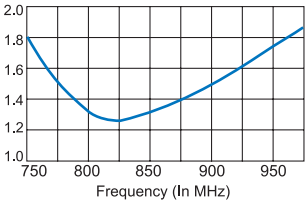
Typical VSWR response (DSW1401)

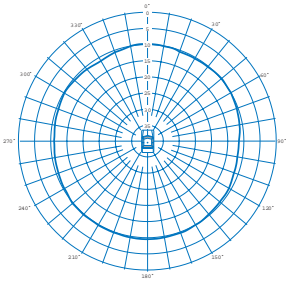




Typical VSWR response (DSW1402)







The Delta Series antenna is an excellent performer providing an omnidirectional pattern expected from any quarter wave antenna correctly mounted.

TEST FREQUENCY: 160 MHz
REFERENCE ANTENNA
MODEL: DSW1402
MOUNT: MB14 Roof Centre

Electrical

Model No.		DSW1401Series		DSW1402 Series	
Gain		Unity over a ¼ wave			
Frequency *MHz*		66 - 175		118 - 1000	
Power *W*		100			
Tuned Bandwidth	1.5:1 VSWR	>5 MHz @ 70 MHz	>9 MHz @ 150 MHz	>40 MHz @ 450 MHz	>95 MHz @ 850 MHz
	2.0:1 VSWR	>10 MHz @ 70 MHz	>18 MHz @ 150 MHz	>80 MHz @ 450 MHz	>230 MHz @ 850 MHz
Tuning		Field tune with supplied chart			

Mechanical

Model No.	DSW1401 Series	DSW1402 Series
Whip Material	Tapered 17-7PH stainless steel	17-7PH stainless steel with black high gloss finish
Whip Length *mm*	1260	655
Mounting	MB14 base (included)	
Cable and Connector	Pre-terminated with 9001 Cellfoam®, specify with order. Connectors not included	

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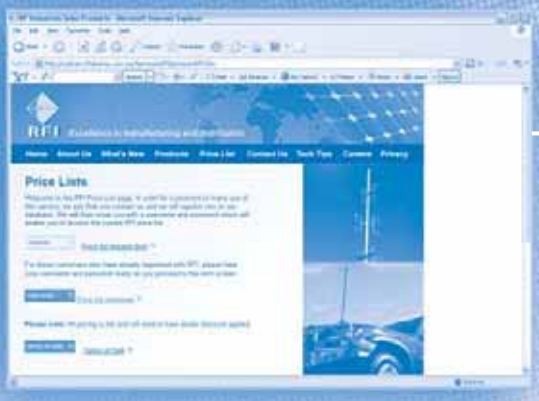
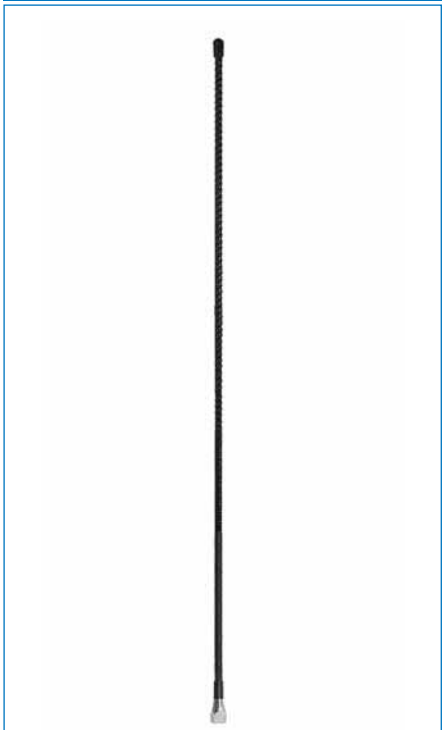


updated pricelists & technical information

VHF High Gain Roof Mount

70-108 MHz

FW11



FW11

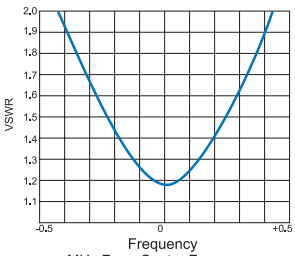
The FW11 is a fibreglass roof mount antenna which provides the highest gain available in this frequency band. The gain and performance of this antenna make it ideal in areas with low or inconsistent signal strength. It fits standard VHF mounting bases such as the MB9 and can utilise the full line of accessories and fittings which are offered with this range.

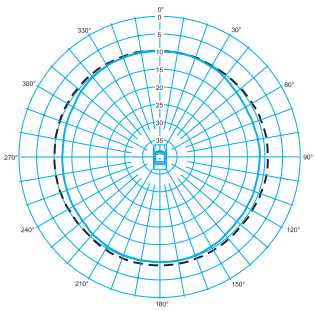
It is important to note the narrow operating bandwidth of this antenna limits it's use to single frequency applications.

The antenna is supplied to be tuned over its entire operating band. The antenna must be tuned in its installed position for minimum VSWR, with tuning quite critical due to the inherently high Q of the antenna. It fits standard VHF mounting bases, such as the MB9 and can utilise the full line of accessories and fittings which are offered with this range.

- 2.5dB high gain for superior performance
- Ideal in areas with low or inconsistent signal strength
- End fed ¾ wave in a ⅝ wave package

Typical VSWR response





Even though centre roof mounted here, the FW11 pattern is showing consistent gain, but with a slightly elliptical pattern. This pattern distortion is actually a function of the vehicle roof being slightly undersize for this frequency band.

TEST FREQUENCY: 77 MHz
REFERENCE ANTENNA *MODEL: SW1* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: FW11* - - - - - - - *MOUNT: MB9 Roof Centre*

Electrical

Model No.	FW11	FW11-28	FW11-29
Gain	2.5dB over a ¼ wave		
Frequency *MHz*	70 - 85	81 - 88	89 - 108
Power *W*	50		
Tuned Bandwidth	0.5 MHz @ 1.5:1 VSWR		
Tuning	Field tune to minimum VSWR		

Mechanical

Model No.	FW11	FW11-28	FW11-29
Whip Material	UV stable heatshrink over copper wound fibreglass with black heat shrink		
Whip Length *mm*	1550		
Mounting	Suits MB9, MB10 or MB12 bases (not included)		
Cable and Connector	Not included, order separately		

VHF Roof Mount

70-175 MHz

HPM-RM-99

HPM-RM-99

The HPM-RM-99 is a flexible, helically loaded electrical ¼ wave for applications where height restrictions prohibit the use of standard quarter wave antennas.

Fitted to a standard MB9 antenna base, the HPM-RM-99 is less than 350mm tall. The lower section of the antenna is a solid fibreglass former. The upper section is a helically wound stainless steel section providing a flexible antenna suitable for height restricted areas. The antenna is ideal in mining applications because of this flexibility.

The antenna is ordered to a specified frequency and should be fine tuned in the field.

- Helically loaded electrical ¼ wave which stands less than 350mm tall
- Extremely small and flexible

NOTE: For low profile applications, also consider the TLA80 Series of transmission line style antennas

Electrical

Model No.	HPM-RM-99
Gain	-3dB over a ¼ wave
Frequency *MHz*	70 - 175
Power *W*	25
Tuned Bandwidth	1.1% @ <1.5:1 VSWR
Tuning	Specify frequency, fine tune in field

Mechanical

Model No.	HPM-RM-99
Whip Material	Fibreglass brass and stainless steel
Whip Length *mm*	350mm (max)
Mounting	Suits MB9 (not included)
Cable and Connector	Not included, order separately

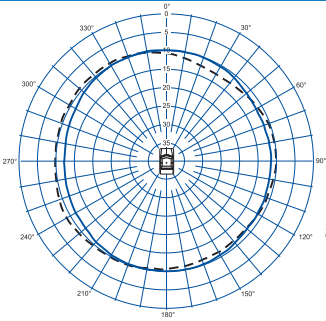
VHF Ground Independent Mopole™

70-85 MHz

CD17 Series
CD18 Series

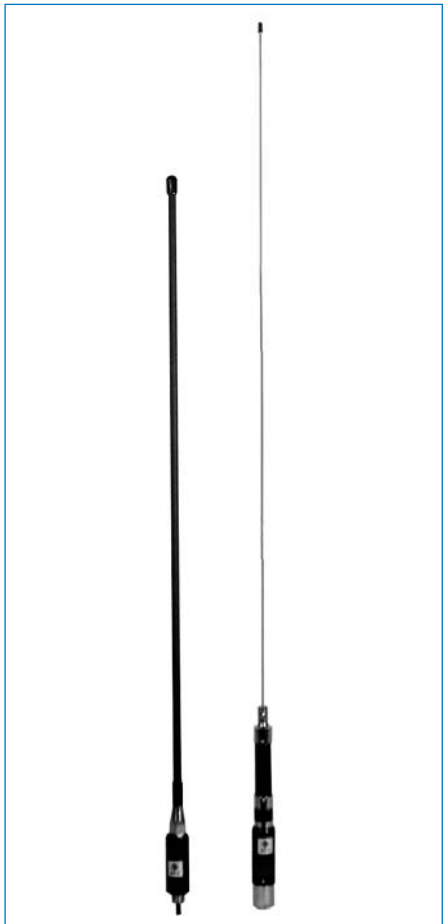
The CD17 and CD18 are ground plane independent Mopole™ antennas which provide excellent performance in a "compromise" mounting position. The CD17 and CD18 also provide an extended bandwidth in a physical arrangement which is ideal for every application from sedans to the heaviest industrial vehicles.

- Ground independent Mopole™ design allows installation in a variety of mounting locations
- Bandwidth of over 3MHz for VSWR <1.5:1 (slightly less for CD18) Accommodates most duplex requirements
- High impedance matching transformer allows end feeding of electrical half wave element
- Shortened half wave radiators suit restricted height applications
- Tapered stainless steel or fibreglass versions available



The CD17 exhibits 1.5dB of gain (over a ¼ whip) and excellent, almost omnidirectional pattern, even when gutter mounted as in this typical pattern.

TEST FREQUENCY: 77 MHz
REFERENCE ANTENNA *MODEL: SW1* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: CD17* - - - - - - - *MOUNT: Gutter Mount* *Driver Side*



CD18 CD17

NOTE:The CD17 and CD18 are highly compressed ½ wave antennas and although they function independently of a ground plane, perform markedly better if earthed. Earthing via a gutter or mirror style bracket will ensure the best possible field performance.

Electrical

Model No.	CD17-xx-73	CD17-xx-50	CD18-xx-73	CD18-xx-50
Gain	1.5dB over a ¼ wave			
Frequency *MHz*	xx denotes Freq band: **26** = 70 - 77 MHz **27** = 77 - 85 MHz			
Power *W*	50			
Tuned Bandwidth	3.0 MHz @ <1.5:1 VSWR		2.5 MHz @ <2.0:1 VSWR	
Tuning	Field tune to minimum VSWR with supplied chart			

Mechanical

Model No.	CD17-xx-73	CD17-xx-50	CD18-xx-73	CD18-xx-50
Whip Material	17-7PH stainless steel whip with fibreglass base coil assembly		Fibreglass helically loaded whip with moulded base coil assembly	
Whip Length *mm*	1500		1050	
Mounting	Threaded stud	MBC base (included)	Threaded stud	MBC base (included)
Cable and Connector	5.0m RG58 C/U	Not included	5.0m RG58 C/U	Not included

VHF High Gain Roof Mount

148-175 MHz

FW12
SW12

SW12 FW12

The SW12 stainless steel and FW12 fibreglass antennas are base loaded e wave high gain antennas which, when mounted high on a roof clear of obstructions, provide superior gain and pattern characteristics. The antennas are identical in performance so the choice of antenna depends on user preference.

Both antennas are easily tuned in the field for minimum VSWR. They mount via standard VHF bases and can utilise the full line of accessories and fittings which are offered in this range.

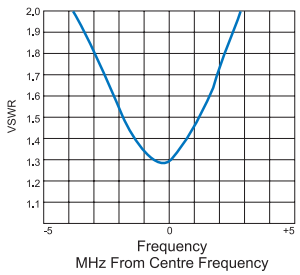
SW12

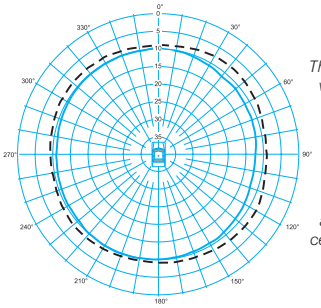
- 17-7PH tapered stainless steel whip fitted to a durable fibreglass base loading coil
- Resilient construction retains shape after bending or knocks

FW12

- Braided fibreglass antenna with integrated base loading coil
- Black UV stabilised heatshrink mounted over chrome plated brass ferrule

Typical VSWR response (FW12)





The FW12 and SW12, when mounted in the centre of the roof, provide excellent gain and omnidirectional performance - free from any nulls or holes. The antennas are ideal for applications requiring centre roof mounting.

TEST FREQUENCY: 160 MHz
REFERENCE ANTENNA
MODEL: SW2
MOUNT: MB9 Roof Centre
TEST ANTENNA
MODEL: FW12
MOUNT: MB9 Roof Centre

Electrical

Model No.	SW12	FW12
Gain	3dB over a ¼ wave	
Frequency *MHz*	148 - 175	
Power *W*	100	
Tuned Bandwidth	3.0 MHz @ 1.5:1 VSWR	
Tuning	Field tune to minimum VSWR	

Mechanical

Model No.	SW12	FW12
Whip Material	Tapered 17-7 PH stainless steel	Fibreglass with black heatshrink
Whip Length *mm*	1340	1345
Mounting	MB9, MB10 or MB12 bases (not included)	
Cable and Connector	Not included, order separately	

VHF Unity Gain Roof Mount

66-175 MHz

SW2
TSW1
111ST

In the 136-175 MHz band, ¼ wave roof mount antennas remain a popular choice. Mounted high on a vehicle they provide excellent omnidirectional performance, are easily tuned and are extremely affordable. All of these antennas can be mounted to a standard 5/16 " - 26 TPI base such as the MB9, MB10 or MB12. They can utilise the full line of accessories and fittings available for such applications.

SW2

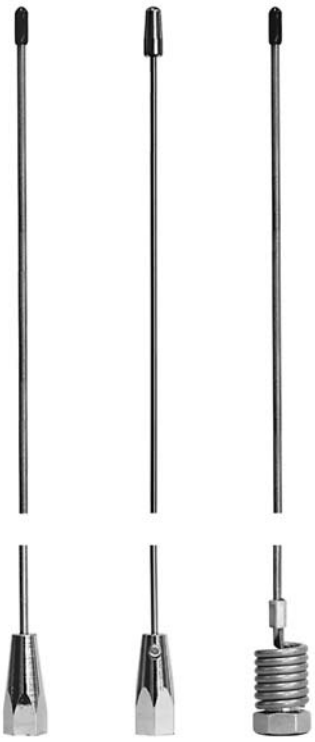
- Parallel stainless steel whip
- Interference thread locking mechanism prevents loosening of whip due to vibration

TSW1

- 17-7PH tapered stainless steel whip
- Resilient construction retains shape after bending or knocks

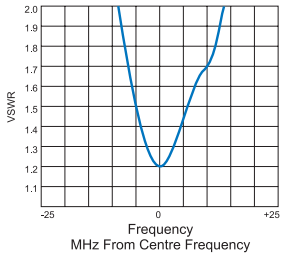
111ST

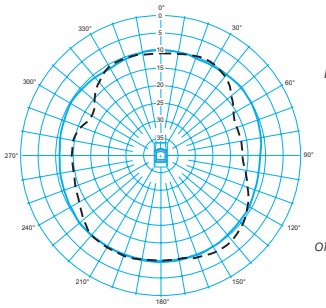
- ¼ wave stainless whip with integral spring
- Ideal for heavy industrial applications



SW2, TSW1, 111ST

Typical VSWR response (SW2)





MOUNTING NOTES
When moved to the vehicle gutter as shown here, the degradation in performance of these ¼ wave whips is dramatic. We strongly recommend against gutter or fender mounting of these antennas.

TEST FREQUENCY: 160 MHz
REFERENCE ANTENNA
MODEL: SW2 ——
MOUNT: MB9 Roof Centre
TEST ANTENNA
MODEL: SW2 - - - - - - - -
MOUNT: Gutter Mount Driver Side

Electrical

Model No.	SW2	TSW1	111ST
Gain	Unity over a ¼ wave		
Frequency *MHz*	136 - 175	66 - 175	
Power *W*	100		
Tuned Bandwidth	6% @ <1.5:1 VSWR (Typically at 150MHz)		
Tuning	Field tune to minimum VSWR		

Mechanical

Model No.	SW2	TSW1	111ST
Whip Material	Parallel stainless steel with chrome plated ferrule	Tapered 17-7PH stainless steel	Parallel stainless steel with integral spring
Whip Length *mm*	633	1277	1270
Mounting	MB9, MB10 or MB12 bases (not included)		
Cable and Connector	Not included, order separately		

VHF Ground Independent Mopole™

148-175 MHz

CD25

CD25

The CD25 has been designed for applications where height restrictions are an issue. The antenna lends itself well to mining applications or other low clearance installations .

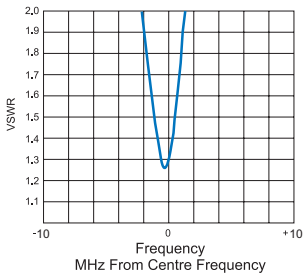
The CD25 is essentially a “shortened” version of our popular CD28 series antenna design. As the height has been shortened for lower profile applications, so the performance and associated bandwidth have been compromised.

The end fed design of this Mopole™ incorporates a unique transformer in the base section. The transformer is housed in a high impact thermoplastic moulding matched to a rugged PVC whip section.

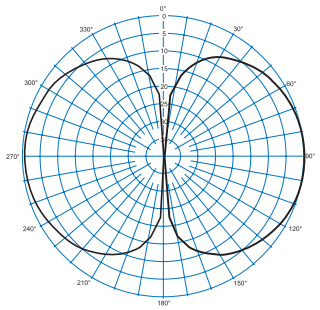
The CD25 is a ground independent antenna, making it ideal for use in “alternative” mounting locations such as gutters, mirrors or non-conductive surfaces. The antenna is supplied with an MBC base allowing for the entire antenna to be removed and replaced at will.

- Reduced height - ideal for use in mining and underground use
- Robust construction
- Unique patented design (Aust Pat. #596830)

Typical VSWR response (CD25-42-50)



Free space radiation pattern



Electrical

Model No.	CD25-42-50	CD25-43-50
Gain	Unity over a ¼ wave	
Frequency *MHz*	148 - 163	157 - 175
Power *W*	10	
Tuned Bandwidth	2% @ <2.0:1 VSWR	
Tuning	Field tune to minimum VSWR	

Mechanical

Model No.	CD25-42-50	CD25-43-50
Whip Material	Black nylon plastic housing	
Whip Length *mm*	570	540
Mounting	MBC base (included)	
Cable and Connector	Not included, order separately	

VHF Ground Independent Mopole™

133-175 MHz

CD28 Series

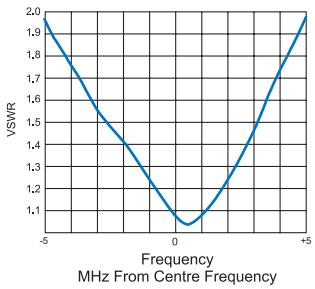
The CD28 series are ground independent Mopole™ antennas ideal in "alternative" mounting positions such as gutter, mirror or trunk mounts.

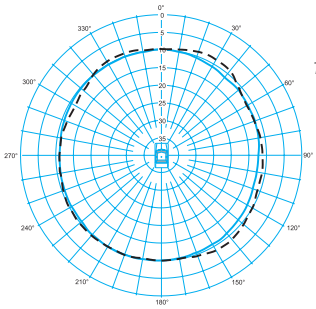
Utilising a patented matching circuit, the CD28 series antennas are end fed dipole antennas combining a durable thermoplastic housing with a flexible tapered stainless whip section resistant to knocks and bends.

- Performance - Exhibits 3 dB improvement in performance over a ¼ wave whip
- Versatile - Ground independent design allows use in alternative mounting locations
- Rugged - The transformer circuit is housed within a high impact thermoplastic moulding which is virtually indestructible
- Unique termination method simplifies installation and re-cabling in the field
- Designed, manufactured and patented in Australia [Australian Patent # 596830 and 656793]

CD28

Typical VSWR response





The CD28 Series Mopole™ antenna is shown here mounted on the driver's side gutter. The pattern demonstrates that the antenna is providing excellent omnidirectional performance.

TEST FREQUENCY: 160 MHz
REFERENCE ANTENNA *MODEL: SW2* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: CD28* - - - - - - - - - *MOUNT: Gutter Mount Drivers Side*

Electrical

Model No.	CD28-37-50	CD28-41-50	CD28-37-70	CD28-41-70
Gain	3dB over a ¼ wave. See note (1)			
Frequency ***MHz***	133 - 163	148 - 175	133 - 163	148 - 175
Power ***W***	50			
Tuned Bandwidth	4 MHz @ 1.5:1 VSWR 8 MHz @ 2.0:1 VSWR	4 MHz @ 1.5:1 VSWR 8 MHz @ 2.0:1 VSWR	4 MHz @ 1.5:1 VSWR 8 MHz @ 2.0:1 VSWR	5 MHz @ 1.5:1 VSWR 10 MHz @ 2.0:1 VSWR
Tuning	Field tune to minimum VSWR using supplied chart			

Mechanical

Model No.	CD28-xx-50	CD28-xx-70
Whip Material	17-7 PH tapered stainless steel whip with moulded base coil assembly	
Whip Length ***mm***	1340	
Mounting	MBC base (included)	Threaded stud
Cable and Connector	Not included, order separately. See note (2)	

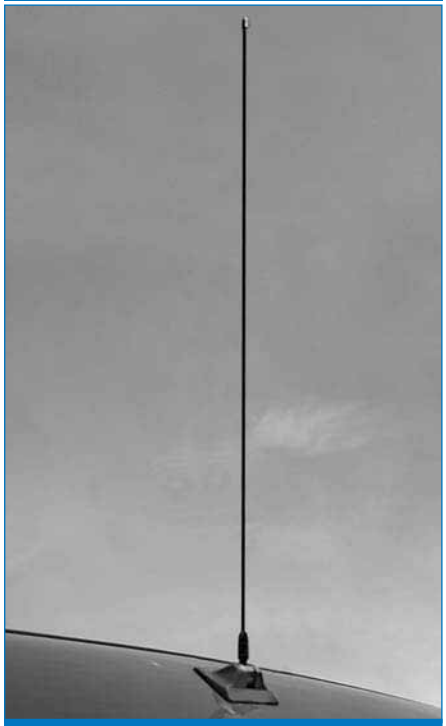
(1) Mopole™ antennas such as the CD28 have been shown to exhibit a 3dB improvement in received signal level in the field when compared to a ¼ wave whip however in pattern tests exhibit only 1.5 to 2dB over a ¼ wave (equivalent to 1.5-2dBi). This improvement in performance can be attributed to a lower radiation angle level of these ground independent antennas.
(2) Available preterminated with 5m 8058 RG58C/U. Use -73 or -53 suffix to replace -70 or -50 suffix.

Australian Patent No. 596830 and 656793

VHF Glass Mount

144-175 MHz

APS151.3

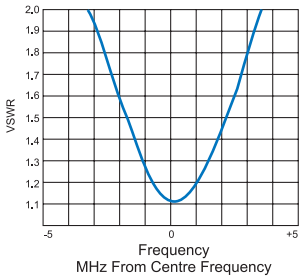


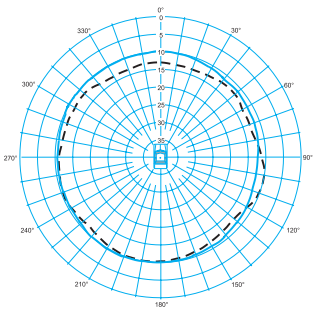
APS151.3

The APS151.3 is a glass mount antenna employing a small, stylish coupling box mounted inside the vehicle. This allows the radio signal to be transmitted through the vehicle glass to a half wave radiating element mounted externally. This high impedance matching network delivers low loss power transfer and the end result is comparable to a roof mounted antenna without drilling a hole.

- Performance - unity gain end fed ½ wave elements don't require a ground plane to achieve low VSWR and low radiation angle
- Secure Mounting - the high performance mounting provides long lasting holding power
- Convenient - installation and tuning complete in minutes with comprehensive instructions

Typical VSWR response





The APS151.3 is most commonly mounted on a rear window. This pattern is a little distorted in shape but will offer good all round performance.

TEST FREQUENCY: 160 MHz
REFERENCE ANTENNA *MODEL: SW2* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: APS151.3* - - - - - - *MOUNT: Glass Mount Rear Window*

Electrical

Model No.	APS151.3
Gain	Unity over a ¼ wave
Frequency *MHz*	144 - 175
Power *W*	100
Tuned Bandwidth	3.8 MHz @ 1.5:1 VSWR
Tuning	Field tune to minimum VSWR

Mechanical

Model No.	APS151.3
Whip Material	Stainless steel with black high gloss finish
Whip Length *mm*	838
Mounting	Glass mount
Cable and Connector	Supplied with 5.0m 8058 (RG58)

UHF Roof Mount

Mounted high on a vehicle, ¼ wave antennas provide excellent omnidirectional performance, are easily tuned and are extremely affordable. All of these antennas can be mounted to a standard 5 1/16" - 26 TPI base such as the MB10 or MB12 and utilise the full line of accessories and fittings available for such applications.

SW20

- Flexi whip - UV stabilised PVC coating on twisted stainless wire
- Supplied within specified bands (colour coded) then trimmed for fine tuning

SW7

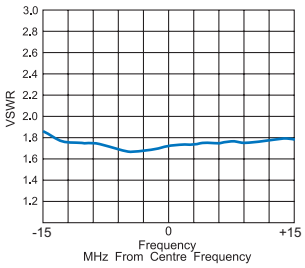
- Parallel Stainless steel whip
- Interference thread locking mechanism prevents loosening of whip due to vibration
- Trimmed to user frequency

380-520 MHz

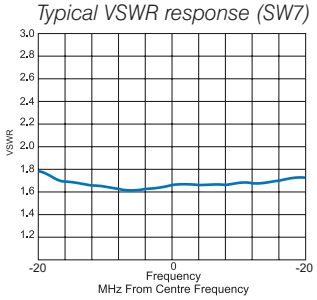
SW7 Series
SW20 Series

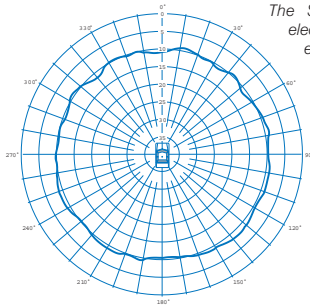
SW24

Typical VSWR response (SW23)



Typical VSWR response (SW7)





The SW20 Series and SW7 are electrically identical and therefore exhibit identical radiation patterns. Shown here centre roof mounted, the SW7 antenna exhibits a classic pattern. While these ¼ wave antennas are ideal in this application, they are not recommended mounted in any other position.

TEST FREQUENCY: 460 MHz
REFERENCE ANTENNA
MODEL: SW7
MOUNT: MB10 Roof Centre

Electrical

Model No.	SW7	SW22	SW23	SW24	SW25	SW26
Colour Code	-	White	Black	Red	Blue	Yellow
Gain	Unity over a ¼ wave					
Frequency *MHz*	380 - 520	380 - 400	400 - 420	450 - 470	470 - 490	490 - 520
Power *W*	100					
Tuned Bandwidth	Any 40 MHz segment @ <2.0:1 VSWR	Entire specified band @ <2.0:1 VSWR				
Tuning	Field tune to minimum VSWR	Supplied pre-tuned for specific bands				

Mechanical

Model No.	SW7	SW20 Series
Whip Material	Parallel stainless steel with chrome plated ferrule	Flexible stranded stainless steel whip coated with black PVC
Whip Length *mm*	330 (un-tuned)	165 (max)
Mounting	MB10 base or MB12 base	
Cable and Connector	Not included, order separately	

UHF Ground Independent Mopole™

380-520 MHz

CD50 Series
CD51 Series

CD50

The CD50 and CD51 Series UHF ground independent Mopole™ antennas are versatile and popular antennas, providing excellent performance in virtually any mounting position.

When mounted on a vehicle gutter or similar position, these UHF Mopoles™ provide optimum performance with a largely omnidirectional pattern. Due to the low angle of radiation inherent in the dipole antenna pattern, a 4.0 dB improvement in performance is typical when compared to a ¼ wave whip in the centre of a metal roof.

The end fed design of the UHF Mopoles™ incorporates a truly unique transformer in the base section. In this patented feed assembly, the dielectric of the coaxial feeder cable is trimmed to a set length and then introduced into the coil in termination. The result is a precisely matched feed which is so consistent that tuning to frequency from a chart becomes a matter of course.

CD51 antennas are fitted with a flexible nylon radome over a copper element - ideal in industrial applications. CD50 antennas have an elegant and durable tapered stainless steel whip section.

There are two styles of mounting arrangements offered. The CD50-xx-70 and CD51-xx-70 versions mount via a threaded stud and nut assembly. The antenna can be easily terminated, tuned and re-terminated in the field using the instructions supplied. Its patented design allows the coaxial cable to be replaced in the field without specialised tools or soldering.

The CD50-xx-50 and CD51-xx-50 versions mate with the MBC coaxial base providing an internal, permanent connection in a completely sealed unit. The MBC base is easy to install and allows the entire antenna to be removed and replaced at will.

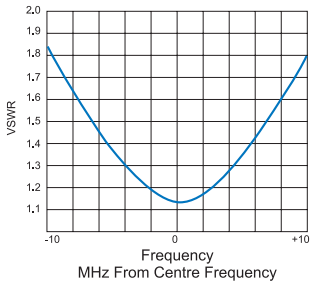
- Versatile - Ground plane independence allows alternative mounting locations
- Performance - High performance and largely omni-directional pattern when not centre roof mounted
- Convenient - Patented design allows termination or re-termination in seconds
- Stainless steel whip or flexible nylon whips cater to individual needs
- Durable - Base coil is virtually indestructible
- Unique transformer design
- Australian Patents #596830 and #656793

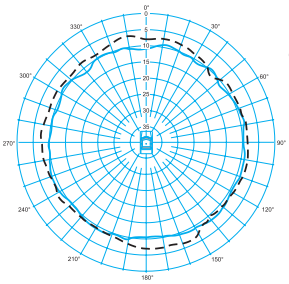
UHF Ground Independent Mopole™

380-520 MHz

CD50 Series
CD51 Series

Typical VSWR response (CD51)

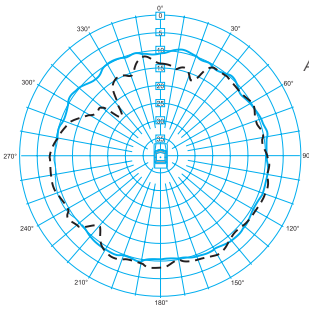




UHF Mopoles™ are excellent performers even when gutter mounted as this pattern demonstrates.
The Mopole™ design has resulted in an antenna which is largely omnidirectional in spite of its gutter mounting position.

TEST FREQUENCY: 460 MHz
REFERENCE ANTENNA MODEL: SW7 —— MOUNT: MB10 Roof Centre
TEST ANTENNA MODEL: CD51 - - - - - - MOUNT: GM2 Gutter Drivers Side

MOUNTING NOTES



Although the CD51 Mopole™ style works extremely well when gutter mounted, moving the antenna down to the vehicle fender , as shown here, will result in severe pattern degradation. This antenna should not be used in this mounting position.

TEST FREQUENCY: 460MHz
REFERENCE ANTENNA MODEL: SW7 —— MOUNT: MB10 POSITION: Roof Centre
TEST ANTENNA MODEL: CD51 - - - - - - MOUNT: Trunk Mount POSITION: Rear Driver Side

CD50-xx-70 cross section with cable fitted

Electrical

Model No.	CD50-65-50	CD50-65-70	CD50-68-50	CD50-68-70	CD51-65-50	CD51-65-70	CD51-68-50	CD51-68-70
Gain	4dB over a ¼ wave. See note (1)							
Frequency *MHz*	380 - 440		450 - 520		380 - 440		450 - 520	
Power *W*	50							
Tuned Bandwidth	13 MHz @ <1.5:1 VSWR							
Tuning	Field tune to minimum VSWR using supplied tuning chart							

Mechanical

Model No.	CD50-XX-50	CD50-XX-70	CD51-XX-50	CD51-XX-70
Whip Material	17-7 PH Stainless steel		Copper braid element in flexible nylon tubing	
Whip Length *mm*	395		360	
Mounting	MBC base (included)	Threaded stud	MBC base (included)	Threaded stud
Cable and Connector	Not included, order separately. See note (2)			

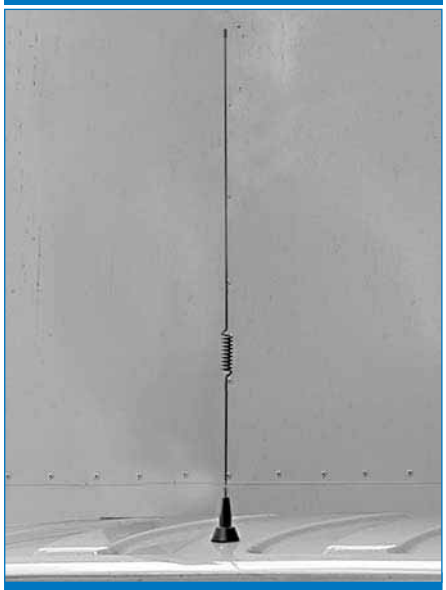
(1) Mopole™ antennas such as the CD50 and CD51 exhibit a 4dB improvement in performance over a ¼ wave whip but in pattern tests deliver only 2.0 to 2.5dB of actual gain. This improvement in performance can be attributed to a lower angle of radiation and is of particular benefit to users in rugged terrain conditions and in heavily built up city areas.
(2) Available preterminated with 5m 8058 RG58C/U. Use -73 or -53 suffix to replace -70 or -50 suffix.

Australian Patent No. 596830 and 656793

UHF Phasemaster™ Roof Mount

400-520 MHz

CSW10 Series
CSW20 Series

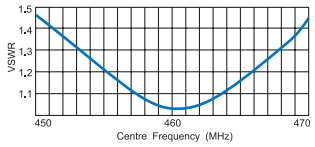


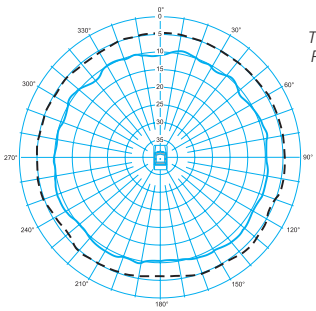
CSW24

The CSW10 and CSW20, the original Phasemaster™ antennas, are our most popular roof mounts due to their unmatched performance and superior strength. The highly flexible stainless steel whip and consistent 4.5dB gain has made them a favourite in virtually all roof mount applications.

- Outstanding performance - precisely matched phasing coil separating ⅝ wave over ½ wave electrical elements
- Available in classic s/s finish or black high gloss finish
- Supplied in colour coded bands then fine tuned in field with chart
- Flexible 17-7PH Stainless steel whip will always bounce back after knocks and bumps

Typical VSWR response (CSW14)





This pattern shows that the Phasemaster™ antenna is meeting the gain and omnidirectional performance we have stated in our specifications. The antenna is producing a "textbook" pattern and is delivering 4.5dB gain. This antenna is an excellent performer and is highly recommended for any roof mount application.

TEST FREQUENCY: 460 MHz
REFERENCE ANTENNA *MODEL: SW7* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: CSW24* - - - - - - - *MOUNT: MB10 Centre Roof*

Electrical

Model No.	CSW13/ CSW23	CSW13-66/ CSW23-66	CSW14/ CSW24	CSW15/ CSW25	CSW16/ CSW26
Gain	4.5dB over a ¼ wave				
Frequency *MHz*	400 - 420	420 - 440	450 - 470	470 - 490	490 - 520
Power *W*	100				
Tuned Bandwidth	20 MHz @ <1.5:1 VSWR (<1.2:1 VSWR @ resonant frequency)				
Tuning	Trim to frequency using supplied tuning chart				

Mechanical

Model No.	CSW13	CSW13-66	CSW14	CSW15	CSW16	CSW23	CSW23-66	CSW24	CSW25	CSW26
Colour Code	Black	Black	Red	Blue	Yellow	Black	Black	Red	Blue	Yellow
Whip Material	17-7 PH Stainless steel					17-7 PH Stainless steel with black high gloss plating				
Whip Length *mm*	720	687	630	590	560	720	687	630	590	560
Mounting	MB10 or MB12 bases									
Cable and Connector	Not included, order separately									

UHF Elevated Feed Mopole™

400-520 MHz

CD91 Series

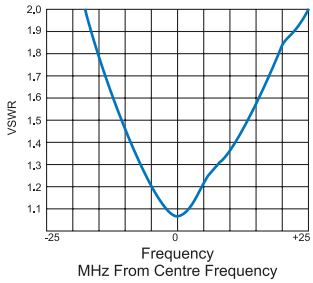
CD91

The CD91 Series are 4 dB elevated feed Mopole™ antennas which are suited to mounting on vehicle roof racks and gutters. These antennas are specifically designed for use on emergency service vehicles to elevate a ¼ wave antenna above lights and sirens.

The antenna can easily be upgraded to a high gain antenna in seconds, by unscrewing and replacing the whip section. The antenna is ordered pre-tuned to a specific band.

- Performance - provides 4 dB improvement over ¼ wave even when mounted on roof rack or gutter mount
- Quality construction - choke assembly is hand crafted from solid brass and chrome plated
- Ideal on emergency service vehicles elevating the antenna above lights and sirens
- Upgrades to high gain antenna in seconds
- Order in pre-tuned bands
- Can be used with a variety of mounts. See accessories section for options.

Typical VSWR response (CD91)



Electrical

Model No.	CD91-65-70	CD91-70-70	CD91-71-70	CD91-72-70
Gain	4dB over a ¼ wave. See note (1)			
Frequency ***MHz***	400 - 420	450 - 470	470 - 490	490 - 520
Power ***W***	100			
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR			
Tuning	Supplied pre-tuned			

Mechanical

Model No.	CD91-65-70	CD91-70-70	CD91-71-70	CD91-72-70
Colour Code	Black	Red	Blue	Yellow
Whip Material	Flexible stranded stainless steel whip with black PVC coating and chrome plated brass elevated feed choke assembly			
Whip Length ***mm***	395 (includes whip and choke section)			
Mounting	Threaded stud and nut assembly mounts in either 16mm or 13mm dia. mount hole			
Cable and Connector	Not included, order separately. See note (2)			

(1) Mopole™ antennas such as the CD91 exhibit a 4dB improvement in performance over a ¼ wave whip but in pattern tests deliver only 2.0 to 2.5dB of actual gain. This improvement in performance can be attributed to a lower angle of radiation and is of particular benefit to users in rugged terrain conditions and in heavily built up city areas.
(2) Available preterminated with 5M RG58 cable. Use -73 (8058 cable) or -75 (9001 cable) to replace -70 suffix.

UHF Elevated Feed Mopole™

400-520 MHz

CD93 Series
CD94 Series

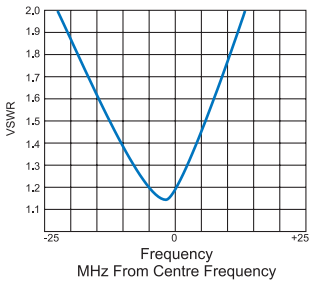
CD93

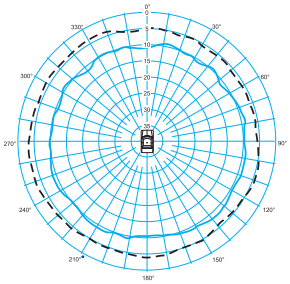
The CD93 and CD94 Series are high performance elevated feed mobile antennas which can be used in virtually any mounting position. When gutter or roof bar mounted, high above a vehicle, CD93 and CD94 Series antennas deliver a full 6.5dB of gain over a ¼ wave whip.

- Totally ground plane independent
- Elevated feed boosts radiating element above obstructions
- "Phasemaster™" whip section provides superior performance and strength
- Quality construction - choke assembly is crafted from solid brass and available in both chrome and black finishes
- Fibreglass whip option available
- Can be used with a variety of mounts. See accessories section for options.

See also new CD900 Series UHF CBRS antennas on page 132

Typical VSWR response (CD93 Series)





This pattern shows that when elevated above obstructions, the CD93 is fully ground independent and delivers superior gain. This pattern is showing that the published gain figures of 6.5dB over a ¼ wave whip are justified.

TEST FREQUENCY: 460 MHz

REFERENCE ANTENNA
MODEL: SW7
MOUNT: MB10 Roof Centre

TEST ANTENNA
MODEL: CD93
MOUNT: GM2 Gutter Drivers Side

Electrical

Model No.	CD93-65-70 CD94-65-70	CD93-70-70 CD94-70-70	CD93-71-70 CD94-71-70	CD93-72-70 CD94-72-70
Colour Code	Black	Red	Blue	Yellow
Gain	6.5dB over a ¼ wave. See note (1)			
Frequency *MHz*	400-420	450-470	470-490	490-520
Power *W*	100			
Tuned Bandwidth	Entire specified band @ <1.6:1 VSWR			
Tuning	Supplied pre-tuned			

Mechanical

Model No.	CD93 Series	CD94 Series
Whip Material	17-7PH stainless steel with black high gloss finish	17-7PH plain stainless steel
Whip Length *mm*	810 max (Includes whip and choke section)	
Mounting	Threaded stud and nut assembly mounts in either 13mm or 16mm dia. mount hole	
Cable and Connector	Not supplied, order separately. See note (2)	

(1) Mopole™ antennas such as the CD93 and CD94 have been shown to exhibit a 6.5dB improvement in received signal level in the field when compared to a ¼ wave whip however in pattern tests exhibit only 1.5 to 2dB over a ¼ wave (equivalent to 1.5-2dBi). This improvement in performance can be attributed to a lower radiation angle level of these ground independent antennas.
(2) Available preterminated with 5M RG58 cable. Use -73 (8058 cable) or -75 (9001 cable) to replace -70 suffix.

UHF Broadband Dipole

400-470 MHz

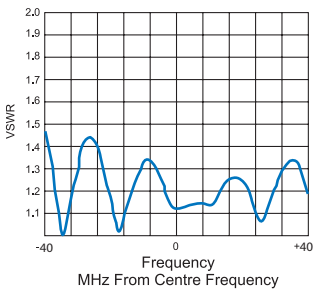
CD440

CD440

The CD440 is a broadband UHF Mopole™ designed to cover the entire 400-470MHz band without adjustment. Being a ground independent design, the CD440 is suited to alternative (non-roof) mounting locations such as bull bar or roof rack. It's versatility makes it ideal for emergency service applications requiring broad bandwidth and high performance.

- Broadband - covers 400-470MHz without adjustment
- Circuit board radiator provides consistent gain across entire frequency band
- Versatile - Ground plane independent allowing alternative mounting locations
- Durable - thick fibreglass radome fitted to a heavy duty spring
- Can be used with a variety of mounts. See accessories section for options.

Typical VSWR response



Electrical

Model No.	CD440
Gain	4dB over a ¼ wave. See note (1)
Frequency *MHz*	400 - 470
Power *W*	100
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

Model No.	CD440
Whip Material	31mm dia. woven black fibreglass
Whip Length *mm*	490
Spring	Electropolished stainless steel (integrated)
Mounting	Mounts via a 12mm dia. threaded stud
Cable and Connector	5.0m RG58C/U fitted, no connector supplied

(1) As the CD440 is a half wave dipole antenna, actual pattern tests show unity gain vs. a half wave dipole. In the field, however, the CD440 will deliver performance which is approximately 4dB better than a ¼ wave whip mounted in the centre of a metal roof, mainly because it exhibits a lower angle of radiation.

UHF Glass Mount

380-474 MHz

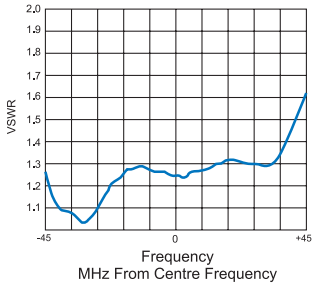
AP354 Series

AP354

The AP354 is a broadband glass mount antenna specifically designed for Tetra mobile applications. Featuring patented On-Glass technology the AP354 transmits and receives through the glass making it ideal for fleet use with a no-holes installation. The antenna has been specifically designed for broadband use with no additional tuning required across the whole band from 380-474MHz for a VSWR of less than 1.9:1.

- Unique - glass mount design transmits and receives through the glass
- Weatherproof - water cannot enter the vehicle through gasket failure or cable channels
- Efficient - mounts high on the vehicle for maximum omnidirectional radiation pattern
- Broadband - requires no field tuning across entire frequency range
- Time-saving - simple mounting method allows no-hole installation in minutes

Typical VSWR response (AP354)



Electrical

Model No.	AP354
Gain	Unity over ¼ wave
Frequency *MHz*	380 - 474
Power *W*	10
Tuned Bandwidth	94 MHz @ <1.9:1 VSWR
Tuning	Supplied tuned

Mechanical

Model No.	AP354
Whip Material	Stainless steel with black high gloss finish
Whip Length *mm*	254
Mounting	Glass mount
Cable and Connector	5.0m RG58C/U fitted, no connector supplied

UHF Glass Mount

400-520 MHz

AP454 Series

The AP454 Series is a third generation glass mount antenna for UHF applications. The AP454 features an unobtrusive interior mounted coupling box and a number of whip options.

- Convenient - installation and tuning completed in minutes
- High gain options available
- Broadband - AP454-72-4G provides broadband 3dB gain across entire specified bandwidth

AP454-3G

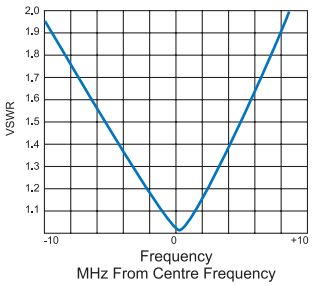
WHIP OPTIONS

AP454-3G - end fed ½ wave

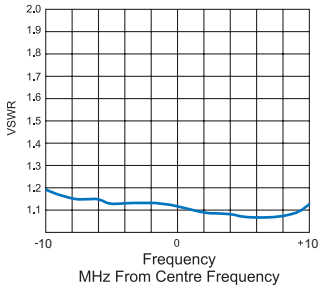
AP454-xx-5G - ⅝ over a ½ wave collinear

AP454-72-4G - end fed ⅝ wave

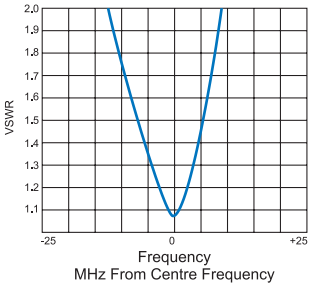
Typical VSWR response (AP454-5G)

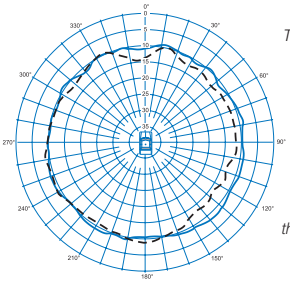


Typical VSWR response (AP454-72-4G)



Typical VSWR response (AP454-3G)





The radiation pattern for the AP454-3G, while clearly a compromise in performance over a ¼ wave whip, remains a much better option in the UHF band than a mis-applied antenna. The nulls in the pattern shown are largely due to the placement of the antenna slightly below the vehicle roof line.

TEST FREQUENCY: 460 MHz
REFERENCE ANTENNA *MODEL: SW7* —— *MOUNT: MB10 Roof Centre*
TEST ANTENNA *MODEL: AP454.3G* ------ *MOUNT: Glass Mount* *Rear Window*

Electrical

Model No.	AP454-3G	AP454-65-5G	AP454-70-5G	AP454-71-5G	AP454-72-4G
Gain	Unity over a ¼ wave	3dB over a ¼ wave			2dB over a ¼ wave
Frequency *MHz*	403 - 520	400 - 420	450 - 470	470 - 490	500 - 520
Power *W*	100				
Tuned Bandwidth	12 MHz @ <1.5:1 VSWR	10 MHz @ <1.5:1 VSWR			Entire specified band @ <1.5:1 VSWR
Tuning	Field tune to minimum VSWR				

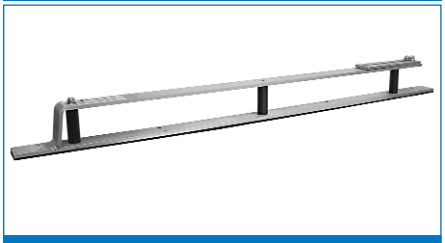
Mechanical

Model No.	AP454.3G	AP454-xx.5G Series	AP454-72-4G
Whip Material	Stainless steel with black high gloss finish		
Whip Length *mm*	230	871	380
Mounting	Glass mount		
Cable and Connector	5.0m RG58C/U		

VHF Low Profile

70-85 MHz

TLA 80



TLA80

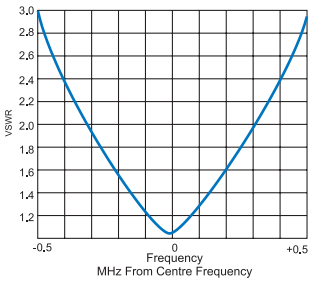
The TLA80 is a low profile transmission line antenna for use in mobile applications with severe height restrictions. Transmission line design allows the antenna to deliver excellent omnidirectional coverage with a substantial height reduction over standard whip style antennas.

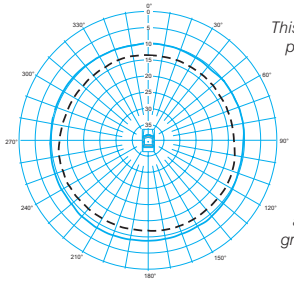
These exceptionally rugged antennas are commonly used in high risk applications such as trains and emergency vehicles or in high vibration environments.

The TLA80 is constructed from alodined aluminium and supplied with a rubber gasket for secure sealing.

- Low Profile - Only 70mm tall makes it ideal for height restricted applications
- Vertically polarised radiation pattern when mounted horizontally
- Frequency tuneable in the field

Typical VSWR response





This transmission line antenna provides excellent omnidirectional coverage. The antenna is approximately 3dB down in gain over a ¼ wave whip, due to its low profile. The antenna is highly recommended in applications where height is critical though it is important to note the performance trade off and need for a large, flat ground plane.

TEST FREQUENCY: 77 MHz
REFERENCE ANTENNA *MODEL: SW1* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: TLA80* - - - - - - - *MOUNT: 1800 x 1200* *Ground Plane*

Electrical

Model No.	TLA80-BK	TLA80-R	TLA80-G
Gain	-3dB over ¼ wave		
Frequency *MHz*	70 - 75	75 - 80	80 - 85
Power *W*	100		
Tuned Bandwidth	0.6 MHz @ <2.0:1 VSWR		
Tuning	Field tune to minimum VSWR		

Mechanical

Model No.	TLA80 Series
Whip Material	Alodined Aluminium
Length *mm*	954
Height *mm*	70
Width *mm*	40
Cable and Connector	UHF female connector fitted. Cable not included

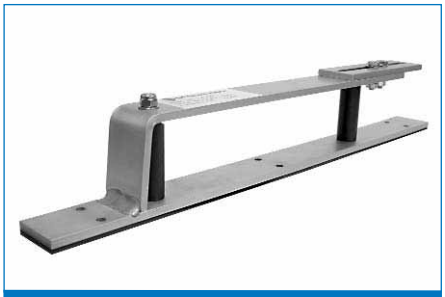
VHF Low Profile

118-175 MHz

TLA150
TLA160
TLR Series

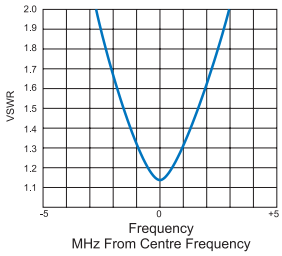
Transmission line antenna designs, as used in this group of antennas, provide excellent omnidirectional radiation patterns for vertically polarised antennas but allow a substantial height reduction over standard ¼ wave whip style antennas. A number of design styles available to suit a variety of applications including heavy duty industrial, mining, rail, commercial, airforce and security.

- TLA150 - For extra heavy duty applications
- TLA160 - Lightweight, field tunable
- TLR Series - Enclosed radiator, field tunable

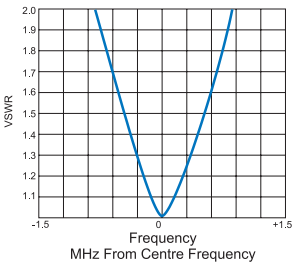


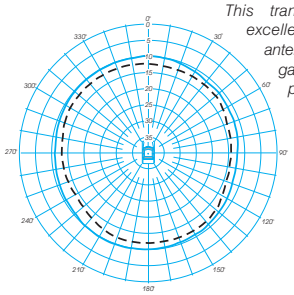
TLA160

Typical VSWR response (TLA160)



Typical VSWR response (TLR160)





This transmission line antenna provides excellent omnidirectional coverage. The antenna is approximately 2dB down in gain over a ¼ wave whip, due to its low profile. The antenna is highly recommended in applications where height is critical though it is important to note the performance trade off and need for a large, flat ground plane.

TEST FREQUENCY: 460 MHz
REFERENCE ANTENNA *MODEL: SW2* —— *MOUNT: MB9 Roof Centre*
TEST ANTENNA *MODEL: TLA160* - - - - - - - - - - *MOUNT: 1800 x 1200 Ground Plane*

Electrical

Model No.	TLA160	TLA150	TLR160	TLR150
Gain	-2dB over ¼ wave			
Frequency ***MHz***	148 - 175 (also available in 118-136)	166 - 175	148 - 160	160 - 174
Power ***W***	100			
Tuned Bandwidth	3.0 MHz@ <1.5:1 VSWR	1.5 MHz@ <1.5:1 VSWR	1.6 MHz@ <2.0:1 VSWR	
Tuning	Field tune to minimum VSWR	Supplied tuned to user specified frequency	Field tune to minimum VSWR	

Mechanical

Model No.	TLA160	TLA150	TLR Series
Whip Material	Alodined aluminium	Rugged cast aluminium coated in chlorinated rubber	Copper plated steel element covered in ASA plastic radome
Length ***mm***	650		429
Height ***mm***	100		104
Width ***mm***	56		83
Cable and Connector	N-type receptacle connector fitted. Cable not included.		UHF female connector fitted. Cable not included.

UHF Low Profile

255-530 MHz

TLA600 Series

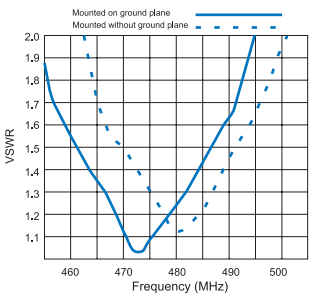
TLA600-57

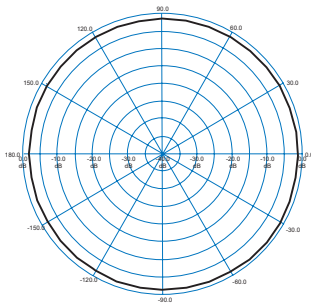
The TLA600 series is a range of low profile transmission line antennas for use in applications where little or no ground plane exists.

These antennas can be used on buses, trucks, trains or in telemetry applications where the antennas are to be mounted on a fibreglass roof or similar non-conductive surface.

- Available with integrated active GPS antenna for asset tracking/vehicle location applications on request. *
- Functions with or without a ground plane, allowing one antenna to be used in an entire system, regardless of mounting application.**
- Performance equivalent to a ¼ whip wave mounted in the centre of a metal roof
- All antennas supplied pre-tuned to the nominated bands and require no field adjustment
- Low profile (<80mm) height overall
- Plastic moulded radome is attractive and durable, resistant to car washes, UV Stable and weatherproofed
- Neoprene gasket seal provides excellent waterproofing of fitted antenna
- Available in all major UHF bands

Typical VSWR response for TLA600-71





This is a logarithmic plot of the horizontal (H Plane) pattern of the TLA600 Series. With a peak gain of 2.1 dBi, the TLA-600 is performing effectively identically to a ¼ wave whip.

** When ordering specify - GPS suffix - i.e. TLA600-57-GPS*
*** TLA620-99 cannot be used without a ground plane*

255-530 MHz

TLA600 Series

Electrical

Model No.	TLA600-57	TLA600-65	TLA600-70	TLA600-71	TLA600-72	TLA620-99
Gain	Unity over a ¼ wave					
Frequency *MHz*	380 - 400	400 - 420	450 - 470	470 - 500	500 - 530	255 - 380
Power *W*	50					
Tuned Bandwidth	Entire band @ VSWR <2.0:1 off ground plane <2.4:1 on ground plane	Entire operating band @ <2.0:1 VSWR on or off ground plane				4% @<1.5:1 VSWR 5% @ <2.0:1 VSWR
Tuning	Supplied pre-tuned					Supplied pre-tuned, requires ground plane

Mechanical

Model No.	TLA600 Series
Construction	White Geloy ASA radome
Length *mm*	375
Height *mm*	78
Width *mm*	140
Mounting	Screw and gasket
Termination	N female connector. Alternative BNC connector also available (subject to MOQ) Optional GPS unit terminates with MCX connector

GPS Specifications

Model No.	TLA600-XX-GPS
Fo	1575.42 MHz
Operation Temperature	-40 to +85°C
Storage Temperature	-40 to +100°C
System Gain at Fo	28dBi including cable and filter losses
Impedance	50 Ohm
Polarization	RHCP
VSWR at Fo	1.5:1
Noise Figure at Fo	<1.8 dB max.
Power Input	+2.5Vdc to +12Vdc input, Auto Switching
Power Consumption	11mA to 13mA (max)
Power Input	Reverse Polarity Short Circuit Shutdown
Over-Current	Thermal over-current shutdown >+150°C

UHF Unity Gain Low Profile

380-520 MHz

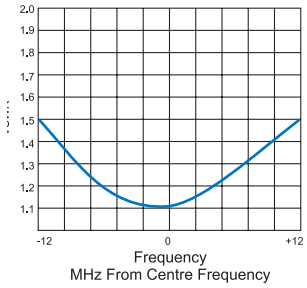
TLA400 Series

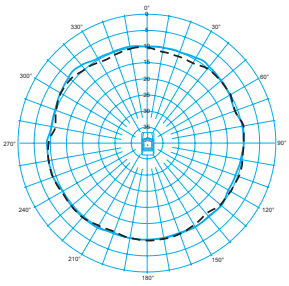
TLA400

The TLA400 is a low profile transmission line antenna ideal for applications with strict height requirements. The TLA400 delivers performance equivalent to a ¼ wave whip, yet measures only 66mm tall. It's rugged construction and low profile make it an ideal choice for industrial, rail and mining applications.

- Low Profile - Only 66mm tall - ideal for height restricted applications
- Extremely Rugged - Cast aluminium construction
- Reliable - Fully pattern tested in verified range conditions
- Corrosion Resistant
- Fully interchangeable with existing products in the field

Typical VSWR response





This is a sweep in the horizontal plane of the TLA400. It is clear that the pattern is identical to that of a ¼ wave whip. This antenna is highly recommended but must be centre roof mounted.

TEST FREQUENCY: 410 MHz
REFERENCE ANTENNA
MODEL: DSW1402 ——
MOUNT: MB14
POSITION: Roof Centre
TEST ANTENNA
MODEL: TLA400 - - - - - -
MOUNT: 1800 x 1200
Ground Plane

Electrical

Model No.	TLA400 Series	TLA401 Series
Gain	Unity over a ¼ wave	
Frequency ***MHz***	380 - 520	
Power ***W***	100	
Tuned Bandwidth	Supplied in 20 MHz bands @ <1.5:1 VSWR. See note (1)	
Tuning	Supplied pre-tuned	

Mechanical

Model No.	TLA400 Series	TLA401 Series
Whip Material	Rugged cast aluminium coated with baked enamel finish	
Length ***mm***	255	
Height ***mm***	66.5	
Width ***mm***	60	
Hole spacing for mounting ***mm***	44	40
Cable and Connector	N connector, no cable supplied, order separately (UHF connector available subject to MOQ)	

(1) When ordering specify suffix: *-57 (380-400MHz)*
-65 (400-420MHz)
-70 (450-470MHz)
-71 (470-490MHz)
-72 (500-520MHz)

Cellular Transit Antenna

890-960 MHz
1710-1880 MHz

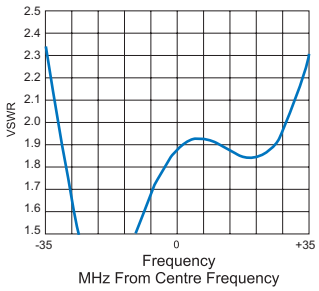
TLA2000
TLA3000

TLA2000/3000

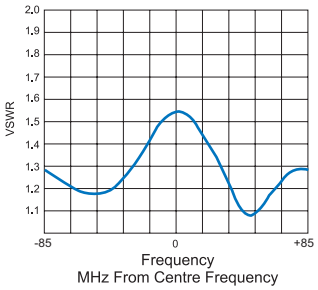
The TLA2000 is an ideal antenna solution for GSM data applications in both fixed and mobile situations. Designed to offer true dual band performance the TLA2000 is ready for use with the latest GSM (GPRS) modems. With a high impact resistant vacuum formed ABS radome and neoprene mounting gasket, the TLA2000 can be used for indoor or outdoor applications.

- Applications include public vending machines, ATM kiosks and industrial automotive use
- Designed for use on conductive or nonconductive surfaces
- TLA3000 model incorporates integrated GPS antenna

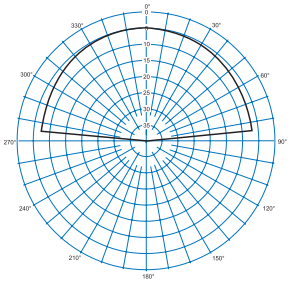
Typical VSWR response GSM900



Typical VSWR response GSM1800



Typical E-Plane response @ 890MHz



Electrical

Model No.	TLA2000/3000
Gain *dBi*	2
Frequency *MHz*	890 - 960 / 1710 - 1880
Power *W*	10
Tuned Bandwidth	Entire specified band @<2.5:1 VSWR
Tuning	Pre-tuned

Mechanical

Model No.	TLA2000	TLA3000
Construction	White Geloy ASA radome	
Diameter *mm*	135	
Height *mm*	61 (including gasket)	
Mounting	M4 hardware (not included)	
Cable and Connector	500mm low loss 9014 RG58 type	Cellular: 5m 9014 RG58 type - FME connector GPS: 5m low loss RG174 type - MCX connector

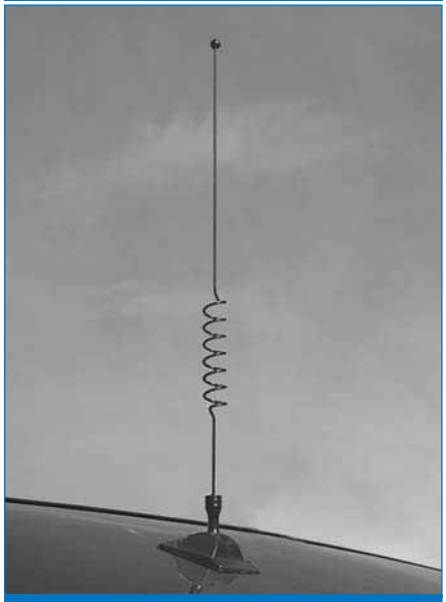
GPS Specifications

Fo	1575.42 MHz
Operation Temperature	-40 to +85°C
Storage Temperature	-40 to +100°C
System Gain at Fo	28dBi including cable and filter losses
Impedance	50 Ohm
Polarization	RHCP
VSWR at Fo	1.5:1
Noise Figure at Fo	<1.8 dB max.
Power Input	+2.5Vdc to +12Vdc input, Auto Switching
Power Consumption	11mA to 13mA (max)
Power Input	Reverse Polarity Short Circuit Shutdown
Over-Current	Thermal over-current shutdown >+150°C

Trunking Glass Mount

806-870 MHz

AP868.3

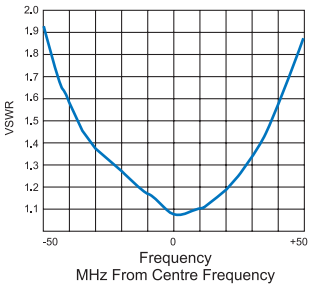


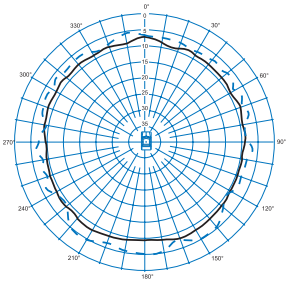
AP868.3

The AP868.3 has been specifically designed for the 806-870MHz international trunked mobile band. The antennas look identical to their cellular cousins but are optimised for full 3dB gain performance within the trunking band.

- Limited lifetime warranty
- No-fuss installation - antenna supplied completely assembled and ready for installation
- High performance - unique coupling design delivers genuine 3 dB gain
- Pliable mounting foot for maximum adhesion to curved windows
- Black high gloss plating won't scratch, chip or peel

Typical VSWR response





The pattern shown for the AP868.3 shows that the antenna provides an excellent, largely omnidirecitonal radiation pattern and exhibits 3dB gain over a ¼ wave whip mounted in the centre of a metal roof.

TEST FREQUENCY: 850 MHz
REFERENCE ANTENNA *MODEL: SW1405* —— *MOUNT: MB14 Roof Centre*
TEST ANTENNA *MODEL: AP868.3* ------ *MOUNT: Glass Mount Rear Window*

Electrical

Model No.	AP868.3
Gain	3dB over a ¼ wave
Frequency ***MHz***	806 - 870
Power ***W***	50
Tuned Bandwidth	Entire specified band @ <1.9:1 VSWR
Tuning	Supplied pre-tuned

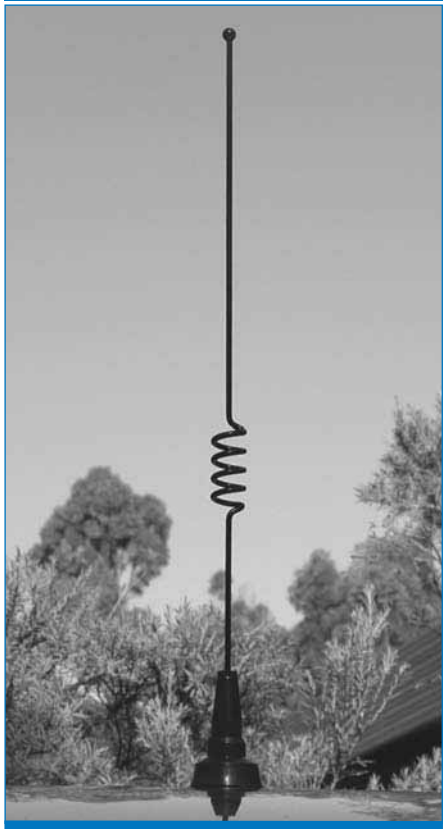
Mechanical

Model No.	AP868.3
Whip Material	Stainless steel with high gloss plating
Whip Length ***mm***	355
Mounting	Glass mount
Cable and Connector	5.0m RG58C/U fitted, please specify connector

High Gain Trunking Roof Mount

806-870 MHz

SW1585



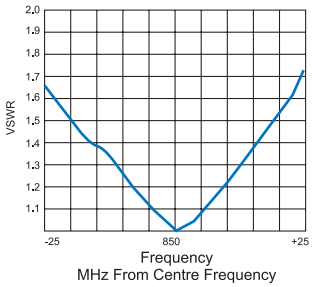
SW1585

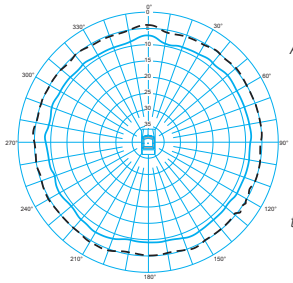
The SW1585 antenna is derived directly from our high performance cellular roof mount antenna. It is a 3 dB gain antenna, optimised for the 806-870MHz international trunked mobile bands. The SW1585 will deliver excellent all-round performance and is generally considered to be the optimum choice for professional users.

At the heart of the SW1585 is the MB14 antenna base. This base is intricately constructed, much like a coaxial connector. The precisely controlled termination which is achieved is reliable electrically and mechanically and provides a superb match, resulting in a broad bandwidth, and extremely low VSWR.

- High performance
- Limited lifetime warranty
- Roof mounting for optimum performance
- MB14 base for superior match and bandwidth
- Black high gloss plating won't scratch, chip or peel

Typical VSWR response





As the pattern shows for the SW1585, this antenna delivers excellent gain and omnidirectional performance, as would be expected from a roof mount antenna. The antenna is actually exhibiting slightly more than 3.0dB gain.

TEST FREQUENCY: 825 MHz
REFERENCE ANTENNA *MODEL: SW1405* —— *MOUNT: MB14 Roof Centre*
TEST ANTENNA *MODEL: SW1585* - - - - - - *MOUNT: MB14 Roof Centre*

Electrical

Model No.	SW1585
Gain	3dB over a ¼ wave
Frequency ***MHz***	806 - 870
Power ***W***	50
Tuned Bandwidth	Entire specified band @ <1.9:1 VSWR
Tuning	Supplied pre-tuned

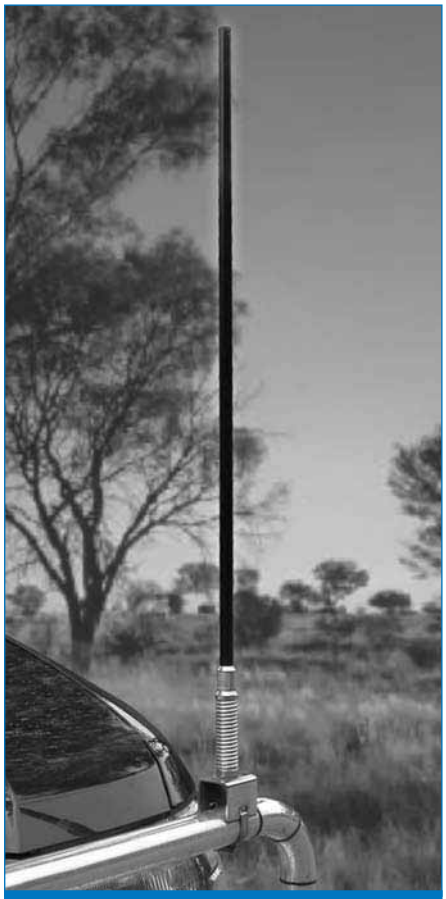
Mechanical

Model No.	SW1585
Whip Material	17-7PH Stainless steel with brass ferrule and black high gloss finish
Whip Length ***mm***	310
Mounting	MB14 base
Cable and Connector	5.0m CellFoam®, connector not included

High Gain Trunking Collinear

806-870 MHz

CD1595



CD1595

The CD1595 is a high gain mobile trunking band antenna providing a genuine 6 dB gain, ideally suited for use in fringe areas and rural applications where performance is paramount.

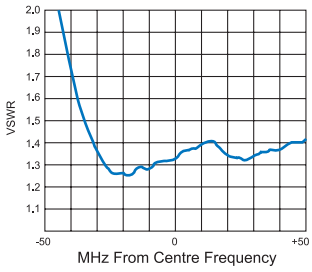
These antennas are extremely robust in design with the radiating element housed in a black fibreglass radome fitted to an integral heavy duty electropolished stainless steel spring.

With a 13mm stud mount, these antennas may be installed onto a number of mounting brackets such as mirror, bull bar, gutter or fender mounts and are ideal for installations in commercial vehicles, four wheel drives and trucks.

These antennas have been factory terminated with an FME connector and are supplied complete with a Mini-UHF adapter to simplify installation.

- Suits Australian and International trunking bands
- 6 dB Gain ideal for fringe areas and rural applications
- Supplied pre-terminated with connectors to suit most radio types
- Robust design for heavy duty applications

Typical VSWR response



Electrical

Model No.	CD1595
Gain	6dB over ¼ wave
Frequency *MHz*	806 - 870
Power *W*	50
Tuned Bandwidth	Entire specified band @ <1.5:1VSWR
Tuning	Supplied pre-tuned

Mechanical

Model No.	CD1595
Whip Material	Black fibreglass radome
Length *mm*	890
Spring	Electropolished stainless steel
Mounting	Threaded stud and nut assembly 13 or 16mm clearance hole required
Cable and Connector	5.0m Cellfoil® low loss cable with FME fitted mini UHF adaptor included

Systems engineering services

RFI offer an extensive range of design, development and related services in support of our customers. These include:

- Site layout and construction advice
- RF systems design
- Intermodulation and interference analysis
- Retuning
- Reconfiguration advice
- Site fault finding
- Multicoupling equipment design and selection

We welcome the opportunity to work with you through each requirement including initial design, tender preparation, right through to installation and commissioning of systems.

Our objective is to provide you with the most complete service utilising our extensive engineering expertise and product knowledge across our entire product portfolio.

RESEARCH

MANUFACTURING

INSTALLATION

For more information on the extensive range of specialist systems products and services call us today or...

visit www.rfi.com.au

Dual Band Cellular Glass Mount

890-960 MHz
1710-1880 MHz

ITG2000

ITG2000

A breakthrough in mobile antenna design!

Finally, an antenna which can radiate effectively from the inside of the vehicle. Unlike most mobile antennas, which have a vertical whip section, the antenna is a tiny radiator which lies flat inside the vehicle windscreen!

Not only is the Duet™ the first truly effective antenna designed to be mounted inside the vehicle, it provides full dual band performance, covering both the 900 and 1800 MHz bands. The secret of the design lies in it's unique patented matching circuit. The antenna uses a stripline fed slot radiator with a patch circuit used to introduce dual resonance at 900 MHz and 1800 MHz. The result is an omnidirectional pattern in both bands and a unique mix of vertical and horizontally polarized radiation.

In performance terms the Duet™ is extraordinary. Free space field tests show the antenna exhibiting unity gain over a ¼ wave at GSM900 (2.1 dBi) and 1.5 dB Gain over a ¼ wave in the GSM1800 MHz band (3.5dBi). When mounted on a vehicle in full network drive tests however the amazing performance of this antenna is really revealed.

The Duet™, mounted on a vehicle screen and tested in network drive tests, is rated at –2dB over a ¼ wave, but this is some 4-5 dB BETTER than even the best externally mounted glass mount antennas and more than 11dB better than using a portable phone in the car without an external antenna! The unique mix of polarization and great efficiency of the radiator make the Duet™ a high performance antenna, not a performance trade off as would normally be expected when using an internal antenna.

Superb performance (especially in urban areas) and no external parts. This simplifies installation, pleases ever more fastidious car owners and eliminates vandalism and car wash problems. The Duet™ antenna is truly a breakthrough product, one which finally addresses the requirements of the network operators and still meets the desires of end users.

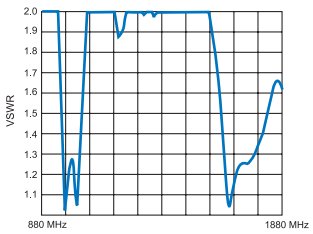
Dual Band Cellular Glass Mount

890-960 MHz
1710-1880 MHz

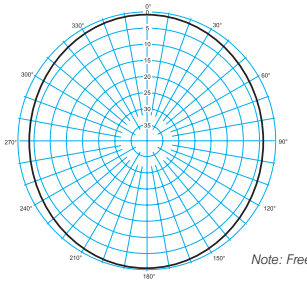
ITG2000

- Easy to install - A simple peel and stick mounting foot is placed on the inside of the vehicle glass. Run the pre-terminated cable assembly to the car kit - connect and go!
- Discreet - The mounting section is slimline and unobtrusive
- Dual Band compatible - Designed to operate in single and dual band GSM applications
- Completely Internal - No threat of vandalism, no concerns of external wind noise and no car wash damage
- Versatile - The tiny radiating section can be mounted on front or rear windscreens
- High Performance - Optimised for operation with mixed polarization cell sites. Eliminates signal fading and outperforms most external glass mounted antennas

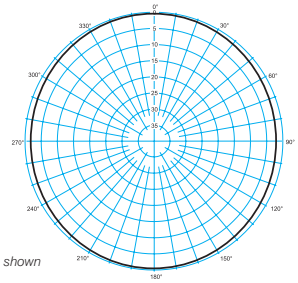
Typical VSWR response



Duet™ vertically placed
H-Plane 1.795 GHz



Duet™ vertically placed
H-Plane - 925 MHz



Note: Free space patterns shown

Electrical

Model No.	ITG2000	
Gain *dBi*	2.1	3.5
Frequency *MHz*	890 - 960	1710 - 1880
Power *W*	10	
Tuned Bandwidth	Entire specified band @ <2.0:1 VSWR	
Tuning	Supplied pre-tuned	

Mechanical

Model No.	ITG2000
Housing Material	Black ABS/Polycarbonate alloy
Dimensions	70 x 70 x 16mm
Mounting	On glass inside vehicle. Pre-fitted with self adhesive foam tape.
Cable and Connector	5.0m 9014 low loss, fully shielded cable terminated with SMA male (antenna end) and FME nipple (adapters available).

Australian Patent No. 764117, USA Patent No. 6346919, Germany Patent App No. 100 38 831.0, Israel Patent App No. 137716

Multi Band Cellular Glass Mount

806-890 MHz
890-960 MHz
1710-1880 MHz
1850-1990 MHz

ITG4000

ITG4000

The Global Antenna

The Quadrant™ is perhaps the most versatile cellular antenna in the world. It can be used in almost any of the existing cellular systems, will provide superior performance to externally glass mounted antennas and yet can be mounted quickly and easily inside the vehicle with no external parts.

A derivation of the Duet™ dual band product (and included in the same patent), the Quadrant™ uses the same stripline fed slot radiator technology with patch circuits used to introduce multi band performance. Being slightly larger than the dual band Duet™, the Quadrant™ has been configured to suit not only GSM900 and GSM1800 systems but also covers AMPS, TDMA and CDMA 800 systems. It also covers the GSM1900 and PCS1900 bands. This enables the Quadrant™ to be used in more than nine out of ten cellular systems anywhere on the globe.

Ship the Quadrant™ to almost any market in the world, and the antenna can be installed quickly, easily and yet deliver incredible performance. With a unique mix of vertical and horizontal polarisation (as is also shown by the cell sites themselves), the Quadrant™ will work especially well in urban and suburban areas. It even (just) out performs it's sister, the Duet™, because of the very slightly larger footprint.

Free space field tests show the Quadrant™ exhibiting just over unity gain relative to a quarter wave at GSM900 and AMPS/TDMA/CDMA 800 Bands (i.e. 2.5 dBi) and 1.8 dB of Gain relative to a quarter wave in the GSM1800 MHz and GSM/PCS1900 MHz bands (i.e. 4dBi). When mounted on a vehicle and tested in full network drive tests (which were performed in an urban environment) it performs even better.

Mounted on a vehicle screen, the Quadrant™ is rated at –1dB over a ¼ wave, but this is some 5-6 dB BETTER than even the best externally mounted glass mount antennas and more than 12dB better than using a portable phone in the car without an external antenna!

The Quadrant™ is truly a breakthrough. There is no performance trade-off. One antenna provides global cellular coverage (ideal for vehicle manufacturers or hands-free kit manufacturers) with a single item. No installation mistakes, with one antenna for every job, and a simple installation with no external parts to be fitted.

Supplied complete with mounting instructions and a pre-terminated low loss, fully shielded coaxial cable, the Quadrant™ can help reduce inventories, reduce installation costs, boost air time and deliver superior customer satisfaction in just about every cellular system in the world.

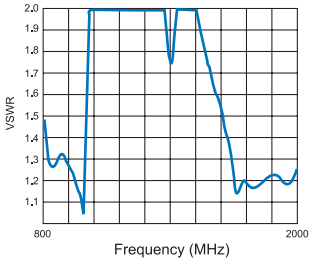
Multi Band Cellular Glass Mount

806-890 MHz
890-960 MHz
1710-1880 MHz
1850-1990 MHz

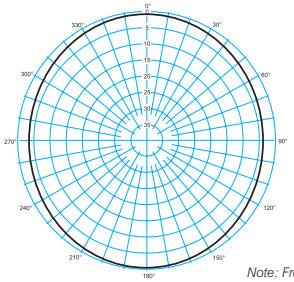
ITG4000

- Truly global cellular coverage.- One antenna suits all of the following systems: GSM 900, GSM 1800 (DCS 1800, PCN 1800), GSM 1900, AMPS, TDMA, CDMA 800, DECT, PCS 1900, (CDMA1900)
- Superb performance – approaches a quarter wave antenna and easily out-performs external mounted glass mount antennas. Patented mixed polarity design.
- Reduce inventories – one antenna suits all systems and can be shipped globally
- Completely internal – no impact on prestige vehicles, no threat of vandalism, no car wash damage and simplified installation
- Supplied ready to go with peel and stick mounting and pre-terminated, fully shielded low loss coaxial cable

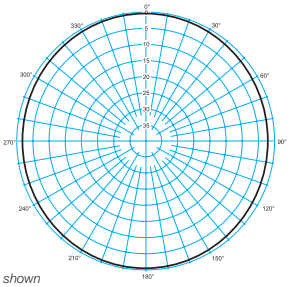
Typical VSWR response



Quadrant™ vertically placed H-Plane 1.795 GHz



Quadrant™ vertically placed H-Plane - 890 MHz



Note: Free space patterns shown

Electrical

Model No.	ITG4000			
Gain *dBi*	2.5		4	
Frequency *MHz*	806 - 890	890 - 960	1710 - 1880	1850 - 1990
Power *W*	10			
Tuned Bandwidth	Entire specified band @ <2.0:1VSWR			
Tuning	Supplied pre-tuned			

Mechanical

Model No.	ITG4000
Housing Material	Black ABS/Polycarbonate alloy
Dimensions	80 x 80 x 16mm
Mounting	On glass inside vehicle. Pre-fitted with self adhesive foam tape.
Cable and Connector	5.0m 9014 low loss, fully shielded cable terminated with SMA male (antenna end) and FME nipple (adapters available).

Australian Patent No. 764117, USA Patent No. 6346919, Germany Patent App No. 100 38 831.0, Israel Patent App No. 137716

Multi Band Cellular-GPS Combination

806-890 MHz
890-960 MHz
1710-1880 MHz
1850-1990 MHz
1910-2170 MHz

ITG5000
ITG5001

ITG5000

The Quintet™ offers incredible versatility. It can be used in almost any cellular system, will provide superior performance to externally glass mounted antennas and yet can be mounted quickly and easily inside the vehicle with no external components.

A derivation of the Duet™ and Quadrant™ dual/multi band products, the antenna uses stripline fed slot radiator technology with patch circuits used to introduce multi band performance. Being slightly larger than the multi band Quadrant™, the Quintet™ has been configured to suit not only GSM900 and GSM1800 systems but also covers AMPS, DAMPS and CDMA 800, SMR systems, PCS1900, DCS1800 and UMTS/3G.

The incredible versatility of the ITG5001 is taken one step further with the ITG5000 version which is effectively two antennas in one. This antenna provides global cellular coverage and GPS satellite coverage making it an ideal telematics solution for vehicle manufacturers, or car kit installers, reducing inventory and installation time.

The GPS element is a small ceramic patch antenna with a high performance active amplifier and industry leading noise figure to ensure faster acquisition of multiple satellites. The Quintet™ is equally appropriate for in-vehicle integrated telematics solutions or after market applications calling for both cellular and GPS installations in recreational or industrial vehicles.

Ship the Quintet™ to any market in the world, and the antenna can be installed quickly, easily and yet deliver incredible performance. With a unique mix of vertical and horizontal polarization (as is also shown by the cell sites themselves), the antenna can be mounted at any angle and still deliver optimum performance.

- The ultimate telematics solution - GPS and cellular in one antenna for almost any market worldwide. (ITG5000)
- Perfect solution for private vehicles, fleet management and vehicle OEMs etc.
- Completely internal – simple installation, no external parts.

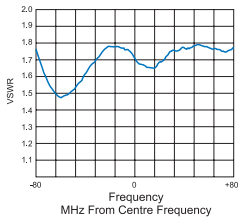
Australian Patent No. 764117, USA Patent No. 6346919, Germany Patent App No. 100 38 831.0, Israel Patent App No. 137716

Multi Band Cellular-GPS Combination

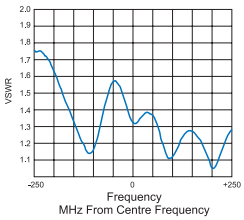
806-890 MHz
890-960 MHz
1710-1880 MHz
1850-1990 MHz
1910-2170 MHz

ITG5000
ITG5001

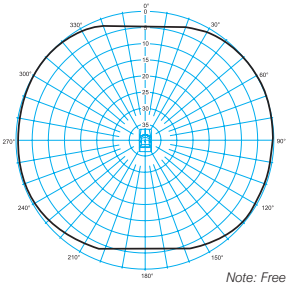
Typical VSWR response CDMA and GSM



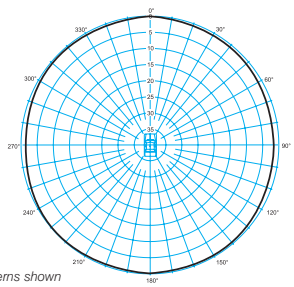
Typical VSWR response DCS, PCS and 3G



Quintet™ vertically placed H-Plane 1.795 GHz



Quintet™ vertically placed H-Plane - 890 MHz



Note: Free space patterns shown

Electrical

Model No.	ITG5000 / ITG5001				
Gain *dBi*	1.1		4.4		4.5
Frequency *MHz*	806 - 890	890 - 960	1710 - 1880	1850 - 1990	1910 - 2170
Max Power *W*	10				
Tuned Bandwidth	Entire specified band @ <2.0:1 VSWR				
Tuning	Supplied pre-tuned				

Mechanical

Model No.	ITG5000 / ITG5001
Housing Material	Black ABS/Polycarbonate alloy
Dimensions	90 x 90 x 17mm
Mounting	On glass inside vehicle. Pre-fitted with self adhesive foam tape.
Cable and Connector	Cellular feeder of 5.0m 9014 low loss, fully shielded cable terminated with SMA male and FME nipple (adapters available).
	ITG5000 ONLY - GPS feeder of 5.0m RG174 type cable MCX connector fitted

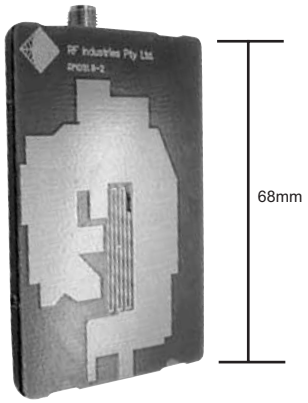
GPS Specifications

Fo	1575.42 MHz
Operation Temperature	-40 to +85°C
Storage Temperature	-40 to +100°C
System Gain at Fo	28dBi including cable and filter losses
Impedance	50 Ohm
Polarization	RHCP
VSWR at Fo	1.5:1
Noise Figure at Fo	<1.8 dB max.
Power Input	+2.5Vdc to +12Vdc input, auto switching
Power Consumption	11mA to 13mA (max)
Power Input	Reverse polarity short circuit shutdown
Over-Current	Thermal over-current shutdown >+150°C

Embedded Cellular Antenna

890-960MHz
1710-1880MHz

EAM2000



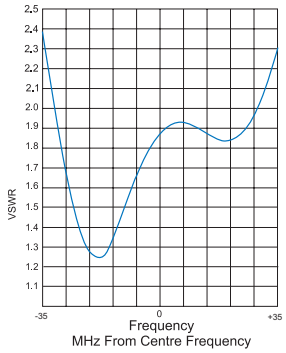
EAM2000

The EAM2000 is a breakthrough antenna, able to be mounted completely inside wireless equipment. This makes it ideal for use in a variety of “new” wireless applications including ATM’s, vending machines and remote monitoring units.

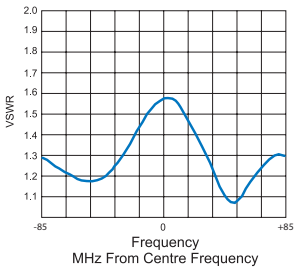
Being ground plane insensitive it can be installed either on or off ground plane. With a depth of only 13 mm, this makes the EAM2000 ideal for the tightest of mounting positions.

- Ideal for the latest M2M applications
- Slimline - for ease of installation
- GSM Dual or single band compatible
- Completely internal - no threat of vandalism or damage

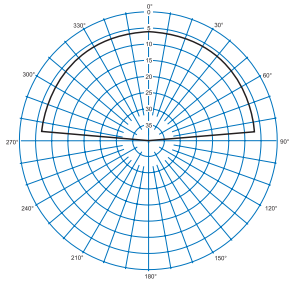
Typical VSWR response GSM 900



Typical VSWR response GSM 1800



Typical E-Plane response @ 890MHz



Electrical

Model Number	EAM2000
Gain *dBi*	2
Frequency	890 - 960 MHz / 1710 - 1880 MHz
Max Power *W*	5
Tuned Bandwidth	Entire specified band @ <2.5:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

Model Number	EAM2000
Construction Material	FR4 composite and tinned brass
Dimensions *mm*	68 x 43 x 13
Mounting	Customer specific
Connector	SMA female connector

Cellular Roof Mount

824-960 MHz

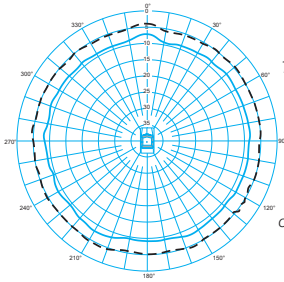
SW1400 Series
SW1600 Series

SW1605

Roof mount antennas are recommended by system operators, mobile manufacturers and system designers as they provide the strongest reception and most reliable performance of any cellular mobile antenna.

At the heart of each RFI roof mount antenna is the MB14 base. The base is intricately constructed, much like a coaxial connector. The precisely controlled termination is reliable electrically and mechanically provides a superb match resulting in a broad bandwidth.

- Roof mounting for optimum performance
- Black finish will not scratch or peel
- Limited lifetime warranty
- SW1495 (CDMA only) offers 5 dB gain for maximum range in country or fringe areas
- SW1486/1686 Magnetic base versions available for portable applications complete with protective rubber boot



This antenna is providing excellent gain and omnidirectional performance as expected when mounted as recommended. The published gain figure for this antenna of 3 dB is conservative and could more correctly be stated at 3.5dB.

TEST FREQUENCY: 825 MHz

REFERENCE ANTENNA
MODEL: SW1405 ——
MOUNT: MB14 Roof Centre

TEST ANTENNA
MODEL: SW1485 - - - - - - -
MOUNT: MB14 Roof Centre

Electrical

Model No.	SW1405	SW1605	SW1485/6	SW1685/6	SW1495
Gain	Unity over ¼ wave		3dB over ¼ wave		5dB over ¼ wave
Frequency *MHz*	824 - 896	890 - 960	824 - 896	890 - 960	824 - 896
Power *W*	50				
Tuned Bandwidth	Entire specified band @ <1.9:1 VSWR				
Tuning	Supplied pre-tuned				

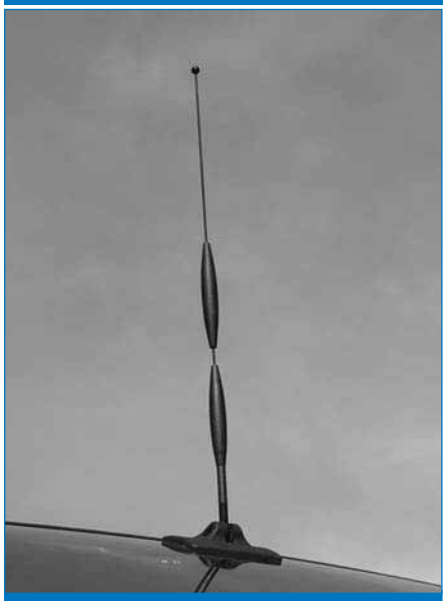
Mechanical

Model No.	SW1405	SW1605	SW1485	SW1685	SW1486	SW1686	SW1495
Whip Material	17-7 PH stainless steel with brass ferrule, black finish						
Whip Length *mm*	70	65	350	340	380	370	624
Mounting	MB14				Heavy duty magnetic mount		MB14
Cable and Connector	Supplied with 5.0m Cellfoam® cable. Please specify mini UHF, FME or TNC connector.						

e-glass® Cellular Dual Band

890-960 MHz
1710-1880 MHz

EG880 Series



EG883

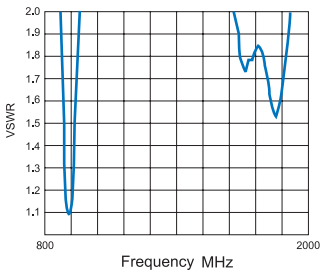
The EG800 series e-glass® antennas are genuine dual band antennas designed specifically for GSM 900/GSM 1800 applications. All of these antennas offer superb, true dual band performance.

The e-glass® utilises an elliptical slot radiator in the coupling box, with a patch element housed in the mounting foot. The patch element is E-shaped to allow the coupling of both bands very effectively. The whip element is fully moulded with dual phasing coils (3dB whip only), the result being an antenna that provides abundant gain in both the 900MHz and 1800MHz bands.

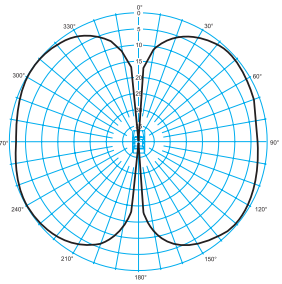
Featuring a new-look mounting foot and coupling box, e-glass® antennas are supplied complete with a pre-terminated lead of low loss, fully shielded coaxial cable.

- True dual band performance at 900 and 1800 MHz
- Fully shielded low loss pre-terminated cable supplied
- EG884 combination kit supplied with unity and 3dB gain whips offering choice of gain and reducing inventory

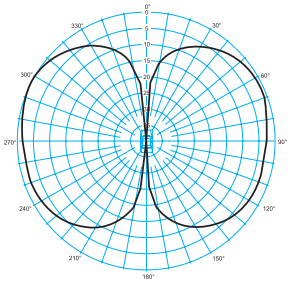
Typical VSWR response (EG880)



EG880 typical E-plane response at 925 MHz



EG880 typical E-plane response at 1795 MHz



Electrical

Model No.	EG880	EG883	EG884
Gain	Unity over a ¼ wave	3dB over a ¼ wave	Unity and 3dB over a ¼ wave
Frequency *MHz*	890 - 960 & 1710 - 1880		
Power *W*	50		
Tuned Bandwidth	Entire specified band @ <2:1 VSWR		
Tuning	Supplied pre-tuned		

Mechanical

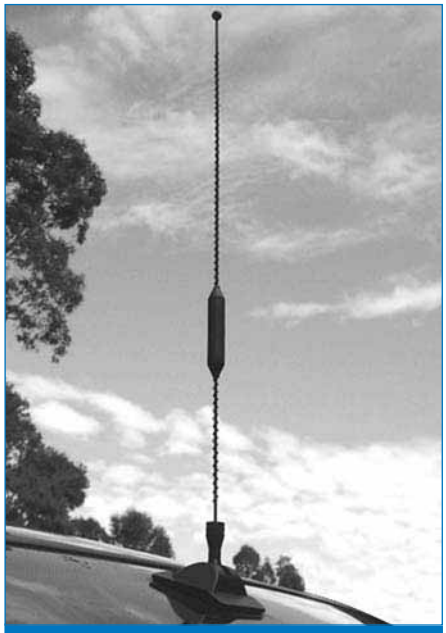
Model No.	EG880	EG883	EG884
Whip Material	One piece black chrome plated stainless steel with plastic over moulding		
Whip Length *mm*	155	352	As per EG880 + EG883
Mounting	Flexible polyurethane moulded mounting foot attaches with self adhesive foam tape		
Cable and Connector	Pre-terminated lead with 5m 9014 flexible foam dielectric low loss fully shielded cable pre-terminated with FME nipple connector for transceiver connector and SMA male to suit coupling box		

Australian Patent App No. 34316/02

CDMA Cellular Glass Mount

820-896 MHz

AMD877.3 Series

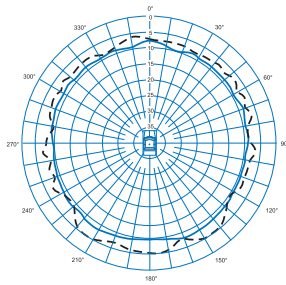


AMD877.3

The glass mount antenna has long been the world standard for cellular mobile antennas. This glass mount antenna is supplied completely assembled ready for quick, effortless installation. The mounting foot is constructed from flexible plastic and mounts securely using very high bond tape.

Established as the world's premier cellular mobile antenna, the glass mount antenna is ideal for both end-users and original equipment manufacturers ideal for virtually all applications.

- 'Solid State' Slimline Coupling Box - Unsurpassed performance in a low profile housing
- Pliable mounting foot for maximum adhesion to curved windows coupled with a choice of whips.
- Simple Installation - Supplied completely assembled and ready for installation with very high bond tape (VHB) - simply peel and stick
- Distinctive packaging for easy stock identification
- Incorporates turbulence spiral for whisper quiet performance



The pattern shown for the AMD873.3 shows that the antenna provides an excellent, largely omnidirecitonal radiation pattern and exhibits 3dB gain over a ¼ wave whip mounted in the centre of a metal roof.

TEST FREQUENCY: 850 MHz
REFERENCE ANTENNA *MODEL: SW1405* —— *MOUNT: MB14* *POSITION: Roof Centre*
TEST ANTENNA *MODEL: AMD873.3* - - - - - *MOUNT: Glass Mount* *POSITION: Rear Window*

Electrical

Model No.	AMD877.3 Series
Gain	3dB over a ¼ wave
Frequency *MHz*	820 - 896
Power *W*	50
Tuned Bandwidth	Entire specified band @ <1.9:1 VSWR
Tuning	Supplied pre-tuned, ready for installation

Mechanical

Model No.	AMD877.3 Series
Whip Material	Stainless steel with black finish
Whip Length *mm*	386
Mounting	Mounted on glass with VHB tape
Cable and Connector	Supplied with 5.0m Cellfoam® cable. Please specify mini UHF, FME or TNC connector.

Cellular Elevated Feed

820-960 MHz

CD1210
CD1610
CD1515

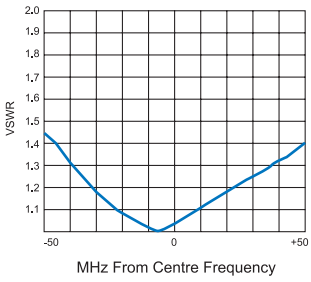
CD1610

This elevated feed 1.5dB gain mobile antenna is available in CDMA, GSM and PTMP bands. The "elevated feed" construction of the antenna is designed to keep the upper radiating portion of the antenna above the roof level to achieve an omnidirectional pattern.

This versatile ground independent design allows installation in "alternative" mounting locations where a roof or glass mount antenna is not desired or will not provide adequate performance. The antenna can be used with or without the optional mounting kits available. These mounting kits provide these antennas with the versatility to be mounted on vehicle gutter, fender, boot and other locations.

- High performance - Elevated feed design requires no ground plane for omnidirectional 1.5 dB gain coverage
- Ground independent design allows installation in almost any location
- Large variety of mounts available to suit any application

Typical VSWR response (CD1610)



Electrical

Model No.	CD1210	CD1610	CD1515
Gain	1.5dB over a ¼ wave		
Frequency *MHz*	820 - 896	890 - 960	850 - 930
Power *W*	40		
Tuned Bandwidth	Entire specified band @ <1.9:1 VSWR		
Tuning	Supplied pre-tuned ready for installation		

Mechanical

Model No.	CD1210	CD1610	CD1515
Whip Material	Stainless steel with black finish		
Whip Length *mm*	195	180	188
Mounting	14mm Stud mount		
Cable and Connector	Supplied with 5.0m Cellfoam® cable. Specify FME, mini UHF, FME or N-male connectors		

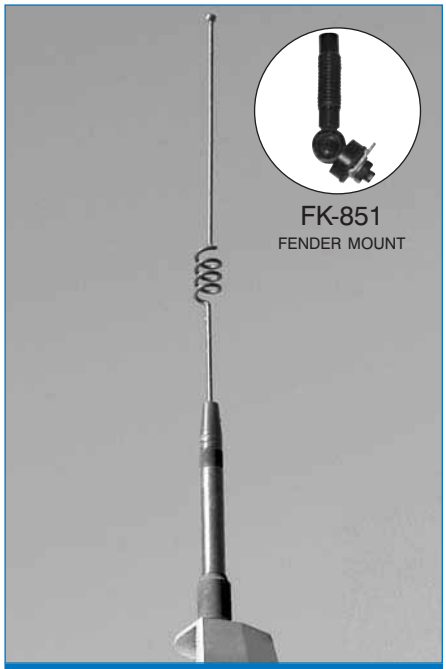
Cellular Elevated Feed

824-1880 MHz

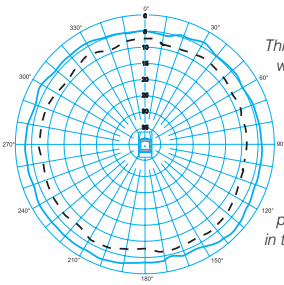
CD1220 Series
CD1620 Series
CD1250 Series

Elevated feed antennas provide high performance in virtually any mounting position. The elevated feed design raises the radiating element above the vehicle roof or other obstructions to provide a strong omnidirectional pattern and high performance for vehicle gutter, fender, boot or magnetic mounting.

- High performance omnidirectional gain
- 'Problem Solver' - Elevated feed design eliminates need for a ground plane and boosts the radiating element over obstructions
- Black finish will not scratch or peel
- Limited lifetime warranty
- CD1250 (CDMA only) offers 5 dB gain for maximum range in country or fringe areas
- Range of fittings available including fender (shown), gutter and magnetic mount



CD1625



This pattern clearly shows that when mounted on the gutter clear of obstructions, this antenna is providing a gain of 4.5dB or more over a ¼ wave whip and a pattern variance of only 1-2dB. The antenna is clearly operating independent of the ground plane and is a superior choice in this mounting position.

TEST FREQUENCY: 850 MHz
REFERENCE ANTENNA *MODEL: SW1405* —— *MOUNT: MB14 Roof Centre*
TEST ANTENNA *MODEL: CD1225* - - - - - - *MOUNT: Gutter Mount* *Passenger Side*

Electrical

Model No.	CD1225 Series	CD1625 Series	CD1228 Series	CD1628 Series	CD1250
Gain	3dB over a ¼ wave				5dB over a ¼ wave
Frequency *MHz*	824 - 896	890 - 960 1710 - 1880	824 - 896	890 - 960 1710 - 1880	824 - 896
Power *W*	50				
Tuned Bandwidth	Entire specified band @ <2.0:1 VSWR				
Tuning	Supplied pre-tuned, ready for installation				

Mechanical

Model No.	CD1225 Series	CD1625 Series	CD1228 Series	CD1628 Series	CD1250
Whip Material	17-7PH Stainless steel black finish				
Whip Length *mm*	470	432	595	557	765
Mounting	14mm Stud		FK-851 Fender Mount		14mm Stud
Cable and Connector	Supplied with 5.0m Cellfoam® cable. Please specify mini UHF, FME or N-male connectors.				

Cellular High Gain Collinear

824-960 MHz

CD1790 Series

CD1795

The CD1790 Series are high gain mobile cellular antennas catering for both CDMA and GSM900 bands and ideally suited for use in fringe areas and country applications.

These antennas are extremely robust in design with a patented PCB designed radiating element housed in a black or white fibreglass radome fitted to an integral heavy duty electro-polished stainless steel spring.

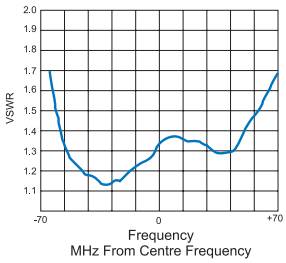
With a 13mm stud mount, these antennas may be installed on a number of mounting brackets and are ideal for installations in commercial vehicles, four wheel drives and trucks. They can also be used as fixed base station antennas for wireless local loop applications.

These antennas have been factory terminated with an FME connector to simplify installation and come complete with a TNC and Mini-UHF adapter to suit all phones and require no further cable termination.

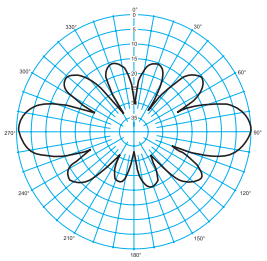
- CDMA and GSM900 compatible
- High gain ideal for fringe areas and rural applications
- Available in white: CD1795-W or CD1797-W
- Available with GPS sub-assembly (see page 53)
- Patented PCB based collinear design offering the ultimate in pattern and gain stability

Other model and gain variations available upon request

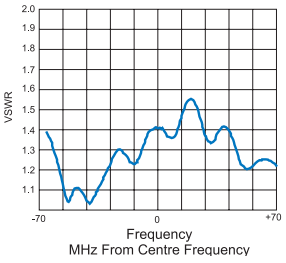
Typical VSWR response (CD1795)



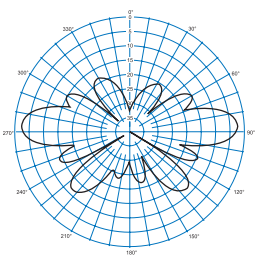
Typical E-Plane response (CD1795)



Typical VSWR response (CD1797)



Typical E-Plane response (CD1797)



Electrical

Model Number	CD1795	CD1797
Gain *dBi*	6.5dB over a ¼ wave	7.5dB over a ¼ wave
Frequency *MHz*	824 - 960	
Max Power *W*	25	
Tuned Bandwidth	Entire specified band @ <2.0:1 VSWR	
Tuning	Supplied pre-tuned	

Mechanical

Model Number	CD1795	CD1797
Whip Length *mm*	860	1100
Mounting	Threaded stud and nut assembly 13mm clearance hole required	
Cable and Connector	5.0m of RG58 9006 fitted with FME 101 connector and supplied with TNC (A-86) and Mini UHF (A-87) adapters	

USA Patent: 6909403
Patent App. No.: Australia 2003255049 / Europe 03 023406.6 / China 200310100548.5 / India 844/CHE/2003

Elevated Feed Mopole™

806-960 MHz

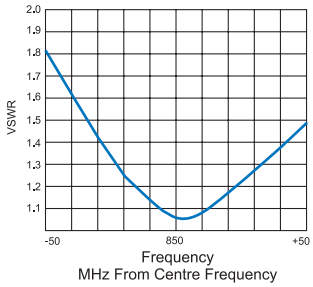
CD1100 Series

CD1160

These 1.5 dB gain elevated feed antennas are ideal in applications where height and aesthetics are a consideration. The elevated feed design raises the radiating element above the vehicle roof level to provide a strong omnidirectional pattern and high performance. The ground independent design provides consistent performance regardless of mounting position. Mounting kits are available for both gutter and mirror mounts.

- Economical - Our most affordable cellular antenna for gutter and mirror mount or fixed applications
- Performance - Ground plane independent design allows mounting in a variety of applications
- Simple Installation - Stud mounted design allows for installation on a gutter or mirror mount
- Flexible - PVC enclosed radiator allows for superior flexibility

Typical VSWR response (CD1150)



Electrical

Model No.	CD1140	CD1150	CD1160
Gain	1.5dB over a ¼ wave		
Frequency *MHz*	806 - 870	820 - 896	890 - 960
Power *W*	40	50	
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR	70 MHz @ <2:1 VSWR	
Tuning	Supplied pre-tuned, ready for installation		

Mechanical

Model No.	CD1140	CD1150	CD1160
Whip Material	Brass elevated feed, radiator enclosed in flexible PVC tubing		
Whip Length *mm*	195 (including elevated feed section)		
Mounting	Threaded stud and nut assembly 16mm clearance hole required		
Cable and Connector	5.0m Cellfoam® cable. Please specify connector		

GPS Antenna

1575.42 MHz

GPS1
GPS1-BKT

GPS1-BKT

GPS1

The GPS1 is a high performance compact GPS antenna designed to accommodate automotive applications and a wide variety of OEM, system integrator and end user applications.

This 25mm patch antenna is coupled with a 28dBi gain active amplifier which operates from 2.5 VDC to 12 VDC with a low 11mA consumption (at 2.5 VDC).

The GPS1 comes enclosed in a UV stable, high impact, fully weatherised housing, with 5m of double screened low-loss RG174 (type) cable terminated with an MCX connector (other connectors available on request).

The GPS1-BKT is an optional mounting bracket kit which mates with the GPS1 antenna. This kit includes a black chrome plated stainless steel bracket and fittings. The bracket's 16mm hole allows mounting of a variety of RFI ground independent mobile antennas. The result is a neat multiband antenna installation.

Electrical

Model	GPS1
Frequency *MHz*	1575.42
System Gain	28dBi
Impedance	50 Ohm
Cable Attenuation	4 dB over 5m
Polarization	RHCP
VSWR	1.5 typical @ fo
Noise Figure	+2.75 dB
Power Input	+2.5Vdc to +12Vdc input, auto switching
Power Consumption	11mA to 15mA (max)
Power Input	Reverse polarity short circuit shutdown
Over-Current	Thermal over-current shutdown >+150°C

Mechanical

Model	GPS1
Operation Temperature	-40 to +85°C
Storage Temperature	-40 to +100°C
Dimensions *mm*	44 x 34 x 12 ±0.5mm
Weight *kg*	0.088
Mounting	Magnet
Cable and Connector	5m RG174 terminated with MCX connector. See note (1)

(1) GPS1 available terminated with other connectors subject to a MOQ upon request

2.4-2.5 GHz

CDM2400 Series

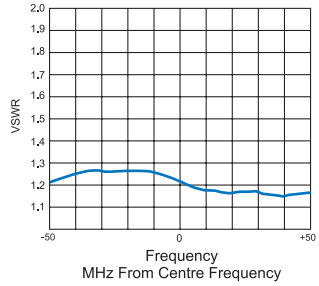
CDM-2408

The CDM2400 series are a range of mobile antennas specifically designed for mobile WLAN applications. Utilising a fibreglass radome with a heavy duty stainless steel spring these antennas offer a robust and high performance solution, well suited to mining, warehousing, public transport and emergency services applications.

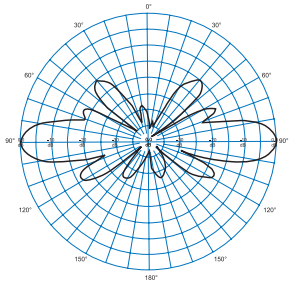
The CDM2400 series utilise a patented PCB based collinear design offering the ultimate in pattern stability. Their ground independent design makes them suitable for a variety of mounting positions including bullbar, gutter and roof rack.

- Robust construction
- Integrated heavy duty spring
- Outstanding performance

Typical VSWR response (CDM2408)



Typical E-Plane response (CDM2408)



Electrical

Part No	CDM2402	CDM2406	CDM2408	CDM2410
Gain *dBi*	2	6	8	10
Frequency *MHz*	2400 - 2500			
Beamwidth E / H	81° / 360°	22° / 360°	16.5° / 360°	8° / 360°
VSWR	Entire specified band @ <1.5:1 VSWR			

Mechanical

Part No	CDM2402	CDM2406	CDM2408	CDM2410
Description	White fibreglass, ISM band, collinear antenna with stainless steel spring			
Dimensions *mm*	250 (L) 16 (Dia)	420 (L) 16 (Dia)	510 (L) 16 (Dia)	1200 (L) 16 (Dia)
Weight *kg*	0.25	0.26	0.27	0.4
Mounting	Supplied with spring and nut for stud mount. Requires 16mm hole. Suits a variety of RFI brackets			

USA Patent: 6909403
Patent App. No.: Australia 2003255049 / Europe 03 023406.6 / China 200310100548.5 / India 844/CHE/2003

UHF CBRS Mopole™

476-477 MHz

CD33 Series

CD33

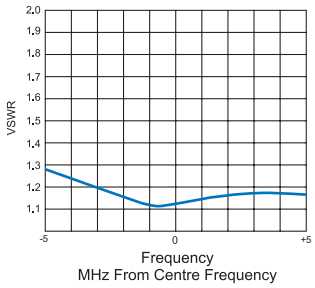
The CD33 Series Mopole™ antenna is specifically designed to be used in a variety of mounting positions such as vehicle mirror, gutter or roof bar mounts according to individual needs.

Mounted in such positions, the CD33 is the ideal substitute for an antenna which would normally need to be mounted in the centre of a metal roof to obtain maximum efficiency.

The CD33 Series antenna is an end-fed dipole (½ wave). A tuned circuit has been incorporated in the base and the radiating element enclosed in a flexible nylon radome. The end result is an attractive, yet tremendously rugged package suited for almost any application.

- Workhorse - A terrific antenna for agricultural and work vehicle applications where durability is critical
- Versatile - Ground plane independent design allows installation in almost any location
- High Performance - Exhibits 4 dB gain over ¼ wave whip mounted in the centre of a metal roof
- Rugged- Radiating element is enclosed in flexible UV resistant nylon tubing
- Convenient - Available in a number of kits with full instructions for fitting by inexperienced installers

Typical VSWR response



Electrical

Model No.	CD33-71-73
Gain	4dB over a ¼ wave. See note (1)
Frequency *MHz*	476 - 477
Power *W*	20
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

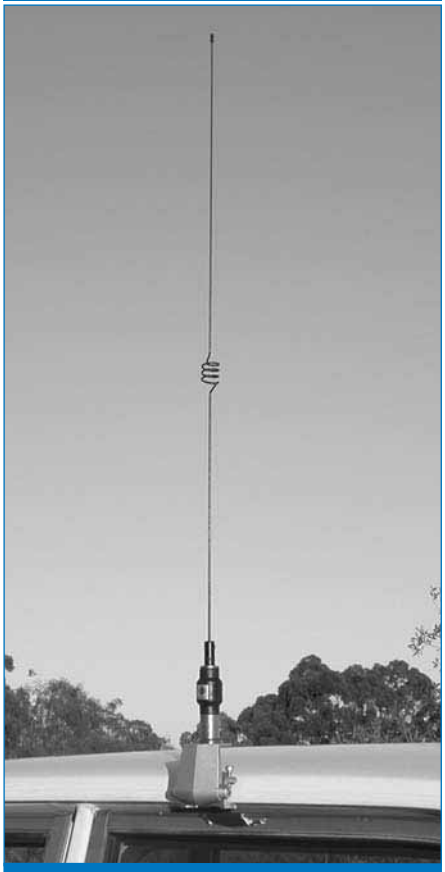
Model No.	CD33-71-73
Whip Material	UV resistant flexible nylon tubing
Whip Length *mm*	330
Mounting	Base mounts in 16mm hole
Cable and Connector	5.0m RG58C/U cable fitted. A variety of pre-packed kits including connectors and fittings are also available

(1) As the CD33 is a half wave dipole antenna, actual pattern tests show unity gain vs. a half wave dipole. In the field, however, the CD33 will deliver performance which is approximately 4dB better than a ¼ wave whip mounted in the centre of a metal roof, mainly because it exhibits a lower angle of radiation.

UHF CBRS Mopole™

476-477 MHz

CD63 Series



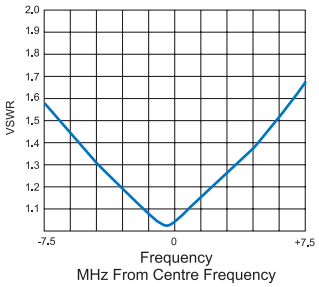
CD63-71-50

The CD63 Series Mopole™ antennas offer complete versatility in mounting options. Unlike conventional roof mount antennas, the CD63 Series antennas have true ground independence which allows mounting in a variety of positions including vehicle mirror, gutter or roof bar mounts.

This extraordinary performance is made possible by the use of an exclusive (and patented) high impedance matching circuit in the base coil. This allows the end feeding of the collinear whip section, a ⅝ over ½ wave radiator wound from a single piece of high resilience 17-7PH stainless steel.

- Available in two mounting options, removable MBC style (CD63-71-50) or threaded stud and nut (CD63-71-70)
- Excellent performance - Exhibits 6.0dB gain over a ¼ wave whip mounted in the centre of a metal roof
- Flexible - Stainless steel whip returns to original shape after bending
- Rugged - The base coil is housed in a high impact thermoplastic moulding and is practically indestructible
- Stylish - Attractive black finish, complements vehicle styling

Typical VSWR response



Electrical

Model No.	CD63-71-50	CD63-71-70
Gain	6dB over a ¼ wave. See note (1)	
Frequency *MHz*	476 - 477	
Power *W*	20	
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR	
Tuning	Supplied pre-tuned	

Mechanical

Model No.	CD63-71-50	CD63-71-70	CD63-71-73
Whip Material	17-7PH Stainless steel		
Whip Length *mm*	800 (whip and coil only)		
Mounting	MBC base supplied to fit 16mm hole	16mm stud mount	
Cable and Connector	None supplied		5m RG58C/U cable

(1) Mopole™ antennas such as the CD63 have been shown to exhibit a 6dB improvement in received signal level in the field when compared to a ¼ wave whip however in pattern tests exhibit only 1.5 to 2dB over a ¼ wave (equivalent to 1.5-2dBi). This improvement in performance can be attributed to a lower radiation angle level of these ground independent antennas.

Australian Patent No. 596830

Elevated Feed Mopole™

470-490 MHz

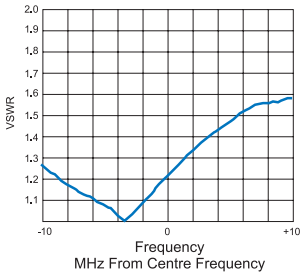
CD900 Series

CD921-71-75

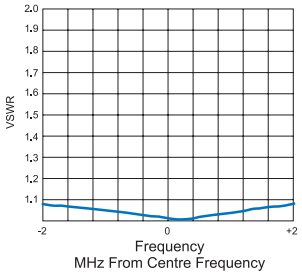
The CD900 Series are high performance elevated feed mobile antennas which can be used in virtually any mounting position. When gutter or roof bar mounted, high above a vehicle, CD900 series antennas deliver a full 6.5dB gain over a ¼ wave whip. When mounted in other positions, such as on a vehicle fender or bull bar, the elevated feed design places a large portion of the antenna above the vehicle cabin, providing good all round performance regardless of mounting position.

- Totally ground plane independent
- Elevated feed boosts radiating element above obstructions
- MSW25 "Phasemaster II™" whip section provides unsurpassed performance and strength
- Quality construction - Choke assembly is crafted from solid brass and available in both chrome and black finishes
- Supplied pre-terminated with FME connector and UHF adaptor
- Can be used with a variety of mounts. See accessories section for options.

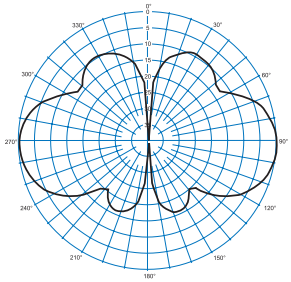
Typical full band VSWR Response (CD920)



Typical UHF CBRS band VSWR Response (CD920)



Typical E-Plane response for CD920



Electrical

Model No.	CD900 Series
Gain	6.5dB over ¼ wave. See note (1)
Frequency *MHz*	470 - 490
Power *W*	100
Tuned Bandwidth	Entire UHF CBRS band for <1.25:1 VSWR; Entire 470-490 MHz band for <1.6:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

Model No.	CD920-71-75	CD921-71-75	CD930-71-75	CD931-71-75
Whip Material	Polyurethene over moulded 17-7PH black chrome plated whip section on bright chrome choke		Polyurethene over moulded 17-7PH black chrome plated whip section on black chrome choke	
Spring Options	No spring	SK954 spring included	No spring	SK953 spring included
Whip Length *mm*	850			
Mounting	Threaded stud and nut assembly mounts in either 13 or 16mm dia. hole			
Cable and Connector	5m Cellfoam™ with FME-101 terminated, UHF adapter supplied.			

(1) Mopole™ antennas such as the CD900 Series has been shown to exhibit a 6.5dB improvement in received signal level in the field when compared to a ¼ wave whip however in pattern tests exhibit only 1.5 to 2dB over a ¼ wave (equivalent to 1.5-2dBi). This improvement in performance can be attributed to a lower radiation angle level of these ground independent antennas.

UHF CBRS Collinear

476-477 MHz

CD5000

CD5000

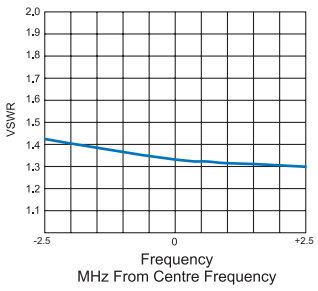
The CD5000 is a high gain mobile CBRS antenna providing a genuine 5 dB gain and is ideally suited for use in fringe areas and country applications where performance is paramount.

This antenna is extremely robust in design with the patented PCB designed radiating element housed in a black or white (CD5000-W) fibreglass radome fitted to an integral heavy duty electro-polished stainless steel spring.

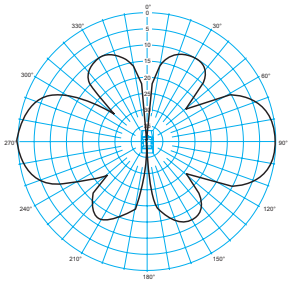
With a 13mm stud mount and ground plane independent design, this antenna may be installed onto a number of mounting brackets such as mirror, bull bar, gutter or fender mounts and are ideal for installations in commercial vehicles, four wheel drives and trucks. They can even be used as a base station antenna due to their ground plane independent design.

- 5 dB Gain ideal for fringe areas and country applications
- Robust design for heavy duty applications
- Available with GPS sub-assembly on request (see page 53)
- Available in white - CD5000-W
- Patented PCB based collinear design offering the ultimate in pattern and gain stability

Typical VSWR response



Typical E-Plane response



Electrical

Model No.	CD5000
Gain	5dB over a ¼ wave
Frequency *MHz*	476 - 477
Power *W*	25
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

Model No.	CD5000
Whip Length *mm*	900
Mounting	Threaded stud and nut assembly 13mm clearance hole required
Cable and Connector	5.0m 9006 supplied with FME-101 connector terminated and UHF adapter supplied

USA Patent: 6909403
Patent App. No.: Australia 2003255049 / Europe 03 023406.6 / China 200310100548.5 / India 844/CHE/2003

UHF CBRS Collinear

476-477 MHz

CD6000 Series

CD6000

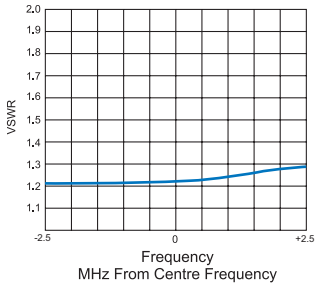
The CD6000 Series antenna is an ultra high performance antenna for use with 477 MHz UHF CB transceivers. The antenna delivers superior gain and will deliver exceptional range in fringe and country applications.

The radiating element is a series fed collinear enclosed in either a black or white fibreglass radome. The heavy duty stainless steel spring mounted at the base allows the antenna to flex and absorb vibrations.

The CD6000 is easy to install being fitted simply with a 12mm (M12) bolt. The antenna can be installed on a number of mounting brackets but we recommend use of a heavy duty bullbar mount for most applications. The CD6000 can be used on 4-wheel drives, trucks, agricultural machinery, boats or even as a base station antenna and will provide superior gain and performance in all applications.

- The ultimate in range and performance for UHF CB
- Built for extreme environments with stainless steel spring integrated for vibration absorption
- Retail ready - Packaged complete with cable and connector for hassle free installation
- Also available in white - CD6000-W

Typical VSWR response



Electrical

Model No.	CD6000
Gain	6dB over a ¼ wave
Frequency *MHz*	476 - 477
Power *W*	20
Tuned Bandwidth	Entire specified band @ <1.5:1 VSWR
Tuning	Supplied pre-tuned

Mechanical

Model No.	CD6000	
Whip Material	Black fibreglass radome fitted with a 30cm aluminium mount tube locked to the base assembly	White fibreglass radome fitted with a 30cm aluminium mount tube locked to the base assembly
Whip Length *mm*	2000	
Mounting	Base assembly is heavy duty electropolished stainless steel spring and collar fitted with 12mm aluminium bolt. Fixes to mounting bracket up to 12mm thick.	
Cable and Connector	5.0m 9001 supplied to mate with UHF receptacle on base of antenna. UHF connector supplied for radio connection.	

27 MHz

MDA-201
MDA-301
MMA-301

The 27MHz marine antenna range includes three ground independent antennas designed specifically for the harsh marine environment. The ground independent design allows great mounting versatility in the marine environment.

These 27MHz marine unity gain antennas are housed within a flexible fibreglass radome with a tightly sealed enclosed element to provide protection in inherently corrosive marine applications.

The MDA Series deck mount antennas utilise the MAM1 marine mount which can be adjusted through 180° across both planes for great flexibility in mounting. The MDA-201 measures 1.9m tall and is ideal when mounting on a flybridge, above obstructions or on smaller vessels. The 3.1m MDA-301 antenna is designed to mount to the lower deck and provides the extra height needed to boost performance for long range communications.

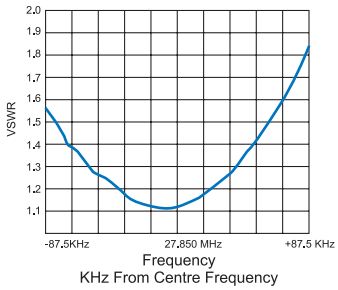
The MMA-301 is a 3.4m antenna which mounts to a mast using two stainless steel U-bolts (not included).

- Performance - Ground independent design allows for mounting in virtually any location
- MAM1 Marine mount allows for adjustability in every direction
- Rugged - Designed specifically for the marine environment

MAM1

MDA-201

Typical VSWR response (MDA-201)



Electrical

Model No.	MDA-201	MDA-301	MMA-301
Gain	Unity over a ¼ wave		
Frequency *MHz*	27.7 - 28.0		
Power *W*	25		
Tuned Bandwidth	Entire specified band @ <2.0:1 VSWR		
Tuning	Supplied pre-tuned		

Mechanical

Model No.	MDA-201	MDA-301	MMA-301
Whip Material	Flexible white fibreglass radome		
Whip Length *mm*	1900	3100	3400
Mounting	MAM1 marine mount (supplied)		2 x UB2 U-bolts (not included)
Cable and Connector	3.6m RG58 cable, no connector supplied		

VHF Mast Mount Marine

156-162 MHz

MME-101
MME-331

MME-101

These VHF marine antennas are designed specifically for the VHF international maritime bands and seaphone frequencies. They are ground independent mast mounting antennas which mount to a mast using customer chosen mounting hardware.

The antennas are housed within a fibreglass radome, with a tightly sealed radiating element to provide protection from the corrosive marine environment.

The MME-101 is a unity gain antenna measuring 1.5 m high and is ideal for mounting on a flybridge, above obstructions.

The MME-331 antenna is a 3 dB gain antenna which measures 2.9m in length. It is ideal in applications requiring high gain or in situations where extra height is needed.

- Unity or 3 dB gain versions
- Performance - ground independent design allows for mounting in virtually any location
- Rugged - designed specifically for the marine environment

Electrical

Model No.	MME-101	MME-331
Gain	Unity over a ¼ wave	3dB over a ¼ wave
Frequency *MHz*	156 - 162	
Power *W*	25	
Tuned Bandwidth	Entire specified band @ <1.8:1 VSWR	
Tuning	Supplied pre-tuned	

Mechanical

Model No.	MME-101	MME-331
Whip Material	Flexible fibreglass radome	
Whip Length *mm*	1500	2900
Mounting	2 x UB2 U-bolts (not included)	
Cable and Connector	Short RG213 cable tail fitted with N-type connector (female)	

VHF Marine Deck Mount

156-162 MHz

MDE-101
MDE-331

MAM1

MDE-101

These VHF marine antennas are designed specifically for the VHF international maritime bands and seaphone frequencies. The ground independent design allows great mounting flexibility in the marine environment.

The antennas are housed within a fibreglass radome with the radiating element tightly sealed to provide protection from the corrosive marine environment.

The MDE Series deck mount antennas mount on an MAM1 marine mount which can be adjusted through 180° in both planes allowing great mounting flexibility. The MDE101 is a unity gain antenna measuring 1.3m high and is ideal for mounting on a flybridge, above obstructions or on smaller vessels.

The MDE331 antenna is a 3 dB gain antenna measuring 2.7m high. The MDE331 is ideal when mounting on the lower deck where it provides the extra height needed to elevate the radome section above flybridges and other obstructions. It is also useful in applications requiring a deck mounted high gain antenna.

- Unity or 3 dB gain versions
- Performance - Ground independent design allows for mounting in virtually any location
- MAM1 marine mount allows flexibility in mounting attitude
- Rugged - Designed specifically for the marine environment

Electrical

Model No.	MDE-101	MDE-331
Gain	Unity over a ¼ wave	3dB over a ¼ wave
Frequency *MHz*	156 - 162	
Power *W*	25	
Tuned Bandwidth	Entire specified band @ <1.8:1 VSWR	
Tuning	Supplied pre-tuned	

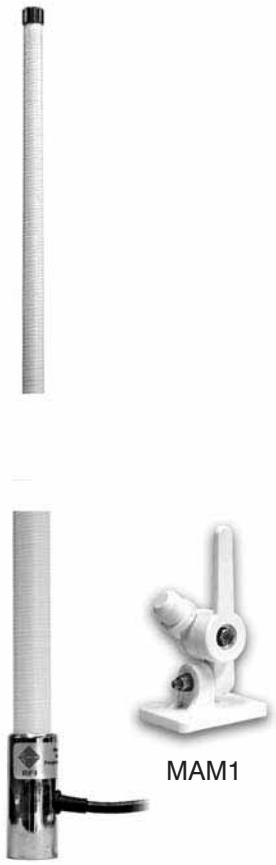
Mechanical

Model No.	MDE-101	MDE-331
Whip Material	White fibreglass radome	
Whip Length *mm*	1300	2700
Mounting	MAM1 marine mount (supplied)	
Cable and Connector	3.6m RG58 cable. No connector supplied.	

Cellular Marine Deck Mount

824-960 MHz

MDD-203
MDG-203



MDG-203

The MDD and MDG Marine antennas are high gain omnidirectional antennas designed specifically for marine applications. The antennas do not require a ground plane and are supplied with a MAM1 marine antenna mount which allows the antenna to be mounted vertically regardless of the mounting surface which is used.

The high gain (3 dB) radiating element is enclosed in a white fibreglass radome. The radiating element has been placed near the top of the radome to ensure maximum range and to maintain omnidirectivity by keeping the antenna well above obstructions or occupants of the vessel.

To minimise connection and cable losses the MDD and MDG are supplied with 10.0 metres of 9006 low loss cable which is pre-terminated to ensure the integrity of this vital connection. The antenna is supplied complete with adapters to allow connection to almost any cellular phone car kit even by inexperienced installers.

The MDD and MDG offer superior performance, maximum range and the ultimate in reliability for marine applications.

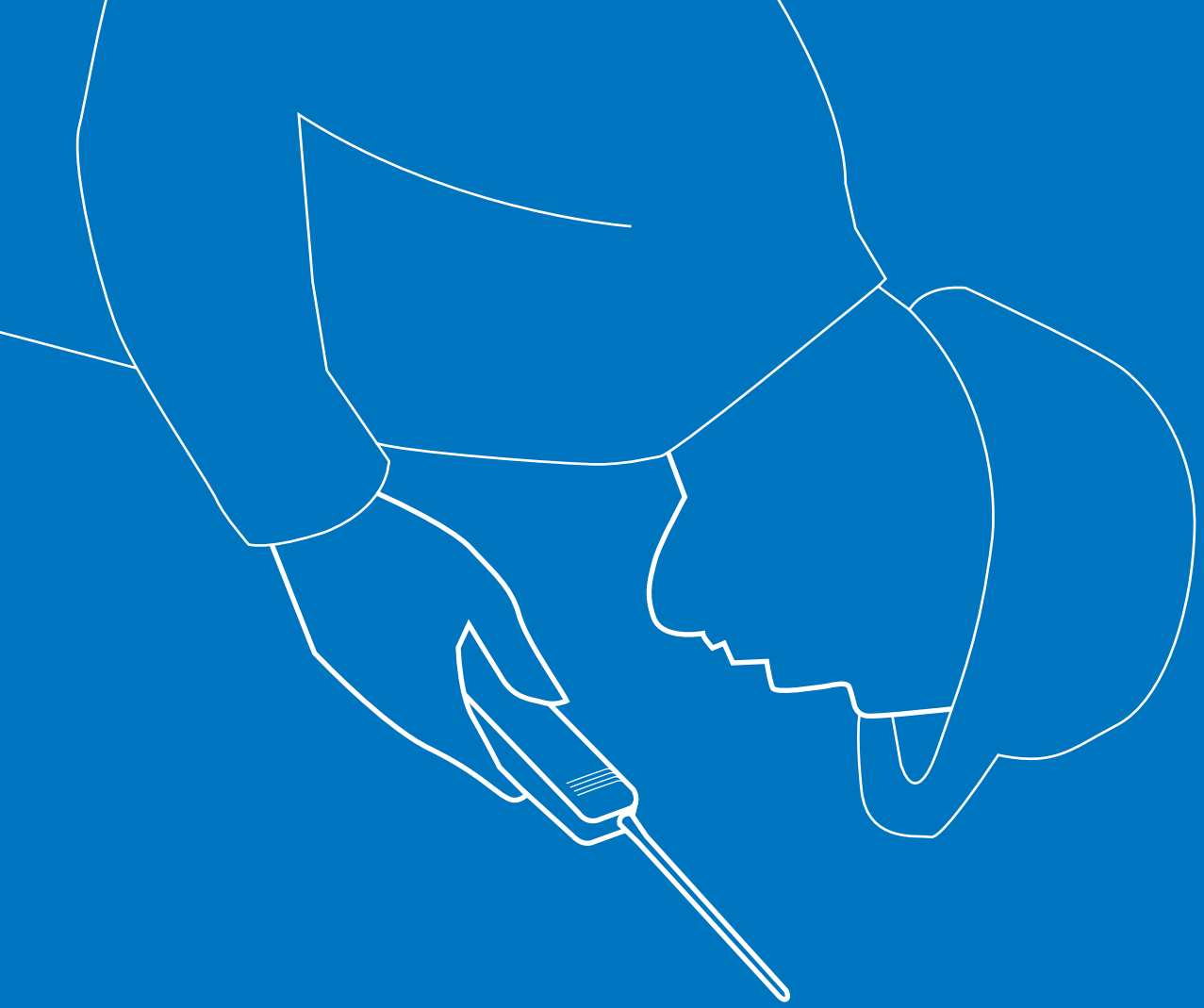
- MAM1 Marine Mount allows for 180° adjustability
- Rugged design specifically for harsh marine environments
- Flexible construction from heavy duty fibreglass
- Retail ready packaging with pre-terminated feeder for use by inexperienced installers

Electrical

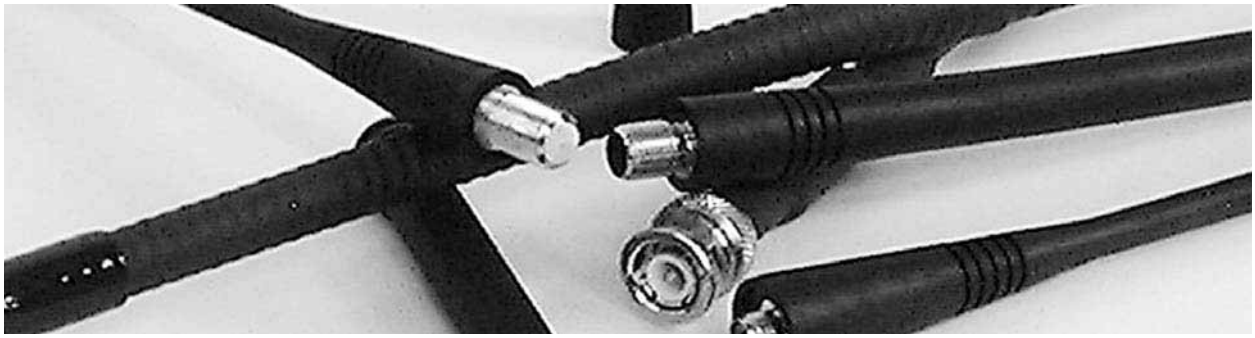
Model No.	MDD-203	MDG-203
Gain	3dB over a ¼ wave	
Frequency *MHz*	824 - 896	890 - 960
Power *W*	10	
Tuned Bandwidth	Entire specified band @ <1.5:1	
Tuning	Supplied pre-tuned	

Mechanical

Model No.	MDD-203	MDG-203
Whip Material	Flexible white fibreglass radome	
Whip Length *mm*	1500	
Mounting	MAM1 marine mount (supplied)	
Cable and Connector	10m Cellfoil® fitted with FME connector. Mini UHF and TNC adapters included.	



hand portable antennas



Typical Data for a ¼ Wave Whip Antenna

RFI offer an extensive range of hand portable antennas for PMR, SMR and trunking applications. The majority of common connector options are catered to in a variety of different formats. The range of antennas is offered in an ideal form for workshop use with most models being tuneable in the field over an extended range of frequencies using the tuning chart provided. This results in reduced inventories and allows dealers to carry antennas "off the shelf" to be tuned to customer specified frequencies as required.

Each individual band is served by a separate series including:

HPCB Series

A tightly compressed helical ¼ wave antenna, shrink coated. Flexible only in the upper 200mm, L.O.A. approximately 400mm. The antennas are supplied pre-tuned for the 27 MHz citizen band, have a narrow bandwidth (approximately 200 KHz) and are not suited for fine tuning.

HPM Series

A fully flexible heatshrink coated helical antenna. L.O.A. is approximately 400mm at its lowest frequency and the antenna can be tuned using the supplied tuning chart over the band 66-88 MHz. Tuned bandwidth is approximately 3% of centre frequency.

HPH Series

A flexible helical antenna which is fully injection moulded for maximum durability. L.O.A. is approximately 250mm at its lowest frequency and the antenna can be tuned over the range 140-250 MHz using the tuning chart supplied. Tuned bandwidth is approximately 3%.

HPHS Series

A flexible, highly compressed helical which is fully injection moulded for maximum durablity. L.O.A. is approximately 200mm at the lowest frequency and the antenna can be tuned over the range 118-175 MHz using the tuning chart supplied. Tuned bandwidth is approximately 3%.

HPU Series

These are full ¼ wave antennas for maximum performance, fully injection moulded for maximum durability. L.O.A. is approximately 200mm at the lowest frequency and the antenna can be tuned over the range 380 - 1000 MHz using the supplied tuning chart. The antenna covers UHF, 800 MHz, and Tetra applications in a single antenna. Tuned bandwidth is approximately 7%.

HPUS Series

These are flexible helically loaded ¼ wave antennas which are fully injection moulded for maximum durability. L.O.A. is approximately 175mm and the antenna can be tuned over the range 260 - 800 MHz, covering Tetra and UHF applications. Tuned bandwidth is approximately 6%.

CRD Series

These half wave dipole antennas are available only with BNC or TNC terminations and offer a true high performance UHF antenna in hand held applications. The dipole element is enclosed in a flexible PVC tubing and the antennas can be trimmed using the enclosed tuning chart over the specified band. Tuned bandwidth is approximately 2% of centre frequency.

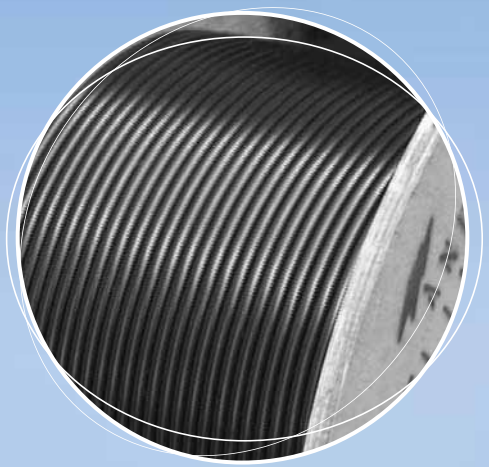
Hand Portable Antennas

			
MX Thread	BNC Male	TNC Male Overmoulded	UHF Male
			
SM SMA Male	SF Motorola SMA female flush dielectric	SFU Universal SMA female recessed dielectric	KR Series

Portable radio antenna reference chart

Band	HPCB Series	HPM Series	HPHS Series	High Band *Helical*	HPU Series *¼ Wave*	HPUS Series *Helical*	CRD Series *Dipoles*
Frequency *MHz*	27	66-88	118-175	140-250	380-1000	260-800	400-520
Tuning Specifications	Pre-Tuned	Tune with chart	Tune with chart	Tune with chart	Tune with chart	Tune with chart	Tune with chart
BNC Plug	HPCB-BNC	HPM-BNC-28	HPHS-BNC-33	HPH-BNC-37	HPU-BNC-67	HPUS-BNC-67	CRD-BNC-65 CRD-BNC-68
TNC Plug	-	-	HPHS-TNC-33	HPH-TNC-37	HPU-TNC-67	HPUS-TNC-67	CRD-TNC-68
UHF Plug	HPCB-UHF	HPM-UHF-28	-	-	-	-	-
MX Thread	-	-	-	-	HPU-MX-67	HPUS-MX-67	-
Bendix King	-	-	-	-	-	HPUS-KR-67	-
Universal (SFU Version Recessed dielectric)	-	-	-	-	HPU-SFU-67	HPUS-SFU-67	-
Motorola SMA Female (SF Version Flush dielectric)	-	HPM-SF-28	-	-	HPU-SF-67	HPUS-SF-67	-
SMA Male	-	-	HPHS-SM-33	-	HPU-SM-67	HPUS-SM-67	-

Note: Normal "stocked" configurations shown. Other formats and terminations are also available. Contact your nearest sales office for configurations not shown. (Minimum order quantities may apply on some items.)



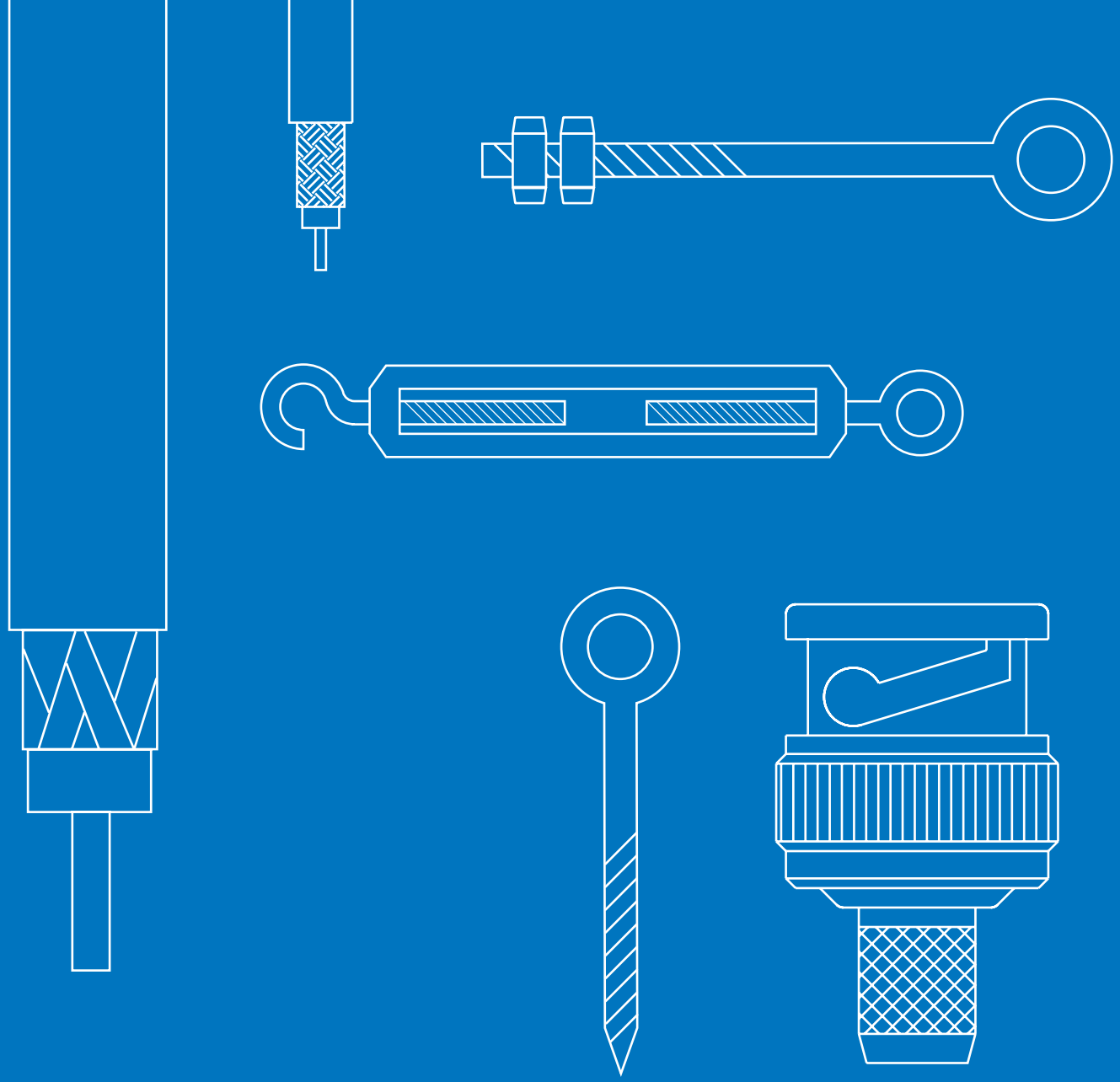
All of the ANDREW® cable you'll ever need is available at RFI

HELIAX® is the Andrew brand name that stands for the most complete, cost effective, high performance coaxial cable systems in the world. In land mobile, broadcast, cellular, HF, earth station, terrestrial microwave and many other applications, HELIAX® coaxial cable products are the industry standard of excellence. These outstanding cables are complemented by a range of compatible connectors, hangers, grounding systems and other installation accessories that form a complete RF transmission line system.

With our comprehensive stockholding and experienced sales team, RFI offers:

- **Complete Product range**
- **One Stop Shopping**
- **Fast Delivery**

So call us today for all your Andrew infrastructure requirements



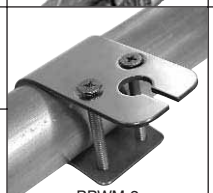
accessories

Mopole™ Accessories

Options for all Mopole™ antennas

Antenna Series Whip	Replacement	Other
CD17-XX-50	TSW150	MBC base available with or without 5.0m of RG58C/U cable
CD28-XX-50	TSW125	
CD50-XX-50		
CD28-XX-70		Base coil can be re-cabled in the field
CD50-XX-70		
CD51-XX-70	Replacement whip not available	
CD91 Series CD91-65 CD91-70 CD91-71 CD91-72	SW23 SW24 SW25 SW26	Choke section not sold separately. Choke can be recabled in the field using RG58 size cables including RG58C/U, CellFoam® or CellFoil® low noise foam cable
CD93 Series CD93-65 CD93-70 CD93-71 CD93-72	CSW23 CSW24 CSW25 CSW26	Choke section not sold separately. Choke can be recabled in the field using RG58 size cables including RG58C/U, CellFoam® or CellFoil® low noise foam cable
CD94 Series CD94-65 CD94-70 CD94-71 CD94-72	CSW13 CSW14 CSW15 CSW16	Choke section not sold separately. Choke can be recabled in the field using RG58 size cables including RG58C/U, CellFoam® or CellFoil® low noise foam cable
CD920 Series CD930 Series	MSW25	

Mounting Options for all Mopole™ antennas

Part. No.	Illustration	Description
GM7		Fibreglass reinforced plastic adjustable vehicle gutter mount. Attaches to gutter using a philips screwdriver.
GM2		Heavy duty cast aluminium adjustable gutter mount. Attaches to vehicle gutter using allen key (provided) and includes buffer plate.
TLM Series		Trunk Lip Mount Series brackets made of stainless steel. (TLM-6 shown)
TLM-1	Heavy duty "L" shaped bracket for use with larger antennas such as CD93.	
TLM-2	Heavy duty extra lip "Z" shaped bracket for use with larger antennas such as CD93.	
TLM-3	Standard "L" shaped bracket	
TLM-4	Standard extra lip "Z" bracket	
TLM-5	Identical to TLM-3 except black	
TLM-6	Identical to TLM-4 except black	
TLM-7	Standard "Z" shaped bracket with compensation angle (for use on tightly raked trunk lids)	
BK850		A black stainless steel bonnet or boot mount. Mounts directly to the bonnet or boot lid.
WM1		Slimline window mount allows ground independent antennas to be mounted on vehicles without gutters. Attaches using double sided tape and is angle adjustable with the use of an allen key.
MM2		Heavy duty mirror mount allows any mobile antenna to be mounted on a truck style mirror, roof rack or bull bar.
SK950 SK954 SK953		Heavy duty springs to suit CD90 Series antennas. SK950 - Parallel spring SK954 "Bellied" spring Both of stainless steel with plated-brass fittings SK953 black chrome equivalent to SK954
BBM-1		Black powder coated bull bar bracket for mounting mobile antennas onto vehicle bull bars. Comes complete with s/s hose clamp.
BBM-2		Polished stainless steel bull bar bracket for mounting mobile antennas onto vehicle bull bars. Comes complete with s/s hose clamp.
BBWM-1 BBWM-2	 BBWM-2	Polished wrap around stainless steel bull bar bracket with 6mm cable slot for ease of antenna mounting. BBWM-1 = 50mm BBWM-2 = 45mm

Part No.	Description	
MBC		Coaxial base providing an internal, permanent connection in a sealed unit. Easy to install and allows the entire antenna to be removed and replaced at will. Available with or without cable.
MBC-00-50F		MBC base with mini (RG174)lead. Allows feeder to be run through door jam or boot lid without crushing.
MB3		Magnetic style base, allows antennas to be transferred from car to car with ease. Complete with 5.0m of RG58 cable.
MK-850		Magnetic base for CD90 Series, CD1225 and CD1625 antennas. Rubber boot prevents magnet from scratching vehicle paint work. Cable exits via mounting turning.
MB9		VHF mobile base mounts either through the roof or on a bracket. Easy to terminate. 19mm hole required for blind hole mounting, Available with or without cable.
MB10		UHF mobile base mounts on a bracket or through the roof. A popular model measuring only 30mm diameter. 20mm hole required for blind hole mounting. Available with or without cable.
MB12		UHF mobile base mounts on a bracket or through the roof, measures 40mm in diameter. 20mm hole required for blind hole mounting. Available with or without cable.
MB14		Mobile base suitable for frequencies up to 2GHz. It delivers a precisely controlled termination resulting in a superb match. 19mm hole required for blind mounting. Only available with 5.0m of 8058 or 9001 cable pre-terminated.

Part No.	Description	
MSF1		Lightweight spring, fits any standard mobile antenna with 5/16 " thread. Allows flexibility for low clearance such as car parks or overhanging trees.
BAF2		Black ball adjuster to swivel the antenna so the correct vertical angle can be gained when the antenna base is on a slope. Easy to adjust and tighten.
KAV385		Re-installation kit for glass mount II, III, IV antennas
KAV382		Re-installation kit for glass mount antennas
KG880		Re-installation kit for E-glass antennas
KG2000		Re-installation kit for ITG-2000
KG4000		Re-installation kit for ITG-4000
KG5000		Re-installation kit for ITG-5000 series.

DC to DC Voltage Converters

Unitek DC/DC Converters

SDC08

A complete line of high quality switch mode DC to DC converters in compact housings. These high efficiency converters are suitable for applications requiring a stable output and low energy consumption, such as radio and navigation equipment.

- The SDC 20 and SDC 30 can also be used as a 13.8Vdc battery charger enabling the charging of a 12V starter or accessory battery from a 24V system.
- The IDC-charger 12-24V can be used to charge a 24V battery from a 12V system, isolated. The output voltage of this model can be adjusted with a potentiometer.

Non isolated Converters

Models	SDC05	SDC08	SDC12	SDC20	SDC30	STEP7	STEP10
Input voltage range *V*	18-35	18-35	20-35	20-35	20-35	9-18	9-18
Output voltage *V*	13.2	13.2	13.2	13.8	13.8	24	24
Max. output current *A*	5.5	8	12	20	30	7	10
Fan assisted cooling (temp. controlled)	no	no	no	no	yes	no	no
Galvanic isolation	no	no	no	no	no	no	no
Off load current *mA*	< 5	< 5	< 5	appr.25	appr.25	< 15	< 15
Temperature increase after 30 minutes at full load	30°C	20°C	30°C	25°C	33°C	30°C	30°C
Weight *kg*	0.17	0.25	0.26	0.48	0.6	0.3	0.4
Dimensions *H x W x D in mm*	49x88x68	49x88x98	49x88x98	49x88x126	49x88x151	49x88x98	49x88x126

Isolated Converters

Models	IDC 100W	IDC 200W	IDC 360W
Power rating *W*	100	200	360
Galvanic isolation	yes	yes	yes
Temperature increase after 30 minutes at full load	25°C	30°C	30°C
Fan assisted cooling (temp. controlled)	no	yes	yes
Weight *kg*	0.5	0.6	1.4
Dimensions *H x W x D in mm*	49 x 88 x 152	49 x 88 x 182	64 x 163 x 160
Input voltage *V*	A (9-18) B (20-35)	C (30-60)	D (60-120) See note (1)
Output voltage *V*	12.5 or 24		

Common Characteristics

Output voltage stability %	2% (STEP7 and STEP10: +0% / -5%)
Output noise *mV*	<50 rms
Off load current *mA*	<25 (isolated converters)
Efficiency %	Non isolated: appr. 92% Isolated: appr. 85%
Isolation *Vrms*	>400 between input, output and case (isolated products only)
Operating temperature *°C*	-20 to +30. Derate linearly to 0A at 70°C
Humidity %	Max 95% non condensing
Casework	Anodised aluminium
Connections	6.3mm push-on flat blade connectors
Protection: Overcurrent Overheating Reverse polarity conn. Overvoltage	Short circuit proof Reduction of output voltage Fuse and reverse connected diode across input Varistor (also protects against load dump)
Standards: Emissions Immunity Automotive directive	EN 50081-1 EN 50082-1 95/45/EC

(1) When ordering 9 - 18 volt model specify suffix -A
When ordering 20 - 35 volt model specify suffix -B
When ordering 30 - 60 volt model specify suffix -C
When ordering 60 - 120 volt model specify suffix -D

Batteryguard

The Unitek universal programmable batteryguard (BG) prevents excessive battery discharge and protects electric appliances against overvoltage.

Two models are available, 25A (BG 30) and 60A (BG 60). The mosfet switch is capable of carrying either 25A or 60A continuous load, and up to 40A or 80A transient load.

- Fully programmable with jumpers, the Batteryguard can be set to engage/disengage at several different voltages.
- Overvoltage protection - load disconnected when DC voltage exceeds 16V or 32V.
- Ignition proof - No relay but MOSFET switches, and therefore no sparks.
- Alarm output - The alarm output is activated if the battery voltage drops below the preset disconnect level for more than 15 seconds. Starting the engine or genset will therefore not activate the alarm. The alarm output is an open collector output to the negative (minus) rail, max. current 500mA. The alarm is typically used to activate a buzzer and/or lamp.
- Load disconnect - 1 minute after the alarm has been activated the load will be disconnected, but if the battery voltage increases to the connect threshold within this minute (after the engine/genset has been started for example) the load will not be disconnected.

Batteryguard

BG30

Models	BG30	BG60
Maximum continuous load current	25A	60A
Operating voltage range	6 - 35V	
Current consumption	<7mA	
Alarm output delay	15 seconds	
Load disconnect delay	1 minute	
Casework	Anodised aluminium, black	
Weight kg *lbs*	0.2 (0.5)	0.2 (0.5)
Dimensions *H x W x D in mm* *H x W x D in inches*	49 x 88 x 68 2.0 x 3.5 x 2.7	80 x 60 x 40 3.2 x 2.4 x 1.6

DC to DC Voltage Converters

24V DC to 12V DC Converters

VC2412-3

RFI's VC Series 24V-12V DC converters have been designed specifically for mobile applications in the communications industry. The VC Series converters incorporate excellent protection features, including overload, short circuit and voltage surge protection.

All units employ a linear output design with over-voltage protection. This is provided in conjunction with a high power relay which is triggered in milliseconds to interrupt supply. The converters utilise an advanced ridged pattern heatsink extrusion, allowing the units to operate at lower temperatures than previously designed converters.

- Over-Voltage Protection - Converters utilise a crowbar protective device to shut down the unit in 35 milliseconds with a high power relay which resets when power supply is interrupted. This eliminates the need to open the converter to replace blown internal fuses
- Overload Safeguard - Units automatically foldback the output to less than one half of the peak output rating and return to normal operation when the overload is corrected
- Cooler Operation - Heatsink extrusions are based on a ridged pattern which substantially increases heat dissipation capacity and improves reliability
- Clear Communications - Low ripple, low noise circuitry to minimise radio interference
- Linear Output Stage - Unit uses 2N3055 transistors for reliability
- Designed and manufactured in Australia

HIGH POWER RELAY MEANS NO MORE BLOWN FUSES

Models		VC2412-3	VC2412-6	VC2412-10	VC2412-15	VC2412-20
Input voltage *Vdc*		22 (Min), 30 (Max)				
Output voltage *Vdc*		13.5				
Peak Rating *A*		3	6	10	15	20
Continuous rating *A*		3	4.3	7	10.5	14
Dimensions *mm*	Length	130	130	155	220	290
	Width	Footprint 95 Body 80	Footprint 140 Body 115		Footprint 140 Body 115	
	Height	38	60		60	
Applications		Cellular phones	CB and UHF CB radios, cellular phones	Synthesised mobile radios to 25 watts	Synthesised mobile radios to 25 watts	HF radios
Operating Temperature		-30°C to 50°C				

Base Station Power Supply & Battery Charger

240V Power Supplies

The SME240 series power supplies have been designed specifically for telecommunications applications demanding high reliability, low noise, fully automatic battery backup, battery protection and full protection of the output. Ideal in remote sites, they can be used completely unattended. With a host of protection features, the units are safe and reliable in any application.

The SME240-12-10 & SME 240-24-5 power supplies provide a power output of 140 watts at 13.6 and 27.2V respectively. The nominal input mains maybe 200V to 240V and 50Hz or 60Hz.

SME240-12-10

- Low noise output, ideal for telecommunications applications
- Lighter and more compact than comparable linear power supplies
- Battery overdischarge protection with automatic reset
- Mains failure and battery reverse polarity alarm output
- Convenient plug in output connector
- 5 year warranty
- Local technical support
- C-Tick approved (EMI/EMC)

Model No.	SME240-12-10	SME240-12-5
Input Voltage *Vac (Hz)*	200-240	
Output Voltage *V adjustable*	12.0 - 14.0	24.0 - 28.0
Output Ripple Voltage *mVp-p*	<20	<20
Output Current *A*	10.0	5.0
Over Voltage Protection *V*	<16.0	<32.0
Load Regulation 1	±2% from set point taking into account all of line and load regulation and temperature coefficient when load powered by power supply	
Load Regulation 2	+0-2% of battery terminal voltage when load powered by battery	
Alarm Relay Contact Rating	Normally closed contact 60V @ 0.2A	
Operating Environment	0-50°C Ambient. Convection cooled	
Efficiency	90% Typical	
Weight *kg*	<1.0	
Compliance	AS3260, AS3548, ACA, EMC compliance, C-Tick Mark	

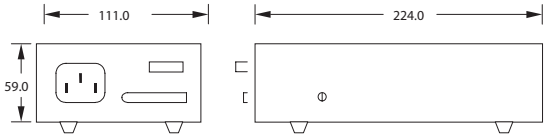


Figure 1 – Overall Dimensions

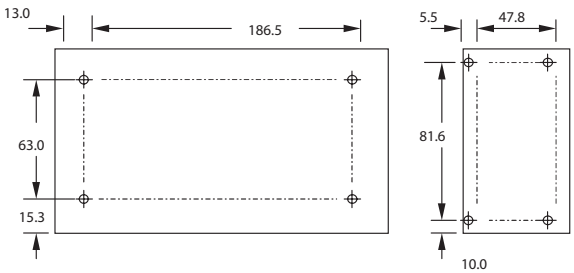
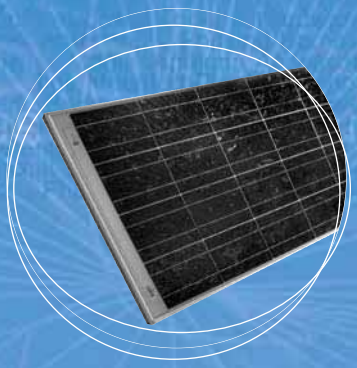
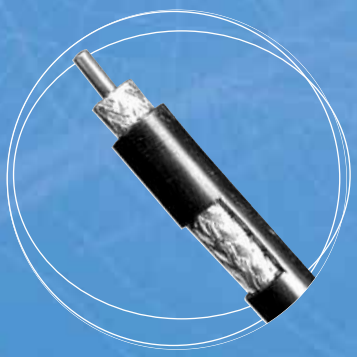
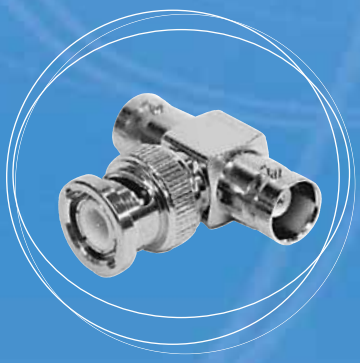


Figure 2 – Mounting Points







RFI DISTRIBUTED LINES

For more than 25 years RFI has served the needs of the wireless communications market. RFI has grown to be not only a world class manufacturer of antennas but also a leading distributor of over 6000 wireless products from around the globe.

We have formed alliances with “best of breed” wireless technology companies around the world. So, whatever your network: land mobile, cellular, paging, telemetry, telematics, WLAN, we are able to provide components from antenna port to air interface.

In renewable energy we are fast gaining the reputation as the industry’s benchmark distributor. Extensive stockholdings, competitive pricing, comprehensive range and an extensive dealer network all contribute to this reputation for service.

- ▷ Extensive product range
- ▷ Competitive pricing
- ▷ Fast delivery
- ▷ Technical advice

Pulse

bp solar Distributor

SYMMETRY

TX RX SYSTEMS INC.

steca

Panasonic

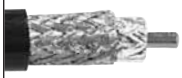
PolyPhaser CORPORATION

ANDREW®

50 Ohm Braided Coaxial Cables

Cable Type	RFI Part No.	Jacket O.D. *mm*	Construction					Impedance *Ohms*	Nominal Velocity %	Type of Jacket
			Dielectric	Centre Conductor	Shield					
					No.	Type	Coverage			
 RG178 B/U	**8178**	1.8	Solid PTFE	7 x SCCPS 0.1mm	1	SC Braid	96%	50	69	Tinted Brown FEP
 RG174/U	**8174**	2.79	Solid Polyethylene	7 x CCS 0.16mm	1	TC Braid	88%	50	66	Black PVC Non Contaminating UV stabilised
 RG58 Type	**9014**	4.62	Cellular Polyethylene (Foam)	22 x TC 0.98mm	2	TC Braid & Al foil	100%	50	80	Black Non Contaminating PVC
 RG58 C/U	**8058**	4.9	Solid Polyethylene	19 x TC 0.98mm	1	TC Braid	89%	50	66	Black PVC Non Contaminating UV stabilised
 RG58 CellFoam®	**9001**	4.9	Cellular Polyethylene (Foam)	19 x TC 0.2mm	1	TC Braid	96%	50	76	Black PVC Non Contaminating UV stabilised
 RG58 CellFoil®	**9006**	5.1	Cellular Polyethylene (Foam)	1 x BC 0.94mm	2	TC Braid & Al foil	100%	50	80	Black PVC Non Contaminating UV stabilised
 RG142 B/U	**8142**	4.95	Solid PTFE	1 x SCCPS 0.88mm	2	SC Braids	98%	50	70	Tinted Brown FEP
 RG142 Style	**9142**	4.95	Solid PTFE	19 x SC 0.98mm	2	SC Braids	98%	50	70	Black Polyethylene UV stabilised
 RG400	**8400**	4.95	Solid PTFE	19 x SC 0.98mm	2	SC Braids	98%	50	70	Tinted Brown FEP
 RG223/U	**8223**	5.4	Solid Polyethylene	1 x SC 0.91mm	2	SC Braids	98%	50	66	Black PVC Non Contaminating UV stabilised

50 Ohm Braided Coaxial Cables

Cable Type	RFI Part No.	Jacket O.D. *mm*	Construction					Impedance *Ohms*	Nominal Velocity %	Type of Jacket
			Dielectric	Centre Conductor	Shield					
					No.	Type	Coverage			
 RG213	**8213**	10.3	Solid Polyethylene	7 x BC 2.75mm	1	BC Braid	96%	50	66	Black PVC Non Contaminating UV stabilised
 RG8 Style	**CNT400**	10.3	Foam Polyethylene	1 x CCA 2.75mm	2	Al Foil TC Braid	100%	50	87	Black Polyethylene UV stabilised
 RG214/U	**8214**	10.8	Solid Polyethylene	7 x SC 2.26mm	2	SC Braids	98%	50	66	Black PVC Non Contaminating UV stabilised
 10DFB Style	**9005**	13.0	Cellular Polyethylene (Foam)	1 x BC 3.5mm	2	TC Braid & Al foil on plastic tape	100%	50	80	Black Polyethylene UV stabilised

Cable Type	RFI Part No.	Jacket O.D. *mm*	Construction					Impedance *Ohms*	Nominal Velocity %	Type of Jacket
			Dielectric	Centre Conductor	Shield					
					No.	Type	Coverage			
RG179	**8179**	2.54	Solid PTFE	7 x SC 0.03mm	1	SC Braid	95%	75	69.5	Tinted Brown FEP
 RG59B/U	**8059**	6.15	Solid Polyethylene	1 x CCS 0.57mm	1	BC Braid	95%	75	66	Black PVC Non Contaminating UV stabilised
 RG59B/U	**9008**	6.15	Solid Polyethylene	1 x CCS 0.57mm	1	BC Braid	95%	75	66	Black Polyethylene UV stabilised
 RG62A/U	**8062**	6.15	Polyethylene Helix Spiral	1 x CCS 0.64mm	1	BC Braid	93%	93	84	Black PVC Non Contaminating UV stabilised
 RG11A/U	**8011**	10.3	Solid Polyethylene	7 x BC 0.4mm	1	BC Braid	96%	75	66	Black PVC Non Contaminating UV stabilised
 RG11/U	**9011**	10.3	Foam Polyethylene	1 x BC 1.62mm	1	BC Braid	97%	75	84	Black Polyethylene UV stabilised

Corrugated Heliax® Coaxial Cables

Cable Type	Jacket O.D. *mm*	Construction					Impedance *Ohms*	Nominal Velocity %	Type of Jacket
		Dielectric	Centre Conductor	Shield					
				No.	Type	Coverage			
 FSJ1-50 Heliax®	7.4	Cellular Polyethylene (Foam)	1 x CCA 1.9mm	1	Corrugated Solid BC	100%	50	84	Black Polyethylene UV stabilised
 FSJ2-50 Heliax®	10.5	Cellular Polyethylene (Foam)	1 x CCA 2.8mm	1	Corrugated Solid BC	100%	50	83	Black Polyethylene UV stabilised
 FSJ4-50 Heliax®	13.2	Cellular Polyethylene (Foam)	1 x CCA 3.6mm	1	Corrugated Solid BC	100%	50	81	Black Polyethylene UV stabilised
 LDF1-50 Heliax®	8.8	Low Density Polyethylene (Foam)	1 x CCA 2.6mm	1	Corrugated Solid BC	100%	50	86	Black Polyethylene UV stabilised
 LDF2-50 Heliax®	11.2	Low Density Polyethylene (Foam)	1 x CCA 3.1mm	1	Corrugated Solid BC	100%	50	88	Black Polyethylene UV stabilised
 LDF4-50A Heliax®	15.9	Low Density Polyethylene (Foam)	1 x CCA 4.6mm	1	Corrugated Solid BC	100%	50	88	Black Polyethylene UV stabilised
 VXL5-50 Heliax®	27.5	Low Density Polyethylene (Foam)	1 x CCA 9.4mm	1	Corrugated Solid BC	100%	50	88	Black Polyethylene
 LDF5-50A Heliax®	28.0	Low Density Polyethylene (Foam)	1 x BC (Hollow) 9.0mm	1	Corrugated Solid BC	100%	50	88	Black Polyethylene UV stabilised
 LDF6-50 Heliax®	39.4	Low Density Polyethylene (Foam)	1 x BC (Hollow) 13.1mm	1	Corrugated Solid BC	100%	50	89	Black Polyethylene UV stabilised
 LDF7-50 Heliax®	50.1	Low Density Polyethylene (Foam)	1 x BC (Hollow) 17.3mm	1	Corrugated Solid BC	100%	50	88	Black Polyethylene UV stabilised
 RXL4-1A Heliax®	19.0	Low Density Polyethylene (Foam)	1 x CCA 4.6MM	1	SlottedBC	Not defined	50	88	Black Polyethylene
 AVA5-50 Heliax®	28.0	Low Density Polyethylene (Foam)	1 x BC (Hollow) 9.45mm	1	Corrugated Solid BC	100%	50	91	Black Polyethylene UV stabilised
 BR-400	10.29	Low Density Polyethylene (Foam)	1 x CCA 2.95mm	1	Corrugated Spiral Alluminium	100%	50	84	Black Polyethylene UV stabilised

BC	-	Bare Copper
TC	-	Tinned Copper
SC	-	Silver Coated Copper
CCS	-	Copper Clad Steel
CCA	-	Copper Clad Aluminium
SCCPS	-	Silver Coated Copper Clad Steel

Coaxial Cable Attenuation Chart

Nominal attenuation of 30.5 metres (100ft)

Cable Type	RFI Part Number	70-85 MHz	148-174 MHz	400-520 MHz	806-960 MHz	2.4-2.45 GHz	5.8-5.85 GHz
RG178B/U	8178	12.4 dB	17.0 dB	30.4 dB	40.8 dB	–	–
RG179	8179	9.2 dB	11.5 dB	17.0 dB	22.3 dB	–	–
RG174/U	8174	7.8 dB	10.8 dB	19.2 dB	26.9 dB	–	–
RG58C/U	8058	4.6 dB	7.1 dB	13.5 dB	18.2 dB	–	–
CELLFOAM™	9001	4.1 dB	5.6 dB	9.8 dB	13.2 dB	–	–
CELLFOIL™	9006	2.8 dB	4.2 dB	6.9 dB	9.0 dB	–	–
RG142B/U	8142	3.3 dB	4.9 dB	8.9 dB	12.0 dB	–	–
RG223/U	8223	4.2 dB	5.7 dB	10.0 dB	13.7 dB	–	–
RG59B/U	8059	3.1 dB	4.9 dB	9.0 dB	13.2 dB	–	–
RG62A/U	8062	2.3 dB	3.4 dB	5.9 dB	8.0 dB	–	–
RG11/U	8011	1.8 dB	2.5 dB	4.8 dB	6.6 dB	–	–
RG213/U	8213	2.0 dB	2.6 dB	5.0 dB	7.4 dB	–	–
RG214/U	8214	1.9 dB	2.6 dB	5.0 dB	7.4 dB	–	–
10D-FB Type	9005	0.9 dB	1.2 dB	2.4 dB	3.1 dB	–	–
RG8 Type	CNT-400	1.2 dB	1.7 dB	3.1 dB	4.5 dB	7.0 dB	10.6dB
1/4" Superflex	FSJ1-50	1.3 dB	2.2 dB	4.2 dB	5.6 dB	9.9 dB	15.8dB
3/8" Superflex	FSJ2-50	1.1 dB	1.5 dB	2.8 dB	3.8 dB	6.9 dB	10.9dB
1/2" Superflex	FSJ4-50	0.8 dB	1.3 dB	2.4 dB	3.4 dB	5.9 dB	10.2dB
1/4" HELIAX®	LDF1-50	1.1 dB	1.5 dB	2.7 dB	3.6 dB	5.8 dB	11.2dB
3/8" HELIAX®	LDF2-50	0.9 dB	1.3 dB	2.3 dB	3.3 dB	5.7 dB	9.5dB
1/2" HELIAX®	LDF4-50	0.6 dB	0.8 dB	1.6 dB	2.2 dB	3.7 dB	5.9dB
7/8" HELIAX®	VXL5-50	0.3 dB	0.5 dB	0.9 dB	1.3 dB	2.3 dB	–
7/8" HELIAX®	AVA5-50	0.3 dB	0.4 dB	0.8 dB	1.1 dB	2.0 dB	–
7/8" HELIAX®	LDF5-50	0.3 dB	0.4 dB	0.9 dB	1.2 dB	2.1 dB	–
1¼" HELIAX®	LDF6-50	0.2 dB	0.3 dB	0.6 dB	0.9 dB	1.6 dB	–
1⅝" HELIAX®	LDF7-50	0.2 dB	0.3 dB	0.5 dB	0.7 dB	1.4 dB	–

DC Power Cables

DC Power Cables

Cat. No.	Description	Roll Size *m*	Area of Conductor *mm²*	Conductor No./Diameter *mm*
3T-30	3mm Twin Fig 8	30	1.13	16/0.3
3T-100	3mm Twin Fig 8	100	1.13	16/0.3
4T-30	4mm Twin Fig 8	30	1.84	26/0.3
4T-100	4mm Twin Fig 8	100	1.84	26/0.3
5S-30	5mm Single (Red or Black)	30	2.90	41/0.3
5S-100	5mm Single (Red or Black)	100	2.90	41/0.3
6S-30	6mm Single (Red or Black)	30	4.59	65/0.3
6S-100	6mm Single (Red or Black)	100	4.59	65/0.3
3DS-100	3mm Twin Double Sheath	100	1.13	16/0.3
4DS-30	4mm Twin Double Sheath	30	1.84	26/0.3
4DS-100	4mm Twin Double Sheath	100	1.84	26/0.3
5DS-30	5mm Twin Double Sheath	30	2.90	41/0.3
5DS-100	5mm Twin Double Sheath	100	2.90	41/0.3
6DS-30	6mm Twin Double Sheath	30	4.59	65/0.3
6DS-100	6mm Twin Double Sheath	100	4.59	65/0.3
FPC6B-100	6mm Sq Single Core Black	100	6.00	192/0.2
FPC6R-100	6mm Sq Single Core Red	100	6.00	192/0.2
FPC10B-100	10mm Sq Single Core Black	100	10.00	322/0.2
FPC10R-100	10mm Sq Single Core Red	100	10.00	322/0.2

Speaker Cables

Cat. No.	Description	Roll Size *m*	Conductor Description *mm*
SPK-14	Light Duty Fig 8	100	14/0.14
SPK-24	Heavy Duty Fig 8	100	24/0.2

4T-100

6DS-100

FPC10R-100

SPK-24

BNC Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Cable Plugs				
BNC-04	Clamp	RG58, 9001, 9006	Solder	-
BNC-07	Clamp	RG59	Solder	-
BNC-09	Clamp	RG213	Solder, captive	-
BNC-97	Crimp	RG59	Crimp, captive	B
BNC-113	Crimp	RG58, 9001, 9006	Crimp, captive	A
BNC-113RG	Crimp	RG58, 9001, 9006	Crimp, captive	A
BNC-174	Crimp	RG174	Crimp, captive	E
BNC-223	Crimp	RG223, RG142	Crimp, captive	A
BNC-239	Right angle crimp	RG58, 9001, 9006	Crimp, captive	A
FIPBM-C	Clamp	FSJ1-50	Captive	-
Cable Jacks				
BNC-86	Crimp	RG58, 9001, 9006	Crimp, captive	A
BNC-87	Crimp	RG59	Crimp, captive	B
Panel Mount Jacks				**Mounting size and direction**
BNC-27	Flange mount (four holes)	Solder Pot	Solder captive	11.5mm (front), 8.5 (rear)
BNC-33	Bulkhead mount	Solder Pot	Solder captive	9.7mm (front)
BNC-88	Bulkhead mount	RG58, R9001, 9006	Crimp, captive	13mm (rear) A - crimp set
Adaptors				
BNC-41	F-F barrel			
BNC-49	M-F Right angle adaptor			
BNC-51	M-M barrel			
BNC-54	M-F-F Tee adaptor			
BNC-80	F-F-F Tee adaptor			

* See Pages 165-167 for Crimp Tools Matrix
** All listed BNC connectors feature the standard 50 Ohm interface dimensions. 75 Ohm interface dimensional connectors and an expanded range of other BNC connectors are available. Contact your nearest sales office for details.


BNC-04


BNC-27


BNC-33


BNC-41


BNC-51


BNC-54


BNC-86


BNC-88


BNC-97


BNC-174

N Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Cable Plugs				
N-07	Clamp - Silver plated	RG213	Solder, captive	-
N-15	Clamp - Nickel	RG58, 9001, 9006	Solder, captive	-
N-41	Right angle clamp	RG58, 9001, 9006	Solder, captive	-
N-87	Crimp silver plated	RG142, RG223	Crimp, captive	A
N-88	Crimp - Nickel	RG58, 9001, 9006	Crimp, captive	A
N-89	Crimp - Silver plated	RG58, 9001, 9006	Crimp, captive	A
N-95	Right angle crimp	RG58	Crimp, captive	A
N-114	Crimp - Nickel	RG213	Crimp, captive	C
N-119P	Crimp - Nickel plated	RG214	Crimp, captive	D
N-201	Crimp white bronze plated	CNT400, LMR400	Spring finger	D
N-203	Crimp Nickel plated	CNT400, LMR400	Spring finger	D
N-205	Crimp Nickel plated	CNT400, LMR400	Solder, captive	D
N-223	Crimp - Nickel plated	RG142, RG223	Crimp, captive	A
N-258	Right angle clamp	RG213, RG214	Solder, captive	-
N-284	Crimp	RG214	Crimp, captive	D
NP-10DFB	Clamp - Nickel	9005	Solder	-
L4PNM-RC	Ringflare	LDF4-50, RXL4-50	Captive, spring finger	Easiax Plus
L4PNR-HC	Right angle clamp, Self-Flare	LDF4-50, RXL4-50	Captive, spring finger	Easiax
L5PNM-RPC	Onepiece, Ring flare	LDF5-50	Captive, spring finger	Easiax Plus
L6PNM-RPC	Onepiece, Ring flare	LDF6-50	Captive, spring finger	Easiax Plus
L7PNM-RPC	Onepiece, Ring flare	LDF7-50	Captive, spring finger	Easiax Plus
F1PNM-HC	Hex Head, Self-Flare	FSJ1-50	Captive, spring finger	Easiax
F2PNM-HC	Hex Head, Self-Flare	FSJ2-50	Captive, spring finger	Easiax
F4NMV2-HC	Hex Head, Crush-Flare	FSJ4-50	Captive, spring finger	Easiax Plus
BR400PNM-TC	Crimp Silver Plated	BR-400	Spring Finger	D
CNT-400 Plugs				
400PNM-H-CR	Crimp Tri Metal Plated Hex	CNT-400, LMR-400	Solder	D
400PNM-HC-CR	Crimp Tri Metal Plated Hex	CNT-400, LMR-400	Spring Finger	D

* See Pages 165-167 for Crimp Tools Matrix


N-07


N-15


N-203


N-41


N-284


N-88

N Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Cable Jacks				
N-28	Clamp - Nickel	RG213, RG214	Solder, captive	-
N-30	Clamp - Nickel	RG58, 9001, 9006	Solder, captive	-
N-96	Crimp - Silver plated	RG142, RG223	Crimp, captive	A
N-98	Crimp - Silver plated	RG58, 9001, 9006	Crimp, captive	A
N-118	Crimp - Nickel	RG213	Crimp, captive	C
N-200	Crimp, White Bronze plated	CNT400, LMR400	Spring finger	D
N-202	Crimp, Nickel plated	CNT400, LMR400	Spring finger	D
N-204	Crimp, Nickel plated	CNT400, LMR400	Solder, captive	D
N-210	Crimp, Silver plated	RG59	Crimp, captive	B
L4PNF-RC	Ring Flare	LDF4-50, RXL4-50	Captive, spring finger	Easiax Plus
L5PNF-RPC	One Piece Ring Flare	LDF5-50	Captive, spring finger	Easiax Plus
L6PNF-RPC	One Piece Ring Flare	LDF6-50	Captive, spring finger	Easiax Plus
L7PNF-RPC	One Piece Ring Flare	LDF7-50	Captive, spring finger	Easiax Plus
F4PNF-C	Clamp, Self Flare	FSJ4-50	Captive, spring finger	Easiax
BR400PNF-TC	Crimp, Silver plated	BR-400	Spring Finger	D
BR400BHNF-TC	Crimp, Silver plated B/H	BR-400	Spring Finger	D
CNT-400 Jacks				
400PNF-C-CR	Crimp Tri Metal Plated	CNT-400, LMR-400	Spring Finger	D
400PNF-BHC	Clamp Tri Metal Plated B/H	CNT-400, LMR-400	Spring Finger	-
Panel Mount Jacks				**Mounting size and direction**
N-09P	Flange Mount, nickle plated		Solder pot, captive	11mm (front) 16mm (rear)
N-12	Bulkhead mount		Solder pot, captive	13mm (front)
N-20	Bulkhead mount, silver plated		Solder pot, captive	13mm (front)
N-38	Cable mounted, bulkhead, RG213		Solder pot, captive	16mm (front) 13.5mm across flat
N-120	Flange mount, silver plated		Solder pot, captive	16mm (front) 15mm (rear)
N-213	Cable mounted flange, nickle plated RG213		Crimp, captive	18mm (front) 16mm (rear)
N-237	Cable mounted flange, nickle plated RG58		Solder, captive	13mm (front) 16mm (rear)
N-288	Cable mounted bulkhead nickel plated RG58, 9001, 9006		Crimp, captive	16mm (rear) 13.7mm across flats
Adaptors				
N-10	F-F barrel			
N-46P	F-F bulkhead feed through			
N-48	F-F-F Tee adaptor			
N-49	M-F-F Tee adaptor			
N-243	M-M barrel, Nickel plated			
N-245	M-F Right angle adaptor, nickel plated			

* See Pages 165-167 for Crimp Tools Matrix

** All listed N connectors feature the standard 50 Ohm interface dimensions. 75 Ohm interface dimensional connectors and an expanded range of other N connectors are available. Contact your nearest sales office for details.

N-118

N-30

N-204

N-288

N-28

ANDREW

7-16 DIN Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Plugs				
400PDM	Clamp Tri Metal Plated	CNT-400, LMR-400	Solder	BCPT-3400
BR400PDM-TC	Crimp Silver Plated	BR-400	Captive, Spring finger	RCT-214
F4PDMV2-C	Self Flare	FSJ4-50	Captive, Spring finger	MCPT-1412
F4PDR-C	Right Angle Self Flare	FSJ4-50	Captive, Spring finger	MCPT-1412
L4PDM-RC	Ringflare	LDF4-50	Captive, Spring finger	MCPT-L4
L5PDM-RPC	Self Flare	LDF5-50	Captive, Spring finger	MCPT-78
V5PDM-RPC	Ringflare	VXL5-50	Captive, Spring finger	MCPT-78
A5TDM-PS	Ringflare, Positive Stop	AVA5-50	Captive, Spring finger	MCPT-78
L6PDM-RPC	Ringflare	LDF6-50	Captive, Spring finger	CPTL6
L7PDM-RPC	Ringflare	LDF7-50	Captive, Spring finger	CPTL7
CH-716P	Combi Head Sucoplate	Requires CEC-142 or CEC-214	Captive, Spring finger	-
Jacks				
400PDF	Clamp Tri Metal Plated	CNT-400, LMR-400	Solder	BCPT-3400
BR400PDF-TC	Crimp Silver Plated	BR-400	Captive, Spring finger	RCT-214
F4PDF-C	Self Flare	FSJ4-50	Captive, Spring finger	MCPT-1412
L4PDF-RC	Ringflare	LDF4-50	Captive, Spring finger	MCPT-L4
L5PDF-RPC	Self Flare	LDF5-50	Captive, Spring finger	MCPT-78
V5PDF-RPC	Ringflare	VXL5-50	Captive, Spring finger	MCPT-78
A5TDF-PS	Ringflare, Positive Stop	AVA5-50	Captive, Spring finger	MCPT-78
L6PDF-RPC	Ringflare	LDF6-50	Captive, Spring finger	CPTL6
L7PDF-RPC	Ringflare	LDF7-50	Captive, Spring finger	CPTL7
CH-716J	Combi Head Sucoplate	Requires CEC-142 or CEC-214	Captive, Spring finger	-
Adapters				
CEC-142	Crimp used with Combi Head	RG142	Captive	D
CEC-214	Crimp used with Combi Head	RG214	Captive	D

* See Pages 165-167 for Crimp Tools Matrix

L5PDM-RPC

L4PDF-RC

UHF Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Cable Plugs				
UHF-21	Clamp - Silver plated	RG58, 9001, 9006	Solder	-
UHF-44	Crimp - Nickel	RG58, 9001, 9006	Crimp, captive	A
UHF-66	Clamp - Right-angle plug	RG58	Solder, captive	-
UHF-104	Twist on nickel	RG58, 9001, 9006	Crimp, captive	A
UHF-119	Crimp - Nickel	RG58, 9001, 9006	Crimp, captive	A
UHF-204	Screw thread nickel	RG58, 9001, 9006	Solder, captive	-
UHF-45	Crimp - Nickel	RG59	Crimp, captive	B
UHF-46	Crimp - Nickel	RG213	Crimp, captive	C
UHF-27	Twist on - Nickel	RG213, RG214	Solder	-
UHF-04	Clamp - Silver plated	RG213, RG214	Solder, captive	-
MP10FB	Solder - Nickel plated	9005, 10DFB	Solder	-
44ASP	Solder, Tab flare	FSJ4-50	Solder	-
L44P	Solder, Self-Flare	LDF4-50, RXL4-50	Solder	-

* See Pages 165-167 for Crimp Tools Matrix

UHF connectors are non-constant impedance connectors suited for use at frequencies not exceeding 600 MHz. However, to ensure maximum performance at higher frequencies all UHF Series male connectors feature a high strength PTFE dielectric with the exception of the “CB style” connectors UHF-104, UHF-204 and UHF-27.


UHF-04


UHF-21


UHF-27


UHF-44


UHF-46


UHF-66


UHF-104


UHF-204


MP10FB

UHF Series

Model. No.	Description	Cable Type	Centre Conductor	
Cable Jacks				
UHF-42P	Solder - Nickel plated	RG58, 9001, 9006	Solder	
UHF-36	Solder - Nickel plated	RG213, RG214	Solder	
44ASU	Solder, Tab flare	FSJ4-50	Solder	
L44U	Solder - Self-Flare	LDF4-50, RXL4-50	Solder	
Panel Mount Jacks				**Mounting size and direction**
UHF-67	Flange Mount	RG58	Clamp	9.5mm (front)
UHF-28	Bulkhead - Nickel plated		Solder pot	12.5mm (front)
UHF-60	Flange Mount - Nickel plated		Solder pot	15mm (front) 16mm (rear)
UHF-117	Bulkhead - Nickel plated		Solder pot	16mm (front)
Adaptors				
UHF-14	Double female barrel			
UHF-15	Double female bulkhead - Nickel plated			
UHF-32	T-Adaptor (2 female) - Nickel plated			
UHF-116	Double male barrel - Nickel plated			
UHF-16	90 degree, male/female - Nickel plated			

UHF connectors are non-constant impedance connectors suited for use at frequencies not exceeding 600 MHz. However, to ensure maximum performance at higher frequencies all UHF Series female connectors feature a high strength PTFE dielectric with the exception of the “CB style” UHF-15, UHF-32 and UHF-60.


L44U


UHF-14


UHF-15


UHF-16


UHF-36


UHF-42P


UHF-67


UHF-116

TNC Series

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set* or Tool
Cable Plugs				
TNC-01	Solder - Nickel plated	RG58, 9001, 9006	Solder	-
TNC-26	Crimp - Nickel plated	RG58, 9001, 9006	Crimp, captive	A
TNC-26RG	***Reverse gender*** - Nickel plated	RG58, 9001, 9006	Crimp	A
TNC-26RT	Reverse thread - Nickel plated	RG58, 9001, 9006	Crimp	A
TNC-223	Crimp - Nickel plated	RG223	Crimp, captive	A
TNC-207	Crimp - Nickel plated	CNT-400	Solder	D
TNC-207RG	***Reverse gender*** crimp - Nickel plated	CNT-400	Solder	D
BR400PTM-C	Clamp - Silver plated	BR-400	Spring Finger, captive	D
Cable Jacks				
TNC-86	Crimp - Nickel plated	RG58, 9001, 9006	Crimp, captive	A
TNC-86RG	***Reverse gender*** crimp - Nickel plated	RG58, 9001, 9006	Crimp, captive	A
TNC-206RG	Crimp - Nickel plated	CNT-400	Solder	-
Panel Mount Jacks				**Mounting size and direction**
TNC-33	Bulkhead - Nickel plated		Solder pot, captive	9.5mm (rear)
TNC-88	Cable mount, bulkhead - Nickel plated	RG58, 9001, 9006	Crimp, captive	13mm (front) A crimp set
Adaptors				
TNC-11	Double female barrel - Nickel plated			
TNC-15	90 degree male/female - Nickel plated			
TNC-42	Double female bulkhead - Nickel plated			

* See Pages 165-167 for Crimp Tools Matrix


TNC-01


TNC-26


TNC-26RG


TNC-26RT


TNC-33


TNC-88


TNC-206RG


TNC-207RG


TNC-223

Miscellaneous Connectors

Model. No.	Description	Cable Type	Centre Conductor	Crimp Set*
Cable Plugs				
FME-150	FME Crimp - Nickel plated	RG174, RG316, RG179	Crimp, captive	E
MCX-02	MCX Crimp - Gold plated	RG174, RG316, RG179	Solder	E
MMCX-01	MMCX Crimp - Gold plated	RG174, RG316, RG179	Solder	E
MMCX-02	MMCX Crimp - Gold plated	RG174, RG316, RG179	Crimp	E
SMA-174	SMA Crimp - Gold plated	RG174, RG316, RG179	Crimp	E
BL-734P	Belling Lee Solder, claw type - Nickel plated	RG58, 9001, 9006	Clamp	-
FME-116	FME Plug to Plug adaptor - Nickel plated	RG58, 9001, 9006	Captive	-
FME-120	FME Nipple, crimp, male - Nickel plated	RG58, 9001, 9006	Crimp	A
MPL-604	Mini UHF crimp - Nickel plated	RG58, 9001, 9006	Crimp, captive	A
MPL-605	Mini UHF crimp - Black chrome	RG58, 9001, 9006	Crimp, captive	A
SMA-40	SMA Crimp black - Chrome	RG58, 9001, 9006	Crimp	A
SMA-104	SMA Crimp, Pulse - Nickel plated	RG58, 9001, 9006	Crimp	A (centre - 1.09mm)
SMA-104KN	SMA Knurled nut interface - Black chrome	RG58, 9001, 9006	Crimp	A (centre - 1.09mm)
SMA-104RG	SMA ***Reverse gender*** - Nickel plated	RG58, 9001, 9006	Crimp	A (centre - 1.09mm)
SMA-104RT	SMA Reverse thread - Gold plated	RG58, 9001, 9006	Crimp	A (centre - 1.09mm)
Cable Jacks				
FME-140	FME Crimp - Nickel plated	RG174, RG316, RG179	Crimp, captive	E
MMCX-03	MMCX Crimp - Gold plated	RG174, RG316, RG179	Solder	E
FME-101	FME Crimp - Nickel plated	RG58, 9001, 9006	Crimp	A
MPL-86	Mini UHF - Nickel plated	RG58, 9001, 9006	Crimp	A
SMA-186	SMA Crimp - Gold plated	RG58, 9001, 9006	Crimp	A (centre - 1.09mm)
Panel Mount Jacks				
SMA-05	SMA Bulkhead - Gold plated	-	Solder pot	6.4mm (front)
SMA-06	SMA Cable mount bulkhead - Gold plated	RG174, RG316, RG179	Crimp	6.4mm (rear)
SMA-07	SMA Cable mount bulkhead - Gold plated	RG58, 9001, 9006	Crimp	6.4mm (rear)

*See Pages 165-167 for Crimp Tools Matrix


BL-734P


FME-101


FME-150


MMCX-03


MPL-604


SMA-06


SMA-104


SMA-104RG


SMA-174


SMA-186

AK-30 COAXIAL ADAPTOR KIT

The AK-30 coaxial kit allows virtually any test adaptor to be made up in seconds. Includes UHF, Mini-UHF, TNC, BNC, N and SMA male and female fittings.

Jumper Cables

Coaxial Jumper Cables

Model No.	Description	Cable Type
92-12NMNM-X	Cable Lead N Plug to N plug	LDF4-50
92-12NMNF-X	Cable Lead N Plug to N jack	LDF4-50
92-12NFNF-X	Cable Lead N Jack to N jack	LDF4-50
92-12DMDM-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Plug	LDF4-50
92-12DMDF-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Jack	LDF4-50
92-12DFDF-X	Cable Lead 7-16 DIN Jack to 7-16 DIN Jack	LDF4-50
92-13NMNM-X	Cable Lead N Plug to N plug	FSJ4-50
92-13NMNF-X	Cable Lead N Plug to N jack	FSJ4-50
92-13NFNF-X	Cable Lead N Jack to N jack	FSJ4-50
92-13DMDM-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Plug	FSJ4-50
92-13DMDF-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Jack	FSJ4-50
92-13DFDF-X	Cable Lead 7-16 DIN Jack to 7-16 DIN Jack	FSJ4-50
92-09NMNM-X	Cable Lead N Plug to N plug	CNT-400
92-09NMNF-X	Cable Lead N Plug to N jack	CNT-400
92-09NFNF-X	Cable Lead N Jack to N jack	CNT-400
92-09DMDM-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Plug	CNT-400
92-09DMDF-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Jack	CNT-400
92-09DFDF-X	Cable Lead 7-16 DIN Jack to 7-16 DIN Jack	CNT-400
92-23NMNM-X	Cable Lead N Plug to N plug	BR-400
92-23NMNF-X	Cable Lead N Plug to N jack	BR-400
92-23NFNF-X	Cable Lead N Jack to N jack	BR-400
92-23DMDM-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Plug	BR-400
92-23DMDF-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Jack	BR-400
92-23DFDF-X	Cable Lead 7-16 DIN Jack to 7-16 DIN Jack	BR-400
92-04NMNM-X	Cable Lead N Plug to N plug	RG214
92-04NMNF-X	Cable Lead N Plug to N jack	RG214
92-04NFNF-X	Cable Lead N Jack to N jack	RG214
92-04DMDM-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Plug	RG214
92-04DMDF-X	Cable Lead 7-16 DIN Plug to 7-16 DIN Jack	RG214
92-04DFDF-X	Cable Lead 7-16 DIN Jack to 7-16 DIN Jack	RG214

Note 1: X denotes cable lead length in metres

Note 2: Other cable types available; LDF1-50, FSJ1-50, RG213, RG58, RG400, RG223. Minimum order quantities may apply.

Coaxial Crimp Tools

Part No.	Description	Illustration
RCT5859	Swedish manufactured ratchet style crimp tool to suit: • **RG58** • **RG223** • **RG400** • **RG142** • **RG59** Crimp Set A + B fitted	 RCT5859
RCT-213	Ratchet style crimp tool for RG213 connectors. Comfort Grip handles. Swedish manufacture. Crimp Set C fitted	 RCT-213
RCT-214	Ratchet style crimp tool to suit RG214 and RG63 connectors. Comfort Grip handles. Swedish manufacture. Crimp Set D fitted	 RCT-214
RCT-174	Ratchet style crimp tool to suit RG174, RG316, and RG179 connectors. Comfort Grip handles. Swedish manufacture. Crimp Set E fitted	 RCT-174
RCT-301G	Multi purpose tool includes 1.09mm jaw for SMA centre pin crimps and suits: • **RG58** • **RG59** • **RG179** • **RG174** • **RG316**	 RCT-301G
RCT-330K	Crimp tool with interchangeable jaws for cables from RG214 down to RG174. Comes packaged in a robust plastic case with cable cutter, stripper and screwdriver.	 RCT-330K

Cable Preparation Tools

Part No.	Description	Illustration
BR-CPT-400	**Cable prep tool** Hand tool for fast and easy preparation of BR-400 cable. Strips jacket and cuts through outer shield and dielectric making cable ready for connector attachment. Incorporates deburring blade to prepare centre conductor.	 BR-CPT-400
CST-399	**Coaxial cable stripping tool -** *Corex 2* 3 blade cutter. Adjustable blade height, reversable blade cartridge. Swedish precision tool to suit: • **RG58** • **RG59** • **RG62** • **RG174** • **RG188** • **RG316** • **RG6** • **RG195** • **RG180**	 CST-399
CST-213	**Coaxial cable stripping tool -** *Maxi Corex* 3 blade cutter. Adjustable blade height, reversable blade cartridge. Packaged in robust plastic case and comes complete with knife and adjustment tool. Swedish precision tool to suit: • **RG213** • **RG214** • **RG6** • **Twinax & Ethernet cables**	 CST-213
EASIAX®	**Cable prep tool** Hand tool for fast precision cuts in Heliax® cables. Available for: • **FSJ1 and 4 (MCPT-1412)** • **FSJ2 and 4 (MCPT-3812)** • **LDF4 and RXL4 (MCPT-L4)** • **LDF5 and RXL5 (MCPT-78)**	 MCPT-L4
EASIAX® Plus	**Automated cable prep tool** Fit to a standard power or battery drill for fast, reliable cable preparation in seconds. Removes jacket outer conducter and foam, then cuts back and chamfers the inner conductor for correct connector attachment. Available for cables from LDF1-50 through to LDF7-50. • **LDF1-50 (CPTL1)** • **LDF2-50 (CPT-E2L2N)** • **LDF4-50 (CPT-L4ARC1)** • **LDF5-50 (CPTL5A)** • **LDF6-50 (CPTL6)** • **LDF7-50 (CPTL7)**	 CPT-L4ARC1

Cutting and Stripping Tools and Accessories

Part No.	Description	Illustration
ACT-1	Ratchet crimp tool for insulated terminals. Incorporates 3 crimping positions for pre-insulated terminals (red, blue and yellow terminals)	 ACT-1
CST-001	Cable stripping tool for 32 to 8 AWG wires. Adjustable length stop, integrated cable cutter, strips single or twin wires. Swedish precision tool.	 CST-001

Crimp Tool Dimensions

Crimp Set	Hex Dimensions (Outer Conductor)	Hex/Square Dimensions (Centre Conductor)	Typical Cable Sizes Using Crimp Set
A	5.41	1.69	RG58, 9001, 9006, RG142, RG223, RG400
B	6.48	1.69	RG59, RG62
C	10.54	2.54	RG213
D	10.9	2.54	RG214, RG63
E	3.25	0.72	RG174, RG63, RG179

Cross Reference to Crimp Dies

Cable Type	ERMA Crimp Code	Hex *mm*	Hex *inch*	Centre Crimp *mm*	Centre Crimp *inch*	Length *mm*	RFI Ref	RCT-330K
RG58C/U	HFD	5.41	0.213	1.69	0.067	8	RCT-5859	A or G
RG59C/U	XH	6.48	0.255	1.69	0.067	8	RCT-5859	A or G
RG62A/U	XH	6.48	0.255	1.69	0.067	8	RCT-5859	A or G
RG63B/U	HIA	10.9	0.429	2.54	0.100	10	RCT-214	K
RG142B/U	HFD	5.41	0.213	1.69	0.067	8	RCT-5859	A or G
RG174A/U	XCF	3.25	0.128	0.72	0.028	8	RCT-174	J outer only
RG178B/U	XB	2.67	0.105	0.72	0.028	8	RCT-174	J outer only
RG179B/U	XCF	3.25	0.128	0.72	0.028	8	RCT-174	J outer only
RG213/U	HIA	10.54	0.415	2.54	0.100	10	RCT-213	K
RG214/U	HIA	10.9	0.429	2.54	0.100	10	RCT-214	K
RG223/U	HFD	5.41	0.213	1.69	0.067	8	RCT-5859	A or G
RG316/U	XCF	3.25	0.128	0.72	0.028	8	RCT-174	J outer only
RG400/U	HFD	5.41	0.213	1.69	0.067	8	RCT-5859	A or G