

# BENELEC

Professional Wireless Solutions

# OUTREACH

LAND MOBILE UHF / 27MHZ CB & CELLULAR ANTENNAS

FOUR-WHEEL DRIVE

MINING & INDUSTRIAL



TRUCKING & TRANSPORT

FARMING & AGRICULTURE



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# OUTREACH

LAND MOBILE UHF / 27MHZ CB & CELLULAR ANTENNAS

PART NUMBER(S)  
ANTENNA NAME

		UHF 477MHZ CB													
27MHZ															
02152 REDBACK															
02623 HI-GLASS															
02623I (STEEL) 02623IBK (BLACK) HI-STEEL															
026264 FAZE 4															
02629 ADVENTURER															
02632 XTENDER															
02634X (FIXED) 02634XC (REMOVABLE) FLEXI-DIPOLE															
02634ZMC RUGGED FLEXI-DIPOLE															
02635 EXPLORER															
02637 TRUCKIE															
02638 (BLACK) 02638W (WHITE) 4WHEELER															
026383C (BLACK) 026383CW (WHITE) UHF STUMPY															
92cm															
65cm															
67cm															
150cm															
130cm															
87cm															
31cm															
33cm															
33cm															
93cm															
16cm															
85cm															
120cm															
30cm															
50cm															
NEW															
APPLICATION		Mobile 27MHz GP		Mobile 477Mhz GP			Mobile 477Mhz GPI		Mobile 450-520MHz GPI		Mobile 477MHz GPI				
FEATURES		Pre-tuned, epoxy coated, rugged & flexible		Ideal for corrugated and rough roads. Braided conductor.		17/7PH polished S/S metal tip. Rugged & flexible.	Tapered Epoxy.	Rugged, long range. Can be mounted anywhere on vehicle. Ideal for 4WDs.	Light-weight GPI ideally suited for 2WD vehicles.	Flexible & compact. Ideal emergency antenna for temporary replacement of large colinears.	Ultra rugged, broadband, flexi dipole. Full band operation.	Rugged & reliable, includes spare emergency whip. Ideal for 4WDs. 3dB hills, 6.5dB flat terrain.	Hi performance/range. Can be mounted anywhere on the vehicle. Ideal for trucks. Mirrors & gutters.	Convenient, all situations covered. Rugged dual antenna, fiberglass enclosed. 3dB hills, 6.5dB flat terrain.	Compact and rugged. Fiberglass enclosed. Removable.
LENGTH (cm)		92	65	67	150	130	87	31(X) 33(XC)	33	93 (6.5) 16 (3)	85	120 (6.5) 50 (3)	50		
GAIN (dB)		0	4.5		6	9	6.5	4	4	3 / 6.5	6.5	4 / 6.5	3		
TERMINATION		VHF Base 5/16" F thread	UHF Base 5/16" female thread			UHF M-Base		Stud (X) UHF M-Base (XC)	UHF M-Base	5m RG58, FMEs, UHFp adaptor (supplied)					

dB gain reference is relative to 1/4 wave on ground plane.

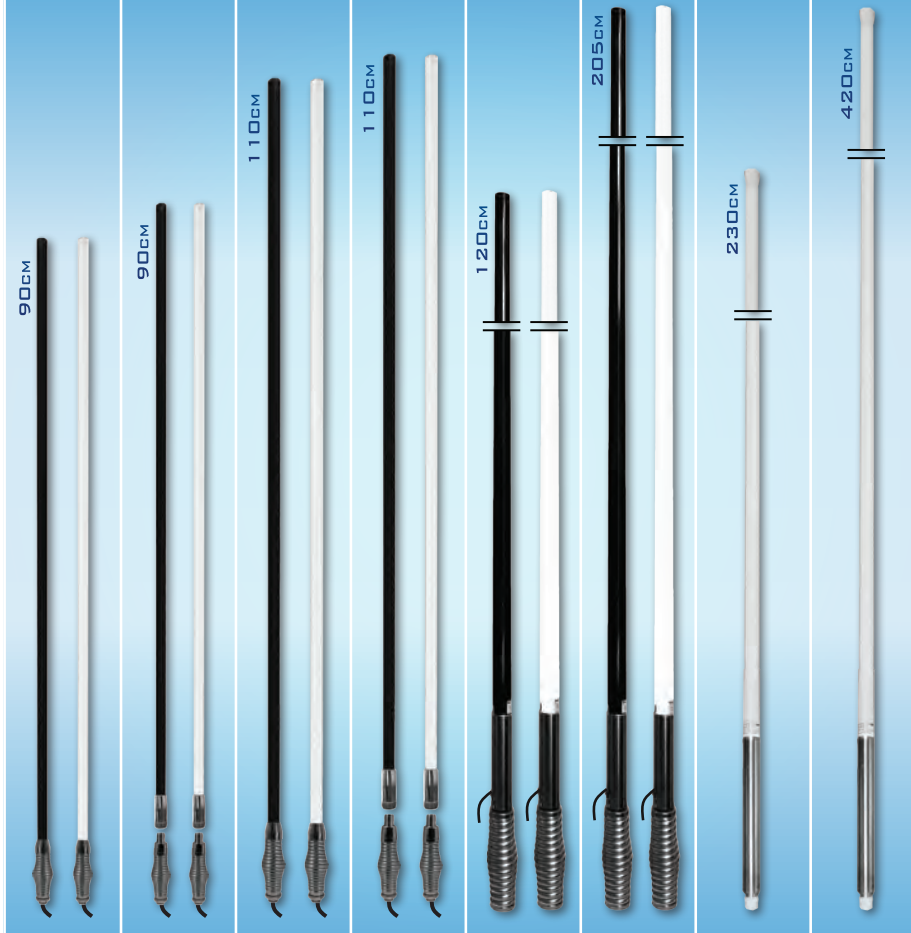

**GPI (Ground Plane Independent)**  
Antenna operates independently of vehicle and can be mounted anywhere.

**GP (Ground Plane)**  
Antenna requires UHF antenna base with contact to vehicle to operate.

Refer to back page for an in-depth antenna guide.

## UHF 477MHZ CB

## CELLULAR

UHF 477MHZ CB							CELLULAR									
026384 (BLACK) 026384W (WHITE) <b>UHF 900 TWIN</b>	026384C (BLACK) 026384CW (WHITE) <b>UHF 900 R-TWIN</b>	026385 (BLACK) 026385W (WHITE) <b>UHF 1100 TWIN</b>	026385C (BLACK) 026385CW (WHITE) <b>UHF 1100 R-TWIN</b>	026382K (BLACK) 026382KW (WHITE) <b>MINI DESERT STICK</b>	026386K (BLACK) 026386KW (WHITE) <b>DESERT STICK</b>	02648 <b>BASE 8</b>	02649 <b>BASE 12</b>	02459 <b>CELL REACH</b>	024574 (BLACK) 024574W (WHITE) <b>CELL 900 TWIN</b>	024577 (BLACK) 024577W (WHITE) <b>CELL 900 R-TWIN</b>	024576 (BLACK) 024576W (WHITE) <b>CELL 1100 TWIN</b>	024578 (BLACK) 024578W (WHITE) <b>CELL 1100 R-TWIN</b>				
																
<b>Mobile 477MHz GPI</b>					<b>Fixed Base 477MHz GPI</b>		<b>Mobile NextG 850 GPI</b>	<b>Mobile 3G NextG/3G 850/900/1800/2200 GPI</b>								
Rugged construction. S/S spring mounted with fixed and removable options. Ideal for garaged vehicles.		Rugged construction. S/S spring mounted with fixed and removable options. Ideal for garaged vehicles. Higher gain.		High gain, high performance. Ultra rugged, all S/S construction. 3mm fiberglass removable push/pull N plug & socket.		Heavy duty fiberglass with S/S mount tube. High performance.		S/S whip, elevated feed	Rugged construction. S/S spring mounted with fixed and removable options. Ideal for garaged vehicles.		Rugged construction. S/S spring mounted with fixed and removable options. Ideal for garaged vehicles. Higher gain.					
90		110		120		205		230		420		82	90		110	
3		6.5		8		12		8	3 / 6		3 / 7.5					
5m RG58, FMEs, UHFp adaptor (supplied)				Base, 5m RG58 + plugs (K & KWT only)			N Socket		5m LL195 low loss cable w/ FME socket fitted							

dB gain reference is relative to 1/4 wave on ground plane.

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## ANTENNA ACCESSORIES

### MOUNTING, BASES, LEADS & MORE

S/S - Stainless Steel  
ZPS - Zinc Plated Steel

#### MOBILE ANTENNA MOUNTING

02714S	Fold Down Gutter Bracket S/S
02726S	Heavy Duty Gutter Bracket S/S
02728	Mirror/Roof Bracket Bar S/S
02728B	Mirror/Roof Bracket Bar ZPS
02729	Wall Bracket 100mm S/S
027291	Light Weight L Bracket S/S
02730	Bull Bar Bracket - Right Angle S/S
02730B	Bull Bar Bracket - Right Angle ZPS
027303	Adjustible Swivel "Lip" Mount
027313	Wrap Around Bull Bar Bracket 45mm
027314	Wrap Around Bull Bar Bracket 50mm
02732	Heavy Duty Bull Bar Bracket 64mm Tube S/S
027321	Heavy Duty Bull Bar Bracket 76mm Tube S/S
02734	'Z' Trunk Groove Bracket S/S
02734B	'Z' Trunk Groove Bracket ZPS
027423	'Super Sucker' Magnetic Suction Base 16mm Hole
02795	UHF Adaptor 5/16" Male to M Base



02714S

02726S

02728 (S/S)  
02728B (ZPS)

02729



027291

02730 (S/S)  
02730B (ZPS)

027303

027313



027314

02732

027321

02734 (S/S)  
02734B (ZPS)

027423

02795

02811 (ZPS)  
02811S (S/S)

02720

#### BASE ANTENNA MOUNTING

02811	Parallel Mounting Bracket 90/60mm ZPS
02811S	Parallel Mounting Bracket 90/60mm S/S

#### MOBILE ANTENNA BASES

02720	Black VHF Standard Base 5/16" 26TPI
02724	'Big Mag' H/D 140mm Mag Base - M Base/UHF Socket & 4m x RG58 to UHFp
02740	UHF Standard Base 5/16" M 26TPI
02742	UHF Heavy Duty Base 5/16" Male to UHF Socket



02724

02740

02742

10106F

#### MOBILE ANTENNA LEADS & ACCESSORIES

10106F	VHF Base 3.6m RG58 & UHFp Fitted
101046	5m FMEs to FMEs Extension Cable for 10109C
10108	UHF Base 3.6m RG58 to UHFp Fitted
10109	UHF M Base 5m RG58 to FME Socket Fitted
10109C	UHF M Base 450mm LL100 Black to FME Plug
10101	Jumper Lead UHFp to UHP 350mm
173810	UHF 2Way Switch - 2 in x 1 out



101046

10108

10109

10109C

#### BASE ANTENNA LEADS

101210	UHF Plug to N Plug 10m x RG213
101215	UHF Plug to N Plug 15m x RG213



10101

173810

101210

101215

#### DC POWER LEADS

10505	2 Pin, 2 Amp In-Line Fuse & Holder Suitable for Uniden
10507	2 Pin "T" Secure Plug 4mm <sup>2</sup> x 20 Amp Fused + & -ve
10510	2 Pin, 2 Amp In-Line Fuse & Holder Suitable for GME



10505

10507

10510

0301

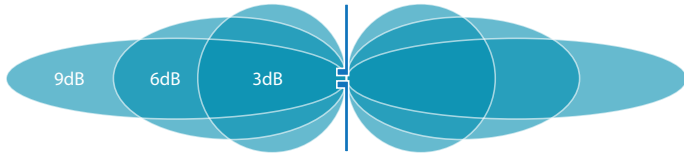
#### ANTENNA TEST INSTRUMENT

0301	VSWR/Power Meter 1.8-525MHz
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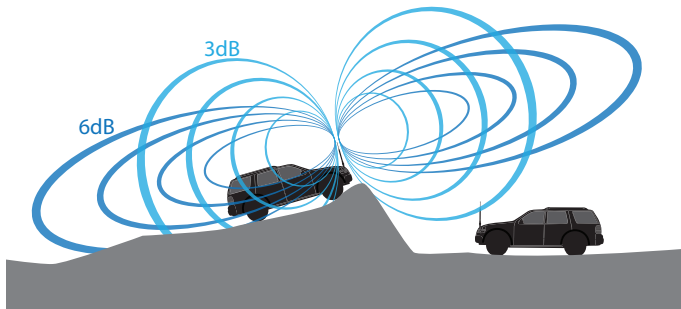
## ANTENNA SELECTION GUIDE

### WHICH ANTENNA DO I NEED?

Gain describes the shape of the radiation from an antenna. Use a higher gain antenna for better performance in open flat terrain. Use a lower gain antenna for better performance in rough mountainous terrain.



We recommend the use of a lower gain antenna for the communications in vehicle convoy situations.



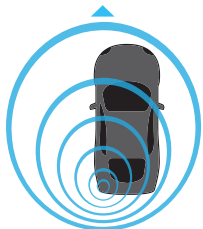
When operating between mountainous and open terrain, think about choosing an antenna with interchangeable high gain and low gain whip tops, or use two antennas with an RF switch.

Note that Stainless Steel whip antennas will not last on corrugated roads. They are not suitable for this application.

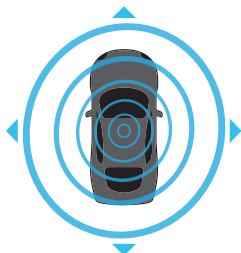
### GP/GPI RADIATING PATTERNS

Ground Plane Independent (GPI) antennas can be mounted anywhere on the vehicle.

These antennas work independently of the vehicle body, and as such they provide consistent performance all the way around the antenna.



Grounded Plane (GP) antennas rely on the metal surface of the vehicle for performance. If you mount this style of antenna on the edge of a vehicle, the radiation pattern will be biased towards the area with the largest amount of metal (an offset pattern).



There will also be a deterioration in the VSWR of grounded antennas that are mounted on the edge of the vehicle. Grounded antennas generally should only be mounted in the centre of the vehicle roof.

### CONNECTOR ADVICE

We recommend to add a thread locking adhesive (eg Loctite 242 Blue – Threadlocker Medium Strength) at the interface between the cable connector (FME socket) and the UHF plug adaptor as it's possible for this connection to vibrate loose over time.

Exposed connectors should be sealed with self amalgamating tape such as Benelec P/N 5052219BK or equivalent.

### CABLE ADVICE

Care must be taken to not damage, cut or crush the coaxial cable when routing it to the transceiver through a vehicle.

We recommend to seal any points where the cable enters the vehicle.

### MOUNTING TIPS & ADVICE

- For better performance locate the antenna higher on the vehicle.
- Brackets and antenna mountings are to be secured properly.
- Antennas must be mounted vertically, this is particularly important with higher gain antennas.
- Avoid affixing any object to the antenna as it could affect the performance of the communications system.
- Ground Plane antennas need to be fitted direct to vehicle panels, as bracket mounting will compromise the performance.
- Do not mount antennas close to each other. Min distance should be 70cm between antennas. The further apart the two antennas, the better the performance of each respective antenna.
- Do not mount antennas closer than 70cm to any metal vertical surface.
- Do not mount antennas operating on the same band, at the same horizontal level unless a switch selects them.

### Available from: