

UHF Ground Independent Mopole™

380-520 MHz

CD50, CD51 Series



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 3 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.



Features:

- 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 retermination 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

Electrical

Model Number	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

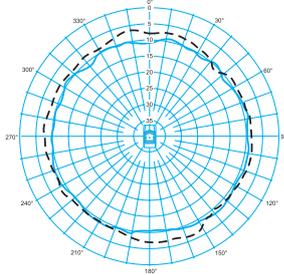
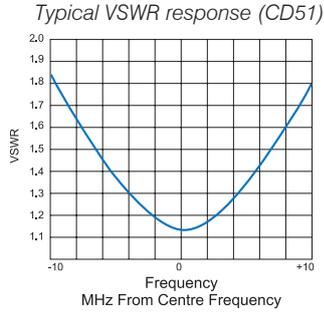
Model Number	CD50-XX-50	CD50-XX-70	CD51-XX-50	CD51-XX-70
Whip Material	17-7 PH Stainless steel		Copper braid element in flexible nylon tubing	
Whip Length mm	395		360	
Mounting	MBC base (included)	Threaded stud	MBC base (included)	Threaded stud
Cable and Connector	Not included, order separately. See 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.

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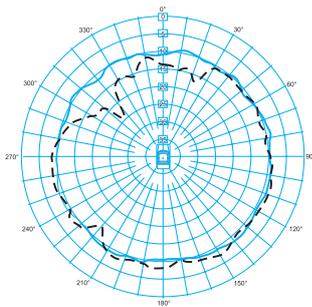
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UHF Mopoles™ are excellent performers even when gutter mounted as this pattern demonstrates. The Mopole™ design has resulted in an antenna which is largely omnidirectional in spite of its gutter mounting position.

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

