

# DFA 450/900-X/...

## 450 MHz / 900 MHz Dual-frequency Mobile Antenna

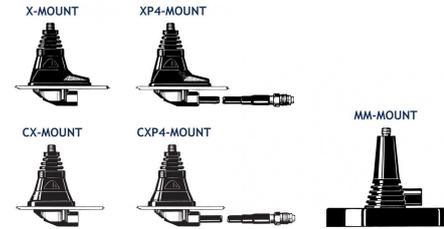
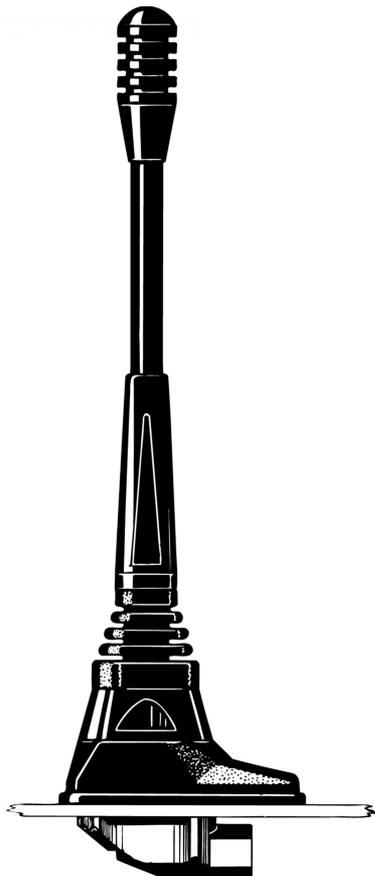
### DESCRIPTION

- This antenna makes it possible to:
  - operate 450 MHz and 900 MHz transceivers alternately on the same antenna
  - operate two transceivers (450 and 900 MHz) at the same time on one antenna using a diplexer (type DIPX 500/800 – to be ordered separately)
  - operate a dual-frequency transceiver (450 and 900 MHz) on one antenna (diplexer not required).
- Ready-tuned and unity gain on both bands.
- Stainless steel X-mount with M6-thread whip-fastening system.
- Simple mounting exclusively with access from the outside.
- Models available with X-mount (oblong), CX-mount (circular) and MM-mount (magnetic).
- Choice between two connection principles: X-mount, MM-mount: FME-connection (supplied without cable).
- XP4-mount: Permanently attached 4 m cable terminated with FME-connector.

### Ordering designations

TYPE NO.	PRODUCT NO.
DFA 450/900-X/...	130001109

When ordering, the operating frequencies in both bands must be stated. In case of duplex operation please specify TX and RX frequencies. In case of application for CELLULAR systems please state names of CELLULAR networks.



All whips are compatible with all mounts.

### SPECIFICATIONS

ELECTRICAL	
MODEL	DFA 450/900-X/...
ANTENNA TYPE	Dual-frequency mobile antenna
FREQUENCY	450 MHz-frequency to be stated within: 380–470 MHz 900 MHz-frequency to be stated within: 800–960 MHz
IMPEDANCE	Nom. 50 Ω
POLARISATION	Vertical
GAIN	Approx. 0 dB in both bands (acc. to EIA RS-329-1)
BAND WIDTH	450 MHz: > 25 MHz @ SWR ≤ 2.0 (typ.) 900 MHz: > 80 MHz @ SWR ≤ 1.5 (typ.)
SWR	≤ 1.5 @ f. res.
MAX. POWER	50 W
MECHANICAL	
MATERIALS	<b>Whip:</b> Black glassfiber Black-chromed brass <b>Mount:</b> Black-chromed brass Environment-proof plastics. Stainless steel
RECOMMENDED INSTALLATION TORQUE	4 ± 1 Nm
COLOUR	Black
HEIGHT	Approx. 140 mm
WEIGHT	X-version: Approx. 60 g XP4-version: Approx. 200 g MM-version: Approx. 270 g
MOUNTING	18 mm dia. hole

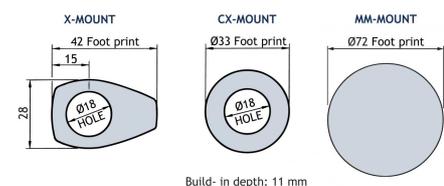
### INSTALLATION

This antenna should be mounted on the car roof to ensure best omnidirectional coverage. Mounting can take place exclusively with access from the outside when drilling an 18 mm dia. hole. Mounting can take place from the inside by drilling a 14 mm dia. hole. When mounting in a 14 mm dia. hole, remove the bottom plastic ring of the packing gasket with a sharp cutter.

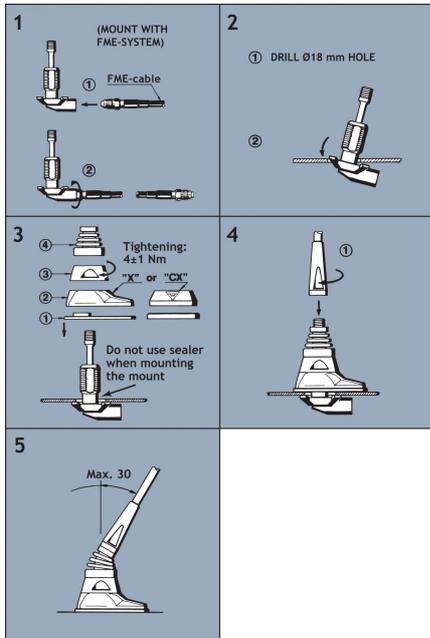
When cleaning the car in car-washing machines, remove the whip using a spanner, size 9 mm. After wash, refit the whip and tighten it lightly with the spanner.

The MiniMag (abbreviated: MM) is a small, light-weight magnetic mount with a high attaching effect. A silicone layer applied to the contact surface protects the car roof and ensures maximum friction.

#### 1. INSTALLATION DIMENSIONS



#### 2. INSTALLATION STEPS

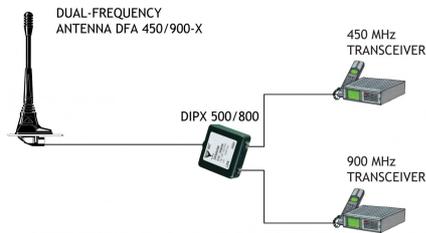


Do not use sealer on rubber gasket or other places.

Several advantages are gained by using only one antenna. Only one single hole has to be drilled into the car body, only one cabl installation has to be run, the car appearance is not destroyed by carrying several whips and also, it may be a particular demand that it should not be too obvious to see that the car is equipped with transceiving equipment.

In case of operating two transceivers on one antenna at the same time, a diplexer, type DIPX 500/800, is necessary to complete the system. (See the coupling diagram below). The tasks of the diplexer are to protect the two receiver inputs from being destroyed by the transmitter in the contrary band, and to ensure a low-loss path between the transceiver and the antenna, which is not loaded by the other branch. For further details please see the separate data sheet on the DIPX 500/800. The diplexer fully covers both bands and, consequently, tuning to specific frequencies is not required.

COUPLING DIAGRAM



PLEASE NOTE

For safety reasons:  
When using the DFA 450/900-MM, car speed must not exceed 180 km/h.

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