



Q-MAC Electronics

QM9015 HF-90 Vehicle Package

Tactical Communications



50Watts PEP

Optional Frequency Hopping

Tactical HF Radio



Package Description

The Q-MAC HF-90 Vehicle Package is an HF SSB radio communication system, for fixed vehicle installation, incorporating the Q-MAC HF-90 Transceiver together with the Q-MAC TA-90 Auto-tune Antenna System. *(A detailed description of the Q-MAC HF-90 Transceiver, together with technical specifications, is provided on a separate brochure).*

This package as a whole is characterised by its extremely compact size, ease of use and its physical robustness. The autotune antenna system supplied with the package is designed for maximum tuning efficiency, whilst its rugged two piece configuration offers improved protection to the tuning device and better driving visibility (unlike conventional one piece systems). The Q-MAC HF-90 Vehicle Package can be easily converted to a Base Station Package, Portable Package or Manpack with the addition of appropriate accessories.

The Q-MAC HF-90 Vehicle Package is being used worldwide in a variety of applications including; international aid projects, mineral exploration, road/pipeline construction, goods transportation, conservation and wildlife, tourism services and remote area 4WD use.

Features

- Small Size
- High Sensitivity
- Excellent 3rd Order Intercept
- Compact Automatic Antenna Tuner
- Selective Calling
- Simple to Use
- Simple to Maintain
- Rugged Construction
- Field Proven in Over 100 Countries

Standard Package Contents

- Q-MAC HF-90 Transceiver: Supplied complete with fist microphone.
- Q-MAC TA-90 Auto-Tune Antenna System: Comprises compact fully-automatic antenna tuner in robust die-cast metal housing (with neoprene gasket seal), complete with heavy-duty aluminium mounting plate (3mm), pair of both 45mm & 50mm C-clamps, required cables and a continuously loaded fibreglass whip antenna (1/2" BSW base) with high voltage insulator and spring. *Please refer to information on the reverse of this brochure concerning "Q-MAC TA-90 Auto-Tune Antenna System" and "Vehicle Installation".*
- Q-MAC Vehicle Installation Kit: Comprises mounting cradle, external mount speaker with audio mute facility, coaxial cable & connectors, HRC fuse (20Amp) & holder, battery lugs (heavy duty), cable ties, microphone clip, grommets and self amalgamating tape. *Please refer to information on the reverse of this brochure concerning "Vehicle Installation".*
- HF-90 Operation & Installation Guide: This booklet provides comprehensive instruction on how to operate the Q-MAC HF-90 Transceiver.
- Quick Reference Guide: This card provides concise instruction on how to best use the equipment provided with the package and how to make basic radio calls.



HF-90 Construction



Automatic Antenna Tuner





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Specifications



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Specifications of TA-90 Autotuner

Frequency Range:	2 to 20 MHz continuous
Power Rating:	50 watt PEP
Input Impedance:	50 Ohm
VSWR:	Typically 1.6:1, Maximum 2 :1 (antenna current always maximised)
Current Drain:	300mA typical
Voltage:	12-14volt (standard) or 24-28volt (optional), from auxiliary connector on rear of HF-90
Tune Time:	3 seconds (maximum)
Tuning Method:	Binary weighted relay switched inductors perform tune, whilst variable ratio transformer achieves match.
Dimensions:	221 (L) x 146 (W) x 56 (D)
Tuner with Mounting Plate:	242 (L) x 206 (W) x 59 (D)
Whip Antenna:	1.8m (L)
Whip Antenna with Insulator & Spring:	2m (L)
Weight:	All items - approx 5.5kg
Antenna Mounting:	½" BSW screw
Environmental Rating:	IP67 (fully waterproof, limited immersion)



Whip Antenna Mounting

Vehicle Installation

Q-MAC HF-90 Transceiver: Because the HF-90 is an extremely compact unit, there is no need for a separate remote control head for vehicle installations. This makes installing the unit extremely simple and saves a lot of space (which is an ever present concern for most vehicle owners/operators). The HF-90 can be mounted under the dash of the vehicle or upright against the centre console. It should not be mounted on top of the dash where it would be exposed to direct sunlight. The appropriate installation will depend on the particular model of vehicle.

Q-MAC TA-90 Auto-Tune Antenna System: The antenna tuner is mounted on an aluminium plate (stone guard) which fixes behind the vehicle bull bar, thus giving maximum protection to the unit. The antenna and fittings are mounted on top of the bull bar (on the antenna bracket) using a single fixing screw. Alternative installations, where the tuner is mounted inside the vehicle, are also possible. The connection from the antenna tuner to the antenna is made using high voltage cable which is kept as short as possible to optimise efficiency.



Small Footprint Mounting



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Specifications are subject to change without notice.
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