BARRETT COMMUNICATIONS

INSTALLATION INSTRUCTIONS

BCA90017 Interference Suppression Kit

1. General

Satisfactory suppression cannot be achieved if faults exist in the vehicle/vessel to be suppressed. Cracked distributor caps, worn commutators or burnt contacts may not yet be seriously degrading vehicle performance but will generate very high radio frequency noise levels. Before attempting to suppress noise, problems described above should be sought out and rectified.

2. Ignition Systems

Audible as a 'popping' noise - frequency varies with engine speed.

2.1 High Tension

High tension wiring should be of the impregnated neoprene type. Suppression cables using graphite powder in a paper core are not reliable. If necessary replace with a suitable set of suppression cables recommended for the vehicle. All high tension wiring should be separated from any other wiring and should be placed as close to the metal block of the motor as practical to reduce radiation of any RF noise.

2.2 Low Tension

Ensure that the wire from the distributor points to the ignition coil is as short as possible and that it is not loomed together with any other cables. If the wire length exceeds 200mm it should be replaced by a screened wire. This may be coaxial cable with the shield connected to ground or simply consist of a twisted pair of wires, one used for the distribution/coil connection and the other earthed at both ends. Keep all wiring as short as possible.

In some cases the wiring from battery to coil may require suppression. In this case use the MAR-60A noise filter supplied in this kit.

3. Battery Charging Systems

3.1 Alternator or generator

Audible as a whine - frequency dependant on engine speed.

Fit an MAR-60A noise filter as supplied in this kit in series with the main charging output of the alternator. If a satisfactory earth point cannot be found on or immediately adjacent to the alternator then the alternator/filter connection should be screened as in section 2.2 above.

Generators are treated in the same way as alternators.

3.2 Charge regulator

Audible as a 'sizzling' noise above engine idle speed. The alternator/regulator control ('field') wire should be removed from any other wiring by replacing with screened wire as in section 2.2 above. Capacitors should not be connected between this wire and ground as they may damage the regulator.

4. Instrumentation

Some vehicles use thermal chopping regulators and/or sensors within their instrument systems. These may be heard as a noise similar to the charge regulator which starts 5 to 20 seconds after the engine is started. This can be suppressed using capacitors on the supply side and screening on the switched side of the device.

5. Accessories

Windscreen wipers, fans, and all other electrical accessories should be checked to ensure they do not contribute RF noise. They can be suppressed using MAR-ACE filters or capacitors and the installation method given in the MAR-ACE application note.

6. Bonding

All metal objects on a vehicle/vessel should be bonded to one common earth with reliable connections. Ensure that the body of a vehicle is connected to chassis bypassing rubber mounts

Heavy duty earth straps and copper braid are supplied for this purpose.

INTERFERENCE SUPPRESSION KIT CONTAINS:

ITEM	QTY	DESCRIPTION	BARRETT P/N
1	1	Noise Filter MAR-60A	FI-07630
2	1	Noise Filter MAR-ACE	FI-07631
3	1	Earth Strap	PO-07633
4	1m	Earth Cable	CA-06518
5	4	8mm Terminal Lugs	CN-07640
6	4	10mm Terminal Lugs	CN-07641
7	4	Capacitors	CP-01515
8	1	Suppressor	NB-04563
9	1	Clamp	NB-04565