Bushcomm
HF Antennas

Product Brief

Alternator DC Noise & Interference Filter - Inline
FLT – 1

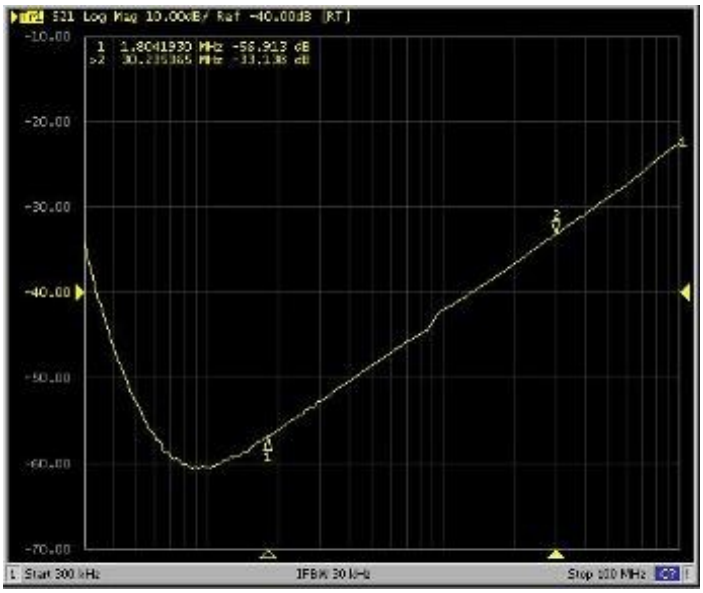
The Bushcomm FLT - 1 is a heavy duty inline noise filter designed for reducing or eliminating interference from alternators and electric motors in mobile installations .

It is typically used to filter broadband noise from 12 or 24 volt DC supply cabling on radio transceivers and high power car stereo amplifiers.

Generally this filter is fitted in the transceiver / accessory supply line, or in the charge line to an auxiliary battery.

For correct installation, the filter mounting tab must be electrically earthed directly to the vehicle engine or body. For best results, especially at higher frequencies, ensure the input and output cabling is well separated.

SPECIFICATION	
ELECTRICAL	
DC Current Rating	50A continuous
Attenuation	>30dB, 300kHz to 30MHz
DC Voltage Rating	50V Max
MECHANICAL	
Weight	40 gram
Overall dimensions	38mm L x 38mm W x 38mm D



Alternator noise

Many automotive alternators produce substantial amounts of radio frequency interference which will be picked up on nearby radio receivers operating in through the AM radio, HF SSB, CB, & VHF marine bands. High power car audio amplifiers can also be effected. The interference sounds like a musical tone, varying in pitch with engine speed, and it may be readily distinguished from the rough buzz of gasoline engines ignition noise. In alternators, the RF noise is produced by the rectifier diode turn-off transients

The FLT1 filter is specifically designed to be fitted inline with the accessory to control alternator radio frequency interference. It is a pi-style LC filter employing metalized-film capacitors and solid epoxy encapsulation for reliable service in harsh auto or marine environment. It will handle up to 50 amps continuously and can be used in systems from 6 volts to 50 volts ac or dc. Filters may be parallelled to handle higher currents

Alternators will also produce an audio frequency ripple on the battery voltage which may come through on some receivers or audio systems. This sounds like the whine described above and may be unaffected by volume control setting. It is readily handled by a low-power audio filter in the power-line to the affected equipment.

1. Find a spot to fit the Filter. Orient the filter so as to allow access to its terminals after it is mounted. Carefully clean any paint or scale around the mounting area so as to assure good electrical contact between the filter case and the alternator case or engine block. Mount the filter.

2. Disconnect the Positive terminal of the battery, and turn off any battery charger.

3. Locate the positive (red) accessory lead from the battery. Cut this wire where it runs near the filter. Strip the insulation back about three centimetres on two ends. Crimp or solder 1/4 inch ring terminals appropriate to your wire size and secure the filter terminals.

4 Reconnect the battery.