

DATONG **ELECTRONICS LIMITED**

MODEL VLF

Adds Very Low Frequency (VLF) Coverage to
Existing Communications Receivers.



CONVERTS INCOMING VLF SIGNALS TO FREQUENCIES 28MHz HIGHER, FOR EASY TUNING ON NORMAL COMMUNICATIONS RECEIVERS.

SIMPLY CONNECTS IN SERIES WITH THE ANTENNA.

FEATURES

- Covers 0 to 500kHz plus up to 1MHz at lower sensitivity.
- No receiver modifications are required.
- High sensitivity – only a short antenna is required.
- Crystal controlled for high stability.
- Rugged diecast aluminium case.
- SO239 coaxial connectors for input and output.
- Powered by internal 9 volt battery (PP3) or external supply. Long battery life.
- Circuitry completely bypassed and antenna connected directly to receiver when Model VLF is switched off.
- LED "power on" indicator.

MANY RECEIVERS NEGLECT VLF

Many current communications receivers have limited coverage or poor sensitivity below 500kHz, a region which includes time signal transmissions, beacons, long wave broadcasting, and certain communications and navigational services.

By connecting Model VLF in series with a receiver's antenna, incoming VLF signals are converted to a frequency 28MHz higher and can be received at high sensitivity with no modifications being required to the receiver.

For example, to receive signals at 19kHz the receiver would be tuned to 28.019MHz. Similarly tuning the receiver to 28.200MHz would give reception of signals at 200kHz.

ALSO USABLE FOR LW AND MW RECEPTION

Although the main application of Model VLF is to signals below 500kHz, it can also be used to give reception of long and medium wave signals on normal amateur-bands-only receivers. An internal low-pass filter progressively attenuates signals above 600kHz, but the sensitivity is still adequate to allow good reception of medium and long wave broadcast stations for time checks, news bulletins, etc.

INSTALLATION AND OPERATION

Model VLF connects in series with the receiver's antenna. When the unit is switched off the unit is bypassed and the receiver is connected directly to the antenna.

A light emitting diode indicates when the unit is switched on.

Only a short antenna, a few metres of wire, is required due to the high sensitivity of Model VLF.

TECHNICAL INFORMATION

Power requirements: External supply of 5 to 16 volts DC at 5mA, or internal 9 volt battery (PP3, 6F22, 006P or equivalent). Internal battery disconnects when jack inserted. Jack tip is positive.

Sensitivity: When used with typical communications receivers having 0.5 μ V sensitivity, Model VLF needs 1.2 μ V for 10dbS signal-plus-noise to noise ratio (SSB, 2.1kHz bandwidth) over the frequency range 10kHz to 600kHz.

The response reduces by 5dbS at 700kHz, 20dbS at 1000kHz, 32dbS at 1400kHz.

Overall gain: 6dbS typical.

Output impedance: 50 ohms nominal.

Input characteristics: Unbalanced input, suitable for both short high impedance antennas and low impedance matched feeders.

Dimensions: 113mm x 62mm x 31mm (4.5 x 2.4 x 1.2 inches).

Weight: 250gms (8.8 ounces).

OPTIONAL ACCESSORIES

Model MPU: mains power unit.

Lead D: coaxial jumper lead, length 1 metre, fitted PL259 coaxial plug at each end.



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