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H. Emmerl

For frequent commercial or holiday drivers by car in W-Germany it is interesting to know that a number of West German FM radio stations transmit, from time to time, useful traffic information. The transmitters in question also carry a continuous 57 kHz pilot tone, enabling a pilot tone indicator in the car to show that the car set has been tuned to the traffic news transmitter.

Readers will, no doubt, recognise the stereo decoder integrated circuit MC 1310 P (SN 76115) put to a somewhat unorthodox use. Due to the fact that the frequency of the traffic news pilot tone differs from that of the stereo pilot tone, the PLL oscillator used for stereo decoding must be adapted. The diagram shows the components R1, P1 and C1 values that determine the VCO frequency.

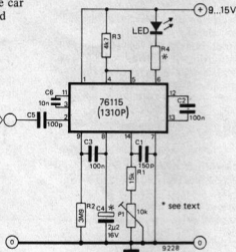
R2 controls the circuit sensitivity, C4 (which should preferably be a tantalum type) gives a slight switch-on and switch-off delay.

Control P1 adjusts the correct oscillator frequency to 57 kHz: as soon as the pilot tone is detected, the LED will light. The LED series resistor R4 depends on the type of LED and the car battery voltage and can be calculated from the equation

$$R_4 = \frac{V_b - 2}{I_{LED}}$$

traffic news service tuning indicator

For a 12 V battery voltage and 20 milliamps LED current this gives $R_4 = 500$ ohms; the nearest standard value (470 Ω) can be used. It is recommended to incorporate the circuit in the car set itself. The



de-emphasising network in the detector output circuit must be removed; it would impair the 57 kHz pilot signal. The treble boost caused by the removal can easily be compensated for in the car set audio amplifier.