GEC mobile radio

Vehicle Identity Equipment

RC1265
RC1270

Features

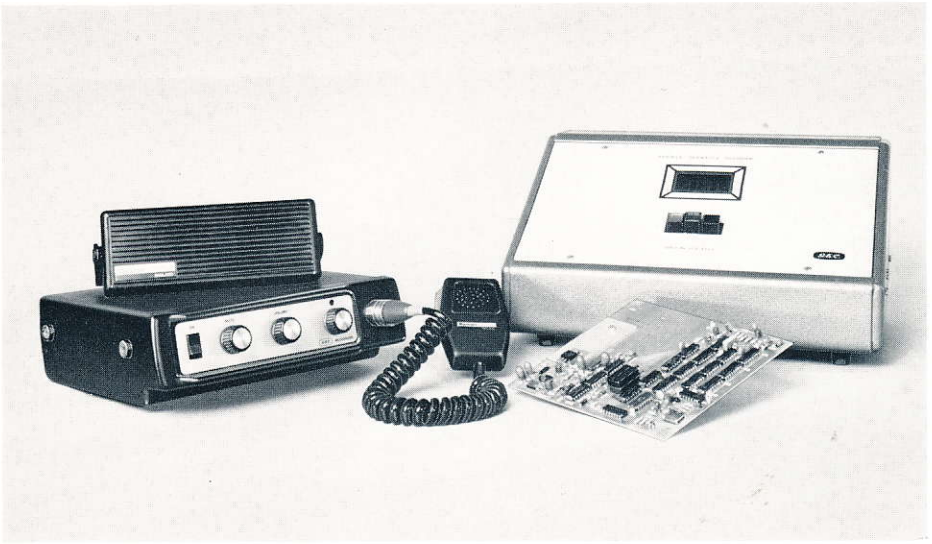
Automatic transmission of mobile identity on keying of transmitter

Suitable for a.m or f.m mobiles

Fits integrally into all current GEC dash mounted mobiles

Four numerical display or three alphanumerical display indicated at base station

Crystal derived tone frequencies



Description

This equipment ensures positive identification of a vehicle using the mobile radio system. It consists of two additional units, an encoder mounted in each mobile radio and a decoder located in the control room.

The encoder board is mounted under the receiver board and a modified cover is used to cater for the increased depth. Each time the transmitter is keyed the encoder is activated and the identity of the vehicle is transmitted. During this period the microphone is inhibited only the tones are transmitted even if the microphone is used. The code is determined by a prewired code plug which can be easily transferred to another unit should the unit become faulty.

The decoder is connected to the channel audio circuit at the control room by a 600Ω line and receives all the channel traffic, noise, speech and tones. The tones are processed and when a correct code is received the three digit identity will be displayed in the form of a letter and two numbers which identify the origin of the incoming call.

There are three buttons on the display by which the mode of operation is selected :

i) HOLD The decoder will decode, display and hold the next code received until it is cleared.

ii) CLEAR This will clear the displayed code.

iii) TEST This button will operate the self-test function when the code 88 or (8888)* will be displayed.

If none of the buttons are depressed the unit will decode and display each code as it is received with the previously displayed code being automatically cleared by the decoding of the next one.

Both units are fully solid state. The encoder generates the tones from a crystal controlled oscillator which is fed to a series of programmable dividers to produce the required audio frequencies. By this manner high accuracy and stability of tones is ensured. The decoder utilizes high Q active filters enabling the system to work reliably at poor s/n. The tones being decoded are examined for frequency and duration before being processed and subsequently displayed. In this way erroneous displays are reduced to an absolute minimum. The display may be four figure numeric e.g 1234 or alph-numeric e.g F29.

The display can be fed from any 600Ω line and a limiter, prior to the decoding circuitry, ensures reliable information over a wide range of input levels.

*Depends on model.

Data Summary

Encoder RC1265

Tone frequencies : As recommended by CCIR 257–1 occupying band 1124Hz to 2110Hz.
Tone duration : 40ms per tone. 5 tones sequentially transmitted – 4 code tones + one sync tone.
Tone accuracy : Better than ±0·1%.
Tone stability over temp range −5°C to +55°C : Better than ±0·1%.
Codes available : Up to 10,000.
Power supply : 11V to 16V.
Power consumption : 170mA nominal in idle state.
Board size : 150×155mm (6×6½in approx).

Decoder RC1270

Input level range : 25dB.
Input impedance : Greater than 12 kilohms.
S/N working : Better than 0dB in 3kHz bandwidth for 95% recognition of calls.
Power supply : 240Va.c±10% 40Hz to 60Hz.
Dimensions : 300×230×150mm (12×9×6½in approx).
(Panel mounted version also available.)

The information contained herein is subject to confirmation at the time of ordering.

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