

MCI550G INTEGRATED CIRCUIT (Cont. from p.4)

Modulation of either audio or even wide-band video can be applied to pin 10 together with about 43.5 volts bias to give approximately 10 to 30 mW of amplitude modulated R.F. output.

The oscillator circuits, 5, 6 and 7, all draw about 10mA with a 12 volt supply. A check for oscillation is easy if you monitor the current. The non-oscillating value of about 20mA drops to 10mA when the circuit is oscillating.

The tap on the coils in circuits 6 and 7 is about one third of the total turns from the crystal end.

If the MCI550 is used in its differential amplifier configuration a further series of oscillators are possible.

Circuit 8 is a crystal oscillator suitable for low frequency crystals of 1 MHz and below. The oscillator gives several volts of nearly square-wave output, and the variable capacitor will trim the frequency.

In circuit 9, the feedback of a Wein-bridge audio oscillator is controlled by a resistor from pin 2 to earth. With 100 ohms in the constant current circuit to control the gain, the output is 300 mV of fairly pure sine-wave.

The 0.05 MF capacitors, the 3.3K resistor and an internal 3K resistor determine the frequency of 800 Hz. Small changes of frequency can be made by varying the 3.3K resistor. Large changes can be made by varying both the .05 MF capacitors to some other value.

This audio oscillator will amplitude modulate circuits 3, 5, 6 and 7.

The circuits in this article all gave good results with a minimum of fiddling.

The MCI550 has a very wide range of applications, yet in spite of this, it is one of the cheapest I.C.s on the market, and may be purchased for \$1.30 from the VK7 Division Equipment Store.

See circuits following pages.

CHRISTMAS QUIZ SPECIAL.

I have found in some literature supplied by Leo 7RG, a very interesting problem that you might be interested in solving over the holidays. As an added incentive, the Equipment Store will donate \$2.00 worth of components or a 4 c/o Cradle Relay c.w. socket as a prize for the correct or nearest correct entry submitted. If more than one correct entry is received, a ballot to decide the outright winner will be held. Please send your answer, written neatly, to the "Bulletin Editor", W.I.A. Tas. Division, Box 851 J, G.P.O. Hobart. 7001. to reach me no later than the 1st January 1972. The answer and winner will be advertised in the February Bulletin.

Problems. 1. There are 12 balls which cannot be visually distinguished from each other, but one of them is either heavier or lighter, we don't know which. A pair of balance scales are available, and the problem is to determine, in three weighings, which is the different one, and whether heavier or lighter.

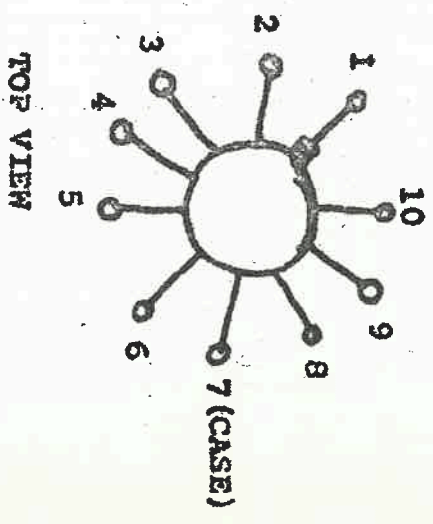
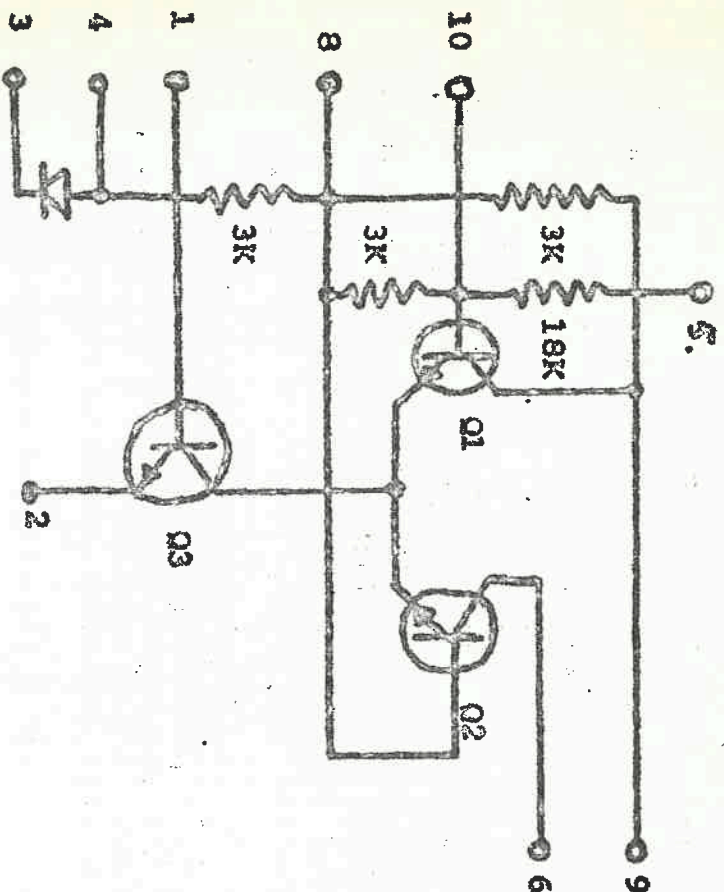
2. A recent problem in S..... A....., which looks easy, but, There are six balls, three of them are identical in weight and are heavier than three other balls, identical in weight. They can not be distinguished from each other visually. Using a pair of balance scales, determine which three are the heavy ones and which three are the lighter ones.

NOVICE LICENCING.

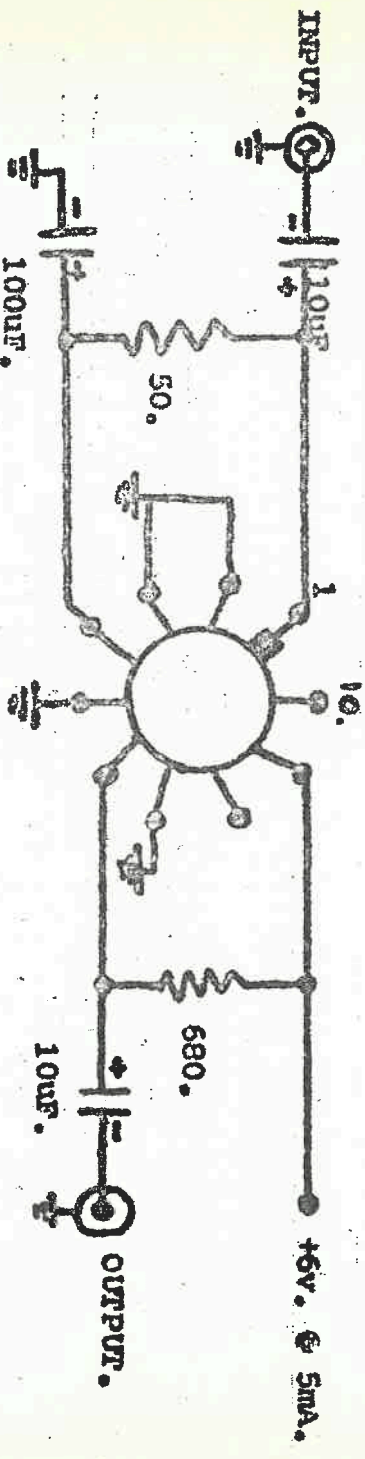
The latest figures are:-	in favour	7
	against	20
Participation in survey 12%!!!	Don't either way	Nil

This is obviously only a small section of the total number of members capable of giving an answer. HOW ABOUT IT GENTLEMEN. Surely a 7c stamp is not a fortune! LETS KNOW YOUR ANSWER PLEASE! A DIVISIONAL POLICY FOR OR AGAINST NOVICE LICENCING CAN ONLY BE FORMED ON THE OPINION OF THE MEMBERS! PLEASE SEND IN YOUR ANSWER NOW! SEE YOUR OCTOBER BULLETIN FOR ALL DETAILS.

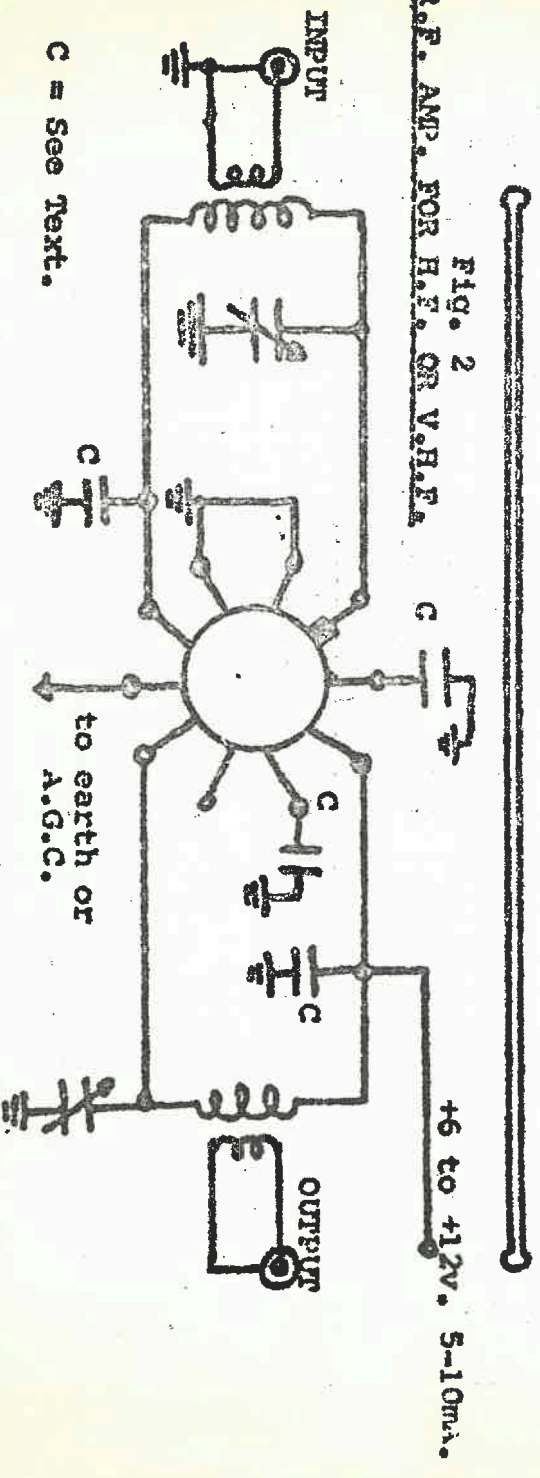
MC1550C INTEGRATED CIRCUIT



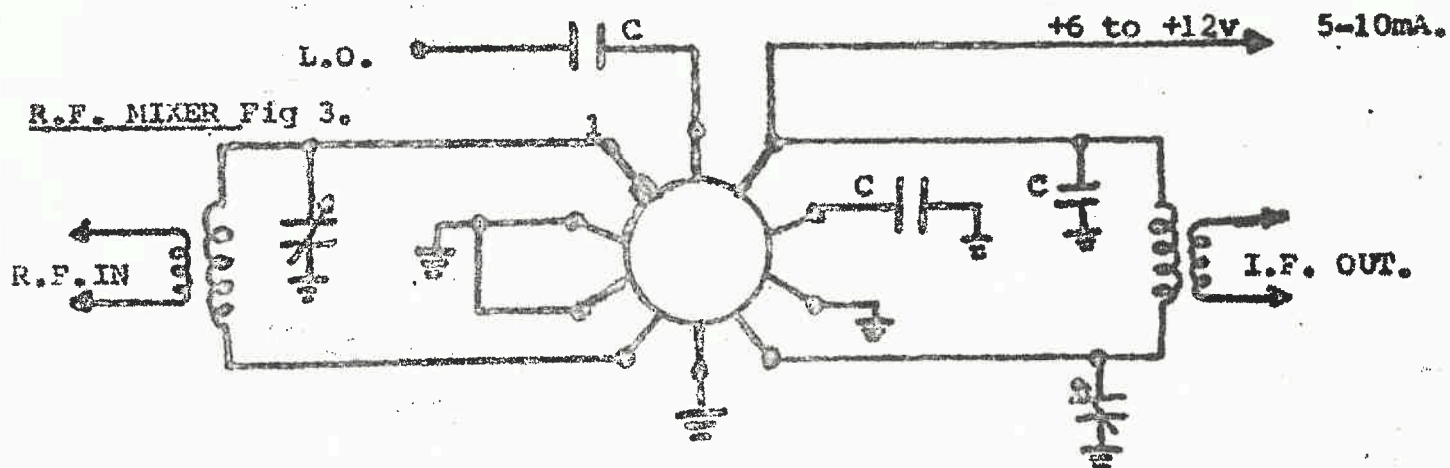
WIDEBAND OR VIDEO AMPLIFIER Fig. 1



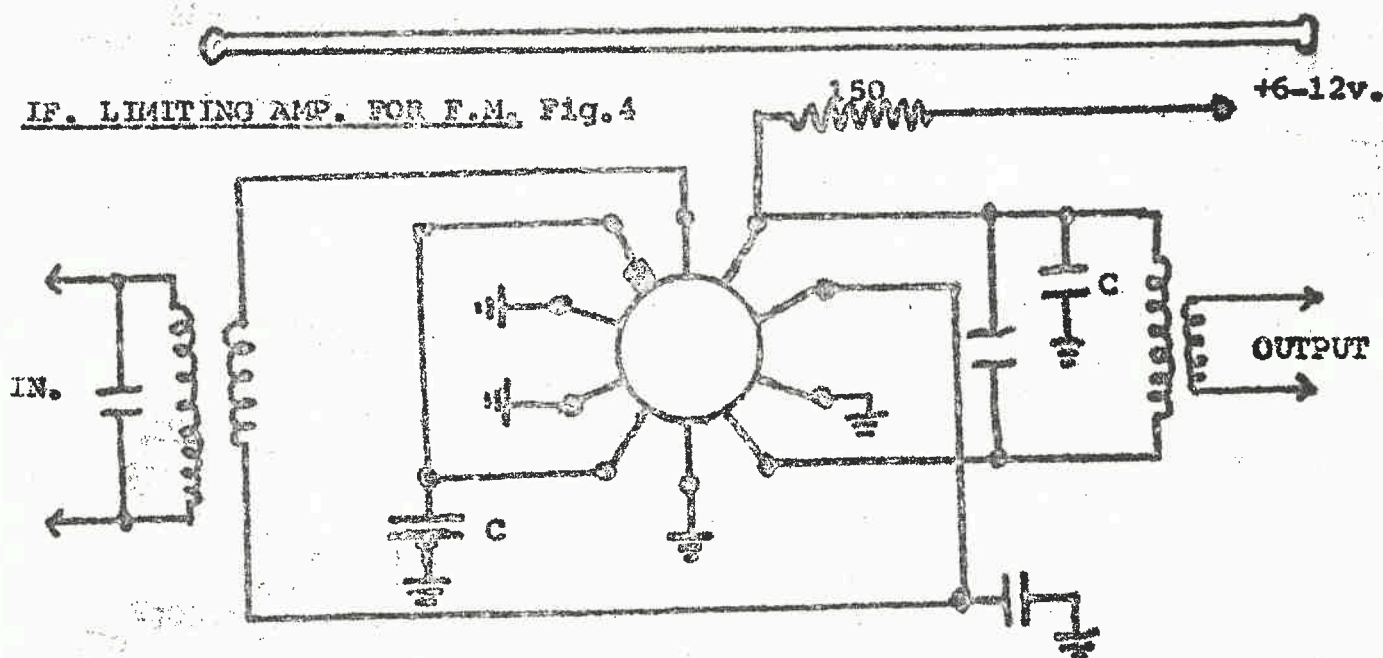
R.F. AMP. FOR H.F. OR V.H.F. Fig. 2



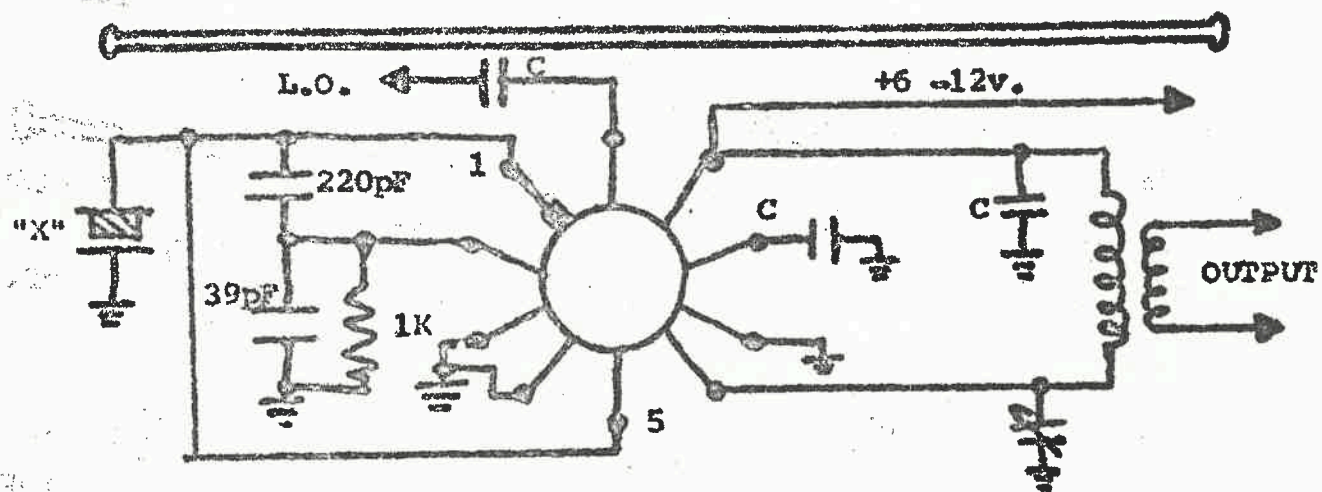
C = See Text.

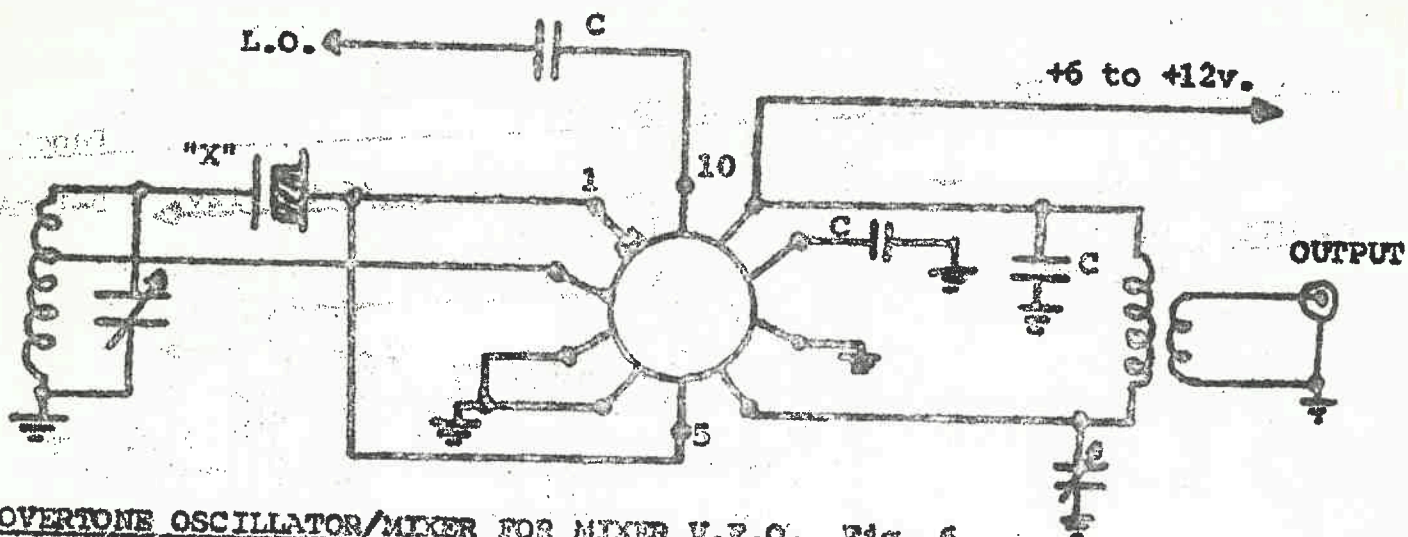


IF. LIMITING AMP. FOR F.M. Fig. 4

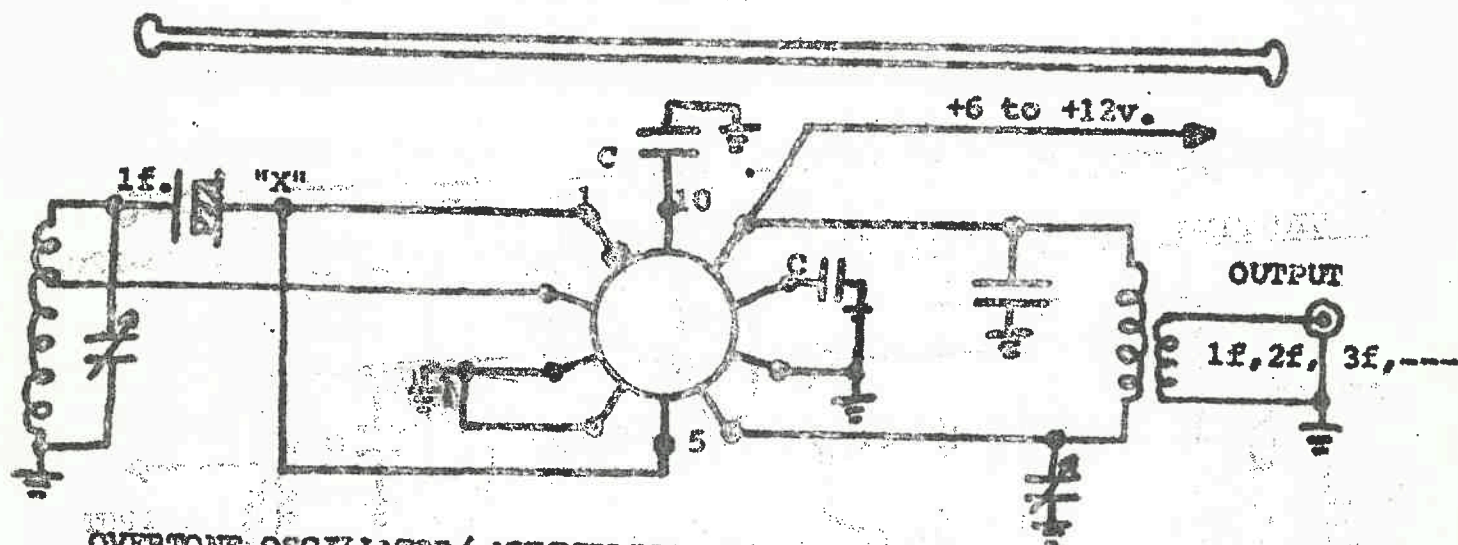


MIXER/OSCILLATOR FOR MIXER V.F.O. Fig 5.

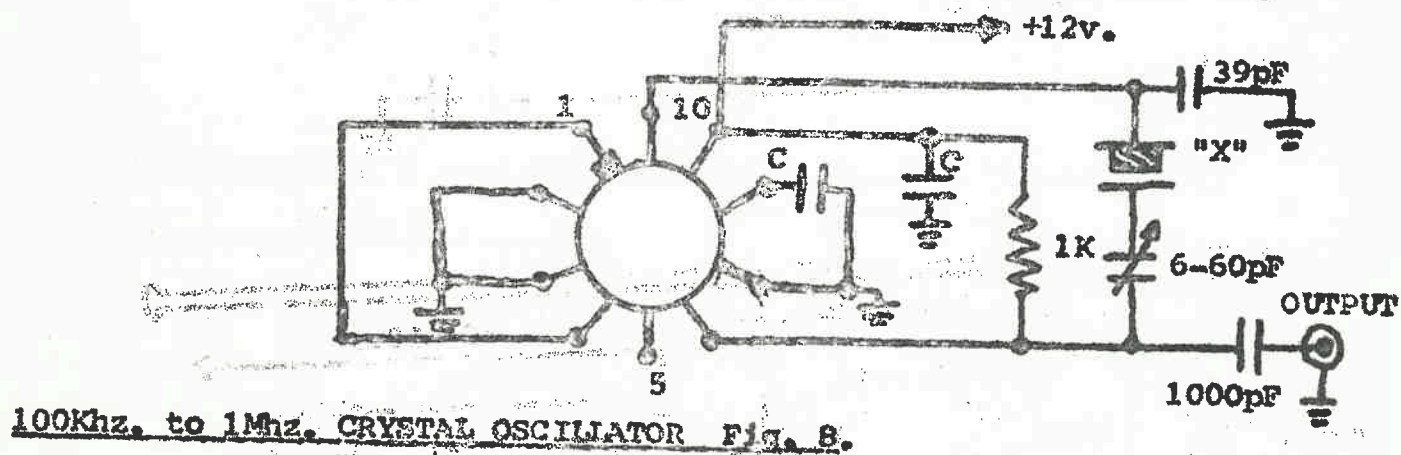




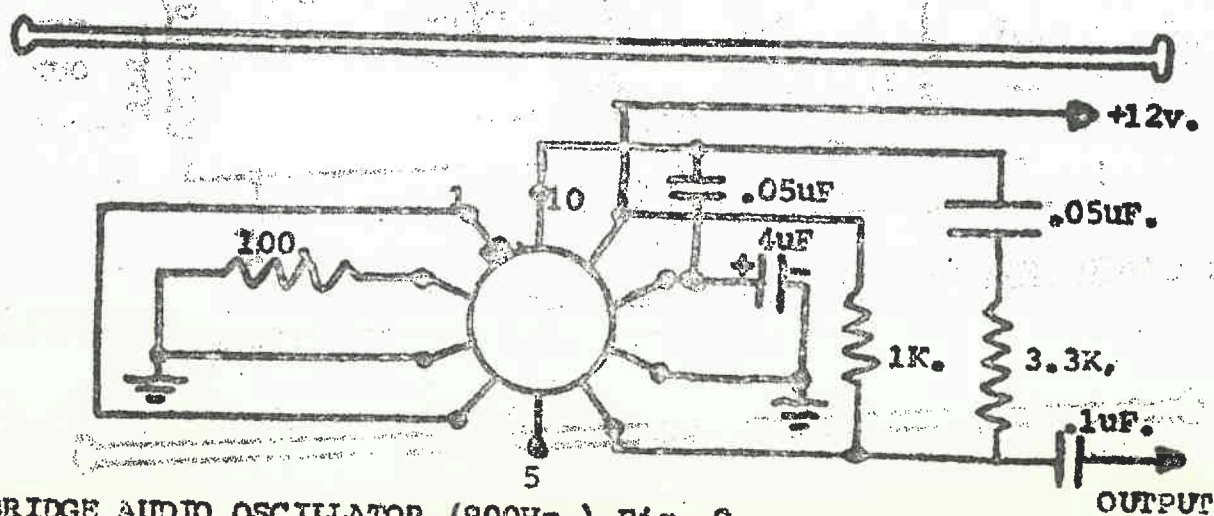
OVERTONE OSCILLATOR/MIXER FOR MIXER V.F.O. Fig. 6.



OVERTONE OSCILLATOR/MULTIPLIER Fig. 7.



100kHz. to 1MHz. CRYSTAL OSCILLATOR Fig. 8.



WEIN-BRIDGE AUDIO OSCILLATOR (800Hz.) Fig. 9.