

Tic-tak (click) generator, powered by em-energy. This is my first design. I make this project two years ago. The idea was come to me when I find Naudin's site from files [tep50a3.gif](#) , [bifcldes.gif](#).

To increase the output from the secondary coil I arranged four ferrite rods with the same primary coils (see figure 1)

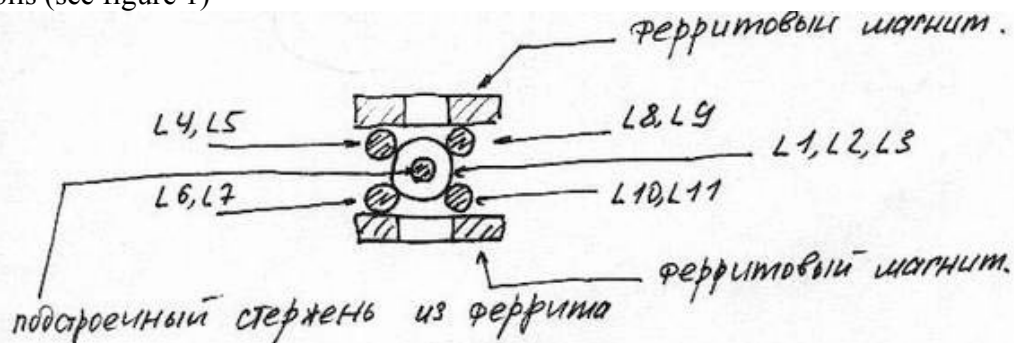


figure 1

The controller like in original project (figure 2) ,coils L1 , L2 , L3 wound by wire 0,55 mm. on the pasteboard of diam. 18 mm. Into this coil I insert two ferrite rods diam. 10 mm., l = 200 mm. to adjust the transformer.

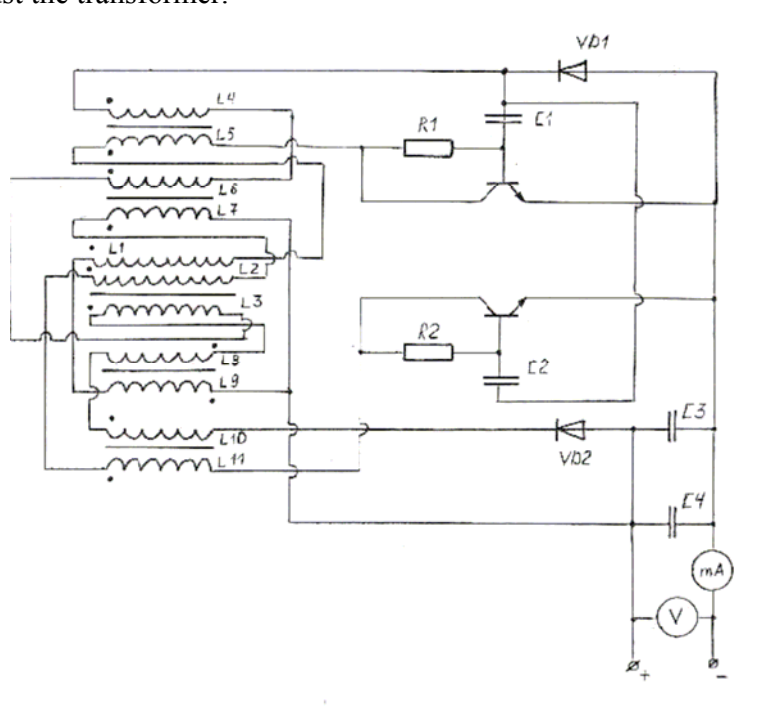
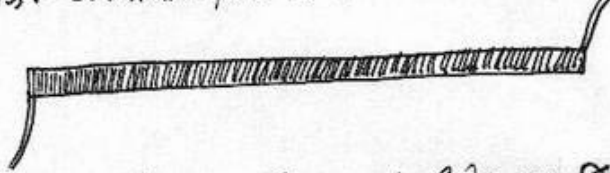


figure 2

The coils L4,L5 and L6,L7 ; L8 ,L9 and L10 , L11 wound on ferrite rods with magnetic conductivity on Russian specification standard M 400 HH diam. 10 mm. L = 200 mm. with two enameled copper wires diam. 0,45 mm. The coils must be bifilar. (figure 3)

At the ends of the rods must be two ferrite magnets (I used ferrite magnets from old loudspeakers) for adjusting the frequency parametres of the transformer(see figure 3)

Катушки L4 и L5; L6 и L7; L8 и L9; L10 и L11 одинаковые и намотаны на стержнях от ферритовых антенн типа М400НН длиной 19,7-20 сантиметров и внешним диаметром 10 мм.



Намотку производить двумя проводами $\varnothing 0,45$ мм, обмоточными, в лаковой изоляции. Использовать провода от отклоняющих систем старых цветных телевизоров.
 Примечание: намотку производить в один слой и при полном заполнении стержня

Для фиксации витков катушек использовался широкий скотч, намотанный клеящим слоем вверх в 3 оборота. Сверху катушки также фиксировались скотчем.

figure 3

At the ends of the rods must be two ferrite magnets(I used ferrite magnets from old loudspeakers)for

adjusting the frequency parameters of the transformer(see figure 4)



Примечания:

Подстроечные стержни вставлены в катушки L1, L2, L3 с двух сторон. Стержни из феррита М400НН такого же типоразмера, как и стержни на которых намотаны катушки L4, L5; L6, L7; L8, L9; L10, L11.

figure 4

The coil for the detector receiver is present in figure 5

It wound on one of two magnets by enameled copper wire diam. 0,8 мм. with 100 + 100 turns of bifilar winding. The connection coil have 100 - 200 turns and at 30% from the ground have a tap to trimmer capacitor 10 - 2000 pF.

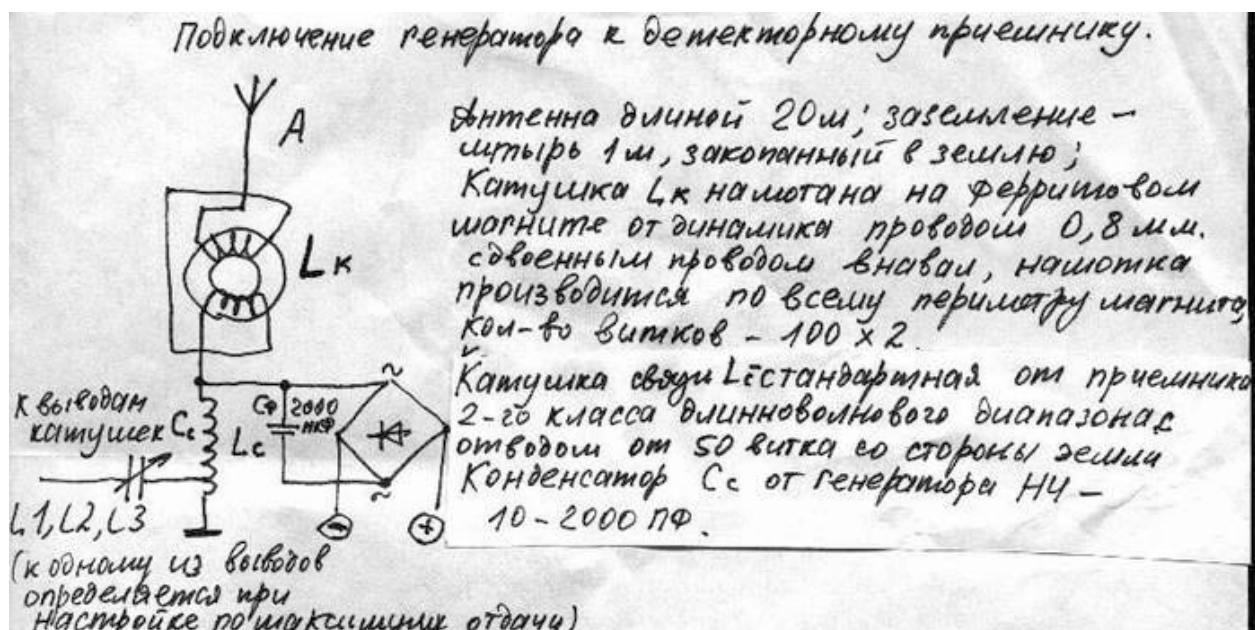


figure 5

At first I powered this circuit from laboratory Volt.source 0,01 - 15V and max.current 1 A.I want to achieve better output from secondary ,but KCE in all conditions ,with magnets or without, was 60 -80% .I deminish the voltage and see that in small signal regime silicon transistors have better KCE. Then I powered this device from the battery 1,5 V,solar battery.

At the first test I powered it from detecor reciver with four stage multiplication of power on old germanium diodes. Later I make bridge rectifier on the same diodes. I use antenna with length of 25 m.

If I adjust my receiver at the harmonic frequency of Shuman resonance (in the range 75-500 kHz) or at one powerful LW station near Moscow, I can obtain the output 2,3 V on electrolytic condenser 1000 mF with current 0,18 mA. With this small amount of power , I can hear the click sounds with interval of 2 - 15 Hz with maximum gain in 7,5 Hz at the ends of adjusting rods in the central transformer coil.

I tuning that transformer to maximum output with two rods in central coil and change the distance from magnets and the central part of the transformer.

If generation is no present - change the polarity of magnet.

Then I glue with epoxy adhesive two diffusors to the ends of ferrite rods,made from pasteboard.

The Tic-tak sounds was very strong and I may hear them at next room.

This is useless designe, but this sounds make nervous tremor of my cat and when I stay for long time near working device I want to sleep!

And this device may operate continually ,by years and years and only static electricity from lightning may cause the damage for the semiconductors ...

In January 2000 serfing the web I visit JLN Labs site .I find there "Magnetic Moebius Tripole" project. I built this coil setup and make all experiments that published in site and more. I wind the mirror secondary coil and make transformer, construct control board to drive it. In this web page, you will find a mean for building a Double Moebius Tripole Transformer, the control board and description of some experiments.

Your must prepare ferrite rods for winding(figure 1)

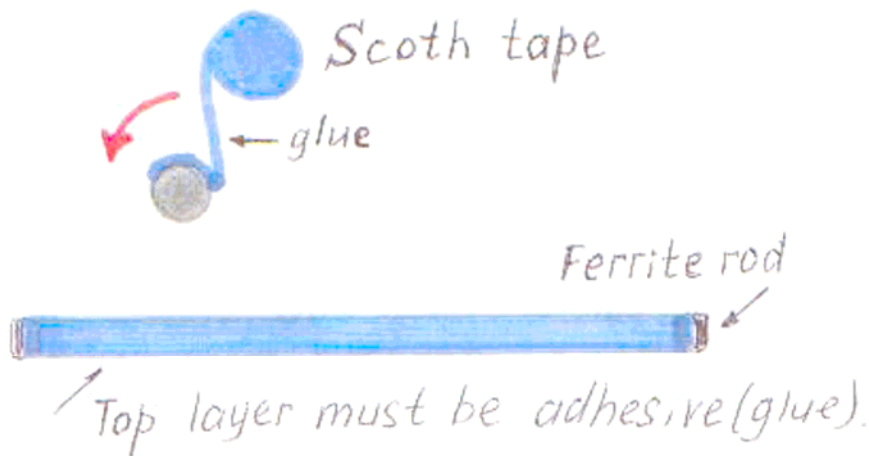


figure 1

The primary coil has been wound with 70 turns (2x35) of 4/10mm copper wire (figure 2), the secondary is like primary but in mirror winding (figure 4).

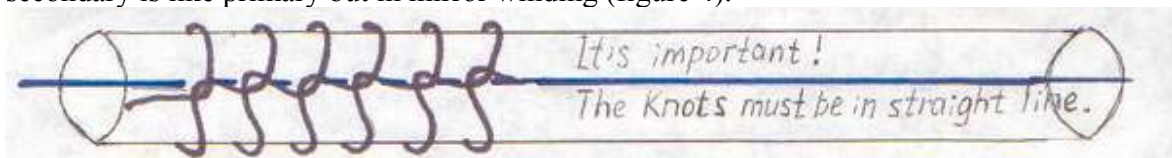


figure 2

When your winding is closed to the middle of the rod, change direction of winding (counter clockwise) figure 3

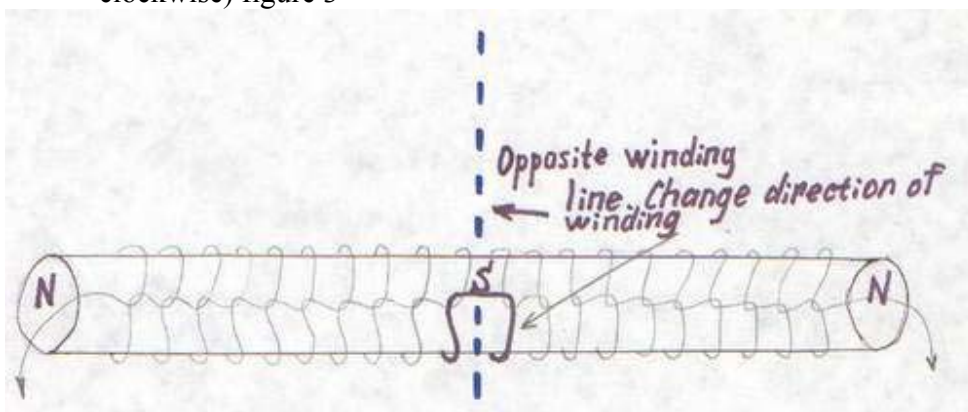


figure 3

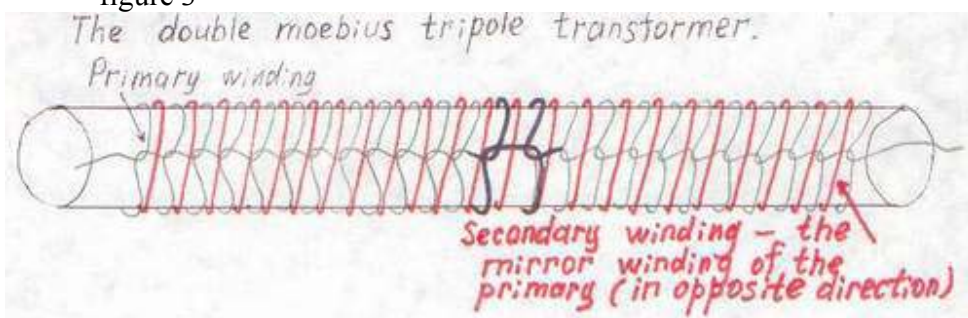


figure 4

The side view (figs.5,6)

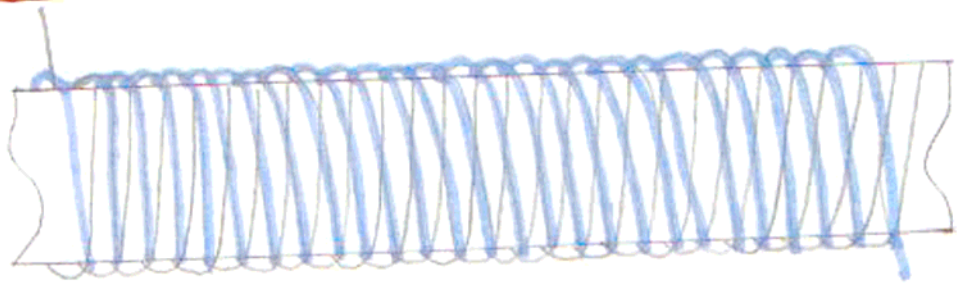


figure 5

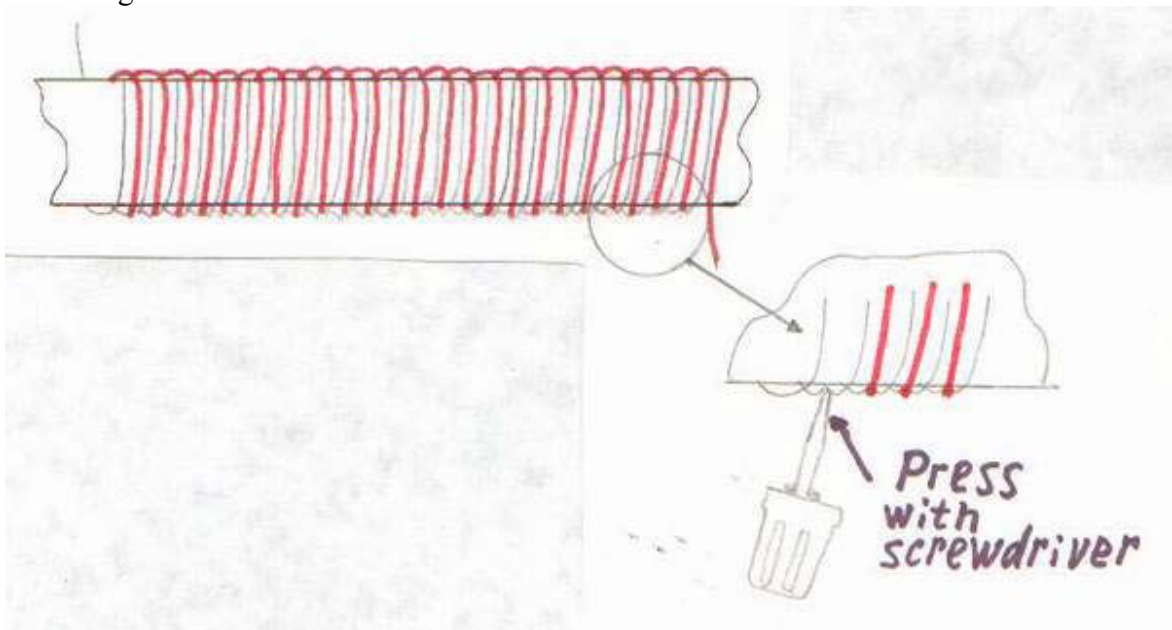
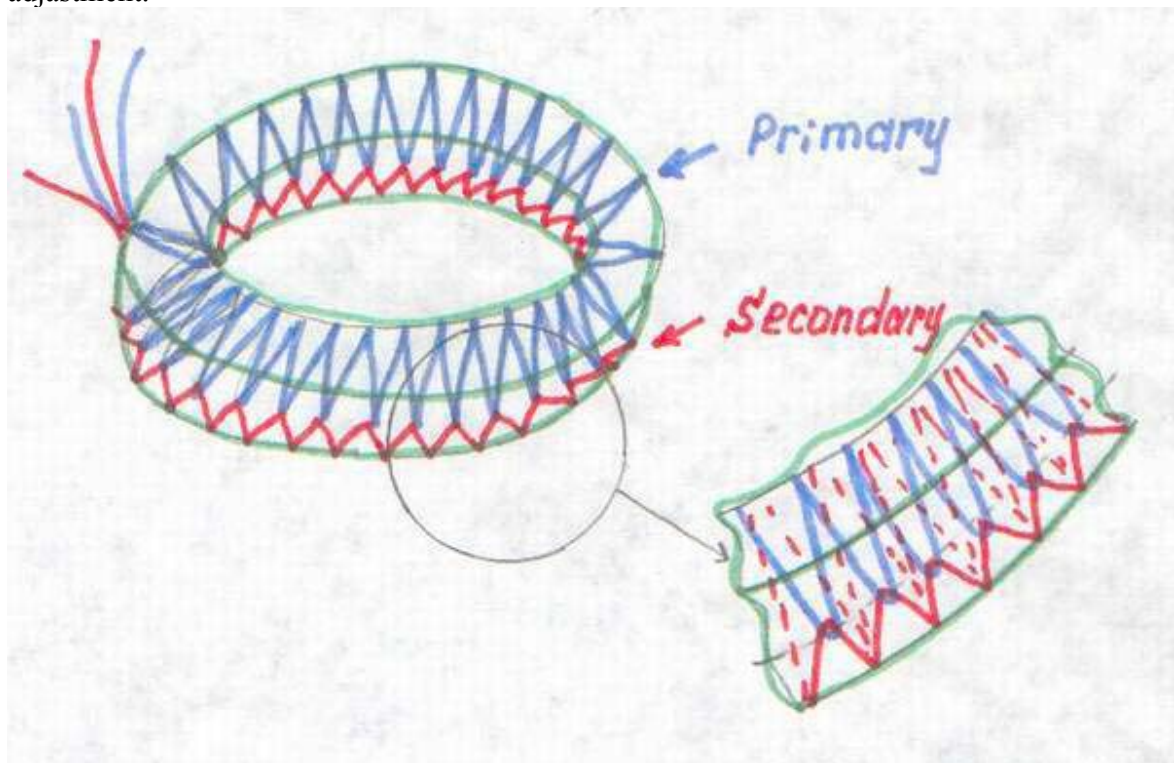


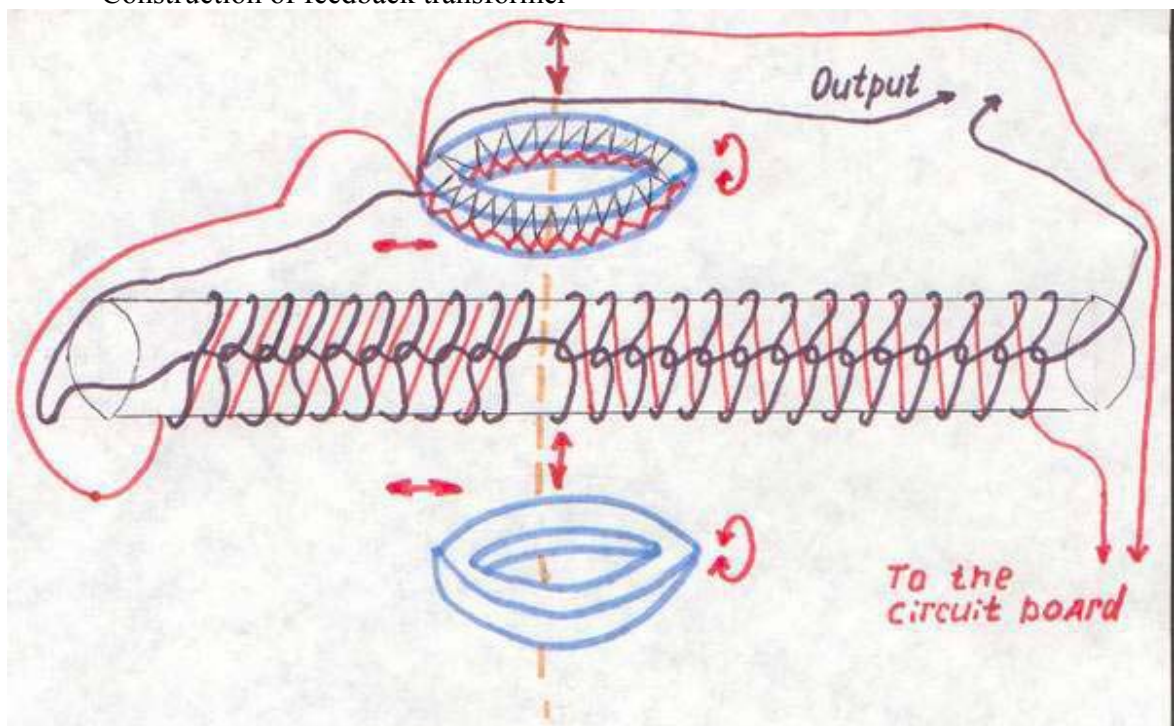
figure 6

Feedback transformer is wound on ferrite magnet from old loudspeaker. The primary consists of 12 turns with special winding type. The secondary winding like primary but in bottom side of ferrite magnet.

The view of DMMT with feedback transformer Circuit description and adjustment.



Construction of feedback transformer



The full circuit diagram appears in figure 7 .

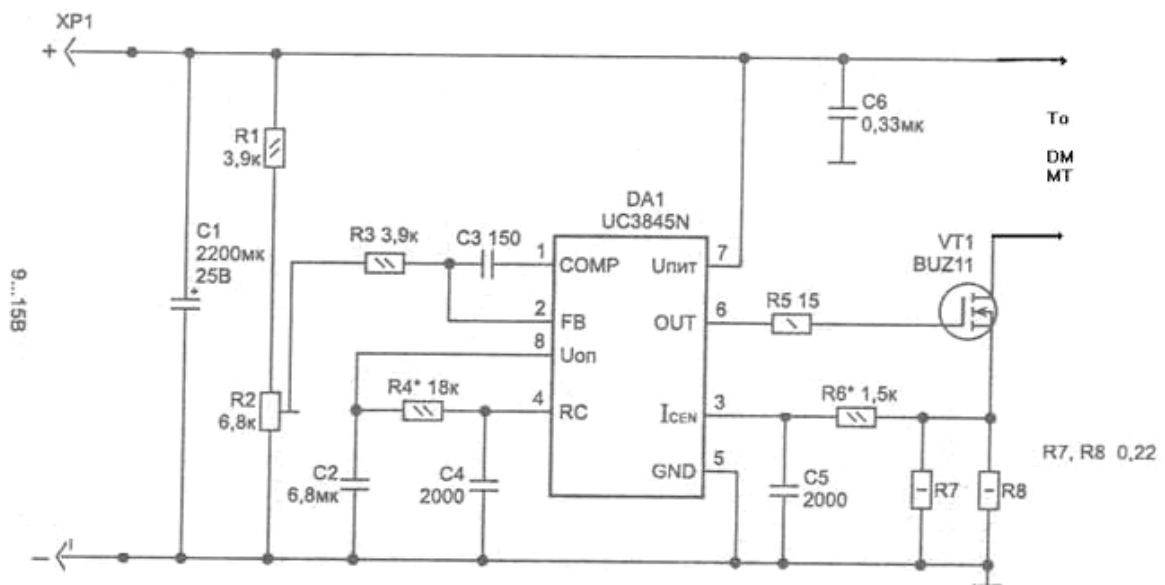


figure 7

The oscillator, based on IC1 and switching transistor VT1 connected to DMMT. The frequency of oscillator without feedback transformer and magnet depends of R4, C4 and near 33 khz. R2 change the output voltage in interval of 30%.

Basically we need the working of oscillator. Replace the primary by resistor 10 Ohm and see the frequency in oscilloscope.

Then connect the primary DMMT with feedback transformer and with R2 and moving the magnets in red arrows adjust the device in working in white magnet noise. If that occurred the voltage in the output is increased and efficiency of transformer must be near 1.

Parts list

Resistors Capacitors

(all 0,25 watt, 5%), except R7, R8 C1 2200 mf 25 V electrolytic

R1, R3 3,9 kohm C2 6,8 mf 25 V electrolytic

C3 150 pf cer.

R4 18 kohm * C4, C5 2000 pf cer.

R5 15 ohm C6 0,33 mf polyester

R6 1,5 kohm

R7, R8 0,22 ohm - 1 watt, 5%.

Potentiometer

R2 6,8 kohm carb.lin.

Semiconductors

IC1 UC3845N

VT1 BUZ11

Trasnformer

The coil has been wound on ferrite rod (length=195mm, diameter=10mm),

The primary coil has been wound with 70 turns (2x35) of 4/10mm copper wire, the secondary is like

primary but in mirror winding.

Miscellaneous

Printed circuit board (see figure 8), wires, case, power supply - 0 - 15 V - 2 A.

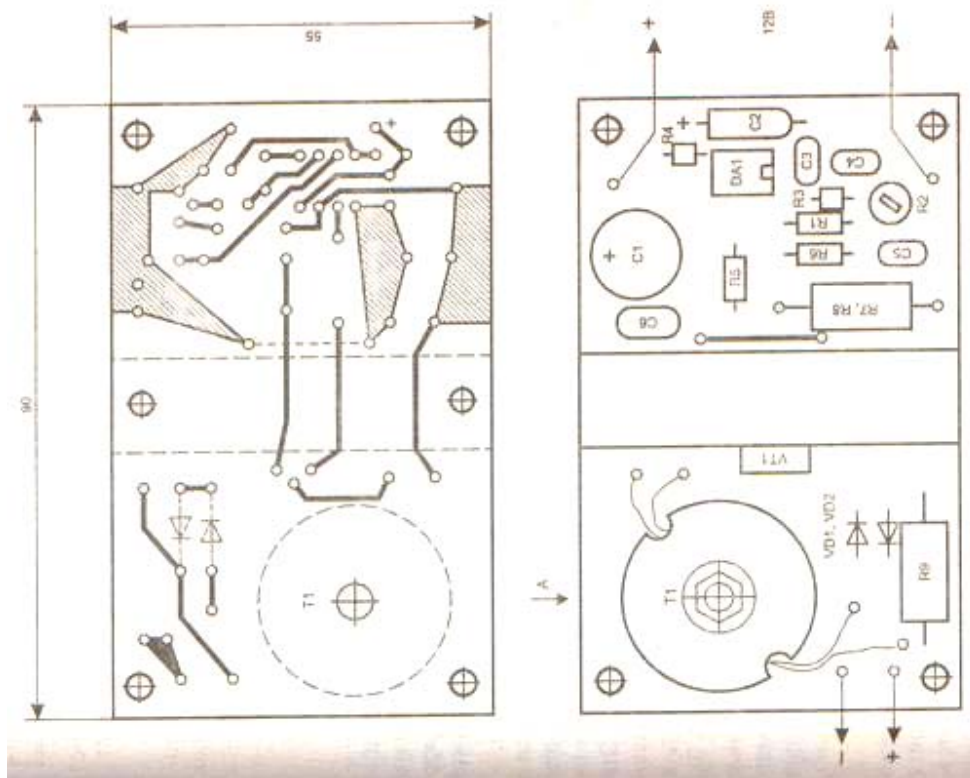


figure 8

After serial experiments with this item I find some strange in it's operation.

This is unusually transformer. When I shut down the secondary the current and voltage in primary is no changed! That transformer is work in white noise with maximum KCE with feedback transformer on ferrite magnet. And when I operate it without of magnet transformer in frequency ~16 khz the KCE is fall down .But when I shut down the secondary the current and voltage in primary is changed very small (1-5 mA).

The secondary winding was connected to DC rectifier with shottki diods (1N5821),capacitor (15000 mF - 50 V)and lamp(26V - 150 mA) .

When I replace the DMMT by bifilar coil the same effect was only in magnet noise stage. In frequency regimes the amperage in primary is raised.

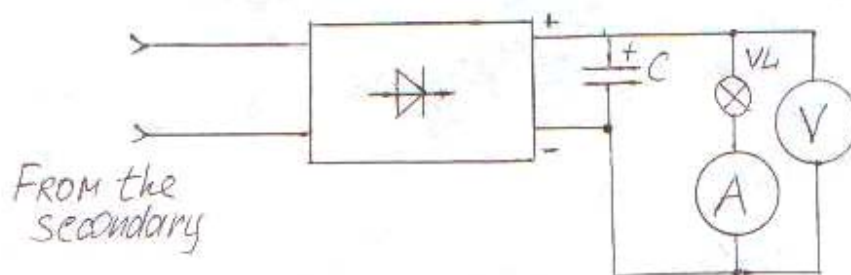


figure 9