

How to Make a Powerful RF Signal Jammer Circuit

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LAST UPDATED ON JULY 3, 2019 BY SWAGATAM ([HTTPS://WWW.HOMEMADE-CIRCUITS.COM/AUTHOR/SWAG/](https://www.homemade-circuits.com/author/swagat/))

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The post describes a simple homemade RF signal jammer circuit that can be used for jamming any RF signal within a radial range of 10 meters. The idea was requested by one of the interested readers of this blog.

Circuit Simulation and Design

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Technical Specifications

I am not a large business interest, but am in need of a circuit which would not only help me, but eventually be welcomed by just about everyone now alive.

I am in need of a circuit which will jam RF signals. I realize jammers are illegal when they disrupt cellphone communication and commercial enterprise. I am only looking to jam (1.) remotely controlled harassment devices and (2.) spyware within the confines of my property. Jamming range limited to around a 25' x 25' area.

There is a growing community of victims of electronic harassment. We all experience an invasion of our personal lives/finances and private conversations, and are sometimes physically stalked and attacked.

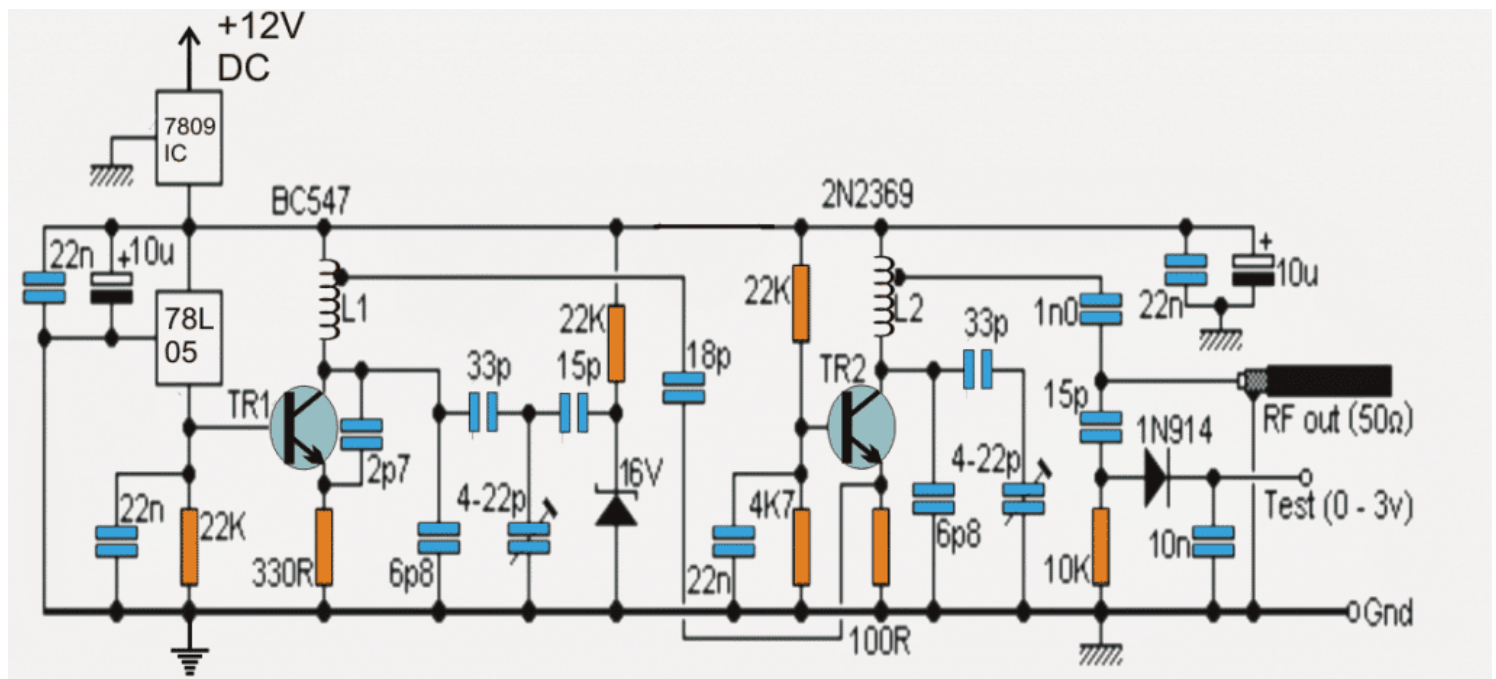
Due to the nature of electronic harassment, it will take time for justice and protection to catch up and solve the problem. As for electronics, some circuits to control the misuse of flux & solder are long overdue in the marketplace.

Up until now, most of the interest has been placed on projects of invasion and abuse, such as those contained on many different website

I am not overly skilled in electronics, and only come to it in self defense. I am self taught and can follow a schematic and complete a project, and am slowly gaining understanding of the underlying theory.

Please advise regarding your interest to help, and your financial requirements. I look forward to hearing from you.

Circuit Diagram



Introduction

A simple looking RF signal jammer circuit can be seen in the above diagram, which may be capable of jamming all sorts RF signal within the range of 5 to 10 meters.

The circuit can be made suitable with any desired frequency to be jammed by merely using different sets of L1/L2 and by tweaking the 22pF trimmers accordingly.

The frequency that could be jammed using this circuit could be well in the range of 50 MHz to

1Ghz, however making it compatible with frequencies above 500 MHz could get much complex and parameters much critical owing to the fact that higher frequencies require shorter interconnections and may involve other stability issues.

The present design can be used for jamming FM radio stations situated in the within 40 meters radial distance or even higher.

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The circuitry of the proposed RF signal jammer is basically made of two distinct stages:

RF Circuit Stages

The one comprising T1 and the associated parts form the RF oscillator stage while the other stage consisting of T2 and the complementing parts for amplifying and transmitting the low voltage oscillations from T1 into the air.

The above strong RF carrier signals transmitted by T2 may be appropriately modulated with any external frequency such as an audio or speech by feeding the signal across the terminal indicated "Test".

The circuit is highly stable and doesn't falter with varying input supply voltages due to the presence of the 78L05 voltage regulator at the base of T1 which clamps the base of T1 with a constant biasing current making sure that the oscillations created by the T1 stage stays very stable and consistent.

The above feature is perfectly complemented by the T2 stage which accepts the oscillations from the T1 stage and amplifies and transforms the signals with much higher current so that the signals are able to travel across larger radial distances in the air.

However in order to implement an optimal transmission of the signals, 50 OHM impedance antenna must be used with the output of the circuit.

This could be any ordinary aluminum dipole yagi antenna. A simple flexible wire measuring about a meter would also do but would reduce the transmission strength by about 60 % making the unit much inefficient as far as the transmission range is concerned.

How to Peak the Resonance

The performance of the RF jammer could be highly improved by adjusting the presets to produce peak resonance. This can be done with the following points:

1. Connect a 0 - 10V DC voltmeter across the point "test" and the ground line.
2. Adjust the right side 22p trimmer such that the meter reads around a maximum of 3V on the meter.
3. This might disturb the initial frequency of the system that you might have set for the jamming purpose.
4. So go back to the left side 22p trimmer and fine tune it again to set the desired frequency back into place.

Your peak resonance for the circuit is set now, and you can expect maximum efficiency from it.

RF Jammer Coil Specifications

For making the RF jammer compatible with other frequencies, the coil L1 and L2 must be shortened in terms of their number of turns and/or also the diameter...this will need some experimentation until the right frequency is determined.

The adjoining trimmers may also be tweaked for getting an optimal response from the jammer circuit or until a perfect jamming is achieved through the circuit.

A good quality, well designed PCB is strictly recommended for constructing the RF jammer circuit

For jamming standard FM broadcasts within a range of 50 meters, L1 and L2 may be built as indicated in the following images:

(<https://www.homemade-circuits.com/wp-content/uploads/2014/11/all-2.jpg>)

PCB Etched RF Coil

The above image shows the construction L2 using a 7 turn, 1mm super enameled copper wire with a diameter of approximately 5 to 6mm (internal)....see how the tap is extracted from the relevant end of the coil.

(https://www.homemade-circuits.com/wp-content/uploads/2014/11/bug9_all-2.jpg)

The following image shows how L1 can be designed by etching the tracks on the PCB itself or the same could be built using pieces of diode leads as explained in this FM wireless MIC circuit (<https://www.homemade-circuits.com/2011/12/fm-wireless-microphone-circuit-design.html>)

Parts List

TR1 = BC547

TR2 = 2N2369

rest are furnished in the diagram.

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About Swagatam

I am an electronic engineer (diplETE), hobbyist, inventor, schematic/PCB designer, manufacturer. I am also the founder of the website:

<https://www.homemade-circuits.com/>, where I love sharing my innovative circuit ideas and tutorials.

If you have any circuit related query, you may interact through comments, I'll be most happy to help!

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Comments

Jade says

This is still very illegal to do. If a radio wave cant make it from the outside limit of your property to the opposite side you can still be charge. Get a VPN and an alarm system instead. that should

the opposite side you can still be charge. Get a VPN and an alarm system instead, that should protect your privacy and alert you to intruders/record trespassers at the same time without putting you in the slammer for a long time.

REPLY

Md.Mohayminul Islam says

I designed a circuit on proteus software according to your given circuit but I can not simulated your circuit on proteus software . what can i do? Can you please help me!

REPLY

Swagatam says

If you make it practically it will surely work, simulators are not always accurate with their results....it is tested design for jamming FM radios.

REPLY

MD.Mohayminul Islam says

Please give me a picture of FM radio jamming/ HF /VH jamming. which circuit make a practical output and made by you. Or you can through a full video about jamming circuit, if there have no problem of you sir.....

REPLY

jay joffe says

I once accidentally put a 13 db antenna made for 5ghz wifi on a 2.4 ghz wifi device. It effectively blocked all 2.4ghz communication for a good area around. Well enough that I was obliged to get in the car.

Maybe this could be a cheap uncomplicated alternative.

please comment.

REPLY

Swagatam says

Sound very interesting, if it worked for you then it should be worth trying for all who may be interested to accomplish identical results.
Thanks for the useful feedback!

REPLY

Abdurrehman says

With the new antenna the 2.4 ghz frequency, which previously carried data, now must have turned into a noisy signal. Therefore it must have acted as a signal jammer for all other 2.4 ghz devices receiving and sending data at that very frequency.

Sir what do you think? Can replacement of a mere antenna turn a good old router into a jamming device?

REPLY

Swagatam says

Sorry Abdurrehman, I have no idea about it!

REPLY

Kludge says

I'm looking for something that is directional and can jam wireless microphones that operate in the 830-860mhz range. I don't care if it bleeds over that, and I don't need to be able to hijack the mic output. I just need to be able to step on their mic output and stop them using their wireless mics for broadcasting their shit all over our town via loudspeaker. Something that will run on 12 or 24v would be ideal, so I can power it from my truck. I have two batteries and about a 40A alternator so I can put some current out. I can get to within 30 to 50m from the location without interference.

REPLY

Swagatam says

Sorry, I do not have a confirmed or a tested design for your requirement, if I find one will surely update it in the above post.

REPLY

white raven says

Swagatam,

just wanted to take the time to thank you for this post!!! I am also a TI & am building my own devices. I am perhaps much newer to the subject than you, but have been a victim for many years. I started with pc, learning ins and outs, & studied negative ions, made orgonite, human physiology, & now my journey has brought me to breadboard like yourself. I was interested to know if there is a simple solution like building a back scatter reciever or a reciever with bandwidth uhf down to sonic with a storage of said energy that will simply dissipate through resistor? Like I said I am new to this & need some basic general electrical rule education.

REPLY

Swagatam says

Hi White raven, I appreciate your thoughts very much, however, unfortunately I am myself not very knowledgeable in the field of high frequency RF circuits, since they require a lot of calculations and time. In future if I happen to gain any expertise in this field I will make sure to share the same through this website..

REPLY

scott says

Hi. Is it possible to block the %G frequency. I think it is between 30 and 60 GHZ? cheers

REPLY

Swagatam says

Hi, I don't think this circuit could be modified for GHz control!

REPLY

scott says

Hi. Thanks for your response. Is it possible and is there someone I can pay to build a device to do so. Thanks

REPLY

Swagatam says

Sorry, I do have anybody within my reach at the present moment.

REPLY

Siddharth says

Im simulating the whole ckt for my college project, i couldnt find the 2N2369 in multisim hence im replacing it with a 2N2222 will it still work?

REPLY

Swagatam says

2N2222 can work with up to 100 MHz frequency whereas 2N2369 is rated at 500 MHz. If 2N2222 is used then the frequency cannot be over 100 MHz.

REPLY

Siddharth says

Could you pls provide the values of I1 and I2

REPLY

Swagatam says

Sorry I have no idea regarding the coil inductance values, only the turn numbers are known to me...

REPLY

Siddharth says

Ok sir, could you provide the turn numbers as well as the area and length of the coil.

REPLY

Swagatam says

Swagatam says

The center tap coil L2 has 7 turns, with 6 mm diameter, as shown below:
<https://www.homemade-circuits.com/wp-content/uploads/2019/06/L1.png>
(<https://www.homemade-circuits.com/wp-content/uploads/2019/06/L1.png>)

the coil L1 is as shown below
<https://www.homemade-circuits.com/wp-content/uploads/2020/02/pcb-coil.png>
(<https://www.homemade-circuits.com/wp-content/uploads/2020/02/pcb-coil.png>)

The tracks must have maximum width such that turns are separated by only 0.5 mm gap.

Sasi says

How to increase the range of the jammer

REPLY

luto65 says

Would it be possible to tune it to the 125-135 kHz range ?

REPLY

Swagatam says

yes, by using larger value for the 22pF trimmer

REPLY

luto65 says

I was wondering, if by using a 555 or some other IC one could simplify the circuit. Furthermore, in my case I would like to selectively focus on a specific frequency range, could that perhaps be used to simplify it further ?

REPLY

Swagatam says

Transistors are better suited for high frequency switching and transmission, so I don't think IC 555 will be appropriate for this application

IC 555 will be appropriate for this application.

REPLY

makukaka says

555 will work stable for frequencies up to 200 kHz, for higher frequencies it can be used as tank-circuit primer, but it is not suited for simple projects as it needs to be calibrated

REPLY

Maureen L. Walker says

Swag

I am a X-Wife of a genuine intelligent manipulative Criminal that has made his way into my Home while having Major Surgery, & had placed what appears to be a Spy Listening Device in the South side of my Kitchen. My Son mistakenly allowed him in the House. This Device has excellent back feed Reception that appears to go directly to him. I can always tell when he has came home because the Home Noises start to occur. I want to completely Block this Man forever. He is currently under Criminal Investigation for attempted Arson, & Theft of X 2 Boats & a Pop Up Camper. I honestly beleive he wants any Heads Up that may prevent his apprehension by Law Enforcement. I have not spent Money on a Jammer Device due to the uncertainty that it would work to Block the Sound transmission to & fro. What is your recommendation? I was told by an Electrician that Magnets would skew the Device, but, thus far, these Magnets do not appear to have done the Job. I would appreciate any helpful guidance for how to begin to tackle this resistant X-Husband. Thanks, Maureen L. Walker

REPLY

Swagatam says

Hi Maureen,

I assume the frequency of the device is in the lower Mhz FM range. If it is so then the above circuit can be effectively customized to jam the device.

But the challenge is to first know the frequency of the device, which can be a difficult thing to do. Once the frequency is known it can be blocked using the above explained jammer circuit!

Another option would be to trace and locate the device and then simply destroy it manually. The tracing could be done through the following circuit. One has to build it and start scanning the walls and other intricate places until the LED lights up indicating the possible location of the bug

<https://www.homemade-circuits.com/bug-detector-circuit-rf-sniffer-circuit/>
(<https://www.homemade-circuits.com/bug-detector-circuit-rf-sniffer-circuit/>)

REPLY

Jason says

You are getting sound from it? It isn't a very good device. Fact: A cheap device that is there long term must be powered from an electrical circuit nearby. Find the circuit breaker for that area, and shut it off. Have someone with really good hearing listen in the area while you turn the breaker on and off (probably every couple minutes as it will work off of a power supply and take time to discharge). The device may well make noise as it powers on and off. If not, have someone check the nearby outlets for added wires. A small device wire will be much smaller than regular house wiring.

REPLY

Omar says

Dear,
I need to interfere with a GPS tracker that I install my boss in my car.
Please, could you tell me how to modify this circuit to reach the 1.5 Ghz frequency?

Regards,

REPLY

Swag says

sorry I don't know how to do it....

REPLY

Credo Tehnologije says

I need to jam frequency from 0-30 MHz, on 5,9,16,20,24,28 MHz. Can I do this according this link <http://www.instructables.com/id/RF-Jammer/step5/Future-modificationsenhancements/> (<http://www.instructables.com/id/RF-Jammer/step5/Future-modificationsenhancements/>) , what electronic parts "determines" max. output that jammer can offer.

Tnaks for answer, Robin.

REPLY

Swagatam says

according to the specifications of the circuit in the article it may be possible to jam those frequencies...but I cannot suggest about the parts or method, because it haven't studied the article completely..

REPLY

Ananda Vernekar says

kindly help which transistors T1 and T2 to be used and turns of coils in both inductance which I was unable to find in above description

REPLY

Swagatam says

I'll upadte the info soon in the article itself.

REPLY

Asbjörn Svendsen says

Sir, We have 10 different frequencies used by cellphone providers in sweden. Does it mean that I have to build 10 different jammers to be sure that no traffic can pass? Thanks in advance

REPLY

Swagatam says

Asbjorn, all the mobiles will be jammed together which are within the range of the jammer frequency...using a single jammer circuit

REPLY

Aqib Ahanger says

yes i know that.. i already had one circuit but there battery drainage occurs mostly and signal strength was bit slow..... swagatam in the above circuit whats the value of inductors L1 and L2??

REPLY

Swagatam says

Aqib, the values were not measured, I only have the turn data, both the coils are 5 turns, 5mm diameter using 0.8mm super enameled copper wire

REPLY

Aqib Ahanger says

swagatam thanks for this circuit... but i just want to know can i buy these parts online ?... as trimmers and inductors are not available here.... or can i buy these parts from you ?

REPLY

Swagatam says

Aqib, yes you can get everything mentioned above from any reputed online electronic store.

However please note that converting the above jammer design to a GHz range could be an extremely complex job, please proceed only if you are entirely sure about the concept and the outcomes.

REPLY