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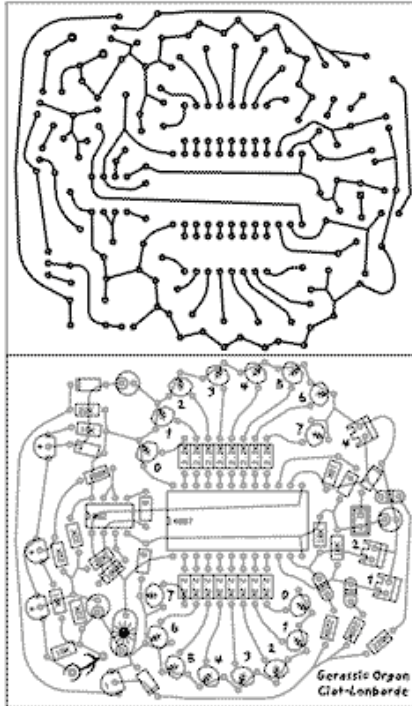
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[« Brobdingnagian LEDs | Main | 5-Minute Project Video: Parabolic Cookware Wi-Fi Antenna »](#)

pPCBs (Paper Printed Circuit Board)



Peter Blasser has a very unique Web site where you can download and print paper "circuit boards." These circuits are for building music-making projects--sans the more "conventional" copper-clad board substratum. Just print the circuit board, layout the components, and wire the traces. How about adding some conductive paint and starting a revolution in circuit building? Try this "wire glue" ([The Electronic Goldmine #G16133; \\$3.95](#)) for making your pPCB connections. This combination could be an interesting method for introducing kids to electronics without the need of purchasing a classroom's worth of soldering irons. If you try pPCB + Wire Glue, please post your results in our comments section. —Dave Prochnow

(Image: Peter Blasser)

October 12, 2007 in [Products](#), [Projects](#), [Tips](#), [Web](#) | [Permalink](#)

Comments



We manufacture PCB design including FPGA and Ethernet enabled development, designer circuit's boards, layout design, prototype, and pcb supply chain

Posted by: [PCB Circuits](#) | July 31, 2009 at 06:34 AM

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Posted by: [Channelvision](#) | August 25, 2009 at 07:29 AM

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PAPER CIRCUITS @ 200?

Recommended to build these in numerical order since the first is easiest.

Number 2:

There is a new paper circuit entitled "old Mr. Grassi". It is built similarly to Lil Sid, but it is bigger and has TWO speakers. SOUNDS:

[BIG POO](#)

[BROWN BEAR](#)

[SHORTY](#)

Download the [SHEET](#), print out the assembly sheet and build it with your own components. Trade money, food, sound object, or interesting plant specimen to:
PETER BLASSER
348 S Bentalou
Baltimore MD
21223

Thanks to Chester, here's a [schematic](#)

Thanks to Sean, here's [another](#), [another](#)

Number 4:

There is a new paper circuit entitled "Gerassic Organ" which is actually more like a plucked lute in sound.

[Demo Track](#)

Download the [SHEET](#), print out the assembly sheet and build it with your own components. Trade money, food, sound object, or interesting plant specimen to:
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Baltimore MD
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Oh, PS, the "trim pots" are most cheapest from mouser- part number 531-pt6kv-100k

[schematic](#) from sean





Twig Harper Plays a Paia OZ organ...





He META-INSTALLED a Mr. Grassi in the OZ!!!



Twig Harper plays a ROLLZ-5 assemblage in custom tube testor case with Matrix switch





Within his ROLLZ-5



Peter Foti sends these pix:

Above is a Phosphate of Aluminum, and below is a Senior Grassi



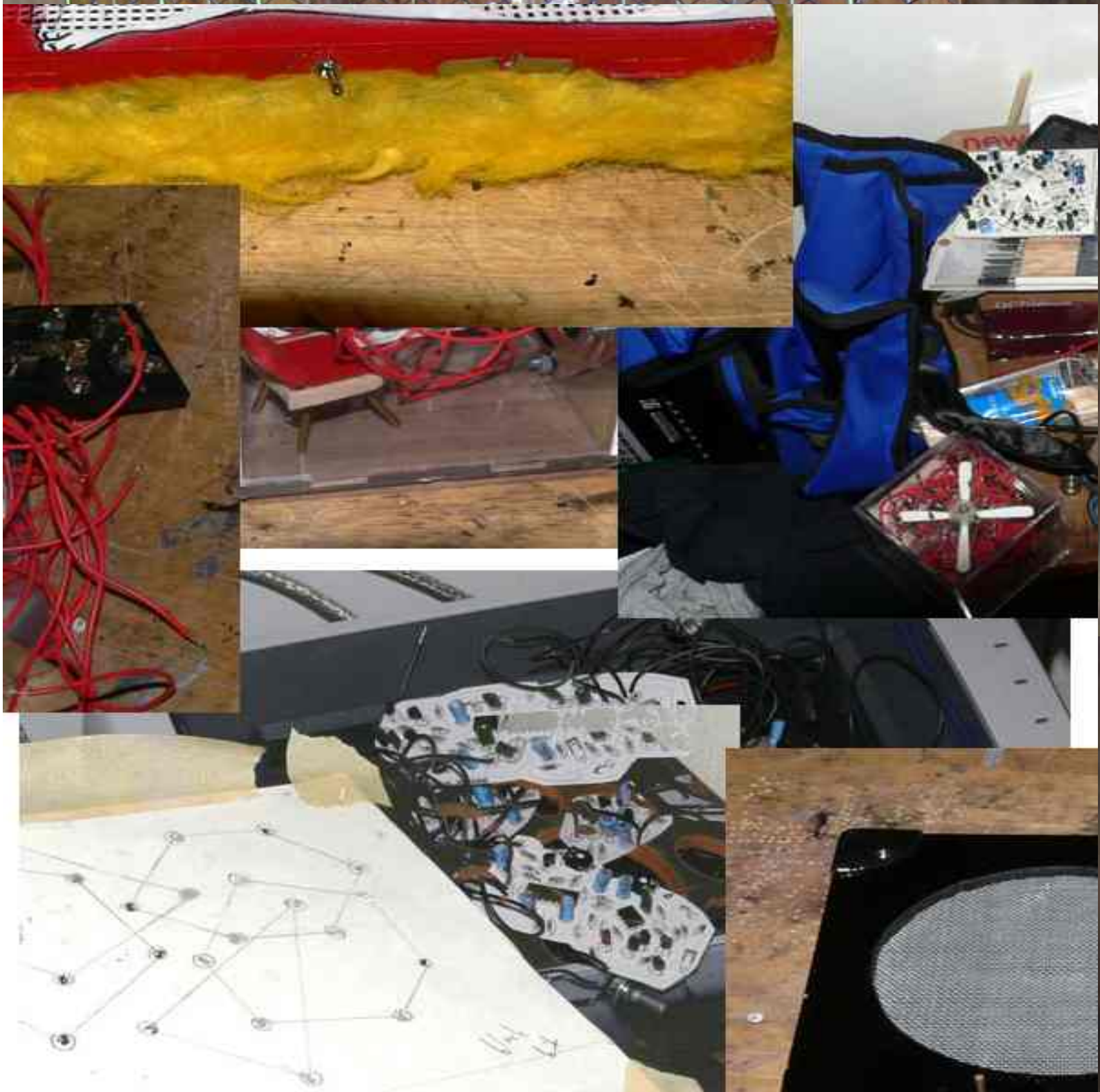


Chester Winowiecki sends these pix:

Thanks so much for all your work on the paper circuits and others. I've been having a great time making them! Attached are some pix

of my latest builds: a mr. grass that I put into an old goodwill boombox because it already had two speakers! Painted it a nice acid green. For some reason I keep thinking of him (it) as willie, as in willie nelson. Must be the "grass" reference... Also a pict of my Alum Phosphate Cyrstal. I used miniature tactile switches recessed and layed out in a mostly ergonomic way. 10 buttons: 10 fingers/thumbs. I'm finding that the value of the "x" resistors plays a big role in the single button sound, especially with the outer ring of crosses, so I'm going back in and tweaking things a bit. I may eventually cover this with leather for an ambrazier "nipple" look.

ALso, more importantly, I/we have our own paper circuit that we'd like to share with you as a contribution/tribute. Rodrigo Constanzo was asking on a listserver if anyone could make him an 8 step sequencer for use with his fourses/fyrall/etc. I got together with him and designed this. We'd like to share it with you and offer it to you to include with your other paper circuits if you see fit. There's also a couple pictures of my finished prototype, with 12 ga. copper wire for nodes and a maple branch knob for the speed control. Thanks again so much for all the great info and music.





Rodrigo and Angie have a grassi/rollz sweatshop going!!!



Manifestation of Phosphate of Aluminum, with Ultrasound filter from Rollz-5





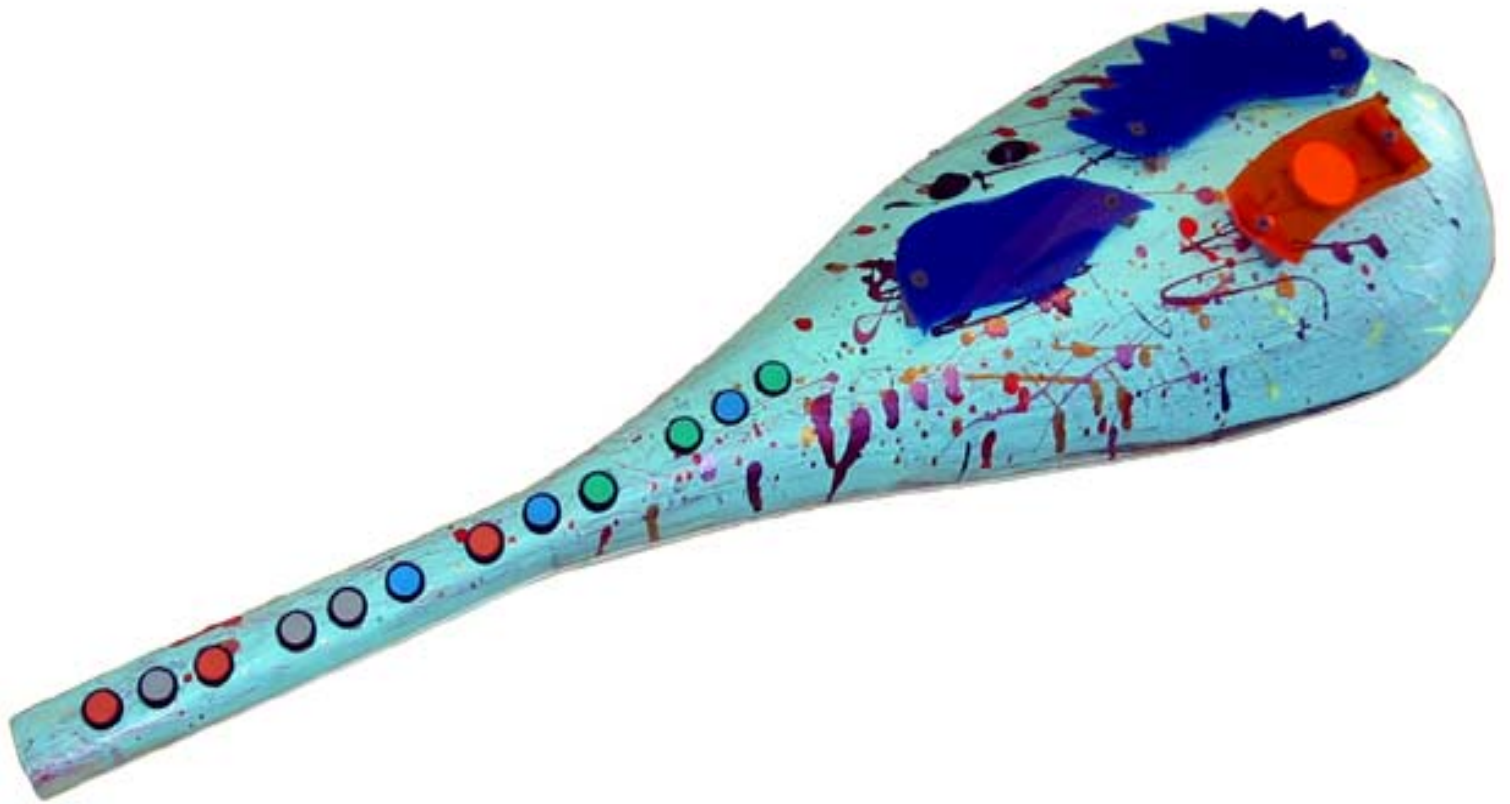
I made a christmas tree ornament out of an old Mr. Grassi prototype, with the paper dissolved, and mounted on thicker house wire.





Here is the greenriver gutterwedge. been using it in performances with a volume pedal It shreds! Thank you for the projects -Markus





I made this electro-lute out of four gerassic organs and also a custom mod for pitchbend.





Professionally 3rd-World-Made, Pier-1-Style Mr. Grassis, with old-world-turned legs.





Matt Wacker's Grassi Box





Here's my implementation of MR GRASSI. It has wooden boards for the top and bottom, then 2 drilled speaker planks, then cereal boxes for sides covered in papier mache





DAVE WRIGHT's Grassi

Number 3:

There is a new paper circuit entitled "ALUMINUM PHOSPHATE CRYSTAL SIMULATION". It is built based on concepts from mr grassi and sidrassi. I recommend using one speaker and 10 buttons for the manifestation, each button connecting one node to the speaker.

"This paper circuit is a crystal simulation of 5 aluminium atoms bonded to 1 phosphorus atom."

[Here is a more detailed explanation of the concept](#)

[DOWNLOAD THE SHEET](#)



NUMBER 1

I offer an instrument design to you for free, "The Lil Sidrassi: a pentagram of primitive oscillators and a speaker". It is a very touchable bee motorcycle sound maker box. Each one is different because you put custom capacitor values in it. So I would please like you to send me a description of yours and I will make a dictionary.

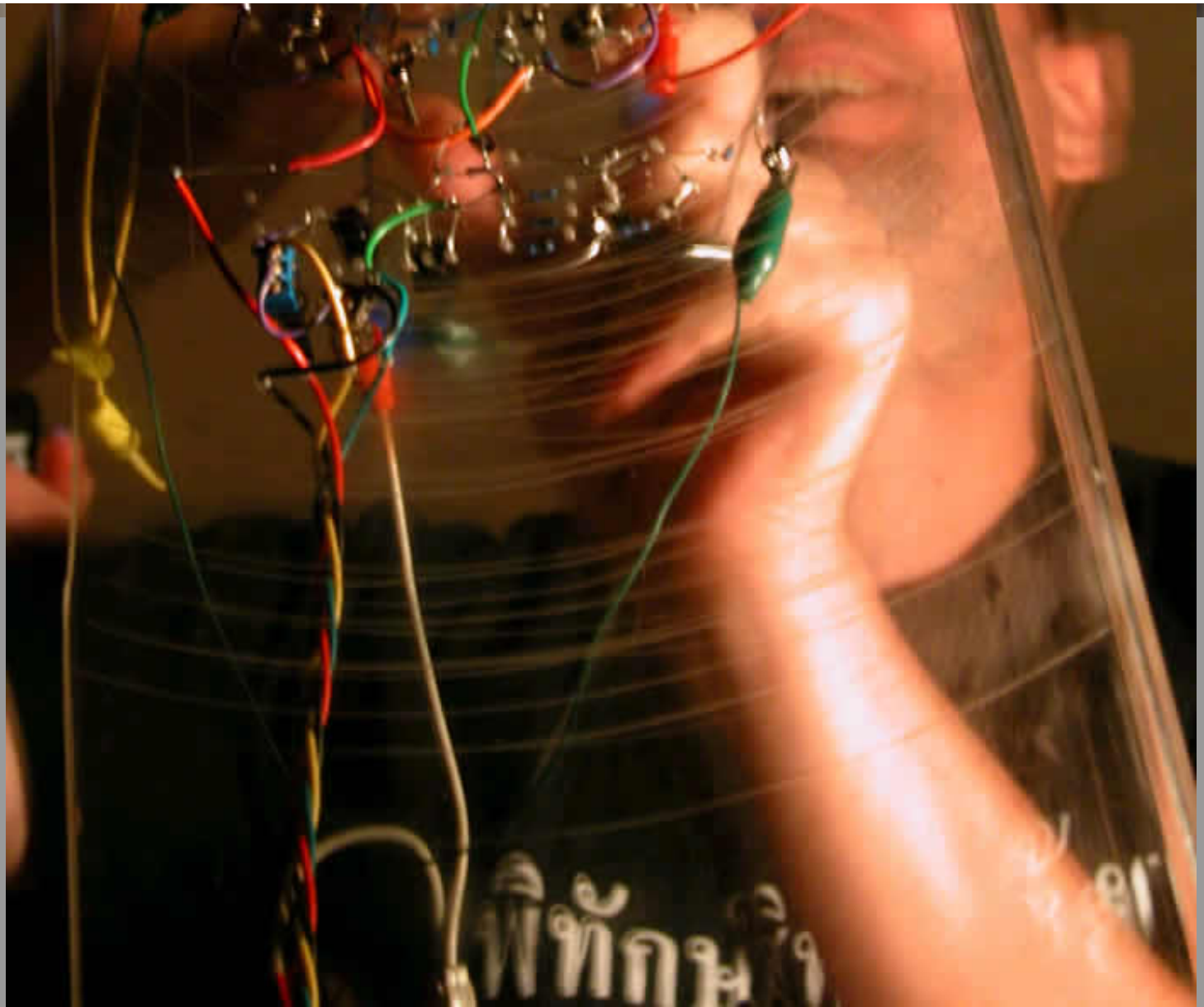
[SONUS DE PRE PROTOTYPUS IN MP3 FORMATTO](#)

medieval times are coming.

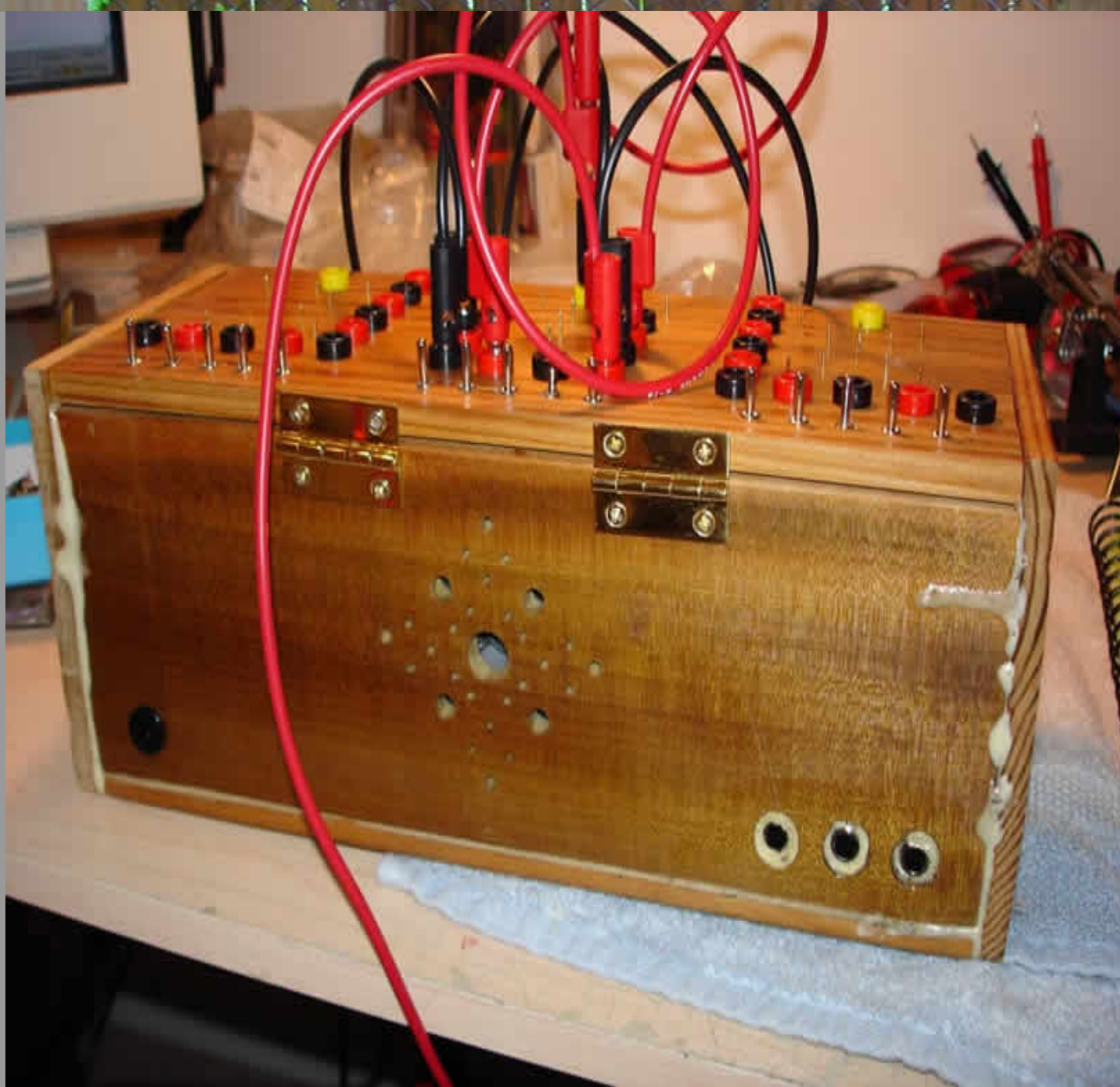


Download the [instruction manual](#) , print out the assembly sheet and build it with your own components. Send money food or sound object to:
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John Jacobs didn't say how he made lil sid clear, but I assume it is photocopy onto transparency.



Shawn @ sirkut.com says:

Now for the next part of my email. The Lil Sidrassi. I'm currently putting 3 Lil Sidrassi's into a wooden box that my g/f and I put together. It still needs sanding because I like using gorilla glue and it oozes after drying but is hard as nails when dried. I let her design the layout of the interface and I did all the circuitry of course. One will be a treble sidrassi, another a bass sidrassi and lastly a chaos sidrassi. Each have banana jacks so I can interface them without alligator clips (i detest using them) and used the pins from a parallel printer port for the contact pins. Then each sidrassi has 5 SPDT switches (On/Off/On) so I can add additional dimensions to the sidrassi hairy capacitors. The two links below are from the completed bass sidrassi. Feel free to share on your site. Attached is a photo of the triple sidrassi unit. I'm tentatively calling it the Triple Threat. Any thoughts would be welcomed. Thanks again for a RAD free circuit. You plan on doing anymore paper circuits?

I say, yessir I am working on a larger one right now called "Old Mr. Grassi" Pete



Here is a LIL SIDRASSI I put in a hardwood case with an antique dial system to switch hairy capacitors for multiple frequency system.



FYI here is a pic of the inside wiring of that.

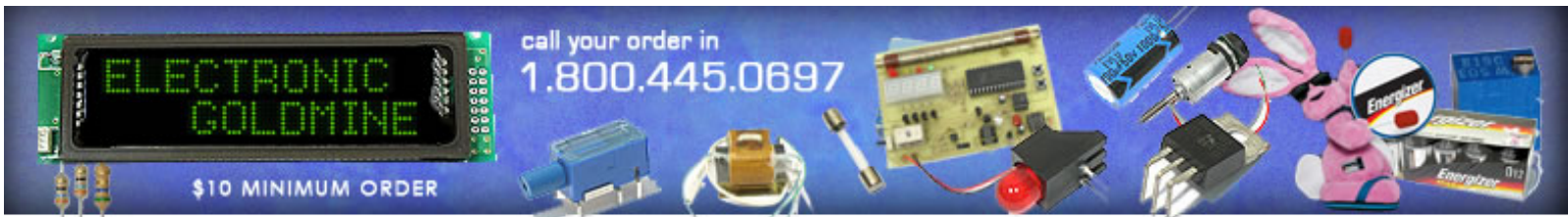




This is Chester's lil sid in sears garage door control case, wiring...







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Amazing Wire Glue



Item Number : G16133
Unit Price: \$3.95
Quantity

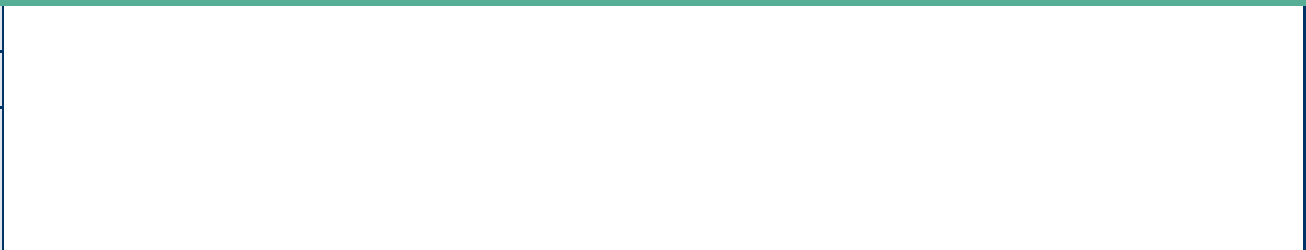
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Detailed Description

Brand new product is an electrically conductive glue. Make electrical connections quickly without heat or solder. Attach wires to glass solar panels, batteries, etc. using this amazing product. Highly conductive non-toxic no lead product is great for low voltage electrical connections. Just apply and allow to cure overnight. You'll find hundreds of uses for this amazing product. Brand new in blister pack jar containing .3FL oz. G16133

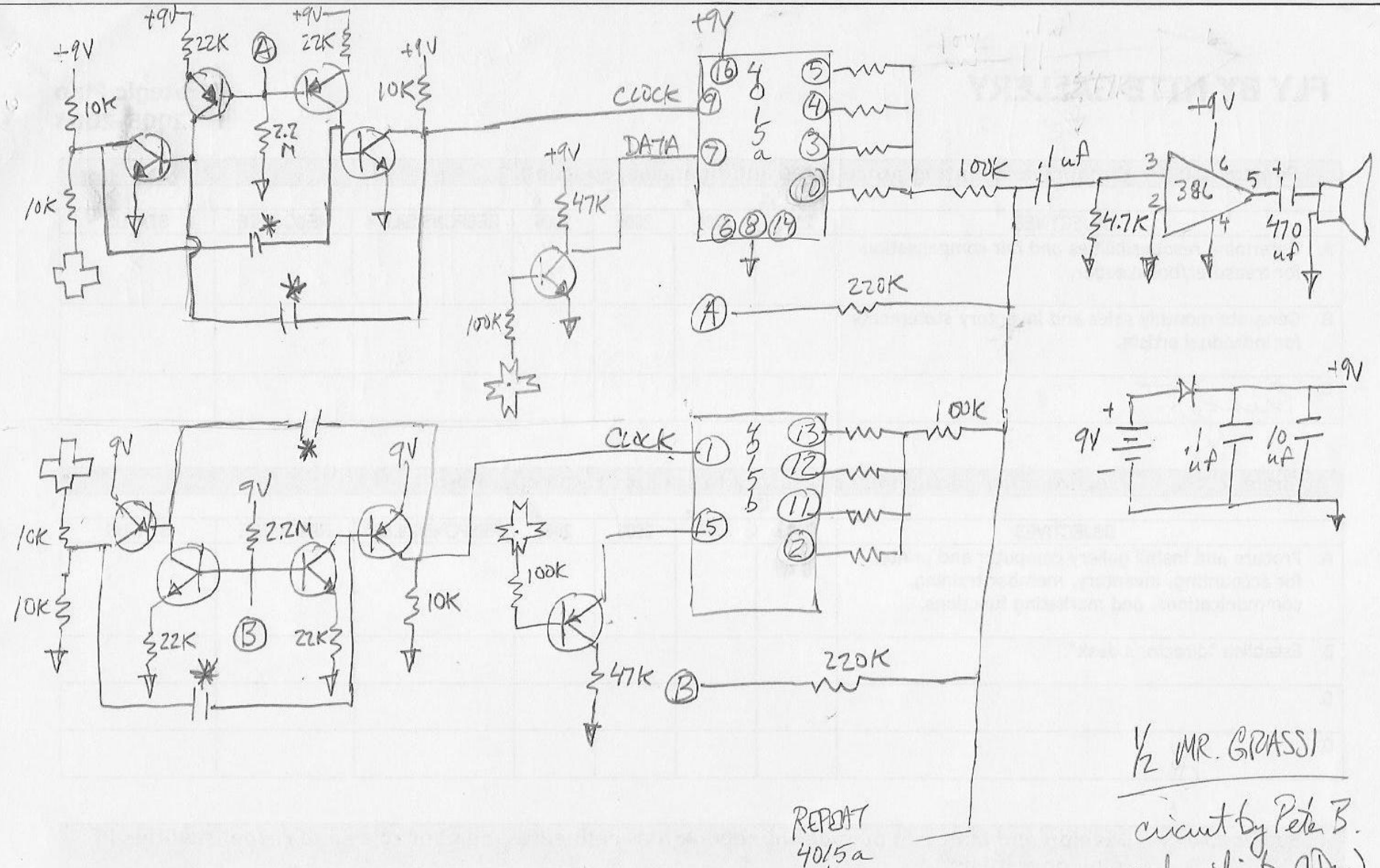
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LEDs
Magnets
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Pumps
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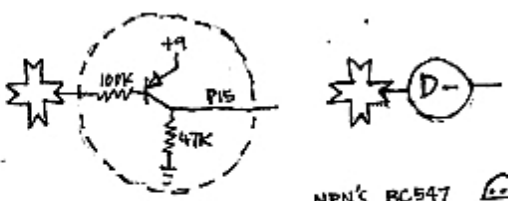
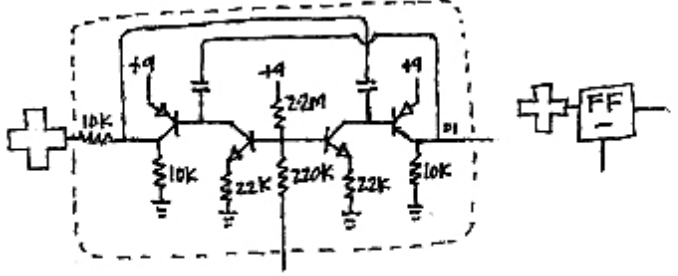
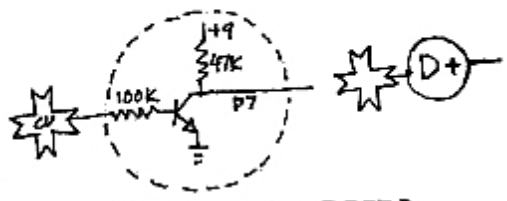
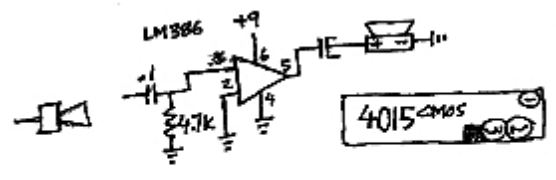
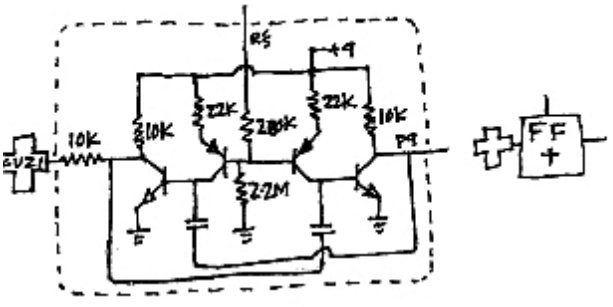



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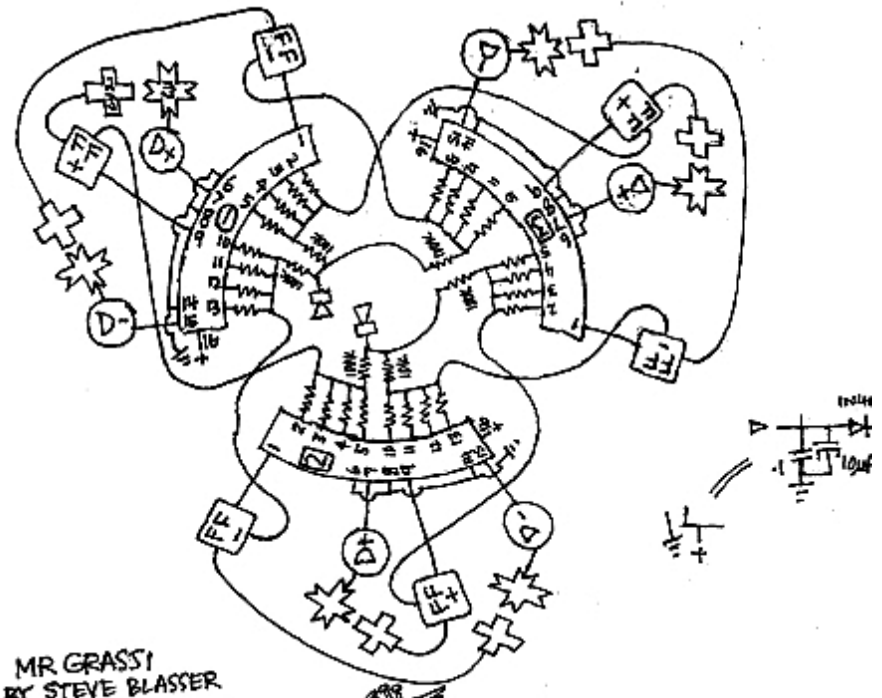
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1/2 MR. GRASSI
 circuit by Peter B.
 schematic by CDW
 traced

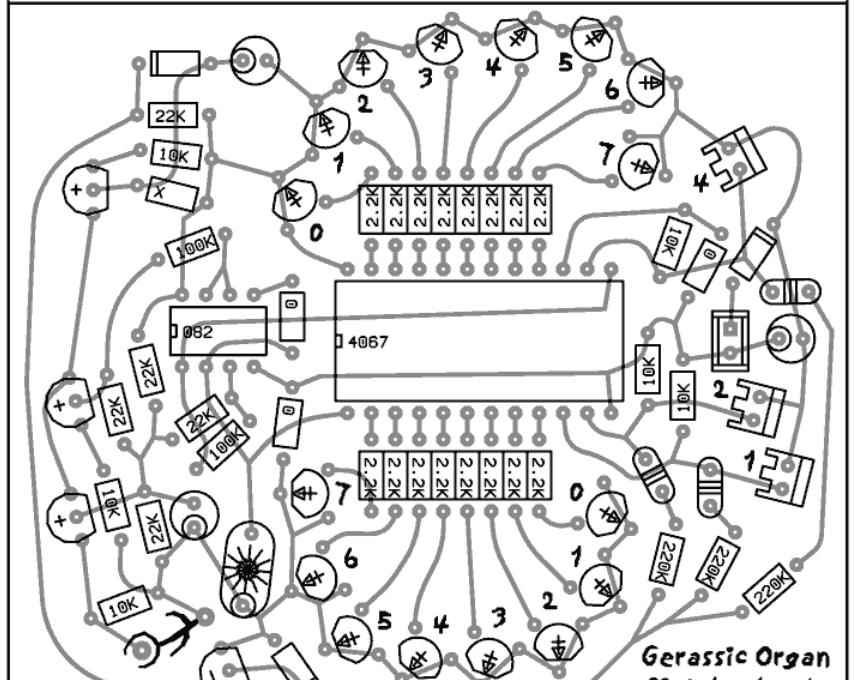
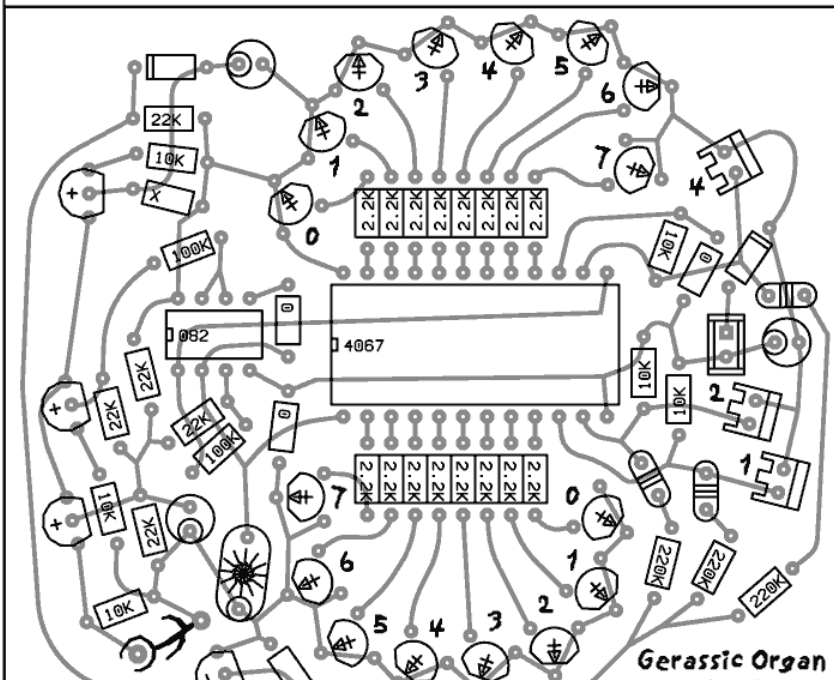
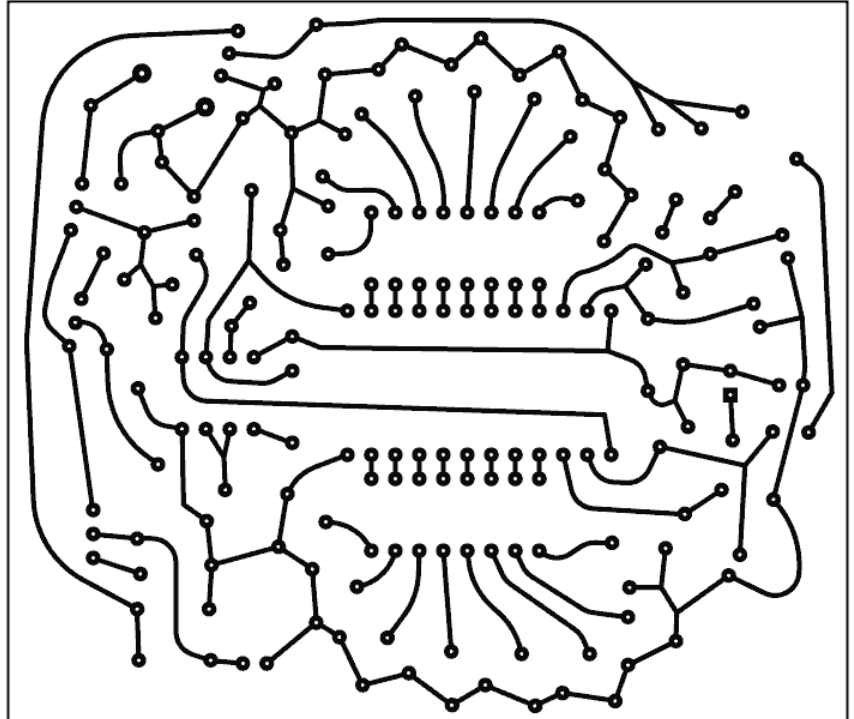
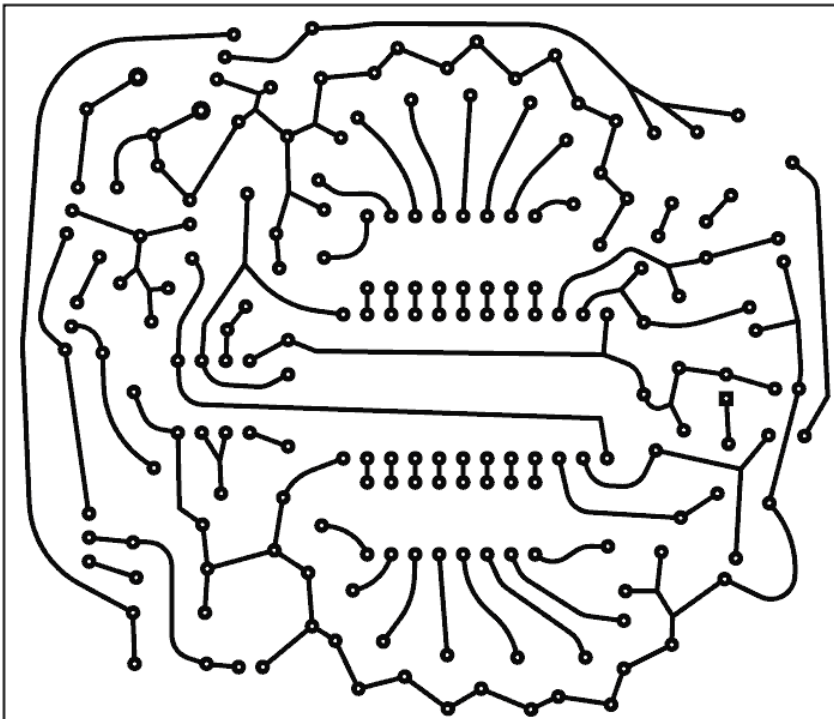


NPN'S BC547
 PNP'S BC557




MR GRASSI
 BY STEVE BLASSER
 DRAWINGS BY SEAN KERRIGAN
 25/4/09



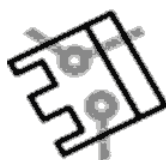


This is a Gerassic Organ, which makes a plucked tone in the scale of your choosing. There are three buttons: 1,2,and 4. When you have buttons 1 and 2 down, you are playing note 3, which you can tune with trimmer pots 3 and 3. In other words, the three buttons are binary counters for pitch. Figure it out.

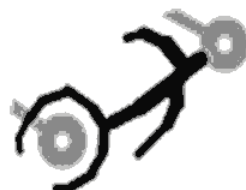
Chips: 4067 is CD4067B, 16 to 1 multiplexer. 082 is TL082

The "X" resistor is pluck length, should be 4.7k to 470k

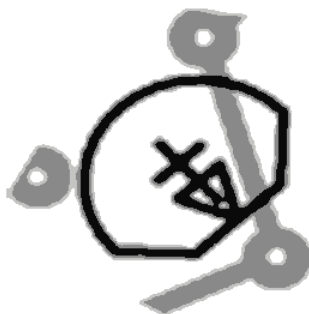
You can also tune the timbre by differentials in the two trimmers



This is a button

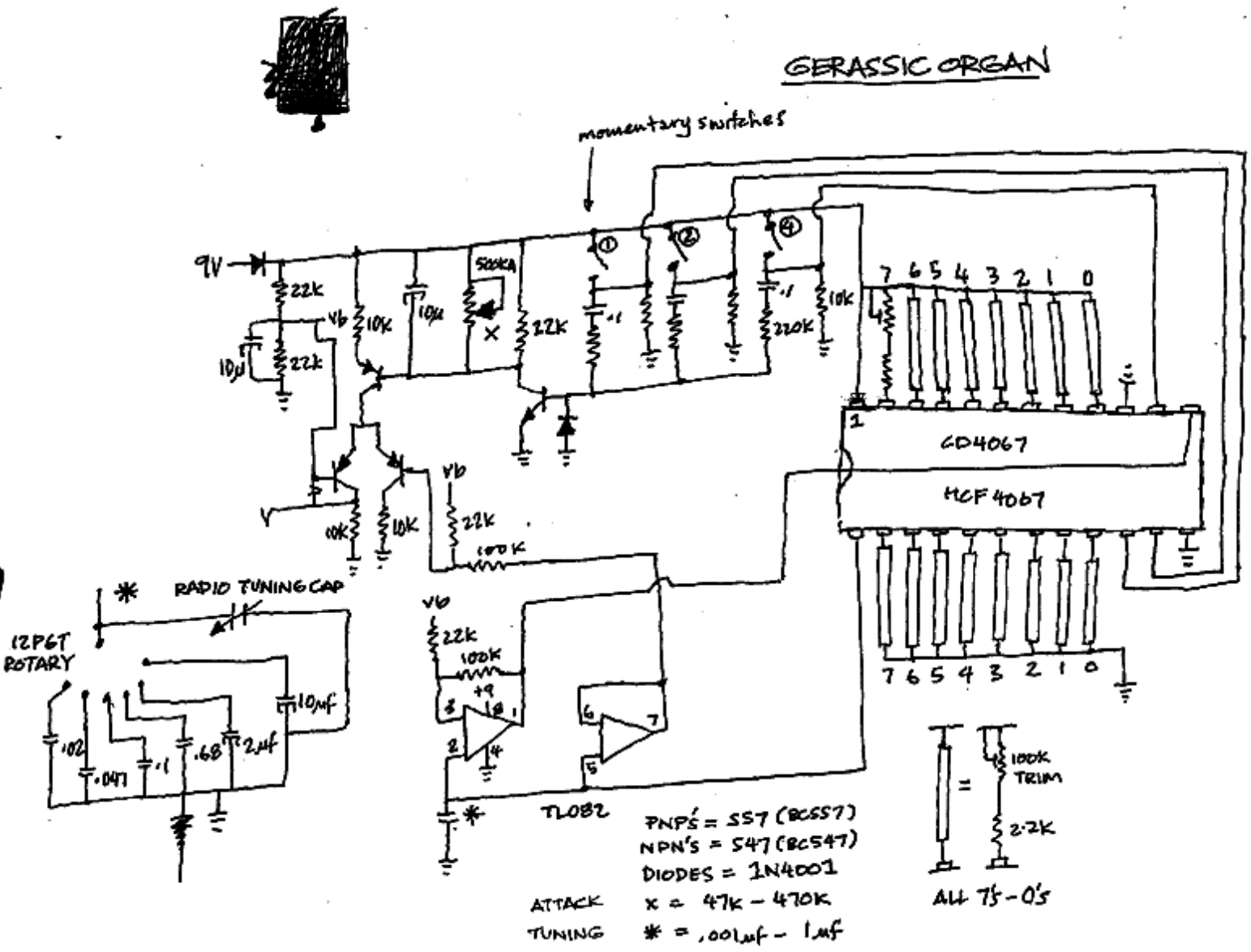


This is output,
to the left, signal pod
to the right is ground



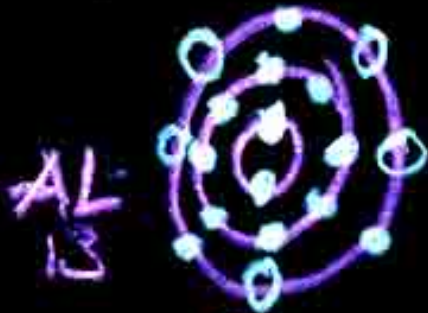
This is a trim pot, should be 100k and small in size, usually cheap. The arrow points to the wiper.

GERASSIC ORGAN



THE CRYSTAL SIMULATION CONCEPT SCROLL

The Aluminum atom has 3 valence electrons, which make up the incomplete shell union around the 2 shell and first 8 shell. These 3 valence electrons need 5 more to be complete and noble like Argon



Sheet aluminium organizes its metallo-crystalline structure in a "forced" triadic relationship based on its trivalent electrons; this is like Boron (2,3) but not like Gallium (2, 8, 8, 13) which has a more metallic-complex structure because of its exterior 13.



This is why pure aluminium sheet does not occur in nature, the same as pure boron, they are simplex, almost simplex, definitely not complex enough to have their own unique unbonded form. That's not true. Aluminium has three electrons and lacks five. Phosphorus has five electrons and lacks three. We're talking about in the incomplete valence shells around a noble base of Neon 20 Neon 20. We're talkin bout valence incompleteness around completeness of Neon.





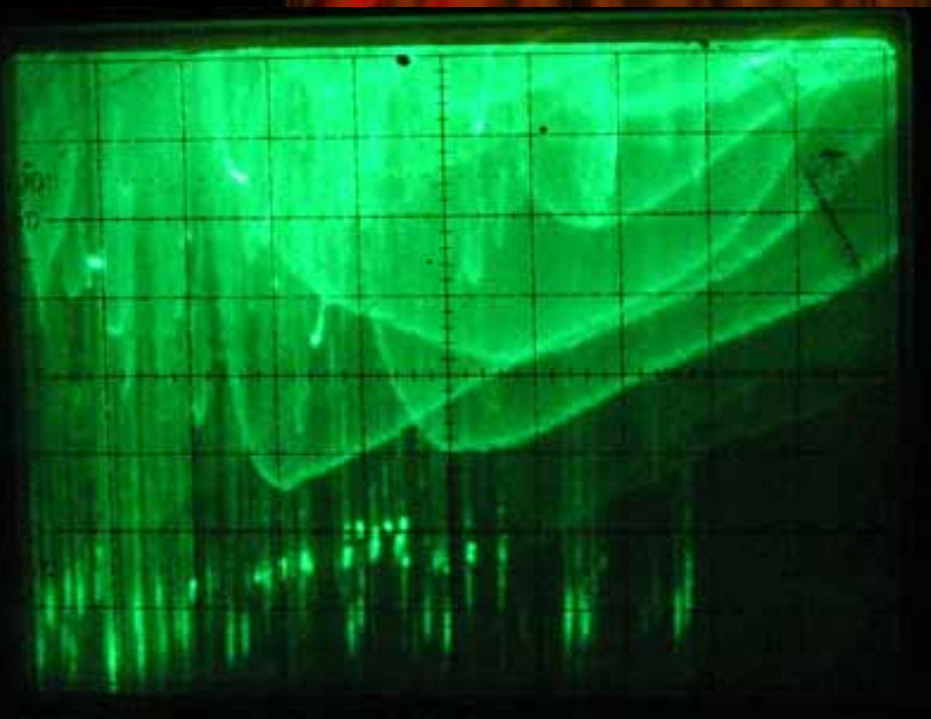
But Aluminium and Phosphorus make an Ionic bond based around 3 plus 5 equals eight. We can simulate the crystallo-multiplex junction resonations with 3 phase oscillators plus one 5 phase oscillator, arranged so that the 5 spokes of phosphorus each meet a triangle:

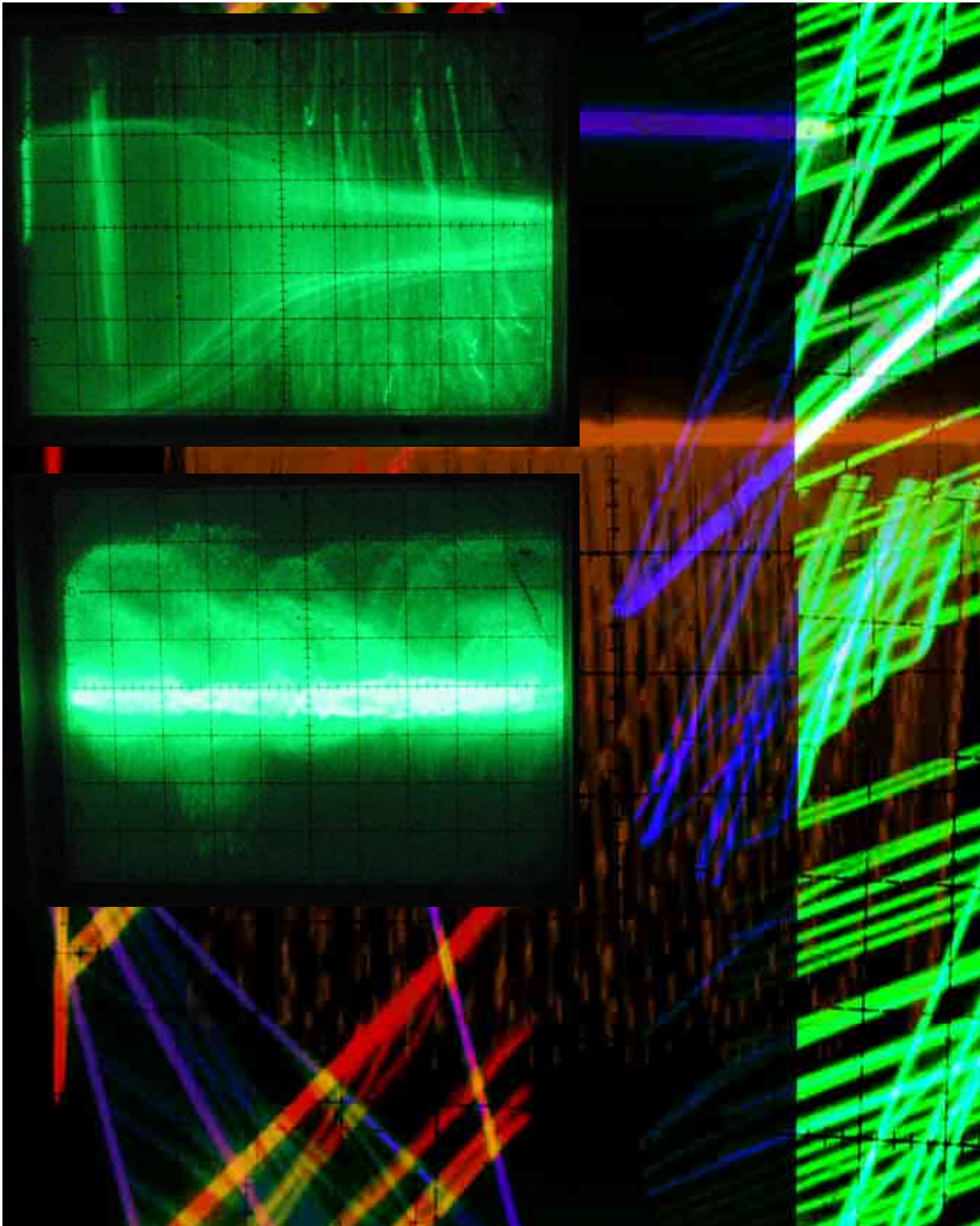


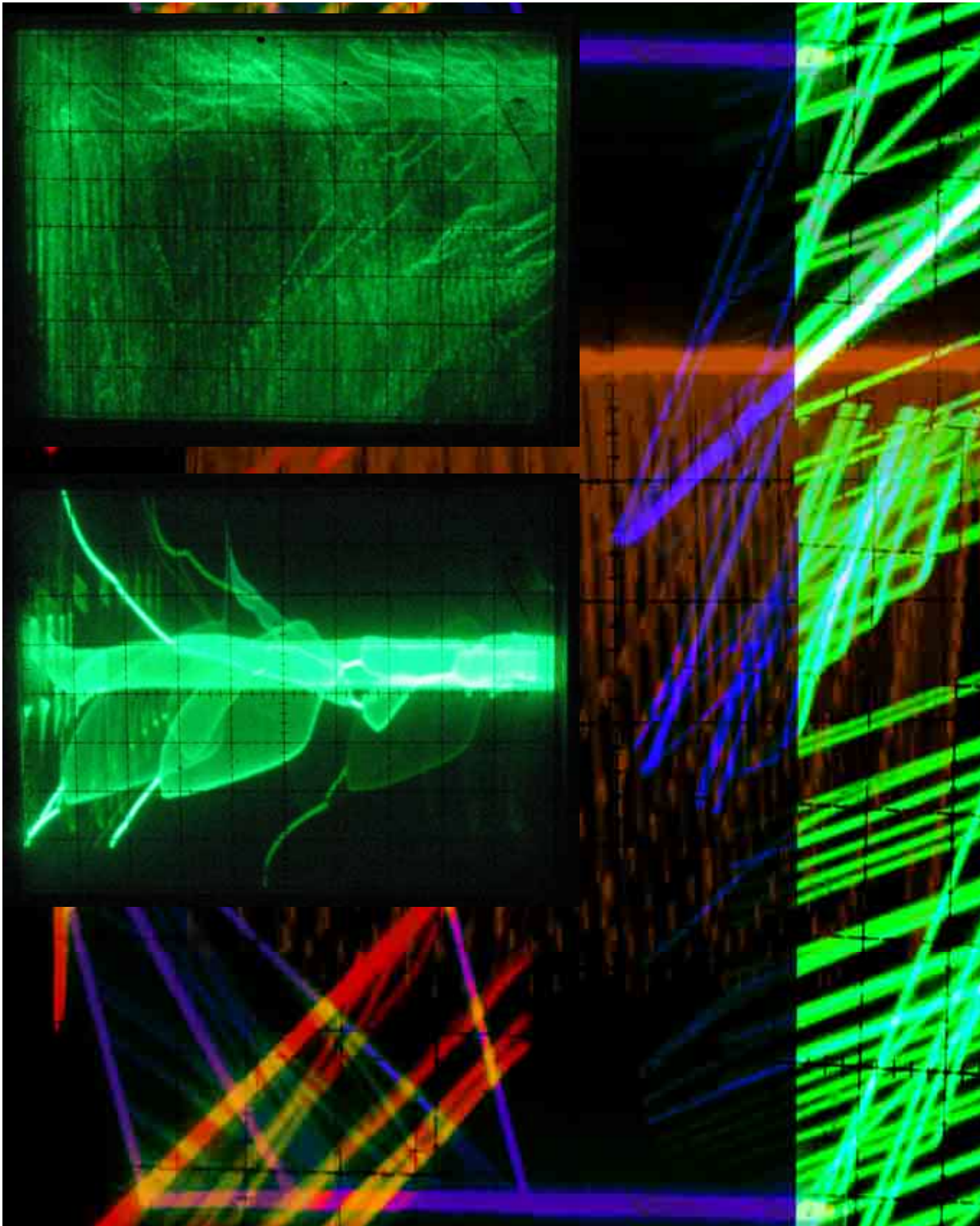
This is a molecule of Aluminium Phosphate- 5 ionic bonds based on bidirection and reaction as well as hard, and each reflecting triad resonance and Quantus resonance. Quantus is the five.

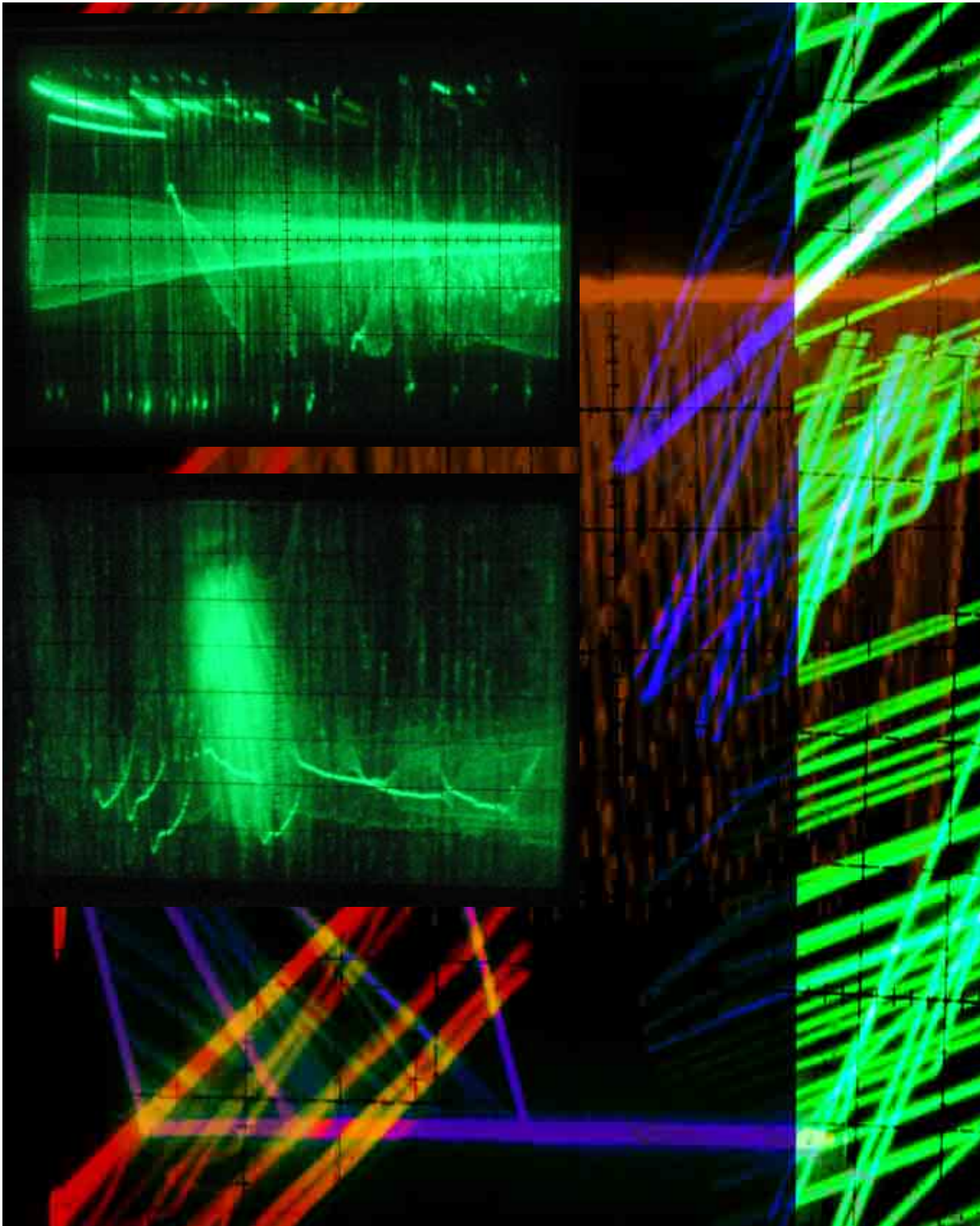
HERE ARE SOME PICTURES OF THE RADIO WAVES AND

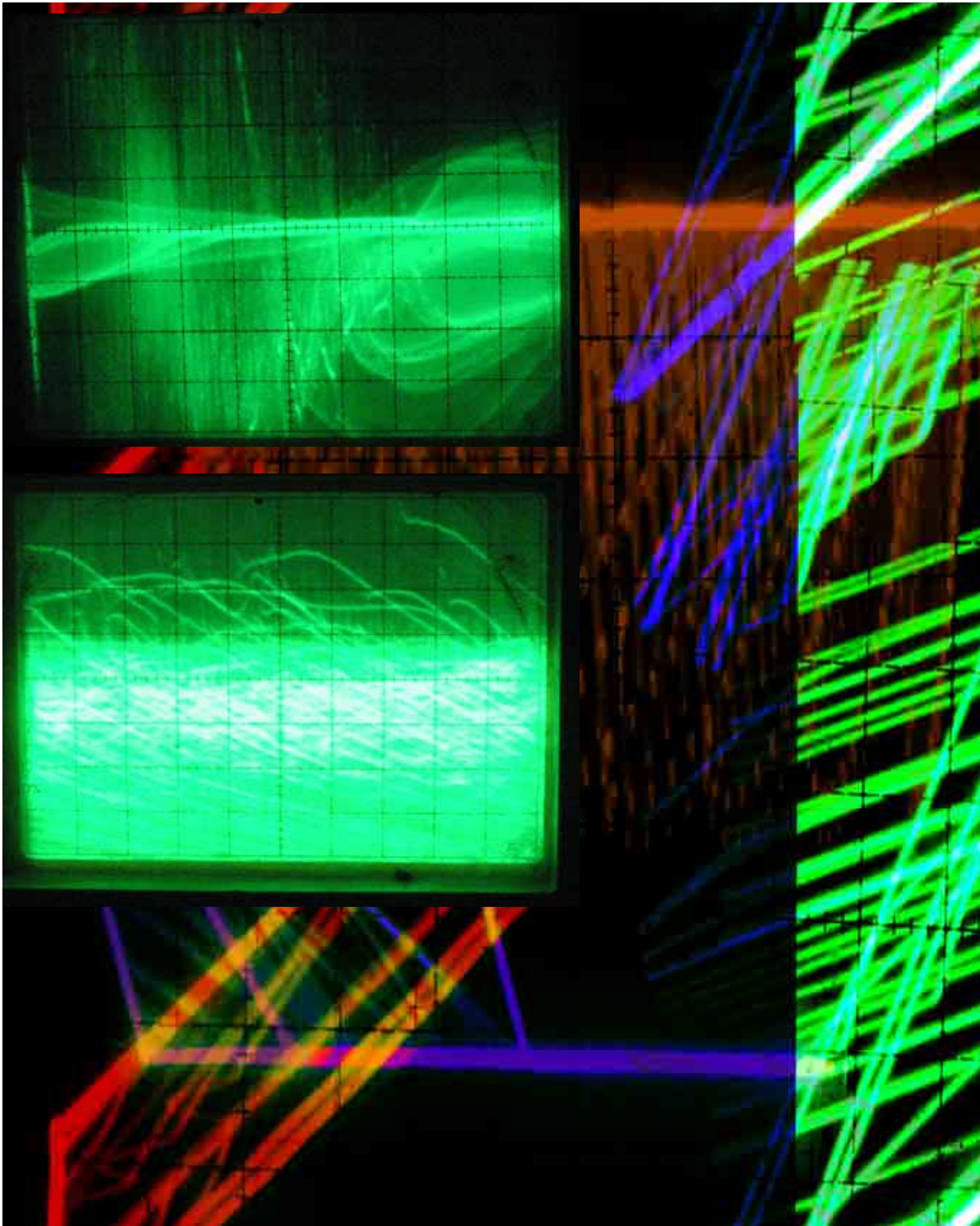
Chaotic operations within the PHOSPHATE OF ALUMINUM WAVEFORM

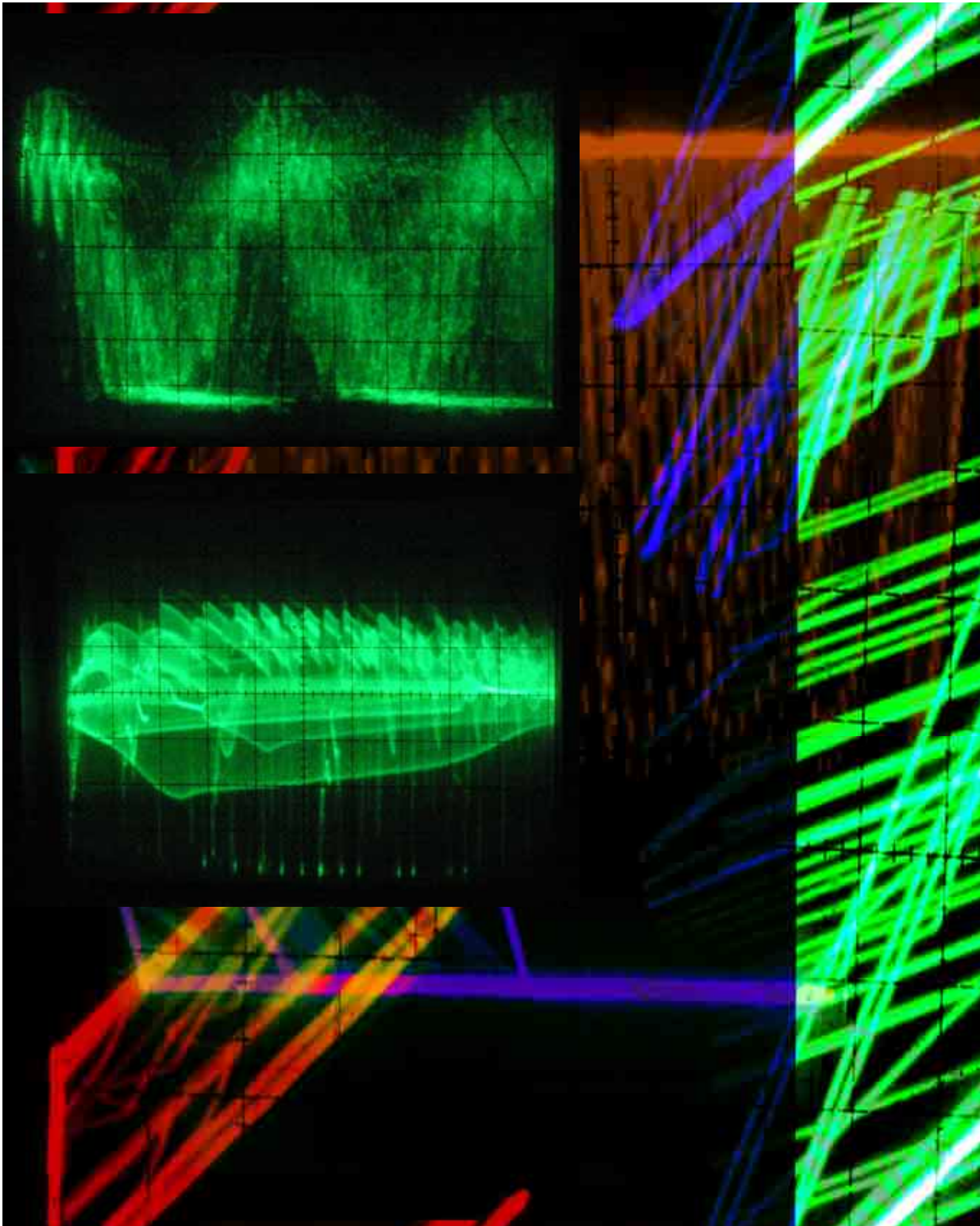


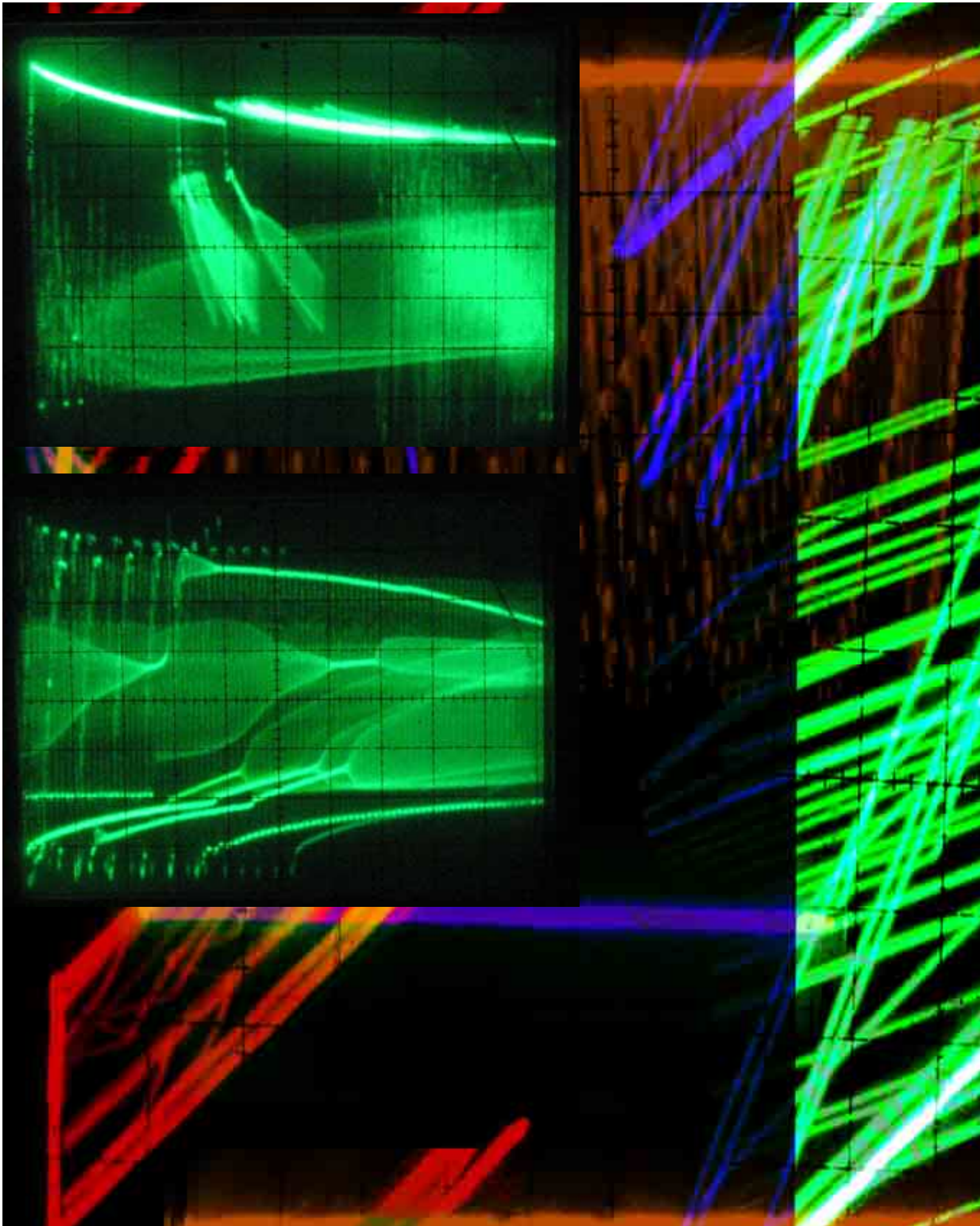


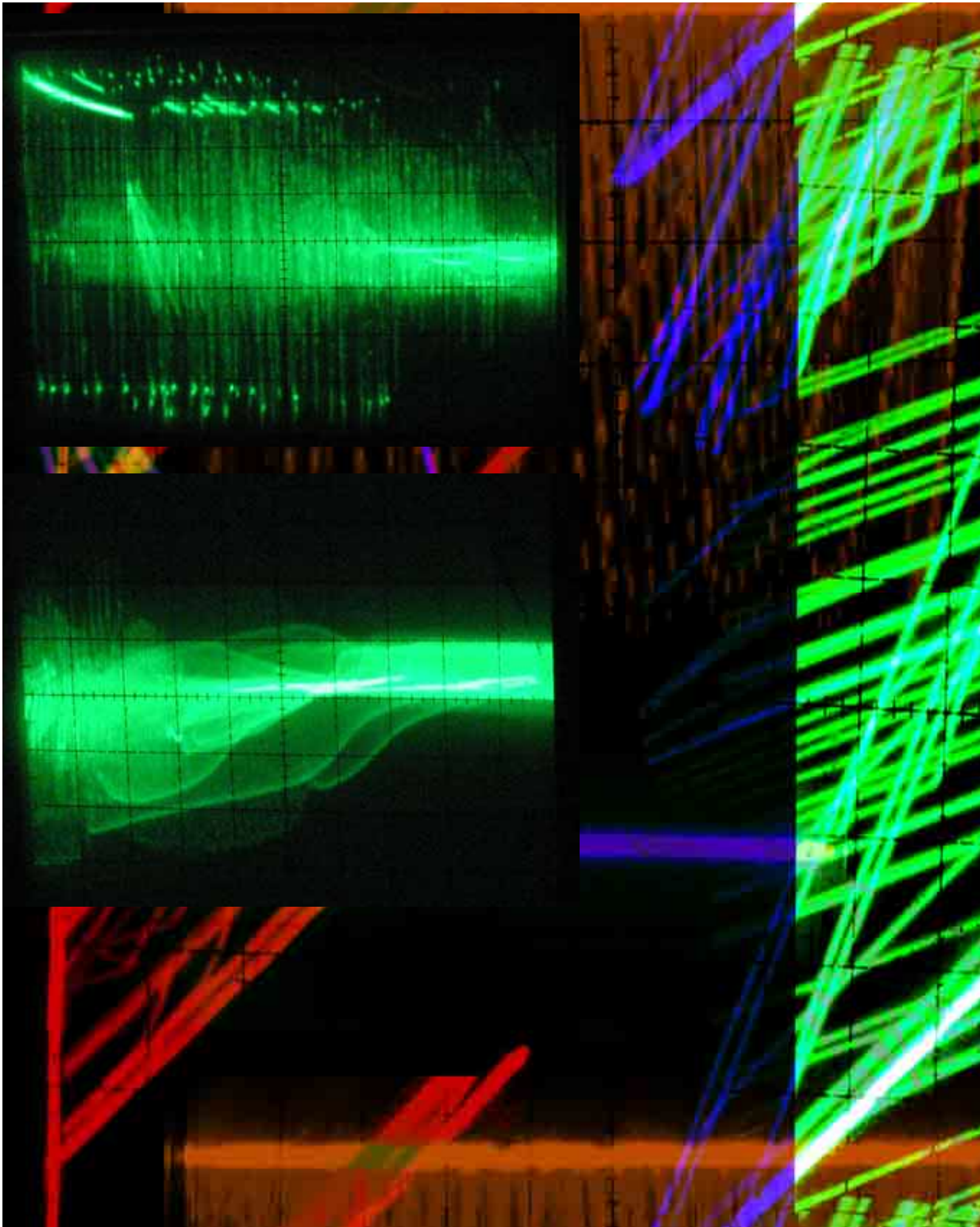


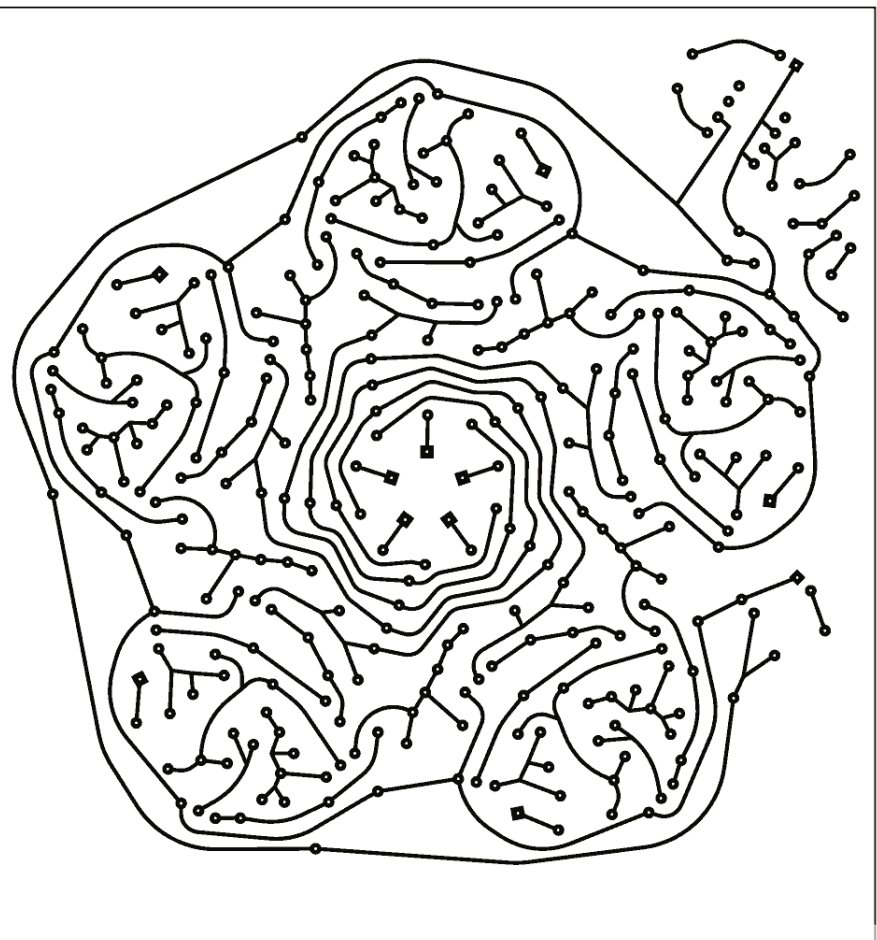
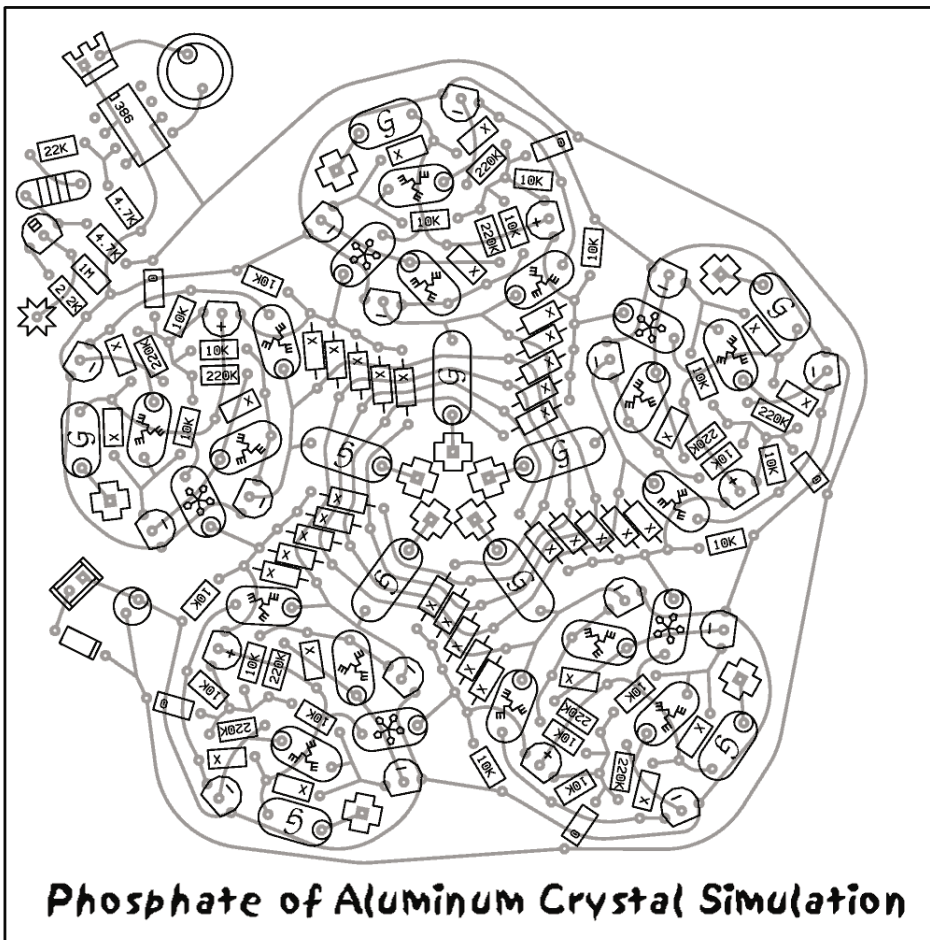












Phosphate of Aluminum Crystal Simulation

Hello, this builds on concepts from grassi and sidrassi. It has one speaker amplifier outside the pentacle, with a star input. Use momentary ON buttons to connect the ten crosses to the star input and incidentally they will connect to each other causing further modulations. The "X" resistors should be between 100k and 1m. There are three types of hairy capacitors:



There are 15 total, 3 for each leaf. Make these similar within each leaf.



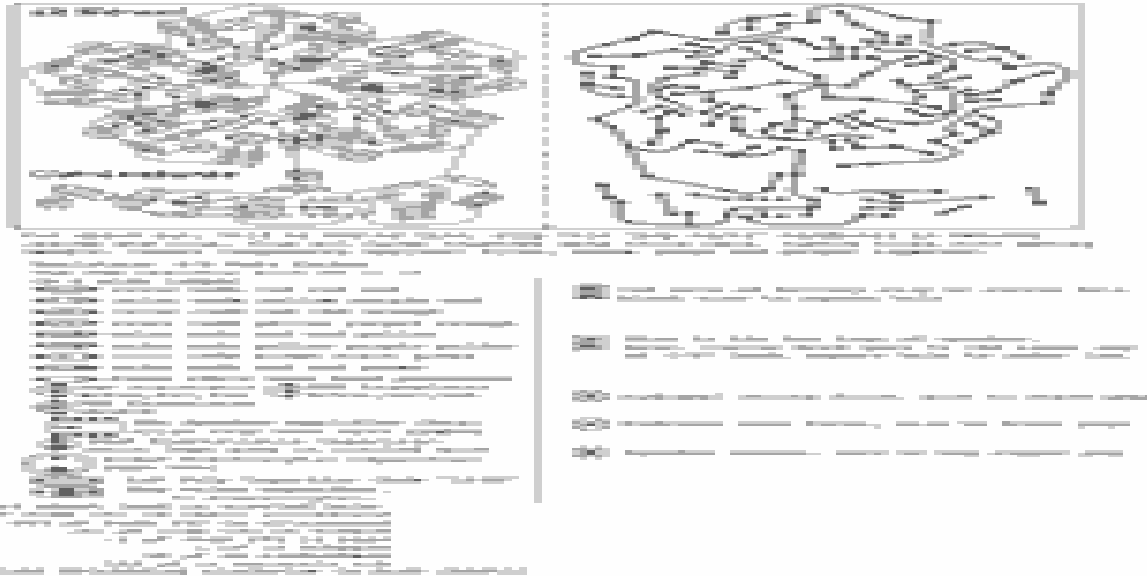
5 of these, one for each leaf. They should be similar.



These are for coupling. Use .001 or smaller for radio/ultrasound modulations.

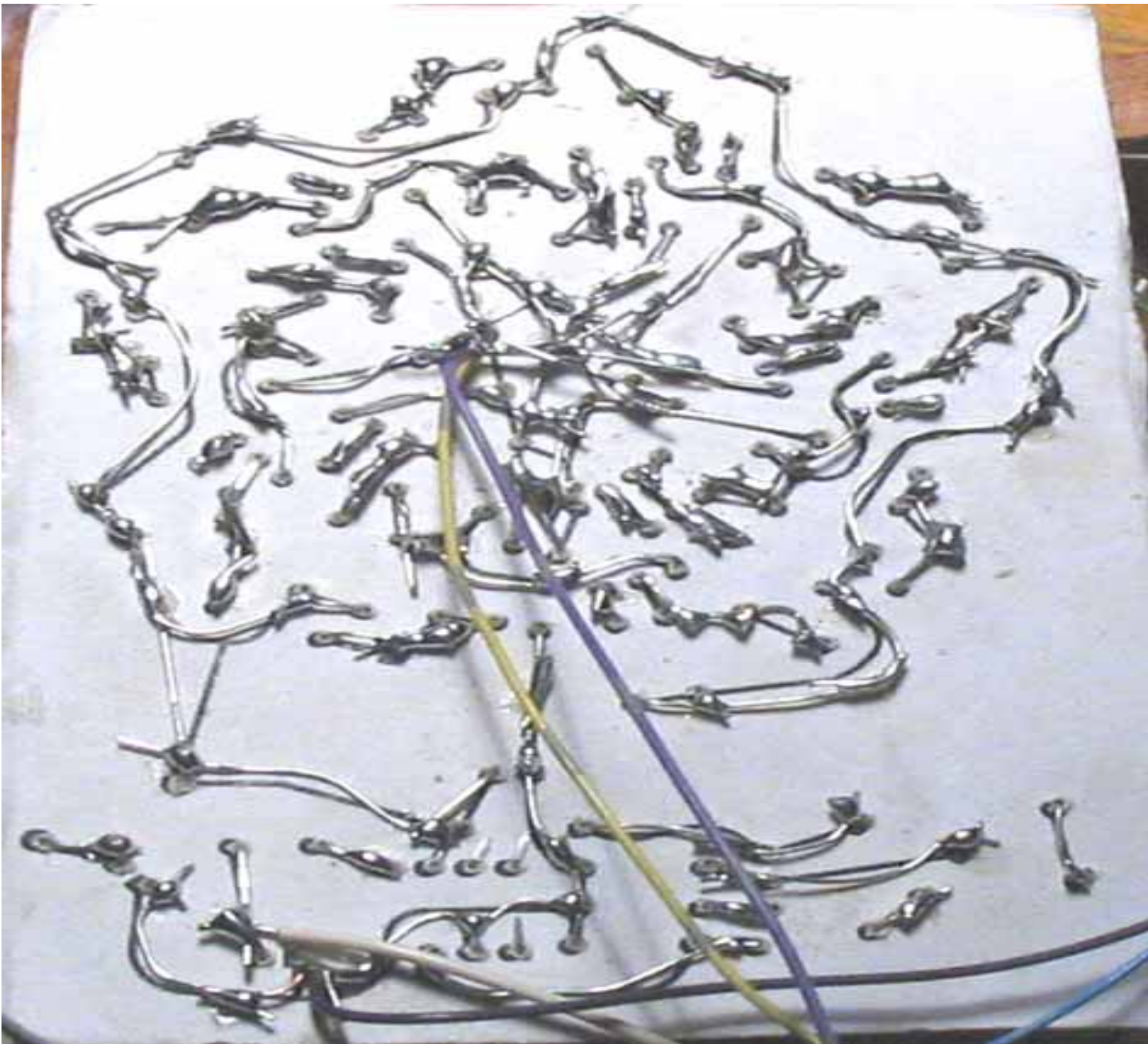
The rectangle is 10" by 5".

/
LIL SIDRASSI MANUEL TO PUT TOGETHER
/ BY CIAT_LONBARDE
/

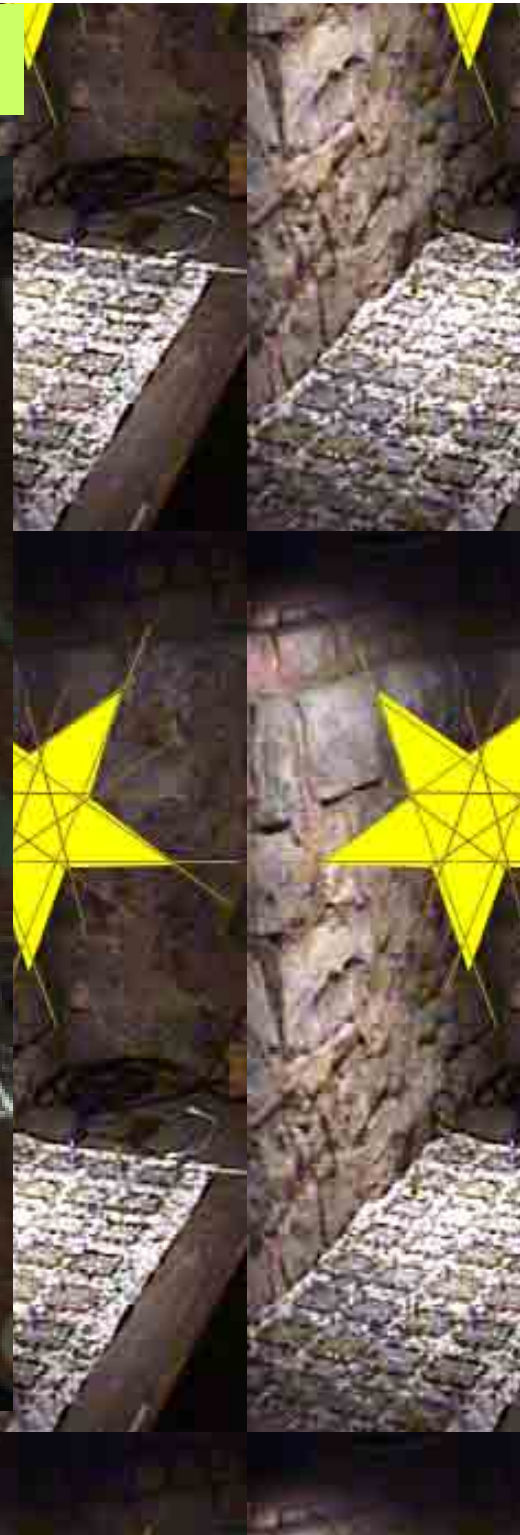
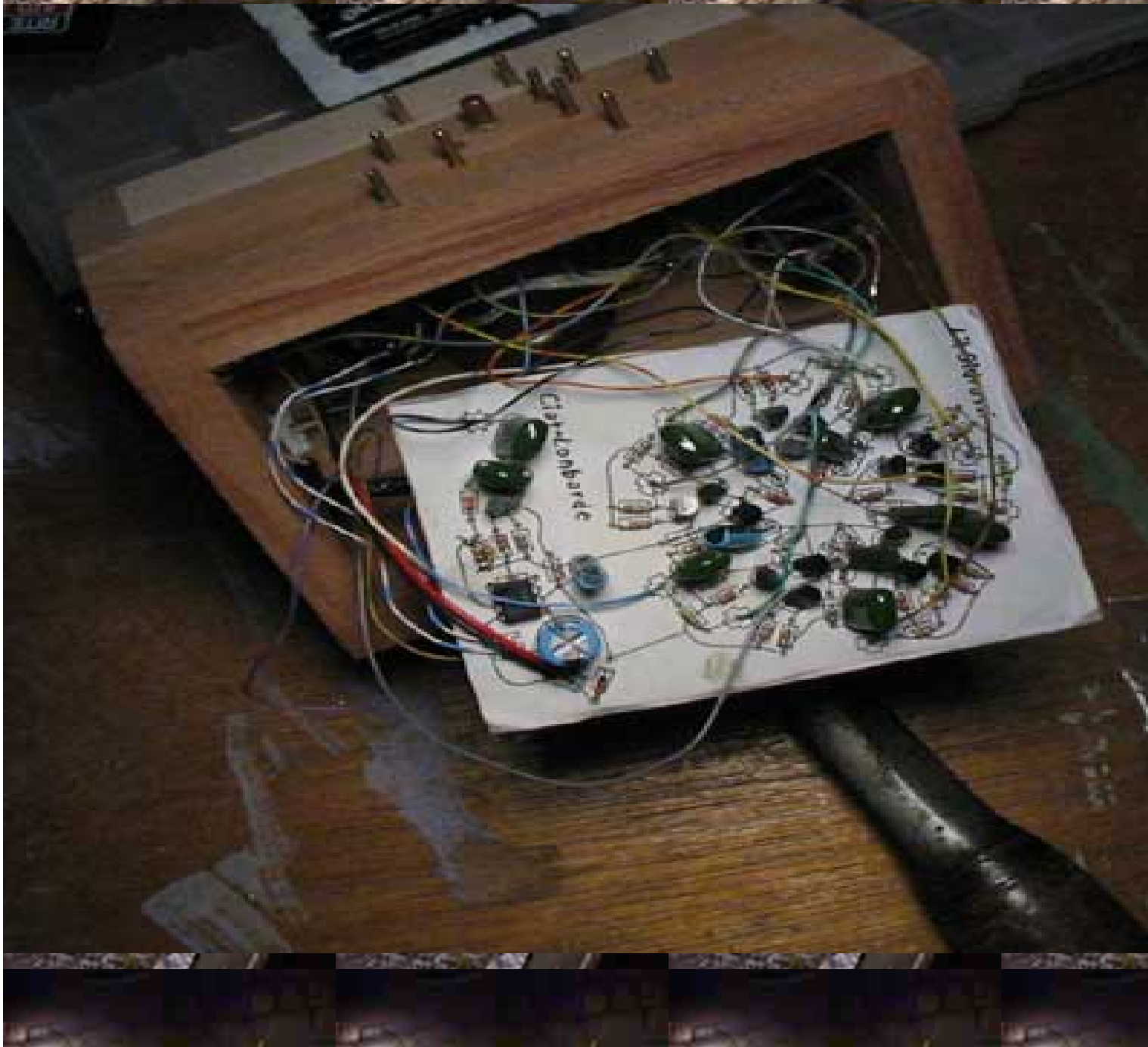


/
STEP ONE, click above to view the circuit card assembly sheet. Check that it is to scale: the circuit board should be 6" wide and 4" tall.
/

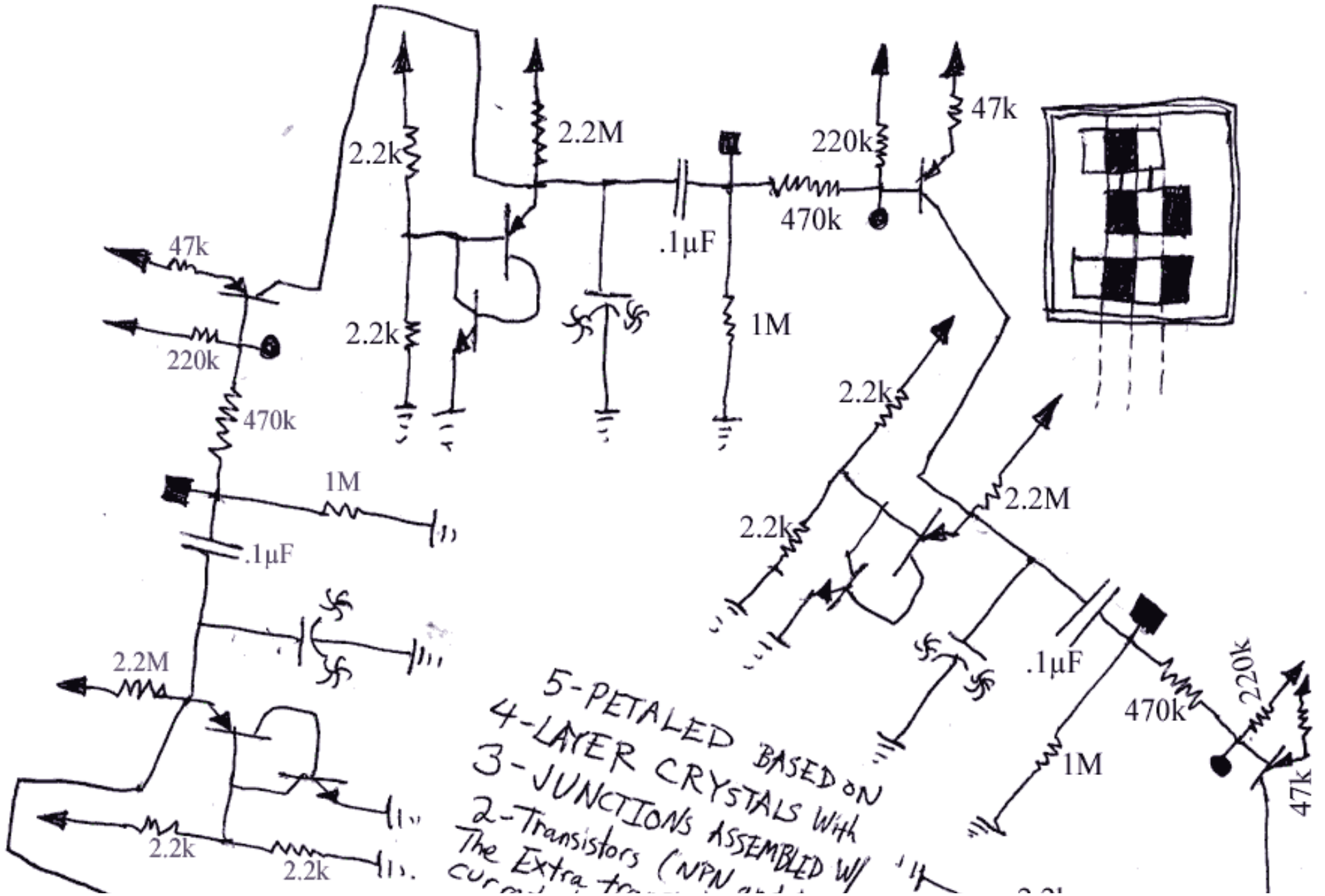


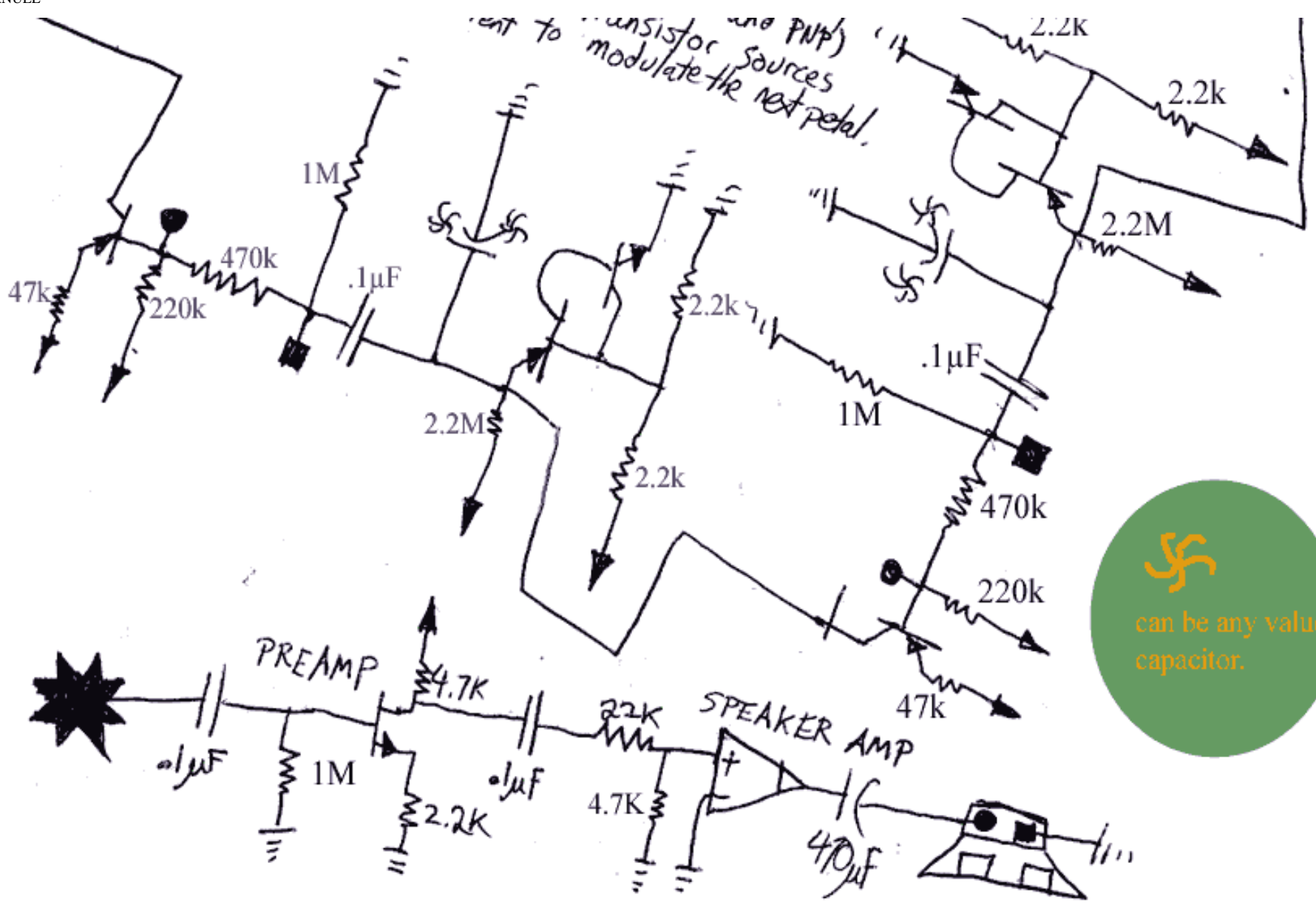


/ This is kinda what the back of your board should look like.
/



This is how mine looked spilling out of its case.





☸
can be any value capacitor.

