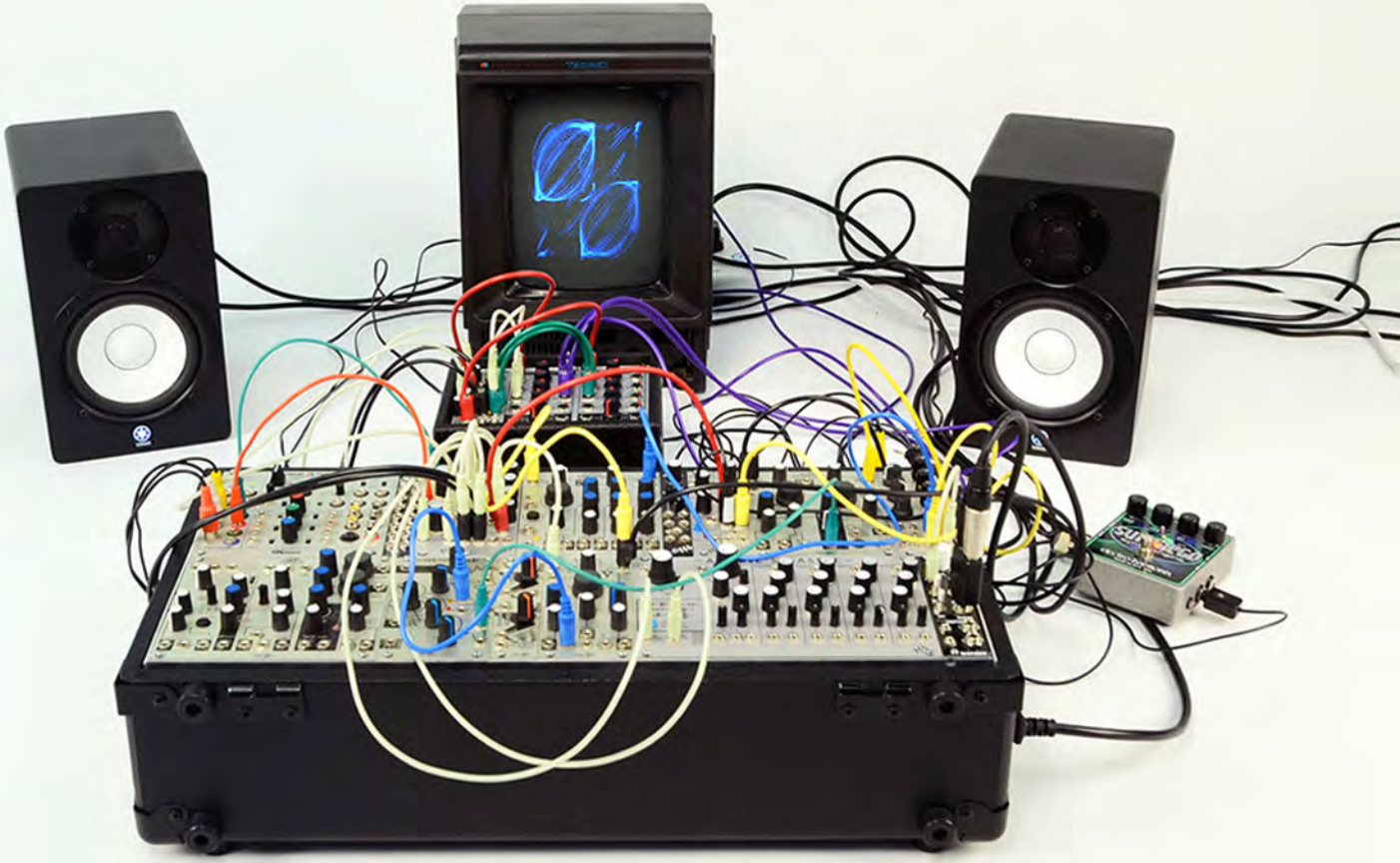
Andrew Duff / Vectrex & euro[C]rack...



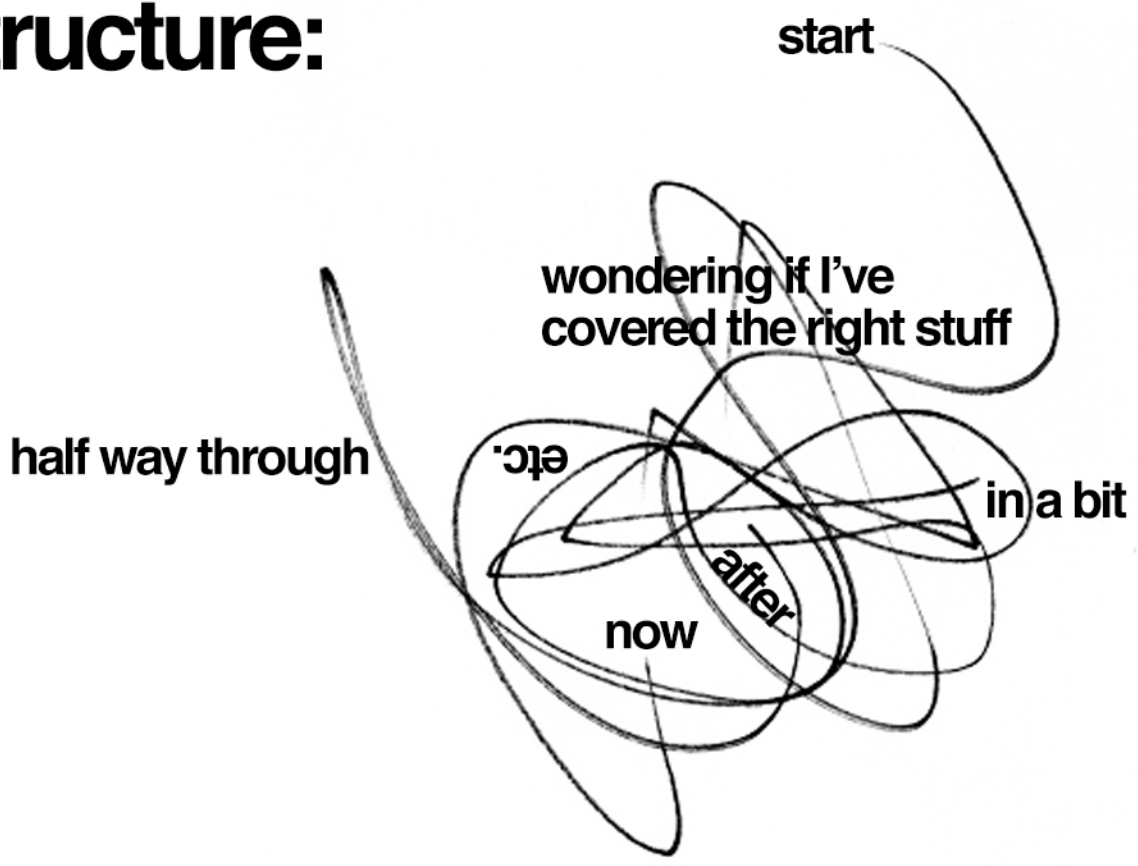
pt.1:

some kind of intro, context, history etc.

pt.2: some examples.

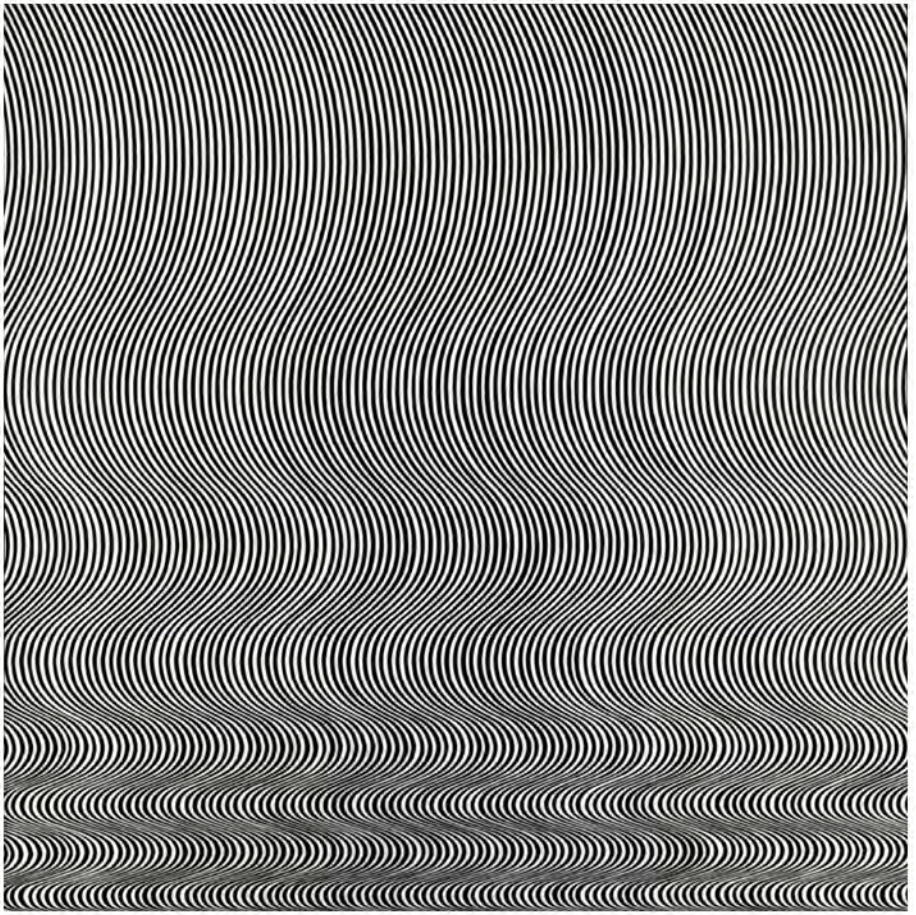
pt.3: demo/performance.

structure:


start
wondering if I've
covered the right stuff
half way through
etc.
in a bit
after
now

#1

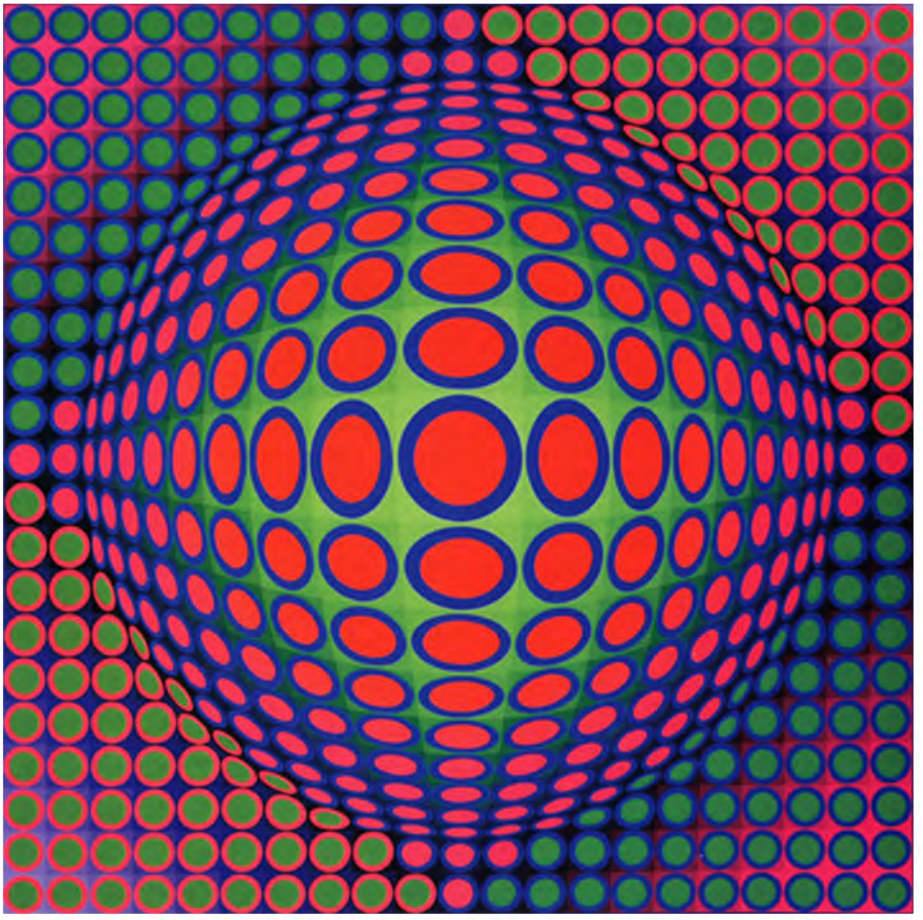
who/what/why?
studied fine art & video art [early 90s]
with old consumer video gear.
dj'd & made beepy techno [mid 90s]
on old Roland gear.
built an audio/visualiser in MAX
(pre-Jitter) [2000].



Bridget Riley, Fall 1963

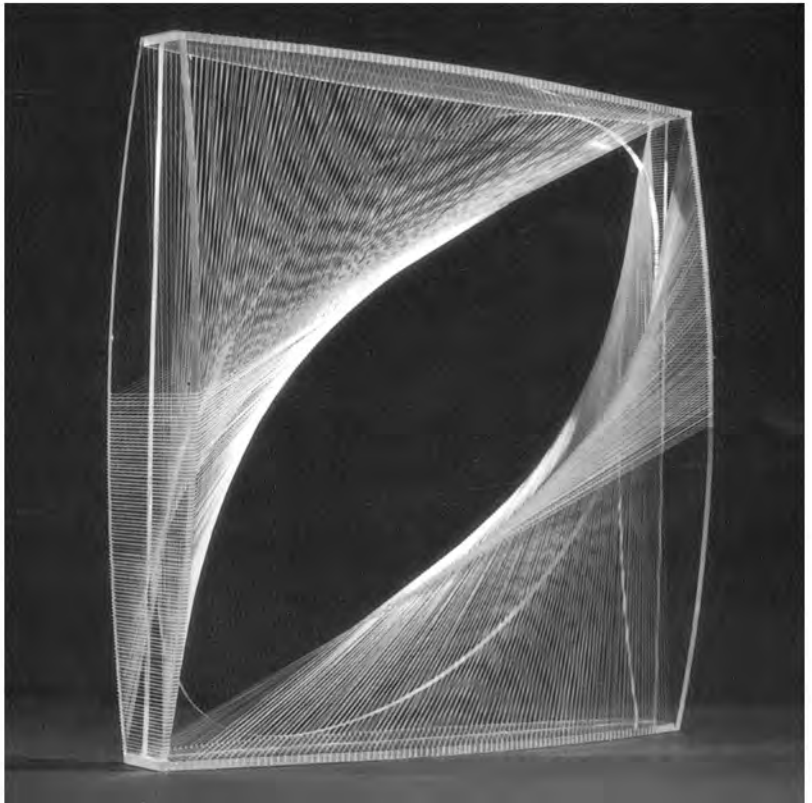
Bridget Riley, Fragment 2-10 1965

Victor Vasarely, Bora III 1964



Victor Vasarely, Vega 200 1968

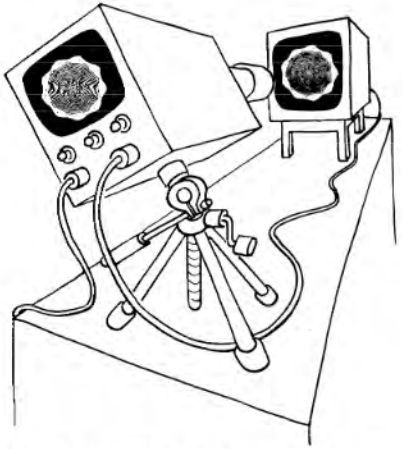
Naum Gabo
linear construction in space



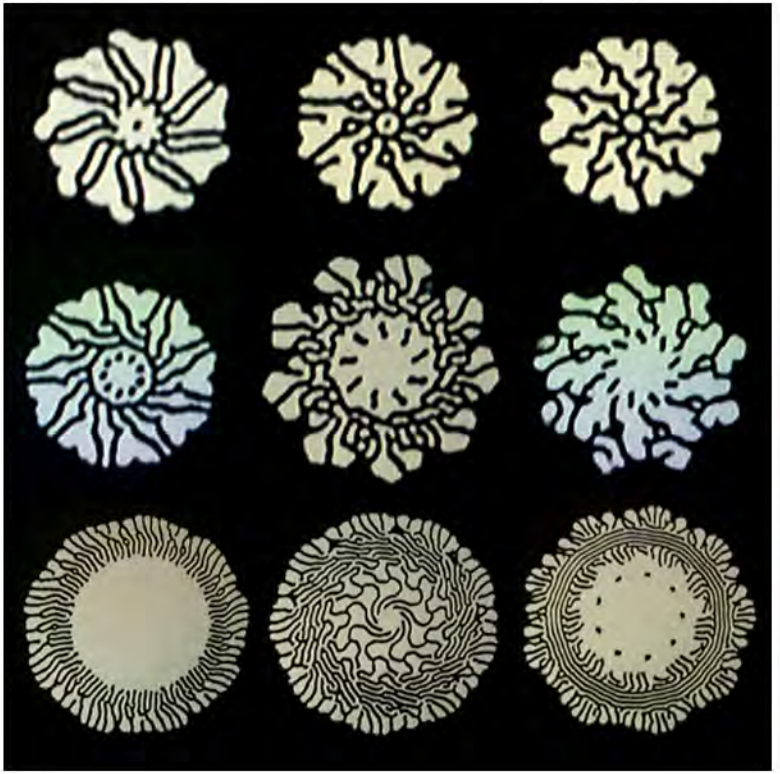
(1940s)

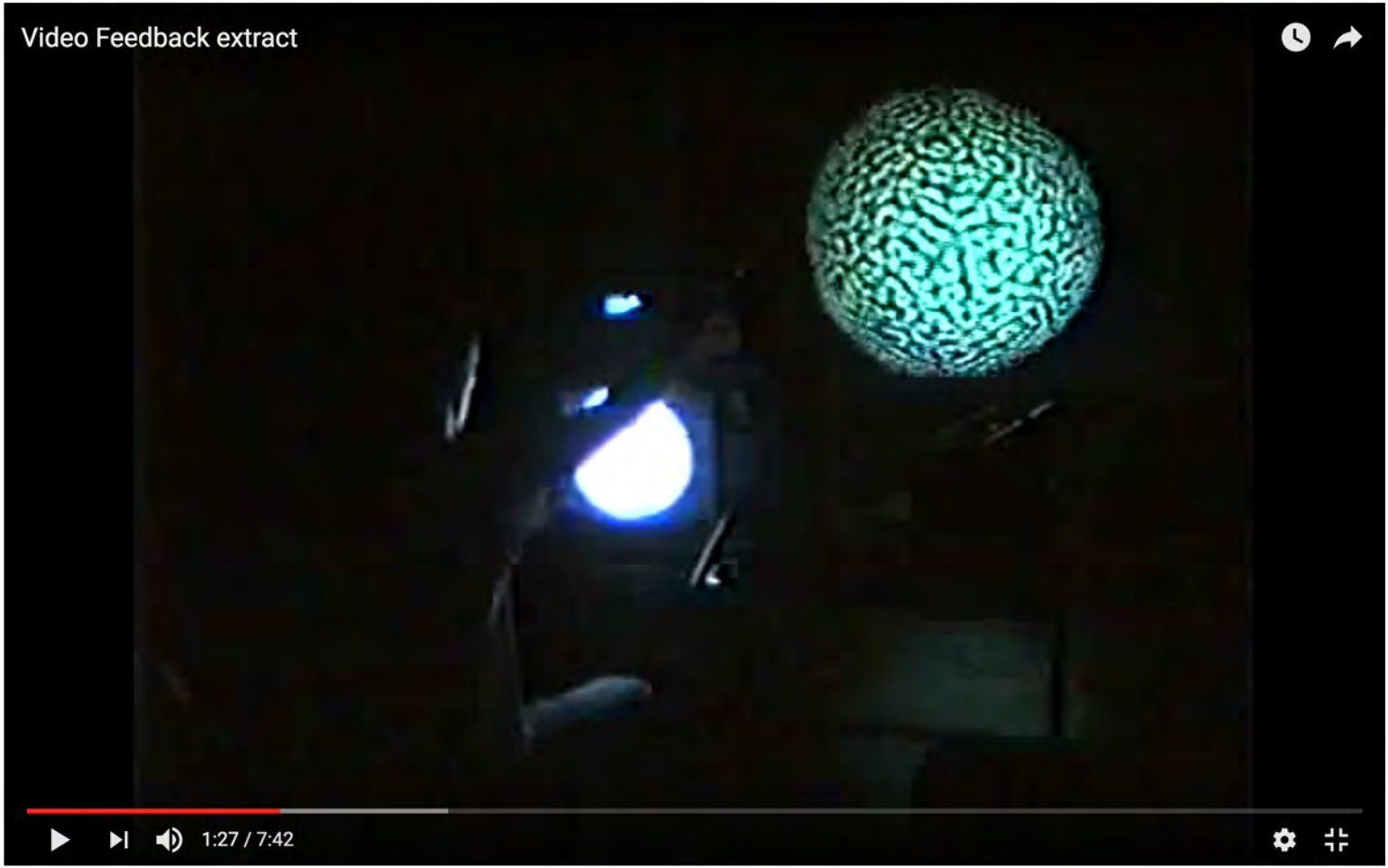
video feedback (not my pic)

(realmagicvideofeedbackloop.tumblr.com)



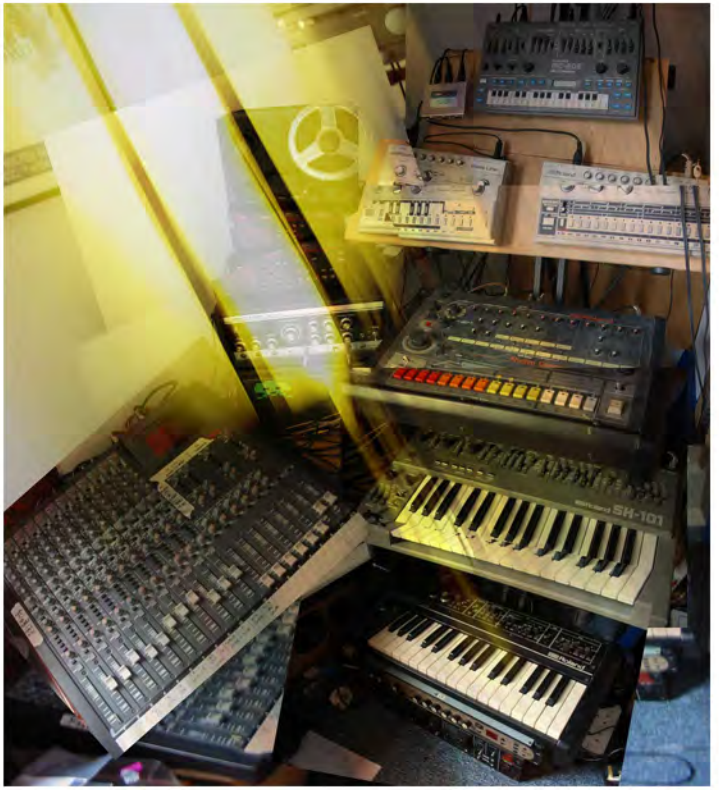
Space-Time Dynamics in
Video Feedback
Jim Crutchfield, 1984



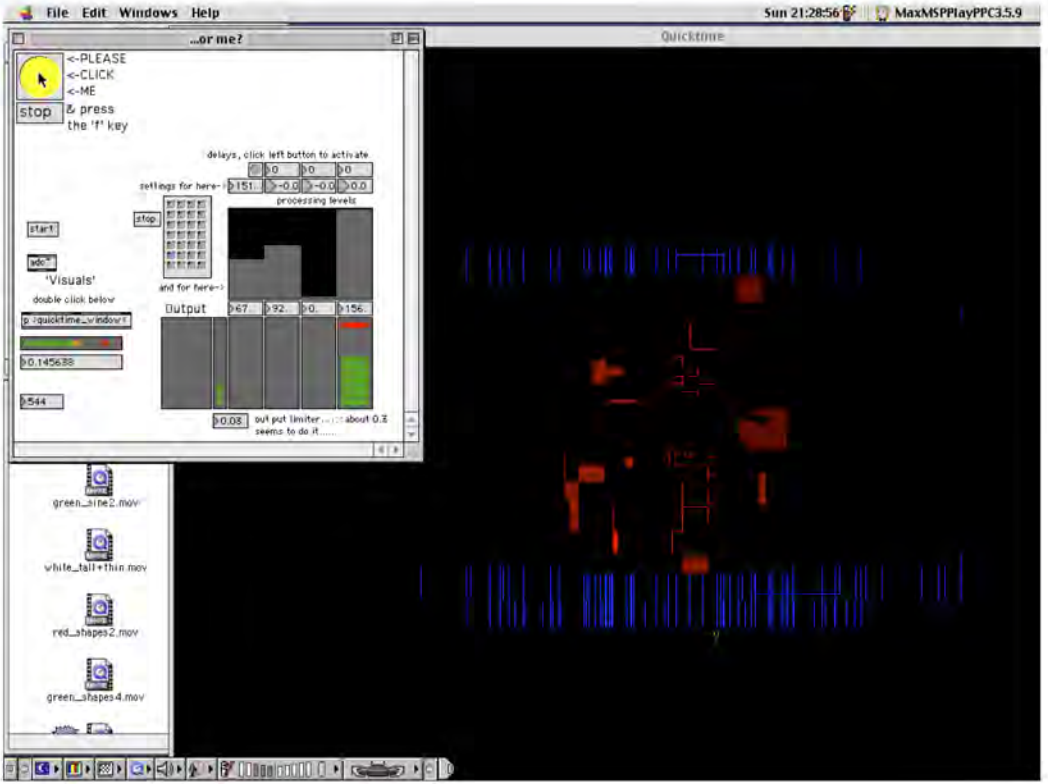

Video Feedback extract
1:27 / 7:42

TV innards as sound source

old Roland gear



99/2000 MAX audio/visualiser



#2

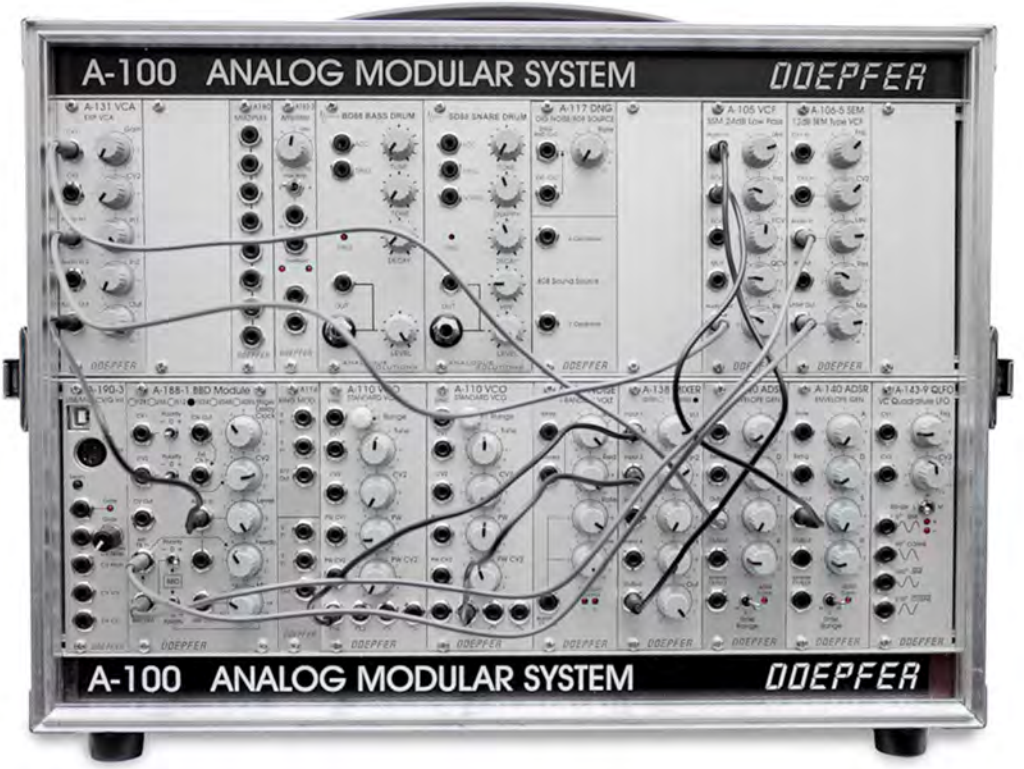
who/what/why?
started teaching.
kept messing with MAX & synths.
started looking at eurorack.
began hosting modular meet at work.
made lots of new friends.
started experimenting with modular.
got into oscillographics.

muffwiggler.com

then started doing modular meets

what is this stuff, though...?

this is a modular synth (just in case...)

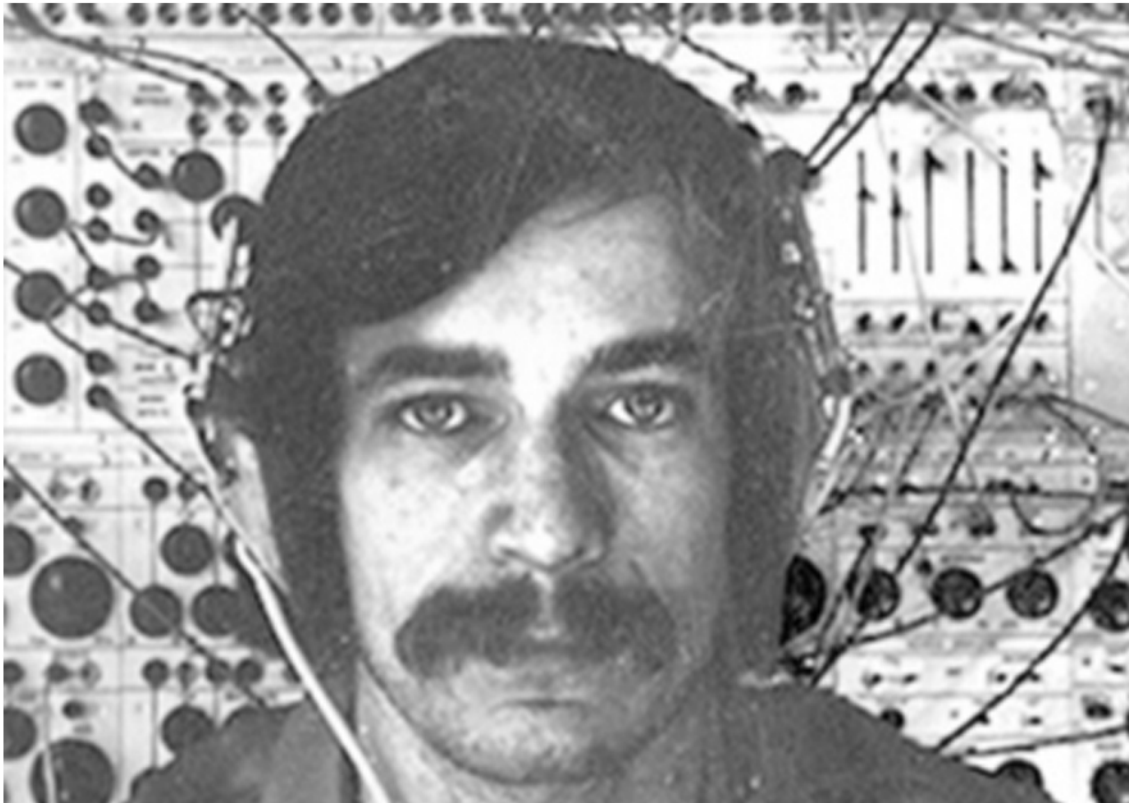


this is Hugh La Caine & his Sackbut

1st voltage controlled synth

this is Bob Moog & a modular synth

this is Don Buchla & his synth

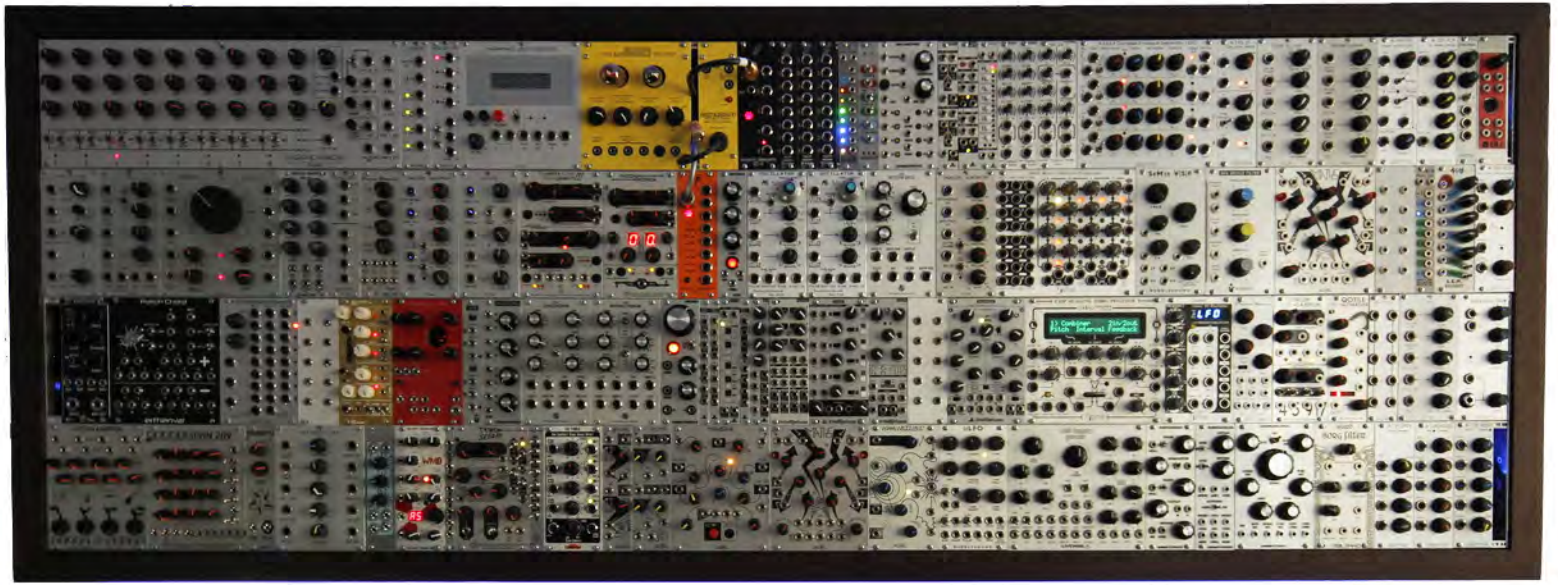


Bob and Don both used Hugh's voltage control idea in their synths but their methods of manipulating sound were different.

filters // complex modulation

loads of other synth stuff happened inbetween the 60s and the mid 90s

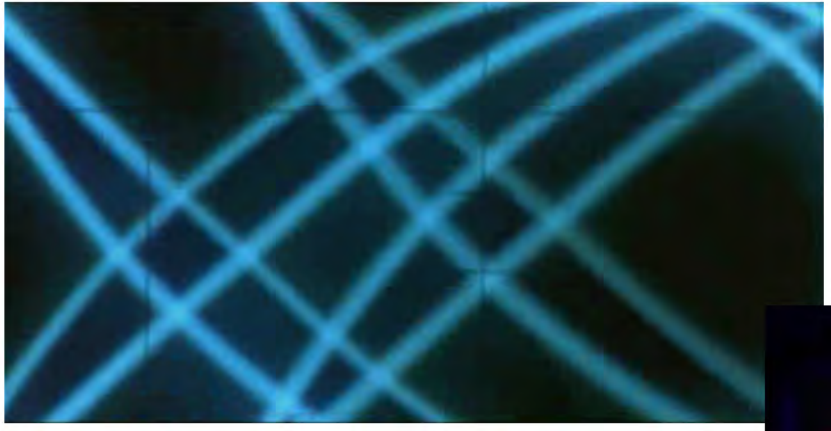
doepfer began this format in 1995
now there's loads and loads and loads
of companies and different modules.

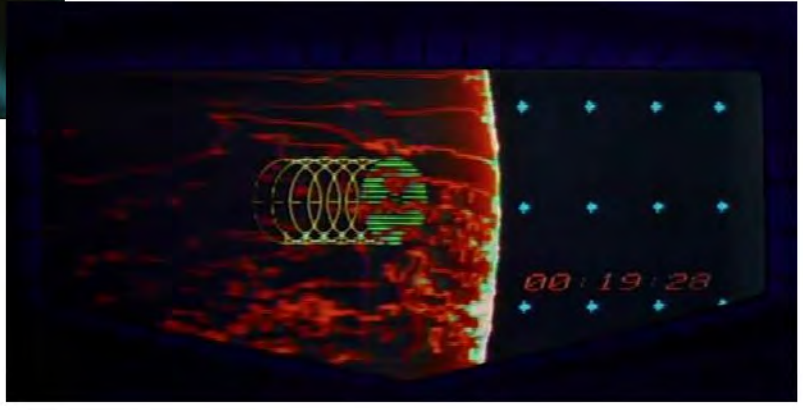


A simple & conventional sequenced synth voice:

oscillographics

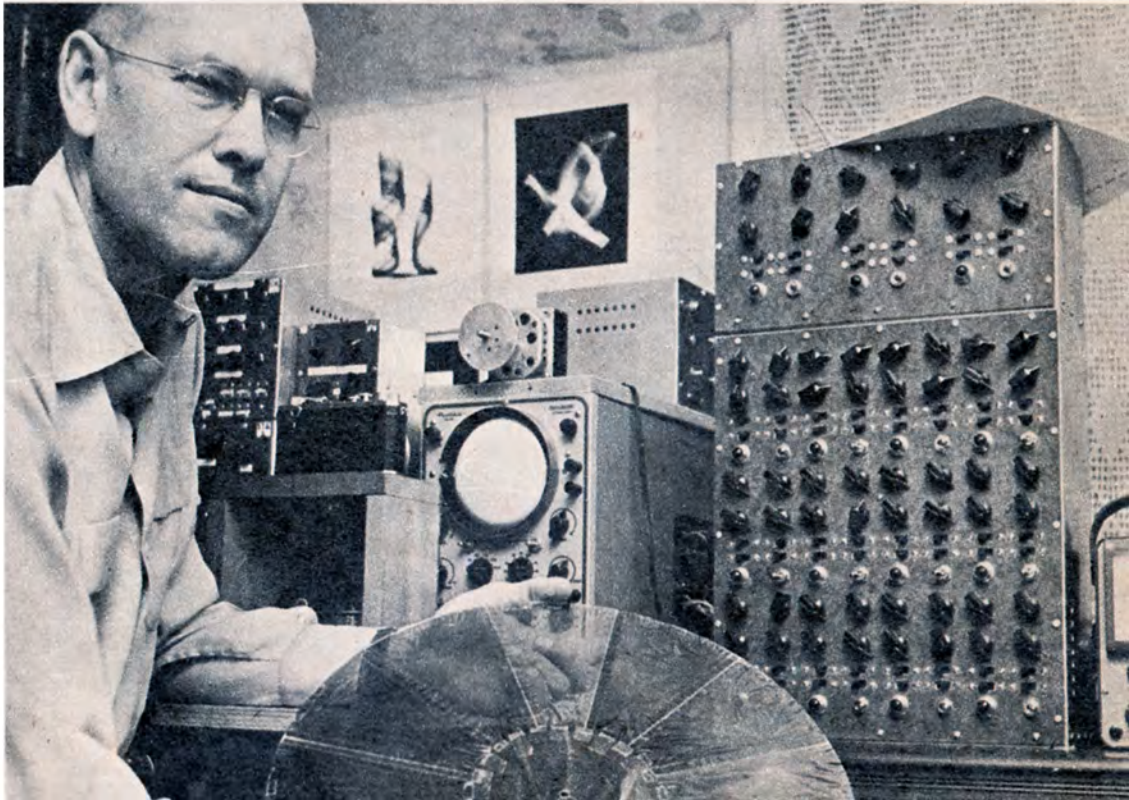
old sci-fi films - tech





ben f laposky

credited with making the first computer graphics, using an oscilloscope as the creation medium for abstract art in 1953.



skoobert Following

22 likes 60w

skoobert Discovered this thumbnail sheet of color #oscillons in a notebook of my late great Uncle #BenFLaposky while doing more research and photography for my book. The man's notebooks are works of art too. Many pages from the notebooks will be featured in the upcoming book on his life and work.

skoobert @ctrlmod

marklyken Look at them!!!!

castroesque #makingcircuits

perryshimon Wow amazing

Add a comment... ooo

skoobert

Following

18 likes

54w

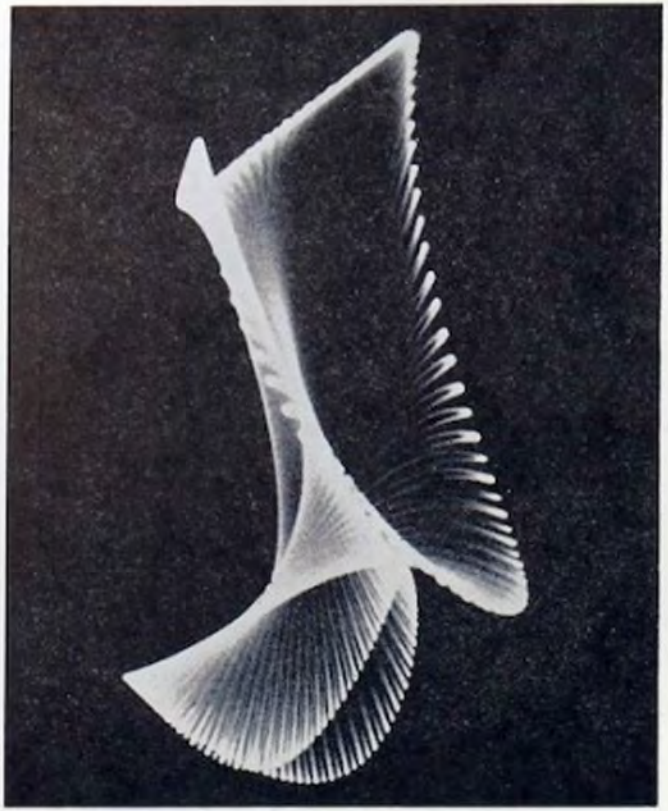
skoobert Starting to make some progress with the #benflaposky book 👍 This is one of the modified oscilloscopes that my Uncle Ben used for his #oscillons

joseconsafos Crazy

skoobert @ctrlmod

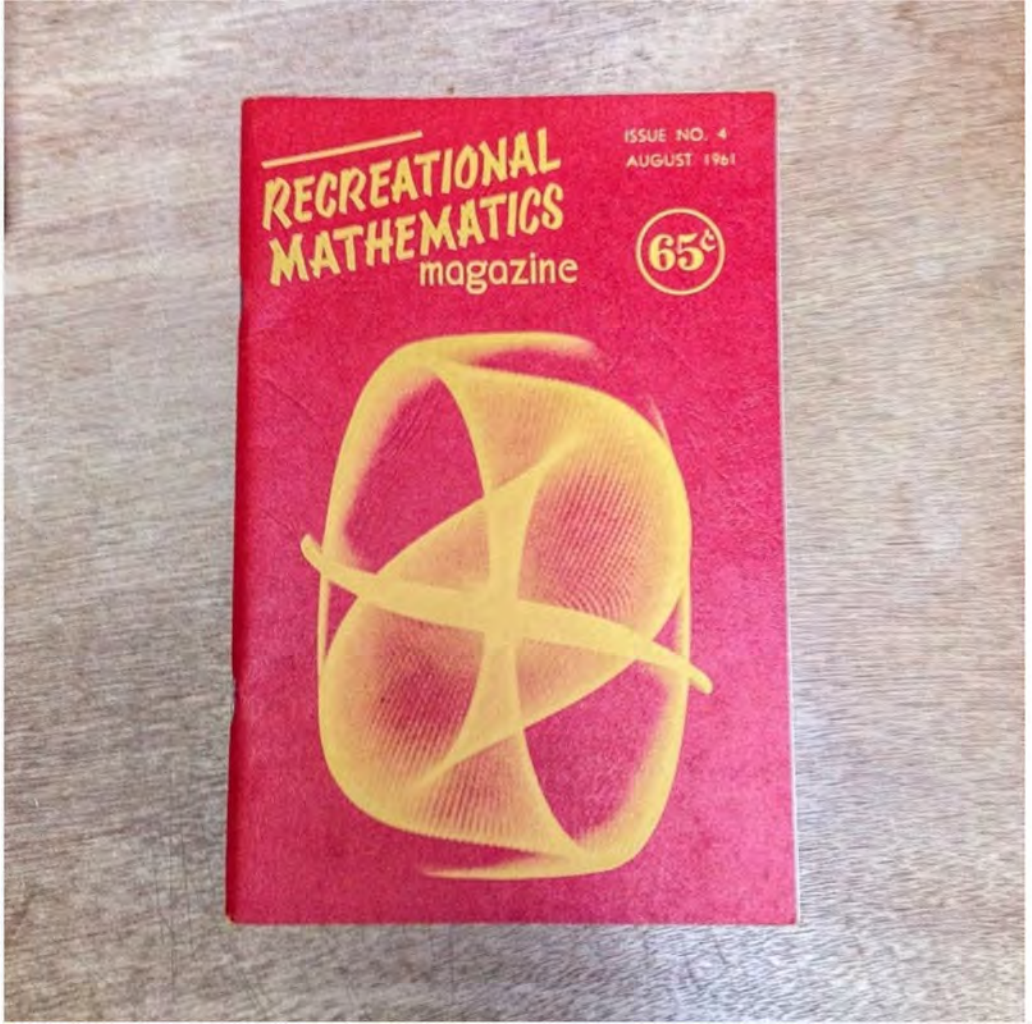
Add a comment...

ooo



OSCILLON # 16

OSCILLON # 38



skoobert

Following

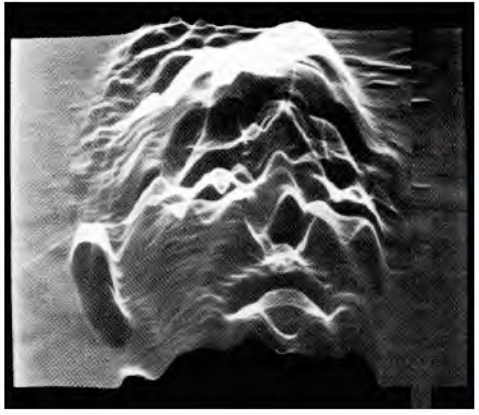
11 likes 119w

skoobert @kirlianauras

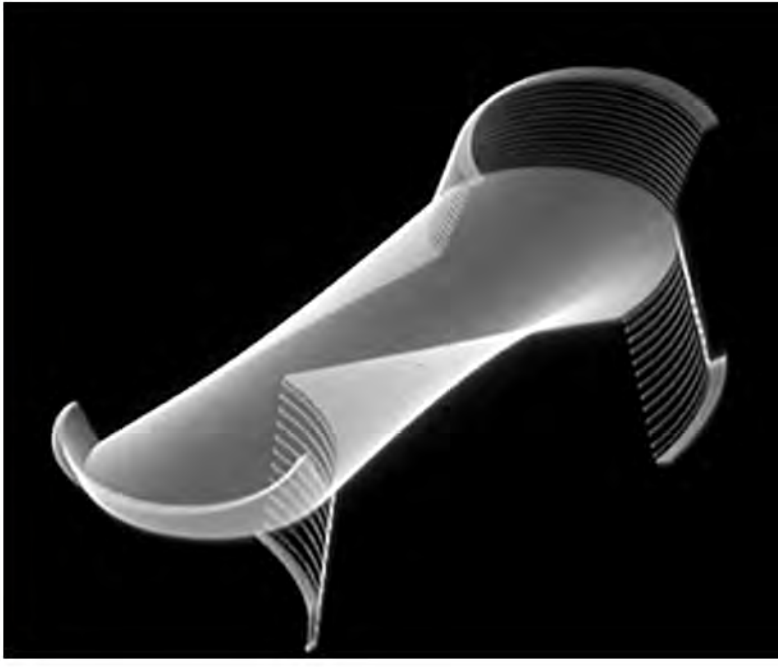
kirlianauras @skoobert YES!!!

Add a comment...

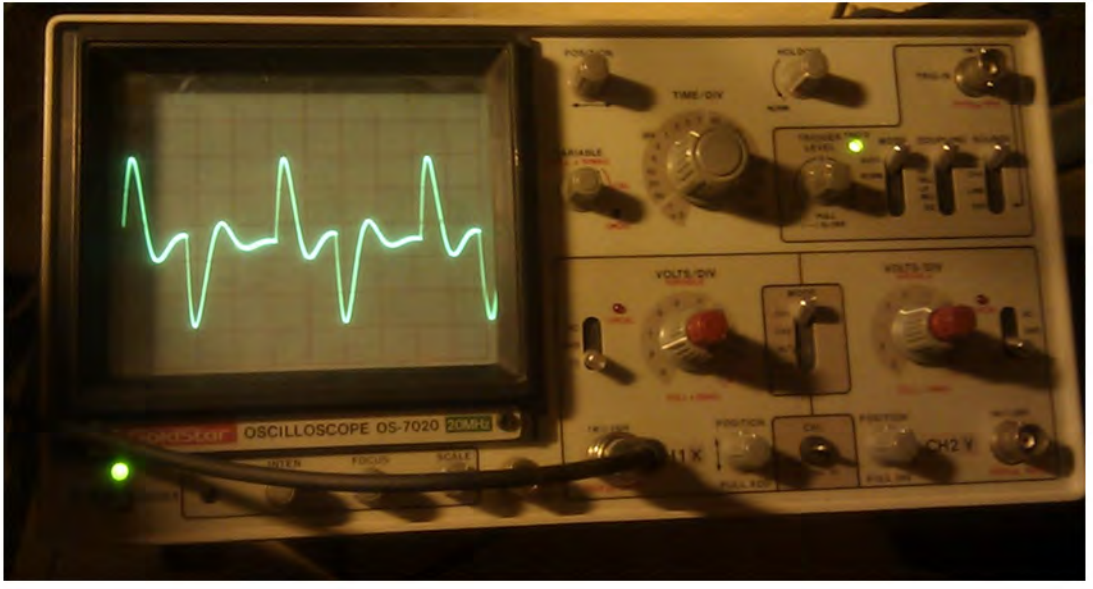
Steve Rutt / Bill Etra

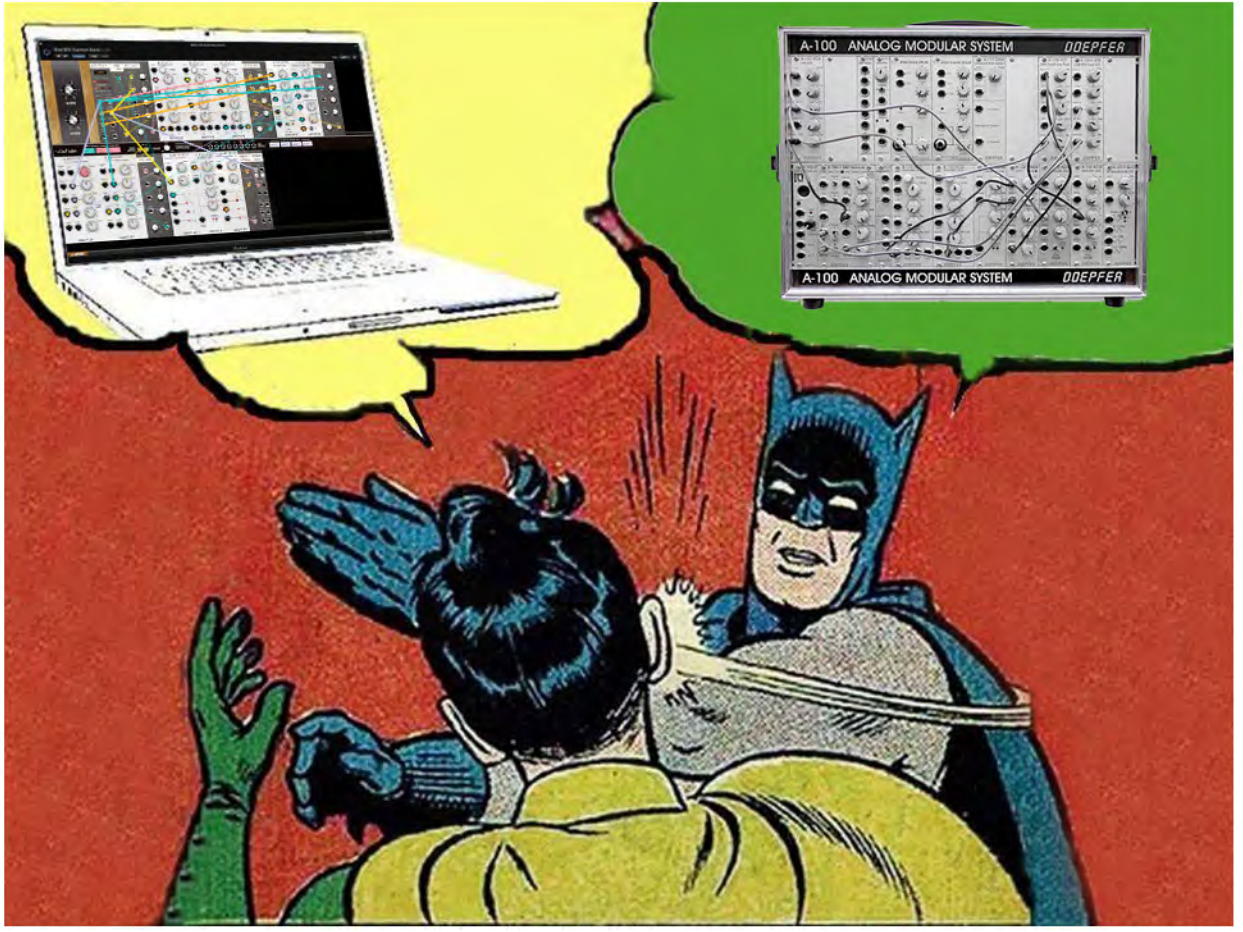


(1972)



oscilloscope - to look at sound




A-100 ANALOG MODULAR SYSTEM DOEPFER
A-100 ANALOG MODULAR SYSTEM DOEPFER

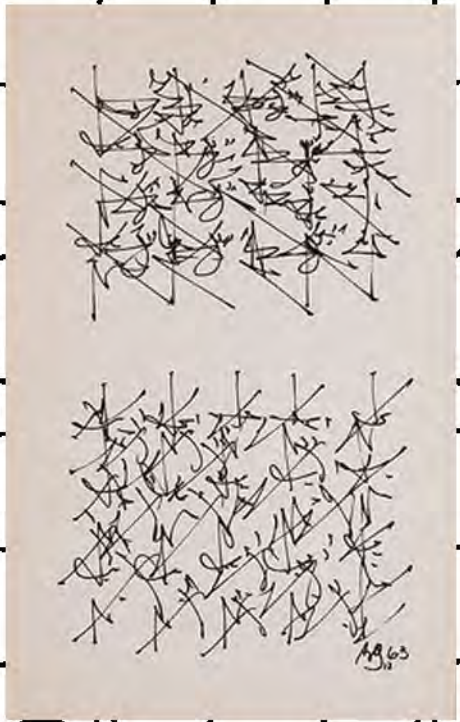
...but

Burroughs & Gysin

cut-up technique

Brion Gysin

(late 50s/early 60s)



wavefolding dual OSC scope view

+

=

muffwiggler/ video synthesis forum

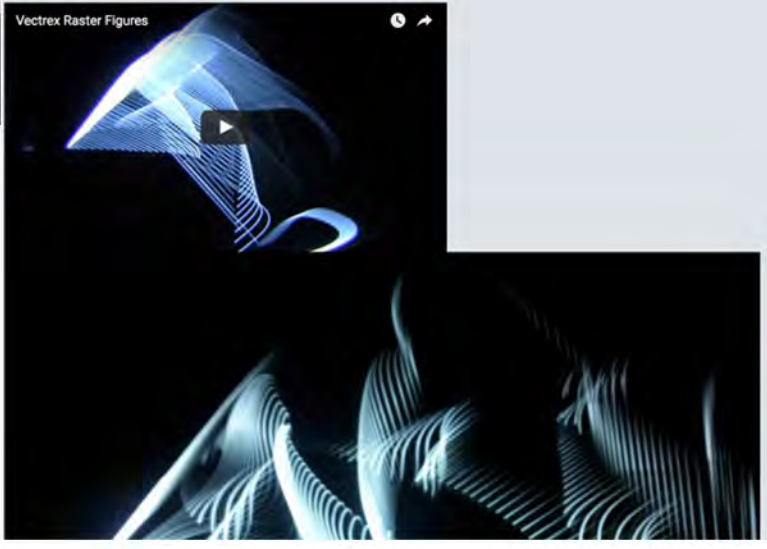
Hi guys,
I've had a fun project this week. I got a Vectrex console in the mail, disconnected its XYZ driver board from its CPU, and wired those XYZ inputs to external BNCs on the back (really it was that simple.) I'm driving it with the LZX system, using a typical vector rescan setup.

It's a really beautiful monitor, a very different aesthetic quality from the scopes and XY displays I've used before. It's based on a modified B&W television tube, rather than an ESD tube.

It's not fast enough for image rescanning (the horizontal sawtooth folds over.)

It may be able to be optimized further (I have schematics) but I may just leave it like it is.

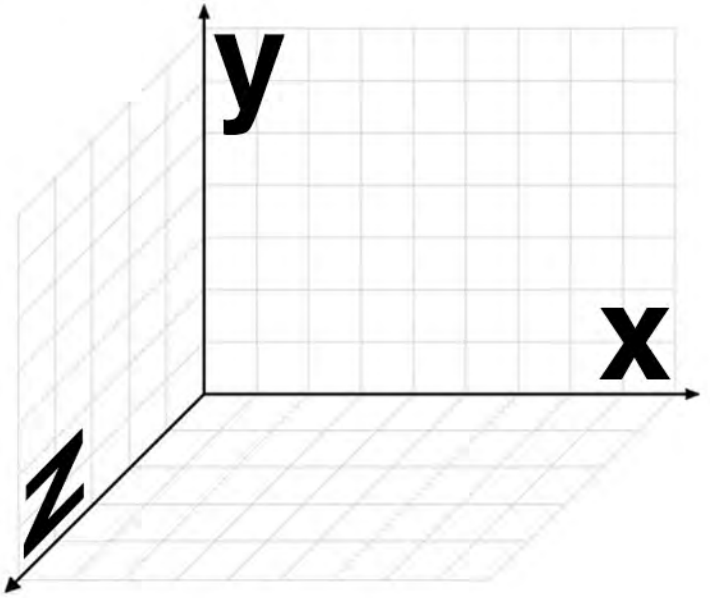
This is a fun project if y'all wanna try it!

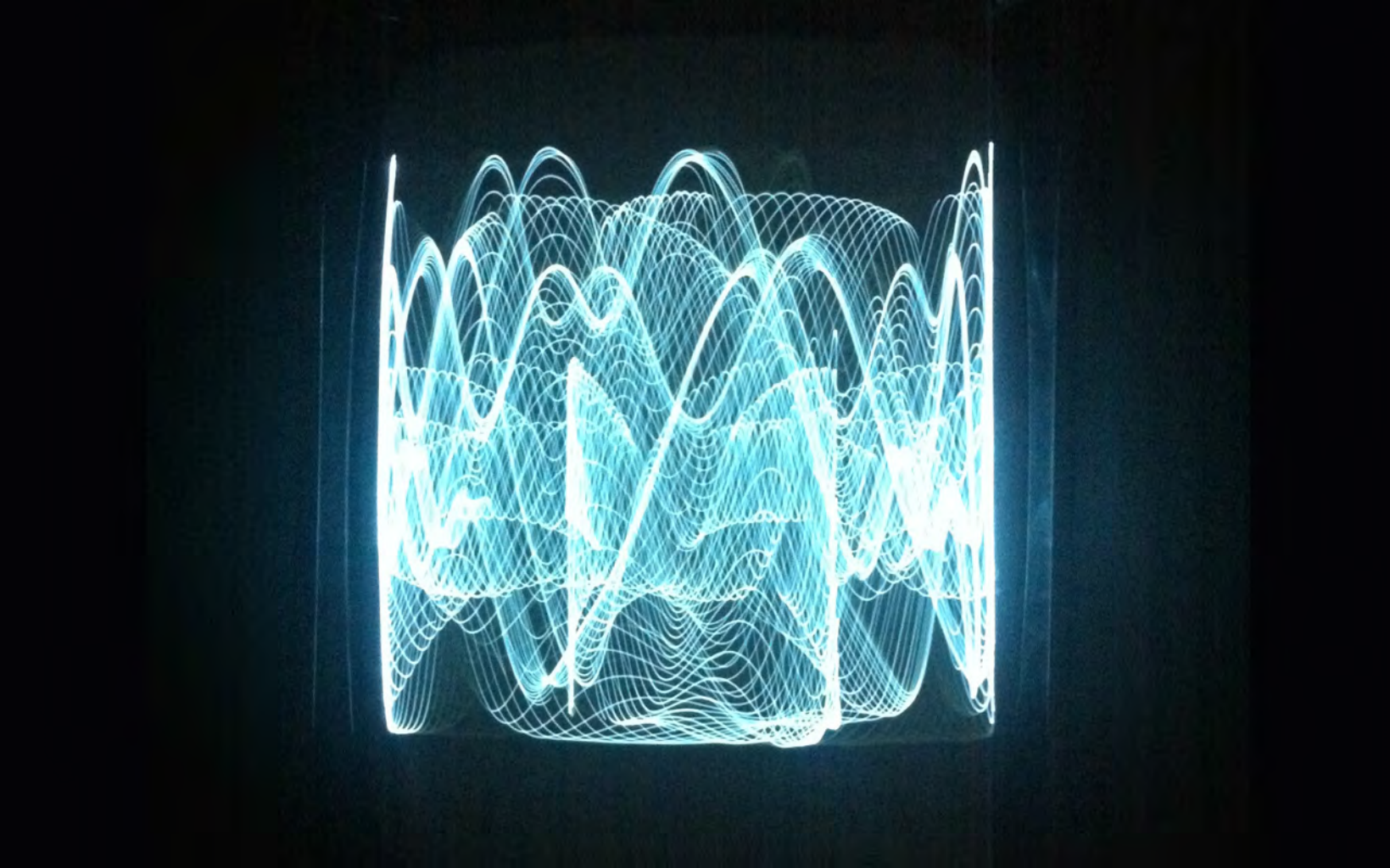


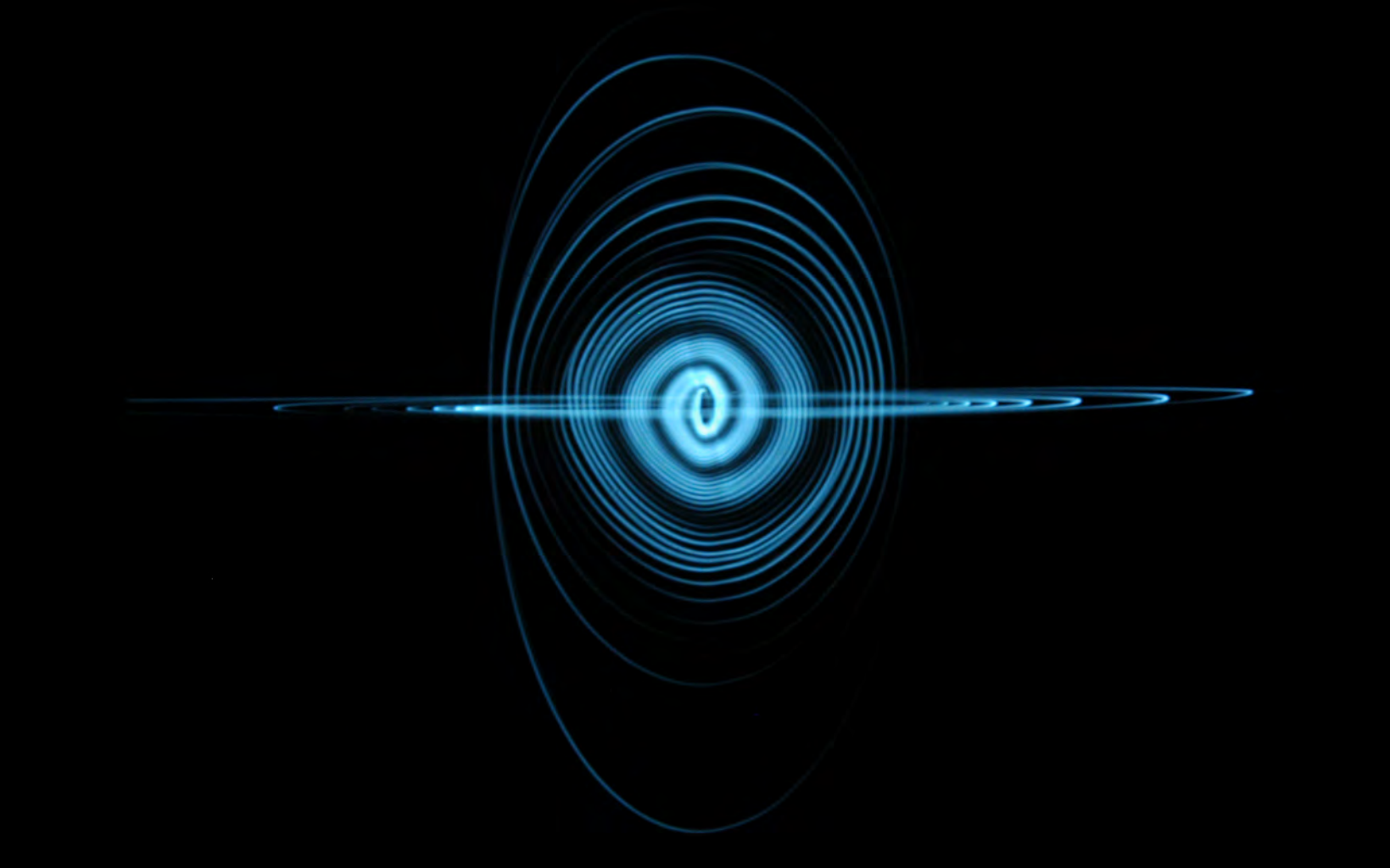
MB Games Vectrex 1982-1984

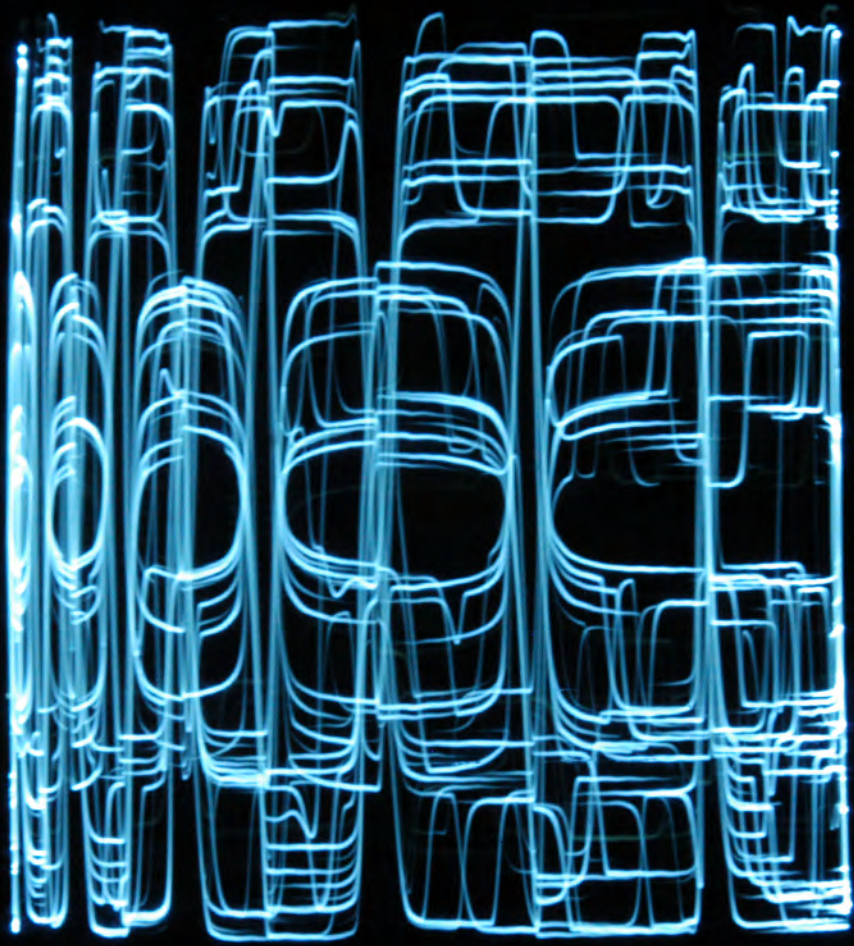
unlike a normal old CRT that displays images via a grid of pixels, a vector screen shows its images by drawing lines between points.
these screens can only really show lines but do not suffer from any aliasing or pixelation.

vector image ‘space’









Vectrex
minijack-input mod

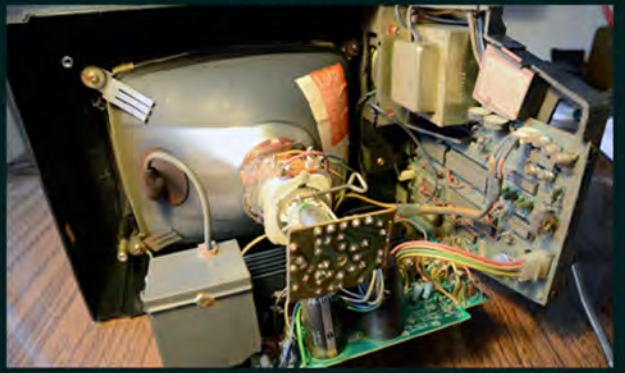
Disclaimer: I take no responsibility for any damage to the Vectrex or your own person, whilst performing this modification.

This unit can contain dangerous/heart-stopping amounts of electricty.

BEFORE EMBARKING ON THIS MODIFICATION, ENSURE THE VECTREX UNIT IS DISCONNECTED FROM ANY POWER SOURCE!

Remember this image from earlier?!
This image highlights the DANGER areas within the Vectrex. The tube, anode and capacitors can contain heart-stopping voltages, AVOID touching these parts of the unit until you are confident you have fully discharged the CRT.
IF YOU ARE UNSURE OF FOLLOWING THIS PROCEEDURE STOP NOW AND SEEK PROFESSIONAL ADVICE.

Turn your Vectrex on to its side (as the picture shows) and have a look at all the crap that has accumulated in there over the years.



bentoncbainbrid... Following

14 likes 92w

bentoncbainbridge #Vectrex #minijack #modification

thegameboymaster How does the mod work? @bentoncbainbridge

allthesixes666 @bentoncbainbridge hey, that PDF looks familiar ;) how did you find the walk-through? I think I put enough warnings in there... !⚠!⚠!⚠!

bentoncbainbridge Thanks @allthesixes666 your guide is very clear and easy to follow! I am trying to mod 1 of my Vectrex consoles with switching 3.5mm minijacks so it can be played as a console when nothing is plugged into it (my 9 y.o. son likes it ;)

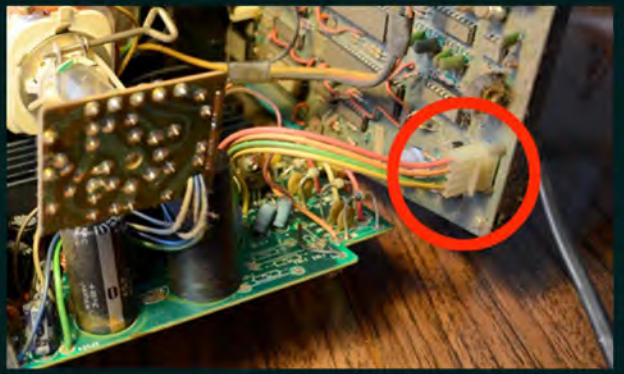
bentoncbainbridge @thegameboymaster https://dl.dropboxusercontent.com/u/4698298/VectrexMinijackInputMod2014.pdf

allthesixes666 @bentoncbainbridge

Add a comment...

Now you Vectrex should be safe for you to pull out four PCB connectors:

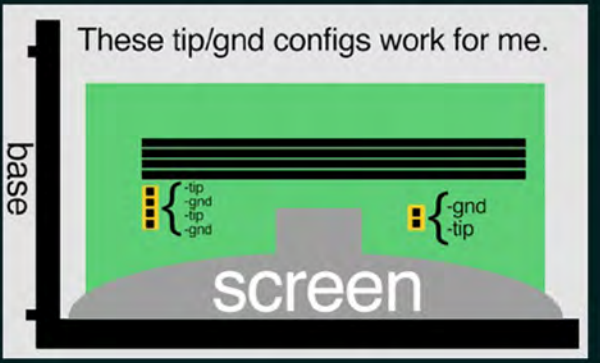
The 4 pin game board connector
(if you don't want the game to start up every time you switch the unit on).



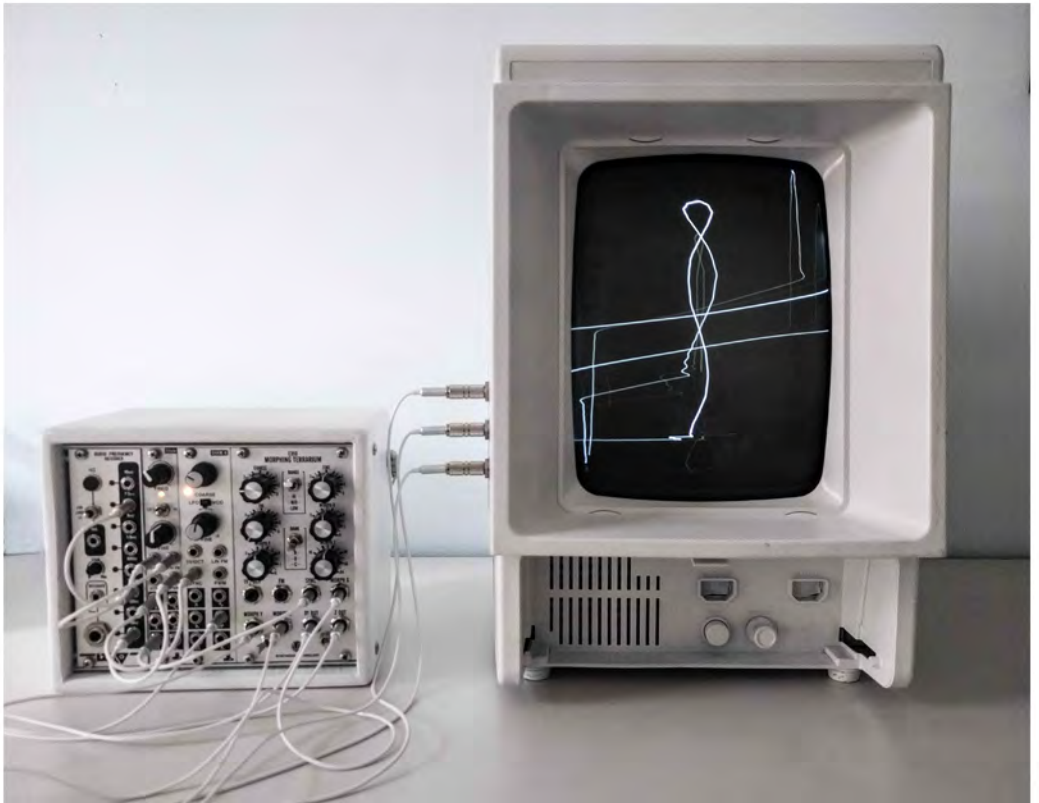
The (larger one at the rear) 2 pin speaker connector
(if you don't want to hear the speaker-buzz or game music).

The Z cable needs to be about 6 inches longer than the X/Y if you want to poke the cables out of the bottom of the case.

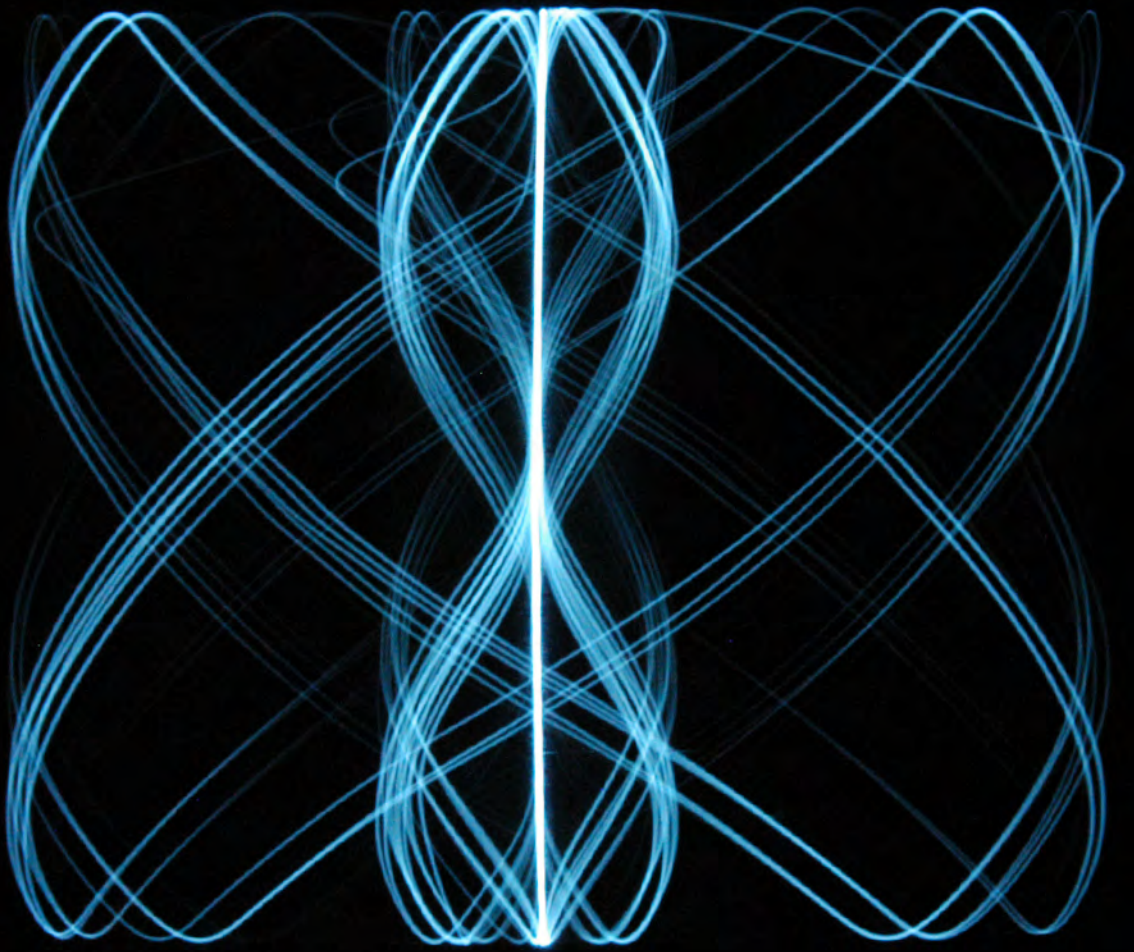
This image shows you the tip and ground configurations you should need to get your cables and headers right for inputting audio signals.

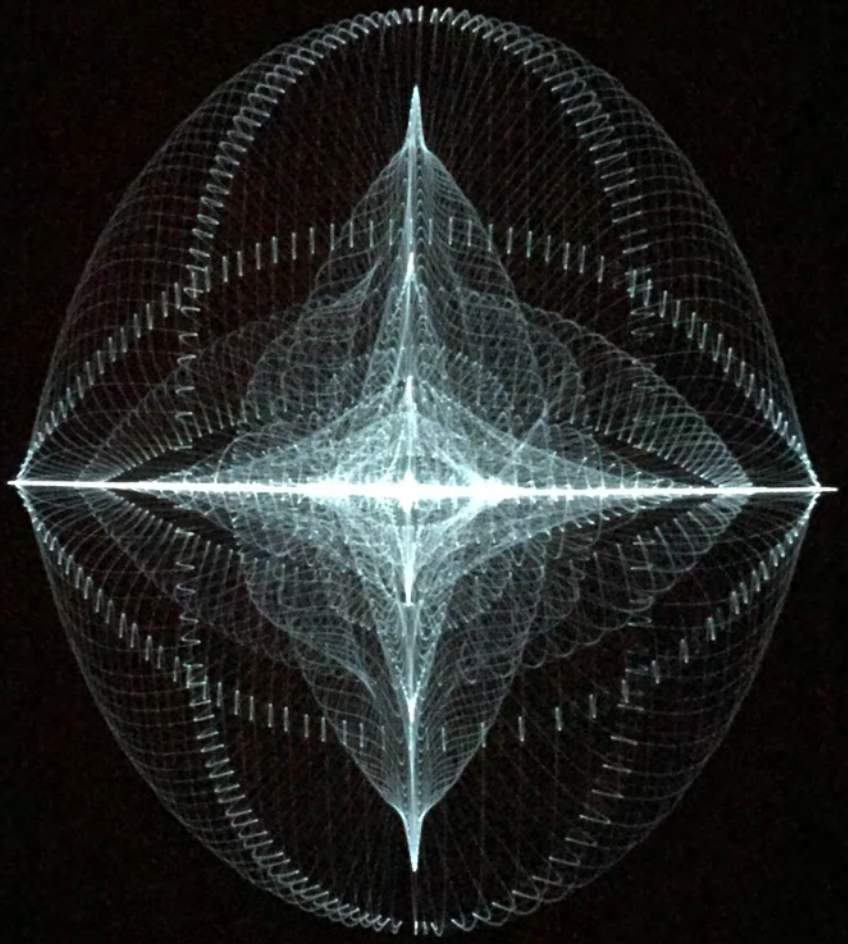


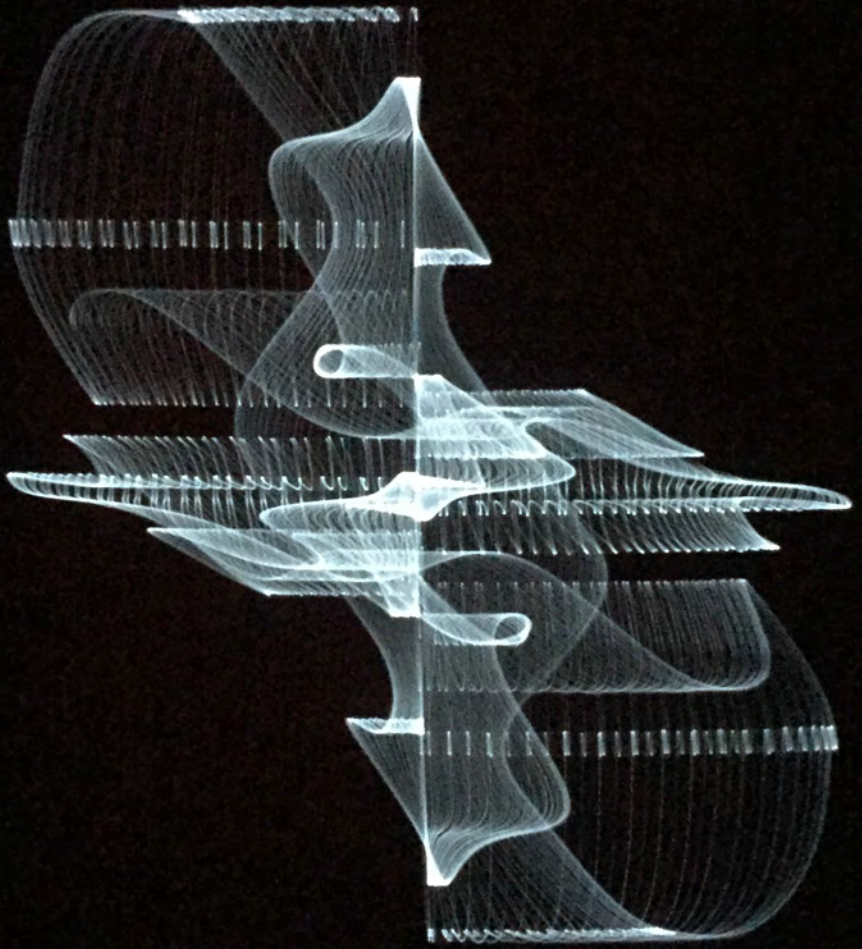
Benton Bainbridge / Lisa Joy

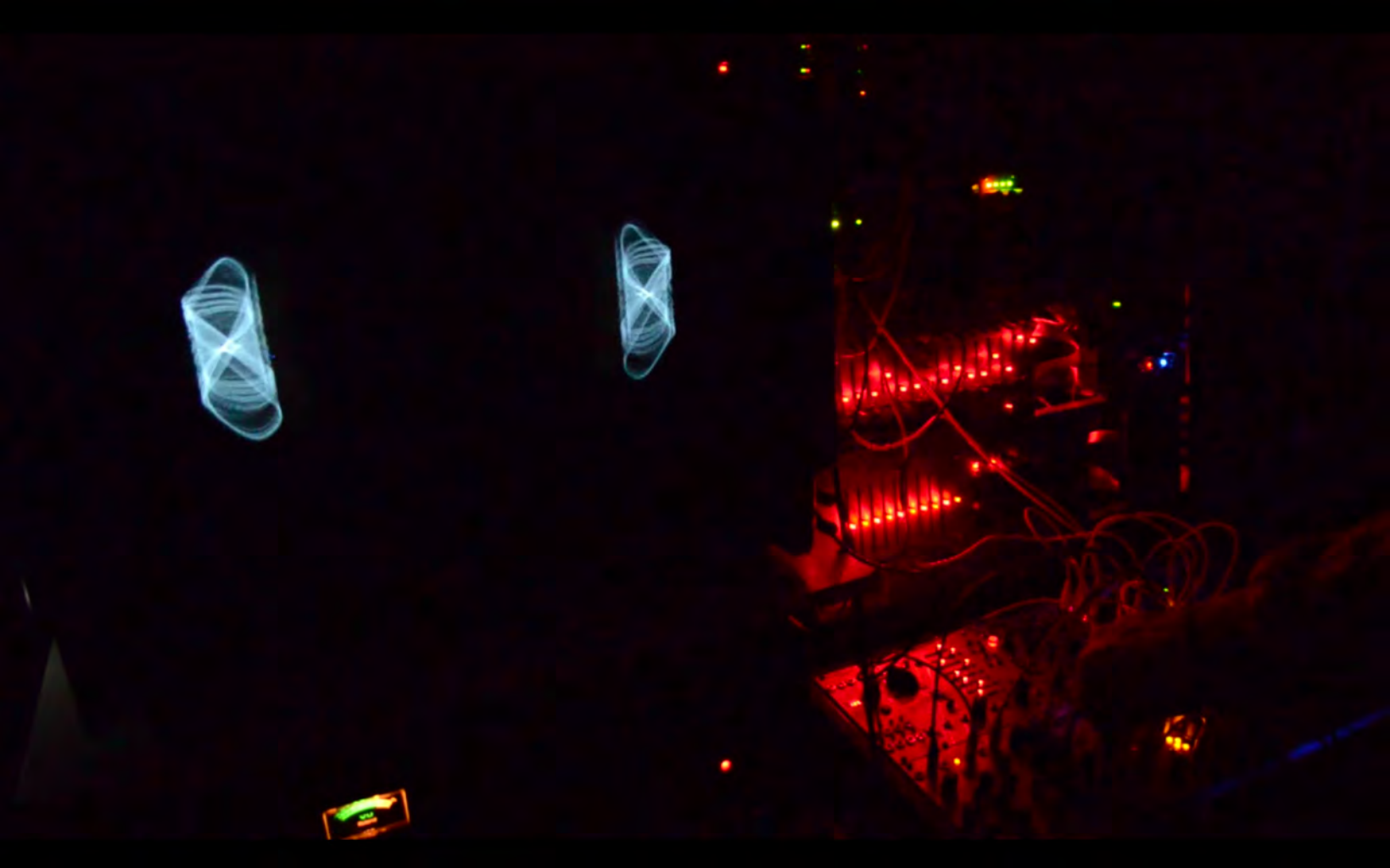


Akira's Rebirth

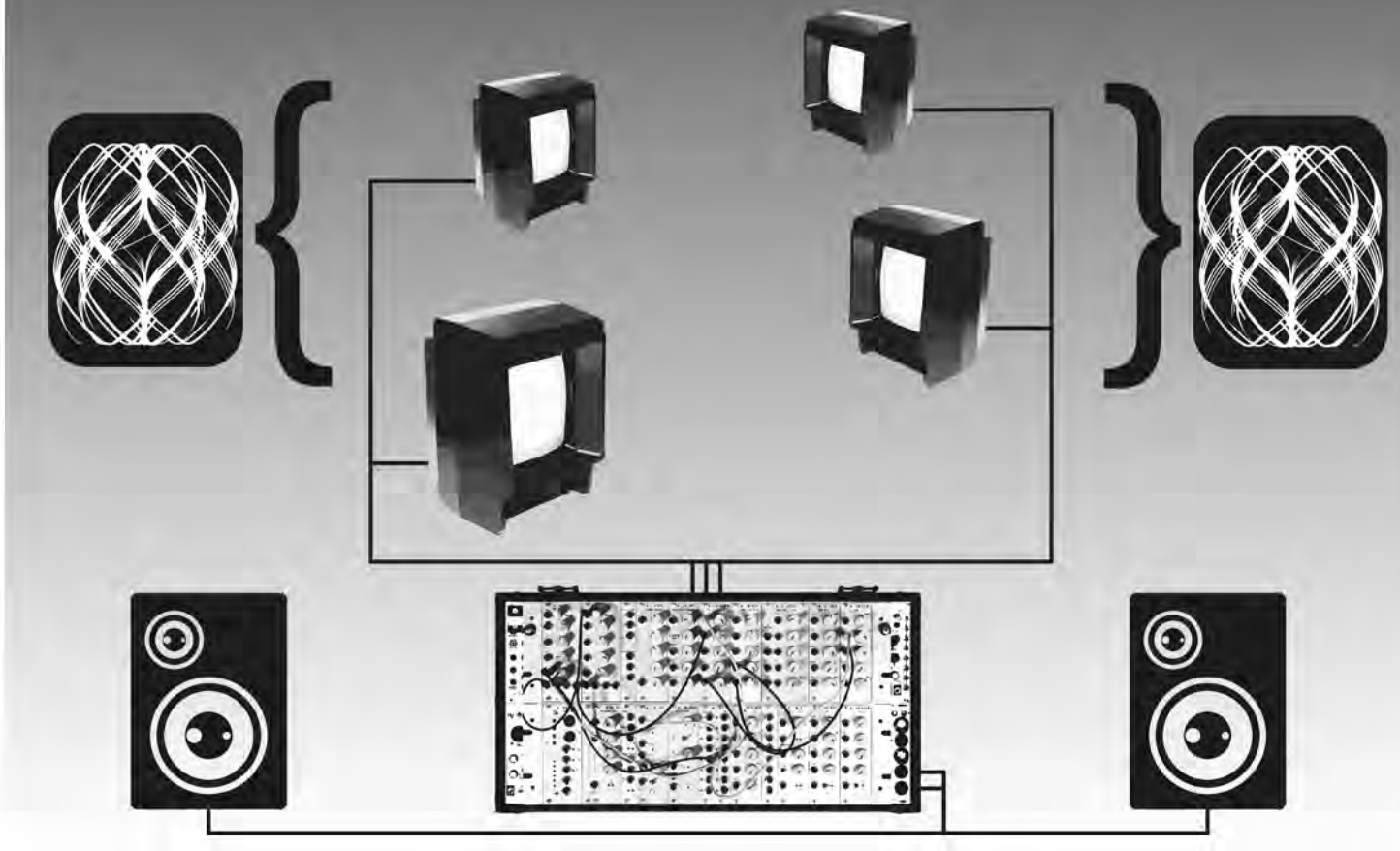








Four-screen Vectrex/Modular synth audio/visual installation.

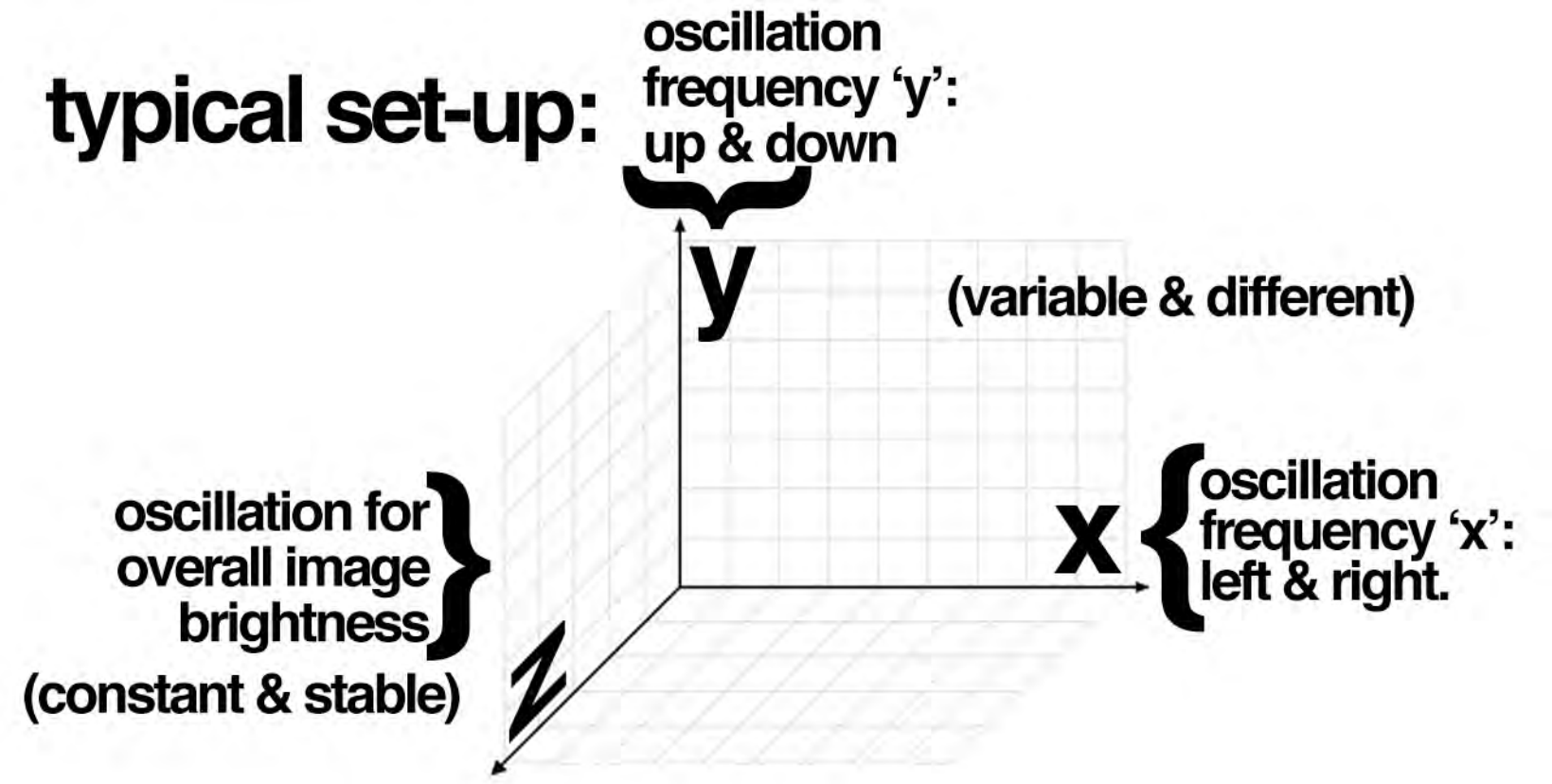


after digging around in the dark...
main tool: offset & attenuation

} to move & scale.

\+ combinations of other modules that make cool shapes.

typical set-up:



typical set-up:

oscillation frequency 'y': up & down

y (variable & different)

x { oscillation frequency 'x': left & right.

oscillation for overall image brightness } (constant & stable)

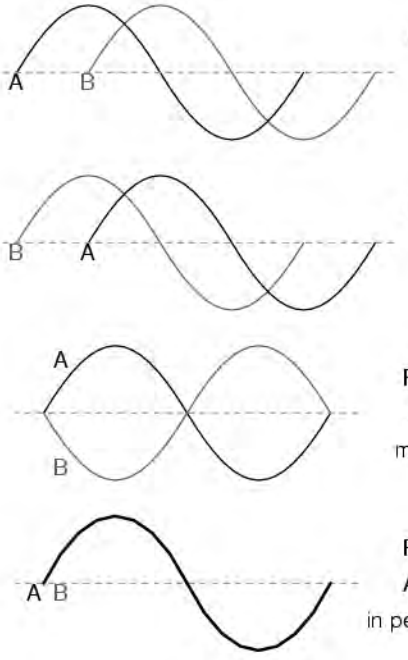
z

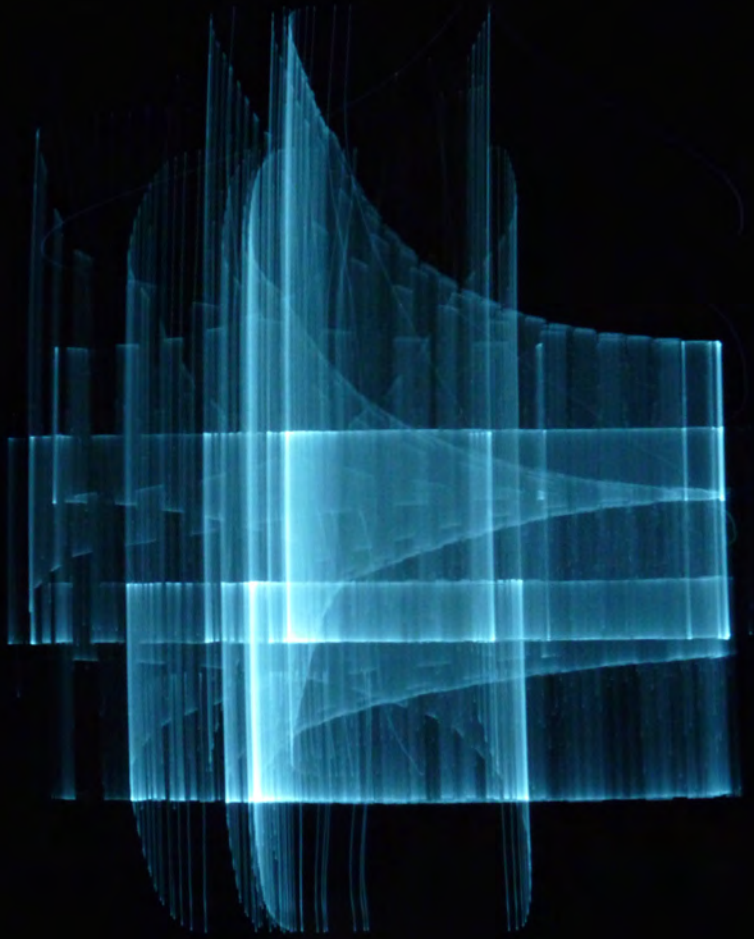
a useful module...

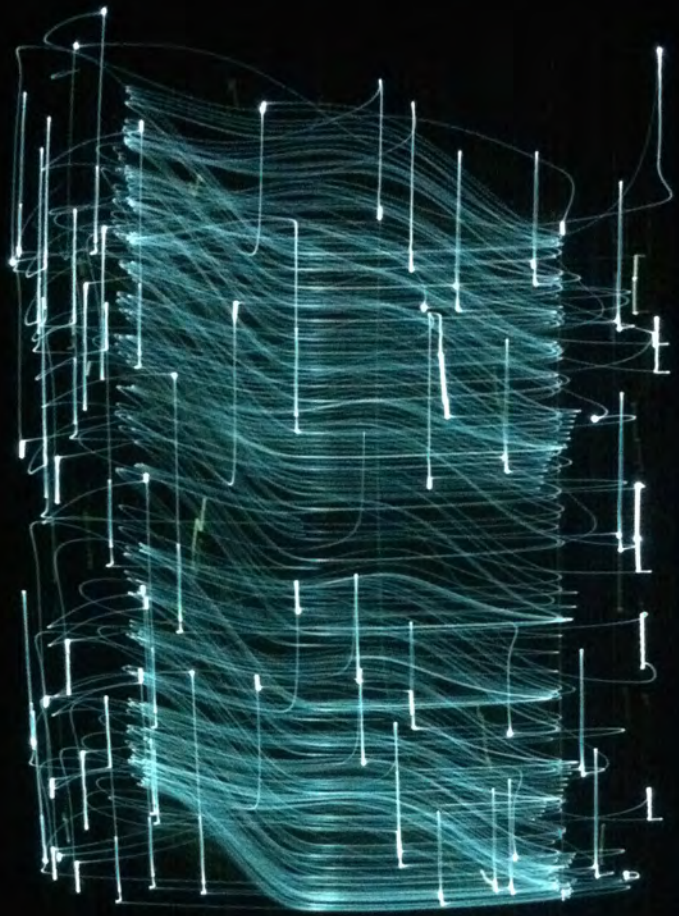
Phase Displacement Oscillator

} **phase shift**

output A, B, etc.







DesInC Live

An Evening of
Experimental Music
and
Experimental Instruments

Anton Mobin
DesInC.ollisions / Prepared Chamber

Andrew Duff
Vectrex & Eurorack study #X 'Performance v4'

Atau Tanaka
Myogram

We Are Raw
Audiovisual Live Coding

TRASH neurons
Drum kit and noinput feedback mixer

Alice Eldridge
Feedback Resonator Cello Solo

Nov 4th

Attenborough Centre
for the Creative Arts
Tickets £5 (£2.50 concessions)
Doors 7pm, Performances 7:45pm
https://www.attenboroughcentre.com/
https://desinc.mfm.sussex.ac.uk/concert

BRITISH ACADEMY
for the humanities and social sciences

ATTENBOROUGH CENTRE FOR THE CREATIVE ARTS


BrightonModularMeet
1st & 2nd July
2017
Attenborough Centre
for the Creative Arts
University of Sussex
Brighton
"The UK's largest modular synth event!"
Thonk.co.uk
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ta!

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youtube: halfofmeis333
@brightonmodular
brightonmodularmeet.co.uk