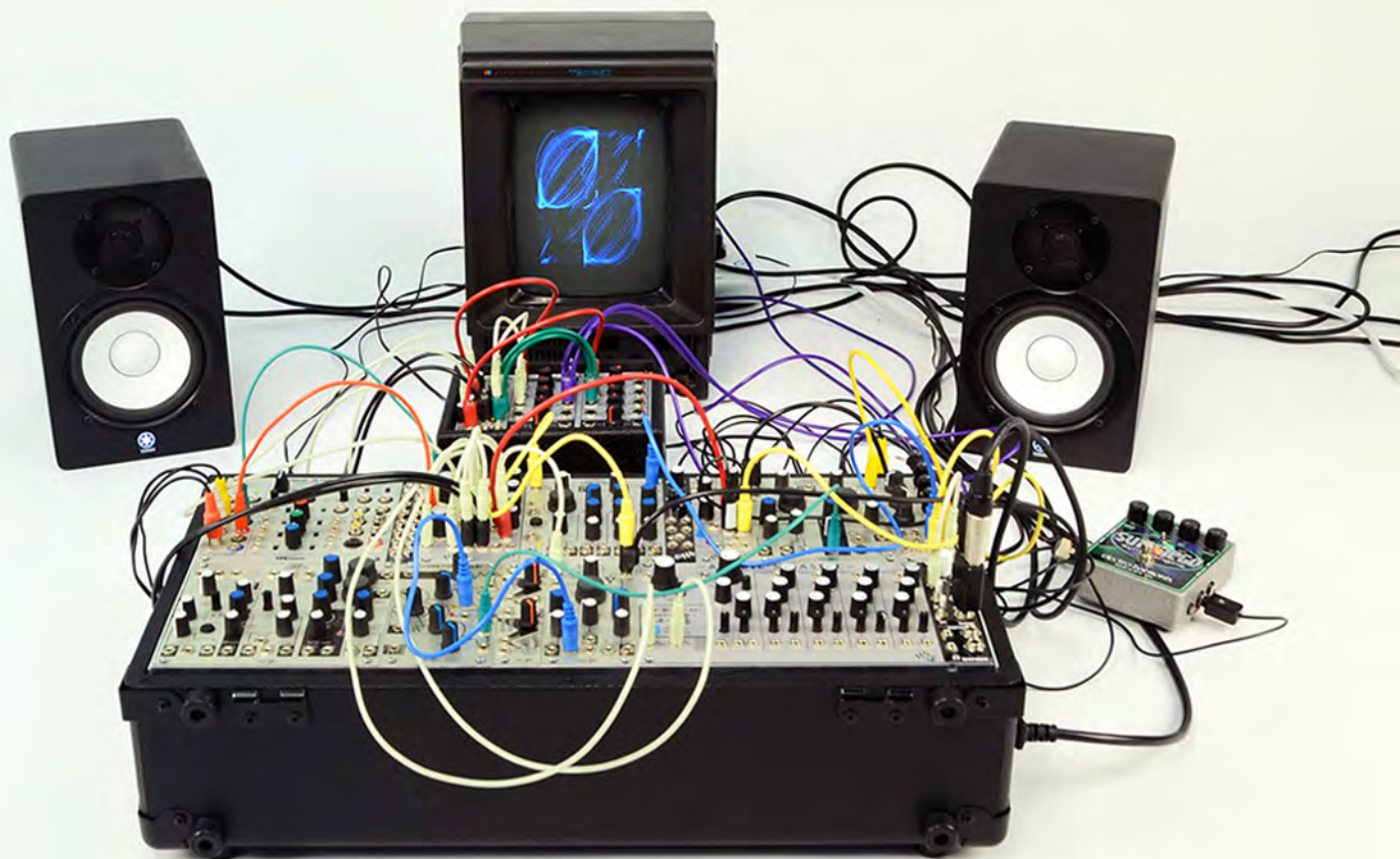
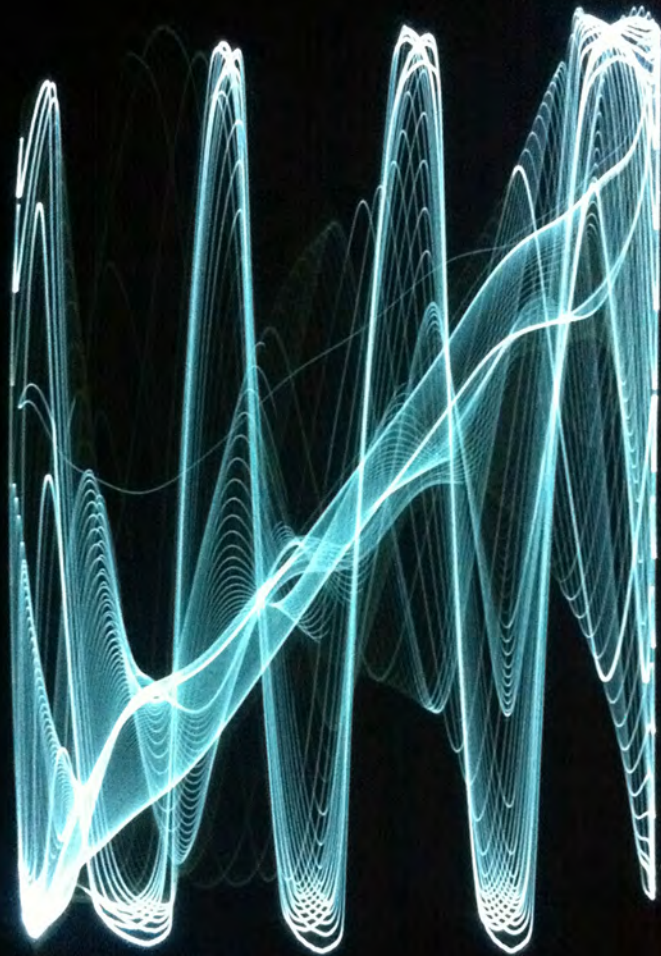


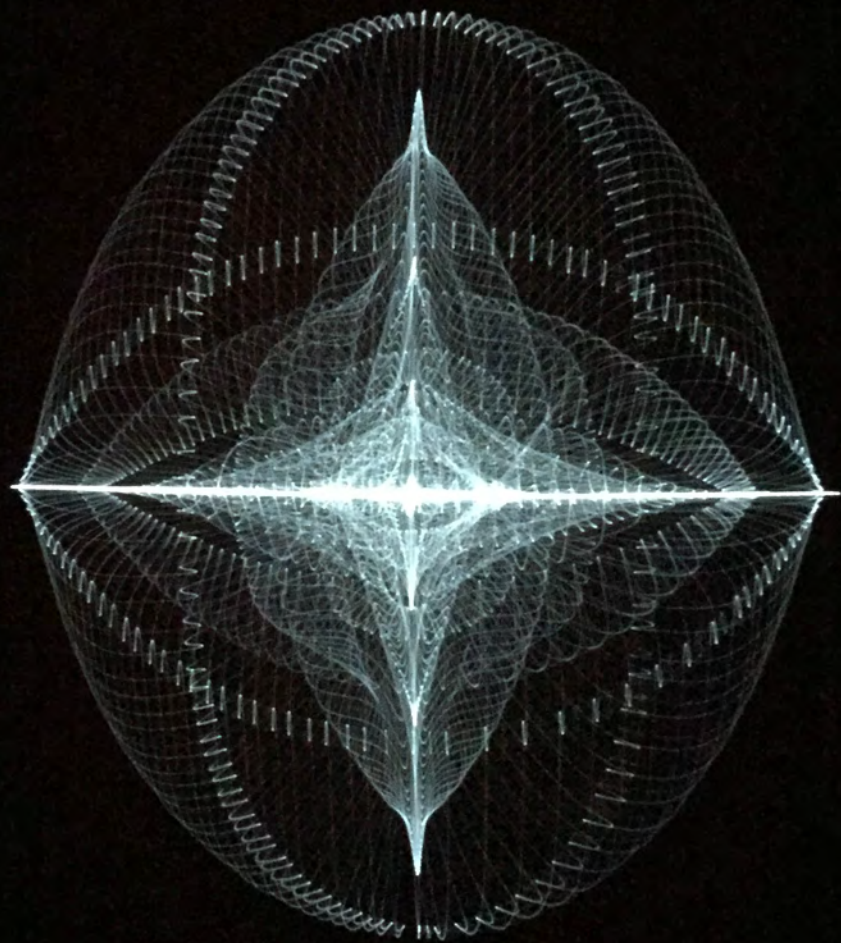
# Andrew Duff / Vectrex

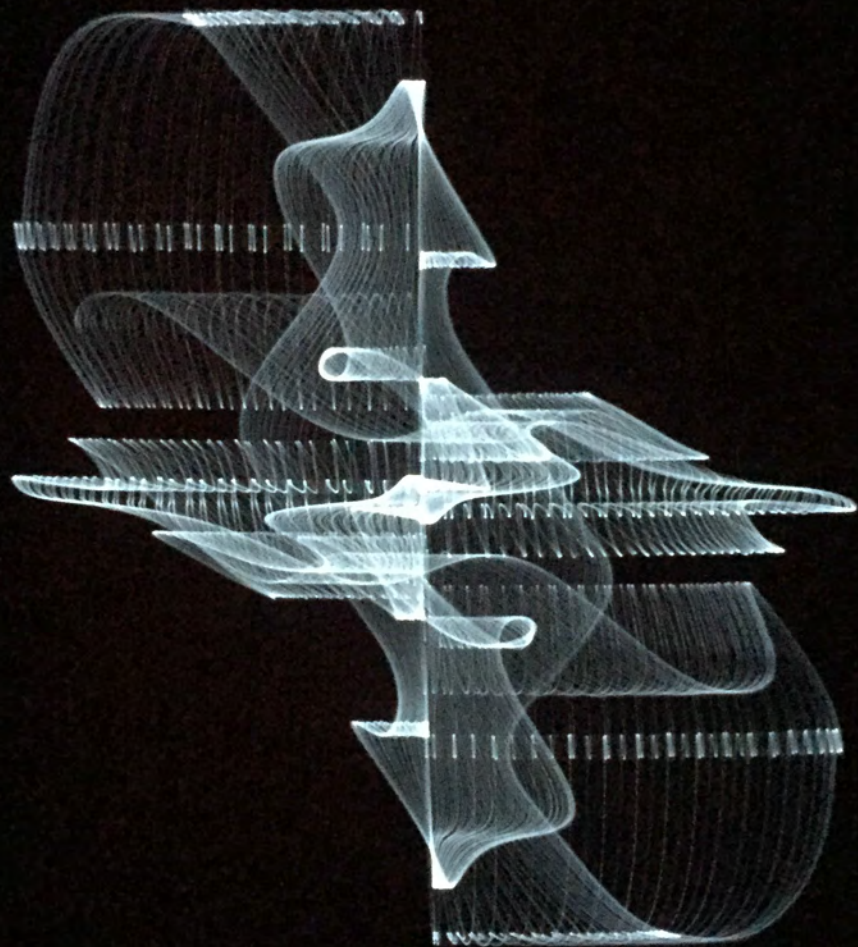












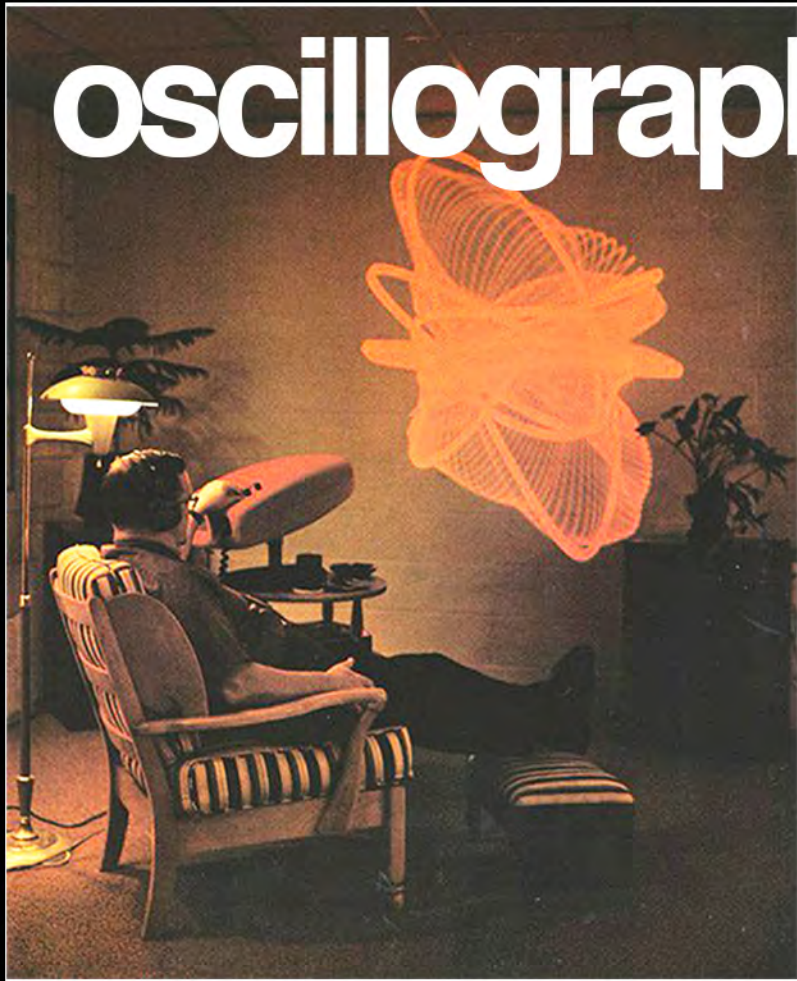




# TV innards as sound source



# oscillographics//history





# 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...





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...



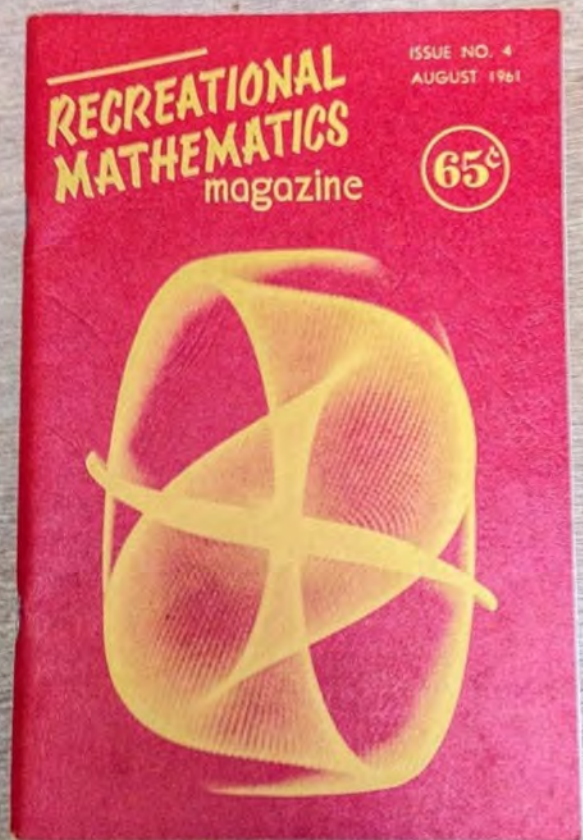




OSCILLON # 16



OSCILLON # 38



skoobert

Following

11 likes

119w

skoobert @kirlianauras

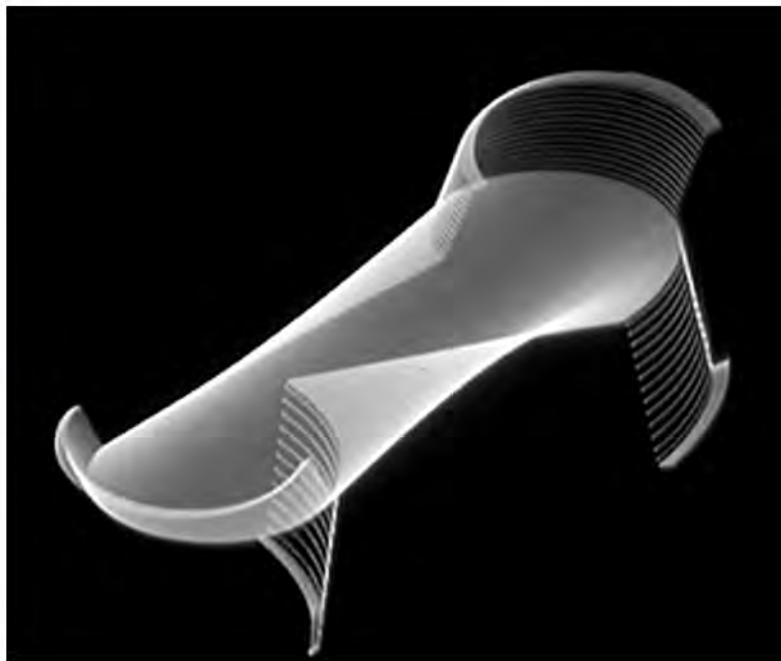
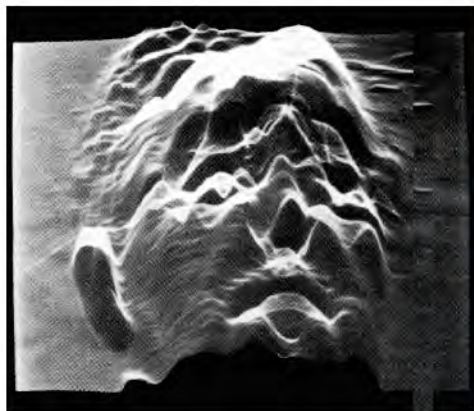
kirlianauras @skoobert YES!!!



Add a comment...

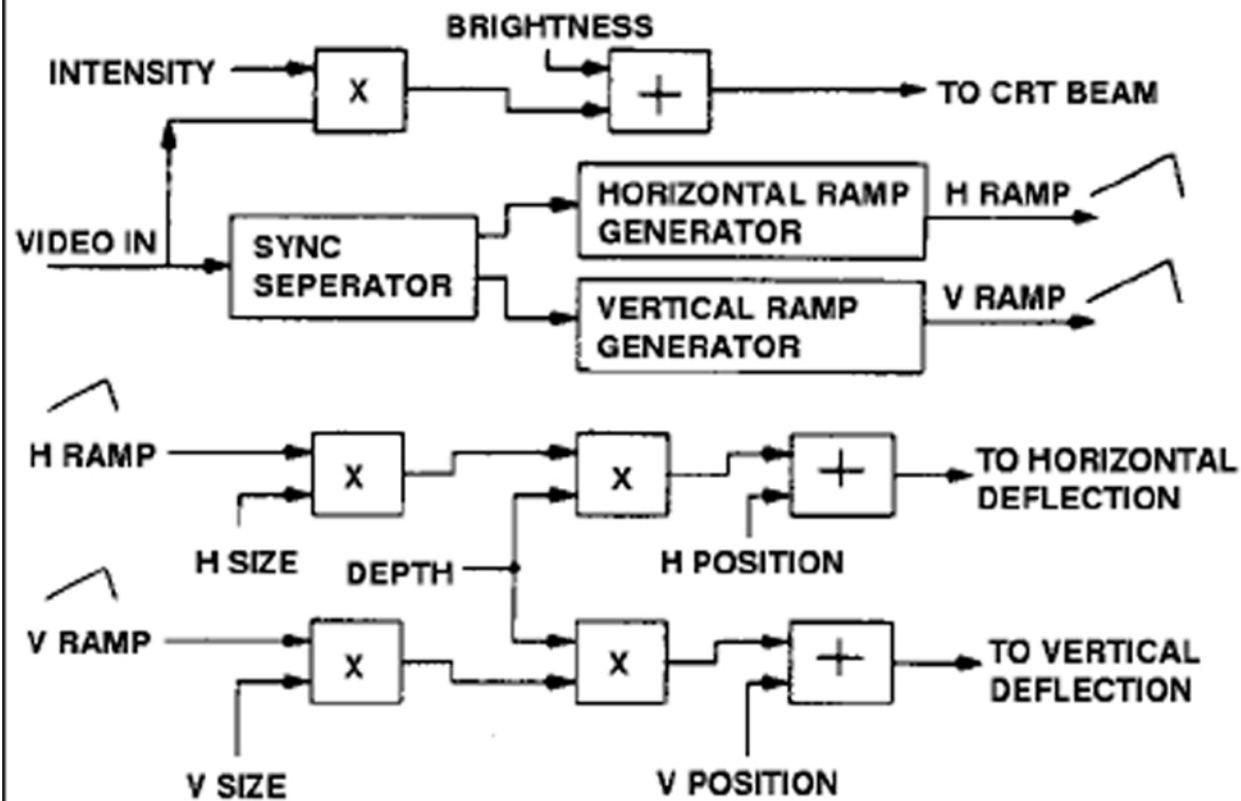


# Steve Rutt / Bill Etra



(1972)





**other influences**

**Burroughs / Gysin / Gabo**

# Burroughs & Gysin



**cut-up technique**



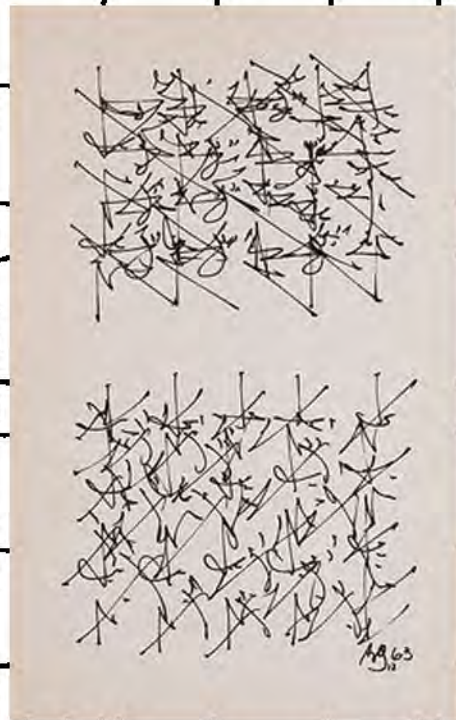
# Brion Gysin



(late 50s/early 60s)

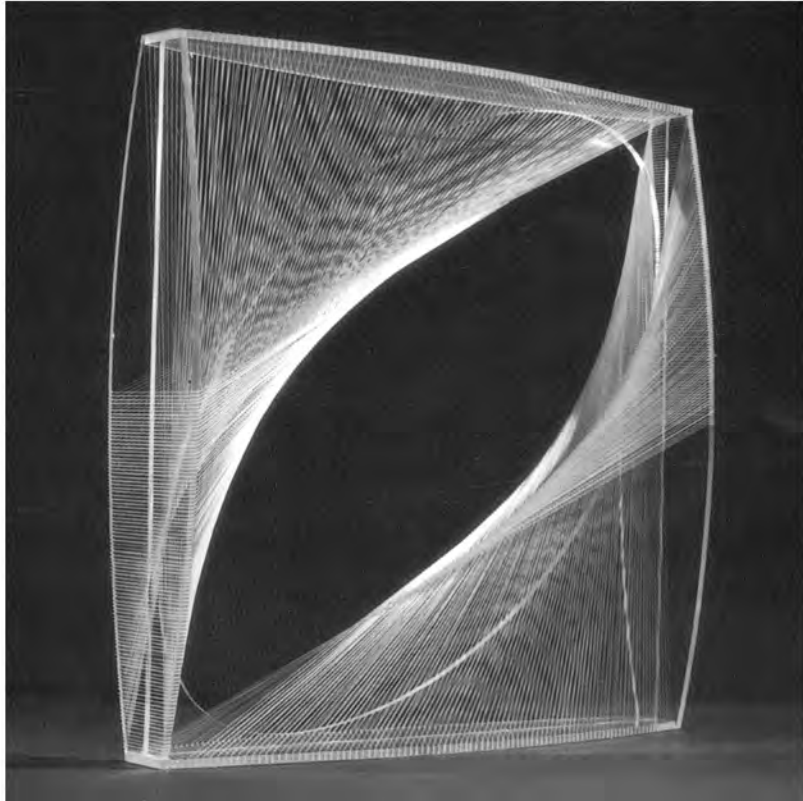






# Naum Gabo

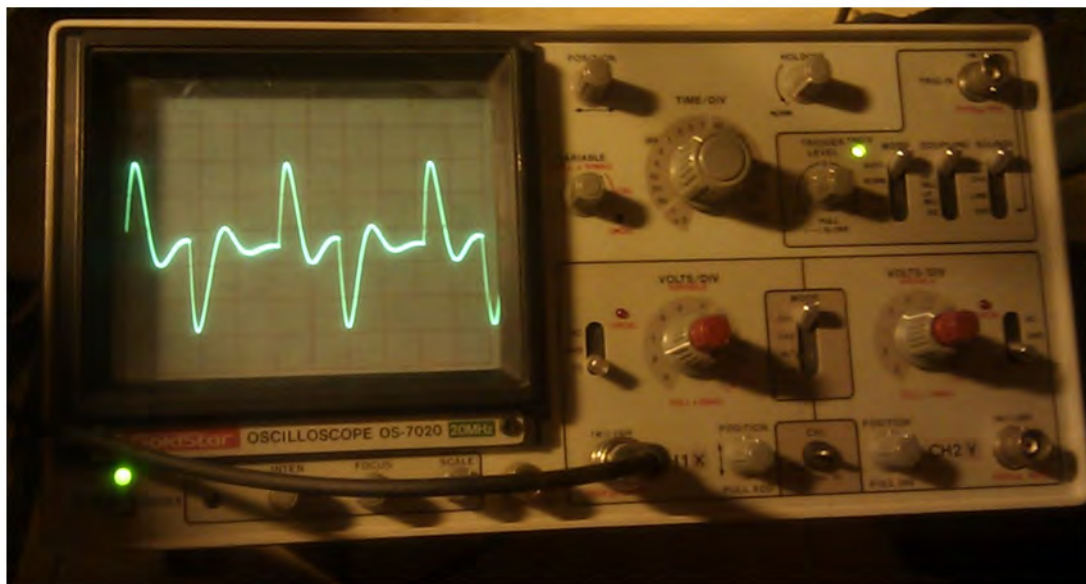
linear construction in space



(1940s)



# oscilloscope - to look at sound



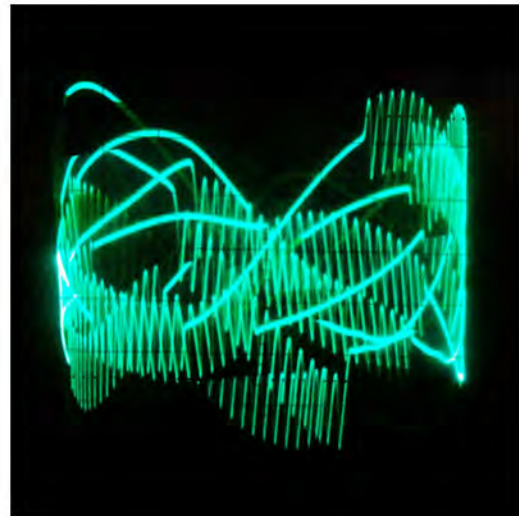
# wavefolding dual OSC scope view



+



=



# muffwiggler/ video synthesis forum



Hi guys,

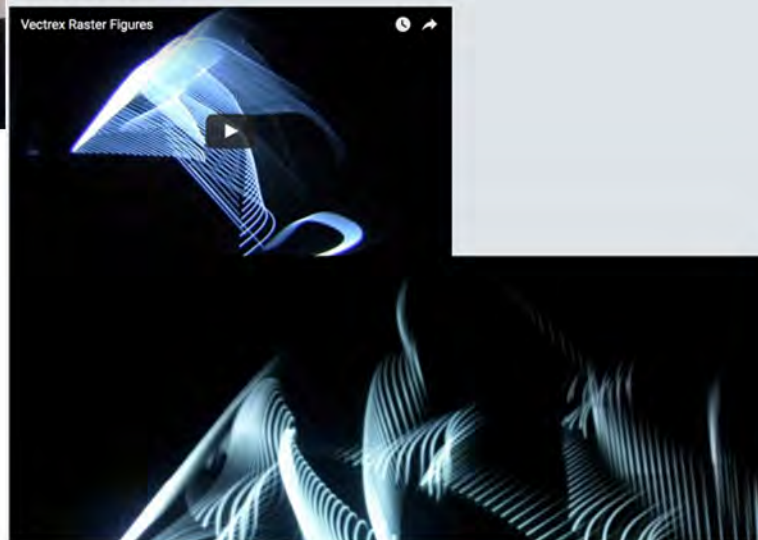
I've had a fun project this week. I got a Vectrex console in the mail, disconnected its XYZ driver board from its CPU, and wired those XYZ inputs to external BNCs on the back (really it was that simple.) I'm driving it with the LZX system, using a typical vector rescan setup.

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 ESO 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!



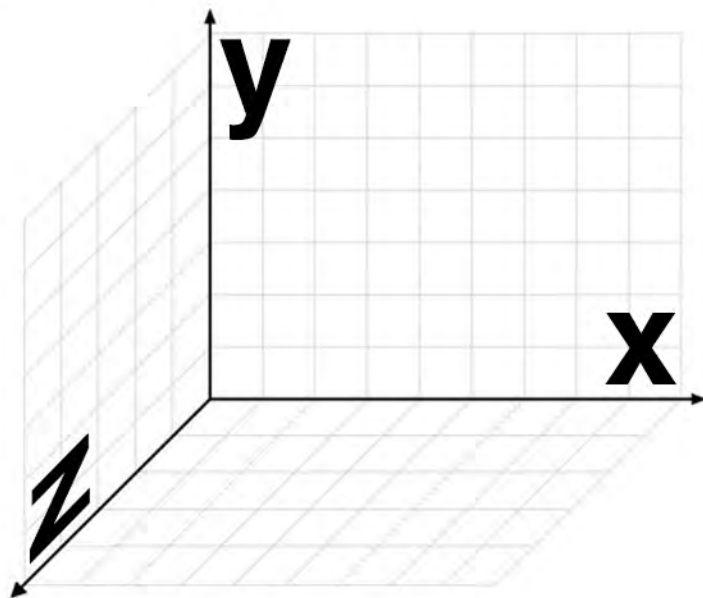


# MB Games Vectrex 1982-1984

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

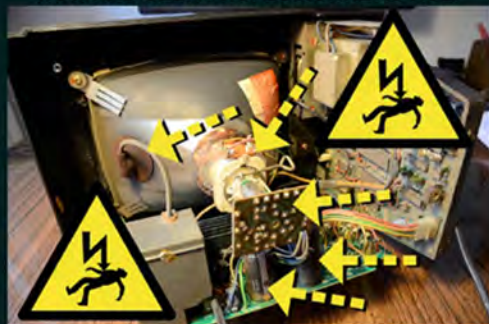


Disclaimer: I take no responsibility for any damage to the Vectrex or your own person, whilst performing this modification.

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

**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.**



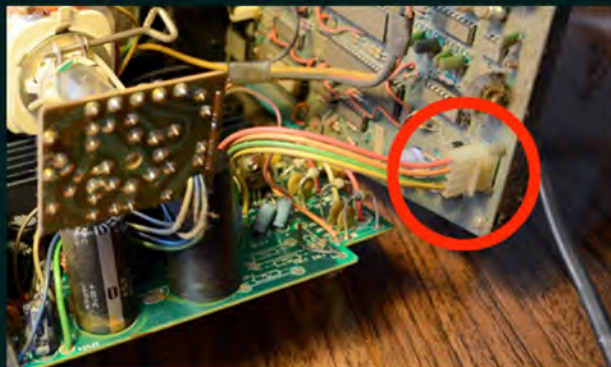
Turn your Vectrex on to its side (as the picture shows) and have a look at all the crap that has accumulated in there over the years.





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).



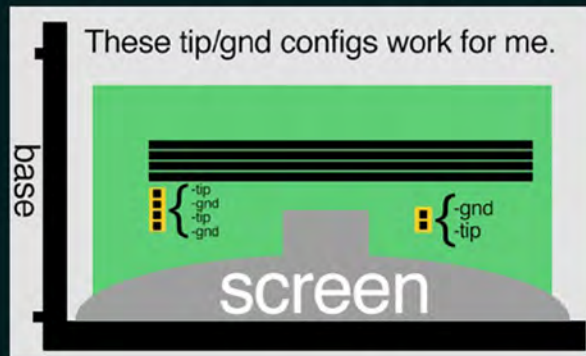
The (larger one at the rear) 2 pin speaker connector  
(if you don't want to hear the speaker-buzz or game music).



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.



Vectrex  
minijack-input mod



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 @thegameboymaste  
r [https://dl.dropboxusercontent.com  
/u/4698298  
/VectrexMinijackInputMod2014.pdf](https://dl.dropboxusercontent.com/u/4698298/VectrexMinijackInputMod2014.pdf)

allthesixes666 @bentoncbainbridge ×



Add a comment...



# Benton Bainbridge





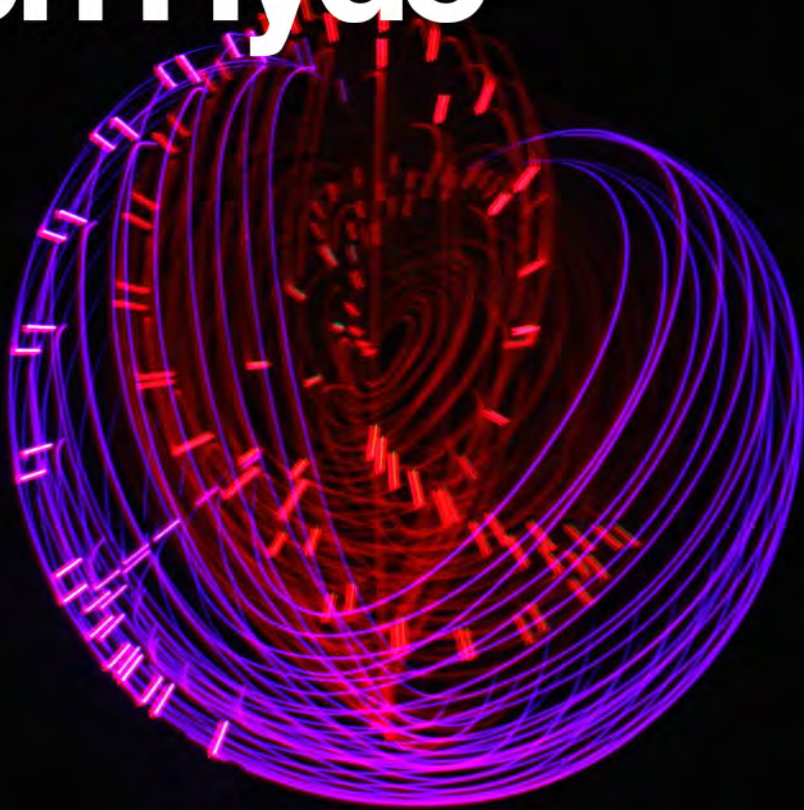
# Akira's Rebirth



# Alberto Novell



# Joseph Hyde





# Derek Holzer



**(secret)techniques**

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

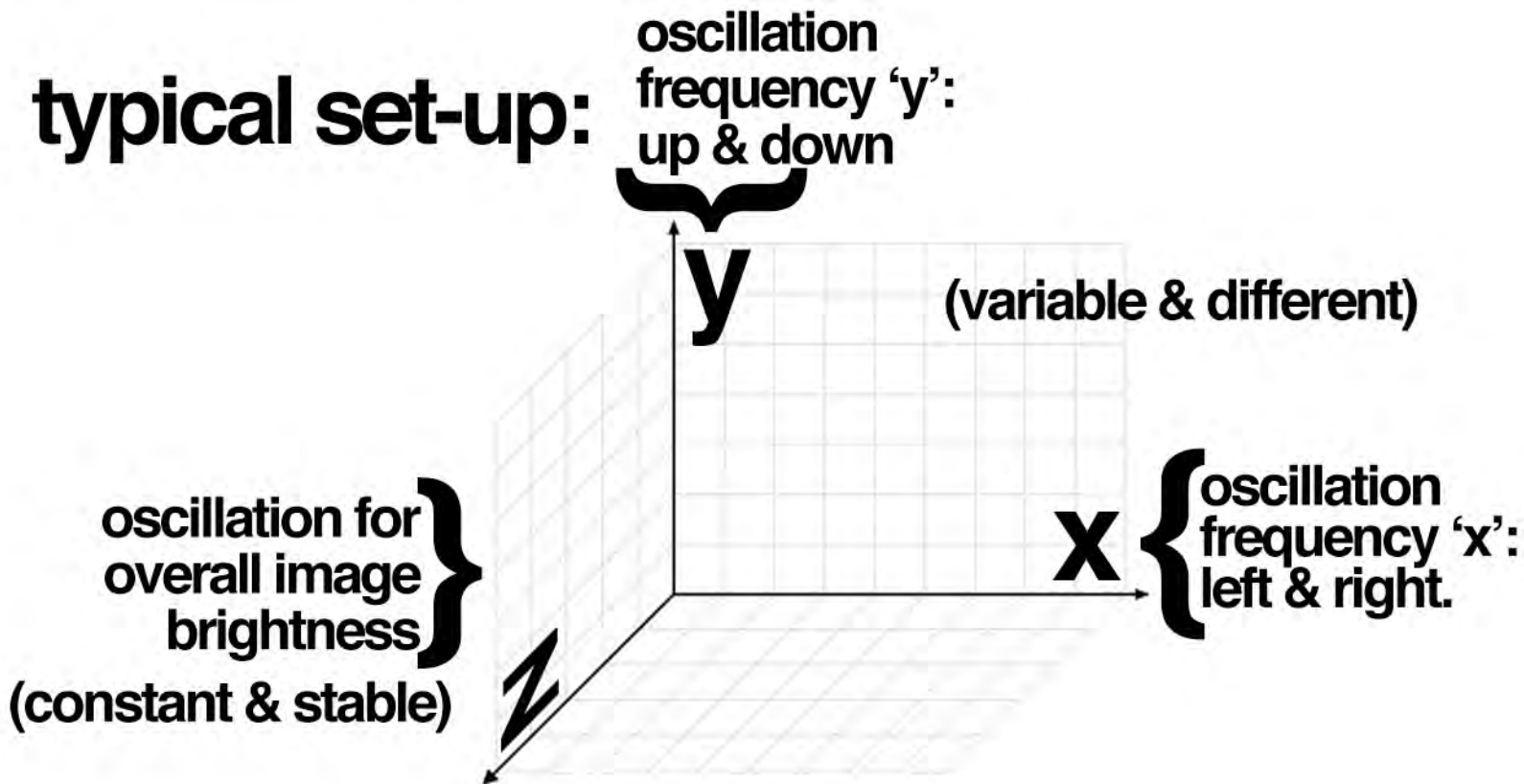


**} to move & scale.**

**+ combinations of  
other modules  
that make cool  
shapes.**



**typical set-up:**



typical set-up:

oscillation  
frequency 'y':  
up & down

y

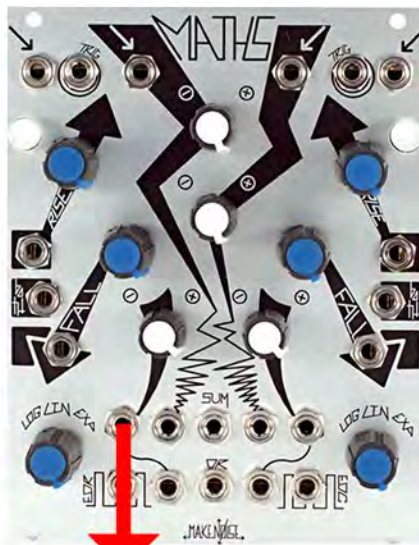
(variable & different)

x

oscillation  
frequency 'x':  
left & right.

oscillation for  
overall image  
brightness  
(constant & stable)

z



z



# a useful module...

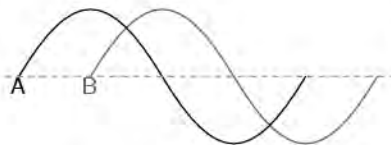


## Phase Displacement Oscillator

} phase shift



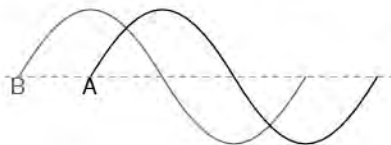
output A, B, etc.



Phase shift = 90 degrees

A is ahead of B

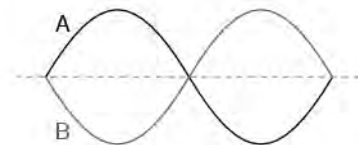
(A "leads" B)



Phase shift = 90 degrees

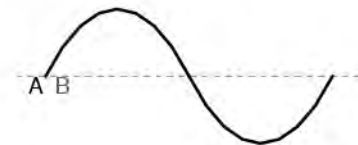
B is ahead of A

(B "leads" A)



Phase shift = 180 degrees

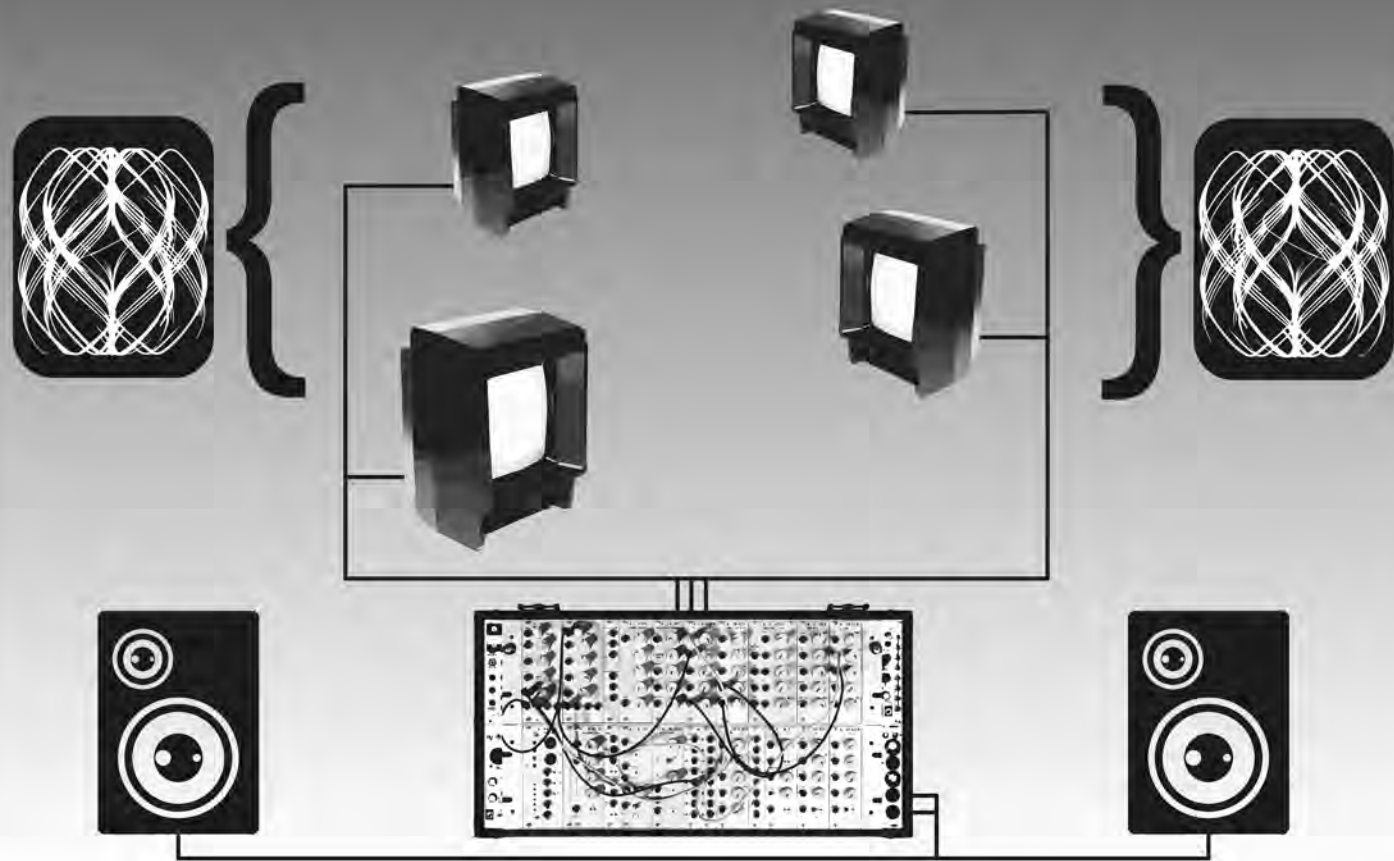
A and B waveforms are  
mirror-images of each other



Phase shift = 0 degrees

A and B waveforms are  
in perfect step with each other

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









1997

1997



1997/98 / 1998/99

## Subject to Gestur

1997/98 / 1998/99

1997/98 / 1998/99

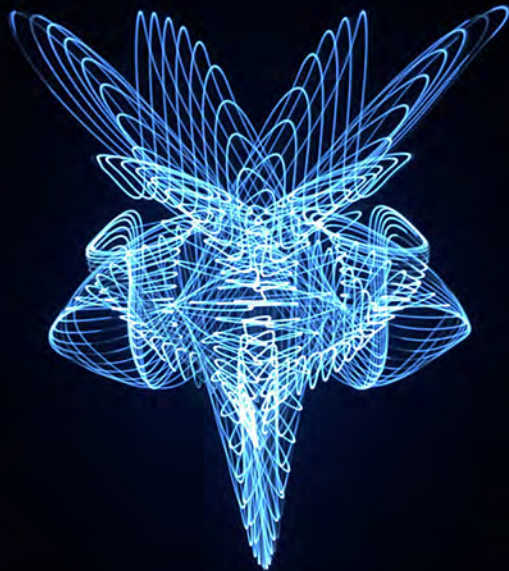


1997/98 / 1998/99

# summoning beings from the Vectrex dimension











**ta!**

**instagram.com/allthesixes666**

**andrew-duff.co.uk**

**youtube: halfofmeis333**

**@brightonmodular**

**brightonmodularmeet.co.uk**