# _bisect_

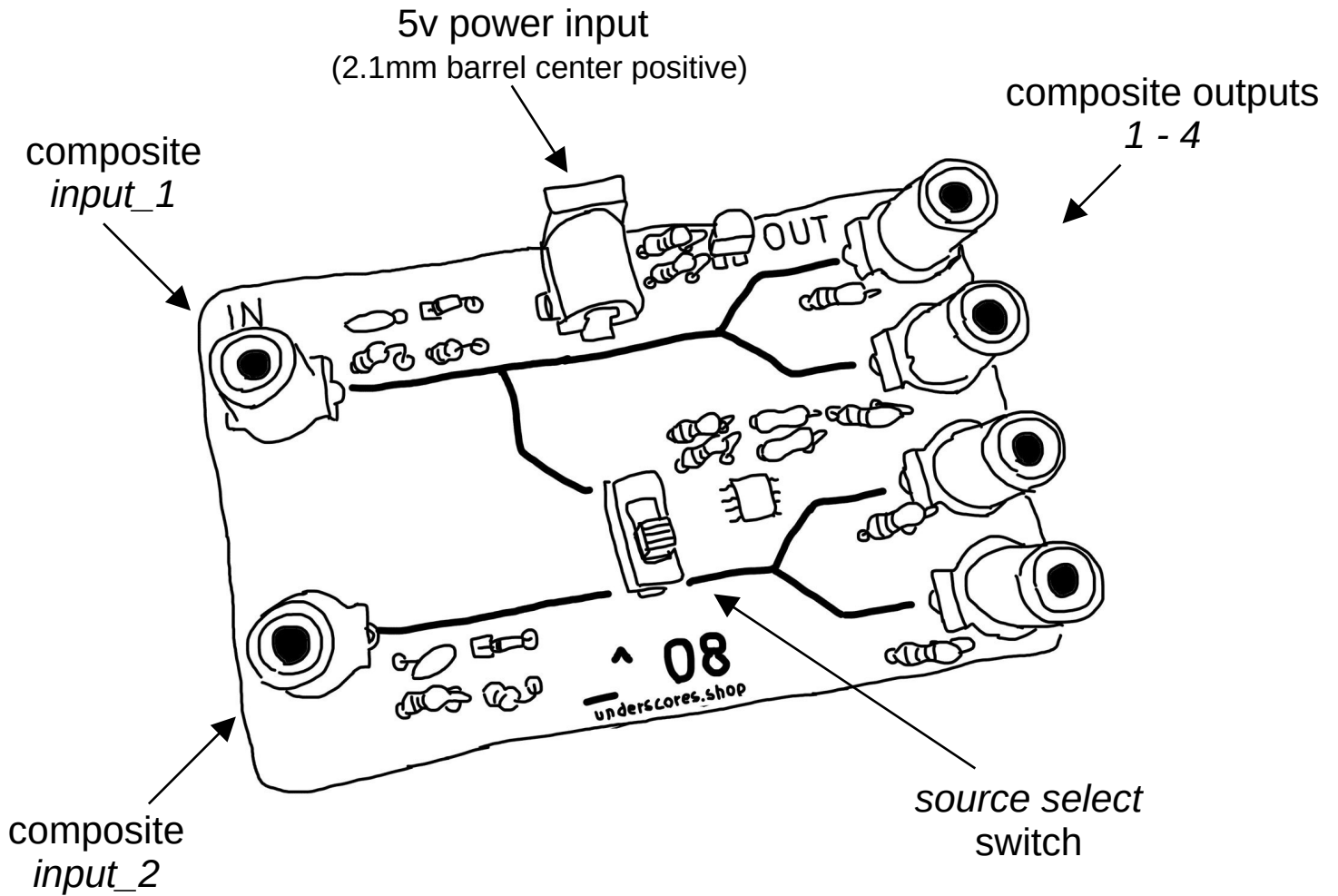## a card-shaped video distribution amplifier
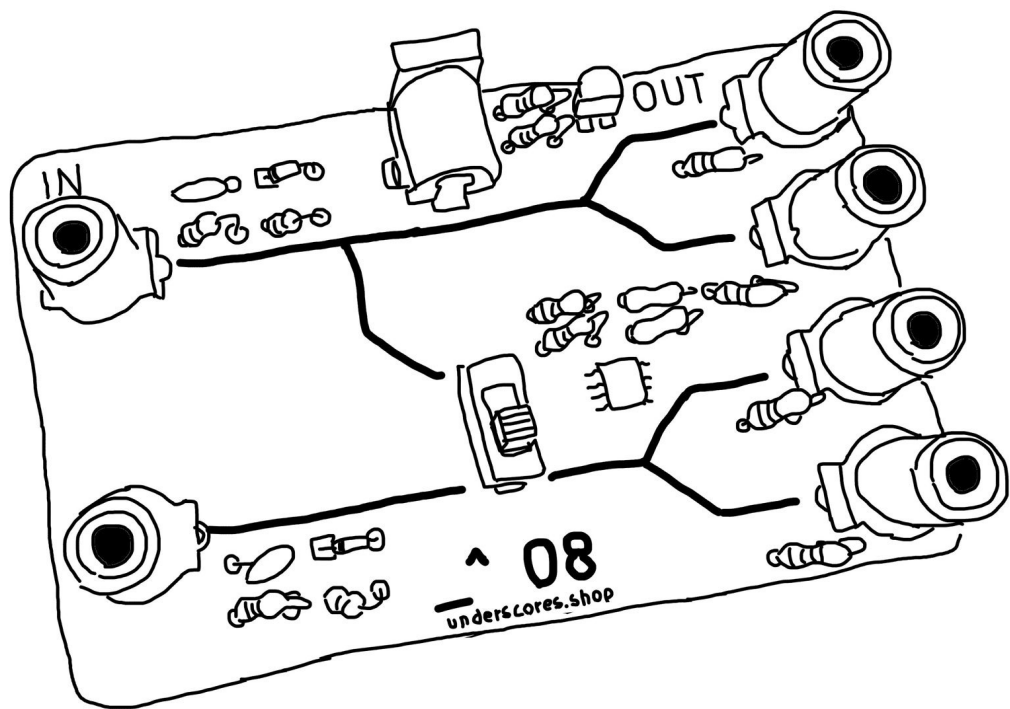


## instruction manual and build guide
## V0_1_1

View this project online at
underscores.shop/_bisect_

# **FEATURES**

composite
*input_1*

5v power input
(2.1mm barrel center positive)

composite outputs
*1 - 4*

IN

OUT

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underscores.shop

composite
*input_2*

*source select*
switch

- *active* splitting of composite video – no lose in signal
  strength

- powered from a single **5v** supply, ie any *usb wall charger*

- can be configured to either distribute *1x input to 4x output*
  or **two stages of** *1x input to 2x output*

- doubles as an **underscores.shop** business card

# BUILD INSTRUCTIONS

Use the Interactive BOM to help place parts - *kutt.it/03z2Ds*
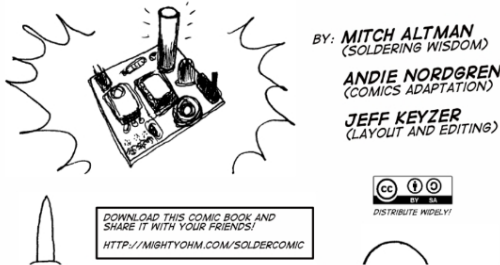


remember to heat pad first (2-3seconds), add solder, then continue to heat (1-2seconds)

Checkout the web-comic **soldering is easy** for more soldering advice.

- start with the smd ic if its not placed already — use lots of flux and drag-solder over the pins — if you are not comfortable with this find someone who can help — the rest is very beginner friendly

- next place resistors, capacitors and diodes - take note of the direction of diode - black bar on component matching black bar on footprint

- finally place the pots and jacks — make sure to use plenty of solder here for structural support

# OPERATING GUIDE

- To set up using the circuit plug an active video source into one of the composite video inputs on the board.

- Next connect a composite video output of the device to your display/tv

- Now plug in a 5v center-positive power supply into the 2.1mm barrel jack connector — I like to use a usb wall charger for this

- with the **source select switch** pointing up, the signal on *input_1* will be distributed to all four output stages

- with the source select switch pointing down the signal on *input_1* will be distributed to *output_1* and *output_2* and the signal on *input_2* will be distributed to *output_3* and *output_4*

# CREDITS AND MORE INFO

This circuit is distributed through UNDERSCORES — open video hardware label — visit underscores.shop for more info

The pcb was designed using KICAD , this booklet was created in LibreOffice Draw

Everything from gerbers, cad files, panels and documentation is freely available online and distributed under CC-BY-SA / open-source licenses — help us contribute to the commons !

Ask any questions or start discussions related to this project on the *scanlines.xyz* forum — an online community space dedicated to diy av / electronic media art

You can contact me directly at *tim (at) cyberboy666 (dot) com* Please get in touch if you are interested in hosting a workshop !

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KiCad
DESIGNED WITH

scanlines
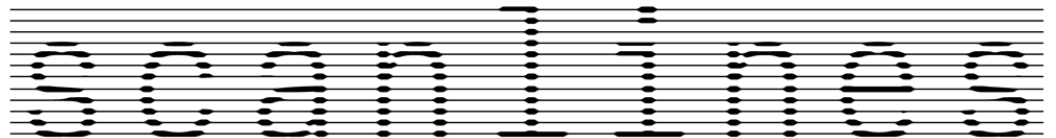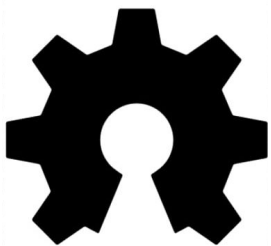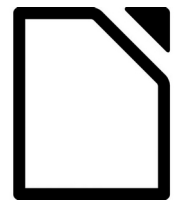
Thanks to Bastien Lavaud for circuit advice, always. To Ben Caldwell for project advice. To everyone who has or will contribute ♥♥♥