



CHIME

Vacuum Tube USB DAC



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Description

The Chime USB DAC is optimized for Redbook CD playback. In fact, it can only lock onto 16 bit 44.1k data. This optimization bypasses the compromises found in all “universal” players, and instead focuses all circuitry to operate on this one specific task. The USB decoder section is galvanically isolated from the rest of the audio system, eliminating problematic ground loops and the introduction of computer electrical noise. Internally, a daughter card performs the complex digital conversion, first by synchronously upsampling the data and filtering to 24 bits at 352.8ksps, and then feeding to the expensive PCM1704K 24 bit converters. A low jitter VCXO-based PLL circuit regenerates the output clock, for spurious-free tonal reconstruction. The output of these is fed to a custom low impedance analog filter and then to a high gain class-A vacuum tube circuit. The output is a constant-current cathode follower. The tube stages employ zero feedback featuring high linearity and DC heaters. Vacuum tube rectification for high voltage provides a soft-start without the need for muting circuits.

The silver version of the Chime is an upgraded version of the original, with improved audiophile components.

Package Contents

- Chime
- Power cord

Specifications

| Item | Specification |
|---------------------|--------------------------------|
| Input | USB (1.1 or 2.0) |
| Input Data Rates | 44.1k |
| Jitter | <10ps |
| Digital Filtering | 24 bits at 352.8ksps |
| Bandwidth (analog) | 10Hz to 100kHz |
| Gain (analog) | 30dB |
| Distortion (analog) | 0.03% @ 1kHz @1Vrms |
| Output Impedance | 1k ohm |
| Output Voltage | 1.2Vrms FS |
| SNR | 92dB A-weighted |
| Size | 8" x 12" x 7" |
| Power | 120Vac / 240Vac 30W |
| Tube Compliment | 12AX7 x 1, 12AU7 x 1, 5AR4 x 1 |

Operation

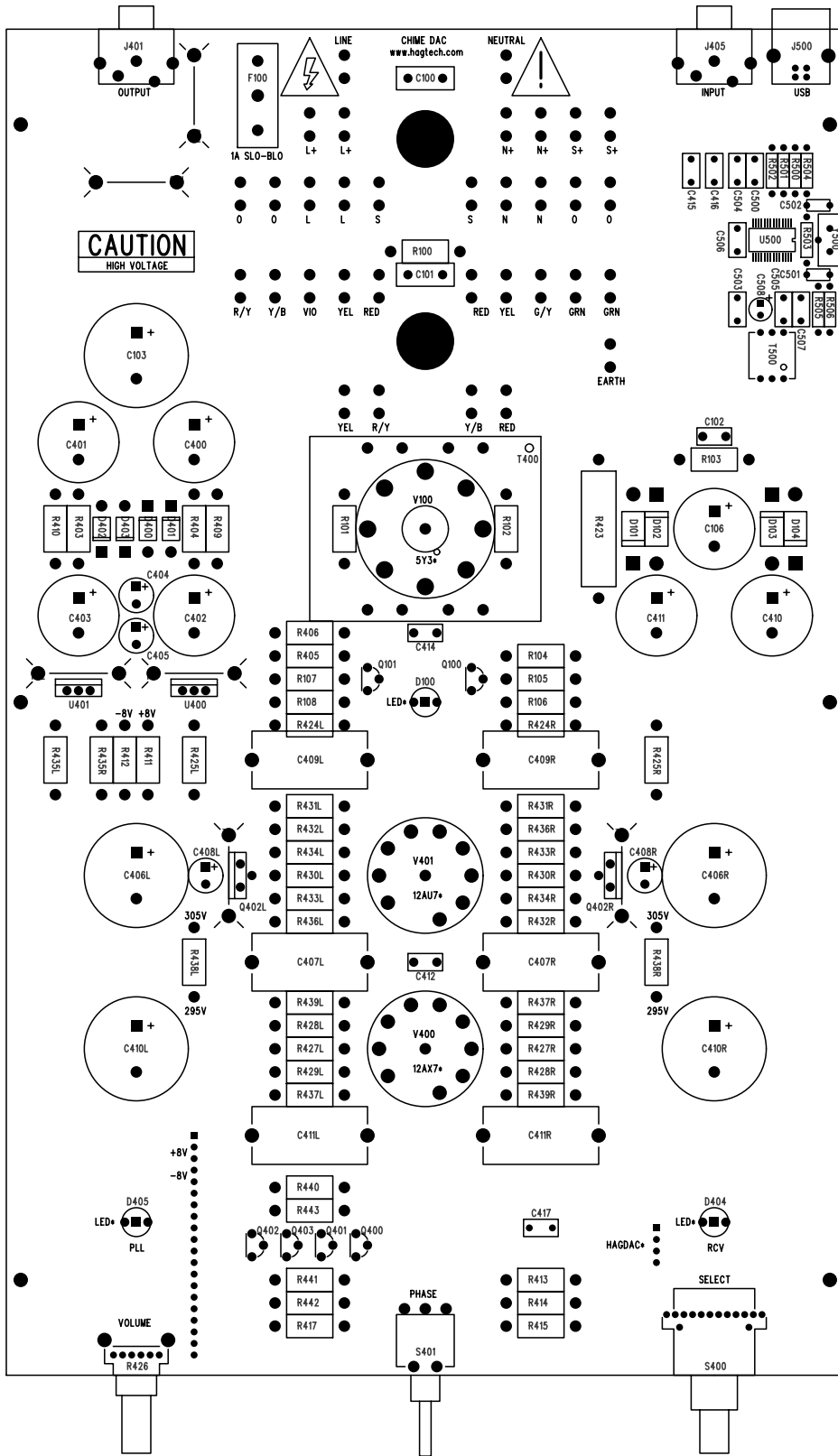
The Chime connects to your PC via a USB cable and is compatible with both PC and Mac; no software drivers are necessary, the DAC is plug-n-play. The computer acts as a CD transport, playing either actual discs or music files of any format and resolution (the operating system must be set to output audio as 44.1k 16 bit data). The outputs are analog line level and connect to your linestage (with volume control).

Connect the power cord to an AC source. Turn on using the power switch on the back panel. The Chime requires about 30 seconds warm-up to start playing, and another 30 minutes to sound its best, which is typical of high quality tube equipment. The middle LED indicates power status; the left side indicates clock status, and the right side data. When properly replaying data, all three LEDs will be green.

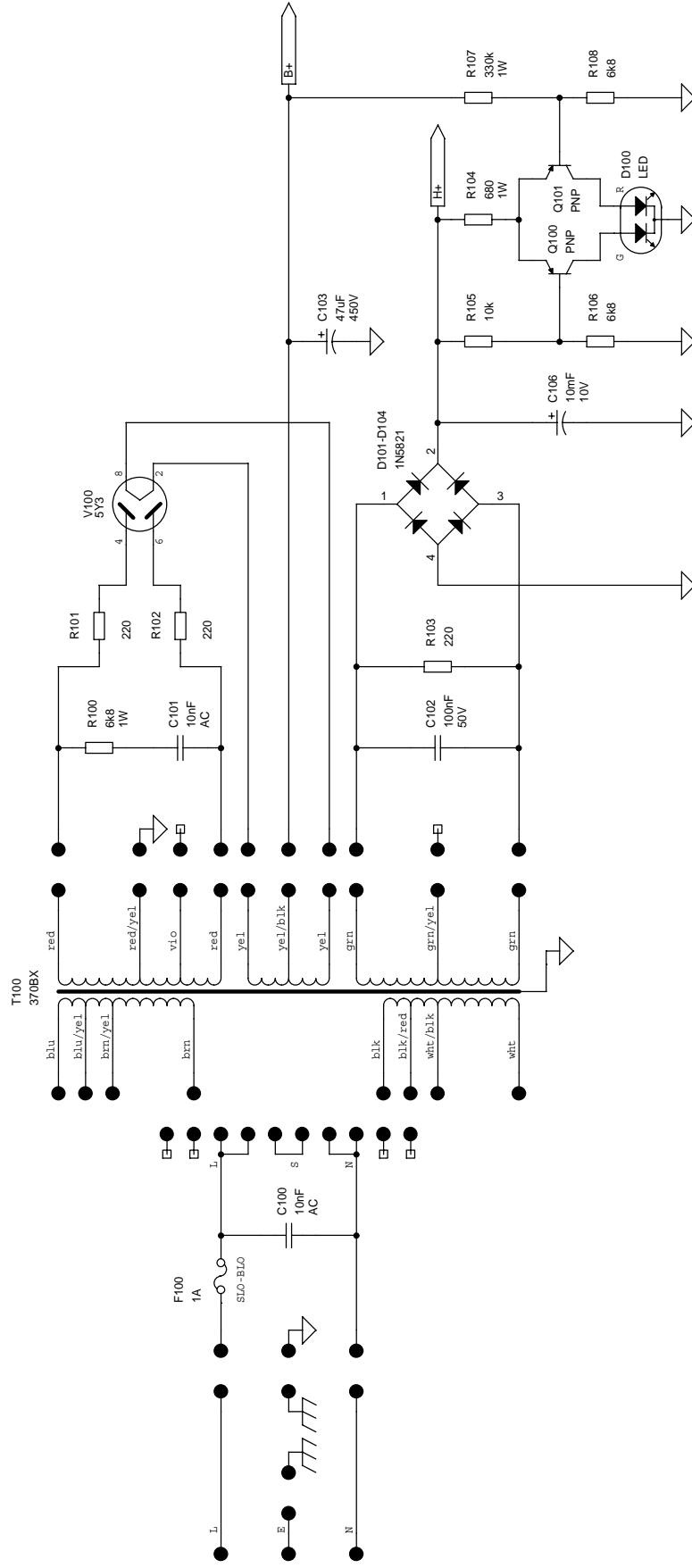
Tube Rolling

The Chime responds admirably to tube rolling. New old stock (NOS) tubes are generally the best, offering various improvements to the sonics. Different tubes sound differently, and the final result becomes a matter of personal taste.

Always replace tubes with their equivalents! Do not use, for example, a 12AT7 in a 12AX7 location. Starting from the front of the unit, the tubes are in order: 12AX7, 12AU7, and 5AR4.



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| | | | | | | |
|---------|------|------|------|------|------|------|
| | 100V | 110V | 120V | 200V | 220V | 240V |
| Blu | NC | NC | L | NC | NC | L |
| Blu/Yel | NC | L | NC | NC | L | NC |
| Bru/Yel | L | NC | NC | L | NC | NC |
| Bru | N | N | S | S | S | S |
| Blk | NC | NC | L | NC | NC | S |
| Blk/Red | NC | L | NC | NC | S | NC |
| Wht/Blk | L | NC | NC | S | NC | NC |
| Wht | N | N | N | N | N | N |

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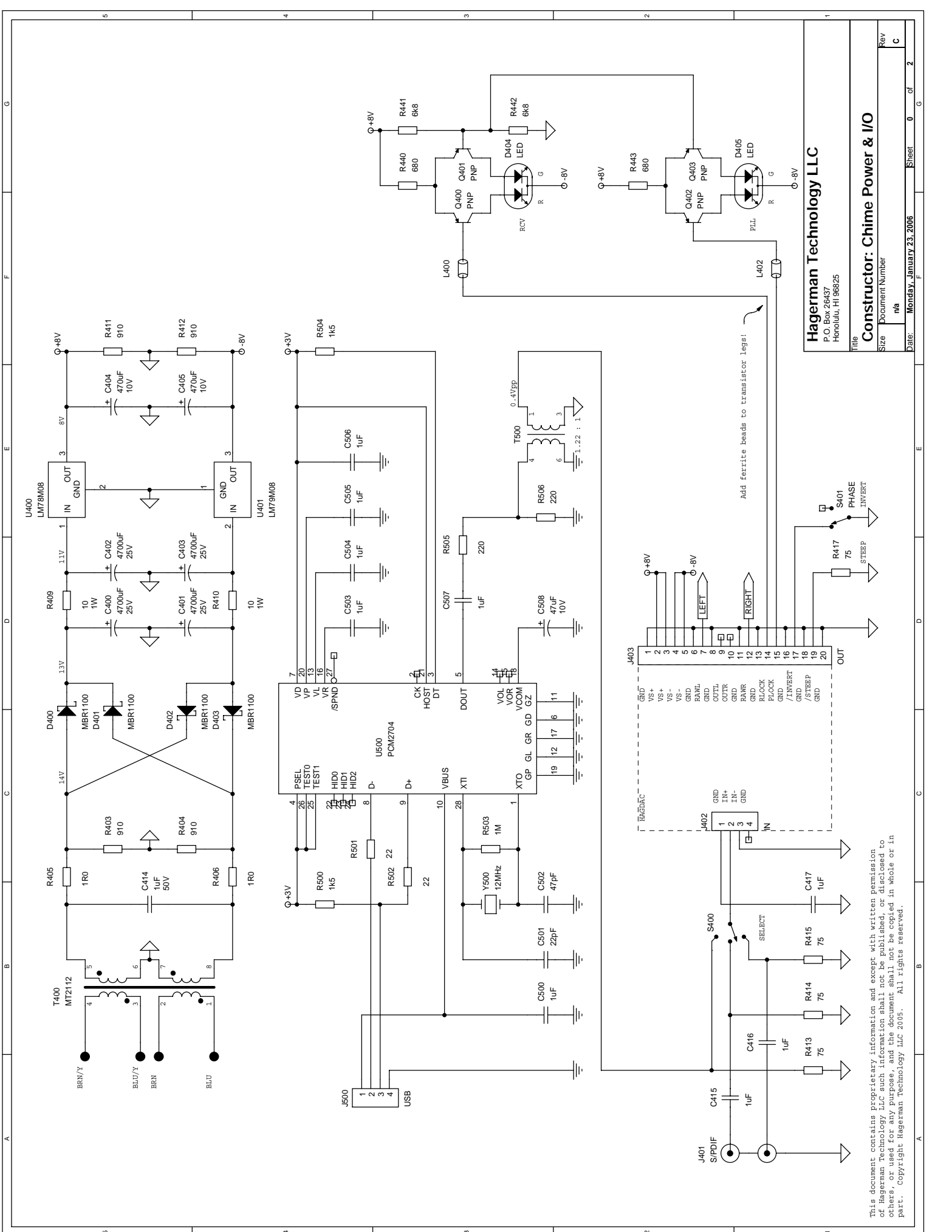
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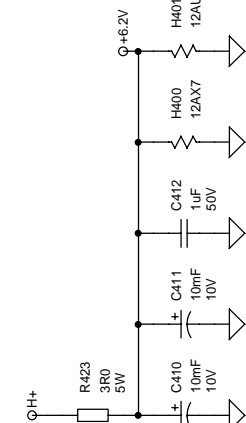
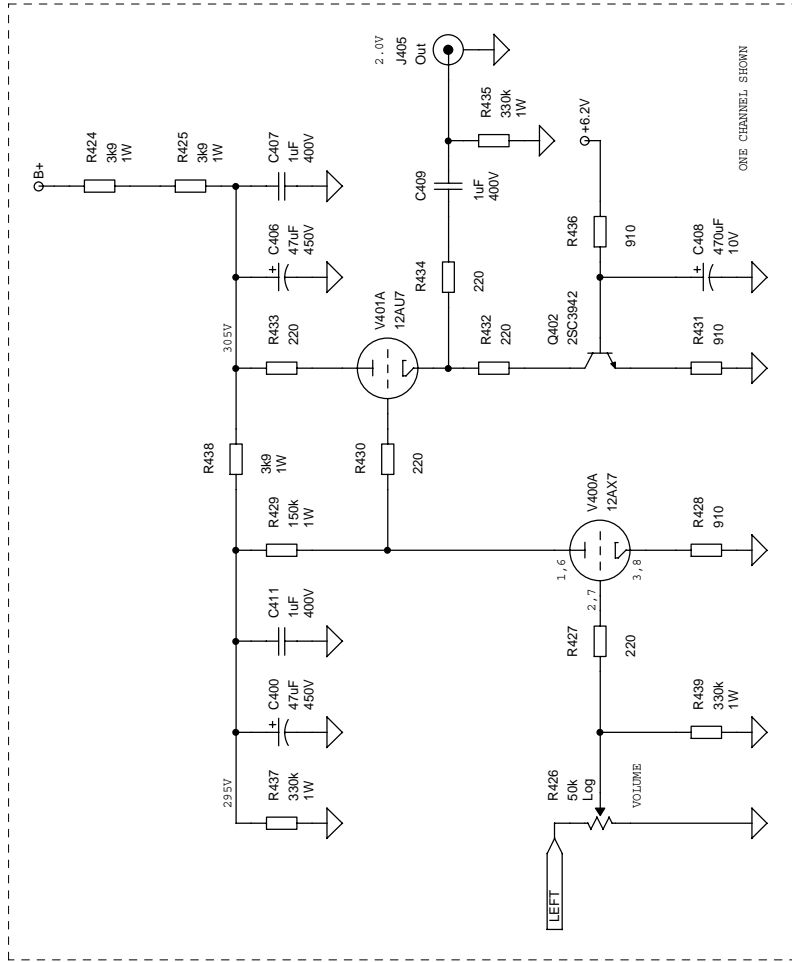


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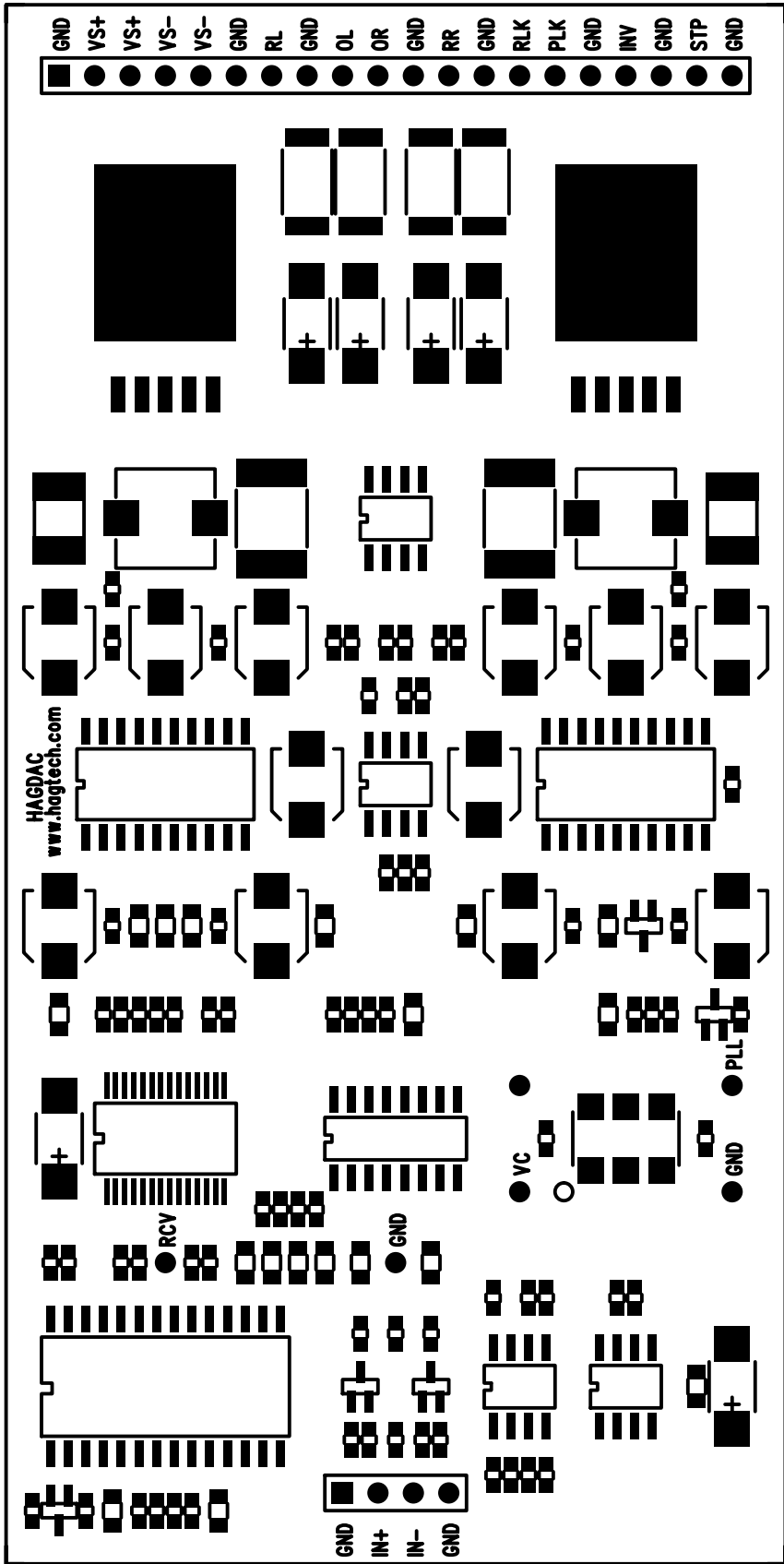
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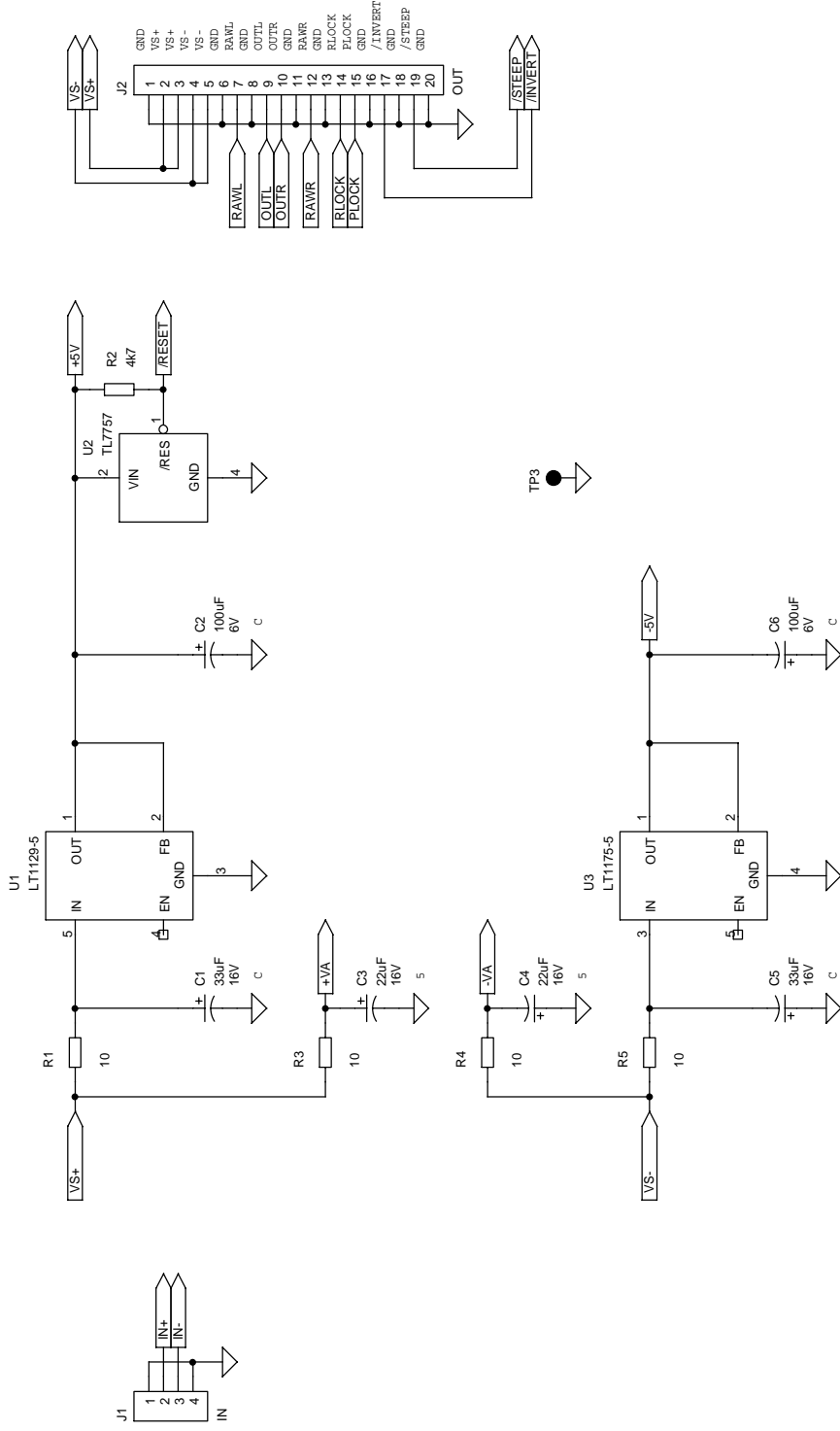
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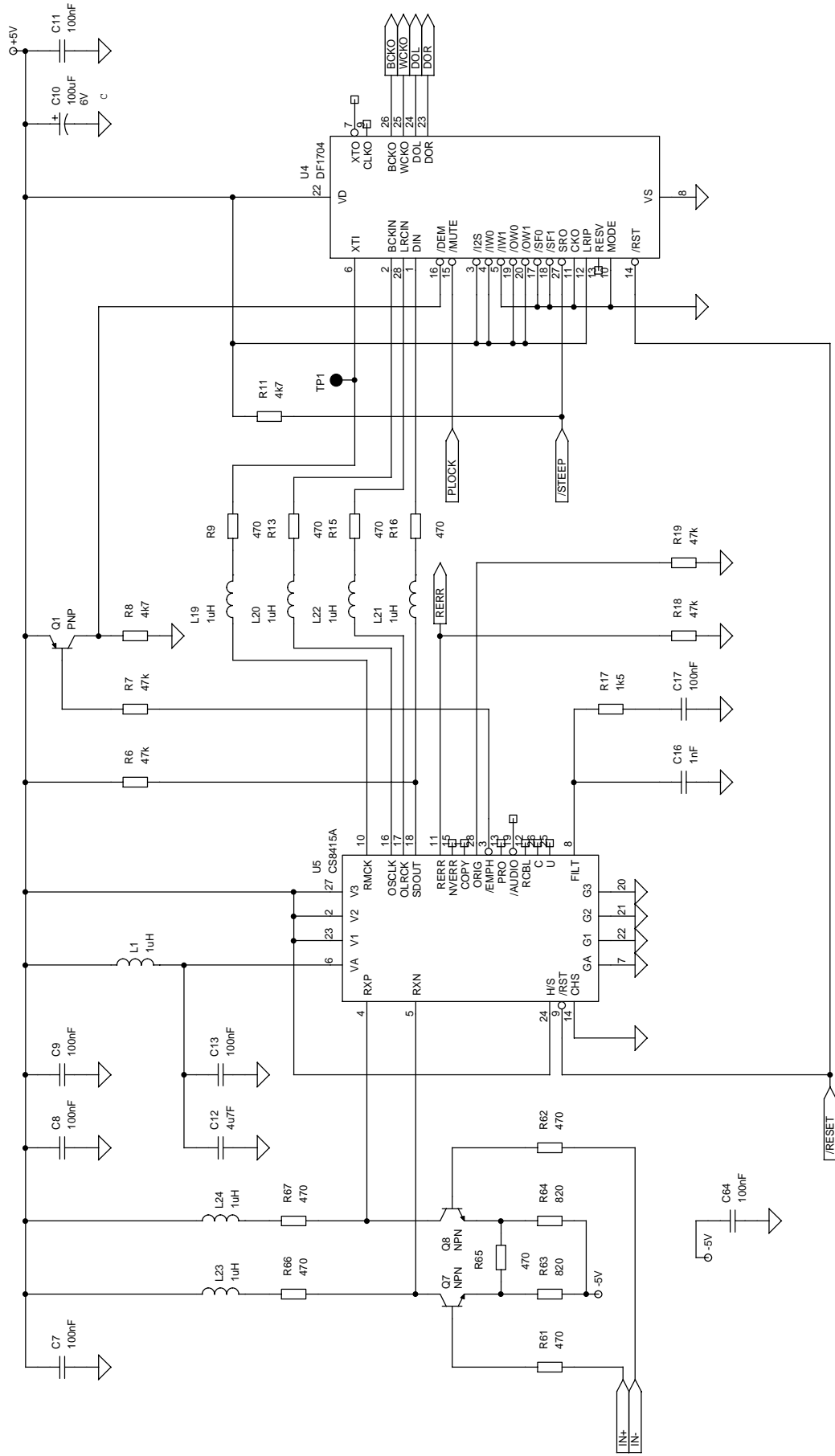


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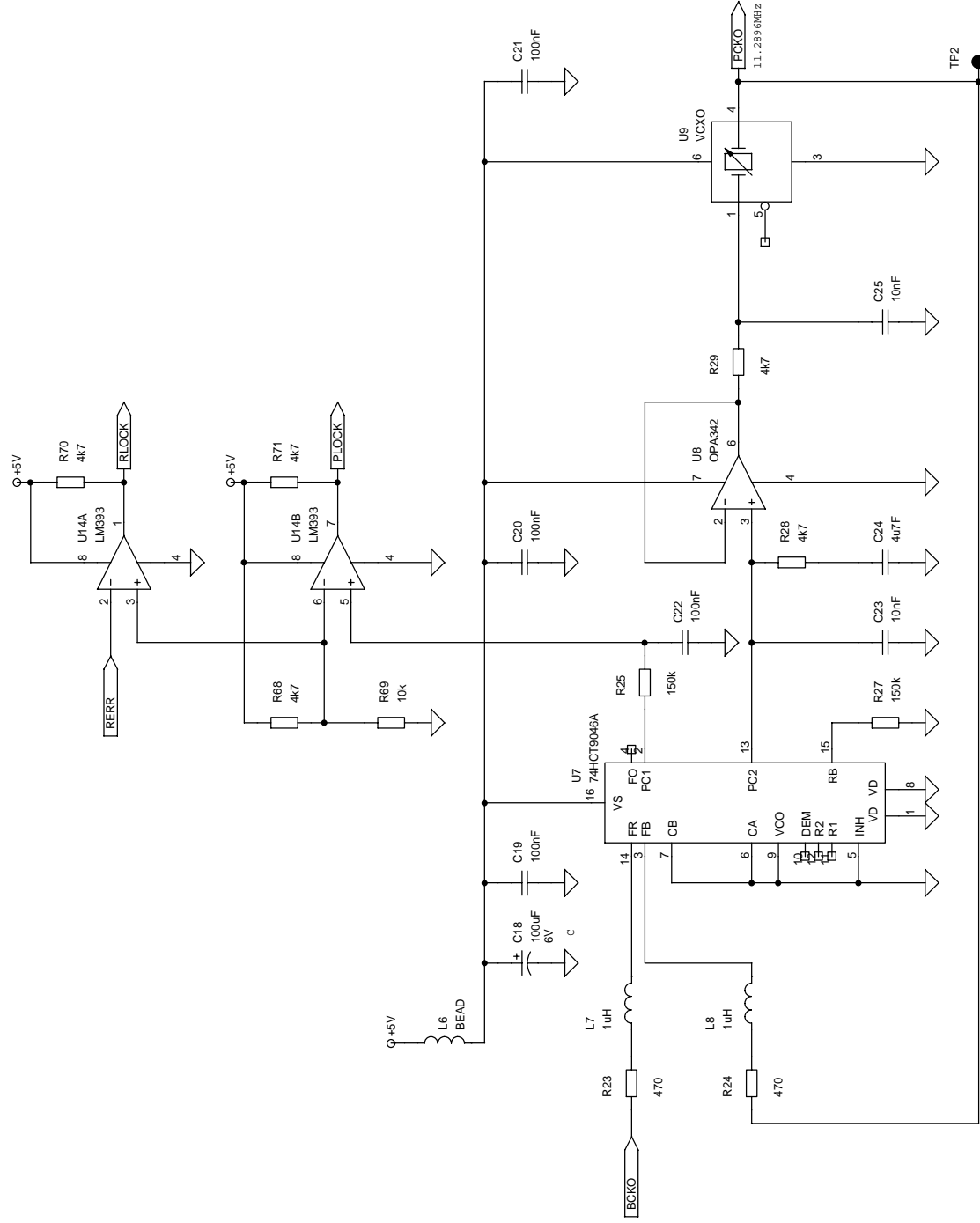


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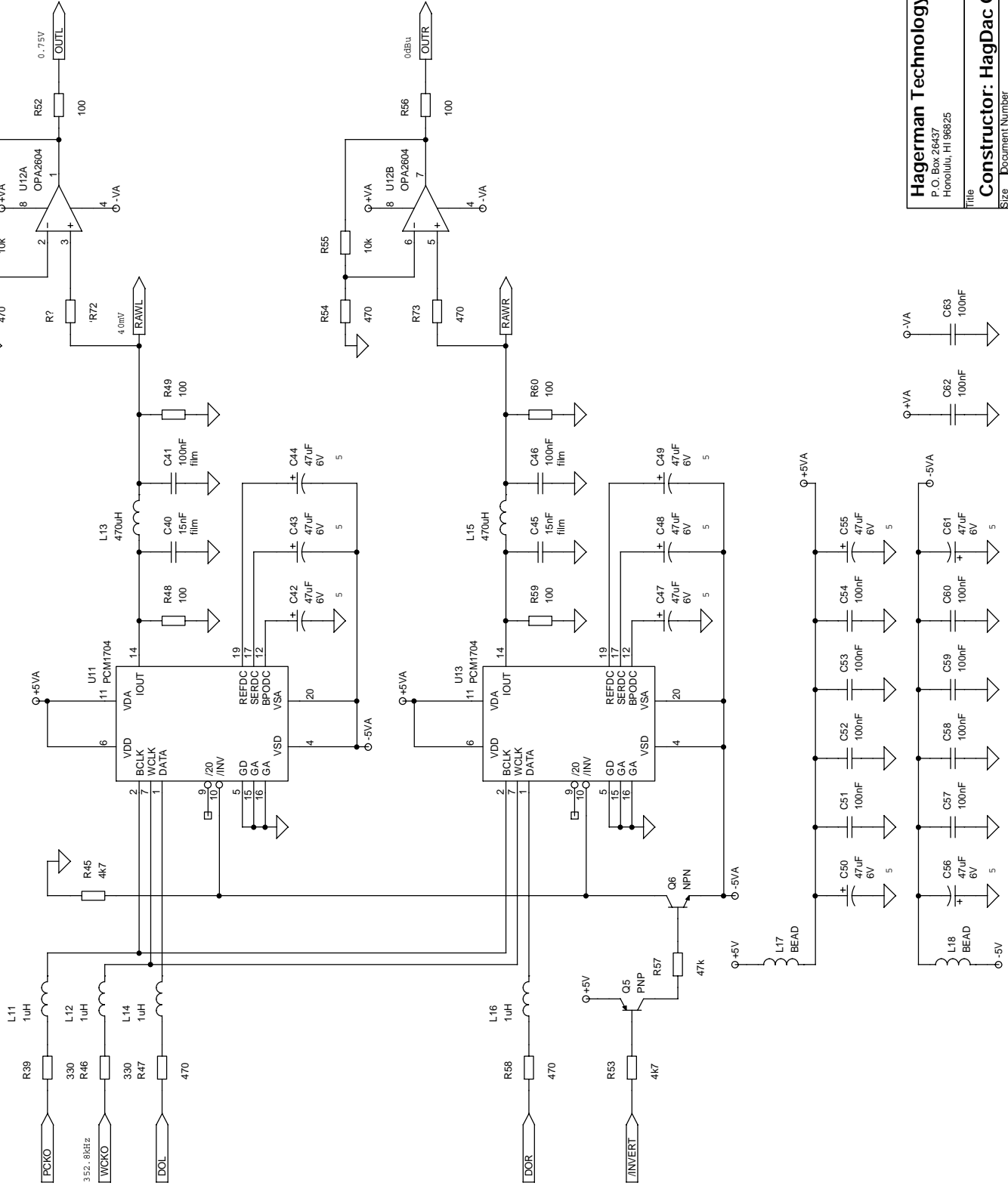
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