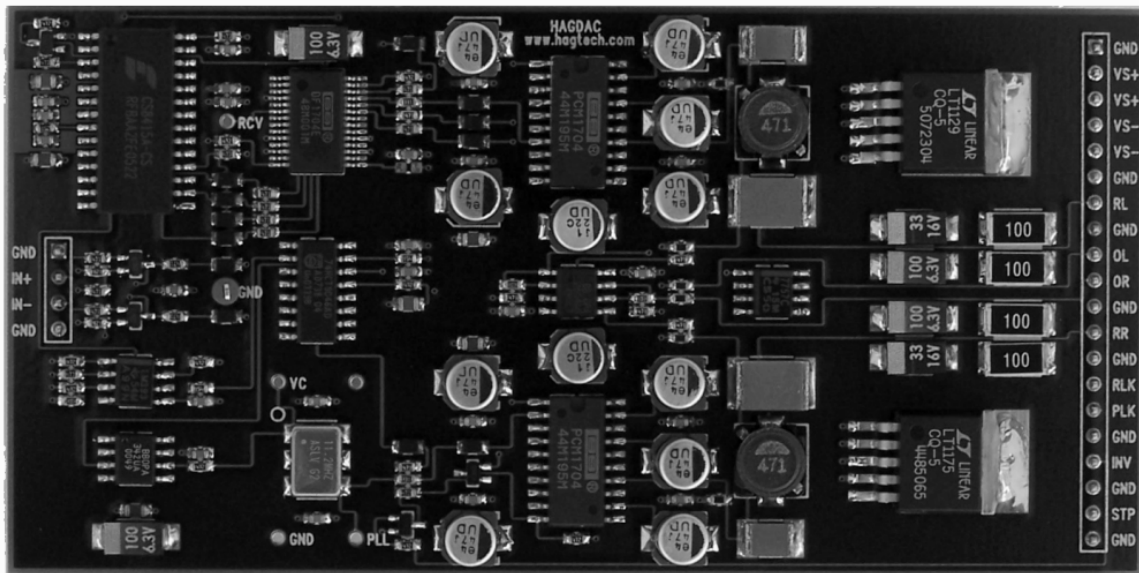
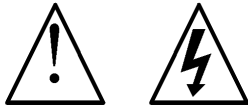




HagDac

Digital to Analog Converter





Warnings

This product uses no lethal or dangerous voltages.

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1 Before You Begin

Description

Congratulations! You have just purchased one of the highest performance-per-dollar audiophile products available. The HagDac is a state-of-the-art converter design optimized for Red Book CD operation (44.1kHz sample rate). A special differential amplifier reduces noise and signal glitches via tuned filters. Data is then converted to I2S and upclocked (8x) to 24 bits by a digital filter. A low jitter VCXO-based PLL circuit then regenerates the output clock feeding 24 bit PCM converters. Current to voltage translation is done using a passive RLC minimal phase Bessel filter. Special onboard regulators and careful attention to layout, ground and power planes, and supply decoupling insure low noise operation.

Features

- Ultra-low jitter output via reclocking
- Built-in regulators
- Easy installation
- 8x oversampling to 24 bits
- Passive I-V conversion
- Fast/slow filter rolloff modes
- Phase control

2 Signals

I/O Connections

The input audio data signal is standard S/PDIF (0.5Vpp). Logic levels are TTL compatible. S/PDIF input will NOT take logic levels, 0.7Vpp maximum.

Signal	Description
IN+	INput+. S/PDIF input. Must be externally terminated.
IN-	INput-. S/PDIF return. Tie to GND.
Signal	Description
VS+	Voltage Supply+. Positive 12V supply input. Use GND for return.
VS-	Voltage Supply-. Negative 12V supply input. Use GND for return.
RL	Raw Left. Output at 50mV level.
OL	Output Left. Buffered via opamp, line level.
OR	Output Right. Buffered via opamp, line level.
RR	Raw Right. Output at 50mV level.
RLK	Receiver LockEd. Open collector output with pullup to +5V. High when receiver locked to incoming data with no errors.
PLK	PLL LockEd. Open collector output with pullup to +5V. High when VCXO PLL is locked to received signal. Also performs mute function when held low.
INV	INVert phase. Input with 4.7k pullup to +5V. Tie to GND for inverse phase.
STP	SteeP digital filter rolloff. Input with 4.7k pullup to +5V. Tie to GND for steep rolloff.

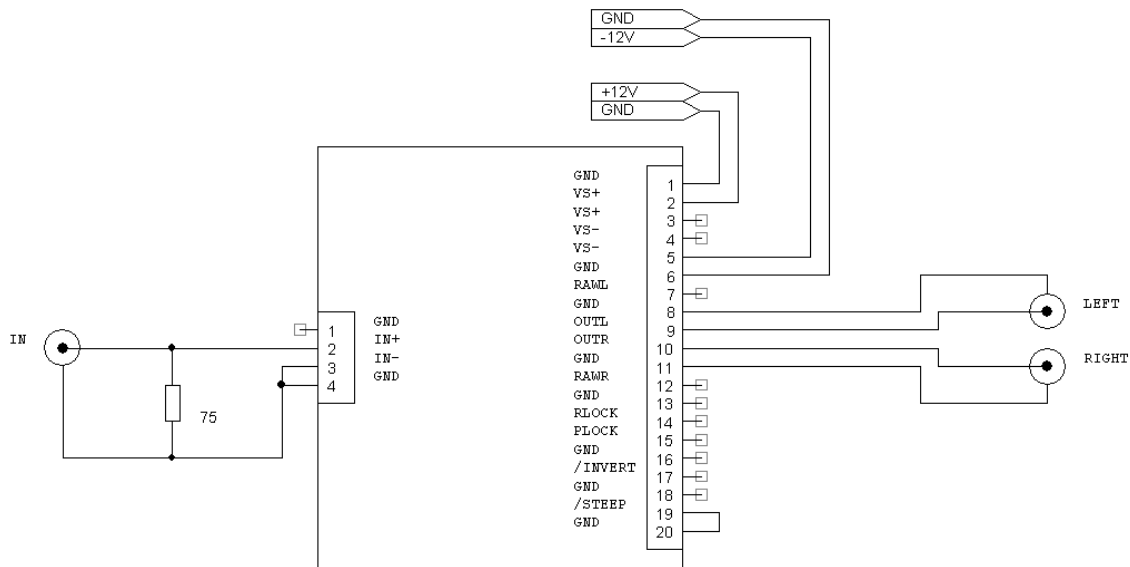
3 Installation

Chime

The HagDac is designed to be installed onto the back of a Chime motherboard. Plug and play.

Standalone Implementation

You can construct your own DAC using the HagDac as an engine. All you have to do is provide +/-12V power supplies, input and output connectors. See the following schematic for a generic hookup suggestion.



Minimal wiring example.

4 Specifications

The following specifications are subject to change without notice.

Item	Specification
Input	S/PDIF (externally terminated)
Output	50mV, 1.5V
Jitter	<10ps rms
Input sampling rates	44.1kHz
Voltage	+/-7.5V to +/-15V @150mA
Size	2.2" x 4.4"

5 Warranty & Service

Warranty

Hagerman Technology LLC warrants this product free of defects in materials and workmanship for 10 years. If you discover a defect, Hagerman Technology LLC will, at its option, repair or replace the product at no charge to you provided you return it during the warranty period, transportation charges prepaid to Hagerman Technology LLC. This warranty does not apply if the product has been damaged by negligence, accident, abuse or misuse or misapplication, has been damaged because it has been improperly connected to other equipment or has been modified without the express written permission of Hagerman Technology LLC. This warranty is limited to the replacement or repair of this product and not to damage to equipment of other manufacturers.

Any applicable implied warranties, including warranty of merchantability, are limited in duration to a period of the express warranty as provided herein beginning with the original date of purchase and no warranties, whether express or implied shall apply to the product thereafter.

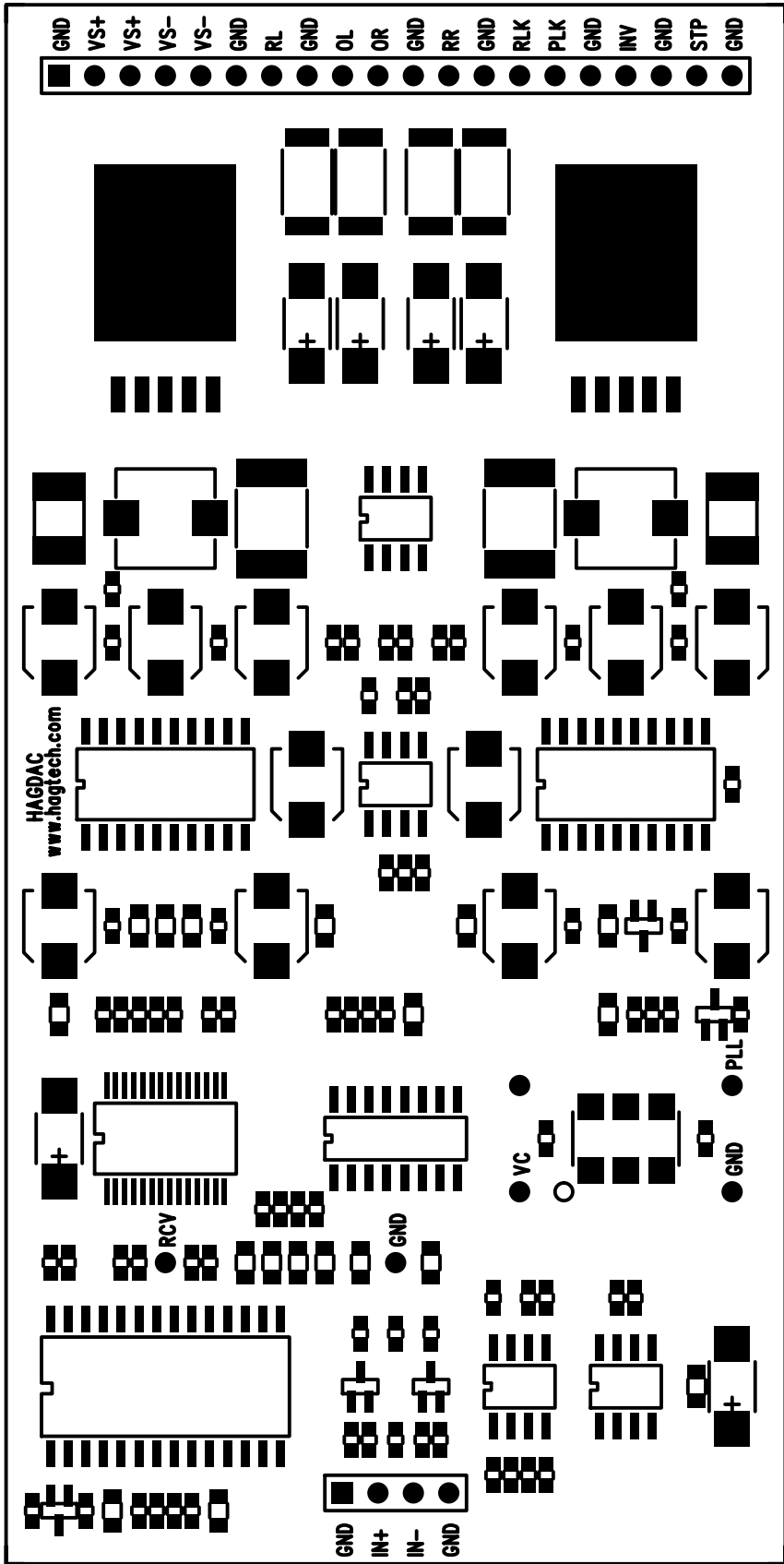
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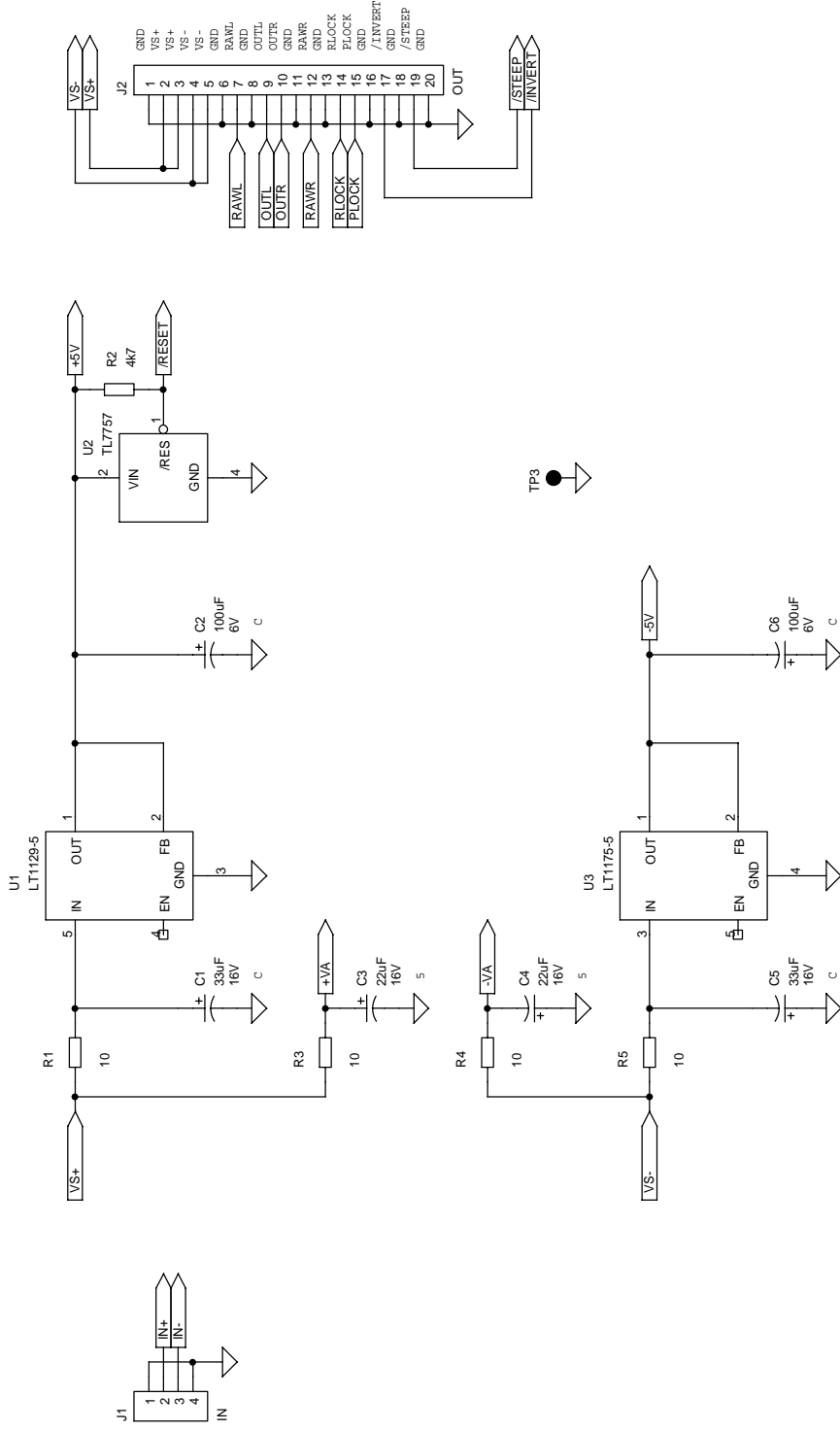
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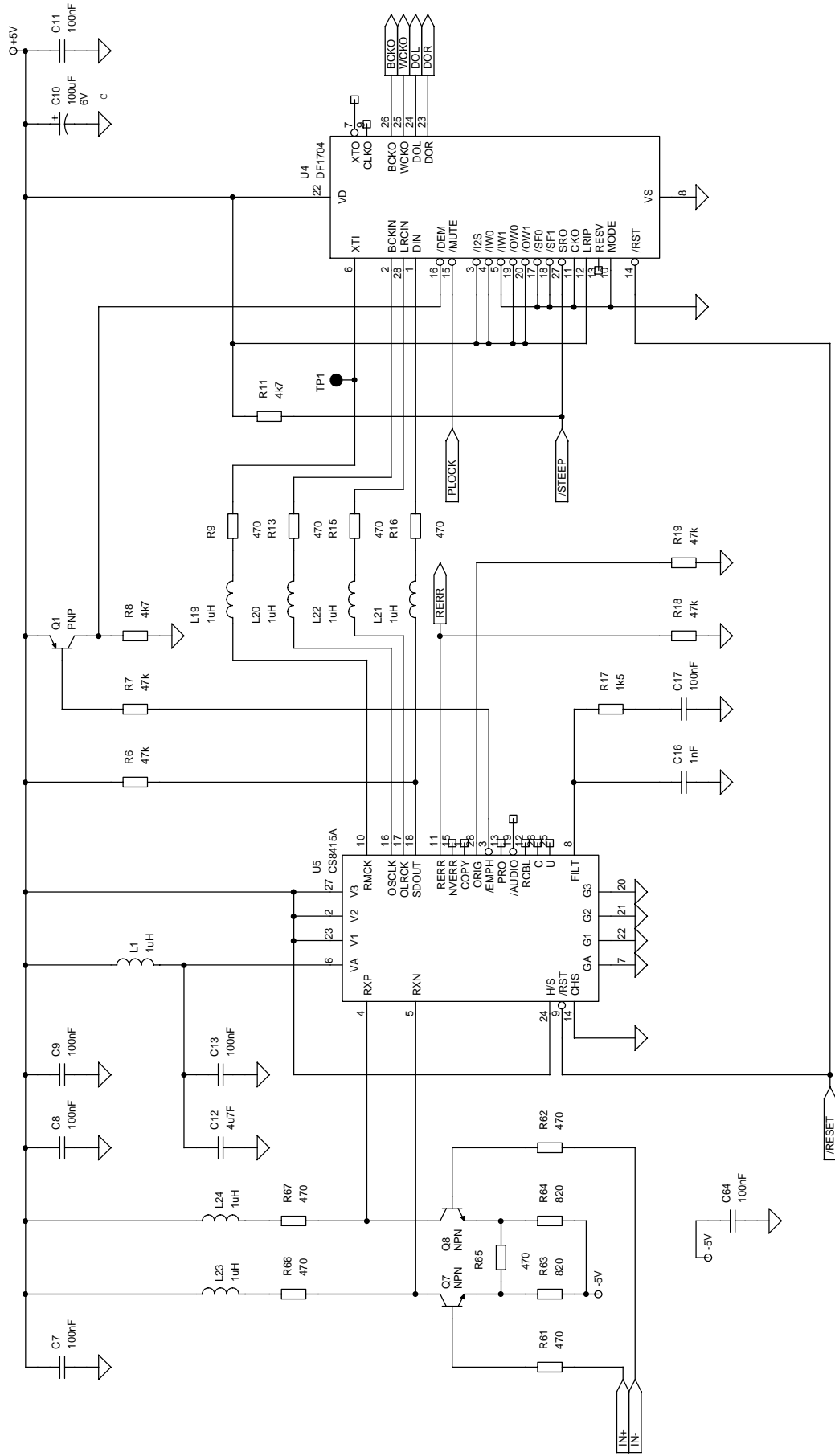


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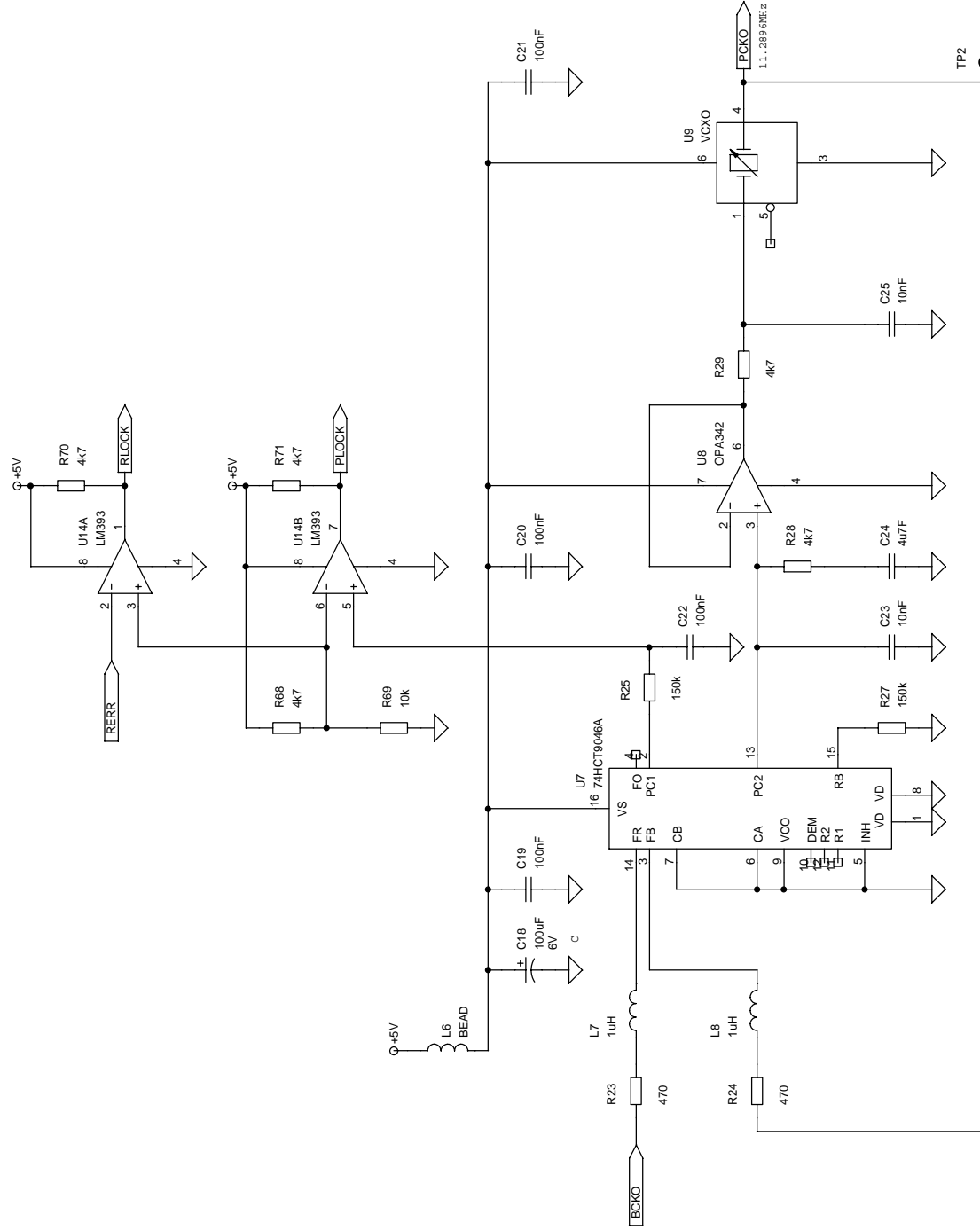


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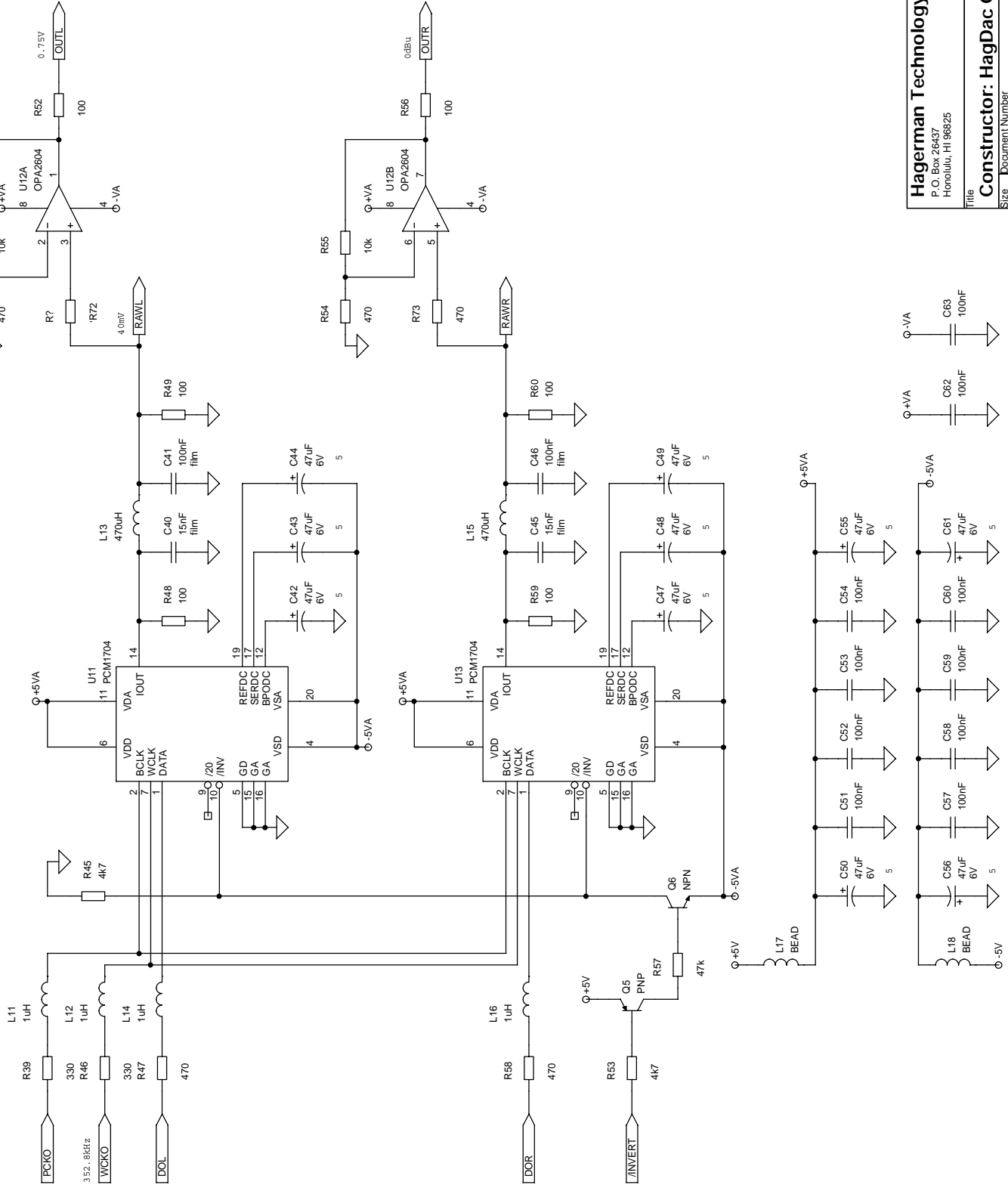
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