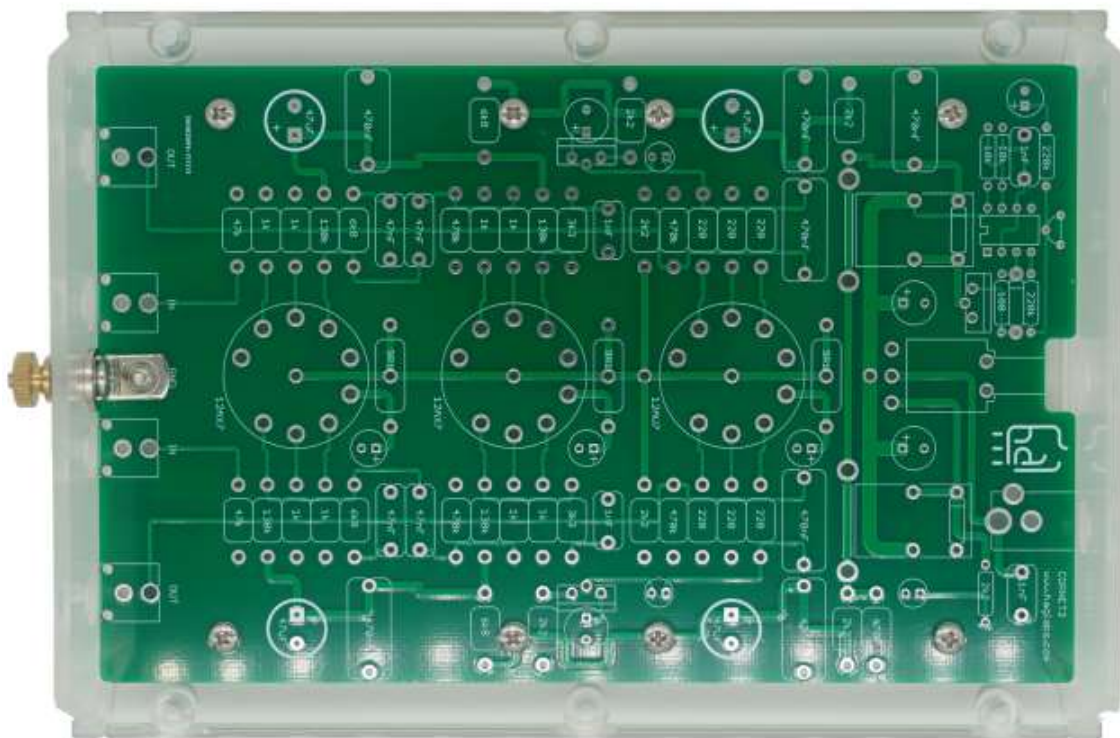




# Cornet3

*Tube MM Phonostage PCB*



Made in USA

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## ***Description***

Congratulations, you have just purchased one of the highest performance-per-dollar audiophile products available! The Cornet3 delivers high performance on a budget with a circuit topology features common cathode class-A gain stages with no feedback, passive equalization, and cathode follower output buffers with constant current sink loading. Power is supplied by a regulated wall-wart driving a boost converter (running at about 50kHz) generating the high voltage rail required for proper tube biasing.

Available as a PCB-only kit! You must purchase all other components to complete assembly.

Do not operate without tubes installed!

## ***Specifications***

Item	Specification
Loading	47k Ohm
Gain	44dB
Output Impedance	1k Ohm
Bandwidth	10Hz to 600kHz
RIAA Accuracy	+/-1dB (30Hz to 30kHz)
Noise	77dBA ref 5mV

## Parts

The following parts (or similar) need to be purchased to complete your kit. Any LED will work fine. If you plan on using a different case, buy panel-mounted RCA jacks, etc. Sockets are available from many places (newsensor.com 3x 9PINPCG), along with tubes (2x 12AX7, 1x 12AU7).

Item	www.digikey.com	Qty
RCA (red)	CP-1419-ND	2
RCA (white)	CP-1420-ND	2
Switch	360-2192-ND	1
DC Jack	EJ508A	1
LED	67-1072-ND	3
Heat Sink	HS372-ND	2
LM555	LM555CNNS/NOPB-ND	1
MUR160	31-MUR160CT-ND	3
2N3906	2N3906FS-ND	1
TIP50	TIP50GOS-ND	2
IRF740	IRF740BPBF-ND	1
50uH	513-1548-ND	2
47uF 25V	565-1306-ND	4
47uF 250V	565-1444-ND	4
470uF 16V	565-3568-ND	4
1nF	495-4761-ND	4
47nF	495-1289-ND	4
470nF	495-1298-ND	7
100 1/4W	100XBK-ND	1
2k2 1/4W	2.21KXBK-ND	1
6k8 1/4W	6.81KXBK-ND	2
220k 1/4W	221KXBK-ND	2
220 1W	13-RSF100JB-73-220R-ND	6
1k 1W	13-RSF100JB-73-1K-ND	8
2k2 1W	13-RSF100JB-73-2K2-ND	6
3k3 1W	13-RSF100JB-73-3K3-ND	2
6k8 1W	6.8KW-1-ND	4
47k 1W	13-RSF100JB-73-47K-ND	2
130k 1W	130KW-1-ND	4
470k 1W	13-RSF100JB-73-470K-ND	5
9R1 3W	9.1AECT-ND	3
Power Supply	1470-3169-ND	1

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## *Assembly*

- ❑ Install all resistors, solder, cut leads. Note the two 10k next to LM555 should be 6k8.
- ❑ Install diodes. Solder.
- ❑ Install LM555.
- ❑ Install power switch.
- ❑ Install 1nF and 47nF capacitors.
- ❑ Install 47uF (25V) and 470uF capacitors.
- ❑ Install LEDs, 2N3904.
- ❑ Install RCA and DC power jacks.
- ❑ Install sockets.
- ❑ Install 470nF capacitors.
- ❑ Install TIP50 and IRF740 transistors. IRF740 is next to switch.
- ❑ Install 50uH inductors.
- ❑ Install 47uF 250V capacitors.
- ❑ Break heat sinks in half, right where the hole is (use pliers). File smooth, install and solder. These act as shields to eliminate noise from power supply.



### ***Testing***

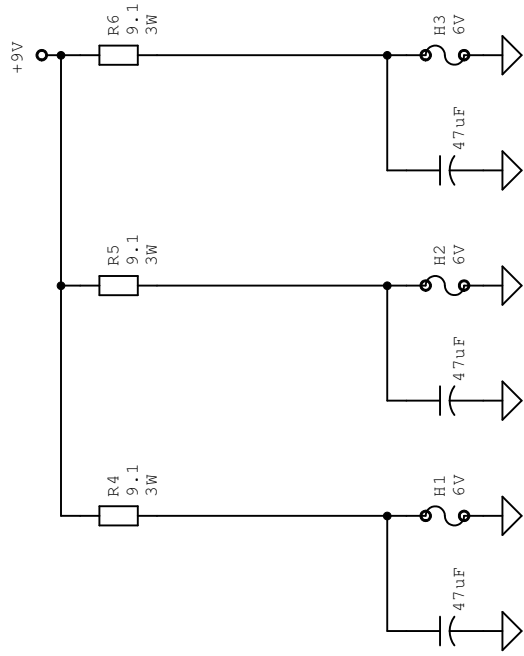
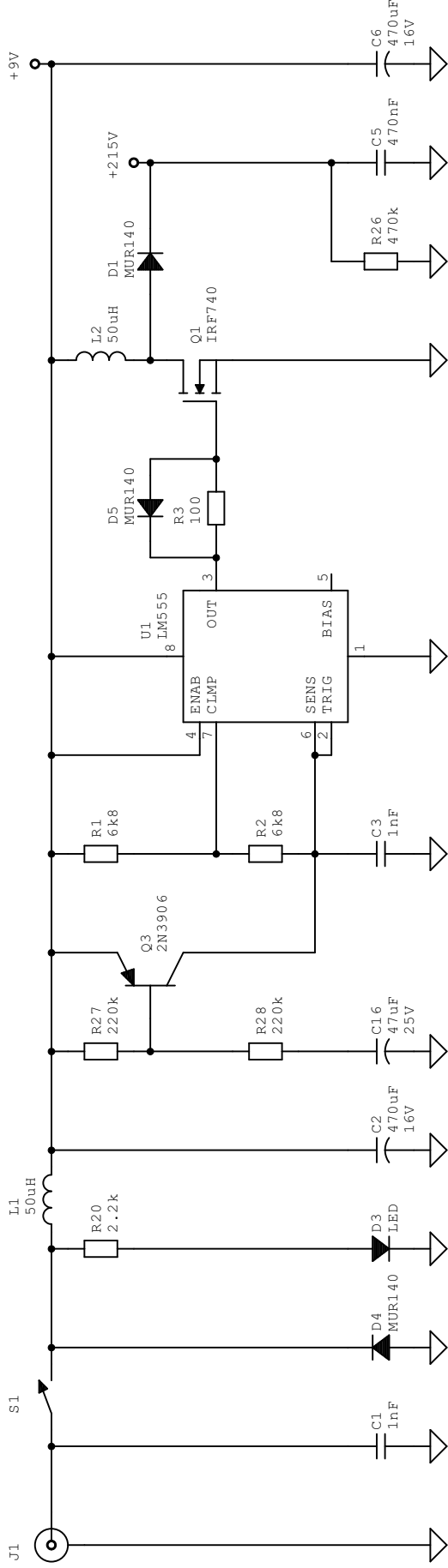
Install tubes. Make sure 12AU7 is towards the front of unit. Apply power to 9Vdc jack. On power, one LED should light up. After about 45 seconds the other two LEDs light up.

If you have a DVM, check supply voltages on mounting screws.

Do not operate without tubes installed!

### ***Troubleshooting***

If audio quality is not good, double-check all resistor values to make sure they were installed into correct locations.



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