

# diytube

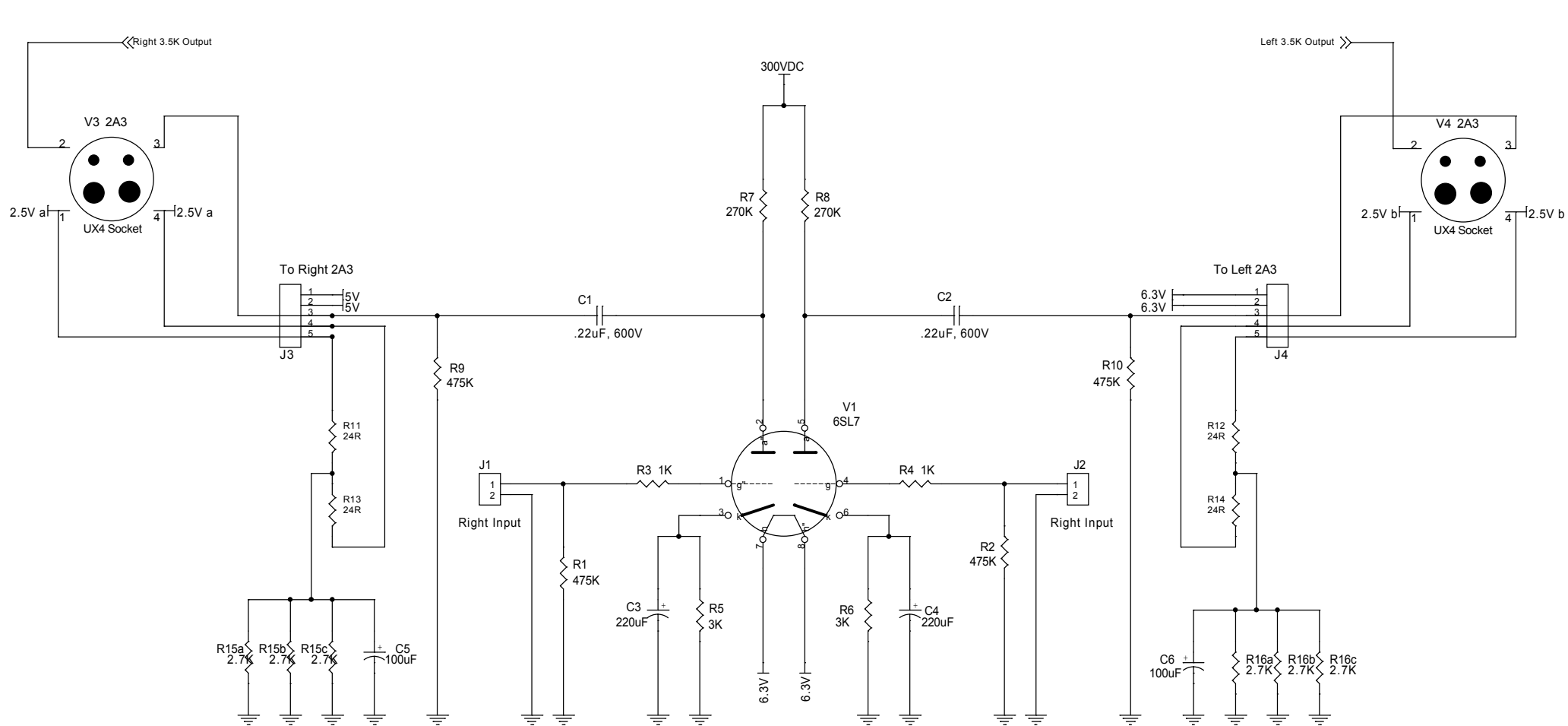
## Get\*Set\*Go

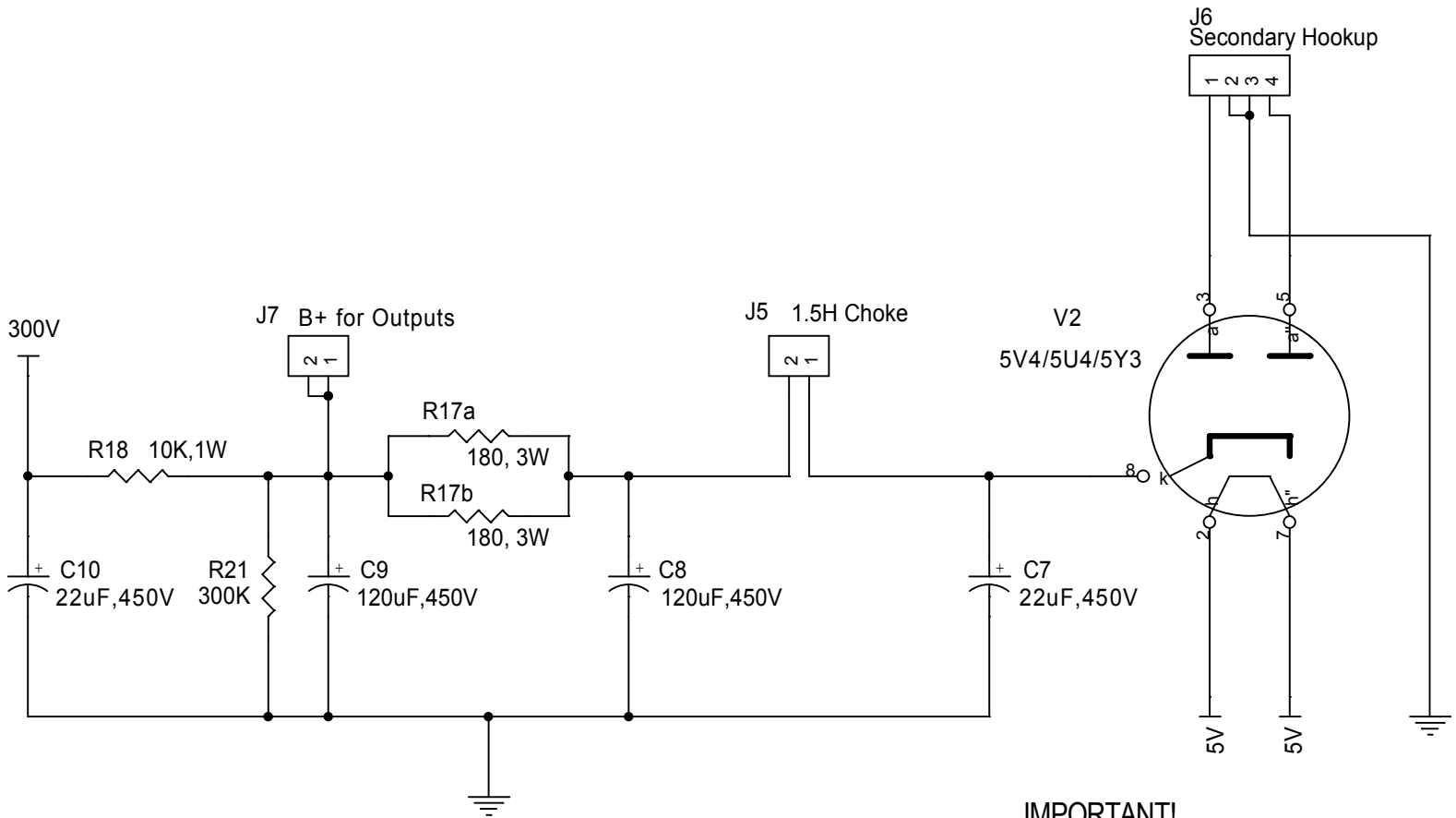
A Directly Heated, Single Ended Triode Design

# INSTRUCTIONS FOR ASSEMBLY AND OPERATION



Price \$10.00





**IMPORTANT!**

With three small jumpers, connect the following on the PCB after the socket is soldered in place:

- Connect V2 pins 3 & 4
- Connect V2 pins 5 & 6
- Connect V2 pins 7 & 8

**VOLTAGE CHART**

- DC measurements (unless noted - AC measurements are to each other, not GND)
- Shorted input, no signal
- All measurements +/-5%

**V1 6SL7****PIN#**

1	0V
2	147V
3	1.8V
4	0V
5	147V
6	1.8V
7	6.3VAC
8	6.3VAC

**V2 5U4/5V4/5Y3****PIN#**

1	0V
2	333V
3	324VAC
4	324VAC
5	324VAC
6	324VAC
7	333V
8	333V

**V3-V4 2A3****PIN#**

1	51V	<  2.5VAC difference
2	308V	
3	0V	
4	51V	<  2.5VAC difference

**J1 & J2****PIN#**

1	0V
2	0V

**J3****PIN#**

1	5VAC
2	5VAC
3	0V
4	51V
5	51V

**J4****PIN#**

1	6.3VAC
2	6.3VAC
3	0V
4	51V
5	51V

**J5****PIN#**

1	333V
2	327V

**J6****PIN#**

1	324VAC
2	0V
3	0V
4	324VAC

**J7****PIN#**

1	319V
2	319V

Tip: Put a dot in the checkbox if you have the part already as a quick reference when ordering parts. 'X' out the checkbox when you have installed the part on the PCB.

Item	QTY	Reference	Part	Mouser Part	Unit Cost
<input type="checkbox"/>	4	R1,R2,R9,R10	475K, 1/4W	71-RN60D-F-475K	0.07
<input type="checkbox"/>	4	R3,R4,D2,D4	1K, 1/4W	71-RN60D-F-1.0K	0.07
<input type="checkbox"/>	2	R5,R6	3.01K, 1/4W	71-RN60D-F-3.01K	0.07
<input type="checkbox"/>	2	R7,R8	270K, 1W	281-270K-RC	0.13
<input type="checkbox"/>	4	R11 thru R14	24 ohm, 1W	281-24-RC	0.13
<input type="checkbox"/>	6	R15a-c,R16a-c	2.7K, 3W	71-CW2B-2.7K	0.87
<input type="checkbox"/>	2	R17a,R17b	180, 3W	72-RWM410-180-5	0.57
<input type="checkbox"/>	1	R18	10K, 1W	281-10K-RC	0.13
<input type="checkbox"/>	1	R21	300K, 1W	281-300K-RC	0.13
<input type="checkbox"/>	2	C1,C2	0.22uF, 600V	75-715P600V0.22	5.45
<input type="checkbox"/>	2	C3,C4	220uF, 25V	647-UVZ1E221MPD	0.18
<input type="checkbox"/>	2	C5,C6	100uF, 100V	647-UVZ2A101MPD	0.61
<input type="checkbox"/>	2	C7,C10	22uF, 450V	647-UVZ2W220MHD	1.23
<input type="checkbox"/>	2	C8,C9	120uF, 450V	5985-380-450V121	3.57
<input type="checkbox"/>	4	J1,J2,J5,J7	2P .375" Terminal	571-14376644	0.79
<input type="checkbox"/>	2	J3,J4	5P .375" Terminal	571-14376647	2.17
<input type="checkbox"/>	1	J6	4P .375" Terminal	571-14376646	1.70

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Item	QTY	Ref	Part	Part Number	Unit Cost
<input type="checkbox"/>	1	SW1	Green Neon ON/OFF	103-R13-135B-02G-EV	1.76
<input type="checkbox"/>	1	F1	Fuse Holder	504-HTB-28M	5.66
<input type="checkbox"/>	1		Slo-Blo 3A Fuse	693-0034.3122	0.27
<input type="checkbox"/>	1		2-Prong AC Cord	173-11112-E	3.23
<input type="checkbox"/>	1		Rubber Grommet	534-740	0.22
<input type="checkbox"/>	2		Wire bushing	561-MP6258	0.15
<input type="checkbox"/>	2		Isolated RCA jacks	502-3501FPX	1.91
<input type="checkbox"/>	2		Washer	502-S2207	0.53
<input type="checkbox"/>	2		Washer	502-S1564	0.52
<input type="checkbox"/>	10		Standoffs	534-8414	0.59
<input type="checkbox"/>	2		Speaker Binding Post	164-19B2-EX	3.95

The following hardware can be purchased from BoltDepot.com and uses their part numbers. Locknuts can be subbed with nuts and star washers.

<input type="checkbox"/>	4		4-40 x 5/16 SS Phil Pan	9628	0.07
<input type="checkbox"/>	4		4-40 Locknuts	12018	0.10
<input type="checkbox"/>	10		6-32 x 1/4 SS Phil Pan	5316	0.07
<input type="checkbox"/>	10		6-32 Locknuts	12019	0.11
<input type="checkbox"/>	8		8-32 x 1/2 SS Phil Pan	1346	0.11
<input type="checkbox"/>	8		8-32 Locknuts	12020	0.12
<input type="checkbox"/>	6		10-32 x 1/2 SS Phil Pan	1366	0.11
<input type="checkbox"/>	6		10-32 Locknuts	12022	0.13

diytube get\*set\*go 2A3

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Item	QTY	Ref	Part	Part Number	Unit Cost
<input type="checkbox"/>	1	V1	6SL7		
<input type="checkbox"/>	1	V2	5V4		
<input type="checkbox"/>	2	V3,V4	2A3		
<input type="checkbox"/>	2	V1,V2	8pin PCB Socket		
<input type="checkbox"/>	2	V3,V4	UX4 Chassis Socket		
<input type="checkbox"/>	1	T1	Edcor XPWR067-100/120 Power Transformer		\$62.83
or					
<input type="checkbox"/>	1	T1	Hammond 302AX Power Transformer		\$132.00
<input type="checkbox"/>	2	T2,T3	Edcor 8 ohm to 3.5K Output Transformer (order correct secondary impedance to match your speakers)	GXSE15-8-3.5K	74.02/pair

## get\*set\*go 2A3 Assembly Instructions

The get\*set\*go PCB has a dual silkscreen design, which permits mounting of all components – except the tube sockets – on either side. For typical construction, almost all the components will be placed on the bottom side of the board – the side with the diytube logo. The top side has silkscreen saying “PUT SOCKET ON THIS SIDE”.

- 1) On the top side of the board, where it says “PUT SOCKET ON THIS SIDE”, insert octal PCB socket. Fully insert the socket and solder pins 1, 4 & 6. Using an octal tube (junkbox variety is handy), test both sockets for ease of insertion. Also straighten the sockets at this point to where it is symmetrical and pleasing to the eye. Then solder the rest of the socket legs. This is a good time to inspect the socket, confirming that all eight pin sockets securely connect to the tube pins. Any that appear loose can be tightened up with a small screwdriver.
- 2) Solder three small jumpers on the V2 socket to convert use of socket from a 6AX5GT rectifier to 5U4/5V4/5Y3 types. Jumper:
  - a. V2 pins 3 & 4
  - b. V2 pins 5 & 6
  - c. V2 pins 7 & 8
- 3) Stuff board with all through-hole resistors. Cross-reference the part with the parts list and check off the resistor once it is placed. Bend the leads of the resistor so that the part identifier markings are clearly visible. Once inserted, fold the leads back to hold the part in place. You can easily stuff the board before soldering them in place, which permits easy correction for misplaced components. Power resistors should be mounted about 1/8” off of the board for effective cooling. It is also suggested that for maximum heat dissipation that the following resistors be placed on the top side (ie socket side) of the PCB: R15A, R15C, R16A, R16C, R17B, R19, R20 and R21.
- 4) Solder all the stuffed resistors. Then gently pull back the excess lead straight out from the board with pair of small pliers. With a pair of cutters, trim close to the board, but do not cut into the solder joint itself.
- 5) Stuff and solder the electrolytic capacitors, noting the polarized markings.
- 6) When stuffing your coupling caps, you will be able to use three different sets of holes. Use what fits your capacitor best. The thru-holes are large enough for hookup wire in case you want to use a larger outboard cap. 400V rated capacitors are OK for use. Any value .22uF and up is fine.

*TIP: If using Auricaps, mount with the black lead towards the center of the board.*
- 7) Solder a small wire from C12 positive to TP2. This DC biases the heater on the 6SL7.



