

diytube

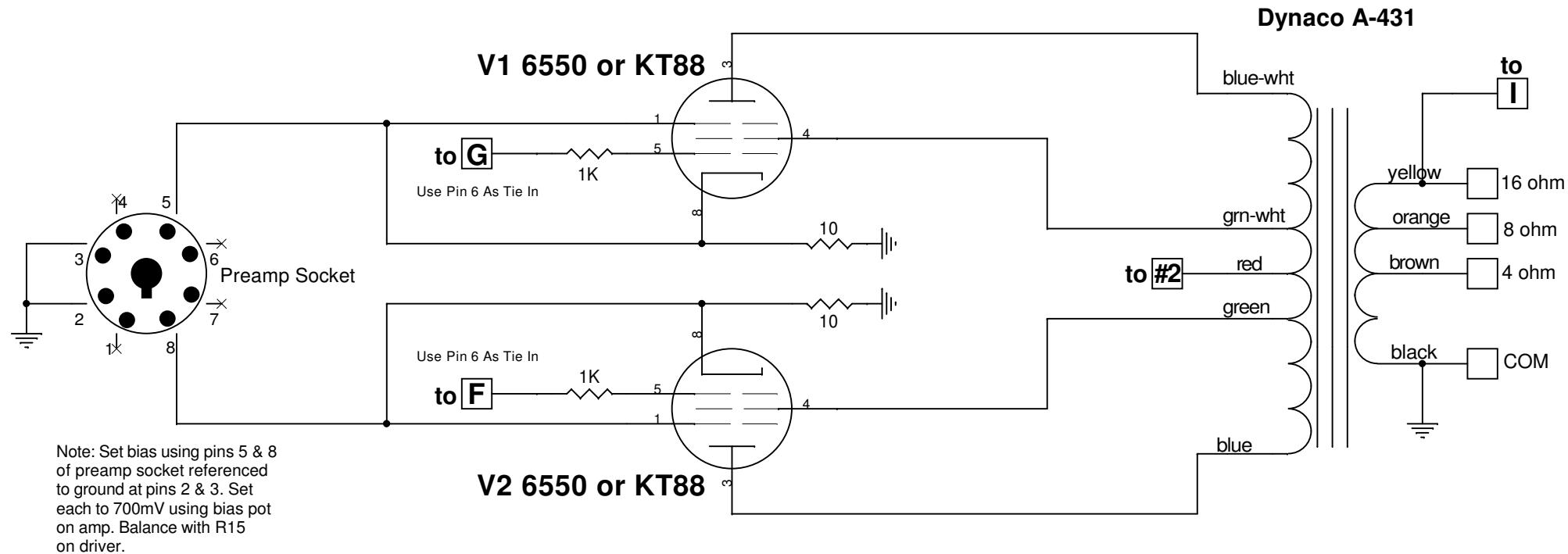
Poseidon Driver

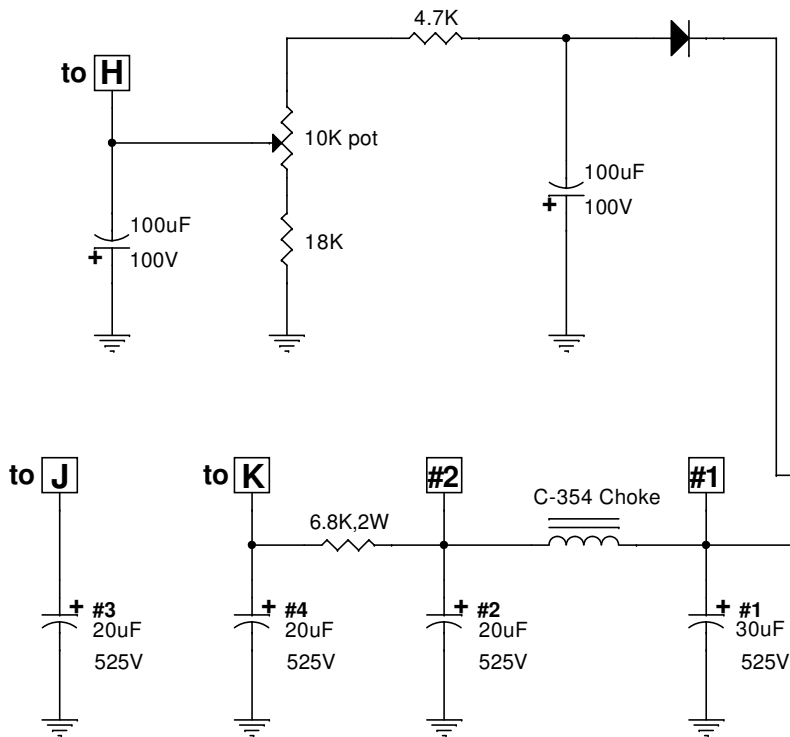
for the Dynaco Mark III, IV and DIY

**INSTRUCTIONS
FOR
ASSEMBLY
AND
OPERATION**

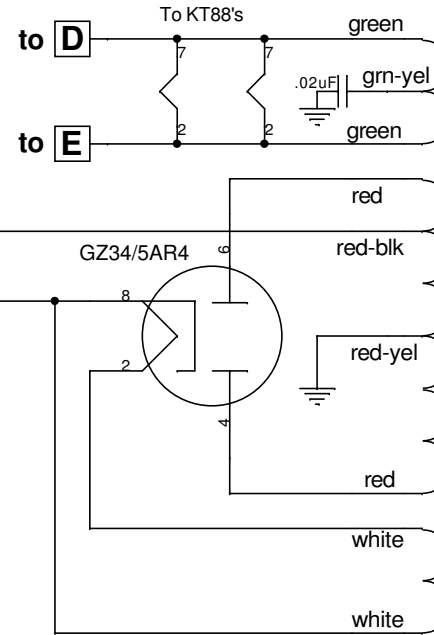


Price \$10.00

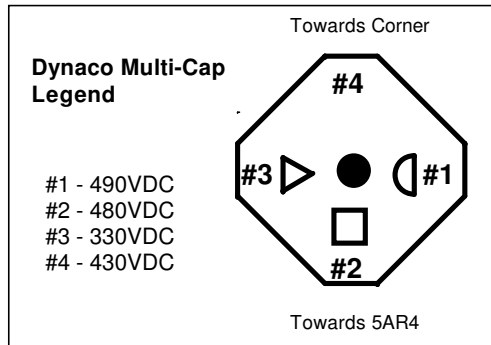




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Dynaco P-782



Mark III Driver Board

VOLTAGE CHART

- DC measurements (unless noted)
 - Shorted input, no signal
 - All measurements +/-5%

V1	12AX7
PIN#	
1	195V
2	0V
3	1.26V
4	6.3VAC ←
5	NA
6	NA
7	NA
8	NA
9	6.3VAC ←

V2	12AU7
PIN#	
1	219V
2	0V
3	10V
4	6.3VAC ←
5	6.3VAC ←
6	219V
7	0V
8	10V
9	6.3VAC ←

V3-V4	KT88/6550
PIN#	
1	700mV
2	6.3VAC ←
3	501V
4	504V
5	-58V
6	-58V
7	6.3VAC ←
8	700mV

V5	GZ34/5AR4
PIN#	
1	0V
2	518V
3	0V
4	422VAC
5	0V
6	422VAC
7	0V
8	518V

A	0V
B	0V
C	0V
D	6.3VAC ←
E	6.3VAC ←
F	-58V

G	-58V
H	-61V
I	0V
J	333V
K	451V

MultiCap Lugs

A	518V
B	508V
C	451V
D	333V

Bias Supply Readings

- 75V at first cap
- 65V after dropping resistor
- 44V at 18K resistor

Parts for diytube Mark III driver PCB from Mouser Electronics (www.mouser.com)

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
☐	2	R1,R4	1K, 1/4W	71-RN60D-F-1.0K	0.09
☐	1	R2	475K, 1/4W	71-RN60D-F-475K	0.24
☐	1	R3	100Ω, 1/4W	71-RN60D-F-100	0.09
☐	1	R5	2.74K, 1/4W	71-RN60D-F-2.74K	0.09
☐	1	R6	121K, 1/2W	71-RN65D-F-121K	0.31
☐	1	R7	5.62K, 1/4W	71-RN60D-F-5.62K	0.09
☐	2	R8, R14	1M, 1/8W	71-RN55D-F-1.0M	0.08
☐	1	R9	10Ω, 1/8W	71-RN55D-F-10	0.08
☐	2	R10,R11	68K, 2W	282-68K-RC	0.39
☐	2	R12,R13	100K, 1/4W	71-RN60D-F-100K	0.09
☐	1	R15	500K Pot	652-3299Y-1-504LF	2.65
☐	1	R16	100K, 1/2W	71-RN65D-F-100K	0.31
☐	1	C1	0.22uF, 600V	75-715P600V0.22	3.37
☐	1	C2	120pF	5982-15-500V120	0.76
☐	1	C3	330pF	5982-15-500V330	1.30
☐	2	C4,C5	0.1uF, 600V	75-715P600V0.1	2.02
☐	1	U1	LM234Z	511-LM234Z	1.04

Other Mark III Parts Available from Mouser Electronics (www.mouser.com)

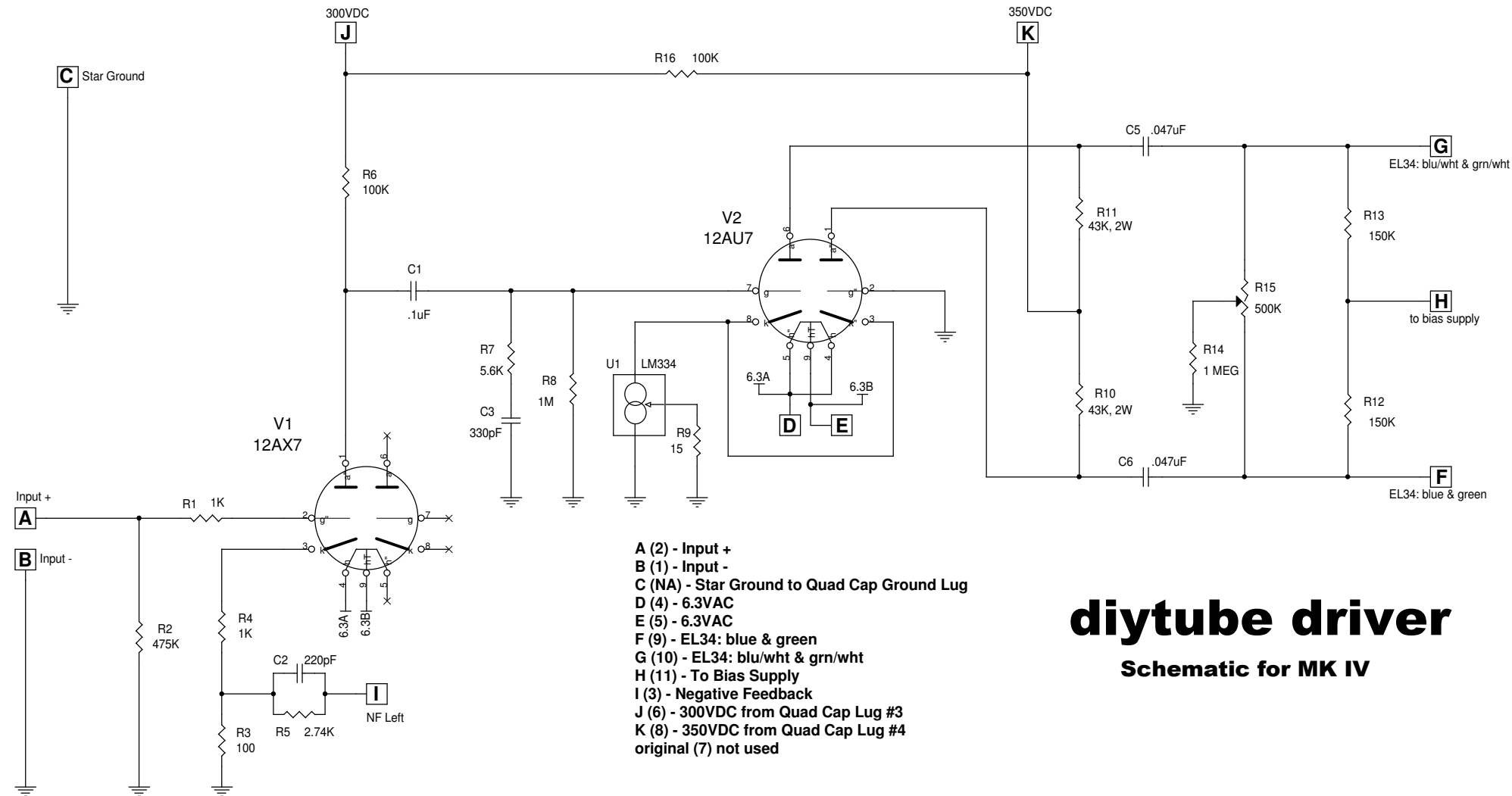
Tip: Put a dot in the checkbox if you have the part already as a quick reference when ordering parts. 'X' out the checkbox when you have installed the part.

Item	QTY	Reference	Part	Mouser Part	Cost
☐	2	bias resistors	10 Ω , 1/2W	71-RN65D-F-10	0.31
☐	2	grid stoppers	1K, 1/4W	71-RN60D-F-1.0K	0.09
☐	1	cap lug 2 to 4	6.8K, 2W	282-6.8K-RC	0.19
☐	1	bias supply	4.75K, 1/2W	71-RN65D-F-4.75K	0.31
☐	1	bias supply	18K, 1/2W	71-RN65D-F-18.2K	0.97
☐	1	bias supply KT88	22K, 1/2W	71-RN65D-F-22.1K	0.31
☐	1	speaker load	680 Ω , 2W	282-680-RC	0.19
☐	2	bias supply caps	100uF, 100V	647-TVX2A101MCA	1.17
☐	1	filament CT cap	.02uF, 50V	140-50Z5-203M-RC	0.11
☐	1	bias diode	1000V, 1A	625-1N4007-E3	0.04
☐	1	Wire Labels		644-PCM-1-33	2.59
☐	1	RCA jack		161-2002	1.09
		<i>RCA phenolic disc</i>		<i>161-R240-E</i>	<i>0.80</i>
☐	1	Fuse Block		504-4405	5.42
☐	1	3A time delay fuse		504-MDL-3	0.76
☐	1	10K Linear Pot		31VF401-F	1.40
☐	1	SPDT switch		629-GF16230001	1.18
☐	1	Terminal Strip, 4 Screw		534-4190	1.10
☐	2	Terminal Strip, 3 Lugs		158-1003	0.56
☐	1	6' AC brown cord		173-11123-E	2.47
☐	1	100' Wire Red TFE		566-83005-100-02	37.74

Other Mark III Parts Available from Triode Electronics (www.triodeel.com)

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.

Item	QTY	Reference	Part	Triode PN#	Unit Cost
☐	1	Multi Section Cap	40/3x20uF, 525V	C-EC40-20X3-525	39.95
☐	4	Sockets	Octal Sockets	OCTAL-CERCHAS	1.95
☐	1	Choke	1.5H, 56DCR	C354	12.95
☐	1	Rectifier	5AR4	GZ34JJ	14.95
☐	2	Power Tubes	KT88	KT88JJ	73.99
☐	1	Voltage Amp	12AX7	12AX7TESLA	9.95
☐	1	Phase Splitter	12AU7	12AU7JJ	9.95
☐	1	Power Trnsfrmr	P-782, 800VCT	P782S	104.95
☐	1	Audio Trnsfrmr	A-431, 4300Ω 60W	A431S	119.95

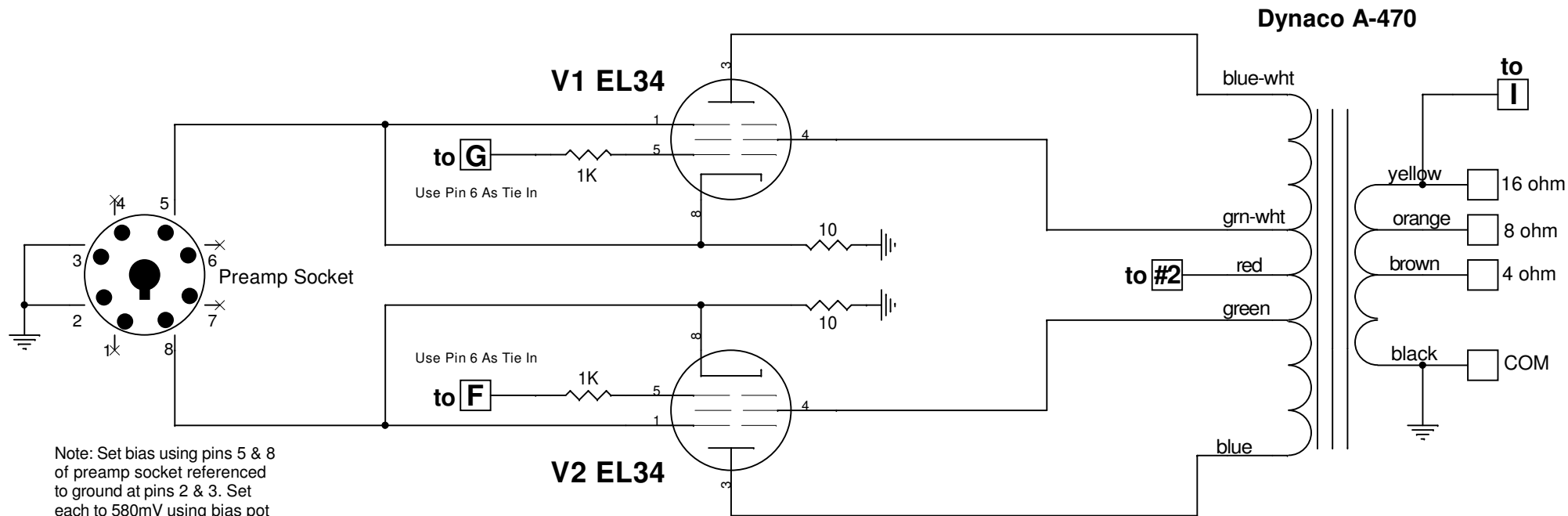


diytube driver

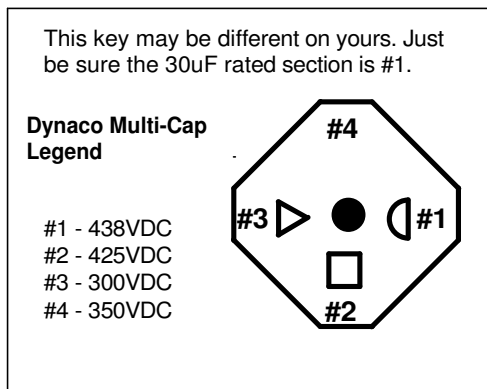
Schematic for MK IV

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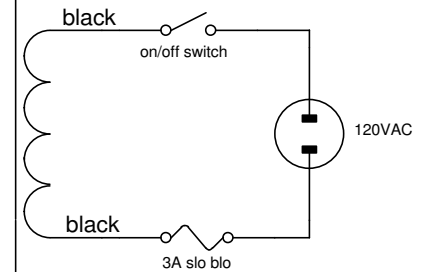
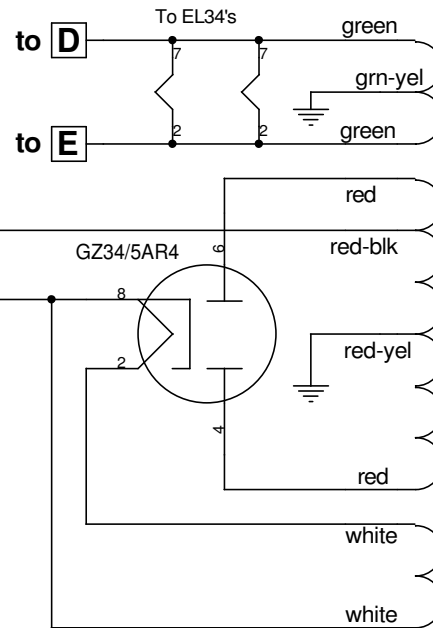
Mark IV Driver Board



Note: Set bias using pins 5 & 8 of preamp socket referenced to ground at pins 2 & 3. Set each to 580mV using bias pot on amp. Balance with R15 on driver.



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Mark IV Driver Board

Parts for diytube Mark IV driver PCB from Mouser Electronics (www.mouser.com)

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Item	QTY	Reference	Part	Mouser Part	Cost
☐	2	R1, R4	1K, 1/4W	71-RN60D-F-1.0K	0.09
☐	1	R2	475K, 1/4W	71-RN60D-F-475K	0.24
☐	1	R3	100Ω, 1/4W	71-RN60D-F-100	0.09
☐	1	R5	2.74K, 1/4W	71-RN60D-F-2.74K	0.09
☐	1	R6	100K, 1/2W	71-RN65D-F-100K	0.31
☐	1	R7	5.62K, 1/4W	71-RN60D-F-5.62K	0.09
☐	2	R8, R14	1M, 1/8W	71-RN55D-F-1.0M	0.08
☐	1	R9	15Ω, 1/8W	71-RN55D-F-15	0.08
☐	2	R10, R11	43K, 2W	282-43K-RC	0.19
☐	2	R12, R13	150K, 1/4W	71-RN60D-F-150K	0.09
☐	1	R15	500K Pot	652-3299Y-1-504LF	2.65
☐	1	R16	100K, 1/2W	71-RN65D-F-100K	0.31
☐	1	C1	0.1uF, 600V	75-715P600V0.1	2.02
☐	1	C2	220pF	5982-15-500V220	0.96
☐	1	C3	330pF	5982-15-500V330	1.30
☐	2	C4, C5	0.047uF, 600V	75-715P600V0.047	1.28
☐	1	U1	LM234Z	511-LM234Z	1.04

Other Mark IV Parts Available from Mouser Electronics (www.mouser.com)

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.

Item	QTY	Reference	Part	Mouser Part	Cost
☐	2	bias resistors	10 Ω , 1/2W	71-RN65D-F-10	0.31
☐	2	grid stoppers	1K, 1/4W	71-RN60D-F-1.0K	0.09
☐	1	cap lug 2 to 4	6.8K, 2W	282-6.8K-RC	0.19
☐	2	bias supply	10K, 1/2W	71-RN65D-F-10K	0.31
☐	2	bias supply caps	100uF, 100V	647-TVX2A101MCA	1.17
☐	1	bias diode	1000V, 1A	625-1N4007-E3	0.04
☐	1	Wire Labels		644-PCM-1-33	2.59
☐	1	RCA jack		161-2002	1.09
		<i>RCA phenolic disc</i>		<i>161-R240-E</i>	<i>0.80</i>
☐	1	Fuse Block		504-4405	5.42
☐	1	2A time delay fuse		504-MDL-2	0.76
☐	1	10K Linear Pot		31VF401-F	1.40
☐	1	SPDT switch		629-GF16230001	1.18
☐	1	Terminal Strip, 4 Screw		534-4190	1.10
☐	2	Terminal Strip, 3 Lugs		158-1003	0.56
☐	1	6' AC brown cord		173-11123-E	2.47
☐	1	100' Wire Red TFE		566-83005-100-02	37.74

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Item	QTY	Reference	Part	Triode PN#	Unit Cost
☐	1	Multi Section Cap	40/3x20uF, 525V	C-EC40-20X3-525	39.95
☐	4	Sockets	Octal Sockets	OCTAL-CERCHAS	1.95
☐	1	Choke	1.5H, 56DCR	C354	12.95
☐	1	Rectifier	5AR4	GZ34JJ	14.95
☐	2	Power Tubes	EL34	JJ-EL34-MP	29.85
☐	1	Voltage Amp	12AX7	12AX7TESLA	9.95
☐	1	Phase Splitter	12AU7	12AU7JJ	9.95
☐	1	Power Trnsfrmr	PA-135, 740VCT	PA135	99.95
☐	1	Audio Trnsfrmr	A-470, 4300Ω 35W	A470S	94.95