BOM_GC-73 Preamp rev3 + FET DI

Q.ty	Resistors:	N° on PCB
1	39k - 1/4w 1%	R62
3	2k7 - 1/4w 1%	R55,R54,R53
1	12R - 1/4w 1%	R21
1	130R - 1/4w 1%	R57
1	82R - 1/4w 1%	R44
1	360R - 1/4w 1%	R56
1	270R - 1/4w 1%	R48
1	620R - 1/4w 1%	R25
1	510R - 1/4w 1%	R59
2	470R - 1/4w 1%	R41,R40
2	390R - 1/4w 1%	R43,R42
3	1k5 - 1/4w 1%	R24,R23,R22
1	1k2 - 1/4w 1%	R20
1	1k0 - 1/4w 1%	R58
4	3k3 - 1/4w 1%	R15,R14,R13,R12
4	2k2 - 1/4w 1%	R16,R19,R18,R17
3	1k8 - 1/4w 1%	R47,R46,R45
3	5k1 - 1/4w 1%	R30,R29,R28
1	4k3 - 1/4w 1%	R60
4	3k9 - 1/4w 1%	R52,R51,R50
2	10k - 1/4w 1%	R39,R38
1	7k5 - 1/4w 1%	R61
3	18k - 1/4w 1%	R6,R7,R5
1	15k - 1/4w 1%	R37
1	12k - 1/4w 1%	R49
2	51k - 1/4w 1%	R32,R31
2	47k - 1/4w 1%	R34,R33
3	33k - 1/4w 1%	R8,R27,R26
2	120k - 1/4w 1%	R36, R35
3	68k - 1/4w 1%	R11,R10,R9
1	56k - 1/4w 1%	R4
2	6K81 - 1/4w 0.1%	R2,R1
1	47R - 3Watt	R3
7	2.2M - 1/4w 1%	R2',R3',R7',R6',R5',R4',R1'
1	22R - 1/4w 1%	R13'
1	2.7K - 1/4w 1%	R12'
2	100R - 1/4w 1%	R11',R10'
2	470R - 1/4w 1%	R9',R8'
Q.ty	**Transistor:**	**N° on PCB**
8	BC184C	Q3,Q2,Q9,Q8,Q7,Q6,Q5,Q4
1	2N3055 + Heatsink TO3	Q1
2	2SK170	Q2',Q1'
Q.ty	**Trimmer & Potentiometers:**	**N° on PCB**
1	Bias TRIMMER P94 4k7	R63
1	Output Gain TRIM 10k Lin 20mm	R149
Q.ty	**Film capacitors:**	**N° on PCB**
4	100nF film capa p=5mm	C8',C7',C6',C4'
1	10nF Film Capa p=5.08mm	C6
1	4n7F Film Capa p=5.08mm	C5
3	680pF Film Capa p=5.08mm	C12,C8,C7

1	1nF Film Capa p=5.08mm	C11
2	1n5F Film Capa p=5.08mm	C10,C9
1	220pF film capa p=5mm	C5'
Q.ty	**Ceramic capacitors:**	**N° on PCB**
1	180pF ceramic capa p=2.54mm	C34
2	100pF Ceramic Capa p=2.54mm	C2,C1
1	220pF Ceramic Capa p=2.54mm	C3
1	330pF Ceramic Capa p=2.54mm	C4
Q.ty	**Electrolytic capacitors:**	**N° on PCB**
7	22uF / 50V d=6.5mm	C22,C19,C18,C21,C17,C16,C20
3	10UF / 50V d=5mm	C13,C15,C14
6	100UF / 25V d=6.5mm	C24,C23,C25,C26,C28,C27
2	470UF / 16V d=9mm	C33,C32
3	470UF / 35V d=10mm	C30,C29,C31
3	100uF / 63V d=6.3mm Bi-polar	C3',C2',C1'
Q.ty	**Various:**	**N° on PCB**
1	VTB1847 Carnhill Output Transfo (or UTM3547)	U1
1	VTB9045 Carnhill Mic Input Transfo (or UTM2545)	U2
2	CONN 2P KK100_22-23-2021	J2',J2
1	LORLIN SERIE PT3 DECKS or GRAYHILL 71BDF30-03-1-AJN	SW1
2	CONN 3P KK100_22-23-2031	J3,J5
2	CONN 5P KK100_22-23-2051	**J4,J1'**
3	SWITCH C&K 7201MD9AV2BE	SW5, SW6, SW7
1	RELAY 24v G6K-2P-Y-DC24	RLY1'

Bias Calibration:

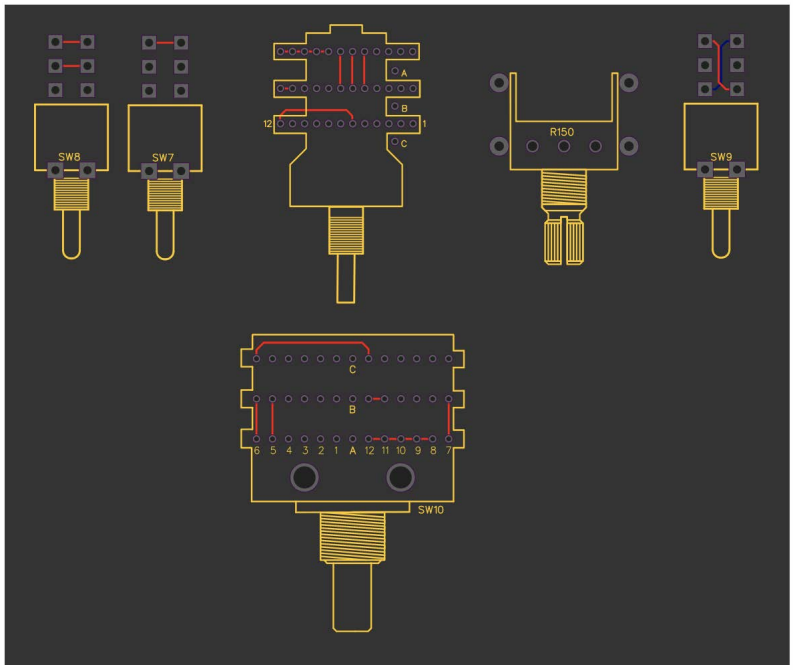
- Measure the voltage across R6 on the PSU board. You should initially get a reading of about 70-80mV DC
- Adjust R63 (Out Bias) until you read 130mV

* If you have the equipment available, the “correct” way to do this is by measuring the output distortion and adjusting R63 (Out Bias) for minimum. However, you will probably end up with a current of about 130mA anyway so the above method works fine.

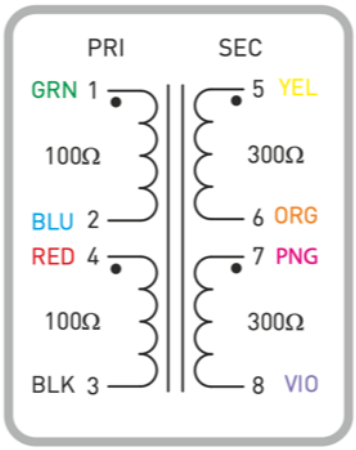
<u>some links :</u>

- Lorlin serie PT 3 decks : you need 3 parts :
  - ° https://fr.rs-online.com/web/p/entretoises-pour-interrupteurs-rotatifs/2371031
  - ° https://fr.rs-online.com/web/p/commutateurs-rotatifs/0352294
  - ° https://fr.rs-online.com/web/p/commutateurs-rotatifs/0665837
- switches :
  - ° https://www.mouser.fr/ProductDetail/CK/7201MD9AV2BE?qs=FbdvdS3ZqjiRhKbgAoF%252BhA%3D%3D
- Gain output trim pot (you don’ need the bracket , hard to find !):
  - ° https://www.mo-user.fr/ProductDetail/Bourns/PDB181-A420K-103B?qs=h2IHEVivlqD7EoAYF1S1sQ%3D%3D
- DI Jack socket :
  - ° https://www.lcsc.com/product-detail/Audio-Connectors_HOOYA-PJ-609BA_C309277.html
  or Aliexpress

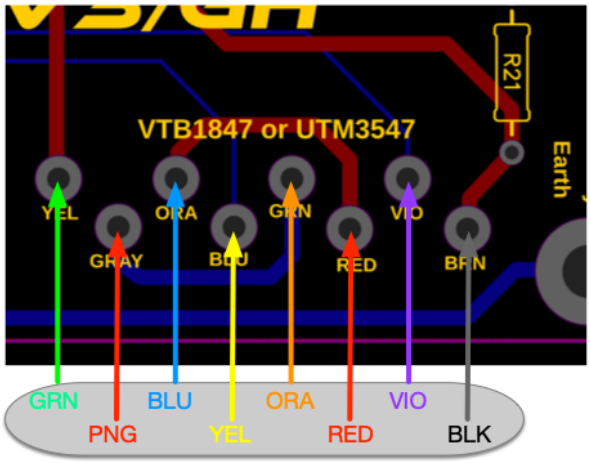
WIRING SWITCHS

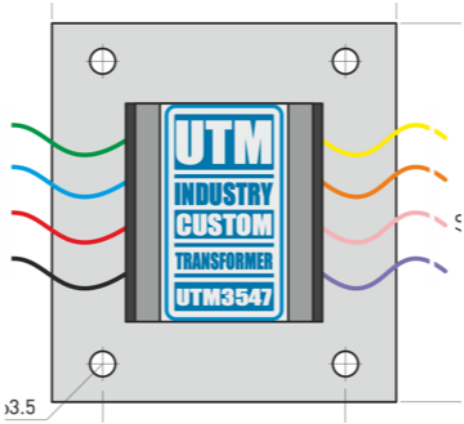


UTM3547

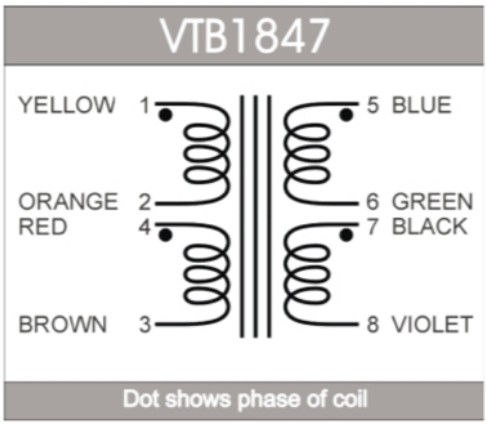


Low profile, Output Audio transformer
Ratio: 1.25:1, 1:1.6, 1:4
Impedance: 200Ω : 600Ω, 200Ω : 150Ω,
50Ω : 600Ω, 50Ω : 150Ω
DC Resistance: (6Ω+6Ω) : (22Ω + 22Ω)
Fitted with 150 mm flying leads
Gapped. Open frame package.

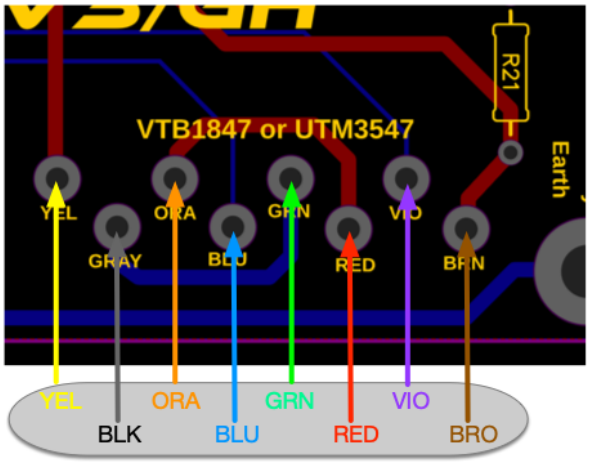
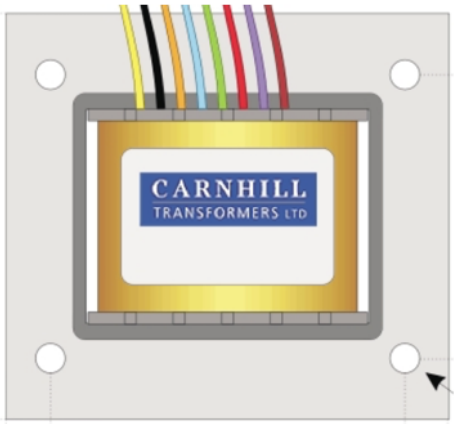




VTB1847



Optimum Source / Load Impedances

Series wired primaries	Parallel wired primaries	Series wired secondaries	Parallel wired secondaries	Voltage Gain dB
200Ω		600Ω		+4
200Ω			150Ω	-2
	50Ω	600Ω		+10
	50Ω		150Ω	+4

Turns Ratio; N1:N2 = 1+1:1.7+1.7
DC Coil Resistances: P1:P2:S1:S2 = 6:6:20:20 (Ohms)
All values are approximate