DYNACO MK4 Auto Bias Upgrade Manual

Preparation

- Disconnect relevant wires from the original PCB driver card-reference MARK IV & AB DIAGRAM
- Disconnect the connecting wire at socket 8 between tubes V2 and V3. Pins1 a 8 on sockets V2 and V3 remain connected by wire.
- Disconnect the wire from the slider of the BIAS potentiometer leading to the driver.

Construction and Connecting the Auto Bias Module

- Mount the Auto Bias board with the new driver.
- Connect the ground point to terminal 1 on the driver.
- Connect the input to the IN terminal on the driver.
- Connect the heating tubes terminals on the driver board and connect in the tube V1 to pins 4 and 5.
- Connect feedback wires to terminals 3 and 7 - g2 power tube to terminal 7 and secondary OT to terminal 3 on the driver.
- Connect AC power 6.3V AB to terminals 4 and 5 on the driver board
- Connect CATH terminal V1 on AB to pin 1 and 8 of socket V3
- Connect CATH terminal V2 on AB to pin 1 and 8 of socket V2
- Connect GRD terminal V1 on AB to terminal 11a on the driver board
- Connect GRD terminal V2 on AB to terminal 11b on the driver board
- Connect the BIAS terminal on AB to the anode of the bias source rectifier

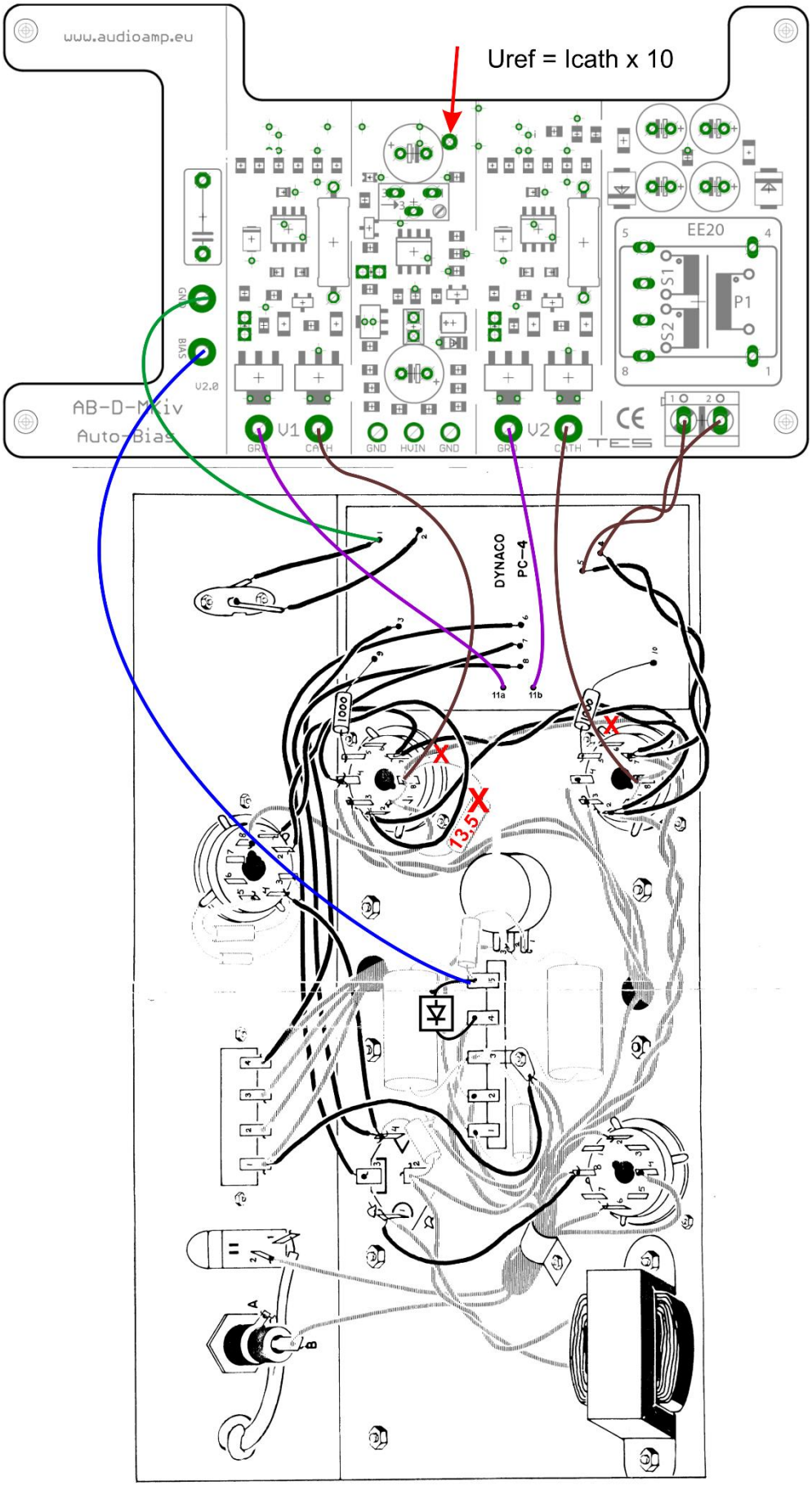
Settings

- PP stage 2 x EL34, class AB1, ultralinear:
  Set bias for EL34 tube. The recommended anode current in the AB1 class is 42.5 mA. 42.5 = 425 / 10.

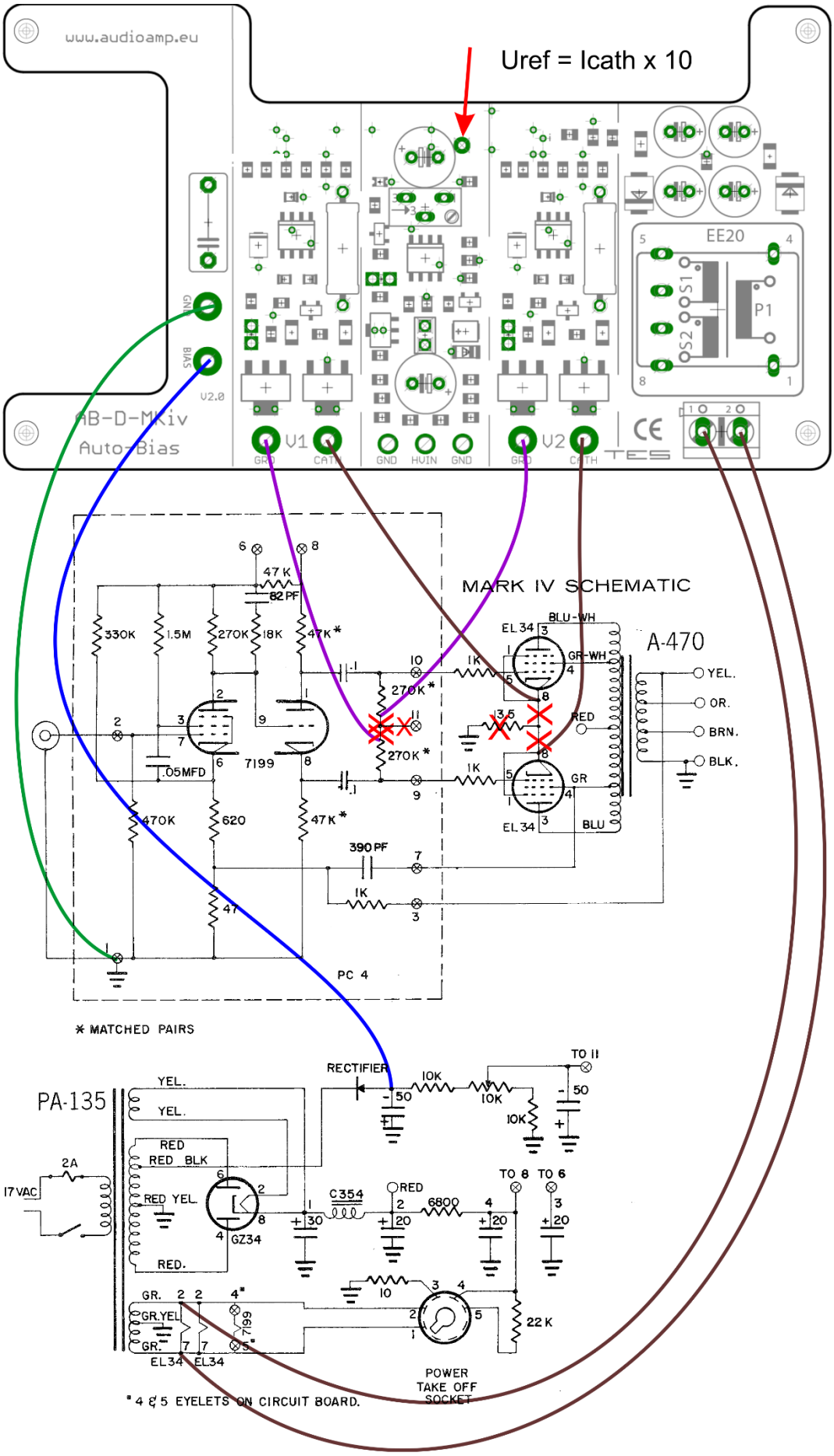
  Adjust Uref = 425 mV (0.425 V) using the Trim pot on the Auto Bias Module.

Very Important!

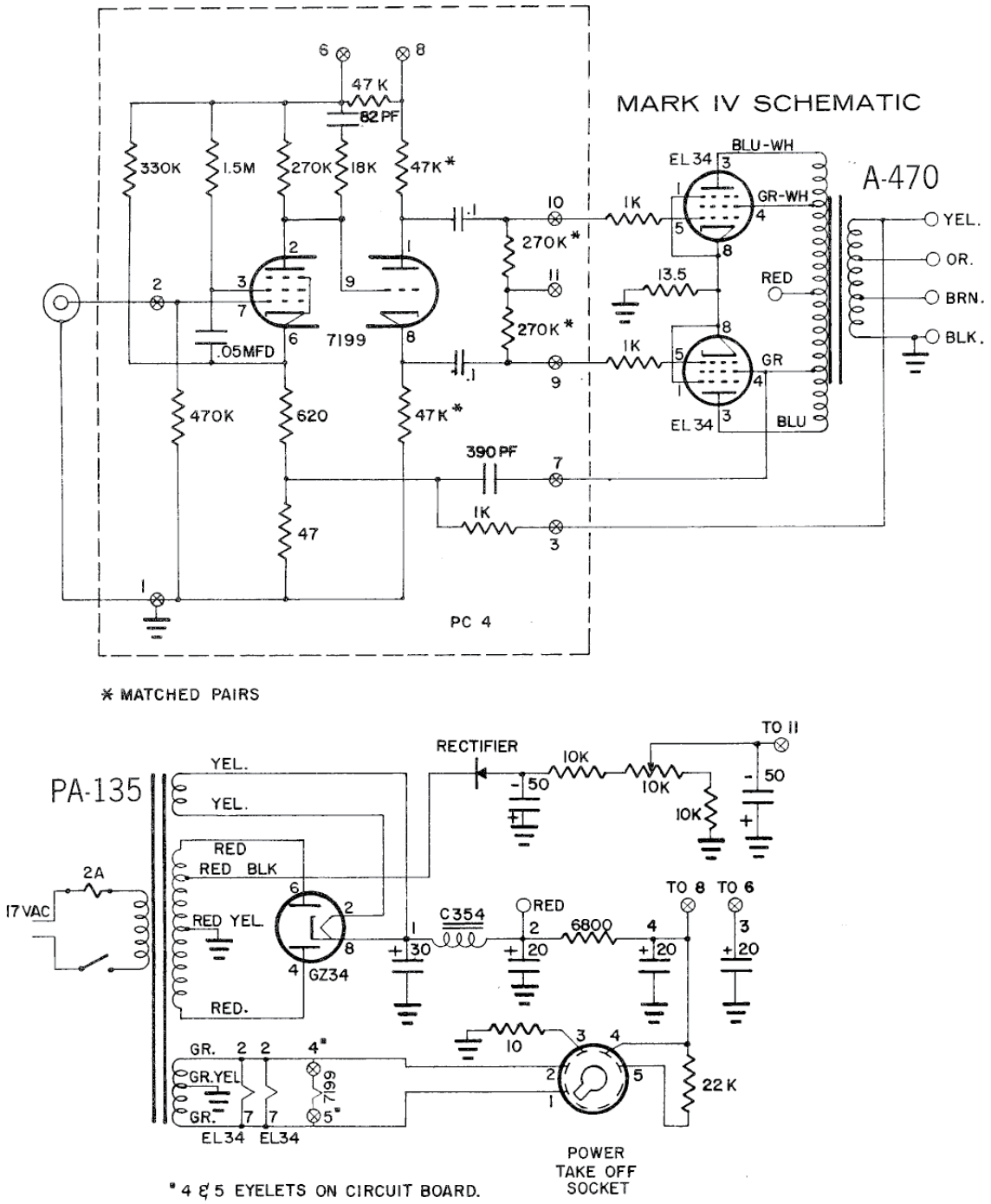
- DO NOT re-adjust the trim pot once the AB-Q module is installed and wired up. The whole idea is to set it ONCE and forget it !



MARK IV & AB DIAGRAM


www.audioamp.eu
Uref = Icath x 10
AB-D-MKiv
Auto-Bias
V2.0
EE20
P1
S1
S2
V1
V2
GND
HVIN
BIAS
MARK IV SCHEMATIC
A-470
PC 4
* MATCHED PAIRS
PA-135
RECTIFIER
7199
EL34
GZ34
YEL.
RED
BLU-WH
GR-WH
BLU
GR
BRN.
BLK.
TO 11
TO 8
TO 6
C354
6800
22 K
470K
620
47K *
270K *
390 PF
.05MFD
82 PF
10K
1K
2A
17VAC
POWER
TAKE OFF
SOCKET
* 4 & 5 EYELETS ON CIRCUIT BOARD.

The original scheme of DYNAKIT MARK IV



BOM Driver MK3

R1 470kΩ 0,5W

R2 330kΩ 2W

R3 820kΩ 0,5W

R4 270kΩ 1W

R5 680Ω 0,5W

R6 47Ω 0,5W

R8 18kΩ 0,5W

R9 47kΩ 2W 1%

R10 47kΩ 2W 1%

R11, R12 270kΩ 0,6W

R13 1kΩ 2W

R14 47kΩ 2W

C1 47nF 250V

C2 82pF 250V

C3, C4 0,1uF 400V

C5 390pF 250V