

ADJUSTMENT OF PRESET CONTROLS ON PA1002A and PA1002B

V4 BIAS AND V5 BIAS

These are to be adjusted whenever 7027A valves are replaced.

V4 BIAS.

Adjust with no signal into the amplifier.

Connect an AVO meter from the cathode, pin 8, of V4 to earth and adjust the V4 BIAS control to give 8 volts d.c. on the meter.

V5 BIAS.

Adjust with no signal into the amplifier.

Connect an AVO meter from the cathode, pin 8, of V5 to earth and adjust the V5 BIAS control to give 8 volts d.c. on the meter.

Repeat adjustment of these two control several times.

AC BALANCE.

Method 1

Connect an oscilloscope across the 3.3 ohm resistor (R44). Connect a resistive load across the OUTPUT terminals with the shorting links correctly connected. e.g. join 3-4, 6-7, 9-10 and use a 200 ohm load. At an output of approximately 10% of full output i.e. 5 watts at 1000 c/s adjust the AC BAL control for the minimum amplitude of the high frequency component of the C.r.o. signal.

Method 2

Connect a Distortion and Noise meter across part of the resistive load on the amplifier. Apply input signal at 1000 c/s to give almost full output from the amplifier e.g. 90 volts across a 200 ohm load.

Adjust the AC BAL control for minimum total harmonic distortion.

Output Limiter.

Turn this control fully anticlockwise.

Connect a resistive load across the OUTPUT terminals with the shorting links correctly connected e.g. join 3-4, 6-7, 9-10 and use a 200 ohm load.

Apply a signal to the amplifier at 1000 c/s and increase the signal until the amplifier gives full output i.e. 100 volts across a 200 ohm load. Turn the OUTPUT LIMITER control until the limiter circuit just commences to work. This will be seen as a "blinking" on an AVO meter or an oscilloscope.

A similar adjustment is used to set the limiter at levels below 50 watts. e.g.

35 watts	- 84 volts in 200 ohms
25 watts	- 70 volts in 200 ohms

Note

If no facilities are available for setting the limiter no damage will be done to the amplifier if the OUTPUT LIMITER control is left in its fully anticlockwise position.

RESISTORS.

R1	220K ohms ± 5%	$\frac{1}{2}$ Watt	616735
R2	680K ohms ± 5%	$\frac{1}{2}$ Watt	617673
R3	270K ohms ± 5%	$\frac{1}{2}$ Watt	616962
R4	1 Megohm ± 5%	$\frac{1}{2}$ Watt	618031
R5	1 Kohms ± 5%	$\frac{1}{2}$ Watt	608043
R6	6.8 megohms ± 10%	$\frac{1}{2}$ Watt	619156
R7	100K ohms ± 5%	1 Watt	616029
R8	390K ohms ± 5%	1 Watt	617210
R9	47K ohms ± 10%	1 Watt	614969
R10	220K ohms ± 5%	1 Watt	616736
R11	120K ohms ± 5%	$\frac{1}{2}$ Watt	616269
R12	1.2 megohms ± 10%	$\frac{1}{2}$ Watt	618149
R13	100 ohms ± 5%	$\frac{1}{2}$ Watt	604052
R14	3.3K ohms ± 5%	$\frac{1}{2}$ Watt	610314
R15	68 K ohms ± 5%	$\frac{1}{2}$ Watt	615510
R16	1.2 megohms ± 10%	$\frac{1}{2}$ Watt	618149
R17	100K ohms ± 5%	1 Watt	616029
R18	2.2K ohms ± 5%	$\frac{1}{2}$ Watt	609457
R19	220K ohms ± 5%	1 Watt	616736
R20	56K ohms ± 5%	$\frac{1}{2}$ Watt	615175
R21	1.2 megohms ± 10%	$\frac{1}{2}$ Watt	618149
R22	2.7K ohms ± 5%	1 Watt	609881
R23	1.2 megohms ± 10%	$\frac{1}{2}$ Watt	618149
R24	6.8 Kohms ± 10%	1 Watt	611530
R25	6.8K ohms ± 10%	1 Watt	611530
R26	33K ohms ± 5%	1 Watt	614479
R27	33K ohms ± 5%	1 Watt	614479
R28	4.7K ohms ± 5%	$\frac{1}{2}$ Watt	610972
R29	4.7K ohms ± 5%	$\frac{1}{2}$ Watt	610972
R30	4.7K ohms ± 5%	$\frac{1}{2}$ Watt	610972
R31	220K ohms ± 5%	$\frac{1}{2}$ Watt	616735
R32	33K ohms ± 5%	$\frac{1}{2}$ Watt	614478
R33	33K ohms ± 5%	$\frac{1}{2}$ Watt	614478
R34	220K ohms ± 5%	$\frac{1}{2}$ Watt	616735
R35	4.7K ohms ± 5%	$\frac{1}{2}$ Watt	610972
R36	100 ohms ± 5%	5 Watt W.W.	604018
R37	100 ohms ± 5%	5 Watt W.W.	604018
R38	4.7K ohms ± 5%	1 Watt	610940
R39	220K ohms ± 5%	1 Watt	616726
R40	220K ohms ± 5%	1 Watt	616726
R41	220K ohms ± 5%	1 Watt	616726
R42	220K ohms ± 5%	1 Watt	616726
R43	4.7K ohms ± 5%	1 Watt	610940
R44	3.3 ohms ± 10%	5 Watt W.W.	600488
R45	47 ohms ± 10%	1 Watt	603106
R46	47 ohms ± 10%	1 Watt	603106
R47	220 ohms ± 10%	1 Watt	605257

RESISTORS.

RV1	500K ohms Curve C Carbon Phono-Volume	620639
RV2	1 megohm Curve C Tone	620787
RV3★	Light Dependent Resistor	619566
RV4	500K ohms Curve A Preset A.C. Balance	620569
RV5	5K ohms Curve A Preset Bias	620062
RV6	5K ohms Curve A Preset Bias	620062
RV7	250K ohms Curve A Preset Output Limiter	620519

CAPACITORS.

C1	150pF ± 10% 600VW Styroseal	222698
C2	68pF ± 10% N750 Tub. Ceramic	221963
C3	0.0012μF ± 10% 600VW Styroseal	225303
C4	330pF ± 10% 600VW Styroseal	223716
C5	32μF 4VW electrolytic	229501
C6	0.1μF 10% 400VW Polyester	227085
C7	8 μF 450VW Electrolytic	222529
C8	0.01μF ± 5% 600VW Styroseal	226335
C9	330pF ± 10% 500 VW Styroseal	223716
C10	500μF 3VW Electrolytic	229854
C11	0.01μF ± 5% 600VW Styroseal	226335
C12	0.1 μF ± 10% 400VW Polyester	227085
C13	220pF ± 10% 600VW Styroseal	223206
C14	0.1 μF ± 10% 400VW Polyester	227085
C15	0.1μF ± 20% 600VW Paper	227011
C16	8μF 450VW Electrolytic	222529
C17	8μF 450VW Electrolytic	222529
C18	0.1μF ± 20% 600VW Paper	227011
C19	0.1μF ± 20% 600VW Paper	227011
C20	2μF 300VW Electrolytic	227923
C21	2μF 300VW Electrolytic	227923
C22	4μF 500VW Electrolytic	228188
C23	4μF 500VW Electrolytic	228188
C24	4μF 500VW Electrolytic	228188
C25	4μF 500VW Electrolytic	228188
C26	0.01μF ± 10% 400VW Polyester	226365
C27	8μF 450VW Electrolytic	222529
C28	90μF 450VW Electrolytic	229690
C29	90μF 450VW Electrolytic	229690

TRANSFORMERS

TR1	Output Transformer	52483A
TR2	Power Transformer	52481A

VALVES AND DIODES

V1	Radiotron EF86
V2	Radiotron 12AX7
V3	Radiotron 12AU7
V4	Radiotron 7027A
V5	Radiotron 7027A
MR1	1N3195
MR2	1N3195
MR3	1N3195

MISCELLANEOUS.

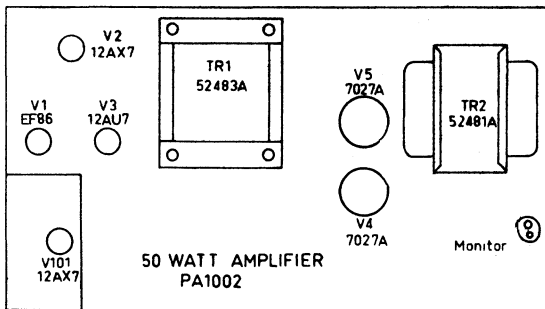
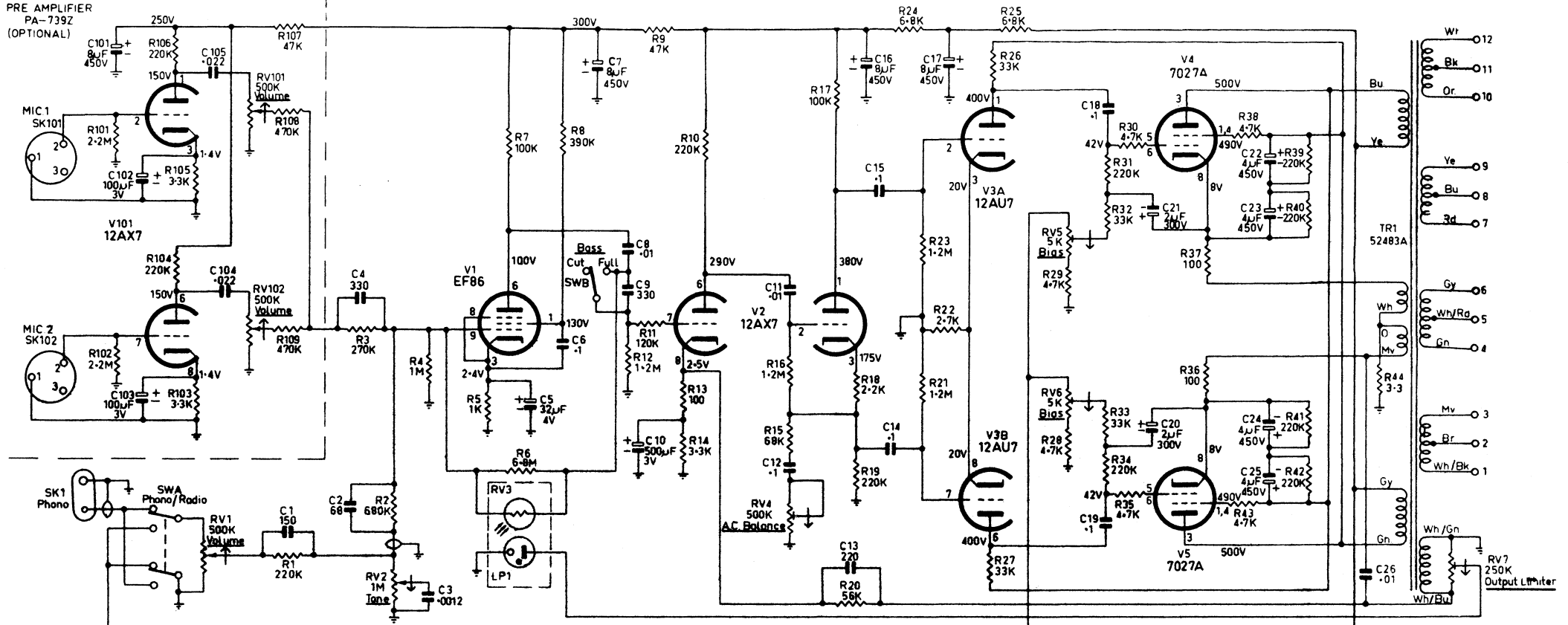
FS1	Fuse, H.T. 500 mA	370029
FS2	Fuse, 1 Mains 1.5 Amp. Delay	370031
LP1 *	Lamp Neon Type NE-51	428317
SK1	Phono Socket 2 pin wafer	794534
SK2	Radio Tuner Socket 4 pin	793287
SK3	Speaker Monitor Socket 2 pin	793038
PL1	Main Plug 3 Pin	
PL2	Monitor Speaker Plug 2 Pin	34545
SWA	Phono Radio Switch	857173
SWB	Bass Switch	61481
SWC	Monitor Switch	857173

MECHANICAL REPLACEMENTS

Badge, AWA	63831
Bezel, Pilot Lamp	41530
Fuse Holder	400027
Knob Assembly	64776
Panel, Output Termination	551514
Plug Microphone ACME C112M	234045
Plug Phono, 2 Pin Wafer	581234
Plug Button	
3/4" (Tuner Gang)	64759
5/8" (Tuning Indicator)	61050/1
1/2" (Mains Switch)	64778
29/64" (Extra Control)	64777
Shield, Pilot Lamp	43917
Trim, Cover	61018

Optional Extras.	
Monitor Speaker Kit PA780	64780
Monitor Speaker & Cable Ass'y only	50230
Radio Tuner	PA449Y

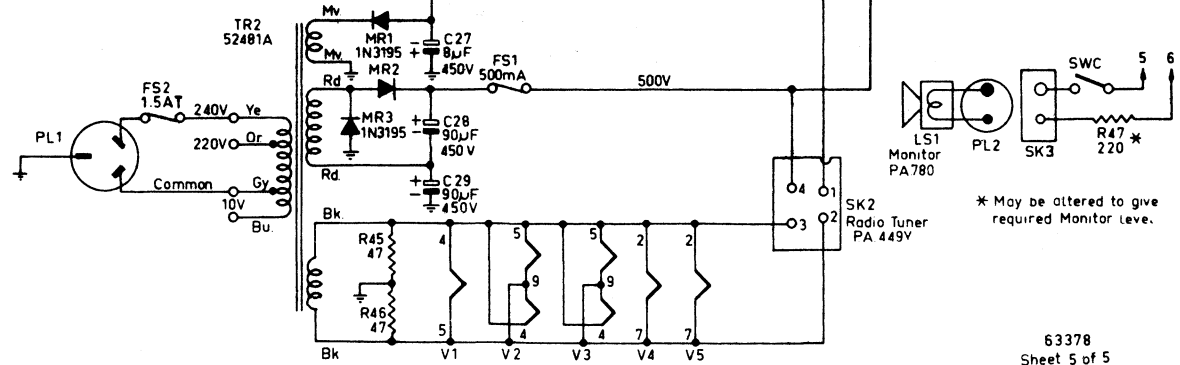
* Note. RV3 and LP1 are part of the Optical Compressor Ass'y Part No. 52184



OUTPUT CONNECTIONS

No OF 600 Ω SPEAKERS	OUTPUT TERMINATION	JOIN FOLLOWING
2-3	200 Ω / 100V	3-4, 6-7, 9-10
4	162 Ω / 70V	3-5, 6-7, 8-10
5-6	98 Ω / 70V	3-5-7, 6-8-10
7-9	72 Ω	3-4, 5-8, 9-10
10-13	50 Ω	1-4, 3-10, 9-12, 6-7
14-24	29 Ω	1-4, 2-7, 9-12, 6-11
25-35	18 Ω	1-4, 3-8, 9-12, 5-10
36-60	12 Ω	1-4-7-10, 3-6-9-12

C/N: 1.



* May be altered to give required Monitor level.