

**CRTS**

# SERVICE MANUAL

## RECORD PLAYER CHASSIS

TYPE

PC1, 2, 3, & 4

A DIVISION OF **STC**

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COMBINED RADIO AND TELEVISION SERVICE LTD

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SERVICE ORGANISATION FOR K.B · REGENTONE · R.G.D. · ACE · ARGOSY

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# RECORD PLAYER CHASSIS

## TYPE

### PG1, 2, 3 & 4

These chassis are mains operated, fully transistorised record player amplifiers for monaural use.

Power Supply : 220-240V. 50c/s.

Power Consumption : 14/15 watts.

Power Output : 2 watts.

#### Semiconductor Complement :

OC75	—	Pre-amplifier.
OC75	—	Driver.
AC128 (2)	—	Push-Pull Output.
AA129 (2)	—	Bias Stabilisers.
FSE2258J	—	H.T. Rectifier.

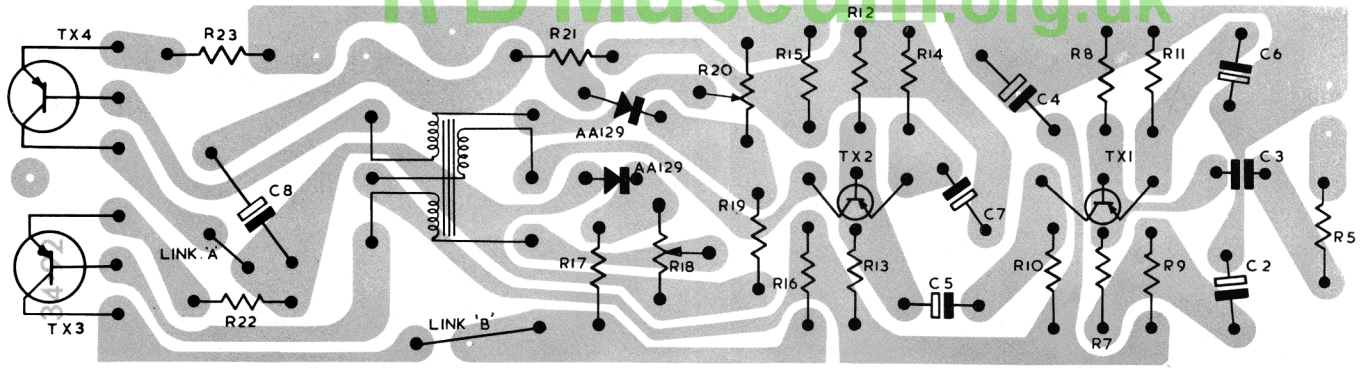
The output voltage from the pick-up cartridge is fed via the volume and tone control networks to the base of TX1. After amplification the signal is fed to TX2 which is operated as a driver stage. In the collector circuit of TX2 is the primary of the driver transformer. The two secondaries of this transformer provide identical signals with opposing phase and are applied to the two transistors of the output stage. The biasing currents in the output transistors are stabilised by the two AA129 diodes, the audio output from the two transistors being developed at the collector of TX4. Feedback is applied to TX2 via R21, the voltage being developed across R15.

The H.T. is derived by rectifying the voltage developed across a low voltage secondary isolated winding on the record changer motor.

#### **BIAS ADJUSTMENT PROCEDURE FOR THE OUTPUT STAGE**

The two link wires (A and B) on the printed circuit board should be removed and replaced by two ammeters capable of registering 2.5 mA, these meters will then read the collector currents of TX3 and TX4. R18 and R20 should then be adjusted to give readings of 2.5 mA on both meters, when no input signal is applied to the amplifier.

If only one meter is available it should be inserted in position "A" and R18 adjusted to give a reading of 2.5mA on the meter. The meter should then be inserted in position "B" and link "A" replaced, R20 then being adjusted to give a reading of 2.5 mA. This procedure should then be repeated until both collector currents remain at 2.5 mA.



PRINTED CIRCUIT BOARD SCHEMATIC

KB RECORD PLAYER CHASSIS  
TYPE PC 1, 2, 3, & 4

KB Museum.org.uk

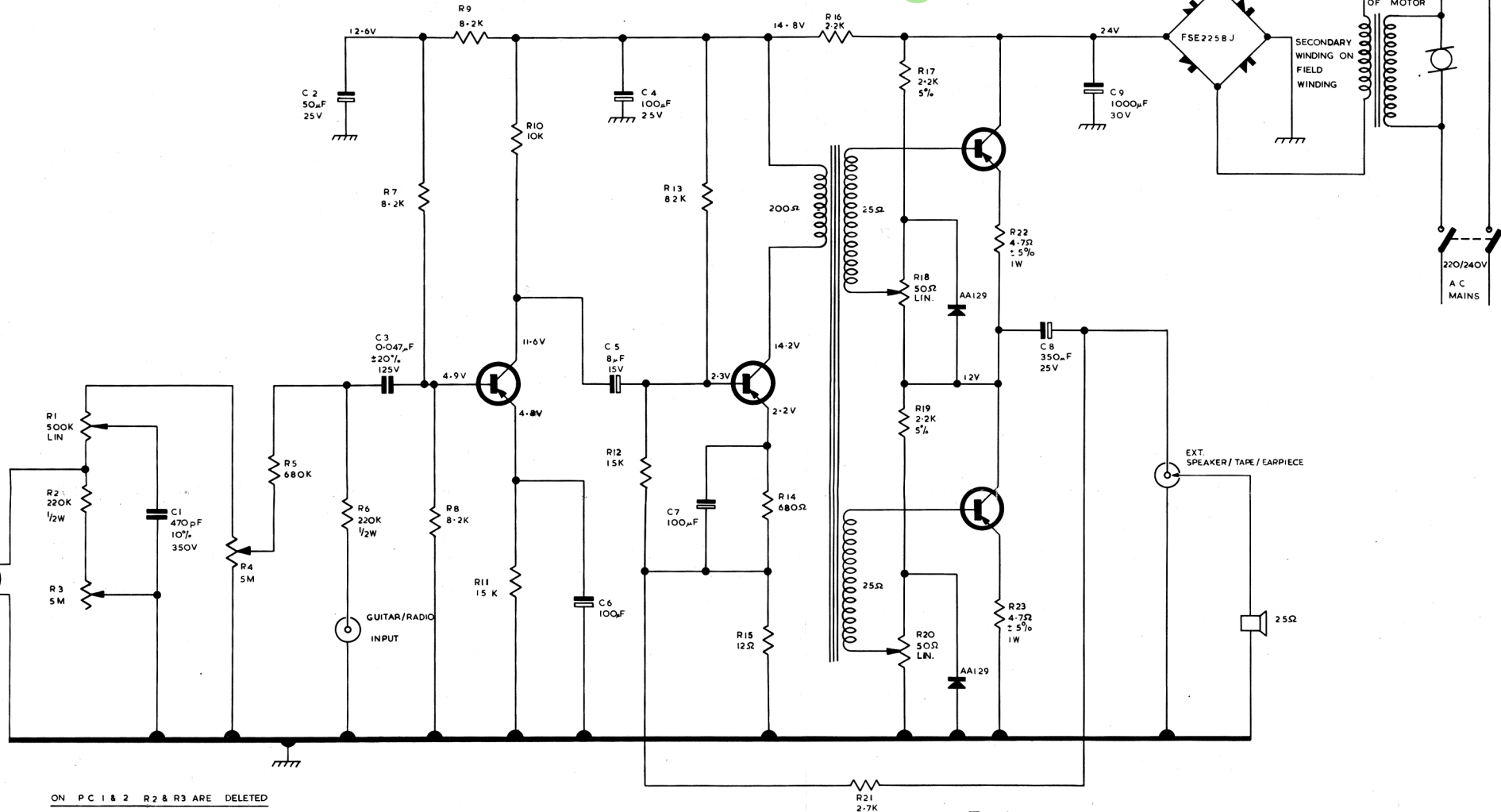
Field Winding D.C. Resistance	...	...	300 ohms
Sec. Winding D.C. Resistance	...	...	3 ohms
Sec. Voltage	...	...	17.5 volts A.C.

TX1  
OC75

TX2  
OC75

TX3  
AC128

TX4  
AC128



ON PC 1 & 2 R2 & R3 ARE DELETED  
ON PC 3 & 4 R3 IS THE BASS CONTROL  
AND R1 IS THE TREBLE CONTROL

ALL RESISTORS 1/4 W 10% UNLESS OTHERWISE STATED

DRG. No. 977/IC

## SPARE PARTS LIST

COMPONENT	CIRCUIT REF.	PART No.
<b>Capacitors :</b>		
50 $\mu$ F 25V	C2	KEM235/S/08239
100 $\mu$ F 25V	C4	KEM233/S/08227
100 $\mu$ F 6V	C6, C7	KEM232/S/08030
8 $\mu$ F 15V	C5	KEM234/S/08236
350 $\mu$ F 25V	C8	KEM231/S/08249
1000 $\mu$ F 30V	C9	KEM236/S/08226
<b>Miscellaneous :</b>		
50 $\Omega$ Linear Pot	R18, R20	9/257/02185
Rectifier	FSE2258J	14/29/12351
Coupling Transformer		39/AC/46/04124