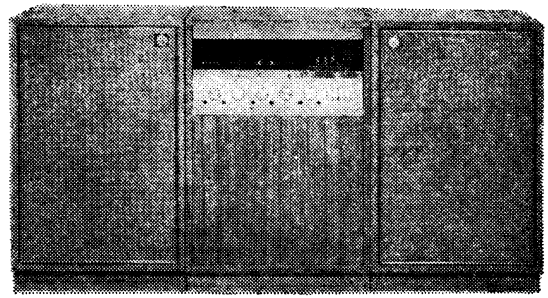
DESCRIPTION: Model 11-107 is an 18 transistor, 8 diode, 1 Zener diode, Broadcast Band Stereophonic Radiogram, fitted with a Tuning Indicator/ Balance Meter. It is housed in three timber units, which may be located together to form a combination or positioned separately, as desired by the user. The Main unit, known commercially as the Command Module, houses the chassis and controls. The remaining two units, known as the Satellite Modules, house the loudspeakers; each Satellite Module being fitted with a four-cone speaker system, one Module for each stereo channel.
The Sound Monitor Control Panel on the Command Module provides the following controls or facilities:—
a) Radio Tuning b) Balance c) Bass d) Treble
e) Balance f) Hi-Fi Output g) Filter h) Radio i) Gram.
j) Off. k) Two Pre-Amp Output Jacks, one per channel, for recording (at a constant output). l) Two Main-Amp Input Jacks, one per channel, for playback (level varied by Volume Control). m) Two Microphone Input Jacks, one per channel, for paging (level varied by Volume Control) or recording (at a constant output. When recording, the level should be adjusted by the tape recorder control-s).
n) Tuning Indicator/Balance Meter.



11 — 107

Two microphones (Part No. 90-7400) are supplied with the unit. Ample record storage space is available in the Command Module, below the Control Panel, behind the hinged front panel (which is fitted with a magnetic catch).

SPEAKERS: 2x5", 15 ΩMagnavox, Type C15W. 2x5", twin cone, 15Ω Magnavox Type HF5S1C. 2x3", 15Ω Magnavox Type 3TC.

IMPORTANT NOTE: Switch "Off" before connecting or disconnecting speakers because, if an accidental short on the speaker plug occurs and the amplifier is operating at high volume, damage to the output transistors is likely to result.
The amplifier has been designed to operate into a 15Ω load. If, either temporarily or permanently, operating extension speakers separately or in parallel with the speakers provided and a makeshift speaker impedance match is considered acceptable, the total combination impedance should not be less than 8Ω. Too low an impedance, applicable to both channels at high volume, may blow the secondary fuse; or to one channel, may damage the output transistors.

RECORD CHANGER: Garrard AT60 Mark 11. **CARTRIDGE:** Sonotone 25T.

STYLUS: N25TSD. **STYLUS PRESSURE:** 3 grammes.

DIMENSIONS:				
Command Module:—	19½" Wide	29⅝" High	18¾" Deep
Satellite Modules, each:—	18" Wide	29⅝" High	18¾" Deep

WEIGHT: Total combination:— 205 lb. (nett). With pallet and carton:— 240 lb. (gross).

MAIN SUPPLY: 230—275 V.A.C., 50 Hz, Transformer tapped for nominal 240 or 260 V.A.C. The chassis is suitable for operation on a mains frequency of 40, 50 or 60 Hz., but for "Gram" operation on other than 50 Hz., the motor pulley must be changed.

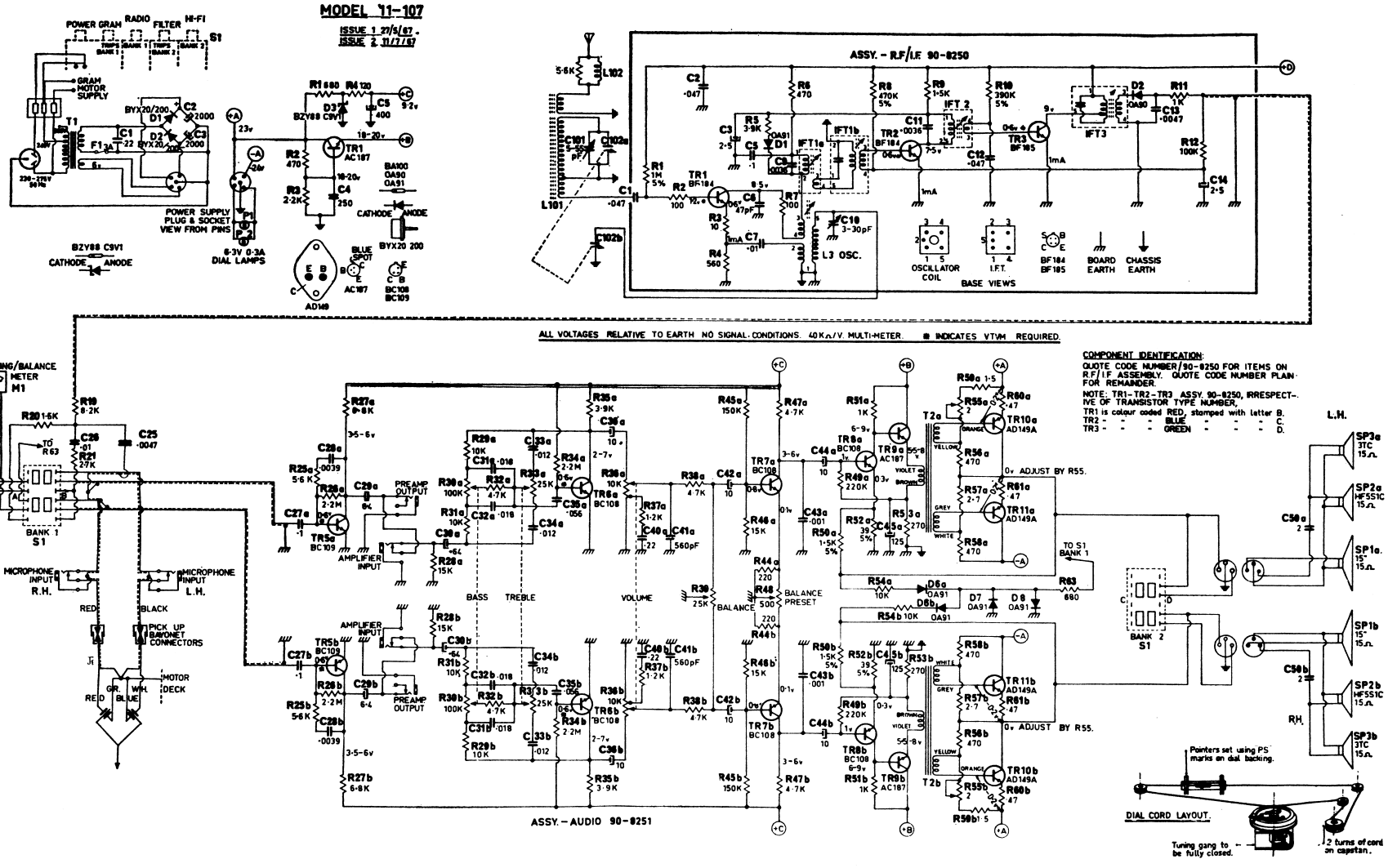
FUSES: A 3 amp if fitted in the power transformer secondary lead; and a wired fuse for the dial lamps supply is located on a lug strip in the power supply (0.012" dia. tinned copper wire).

AERIAL: In-built ferrite rod, with provision for connecting an external aerial,

EARTH: If the mains earth is not a satisfactory 'radio' earth, a separate earth may be connected to the metal chassis-work (not the printed board earth).

Tuning Range: 525—1635 KHz. I.F. 455 KHz. **ALIGNMENT:** Conventional

SPECIAL NOTE, RECORD CHANGER: On all occasions of transporting the Command Module, the record changer transit screws should be tightened and the tone arm anchored under the clamp-clip to prevent damage to the unit. On installation, the transit screws must be loosened; and tne tone arm unclamped preparatory to operating the changer.


MODEL 11-107
ISSUE 1 27/5/67.
ISSUE 2 11/7/67
POWER GRAM
RADIO
FILTER
HI-FI
S1
GRAM MOTOR SUPPLY
T1
F1 3A
POWER SUPPLY PLUG & SOCKET VIEW FROM PINS
6-3V 0-3A DIAL LAMPS
BZY88 C9V1
CATHODE ANODE
BYX20/200
BZY88 C9V1
TR1 AC187
BA100 OA90 OA91
CATHODE ANODE
BYX20 200
AD149
BLUE SPOT
AC187
BC108 BC109
ASSY. - R.F/I.F 90-8250
L102
L101
C101
C102a
C102b
L3 OSC.
TR1 BF184
TR2 BF184
TR3 BF185
IFT1a
IFT1b
IFT 2
IFT3
OSCILLATOR COIL
I.F.T.
BF184 BF185
BOARD EARTH
CHASSIS EARTH
BASE VIEWS
ALL VOLTAGES RELATIVE TO EARTH NO SIGNAL CONDITIONS. 40K Ω/V. MULTI-METER. ⊛ INDICATES VTVM REQUIRED.
COMPONENT IDENTIFICATION:
QUOTE CODE NUMBER/90-8250 FOR ITEMS ON R.F/I.F ASSEMBLY. QUOTE CODE NUMBER PLAIN FOR REMAINDER.
NOTE: TR1-TR2-TR3 ASSY. 90-8250, RRESPECT-IVE OF TRANSISTOR TYPE NUMBER.
TR1 is colour coded RED, stamped with letter B.
TR2 - - - BLUE - - - C.
TR3 - - - GREEN - - - D.
TUNING/BALANCE METER M1
BANK 1 S1
MICROPHONE INPUT R.H.
MICROPHONE INPUT L.H.
PICK UP BAYONET CONNECTORS
MOTOR DECK
AMPLIFIER INPUT
PREAMP OUTPUT
BASS
TREBLE
VOLUME
BALANCE
BALANCE PRESET
TR5a BC109
TR6a BC108
TR7a BC108
TR8a BC108
TR9a AC187
TR10a AD149A
TR11a AD149A
TR5b BC109
TR6b BC108
TR7b BC108
TR8b BC108
TR9b AC187
TR10b AD149A
TR11b AD149A
T2a
T2b
TO S1 BANK 1
BANK 2 S1
ASSY. - AUDIO 90-8251
L.H.
R.H.
SP3a 3TC 15Ω
SP2a MF55IC 15Ω
SP1a 15" 15Ω
SP1b 15" 15Ω
SP2b MF55IC 15Ω
SP3b 3TC 15Ω
Pointers set using PS marks on dial backing.
DIAL CORD LAYOUT.
Tuning gang to be fully closed.
2 turns of cord on capstan.

ALIGNMENT PROCEDURE

STEP	SIGNAL GEN. FREQUENCY	CONNECT SIGNAL GENERATOR TO–	WITH TUNING GANG–	PROCEED AS FOLLOWS
1.	455 Kc/s	Base of TR 1	Closed	Peak core of IFT 3
2.	455 Kc/s	IMPORTANT	Closed	Peak core of IFT 2
3.	455 Kc/s	Connect generator earth to emitter of TR 1	Closed	Peak core of IFT 1
4.	--		--	Repeat until no further gain is obtainable.
5.	455 Kc/s	Radiate into Aerial	Closed	Check alignment of IFT 1
6.	525 Kc/s	Radiate into Aerial	Closed	Adjust oscillator coil until signal is heard.
7.	1635 Kc/s	Radiate into Aerial	Open	Tune oscillator trimmer until signal is heard
8.	600 Kc/s	Radiate into Aerial	at 600 Kc/s	Peak aerial coil
9.	1500 Kc/s	Radiate into Aerial	at 1500 Kc/s	Peak aerial trimmer.
10.	Repeat 8 and 9 until no further gain is obtainable.			

NOTE: Inject 455 Kc/s signal to base of TR 1 via a 0.22 μF capacitor.

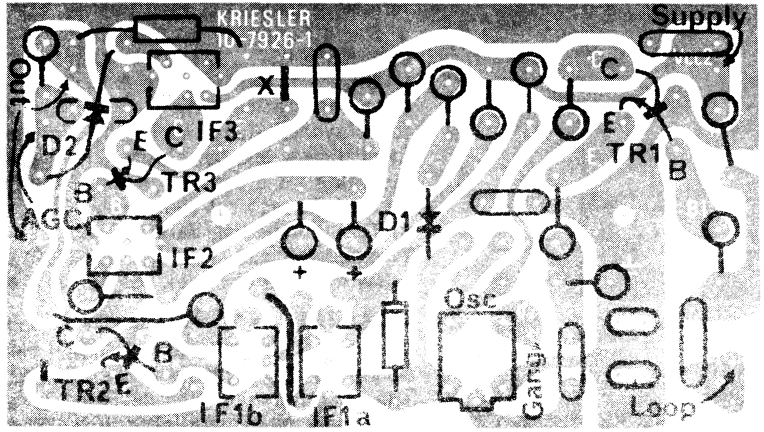
CARE OF CABINET: Polish with any reputable make of furniture polish or Scandinavian teak oil as appropriate to the timber. If alcoholic spirits are accidentally spilled on woodwork, the effect cannot be removed unless wiped off immediately. Beer, soft drinks, milk beverages, children's butter-y or egg-y fingermarks stains may be removed by wiping clean with a soft cloth and polishing with furniture polish. The anodised aluminium matt finishes are reasonably impervious to boiling water and to fingermarks if wiped off without delay; also to most household foodstuffs, soft drink and alcohol. However, milk, lemon juice, household cleansers and bleaches produce a stain which, though usually discernable at certain viewing angles only, is indelible. Rubbing with steel wool will produce a prominent stain, therefore VERY LIGHT rubbing should only be resorted to if the stain so produced is less disfiguring than the original stain (however produced) which it is desired to remove. A soft cloth moistened with water, to which a few drops of detergent have been added, will remove all substances which do not stain. After cleaning, the surface should be dried with a soft cloth.

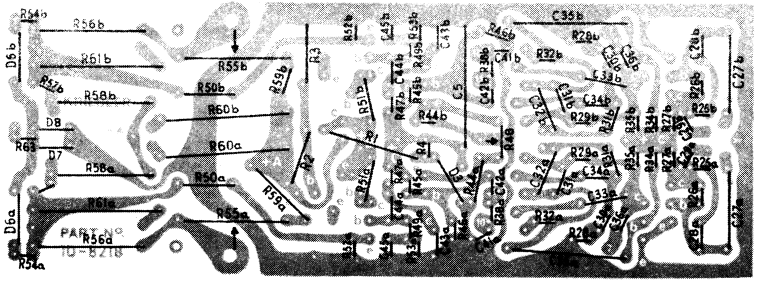
LID-STAY ADJUSTMENT: If the cabinet lid does not open fully, due to insufficient compression in the lid-stay assembly, proceed as follows: – Undo the acorn nut and remove the hinge pin from the bracket on the lid. Turn the plunger shaft anti-clockwise until the extra length so obtained provides the required extra compression (six turns approximately equals ¼" of lengthening).

CHASSIS REMOVAL: WARNING – Disconnect completely from mains supply before handling metal work, components or wiring. The chassis is held on to the horizontal mounting board by two screws 12" apart and 3½" in from the front of the Command Module. The screws are accessible from the record storage compartment. Remove screws and lift out chassis to the extent of the lead lengths.

CABINET PROTECTION: Insert slips of thin cardboard or thick paper between the ends of the chassis and the inside wall surface of the cabinet in order to protect these surfaces against being marked by the chassis, as it is being moved for service access.

RECORD CHANGER: Disconnect appropriate leads. Undo the screws securing the hinged access panel at the rear of the Module. With the panel opened, the clips on the bottom ends of the transit screws should be turned so that they lie vertically. The record changer may now be lifted off the motor board and removed from the cabinet.





RADIO SERVICE NOTES No.3 Dated 6th June 1969

As from the above date the following Production Changes have been made in Model Nos. 11-107 and and 11-116. This is not an instruction to modify sets in the field but an advice that future models will have slight variations.

MODEL NO. 11-107

Cartridge Type:- ACOS GP94-1 (Replacing Sonotone 25T)
R25(a&b):- 2.7K ± 10% ½ watt (Replacing 5.6K)
C28(a&b):- .0082uF 400vw ± 10% Polyester (Replacing .0039uF)

MODEL NO. 11-116

Cartridge Type:- ACOS GP94-1 (Replacing Sonotone 25T)
R33(a&b):- 2.7K ± 10% ½watt (Replacing 10K)
C29(a&b):- .0082uF 50vw ± 20% Polyester (Replacing .0039uF)

Model No. 11-107 Service Manual No. 107
Model No. 11-116 Service Manual No. 119

RADIO SERVICE NOTES No. 4 Dated 1st October 1969

MODELS TE2 AND TE3 up to Serial Number 390.

There is a probability that some TE2 and TE3 Tape Recorders up to Serial No. 390 have resistors RI A and RI B (470K ½ watt) wired incorrectly to the microphone jacks.

This fault can be detected only when making "sound on sound" recordings with the use of a microphone.

To check for this fault, use a pre-recorded tape and connect the "sound on sound" lead from the left channel Pre-amp output jack to the right channel Xtal P.U. jack. Press in the right channel record button and move the function control to Play/Record. It is now possible to set the record level on the right hand channel meter with the right hand record level control. Also the sound can be monitored using the right hand volume control.

Turn both volume controls to *minimum* and plug microphone into the right channel microphone socket; observe that there is still deflection in the right channel record meter. If not, then RI A & B are wired incorrectly.

Remedy Remove chassis from cabinet, remove the shield on the jack panel, locate RI A & B and disconnect.

Extend pigtails and sleeve, resolder to the lug on the microphone jack which has the inner conductor of the braided cable connected to it.

Note The wiring of RI A & B as shown in circuit diagram is correct.