



Garrard RC120 Audio Schematics Instruction Manual

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Garrard

**AUTOMATIC RECORD CHANGERS
MODELS RC.121/ME.II and RC.120/ME.II**



OPERATING INSTRUCTIONS

**THE GARRARD ENGINEERING AND MANUFACTURING CO. LTD.
SWINBON – WILTSHIRE – ENGLAND**

 **THE GARRARD MODELS RC.121/Mk. II AND RC.120/Mk.11 Ned.
FOUR SPEED AUTOMATIC RECORD CHANGERS**

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Introduction

The Garrard Model RC.121/Mk. II has a plug-in pickup head, while the RC.120/Mk.I has the pickup head integral with the arm., Other than this difference, both models are similar and reference in this booklet to the RC.121/MXk.II also applies to the RC.120/Mk. II, except where stated,)

Should at any time further information be required regarding your Garrard Record Changer, please write to our Technical Service Department, Newcastle Street, Swindon, Wilts. {Tel.: Swindon 5381-5 lines), or for spare parts and service returns to our Service and Spares Department, 50-54, Radnor Street, Swindon, Wilts. (Tel.; Swindon 2606).

Description

The Garrard Model RC.121/MK.II Record Changer will play automatically any number of records up to 10 either 77, 87, 97, 10" or 12" diameter at 16%, 33, 45 or 78 r.p.m. 10" and 12 records of the same speed can be mixed in any order. No setting for any record size required, the selection being completely automatic. Records of all the sizes mentioned may if they are of similar speed, be played at the same loading providing the smallest diameter records are placed above the larger ones. With certain stereophonic pickups up to eight records may be played at one loading.

77 45 r.p.m. records with large centre hole may be placed using the large record spindle Type LRS54 (available as an optional extra) or centre hole clip-in adaptors available at record stores.

Records may also be played manually and the changer stopped and started if desired without rejecting the record being played.

Operating Instructions

To operate Changer proceed as follows:

1. Release pickup arm retaining clip.
2. Set correct stylus for type of record to be played.
3. Move speed change knob to desired speed.
4. Place records horizontally on record spindle, lift and move overarm inward.
5. Switch on by turning the Auto knob to "On."

To unload Changer.

1. Lift overarm, move to right hand side and lower.
2. Lift records off spindle, if replaying the same records lift clear of the spindle before replacing.

Reject.

A record being played may be rejected by moving the "Auto" knob to the "On" position.

Manual Operation.

1. Place record on turntable by threading over record spindle, moving record horizontally over the step on spindle.
2. Switch on by moving the lower "Manual" knob only. On completion of playing the record, the pickup will return to its rest and the changer switch off.

Stop.

The changer automatically stops on completion of playing the records placed on it, but if it is desired to stop the changer while playing a record, slide the knob marked "Stop" forward. The changer will then stop with the pickup remaining on the record. Restart by moving the "Manual" knob to "On" and the same record will continue playing, no records being rejected.

To stop the changer for a period, move the "Auto" knob to "OR." The pickup will return to its rest and the changer switch off. The pickup arm retaining clip may be replaced if desired.

Note.

The pickup arm will not automatically move from its rest unless one or more records are loaded on the record spindle. This is a safety device to prevent the pickup being damaged by switching on inadvertently. _

To play 78 r.p.m. coarse groove records, the knob of & turnover pickup should show 78 or Std. (Green) and for fine groove (Microgroove) records it should show 33/45 or L.P. (Red).

Large hole 45 r.p.m. records can be played automatically using a large record spindle Type LRS4 obtainable as an optional extra. Alternatively, clip-in record centre adaptors may be used, these are obtainable from your dealer.

To obtain the best results from your records, care should be taken to see that they are stored and cleaned as recommended by the record manufacturers. Do not leave records on the changer when not in use.

Transit Screws. . .

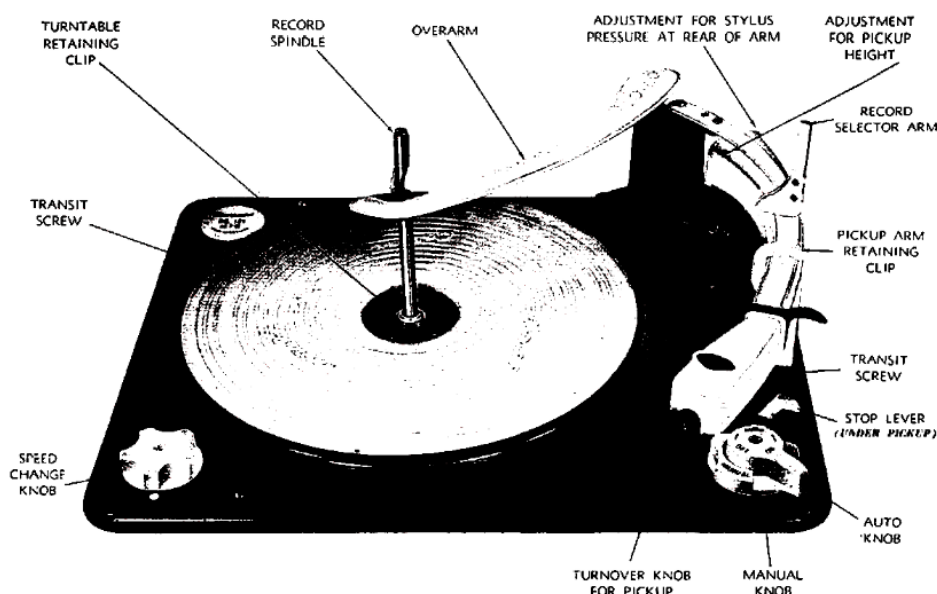
When your radiogram is installed see that the two transit screws are removed and that the record changer is floating freely on its suspension springs. The transit screws are copper plated for identification.

Maintenance

The motor, turntable spindle and intermediate wheel bearings are of the oil retaining type and rarely need lubricating. When the need for oil is apparent, lubricate these bearings with a fine grade of machine oil. Carefully remove all traces of surplus oil especially from the intermediate wheel and motor pulley.

To remove Turntable.

To lift turntable, remove the flat spring retaining clip and lift with equal pressure on diametrically opposite sides. If difficulty is found give the record spindle a light downward tap with a piece of wood, such as the handle of a screwdriver while lifting the turntable.



Service Adjustments

Speed.

Should the speed vary during the playing of a record, first make sure that this is not due to record slip caused by warped records. Next examine the motor pulley, intermediate wheel, and inside of turntable rim for traces of oil and if necessary wipe thoroughly with a clean cloth. Also check that the intermediate wheel runs in the centre of the appropriate step on the motor pulley and is not touching the side of the adjacent step. If necessary loosen the screw holding pulley to shaft and move pulley to its correct position.

Motor.

Should the motor if dual voltage range run too hot or be too weak to operate the changer, check that the links in the voltage changeover block are correct to correspond to the voltage of the power supply. Connection details are given on the cover of the block. Also check that the links are tight,

Pickup Dropping Position.

The pickup arm dropping position is set for optimum accuracy. Should however any minor adjustment be required, lift up the pickup arm which will reveal the slotted bush by which the dropping position adjustment can be made. Release the small locking screw immediately behind this slotted eccentric bush, which should be given a slight turn and when the correct position has been found retighten the locking screw.

Pickup Height.

The height of the pickup lift can be adjusted by turning the small screw accessible on top of the rear of the pickup arm. To make this adjustment, first place 10 78 r.p.m. records on the turntable and adjust the pickup height so that as the pickup returns to its rest after playing the top record the tip of the stylus calcars the top record by L". .

Pickup Stylus Pressure.

The stylus pressure should not exceed 10 grammes and it is strongly recommended that a check be made occasionally with a Garrard Stylus Pressure Gauge. To adjust the stylus pressure turn the Knurled screw at the rear of the pickup arm. clockwise to reduce and counter clockwise to increase the stylus pressure.

Pickup,

Keep the stylus free from accumulated dust.

Spare Parts for RC.121/Mk.II and RC.120/ME.II.

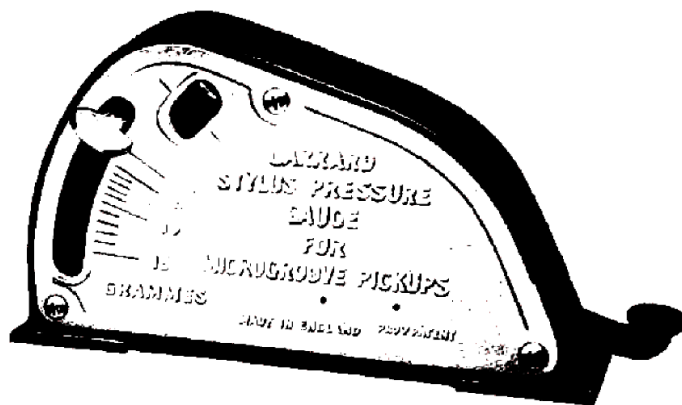
When ordering spare parts the schedule number, found under turntable mat, should be quoted.,

Name of Part	Ref. No.
Turntable Mat – – – –	C54848
Turntable Retaining Clip – –	AS53176
Intermediate Wheel with Tyre – .	A53884
Intermediate Wheel Retaining Clip .	A4t723
Pulley 50 Cycles – – – –	AS39\$3/2
Pulley 60 Cycles – – – – .	AS3954/2
Voltage Change over Block, Cover for-	B54982
Nut for Cover – – –	A41012
Switch Cover – – –	A51327
Screw for Switch Cover :	A40343
Manau! Conical Knob – –	BS4609
Speed Control Knob – .	B54613
Control Knob – – :	BS4611
Large Record Spindle – –	Type LRS4
Plug in Pickup Head Moulding	MPM3

Replacement Styli for Garrard Pickups.

Pickup Model	Stylus Reference	Description
GC2	GC2/3	Sapphire Stylus for 78 r.p.m. (Coarse Groove) Records,
GC2	GC2/3D	Diamond Stylus for 78 r.p.m. (Coarse Groove) Records.
Gc2	GC2/1	Sapphire Stylus for Microgroove (Fine Groove) Records.
GC2	GC2/1D	Diamond Stylus for Microgroove (Fine Groove) Records.
GC8	GC8/3	Sapphire Stylus for 78 r.p.m. (Coarse Groove) Records.
GC8	GC8/3D	Diamond Stylus for 78 r.p.m, (Coarse Groove) Records.
GCs	GCs/i	Sapphire Stylus for Microgroove (Fine Groove) Records.
GC8	GC8/1D	Diamond Stylus for Microgroove (Fine Groove) Records.
GCS10	GCS10/07	Sapphire Stylus for Stereo Records.
GCS10	GCSI0/07D	Diamond Stylus for Stereo Records.

Tre Garrard Models RC.121/Mk. II and RC.120/Mk. II Record Changers are made under the folowing patents:-
British 741308, 748659, Sweden 158348, Australia 200074, Cither patents pending.



**Garrard Stylus Pressure Gauge
MODEL SPC2**

an indispensable accessory for measuring Stylus Pressure (Range 0-15 grammes)

Every Gramophone Enthusiast should possess one of these Gauges.

Obtainable from your Radio or Record Dealer

Fitting Instructions for the Garrard Multi-Purpose Plug-in Pickup Cast Type MPM3

The Garrard Type MPM3 Multi-Purpose pickup crass has been designed for use on the Garrard Model RC. 121/MK.II automatic record chanter, SR .

This pickup case will, with the aid of the accessories supplied with it, enable a wide range of pickup cartridges 1o be fitted, A thin Bakelite section known as a knockout, which can be easily broken away, it provided in the front of the case through which can paseo the knob of turnover wpa cartridges and 8 hole is located in the top of the case, covered by the (Garrard name plate, for the knob of the turn round stylus type of cartridge.

As s pickup case can cagily be plugged in and out of the pickup arm, ginal stylus cartridges can be fitted having a separate case for each type of cartridge,

The acoessories comprise :—

2 Screws (assembled) Ref: A40295 2 Screws — Ref: AdD345

2 Stand-offs — Ref: AS0504 1 Sub Plate — Ref: A50525

2 Spacers — Ref: A45210 2 Washers — Ref: A40519

Most pickup cartridges will quite cagily assemble into the case using the accessories provided.

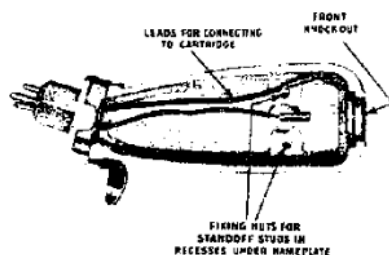
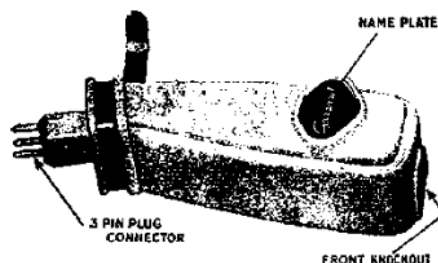
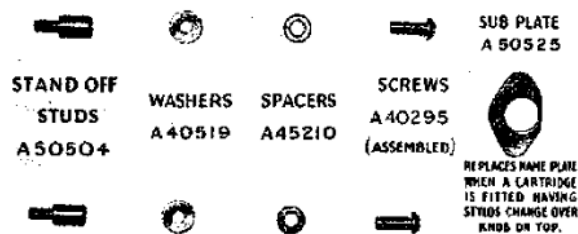
'The two spacers should be assembled under the homes of the cartridge should the stylus not project far enough below the edge of the case.

The two washers should be wised under the sewer heads as the holes in the harness of some pickups are larger than the screw heads; centralize the cartridge before tightening the screws.

For cartridges having the turn round type of stylus, the Garrard name plate should be removed from the case by pushing it out From inside and replacing it with the sub-plate. Be carful not to lose the two EBA nuts immediately underneath the plate.

THE GARRARD ENGINEERING AND MANUFACTURING Co., Lid. NEWCASTLE STREET — SWINDON — WILTSHIRE .

ENGLAND IN USA, —GARRARD SALES CORPORATION 80 SHORE ROAD — PORT WASHINGTON — NEW YORK



Pickup Connecting Instructions

This Garrard Unit is wired for use with both Monaural and Stereophonic Pickups.

Where the pickup moulding (shell) only is supplied, it will have three leads, making it suitable for fitting either a Monaural or Stereophonic Pickup Cartridge. As only two leads will be required for a Monaural Cartridge, the Grey lead will not be required and it should be tucked out of the way into the rear of the moulding. Use the Brown and the Black lead (Ground) and connect in accordance with the pickup manufacturer's instructions.

The amplifier should be connected to the tags marked 'R' (Brown lead) and 'C' (screen) on the ta) strip underneath the unit, the tag 'C' being ground. (Brown phono jack lead on U.S.A. type units).

To use a Stereophonic Pickup Cartridge connect the leads in the moulding (shell) to the cartridge as follows: —

- Brown lead Right hand channel.
- Grey lead Left hand channel.
- Black lead to the common terminal.

Some Stereophonic cartridges may have four terminals and these should be connected according to the manufacturer's instructions.

The amplifier for the Right hand channel should be connected to the tags marked 'R' (Brown lead) and 'C' (screen). This is the Brown phono jack lead on U.S.A. type units.

The amplifier for the Left hand channel should be connected to the tags marked 'L' (Grey lead) and 'C' (screen). This is the Grey phono jack lead on U.S.A. type units.

Suitable Garrard Moldings for Stereophonic pickups for use with Models: —

RC.88, RC.98 and TA./Mk.II.	Garrard MPM2/S A55703.
RC.121 /Mk.IT, 4HF. and TPAI2.	Garrard MPM3/S A55704.

Addendum to RC.120/121 Mk.II and RC.88/D Service Manuals
In certain countries these models are made for the 100/130 voltage range only.



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Documents / Resources



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RC120 Audio Schematics, RC120, Audio Schematics, Schematics

References

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