



## **The Garrard tradition**

At Garrard, simple precision and mechanical integrity have always held a high priority over glamour features and hi-fi pizzazz.

Like a chemist's analytical balance or a gyroscope, a high fidelity turntable has certain basic mechanical functions that require the utmost precision. The correct rotation of the record and the correct seating of the stylus in the record groove are fundamental. Only then come all the other conveniences which make record playing pleasurable.

This emphasis on fundamentals is the primary reason that Garrard is one of the world's classic names in high fidelity.

The GT55 is one of Garrard's proudest achievements.



**CAUTION:** This record changer is for use with Garrard base model BW40.

## **The GT55**

This superb, fully automatic, belt driven, single-play/multiple-play transcription turntable is designed to handle your record collection with consummate care. It offers outstanding performance benefits such as:

**The True Tangent Tonearm** – a very low mass magnesium alloy tonearm which maintains *perfect* tangency between the stylus and the record groove by articulating the head so as to always be at a 90° angle to the groove. The result is the elimination of tracking error.

The True Tangent Tonearm pivots on precision low friction ball bearings. (Horizontal friction 30 milligrams, vertical friction 20 milligrams.) The magnesium tonearm achieves an effective moving mass of 19 grams, balanced with a cartridge weighing 5 grams.

The drive system incorporates a DC servo controlled 1,000 rpm motor, electronically regulated for maximum rotational accuracy, turning a 4lb, die-cast balanced platter via a flexible belt. This system isolates the platter from the motor.

The fully automatic mechanism handles your precious records with gentle precision, affording more protection than the steadiest hand.

## **Specifications**

Performance figures are typical.

Rumble: – 66dB DIN B

Wow and flutter: 0.05%

Minimum tracking force: 0.75 gram

Garrard's policy is one of continued development and therefore the Company reserves the right to alter specifications without prior notice.

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**WARNING:** To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

# 1 Unpacking

Carefully remove the GT55 from its protective styrofoam packing and plastic bag. Do *not* lift the unit by the tonearm. Remove all packing material and ties. Remove the protective coating from the metal trim. The following items will be found:

Tonearm balance weight (1.1)  
Lubricating oil (1.2)  
45 rpm single play adaptor (1.3)  
Multiple play spindle (1.4)  
Cartridge setting gauge (1.5)  
Single play spindle (1.6)

# 2 Mounting the turntable on its base

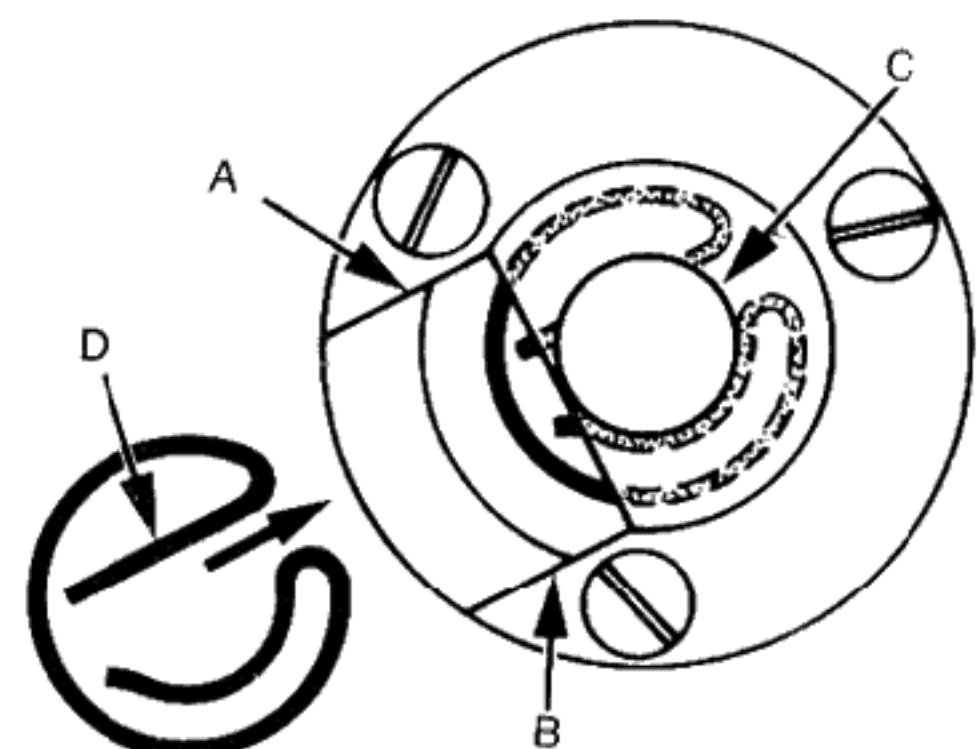
- 1 Place the turntable on top of the base, model BW40, making sure that the four mounting springs fit into the appropriate recesses. The transit clips should be in the vertical position (Figure 2.1).
- 2 Press down on the sides of the top plate. Reaching up from under the base, flip the transit spring clips into the horizontal position (Figure 2.2) to lock the turntable on its base. (This is important for safety and sound quality.)

# 3 Mounting and lubricating the platter

- 1 Remove the rubber mat from the platter.
- 2 Spread a light film of oil (illustration 3a) over the center spindle.
- 3 Remove the C-shaped retaining clip from the center spindle and set the platter onto the spindle with the *foam pad nearest the motor pulley* (illustration 3b).
- 4 Press the platter down from opposite sides until it clicks into position.
- 5 Reaching through the platter opening, remove the foam pad and stretch the belt so it fits around the motor pulley, silver or gold stripe outward.
- 6 Replace the C-shaped retaining clip.
- 7 Replace the rubber mat.

## To fit the retaining clip

- 1 Align the platter so that the edges of the cutout (A & B) are parallel to the flat edge of the center spindle (C).
- 2 Slide the clip onto the center spindle so that straight section (D) fits into the slot in the spindle.



## 4 Mounting the cartridge

- 1 Lock the tonearm into its rest.
- 2 Slide out the C6 cartridge carrier (illustration 4a).
- 3 Insert two screws (of appropriate length) through the carrier and into the two nuts (Figure 4.1). Mount the cartridge onto the carrier. Tighten the screws just enough to hold the cartridge in place.
- 4 Push the tabs on the carrier wires onto the cartridge pins (Figure 4.2) (you may find it easier if you use a needle-nosed pliers or a tweezer), using the following color code:  
Red – right signal  
Green – right ground  
White – left signal  
Blue – left ground
- 5 Slide the clear plastic setting gauge onto the back of the carrier (Figure 4.3). Be sure that the stylus does not catch on the gauge as the cartridge enters. With the cartridge parallel to the sides of the carrier, its stylus must be vertically below the point at which the lines on the gauge cross. If not, move the cartridge until the stylus position is satisfactory. Tighten both fixing screws and recheck the stylus position (in case the cartridge has moved). Remove the gauge.
- 6 Slide the carrier back into the tonearm head until it snaps into place.

## 5 Balancing the tonearm for proper tracking force

- 1 Place a record on the platter and thread the tonearm counterbalance weight on to the tonearm (Figure 5.1).
- 2 Turn the anti-skating control (Figure 5.2, to the '0' position shown.
- 3 Unlock the tonearm and move it toward the center of the record.
- 4 Wind the tonearm counterbalance weight (forward or backward) until the tonearm balances with the stylus tip just above the record. The tonearm may drift slightly due to its low bearing friction. This is of no consequence. Lock the tonearm back into its rest.
- 5 Hold the tonearm balance weight and turn its adjusting cone (Figure 5.3) until the mark at 0 is against the red line on the tonearm. The balance will be upset if the counterbalance weight is accidentally turned with the cone.
- 6 Turn the counterbalance weight counterclockwise (as seen from the front of the arm) until the line on the cone corresponding to the proper tracking force touches the line (Figure 5.4) on top of the tonearm. (Use the tracking force recommended by the cartridge manufacturer.)

## 6 Setting the anti-skating control

The anti-skating control has two scales for proper calibration with an elliptical or CD-4 stylus (Figure 6.2).

Set the dial to correspond with the tracking force (previously set). For

instance, if a cartridge with an elliptical stylus calls for a force of 1 gram, then the figure '1' on the elliptical scale 'E' should be in line with the vertical marker (Figure 6.1).



The gray and black colored cables (Figure 7.1) plug into the phono input jacks of your amplifier or receiver.

Black is for the right channel, and gray for the left. (The audio cables are of low capacitance and suitable for any stereo or 4-channel equipment.)

The green ground wire (Figure 7.2)

should be attached to the grounding screw on the back of your receiver or amplifier.

The AC power plug (Figure 7.3) can be connected to any normal household AC outlet, or the UNSWITCHED accessory outlet of your amplifier or receiver.

## How to play a record

**Before play**, move the locking lever on the tonearm rest to 'Free'.

**To play a single record automatically:**

- 1 Insert the manual (short) spindle (Figure 1.6) which rotates with the record.
- 2 Place the record on the platter and set the 'Size' (Figure 8.3) and 'Speed' (Figure 9.1) selectors to correspond.
- 3 Slide 'Mode' (Figure 8.4) control to 'Auto' and the 'Auto' (Figure 8.2) control to 'Start'. Hold it there a moment while the mechanism engages and release it. The tonearm will index. At the end of play, it will return to the arm rest and shut off the motor automatically.

**To play a single record manually:**

- 1 Place a record on the platter and slide the speed selector to either  $33\frac{1}{3}$  or 45 rpm.
- 2 Slide 'Mode' control to 'Man'.
- 3 Slide 'Cue' (Figure 8.1) control to 'Lift'. Move the tonearm so that the stylus is over the outer grooves of the record. Move 'Cue' control to 'Play'.

**To play several records automatically:**

- 1 Remove the short spindle and insert the automatic (long) spindle.  
*CAUTION: Only insert it when the tonearm is down on its rest.*
- 2 Place up to six records on the spindle with the edge of the lowest record

resting on the support platform. Lift the record 'steady' (Figure 10.1) as far as possible and swing it inward and down so that it presses lightly on top of the record stack. (*Note: For 45 rpm records use the Garrard LRS100 adaptor, available as an optional extra.*)

- 3 Set the record 'Size' and 'Speed' selectors.
- 4 Slide 'Mode' selector to 'Auto'.
- 5 Slide the 'Auto' control to 'Start'. Hold it there for a moment until the mechanism engages.
- 6 When all the records have played, the arm will return to its rest and shut off the motor automatically. To remove the records from the platter, simply lift the spindle straight up and remove the records.

*Note: To interrupt a record and go to the next one, move the 'Auto' control to 'Reject'. To switch off while playing a stack of records, move the 'Mode' selector to 'Man.', then the 'Auto' slider to 'Reject' – this will first cause the next record to be lowered.*

*If the 'Mode' selector is accidentally moved to 'Off' during the automatic cycle, then the control may not slide freely. In this unlikely event, rotate the platter a few times by hand in a clockwise direction until the control is released.*

### The cueing control

This precision device permits much safer raising and lowering of the tonearm than is possible by hand. It has been factory adjusted and locked for optimum rate of descent, to protect both the stylus and record. Do not attempt to rotate the control (Figure 11.1).

### Repeat play control

To play a single record (or the last of a stack) continuously, slide the 'Mode' selector to 'Repeat'. To resume normal play, move the 'Mode' selector to 'Auto'.

### The stroboscope

The DC servo controlled motor of the GT55 ensures that the platter will revolve without variation from its precise  $33\frac{1}{3}$  or 45 setting. The platter is revolving at the precisely correct speed when the bars in the stroboscope window (Figure 12.1) appear to be stationary.

To correct out-of-pitch recordings, you may use the pitch control (Figure 12.2); this variable speed control has a range of approximately  $\pm 3\%$  (one semi-tone). It also enables musicians to make minor adjustments of the pitch of an individual recording.

## Service adjustments

### Arm height

After playing a record, the tonearm should raise, return to a position just above its rest, then settle onto it. A restrictor prevents the arm from rising too high.

### To adjust the height

- 1 Slide mode selector to 'Off' just before the tonearm settles onto its rest. Turn restricting screw (Figure 13.1) counterclockwise to disengage it.
- 2 Turn adjusting screw (Figure 13.2) clockwise to increase lift or counterclockwise to decrease lift.  
On completion, switch off by moving the 'Mode' slider to 'Man' then the 'Auto' slider to 'Reject'.
- 3 To reset the restrictor, first raise the tonearm by moving the 'Cue' slider to 'Lift'. Then turn the restricting screw

clockwise until there is about  $\frac{1}{16}$  in free upward movement at the front of the tonearm.

### Indexing position

The stylus should land at the bottom of the sloping groove guard rim, just before the playing groove. If it does not lower in the proper position, return the arm to its rest for safety and rotate adjusting screw (Figure 14.1) clockwise to move the lowering position inward, or counterclockwise to move it outward. If the tonearm stops short of its rest after playing a record, first lock the tonearm to its rest (for safety), then rotate screw (Figure 14.2) counterclockwise a quarter of a turn and test again. Repeat process if necessary.

Careful design has reduced the need for maintenance to a minimum, but attention to the following points will prolong trouble-free listening.

### The pickup cartridge stylus

If the stylus tip gathers dust, sound quality will suffer. Brush the dust away with an artist's camel-hair brush, working only from the back of the stylus towards the front to avoid bending it. Do not use solvent without the cartridge manufacturer's approval.

Examine the stylus tip under a microscope periodically for wear. Your dealer can offer this service. A worn or chipped tip damages records permanently.

### The platter mat

Periodically remove the mat and clean it with a soft brush or a slightly moist sponge.

### The drive system

Once a year spread a light film of oil over the center spindle. See Figure 3a. Keep oil off the driving surface since this will affect platter speed. Wipe these surfaces clean with a lint-free cloth.

The motor has oil-retaining bearings and needs no further lubrication.

# Selected spare parts list

Description of part				Part number
Tonearm counterbalance weight	...	...	...	78714
Cartridge carrier, Type C6	...	...	...	78715
Cartridge setting gauge	...	...	...	78948
Platter mat	...	...	...	78607
Center disc for mat	...	...	...	78609
Platter drive belt	...	...	...	76992
Platter retaining clip	...	...	...	43857
Transit screw	...	...	...	77177
Transit clip	...	...	...	43855
Single play spindle	...	...	...	75196
45 rpm single play adaptor	...	...	...	72698
Multiple play spindle	...	...	...	79250
Stroboscope ring (60Hz)	...	...	...	77892/001
Stroboscope ring (50Hz)	...	...	...	77892/002



Disconnect power supply and protect stylus when possible before investigating problems.

Numbers in brackets under 'Cause and remedy' are those of relevant instructional sections.

Fault	Cause and remedy
Unit fails to start	<ol style="list-style-type: none"> <li>1 Platter drive belt disconnected or broken. Remove the C-shaped retaining clip and platter to refit or fit new belt (3).</li> <li>2 If stroboscope neon lamp is alight, power is reaching unit. Consult dealer.</li> <li>3 If neon lamp is not lit, power may not be reaching unit. Check power connections and source voltage by connecting other apparatus to power outlet. Consult dealer if in doubt.</li> </ol>
Speed variation (wow or flutter)	<ol style="list-style-type: none"> <li>1 Remove platter to check motor pulley, drive belt and platter drum for foreign matter. Clean with a lint-free cloth moistened with alcohol.</li> <li>2 If center spindle is dry, lightly oil it (3).</li> <li>3 No cure for warped, dished or eccentric records.</li> </ol>
No sound	<ol style="list-style-type: none"> <li>1 Check security of cartridge and audio connections (4 and 7).</li> <li>2 Check cartridge by substituting another if possible.</li> </ol>
Distorted sound	<ol style="list-style-type: none"> <li>1 Check that stylus is free of dust (11).</li> <li>2 Check tracking force (5) and anti-skating force (6). Reset if not to cartridge maker's recommendations.</li> <li>3 'Cue' control not moved fully to 'Play'.</li> <li>4 If back of cartridge touches the record, fit the plastic tilt wedge (supplied with cartridge fixing kit) between the cartridge and C6 carrier, deep edge forward.</li> </ol>

*continued*



## Service hints (continued)

Fault	Cause and remedy
Distorted sound <i>continued</i>	<ol style="list-style-type: none"><li>5 Cartridge fixing screws loose. Reset cartridge (4).</li><li>6 Tight leads at back of tonearm. Relieve tension.</li><li>7 If substituting another record player shows that fault lies in other equipment, consult dealer.</li><li>8 Examine stylus microscopically for signs of wear or damage. Renew if necessary.</li></ol>
Low pitched noise through speakers	<ol style="list-style-type: none"><li>1 Make sure that the green ground lead is connected (7).</li><li>2 If center spindle is dry, lightly oil it (3).</li><li>3 Check that unit floats on its mounting springs (2). Turn transit screws fully clockwise.</li><li>4 Acoustic feedback can be caused by placing the turntable too close to the speakers.</li></ol>
Tonearm movement limited	<ol style="list-style-type: none"><li>1 Tonearm height or restriction (10) wrongly set, or not balanced (5). Reset.</li><li>2 If the tonearm is locked to its rest move the locking lever to 'Free'.</li></ol>
Tonearm lands too far in or out	<ol style="list-style-type: none"><li>1 Indexing position (10) incorrect.</li><li>2 Stylus displaced. Fit new stylus.</li></ol>
Records do not change	<ol style="list-style-type: none"><li>1 Multiple play record spindle not pressed down fully.</li><li>2 C-shaped retaining clip not fitted correctly (3).</li></ol>

