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*Garrard*  
**model 440 auto turntable**

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**instruction leaflet**

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# model 440 features

- Plays up to six records pre-selected for 10-78, 7-45, 7-33 or 12-33 (size and speed), according to the pickup cartridge fitted and the thickness of the records. (For playing 78 rev/min records, a 3 mill stylus is recommended.)
- Plays single records manually or to the above settings automatically.
- Rejects records and allows single record repeat.
- Switches off automatically at the end of a single record, or the last of a stack, with the pickup returning to its rest.
- Damped cue and pause facility, with fine control.
- Adjustable bias compensator, calibrated for elliptical, conical and special CD-4 type styli.

- Removable slide-in cartridge carrier.
- Available with fitted magnetic cartridge (Model 440M) or ceramic element cartridge (Model 440C).
- Readily used with quadrophonic record playing equipment.

A short record spindle is supplied and an adaptor for large hole records is available as an optional extra for playing a single record.

For playing a stack of large hole records, spindle F.45 is available.

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



- 1\* Auto record spindle
- 2 Overarm (lift here)
- 3 Fixed counterweight
- 4 Bias compensator control
- 5 Cue and pause control
- 6 Pickup arm
- 7 Pickup rest safety clip
- 8 Transit clip (2)
- 9 Pickup cartridge
- 10 Pickup finger lift
- 11 Speed/record size control
- 12 Operating control
- 13 Turntable
- 14 Turntable centre disc concealing retaining clip

\* Check that record spindle is pushed in to its stop position. The spindle must only be inserted to locate as shown.

# operating instructions

## Setting up to operate

Remove the pickup stylus guard, if fitted, and check that the speed/size control and stylus are set to suit the records to be played. Gently spin the turntable clockwise to ensure unit is not in auto-cycle before fitting record spindle which must be firmly located by retaining clip. Also check that transit screws are turned fully clockwise.

## Automatic play

If it is in its centre position (illustrated), lift the overarm and swing it to the right.

Place records on the step of the record spindle and steady them by swinging the overarm into its centre position. (For a single record see the alternative instruction.)

Release the pickup rest clip then move the operating control to 'Auto', pause and release. The control will return to 'Manual'.

After playing the last record the pickup will return to its rest and the unit will automatically switch off. Raise the overarm and swing it to the right, then lift the records clear of the spindle, even if replaying them.

**Reject** To play the next record of a stack, move the operating control to 'Auto' (if playing a single record, or the last of a stack, **immediately return the control to 'Manual'**, otherwise the record will repeat).

## Single record play

**Automatic** Fit the short record spindle. Lift the overarm and either swing it to the right or park it along the rear of the unit, then place the record on the turntable. Check settings and move the operating control to 'Auto', as above. The pickup will automatically lower onto the record.

**Manual** As **Automatic**, but move the operating control to 'Manual' and place the pickup on the record by hand.

**Cue and Pause** When playing a single record, the cue and pause control may be used to raise or lower the pickup at any selected point, or temporarily interrupt play. To raise the pickup, lift the cue and pause control then position the pickup manually, if required. To gently lower the pickup, lower the control.

For special purpose accuracy or to shorten the damped descent time, the cue and pause control may be lifted just sufficiently for the stylus to clear the record - allowing for any warp on the record. The stylus can then be aligned over any particular groove with great accuracy before lowering the control.

This technique is particularly useful when quick and accurate cueing is of benefit, such as in a pre-arranged discotheque application, or to save an initial blank tape run if transcribing record-to-tape.

**Repeat** Move the operating control to 'Auto'.

## Stop

Move the operating control to 'Off' and clip the pickup arm to its rest by hand.

## Note

Make sure that at least one record is either on the record spindle or turntable before moving the operating control to 'Auto' and do not leave the records on the unit when not in use. Store and clean records as recommended by the makers and keep the pickup stylus free of dust build-up. If transporting the unit, turn screws fully counterclockwise. Clip the pickup to its rest.



# adjustments

Before making adjustments always disconnect the power supply and protect the stylus whenever possible.

Adjustments should normally only be necessary if a new cartridge is fitted.

## Pickup lowering position

Turn screw (D) clockwise to move the arm inwards, counterclockwise to move the arm outwards. A quarter turn of the screw will move the stylus about  $\frac{1}{16}$  in.

## Pickup lift adjustment

Turn nut (E) clockwise to lower, counterclockwise to raise the pickup. Normally the pickup should lift to a height of  $1\frac{3}{8}$  in from the top of one record on the turntable to the top of the fingerlift.

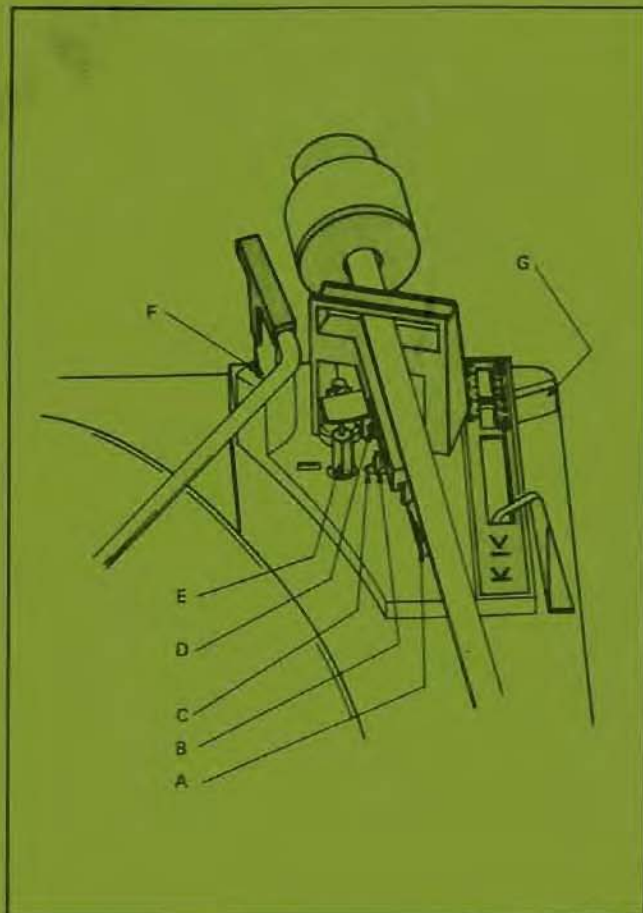
**Pickup cueing height** The height the pickup is raised depends on how much the cue and pause control is lifted, but with the control fully lifted this height must not be greater than when the pickup lifts automatically. If necessary, turn screw (C) clockwise to increase pickup cueing height, counterclockwise to lower.

## Stylus force adjustment

Turn screw (A) clockwise to draw indicator (B) towards the front of the pickup arm and reduce stylus force. Turn screw (A) counterclockwise to move indicator (B) towards rear of arm and increase stylus force. Set the stylus force recommended for your cartridge, using a stylus force gauge.

## Bias compensator

Move the bias compensator control (G) along its scale to the figure which corresponds to the previously set stylus force. Use the scale headed ● for elliptical styli or the scale headed ● if a conical or special CD-4 type stylus is fitted.



# fitting pickup cartridge

Gottard  
DATE 4 MODEL 440M

## (Ignore if cartridge is already fitted)

A slide-in cartridge carrier, type C4, is used on the Model 440 and may be supplied with or without cartridge. When supplied with a magnetic cartridge the unit is known as Model 440M. When a ceramic cartridge is already fitted, the unit is called Model 440C. When Model 440 is supplied less cartridge, a fixing kit is supplied. The cartridge fixing kit, part number 59048 contains fixing accessories (less cartridge), comprising a pickup head weight and pairs of screws of different lengths.

Fit the cartridge (which must have a 2-hole fixing bracket) to the slide using the pair of screws of the most suitable length. Include the pickup head weight next to the slide in the assembly if the pickup cartridge is too light to come within the stylus force adjustment range (see diagram). Note that a minimum stylus force of  $2\frac{1}{2}$  grams is recommended for cartridges used with this model.

If, due to the design of your particular cartridge, there is insufficient clearance between a record and the body of the cartridge when playing, a tilt wedge (not illustrated) is supplied. Insert the tilt wedge in this assembly next to the cartridge and with thick edge facing forward, in order to increase clearance.

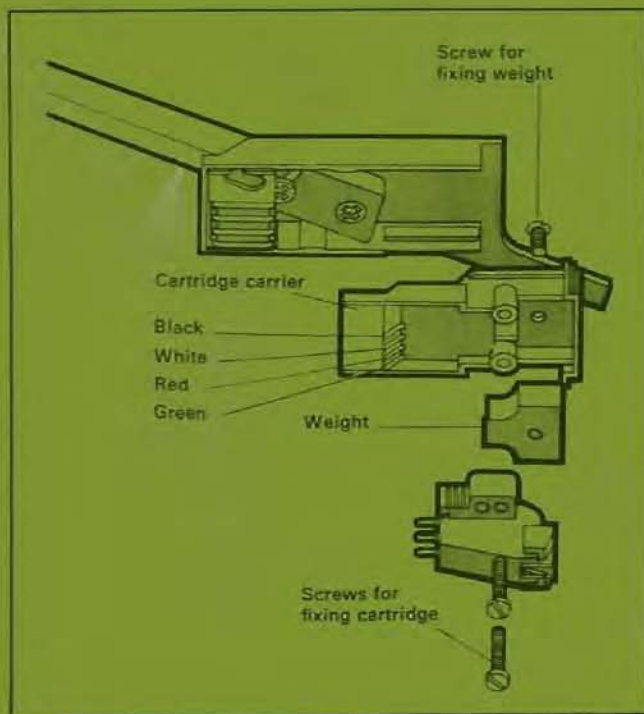
Connect the colour coded leads on the slide to the connection tags for the cartridge, but do not solder leads directly to the cartridge. Connect leads as follows:

- Red to right channel
- Green to right channel ground
- White to left channel
- Black to left channel ground

Information on connections is usually supplied with the cartridge. For cartridges with 3 connections use the green as common, or join the green and black leads

together as the common connection. For monophonic cartridges use the red and green leads. Insulate and tuck away any leads not required.

Carefully slide the cartridge carrier so that it clips into place in the pickup head. When removing the cartridge carrier, grip its sides at the front and pull it forward from the pickup head, to overcome its clip.



# maintenance

Before carrying out maintenance, disconnect the power supply and protect the stylus.

## To remove turntable

Withdraw the record spindle and carefully take out the centre disc from the turntable mat - this is easily done by turning back one of the three lugs in the mat which retain the disc and sliding the disc upwards and sideways out of its location. Then remove the turntable retaining clip, noting the location (small hole to rear, left) and lift off the turntable.

## Lubrication

When the need is apparent, remove the turntable and apply a drop of fine machine oil to the bearings of the rubber intermediate wheel, motor and turntable. Keep oil away from driving surfaces. The overarm must lower freely. If it does not, clean and oil it at point (F) on diagram.

## Installation (when not already connected to other equipment)

Model 440 may be supplied as a pre-pack module or as a deck only. If supplied in module form, refer to installation information supplied with the module. When supplied as a deck with an installation template, refer to the appropriate information on the template.

In many cases installation will consist simply of making appropriate connections for the power supply lead and plugging the audio (phono) lead(s) into your amplifier (brown lead for right channel, grey lead for left channel, if twin phono leads). Then carry out the operating instruction procedure before play.

When the unit is to be used with CD-4 type quadrophonic equipment, use Garrard phono leads coded black for right channels, grey for left channels. When the unit is fitted with a USA line cord with a standard 2 flat pin plug, connect the plug to the power outlet on your amplifier or a wall socket. The line cord green ground lead should be connected to a reliable grounding point on the amplifier chassis or directly to ground.

## Cabinet space

Garrard Model 440 deck is 13½ in wide by 11½ in front to rear by 2¼ in below lower edge of unit plate. Height above the lower edge of the unit plate is 3½ in with the overarm fully lifted.

**Garrard**   
A Plessey Quality Product

For technical information or spare parts contact your Garrard dealer or agent or write to:

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